

DocuSigned by:
Carisa Duran
Construction Engineer

DocuSigned by:
Alex Sandoval
Road Superintendent

DocuSigned by:
Greg Martin, P.E.
Traffic Engineer

Reviewed by:
Greg Martin, P.E.
Traffic Engineer

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GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE COUNTY OF SANTA CRUZ DESIGN CRITERIA, THE STATE STANDARD PLANS AND THE APPLICABLE PROVISIONS OF THE STATE STANDARD SPECIFICATIONS.
2. THERE SHALL BE NO CHANGES IN THE APPROVED IMPROVEMENT PLANS WITHOUT PRIOR APPROVAL BY THE SANTA CRUZ COUNTY DEPARTMENT OF PUBLIC WORKS.
3. PLEASE CALL "UNDERGROUND SERVICE ALERT" (U.S.A.) AT 811 or 800-227-2600 BEFORE DIGGING.
4. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE APPROVED BY TRANSPORTATION ENGINEERING.
5. THE CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY, AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
6. THE CONTRACTOR SHALL POSSESS A CLASS "A" LICENSE AT THE TIME THE CONTRACT IS AWARDED.

ABBREVIATIONS

A.B.	AGGREGATE BASE	KIP	1000 POUNDS FORCE
AC	ASPHALT CONCRETE	MBGR	METAL BEAM GUARD RAIL
APN	ASSESSOR'S PARCEL NUMBER	MIN	MINIMUM
APPROX	APPROXIMATE	N	NORTH
BOT	BOTTOM	(n)	NEW
BP	BOTTOM CONCRETE PIER	O.C.	ON CENTER
CL	CENTER LINE	OH	OVERHEAD
CL	CONTROL LINE	PERF	PERFORATED
CONC	CONCRETE	PG&E	PACIFIC GAS AND ELECTRIC
CONN	CONNECTION	PM	POST MILE
CONST	CONSTRUCTION	PRIN	PRINCIPAL
CP	CONTROL POINT	PT	POINT
DIA	DIAMETER	PVC	POLY VINYL CHLORIDE
E	EAST	RD	ROAD
(E), EXIST	EXISTING	REINF	REINFORCED
EA	EACH	RT	RIGHT
EL, ELEV	ELEVATION	R/W	RIGHT OF WAY
ENGR	ENGINEER	S	SOUTH
EP	EDGE OF PAVEMENT	SEC	SECTION
EST	ESTIMATE	SHT	SHEET
EXCAV	EXCAVATE, EXCAVATION	S.S.	SANDSTONE
FD	FOUND	STA	STATION
FT	FOOT, FEET	TP	TOP CONCRETE PIER
FTG	FOOTING	TYP	TYPICAL
GEN	GENERAL	U.B.	UNBONDED
GRD	GRADE	W	WEST
HDPE	HIGH DENSITY POLYETHYLENE	W/	WITH
HT	HEIGHT	&	AND
INV	INVERT	@	AT
IP	IRON PIPE	1ST	FIRST
JP	JOINT POLE	<	LESS THAN
		#	POUND

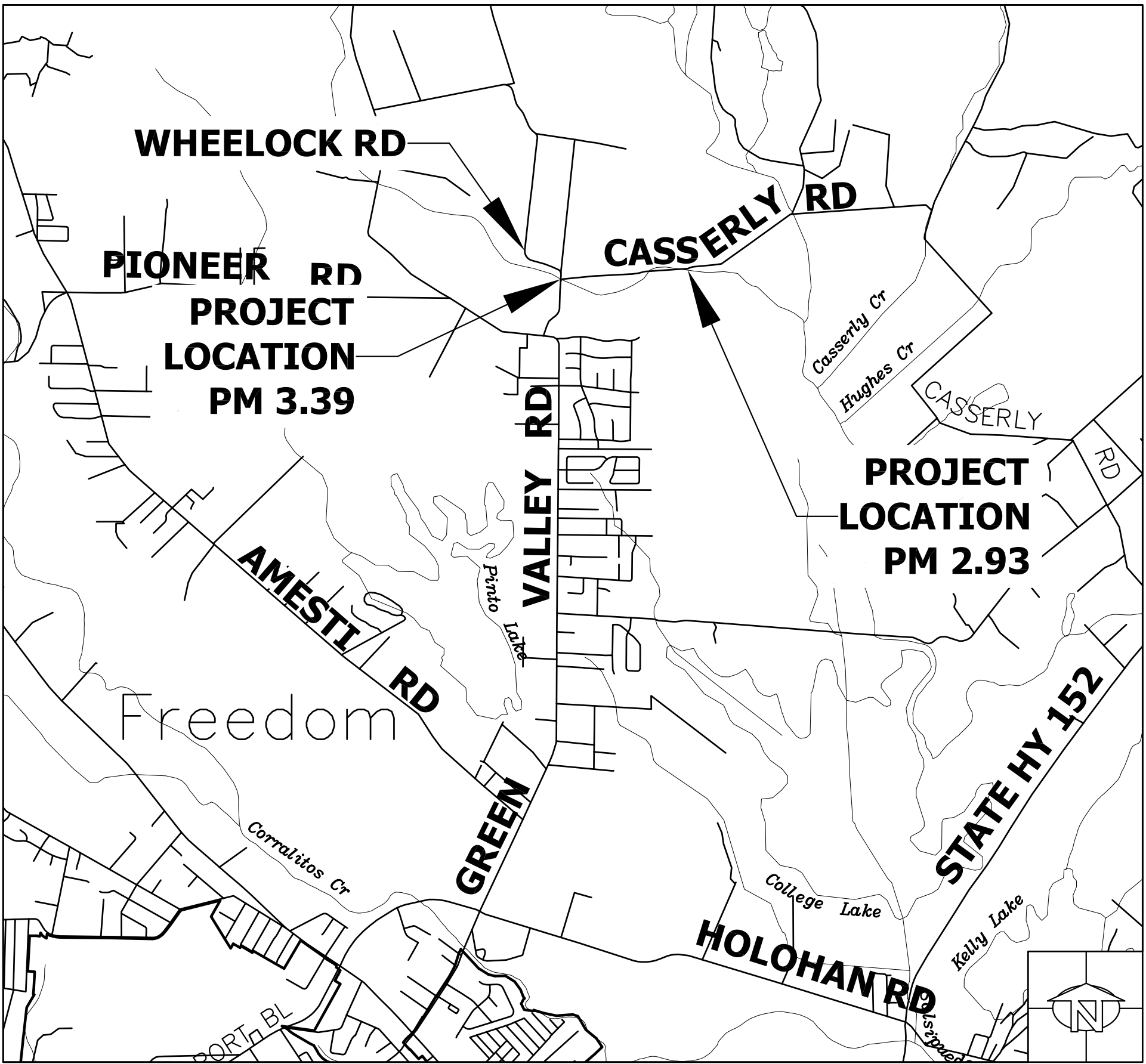
COUNTY OF SANTA CRUZ
DEPARTMENT OF PUBLIC WORKS

PROJECT PLANS FOR CONSTRUCTION ON
CASSERLY RD PM 2.93, 3.39
STORM DAMAGE REPAIR PROJECT

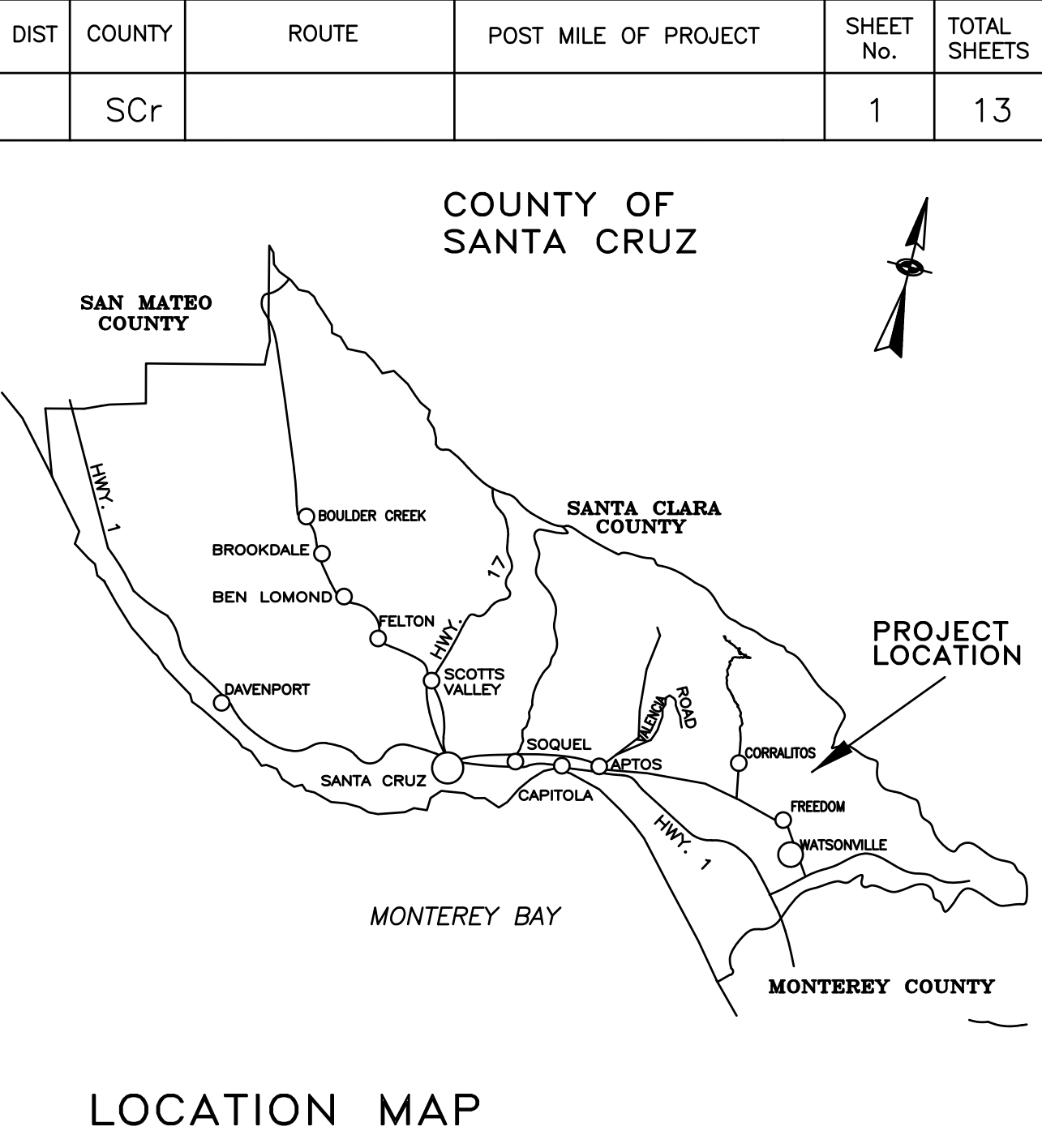
PM 2.93
PROJECT NO: 32LO(094)
STATE PROJECT NO:
DISASTER NO: CA2017-2

PM 3.39
PROJECT NO: 32LO(104)
STATE PROJECT NO: 0517000203L-N
DISASTER NO: CA2017-2

To be supplemented by 2010 CalTrans Standard Plans



VICINITY MAP
NOT TO SCALE



DocuSigned by:
Jeffrey de los Santos
Design Engineer
Jeffrey de los Santos



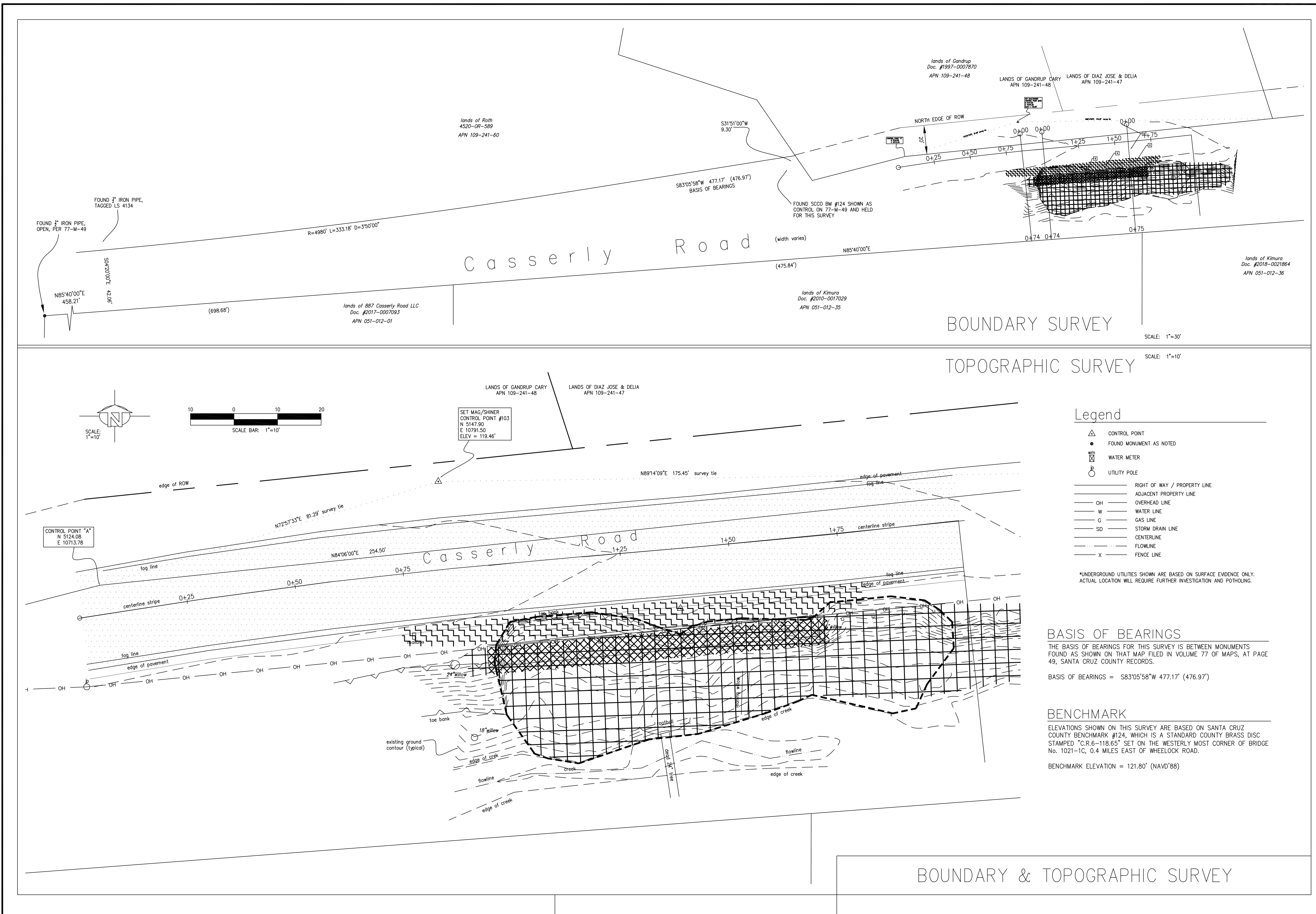
DocuSigned by:
Joel LaCagnina
Senior Design Engineer
Joel LaCagnina

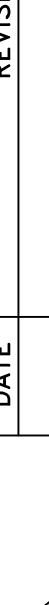
DocuSigned by:
Steve Wiesner
Assistant Director of Public Works
Transportation Division
Steve Wiesner

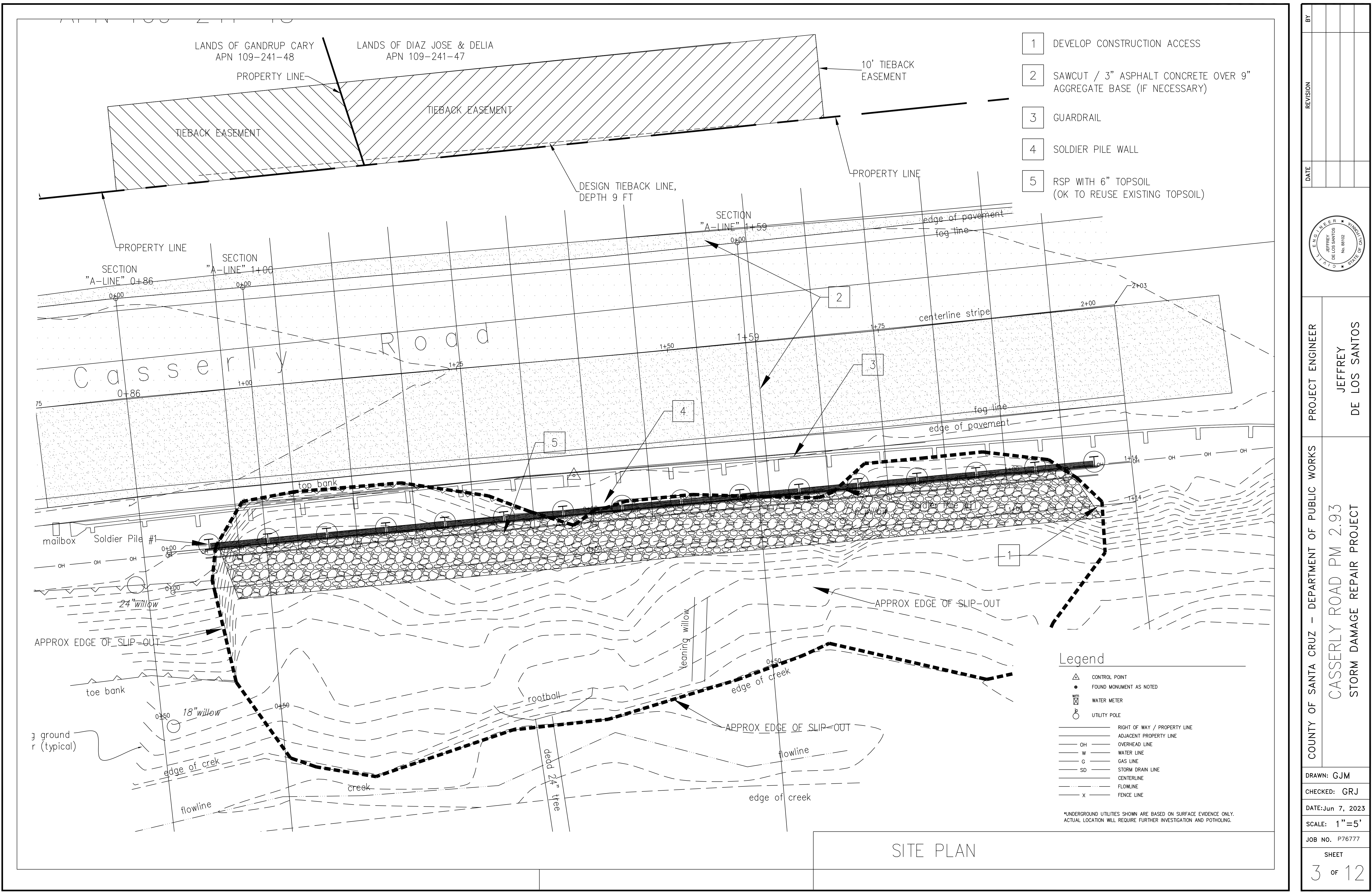
DocuSigned by:
Matthew J. Machado
Director of Public Works
Matthew J. Machado

Chair, Board of Supervisors

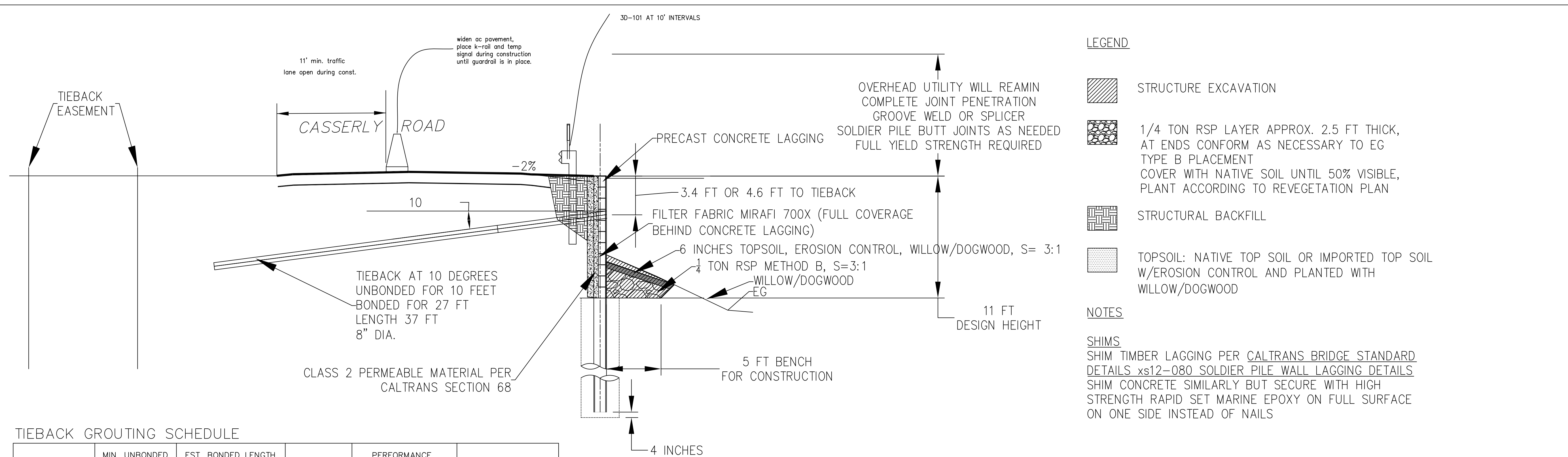
May 6, 2025
Date approved by Board of Supervisors



COUNTY OF SANTA CRUZ — DEPARTMENT OF PUBLIC WORKS		PROJECT SURVEYOR		DATE	REVISION	BY
CASSERLY ROAD PM 2.93		GREG JONES				
STORM DAMAGE REPAIR PROJECT						
DRAWN: GRJ						
CHECKED: GRJ						
DATE: Jun 7, 2023						
SCALE: 1"=10'						
JOB NO. P76777						
SHEET						
2 OF 12						



BY		REVISION		DATE	
PROJECT ENGINEER	JEFFREY DE LOS SANTOS	COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS	CASSERLY ROAD PM 2.93	DRAWN: GJM	
			STORM DAMAGE REPAIR PROJECT	CHECKED: GRJ	
				DATE: Jun 7, 2023	
				SCALE: 1"=5'	
				JOB NO. P76777	
				SHEET	
				3	OF 12



- LEGEND**
- STRUCTURE EXCAVATION
 - 1/4 TON RSP LAYER APPROX. 2.5 FT THICK, AT ENDS CONFORM AS NECESSARY TO EG TYPE B PLACEMENT COVER WITH NATIVE SOIL UNTIL 50% VISIBLE, PLANT ACCORDING TO REVEGETATION PLAN
 - STRUCTURAL BACKFILL
 - TOPSOIL: NATIVE TOP SOIL OR IMPORTED TOP SOIL W/EROSION CONTROL AND PLANTED WITH WILLOW/DOGWOOD
- NOTES**
- SHIMS**
SHIM TIMBER LAGGING PER CALTRANS BRIDGE STANDARD DETAILS xs12-080 SOLDIER PILE WALL LAGGING DETAILS
SHIM CONCRETE SIMILARLY BUT SECURE WITH HIGH STRENGTH RAPID SET MARINE EPOXY ON FULL SURFACE ON ONE SIDE INSTEAD OF NAILS

TIEBACK GROUTING SCHEDULE

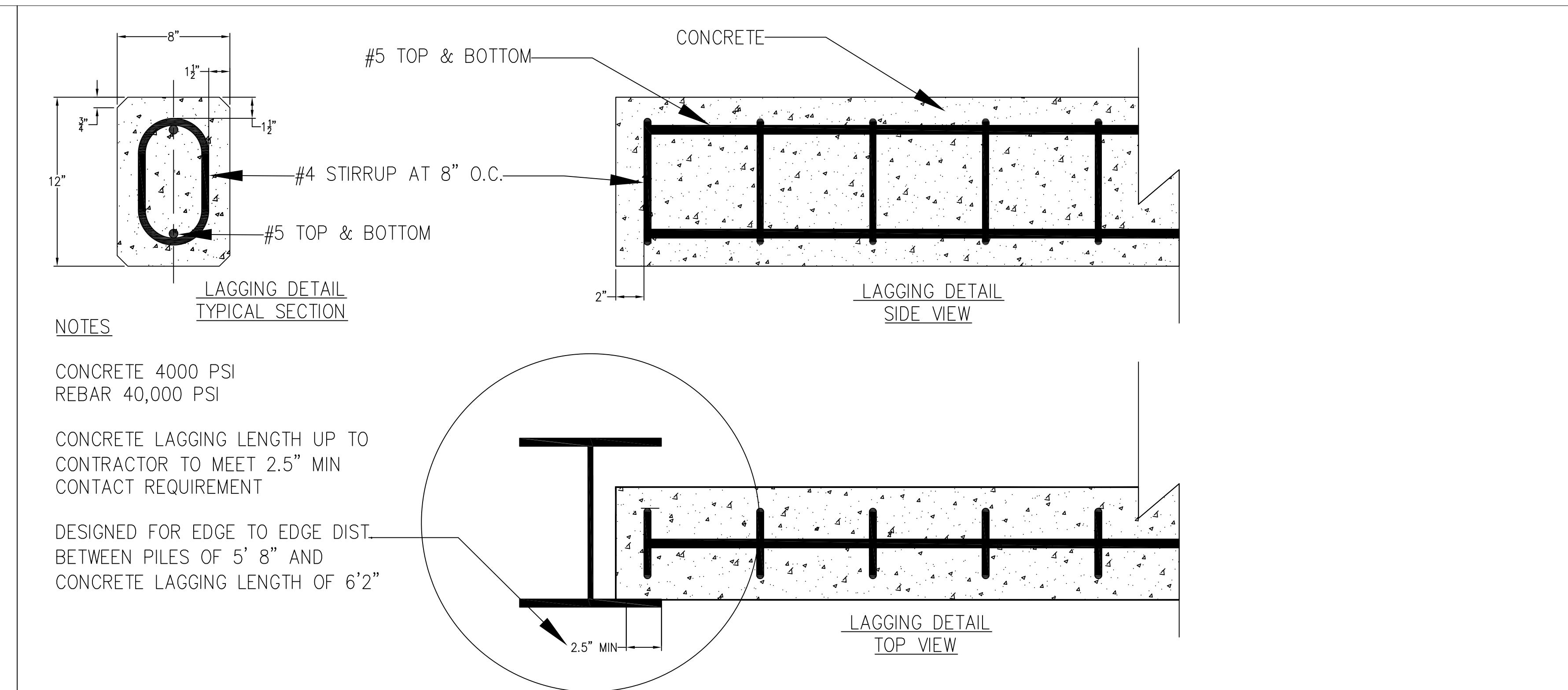
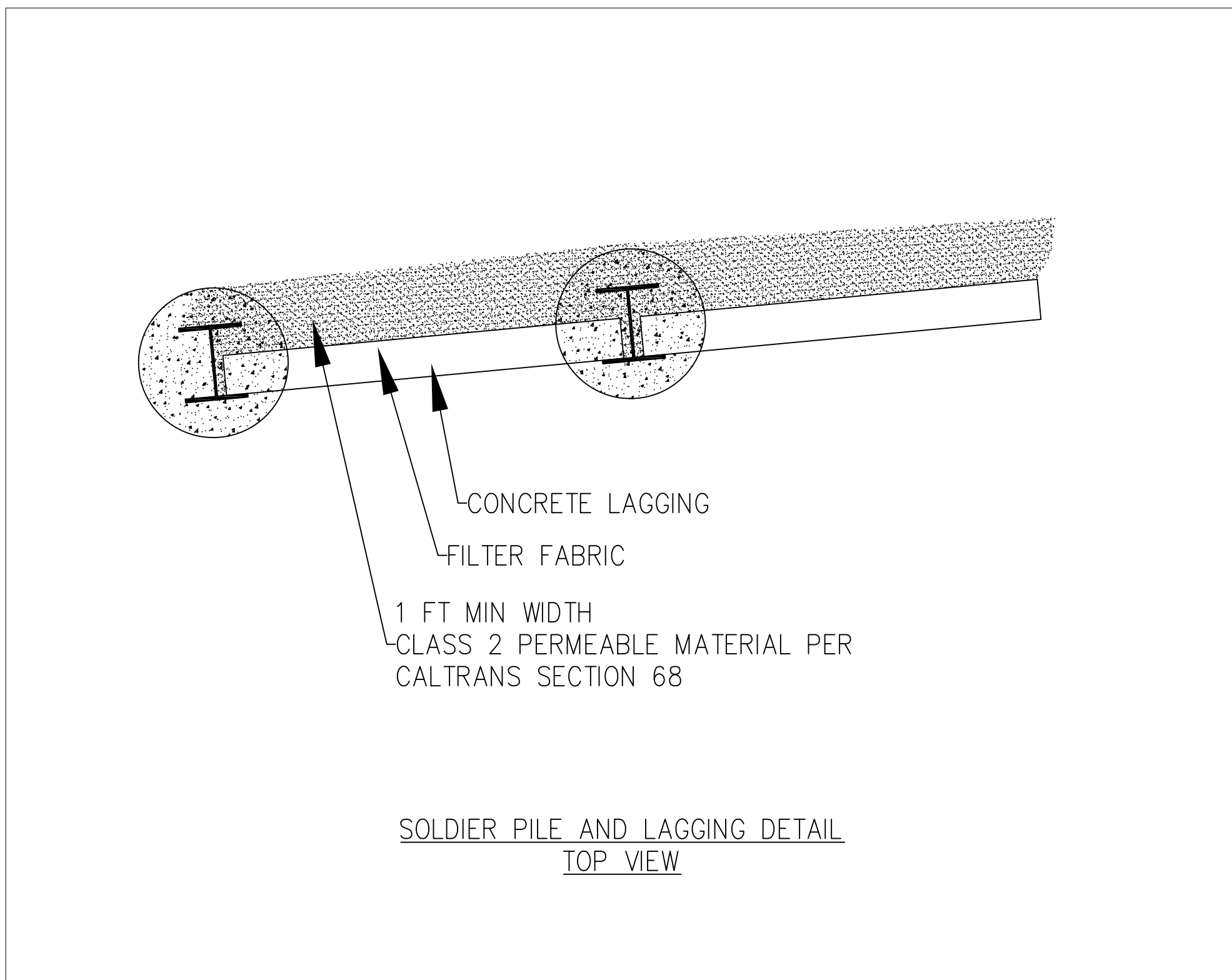
CABLE/ROD DIA.	MIN. UNBONDED LENGTH	EST. BONDED LENGTH (8" DIA GROUT)	DESIGN LOAD	PERFORMANCE TEST LOAD	PROOF TEST LOAD
1 INCH	10 FT.	27 FT.	41,600 lbs.	62,400 lbs.	52,000 lbs.

TIEBACK NOTES:

1. THE ABOVE SPECIFIED TIEBACK BONDED LENGTHS HAVE BEEN CALCULATED AND ARE THE ESTIMATED MINIMUM LENGTHS. ACTUAL BONDED LENGTHS WILL BE BASED ON PULL-OUT TEST RESULTS AT THE SITE DURING INSTALLATION.

2. DURING THE PERFORMANCE TEST, CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR DETERMINING BONDING ZONE AND REQUIRED BONDED LENGTH. THE DESIGN ENGINEER SHALL BE NOTIFIED 24 HOURS IN ADVANCE AND BE ON SITE DURING TIEBACK TESTING.
3. DESIGN LOAD IS 43,100 POUNDS. THE FIRST TWO PRODUCTION TIEBACKS SHALL BE PERFORMANCE TESTED TO 1.5 TIMES THE DESIGN LOAD. TWENTY FIVE PERCENT OF REMAINING TIEBACKS SHALL BE PROOF-TESTED TO 1.25 TIMES THE DESIGN LOAD.
4. THE WALL SHALL BE BACKFILLED AND THE BEARING PLATES SHALL BE WELDED IN PLACE PRIOR TO TESTING OF TIEBACKS.
5. TIEBACK ANCHORS SHALL BE LOCKED OFF AT A VALUE OF AT LEAST 80 TO 90% OF THE DESIGN LOAD FOR THE TIEBACK ANCHOR, OR AS DETERMINED BY THE DESIGN ENGINEER.

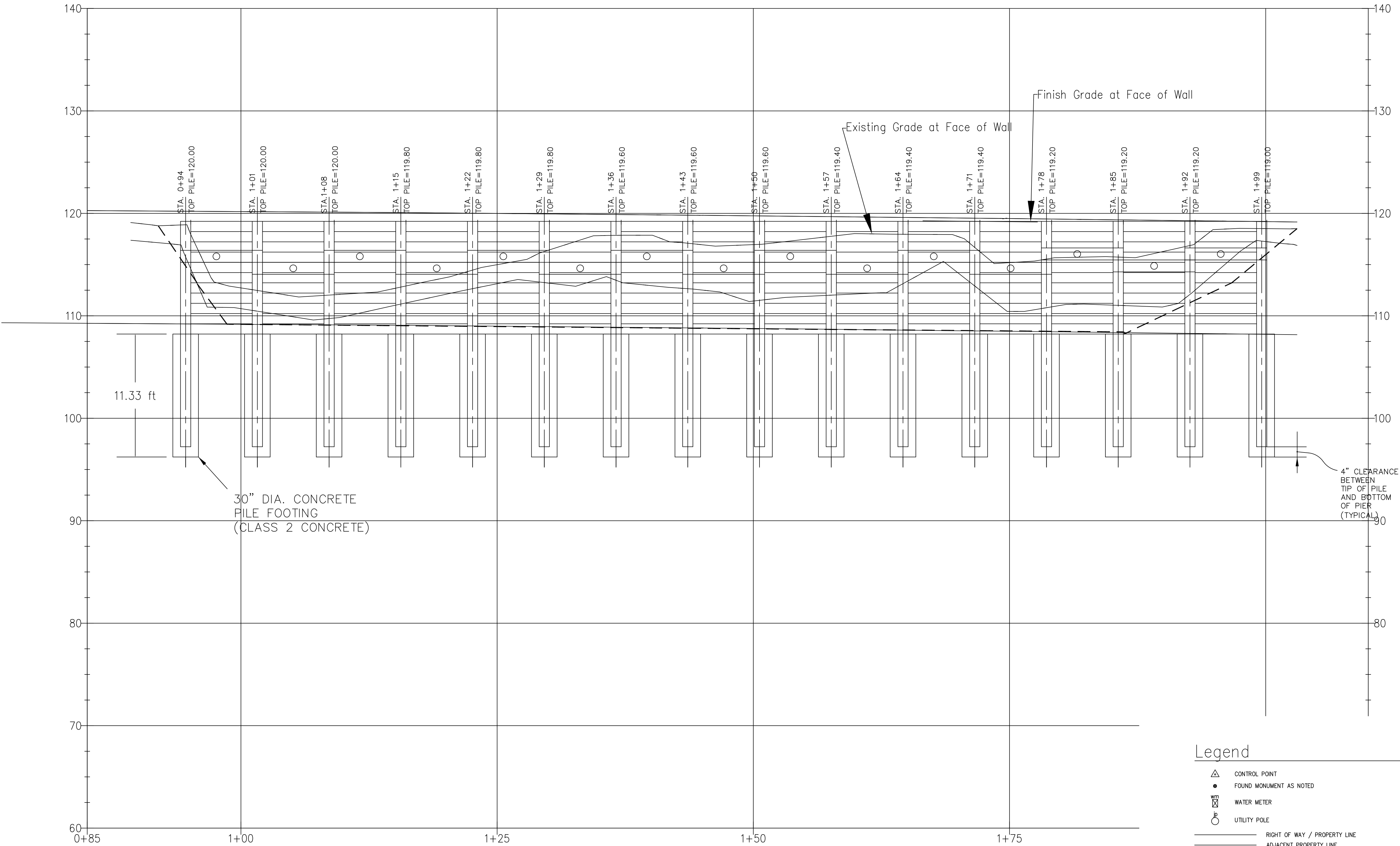
TYPICAL SECTION
SCALE 1" = 5'



- NOTES**
- CONCRETE 4000 PSI
REBAR 40,000 PSI
- CONCRETE LAGGING LENGTH UP TO CONTRACTOR TO MEET 2.5" MIN CONTACT REQUIREMENT
- DESIGNED FOR EDGE TO EDGE DIST. BETWEEN PILES OF 5' 8" AND CONCRETE LAGGING LENGTH OF 6' 2"

SOLDIER PILE TIEBACK WALL W/CONCRETE LAGGING

BY				
REVISION				
DATE				
PROJECT SURVEYOR	JEFFREY DE LOS SANTOS			
COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS	CASSERLY ROAD PM 2.93 STORM DAMAGE REPAIR PROJECT			
DRAWN: GJM				
CHECKED: GRJ				
DATE: Jun 7, 2023				
SCALE:				
JOB NO. P76777				
SHEET				
4 OF 12				



WALL ELEVATION
SCALE: 1" = 5' HOR & VERT

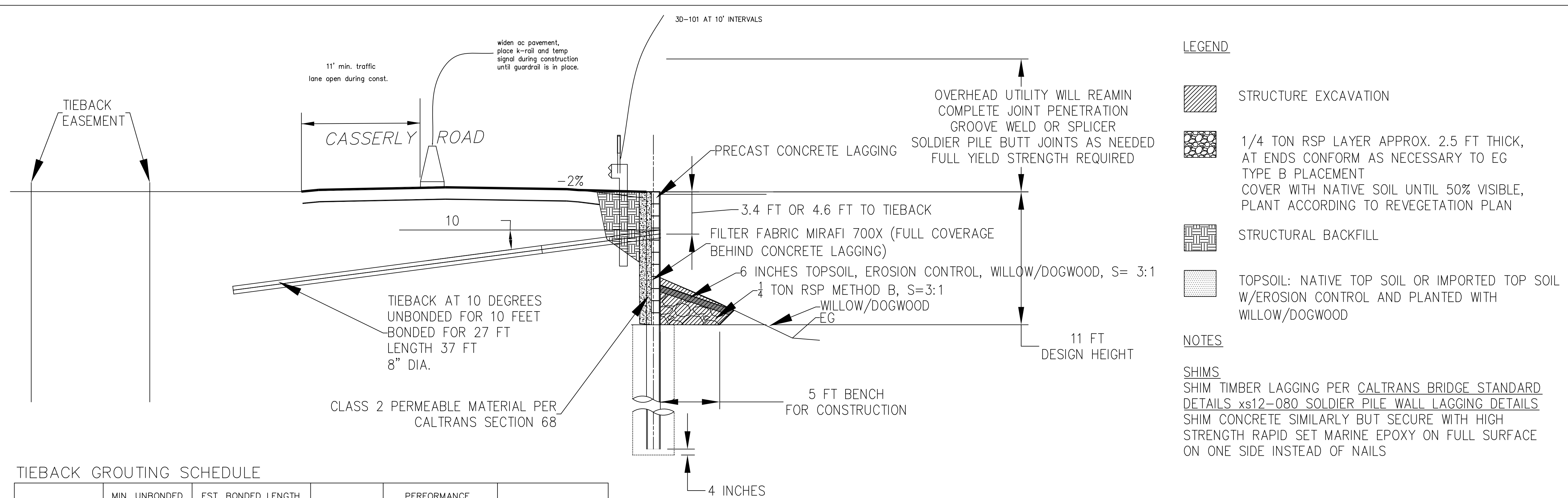
WALL PROFILE

Legend

- △ CONTROL POINT
- FOUND MONUMENT AS NOTED
- ⊗ WATER METER
- UTILITY POLE
- RIGHT OF WAY / PROPERTY LINE
- ADJACENT PROPERTY LINE
- OH OVERHEAD LINE
- W WATER LINE
- G GAS LINE
- SD STORM DRAIN LINE
- CENTERLINE
- FLOWLINE
- X FENCE LINE

*UNDERGROUND UTILITIES SHOWN ARE BASED ON SURFACE EVIDENCE ONLY. ACTUAL LOCATION WILL REQUIRE FURTHER INVESTIGATION AND POT-HOLING.

BY	REVISION	DATE	ENGINEER JEFFREY DE LOS SANTOS No. 86102 STATE OF CALIF.	PROJECT SURVEYOR JEFFREY DE LOS SANTOS	COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS CASSERLY ROAD PM 2.93 STORM DAMAGE REPAIR PROJECT	DRAWN: GJM	CHECKED: GRJ	DATE: Jun 7, 2023	SCALE: 1"=5'	JOB NO. P76777	SHEET 5 OF 12
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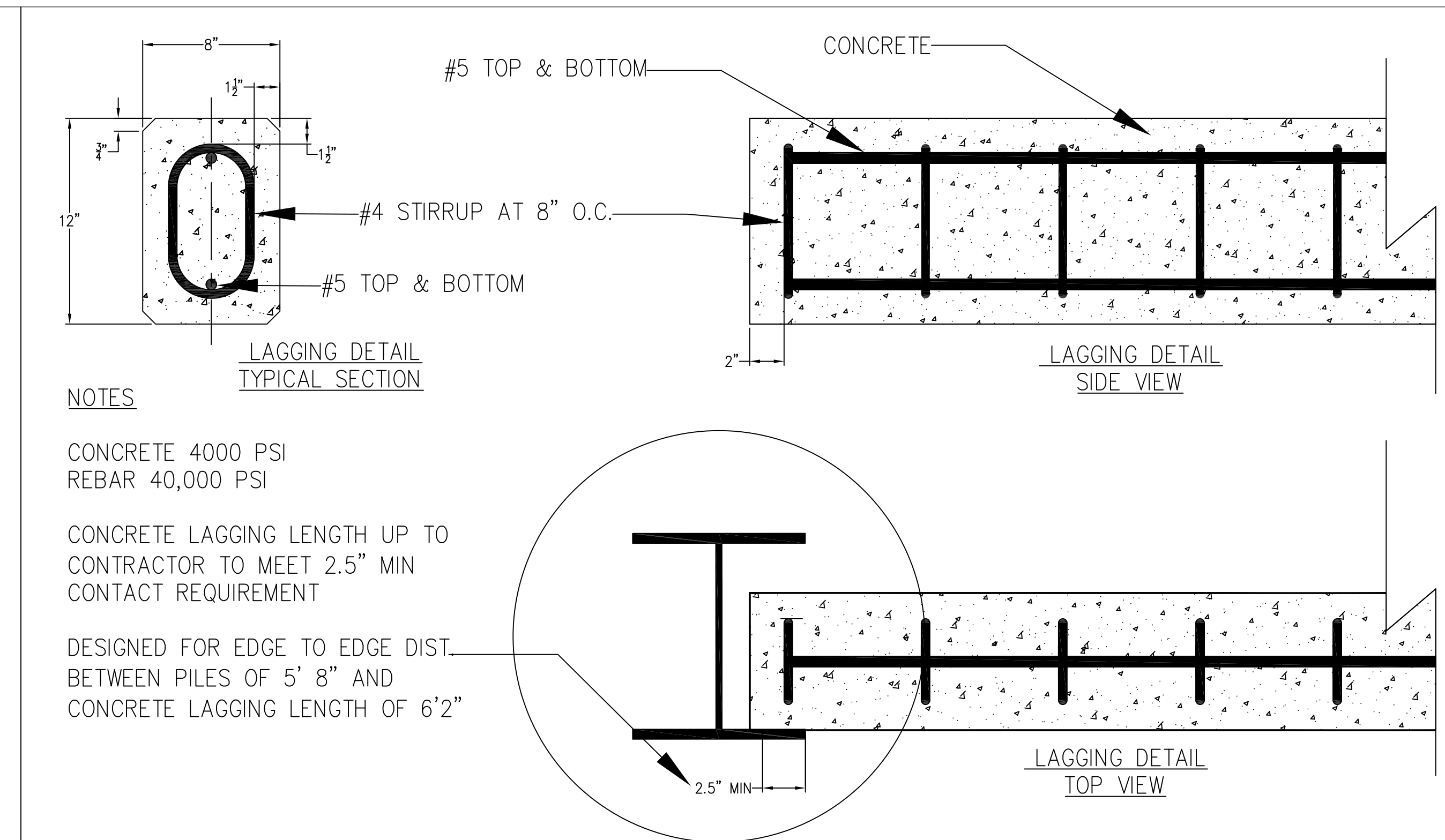
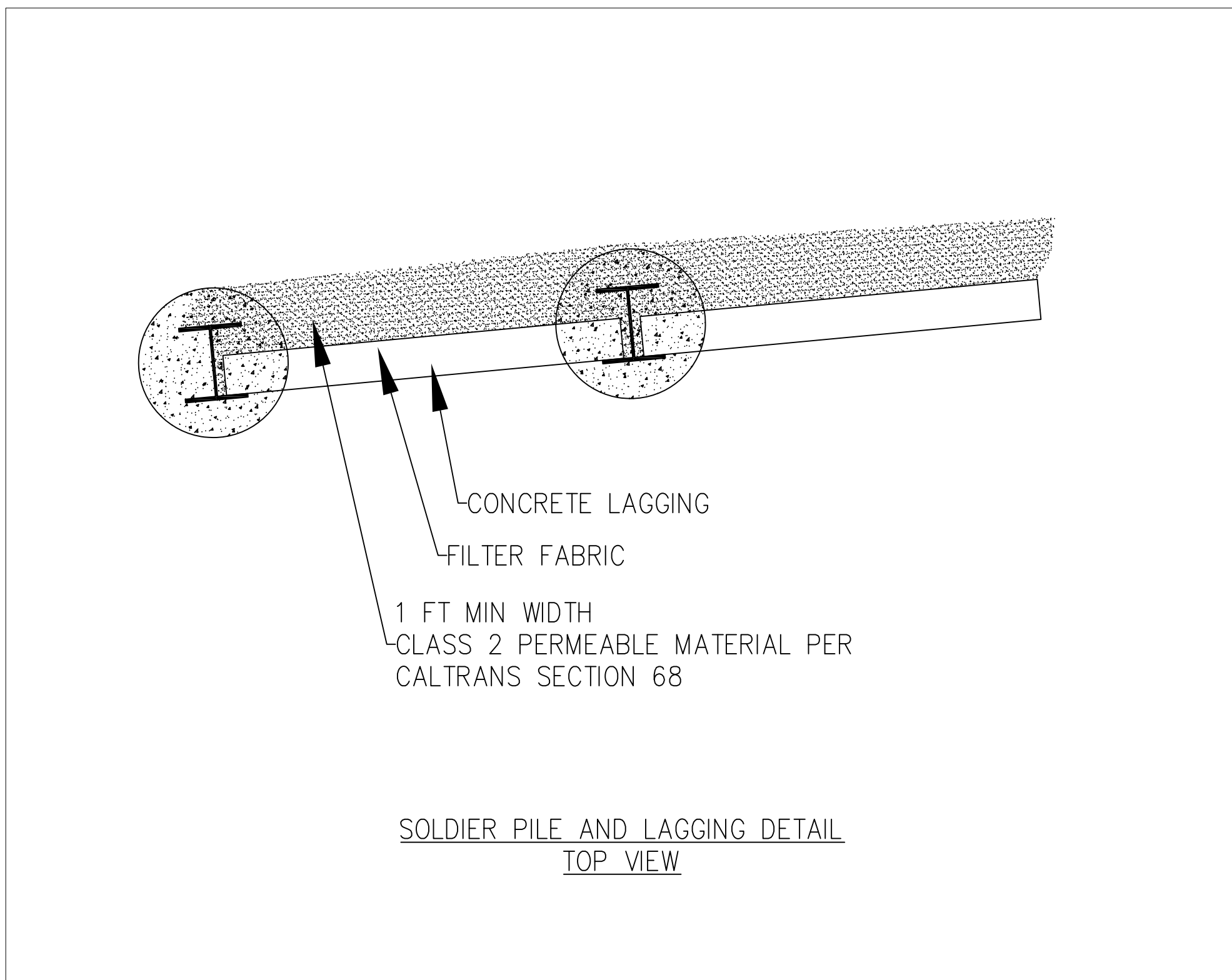
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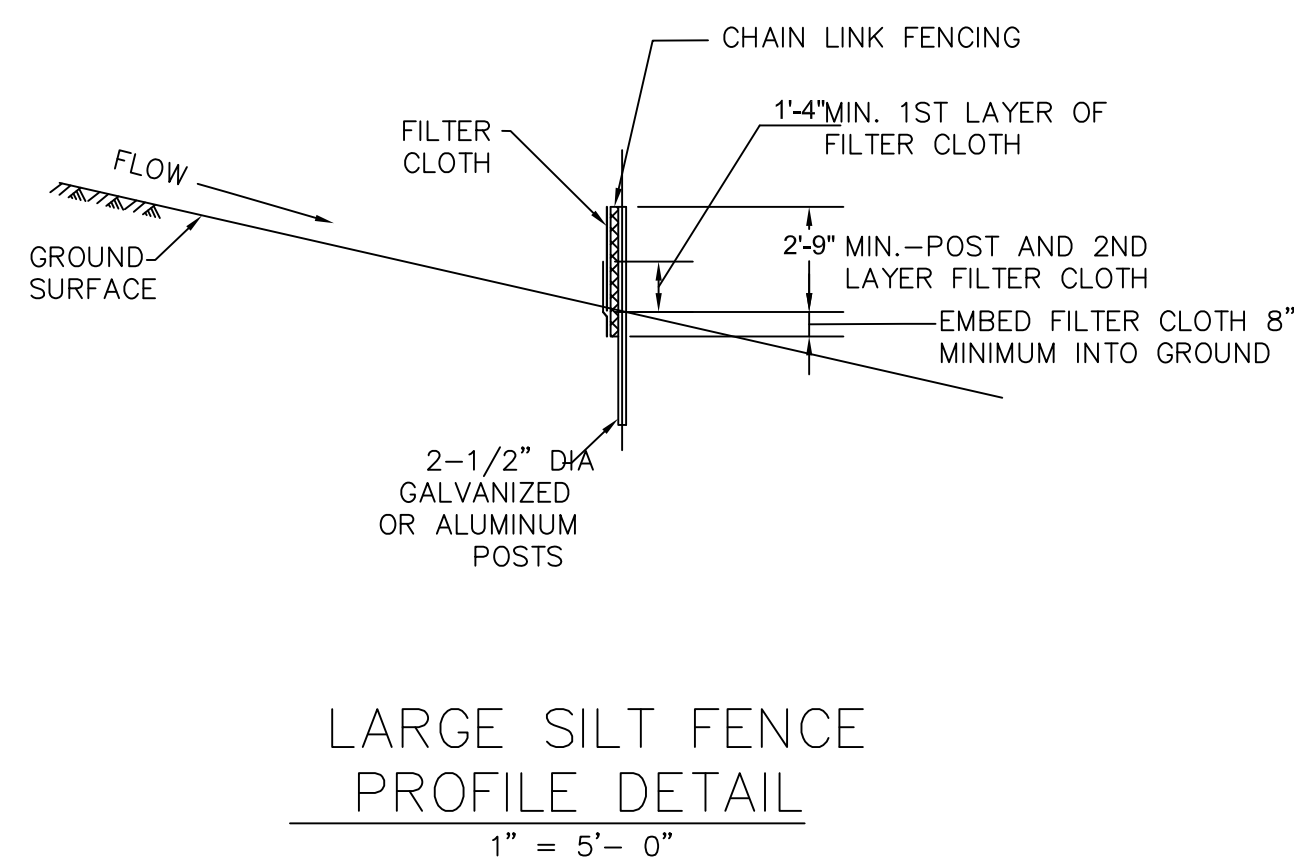
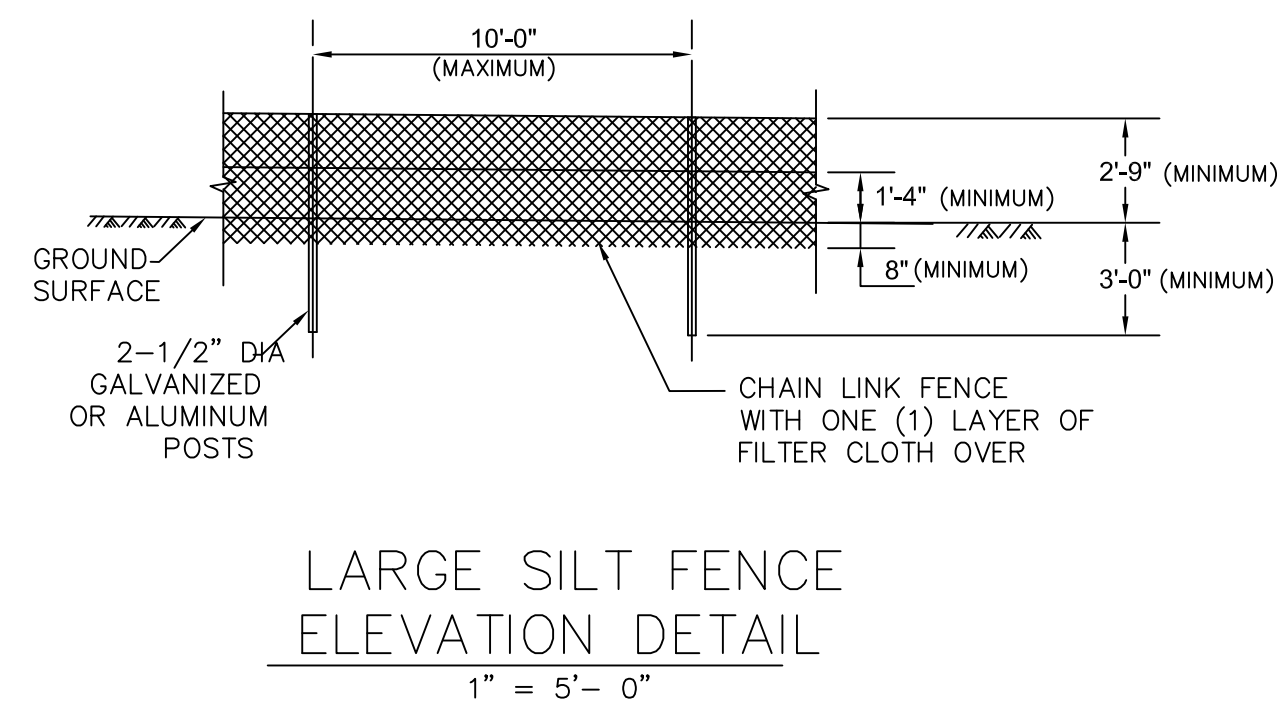
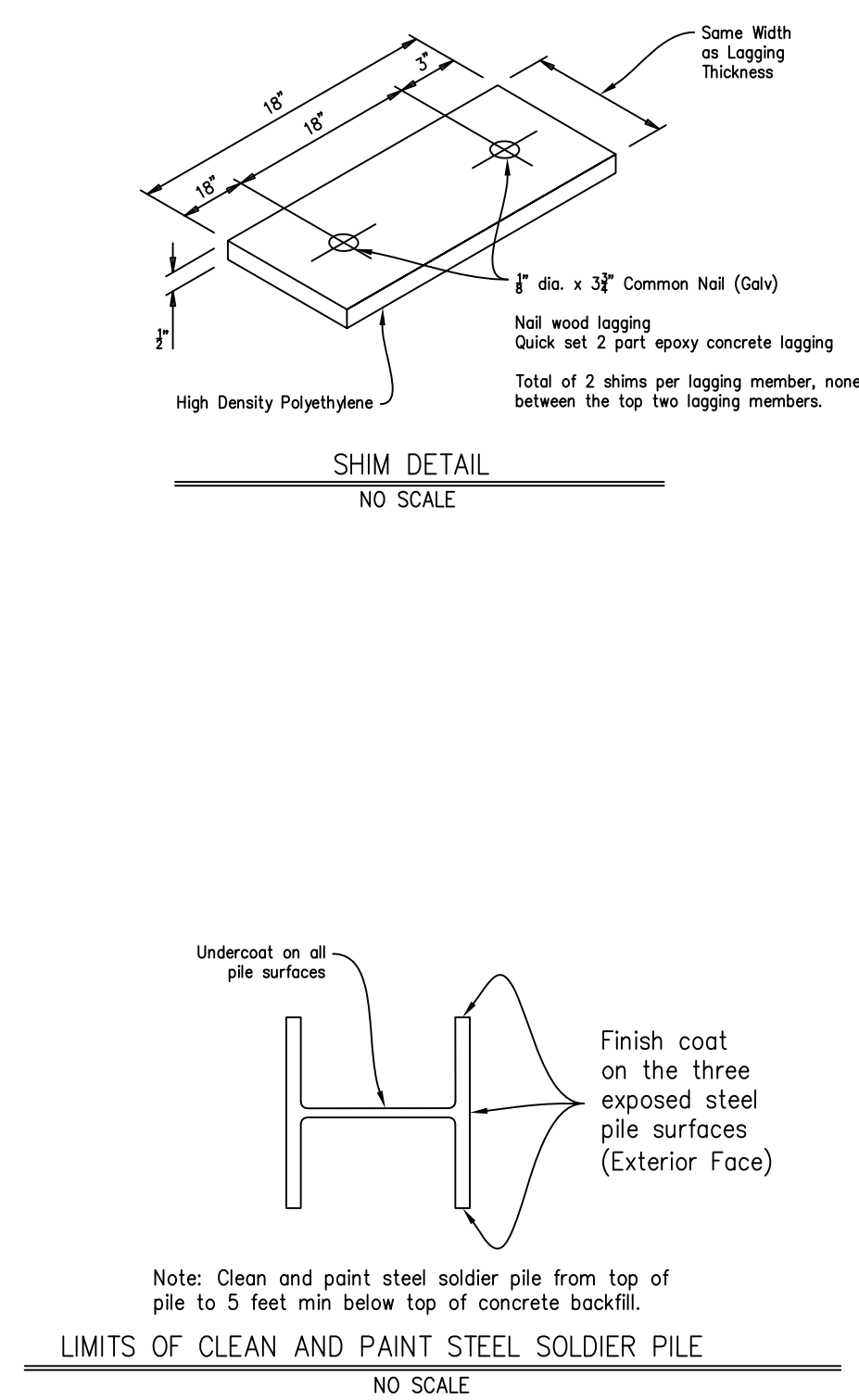
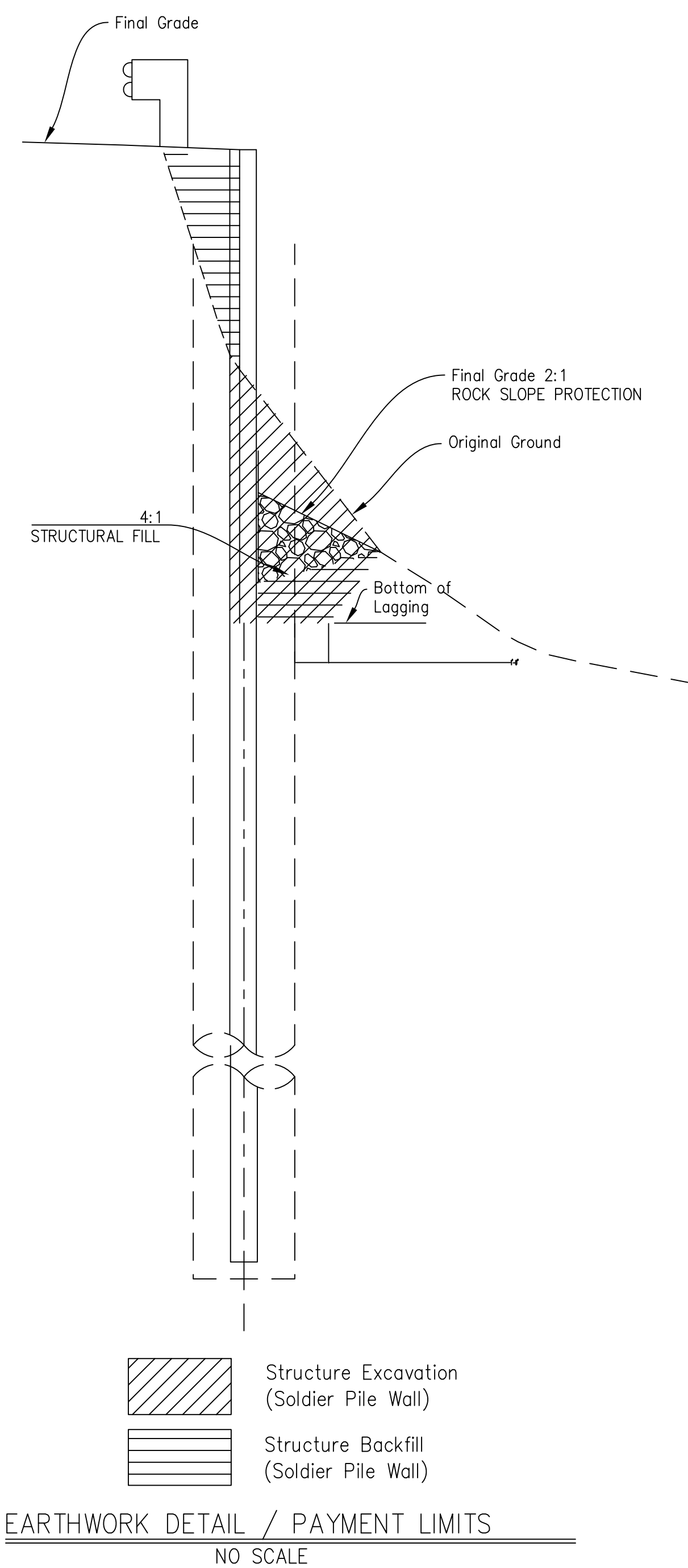
TYPICAL SECTION
SCALE 1" = 5'



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SOLDIER PILE TIEBACK WALL W/CONCRETE LAGGING

BY				
REVISION				
DATE				
PROJECT SURVEYOR	JEFFREY DE LOS SANTOS			
COUNTY OF SANTA CRUZ - DEPARTMENT OF PUBLIC WORKS	CASSERLY ROAD PM 2.93 STORM DAMAGE REPAIR PROJECT			
DRAWN: GJM				
CHECKED: GRJ				
DATE: Jun 7, 2023				
SCALE:				
JOB NO. P76777				
SHEET				
4 OF 12				

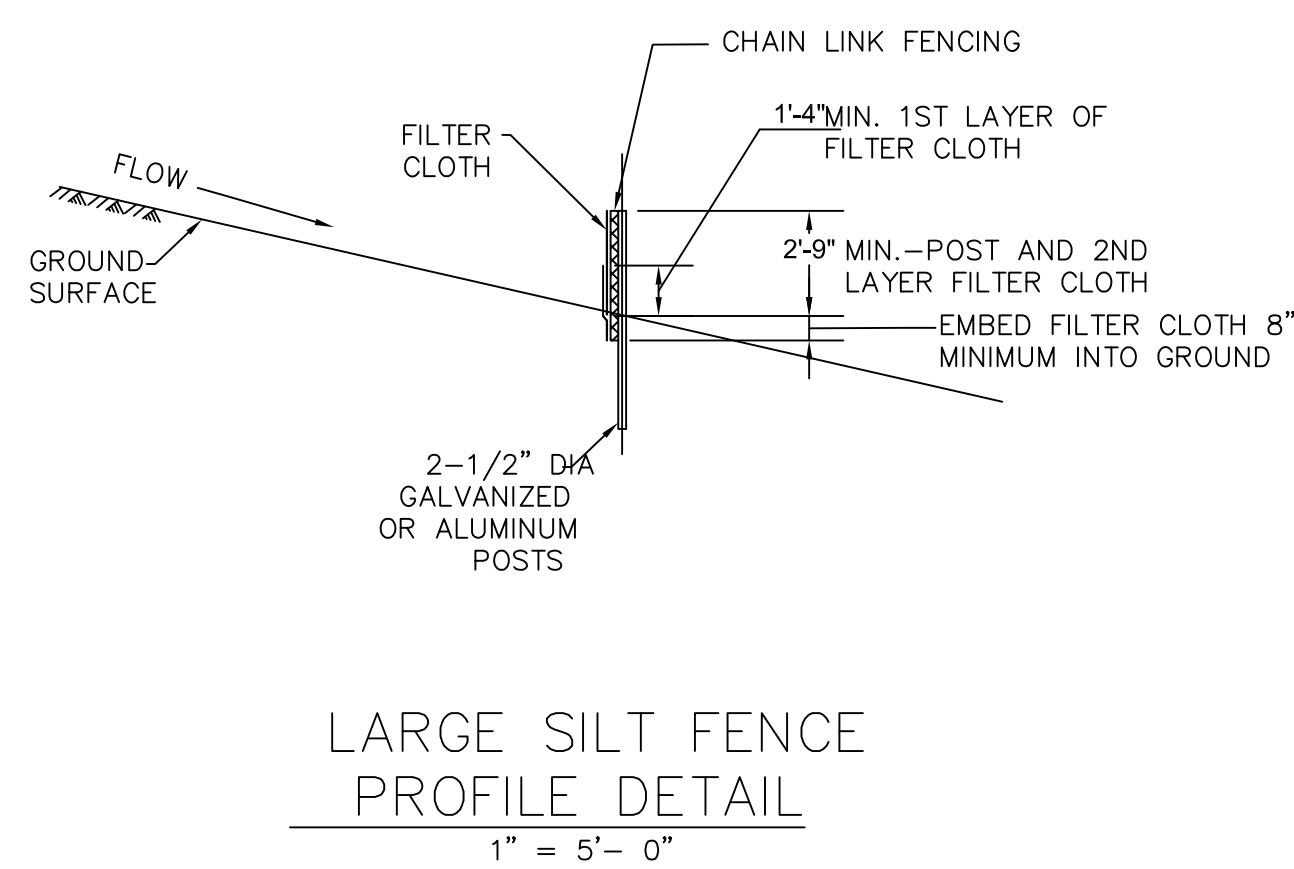
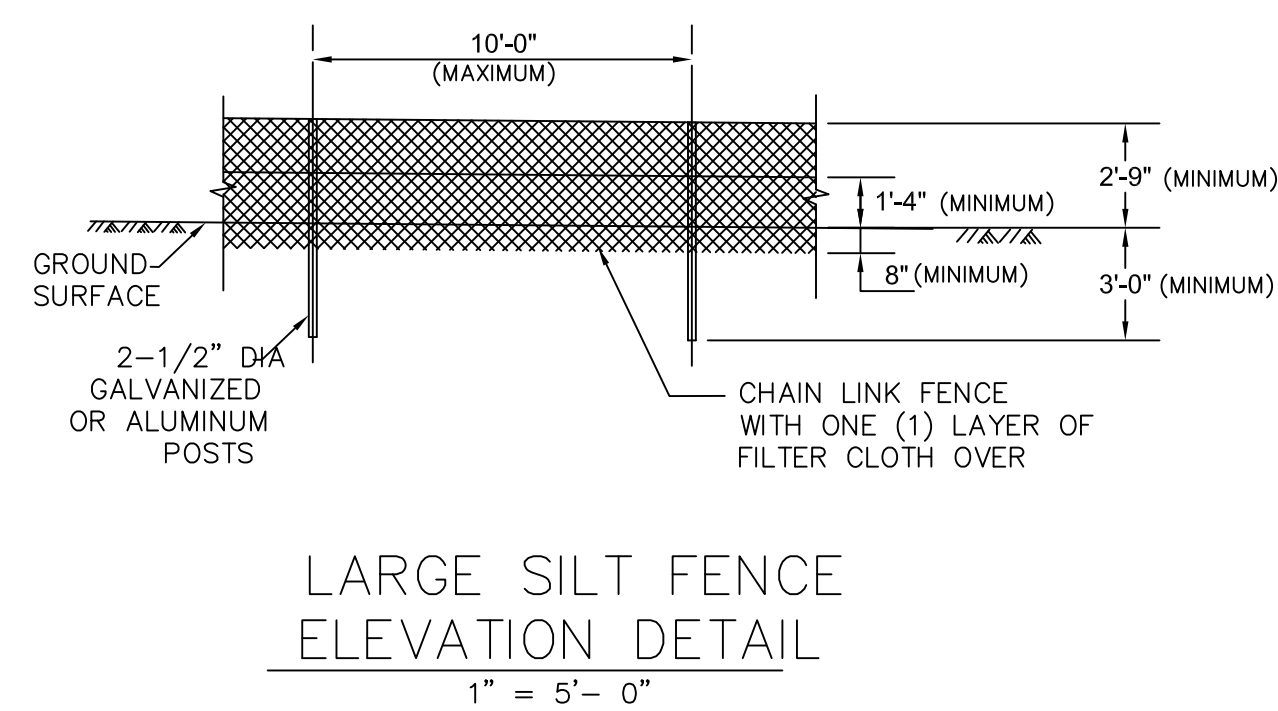
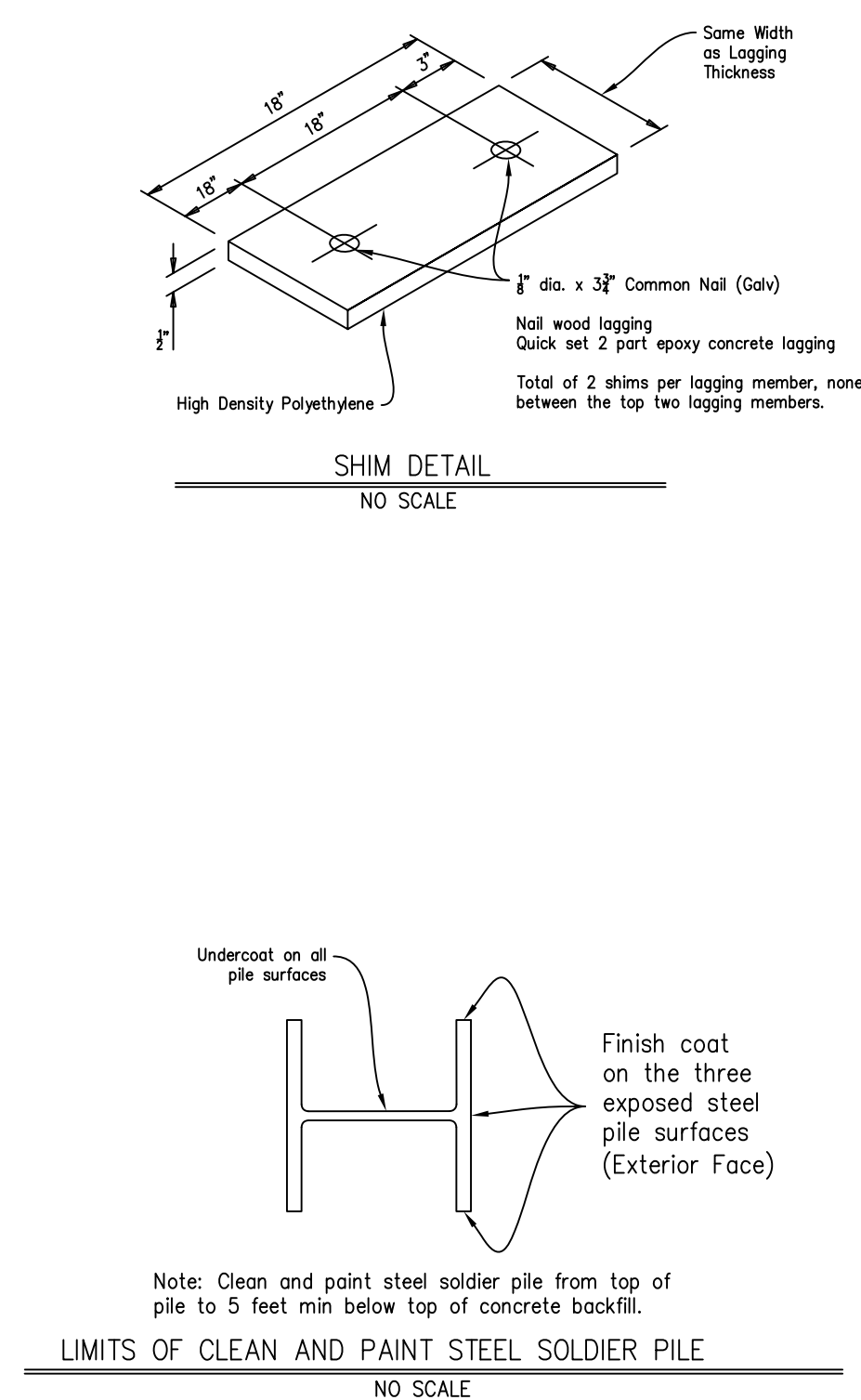
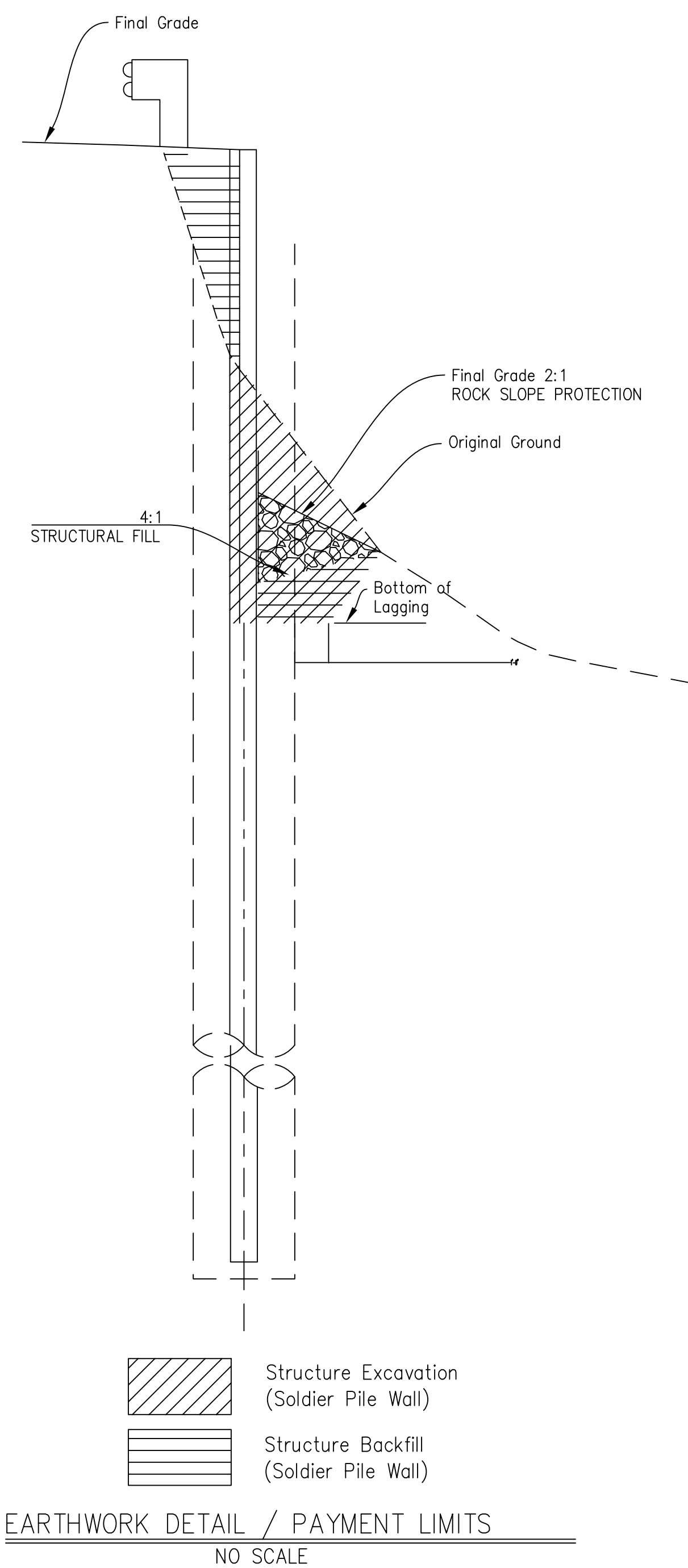


SILT FENCE CONSTRUCTION NOTES:

1. FENCE POST SPACING SHALL NOT EXCEED 10' CENTER TO CENTER.
2. THE POLES DO NO NEED TO BE SET IN CONCRETE.
3. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MIDDLE SECTIONS.
5. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM 8 INCHES INTO THE GROUND
6. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES AND FOLDED.
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILUPS REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE.
8. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
9. SILT FENCE SHALL BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY COUNTY PLANNING DEPARTMENT PRIOR TO BEGINNING ANY CONSTRUCTION WORK.
10. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SEVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED AND ANY SEDIMENT STORED BEHIND THE SILT FENCE HAS BEEN REMOVED.

DETAILS 2 – SOLDIER PILE

BY	REVISION	DATE	PROJECT SURVEYOR	COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS	DRAWN: GJM
			JEFFREY DELOS SANTOS	CASSERLY ROAD PM 2.93 STORM DAMAGE REPAIR PROJECT	CHECKED: GRJ
					DATE: Jun 7, 2023
					SCALE:
					JOB NO. P76777
					SHEET 7 OF 12

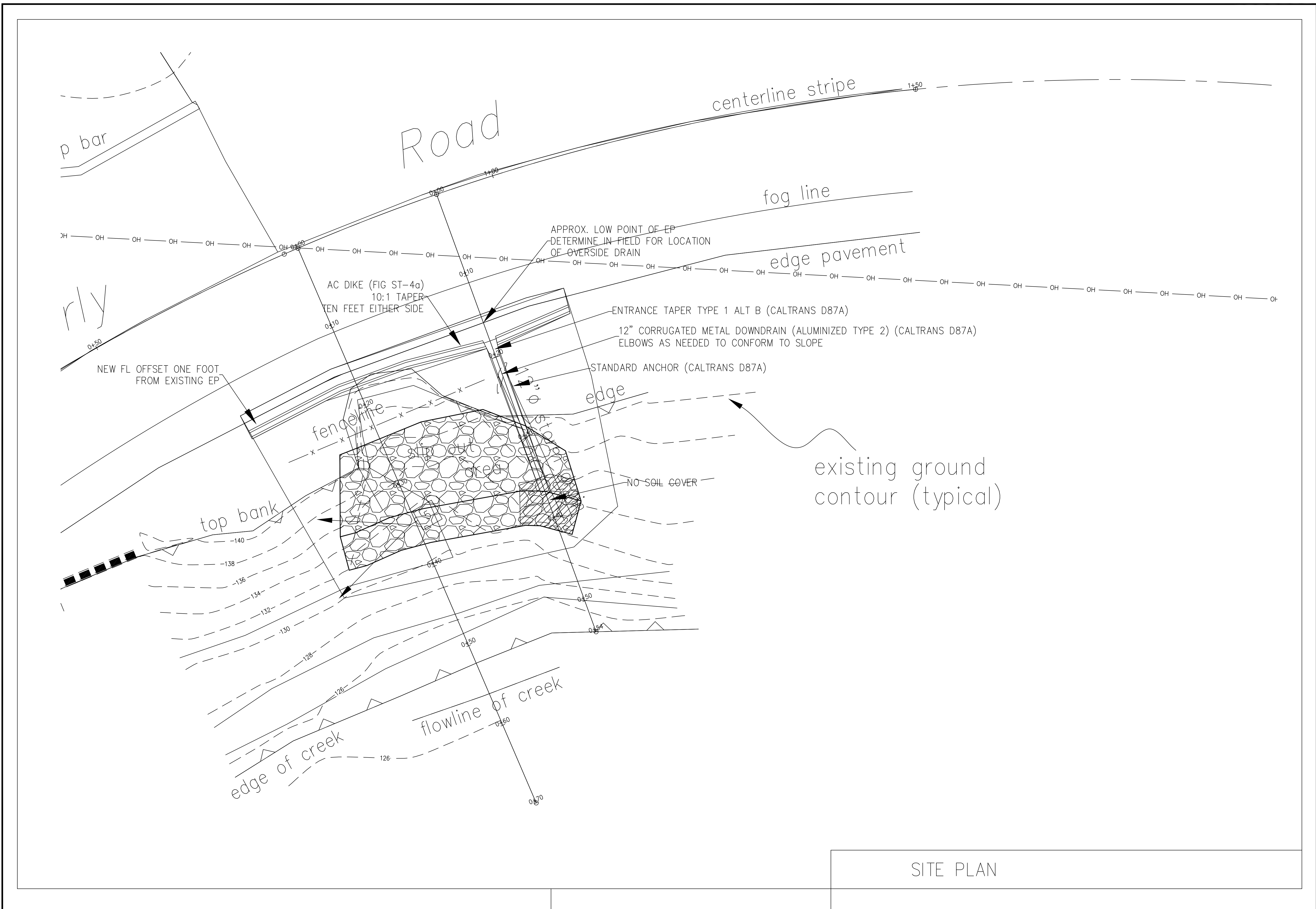



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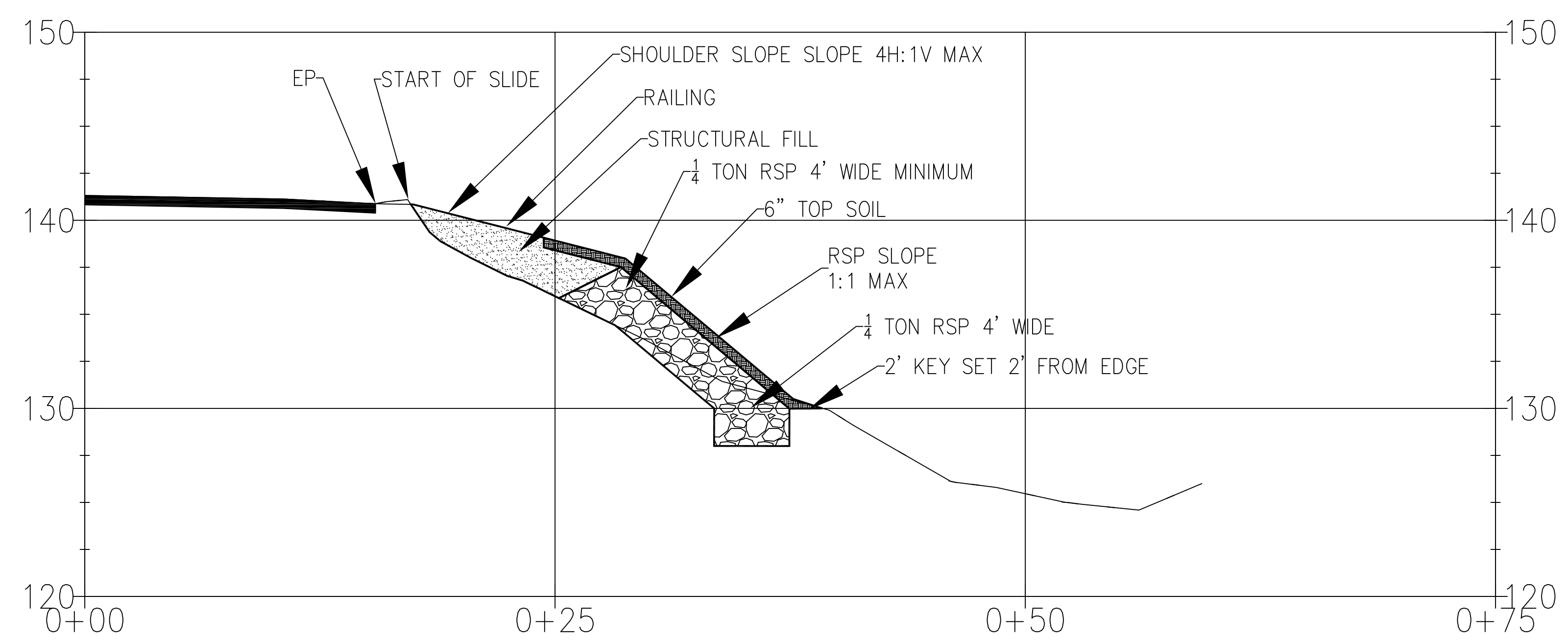
DETAILS 2 – SOLDIER PILE


BY	REVISION	DATE	PROJECT SURVEYOR	COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS
			JEFFREY DELOS SANTOS	CASSERLY ROAD PM 2.93 STORM DAMAGE REPAIR PROJECT
DRAWN: GJM				
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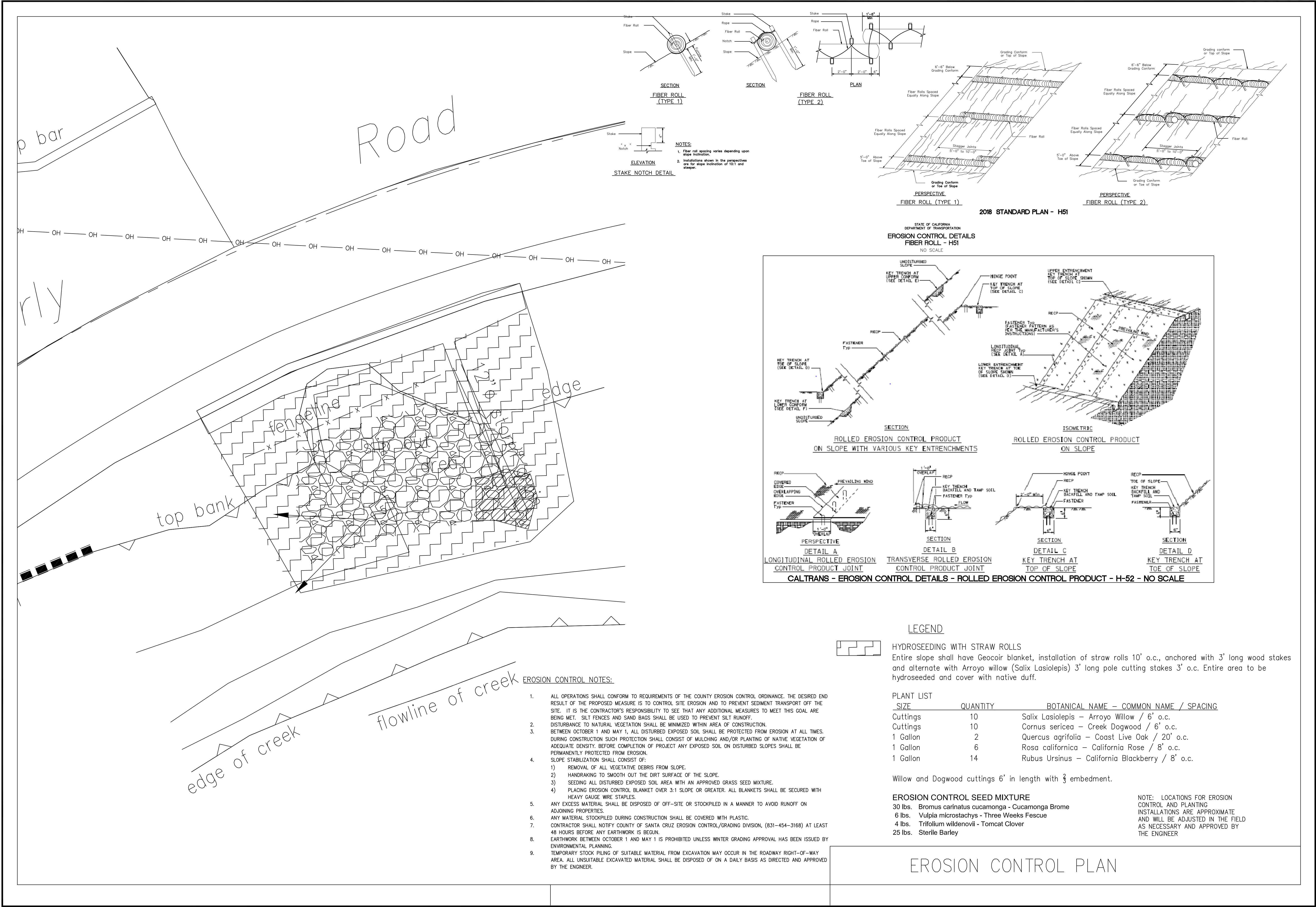


COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS		PROJECT SURVEYOR	<div></div>	DATE	REVISION	BY
CASSERLY ROAD PM 3.39 STORM DAMAGE REPAIR PROJECT						
DRAWN: GJM		GREG MARTIN				
CHECKED: GJM						
DATE: Jun 8, 2023						
SCALE: 1"=5'						
JOB NO. P76822						
SHEET						
10 OF 12						

SECTION



11 OF 12	SHEET	JOB NO. P76822	SCALE: 1"=5'	DATE: Jun 7, 2023	CHECKED: GJM	DRAWN: GJM	COUNTY OF SANTA CRUZ – DEPARTMENT OF PUBLIC WORKS CASSERLY ROAD PM 3.39 STORM DAMAGE REPAIR PROJECT	PROJECT SURVEYOR GREG MARTIN		DATE	REVISION	BY



<div>COUNTY OF SANTA CRUZ — DEPARTMENT OF PUBLIC WORKS</div> <div>CASSERLY ROAD PM 3.39</div> <div>STORM DAMAGE REPAIR PROJECT</div>		<div>CIVIL ENGINEER</div> <div>GREGORY MARTIN</div> <div>No. 52256</div> <div>LICENSED</div> <div>STATE OF CALIFORNIA</div>	DATE		REVISION		BY		
PROJECT SURVEYOR									
GREG MARTIN									
DRAWN: GJM									
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12 OF 12									