

**FUNDING SOURCE**

THIS PROJECT IS FUNDED BY THE US DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION EMERGENCY RELIEF PROGRAM

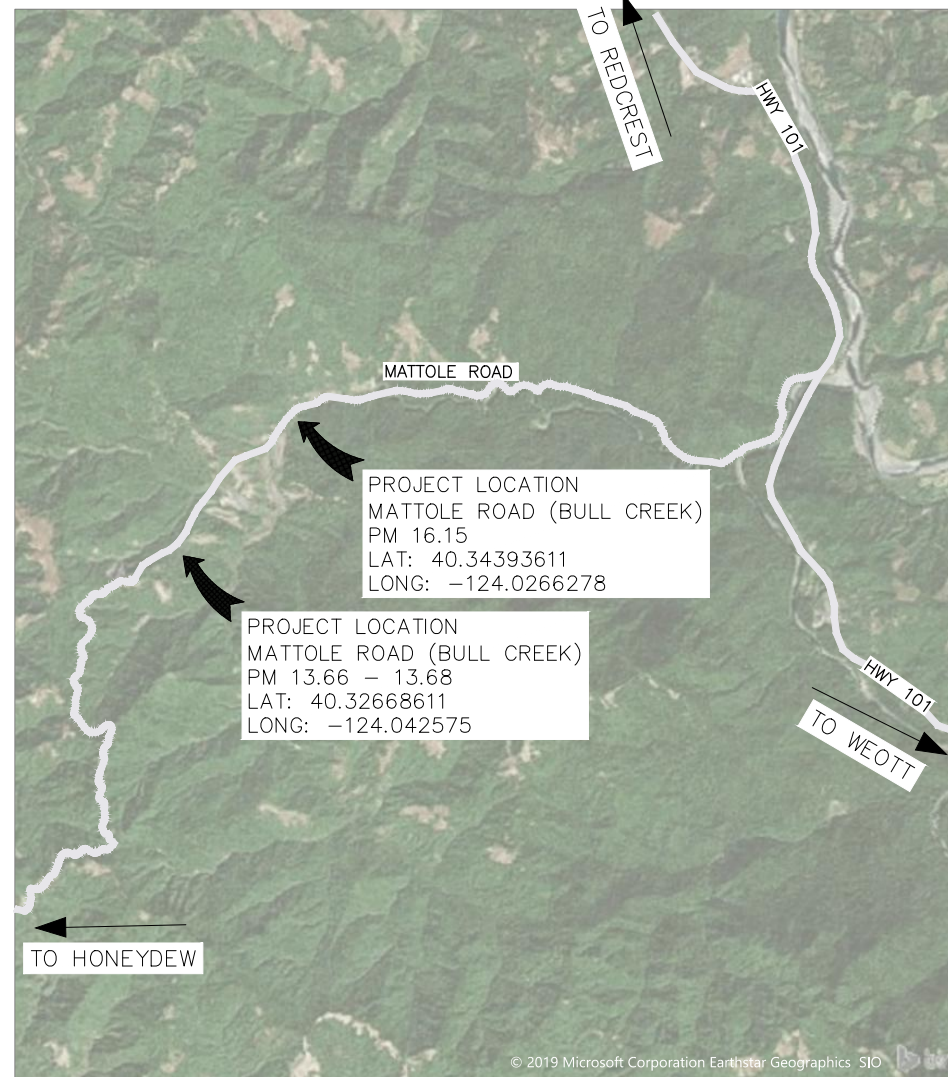


**NOTES**

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, 2020.

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

- APN ASSESSORS PARCEL NUMBER
- CT CALTRANS
- (E) EXISTING
- EL ELEVATION
- L LEFT
- R RIGHT
- S SLOPE
- CL CENTER LINE



**VICINITY MAP**  
SCALE: 1"=5000'±



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Eureka California 95501 USA  
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ROAD NAME: MATTOLE ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: F30010	DESIGNED BY: C.PENNY
MILE POST: 13.66 - 13.68, 16.15	DRAWN BY: C.PENNY
PROJECT NO.: ER-32L0(252), ER-32L0(253)	REVIEWED BY: J.SVEHLA
CONTRACT NO.: 217204, 217424	APPROVED BY: J.SVEHLA
PLOT DATE: 03/14/2024	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 1 OF 28
STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 & 16.15	
COVER SHEET, SHEET INDEX, AND MAPS	

**COUNTY OF HUMBOLDT  
DEPARTMENT OF PUBLIC WORKS  
PROJECT PLANS FOR CONSTRUCTION OF  
STORM DAMAGE REPAIRS**

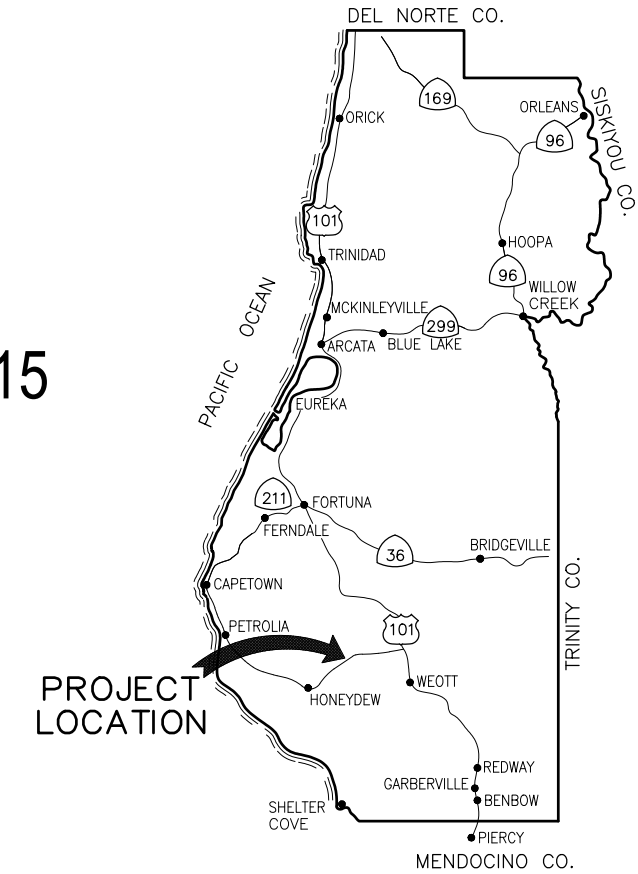
**MATTOLE ROAD (BULL CREEK) (F3D010) AT P.M. 13.66 - 13.68 & 16.15  
PROJECT NO. ER-32L0(252), ER-32L0(253)  
CONTRACT NO. 217204, 217424**

TO BE SUPPLEMENTED BY STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION 2023 STANDARD PLANS, 2023 STANDARD SPECIFICATIONS, AND LATEST REVISED STANDARD PLANS AND SPECIFICATIONS.



**SHEET LIST TABLE**

SHEET	SHEET TITLE
1	COVER SHEET, SHEET INDEX, AND MAPS
2	PROJECT QUANTITIES
3	PM 13.66-13.68 TRAFFIC CONTROL AND STAGING-STOCKPILE LOCATIONS
4	PM 13.66-13.68 SURVEY CONTROL PLAN
5	PM 13.66-13.68 TYPICAL SECTIONS
6	PM 13.66-13.68 TEMPORARY DETOUR PLAN
7	PM 13.66-13.68 ROADWAY PLAN AND PROFILE
8	PM 13.66-13.68 CULVERT DRAINAGE PLAN AND PROFILE
9	PM 13.66-13.68 CONSTRUCTION DETAILS
10	PM 13.66-13.68 EROSION CONTROL PLAN
11	PM 13.66-13.68 CROSS SECTIONS 1 OF 6
12	PM 13.66-13.68 CROSS SECTIONS 2 OF 6
13	PM 13.66-13.68 CROSS SECTIONS 3 OF 6
14	PM 13.66-13.68 CROSS SECTIONS 4 OF 6
15	PM 13.66-13.68 CROSS SECTIONS 5 OF 6
16	PM 13.66-13.68 CROSS SECTIONS 6 OF 6
17	PM 16.15 CONSTRUCTION AREA SIGNS
18	PM 16.15 STAGING & STOCKPILE LOCATION AND RIGHT OF WAY (TCE) DETAIL
19	PM 16.15 SURVEY CONTROL AND ALIGNMENT DATA
20	PM 16.15 MATTOLE ROAD PLAN AND PROFILE
21	PM 16.15 MATTOLE ROAD DETOUR PLAN AND PROFILE
22	PM 16.15 STREAM CHANNEL PLAN AND PROFILE
23	PM 16.15 STREAM DIVERSION PLAN AND DETAILS
24	PM 16.15 EROSION CONTROL AND REVEGETATION PLAN
25	PM 16.15 TYPICAL SECTIONS AND DETAILS
26	PM 16.15 BOX CULVERT DETAILS
27	PM 16.15 MATTOLE ROAD SECTIONS
28	PM 16.15 STREAM CHANNEL SECTIONS



**LOCATION MAP**  
NOT TO SCALE

**RECOMMENDED**

*[Signature]*  
JEREMY SVEHLA  
RCE 72169  
CIVIL ENGINEER  
GHD INC.  
3/11/2024  
DATE



*[Signature]*  
JEFFREY A. BALL  
RCE 70631, EXP. 6/30/2025  
ASSOCIATE CIVIL ENGINEER  
COUNTY OF HUMBOLDT  
3/19/2024  
DATE



**APPROVED**

*[Signature]*  
TONY R. SEGHELLI  
RCE 63714, EXP. 9/30/2024  
DEPUTY DIRECTOR OF ENGINEERING  
COUNTY OF HUMBOLDT  
3/19/2024  
DATE





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ROAD NAME:	MATTOLE ROAD	DESIGN SECTION	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
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MILE POST:	13.66 - 13.68, 16.15	DESIGNED BY:	C.PENNY
PROJECT NO.:	ER-32LO(252), ER-32LO(253)	DRAWN BY:	C.PENNY
CONTRACT NO.:	217204, 217424	REVIEWED BY:	J.SVEHLA
PLOT DATE:	03/19/2024	APPROVED BY:	J.SVEHLA

<b>PROJECT QUANTITIES</b>	
<b>STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 &amp; 16.15</b>	

SHEET  
2  
OF  
28

**QUANTITIES**

ITEM NO.	ITEM CODE	ITEM DESCRIPTION	UNIT	PM 13.66-13.68	PM 16.15	TOTAL QUANTITY
1	120090A	Construction Area Signs	EA	10	12	22
2	120100	Traffic Control System	LS	0.7	0.3	1
3	120120	Type III Barricade	EA	-	6.00	6
4	120206	Portable Signal Systems (EA)	EA	2	-	2
5	129000	Temporary Railing (Type K)	LF	460	-	460
6	129110A	Temporary Crash Cushion (Absorb-M, MASH TL-2)	EA	2	-	2
7	130100	Job Site Management	LS	0.5	0.5	1
8	130200	Prepare Water Pollution Control Program	LS	0.5	0.5	1
9	130310	Rain Event Action Plan	EA	8	8	16
10	130320	Stormwater Sampling and Analysis Day	EA	8	8	16
11	130330	Stormwater Annual Report	EA	0.50	0.50	1
12	130610	Temporary Check Dam	LF	100	-	100
13	130620	Temporary Drainage Inlet Protection	EA	1	-	1
14	130680	Temporary Silt Fence	LF	380	-	380
15	130900	Temporary Concrete Washout	LS	-	1	1
16	131201	Temporary Creek Diversion System	LS	-	1	1
17	146001	Contractor Supplied Biologist	DAY	-	15	15
18	160110	Temporary High-Visibility Fence	LF	-	300	300
19	170103	Cleaning and Grubbing (LS)	LS	0.8	0.2	1
20	173002	Log/Root Wad Structure	EA	-	1	1
21	190101	Roadway Excavation	CY	7700	76	7776
22	190136	Roadway Excavation (Detour)	LS	-	1	1
23	192001	F Structure Excavation	CY	-	475	475
24	193001	F Structure Backfill	CY	-	112	112
25	198050	Embankment	CY	6360	51	6411
26	198250A	Geosynthetic Reinforcement (Primary Reinforcement)	SQYD	5530	-	5530
27	198250B	Geosynthetic Reinforcement (Secondary Reinforcement)	SQYD	990	-	990
28	210212	Dry Seed (SQFT)	SQFT	15110	-	15110
29	210280A	Rolled Erosion Control Product (Blanket) (Type B)	SQFT	13780	-	13780
30	210350	Fiber Rolls	LF	1090	-	1090
31	210420	Straw	SQFT	1330	-	1330
32	260203	Class 2 Aggregate Base (CY)	CY	350	80	430
33	390132	Hot Mix Asphalt (Type A)	TON	260	54	314
34	394073	Place Hot Mix Asphalt Dike (Type A)	LF	252	-	252
35	514000A	F 12' x 6' Precast Reinforced Concrete Box Culvert	LF	-	38	38
36	514001A	F Structural Concrete (Wingwalls, Parapets)	CY	-	25	25
37	520101	F Bar Reinforcing Steel (Wingwalls, Parapets)	LBS	-	3170	3170
38	641113A	24" Plastic Pipe (HDPE Type S)	LF	79	-	79
39	680902	6" Perforated Plastic Pipe Underdrain	LF	462	-	462
40	680903	6" Non-Perforated Plastic Pipe Underdrain	LF	183	-	183
41	682022	F Class 1 Permeable Material (Blanket)	CY	940	-	940
42	691900	Flume Downdrain	LF	10	-	10
43	692101	Tapered Inlet	EA	1	-	1
44	692309	24" Anchor Assembly	EA	1	-	1
45	692361	Flume Anchor Assembly	EA	1	-	1
46	700655	48" Corrugated Steel Pipe Inlet (.109" Thick)	LF	7	-	7
47	710130	Remove Culvert (EA)	EA	1	2	3
48	720000	Engineered Streambed Material	CY	-	67	67
49	723070	Rock Slope Protection (150 lb, Class III, Method B) (CY)	CY	5	-	5
50	723080	Rock Slope Protection (60 lb, Class II, Method B) (CY)	CY	13	-	13
51	839491	Cable Railing	LF	-	91	91
52	840504	4" Thermoplastic Traffic Stripe	LF	530	-	530
53	999990	Mobilization	LS	0.8	0.2	1



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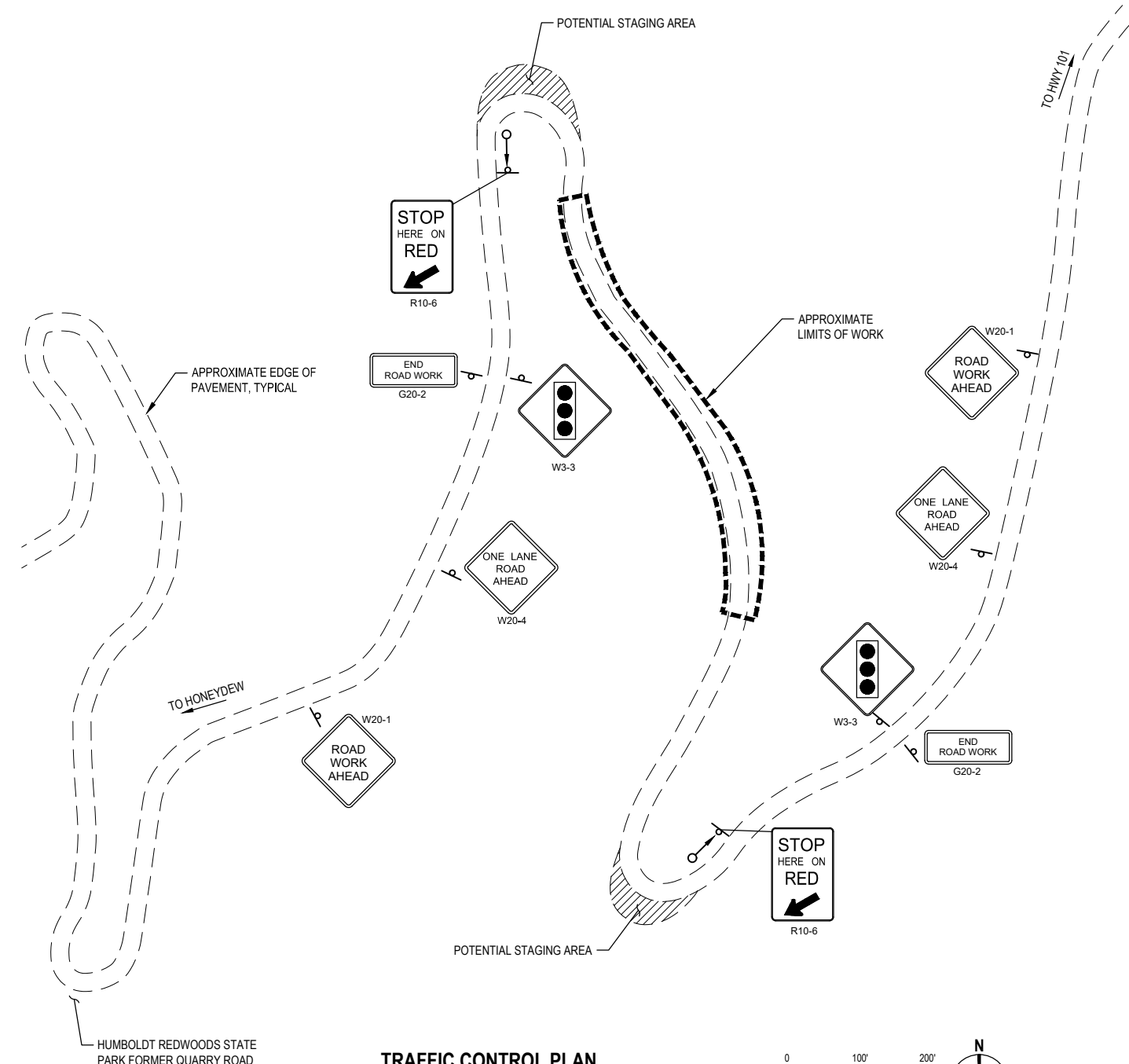
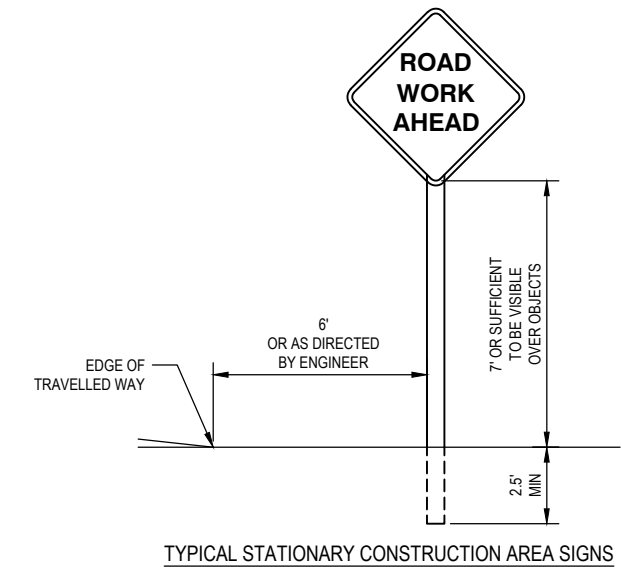
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COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS <b>STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 &amp; 16.15</b> <b>PM 13.66-13.68 TRAFFIC CONTROL AND STAGING-STOCKPILE LOCATIONS</b>
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SHEET 3 OF 28

**STATIONARY MOUNTED CONSTRUCTION AREA SIGNS**

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



**STOCKPILE NOTES:**

- MANAGE MATERIAL STOCKPILE PER SECTION 13.4.03(C) OF CALTRANS STANDARD SPECIFICATIONS.
- STOCKPILE SHALL HAVE FIBER ROLL, HAY BALES, SILT FENCE, OR OTHER APPROVED LINEAR BARRIER AROUND STOCKPILE.
- STOCKPILE SHALL BE COVERED WITH PLASTIC WHEN NOT IN USE AND BE WEIGHTED DOWN WITH SANDBAGS OR EQUIVALENT (AS PER STANDARD PLAN T53).
- IF STOCKPILE 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.
- ALTERNATE STOCKPILE AND STAGING SITES SHALL BE PRE-APPROVED THROUGH PUBLIC WORKS WITH WRITTEN APPROVAL.

**TRAFFIC CONTROL NOTES:**

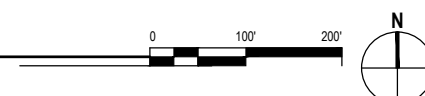
- ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CAMUTCD) AND CALTRANS 2023 STANDARD PLANS.
- EXACT SIGN LOCATIONS AND POSITIONS TO BE APPROVED BY THE ENGINEER.
- ALL WARNING SIGNS SHALL HAVE A BLACK LEGEND AND BORDER ON ORANGE BACKGROUND.
- ALTERNATIVE POST CONFIGURATION TO BE APPROVED BY ENGINEER.
- REFER TO 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.

**LEGEND**

- SIGN
- TRAFFIC SIGNAL

**TRAFFIC CONTROL PLAN**

1" = 100'





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PLOT DATE:	03/14/2024		

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS		SHEET <b>4</b> OF <b>28</b>
<b>STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 &amp; 16.15</b>		
<b>PM 13.66-13.68 SURVEY CONTROL PLAN</b>		

POINT#	EASTINGS	NORTHINGS	ELEVATION	DESCRIPTION
50	5992039.27	2009258.07	1049.62	CP_SPK
51	5991914.53	2009543.60	1069.67	CP_SPK
52	5992227.34	2008947.18	1023.87	CP_SPK
100	5992064.38	2008421.71	979.05	CP_SPK

Segment	Type	Length	Radius	Direction	Start Station	End Station
L1	LINE	59.18	-	N5° 43' 03.24"E	"R" 0+00.00	"R" 0+59.18
C1	CURVE	235.22	440.00		"R" 0+59.18	"R" 2+94.39
C2	CURVE	89.09	320.00		"R" 2+94.39	"R" 3+83.48
L2	LINE	85.80	-	N40° 51' 46.57"W	"R" 3+83.48	"R" 4+69.28
C3	CURVE	162.05	300.00		"R" 4+69.28	"R" 6+31.33
L3	LINE	97.47	-	N9° 54' 48.56"W	"R" 6+31.33	"R" 7+28.80

Segment	Type	Length	Radius	Direction	Start Station	End Station
C9	CURVE	22.46	388.00		"PM 13.68" 1+00.00	"PM 13.68" 1+22.46
C10	CURVE	4.22	38.00		"PM 13.68" 1+22.46	"PM 13.68" 1+26.68
C11	CURVE	30.66	438.00		"PM 13.68" 1+26.68	"PM 13.68" 1+57.34

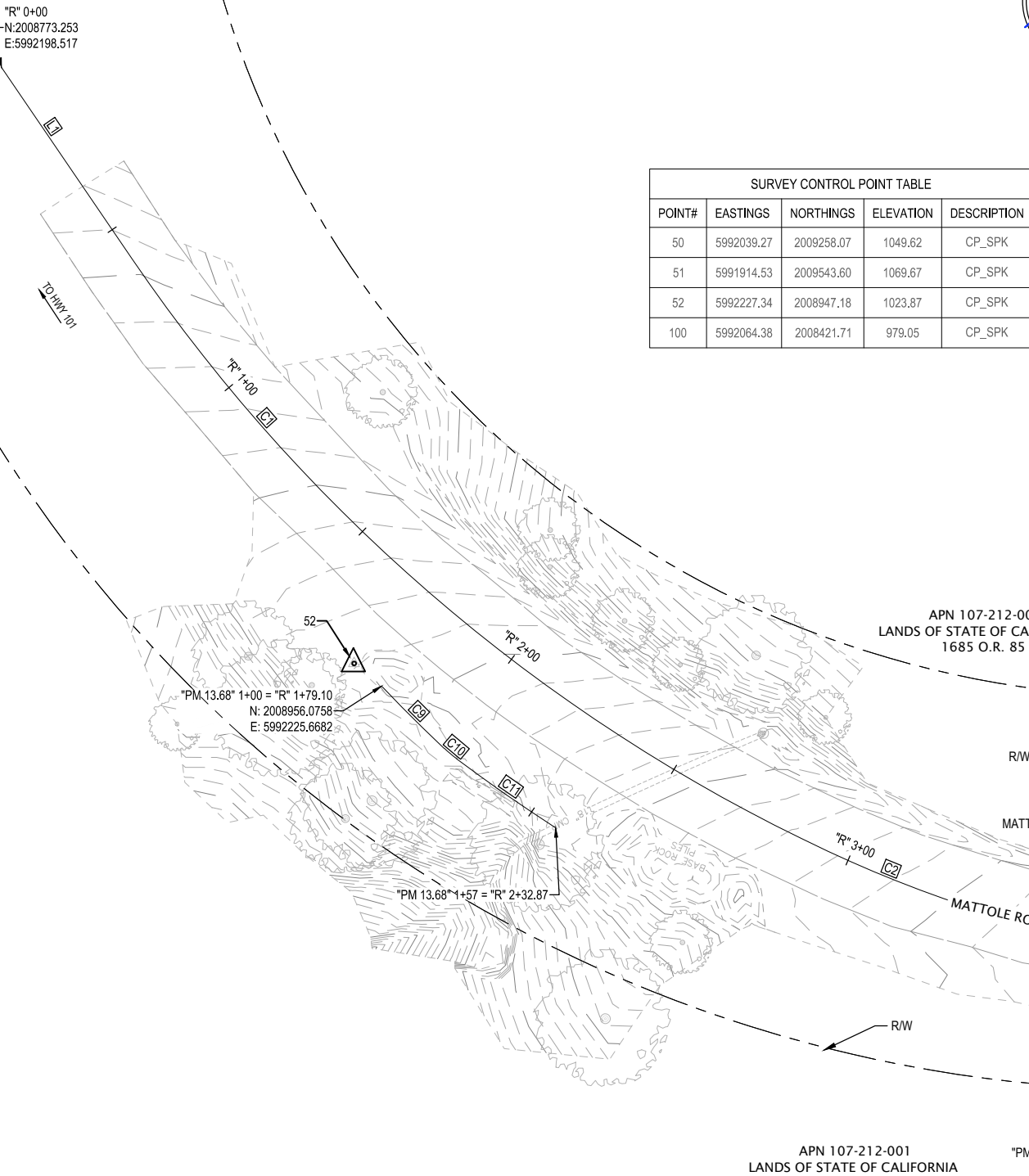
Segment	Type	Length	Radius	Direction	Start Station	End Station
L5	LINE	52.55	-	N43° 12' 37.99"W	"PM 13.66" 1+00.00	"PM 13.66" 1+52.55
C12	CURVE	49.53	166.00	N35° 41' 00.09"W	"PM 13.66" 1+52.55	"PM 13.66" 2+02.08
C13	CURVE	71.17	161.00	N29° 08' 58.33"W	"PM 13.66" 2+02.08	"PM 13.66" 2+73.25

- ### SURVEY CONTROL NOTES
- SURVEY CONDUCTED BY POINTS WEST SURVEYING. THE SURVEY REFLECTS CONDITIONS AT THE TIME OF SURVEY; FIELD WORK WAS COMMENCED APRIL 17 AND CONCLUDED MAY 7, 2019.
  - COORDINATES FOR THIS SURVEY ARE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83) ZONE 1, NAD 83 (2011), EPOCH 2010.0 BASED ON A STATIC GPS CONTROL SURVEY USING THE NGS OPUS POST PROCESSING SOFTWARE. THE CONTROL POINT IDENTIFIED AS POINT 100 WAS HELD FOR HORIZONTAL POSITIONS SHOWN HERON. THE MAPPING ANGLE IS 1 DEGREE 20 MINUTES 09 SECONDS; ROTATE BEARINGS HEREON COUNTERCLOCKWISE BY THIS ANGLE TO OBTAIN "TRUE" OR GEODETIC BEARINGS. GRID DISTANCES SHOWN SHOULD BE DIVIDED BY THE COMBINED SCALE FACTOR OF 0.99989196 TO OBTAIN GROUND DISTANCES. MAPPING ANGLE AND GRID SCALE FACTOR ARE TAKEN AT CONTROL POINT NUMBER 100, A 12-INCH SPIKE. ELEVATIONS ARE NAVD 88 DATUM BASED ON OPUS SOLUTION UTILIZING THE GEOID 12B MODEL. AN ELEVATION OF 979.05 FEET WAS MEASURED AT THE AFOREMENTIONED CONTROL POINT 100. CONTROL POINT #100 AND #51 FALL OUTSIDE OF PROJECT LIMITS AND ARE CONSIDERED PRIMARY SURVEY CONTROL. VERIFY CONTROL POINTS SHOWN HERON WITH THESE PRIMARY CONTROL POINTS AS POINTS IN SLIDE DAMAGE COULD MOVE.
  - CONTOURS AND SPOT ELEVATIONS WERE OBTAINED BY CONVENTIONAL SURVEY TECHNIQUES. ONLY TREES 12 INCH AND BIGGER WERE LOCATED; NUMEROUS OTHER SMALLER TREES EXIST WITHIN AREA SURVEYED AND ARE NOT SHOWN. TREE LOCATIONS ARE GENERALLY SHOWN AT BREAST HEIGHT AND ARE APPROXIMATE DUE TO THE FACT NOT ALL TREES ARE GROWING VERTICALLY.
  - THE ROAD RIGHT OF WAY SHOWN IS BASED ON SHEET 10 OF 17 OF THE F.A.S. PROJECT NO. S976-(1). A LIS PENDENS FOR THE RIGHT OF WAY WAS RECORDED IN BOOK 46 OF OFFICIAL RECORDS, PAGE 402. NO FINAL DECREE OF CONDEMNATION WAS FOUND IN HUMBOLDT COUNTY RECORDS. THE F.A.S. BEARINGS WERE ROTATED CLOCKWISE 2°36'49" TO OUR GRID BEARINGS. NO MONUMENTATION ALONG F.A.S. CENTERLINE WAS FOUND. THE F.A.S. MAP DOES NOT PROVIDE ANY DATA TO LOCATE THE CENTERLINE. THE LIS PENDENS DOCUMENT NOTED ABOVE (SITE FALLS WITHIN PARCEL EIGHT THEREIN) HAS A TIE TO QUARTER CORNER COMMON TO SECTION 2, T2S, R1E AND SECTION 35, T1S, R1E. THIS TIE WAS NOT VERIFIED. LIKE THE SURVEY FOR HUMBOLDT COUNTY RECORDED IN BOOK 57 OF SURVEYS, PAGE 25, THIS SURVEY HOLDS THE PHYSICAL CENTERLINE OF THE ROAD TO LOCATE THE 100 FOOT RIGHT OF WAY AS DESCRIBED IN THE DOCUMENT NOTED ABOVE. POINTS "A" AND "B" AS INDICATED HERON WERE HELD FOR LOCATING THE RIGHT OF WAY. DISTANCES ON SAID F.A.S. MAP WERE SCALED BY 0.99989196- SEE NOTE 2 ABOVE.

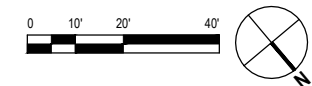
- ### GENERAL NOTES
- CONTRACTOR MUST COMPLY WITH BUSINESS AND PROFESSIONS CODE SECTION 8771 (b) REGARDING REFERENCING, PRESERVING AND RECONSTRUCTING SURVEY MONUMENTS, WHETHER OR NOT SURVEY MONUMENTS ARE SHOWN IN THESE PLANS.
  - IF SURVEY MONUMENT IS DAMAGED BY CONTRACTORS OPERATIONS, CONTRACTOR SHALL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

### LEGEND

	TEMPORARY CONTROL POINT
	TEMPORARY CONSTRUCTION EASEMENT
	STORM DAMAGE REPAIR RW
	ROAD RW



- ### UNDERGROUND UTILITY NOTES:
- UNDERGROUND UTILITIES ARE SHOWN BASED ON A COMBINATION OF VISIBLE PHYSICAL EVIDENCE AND RECORDS MADE AVAILABLE TO THE SURVEYOR.
  - 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.
  - CALL UNDERGROUND SERVICE ALERT (USA) 1-800-642-2444 A MINIMUM OF TWO BUSINESS DAYS PRIOR TO ANY EXCAVATIONS.





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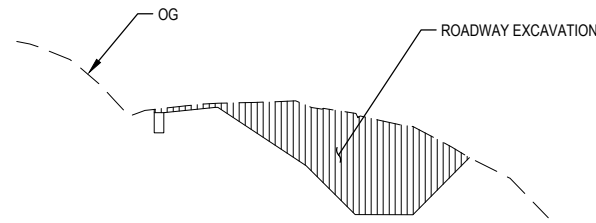


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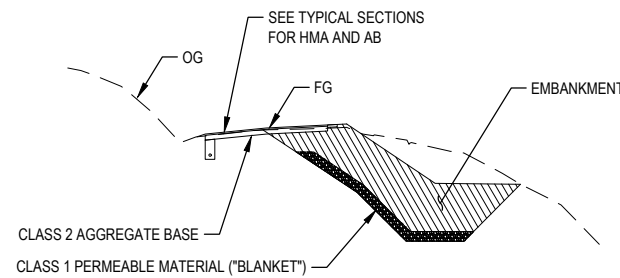
COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 & 16.15
PM 13.66-13.68 TYPICAL SECTIONS

SHEET 5 OF 28



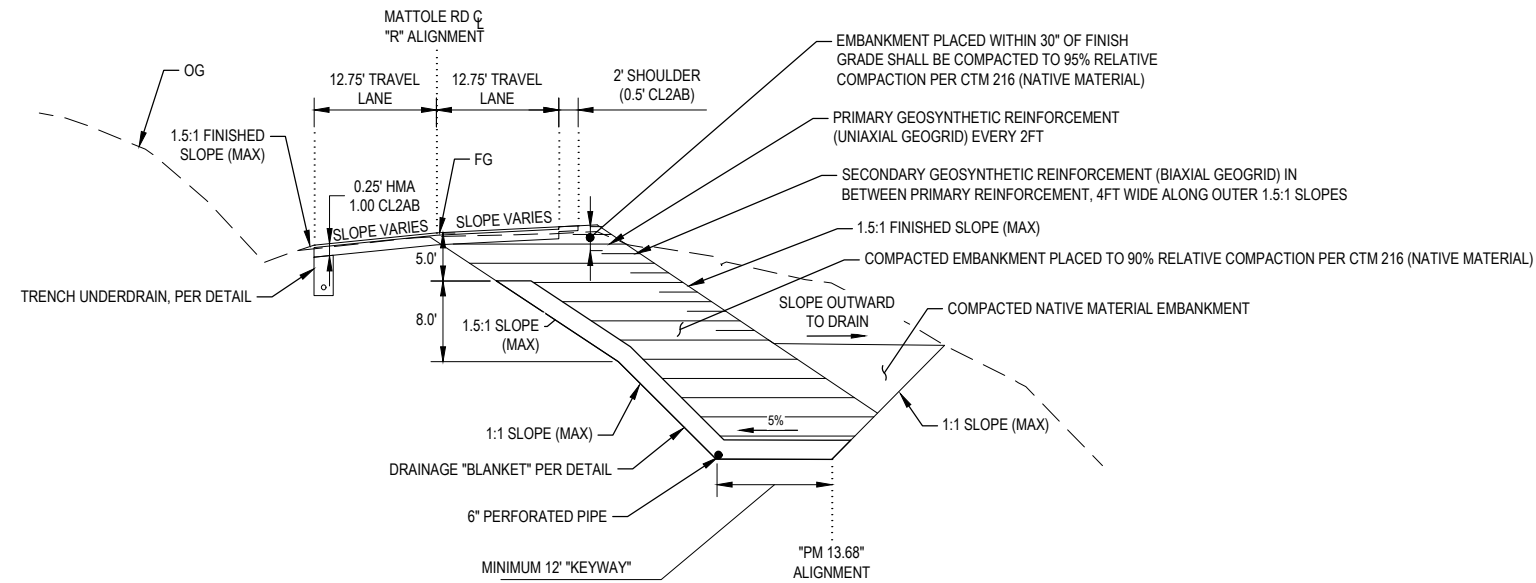
**LIMITS OF PAYMENT - CUT PM 13.68**

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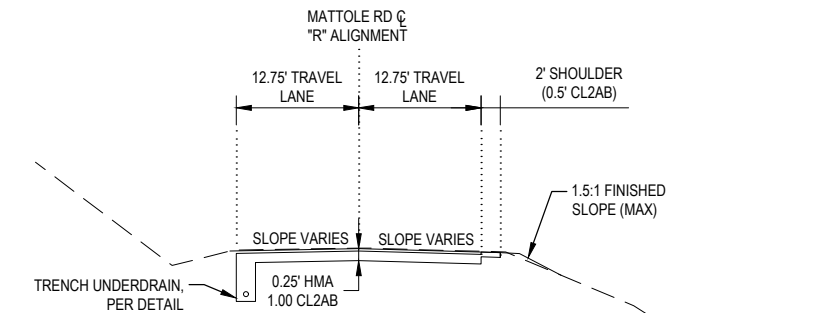
**LIMITS OF PAYMENT - FILL PM 13.68**

NOT TO SCALE



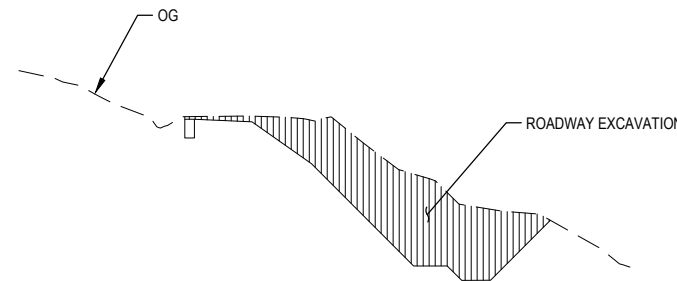
**TYPICAL SECTION - MATTOLE ROAD PM 13.68**

NOT TO SCALE STA 1+79 TO STA 2+33



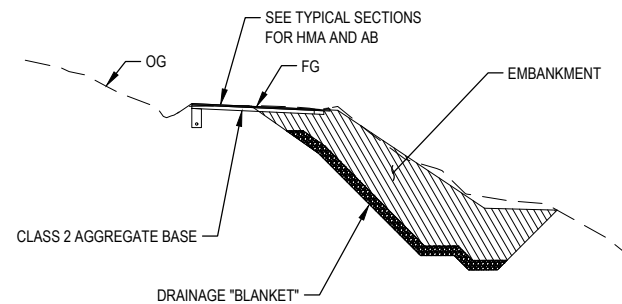
**TYPICAL SECTION - MATTOLE ROAD PM 13.66**

NOT TO SCALE STA 1+50 TO STA 1+79, STA 2+33 TO STA 4+05, AND STA 5+96 TO STA 6+30



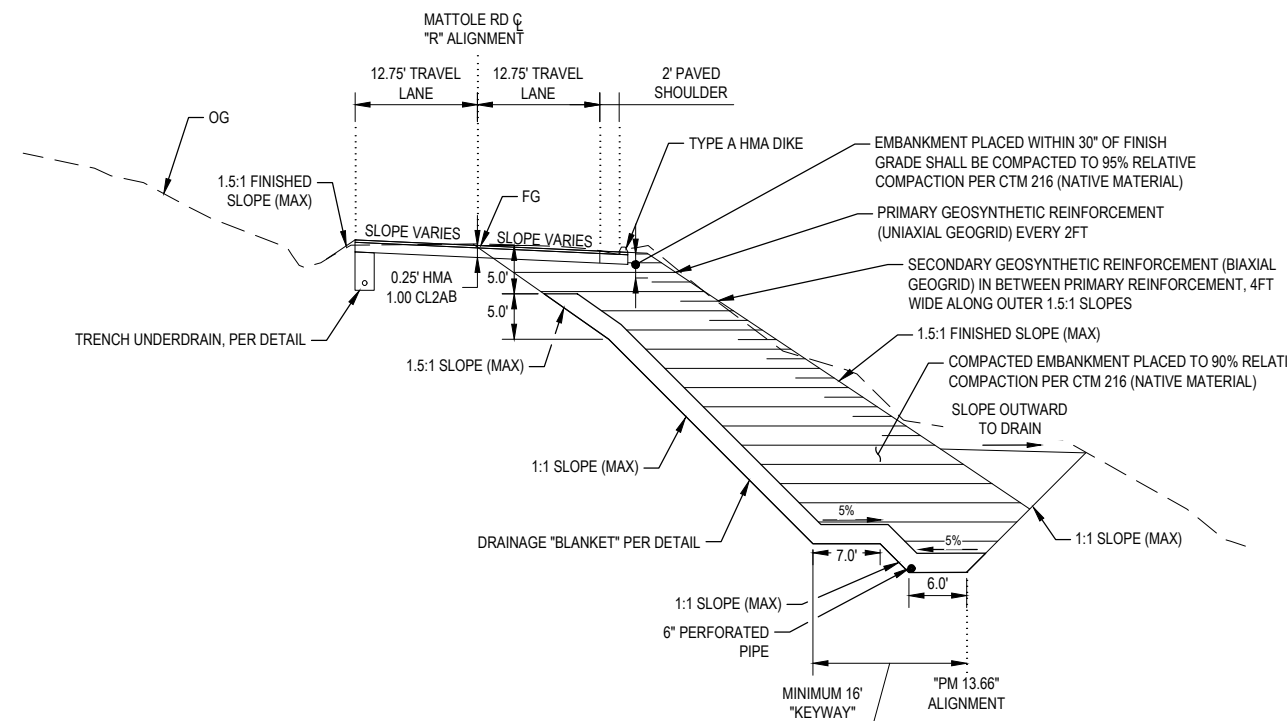
**LIMITS OF PAYMENT - CUT PM 13.66**

NOT TO SCALE



**LIMITS OF PAYMENT - FILL PM 13.66**

NOT TO SCALE



**TYPICAL SECTION - MATTOLE ROAD PM 13.66**

NOT TO SCALE STA 4+05 TO STA 5+96

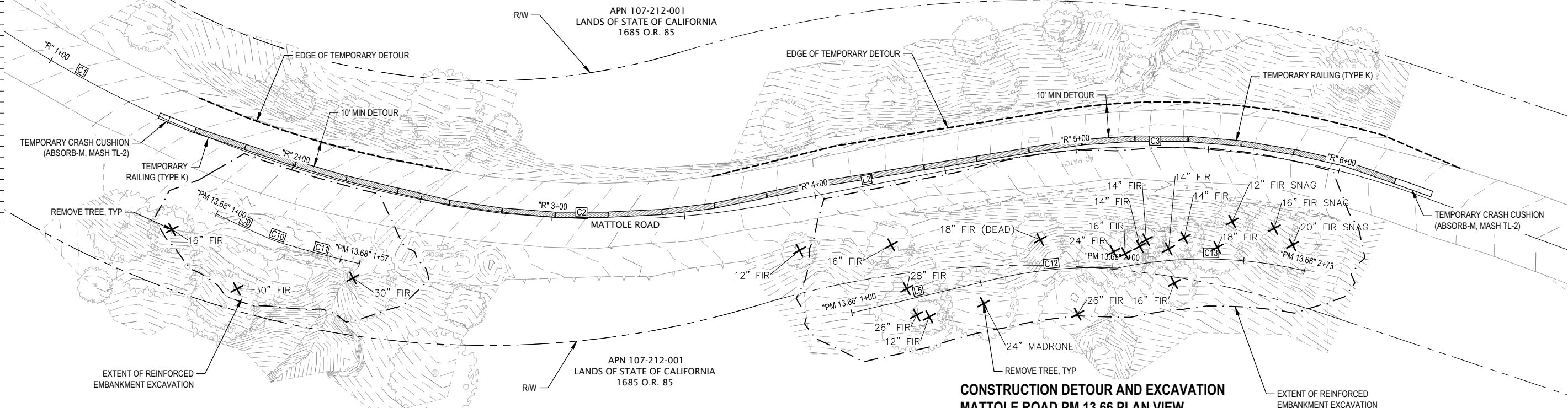
TREE REMOVAL	
STATE PARKS R/W	
12"	FIR
16"	FIR
24"	MADRONE
26"	FIR
26"	FIR
28"	FIR
COUNT 6	
COUNTY R/W	
12"	FIR
12"	FIR SNAG
14"	FIR
14"	FIR
14"	FIR
16"	FIR
16"	FIR
16"	FIR SNAG
16"	FIR TOP
18"	FIR
18"	FIR DEAD
20"	FIR SNAG
24"	FIR
30"	FIR
30"	FIR TOP
COUNT 16	



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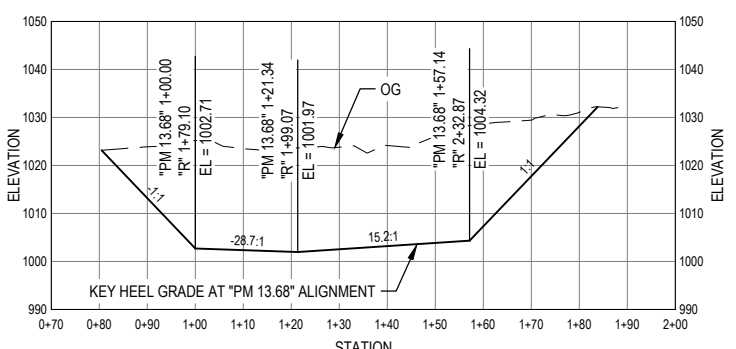


ROAD NAME: MATTOLE ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: F30010	DESIGNED BY: C.PENNY
MILE POST: 13.66 - 13.68, 16.15	DRAWN BY: C.PENNY
PROJECT NO: ER-32LO(252), ER-32LO(253)	REVIEWED BY: J.SVEHLA
CONTRACT NO.: 217204, 217424	APPROVED BY: J.SVEHLA
PLOT DATE: 03/14/2024	

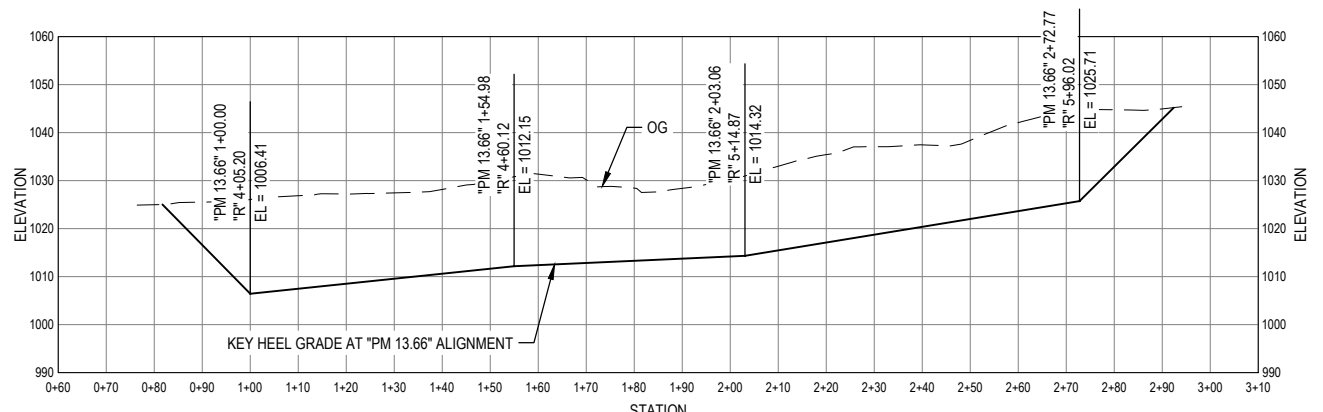


**CONSTRUCTION DETOUR AND EXCAVATION MATTOLE ROAD PM 13.68 PLAN VIEW**

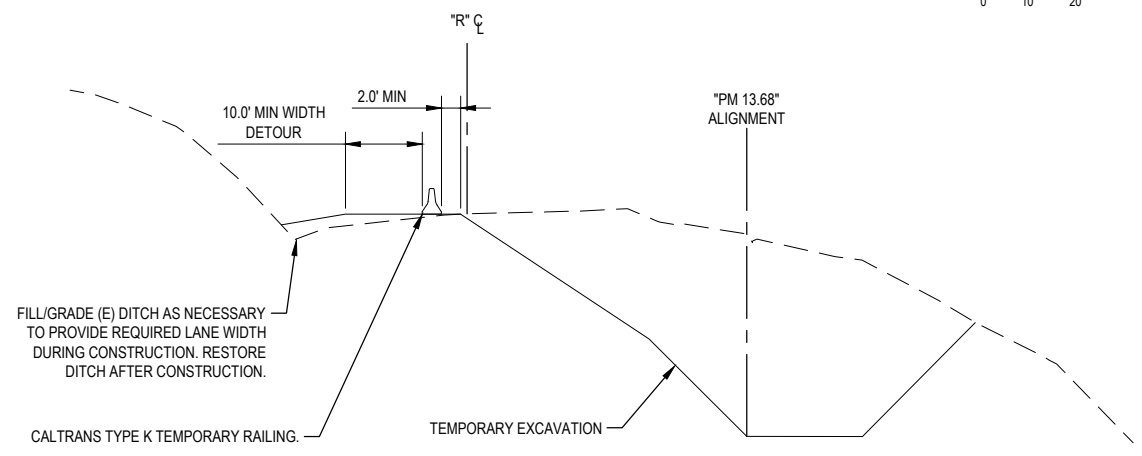
**CONSTRUCTION DETOUR AND EXCAVATION MATTOLE ROAD PM 13.66 PLAN VIEW**



**"PM 13.68" ALIGNMENT PROFILE VIEW**

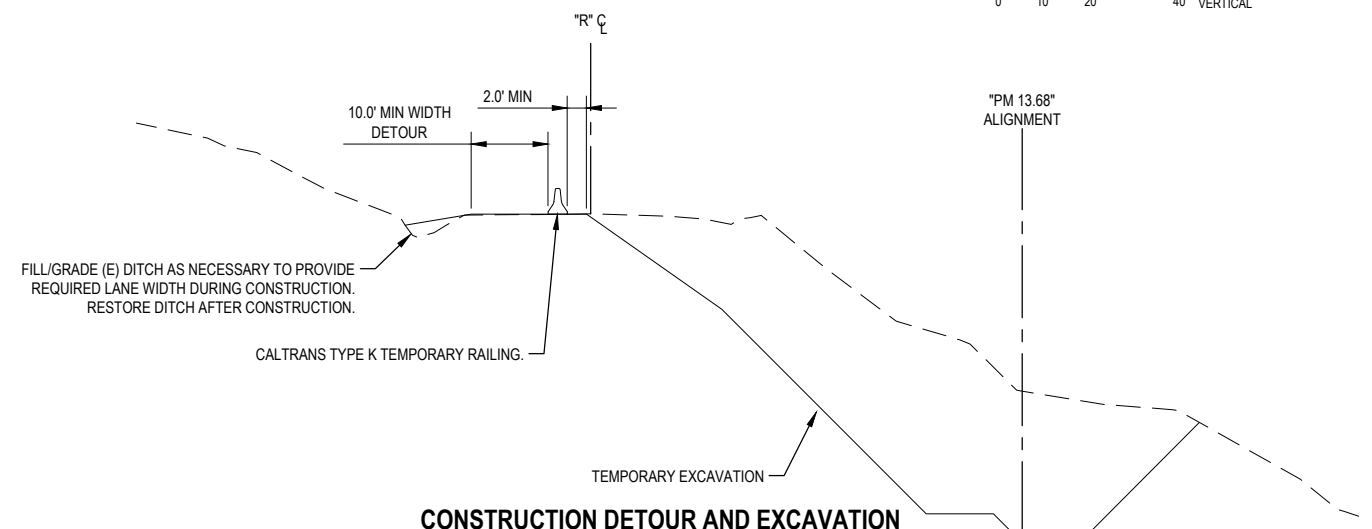


**"PM 13.66" ALIGNMENT PROFILE VIEW**



**CONSTRUCTION DETOUR AND EXCAVATION MATTOLE ROAD PM 13.68 TYPICAL SECTION**

NOT TO SCALE



**CONSTRUCTION DETOUR AND EXCAVATION MATTOLE ROAD PM 13.66 TYPICAL SECTION**

NOT TO SCALE



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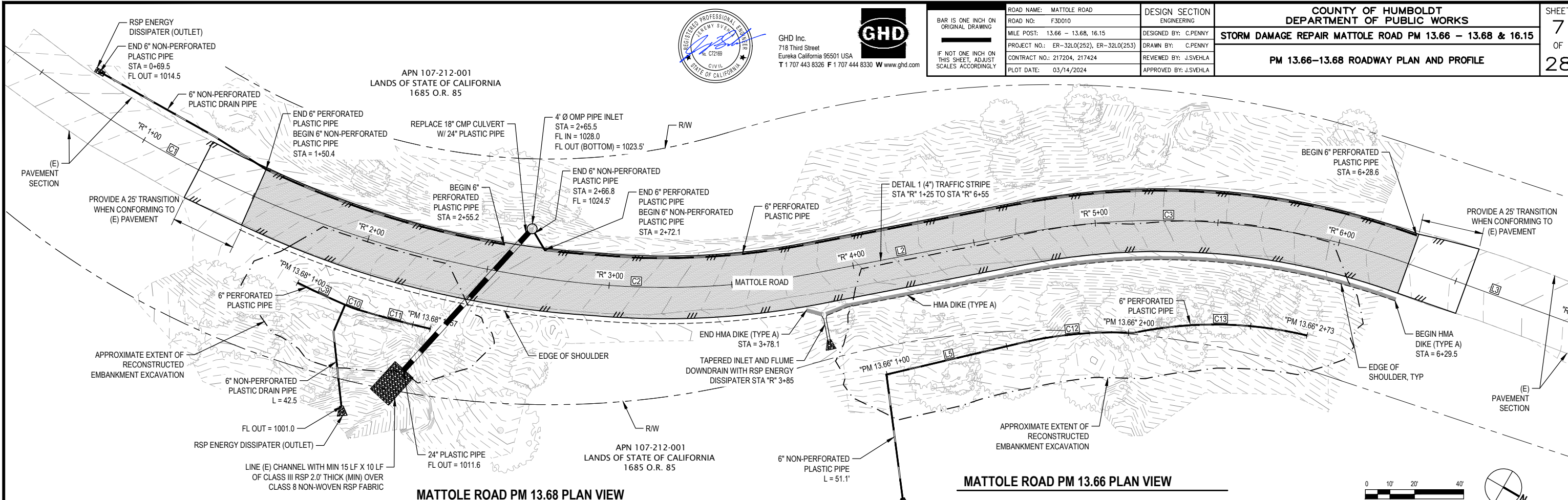
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME:	MATTOLE ROAD
ROAD NO:	F30010
MILE POST:	13.66 - 13.68, 16.15
PROJECT NO.:	ER-32L(252), ER-32L(253)
CONTRACT NO.:	217204, 217424
PLOT DATE:	03/14/2024

DESIGN SECTION	ENGINEERING
DESIGNED BY:	C.PENNY
DRAWN BY:	C.PENNY
REVIEWED BY:	J.SVEHLA
APPROVED BY:	J.SVEHLA

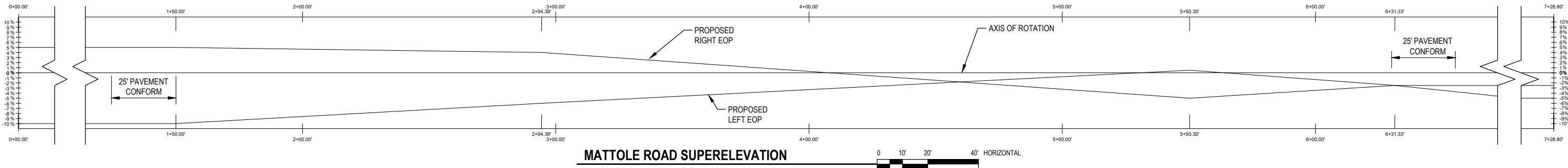
COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	
STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 & 16.15	
PM 13.66-13.68 ROADWAY PLAN AND PROFILE	

SHEET 7 OF 28

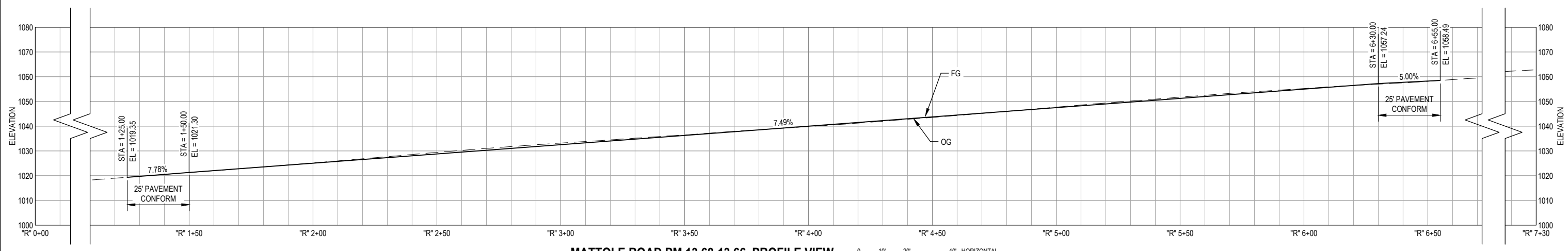


MATTOLE ROAD PM 13.68 PLAN VIEW

MATTOLE ROAD PM 13.66 PLAN VIEW



MATTOLE ROAD SUPERELEVATION



MATTOLE ROAD PM 13.68-13.66 PROFILE VIEW



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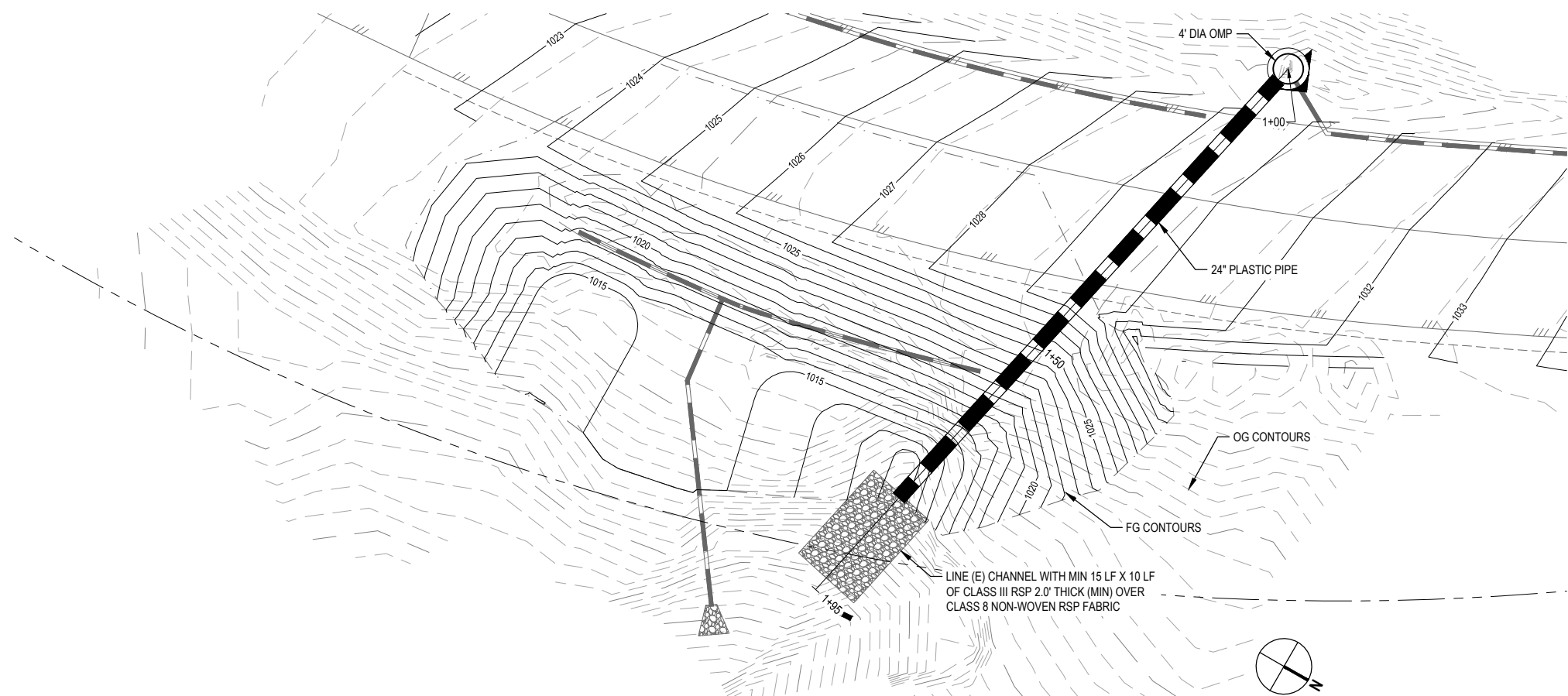


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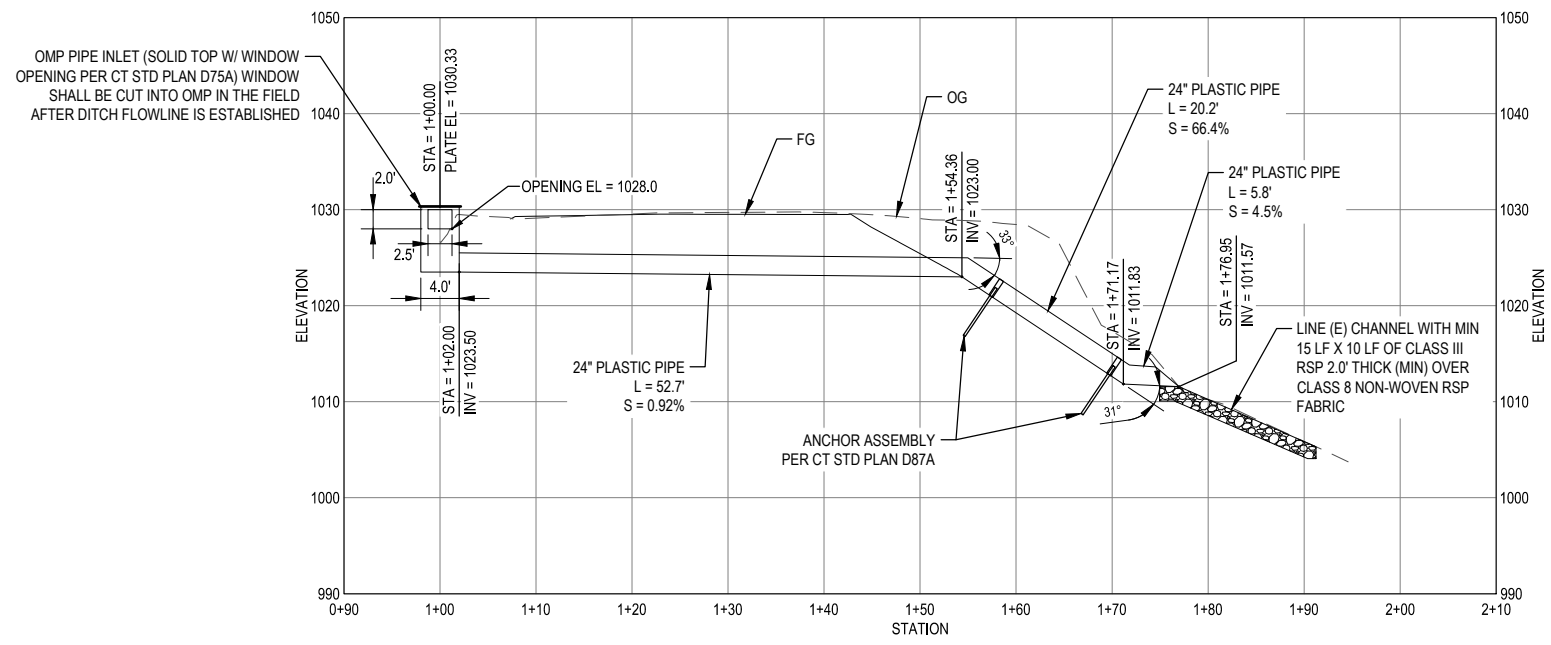
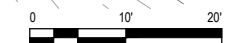
ROAD NAME: MATTOLE ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: F30010	DESIGNED BY: C.PENNY
MILE POST: 13.66 - 13.68, 16.15	DRAWN BY: C.PENNY
PROJECT NO.: ER-32LO(252), ER-32LO(253)	REVIEWED BY: J.SVEHLA
CONTRACT NO.: 217204, 217424	APPROVED BY: J.SVEHLA
PLOT DATE: 03/14/2024	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 & 16.15
PM 13.66-13.68 CULVERT DRAINAGE PLAN AND PROFILE

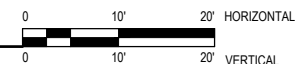
SHEET 8 OF 28



CULVERT DRAINAGE PLAN  
SCALE



CULVERT DRAINAGE PROFILE  
SCALE



NOTE:  
1. TRENCH BACKFILL PER CT STD PLAN A62F





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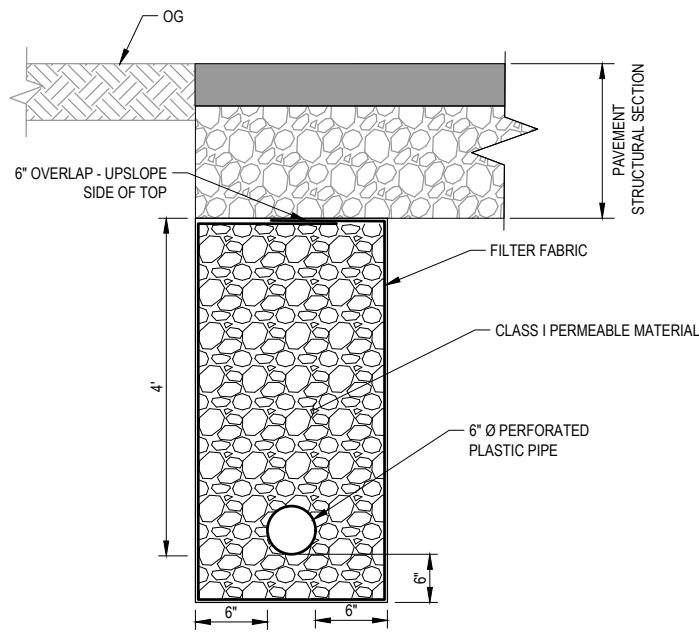


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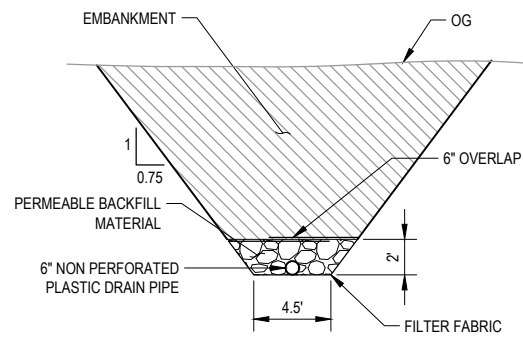
ROAD NAME: MATTOLE ROAD	DESIGN SECTION: ENGINEERING
ROAD NO: F30010	DESIGNED BY: C.PENNY
MILE POST: 13.66 - 13.68, 16.15	DRAWN BY: C.PENNY
PROJECT NO.: ER-32L0(252), ER-32L0(253)	REVIEWED BY: J.SVEHLA
CONTRACT NO.: 217204, 217424	APPROVED BY: J.SVEHLA
PLOT DATE: 03/14/2024	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 & 16.15
PM 13.66-13.68 CONSTRUCTION DETAILS

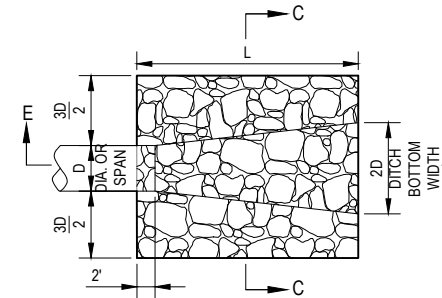
SHEET 9 OF 28



**TYPICAL TRENCH UNDERDRAIN**  
NOT TO SCALE

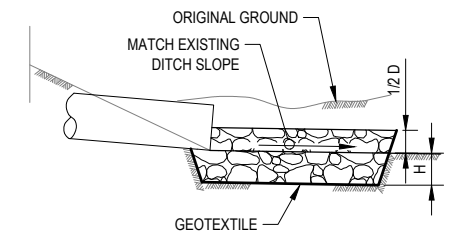


**SUBDRAIN OUTLET DETAIL**  
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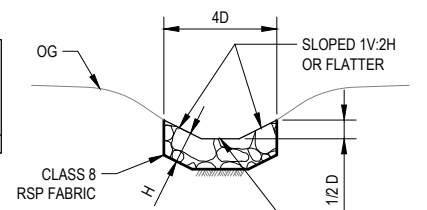


**PLAN VIEW**

OUTLET PROTECTION	CULVERT SIZE D (inches)	RSP CLASS	LENGTH OF APRON L (feet)	DEPTH OF APRON H (feet)	ESTIMATED RSP QUANTITY (CY)
	6	2	4	1.5	0.5



**SECTION E-E**



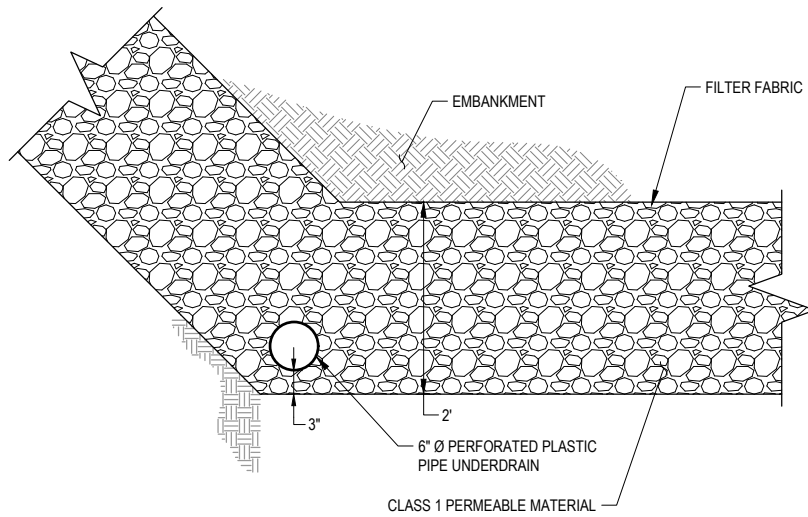
**SECTION C-C**

NOTE:

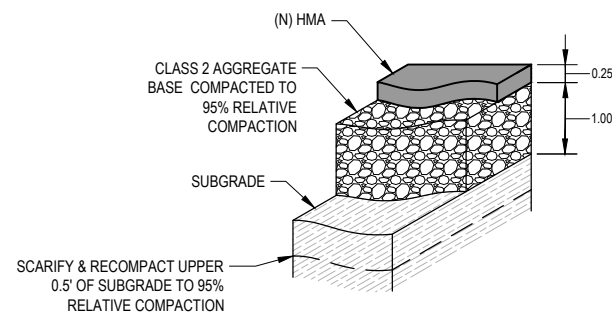
- EXCAVATION FOR PLACEMENT OF RSP AND RSP FABRIC WILL NOT BE MEASURED FOR PAYMENT.

**CULVERT ENERGY DISSIPATOR WITH DITCH**

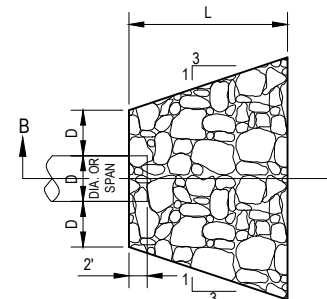
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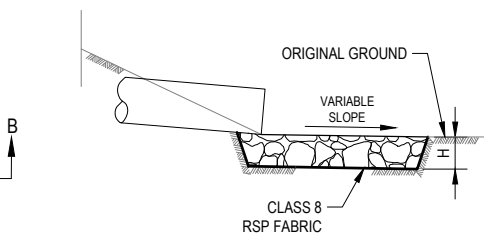
**DRAINAGE "BLANKET" DETAIL**  
NOT TO SCALE



**TYPICAL PAVEMENT STRUCTURAL SECTION DETAIL**  
NOT TO SCALE



**PLAN VIEW**



**SECTION B-B**

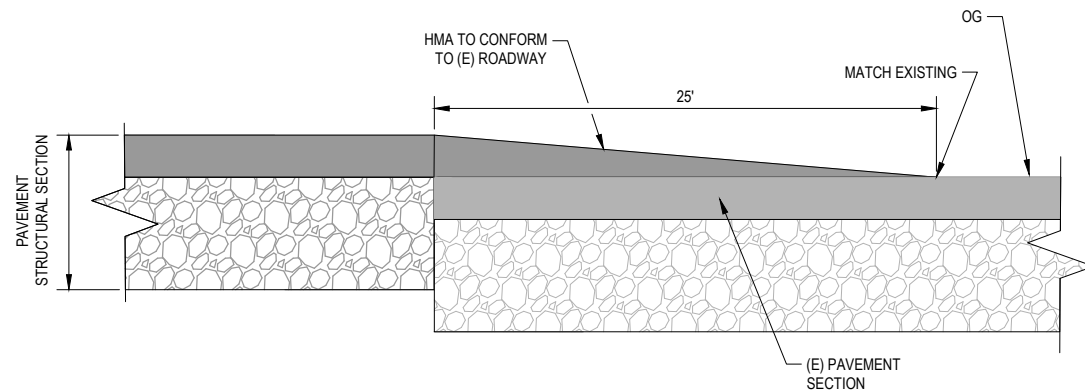
OUTLET PROTECTION	CULVERT SIZE D (inches)	RSP CLASS	LENGTH OF APRON L (feet)	DEPTH OF APRON H (feet)	ESTIMATED RSP QUANTITY (CY)
	6	2	4	1.5	1
FLUME DOWNDRAIN		2	6	1.5	2

NOTE:

- EXCAVATION FOR PLACEMENT OF RSP AND RSP FABRIC WILL NOT BE MEASURED FOR PAYMENT.

**CULVERT ENERGY DISSIPATOR WITHOUT DITCH**

NOT TO SCALE



**PAVEMENT CONFORM DETAIL**

SCALE: NTS



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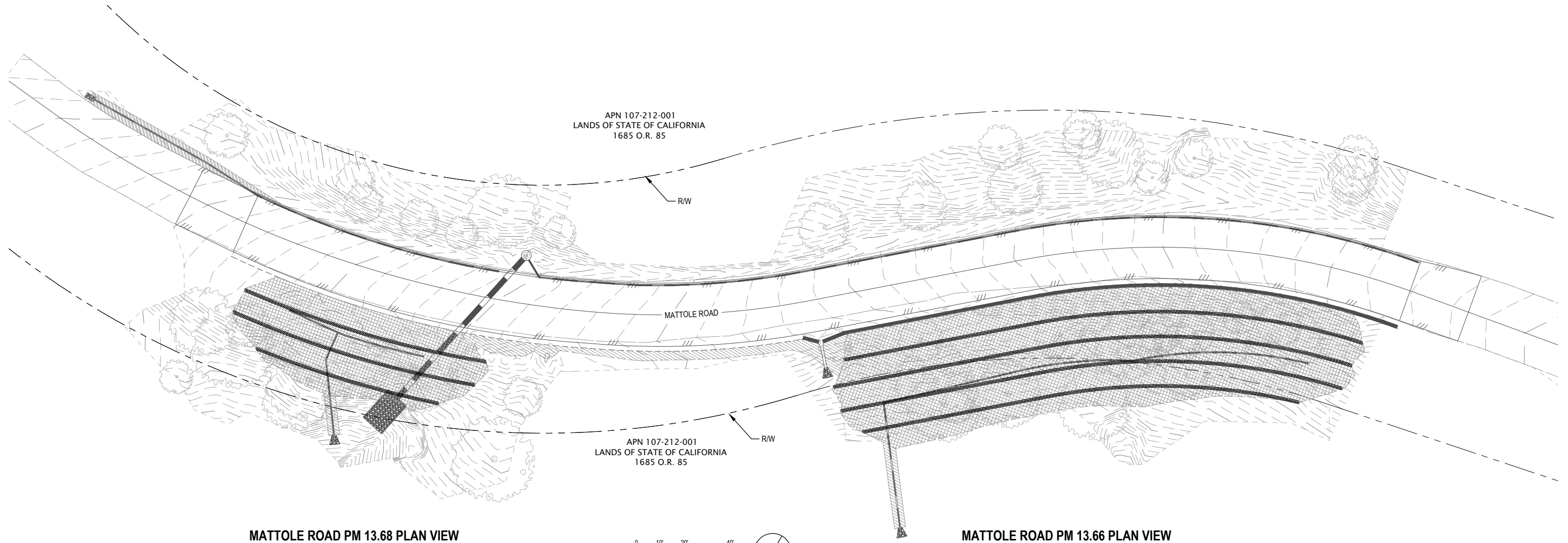
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME: MATTOLE ROAD	DESIGN SECTION
ROAD NO: F30010	ENGINEERING
MILE POST: 13.66 - 13.68, 16.15	DESIGNED BY: C.PENNY
PROJECT NO.: ER-32LO(252), ER-32LO(253)	DRAWN BY: C.PENNY
CONTRACT NO.: 217204, 217424	REVIEWED BY: J.SVEHLA
PLOT DATE: 03/14/2024	APPROVED BY: J.SVEHLA

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 & 16.15
PM 13.66-13.68 EROSION CONTROL PLAN

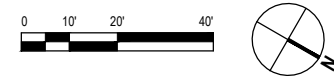
SHEET 10 OF 28

NOTE: THIS PLAN IS ACCURATE FOR EROSION CONTROL ONLY



MATTOLE ROAD PM 13.68 PLAN VIEW

MATTOLE ROAD PM 13.66 PLAN VIEW



LEGEND	
	HAND SOWN SEED UNDER ROLLED EROSION CONTROL PRODUCT
	HAND SOWN SEED AND STRAW; PLACE ON ALL SOIL DISTURBED AREAS. TOTAL AREA SUBJECT TO CONTRACTORS OPERATIONS.
	FIBER ROLLS (10' SPACING, TYP)



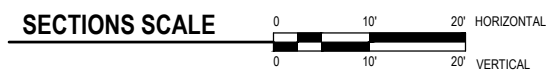
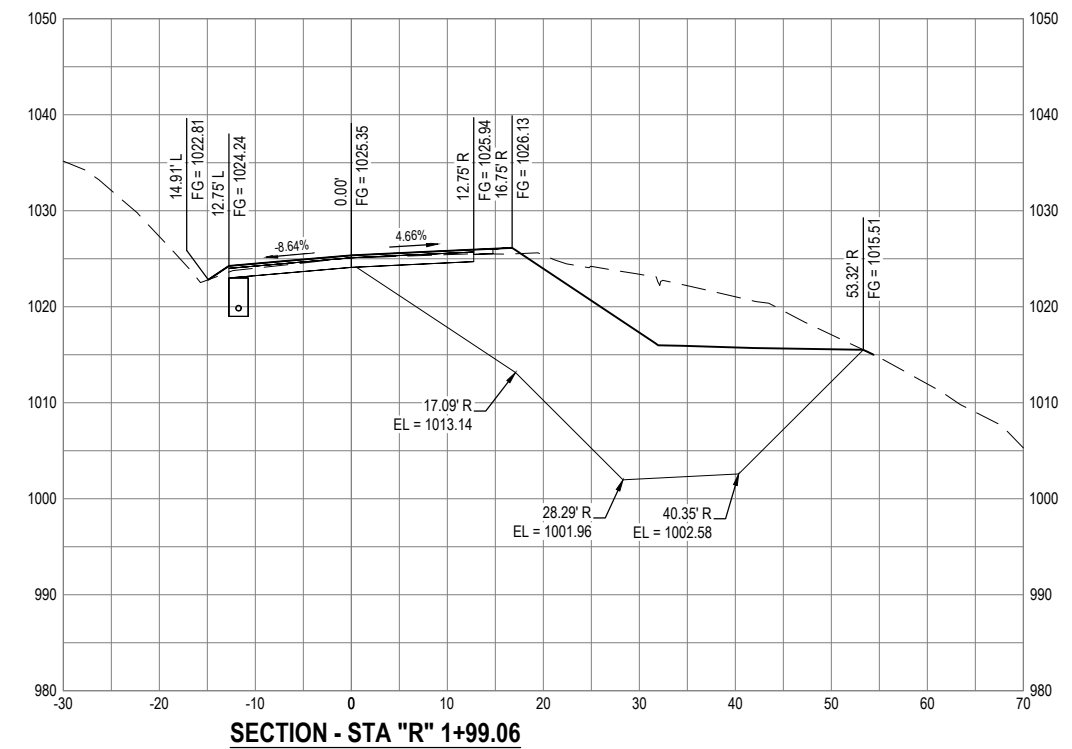
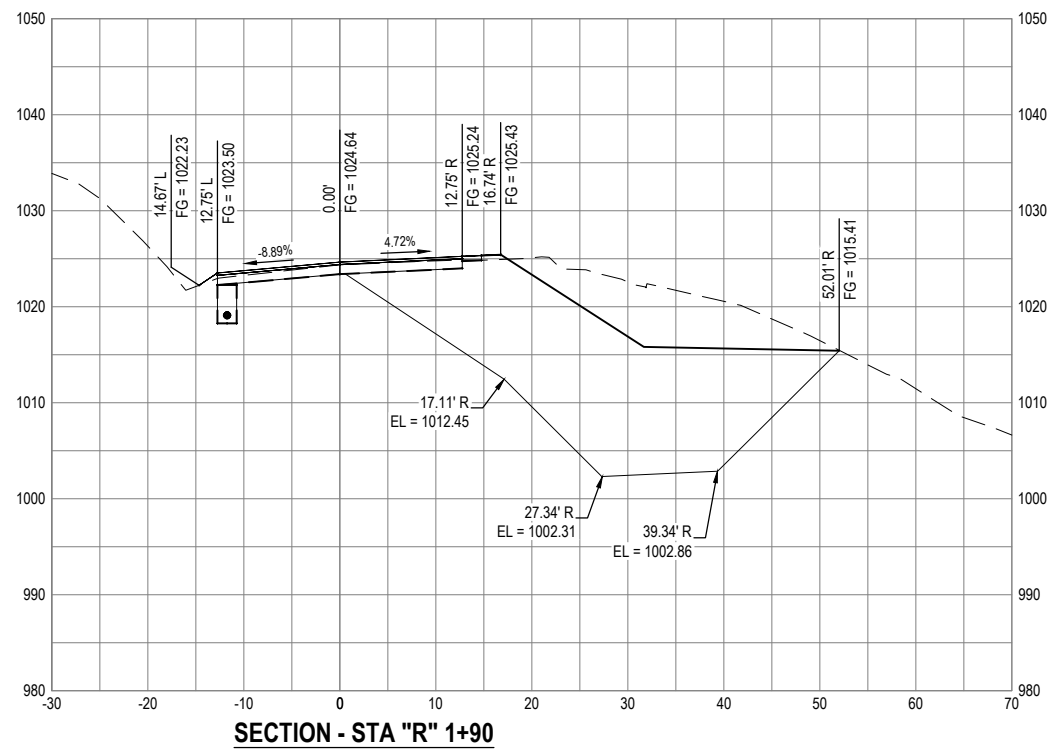
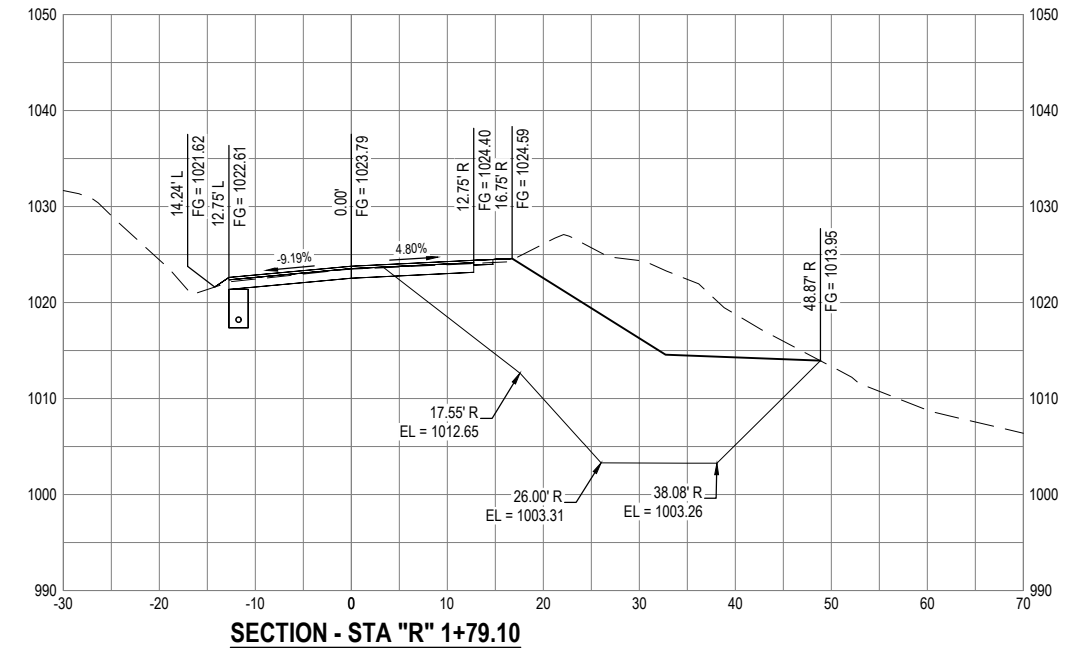
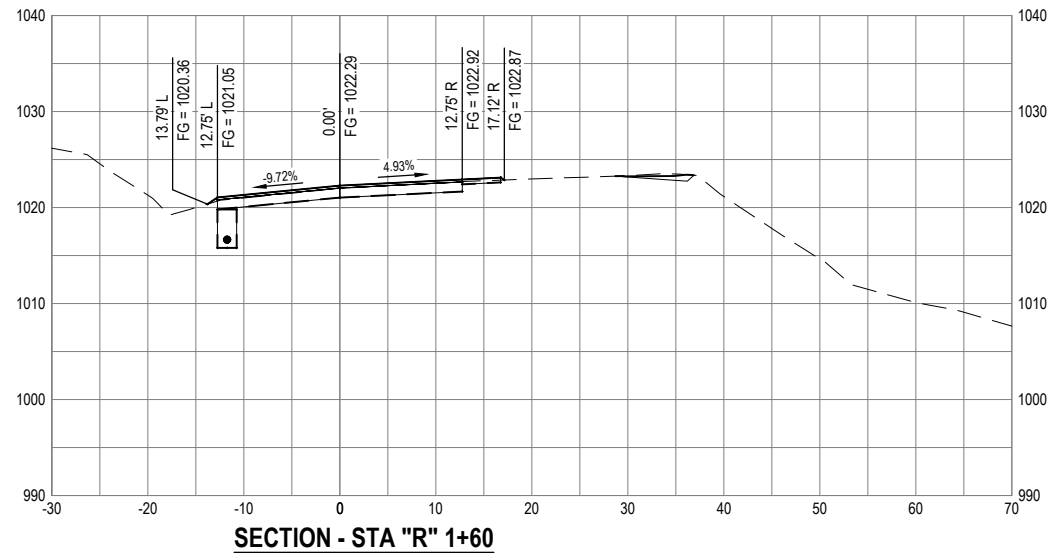
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ROAD NAME: MATTOLE ROAD	DESIGN SECTION
ROAD NO: F30010	ENGINEERING
MILE POST: 13.66 - 13.68, 16.15	DESIGNED BY: C.PENNY
PROJECT NO.: ER-32LO(252), ER-32LO(253)	DRAWN BY: C.PENNY
CONTRACT NO.: 217204, 217424	REVIEWED BY: J.SVEHLA
PLOT DATE: 03/14/2024	APPROVED BY: J.SVEHLA

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS <b>STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 &amp; 16.15</b> <b>PM 13.66-13.68 CROSS SECTIONS 1 OF 6</b>
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SHEET  
11  
OF  
28





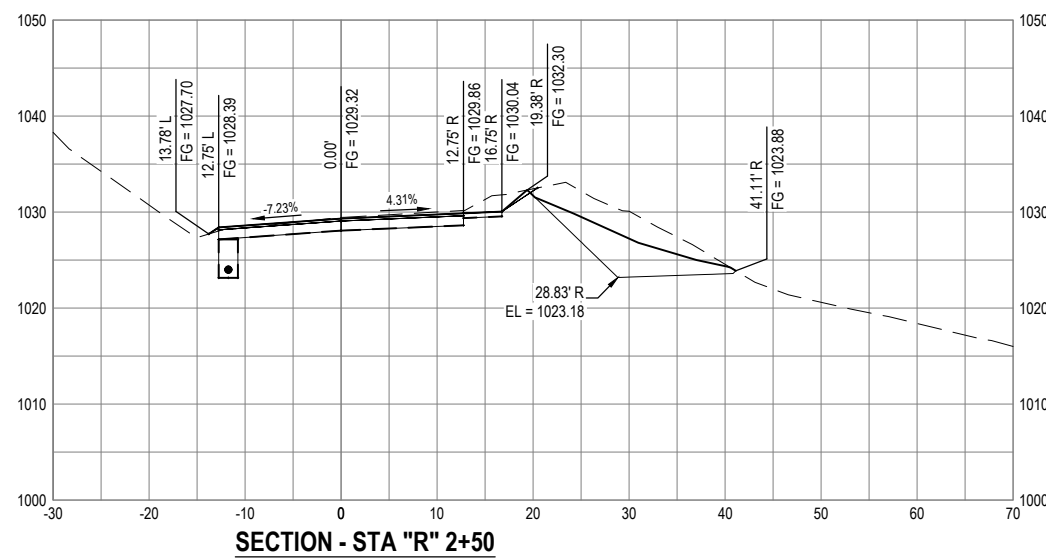
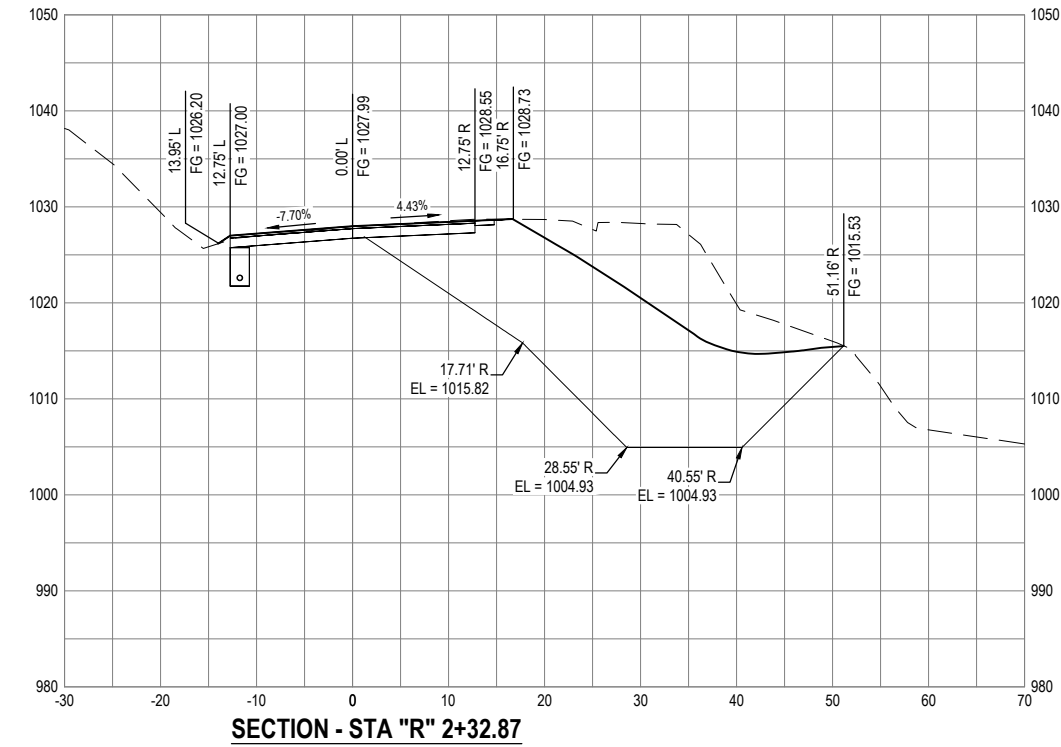
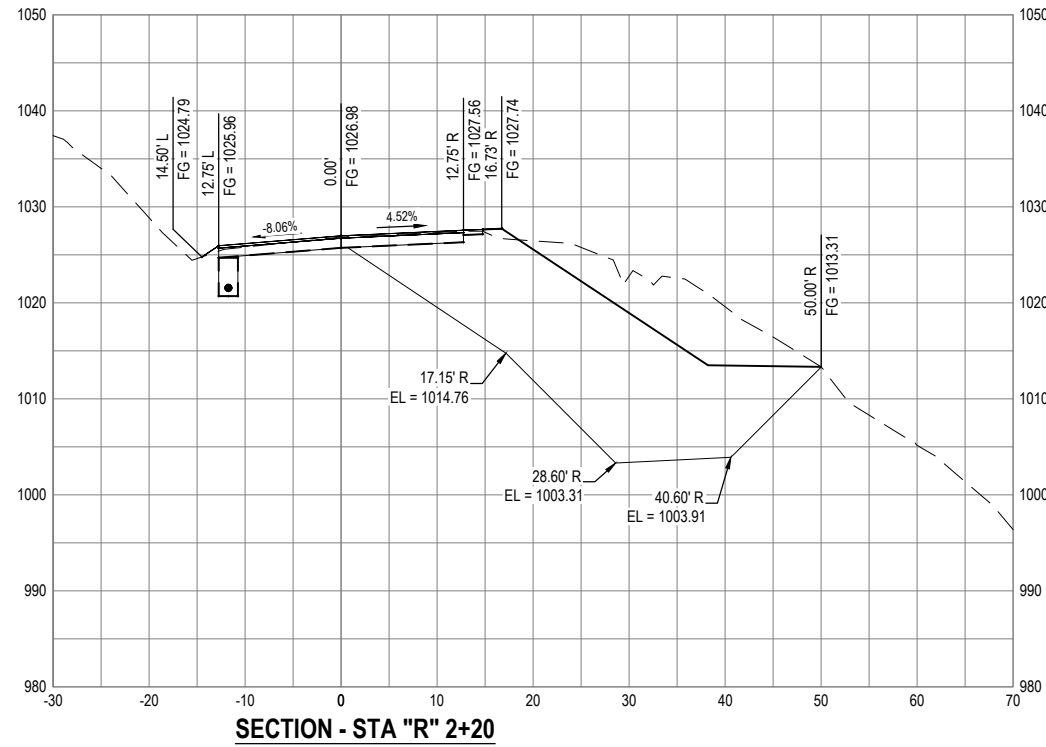
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ROAD NO: F30010	ENGINEERING
MILE POST: 13.66 - 13.68, 16.15	DESIGNED BY: C.PENNY
PROJECT NO.: ER-32LO(252), ER-32LO(253)	DRAWN BY: C.PENNY
CONTRACT NO.: 217204, 217424	REVIEWED BY: J.SVEHLA
PLOT DATE: 03/14/2024	APPROVED BY: J.SVEHLA

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
<b>STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 &amp; 16.15</b>
<b>PM 13.66-13.68 CROSS SECTIONS 2 OF 6</b>

SHEET  
12  
OF  
28



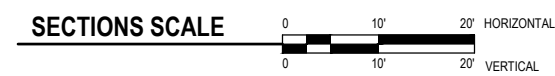
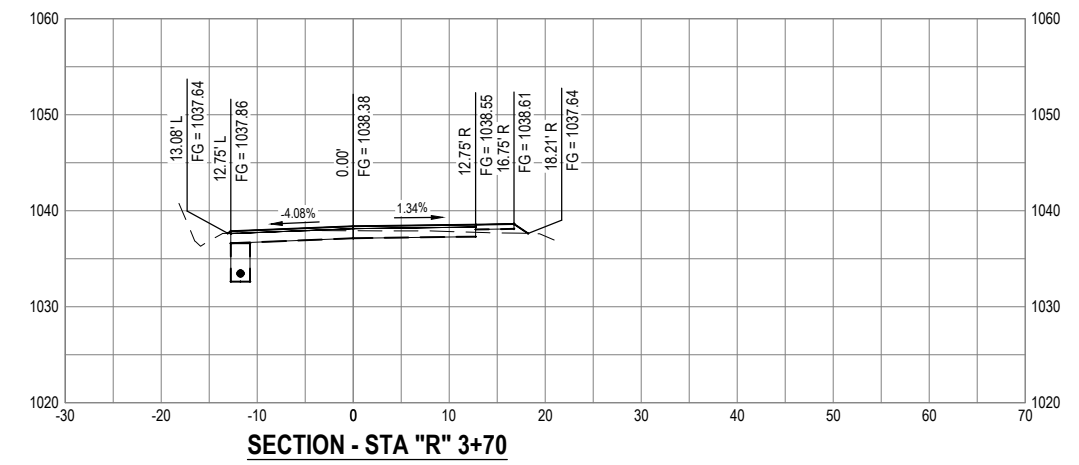
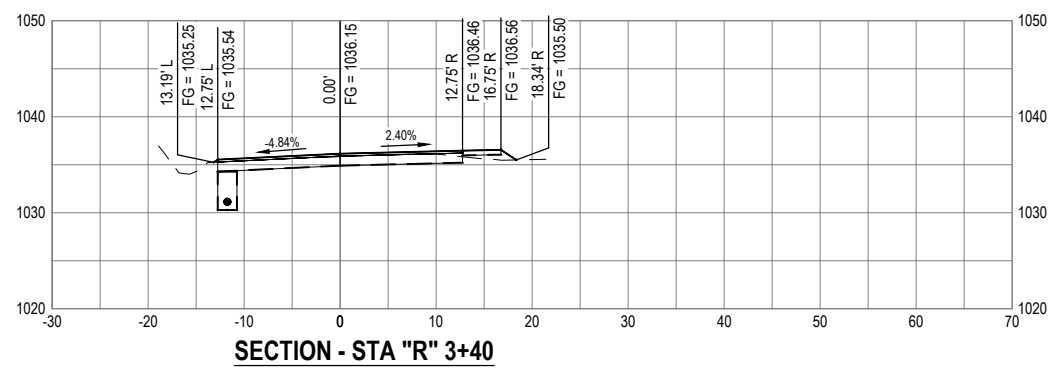
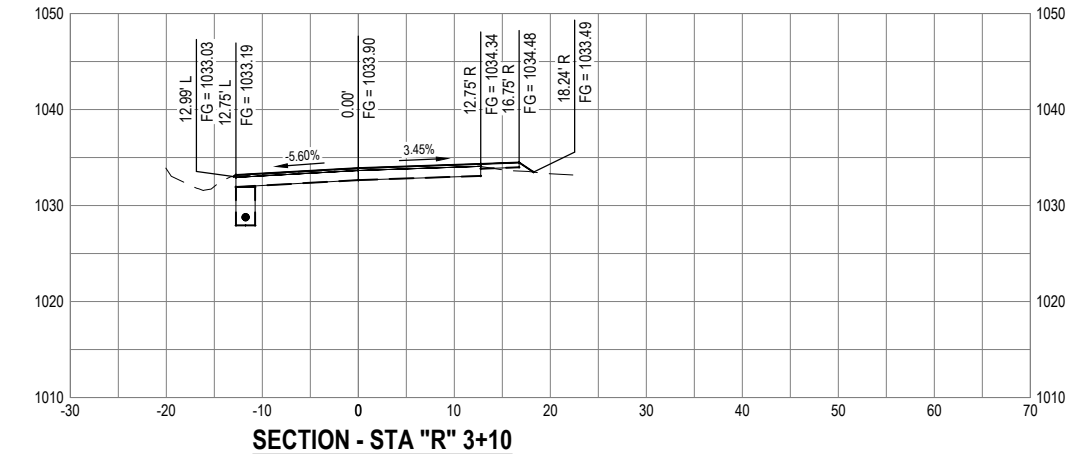
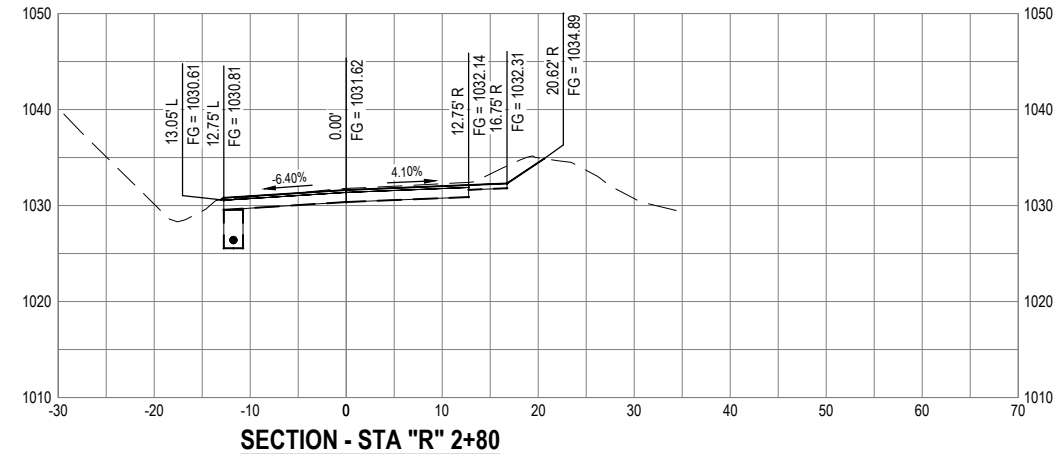


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ROAD NAME: MATTOLE ROAD	DESIGN SECTION
ROAD NO: F30010	ENGINEERING
MILE POST: 13.66 - 13.68, 16.15	DESIGNED BY: C.PENNY
PROJECT NO.: ER-32LO(252), ER-32LO(253)	DRAWN BY: C.PENNY
CONTRACT NO.: 217204, 217424	REVIEWED BY: J.SVEHLA
PLOT DATE: 03/14/2024	APPROVED BY: J.SVEHLA

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 13 OF 28
STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 & 16.15	
PM 13.66-13.68 CROSS SECTIONS 3 OF 6	



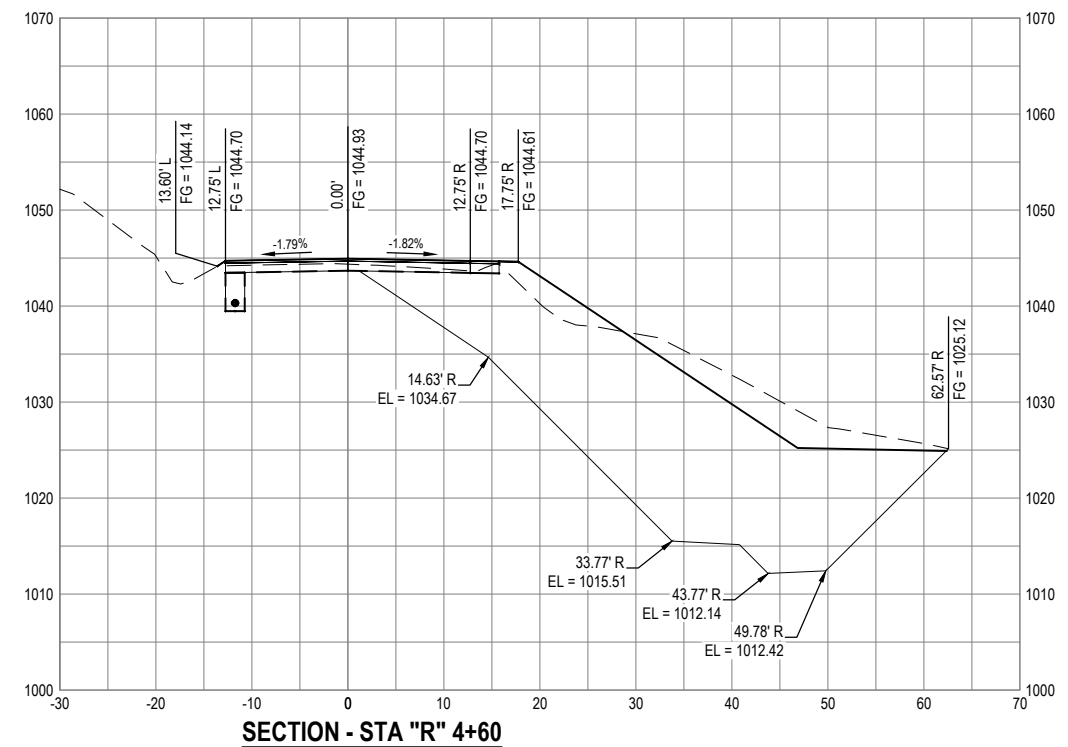
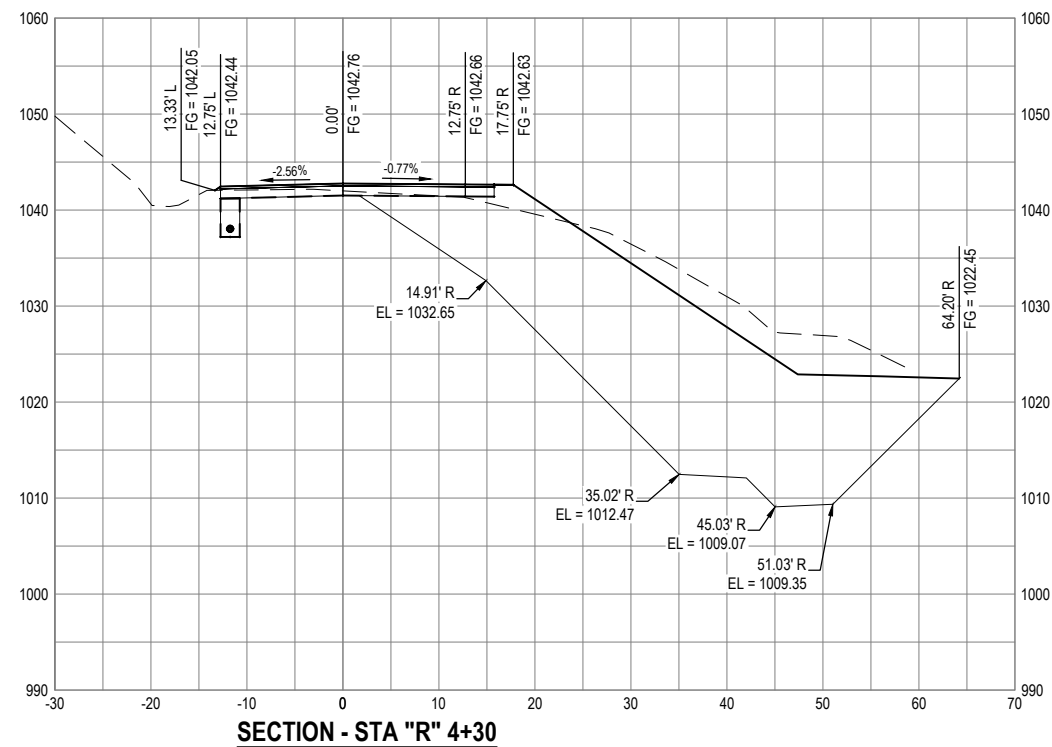
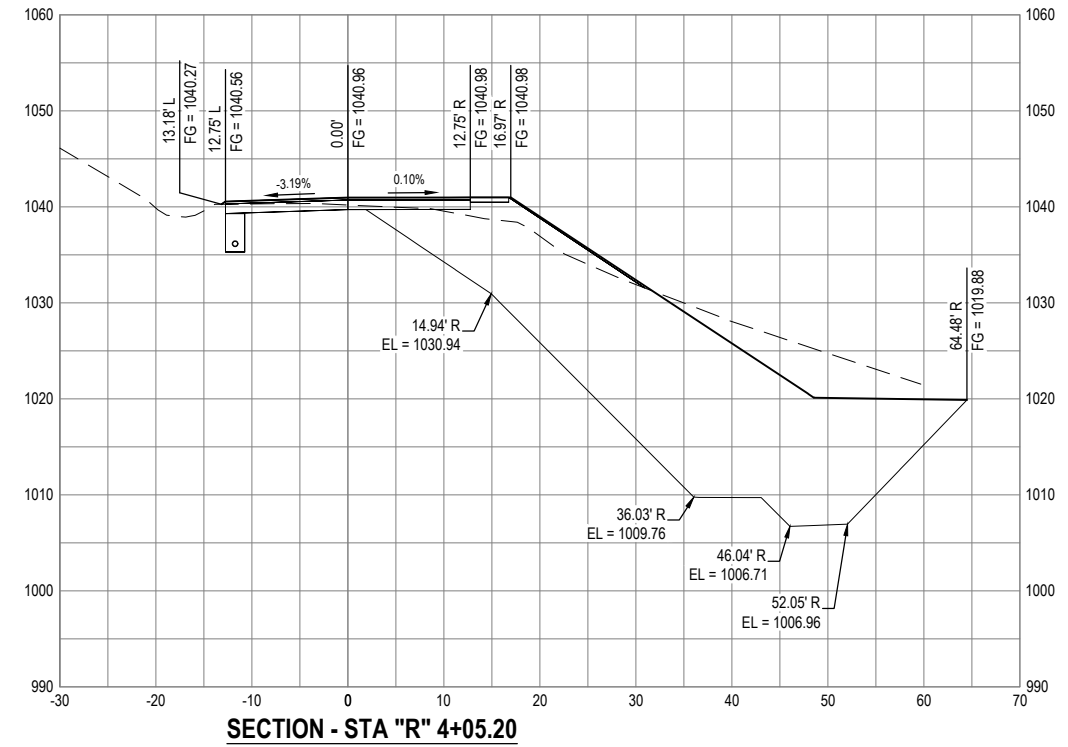
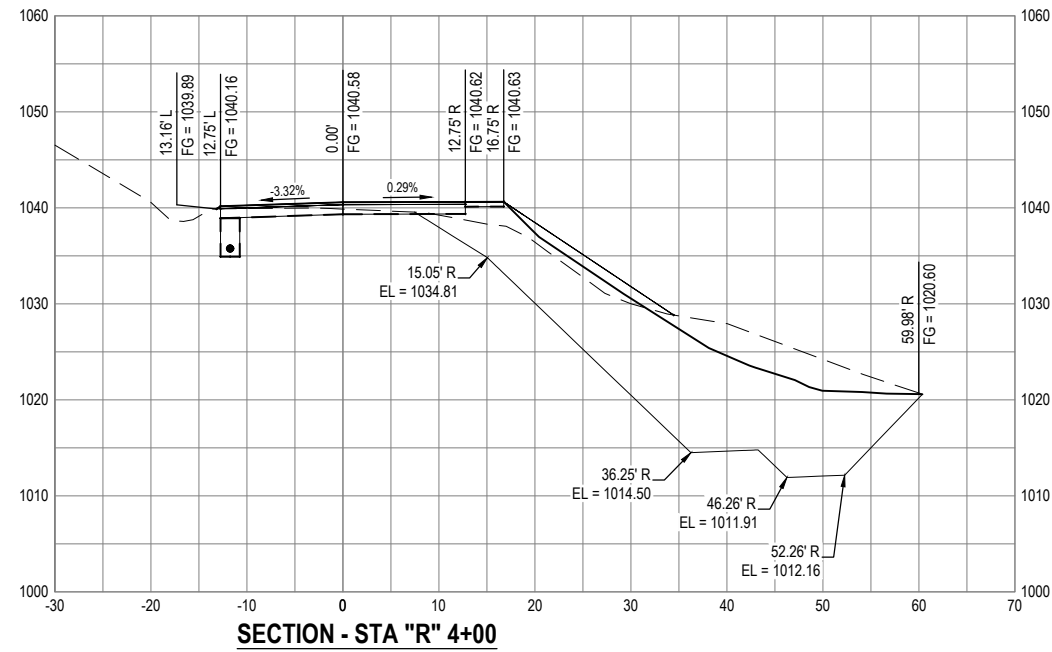


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	ROAD NO: F30010	ENGINEERING
	MILE POST: 13.66 - 13.68, 16.15	DESIGNED BY: C.PENNY
	PROJECT NO.: ER-32LO(252), ER-32LO(253)	DRAWN BY: C.PENNY
	CONTRACT NO.: 217204, 217424	REVIEWED BY: J.SVEHLA
	PLOT DATE: 03/14/2024	APPROVED BY: J.SVEHLA

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS <b>STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 &amp; 16.15</b> <b>PM 13.66-13.68 CROSS SECTIONS 4 OF 6</b>	SHEET <b>14</b> OF <b>28</b>
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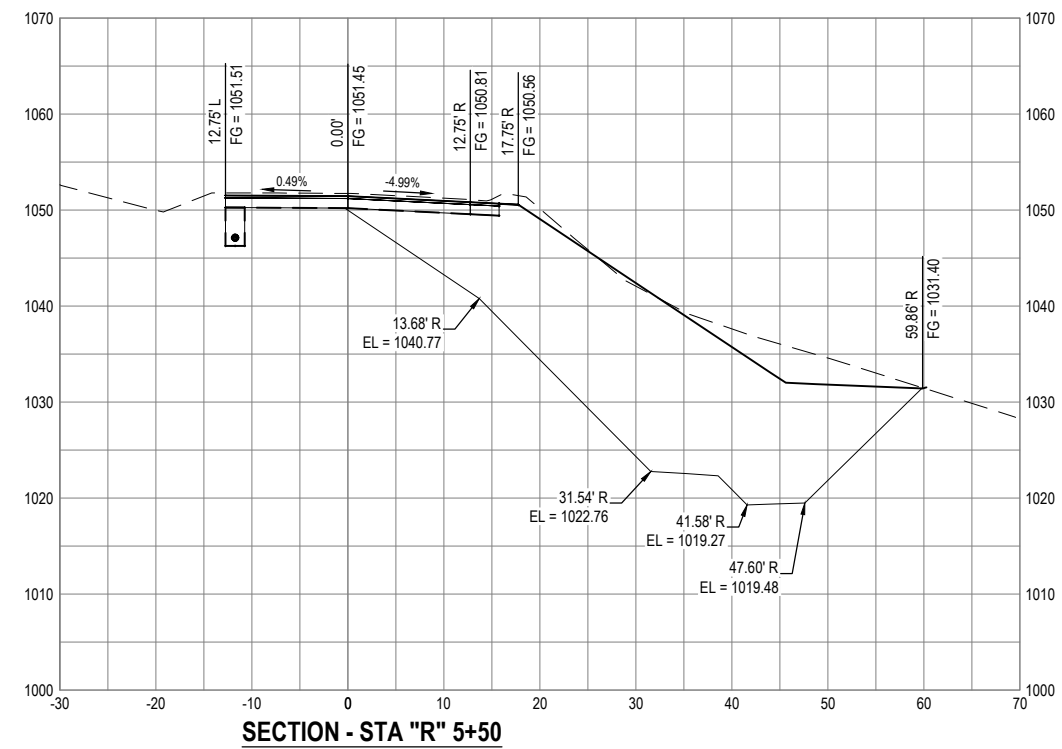
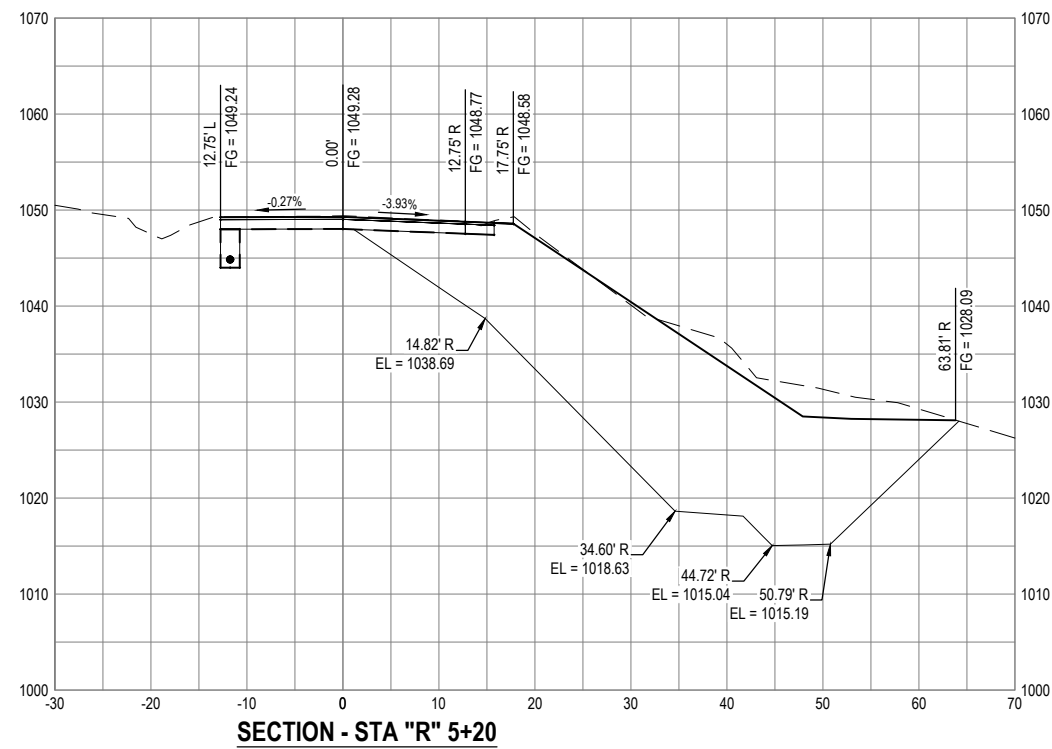
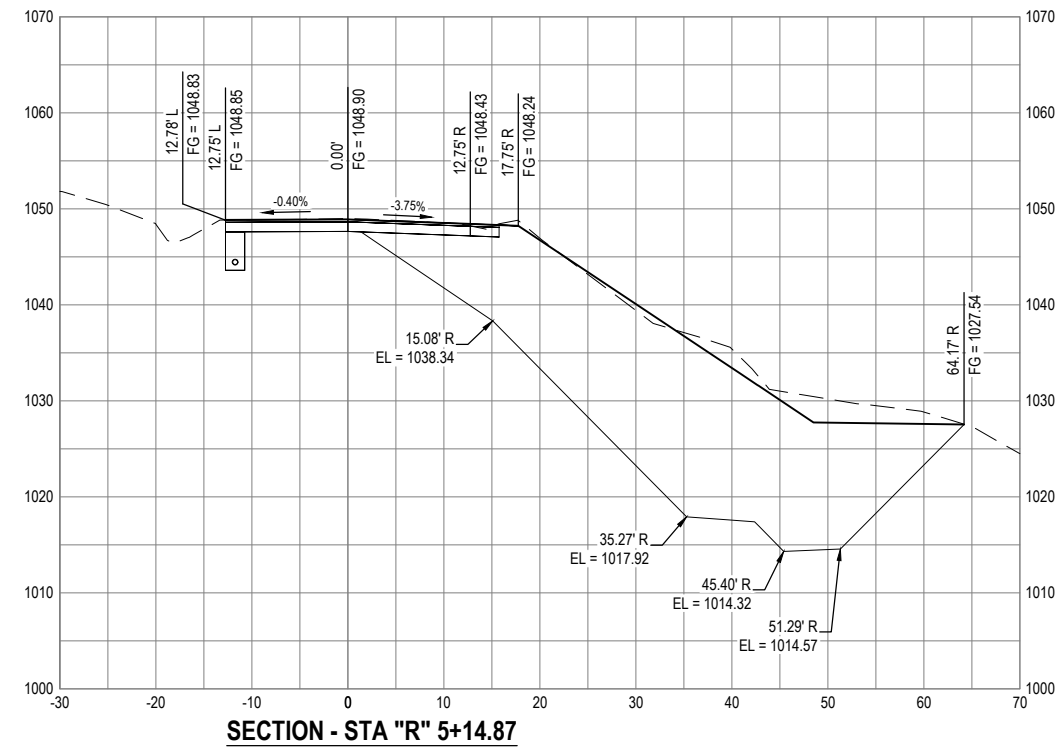
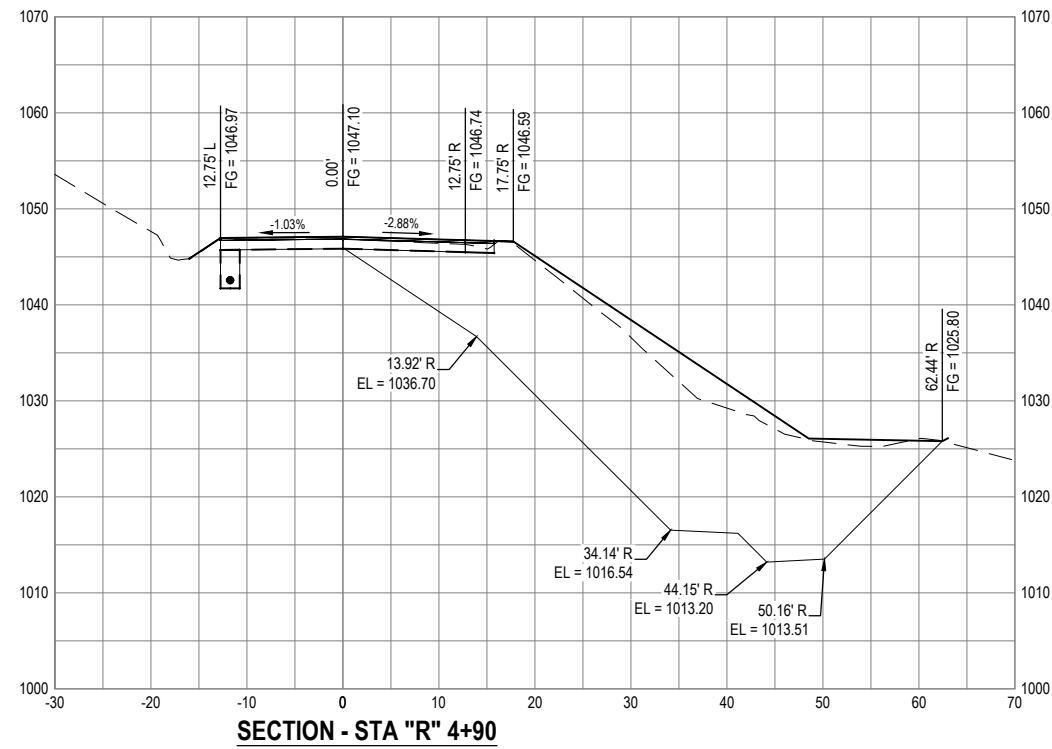


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BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MATTOLE ROAD	DESIGN SECTION
	ROAD NO: F30010	ENGINEERING
	MILE POST: 13.66 - 13.68, 16.15	DESIGNED BY: C.PENNY
	PROJECT NO: ER-32LO(252), ER-32LO(253)	DRAWN BY: C.PENNY
	CONTRACT NO.: 217204, 217424	REVIEWED BY: J.SVEHLA
	PLOT DATE: 03/14/2024	APPROVED BY: J.SVEHLA

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS <b>STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 &amp; 16.15</b> <b>PM 13.66-13.68 CROSS SECTIONS 5 OF 6</b>	SHEET <b>15</b> OF <b>28</b>
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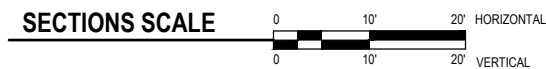
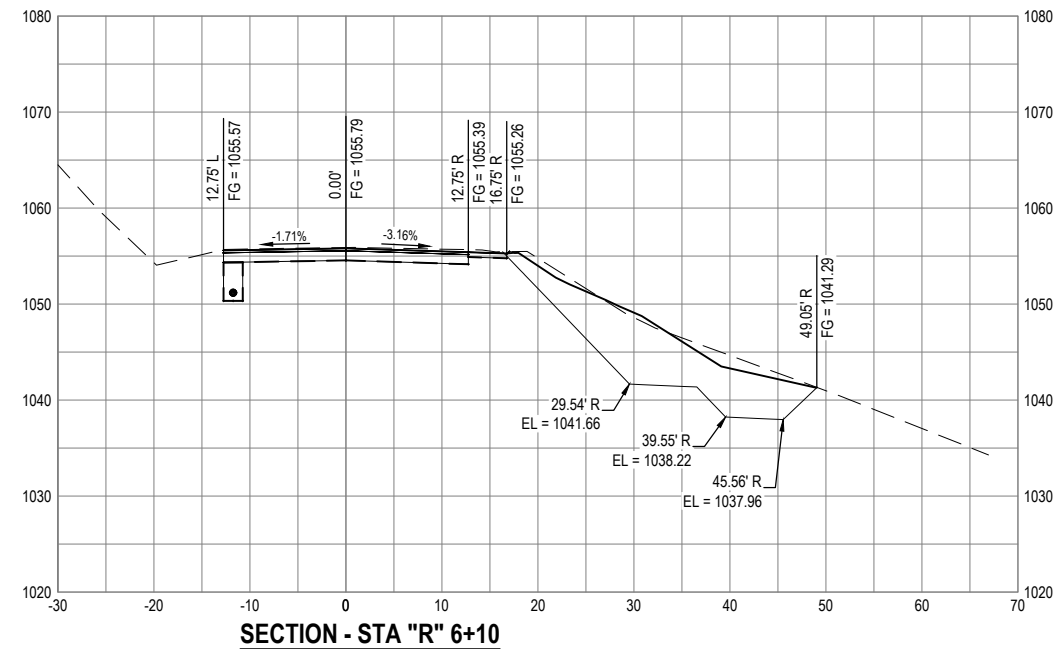
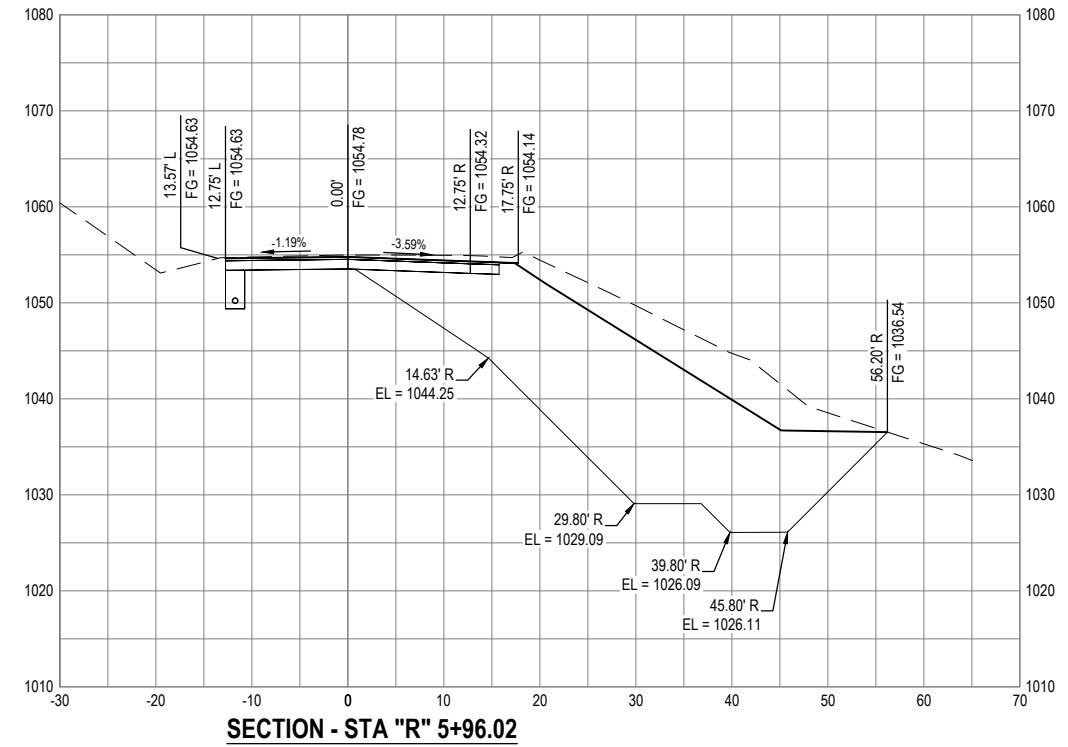
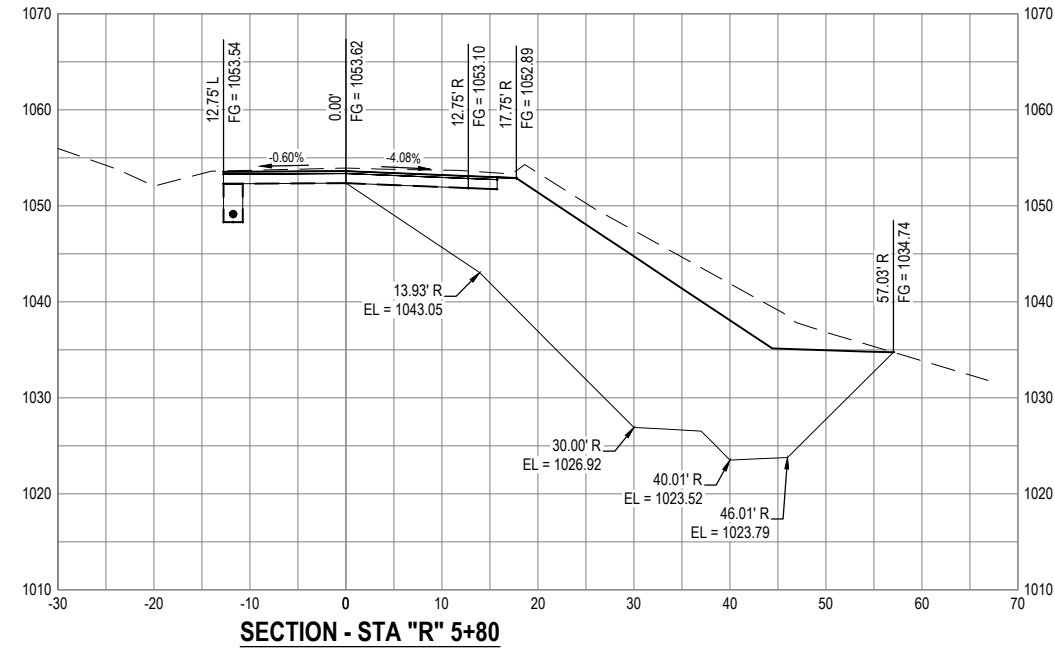


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	ROAD NO: F30010	ENGINEERING
	MILE POST: 13.66 - 13.68, 16.15	DESIGNED BY: C.PENNY
	PROJECT NO.: ER-32LO(252), ER-32LO(253)	DRAWN BY: C.PENNY
	CONTRACT NO.: 217204, 217424	REVIEWED BY: J.SVEHLA
	PLOT DATE: 03/14/2024	APPROVED BY: J.SVEHLA

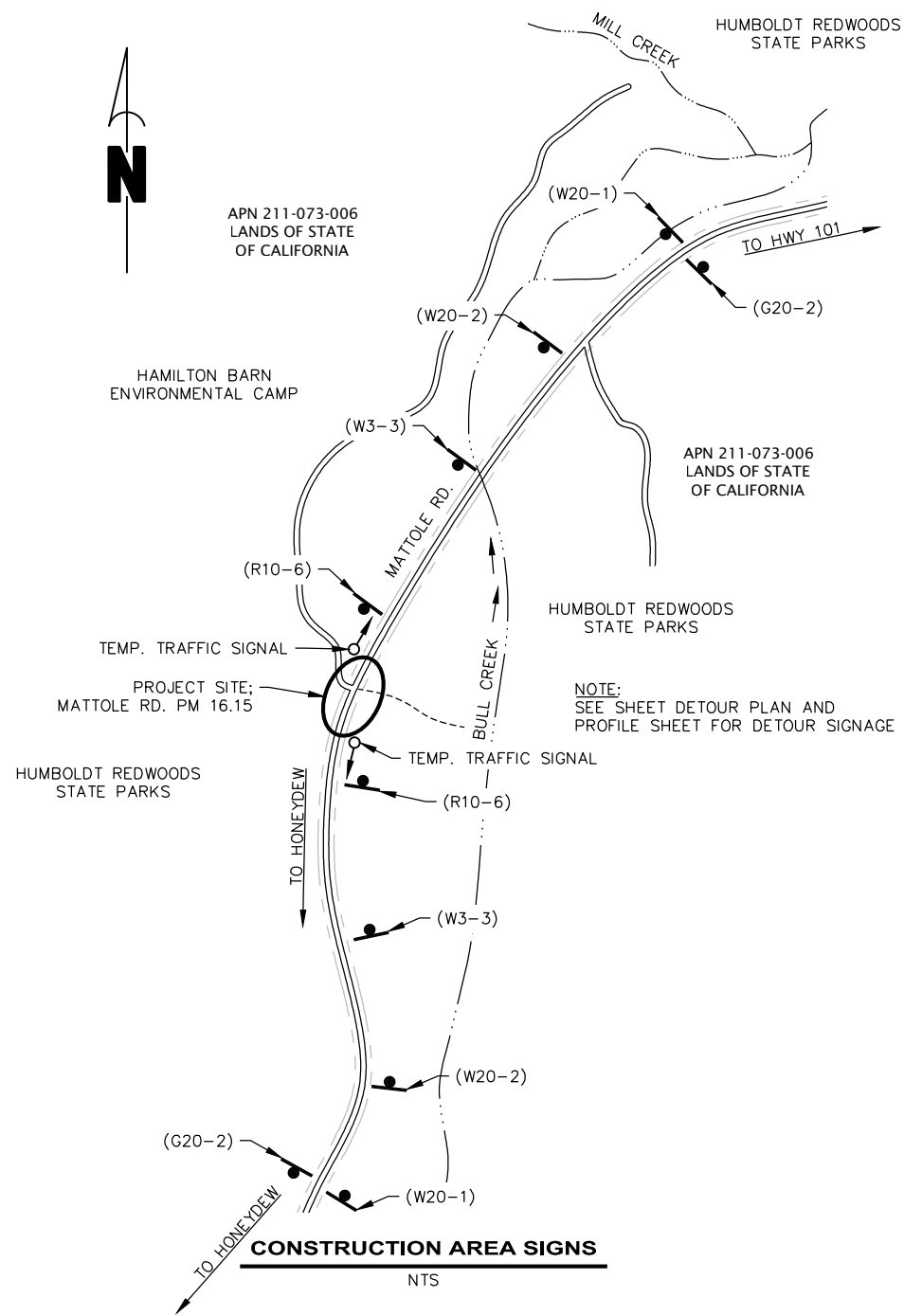
COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS <b>STORM DAMAGE REPAIR MATTOLE ROAD PM 13.66 - 13.68 &amp; 16.15</b> <b>PM 13.66-13.68 CROSS SECTIONS 6 OF 6</b>	SHEET <b>16</b> OF <b>28</b>
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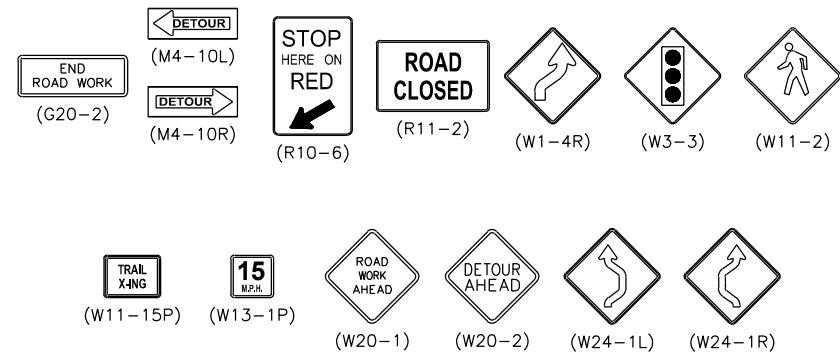




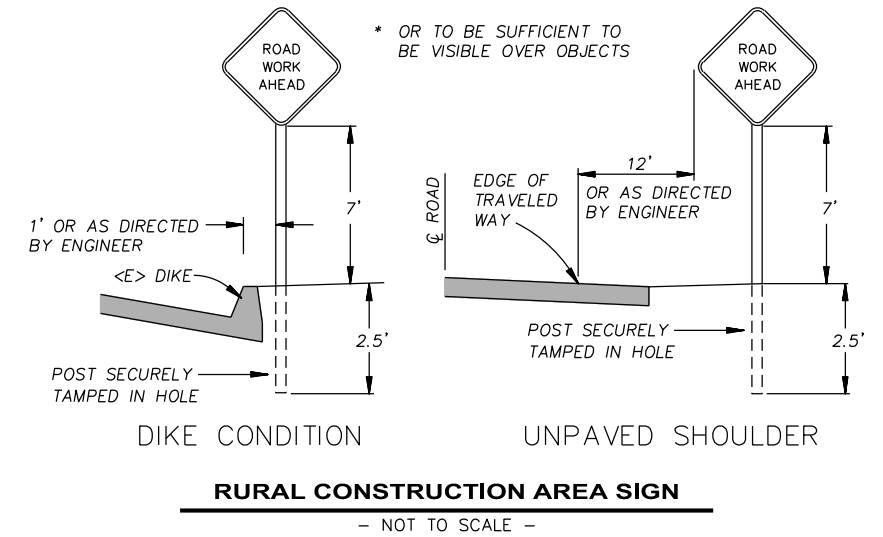
BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MATTOLE ROAD	DESIGN SECTION	<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>STORM DAMAGE REPAIR TO MATTOLE ROAD PM 16.15</b> <b>PM 16.15 CONSTRUCTION AREA SIGNS</b>	SHEET <b>17</b> OF <b>28</b>	
	ROAD NO.: F30010	MILE POST: 16.15			ENGINEERING
	PROJECT NO.: ER-32LO(253)				DESIGNED BY: RMD
	CONTRACT NO.: 217424				DRAWN BY: RMD
	DRAWING FILE NAME: 217424_CDSN_001	REVIEWED BY: JAB			
	PLOT DATE: 03/05/2024	REVISION DATE:	APPROVED BY: TRS		



CONSTRUCTION AREA SIGN SUMMARY					
SIGN CODE	QTY	SIGN MESSAGE	PANEL SIZE (WIDTH x HEIGHT)	POST SIZE & QTY	NOTES
(G20-2)	2	"END ROAD WORK"	36" x 18"	4" x 4" (1)	
(M4-10L)	1	"DETOUR" / *LEFT ARROW*	48" x 18"	N/A	ON TYPE 3 BARRICADE
(M4-10R)	1	"DETOUR" / *RIGHT ARROW*	48" x 18"	N/A	ON TYPE 3 BARRICADE
(R10-6)	2	"STOP HERE ON RED"	24" x 36"	4" x 4" (1)	
(R11-2)	2	"ROAD CLOSED"	48" x 30"	N/A	ON TYPE 3 BARRICADE
(W1-4R)	1	*REVERSE CURVE ARROW, RIGHT*	30" x 30"	4" x 4" (1)	
(W3-3)	2	*SIGNAL AHEAD*	30" x 30"	4" x 4" (1)	
(W11-2)	2	*NON-VEHICULAR WARNING, PEDESTRIAN*	30" x 30"	4" x 4" (1)	
(W11-15P)	2	"TRAIL X-ING"	18" x 12"	N/A	ON (W11-2) SIGN POST
(W13-1P)	2	"15 M.P.H."	18" x 18"	N/A	ON (W24-1L/R) SIGN POST
(W20-1)	2	"ROAD WORK AHEAD"	36" x 36"	4" x 4" (1)	
(W20-2)	2	"DETOUR AHEAD"	36" x 36"	4" x 4" (1)	
(W24-1L)	1	*DOUBLE REVERSE CURVE ARROW, LEFT*	36" x 36"	4" x 4" (1)	
(W24-1R)	1	*DOUBLE REVERSE CURVE ARROW, RIGHT*	36" x 36"	4" x 4" (1)	



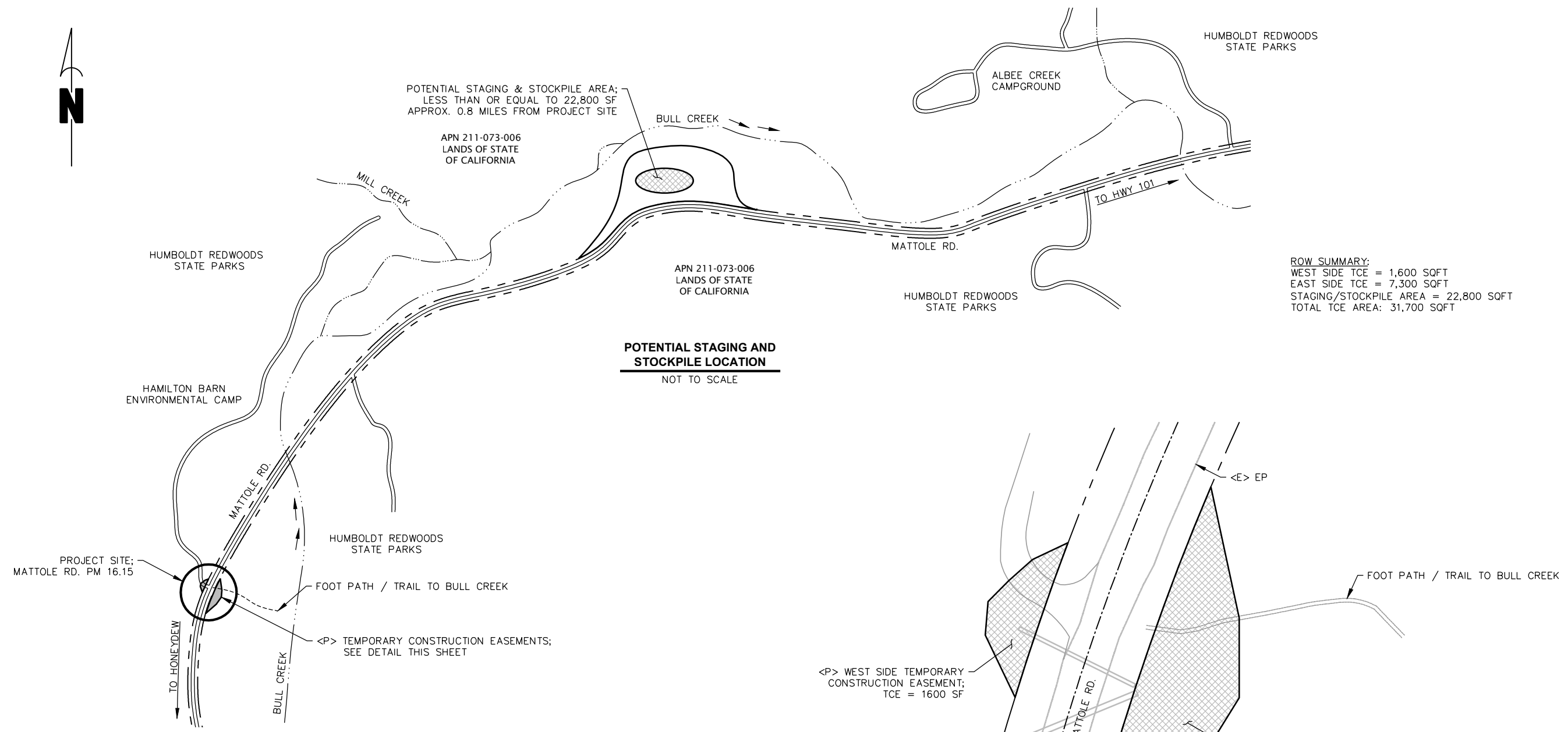
- NOTES**
- SIGNS SHALL BE PLACED AS SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER.
  - FINAL PLACEMENT OF SIGNS SHALL BE APPROVED BY RESIDENT ENGINEER.
  - ADDITIONAL PORTABLE SIGNS SHALL BE USED AS REQUIRED FOR OTHER ROADSIDE WORK.
  - SEE STANDARD PLAN T13 FOR TRAFFIC CONTROL SYSTEM.
  - IN ADDITION TO CONSTRUCTION AREA SIGNS AND WHEN DIRECTED BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL UTILIZE FLAGMEN AS NECESSARY TO DIRECT TRAFFIC.
  - PLACE SIGNS APPROXIMATELY 500 FEET APART
  - DISTANCE TO W20-1 AND G20-2 MAY BE EXTENDED TO ENCOMPASS SITES WITHIN ONE MILE OF EACH OTHER.
  - WHEN THROUGH TRAFFIC IS ALLOWED, KEEP A MINIMUM OF 1 TRAFFIC LANE AT LEAST 10 FEET WIDE OPEN FOR TRAFFIC, EXCEPT THE FULL WIDTH OF THE TRAVELED WAY (18' MINIMUM) MUST BE OPEN WHEN CONSTRUCTION OPERATIONS ARE NOT ACTIVE OR AN APPROVED TRAFFIC CONTROL PLAN IS IN PLACE.
  - CONTRACTOR MUST PROVIDE A MINIMUM OF 14 DAYS NOTICE OF COMPLETE ROAD CLOSURE TO ENGINEER.



**RURAL CONSTRUCTION AREA SIGN**  
- NOT TO SCALE -

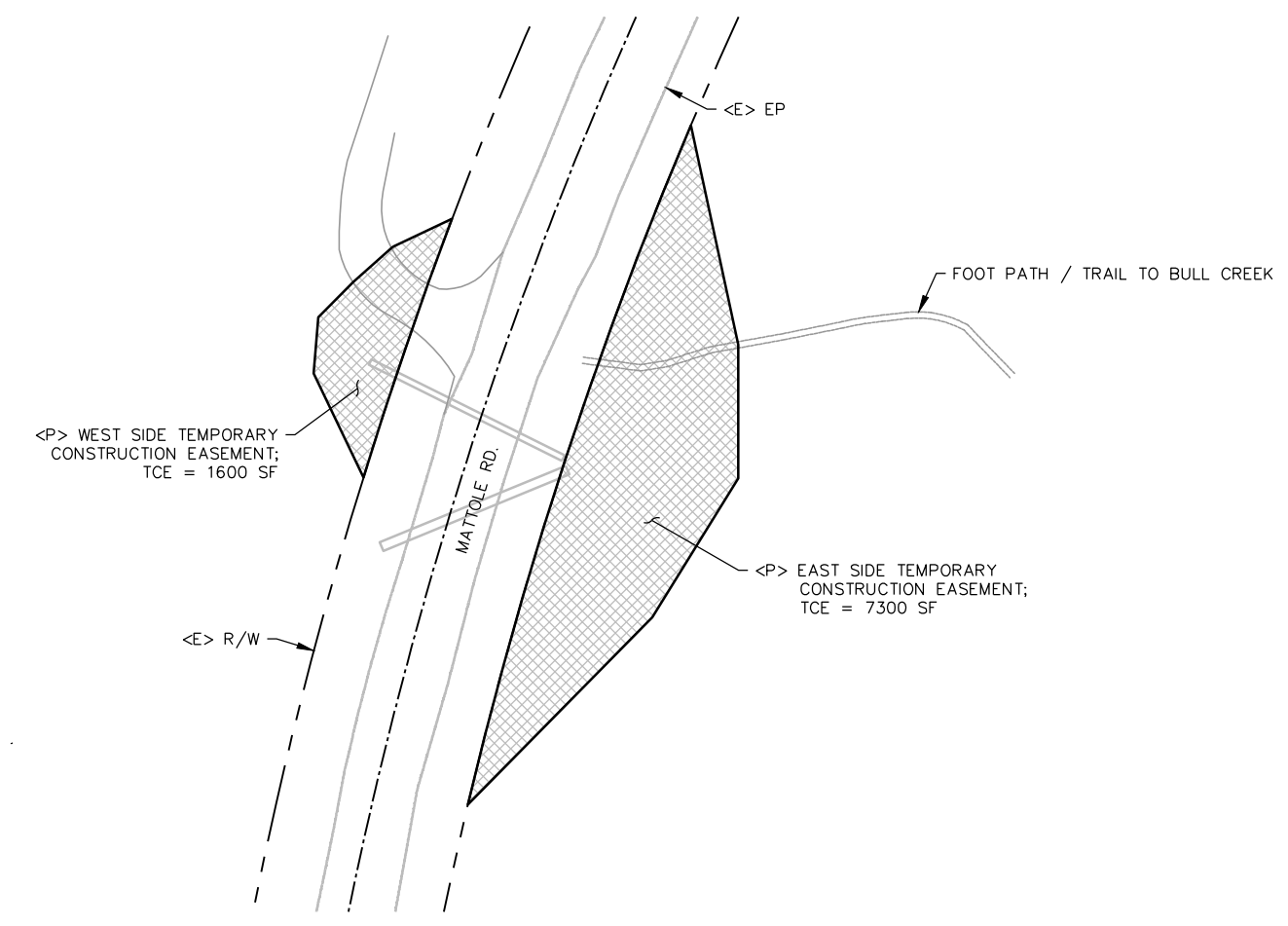


BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MATTOLE ROAD	DESIGN SECTION	<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>STORM DAMAGE REPAIR TO MATTOLE ROAD PM 16.15</b> <b>PM 16.15 STAGING &amp; STOCKPILE LOCATION AND RIGHT OF WAY (TCE) DETAIL</b>	SHEET <b>18</b> OF <b>28</b>	
	ROAD NO.: F30010	MILE POST: 16.15			ENGINEERING
	PROJECT NO.: ER-32LO(253)				DESIGNED BY: RMD
	CONTRACT NO.: 217424				DRAWN BY: RMD
	DRAWING FILE NAME: 217424 CDSN 001	REVIEWED BY: JAB			
	PLOT DATE: 03/05/2024	REVISION DATE:	APPROVED BY: TRS		



ROW SUMMARY:  
 WEST SIDE TCE = 1,600 SQFT  
 EAST SIDE TCE = 7,300 SQFT  
 STAGING/STOCKPILE AREA = 22,800 SQFT  
 TOTAL TCE AREA: 31,700 SQFT

**POTENTIAL STAGING AND STOCKPILE LOCATION**  
 NOT TO SCALE



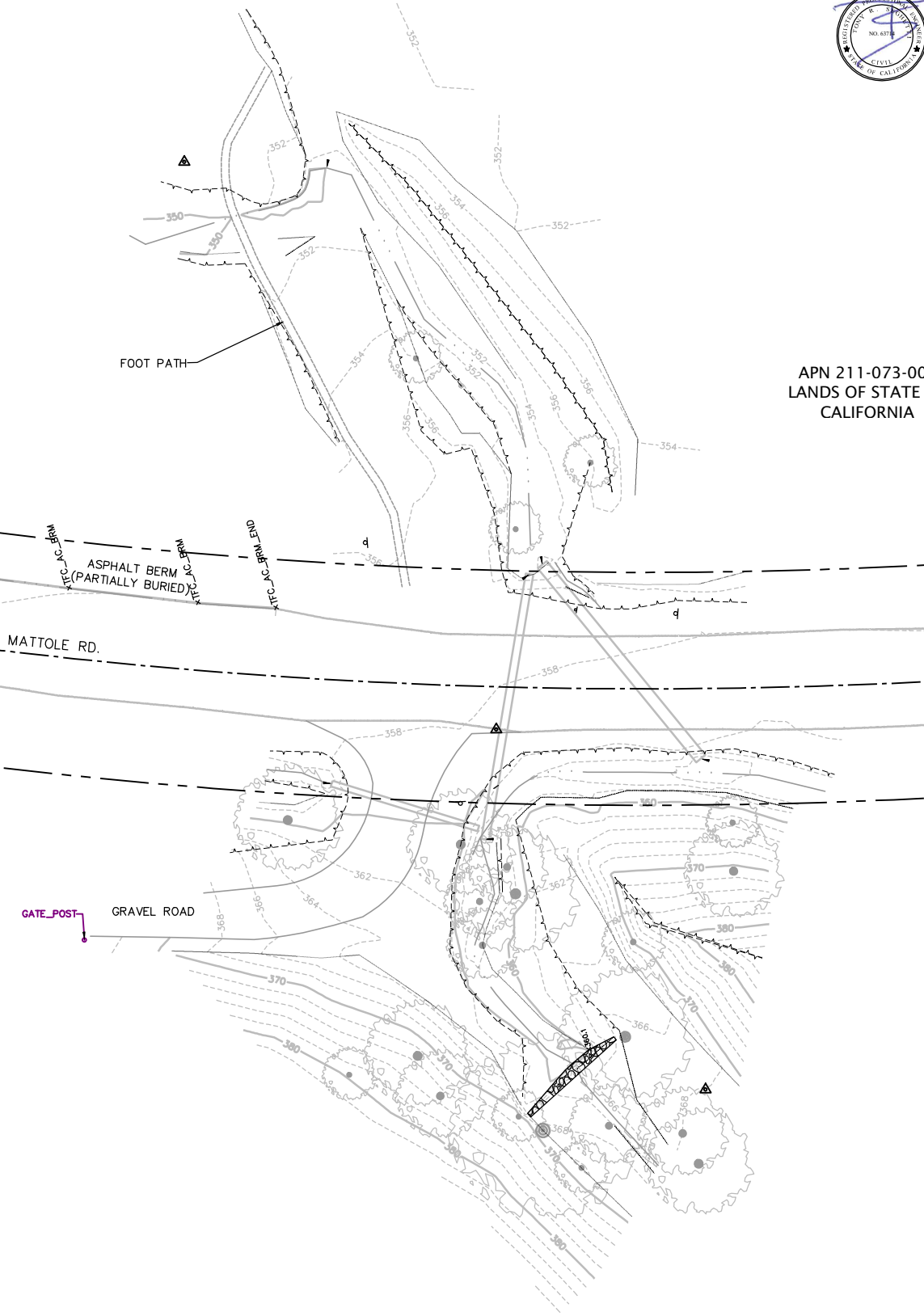
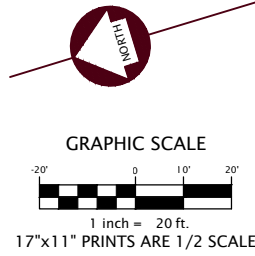
**TEMPORARY CONSTRUCTION EASEMENT DETAIL**  
 NOT TO SCALE

**STOCKPILE NOTES- STD PLAN T53**

- 1) MANAGE MATERIAL STOCKPILE PER SECTION 13-4.03(C) OF CALTRANS STANDARD SPECIFICATIONS
- 2) IF STOCKPILE AREA IS IN A TURNOUT, THE TURNOUT SHALL BE REESTABLISHED TO PRE-CONSTRUCTION CONDITIONS.
- 3) STOCKPILE LOCATION SHOWN HAS BEEN APPROVED BY PUBLIC WORKS AS DETAILED IN THE ENVIRONMENTAL REPORT. ALTERNATIVE SITES MAY BE APPROVED THROUGH PUBLIC WORKS IN WRITING.



BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MATTOLE ROAD	DESIGN SECTION: ENGINEERING	<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>STORM DAMAGE REPAIR TO MATTOLE ROAD PM 16.15</b> <b>PM 16.15 SURVEY CONTROL AND ALIGNMENT DATA</b>	SHEET <b>19</b> OF <b>28</b>
	ROAD NO.: F3D010	MILE POST: 16.15		
	PROJECT NO.: ER-32LO(253)	DESIGNED BY: RMD		
	CONTRACT NO.: 217424	DRAWN BY: RMD		
	DRAWING FILE NAME: 217424_CDSN_001	REVIEWED BY: JAB		
	PLOT DATE: 03/05/2024	REVISION DATE:	APPROVED BY: TRS	



CONTROL POINTS				
Point #	Northing	Eastng	Elevation	Description
50	2015156.00	5996987.92	351.04	CP_SPK
51	2014725.80	5996787.06	355.96	CP_SPK
52	2015097.16	5996720.17	368.14	CP_SPK
53	2015121.68	5996824.64	358.11	CP_SPK
54	2015448.41	5996972.50	352.59	CP_SPK
107	2014273.84	5996903.05	359.96	CP_R+C_2013SURVEY
110	2014460.06	5996898.65	357.62	CP_R+C_2013SURVEY

- SURVEY NOTES:**
- The purpose of this survey is to determine topography for a box culvert replacement to repair a failing culvert that spans the road at Post Mile 16.15 of Mattole Road at the Hamilton Barn Environmental Campground (also known as Bull Creek Rd.). This survey reflects conditions at the time of survey; field work was commenced August 12, and concluded August 13, 2019.
  - Coordinates for this survey are California Coordinate System of 1983 (CCS83) Zone 1, NAD 83 (2011), Epoch 2010.0 based on a static GPS Control Survey using the NGS OPUS Post Processing Software. The control point identified as Point 50 was held for horizontal positions shown hereon. The mapping angle is 1 degree 19 minutes 29 seconds; rotate bearings hereon counterclockwise by this angle to obtain "True" or Geodetic Bearings. Grid distances shown should be divided by the Combined Scale factor of 0.99991913 to obtain ground distances. Mapping angle and grid scale factor are taken at control point number 50, a 12 inch spike. Elevations are NAVD 88 datum based on OPUS solution utilizing the GEOID 12B model: an elevation of 351.04 feet was measured at the aforementioned Control Point 50. Control established on this survey was used to check point numbers 110 and 107 from the Control Survey for the Ca. State Parks Bull Creek project performed in June of 2013 by this office an was found to fit prior work. Control Point #51 and #54 fall outside of project limits and are considered "primary" survey control. Verify control points shown hereon with these primary control points as points in construction area could move and/or be destroyed.
  - Contours and spot elevations were obtained by conventional survey techniques. Only trees 12 inch and bigger were located; numerous other smaller trees exist within area surveyed and are not shown. Tree locations are generally shown at breast height and are approximate due to the fact not all trees are growing vertically.
  - The Right of Way shown is based on Sheet 4 of 29 of the County of Humboldt plans Project No. ER-292-(7) dated May 31, 1966. The right of way was pinned to the physical centerline of the beginning of curve Station 14+90.38 and the physical centerline of the road south of job site. No deed for said right of way was provided by County. Distances on said Project were scaled by 0.99991913- see Note 2 above.

"D" LINE ALIGNMENT						
SEGMENT	LENGTH	BEARING/DELTA	RADIUS	TANGENT	START	END
C10	31.83'	036°28'26"	50.00'	16.47'	STA: 0+01.33 N: 2015251.84 E: 5996888.99	STA: 0+33.16 N: 2015220.70 E: 5996885.86
C11	26.77'	030°40'55"	50.00'	13.72'	STA: 0+95.50 N: 2015159.83 E: 5996899.35	STA: 1+22.28 N: 2015133.40 E: 5996898.03
C12	21.01'	024°04'12"	50.00'	10.66'	STA: 1+92.38 N: 2015066.80 E: 5996876.15	STA: 2+13.39 N: 2015048.79 E: 5996885.66
C13	26.95'	030°52'59"	50.00'	13.81'	STA: 3+03.49 N: 2014982.10 E: 5996805.07	STA: 3+30.44 N: 2014958.34 E: 5996793.05
L10	1.33'	S23°58'49"W			STA: 0+00.00 N: 2015253.05 E: 5996889.53	STA: 0+01.33 N: 2015251.84 E: 5996888.99
L11	62.35'	S12°29'37"E			STA: 0+33.16 N: 2015220.70 E: 5996885.86	STA: 0+95.50 N: 2015159.83 E: 5996899.35
L12	70.10'	S18°11'18"W			STA: 1+22.28 N: 2015133.40 E: 5996898.03	STA: 1+92.38 N: 2015066.80 E: 5996876.15
L13	90.10'	S42°15'30"W			STA: 2+13.39 N: 2015048.79 E: 5996865.66	STA: 3+03.49 N: 2014982.10 E: 5996805.07
L14	6.57'	S11°22'31"W			STA: 3+30.44 N: 2014958.34 E: 5996793.05	STA: 3+37.01 N: 2014951.90 E: 5996791.76

**UNDERGROUND UTILITY NOTE**

Underground utilities are shown based on a combination of visible physical evidence and records made available to the surveyor. 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.

**Call Underground Service Alert (USA) 1-800-642-2444 a minimum of 48 hours prior to any excavations.**

- LEGEND**
- SURVEY CONTROL POINT
  - RIGHT OF WAY CENTERLINE
  - RIGHT OF WAY EASEMENT LINES
  - DRAINAGE FLOW LINE
  - EDGES OF PAVEMENT
  - ASPHALT PATCH
  - CRACKS IN ASPHALT PAVEMENT
  - EDGE OF TRAVELED WAY (DIRT ROAD)
  - EXISTING GROUND CONTOURS (TWO FOOT INTERVALS)
  - TOP OF SLOPE / TOE OF SLOPE / GRADE BREAK
  - STORM DRAIN CULVERT
  - OHT / TELEPHONE POLE

"M" LINE ALIGNMENT						
SEGMENT	LENGTH	BEARING/DELTA	RADIUS	TANGENT	START	END
C1	1107.32'	045°19'17"	1399.89'	584.46'	STA: 8+99.19 N: 2015486.32 E: 5997022.59	STA: 20+06.51 N: 2014434.54 E: 5996783.18
L1	899.19'	S35°29'02"W			STA: 0+00.00 N: 2016218.51 E: 5997544.54	STA: 8+99.19 N: 2015486.32 E: 5997022.59
L2	393.05'	S09°50'15"E			STA: 20+06.51 N: 2014434.54 E: 5996783.18	STA: 23+99.56 N: 2014047.28 E: 5996850.33

NOTE:  
SEE PROJECT DESIGN SHEETS FOR ALIGNMENT PLAN & PROFILE VIEWS

**TOPOGRAPHIC SURVEY**  
 for  
**Mattole Road PM 16.15**  
**Humboldt County Project No. 217424**  
**Task Order No. DPW 2017-005-T.O. #26**  
 SECTION 25, T1S, R1E,  
 HUMBOLDT MERIDIAN  
 IN THE UNINCORPORATED AREA OF,  
 HUMBOLDT COUNTY, STATE OF CALIFORNIA  
 Date: August 2019

SCALE: 1" = 20'  
 SHEET 1 OF 1

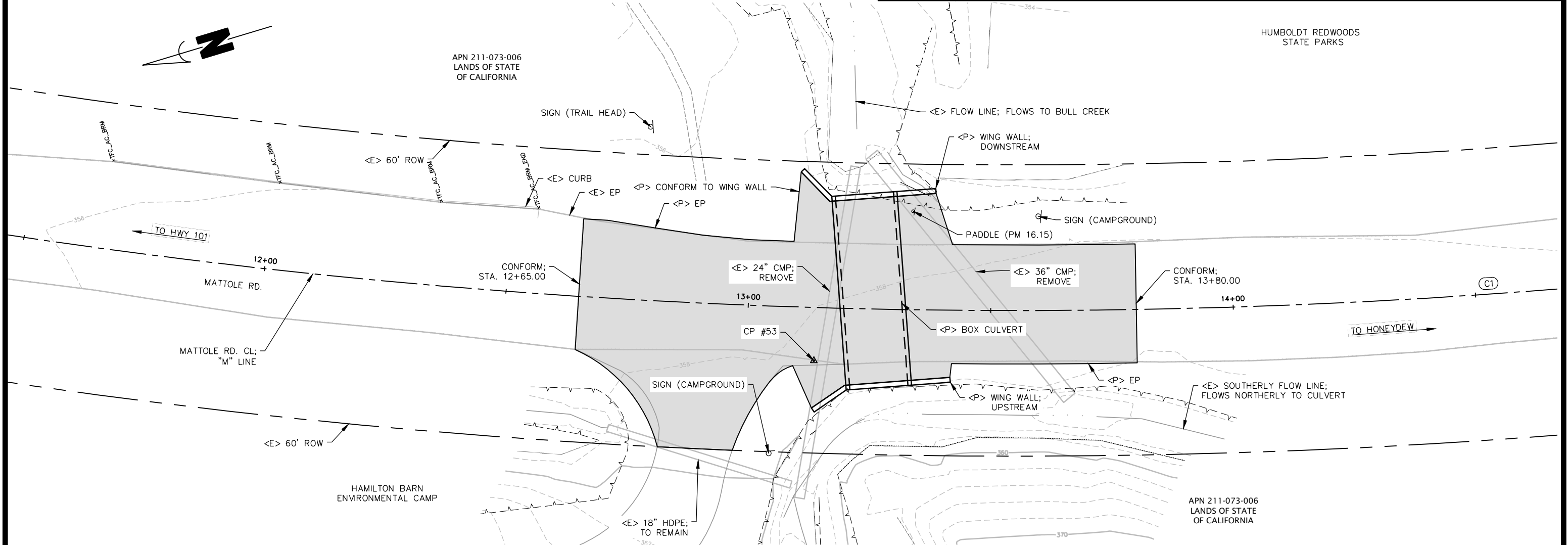
**POINTS WEST SURVEYING CO.**  
 5201 Carlson Park Dr., Suite 3 - Arcata, CA 95521  
 707-840-9510 • Phone 707-840-9542 • Fax

NOTES:  
FOR ALIGNMENT CURVE AND LINE TABLES, SEE SURVEY  
CONTROL AND ALIGNMENT DATA SHEET.

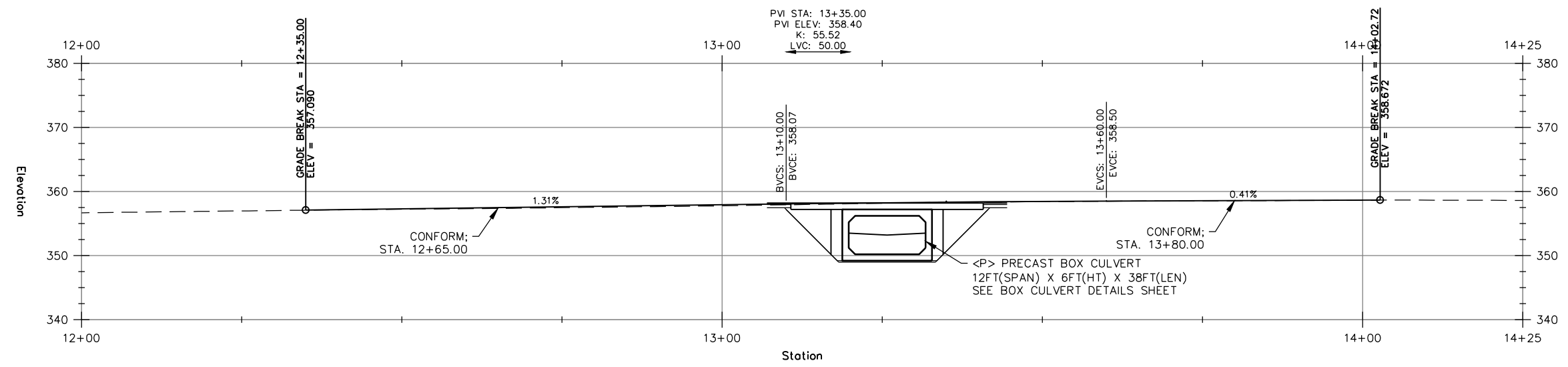


ROAD NAME: MATTOLE ROAD	DESIGN SECTION
ROAD NO.: F30010	ENGINEERING
PROJECT NO.: ER-32LO(253)	DESIGNED BY: RMD
CONTRACT NO.: 217424	DRAWN BY: RMD
DRAWING FILE NAME: 217424 CDSN 001	REVIEWED BY: JAB
DATE: 03/05/2024	APPROVED BY: TRS

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET
STORM DAMAGE REPAIR TO MATTOLE ROAD PM 16.15	20
PM 16.15 MATTOLE ROAD PLAN AND PROFILE	OF
	28



**SITE PLAN**  
SCALE: 1"=10'



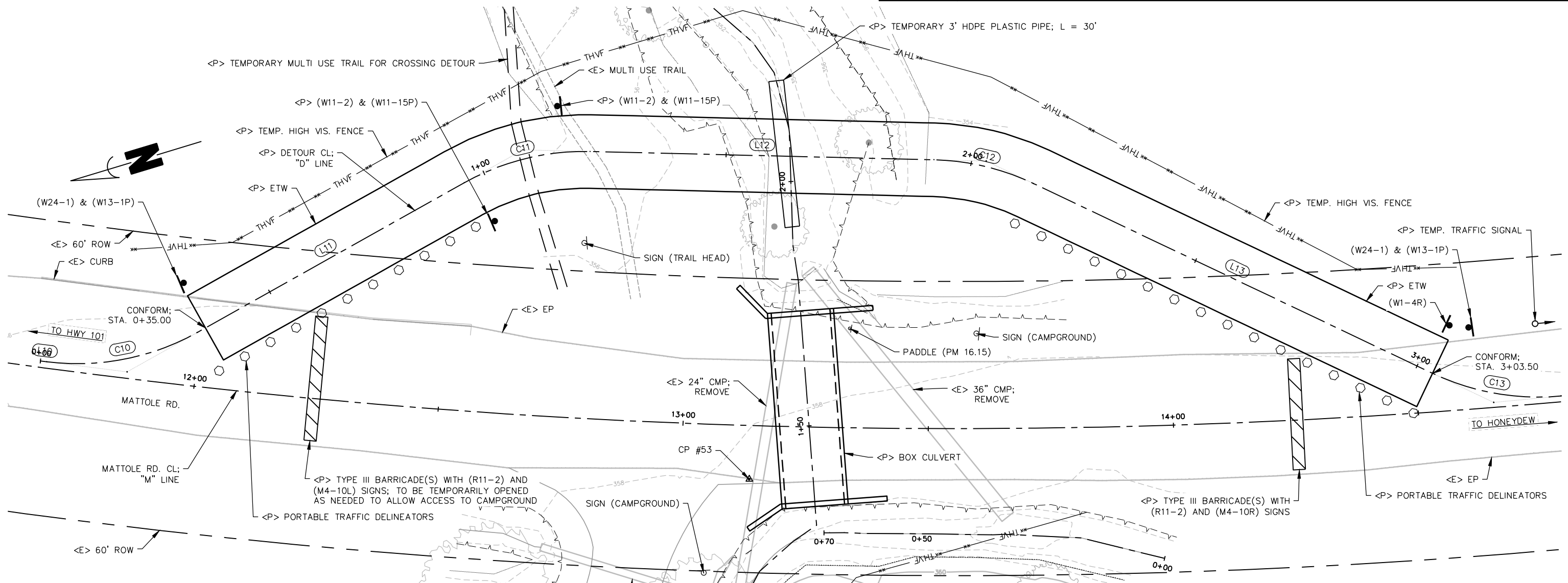
**"M" LINE PROFILE**  
SCALE: 1"=10'(H,V)

- NOTES:**
- FOR SIGN PLACEMENT NOTES AND INSTRUCTIONS, SEE CONSTRUCTION AREA SIGN SHEET.
  - FOR ALIGNMENT CURVE AND LINE TABLES, SEE SURVEY CONTROL AND ALIGNMENT DATA SHEET.

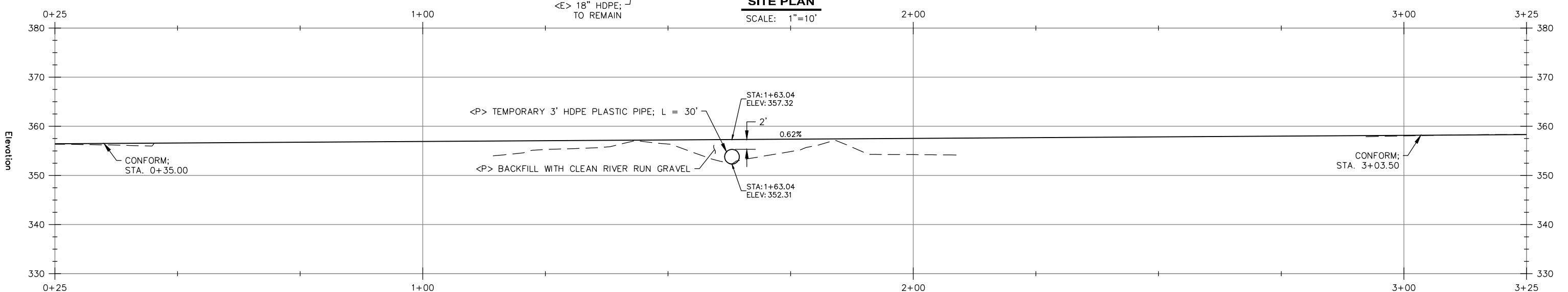


ROAD NAME: MATTOLE ROAD	DESIGN SECTION: ENGINEERING
ROAD NO.: F30010	MILE POST: 16.15
PROJECT NO.: ER-32LO(253)	DESIGNED BY: RMD
CONTRACT NO.: 217424	DRAWN BY: RMD
DRAWING FILE NAME: 217424 CDSN 001	REVIEWED BY: JAB
PLOT DATE: 03/05/2024	REVISION DATE:
	APPROVED BY: TRS

<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>STORM DAMAGE REPAIR TO MATTOLE ROAD PM 16.15</b> <b>PM 16.15 MATTOLE ROAD DETOUR</b> <b>PLAN AND PROFILE</b>	SHEET
	21
	OF
	28



**SITE PLAN**  
SCALE: 1"=10'



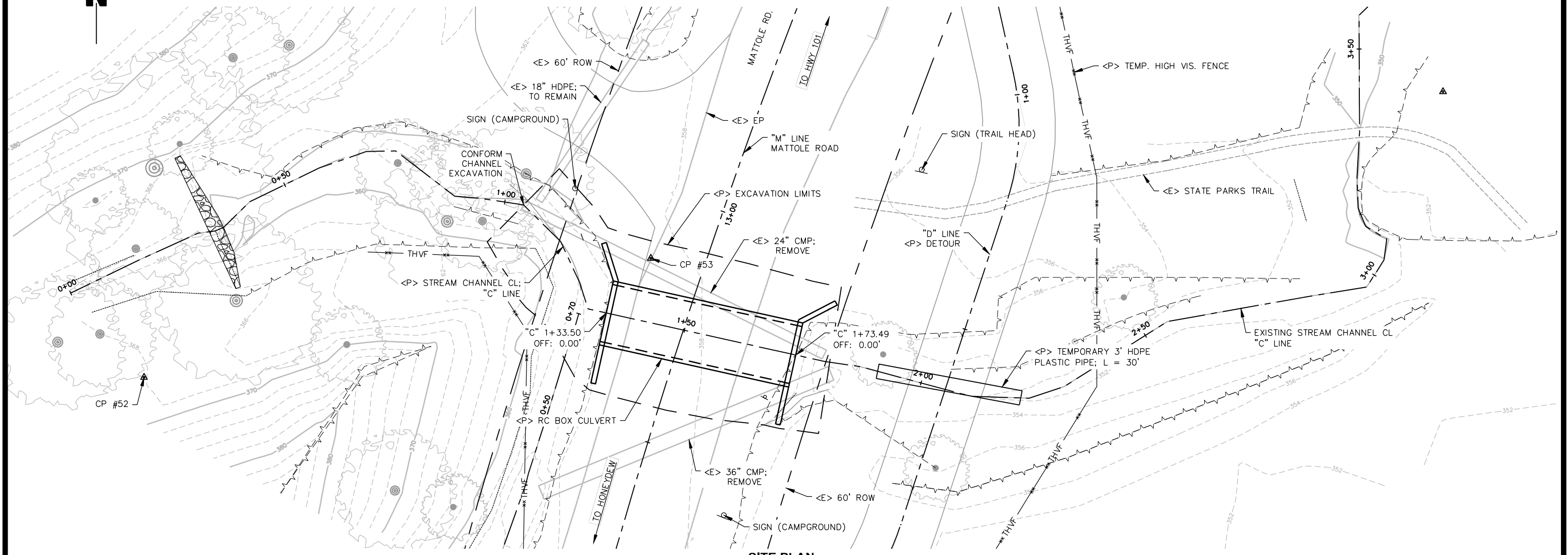
**"D" LINE PROFILE** Station  
SCALE: 1"=10'(H,V)



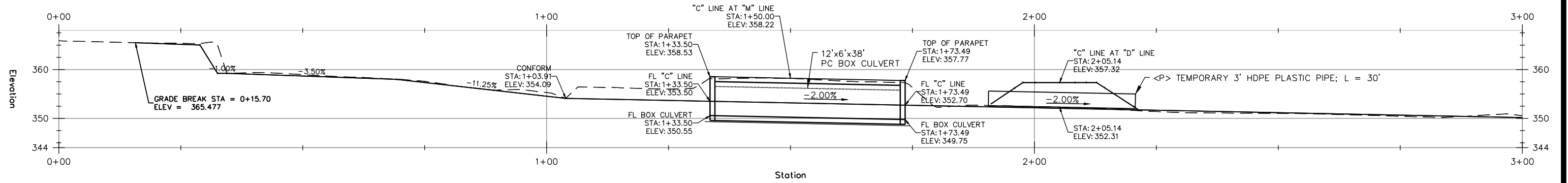
BAR IS ONE INCH ON ORIGINAL DRAWING	ROAD NAME: MATTOLE ROAD	DESIGN SECTION
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NO.: F30010	ENGINEERING
	PROJECT NO.: ER-32LO(253)	DESIGNED BY: RMD
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	PLT DATE: 03/05/2024	APPROVED BY: TRS
		REVISION DATE:

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET
STORM DAMAGE REPAIR TO MATTOLE ROAD PM 16.15	22
PM 16.15 STREAM CHANNEL PLAN AND PROFILE	OF
	28

NOTE:  
FOR ALIGNMENT CURVE AND LINE TABLES, SEE SURVEY  
CONTROL AND ALIGNMENT DATA SHEET



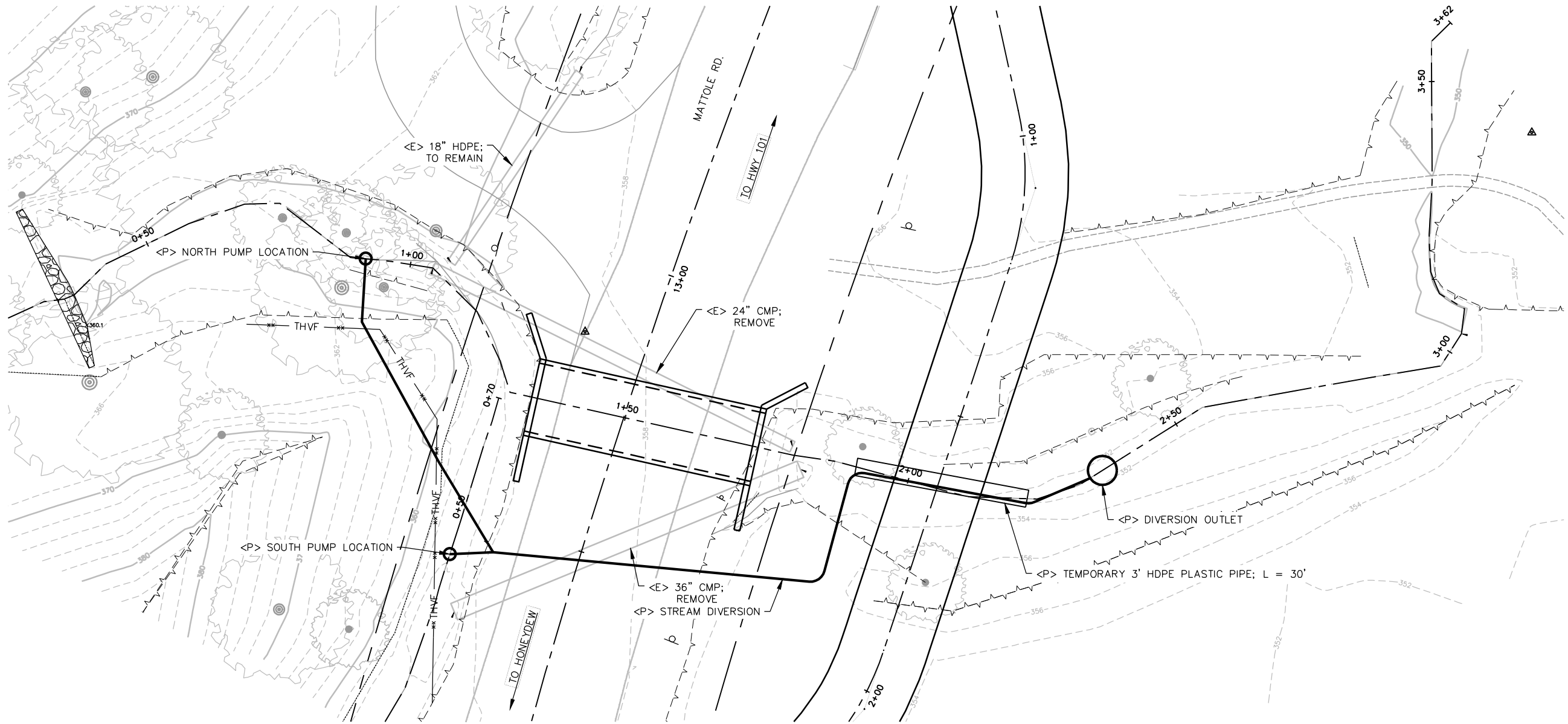
**SITE PLAN**  
SCALE: 1"=10'



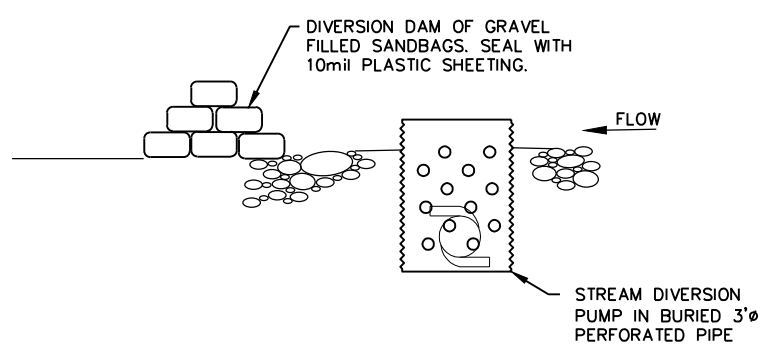
**"C" LINE PROFILE**  
SCALE: 1"=10'(H,V)



BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MATTOLE ROAD	DESIGN SECTION	<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>STORM DAMAGE REPAIR TO MATTOLE ROAD PM 16.15</b> <b>PM 16.15 STREAM DIVERSION PLAN AND DETAILS</b>	SHEET <b>23</b> OF <b>28</b>	
	ROAD NO.: F30010	MILE POST: 16.15			ENGINEERING
	PROJECT NO.: ER-32LO(253)				DESIGNED BY: RMD
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	PLOT DATE: 03/05/2024	REVISION DATE:	APPROVED BY: TRS		



**STREAM DIVERSION PLAN**  
SCALE: 1"=10'



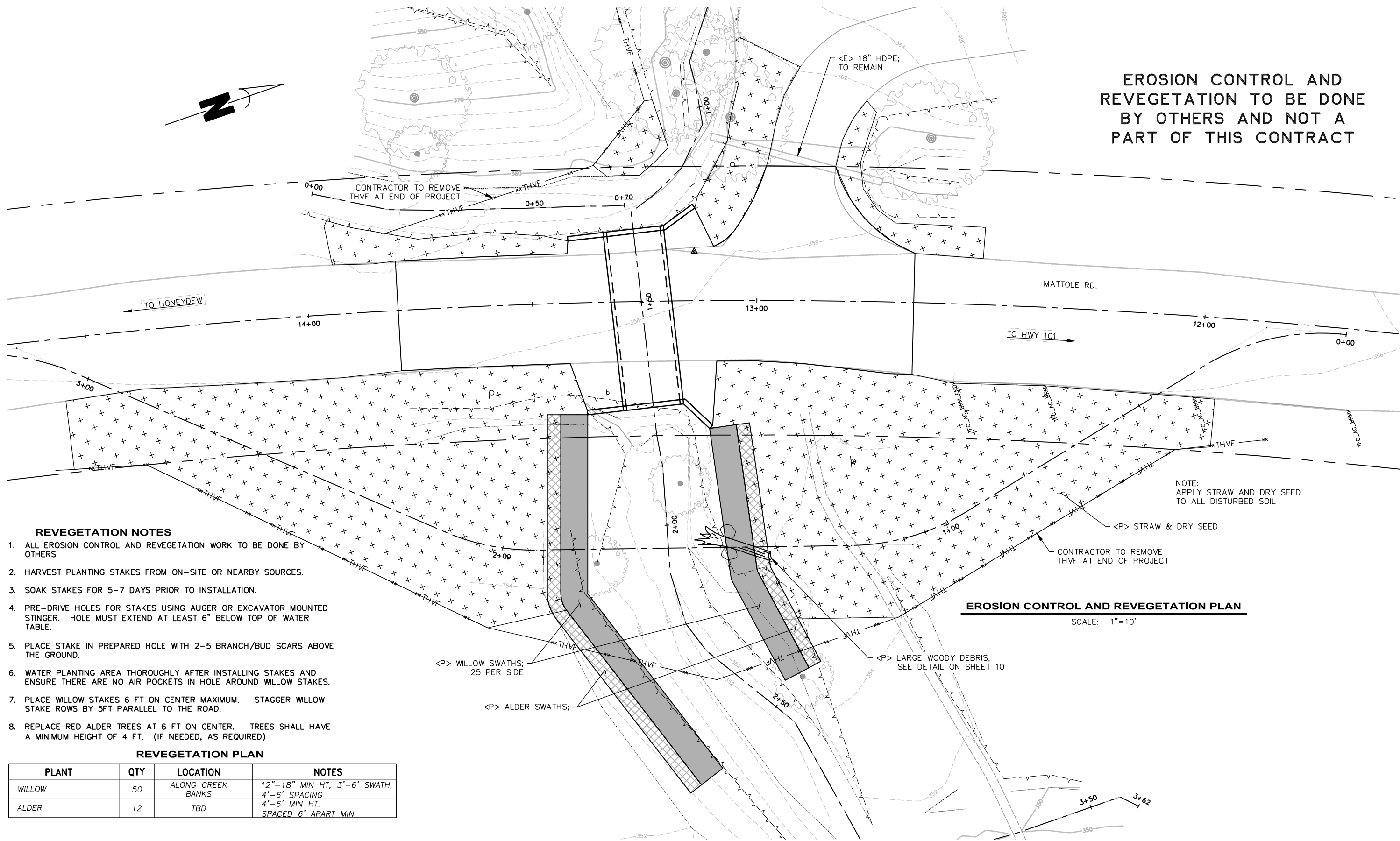
**TYPICAL CREEK DIVERSION DETAIL**  
NOT TO SCALE

**NOTES**

1. THE PUMP WILL RUN 24/7 AS NEEDED TO DIVERT STREAM FLOW THROUGH THE SITE USING A GAS GENERATOR OR SIMILAR DEVICE.
2. PLACE GENERATOR IN A CONTAINMENT STRUCTURE AND HAVE SECONDARY CONTAINMENT STRUCTURE FOR FUELING.
3. PLACE STREAM DIVERSION INLET PUMP IN A 3' DIAMETER PERFORATED PIPE, 40 GALLON BUCKET, OR SIMILAR STRUCTURE WITH HOLES TO CAPTURE STREAM FLOW AND GROUND WATER. THIS WILL DIVERT SURFACE AND SUBSURFACE FLOW. A SAND-BAG COFFER DAM WILL BE BUILT AROUND STREAM INLET PUMP TO ENSURE ALL WATER IS ADEQUATELY PUMPED FROM ACTIVE WORK SITE.
4. DISCHARGE THE STREAM DIVERSION OUTLET DOWNSTREAM OF EXCAVATION LIMITS INTO A DISSIPATION/FILTER SYSTEM THAT MINIMIZES EROSION OR SCOUR.
5. THE WORK SITE GROUNDWATER PUMP MUST DISCHARGE ACCUMULATED GROUNDWATER AND WATERS THAT ARE TURBID DUE TO CONSTRUCTION ACTIVITIES IN AN AREA THAT IS HEAVILY VEGETATED EMBANKMENT, OR IN THE ROADSIDE DITCH THAT DRAINS BACK INTO CREEK, OR IN A FILTER FABRIC BAG.
6. ADEQUATE FILTRATION AT THE SYSTEM OUTLETS MUST BE PROVIDED FOR TURBID WATER DUE TO CONSTRUCTION ACTIVITIES.
7. ALTERNATE STREAM DIVERSION SYSTEMS, INCLUDING GRAVITY WILL BE CONSIDERED, BUT MUST BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION.
8. CONTRACTOR RESPONSIBLE FOR PIPE SIZING THAT IS ADEQUATE FOR STREAM FLOWS DURING CONSTRUCTION.



BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MATTOLE ROAD	DESIGN SECTION	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS <b>STORM DAMAGE REPAIR TO MATTOLE ROAD PM 16.15</b> <b>PM 16.15 EROSION CONTROL AND REVEGETATION PLAN</b>	SHEET <b>24</b> OF <b>28</b>	
	ROAD NO.: F30010	MILE POST: 16.15			ENGINEERING
	PROJECT NO.: ER-32LO(253)				DESIGNED BY: RMD
	CONTRACT NO.: 217424				DRAWN BY: RMD
	DRAWING FILE NAME: 217424 CDSN 001	REVIEWED BY: JAB			
	PLOT DATE: 03/05/2024	REVISION DATE:	APPROVED BY: TRS		



**REVEGETATION NOTES**

1. ALL EROSION CONTROL AND REVEGETATION WORK TO BE DONE BY OTHERS
2. HARVEST PLANTING STAKES FROM ON-SITE OR NEARBY SOURCES.
3. SOAK STAKES FOR 5-7 DAYS PRIOR TO INSTALLATION.
4. PRE-DRIVE HOLES FOR STAKES USING AUGER OR EXCAVATOR MOUNTED STINGER. HOLE MUST EXTEND AT LEAST 6" BELOW TOP OF WATER TABLE.
5. PLACE STAKE IN PREPARED HOLE WITH 2-5 BRANCH/BUD SCARS ABOVE THE GROUND.
6. WATER PLANTING AREA THOROUGHLY AFTER INSTALLING STAKES AND ENSURE THERE ARE NO AIR POCKETS IN HOLE AROUND WILLOW STAKES.
7. PLACE WILLOW STAKES 6 FT ON CENTER MAXIMUM. STAGGER WILLOW STAKE ROWS BY 5FT PARALLEL TO THE ROAD.
8. REPLACE RED ALDER TREES AT 6 FT ON CENTER. TREES SHALL HAVE A MINIMUM HEIGHT OF 4 FT. (IF NEEDED, AS REQUIRED)

**REVEGETATION PLAN**

PLANT	QTY	LOCATION	NOTES
WILLOW	50	ALONG CREEK BANKS	12"-18" MIN HT, 3'-6' SWATH, 4'-6' SPACING
ALDER	12	TBD	4'-6' MIN HT. SPACED 6' APART MIN

**EROSION CONTROL AND REVEGETATION PLAN**

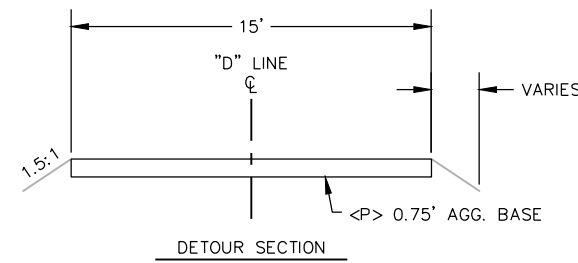
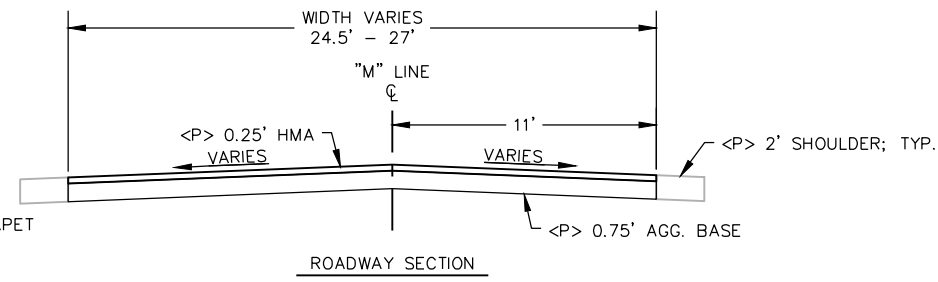
SCALE: 1"=10'



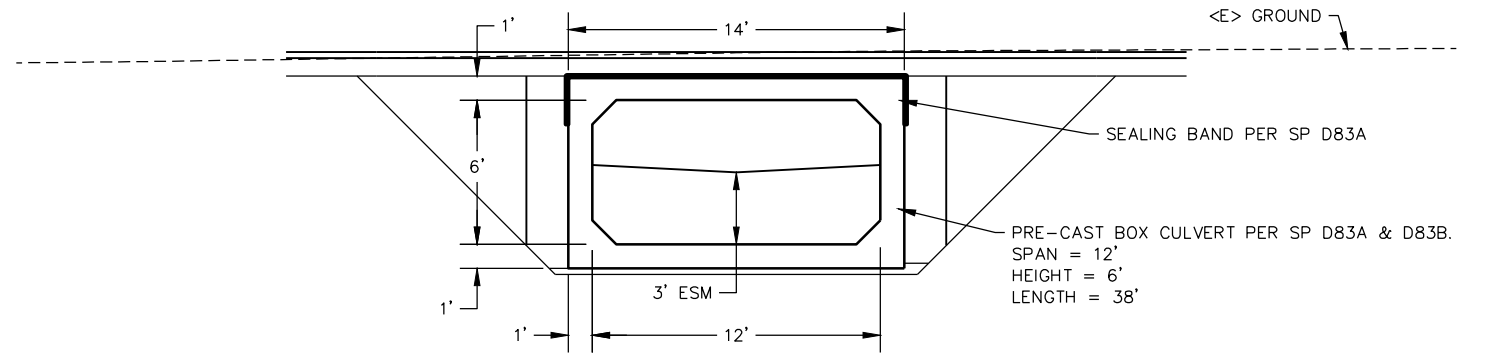


BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MATTOLE ROAD	DESIGN SECTION	<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>STORM DAMAGE REPAIR TO MATTOLE ROAD PM 16.15</b> <b>PM 16.15 TYPICAL SECTIONS AND DETAILS</b>	SHEET <b>25</b> OF <b>28</b>	
	ROAD NO.: F30010	MILE POST: 16.15			ENGINEERING
	PROJECT NO.: ER-32LO(253)	DESIGNED BY: RMD			DRAWN BY: RMD
	CONTRACT NO.: 217424	REVIEWED BY: JAB			APPROVED BY: TRS
	DRAWING FILE NAME: 217424_CDSN_001				
	PLOT DATE: 03/05/2024	REVISION DATE:			

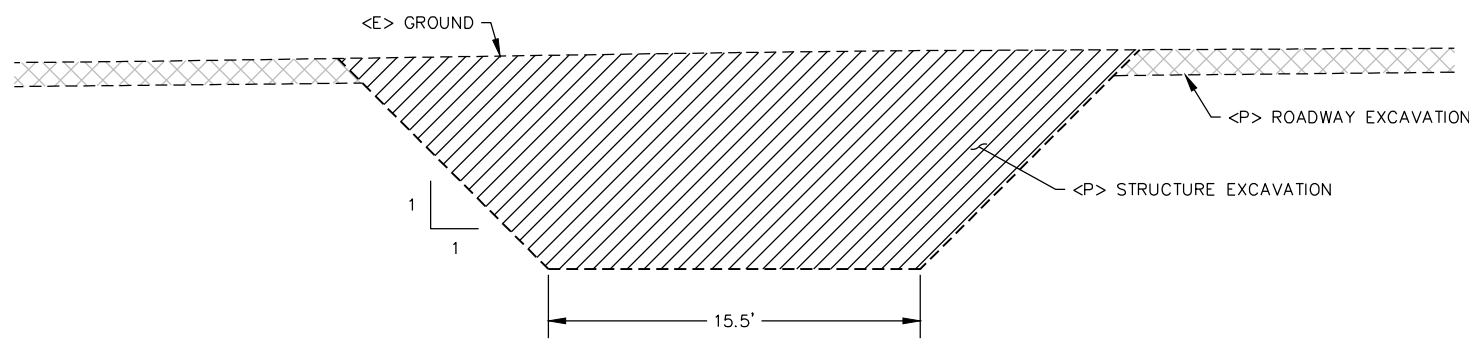
- NOTE:
- SP = 2023 CALTRANS STANDARD PLANS
  - PRECAST BOX CULVERT
  - CAST-IN-PLACE WINGWALLS AND PARAPETS
  - HMA AND AB TO EXTEND TO PARAPET AND WINGWALLS AT STA 13+09.00 THRU 13+42.00
  - LANE SLOPES VARY
    - LEFT LANE VARIES BETWEEN -2% AND -4%
    - RIGHT LANE VARIES BETWEEN +2% AND -4%



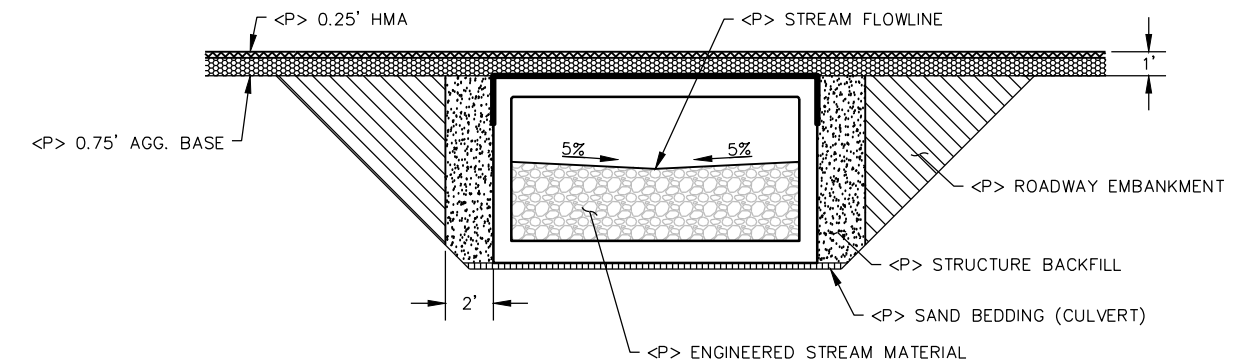
**TYPICAL ROADWAY SECTIONS**  
SCALE: 1"=4'



**TYPICAL BOX CULVERT SECTION**  
SCALE: 1"=4'

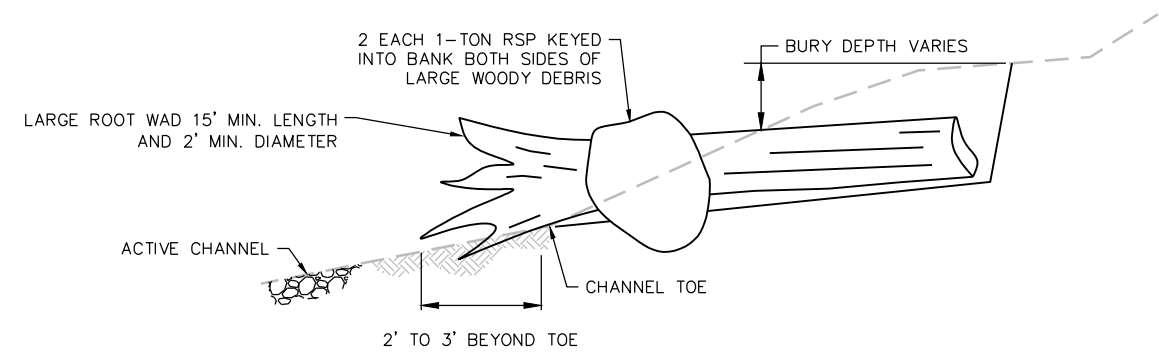


**TYPICAL EXCAVATION SECTION**  
SCALE: 1"=4'

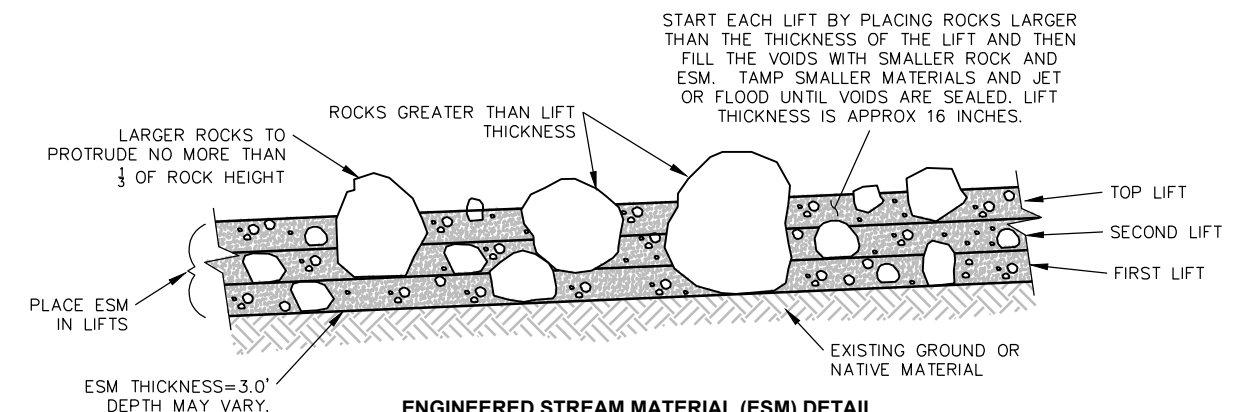


**TYPICAL BACKFILL SECTION**  
NOT TO SCALE

NOTE:  
METHOD 1, 2 OR 3 BACKFILL PER  
SP A62G (METHOD 2 SHOWN)



**LARGE WOODY DEBRIS DETAIL**  
NOT TO SCALE

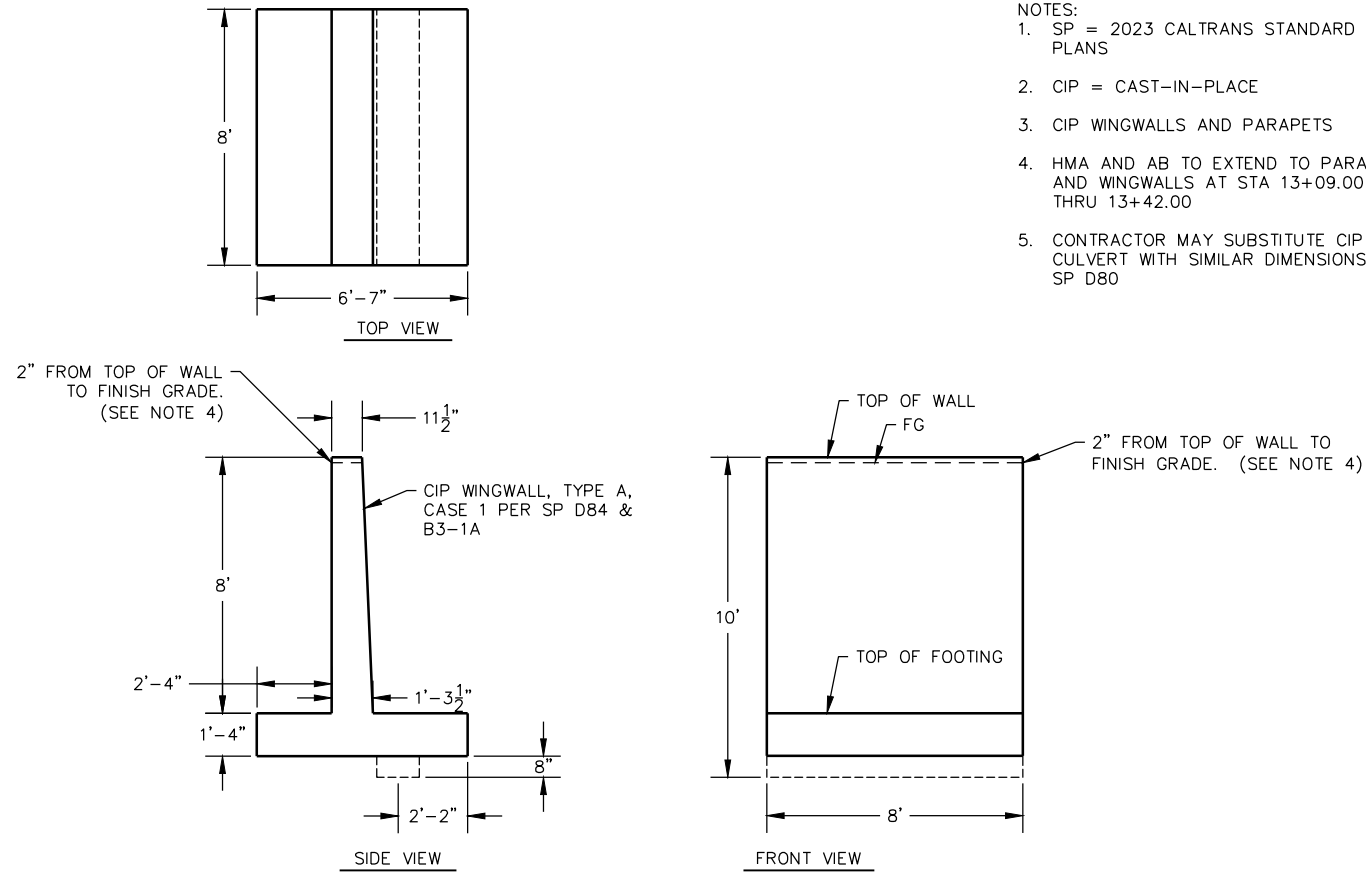


**ENGINEERED STREAM MATERIAL (ESM) DETAIL**  
NOT TO SCALE



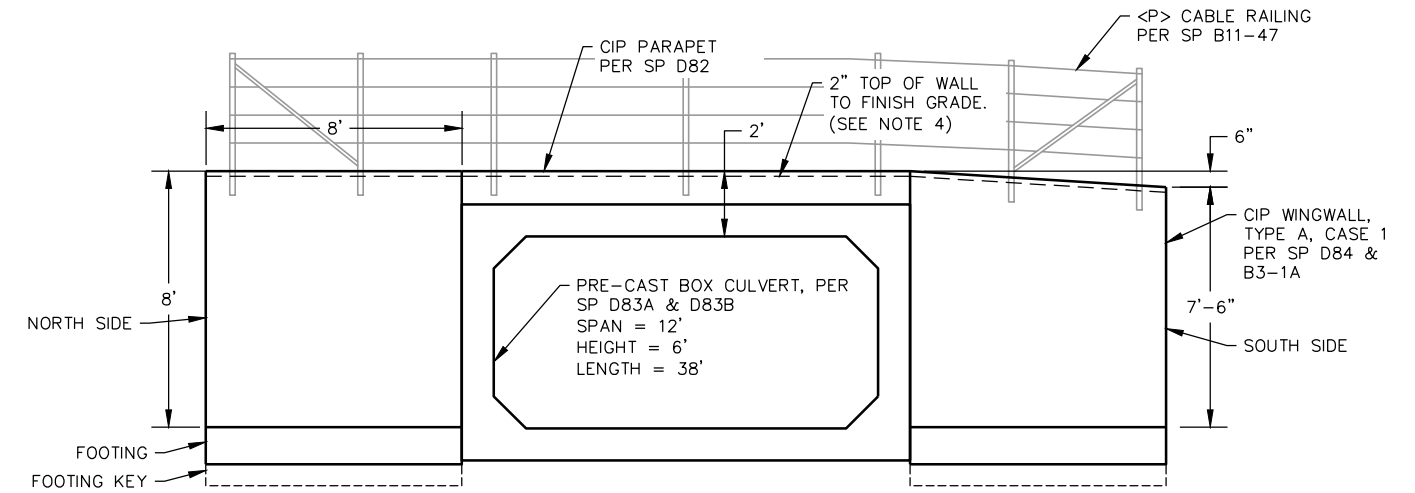
BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MATTOLE ROAD	DESIGN SECTION	<b>COUNTY OF HUMBOLDT</b> <b>DEPARTMENT OF PUBLIC WORKS</b> <b>STORM DAMAGE REPAIR TO MATTOLE ROAD PM 16.15</b> <b>PM 16.15 BOX CULVERT DETAILS</b>	SHEET <b>26</b> OF <b>28</b>	
	ROAD NO.: F30010	MILE POST: 16.15			ENGINEERING
	PROJECT NO.: ER-32LO(253)	DESIGNED BY: RMD			
	CONTRACT NO.: 217424	DRAWN BY: RMD			
	DRAWING FILE NAME: 217424 CDSN 001	REVIEWED BY: JAB			
	PLOT DATE: 03/05/2024	REVISION DATE:	APPROVED BY: TRS		

- NOTES:
- SP = 2023 CALTRANS STANDARD PLANS
  - CIP = CAST-IN-PLACE
  - CIP WINGWALLS AND PARAPETS
  - HMA AND AB TO EXTEND TO PARAPET AND WINGWALLS AT STA 13+09.00 THRU 13+42.00
  - CONTRACTOR MAY SUBSTITUTE CIP BOX CULVERT WITH SIMILAR DIMENSIONS PER SP D80



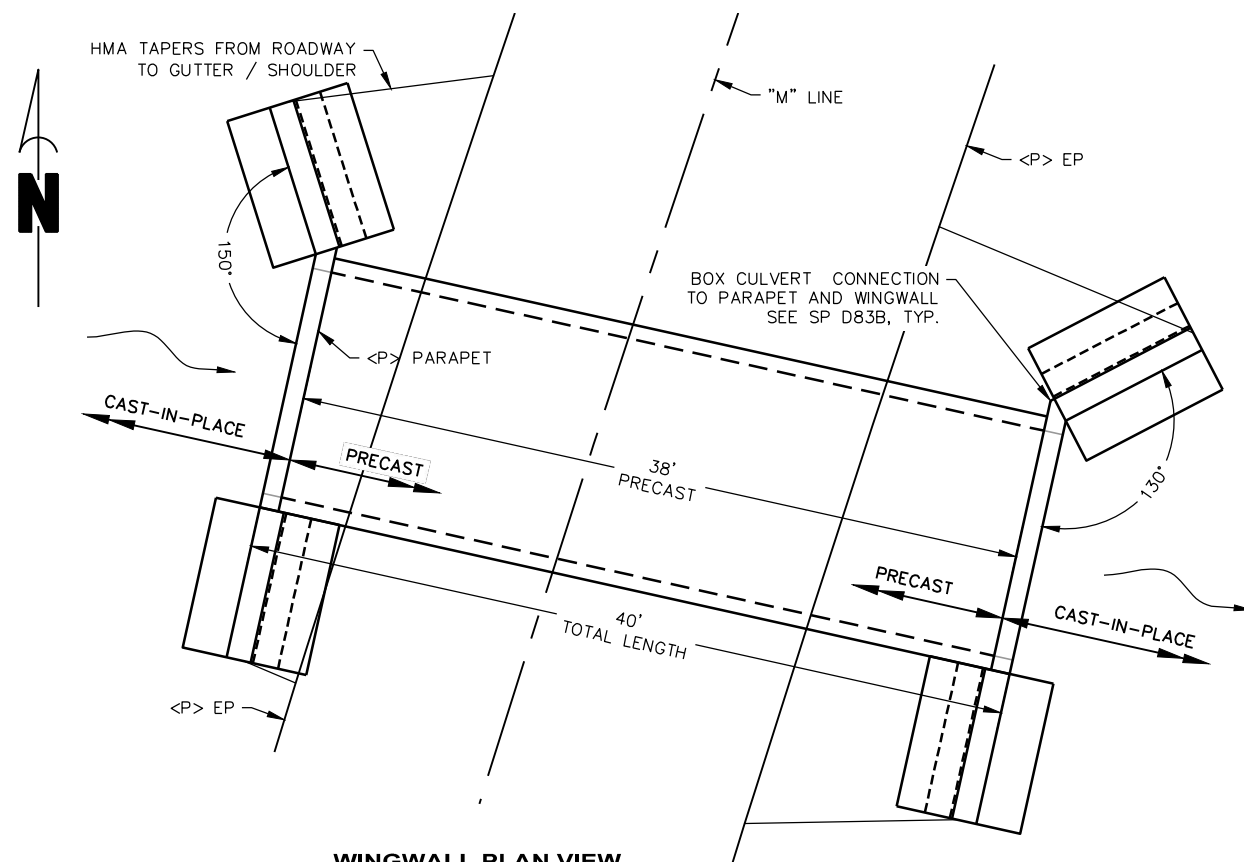
**WINGWALL DETAILS: H = 8'**

SCALE: 1"=3'



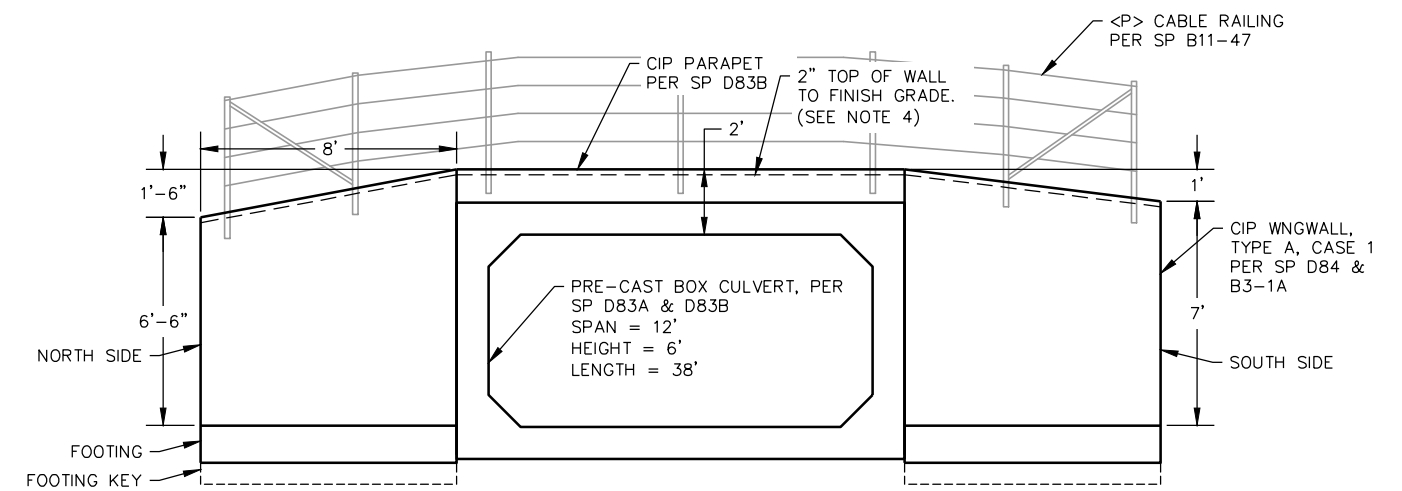
**UPSTREAM WINGWALL PROJECTION**

SCALE: 1"=3'



**WINGWALL PLAN VIEW**

SCALE: 1"=5'



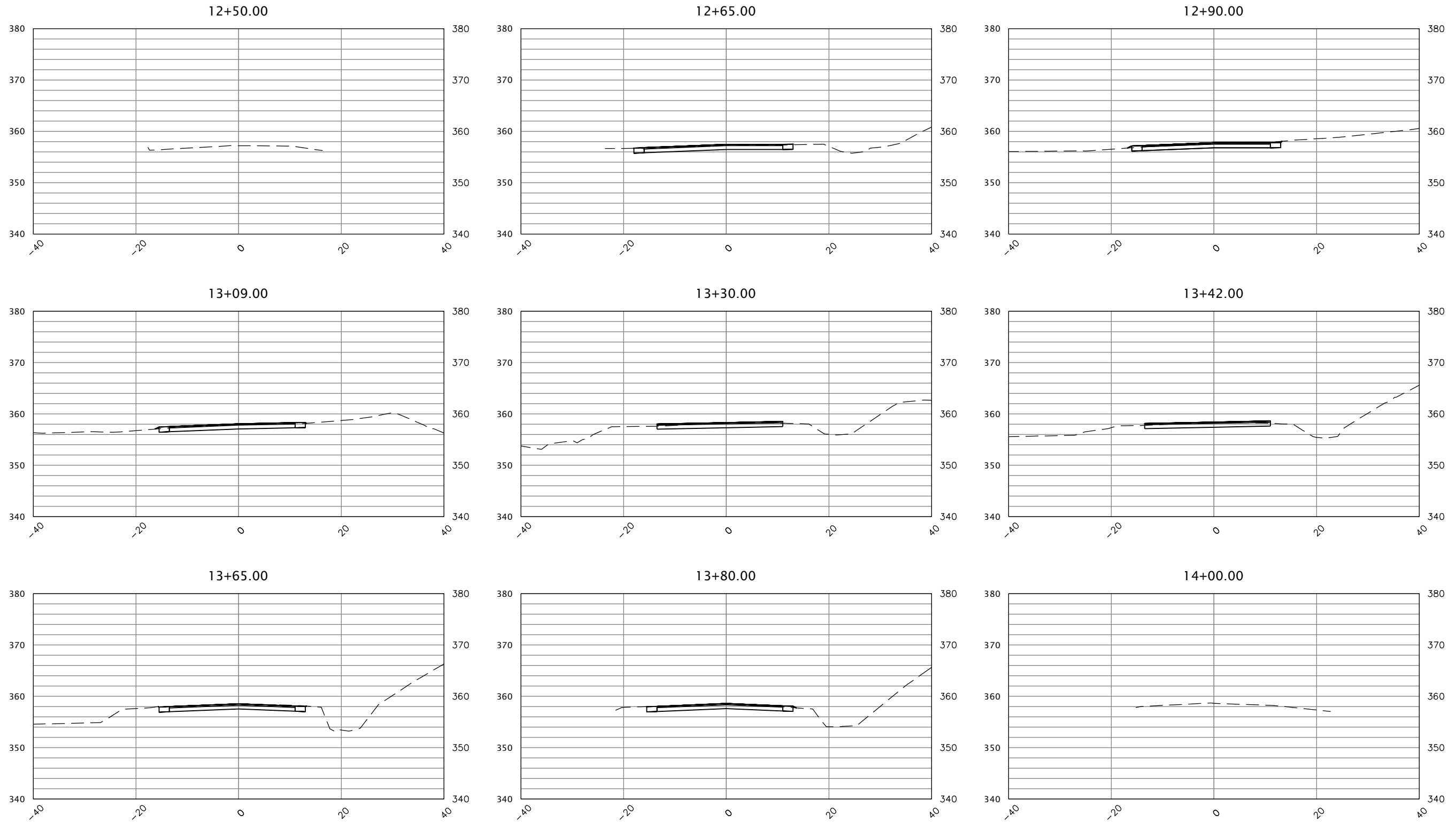
**DOWNSTREAM WINGWALL PROJECTION**

SCALE: 1"=3'



BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MATTOLE ROAD	DESIGN SECTION	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS <b>STORM DAMAGE REPAIR TO MATTOLE ROAD PM 16.15</b> <b>PM 16.15 MATTOLE ROAD SECTIONS</b>	SHEET <b>27</b> OF <b>28</b>	
	ROAD NO.: F30010	MILE POST: 16.15			ENGINEERING
	PROJECT NO.: ER-32LO(253)	DESIGNED BY: RMD			DRAWN BY: RMD
	CONTRACT NO.: 217424	REVIEWED BY: JAB			APPROVED BY: TRS
	DRAWING FILE NAME: 217424_CDSN_001				
	PLOT DATE: 03/05/2024	REVISION DATE:			

NOTE: BOX CULVERT NOT SHOWN



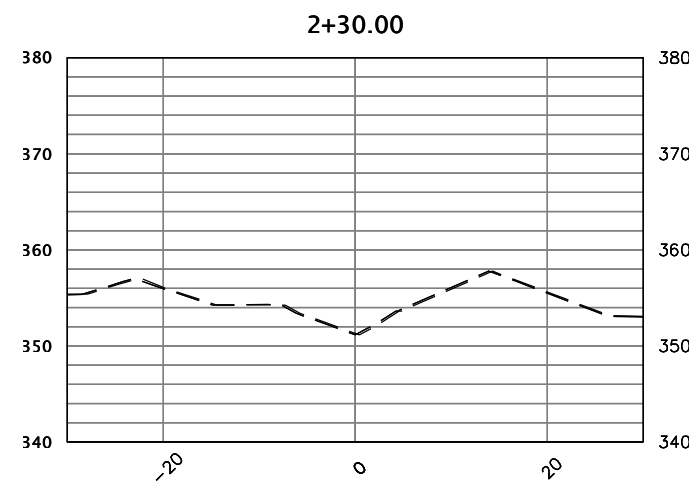
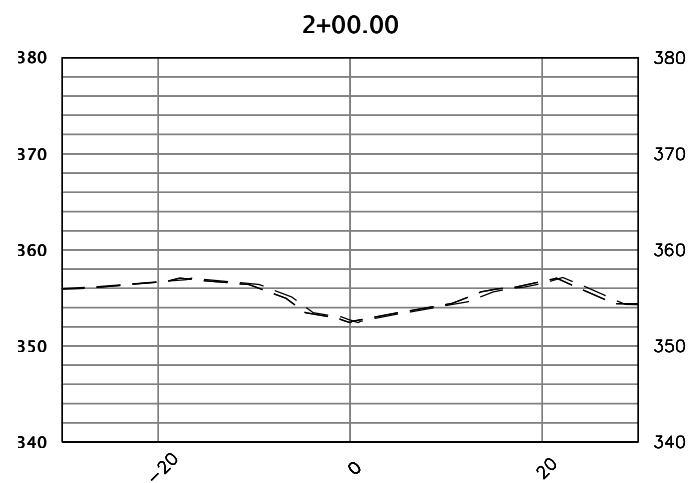
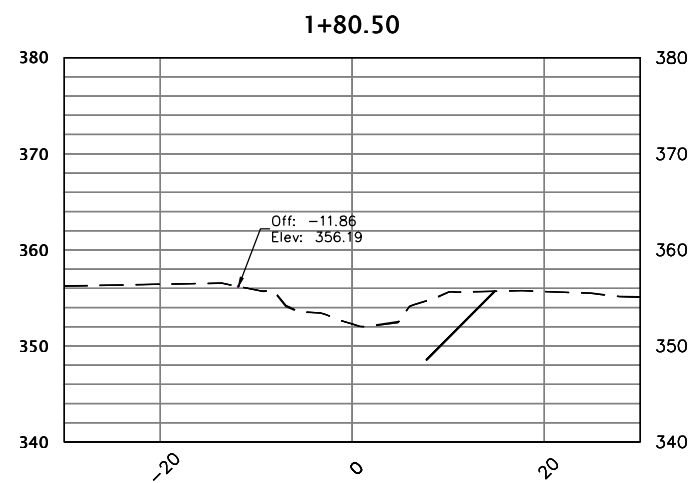
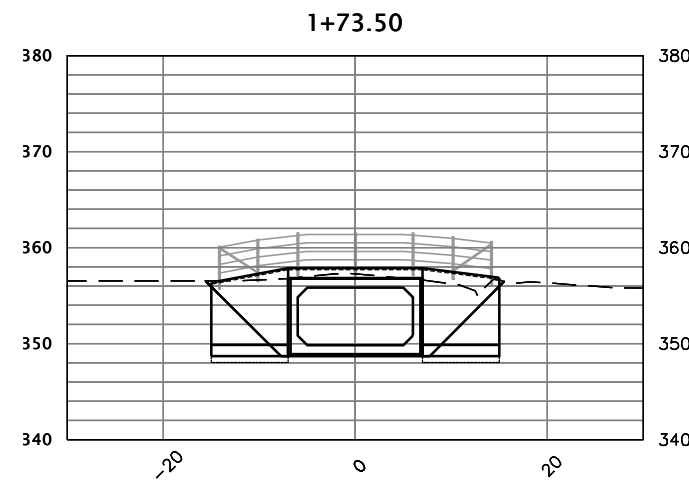
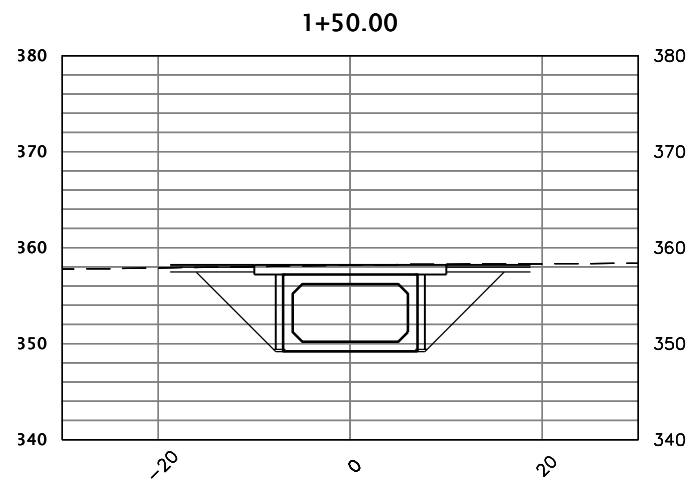
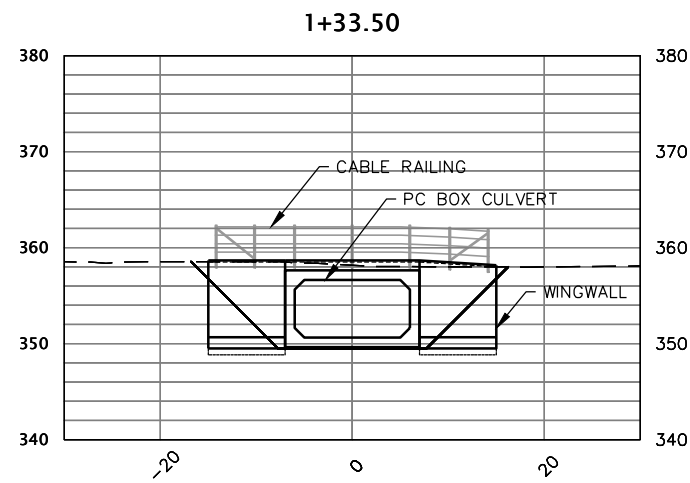
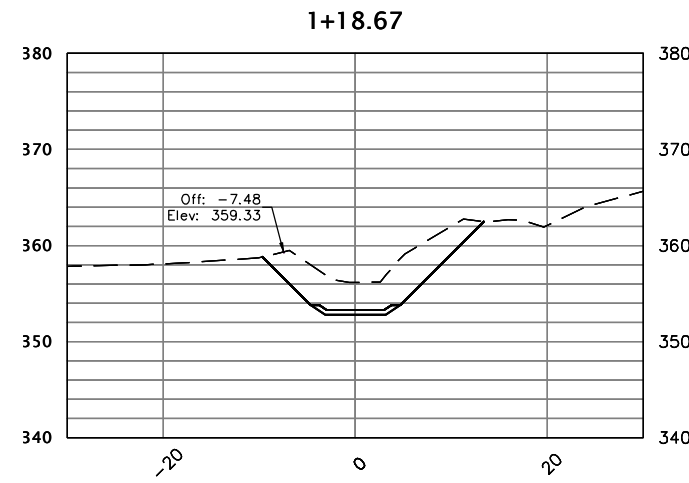
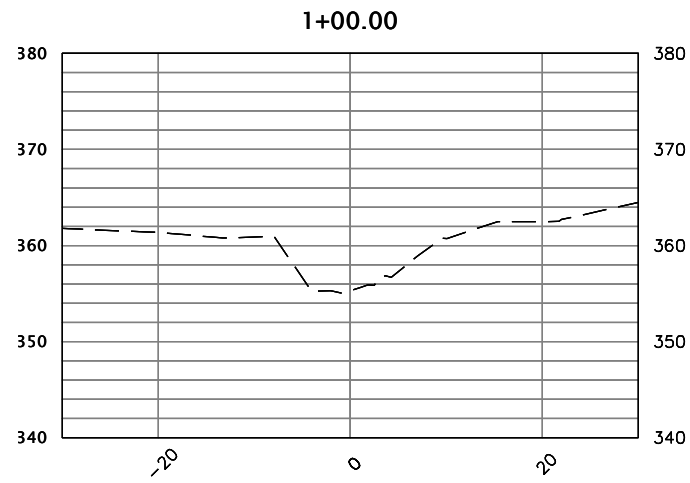
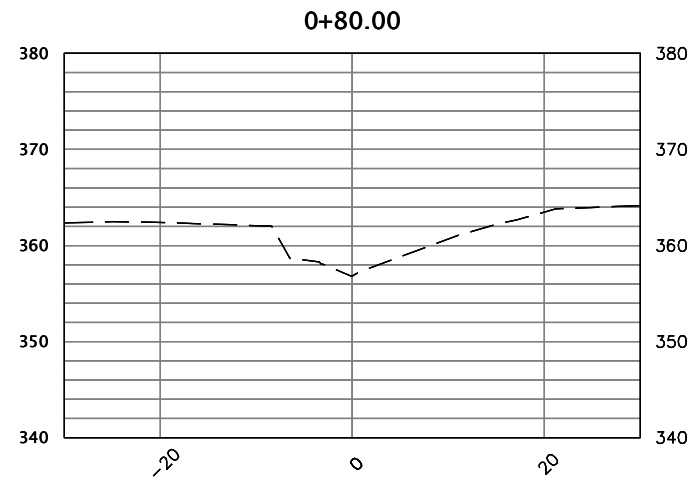
**ROADWAY SECTIONS**

SCALE: 1"=10' (H,V)



BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	ROAD NAME: MATTOLE ROAD	DESIGN SECTION	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS		
	ROAD NO.: F30010	ENGINEERING		STORM DAMAGE REPAIR TO MATTOLE ROAD PM 16.15	
	PROJECT NO.: ER-32LO(253)	DESIGNED BY: RMD			PM 16.15 STREAM CHANNEL SECTIONS
	CONTRACT NO.: 217424	DRAWN BY: RMD			
DRAWING FILE NAME: 217424_CDSN_001	REVIEWED BY: JAB	APPROVED BY: TRS			
PLOT DATE: 03/05/2024	REVISION DATE:				

SHEET  
**28**  
OF  
**28**



**STREAM CHANNEL SECTIONS**  
SCALE: 1"=10' (H,V)