Commission Agenda Report

Planning Commission Meeting 10-19-26

Item 4.A.

To: Chair Kamins and Members of the Planning Commission

Prepared by: Alexander da Silva, Associate Planner

Reviewed by: Joseph Smith, AICP, Contract Principal Planner

Approved by: Yolanda Bundy, MS, PE, CBO, CFCO, Community Development Director and Tyler Eaton, Associate Community Development Director

Date prepared: October 8, 2026 Meeting date: October 19, 2026

Subject: Coastal Development Permit No. 21-070, Variance Nos. 26-007 and 26-010 and Demolition Permit No. 22-004 – An application to replace an existing water storage tank and pump station with associated development (Continued from October 5, 2026)

Location: 4501 Vista del Preseas, not in the appealable coastal zone, but appealable as a major public works project
APNs: 4473-005-901, 4473-005-902
Owner: Los Angeles County Waterworks District No. 29

RECOMMENDED ACTION: Adopt Planning Commission Resolution No. 26-38 (Attachment 1) determining the project is categorically exempt from the California Environmental Quality Act (CEQA), and approving Coastal Development Permit (CDP) No. 21-070 to replace an existing 70,000 gallon (gal.) water storage tank and pump station with a new 26 foot (ft.) tall, 185,000 gal. water storage tank and pump station with associated development; including Demolition Permit (DP) No. 22-004 to replace an existing 70,000 gal. water storage tank, Variance (VAR) No. 26-007 for a single retaining wall above 6 ft. in height and VAR No. 26-010 for structures on slopes steeper than 2.5 to 1 located in the Public Open Space (POS) zoning district at 4501 Vista del Preseas (Los Angeles County Waterworks District No. 29)

DISCUSSION: This agenda report provides a project overview, project setting and surrounding land uses, description of the proposed project, an analysis of the project's consistency with applicable provisions of the Local Coastal Program (LCP) and Malibu Municipal Code (MMC), and environmental review pursuant to CEQA. The analysis and findings contained herein demonstrate the project is consistent with the LCP, MMC, and

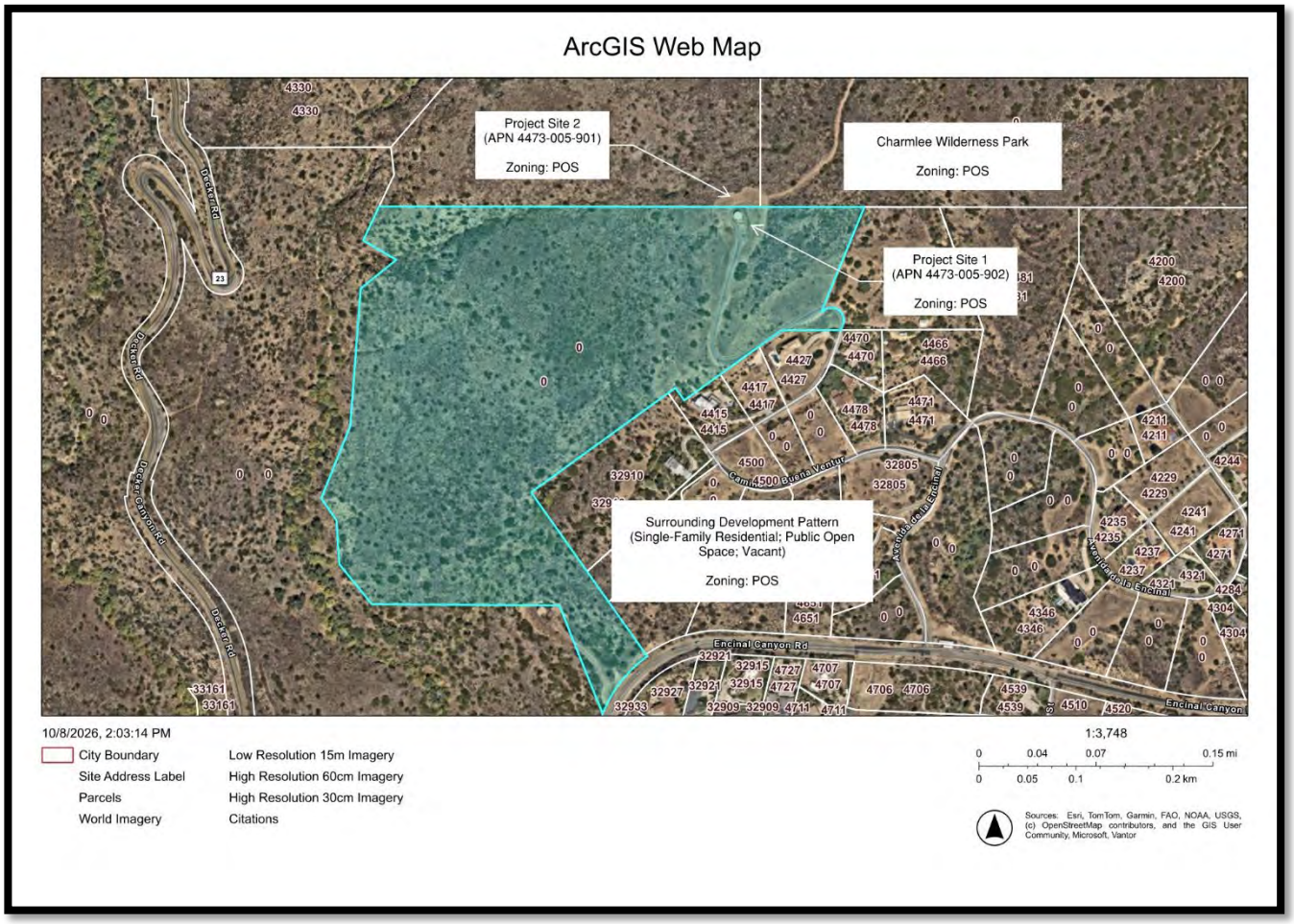
CEQA. The County of Los Angeles Board of Supervisors certified a Final Environmental Impact Report (Final EIR) for a replacement water tank up to 225,000 gal. in storage capacity at this location in 2021 (State Clearinghouse No. 2017111032), where 185,000 gal. is proposed. No substantial changes to the project or new significant environmental effects were identified by the Community Development Director and the project, as proposed, does not warrant further environmental review. The City, as a responsible agency, can determine if the project is consistent with the certified Final EIR pursuant to CEQA Guidelines Section 15096.

Project Overview

As shown in Figure 1, development would occur on two parcels accessed by Vista del Preseas. Combined, the subject parcels comprise approximately 55 acres. While the two parcels are developed with an existing water tank and support infrastructure, they are primarily undisturbed, vacant properties located on the east side of Decker Canyon Road in western Malibu. The subject parcels are generally within a developed residential area between Charmlee Wilderness Park to the north, Leo Carillo State Park to the West, and Malibu Springs Park to the south. The subject parcels are not located along a shoreline or coastal bluff. A mapped trail is located adjacent to the existing water tank and bifurcates the parcel generally in a north-south alignment. With exception to the existing water tank location and supporting infrastructure, including the driveway and Vista del Preseas roadway, most of the subject parcels include mapped Environmentally Sensitive Habitat Area (ESHA). Due to location and topography, the project site is not visible from Pacific Coast Highway (PCH); however, the existing water tank and proposed replacement tank are visible from Decker Canyon Road, which is an LCP designated scenic area pursuant to Land Use Plan (LUP) Policy 6.3. The project site is accessed from an existing private driveway from Vista del Preseas that is approximately 885 ft. long. Prior approvals for the replacement of water lines were issued on the subject parcel within the last ten years.

The project proposes to replace an existing 70,000 gal. water tank and pump station with a new 26 foot tall, 185,000 gal. water tank, foundation and support infrastructure, a single retaining wall up to 12 ft. in height for the foundation, water lines, and grading. The replacement water tank would be constructed on the existing building pad and would not require any development into existing onsite ESHA. VARs for a single retaining wall above 6 ft., up to 12 ft. and structures on slopes steeper than 2.5 to 1 and are requested. Project plans are included as Attachment 2.

Figure 1 – Aerial Map



Source: Malibu City GIS 2026

Project Background and Determination

The first iteration of this project began in 2015 where the item was to be presented as a request for a *Determination of Use* project, where the Planning Division aimed to obtain approval to determine whether the enlargement of an existing water tank "is a use similar to and not more objectionable than the permitted or conditionally permitted uses in the Public Open Space (OS) zone."[1] This particular submittal consisted of replacing an existing water tank with a 300,000 gal. water tank and 4,550 linear ft. of water line improvements and equipment. The item was ultimately pulled from the agenda and thus the Planning Commission never opined on the project's merits. A supplemental commission agenda report noted the reasoning for removing the proposal was that additional time was needed to research the item.[2]

[1] November 16, 2015 Commission Agenda Report, Item 5.C.
[2] November 16, 2015 Commission Agenda Report, Item 5.C.

Los Angeles County Department of Public Works (LADPW) then resubmitted the application in 2022. The new submittal was accompanied by an adjusted project scope to now include the demolition of the existing 70,000 gal. water tank and pump station and the construction of a new 185,000 gal. water tank and pump station with associated development. The proposed project also includes VAR No. 26-007 for the height of a single, contiguous retaining wall above 6 ft. and VAR No. 26-010 for development on slopes steeper than 2.5 to 1. As further described in LIP Chapter 8 (Grading), the project would exceed two development standards of the LIP.

The project is considered a *major public works project* pursuant to LCP Local Implementation Plan (LIP) Section 2.1 and, therefore, is subject to the California Coastal Commission (CCC) Appealable Jurisdiction. The applicant for the project is a public agency, Los Angeles County Waterworks District No. 29 (WD29).

Processing Overview

LCP & MMC

The project is a public water storage facility owned and operated by a public water agency (WD29) on land the agency owns. This project would replace an existing water tank that serves the Upper Encinal Canyon neighborhood within Western Malibu. Coastal Act Section 30114 and LIP Section 2.1 define "public works" to include all production, storage, transmission, and recovery facilities for water owned or operated by any public agency. The project meets that definition. The LCP addresses facilities of this type directly in LUP Policy 7.16 and LIP Section 18.11(E), which provide that “additional water storage facilities and/or new pipelines may be allowed in the City to replace deteriorated or undersized facilities and/or to ensure an adequate source of domestic and fire protection water supply during outages or pipeline interruptions provided such facilities are designed and limited to accommodate existing or planned development allowed by the Land Use Plan and can be found consistent with all applicable policies of the LCP.” The LUP and LIP provisions are not stated by zoning district but apply citywide. Similar to other types of *public works*, such as roads and utility distribution projects, LIP Appendix 1 Table B would not apply for this type of project; however, it is still subject to the policies of the LCP and all applicable development standards, including the height of retaining walls, the placement of structures on steep slopes, and protection standards related to ESHA, scenic resources, public access, and hazards.

The project is not covered by Governor Executive Order (EO) N-20-25 and, therefore, is subject to the Coastal Act/LCP. Therefore, review is not limited to the Malibu Municipal Code (MMC). Since the project is subject to the Coastal Act/LCP, the discretionary entitlement is a CDP, and the governing findings are those in LIP Section 13.9. The CDP process provides for conditions of approval and, for this type of project, a noticed public hearing. Since this type of project is classified as *public works* allowed in the City pursuant

to LUP Policy 7.16 and LIP Section 18.11(E), a conditional use permit (CUP) is not available to this project. Further, because the project is defined as a *major public works project* in LIP Section 2.1, the City's action on the CDP and VARs would be appealable to the CCC pursuant to LIP Chapter 13 and Coastal Act Section 30603(a)(5).

Note that on September 22, 2026, the City considered a CUP for Administrative Plan Review (APR) No. 26-014 for the construction of an additional water tank located at 20699 Las Flores Mesa Drive. For that project, the CUP was the appropriate entitlement as the project was covered under EO N-20-25 and the project was limited to the MMC (not the LCP). Because the EO did not suspend MMC Title 17 (Zoning), the project could only be processed under the MMC where allowances for citywide public works projects are not defined or authorized as they are in the LCP. Therefore, the project was regulated by the most comparable use allowance within the zoning district, which for Rural Residential (RR) was "utility facility related to public projects" pursuant to MMC Section 17.08.040(A). Even though the additional water was privately sponsored with WD29, it was still related to the public water system. Due to the EO, the City's ability to require a CDP was suspended and the LCP could not be applied as the standard of review. Further, the definition of *public works* in Coastal Act Section 30114 and LIP Section 2.1 could not be carried over and applied to the project as the applicant was a private entity and, due to the EO suspension, the project was not eligible for the citywide allowances of LUP Policy 7.16 and LIP Section 18.11(E) or eligible for an appeal to the CCC as a major public works project. Nonetheless, the CUP still allowed the City to apply conditions of approval for the requested use and consideration at a noticed public hearing before the Planning Commission, with an appeal to the City Council.

General Plan

The Circulation and Infrastructure Element (CE) and Safety (SE) Element of the City's General Plan specifically incorporate implementation measures and policy actions that relate to this type of project. As described in CE Section 4.3.6, several of the City's water tanks are categorized as "severely undersized" and CE Policy 2.2.1 aims to ensure adequate water storage for firefighting and other emergencies. Under CE Implementation Measure 37, the City is to "work with the appropriate agencies such as Water District 29 and the Los Angeles County Fire Department to increase water storage at strategic locations throughout the City as required..". The proposed water tank replacement would carry out the policy and implementation measure.

SE Objective S-3.3 plans for a community adapted to wildfire risks and hazards, wherein Action S-3.3.1f calls for similar action as described in CE Implementation Measure 37. The Action states, "Work with appropriate agencies to ensure sufficient stored water and consider non-monetary incentives for on-site or area-wide shared storage water suitable to meet effective firefighting standards and requirements." Additionally, SE Actions S-3.3.1n and S-3.3.1o would be implemented by this project. The Actions read, "Work with water service providers and Los Angeles County Fire Department, to identify

neighborhoods with inadequate flow from fire hydrants, and to upgrade deteriorated and undersized water-distribution systems" and "Work with jurisdictions within the city and surrounding region to ensure that all public water storage facilities have an emergency power supply for their pumps, or gravity-driven water distribution systems." As designed, the proposed water tank replacement would implement these actions.

Table 1 provides a summary of the lot dimensions and lot area of the subject parcel.

Table 1 – Parcel Data	
Lot Depth	630 ft., 5 in.
Lot Width	183 ft., 7 in.
Gross Lot Area	111,111 sf. (2.55 acres)
Area Comprised of 1:1 Slopes	229 sf.
Net Lot Area*	**110,882 sf. (2.54 acres**)

*Net Lot Area = Gross Lot Area minus the area of access easements and 1 to 1 slopes.

Table 2 provides a summary of the surrounding parcels.

Table 2 – Surrounding Land Uses				
Direction	**APN/Address**	**Lot Size**	**Zoning**	**Land Use**
North	4473-006-900	1.96 acres	POS	Public Open Space
South	4473-005-903	1.21 acres	POS	Public Open Space
West	4473-004-901	0.78 acre	RR-40	Vacant
East	32910 Camino de Buena Ventura	1.00 acre	RR-2	Single-Family Residence
	4473-009-020	1.21 acres	RR-2	Vacant

As shown on Figure 1, the subject parcels are located in the Upper Encinal/Charmlee Wilderness Park area. The parcels' topography descends gradually along Vista del Preseas, gently sloping toward Encinal Canyon Road and developed neighborhoods zoned Rural Residential Two-Acre (RR-2). Figure 1 also illustrates that the subject parcels are located in an area bordered by open space and one to two-story single-family residences with accessory development zoned both OS and RR-2. The portion of the subject parcels to be developed consists primarily of slopes of 4 to 1, with steeper slopes to the west and east sides of the parcels ranging from 4 to 1 to 1 to 1. The project site takes direct access from Vista del Preseas.

With exception to the existing water tank location and supporting infrastructure, the driveway, Vista del Preseas roadway, and most of the subject parcels are mapped Environmentally Sensitive Habitat Area ESHA pursuant to the LCP ESHA Overlay Map. Per the City Biologist's review and LIP Section 4.4.4(C), a detailed biological study of the site and review by the Environmental Review Board (ERB) were not required as the project involves the replacement of an existing water tank on an existing building pad. The project

also involves the northward trenching of a water line along Portrero Road of which the Malibu Pacific Trail simultaneously occupies. This area occurs in Environmentally Sensitive Habitat Area pursuant to the LCP ESHA Overlay Maps, however, pursuant to Section 4.5.3 of the LIP, *public accessways and trails* are a permitted use within "other types of ESHA" that are neither wetlands or streams.

Although the project site contains a mapped trail (Malibu Pacific Trail) adjacent to the existing water tank, the proposed development would occur on the same building pad. The project will not encroach or obstruct the mapped trail alignment and will not affect the public's ability to access mountain recreational pathways along Encinal Canyon. As a result, the project was evaluated pursuant to LIP Section 12.4 and determined that a public access dedication is not warranted because the project would not adversely affect public access. Nevertheless, a condition will be required that the applicant maintain existing public access during construction to the maximum extent feasible and return any disturbed portions to their previous conditions.

Project Description

The proposed scope of work is as follows (Attachment 2 – Project Plans):

Demolition

a. Demolition Permit No. 22-004 for demolition of an existing 70,000 gal. water storage tank, pump station, and ancillary development.

Construction

b. 26 ft. tall, 185,000 gal. water storage tank with a pump station, foundation improvements, piping, and ancillary development including security fencing and lighting;
c. 12 ft. tall single retaining wall; and
d. Approximately 567 cubic yards (c.y.) of understructure grading.

Discretionary Requests

e. VAR No. 26-007 for a single retaining wall above 6 ft., up to 12 ft. in height; and
f. VAR No. 26-010 for structures on slopes steeper than 2.5 to 1.

Water Storage Capacity

• Existing water tank (to be demolished):		70,000 gal.
• Proposed replacement water tank:		185,000 gal.
	Net Increase:	115,000 gal.
	Total Capacity:	185,000 gal.

LCP Analysis

The LCP consists of the LUP and the LIP. The LUP contains programs and policies implementing the Coastal Act in Malibu. The LIP contains provisions to carry out the policies of the LUP to which every project requiring a CDP must adhere. There are 14 LIP chapters that potentially apply depending on the nature and location of the proposed project. Of these, five are for conformance review only and contain no findings: 1) Zoning, 2) Grading, 3) Archaeological/Cultural Resources, 4) Water Quality, and 5) OWTS. Conformance with these LIP chapters is made below.

The nine remaining LIP chapters contain required findings: 1) CDP; 2) ESHA; 3) Native Tree Protection; 4) Scenic, Visual and Hillside Resource Protection; 5) Transfer of Development Credits; 6) Hazards; 7) Shoreline and Bluff Development; 8) Public Access; and 9) Land Division. For the reasons described in this report and resolution, including the project site, the scope of work and substantial evidence in the record, only findings in the following chapters are applicable to the proposed project: CDP;; Scenic, Visual and Hillside Resource Protection; and Hazards. These findings are made in the resolution for the Commission's consideration. Findings have also been included for the proposed VARs as required by the LIP.

The proposed project has been reviewed by the Planning Division, City Biologist, City geotechnical consultant reviewers, City Public Works Department, and the LACFD (Attachment 4 – Department Review Sheets). All conditions of approval from reviewers are included in the resolution. The project, as proposed and conditioned, has been found to be consistent with all applicable LCP codes, standards, goals and policies with the inclusion of the requested VARs.

Zoning (LIP Chapter 3)

Currently, development in the OS zone does not have specific standards in LIP Chapter 3, similar to that of residential, commercial, and institutional development. However, development in the OS zone is still subject to all other applicable chapters of the LIP as described in the report and resolution.

Grading (LIP Chapter 8)

LIP Section 8.3 ensures that new development minimizes the visual resource impacts of grading and landform alteration. The total amount of grading is 567 c.y., consisting of 567 c.y. of cut and 10 c.y. of fill, as provided for on the Total Grading Yardage Verification Certificate on the grading plan cover sheet. The project is subject to the development standards set forth in LIP Section 8.3, which limit the height of a single retaining wall to 6 ft. and slopes created for the development of structures to 3 to 1 or flatter. The project requests VARs for the height of a single retaining wall up to 12 ft. and the development of

structures on slopes steeper than 3 to 1, up to 1 to 1. While a site plan review (SPR) would allow the placement of structures on slopes steeper than 3 to 1, up to 2.5 to 1, the project proposes structures on slopes steeper than 2.5 to 1; therefore, the VAR would allow for structures on slopes steeper than 3 to 1 without need for the SPR. With the inclusion of the VARs, the proposed project complies with grading requirements set forth under LIP Section 8.3.

Archaeological / Cultural Resources (LIP Chapter 11)

LIP Chapter 11 requires certain procedures be followed to determine potential impacts on archaeological resources. There is no record of a preexisting archaeological report noting any potential cultural resources. However, the proposed building pad does not expand upon the preexisting pad that was already developed with the former water tank.

Nevertheless, a condition of approval is included in the resolution which states that in the event that potentially important cultural resources are found in the course of geologic testing or during construction, work shall immediately cease until a qualified archaeologist can provide an evaluation of the nature and significance of the resources, and until the Community Development Director can review this information. Additionally, to ensure that mitigation measures identified in the Final EIR are implemented, the lead agency, per CEQA, is required to adopt a program for monitoring or reporting on the revisions it has required for a project, and the measures it has imposed to mitigate or avoid significant environmental effects. Those mitigation measures are denoted within Chapter 4 of the Mitigation Monitoring and Reporting Program (MMRP) of which there are three specifically identified mitigation measures that are tied to cultural resources. Those three measures include a 1) cultural resource monitoring program, 2) discovery of human remains, and 3) discovery of unknown cultural resources. Each measure contains corresponding required actions that are delineated within the MMRP document for the applicant to undergo if certain events occur.

Water Quality (LIP Chapter 17)

The City Public Works Department reviewed and approved the proposed project for conformance to LIP Chapter 17 requirements for water quality protection and requirements of the State Water Resources Control Board because the property is located in an Area of Special Biological Significance (ASBS). The ocean between Latigo Point and the west City limits has been established by the State Water Resources Control Board as an ASBS as part of the California Ocean Plan. Standard conditions of approval include the implementation of approved storm water management plans during construction activities and to manage runoff from the development, including recordation of a water quality mitigation plan, and best management practices in compliance with ASBS standards. With the implementation of these conditions, the proposed project conforms to the water quality protection standards of LIP Chapter 17.

Wastewater Treatment System Standards (LIP Chapter 18)

LIP Chapter 18 addresses OWTS. LIP Section 18.7 includes specific siting, design, and performance requirements. There is no existing onsite wastewater treatment system within the subject parcel. Therefore, no conformance review was required by the City Environmental Health Administrator.

ENVIRONMENTAL REVIEW: The proposed Planning Commission actions, including without limitation, a resolution to approve a 185,000 gallon water tank with ancillary development to replace an existing water tank on the project site was adequately covered in the Final Environmental Impact Report (Final EIR) for the Los Angeles County Waterworks District No. 29 Priority Capital Deficiencies Improvements Project (State Clearinghouse No. 2014111057), certified by the Los Angeles County Board of Supervisors (Board) as lead agency on May 4, 2021. The Final EIR analyzed a replacement water tank on the project site up to 225,000 gallons. The proposed Planning Commission actions are not a separate "project" for CEQA purposes but is a subsequent discretionary approval related to a previously approved project (CEQA Guidelines Section 15378(c)). Additionally, pursuant to CEQA Guidelines Sections 15162 and 15163, and based on the review of the entire record, including without limitation, the Final EIR, the Community Development Director finds that the proposed actions do not require further environmental review as: 1) no substantial changes are proposed to the project and no substantial changes have occurred that require major revisions to the Final EIR due to the involvement of new significant environmental effects or an increase in severity of previously identified significant effects; and 2) no new information of substantial importance has come to light that (a) shows the project will have one or more significant effects not discussed in the Final EIR, (b) identifies significant impacts would be more severe than those analyzed in the Final EIR, (c) shows that mitigation measures or alternatives are now feasible that were identified as infeasible and those mitigation measures or alternatives would reduce significant impacts, and (d) no changes to mitigation measures or alternatives have been identified or are required. Pursuant to CEQA Guidelines Section 15162(b), the Community Development Director finds and recommends that no further analysis or environmental documentation is necessary. Accordingly, the proposed Planning Commission actions are merely a step-in furtherance of the original project for which environmental review was performed and no supplemental or subsequent CEQA has been triggered, and no further environmental review is required.

CORRESPONDENCE: As of publication of this report, no correspondence has been received by the Planning Division.

PUBLIC NOTICE: On September 10, 2026, staff published a Notice of Public Hearing in a newspaper of general circulation within the City of Malibu and mailed the notice to all property owners and occupants within a 500-foot radius of the subject property (Attachment 6).

SUMMARY: The required findings can be made that the proposed project complies with the LCP and MMC. Further, staff's findings of fact are supported by substantial evidence in the record. Based on the analysis contained in this report and the accompanying resolution, staff recommends approval of this project, subject to the conditions of approval contained in Section 5 (Conditions of Approval) of Planning Commission Resolution No. 26-38. The proposed project has been reviewed and conditionally approved for conformance with the LCP by the Planning Division and appropriate City and County departments.

ATTACHMENTS:

1. Planning Commission Resolution No. 26-38
2. Project Plans
3. Story Pole Photos
4. Department Review Sheets
5. Final EIR Adoption (full file available online due to size): https://pw.lacounty.gov/wwd/web/Documents/SystemImprovements/2020/WW29%20DEIR_Combined_Oct2020.pdf
6. Public Hearing Notice

CITY OF MALIBU PLANNING COMMISSION
RESOLUTION NO. 26-38

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MALIBU DETERMINING THE PROJECT IS CATEGORICALLY EXEMPT FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT, AND APPROVING COASTAL DEVELOPMENT PERMIT NO. 21-070 TO REPLACE AN EXISTING 70,000 GALLON WATER STORAGE TANK AND PUMP STATION WITH A NEW 26 FOOT TALL, 185,000 GALLON WATER STORAGE TANK AND PUMP STATION WITH ASSOCIATED DEVELOPMENT; INCLUDING DEMOLITION PERMIT NO. 22-004 TO REPLACE AN EXISTING WATER STORAGE TANK, VARIANCE NO. 26-007 FOR A SINGLE RETAINING WALL ABOVE 6 FEET AND VARIANCE NO. 26-010 FOR STRUCTURES ON SLOPES STEEPER THAN 2.5 TO 1 LOCATED IN THE PUBLIC OPEN SPACE ZONING DISTRICT AT 4501 VISTA DEL PRESEAS (LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 29)

The Planning Commission of the City of Malibu does hereby find, order and resolve as follows:

SECTION 1. Recitals.

A. On January 20, 2022, an application for Coastal Development Permit (CDP) No. 21-070 and Demolition Permit No. 22-004, were submitted to the Planning Division by the applicant, Katrine Usi of Los Angeles County Department of Public Works (LADWP), on behalf of the property owner, LA County Waterworks District No. 29 (WD29). The application was routed to the City Biologist, City geotechnical consultant reviewers, City Public Works Department, and the Los Angeles County Fire Department (LACFD) for review.

B. On April 27, 2026, after staff review, Variance (VAR) No. 26-007 was included for a single retaining wall that exceeded 6 feet (ft.) in height.

C. On June 22, 2026, after staff review, VAR No. 26-010 was included for structures on slopes steeper than 2.5 to 1.

D. On August 17, 2026, staff deemed the CDP application complete for processing.

E. On August 19, 2026, the applicant posted a Notice of CDP Application on the subject property.

F. On August 27, 2026, story poles representing the location and height of the proposed water tank were installed.

G. On August 19, 2026, Planning Division staff conducted a site visit to document site conditions, the property, and the surrounding area.

H. On August 27, 2026, a Notice of Planning Commission Public Hearing was published in a newspaper of general circulation within the City of Malibu and was mailed to all property owners and occupants within a 500 ft. radius of the subject parcels.

I. On October 5, 2026, the Planning Commission continued the item to the October 19, 2026 Regular Planning Commission meeting.

J. On October 19, 2026, the Planning Commission held a duly noticed public hearing on the subject application, reviewed and considered the agenda report, reviewed and considered written reports, public testimony, and other information in the record.

SECTION 2. Environmental Review.

The proposed Planning Commission actions, including without limitation, a resolution to approve a 185,000 gallon (gal.) water tank with ancillary development to replace an existing water tank on the project site was adequately covered in the Final Environmental Impact Report (Final EIR) for the Los Angeles County Waterworks District No. 29 Priority Capital Deficiencies Improvements Project (State Clearinghouse No. 2014111057), certified by the Los Angeles County Board of Supervisors (Board) as lead agency on May 4, 2021. The Final EIR analyzed a replacement water tank on the project site up to 225,000 gal. The Planning Commission actions are not a separate "project" for CEQA purposes but is a subsequent discretionary approval related to a previously approved project (CEQA Guidelines Section 15378(c)). Additionally, pursuant to CEQA Guidelines Sections 15162 and 15163, and based on the review of the entire record, including without limitation, the Final EIR, the Planning Commission finds that the proposed actions do not require further environmental review as: 1) no substantial changes are proposed to the project and no substantial changes have occurred that require major revisions to the Final EIR due to the involvement of new significant environmental effects or an increase in severity of previously identified significant effects; and 2) no new information of substantial importance has come to light that (a) shows the project will have one or more significant effects not discussed in the Final EIR, (b) identifies significant impacts would not be more severe than those analyzed in the Final EIR, (c) shows that mitigation measures or alternatives are now feasible that were identified as infeasible and those mitigation measures or alternatives would reduce significant impacts, and (d) no changes to mitigation measures or alternatives have been identified or are required. Pursuant to CEQA Guidelines Section 15162(b), the Planning Commission finds that no further analysis or environmental documentation is necessary. Accordingly, the Planning Commission actions are merely a step-in furtherance of the original project for which environmental review was performed and no supplemental or subsequent CEQA has been triggered, and no further environmental review is required.

SECTION 3. Coastal Development Permit Findings.

Based on evidence contained within the record and pursuant to the Local Coastal Program (LCP) Local Implementation Plan (LIP) including Sections 13.7(B) and 13.9 and Malibu Municipal Code (MMC), the Planning Commission adopts the analysis in the agenda report, incorporated herein, the findings of fact below, and approves CDP No. 21-070, VAR No. 26-007, and VAR No 26-010, to replace an existing 70,000 gal. water storage tank and pump station with a new 26 ft. tall, 185,000 gal. water tank with a pump station with associated development, and a single retaining wall up to 12 ft. in height; including VAR No. 26-007 for a single retaining wall height above 6 ft., up to 12 ft., and VAR No. 26-010 for structures on slopes steeper than 2.5 to 1, located in the Public Open Space (OS) zoning district at 4501 Vista del Preseas. The project is considered a *major public works project* pursuant to LIP Section 2.1 and, therefore, subject to the California Coastal Commission (CCC) Appealable Jurisdiction.

The project is consistent with the LCP's zoning, grading, cultural resources, water quality, and wastewater treatment system standards requirements, as applicable. The project, as conditioned,

has been determined to be consistent with all applicable LCP codes, standards, goals, and policies. The required findings are made herein.

A. General Coastal Development Permit (LIP Chapter 13)

1. *That the project as described in the application and accompanying materials, as modified by any conditions of approval, conforms with the certified City of Malibu Local Coastal Program.*

The project is a public water storage facility owned and operated by a public water agency (WD29) on land the agency owns. This project would replace an existing water tank that serves the Upper Encinal Canyon neighborhood within Western Malibu. Coastal Act Section 30114 and LIP Section 2.1 define "public works" to include all production, storage, transmission, and recovery facilities for water owned or operated by any public agency. The project meets that definition. The LCP addresses facilities of this type directly in LCP Land Use Plan (LUP) Policy 7.16 and LIP Section 18.11(E), which provide that "additional water storage facilities and/or new pipelines may be allowed in the City to replace deteriorated or undersized facilities and/or to ensure an adequate source of domestic and fire protection water supply during outages or pipeline interruptions provided such facilities are designed and limited to accommodate existing or planned development allowed by the Land Use Plan and can be found consistent with all applicable policies of the LCP." The LUP and LIP provisions are not stated by zoning district but apply citywide. Similar to other types of public works, such as roads and utility distribution projects, LIP Appendix 1 Table B would not apply for this type of project; however, it is still subject to the policies of the LCP and all applicable development standards, including the height of retaining walls, the placement of structures on steep slopes, and protections standards related to Environmentally Sensitive Habitat Area (ESHA), scenic resources, public access, and hazards.

The project is not covered by Governor Executive Order (EO) N-20-25 and, therefore, is subject to the Coastal Act/LCP. Therefore, review is not limited to the Malibu Municipal Code (MMC). Since the project is subject to the Coastal Act/LCP, the discretionary entitlement is a CDP, and the governing findings are those in LIP Section 13.9. The CDP process provides for conditions of approval and, for this type of project, a noticed public hearing. Since this type of project is classified as public works allowed in the City pursuant to LUP Policy 7.16 and LIP Section 18.11(E), a conditional use permit (CUP) is not available to this project. Further, because the project is defined as a major public works project in LIP Section 2.1, the City's action on the CDP and VARs would be appealable to the CCC pursuant to LIP Chapter 13 and Coastal Act Section 30603(a)(5).

The proposed project has been reviewed for conformance with the LCP by the Planning Division, City Biologist, City Public Works Department, City geotechnical consultant reviewers, and LACFD. As discussed herein, based on submitted reports, project plans, visual analysis and site investigation, the proposed project, as conditioned, conforms to the LCP in that it meets all applicable development standards, inclusive of the requested VARs.

2. *If the project is located between the first public road and the sea, that the project is in conformity to the public access and recreation policies of Chapter 3 of the Coastal Act of 1976 (commencing with Sections 30200 of the Public Resources Code).*

The project is not located between the first public road and the sea. Therefore, this finding is not applicable.

3. *The project is the least environmentally damaging alternative.*

There is no evidence that an alternative project would substantially lessen any potential significant adverse impacts of the development on the environment. The proposed project consists of the replacement of an existing water storage tank and pump station with a new water tank and pump station on the same building pad as the existing tank. As designed, all proposed development will remain within the existing developed area and avoids encroachment into onsite ESHA. A single retaining wall up to 12 ft. in height is proposed to the rear of the water tank to protect the tank location and ensure safe access is maintained around the tank. Although development would occur on slopes steeper than 2.5 to 1, the project design utilizes a single-wall design to the rear of the water tank versus a stacked wall design upslope from the water tank. This allows less landform alteration and keeps to proposed development clustered within the existing developed area. The Planning Division, City Biologist, City geotechnical consultant reviewers, and City Public Works Department reviewed the proposed project for conformance with the LCP, and these specialists found the project meets all applicable development standards, inclusive of the two VARs. The proposed project, as conditioned, will comply with all applicable requirements of state and local law. As designed, the project complies with the requirements of the LCP and represents the least environmentally damaging feasible alternative as no alternative provides a superior project to the one proposed.

4. *If the project is located in or adjacent to an environmentally sensitive habitat area pursuant to Chapter 4 of the Malibu LIP (ESHA Overlay), that the project conforms with the recommendations of the Environmental Review Board, or if it does not conform with the recommendations, findings explaining why it is not feasible to recommend action.*

With exception to the existing water tank location and supporting infrastructure, , the driveway, Vista del Preseas roadway, and most of the subject parcels are mapped as ESHA pursuant to the LCP ESHA Overlay Map. Per the City Biologist's review and LIP Section 4.4.4(C), a detailed biological study of the site and review by the Environmental Review Board (ERB) were not required as the project involves the replacement of an existing water tank on an existing building padTherefore, ERB review was not required, and this finding is not applicable. The project also involves the northward trenching of a water line along Portrero Road of which the Malibu Pacific Trail simultaneously occupies. This area occurs in Environmentally Sensitive Habitat Area pursuant to the LCP ESHA Overlay Maps, however, pursuant to Section 4.5.3 of the LIP, *public accessways and trails* are a permitted use within "other types of ESHA" that are neither wetlands or streams.

B. Variance No. 26-007 from LIP Section 8.3(C) for Single Retaining Wall Height Above 6 Feet (LIP Section 13.26.5)

LIP Section 8.3(C) limits the height of a single retaining wall to 6 ft. or a combination of walls to 12 ft. The VAR is to allow the height of a single retaining wall up to 12 ft. located to the rear of the water tank. LIP Section 13.26.5 states that the Planning Commission may approve and/or modify an application for a VAR in whole or in part, with or without conditions, only if it makes ten findings of fact. Based on the foregoing evidence, findings for VAR No. 26-007 are made as follows.

1. *There are special circumstances or exceptional characteristics applicable to the subject property, including size, shape, topography, location, or surroundings such that strict application of the zoning ordinance deprives such property of privileges enjoyed by other property in the vicinity and under the identical zoning classification.*

Special circumstances exist due to the unique topography and physical constraints of the existing Upper Encinal Tank site. The site is bounded by a steep descending slope to the front and an ascending hillside to the rear, resulting in a limited developable footprint. The existing tank facility predates many of the current LIP development standards, and there are no other feasible locations on the subject parcels to accommodate the replacement tank required to provide increased water storage and fire protection capacity. Strict application of the retaining wall height limitation would require substantially greater hillside excavation and disturbance in order to create a combination of walls versus a single wall within the existing developed area. The single wall design would protect the tank location and ensure safe access is maintained around the tank, while keeping development clustered within the existing developed area. The VAR also allows for the reasonable upsizing of the existing water tank consistent with LUP Policy 7.16 and LIP Section 18.11(E). Accordingly, the VAR is necessitated by the site's existing topographic constraints, limited developable area, and feasibility of utilizing the existing developed area to the maximum extent feasible without requiring more landform alteration or encroachment toward onsite ESHA.

2. *The granting of such variance will not be detrimental to the public interest, safety, health or welfare, and will not be detrimental or injurious to the property or improvements in the same vicinity and zone(s) in which the property is located.*

The VAR will facilitate replacement of an existing 70,000 gal. water storage tank with a new 185,000 gal. water tank with a pump facility. As described in Finding A.1, the replacement water tank would increase system reliability and improve WD29's ability to provide emergency water storage and fire-flow capacity to the surrounding community as planned for in the LUP. Furthermore, the proposed single retaining wall would minimize grading and disturbance to the hillside behind the water tank compared to a terraced combination wall configuration. The VAR, therefore, provides a public benefit while avoiding potentially adverse impacts to surrounding properties and/or coastal resources. The scope of the VAR has been reviewed and conditionally approved by the City geotechnical consultant reviewers, City Public Works Department, City Biologist, and the Planning Division.

3. *The granting of the variance will not constitute a special privilege to the applicant or property owner.*

The VAR is necessitated by the unique topographic constraints and limited developable area of the existing Upper Encinal Tank site and is the minimum relief necessary to protect the tank location and ensure safe access is maintained around the tank, while keeping development clustered within the existing developed area. The VAR does not authorize development beyond that required to construct the replacement tank and associated improvements, and does not provide allowances that would not be available to other properties with similar constraints. Rather, it allows reasonable use of an existing water storage facility while minimizing grading and hillside disturbance with a single retaining wall design versus a combination wall design. The VAR would

not constitute a special privilege because it would allow for the development of a replacement water tank designed to increase system reliability and improve WD29's ability to provide emergency water storage and fire-flow capacity to the surrounding community as planned for in the LUP.

4. *The granting of such variance will not be contrary to or in conflict with the general purposes and intent of this Chapter, nor to the goals, objectives and policies of the LCP.*

The VAR facilitates the replacement of an existing public water storage tank that will improve system reliability, emergency water storage, and fire protection for the surrounding community and is consistent with the LCP as described in Finding A.1. The proposed single retaining wall minimizes grading, excavation, and disturbance of the hillside compared to a terraced, combination wall configuration that complies with LIP Chapter 8 height allowances. The VAR thereby furthers the LCP's objectives of protecting natural landforms and minimizing environmental impacts. In addition, the retaining wall will be largely screened from public view from Decker Canyon Road, an LCP designated scenic road, due to its orientation behind the replacement tank and surrounding topography. Accordingly, the VAR is consistent with the overall purpose and intent of the Malibu LCP.

5. *For variances to environmentally sensitive habitat area buffer standards or other environmentally sensitive habitat area protection standards, that there is no other feasible alternative for siting the structure and that the development does not exceed the limits on allowable development area set forth in Section 4.7 of the Malibu LIP.*

The project site is not located in ESHA or ESHA buffer. Therefore, this finding is not applicable. Nonetheless, there is no feasible alternative location on the subject parcels for the proposed replacement tank and associated retaining wall that would be more protective of ESHA than the proposed site. The project is located within an existing building area that predates current LIP standards and is constrained by steep topography and is surrounded by ESHA. As acknowledged during discussions with City staff, application of a 100 ft. ESHA buffer is not feasible at this existing facility due to the site's established development footprint and surrounding environmental constraints. While the proposed improvements require a limited expansion of the existing tank footprint to accommodate the larger tank storage volume, no portion of the project extends outside or the existing developed area or into mapped ESHA. Furthermore, the proposed single retaining wall minimizes the extent of grading, site disturbance, and expansion compared to a terraced, combination retaining wall configuration and represents the minimum development necessary to accommodate the replacement tank and associated infrastructure. Accordingly, no feasible alternative siting location exists, and the proposed VAR does not result in encroachment into ESHA or unavoidable impacts to adjacent environmental resources. Though this project does not request a VAR to ESHA or ESHA buffer standards, the project does propose northerly trenching along Portrero Road of which the Malibu Pacific Trail simultaneously occupies. Pursuant to Section 4.5.3 of the LIP, permitted uses within ESHA include public accessways and trails, and thus the proposed project satisfies the established criteria for a permitted use.

6. *For variances to stringline standards, that the project provides maximum feasible protection to public access as required by Chapter 12 of the Malibu LIP.*

The VAR is not associated with stringline standards. Therefore, this finding is not applicable.

7. *The variance request is consistent with the purpose and intent of the zone(s) in which the site is located. A variance shall not be granted for a use or activity which is not otherwise expressly authorized by the zone regulation governing the parcel of property.*

The VAR is for relief from a specific development standard related to retaining wall height in LIP Section 8.3(C). As described in Finding A.1, the project is classified as public works and is authorized pursuant to LUP Policy 7.16 and LIP Sections 2.1 and 18.11(E). Similar to other types of public works, such as roads and utility distribution projects, LIP Appendix 1 Table B would not apply for this type of project; however, it is still subject to the policies of the LCP and all applicable development standards, including the height of retaining walls, the placement of structures on steep slopes, and protections standards related to ESHA, scenic resources, public access, and hazards. The VAR pertains solely to the height of the retaining wall required to accommodate the replacement tank and as designed, would minimize grading, excavation, and disturbance of the surrounding hillside compared to a terraced, combination retaining wall configuration consistent with the wall height requirements in LIP Section 8.3(C). The VAR would allow for reduced impacts to existing hillside and open space resources and, therefore, supports the resource protection objectives of the Public Open Space zoning district while facilitating continued operation of critical public water infrastructure in the area.

8. *The subject site is physically suitable for the proposed variance.*

The subject parcels have long been utilized for public water storage and are capable of accommodating the proposed replacement tank and associated retaining wall improvements at the existing development site. The retaining wall is specifically designed to create a stable tank pad and ensure access around the tank within the site's existing topographic constraints while minimizing grading and disturbance of the surrounding hillside. The project has been designed and will be constructed in accordance with applicable building code and recommendations of the site-specific geotechnical evaluation prepared for the project. Accordingly, the site is physically suitable for the VAR and associated retaining wall.

9. *The variance complies with all requirements of state and local law.*

The City geotechnical consultant reviewers, City Public Works Department, Planning Division, and City Biologist reviewed the proposed project. As conditioned, all reviewing specialists have determined that the project would comply with state and local requirements, inclusive of the VAR. The VAR complies with all applicable requirements of state and local law. The replacement tank, retaining wall, and associated improvements have been designed and will be constructed in accordance with applicable codes, standards, and permit requirements.

10. *A variance shall not be granted that would allow reduction or elimination of public parking for access to the beach, public trails or parklands.*

The VAR is not associated with a request to reduce or eliminate public parking for access to the beach, public trails, or parklands. There is currently no public parking on the subject parcel or nearby public parking that would be affected by the proposed project. Granting the VAR would not result in impacts to public parking or recreational access in the area.

C. Variance No. 26-010 from LIP Section 8.3(D) for Development of Structures on Slopes Steeper than 2.5 to 1 (LIP Section 13.26.5)

LIP Section 8.3(D) limits areas created for the development of structures to slopes 3 to 1 or flatter. Note that LIP Section 13.27.1(A)(4) allows the development of structures on slopes between 3 to 1 and 2.5 to 1 subject to a site plan review (SPR); however, development on slopes steeper than 2.5 to 1 requires a VAR. Since the project proposes structures on slopes steeper than 2.5 to 1, the VAR would authorize development on slopes steeper than 3 to 1 without need for an SPR. LIP Section 13.26.5 states that the Planning Commission may approve and/or modify an application for a VAR in whole or in part, with or without conditions, only if it makes ten findings of fact. Based on the foregoing evidence, findings for VAR No. 26-010 are made as follows.

1. *There are special circumstances or exceptional characteristics applicable to the subject property, including size, shape, topography, location, or surroundings such that strict application of the zoning ordinance deprives such property of privileges enjoyed by other property in the vicinity and under the identical zoning classification.*

Special circumstances exist due to the unique topography and physical constraints of the existing Upper Encinal Tank site. The site is bounded by a steep descending slope to the front and a steep ascending hillside to the rear, resulting in a limited developable footprint. The existing tank facility predates many of the current development standards, and there are no other feasible locations on the parcel to accommodate the replacement tank required to provide increased water storage and fire protection capacity. Similarly, strict application of the steep slope limitation would require a narrower footprint and taller tank design to provide the capacity needed for increased water storage and fire protection capacity. The broader footprint design into stepper slopes would allow the replacement tank to maintain a maximum height of 26 ft., which is consistent with the LCP's maximum height allowance for other types of development, and provide the intended water storage capacity. It would also allow the replacement tank to remain clustered within the existing developed area. The VAR allows for the reasonable upsizing of the existing water tank consistent with LUP Policy 7.16 and LIP Section 18.11(E). Accordingly, the VAR is necessitated by the site's existing topographic constraints, limited developable area, and feasibility of utilizing the existing developed area to the maximum extent feasible without requiring more landform alteration, encroachment toward onsite ESHA, or potential scenic resource impacts with a taller tank design.

2. *The granting of such variance will not be detrimental to the public interest, safety, health or welfare, and will not be detrimental or injurious to the property or improvements in the same vicinity and zone(s) in which the property is located.*

The VAR will facilitate replacement of an existing 70,000 gal. water storage tank with a new 185,000 gal. water tank with a pump facility. As described in Finding A.1, the replacement water tank would increase system reliability and improve WD29's ability to provide emergency water storage and fire-flow capacity to the surrounding community as planned for in the LUP. Furthermore, the proposed size of the tank, location and associated grading and system components have been designed to include minimize landform alteration on the surrounding hillside, and potential scenic resource impacts to the extent feasible. The VAR, therefore, provides a public benefit while avoiding potentially adverse impacts to surrounding properties and/or coastal resources. The scope of the VAR has been reviewed and conditionally approved by the

City geotechnical consultant reviewers, City Public Works Department, City Biologist, and the Planning Division.

3. *The granting of the variance will not constitute a special privilege to the applicant or property owner.*

The VAR is necessitated by the unique topographic constraints and limited developable area of the existing Upper Encinal Tank site and is the minimum relief necessary to accommodate the proposed replacement tank within the LIP's maximum allowed height limit for development, while keeping development clustered within the existing developed area. The VAR does not authorize development beyond that required to construct the replacement tank and associated improvements, and does not provide allowances that would not be available to other properties with similar constraints. Rather, it allows reasonable use of an existing water storage facility while minimizing grading, hillside disturbance, and visual impacts. The VAR would not constitute a special privilege because it would allow for the development of a replacement water tank designed to increase system reliability and improve WD29's ability to provide emergency water storage and fire-flow capacity to the surrounding community as planned for in the LUP.

4. *The granting of such variance will not be contrary to or in conflict with the general purposes and intent of this Chapter, nor to the goals, objectives and policies of the LCP.*

The VAR facilitates replacement of an existing public water storage tank that will improve system reliability, emergency water storage, and fire protection for the surrounding community and is consistent with the LCP as described in Finding A.1. The proposed grading, retaining wall, and associated site improvements represent the minimum extent of disturbance necessary to accommodate the replacement tank while minimizing grading, disturbance to the surrounding hillside, and potential scenic resource impacts to the extent feasible. In addition, the replacement tank and retaining wall will be largely screened from public view from Decker Canyon Road, an LCP designated scenic road, due to its orientation on the site and surrounding topography, further minimizing potential visual impacts to the surrounding area. Accordingly, the VAR is consistent with the overall purpose and intent of the Malibu LCP.

5. *For variances to environmentally sensitive habitat area buffer standards or other environmentally sensitive habitat area protection standards, that there is no other feasible alternative for siting the structure and that the development does not exceed the limits on allowable development area set forth in Section 4.7 of the Malibu LIP.*

The project site is not located in ESHA or ESHA buffer. Therefore, this finding is not applicable. Nonetheless, there is no feasible alternative location on the subject parcels for the proposed replacement tank and associated retaining wall that would be more protective of ESHA than the proposed site. The project is located within an existing building area that predates current LIP standards and is constrained by steep topography and is surrounded by ESHA. As acknowledged during discussions with City staff, application of a 100 ft. ESHA buffer is not feasible at this existing facility due to the site's established development footprint and surrounding environmental constraints. While the proposed improvements require a limited expansion of the existing tank footprint to accommodate the larger tank storage volume, no portion of the project extends outside

or the existing developed area or into mapped ESHA. Furthermore, the proposed retaining wall and replacement water tank minimize the extent of grading, site disturbance, and potential impacts to scenic resources compared to alternate configurations and designs. As proposed, the project represents the minimum development necessary to accommodate the replacement tank and associated infrastructure in accordance with LUP Policy 7.16 and LIP Section 18.11(E). Accordingly, no feasible alternative siting location exists, and the proposed VAR does not result in encroachment into ESHA or unavoidable impacts to adjacent environmental resources. Though this project does not request a VAR to ESHA or ESHA buffer standards, the project does propose northerly trenching along Portrero Road of which the Malibu Pacific Trail simultaneously occupies. Pursuant to Section 4.5.3 of the LIP, permitted uses within ESHA include public accessways and trails, and thus the proposed project satisfies the established criteria for a permitted use.

6. *For variances to stringline standards, that the project provides maximum feasible protection to public access as required by Chapter 12 of the Malibu LIP.*

The VAR is not associated with stringline standards. Therefore, this finding is not applicable.

7. *The variance request is consistent with the purpose and intent of the zone(s) in which the site is located. A variance shall not be granted for a use or activity which is not otherwise expressly authorized by the zone regulation governing the parcel of property.*

The VAR is for relief from a specific development standard related to the development of areas for structures on slopes steeper than 3 to 1 in LIP Section 8.3(D). As described in Finding A.1, the project is classified as public works and is authorized pursuant to LUP Policy 7.16 and LIP Sections 2.1 and 18.11(E). Similar to other types of public works, such as roads and utility distribution projects, LIP Appendix 1 Table B would not apply for this type of project; however, it is still subject to the policies of the LCP and all applicable development standards, including the height of retaining walls, the placement of structures on steep slopes, and protections standards related to ESHA, scenic resources, public access, and hazards. The VAR pertains solely to development of areas for structures on steeper slopes as required to accommodate the replacement tank and as designed, would minimize grading and potential scenic resource impacts on the surrounding hillside compared to an alternate configuration consistent with the slope allowances in LIP Section 8.3(D). The VAR would allow for reduced impacts to existing hillside and open space resources and, therefore, supports the resource protection objectives of the Public Open Space zoning district while facilitating continued operation of critical public water infrastructure in the area.

8. *The subject site is physically suitable for the proposed variance.*

The subject parcels have long been utilized as a public water storage and are capable of accommodating the proposed replacement tank and associated retaining wall improvements at the existing development site. The proposed grading, retaining wall, and associated site improvements within portions of the existing hillside where slopes exceed 3 to 1, including exceedance of 2.5 to 1, have been specifically designed to create a stable, level tank pad within the site's existing topographic constraints and minimizing grading, disturbance to the surrounding hillside, and potential scenic resource impacts to the extent feasible. The project has been designed and will be constructed in accordance with applicable building codes and recommendations of the site-specific

geotechnical evaluation prepared for the project. Accordingly, the site is physically suitable for the VAR and associated structures.

9. *The variance complies with all requirements of state and local law.*

The City geotechnical consultant reviewers, City Public Works Department, Planning Division, and City Biologist reviewed the proposed project. As conditioned, all reviewing specialists have determined that the project would comply with state and local requirements, inclusive of the VAR. The VAR complies with all applicable requirements of state and local law. The replacement tank, retaining wall, and associated improvements have been designed and will be constructed in accordance with applicable codes, standards, and permit requirements.

10. *A variance shall not be granted that would allow reduction or elimination of public parking for access to the beach, public trails or parklands.*

The VAR is not associated with a request to reduce or eliminate public parking for access to the beach, public trails, or parklands. There is currently no public parking on the subject parcel or nearby public parking that would be affected by the proposed project. Granting the VAR would not result in impacts to public parking or recreational access in the area.

D. Environmentally Sensitive Habitat Area Overlay Findings (LIP Chapter 4)

As described in Findings A.4, B.5, and C.5, the existing developed area is surrounded by mapped ESHA With exception to the existing water tank location and supporting infrastructure, including the driveway and Vista del Preseas roadway, most of the subject parcels include mapped ESHA. While the subject parcel primarily consists of ESHA the existing water tank's development pad will not be expanded upon to construct the proposed water tank. Thus, per LIP Section 4.4.4, neither a biological study nor review by the Environmental Review Board were required per the City Biologist. Nevertheless, this project will be conditioned to stay within the existing development pad in order to avoid any potential impacts that further encroach into the ESHA buffer. Though this project does not request a VAR to ESHA or ESHA buffer standards, the project does propose northerly trenching along Portrero Road of which the Malibu Pacific Trail simultaneously occupies. Pursuant to Section 4.5.3 of the LIP, permitted uses within ESHA include public accessways and trails, and thus the proposed project satisfies the established criteria for a permitted use.

E. Native Tree Protection (LIP Chapter 5)

There are no native trees on or adjacent to the subject parcels. Therefore, the findings of LIP Chapter 5 are not applicable.

F. Scenic, Visual and Hillside Resource Protection (LIP Chapter 6)

The Scenic, Visual, and Hillside Resource Protection Chapter governs those CDP applications concerning any parcel of land that is located along, within, provides views to or is visible from any scenic area, scenic road or public viewing area. The proposed project site is visible from Decker Canyon Road, which is an LCP-designated scenic road, and the Malibu Pacific Trail which is mapped and developed. Therefore, the findings of LIP Chapter 6 are applicable.

1. *The project, as proposed, will have no significant adverse scenic or visual impacts due to the project design, location on the site or other reasons.*

The existing water tank is located adjacent to the Malibu Pacific Trail that bifurcates the parcel for which the existing development pad utilizes the site. The project is also visible from Decker Canyon Road which is a scenic road per the LIP. As previously discussed, the proposed project will not expand the existing development area but will include a larger water tank footprint than the existing water tank in order to provide sufficient water storage capacity. Currently, development in the OS zone does not have specific standards in LIP Chapter 3, including maximum height, that is typical of residential, commercial, and institutional development. However, development in the OS zone is still subject to all other applicable chapters of the LIP. Even though the OS zone does not apply a height standard, the replacement tank will not exceed the LIP's maximum height allowance of 26 ft. for other types of development in the City's residential, commercial, and institutional zones. Per an onsite investigation by city staff, the view from Decker Canyon Road in view of the existing tank does not currently obstruct impressive views of the Pacific Ocean at its current height. The associated development that will include the retaining wall and underground trenching does not propose impacts that reach the existing or proposed height of the water tank. Staff was able to approximate the height of the existing water tank using digital aerial imagery from the Los Angeles Region Imagery Acquisition Consortium (LARIAC) Building Footprint dataset from the County of Los Angeles Internal Services Department; the existing height of the water tank is approximately 16 feet. The proposed height of the new water tank will reach 26 feet. However, there are no current visual impacts to impressive views of the Pacific Ocean due to the site's topography from the either the vantage point of scenic road Decker Canyon or the associated Malibu Pacific Trail. The applicant placed story poles on the site on August 31, 2026 to which staff was also able to conduct a site investigation to further understand any potential visual impacts with the new design. . Thus, the new development will not create any new significant adverse scenic or visual impacts that either affect the Malibu Pacific Trail or scenic views emanating from Decker Canyon Road.

2. *The project, as conditioned, will not have significant adverse scenic or visual impacts to required project modifications, landscaping or other conditions.*

As conditioned, the project will not have significant adverse scenic or visual impacts as the extent of development is consistent with Finding F.1. As conditioned, the project's scenic and visual effects are minimized to the maximum extent feasible by ensuring that height does not exceed 26 ft., that the color of the tank will be compatible with the surrounding environment, and that reflective materials are not proposed.

3. *The project, as proposed or as conditioned, is the least environmentally damaging alternative.*

As discussed in Finding A.3, the project is the least environmentally damaging alternative. No alternative was identified that would still achieve the water storage capacity needs on the site, consistent with LUP Policy 7.16 and LIP Section 18.11(E), than the existing project. As designed, the 26 ft. tall tank would replacement an existing 16 ft. tall tank, maintain the existing use of the site, and utilize the same building footprint.

4. *There are no feasible alternatives to development that would avoid or substantially lessen any significant adverse impacts on scenic or visual resources.*

The project, as designed and conditioned, is not expected to adversely affect scenic and visual resources and no feasible alternatives would avoid or substantially lessen any significant adverse impacts on scenic and visual resources.

5. *Development in a specific location on the site may have adverse scenic and visual impacts but will eliminate, minimize, or otherwise contribute to conformance to sensitive resource protection policies contained in the certified LCP.*

The subject property is visible from Decker Canyon Road and the Malibu Pacific Trail; however, the proposed structure will not block prominent views that are visible from this scenic road, or other public viewing areas, per LIP Section 6.8. The proposed project is both utilizing the flattest area of the site via the existing building pad, and also minimizing impacts to ESHA located to the east, west, and north by clustering development within the existing developed area. By replacing the existing water tank with a larger tank versus constructing an additional (second tank), the proposed project would occupy less area on the site and avoids expansion of the development footprint into mapped ESHA. While the replacement tank is larger than the existing tank, as proposed, the project ensures that potential impacts to sensitive resource protections are minimized and avoided.

G. Transfer of Development Credits (LIP Chapter 7)

The proposed project does not include a land division or multi-family development. Therefore, the findings of LIP Chapter 7 are not applicable.

H. Hazards (LIP Chapter 9)

Pursuant to LIP Section 9.3, written findings of fact, analysis and conclusions addressing geologic, flood and fire hazards, structural integrity or other potential hazards listed in LIP Sections 9.2(A)(1-7) must be included in support of all approvals, denials or conditional approvals of development located on a site or in an area where it is determined that the proposed project causes the potential to create adverse impacts upon site stability or structural integrity.

The proposed development has been analyzed for the hazards listed in LIP Chapter 9 by the Planning Division, City Biologist, City geotechnical consultant reviewers, and the City Public Works Department. The required findings are made as follows:

1. *The project, as proposed will neither be subject to nor increase instability of the site or structural integrity from geologic, flood, or fire hazards due to project design, location on the site or other reasons.*

The project site is located within a mapped landslide hazard area and the La Chuza Highlands landslide/debris flow complex. The City's geotechnical consultants reviewed the proposed water tank project and marked the project as acceptable from a geotechnical perspective. The review addressed the site's landslide hazards and slope stability under static and seismic loading conditions and identified the requirement that the applicable minimum factors of safety be met. The consultants further recommended that the final water tank plans be reviewed, signed, and stamped by the County of Los Angeles Geotechnical Materials Engineering Division and that the plans incorporate a regular monitoring program for the slope inclinometer installed adjacent to the

proposed tank, including an appropriate response plan for detected movement, as warranted.

The project shall comply with the applicable requirements of LIP Chapter 9. The final plans shall incorporate the required geotechnical review and slope monitoring measures, and compliance with the applicable minimum factors of safety shall be documented to the satisfaction of the City's geotechnical reviewers during Building Plan Check.

Fire Hazard

The entire City of Malibu is designated as a Very High Fire Hazard Severity Zone, a zone defined by a more destructive behavior of fire and a greater probability of flames and embers threatening buildings. The subject parcel is currently subject to wildfire hazards. The proposed development is not expected to increase the subject parcel's susceptibility to wildfire or have an adverse impact on wildfire hazards. The certified Final EIR from April of 2021 for this project included wildfire as a potential hazard for this project and subsequently found that the Construction of this project would carry a "Less than Significant" impact whilst the operation would carry "No impact" per the Summary of Proposed Project Impacts and Mitigation Measures within Table ES-1.

As conditioned, all recommendations of the City geotechnical consultant reviewers and City Public Works Department shall be incorporated into the final design and construction, including foundations and grading. Final plans shall be reviewed and approved by the City geotechnical consultant reviewers and City Public Works Department prior to the issuance of a grading permit.

2. *The project, as conditioned, will not have significant adverse impacts on site stability or structural integrity from geologic, flood or fire hazards due to required project modifications, landscaping or other conditions.*

As discussed in Finding H.1, the project, as designed, conditioned, and approved by the City geotechnical consultant reviewers and City Public Works Department, does not have any significant adverse impacts on site stability or structural integrity from geologic or fire hazards due to the project design.

3. *The project, as proposed or as conditioned, is the least environmentally damaging alternative.*

As discussed in Finding A.3, the project is the least environmentally damaging alternative. No alternative was identified that would still achieve the water storage capacity needs on the site, consistent with LUP Policy 7.16 and LIP Section 18.11(E), than the existing project. As designed, the replacement tank will maintain the existing use of the site for water storage and utilize the same building footprint as currently exists.

4. *There are no alternatives to development that would avoid or substantially lessen impacts on site stability or structural integrity.*

The proposed development has been analyzed for the hazards listed in LIP Chapter 9 by the Planning Division, City Biologist, City Public Works Department, City geotechnical consultant reviewers, , and LACFD. It has been determined that the proposed project does not impact site stability or structural integrity. As previously discussed in Finding A.3, there are no feasible alternatives to development and due to site constraints, any other project alternative would result in more grading and land disturbance, construction on steep slopes, and a potential increase in encroachment into ESHA and ESHA buffer.

5. *Development in a specific location on the site may have adverse impacts but will eliminate, minimize or otherwise contribute to conformance to sensitive resource protection policies contained in the certified Malibu LCP.*

As discussed in Finding A.3, the proposed project, as designed and conditioned, is the least environmentally damaging alternative and no adverse impacts to sensitive resources are anticipated. City Geotechnical reviewers in tandem with the City Building Official conditionally approved the project on the requirement that the minimum factors of safety for static and seismic conditions need to be met for the proposed tank.

I. Shoreline and Bluff Development (LIP Chapter 10)

The subject parcels are not located on or along the shoreline, a coastal bluff, or bluff top fronting the shoreline. Therefore, the findings of LIP Chapter 10 are not applicable.

J. Public Access (LIP Chapter 12)

In accordance with LIP Section 12.6(B)(2), the project is exempt from providing public lateral, vertical, bluff top, trail or recreational access for the following reasons:

A. Lateral and Vertical Access - The project is not located on or adjacent to a shoreline. No provision for vertical or lateral access is warranted.
B. Blufftop Access – The project is not located on or adjacent to a bluff fronting the ocean. No provision for blufftop access the beach is warranted.
C. Trail Access - The project site is located near the developed and mapped Malibu Pacific Trail as shown on the LCP Park Lands Map. No provision for trail access is warranted. Access to the trail will not be obstructed by development as the development will not expand the overall building pad and adequate access exists nearby through Vista del Preseas.
D. Recreational Access - The project site does not include any existing or planned public recreational areas and does not extend onto or impede upon existing recreational access. No provision for recreational access is warranted.

No potential project-related or cumulative impacts on public access and/or recreation are anticipated to result from the proposed project. The proposed project conforms to the public access and recreational policies in Chapter 3 of the Coastal Act of 1976. Therefore, the requirement for public access of LIP Section 12.4 does not apply and further findings are not required.

K. Land Division (LIP Chapter 15)

The project does not include a land division. Therefore, the findings of LIP Chapter 15 are not applicable.

SECTION 4. Planning Commission Action.

Based on the foregoing findings and evidence contained within the record, the Planning Commission hereby approves CDP No. 21-070, VAR 26-007, VAR 26-010 and DP No. 22-004. subject to the following conditions.

SECTION 5. Conditions of Approval.

Standard Conditions

1. The property owners, and their successors in interest, shall indemnify and defend the City of Malibu and its officers, employees and agents from and against all liability and costs relating to the City's actions concerning this project, including (without limitation) any award of litigation expenses in favor of any person or entity who seeks to challenge the validity of any of the City's actions or decisions in connection with this project. The City shall have the sole right to choose its counsel and property owners shall reimburse the City's expenses incurred in its defense of any lawsuit challenging the City's actions concerning this project.

2. Approval of this application is to allow for the project described herein. The scope of work approved includes:

   Demolition

   a. Demolition Permit No. 22-004 for demolition of an existing 70,000 gal. water storage tank, pump station, and ancillary development.

   Construction

   b. 26 ft. tall 185,000 gal. water storage tank with a pump station, foundation improvements, piping, and ancillary development including security fencing and lighting
   c. 12 ft. tall single retaining wall
   d. Approximately 567 cubic yards (c.y.) of understructure grading

   Discretionary Requests

   e. VAR No. 26-007 for a single retaining wall above 6 ft., up to 12 ft. in height
   f. VAR No. 26-010 for structures on slopes steeper than 2.5 to 1

3. Except as specifically changed by conditions of approval, the proposed development shall be constructed in substantial conformance with the approved scope of work, as described in Condition No. 2 and depicted on plans on file with the Planning Division date stamped **February 6, 2026**. The proposed development shall further comply with all conditions of approval stipulated in this resolution and Department Review Sheets attached hereto. In the event project plans conflict with any condition of approval, the condition shall take precedence.

4. Pursuant to LIP Section 13.18.2, this permit and rights conferred in this approval shall not be effective until the property owner signs, notarizes and returns the Acceptance of Conditions Affidavit accepting the conditions of approval set forth herein. The applicant shall file this form with the Planning Division prior to the issuance of any development permits.

5. The applicant shall digitally submit a complete set of plans to the Planning Division for consistency review and approval prior to plan check and again prior to the issuance of any building or development permits.

6. The CDP shall expire if the project has not commenced within three (3) years after issuance of the permit, unless a time extension has been granted. Extension of the permit may be granted by the approving authority for due cause. Extensions shall be requested in writing by the applicant or authorized agent prior to expiration of the three-year period and shall set forth the reasons for the request. In the event of an appeal, the CDP shall expire if the project has not commenced within three years from the date the appeal is decided by the decision-making body or withdrawn by the appellant.

7. Any questions of intent or interpretation of any condition of approval will be resolved by the Community Development Director upon written request of such interpretation.

8. All development shall conform to requirements of the City Biologist, City geotechnical consultant reviewers, City Public Works Department, and LACFD, as applicable. Notwithstanding this review, all required permits shall be secured.

9. Minor changes to the approved plans or the conditions of approval may be approved by the Community Development Director, provided such changes achieve substantially the same results and the project is still in compliance with the LCP and MMC. Revised plans reflecting the minor changes and additional fees shall be required.

10. Pursuant to LIP Section 13.20, development pursuant to an approved CDP shall not commence until the CDP is effective. The CDP is not effective until all appeals, including those to the CCC, have been exhausted. In the event that the CCC denies the permit or issues the permit on appeal, the CDP approved by the City is void.

11. The property owner must submit payment for all outstanding fees payable to the City prior to issuance of any building permit, including grading or demolition.

Cultural Resources

12. In the event that potentially important cultural resources are found in the course of geologic testing or during construction, work shall immediately cease until a qualified archaeologist can provide an evaluation of the nature and significance of the resources and until the Community Development Director can review this information. Thereafter, the procedures contained in LIP Chapter 11 and those in MMC Section 17.54.040(D)(4)(b) shall be followed.

13. If human bone is discovered during geologic testing or during construction, work shall immediately cease and the procedures described in Section 7050.5 of the California Health and Safety Code shall be followed. Section 7050.5 requires notification of the coroner. If the coroner determines that the remains are those of a Native American, the applicant shall notify the Native American Heritage Commission by phone within 24 hours. Following notification of the Native American Heritage Commission, the procedures described in Section 5097.94 and Section 5097.98 of the California Public Resources Code shall be followed.

Lighting

14. Exterior lighting must comply with the Dark Sky Ordinance and shall be minimized, shielded, or concealed and restricted to low intensity features, so that no light source is directly visible from public view. Permitted lighting shall conform to the following standards:
    a. Lighting for walkways shall be limited to fixtures that do not exceed two feet in height and are directed downward, and limited to 850 lumens (equivalent to a 60-watt incandescent bulb);
    b. Security lighting controlled by motion detectors may be attached to the residence provided it is directed downward and is limited to 850 lumens;
    c. Driveway lighting shall be limited to the minimum lighting necessary for safe vehicular use. The lighting shall be limited to 850 lumens;
    d. Lights at entrances as required by the Building Code shall be permitted provided that such lighting does not exceed 850 lumens;
    e. Site perimeter lighting shall be prohibited; and
    f. Outdoor decorative lighting for aesthetic purposes is prohibited.

15. Night lighting for sports courts or other private recreational facilities shall be prohibited.

16. No permanently installed lighting shall blink, flash, or be of unusually high intensity or brightness. Lighting levels on any nearby property from artificial light sources on the subject property(ies) shall not produce an illumination level greater than one foot candle.

17. Night lighting from exterior and interior sources shall be minimized. All exterior lighting shall be low intensity and shielded directed downward and inward so there is no offsite glare or lighting of natural habitat areas. Lighting of the shore or the beach in excess of one foot-candle is prohibited. .

18. String lights are allowed in occupied dining and entertainment areas only and must not exceed 3,000 Kelvin.

19. Motion sensor lights shall be programmed to extinguish ten minutes after activation.

20. No lighting can exceed 18 feet in height except as required by the California building code.

21. Three violations of the conditions by the same property owner will result in a requirement to permanently remove the outdoor light fixture(s) from the site.

Fencing/Walls/Screening

22. Fencing or walls are prohibited within areas designated as ESHA, except where necessary for public safety or habitat protection or restoration. Fencing or walls that do not permit free passage of wildlife shall be prohibited in any wildlife corridor.

23. Development adjacent to, but not within ESHA, may include fencing, if necessary for security, that is limited to the area around the clustered development area.

Demolition/Solid Waste

24. Prior to the issuance of a building/demolition permit, an Affidavit and Certification to implement waste reduction and recycling shall be signed by the Owner or Contractor and submitted to the Community Development Department. The Affidavit shall indicate the agreement of the applicant to divert at least 65 percent (in accordance with CalGreen) of all construction waste from the landfill.

25. Any building or demolition permits issued for work commenced or completed without the benefit of required permits are subject to appropriate "Investigation Fees" as required in the Building Code.

Construction / Framing

26. Prior to the commencement of work, the applicant shall submit a copy of their Construction Management Plan to the Planning Division. The Construction Management Plan shall include a dedicated parking location for construction workers and storage of construction material, onsite and not within the PCH public right-of-way. Prior to permit issuance, the Construction Management Plan must be acceptable to the Community Development Director and, if applicable, to the Building Official and Public Works Director.

27. A construction staging plan shall be reviewed and approved by the Building Official prior to plan check submittal.

28. Construction hours shall be limited to Monday through Friday from 7:00 AM to 7:00 PM and Saturdays from 8:00 AM to 5:00 PM. No construction activities shall be permitted on Sundays or City-designated holidays.

29. Construction management techniques, including minimizing the amount of equipment used simultaneously and increasing the distance between emission sources, shall be employed as feasible and appropriate. All trucks leaving the construction site shall adhere to the California Vehicle Code. In addition, construction vehicles shall be covered when necessary; and their tires rinsed prior to leaving the property.

30. All new development, including construction, grading, and landscaping shall be designed to incorporate drainage and erosion control measures prepared by a licensed engineer that incorporate structural and non-structural BMPs to control the volume, velocity and pollutant load of storm water runoff in compliance with all requirements contained in LIP Chapter 17, including:
    a. Construction shall be phased to the extent feasible and practical to limit the amount of disturbed areas present at a given time.
    b. Grading activities shall be planned during the southern California dry season (April through October).
    c. During construction, contractors shall be required to utilize sandbags and berms to control runoff during on-site watering and periods of rain in order to minimize surface water contamination.
    d. Filter fences designed to intercept and detain sediment while decreasing the velocity of runoff shall be employed within the project site.

31. When framing of the water tank is complete, a site survey shall be prepared by a licensed civil engineer or architect that states the finished ground level elevation and the highest exterior surface point elevation. Prior to the commencement of further construction activities, said document shall be submitted to the assigned Building Inspector and Planning Division for review and sign off on the height consistent with the height allowances herein.

32. For the transportation of heavy construction equipment and/or material, which requires the use of oversized-transport vehicles on State highways, the applicant / property owner is required to obtain a transportation permit from the California Department of Transportation.

Biology/Landscaping

33. No new landscaping is proposed with this project. Therefore, none is approved. Should the applicant intent to plant any new vegetation with a potential to exceed six feet in height, or change 500/2,500 square feet or more (new residence/existing residence) of the existing landscaping area, a detailed landscape plan shall be submitted for review and approval prior to any planting.

34. Grading shall be scheduled only during the dry season from April 1 through October 31. If it becomes necessary to conduct grading activities from November 1 through March 31, a comprehensive erosion control plan shall be submitted for approval prior to issuance of a grading permit and implemented prior to initiation of vegetation removal and/or grading activities.

35. Grading shall not extend beyond those areas previously disturbed for the existing tank and associated plumbing.

Geology

36. All recommendations of the consulting certified engineering geologist or geotechnical engineer and/or the City geotechnical consultant reviewers shall be incorporated into all final design and construction including foundations, grading, sewage disposal, and drainage. Final plans shall be reviewed and approved by the City geotechnical consultant reviewers prior to the issuance of a grading permit.

37. Final plans approved by the City geotechnical consultant reviewers shall be in substantial conformance with the approved CDP relative to construction, grading, sewage disposal and drainage. Any substantial changes may require a CDP amendment or a new CDP.

Public Works

38. Clearing and grading during the rainy season (extending from November 1 to March 31) shall be prohibited for development LIP Section 17.3.1 that:
    a. Is located within or adjacent to ESHA, or
    b. Includes grading on slopes greater than 4:1
    c. Approved grading for development that is located within or adjacent to ESHA or on slopes greater than 4:1 shall not be undertaken unless there is sufficient time to

complete grading operations before the rainy season. If grading operations are not completed before the rainy season begins, grading shall be halted and temporary erosion control measures shall be put into place to minimize erosion until grading resumes after March 31, unless the City determines that completion of grading would be more protective of resources

39. Exported soil from a site shall be taken to the Los Angeles County Landfill or to a site with an active grading permit and the ability to accept the material in compliance with LIP Section 8.3. A note shall be placed on the project that addresses this condition.

40. A grading and drainage plan containing the following information shall be approved, and submitted to the Public Works Department, prior to the issuance of grading permits for the project:
    a. Public Works Department general notes;
    b. The existing and proposed square footage of impervious coverage on the property shall be shown on the grading plan (including separate areas for buildings, driveways, walkways, parking, tennis courts and pool decks);
    c. The limits of land to be disturbed during project development shall be delineated and a total area shall be shown on this plan. Areas disturbed by grading equipment beyond the limits of grading, areas disturbed for the installation of the septic system, and areas disturbed for the installation of the detention system shall be included within the area delineated;
    d. The limits to land to be disturbed during project development shall be delineated and a total area of disturbance should be shown on this plan. Areas disturbed by grading equipment beyond the limits of grading shall be included within the area delineated;
    e. If the property contains rare, endangered or special status species as identified in the Biological Assessment, this plan shall contain a prominent note identifying the areas to be protected (to be left undisturbed). Fencing of these areas shall be delineated on this plan is required by the City Biologist;
    f. The grading limits shall include the temporary cuts made for retaining walls, buttresses and over excavations for fill slopes; and
    g. Private storm drain systems shall be shown on this plan. Systems greater than 12 inch in diameter shall also have a plan and profile for the system included with this plan.
    h. Public storm drain modifications shown on the grading plan shall be approved by the Public Works Department prior to the issuance of the grading permit.

41. A digital drawing (AutoCAD) of the project's private storm drain system, public storm drain system within 250 feet of the property limits, and post-construction BMP's shall be submitted to the Public Works Department prior to the issuance of grading or building permits. The digital drawing shall adequately show all storm drain lines, inlets, outlet, post-construction BMP's and other applicable facilities. The digital drawing shall also show the subject property, public or private street, and any drainage easements.

42. The ocean between Latigo Point and the West City limits has been established by the State Water Resources Control Board as an Area of Special Biological Significance (ASBS) as part of the California Ocean Plan. This designation allows discharge of storm water only where it is essential for flood control or slope stability, including roof, landscape, road and

parking lot drainage, to prevent soil erosion, only occurs during wet weather, and is composed of only storm water runoff. The applicant shall provide a drainage system that accomplishes the following:

a. Installation of BMPs that are designed to treat the potential pollutants in the storm water runoff so that it does not alter the natural ocean water quality. These pollutants include trash, oil and grease, metals, bacteria, nutrients, pesticides, herbicides and sediment.
b. Prohibits the discharge of trash.
c. Only discharges from existing storm drain outfalls are allowed. No new outfalls will be allowed. Any proposed or new storm water discharged shall be routed to existing storm drain outfalls and shall not result in any new contribution of waste to the ASBS (i.e., no additional pollutant loading).
d. Elimination of non-storm water discharges.
A Local Storm Water Pollution Prevention Plan (LSWPPP) shall be provided prior to issuance of grading/building permits. This plan shall include an Erosion and Sediment Control Plan (ESCP) that includes, but is not limited to:

Erosion Controls Scheduling	Erosion Controls Scheduling
	Preservation of Existing Vegetation
Sediment Controls	Silt Fence
	Sand Bag Barrier
	Stabilized Construction Entrance
Non-Storm Water Management	Water Conservation Practices
	Dewatering Operations
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management
	Concrete Waste Management
	Sanitary/Septic Waste Management

Colors and Materials

43. The project is visible from scenic roads or public viewing areas, therefore, shall incorporate colors and exterior materials that are compatible with the surrounding landscape.
    a. Acceptable colors shall be limited to colors compatible with the surrounding environment (earth tones) including shades of green, brown and gray, with no white or light shades and no bright tones. Colors shall be reviewed and approved by the Community Development Director and clearly indicated on the building plans.
    b. The use of highly reflective materials shall be prohibited except for solar energy panels or cells, which shall be placed to minimize significant adverse impacts to public views to the maximum extent feasible.
    c. All windows shall be comprised of non-glare glass.

44. All driveways shall be a neutral color that blends with the surrounding landforms and vegetation. Retaining walls shall incorporate veneers, texturing and/or colors that blend with the surrounding earth materials or landscape. The color of driveways and retaining

walls shall be reviewed and approved by the Community Development Director and clearly indicated on all grading, improvement and/or building plans.

45. All glass windows and doors shall incorporate the use of ultra-violet coating to minimize reflective glare that results in bird strikes.

Site Specific Conditions

46. Any temporary impacts to the public's access to the Malibu Pacific Trail during construction must be returned to previous site conditions upon completion of development.

47. Prior to construction of the proposed water tank, the County of Los Angeles shall submit plans for the Upper Encinal water tank and pump station improvements to the City for review and approval. The water tank shall not be constructed without first receiving approval from the City of Malibu on the waterline improvements as the water tank will serve no purpose without demonstration of adequate waterline connection. The County of Los Angeles must submit the plans for the waterline connections and pump station improvements to the City prior to the expiration of this permit.

48. Prior to the issuance of any development permit, the applicant/property owner shall provide a pre-construction assessment of the existing condition of Vista del Preseas to the subject parcel. A copy of this assessment shall be kept on file with the City. The applicant/property owner shall be responsible for repairs of any damage to the road that may result during the construction phase of the proposed project. Any obvious damage to the road that becomes apparent during the construction phase (including, but not limited to, pot holes, cracks and ripples) shall be immediately repaired by the applicant/property owner. Prior to a Planning Division final inspection, the applicant/property owner shall submit a post-construction assessment of the road to demonstrate compliance with this condition. A photo survey shall be utilized to complete this assessment.

49. Upon completion and acceptance of the water tank improvements by the County of Los Angeles, the applicant shall transfer the water tank improvements to the County for ownership, operation, and maintenance through a Warranty Deed and Bill of Sale. Such evidence shall be provided to the City prior to the City's final sign off.

50. The applicant/owner shall obtain building permits from the City of Malibu's Building Safety Division prior to any construction activities for the approved project under this entitlement, unless deemed by the City's Building Official to be unnecessary.

Site Specific Condition – MMRP Compliance

51. The project shall comply with all recommended mitigation measures listed in the Mitigation Monitoring and Reporting Program (MMRP) associated with the Final EIR, attached hereto as Exhibit A.

Deed Restrictions

52. The property owner is required to execute and record a deed restriction which shall indemnify and hold harmless the City, its officers, agents, and employees against any and

all claims, demands, damages, costs and expenses of liability arising out of the acquisition, design, construction, operation, maintenance, existence or failure of the permitted project in an area where an extraordinary potential for damage or destruction from wildfire exists as an inherent risk to life and property. The property owner shall provide a copy of the recorded document to Planning Division staff prior to final Planning Division approval.

53. The property owner is required to acknowledge, by recordation of a deed restriction, that the property is subject to erosion, landslides, or other hazards associated with development upslope from a canyon, and that the property owner assumes said risks and waives any future claims of damage or liability against the City of Malibu and agrees to indemnify the City of Malibu against any liability, claims, damages or expenses arising from any injury or damage due to such hazards. The property owner shall provide a copy of the recorded document to the Planning Division prior to final Planning approval.

54. Prior to final Planning Division approval, the applicant shall be required to execute and record a deed restriction reflecting lighting requirements set forth in Condition of Approval Nos. 14 through 21. The property owner shall provide a copy of the recorded document to the Planning Division prior to final Planning approval.

Prior to Final Inspection

55. Prior to, or at the time of a Planning final inspection, the City Biologist shall inspect the project site and determine that all Planning Division conditions to protect natural resources are in compliance with the approved plans.

56. Prior to a final Building inspection, the applicant shall provide a Recycling Summary Report (Summary Report) and obtain the approval from the Community Development Department. Applicant must provide haul tickets and diversion information. The final Summary Report shall designate the specific materials that were land filled or recycled, and state the facilities where all materials were taken.

57. Any construction trailer, storage equipment or similar temporary equipment not permitted as part of the approved scope of work shall be removed prior to final inspection and approval, and if applicable, the issuance of the certificate of occupancy.

Fixed Conditions

58. This CDP shall run with the land and bind all future owners of the property.

59. Violation of any of the conditions of this approval may be cause for revocation of this permit and termination of all rights granted there under.

SECTION 6. The Planning Commission shall certify the adoption of this resolution.

PASSED, APPROVED AND ADOPTED this 19th day of October 2026.

MARNI KAMINS, Planning Commission Chair

ATTEST:

REBECCA EVANS, Recording Secretary

LOCAL APPEAL - Pursuant to Local Coastal Program Local Implementation Plan (LIP) Section 13.20.1 (Local Appeals) a decision made by the Planning Commission may be appealed to the City Council by an aggrieved person by written statement setting forth the grounds for appeal. An appeal shall be filed with the City Clerk within 10 days and shall be accompanied by an appeal form and filing fee, as specified by the City Council. Appeal forms may be found online at www.malibucity.org, in person at City Hall, or by calling (310) 456-2489, ext. 246.

COASTAL COMMISSION APPEAL – An aggrieved person may appeal the Planning Commission's approval to the Coastal Commission within 10 working days of the issuance of the City's Notice of Final Action. Appeal forms may be found online at www.coastal.ca.gov or by calling (805) 585-1800. Such an appeal must be filed with the Coastal Commission, not the City.

Any action challenging the final decision of the City made as a result of the public hearing on this application must be filed within the time limits set forth in Section 1.12.010 of the MMC and Code of Civil Procedure. Any person wishing to challenge the above action in Superior Court may be limited to raising only those issues they or someone else raised at the public hearing, or in written correspondence delivered to the City of Malibu at or prior to the public hearing.

I CERTIFY THAT THE FOREGOING RESOLUTION NO. 26-38 was passed and adopted by the Planning Commission of the City of Malibu at the regular meeting held on the 19th day of October 2026 by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

REBECCA EVANS, Recording Secretary

Exhibit A: Mitigation Monitoring and Reporting Program

Chapter 4
Mitigation Monitoring and Reporting Program

To ensure that the mitigation measures identified in an EIR are implemented, CEQA requires the lead agency for a project to adopt a program for monitoring or reporting on the revisions it has required for a project and the measures it has imposed to mitigate or avoid significant environmental effects. As specifically set forth in Section 15097(c) of the CEQA Guidelines, the public agency may choose whether to monitor mitigation, report on mitigation, or both. As provided in Section 15097(c) of the CEQA Guidelines, "monitoring" is generally an ongoing or periodic process of project oversight. "Reporting" generally consists of a written compliance review that is presented to the decision-making body or authorized staff person.

An EIR has been prepared to address the proposed District 29 Priority Capital Deficiencies Improvements project's potential environmental impacts. The EIR identified mitigation measures to avoid or substantially lessen significant impacts. This MMRP is designed to monitor and report implementation of those mitigation measures. The primary purpose of the MMRP is to ensure that the mitigation measures identified in the Draft and Final EIR are implemented in order to reduce effects of the project.

This MMRP has been prepared in compliance with the requirements of CEQA Section 21081.6 and CEQA Guidelines Section 15097. Los Angeles County Waterworks District No. 29, as the lead agency for the project, is responsible for overseeing and enforcing implementation of the MMRP.

The MMRP in Table 4-1 lists each of the proposed mitigation measures and identifies the corresponding action(s) required for each measure, the mitigation timing, the responsible agency or party, and the monitoring agency, which in this case is District 29. This MMRP shall be enforced throughout all phases of the project, including design, construction, and operations/maintenance, with Waterworks District No. 29 having ultimate responsibility for enforcement, even if another entity is named as the responsible agency or party.

EXHIBIT A

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Table 4-1. District 29 Priority Capital Deficiencies Improvements Mitigation Monitoring and Reporting Program

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
Biological Resources				
MM-BIO-1: **Environmentally Sensitive Area Fencing** Prior to clearing or construction, highly visible barriers (such as orange construction fencing) will be installed around areas adjacent to the improvement limit of disturbance to designate environmentally sensitive areas (ESAs) to be protected. No construction activity of any type will be permitted within these ESAs. In addition, heavy equipment, including motor vehicles, will not be allowed to operate within the ESAs. All construction equipment will be operated in a manner so as to prevent accidental damage to ESAs. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within these protected zones. Silt fence barriers will be installed at the ESA boundary to prevent accidental deposition of cut or fill material in areas where vegetation is immediately adjacent to planned grading activities.	Include ESA fencing requirement on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Install and maintain ESA fencing, including highly visible barriers and silt fence barriers.	Before initiation of construction at any site, including staging, and during construction until complete; fencing to be removed as last step in construction.	Construction contractors	Los Angeles County Waterworks District 29
MM BIO-2: **Pesticides** Herbicides and insecticides that are not approved as safe to use around water will not be used, nor will rodenticides.	Include pesticide requirement on plans and/or specifications.	During improvement design and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Use appropriate pesticides during construction if needed.	Before and during construction at any time pesticides are used.	Construction contractors	Los Angeles County Waterworks District 29
	Use appropriate pesticides during operation if needed.	During maintenance at any site at any time pesticides are used.	Maintenance crews	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
MM BIO-3: **Clean Construction Area** To avoid attracting predators of special-status species, the improvement sites will be kept as clean of debris as possible. All food-related trash items will be enclosed in sealed containers and regularly removed from the site(s).	Include clean site requirements on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Keep construction areas clean of debris.	During construction at any site at all times.	Construction contractors	Los Angeles County Waterworks District 29
MM BIO-4: **Preconstruction Nesting Bird and Wildlife Survey** If construction commences during the bird breeding season (March 1 through June 30), a preconstruction survey for nesting birds by an experienced avian biologist will occur within 3 days prior to construction activities. The survey will occur within all suitable nesting habitat within the improvement impact area and at a buffer deemed suitable by the biologist. It is assumed that areas along Pacific Coast Highway (PCH) will receive a smaller survey buffer than areas where there is less ambient disturbance. If nesting birds are found, an avoidance area will be established as appropriate by a qualified biologist around the nest until it has determined that young have fledged or nesting activities have ceased. The improvement site will need to be resurveyed if there is a lapse in construction activities for more than 7 days during the nesting season. In areas where vegetation trimming is required during the construction phase, the avian biologist will conduct a preconstruction survey for nesting birds in the targeted vegetation within 3 days prior to trimming, and preferably	Include preconstruction survey requirements on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	If construction occurs between March 1 through June 30, retain qualified biologist to conduct nesting bird survey, establish avoidance area (if necessary), and resurvey (if necessary).	3 days prior to the start of any construction at any site if between March 1 and June 30.	Construction contractors	Los Angeles County Waterworks District 29
	In areas where vegetation is required, retain qualified biologist to conduct nesting birds survey and direct avoidance (if necessary).	3 days prior to vegetation trimming (or up to same day) at any site during construction.	Construction contractors	Los Angeles County Waterworks District 29
	Retain a qualified biologist to perform surveys for species of special concern, including amphibians,	3 days prior to the start of any construction at any site.	Construction contractors	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
on the same day. This action is required even if there has been no lapse in construction activities in an area so as to avoid direct take of active but "acclimated" nests that may be present. Prior to and no more than 3 days before construction commencement, a qualified biologist will perform a survey for species of special concern including birds, amphibians, reptiles, turtles, and mammals including bats. Surveys for Southwestern pond turtles and potential habitat shall follow the Western Pond Turtle Visual Survey Protocol for the Southcoast Ecoregion (USGS 2006). Should any non-listed sensitive species be present, then the biologist will be present at the onset of ground-disturbing activities to ensure the work area is clear of any sensitive species. The biologist will encourage the species to move out of the disturbance area of its own volition. If relocation is required, then the biologist will possess a scientific collecting permit and relocate the species to an adjacent suitable habitat. If any special-status species is harmed during relocation or a dead or injured animal is found, work in the immediate area should stop immediately, the qualified biologist will be notified, and dead or injured wildlife documented immediately. A formal report should be sent to CDFW within 3 calendar days of the incident or finding. The report will include the date, time of the finding or incident (if known), and location of the carcass or injured animal and circumstances of its death or injury (if known). Work in the immediate area may only resume once the proper notifications have been made and additional mitigation measures have been identified to prevent additional injury or death.	reptiles, turtles, and mammals; monitor ground-disturbing activities (if necessary); encourage species to move out (if necessary) or relocate (with scientific collecting permit) (if necessary).			
	Notify qualified biologist to remove injured or dead wildlife, if found; provide report; stop work in immediate area.	At all times during construction, if injured or dead animal is discovered, and until cleared to continue work by biologist.	Construction contractors	Los Angeles County Waterworks District 29
	For improvements requiring tree, vegetation, or structure removal, retain qualified biologist to conduct bat surveys, direct tree removal (if necessary), and consult with CDFW (if necessary).	Prior to start of any construction at any site where tree, vegetation, or structure removal will be necessary.	Construction contractors	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
Activities that include the removal of trees, vegetation, and/or structures that may provide roosting habitat for bats shall be surveyed for bat roosts prior to ground-disturbing activities. The survey will include the work area and 100-foot buffer as access permits. If roosting bats may be present, trees should be pushed down (removed) using heavy machinery rather than felling with a chainsaw. To ensure the optimum warning for any roosting bats that may still be present, trees should be pushed lightly two or three times, with a pause of approximately 30 seconds between each push to allow bats to become active. If maternity roosts are found and the County determines that impacts are unavoidable, a qualified bat specialist will consult with the California Department of Fish and Wildlife (CDFW) to determine an exclusion and relocation plan.				
MM BIO-5: **Noise Control** So as to reduce unnecessary sound or disturbance to wildlife, vehicles or equipment that are not actively being used will not be left to idle unnecessarily.	Include noise control requirements on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Shut off equipment or vehicles when not in use.	At all times during construction at any site where vehicles or motorized equipment are used.	Construction contractors	Los Angeles County Waterworks District 29
	Shut off equipment or vehicles when not in use.	At all times during maintenance at any site where vehicles or motorized equipment are used.	Maintenance crews	Los Angeles County Waterworks District 29
MM BIO-6: **Nighttime Construction**	Include light control requirements on plans and/or specifications.	During improvement design for any site and	Improvement designers	Los Angeles County

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
To the extent feasible, nighttime construction will not occur. When nighttime construction cannot be avoided, any required external light sources must be directed at the ground or directly at active construction and must have baffles or other mechanisms to reduce the amount of visible light that may disturb nearby nesting, foraging, or migrating wildlife.		before final design is approved.		Waterworks District 29
	Employ controls to reduce external light sources when conducting construction at night.	At all times during construction at any site when nighttime work is necessary.	Construction contractors	Los Angeles County Waterworks District 29
MM BIO-7: **Pets** No pets will be allowed in, or adjacent to, the improvement site.	Include prohibition of pets on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Prohibit pets near improvements.	At all times during construction at any site.	Construction contractors	Los Angeles County Waterworks District 29
	Prohibit pets near improvements.	At all times during maintenance at any site.	Maintenance crews	Los Angeles County Waterworks District 29
MM BIO-8: **Plant Surveys** To ensure that rare plant species are not present at the time of construction of any improvement, focused surveys for rare plant species by a qualified botanist with experience surveying for southern California plants will occur within suitable habitat during the most recent blooming season prior to the start of construction in accordance with appropriate CDFW protocols. Surveys for Lyon's pentachaeta, Santa Monica dudleya, Braunton's milk vetch, Agoura Hills dudleya, San Fernando Valley spineflower, Coulter's saltbush, Malibu baccharis, Brewer's calandrinia, Catalina mariposa-lily, Plummer's mariposa-lily, Lewis' evening primrose, western	Include plant survey requirements on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Retain qualified biologist to conduct focused rare plant surveys and prepare a report for CDFW and USFWS, if applicable.	Prior to the start of any construction at any site.	Construction contractors	Los Angeles County Waterworks District 29
	If necessary, implement avoidance measures, and/or relocate or mitigate	Prior to the start of any construction at any site if focused surveys identify need for	Construction contractors	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
dichondra, mesa horkelia, decumbent goldenbush, southern California black walnut, fragrant pitcher sage, ocellated Humboldt lily, white-veined monardella, chaparral ragwort, and California screw moss will be conducted within areas of coastal scrub, chaparral, and woodland and non-native grassland habitat within the project's limits of disturbance. Surveys for Ventura marsh milk-vetch, salt marsh bird's-beak, coastal dunes milk-vetch, red sand verbena, Lewis' evening primrose, southwestern spiny rush, south coast branching phacelia, and woolly seablite will be conducted within areas of coastal dunes and coastal lagoons within limits of disturbance. The qualified biologist will prepare a report to CDFW and USFWS (if applicable) documenting the results of the surveys including a description and map of the survey areas, field survey conditions, whether or not rare plants were detected with mapping of locations, descriptions of the conditions where rare plants were found, and species-specific measures to avoid or mitigate impacts to the rare plants. Special-status plants found during focused surveys will be avoided to the extent feasible. Where avoidance is not possible, and as feasible depending upon the species and population, non-listed special-status plants will be relocated to the nearest suitable habitat by a qualified biologist prior to construction. State or federally listed species must be avoided unless a take permit is obtained from the appropriate discretionary regulatory agency. Habitat loss for plants with a California Rare Plant Rank (CRPR) of 1 or 2, or those that otherwise are locally rare and for which loss of individual plants or	rare plant species at a 1:1 ratio.	avoidance and/or mitigation.		

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
populations would be considered locally or regionally significant, will be mitigated at a minimum 1:1 ratio through mitigation bank or in-lieu fee program credit purchase or other approved method.				
MM BIO-9: **Invasive Weed Avoidance** Prior to site mobilization, all construction equipment and any vehicles that will be driven or parked off of pavement in areas containing invasive weeds will be thoroughly washed, to the extent possible, to remove invasive weed seeds from the tire tracks, undercarriages, and elsewhere that seeds may accumulate. In addition, any invasive plants that are removed from any of the project sites must be properly contained and disposed of so as to avoid their additional spread.	Include invasive weed avoidance requirements on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Implement controls to avoid invasive weed removal.	During any construction at any site where vehicles will be driven off pavement.	Construction contractors	Los Angeles County Waterworks District 29
MM BIO-10: **Dust Control** A water truck will be kept onsite and will be used as needed for dust containment. To the extent possible, the spread of fugitive dust will be avoided.	Include dust control requirements on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Implement controls to avoid the spread of fugitive dust.	During any construction at any site.	Construction contractors	Los Angeles County Waterworks District 29
MM BIO-11: **Certified Arborist** Prior to construction, a certified arborist will investigate and determine whether any trees that may be trimmed, removed, or otherwise affected on any site qualify as protected under the Malibu Local Coastal Program (LCP), the Santa Monica Mountains (SMM) LCP, or the Los Angeles County Code of Ordinances.	Include arborist requirements on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	For improvements requiring tree trimming, removal or other effects, retain certified arborist to	Prior to the start of construction at any site where tree trimming, removal, or other effects will occur.	Construction contractors	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
	determine protection requirements.			
MM BIO-12: **Coastal Development Permit (CDP)** The Los Angeles County Department of Public Works (LACDPW) requires compliance with the permit conditions stated within the CDP. The Los Angeles County Department of Public Works must seek a CDP under the Malibu LCP for the removal of or adverse impacts to any native oaks, southern California black walnut, California sycamore, white alder, or toyon, as protected under the Native Tree Protection Ordinance, that have at least one trunk measuring at least 6 inches in diameter, or a combination of any two trunks measuring a total of at least 8 inches in diameter, measured at 4.5 feet above natural grade. Under this ordinance, removed trees or trees left in a worse state than prior to construction must be replaced at a ratio of at least 10:1, either onsite or offsite, and the applicant must submit a native tree replacement planting program outlining planting locations and tree sizes, as well as details for monitoring success, including annual monitoring and reporting for at least 10 years. All planted trees must be less than 1 year old, and oaks must be grown from local acorns collected from the site vicinity. If the 10:1 replacement ratio cannot be met, an in-lieu fee commensurate to the type, size, and age of the affected tree(s) will be required instead. Additional requisite measures and postconstruction requirements would be included as permit conditions of approval and would include 1) protective fencing around root zones (no construction, grading, staging, or storage allowed); 2) any approved development	Include CDP requirements on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	If protected trees need to be removed, obtain a CDP	Prior to the start of construction at any site where removal of protected trees will be necessary.	Los Angeles County Waterworks District 29	Los Angeles County Waterworks District 29
	If a CDP is obtained, implement requirements as specified in permit	During and after construction at any site where removal of protected trees will be necessary and in accordance with the CDP.	Construction contractors	Los Angeles County Waterworks District 29
	If a CDP is obtained, implement monitoring requirements as specified in permit.	During operation at any site where removal of protected trees will be necessary and in accordance with the CDP.	Los Angeles County Waterworks District 29	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
inside the fenced areas can only use hand-held tools and must not damage root systems; 3) a qualified biologist or arborist must monitor protected trees in or adjacent to construction; and 4) if the protective fence is compromised, work must be suspended until the fence is repaired or replaced. The only exemptions to the permit requirement include native trees that have been destroyed or damaged beyond recovery by a natural disaster, native trees that are at risk of falling and cannot be stabilized and that pose an imminent public health and safety risk, and native trees that were planted for ornamental reasons and not as part of a LCP or Coastal Act requirement. The LACDPW will seek an Oak Tree Permit under the Los Angeles County Code of Ordinances before cutting, destroying, removing, relocating, damaging, or encroaching within the protected zone (defined as the dripline plus 5 feet, or 15 feet from the trunk, whichever is greater) of all oak trees in unincorporated Los Angeles County that are at least 8 inches in diameter or that have a combination of any two trunks measuring a total of at least 12 inches in diameter at 4.5 feet above natural grade, as well as any tree that has been planted as a replacement tree pursuant to this ordinance. The permit application must contain a detailed oak tree report evaluating structure, health, impacts, and mitigation for every potentially affected oak tree onsite. Under this ordinance, removed trees must be replaced at a ratio of at least 2:1, and all trees must be at least a 15-gallon specimen and measure at least 1 inch in diameter measured 1 foot above the base. Replacement trees must be maintained, monitored, and replaced for a minimum of 2				

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
years after planting, and a plan must be put in place to protect the tree(s) once planted. Exemptions to the permit include construction of subdivisions approved prior to the effective date of the ordinance; oaks that are considered a public health or safety hazard; oaks that have been irretrievably damaged or destroyed by a natural disaster; maintenance necessary to protect or maintain electricity, communications, or other public utilities; tree maintenance limited to medium pruning of branches 2 inches in diameter or smaller; trees planted, grown, and/or held for sale by a licensed nursery; and trees in an existing road ROW for which pruning, removal, or relocation is necessary for safety reasons or road damage. The LACDPW will seek a Coastal Development Permit – Oak Tree (CDP-OT) before cutting, destroying, removing, relocating, damaging, or encroaching within the protected zone (defined as the dripline plus 5 feet, or 15 feet from the trunk, whichever is greater) all oak trees within the SMM LCP that are at least 6 inches in diameter or that have a combination of any two trunks measuring a total of at least 8 inches in diameter at 4.5 feet above natural grade, or that are replacement trees planted under this ordinance. General application requirements are virtually identical to the Los Angeles County Oak Tree Ordinance. However, under the CDP-OT, mitigation for every affected oak tree must be as follows: the removal of oak trees must be replaced at a ratio of 10:1, an encroachment of more than 30 percent into the protected zone of an oak must be mitigated at a 10:1 ratio, encroachment that extends within 3 feet of the trunk must be mitigated at a 10:1 ratio, trimming				

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
branches over 11 inches in diameter must be mitigated at a 5:1 ratio, a 10–30-percent encroachment into the protected zone must be mitigated at a 5:1 ratio, and less than 10-percent encroachment into the protected zone requires only monitoring. Each replacement tree must be the same species as that it is intended to replace, it must be at least a 1-gallon size specimen, it must measure at least 1 inch in diameter 1 foot above the base, and it must have an acorn taken from the SMM planted within its watering zone. Replacement trees must be maintained, monitored, and replaced for a minimum of 7 years after planting. Where feasible, replacement trees must be grown from acorns collected in Los Angeles or Ventura Counties and must be planted in the same general area of the subject property as the tree they are replacing. If not feasible to plant onsite, trees must be planted in a protected area within the SMM and, where feasible, must be in the same watershed as the affected trees; if it is not possible to plant in the same watershed, an additional two trees will be added to the mitigation ratio for each affected tree. Trees with less than a 30-percent encroachment into the protected zone must be monitored and reported on annually for a minimum of 10 years, during which time if the subject trees die or deteriorate in health as a result of the project, they must be replaced at a 10:1 ratio under the same conditions as those described above. Finally, a plan must be submitted and implemented for the protection of all oak trees on the subject property, both during and after development. Exemptions to the permit include where there is an existing and unexpired CDP and oak tree permit approved prior to the				

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
effective date of the LCP; oaks that are considered a public health or safety hazard within 200 feet of an existing structure or on open land threatening public property or utilities; oaks that have been irretrievably damaged or destroyed by a natural disaster; maintenance necessary to protect or maintain electricity, communications, or other public utilities; tree maintenance limited to medium pruning of branches 2 inches in diameter or smaller; trees planted, grown, and/or held for sale by a licensed nursery; and trees in an existing road right-of-way (ROW) for which pruning, removal, or relocation is necessary for safety reasons or for road damage.				
MM BIO-13: **Spoils and Rubble** Spoils and rubble will not be deposited outside the identified limits of construction and material waste generated by the project will be disposed of offsite.	Include spoils and rubble prohibitions on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Dispose of/deposit spoils and rubble appropriately as required.	At all times during any construction at any site where spoils or rubble will be deposited.	Construction contractors	Los Angeles County Waterworks District 29
MM BIO-14: **Equipment Maintenance** All equipment will be adequately maintained to prevent the leaking of oil, fuel, or other hydraulic fluids into nearby creek crossings or into other areas where it could accidentally contaminate waterways. Heavy equipment will be examined for leaks each day before work begins and, in the case of a leak, their use will not be allowed until any leak-related issues are fixed. All equipment maintenance, staging, and dispensing of fuel, oil,	Include equipment maintenance requirements on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Maintain equipment to prevent releases to nearby waterways.	At all times during any construction at any site near creek crossings or waterways where equipment using oil, fuel, or other hydraulic fluids will be used.	Construction contractors	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
coolant, or any other toxic substances will occur in designated staging areas.	Maintain equipment to prevent releases to nearby waterways.	During maintenance at any site near creek crossings or waterways where equipment using oil, fuel, or other hydraulic fluids will be used.	Maintenance crews	Los Angeles County Waterworks District 29
MM BIO-15: **Stormwater Pollution Prevention Plan** A Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented to address all construction-related activities, equipment, and materials that have the potential to affect water quality. The SWPPP will identify the sources of pollutants that may affect the quality of stormwater and include relevant BMPs to control pollutants, such as sediment control, catch basin inlet protection, construction materials management, and non-stormwater BMPs.	Obtain SWPPP.	Prior to the start of any construction at any site.	Los Angeles County Waterworks District 29	Los Angeles County Waterworks District 29
	Implement requirements of SWPPP.	During all construction at any site covered by a SWPPP, in accordance with the requirements of the plan.	Construction contractors	Los Angeles County Waterworks District 29
MM BIO-16: **Slope Protection** The areas of disturbance and constructed slopes will be protected with temporary and/or permanent erosion controls, including fiber rolls, silt fencing, soil binders, rock slope protection, and/or revegetation with an erosion control seed mix.	Include slope protection requirements on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Implement slope protection requirements.	During any construction at any site where ground is disturbed and/or slopes are constructed.	Construction contractors	Los Angeles County Waterworks District 29
MM BIO-17: Preconstruction Training When in or near natural habitat areas, all personnel involved in the onsite project construction will be required to participate in a	Include preconstruction training requirements on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
preconstruction training program to understand the mitigation obligations on the project.	Implement preconstruction training program.	Prior to the start of any construction and during construction at any site in or near natural habitat areas.	Construction contractors	Los Angeles County Waterworks District 29
MM BIO-18: **Jurisdictional Waters and Riparian Vegetation** No equipment or vehicles must be operated or placed within the limits of jurisdictional waters or associated riparian vegetation. In areas where a foot crew is required to be present within jurisdictional waters for pipeline repairs, removals, or replacements, all tools, materials, and associated mechanical equipment must be packed out and removed on a daily basis when the crew leaves the site. No construction-related materials must be left within jurisdictional limits or associated riparian vegetation overnight	Include jurisdictional waters and riparian vegetation restrictions on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Avoid jurisdictional waters and riparian vegetation.	During any construction at any site in or near jurisdictional waters and/or riparian vegetation.	Construction contractors	Los Angeles County Waterworks District 29
MM BIO-19: **Wildlife Movement** Equipment maintenance, lighting, and staging will occur only in designated areas, and will not block or impede movement through wildlife corridors.	Include wildlife corridor restrictions on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Avoid wildlife corridors.	During any construction at any site in or near wildlife corridors.	Construction contractors	Los Angeles County Waterworks District 29
Cultural Resources				
MM CUL-1: **Cultural Resources Monitoring Program** *This mitigation measure is applicable to the following District 29 improvements only: PCH 8-inch Waterline Improvements (Zumirez Drive to Escondido Beach Road), PCH and Topanga Beach*	Retain a qualified archaeologist to prepare a CRMP in consultation with the Fernandeño Tataviam Band of Mission Indians.	Prior to the start of any construction of PCH and Topanga Beach Drive Waterlines Improvements (Segments 1, 2, and 3)	Los Angeles County Waterworks District 29	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
Drive Waterlines Improvements (Segments 1, 2, and 3) and Big Rock Bypass Improvements.		and Big Rock Bypass Improvements.		
A Cultural Resources Monitoring Program (CRMP) must be developed once final designs are available and implemented during construction activities that have the potential to disturb native soils in archaeologically sensitive areas. The CRMP shall be prepared by a qualified archaeologist in consultation with the Fernandeño Tataviam Band of Mission Indians, which is the Assembly Bill (AB) 52 consulting tribe on the project. The CRMP will provide details regarding the process for in-field treatment of discoveries and the disposition of discovered non-funerary resources. The CRMP must be completed prior to commencement of ground-disturbing activities, including any archaeological testing (if applicable), and include the following provisions: • A qualified archaeologist must implement a monitoring and recovery program. The archaeologist must meet the U.S. Secretary of the Interior's Professional Qualification Standards for Archaeology. • The project shall retain a professional Native American monitor procured by the Fernandeño Tataviam Band of Mission Indians or consulting tribe under AB 52. The Native American monitors must be afforded an opportunity to be present with the qualified archaeologist during earthwork and excavations associated with the District 29 project. • The qualified archaeologist(s) must provide cultural resources awareness training for all construction personnel prior to the start of construction. Construction personnel must be	Implement CRMP, including retaining qualified archaeologists and professional Native American monitor to monitor ground-disturbing activities, provide training, maintain monitoring logs and site records, and provide copies to the Fernandeño Tataviam Band of Mission Indians.	During any construction involving ground disturbance of PCH and Topanga Beach Drive Waterlines Improvements (Segments 1, 2, and 3) and Big Rock Bypass Improvements, as specified in the CRMP.	Los Angeles County Waterworks District 29 and construction contractors.	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
briefed on procedures to be followed in the event that a unique archaeological resource, historic-era building or structure, or human remains are encountered during construction. A training log must be maintained. • The qualified archaeologist(s)/monitor(s) must be present during initial earthwork and excavations that have the potential to disturb native soils. Based on initial monitoring, the qualified archaeologist must determine the frequency and length of construction monitoring at each location. Monitoring at each specific project location would cease once excavation is completed. Monitoring of equipment installation, backfilling, or shallow excavations in areas of fill soils only will not be required. The monitor(s) must maintain a daily monitoring log that describes monitoring activities and results. After construction is complete, a final report will be prepared by the qualified archaeologist that describes the monitoring program, any resources discovered, and the treatment completed for each resource, if applicable. The monitoring report will include monitoring logs and site records as attachments. A copy of all archaeological documents prepared as a result of the project will be provided to the Fernandeño Tataviam Band of Mission Indians.				
MM CUL-2: **Discovery of Unknown Cultural Resources** If cultural resources or tribal cultural resources are discovered in the course of excavation for project construction, the Construction	Include requirements for discovery of cultural resources in CRMP.	Prior to the start of any construction of PCH and Topanga Beach Drive Waterlines Improvements (Segments 1, 2, and 3)	Los Angeles County Waterworks District 29	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
Contractor must halt work in the immediate area of the find until a qualified archaeologist can evaluate the significance and distribution of the materials and identify future activities needed. The Fernandeño Tataviam Band of Mission Indians, the consulting tribe under AB 52, will be notified of the discovery and given the opportunity to consult on the disposition and treatment of resources through the entire duration of the project. If the cultural material discovered is determined to be of potential archaeological significance, the investigation and future activities must be conducted in consultation with relevant Native American tribes as determined by the NAHC.		and Big Rock Bypass Improvements.		
	Implement requirements of CRMP in case of discovery of cultural resources, including evaluation of materials and future activities, consultation with the Fernandeño Tataviam Band of Mission Indians, and disposition as required.	During any construction involving ground disturbance of PCH and Topanga Beach Drive Waterlines Improvements (Segments 1, 2, and 3) and Big Rock Bypass Improvements, as specified in the CRMP.	Los Angeles County Waterworks District 29 and construction contractors	Los Angeles County Waterworks District 29
MM CUL-3: **Discovery of Human Remains** In accordance with California Health and Safety Code Section 7050.5 and Public Resources Code (PRC) 5097.98, if human remains are found, the County Coroner must be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains must occur until the County Coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the County Coroner determines that the remains are or are believed to be Native American, the Coroner must notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with PRC 5097.98, the NAHC must immediately notify those persons it believes to be the Most Likely Descendant (MLD) of the deceased Native American(s). The MLD must complete their	Include requirements for discovery of human remains on plans and/or specifications.	During improvement design for any site and before final design is approved.	Improvement designers	Los Angeles County Waterworks District 29
	Implement requirements of California Health and Safety Code in case of discovery of human remains.	During ground disturbance at any construction site.	Construction contractors	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
inspection within 48 hours of being granted access to the site and would then make recommendations as to the final disposition of the remains and associated grave goods.				
Geology, Soils, and Paleontological Resources				
MM GEO-1: **Site-Specific Expansive Soil Testing and Design** *This mitigation measure is applicable only to the Emergency Source of Water Supply Connection (Las Virgenes Connection) and the Upper Encinal Tank Improvement.* During facility design for the Emergency Source of Water Supply Connection (Las Virgenes Connection) and the Upper Encinal Tank Improvement, an engineering geologist will conduct an evaluation of soils to determine if there are highly expansive soils at the site (i.e., with an expansion index greater than 20). If expansive soils are present, the engineering geologist must recommend remediation measures to address the soil condition or engineer the pipeline and tank to withstand the pressure of highly expansive soils.	Conduct soil testing to determine potential expansive soils and prescribe remediation.	During improvement design of Emergency Source of Water Supply Connection (Las Virgenes Connection) and the Upper Encinal Tank Improvement and before final design is approved.	Engineering geologist	Los Angeles County Waterworks District 29
	Implement remediation of expansive soils if necessary.	During construction of Emergency Source of Water Supply Connection (Las Virgenes Connection) and the Upper Encinal Tank Improvement in accordance with remediation prescribed (if any).	Construction contractors	Los Angeles County Waterworks District 29
MM GEO-2: **Paleontological Monitoring** *This mitigation measure is applicable to the following seven improvements: Carbon Canyon Road and Carbon Mesa Road Waterline Improvements, Coastline Drive 12-inch Waterline Improvements, Fernwood Tank Improvement, PCH 8-inch Waterline Improvements (Zumirez Drive to Escondido Beach Road), PCH and Topanga Beach Drive Waterline Improvements (all three segments), Emergency Source of Water Supply*	Retain qualified paleontologists or archaeologist to assess soils for paleontological resources and determine where monitoring will be required, if necessary.	Prior to construction of Carbon Canyon Road and Carbon Mesa Road Waterline Improvements, Coastline Drive 12-inch Waterline Improvements, Fernwood Tank Improvement, PCH 8-inch Waterline Improvements (Zumirez	Los Angeles County Waterworks District 29	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
Connection (Las Virgenes Connection), and Upper Encinal Tank Improvement. Prior to construction of the improvements listed above, a qualified paleontologist(s) or cross-trained archaeologist(s) will assess the site with the construction contractor to identify the portions of the site, if any, that, based upon the potential to disturb sedimentary rock formations, will require paleontological monitoring. In these areas, paleontological monitoring will occur by a qualified paleontologist or cross-trained archaeologist. The monitor(s) will have the authority to stop work or divert heavy equipment away from the fossil site until they have had an opportunity to examine and salvage the remains. The monitor(s) will be required to immediately notify the County of the work stoppage or diversion. The monitor(s) must be equipped with tools and collection materials to rapidly remove fossil remains and/or matrix (i.e., earth), and thus reduce the potential for any construction delays. If necessary, the monitor(s) will be authorized to bring in further resources or equipment for large discoveries.		Drive to Escondido Beach Road), PCH and Topanga Beach Drive Waterline Improvements (all three segments), Emergency Source of Water Supply Connection (Las Virgenes Connection), and Upper Encinal Tank Improvement and before final designs are approved.		
	Retain qualified paleontologist or archaeologist to monitor, stop work if necessary, and evaluate and collect resources, as necessary.	Prior to and during any ground disturbance required for construction of Carbon Canyon Road and Carbon Mesa Road Waterline Improvements, Coastline Drive 12-inch Waterline Improvements, Fernwood Tank Improvement, PCH 8-inch Waterline Improvements (Zumirez Drive to Escondido Beach Road), PCH and Topanga Beach Drive Waterline Improvements (all three segments), Emergency Source of Water Supply Connection (Las Virgenes Connection),	Los Angeles County Waterworks District 29	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
		and Upper Encinal Tank Improvement until paleontologist or archaeologist determines monitoring is no longer necessary.		
MM GEO-3: **Paleontological Documentation and Recovery** *This mitigation measure is applicable to the following seven improvements: Carbon Canyon Road and Carbon Mesa Road Waterline Improvements, Coastline Drive 12-inch Waterline Improvements, Fernwood Tank Improvement, PCH 8-inch Waterline Improvements (Zumirez Drive to Escondido Beach Road), PCH and Topanga Beach Drive Waterline Improvements (all three segments), Emergency Source of Water Supply Connection (Las Virgenes Connection), and Upper Encinal Tank Improvement, if any fossils are recovered during implementation of Mitigation Measures GEO-2.* Fossils identified during construction must be documented by a qualified paleontologist(s) or cross-trained archaeologist(s) in a detailed Paleontological Mitigation Report. Fossils recovered from the field or by processing must be prepared, identified, and, along with accompanying field notes, maps and photographs, accessioned into the collections of a designated, accredited museum, such as the Natural History Museum of Los Angeles County.	Include requirements for discovery of paleontological resources on plans and/or specifications.	During improvement design of Carbon Canyon Road and Carbon Mesa Road Waterline Improvements, Coastline Drive 12-inch Waterline Improvements, Fernwood Tank Improvement, PCH 8-inch Waterline Improvements (Zumirez Drive to Escondido Beach Road), PCH and Topanga Beach Drive Waterline Improvements (all three segments), Emergency Source of Water Supply Connection (Las Virgenes Connection), and Upper Encinal Tank Improvement and before final designs are approved.	Improvement designers	Los Angeles County Waterworks District 29
	Retain paleontologist or archaeologist to document fossils if identified during	Prior to and during any ground disturbance required for construction of Carbon	Construction contractors	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
	construction, recover and process, and accession into accredited museum.	Canyon Road and Carbon Mesa Road Waterline Improvements, Coastline Drive 12-inch Waterline Improvements, Fernwood Tank Improvement, PCH 8-inch Waterline Improvements (Zumirez Drive to Escondido Beach Road), PCH and Topanga Beach Drive Waterline Improvements (all three segments), Emergency Source of Water Supply Connection (Las Virgenes Connection), and Upper Encinal Tank Improvement until paleontologist or archaeologist determines monitoring is no longer necessary.		
Hazards and Hazardous Materials				
MM HAZ-1: **Soil Screening and Soil Management Plan** *This mitigation measure applies to construction of all the District 29 improvements included in this project, except for the District 29 Creek Crossing Repairs because they would not involve ground disturbance.* As proposed improvements are to occur at several locations, there is a possibility of	Include requirements for soil screening and soil management plans on plans and/or specifications.	During design of all improvements except District 29 Creek Crossing Repairs and before final designs are approved.	Improvement designers	Los Angeles County Waterworks District 29
	Conduct visual and olfactory observations.	During all construction activities of any improvements except	Construction contractors	Los Angeles County

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
construction personnel encountering previously unknown or undocumented contamination while conducting earth-moving activities. Visual and olfactory observations are commonly used for screening purposes to identify potentially contaminated soils during construction. Uncontaminated native soils typically have distinct color and bedding, as well as other physical attributes (e.g., organic or peaty odors). Chemically impacted soils can exhibit a coloration that is distinctly different from surrounding uncontaminated soil. Often when construction equipment first encounters contaminated soils, a change in color is first noted, and, soon afterward, a distinct odor is detected. These odors can range from smells that are characteristic of oils or lubricants to sweeter smells, often associated with solvents. If suspected affected soils are encountered, construction should seek the professional recommendation of a consultant specializing in the identification of hazardous materials. Suspect soil should be isolated, covered, and bypassed by construction personnel until analytical results are reviewed by the qualified consultant. If contaminated soil is confirmed to exist by the qualified consultant, a licensed Professional Geologist, Professional Engineering Geologist, or Professional Engineer will be retained to prepare a Soil Management Plan. The Soil Management Plan will include the following: • Site characterization, including testing, to determine the full extent of potential areas of concern and all potential contaminants of concern.		District 29 Creek Crossing Repairs.		Waterworks District 29
	If suspected affected soils are encountered, retain qualified professional geologist, engineering geologist, or engineer to identify/confirm presence of hazardous materials; prepare a Soil Management Plan, if necessary; implement Soil Management Plan.	Prior to continuing with any construction activities of any improvements except District 29 Creek Crossing Repairs if suspected affected soils are encountered.	Construction contractors	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
• Procedures for profiling and disposal of contaminated soil. The plan will describe the process for excavation, stockpiling, dewatering, treating, and/or loading and hauling of soil from the site, if necessary. • Site worker safety procedures to ensure compliance with 29 Code of Federal Regulations (CFR) Part 120, Hazardous Waste Operations and Emergency Response regulations for site workers at uncontrolled hazardous waste sites. • The Los Angeles County Fire Department, the local CUPA, will be notified of the discovery. The impacted soil will be handled and disposed of in accordance with the requirements of the Certified Unified Program Agency (CUPA). The County and their contractors will implement all requirements of the Soil Management Plan.				
MM HAZ-2: **Contaminated Groundwater Management** *This mitigation measure applies to construction of all the District 29 improvements included in this project, except for the District 29 Creek Crossing Repairs because they do not involve ground disturbance.* If contaminated groundwater is encountered during construction, a licensed Professional Geologist, Professional Engineering Geologist, or Professional Engineer will be retained to prepare a Groundwater Management Plan. The Groundwater Management Plan will include the following: • Site characterization documenting the extent and the type of the contamination present.	Include requirements for encountering contaminated groundwater on plans and/or specifications.	During design of all improvements except District 29 Creek Crossing Repairs and before final designs are approved.	Improvement designers	Los Angeles County Waterworks District 29
	Retain a qualified professional geologist, engineering geologist, or engineer to prepare a Groundwater Management Plan, if necessary; implement Groundwater Management Plan.	Prior to continuing with any construction of all improvements except District 29 Creek Crossing Repairs if contaminated groundwater is encountered.	Construction contractors	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
• Procedures for profiling and disposal of contaminated groundwater. The plan will describe the process for dewatering, treating, and/or disposing of groundwater from the site, if necessary. • Site worker safety procedures to ensure compliance with 29 CFR Part 120, Hazardous Waste Operations and Emergency Response, regulations for site workers at uncontrolled hazardous waste sites. • The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), and/or the CUPA will be notified of the discovery. Any impacted dewatering fluid will be treated and disposed of in accordance with the requirements of the Regional Board and/or the CUPA. The County and their contractors will implement all requirements of the Soil Management Plan.				
MM HAZ-3: **Trench Slurry** *This mitigation measure applies to construction of all the District 29 improvements included in this project, except for the District 29 Creek Crossing Repairs because they do not involve ground disturbance.* If contaminated groundwater is encountered during construction, replacement improvements, or new pipeline construction, a preferential migration pathway for groundwater may be reduced or eliminated by backfilling the pipeline trench with a slurry that would be sufficient to seal off the trench from the impacted groundwater. A plan for such an installation will be prepared and submitted to the Regional	Include requirements for trench slurry if contaminated groundwater is encountered on plans and/or specifications.	During design of all improvements except District 29 Creek Crossing Repairs and before final designs are approved.	Improvement designers	Los Angeles County Waterworks District 29
	Retain a qualified professional geologist, engineering geologist, or engineer to prepare a plan for installation of trench slurry if contaminated groundwater is encountered; submit the plan to the Regional Board/CUPA	Prior to continuing with any construction of all improvements except District 29 Creek Crossing Repairs if contaminated groundwater is encountered.	Construction contractors	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
Board and/or the CUPA for review and approval as required.	for approval; implement the approved trench slurry plan.			
MM HAZ-4: **Contaminated Soil Disposal** *This mitigation measure applies to construction of all the District 29 improvements included in this project, except for the District 29 Creek Crossing Repairs because they do not involve ground disturbance.* Contaminated soil encountered during construction activities would be removed and tested for level of contamination. If the soil is not considered to be hazardous, it may be disposed of at a Class III landfill. If the soil is deemed hazardous, it would be transported in accordance with hazardous waste regulations to a Class I landfill (Buttonwillow or Westmorland, both of which have adequate daily and total capacity) for final disposal.	Include requirements for disposal of contaminated soil if encountered on plans and/or specifications.	During design of all improvements except District 29 Creek Crossing Repairs and before final designs are approved.	Improvement designers	Los Angeles County Waterworks District 29
	Retain a qualified professional geologist, engineering geologist, or engineer to remove and test contamination of soils, if encountered, and recommend disposal methods; implement disposal in accordance with hazardous waste regulations.	During construction of all improvements except District 29 Creek Crossing Repairs if contaminated groundwater is encountered.	Construction contractors	Los Angeles County Waterworks District 29
Noise				
MM NOI-1: **Construction Noise Reduction** The construction contractor will use appropriate noise-control measures to reduce short-term noise levels associated with project construction to the extent feasible. Noise controls could include any of the following, as appropriate: • Construction hours will be in compliance with City of Malibu and County of Los Angeles noise ordinances during construction within each respective jurisdictional boundary, to the extent feasible. Where construction is required outside of permissible hours or days of the	Include requirements for noise-control measures on plans and/or specifications.	During improvement design for any site and before final designs are approved.	Improvement designers	Los Angeles County Waterworks District 29
	Implement noise controls and construction scheduling as required.	During any construction for any site.	Construction contractors	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
week, written permission from the City Manager in accordance with Section 8.24.060(D) of the City Noise Ordinance or a variance from the County Health Officer in accordance with Section 12.08.580 of the County Noise Ordinance will be obtained. • For construction of the Coastline Drive 12-Inch Waterline Improvements, which is restricted to off-peak hours (see 3.17, Transportation), construction will only occur during the daytime, off-peak hours. • Best available noise-control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) will be used for all equipment and trucks to minimize construction noise impacts. • If impact equipment (e.g., jackhammers and pavement breakers) is used during project construction, hydraulically or electrically powered equipment will be used wherever feasible to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where the use of pneumatically powered tools is unavoidable, an exhaust muffler, which can lower noise levels from the exhaust by up to approximately 10 A-weighted decibels (dBA), will be used on the compressed-air exhaust. External jackets on the tools themselves will be used, where feasible, which could reduce noise by 5 dBA. Quieter procedures, such as drilling rather than using impact equipment, will be used whenever feasible. • Stationary noise sources (e.g., generators, compressors, etc.) will be located as far from sensitive receptors as feasible. If they must be				

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
located near receptors, adequate muffling (with enclosures, where feasible and appropriate) will be used to ensure that local noise ordinance limits are met to the extent feasible. Enclosure openings or venting will face away from sensitive receptors. The use of any stationary equipment will comply with the daytime and nighttime noise limits specified in pertinent noise ordinances to the extent feasible. • Equipment staging and parking areas will be located as far as feasible from residential and school receptors. • Haul trucks will not be allowed to idle for periods greater than 5 minutes, except as needed to perform a specified function (e.g., concrete mixing). • Back-up beepers for all construction equipment and vehicles will be broadband sound alarms or adjusted to the lowest noise levels possible, provided that the Occupational Safety and Health Administration (OSHA) and California Occupational Safety and Health Administration's (Cal OSHA's) safety requirements are not violated. On vehicles where back-up beepers are not available, alternative safety measures, such as escorts and spotters, will be employed. • A designated project liaison will be responsible for responding to noise complaints during the construction activities. The name and phone number of the liaison will be posted conspicuously at construction areas and on all advance notifications. This person will take steps to resolve complaints, including periodic noise monitoring, if necessary. Results of noise monitoring will be				

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
presented at regular meetings with the construction contractor, and the liaison will coordinate with the construction contractor to modify, to the extent feasible, any construction activities that generate excessive noise levels.				
MM NOI-2: Construction Vibration Reduction Construction activities associated with the proposed project will avoid the operation of large-sized mobile equipment within 10 feet of neighboring residential structures. Instead, smaller-sized mobile equipment will be used within this distance.	Include requirements for vibration reduction on plans and/or specifications.	During improvement design for any site and before final designs are approved.	Improvement designers	Los Angeles County Waterworks District 29
	Use smaller-sized equipment adjacent to residential structures.	During construction at any site if within 10 feet of neighboring residential structures.	Construction contractors	Los Angeles County Waterworks District 29
Transportation				
MM TRA-1: **All Lanes Open during Non-construction Periods** *This measure is applicable to the following improvements: all improvements except Fernwood Tank Improvement.* To reduce construction-related impacts related to roadway operations, all travel lanes will be opened during non-construction periods, with lanes maintained in a safe condition.	Include requirements for keeping travel lanes open during non-construction periods on plans and/or specifications.	During design of all improvements except Fernwood Tank and before final designs are approved.	Improvement designers	Los Angeles County Waterworks District 29
	Keep traffic lanes open during periods of non-construction.	During any construction of any improvements except Fernwood Tank.	Construction contractors	Los Angeles County Waterworks District 29
MM TRA-2: **Construction Traffic Controls for Two-lane Roads** *This measure is applicable to the following improvements: Carbon Canyon Road and Carbon Mesa Road Waterline Improvements, Coastline Drive 12-inch Waterline Improvements, and Emergency Source of Water Supply Connection (Las Virgenes Connection).*	Include requirements for construction traffic controls for two-lane roads on plans and/or specifications.	During design of Carbon Canyon Road and Carbon Mesa Road Waterline Improvements, Coastline Drive 12-inch Waterline Improvements, and Emergency Source of Water Supply Connection (Las	Improvement designers	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
To reduce construction-related impacts related to roadway operations on two-lane roadways due to closure of one of the lanes necessary to remove and replace existing pipelines, traffic controls will be used during construction. These will include, at a minimum: • Establishment of one-way traffic zones with adequate queuing areas for waiting traffic. • Use of appropriate advance warning signs such as ROAD WORK AHEAD, LANE CLOSED AHEAD, ONE-WAY TRAFFIC AHEAD, FLAGGERS AHEAD, PREPARE TO STOP, or similar warnings at sufficient distance to slow traffic before queuing location. • Flaggers positioned at either end of the one-way traffic zones at points of maximum visibility to stop traffic at a sufficient distance to prevent entrance into the work zone and to yield to opposing traffic. • Channeling devices, such as cones or other traffic barriers. • High-visibility safety apparel for flaggers in either fluorescent orange-red or fluorescent yellow-green, with reflective material, visible at a minimum distance of 1,000 feet. • Hand-signaling devises, such as STOP/SLOW paddles, lights, and red flags. • Illumination of flagger stations for nighttime work. • Communication devices for flaggers at either end of the one-way traffic zones.		Virgenes Connection) and before final designs are approved.		
	Implement traffic controls as specified.	During any construction of Carbon Canyon Road and Carbon Mesa Road Waterline Improvements, Coastline Drive 12-inch Waterline Improvements, and Emergency Source of Water Supply Connection (Las Virgenes Connection).	Construction contractors	Los Angeles County Waterworks District 29
MM TRA-3: **Limit Construction to Off-Peak Hours** *This measure is applicable to the following improvements:*	Include requirements for off-peak-hour construction on plans and/or specifications.	During design of Coastline Drive 12-inch Waterline Improvements, District 29 Creek	Improvement designers	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
• *Coastline Drive 12-inch Waterline Improvements* • *District 29 Creek Crossing Repairs* • *PCH 8-inch Waterline Improvements (Zumirez Drive to Escondido Beach Road)* • *PCH and Topanga Beach Drive Waterline Improvements* • *Big Rock Bypass Improvements* In order to reduce peak-hour LOS impacts at affected locations, lane closures will occur only during off-peak hours, from 10 a.m. to 3 p.m. or from 9 p.m. to 5 a.m., with lanes restored to a safe condition during peak hours.		Crossing Repairs, PCH 8-inch Waterline Improvements (Zumirez Drive to Escondido Beach Road), PCH and Topanga Beach Drive Waterline Improvements, and Big Rock Bypass Improvements and before final designs are approved.		
	Implement lane closures during off-peak hours only at required locations.	During any construction of Coastline Drive 12-inch Waterline Improvements, District 29 Creek Crossing Repairs, PCH 8-inch Waterline Improvements (Zumirez Drive to Escondido Beach Road), PCH and Topanga Beach Drive Waterline Improvements, and Big Rock Bypass Improvements.	Construction contractors	Los Angeles County Waterworks District 29
MM TRA-4: **Traffic Controls for Full Roadway Closure** *This measure is applicable to the Fernwood Tank Improvements.* To reduce construction-related impacts related to roadway operations on Horseshoe Drive with full roadway closure during construction when large trucks and other equipment are accessing the Fernwood Tank Improvements site, the	Include requirements for maintaining Horseshoe Drive access on plans and/or specifications.	During design of Fernwood Tank Improvement and before final designs are approved.	Improvement designers	Los Angeles County Waterworks District 29
	Implement required notifications, street closures, and high-	During any construction of Fernwood Tank Improvements when large trucks and other	Construction contractors	Los Angeles County Waterworks District 29

Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
following measures are required, at a minimum, before and during construction: • Notification of neighbors to the site at least 48 hours in advance if street closure will affect their access or on-street parking. Notification will be hand delivered to the affected house and will include a contact person with email and phone number. • Use of appropriate street closure signs positioned so that vehicles can make appropriate detours or U-turns. • Appropriate high-visibility barriers to prevent vehicles from entering closed areas.	visibility barriers during construction.	equipment are accessing the site.		
MM TRA-5: **Accommodate Bike Route on PCH during Construction** *This measure is applicable to the following improvements:* • *District 29 Creek Crossing Repairs* • *PCH 8-inch Waterline Improvements (Zumirez Drive to Escondido Beach Road)* • *PCH and Topanga Beach Drive Waterline Improvements* • *Big Rock Bypass Improvements* To reduce impacts on the Class III bike route on PCH from closure of outside lanes, bicycle route detours will be provided whenever possible, preferably separated from traffic, with appropriate signage. When not possible, signs indicating that the bike route will be closed will be posted at least 1 week prior to closure.	Include requirements for accommodating bike routes on plans and/or specifications.	During design of District 29 Creek Crossing Repairs, PCH 8-inch Waterline Improvements (Zumirez Drive to Escondido Beach Road), PCH and Topanga Beach Drive Waterline Improvements, and Big Rock Bypass Improvements and before final designs are approved.	Improvement designers	Los Angeles County Waterworks District 29
	Implement bicycle route detours or closure signs as required during construction.	At least 1 week prior to any construction of District 29 Creek Crossing Repairs, PCH 8-inch Waterline Improvements (Zumirez Drive to Escondido Beach Road), PCH and Topanga Beach Drive	Construction contractors	Los Angeles County Waterworks District 29

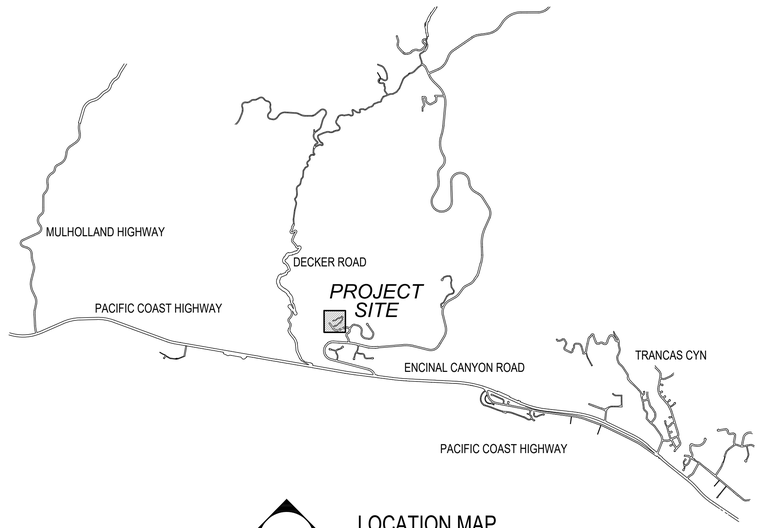
Mitigation Measure	Action Required	Mitigation Timing	Responsible Agency or Party	Monitoring Agency or Party
		Waterline Improvements, and Big Rock Bypass Improvements when lane closure (including Class III bike route) is required.		
MM TRA-6: **Accommodate Pedestrians during Construction within Roadway Rights-of-Way** *This measure is applicable to the following improvements: all improvements except Fernwood Tank Improvement.* To reduce impacts on pedestrians from closure of outside lanes, safe pedestrian detours will be provided if sidewalks are blocked or unsafe during construction or if roadway rights-of-way without sidewalks are used for walking, jogging, or running.	Include requirements for accommodating pedestrians on plans and/or specifications.	During design of all improvements except of Fernwood Tank Improvement and before final designs are approved.	Improvement designers	Los Angeles County Waterworks District 29
	Provide safe alternatives to pedestrian traffic.	Prior to any construction of all improvements except of Fernwood Tank Improvement when sidewalks will be blocked or unsafe during construction and/or where no sidewalks are available.	Construction contractors	Los Angeles County Waterworks District 29

LOS ANGELES COUNTY PUBLIC WORKS

UPPER ENCINAL TANK IMPROVEMENT

WATERWORKS DISTRICT NO. 29, MALIBU

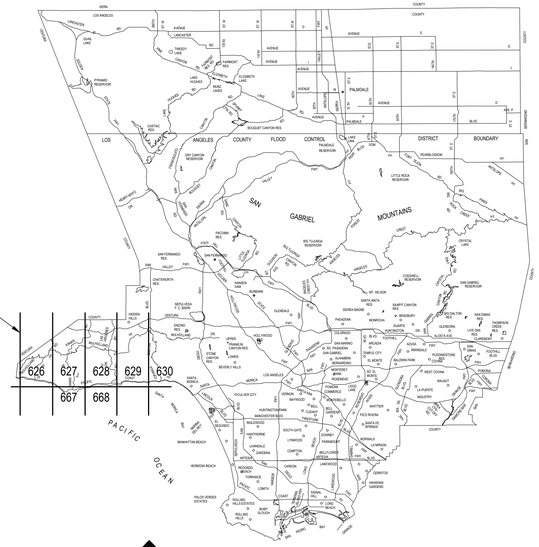
Sheet List Table		
SHEET #	**DWG. #**	**SHEET TITLE**
GENERAL		
1	T1.0	TITLE SHEET, VICINITY AND LOCATION MAPS
2	G1.0	SHEET LIST & ABBREVIATIONS
3	G1.1	GENERAL NOTES
4	G2.0	HYDRAULIC PROFILE
5	G3.0	CONSTRUCTION NOTES
6	G4.0	GEOTECHNICAL BORING LOGS
7	G4.1	GEOTECHNICAL BORING LOGS
CIVIL		
8	C1.0	EXISTING SITE PLAN
9	C1.1	SEQUENCE OF CONSTRUCTION PLAN
10	C1.2	SEQUENCE OF CONSTRUCTION PLAN
11	C1.3	DEMOLITION DETAILS
12	C2.0	PROPOSED SITE PLAN
13	C3.0	SITE GRADING PLAN
14	C3.1	RETAINING WALL PLAN AND PROFILE
15	C4.0	SITE YARD PIPING PLAN
16	C5.0	CIVIL DETAILS
17	C5.1	CIVIL DETAILS
MECHANICAL		
18	M1.0	TANK MECHANICAL PLAN
19	M1.1	TANK MECHANICAL SECTIONS
20	M1.2	TANK MECHANICAL SECTIONS
21	M2.0	CHARMLEE P.S. PLAN
22	M2.1	CHARMLEE P.S. SECTIONS
23	M2.2	CHARMLEE P.S. SECTIONS
24	M3.0	MECHANICAL DETAILS
25	M3.1	MECHANICAL DETAILS
26	M3.2	MECHANICAL DETAILS
STRUCTURAL	*NOT A PART OF PLANNING REVIEW SUBMITTAL	
27	F1.0	PILE CAP FOUNDATION NOTES
28	F2.0	FILE CAP FOUNDATION
29	S1.0	STRUCTURAL NOTES
30	S1.1	STRUCTURAL NOTES
31	S2.0	STRUCTURAL DETAILS
ELECTRICAL		
32	E1.0	LEGEND AND ABBREVIATIONS
33	E1.1	ELECTRICAL NOTES
34	E2.0D	EXISTING SINGLE LINE DIAGRAM
35	E2.0	PROPOSED SINGLE LINE DIAGRAM
36	E3.0	LOAD AND PANEL SCHEDULES
37	E4.0	ELECTRICAL POWER PLAN
38	E4.1	ELECTRICAL CONTROL PLAN
39	E4.2	LIGHTING CONTROL PLAN
40	E4.3	GROUNDING PLAN
41	E5.0	CABLE AND CONDUIT SCHEDULE
42	E6.0	ELECTRICAL DETAILS
43	E6.1	ELECTRICAL DETAILS
44	E6.2	ELECTRICAL DETAILS
P&ID		
45	I0.0	P&ID LEGEND
46	I0.1	NETWORK DIAGRAM
47	I1.0	UPPER ENCINAL TANK P&ID
48	I2.0	CHARMLEE P.S. P&ID
49	I3.0	POTENTIAL CHLORINE RESIDUAL SYSTEM P&ID
CATHODIC PROTECTION SYSTEM	*NOT A PART OF PLANNING REVIEW SUBMITTAL	
50 (001)	U52-93576-C-001	CATHODIC PROTECTION SYSTEM LAYOUT
51 (002)	U52-93576-C-002	CATHODIC PROTECTION SYSTEM DETAILS
52 (003)	U52-93576-C-003	CATHODIC PROTECTION HARDWARE LAYOUT
53 (004)	U52-93576-C-004	CATHODIC PROTECTION HARDWARE DETAILS



LOCATION MAP

N.T.S.

THOMAS GUIDE BROS PAGE #'s



VICINITY MAP

N.T.S

SCOPE OF WORK

THE UPPER ENCINAL TANK IMPROVEMENT PROJECT WILL CONSIST OF CONSTRUCTING A NEW 185,000 GALLON WELDED STEEL STORAGE TANK, ASSOCIATED PROCESS PIPING, SITE CIVIL, BOOSTER PUMP STATION, AND ELECTRICAL AND INTEGRATION AND CONTROLS IMPROVEMENTS AS SHOWN IN THE CONTRACT DOCUMENTS.

SPECIFICALLY, THE PROJECT WILL INCLUDE BUT WILL NOT BE LIMITED TO THE FOLLOWING ITEMS:

1. REMOVAL OF THE EXISTING 70,000 GALLON BOLTED STEEL UPPER ENCINAL POTABLE WATER STORAGE TANK.
2. REMOVAL OF THE EXISTING 90 GPM CHARMLEE PUMP STATION.
3. CONSTRUCTION SEQUENCING IN ACCORDANCE WITH THE COUNTY AND BID DOCUMENT REQUIREMENTS.
4. NEW SITE GRADING WORK.
5. NEW RETAINING WALL.
6. NEW 185,000 GALLON WELDED STEEL UPPER ENCINAL POTABLE WATER STORAGE TANK (26-FT MAX HEIGHT) WITH AN ACTIVE VORTEX MIXING SYSTEM, INSTRUMENTATION AND TANK APPURTENANCES.
7. NEW 90 GPM CHARMLEE POTABLE WATER BOOSTER PUMP STATION.
8. NEW YARD AND PROCESS PIPING, VALVE, ASSOCIATED FITTINGS AND ACCESSORIES.
9. MISCELLANEOUS SITE CIVIL WORK.
10. NEW ELECTRICAL, CONTROLS, INSTRUMENTATIONS AND PROGRAMMING OF PROPOSED UPGRADES.

UTILITY CONTACTS:

FRONTIER COMMUNICATIONS
JASON EISEL (805) 233-1472

SOUTHERN CALIFORNIA EDISON
MANUEL DEGRACIA (805) 497-5602

SPECTRUM (CHARTER COMMUNICATIONS)
SHAWN RIGGS (805) 626-3225

THE GAS COMPANY
JOSE BARBA (213) 231-8124

CITY OF MALIBU PLANNING NOTES:

1. PROPOSED TANK MATERIAL, COLOR, AND FINISH SHALL BE STEEL, TAN, AND NON-GLOSSY.
2. ALL SITE LIGHTING WILL BE IN COMPLIANCE WITH THE CITY'S DARK SKY ORDINANCE (MMC SECTION 17.41).
3. LCP ZONING DESIGNATION: PUBLIC OPEN SPACE, OS.
4. THE TANK SITE EASEMENT AREA SPANS TWO (2) PARCELS. THE GROSS LOT AREAS FOR EACH PARCEL, AND THE TANK SITE EASEMENT IS SHOWN BELOW FOR REFERENCE.

   AIN 4473-005-901: GROSS LOT AREA = 1,314,783 SQ. FT.
   AIN 4473-005-902: GROSS LOT AREA = 1,582,703 SQ. FT.
   TANK SITE EASEMENT AREA = 11,250 SQ. FT.

PRIME CONTRACTOR'S LICENSE REQUIRED:

CLASS A

FILE NAME:
DATE LAST SAVED:
CHECKER: RM
DESIGNER: KS
DRAFTER: JS

811 Know what's **below.** **Call** before you dig.

APPROVED

BY _____ ASSISTANT DEPUTY DIRECTOR DATE

RECOMMENDED

BY _____ DATE

PACE
Advanced Water Engineering
17520 Newhope Street, Suite 200 | Fountain Valley, CA 92708
P: (714) 481-7300 | www.pacewater.com

DATE		INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY
PROJECT ENGINEER

06/09/2026
DATE

DWG NO. T1.0

100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL
TANK IMPROVEMENT
TITLE SHEET, VICINITY
AND LOCATION MAPS

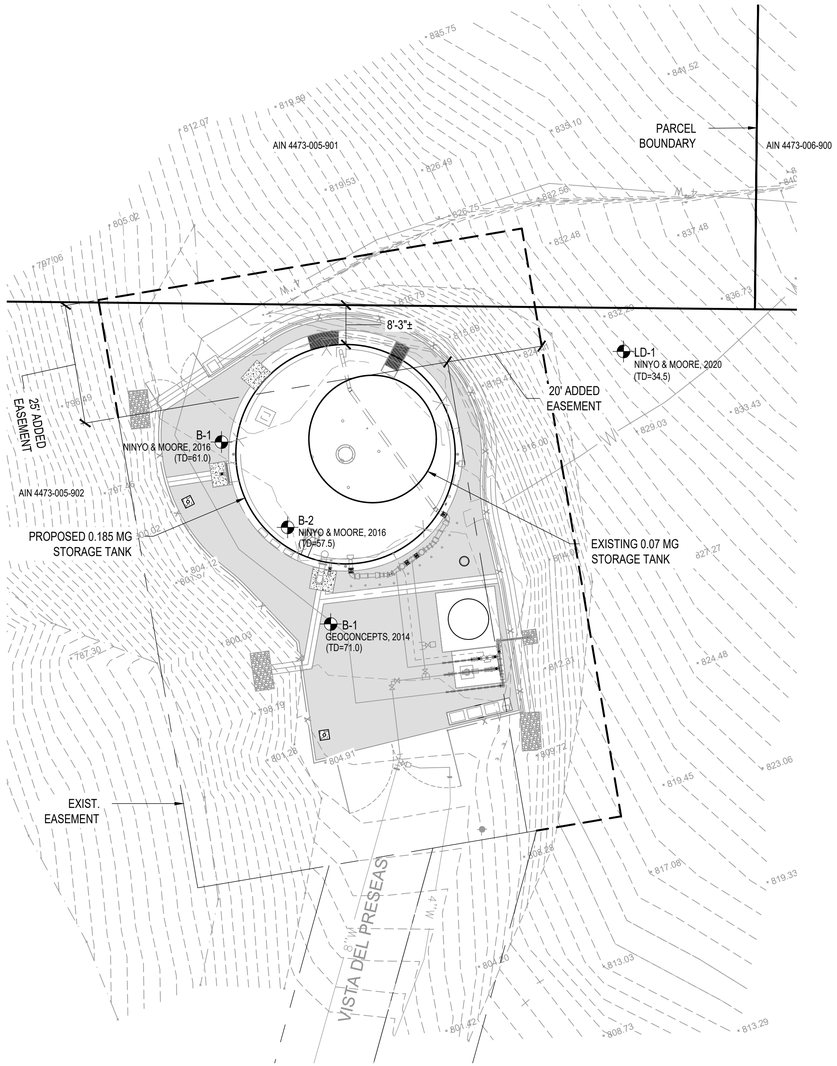
PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	1	OF	53

ATTACHMENT 2

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AI	ANALOG INPUT
ALUM	ALUMINUM
AO	ANALOG OUTPUT
APPROX	APPROXIMATELY
ARV	AIR RELEASE VALVE
ATS	AUTOMATIC TRANSFER SWITCH
BC	BEGINNING OF CURVE
BM	BENCHMARK
CFM	CUBIC FEET PER MINUTE
CITY	CITY OF MALIBU
CL	CENTERLINE
CLR	CLEAR
CML&C	CEMENT MORTAR LINED AND COATED
CML&EC	CEMENT MORTAR LINED AND EPOXY COATED
CONT	CONTINUOUS
COUNTY	LOS ANGELES COUNTY
CPLG	COUPLING
CV	CHECK VALVE
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
DWG	DRAWING
E	ELECTRICAL POWER
E	EASTING
EA	EACH
EL	ELEVATION
EL&EC	EPOXY LINED AND COATED
ELEC	ELECTRICAL POWER
EOC	EDGE OF CURB
EOG	EDGE OF GUTTER
EP	EDGE OF PAVEMENT
EW	EACH WAY
EXH	EXHAUST
EXIST	EXISTING
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FLG	FLANGED
FM	FORCEMAIN
FS	FINISHED SURFACE
FT	FEET
FUT	FUTURE
GA	GAUGE
HDPE	HIGH DENSITY POLYETHYLENE
HOA	HOME OWNERS ASSOCIATION
HP	HORSEPOWER
HZ	HERTZ
ID	INSIDE DIAMETER

IE	INVERT ELEVATION
IN	INCHES
IRR	IRRIGATION
JB	JUNCTION BOX
LBS	POUNDS
LF	LINEAR FEET
LI	LEVEL INDICATOR
MAX	MAXIMUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MTS	MANUAL TRANSFER SWITCH
N	NORTHING
N/C	NORMALLY CLOSED
N/O	NORMALLY OPEN
NG	NATURAL GAS
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PCC	PORTALND CEMENT CONCRETE
PG	PRESSURE GAUGE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PRC	POINT OF REVERSE CURVE
PROP	PROPOSED
PSI	POUNDS PER SQUARE INCH
RED	REDUCER
REF	REFERENCE
REQ	REQUIRED
ROW	RIGHT OF WAY
S	SLOPE
SCH	SCHEDULE
SD	STORM DRAIN
SHT	SHEET
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STA	STATION
SV	SOLENOID VALVE
T&B	TOP AND BOTTOM
TB	TERMINAL BOX
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE
TOC	TOP OF CURB
TOS	TOP OF SLAB
TOW	TOP OF WALL
TSP	TWISTED SHEILDED PAIR
WWF	WELDED WIRE FABRIC



SITE MAP
SCALE: 1" = 20'-0"

COORDINATES FOR SURVEY CONTROL POINTS

SURVEY CONTROL POINT & PAGE #	NORTHING (FT)	EASTING (FT)	ELEVATION (FT)
CP #324	1840823.44	6291641.60	737.76
CP #325	1840823.44	6291866.46	701.46
CP #326	1840893.42	6292045.87	688.91
PT#2404 - PER PWFB 1201, PG. 329	1840413.18	6291623.03	632.33
PT#2405 - PER PWFB 1201, PG. 329	1840350.99	6292381.90	523.09
PT#2406 - PER PWFB 1201, PG. 330	1840572.47	6293172.84	677.87
PT#2410 - PER PWFB 1201, PG. 329	1839045.19	6293408.39	376.15

NOTE: SEE SPECIFICATIONS FOR ADDITIONAL SURVEY CONTROL POINTS AND SURVEY MAP

LEGEND

- PROPOSED WATER MAIN
- EXISTING WATER MAIN
- EXISTING GAS LINE
- EXISTING TELEPHONE
- EXISTING ELECTRICAL
- STREET CENTER LINE
- PROPERTY LINE
- RIGHT OF WAY LINE
- EXISTING A.C. PAVING
- EXISTING CHAIN LINK FENCE
- GATE VALVE
- TEE, FLANGED
- ELBOW, FLANGED
- CONNECTIONS: FLANGE, MJ, FLEX. ADAPTOR
- SERVICE CONNECTION
- FIRE HYDRANT
- COMBINATION AIR RELEASE AND VACUUM VALVE ASSEMBLY
- POWER POLE
- BORING LOCATION (APPROXIMATE), SEE G4.0 AND G4.1 FOR BORING LOGS

BASIS OF SURVEY:

THE BASIS OF HORIZONTAL CONTROL IS THE NORTH AMERICAN DATUM OF 1983 (NAD 83). CALIFORNIA COORDINATE SYSTEM (CCS) ZONE 5, EPOCH 2007. AND THE BASIS OF VERTICAL CONTROL IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), MALIBU QUAD 2008 ADJUSTMENT, CONSTRAINING THE COORDINATES AND ELEVATIONS OF FOUND AERIAL TARGETS SHOWN ON PWFB 1201, PAGES 329 AND 330.

GEOTECHNICAL CONSULTANT'S APPROVAL:

THESE PLANS HAVE BEEN REVIEWED AND ARE ACCEPTABLE IN REGARDS TO SOIL CONDITION AND CONFORM TO THE RECOMMENDATIONS OF THE FOLLOWING SUPPORTIVE REPORT PREPARED BY NINYO & MOORE.

GEOTECHNICAL EVALUATION REPORT
ENCINAL CANYON TANK AND WATERLINE PROJECT
LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 29, MALIBU
JOB NUMBER 209249002
MALIBU, LOS ANGELES COUNTY, CALIFORNIA
SPEC WWD 29-825.

BY: _____ _____
GEOTECHNICAL/SOILS ENGINEERING DATE

DWG NO. G1.0

100% PLANS - PLANNING REVIEW

PACE
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17520 Newhope Street, Suite 200 | Fountain Valley, CA 92708
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DATE		INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 DATE

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

SHEET LIST & ABBREVIATIONS

PROJ ID WWD2900065 | PCA Y5292300 | SPEC WWD 29-825 | SHEET 2 OF 53

FILE NAME
DATE LAST SAVED:
CHECKER RM
DESIGNER KS
DRAFTER JS

GENERAL NOTES

1. THE TERM OWNER, COUNTY OR DISTRICT SHALL REFER TO LOS ANGELES COUNTY WATERWORKS DISTRICT 29 OR THEIR REPRESENTATIVE. THE CITY SHALL REFER TO THE CITY OF MALIBU OR THEIR REPRESENTATIVE. CONTRACTOR SHALL REFER TO THE CONTRACTOR HIRED TO COMPLETE THE WORK. THE ENGINEER SHALL REFER TO PACIFIC ADVANCED CIVIL ENGINEERING OR THE APPLICABLE ENGINEER OF RECORD. THE GEOTECHNICAL ENGINEER SHALL REFER TO NINYO & MOORE OR THEIR REPRESENTATIVE.

2. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH 1. THESE PLANS AND SPECIFICATIONS; 2. STANDARD FOR PUBLIC WORKS CONSTRUCTION; 3. THE LOS ANGELES COUNTY WATERWORKS STANDARD PLANS & SPECIFICATIONS.

3. ALL PERMITS HAVE BEEN OBTAINED BY THE AGENCY. CONTRACTOR WILL PROCURE ANY REQUIRED BUSINESS LICENSES.

4. DURING ALL PHASES OF CONSTRUCTION, INCLUDING SUSPENSION OF WORK, UNTIL FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL OBSERVE, FOLLOW AND IMPLEMENT ALL THE REQUIREMENTS OF THE NPDES AND STORMWATER POLLUTION PREVENTION PROGRAM AS STATED IN SECTION EC OF THE SPECIAL PROVISIONS AND KEEP THE WORK SITE CLEAN AND FREE FROM RUBBISH AND DEBRIS. THE CONTRACTOR SHALL ALSO ABATE DUST NUISANCE BY CLEANING, SWEEPING AND SPRINKLING WITH WATER AND USING DUST FENCES OR OTHER METHODS AS DIRECTED BY THE COUNTY'S REPRESENTATIVE THROUGHOUT THE CONSTRUCTION OPERATION.

5. THE CONTRACTOR SHALL KEEP A STRICT RECORD OF ALL CHANGES AND SUBMIT THIS RECORD TO THE COUNTY. THE CONTRACTOR SHALL ALSO COORDINATE TRANSFERRING "AS-BUILT" INFORMATION ON THE CONTRACT DRAWINGS AND DELIVER THE CERTIFIED "AS-BUILT" PLANS TO THE COUNTY BEFORE THE RELEASE FOR OCCUPANCY OR FINAL ACCEPTANCE OF THE PROJECT SHALL BE FILED.

6. THE CONTRACTOR SHALL EXERCISE DUE CARE TO AVOID DAMAGES TO EXISTING IMPROVEMENTS OR FACILITIES, UTILITY FACILITIES, ADJACENT PROPERTY, AND TREES AND SHRUBBERY THAT ARE NOT TO BE REMOVED. ALL DAMAGE CAUSED TO STREETS, INCLUDING HAUL ROUTES, ALLEYS, SIDEWALKS, CURBS OR STREET FURNISHINGS, OR TO PRIVATE PROPERTY SHALL BE REPAIRED AT THE SOLE EXPENSE OF THE CONTRACTOR TO THE SATISFACTION OF THE COUNTY.

7. THE CONTRACTOR SHALL DESIGNATE AND KEEP ON THE PROJECT AT ALL TIMES DURING ITS PROGRESS A COMPETENT SUPERINTENDENT WHO SHALL NOT BE REPLACED WITHOUT A WRITTEN NOTICE TO THE COUNTY. THE SUPERINTENDENT WILL BE THE CONTRACTOR'S REPRESENTATIVE AT THE SITE AND SHALL HAVE AUTHORITY TO ACT ON BEHALF OF THE CONTRACTOR. ALL COMMUNICATIONS GIVEN TO THE SUPERINTENDENT SHALL BE AS BINDING AS IF GIVEN TO THE CONTRACTOR. DURING PERIODS WHEN THE WORK IS SUSPENDED, THE CONTRACTOR SHALL MAKE APPROPRIATE ARRANGEMENTS FOR ANY EMERGENCY WORK WHICH MAY BE REQUIRED.

8. WHEN THE WORK OR ANY PORTION OF IT IS SUFFICIENTLY COMPLETE TO BE UTILIZED OR PLACED INTO SERVICE, THE COUNTY SHALL HAVE THE RIGHT UPON WRITTEN NOTIFICATION TO THE CONTRACTOR TO UTILIZE SUCH PORTIONS OF THE WORK AND TO PLACE THE OPERABLE PORTIONS INTO SERVICE AND TO OPERATE SAME. UPON SAID NOTICE AND COMMENCEMENT OF UTILIZATION OR OPERATION BY THE COUNTY, THE CONTRACTOR SHALL BE RELIEVED OF THE DUTY OF MAINTAINING THE PORTIONS SO UTILIZED OR PLACED INTO OPERATION; PROVIDED, HOWEVER, THAT NOTHING IN THIS NOTE SHALL BE CONSTRUED AS RELIEVING THE CONTRACTOR OF THE FULL RESPONSIBILITY FOR COMPLETING THE WORK IN ITS ENTIRETY, FOR MAKING GOOD DEFECTIVE WORK AND MATERIALS, FOR PROTECTING THE WORK FROM DAMAGE, AND FOR BEING RESPONSIBLE FOR DAMAGE.

9. THE CONTRACTOR SHALL SO CONDUCT HIS OPERATIONS AS TO OFFER THE LEAST POSSIBLE OBSTRUCTION AND INCONVENIENCE, AND HE SHALL HAVE UNDER CONSTRUCTION NO GREATER LENGTH OR AMOUNT OF WORK THAN HE CAN PROSECUTE PROPERLY WITH DUE REGARD TO THE RIGHTS OF THE PUBLIC. CONVENIENT ACCESS TO DRIVEWAYS, HOUSES, AND BUILDINGS ALONG THE LINE OF WORK SHALL BE MAINTAINED AND TEMPORARY CROSSINGS SHALL BE PROVIDED AND MAINTAINED IN GOOD CONDITION. NO MORE THAN ONE CROSSING OR INTERSECTION STREET OR ROAD SHALL BE CLOSED AT ANY ONE TIME.

10. UNTIL THE ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL HAVE THE RESPONSIBLE CHARGE AND CARE OF THE WORK AND OF THE MATERIALS TO BE USED THEREIN (INCLUDING MATERIALS FOR WHICH HE HAS RECEIVED PARTIAL PAYMENT OR MATERIALS WHICH HAVE BEEN FURNISHED BY THE COUNTY) AND SHALL BEAR THE RISK OF INJURY, LOSS, OR DAMAGE TO ANY PART THEREOF BY THE ACTION OF ELEMENTS OR FROM ANY OTHER CAUSE, WHETHER ARISING FROM THE EXECUTION OR FROM THE NONEXECUTION OF THE WORK.

11. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK, AND THE CONTRACTOR SHALL FULLY COMPLY WITH ALL STATE, FEDERAL AND OTHER LAWS, RULES, REGULATIONS, AND ORDERS RELATING TO SAFETY OF WORKERS AND ALL OTHERS. THIS MAY INCLUDE THE ISSUANCE OF PERSONAL PROTECTIVE EQUIPMENT.

12. THE LANDS AND RIGHTS-OF-WAY FOR THE FACILITY TO BE CONSTRUCTED WILL BE PROVIDED BY THE COUNTY. THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS AND PAY ALL EXPENSES FOR ADDITIONAL AREA REQUIRED BY HIM BEYOND THE LIMITS OF THE COUNTY'S LANDS AND RIGHTS-OF-WAY.

13. DIG ALERT SHALL BE NOTIFIED BY CALLING 1-800-227-2600 PRIOR TO THE START OF CONSTRUCTION OR PIPELINE INSTALLATION TO SCHEDULE AN INSPECTION. INSPECTION MUST BE MADE BEFORE TRENCHING FOR BELOW-GROUND PIPING IS BACK-FILLED.

14. ALL FIELD SURVEYING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

15. ANY INSPECTION BY THE COUNTY OR THE ENGINEER SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN STRICT COMPLIANCE WITH THE APPLICABLE CODES AND AGENCY REQUIREMENTS.

16. THE DESIGN AND INSTALLATION OF THE WELDED STEEL POTABLE WATER STORAGE TANK SHALL BE PER AWWA D100-11. INTERIOR & EXTERIOR COATING OF THE WELDED STEEL POTABLE WATER STORAGE TANK SHALL BE PER AWWA D102.

17. IF A CONFLICT OCCURS BETWEEN ANY OF THE PROJECT DOCUMENTS AND PLANS THE MORE STRINGENT SHALL APPLY.

18. THE ENGINEER WILL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES ON PROCEDURES OR FOR SAFETY PRECAUTIONS OR PROGRAMS UTILIZED IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSBILE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

19. THE EXISTENCE AND LOCATIONS OF ALL UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS WERE ASCERTAINED BY EXISTING INFORMATION AND ARE APPROXIMATE. NEITHER THE COUNTY NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY FOR UTILITIES NOT SHOWN OR NOT IN THE LOCATION SHOWN.

20. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE COUNTY AND THE ENGINEER OF ALL DISCREPANCIES PRIOR TO THE COMMENCEMENT OF WORK.

21. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXPOSE EXISTING WATER SYSTEM AT THE PROPOSED CONNECTION POINTS AND VERIFY ITS EXISTING ELEVATION, LOCATION, ACTUAL DIAMETER & MATERIAL.

22. ALL BURIED ELECTRICAL CONDUITS SHALL BE ENCASED IN RED CONCRETE.

23. PRIOR TO ANY POTABLE WATER CONNECTIONS, THE CONTRACTOR SHALL PRESSURE TEST AND DISINFECT ALL NEWLY CONSTRUCTED FACILITIES IN ACCORDANCE WITH THE COUNTY REQUIREMENTS AND ALL APPLICABLE AWWA STANDARDS AND PASS A BACTERIA CONTAMINATION TEST. ALL DISINFECTION AND BACTERIA TESTING SHALL BE UNDER THE OBSERVATION OF THE COUNTY REPRESENTATIVE.

24. ANY WORK TO BE CONDUCTED IN AN AREA DEFINED BY OSHA TO BE A CONFINED SPACE SHALL FOLLOW THE NECESSARY OPERATIONAL REQUIREMENTS AS DESIGNATED BY THE APPLICABLE REGULATORY AGENCIES. ALL PARTICIPANTS CONDUCTING WORK IN A CONFINED SPACE ENVIRONMENT MUST BE TRAINED AND CERTIFIED TO CONDUCT WORK IN A CONFINED SPACE. PRIOR TO ANY WORK IN AN AREA DEFINED AS A CONFINED SPACE, THE CONTRACTOR SHALL CREATE AN ENTRY PLAN THAT SHALL SATISFY ALL THE SAFETY REQUIREMENTS BY ALL REGULATORY AGENCIES (SEE ALSO SPECIFICATIONS).

25. ALL DISINFECTION WORK SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY THE CA DEPARTMENT OF HEALTH SERVICES IN ACCORDANCE WITH CHAPTER 9, DIVISION 5 OF THE HEALTH AND SAFETY CODE AND COUNTY STANDARDS. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE A DISINFECTION PLAN TO THE COUNTY FOR REVIEW AND APPROVAL BY THE COUNTY. A COPY OF THE CERTIFICATE SHALL BE PROVIDED TO THE COUNTY PRIOR TO THE COMMENCEMENT OF DISINFECTION.

FIRE DEPARTMENT NOTES

1. ADDITIONAL SIGNAGE AND FIRE EXTINGUISHERS MAY BE REQUIRED. LOCATION AND TYPE SHALL BE DETERMINED PRIOR TO FINAL FIRE DEPARTMENT INSPECTION.

2. ALL WORKS SHALL COMPLY WITH THE CALIFORNIA FIRE CODE 2019 EDITION.

3. PERMITS SHALL BE OBTAINED FROM THE FIRE CODE OFFICIAL. PERMIT(S) AND FEES, IF ANY, SHALL BE PAID PRIOR TO ISSUANCE OF ANY AND/OR ALL PERMITS. ISSUED PERMITS SHALL BE KEPT ON THE PREMISES DESIGNATED THEREIN AT ALL TIMES AND SHALL BE READILY AVAILABLE FOR INSPECTION BY THE FIRE CODE OFFICIAL.

4. FINAL APPROVAL IS SUBJECT TO FIELD INSPECTIONS. MINIMUM 48 HOURS NOTICE REQUIRED TO ANY LIFE-SAFETY FIRE INSPECTION. OTHER CONDITIONS MAY APPLY AT TIME OF INSPECTIONS AND SUBJECT TO CORRECTIONS.

CONSTRUCTION NOTES:

1. CONTRACTOR TO PROVIDE PIPE SUPPORTS PER MANUFACTURER'S REQUIREMENTS, PROJECT PLANS AND SPECIFICATIONS AND AT THE LOCATIONS INDICATED ON THE PLANS.

2. ALL PROCESS PIPES SHALL BE COLOR COATED PER THE SPECIFICATIONS WITH THE EXCEPTION OF STAINLESS STEEL PIPES. ALL ABOVE GROUND PIPES SHALL ALSO BE OUTFITTED WITH A FLOW DIRECTION ARROW AND LABEL.

3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL FOR EACH EQUIPMENT ITEM PRIOR TO INSTALLATION. INSTALLATION DETAILS FOR ALL EQUIPMENT ITEMS SHALL BE PER RESPECTIVE EQUIPMENT MANUFACTURER'S SHOP DRAWINGS AND RECOMMENDED INSTALLATION REQUIREMENTS.

4. ELEVATION OF EXISTING STRUCTURES, PIPING, AND COMPONENTS ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO CONSTRUCTION.

5. CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTING AND PIPE APPURTENANCIES REQUIRED FOR PROPER INSTALLATION AND SHALL ACCOUNT FOR ADEQUATE LAY LENGTH COMPLETE AND IN PLACE.

6. PRECAST SUPPLIER TO PROVIDE STRUCTURAL CALCULATIONS STAMPED BY A REGISTERED ENGINEER IN CA TO DOCUMENT DESIGN OF PRECAST STRUCTURE.

7. THE CONTRACTOR /SELECTED EQUIPMENT MANUFACTURERS SHALL BE RESPONSIBLE FOR SIZING & PROVIDING ANCHOR BOLTS FOR THE RESPECTIVE EQUIPMENT IN ACCORDANCE WITH THE SITE LOADS, SPECIFICALLY SEISMIC REQUIREMENTS. CONTRACTOR/SELECTED EQUIPMENT MANUFACTURERS SHALL INCLUDE CLEAR CONCISE CALCULATIONS SIGNED & STAMPED BY A LICENSED CIVIL ENGINEER IN THE STATE OF CALIFORNIA, SHOWING EQUIPMENT ANCHORAGE FORCES & CAPACITIES OF THE ANCHORAGE ELEMENT.

GENERAL GRADING NOTES:

1. CONTRACTOR TO FOLLOW RECOMMENDATIONS GEOTECHNICAL EVALUATION TITLED "ENCINAL CANYON TANK AND WATERLINE IMPROVEMENT PROJECT LOS ANGELES COUNTY WATERWORKS DISTRICT 29 WATER SYSTEM, MALIBU, CALIFORNIA", DATED JANUARY 15, 2021 (PROJECT NO. 209249002). THE GEOTECHNICAL CONSULTANT FOR THIS PROJECT IS NINYO & MOORE LOCATED AT THE ADDRESS OF 475 GODDARD, SUITE 200, IRVINE, CALIFORNIA, AND MAY BE REACHED BY PHONE NUMBER OF (949) 753 7070 . SHOULD ANY CONFLICTS ARISE BETWEEN THE EVALUATION AND THESE GRADING PLANS, THE ENGINEER SHALL BE CONTACTED AND THE GEOTECHNICAL EVALUATION RECOMMENDATIONS SHALL BE FOLLOWED.

2. THE ENGINEER MAKES NO REPRESENTATION OR GUARANTEE REGARDING EARTHWORK QUANTITIES OR THAT THE EARTHWORK FOR THIS PROJECT WILL BALANCE DUE TO VARIOUS FIELD CONDITIONS, CHANGING SOIL TYPES, ALLOWABLE CONSTRUCTION TOLERANCES AND CONSTRUCTION METHODS THAT ARE BEYOND THE CONTROL OF THE ENGINEER.

3. PRIOR TO THE BIDDING OF WORK, THE CONTRACTOR SHALL THOROUGHLY SATISFY HIMSELF AS TO THE ACTUAL CONDITIONS AND EARTHWORK QUANTITIES, IF ANY. NO CLAIM SHALL BE MADE TO THE OWNER OR ENGINEER FOR ANY EXCESS OF DEFICIENCY HEREIN, ACTUAL OR RELATIVE.

4. AN APPROVED GRADING AND DRAINAGE PLAN MUST BE ON THE JOBSITE AT ALL TIMES. DEVIATIONS FROM THIS PLAN MUST BE PRECEDED BY AN APPROVED PLAN REVISION.

5. HAUL PERMITS, WHEN REQUIRED, MUST BE OBTAINED PRIOR TO OR CONCURRENTLY WITH THE GRADING AND DRAINAGE PERMIT.

6. SUBSOIL OF ALL STRUCTURES SHALL BE PREPARED PER THE SITE GEOTECHNICAL REPORT.

7. ON-SITE AND IMPORTED SOILS PLACED TO BACKFILL THE EXCAVATION SHALL BE COMPACTED TO 95% RELATIVE COMPACTION PER ASTM D 1557.

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DATE	△	INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

DWG NO. G1.1

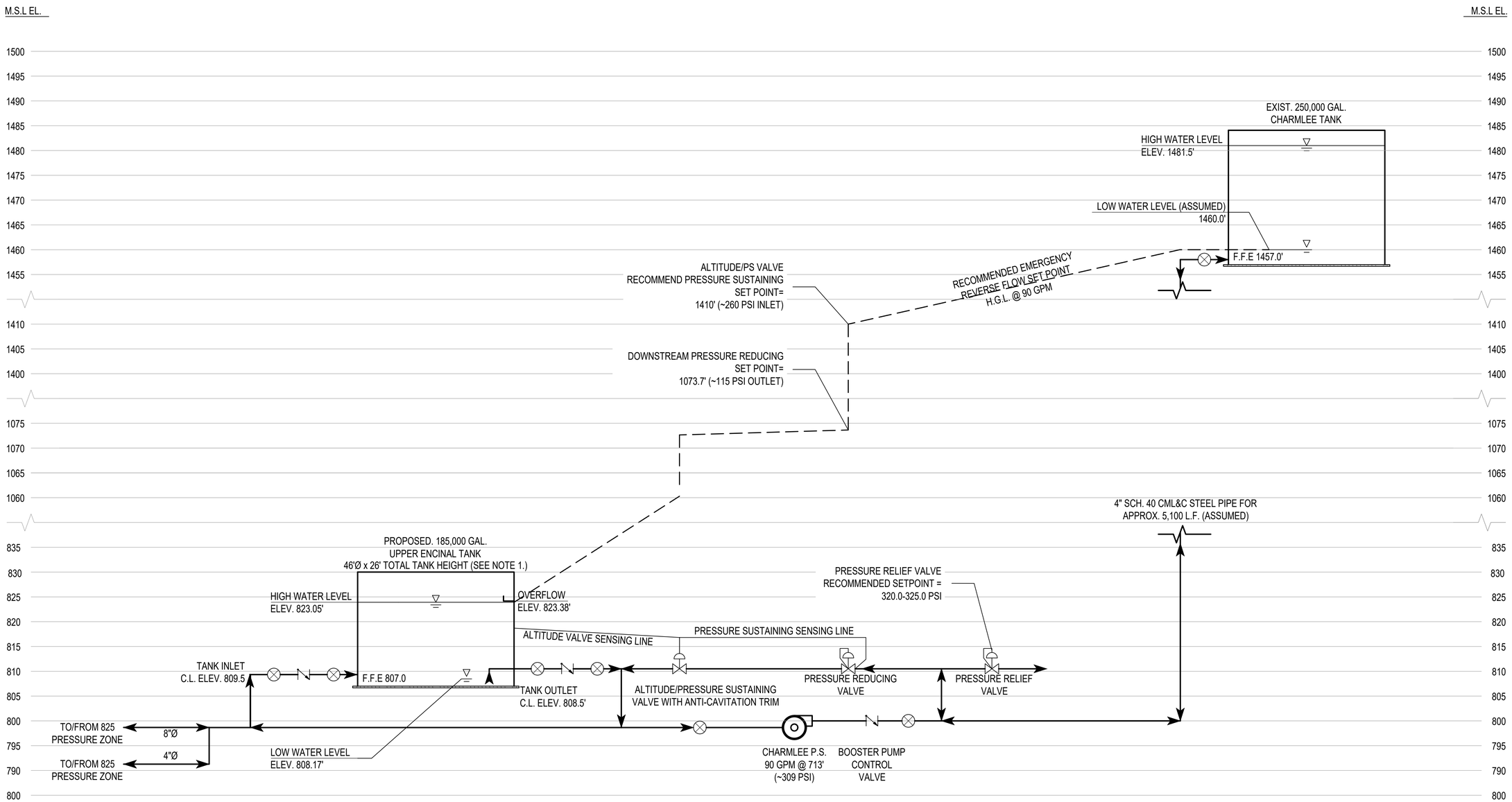
100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

GENERAL NOTES

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	3	OF	53



PROPOSED HYDRAULIC PROFILE

LEGEND

- PROPOSED POTABLE WATER MAIN
- HYDRAULIC GRADE LINE
- CHARMLEE PUMP STATION
- ISOLATION VALVE
- CHECK VALVE

NOTES

1. SELECTED TANK MANUFACTURER SHALL PROVIDE A MINIMUM WORKING VOLUME OF 185,000 GALLONS. MINIMUM WORKING VOLUME IS DEFINED FROM THE TANK'S HIGH WATER LEVEL OF 823.05' TO THE TANKS LOW WATER LEVEL ELEVATION OF 808.17'. SELECTED TANK MANUFACTURER SHALL PROVIDE DESIGN CALCULATIONS (INCLUDE SLOSHING CALCULATIONS) TO VERIFY THE SUBMITTED TANK MEETS THE APPLICABLE AWWA & THE SITE LOAD REQUIREMENTS. TOTAL TANK HEIGHT SHALL NOT EXCEED 26 FEET MEASURED FROM THE BOTTOM OF THE EXPOSED TANK FOUNDATION FOOTING (TOP OF THE ADJACENT ASPHALT PAVEMENT) ALL AROUND THE TANK TO THE HIGHEST POINT OF THE TANK INCLUDING ROOF VENT, HANDRAILS, BLOWER, AND ALL ASSOCIATED APPURTENANCES.

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DATE		INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

DWG NO. G2.0

100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

HYDRAULIC PROFILE

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	4	OF	53

FILE NAME
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EXISTING CIVIL CONSTRUCTION NOTES

NO.	DESCRIPTION
1	EXIST. 70K GALLON BOLTED STEEL WATER TANK.
2	EXIST. SAND BAG RETAINING WALL.
3	EXIST. 120V LA COUNTY SERVICE ENTRANCE, METER AND CONTROL ENCLOSURE
4	EXIST. POWER POLE
5	EXIST. CHARMLEE P.S. 277/480V CITY SERVICE ENTRANCE, METER AND CONTROL ENCLOSURE
6	EXIST. CITY OF MALIBU CHARMLEE P.S.
7	EXIST. CHAINLINK FENCE
8	EXIST. ACCESS GATE
9	EXIST. 4" AC WATER LINE (825 PZ)
10	EXIST. 8" CML&C STEEL WATER LINE (825 PZ)
11	EXIST. TANK ACCESS HATCH ENCLOSURE
12	EXIST. SWINGING GATE
13	EXIST. BOLLARD
14	EXIST. TANK OVERFLOW / DRAIN PIPING
15	EXIST. OVERFLOW CATCH BASIN
16	EXIST. TANK ANTENA
17	EXIST. 4" CML&C SCH.10 STEEL WATER LINE (CHARMLEE)
18	EXIST. ALTITUDE VALVE
19	EXIST. CONCRETE PAD

CIVIL CONSTRUCTION NOTES

NO.	DESCRIPTION
1	3.5" ASPHALT PAVEMENT OVER 7.5" AGGREGATE BASE PER DETAIL F ON SHEET C5.0.
2	CHAIN LINK FENCE WITH BARBED WIRE PER LACWWD STD. PLAN W-23, 8' HIGH FOR FENCE AT GRADE, 3' HIGH FOR FENCE AT RETAINING WALL. SEE DETAIL E ON SHEET C5.0
3	DBL. DRIVE CHAIN LINK ACCESS GATE W/ BARBED WIRE PER LACWWD STD. PLAN W-23, 8' HIGH. SEE DETAIL E ON SHEET C5.0.
4	6" CURB & 12" LONG GUTTER DETAIL E ON SHEET C5.1.
5	6" CURB PER DETAIL E ON SHEET C5.1.
6	CMU SPLASH WALL. SEE STRUCTURAL PLANS FOR DETAILS.
7	CONCRETE RETAINING WALL. SEE STRUCTURAL PLANS FOR DETAILS.
8	2' WIDE CONCRETE RIBBON GUTTER PER DETAIL C ON SHEET C5.1.
9	AREA FOR CLASS II RIP RAP (SEE SPECIFICATIONS).
10	CONCRETE SPLASH PAD.
11	8" CML&C SCH.40 STEEL PIPE.
12	8"- 90° CML&C SCH.40 STEEL BEND.
13	4" CML&C SCH.40 STEEL PIPE.
14	4"- 90° CML&C SCH.40 STEEL BEND.
15	4"- 45° CML&C SCH.40 STEEL BEND.
16	4"- 22.5° CML&C SCH.40 STEEL BEND.
17	4"- 11.25° CML&C SCH.40 STEEL BEND.
18	12'-6" x 12'-6" REINFORCED CONCRETE PAD AND TEMPORARY COUNTY FURNISHED 5000 GALLON STORAGE TANK. SEE STRUCTURAL PLANS FOR DETAILS.

MECHANICAL CONSTRUCTION NOTES

NO.	DESCRIPTION
1	46'Ø x 26'H WELDED STEEL STORAGE TANK (MINIMUM 0.185 MG WORKING VOLUME).
2	REINFORCED CONCRETE MAT SLAB FOUNDATION PER TANK MANUFACTURER AND SITE GEOTHECNICAL REPORT. SEE NOTE 2.
3	TANK SPIRAL STAIRCASE PER DETAIL B ON SHEET M3.2 AND MANUFACTURER'S REQUIREMENTS.
4	STEP-OFF PLATFORM PER TANK MANUFACTURER'S SHOP DRAWINGS.
5	30" SQ. LOCKABLE ROOF ACCESS HATCH w/ INTRUSION ALARM PER DETAIL C ON SHEET M3.2 AND MANUFACTURER'S REQUIREMENTS.
6	SUBMERSIBLE MIXER PER MANUFACTURER'S REQUIREMENTS.
7	VERTICAL NON-SLIP FIBERGLASS INTERIOR LADDER PER DETAIL F ON SHEET M3.0 AND MANUFACTURER'S REQUIREMENTS.
8	TANK SHELL ACCESS HOLE PER DETAIL D ON M3.2 AND MANUFACTURER'S REQUIREMENTS.
9	TANK BLOWER CONTROL PANEL MOUNTED ON TANK SHELL (PROVIDED BY BLOWER MANUFACTURER).
10	NON-SLIP COATING BETWEEN HANDRAILS. SEE SPECIFICATION SECTION 13208.
11	42" H GALVANIZED STEEL HANDRAILS w/ KICKER PLATE PER DETAIL B ON SHEET M3.2 AND MANUFACTURER'S REQUIREMENTS.
12	36"H X 48"W FLUSHOUT TYPE MANWAY PER DETAIL E ON SHEET M3.2.
13	NOT USED
14	36'Ø ROOF VENT PER DETAIL F ON SHEET M3.2.
15	SAMPLE TAP w/ SECURITY ENCASEMENT (TYP. 4) PER DETAILS A AND E ON SHEET M3.1.
16	1" CORP STOP AND PLUG FOR EMERGENCY CHEMICAL INJECTION PER DETAIL C ON SHEET M3.1.
17	FALL PROTECTION ANCHORS PER MANUFACTUERER'S REQUIREMENTS PER DETAIL A ON SHEET M3.0.
18	LEVEL PRESSURE TRANSMITTER PER DETAIL E ON SHEET M3.0.
19	EXTERIOR FULL-TRAVEL TANK FLOAT LEVEL INDICATOR PER TANK MANUFACTURER'S SHOP DRAWINGS.
20	POTENTIAL FUTURE TANK SAMPLE PUMP W/ LOCKABLE PUMP CONTAINMENT ENCLOSURE MOUNTED TO TANK SHELL
21	POTENTIAL FUTURE LOCKABLE TANK WATER QUALITY ANALYZERS MOUNTED TO TANK SHELL. SEE SPECIFICATIONS.
22	TANK SHELL MOUNTED MIXER CONTROL PANEL PER MANUFACTURER'S REQUIREMENTS.
23	2" EXTRA STRONG COUPLING TANK PENETRATION AND ISOLATION VALVE.
24	WELDED PIPE SUPPORT TO TANK FLOOR AND PIPING PER TANK MANUFARTURER.
25	BOLLARDS PER DETAIL A ON SHEET C5.0.
26	8" CML&EC SCH.40 STEEL PIPE.
27	8" EL&EC SCH.40 STEEL PIPE (WELD).
28	8" GATE VALVE (FLG'D).
29	8" - 90° CML&EC SCH.40 STEEL BEND (FLG'D).
30	8" FORCE BALANCED FLEX-TEND DOUBLE BALL EXPANSION JOINT (FLG'D)
31	8" - 22.5° CML&EC SCH.40 STEEL BEND (FLG'D).
32	8" CML&EC GROOVED PIPE SPOOL w/ VICTAULIC COUPLING.
33	8" SWING CHECK VALVE w/ LEVER & WEIGHT (FLG'D).
34	8" CML&EC SCH.40 STEEL TEE (FLG'D).
35	8" x 4" CML&EC SCH.40 STEEL TEE (FLG'D).
36	4" MODIFIED ALTITUDE VALVE w/ PRESSURE SUSTAINING PILOT (FLG'D) (CLA-VAL SERIES 210).
37	4" PRESSURE REDUCING VALVE (FLG'D) (CLA-VAL SERIES 90).
38	1" WELDED 316 S.S ALTITUDE VALVE SENSING LINE PER MANUFACTURERS REQUIREMENT.
39	8" - 22.5° EL&EC SCH.40 STEEL BEND (WELD).
40	1" AIR COMBINATION VALVE PER DETAIL B ON SHEET M3.0.

MECHANICAL CONSTRUCTION NOTES CONT.

41	ADJUSTABLE PIPE SUPPORT PER DETAIL A ON SHEET M3.2.
42	4" CML&EC SCH.40 STEEL PIPE.
43	4" CML&EC GROOVED PIPE SPOOL w/ VICTAULIC COUPLING.
44	3" x 4" CML&EC SCH.40 REDUCER (FLG'D).
45	CONCRETE THRUST BLOCK PER DETAIL C ON SHEET C5.0.
46	8" - 90° EL&EC SCH.40 STEEL BEND (WELD).
47	VORTEX BREAKER PER TANK MANUFACTURER'S SHOP DRAWINGS.
48	18" x 14" REDUCER (WELD).
49	14" EL&EC SCH.40 STEEL PIPE.
50	TANK WALL MOUNTED PIPE SUPPORT PER DETAIL B ON SHEET M3.1.
51	14" - 90° EL&EC SCH.40 STEEL BEND.
52	14" TIDEFLEX SERIES 35 CHECK VALVE (FLG'D).
53	4" - 90° CML&EC SCH.40 STEEL BEND (FLG'D).
54	4" FLANGE w/ INSECT SCREEN BETWEEN FLANGES.
55	4" GATE VALVE (FLG'D).
56	4" EL&EC SCH.40 STEEL PIPE.
57	4.5' x 5' CONCRETE SPLASH PAD.
58	SACRIFICIAL ANODE TEST STATION. SEE CATHODIC PROTECTION PLANS FOR DETAIL.
59	8" EL&EC SCH.40 STEEL TEE (WELD).
60	4" PRESSURE RELIEF VALVE (FLG'D).(CLA-VAL SERIES 50)
61	1/2" THICK EXPANSION JOINT MATERIAL.
62	PREPARE TANK SUBGRADE PER THE GEOTECHNICAL REPORT REQUIREMENTS AND STRUCTURAL PLANS.
63	TANK NAME PLATE PER AWWA D-100.
64	1/4" 316 S.S LINE FOR PRESSURE SUSTAINING PILOT.
65	8" CML&C SCH.40 STEEL PIPE.
66	4" GATE VALVE (FLG'D).
67	4" CML&C SCH.40 STEEL PIPE.
68	90 GPM @ 700 TDH "GOULDS" SUBMERSIBLE PUMP PER MANUFACTURER'S REQUIREMENTS.
69	4" FLANGE COUPLING ADAPTER w/ AWWA M-11 HARNESS.
70	1" WELDOLET PRESSURE GAUGE PER DETAIL D ON SHEET M3.1.
71	8" - 90° CML&C SCH.40 STEEL BEND (FLG'D).
72	4" BI-DIRECTIONAL "ULTRA-MAG" FLOW METER PER MANUFACTURER'S REQUIREMENTS (McCROMETER OR EQUAL).
73	4" BOOSTER CONTROL VALVE w/ BUILT IN CHECK VALVE (FLG'D) (CLA-VAL SERIES 60).
74	NOT USED.
75	4" CML&EC TEE (FLG'D).
76	1" WELDED 316 S.S ALTITUDE VALVE SENSING LINE BEND.
77	316 S.S. MANUAL BALL VALVE FOR ALTITUDE VALVE SENSING LINE (AIR PURGING).
78	3" CML&EC SCH.40 TEE (FLG'D).
79	4" - 90° CML&C SCH.40 STEEL BEND (FLG'D).
80	TORQUE ARRESTER w/ 316SS BANNING CLAMPS.
81	8"Ø, 5/16" THICK STEEL PUMP CYLINDER w/ FUSION BONDED EPOXY LINING, 8" CLASS 150 MOUNTING PLATE, WELDED SUCTION, BUTT WELEDED BULKHEAD CAP AT BOTTOM AND CONCRETE ENCASEMENT PER DETAIL D ON SHEET M3.2.
82	8" - 33° CML&EC SCH.40 CUSTOM BEND (FLG'D).
83	BLOWER ASSEMBLY PER DETAIL F ON SHEET M3.1.

ELECTRICAL CONSTRUCTION NOTES

NO.	DESCRIPTION
1	EXIST. UTILITY POWER POLE, PROTECT IN PLACE. SEE DETAIL F SHEET C1.3.
2	EXIST. UTILITY TRANSFORMER, PROTECT IN PLACE. SEE DETAIL F SHEET C1.3.
3	EXIST. OVERHEAD UTILITY POWER & TELEPHONE CONDUCTORS TO BE REMOVED (BY OTHERS).
4	EXIST. UTILITY POWER & TELEPHONE POLE TO BE REMOVED (BY OTHERS).
5	REMOVE AND PROPERLY DISPOSE OF THE EXIST. COUNTY ELECTRICAL SERVICE ENTRANCE ENCLOSURE AND ASSOCIATED CONDUCTORS AND CONDUITS, SEE DETAIL B SHEET C1.3.
6	REMOVE AND PROPERLY DISPOSE OF THE EXIST. 120V LOAD CENTER A, ENCLOSURE, AND ASSOCIATED CONDUITS AND CONDUCTORS UP TO THE ELECTRICAL SERVICE ENTRANCE AS SHOWN, SEE DETAIL B SHEET C1.3.
7	EXIST. UNDERGROUND POWER CONDUCTORS TO BE REMOVED AS REQUIRED TO COMPLETE THE NECESSARY IMPROVEMENTS, SEE DETAIL D SHEET C1.3.
8	REMOVE AND PROPERLY DISPOSE OF THE EXIST. CITY OF MALIBU ELECTRICAL SERVICE ENTRANCE ENCLOSURE AND ASSOCIATED CONDUCTORS AND CONDUITS, SEE DETAIL D SHEET C1.3.
9	REMOVE AND PROPERLY DISPOSE OF THE EXIST. CHARMLEE PUMP STATION DISCONNECT SWITCH AND ASSOCIATED CONDUITS AND CONDUCTORS AS SHOWN, SEE DETAIL D SHEET C1.3.
10	REMOVE AND PROPERLY DISPOSE OF THE EXIST. CHARMLEE PUMP STATION MOTOR CONTROL PANEL AND ASSOCIATED CONDUITS AND CONDUCTORS AS SHOWN, SEE DETAIL D SHEET C1.3.
11	SERVICE ENTRANCE EQUIPMENT AND CONDUIT PER POWER COMPANY SPECIFICATIONS.
12	SERVICE ENTRANCE SECTION SHALL BE LABELED WITH AVAILABLE FAULT CURRENT IN ACCORDANCE WITH NEC 110.24(A).
13	STANCHION MOUNTED CHARMLEE PUMP STATION MOTOR CONTROL PANEL, 100A, 480/277V, NEMA 4X.
14	STANCHION MOUNTED PANEL "A". 120/240V, 100 AMPS, 24 CIRCUITS, NEMA 4X, TYPE EATON, 20" W x 12" D.
15	STANCHION MOUNTED, NEMA 4X, LOCKABLE POWER TERMINAL BOX (TERMINAL BOX "TB-P1") PER DETAIL G SHEET E6.1.
16	STANCHION MOUNTED TANK MIXER CONTROL PANEL (PROVIDED BY MIXER MANUFACTURER).
17	FUTURE WATER QUALITY ANALYZER SYSTEM.
18	FUTURE TANK SAMPLE PUMP.
19	SUBMERSIBLE VORTEX TYPE MIXER (MXR-01010).
20	HANDRAIL MOUNTED, NEMA 4X, LOCKABLE POWER TERMINAL BOX (TERMINAL BOX "TB-P2") PER DETAIL A SHEET E6.2.
21	SUBMERSIBLE CHARMLEE BOOSTER PUMP (PMP-02000).
22	"ULTRA MAG" ELECTROMAGNETIC BI-DIRECTIONAL FLOW METER (FIT-02040).
23	STANCHION MOUNTED, NEMA 4X, LOCKABLE CONTROL TERMINAL BOX (TERMINAL BOX "TB-C1") PER DETAIL G SHEET E6.1.
24	HANDRAIL MOUNTED, NEMA 4X, LOCKABLE CONTROL TERMINAL BOX (TERMINAL BOX "TB-C2") PER DETAIL A SHEET E6.2.
25	MAGNETIC NON-CONTACTING INSTRUSION ALARM ON ACCESS HATCH (YAS-01060).
26	GROUND FLOW METER (FIT-02040) PER DETAIL B SHEET E6.2.
27	PRESSURE BASED TANK LEVEL TRANSMITTER (LIT-01050).
28	EMERGENCY TANK BACKFILL VALVE POSITION SWITCH CLOSED (ZSC-01021).
29	0.185 MG WELDED STEEL UPPER ENCINAL POTABLE WATER STORAGE TANK.
30	CHARMLEE PRESSURE RELIEF VALVE POSITION SWITCH CLOSED (ZSC-02029).
31	10-FOOT TALL POLE MOUNTED LED FLOOD LIGHT
32	TANK SHELL MOUNTED (10 FEET ABOVE TANK FINISHED FLOOR) WEATHERPROOF LED FLOOD LIGHTS.
33	STANCHION MOUNTED GFCI RECEPTACLE WITH WEATHERPROOF ENCLOSURE PER DETAIL A SHEET E6.1.
34	GROUNDING ROD WITH H20 TRAFFIC RATED COVER PER DETAIL A SHEET E6.0
35	TANK GROUND SYSTEM PER DETAIL D SHEET E6.2.

ELECTRICAL CONSTRUCTION NOTES CONT.

36	GROUNDING WIRE CONNECTION PER DETAIL C SHEET E6.0
37	GROUNDING WIRE TO EQUIPMENT/PANEL CONNECTION PER DETAIL D SHEET E6.0
38	NEW MAGNETIC NON-CONTACTING INTRUSION ALARM ON LADDER (YAS-01061).
39	2400 CFM SUPPLY AIR FAN AND WEATHER RESISTANT SOUND ENCLOSURE, 120VAC, 0.5HP, TYPE BIG WAVE HURRICANE 100 OR EQUAL. (BLR-01011)
40	TANK SHELL MOUNTED TANK BLOWER CONTROL PANEL (PROVIDED BY BLOWER MANUFACTURER).
41	ROUTE TO AND GROUND SITE PERIMETER FENCE PER DETAIL C SHEET E6.1
42	EQUIPMENT GROUNDING CONDUCTOR ON BLOWER MOTOR PER DETAIL D SHEET E6.0.
43	TANK TEMPERATURE SENSOR PER MANUFACTURER'S REQUIREMENTS (INSTALL SENSOR IN TANK HEADSPACE).
44	#4/0 BARE COPPER MAIN SYSTEM BONDING JUMPER FROM NEUTRAL BAR AND MAIN GROUND BUS TO GROUND RING. SEE GROUNDING PLAN.
45	CONNECT #4/0 BARE COPPER GROUNDING ELECTRODE CONDUCTOR FROM MAIN GROUND BUS TO GROUND RING. SEE GROUNDING PLAN.
46	BOND EQUIPMENT/ENCLOSURE WITH #4/0 BARE COPPER GROUND TO SYSTEM GROUND RING.
47	INTEGRATED POWER MONITORING DEVICE, SAME BRAND AS PANEL.
48	SURGE PROTECTION DEVICE AND SIZE SPD FEEDER PER MANUFACTURER SPECIFICATIONS, MINIMUM 100 KA PER PHASE.
49	CONTRACTOR TO COORDINATE WITH ELECTRICAL UTILITY (SCE) TO REMOVE EXISTING 120V 1Ø-2W SERVICE.
50	CONTRACTOR TO COORDINATE WITH ELECTRICAL UTILITY (SCE) TO OBTAIN UPGRADED 120/240V 1Ø-3W SERVICE.

FILE NAME

DATE LAST SAVED:

CHECKER RM

DESIGNER KS

DRAFTER JS

PACE
Advanced Water Engineering
17520 Newhope Street, Suite 200 | Fountain Valley, CA 92708
P: (714) 481-7300 | www.pacewater.com

DATE		INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

DWG NO.
G3.0

100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

CONSTRUCTION NOTES

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	5	OF	53

APPENDIX A

BORING LOGS

Field Procedure for the Collection of Disturbed Samples
Disturbed soil samples were obtained in the field using the following method.

Bulk Samples
Bulk samples of representative earth materials were obtained from the exploratory borings. The samples were bagged and transported to the laboratory for testing.

Field Procedure for the Collection of Relatively Undisturbed Samples
Relatively undisturbed soil samples were obtained in the field using the following method.

The Modified Split-Barrel Drive Sampler
The sampler, with an external diameter of 3 inches, was lined with 1-inch-long, thin brass rings with inside diameters of approximately 2.4 inches. The sample barrel was driven into the ground with the weight of a hammer in general accordance with ASTM D 3550. The driving weight was permitted to fall freely. The approximate length of the fall, the weight of the hammer, and the number of blows per foot of driving are presented on the boring logs as an index to the relative resistance of the materials sampled. The samples were removed from the sample barrel in the brass rings, sealed, and transported to the laboratory for testing.

BORING LOG EXPLANATION SHEET

DEPTH (feet)	Bulk	SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	
0								Bulk sample.
								Modified split-barrel drive sampler.
								No recovery with modified split-barrel drive sampler.
								Sample retained by others.
								Standard Penetration Test (SPT).
								No recovery with a SPT.
5		XX/XX						Shelby tube sample. Distance pushed in inches/length of sample recovered in inches.
								No recovery with Shelby tube sampler.
								Continuous Push Sample.
				▽				Seepage.
10				12 ▽				Groundwater encountered during drilling.
								Groundwater measured after drilling.
						SM		MAJOR MATERIAL TYPE (SOIL): Solid line denotes unit change.
						CL		Dashed line denotes material change.
15								Attitudes: Strike/Dip b: Bedding c: Contact j: Joint f: Fracture F: Fault cs: Clay Seam s: Shear bss: Basal Slide Surface sf: Shear Fracture sz: Shear Zone sbs: Shear Bedding Surface
20								The total depth line is a solid line that is drawn at the bottom of the boring.

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BORING LOG

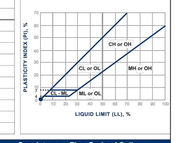
ASTM D 2488

Primary Divisions		Secondary Divisions: Group Symbol	Secondary Divisions: Group Name
COARSE-GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVEL more than 50% of coarse fraction retained on No. 4 sieve — CLEAN GRAVEL	GW	well-graded GRAVEL
		GP	poorly graded GRAVEL
	GRAVEL with DUAL CLASSIFICATIONS	GW-GM	well-graded GRAVEL with silt
		GP-GM	poorly graded GRAVEL with silt
		GW-GC	well-graded GRAVEL with clay
		GP-GC	poorly graded GRAVEL with clay
	GRAVEL with FINES more than 12% fine	GM	silty GRAVEL
		GC	clayey GRAVEL
		GC-GM	silty, clayey GRAVEL
	SAND 50% or more of coarse fraction passes No. 4 sieve — CLEAN SAND	SW	well-graded SAND
		SP	poorly graded SAND
	SAND with DUAL CLASSIFICATIONS	SW-SM	well-graded SAND with silt
		SP-SM	poorly graded SAND with silt
		SW-SC	well-graded SAND with clay
		SP-SC	poorly graded SAND with clay
	SAND with FINES more than 12% fine	SM	silty SAND
		SC	clayey SAND
		SC-SM	silty, clayey SAND
FINE-GRAINED SOILS 50% or more passes No. 200 sieve	SILT and CLAY liquid limit less than 50% — INORGANIC	CL	lean CLAY
		ML	SILT
	ORGANIC	CL-ML	silty CLAY
		OL (PI > 4)	organic CLAY
		OL (PI < 4)	organic SILT
	SILT and CLAY liquid limit 50% or more — INORGANIC	CH	fat CLAY
		MH	elastic SILT
	ORGANIC	OH (plots on or above "A" line)	organic CLAY
		OH (plots below "A" line)	organic SILT
	Highly Organic Soils	PT	Peat

Grain Size

Description		Sieve Size	Grain Size	Approximate Size
Boulders		> 12"	> 12"	Larger than basketball-sized
Cobbles		3 - 12"	3 - 12"	Fist-sized to basketball-sized
Gravel	Coarse	3/4 - 3"	3/4 - 3"	Thumb-sized to fist-size
	Fine	#4 - 3/4"	0.19 - 0.75"	Pea-sized to thumb-sized
Sand	Coarse	#10 - #4	0.079 - 0.19"	Rock-salt-sized to pea-sized
	Medium	#40 - #10	0.017 - 0.079"	Sugar-sized to rock-salt-sized
	Fine	#200 - #40	0.0029 - 0.017"	Flour-sized to sugar-sized
Fines		Passing #200	< 0.0029"	Flour-sized and smaller

Plasticity Chart



Apparent Density - Coarse-Grained Soil

Apparent Density	Spooling Cable or Cathead: SPT (blows/foot)	Spooling Cable or Cathead: Split Barrel (blows/foot)	Automatic Trip Hammer: SPT (blows/foot)	Automatic Trip Hammer: Split Barrel (blows/foot)
Very Loose	≤ 4	≤ 8	≤ 3	≤ 5
Loose	5 - 10	9 - 21	4 - 7	6 - 14
Medium Dense	11 - 30	22 - 63	8 - 20	15 - 42
Dense	31 - 50	64 - 105	21 - 33	43 - 70
Very Dense	> 50	> 105	> 33	> 70

Consistency - Fine-Grained Soil

Consistency	Spooling Cable or Cathead: SPT (blows/foot)	Spooling Cable or Cathead: Split Barrel (blows/foot)	Automatic Trip Hammer: SPT (blows/foot)	Automatic Trip Hammer: Split Barrel (blows/foot)
Very Soft	< 2	< 3	< 1	< 2
Soft	2 - 4	3 - 5	1 - 3	2 - 3
Firm	5 - 8	6 - 10	4 - 5	4 - 6
Stiff	9 - 15	11 - 20	6 - 10	7 - 13
V. Hard	16 - 30	21 - 39	11 - 20	14 - 26
Hard	> 30	> 39	> 20	> 26

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USCS METHOD OF SOIL CLASSIFICATION

DEPTH (feet)	Bulk	SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	
0						SC		RESIDUAL SOIL/COLLUVIUM: Brown, moist, loose to medium dense, clayey SAND; trace gravel-size fragments of sandstone; trace rootlets in the upper 2 feet; rodent burrows in the upper foot.
5								VAQUEROS FORMATION: Light yellowish brown, white, moist, strongly cemented, moderately hard to hard, SANDSTONE; fine- to medium-grained; massive; weathered; irregular contact; intensely fractured with open fractures up to approximately 3 inches wide infilled with soil; fractures are randomly oriented. @ 3.5': Hard; slow drilling; too hard to sample. @ 5': f: N55°W, 80°S; northeast side of hole, iron oxidation staining.
								@ 6': Variable weathering; bedrock is softer along some fractures. @ 6': f: N37°E, 15°N; discontinuous. @ 6': f: N85°W, 73°S; infilled with calcium carbonate mineralization. @ 7': f: N85°E, 88°S; open voids.
10								@ 8': Soil infilled fractures continue.
								@ 9': f: N13°W, 66°E; f: N2°E, 34°W; f: N50°E, 77°SE; intersecting; slight voids up to approximately 3/8 inch. Siliceous; difficult drilling. @10': f: N58°-64°E, 75°S; up to approximately 8-inch-wide void, reducing to 6-inch wide at 14 feet; void extends 2 feet into borehole sidewall. @ 10.5': f: N70°-75°W, 62°S; irregular. @ 11': f: N23°W, 90°; approximately 2¼-inch-wide open voids.
15			15	7.4	113.5			@ 12'-17': Continuous intensely fractured, cemented sandstone; blocky; fractures are infilled with dark brown to dark gray, moist, stiff, clay. @ 13' to 14': Fractures have decreasing void spaces. Reddish yellow, moist, weakly to moderately cemented, soft to moderately soft, silty SANDSTONE; massive weathered to moderately weathered; highly fractured; oxidation staining on fractures. @ 14': f: N45°W, 78°N.
								@ 17': White to yellowish brown, moist, friable, soft; decrease in cementation; trace rootlets up to approximately 1/8-inch.
20								@ 19': Continues highly fractured; blocky; fractures are short and discontinuous.

DATE DRILLED 1/27/20 - 1/28/20 BORING NO. LD-1
GROUND ELEVATION 832' ± (MSL) SHEET 1 OF 2
METHOD OF DRILLING EZ Bore 24" Bucket (Roy Brothers Drilling)
DRIVE WEIGHT See End of Log DROP 30"
SAMPLED BY AES LOGGED BY AES/MLP REVIEWED BY MLP
DESCRIPTION/INTERPRETATION

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FIGURE A- 1
ENCINAL CANYON TANK AND WATERLINE IMPROVEMENTS PROJECT
MALIBU, CALIFORNIA
209249002 1/21

DEPTH (feet)	Bulk	SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	
20			20	5.7	114.7			VAQUEROS FORMATION: (Continued) Reddish yellow, moist, weakly cemented, soft to moderately soft SANDSTONE; massive weathered; fine to medium sand; highly fractured.
								@ 22': f: N72°W, 52°S; f: N18°E, 83°SE.
25			30	6.0	104.0			@ 23': Becomes strongly cemented; intensely fractured; fractures are short and discontinuous. @ 23': f: N82°W, 67°S. @ 23.5': f: N7°E, 71°W.
								@ 25': Decrease in fracture spacing; fractures are longer, more continuous, creating larger blocks. @ 25': f: N17°E, 72°S. @ 25.5': f: N76°W, 53°N.
30			35	8.3	154.2			Difficult drilling below approximately 30 feet; hard; strongly cemented; moderately weathered; oxidation staining in fractures.
35			40	5.5	108.3			Total Depth = 34.5 feet. Groundwater was not encountered during drilling. Backfilled with on-site soil on 1/28/20. Notes: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents. Drive Weights 0'-15' = 1,767 lbs. 15'-30' = 1,182 lbs. 30'-45' = 757 lbs.
40								

DATE DRILLED 1/27/20 - 1/28/20 BORING NO. LD-1
GROUND ELEVATION 832' ± (MSL) SHEET 2 OF 2
METHOD OF DRILLING EZ Bore 24" Bucket (Roy Brothers Drilling)
DRIVE WEIGHT See End of Log DROP 30"
SAMPLED BY AES LOGGED BY AES/MLP REVIEWED BY MLP
DESCRIPTION/INTERPRETATION

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

FIGURE A- 2
ENCINAL CANYON TANK AND WATERLINE IMPROVEMENTS PROJECT
MALIBU, CALIFORNIA
209249002 1/21

Upper Encinal Tank
Malibu, California

November 17, 2016
Project No. 209249001

APPENDIX A

BORING LOGS

Field Procedure for the Collection of Disturbed Samples
Disturbed soil samples were obtained in the field using the following methods.

Bulk Samples
Bulk samples of representative earth materials were obtained from the exploratory excavations. The samples were bagged and transported to the laboratory for testing.

Field Procedure for the Collection of Relatively Undisturbed Samples
Relatively undisturbed soil samples were obtained in the field using the following method.

The Modified Split-Barrel Drive Sampler
The sampler, with an external diameter of 3.0 inches, was lined with 1-inch-long, thin brass rings with inside diameters of approximately 2.4 inches. The sample barrel was driven into the ground with the weight of a hammer or the kelly bar of the drill rig in general accordance with ASTM D 3550. The driving weight was permitted to fall freely. The approximate length of the fall, the weight of the hammer or bar, and the number of blows per foot of driving are presented on the boring logs as an index to the relative resistance of the materials sampled. The samples were removed from the sample barrel in the brass rings, sealed, and transported to the laboratory for testing.

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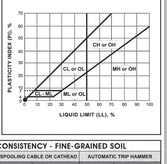
SOIL CLASSIFICATION CHART PER ASTM D 2488

Primary Divisions		Secondary Divisions: Group Symbol	Secondary Divisions: Group Name
COARSE-GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVEL more than 50% of coarse fraction retained on No. 4 sieve — CLEAN GRAVEL less than 5% fine	GW	well-graded GRAVEL
		GP	poorly graded GRAVEL
	GRAVEL with DUAL CLASSIFICATIONS 5% to 12% fine	GW-GM	well-graded GRAVEL with silt
		GP-GM	poorly graded GRAVEL with silt
		GW-GC	well-graded GRAVEL with clay
		GP-GC	poorly graded GRAVEL with clay
	GRAVEL with FINES more than 12% fine	GM	silty GRAVEL
		GC	clayey GRAVEL
		GC-GM	silty, clayey GRAVEL
	SAND 50% or more of coarse fraction passes No. 4 sieve — CLEAN SAND less than 5% fine	SW	well-graded SAND
		SP	poorly graded SAND
	SAND with DUAL CLASSIFICATIONS 5% to 12% fine	SW-SM	well-graded SAND with silt
		SP-SM	poorly graded SAND with silt
		SW-SC	well-graded SAND with clay
		SP-SC	poorly graded SAND with clay
	SAND with FINES more than 12% fine	SM	silty SAND
		SC	clayey SAND
		SC-SM	silty, clayey SAND
FINE-GRAINED SOILS 50% or more passes No. 200 sieve	SILT and CLAY liquid limit less than 50% — INORGANIC	CL	lean CLAY
		ML	SILT
	ORGANIC	CL-ML	silty CLAY
		OL (PI > 4)	organic CLAY
		OL (PI < 4)	organic SILT
	SILT and CLAY liquid limit 50% or more — INORGANIC	CH	fat CLAY
		MH	elastic SILT
	ORGANIC	CH (plots on or above "A" line)	organic CLAY
		OH (plots below "A" line)	organic SILT
	Highly Organic Soils	PT	Peat

GRAIN SIZE

DESCRIPTION		SIEVE SIZE	GRAIN SIZE	APPROXIMATE SIZE
Boulders		> 12"	> 12"	Larger than basketball-sized
Cobbles		3 - 12"	3 - 12"	Flat-sized to basketball-sized
Gravel	Coarse	3/4 - 3"	3/4 - 3"	Thumb-sized to fist-size
	Fine	#4 - 3/4"	0.19 - 0.75"	Pea-sized to thumb-sized
Sand	Coarse	#10 - #4	0.079 - 0.19"	Rock-salt-sized to pea-sized
	Medium	#40 - #10	0.017 - 0.079"	Sugar-sized to rock-salt-sized
	Fine	#200 - #40	0.0029 - 0.017"	Flour-sized to sugar-sized
Fines		Passing #200	< 0.0029"	Flour-sized and smaller

PLASTICITY CHART



APPARENT DENSITY - COARSE-GRAINED SOIL

APPARENT DENSITY	SPOOLING CABLE OR CATHEAD: SPT (blows/foot)	SPOOLING CABLE OR CATHEAD: MODIFIED SPLIT BARREL (blows/foot)	AUTOMATIC TRIP HAMMER: SPT (blows/foot)	AUTOMATIC TRIP HAMMER: MODIFIED SPLIT BARREL (blows/foot)
Very Loose	≤ 4	≤ 7	≤ 3	≤ 5
Loose	5 - 10	8 - 21	4 - 7	6 - 14
Medium Dense	11 - 30	22 - 63	8 - 20	15 - 42
Dense	31 - 50	64 - 105	21 - 33	43 - 70
Very Dense	> 50	> 105	> 33	> 70

CONSISTENCY - FINE-GRAINED SOIL

CONSISTENCY	SPOOLING CABLE OR CATHEAD: SPT (blows/foot)	SPOOLING CABLE OR CATHEAD: MODIFIED SPLIT BARREL (blows/foot)	AUTOMATIC TRIP HAMMER: SPT (blows/foot)	AUTOMATIC TRIP HAMMER: MODIFIED SPLIT BARREL (blows/foot)
Very Soft	< 2	< 3	< 1	< 2
Soft	2 - 4	3 - 5	1 - 3	2 - 3
Firm	5 - 8	6 - 10	4 - 5	4 - 6
Stiff	9 - 15	11 - 20	6 - 10	7 - 13
Very Stiff	16 - 30	21 - 39	11 - 20	14 - 26
Hard	> 30	> 39	> 20	> 26

Ninyo & Moore

USCS METHOD OF SOIL CLASSIFICATION
Explanation of USCS Method of Soil Classification

PROJECT NO.	DATE	FIGURE

DEPTH (meters)	Bulk	SAMPLES	BLOWS/0.3 m	MOISTURE (%)	DRY DENSITY (kN/m³)	SYMBOL	CLASSIFICATION U.S.C.S.	
0								Bulk sample.
								Modified split-barrel drive sampler.
								No recovery with modified split-barrel drive sampler.
								Sample retained by others.
								Standard Penetration Test (SPT).
5			XX/XX					No recovery with a SPT.
								Shelby tube sample. Distance pushed in inches/length of sample recovered in inches.
								No recovery with Shelby tube sampler.
								Continuous Push Sample.
				▽				Seepage.
10				45 ▽				Groundwater encountered during drilling.
								Groundwater measured after drilling.
						SM		MAJOR MATERIAL TYPE (SOIL): Solid line denotes unit change.
						CL		Dashed line denotes material change.
15								Attitudes: Strike/Dip b: Bedding c: Contact j: Joint f: Fracture F: Fault cs: Clay Seam s: Shear bss: Basal Slide Surface sf: Shear Fracture sz: Shear Zone sbs: Shear Bedding Surface
20								The total depth line is a solid line that is drawn at the bottom of the boring.

Ninyo & Moore

BORING LOG
Explanation of Boring Log Symbols

PROJECT NO.	DATE	FIGURE

DEPTH (feet)	Bulk	SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	
0						ML		FILL: Light yellowish brown, moist, medium dense, sandy SILT; some gravel and few cobble size fragments of sandstone.
								Contact relatively flat.
						CL		RESIDUAL SOIL/COLLUVIUM: Dark grayish brown, moist, very stiff, CLAY; some gravel and cobble size fragments of sandstone; trace organic pieces; decrease in gravel and cobble downward.
5			2	10.8	107.1			Brown; hard; sandy clay.
								Gradational downward to yellowish brown, fine-grained sandstone.
								@ 8': c: N45°E, 70°S; undulating contact.
10			8	4.9	126.7			VAQUEROS FORMATION: Yellowish brown and reddish brown, moist, moderately cemented, moderately soft to moderately hard, weathered SANDSTONE; fine- to medium-grained.
								@ 8'-11': Highley weathered zone; abundant randomly oriented clay filled fractures; unweathered sandstone on north side of boring with loose sandy silt along contact.
								@ 12': fr: N07°W, 66°W; up to approximately 3 inches wide; infilled with loose, sandy silt; discontinuous; terminates at 13'.
								@ 13': fr: N85°W, 55°S; up to 1.5 inches wide; infilled with reddish brown, loose, sandy silt; discontinuous; terminates at 14'.
15			3					@ 15': b: N25°E, 55°N. @ 15' - 17': Highly to intensely fractured; minor to moderate caving; randomly oriented fractures spaced approximately 1 to 3 inches.
								@ 17': Approximately 1- to 6-inch-wide open fracture; up to 1 foot deep. @ 17': fr: N15°W, 85°W; tight to very narrow; iron oxide staining on fracture surface; planar; smooth. @ 17': b: N35°E, 45°N; sandstone becomes reddish brown; fine-grained. @ 17' - 19': Friable (north side of hole). @ 18': Caving encountered; downhole logging stopped.
20								

DATE DRILLED 8/11/15 BORING NO. B-1
GROUND ELEVATION 808' ± (MSL) SHEET 1 OF 4
METHOD OF DRILLING EZ Bore 24" Bucket (Roy Brothers Drilling)
DRIVE WEIGHT See End of Log DROP 12"
SAMPLED BY JRS LOGGED BY JRS/GMC REVIEWED BY LTJ
DESCRIPTION/INTERPRETATION

Ninyo & Moore

BORING LOG
UPPER ENCINAL TANK
MALIBU, CALIFORNIA

PROJECT NO.	DATE	FIGURE
209249001	11/16	A-3

DEPTH (feet)	Bulk	SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	
20			4	5.6	103.8			VAQUEROS FORMATION: (Continued) Light reddish yellow, moist, moderately to strongly cemented, weathered SANDSTONE; fine to medium grained; black sporty magnese oxide staining.
25			4					Very light yellowish brown; dry; moderately cemented; red iron oxidation staining.
30			6	7.9				Light reddish yellow; strongly cemented; fractured with clay infilling in fractures.
35			10					Moderately fractured with clay infilling in fractures.
40								Light reddish yellow, moist, weakly to moderately indurated, CLAYSTONE; moderately fractured; spotty manganese oxide staining. Light reddish yellow, moist, strongly cemented, SANDSTONE; fine to medium grained; fractured.

DATE DRILLED 8/11/15 BORING NO. B-1
GROUND ELEVATION 808' ± (MSL) SHEET 2 OF 4
METHOD OF DRILLING EZ Bore 24" Bucket (Roy Brothers Drilling)
DRIVE WEIGHT See End of Log DROP 12"
SAMPLED BY JRS LOGGED BY JRS/GMC REVIEWED BY LTJ
DESCRIPTION/INTERPRETATION

Ninyo & Moore

BORING LOG
UPPER ENCINAL TANK
MALIBU, CALIFORNIA

PROJECT NO.	DATE	FIGURE
209249001	11/16	A-4

DRAFTER JS | DESIGNER KS | CHECKER RM | DATE LAST SAVED: | FILE NAME

DWG NO.
G4.0

100% PLANS - PLANNING REVIEW

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DATE	NO.	INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 DATE

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT
GEOTECHNICAL BORING LOGS

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	6	OF	53

DATE DRILLED 8/11/15 BORING NO. B-1
GROUND ELEVATION 808' ± (MSL) SHEET 3 OF 4
METHOD OF DRILLING EZ Bore 24" Bucket (Roy Brothers Drilling)
DRIVE WEIGHT See End of Log DROP 12"
SAMPLED BY JRS LOGGED BY JRS/GMC REVIEWED BY LTJ

DEPTH (feet) | Bulk | Driven SAMPLES | BLOWS/FOOT | MOISTURE (%) | DRY DENSITY (PCF) | SYMBOL | CLASSIFICATION U.S.C.S.

DESCRIPTION/INTERPRETATION

40 — 6 — 7.2 — 112.1
VAQUEROS FORMATION: (Continued)
Light reddish brown, moist, moderately to strongly cemented, SANDSTONE; fine to medium-grained; fractured; becomes less weathered with depth.

45 — 6

50 — 10
Light yellowish brown.

Very hard; difficult and slow drilling; broken auger teeth.

55

Too hard to sample.

60

Ninyo & Moore

BORING LOG
UPPER ENCINAL TANK
MALIBU, CALIFORNIA

PROJECT NO.	DATE	FIGURE
209249001	11/16	A-3

DATE DRILLED 8/11/15 BORING NO. B-1
GROUND ELEVATION 808' ± (MSL) SHEET 4 OF 4
METHOD OF DRILLING EZ Bore 24" Bucket (Roy Brothers Drilling)
DRIVE WEIGHT See End of Log DROP 12"
SAMPLED BY JRS LOGGED BY JRS/GMC REVIEWED BY LTJ

DESCRIPTION/INTERPRETATION

60
VAQUEROS FORMATION: (Continued)
Light brown, dry, strongly cemented, SANDSTONE; fine-grained; mechanically fractured.

65

Total Depth = 61 feet.
Downhole logged to 18 feet (caving).
Groundwater was not encountered during drilling.
Backfilled with on-site soil on 8/13/15.

Note:
Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.

The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.

70

Drive Weights:
0' - 25'= 4,900 lbs.
25' - 50' = 3,400 lbs.
50' - 61' = 2,200 lbs.

75

80

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BORING LOG
UPPER ENCINAL TANK
MALIBU, CALIFORNIA

PROJECT NO.	DATE	FIGURE
209249001	11/16	A-4

DATE DRILLED 8/12/15 BORING NO. B-2
GROUND ELEVATION 808' ± (MSL) SHEET 1 OF 4
METHOD OF DRILLING EZ Bore 24" Bucket (Roy Brothers Drilling)
DRIVE WEIGHT See End of Log DROP 12"
SAMPLED BY JRS LOGGED BY JRS/GMC REVIEWED BY LTJ

DESCRIPTION/INTERPRETATION

0 — CL
FILL:
Light brown, moist, stiff, sandy CLAY; few gravel size pieces of sandstone.

CL
RESIDUAL SOIL/COLLUVIUM:
Dark grayish brown, moist, very stiff to hard, silty to sandy CLAY.

@ 4.5': Abundant clasts of light yellowish brown, moist, moderately cemented, fine-grained SANDSTONE; gradational downward.

5 — VAQUEROS FORMATION:
Yellowish brown, moist, moderately cemented, moderately hard, SANDSTONE; fine-grained; highly weathered to decomposed; randomly oriented veins of dark brown clay.

@ 8' - 10': Light brown, moist, strongly cemented, hard, SANDSTONE; highly fractured; randomly oriented; tight; manganese oxide staining on fracture surfaces.

@ 9': fr: N45°E, 58°S and N45°W, 85°S; very narrow; manganese oxide and iron oxide staining on fracture surfaces; planar to arcuate; slightly rough.

10 — @ 10': Becomes intermixed light brown and brown; weakly cemented to friable; highly to intensely fractured; few surfaces with manganese oxide staining.

Brown, moist, weakly indurated, gravelly CLAYSTONE; decomposed to clay.

@ 12': b: N-S, 52°W.
Yellowish brown, moist, moderately cemented, moderately hard, silty SANDSTONE; finely laminated; fine-grained; weathered; fractured.

15 — @ 15': b: N10°E, 49°W; approximately 1/2- to 1-inch-thick lens of orangish brown, moist, firm, clay.

Reddish brown, moist, weakly to moderately indurated, SILTSTONE; highly fractured; weathered.

@ 16': fr: N70°E, 20°N; very narrow; manganese oxide and iron oxide staining on surface; planar to wavy; slightly rough.
@ 16': fr: N75°W, 85°N.
Yellowish brown, moist, moderately cemented, moderately hard, SANDSTONE; highly fractured; moderately to strongly cemented.

20 — @ 19'-20': Becomes moderately to strongly cemented; highly to intensely fractured; increase in cementation; surfaces stained with manganese oxide and iron oxide; blocky texture.
@ 19': fr: N30°W, 58°S; fr: N75°E, 34°N; fr: N45°E, 75°W; tight; manganese and iron oxide staining on fracture surfaces; planar; smooth; fr: N07°W, 41°W; fr: N30°W, 74°N.

Ninyo & Moore

BORING LOG
UPPER ENCINAL TANK
MALIBU, CALIFORNIA

PROJECT NO.	DATE	FIGURE
209249001	11/16	A-5

DATE DRILLED 8/12/15 BORING NO. B-2
GROUND ELEVATION 808' ± (MSL) SHEET 2 OF 4
METHOD OF DRILLING EZ Bore 24" Bucket (Roy Brothers Drilling)
DRIVE WEIGHT See End of Log DROP 12"
SAMPLED BY JRS LOGGED BY JRS/GMC REVIEWED BY LTJ

DESCRIPTION/INTERPRETATION

20
VAQUEROS FORMATION: (Continued)
Light brown, moist, moderately cemented, moderately hard, weathered SANDSTONE; fine-grained; highly fractured; fracture surfaces stained with manganese oxide and iron oxide; blocky texture.

25 — @ 24': b: N30°E, 54°N.
@ 24': fr: N20°W, 85°N; fr: N80°W, 60°S; 1- to 6-inch-spaced fractures/joints; very narrow to tight; abundant manganese oxide and iron oxide staining on surfaces.

30 — @ 28': b: N45°E, 46°N.

35 — 4 — @ 34': j: N70°W, 79°N; N40°E, 70°N; joint set spaced 2 to 6 inches; planar.
10
18
@ 35' - 36': Randomly oriented shears in siltstone and sandstone; gray and orange intermixed clay; no bedding apparent.
@ 36' - 39': Light gray; strongly cemented; very hard; fine- to medium-grained; highly fractured.

40 — 10 — 9.6 — 117.7

Ninyo & Moore

BORING LOG
UPPER ENCINAL TANK
MALIBU, CALIFORNIA

PROJECT NO.	DATE	FIGURE
209249001	11/16	A-6

DATE DRILLED 8/12/15 BORING NO. B-2
GROUND ELEVATION 808' ± (MSL) SHEET 3 OF 4
METHOD OF DRILLING EZ Bore 24" Bucket (Roy Brothers Drilling)
DRIVE WEIGHT See End of Log DROP 12"
SAMPLED BY JRS LOGGED BY JRS/GMC REVIEWED BY LTJ

DESCRIPTION/INTERPRETATION

40 — 8
VAQUEROS FORMATION: (Continued)
Reddish brown and yellowish brown, moist, weakly to moderately indurated, silty CLAYSTONE.
Light gray, reddish brown, and yellowish brown, moist, weakly to moderately indurated, weathered SILTSTONE; intensely fractured; manganese oxide and iron oxide staining on fracture surfaces; spotty carbonates.

9
@ 43': fr: N75°W, 45°S.

9
@ 44': b: N22°E, 42°N; finely laminated; polished surfaces.

45 — 9 — 7.0 — 125.3
11

@ 47': b: N10°E, 48°N; thin interbed of gray siltstone.

Gradational contact.
Light yellowish brown, moist, strongly cemented, hard, SANDSTONE; moderately fractured.

50 — @ 51': j: N20°W, 72°S; narrow; manganese oxide and iron oxide staining on surfaces; planar; smooth.

55

60 — Total Depth = 57.5 feet.
Downhole logged to 52 feet.
Groundwater was not encountered during drilling or downhole logging.
Backfilled with on-site soil on 8/13/15.

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BORING LOG
UPPER ENCINAL TANK
MALIBU, CALIFORNIA

PROJECT NO.	DATE	FIGURE
209249001	11/16	A-7

DATE DRILLED 8/12/15 BORING NO. B-2
GROUND ELEVATION 808' ± (MSL) SHEET 4 OF 4
METHOD OF DRILLING EZ Bore 24" Bucket (Roy Brothers Drilling)
DRIVE WEIGHT See End of Log DROP 12"
SAMPLED BY JRS LOGGED BY JRS/GMC REVIEWED BY LTJ

DESCRIPTION/INTERPRETATION

60
Note:
Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report.

The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.

65

Drive Weights:
0' - 25' = 4,900 lbs.
25' - 50' = 3,400 lbs.
50' - 57.5' = 2,200 lbs.

70

75

80

Ninyo & Moore

BORING LOG
UPPER ENCINAL TANK
MALIBU, CALIFORNIA

PROJECT NO.	DATE	FIGURE
209249001	11/16	A-8

BORING: B-1

ADDRESS: La Chusa Highlands PROJECT NO.: 4743
DATE LOGGED: April 23, 2014 LOGGED BY: MAB

ATTITUDES: b - bedding j - joint s - shear f - fault

WATER CONTENT, %	DRY DENSITY, PCF	BLOWS/FOOT	SAMPLE	DEPTH, FT	GRAPHIC LOG	DESCRIPTION
						0.0' - 0.5' **ARTIFICIAL FILL; Af,** clayey silt, very dark yellowish brown and yellow browns, abundant rock fragments to 2" in length, damp, medium dense
						0.5' - 3.0' **NATIVE SOIL; Qs,** clayey silt, very dark yellowish brown, abundant clasts to 4" in length, damp, stiff, dark yellowish brown contact dips west
						3.0' - 71.0' **BEDROCK; Tva,** sandstone, white to yellowish brown, fractured, locally soil filled fractures to 3.5', weathered, subvertical fractures, differerential weathering, weathered along fractures
6	115	4	X	5		@ 10.0' sandstone, fine to medium grained, yellowish brown, subparallel fractures
7	117	3	X	10		@ 15.0' sandstone, fine to medium grained, brown, massive, fractures locally well cemented, black mineral spots
5	125	6	X	15		@ 20.0' sandstone, fine to medium grained, brown, massive, fractures locally well cemented, black mineral spots
4	120	7	X	20		@ 30.0' sandstone, fine to medium grained, brown, massive, fractures locally well cemented, black mineral spots
4	129			30		
				35		@ 39.0' sandstone, fine to coarse grained, yellow brown, massive,

@ 9.5' 339°/45°W-0
@ 10.0' 250°/87°W-0
@ 21.0' 030°/35°SE-0 weathered sc / fractured sc
@ 26.5' 025°/72°SE-0 weathered sc / fractured sc
@ 32.0' 030°/55°SE-0
@ 34.0' 033°/35°W-0 discontinuous

GeoConcepts, Inc. Sheet 1 of 2

BORING: B-1

ADDRESS: La Chusa Highlands PROJECT NO.: 4743
DATE LOGGED: April 23, 2014 LOGGED BY: MAB

ATTITUDES: b - bedding j - joint s - shear f - fault

WATER CONTENT, %	DRY DENSITY, PCF	BLOWS/FOOT	SAMPLE	DEPTH, FT	GRAPHIC LOG	DESCRIPTION
5	122	9	X	45		more fractures, locally well cemented, black mineral spots
9	124	10	X	50		@ 40.0' sandstone, fine to coarse grained, yellow brown, locally gray shale, poorly bedded, more fractures, well cemented, black mineral spots, weathered, tight
				55		@ 46.0' sandstone, fine to coarse grained, yellow brown, locally gray shale, no bedding, more fractures, very well cemented, black mineral spots, weathered, tight
				60		@ 50.0' shale, gray, weathered yellowish brown, well cemented, differentially weathered, fractured, 1"-2" spacing
				65		@ 52.0' clay, yellowish brown, 1/8" to 1/4" thick, flexural slip on hard sandstone
				70		slickensides plunge 10° towards 190° sandstone, fine to coarse, yellowish brown, well cemented,very dense (using crowd), thickly bedded to massive, fractured, too hard to sample below 52' @ 58.0' sandstone, fine to coarse grained, mainly gray
				75		@ 62.5' sandstone, fine to coarse grained, mainly yellowish brown
						Total Depth: 71.0 Feet No Groundwater No Caving Bucket Auger 24" Diameter Kelly Weights: 0' - 29' = 3,700 lbs 29.0' - 58.0' = 2,400 lbs

@ 40.0' 035°/42°NW-h
@ 41.0' 015°/35°W-h
@ 44.0' 075°/20°N-h
@ 46.5' 050°/50°SE-fr
@ 47.0' 060°/50°W-fr
@ 51.5' 090°/13°S-sh
@ 52.0' 090°/10°S-sh
@ 54.0' 060°/15°S-h
@ 58.0' 010°/80°E-fr
@ 59.0' 230°/70°S-fr

GeoConcepts, Inc. Sheet 2 of 2

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DWG NO. G4.1

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DATE	△	INITIALS	DESCRIPTION

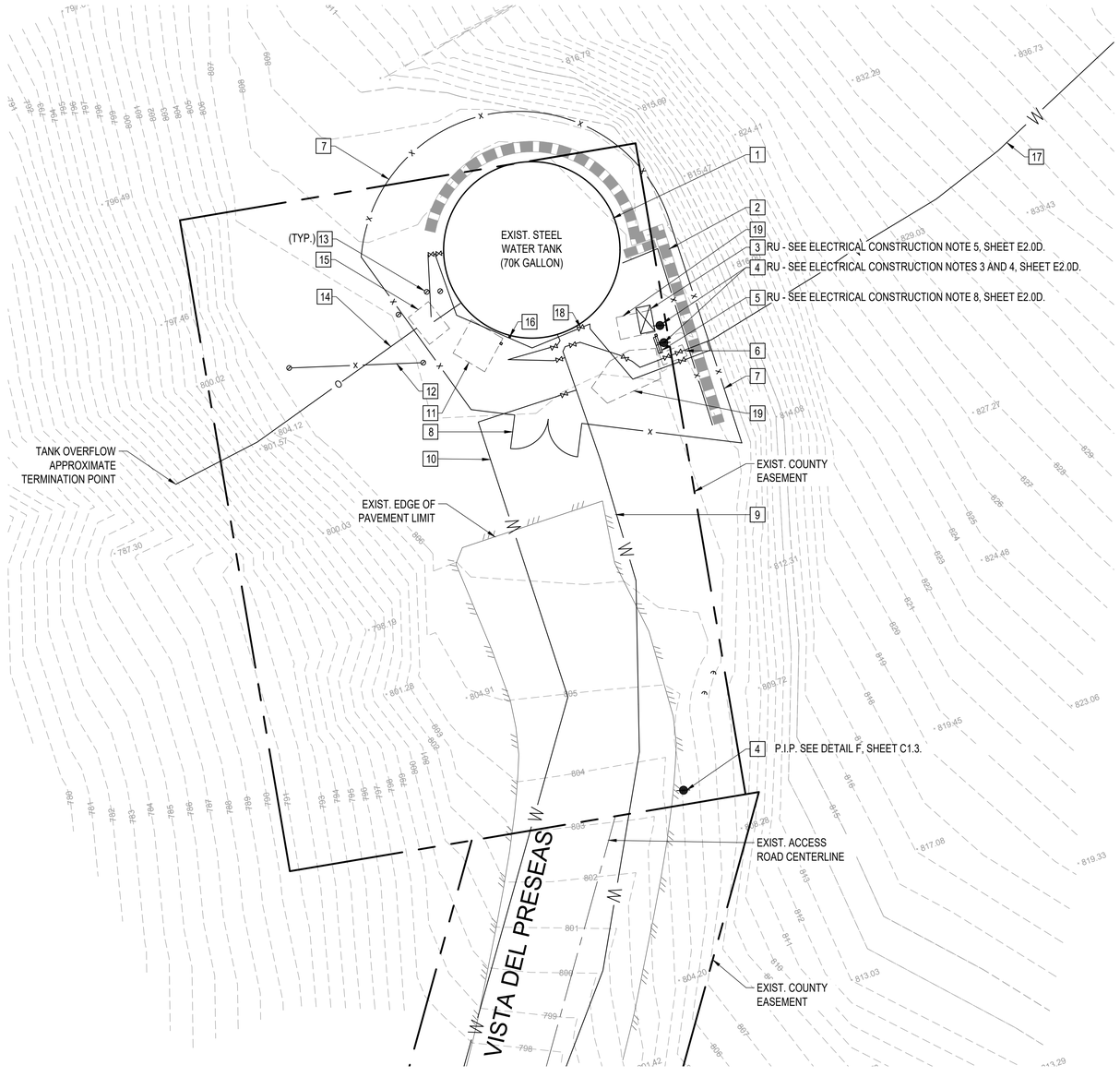
REVISIONS

ROBERT MURPHY, PROJECT ENGINEER — 06/09/2026, DATE

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT
GEOTECHNICAL BORING LOGS

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET 7 OF 53



EXISTING CIVIL CONSTRUCTION NOTES	
NO.	DESCRIPTION
1	EXIST. 70K GALLON BOLTED STEEL WATER TANK.
2	EXIST. SAND BAG RETAINING WALL.
3	EXIST. 120V LA COUNTY SERVICE ENTRANCE, METER AND CONTROL ENCLOSURE
4	EXIST. POWER POLE
5	EXIST. CHARMLEE P.S. 277/480V CITY SERVICE ENTRANCE, METER AND CONTROL ENCLOSURE
6	EXIST. CITY OF MALIBU CHARMLEE P.S.
7	EXIST. CHAINLINK FENCE
8	EXIST. ACCESS GATE
9	EXIST. 4" AC WATER LINE (825 PZ)
10	EXIST. 8" CML&C STEEL WATER LINE (825 PZ)
11	EXIST. TANK ACCESS HATCH ENCLOSURE
12	EXIST. SWINGING GATE
13	EXIST. BOLLARD
14	EXIST. TANK OVERFLOW / DRAIN PIPING
15	EXIST. OVERFLOW CATCH BASIN
16	EXIST. TANK ANTENA
17	EXIST. 4" CML&C SCH.10 STEEL WATER LINE (CHARMLEE)
18	EXIST. ALTITUDE VALVE
19	EXIST. CONCRETE PAD

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL EXISTING CONDITIONS AND SHALL NOTIFY THE DESIGN ENGINEER AND THE COUNTY OF ANY DISCREPANCIES.
2. THE PRESENCE OF LEAD PAINT HAS BEEN FOUND IN EXISTING TANK, ELECTRICAL EQUIPMENT AND ASSOCIATED COMPONENTS PER THE "LIMITED HAZARDOUS MATERIALS SURVEY" PREPARED BY LOS ANGELES COUNTY PUBLIC WORKS STORMWATER QUALITY DIVISION ENVIRONMENTAL COMPLIANCE UNIT (OCTOBER 6, 2020).

LEGEND

- EXIST. ABOVE GROUND UTILITES
- W — EXIST. UNDERGROUND UTILITIES
- O — EXIST. STORM DRAIN
- EXIST. VALVE
- EXIST. POWER POLE
- EXIST. BOLLARD
- RU — UTILITY TO BE REMOVED / RELOCATED BY OWNER

EXISTING SITE PLAN

SCALE: 1"=10'

NORTH
10 5 0 10 20

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DATE	INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY
PROJECT ENGINEER
06/09/2026
DATE

DRAFTER: JS
DESIGNER: KS
CHECKER: RM
DATE LAST SAVED:
FILE NAME:

DWG NO. C1.0

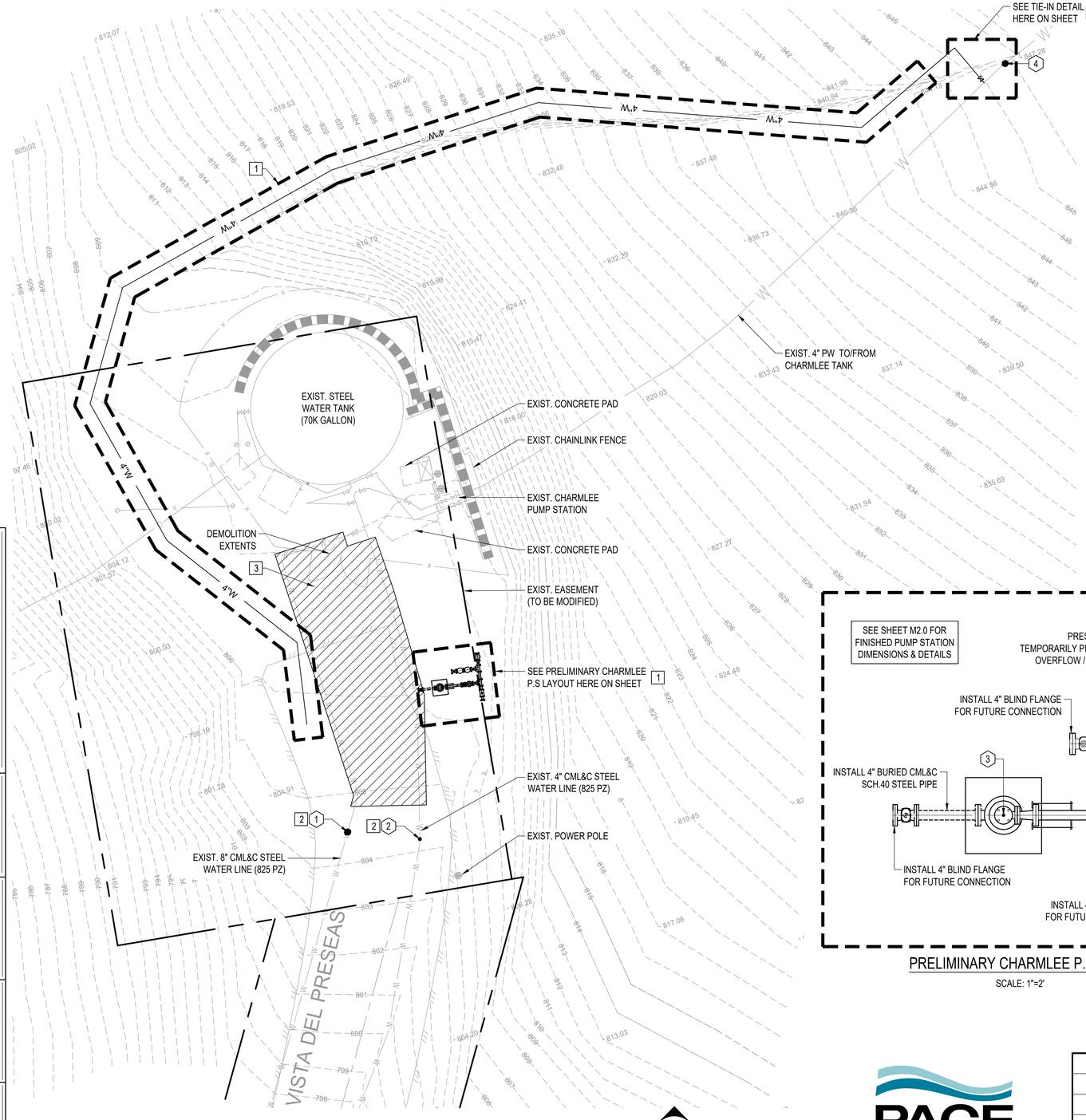
100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

EXISTING SITE PLAN

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	8	OF	53



EXISTING SITE PLAN

SCALE: 1"=10'

10 5 0 10 20

PRELIMINARY SEQUENCE OF CONSTRUCTION	
TASK NO.	DESCRIPTION
1	INSTALL CHARMLEE PUMP STATION TO THE EXTENT SHOWN PER PREMINILARY CHARMLEE P.S. DETAIL ON SHEET. HOT TAP AND LINE STOP EXISTING 4" CML&C DISCHARGE PIPE PER TIE-IN DETAIL ON SHEET. INSTALL NEW CML&C SCH.40 STEEL CHARMLEE DISHARGE PIPE TO THE EXTENTS SHOWN.
2	HOT TAP AND LINE STOP EXISTING 8" AND 4" CML&C STEEL PIPE (825 PZ). CONTRACTOR SHALL VERIFY WITH COUNTY THAT THE LOWER ENCINAL PUMP STATION (PRIMARY SOURCE OF WATER FOR 825 PZ) HAS BEEN INSTALLED WITH TEMPORARY PORTABLE EMERGENCY GENERATOR.
3	DEMOLISH AND REMOVE EXISTING BELOW GROUND PIPING AND APPURTENANCES TO THE EXTENT SHOWN TO ALLOW FOR INSTALLATION OF FUTURE SITE INTERCONNECTION PIPING AS SHOWN ON SHEET C1.2. REMOVE PORTION OF CHAIN LINK FENCE AS NEEDED. ISOLATION VALVES TO PROTECT IN PLACE.

LEGEND

INCLUDED ON THIS SHEET IS PRELIMINARY SEQUENCE OF CONSTRUCTION

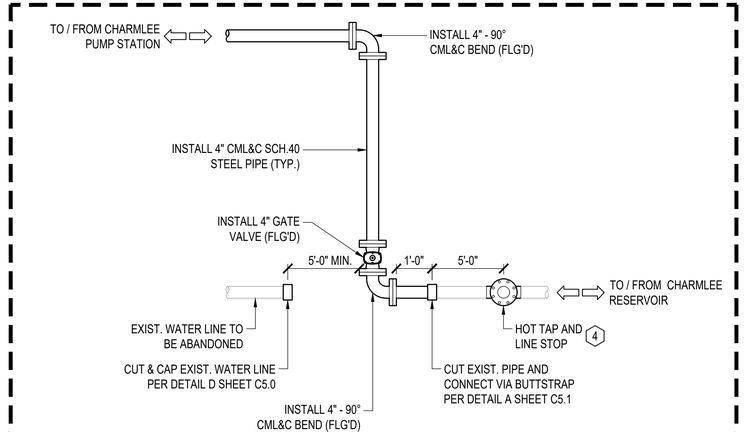
POINT TABLE			
PNT. #	NORTHING	EASTING	DESCRIPTION
1	1841134.67	6291724.73	8" LINE STOP (825 PZ)
2	1841133.45	6291737.38	4" LINE STOP (825 PZ)
3	1841160.00	6291740.89	CENTER OF PUMP CAN
4	1841269.34	6291839.90	4" LINE STOP (CHARMLEE)

NOTES:

1. THE PROPOSED PRELIMINARY SEQUENCE OF CONSTRUCTION LISTED HEREON SHALL BE CONSIDERED A PRELIMINARY AND NOT ALL INCLUSIVE AND IS SHOWN FOR BIDDING PURPOSED ONLY AND IS SUBJECT TO CHANGE AT THE COUNTY AND ENGINEER'S DISCRETION. THE FINAL SEQUENCE OF CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE SELECTED CONTRACTOR AND SHALL BE SUBMITTED TO THE COUNTY AND THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO THE START OF WORK. CONTRACTOR SHALL DETERMINE THEIR SCHEDULE AND SEQUENCE OF CONSTRUCTION ACCORDINGLY.
2. CONTRACTOR SHALL INCLUDE SITE SECURITY MEASURES SUCH AS TEMPORARY LOCKABLE FENCING AROUND THE ENTIRE WORK AREA (INCLUDING STAGING AREA AS NEEDED). IN THE BID TO PREVENT THE PUBLIC FROM ACCESSING THE SITE. SEE SPECIFICATIONS SECTION 01550 SITE ACCESS AND STORAGE FOR FURTHER REQUIREMENTS.
3. COORDINATE ALL DEMO WORK SHUTDOWN AND TIE-INS WITH COUNTY AND UTILITY STAFF AT LEAST 2 WEEKS BEFORE HAND.
4. CONTRACTOR SHALL COORDINATE NEW ELECTRICAL SERVICE AND CHANGE OVER WITH UTILITY AGENCY.
5. FOR ALL HOT TAPS THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PREPARATIONS FOR HOT TAPS TO TAKE PLACE, INCLUDING BUT NOT LIMITED TO: EXCAVATIONS, SHORING, TRAFFIC CONTROL, STEEL PLATES & GROUNDWATER DEWATERING UPON COMPLETION OF WORK.
6. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, MATERIAL, LOCATION AND NOTIFY THE ENGINEER AND COUNTY OF ANY DISCREPANCIES.
7. CONTRACTOR SHALL INSTALL BLIND FLANGE ON HOT TAP PRIOR TO BACKFILL.
8. ALL ABOVE GROUND PIPING AND FITTINGS SHALL BE CML & EPOXY-COATED STEEL SCH.40 (SEE SPECIFICATIONS). ALL BELOW GROUND PIPING AND FITTINGS SHALL BE CML & CEMENT-COATED STEEL SCH.40 (SEE SPECIFICATIONS).

PRELIMINARY CHARMLEE P.S PLAN

SCALE: 1"=2'



TIE-IN CONNECTION DETAIL

SCALE: N.T.S

DWG NO. C1.1

100% PLANS - PLANNING REVIEW

PACE
Advanced Water Engineering
17520 Newhope Street, Suite 200 | Fountain Valley, CA 92708
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DATE	△	INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

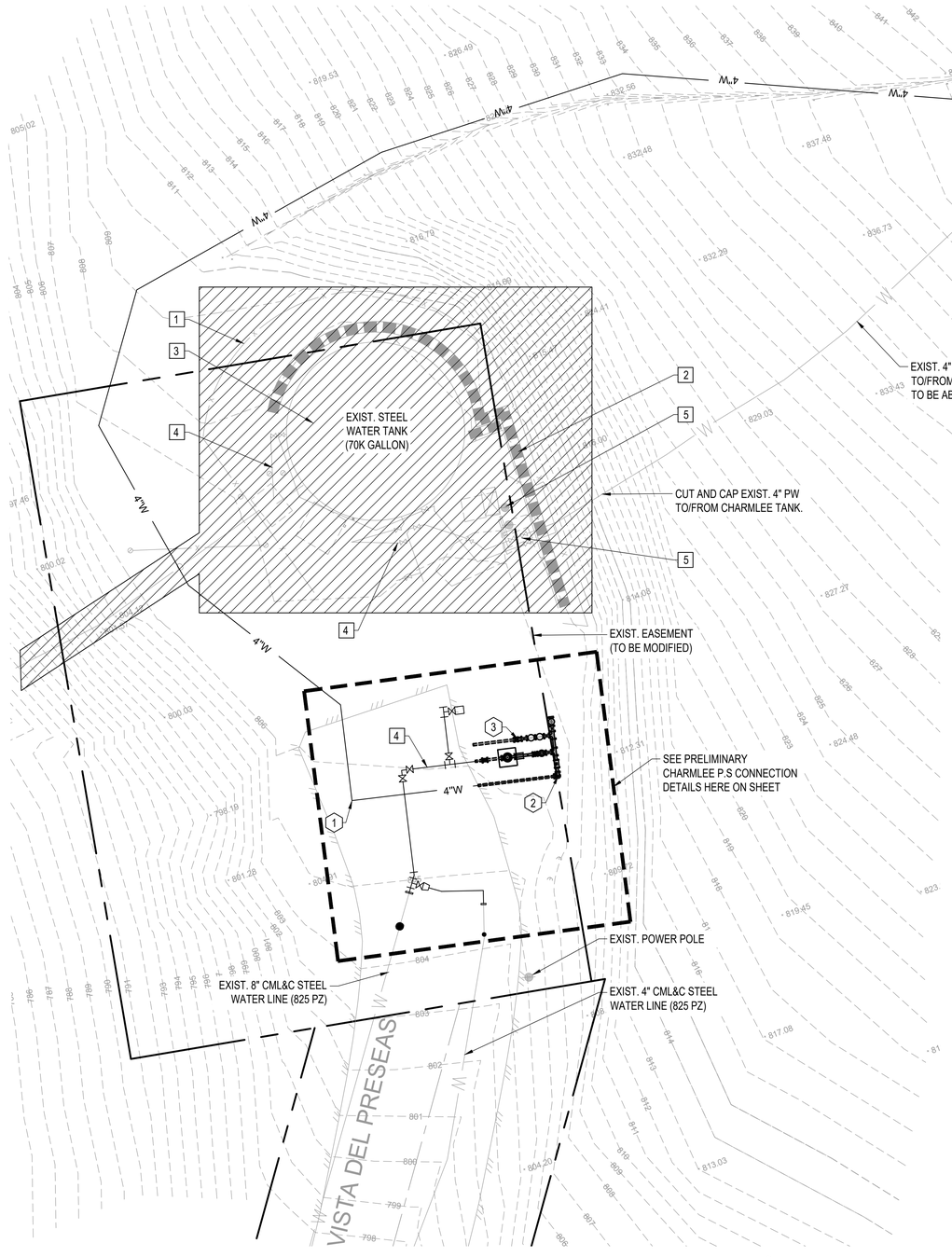
LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

SEQUENCE OF CONSTRUCTION PLAN

PROJ ID WWD2900065 | PCA Y5292300 | SPEC WWD 29-825 | SHEET 9 OF 53

FILE NAME
DATE LAST SAVED:
CHECKER RM
DESIGNER KS
DRAFTER JS



EXISTING SITE PLAN

SCALE: 1"=10'

NORTH

10 5 0 10 20

PRELIMINARY SEQUENCE OF CONSTRUCTION	
TASK NO.	DESCRIPTION
1	INSTALL INTERCONNECTION YARD PIPING PER DETAIL ON SHEET. REMOVE EXIST. CHAIN LINK FENCE. CUT FENCE POST FLUSH WITH FINISHED GRADE AND FILL WITH NON-SHRINK GROUT.
2	DEMO, REMOVE AND PROPERLY DISPOSE OF THE EXISTING CEMENT SANDBAG RETAINING WALL.
3	DEMO, REMOVE AND PROPERLY DISPOSE OF THE EXISTING 0.07 MG BOLTED STEEL TANK AND ALL ASSOCIATE APPURTENANCES. THIS SPECIFICIALLY INCLUDED, BUT NOT LIMITED TO EXISTING TANK FOUNDATION.
4	DEMO, REMOVE AND PROPERLY DISPOSE OF THE EXISTING YARD PIPING, FITTINGS, VALVES AND APPURTENANCES WITHIN THE INDICATED AREA AND IN CONFLICT WITH THE PROPOSED IMPROVEMENTS.
5	DEMO, REMOVE AND PROPERLY DISPOSE OF THE EXISTING CHARMLEE PUMP STATION, PIPING, FITTINGS, VALVES, ELECTRICAL SERVICES, POWER POLE AND ASSOCIATED APPURTENANCES WITHIN THE INDICATED AREA AND IN CONFLICT WITH THE PROPOSED IMPROVEMETNS.

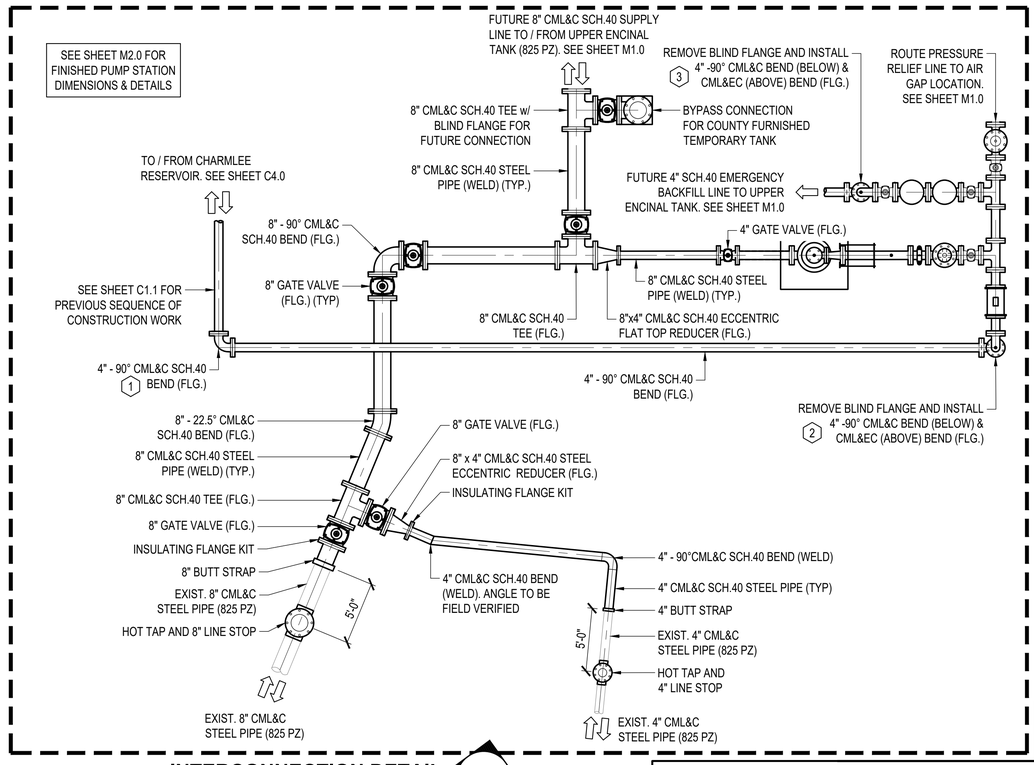
LEGEND

- INCLUDED ON THIS SHEET PRELIMINARY SEQUENCE OF CONSTRUCTION
- CEMENT SANDBAG RETAINING WALL

POINT TABLE			
PNT. #	NORTHING	EASTING	DESCRIPTION
1	1841153.53	6291717.58	4" CHARMLEE P.S. BEND
2	1841157.23	6291748.46	4" CHARMLEE P.S. BEND
3	1841162.70	6291742.43	4" CHARMLEE P.S. BEND

NOTES:

1. THE PROPOSED PRELIMINARY SEQUENCE OF CONSTRUCTION LISTED HEREON SHALL BE CONSIDERED A PRELIMINARY AND NOT ALL INCLUSIVE AND IS SHOWN FOR BIDDING PURPOSED ONLY AND IS SUBJECT TO CHANGE AT THE COUNTY AND ENGINEER'S DISCRETION. THE FINAL SEQUENCE OF CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE SELECTED CONTRACTOR AND SHALL BE SUBMITTED TO THE COUNTY AND THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO THE START OF WORK. CONTRACTOR SHALL DETERMINE THEIR SCHEDULE AND SEQUENCE OF CONSTRUCTION ACCORDINGLY.
2. CONTRACTOR SHALL INCLUDE SITE SECURITY MEASURES SUCH AS TEMPORARY LOCKABLE FENCING AROUND THE ENTIRE WORK AREA (INCLUDING STAGING AREA AS NEEDED). IN THE BID TO PREVENT THE PUBLIC FROM ACCESSING THE SITE. SEE SPECIFICATIONS SECTION 01550 SITE ACCESS AND STORAGE FOR FURTHER REQUIREMENTS.
3. COORDINATE ALL DEMO WORK SHUTDOWN AND TIE-INS WITH COUNTY AND UTILITY STAFF AT LEAST 2 WEEKS BEFORE HAND.
4. CONTRACTOR SHALL COORDINATE NEW ELECTRICAL SERVICE AND CHANGE OVER WITH UTILITY AGENCY.
5. FOR ALL HOT TAPS THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PREPARATIONS FOR HOT TAPS TO TAKE PLACE, INCLUDING BUT NOT LIMITED TO: EXCAVATIONS, SHORING, TRAFFIC CONTROL, STEEL PLATES & GROUNDWATER DEWATERING UPON COMPLETION OF WORK.
6. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, MATERIAL, LOCATION AND NOTIFY THE ENGINEER AND COUNTY OF ANY DISCREPANCIES.
7. CONTRACTOR SHALL INSTALL BLIND FLANGE ON HOT TAP PRIOR TO BACKFILL.
8. ALL ABOVE GROUND PIPING AND FITTINGS SHALL BE CML & EPOXY-COATED STEEL SCH.40 (SEE SPECIFICATIONS). ALL BELOW GROUND PIPING AND FITTINGS SHALL BE CML & CEMENT-COATED STEEL SCH.40 (SEE SPECIFICATIONS).



INTERCONNECTION DETAIL

SCALE: N.T.S

NORTH

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DATE		INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

DWG NO. C1.2

100% PLANS - PLANNING REVIEW

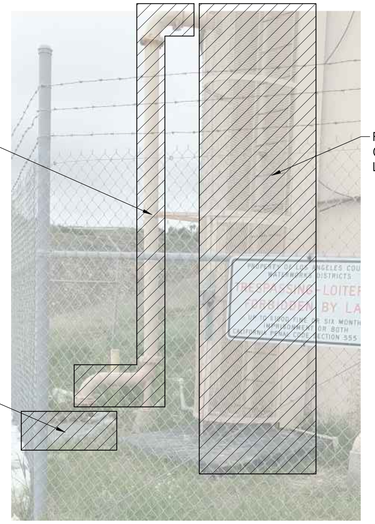
LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

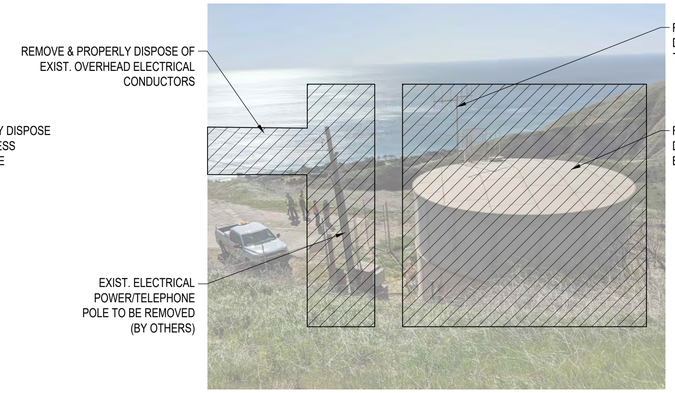
SEQUENCE OF CONSTRUCTION PLAN

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	10 OF	53

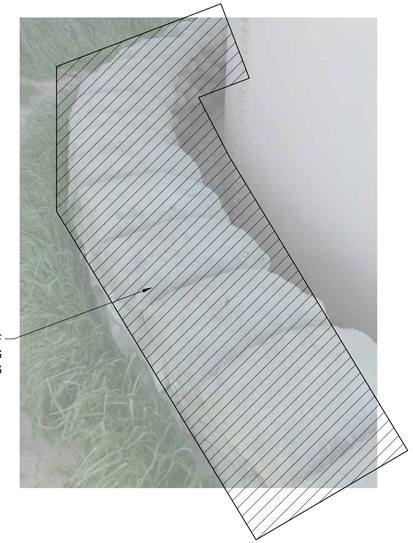
DRAFTER: JS | DESIGNER: KS | CHECKER: RM | DATE LAST SAVED: | FILE NAME:



OVERFLOW / TANK DRAIN CATCH BASIN DEMO
DETAIL "A"



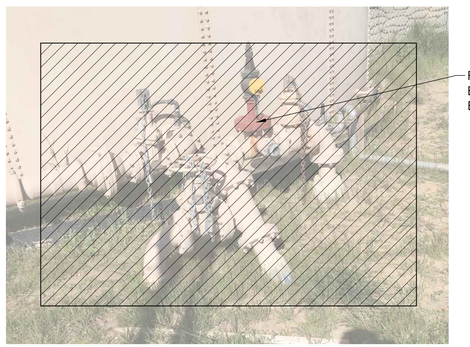
BOLTED TANK / POWER POLE DEMO
DETAIL "B"



CEMENT SAND BAG DEMO
DETAIL "C"



ELECTRICAL SERVICE / CHARMLEE P.S DEMO
DETAIL "D"



TANK INLET DEMO
DETAIL "E"



EXIST. POWER POLE
DETAIL "F"

DWG NO.
C1.3

100% PLANS - PLANNING REVIEW

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DATE	INITIALS	DESCRIPTION

REVISIONS

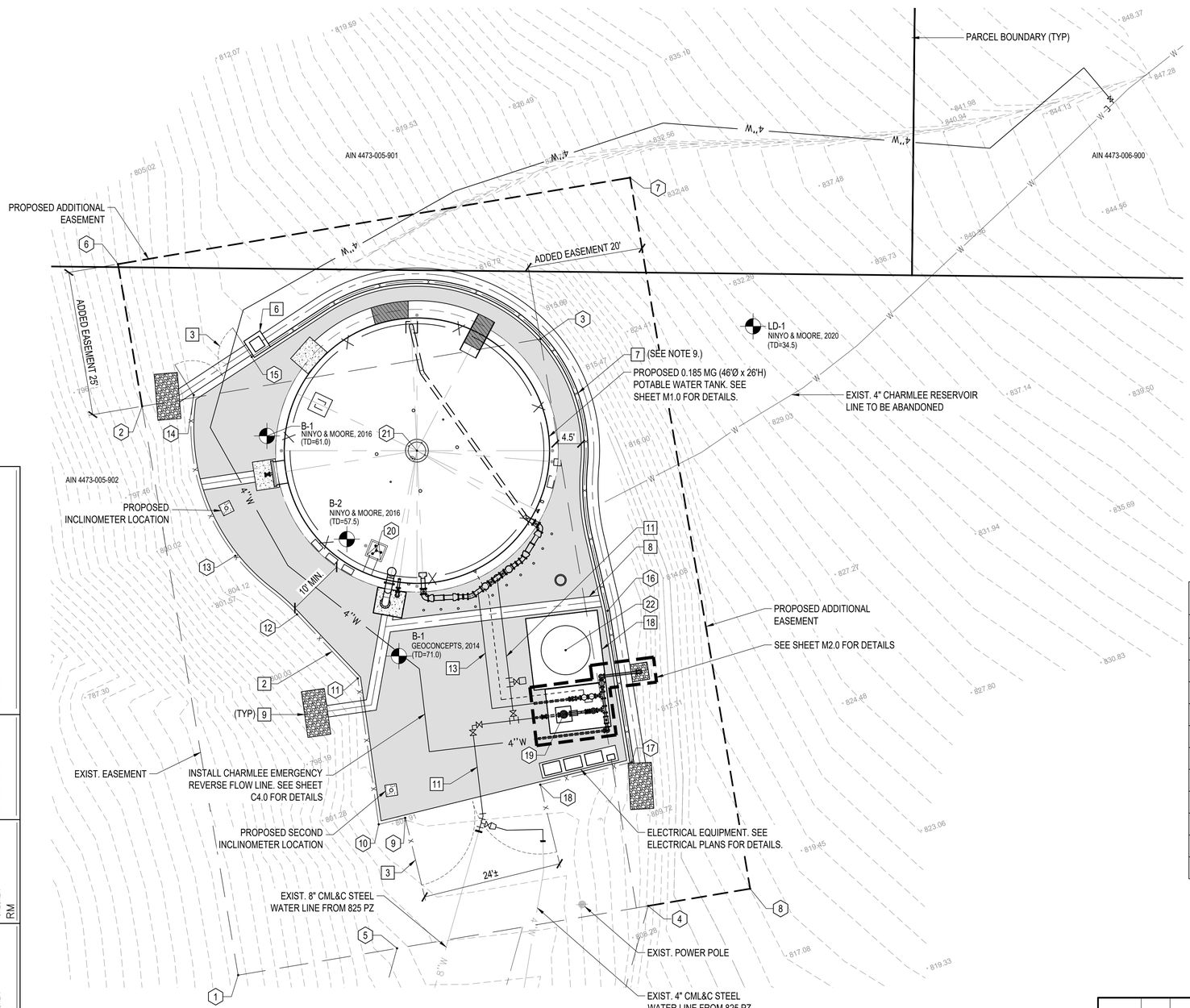
ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

DEMOLITION DETAILS

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	11 OF 53



PROPOSED SITE PLAN

SCALE: 1"=10'

NORTH

10 5 0 10 20

CIVIL CONSTRUCTION NOTES	
NO.	DESCRIPTION
2	CHAIN LINK FENCE WITH BARBED WIRE PER LACWWD STD. PLAN W-23, 8' HIGH FOR FENCE AT GRADE, 3' HIGH FOR FENCE AT RETAINING WALL. SEE DETAIL E ON SHEET C5.0
3	DBL. DRIVE CHAIN LINK ACCESS GATE W/ BARBED WIRE PER LACWWD STD. PLAN W-23, 8' HIGH. SEE DETAIL E ON SHEET C5.0.
6	CMU SPLASH WALL. SEE STRUCTURAL PLANS FOR DETAILS.
7	CONCRETE RETAINING WALL. SEE STRUCTURAL PLANS FOR DETAILS.
8	2' WIDE CONCRETE RIBBON GUTTER PER DETAIL C ON SHEET C5.1.
9	AREA FOR CLASS II RIP RAP (SEE SPECIFICATIONS).
11	8" CML&C SCH.40 STEEL PIPE.
13	4" CML&C SCH.40 STEEL PIPE.
18	12'-6" x 12'-6" REINFORCED CONCRETE PAD AND TEMPORARY COUNTY FURNISHED 5000 GALLON STORAGE TANK. SEE STRUCTURAL PLANS FOR DETAILS.

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, MATERIAL, LOCATION AND NOTIFY THE ENGINEER AND COUNTY OF ANY DISCREPANCIES.
2. ALL ABOVE GROUND PIPING AND FITTINGS SHALL BE CML & EPOXY-COATED STEEL SCH.40 (SEE SPECIFICATIONS). ALL BELOW GROUND PIPING AND FITTINGS SHALL BE CML & CEMENT-COATED STEEL SCH.40 (SEE SPECIFICATIONS).
3. CONTRACTOR SHALL REPAIR ALL MORTAR LINING AND COATING ON EXISTING STEEL PIPE AND FITTINGS DAMAGED DURING CONSTRUCTION.
4. CONTRACTOR TO COORDINATE ALL TIE-IN WORK/SHUTDOWNS WITH THE COUNTY. SEE SEQUENCE OF CONSTRUCTION PLANS FOR PHASING REQUIREMENTS.
5. TRENCH FOR NEW PIPING INSTALLATION AND BACKFILL PER DETAIL D ON SHEET C5.1.
6. ALL POTABLE WATER PIPELINES AND INFRASTRUCTURE SHALL BE DISINFECTED IN ACCORDANCE WITH ANSI/AWWA C651 REQUIREMENTS.
7. STEEL SLIP ON WELD FLANGES SHALL BE PROVIDED FOR ALL CONNECTION OF ALL STEEL PIPE TO FLANGE FITTINGS AND VALVES, UNLESS NOTED OTHERWISE.
8. THRUST BLOCKS SHALL BE PROVIDED FOR ALL BELOW GROUND BENDS (22.5 AND GREATER), TEES AND CROSSES PER DETAIL C ON SHEET C5.0.
9. CHAIN LINK FENCE ON RETAINING WALL WILL BE A POST INSTALL AND IS CONSIDERED A DEFERRED SUBMITTAL. SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND STAMPED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA AND SHALL BE SUBMITTED TO THE ENGINEER AND COUNTY FOR REVIEW PRIOR TO THE START OF CONSTRUCTION.

POINT TABLE			
PNT. #	NORTHING	EASTING	DESCRIPTION
1	1841114.79	6291684.45	EXISTING EASEMENT
2	1841213.39	6291667.80	EXISTING EASEMENT
3	1841225.05	6291736.82	EXISTING EASEMENT
4	1841126.79	6291755.51	EXISTING EASEMENT
5	1841119.44	6291711.99	EXISTING EASEMENT
6	1841238.04	6291663.63	PROPOSED ADDITIONAL EASEMENT
7	1841253.03	6291752.38	PROPOSED ADDITIONAL EASEMENT
8	1841129.77	6291773.19	PROPOSED ADDITIONAL EASEMENT
9	1841142.06	6291713.40	PROPOSED ACCESS SWING GATE
10	1841140.93	6291708.81	PROPOSED CHAIN LINK FENCE
11	1841166.23	6291705.18	PROPOSED CHAIN LINK FENCE

POINT TABLE			
PNT. #	NORTHING	EASTING	DESCRIPTION
12	1841177.33	6291694.65	PROPOSED CHAIN LINK FENCE
13	1841181.43	6291690.10	PROPOSED CHAIN LINK FENCE
14	1841215.35	6291676.74	PROPOSED ACCESS SWING GATE
15	1841221.96	6291686.79	PROPOSED ACCESS SWING GATE
16	1841177.95	6291748.49	PROPOSED CHAIN LINK FENCE
17	1841151.71	6291752.69	PROPOSED CHAIN LINK FENCE
18	1841147.81	6291736.80	PROPOSED ACCESS SWING GATE
19	1841160.00	6291740.89	CENTER OF PUMP CAN
20	1841188.37	6291708.41	CENTER OF ACCESS HATCH
21	1841205.70	6291715.44	CENTER OF TANK
22	1841171.12	6291741.21	CENTER OF TEMPORARY TANK

DRAFTER JS | DESIGNER KS | CHECKER RM | DATE LAST SAVED: | FILE NAME

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DATE	△	INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

DWG NO. C2.0

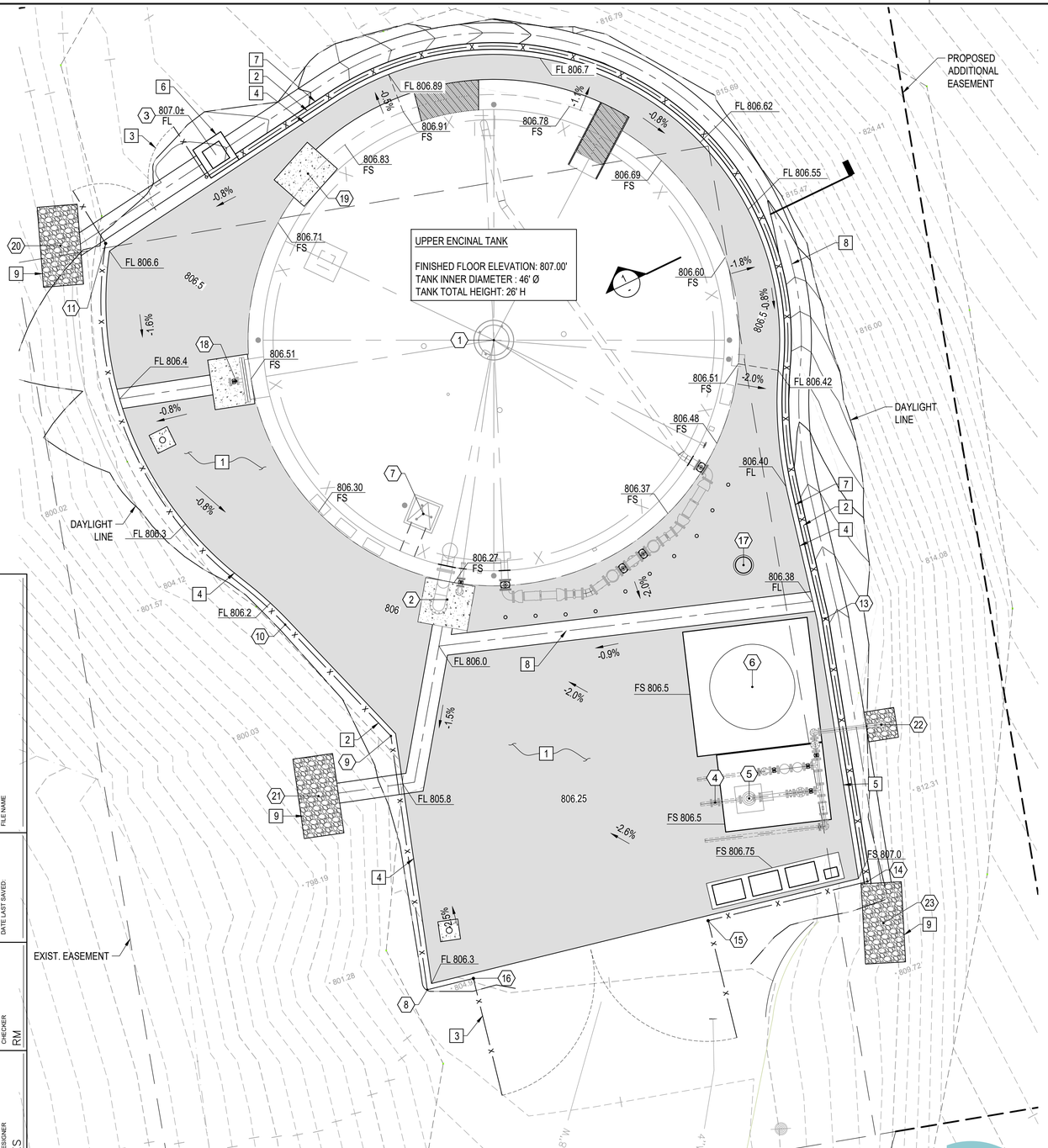
100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

PROPOSED SITE PLAN

PROJ ID WWD2900065 | PCA Y5292300 | SPEC WWD 29-825 | SHEET 12 OF 53



SITE GRADING PLAN

SCALE: 1"=6'

EOP LINE DATA				
LINE #	DISTANCE	BEARING	START POINT	END POINT
L1	15.46'	S43°29'56"E	N 1841177.67, E 6291695.01	N 1841166.46, E 6291705.65
L2	25.17'	S8°10'09"E	N 1841166.46, E 6291705.65	N 1841141.54, E 6291709.23

EOP CURVE DATA				
CURVE #	RADIUS	LENGTH	DELTA	TANGENT
C1	35.00'	37.06'	60.67	20.48
C2	40.00'	6.21'	8.89	3.11

POINT TABLE			
PNT. #	NORTHING	EASTING	DESCRIPTION
1	1841205.70	6291715.44	POTABLE WATER STORAGE TANK
2	1841179.86	6291710.81	OVERFLOW SPLASH PAD
3	1841224.18	6291687.74	CMU SPLASH WALL
4	1841159.59	6291737.50	4" GATE VALVE
5	1841160.00	6291740.89	PUMP CAN
6	1841171.12	6291741.21	TEMPORARY TANK
7	1841188.37	6291708.41	TANK ACCESS HATCH
8	1841140.93	6291708.81	PROPOSED CHAIN LINK FENCE
9	1841166.23	6291705.18	PROPOSED CHAIN LINK FENCE
10	1841177.33	6291694.65	PROPOSED CHAIN LINK FENCE
11	1841215.39	6291676.75	PROPOSED CHAIN LINK FENCE
12	1841221.96	6291686.79	PROPOSED CHAIN LINK FENCE
13	1841177.95	6291748.49	PROPOSED CHAIN LINK FENCE
14	1841151.71	6291752.69	PROPOSED CHAIN LINK FENCE
15	1841147.80	6291736.81	PROPOSED CHAIN LINK FENCE
16	1841142.06	6291713.40	PROPOSED CHAIN LINK FENCE
17	1841183.27	6291740.33	LIGHT POST
18	1841201.61	6291689.76	TANK MANWAY SPLASH PAD
19	1841222.31	6291696.91	SPIRAL STAIRCASE CONCRETE LANDING
20	1841215.12	6291672.23	RIP RAP AREA
21	1841160.24	6291697.96	RIP RAP AREA
22	1841167.36	6291754.06	RIP RAP AREA
23	1841147.59	6291754.27	RIP RAP AREA

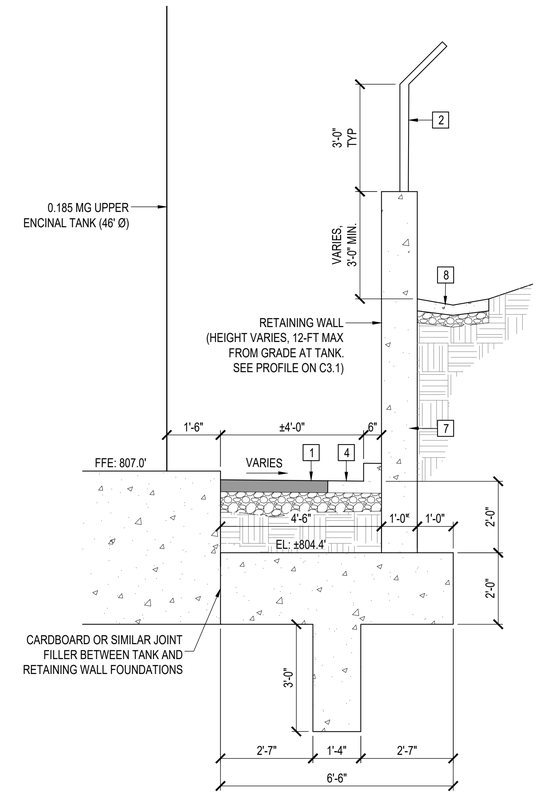
EARTHWORKS:

TOTAL 2D AREA: 4,785.44 Sq. Ft.
TOTAL CUT: 576.73 Cu. Yds.
TOTAL FILL: 10.16 Cu. Yds.
NET <CUT>: 566.57 Cu. Yds.

NOTES:

1. EXPORTED SOIL FROM THE SITE SHALL BE TAKEN TO THE COUNTY LANDFILL OR TO A SITE WITH AN ACTIVE GRADING PERMIT AND THE ABILITY TO ACCEPT THE MATERIAL IN COMPLIANCE WITH THE CITY'S LIP SECTION 8.3.

CIVIL CONSTRUCTION NOTES	
NO.	DESCRIPTION
1	3.5" ASPHALT PAVEMENT OVER 7.5" AGGREGATE BASE PER DETAIL F ON SHEET C5.0.
2	CHAIN LINK FENCE WITH BARBED WIRE PER LACWWD STD. PLAN W-23, 8' HIGH FOR FENCE AT GRADE, 3' HIGH FOR FENCE AT RETAINING WALL. SEE DETAIL E ON SHEET C5.0
3	DBL. DRIVE CHAIN LINK ACCESS GATE W/ BARBED WIRE PER LACWWD STD. PLAN W-23, 8' HIGH. SEE DETAIL E ON SHEET C5.0.
4	6" CURB & 12" LONG GUTTER DETAIL E ON SHEET C5.1.
5	6" CURB PER DETAIL E ON SHEET C5.1.
6	CMU SPLASH WALL. SEE STRUCTURAL PLANS FOR DETAILS.
7	CONCRETE RETAINING WALL. SEE STRUCTURAL PLANS FOR DETAILS.
8	2' WIDE CONCRETE RIBBON GUTTER PER DETAIL C ON SHEET C5.1.
9	AREA FOR CLASS II RIP RAP (SEE SPECIFICATIONS).



1-TYP. SECTION

SCALE: 1/2"=1'-0"

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REVISIONS			

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DWG NO. C3.0

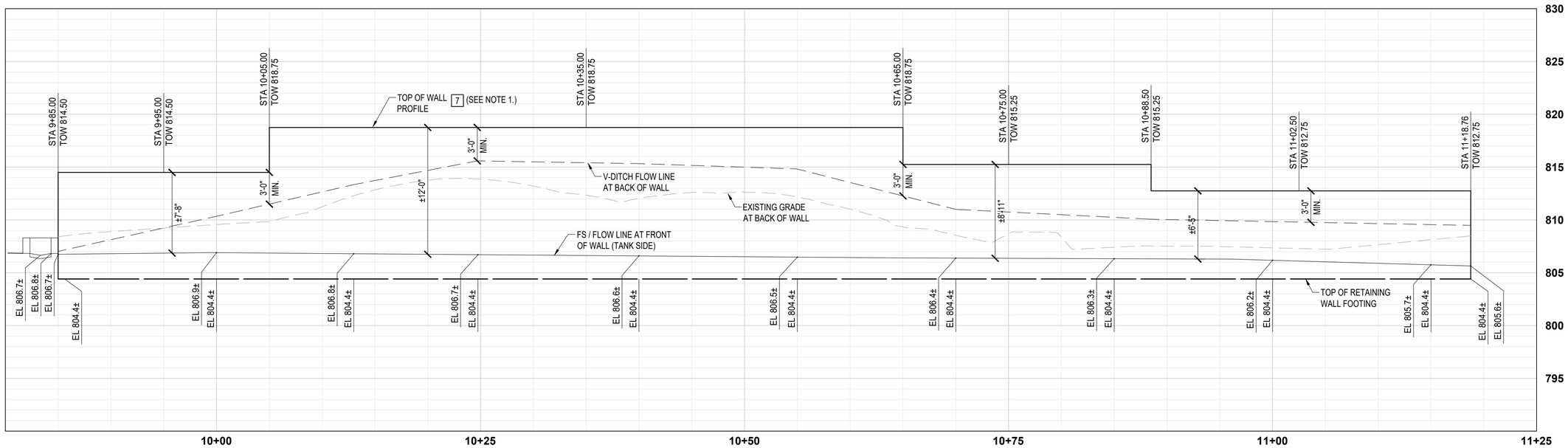
100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

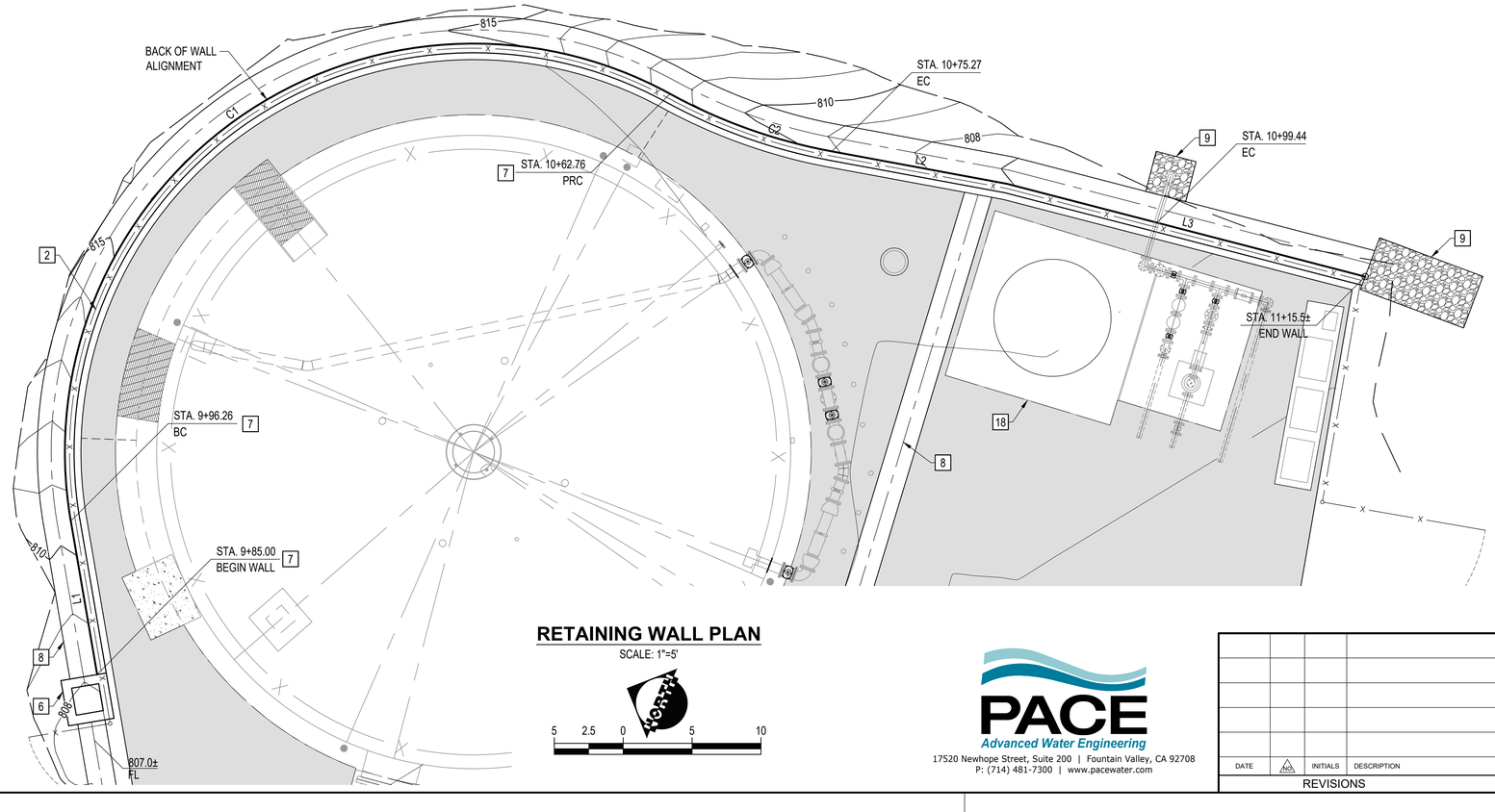
SITE GRADING PLAN

PROJ ID WWD2900065 | PCA Y5292300 | SPEC WWD 29-825 | SHEET 13 OF 53



RETAINING WALL PROFILE

SCALE: 1"=5'



RETAINING WALL PLAN

SCALE: 1"=5'

NORTH

5 2.5 0 5 10

CIVIL CONSTRUCTION NOTES	
NO.	DESCRIPTION
6	CMU SPLASH WALL.SEE STRUCTURAL PLANS FOR DETAILS.
7	CONCRETE RETAINING WALL. SEE STRUCTURAL PLANS FOR DETAILS.
8	2' WIDE CONCRETE RIBBON GUTTER PER DETAIL C ON SHEET C5.1.
9	AREA FOR CLASS II RIP RAP (SEE SPECIFICATIONS).
18	12'-6" x 12'-6" REINFORCED CONCRETE PAD AND TEMPORARY COUNTY FURNISHED 5000 GALLON STORAGE TANK. SEE STRUCTURAL PLANS FOR DETAILS.

NOTES:

1. CHAIN LINK FENCE ON RETAINING WALL WILL BE A POST INSTALL AND IS CONSIDERED A DEFERRED SUBMITTAL. SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND STAMPED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA AND SHALL BE SUBMITTED TO THE ENGINEER AND COUNTY FOR REVIEW PRIOR TO THE START OF CONSTRUCTION.

BACK OF WALL CURVE DATA				
CURVE #	RADIUS	LENGTH	DELTA	TANGENT
C1	29.67'	66.50'	128.43	61.41
C2	39.33'	12.51'	18.23	6.31

BACK OF WALL LINE DATA				
LINE #	DISTANCE	BEARING	START POINT	END POINT
L1	11.32'	N56°38'48"E	N 1841224.26, E 6291689.67	N 1841230.48, E 6291699.13
L2	12.96'	S13°08'18"E	N 1841190.64, E 6291745.86	N 1841178.02, E 6291748.81
L3	26.83'	S9°05'24"E	N 1841178.02, E 6291748.81	N 1841151.53, E 6291753.05

DRAFTER: JS
DESIGNER: KS
CHECKER: RM
DATE LAST SAVED:
FILE NAME:

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DATE	NO.	INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

DWG NO. C3.1

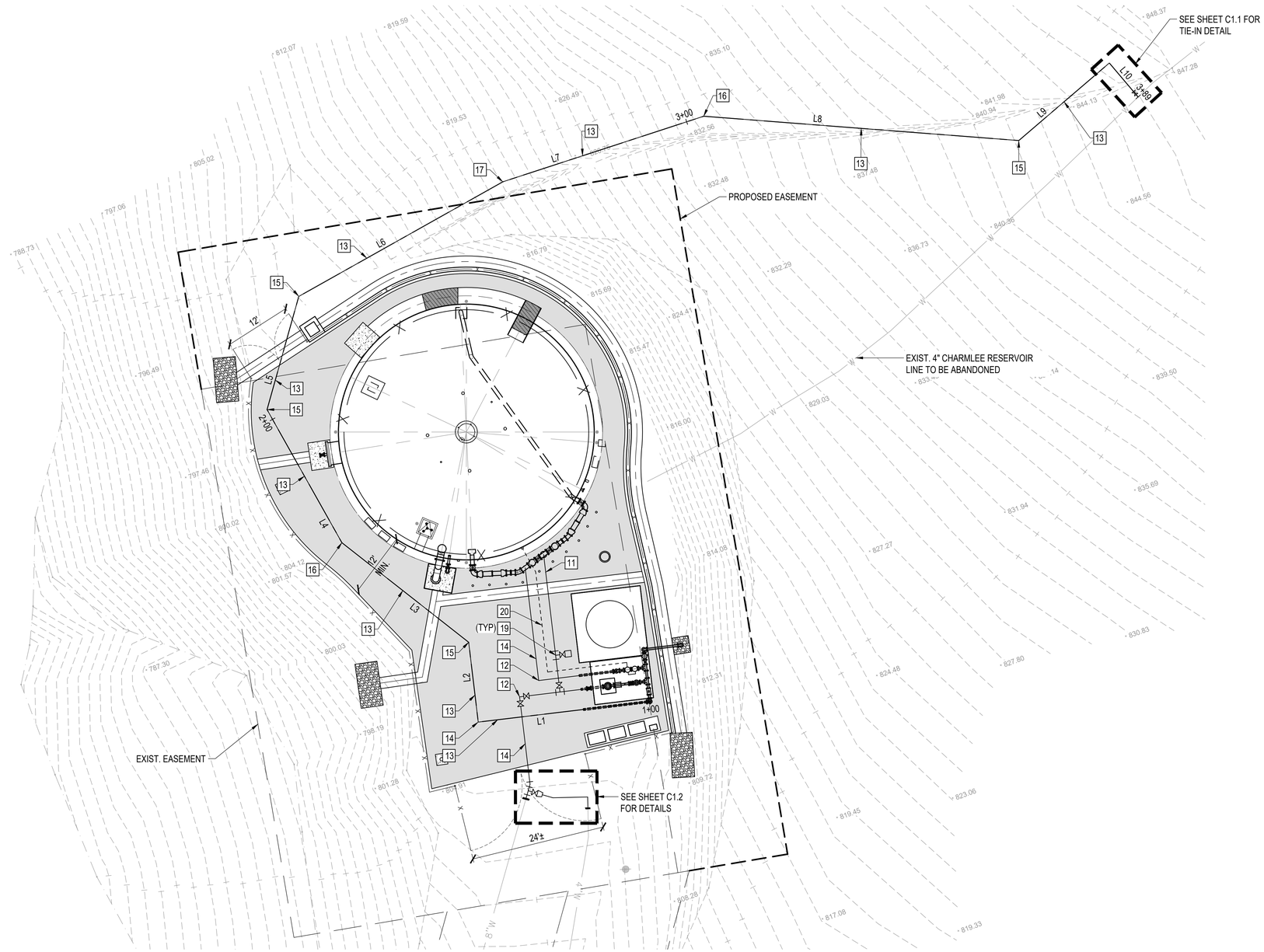
100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

RETAINING WALL PLAN AND PROFILE

PROJ ID WWD2900065 | PCA Y5292300 | SPEC WWD 29-825 | SHEET 14 OF 53



SITE PLAN

SCALE: 1"=10'

NORTH

10 5 0 10 20

CIVIL CONSTRUCTION NOTES	
NO.	DESCRIPTION
11	8" CML&C SCH.40 STEEL PIPE.
12	8"- 90° CML&C SCH.40 STEEL BEND.
13	4" CML&C SCH.40 STEEL PIPE.
14	4"- 90° CML&C SCH.40 STEEL BEND.
15	4"- 45° CML&C SCH.40 STEEL BEND.
16	4"- 22.5° CML&C SCH.40 STEEL BEND.
17	4"- 11.25° CML&C SCH.40 STEEL BEND.
19	8" CML&C SCH.40 STEEL TEE.
20	1" WELDED 316 S.S ALTITUDE VALVE SENSING LINE PIPE AND FITTINGS PER MANUNUFACTURER'S REQUIREMENTS.

NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, MATERIAL, LOCATION AND NOTIFY THE ENGINEER AND COUNTY OF ANY DISCREPANCIES.
2. ALL ABOVE GROUND PIPING AND FITTINGS SHALL BE CML & EPOXY-COATED STEEL SCH.40 (SEE SPECIFICATIONS). ALL BELOW GROUND PIPING AND FITTINGS SHALL BE CML & CEMENT-COATED STEEL SCH.40 (SEE SPECIFICATIONS).
3. CONTRACTOR SHALL REPAIR ALL MORTAR LINING AND COATING ON EXISTING STEEL PIPE AND FITTINGS DAMAGED DURING CONSTRUCTION.
4. CONTRACTOR TO COORDINATE ALL TIE-IN WORK/SHUTDOWNS WITH THE COUNTY. SEE SEQUENCE OF CONSTRUCTION PLANS FOR PHASING REQUIREMENTS.
5. TRENCH FOR NEW PIPING INSTALLATION AND BACKFILL PER DETAIL D ON SHEET C5.1.
6. ALL POTABLE WATER PIPELINES AND INFRASTRUCTURE SHALL BE DISINFECTED IN ACCORDANCE WITH ANSI/AWWA C651 REQUIREMENTS.
7. STEEL SLIP ON WELD FLAGNES SHALL BE PROVIDED FOR ALL CONNECTION OF ALL STEEL PIPE TO FLANGE FITTINGS AND VALVES, UNLESS NOTED OTHERWISE.
8. THRUST BLOCKS SHALL BE PROVIDED FOR ALL BELOW GROUND BENDS (22.5 AND GREATER), TEES AND CROSSES PER DETAIL C ON SHEET C5.0.

LINE DATA				
LINE #	DISTANCE	BEARING	START POINT	END POINT
L1	31.10'	S83°09'39"W	N 1841157.23, E 6291748.46	N 1841153.53, E 6291717.58
L2	14.46'	N6°50'21"W	N 1841153.53, E 6291717.58	N 1841167.88, E 6291715.86
L3	28.99'	N51°50'21"W	N 1841167.88, E 6291715.86	N 1841185.79, E 6291693.07
L4	27.46'	N29°20'21"W	N 1841185.79, E 6291693.07	N 1841209.73, E 6291679.61
L5	21.14'	N15°39'39"E	N 1841209.73, E 6291679.61	N 1841230.09, E 6291685.32
L6	42.07'	N60°39'39"E	N 1841230.09, E 6291685.32	N 1841250.70, E 6291721.99
L7	37.99'	N71°54'39"E	N 1841250.70, E 6291721.99	N 1841262.50, E 6291758.11
L8	56.81'	S85°35'21"E	N 1841262.50, E 6291758.11	N 1841258.13, E 6291814.75
L9	21.43'	N49°24'59"E	N 1841258.13, E 6291814.75	N 1841272.07, E 6291831.03
L10	8.01'	S40°15'21"E	N 1841272.07, E 6291831.03	N 1841265.96, E 6291836.20

DWG NO.
C4.0

100% PLANS - PLANNING REVIEW

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Advanced Water Engineering
17520 Newhope Street, Suite 200 | Fountain Valley, CA 92708
P: (714) 481-7300 | www.pacewater.com

DATE	△	INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

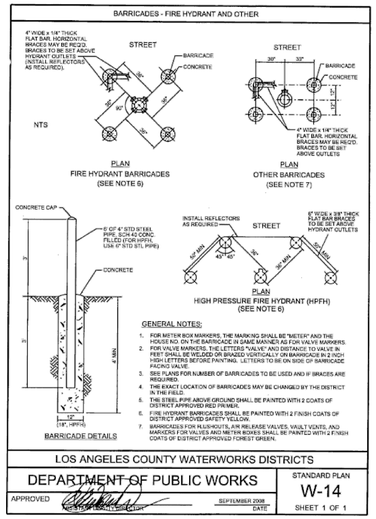
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WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

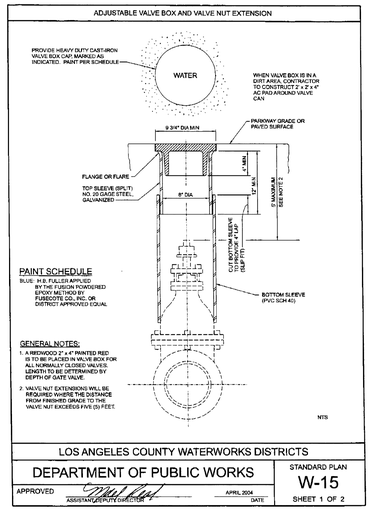
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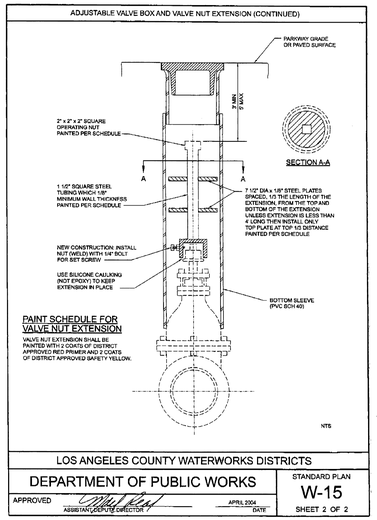
PROJ ID WWD2900065 | PCA Y5292300 | SPEC WWD 29-825 | SHEET 15 OF 53

DRAFTER JS | DESIGNER KS | CHECKER RM | DATE LAST SAVED: | FILE NAME

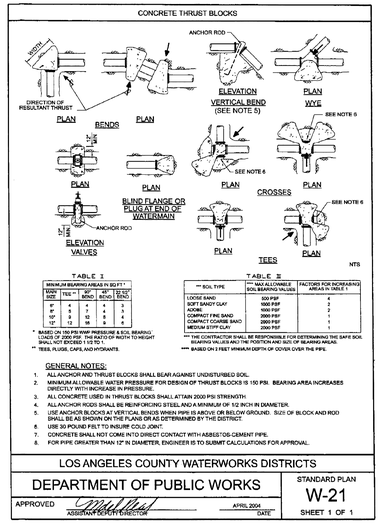


BOLLARDS DETAIL NTS A

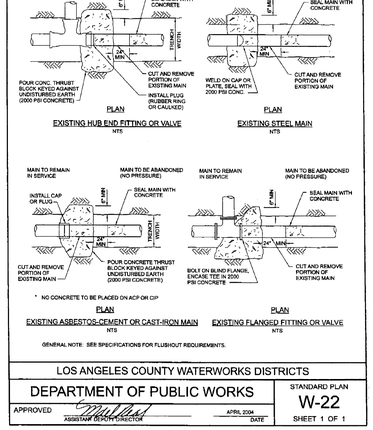




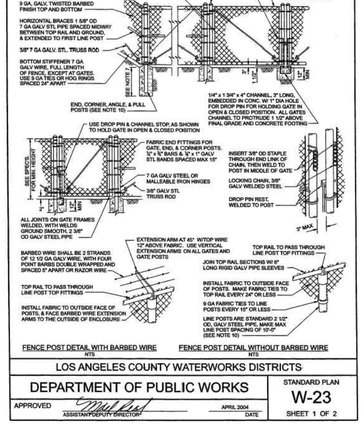
ADJUSTABLE VALVE BOX AND VALVE NUT EXTENSION DETAIL NTS B

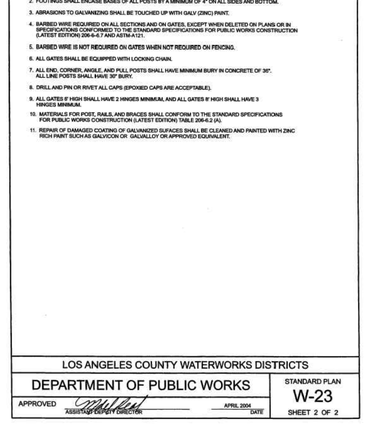


CONCRETE THRUST BLOCKS DETAIL NTS C

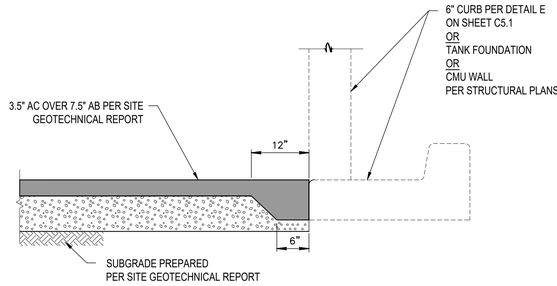


CUTTING AND PLUGGING WATER MAINS DETAIL NTS D





CHAIN LINK FENCING DETAIL NTS E



AC PAVEMENT TERMINATION DETAIL NTS F

DRAFTER JS | DESIGNER KS | CHECKER RM | DATE LAST SAVED: | FILE NAME

DWG NO. C5.0

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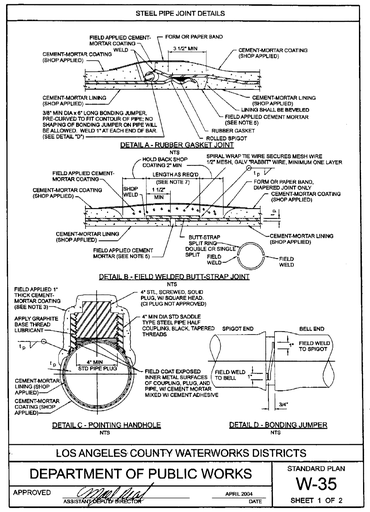
ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

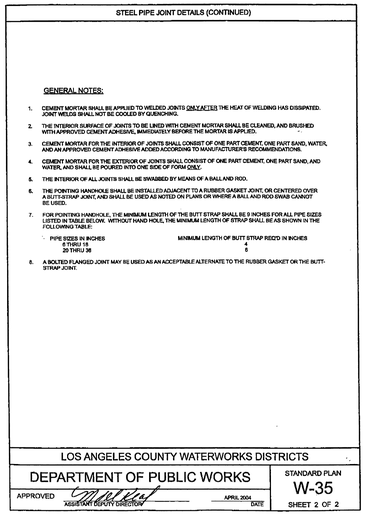
LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

CIVIL DETAILS

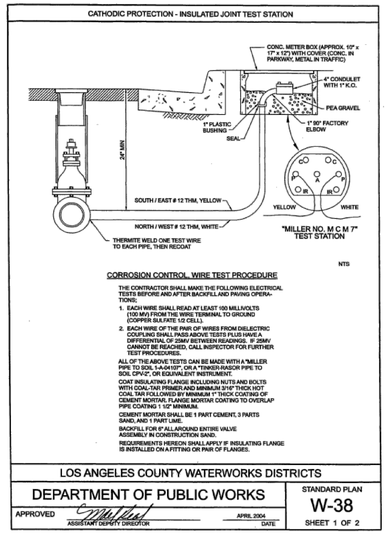
PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	16 OF 53

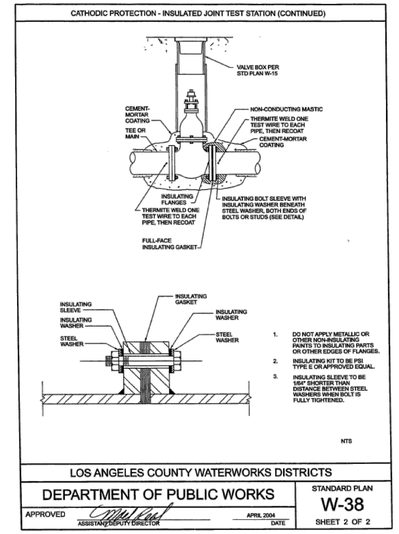




STEEL PIPE JOINT DETAIL

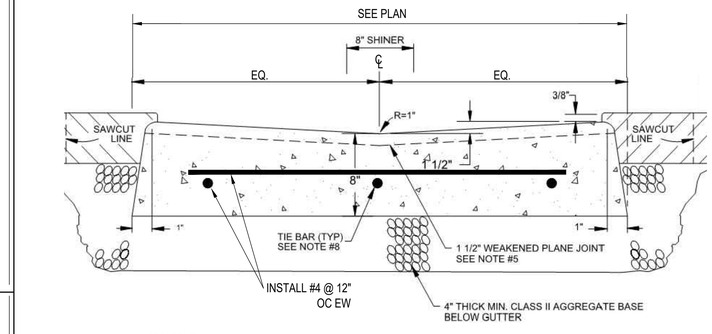
NTS | A





INSULATED JOINT TEST STATION DETAIL

NTS | B



NOTES:

1. CONCRETE SHALL BE CLASS 3000 PSI MIN. SEE SPECIFICATIONS.
2. ALL EXPOSED CORNERS SHALL BE FINISHED WITH 1/2" RADIUS.
3. FINISH SHALL BE LIGHT BROOM.

RIBBON GUTTER DETAIL

NTS | C

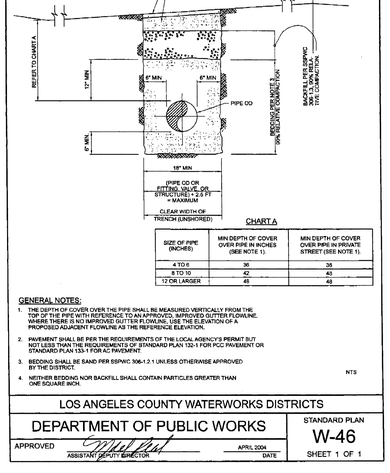


CHART A

SIZE OF PIPE (INCHES)	MIN DEPTH OF COVER OVER PIPE IN INCHES (SEE NOTE 1).	MIN DEPTH OF COVER OVER PIPE IN PRIVATE STREET (SEE NOTE 1).
4 TO 6	36	36
8 TO 10	42	42
12 OR LARGER	48	48

GENERAL NOTES:

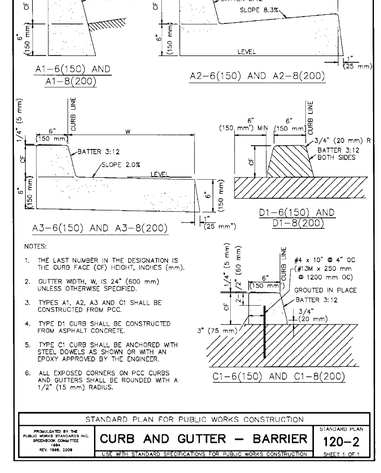
1. THE DEPTH OF COVER OVER THE PIPE SHALL BE MEASURED VERTICALLY FROM THE TOP OF THE PIPE WITH REFERENCE TO AN APPROVED, IMPROVED GUTTER FLOWLINE. WHERE THERE IS NO IMPROVED GUTTER FLOWLINE, USE THE ELEVATION OF A PROPOSED ADJACENT FLOWLINE AS THE REFERENCE ELEVATION.
2. PAVEMENT SHALL BE PER THE REQUIREMENTS OF THE LOCAL AGENCY'S PERMIT BUT NOT LESS THAN THE REQUIREMENTS OF STANDARD PLAN 132-1 FOR PCC PAVEMENT OR STANDARD PLAN 133-1 FOR AC PAVEMENT.
3. BEDDING SHALL BE SAND PER SSPWC 306-1.2.1 UNLESS OTHERWISE APPROVED BY THE DISTRICT.
4. NEITHER BEDDING NOR BACKFILL SHALL CONTAIN PARTICLES GREATER THAN ONE SQUARE INCH.

NTS

LOS ANGELES COUNTY WATERWORKS DISTRICTS
DEPARTMENT OF PUBLIC WORKS
STANDARD PLAN
W-46
APPROVED
ASSISTANT DEPUTY DIRECTOR
APRIL 2004
DATE
SHEET 1 OF 1

PIPE TRENCH DETAIL

NTS | D



NOTES:

1. THE LAST NUMBER IN THE DESIGNATION IS THE CURB FACE (CF) HEIGHT, INCHES (mm).
2. GUTTER WIDTH, W, IS 24" (600 mm) UNLESS OTHERWISE SPECIFIED.
3. TYPES A1, A2, A3 AND C1 SHALL BE CONSTRUCTED FROM PCC.
4. TYPE D1 CURB SHALL BE CONSTRUCTED FROM ASPHALT CONCRETE.
5. TYPE C1 CURB SHALL BE ANCHORED WITH STEEL DOWELS AS SHOWN OR WITH AN EPOXY APPROVED BY THE ENGINEER.
6. ALL EXPOSED CORNERS ON PCC CURBS AND GUTTERS SHALL BE ROUNDED WITH A 1/2" (15 mm) RADIUS.

STANDARD PLAN FOR PUBLIC WORKS CONSTRUCTION
PROMULGATED BY THE PUBLIC WORKS STANDARDS INC. SPECIFICATION COMMITTEE
REV. 1998 2009
CURB AND GUTTER – BARRIER
USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION
STANDARD PLAN 120-2
SHEET 1 OF 1

CURB AND GUTTER DETAIL

NTS | E

DWG NO.
C5.1

100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

CIVIL DETAILS

PROJ ID WWD2900065 | PCA Y5292300 | SPEC WWD 29-825 | SHEET 17 OF 53

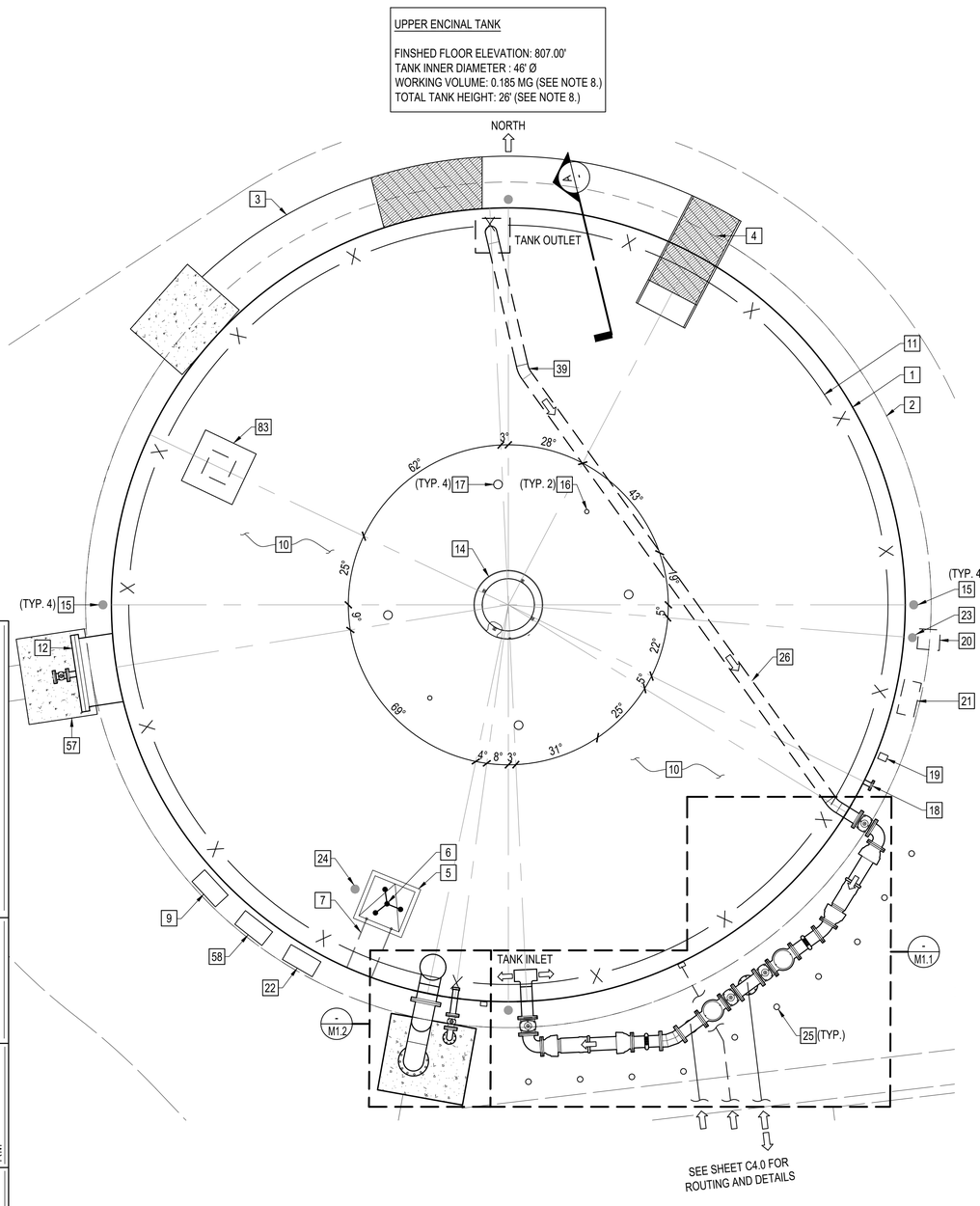
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DATE	INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY
PROJECT ENGINEER
06/09/2026
DATE

DRAFTER JS | DESIGNER KS | CHECKER RM | DATE LAST SAVED: | FILE NAME



MECHANICAL TANK PLAN

SCALE: 1/4"=1'-0"

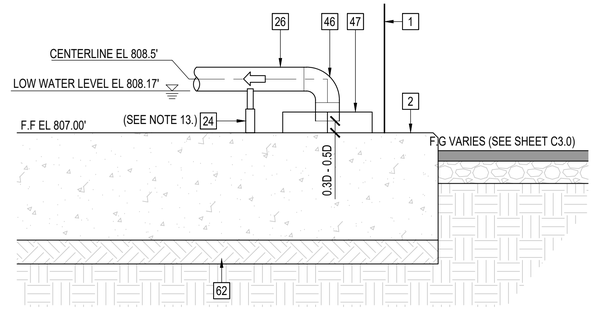
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MECHANICAL CONSTRUCTION NOTES

NO.	DESCRIPTION
1	46'Ø x 26'H WELDED STEEL STORAGE TANK (MINIMUM 0.185 MG WORKING VOLUME).
2	REINFORCED CONCRETE MAT SLAB FOUNDATION PER TANK MANUFACTURER AND SITE GEOTHECNICAL REPORT. SEE NOTE 2.
3	TANK SPIRAL STAIRCASE PER DETAIL B ON SHEET M3.2 AND MANUFACTURER'S REQUIREMENTS.
4	STEP-OFF PLATFORM PER TANK MANUFACTURER'S SHOP DRAWINGS.
5	30" SQ. LOCKABLE ROOF ACCESS HATCH w/ INTRUSION ALARM PER DETAIL C ON SHEET M3.2 AND MANUFACTURER'S REQUIREMENTS.
6	SUBMERSIBLE MIXER PER MANUFACTURER'S REQUIREMENTS.
7	VERTICAL NON-SLIP FIBERGLASS INTERIOR LADDER PER DETAIL F ON SHEET M3.0 AND MANUFACTURER'S REQUIREMENTS.
9	TANK BLOWER CONTROL PANEL MOUNTED ON TANK SHELL (PROVIDED BY BLOWER MANUFACTURER).
10	NON-SLIP COATING BETWEEN HANDRAILS. SEE SPECIFICATION SECTION 13208.
11	42" H GALVANIZED STEEL HANDRAILS w/ KICKER PLATE PER DETAIL B ON SHEET M3.2 AND MANUFACTURER'S REQUIREMENTS.
12	36"H X 48"W FLUSHOUT TYPE MANWAY PER DETAIL E ON SHEET M3.2.
14	36'Ø ROOF VENT PER DETAIL F ON SHEET M3.2.
15	SAMPLE TAP w/ SECURITY ENCASEMENT (TYP. 4) PER DETAILS A AND E ON SHEET M3.1.
16	1" CORP STOP AND PLUG FOR EMERGENCY CHEMICAL INJECTION PER DETAIL C ON SHEET M3.1.
17	FALL PROTECTION ANCHORS PER MANUFACTUERER'S REQUIREMENTS PER DETAIL A ON SHEET M3.0.
18	LEVEL PRESSURE TRANSMITTER PER DETAIL E ON SHEET M3.0.
19	EXTERIOR FULL-TRAVEL TANK FLOAT LEVEL INDICATOR PER TANK MANUFACTURER'S SHOP DRAWINGS.
20	POTENTIAL FUTURE TANK SAMPLE PUMP W/ LOCKABLE PUMP CONTAINMENT ENCLOSURE MOUNTED TO TANK SHELL
21	POTENTIAL FUTURE LOCKABLE TANK WATER QUALITY ANALYZERS MOUNTED TO TANK SHELL. SEE SPECIFICATIONS.
22	TANK SHELL MOUNTED MIXER CONTROL PANEL PER MANUFACTURER'S REQUIREMENTS.
23	2" EXTRA STRONG COUPLING TANK PENETRATION AND ISOLATION VALVE.
24	WELDED PIPE SUPPORT TO TANK FLOOR AND PIPING PER TANK MANUFARTURER.
25	BOLLARDS PER DETAIL A ON SHEET C5.0.
26	8" CML&EC SCH.40 STEEL PIPE.
39	8" - 22.5° EL&EC SCH.40 STEEL BEND (WELD).
46	8" - 90° EL&EC SCH.40 STEEL BEND (WELD).
47	VORTEX BREAKER PER TANK MANUFACTURER'S SHOP DRAWINGS.
57	4.5' x 5' CONCRETE SPLASH PAD.
58	SACRIFICIAL ANODE TEST STATION. SEE CATHODIC PROTECTION PLANS FOR DETAIL.
62	PREPARE TANK SUBGRADE PER THE GEOTECHNICAL REPORT REQUIREMENTS AND STRUCTURAL PLANS.
83	BLOWER ASSEMBLY PER DETAIL F ON SHEET M3.1.

NOTES

1. ALL ABOVE GRADE PIPING AND FITTINGS SHALL BE CML & EPOXY COATED STEEL SCH. 40 STEEL AND ALL BELOW GROUND PIPING & FITTINGS SHALL BE CML & CEMENT-COATED STEEL SCH.40 (SEE SPECIFICATIONS). UNLESS OTHERWISE SPECIFIED ON PLAN.
2. STEEL TANK AND FOUNDATION IS CONSIDERED A DEFERRED SUBMITTAL. SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND STAMPED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA AND SHALL BE SUBMITTED TO THE ENGINEER AND COUNTY FOR REVIEW PRIOR TO THE START OF CONSTRUCTION.
3. EXTERIOR ROOF STEEL HANDRAIL IS CONSIDERED A DEFERRED SUBMITTAL AND SHOP DRAWINGS AND CALCULATIONS FOR THE PLATFORM, FRAMING AND ACCESSORIES SHALL BE SIGNED AND STAMPED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO THE START OF CONSTRUCTION.
4. PER AWWA D100-11 THE CENTER VENT SHALL HAVE THE CAPACITY TO PASS AIR SO THAT AT THE MAXIMUM FLOW RATE OF WATER EITHER ENTERING OR LEAVING THE TANK DURING A LINE BREAK SHALL NOT CAUSE THE DEVELOPMENT OF EXCESSIVE PRESSURE/VACUUM.
5. THE DESIGN AND INSTALLATION OF THE WELDED STEEL POTABLE WATER STORAGE TANK SHALL BE PER AWWA D100-11.
6. ALL POTABLE WATER PIPELINES AND INFRASTRUCTURE SHALL BE DISINFECTED IN ACCORDANCE WITH ANSI/AWWA C651.
7. PREPARE TANK SUBGRADE PER THE SITE GEOTECHNICAL REPORT RECOMMENDATIONS.
8. SELECTED TANK MANUFACTURER SHALL PROVIDE A MINIMUM WORKING VOLUME OF 185,000 GALLONS MINIMUM WORKING VOLUME IS DEFINED FROM THE TANK'S HIGH WATER LEVEL OF 823.05' TO THE TANKS LOW WATER LEVEL ELEVATION OF 808.17'. SELECTED TANK MANUFACTURER SHALL PROVIDE DESIGN CALCULATIONS (INCLUDE SLOSHING CALCULATIONS) TO VERIFY THE SUBMITTED TANK MEETS THE APPLICABLE AWWA & THE SITE LOAD REQUIREMENTS. TOTAL TANK HEIGHT SHALL NOT EXCEED 26 FEET MEASURED FROM THE BOTTOM OF THE EXPOSED TANK FOUNDATION FOOTING (TOP OF THE ADJACENT ASPHALT PAVEMENT) ALL AROUND THE TANK TO THE HIGHEST POINT OF THE TANK INCLUDING ROOF VENT, HANDRAILS, BLOWER, AND ALL ASSOCIATED APPURTENANCES.
9. ALL NUTS, BOLTS, FASTENERS AND SUPPORTS INSTALLED / ATTACHED TO THE TANK SHALL BE CONSTRUCTED OF LOW CARBON STEEL WITH ZINC COATING (H.D.G OR FIELD APPLIED).
10. ALL STEEL POTABLE WATER PIPE JOINTS SHALL BE FULLY WELDED, DOUBLE PASS UNLESS OTHERWISE NOTED.
11. ALL DAMAGED CEMENT LINER/COATING SHALL BE RECOATED IN THE FIELD.
12. PROPOSED TANK MATERIAL, COLOR AND FINISH TO BE: STAINLESS STEEL, TAN, AND NON-GLOSSY.
13. ALL INTERIOR PIPE SUPPORTS SHALL BE WELDED TO PIPE AND TANK FLOOR.



SECTION A - TANK OUTLET

SCALE: 1/2"=1'-0"

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DATE		INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

DWG NO. M1.0

100% PLANS - PLANNING REVIEW

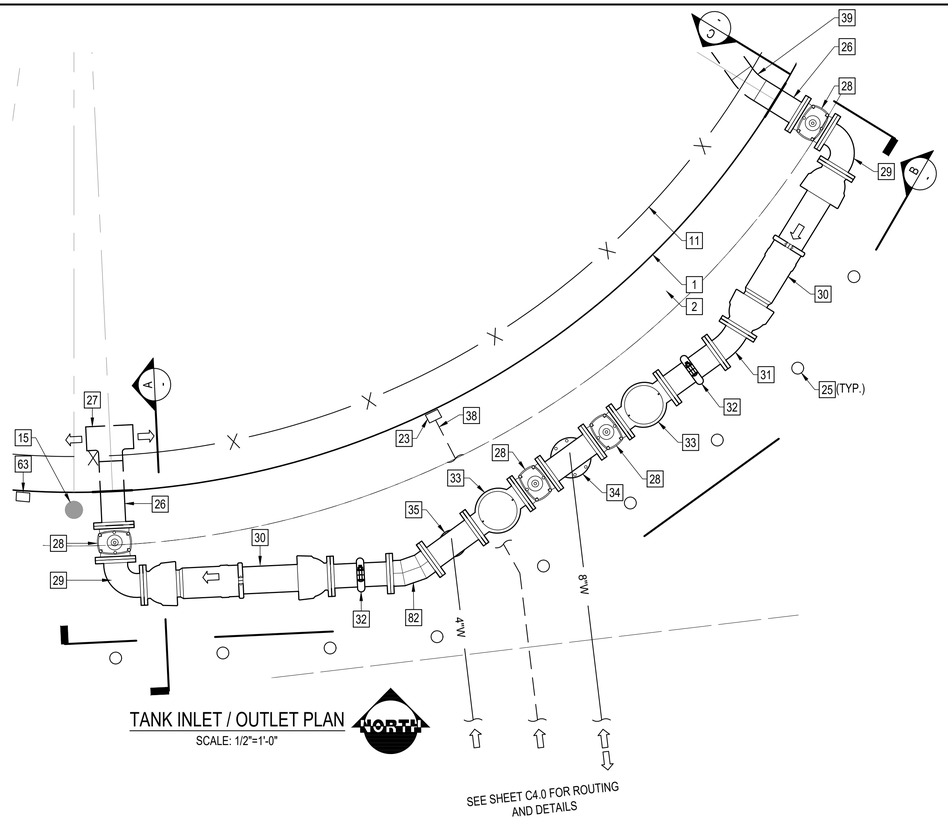
LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

TANK MECHANICAL PLAN

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	18 OF 53

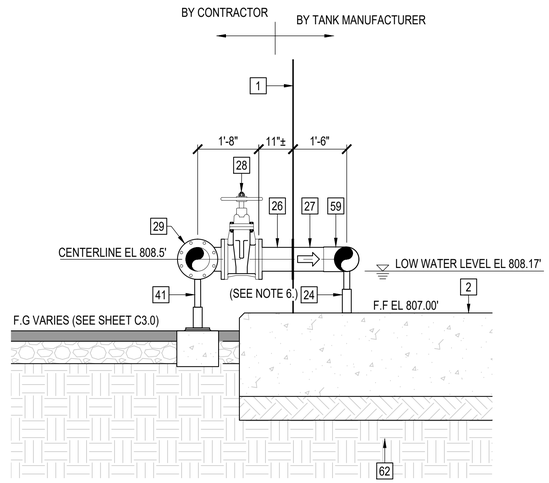
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TANK INLET / OUTLET PLAN

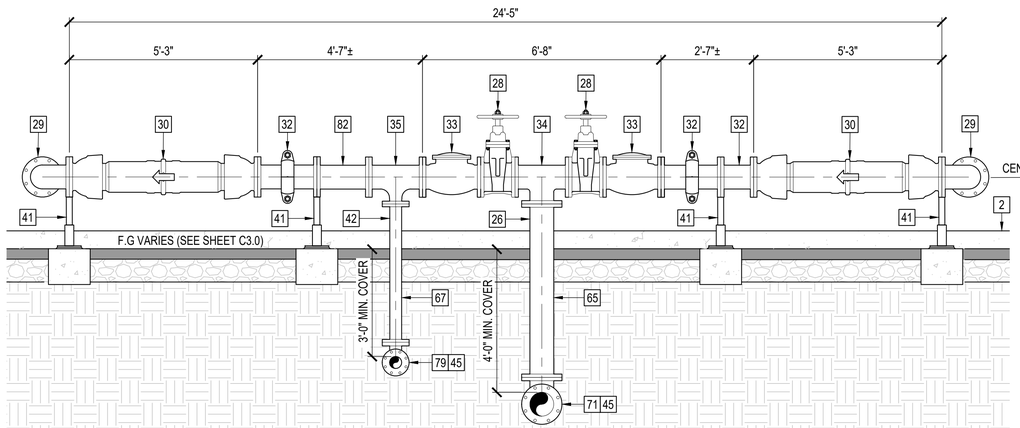
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SEE SHEET C4.0 FOR ROUTING AND DETAILS



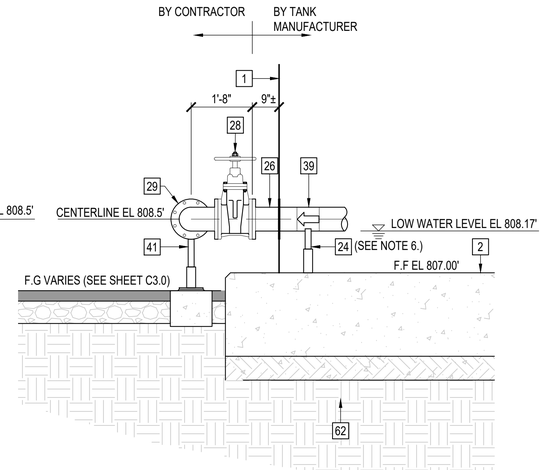
SECTION A - TANK INLET

SCALE: 1/2"=1'-0"



SECTION B - TANK INLET & OUTLET CONFIGURATION

SCALE: 1/2"=1'-0"



SECTION C - TANK OUTLET

SCALE: 1/2"=1'-0"

MECHANICAL CONSTRUCTION NOTES

NO.	DESCRIPTION
1	46'Ø x 26'H WELDED STEEL STORAGE TANK (MINIMUM 0.185 MG WORKING VOLUME).
2	REINFORCED CONCRETE MAT SLAB FOUNDATION PER TANK MANUFACTURER AND SITE GEOTHECNICAL REPORT. SEE NOTE 2.
11	42" H GALVANIZED STEEL HANDRAILS w/ KICKER PLATE PER DETAIL B ON SHEET M3.2 AND MANUFACTURER'S REQUIREMENTS.
15	SAMPLE TAP w/ SECURITY ENCASEMENT (TYP. 4) PER DETAILS A AND E ON SHEET M3.1.
23	2" EXTRA STRONG COUPLING TANK PENETRATION AND ISOLATION VALVE.
24	WELDED PIPE SUPPORT TO TANK FLOOR AND PIPING PER TANK MANUFARTURER.
25	BOLLARDS PER DETAIL A ON SHEET C5.0.
26	8" CML&EC SCH.40 STEEL PIPE.
27	8" EL&EC SCH.40 STEEL PIPE (WELD).
28	8" GATE VALVE (FLG'D).
29	8" - 90° CML&EC SCH.40 STEEL BEND (FLG'D).
30	8" FORCE BALANCED FLEX-TEND DOUBLE BALL EXPANSION JOINT (FLG'D)
31	8" - 22.5° CML&EC SCH.40 STEEL BEND (FLG'D).
32	8" CML&EC GROOVED PIPE SPOOL w/ VICTAULIC COUPLING.
33	8" SWING CHECK VALVE w/ LEVER & WEIGHT (FLG'D).
34	8" CML&EC SCH.40 STEEL TEE (FLG'D).
35	8" x 4" CML&EC SCH.40 STEEL TEE (FLG'D).
38	1" WELDED 316 S.S ALTITUDE VALVE SENSING LINE PER MANUFACTURERS REQUIREMENT.
39	8" - 22.5° EL&EC SCH.40 STEEL BEND (WELD).
41	ADJUSTABLE PIPE SUPPORT PER DETAIL A ON SHEET M3.2.
42	4" CML&EC SCH.40 STEEL PIPE.
45	CONCRETE THRUST BLOCK PER DETAIL C ON SHEET C5.0.
59	8" EL&EC SCH.40 STEEL TEE (WELD).
62	PREPARE TANK SUBGRADE PER THE GEOTECHNICAL REPORT REQUIREMENTS AND STRUCTURAL PLANS.
63	TANK NAME PLATE PER AWWA D-100.
65	8" CML&C SCH.40 STEEL PIPE.
67	4" CML&C SCH.40 STEEL PIPE.
71	8" - 90° CML&C SCH.40 STEEL BEND (FLG'D).
79	4" - 90° CML&C SCH.40 STEEL BEND (FLG'D).
82	8" - 33° CML&EC SCH.40 CUSTOM BEND (FLG'D).

SHEET NOTES:

1. ALL ABOVE GRADE PIPING AND FITTINGS SHALL BE CML & EPOXY COATED STEEL SCH. 40 STEEL AND ALL BELOW GROUND PIPING & FITTINGS SHALL BE CML & CEMENT-COATED STEEL SCH.40 (SEE SPECIFICATIONS). UNLESS OTHERWISE SPECIFIED ON PLAN.
2. STEEL TANK AND FOUNDATION IS CONSIDERED A DEFERRED SUBMITTAL. SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND STAMPED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA AND SHALL BE SUBMITTED TO THE ENGINEER AND COUNTY FOR REVIEW PRIOR TO THE START OF CONSTRUCTION.
3. SELECTED TANK MANUFACTURER SHALL PROVIDE A MINIMUM WORKING VOLUME OF 185,000 GALLONS MINIMUM WORKING VOLUME IS DEFINED FROM THE TANK'S HIGH WATER LEVEL OF 823.05' TO THE TANKS LOW WATER LEVEL ELEVATION OF 808.17'. SELECTED TANK MANUFACTURER SHALL PROVIDE DESIGN CALCULATIONS (INCLUDE SLOSHING CALCULATIONS) TO VERIFY THE SUBMITTED TANK MEETS THE APPLICABLE AWWA & THE SITE LOAD REQUIREMENTS. TOTAL TANK HEIGHT SHALL NOT EXCEED 26 FEET MEASURED FROM THE BOTTOM OF THE EXPOSED TANK FOUNDATION FOOTING (TOP OF THE ADJACENT ASPHALT PAVEMENT) ALL AROUND THE TANK TO THE HIGHEST POINT OF THE TANK INCLUDING ROOF VENT, HANDRAILS, BLOWER, AND ALL ASSOCIATED APPURTENANCES.
4. ALL NUTS, BOLTS, FASTENERS AND SUPPORTS INSTALLED ON THE TANK SHALL BE LOW CARBON STEEL WITH ZINC COATING (H.D.G OR FIELD APPLIED).
5. ALL POTABLE WATER PIPELINES AND INFRASTRUCTURE SHALL BE DISINFECTED IN ACCORDANCE WITH ANSI/AWWA C651 REQUIREMENTS.
6. ALL INTERIOR PIPE SUPPORTS SHALL BE WELDED TO PIPE AND TANK FLOOR.

DRAFTER: JS
DESIGNER: KS
CHECKER: RM
DATE LAST SAVED:
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DATE		INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

DWG NO. M1.1

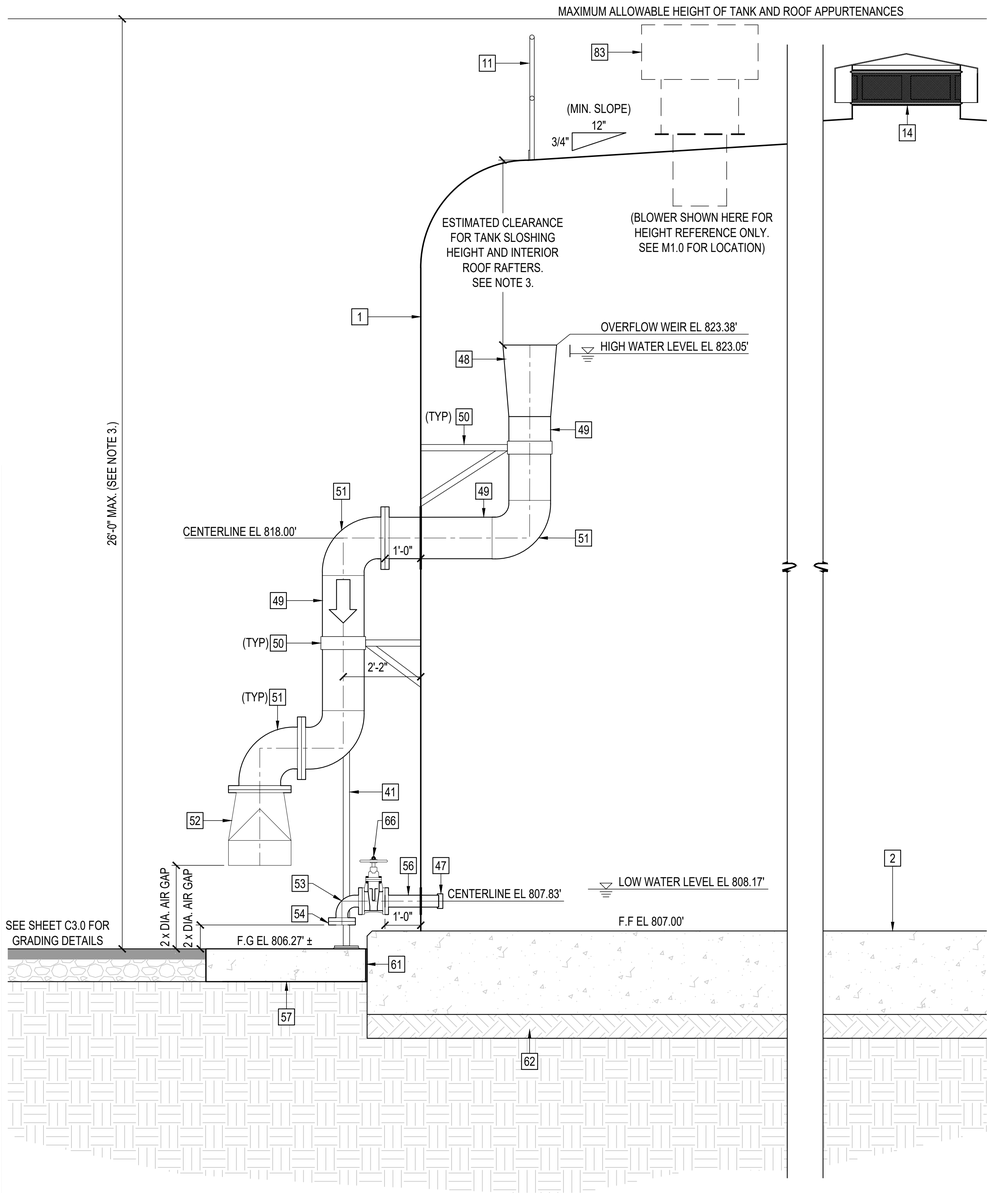
100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

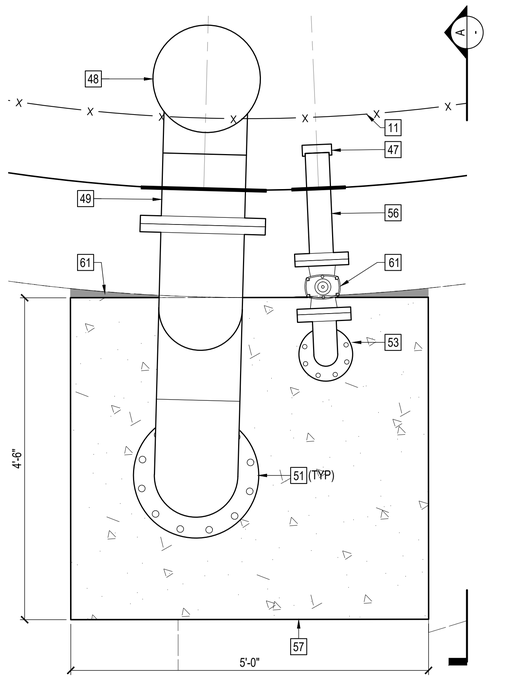
TANK MECHANICAL SECTIONS

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	19 OF 53



SECTION A

SCALE: 1/2"=1'-0"



TANK OVERFLOW/DRAIN PLAN

SCALE: 1"=1'-0"

NORTH

MECHANICAL CONSTRUCTION NOTES	
NO.	DESCRIPTION
1	46'Ø x 26'H WELDED STEEL STORAGE TANK (MINIMUM 0.185 MG WORKING VOLUME).
2	REINFORCED CONCRETE MAT SLAB FOUNDATION PER TANK MANUFACTURER AND SITE GEOTHECNICAL REPORT. SEE NOTE 2.
11	42" H GALVANIZED STEEL HANDRAILS w/ KICKER PLATE PER DETAIL B ON SHEET M3.2 AND MANUFACTURER'S REQUIREMENTS.
14	36'Ø ROOF VENT PER DETAIL F ON SHEET M3.2.
41	ADJUSTABLE PIPE SUPPORT PER DETAIL A ON SHEET M3.2.
47	VORTEX BREAKER PER TANK MANUFACTURER'S SHOP DRAWINGS.
48	18" x 14" REDUCER (WELD).
49	14" EL&EC SCH.40 STEEL PIPE.
50	TANK WALL MOUNTED PIPE SUPPORT PER DETAIL B ON SHEET M3.1.
51	14" - 90° EL&EC SCH.40 STEEL BEND.
52	14" TIDEFLEX SERIES 35 CHECK VALVE (FLG'D).
53	4" - 90° CML&EC SCH.40 STEEL BEND (FLG'D).
54	4" FLANGE w/ INSECT SCREEN BETWEEN FLANGES.
56	4" EL&EC SCH.40 STEEL PIPE.
57	4.5' x 5' CONCRETE SPLASH PAD.
61	1/2" THICK EXPANSION JOINT MATERIAL.
62	PREPARE TANK SUBGRADE PER THE GEOTECHNICAL REPORT REQUIREMENTS AND STRUCTURAL PLANS.
66	4" GATE VALVE (FLG'D).
83	BLOWER ASSEMBLY PER DETAIL F ON SHEET M3.1.

SHEET NOTES:

1. ALL ABOVE GRADE PIPING AND FITTINGS SHALL BE CML & EPOXY COATED STEEL SCH. 40 STEEL AND ALL BELOW GROUND PIPING & FITTINGS SHALL BE CML & CEMENT-COATED STEEL SCH.40 (SEE SPECIFICATIONS). UNLESS OTHERWISE SPECIFIED ON PLAN.
2. STEEL TANK AND FOUNDATION IS CONSIDERED A DEFERRED SUBMITTAL. SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND STAMPED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA AND SHALL BE SUBMITTED TO THE ENGINEER AND COUNTY FOR REVIEW PRIOR TO THE START OF CONSTRUCTION.
3. SELECTED TANK MANUFACTURER SHALL PROVIDE A MINIMUM WORKING VOLUME OF 185,000 GALLONS MINIMUM WORKING VOLUME IS DEFINED FROM THE TANK'S HIGH WATER LEVEL OF 823.05' TO THE TANKS LOW WATER LEVEL ELEVATION OF 808.17'. SELECTED TANK MANUFACTURER SHALL PROVIDE DESIGN CALCULATIONS (INCLUDE SLOSHING CALCULATIONS) TO VERIFY THE SUBMITTED TANK MEETS THE APPLICABLE AWWA & THE SITE LOAD REQUIREMENTS. TOTAL TANK HEIGHT SHALL NOT EXCEED 26 FEET MEASURED FROM THE BOTTOM OF THE EXPOSED TANK FOUNDATION FOOTING (TOP OF THE ADJACENT ASPHALT PAVEMENT) ALL AROUND THE TANK TO THE HIGHEST POINT OF THE TANK INCLUDING ROOF VENT, HANDRAILS, BLOWER, AND ALL ASSOCIATED APPURTENANCES.
4. ALL NUTS, BOLTS, FASTENERS AND SUPPORTS INSTALLED ON THE TANK SHALL BE LOW CARBON STEEL WITH ZINC COATING (H.D.G OR FIELD APPLIED).
5. ALL POTABLE WATER PIPELINES AND INFRASTRUCTURE SHALL BE DISINFECTED IN ACCORDANCE WITH ANSI/AWWA C651 REQUIREMENTS.

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06/09/2026
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FILE NAME

DWG NO. M1.2

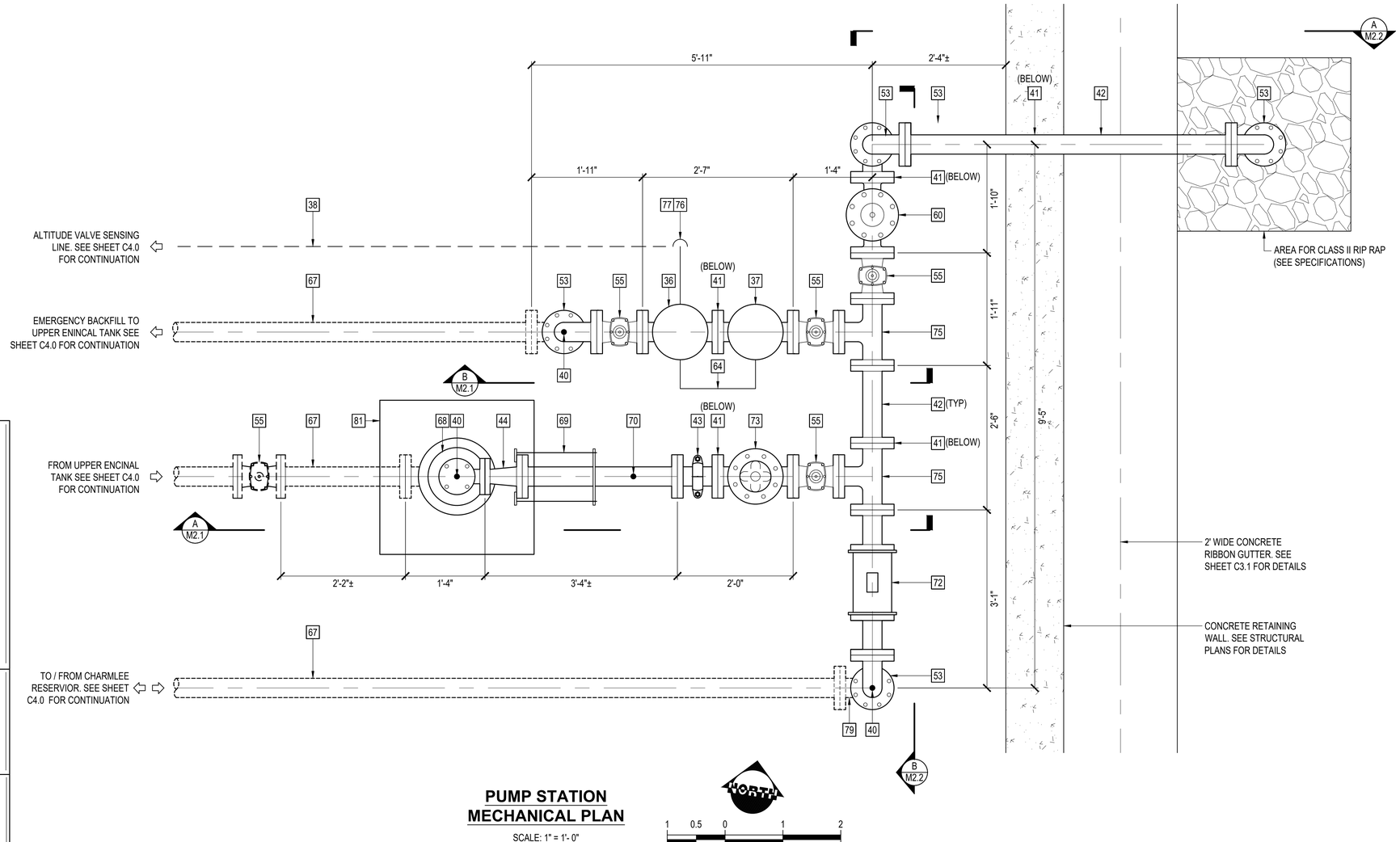
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LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

TANK MECHANICAL SECTIONS

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	20 OF 53



PUMP STATION MECHANICAL PLAN

SCALE: 1" = 1'- 0"

NORTH

1 0.5 0 1 2

MECHANICAL CONSTRUCTION NOTES	
NO.	DESCRIPTION
36	4" MODIFIED ALTITUDE VALVE w/ PRESSURE SUSTAINING PILOT (FLG'D) (CLA-VAL SERIES 210).
37	4" PRESSURE REDUCING VALVE (FLG'D) (CLA-VAL SERIES 90).
38	1" WELDED 316 S.S ALTITUDE VALVE SENSING LINE PER MANUFACTURERS REQUIREMENT.
40	1" AIR COMBINATION VALVE PER DETAIL B ON SHEET M3.0.
41	ADJUSTABLE PIPE SUPPORT PER DETAIL A ON SHEET M3.2.
42	4" CML&EC SCH.40 STEEL PIPE.
43	4" CML&EC GROOVED PIPE SPOOL w/ VICTAULIC COUPLING.
44	3" x 4" CML&EC SCH.40 REDUCER (FLG'D).
53	4" - 90° CML&EC SCH.40 STEEL BEND (FLG'D).
55	4" GATE VALVE (FLG'D).
60	4" PRESSURE RELIEF VALVE (FLG'D).(CLA-VAL SERIES 50)
64	1/4" 316 S.S LINE FOR PRESSURE SUSTAINING PILOT.
67	4" CML&C SCH.40 STEEL PIPE.
68	90 GPM @ 700 TDH "GOULDS" SUBMERSIBLE PUMP PER MANUFACTURER'S REQUIREMENTS.
69	4" FLANGE COUPLING ADAPTER w/ AWWA M-11 HARNESS.
70	1" WELDOLET PRESSURE GAUGE PER DETAIL D ON SHEET M3.1.
72	4" BI-DIRECTIONAL "ULTRA-MAG" FLOW METER PER MANUFACTURER'S REQUIREMENTS (McCROMETER OR EQUAL).
73	4" BOOSTER CONTROL VALVE w/ BUILT IN CHECK VALVE (FLG'D) (CLA-VAL SERIES 60).
75	4" CML&EC TEE (FLG'D).
76	1" WELDED 316 S.S ALTITUDE VALVE SENSING LINE BEND.
77	316 S.S. MANUAL BALL VALVE FOR ALTITUDE VALVE SENSING LINE (AIR PURGING).
79	4" - 90° CML&C SCH.40 STEEL BEND (FLG'D).
81	8"Ø, 5/16" THICK STEEL PUMP CYLINDER w/ FUSION BONDED EPOXY LINING, 8" CLASS 150 MOUNTING PLATE, WELDED SUCTION, BUTT WELEDED BULKHEAD CAP AT BOTTOM AND CONCRETE ENCASEMENT PER DETAIL D ON SHEET M3.2.

SHEET NOTES:

1. ALL DISCHARGE PIPE & FITTINGS SHALL BE RATED FOR A WORKING WATER PRESSURE (WWP) OF 315 MINIMUM. ALL FLANGES ON DISCHARGE PIPE & FITTINGS SHALL BE CLASS 300. FLANGES ON SUCTION PIPE & FITTINGS CAN BE CLASS 150.
2. ALL ABOVE GRADE PIPING AND FITTINGS SHALL BE CML & EPOXY COATED STEEL SCH. 40 STEEL AND ALL BELOW GROUND PIPING & FITTINGS SHALL BE CML & CEMENT-COATED STEEL SCH.40 (SEE SPECIFICATIONS). UNLESS OTHERWISE SPECIFIED ON PLAN.
3. ALL POTABLE WATER PIPELINES AND INFRASTRUCTURE SHALL BE DISINFECTED IN ACCORDANCE WITH ANSI/AWWA C651 REQUIREMENTS.

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PROJECT ENGINEER

06/09/2026
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DWG NO. M2.0

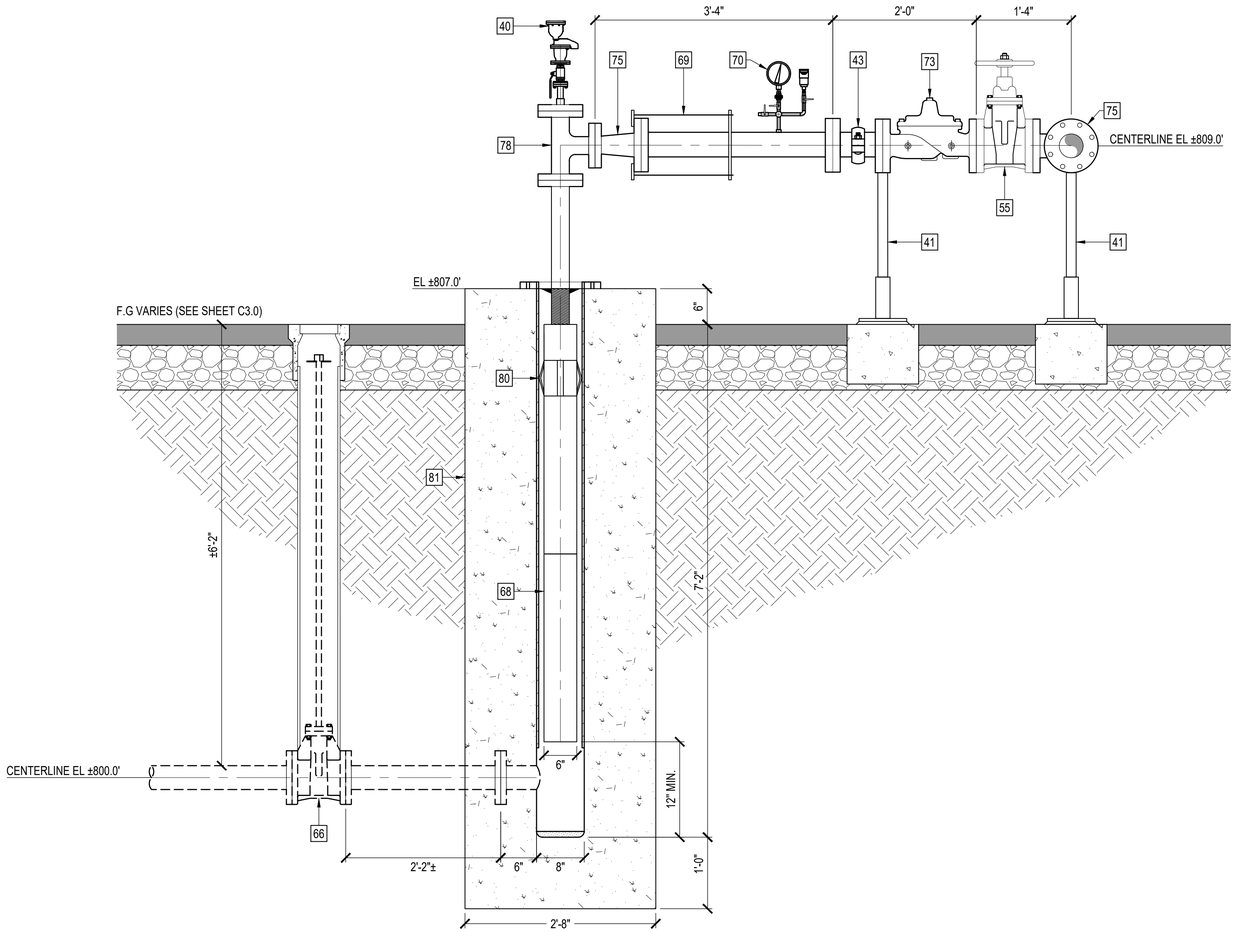
100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

CHARMLEE P.S. PLAN

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	21 OF 53

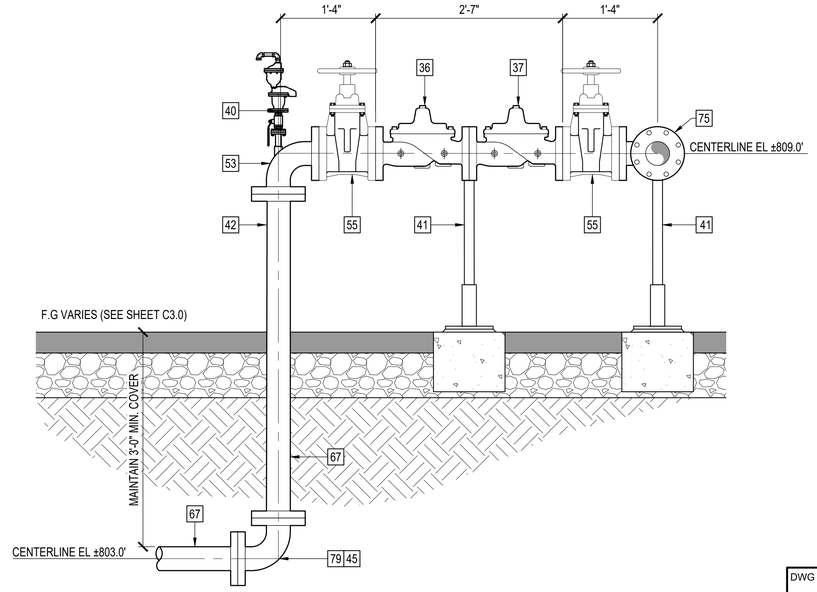


PUMP STATION
MECHANICAL SECTION - A
SCALE: 1" = 1'- 0"

MECHANICAL CONSTRUCTION NOTES	
NO.	DESCRIPTION
36	4" MODIFIED ALTITUDE VALVE w/ PRESSURE SUSTAINING PILOT (FLG'D) (CLA-VAL SERIES 210).
37	4" PRESSURE REDUCING VALVE (FLG'D) (CLA-VAL SERIES 90).
40	1" AIR COMBINATION VALVE PER DETAIL B ON SHEET M3.0.
41	ADJUSTABLE PIPE SUPPORT PER DETAIL A ON SHEET M3.2.
42	4" CML&EC SCH.40 STEEL PIPE.
43	4" CML&EC GROOVED PIPE SPOOL w/ VICTAULIC COUPLING.
45	CONCRETE THRUST BLOCK PER DETAIL C ON SHEET C5.0.
53	4" - 90° CML&EC SCH.40 STEEL BEND (FLG'D).
55	4" GATE VALVE (FLG'D).
66	4" GATE VALVE (FLG'D).
67	4" CML&C SCH.40 STEEL PIPE.
68	90 GPM @ 700 TDH "GOULDS" SUBMERSIBLE PUMP PER MANUFACTURER'S REQUIREMENTS.
69	4" FLANGE COUPLING ADAPTER w/ AWWA M-11 HARNESS.
70	1" WELDOLET PRESSURE GAUGE PER DETAIL D ON SHEET M3.1.
73	4" BOOSTER CONTROL VALVE w/ BUILT IN CHECK VALVE (FLG'D) (CLA-VAL SERIES 60).
75	4" CML&EC TEE (FLG'D).
78	3" CML&EC SCH.40 TEE (FLG'D).
79	4" - 90° CML&C SCH.40 STEEL BEND (FLG'D).
80	TORQUE ARRESTER w/ 316SS BANNING CLAMPS.
81	8"Ø, 5/16" THICK STEEL PUMP CYLINDER w/ FUSION BONDED EPOXY LINING, 8" CLASS 150 MOUNTING PLATE, WELDED SUCTION, BUTT WELEDED BULKHEAD CAP AT BOTTOM AND CONCRETE ENCASEMENT PER DETAIL D ON SHEET M3.2.

SHEET NOTES:

1. ALL DISCHARGE PIPE & FITTINGS SHALL BE RATED FOR A WORKING WATER PRESSURE (WWP) OF 315 MINIMUM. ALL FLANGES ON DISCHARGE PIPE & FITTINGS SHALL BE CLASS 300. FLANGES ON SUCTION PIPE & FITTINGS CAN BE CLASS 150.
2. ALL ABOVE GRADE PIPING AND FITTINGS SHALL BE CML & EPOXY COATED STEEL SCH. 40 STEEL AND ALL BELOW GROUND PIPING & FITTINGS SHALL BE CML & CEMENT-COATED STEEL SCH.40 (SEE SPECIFICATIONS). UNLESS OTHERWISE SPECIFIED ON PLAN.
3. ALL POTABLE WATER PIPELINES AND INFRASTRUCTURE SHALL BE DISINFECTED IN ACCORDANCE WITH ANSI/AWWA C651 REQUIREMENTS.



PUMP STATION
MECHANICAL SECTION - B
SCALE: 1" = 1'- 0"

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DWG NO. M2.1

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LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

CHARMLEE P.S. SECTIONS

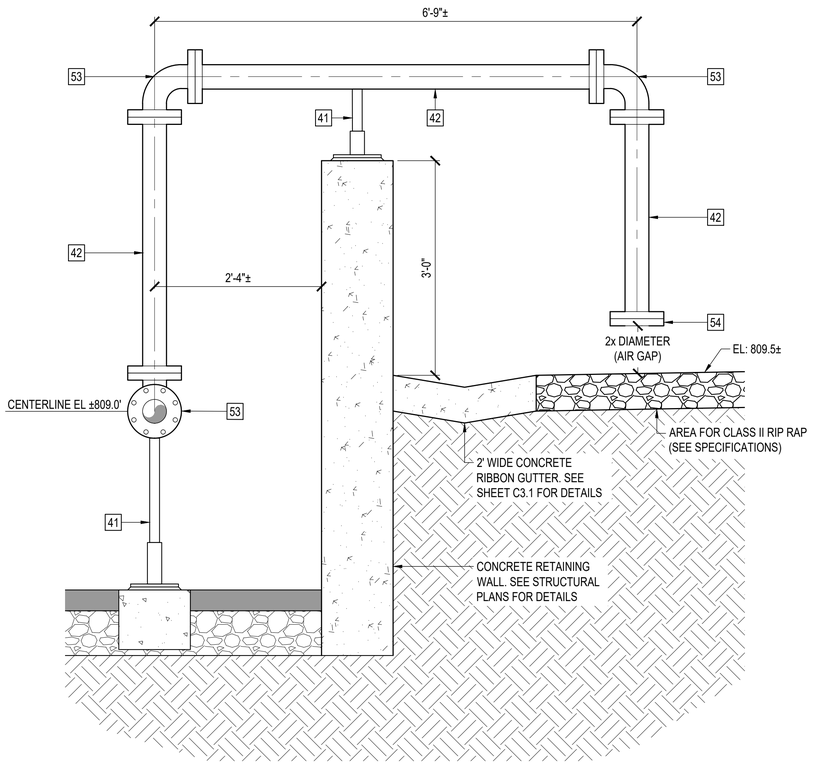
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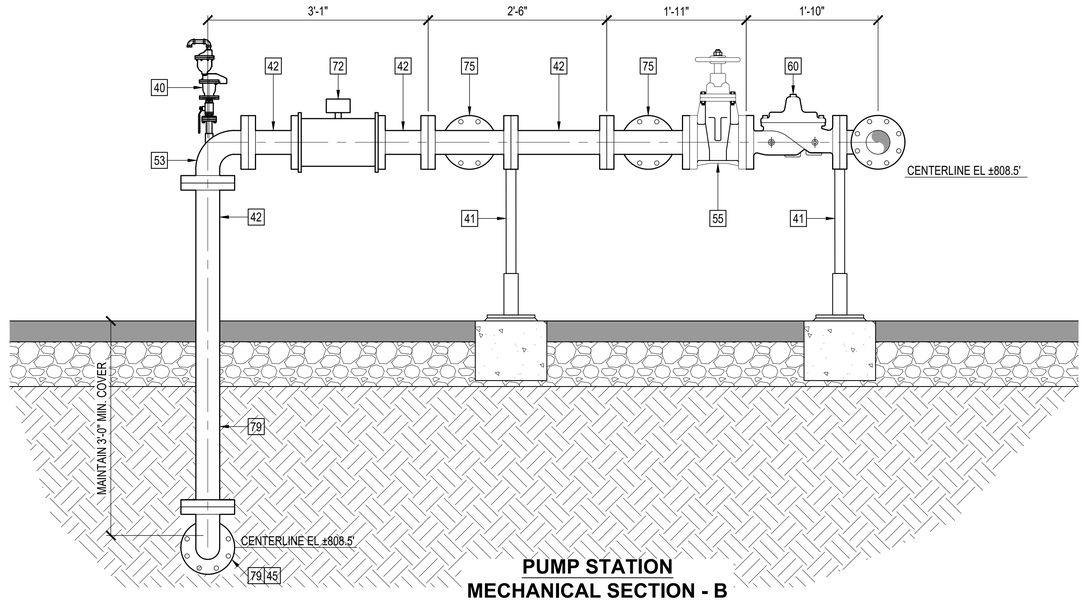
MECHANICAL CONSTRUCTION NOTES	
NO.	DESCRIPTION
40	1" AIR COMBINATION VALVE PER DETAIL B ON SHEET M3.0.
41	ADJUSTABLE PIPE SUPPORT PER DETAIL A ON SHEET M3.2.
42	4" CML&EC SCH.40 STEEL PIPE.
45	CONCRETE THRUST BLOCK PER DETAIL C ON SHEET C5.0.
53	4" - 90° CML&EC SCH.40 STEEL BEND (FLG'D).
54	4" FLANGE w/ INSECT SCREEN BETWEEN FLANGES.
55	4" GATE VALVE (FLG'D).
60	4" PRESSURE RELIEF VALVE (FLG'D),(CLA-VAL SERIES 50)
72	4" BI-DIRECTIONAL "ULTRA-MAG" FLOW METER PER MANUFACTURER'S REQUIREMENTS (McCROMETER OR EQUAL).
75	4" CML&EC TEE (FLG'D).
79	4" - 90° CML&C SCH.40 STEEL BEND (FLG'D).

SHEET NOTES:

1. ALL DISCHARGE PIPE & FITTINGS SHALL BE RATED FOR A WORKING WATER PRESSURE (WWP) OF 315 MINIMUM. ALL FLANGES ON DISCHARGE PIPE & FITTINGS SHALL BE CLASS 300. FLANGES ON SUCTION PIPE & FITTINGS CAN BE CLASS 150.
2. ALL ABOVE GRADE PIPING AND FITTINGS SHALL BE CML & EPOXY COATED STEEL SCH. 40 STEEL AND ALL BELOW GROUND PIPING & FITTINGS SHALL BE CML & CEMENT-COATED STEEL SCH.40 (SEE SPECIFICATIONS). UNLESS OTHERWISE SPECIFIED ON PLAN.
3. ALL POTABLE WATER PIPELINES AND INFRASTRUCTURE SHALL BE DISINFECTED IN ACCORDANCE WITH ANSI/AWWA C651 REQUIREMENTS.



PUMP STATION
MECHANICAL SECTION - A
SCALE: 1" = 1'- 0"



PUMP STATION
MECHANICAL SECTION - B
SCALE: 1" = 1'- 0"

DWG NO.
M2.2

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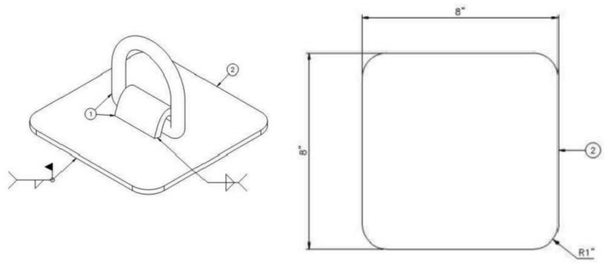
LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

CHARMLEE P.S. SECTIONS

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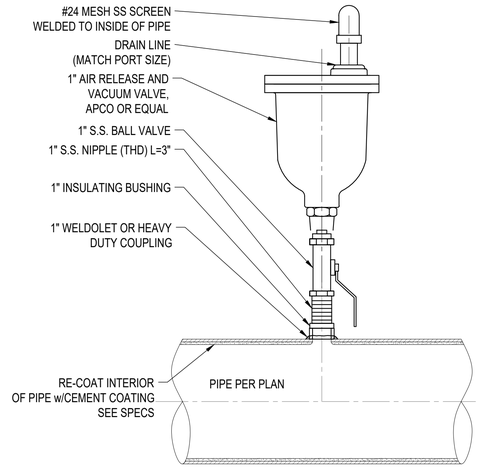
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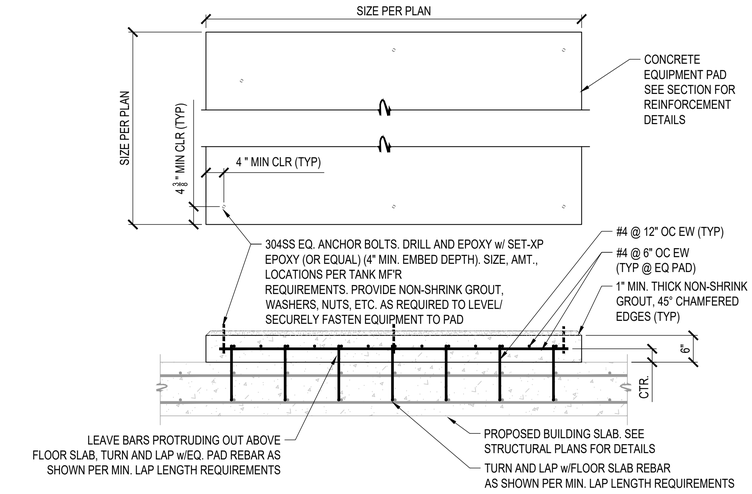
BILL OF MATERIALS		
ITEM#	DESCRIPTION	MATL
1	LASHING RING	SS
2	PLATE	A36

FOR REFERENCE ONLY. CONTRACTOR SHALL REFER TO TANK MANUFACTURER SHOP DRAWINGS FOR FURTHER DETAILS

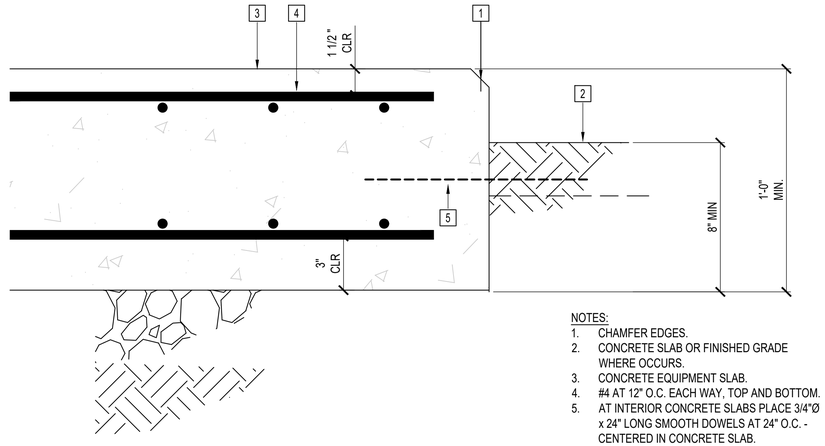
FALL PROTECTION ANCHOR DETAIL NTS A



AIR COMBINATION VALVE DETAIL NTS B

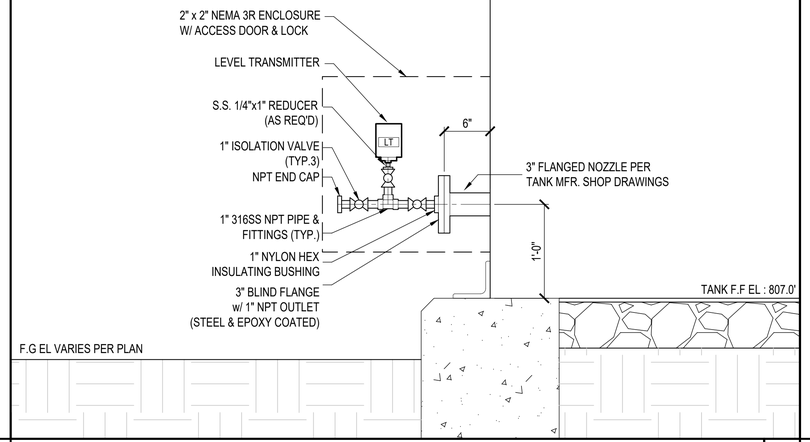


HOUSEKEEPING PAD DETAIL NTS C

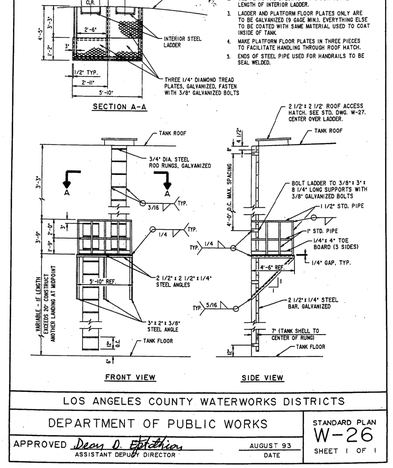


NOTES:
1. CHAMFER EDGES.
2. CONCRETE SLAB OR FINISHED GRADE WHERE OCCURS.
3. CONCRETE EQUIPMENT SLAB.
4. #4 AT 12" O.C. EACH WAY, TOP AND BOTTOM.
5. AT INTERIOR CONCRETE SLABS PLACE 3/4"Ø x 24" LONG SMOOTH DOWELS AT 24" O.C. - CENTERED IN CONCRETE SLAB.

CONCRETE EQUIPMENT PAD ON GRADE NTS D



LEVEL PRESSURE TRANSMITTER DETAIL NTS E



VERTICAL INTERIOR LADDER DETAIL NTS F

FILE NAME

DATE LAST SAVED:

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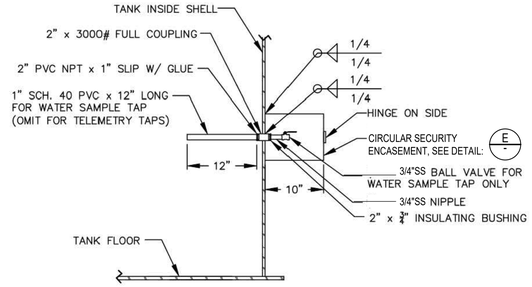
ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 DATE

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

MECHANICAL DETAILS

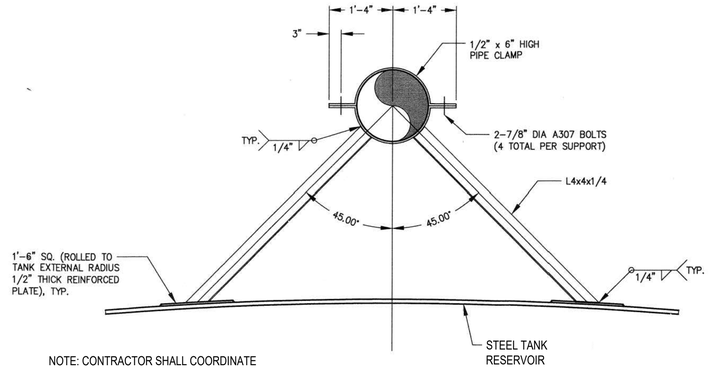
PROJ ID WWD2900065 | PCA Y5292300 | SPEC WWD 29-825 | SHEET 24 OF 53



DESCRIPTION	ELEVATION
WATER SAMPLE TAPS (TYP 4)	MATCH ℄ OF OUTLET PIPE

SAMPLE TAP DETAIL

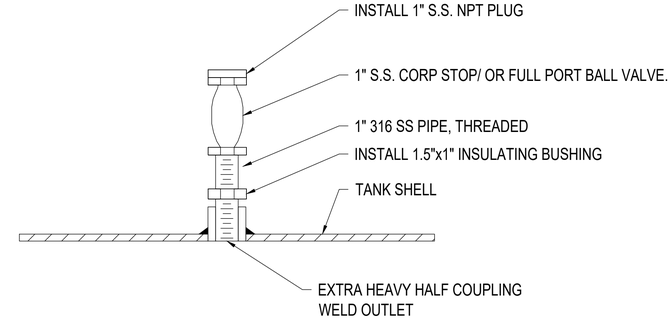
NTS **A**



NOTE: CONTRACTOR SHALL COORDINATE OVERFLOW PIPE SUPPORT CONNECTION AND LOCATION WITH THE TANK MF'R.

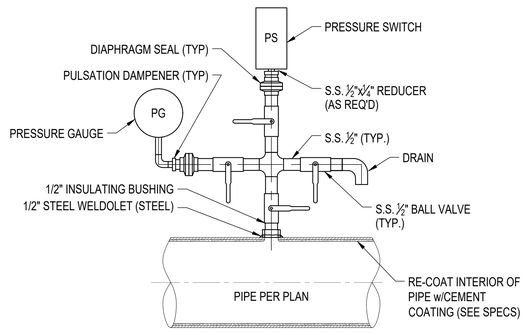
TANK WALL MOUNTED PIPE SUPPORT

NTS **B**



CORP STOP AND PLUG DETAIL

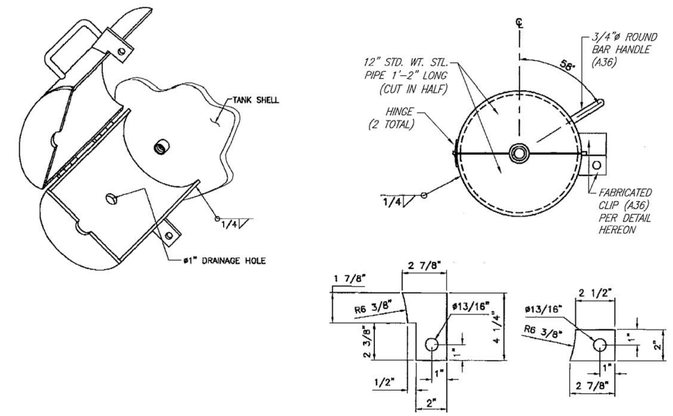
NTS **C**



NOTE: DIAPHRAGM SEALS TO BE INSTALLED ON ALL PROCESS PIPING UNLESS FLUID IS POTABLE/RECYCLED WATER.

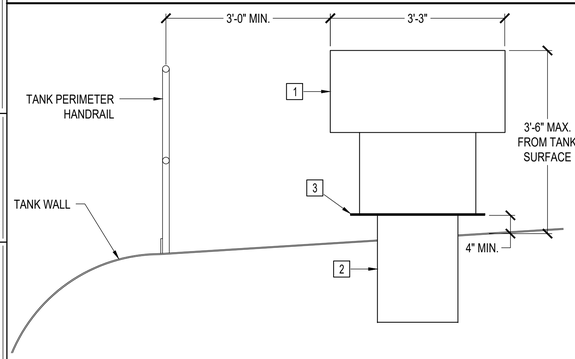
WELDOLET PRESSURE GAUGE DETAIL

NTS **D**

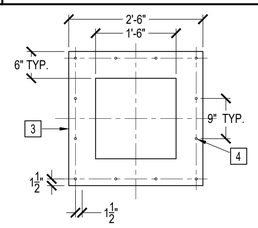


SECURITY ENCASEMENT DETAIL

NTS **E**



NOTE: DETAIL IS SCHEMATIC AND PROVIDED FOR REFERENCE ONLY. ACTUAL CONFIGURATION, DIMENSIONS, AND CONNECTION DETAILS SHALL BE BASED ON THE FURNISHED BLOWER. BLOWER SHALL BE BIG WAVE WATER TECHNOLOGIES HURRICANE 100 OR ENGINEER-APPROVED EQUAL.



FLANGE DETAIL

NOTES:

1. **TANK VENTILATION BLOWER:** (2600 CFM, 0.5 HP, 120V, 1PH) w/ ROOF-MOUNTED ENCLOSURE AND INTAKE SCREEN PER MANUFACTURER REQUIREMENTS.
2. **18" SQ. FLANGE TUNNEL**: WELDED 3/16" THICK PLATE STEEL PAINTED w/ TANK COATING SYSTEM. LENGTH PER BLOWER MANUFACTURER.
3. **MOUNTING FLANGES:** 30" SQ w/ 18" SQ OPENING, 3/16" THICK PLATE STEEL PAINTED w/ TANK COATING SYSTEM. SEE FLANGE DETAIL. FLANGE FOR BLOWER AND TUNNEL ARE IDENTICAL.
4. **1/2" DIA BOLT HOLES (QTY 12)** w/ STAINLESS STEEL BOLT HARDWARE SUPPLIED BY BLOWER MANUFACTURER.

BLOWER ASSEMBLY DETAIL

NTS **F**

FILE NAME

DATE LAST SAVED:

CHECKER RM

DESIGNER KS

DRAFTER JS

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DATE	NO.	INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

DWG NO. M3.1

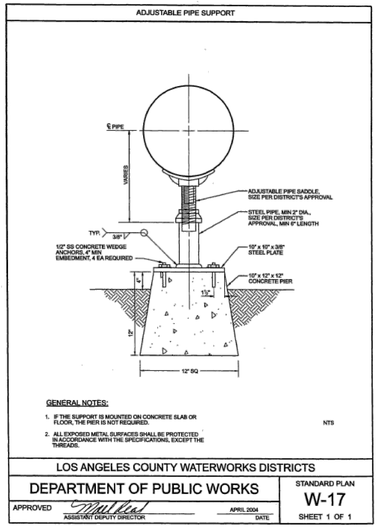
100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

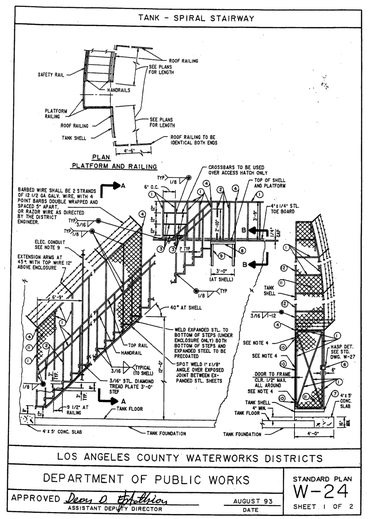
UPPER ENCINAL TANK IMPROVEMENT

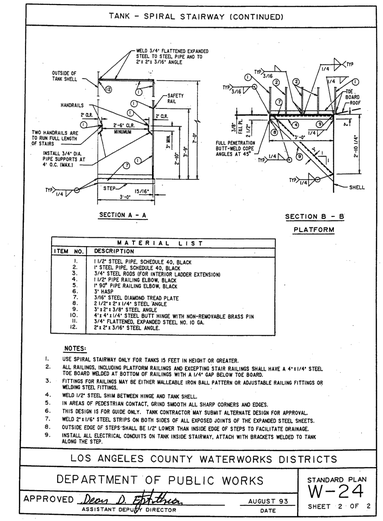
MECHANICAL DETAILS

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	25 OF 53

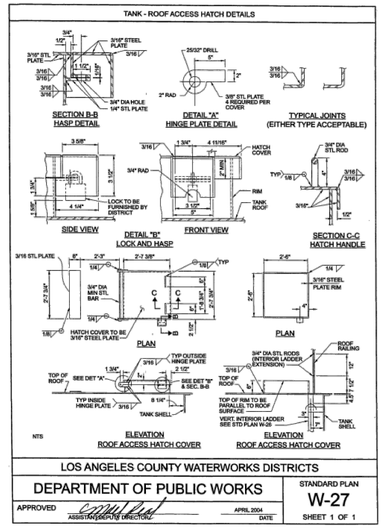


ADJUSTABLE PIPE SUPPORT DETAIL — NTS — A





VERTICAL SPIRAL STAIRWAY EXTERIOR DETAIL — NTS — B



ROOF ACCESS HATCH DETAIL — NTS — C

BOOSTER PUMP CAN DETAIL — NTS — D

TANK MANWAY DETAIL — NTS — E

TANK MANWAY DETAIL — NTS — E

ROOF VENT DETAIL — NTS — F

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ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 DATE

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100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

MECHANICAL DETAILS

PROJ ID WWD2900065 | PCA Y5292300 | SPEC WWD 29-825 | SHEET 26 OF 53

PLAN LEGEND

- EXPOSED CONDUIT
- UNDERGROUND CONDUIT DUCTBANK
- UTILITY CONDUIT DUCTBANK
- CONDUIT RUN CONCEALED IN CEILING, FLOOR, TRENCH OR IN WALLS
- EXISTING CONDUIT
- GEC — GROUNDING ELECTRODE CONDUCTOR
- OHE — EXISTING OVERHEAD ELECTRIC
- E — EXISTING UNDERGROUND ELECTRIC
- FENCE
- CONDUIT TURNED UP (TOWARDS READER)
- CONDUIT TURNED DOWN (INTO PAGE)
- CONDUIT STUB UP
- FLOOR MOUNTED ETHERNET (10/100) OUTLET (RJ-45)
- TELEPHONE OUTLET (RJ-11)
- ETHERNET (10/100) OUTLET (RJ-45)
- COMBINATION TELEPHONE/ETHERNET (10/100) OUTLET (RJ-11 & RJ-45)
- 20 — 240V SIMPLEX RECEPTACLE (NUMBER DENOTES CIRCUIT AMPS)
- 20 — 480V SIMPLEX RECEPTACLE (NUMBER DENOTES CIRCUIT AMPS)
- 120V, 20A SIMPLEX RECEPTACLE
- 120V, 20A DUPLEX RECEPTACLE
- 120V, 20A QUADRAPLEX RECEPTACLE
- $ — 120V, 20A SPST SWITCH
- $M — MANUAL MOTOR STARTER
- $3 — 120V, 20A 3-WAY SWITCH
- $4 — 120V, 20A 4-WAY SWITCH
- AT — ANALYZER TRANSMITTER
- ZS — INTRUSION ALARM SWITCH
- FS — FLOAT SWITCH
- J — ABOVE GROUND JUNCTION BOX
- LE — LEVEL ELEMENT
- LP — LEVEL PROBES
- LT — LEVEL TRANSPONDER
- PC — PHOTOCELL
- PS — PRESSURE SWITCH
- TS — TEMPERATURE SWITCH
- T — THERMOSTAT
- PUSHBUTTON CONTROL STATION
- CONDUIT SEAL-OFF FITTING
- SOLENOID VALVE (ENERGIZED TO CLOSE)
- SOLENOID VALVE (ENERGIZED TO OPEN)
- TB — TERMINAL BOX
- JB — JUNCTION BOX
- JB — UNDERGROUND JUNCTION BOX
- MH — MANHOLE
- HH — HANDHOLE
- DISCONNECT SWITCH
- F — FUSED DISCONNECT SWITCH
- CB — ENCLOSED CIRCUIT BREAKER
- COMBINATION MOTOR STARTER INDICATING MOTOR STARTER SIZE 2
- MOTOR STARTER
- FIELD WIRING
- PANEL WIRING
- COMMUNICATIONS WIRING
- CABLE (MULTICONDUTOR SHIELDED)

SINGLE LINE DIAGRAM AND SCHEMATIC LEGEND

- R — PILOT LIGHT (LETTER DENOTES COLOR)
- R — PUSH-TO-TEST PILOT LIGHT (LETTER DENOTES COLOR)
- CR — CONTROL RELAY
- PRESSURE SWITCH (N.O.) CLOSES ON RISING PRESSURE
- PRESSURE SWITCH (N.C.) OPENS ON RISING PRESSURE
- TIMING RELAY, (N.O.) CONTACT TIME TO CLOSE (ON DELAY TIMER)
- TIMING RELAY, (N.C.) CONTACT TIME TO OPEN (ON DELAY TIMER)
- TIMING RELAY, (N.O.) CONTACT TIME TO OPEN (OFF DELAY TIMER)
- TIMING RELAY, (N.C.) CONTACT TIME TO CLOSE (OFF DELAY TIMER)
- SAIL SWITCH (N.O.) CLOSES ON FLOW
- SAIL SWITCH (N.C.) OPENS ON FLOW
- FLOAT SWITCH (N.C.) OPENS ON RISING LEVEL
- FLOAT SWITCH (N.O.) CLOSES ON RISING LEVEL
- LIMIT SWITCH (N.C.)
- LIMIT SWITCH (N.O.)
- LIMIT SWITCH (N.O.) HELD CLOSED
- LIMIT SWITCH (N.C.) HELD OPEN
- TEMPERATURE SWITCH (N.C.) OPENS ON RISING TEMPERATURE
- TEMPERATURE SWITCH (N.O.) CLOSES ON RISING TEMPERATURE
- CIRCUIT BREAKER WITH DOOR OPERATED HANDLE
- MOLDED CASE CIRCUIT BREAKER WITH THERMAL TRIP, UNO
- H O A — 3-POSITION
- SELECTOR SWITCH (HAND-OFF-AUTO)
- LOCKOUT STOP PUSHBUTTON
- PUSH-PULL EMERGENCY STOP PUSHBUTTON
- DISCONNECT SWITCH (N.O.)
- DISCONNECT SWITCH (N.C.)
- EARTH GROUND CONNECTION
- GROUND ROD AND WELL
- THERMAL OVERLOAD
- FUSED TERMINAL BLOCK
- CONTACT (N.O.)
- CONTACT (N.C.)
- PUSHBUTTON (N.O.) MOMENTARY CLOSE
- PUSHBUTTON (N.C.) MOMENTARY OPEN
- 2-POSITION SELECTOR SWITCH
- PFR — PHASE FAILURE RELAY
- TR XX — TIME DELAY RELAY
- LR XX — LATCHING RELAY
- CR XX — CONTROL RELAY
- ISR XX — INTRINSICALLY SAFE RELAY
- N — NEUTRAL BUS
- G — GROUND BUS
- H — HORN
- BUZZER
- TERMINAL BLOCK
- FIELD TERMINATION
- MLO — MAIN LUG ONLY
- POWER DISTRIBUTION BLOCK
- COIL/INDUCTOR
- POWER TRANSFORMER
- HEATER
- M — MOTOR STARTER CONTACTOR COIL
- BATTERY
- ETM — ELAPSED TIME METER
- M — METER & CURRENT TRANSFORMER
- WHM — WATT HOUR METER AND SOCKET
- RESISTOR
- DIODE
- MOV — METAL OXIDE VARISTOR
- INDICATING FUSE HOLDER AMPERE SIZE SHOWN
- S LA — LIGHTNING ARRESTER
- C-XXX — CONDUIT DESIGNATION
- EQUIPMENT TAG REFERENCE
- I/O POINT REFERENCE PLC,
- DRAWING REFERENCE
- EDGE CONNECTORS
- LOCATION SYMBOL
- SHEET NOTE TAG
- EDGE CONNECTOR
- INSTRUMENTATION
- VFD — VARIABLE FREQUENCY DRIVE
- SPD — SURGE PROTECTION DEVICE
- INV — ACTIVE HARMONIC FILTER
- 10 — 3 PHASE MOTOR, INDICATING 10 HORSEPOWER
- CAPACITOR
- SOLENOID
- INTERNAL CONTACT (N.O.)
- INTERNAL CONTACT (N.C.)

ABBREVIATION LIST

A, AMP	AMPERES
AM	AMMETER
AC	ALTERNATING CURRENT
AIC	AMPS INTERRUPTING CAPACITY
BAT	BATTERY BC BATTERY CHARGER
C	COMMON
CB	CIRCUIT BREAKER
CNTL	CONTROL
CPT	CONTROL POWER TRANSFORMER
CP	CONTROL PANEL
CR	CONTROL RELAY
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
DR	DUPLEX RECEPTACLE
DS	DISCONNECT SWITCH
(E)	EXISTING
EC	EDGE CONNECTOR
EF	EXHAUST FAN
ETM	ELAPSED TIME METER
F	FUSE
FB	FUSE BLOCK
(F)	FUTURE
FLTR	FILTER
FS	FLOAT SWITCH
FVNR	FULL VOLTAGE NON REVERSING
FVR	FULL VOLTAGE REVERSING
G, GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HPS	HIGH PRESSURE SODIUM
HS	HAND SWITCH
ICP	INSTRUMENTATION CONTROL PANEL
ISR	INTRINSICALLY SAFE RELAY
I, IND	INDICATOR
INST	INSTANTANEOUS
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
LED	LIGHT EMITTING DIODE
LCD	LIQUID CRYSTAL DISPLAY
LA	LIGHTNING ARRESTER
LCP	LOCAL CONTROL PANEL
LPU	LIGHTNING PROTECTION UNIT
LOS	LOCK OUT STOP
LR	LATCH RELAY
LS	LOAD SPLITTER
MA	MILLIAMPERES
MB	MAIN BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MOT	MOTOR OVERTEMPERATURE
MMS	MOTOR MOISTURE SENSOR
MS	MOTOR STARTER
N	NEUTRAL
NA	NON AUTOMATIC
(N)	NEW
N.I.C.	NOT IN CONTRACT
NP	NAMEPLATE
OT	OVERTEMPERATURE
O/L	OVERLOAD DEVICE
PB	PUSHBUTTON
PCB	PRINTED CIRCUIT BOARD
PC	PROGRAMMABLE CONTROLLER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PL-1	PILOT LIGHT 1
PFR	PHASE/POWER FAIL RELAY
PNL	PANEL
POT	POTENTIOMETER
PPM	POWER PHASE MONITOR
PR	PAIR CABLE
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PTT	PUSH TO TEST
PVC	POLYVINYL CHLORIDE
PWR	POWER
RR	RUN RELAY
RV	REDUCED VOLTAGE
RVAT	RV AUTO-TRANSFORMER
SSS	SOLID-STATE STARTER
SR	RECEPTACLE
SS	SELECTOR SWITCH, SOFT STARTER
SP	SURGE PROTECTOR
SPD	SURGE PROTECTOR DEVICE
SV	SOLENOID VALVE
SWBD	SWITCHBOARD
TB	TERMINAL BLOCK
TR	TIME DELAY RELAY
TC	TIMECLOCK
TM	THERMAL MAGNETIC
TS	TEMPERATURE SWITCH
TSP	TWISTED SHIELDED PAIR
TWP	TWISTED PAIR
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
V	VOLTS, VOLTAGE
VM	VOLTMETER
VFD	VARIABLE FREQUENCY DRIVE
WP	WEATHERPROOF
TR,XFMR	TRANSFORMER
XP	EXPLOSION PROOF

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DATE	△	INITIALS	DESCRIPTION

REVISIONS

XXX — PROJECT ENGINEER
06/05/2026 — DATE

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENTS

ELECTRICAL LEGEND & ABBREVIATIONS

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	32 OF 53

ELECTRICAL NOTES:

1. ELECTRICAL WORK SHALL COMPLY WITH THE CALIFORNIA ELECTRICAL CODE (2025), FEDERAL, STATE AND LOCAL JURISDICTION CODES.
2. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION.
3. CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING WALKS, WALLS, DRIVEWAYS, CURBS, ETC. DAMAGES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY/COUNTY AT NO ADDITIONAL COST TO THE CITY/COUNTY.
5. CONTRACTOR SHALL PAY FOR LOCAL FEES, PERMITS AND INSPECTIONS AS MAY BE REQUIRED AND PROVIDE A CERTIFICATE OF INSPECTION TO THE CITY/COUNTY.
6. LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION.
7. IT IS THE OBLIGATION OF THE CONTRACTOR TO ORGANIZE HIS WORK SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION, AND/OR CONTROL SYSTEM FOR THE FACILITY WILL BE PROVIDED AND SUPPORTED BY ACCURATE SHOP AND RECORD DRAWINGS, AND ALL O&M MANUALS.
8. ALL CABLES SHALL BE NEW, COPPER, RATED FOR 600V AND LISTED FOR ITS LOCATION WITH A MINIMUM TEMPERATURE RATING OF 90 DEG C WET AND 90 DEG C DRY; POWER AND CONTROL CABLES SHALL BE TYPE XHHW-2 UNLESS NOTED OTHERWISE.
9. MINIMUM SIZE CONDUIT ABOVE GROUND SHALL BE 3/4" AND MINIMUM SIZE CONDUIT BELOW GROUND SHALL BE 1" UNLESS NOTED OTHERWISE. ALL CONDUITS FOR POWER AND LIGHTING SHALL CONTAIN A GROUNDING CONDUCTOR.
10. MINIMUM SIZE POWER CONDUCTORS SHALL BE #12 AWG UNLESS NOTED OTHERWISE.
11. ALL TERMINAL RATINGS SHALL HAVE A MINIMUM TEMPERATURE RATING OF 75 DEG C. AS SUCH, WIRE AMPACITIES ARE CALCULATED AT 75 DEG C RATINGS. CABLES SHALL BE DE-RATED PER NEC 110.14 (C).
12. CONDUIT SIZE SHALL BE AS SPECIFIED IN THE PLANS OR DETAILS. UNDERGROUND CONDUIT SHALL BE SCH 40 PVC ENCASED IN CONCRETE WITH PVC COATED GALVANIZED RIGID STEEL BENDS, ELBOWS AND TURN-UPS. EXPOSED ABOVE-GROUND CONDUIT SHALL BE PVC COATED GALVANIZED RIGID STEEL.
13. ALL EQUIPMENT AND WIRING METHODS SHALL BE RATED FOR OUTDOOR LOCATIONS. EXPOSED EQUIPMENT SHALL BE NEMA 3R UNLESS NOTED OTHERWISE.
14. GROUND AND BOND ALL EQUIPMENT AND ENCLOSURES PER NEC ARTICLE 250 AND MANUFACTURER REQUIREMENTS.
15. CONTRACTOR SHALL PLAN AND INSTALL WORK IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR.
16. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, ETC. NECESSARY FOR A COMPLETE AND WORKABLE ELECTRICAL SYSTEM WHETHER OR NOT THESE ITEMS ARE SPECIFICALLY NOTED ON THESE DRAWINGS. INCIDENTAL ITEMS NOT INDICATED ON THE DRAWINGS, NOR MENTIONED IN SPECIFICATIONS THAT CAN BE LEGITIMATELY AND REASONABLY INFERRED TO BELONG TO THE WORK DESCRIBED OR BE NECESSARY IN GOOD PRACTICE TO PROVIDE A COMPLETE SYSTEM, SHALL BE FURNISHED AND INSTALLED AS THOUGH ITEMIZED HERE IN EVERY DETAIL.
17. ALL TRENCHING, CONDUITS, ETC. SHALL BE ROUTED AND INSTALLED IN SUCH A MANNER THAT WILL NOT DAMAGE EXISTING FACILITIES OR UNDERGROUND UTILITIES. SHOULD DAMAGE OCCUR, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR DAMAGE TO THE SATISFACTION OF THE CITY OR INSPECTOR.
18. ALL CONDUIT RUNS SHOWN ON THIS PLAN ARE SCHEMATIC IN NATURE. THE CONTRACTOR SHALL MAKE SURE THAT ALL CONDUIT MEETS LOCAL AND STATE CODES.
19. WHEN CROSSING PATHWAYS OR SIDEWALKS, CONTRACTOR SHALL BORE UNDER EXISTING CONCRETE WALKS AND SAWCUT ASPHALT WALKS. ASPHALT WALKS AND CONCRETE SIDEWALKS TO BE REPLACED IN KIND.
20. CONTRACTOR SHALL GUARANTEE WORK INSTALLED UNDER THE CONTRACT TO BE FREE FROM DEFECTIVE WORKMANSHIP AND MATERIALS, USUAL WEAR EXPECTED, AND SHOULD ANY SUCH DEFECTS DEVELOP WITHIN A PERIOD OF ONE YEAR ACCEPTANCE OF THE PROJECT BY THE CITY, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DEFECTIVE ITEMS AND DAMAGE RESULTING FROM FAILURE OF THESE ITEMS, AT NO EXPENSE WHATSOEVER TO THE CITY.
21. ALL CIRCUITS SHALL BE LEGIBLY IDENTIFIED AT THE PANEL, JUNCTION BOXES AND AT ALL EQUIPMENT IN A PERMANENT MANNER (I.E. ETCHED PLATES, CONDUCTOR TAG, PERMANENT MARKER, ETC.). THE LABELING SHALL INCLUDE PANEL CIRCUIT NUMBER, "TO" AND "FROM" IDENTIFICATION, AND MARKED "SPARE" WHERE APPLICABLE.
22. CONTRACTOR SHALL TEST ELECTRICAL SYSTEM FOR SHORT CIRCUITS AND MEGGER TEST FEEDERS AND BRANCH CIRCUIT WIRING. INSURE LOW IMPEDANCE GROUND PATH SYSTEM. PERFORM HIPOT TESTING WHEN REQUIRED BY LOCAL JURISDICTION.
23. CONTRACTOR SHALL COORDINATE ALL EQUIPMENT CONNECTIONS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN. PROVIDE ADDITIONAL FUSED DISCONNECT SWITCHES AND CONTROLS IF OVERCURRENT PROTECTION OR CONTROLS ARE NOT INTEGRAL WITH UNITS.
24. FULL LOAD AMPS (FLA) SIZES, AS NOTED IN THESE DRAWINGS, ARE BASED ON SPECIFIED EQUIPMENT DATA. CONTRACTOR SHALL VERIFY NAMEPLATE FLA OF EQUIPMENT SUPPLIED AND COORDINATE ACCORDINGLY PER EQUIPMENT SUPPLIER'S RECOMMENDATIONS AND CODE REQUIREMENTS.
25. CONDUITS OR RACEWAYS INSTALLED IN AREAS WHERE ELEVATION CHANGES MAY CAUSE WATER OR MOISTURE TO ENTER THE ELECTRICAL EQUIPMENT THROUGH THE CONDUIT SHALL BE SEALED IN ACCORDANCE WITH NEC 300.5 (G).
26. MATERIALS SHALL BE NEW AND OF THE BEST QUALITY WITH MANUFACTURER'S NAME PRINTED THEREON. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, UNDERWRITER'S LABORATORY OR OTHER APPLICABLE STANDARDS AND RATED FOR HEAVY DUTY SERVICE.
27. SELECTION OF MATERIALS SHALL BE IN STRICT ACCORDANCE WITH THE DRAWINGS AND/OR SPECIFICATIONS.
28. THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTION, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.
29. VERIFY ALL CONDUIT FILL RATIOS, BOX FILLS, AND CONDUIT BENDS (MAX 360 DEGREES) ARE MET PER NEC REQUIREMENTS. INSTALL PULL BOXES AND DE-RATE CABLE AMPACITY AS NECESSARY.
30. CONTRACTOR TO READ ALL THE DRAWINGS IN THIS SET TO BECOME FAMILIARIZED WITH THE FULL ELECTRICAL SCOPE, INCLUDING BUT NOT LIMITED TO THE MECHANICAL, INSTRUMENTATION AND CIVIL DRAWINGS.
31. THESE DRAWINGS AND THE PROJECT SPECIFICATIONS ARE COMPLEMENTARY. WHERE THERE IS OVERLAP, THE MORE STRINGENT REQUIREMENT WILL TAKE PRECEDENCE.
32. CONTRACTOR SHALL VERIFY ALL CIRCUITS CONTAIN LESS THAN 5% VOLTAGE DROP. CONTRACTOR SHALL PROVIDE SHORT CIRCUIT ANALYSIS AND ARC FLASH STUDY, AS REQUIRED.
33. CONTRACTOR SHALL COORDINATE AND PERFORM WORK TO THE STANDARDS OF ALL APPLICABLE UTILITY COMPANIES, INCLUDING BUT NOT LIMITED TO UNDERGROUND ELECTRICAL LINES, GAS LINES AND WATER LINES. WHEN AN ISSUE OR DISCREPANCY ARISES, NOTIFY THE CITY AND ENGINEER IMMEDIATELY.
34. CONTRACTOR TO PROVIDE REQUIREMENTS FOR NFPA 70E, AS REQUIRED.
35. CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE CITY/COUNTY WITH ANY DISCREPANCIES FOUND DURING INSTALLATION OR REVIEW.

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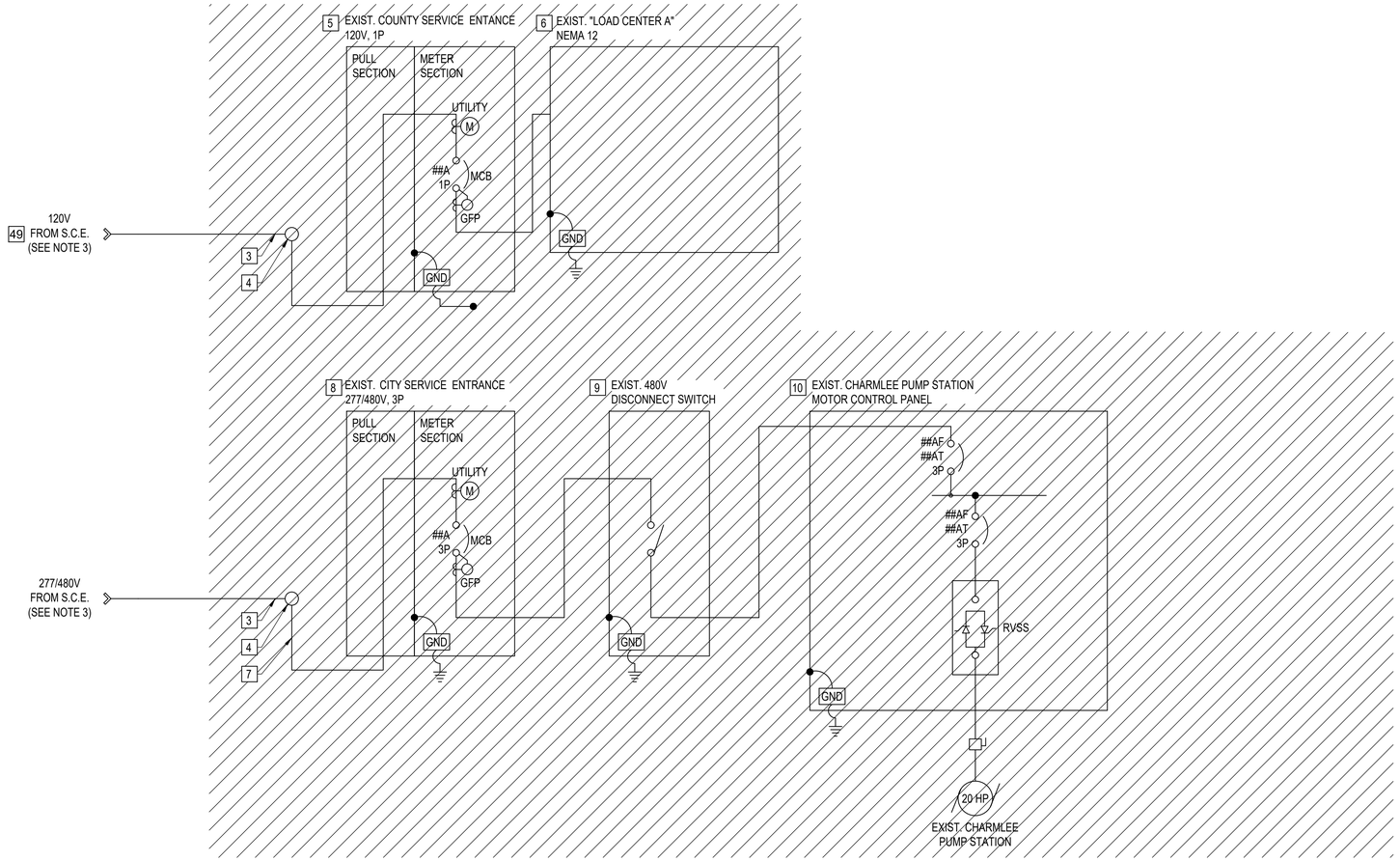
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LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENTS

ELECTRICAL GENERAL NOTES

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	33 OF 53



EXISTING SINGLE LINE

ELECTRICAL CONSTRUCTION NOTES

NO.	DESCRIPTION
3	EXIST. OVERHEAD UTILITY POWER & TELEPHONE CONDUCTORS TO BE REMOVED (BY OTHERS).
4	EXIST. UTILITY POWER & TELEPHONE POLE TO BE REMOVED (BY OTHERS).
5	REMOVE AND PROPERLY DISPOSE OF THE EXIST. COUNTY ELECTRICAL SERVICE ENTRANCE ENCLOSURE AND ASSOCIATED CONDUCTORS AND CONDUITS, SEE DETAIL B SHEET C1.3.
6	REMOVE AND PROPERLY DISPOSE OF THE EXIST. 120V LOAD CENTER A, ENCLOSURE, AND ASSOCIATED CONDUITS AND CONDUCTORS UP TO THE ELECTRICAL SERVICE ENTRANCE AS SHOWN, SEE DETAIL B SHEET C1.3.
7	EXIST. UNDERGROUND POWER CONDUCTORS TO BE REMOVED AS REQUIRED TO COMPLETE THE NECESSARY IMPROVEMENTS, SEE DETAIL D SHEET C1.3.
8	REMOVE AND PROPERLY DISPOSE OF THE EXIST. CITY OF MALIBU ELECTRICAL SERVICE ENTRANCE ENCLOSURE AND ASSOCIATED CONDUCTORS AND CONDUITS, SEE DETAIL D SHEET C1.3.
9	REMOVE AND PROPERLY DISPOSE OF THE EXIST. CHARMLEE PUMP STATION DISCONNECT SWITCH AND ASSOCIATED CONDUITS AND CONDUCTORS AS SHOWN, SEE DETAIL D SHEET C1.3.
10	REMOVE AND PROPERLY DISPOSE OF THE EXIST. CHARMLEE PUMP STATION MOTOR CONTROL PANEL AND ASSOCIATED CONDUITS AND CONDUCTORS AS SHOWN, SEE DETAIL D SHEET C1.3.
49	CONTRACTOR TO COORDINATE WITH ELECTRICAL UTILITY (SCE) TO REMOVE EXISTING 120V 1Ø-2W SERVICE.

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ENGINEER AND THE COUNTY/CITY OF ANY DISCREPANCIES FOUND.
2. ANY ASSOCIATED POWER OR CONTROL CONDUCTORS FOR EQUIPMENT/INSTRUMENTATION SPECIFIED TO BE REMOVED SHALL EITHER BE REMOVED AND THE EXISTING CONDUIT CUT AND CAPPED ON BOTH ENDS OR HAVE THE CONDUCTORS ISOLATED AND TAGGED AS NOT USED ON BOTH ENDS.
3. SEE DETAIL F, SHEET C1.3 FOR EXISTING POLES AND POLE-MOUNTED TRANSFORMERS TO BE PROTECTED IN PLACE.

LEGEND

DEMO

FILE NAME

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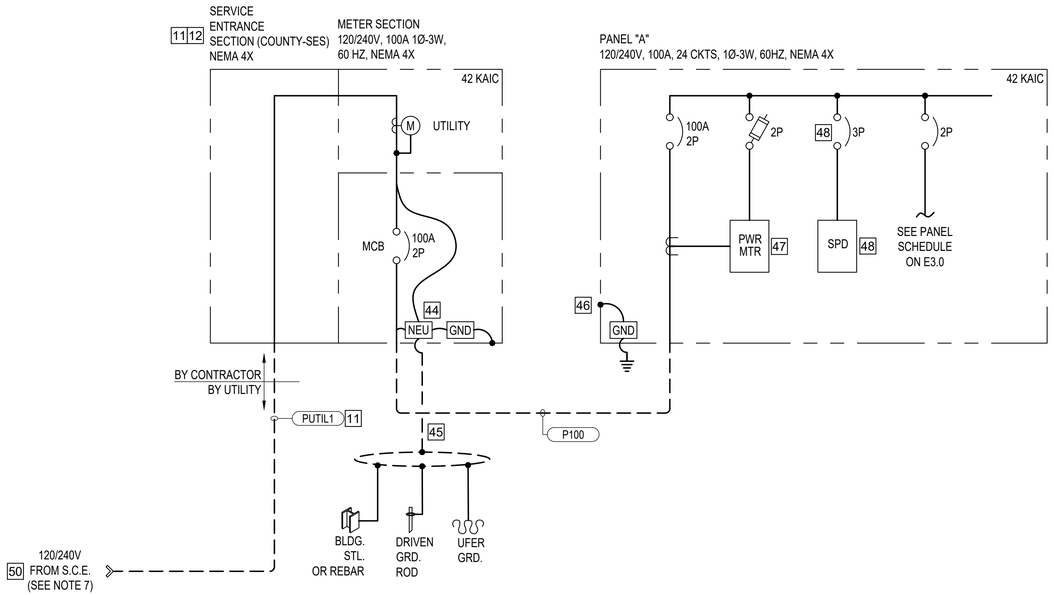
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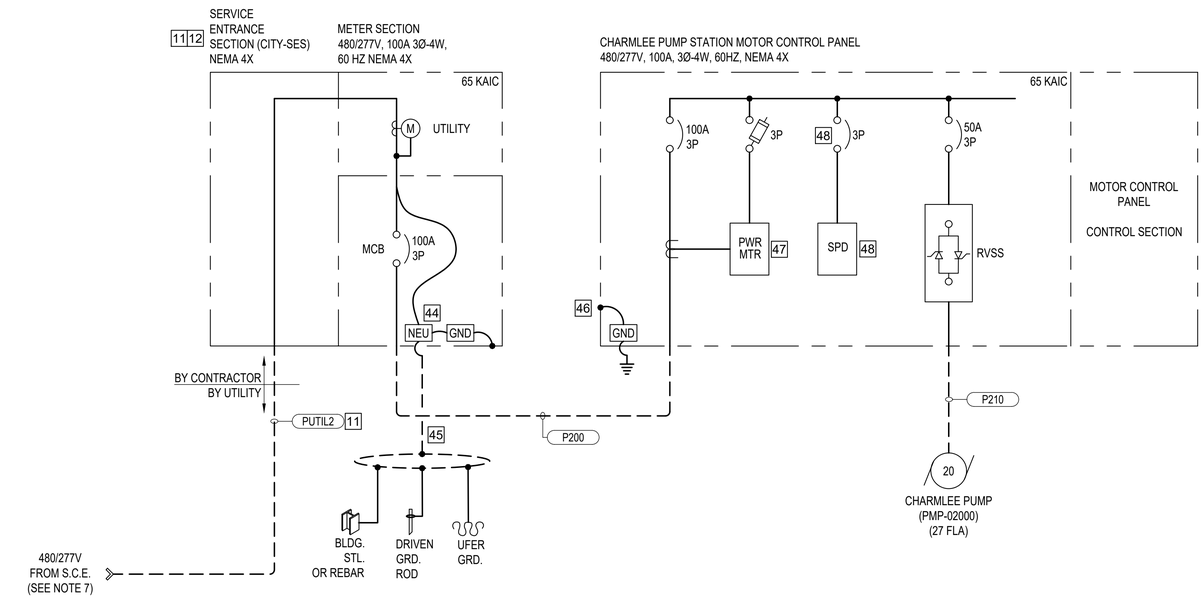
LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENTS

EXISTING SINGLE LINE DIAGRAM

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	34 OF 53





ELECTRICAL CONSTRUCTION NOTES

NO.	DESCRIPTION
11	SERVICE ENTRANCE EQUIPMENT AND CONDUIT PER POWER COMPANY SPECIFICATIONS.
12	SERVICE ENTRANCE SECTION SHALL BE LABELED WITH AVAILABLE FAULT CURRENT IN ACCORDANCE WITH NEC 110.24(A).
44	#4/0 BARE COPPER MAIN SYSTEM BONDING JUMPER FROM NEUTRAL BAR AND MAIN GROUND BUS TO GROUND RING. SEE GROUNDING PLAN.
45	CONNECT #4/0 BARE COPPER GROUNDING ELECTRODE CONDUCTOR FROM MAIN GROUND BUS TO GROUND RING. SEE GROUNDING PLAN.
46	BOND EQUIPMENT/ENCLOSURE WITH #4/0 BARE COPPER GROUND TO SYSTEM GROUND RING.
47	INTEGRATED POWER MONITORING DEVICE, SAME BRAND AS PANEL.
48	SURGE PROTECTION DEVICE AND SIZE SPD FEEDER PER MANUFACTURER SPECIFICATIONS, MINIMUM 100 KA PER PHASE.
50	CONTRACTOR TO COORDINATE WITH ELECTRICAL UTILITY (SCE) TO OBTAIN UPGRADED 120/240V 1Ø-3W SERVICE.

GENERAL NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ENGINEER AND THE COUNTY/CITY OF ANY DISCREPANCIES.
2. DRAWINGS ARE DIAGRAMMATIC AND DO NOT REFLECT ACTUAL ROUTING. CONTRACTOR SHALL INSTALL PULLPOINTS WHERE REQUIRED FOR PULLING TENSION AND MAINTAINING LESS THEN (4) 90 DEGREE BENDS.
3. IN ACCORDANCE WITH NEC 110.16(A), ELECTRICAL EQUIPMENT SUCH AS PANELBOARDS AND VFDS, SHALL HAVE FIELD OR FACTORY LABELS WARNING PERSONNEL OF ARC FLASH HAZARDS.
4. ALL EQUIPMENT, INCLUDING INSTRUMENTATION, IS NOT SHOWN ON THIS DIAGRAM. REFERENCE MECHANICAL AND INSTRUMENTATION DIAGRAMS.
5. GROUND AND BOND ALL ENCLOSURES PER GROUNDING PLANS AND MANUFACTURER/CODE REQUIREMENTS.
6. NOT ALL EQUIPMENT AND WIRING IS SHOWN ON THIS DIAGRAM. REFERENCE DRAWINGS IN THE ELECTRICAL SET AND ENTIRE PROJECT TO COMPLETELY UNDERSTAND THE SCOPE OF ELECTRICAL WORK.
7. SEE DETAIL F, SHEET C1.3 FOR EXISTING POLES AND POLE-MOUNTED TRANSFORMERS TO BE PROTECTED IN PLACE.

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LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENTS

PROPOSED SINGLE LINE DIAGRAM

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	35 OF 53

PANEL "A"											
VOLTAGE:	120/240 VAC	VOLT AMPS								**MAIN BKR:**	100 A
SCCR:	42 KAIC									**PANEL BUS:**	100 A
LOAD DESCRIPTION		**VA**	**CB**	**BKR**	**PHASE A**	**PHASE B**	**BKR**	**CB**	**VA**	**LOAD DESCRIPTION**	
TANK MIXER CONTROL PANEL		1176	20/1	1	1326		2	15/1	150	TANK TEMPATURE SENSOR	
TANK GFCI RECEPTACLE		180	20/1	3		360	4	15/1	180	CHARMLEE P.S GFCI RECEPTACLE	
EXTERIOR LIGHTS*		325	15/1	5	625		6	15/1	300	FLOW METER (FT-02040)	
TANK BLOWER CONTROL PANEL		1176	20/1	7		2676	8	15/1	1500	PLC*	
SPARE			15/1	9	0		10	20/1		SPARE	
SPARE			15/1	11		0	12	20/1		SPARE	
"SPACE"				13	0		14			"SPACE"	
"SPACE"				15		0	16			"SPACE"	
"SPACE"				17	0		18			"SPACE"	
"SPACE"				19		0	20			"SPACE"	
"SPACE"				21	0		22			"SPACE"	
"SPACE"				23		0	24			"SPACE"	
					PHASE A	PHASE B					
VA/PHASE SUBTOTAL					1951	3036	1Φ, 3W				
A/LEG (SUBTOTAL)					16.3	25.3	10,000 AIC BREAKERS (SERIES RATED W/ MAIN BKR)				
VA (SUBTOTAL)					4987		NEMA 3R				
25% OF LARGEST INDUCTIVE LOAD					294	294					
GRAND TOTAL (AMPS)					23.2		* INDICATES LOAD CALCULATED AT 125%				
PERCENT CAPACITY					23.2%						

PANELBOARD NOTES:

1. PROVIDE UPDATED, COMPLETE, AND ACCURATE TYPED PANELBOARD CIRCUIT DIRECTORIES AT THE COMPLETION OF WORK.
2. CIRCUIT BREAKERS SHALL BE THERMAL MAGNETIC, TRIP INDICATING.
3. MULTI-POLE CIRCUIT BREAKERS SHALL BE EQUIPPED WITH AN INTERNAL COMMON TRIP MECHANISM.
4. CIRCUIT BREAKERS SHALL BE OF THE SAME MANUFACTURER AS THE PANELBOARD.
5. PANELBOARDS SHALL BE BOLT-ON TYPE.
6. BREAKER SHALL HAVE FIXED LOCKS WHEN REQUIRED BY NEC CODE.
7. PANELBOARDS SHALL BE PROVIDED WITH SPARE BREAKERS AS INDICATED.
8. "SPACE" INDICATES A LISTED CIRCUIT BREAKER COVER.
9. BOTH ENDS OF CONDUCTORS SHALL BE LABELED WITH THE PANEL NAME AND CIRCUIT.
10. EQUIPMENT FED FROM PANEL A SHALL BE LABELED WITH THEIR CIRCUIT IN ACCORDANCE WITH NEC 110.22 (A).

MCP LOAD SUMMARY (MAIN BREAKER 100A @ 480V 3PH)			
LOAD DESCRIPTION	HP	ACTIVE AMPS	REDUNDANT AMPS
CHARMLEE PUMP (M-02000)	20	27	-
5KVA CTRL XFMR	-	10.4	-
SUBTOTAL	20	37.4	
+ 25 % OF LARGEST MOTOR	-	6.8	
GRAND TOTAL	-	44.2	
PERCENT CAPACITY	-	44%	

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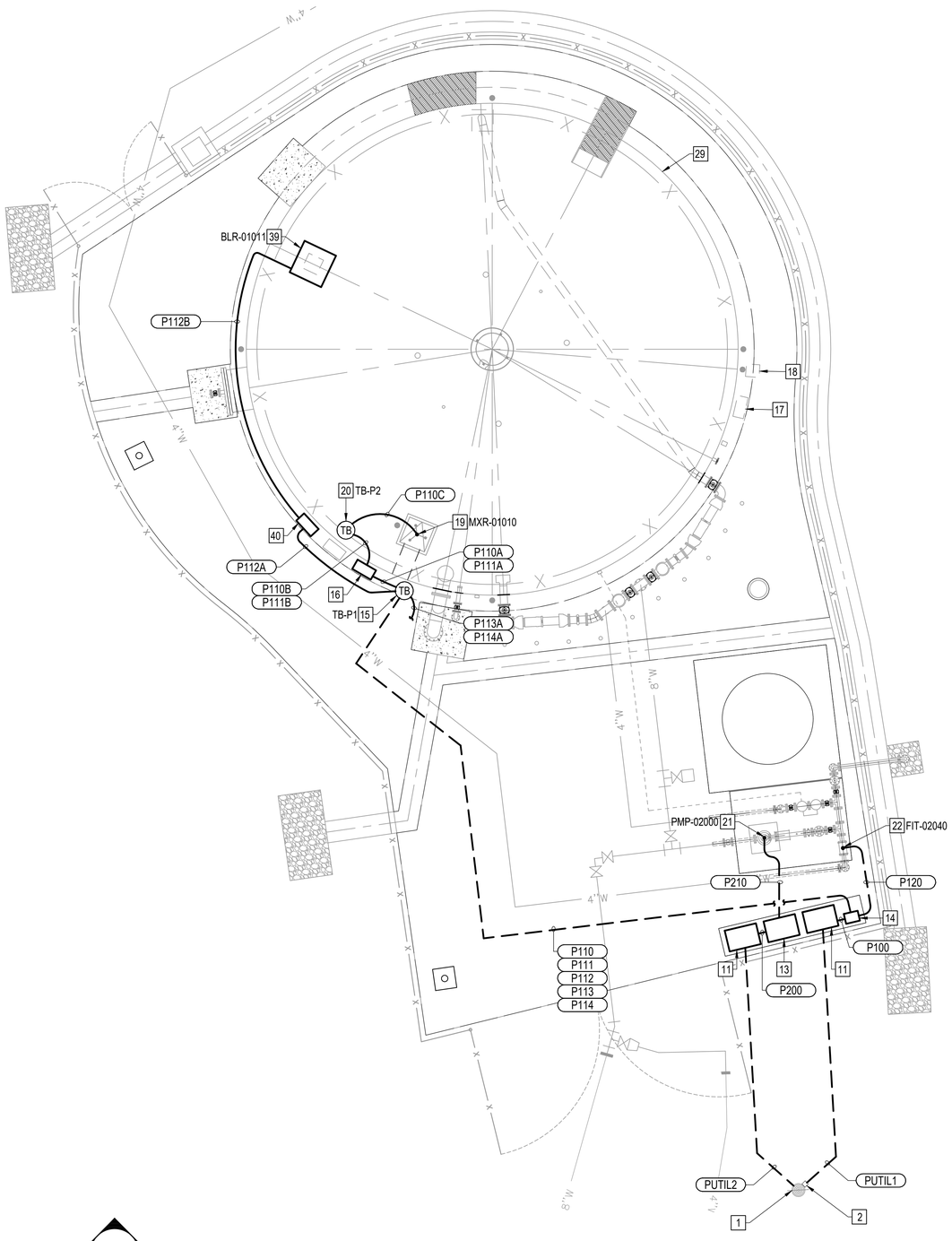
100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENTS

LOAD SUMMARY & PANEL SCHEDULES

PROJ ID WWD2900065 | PCA Y5292300 | SPEC WWD 29-825 | SHEET 36 OF 53



ELECTRICAL CONSTRUCTION NOTES

NO.	DESCRIPTION
1	EXIST. UTILITY POWER POLE, PROTECT IN PLACE. SEE DETAIL F SHEET C1.3.
2	EXIST. UTILITY TRANSFORMER, PROTECT IN PLACE. SEE DETAIL F SHEET C1.3.
11	SERVICE ENTRANCE EQUIPMENT AND CONDUIT PER POWER COMPANY SPECIFICATIONS.
13	STANCHION MOUNTED CHARMLEE PUMP STATION MOTOR CONTROL PANEL, 100A, 480/277V, NEMA 4X.
14	STANCHION MOUNTED PANEL "A". 120/240V, 100 AMPS, 24 CIRCUITS, NEMA 4X, TYPE EATON, 20" W x 12" D.
15	STANCHION MOUNTED, NEMA 4X, LOCKABLE POWER TERMINAL BOX (TERMINAL BOX "TB-P1") PER DETAIL G SHEET E6.1.
16	STANCHION MOUNTED TANK MIXER CONTROL PANEL (PROVIDED BY MIXER MANUFACTURER).
17	FUTURE WATER QUALITY ANALYZER SYSTEM.
18	FUTURE TANK SAMPLE PUMP.
19	SUBMERSIBLE VORTEX TYPE MIXER (MXR-01010).
20	HANDRAIL MOUNTED, NEMA 4X, LOCKABLE POWER TERMINAL BOX (TERMINAL BOX "TB-P2") PER DETAIL A SHEET E6.2.
21	SUBMERSIBLE CHARMLEE BOOSTER PUMP (PMP-02000).
22	"ULTRA MAG" ELECTROMAGNETIC BI-DIRECTIONAL FLOW METER (FIT-02040).
29	0.185 MG WELDED STEEL UPPER ENCINAL POTABLE WATER STORAGE TANK.
39	2400 CFM SUPPLY AIR FAN AND WEATHER RESISTANT SOUND ENCLOSURE, 120VAC, 0.5HP, TYPE BIG WAVE HURRICANE 100 OR EQUAL. (BLR-01011)
40	TANK SHELL MOUNTED TANK BLOWER CONTROL PANEL (PROVIDED BY BLOWER MANUFACTURER).

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ENGINEER AND THE CITY OF ANY DISCREPANCIES FOUND.
2. ALL EQUIPMENT AND WIRING METHODS SHALL BE RATED FOR CORROSIVE LOCATIONS. EXPOSED CONDUIT SHALL BE PVC COATED RIGID GALVANIZED STEEL. EXPOSED EQUIPMENT SHALL BE NEMA 4X CORROSIVE RESISTANT (PVC COATED OR STAINLESS STEEL).
3. CONDUIT RUNS ARE SHOWN SCHEMATICALLY. THE CONTRACTOR SHALL COORDINATE WITH THE TANK MANUFACTURER TO PROVIDE CONDUIT SUPPORTS PER NEC REQUIREMENTS. CONDUIT SUPPORTS ON THE TANK SHALL BE STEEL AND BE FIELD WELDED TO THE TANK WHERE REQUIRED.
4. ROUTE CONDUIT ALONG BOTTOM OF OUTSIDE OF TANK, SUPPORTED AND SECURED ON CONCRETE PAD.
5. CONTRACTOR TO PROVIDE ALL SEISMIC CALCULATIONS AS REQUIRED FOR MOUNTING EQUIPMENT.
6. BELOWGROUND TO ABOVEGROUND CONDUIT TRANSITIONS PER DETAIL D, SHEET E6.1.
7. GROUND AND BOND ALL ENCLOSURES PER GROUNDING PLANS AND MANUFACTURER/CODE REQUIREMENTS.
8. SEE CONDUIT SCHEDULE, PLAN LAYOUTS, AND PANEL LOAD DRAWINGS FOR FURTHER CIRCUIT INFORMATION.
9. NOT ALL EQUIPMENT AND WIRING ARE SHOWN ON THIS DIAGRAM. REFERENCE DRAWINGS IN THE ELECTRICAL SET AND ENTIRE PROJECT TO COMPLETELY UNDERSTAND THE SCOPE OF ELECTRICAL WORK.
10. DRAWINGS ARE DIAGRAMMATIC AND DO NOT REFLECT ACTUAL ROUTING. CONTRACTOR SHALL INSTALL PULLPOINTS WHERE REQUIRED FOR PULLING TENSION AND MAINTAINING LESS THAN (4) 90 DEGREE BENDS.
11. INSTALL EQUIPMENT PER MANUFACTURER REQUIREMENTS, SPECIFICATIONS, PLANS, AND DETAILS. SEE MECHANICAL PLANS.
12. CONTROL AND POWER CIRCUITS SHALL BE IN SEPARATE CONDUITS PER THE PLANS, MAINTAIN 12" MINIMUM DISTANCE BETWEEN POWER/CONTROL CIRCUITS.
13. CONTRACTOR SHALL MOUNT ELECTRICAL EQUIPMENT IN ACCORDANCE WITH WORKING SPACE REQUIREMENTS OF NEC 110.26(A)(1).

LEGEND

- C### — CONTROL IDENTIFICATION TAG. SEE SHEET E6.0.
- TB — NEW LOCKABLE TERMINAL BOX.
- NEW UNDERGROUND ELECTRICAL CONDUITS
- NEW ABOVEGROUND ELECTRICAL CONDUITS

NORTH

6 3 0 6 12

ELECTRICAL POWER PLAN

SCALE: 1"=6'

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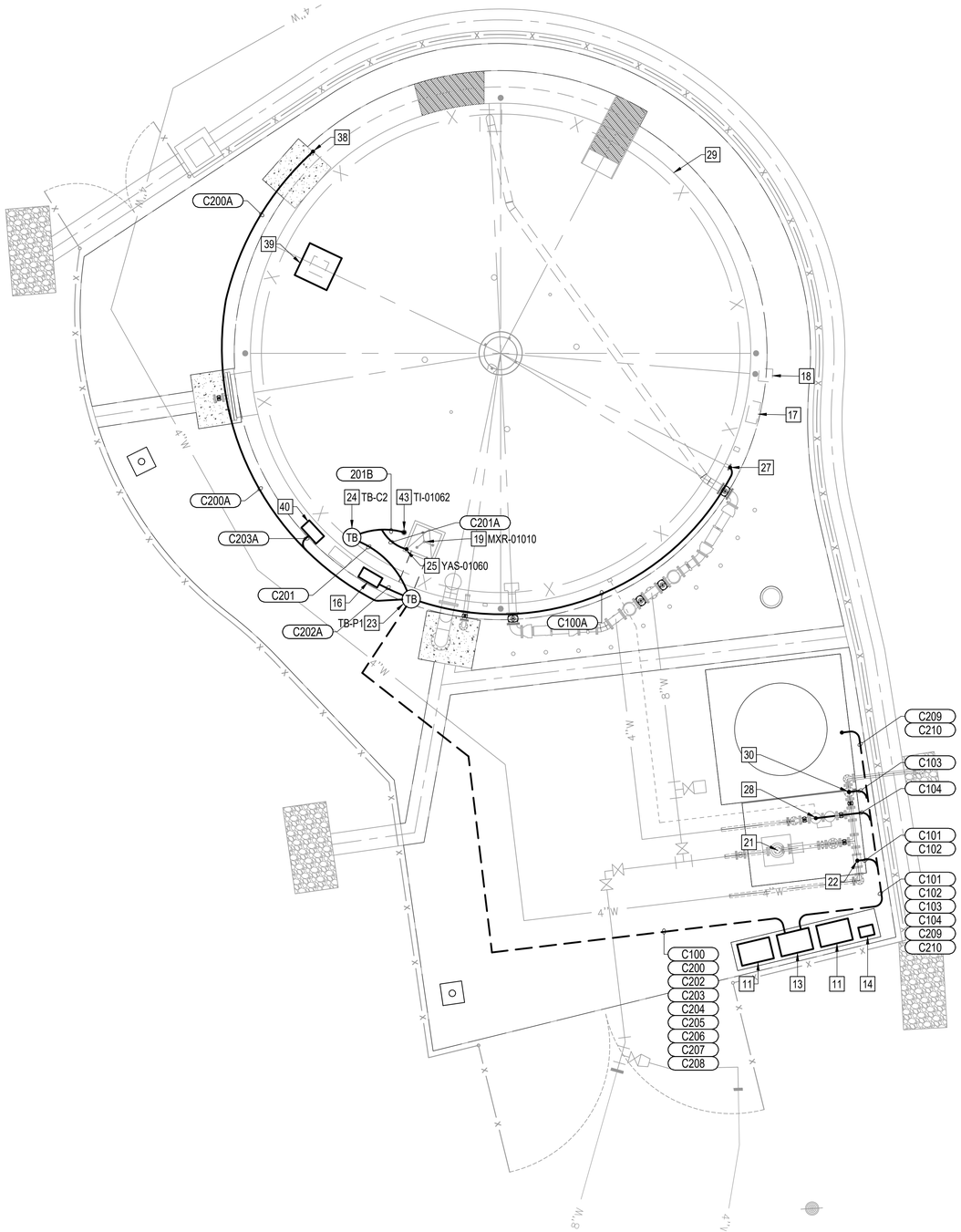
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LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENTS

ELECTRICAL POWER PLAN

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	37 OF 53



ELECTRICAL CONSTRUCTION NOTES

NO.	DESCRIPTION
11	SERVICE ENTRANCE EQUIPMENT AND CONDUIT PER POWER COMPANY SPECIFICATIONS.
13	STANCHION MOUNTED CHARMLEE PUMP STATION MOTOR CONTROL PANEL, 100A, 480/277V, NEMA 4X.
14	STANCHION MOUNTED PANEL "A", 120/240V, 100 AMPS, 24 CIRCUITS, NEMA 4X, TYPE EATON, 20" W x 12" D.
16	STANCHION MOUNTED TANK MIXER CONTROL PANEL (PROVIDED BY MIXER MANUFACTURER).
17	FUTURE WATER QUALITY ANALYZER SYSTEM.
18	FUTURE TANK SAMPLE PUMP.
19	SUBMERSIBLE VORTEX TYPE MIXER (MXR-01010).
21	SUBMERSIBLE CHARMLEE BOOSTER PUMP (PMP-02000).
22	"ULTRA MAG" ELECTROMAGNETIC BI-DIRECTIONAL FLOW METER (FIT-02040).
23	STANCHION MOUNTED, NEMA 4X, LOCKABLE CONTROL TERMINAL BOX (TERMINAL BOX "TB-C1") PER DETAIL G SHEET E6.1.
24	HANDRAIL MOUNTED, NEMA 4X, LOCKABLE CONTROL TERMINAL BOX (TERMINAL BOX "TB-C2") PER DETAIL A SHEET E6.2.
25	MAGNETIC NON-CONTACTING INSTRUSION ALARM ON ACCESS HATCH (YAS-01060).
27	PRESSURE BASED TANK LEVEL TRANSMITTER (LIT-01050).
28	EMERGENCY TANK BACKFILL VALVE POSITION SWITCH CLOSED (ZSC-01021).
29	0.185 MG WELDED STEEL UPPER ENCINAL POTABLE WATER STORAGE TANK.
30	CHARMLEE PRESSURE RELIEF VALVE POSITION SWITCH CLOSED (ZSC-02029).
38	NEW MAGNETIC NON-CONTACTING INTRUSION ALARM ON LADDER (YAS-01061).
39	2400 CFM SUPPLY AIR FAN AND WEATHER RESISTANT SOUND ENCLOSURE, 120VAC, 0.5HP, TYPE BIG WAVE HURRICANE 100 OR EQUAL. (BLR-01011)
40	TANK SHELL MOUNTED TANK BLOWER CONTROL PANEL (PROVIDED BY BLOWER MANUFACTURER).
43	TANK TEMPERATURE SENSOR PER MANUFACTURER'S REQUIREMENTS (INSTALL SENSOR IN TANK HEADSPACE).

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ENGINEER AND THE CITY OF ANY DISCREPANCIES FOUND.
2. ALL EQUIPMENT AND WIRING METHODS SHALL BE RATED FOR CORROSIVE LOCATIONS. EXPOSED CONDUIT SHALL BE PVC COATED RIGID GALVANIZED STEEL. EXPOSED EQUIPMENT SHALL BE NEMA 4X CORROSIVE RESISTANT (PVC COATED OR STAINLESS STEEL).
3. CONDUIT RUNS ARE SHOWN SCHEMATICALLY. THE CONTRACTOR SHALL COORDINATE WITH THE TANK MANUFACTURER TO PROVIDE CONDUIT SUPPORTS PER NEC REQUIREMENTS. CONDUIT SUPPORTS ON THE TANK SHALL BE STEEL AND BE FIELD WELDED TO THE TANK WHERE REQUIRED.
4. ROUTE CONDUIT ALONG BOTTOM OF OUTSIDE OF TANK, SUPPORTED AND SECURED ON CONCRETE PAD.
5. CONTRACTOR TO PROVIDE ALL SEISMIC CALCULATIONS AS REQUIRED FOR MOUNTING EQUIPMENT.
6. BELOWGROUND TO ABOVEGROUND CONDUIT TRANSITIONS PER DETAIL D, SHEET E6.1.
7. GROUND AND BOND ALL ENCLOSURES PER GROUNDING PLANS AND MANUFACTURER/CODE REQUIREMENTS.
8. SEE CONDUIT SCHEDULE, PLAN LAYOUTS, AND PANEL LOAD DRAWINGS FOR FURTHER CIRCUIT INFORMATION.
9. NOT ALL EQUIPMENT AND WIRING ARE SHOWN ON THIS DIAGRAM. REFERENCE DRAWINGS IN THE ELECTRICAL SET AND ENTIRE PROJECT TO COMPLETELY UNDERSTAND THE SCOPE OF ELECTRICAL WORK.
10. DRAWINGS ARE DIAGRAMMATIC AND DO NOT REFLECT ACTUAL ROUTING. CONTRACTOR SHALL INSTALL PULLPOINTS WHERE REQUIRED FOR PULLING TENSION AND MAINTAINING LESS THAN (4) 90 DEGREE BENDS.
11. INSTALL EQUIPMENT PER MANUFACTURER REQUIREMENTS, SPECIFICATIONS, PLANS, AND DETAILS. SEE MECHANICAL PLANS.
12. CONTROL AND POWER CIRCUITS SHALL BE IN SEPARATE CONDUITS PER THE PLANS, MAINTAIN 12" MINIMUM DISTANCE BETWEEN POWER/CONTROL CIRCUITS.
13. CONTRACTOR SHALL MOUNT ELECTRICAL EQUIPMENT IN ACCORDANCE WITH WORKING SPACE REQUIREMENTS OF NEC 110.26(A)(1).

LEGEND

- C### — CONTROL IDENTIFICATION TAG. SEE SHEET E6.0.
- TB — NEW LOCKABLE TERMINAL BOX.
- NEW UNDERGROUND ELECTRICAL CONDUITS
- NEW ABOVEGROUND ELECTRICAL CONDUITS

NORTH

6 3 0 6 12

ELECTRICAL CONTROL PLAN

SCALE: 1"=6'

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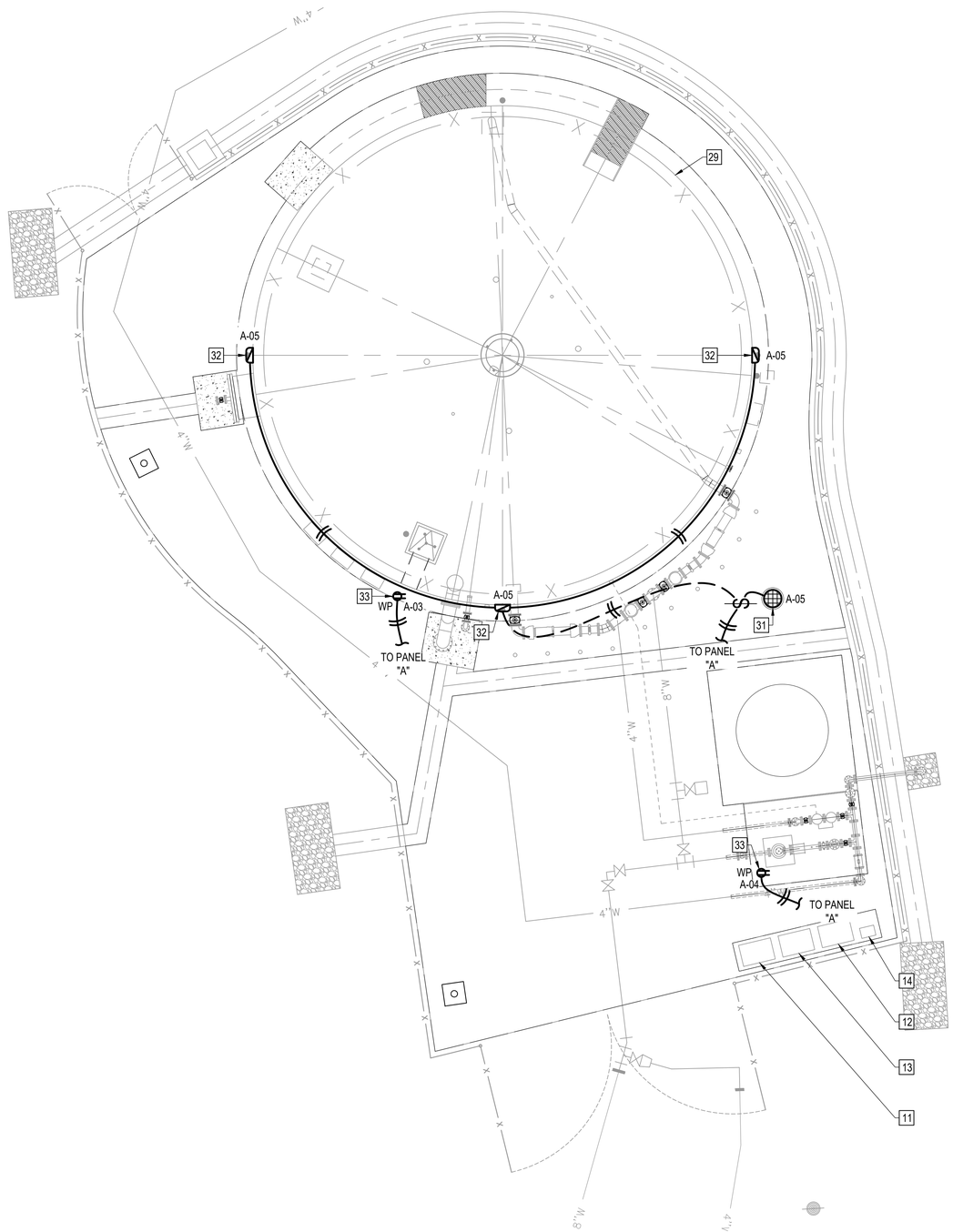
LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENTS

ELECTRICAL CONTROL PLAN

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	38 OF 53

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ELECTRICAL CONSTRUCTION NOTES

NO.	DESCRIPTION
11	SERVICE ENTRANCE EQUIPMENT AND CONDUIT PER POWER COMPANY SPECIFICATIONS.
12	SERVICE ENTRANCE SECTION SHALL BE LABELED WITH AVAILABLE FAULT CURRENT IN ACCORDANCE WITH NEC 110.24(A).
13	STANCHION MOUNTED CHARMLEE PUMP STATION MOTOR CONTROL PANEL, 100A, 480/277V, NEMA 4X.
14	STANCHION MOUNTED PANEL "A". 120/240V, 100 AMPS, 24 CIRCUITS, NEMA 4X, TYPE EATON, 20" W x 12" D.
29	0.185 MG WELDED STEEL UPPER ENCINAL POTABLE WATER STORAGE TANK.
31	10-FOOT TALL POLE MOUNTED LED FLOOD LIGHT
32	TANK SHELL MOUNTED (10 FEET ABOVE TANK FINISHED FLOOR) WEATHERPROOF LED FLOOD LIGHTS.
33	STANCHION MOUNTED GFCI RECEPTACLE WITH WEATHERPROOF ENCLOSURE PER DETAIL A SHEET E6.1.

NOTES

1. CONDUCTORS FOR HOME RUN CIRCUITS FOR LIGHTING SHALL BE #10 AWG MINIMUM SIZE, UNLESS NOTED OTHERWISE.
2. LIGHTING WIRING SHALL BE TYPE XHHW-2 AND RATED FOR AN AMBIENT TEMPERATURE OF 90° THROUGHOUT THE PROJECT.
3. ALL WIRING SHOWN SHALL BE WITHIN PVC COATED GRS CONDUITS.
4. MOUNT AND WIRE ALL EQUIPMENT PER THE MANUFACTURER'S REQUIREMENTS.
5. DE-RATE CONDUCTOR AMPACITY BASED ON # OF CURRENT CARRYING CONDUCTORS AS APPLICABLE.
6. ALL SITE LIGHTING SHALL BE WIRED DIRECTLY TO AN ON/OFF SWITCH.
7. ALL SITE LIGHTING WILL BE IN COMPLIANCE WITH THE CITY'S DARK SKY ORDINANCE (MMC SECTION 17.41).

LEGEND

A-##	TANK SHELL MOUNTED LED FLOOD LIGHT, 78W, 9,989 LUMENS, RAB FXLED OR EQUAL.
WP	120V, 20A GFCI DUPLEX TEMPERATURE/WEATHER RESISTANT RECEPTACLE WITH METALLIC WEATHERPROOF COVER WHILE IN USE COVER, EXTRA DUTY.
A-##	120V PANEL AND CIRCUIT DESIGNATION.
	10' TALL POLE MOUNTED WEATHERPROOF LED LIGHT, 26W, 3,484 LUMENS, RAB ALED26 OR EQUAL
	120 VAC, 20 AMP, STACHION MOUNTED LIGHT SWITCH WITHIN NEMA 4X RATED ENCLOSURE.
	HASH MARKS INDICATING NUMBER OF #12 CURRENT CARRYING CONDUCTORS. GROUND CONDUCTOR(S) NOT SHOWN FOR CLARITY. ALL CONDUITS SHALL HAVE A MINIMUM #12 GROUND AND SIZED PER CODE REQUIREMENTS.

DWG NO.
E4.2

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LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENTS

LIGHTING & RECEPTACLE PLAN

PROJ ID WWD2900065 | PCA Y5292300 | SPEC WWD 29-825 | SHEET 39 OF 53

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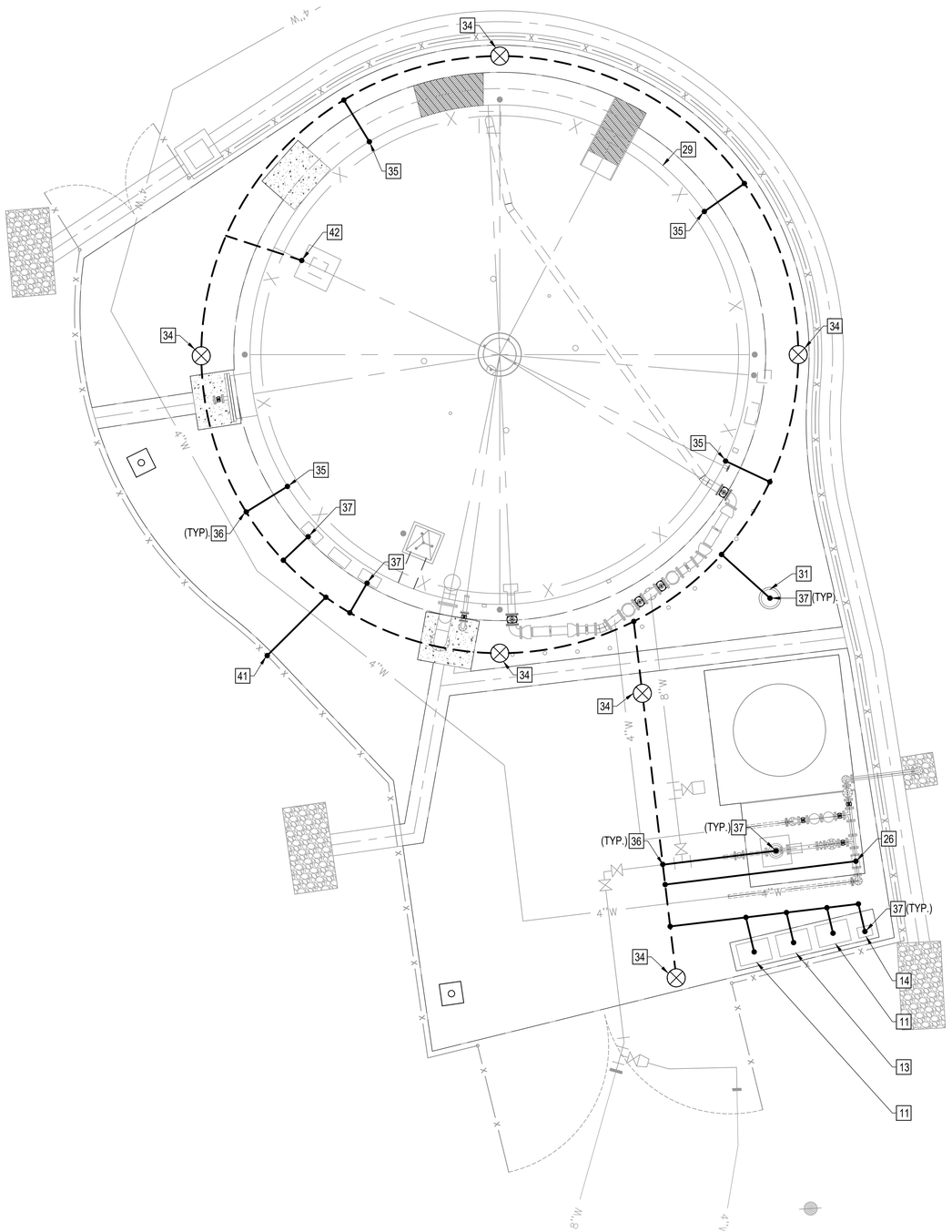
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NORTH

6 3 0 6 12

LIGHTING CONTROL PLAN
SCALE: 1"=6'

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ELECTRICAL CONSTRUCTION NOTES

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11	SERVICE ENTRANCE EQUIPMENT AND CONDUIT PER POWER COMPANY SPECIFICATIONS.
13	STANCHION MOUNTED CHARMLEE PUMP STATION MOTOR CONTROL PANEL, 100A, 480/277V, NEMA 4X.
14	STANCHION MOUNTED PANEL "A". 120/240V, 100 AMPS, 24 CIRCUITS, NEMA 4X, TYPE EATON, 20" W x 12" D.
26	GROUND FLOW METER (FIT-02040) PER DETAIL B SHEET E6.2.
29	0.185 MG WELDED STEEL UPPER ENCINAL POTABLE WATER STORAGE TANK.
31	10-FOOT TALL POLE MOUNTED LED FLOOD LIGHT
34	GROUNDING ROD WITH H20 TRAFFIC RATED COVER PER DETAIL A SHEET E6.0
35	TANK GROUND SYSTEM PER DETAIL D SHEET E6.2.
36	GROUNDING WIRE CONNECTION PER DETAIL C SHEET E6.0
37	GROUNDING WIRE TO EQUIPMENT/PANEL CONNECTION PER DETAIL D SHEET E6.0
41	ROUTE TO AND GROUND SITE PERIMETER FENCE PER DETAIL C SHEET E6.1
42	EQUIPMENT GROUNDING CONDUCTOR ON BLOWER MOTOR PER DETAIL D SHEET E6.0.

NOTES

1. GROUND AND BOND ALL EQUIPMENT AND ENCLOSURES PER MANUFACTURER REQUIREMENTS AND NEC 250.
2. GROUND AND BOND ALL MOTOR FRAMES TO THE GROUND RING.
3. PROVIDE GROUNDING BUS FOR MOTOR CONTROL PANEL.
4. ALL METALLIC ENCLOSURES INCLUDING FENCES, GATES, RAILING OR OTHER METAL PERSONNEL MAY COME IN CONTACT WITH, SHALL BE EFFECTIVELY GROUNDED.
5. BARE GROUND CONDUIT CONNECTIONS EXPOSED TO THE ATMOSPHERE SHALL BE COVERED WITH GLYPTAL OR EQUIVALENT.

LEGEND

- NEW GROUNDING ROD
- #2/0 GROUNDING ELECTRODE CONDUCTOR
- #2 EQUIPMENT GROUNDING CONDUCTOR
- GROUNDING CONNECTION PER ELECTRICAL DETAILS

NORTH

6 3 0 6 12

GROUNDING PLAN

SCALE: 1"=6'

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DWG NO. E4.3

100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENTS

GROUNDING PLAN

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	40 OF 53

POWER CONDUIT WIRE SCHEDULE						
CONDUIT		WIRE		FROM	TO	NOTES
NO.	SIZE	POWER	GROUND			
PUTIL1	PER SCE	PER SCE	PER SCE	EXIST. UTILITY POWER POLE	NEW COUNTY SERVICE ENTRANCE	WIRE SIZE PER SCE REQUIREMENTS
P100	1.5"	3 - #2	1 - #6	NEW COUNTY SERVICE ENTRANCE	PANEL A	
P110	1"	2 - #10	1 - #10	PANEL A	POWER TERMINAL BOX "TB-P1"	
P110A	1"	2 - #10	1 - #10	POWER TERMINAL BOX "TB-P1"	TANK MIXER CONTROL PANEL	
P110B	1"	2 - #10	1 - #10	TANK MIXER CONTROL PANEL	POWER TERMINAL BOX "TB-P2"	DESIGN BASED ON PAX PWM400 SUBMERSIBLE VORTEX MIXER. CONTRACTOR TO COORDINATE THE FINAL REQUIRED WIRE SIZE AND QUANTITY BASED ON THE SELECTED MANUFACTURER.
P110C	1"	1 - FACTORY CABLE		POWER TERMINAL BOX "TB-P2"	TANK MIXER MXR-01010	PROVIDE SUBMERSIBLE FACTORY CABLE OF SUFFICIENT LENGTH EXTEND FROM MIXER TO POWER TERMINAL BOX #P2
P111	1"	-	-	PANEL A	POWER TERMINAL BOX "TB-P1"	CAP WITH PULLSTRING FOR FUTURE USE
P111A	1"	-	-	POWER TERMINAL BOX "TB-P1"	TANK MIXER CONTROL PANEL	CAP WITH PULLSTRING FOR FUTURE USE
P111B	1"	-	-	TANK MIXER CONTROL PANEL	POWER TERMINAL BOX "TB-P2"	CAP WITH PULLSTRING FOR FUTURE USE
P112	1"	2 - #10	1 - #10	PANEL A	POWER TERMINAL BOX "TB-P1"	
P112A	1"	2 - #10	1 - #10	POWER TERMINAL BOX "TB-P1"	TANK BLOWER CONTROL PANEL	
P112B	1"	2 - #10	1 - #10	TANK BLOWER CONTROL PANEL	TANK BLOWER (BLR-01011)	
P113	1"	-	-	PANEL A	POWER TERMINAL BOX "TB-P1"	CAP WITH PULLSTRING FOR FUTURE USE
P113A	1"	-	-	POWER TERMINAL BOX "TB-P1"	POTENTIAL SOLAR EQUIPMENT (COUNTY TO CONFIRM LOCATION)	CAP WITH PULLSTRING FOR FUTURE USE
P114	1"	-	-	PANEL A	POWER TERMINAL BOX "TB-P1"	CAP WITH PULLSTRING FOR FUTURE USE (ANTENNA)
P114A	1"	-	-	POWER TERMINAL BOX "TB-P1"	ANTENNA AREA (COUNTY TO CONFIRM LOCATION)	CAP WITH PULLSTRING FOR FUTURE USE (ANTENNA)
P120	1"	2 - #12	1 - #12	PANEL A	CHARMLEE PS FLOW METER (FIT-02040)	
PUTIL2	PER SCE	PER SCE	PER SCE	EXIST. UTILITY POWER POLE	NEW CITY SERVICE ENTRANCE	WIRE SIZE PER SCE REQUIREMENTS
P200	1.5"	4 - #2	1 - #6	NEW CITY SERVICE ENTRANCE	MOTOR CONTROL PANEL (MCP)	
P210	1"	3 - #8	1 - #8	MOTOR CONTROL PANEL (MCP)	CHARMLEE PUMP (PMP-02000)	PROVIDE FLEXIBLE CONDUIT CONNECTION AT MOTOR

CONTROL CONDUIT WIRE SCHEDULE						
CONDUIT		WIRE		FROM	TO	NOTES
NO.	SIZE	CONTROL	GROUND			
C100	3/4"	1 - #18 TSP	1 - #12	MOTOR CONTROL PANEL (MCP)	CONTROL TERMINAL BOX "TB-C1"	
C100A	3/4"	1 - #18 TSP	-	CONTROL TERMINAL BOX "TB-C1"	TANK LEVEL TRANSMITTER (LIT-01050)	
C101	3/4"	1 - #18 TSP, 2 - #14	-	MOTOR CONTROL PANEL (MCP)	CHARMLEE FLOW METER (FIT-02040)	
C102	3/4"	2 - #12	-	MOTOR CONTROL PANEL (MCP)	CHARMLEE FLOW METER (FIT-02040)	
C103	3/4"	2 - #12	-	MOTOR CONTROL PANEL (MCP)	CHARMLEE PRESSURE RELIEF VALVE CLOSED POSITION SWITCH (ZSC-02030)	
C104	3/4"	2 - #12	-	MOTOR CONTROL PANEL (MCP)	EMERGENCY TANK FILL VALVE (ZSC-02028)	
C200	1"	6 - #12	-	MOTOR CONTROL PANEL (MCP)	CONTROL TERMINAL BOX "TB-C1"	YAS-01060 & YAS-01061, AND TI-01062
C200A	3/4"	2 - #12	-	CONTROL TERMINAL BOX "TB-C1"	TANK LADDER INTRUSION ALARM (YAS-01061)	
C201	1"	4 - #14	1 - #12	CONTROL TERMINAL BOX "TB-C1"	CONTROL TERMINAL BOX "TB-C2"	YAS-01060 AND TI-01062
C201A	3/4"	2 - #12	-	CONTROL TERMINAL BOX "TB-C2"	TANK INTRUSION ALARM (YAS-01060)	
C201B	3/4"	FACTORY CABLE		CONTROL TERMINAL BOX "TB-C2"	TANK TEMPERATURE MONITOR (TI-01062)	
C202	3/4"	8 - #12	-	MOTOR CONTROL PANEL (MCP)	CONTROL TERMINAL BOX "TB-C1"	
C202A	3/4"	8 - #12	-	CONTROL TERMINAL BOX "TB-C1"	TANK MIXER CONTROL PANEL	
C203	3/4"	4 - #12	-	MOTOR CONTROL PANEL (MCP)	CONTROL TERMINAL BOX "TB-C1"	
C203A	3/4"	4 - #12	-	CONTROL TERMINAL BOX "TB-C1"	TANK BLOWER CONTROL PANEL	
C204	1"	-	-	MOTOR CONTROL PANEL (MCP)	CONTROL TERMINAL BOX #C1	CAP WITH PULLSTRING FOR FUTURE USE
C205	1"	-	-	MOTOR CONTROL PANEL (MCP)	CONTROL TERMINAL BOX #C1	CAP WITH PULLSTRING FOR FUTURE USE
C206	1"	-	-	MOTOR CONTROL PANEL (MCP)	CONTROL TERMINAL BOX #C1	CAP WITH PULLSTRING FOR FUTURE USE
C207	1"	-	-	MOTOR CONTROL PANEL (MCP)	CONTROL TERMINAL BOX #C1	CAP WITH PULLSTRING FOR FUTURE USE
C208	1"	-	-	MOTOR CONTROL PANEL (MCP)	CONTROL TERMINAL BOX #C1	CAP WITH PULLSTRING FOR FUTURE USE
C209	1"	-	-	MOTOR CONTROL PANEL (MCP)	TEMPORARY TANK AREA (COUNTY TO CONFIRM LOCATION)	CAP WITH PULLSTRING FOR FUTURE USE
C210	1"	-	-	MOTOR CONTROL PANEL (MCP)	TEMPORARY TANK AREA (COUNTY TO CONFIRM LOCATION)	CAP WITH PULLSTRING FOR FUTURE USE

NOTES

1. ALL ABOVE GROUND AND EXTERIOR CONDUITS SHALL BE INSTALLED WITH INTRUSION/TAMPER RESISTANT ALL ABOVE GROUND CONDUITS SHALL BE CONSTRUCTED OF PVC COATED GALVANIZED RIGID STEEL CONDUITS.
2. ALL BELOW GROUND CONDUITS SHALL BE CONSTRUCTED OF PVC SCH. 40.
3. ALL CONDUITS RUNS SHOWN IN THE PLANS ARE SCHEMATIC IN NATURE. CONTRACTOR SHALL INSTALL ALL CONDUITS IN A MANNER TO AVOID CLEARANCE OR TRIPPING HAZARD IN ACCORDANCE WITH THE LOCAL REGULATORY REQUIREMENTS.

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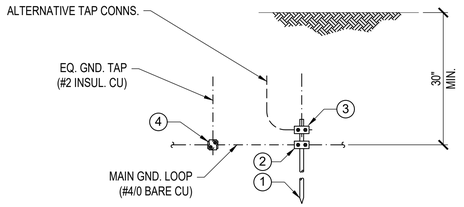
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LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENTS

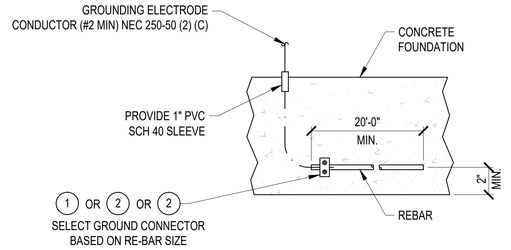
CABLE AND CONDUIT SCHEDULE

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	41 OF 53



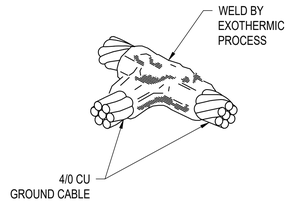
BILL OF MATERIALS		
NO.	DESCRIPTION	QTY
1	GROUND ROD, 3/4" DIA. x 10', COPPER-CLAD STEEL	1
2	GROUND ROD CONNECTOR (5/8"-3/4", 2/0 SOL-250)	1
3	GROUND ROD CONNECTOR (5/8"-3/4", #4 SOL-2/0)	1
4	GROUND CABLE CONNECTOR (#2/0-250 TO #4-#2/0)	1

GROUND ROD "A" INSTALLATION — NTS — A

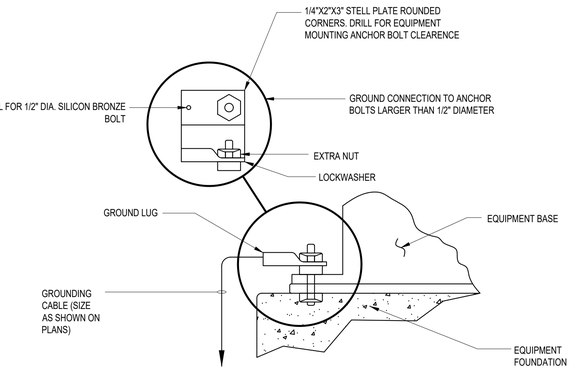


BILL OF MATERIALS		
NO.	DESCRIPTION	QTY
1	#4 RE-BAR, 1/2" DIA.	1
2	#5 OR #6 RE-BAR, 5/8" OR 3/4" DIA.	1
3	#7 OR #8 RE-BAR, 7/8" OR 1" DIA.	1

GROUND BOND TO REBAR — NTS — B



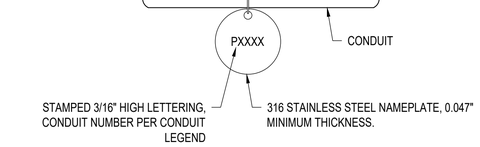
GROUNDING CONNECTION — NTS — C



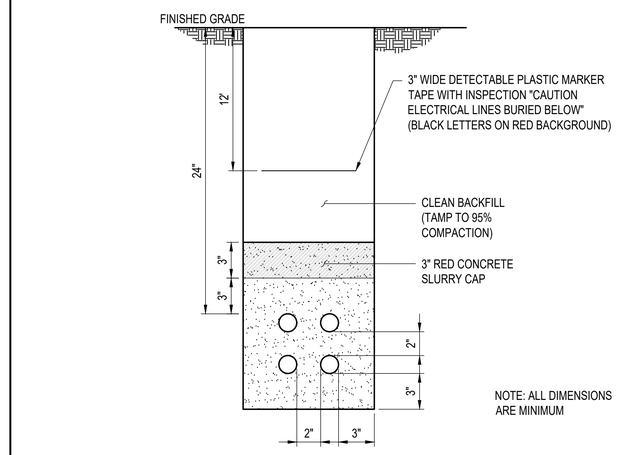
NOTE:

GROUND LUG SHALL BE BOLTED TO THE ANCHOR WITH A SECOND NUT AND LOCKWASHER. WHEN THE ANCHOR BOLT IS TOO LARGE FOR THE GROUND LUG A STEEL PLATE SHALL BE PROVIDED. DRILLED FOR ANCHOR BOLT CLEARANCE AND INSTALLED AS SHOWN WITH GROUND CONNECTOR BOLTED TO THE STEEL PLATE WITH 1/2" SILICONE BRONZE BOLT NUT AND FLAT WASHER.

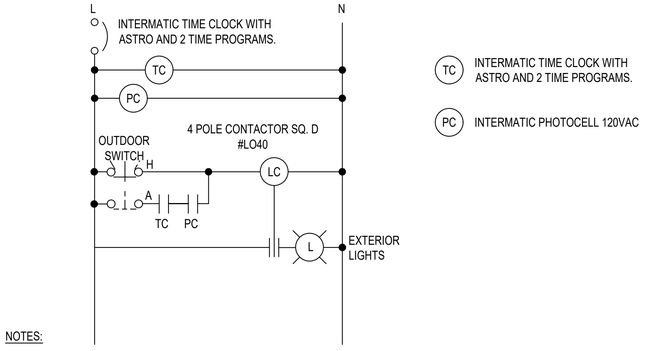
EQUIPMENT GROUNDING — NTS — D



CONDUIT MARKING — NTS — E



CONDUIT TRENCH DETAIL — NTS — F



NOTES:

1. PHOTOCELL SHALL BE MOUNTED TO THE TOP OF THE TANK CLEAR OF OVERHEAD OBSTRUCTIONS.
2. INSTALL NEW LIGHTS IN PARALLEL WITH EXISTING LIGHTS
3. EXTERIOR LIGHTING CONTROL DIAGRAM SHOWN FOR REFERENCE PURPOSES ONLY. CONTRACTOR SHALL FIELD VERIFY AND NOTIFY THE ENGINEER AND CITY OF ANY DISCREPANCIES

EXTERIOR LIGHTING CONTROL DIAGRAM — NTS — G

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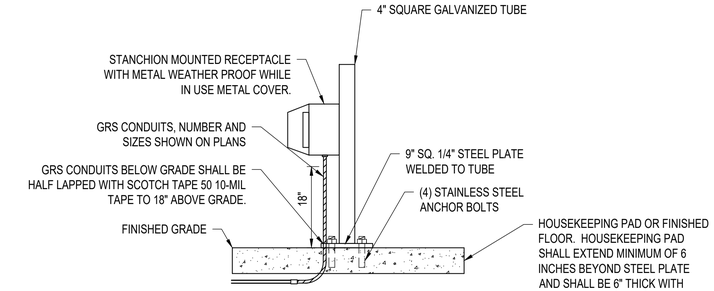
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LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENTS

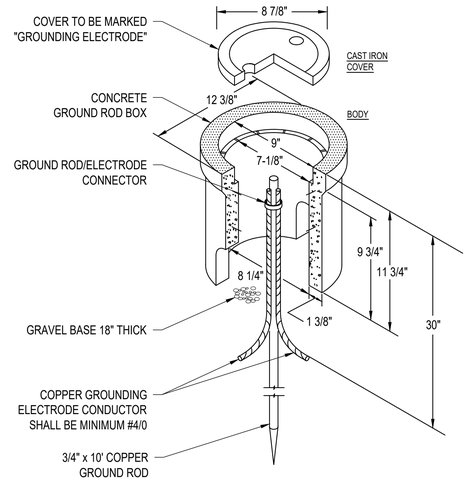
ELECTRICAL DETAILS

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	42 OF 53

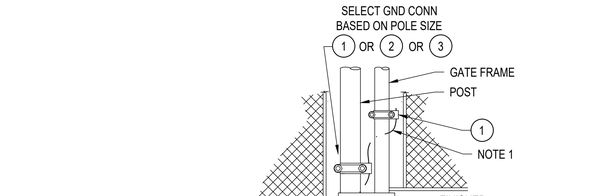


NOTES:
1. RECEPTACLE MAY BE ATTACHED TO TANK SHELL DIRECTLY WITH UNISTRUCT. CONTRACTOR SHALL COORDINATE WITH THE TANK MANUFACTURER ON THE ALLOWABLE CONNECTION MATERIAL, AND METHODS OF INSTALLATION.

GFCI RECEPTACLE DETAIL — NTS — A



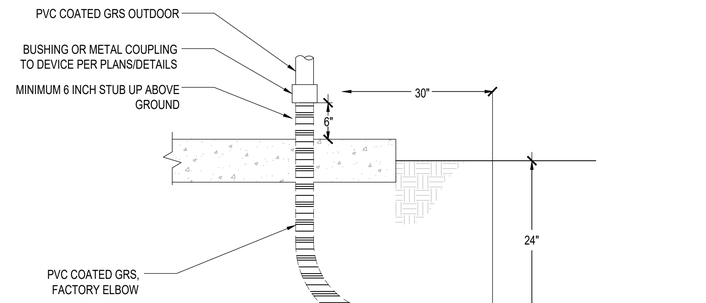
CONCRETE GROUND ROD INSPECTION DETAIL — NTS — B



NOTES:
1. LEAVE SUFFICIENT SLACK IN CABLE FOR GATE SWING.

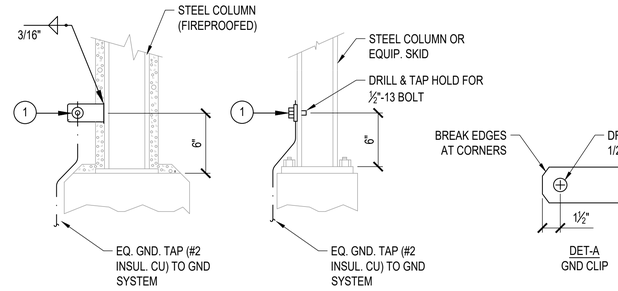
BILL OF MATERIALS		
NO.	DESCRIPTION	QTY
1	GROUND CONNECTOR, 1/C (1.25-2", #4-#4/0)	1
2	GROUND CONNECTOR, 1/C, (2.5-3.5", #4-#4/0)	1
3	GROUND CONNECTOR, 1/C, (6", #4-#4/0)	1

GROUND TO FENCE DETAIL — NTS — C



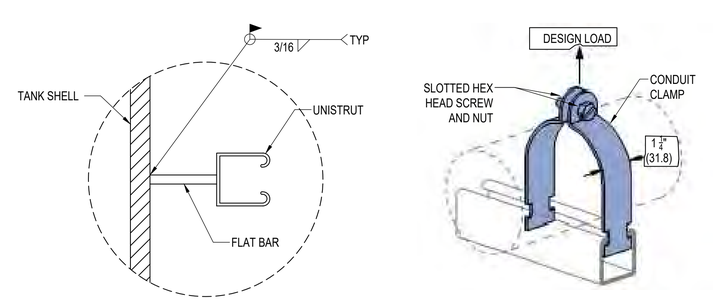
NOTES:
1. ALL DIMENSIONS SHOWN ARE MINIMUM.
2. PROVIDE 6 INCH COVER OF CONCRETE WITHIN 2 FEET OF ALL DRIVABLE AREAS PER DETAILS AND PLAN.

TYPICAL CONDUIT STUB-UP DETAIL — NTS — D



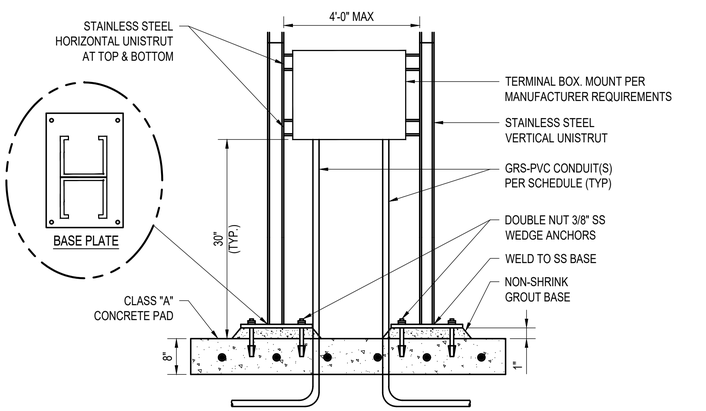
BILL OF MATERIALS		
NO.	DESCRIPTION	QTY
1	SERVIT POST CONNECTOR, 2/C, 1/2"-13 LONG STUD, #2-#2/0 W/ NUT & LOCKWASHER	1
2	GROUND CLIP, MILD STEEL, 5" x 3" x 1/4" FIELD FABRICATE	1

GROUNDING CONNECTION - EQUIPMENT/STEEL COLUMN — NTS — E



NOTES:
1. RIGID METAL CONDUIT SHALL BE SUPPORTED AT INTERVALS NOT EXCEEDING10 FT. AND SECURED WITHIN 3FT. OF CONDUIT TERMINATIONS PER NEC 344.30.
2. DETAIL SHOWN FOR REFERENCE. CONTRACTOR SHALL COORDINATE WITH TANK MANUFACTURER TO PROVIDE CONDUIT SUPPORTS PER NEC REQUIREMENTS.

TANK CONDUIT MOUNTING DETAIL — NTS — F



TERMINAL BOX SUPPORT DETAIL — NTS — G

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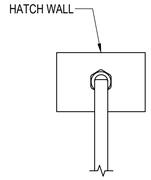
UPPER ENCINAL TANK IMPROVEMENTS

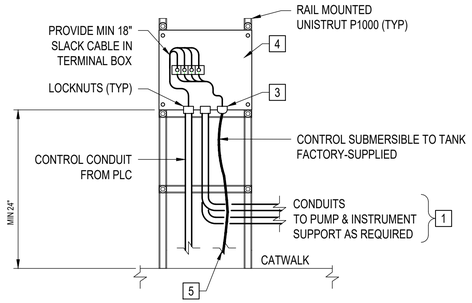
ELECTRICAL DETAILS

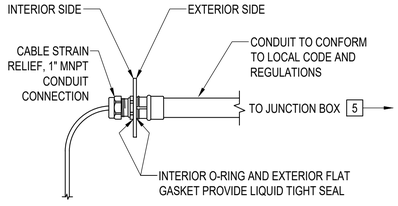
PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	43 OF 53

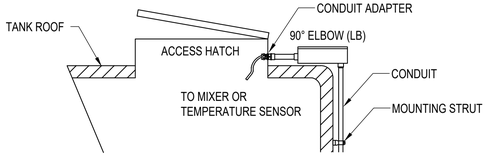
NOTES:

1. SEE SHEET E4.1 FOR CONTROL CONDUIT DESTINATIONS.
2. SPLICE TO VENDOR CONDUCTORS IN TERMINAL BOX USING RESPECTIVE TERMINAL BLOCKS.
3. REMOVABLE STAINLESS STEEL TO CABLE GLAND CABLE CONNECTORS.
4. TERMINAL BOX, NEMA 4X STAINLESS STEEL (24"HX24"MIN) WITH PADLOCKABLE HINGED DOOR, WITH TEN 20A TERMINAL BLOCKS FOR CONTROL WIRES INSTALLED ON A REMOVABLE BACK PANEL.
5. MANUFACTURE'S CABLE AT TANK SHALL BE ROUTED TO AVOID TRIPPING HAZARDS AND CLEARANCE REQUIREMENTS.



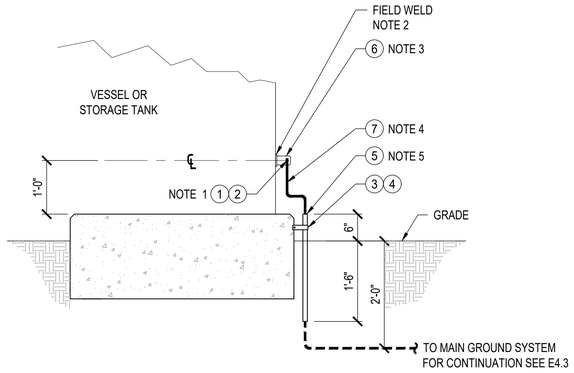




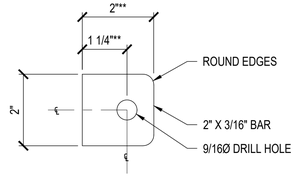


TANK TERMINAL BOX

SCALE: N.T.S. | A



ELEVATION



STEEL GROUND PLATE BY FIELD (WELD TO TANK)

BILL OF MATERIALS		
NO.	DESCRIPTION	QTY
1	GROUND CONNECTOR, SERVIT POST	1
2	1/2"HEX NUT AND LOCK WASHER	1
3	1" CONDUIT CLAMP WITH BACKING PLATE	1
4	1/4" CINCH ANCHOR	1
5	1" PVC CONDUIT SLEEVE, SCHEDULE 80, LENGTH AS REQUIRED	1
6	STEEL GROUND PLATE	1
7	1/4" CINCH ANCHOR	AS REQ'D

NOTES:

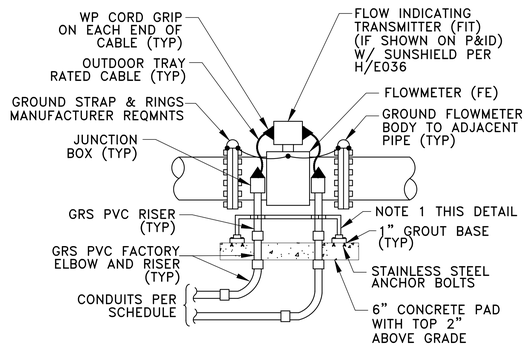
1. BARE GROUND CONNECTIONS EXPOSED TO THE ATMOSPHERE SHALL BE COVERED WITH GLYPTAL OR EQUIVALENT.
2. FIELD CONTRACTOR TO CHECK WITH TANK/VESSEL MANUFACTURER BEFORE WELDING.
3. **DIMENSIONS SHOWN SHALL INCREASE BY THE THICKNESS OF FIREPROOFING IF VESSEL OR TANK HAS FIREPROOFING.
4. MINIMUM NUMBER OF LUGS AND GROUND WIRE SIZE REQUIRED FOR TANK/VESSEL:
   CAPACITY 2000 GAL. AND UNDER - ONE (1) LUG, #2 AWG GREEN INSULATED GROUND
   CAPACITY OVER 2000 GAL. - TWO (2) LUGS, #2/O AWG GREEN INSULATED GROUND
   OVER 19'-00" IN HEIGHT - TWO (2) LUGS, #2/O AWG GREEN INSULATED GROUND
   OVER 26'-00" IN DIAMETER - FOUR (4) LUGS, #2/O AWG GREEN INSULATED GROUND
   REFER TO PROJECT GROUNDING DRAWINGS FOR DETAILS.
5. SEAL TOP OF PVC AROUND THE GROUND WIRE TO MAKE CONDUIT LIQUID TIGHT.

TANK GROUNDING DETAIL

SCALE: N.T.S. | C | DWG NO. E6.2

NOTE:

1. STAINLESS STEEL SUPPORT WITH TWO HOLE BASE ON EACH SIDE AND HEIGHT OF HORIZONTAL UNISTRUT SUPPORT SHALL BE 12" MINIMUM.



FLOW METER GROUNDING

SCALE: N.T.S. | B

FILE NAME:
DATE LAST SAVED:
CHECKER: BI
DESIGNER: JS / GT
DRAFTER: JS

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P: (714) 481-7300 | www.pacewater.com

DATE	INITIALS	DESCRIPTION

REVISIONS

XXX — PROJECT ENGINEER
06/05/2026 — DATE

100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENTS

ELECTRICAL DETAILS

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	44 OF 53

INSTRUMENT IDENTIFICATION LETTERS (FSS)

	FIRST – LETTER (F)		SUCCEEDING – LETTERS (SS)		
	MEASURED OF INITIATING VARIABLE	MODIFIER	READOUT PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY			CONTROLLER	
D	DENSITY	DIFFERENTIAL			
E	VOLTAGE		SENSOR, PRIMARY ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G	GAUGE, GENERAL		GLASS VIEWING DEVICE		
H	HAND				HIGH, OPENED
I	CURRENT (ELEC.)		INDICATING, INDICATOR		
J	POWER		SCAN		
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW, CLOSED
M	MOISTURE, MOTION	MOMENTARY			MIDDLE
N	INTRUSION, STATUS	MOMENTARY	STATUS	USER'S CHOICE	USER'S CHOICE
O	OPERATOR, TORQUE		ORIFICE, RESTRICTION		USER'S CHOICE
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RESET, RADIATION		RECORD OR PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	SLOW
T	TEMPERATURE			TRANSDUCER, TRANSMITTER	TEST
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECH. ANALYSIS			VALVE, DAMPER LOUVER	
W	WEIGHT, FORCE		WELL		
X	SWITCH	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE, PRESENCE	Y AXIS	UNCLASSIFIED	RELAY, COMPUTE, CONVERT	
Z	POSITION DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

LINE NUMBERING

00" – INFLT – 001 (EXAMPLE)

- 00" – SEQUENTIAL LINE NO.
- INFLT – FLUID CODE
- 001 – NOMINAL LINE SIZE

EQUIPMENT NUMBERING

F SS – PP T NN (EXAMPLE)

- NN – ITEM NUMBER
- T – SERIES (TRAIN) LOCATION
- PP – PROCESS LOCATION
- SS – SUCCEEDING LETTERS (INSTRUMENT ID)
- F – FIRST LETTER (INSTRUMENT ID)

EXAMPLE:
LT–03121 = RAS/WAS PUMP STATION LEVEL TRANSDUCER #1

PROCESS LOCATION (PP)

00	MISCELLANEOUS
01	UPPER ENCINAL TANK
02	CHARMLEE P.S.

SERIES LOCATION (TT)

0	SHEET 0
1	SHEET 1
2	SHEET 2
3	SHEET 3
4	SHEET 4
5	SHEET 5
6	SHEET 6
7	SHEET 7

FLUID CODE ABBREVIATION

PW	POTABLE WATER
BL	BLOWER

EQUIPMENT NUMBERS

EQUIPMENT ABBREVIATIONS	# STARTING AT
PUMPS (PMP)	00–09
MOTORS (M/MXR/BLR)	10–19
VALVES (MV/V/SV)	20–39
FLOW INST (FT/FS/FE/FIT)	40–49
PRESSURE INST (PT/PS/PG)	50–59
ANALYTICAL (AT)	60–69
LEVEL INST (LT/LS)	70–79

LINE CODES

- MAJOR PROCESS LINE
- MINOR PROCESS LINE
- AIR
- ELECTRICAL
- PLC TO SCADA COMMUNICATION
- AUTO–DIALER AND PRIORITY LEVEL
- 00"–XXX — LINE SIZE & NUMBER
- DESCRIPTION 1 / DESCRIPTION 2 / REF SHT IXX.X — PROCESS CONTINUATION WITHIN SCOPE
- SENSOR OR CONTROL

INSTRUMENT NUMBERING

FSS / NPPNNN / XX

- FSS – FIRST LETTER (INSTRUMENT ID), SUCCEEDING LETTERS (INSTRUMENT ID)
- NPPNNN – PROCESS LOCATION, SERIES (TRAIN) LOCATION, ITEM NUMBER
- XX – DEVICE FUNCTION EQUIPMENT NUMBER

LINE NUMBER GROUPS

100	POTABLE WATER
200	PROCESS AIR

GENERAL INSTRUMENT OR FUNCTION SYMBOLS

	FIELD MOUNTED	PRIMARY LOCATION ACCESSIBLE TO OPERATOR	PRIMARY LOCATION INACCESSIBLE TO OPERATOR	AUXILIARY LOCATION ACCESSIBLE TO OPERATOR
DISCRETE INSTRUMENTS	○	⊖	⊖	⊖
SHARED DISPLAY SHARED CONTROL	◯	⊖	⊖	⊖
COMPUTER FUNCTION	⬡	⬡	⬡	⬡
PROGRAMMABLE LOGIC CONTROL	◇	◇	◇	◇

HARDWARE INTERLOCK: (I)

PLC "SOFT" INTERLOCK: (I)

VALVE SYMBOLS

NC NO

- GATE VALVE
- GATE VALVE
- BALL VALVE
- DIAPHRAGM VALVE
- PLUG VALVE
- Pinch VALVE
- 3–WAY BALL VALVE
- NEEDLE VALVE
- MUD VALVE
- FLANGED BUTTERFLY
- WAFER/LUGGED BUTTERFLY
- CHECK VALVE
- DOUBLE LEAF CHECK VALVE
- WEIR GATE/TELESCOPE VALVE

VALVE ACTUATORS

- DIAPHRAGM ACTUATOR
- MOTOR ACTUATOR
- SOLENOID ACTUATOR
- CYLINDER ACTUATOR
- LEVER
- HAND WHEEL
- CHAIN WHEEL

RELIEF DEVICES

- AIR RELEASE
- VACUUM RELEASE
- RUPTURE DISK FOR PRESSURE RELIEF
- RUPTURE DISK FOR VACUUM RELIEF

REGULATORS

- PRESSURE REDUCING
- BACK PRESSURE
- PRESSURE SUSTAINING / REDUCING
- ALTITUDE VALVE

PIPING SYMBOLS

- Y STRAINER
- FLEXIBLE LINE
- BLIND FLANGE
- CAMLOCK FITTING
- PRESSURE DIAPHRAGM SEAL
- UNION
- CONCENTRIC REDUCER
- SPECTACLE BLIND
- ECCENTRIC REDUCER
- EXPANSION JOINT
- EDUCTOR
- TP XX — TIE–IN POINT
- WELDED CAP
- WELDED PIPE END
- FLANGE COUPLING ADAPTER
- SCREWED CAP

MECHANICAL EQUIPMENT

- METERING PUMP
- ULTRA SONIC LEVEL TRANSMITTER
- CENTRIFUGAL PUMP OR BLOWER
- CHEMICAL INJECTOR OR STATIC MIXER
- SUBMERSIBLE PUMP
- FLOW METER OR MOTOR
- TURBINE PUMP
- ROTAMETER
- VENTURI
- ROTARY BLOWER
- VORTEX SHEDDING
- SONIC
- MIXER
- FM — FLOW METER
- PROGRESSIVE CAVITY PUMP
- ACM — AIR COMPRESSOR
- AERATOR
- EXHAUST FAN
- DECANTER
- POSITIVE DISPLACEMENT PUMP

NOTE: ALL PRESSURE GAUGES AND OTHER SMALL PROCESS MECHANICAL INSTRUMENT EQUIPMENT SHALL BE SUPPLIED WITH ISOLATION VALVES AND ADDITIONAL APPURTENANCES (E.G. PRESSURE PULSATION DAMPENERS/SNUBBERS) AS REQUIRED FOR PROPER OPERATION

ABBREVIATIONS

AE	ANALYTICAL SENSOR
AI	ANALOG INPUT
AIT	ANALYTICAL INDICATOR TRANSMITTER
AMP	AMPERE
AO	ANALOG OUTPUT
AT	ANALYTICAL TRANSMITTER
ATS	AUTOMATIC TRANSFER SWITCH
CB	CIRCUIT BREAKER
CHV	CHECK VALVE
CL2	CHLORINE
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
ETM	ELAPSED TIME METER
EXIST	EXISTING
FCV	MODULATING CONTROL VALVE
FE	FLOW SENSOR
FI	FLOW INDICATOR
FIT	FLOW INDICATOR TRANSMITTER
FR	FORWARD–REVERSE
FS	FULL SPEED
FT	FLOW TRANSMITTER
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HMI	HUMAN MACHINE INTERFACE
HOA	HAND–OFF–AUTO
HOR	HAND–OFF–REMOTE
HS	HAND SWITCH
JB	JUNCTION BOX
LCP	LOCAL CONTROL PANEL
LE	LEVEL SENSOR
LIT	LEVEL INDICATOR TRANSMITTER
LOS	LOCK–OFF–STOP
LR	LOCAL / REMOTE
LSH	LEVEL SWITCH HIGH
LSHH	LEVEL SWITCH HIGH HIGH
LSL	LEVEL SWITCH LOW
LSLL	LEVEL SWITCH LOW LOW
LSM	LEVEL SWITCH MEDIUM
LT	LEVEL TRANSMITTER
MCAS	MINI CONTROL AND STATUS
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CONTROL PANEL
ME	MOISTURE SENSOR
MGD	MILLION GALLONS PER DAY
MGL	MILLIGRAM PER LITER
MOT	MOTOR
MS	MOTOR STARTER
MXR	MIXER
NaHSO3	SODIUM BISULFITE
NaOCL	SODIUM HYPOCHLORITE
OIT	OPERATOR INTERFACE TERMINAL
PE	PRESSURE SENSOR
PG	PRESSURE GAUGE
PI	PRESSURE INDICATOR
PID	PROPORTIONAL–INTEGRAL–DERIVATIVE
PIT	PRESSURE INDICATOR TRANSMITTER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PMP	PUMP
PNL	PANEL
PO	PULSE OUTPUT
PPG	POUNDS PER GALLON
PPH	POUNDS PER HOUR
PPM	PARTS PER MILLION
PRESS	PRESSURE
PRV	PRESSURE RELIEF OR REDUCING VALVE
PSH	PRESSURE SWITCH HIGH
PSI	POUNDS PER SQUARE INCH
PSL	PRESSURE SWITCH LOW
PT	PRESSURE TRANSMITTER
PV	PROCESS VARIABLE
REM	REMOTE
RF	RADIO FREQUENCY
RIO	REMOTE INPUT–OUTPUT
RST	RESET
RTU	REMOTE TELEMETRY UNIT
RVSS	REDUCED VOLTAGE SOFT STARTER
SES	SERVICE ENTRANCE SECTION
SP	SETPOINT
SPD	SPEED
SPR	SPARE
SS	START/STOP (MAINTAINED)
STG	MANUAL STOP GATE
SUG	SLUICE GATE
TE	TEMPERATURE SENSOR
TG	TEMPERATURE GAUGE
TI	TEMPERATURE INDICATOR
TIT	TEMPERATURE INDICATOR TRANSMITTER
TNK	TANK
TS	TEMPERATURE SWITCH
TSH	TEMPERATURE SWITCH HIGH
TT	TEMPERATURE TRANSMITTER
TV	TELESCOPING VALVE
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	MANUAL VALVE
VFD	VARIABLE FREQUENCY DRIVE
XV	AUTOMATED VALVE
ZS	SWITCH POSITION

FILE NAME

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DESIGNER: KS

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DATE		INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

DWG NO. I0.0

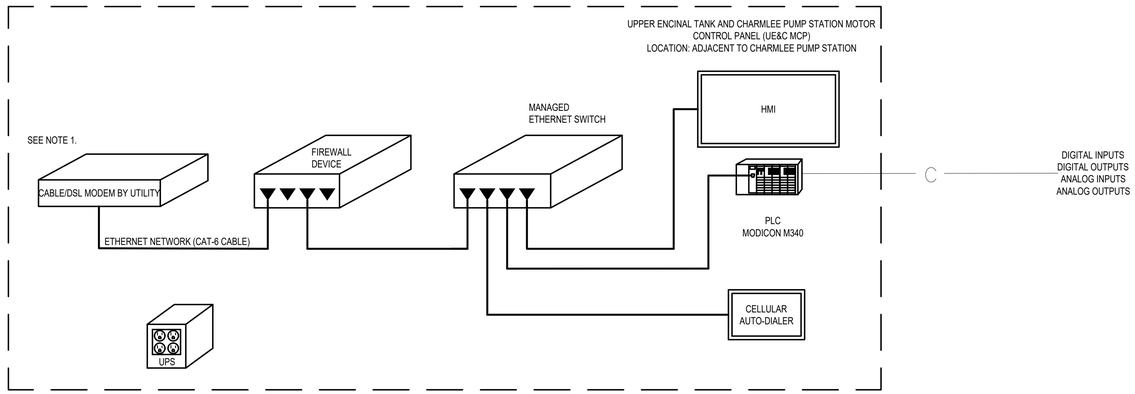
100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

P&ID LEGEND

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	45 OF 53



NETWORK DIAGRAM

LEGEND

▶ CAT-6 CONNECTION (ETHERNET)

NOTES:

1. OFFSITE COMMUNICATION VIA TELEPHONE OR RADIO

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DATE	△	INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

DWG NO. I0.1

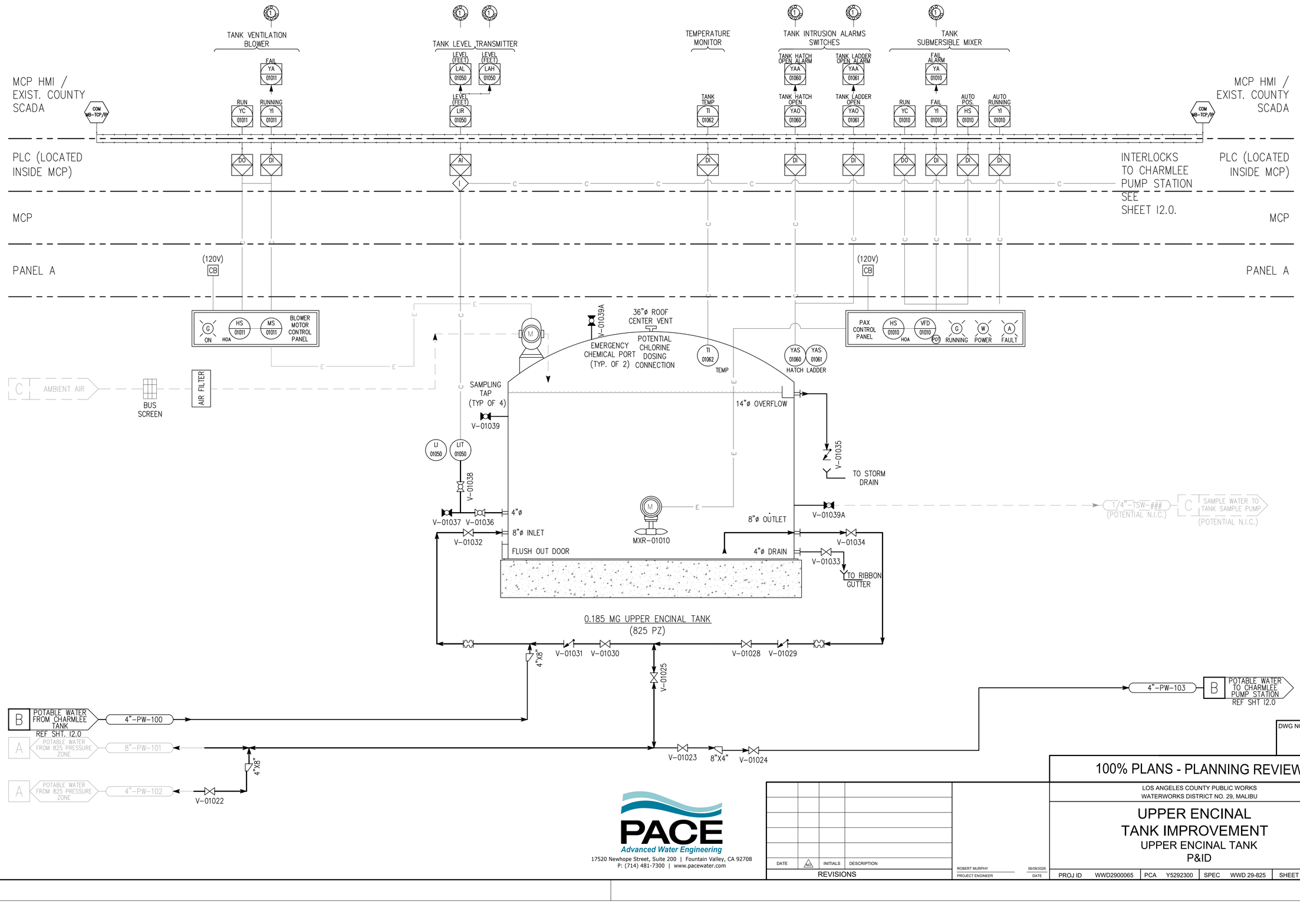
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LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

NETWORK DIAGRAM

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	46 OF 53



DWG NO. I1.0

100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

UPPER ENCINAL TANK P&ID

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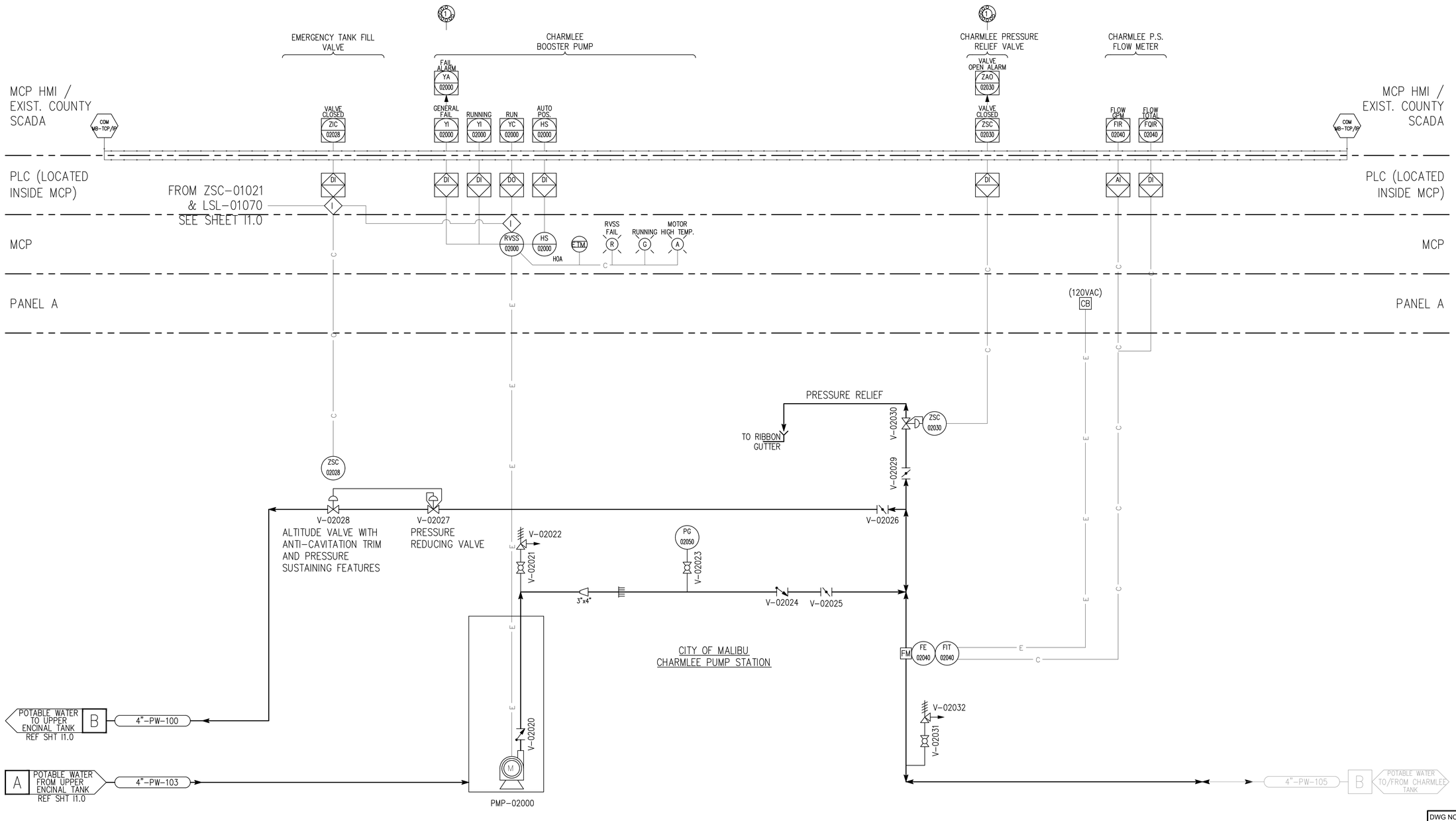
DATE	INITIALS	DESCRIPTION

REVISIONS

ROBERT MURPHY, PROJECT ENGINEER — DATE 06/09/2026

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	47 OF 53

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DESIGNER KS
CHECKER RM
DATE LAST SAVED:
FILE NAME

DWG NO.
I2.0

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DATE	INITIALS	DESCRIPTION

REVISIONS

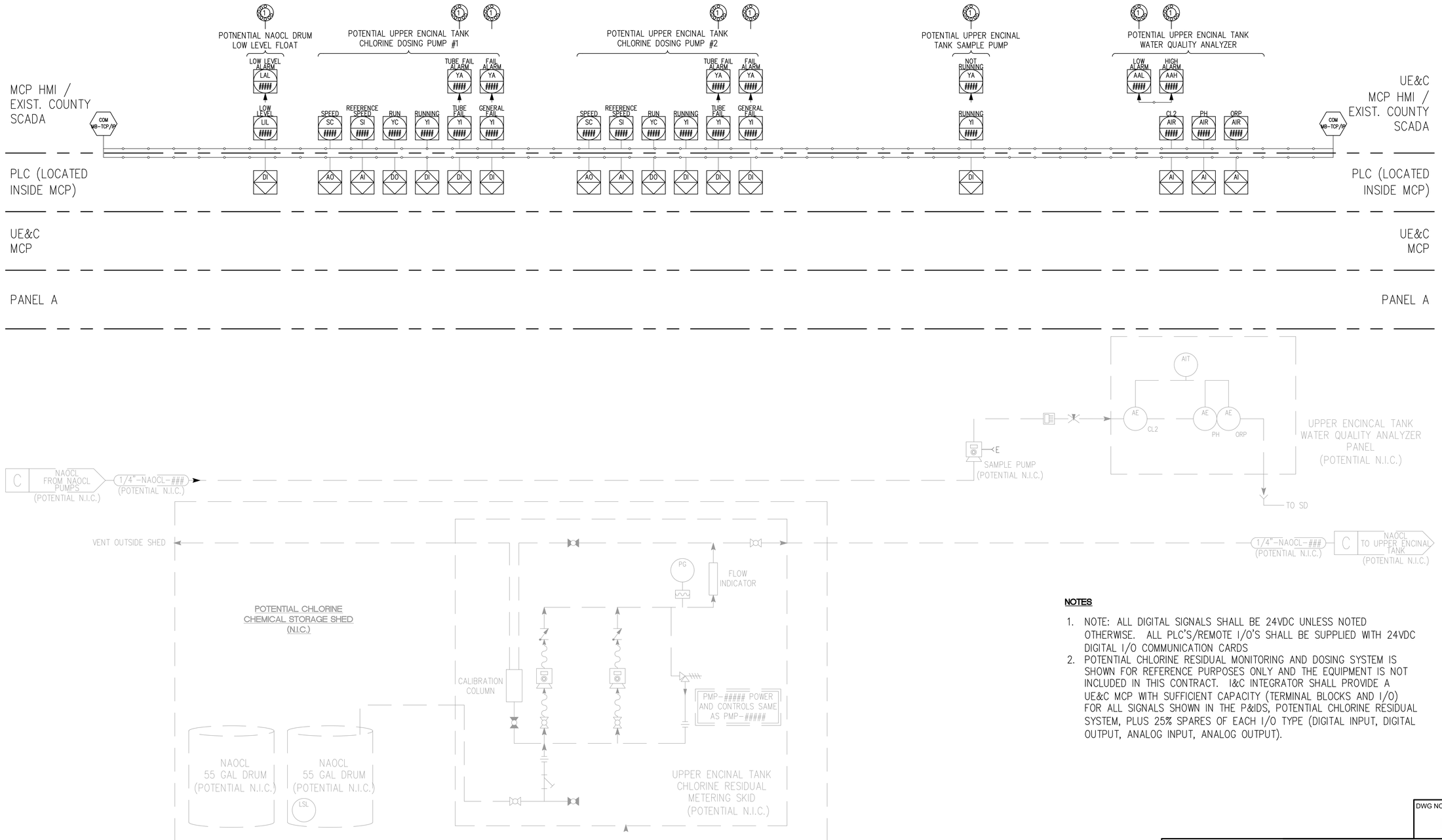
ROBERT MURPHY
PROJECT ENGINEER
06/09/2026
DATE

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

CHARMLEE P.S. P&ID

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	48 OF 53



NOTES

1. NOTE: ALL DIGITAL SIGNALS SHALL BE 24VDC UNLESS NOTED OTHERWISE. ALL PLC'S/REMOTE I/O'S SHALL BE SUPPLIED WITH 24VDC DIGITAL I/O COMMUNICATION CARDS
2. POTENTIAL CHLORINE RESIDUAL MONITORING AND DOSING SYSTEM IS SHOWN FOR REFERENCE PURPOSES ONLY AND THE EQUIPMENT IS NOT INCLUDED IN THIS CONTRACT. I&C INTEGRATOR SHALL PROVIDE A UE&C MCP WITH SUFFICIENT CAPACITY (TERMINAL BLOCKS AND I/O) FOR ALL SIGNALS SHOWN IN THE P&IDS, POTENTIAL CHLORINE RESIDUAL SYSTEM, PLUS 25% SPARES OF EACH I/O TYPE (DIGITAL INPUT, DIGITAL OUTPUT, ANALOG INPUT, ANALOG OUTPUT).

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ROBERT MURPHY — PROJECT ENGINEER — 06/09/2026 — DATE

DWG NO. I3.0

100% PLANS - PLANNING REVIEW

LOS ANGELES COUNTY PUBLIC WORKS
WATERWORKS DISTRICT NO. 29, MALIBU

UPPER ENCINAL TANK IMPROVEMENT

POTENTIAL CHLORINE RESIDUAL SYSTEM P&ID

PROJ ID	WWD2900065	PCA	Y5292300	SPEC	WWD 29-825	SHEET	49 OF 53



ATTACHMENT 3



City of Malibu

23825 Stuart Ranch Rd., Malibu, California CA 90265-4804
(310) 456-2489 FAX (310) 456-7650

BIOLOGY REVIEW REFERRAL SHEET

TO: City of Malibu Biologist

FROM: City of Malibu Planning Department **DATE:** 1/20/2022

PROJECT NUMBER:	CDP 21-070
JOB ADDRESS:	4501 VISTA DEL PRESEAS
APPLICANT / CONTACT:	Katrine Usi, LA County DPW
APPLICANT ADDRESS:	1000 S Freemont Ave Alhambra, CA 91803
APPLICANT PHONE #:	(626)300-4680
APPLICANT FAX #:	
APPLICANT EMAIL:	kusi@dpw.lacounty.gov
PLANNER:	Tyler Eaton
PROJECT DESCRIPTION:	replacement water tank

TO: Malibu Planning Department and/or Applicant

FROM: City Biologist, Courtney McCammon

_____ **The project review package is INCOMPLETE and; CANNOT proceed through Final Planning Review until corrections and conditions from Biological Review are incorporated into the proposed project design** (See Attached).

X **The project is APPROVED, consistent with City Goals & Policies associated with the protection of biological resources and CAN proceed through the Planning process.**

_____ **The project may have the potential to significantly impact the following resources, either individually or cumulatively: Sensitive Species or Habitat, Watersheds, and/or Shoreline Resources and therefore Requires Review by the Environmental Review Board (ERB).**

Courtney McCammon — 2/9/22

Signature — Date

Additional requirements/conditions may be imposed upon review of plan revision

Contact Information:
Courtney McCammon, City Biologist, biology@malibucity.org, (310) 456-2489, extension 277

ATTACHMENT 4

BIOLOGY REVIEW SHEET

PROJECT INFORMATION

Applicant: (name and email)	Katrine Usi, LA County DPW kusi@dpw.lacounty.gov		
Project Address:	**4501 VISTA DEL PRESEAS** Malibu, CA 90265		
Planning Case No.:	CDP 21-070		
Project Description:	replacement water tank		
Date of Review:	February 9, 2022		
Reviewer:	Courtney McCammon	Signature:	Courtney McCammon
Contact Information:	Phone: (310) 456-2489 ext 277	Email:	biology@malibucity.org

SUBMITTAL INFORMATION

Site Plan:	1/20/22
Site Survey:	1/20/22
Landscape Plan:	
Hydrozone Plan:	
Irrigation Plan:	
Fuel Modification Plan:	
Grading Plan:	
OWTS Plan:	
Bio Assessment:	
Bio Inventory:	
Native Tree Survey:	
Native Tree Protection Plan:	
Miscellaneous:	
Previous Reviews:	

REVIEW FINDINGS

Review Status:	☐	**INCOMPLETE**: Additional information and/or a response to the listed review comments is required.
	☒	**APPROVED**: The project has been approved with regards to biological impacts.
	☐	**CANNNOT APPROVE AS SUBMITTED**: The proposed project does not conform to the requirements of the MMC and/or LCP.
	☐	**ERB**: This project has the potential to impact ESHA and may require review by the Environmental Review Board pursuant to LIP Section 4.4.4

DISCUSSION:

1. The proposed project is adjacent to ESHA and is a replacement water tank for public usage and will occur in the same location as an existing tank. Therefore, a Biological Assessment and ERB is not required.

RECOMMENDATIONS:

1. The project is recommended for **APPROVAL** with the following conditions:

   A. Grading shall not extend beyond those areas previously disturbed for the existing tank and associated plumbing.

   B. No new landscaping is proposed with this project. Therefore, none is approved. Should the applicant intend to plant any new vegetation with a potential to exceed six feet in height, or change 500/2,500 square feet or more (new residence/existing residence)of the existing landscaping area, a detailed landscape plan shall be submitted for review and approval prior to any planting.

   C. Grading shall be scheduled only during the dry season from April 1 - October 31. If it becomes necessary to conduct grading activities from November 1 – March 31, a comprehensive erosion control plan shall be submitted for approval prior to issuance of a grading permit and implemented prior to initiation of vegetation removal and/or grading activities.

-o0o-

If you have any questions regarding the above requirements, please contact the City Biologist office at your earliest convenience.

cc: Planning Project file
Planning Department

GEOTECHNICAL REVIEW SHEET

Project Information

Date: April 13, 2026		**Review Log #:**	**4873**
Site Address:	4501 Vista del Preseas		
Lot/Tract/PM #:		**Planning #:**	**CDP 21-070 P4**
Applicant/Contact:	Katrine Usi, kusi@dpw.lacounty.gov Karin Burger, kburger@dpw.lacounty.gov	**BPC/GPC #:**	
Contact Phone #:	626-300-4680 **Fax #:**	**Planner:**	**Tyler Eaton**
Project Type:	Replace water tank		

Submittal Information

Consultant(s) / Report: Date(s): *(Current submittal(s) in **Bold**.)*	Ninyo & Moore (Chu, GE 2096; Putt, CEG 2341**): 3-23-2026**, 2-6-2026 (draft responses), 2-23-23, 11-11-2022, 1-15-2021 Ref: GeoConcepts: 4-16-2015, 2-25-2015, 6-27-2014 (for previously proposed water tank and water line project, CDP 14-074)) Ref: E.D. Michael Consulting Geologist: 6-29-1999 (for 4427 Vista Del Preseas) Ref: GeoSystems: 8-28-2020 (for 4417 Vista del Preseas) **4th Coastal Development Permit submittal** Upper Encinal Tank Improvement plans prepared by Pace Advanced Water Engineering, undated. Total Grading Yardage Verification Certificate prepared by Duncan Lee, PE dated August 23, 2022.
Previous Reviews:	Memorandum, Review of Draft Report by Ninyo & Moore, dated 2-20-2026, 9-19-2023, 2-23-23, 2-28-2022

Review Findings

Coastal Development Permit Review

☒ The water tank project is **ACCEPTABLE** from a geotechnical perspective.

☐ The water tank project is **NOT ACCEPTABLE** from a geotechnical perspective. The listed 'Review Comments' shall be addressed prior to acceptance.

Project submittals were reviewed from a geotechnical perspective for conformance with applicable codes, guidelines, and standards of practice, including the following current City adopted standards:

- City of Malibu Local Coastal Program – Land Use Plan and Local Implementation Plan (LCP-LUP and LCP-LIP)
- Malibu Municipal Code – Title 15, Buildings and Construction
- City of Malibu Guidelines for the Preparation of Geotechnical Reports and Procedures for Report Submittal (November 2013) referred to herein as Geotechnical Report Guidelines

In the case of conflicting requirements between the Geotechnical Guidelines and any other referenced standards, the latest standard will apply. The Applicant is responsible for complying with the submittal requirements for all Planning variances, as appropriate; any questions regarding variances should be directed to the case Planner.

Remarks

It should be noted that this review letter focuses on the part of the referenced geotechnical report pertaining to the upper tank improvement only.

The referenced response geotechnical report, as well as the City's files for projects completed in the area, was reviewed by the City's consultants from a geotechnical perspective. The project comprises demolishing and removing the existing cement bag retaining wall, 70,000-gallon bolted steel water tank, existing yard piping, fittings valves and appurtenances, and Charmlee pump station and appurtenances. A new 185,000-gallon welded steel water tank is proposed in the same location along with a new retaining wall, water piping, fencing, and booster pump station. Grading consists of 577 yards of cut and 10 yards of fill under structure and 567 yards of export.

The site is located within a landslide seismic hazards zone as mapped by the State of California as well as the La Chuza Highlands landslide/debris flow complex mapped by E. D. Michael in 1963. The Project Geotechnical Consultant (consultant) refers to the underlying landslide as "dormant" and confirmed that the site is located within a landslide complex system. However, dormant landslides do not necessarily have the required factors of safety for static and pseud-static loading conditions. Hence, slope stability analyses of the landslide system and the impact it may have on the proposed development will need to be performed in order to evaluate compliance with the City of Malibu requirements for stability of all slopes that could impact the proposed development.

The consultant appropriately discussed logistical and economical constraints that would make pursuing a subsurface investigation to further delineate/constrain the limits of the landslide system and residual strength at the base of the landslide. Alternatively, the consultant performed slope stability analyses based on a reasonable interpretation of the landslide geometry supported by field mapping of the site and slope below, testing and experience. Notwithstanding the concerns the undersigned reviewers have regarding landslide configuration and shear strength parameters used in slope stability analyses performed by the consultant as outlined in comments in the February 23, 2023 geotechnical review letter, factors of safety under both static and pseudo-static loading conditions below minimum requirements were obtained.

Given the substandard factors of safety, the city reviewers recommended that the development should not be approved from a geotechnical perspective until adequate responses to comments in our geotechnical review letter of February 23, 2023 (reiterated below) are provided. Subsequently, in April 2025, the City of Malibu reviewers met with the County of Los Angeles Geotechnical Materials Engineering Division to discuss the slope stability analysis, data gaps in slope characterization, and suggested methods of closing the data gap.

Subsequently, the undersigned reviewers met with the applicant, Los Angeles County Public Works, and geotechnical consultant, Ninyo & Moore, on February 19, 2026 to discuss their draft report responding to the comments in the latest review letter by Cotton, Shires and Associates (CSA) dated September 19, 2023. CSA reviewed the report prior to the meeting so as to provide commentary and questions to resolve any remaining comments, and so that Ninyo & Moore could provide a complete response report for formal submittal to the City for review. CSA provided the referenced memorandum to the applicant that included comments for the Project Geotechnical Consultant, Ninyo & Moore, to include in their formal response report responding to our comments in our latest review letter (September 19, 2023).

The Consultant provided updated slope stability analysis with revised shear strength parameters, and additional slope stability analysis of the deeper Old Landslide slide plane and conducted a sensitivity analysis of the landslide shear strength. The analysis shows a static factor of safety between 1.39 and 1.94, with seismic analyses showing a seismic factor of safety between 0.79 and 1.29. The lower end results are

for slip surfaces within the Old Landslide mass that do not have an immediate impact on the proposed improvements. Using the lowest residual friction angle and cohesion values obtained from laboratory testing, the calculated Factor of Safety is 1.69. Reducing the laboratory test strength data to the lowest friction angle and neglecting cohesion, the calculated Factor of Safety is 1.66. Further reducing the friction angle to 25 and 20 degrees still neglecting cohesion, the calculated Factor of Safety is 1.35 and 1.06 respectively. The Consultant concludes that the old landslide is between 1.06 and 1.77, and is closer to 1.5.

Please note that approving projects with factors of safety below the minimum requirements established in the City's current geotechnical guidelines and LCP-LIP is not in the purview of the City's geotechnical reviewers. The City's geotechnical consultants discussed the project with the Building Official, Yolanda Bundy, and the City requires that the minimum factors of safety for static and seismic conditions need to be met for the proposed tank enlargement project.

Planning Review Comments:

None.

Recommended Note for the Plans

1. The geotechnical professionals for the County of Los Angeles Geotechnical Materials Engineering Division should review, sign, and stamp the final water tank plans.
2. Include a plan for regular monitoring of the slope inclinometer (boring I-N) installed adjacent to the proposed water tank on the plans. The monitoring plan may include an action plan to respond to detected movement, as needed, after potentially triggering seismic or hydrological events occur.

Please direct questions regarding this review sheet to the City's geotechnical consultants listed below.

Engineering Geology Review by: _____ *4-13-2026*
Christopher Dean, C.E.G. #1751, Exp. 9-30-24 Date
Engineering Geology Reviewer (408-656-3210)
Email: cdean@malibucity.org

Geotechnical Engineering Review by: _____ *4-13-2026*
Sam Nolan, G.E. #3191, Exp. 9-30-27 Date
Geotechnical Engineering Reviewer (408) 354-5542)
Email:snolan@cottonshires.com

Geotechnical Engineering Review by: _____ *4-13-2026*
Lauren J. Doyel, G.E. #2981, Exp. 6-30-27 Date
Geotechnical Engineering Reviewer (805-272-0018)
Email: ldoyel@malibucity.org

This review sheet was prepared by representatives of Cotton, Shires and Associates, Inc. as an agent of the City of Malibu.

COTTON, SHIRES AND ASSOCIATES, INC.
CONSULTING ENGINEERS AND GEOLOGISTS

City of Malibu

23825 Stuart Ranch Rd., Malibu, California CA 90265-4861
(310) 456-2489 FAX (310) 456-7650

PUBLIC WORKS REVIEW
REFERRAL SHEET

TO: Public Works Department

FROM: City of Malibu Planning Department **REVISED DATE** 03/30/2023

PROJECT NUMBER:	CDP 21-070
JOB ADDRESS:	4501 VISTA DEL PRESEAS
APPLICANT / CONTACT:	Katrine Usi, LA County DPW
APPLICANT ADDRESS:	1000 S Freemont Ave Alhambra, CA 91803
APPLICANT PHONE #:	(626)300-4680
APPLICANT FAX #:	
APPLICANT EMAIL:	kusi@dpw.lacounty.gov
PROJECT DESCRIPTION:	Upper Encinal Replacement Water Tank

TO: Malibu Planning Department and/or Applicant

FROM: Public Works Department

____ The following items described on the attached memorandum shall be addressed and resubmitted.

__X__ The project was reviewed and found to be in conformance with the City's Public Works and LCP policies and CAN proceed through the Planning process.

Julie K Santoro — SIGNATURE

3/30/2023 — DATE

City of Malibu
MEMORANDUM

To: Planning Department

From: Public Works Department
Julie Santia, Associate Engineer

Date: March 30, 2023

Re: Proposed Conditions of Approval for 4501 Vista Del Preseas, CDP 21-070 (REISSUED)

The Public Works Department has reviewed the plans submitted for the above referenced project. Based on this review sufficient information has been submitted to confirm that conformance with the Malibu Local Coastal Plan (LCP) and the Malibu Municipal Code (MMC) can be attained. Prior to the issuance of building and grading permits, the applicant shall comply with the following conditions.

GRADING AND DRAINAGE

1. Clearing and grading during the rainy season (extending from November 1 to March 31) shall be prohibited for development LIP Section 17.3.1 that:
    - Is located within or adjacent to ESHA, or
    - Includes grading on slopes greater than 4:1
    - Approved grading for development that is located within or adjacent to ESHA or on slopes greater than 4:1 shall not be undertaken unless there is sufficient time to complete grading operations before the rainy season. If grading operations are not completed before the rainy season begins, grading shall be halted and temporary erosion control measures shall be put into place to minimize erosion until grading resumes after March 31, unless the City determines that completion of grading would be more protective of resources

2. Exported soil from a site shall be taken to the County Landfill or to a site with an active grading permit and the ability to accept the material in compliance with the City's LIP Section 8.3. **A note shall be placed on the project that addresses this condition.**

3. A grading and drainage plan shall be approved containing the following information prior to the issuance of grading permits for the project.

- Public Works Department General Notes
- The existing and proposed square footage of impervious coverage on the property shall be shown on the grading plan (including separate areas for buildings, driveways, walkways, parking, tennis courts and pool decks).
- The limits of land to be disturbed during project development shall be delineated on the grading plan and a total area shall be shown on the plan. Areas disturbed by grading equipment beyond the limits of grading, areas disturbed for the installation of the septic system, and areas disturbed for the installation of the detention system shall be included within the area delineated.
- The grading limits shall include the temporary cuts made for retaining walls, buttresses, and over excavations for fill slopes and shall be shown on the grading plan.
- If the property contains trees that are to be protected they shall be highlighted on the grading plan.
- If the property contains rare and endangered species as identified in the resources study the grading plan shall contain a prominent note identifying the areas to be protected (to be left undisturbed). Fencing of these areas shall be delineated on the grading plan if required by the City Biologist.
- Private storm drain systems shall be shown on the grading plan. Systems greater than 12-inch diameter shall also have a plan and profile for the system included with the grading plan.
- Public storm drain modifications shown on the grading plan shall be approved by the Public Works Department prior to the issuance of the grading permit.

4. A digital drawing (AutoCAD) of the project's private storm drain system, public storm drain system within 250 feet of the property limits, and post-construction BMP's shall be submitted to the Public Works Department prior to the issuance of grading or building permits. The digital drawing shall adequately show all storm drain lines, inlets, outlet, post-construction BMP's and other applicable facilities. The digital drawing shall also show the subject property, public or private street, and any drainage easements.

STORMWATER

5. The ocean between Latigo Point and the West City limits has been established by the State Water Resources Control Board as an Area of Special Biological Significance (ASBS) as part of the California Ocean Plan. This designation allows discharge of storm water only where it is essential for flood control or slope stability, including roof, landscape, road and parking lot drainage, to prevent soil erosion, only occurs during wet weather, and is composed of only storm water runoff. The applicant shall provide a drainage system that accomplishes the following:

    - Installation of BMPs that are designed to treat the potential pollutants in the storm water runoff so that it does not alter the natural ocean water quality. These pollutants include trash, oil and grease, metals, bacteria, nutrients, pesticides, herbicides and sediment.
    - Prohibits the discharge of trash.

- Only discharges from existing storm drain outfalls are allowed. No new outfalls will be allowed. Any proposed or new storm water discharged shall be routed to existing storm drain outfalls and shall not result in any new contribution of waste to the ASBS (i.e. no additional pollutant loading).
- Elimination of non-storm water discharges.

6. A Local Storm Water Pollution Prevention Plan shall be provided prior to the issuance of the Grading/Building permits for the project. This plan shall include an Erosion and Sediment Control Plan (ESCP) that includes, but not limited to:

Erosion Controls	Scheduling
	Preservation of Existing Vegetation
Sediment Controls	Silt Fence
	Sand Bag Barrier
	Stabilized Construction Entrance
Non-Storm Water Management	Water Conservation Practices
	Dewatering Operations
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management
	Concrete Waste Management
	Sanitary/Septic Waste Management

All Best Management Practices (BMP) shall be in accordance to the latest version of the California Stormwater Quality Association (CASQA) BMP Handbook. Designated areas for the storage of construction materials, solid waste management, and portable toilets must not disrupt drainage patterns or subject the material to erosion by site runoff.

MISCELLANOUS

7. The developer's consulting engineer shall sign the final plans prior to the issuance of permits.

City of Malibu

23825 Stuart Ranch Rd., Malibu, California CA 90265-4861
(310) 456-2489 FAX (310) 456-7650

PUBLIC WORKS REVIEW
REFERRAL SHEET

TO: Public Works Department

FROM: City of Malibu Planning Department **DATE:** 1/20/2022

PROJECT NUMBER:	CDP 21-070
JOB ADDRESS:	4501 VISTA DEL PRESEAS
APPLICANT / CONTACT:	Katrine Usi, LA County DPW
APPLICANT ADDRESS:	1000 S Freemont Ave Alhambra, CA 91803
APPLICANT PHONE #:	(626)300-4680
APPLICANT FAX #:	
APPLICANT EMAIL:	kusi@dpw.lacounty.gov
PROJECT DESCRIPTION:	replacement water tank

TO: Malibu Planning Department and/or Applicant

FROM: Public Works Department

____ The following items described on the attached memorandum shall be addressed and resubmitted.

X The project was reviewed and found to be in conformance with the City's Public Works and LCP policies and CAN proceed through the Planning process.

Julie K Santua
SIGNATURE

1/27/2022
DATE

City of Malibu
MEMORANDUM

To: Planning Department

From: Public Works Department
Julie Santia, Associate Civil Engineer

Date: January 27, 2022

Re: Proposed Conditions of Approval for 4501 Vista Del Preseas CDP 21-070

The Public Works Department has reviewed the plans submitted for the above referenced project. Based on this review sufficient information has been submitted to confirm that conformance with the Malibu Local Coastal Plan (LCP) and the Malibu Municipal Code (MMC) can be attained. Prior to the issuance of building and grading permits, the applicant shall comply with the following conditions.

GRADING AND DRAINAGE

1. Clearing and grading during the rainy season (extending from November 1 to March 31) shall be prohibited for development LIP Section 17.3.1 that:
    - Is located within or adjacent to ESHA, or
    - Includes grading on slopes greater than 4:1
    - Approved grading for development that is located within or adjacent to ESHA or on slopes greater than 4:1 shall not be undertaken unless there is sufficient time to complete grading operations before the rainy season. If grading operations are not completed before the rainy season begins, grading shall be halted and temporary erosion control measures shall be put into place to minimize erosion until grading resumes after March 31, unless the City determines that completion of grading would be more protective of resources

2. Exported soil from a site shall be taken to the County Landfill or to a site with an active grading permit and the ability to accept the material in compliance with the City's LIP Section 8.3. **A note shall be placed on the project that addresses this condition.**

3. A grading and drainage plan shall be approved containing the following information prior to the issuance of grading permits for the project.

- Public Works Department General Notes
- The existing and proposed square footage of impervious coverage on the property shall be shown on the grading plan (including separate areas for buildings, driveways, walkways, parking, tennis courts and pool decks).
- The limits of land to be disturbed during project development shall be delineated on the grading plan and a total area shall be shown on the plan. Areas disturbed by grading equipment beyond the limits of grading, areas disturbed for the installation of the septic system, and areas disturbed for the installation of the detention system shall be included within the area delineated.
- The grading limits shall include the temporary cuts made for retaining walls, buttresses, and over excavations for fill slopes and shall be shown on the grading plan.
- If the property contains trees that are to be protected they shall be highlighted on the grading plan.
- If the property contains rare and endangered species as identified in the resources study the grading plan shall contain a prominent note identifying the areas to be protected (to be left undisturbed). Fencing of these areas shall be delineated on the grading plan if required by the City Biologist.
- Private storm drain systems shall be shown on the grading plan. Systems greater than 12-inch diameter shall also have a plan and profile for the system included with the grading plan.
- Public storm drain modifications shown on the grading plan shall be approved by the Public Works Department prior to the issuance of the grading permit.

4. A digital drawing (AutoCAD) of the project's private storm drain system, public storm drain system within 250 feet of the property limits, and post-construction BMP's shall be submitted to the Public Works Department prior to the issuance of grading or building permits. The digital drawing shall adequately show all storm drain lines, inlets, outlet, post-construction BMP's and other applicable facilities. The digital drawing shall also show the subject property, public or private street, and any drainage easements.

STORMWATER

5. The ocean between Latigo Point and the West City limits has been established by the State Water Resources Control Board as an Area of Special Biological Significance (ASBS) as part of the California Ocean Plan. This designation allows discharge of storm water only where it is essential for flood control or slope stability, including roof, landscape, road and parking lot drainage, to prevent soil erosion, only occurs during wet weather, and is composed of only storm water runoff. The applicant shall provide a drainage system that accomplishes the following:

    - Installation of BMPs that are designed to treat the potential pollutants in the storm water runoff so that it does not alter the natural ocean water quality. These

pollutants include trash, oil and grease, metals, bacteria, nutrients, pesticides, herbicides and sediment.

- Prohibits the discharge of trash.
- Only discharges from existing storm drain outfalls are allowed. No new outfalls will be allowed. Any proposed or new storm water discharged shall be routed to existing storm drain outfalls and shall not result in any new contribution of waste to the ASBS (i.e. no additional pollutant loading).
- Elimination of non-storm water discharges.

6. A Local Storm Water Pollution Prevention Plan shall be provided prior to the issuance of the Grading/Building permits for the project. This plan shall include an Erosion and Sediment Control Plan (ESCP) that includes, but not limited to:

Erosion Controls	Scheduling
	Preservation of Existing Vegetation
Sediment Controls	Silt Fence
	Sand Bag Barrier
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	Dewatering Operations
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management
	Concrete Waste Management
	Sanitary/Septic Waste Management

All Best Management Practices (BMP) shall be in accordance to the latest version of the California Stormwater Quality Association (CASQA) BMP Handbook. Designated areas for the storage of construction materials, solid waste management, and portable toilets must not disrupt drainage patterns or subject the material to erosion by site runoff.

7. A Water Quality Mitigation Plan (WQMP) is required for this project. The WQMP shall be supported by a hydrology and hydraulic study that identifies all areas contributory to the property and an analysis of the predevelopment and post development drainage of the site. The WQMP shall meet all the requirements of the City's current Municipal Separate Stormwater Sewer System (MS4) permit. The following elements shall be included within the WQMP:
    - Site Design Best Management Practices (BMP's)
    - Source Control BMP's

- Treatment Control BMP's that retains on-site the Stormwater Quality Design Volume (SWQDv). Or where it is technical infeasible to retain on-site, the project must biofiltrate 1.5 times the SWQDv that is not retained on-site.
- Drainage Improvements
- A plan for the maintenance and monitoring of the proposed treatment BMP's for the expected life of the structure.
- A copy of the WQMP shall be filed against the property to provide constructive notice to future property owners of their obligation to maintain the water quality measures installed during construction prior to the issuance of grading or building permits.
- The WQMP shall be submitted to Public Works Department and the fee applicable at time of submittal for the review of the WQMP shall be paid prior to the start of the technical review. The WQMP shall be approved prior to the Public Works Department's approval of the grading and drainage plan and or building plans. The Public Works Department will tentatively approve the plan and will keep a copy until the completion of the project. Once the project is completed, the applicant shall verify the installation of the BMP's, make any revisions to the WQMP, and resubmit to the Public Works Department for approval. The original signed and notarized document shall be recorded with the County Recorder. A copy of the WQMP shall be submitted to the Public Works Department prior to the certificate of occupancy.

MISCELLANOUS

8. The developer's consulting engineer shall sign the final plans prior to the issuance of permits.

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone (626) 458-5100
http://dpw.lacounty.gov

MARK PESTRELLA, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE

ADOPTED
BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES
54 May 4, 2021
CELIA ZAVALA
EXECUTIVE OFFICER

May 04, 2021

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012

Dear Supervisors:

WATER RESOURCES CORE SERVICE AREA
LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 29, MALIBU
PRIORITY CAPITAL DEFICIENCIES IMPROVEMENTS PROJECT
APPROVAL AND CERTIFICATION OF FINAL ENVIRONMENTAL IMPACT REPORT
IN THE UNINCORPORATED COMMUNITY OF TOPANGA AND THE CITY OF MALIBU
(SUPERVISORIAL DISTRICT 3)
(3 VOTES)

SUBJECT

Public Works is seeking Board approval of the Los Angeles County Waterworks District No. 29, Malibu, Priority Capital Deficiencies Improvements Project and certification of its Final Environmental Impact Report.

IT IS RECOMMENDED THAT THE BOARD ACTING AS THE GOVERNING BODY OF THE LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 29, MALIBU:

1. Certify that the Final Environmental Impact Report for the Los Angeles County Waterworks District No. 29, Malibu, Priority Capital Deficiencies Improvements Project has been completed in accordance with the California Environmental Quality Act and reflects the independent judgment and analysis of the Los Angeles County Waterworks District No. 29, Malibu, as lead agency; find that the Board has reviewed and considered the information contained in the Final Environmental Impact Report; adopt the Mitigation Monitoring and Reporting Program, finding that the Mitigation Monitoring and Reporting Program is adequately designed to ensure compliance with the mitigation measures during project implementation; and determine that the significant adverse effects of the project have either been reduced to an acceptable level or are outweighed by the specific considerations of the project as outlined in the Findings of Fact and Statement of Overriding Considerations, which

findings and statement are adopted and incorporated by reference.

2. Approve the proposed Los Angeles County Waterworks District No. 29, Malibu, Priority Capital Deficiencies Improvements Project and authorize the Los Angeles County Waterworks District No. 29, Malibu, to proceed with the preconstruction phase of the project.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

Approval of the recommended actions will certify the Final Environmental Impact Report (FEIR) (Enclosure A) and make other necessary environmental findings for the proposed Los Angeles County Waterworks District No. 29, Malibu (District), Priority Capital Deficiencies Improvements Project (Project) and allow the District to proceed with the preconstruction phase of the Project, including the preparation of construction documents and all necessary permits.

The proposed Project would be implemented over a period of approximately 6 years (2021-26). The Project addresses deficiencies in the water system, including areas with reoccurring leaks and breaks, aged infrastructure that is well beyond its effective lifespan, structural integrity issues, and poor system resilience.

The Project would include construction of two above ground replacement water tanks; replacing 34,400 feet of waterlines, 19,000 feet of which are along Pacific Coast Highway (PCH); an emergency connection to Las Virgenes Water District; and several creek crossing repairs along PCH in the City of Malibu and unincorporated Topanga area (map included on page 42 of Enclosure A). The District will return to the Board for approval to adopt and advertise plans and specifications and call for construction bids between 2022 and 2025. The Project is anticipated to be implemented over 6 years.

Implementation of Strategic Plan Goals

These recommendations support the County Strategic Plan: Strategy III.3, Pursue Operational Effectiveness, Fiscal Responsibility, and Accountability and Objective III.3.2, Manage and Maximize County Assets. The recommended actions will respond to public needs to provide District customers with a more reliable water supply and supports ongoing efforts to manage and improve public infrastructure assets.

FISCAL IMPACT/FINANCING

There will be no impact to the County General Fund.

The estimated total project cost, which includes preparation of plans and specifications, construction costs, contract administration, and other County services, is $38.8 million. Funding for this project is available in the Los Angeles County Waterworks District No. 29, Malibu, Accumulative Capital Outlay Fund (N33).

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

Certification of the FEIR is required by the California Environmental Quality Act (CEQA), prior to the Board's approval of the proposed Project. The Board's approval would authorize the District to proceed with preconstruction activities, including finalization of plans and specifications for the proposed Project. Following completion of preconstruction activities, the District will return to the

Board for approval to advertise plans and specifications and call for construction bids between 2022 and 2025. The Project is anticipated to be implemented over 6 years and through nine separate construction contracts.

ENVIRONMENTAL DOCUMENTATION

An Initial Study was not prepared for the proposed Project as permitted by State CEQA Guidelines Section 15063 since the District determined that an Environmental Impact Report was appropriate due to likely involvement of significant effects on the environment as a result of the proposed Project.

On November 9, 2017, the District mailed a Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR) to the State Clearinghouse and to applicable public agencies and interested parties. A Public Notice of the NOP was published in The Malibu Times and Topanga Messenger in November 2017. The notice advertised a public scoping meeting for the interested parties to receive information on the proposed Project and the related CEQA process and provided an opportunity for the submission of comments. The District held public scoping meetings on November 14, 2017, at Topanga Elementary School and November 16, 2017, at Malibu City Hall. Seven agencies, in addition to the State Clearinghouse, and four interested parties submitted comments in response to the NOP. All comments related to environmental issues received during the public review and scoping meetings were considered in the preparation of the DEIR.

The FEIR for the Project was prepared in compliance with CEQA and an electronic copy is on file with the Clerk of the Board. The FEIR and supporting documents can also be viewed on the District's website at LACWaterworks.org. On October 29, 2020, the District e-mailed a Notice of Completion for a DEIR to the State Clearinghouse and to applicable public agencies and interested parties for a 45-day public review period that ended on December 15, 2020. A Public Notice of the Notice of Availability (NOA) of the DEIR was published in The Malibu Times and The Acorn Newspapers on October 29, 2020, pursuant to Public Resources Code Section 21092 and posted pursuant to Section 21092.3. The notice advised of the public review period and provided an opportunity for the submission of comments for the interested parties. As part of the District's outreach, on October 29, 2020, the NOA was published on Nextdoor and Twitter social media platforms. Due to COVID-19 emergency conditions and pursuant to Executive Order N-80-20, the NOA and DEIR were posted for viewing on the District's website. Additionally, the NOA was posted on windows at Malibu and Topanga libraries and a telephone number was included for requesting hard copies of the DEIR due to the closure of public libraries as a result of the COVID-19 emergency.

Due to the COVID-19 emergency, the District held a virtual public meeting on December 8, 2020, for the interested parties to receive information on the DEIR and CEQA findings and provided an opportunity for the submission of comments. Twenty people attended the virtual public meeting. Twenty-five written letters and oral comments were received in response to the DEIR, 14 letters were received from members of the public and 4 letters were received from public agencies, including the California Department of Fish and Wildlife, California Coastal Commission, City of Malibu, and Caltrans. Issues identified during the review period included support for the Project, requests for additional improvements and concerns about development, landslides, prioritization, costs, and schedule. All written comments received and responses to the comments are included in the FEIR. In addition, responses to comments received from public agencies were sent to those agencies pursuant to Public Resources Code Section 21092.5.

All tribal cultural resources consultation requirements of CEQA have been met and documented. The Fernandeño Tataviam Band of Mission Indians requested consultation and the consultation was completed through agreement.

The FEIR includes the DEIR dated October 2020, Technical Appendices to the DEIR dated October 2020, Public Comment Letters and Responses to Comments dated March 2021, and corrections and additions to the DEIR dated March 2021. Except for significant and unavoidable impacts to noise and utilities during construction, all identified significant environmental effects of the Project can be avoided or reduced to a level of insignificance through the implementation of the mitigation measures identified in the FEIR.

As stated in the FEIR and Findings of Fact and Statement of Overriding Considerations (Enclosure B), the proposed Project will result in significant and unavoidable impacts to noise and utilities during construction, but such impacts have been reduced to the extent feasible and the benefits of the proposed Project, which include improvements in water system resiliency and correcting the most critical water system deficiencies by replacing a severely deteriorating and aging water system infrastructure to provide a more reliable system for District customers, outweigh these unavoidable adverse impacts.

A Mitigation Monitoring and Reporting Program consistent with the conclusions and recommendations of the FEIR has been prepared and is included as an attachment to the FEIR. The Mitigation Monitoring and Reporting Program has been adequately designed to ensure compliance with the mitigation measures during Project implementation.

The location of documents and other materials constituting the record of the proceedings upon which the Board's decision is based in this matter is Los Angeles County Public Works, Waterworks Division 1000 South Fremont Avenue, Building A9-East, 4th Floor, Alhambra, California 91803.

The Project is not exempt from payment of a fee to the California Department of Fish and Wildlife pursuant to Section 711.4 of the Fish and Game Code to defray the costs of fish and wildlife protection and management incurred by Fish and Wildlife. Upon the Board's certification of the FEIR and approval of the Project, the District will file a Notice of Determination in accordance with Section 21152(a) of the California Public Resources Code and pay the required filing and processing fees with the Los Angeles County Registrar-Recorder/County Clerk in the amount of $3,520.25.

CONTRACTING PROCESS

Not applicable.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

Approval of the recommended actions will have no negative impact on current County services or projects. The Project will provide District customers with a more reliable water supply.

CONCLUSION

Please return an adopted copy of this Board letter to Public Works, Waterworks Division.

Respectfully submitted,



MARK PESTRELLA, PE

Director

MP:RB:ea

Enclosures

c: Chief Executive Office (Chia-Ann Yen)
County Counsel (Lauren Dods, Tiffani Shin)
Executive Office

City Of Malibu
23825 Stuart Ranch Road
Malibu, CA 90265
Phone (310) 456-2489
www.malibucity.org

COMMUNITY DEVELOPMENT DEPARTMENT

NOTICE OF PUBLIC HEARING

NOTICE OF PUBLIC HEARING

The Malibu Planning Commission will hold a public hearing on **Monday, October 5, 2026, at 6:30 p.m**. in the Council Chambers, Malibu City Hall, 23825 Stuart Ranch Road, Malibu, CA for the project identified below. Public comment can be submitted ahead of the public hearing to planningcommission@malibucity.org for inclusion in the public record. To participate during the public hearing, please review the meeting agenda posted at MalibuCity.org/AgendaCenter and follow the directions for public participation.

COASTAL DEVELOPMENT PERMIT NO. 21-070, VARIANCE NOS. 26-007 AND 26-010, AND DEMOLITION PERMIT NO. 22-004 - An application to replace an existing 70,000-gallon (gal.) water storage tank and pump station with a new 26 foot (ft.) tall, above-ground 185,000-gal. water storage tank and pump station with associated development; including variances for structures on slopes steeper than 2.5 to 1 and for a single retaining wall above 6 ft.; the project is considered a Major Public Works Facility pursuant to Local Coastal Program Local Implementation Plan Section 2.1 and, therefore, subject to the California Coastal Commission Appealable Jurisdiction

LOCATION / APN:	**4501 Vista Del Preseas** / 4473-005-902
ZONING:	Open Space (OS)
APPLICANT / OWNER(S):	Los Angeles County Department of Public Works / LA County Waterworks
APPEALABLE TO:	City Council and California Coastal Commission
ENVIRONMENTAL REVIEW:	Categorical Exemption CEQA Guidelines Section 15303(d)
APPLICATION FILED:	January 20, 2022
CASE PLANNER:	Alexander da Silva, Associate Planner, adasilva@malibucity.org / (310) 456-2489, ext. 314

A written staff report will be available at or before the hearing for the project. All persons wishing to address the Commission regarding this matter will be afforded an opportunity in accordance with the Commission's procedures. Copies of all related documents can be reviewed by any interested person at City Hall during regular business hours. Oral and written comments may be presented to the Planning Commission on, or before, the date of the meeting.

LOCAL APPEAL - A decision of the Planning Commission may be appealed to the City Council by an aggrieved person by written statement setting forth the grounds for appeal. An appeal shall be filed with the City Clerk within ten days following the date of action which the appeal is made and shall be accompanied by an appeal form and filing fee, as specified by the City Council. Appeal forms may be found online at www.malibucity.org/planningforms or in person at City Hall, or by calling (310) 456-2489, extension 246.

COASTAL COMMISSION APPEAL – An aggrieved person may appeal the Planning Commission's approval to the Coastal Commission within 10 working days of the issuance of the City's Notice of Final Action. Appeal forms may be found online at www.coastal.ca.gov or in person at the Coastal Commission South Central Coast District office located at 89 South California Street in Ventura, or by calling (805) 585-1800. Such an appeal must be filed with the Coastal Commission, not the City.

IF YOU CHALLENGE THE CITY'S ACTION IN COURT, YOU MAY BE LIMITED TO RAISING ONLY THOSE ISSUES YOU OR SOMEONE ELSE RAISED AT THE PUBLIC HEARING DESCRIBED IN THIS NOTICE, OR IN WRITTEN CORRESPONDENCE DELIVERED TO THE CITY, AT OR PRIOR TO THE PUBLIC HEARING.

YOLANDA BUNDY, Community Development Director — Date: September 10, 2026

ATTACHMENT 6