



## NOTICE OF ENGINEERING/ENVIRONMENTAL COMMITTEE MEETING NOVEMBER 3, 2023

**NOTICE IS HEREBY GIVEN** that the San Lorenzo Valley Water District has called a meeting of the Engineering/Environmental Committee to be held on **Friday, November 3, 2023, 8:30 a.m.**, SLVWD Conference Room, 12788 Highway 9, Boulder Creek.

Any person in need of any reasonable modification or accommodation in order to participate in the meeting may contact the District Secretary's Office at (831) 430-4636 a minimum of 72 hours prior to the scheduled meeting.

This meeting is being conducted as an in-person meeting under the Brown Act, Government Code section 54953, and a quorum of the Committee must participate from the location(s) within the District that are identified above. Members of the public may attend the meeting at the identified location(s). Teleconferencing/videoconferencing access as set forth below is being provided as a convenience only and is not guaranteed. The meeting may continue in person even if teleconferencing/videoconferencing capability is disrupted or unavailable.

### **The meeting access information is as follows:**

<https://us02web.zoom.us/j/89310528824?pwd=SHFGcmY5bXhJWk9EYlorYkxLb2FHdz09>

Webinar ID: 893 1052 8824

Passcode: 457650

Or One tap mobile :

+16694449171,,89310528824#,,,,\*457650# US

+16699006833,,89310528824#,,,,\*457650# US (San Jose)

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

+1 669 444 9171 US

+1 669 900 6833 US (San Jose)

+1 253 205 0468 US

### **AGENDA**

1. Convene Meeting/Roll Call
2. Oral Communications

*This portion of the agenda is reserved for Oral Communications by the public for items which are not on the Agenda. Please understand that California law (The Brown Act) limits what the Board can do regarding issues raised during Oral Communication. No action or discussion may occur on issues outside of those already listed on today's agenda. Any person may address the Committee at this time, on any subject that lies within the jurisdiction of the District. Normally, presentations must not exceed three (3) minutes in length, and individuals may only speak once during Oral Communications. Any Director may request that the matter be placed on a future agenda or staff may be directed to provide a brief response.*

3. New Business:

*Members of the public will be given the opportunity to address each scheduled item prior to Committee action. The Chairperson of the Committee may establish a time limit for members of the public to address the Committee on agenda items.*

- a. ALTA VIA DRIVE MAIN REPLACEMENT  
Discussion by the Committee regarding the Alta Vis Drive main replacement with the Monan Way soldier pile retaining wall.
- b. CALTRANS HIGHWAY 9 - GABION WALL EMERGENCY PROJECT  
Discussion by the Committee regarding the Caltrans Hwy. 9 Gabion Wall emergency project to relocate the District water main.
- c. LOMPICO CANYON EMERGENCY EVACUATION ROUTE PROJECT  
Discussion by the Committee regarding an Easement Agreement with the County for an emergency evacuation route through Lompico Canyon.

4. Unfinished Business:

*Members of the public will be given the opportunity to address each scheduled item prior to Committee action. The Chairperson of the Committee may establish a time limit for members of the public to address the Committee on agenda items.*

- a. BRACKEN BRAE & FOREST SPRINGS - PUMP STATION  
Discussion by the Committee regarding an update on the equipment noise analysis for the Bracken Brae & Forest Springs pump station.

5. Informational Material

Here is a link to previous Engineering/Environmental Committee meeting minutes:  
[All Engineering/Environmental Committee Meeting Minutes | San Lorenzo Valley Water District \(slvwd.com\)](#)

6. Adjournment

*Agenda documents, including materials related to an item on this agenda submitted to the Committee after distribution of the agenda packet, are available for public inspection and may be reviewed at the office of the District Secretary, 13060 Highway 9, Boulder Creek, CA 95006 during normal business hours. Such documents may also be available on the District website at [www.slvwd.com](http://www.slvwd.com) subject to staff's ability to post the documents before the meeting.*

## MEMO

**DATE:** November 3, 2023  
**TO:** Engineering & Environmental Committee, SLVWD  
**FROM:** Garrett Roffe, Engineering Manager  
**SUBJECT:** Alta Via Drive Main Replacement Project, Monan Way Soldier Pile Retaining Wall

**WRITTEN BY:** Garrett Roffe, Engineering Manager

**PRESENTED BY:** Garrett Roffe, Engineering Manager

### STAFF RECOMMENDATION

It is recommended that the Engineering & Environmental Committee review this memo for the proposed soldier pile retaining wall on Monan Way and recommend a contract change order of \$198,900 to the Board of Directors for Anderson Pacific Engineering Construction to build the proposed wall.

### RECOMMENDED MOTION

I move that the Committee recommend to the Board a contract change order of \$198,900 for Anderson Pacific Engineering Construction to build the Monan Way Soldier Pile Retaining Wall.

### BACKGROUND

The Alta Via Drive Main Replacement project provides approximately 1,883 feet of buried 6-inch ductile iron pipe water main and approximately 4,025-LF of buried 8-inch ductile iron pipe water main with associated valves, fire hydrants and residential water services for Alta Via Drive, Monan Way & Prospect Avenue in Brookdale. The

majority of the new pipeline is installed under the existing roads of Alta Via Drive and Monan Way. The project includes a bid item for overlay asphalt paving after the completion of the underground work. Anderson Pacific alerted the District that the compromised road conditions on Monan Way will directly affect final paving of the entire road and requested direction to address the existing road failure. District staff contacted Haro, Kasunich and Associates for a proposal to perform a geotechnical investigation and design of a steel beam soldier pile retaining wall with wood lagging at the compromised road location. The plans for the proposed retaining wall were provided to Anderson Pacific and pricing of \$198,900 was provided on October 10, 2023.

#### **PRIOR COMMITTEE ACTION**

None

#### **FISCAL IMPACT**

\$198,900

#### **ENVIRONMENTAL IMPACT**

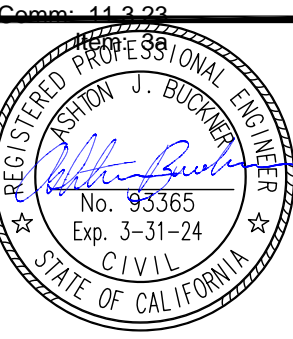
Unknown

#### **ATTACHMENTS**

- Soldier Pile Retaining Wall and Roadway Improvement  
Alta Via Drive Main Replacement Project, Monan Way

# SOLDIER PILE RETAINING WALL AND ROADWAY IMPROVEMENT

## ALTA VIA DRIVE MAIN REPLACEMENT PROJECT MONAN WAY BOULDER CREEK, CALIFORNIA

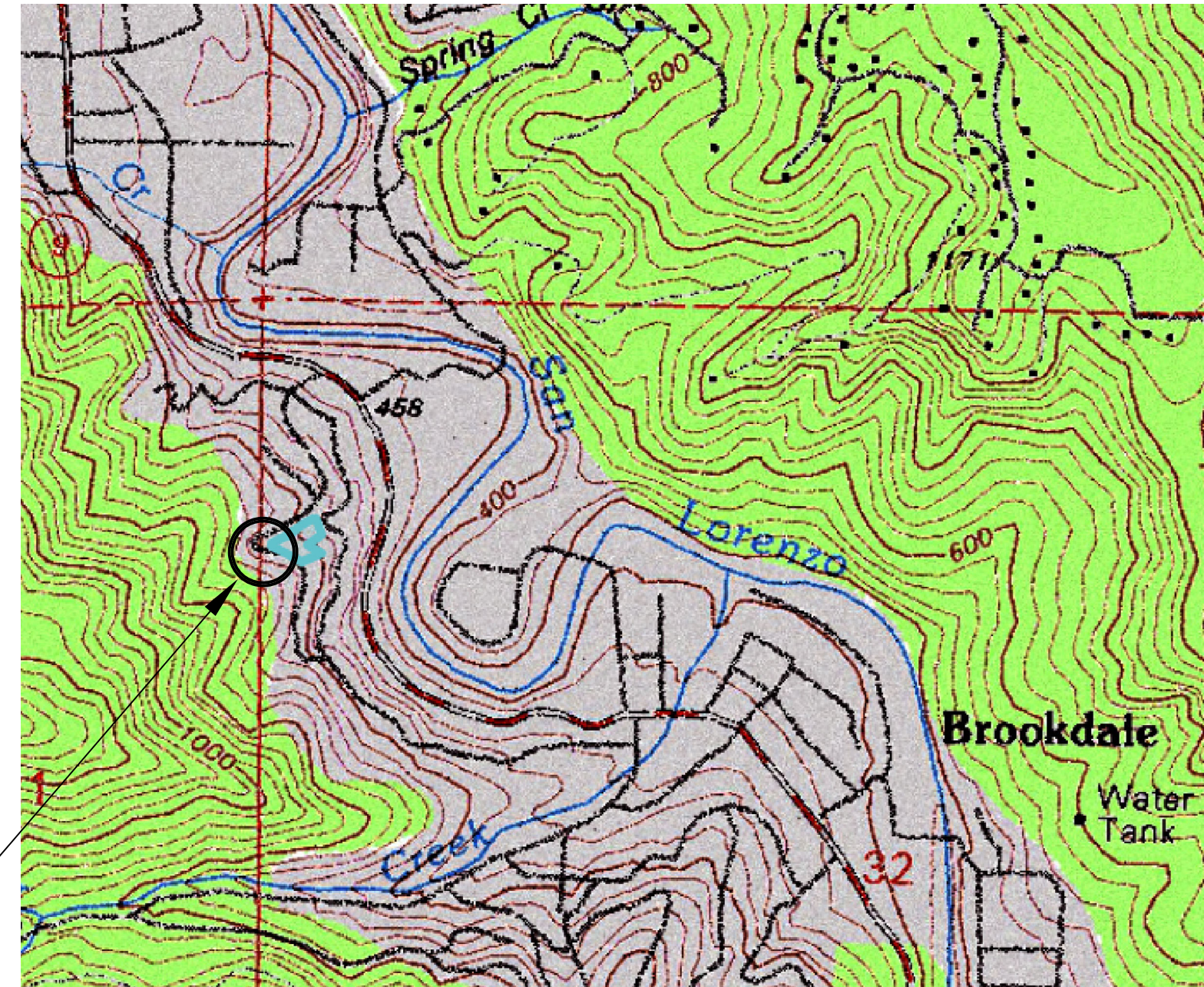


DATE	REVISION	BY

**HARO, KASUNICH & ASSOCIATES**  
 GEOTECHNICAL AND COASTAL ENGINEERS  
 116 EAST LAKE AVENUE, WATSONVILLE, CALIFORNIA 95076  
 (831) 722 4175 PHONE AND (831) 722-3202 FAX

**TITLE SHEET**  
 ALTA VIA DRIVE MAIN REPLACEMENT PROJECT  
 MONAN WAY  
 BOULDER CREEK, CALIFORNIA

PROJECT:	SC12326
DATE:	8/10/23
DESIGN:	TA + AB
DRAWN:	TA
SCALE:	AS SHOWN



**VICINITY MAP**  
N.T.S. (USGS)

PROJECT LOCATION



**REGIONAL MAP**  
N.T.S. (GOOGLE)

PROJECT LOCATION

**SHEET INDEX**

- C1 TITLE SHEET
- C2 SITE RETAINING WALL PLAN
- C3 ROAD PROFILE AND CROSS SECTIONS
- C4 NOTES

**GENERAL NOTES**

1. ELEVATION DATUM: SANDIS SURVEY MAP  
BASIS OF BEARINGS: SANDIS SURVEY MAP
2. CROSS SECTIONS AND ROAD PROFILE SURVEYED BY HARO, KASUNICH AND ASSOCIATES, INC.
3. GEOTECHNICAL REPORT AND CIVIL PLANS/DESIGNS PREPARED BY:  
HARO, KASUNICH AND ASSOCIATES, INC.  
116 EAST LAKE AVE.  
WATSONVILLE, CA 95076  
PROJECT NO.: SC12326
4. OWNER:  
SAN LORENZO VALLEY WATER DISTRICT  
13060 HIGHWAY 9  
BOULDER CREEK, CALIFORNIA 95006
5. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE 2022 EDITION OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS PLANS, ISSUED BY THE DEPARTMENT OF TRANSPORTATION.
6. REFER TO OUR 10-AUGUST-2023 GEOTECHNICAL REPORT INVESTIGATION AND RECOMMENDATIONS FOR ADDITIONAL INFORMATION.

**ABBREVIATIONS**

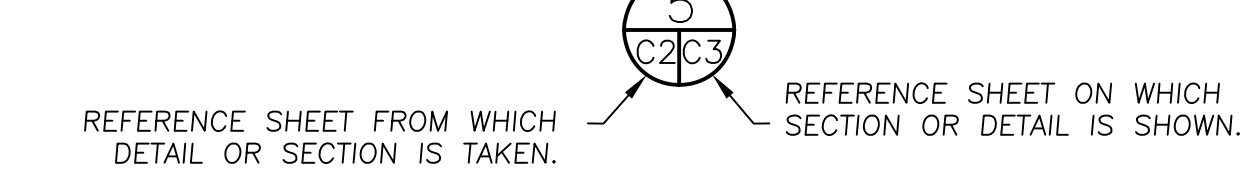
AVG.	AVERAGE
CC	CONCRETE
CY	CUBIC YARDS
DIA.	DIAMETER
E	EXISTING
EG	EXISTING GROUND
ELEV.	ELEVATION
FG	FINISHED GRADE
FT	FEET
INV	INVERT
IN	INCH
MIN.	MINIMUM
N	NEW
NTS	NOT TO SCALE
O.C.	ON CENTER
SF	SQUARE FOOT
T	TREE
T.B.D.	TO BE DETERMINED
TRW	TOP OF RETAINING WALL
TYP.	TYPICAL

**PROJECT DESCRIPTION**

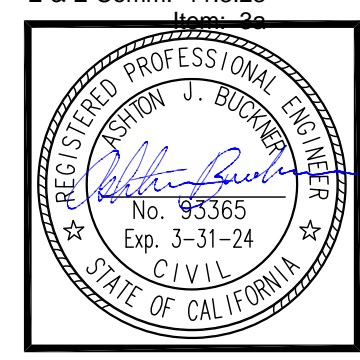
THESE DRAWINGS PROVIDE DETAILS FOR THE CONSTRUCTION OF A SOLDIER PILE RETAINING WALL AND ROADWAY IMPROVEMENTS REQUIRED TO MAINTAIN ACCESS ON MONAN WAY AND FACILITATE CONSTRUCTION OF THE PROPOSED ALTA VIA DRIVE WATER MAIN REPLACEMENT IN BOULDER CREEK. THE NEW APPROXIMATELY 46-FOOT LONG RETAINING WALL WILL CONSIST OF STEEL I-BEAMS, REINFORCED CONCRETE PIERS, SOLDIER PILES WITH WOOD LAGGING, AND DRAINAGE MATERIAL.

**SECTION AND DETAIL CONVENTION**

SECTION OR DETAIL IDENTIFICATION (NUMBER OR LETTER)



C1



BY	
REVISION	
DATE	

**HARO, KASUNICH & ASSOCIATES**  
 GEOTECHNICAL AND COASTAL ENGINEERS  
 116 EAST LAKE AVENUE, WATSONVILLE, CALIFORNIA 95076  
 (831) 722 4175 PHONE AND (831) 722-3202 FAX

**RETAINING WALL SITE PLAN**  
 ALTA VIA DRIVE MAIN REPLACEMENT PROJECT  
 MONAN WAY  
 BOULDER CREEK, CALIFORNIA

PROJECT:	SCI2326
DATE:	8/10/23
DESIGN:	TA + AB
DRAWN:	TA
SCALE:	1" = 10'

**C2**

**NOTES:**

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE GEOTECHNICAL REPORT UPDATE DATED, 18 AUGUST 2023, PREPARED BY HARO, KASUNICH AND ASSOCIATES, INC. (HKA) PROJECT NO. SC12326, AND THE REQUIREMENTS OF THE COUNTY OF SANTA CRUZ.
- THE NEW RETAINING WALLS SHOULD BE SUPPORTED BY SOLDIER PILES EMBEDDED INTO WEATHERED MONTEREY FORMATION WITH 24-30" DIAMETER CONCRETE FILLED SHAFTS.
- EXISTING UNDOCUMENTED FILL SHOULD BE REMOVED AND REPLACED WITH ENGINEERED FILL.
- DETERMINING THE EXISTENCE, LOCATION, AND DEPTH OF UNDERGROUND UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. THIS SHOULD BE DONE PRIOR TO COMMENCEMENT OF WORK. THE ENGINEER SHOULD BE NOTIFIED IF ANY DISCREPANCIES OR CONFLICTS ARE ENCOUNTERED.
- ALL WORK SHALL CONFORM TO APPROVED SPECIFICATIONS PRESENTED HEREIN OR CONTAINED IN THE GEOTECHNICAL REPORT OF 18 AUGUST 2023.
- SHAFTS SHALL BE OBSERVED AND APPROVED BY THE SOIL ENGINEER PRIOR TO PLACEMENT OF SOLDIER PILES.
- HKA SHALL BE NOTIFIED AT LEAST (4) WORKING DAYS BEFORE BEGINNING WORK AT TELEPHONE NUMBER (831)722-4175, EXT. 104. HKA SHALL NOT BE RESPONSIBLE FOR WORK THAT HAS NOT BEEN OBSERVED AND DOCUMENTED BY HKA.
- THE CONTRACTOR SHALL OBTAIN INSPECTION OF ALL WORK BY THE CONTROLLING AGENCY.
- IF, DURING THE COURSE OF CONSTRUCTION, CULTURAL, ARCHAEOLOGICAL, HISTORICAL OR PALEONTOLOGIST RESOURCES ARE UNCOVERED AT THE SITE (SURFACE OR SUBSURFACE RESOURCES) WORK SHALL BE HALTED IMMEDIATELY WITHIN 50 METERS OF THE FIND UNTIL A QUALIFIED PROFESSIONAL ARCHAEOLOGIST CAN EVALUATE IT. SANTA CRUZ COUNTY - PLANNING AND A QUALIFIED ARCHAEOLOGIST (I.E., AN ARCHAEOLOGIST REGISTERED WITH THE REGISTER OF PROFESSIONAL ARCHAEOLOGISTS) SHALL BE IMMEDIATELY CONTACTED BY THE RESPONSIBLE INDIVIDUAL PRESENT ON-SITE. WHEN CONTACTED, THE PROJECT PLANNER AND THE ARCHAEOLOGIST SHALL IMMEDIATELY VISIT THE SITE TO DETERMINE THE EXTENT OF THE RESOURCES AND TO DEVELOP PROPER MITIGATION MEASURES REQUIRED FOR RECOVERY (PLANNING).
- IF DISCREPANCIES ARE DISCOVERED BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- PROTECT TREES ADJACENT TO PROJECT FROM POTENTIAL DAMAGE.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE FULLY INFORMED OF AND TO COMPLY WITH ALL LAWS, ORDINANCES, CODES, REQUIREMENTS AND STANDARDS WHICH IN ANY MANNER AFFECT THE COURSE OF CONSTRUCTION OF THIS PROJECT, THOSE ENGAGED OR EMPLOYED IN THE CONSTRUCTION AND THE MATERIALS USED IN THE CONSTRUCTION.
- ANY TESTS, INSPECTIONS, SPECIAL OR OTHERWISE, THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS, OR THESE PLANS, SHALL BE DONE BY AN INDEPENDENT INSPECTION COMPANY. JOB SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE AN OFFICIAL INSPECTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE REQUIRED TESTS AND INSPECTIONS ARE PERFORMED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, PERMITTING, INSTALLATION, AND MAINTENANCE OF ANY AND ALL TRAFFIC CONTROL MEASURES DEEMED NECESSARY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR GENERAL SAFETY DURING CONSTRUCTION. ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAINTAINING ALL WARNING SIGNS AND DEVICES NECESSARY TO SAFEGUARD THE GENERAL PUBLIC AND THE WORK, AND PROVIDE FOR THE PROPER AND SAFE ROUTING OF VEHICULAR AND PEDESTRIAN TRAFFIC DURING THE PERFORMANCE OF THE WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND LAYOUT, UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND PRESERVATION OF ALL SURVEY MONUMENTS OR PROPERTY CORNERS. DISTURBED MONUMENTS SHALL BE RESTORED BACK TO THEIR ORIGINAL LOCATION AND SHALL BE CERTIFIED BY A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR AT THE SOLE EXPENSE OF THE CONTRACTOR.
- EXISTING UNDERGROUND UTILITY LOCATIONS:
  - CALL UNDERGROUND SERVICE ALERT (811) TO LOCATE ALL UNDERGROUND UTILITY LINES PRIOR TO COMMENCING CONSTRUCTION.
  - PRIOR TO BEGINNING WORK, CONTACT ALL UTILITIES COMPANIES WITH REGARD TO WORKING OVER, UNDER, OR AROUND EXISTING FACILITIES AND TO OBTAIN INFORMATION REGARDING RESTRICTIONS THAT ARE REQUIRED TO PREVENT DAMAGE TO THE FACILITIES.
  - THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE LOCATION AND/OR PROTECTION OF ALL EXISTING AND PROPOSED PIPING, UTILITIES, TRAFFIC SIGNAL EQUIPMENT (BOTH ABOVE GROUND AND BELOW GROUND), STRUCTURES, AND ALL OTHER EXISTING IMPROVEMENTS THROUGHOUT CONSTRUCTION.
  - PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION, DISCOVER OR VERIFY THE ACTUAL DIMENSIONS, SIZES, MATERIALS, LOCATIONS, AND ELEVATIONS OF ALL EXISTING UTILITIES AND POTHOLES THOSE AREAS WHERE POTENTIAL CONFLICTS ARE LIKELY OR DATA IS OTHERWISE INCOMPLETE.
  - TAKE APPROPRIATE MEASURES TO PROTECT EXISTING UTILITIES DURING CONSTRUCTION OPERATIONS. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COST OF REPAIR/REPLACEMENT OF ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
  - UPON LEARNING OF THE EXISTENCE AND/OR LOCATIONS OF ANY UNDERGROUND FACILITIES NOT SHOWN OR SHOWN INACCURATELY ON THE PLANS OR NOT PROPERLY MARKED BY THE UTILITY OWNER, IMMEDIATELY NOTIFY THE UTILITY OWNER AND THE CITY BY TELEPHONE AND IN WRITING.
  - UTILITY RELOCATIONS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT FACILITIES WILL BE PERFORMED BY THE UTILITY COMPANY, UNLESS OTHERWISE NOTED.

**DIMENSIONS**

- DIMENSIONS UNLESS OTHERWISE SHOWN ARE TO THE CENTER OF COLUMNS AND BEAMS.
- CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB SITE. PLEASE NOTIFY HKA OF ANY DIMENSION VARIATIONS PRIOR TO THE START OF CONSTRUCTION.

**CONCRETE**

- CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-11 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
- ALL CONCRETE SHALL BE REGULAR WEIGHT HARD ROCK AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI. USE TYPE II CEMENT ASTM C150 MAX. AGGREGATE SIZE 3/4".
- DO NOT BACKFILL WALL UNTIL CONCRETE HAS REACHED IT'S STRENGTH, OTHERWISE USE FAST SETTING CONCRETE WITH ENGINEER'S APPROVAL.

**LUMBER**

- USE PRESSURE TREATED DOUGLAS FIR #2 TIMBER LAGGING (AWPA USE CATEGORY UC4B GROUND CONTACT HEAVY DUTY). SEE RETAINING WALL SCHEDULE FOR SIZE. PRESSURE TREATMENT TO CONFORM WITH CALTRANS SECTION 58-1.02 (AWPA STANDARD C14).
- SPACE LAGGING BOARDS VERTICALLY BY 1/4" TO ALLOW FOR DRAINAGE.

**STEEL**

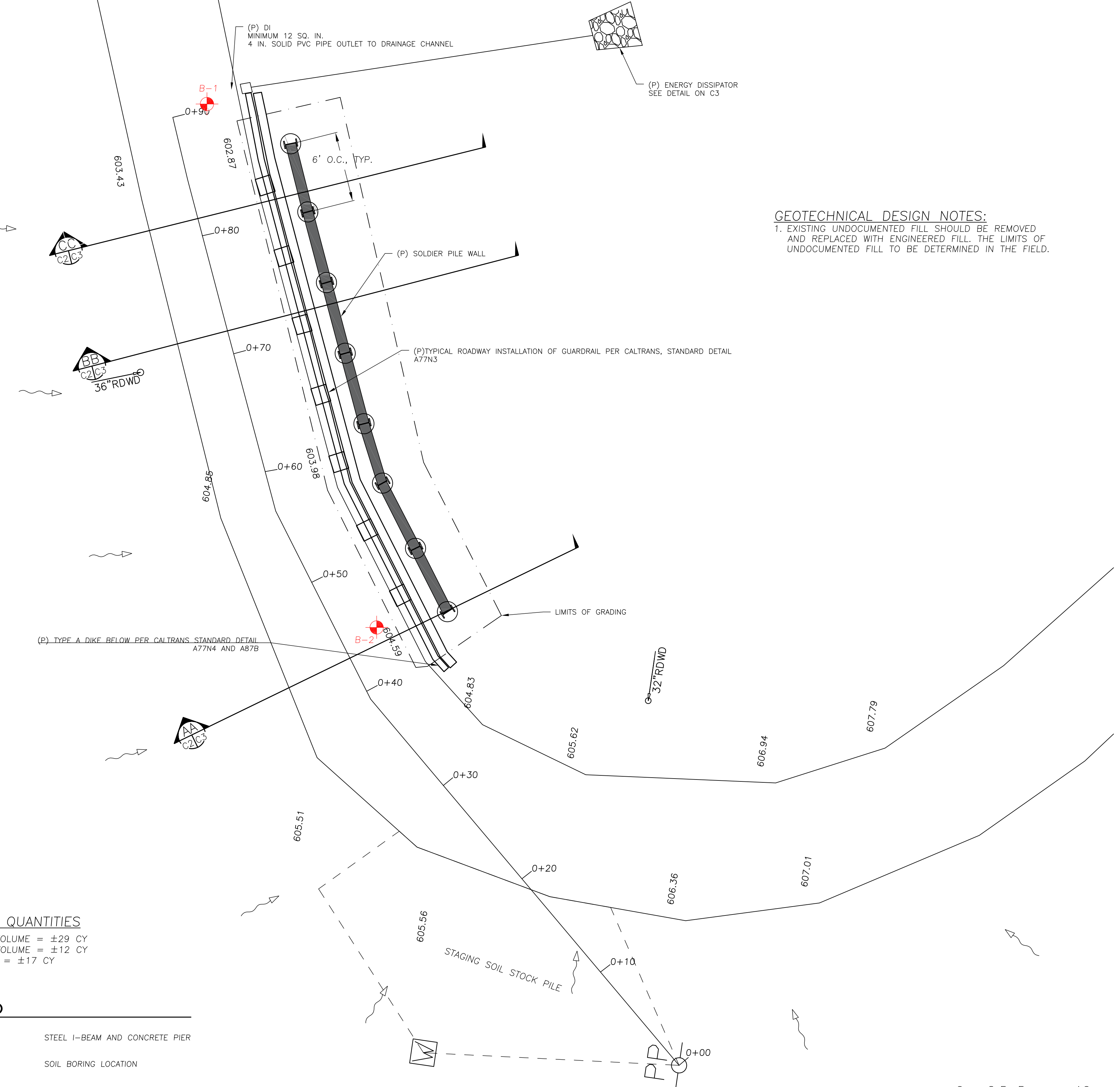
- USE A50 (Fy=50KSI) STEEL.

**GENERAL NOTES CONTINUED**

- A PRECONSTRUCTION CONFERENCE IS REQUIRED.

**GEOTECHNICAL DESIGN NOTES:**

- EXISTING UNDOCUMENTED FILL SHOULD BE REMOVED AND REPLACED WITH ENGINEERED FILL. THE LIMITS OF UNDOCUMENTED FILL TO BE DETERMINED IN THE FIELD.

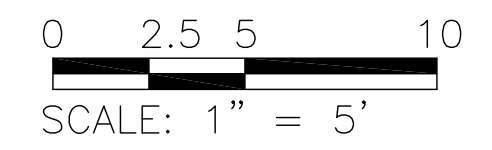


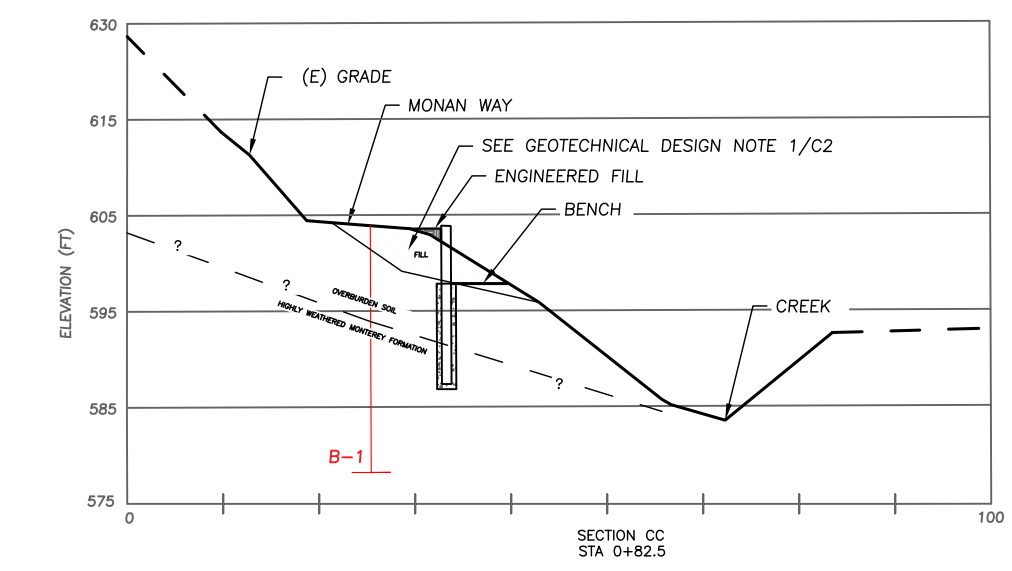
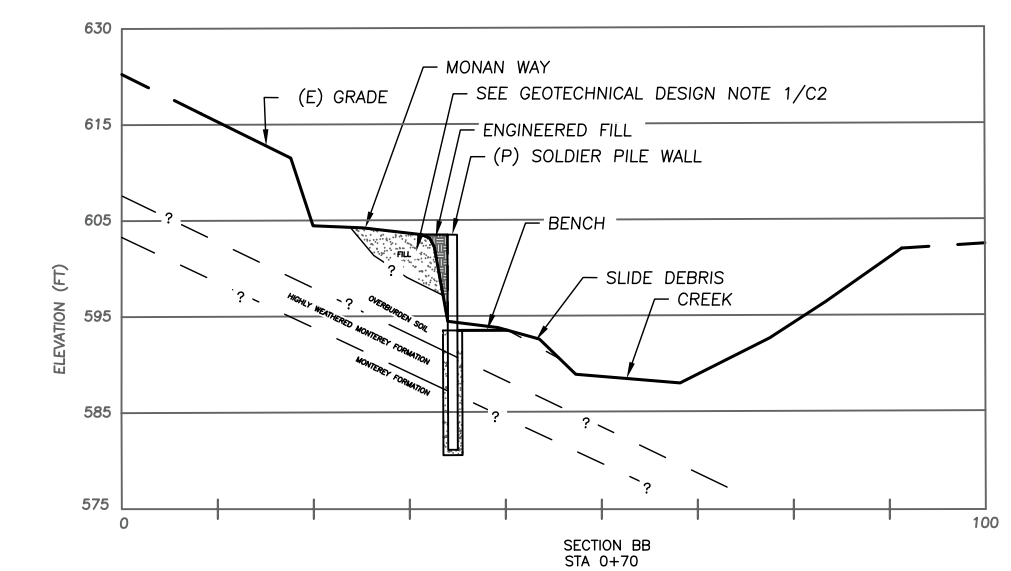
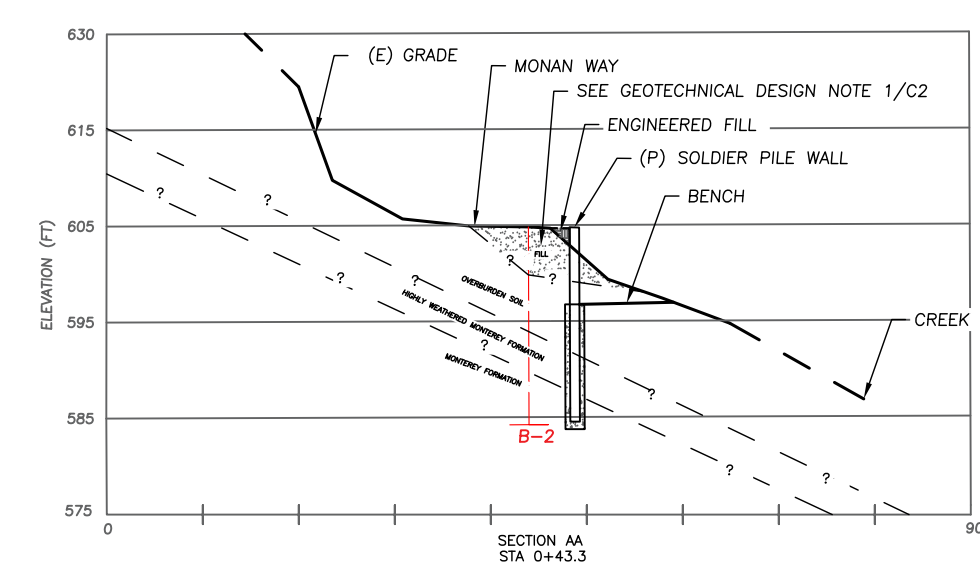
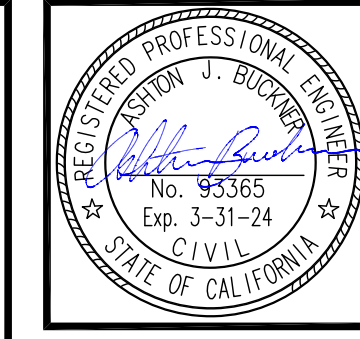
**GRADING QUANTITIES**  
 TOTAL CUT VOLUME = ±29 CY  
 TOTAL FILL VOLUME = ±12 CY  
 NET VOLUME = ±17 CY

**LEGEND**

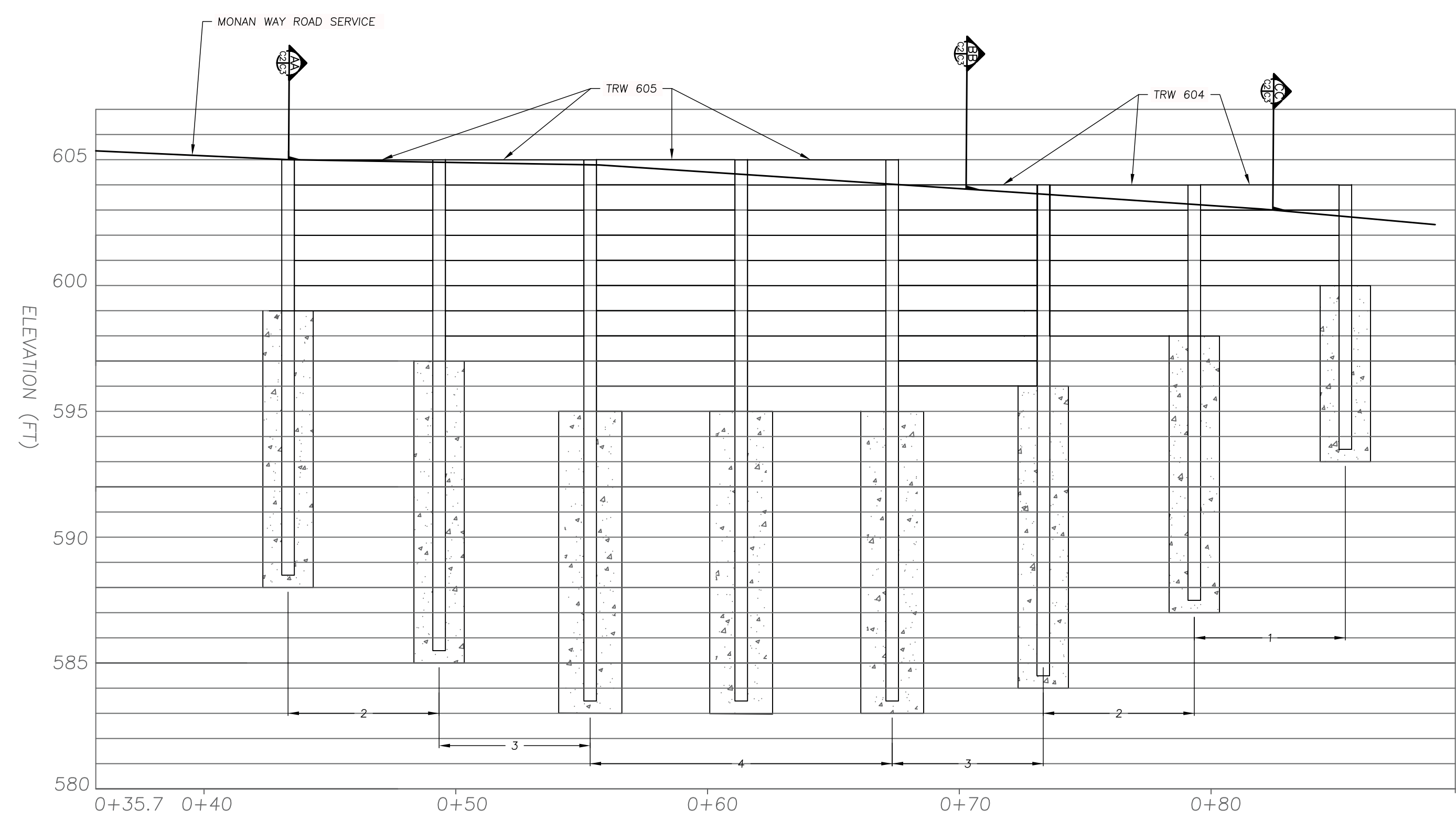
- STEEL I-BEAM AND CONCRETE PIER
- SOIL BORING LOCATION
- LIMITS OF GRADING
- FLOW LINES

**SITE PLAN**  
 SCALE: 1" = 5'





**CROSS SECTIONS**  
SCALE: 1" = 20'  
0 10 20 40  
SCALE: 1" = 20'

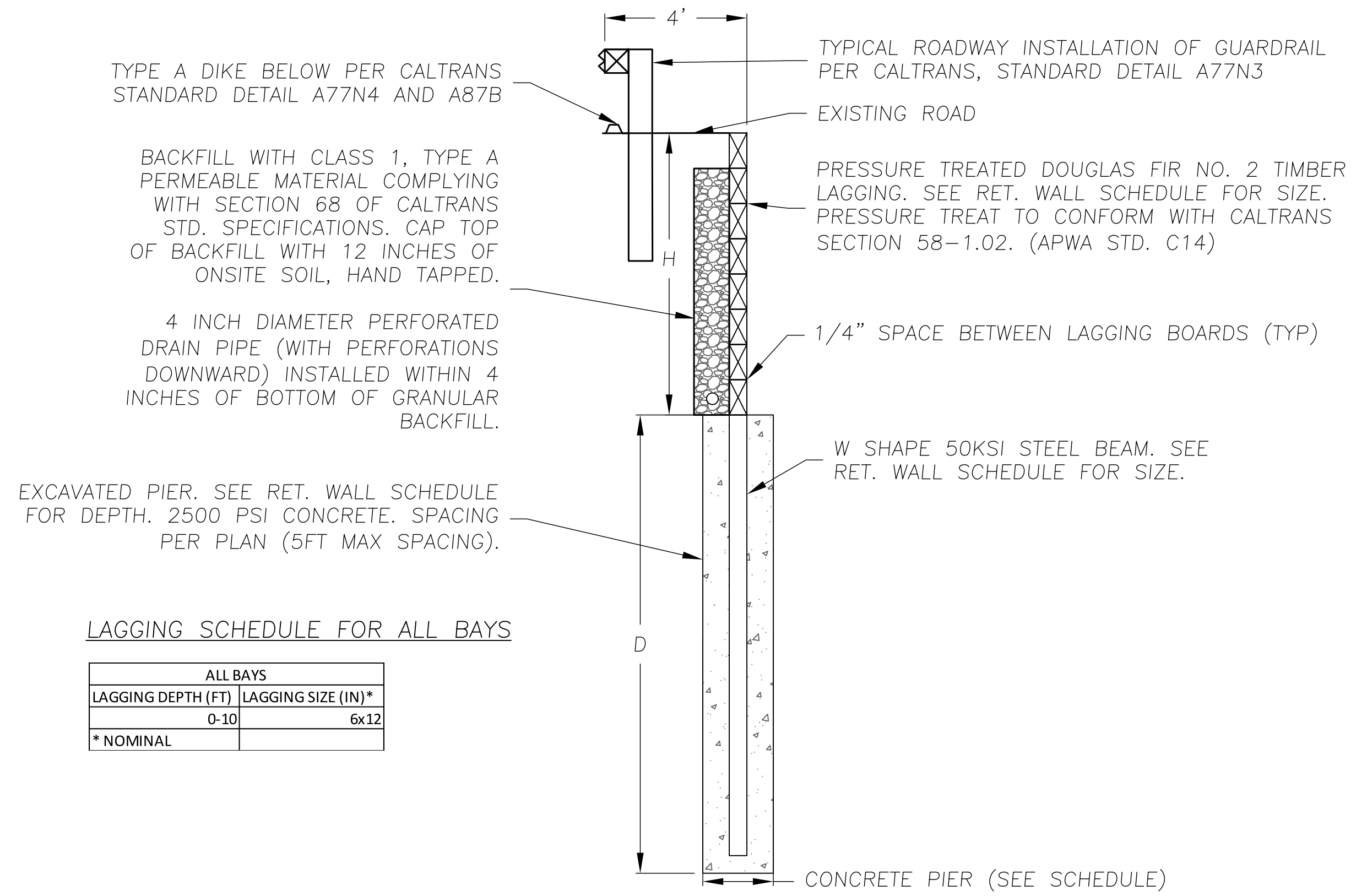


**ROADWAY PROFILE**  
SCALE: 1" = 4'  
0 2 4 8  
SCALE: 1" = 4'

**TYPICAL RETAINING WALL SCHEDULE**

BAY	WALL HEIGHT (FT)	MAX. PIER SPACING (FT)	PIER DEPTH (FT)	DIAMETER (IN)	STEEL BEAM SHAPE <sup>1</sup>	WOOD LAGGING <sup>2,3</sup> (INCH)
1	4	6.0	7.0	24.0	W12x14	SEE SHEET C3
2	6	6.0	11.0	24.0	W12x16	
3	8	6.0	12.0	24.0	W14x26	
4	10	6.0	12.0	30.0	W18x40	

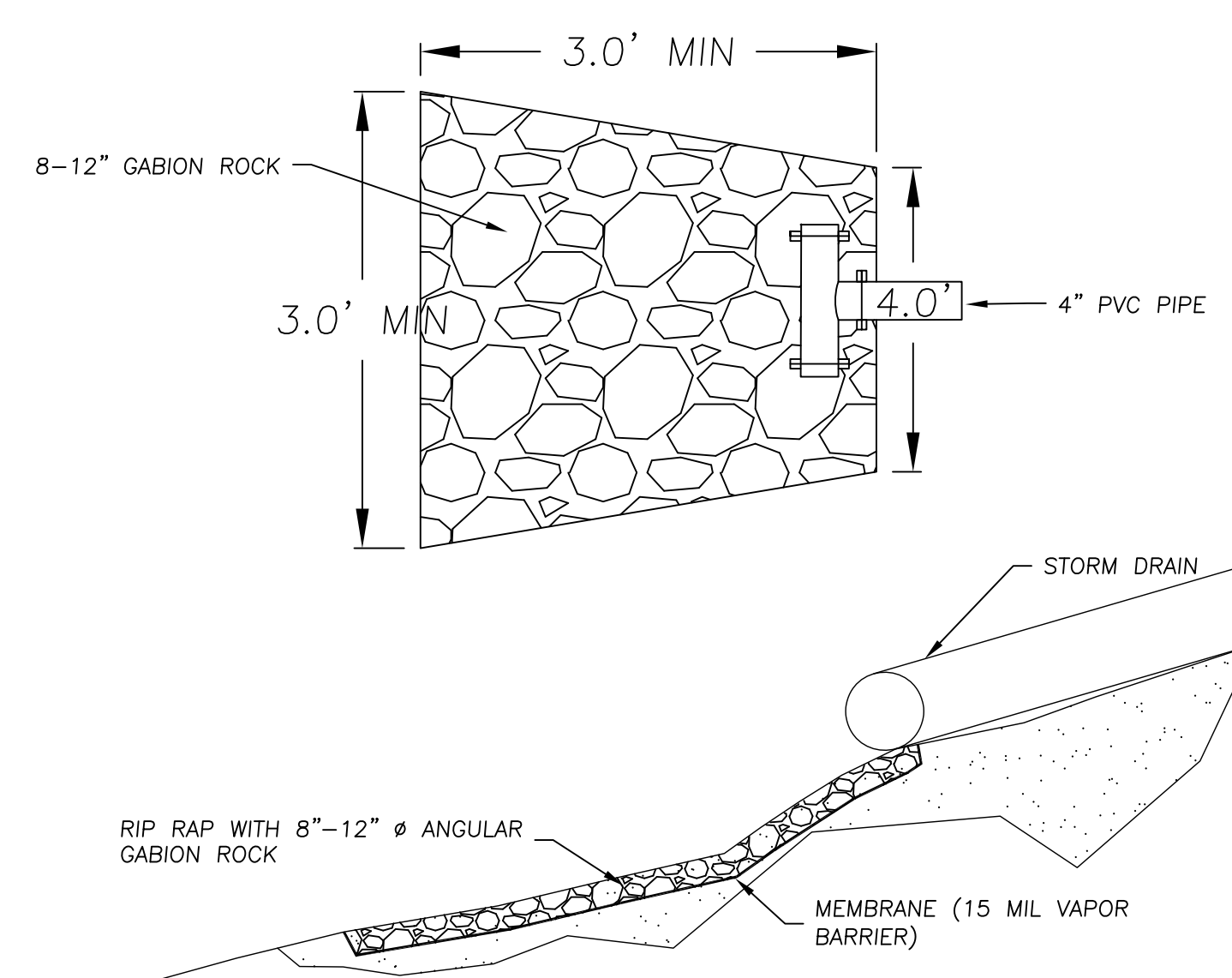
NOTES:  
1) ASSUMES F<sub>y</sub> = 50 ksi.  
2) WOOD LAGGING SHOULD BE PRESSURE TREATED DOUGLAS FIR LARCH NO. 2. PRESSURE TREAT TO CONFORM WITH CALTRANS SECTION 58-1.02.  
3) SEE SHEET C3.



LAGGING SCHEDULE FOR ALL BAYS

ALL BAYS	
LAGGING DEPTH (FT)	LAGGING SIZE (IN)*
0-10	6x12
* NOMINAL	

**TYP. SOLDIER PILE SECTION**  
SCALE: 1" = 3'



**ENERGY DISSIPATOR DETAIL**  
SCALE: N.T.S.

BY	REVISION	DATE

**HARO, KASUNICH & ASSOCIATES**  
GEOTECHNICAL AND COASTAL ENGINEERS  
116 EAST LAKE AVENUE, WATSONVILLE, CALIFORNIA 95076  
(831) 722-4175 PHONE AND (831) 722-3202 FAX

**SOLDIER PILE WALL PROFILE AND CROSS SECTIONS**  
ALTA VIA DRIVE MAIN REPLACEMENT PROJECT  
MONAN WAY  
BOULDER CREEK, CALIFORNIA

PROJECT:	SC12326
DATE:	8/10/23
DESIGN:	TA + AB
DRAWN:	TA
SCALE:	AS SHOWN

**C3**



## MEMO

**DATE:** November 3, 2023  
**TO:** Engineering & Environmental Committee, SLVWD  
**FROM:** Garrett Roffe, Engineering Manager  
**SUBJECT:** Caltrans Highway 9 PM12.12 Gabion Wall  
Emergency Project, Relocation of District Water Main

**WRITTEN BY:** Garrett Roffe, Engineering Manager

**PRESENTED BY:** Garrett Roffe, Engineering Manager

### STAFF RECOMMENDATION

It is recommended that the Engineering & Environmental Committee review the request from Caltrans and recommend a motion for completing the emergency work to the Board of Directors.

### RECOMMENDED MOTION

None

### BACKGROUND

Caltrans contacted the District on October 16, 2023, and indicated an Emergency Caltrans job on Highway 9 at Post Marker 12.12 requires an existing District water main to be relocated. District staff attended a field meeting on October 25, 2023, with Caltrans representative to discuss scope of work and schedule. Caltrans indicated the gabion wall construction is an emergency repair and wishes to assign construction personnel currently in the San Lorenzo Valley area to perform the emergency work as soon as possible. Caltrans has provided CAD files of the area for the emergency work and offered to provide traffic control



during the week of November 6-10, if the District is able to contract the water main relocation work at this time.

#### **PRIOR COMMITTEE ACTION**

None

#### **FISCAL IMPACT**

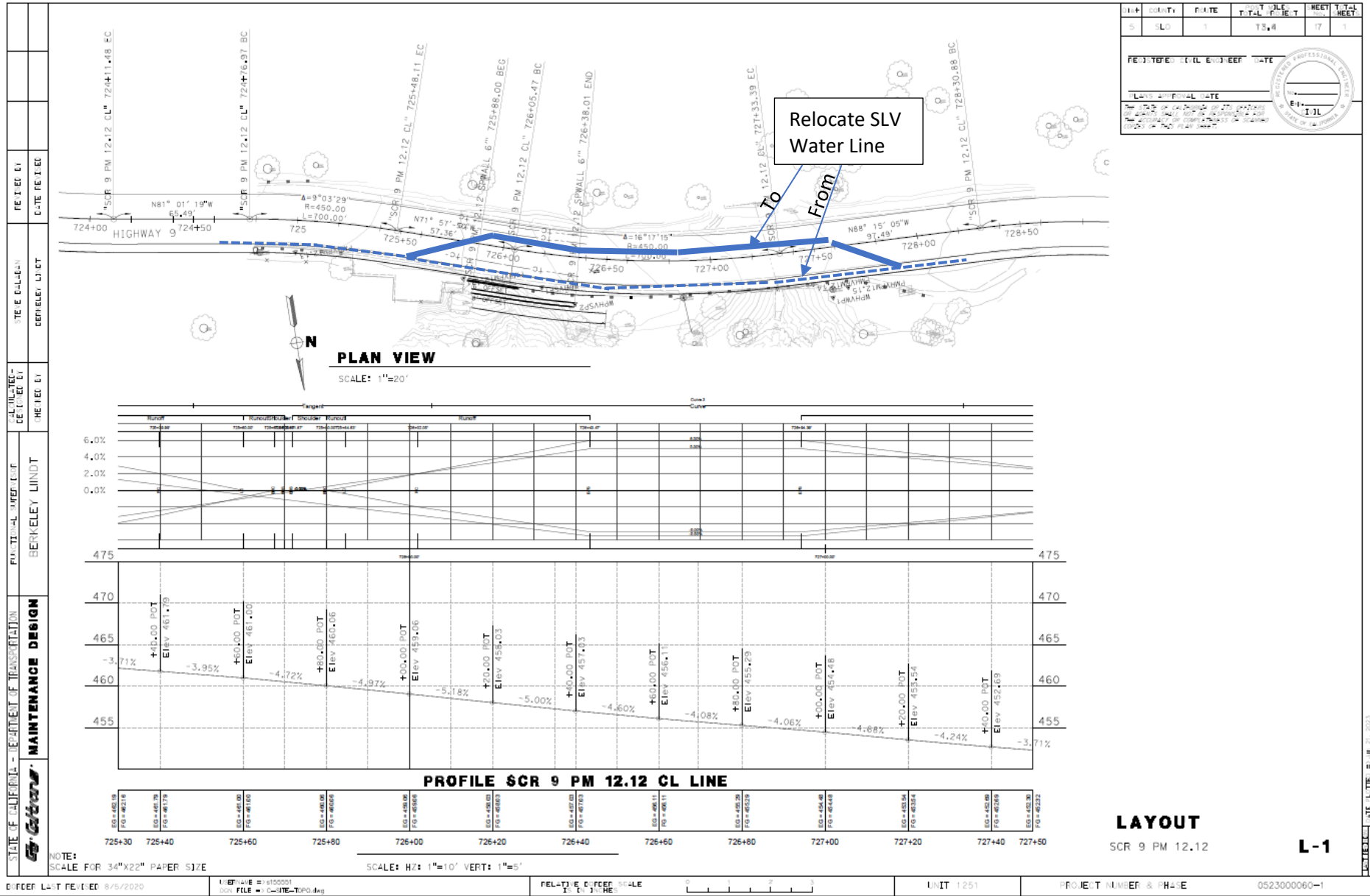
Unknown

#### **ENVIRONMENTAL IMPACT**

Unknown

#### **ATTACHMENTS**

- SCR 9 PM 12.12\_SLV Water Relocation (To SLV Water)
- Photos of Existing Conditions



DATE	COUNTY	ROUTE	PROJECT	DATE	REVISION	TOTAL SHEETS
5	SLO	1	13.4	7	1	

PROJECT: **RELAY WATER LINE**  
 DATE: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 SCALE: \_\_\_\_\_  
 PROJECT NUMBER: \_\_\_\_\_

REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA  
 No. \_\_\_\_\_  
 Exp. \_\_\_\_\_  
 IJL

DATE: 8/5/2020  
 FILE: C:\ITE-Topo.dwg  
 PROJECT NUMBER & PHASE: 0523000060-1

**LAYOUT**  
SCR 9 PM 12.12  
**L-1**

# Caltrans Highway 9 PM12.12 Gabion Wall Emergency Project Relocation of District Water Main

## PHOTOS OF EXISTING CONDITIONS





## MEMO

**DATE:** November 3, 2023  
**TO:** Engineering & Environmental Committee, SLVWD  
**FROM:** Garrett Roffe, Engineering Manager  
**SUBJECT:** Lompico Emergency Access Easement Agreement with County of Santa Cruz

**WRITTEN BY:** Garrett Roffe, Engineering Manager

**PRESENTED BY:** Garrett Roffe, Engineering Manager

### STAFF RECOMMENDATION

It is recommended that the Engineering & Environmental Committee review this memo and attachments for the Lompico Emergency Access Agreement with the County of Santa Cruz and recommend to the Board of Directors for the District Manager to execute the agreement.

### RECOMMENDED MOTION

I move that the Committee recommend to the Board for the District Manager to execute the Lompico Emergency Access Agreement with the County of Santa Cruz.

### BACKGROUND

The County of Santa Cruz wishes to create and maintain an emergency route for the community of Lompico. Currently, Lompico Road is the only means of access for the community of Lompico. The proposed emergency route would connect West Drive with Newell Creek Road.

## **PRIOR COMMITTEE ACTION**

None

## **FISCAL IMPACT**

\$2,100 payment to District from the County of Santa Cruz

## **ENVIRONMENTAL IMPACT**

Unknown

## **ATTACHMENTS**

- Easement Agreement btw SLV and County\_Final
- Easement Deed\_SLV to County\_APN 076-301-06
- Easement Deed\_SLV to County\_APN 075-311-04
- Easement Deed\_SLV to County\_APN 075-311-06

**RECORDED AT THE REQUEST OF:**  
COUNTY OF SANTA CRUZ

**WHEN RECORDED RETURN TO:**  
DEPT. OF PUBLIC WORKS  
701 OCEAN STREET RM 410  
SANTA CRUZ, CA 95060  
**ATTN: Real Property Division**

Government Agency Exempt From Recording Fees Pursuant to Government Code, § 27383

**APN: 076-301-06**

**EASEMENT DEED**

For value received, the **SAN LORENZO VALLEY WATER DISTRICT** (successor in interest to the FORMER LOMPICO COUNTY WATER DISTRICT) ("**GRANTOR**") hereby grants to the **COUNTY OF SANTA CRUZ**, a political subdivision of the State of California ("**GRANTEE**"), an **EASEMENT FOR EMERGENCY TRAVEL AND MAINTENANCE** over the area described as follows:

FOR LEGAL DESCRIPTION SEE **EXHIBIT A**, ATTACHED HERETO AND MADE A PART HEREOF.

THE USE OF THIS EASEMENT IS FOR EMERGENCY PURPOSES ONLY. GRANTEE IS ALLOWED TO CONSTRUCT A TRAVEL ROUTE ON THE EASEMENT, FOR THE BENEFIT OF THE PUBLIC, POLICE, FIRE AND OTHER EMERGENCY PERSONNEL AND THEIR VEHICLES IN THE EVENT OF AN EMERGENCY. THIS EASEMENT ROUTE SHALL REMAIN CLOSED TO THE PUBLIC AND GRANTEE UNLESS THERE IS AN IMMINENT EMERGENCY. GRANTEE SHALL ENSURE THAT THE EASEMENT ROUTE BE GATED AND LOCKED SO AS TO PREVENT PUBLIC ACCESS. GRANTEE SHALL BE ALLOWED INITIAL ACCESS TO CONSTRUCT A NEW CONNECTION BETWEEN EXISTING COUNTY MAINTAINED ROADS. AFTER COMPLETION OF PROJECT CONSTRUCTION, GRANTEE WILL ONLY HAVE ACCESS AS NECESSARY TO MAINTAIN THE EASEMENT ROUTE IN GOOD CONDITION AND REPAIR DAMAGE. GRANTOR SHALL NOT HAVE ANY RESPONSIBILITY TO MAINTAIN OR REPAIR THE EASEMENT, WITH ALL SUCH OBLIGATIONS BELONGING TO GRANTEE.

DATED: \_\_\_\_\_, 2023

**GRANTOR:**

By: \_\_\_\_\_

Print: \_\_\_\_\_

General Manager  
San Lorenzo Valley Water District

STATE OF CALIFORNIA  
COUNTY OF \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_, a notary public,  
personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory evidence to  
be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that  
he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on  
the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing  
paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_ (Seal)

<p style="text-align: center;"><b>CERTIFICATE OF ACCEPTANCE</b> Govt. Code Sec. 27281</p> <p>This is to certify that the interest in real property conveyed by the within deed to the County of Santa Cruz, a political subdivision of the State of California, is hereby accepted by Ordinance No. 5247 of the Board of Supervisors dated May 24, 2017, and the Grantee consents to recordation thereof by its duly authorized officer.</p> <p>Dated _____</p> <p>By _____ DIRECTOR OF PUBLIC WORKS</p>
--



EXHIBIT A

EASEMENT FOR EMERGENCY ACCESS

SITUATE in the County of Santa Cruz, State of California, and described as follows:

BEING an easement for emergency purposes, 20 feet in width, the centerline described as follows:

BEGINNING at an angle point in the centerline of West Drive as shown on that map filed in Volume 106 of Maps, at Page 3, Santa Cruz County Records, said angle point also being the northeast corner of the lands of Fishbin as described in Document #2002-0061719, Santa Cruz County Records, from which a  $\frac{3}{4}$  inch iron pipe, no tag, on the southerly line of said lands of Fishbin, South  $00^{\circ}18'00''$  West, a distance 54.77 feet and North  $89^{\circ}55'08''$  East, a distance of 422.98 feet;

thence along the centerline of the following courses:

1. South  $12^{\circ}20'34''$  West, a distance of 61.29 feet;
2. South  $07^{\circ}08'41''$  East, a distance of 303.56 feet, to a tangent curve to the right
3. along said curve to the right with a radius of 100 feet, through an angle of  $19^{\circ}31'14''$ , an arc length of 34.07 feet;
4. South  $12^{\circ}22'33''$  West, a distance of 52.01 feet, to a tangent curve to the right;
5. along said curve to the right with a radius of 100 feet, through an angle of  $12^{\circ}05'25''$ , an arc length of 21.10 feet;
6. South  $24^{\circ}27'57''$  West, a distance of 230.80 feet, to a tangent curve to the left;
7. along said curve to the left with a radius of 100 feet, through an angle of  $11^{\circ}57'33''$ , an arc length of 20.87 feet;
8. South  $12^{\circ}30'25''$  West, a distance of 111.91 feet, to a tangent curve to the left;
9. along said curve to the left with a radius of 100 feet, through an angle of  $26^{\circ}54'30''$ , an arc length of 46.96 feet;
10. South  $14^{\circ}24'05''$  East, a distance of 134.17 feet, to a tangent curve to the right;
11. along said curve to the right with a radius of 25 feet, through an angle of  $124^{\circ}26'25''$ , an arc length of 54.30 feet;

12. North  $69^{\circ}57'40''$  West, a distance of 29.65 feet, to a tangent curve to the left;
13. along said curve to the left with a radius of 50 feet, through an angle of  $26^{\circ}37'43''$ , an arc length of 23.24 feet;
14. South  $83^{\circ}24'36''$  West, a distance of 58.52 feet, to a tangent curve to the left;
15. along said curve to the left with a radius of 50 feet, through an angle of  $26^{\circ}04'41''$ , an arc length of 22.76 feet;
16. South  $57^{\circ}19'56''$  West, a distance of 115.70 feet, to a tangent curve to the right;
17. along said curve to the right with a radius of 50 feet, through an angle of  $27^{\circ}18'10''$ , an arc length of 23.83 feet;
18. South  $84^{\circ}38'05''$  West, a distance of 97.33 feet, to a tangent curve to the right;
19. along said curve to the right with a radius of 100 feet, through an angle of  $13^{\circ}14'15''$ , an arc length of 23.10 feet;
20. North  $82^{\circ}07'40''$  West, a distance of 54.29 feet, to a tangent curve to the left;
21. along said curve to the left with a radius of 100 feet, through an angle of  $25^{\circ}40'37''$ , an arc length of 44.82 feet;
22. South  $72^{\circ}11'43''$  West, a distance of 72.14 feet, to a tangent curve to the right;
23. along said curve to the right with a radius of 100 feet, through an angle of  $17^{\circ}35'00''$ , an arc length of 38.69 feet;
24. South  $89^{\circ}46'43''$  West, a distance of 71.22 feet, to a tangent curve to the right;
25. along said curve to the right with a radius of 50 feet, through an angle of  $58^{\circ}31'54''$ , an arc length of 51.08 feet;
26. North  $31^{\circ}41'22''$  West, a distance of 79.76 feet, to a tangent curve to the left;
27. along said curve to the left with a radius of 50 feet, through an angle of  $56^{\circ}50'40''$ , an arc length of 49.61 feet
28. North  $88^{\circ}32'02''$  West, a distance of 57.49 feet, to a point on the easterly side of the lands of Yee as described in Document #2010-0017978, Official Records of Santa Cruz County, from which a found 1-1/2 inch iron pipe, tagged RCE 10307, located on the northerly line of Section

3, Township 10 South, Range 2 West, M.D.B.&M. bears North 00°31'15" West, a distance of 224.84 feet,

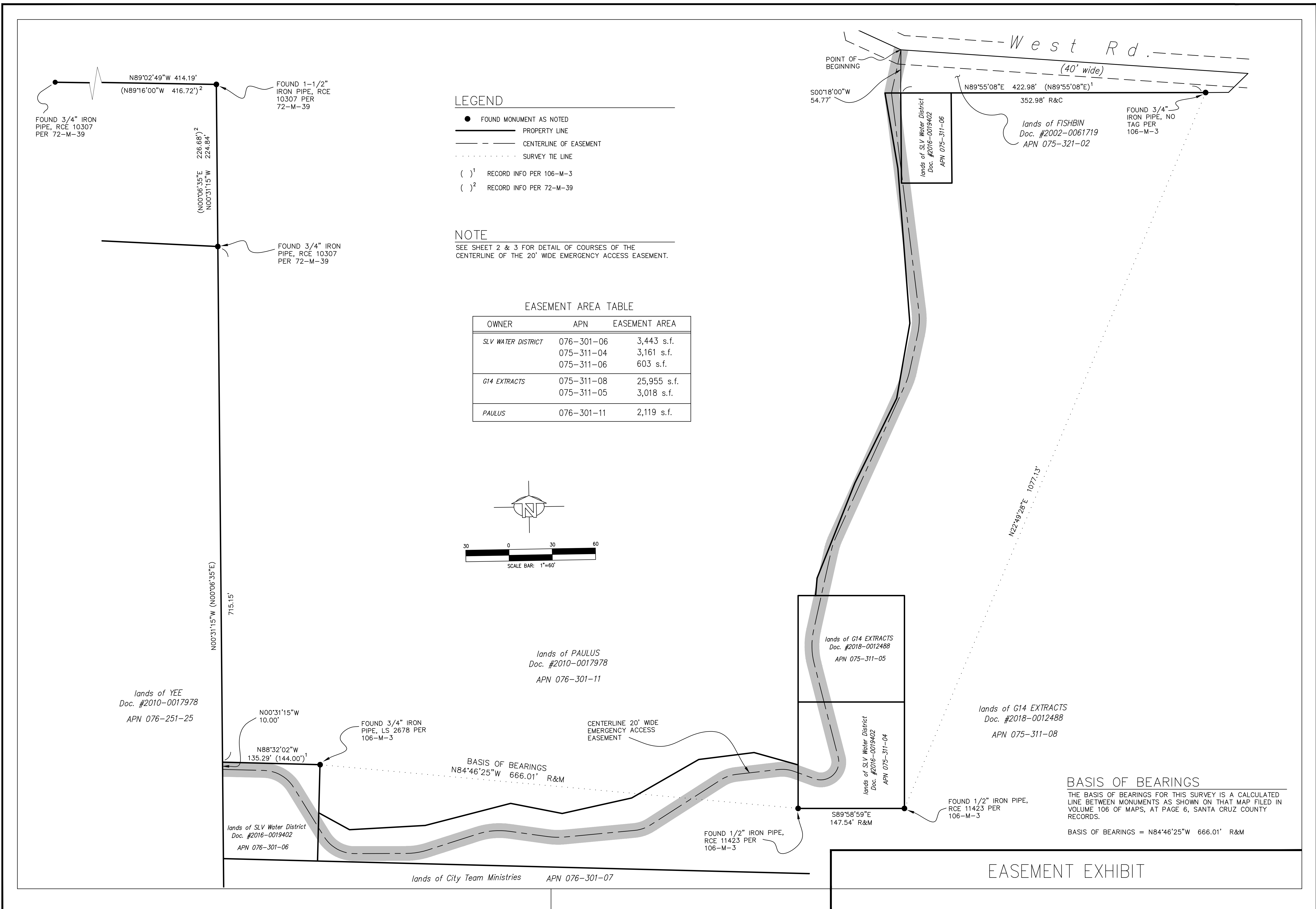
the sidelines of said 20 foot wide easement to be extended and shortened to meet at angle points and to terminate at the easterly line of said lands of Yee and the southerly side of West Road.

END OF DESCRIPTION

*Job #P40674 – Lompico Emergency Escape Route (Phase 1)*

*Over portions of:*

<i>SLV Water District:</i>	<i>APN 076-301-06</i>	<i>(3,443 s.f.)</i>
	<i>APN 075-311-04</i>	<i>(3,161 s.f.)</i>
	<i>APN 075-311-06</i>	<i>(603 s.f.)</i>
<i>G14 Extracts:</i>	<i>APN 075-311-08</i>	<i>(25,955 s.f.)</i>
	<i>APN 075-311-05</i>	<i>(3,018 s.f.)</i>
<i>Paulus:</i>	<i>APN 076-301-11</i>	<i>(2,119 s.f.)</i>



**LEGEND**

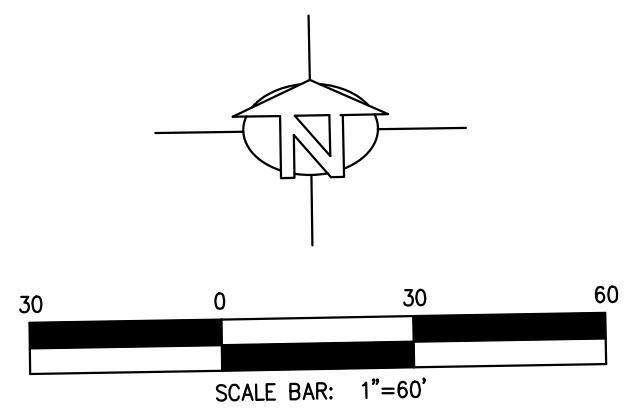
- FOUND MONUMENT AS NOTED
- PROPERTY LINE
- - - CENTERLINE OF EASEMENT
- ..... SURVEY TIE LINE
- ( )<sup>1</sup> RECORD INFO PER 106-M-3
- ( )<sup>2</sup> RECORD INFO PER 72-M-39

**NOTE**

SEE SHEET 2 & 3 FOR DETAIL OF COURSES OF THE CENTERLINE OF THE 20' WIDE EMERGENCY ACCESS EASEMENT.

**EASEMENT AREA TABLE**

OWNER	APN	EASEMENT AREA
SLV WATER DISTRICT	076-301-06	3,443 s.f.
	075-311-04	3,161 s.f.
	075-311-06	603 s.f.
G14 EXTRACTS	075-311-08	25,955 s.f.
	075-311-05	3,018 s.f.
PAULUS	076-301-11	2,119 s.f.



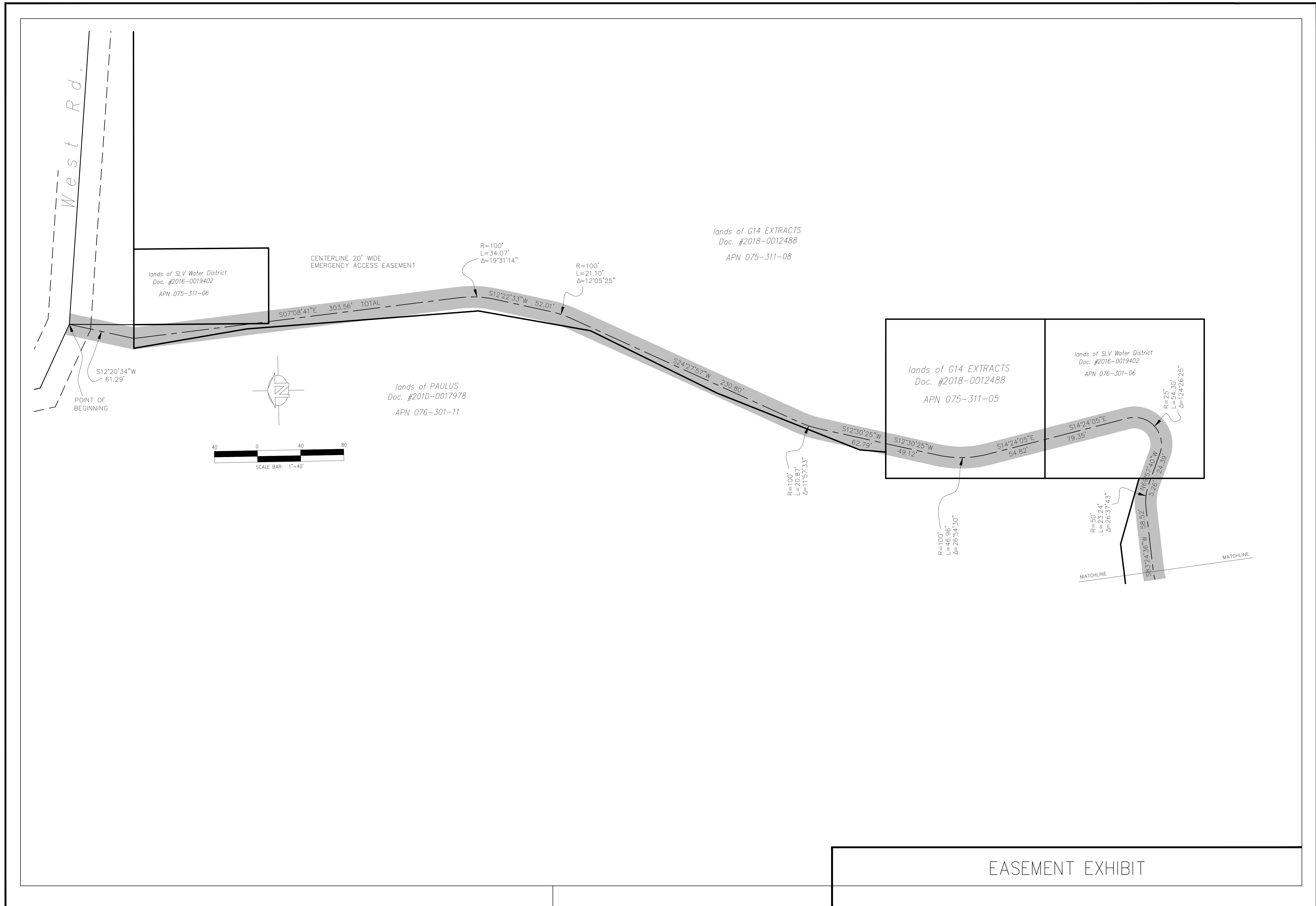
**BASIS OF BEARINGS**

THE BASIS OF BEARINGS FOR THIS SURVEY IS A CALCULATED LINE BETWEEN MONUMENTS AS SHOWN ON THAT MAP FILED IN VOLUME 106 OF MAPS, AT PAGE 6, SANTA CRUZ COUNTY RECORDS.

BASIS OF BEARINGS = N84°46'25"W 666.01' R&M

**EASEMENT EXHIBIT**

BY		REVISION		DATE	
PROJECT SURVEYOR	GREG JONES				
COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS	LOMPICO EVACUATION ROUTE EASEMENT EXHIBIT				
DRAWN: GRJ					
CHECKED: GRJ					
DATE: 2/7/2022					
SCALE: 1"=60'					
JOB NO. P40674					
SHEET					
1 OF 3					



DATE	REVISION	BY

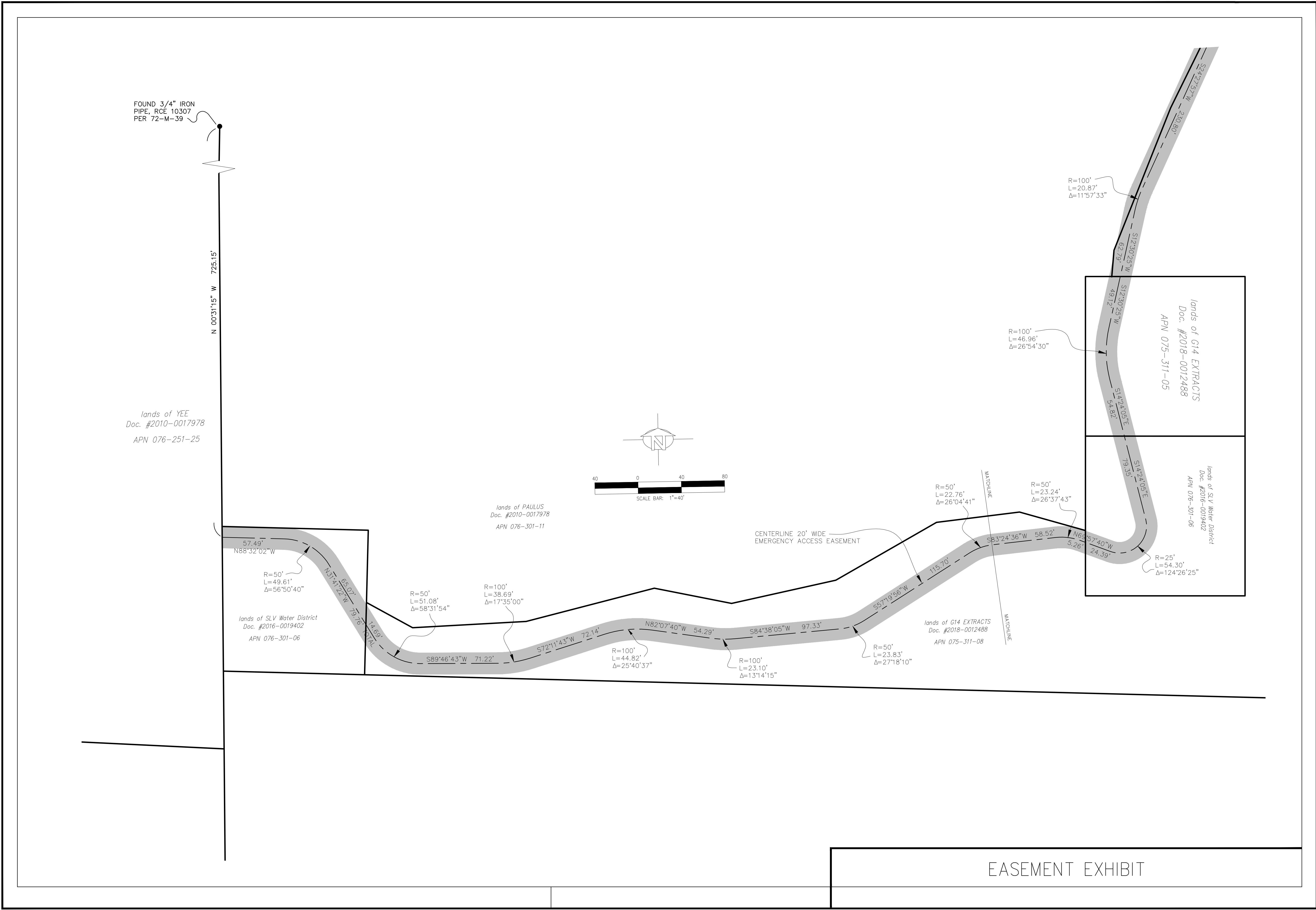
  

PROJECT SURVEYOR	GREG JONES

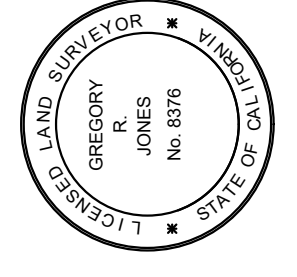
  

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS	LOMPICO EVACUATION ROUTE EASEMENT EXHIBIT
DRAWN: GRJ	CHECKED: GRJ
DATE: 2/7/2022	SCALE: 1"=40'
JOB NO. P40674	SHEET
	2 OF 3

EASEMENT EXHIBIT



DATE	REVISION	BY



PROJECT SURVEYOR  
**GREG JONES**

COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS  
**LOMPICO EVACUATION ROUTE  
EASEMENT EXHIBIT**

DRAWN: GRJ  
CHECKED: GRJ  
DATE: 2/7/2022  
SCALE: 1"=40'  
JOB NO. P40674  
SHEET  
**3 OF 3**

EASEMENT EXHIBIT

**RECORDED AT THE REQUEST OF:**  
COUNTY OF SANTA CRUZ

**WHEN RECORDED RETURN TO:**  
DEPT. OF PUBLIC WORKS  
701 OCEAN STREET RM 410  
SANTA CRUZ, CA 95060  
**ATTN: Real Property Division**

Government Agency Exempt From Recording Fees Pursuant to Government Code, § 27383

**APN: 075-311-04**

**EASEMENT DEED**

For value received, the **SAN LORENZO VALLEY WATER DISTRICT** (successor in interest to the FORMER LOMPICO COUNTY WATER DISTRICT) ("**GRANTOR**") hereby grants to the **COUNTY OF SANTA CRUZ**, a political subdivision of the State of California ("**GRANTEE**"), an **EASEMENT FOR EMERGENCY TRAVEL AND MAINTENANCE** over the area described as follows:

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DATED: \_\_\_\_\_, 2023

**GRANTOR:**

By: \_\_\_\_\_

Print: \_\_\_\_\_

General Manager  
San Lorenzo Valley Water District

STATE OF CALIFORNIA  
COUNTY OF \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_, a notary public,  
personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory evidence to  
be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that  
he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on  
the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing  
paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_ (Seal)

<p style="text-align: center;"><b>CERTIFICATE OF ACCEPTANCE</b> Govt. Code Sec. 27281</p> <p>This is to certify that the interest in real property conveyed by the within deed to the County of Santa Cruz, a political subdivision of the State of California, is hereby accepted by Ordinance No. 5247 of the Board of Supervisors dated May 24, 2017, and the Grantee consents to recordation thereof by its duly authorized officer.</p> <p>Dated _____</p> <p>By _____ DIRECTOR OF PUBLIC WORKS</p>
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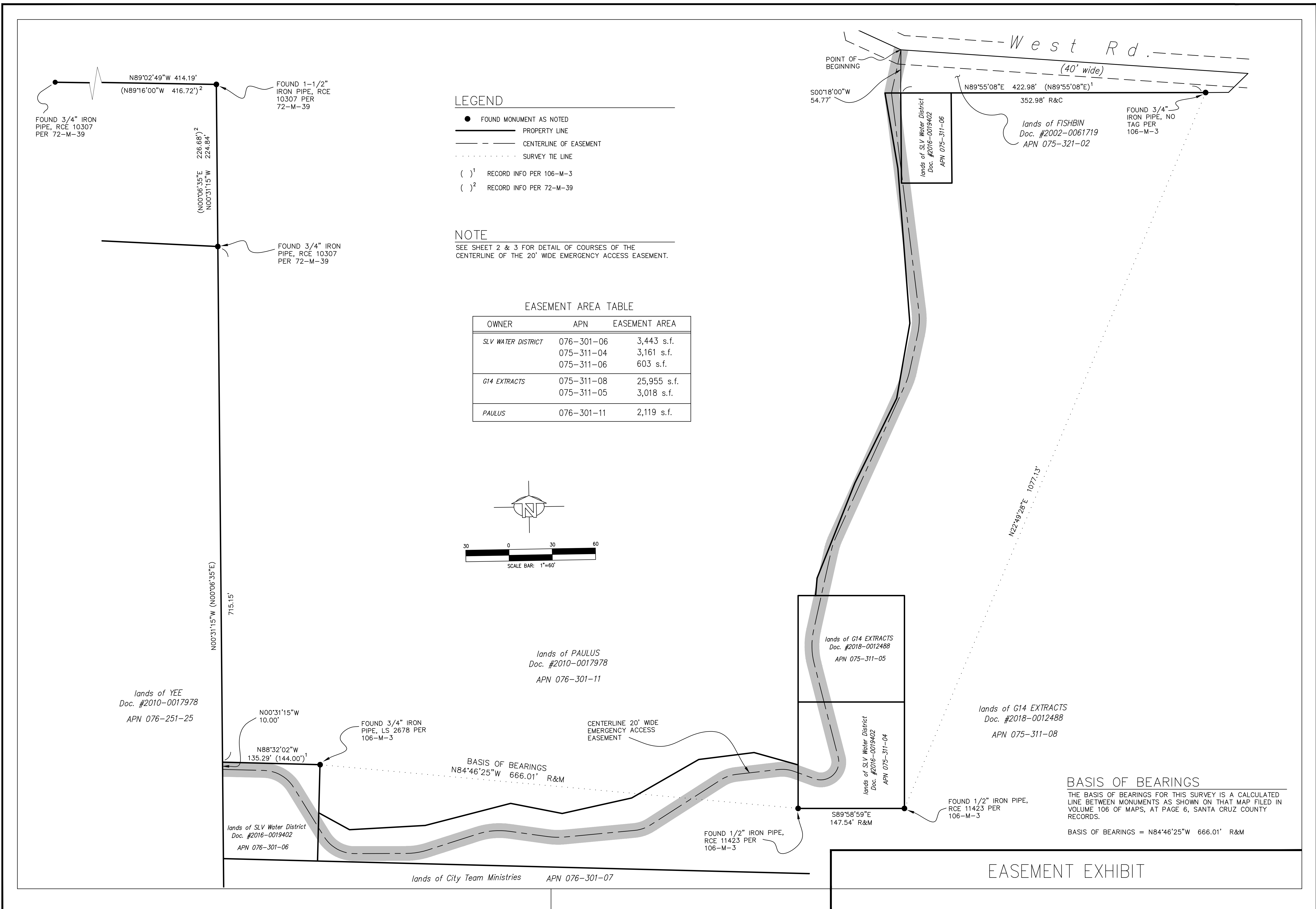
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END OF DESCRIPTION

*Job #P40674 – Lompico Emergency Escape Route (Phase 1)*

*Over portions of:*

<i>SLV Water District:</i>	<i>APN 076-301-06</i>	<i>(3,443 s.f.)</i>
	<i>APN 075-311-04</i>	<i>(3,161 s.f.)</i>
	<i>APN 075-311-06</i>	<i>(603 s.f.)</i>
<i>G14 Extracts:</i>	<i>APN 075-311-08</i>	<i>(25,955 s.f.)</i>
	<i>APN 075-311-05</i>	<i>(3,018 s.f.)</i>
<i>Paulus:</i>	<i>APN 076-301-11</i>	<i>(2,119 s.f.)</i>



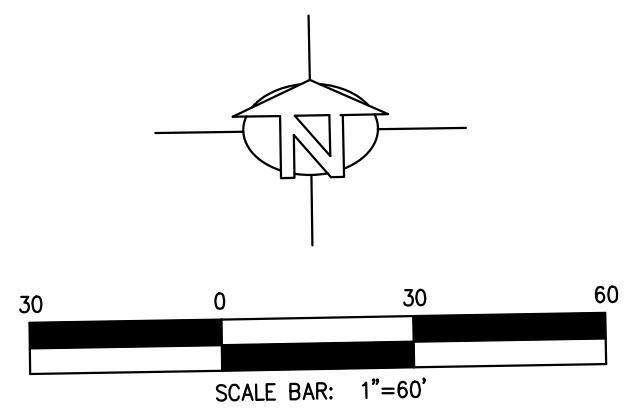
**LEGEND**

- FOUND MONUMENT AS NOTED
- PROPERTY LINE
- - - CENTERLINE OF EASEMENT
- ..... SURVEY TIE LINE
- ( )<sup>1</sup> RECORD INFO PER 106-M-3
- ( )<sup>2</sup> RECORD INFO PER 72-M-39

**NOTE**  
SEE SHEET 2 & 3 FOR DETAIL OF COURSES OF THE CENTERLINE OF THE 20' WIDE EMERGENCY ACCESS EASEMENT.

**EASEMENT AREA TABLE**

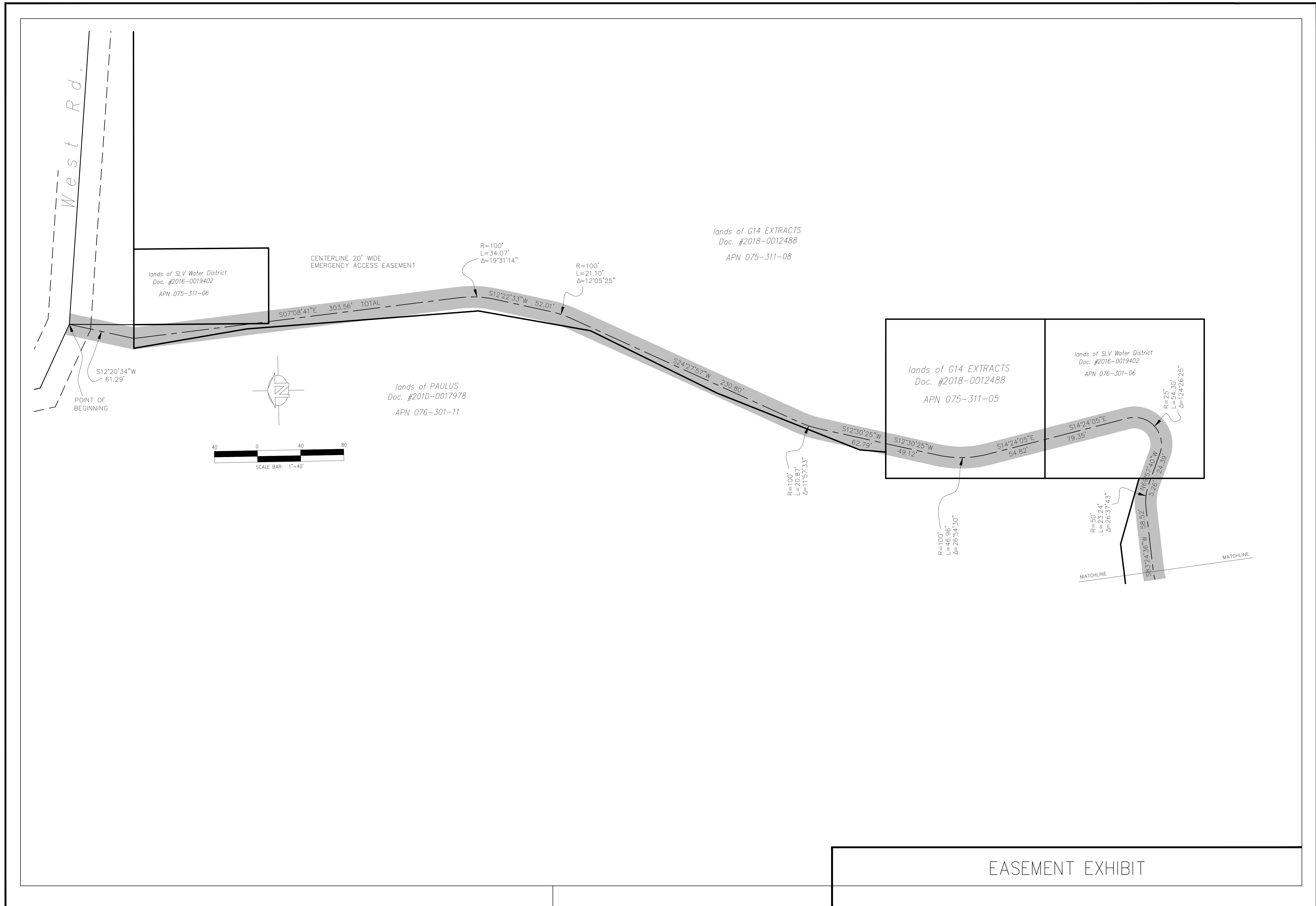
OWNER	APN	EASEMENT AREA
SLV WATER DISTRICT	076-301-06	3,443 s.f.
	075-311-04	3,161 s.f.
	075-311-06	603 s.f.
G14 EXTRACTS	075-311-08	25,955 s.f.
	075-311-05	3,018 s.f.
PAULUS	076-301-11	2,119 s.f.



**BASIS OF BEARINGS**  
THE BASIS OF BEARINGS FOR THIS SURVEY IS A CALCULATED LINE BETWEEN MONUMENTS AS SHOWN ON THAT MAP FILED IN VOLUME 106 OF MAPS, AT PAGE 6, SANTA CRUZ COUNTY RECORDS.  
BASIS OF BEARINGS = N84°46'25"W 666.01' R&M

**EASEMENT EXHIBIT**

BY		REVISION		DATE				
PROJECT SURVEYOR			GREG JONES					
COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS			LOMPICO EVACUATION ROUTE EASEMENT EXHIBIT					
DRAWN: GRJ								
CHECKED: GRJ								
DATE: 2/7/2022								
SCALE: 1"=60'								
JOB NO. P40674								
SHEET								
1 OF 3								



DATE	REVISION	BY

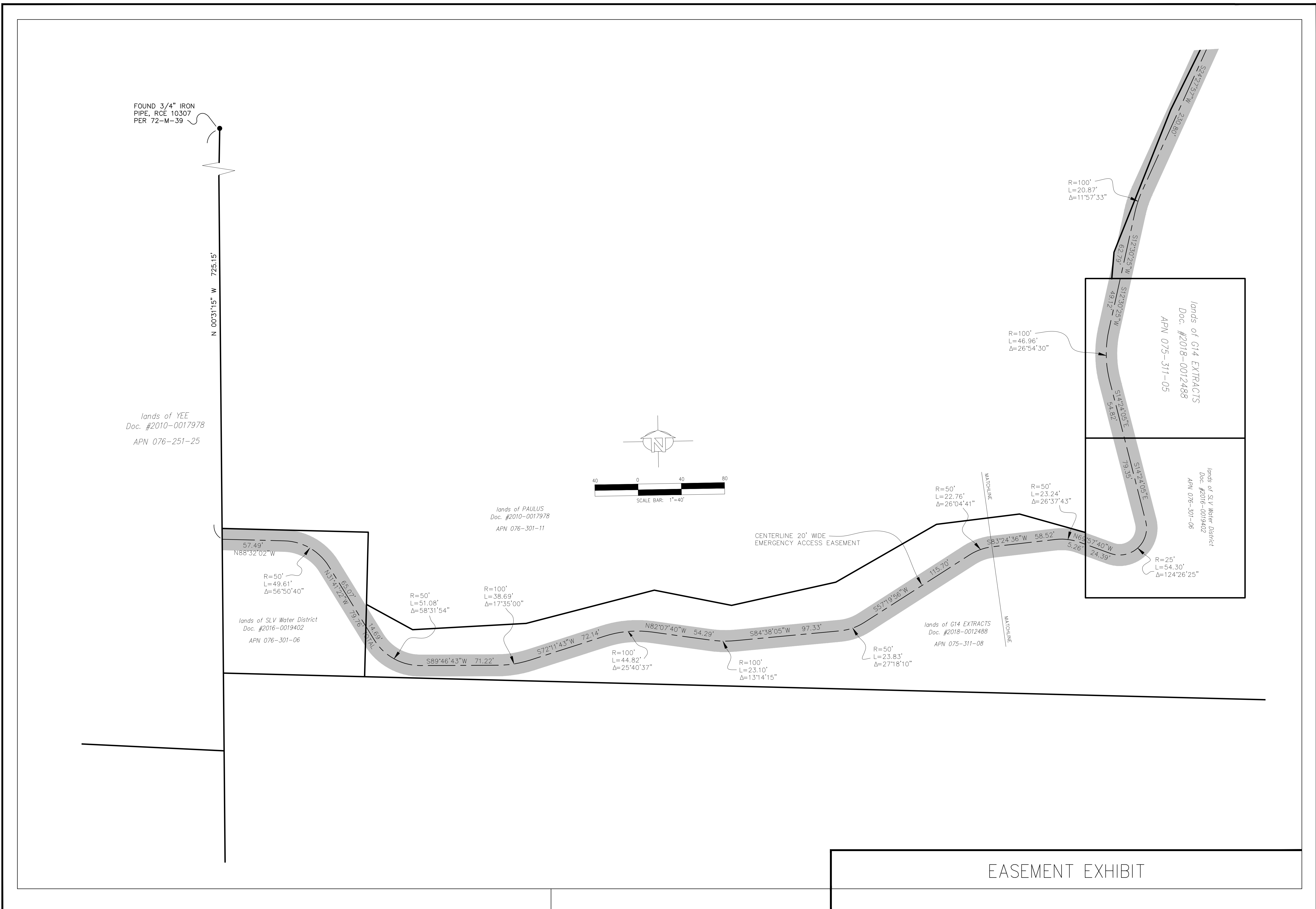
  

PROJECT SURVEYOR	GREG JONES

COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS	LOMPICO EVACUATION ROUTE EASEMENT EXHIBIT
DRAWN: GRJ	
CHECKED: GRJ	
DATE: 2/7/2022	
SCALE: 1"=40'	
JOB NO. P40674	
SHEET	
2	OF 3

EASEMENT EXHIBIT



FOUND 3/4" IRON PIPE, RCE 10307 PER 72-M-39

lands of YEE  
Doc. #2010-0017978  
APN 076-251-25

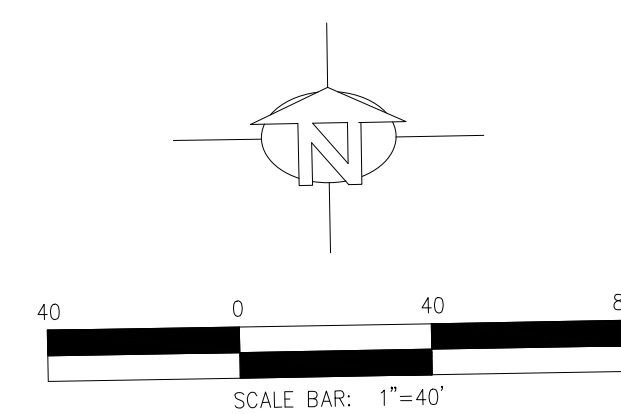
lands of SLV Water District  
Doc. #2016-0019402  
APN 076-301-06

lands of PAULUS  
Doc. #2010-0017978  
APN 076-301-11

lands of G14 EXTRACTS  
Doc. #2018-0012488  
APN 075-311-08

lands of G14 EXTRACTS  
Doc. #2018-0012488  
APN 075-311-05

lands of SLV Water District  
Doc. #2016-0019402  
APN 076-301-06



CENTERLINE 20' WIDE EMERGENCY ACCESS EASEMENT

MATCHLINE

MATCHLINE

EASEMENT EXHIBIT

BY	
REVISION	
DATE	
PROJECT SURVEYOR	GREG JONES
COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS	LOMPICO EVACUATION ROUTE EASEMENT EXHIBIT
DRAWN:	GRJ
CHECKED:	GRJ
DATE:	2/7/2022
SCALE:	1"=40'
JOB NO.	P40674
SHEET	3 OF 3

**SAN LORENZO VALLEY WATER DISTRICT**  
**(FORMERLY, LOMPICO COUNTY WATER DISTRICT)**  
**(SELLER)**

**APNs: 076-301-06, 075-311-04, 075-311-06**  
**Project: LOMPICO CANYON EMERGENCY**  
**EVACUATION ROUTE PROJECT**

## **EASEMENT AGREEMENT**

This Easement Agreement (“Agreement”) is entered into by and between the **COUNTY OF SANTA CRUZ** (hereafter, “County”), and **SAN LORENZO VALLEY WATER DISTRICT** (hereafter, “Seller”). County and Seller may be referred to herein individually as a “Party” or collectively as the “Parties.” The Parties mutually agree as follows:

1. Purpose. Seller owns certain parcels of real property in Santa Cruz County. County seeks to create and maintain an emergency route for the public through parcels owned by Seller. Seller will convey permanent easements to County for an emergency route as set forth herein.
2. Easements Granted to County. Seller agrees to execute and deliver the following documents:
  - A. One (1) permanent easement over the property commonly identified as APN 076-301-06 in Santa Cruz County, as further described in **Exhibit A** attached hereto;
  - B. One (1) permanent easement over the property commonly identified as APN 075-311-04 in Santa Cruz County, as further described in **Exhibit B** attached hereto;
  - C. One (1) permanent easement over the property commonly identified as APN 075-311-06 in Santa Cruz County, as further described in **Exhibit C** attached hereto.

The real property described in **Exhibits A, B and C** shall collectively be referred to as the “Easement”.

3. Form of Easement. The Parties shall execute and deliver deeds for the Easement (“Easement Deeds”) promptly upon execution of this Agreement. The Easement Deeds shall be in a form substantially similar to **Exhibit D** attached hereto.
4. Consideration by County. In exchange for Seller’s execution and delivery of the Easement Deeds, County shall do the following:
  - A. Pay **TWO THOUSAND ONE HUNDRED DOLLARS (\$2,100)** to Seller (“Purchase Price”).
  - B. Remit the Purchase Price to Seller within thirty (30) days of execution of this Agreement.
  - C. Be responsible for all escrow, title and recording fees associated with this transaction.
5. Use of Easement. The Parties agree that use of the Easement is for emergency purposes only. Conditions for the Easement will be as follows:

- A. County shall be solely responsible for roadway improvements and ongoing maintenance of the Easement. "Ongoing maintenance" shall include tree clearing and otherwise maintaining the Easement free of obstructions and in good condition.
  - B. The Easement route shall be closed to the public unless there is an imminent emergency.
  - C. Access to the Easement shall be gated and locked to restrict public access, with access keys provided only to Seller and County. Installation and maintenance of the access gates will be the obligation of County.
  - D. Use of the Easement will be restricted to ingress and egress by the public, police, fire and similar emergency personnel and their vehicles. County personnel (*e.g.*, public works) will also have access to the Easement for maintenance and repairs as may be necessary to keep the Easement in good condition.
  - E. Prior to installing the roadway or gate improvements, County shall provide design plans to Seller for Seller's review and approval.
6. County as Lead Agency. County is lead agency for the Lompico Emergency Evacuation Route Project and maintains responsibility for compliance with associated environmental laws and regulations.
  7. Commencement of Possession. Use of the Easement by County shall commence once all of the following have occurred: (A) This Agreement is executed by both Parties; (B) the Easement Deeds have been recorded with the Santa Cruz County Recorder's Office, and (C) Seller receives the Purchase Price.
  8. Damage to Easement or Seller Property. County shall promptly repair any damage to the Easement or Seller's property caused by use of the Easement. County will have thirty (30) days to complete such repairs upon receiving written notice from Seller. In the event County does not make the requested repairs, Seller at its own expense can make the repairs and County shall be responsible for repair costs. County shall pay the cost of the repairs within ten (10) days of receiving a written invoice in reasonable detail from Seller. The Parties agree to cooperate with one another to complete repairs in a timely manner.
  9. Indemnity. County shall indemnify and hold Seller harmless from and against all injuries to persons, personal property or real property arising from use of the Easement. Seller shall not be liable in any way for damages or harm to persons or property that result from use of the Easement. In the event Seller is named in any claim, suit or proceeding alleging liability attributable to Seller for conduct related to the Easement, County shall be responsible for all defense costs of Seller. Seller may tender its defense to County at any time, with counsel acceptable to Seller.
  10. Authority to Grant Easements. Seller warrants that it has the legal authority to grant the property interests described in this Agreement.
  11. Agreement Subject to Approval. This Agreement shall not be effective until it receives approval from the Santa Cruz County Board of Supervisors and the San Lorenzo Valley Water District Board of Directors.
  12. Successors Bound. The provisions of this Agreement shall inure to the benefit of and bind the respective successors of the Parties.



13. Notices. All notices and correspondence herein shall be provided personally, by mail, or by email to the addresses below. If personally delivered, the notice shall be deemed received as of the date delivered. If sent by mail, the notice shall be deemed received three (3) days after registered or certified mail is deposited in the United States mail. If sent by email, the notice shall be deemed received based on the date shown on the sent email. The Parties agree to update the contact information as necessary to maintain updated contacts for Seller and County:

**To SELLER:**

SAN LORENZO VALLEY WATER DISTRICT  
13060 Hwy 9  
Boulder Creek, CA 95006  
Attn: GENERAL MANAGER  
Phone: (831) 338-2153  
Email: [rogers@slvwd.com](mailto:rogers@slvwd.com)

**To COUNTY:**

DEPARTMENT OF PUBLIC WORKS  
REAL PROPERTY SECTION  
701 Ocean Street, Room 410  
Santa Cruz, CA 95060  
Attn: KIMBERLY FINLEY  
Phone: (831) 454-2334  
Email: [Kimberly.finley@santacruzcounty.us](mailto:Kimberly.finley@santacruzcounty.us)

14. GENERAL PROVISIONS.

- A. Exhibits. The Exhibits attached hereto are hereby incorporated and made part of this Agreement.
- B. Severability. In the event any part(s) of this Agreement are found to be void, the remaining provisions of this Agreement shall nevertheless be binding with the same effect as though the void parts were deleted.
- C. Amendment. No changes shall be made to this Agreement except by written amendment mutually agreed to by the Parties.
- D. Entire Agreement. This Agreement constitutes the entire understanding between the Parties and supersedes any prior understandings, contracts or representations by or among the Parties, written or oral, to the extent related to the subject matter hereof.
- E. Counterparts. This Agreement may be executed in any number of counterparts and all the counterparts taken together shall be deemed to constitute one and the same instrument.

- F. Electronic Delivery. Executed copies of this Agreement may be delivered electronically to either Party, and such signatures shall be deemed fully enforceable signatures to this Agreement.
- G. Joint Preparation. County and Seller mutually represent and warrant that they have each had the opportunity to be represented by counsel of their choice in negotiating this Agreement. This Agreement shall be deemed to have been negotiated and prepared between the Parties with the advice and participation of counsel. This Agreement shall be interpreted in accordance with its terms without favor to either Party and without any presumption against the drafting Party.
- H. Governing Law; Venue. The sole venue for any dispute shall be the Superior Court of the County of Santa Cruz, and the terms and provisions of this Agreement shall be interpreted under the laws of the State of California.

*[Signatures on next page]*

**In WITNESS WHEREOF**, the Parties have executed this Agreement as of the dates set forth below.

<b>Seller</b>	<b>County of Santa Cruz</b>
SAN LORENZO VALLEY WATER DISTRICT           <hr/> By: Rick Rogers <span style="float: right;">Date</span>	Matt Machado, Deputy CAO, Director of Department of Community Development and Infrastructure           <hr/> <span style="float: right;">Date</span>
	Approved as to Form:           <hr/> Office of County Counsel <span style="float: right;">Date</span>
	Approved as to Insurance:           <hr/> Risk Management <span style="float: right;">Date</span>
	Recommended for Approval:           <hr/> Real Property <span style="float: right;">Date</span>

**EXHIBIT A**

**Legal Description**

## EASEMENT FOR EMERGENCY ACCESS

SITUATE in the County of Santa Cruz, State of California, and described as follows:

BEING an easement for emergency purposes, 20 feet in width, the centerline described as follows:

BEGINNING at an angle point in the centerline of West Drive as shown on that map filed in Volume 106 of Maps, at Page 3, Santa Cruz County Records, said angle point also being the northeast corner of the lands of Fishbin as described in Document #2002-0061719, Santa Cruz County Records, from which a  $\frac{3}{4}$  inch iron pipe, no tag, on the southerly line of said lands of Fishbin, South  $00^{\circ}18'00''$  West, a distance 54.77 feet and North  $89^{\circ}55'08''$  East, a distance of 422.98 feet;

thence along the centerline of the following courses:

1. South  $12^{\circ}20'34''$  West, a distance of 61.29 feet;
2. South  $07^{\circ}08'41''$  East, a distance of 303.56 feet, to a tangent curve to the right
3. along said curve to the right with a radius of 100 feet, through an angle of  $19^{\circ}31'14''$ , an arc length of 34.07 feet;
4. South  $12^{\circ}22'33''$  West, a distance of 52.01 feet, to a tangent curve to the right;
5. along said curve to the right with a radius of 100 feet, through an angle of  $12^{\circ}05'25''$ , an arc length of 21.10 feet;
6. South  $24^{\circ}27'57''$  West, a distance of 230.80 feet, to a tangent curve to the left;
7. along said curve to the left with a radius of 100 feet, through an angle of  $11^{\circ}57'33''$ , an arc length of 20.87 feet;
8. South  $12^{\circ}30'25''$  West, a distance of 111.91 feet, to a tangent curve to the left;
9. along said curve to the left with a radius of 100 feet, through an angle of  $26^{\circ}54'30''$ , an arc length of 46.96 feet;
10. South  $14^{\circ}24'05''$  East, a distance of 134.17 feet, to a tangent curve to the right;
11. along said curve to the right with a radius of 25 feet, through an angle of  $124^{\circ}26'25''$ , an arc length of 54.30 feet;

12. North  $69^{\circ}57'40''$  West, a distance of 29.65 feet, to a tangent curve to the left;
13. along said curve to the left with a radius of 50 feet, through an angle of  $26^{\circ}37'43''$ , an arc length of 23.24 feet;
14. South  $83^{\circ}24'36''$  West, a distance of 58.52 feet, to a tangent curve to the left;
15. along said curve to the left with a radius of 50 feet, through an angle of  $26^{\circ}04'41''$ , an arc length of 22.76 feet;
16. South  $57^{\circ}19'56''$  West, a distance of 115.70 feet, to a tangent curve to the right;
17. along said curve to the right with a radius of 50 feet, through an angle of  $27^{\circ}18'10''$ , an arc length of 23.83 feet;
18. South  $84^{\circ}38'05''$  West, a distance of 97.33 feet, to a tangent curve to the right;
19. along said curve to the right with a radius of 100 feet, through an angle of  $13^{\circ}14'15''$ , an arc length of 23.10 feet;
20. North  $82^{\circ}07'40''$  West, a distance of 54.29 feet, to a tangent curve to the left;
21. along said curve to the left with a radius of 100 feet, through an angle of  $25^{\circ}40'37''$ , an arc length of 44.82 feet;
22. South  $72^{\circ}11'43''$  West, a distance of 72.14 feet, to a tangent curve to the right;
23. along said curve to the right with a radius of 100 feet, through an angle of  $17^{\circ}35'00''$ , an arc length of 38.69 feet;
24. South  $89^{\circ}46'43''$  West, a distance of 71.22 feet, to a tangent curve to the right;
25. along said curve to the right with a radius of 50 feet, through an angle of  $58^{\circ}31'54''$ , an arc length of 51.08 feet;
26. North  $31^{\circ}41'22''$  West, a distance of 79.76 feet, to a tangent curve to the left;
27. along said curve to the left with a radius of 50 feet, through an angle of  $56^{\circ}50'40''$ , an arc length of 49.61 feet
28. North  $88^{\circ}32'02''$  West, a distance of 57.49 feet, to a point on the easterly side of the lands of Yee as described in Document #2010-0017978, Official Records of Santa Cruz County, from which a found 1-1/2 inch iron pipe, tagged RCE 10307, located on the northerly line of Section

3, Township 10 South, Range 2 West, M.D.B.&M. bears North 00°31'15" West, a distance of 224.84 feet,

the sidelines of said 20 foot wide easement to be extended and shortened to meet at angle points and to terminate at the easterly line of said lands of Yee and the southerly side of West Road.

END OF DESCRIPTION

*Job #P40674 – Lompico Emergency Escape Route (Phase 1)*

*Over portions of:*

<i>SLV Water District:</i>	<i>APN 076-301-06</i>	<i>(3,443 s.f.)</i>
	<i>APN 075-311-04</i>	<i>(3,161 s.f.)</i>
	<i>APN 075-311-06</i>	<i>(603 s.f.)</i>
<i>G14 Extracts:</i>	<i>APN 075-311-08</i>	<i>(25,955 s.f.)</i>
	<i>APN 075-311-05</i>	<i>(3,018 s.f.)</i>
<i>Paulus:</i>	<i>APN 076-301-11</i>	<i>(2,119 s.f.)</i>

**EXHIBIT B**

**Legal Description**



## EASEMENT FOR EMERGENCY ACCESS

SITUATE in the County of Santa Cruz, State of California, and described as follows:

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BEGINNING at an angle point in the centerline of West Drive as shown on that map filed in Volume 106 of Maps, at Page 3, Santa Cruz County Records, said angle point also being the northeast corner of the lands of Fishbin as described in Document #2002-0061719, Santa Cruz County Records, from which a  $\frac{3}{4}$  inch iron pipe, no tag, on the southerly line of said lands of Fishbin, South  $00^{\circ}18'00''$  West, a distance 54.77 feet and North  $89^{\circ}55'08''$  East, a distance of 422.98 feet;

thence along the centerline of the following courses:

1. South  $12^{\circ}20'34''$  West, a distance of 61.29 feet;
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3. along said curve to the right with a radius of 100 feet, through an angle of  $19^{\circ}31'14''$ , an arc length of 34.07 feet;
4. South  $12^{\circ}22'33''$  West, a distance of 52.01 feet, to a tangent curve to the right;
5. along said curve to the right with a radius of 100 feet, through an angle of  $12^{\circ}05'25''$ , an arc length of 21.10 feet;
6. South  $24^{\circ}27'57''$  West, a distance of 230.80 feet, to a tangent curve to the left;
7. along said curve to the left with a radius of 100 feet, through an angle of  $11^{\circ}57'33''$ , an arc length of 20.87 feet;
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24. South  $89^{\circ}46'43''$  West, a distance of 71.22 feet, to a tangent curve to the right;
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the sidelines of said 20 foot wide easement to be extended and shortened to meet at angle points and to terminate at the easterly line of said lands of Yee and the southerly side of West Road.

END OF DESCRIPTION

*Job #P40674 – Lompico Emergency Escape Route (Phase 1)*

*Over portions of:*

<i>SLV Water District:</i>	<i>APN 076-301-06</i>	<i>(3,443 s.f.)</i>
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<i>Paulus:</i>	<i>APN 076-301-11</i>	<i>(2,119 s.f.)</i>

**EXHIBIT C**

**Legal Description**

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*Over portions of:*

<i>SLV Water District:</i>	<i>APN 076-301-06</i>	<i>(3,443 s.f.)</i>
	<i>APN 075-311-04</i>	<i>(3,161 s.f.)</i>
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<i>G14 Extracts:</i>	<i>APN 075-311-08</i>	<i>(25,955 s.f.)</i>
	<i>APN 075-311-05</i>	<i>(3,018 s.f.)</i>
<i>Paulus:</i>	<i>APN 076-301-11</i>	<i>(2,119 s.f.)</i>

**EXHIBIT D**

**Form of Easement Deed**



**RECORDED AT THE REQUEST OF:**  
COUNTY OF SANTA CRUZ

**WHEN RECORDED RETURN TO:**  
DEPT. OF PUBLIC WORKS  
701 OCEAN STREET RM 410  
SANTA CRUZ, CA 95060  
**ATTN: Real Property Division**

Government Agency Exempt From Recording Fees Pursuant to Government Code, § 27383

**APNs:** \_\_\_\_\_

## EASEMENT DEED

For value received, the **SAN LORENZO VALLEY WATER DISTRICT** (successor in interest to the FORMER LOMPICO COUNTY WATER DISTRICT) ("**GRANTOR**") hereby grants to the **COUNTY OF SANTA CRUZ**, a political subdivision of the State of California ("**GRANTEE**"), an **EASEMENT FOR EMERGENCY TRAVEL AND MAINTENANCE** over the area described as follows:

FOR LEGAL DESCRIPTION SEE **EXHIBIT A**, ATTACHED HERETO AND MADE A PART HEREOF.

THE USE OF THIS EASEMENT IS FOR EMERGENCY PURPOSES ONLY. GRANTEE IS ALLOWED TO CONSTRUCT A TRAVEL ROUTE ON THE EASEMENT, FOR THE BENEFIT OF THE PUBLIC, POLICE, FIRE AND OTHER EMERGENCY PERSONNEL AND THEIR VEHICLES IN THE EVENT OF AN EMERGENCY. THIS EASEMENT ROUTE SHALL REMAIN CLOSED TO THE PUBLIC AND GRANTEE UNLESS THERE IS AN IMMINENT EMERGENCY. GRANTEE SHALL ENSURE THAT THE EASEMENT ROUTE BE GATED AND LOCKED SO AS TO PREVENT PUBLIC ACCESS. GRANTEE SHALL BE ALLOWED INITIAL ACCESS TO CONSTRUCT A NEW CONNECTION BETWEEN EXISTING COUNTY MAINTAINED ROADS. AFTER COMPLETION OF PROJECT CONSTRUCTION, GRANTEE WILL ONLY HAVE ACCESS AS NECESSARY TO MAINTAIN THE EASEMENT ROUTE IN GOOD CONDITION AND REPAIR DAMAGE. GRANTOR SHALL NOT HAVE ANY RESPONSIBILITY TO MAINTAIN OR REPAIR THE EASEMENT, WITH ALL SUCH OBLIGATIONS BELONGING TO GRANTEE.

DATED: \_\_\_\_\_, 2023

**GRANTOR:**

By: \_\_\_\_\_

Print: \_\_\_\_\_

General Manager  
San Lorenzo Valley Water District

STATE OF CALIFORNIA  
COUNTY OF \_\_\_\_\_

On \_\_\_\_\_ before me, \_\_\_\_\_, a notary public,  
personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory evidence to  
be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that  
he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on  
the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing  
paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_ (Seal)

<p style="text-align: center;"><b>CERTIFICATE OF ACCEPTANCE</b> Govt. Code Sec. 27281</p> <p>This is to certify that the interest in real property conveyed by the within deed to the County of Santa Cruz, a political subdivision of the State of California, is hereby accepted by Ordinance No. 5247 of the Board of Supervisors dated May 24, 2017, and the Grantee consents to recordation thereof by its duly authorized officer.</p> <p>Dated _____</p> <p>By _____ DIRECTOR OF PUBLIC WORKS</p>
--

## MEMO

**DATE:** November 3, 2023  
**TO:** Engineering & Environmental Committee, SLVWD  
**FROM:** Garrett Roffe, Engineering Manager  
**SUBJECT:** Bracken Brae & Forest Springs Pump and Equipment Noise Analysis (Update)

**WRITTEN BY:** Garrett Roffe, Engineering Manager

**PRESENTED BY:** Garrett Roffe, Engineering Manager

### STAFF RECOMMENDATION

It is recommended that the Engineering & Environmental Committee review the updated pump and equipment noise analysis and discuss.

### RECOMMENDED MOTION

None

### BACKGROUND

The Bracken Brae and Forest Springs Mutual Water Company Consolidation Project includes a new pump house near the intersection of State Highway 236 and Ridge Drive in Boulder Creek. The proposed booster station would serve the new Upper Big Basin service zone that includes the Bracken Brae and Forest Springs neighborhoods.

The initial pump and equipment noise analysis estimated source sound levels using manufacturer's sound data from a similarly sized generator, about 80 to 100kw. The updated pump and equipment noise analysis indicates estimated source sound levels based on equipment

specifications contained in the plans, including the Grundfos Vertical Multistage Centrifugal Pump (Model: CR20-8, 20HP, 230 volt, 3 Phase) and Generac SG050T (50kW) 4.5L turbo charged engine generator. For the generator, exhaust sound levels were not immediately available; therefore, the generator exhaust in combination with muffler sound pressure level should not exceed 87 dBA at three-feet from the outlet.

The updated pump and equipment noise analysis has removed the recommendations to route the exhaust such that the exit vent is positioned lower than 7 feet and constructing a solid barrier that is at least 7 feet tall and no farther than 7 feet from the pump enclosure walls.

#### **PRIOR COMMITTEE ACTION**

On September 21, 2023; Engineering & Environmental Committee requested an updated pump and equipment noise analysis that includes the equipment specified in the Bracken Brae and Forest Springs Mutal Water Company Consolidation Project plans by Sandis.

#### **FISCAL IMPACT**

Unknown

#### **ENVIRONMENTAL IMPACT**

Unknown

#### **ATTACHMENTS**

- Pump and Equipment Noise Analysis (Update)
- Pump and Equipment Noise Analysis

11 October 2023

Brian Cancimilla  
**Sandis**  
636 9<sup>th</sup> Street  
Oakland, CA 94607  
bcancimilla@sandis.net

**Subject: San Lorenzo Valley Water District Pump Station Noise, Boulder Creek, CA –  
Pump and Equipment Noise Analysis (Update)  
Salter Project 23-0358**

Dear Brian:

As requested, we have analyzed noise transmission from the proposed water pump equipment to adjacent property lines. The purpose of this analysis is to quantify the equipment noise impact at nearby sensitive receivers, compare the noise levels with the applicable criteria, and propose mitigation measures as needed.

## **SUMMARY**

To meet the County Property Line Noise Standards established in the Initial Study – Mitigated Negative Declaration (IS-MND), our analysis indicates that it would be necessary to incorporate noise mitigation strategies for the generator exhaust. Additional details are provided in the body of this letter.

## **CRITERIA**

We understand the following standards and testing procedures will be applied to this project:

### **Generator Noise Criteria**

#### ***Generator Operational Testing Duration***

The District of San Lorenzo Valley will test the generator once a month for 20 minutes and only during daytime hours.

#### ***Initial Study – Mitigated Negative Declaration***

An Initial study was prepared for the project in which the County of Santa Cruz established noise criteria for generator noise. The criteria are as follows:



- a. *Day and Evening Hours. For purposes of this factor, a noise shall be automatically considered offensive if it occurs between the hours of 8:00 a.m. and 10:00 p.m. and it is:*
  - i. *Clearly discernible at a distance of 150 feet from the property line of the property from which it is broadcast; or*
  - ii. *In excess of 75 decibels at the edge of the property line of the property from which the sound is broadcast, as registered on a sound measuring instrument meeting the American National Standard Institute's Standard S1.4-1971 (or more recent revision thereof) for Type 1 or Type 2 sound level meters, or an instrument which provides equivalent data.*

*A noise not reaching this intensity of volume may still be found to be offensive depending on consideration of the other factors outlined below.*

- b. *Night Hours. For purposes of this factor, a noise shall be automatically considered offensive if it occurs between the hours of 10:00 p.m. and 8:00 a.m., and it is:*
  - i. *Made within 100 feet of any building or place regularly used for sleeping purposes;*
  - ii. *(Clearly discernible at a distance of 100 feet from the property line of the property from which it is broadcast; or*
  - iii. *In excess of 60 decibels at the edge of the property line of the property from which the sound is broadcast, as registered on a sound measuring instrument meeting the American National Standard Institute's Standard S1.4-1971 (or more recent revision thereof) for Type 1 or Type 2 sound level meters, or an instrument which provides equivalent data.*

### **Stationary Noise Source Criteria (not including emergency generators)County Municipal Code**

The County of Santa Cruz provides the following regulations for noise levels at nearby residential property lines:

#### *13.15.030 Sound level assessment or measurement.*

- a. *Sound or noise level assessments or measurements made to administer and enforce this chapter shall be conducted at the position or positions along the property line of the receiving land use closest to the noise source or where the noise level is highest. If practical, the ambient noise level shall be assessed or measured at the same location along the property line with the project noise source inoperative, or the ambient noise may be estimated by performing an assessment or measurement in the same noise sphere or general area of the source but at a sufficient distance that the project noise is inaudible.*
- b. *When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of the noise barriers or other property line noise mitigation measures. [Ord. 5308 § 1, 2019].*

**General Plan Noise Element**

Additionally, the General Plan for Santa Cruz County contains the following policies:

9.2.1 Require acoustical studies for all new development projects that may affect the existing noise environment affecting sensitive land uses and receptors and that may not conform to the Normally Acceptable Noise Exposure in Table 9-2.

LAND USE		COMMUNITY NOISE EXPOSURE DNL or CNEL, dB					
		55	60	65	70	75	80
A	Residential/Lodging – Single Family, Duplex, Mobile Home, Multi Family,						
B	Schools, Libraries, Religious Institutions, Meeting Halls, Hospitals						
C	Outdoor Sports Arena or Facility, Playgrounds, Neighborhood Parks						
D	Office Buildings, Business Commercial and Professional						
E	Industrial, Manufacturing, Utilities, Agriculture						
<b>NORMALLY ACCEPTABLE:</b> Specific land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements, and can meet the indoor noise standards.							
<b>CONDITIONALLY ACCEPTABLE:</b> New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design to meet interior and exterior noise standards, where applicable.							
<b>NORMALLY UNACCEPTABLE:</b> New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design to meet interior and exterior noise standards, where applicable.							
<b>CLEARLY UNACCEPTABLE:</b> New construction or development should generally not be undertaken.							
Based on Draft General Plan Guidelines published by the California State Office of Planning and Research, 2014.							

9.2.2 Require site-design and noise reduction measures for any project, including transportation projects, that would cause significant degradation of the noise environment due to project effects that could:



- a. Increase the noise level at existing noise-sensitive receptors or areas by 5 dB or more, where the post-project CNEL<sup>1</sup> or DNL<sup>2</sup> will remain equal to or below 60 dB
- b. Increase the noise level at existing noise-sensitive receptors or areas by 3 dB or more, where the post-project CNEL or DNL would exceed 60 dB

9.2.4 For all new commercial and industrial developments which would increase noise levels above the normally acceptable standards in Table 9-2 or the maximum allowable standards in Table 9-3, the best available control technologies shall be used to minimize noise levels. In no case shall the noise levels exceed the standards of Table 9-3.

Table 9-3 Maximum Allowable Noise Exposure Stationary Noise Sources <sup>(1)</sup>		
	Daytime <sup>(5)</sup> (7 AM to 10 PM)	Nighttime <sup>(2,5)</sup> (10 PM to 7 AM)
Hourly Leq – average hourly noise level, dB <sup>(3)</sup>	50	45
Maximum level, dB <sup>(3)</sup>	70	65
Maximum level dB – Impulsive Noise <sup>(4)</sup>	65	60
dB = decibel (1) As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures (2) Applies only where the receiving land use operate or is occupied during nighttime hours (3) Sound level measurements shall be made with “slow” meter response (4) Sound level measurements shall be made with “fast” meter response (5) Allowable levels shall be raised to the ambient noise levels where the ambient levels exceed the allowable levels. Allowable levels shall be reduced 5 dB if the ambient hourly Leq is at least 10 dB lower than the allowable level.		

<sup>1</sup> CNEL (Community Noise Equivalent Level) – A descriptor for a 24-hour A-weighted average noise level. CNEL accounts for the increased acoustical sensitivity of people to noise during the evening and nighttime hours. CNEL penalizes sound levels by 5 dB during the hours from 7 PM to 10 PM and by 10 dB during the hours from 10 PM to 7 AM. For practical purposes, the CNEL and DNL are usually interchangeable.

<sup>2</sup> DNL (Day-Night Average Sound Level) – A descriptor for a 24-hour A-weighted average noise level. DNL accounts for the increased acoustical sensitivity of people to noise during the nighttime hours. DNL penalizes sound levels by 10 dB during the hours from 10 PM to 7 AM. For practical purposes, the DNL and CNEL are usually interchangeable. DNL is sometimes written as L<sub>dn</sub>.





## AMBIENT NOISE MEASUREMENTS

To quantify ambient noise levels, we conducted long-term noise measurements along the nearest adjacent residential property lines (Big Basin Way and Ridge Drive) between 24 to 29 August 2023.

**Figure 1** shows the measurement location and measured ambient noise levels. The noise monitors were located at an approximate height of 12 feet above grade.

**Table 1** summarizes measured ambient noise levels. We have used the quietest  $L_{eq}(h)$ <sup>3</sup> as the ambient.

**Table 1: Measured Ambient Noise Level at Adjacent Property Lines ( $L_{eq}(h)$ )**

Ambient Noise Level (dBA)	DNL/CNEL (dBA)	Location	Measurement Hour of Lowest $L_{eq}(h)$
47	69	Big Basin Way	3:00 AM, 26 August 2023
33	58	Ridge Drive	3:00 AM, 29 August 2023

The ambient levels along Ridge Drive are 10 dB lower than the allowable levels in Table 9-3; therefore, we have analyzed stationary equipment to the 40 dB criterion.

## ANALYSIS

We understand the project equipment will be housed in a fully enclosed pump structure located approximately 115 feet away from the nearest residence on Ridge Drive and 100 feet away from the nearest residence on Big Basin Way. Wall assemblies are assumed to be solid CMU blocks, with louvers and doors as shown in the elevations.

### Stationary Equipment

For our calculations, we have estimated source sound levels based on stationary equipment specifications including the Grundfos Vertical Multistage Centrifugal Pump (Model: CR20-8, 20 HP, 230 volt, 3 Phase) provided to us on 16 August 2023. We assumed “worst case” conditions where all stationary equipment is running simultaneously during both daytime and nighttime hours. **Table 2** below summarizes the estimated noise levels to the nearest property lines without the generator running.

**Table 2: Summary of Cumulative Project Noise Level at Property Line (without Generator)**

Location	Calculated Noise Level (Hourly $L_{eq}$ )	Stationary Equipment Criteria	
		Daytime	Nighttime
North Property Line	<25 dBA		
South Property Line (Nearest – Ridge Drive)	<25 dBA	45 dBA	40 dBA

<sup>3</sup>  $L_{eq}(h)$  – The equivalent steady-state A-weighted sound level that, in an hour, would contain the same acoustic energy as the time-varying sound level during that hour. This metric is typically used to describe the “average” noise level over the course of an hour.

Noise from stationary equipment within the pump room is expected to meet the criteria.

## Generator

We understand the generator will only be tested for 20 minutes during daytime hours and have assessed generator equipment to the daytime criterion. For our calculations we used generator sound power levels for a Generac SG050T (50 kW) 4.5L turbo charged engine, provided 27 September 2023. Exhaust sound power levels were not immediately available; therefore, performance requirements for this aspect of the generator's overall noise emissions are provided in our recommendations.

**Table 3: Summary of Generator Radiated Noise Level at Property Line (without Exhaust)**

Location	Calculated Noise Level (Hourly Leq)	Generator Criteria	
		Daytime	Nighttime
South Property Line (Nearest – Ridge Drive)	27 dBA	75 dBA	60 dBA

Radiated noise levels from the generator during testing are expected to meet the IS-MND Criteria. Exhaust noise will need to be designed as noted in our recommendations below.

## NOISE CONTROL RECOMMENDATIONS

### Generator Exhaust

1. To meet the IS-MND noise criteria, the generator exhaust in combination with muffler sound pressure level (SPL) should not exceed 87 dBA at three-feet from the outlet. Note that various octave band spectra can achieve the single value noise level and the exhaust muffler should have the appropriate octave band insertion loss values to be below this limit. When received from the manufacturer, we can be available to review the exhaust and silencer octave band data.

### Pump Structure

2. To reduce reverberant noise buildup within the pump and generator rooms, we recommend attaching 2-inch-thick mineral wool to available wall surfaces above 3-feet AFF and ceiling surfaces. The material should have a minimum NRC<sup>4</sup> of 0.85. Reverberant noise is additive to directly emitted noise from the equipment, making the cumulative levels louder unless treated. Appropriate materials include Kinetics KNP panels or IAC Acoustics Noisefoil panels.
3. Doors to the pump structure rooms (pump and generator) should be insulated metal, tight fitting to the surrounding concrete structural walls, and fully perimeter gasketed. The goal is to have doors with sound isolation performance approaching that of the surrounding concrete; we recommend sound rated door assemblies with a minimum STC<sup>5</sup> rating of 47, such as those by IAC Acoustics and Noise Barriers, LLC.

\* \* \*

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<sup>4</sup> NRC (Noise Reduction Coefficient) – A single-number rating defined in ASTM C423 that quantifies the sound absorbing performance of a material. NRC is calculated by averaging the material’s octave-band sound absorption coefficients in the speech frequency range – i.e., at 250, 500, 1000, and 2000 hertz. An NRC of 1.00 represents 100% absorption (no sound reflections). An updated version of the NRC is SAA (sound absorption average).

<sup>5</sup> STC (Sound Transmission Class) – A single-number rating defined in ASTM E90 that quantifies the airborne sound insulating performance of a partition under laboratory conditions. Increasing STC ratings correspond to improved airborne sound insulation.

SLVWD Pump Noise  
11 October 2023

This concludes our review of the property line noise analysis for the San Lorenzo Valley Water District pump equipment project. Please contact us with any questions.

Best,

**CHARLES M. SALTER ASSOCIATES, INC.**



Matthew Hsiung  
Senior Consultant



Ethan Salter, PE, LEED AP  
Vice President

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# SLVWD PROPERTY LINE STUDY MEASUREMENT LOCATIONS AND MEASURED NOISE LEVELS

## FIGURE 1

Salter #  
23-0358

MDH/ECS  
09.11.23

13 September 2023

Brian Cancimilla  
**Sandis**  
636 9<sup>th</sup> Street  
Oakland, CA 94607  
bcancimilla@sandis.net

**Subject: San Lorenzo Valley Water District Pump Station Noise, Boulder Creek, CA –  
Pump and Equipment Noise Analysis  
Salter Project 23-0358**

Dear Brian:

As requested, we have analyzed noise transmission from the proposed water pump equipment to adjacent property lines. The purpose of this analysis is to quantify the equipment noise impact at nearby sensitive receivers, compare the noise levels with the applicable criteria, and propose mitigation measures as needed.

## **SUMMARY**

To meet the County Property Line Noise Standards, our analysis indicates that it would be necessary to incorporate noise mitigation strategies. Given the current generator selection and proximity to residential property lines, we are including several preliminary recommendations and strategies that should be discussed further. Additional details are provided in the body of this letter.

## **CRITERIA**

### **County Municipal Code**

The County of Santa Cruz provides the following regulations for noise levels at nearby residential property lines:



**13.15.030 Sound level assessment or measurement.**

(A) Sound or noise level assessments or measurements made to administer and enforce this chapter shall be conducted at the position or positions along the property line of the receiving land use closest to the noise source or where the noise level is highest. If practical, the ambient noise level shall be assessed or measured at the same location along the property line with the project noise source inoperative, or the ambient noise may be estimated by performing an assessment or measurement in the same noise sphere or general area of the source but at a sufficient distance that the project noise is inaudible.

(B) When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of the noise barriers or other property line noise mitigation measures. [Ord. 5308 § 1, 2019].

**13.15.050 General noise regulations and unlawful noise.**

(B) Emergency stand-by generators shall only be operated during power outages and for other temporary purposes as defined in this chapter. In residential zone districts, an emergency stand-by generator shall be fueled by natural gas or propane, and operation is prohibited between the hours of 10:00 p.m. and 7:00 a.m. unless it is necessary for life support or to support other necessary medical needs, equipment, or medication. Residential installations shall meet the property line setbacks in the table below. A reduction of these setback requirements may be approved if noise attenuation measures are included to reduce noise levels to a maximum exterior noise level of 65 dBA at the nearest property line. In no case shall the generator be located closer than the minimum property line setbacks in the zone district.

Generator Manufacturer Specification (dBA at 23 feet)	Minimum Property Line Setback (feet)
60-61	15
62-63	20
64-65	25
66-67	30
68	35
69	40
70	45
71	50
72	55
73	60
74	65
75	70



## General Plan Noise Element

Additionally, the General Plan for Santa Cruz County contains the following policies:

**9.2.1** *Require acoustical studies for all new development projects that may affect the existing noise environment affecting sensitive land uses and receptors and that may not conform to the Normally Acceptable Noise Exposure in Table 9-2.*

LAND USE		COMMUNITY NOISE EXPOSURE DNL or CNEL, dB					
		55	60	65	70	75	80
A	Residential/Lodging – Single Family, Duplex, Mobile Home, Multi Family,						
B	Schools, Libraries, Religious Institutions, Meeting Halls, Hospitals						
C	Outdoor Sports Arena or Facility, Playgrounds, Neighborhood Parks						
D	Office Buildings, Business Commercial and Professional						
E	Industrial, Manufacturing, Utilities, Agriculture						
<b>NORMALLY ACCEPTABLE:</b> Specific land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements, and can meet the indoor noise standards.							
<b>CONDITIONALLY ACCEPTABLE:</b> New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design to meet interior and exterior noise standards, where applicable.							
<b>NORMALLY UNACCEPTABLE:</b> New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design to meet interior and exterior noise standards, where applicable.							
<b>CLEARLY UNACCEPTABLE:</b> New construction or development should generally not be undertaken.							

Based on Draft General Plan Guidelines published by the California State Office of Planning and Research, 2014.

**9.2.2** *Require site-design and noise reduction measures for any project, including transportation projects, that would cause significant degradation of the noise environment due to project effects that could:*

(a) *Increase the noise level at existing noise-sensitive receptors or areas by 5 dB or more, where the post-project CNEL or DNL will remain equal to or below 60 dB*

(b) *Increase the noise level at existing noise-sensitive receptors or areas by 3 dB or more, where the post-project CNEL or DNL would exceed 60 dB*





**9.2.4** For all new commercial and industrial developments which would increase noise levels above the normally acceptable standards in Table 9-2 or the maximum allowable standards in Table 9-3, the best available control technologies shall be used to minimize noise levels. In no case shall the noise levels exceed the standards of Table 9-3.

Table 9-3 Maximum Allowable Noise Exposure Stationary Noise Sources <sup>(1)</sup>		
	Daytime <sup>(5)</sup> (7 AM to 10 PM)	Nighttime <sup>(2,5)</sup> (10 PM to 7 AM)
Hourly Leq – average hourly noise level, dB <sup>(3)</sup>	50	45
Maximum level, dB <sup>(3)</sup>	70	65
Maximum level dB – Impulsive Noise <sup>(4)</sup>	65	60
dB = decibel (1) As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures (2) Applies only where the receiving land use operate or is occupied during nighttime hours (3) Sound level measurements shall be made with “slow” meter response (4) Sound level measurements shall be made with “fast” meter response (5) Allowable levels shall be raised to the ambient noise levels where the ambient levels exceed the allowable levels. Allowable levels shall be reduced 5 dB if the ambient hourly Leq is at least 10 dB lower than the allowable level.		

## AMBIENT NOISE MEASUREMENTS

To quantify ambient noise levels, we conducted a long-term noise measurement along the nearest adjacent residential property lines (Big Basin Way and Ridge Drive) between 24 to 29 August 2023. **Figure 1** shows the measurement location and measured ambient noise levels. The noise monitors were located on trees at an approximate height of 12 feet above grade.

**Table 1** summarizes measured ambient noise levels. We have used the quietest  $L_{eq}(h)$ <sup>1</sup> as the ambient.

Ambient Noise Level (dBA)	DNL/CNEL (dBA)	Location	Measurement Hour of Lowest $L_{eq}(h)$
47	69	Big Basin Way	3:00 AM, 26 August 2023
33	58	Ridge Drive	3:00 AM, 29 August 2023

<sup>1</sup>  $L_{eq}(h)$  – The equivalent steady-state A-weighted sound level that, in an hour, would contain the same acoustic energy as the time-varying sound level during that hour. This metric is typically used to describe the “average” noise level over the course of an hour.

We calculated noise levels from future equipment would increase noise levels above the normally acceptable standards in Table 9-2. Additionally, the ambient levels along Ridge Drive are 10 dB lower than the allowable levels in Table 9-3, therefore, our analysis includes recommendations to meet the modified 40 dB criterion.

## ANALYSIS

We understand the project equipment will be housed in a pump structure located approximately 115 feet away from the nearest residence on Ridge Drive and 100 feet away from the nearest residence on Big Basin Way. The project equipment and cumulative estimated noise levels to the nearest property lines are summarized in **Table 2** below. For our calculations, we have estimated source sound levels based on equipment specifications provided to us on 16 August 2023. We assumed “worst case” conditions where all equipment is running simultaneously for at least one hour. Sound power levels for the generator were not provided, therefore we used manufacturer’s sound data from a similarly sized generator in our analysis (about 80 to 100 kW). Wall assemblies were assumed to be solid CMU blocks, with louvers and doors as shown in the elevations.

**Table 2: Summary of Cumulative Project Noise Level at Property Line (including Generator)**

Location	Calculated Noise Level (Hourly Leq)
North Property Line	83 dBA
South Property Line (Nearest – Ridge Drive)	57 dBA

Noise levels are primarily dominated by generator exhaust noise and radiated noise through the louver from the generator intake. **Table 3** below summarizes the estimated noise levels to the nearest property lines without the generator running.

**Table 3: Summary of Cumulative Project Noise Level at Property Line (without Generator)**

Location	Calculated Noise Level (Hourly Leq)
North Property Line	<25 dBA
South Property Line (Nearest – Ridge Drive)	<25 dBA

Under normal conditions where the generator will not be running continuously, noise from equipment within the pump room is expected to meet the criteria.

## NOISE CONTROL RECOMMENDATIONS

To reduce noise levels to meet the criteria with the generator running, we recommend implementing the following strategies:

### Southern Property Line – Ridge Drive

We recommend constructing a solid barrier that is at least 7 feet tall and no farther than 7 feet from the pump enclosure walls. The barrier should enclose the pump room at all sides and have the following specifications:

- Minimum surface density of 4 psf (materials such as approximately 12-gauge steel or two layers of ¾ inch thick plywood or similar sheathing would meet this requirement). The barrier should have sound-absorptive media facing the equipment enclosure (e.g., encapsulated 2-inch thick glass fiber or mineral wool)
- Joints between sheathing layers offset by at least 16-inches
- Free of any cracks and gaps at the face
- Drainage holes/slots kept to a minimum and covered with a minimum 1psf mass-loaded vinyl flap.

The sound-reducing barriers can be pre-manufactured or field-built to specifications above. Prefabricated products include the Silent Screen Panels by Empire, Modular Acoustical Metal Panels from IMI Acoustics, or Noiseblock by Kinetics Noise Control.

### Northern Property Line

We recommend implementing the following generator-specific treatments in conjunction with the 7-foot barrier.

#### ***Exhaust Noise***

Select a silencer/muffler for the exhaust duct with the following minimum insertion loss values.

**Table 4. Exhaust Silencer Insertion Loss Values (dB)**

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Insertion Loss (dB)	13	13	13	21	21	21	21	21

Additionally, route the exhaust such that the exit vent is positioned lower than 7 feet such that the barrier covers the line of site to the vent.

### ***Radiated Noise (through louver)***

We recommend providing an acoustic louver at the vent of the generator, options include acoustic louvers from IAC with the following minimum insertion loss values.

Table 5. Louver Insertion Loss Values (dB)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Minimum Insertion Loss (dB)	5	7	11	12	15	14	12	9

### **Pump Structure**

1. To reduce reverberant noise buildup within the two rooms (pump and generator), we recommend attaching 2-inch-thick mineral wool to available wall surfaces above 3-feet AFF and ceiling surfaces. The material should have a minimum NRC of 0.85. Reverberant noise is additive to directly emitted noise from the equipment, making the cumulative levels louder unless treated. Appropriate materials include Kinetics KNP panels or IAC Acoustics Noisefoil panels.
2. Doors to the pump structure rooms (pump and generator) should be insulated metal, tight fitting to the surrounding concrete structural walls, and fully perimeter gasketed. The goal is to have doors with sound isolation performance approaching that of the surrounding concrete; we recommend sound rated door assemblies with a minimum STC<sup>2</sup> rating of 47, such as those by IAC Acoustics and Noise Barriers, LLC.

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This concludes our review of the property line noise analysis for the San Lorenzo Valley Water District pump equipment project. Please contact us with any questions.

Best,

### **CHARLES M. SALTER ASSOCIATES, INC.**



Matthew Hsiung  
Senior Consultant



Ethan Salter, PE, LEED AP  
Vice President

cc: Christopher Small ([csmall@sandis.net](mailto:csmall@sandis.net)), Mike Kuykendall ([mkuykendall@sandis.net](mailto:mkuykendall@sandis.net))

<sup>2</sup> STC (Sound Transmission Class) – A single-number rating defined in ASTM E90 that quantifies the airborne sound insulating performance of a partition under laboratory conditions. Increasing STC ratings correspond to improved airborne sound insulation.