

SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

COLD SPRINGS DEBRIS BASIN IMPROVEMENT PROJECT

SC8355

FINAL PLANS

IN THE MONTECITO AREA OF SANTA BARBARA COUNTY, CALIFORNIA

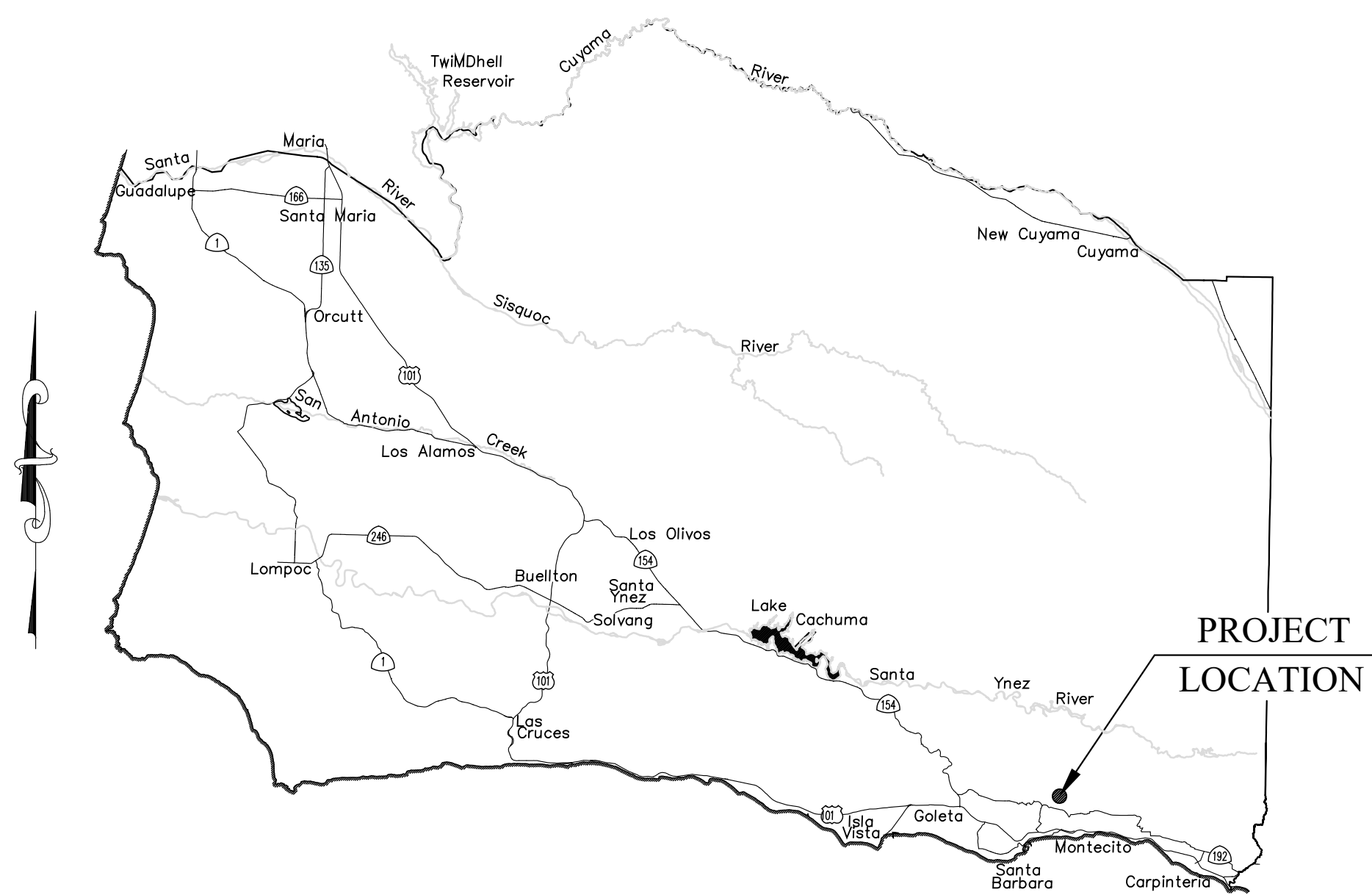
DISTRICT BOARD OF DIRECTORS

FIRST DISTRICT, CHAIR	Das Williams
SECOND DISTRICT	Laura Capps
THIRD DISTRICT	Joan Hartmann
FOURTH DISTRICT	Bob Nelson
FIFTH DISTRICT	Steve Lavagnino

CHAIR BOARD OF DIRECTORS _____
Steve Lavagnino

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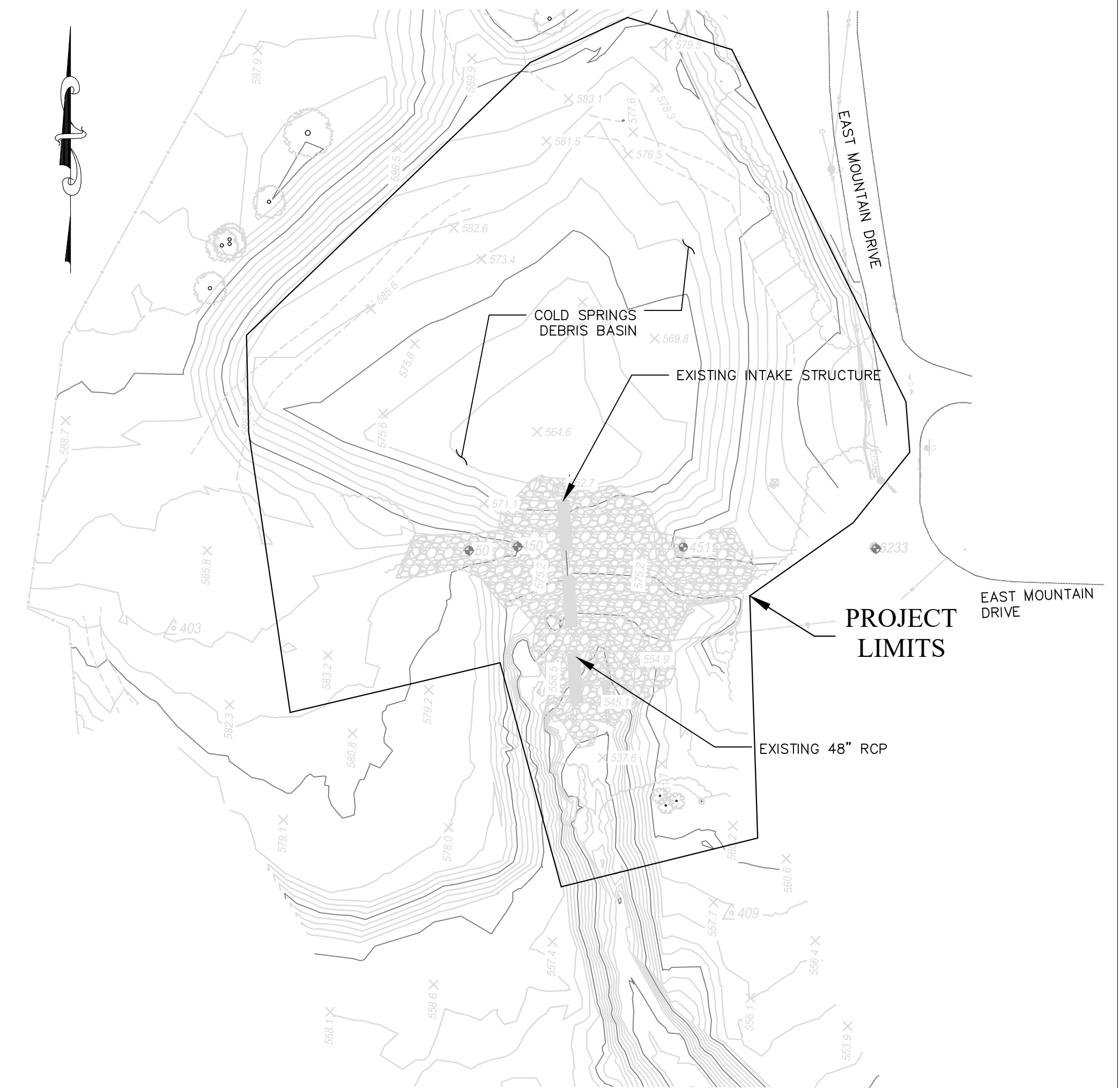
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VICINITY MAP
No Scale

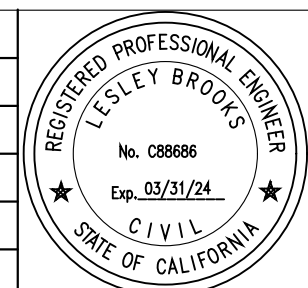


UNAUTHORIZED CHANGES OR USES:
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CONTRACTOR'S LICENSE:
THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE" ADVERTISING FOR BIDS.



EXISTING CONDITION
No Scale

REVISIONS			
NO.	DESCRIPTION	DATE	APR



DESIGNED BY: *Leslie Brooks* 11/03/2023
 WRECO REVIEWED BY: *Matt Griffin* 12/20/2023 | 8:19 AM PST
 FLOOD CONTROL ENGINEERING MANAGER DATE
 REVIEWED BY: *Walter Rubalcava* 12/20/2023 | 3:42 PM PST
 FLOOD CONTROL DEPUTY DIRECTOR DATE

REVIEWED BY: *Floyd Adams* 12/20/2023 | 11:54 AM PST
 MAINTENANCE SUPERINTENDENT DATE
 REVIEWED BY: *Cam* 12/20/2023 | 11:49 AM PST
 ENVIRONMENTAL SERVICES MANAGER DATE

SANTA BARBARA COUNTY
FLOOD CONTROL AND
WATER CONSERVATION DISTRICT
130 E. VICTORIA STREET
SANTA BARBARA, CA 93101
(805) 568-3440



**COLD SPRINGS DEBRIS
BASIN IMPROVEMENT PROJECT**
AREA OF MONTECITO
SANTA BARBARA COUNTY, CALIFORNIA

TITLE SHEET

DESIGNED BY:
LB
DRAWN BY:
MD
CHECKED BY:
HBL

O-1156

SHEET 1 OF 26

Filename: Cold Springs DB Plans.DWG

SYMBOL LEGEND

CONTROL POINT		EX. ROCK		EX. TREE	
EX. CABLE TV BOX		EX. SEWER CLEANOUT		EX. TREE - EUCALYPTUS	
EX. CABLE TV VAULT		EX. SEWER MANHOLE		EX. TREE - LEMON	
EX. ELECTRIC BOX		EX. SIGNAGE		EX. TREE - PALM	
EX. ELECTRIC GUY WIRE		EX. STORM DRAIN GRATE		EX. TREE - PINE	
EX. ELECTRIC MANHOLE		EX. STORM DRAIN MANHOLE		EX. TREE - STUMP	
EX. ELECTRIC METER		EX. STRUCTURE BENCH		EX. TREE - SYCAMORE	
EX. FIRE HYDRANT		EX. STRUCTURE BOLLARD/POST		EX. TREE - WILLOW	
EX. GAS METER		EX. TELEPHONE BOX		EX. TREE - YUCCA	
EX. GAS VALVE		EX. TELEPHONE MANHOLE		EX. WATER METER	
EX. IRRIGATION SPRINKLER		EX. TELEPHONE POLE		EX. WATER SPIGOT	
EX. LUMINARY		EX. TELEPHONE VAULT		EX. WATER VALVE	
EX. MAILBOX		EX. BUSH/HEDGE		EX. WATER WELL	
EX. MONUMENT					
EX. POWER & TELEPHONE POLE					

STANDARD DETAILS AND PLANS LIST

STANDARD NO.	DESCRIPTION
A62B	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE SURCHARGE AND WALL
B11-47	CABLE RAILING

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS (2018)
 The Standard Plan sheets applicable to this contract include, but are not limited to those indicated below. The Revised Standard Plans (RSP) and New Standard Plans (NSP) which apply are attached to the contract.

ABBREVIATIONS

APN	ASSESSORS PARCEL NUMBER	OG	ORIGINAL GRADE
APWA	AMERICAN PUBLIC WORKS ASSOC.	R, RT	RIGHT
BW	BOTH WAYS	RCP	REINFORCED CONCRETE PIPE
CFS	CUBIC FEET PER SECOND	REINF	REINFORCEMENT
CL or C/L	CENTER LINE	RW OR RETWALL	RETAINING WALL
CLR	CLEAR	S	SEWER OR SLOPE OR SOUTH
CALTRANS	STATE OF CALIFORNIA	SDMH	STORM DRAIN MANHOLE
COUNTY	COUNTY OF SANTA BARBARA	STA	STATION
CP	CONTROL POINT	T.R.	THREADED ROD
E	EAST OR EASTING	TW or tw	TOP OF WALL
EG	EXISTING GROUND ELEVATION	TCE	TEMPORARY CONSTRUCTION EASEMENT
EL	ELEVATION	T&B	TOP AND BOTTOM
ESM	ENGINEERED STREAMBED MATERIAL	TBM	TEMPORARY BENCH MARK
FG, F.G.	FINISHED GRADE	TYP	TYPICAL
FT	FEET	WF	WALL FACE
G	GAS LINE		
GB	GRADE BREAK		
HDPE	HIGH DENSITY POLYETHYLENE		
IN	INCH		
L, LT	LEFT		
LOL	LAYOUT LINE		
LWD	LARGE WOODY DEBRIS		
MAX	MAXIMUM		
MJ	MECHANICAL JOINT		
MIN	MINIMUM		
MON	MONUMENT		
N	NORTH OR NORTHING		

LINETYPE LEGEND

BOUNDARY EASEMENT LINE		BOUNDARY RIGHT OF WAY LINE		BOUNDARY PROPERTY LINE		CENTERLINE		CONTOUR LINE-MAJOR		CONTOUR LINE-MINOR		EDGE OF PAVEMENT		EX. BARBED WIRE FENCE		EX. BRUSH		EX. CHAINLINK FENCE		EX. DRAINAGE		EX. STORM DRAIN		GRADING LIMITS		STAGING AREA		 GROUDED ROCK SLOPE PROTECTION EXISTING GROUDED RIPRAP ESM CLASS I ROCK CLASS II AGGREGATE BASE CLASS V ROCK GROUDED ROCK STRUCTURE GROUDED RIPRAP REMOVAL LIMITS
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EXISTING UTILITY INFORMATION

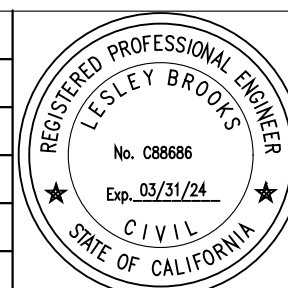
ALL UNDERGROUND UTILITIES SHOWN ARE PLOTTED BASED ON INFORMATION PROVIDED BY OTHERS, AND ARE APPROXIMATE. OVERHEAD UTILITIES ARE NOT SHOWN. NOTE THAT INDIVIDUAL SERVICE LATERALS AND CONNECTIONS ARE NOT PLOTTED ON THE PROFILE.

THE SANTA BARBARA COUNTY FLOOD CONTROL DISTRICT IS NOT RESPONSIBLE FOR THE ACCURACY OF THIS INFORMATION. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT A MINIMUM OF TWO WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION @ 1-800-422-4133.



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DESIGNED BY:	<i>Lesley Brooks</i>	11/03/2023
WRECO		DATE

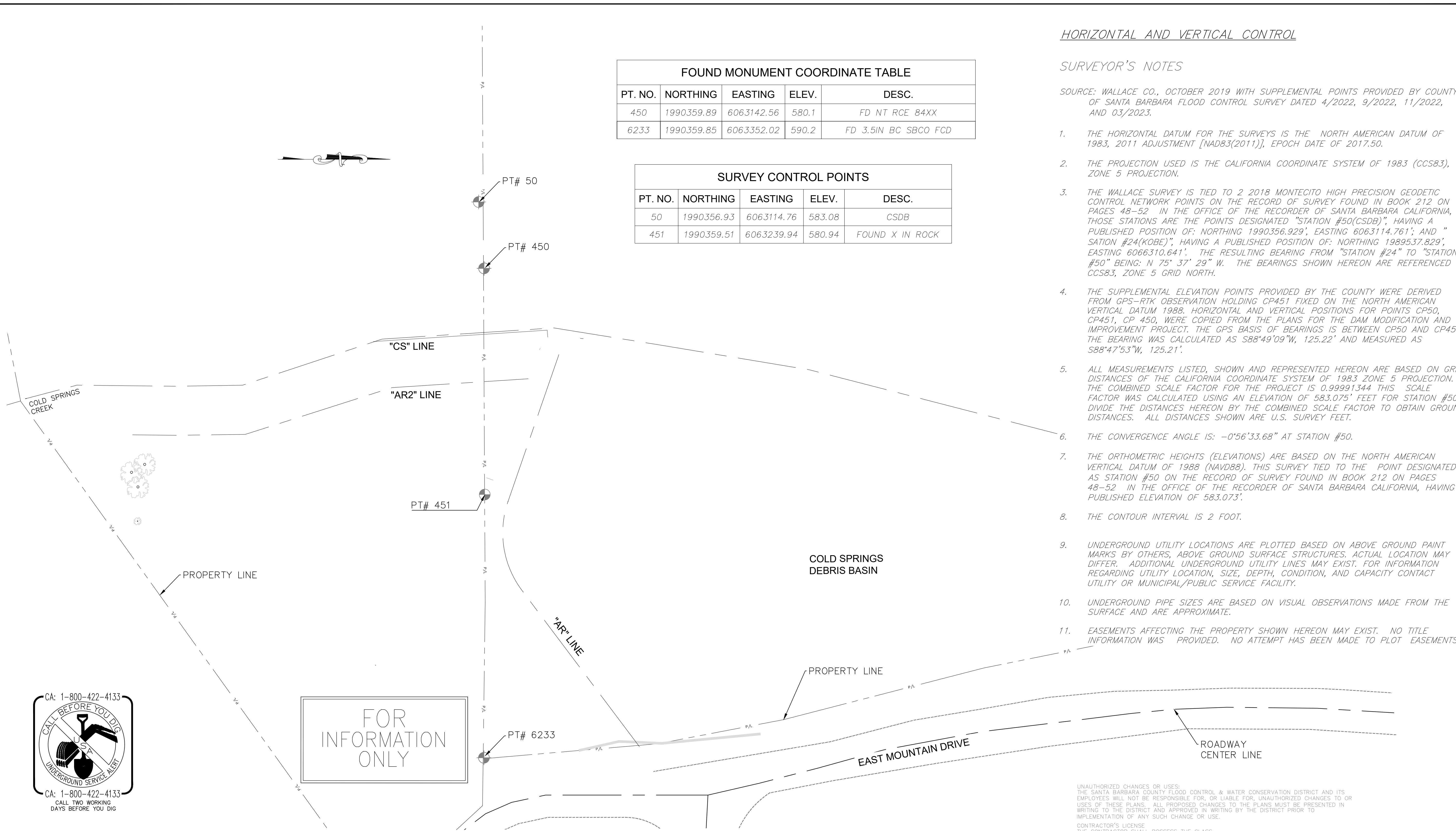
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COLD SPRINGS DEBRIS
 BASIN IMPROVEMENT PROJECT
 AREA OF MONTECITO
 SANTA BARBARA COUNTY, CALIFORNIA

GENERAL INFORMATION

DESIGNED BY:	LB	0-1156
DRAWN BY:	MD	
CHECKED BY:	HBL	
SHEET 2 OF 26		Filename: Cold Springs DB Plans.DWG



FOUND MONUMENT COORDINATE TABLE				
PT. NO.	NORTHING	EASTING	ELEV.	DESC.
450	1990359.89	6063142.56	580.1	FD NT RCE 84XX
6233	1990359.85	6063352.02	590.2	FD 3.5IN BC SBCO FCD

SURVEY CONTROL POINTS				
PT. NO.	NORTHING	EASTING	ELEV.	DESC.
50	1990356.93	6063114.76	583.08	CSDB
451	1990359.51	6063239.94	580.94	FOUND X IN ROCK

HORIZONTAL AND VERTICAL CONTROL

SURVEYOR'S NOTES

SOURCE: WALLACE CO., OCTOBER 2019 WITH SUPPLEMENTAL POINTS PROVIDED BY COUNTY OF SANTA BARBARA FLOOD CONTROL SURVEY DATED 4/2022, 9/2022, 11/2022, AND 03/2023.

1. THE HORIZONTAL DATUM FOR THE SURVEYS IS THE NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT [NAD83(2011)], EPOCH DATE OF 2017.50.
2. THE PROJECTION USED IS THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83), ZONE 5 PROJECTION.
3. THE WALLACE SURVEY IS TIED TO 2 2018 MONTECITO HIGH PRECISION GEODETIC CONTROL NETWORK POINTS ON THE RECORD OF SURVEY FOUND IN BOOK 212 ON PAGES 48-52 IN THE OFFICE OF THE RECORDER OF SANTA BARBARA CALIFORNIA, THOSE STATIONS ARE THE POINTS DESIGNATED "STATION #50(CSDB)", HAVING A PUBLISHED POSITION OF: NORTHING 1990356.929', EASTING 6063114.761'; AND "STATION #24(KOBE)", HAVING A PUBLISHED POSITION OF: NORTHING 1989537.829', EASTING 6066310.641'. THE RESULTING BEARING FROM "STATION #24" TO "STATION #50" BEING: N 75° 37' 29" W. THE BEARINGS SHOWN HEREON ARE REFERENCED TO CCS83, ZONE 5 GRID NORTH.
4. THE SUPPLEMENTAL ELEVATION POINTS PROVIDED BY THE COUNTY WERE DERIVED FROM GPS-RTK OBSERVATION HOLDING CP451 FIXED ON THE NORTH AMERICAN VERTICAL DATUM 1988. HORIZONTAL AND VERTICAL POSITIONS FOR POINTS CP50, CP451, CP 450, WERE COPIED FROM THE PLANS FOR THE DAM MODIFICATION AND IMPROVEMENT PROJECT. THE GPS BASIS OF BEARINGS IS BETWEEN CP50 AND CP451. THE BEARING WAS CALCULATED AS S88°49'09"W, 125.22' AND MEASURED AS S88°47'53"W, 125.21'.
5. ALL MEASUREMENTS LISTED, SHOWN AND REPRESENTED HEREON ARE BASED ON GRID DISTANCES OF THE CALIFORNIA COORDINATE SYSTEM OF 1983 ZONE 5 PROJECTION. THE COMBINED SCALE FACTOR FOR THE PROJECT IS 0.99991344 THIS SCALE FACTOR WAS CALCULATED USING AN ELEVATION OF 583.075' FEET FOR STATION #50. DIVIDE THE DISTANCES HEREON BY THE COMBINED SCALE FACTOR TO OBTAIN GROUND DISTANCES. ALL DISTANCES SHOWN ARE U.S. SURVEY FEET.
6. THE CONVERGENCE ANGLE IS: -0°56'33.68" AT STATION #50.
7. THE ORTHOMETRIC HEIGHTS (ELEVATIONS) ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). THIS SURVEY TIED TO THE POINT DESIGNATED AS STATION #50 ON THE RECORD OF SURVEY FOUND IN BOOK 212 ON PAGES 48-52 IN THE OFFICE OF THE RECORDER OF SANTA BARBARA CALIFORNIA, HAVING A PUBLISHED ELEVATION OF 583.073'.
8. THE CONTOUR INTERVAL IS 2 FOOT.
9. UNDERGROUND UTILITY LOCATIONS ARE PLOTTED BASED ON ABOVE GROUND PAINT MARKS BY OTHERS, ABOVE GROUND SURFACE STRUCTURES. ACTUAL LOCATION MAY DIFFER. ADDITIONAL UNDERGROUND UTILITY LINES MAY EXIST. FOR INFORMATION REGARDING UTILITY LOCATION, SIZE, DEPTH, CONDITION, AND CAPACITY CONTACT UTILITY OR MUNICIPAL/PUBLIC SERVICE FACILITY.
10. UNDERGROUND PIPE SIZES ARE BASED ON VISUAL OBSERVATIONS MADE FROM THE SURFACE AND ARE APPROXIMATE.
11. EASEMENTS AFFECTING THE PROPERTY SHOWN HEREON MAY EXIST. NO TITLE INFORMATION WAS PROVIDED. NO ATTEMPT HAS BEEN MADE TO PLOT EASEMENTS.

FOR INFORMATION ONLY

PLAN
SCALE: 1" = 20'



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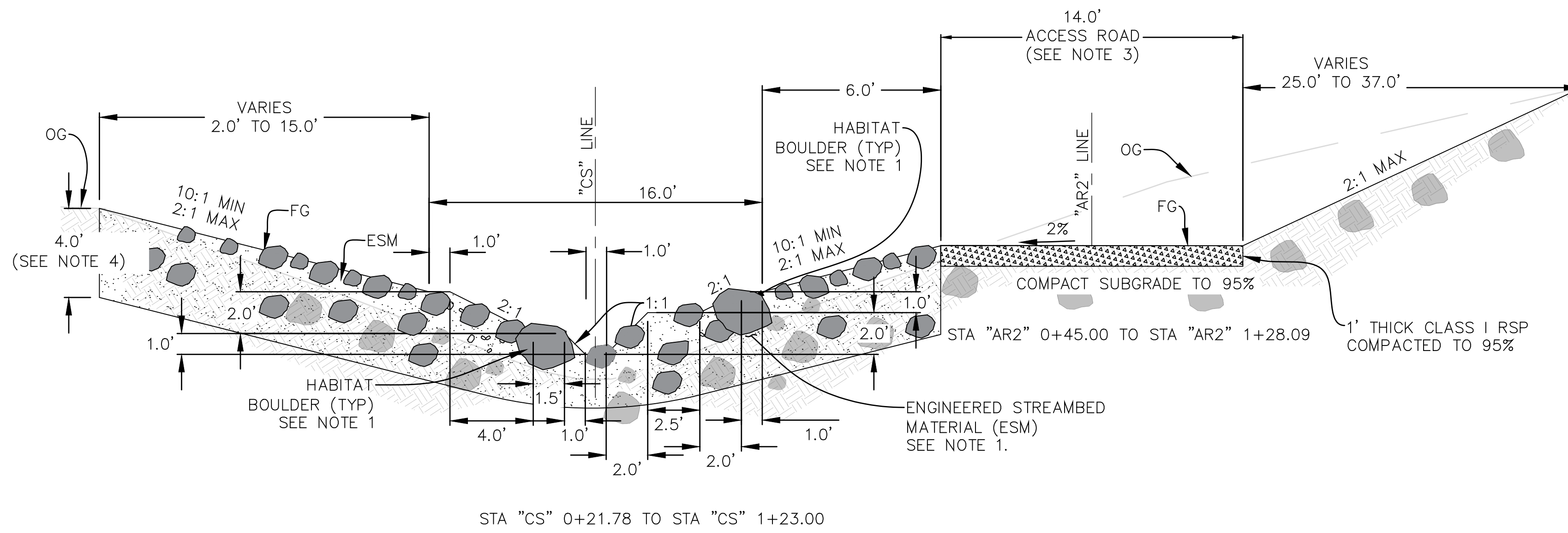
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SANTA BARBARA COUNTY, CALIFORNIA

SURVEY
INFORMATION

DESIGNED BY: LB	O-1156
DRAWN BY: MD	
CHECKED BY: HBL	
SHEET 3 OF 26	
Filename: Cold Springs DB Plans.DWG	

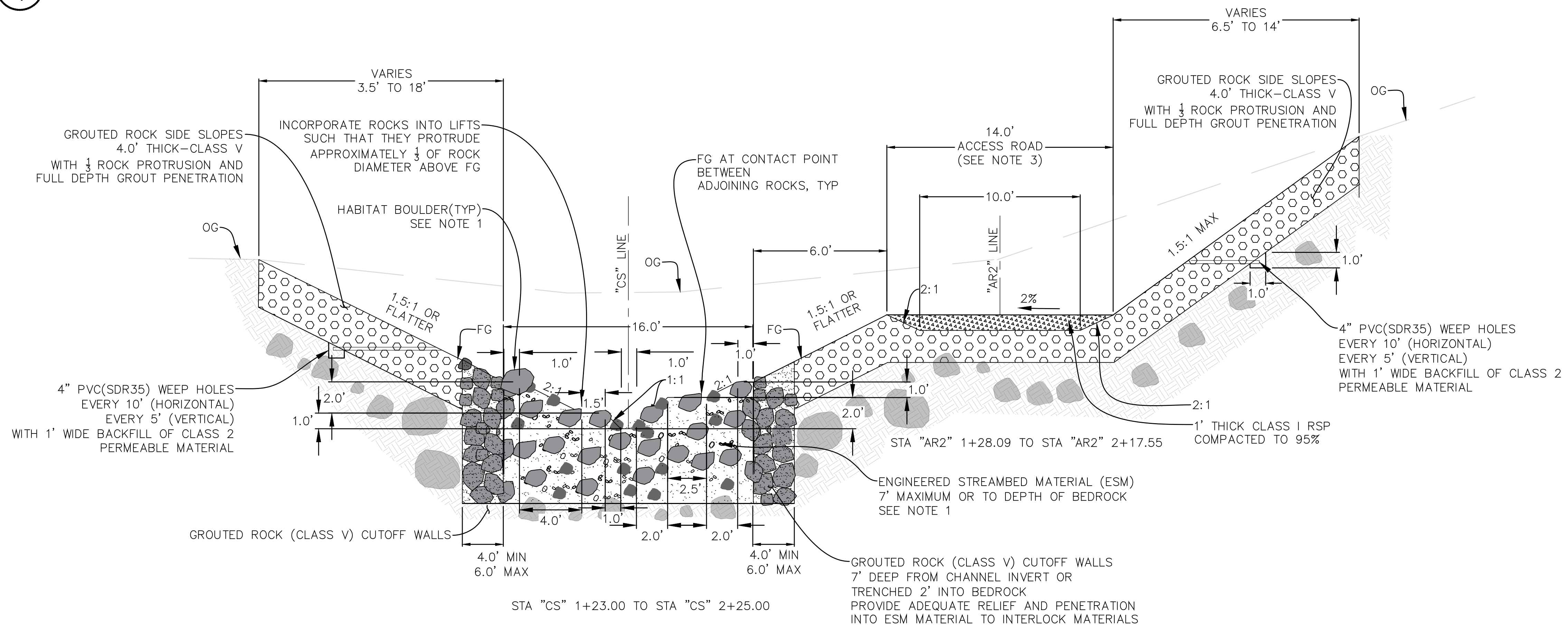


- NOTES
- SEE SHEET 15 FOR ADDITIONAL INFORMATION ON HABITAT BOULDERS AND ESM SIZING AND PLACEMENT. HABITAT BOULDERS INCLUDED IN ESM TOTALS.
 - WHERE BEDROCK ELEVATION IS LESS THAN 7' DEEP FROM FG ELEVATION, GROUDED ROCK CUTOFF WALL TO BE TRENCHED 2- FEET DEEP INTO BEDROCK AND GROUDED INTO BEDROCK.
 - ACCESS ROAD (AR2 LINE) ALONG CHANNEL TO CONSIST OF 1' THICK CLASS 1 RSP WITH 95% COMPACTION. GROUDED ROCK SECTION THICKNESS TO BE REDUCED TO ALLOW FOR ACCESS ROAD, WHERE APPLICABLE. OTHERWISE, ACCESS ROAD TO FOLLOW TYPICAL SECTION E SHEET 5.
 - ESM DEPTH FOR SECTION A ESTIMATED AS 4'. ACTUAL ESM DEPTH WILL BE THE DIFFERENCE BETWEEN THE OG AND FG ELEVATIONS AND WILL VARY. ROUGHEN EXISTING STREAMBED MATERIAL TO A 2 FEET MINIMUM TO BIND ESM TO SURFACE IN AREAS WHERE EXISTING STREAMBED MATERIAL DOES NOT INCLUDE BOULDERS WITH A MINIMUM DIAMETER OF 2.5 FEET.

NOMINAL RSP CLASS BY MEDIAN PARTICLE DIAMETER

CLASS	SIZE (INCHES)
CLASS I	6
CLASS III	12
CLASS V	18

A CHANNEL TYPICAL SECTION (DOWNSTREAM OF THE WALL)
 4 NOT TO SCALE



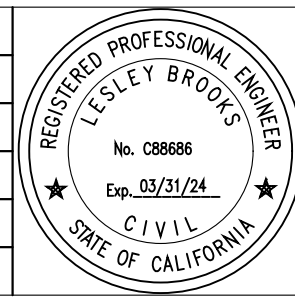
B CHANNEL TYPICAL SECTION (DOWNSTREAM OF THE WALL)
 4 NOT TO SCALE

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DESIGNED BY: *Lesley Brooks* 11/03/2023
 WRECO DATE

SANTA BARBARA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
 130 E. VICTORIA STREET
 SANTA BARBARA, CA 93101
 (805) 568-3440

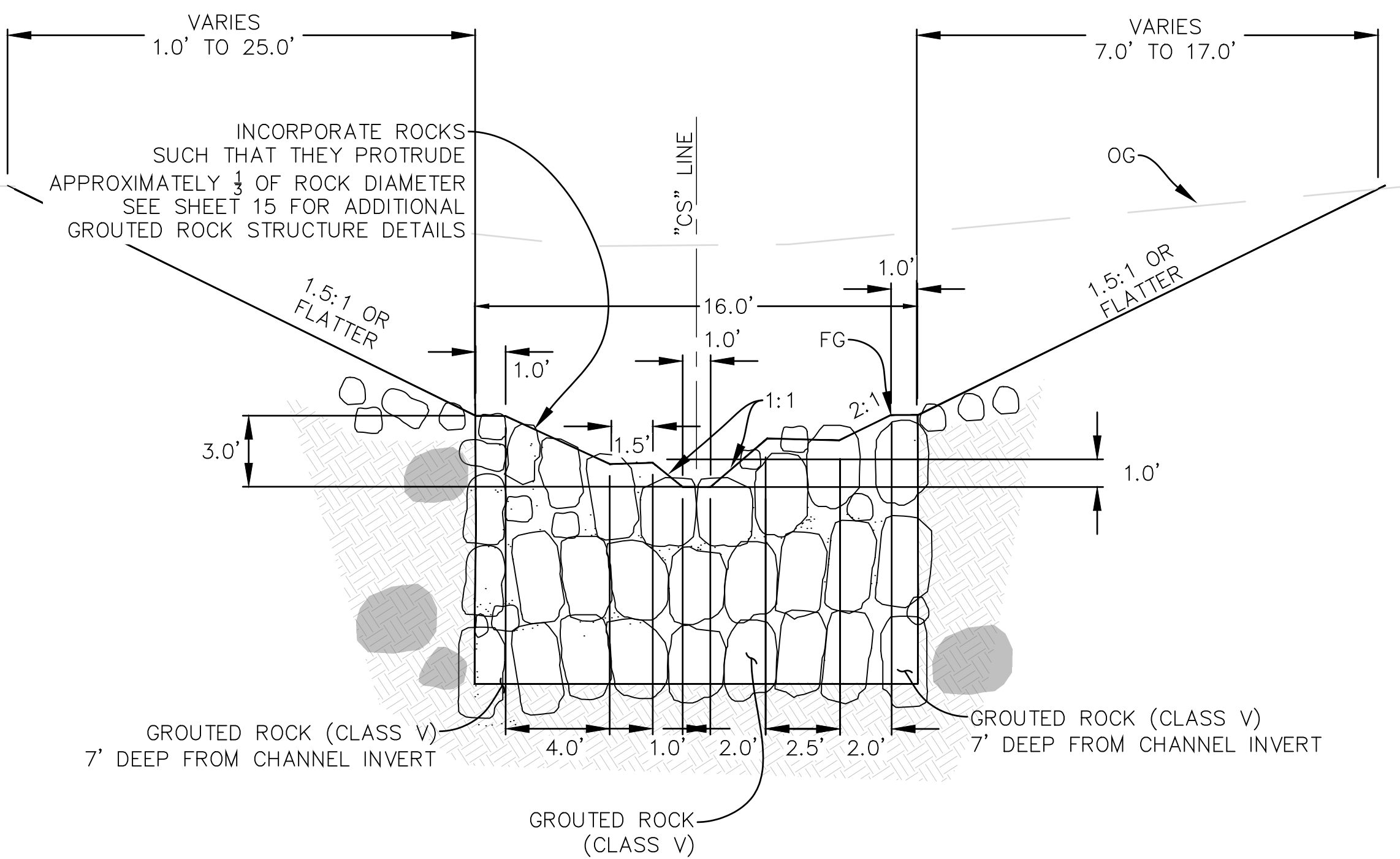


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 AREA OF MONTECITO
 SANTA BARBARA COUNTY, CALIFORNIA

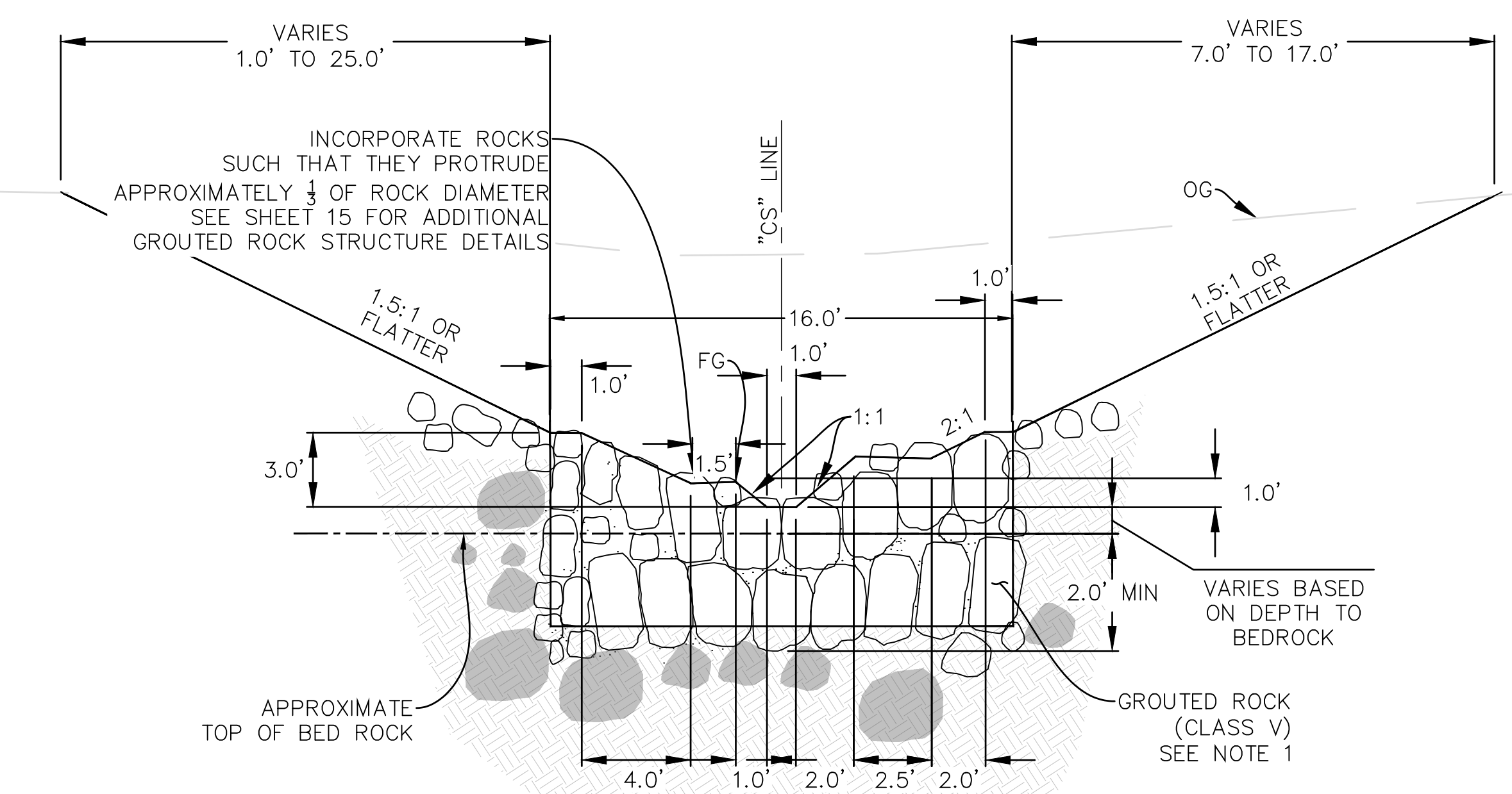
TYPICAL SECTIONS 1

DESIGNED BY: LB
 DRAWN BY: MD
 CHECKED BY: HBL

O-1156
 SHEET 4 OF 26
 Filename: Cold Springs DB Plans.DWG



A
5
ROCK STRUCTURE EMBEDMENT TYPICAL SECTION
(SCENARIO 1 - NO BED ROCK ENCOUNTERED)
NOT TO SCALE



B
5
ROCK STRUCTURE EMBEDMENT TYPICAL SECTION
(SCENARIO 2 - BED ROCK ENCOUNTERED)
NOT TO SCALE

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DESIGNED BY: *Lesley Brubaker* 11/03/2023
WRECO DATE

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130 E. VICTORIA STREET
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(805) 568-3440



COLD SPRINGS DEBRIS
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AREA OF MONTECITO
SANTA BARBARA COUNTY, CALIFORNIA

TYPICAL SECTIONS 2

DESIGNED BY: LB
DRAWN BY: MD
CHECKED BY: HBL

CA: 1-800-422-4133
CALL BEFORE YOU DIG
USA
UNDERGROUND SERVICE ALERT
CA: 1-800-422-4133
CALL TWO WORKING DAYS BEFORE YOU DIG

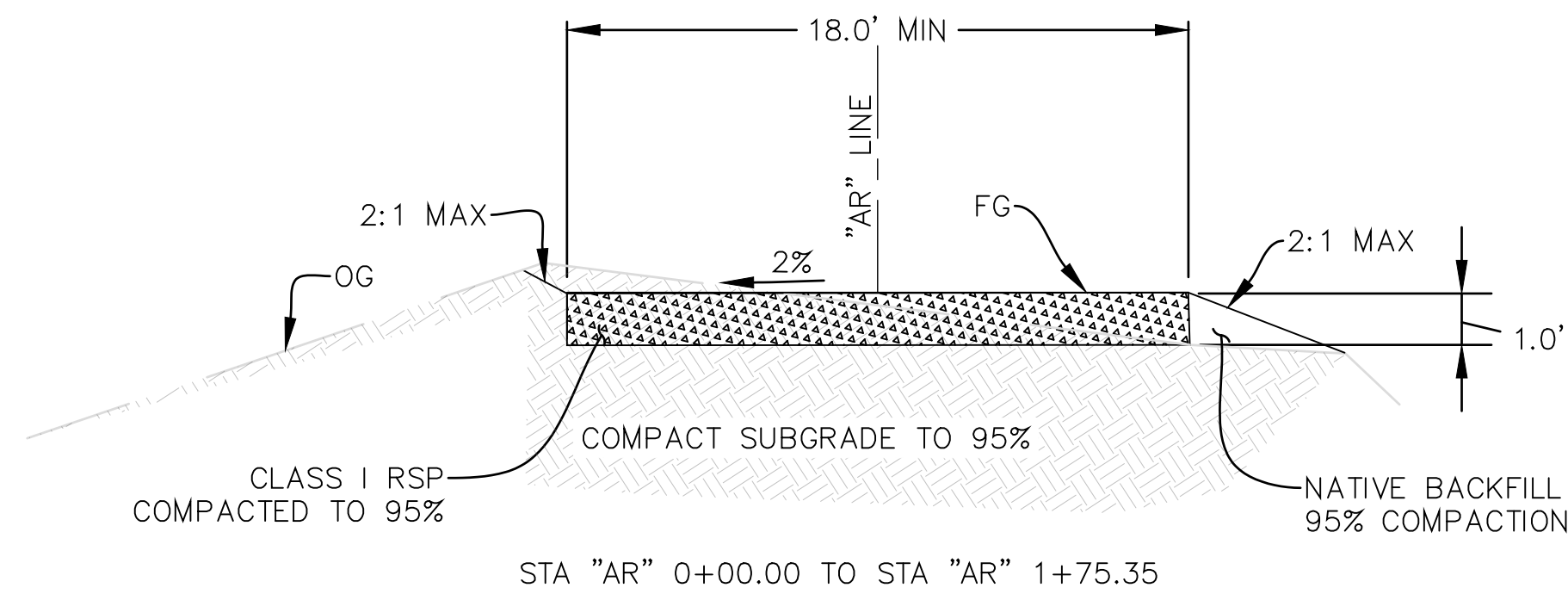
O-1156

SHEET 5 OF 26

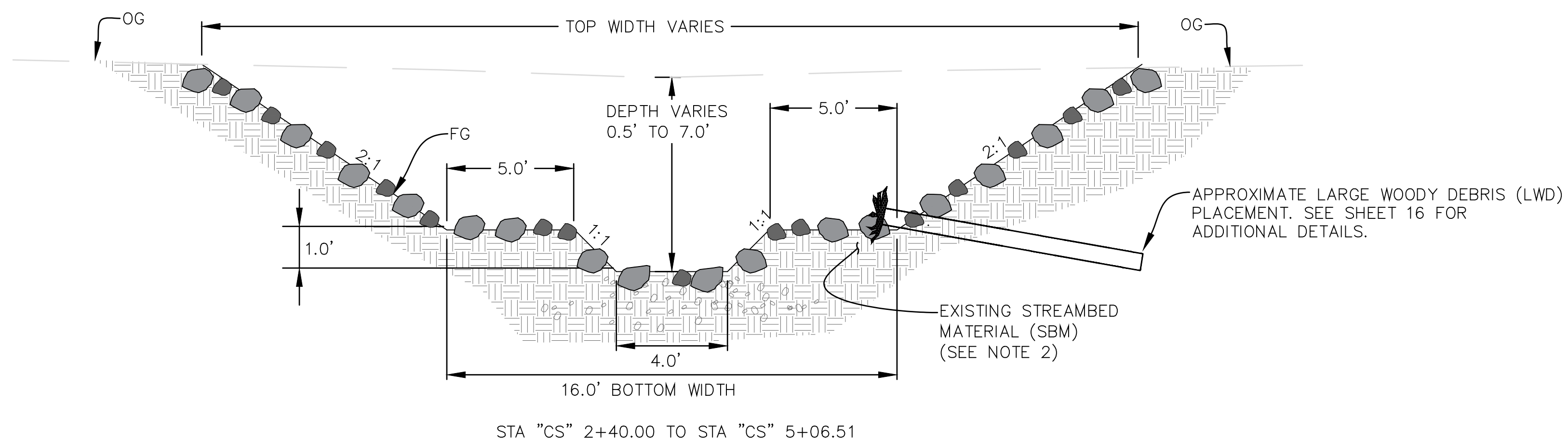
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NOTES

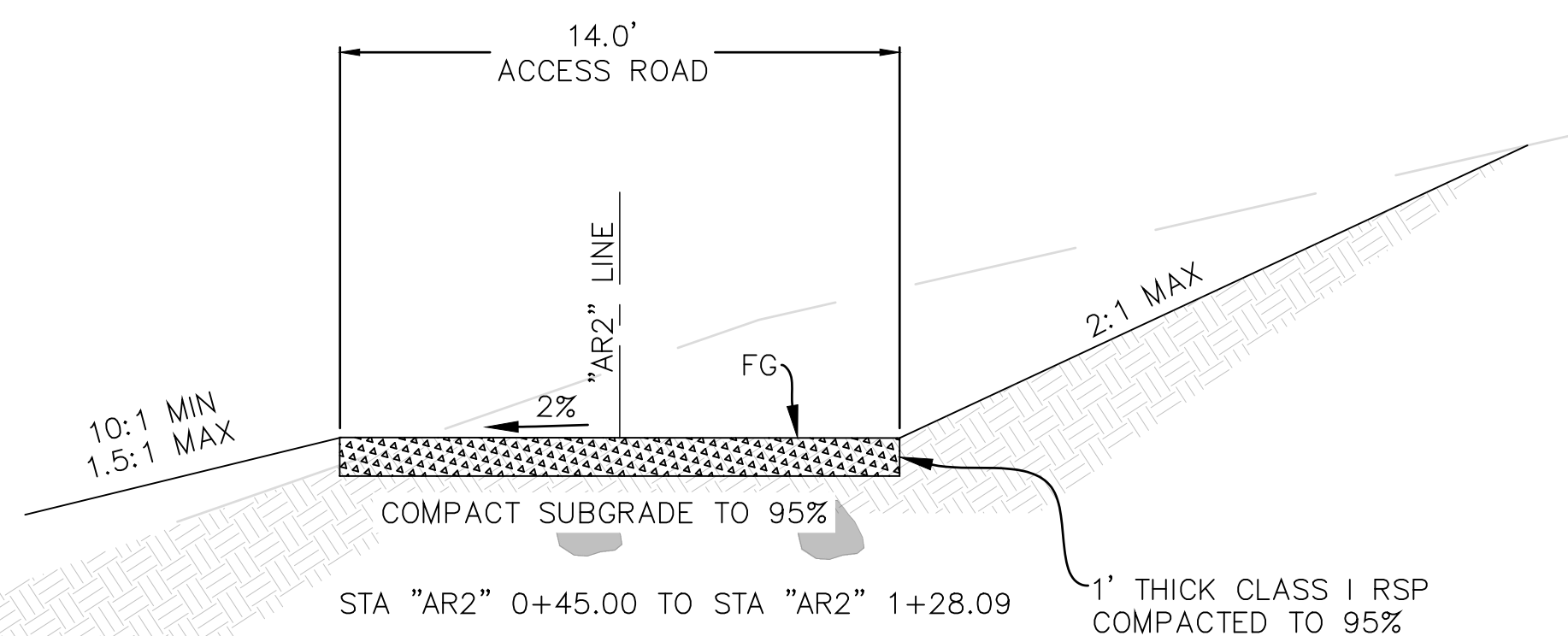
- WHERE ROCK STRUCTURES ENCOUNTER BEDROCK BEFORE A 7' DEPTH IS ACHIEVED, BEDROCK WILL BE TRENCHED TO A DEPTH OF 2 FEET AND THE ROCK STRUCTURE WILL BE GROUDED INTO THE BEDROCK TRENCH.
- EXPOSED GRADED STREAMBED MATERIAL WITHIN THE PILOT CHANNEL TO CONFORM TO ESM GRADATIONS PROVIDED IN SHEET 15. BOULDER SIZES OF D84 AND LARGER TO REMAIN PROTRUDING FROM THE PILOT CHANNEL FG, WHERE ENCOUNTERED. FINAL ROUGHNESS OF EXPOSED PILOT CHANNEL MATERIAL TO BE REVIEWED AND APPROVED BY FIELD ENGINEER.



C
5
ACCESS RD ("AR" LINE)
NOT TO SCALE



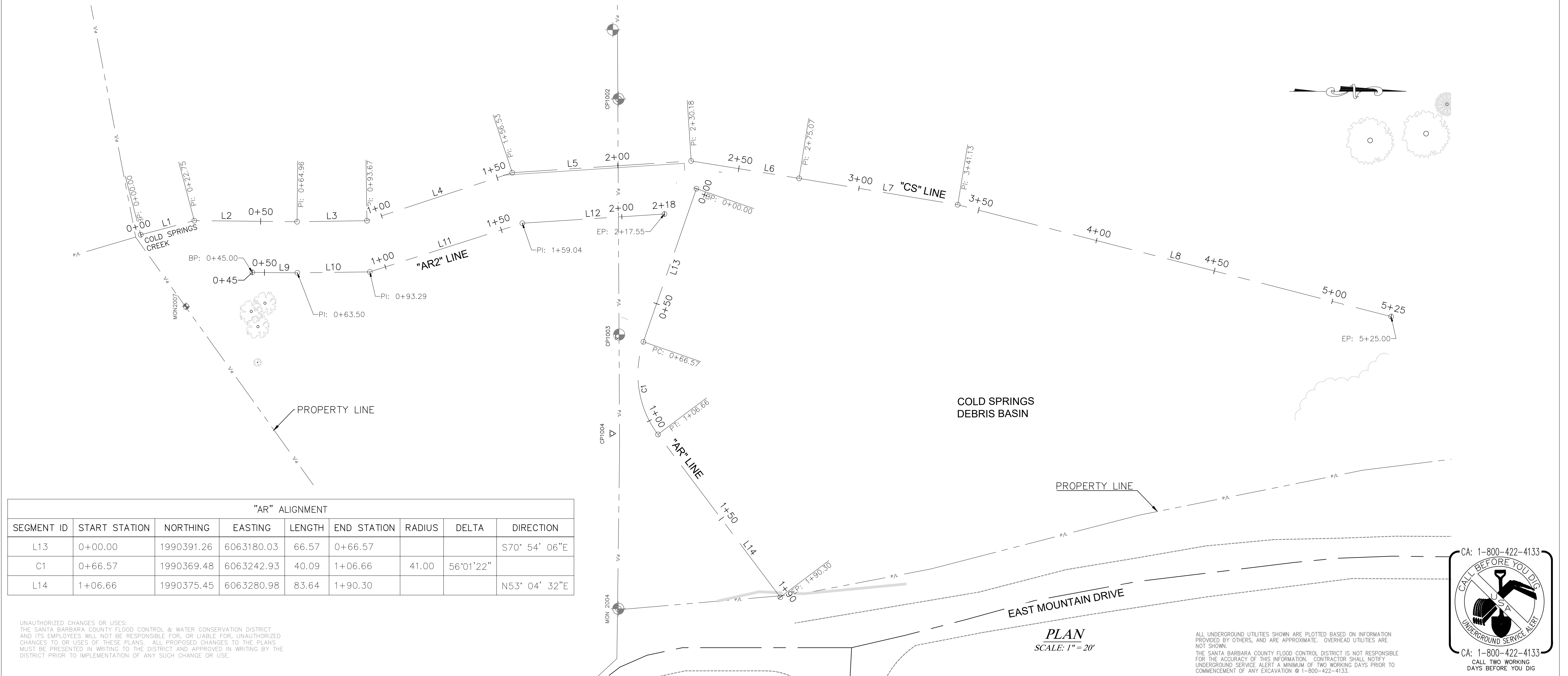
D
5
PILOT CHANNEL TYPICAL SECTION
NOT TO SCALE



E
5
ACCESS RD ("AR2" LINE)
NOT TO SCALE

"CS" ALIGNMENT								
SEGMENT ID	START STATION	NORTHING	EASTING	LENGTH	END STATION	RADIUS	DELTA	DIRECTION
L1	0+00.00	1990163.02	6063198.96	22.75	0+22.75			N14° 47' 40"W
L2	0+22.75	1990185.01	6063193.16	42.22	0+64.96			N0° 36' 47"E
L3	0+64.96	1990227.22	6063193.61	28.71	0+93.67			N0° 51' 31"W
L4	0+93.67	1990255.93	6063193.18	62.86	1+56.53			N18° 18' 04"W
L5	1+56.53	1990315.61	6063173.44	73.66	2+30.18			N3° 43' 29"W
L6	2+30.18	1990389.11	6063168.65	44.89	2+75.07			N9° 09' 02"E
L7	2+75.07	1990433.42	6063175.79	66.06	3+41.13			N9° 26' 31"E
L8	3+41.13	1990498.59	6063186.63	183.87	5+25.00			N14° 28' 07"E

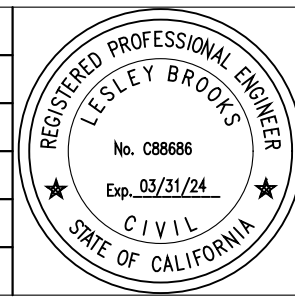
"AR2" ALIGNMENT								
SEGMENT ID	START STATION	NORTHING	EASTING	LENGTH	END STATION	RADIUS	DELTA	DIRECTION
L9	0+45.00	1990208.83	6063214.41	18.50	0+63.50			N0° 35' 40"E
L10	0+63.50	1990227.33	6063214.60	29.79	0+93.29			N0° 45' 46"W
L11	0+93.29	1990257.12	6063214.21	65.75	1+59.04			N17° 42' 06"W
L12	1+59.04	1990319.76	6063194.21	58.51	2+17.55			N3° 42' 51"W



"AR" ALIGNMENT								
SEGMENT ID	START STATION	NORTHING	EASTING	LENGTH	END STATION	RADIUS	DELTA	DIRECTION
L13	0+00.00	1990391.26	6063180.03	66.57	0+66.57			S70° 54' 06"E
C1	0+66.57	1990369.48	6063242.93	40.09	1+06.66	41.00	56°01'22"	
L14	1+06.66	1990375.45	6063280.98	83.64	1+90.30			N53° 04' 32"E

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SANTA BARBARA COUNTY
 FLOOD CONTROL AND
 WATER CONSERVATION DISTRICT
 130 E. VICTORIA STREET
 SANTA BARBARA, CA 93101
 (805) 568-3440



COLD SPRINGS DEBRIS
 BASIN IMPROVEMENT PROJECT
 AREA OF MONTECITO
 SANTA BARBARA COUNTY, CALIFORNIA

KEYLINE GEOMETRY

DESIGNED BY:
LB
 DRAWN BY:
MD
 CHECKED BY:
HBL

O-1156
 SHEET 6 OF 26
 Filename: Cold Springs DB Plans.DWG

ALL UNDERGROUND UTILITIES SHOWN ARE PLOTTED BASED ON INFORMATION
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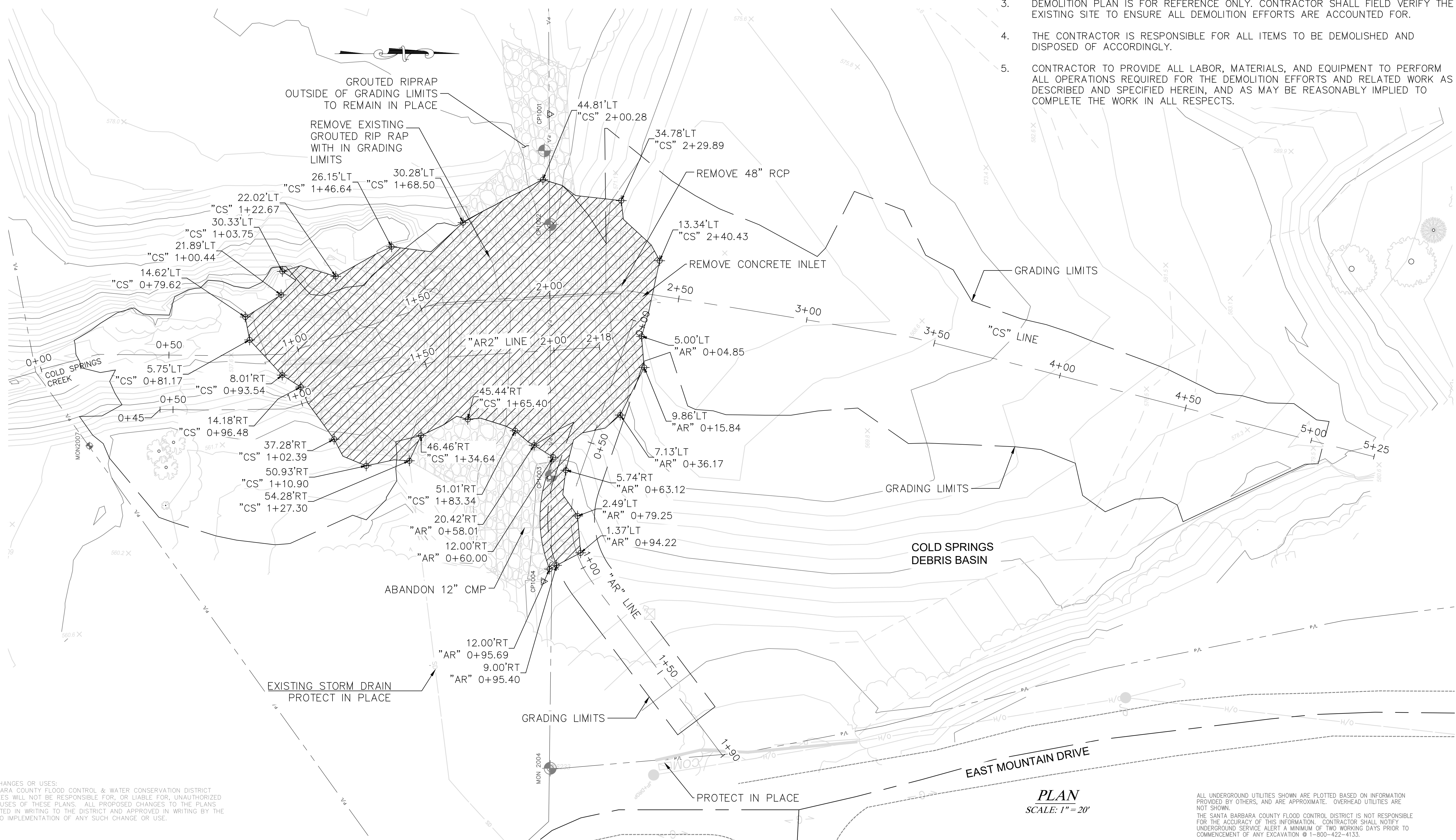
PLAN
 SCALE: 1" = 20'

LEGEND:

	GROUPED RIPRAP REMOVAL LIMITS		EXISTING GROUDED RSP
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NOTES:

1. REMOVE EXISTING GROUDED ROCK WITHIN GRADING LIMITS TO CONSTRUCT IMPROVEMENTS SHOWN ON SHEET 8.
2. GROUDED RIPRAP DEPTH ESTIMATED AT 2.5 FT BASED ON AS-BUILTS. DEPTH OF GROUDED RIPRAP MAY VARY 1.5± FT.
3. DEMOLITION PLAN IS FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY THE EXISTING SITE TO ENSURE ALL DEMOLITION EFFORTS ARE ACCOUNTED FOR.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL ITEMS TO BE DEMOLISHED AND DISPOSED OF ACCORDINGLY.
5. CONTRACTOR TO PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT TO PERFORM ALL OPERATIONS REQUIRED FOR THE DEMOLITION EFFORTS AND RELATED WORK AS DESCRIBED AND SPECIFIED HEREIN, AND AS MAY BE REASONABLY IMPLIED TO COMPLETE THE WORK IN ALL RESPECTS.



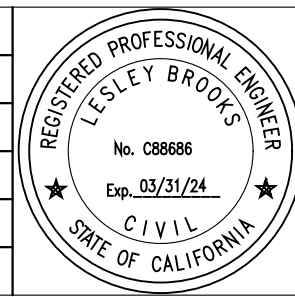
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PLAN
 SCALE: 1" = 20'

REVISIONS			
NO.	DESCRIPTION	DATE	APR



DESIGNED BY: *Lesley Brooks* 11/03/2023
 WRECO DATE

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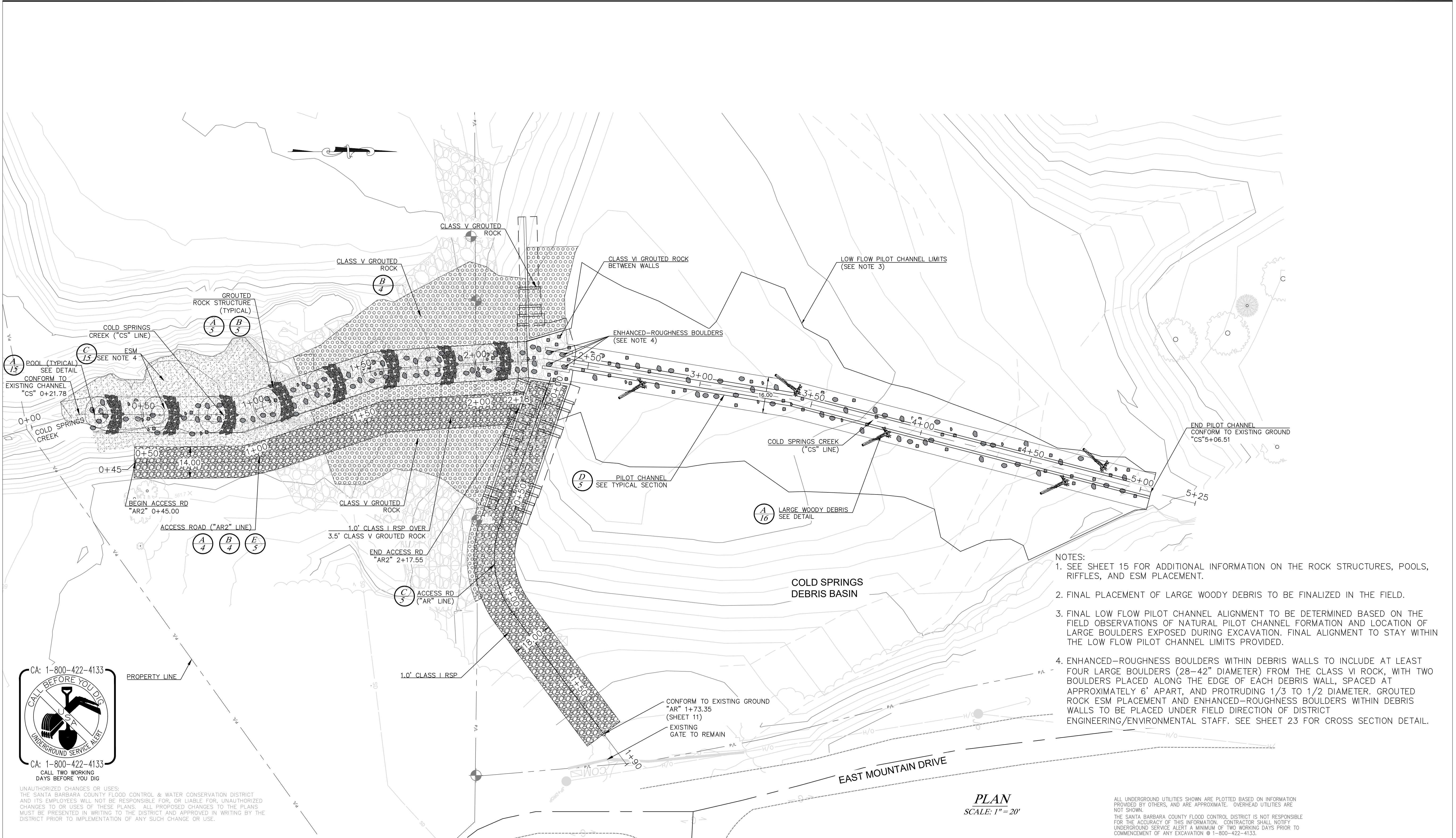


**COLD SPRINGS DEBRIS
 BASIN IMPROVEMENT PROJECT**
 AREA OF MONTECITO
 SANTA BARBARA COUNTY, CALIFORNIA

DEMOLITION PLAN

DESIGNED BY:
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 DRAWN BY:
 MD
 CHECKED BY:
 HBL

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 SHEET 7 OF 26
 Filename: Cold Springs DB Plans.DWG



- NOTES:
- SEE SHEET 15 FOR ADDITIONAL INFORMATION ON THE ROCK STRUCTURES, POOLS, RIFFLES, AND ESM PLACEMENT.
 - FINAL PLACEMENT OF LARGE WOODY DEBRIS TO BE FINALIZED IN THE FIELD.
 - FINAL LOW FLOW PILOT CHANNEL ALIGNMENT TO BE DETERMINED BASED ON THE FIELD OBSERVATIONS OF NATURAL PILOT CHANNEL FORMATION AND LOCATION OF LARGE BOULDERS EXPOSED DURING EXCAVATION. FINAL ALIGNMENT TO STAY WITHIN THE LOW FLOW PILOT CHANNEL LIMITS PROVIDED.
 - ENHANCED-ROUGHNESS BOULDERS WITHIN DEBRIS WALLS TO INCLUDE AT LEAST FOUR LARGE BOULDERS (28-42" DIAMETER) FROM THE CLASS VI ROCK, WITH TWO BOULDERS PLACED ALONG THE EDGE OF EACH DEBRIS WALL, SPACED AT APPROXIMATELY 6' APART, AND PROTRUDING 1/3 TO 1/2 DIAMETER. GROUDED ROCK ESM PLACEMENT AND ENHANCED-ROUGHNESS BOULDERS WITHIN DEBRIS WALLS TO BE PLACED UNDER FIELD DIRECTION OF DISTRICT ENGINEERING/ENVIRONMENTAL STAFF. SEE SHEET 23 FOR CROSS SECTION DETAIL.

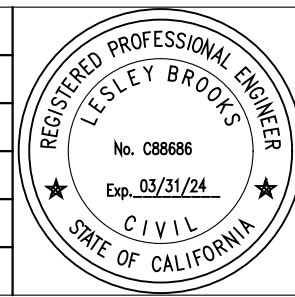


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COLD SPRINGS DEBRIS
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 AREA OF MONTECITO
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LAYOUT PLAN

DESIGNED BY:
 LB
 DRAWN BY:
 MD
 CHECKED BY:
 HBL

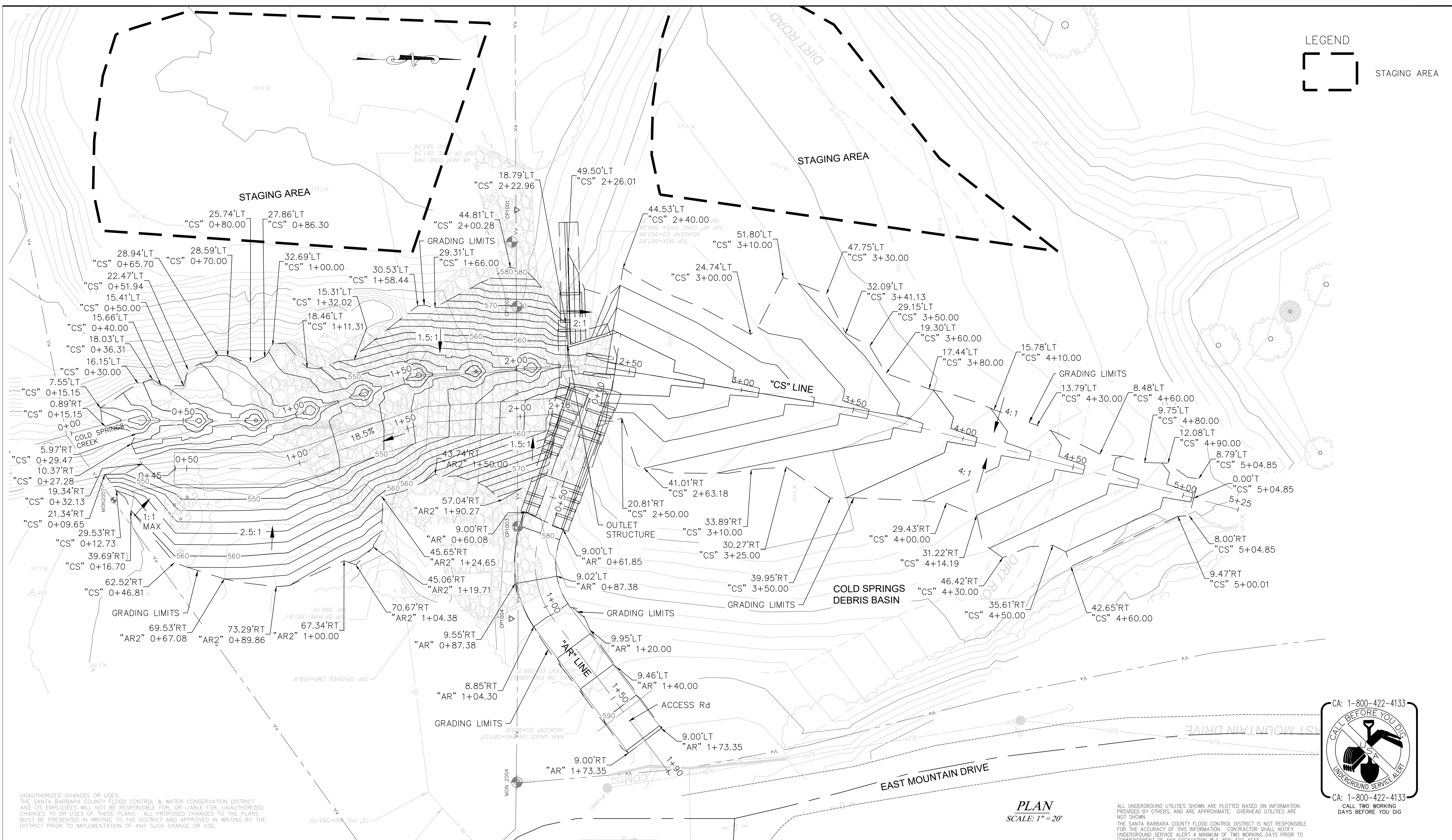
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SHEET 8 OF 26

Filename: Cold Springs DB Plans.DWG

LEGEND

STAGING AREA



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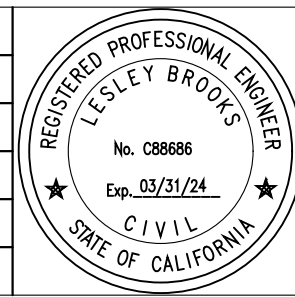
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CA: 1-800-422-4133

CALL BEFORE YOU DIG
 UNDERGROUND SERVICE ALERT
 CA: 1-800-422-4133
 CALL TWO WORKING
 DAYS BEFORE YOU DIG

REVISIONS			
NO.	DESCRIPTION	DATE	APR



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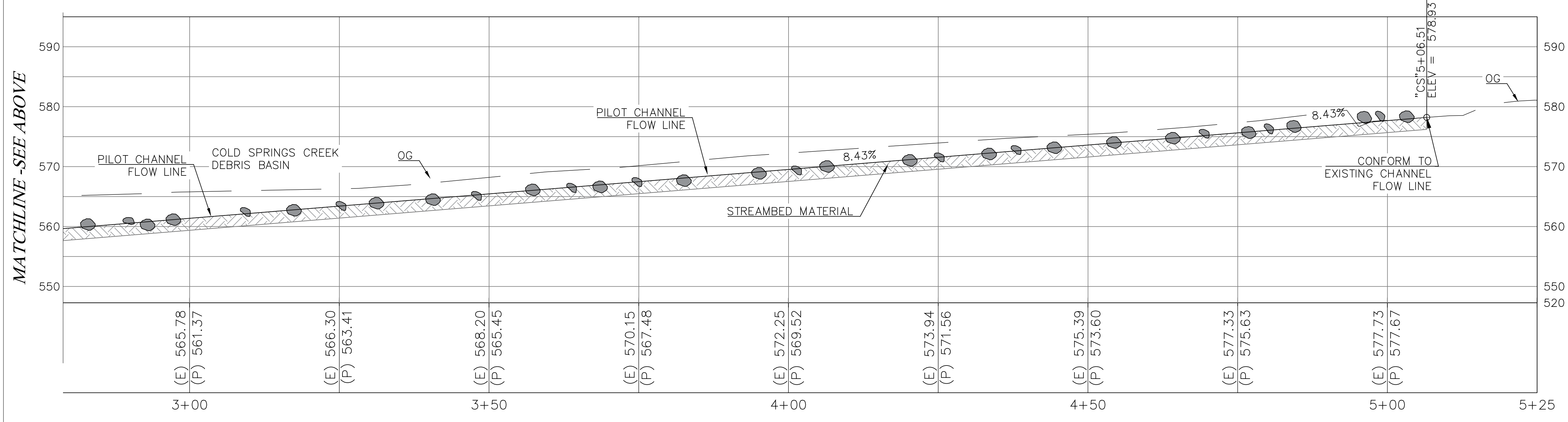
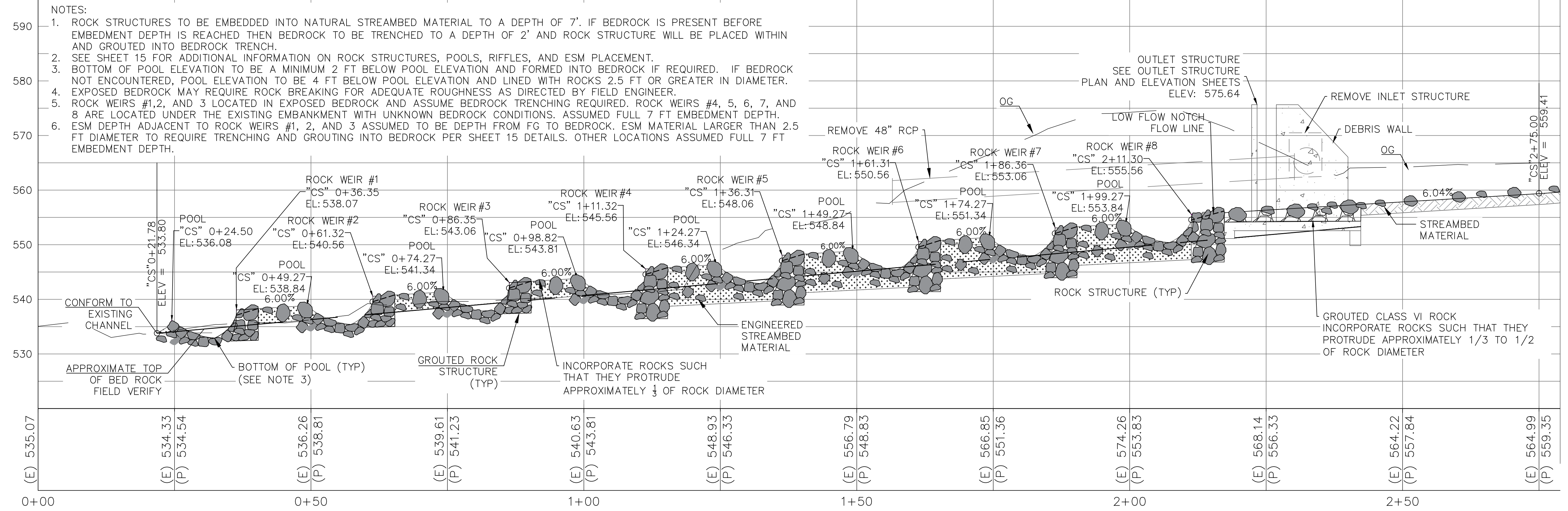
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 SHEET 9 OF 23
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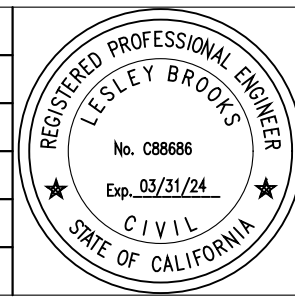
COLD SPRINGS CREEK ("CS" LINE) PROFILE

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

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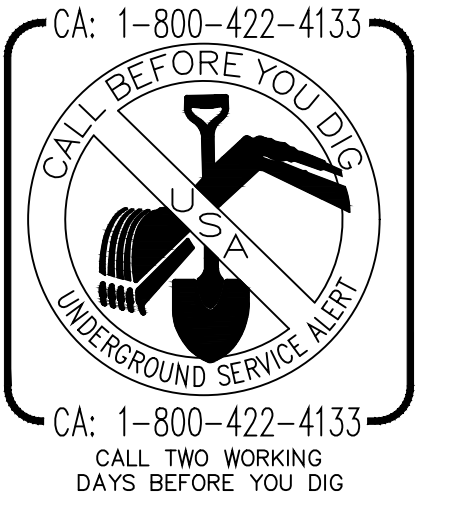


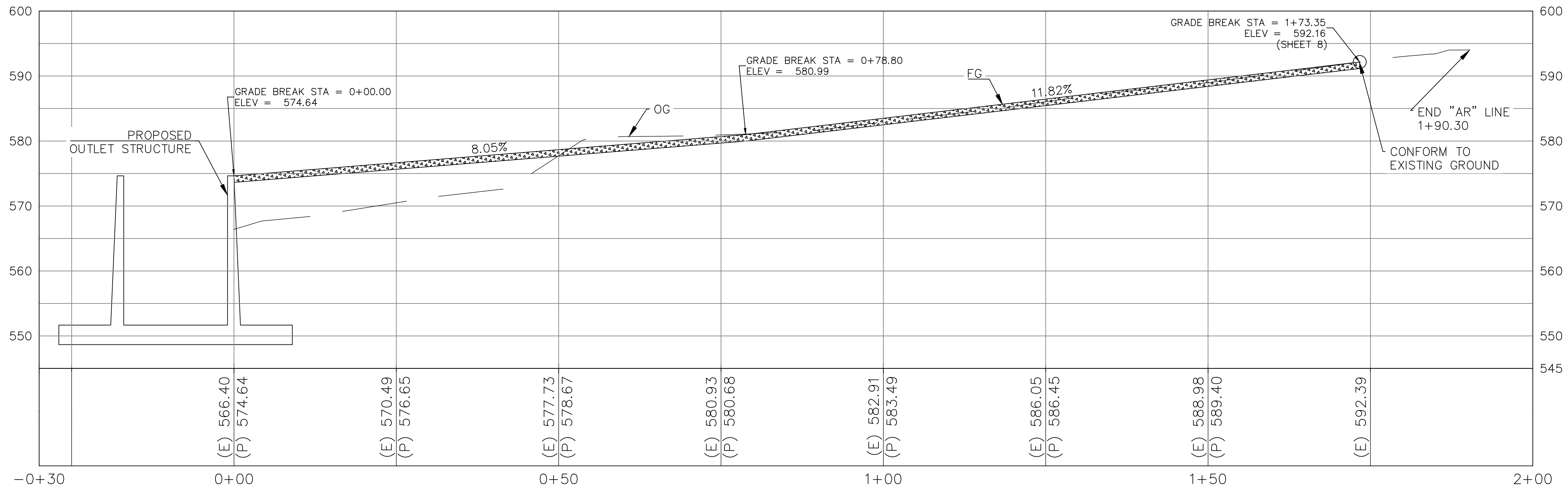
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BASIN IMPROVEMENT PROJECT
AREA OF MONTECITO
SANTA BARBARA COUNTY, CALIFORNIA

**COLD SPRINGS CREEK
PROFILE**

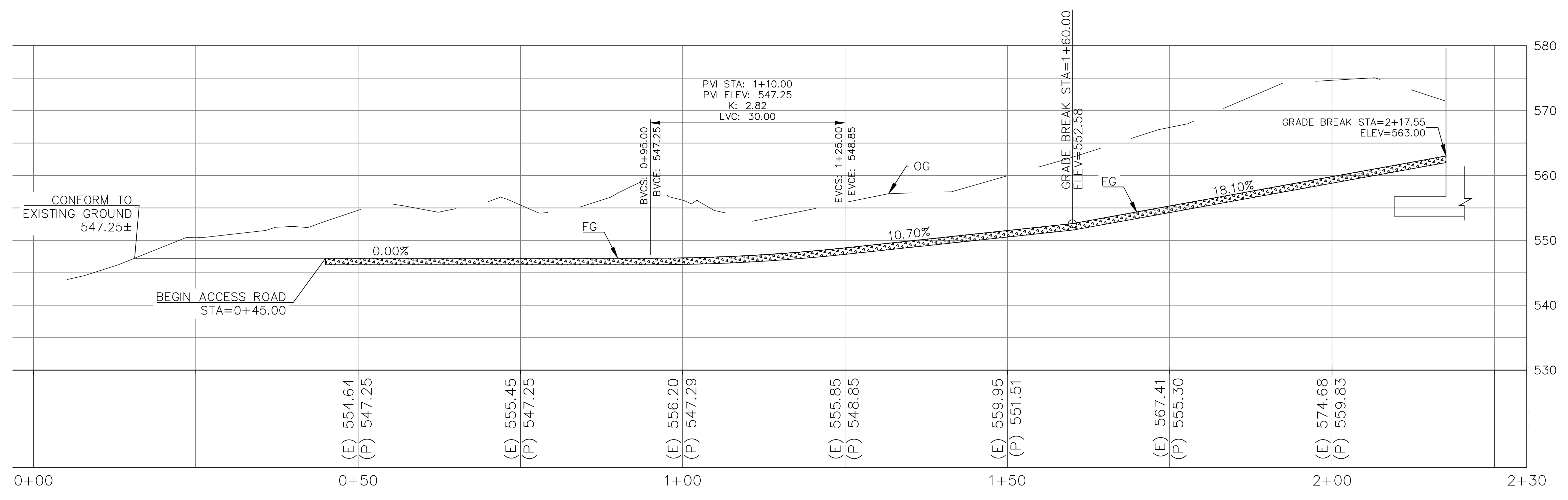
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SHEET 10 OF 26
Filename: Cold Springs DB Plans.DWG





ACCESS ROAD ("AR" LINE) PROFILE
 SCALE: 1" = 10' HORIZONTAL
 1" = 10' VERTICAL



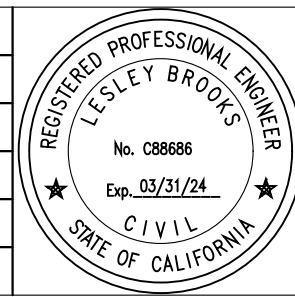
ACCESS ROAD 2 ("AR2" LINE) PROFILE
 SCALE: 1" = 10' HORIZONTAL
 1" = 10' VERTICAL



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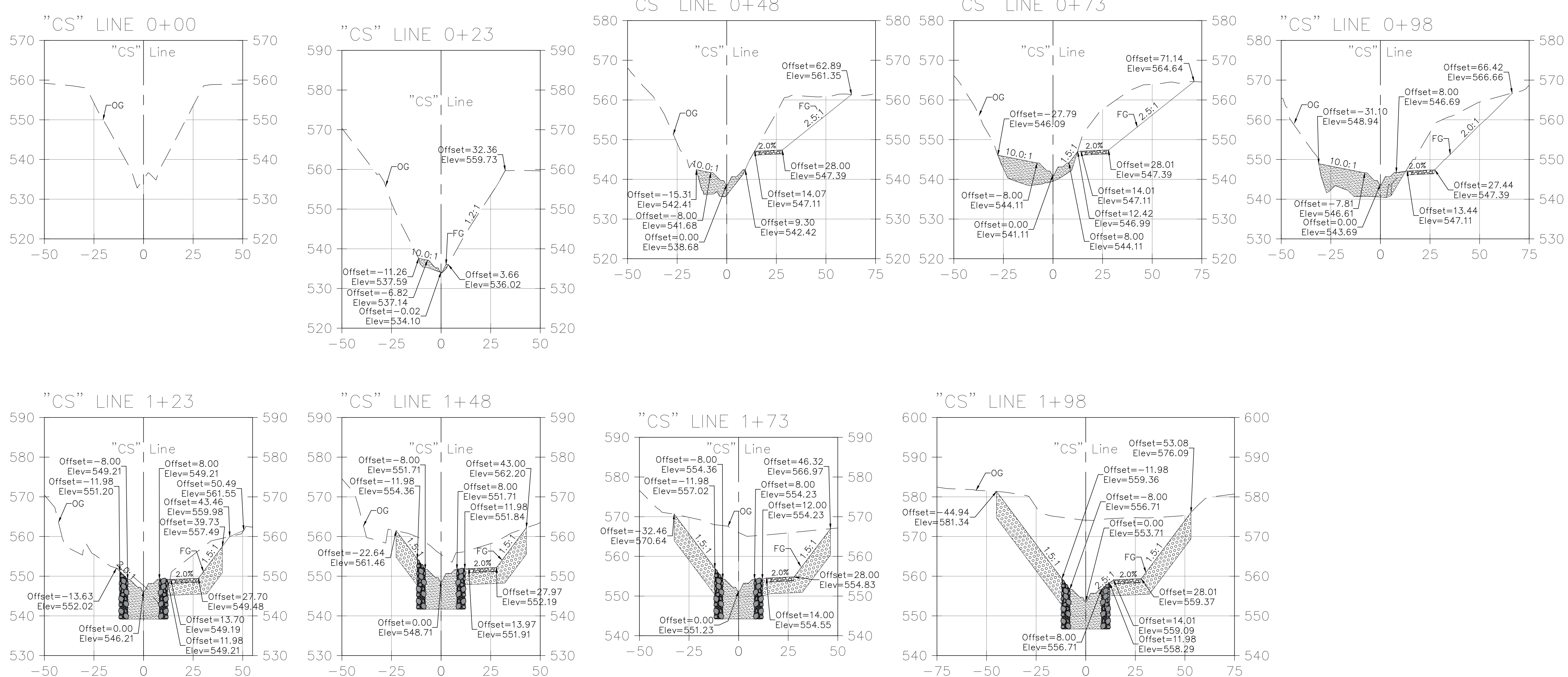
SANTA BARBARA COUNTY
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ACCESS RD PROFILE

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 SHEET 11 OF 26
 Filename: Cold Springs DB Plans.DWG



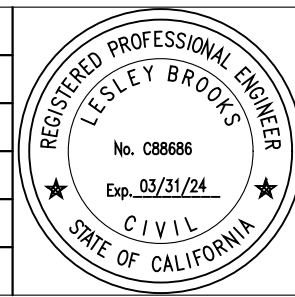
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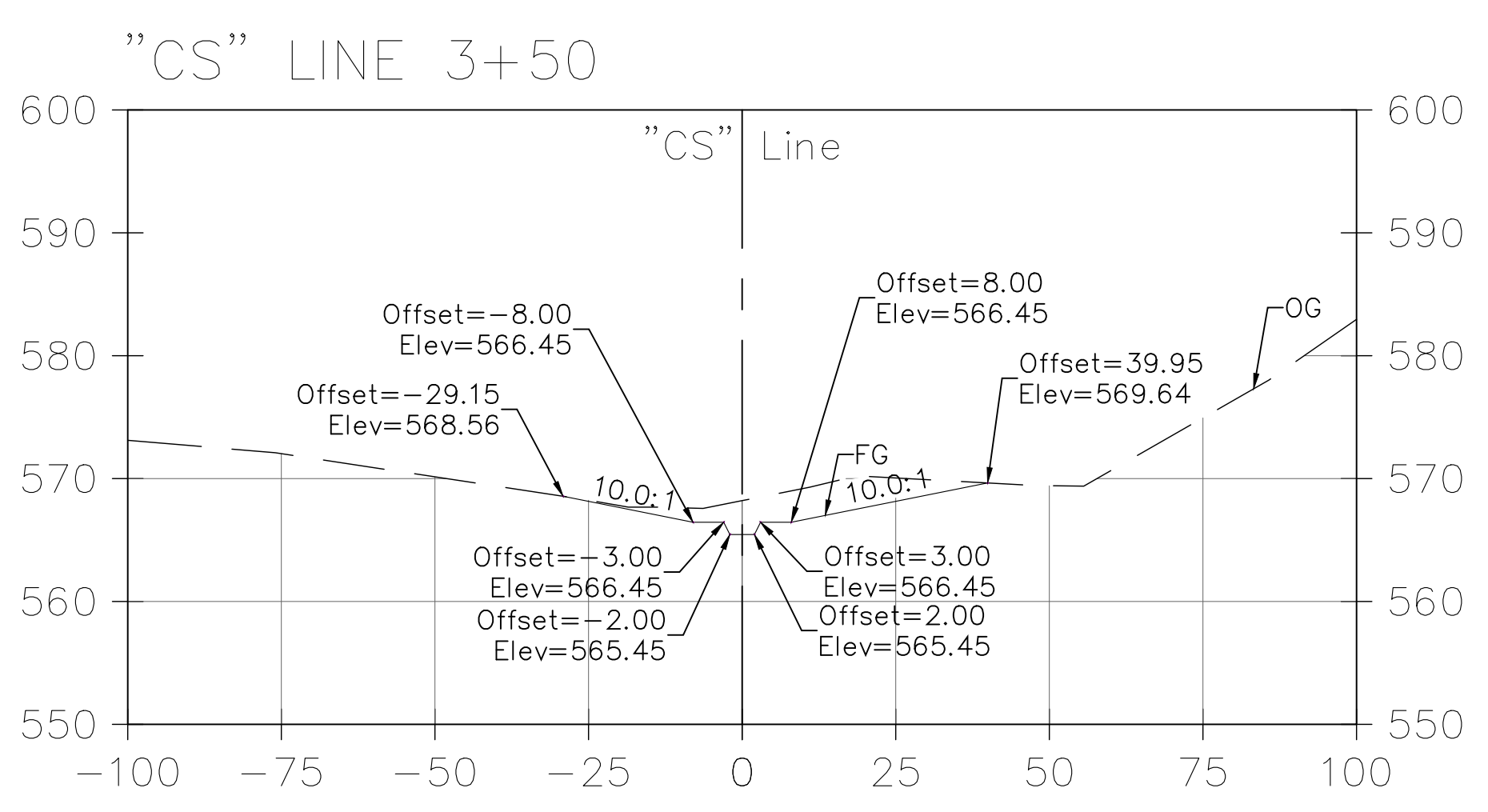
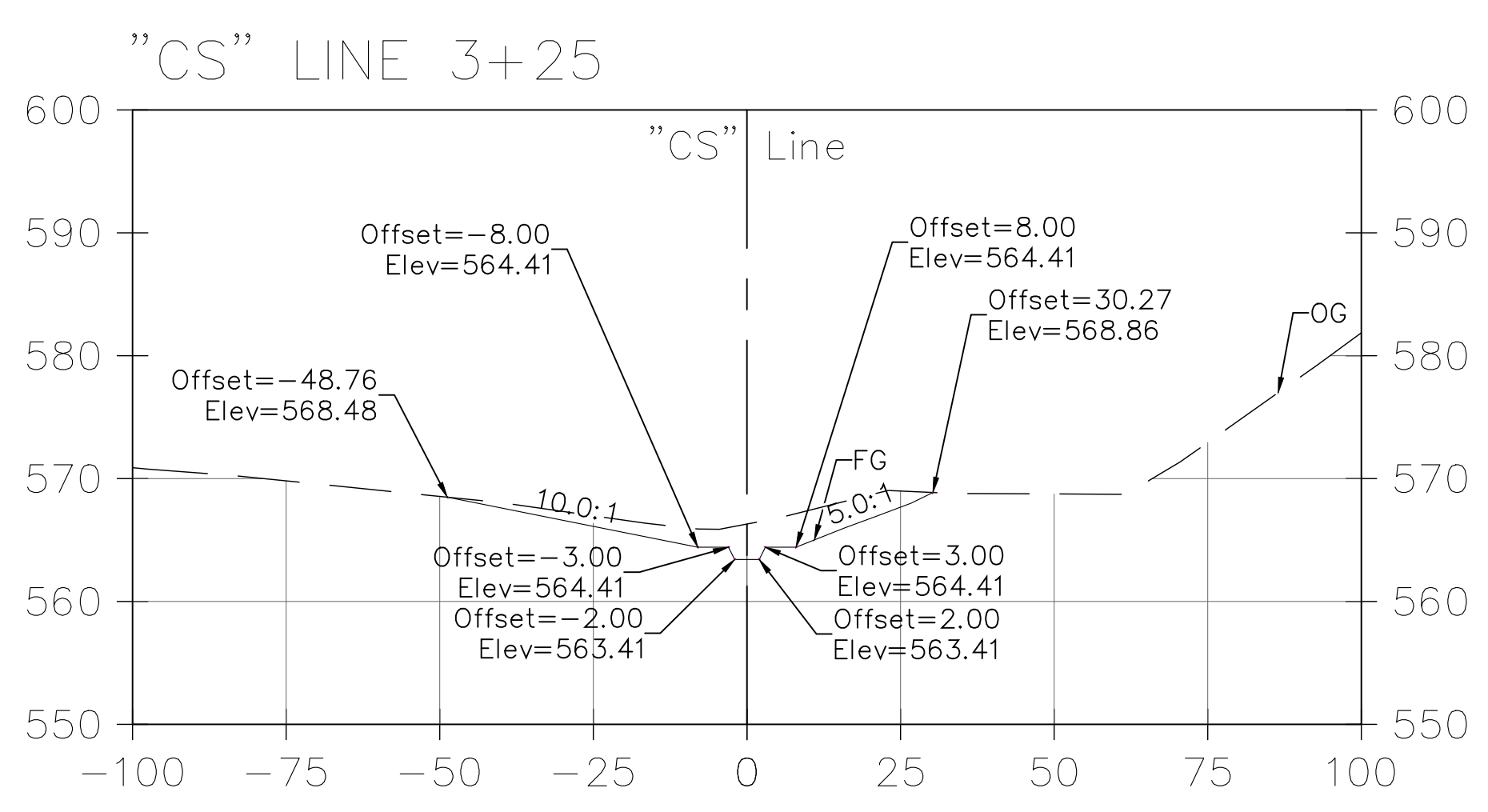
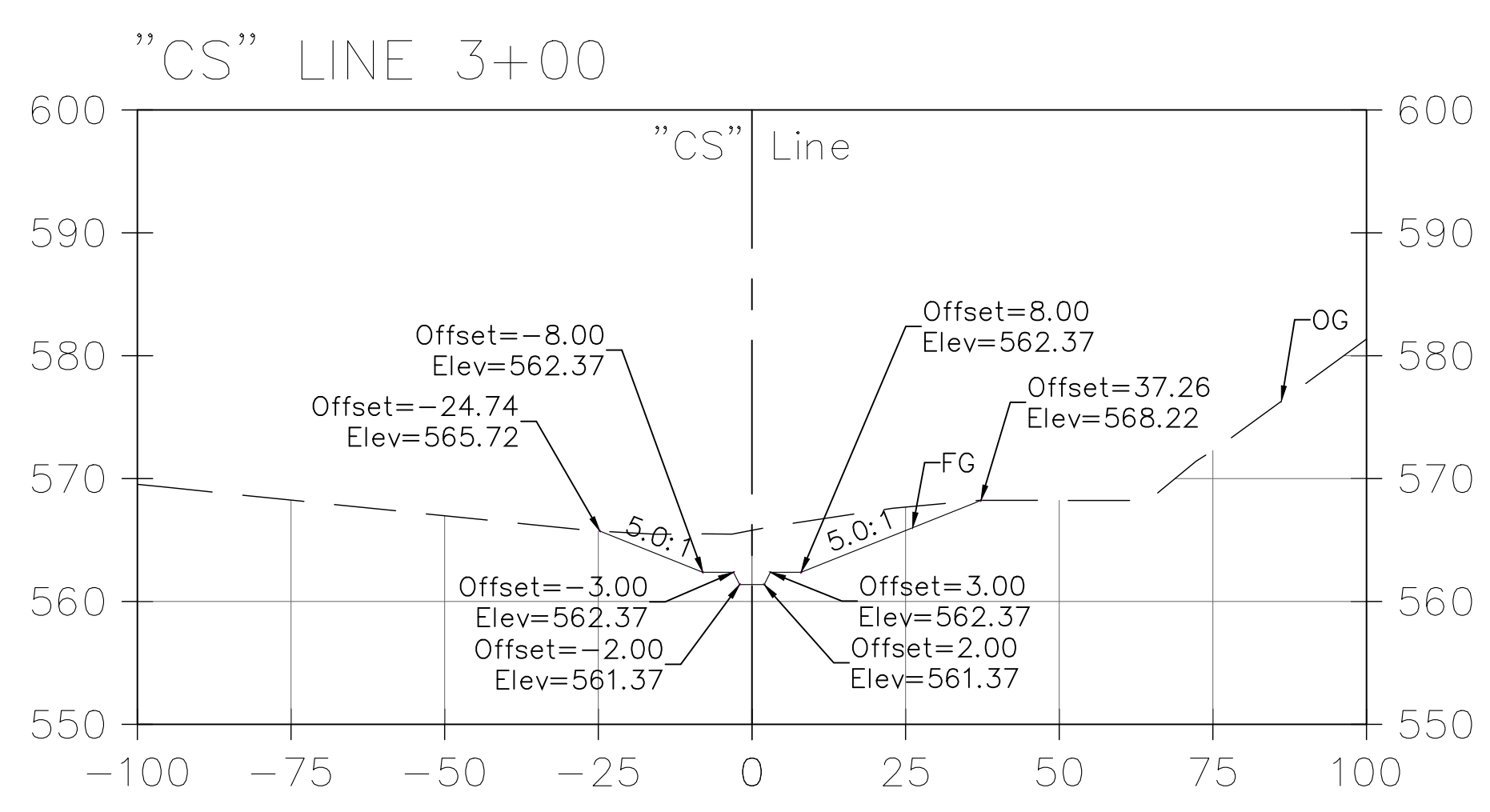
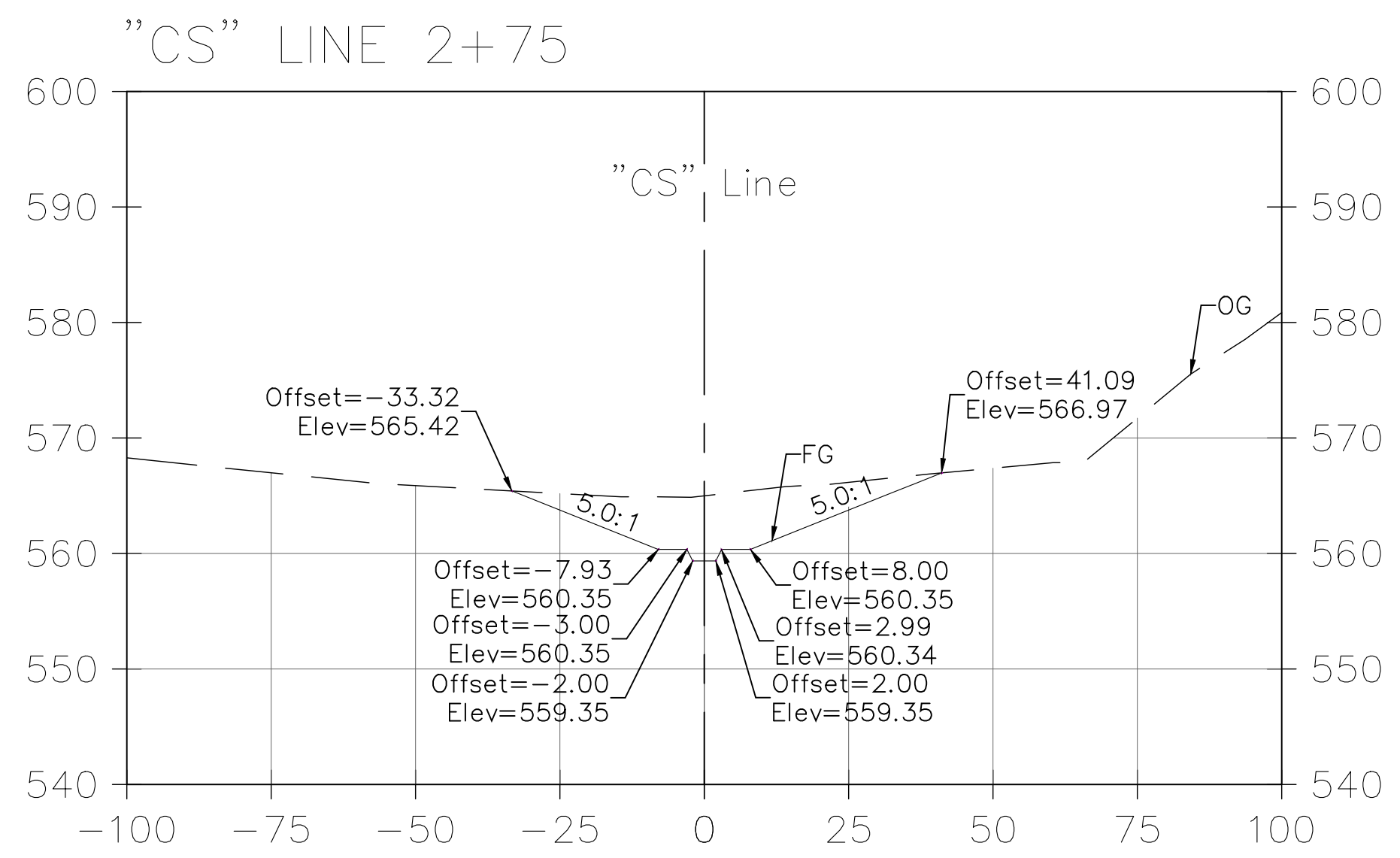
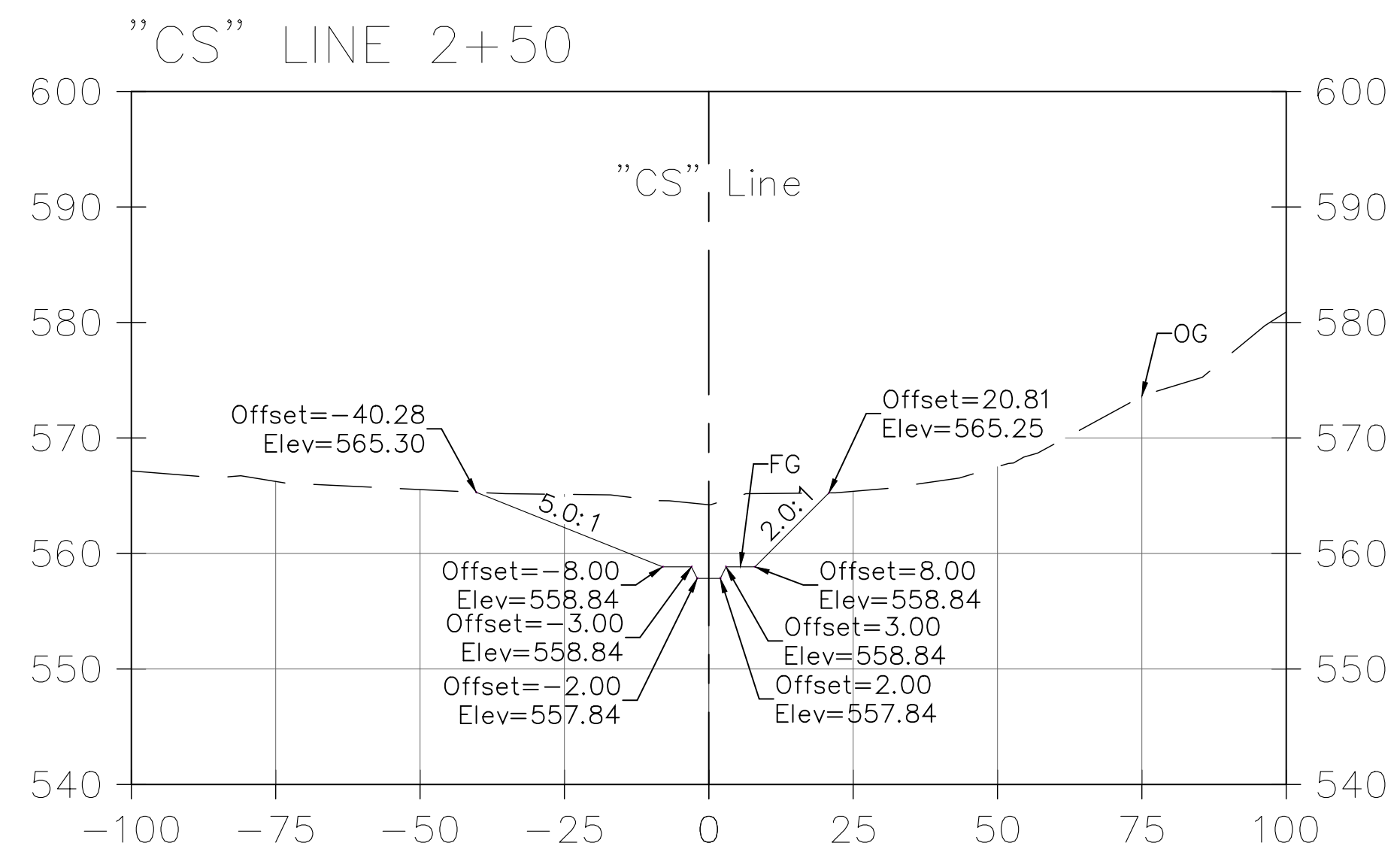
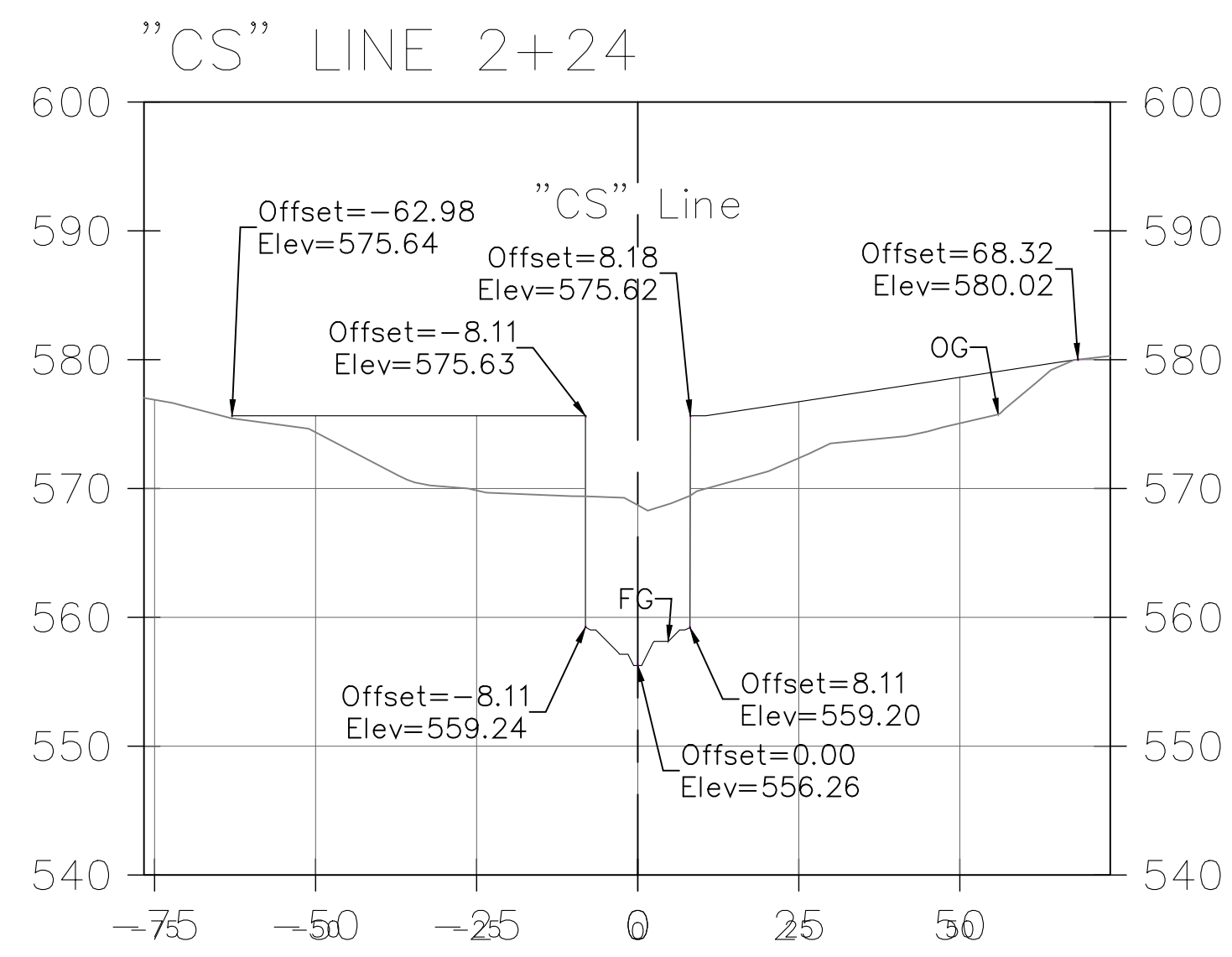
SECTIONS 1

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SHEET 12 OF 26

Filename: Cold Springs DB Plans.DWG



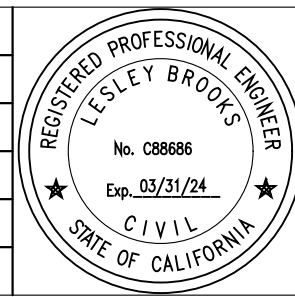
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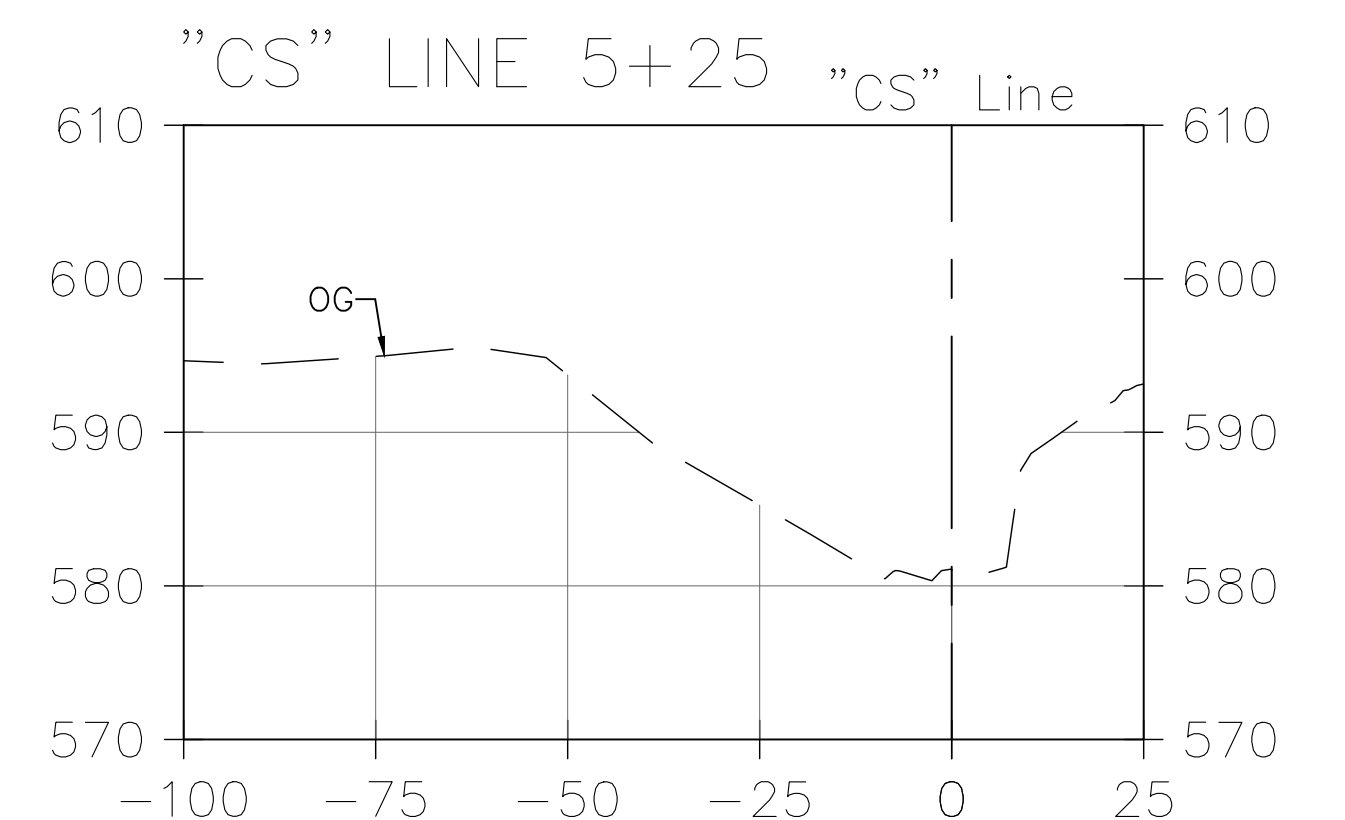
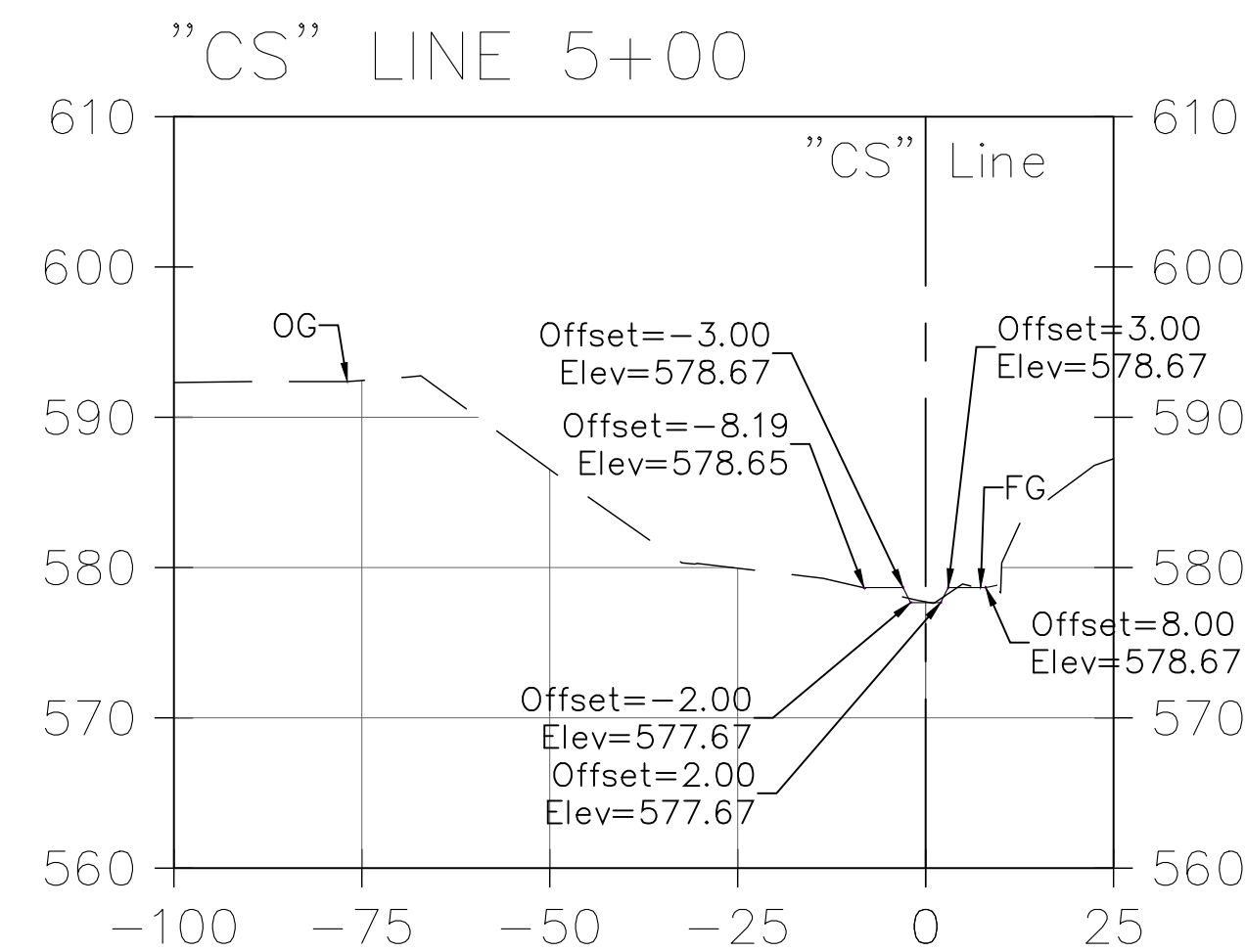
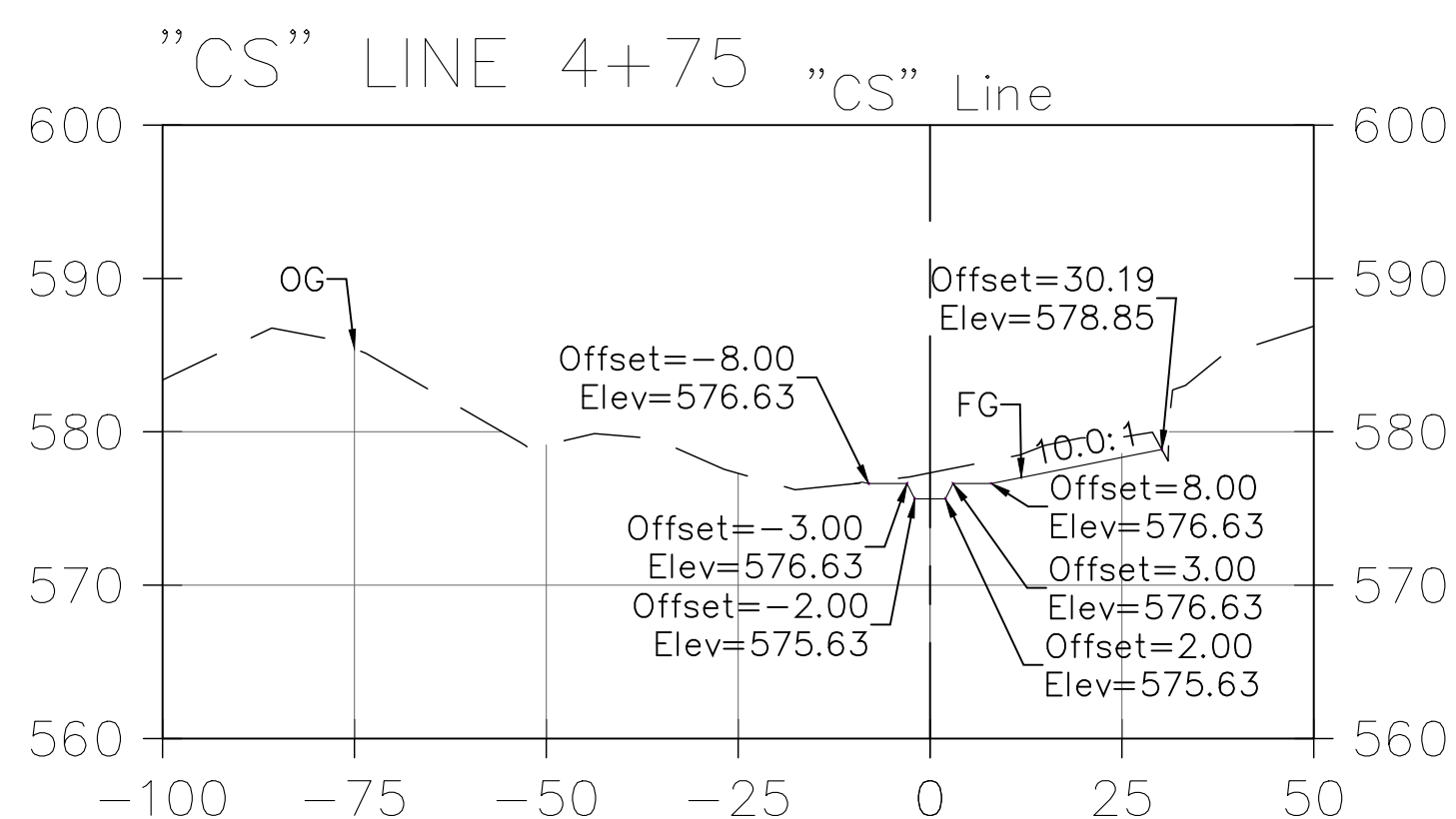
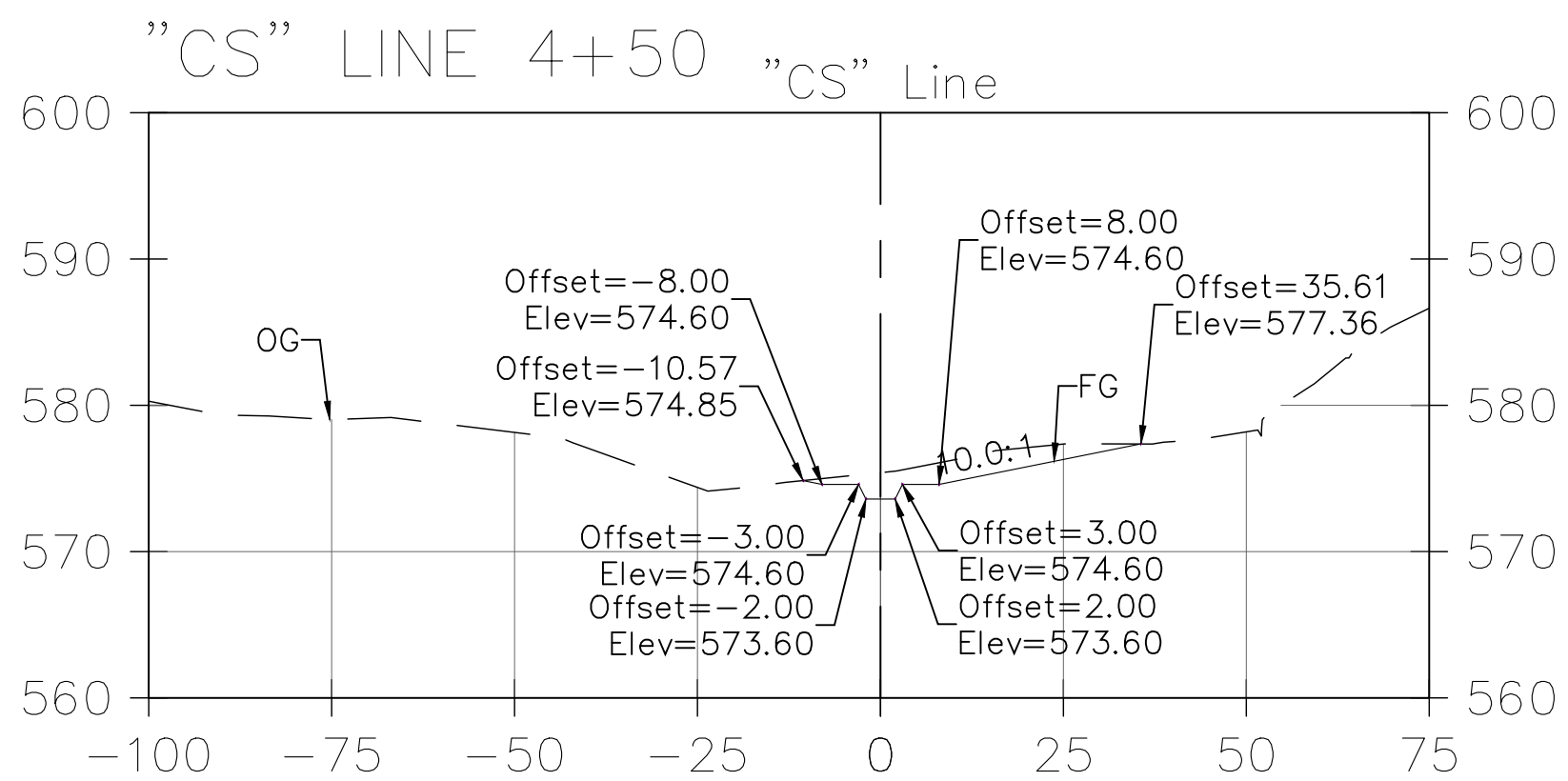
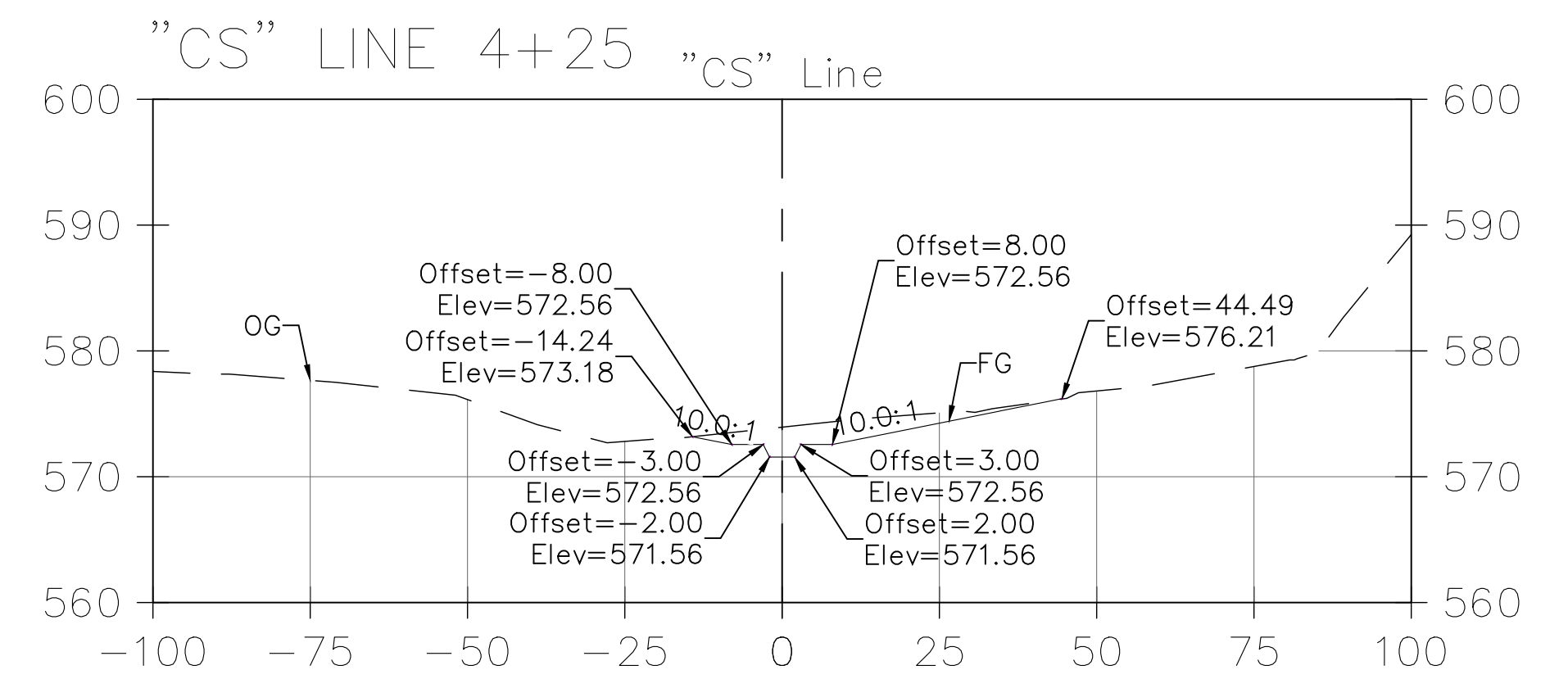
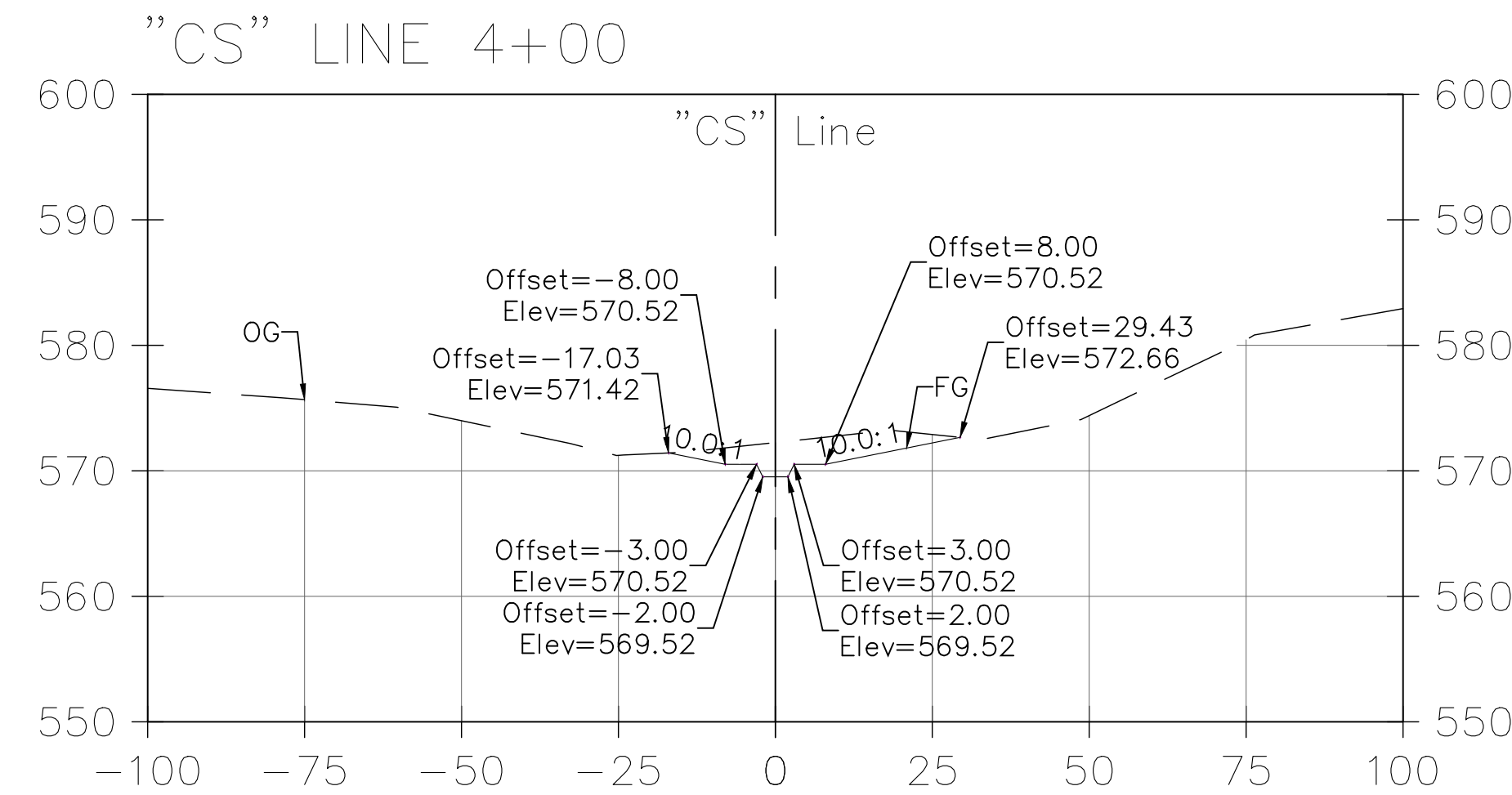
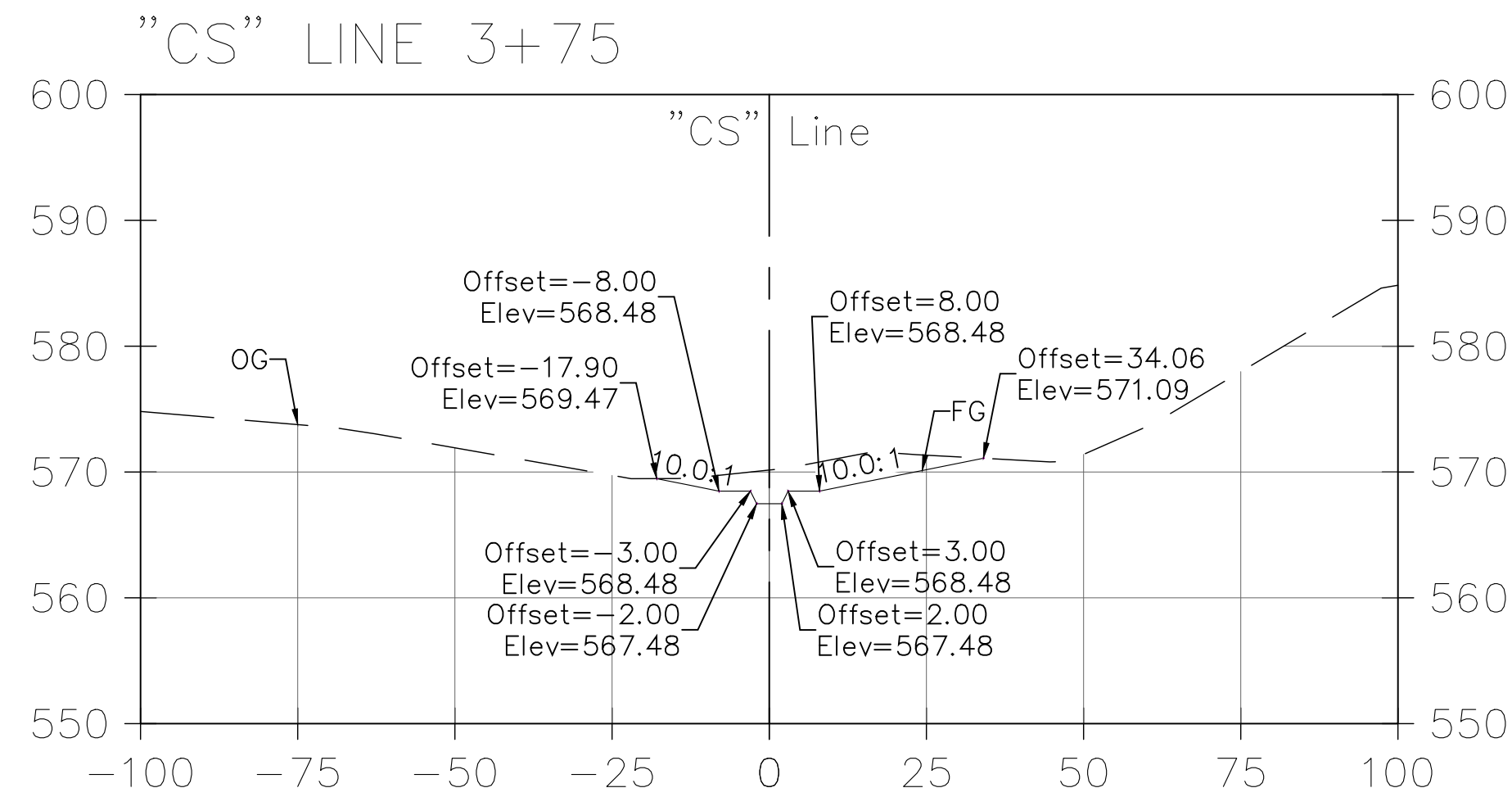
SECTIONS 2

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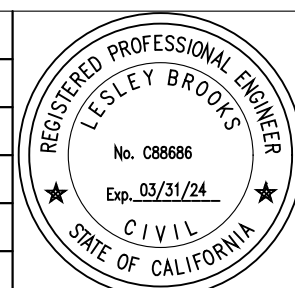
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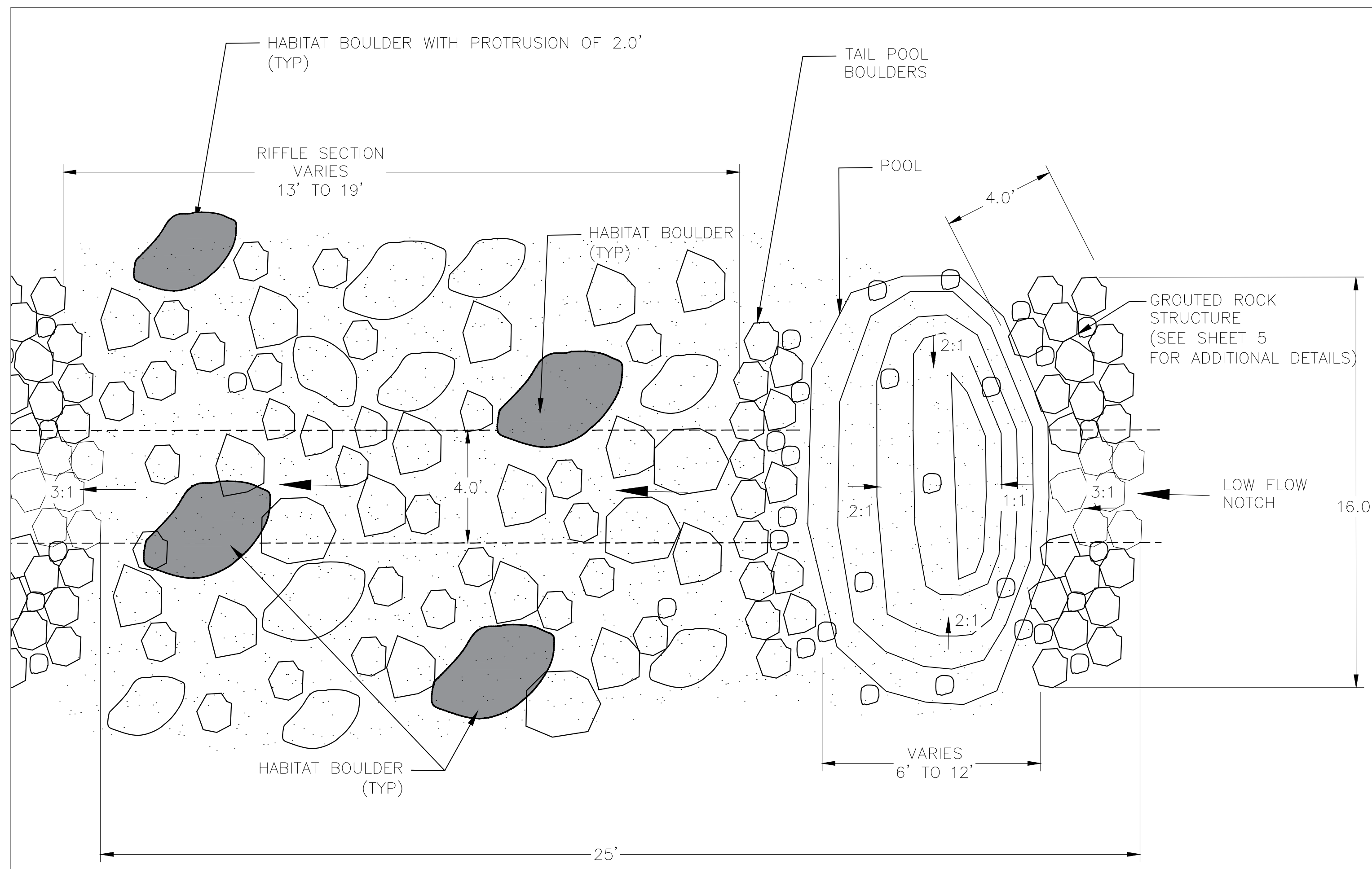
SECTIONS 3

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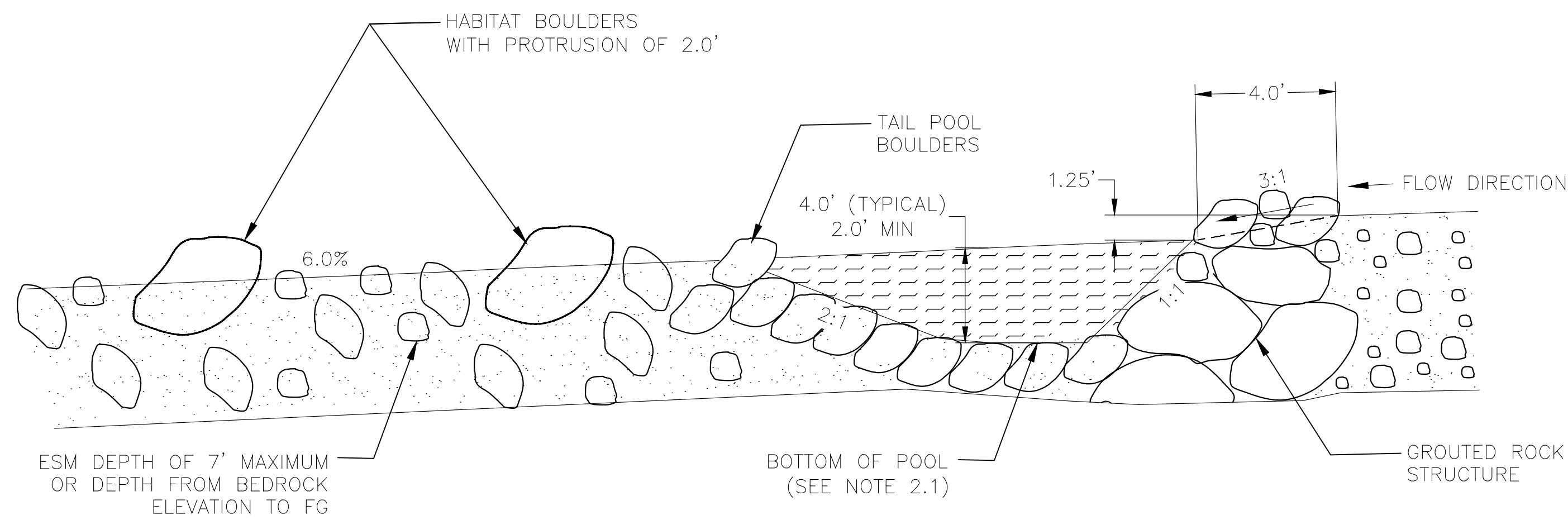
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SHEET 14 OF 26

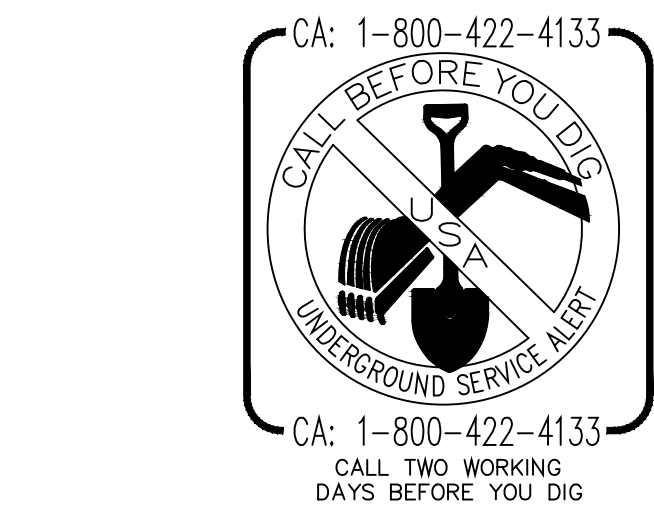
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A
15
TYPICAL POOL AND GROUDED ROCK STRUCTURE (PLAN)
SCALE: NO SCALE



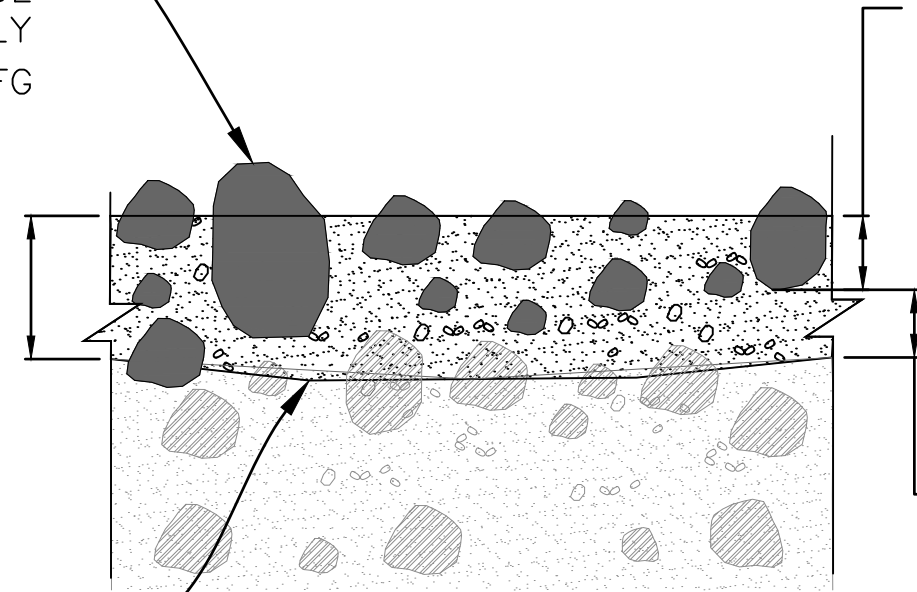
B
15
TYPICAL POOL AND GROUDED ROCK STRUCTURE (PROFILE)
SCALE: NO SCALE



INCORPORATE STRUCTURAL ROCKS AS NECESSARY INTO LIFTS SUCH THAT THEY PROTRUDE APPROXIMATELY 1/3 TO 1/2 OF ROCK DIAMETER ABOVE FG

EXCAVATE AS NECESSARY TO PLACE ROCK AS SHOWN IN PLANS. RE-USE AS MUCH ROCK AS PRACTICABLE. 7' MAXIMUM DEPTH OR TO DEPTH OF BEDROCK

APPROXIMATE BEDROCK OR BOTTOM OF 7 FT EMBEDMENT DEPTH



1 FOOT LIFT WITH D84 MATERIAL AND LARGER PLACED AS FIELD DIRECTED. FILL VOIDS WITH REMAINING MATERIAL. TAMP TO FILL VOIDS. SEAL TOP WITH FINES SO WATER REMAINS FLOWING ON THE SURFACE. IF BEDROCK DEPTH PROHIBITS EMBEDMENT THEN D84 MATERIAL AND LARGER TO BE TRENCHED AND GROUDED INTO BEDROCK PER D-15 DETAIL.

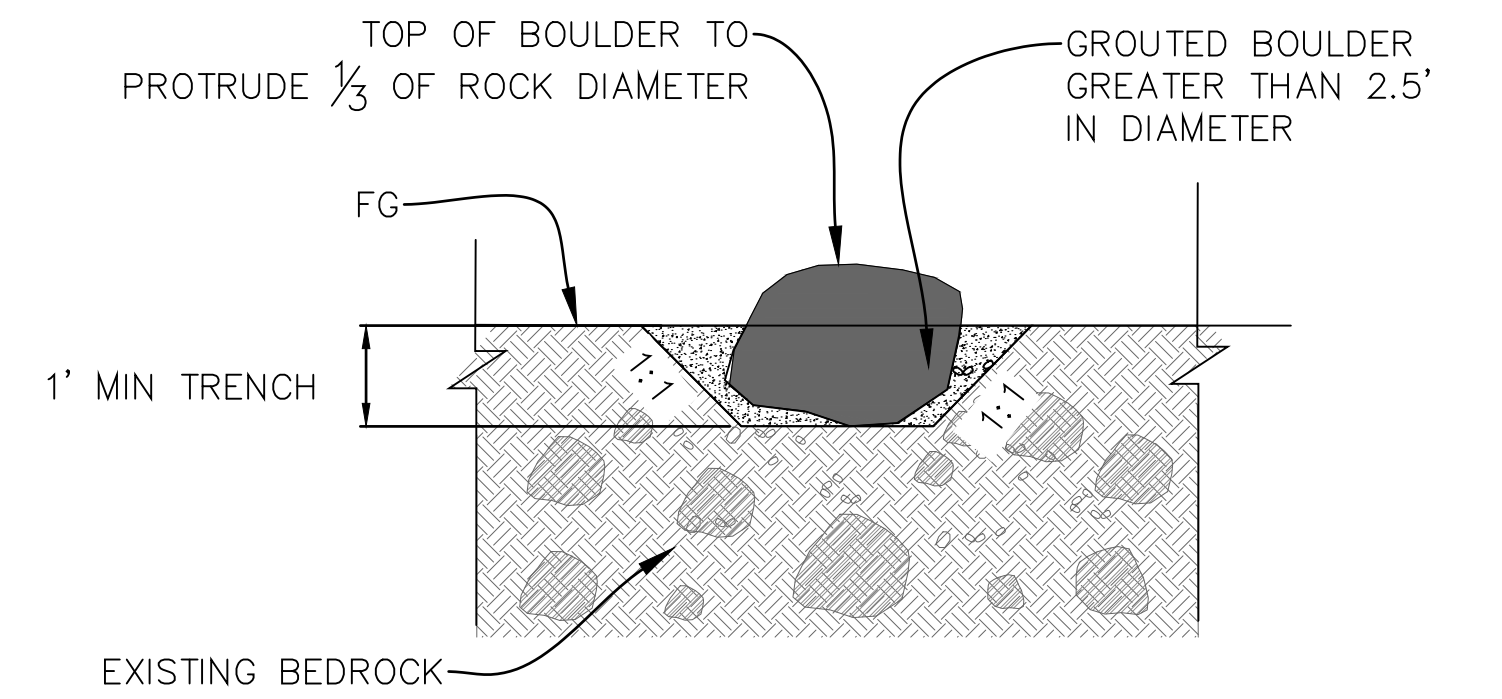
LIFT WITH D84 (SEE ROCK SIZING TABLE) AND LARGER MATERIAL. FILL VOIDS WITH REMAINING MATERIAL. TAMP TO FILL VOIDS. SEAL TOP WITH FINES SO WATER REMAINS FLOWING ON THE SURFACE.

C
15
TYPICAL ESM LIFT PLACEMENT DETAIL
SCALE: NO SCALE

UNAUTHORIZED CHANGES OR USES: THE SANTA BARBARA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT AND ITS EMPLOYEES WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL PROPOSED CHANGES TO THE PLANS MUST BE PRESENTED IN WRITING TO THE DISTRICT AND APPROVED IN WRITING BY THE DISTRICT PRIOR TO IMPLEMENTATION OF ANY SUCH CHANGE OR USE.

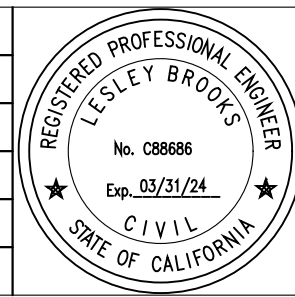
ROCK SIZING		
ENGINEERED STREAMBED MATERIAL (ESM) (INCLUDES HABITAT BOULDERS AND TAIL POOL BOULDERS)		
ROCK DIAMETER CLASSIFICATION	B-AXIS SIZE RANGE	%
D100	>5.9 FT	16
D84	2.4-5.9 FT	34
D50	1.0-2.4 FT	34
D16	0.084-12 IN	11
	< 0.084 IN (NO.8 SEIVE)	5

VOLUME PERCENT OF MIX



D
15
TYPICAL TRENCHED & GROUDED BOULDER DETAIL
SCALE: NO SCALE
(FOR USE WHERE BEDROCK DEPTH PROHIBITS EMBEDMENT OF LARGE ESM MATERIAL)

REVISIONS			
NO.	DESCRIPTION	DATE	APR



DESIGNED BY: *Leslie Brooks* 11/03/2023
WRECO DATE

SANTA BARBARA COUNTY
FLOOD CONTROL AND
WATER CONSERVATION DISTRICT
130 E. VICTORIA STREET
SANTA BARBARA, CA 93101
(805) 568-3440

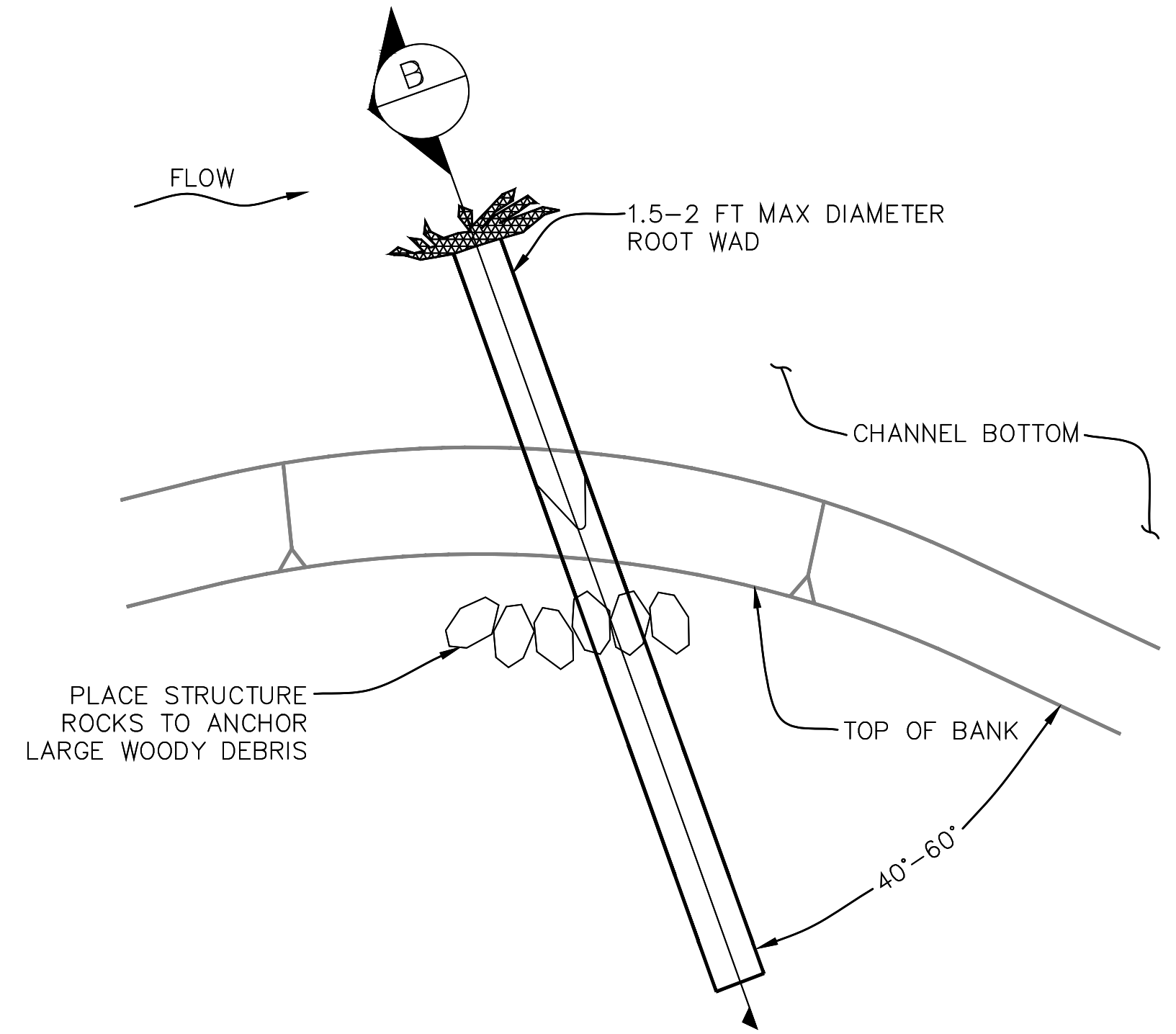


COLD SPRINGS DEBRIS
BASIN IMPROVEMENTS PROJECT
AREA OF MONTECITO
SANTA BARBARA COUNTY, CALIFORNIA

POOL, RIFFLE, AND
ESM DETAIL

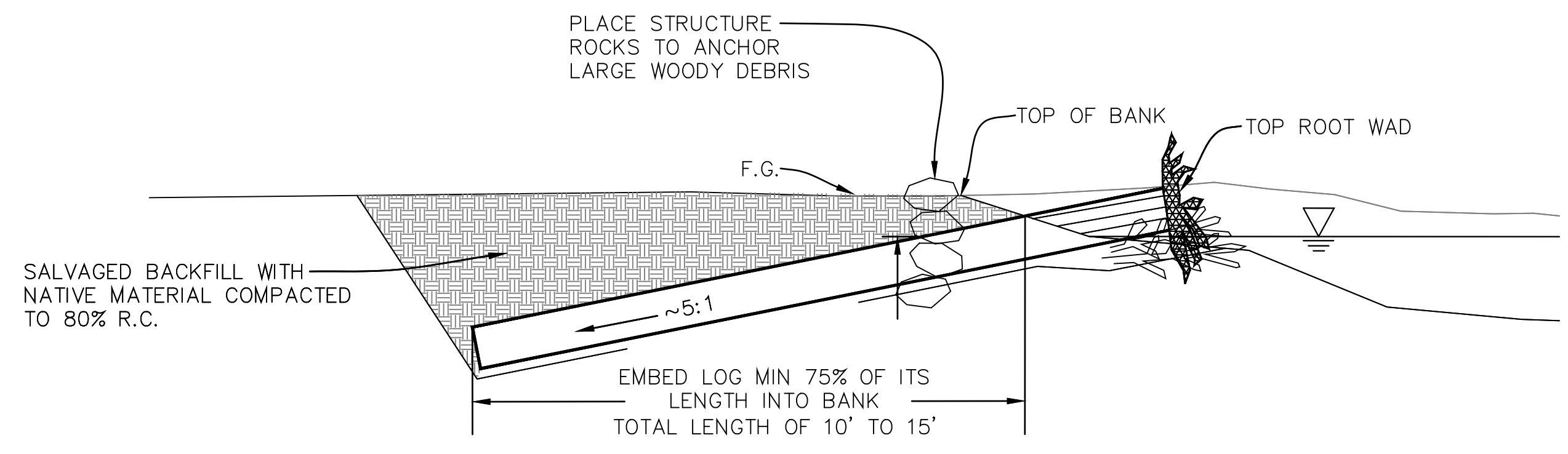
DESIGNED BY: LB
DRAWN BY: MD
CHECKED BY: HBL

O-1156
SHEET 15 OF 26
Filename: Cold Springs DB Plans.DWG



A PLAN VIEW-LARGE WOODY DEBRIS
16 NOT TO SCALE

- NOTES:
1. LARGE WOODY DEBRIS TREES TO BE PROVIDED BY AND CONVEYED TO THE PROJECT SITE BY THE COUNTY
 2. LARGE WOODY DEBRIS FINAL PLACEMENT AND LOCATION TO BE FIELD DIRECTED BY COUNTY ENGINEER.
 3. STRUCTURE ROCKS TO BE GREATER THAN 2.5 FT IN DIAMETER SHALL BE SELECTED AND PLACED AS DIRECTED BY THE FIELD ENGINEER.



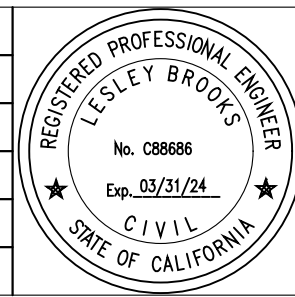
B SECTION VIEW-LARGE WOODY DEBRIS
16 NOT TO SCALE

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REVISIONS			
NO.	DESCRIPTION	DATE	APR



DESIGNED BY: *Lesley Brooks* 11/03/2023
WRECO DATE

SANTA BARBARA COUNTY
FLOOD CONTROL AND
WATER CONSERVATION DISTRICT
130 E. VICTORIA STREET
SANTA BARBARA, CA 93101
(805) 568-3440



COLD SPRINGS DEBRIS
BASIN IMPROVEMENT PROJECT
AREA OF MONTECITO
SANTA BARBARA COUNTY, CALIFORNIA

DETAILS

DESIGNED BY: LB
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SHEET 16 OF 26

Filename: Cold Springs DB Plans.DWG



LEGEND



Species	Number Planted
Toyon	10
Sycamore	15
Mulefat	15
alder	12
Lemonadeberry	10
Laurel sumac	18
Arroyo willow	15
Cyn sunflower	10
Elderberry	10
Mugwort	10
black sage	15
Calif Sagebrush	10
TOTAL PLANTS	150

GENERAL NOTES

- PLANTS ARE BEING GROWN AT SANTA BARBARA NATIVES NURSERY UNDER SEPARATE CONTRACT.
- REVEGETATION CONTRACTOR WILL ARRANGE FOR PICKUP AND DELIVERY OF PLANTS FROM THE NURSERY TO THE JOB SITE.
 SANTA BARBARA NATIVES Inc.
 14900 CALLE REAL
 GAVIOTA, CALIFORNIA 93117
 EMAIL: JEFF@SEBNATIVES.COM
 JEFF NIGHMAN: (805) 698-4994
 JOHN WARNER: (805) 729-3855
- PLANT INSTALLATION SHOULD OCCUR BETWEEN OCTOBER 15TH AND DECEMBER 1ST.
- PLANTING AREA ENCOMPASSES 4600 SQUARE FEET. (SEE FIGURE).
- ALL PLANTS WILL BE 1-GALLON CONTAINERS EXCEPT SYCAMORE AND ALDERS (MAY BE LARGER 5 TO 15-GALLON CONTAINERS).
- INSTALL PLANTS IN A MIXED DISTRIBUTION PER FIELD DIRECTION BY DISTRICT STAFF.
- DIG PLANTING PIT TWICE AS WIDE AND DEEP ENOUGH SO THAT THE TOP OF THE SOIL WITHIN CONTAINER IS LEVEL WITH TOP OF PIT AND PROVIDE SOIL AMENDMENT TO EACH PLANTING PIT.
- BACKFILL EACH PLANTING PIT AND FORM A MOUND OF SOIL AROUND EACH PLANT TO FORM A WATERING BASIN.
- PROVIDE INITIAL WATERING AFTER INSTALL, ENOUGH TO DELIVER 5-GALLONS OF WATER TO EACH PLANT WITHIN 24 HOURS OF PLANT INSTALLATION.
- REMOVE WEEDS FROM EACH PLANTING BASIN.
- MULCH EACH PLANTING BASIN TO A DEPTH OF 3-INCHES.
- PLANTS TO BE WATERED ONCE PER WEEK UNTIL FINAL JOB COMPLETION SIGN OFF IS OBTAINED.
- WATER IS NOT AVAILABLE ONSITE; CONTRACTOR TO DELIVER WATER TO THE SITE VIA WATER TRUCK SOURCED BY THE CONTRACTOR.


PLAN
SCALE: 1" = 20'

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REVISIONS			
NO.	DESCRIPTION	DATE	APR

REVIEWED BY:  12/20/2023 11:49 AM PST
ENVIRONMENTAL SERVICES MANAGER DATE

SANTA BARBARA COUNTY
 FLOOD CONTROL AND
 WATER CONSERVATION DISTRICT
 130 E. VICTORIA STREET
 SANTA BARBARA, CA 93101
 (805) 568-3440

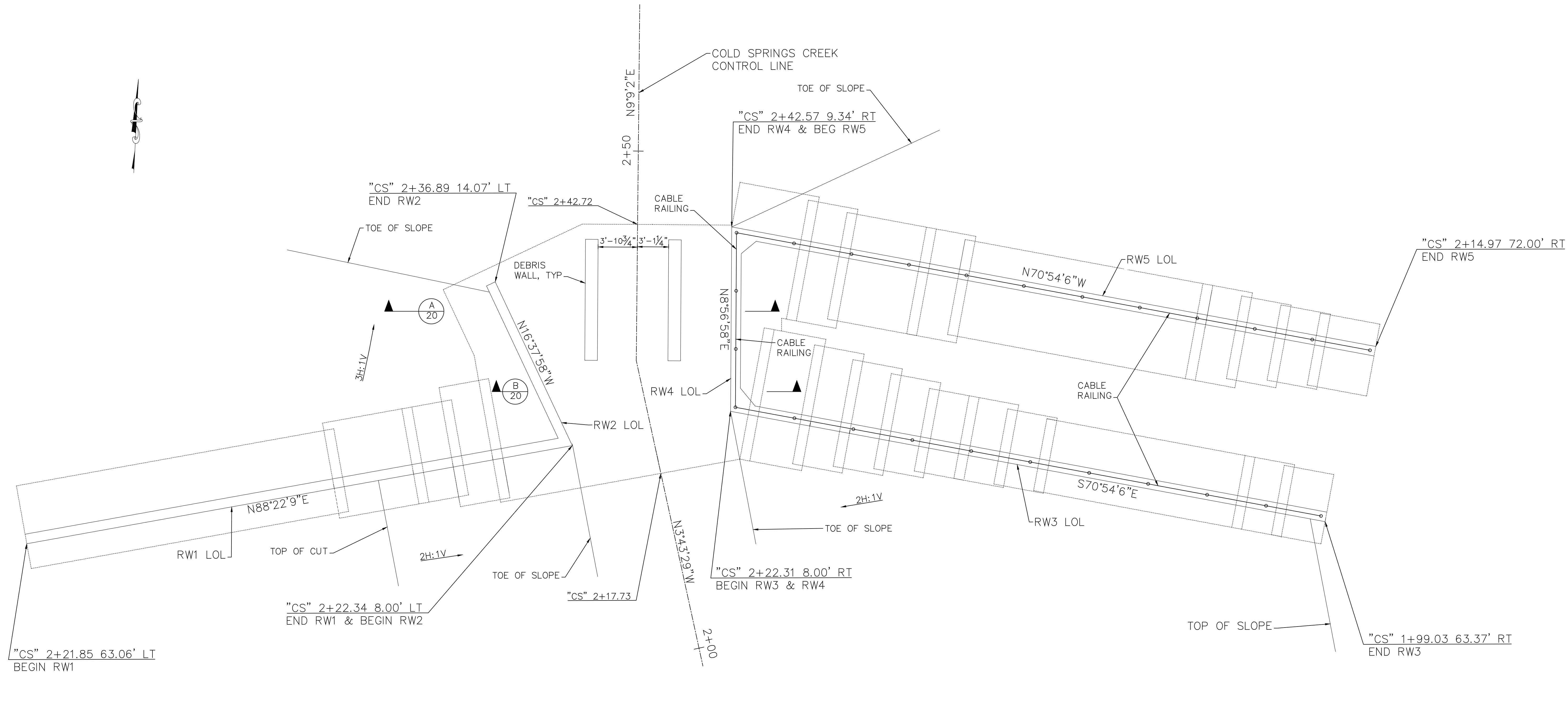


COLD SPRINGS DEBRIS
 BASIN IMPROVEMENT PROJECT
 AREA OF MONTECITO
 SANTA BARBARA COUNTY, CALIFORNIA

PLANTING PLAN

DESIGNED BY: AR
DRAWN BY: MD
CHECKED BY: AR

O-1156
 SHEET 17 OF 26
 Filename: Cold Springs DB Plans.DWG



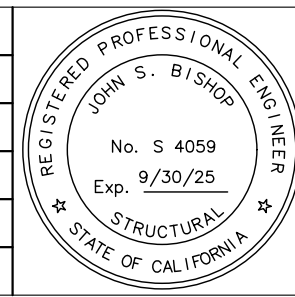
PLAN
SCALE: 1" = 5'

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REVISIONS			
NO.	DESCRIPTION	DATE	APR



DESIGNED BY: *John Bishop* 11/03/2023
BISHOP ENGINEERING DATE

SANTA BARBARA COUNTY
FLOOD CONTROL AND
WATER CONSERVATION DISTRICT
130 E. VICTORIA STREET
SANTA BARBARA, CA 93101
(805) 568-3440

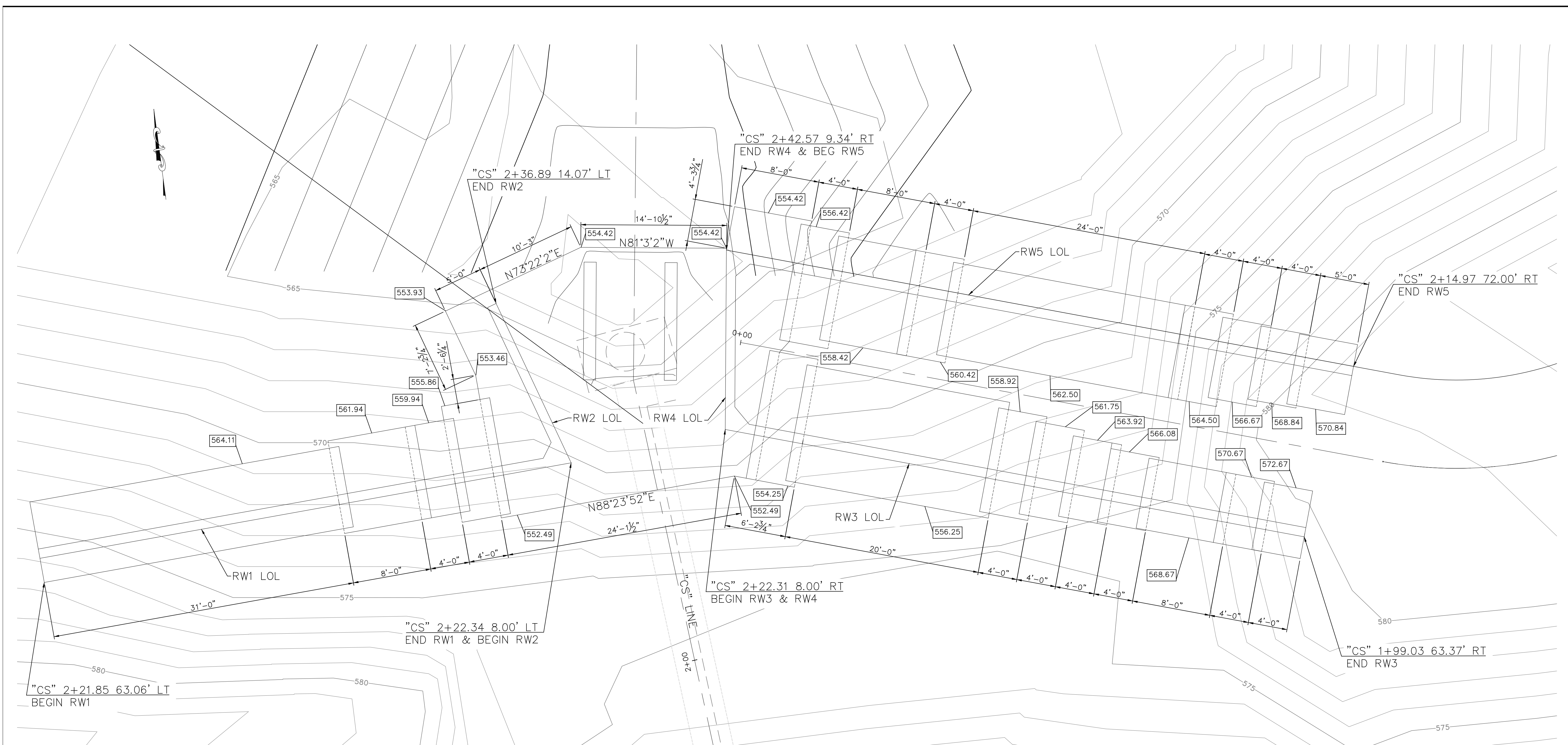


**COLD SPRINGS DEBRIS
BASIN IMPROVEMENT PROJECT**
AREA OF MONTECITO
SANTA BARBARA COUNTY, CALIFORNIA

**OUTLET
STRUCTURE PLAN**

DESIGNED BY: KB
DRAWN BY: SC
CHECKED BY: JB

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SHEET 18 OF 26
Filename: Cold Springs DB Plans.DWG



PLAN
SCALE: 1" = 5'

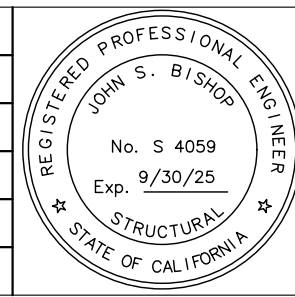
LEGEND
XXX.XX DENOTES BOTTOM OF FOOTING ELEVATION

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REVISIONS			
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DESIGNED BY: *John Bishop* 11/03/2023
BISHOP ENGINEERING DATE

SANTA BARBARA COUNTY
FLOOD CONTROL AND
WATER CONSERVATION DISTRICT
130 E. VICTORIA STREET
SANTA BARBARA, CA 93101
(805) 568-3440

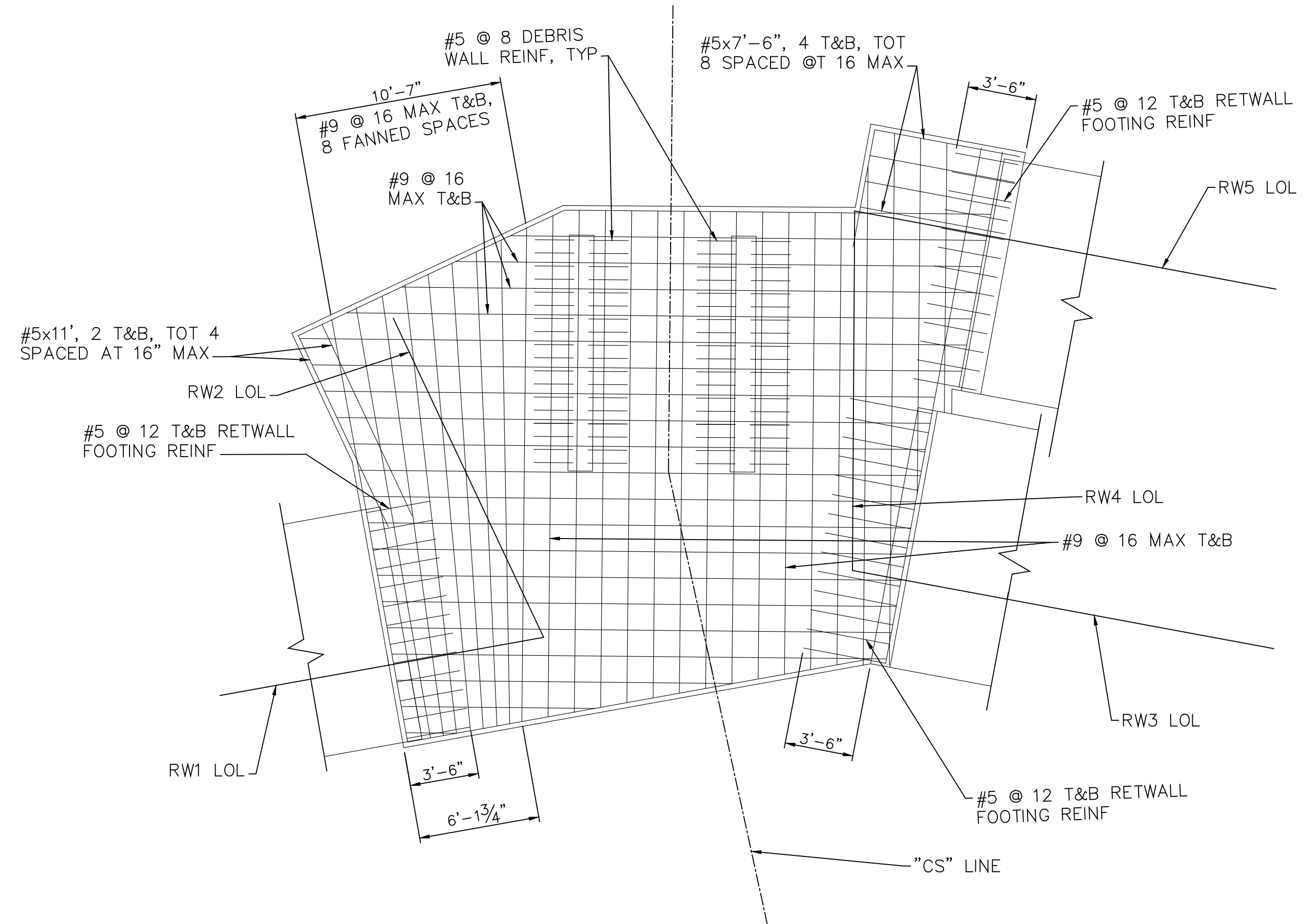


**COLD SPRINGS DEBRIS
BASIN IMPROVEMENT PROJECT**
AREA OF MONTECITO
SANTA BARBARA COUNTY, CALIFORNIA

**OUTLET STRUCTURE
FOUNDATION PLAN**

DESIGNED BY: KB
DRAWN BY: SC
CHECKED BY: JB

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SHEET 19 OF 26
Filename: Cold Springs DB Plans.DWG



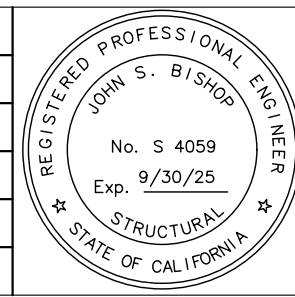
PLAN
SCALE: 1" = 5'

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REVISIONS			
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DESIGNED BY: <i>John Bishop</i>	11/03/2023
BISHOP ENGINEERING	DATE

SANTA BARBARA COUNTY
FLOOD CONTROL AND
WATER CONSERVATION DISTRICT
130 E. VICTORIA STREET
SANTA BARBARA, CA 93101
(805) 568-3440

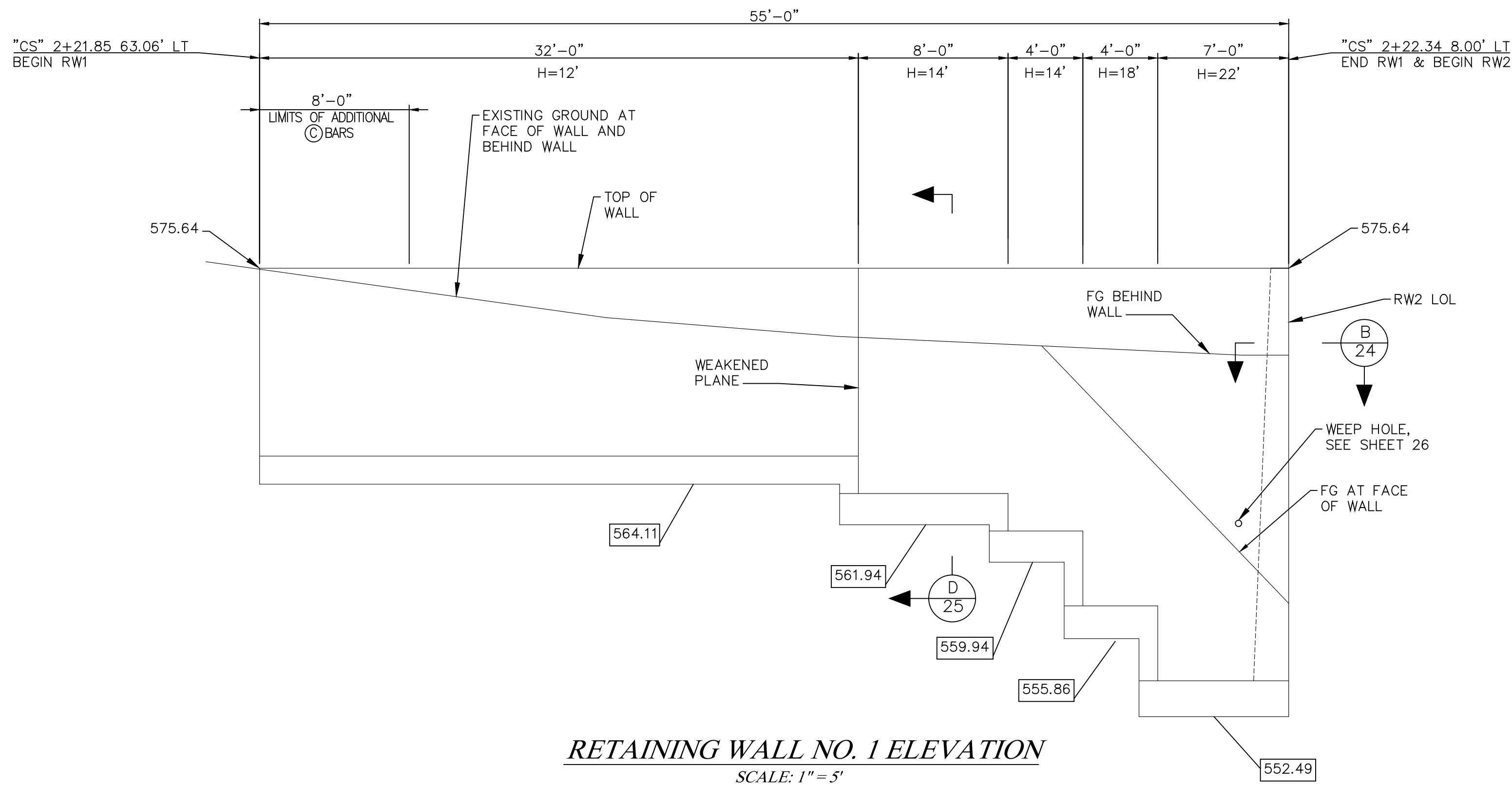


COLD SPRINGS DEBRIS
BASIN IMPROVEMENT PROJECT
AREA OF MONTECITO
SANTA BARBARA COUNTY, CALIFORNIA

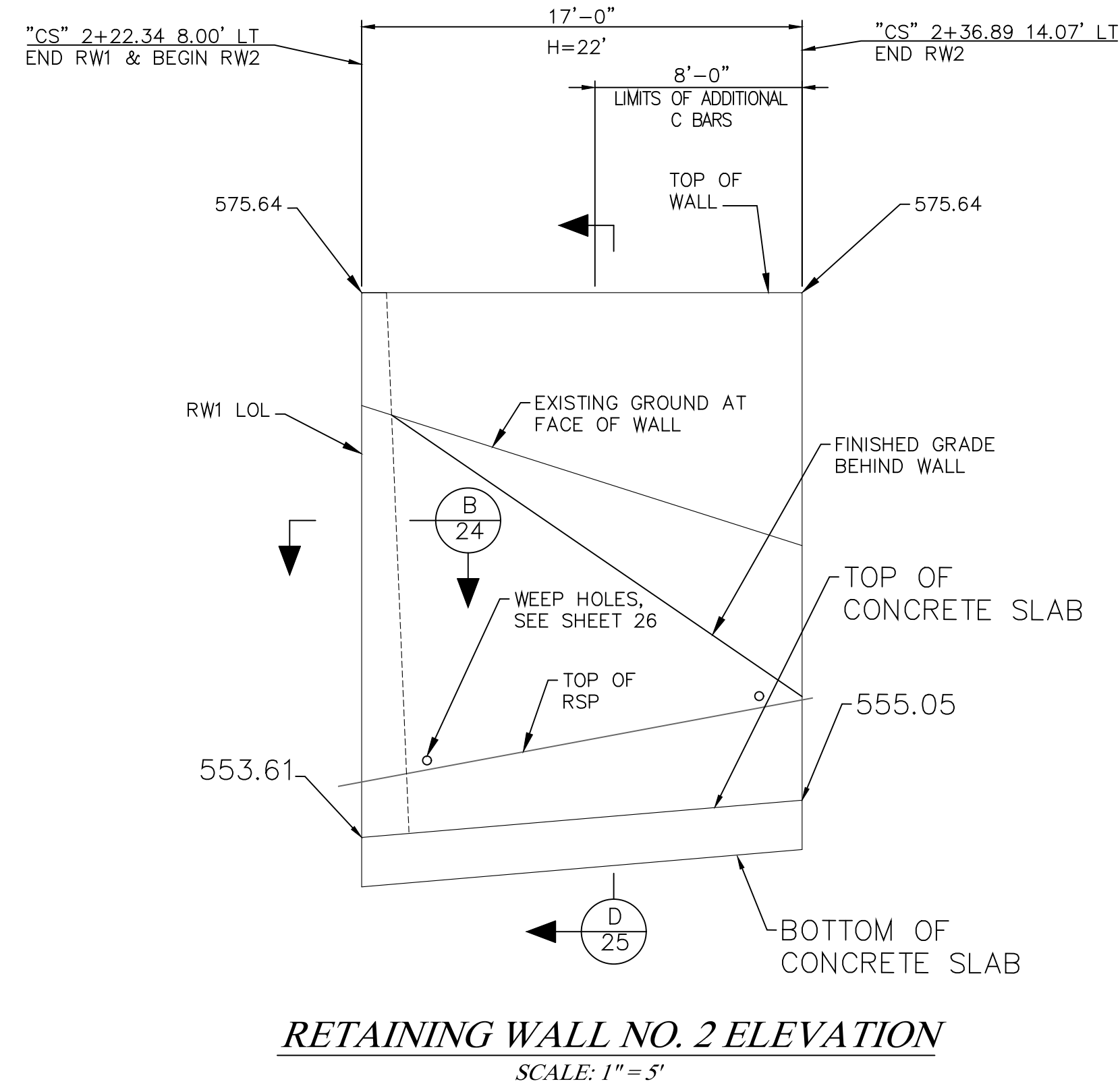
SLAB REINFORCING PLAN

DESIGNED BY:	JB
DRAWN BY:	JB
CHECKED BY:	JB

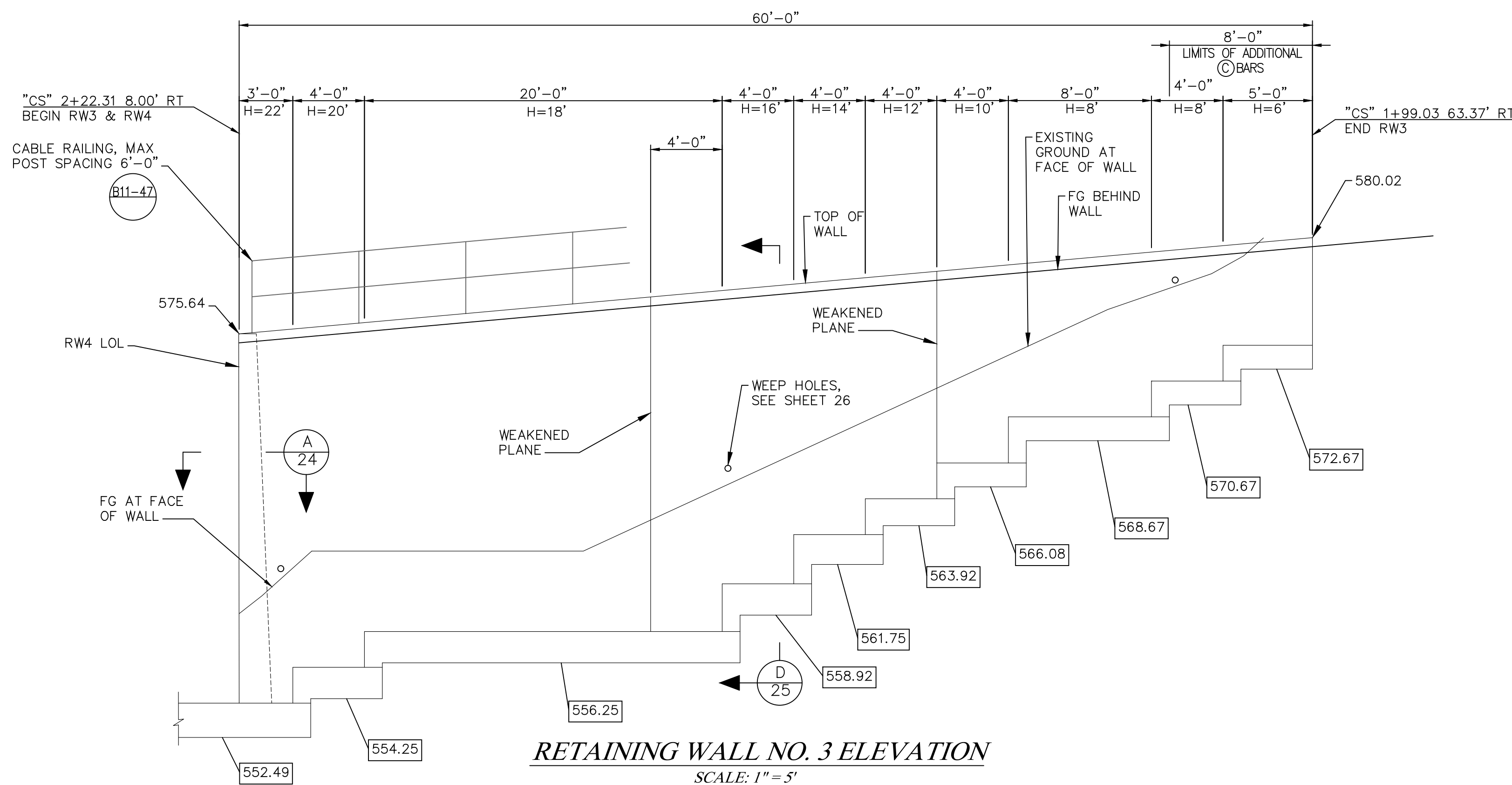
O-1156
SHEET 20 OF 26
Filename: Cold Springs DB Plans.DWG



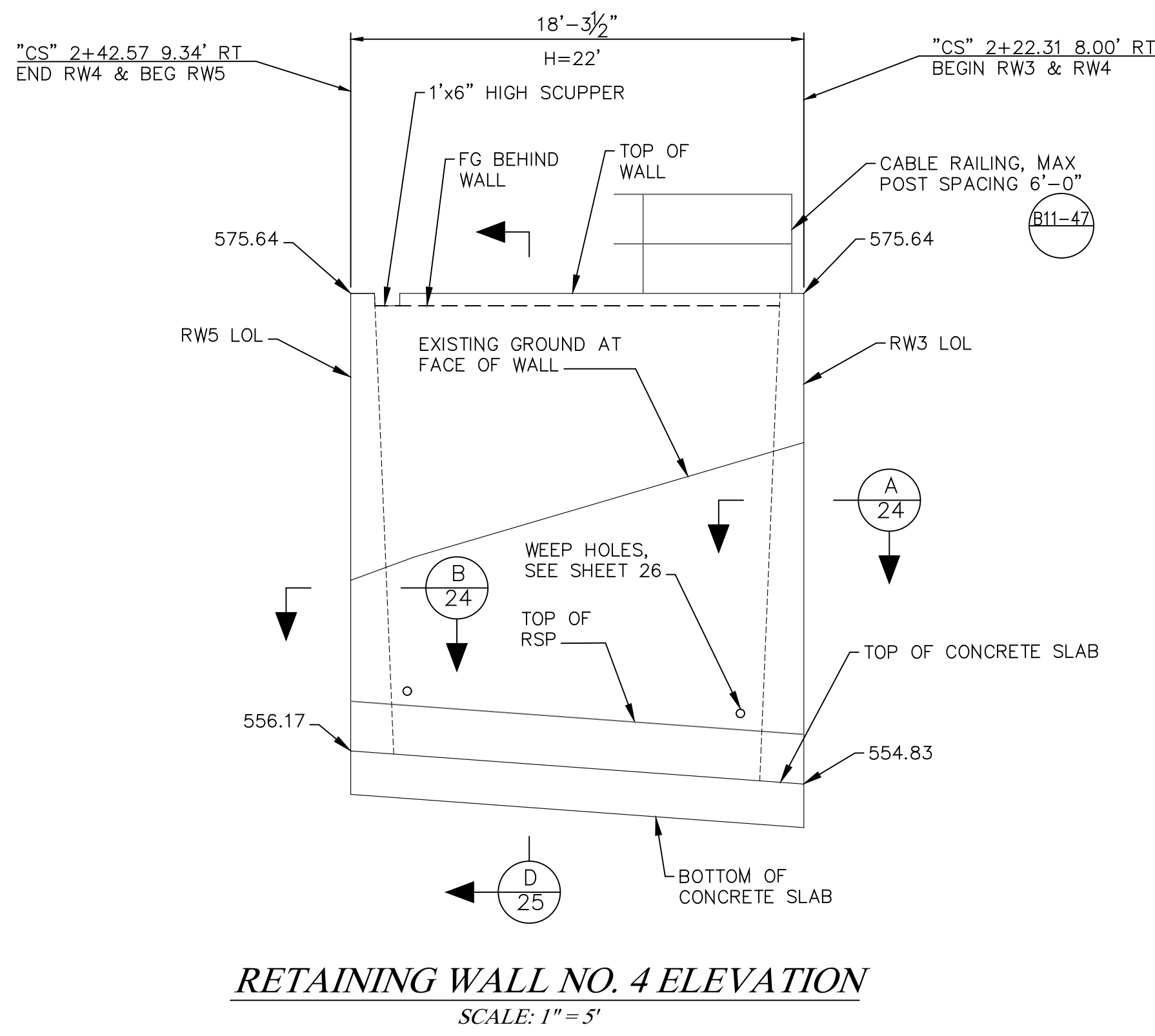
RETAINING WALL NO. 1 ELEVATION
SCALE: 1" = 5'



RETAINING WALL NO. 2 ELEVATION
SCALE: 1" = 5'



RETAINING WALL NO. 3 ELEVATION
SCALE: 1" = 5'



RETAINING WALL NO. 4 ELEVATION
SCALE: 1" = 5'

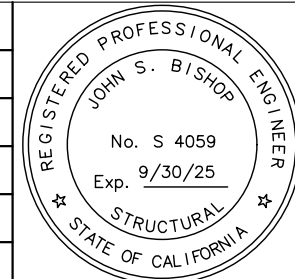
LEGEND
XXX.XX DENOTES BOTTOM OF FOOTING ELEVATION

- NOTES:**
- FOR WEAKENED PLANE DETAIL, SEE RETAINING WALL DETAILS NO. 2 SHEET.
 - SEE NOTE 2 IN "TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA" ON PAGE 25 FOR ADDITIONAL C BAR INFORMATION.

UNAUTHORIZED CHANGES OR USES: THE SANTA BARBARA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT AND ITS EMPLOYEES WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL PROPOSED CHANGES TO THE PLANS MUST BE PRESENTED IN WRITING TO THE DISTRICT AND APPROVED IN WRITING BY THE DISTRICT PRIOR TO IMPLEMENTATION OF ANY SUCH CHANGE OR USE.

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REVISIONS			
NO.	DESCRIPTION	DATE	APR



DESIGNED BY: *John Bishop* 11/03/2023
BISHOP ENGINEERING DATE

SANTA BARBARA COUNTY
FLOOD CONTROL AND
WATER CONSERVATION DISTRICT
130 E. VICTORIA STREET
SANTA BARBARA, CA 93101
(805) 568-3440



COLD SPRINGS DEBRIS
BASIN IMPROVEMENT PROJECT
AREA OF MONTECITO
SANTA BARBARA COUNTY, CALIFORNIA

**OUTLET STRUCTURE
ELEVATIONS NO. 1**

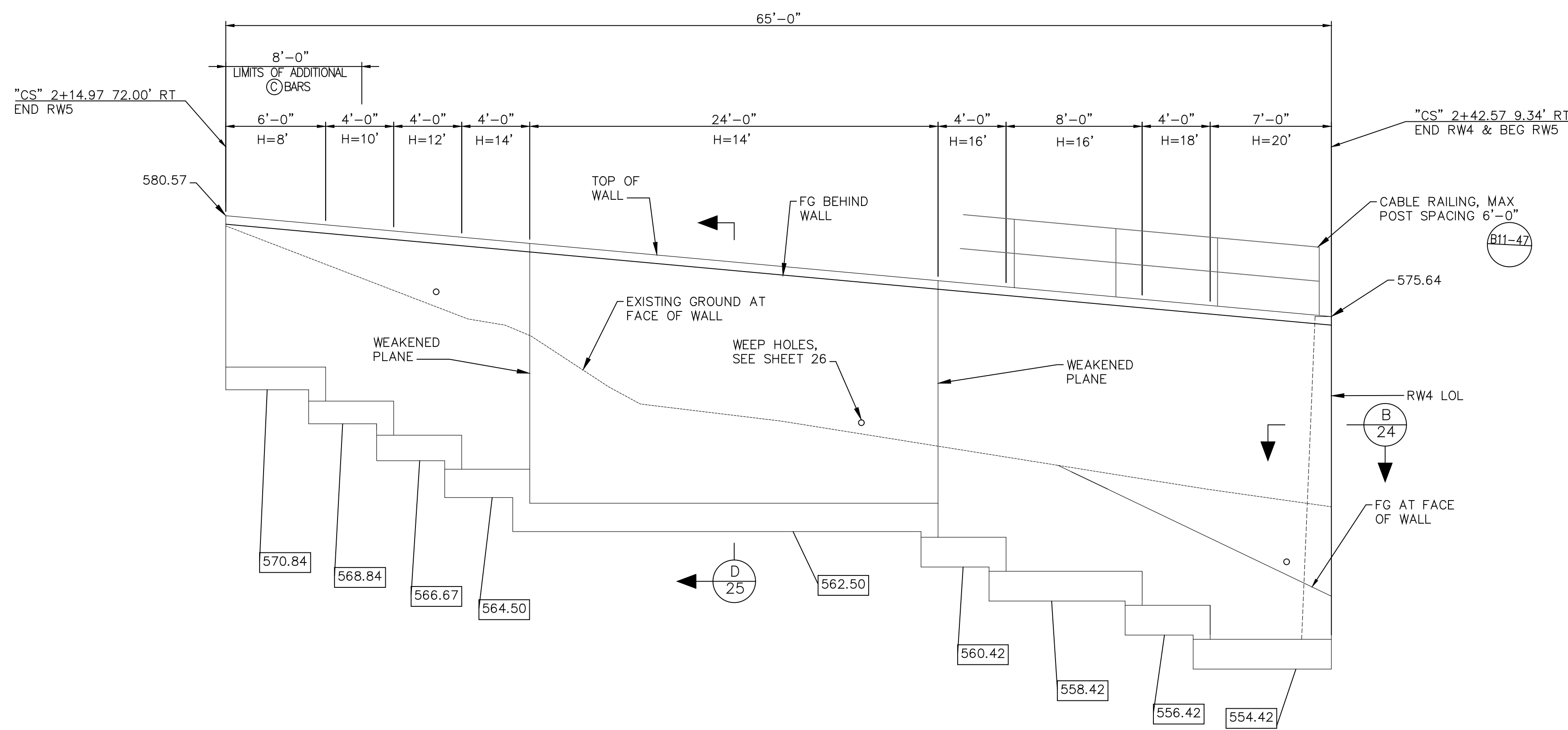
KB
DRAWN BY: SC
CHECKED BY: JB



O-1156

SHEET 21 OF 26

Filename: Cold Springs DB Plans.DWG



RETAINING WALL NO. 5 ELEVATION
SCALE: 1" = 5'

- NOTES:**
- FOR WEAKENED PLANE DETAILS, SEE RETAINING WALL DETAILS NO. 2 SHEET.
 - SEE NOTE 2 IN "TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA" ON PAGE 25 FOR ADDITIONAL BAR INFORMATION.

LEGEND

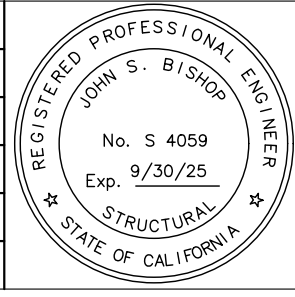
XXX.XX DENOTES BOTTOM OF FOOTING ELEVATION



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SANTA BARBARA COUNTY
FLOOD CONTROL AND
WATER CONSERVATION DISTRICT
130 E. VICTORIA STREET
SANTA BARBARA, CA 93101
(805) 568-3440



**COLD SPRINGS DEBRIS
BASIN IMPROVEMENT PROJECT**
AREA OF MONTECITO
SANTA BARBARA COUNTY, CALIFORNIA

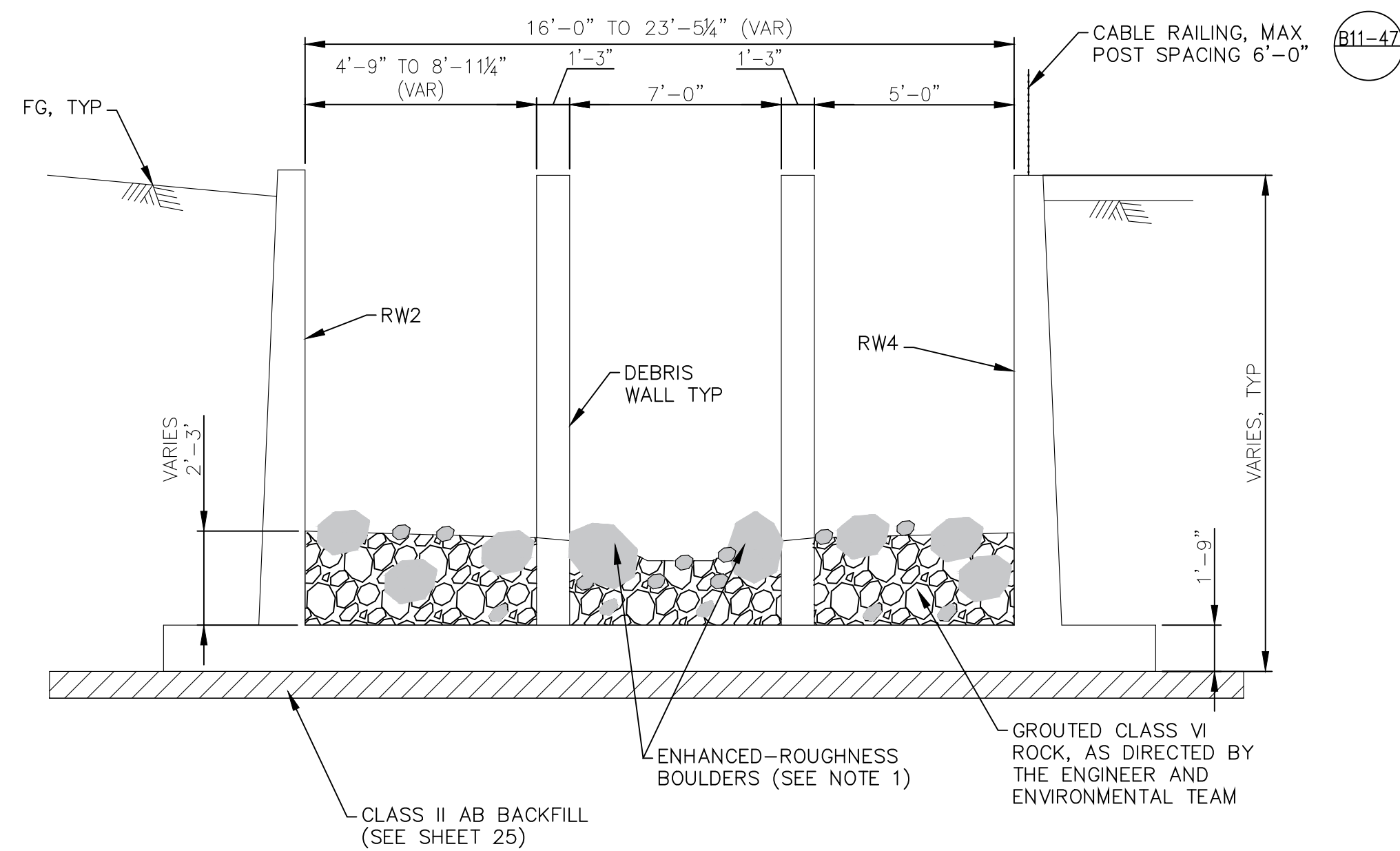
**OUTLET STRUCTURE
ELEVATIONS NO. 2**

KB
DRAWN BY: SC
CHECKED BY: JB

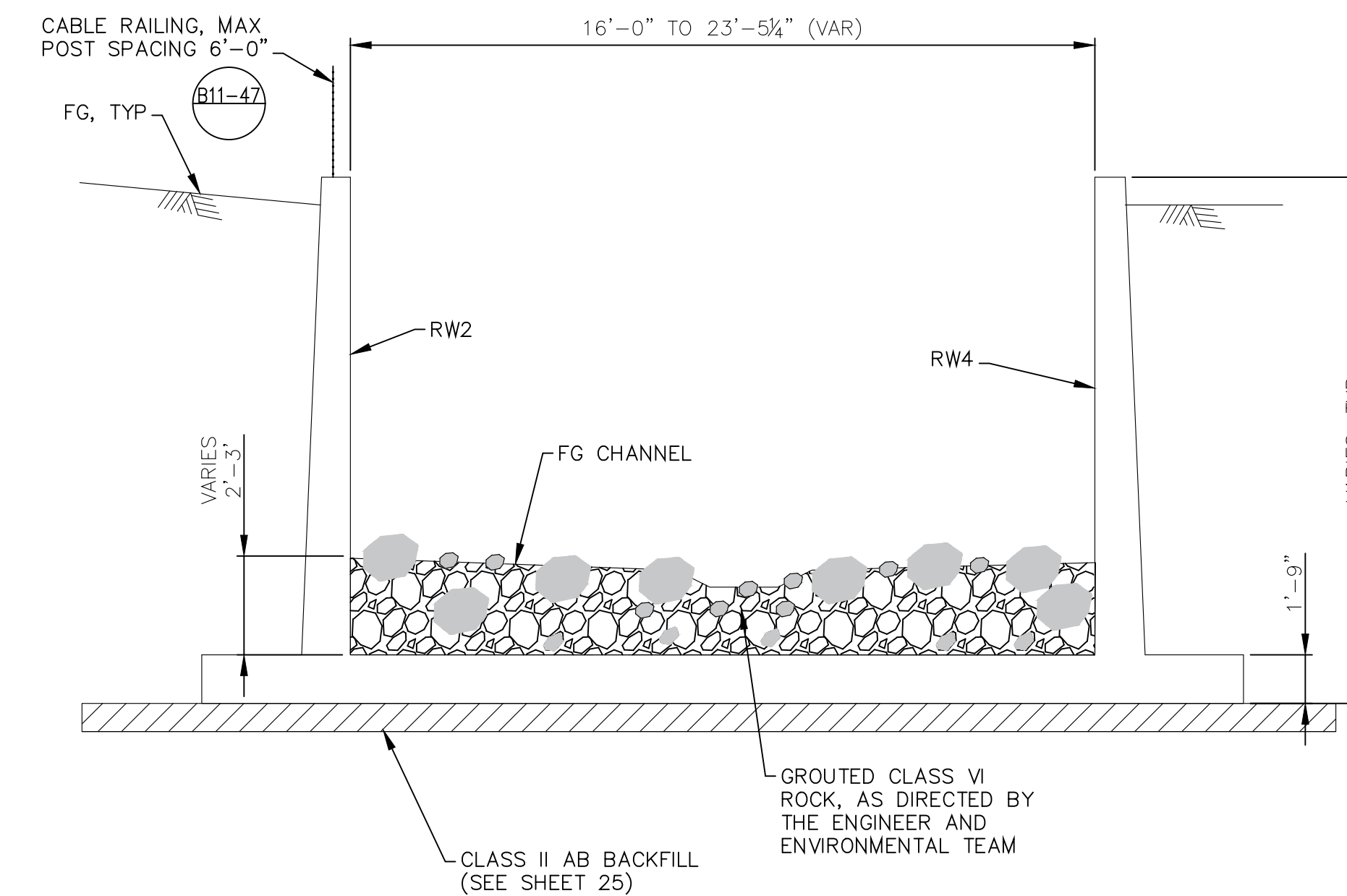
O-1156
SHEET 22 OF 26
Filename: Cold Springs DB Plans.DWG

NOTES:

1. ENHANCED-ROUGHNESS BOULDERS WITHIN DEBRIS WALLS TO INCLUDE AT LEAST FOUR LARGE BOULDERS (28-42" DIAMETER) FROM THE CLASS VI ROCK, WITH TWO BOULDERS PLACED ALONG THE EDGE OF EACH DEBRIS WALL, SPACED AT APPROXIMATELY 6' APART, AND PROTRUDING 1/3 TO 1/2 DIAMETER. GROUDED ROCK ESM PLACEMENT AND ENHANCED-ROUGHNESS BOULDERS WITHIN DEBRIS WALLS TO BE PLACED UNDER FIELD DIRECTION OF DISTRICT ENGINEERING/ENVIRONMENTAL STAFF.



A CONTROL STRUCTURE SECTION E-E
 23 STA 2+30.18 TO STA 2+42.57
 SCALE: 1" = 5'



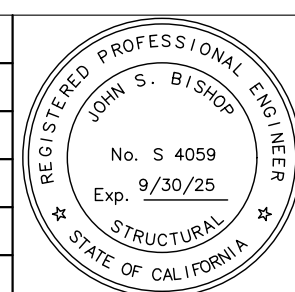
B CONTROL STRUCTURE SECTION F-F
 23 STA 2+22.31 TO STA 2+30.18
 SCALE: 1" = 5'

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REVISIONS			
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DESIGNED BY: *John Bishop* 11/03/2023
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SANTA BARBARA COUNTY
 FLOOD CONTROL AND
 WATER CONSERVATION DISTRICT
 130 E. VICTORIA STREET
 SANTA BARBARA, CA 93101
 (805) 568-3440

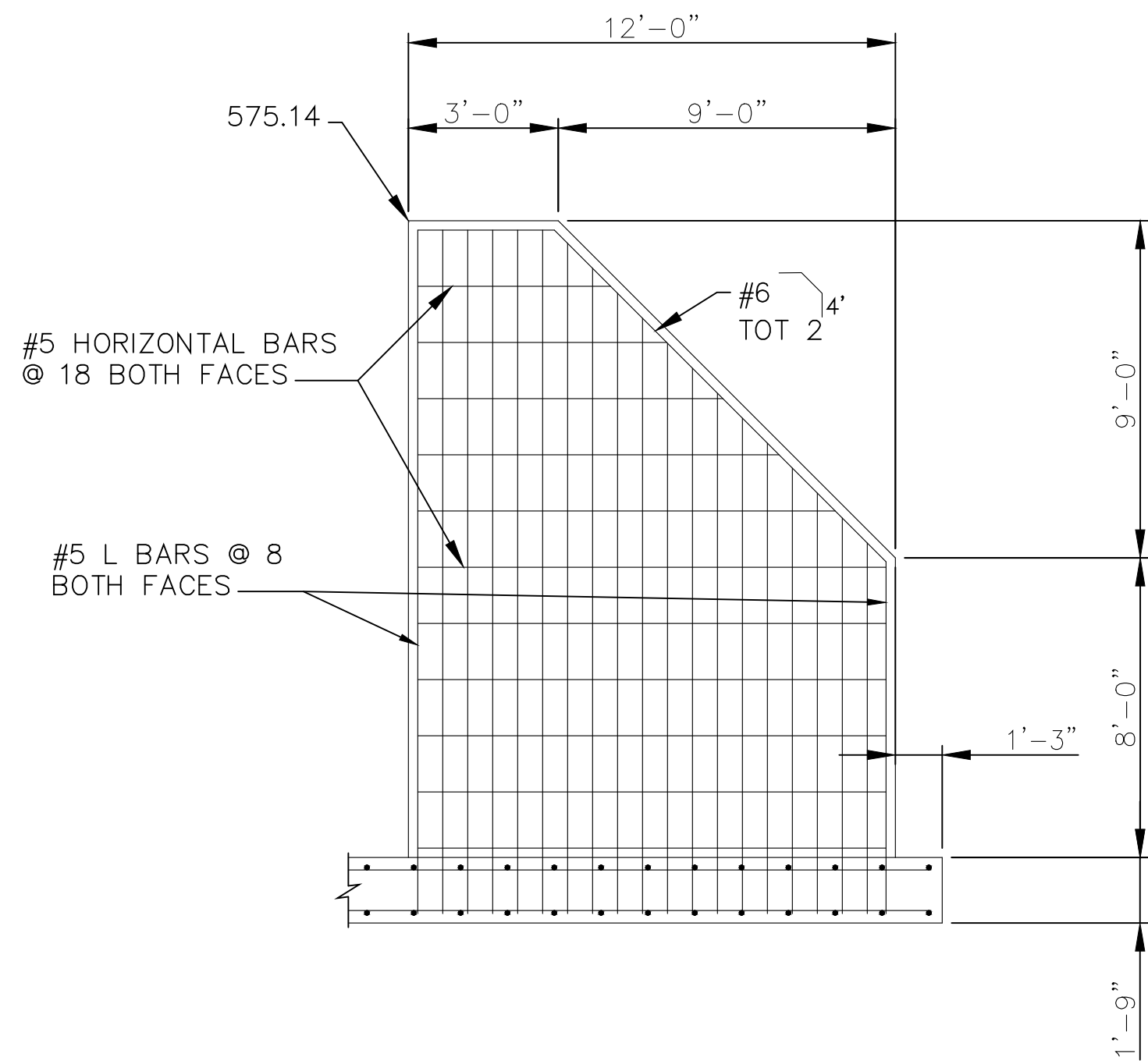


COLD SPRINGS DEBRIS
 BASIN IMPROVEMENT PROJECT
 AREA OF MONTECITO
 SANTA BARBARA COUNTY, CALIFORNIA

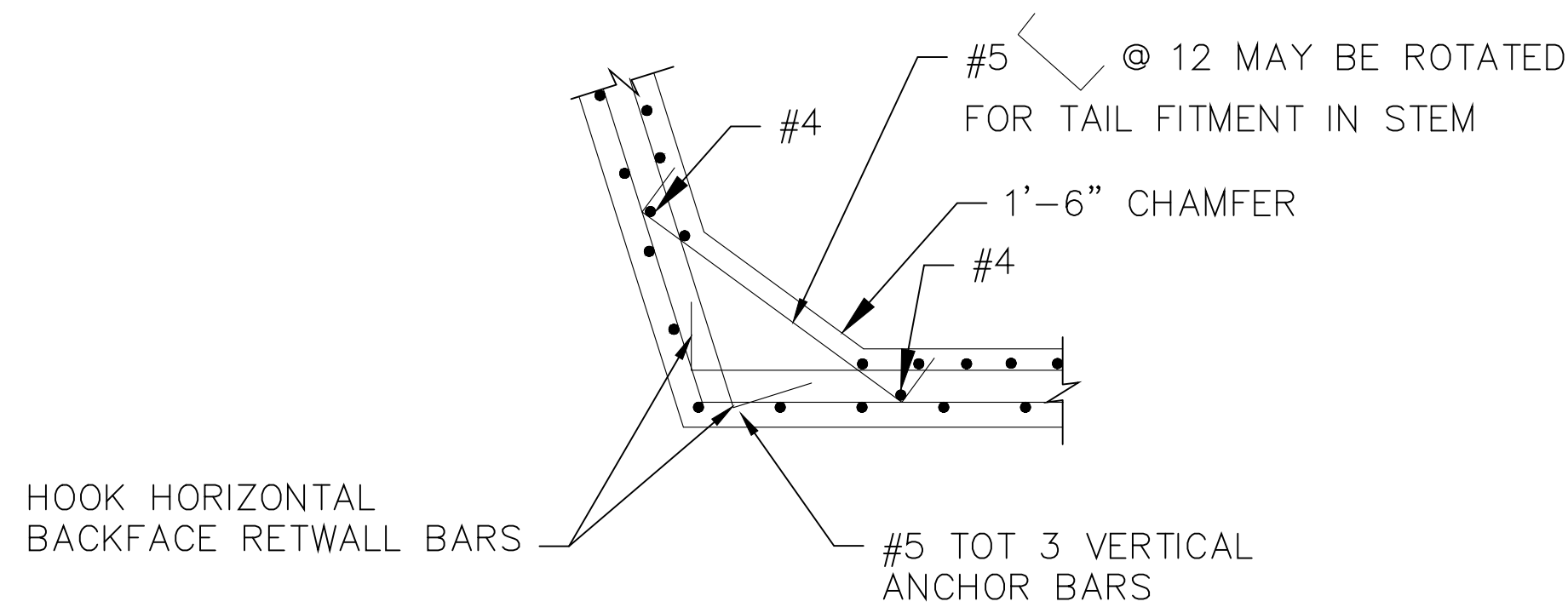
**OUTLET STRUCTURE
 TYPICAL SECTIONS**

DESIGNED BY: KB
 DRAWN BY: SC
 CHECKED BY: JB

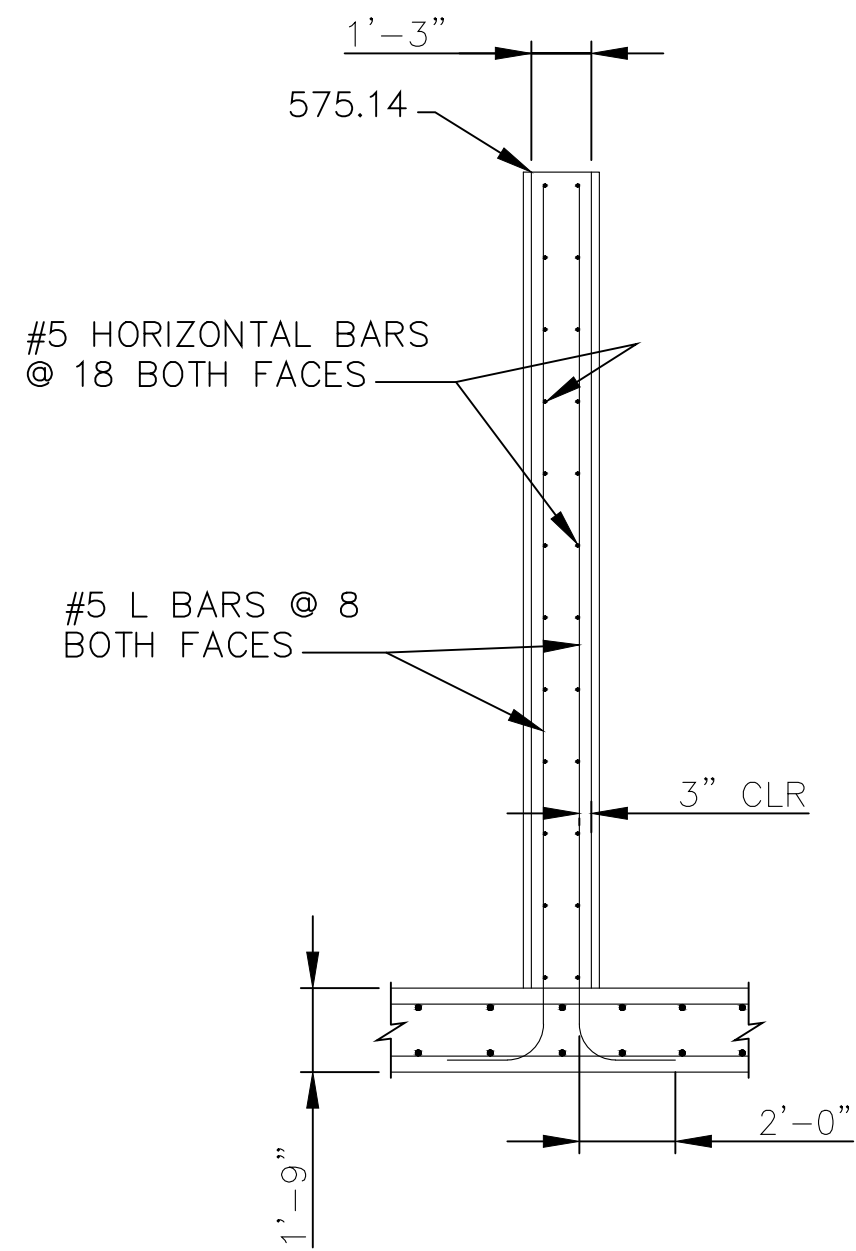
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 SHEET 23 OF 26
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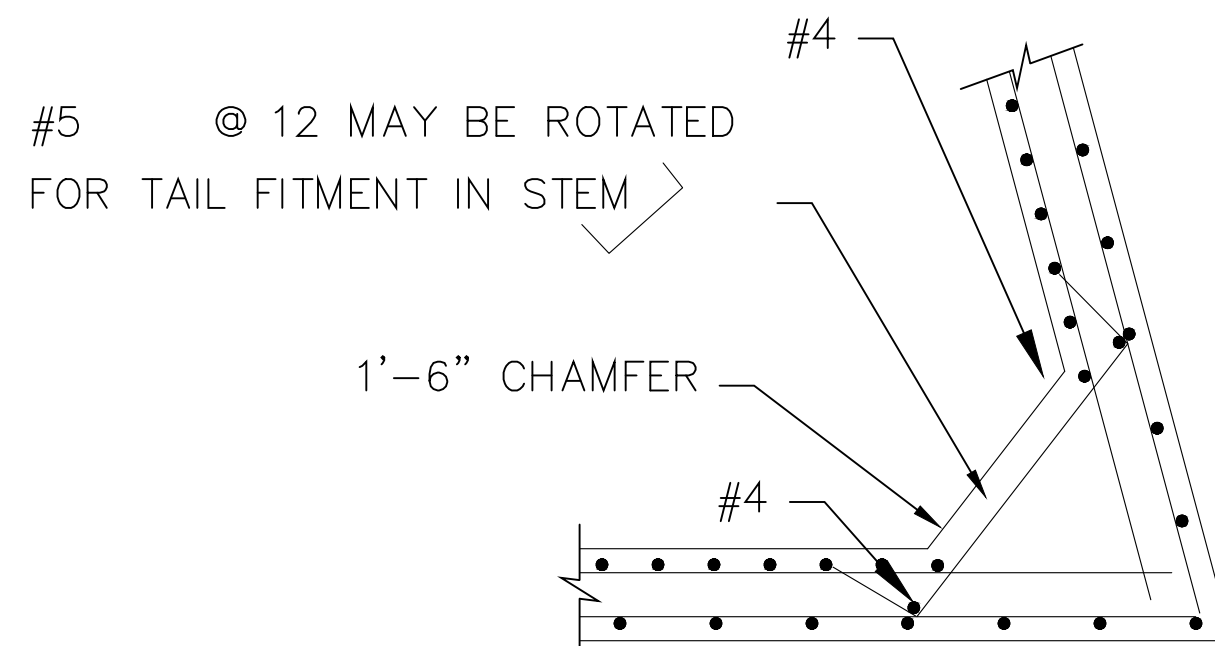
DEBRIS WALL ELEVATION
SCALE: 1"=4'



A **DETAIL A**
24 SCALE: 1"=2'



DEBRIS WALL SECTION
SCALE: 1"=4'

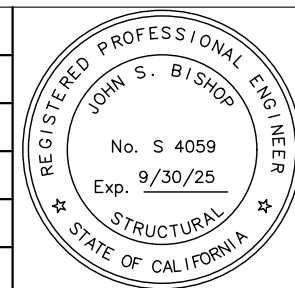


B **DETAIL B**
24 SCALE: 1"=2'

UNAUTHORIZED CHANGES OR USES:
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REVISIONS			
NO.	DESCRIPTION	DATE	APR



DESIGNED BY: <i>John Bishop</i>	11/03/2023
BISHOP ENGINEERING	DATE

SANTA BARBARA COUNTY
FLOOD CONTROL AND
WATER CONSERVATION DISTRICT
130 E. VICTORIA STREET
SANTA BARBARA, CA 93101
(805) 568-3440



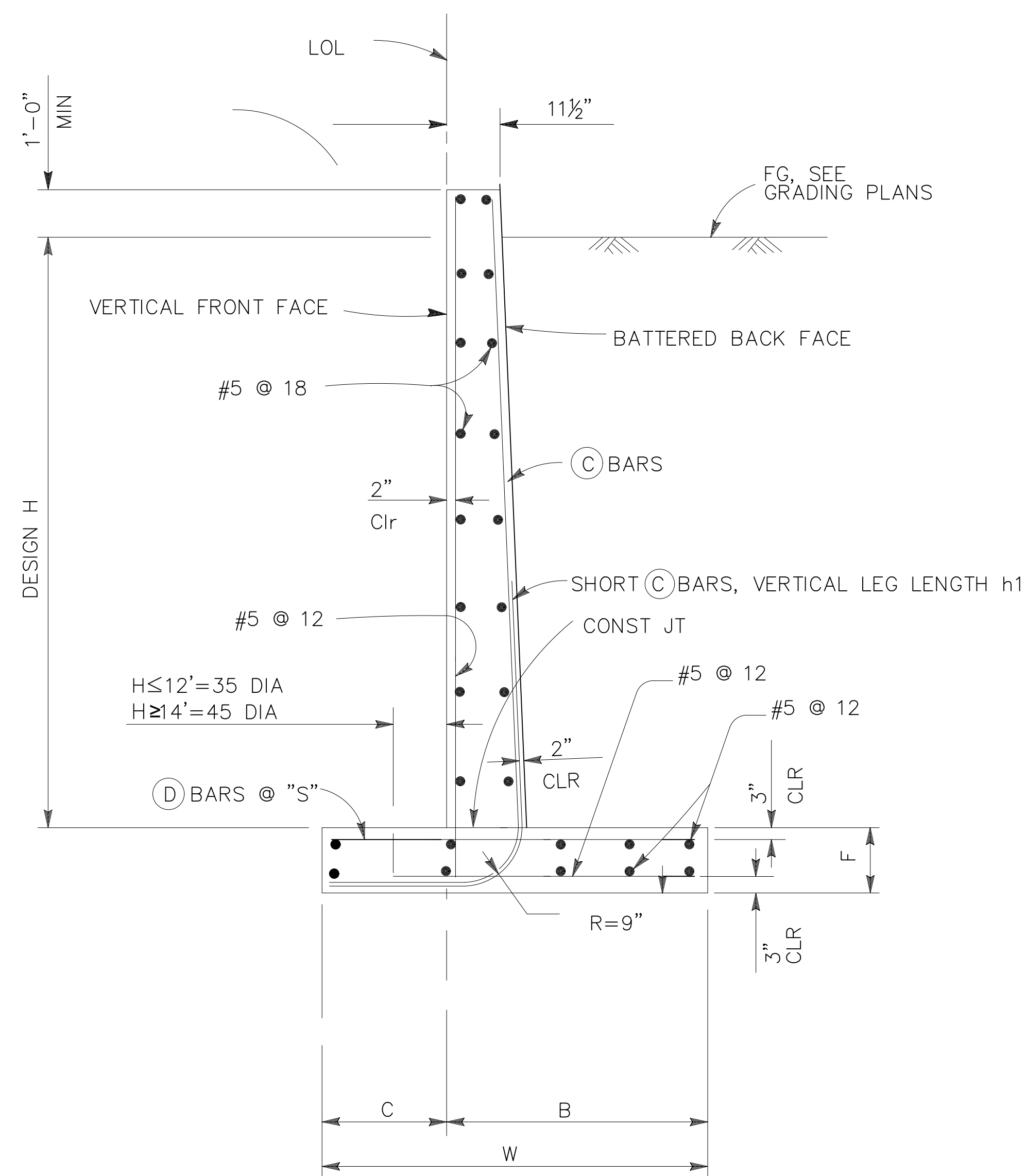
COLD SPRINGS DEBRIS
BASIN IMPROVEMENTS PROJECT
AREA OF MONTECITO
SANTA BARBARA COUNTY, CALIFORNIA

**OUTLET
STRUCTURE DETAILS**

DESIGNED BY:	KB
DRAWN BY:	SC
CHECKED BY:	JB

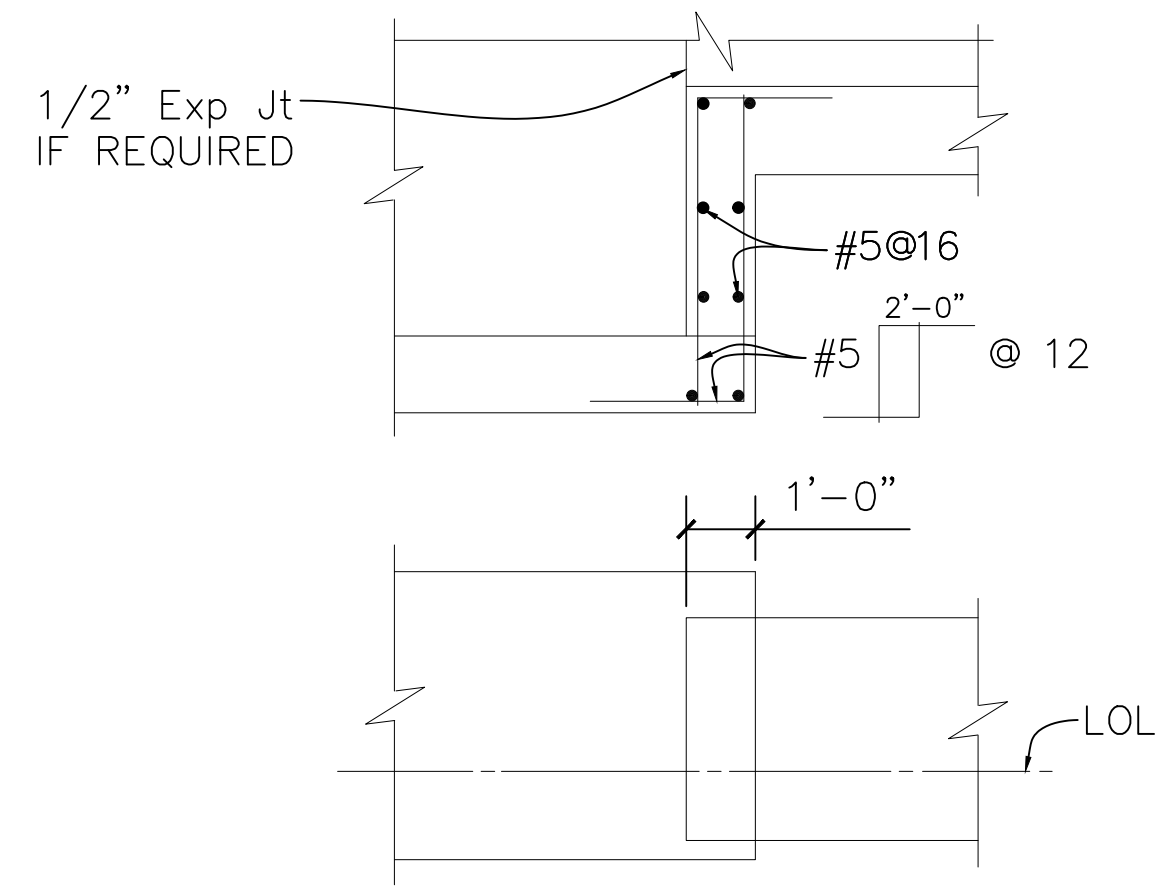
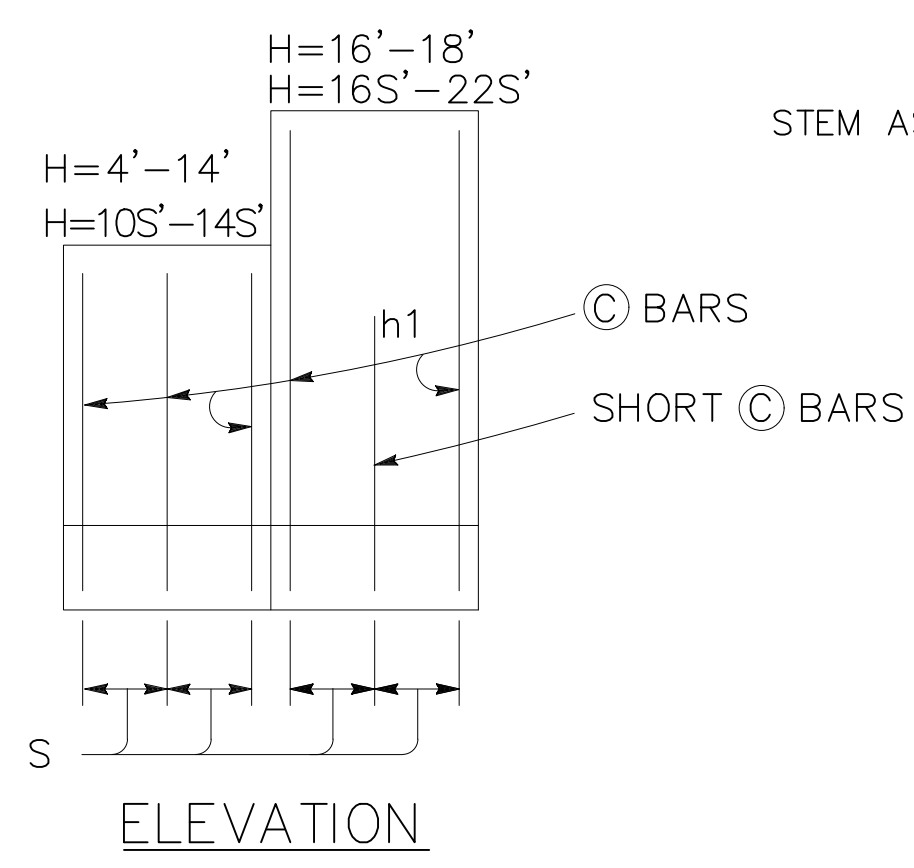


O-1156
SHEET 24 OF 26
Filename: Cold Springs DB Plans.DWG



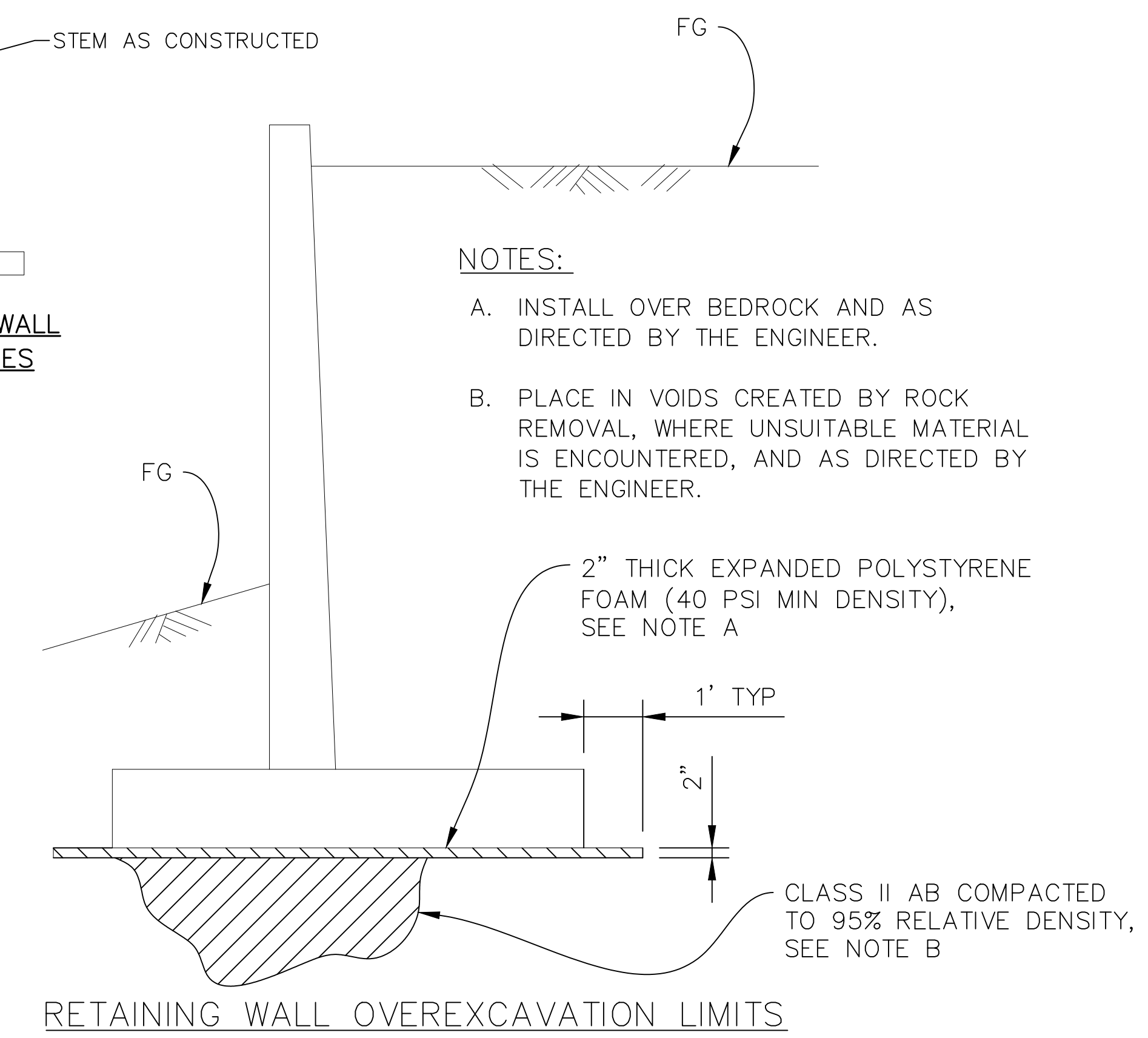
D
25

PLACE CONCRETE IN TOE AGAINST UNDISTURBED MATERIAL, EXCEPT AS PERMITTED BY THE ENGINEER.



FOOTING STEP

APPROXIMATE WALL OFFSET VALUES



- NOTES:
- A. INSTALL OVER BEDROCK AND AS DIRECTED BY THE ENGINEER.
 - B. PLACE IN VOIDS CREATED BY ROCK REMOVAL, WHERE UNSUITABLE MATERIAL IS ENCOUNTERED, AND AS DIRECTED BY THE ENGINEER.

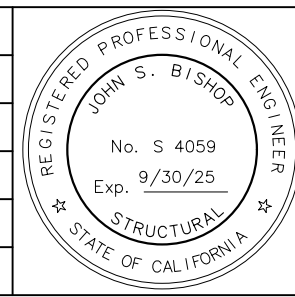
TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA										
DESIGN H	4'	6'	8'	10'	12'	14'	16'	18'	20'	22'
W	6'-10"	7'-0"	7'-3"	7'-7"	8'-4"	9'-7"	10'-9"	12'-0"	12'-0"	NOT APPLICABLE
C	2'-2"	2'-3"	2'-3"	2'-4"	2'-6"	3'-0"	3'-6"	4'-0"	4'-0"	
B	4'-8"	4'-9"	5'-0"	5'-3"	5'-10"	6'-7"	7'-3"	8'-0"	8'-0"	
F	1'-4"	1'-4"	1'-4"	1'-4"	1'-6"	1'-8"	1'-9"	1'-9"	1'-9"	1'-9"
BATTER	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12
SPACING "S"	9"	9"	9"	9"	9"	7"	6"	5"	6"	6"
C BARS	#6	#6	#6	#6	#6	#6	#7	#7	#8	#9
D BARS	#5	#5	#6	#6	#6	#6	#7	#8	#8	#9
h1 (SHORT C BAR LENGTH)	-	-	-	-	-	-	5'-9"	5'-10"	8'-0"	9'-0"
Ser: B', q'o	6.8, 0.7	6.5, 1.0	6.2, 1.3	6.0, 1.6	6.3, 2.0	7.5, 2.1	8.6, 2.2	9.8, 2.3	9.8, 2.3	NOT APPLICABLE
Str: B', q'o	6.6, 1.6	5.0, 1.8	3.6, 2.3	3.0, 3.3	3.2, 4.0	4.3, 3.8	5.3, 3.7	6.4, 3.7	6.4, 3.7	
Ext I: B', q'o	5.2, 1.1	4.7, 1.5	3.9, 2.2	3.1, 3.4	2.8, 4.8	3.2, 5.3	3.6, 5.7	4.1, 6.1	4.1, 6.1	
Ext II: B', q'o	2.6, 2.2	2.7, 2.6	2.8, 3.1	2.9, 3.6	3.7, 3.6	5.2, 3.3	6.7, 3.1	8.3, 3.0	8.3, 3.0	

- NOTES:
1. SPLICES IN © BARS SHALL NOT BE ALLOWED IN THE WALL STEM WITHIN A DISTANCE OF H/4 OR MINIMUM OF 1'-8" FROM TOP OF FOOTING.
 2. SEE WALL ELEVATIONS ON SHEETS 21 AND 22 FOR LIMITS OF ADDITIONAL © BARS CONSISTING OF FULL HEIGHT #6 L BARS BUNDLED WITH STANDARD © BARS IN TABLE ABOVE.
 3. HORIZONTAL LEGS OF © BARS IN STEM WALLS FOUNDED ON STRUCTURAL SLAB SHALL BE 4'-0" LONG AND PLACED PARALLEL WITH TRANSVERSE #9 @ 16 IN STRUCTURAL SLAB.

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REVISIONS			
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DESIGNED BY: *John Bishop* 11/03/2023
 BISHOP ENGINEERING

SANTA BARBARA COUNTY
 FLOOD CONTROL AND
 WATER CONSERVATION DISTRICT
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 SANTA BARBARA, CA 93101
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COLD SPRINGS DEBRIS
 BASIN IMPROVEMENTS PROJECT
 AREA OF MONTECITO
 SANTA BARBARA COUNTY, CALIFORNIA

RETAINING WALL DETAILS NO. 1

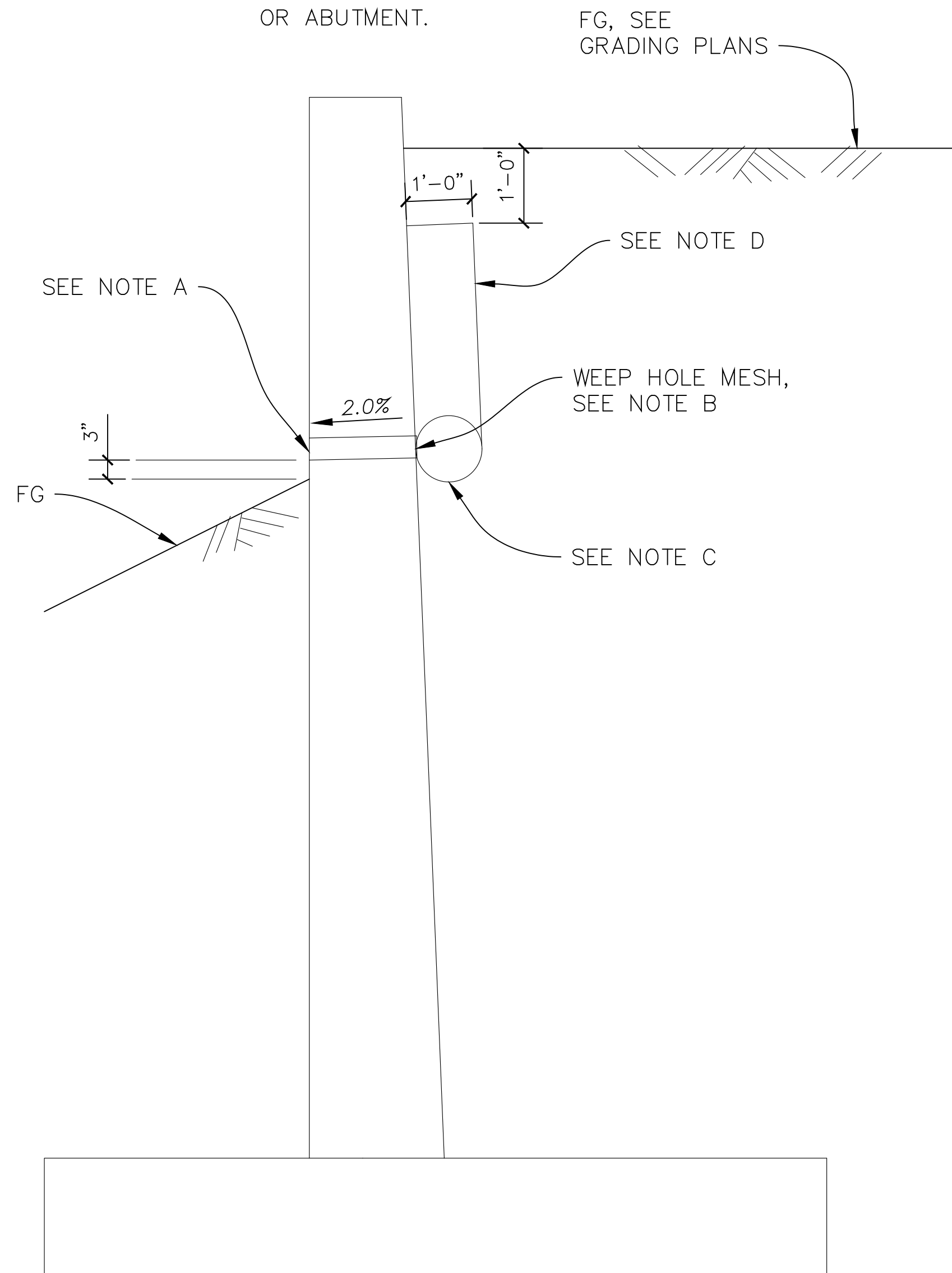
DESIGNED BY: KB
 DRAWN BY: SC
 CHECKED BY: JB

O-1156
 SHEET 25 OF 26
 Filename: Cold Springs DB Plans.DWG

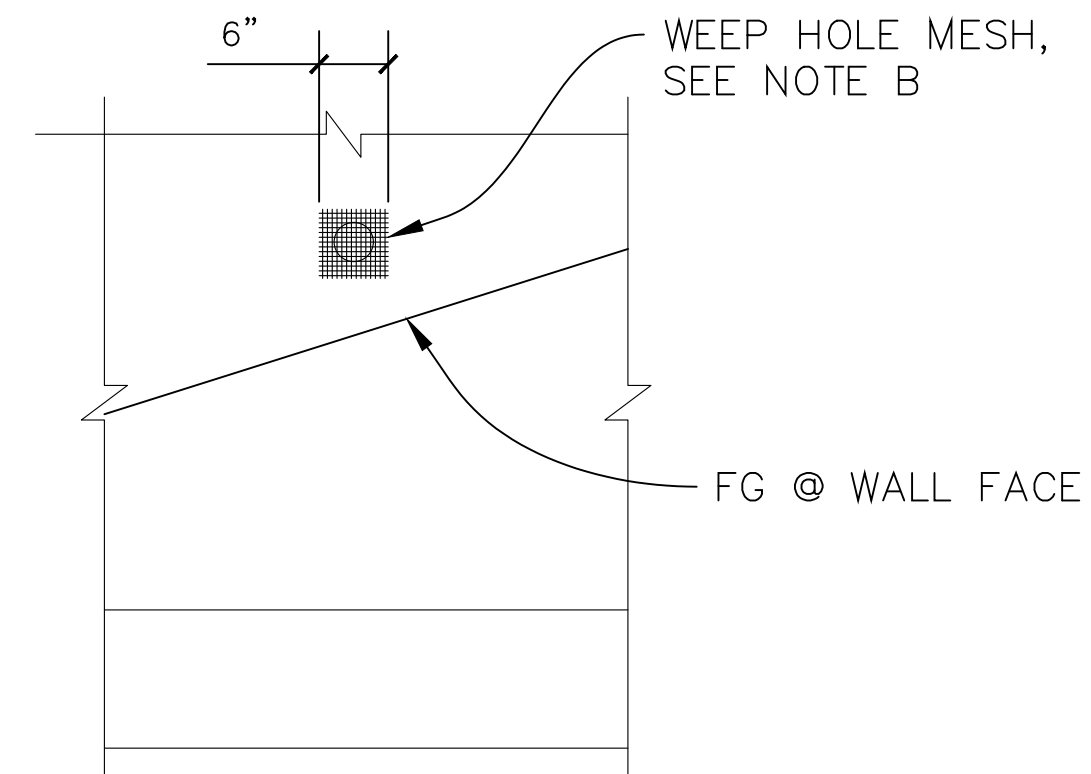


NOTES:

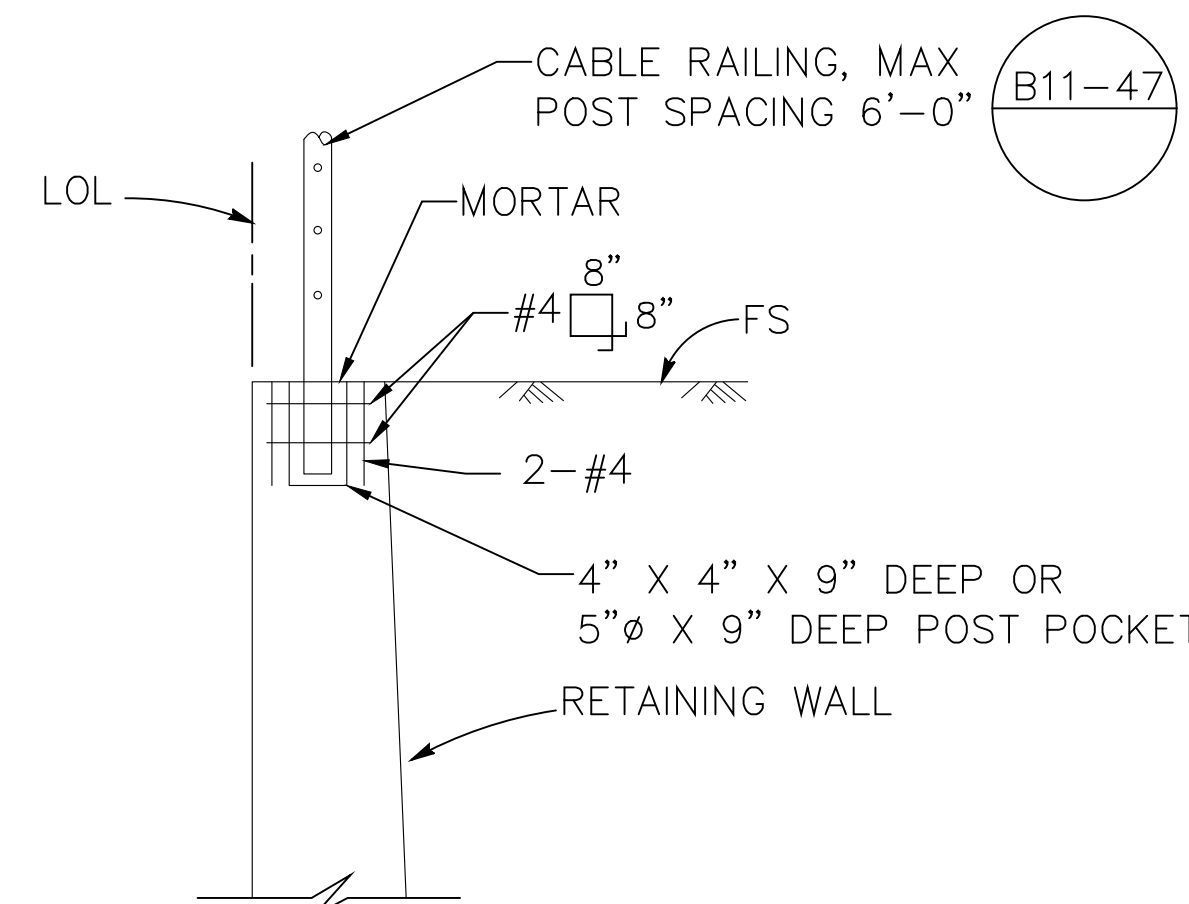
- A. 4"Ø PVC SCHEDULE 80 DRAINS @ 25'-0" MAXIMUM CENTER TO CENTER. EXPOSED WALL DRAINS SHALL BE LOCATED 3"± ABOVE FINISHED GRADE
- B. 6" SQUARE ALUMINUM OR GALVANIZED STEEL WIRE ¼" MESH HARDWARE CLOTH. MINIMUM WIRE DIAMETER 0.025". ANCHOR FIRMLY TO BACKFACE.
- C. ONE CUBIC FOOT PER LINEAR FOOT OF WALL PERVIOUS BACKFILL MATERIAL IN NONWOVEN FILTER FABRIC, SECURELY TIED.
- D. PERVIOUS BACKFILL MATERIAL CONTINUOUS BEHIND RETAINING WALL OR ABUTMENT.



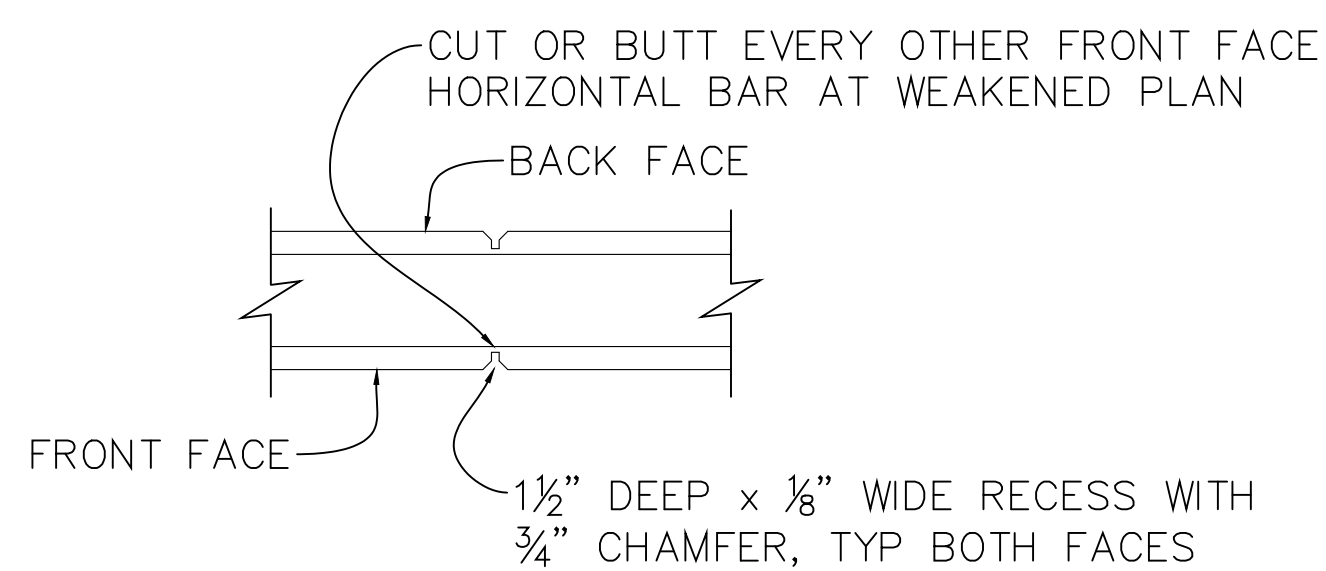
WEEP HOLE AND PERVIOUS BACKFILL SECTION



WEEP HOLE MESH



CABLE RAILING POST POCKET



WEAKENED PLANE

SYMBOLS:

- Ser - SERVICE LIMIT STATE I
- Str - STRENGTH LIMIT STATE I
- Ext I - EXTREME EVENT LIMIT STATE I
- Ext II - EXTREME EVENT LIMIT STATE II
- B' - EFFECTIVE FOOTING WIDTH (ft)
- q'o - NET BEARING STRESS (ksf), OG ASSUMED TO BE FG AT TOE
- qo - GROSS UNIFORM BEARING STRESS (ksf)

DESIGN CONDITIONS:

DESIGN H MAY BE EXCEEDED BY 6" BEFORE GOING TO THE NEXT SIZE. SPECIAL FOOTING DESIGN IS REQUIRED WHERE FOUNDATION MATERIAL IS INCAPABLE OF SUPPORTING BEARING STRESS LISTED IN THE TABLE.

DESIGN NOTES:

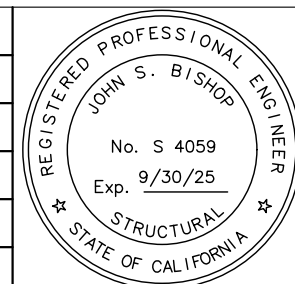
- DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION WITH CALIFORNIA AMENDMENTS
- LS: 240PSF SURCHARGE ON LIMITS OF MAINTENANCE ROAD
- DC: STEEL ARMOR FOR CONCRETE FACES UP TO 1¾" THICK (75 PSF) CONSIDERED
- CT: 54 KIP TRANSVERSE FORCE APPLIED AT HE = 32", DISTRIBUTED OVER 10 FEET AT THE TOP OF WALL AND 1 : 1 DISTRIBUTION DOWN AND OUTWARD. DISTRIBUTION BELOW FOOTING TAKEN NO LESS THAN 40'.
- SEISMIC: $k_h = 0.2$
 $k_v = 0.0$
- SOIL: $\phi = 34^\circ$
 $\gamma = 120$ pcf
- REINFORCED CONCRETE: $f'_c = 3,600$ psi
 $f_y = 60,000$ psi
- LOAD COMBINATIONS AND LIMIT STATES:
 - Service I $Q = 1.00DC + 1.00EV + 1.00EH + 1.00LS$
 - Strength I $Q = \alpha DC + \beta EV + \eta EH + 1.75LS$
 - Extreme I $Q = 1.00DC + 1.00EV + 1.00EH + 1.00EQD + 1.00EQE$
 - Extreme II $Q = 1.00DC + 1.00EV + 1.00EH + 1.00CT$

- Where:
- Q: FORCE EFFECTS
 - α : 1.25 OR 0.90, WHICHEVER CONTROLS DESIGN
 - β : 1.35 OR 1.00, WHICHEVER CONTROLS DESIGN
 - η : 1.50 OR 0.90, WHICHEVER CONTROLS DESIGN
 - DC: DEAD LOAD OF STRUCTURE COMPONENTS
 - EH: HORIZONTAL EARTH FILL PRESSURE
 - EV: VERTICAL EARTH PRESSURE FROM EARTH FILL WEIGHT
 - LS: LIVE LOAD SURCHARGE
 - EQE: SEISMIC EARTH PRESSURE
 - EQD: SOIL AND STRUCTURAL AND NONSTRUCTURAL COMPONENTS INERTIA
 - CT: VEHICULAR COLLISION FORCE

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COLD SPRINGS DEBRIS
BASIN IMPROVEMENTS PROJECT
AREA OF MONTECITO
SANTA BARBARA COUNTY, CALIFORNIA

**RETAINING WALL
DETAILS NO. 2**

DESIGNED BY: KB
DRAWN BY: SC
CHECKED BY: JB



O-1156
SHEET 26 OF 26
Filename: Cold Springs DB Plans.DWG