

GHD Inc.
718 Third Street
Eureka California 96501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



ROAD NAME: MONUMENT ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: 3F020	DESIGNED BY: C.PROVO
MILE POST: 0.00	DRAWN BY: C.PROVO
PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: J.WOLF
CONTRACT NO.: 217356	APPROVED BY: J.WOLF
PLOT DATE: 01/23/2023	

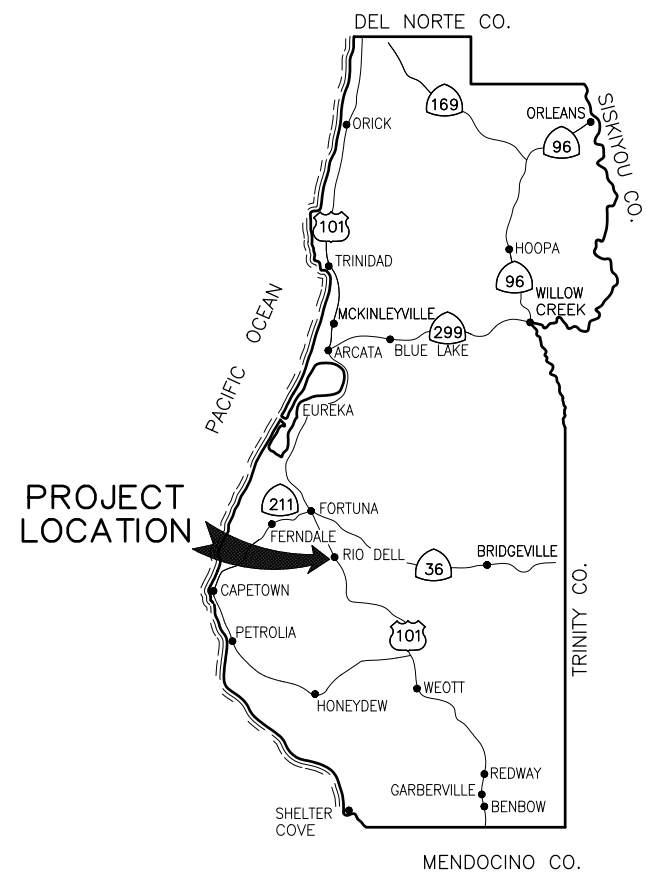
COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00
TITLE SHEET

SHEET 1 OF 24

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS

PROJECT PLANS FOR CONSTRUCTION OF STORM DAMAGE REPAIRS MONUMENT ROAD (3F020) AT P.M. 0.00 PROJECT NO. 4308-CA-DR PW#1276 CONTRACT NO. 217356

TO BE SUPPLEMENTED BY STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION 2018 STANDARD PLANS, 2018 STANDARD SPECIFICATIONS, AND LATEST REVISED STANDARD PLANS AND SPECIFICATIONS.



LOCATION MAP
NOT TO SCALE




SHEET LIST TABLE

SHEET	SHEET TITLE
1	TITLE SHEET
2	CONSTRUCTION AREA SIGNS AND QUANTITIES
3	STAGE CONSTRUCTION PLAN
4	SURVEY CONTROL PLAN
5	TYPICAL ROADWAY SECTIONS
6	LAYOUT - 1 OF 2
7	LAYOUT - 2 OF 2
8	PROFILE AND SUPERELEVATION
9	DRAINAGE AND UTILITIES
10	DRAINAGE PROFILE
11	EROSION CONTROL
12	SIGNING AND STRIPING
13	CONSTRUCTION DETAILS
14	ROADWAY CROSS SECTIONS - 1 OF 3
15	ROADWAY CROSS SECTIONS - 2 OF 3
16	ROADWAY CROSS SECTIONS - 3 OF 3
17	RETAINING WALL GENERAL PLAN
18	STRUCTURAL GENERAL NOTES & ABBREVIATIONS
19	RETAINING WALL LAYOUT NO. 1
20	RETAINING WALL LAYOUT NO. 2
21	SOLDIER PILE WALL DETAILS NO. 1
22	SOLDIER PILE WALL DETAILS NO. 2
23	SOLDIER PILE WALL DETAILS NO. 3
24	GROUND ANCHOR DETAILS


 JOSH A. WOLF
 RCE 70358
 CIVIL ENGINEER
 GHD INC.
 1/23/2023
 DATE



APPROVED

 TONY R. SEGHETTI
 RCE 63714
 DEPUTY DIRECTOR OF ENGINEERING
 COUNTY OF HUMBOLDT
 2/16/2023
 DATE

NOTES

1. THE CONTRACTOR SHALL HAVE A CLASS "A" LICENSE FOR THIS PROJECT.
2. STANDARD PLAN LIST APPLICABLE TO THIS CONTRACT INCLUDED IN THE SPECIAL PROVISIONS.
3. GEOTECHNICAL REPORT: CRAWFORD AND ASSOCIATES, MARCH 19, 2021.
4. PROJECT LOCATION; LAT:40°29'27.02"N, LONG:124°6'40.04"W

ABBREVIATIONS

(TO SUPPLEMENT CALTRANS STANDARD PLANS A3A, A3B & A3C)

- APN ASSESSORS PARCEL NUMBER
- CL CENTERLINE
- CT CALTRANS
- (E) EXISTING
- EL ELEVATION
- ICL IMPLIED COMMON LAW DEDICATION
- K K-VALUE
- LT LEFT
- PVI POINT OF VERTICAL INTERSECTION
- RT RIGHT
- S SLOPE
- TEL TELEPHONE



VICINITY MAP
NOT TO SCALE



QUANTITIES

Item No.	Item Code	Item Description	Unit	Quantity
1	120090	Construction Area Signs	EA	16
2	120100	Traffic Control System	LS	1
3	120202	Portable Signal System	LS	1
4	129000	Temporary Railing (Type K)	LF	420
5	130100	Job Site Management	LS	1
6	130200	Prepare Water Pollution Control Program	LS	1
7	130620	Temporary Drainage Inlet Protection	EA	4
8	130680	Temporary Silt Fence	LF	440
9	130900	Temporary Concrete Washout	EA	1
10	170103	Clearing and Grubbing (LS)	LS	1
11	190101	Roadway Excavation	CY	705
12	192049	F Structure Excavation (Soldier Pile Wall)	CY	1238
13	193029	F Structure Backfill (Soldier Pile Wall)	CY	741
14	193116	F Concrete Backfill (Soldier Pile Wall)	CY	134
15	193119	F Lean Concrete Backfill	CY	132
16	198050	Embankment	CY	34
17	210212	Dry Seed (SQFT)	SQFT	6500
18	210280	Rolled Erosion Control Product (Blanket)	SQFT	6500
19	210350	Fiber Rolls	LF	460
20	260203	Class 2 Aggregate Base (CY)	CY	275
21	390132	Hot Mix Asphalt (Type A)	TON	179
22	394073	Place Hot Mix Asphalt Dike (Type A)	LF	70
23	394077	Place Hot Mix Asphalt Dike (Type F)	LF	246
24	460210	Ground Anchor (Subhorizontal)	EA	32
25	490325A	Steel Soldier Piling (W18x106)	LF	1518
26	490403	30" Drilled Hole	LF	1555
27	510060A	F Structural Concrete, Retaining Wall (Waler)	CY	51
28	510094A	Minor Concrete, Drainage Inlet (Type GO)	EA	2
29	520103A	F Bar Reinforcing (Retaining Wall - Waler)	LB	25700
30	575004	F Timber Lagging	MFBM	32
31	641107A	18" Plastic Pipe (Heat-Fused HDPE)	LF	248
32	680902	6" Perforated Plastic Pipe Underdrain	LF	243
33	680903	6" Non-Perforated Plastic Pipe Underdrain	LF	97
34	692381	Concrete Anchor and Cable Assembly	EA	1
35	700638	36" Corrugated Steel Pipe Inlet (.079" Thick)	LF	11.5
36	710132	Remove Culvert (LF)	LF	57
37	723080	Rock Slope Protection (60 lb, Class II, Method B) (CY)	CY	13
38	723095	Rock Slope Protection (20 lb, Class I, Method B) (CY)	CY	1
39	729011	Rock Slope Protection Fabric (Class 8)	SQYD	40
40	750500A	F Miscellaneous Metal (Inlet Grate, Galvanized Type 24-12X)	LB	478
41	780230	Survey Monument (Type D)	EA	1
42	820110	Milepost Marker	EA	1
43	820170	Delineator (Class 1)	EA	8
44	832006	Midwest Guardrail System (Steel Post)	LF	250
45	839580	End Anchor Assembly (Type SFT-M)	EA	1
46	839585	Alternative Flared Terminal System	EA	1
47	839521	F Cable Railing	LF	269
48	840505A	4" Thermoplastic Traffic Stripe	LF	580
49	999990	Mobilization	LS	1



GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



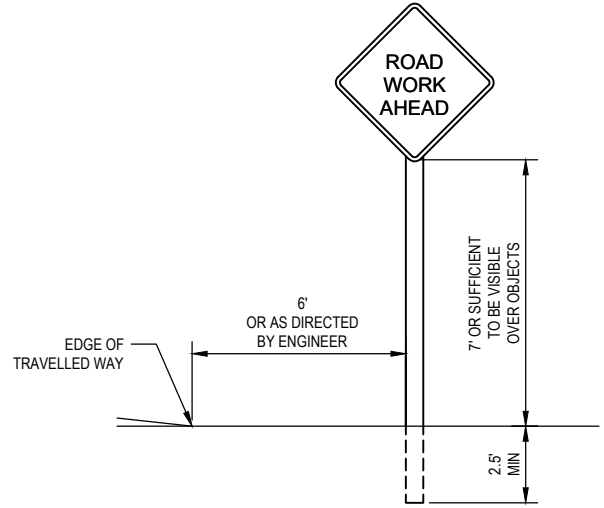
ROAD NAME: MONUMENT ROAD
ROAD NO: 3F020
MILE POST: 0.00
PROJECT NO.: 4308-CA-DR PW#1276
CONTRACT NO.: 217356
PLOT DATE: 01/27/2023

DESIGN SECTION ENGINEERING
DESIGNED BY: C.PROVO
DRAWN BY: C.PROVO
REVIEWED BY: J.WOLF
APPROVED BY: J.WOLF

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00
CONSTRUCTION AREA SIGNS AND QUANTITIES

TEMPORARY TRAFFIC CONTROL NOTES:

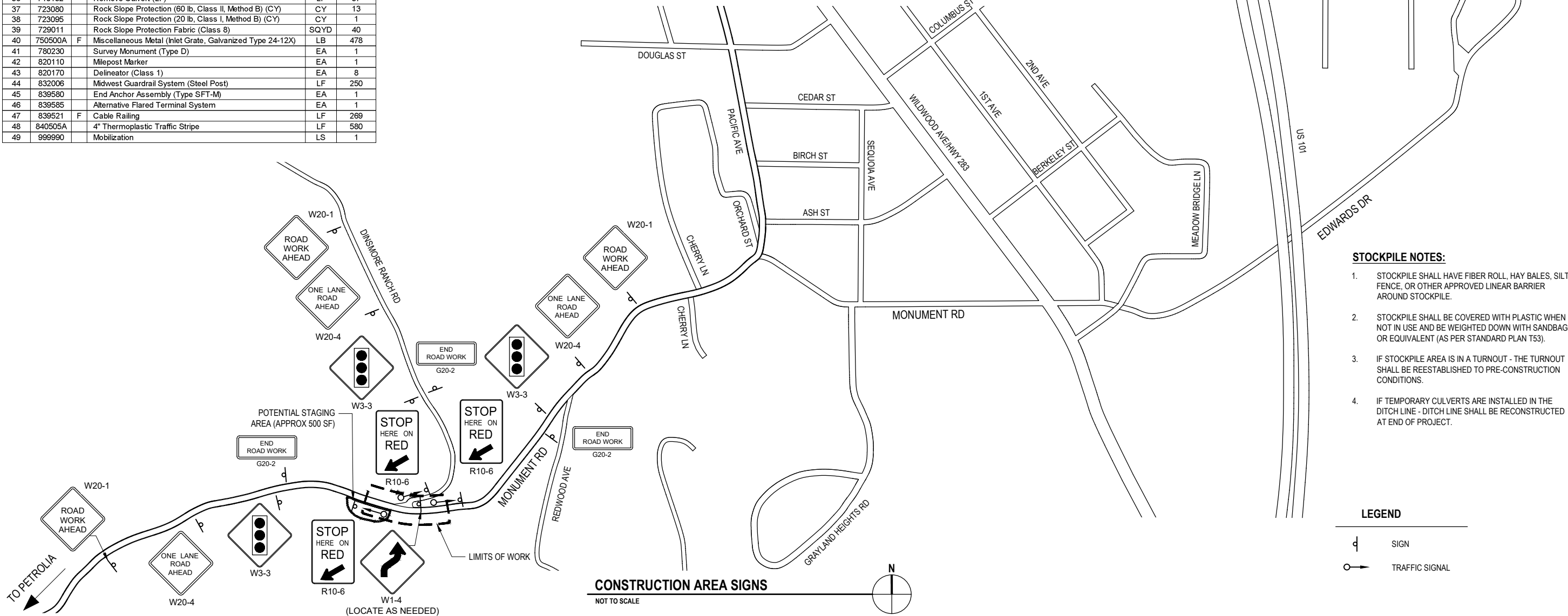
- ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CAMUTCD) AND CALTRANS 2018 STANDARD PLANS.
- EXACT SIGN LOCATIONS AND POSITIONS TO BE APPROVED BY THE ENGINEER.
- ALL WARNING SIGNS SHALL HAVE A BLACK LEGEND AND BORDER ON ORANGE BACKGROUND.
- ALTERNATIVE POST CONFIGURATION TO BE APPROVED BY COUNTY ENGINEER.
- REFER TO CAMUTCD FIGURE 6H-12 FOR LANE CLOSURE ON A TWO-LANE ROAD USING TRAFFIC CONTROL SIGNALS (TA-12).
- MAINTAIN ALL SIGNS THROUGHOUT DURATION OF CONSTRUCTION.
- MAINTAIN ONE TRAVEL LANE AT ALL TIMES.
- PROVIDE FLAGGERS AS REQUIRED TO ACCOMMODATE CONSTRUCTION.



TYPICAL STATIONARY CONSTRUCTION AREA SIGNS

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER & POST SIZE	NO. OF SIGNS
W1-4	36"x36"	HORIZONTAL ALIGNMENT	(1) 4"x4"	1
R10-6	24"x36"	STOP HERE ON RED	(1) 4"x4"	3
W3-3	36"x36"	SIGNAL WARNING	(1) 4"x4"	3
W20-4	36"x36"	ONE LANE ROAD AHEAD	(1) 4"x4"	3
W20-1	36"x36"	ROAD WORK AHEAD	(1) 4"x4"	3
G20-2	36"x18"	END ROAD WORK	(1) 4"x4"	3



STACKPILE NOTES:

- STACKPILE SHALL HAVE FIBER ROLL, HAY BALES, SILT FENCE, OR OTHER APPROVED LINEAR BARRIER AROUND STACKPILE.
- STACKPILE SHALL BE COVERED WITH PLASTIC WHEN NOT IN USE AND BE WEIGHTED DOWN WITH SANDBAGS OR EQUIVALENT (AS PER STANDARD PLAN T53).
- IF STACKPILE AREA IS IN A TURNOUT - THE TURNOUT SHALL BE REESTABLISHED TO PRE-CONSTRUCTION CONDITIONS.
- IF TEMPORARY CULVERTS ARE INSTALLED IN THE DITCH LINE - DITCH LINE SHALL BE RECONSTRUCTED AT END OF PROJECT.

LEGEND

- SIGN
- TRAFFIC SIGNAL

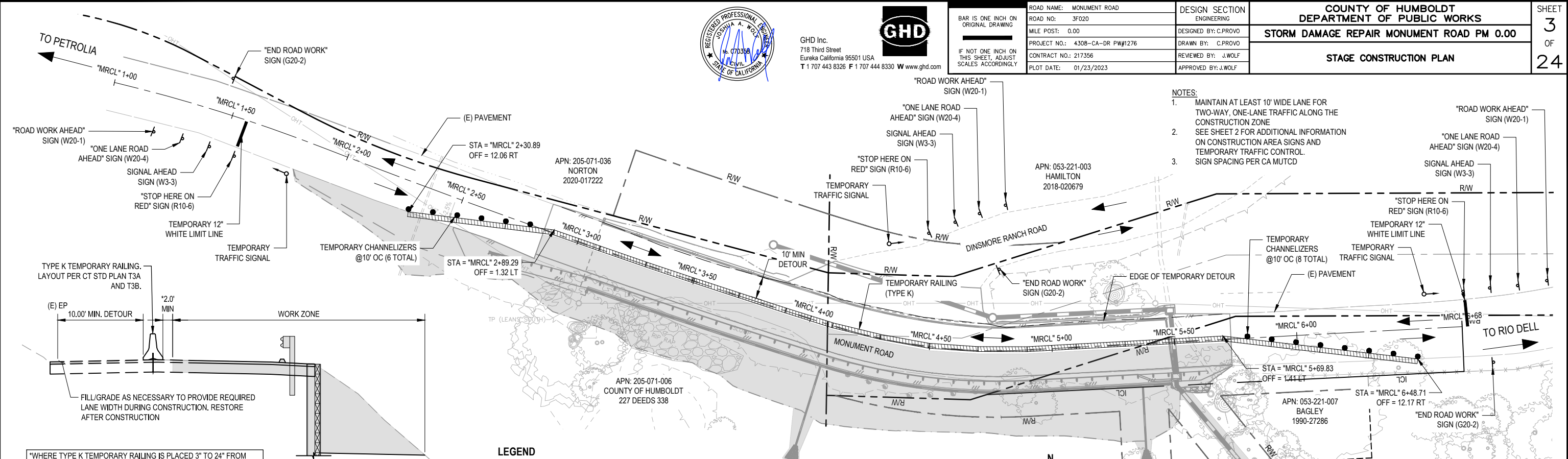


GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



ROAD NAME: MONUMENT ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: 3F020	DESIGNED BY: C.PROVO
MILE POST: 0.00	DRAWN BY: C.PROVO
PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: J.WOLF
CONTRACT NO.: 217356	APPROVED BY: J.WOLF
PLOT DATE: 01/23/2023	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 3 OF 24
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00	
STAGE CONSTRUCTION PLAN	

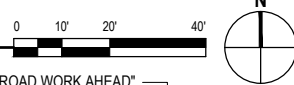


- NOTES:
1. MAINTAIN AT LEAST 10' WIDE LANE FOR TWO-WAY, ONE-LANE TRAFFIC ALONG THE CONSTRUCTION ZONE
 2. SEE SHEET 2 FOR ADDITIONAL INFORMATION ON CONSTRUCTION AREA SIGNS AND TEMPORARY TRAFFIC CONTROL. SIGN SPACING PER CA MUTCD
 - 3.

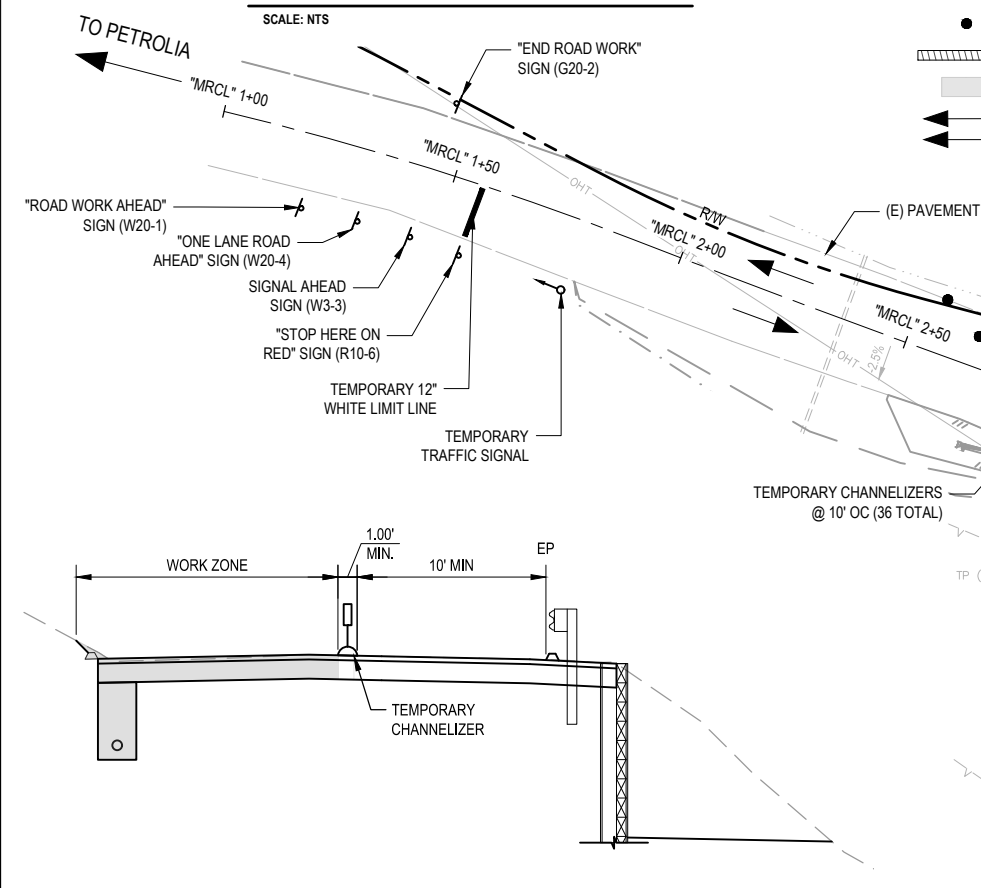
"WHERE TYPE K TEMPORARY RAILING IS PLACED 3" TO 24" FROM THE EDGE OF ROADWAY EXCAVATION, USE TWO CAPPED STAKES PER PANEL ALONG THE TRAFFIC SIDE. REFER TO CT STD PLAN T3B.

- LEGEND
- TEMPORARY 12" WHITE LIMIT LINE
 - CONSTRUCTION AREA SIGN
 - TEMPORARY TRAFFIC SIGNAL
 - TEMPORARY CHANNELIZER
 - ▨ TEMPORARY RAILING (TYPE K)
 - ▭ WORK AREA
 - ↔ TRAVEL DIRECTION(S)

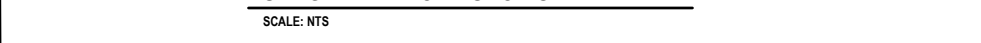
STAGE CONSTRUCTION - STAGE 1



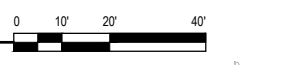
STAGE 1: TYPICAL SECTION



STAGE 2: TYPICAL SECTION



STAGE CONSTRUCTION - STAGE 2





GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME:	MONUMENT ROAD
ROAD NO.:	3F020
MILE POST:	0.00
PROJECT NO.:	4308-CA-DR PW#1276
CONTRACT NO.:	217356
PLOT DATE:	01/23/2023

DESIGN SECTION	ENGINEERING
DESIGNED BY:	C.PROVO
DRAWN BY:	C.PROVO
REVIEWED BY:	J.WOLF
APPROVED BY:	J.WOLF

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00	
SURVEY CONTROL PLAN	

SHEET
4
OF
24

Segment	Type	Length	Radius	Direction	Start Station	End Station
C1	CURVE	89.26	663.00		"MRCL" 1+00.00	"MRCL" 1+89.26
C2	CURVE	220.73	3211.00		"MRCL" 1+89.26	"MRCL" 4+09.99
C3	CURVE	79.26	223.00		"MRCL" 4+09.99	"MRCL" 4+89.25
L1	LINE	178.28	-	N86° 55' 34.59"E	"MRCL" 4+89.25	"MRCL" 6+67.52

Segment	Type	Length	Radius	Direction	Start Station	End Station
C4	CURVE	110.56	3227.58		"RWLOL" 3+00.00	"RWLOL" 4+10.56
C5	CURVE	85.15	239.58		"RWLOL" 4+10.56	"RWLOL" 4+95.71
L2	LINE	58.79	-	N86° 55' 48.81"E	"RWLOL" 4+95.71	"RWLOL" 5+54.50

SURVEY CONTROL NOTES

1. THE PURPOSE OF THIS SURVEY IS TO DETERMINE TOPOGRAPHY FOR A STORM DAMAGE REPAIR SITE AT PM 0.00 ON MONUMENT ROAD IN THE RIO DELL AREA. THE SITE HAS A ROADWAY FAILURE AND EVIDENCE OF PREVIOUS FAILURES AND PREVIOUS WOODEN RETAINING WALL/PILE CONSTRUCTION. THIS SURVEY REFLECTS CONDITIONS ON THE SITE AT TIME OF SURVEY; FIELD WORK PERFORMED ON 10/4/18, 11/19/18, AND 12/3/18.
2. UNDERGROUND UTILITIES RESEARCH WAS NOT PERFORMED. NO EVIDENCE OF UNDERGROUND UTILITIES WAS ENCOUNTERED IN THIS AREA OTHER THAN THE STORM DRAIN CROSSINGS SHOWN HEREON.
3. COORDINATES FOR THIS SURVEY ARE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83) ZONE 1, NAD 83, EPOCH 2010.00, US SURVEY FEET, BASED ON A RTK GPS CONTROL SURVEY PERFORMED ON 10/4/2018. THE MAPPING ANGLE IS 1 DEGREE 22 MINUTES 42 SECONDS- ROTATE BEARINGS COUNTERCLOCKWISE BY THIS ANGLE TO OBTAIN "TRUE" OR GEODETIC BEARINGS. GRID DISTANCES SHOWN SHOULD BE DIVIDED BY THE COMBINED SCALE FACTOR OF 0.99990976 TO OBTAIN GROUND DISTANCES. MAPPING ANGLE AND GRID SCALE FACTOR TAKEN AT NGS CONTROL POINT "101 HUM 53.32", PID "DH6338", WHICH IS THE BASIS OF THE HORIZONTAL CONTROL FOR THIS SITE, A HPGN CONTROL POINT LOCATED AT THE NORTHERLY RIO DELL OFFRAMP ON SOUTHBOUND US HIGHWAY 101.
4. VERTICAL DATUM IS NAVD88 ELEVATIONS, IN FEET, BASED ON A TIE TO NGS CONTROL POINT "Q 1086", PID "LV0395", WHICH IS A BRASS DISC LOCATED AT THE NORTH END OF THE EAGLE PRAIRIE BRIDGE IN THE CITY OF RIO DELL, HELD AT THE PUBLISHED ELEVATION OF 137.60 FEET.
5. BOUNDARY LINES SHOWN HEREON ARE BASED ON BOOK 38 OF SURVEYS, PAGE 12 PER TIES TO RECORD MONUMENTS SHOWN THEREON. THE WITNESS CORNER TO THE QUARTER CORNER BETWEEN SECTIONS 6 & 7, TOWNSHIP 1 NORTH, RANGE 1 EAST FALLS WITHIN THE PROJECT AREA AS SHOWN HEREON. NO RIGHT OF WAY IS SHOWN FOR MONUMENT ROAD WEST OF THE QUARTER SECTION LINE SHOWN HEREON AS THE COUNTY OWNS THIS PROPERTY. THE PORTION OF MONUMENT ROAD EAST OF THE QUARTER SECTION LINE FALLS WITHIN THE CITY OF RIO DELL. PROPERTY TO THE NORTH OF THIS PORTION OF MONUMENT ROAD ENDS AT THE NORTH LINE OF MONUMENT ROAD PER BOOK 153 OF DEEDS, PAGE 22; PROPERTY TO THE SOUTH OF THIS PORTION OF MONUMENT ROAD ENDS AT THE CENTERLINE OF MONUMENT ROAD PER BOOK 23 OF OFFICIAL RECORDS, PAGE 299. MEANING MONUMENT ROAD IS CONTAINED WITHIN A 25 FOOT FEE STRIP AND 25 FOOT EASEMENT. THE POSITION FOR THE 25 FEE STRIP AND 25 FOOT RIGHT OF WAY SHOWN HEREON DOES NOT MATCH THE POSITION SHOWN ON BOOK 53 OF SURVEYS, PAGES 98-101; THIS SURVEY HOLDS A COMMON POINT FOR THE NORTH LINE OF MONUMENT ROAD.
6. THE PILES/CUT OFF POLES SHOWN HEREON APPEAR TO BE REMNANTS OF A PREVIOUS WOODEN RETAINING WALL; ONLY A COUPLE HORIZONTAL MEMBERS REMAIN AND WERE VISIBLE. DEPTH OF THESE POLES AND ANY WALL UNDER THE GROUND SURFACE IS UNKNOWN.
7. THIS SITE, ESPECIALLY THE PORTION FALLING WITHIN THE CITY OF RIO DELL, APPEARS TO BE THE SITE OF AN INFORMAL LANDFILL. LARGE AMOUNTS OF TRASH WERE FOUND ONSITE, AND ADDITIONAL TRASH WAS DUMPED DURING THE COURSE OF THE SURVEY.
8. THE BRASS CAP LOCATED IN THE ROADWAY ON THE PROJECT SITE, POINT #101, IS A WITNESS CORNER TO THE QUARTER CORNER BETWEEN SECTIONS 6 & 7, TOWNSHIP 1 NORTH, RANGE 1 EAST. A PRE- AND POST-CONSTRUCTION CORNER RECORD SHOULD BE PREPARED BEFORE ANY DISTURBANCE TO THIS MONUMENT.
9. TREES 12" AND LARGER LOCATED WITHIN THE PROJECT SITE ARE SHOWN HEREON. SMALLER TREES AND LARGE QUANTITIES OF POISON OAK EXIST ONSITE.

UNDERGROUND UTILITY NOTE

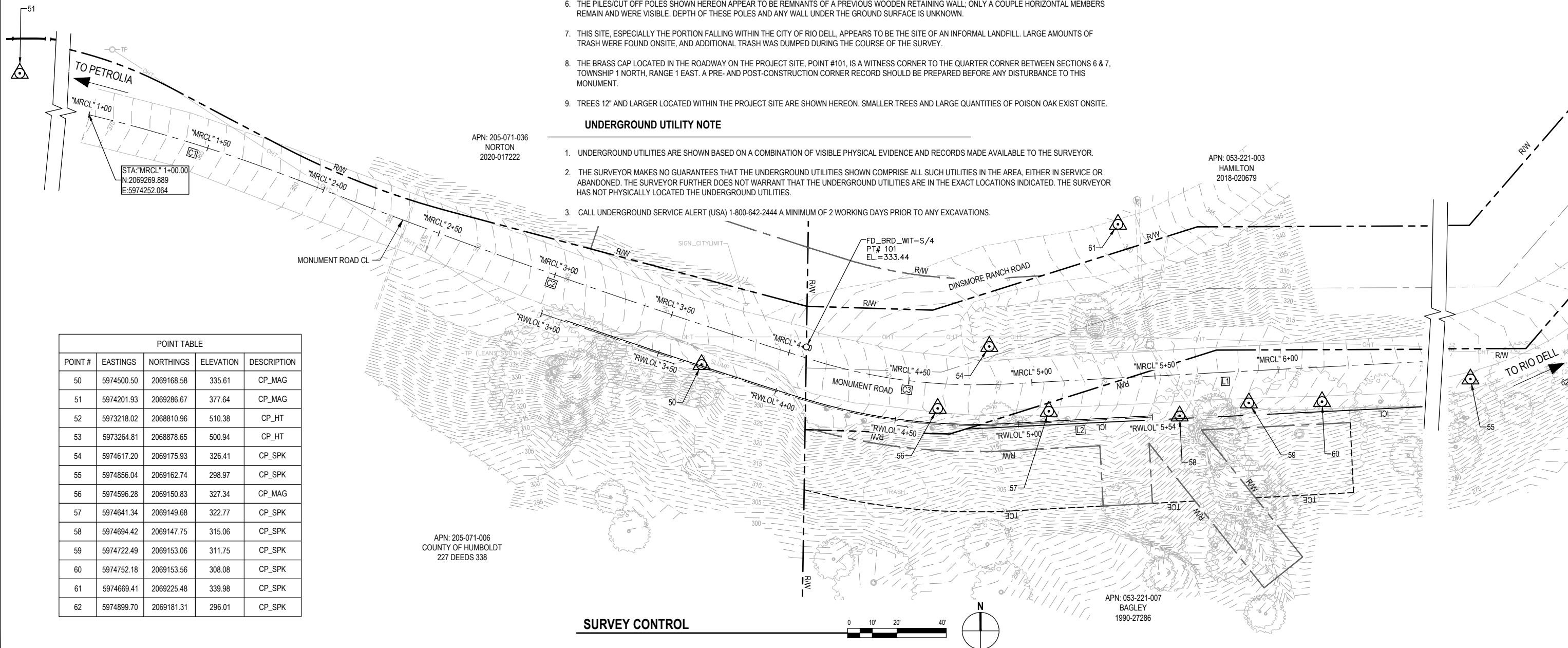
1. UNDERGROUND UTILITIES ARE SHOWN BASED ON A COMBINATION OF VISIBLE PHYSICAL EVIDENCE AND RECORDS MADE AVAILABLE TO THE SURVEYOR.
2. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES ARE IN THE EXACT LOCATIONS INDICATED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
3. CALL UNDERGROUND SERVICE ALERT (USA) 1-800-642-2444 A MINIMUM OF 2 WORKING DAYS PRIOR TO ANY EXCAVATIONS.

GENERAL NOTES

1. CONTRACTOR MUST COMPLY WITH BUSINESS AND PROFESSIONS CODE SECTION 8771 (b) REGARDING REFERENCING, PRESERVING AND RECONSTRUCTING MONUMENTS, WHETHER OR NOT MONUMENTS ARE SHOWN IN THESE PLANS.
2. IF MONUMENT IS DAMAGED BY CONTRACTORS OPERATIONS, CONTRACTOR SHALL REPLACE MONUMENT AT CONTRACTORS EXPENSE.

LEGEND

- TEMPORARY CONTROL POINT
- MATTOLE ROAD R/W
- WALL AND DRAINAGE R/W
- TCE
- ALIGNMENT LINE
- IMPLIED COMMON LAW DEDICATION LINE



APN: 205-071-036
NORTON
2020-017222

APN: 053-221-003
HAMILTON
2018-020679

APN: 205-071-006
COUNTY OF HUMBOLDT
227 DEEDS 338

APN: 053-221-007
BAGLEY
1990-27286

POINT #	EASTINGS	NORTHINGS	ELEVATION	DESCRIPTION
50	5974500.50	2069168.58	335.61	CP_MAG
51	5974201.93	2069286.67	377.64	CP_MAG
52	5973218.02	2068810.96	510.38	CP_HT
53	5973264.81	2068878.65	500.94	CP_HT
54	5974617.20	2069175.93	326.41	CP_SPK
55	5974856.04	2069162.74	298.97	CP_SPK
56	5974596.28	2069150.83	327.34	CP_MAG
57	5974641.34	2069149.68	322.77	CP_SPK
58	5974694.42	2069147.75	315.06	CP_SPK
59	5974722.49	2069153.06	311.75	CP_SPK
60	5974752.18	2069153.56	308.08	CP_SPK
61	5974669.41	2069225.48	339.98	CP_SPK
62	5974899.70	2069181.31	296.01	CP_SPK

SURVEY CONTROL



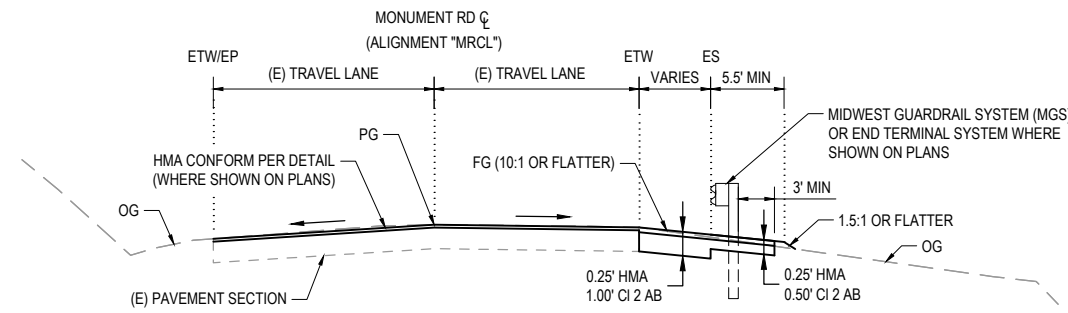


GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com

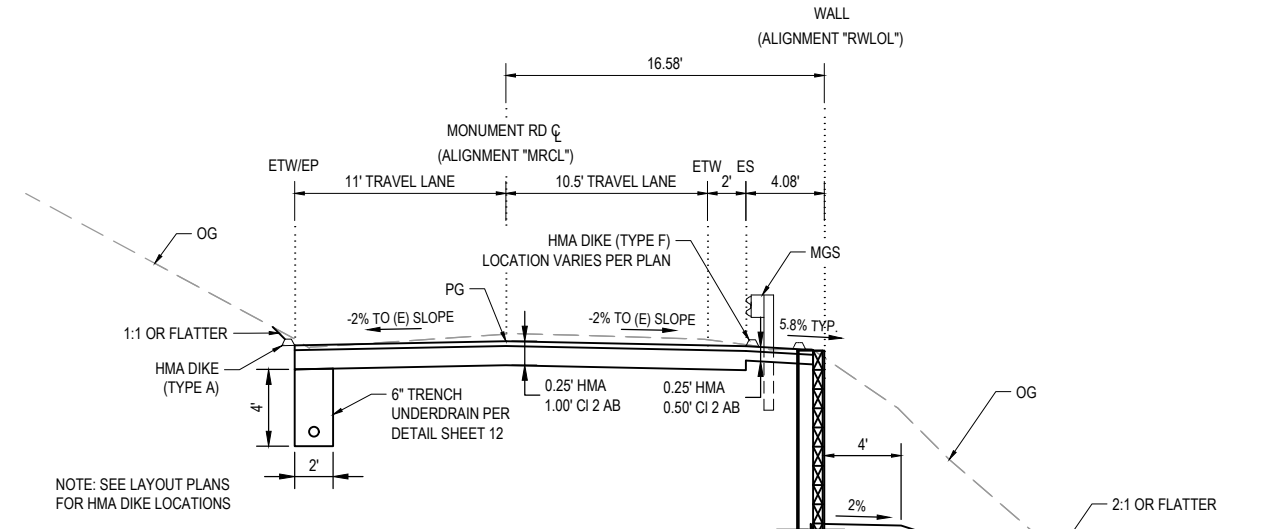


ROAD NAME: MONUMENT ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: 3F020	DESIGNED BY: C.PROVO
MILE POST: 0.00	DRAWN BY: C.PROVO
PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: J.WOLF
CONTRACT NO.: 217356	APPROVED BY: J.WOLF
PLOT DATE: 01/23/2023	

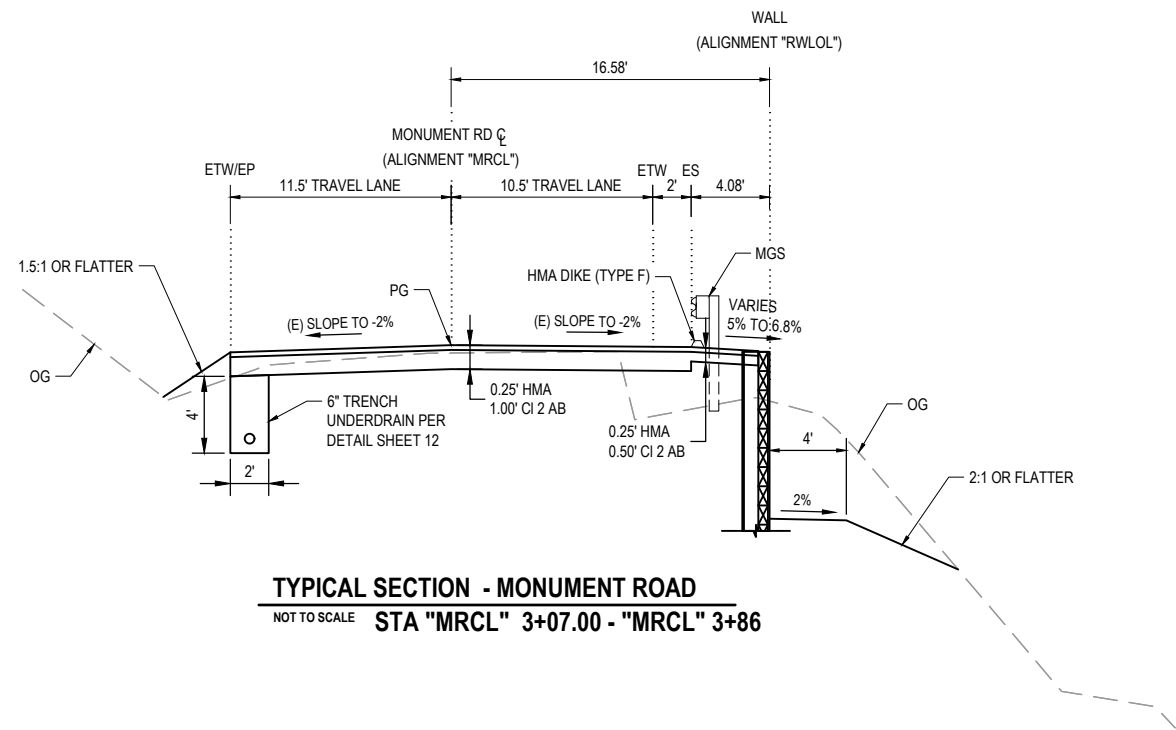
COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 5 OF 24
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00	
TYPICAL ROADWAY SECTIONS	



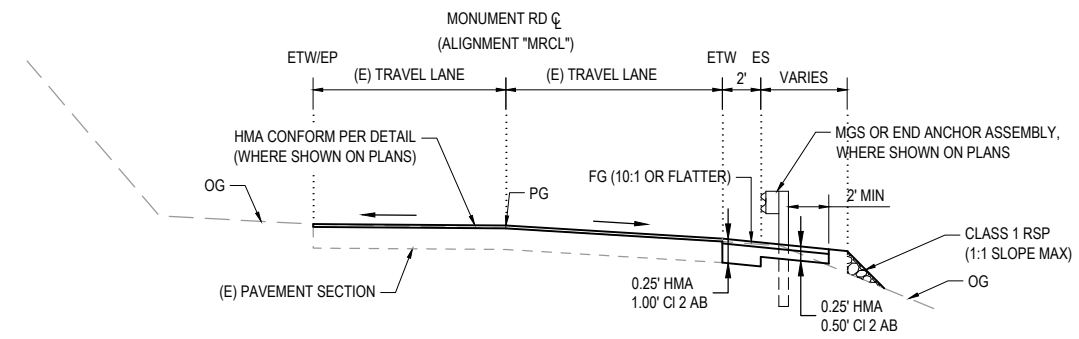
TYPICAL SECTION - MONUMENT ROAD
NOT TO SCALE STA "MRCL" 2+30.04 - "MRCL" 3+07.00



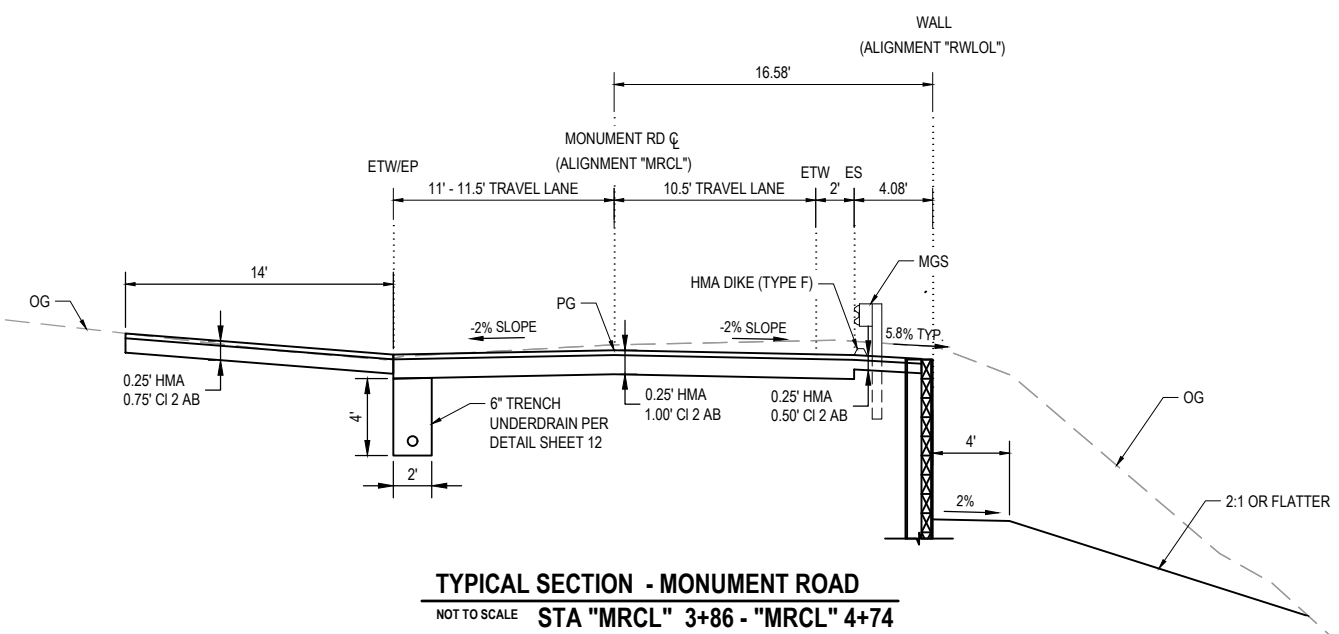
TYPICAL SECTION - MONUMENT ROAD
NOT TO SCALE STA "MRCL" 4+74 - "MRCL" 5+48.04



TYPICAL SECTION - MONUMENT ROAD
NOT TO SCALE STA "MRCL" 3+07.00 - "MRCL" 3+86



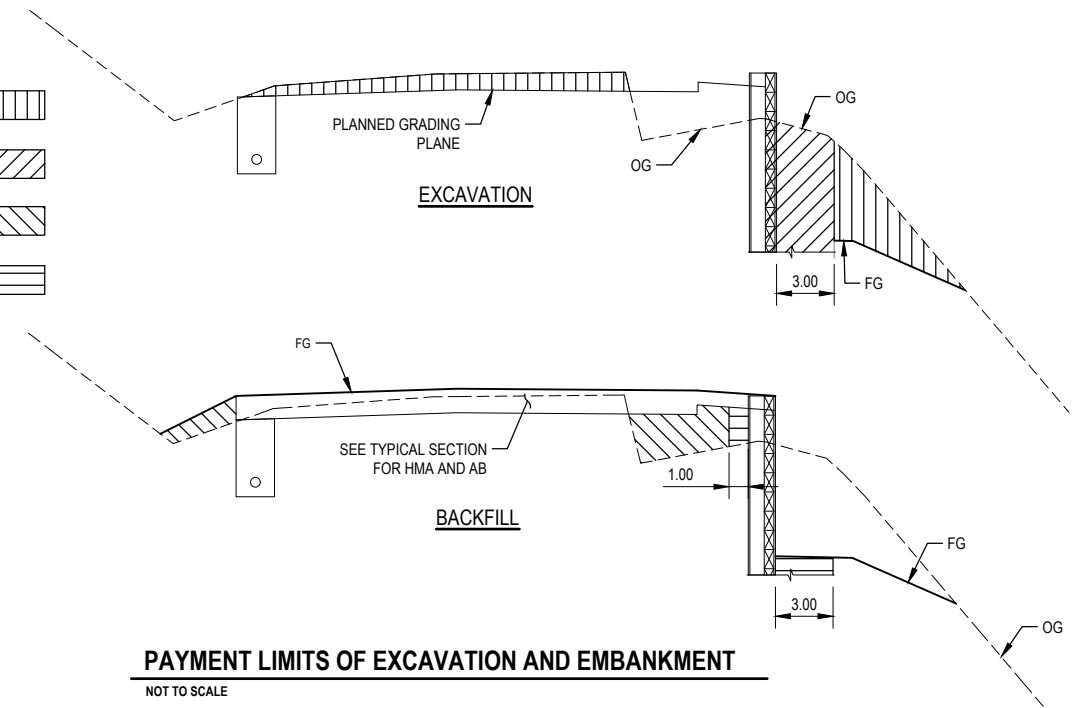
TYPICAL SECTION - MONUMENT ROAD
NOT TO SCALE STA "MRCL" 5+48.04 - "MRCL" 5+60.54



TYPICAL SECTION - MONUMENT ROAD
NOT TO SCALE STA "MRCL" 3+86 - "MRCL" 4+74

LEGEND

- ROADWAY EXCAVATION [Hatched pattern]
- STRUCTURE EXCAVATION [Diagonal hatched pattern]
- EMBANKMENT [Diagonal hatched pattern]
- STRUCTURE BACKFILL [Horizontal hatched pattern]



PAYMENT LIMITS OF EXCAVATION AND EMBANKMENT
NOT TO SCALE



GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



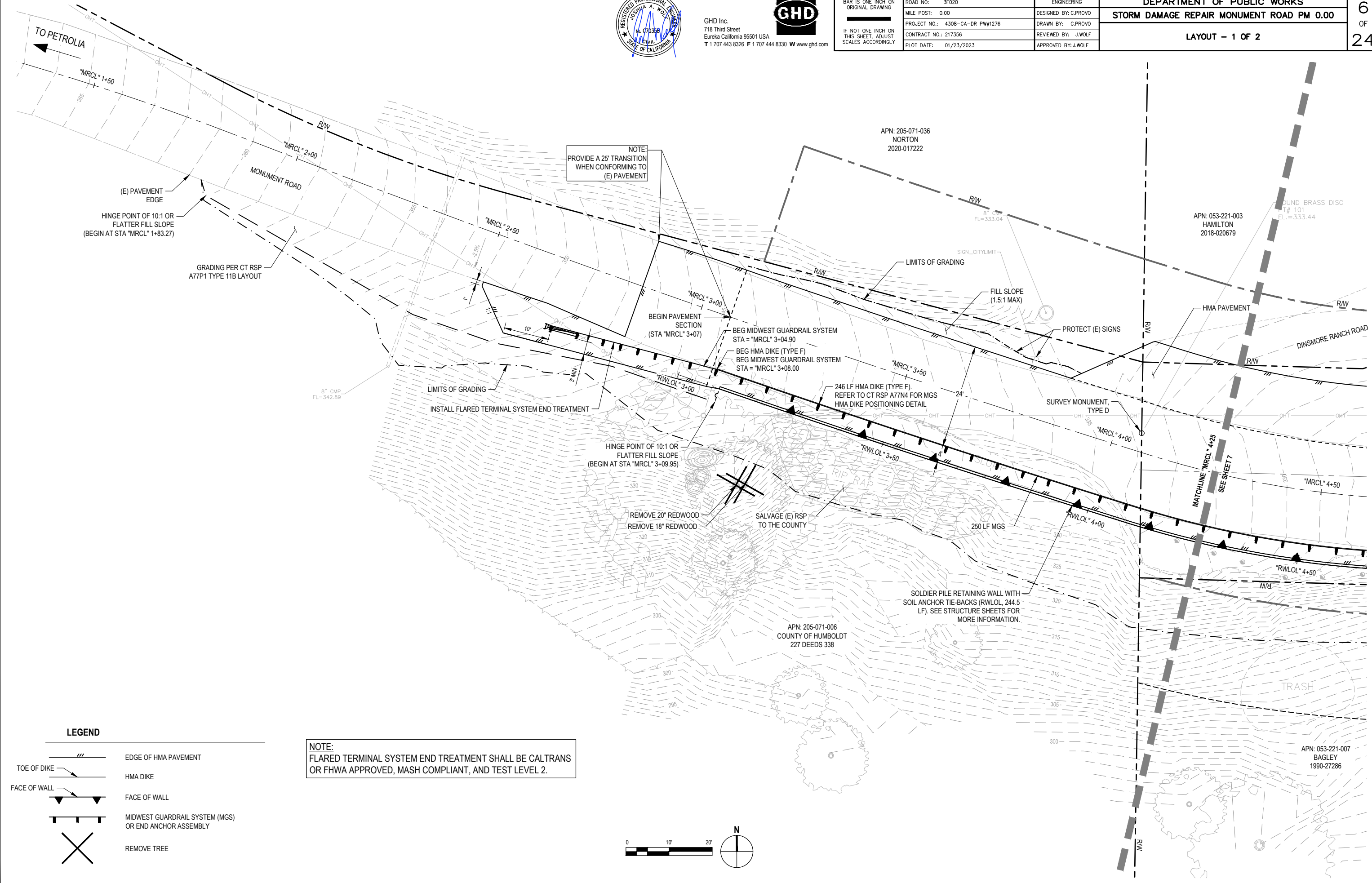
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME:	MONUMENT ROAD
ROAD NO.:	3F020
MILE POST:	0.00
PROJECT NO.:	4308-CA-DR PW#1276
CONTRACT NO.:	217356
PLOT DATE:	01/23/2023

DESIGN SECTION	ENGINEERING
DESIGNED BY:	C.PROVO
DRAWN BY:	C.PROVO
REVIEWED BY:	J.WOLF
APPROVED BY:	J.WOLF

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00	
LAYOUT - 1 OF 2	

SHEET
6
OF
24





GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



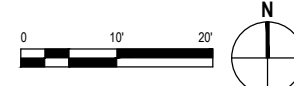
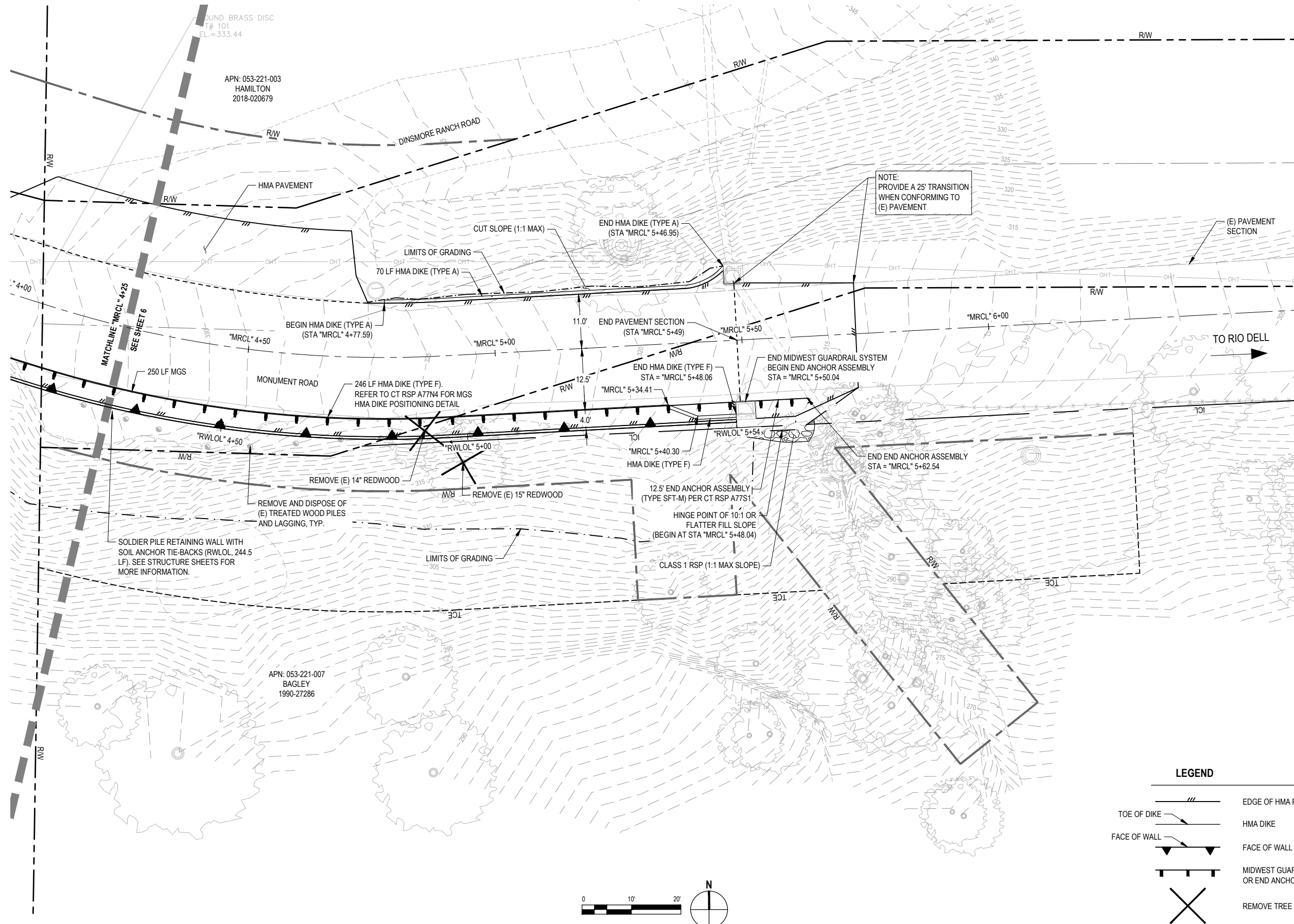
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME:	MONUMENT ROAD
ROAD NO.:	3F020
MILE POST:	0.00
PROJECT NO.:	4308-CA-DR PW#1276
CONTRACT NO.:	217356
PLOT DATE:	01/23/2023

DESIGN SECTION	ENGINEERING
DESIGNED BY:	C.PROVO
DRAWN BY:	C.PROVO
REVIEWED BY:	J.WOLF
APPROVED BY:	J.WOLF

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00
LAYOUT - 2 OF 2

SHEET
7
OF
24





GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



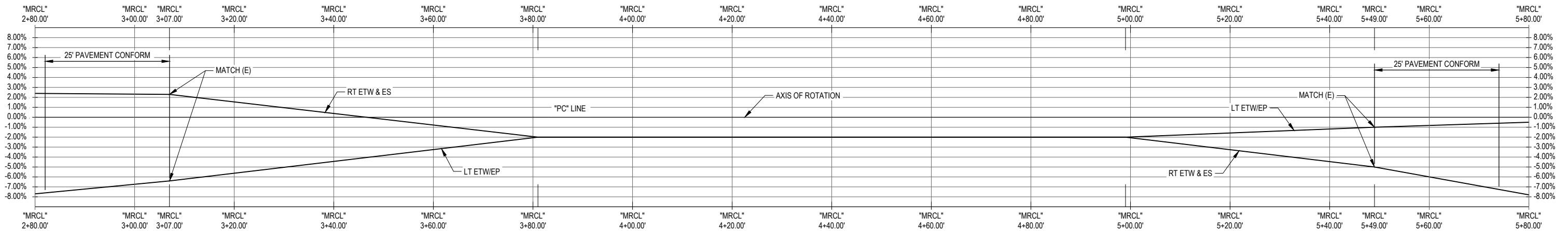
ROAD NAME: MONUMENT ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: 3F020	DESIGNED BY: C.PROVO
MILE POST: 0.00	DRAWN BY: C.PROVO
PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: J.WOLF
CONTRACT NO.: 217356	APPROVED BY: J.WOLF
PLOT DATE: 01/23/2023	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 8 OF 24
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00	
PROFILE AND SUPERELEVATION	

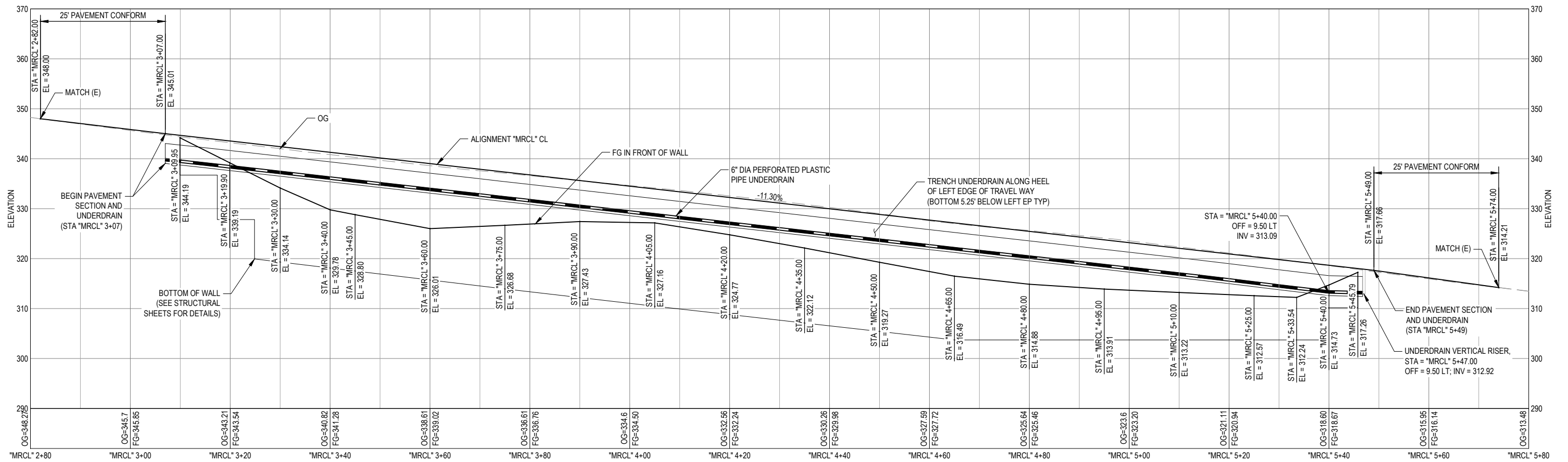
ROADWAY GEOMETRY					
STATION	LEFT TRAVEL LANE CROSS SLOPE	LEFT ETW/EP ELEVATION	CROWN ELEVATION	RIGHT ES ELEVATION	RIGHT TRAVEL LANE CROSS SLOPE
"MRCL" 3+07	-6.40%	344.27	345.01	345.30	2.30%
"MRCL" 3+81	-2.00%	336.42	344.22	336.40	-2.00%
"MRCL" 4+99	-2.00%	323.08	338.01	323.06	-2.00%
"MRCL" 5+49	-1.00%	317.55	317.66	317.04	-5.00%

Note: Negative cross slopes indicate downwards sloping away from centerline

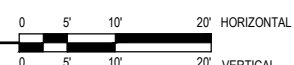
ROADWAY ELEVATIONS



MONUMENT ROAD PM 0.00 SUPERELEVATION



MONUMENT ROAD PM 0.00 PROFILE VIEW



NOTE: THIS PLAN IS ACCURATE FOR DRAINAGE AND UTILITIES ONLY

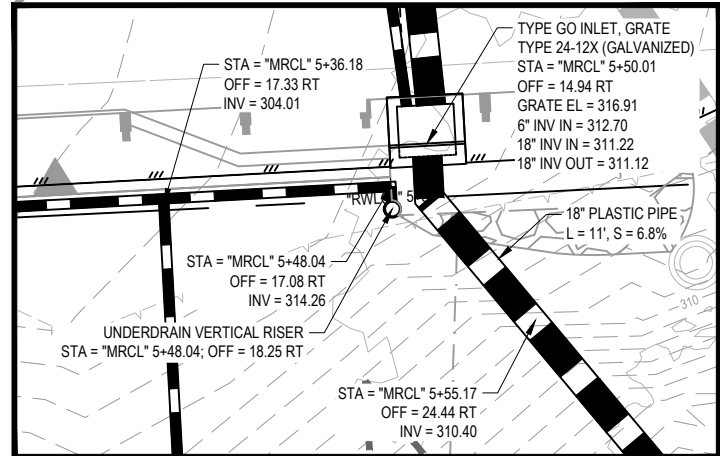
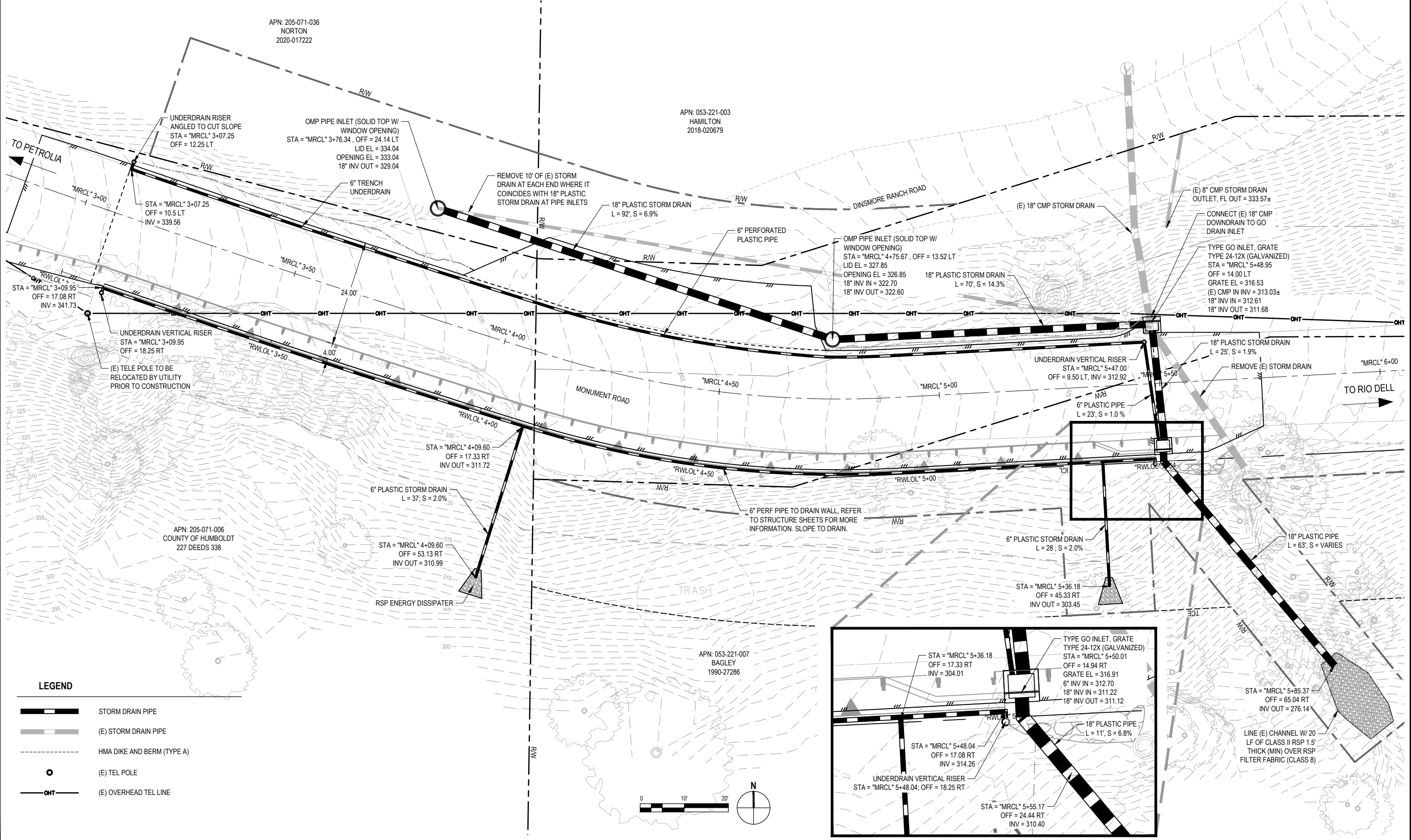


GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



BAR IS ONE INCH ON ORIGINAL DRAWING	ROAD NAME: MONUMENT ROAD	DESIGN SECTION: ENGINEERING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NO: 3F020	DESIGNED BY: C.PROVO
	MILE POST: 0.00	DRAWN BY: C.PROVO
	PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: J.WOLF
	CONTRACT NO.: 217356	APPROVED BY: J.WOLF
	PLOT DATE: 01/23/2023	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 9 OF 24
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00	
DRAINAGE AND UTILITIES	





GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com

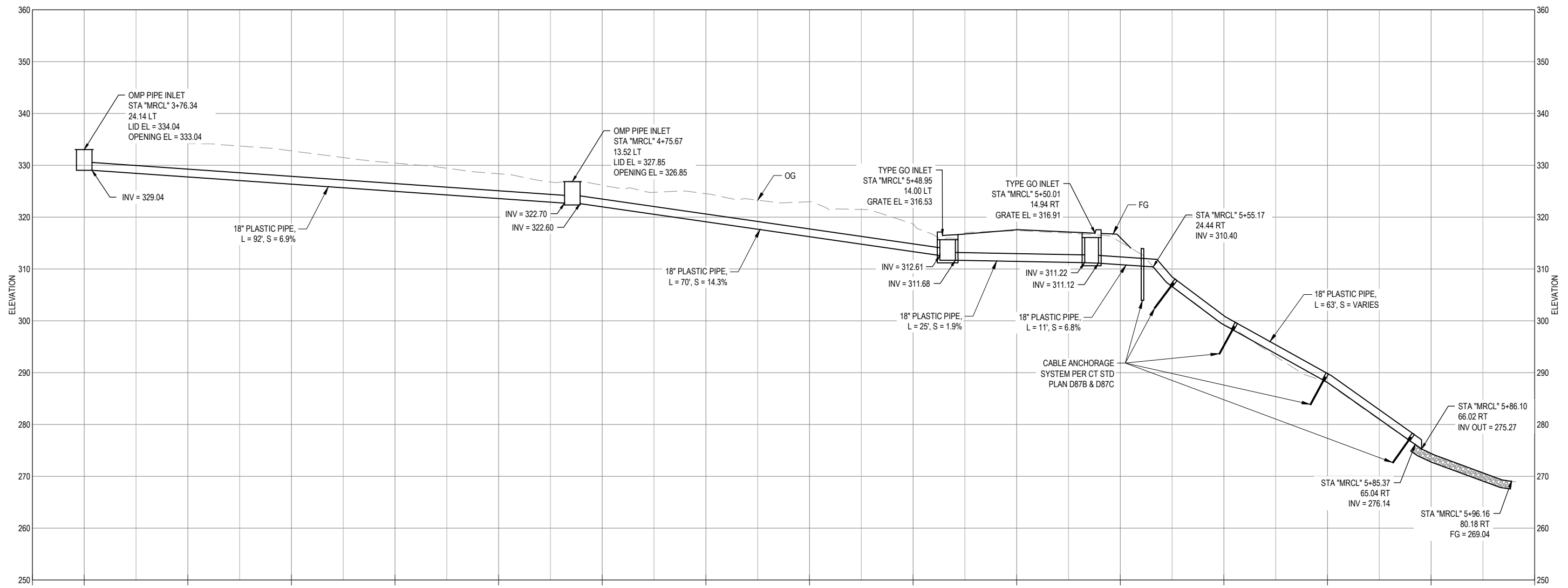


BAR IS ONE INCH ON ORIGINAL DRAWING	ROAD NAME: MONUMENT ROAD
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NO: 3F020
	MILE POST: 0.00
	PROJECT NO.: 4308-CA-DR PW#1276
	CONTRACT NO.: 217356
	PLOT DATE: 01/23/2023

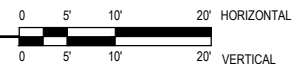
DESIGN SECTION ENGINEERING
DESIGNED BY: C.PROVO
DRAWN BY: C.PROVO
REVIEWED BY: J.WOLF
APPROVED BY: J.WOLF

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00
DRAINAGE PROFILE

SHEET
10
OF
24



18" STORM DRAIN SYSTEM PROFILE



NOTE: THIS PLAN IS ACCURATE FOR EROSION CONTROL ONLY



GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



ROAD NAME: MONUMENT ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: 3F020	DESIGNED BY: C.PROVO
MILE POST: 0.00	DRAWN BY: C.PROVO
PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: J.WOLF
CONTRACT NO.: 217356	APPROVED BY: J.WOLF
PLOT DATE: 01/23/2023	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 11 OF 24
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00	
EROSION CONTROL	

APN: 053-221-003
HAMILTON
2018-020679



APN: 205-071-006
COUNTY OF HUMBOLDT
227 DEEDS 338

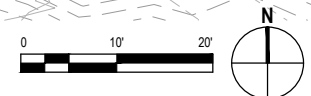
APN: 053-221-007
BAGLEY
1990-27286

APN: 205-071-036
NORTON
2020-017222

APN: 205-071-006
COUNTY OF HUMBOLDT
227 DEEDS 338

LEGEND

- HAND SOWN SEED UNDER ROLLED EROSION CONTROL PRODUCT
- TEMPORARY SILT FENCE
- FIBER ROLLS
- TEMPORARY DRAINAGE INLET PROTECTION



NOTE: THIS PLAN IS ACCURATE FOR
SIGNING AND STRIPING ONLY

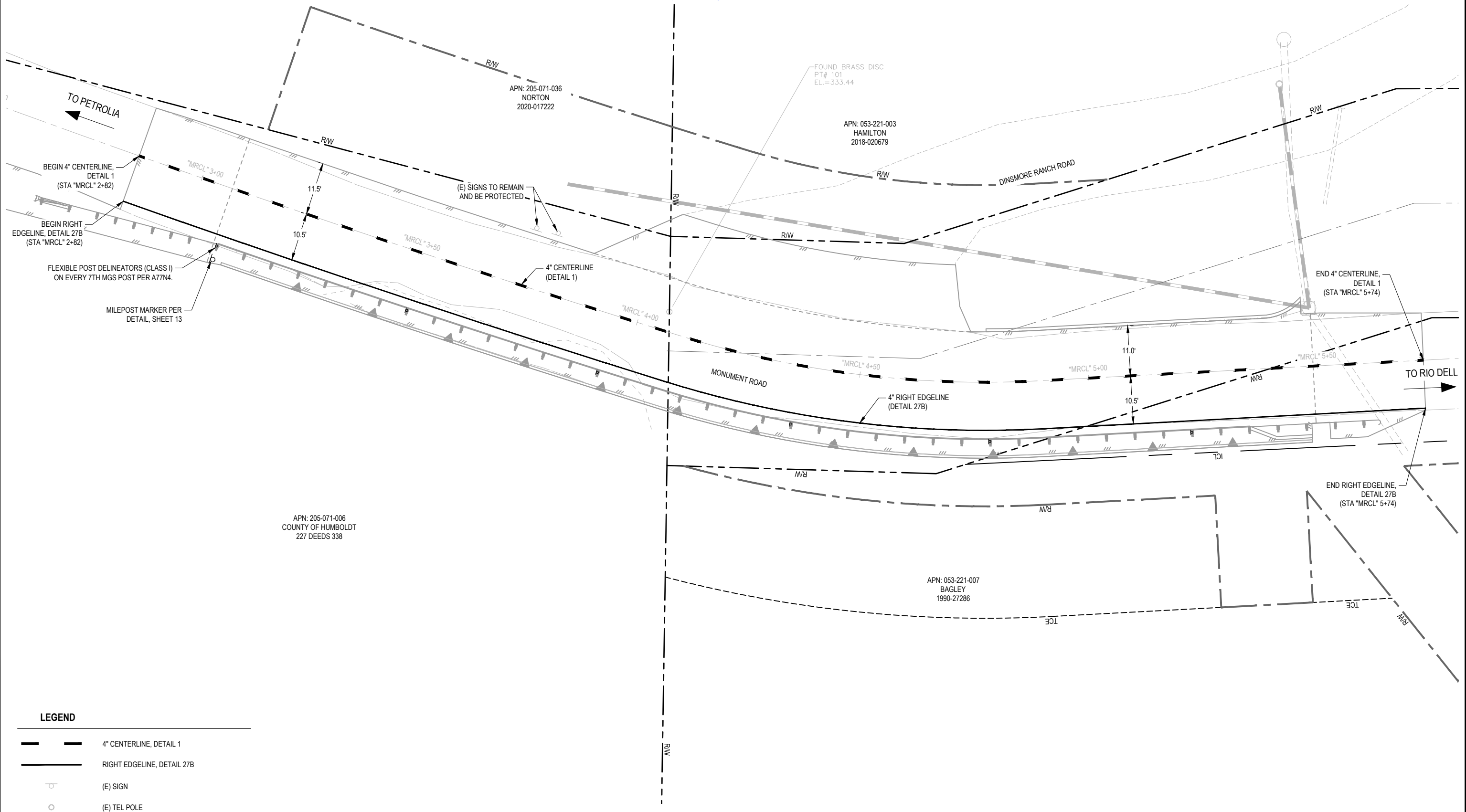


GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



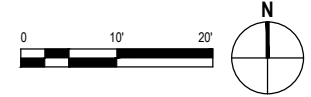
ROAD NAME: MONUMENT ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: 3F020	DESIGNED BY: C.PROVO
MILE POST: 0.00	DRAWN BY: C.PROVO
PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: J.WOLF
CONTRACT NO.: 217356	APPROVED BY: J.WOLF
PLOT DATE: 01/23/2023	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 12 OF 24
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00	
SIGNING AND STRIPING	



LEGEND

- 4" CENTERLINE, DETAIL 1
- RIGHT EDGELINE, DETAIL 27B
- (E) SIGN
- (E) TEL POLE





GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



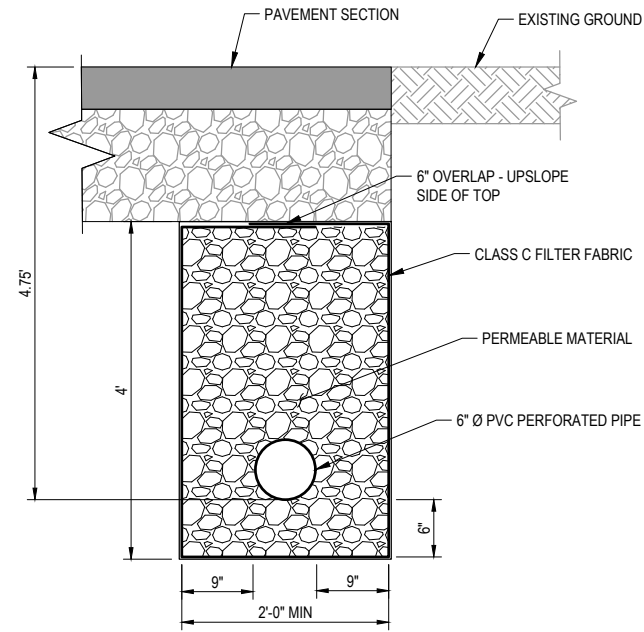
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME:	MONUMENT ROAD
ROAD NO.:	3F020
MILE POST:	0.00
PROJECT NO.:	4308-CA-DR PW#1276
CONTRACT NO.:	217356
PLOT DATE:	01/23/2023

DESIGN SECTION	ENGINEERING
DESIGNED BY:	C.PROVO
DRAWN BY:	C.PROVO
REVIEWED BY:	J.WOLF
APPROVED BY:	J.WOLF

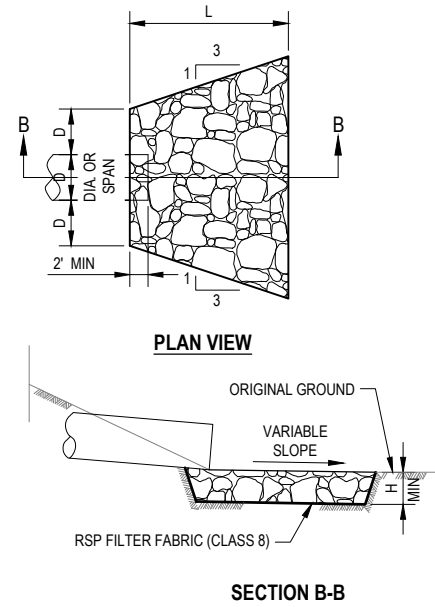
COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00
CONSTRUCTION DETAILS

SHEET
13
OF
24



TYPICAL TRENCH UNDERDRAIN

NOT TO SCALE

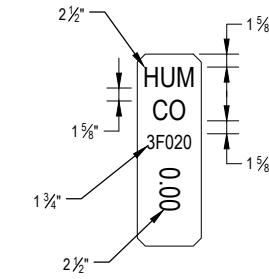


CULVERT SIZE D (inches)	RSP CLASS	LENGTH OF APRON L (feet)	DEPTH OF APRON H (feet)
6	2	6	1.5

- NOTE:**
- EXCAVATION FOR PLACEMENT OF RSP WILL NOT BE MEASURED FOR PAYMENT.

RSP ENERGY DISSIPATOR

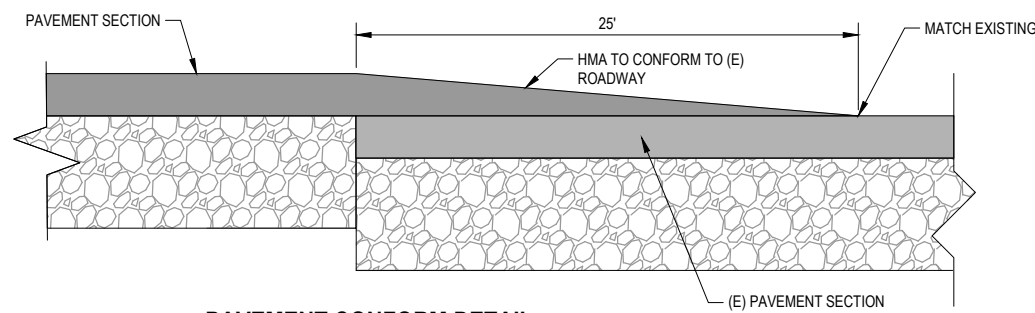
NOT TO SCALE



- NOTES:**
- MILEPOST MARKER SIZE PER CALTRANS A73B.
 - METAL POST PER CALTRANS A73B.

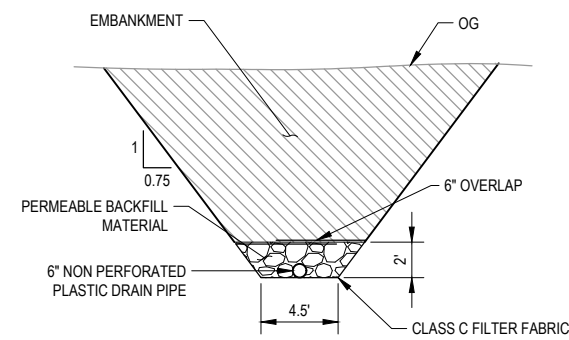
HIGHWAY MILEPOST MARKER LETTERING DETAIL

NOT TO SCALE



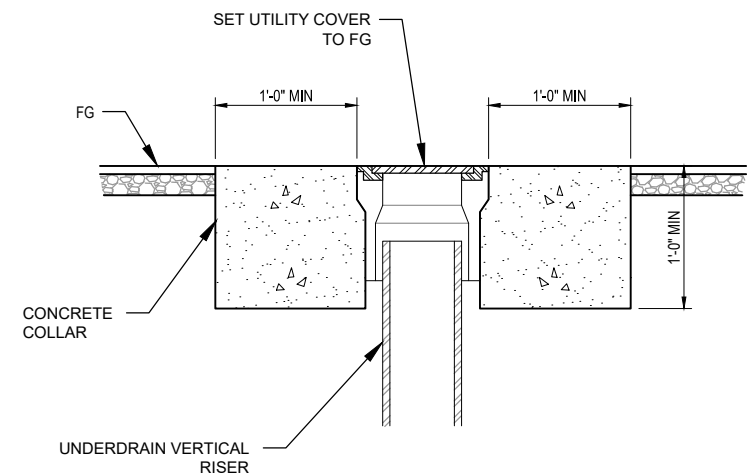
PAVEMENT CONFORM DETAIL

NOT TO SCALE



SUBDRAIN OUTLET DETAIL

NOT TO SCALE



UNDERDRAIN RISER COVER AND CONCRETE COLLAR DETAIL

NOT TO SCALE



GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



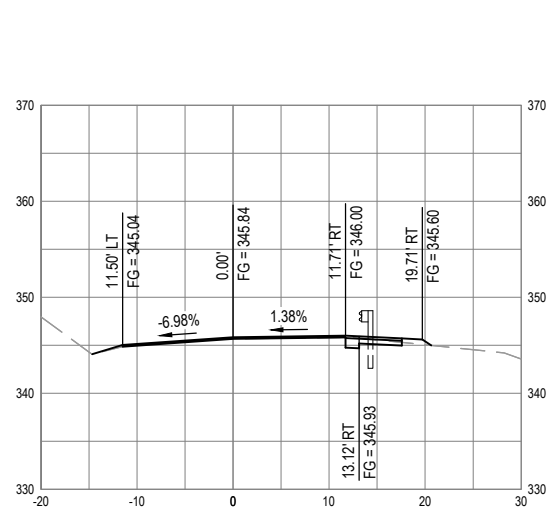
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME:	MONUMENT ROAD
ROAD NO.:	3F020
MILE POST:	0.00
PROJECT NO.:	4308-CA-DR PW#1276
CONTRACT NO.:	217356
PLOT DATE:	01/23/2023

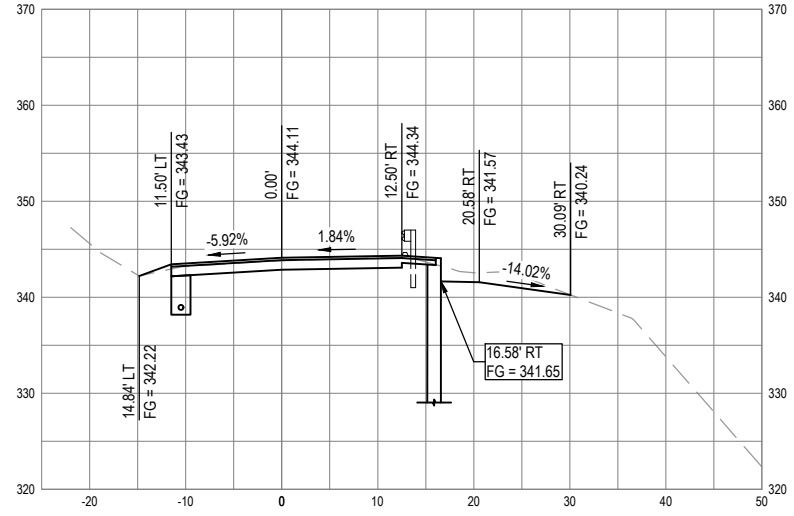
DESIGN SECTION	ENGINEERING
DESIGNED BY:	C.PROVO
DRAWN BY:	C.PROVO
REVIEWED BY:	J.WOLF
APPROVED BY:	J.WOLF

COUNTY OF HUMBOLDT
DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00
ROADWAY CROSS SECTIONS - 1 OF 3

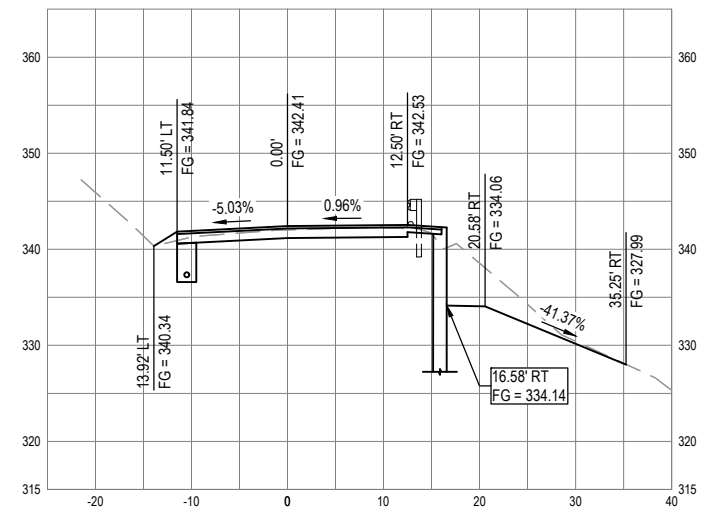
SHEET 14 OF 24



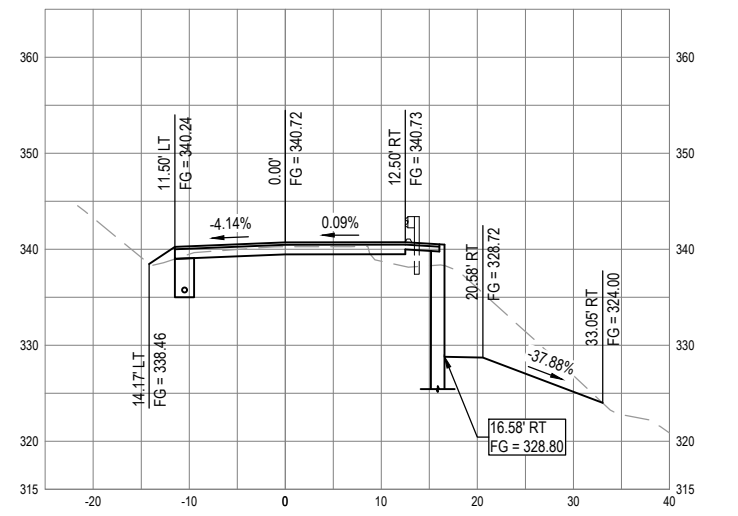
SECTION - STA "MRCL" 3+00



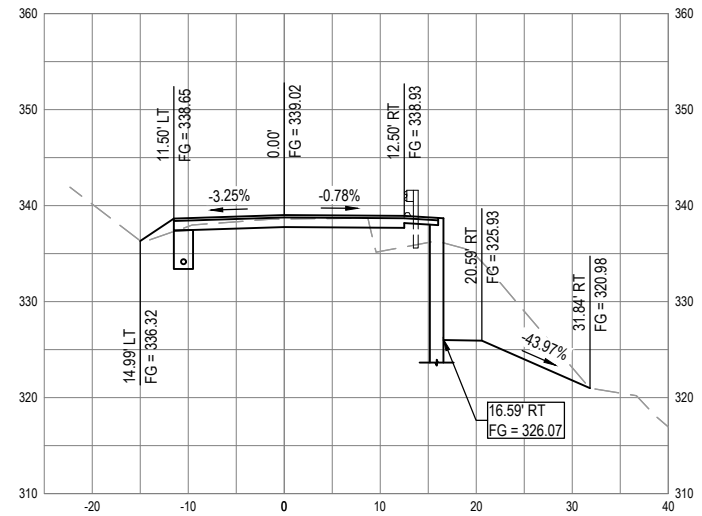
SECTION - STA "MRCL" 3+15



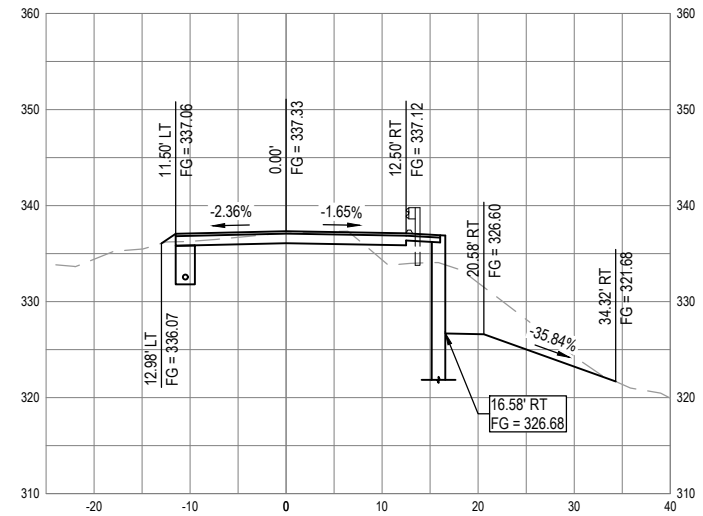
SECTION - STA "MRCL" 3+30



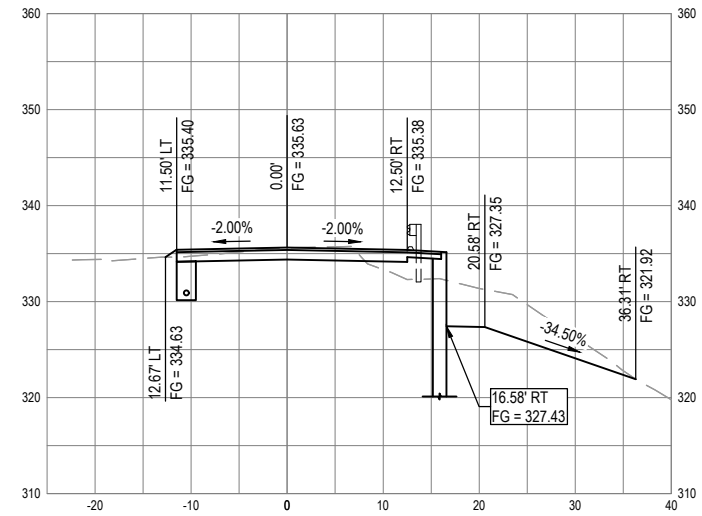
SECTION - STA "MRCL" 3+45



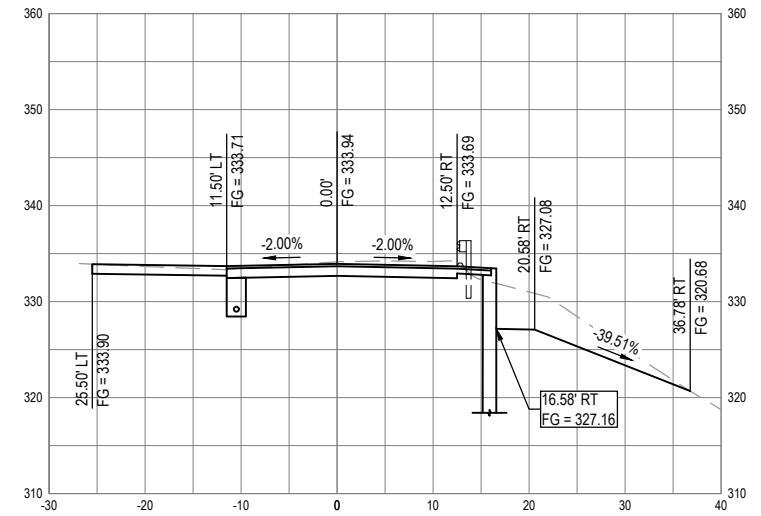
SECTION - STA "MRCL" 3+60



SECTION - STA "MRCL" 3+75



SECTION - STA "MRCL" 3+90



SECTION - STA "MRCL" 4+05



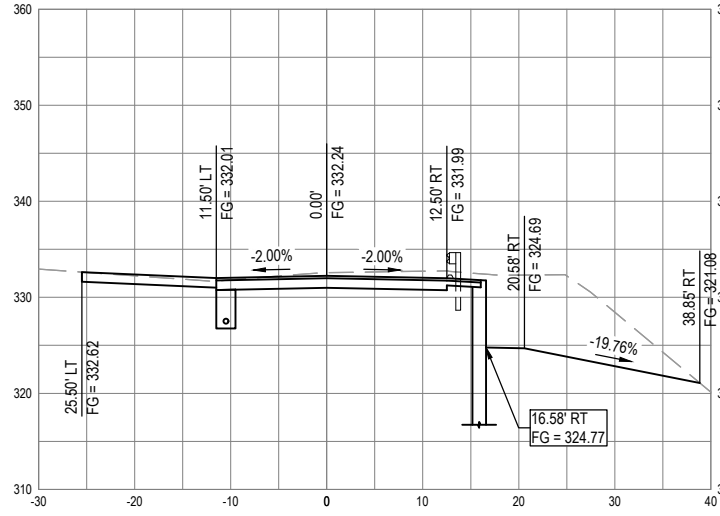
GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



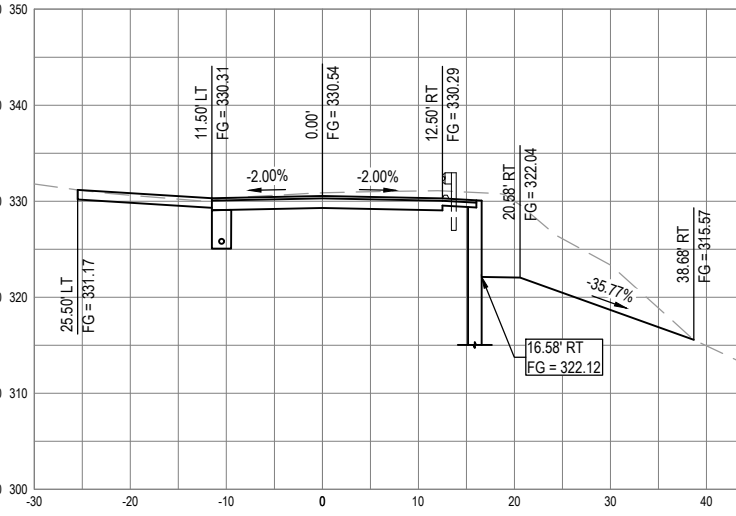
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME: MONUMENT ROAD
ROAD NO: 3F020
MILE POST: 0.00
PROJECT NO.: 4308-CA-DR PW#1276
CONTRACT NO.: 217356
PLOT DATE: 01/23/2023

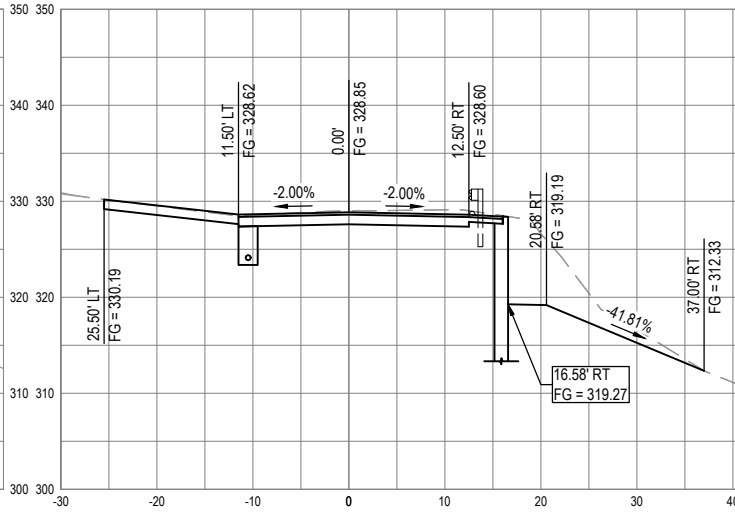
DESIGN SECTION ENGINEERING
DESIGNED BY: C.PROVO
DRAWN BY: C.PROVO
REVIEWED BY: J.WOLF
APPROVED BY: J.WOLF



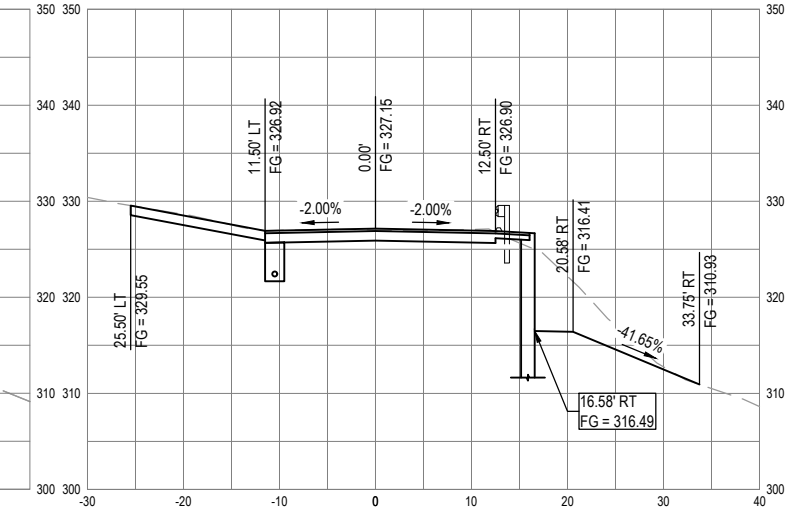
SECTION - STA "MRCL" 4+20



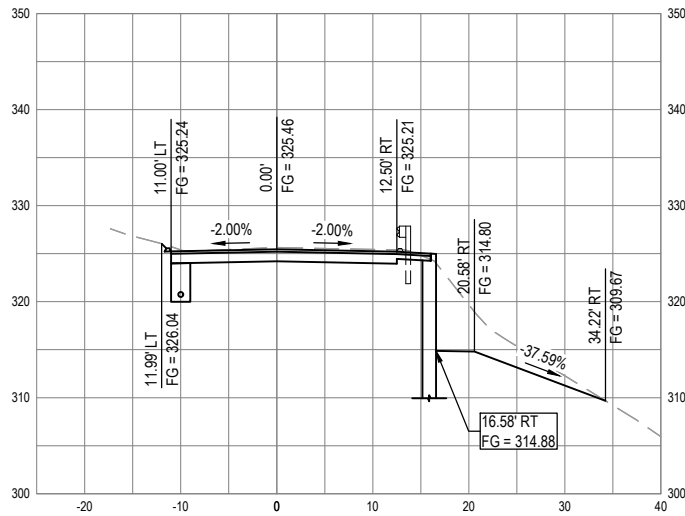
SECTION - STA "MRCL" 4+35



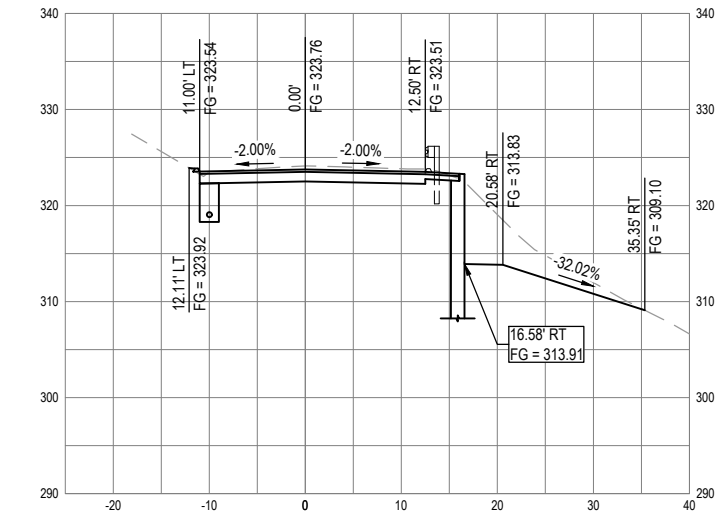
SECTION - STA "MRCL" 4+50



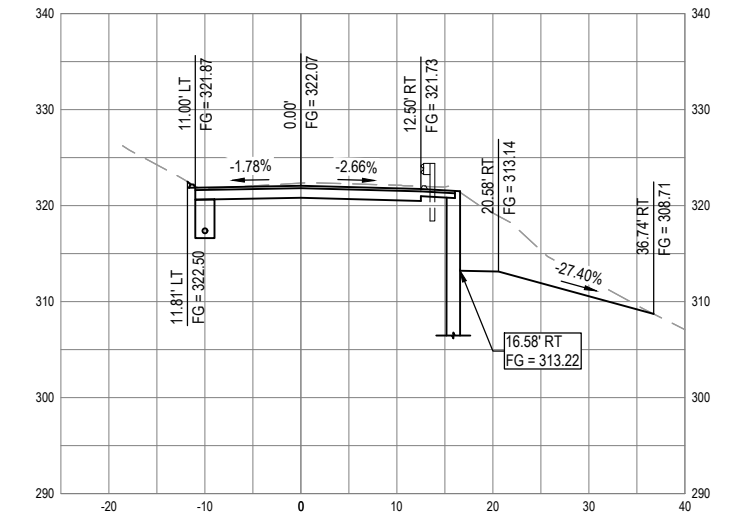
SECTION - STA "MRCL" 4+65



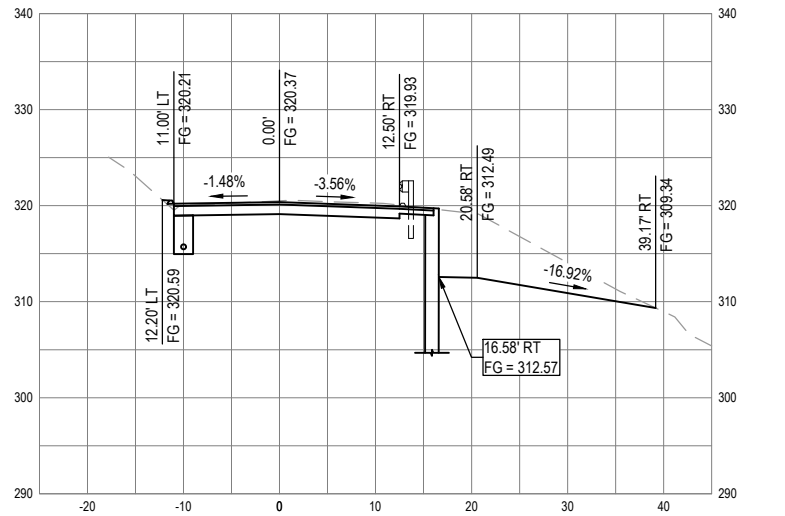
SECTION - STA "MRCL" 4+80



SECTION - STA "MRCL" 4+95



SECTION - STA "MRCL" 5+10



SECTION - STA "MRCL" 5+25



GHD Inc.
718 Third Street
Eureka California 95501 USA
T 1 707 443 8326 F 1 707 444 8330 W www.ghd.com



BAR IS ONE INCH ON ORIGINAL DRAWING

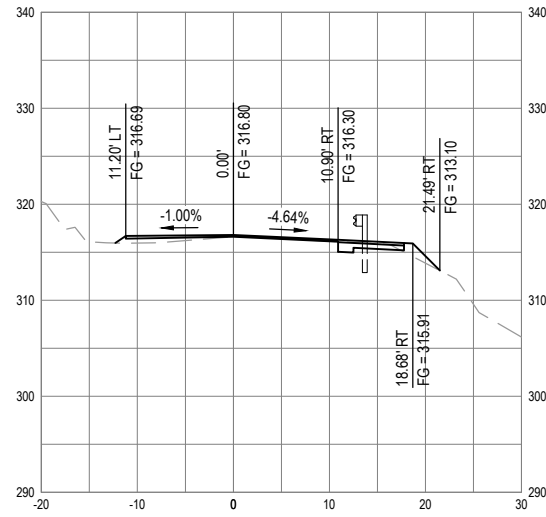
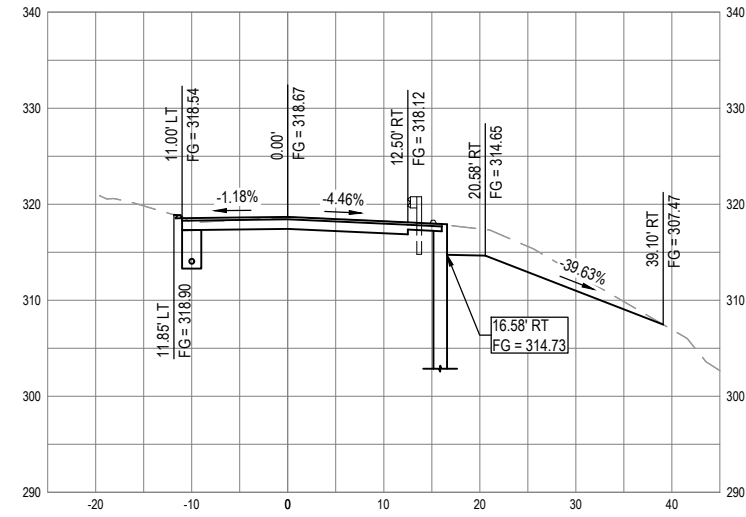
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME:	MONUMENT ROAD
ROAD NO.:	3F020
MILE POST:	0.00
PROJECT NO.:	4308-CA-DR PW#1276
CONTRACT NO.:	217356
PLOT DATE:	01/23/2023

DESIGN SECTION	ENGINEERING
DESIGNED BY:	C.PROVO
DRAWN BY:	C.PROVO
REVIEWED BY:	J.WOLF
APPROVED BY:	J.WOLF

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00
ROADWAY CROSS SECTIONS - 3 OF 3

SHEET
16
OF
24





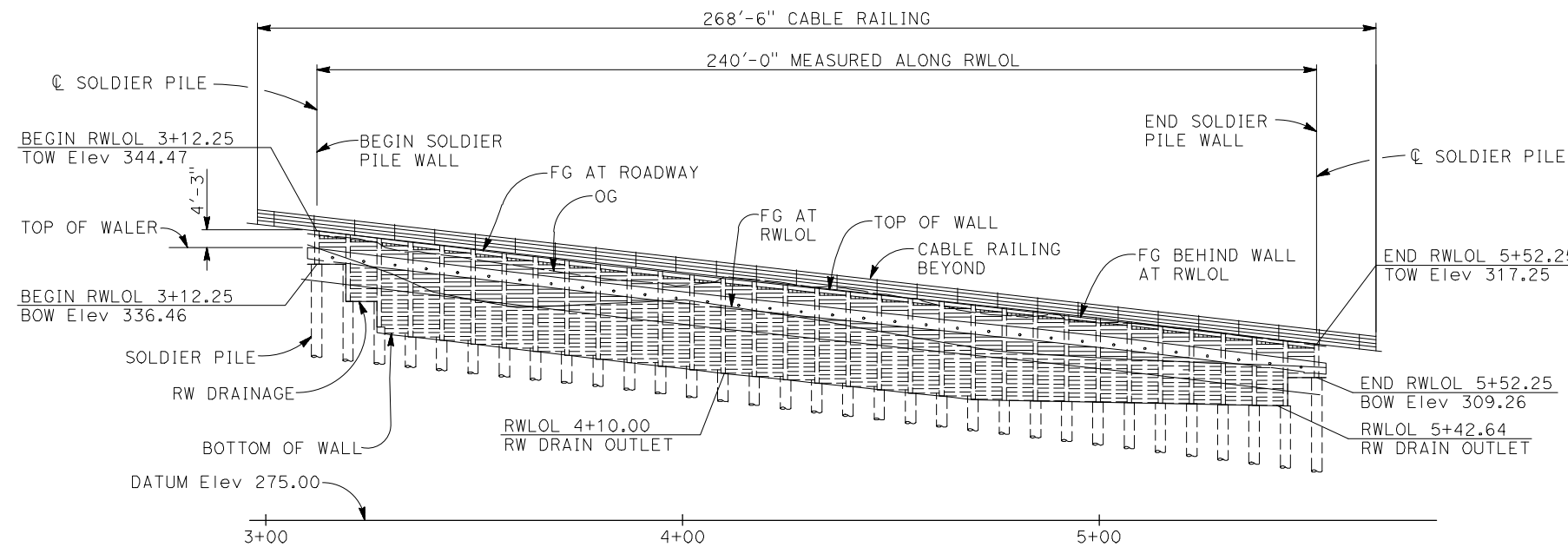
BIGGS CARDOSA ASSOCIATES INC
BCA
 STRUCTURAL ENGINEERS
 1111 Broadway, Ste. 1510
 Oakland, California 94607
 510-625-9900

BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME: MONUMENT ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: 3F020	DESIGNED BY: AWR
MILE POST: 0.00	DRAWN BY: AR
PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: GJT
CONTRACT NO.: 217356	APPROVED BY: AWR
PLOT DATE: 02/24/2021	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00
RETAINING WALL GENERAL PLAN

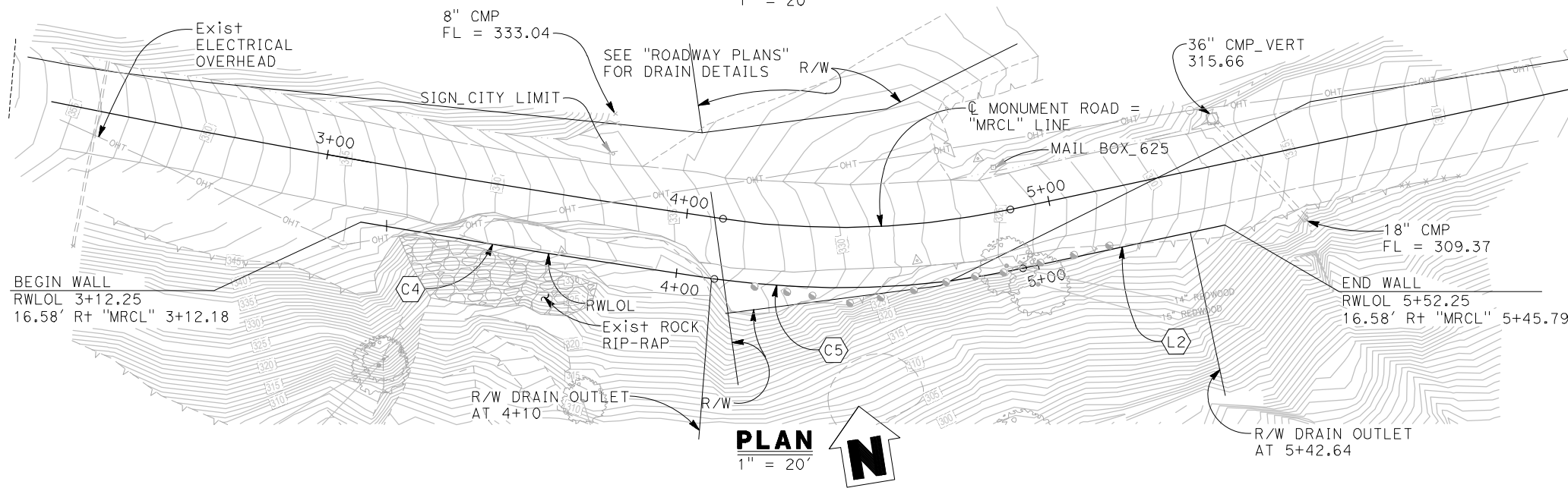
SHEET
17
OF
24



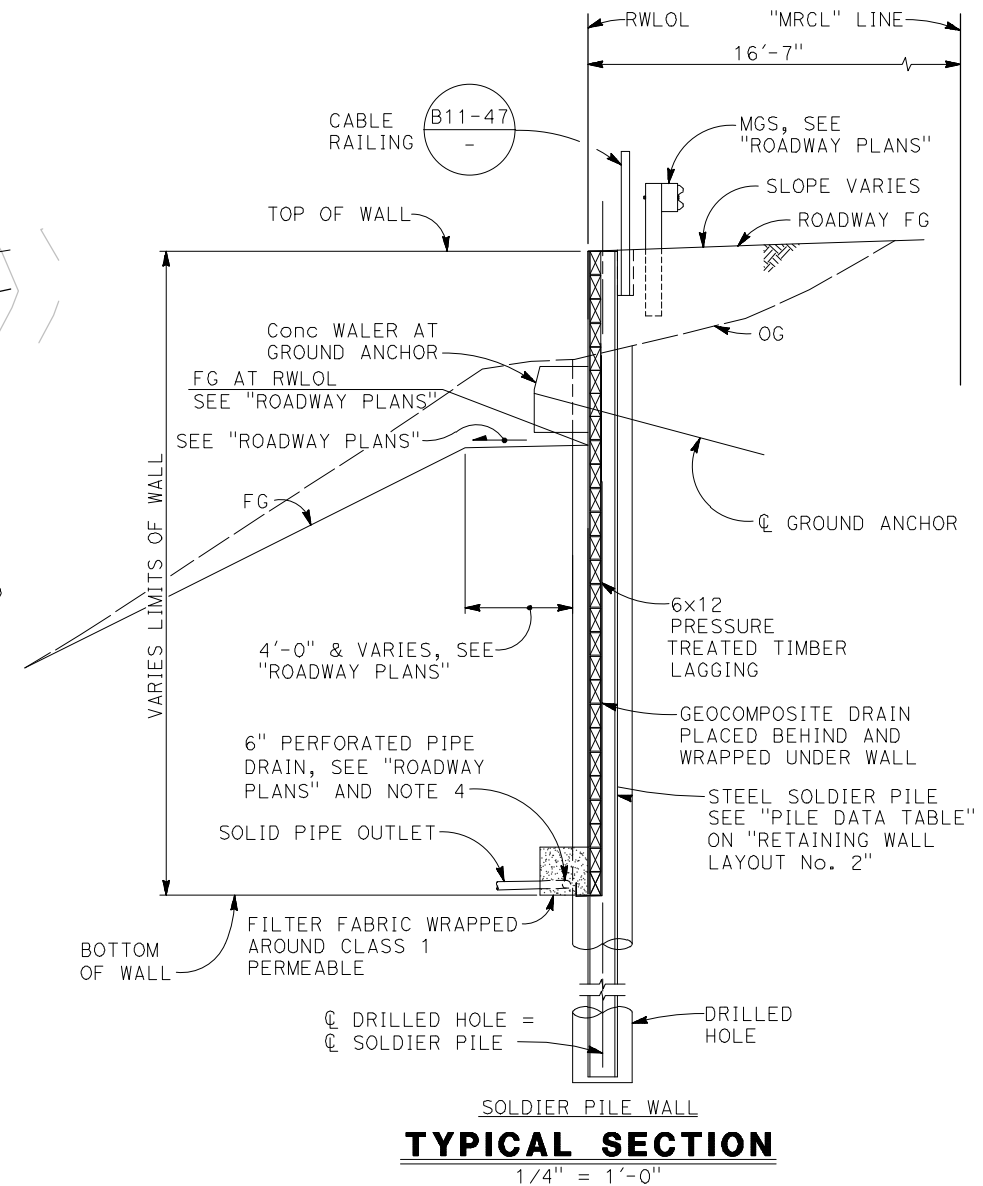
DEVELOPED ELEVATION
1" = 20'

LINE TABLE		
LINE #	LENGTH	DIRECTION
(L2)	58.79'	N 86°55'35" E

CURVE TABLE						
CURVE #	BC TANGENT BEARING	RADIUS	DELTA	TANGENT	LENGTH	EC TANGENT BEARING
(C4)	S 70°52'24" E	3227.58'	01°50'12"	51.73'	103.46'	S 72°42'36" E
(C5)	S 72°42'36" E	239.58'	20°21'50"	43.03'	85.15'	N 86°55'35" E



PLAN
1" = 20'



TYPICAL SECTION
1/4" = 1'-0"

NOTES:

- Top of wall elevations shown are based on "ROADWAY PLANS". Verify elevations with "ROADWAY PLANS" prior to construction.
- See "ROADWAY PLANS" for right-of-way, utility, drainage, roadway and layout information not noted.
- "MRCL" Line layout information shown is for informational purposes only, see "ROADWAY PLANS" for "MR" Line.
- 6" perforated drain pipe to be 3" Cir of RWLOL. Slope drain at Min 2%.

12019048.2 (201904825)



BIGGS CARDOSA ASSOCIATES INC
BCA
 STRUCTURAL ENGINEERS
 1111 Broadway, Ste. 1510
 Oakland, California 94607
 510-625-9900

ROAD NAME: MONUMENT ROAD	DESIGN SECTION: ENGINEERING	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 18 OF 24
ROAD NO: 3F020	DESIGNED BY: AWR	STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00	
MILE POST: 0.00	DRAWN BY: AR	STRUCTURAL GENERAL NOTES & ABBREVIATIONS	
PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: GJT		
CONTRACT NO.: 217356	APPROVED BY: AWR		
PLOT DATE: 02/24/2021			

GENERAL NOTES LOAD AND RESISTANCE FACTOR DESIGN

DESIGN: AASHTO LRFD Bridge Design Specifications 8th Edition with Caltrans Amendments, preface dated September 2017

Geotechnical Report by Crawford & Associates, Inc., dated March 19, 2021

REINFORCED CONCRETE & Reinf: ASTM Designation: A706
 fy = 60,000 psi
 f'c = 3,600 psi

STRUCTURAL STEEL: Steel Piles ASTM Designation: A572/A, A572M Grade 50 Min or A992/A992M GRADE 50
 Steel Plates ASTM Designation: ASTM A572/A572M Grade 50
 Welded Concrete Anchors ASTM Designation: A108, AASHTO/AWS D1.1
 Welding AWS D1.1

SOIL PARAMETERS: UNIT WEIGHT (γ) = 124 pcf
 Active Earth Pressure = 40H psf
 Passive Earth Pressure = 500Z psf "INTACT" Material
 Passive Arching Capability = 3.0
 Seismic Earth Pressure = 18H psf
 Max Passive Pressure = 10,000 psf

LIVE LOAD Live Load Surcharge = 250 psf

TIMBER LAGGING: PRESSURE TREATED DOUGLAS FIR No. 1, TIMBER TO BE FULL SAWN

PRESTRESSING STEEL:

Bars - ASTM Designation: A722 Type II (150 ksi)

Strand Tendons-ASTM Designation: A416
 (270 Ksi Low Relaxation steel)

FDL = Factored Design Load on Ground Anchor (kips)

FTL = Factored Test Load per anchor (Kips) = 1.0 FDL

LL = Lock-off Load (Kips) = 0.55 FDL

fpu = Minimum tensile strength of prestressing steel

As = Minimum cross sectional area of prestressing steel in ground anchor (square inch)

$$As(\text{Min}) = \frac{1.0 \text{ FTL}}{0.75 \text{ fpu}} \text{ (Strands)}$$

$$As(\text{Min}) = \frac{1.0 \text{ FTL}}{0.80 \text{ fpu}} \text{ (Bars)}$$

For FDL, see "GROUND ANCHOR DATA TABLE" on "RETAINING WALL LAYOUT No. 2" sheet

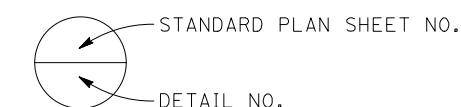
INDEX TO SOLDIER PILE WALL PLANS

SHEET NO.	TITLE
17	RETAINING WALL GENERAL PLAN
18	STRUCTURAL GENERAL NOTES & ABBREVIATIONS
19	RETAINING WALL LAYOUT No. 1
20	RETAINING WALL LAYOUT No. 2
21	SOLDIER PILE WALL DETAILS No. 1
22	SOLDIER PILE WALL DETAILS No. 2
23	SOLDIER PILE WALL DETAILS No. 3
24	GROUND ANCHOR DETAILS

2022 STANDARD PLANS

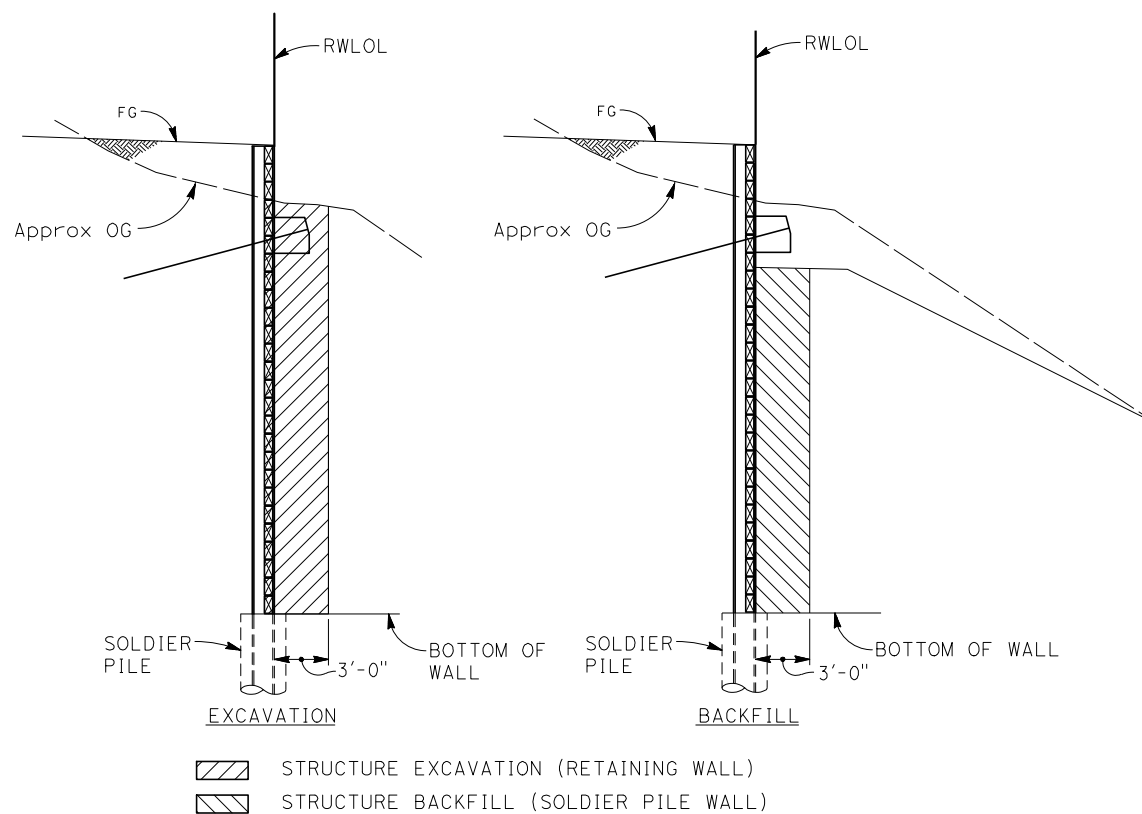
A3A	ABBREVIATIONS (SHEET 1 OF 3)
A3B	ABBREVIATIONS (SHEET 2 OF 3)
A3C	ABBREVIATIONS (SHEET 3 OF 3)
A10A	LEGEND - LINES AND SYMBOLS (SHEET 1 OF 5)
A10B	LEGEND - LINES AND SYMBOLS (SHEET 2 OF 5)
A10C	LEGEND - LINES AND SYMBOLS (SHEET 3 OF 5)
A10D	LEGEND - LINES AND SYMBOLS (SHEET 4 OF 5)
A10E	LEGEND - LINES AND SYMBOLS (SHEET 5 OF 5)
B11-47	CABLE RAILING

LEGEND



ABBREVIATIONS

CL	CENTER LINE
BOW	BOTTOM OF WALL
D/S	DOWN STATION
RWLOL	RETAINING WALL LAYOUT LINE
TOW	TOP OF WALL
U/S	UP STATION



SOLDIER PILE WALL

LIMITS OF PAYMENT FOR STRUCTURE EXCAVATION AND BACKFILL (SOLDIER PILE WALL)

NO SCALE

FINISH COAT ON ALL PILE SURFACES. LIMITS OF FINISH COAT EXTENDS FROM TOP OF PILE TO 5 FEET BELOW BOTTOM OF LAGGING FOR SOLDIER PILE, TYP



UNDERCOAT ON ALL PILE SURFACES, TYP

LIMITS OF CLEAN AND PAINT STEEL SOLDIER PILE

NO SCALE



BIGGS CARDOSA ASSOCIATES INC
BCA
 STRUCTURAL ENGINEERS
 1111 Broadway, Ste. 1510
 Oakland, California 94607
 510-625-9900

BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME:	MONUMENT ROAD
ROAD NO.:	3F020
MILE POST:	0.00
PROJECT NO.:	4308-CA-DR PW#1276
CONTRACT NO.:	217356
PLOT DATE:	02/24/2021

DESIGN SECTION	ENGINEERING
DESIGNED BY:	AWR
DRAWN BY:	AR
REVIEWED BY:	GJT
APPROVED BY:	AWR

COUNTY OF HUMBOLDT
 DEPARTMENT OF PUBLIC WORKS
 STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00
RETAINING WALL LAYOUT No. 1

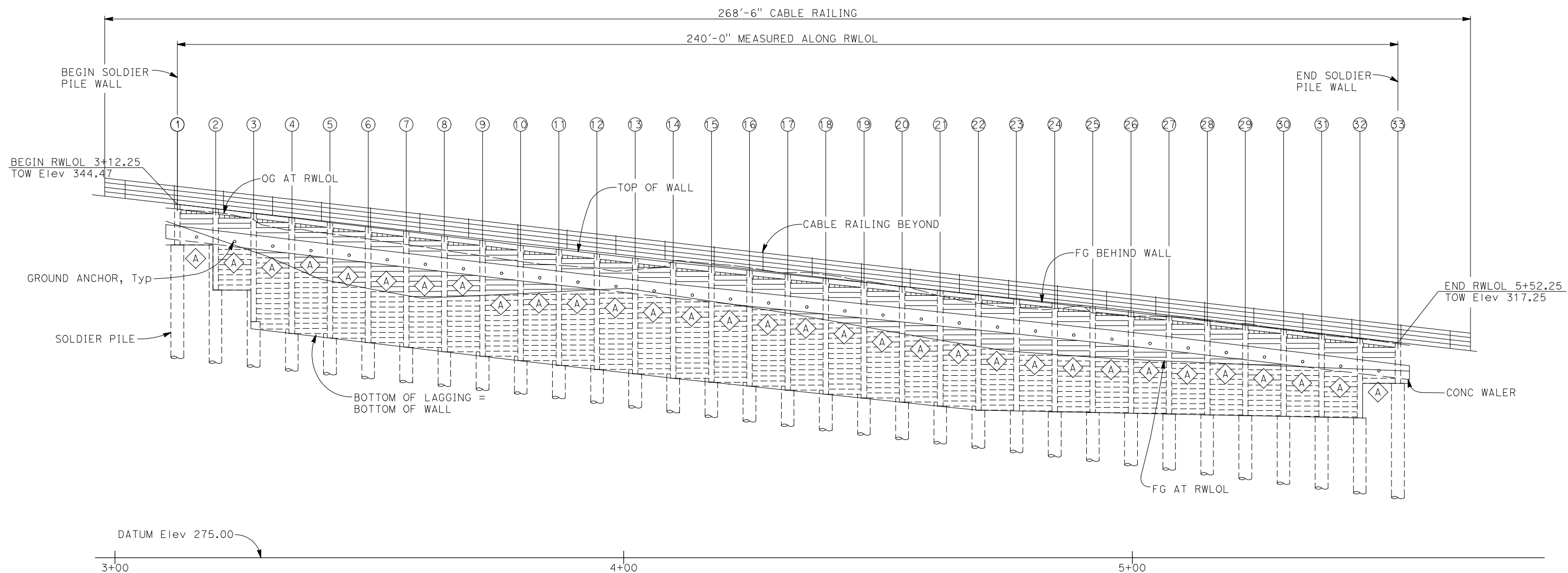
SHEET
19
 OF
24

LEGEND:

- ① Indicates Soldier Pile No., see "PILE DATA TABLE" on "RETAINING WALL LAYOUT No. 2" sheet.
- ⬠ Indicates GROUND ANCHOR TYPE, SEE "GROUND ANCHOR DATA TABLE" on "RETAINING WALL LAYOUT No. 2" sheet.

NOTE:

1. Top of wall elevations shown are based on "ROADWAY PLANS", verify elevations with "ROADWAY PLANS" prior to construction.



DEVELOPED ELEVATION - PILE LAYOUT

1" = 10'



BIGGS CARDOSA ASSOCIATES INC
BCA
 STRUCTURAL ENGINEERS
 1111 Broadway, Ste. 1510
 Oakland, California 94607
 510-625-9900

BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME: MONUMENT ROAD	DESIGN SECTION ENGINEERING
ROAD NO: 3F020	DESIGNED BY: AWR
MILE POST: 0.00	DRAWN BY: AR
PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: GJT
CONTRACT NO.: 217356	APPROVED BY: AWR
PLOT DATE: 02/24/2021	

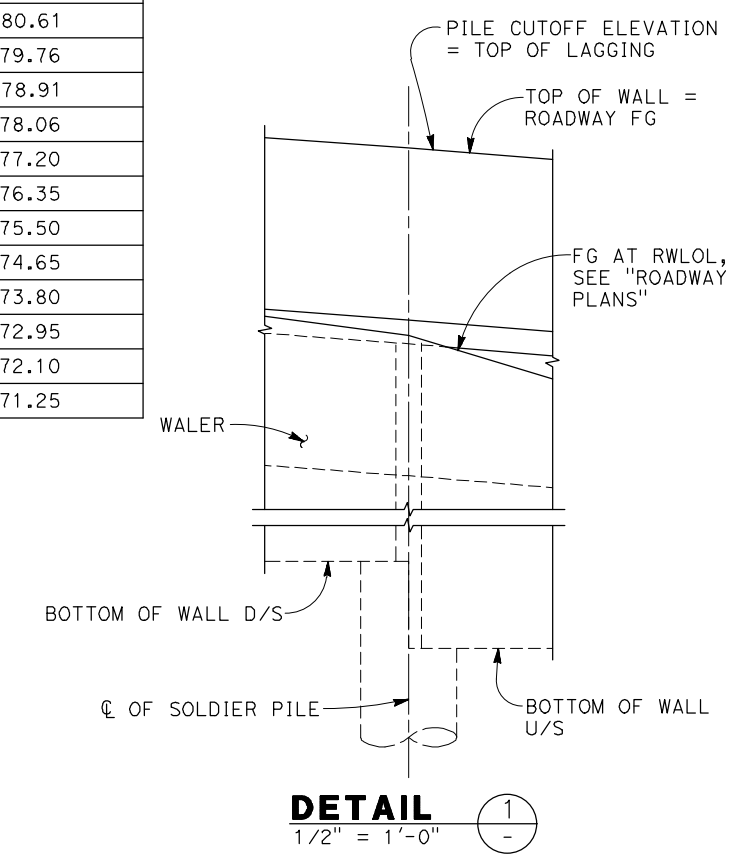
COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 20 OF 24
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00	
RETAINING WALL LAYOUT No. 2	

PILE DATA TABLE

PILE #	RWLOL STATION (FT)	PILE SECTION (FT)	TOP OF WALL ELEVATION (FT), SEE NOTE 1	DRILLED HOLE SIZE (IN)	PILE CUTOFF ELEVATION (FT)	BOTTOM OF WALL ELEVATION (FT), SEE ①	BOTTOM OF WALL ELEVATION (FT), SEE ①	PILE LENGTH (FT)	PILE TIP ELEVATION (FT)
						D/S	U/S		
①	3+12.25	W18x106	344.47	30.00	344.47	-	336.21	46.0	298.47
②	3+19.75	W18x106	343.62	30.00	343.62	336.21	329.62	46.0	297.62
③	3+27.25	W18x106	342.77	30.00	342.77	329.62	319.77	46.0	296.77
④	3+34.75	W18x106	341.92	30.00	341.92	319.77	318.92	46.0	295.92
⑤	3+42.25	W18x106	341.07	30.00	341.07	318.92	318.07	46.0	295.07
⑥	3+49.75	W18x106	340.22	30.00	340.22	318.07	317.22	46.0	294.22
⑦	3+57.25	W18x106	339.37	30.00	339.37	317.22	316.37	46.0	293.37
⑧	3+64.75	W18x106	338.52	30.00	338.52	316.37	315.52	46.0	292.52
⑨	3+72.25	W18x106	337.67	30.00	337.67	315.52	314.67	46.0	291.67
⑩	3+79.75	W18x106	336.82	30.00	336.82	314.67	313.82	46.0	290.82
⑪	3+87.25	W18x106	335.97	30.00	335.97	313.82	312.97	46.0	289.97
⑫	3+94.75	W18x106	335.12	30.00	335.12	312.97	312.12	46.0	289.12
⑬	4+02.25	W18x106	334.27	30.00	334.27	312.12	311.27	46.0	288.27
⑭	4+09.75	W18x106	333.41	30.00	333.41	311.27	310.41	46.0	287.41
⑮	4+17.25	W18x106	332.56	30.00	332.56	310.41	309.56	46.0	286.56
⑯	4+24.75	W18x106	331.71	30.00	331.71	309.56	308.71	46.0	285.71
⑰	4+32.25	W18x106	330.86	30.00	330.86	308.71	307.86	46.0	284.86
⑱	4+39.75	W18x106	330.01	30.00	330.01	307.86	307.01	46.0	284.01
⑲	4+47.25	W18x106	329.16	30.00	329.16	307.01	306.16	46.0	283.16
⑳	4+54.75	W18x106	328.31	30.00	328.31	306.16	305.31	46.0	282.31
㉑	4+62.25	W18x106	327.46	30.00	327.46	305.31	304.46	46.0	281.46
㉒	4+69.75	W18x106	326.61	30.00	326.61	304.46	304.46	46.0	280.61
㉓	4+77.25	W18x106	325.76	30.00	325.76	304.46	304.46	46.0	279.76
㉔	4+84.75	W18x106	324.91	30.00	324.91	304.46	304.46	46.0	278.91
㉕	4+92.25	W18x106	324.06	30.00	324.06	304.46	304.46	46.0	278.06
㉖	4+99.75	W18x106	323.20	30.00	323.20	304.46	304.46	46.0	277.20
㉗	5+07.25	W18x106	322.35	30.00	322.35	304.46	304.46	46.0	276.35
㉘	5+14.75	W18x106	321.50	30.00	321.50	304.46	304.46	46.0	275.50
㉙	5+22.25	W18x106	320.65	30.00	320.65	304.46	304.46	46.0	274.65
㉚	5+29.75	W18x106	319.80	30.00	319.80	304.46	304.46	46.0	273.80
㉛	5+37.25	W18x106	318.95	30.00	318.95	304.46	304.46	46.0	272.95
㉜	5+44.75	W18x106	318.10	30.00	318.10	304.46	309.26	46.0	272.10
㉝	5+52.25	W18x106	317.25	30.00	317.25	309.26	-	46.0	271.25

- NOTES:
- Top of Wall elevations shown are based on "ROADWAY PLANS", verify elevations with "ROADWAY PLANS" prior to construction. Notify Engineer if top of wall elevations are higher than shown on plans.
 - Per the Geotechnical report by Crawford & Associates, Inc., dated March 19, 2021, the ground anchor unbonded length shall extend at least 5 feet or H/5, whichever is greater (H = wall Height) beyond the "intact" material.

LEGEND:
 ① Indicates Soldier Pile No., see "PILE DATA TABLE"



GROUND ANCHOR DATA TABLE

GROUND ANCHOR TYPE	FACTORED DESIGN LOAD, FDL (kips)	MINIMUM UNBONDED LENGTH (FT) SEE NOTE 2
⬠	214	26'-0"

2019048.2 (201904825)



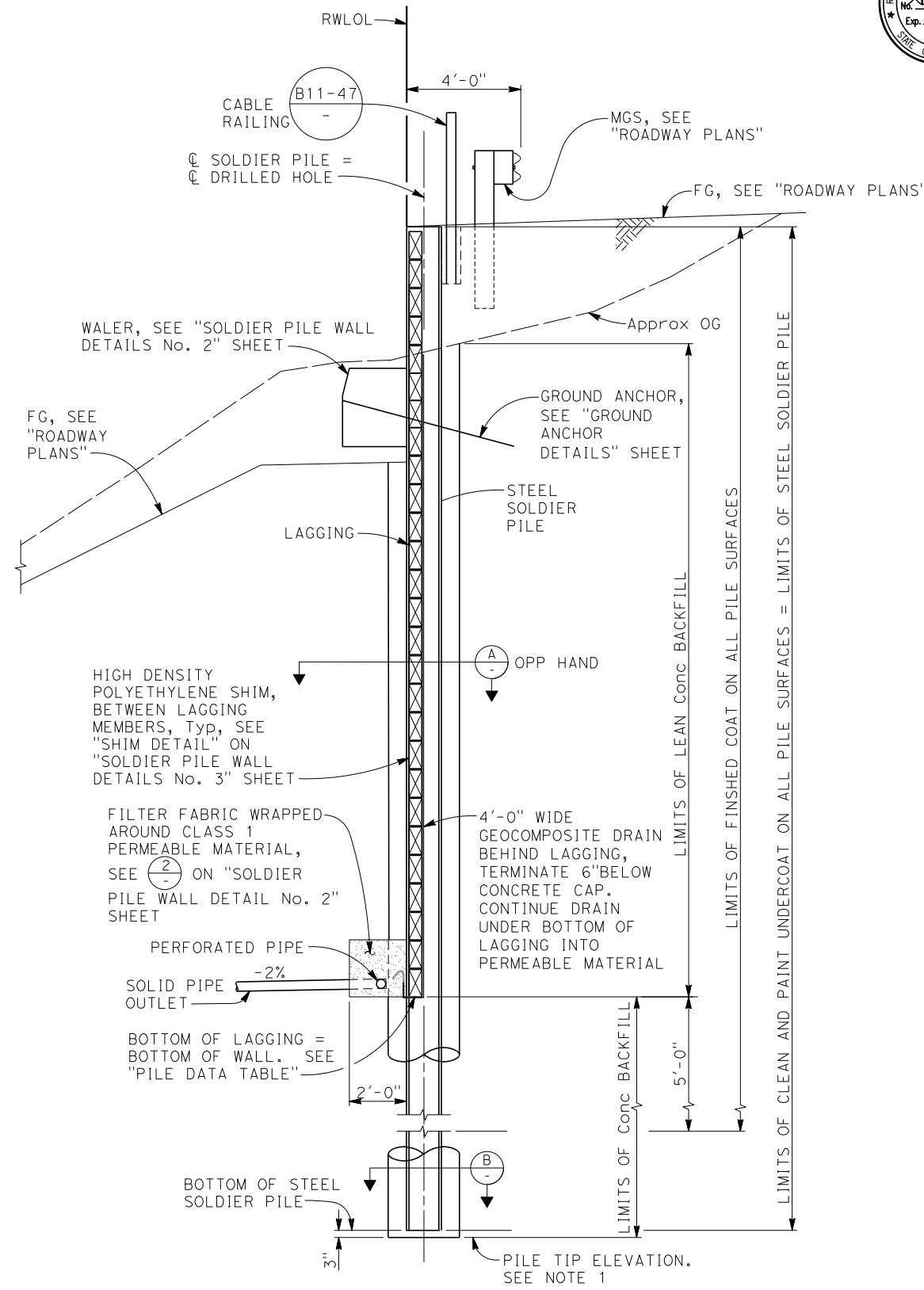
BIGGS CARDOSA ASSOCIATES INC
BCA
 STRUCTURAL ENGINEERS
 1111 Broadway, Ste. 1510
 Oakland, California 94607
 510-625-9900

ROAD NAME: MONUMENT ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: 3F020	DESIGNED BY: AWR
MILE POST: 0.00	DRAWN BY: AR
PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: GJT
CONTRACT NO.: 217356	APPROVED BY: AWR
PLAT DATE: 02/24/2021	

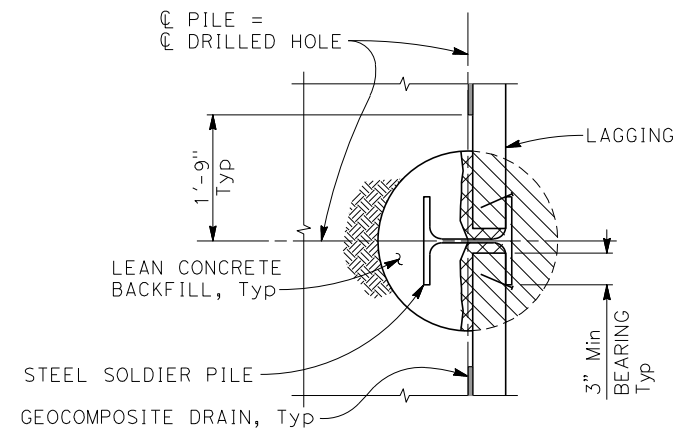
COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00
SOLDIER PILE WALL DETAILS No.1

SHEET
21
OF
24

NOTES:
 1. For "PILE DATA TABLE", see "RETAINING WALL LAYOUT No. 2" sheet.

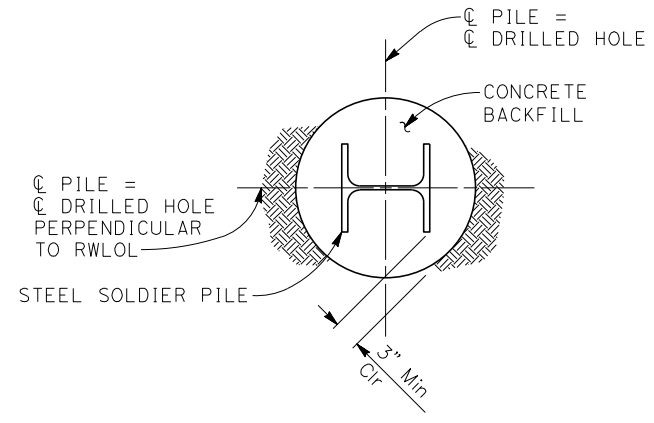


TYPICAL SECTION
 3/8" = 1'-0"



SECTION AT LAGGING (A)
 3/4" = 1'-0"

- LEAN CONCRETE TO BE CHIPPED AWAY AS REQUIRED FOR LAGGING INSTALLATION
- LIMITS OF FILL WITH STRUCTURAL BACKFILL AFTER LAGGING INSTALLATION



SECTION AT DRILLED HOLE (B)
 3/4" = 1'-0"



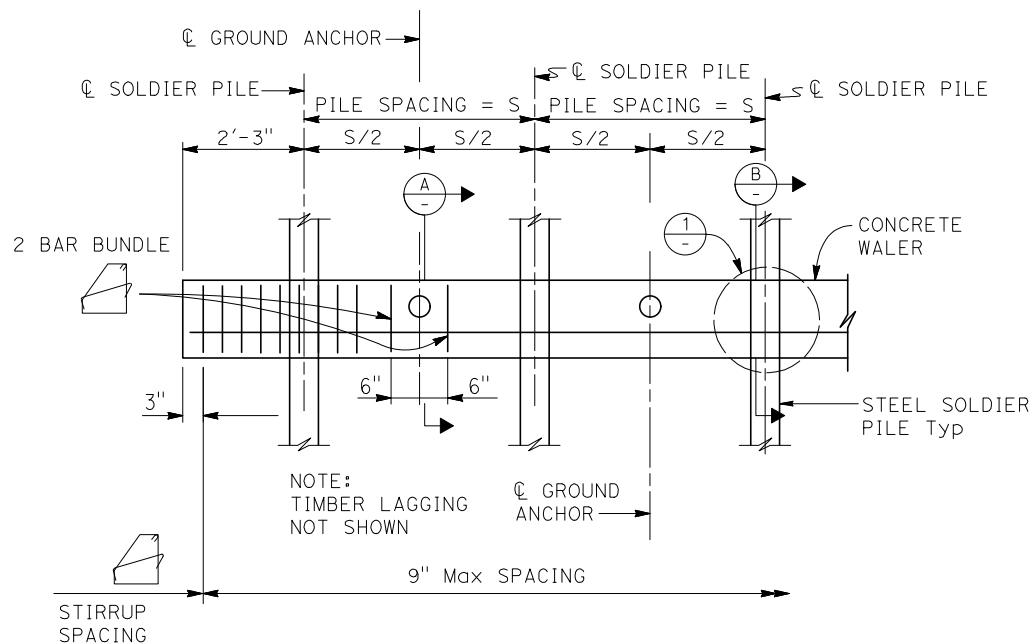
BIGGS CARDOSA ASSOCIATES INC
BCA
 STRUCTURAL ENGINEERS
 1111 Broadway, Ste. 1510
 Oakland, California 94607
 510-625-9900

BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

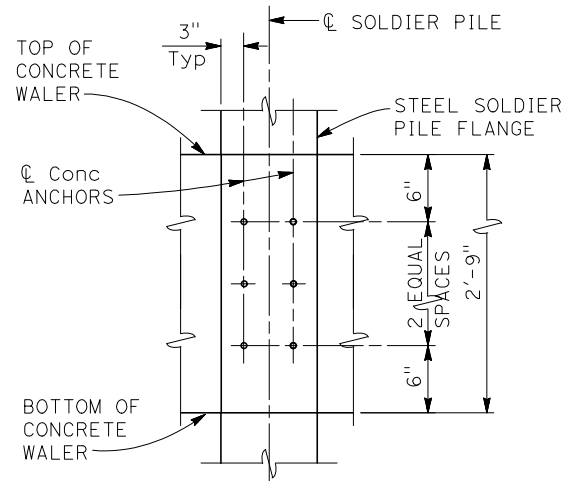
ROAD NAME: MONUMENT ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: JF020	DESIGNED BY: AWR
MILE POST: 0.00	DRAWN BY: AR
PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: GJT
CONTRACT NO.: 217356	APPROVED BY: AWR
PLOT DATE: 02/24/2021	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00
SOLDIER PILE WALL DETAILS No. 2

SHEET **22**
OF
24



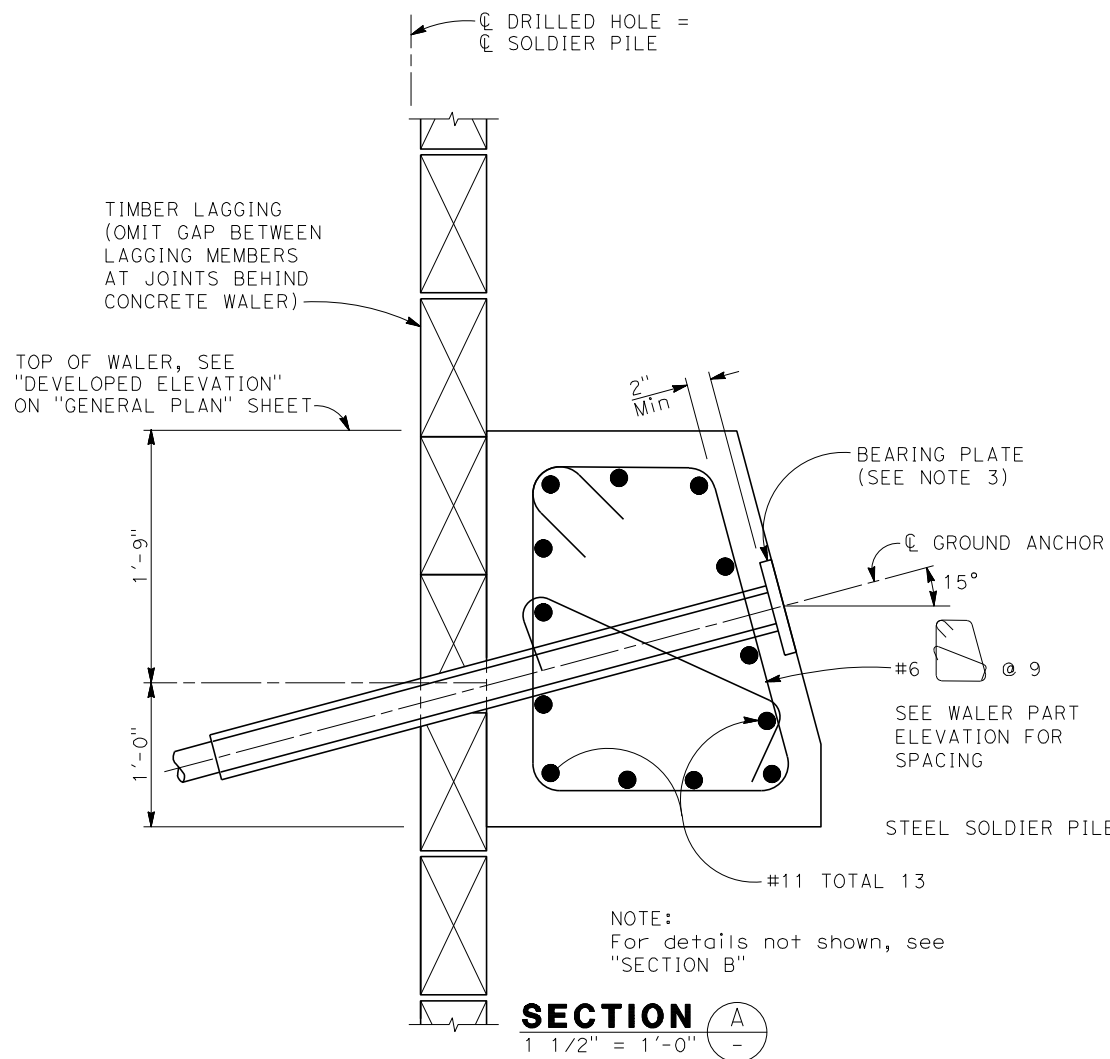
WALER PART ELEVATION
NO SCALE



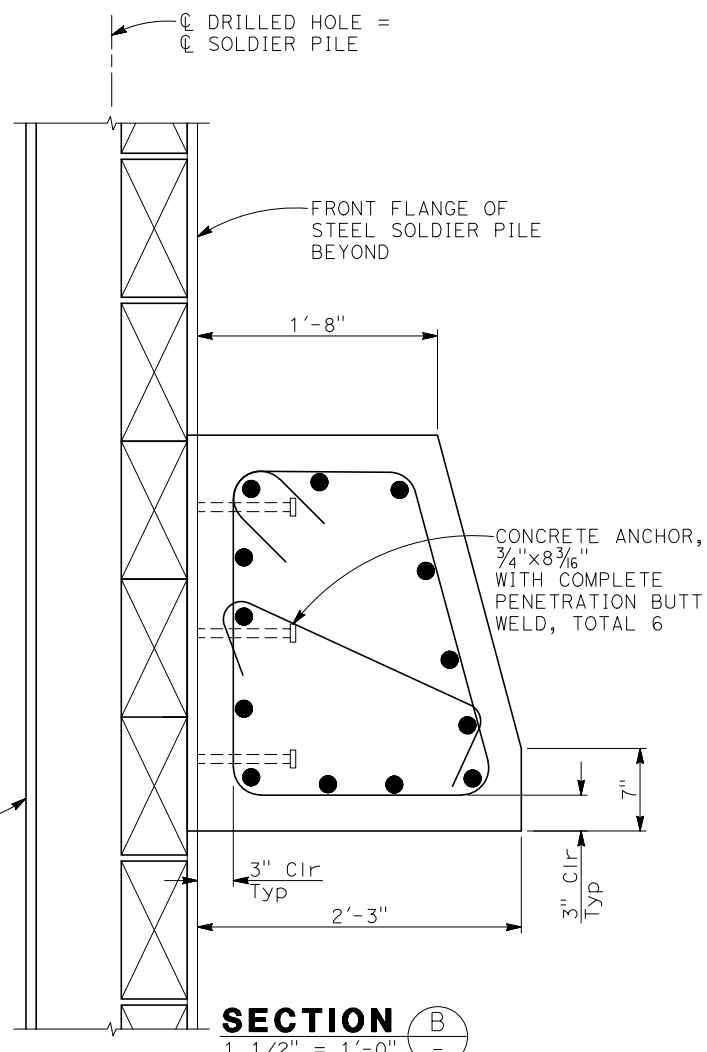
DETAIL 1
NO SCALE

NOTES:

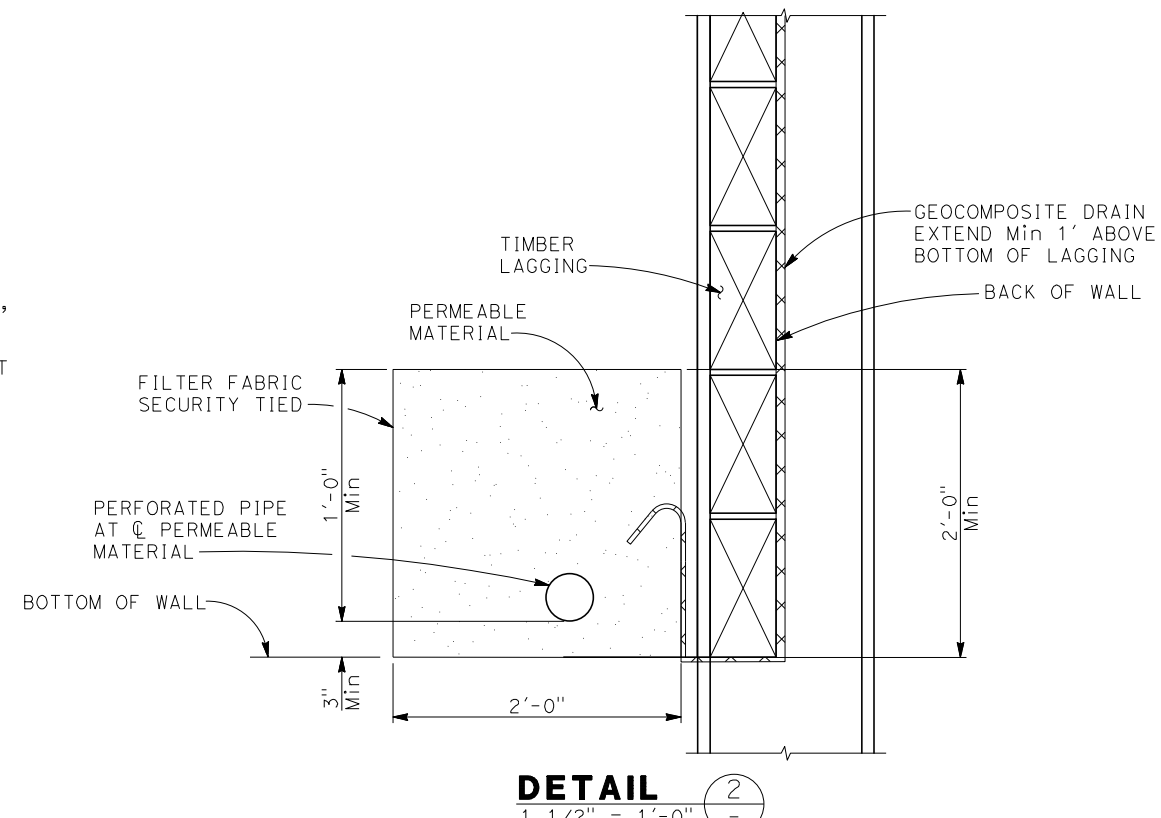
1. For concrete waler location, see "DEVELOPED ELEVATION" shown on "GENERAL PLAN" sheet.
2. Concrete walers may be poured to face of lagging.
3. Bearing plates may be recessed or on face of concrete waler.
4. No clipping of timber lagging corners allowed.
5. Use 40d Galv wire spikes for 6x12 lagging.
6. Spikes shall not be bent.
7. Place stirrups 1/2" clear of anchorage tube.



SECTION A
1 1/2" = 1'-0"



SECTION B
1 1/2" = 1'-0"

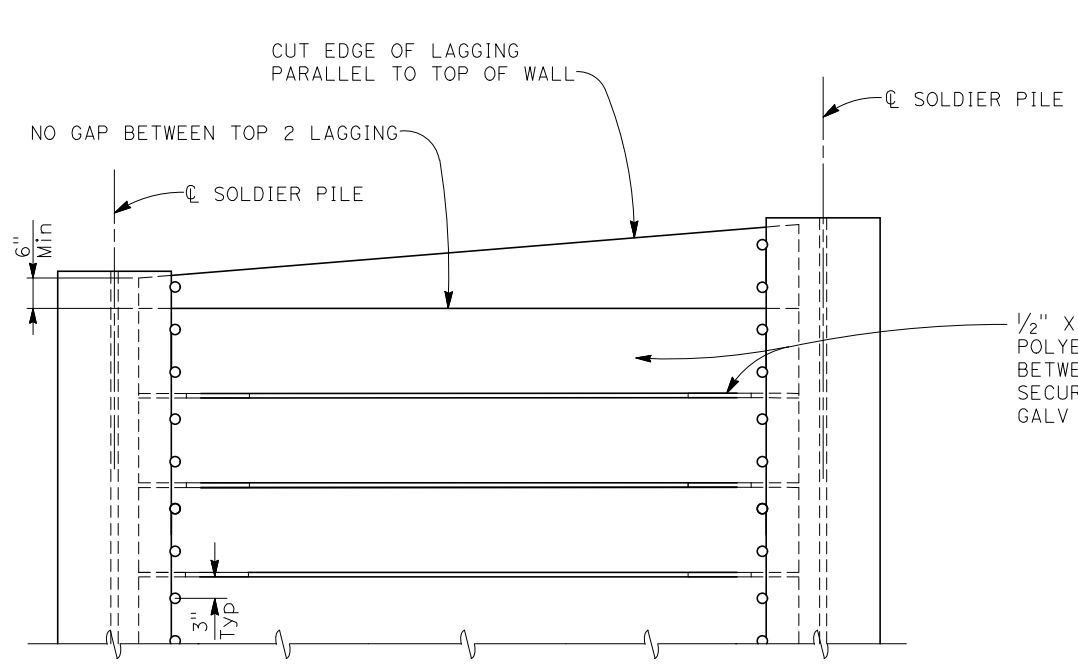


DETAIL 2
1 1/2" = 1'-0"



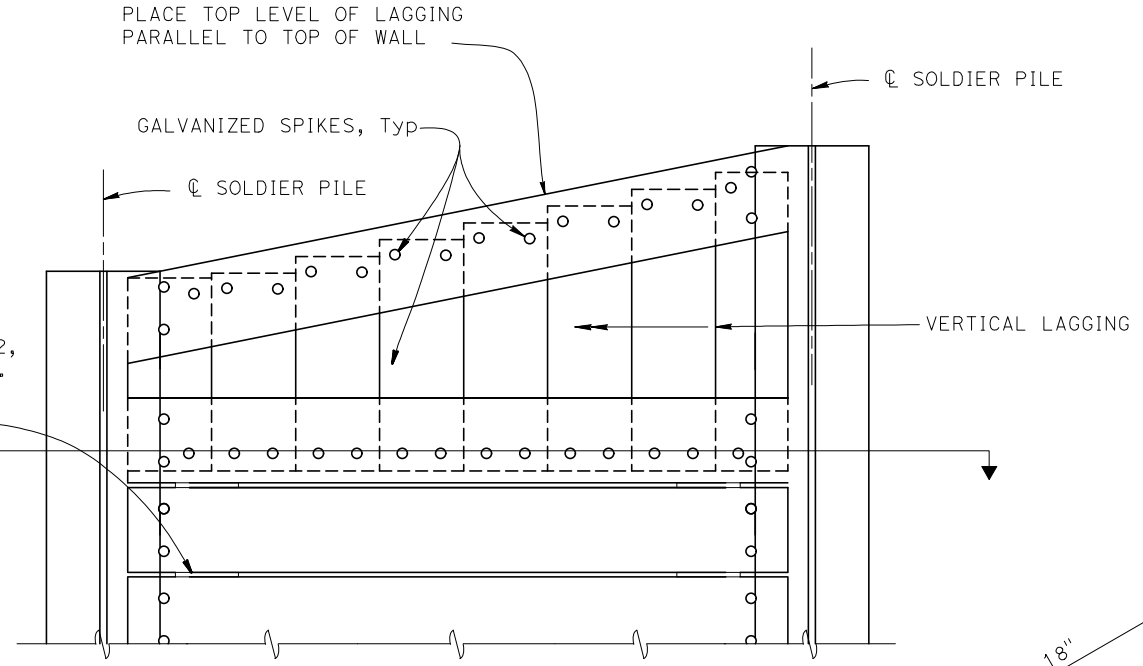
BIGGS CARDOSA ASSOCIATES INC
BCA
 STRUCTURAL ENGINEERS
 1111 Broadway, Ste. 1510
 Oakland, California 94607
 510-625-9900

ROAD NAME: MONUMENT ROAD	DESIGN SECTION: ENGINEERING	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 23
ROAD NO: 3F020	DESIGNED BY: AWR	STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00	OF
MILE POST: 0.00	DRAWN BY: SMH	SOLDIER PILE WALL DETAILS No. 3	24
PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: GJT		
CONTRACT NO.: 217356	APPROVED BY: AWR		
PLOT DATE: 02/24/2021			

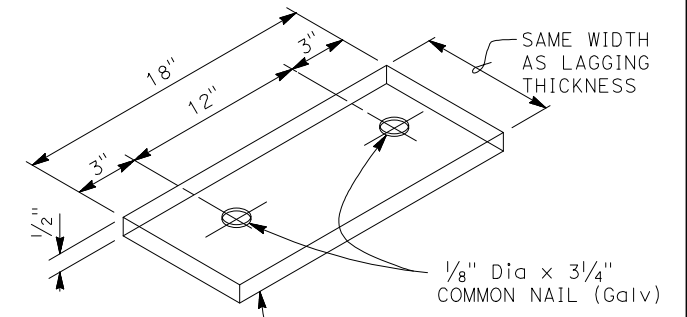


PART ELEVATION
LAGGING DETAILS (ALTERNATIVE 1)
 NO SCALE

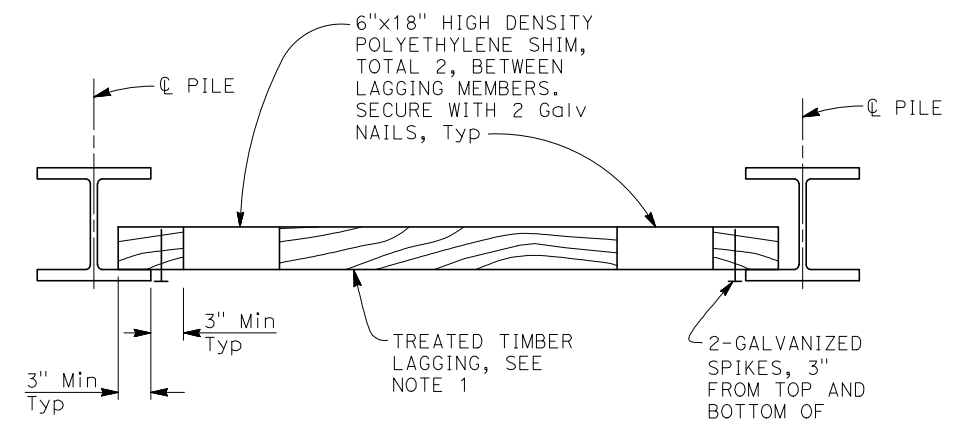
1/2" X 18" HIGH DENSITY POLYETHYLENE SHIM, Tot 2, BETWEEN LAGGING MEMBERS. SECURE WITH 2 GALV NAILS, Typ



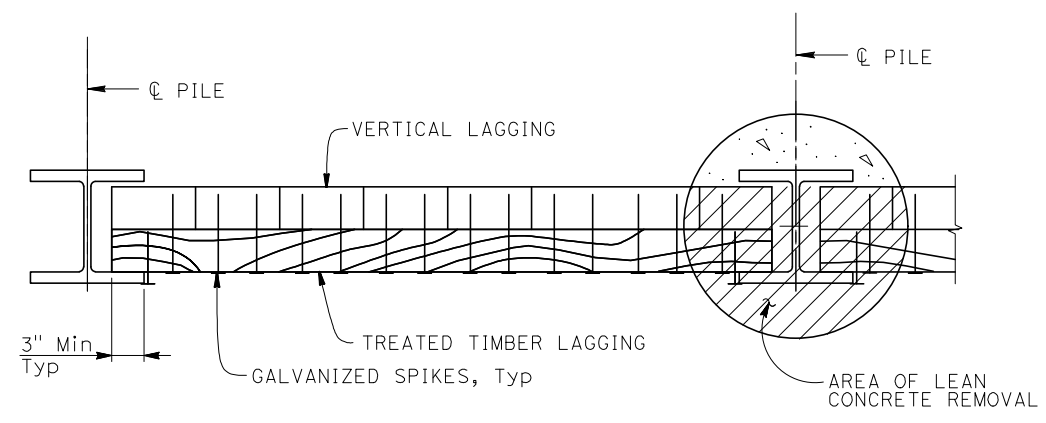
PART ELEVATION
LAGGING DETAILS (ALTERNATIVE 2)
 NO SCALE



SHIM DETAIL
 NO SCALE



PART PLAN
 NO SCALE



SECTION A-A
 NO SCALE

- NOTES:
1. No clipping of timber lagging corners allowed
 2. Use 16d Galv wire spikes for 4 x 12 lagging, and 40d Galv wire spikes for 6 x 12 lagging
 3. Spikes shall not be bent

NOTE:
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

2019048.2 (2019048257)

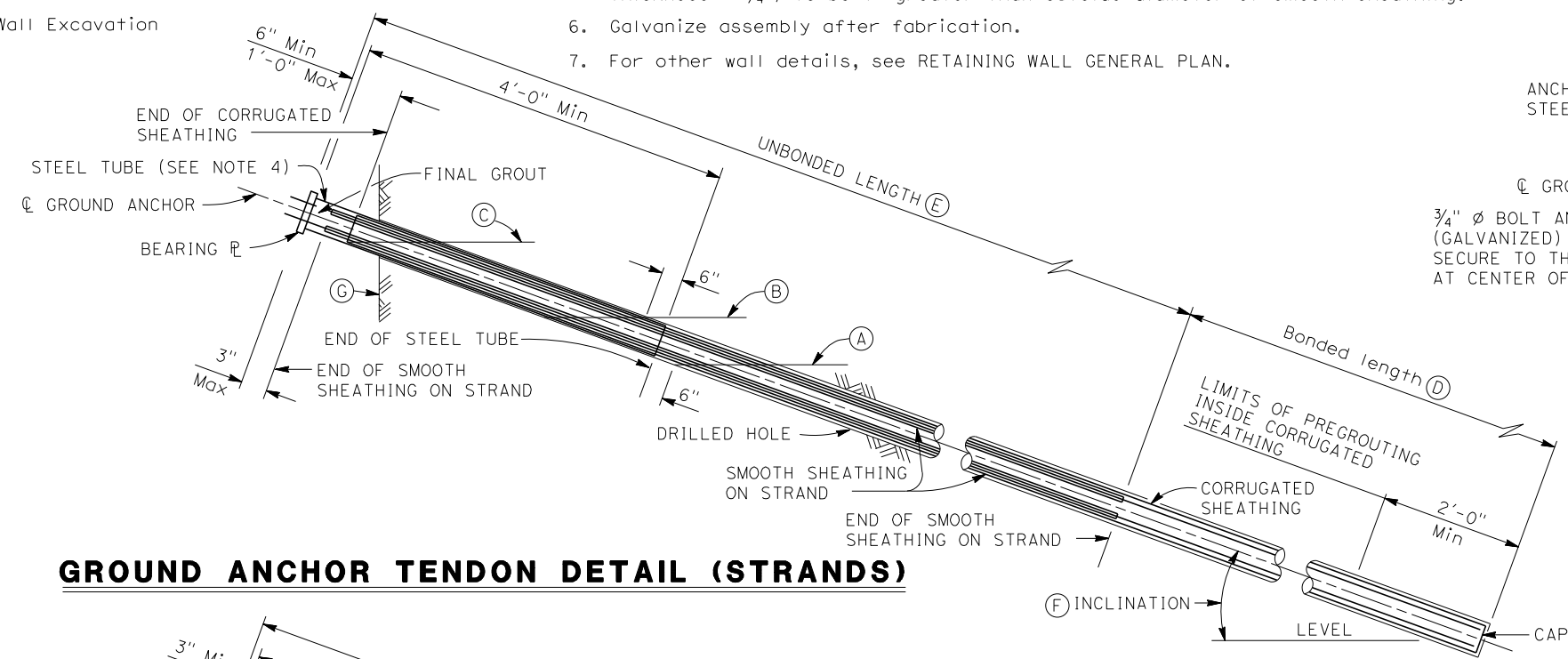


BIGGS CARDOSA ASSOCIATES INC
BCA
 STRUCTURAL ENGINEERS
 1111 Broadway, Ste. 1510
 Oakland, California 94607
 510-625-9900

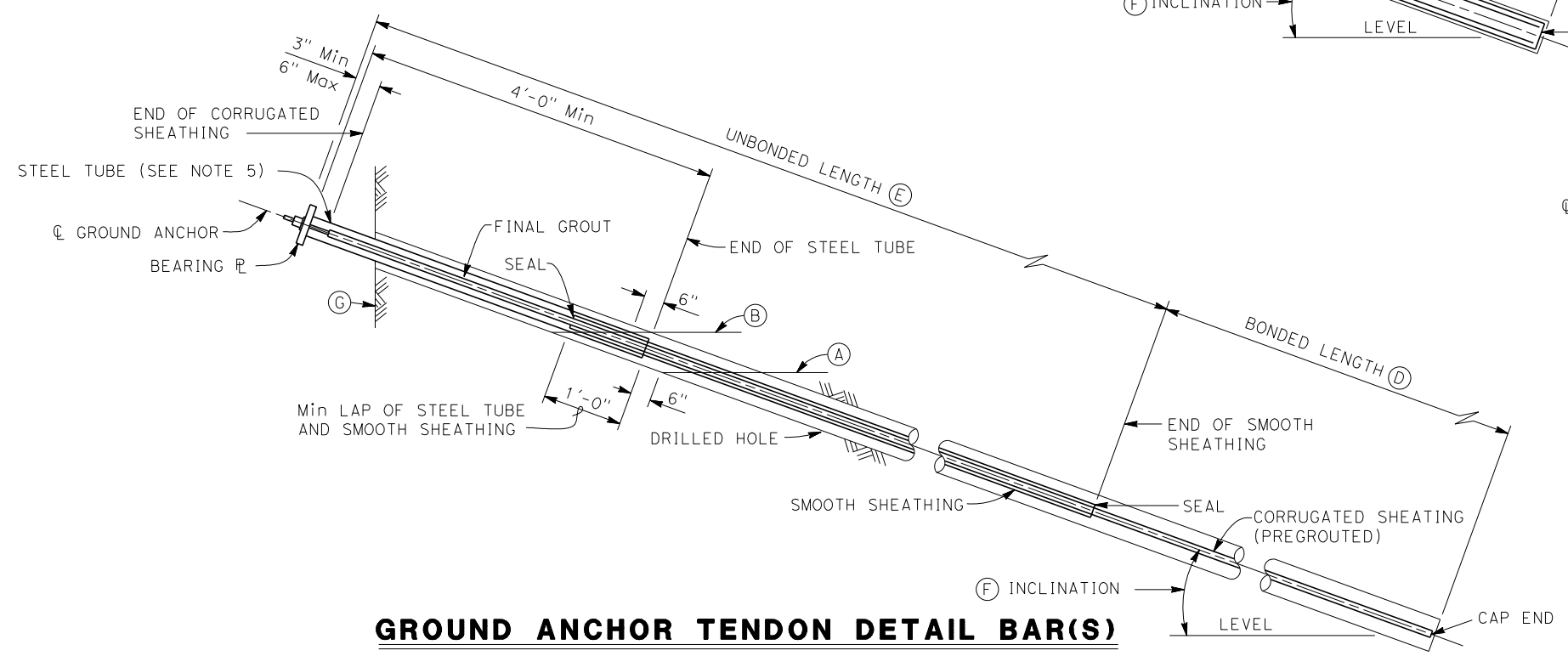
ROAD NAME: MONUMENT ROAD	DESIGN SECTION: ENGINEERING	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 24 OF 24
ROAD NO: 3F020	DESIGNED BY: AWR	STORM DAMAGE REPAIR MONUMENT ROAD PM 0.00	
MILE POST: 0.00	DRAWN BY: AR		
PROJECT NO.: 4308-CA-DR PW#1276	REVIEWED BY: GJT	GROUND ANCHOR DETAILS	
CONTRACT NO.: 217356	APPROVED BY: AWR		
PLOT DATE: 02/24/2021			

- NOTES:
- (A) Level of initial grouting for drilled hole 6" in diameter or smaller
 - (B) Level of secondary grouting
 - (C) Level of initial grouting inside corrugated sheathing
 - (D) Bonded length shall be determined by the contractor
 - (E) For unbonded length, see "GROUND ANCHOR DATA TABLE" on "RETAINING WALL LAYOUT No. 2" sheet
 - (F) For inclination, see (A) on "SOLDIER PILE WALL DETAILS No. 2" sheet
 - (G) Face of Wall Excavation

- NOTES:
1. Anchorage enclosure shall only be used when anchor head assembly is not enclosed in concrete.
 2. Anchorage enclosure shall have provisions to allow injecting grout at low end and venting at high end. Galvanize after fabrication.
 3. Silicone sealant to cover full width of flange.
 4. Steel tube (Min thickness = 1/4") welded to bearing plate. Galvanize assembly after fabrication
 5. Steel tube welded to bearing plate. Inside diameter of steel tube (Min thickness = 1/4") to be 1" greater than outside diameter of smooth sheathing.
 6. Galvanize assembly after fabrication.
 7. For other wall details, see RETAINING WALL GENERAL PLAN.

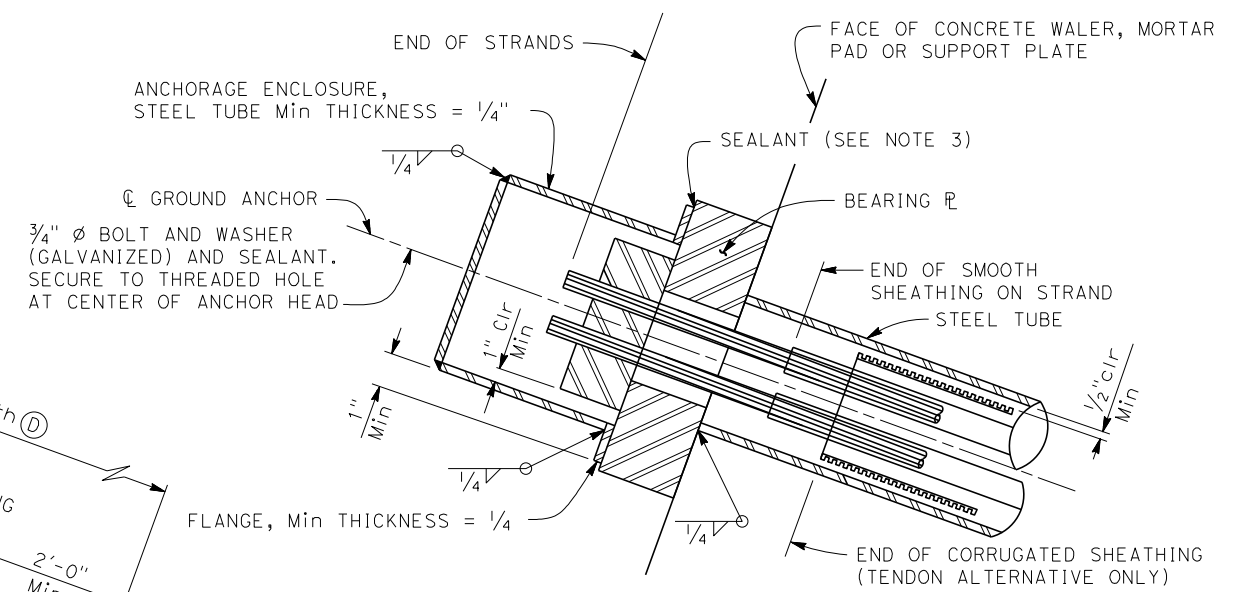


GROUND ANCHOR TENDON DETAIL (STRANDS)

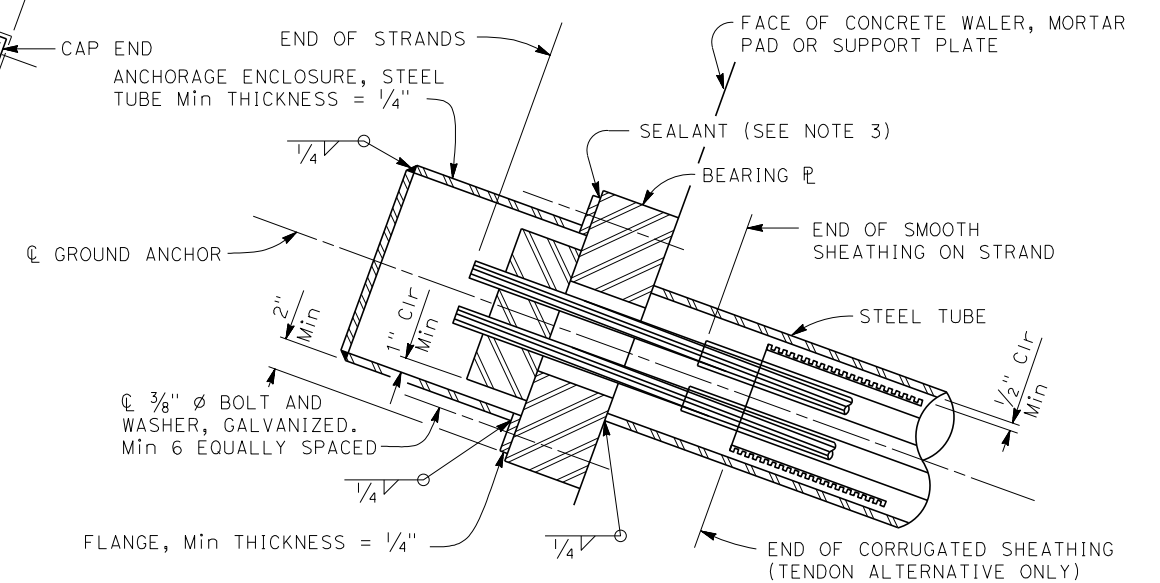


GROUND ANCHOR TENDON DETAIL BAR(S)

NOTE:
 THE CONTRACTOR MUST VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL



ALTERNATIVE X



ALTERNATIVE Y

ANCHORAGE ENCLOSURE DETAILS