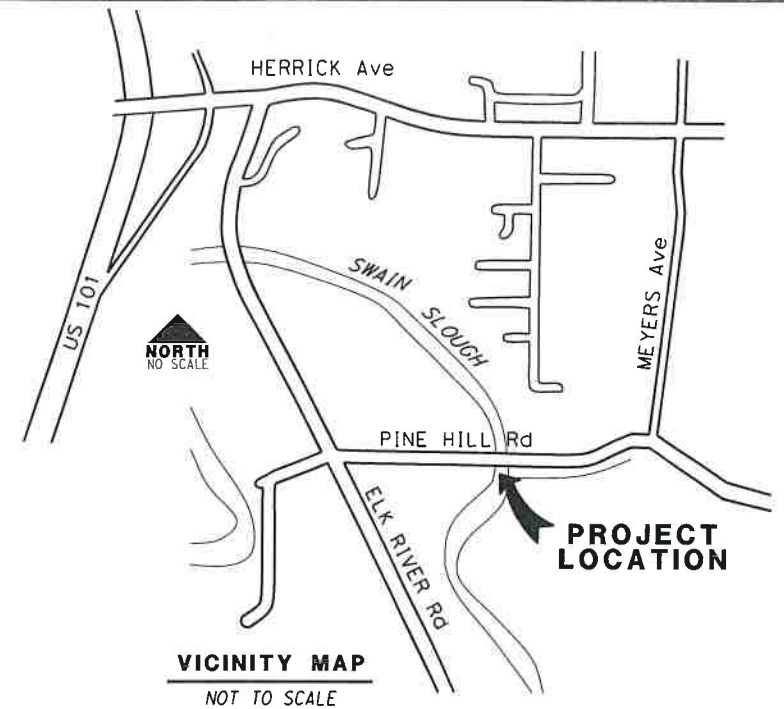


ROAD NAME: PINE HILL ROAD	QUINCY ENGINEERING	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
ROAD NO.: J4430	MILE POST: 0.19	PINE HILL ROAD BRIDGE OVER SWAIN SLOUGH
PROJECT NO.: BRLO-5904(112)	EA NO.:	COVER SHEET, SHEET INDEX AND DETAILS
CONTRACT NO.: 594020	PPNO.:	
DRAWING FILE NAME: S:\CITent\Humboldt\H07-300 Pine Hill\CAD\Roadway\H07300rab001.dgn	DESIGNED BY: KP	
PLOT DATE: 11-8-2022	REVIEWED BY: JJ	
REVISION DATE: 11-8-2022	APPROVED BY:	

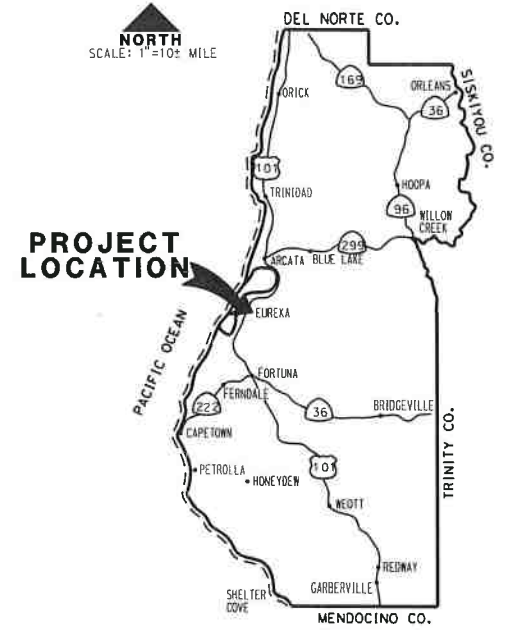
SHEET  
1  
OF  
28



VICINITY MAP  
NOT TO SCALE

# COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS

## PROJECT PLANS FOR CONSTRUCTION OF PINE HILL ROAD OVER SWAIN SLOUGH BRIDGE No. 04C0260 FEDERAL PROJECT NO. BRLO-5904[112]



LOCATION MAP  
SCALE: 1"=10± MILE

**APPLICABLE STANDARD PLANS**

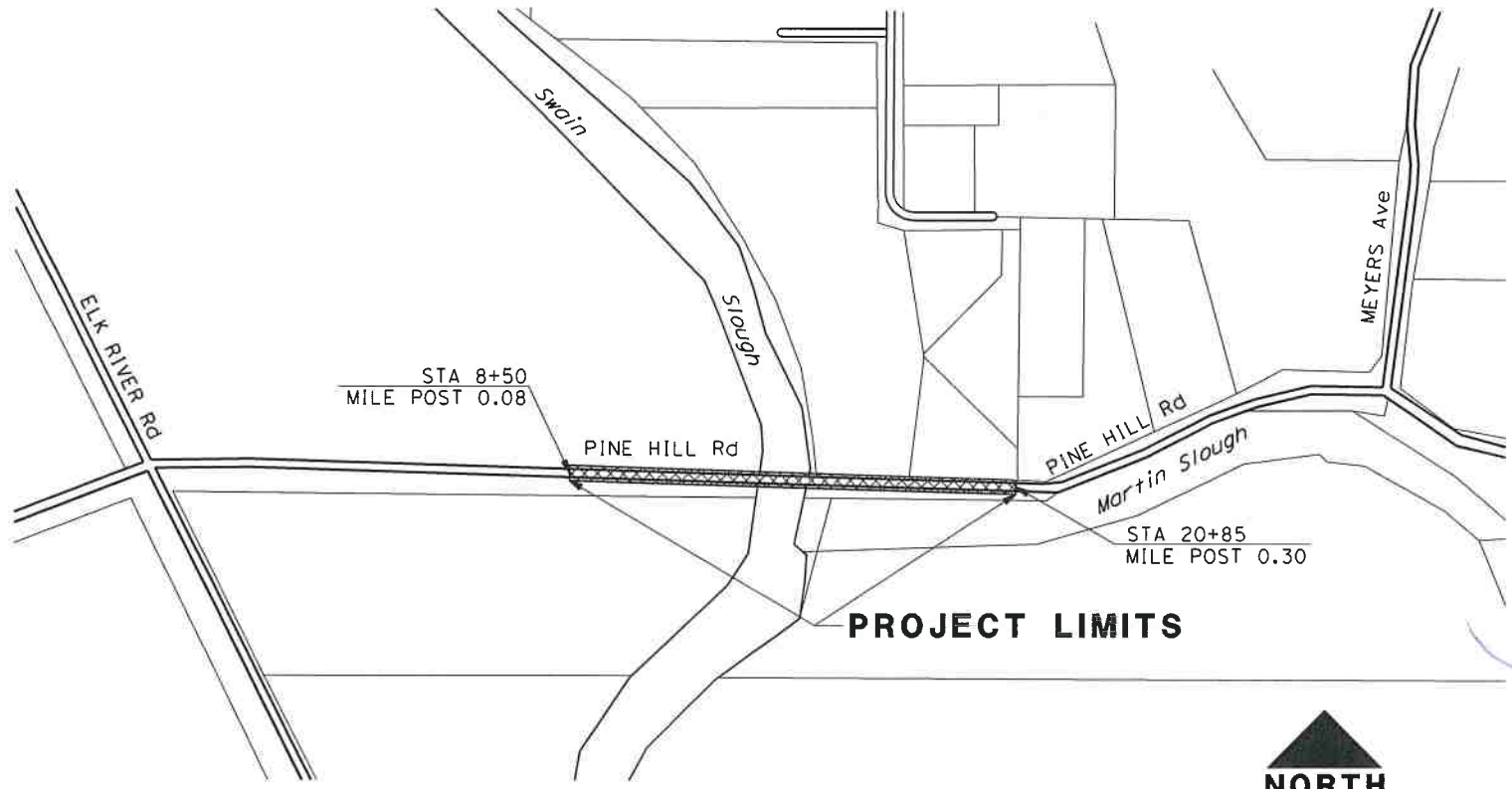
CALTRANS STANDARD PLANS DATED 2018, AND LATEST REVISED 2018 STANDARD PLANS (SEE SPECIAL PROVISIONS STANDARD PLAN LIST)

**NOTES**

THE CONTRACTOR SHALL HAVE A CLASS "A" LICENSE FOR THIS PROJECT.

**INDEX OF SHEETS**

- ROADWAY PLANS
- 1 COVER SHEET
- 2 TYPICAL CROSS SECTIONS
- 3 LAYOUT
- 4 PROFILE
- 5 CONSTRUCTION DETAILS
- 6 CONTOUR GRADING
- 7 DRAINAGE PLAN
- 8 DRAINAGE PROFILES
- 9 DRAINAGE DETAILS
- 10 UTILITY PLAN
- 11 DETOUR PLAN
- 12 SUMMARY OF QUANTITIES
- 13 EROSION CONTROL PLAN
- STRUCTURE PLANS
- 14 GENERAL PLAN
- 15 DECK CONTOURS
- 16 FOUNDATION PLAN
- 17 ABUTMENT LAYOUT
- 18 ABUTMENT DETAILS No.1
- 19 ABUTMENT DETAILS No.2
- 20 TYPICAL SECTION
- 21 GIRDER LAYOUT
- 22 WIDE FLANGE GIRDER DETAILS No.1
- 23 WIDE FLANGE GIRDER DETAILS No.2
- 24 CONSTRUCTION SEQUENCE
- 25 MISCELLANEOUS DETAILS
- 26-28 LOG OF TEST BORINGS



VICINITY MAP  
NORTH  
NO SCALE

**BASIS OF BEARINGS**

CC83 EPOCH 2007.00 BASED ON CONTROL BY BRIAN SOUSA, PLS FOR LIDAR SURVEY (PT NOS. 1510 & 1512)  
CONVERGENCE ANGLE 01°25'43"  
COMBINATION FACTOR 0.999900144

**BASIS OF ELEVATION**

NAVD88 BASED ON SAME SOUSA SURVEY (WHICH WAS VIA STATIC GPS TIES TO NGS CONTROL AT MURRAY FIELD)

**RECOMMENDED**

*Jason P. Jurens* 11/8/2022  
DATE



**APPROVED**

*Tony Seghetti* 11/8/22  
HUMBOLDT COUNTY DATE



ORIGINAL LOW BID PRICE	CONSTRUCTED BY	RESIDENT ENGINEER
	PROJECT COMPLETED / /	CONSTRUCTION COST \$

**NOTES:**

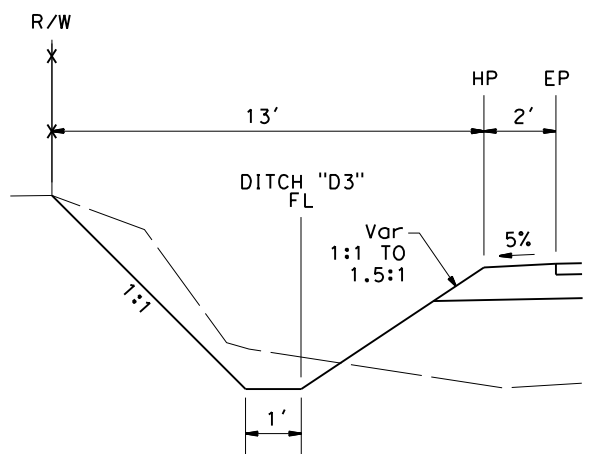
1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. CLASS 2 AGGREGATE BASE EXTENDED AT SAME DEPTH UNDER APPROACH SLAB.
3. FOR DITCH FLOW ELEVATIONS, SEE DRAINAGE DETAILS
4. EXCAVATION AND BACKFILL PER CALTRANS STANDARD PLAN A62A



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

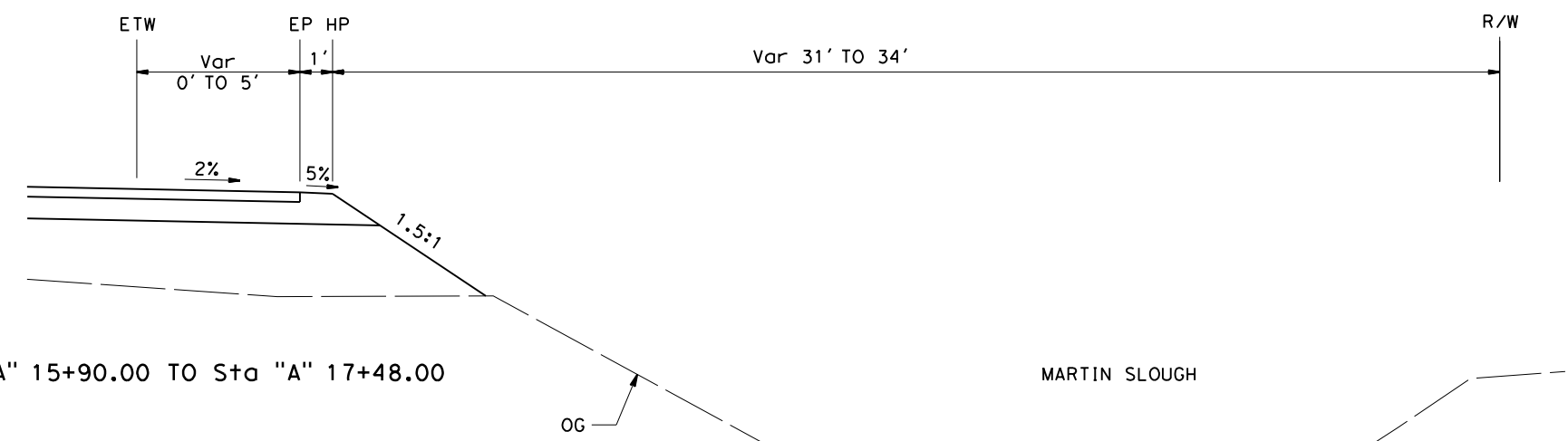
ROAD NAME: PINE HILL ROAD	MILE POST: 0.19	DESIGNED BY: KP
ROAD NO.: 3J430	EA NO.:	DRAWN BY: KP
PROJECT NO.: BRLO-5904(112)	PPNO.:	REVIEWED BY: JJ
CONTRACT NO.: 594020		APPROVED BY:
DRAWING FILE NAME: S:\Client\Humboldt\H07-300 Pine Hill\CAD\Roadway\H07300rca001.dgn		
PLOT DATE: 11-8-2022	REVISION DATE: 11-8-2022	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 2 OF 28
PINE HILL ROAD BRIDGE OVER SWAIN SLOUGH	
TYPICAL CROSS SECTIONS	

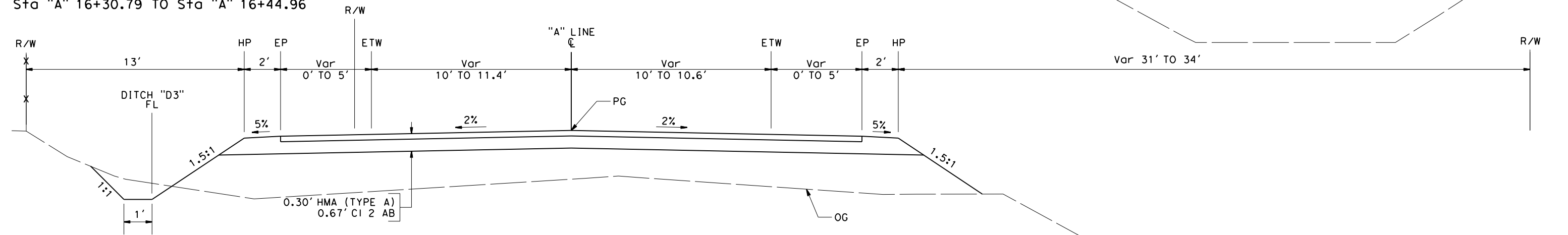


**DESIGN DESIGNATION (COUNTY ROAD)**  
 2009 ADT = 341  
 2036 ADT = 582  
 TRUCKS = 3% V = 35 MPH  
 LOCAL RURAL ROAD

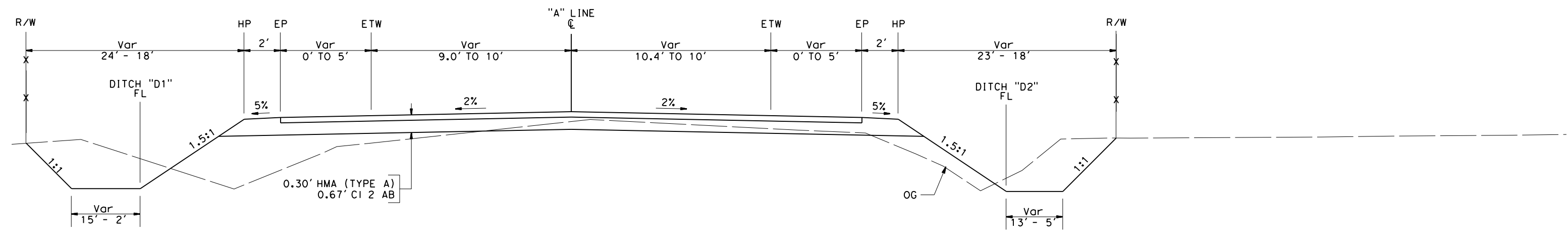
Sta "A" 15+40.00 TO Sta "A" 16+13.34  
 Sta "A" 16+30.79 TO Sta "A" 16+44.96



Sta "A" 15+90.00 TO Sta "A" 17+48.00



**PINE HILL ROAD**  
 Sta "A" 15+23.00 EB TO Sta "A" 17+48.00  
 (SEE NOTE 2)



**PINE HILL ROAD**  
 Sta "A" 11+93.00 TO Sta "A" 14+43.00 BB  
 (SEE NOTE 2)

**NOTES:**

- FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT THE COUNTY OFFICE.
- PINE HILL ROAD TO MYERS (MEYERS) AVE - 60' WIDE PER 62 DEEDS 372 UNABLE TO LOCATE POINT OF BEGINNING-HELD EXISTING ROAD AS BEST EVIDENCE OF DEEDED R/W. ALSO 60' WIDE PER BOOK 6 OF MAPS PAGE 40 (PT NOS. 417, 418, 421 & 422) NOTE THIS DOES NOT FIT EXISTING ROAD VERY WELL.
- IMPLIED COMMON LAW DEDICATION FOR OTHER AREAS FALLING WITHIN MAINTAINED ROAD VIA LONG TERM PUBLIC USE AND MAINTENANCE BY THE COUNTY.
- TRAFFIC STRIPES SHALL BE 4" WIDE, MODIFIED FROM CALTRANS STANDARD PLANS A20A AND A20B.

**LEGEND:**

- DIRECTION OF TRAFFIC
- CURVE DATA NUMBER
- PAVEMENT DELINEATION DETAIL
- DIRECTION OF DITCH FLOW
- SURVEY CONTROL POINT

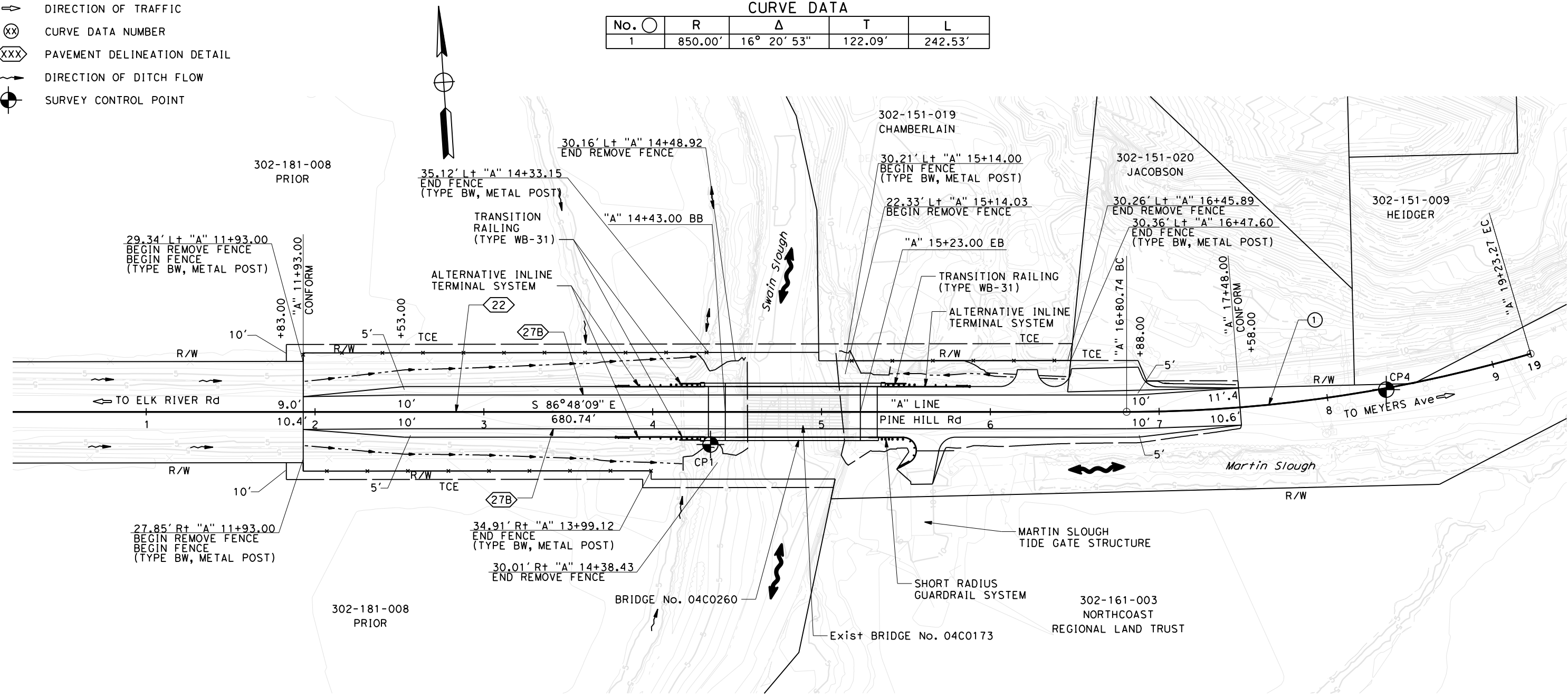


ROAD NAME: PINE HILL ROAD		MILE POST: 0.19		DESIGNED BY: KP	
ROAD NO.: 3J430	PROJECT NO.: BRLO-5904(112)	EA NO.:	DRAWN BY: KP		
CONTRACT NO.: 594020	PPNO.:		REVIEWED BY: JJ		
DRAWING FILE NAME: S:\Client\Humboldt\H07-300 Pine Hill\CAD\Roadway\H07300rea001.dgn		APPROVED BY:			
PLOT DATE: 11-8-2022	REVISION DATE: 11-8-2022				

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS		SHEET <b>3</b> OF <b>28</b>
PINE HILL ROAD BRIDGE OVER SWAIN SLOUGH		
LAYOUT		

**CURVE DATA**

No.	R	Δ	T	L
1	850.00'	16° 20' 53"	122.09'	242.53'



**SURVEY CONTROL DATA**

No.	NORTHING	EASTING	ELEV	LINE	STATION	OFFSET	DESCRIPTION
CP1	2164937.002	5957031.194	10.172	"A"	14+34.23	19.36' Rt	SET80DSPIKE
CP2	2165008.312	5956085.236	9.142	"A"			BRASSCAPHUMCORE19203
CP4	2164947.122	5957432.660	9.366	"A"	18+35.19	0.88' Rt	SETMAGNAIL&DPWTAG
CP5	2165073.438	5957926.179	8.956	"A"			FD1510

SCALE: 1"=30' **L-1**

NOTE:  
1. HWE IS 0100.



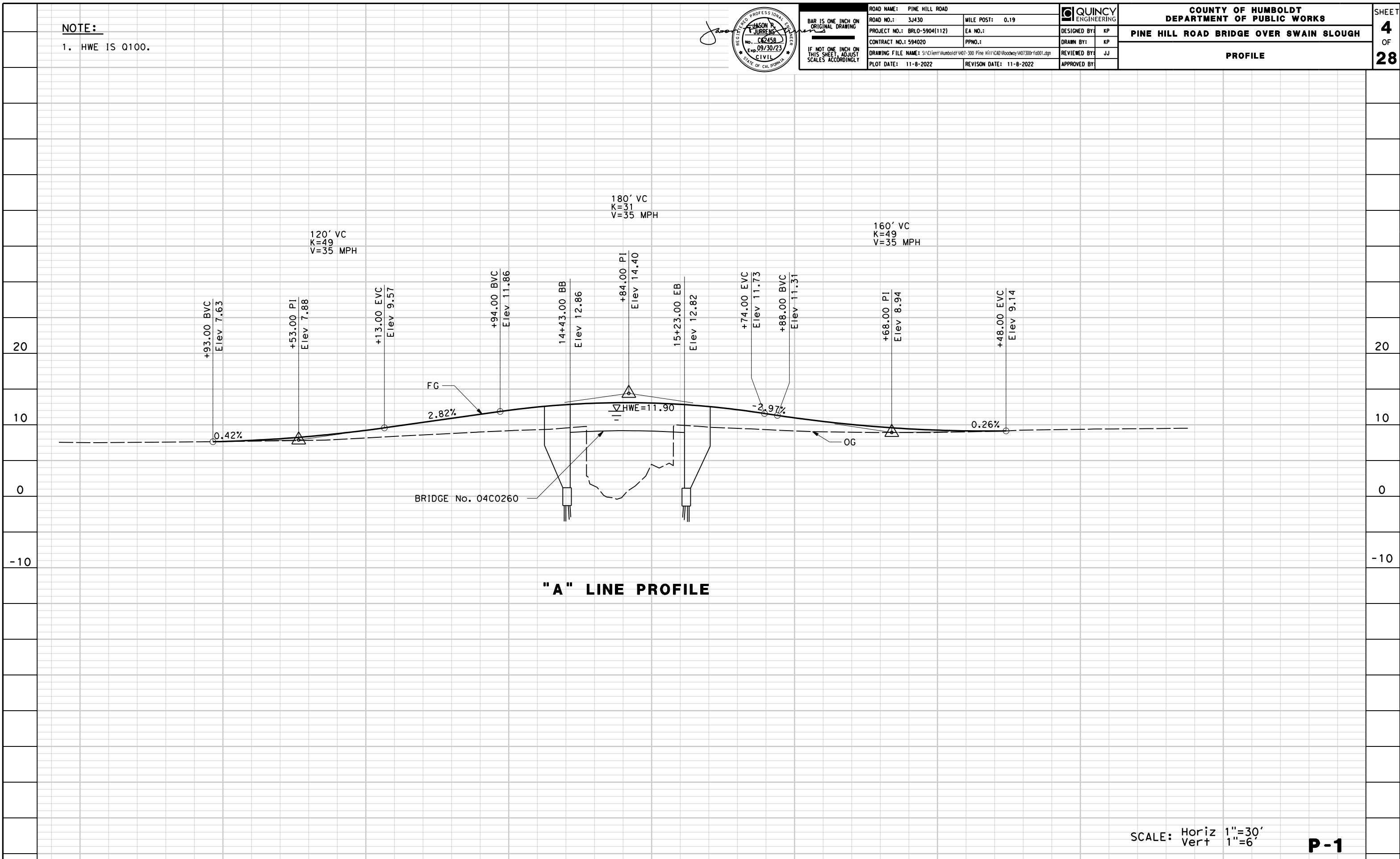
BAR IS ONE INCH ON ORIGINAL DRAWING  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME:	PINE HILL ROAD	MILE POST:	0.19
ROAD NO.:	3J430	EA NO.:	
PROJECT NO.:	BRLO-5904(112)	CONTRACT NO.:	594020
PPNO.:		DRAWING FILE NAME:	S:\Client\Humboldt\H07-300 Pine Hill\CAD\Roadway\H07300rfa001.dgn
PLOT DATE:	11-8-2022	REVISION DATE:	11-8-2022

DESIGNED BY:	KP
DRAWN BY:	KP
REVIEWED BY:	JJ
APPROVED BY:	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
<b>PINE HILL ROAD BRIDGE OVER SWAIN SLOUGH</b>
<b>PROFILE</b>

SHEET **4**  
OF  
**28**



**"A" LINE PROFILE**

SCALE: Horiz 1"=30'  
Vert 1"=6'

**P-1**

STATION	11+00	12+00	13+00	14+00	15+00	16+00	17+00	18+00	TOTAL
Exc									
Emb									

**NOTES:**

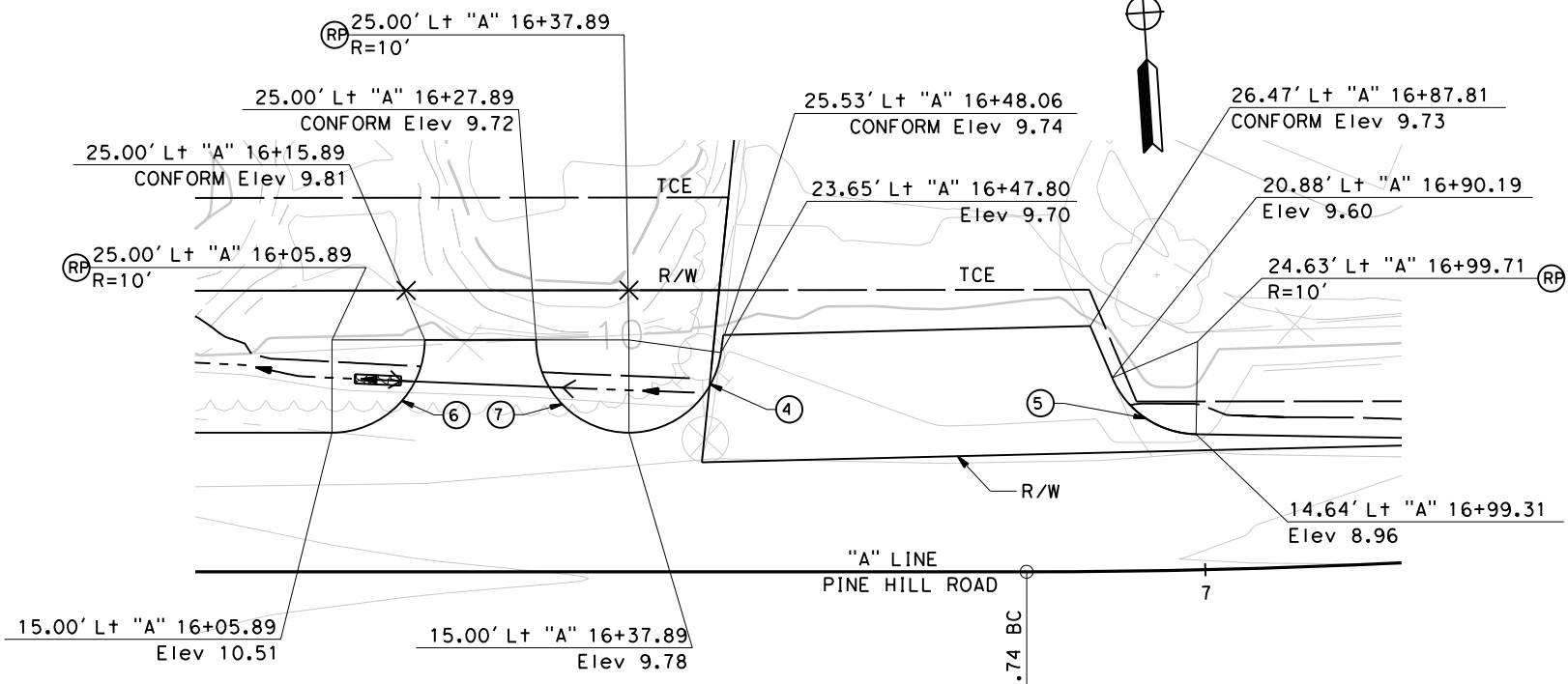
1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT THE COUNTY OFFICE.



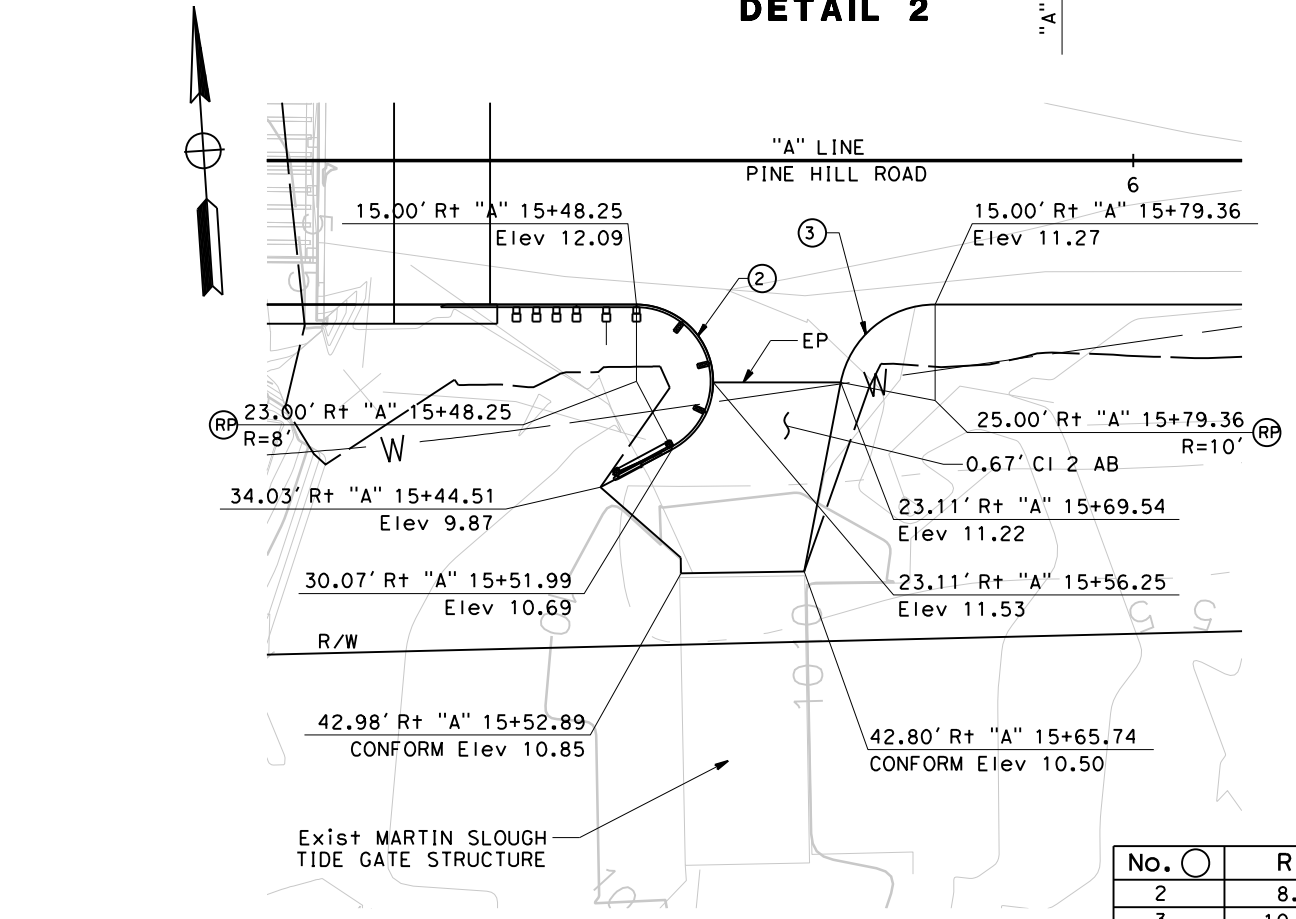
BAR IS ONE INCH ON ORIGINAL DRAWING  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME: PINE HILL ROAD	MILE POST: 0.19	DESIGNED BY: KP
ROAD NO.: 3J430	EA NO.:	DRAWN BY: KP
PROJECT NO.: BRLO-5904(112)	PPNO.:	REVIEWED BY: JJ
CONTRACT NO.: 594020	DRAWING FILE NAME: S:\Client\Humboldt\H07-300 Pine Hill\CAD\Roadway\H07300rga001.dgn	APPROVED BY:
PLOT DATE: 11-8-2022	REVISION DATE: 11-8-2022	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 5 OF 28
PINE HILL ROAD BRIDGE OVER SWAIN SLOUGH	
CONSTRUCTION DETAILS	



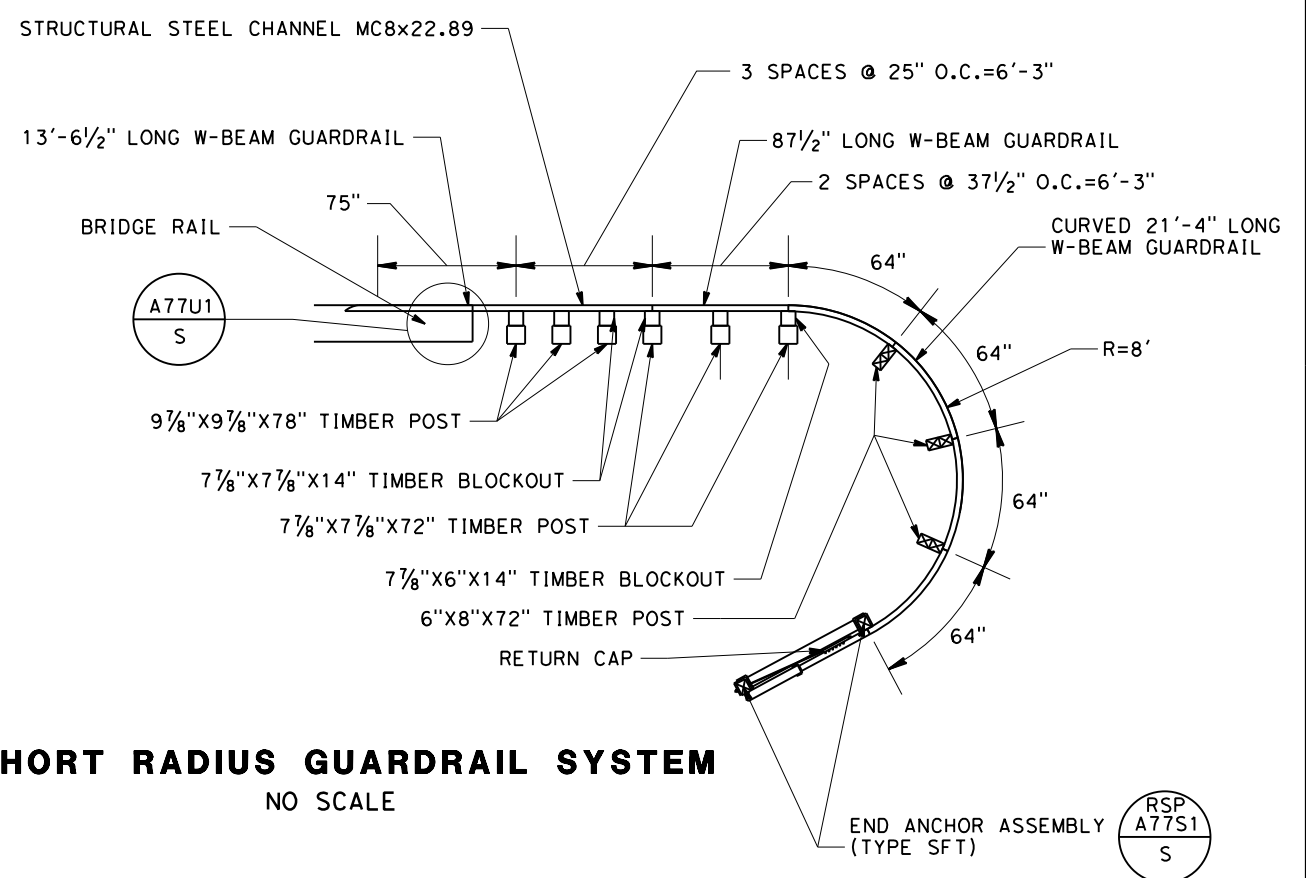
**DETAIL 2**



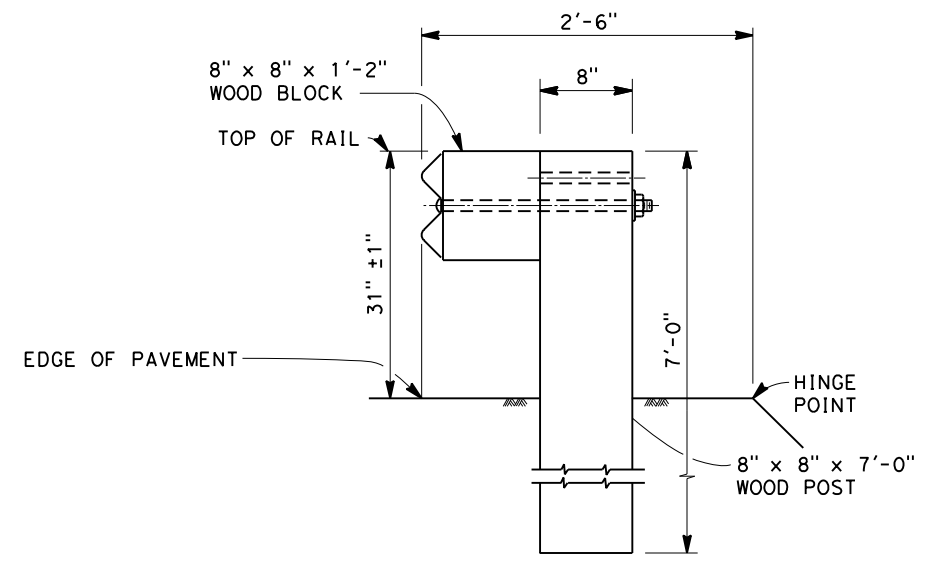
**DETAIL 1**

**CURVE DATA**

No. ○	R	Δ	T	L
2	8.00'	100° 54' 40"	9.69'	14.09'
3	10.00'	79° 05' 20"	8.26'	13.80'
4	10.00'	82° 13' 54"	8.73'	14.35'
5	10.00'	65° 59' 24"	6.49'	11.52'
6	10.00'	90° 00' 00"	10.00'	15.71'
7	10.00'	90° 00' 00"	10.00'	15.71'



**SHORT RADIUS GUARDRAIL SYSTEM**  
NO SCALE



**NARROW ROADWAY INSTALLATION POST EMBEDMENT**  
NO SCALE

SCALE: 1"=10'

**C-1**

**NOTES:**

1. FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT THE COUNTY OFFICE.
2. FOR STEEL SHEET PILING, SEE BRIDGE PLANS.

**LEGEND:**

— — — — — LIMITS OF STEEL SHEET PILING



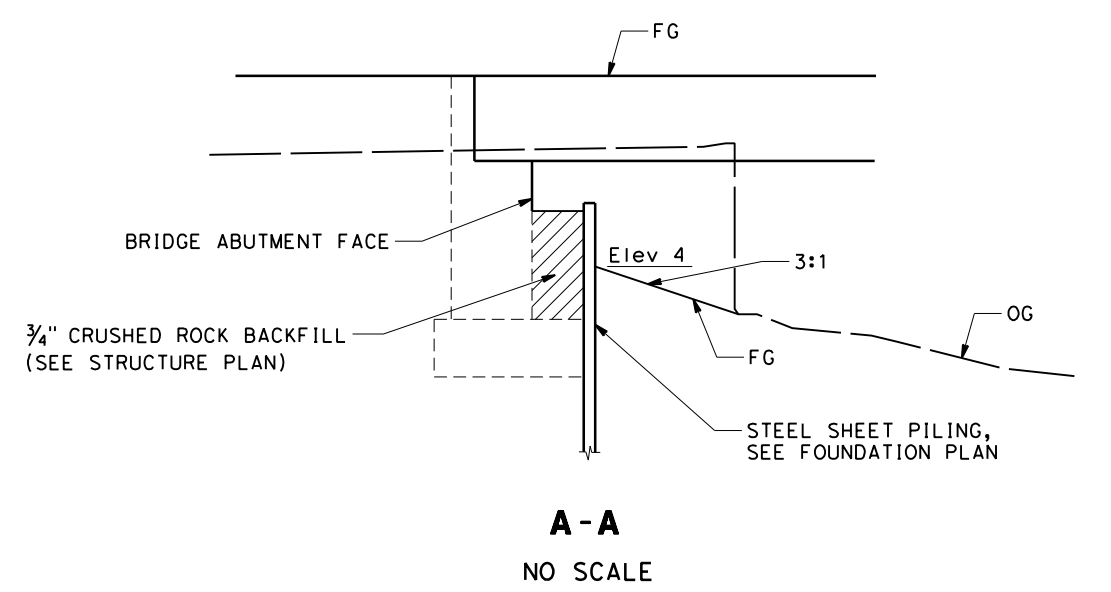
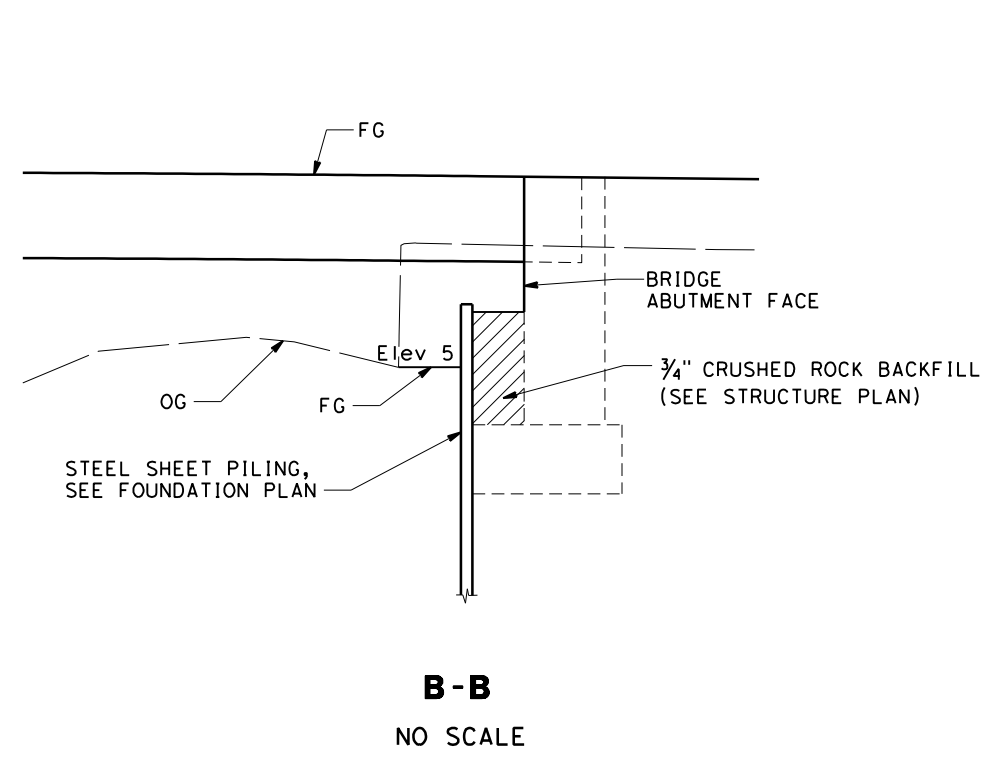
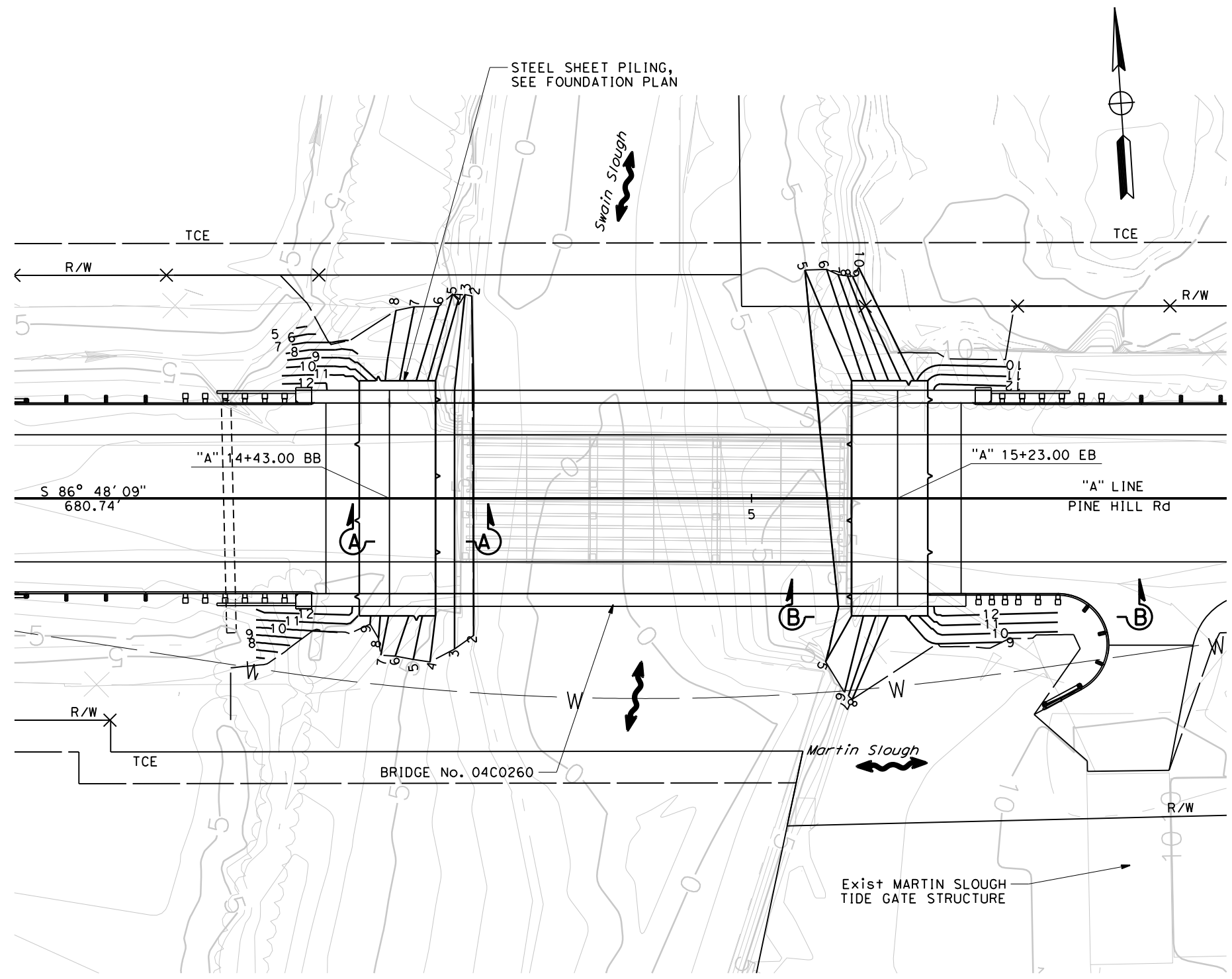
BAR IS ONE INCH ON ORIGINAL DRAWING  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME: PINE HILL ROAD	MILE POST: 0.19
ROAD NO.: 3J430	EA NO.:
PROJECT NO.: BRLO-5904(112)	PPNO.:
CONTRACT NO.: 594020	DRAWING FILE NAME: S:\Client\Humboldt\H07-300 Pine Hill\CAD\Roadway\H07300rha001.dgn
PLOT DATE: 11-8-2022	REVISION DATE: 11-8-2022

DESIGNED BY: KP
DRAWN BY: KP
REVIEWED BY: JJ
APPROVED BY:

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
<b>PINE HILL ROAD BRIDGE OVER SWAIN SLOUGH</b>
<b>CONTOUR GRADING</b>

SHEET **6**  
OF  
**28**



THIS PLAN ACCURATE FOR CONTOUR GRADING WORK ONLY.

SCALE: 1"=10'

**G-1**

**NOTES:**

- FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT THE COUNTY OFFICE.
- CONTRACTOR SHALL POSITIVELY DETERMINE ALL HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION OF ANY COMPONENT OF ANY DRAINAGE SYSTEM IN ORDER TO VERIFY CONSTRUCTIBILITY OF THE DRAINAGE SYSTEM AS SHOWN ON PLANS.

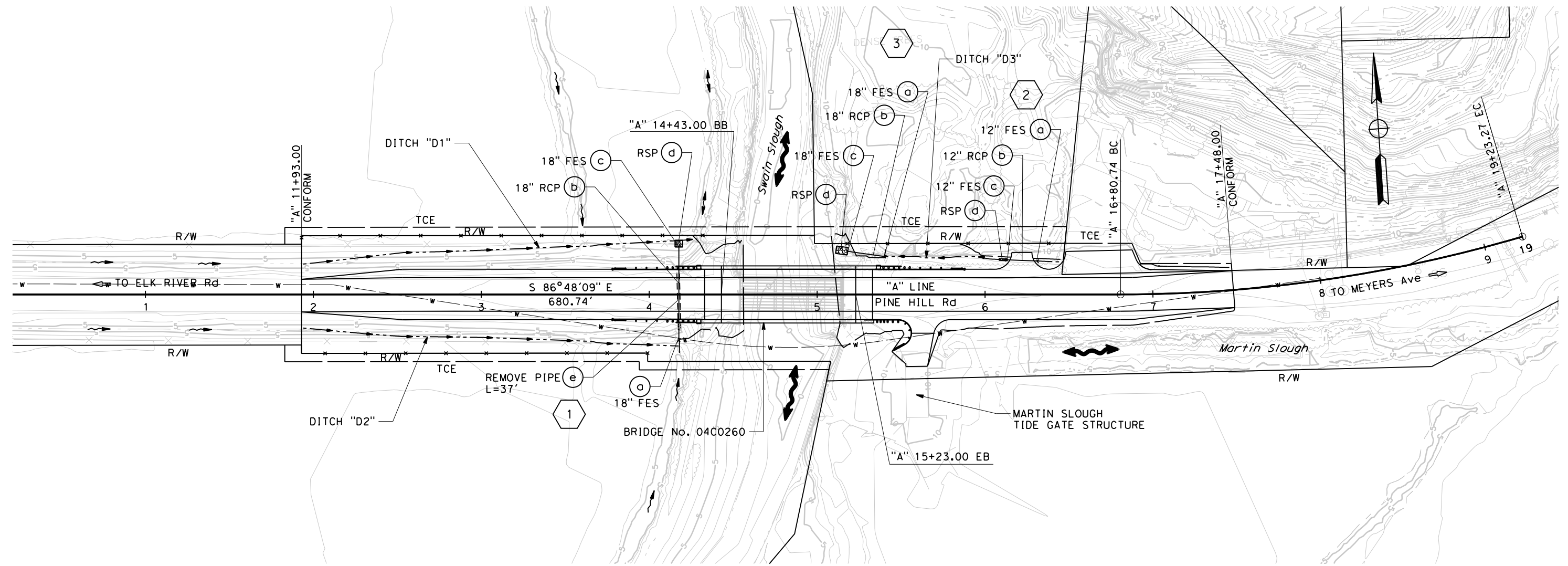
**LEGEND:**

- XXX DRAINAGE SYSTEM NUMBER
- XX DRAINAGE UNIT NUMBER
- DIRECTION OF DITCH FLOW
- w- EXISTING WATER LINE



ROAD NAME: PINE HILL ROAD		QUINCY ENGINEERING	
ROAD NO.: 3J430	MILE POST: 0.19	DESIGNED BY: KP	
PROJECT NO.: BRLO-5904(112)	EA NO.:	DRAWN BY: KP	
CONTRACT NO.: 594020	PPNO.:	REVIEWED BY: JJ	
DRAWING FILE NAME: S:\Client\Humboldt\H07-300 Pine Hill\CAD\Roadway\H07300ria001.dgn		APPROVED BY:	
PLOT DATE: 11-8-2022	REVISION DATE: 11-8-2022		

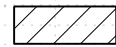
COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET <b>7</b> OF <b>28</b>
PINE HILL ROAD BRIDGE OVER SWAIN SLOUGH	
DRAINAGE PLAN	

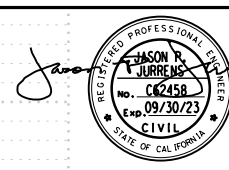


THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.

SCALE: 1"=30' **D-1**

**LEGEND:**

 MINOR CONCRETE (PIPE ENCASEMENT)



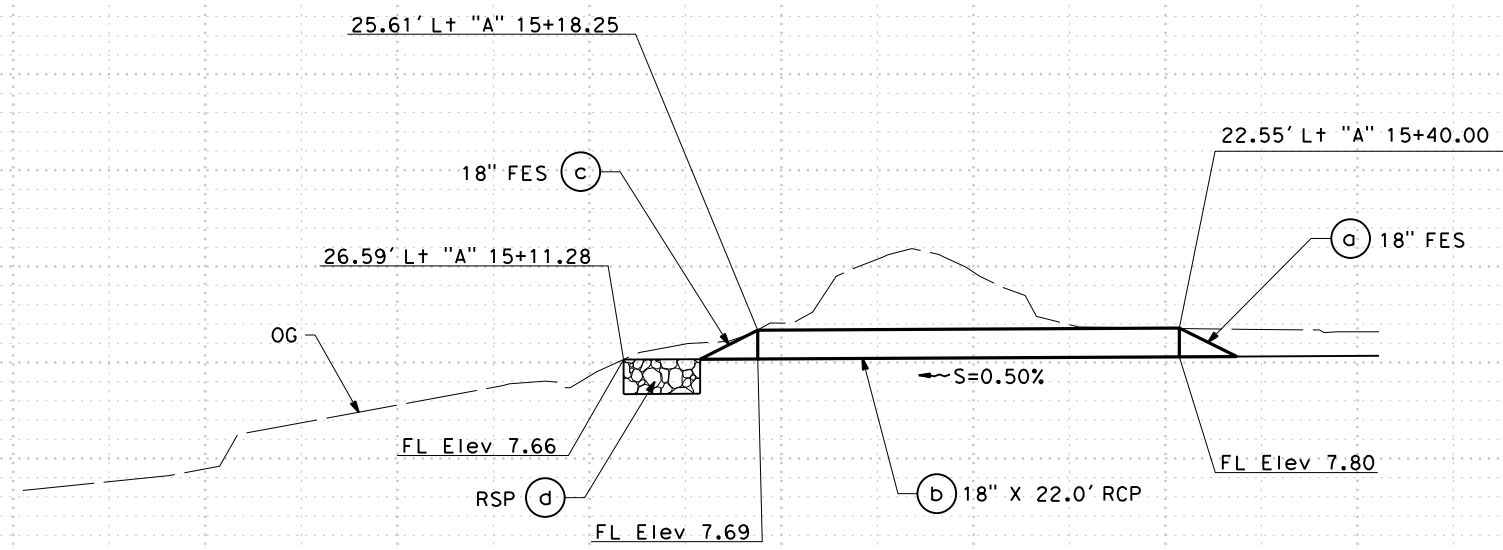
BAR IS ONE INCH ON ORIGINAL DRAWING  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME:	PINE HILL ROAD	MILE POST:	0.19
ROAD NO.:	3J430	EA NO.:	
PROJECT NO.:	BRLO-5904(112)	PPNO.:	
CONTRACT NO.:	594020	DRAWING FILE NAME:	S:\Client\Humboldt\H07-300 Pine Hill\CAD\Roadway\H07300r\ib001.dgn
PLOT DATE:	11-8-2022	REVISION DATE:	11-8-2022

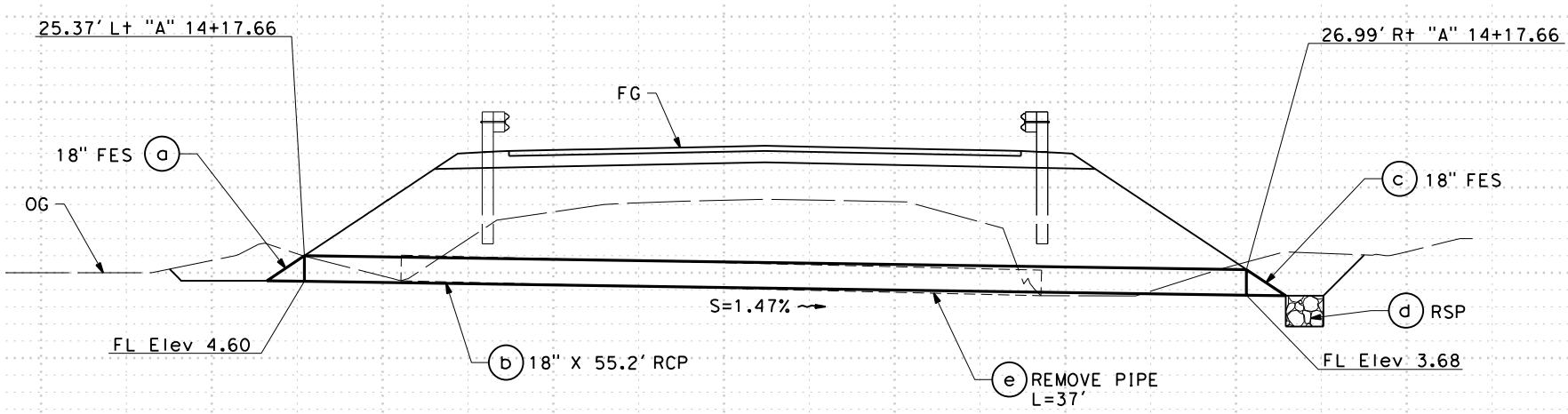
DESIGNED BY:	KP
DRAWN BY:	KP
REVIEWED BY:	JJ
APPROVED BY:	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
<b>PINE HILL ROAD BRIDGE OVER SWAIN SLOUGH</b>
<b>DRAINAGE PROFILES</b>

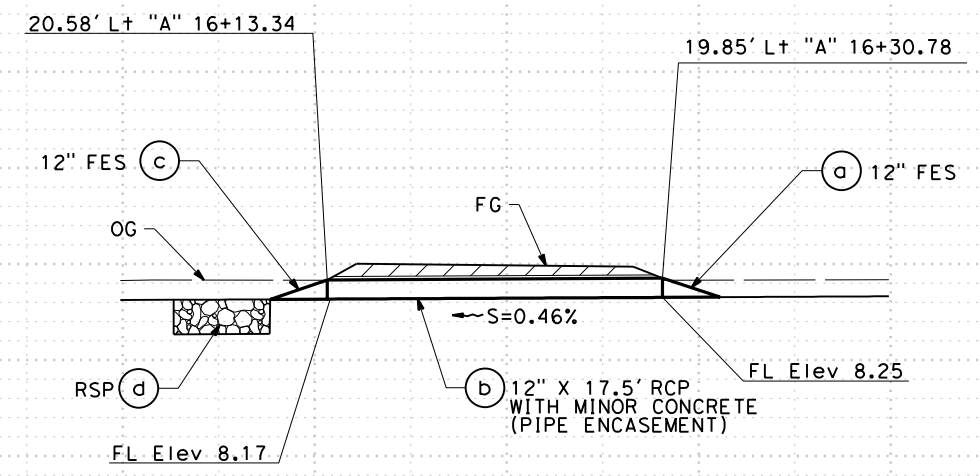
SHEET **8**  
OF  
**28**



**DRAINAGE SYSTEM No. 3**  
"A" 15+18.25 TO "A" 15+40.00



**DRAINAGE SYSTEM No. 1**  
"A" 14+17.66



**DRAINAGE SYSTEM No. 2**  
"A" 16+13.34 TO "A" 16+30.78

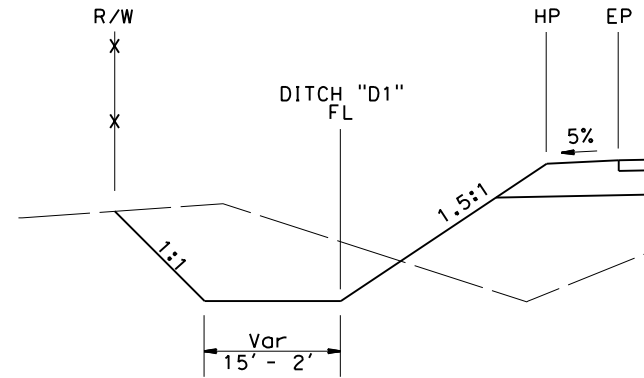
Horiz 1"=5'  
Vert 1"=5' **DP-1**

THIS PLAN ACCURATE FOR DRAINAGE WORK ONLY.



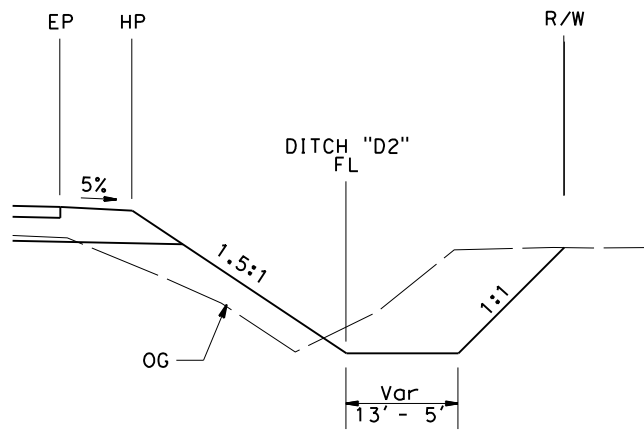
**NOTES:**

1. FOR RSP CLASS AND DIMENSIONS, SEE TABLE 1.
2. FOR FLARED END SECTION DETAILS NOT SHOWN, SEE STANDARD PLAN D94B.
3. CUTOFF WALL ONLY PRESENT WITH CONCRETE FES, SEE STANDARD PLAN D94B.



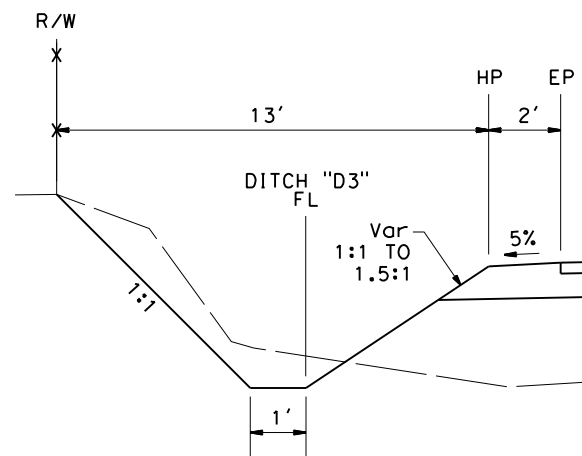
**DITCH "D1"**

Sta "A" 11+93.00 TO Sta "A" 14+29.00



**DITCH "D2"**

Sta "A" 11+93.00 TO Sta "A" 14+18.00



**DITCH "D3"**

Sta "A" 15+40.00 TO Sta "A" 16+13.34  
Sta "A" 16+30.79 TO Sta "A" 16+44.96

**DITCH "D1"**

STATION	LINE	OFFSET	L+/R+	WIDTH	FL Elev	SLOPE (%)
11+93.00	"A"	15.91	L+	15.91	4.07	
12+00.00	"A"	16.67	L+	15.25	4.05	-0.29
12+20.00	"A"	18.93	L+	12.95	4.00	-0.25
12+40.00	"A"	21.30	L+	10.47	3.95	-0.25
12+60.00	"A"	23.00	L+	8.78	3.96	0.05
12+80.00	"A"	23.57	L+	7.55	3.97	0.05
13+00.00	"A"	24.27	L+	6.73	3.98	0.05
13+20.00	"A"	25.11	L+	6.25	3.97	-0.05
13+40.00	"A"	25.97	L+	5.62	3.95	-0.10
13+60.00	"A"	26.50	L+	6.71	4.17	1.10
13+80.00	"A"	28.04	L+	5.17	4.01	-0.80
14+00.00	"A"	29.13	L+	2.81	3.85	-0.80
14+20.00	"A"	30.22	L+	2.44	3.58	-1.35
14+29.00	"A"	30.96	L+	2.42	3.26	-3.56

**DITCH "D2"**

STATION	LINE	OFFSET	L+/R+	WIDTH	FL Elev	SLOPE (%)
11+93.00	"A"	17.97	R+	13.80	3.62	
12+00.00	"A"	18.57	R+	13.16	3.60	-0.29
12+20.00	"A"	20.39	R+	11.25	3.52	-0.40
12+40.00	"A"	22.09	R+	9.62	3.61	0.45
12+60.00	"A"	23.12	R+	8.83	3.88	1.35
12+80.00	"A"	23.31	R+	8.94	4.14	1.30
13+00.00	"A"	23.62	R+	8053	4.41	1.35
13+20.00	"A"	24.30	R+	7.52	4.51	0.50
13+40.00	"A"	25.04	R+	6052	4.58	0.35
13+60.00	"A"	25.75	R+	7.79	4.67	0.45
13+80.00	"A"	27.42	R+	5015	4.43	-1.20
14+00.00	"A"	28.01	R+	4.50	4.59	0.80
14+18.00	"A"	28.74	R+	5.45	4.53	-0.33

**DITCH "D3"**

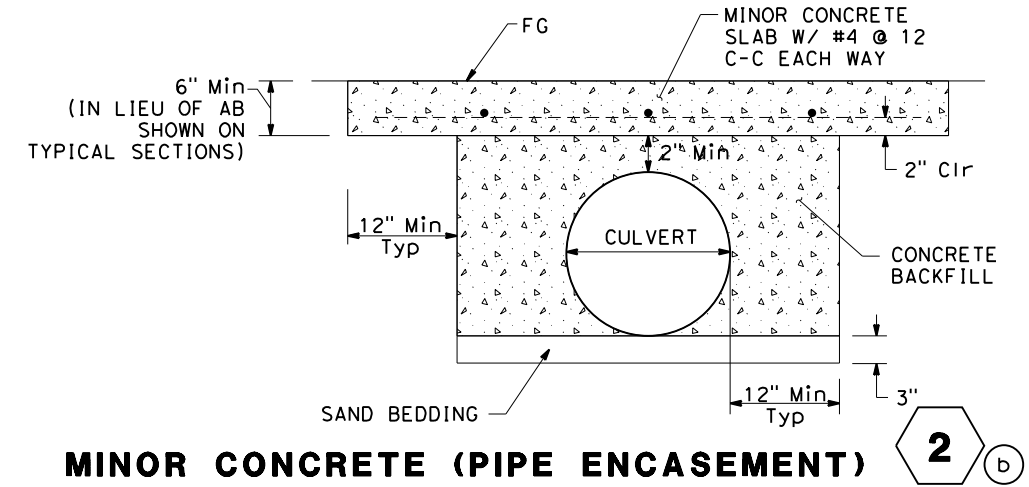
STATION	LINE	OFFSET	L+/R+	FL Elev	SLOPE (%)
15+40.00	"A"	22.05	L+	7.80	
15+60.00	"A"	21.96	L+	7.90	0.50
15+80.00	"A"	21.63	L+	8.00	0.50
15+90.00	"A"	21.66	L+	8.05	0.50
16+00.00	"A"	20.70	L+	8.10	0.50
16+13.34	"A"	20.08	L+	8.17	0.52
16+30.79	"A"	19.36	L+	8.25	0.46
16+40.00	"A"	19.01	L+	8.30	0.54
16+44.96	"A"	18.83	L+	8.33	0.60



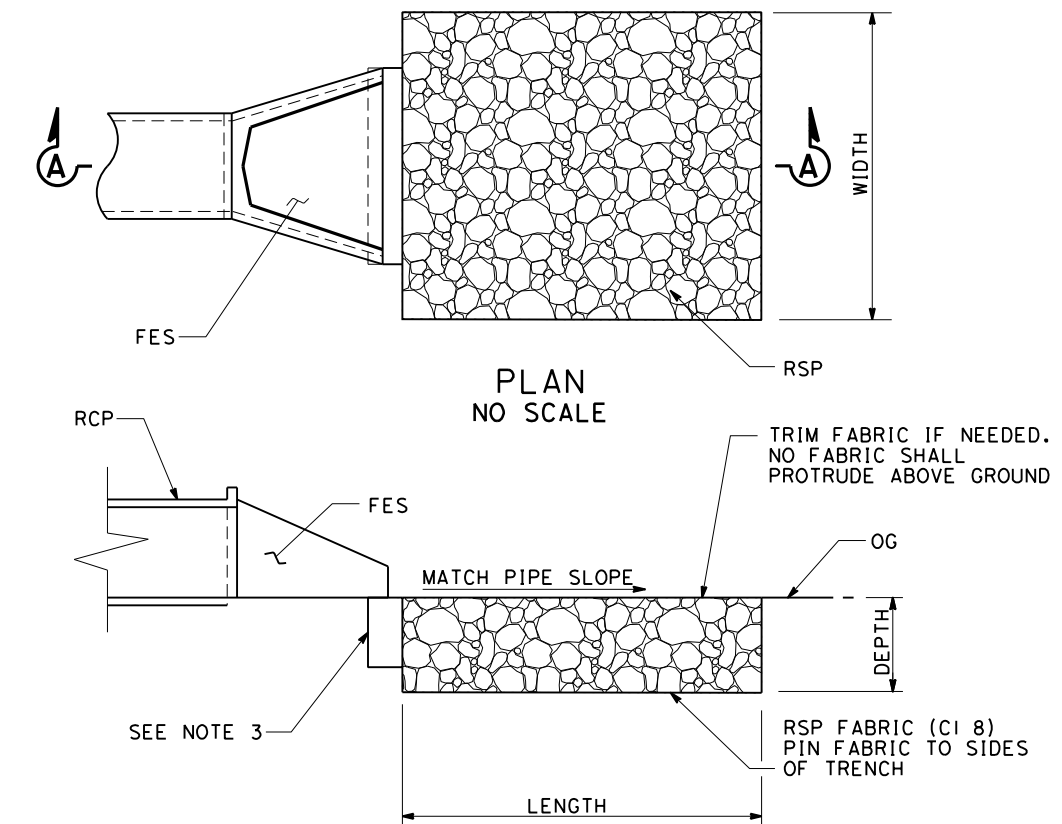
BAR IS ONE INCH ON ORIGINAL DRAWING  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

ROAD NAME: PINE HILL ROAD	MILE POST: 0.19	DESIGNED BY: KP
ROAD NO.: 3J430	EA NO.:	DRAWN BY: KP
PROJECT NO.: BRLO-5904(112)	PPNO.:	REVIEWED BY: JJ
CONTRACT NO.: 594020	DRAWING FILE NAME: S:\Client\Humboldt\H07-300 Pine Hill\CAD\Roadway\H07300r\c001.dgn	APPROVED BY:
PLOT DATE: 11-8-2022	REVISION DATE: 11-8-2022	

QUINCY ENGINEERING	COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 9 OF 28
PINE HILL ROAD BRIDGE OVER SWAIN SLOUGH		
DRAINAGE DETAILS		



**MINOR CONCRETE (PIPE ENCASEMENT)**



**ROCK SLOPE PROTECTION (RSP)**  
NO SCALE

TABLE 1

DRAINAGE UNIT	RSP CLASS	LENGTH	DEPTH	WIDTH
		FT	FT	FT
1d	150 LB, CLASS III, METHOD B	3.0	1.8	4.5
2d	150 LB, CLASS III, METHOD B	5.0	1.8	1.0
3d	150 LB, CLASS III, METHOD B	7.0	1.8	4.5

NO SCALE **DD-1**



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

ROAD NAME:	PINE HILL ROAD
ROAD NO.:	3J430
PROJECT NO.:	BRLO-5904(112)
CONTRACT NO.:	594020
PLOT DATE:	11-8-2022
MILE POST:	0.19
EA NO.:	
PPNO.:	
DRAWING FILE NAME:	S:\Client\Humboldt\H07-300 Pine Hill\CAD\Roadway\H07300rka001.dgn
REVISION DATE:	11-8-2022

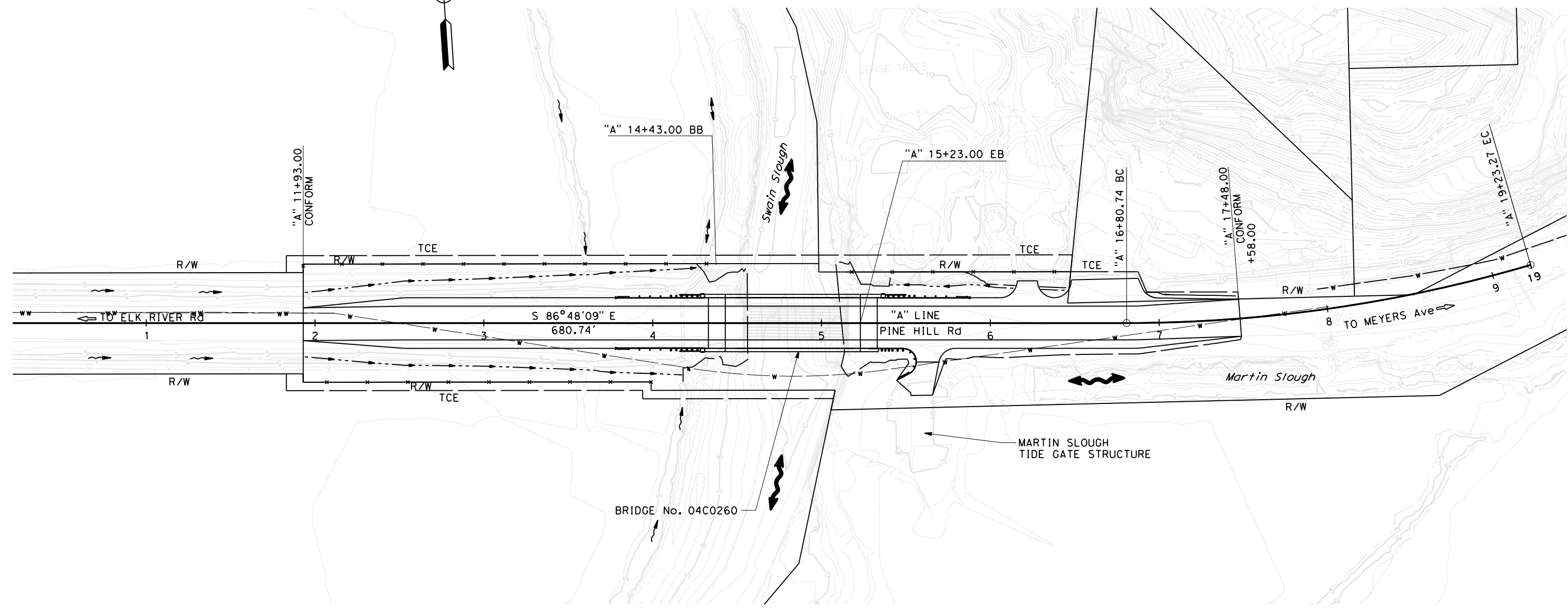
QUINCY ENGINEERING	
DESIGNED BY:	KP
DRAWN BY:	KP
REVIEWED BY:	JJ
APPROVED BY:	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS
PINE HILL ROAD BRIDGE OVER SWAIN SLOUGH
UTILITY PLAN

SHEET 10 OF 28

LEGEND:

---w--- EXISTING WATER LINE



THIS PLAN ACCURATE FOR UTILITY INFORMATION ONLY.

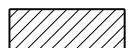



SCALE: 1"=30'

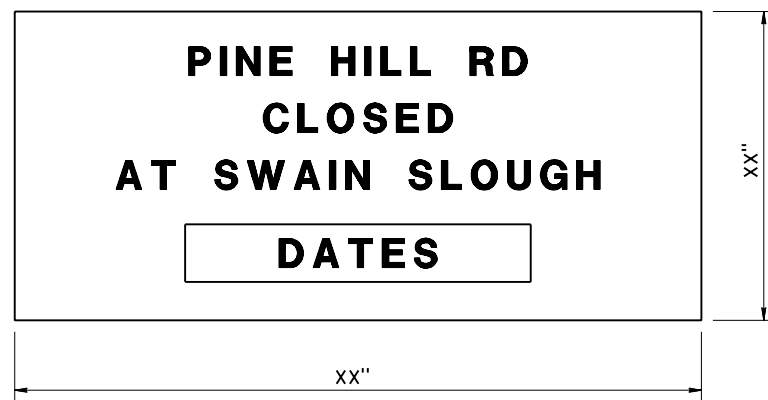
U-1

**NOTES:**

1. THIS PLAN ACCURATE FOR DETOUR WORK ONLY.
2. SIGN LOCATIONS SHOWN ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER.
3. R11-2 SIGNS MOUNTED ON BARRICADE.

**LEGEND:**

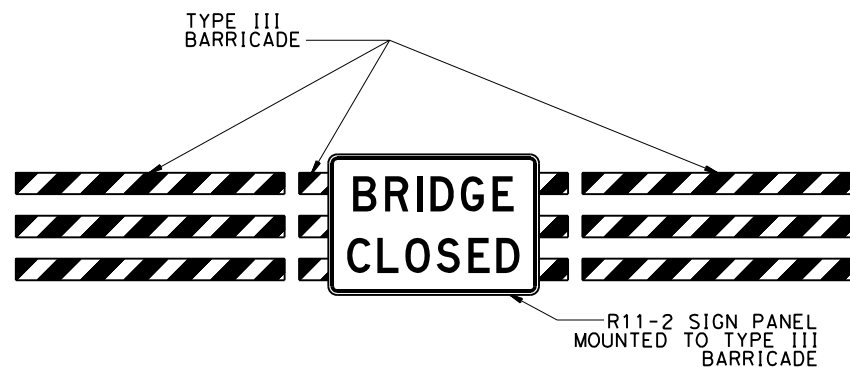
-  CONSTRUCTION AREA
-  CONSTRUCTION AREA SIGN
-  TYPE III BARRICADE
-  USE WITH FLASHERS AT NIGHT



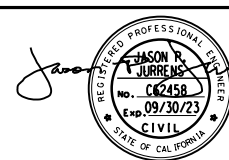
**A-1 SIGN DETAIL**  
NO SCALE

**TYPE III BARRICADE**

LINE	STATION	EA
"A"	8+50	3
"A"	20+85	3
<b>TOTAL</b>		<b>6</b>



**BRIDGE CLOSURE DETAIL**

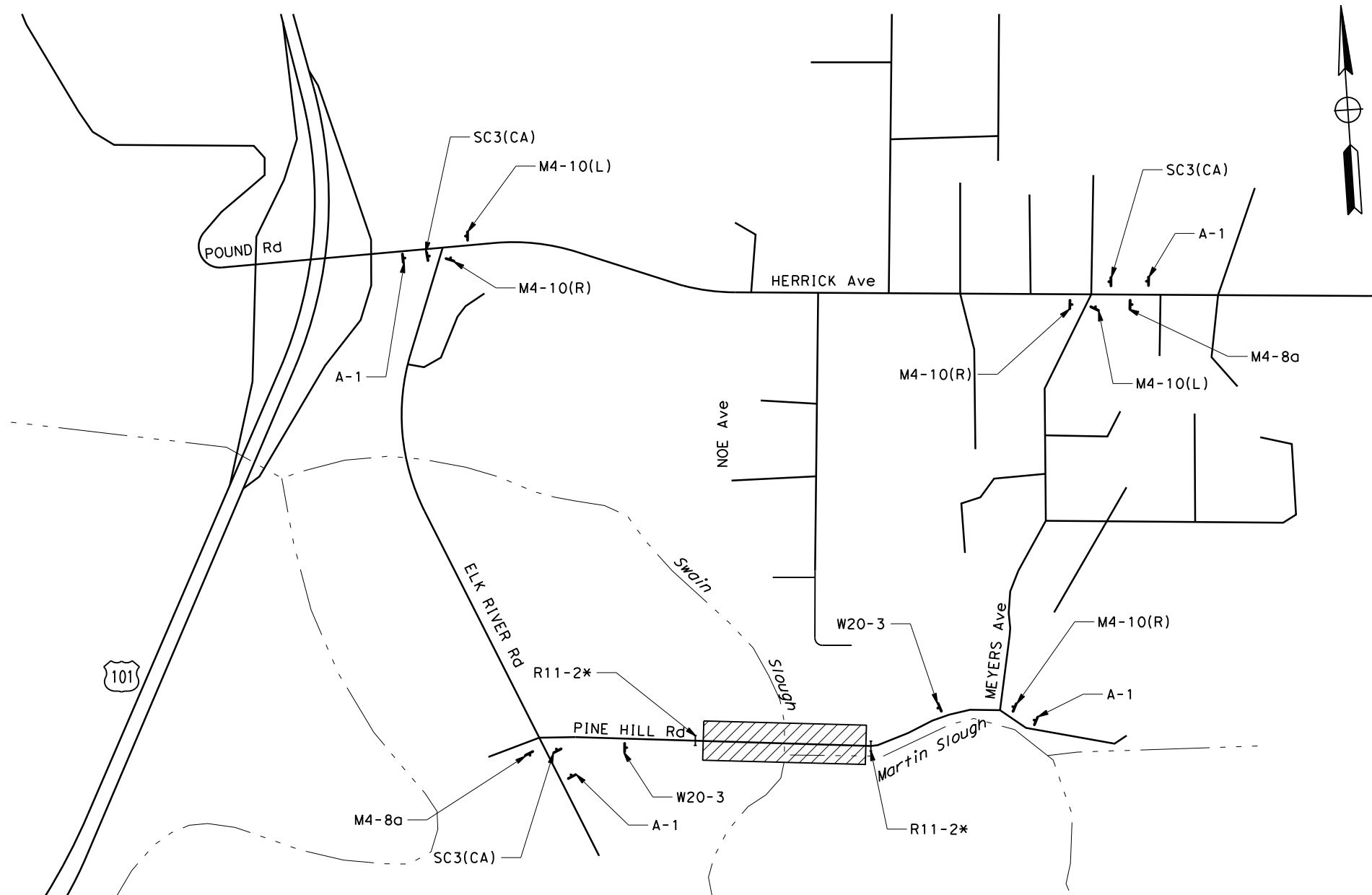


ROAD NAME: PINE HILL ROAD		MILE POST: 0.19		DESIGNED BY: KP	
ROAD NO.: 3J430	PROJECT NO.: BRLO-5904(112)	EA NO.:	CONTRACT NO.: 594020	PPNO.:	DRAWN BY: KP
DRAWING FILE NAME: S:\Client\Humboldt\H07-300 Pine Hill\CAD\Roadway\H07300rmg001.dgn			REVIEWED BY: JJ		
PLOT DATE: 11-8-2022		REVISION DATE: 11-8-2022			
APPROVED BY:					

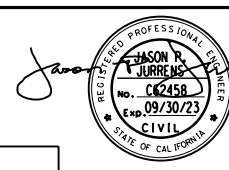
<b>COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS</b>		<b>SHEET 11 OF 28</b>
<b>PINE HILL ROAD BRIDGE OVER SWAIN SLOUGH</b>		
<b>DETOUR PLAN</b>		

**CONSTRUCTION AREA SIGNS**

SIGN CODE	PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
R11-2	48" x 30"	ROAD CLOSED	1 - 4" x 6"	2
W20-3	36" x 36"	ROAD CLOSED AHEAD	1 - 4" x 6"	2
M4-8a	24" x 18"	END DETOUR	1 - 4" x 6"	2
M4-10(R)	48" x 18"	DETOUR ARROW SIGN	1 - 4" x 6"	3
M4-10(L)	48" x 18"	DETOUR ARROW SIGN	1 - 4" x 6"	2
SC3(CA)	36" x 12"	DETOUR WITH ARROW	1 - 4" x 6"	3
A-1	XX" x XX"	PINE HILL ROAD CLOSED AT SWAIN SLOUGH	2 - 4" x 6"	4



NO SCALE **DE-1**



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

ROAD NAME: PINE HILL ROAD	MILE POST: 0.19	DESIGNED BY: KP
ROAD NO.: 3J430	EA NO.:	DRAWN BY: KP
PROJECT NO.: BRLO-5904(112)	PPNO.:	REVIEWED BY: JJ
CONTRACT NO.: 594020		APPROVED BY:
DRAWING FILE NAME: S:\Client\Humboldt\H07-300 Pine Hill\CAD\Roadway\H07300rpa001.dgn		
PLOT DATE: 11-8-2022	REVISION DATE: 11-8-2022	

**ROADWAY ITEMS**

FROM	TO	ROADWAY EXCAVATION	EMBANKMENT (N)	IMPORTED BORROW	CLASS 2 AGGREGATE BASE	HOT MIX ASPHALT (TYPE A)	REMOVE FENCE	REMOVE MARKER	FENCE (TYPE BW, METAL POST)	COMMENTS	
LINE	STATION	LINE	STATION	CY	CY	CY	LF	EA	LF		
"A"	11+93.00	"A"	14+43.00 BB	420	686	266	232	156			
"A"	15+23.00 EB	"A"	17+48.00	102	271	169	219	159			
"A"	15+67.59			2	21	19				DWY AT TIDAL GATE STRUCTURE	
"A"	ABUTMENT 1			36	1	-35				CONTOUR GRADING	
"A"	ABUTMENT 2			23	2	-21				CONTOUR GRADING	
"A"	11+93.00	"A"	14+43.00 BB			185				SETTLEMENT	
"A"	15+23.00 EB	"A"	17+48.00			165				SETTLEMENT	
"A"	11+93.00 LT	"A"	14+48.92 LT				256				
"A"	11+93.00 RT	"A"	14+38.43 RT				246				
"A"	15+14.03 LT	"A"	16+45.89 LT				136				
"A"	11+93.00 LT	"A"	14+33.15 LT					246			
"A"	11+93.00 RT	"A"	13+99.12 RT					211			
"A"	15+14.00 LT	"A"	16+47.60 LT					134			
	EXIST BRIDGE	BB Lt						1		EXIST BRIDGE	
	EXIST BRIDGE	BB Rt						1		EXIST BRIDGE	
	EXIST BRIDGE	EB Lt						1		EXIST BRIDGE	
	EXIST BRIDGE	EB Rt						1		EXIST BRIDGE	
TOTAL				583	981	748	451	315	638	4	591

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

**DRAINAGE ITEMS**

DRAINAGE SYSTEM	DRAINAGE UNIT No.	STATION	12" CONCRETE FLARED END SECTION	18" CONCRETE FLARED END SECTION	12" REINFORCED CONCRETE PIPE	18" REINFORCED CONCRETE PIPE	ROCK SLOPE PROTECTION (150 LB, CLASS III, METHOD B)	RSP FABRIC (CLASS 8)	REMOVE PIPE	DESCRIPTION
			EA	EA	LF	LF	CY	SQYD	LF	
1	a	"A" 14+17.66		1						18" CONCRETE FLARED END SECTION
	b					55.2				18" X 55.2' RCP
	c	"A" 14+17.66		1						18" CONCRETE FLARED END SECTION
	d						0.9	5.9		RSP (150 LB, CLASS III, METHOD B)
	e								37	REMOVE PIPE 18"
2	a	"A" 16+30.78	1							12" CONCRETE FLARED END SECTION
	b				17.5					12" X 17.5' RCP WITH MINOR CONCRETE (PIPE ENCASMENT)
	c	"A" 16+13.34	1							12" CONCRETE FLARED END SECTION
	d						0.3	4.4		RSP (150 LB, CLASS III, METHOD B)
3	a	"A" 15+40.00		1						18" CONCRETE FLARED END SECTION
	b					22.0				18" X 22.0' RCP
	c	"A" 15+18.25		1						18" CONCRETE FLARED END SECTION
	d						2.1	9.5		RSP (150 LB, CLASS III, METHOD B)
TOTAL			2	4	17.5	77.2	3.3	19.8	37	

**GUARD RAILING**

FROM	TO	TRANSITION RAILING (TYPE WB-31)	ALTERNATIVE IN LINE TERMINAL SYSTEM	SHORT RADIUS GUARDRAIL SYSTEM	OBJECT MARKER (TYPE P)	END ANCHOR ASSEMBLY (TYPE SFT-M)				
LINE	FROM	OFFSET	LINE	TO	OFFSET	EA	EA	EA	EA	EA
"A"	13+78.25	15.00' Lt	"A"	14+28.25	15.00' Lt	1	1			1
"A"	13+78.25	15.00' Rt	"A"	14+28.25	15.00' Rt	1	1			1
"A"	15+37.75	15.00' Lt	"A"	15+87.75	15.00' Lt	1	1			1
"A"	15+33.75	15.00' Rt	"A"	15+44.51	34.03' Rt			1	1	1
TOTAL						3	3	1	4	1

**EROSION CONTROL**

LINE	FROM	TO	LT/RT	ROLLED EROSION CONTROL PRODUCT (BLANKET)	HYDROSEED	TEMPORARY HIGH-VISIBILITY FENCE	FIBER ROLLS
				SQFT	SQFT	LF	LF
"A"	11+93.00	14+43.00 BB	LT	4463	4463	271	262
"A"	11+93.00	14+43.00 BB	RT	4282	4282	273	259
"A"	14+43.00 BB	17+48.00	LT	1015	1015	196	184
"A"	14+43.00 BB	17+48.00	RT	681	681	244	221
TOTAL				10441	10441	984	926

**PAVEMENT DELINEATION**

FROM	TO	THERMOPLASTIC TRAFFIC STRIPE	PAVEMENT MARKER (RETRO-REFLECTIVE)							
LINE	STATION	OFFSET	LINE	STATION	OFFSET	DETAIL No.	4" WHITE FT	4" YELLOW FT	TYPE D	
"A"	11+93.00		"A"	17+48.00		22		1110	48	
"A"	11+93.00	RT	"A"	17+48.00	RT	27B	555			
"A"	11+93.00	LT	"A"	17+48.00	LT	27B	555			
SUBTOTAL								1110	1110	
TOTAL								2220		48


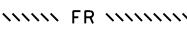
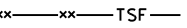
NO SCALE

**Q-1**

**NOTES:**

- FOR COMPLETE RIGHT OF WAY AND ACCURATE ACCESS DATA, SEE RIGHT OF WAY RECORD MAPS AT THE COUNTY OFFICE.
- LOCATION OF FIBER ROLLS ARE SCHEMATIC. ACTUAL PLACEMENT LOCATIONS OF FIBER ROLLS SHALL BE IN ACCORDANCE WITH THE STANDARD PLANS AND SPECIAL PROVISIONS.

**LEGEND:**

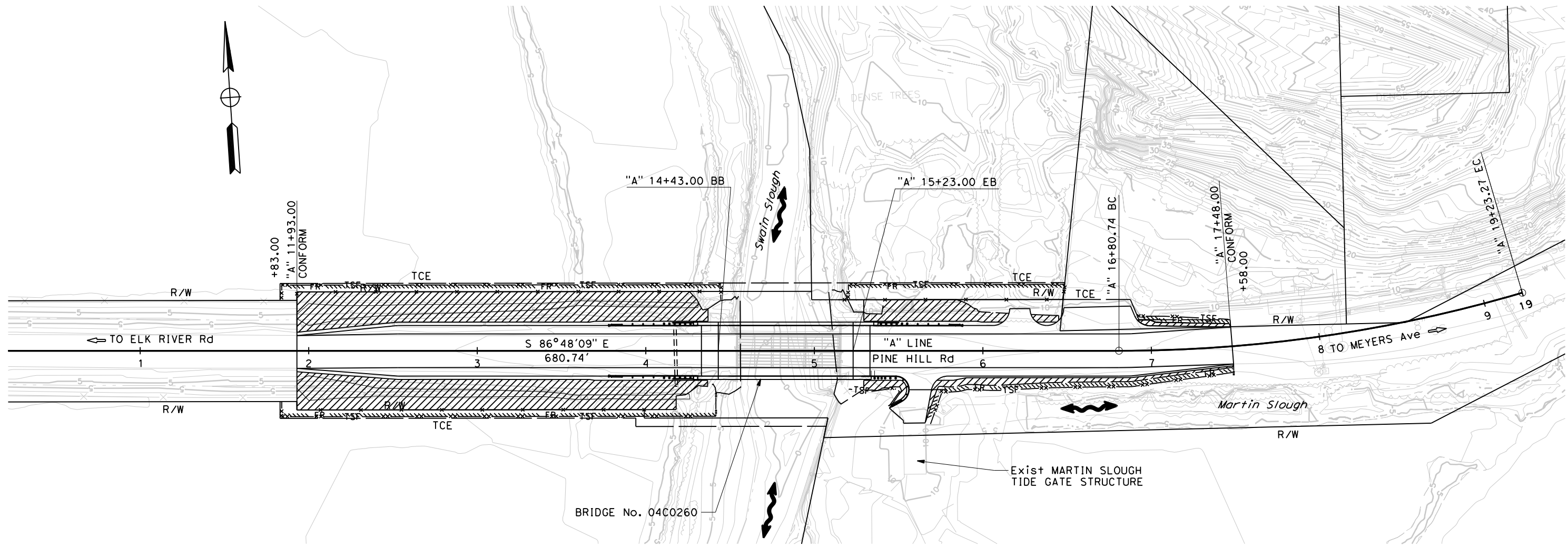
-  EROSION CONTROL
-  FR FIBER ROLL
-  TSF TEMPORARY HIGH-VISIBILITY FENCE



BAR IS ONE INCH ON ORIGINAL DRAWING  
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ROAD NAME: PINE HILL ROAD	MILE POST: 0.19	DESIGNED BY: KP
ROAD NO.: 3J430	EA NO.:	DRAWN BY: KP
PROJECT NO.: BRLO-5904(112)	PPNO.:	REVIEWED BY: JJ
CONTRACT NO.: 594020	DRAWING FILE NAME: S:\Client\Humboldt\H07-300 Pine Hill\CAD\Roadway\H07300rge001.dgn	APPROVED BY:
PLOT DATE: 11-8-2022	REVISION DATE: 11-8-2022	

COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS	SHEET 13 OF 28
PINE HILL ROAD BRIDGE OVER SWAIN SLOUGH	
EROSION CONTROL PLAN	



**EROSION CONTROL**

SEQUENCE	ITEM	MATERIAL		APPLICATION RATE	REMARKS
		DESCRIPTION	TYPE		
STEP 1	HYDROSEED	SEED	MIX	28 LB/ACRE	
		FIBER	WOOD	1000 LB/ACRE	
STEP 2	ROLLED EROSION CONTROL PRODUCT (BLANKET)	BLANKET	TYPE A		
STEP 3	FIBER ROLLS	FIBER ROLL	8 TO 10 INCHES IN Dia		TYPE 2 INSTALATION

**SEED MIX**

BOTANICAL NAME (COMMON NAME)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
WESTERN YARROW (ACHILLEA MILLEFOLIUM)	1
SAN DIEGO BENTGRASS (AGROSTIS PALLENS)	1
CLUSTERED FIELD SEDGE (CAREX PRAEGRACILIS)	5
SLENDER HAIRGRASS (DESCHAMPSIA ELONGATA)	1
BARLEY (HORDEUM BRACHYANTHERUM)	20
<b>TOTAL</b>	<b>28</b>

SCALE: 1"=30' **EC-1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Hum	CR	0.19	14	28

Scott McCauley 11-8-22  
 REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER  
 SCOTT A. MCCAULEY  
 No. 71495  
 Exp. 12-31-23  
 CIVIL  
 STATE OF CALIFORNIA

PLANS APPROVAL DATE

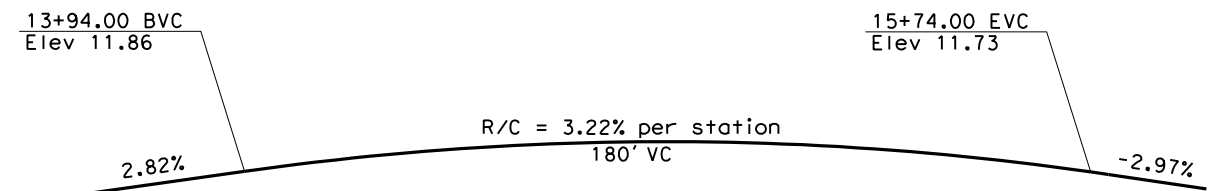
The County or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

QUINCY ENGINEERING, INC  
 11017 Cobblestone Drive, Suite 100  
 Rancho Cordova, CA 95670

COUNTY OF HUMBOLDT  
 DEPARTMENT OF PUBLIC WORKS  
 1106 2nd Street  
 Eureka, CA 95501

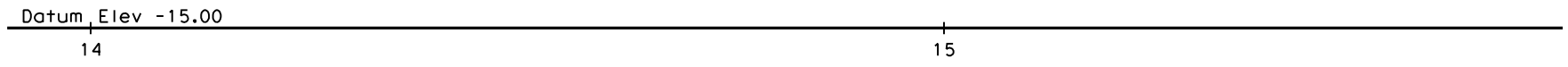
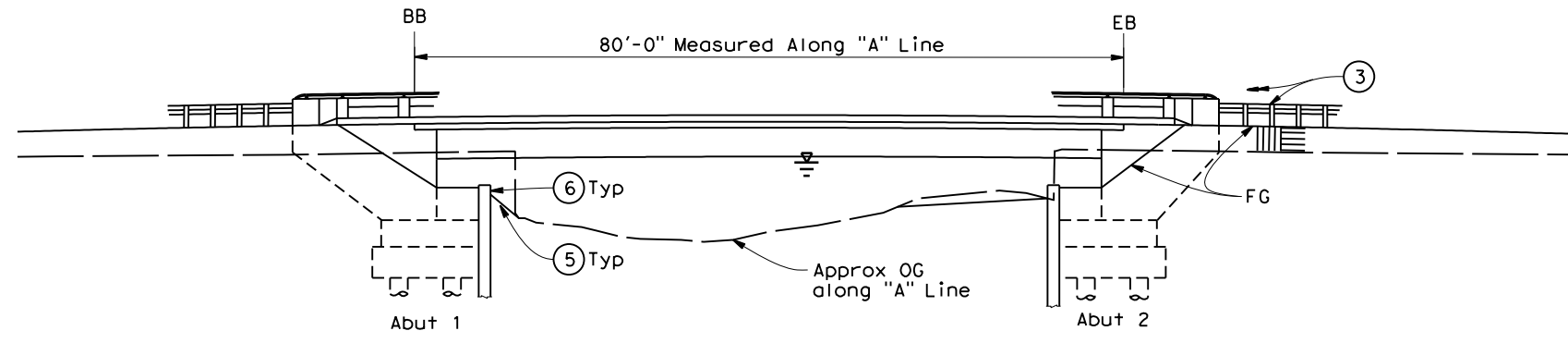
### INDEX TO PLANS

Sheet No.	Title
1	General Plan
2	Deck Contours
3	Foundation Plan
4	Abutment Layout
5	Abutment Details No. 1
6	Abutment Details No. 2
7	Typical Section
8	Girder Layout
9	Wide Flange Girder Details No. 1
10	Wide Flange Girder Details No. 2
11	Construction Sequence
12	Miscellaneous Details
13	Log of Test Borings No. 1
14	Log of Test Borings No. 2
15	Log of Test Borings No. 3



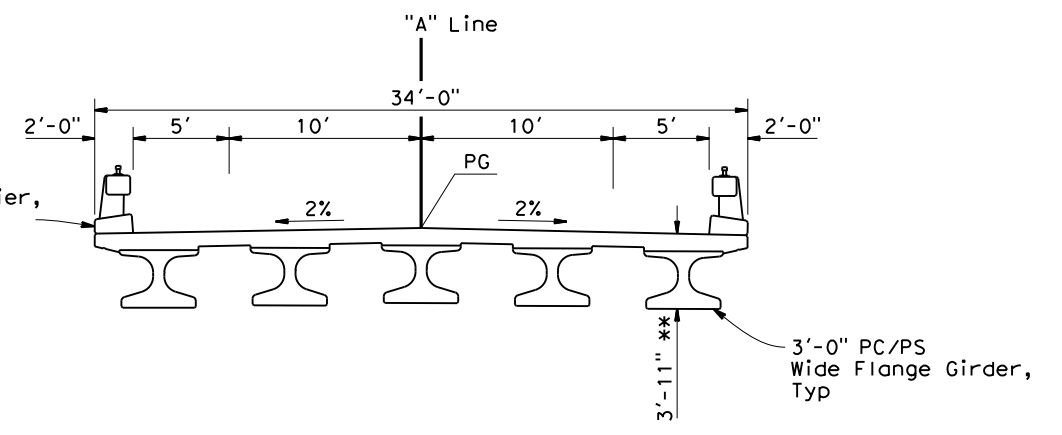
### PROFILE GRADE

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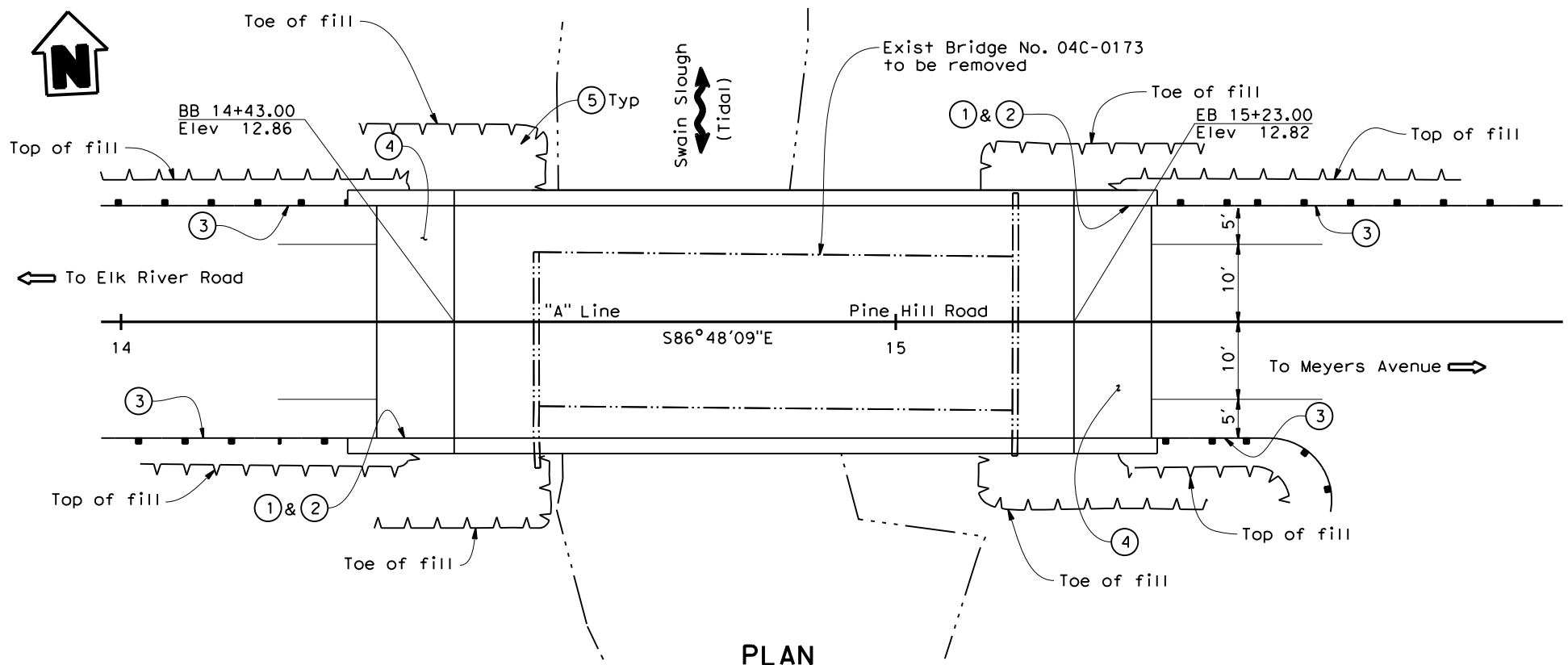
### ELEVATION

1"=10'



### TYPICAL SECTION

1"=5'



### PLAN

1"=10'

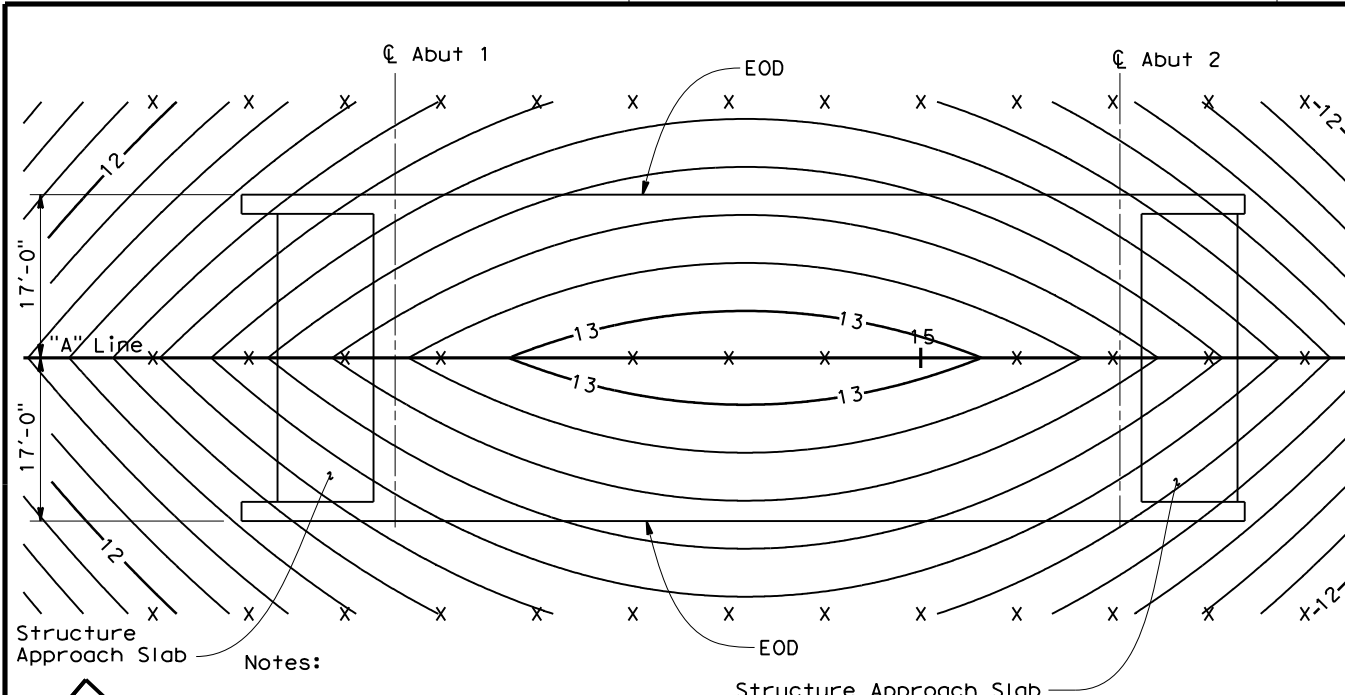
\*\* Maximum anticipated Structure Depth at centerline girder at midspan

#### Notes:

- ① Paint Bridge Number "Bridge No. 04C0260"
- ② Paint "Swain Slough Bridge"
- ③ MGS, see Road Plans
- ④ Structure Approach Type EQ(10)
- ⑤ Contour Grading, see Road Plans
- ⑥ Steel Sheet Piling, see "Miscellaneous Details" sheet
- ▽ King Tide water surface elevation = 8.5' NAVD
- Existing structure, Br. No. 04C0173, to be removed

DESIGN OVERSIGHT SIGN OFF DATE	DESIGN	BY L. Smith	CHECKED J. Chou	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 AND PERMIT DESIGN VEHICLE	<b>PREPARED FOR THE COUNTY OF HUMBOLDT DEPARTMENT OF PUBLIC WORKS</b>	BRIDGE NO.	<b>SWAIN SLOUGH BRIDGE GENERAL PLAN</b>				
	DETAILS	BY B. Maechler	CHECKED J. Chou	LAYOUT	BY L. Smith		CHECKED J. Chou			04C0260		
	QUANTITIES	BY J. Cruz	CHECKED H. Chou	SPECIFICATIONS	BY S. McCauley		PLANS AND SPECS COMPARED			0.19		
DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)						ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	0 1 2 3	UNIT: PROJECT NUMBER & PHASE:	CONTRACT NO.:	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET 1 OF 15

FILE => S:\client\Humboldt\H07-300 Pine Hill\CAD\Bridges\H07300a-a-gp01.dgn



Notes:  
 X = 10' intervals along station line  
 Contours Intervals = 0.10'  
 Contours do not include camber

**PLAN**  
 1"=10'

**QUANTITIES**

Bridge Removal	.....	LUMP	SUM
Structure Excavation (Type A)	.....	370	CY
Structure Backfill (Bridge)	.....	117	CY
Crushed Rock Backfill	.....	51	CY
Temporary Shoring	.....	LUMP	SUM
Furnish Steel Sheet Piling	.....	6161	SOFT
Drive Steel Sheet Pile	.....	6161	SOFT
Furnish 24" Cast-In-Steel-Shell Concrete Piling	.....	2446	LF
Drive 24" Cast-In-Steel-Shell Concrete Pile	.....	24	EA
Seal Course Concrete	.....	116	CY
Structural Concrete, Bridge Footing	.....	91	CY
Structural Concrete, Bridge	.....	86	CY
Structural Concrete, Bridge (Polymer Fiber)	.....	99	CY
Structural Concrete, Approach Slab (Type E0)	.....	23	CY
Furnish Precast Prestressed Concrete Girder (70'-80')	.....	5	EA
Erect Precast Prestressed Concrete Girder	.....	5	EA
Joint Seal (MR = 1/2")	.....	68	LF
Bar Reinforcing Steel (Epoxy Coated) (Bridge)	.....	121209	LB
Miscellaneous Metal	.....	1918	LB
Concrete Barrier, Type 85	.....	209	LF



	Structural Concrete, Bridge
	Prestressed Concrete PC/PS Wide Flange Girder
	Structural Concrete, Bridge (Polymer Fiber) (f'c = 4.0 ksi @ 28 days)
	Structural Concrete, Bridge Footing
	Structural Concrete, Approach Slab
	Seal Course Concrete
	Structural Concrete, Bridge (Piles) (f'c = 4.0 ksi @ 28 days)

**CONCRETE STRENGTH AND TYPE LIMITS**

No Scale

**GENERAL NOTES  
 LOAD AND RESISTANCE FACTOR DESIGN**

DESIGN: AASHTO LRFD Bridge Design Specifications, 6th Edition with California Amendments

SEISMIC DESIGN: Caltrans Seismic Design Criteria (SDC) Version 1.7 dated April 2013

DEAD LOAD: Includes 35 psf for future wearing surface. The dead load between girders has been increased by 10% to allow for the use of steel deck forms.

LIVE LOADING: HL93 and Permit Design Vehicle.

SEISMIC LOADING: Peak Ground Acceleration = 0.3 g  
 Soil Profile: Vs30 = 140m/s  
 Movement Magnitude: Mmax = 7.25

TSUNAMI LOADING: Tsunami design based on Caltrans "Tsunami Forces on Selected California Coastal Bridges" (Report No. CAB-1983) dated June 2013  
 Assumed Tsunami WSE = 20.0'  
 Initial impact velocity = 15.0 ft/s  
 Max Mass Movement flux  
 Velocity = 10.6 ft/s

REINFORCED CONCRETE: fy = 60 ksi  
 f'c = 3.6 ksi, unless otherwise specified  
 n = 8

PRECAST PRESTRESSED CONCRETE: See "Prestressing Notes" in "Wide Flange Girder Details No.1" sheet.

PILES: ASTM A252, Grade 3  
 Fy = 45 ksi Fu = 66 ksi

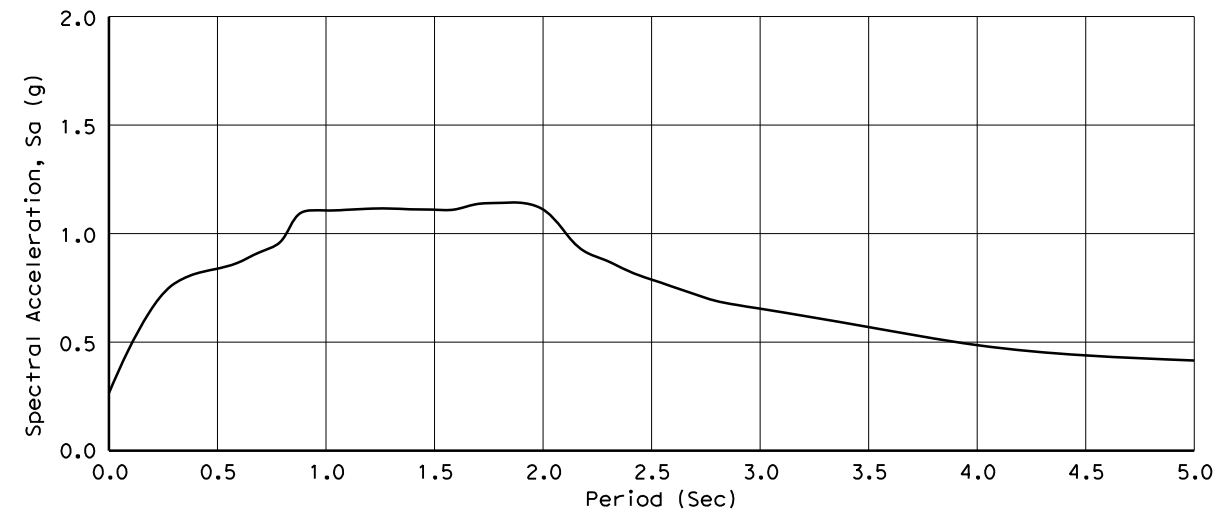
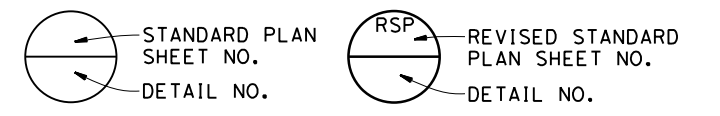
SEA LEVEL RISE: Abutments have been designed to accommodate a future 4'-6" grade raise due to sea level rise. See "Abutment Details No. 1" for limits of wing wall design.

PERMANENT STEEL SHEET PILES: Type: Z-Section  
 ASTM A690  
 Fy = 50 ksi

ANCHOR TIE DOWNS: Threaded rods shall conform to ASTM F1554 Grade 105 and shall be hot-dipped galvanized. Nuts shall conform to ASTM A563 Grade DH and shall be hot-dipped galvanized. Hardened washers shall conform to ASTM F436 Type 1 and shall be hot-dipped galvanized. Bearing Plates and Keeper Plates shall conform to ASTM A572 Grade 50 and shall be hot-dipped galvanized.

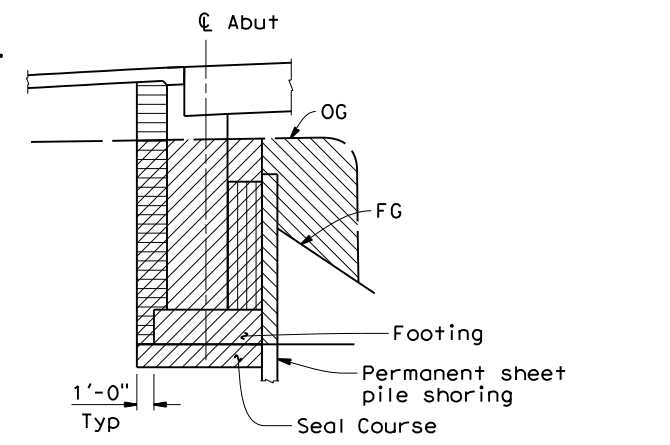
**STANDARD PLANS DATED 2018**

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)
A10F	Legend - Soil (Sheet 1 of 2)
A10G	Legend - Soil (Sheet 2 of 2)
A62B	Limits of Payment for Excavation and Backfill
RSP B0-1	Bridge Surcharge and Wall
RSP B0-3	Bridge Details
B0-5	Bridge Details
B0-13	Bridge Details
B6-21	Joint Seals (Maximum Movement Rating = 2")
B7-1	Box Girder Details
RSP B9-4	Structure Approach Type E0 (10)
RSP B9-5	Structure Approach Slab Details
RSP B11-51	Tubular Handrailing
RSP B11-83	Concrete Barrier Type 85 Details No. 1
RSP B11-84	Concrete Barrier Type 85 Details No. 2
RSP B11-85	Concrete Barrier Type 85 Details No. 3



**ACCELERATION RESPONSE SPECTRA CURVE (SITE SPECIFIC)**

No Scale



	Indicates Structure Excavation (Type A)
	Indicates Structure Backfill
	Indicates Roadway Excavation
	Indicates 3/4" Crushed Rock Backfill

**LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL**

No Scale

X DESIGN OVERSIGHT  
 X SIGN OFF DATE

DESIGN	BY L. Smith	CHECKED J. Chou
DETAILS	BY B. Maechler	CHECKED J. Chou
QUANTITIES	BY J. Cruz	CHECKED H. Chou

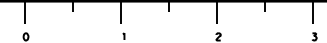
**PREPARED FOR THE  
 COUNTY OF HUMBOLDT  
 DEPARTMENT OF PUBLIC WORKS**

BRIDGE NO.	04C0260
POST MILE	0.19

**SWAIN SLOUGH BRIDGE  
 DECK CONTOURS**

DESIGN DETAIL SHEET (ENGLISH) (REV.03/14/12)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



UNIT: PROJECT NUMBER & PHASE: X

CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET 2 OF 15
----------------	---------------

USERNAME => scott.mccauley PLOTTED => 11/17/2022 TIME PLOTTED => 9:55:18 AM

### LOAD AND RESISTANCE FACTOR DESIGN PILE DATA TABLE

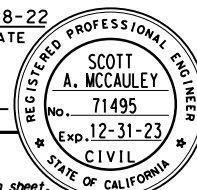
LOCATION	PILE TYPE	NOMINAL RESISTANCE (kips)		DESIGN TIP ELEVATION	SPECIFIED TIP ELEVATION	NOMINAL DRIVING RESISTANCE kips
		COMPRESSION	TENSION			
Abut 1	CISS 24x0.75	360	N/A	-120.0(a); -35.0(b); -55(c)	-120.0	460
Abut 2	CISS 24x0.75	360	N/A	-85.0(a); -35.0(b); -55(c)	-85.0	410



- (1) Design Tip Elevation is controlled by the following demands:  
 (a) Compression (Strength Limit), (b) Compression (Extreme Limit), (c) Lateral Load  
 (2) Do not raise the tip elevation

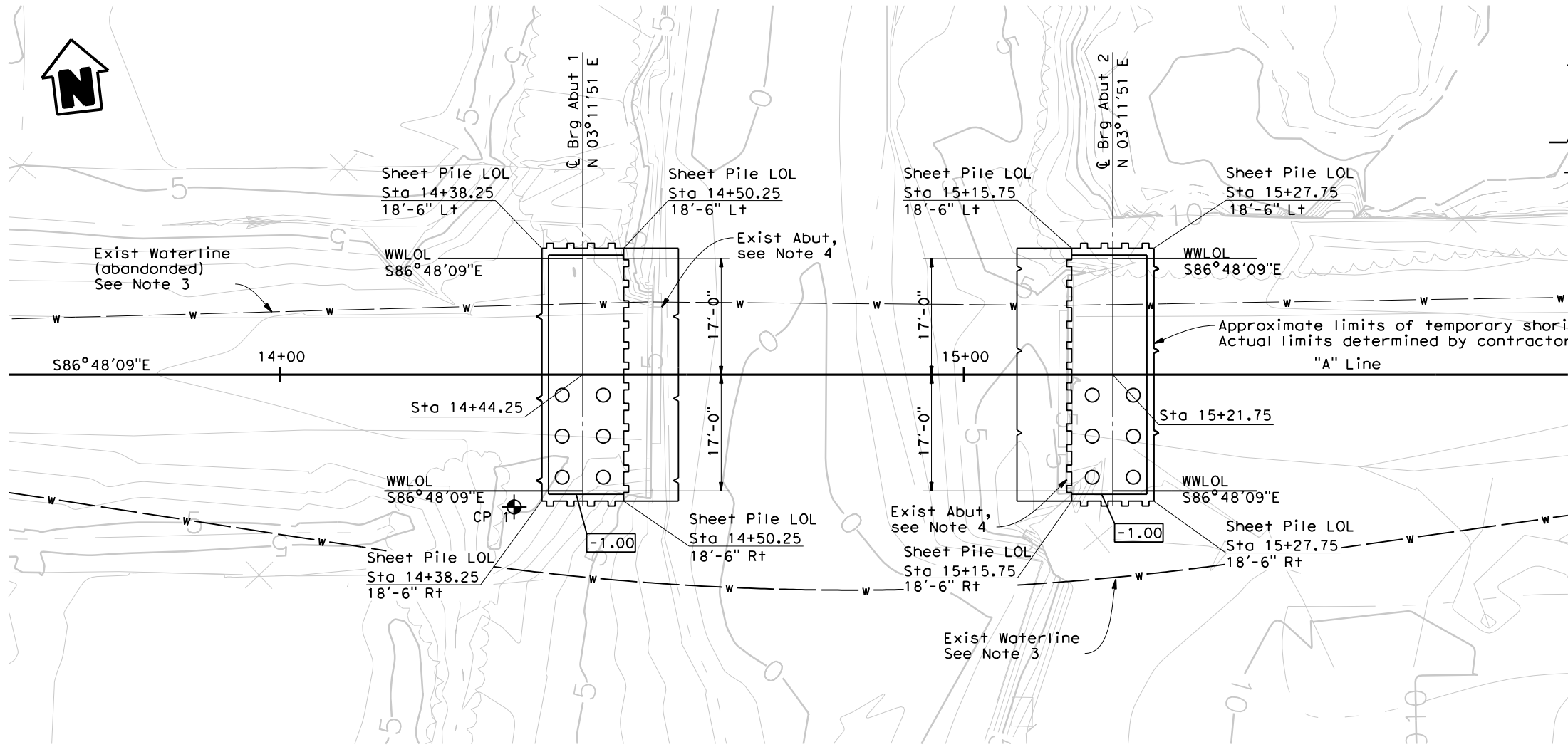
### SCOUR DATA TABLE

SUPPORT No.	LONG TERM (DEGRADATION AND CONTRACTION) SCOUR ELEVATION (ft)	SHORT TERM (LOCAL) SCOUR DEPTH (ft)
Abut 1	-1.1	8.2
Abut 2	-1.1	8.6

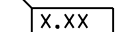

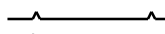


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Hum	CR	0.19	16	28


 11-8-22  
 REGISTERED CIVIL ENGINEER DATE  
 PLANS APPROVAL DATE  
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 QUINCY ENGINEERING, INC  
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 Rancho Cordova, CA 95670  

 COUNTY OF HUMBOLDT  
 DEPARTMENT OF PUBLIC WORKS  
 1106 2nd Street  
 Eureka, CA 95501



#### Legend:

-  Indicates bottom of footing elevation
-  Indicates driven vertical pile, not all piles shown
-  Indicates Temporary Shoring
-  Indicates Steel Sheet Piling, see Note 2
-  Indicates survey control point

#### Notes:

1. Seal course not shown.
2. For permanent sheet pile shoring specified tip elevation and details, see "Miscellaneous Details" sheet.
3. For Utility information, see Road Plans.
4. Existing abutment locations shown are approximate. Contractor shall field verify actual abutment locations prior to constructing sheet pile and notify Engineer of potential conflict.

### PLAN 1"=10'

### SURVEY CONTROL DATA

No.	NORTHING	EASTING	ELEV	LINE	STATION	OFFSET	DESCRIPTION
CP1	2164937.002	5957031.194	10.172	"A"	14+34.23	19.36' Rt	SET80DSPIKE
CP2	2165008.312	5956085.236	9.142	"A"			BRASSCAPHUMCORE19203
CP4	2164947.122	5957432.660	9.366	"A"	18+35.19	0.88' Rt	SETMAGNAIL&DPWTAG
CP5	2165073.438	5957926.179	8.956	"A"			FD1510

Note:  
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

### HYDROLOGIC SUMMARY

Drainage area: 5.5 Square Miles

	Design Flood	Base Flood
Frequency (years)	50	100
Discharge (cubic feet per second)	2200	2490
Water Surface Elev at Bridge (ft)	11.5	12.1

Flood plain data based upon information available when the plans were prepared and are shown to meet Federal requirements. The accuracy of said information is not warranted by the County and interested or affected parties should make their own investigations.

X  
 GEOTECHNICAL PROFESSIONAL APPROVAL DATE  
 X

DESIGN OVERSIGHT	SCALE: As shown	VERT. DATUM NAVD 1988	HORZ. DATUM CCS 83 Zone 1	DESIGN BY L. Smith	CHECKED J. Chou
SIGN OFF DATE	PHOTOGRAMMETRY AS OF: 08/2012	ALIGNMENT TIES See Survey County Data		DETAILS BY L. Smith	CHECKED J. Chou
	SURVEYED BY County	DRAFTED BY County		QUANTITIES BY J. Cruz	CHECKED H. Chou
	FIELD CHECKED BY County	CHECKED BY County			

PREPARED FOR THE  
**COUNTY OF HUMBOLDT**  
 PUBLIC WORKS DEPARTMENT

Scott McCauley  
 PROJECT ENGINEER

BRIDGE NO.	04C0260
POST MILE	0.19

## SWAIN SLOUGH BRIDGE FOUNDATION PLAN

FOUNDATION PLAN SHEET (ENGLISH) (REV.03/14/12)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

UNIT: PROJECT NUMBER & PHASE: X

CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES

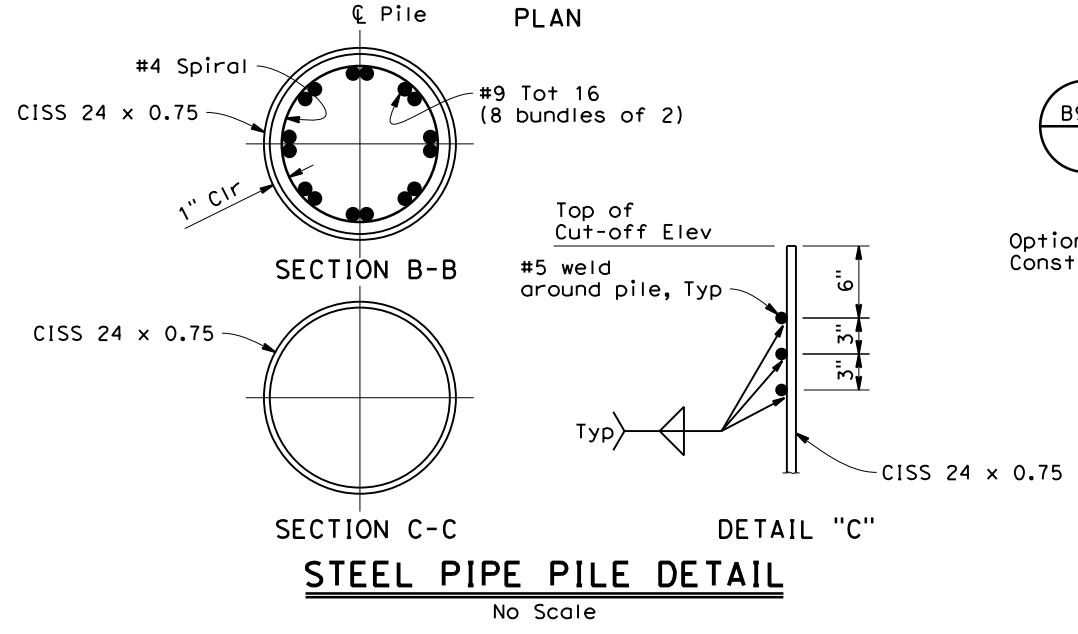
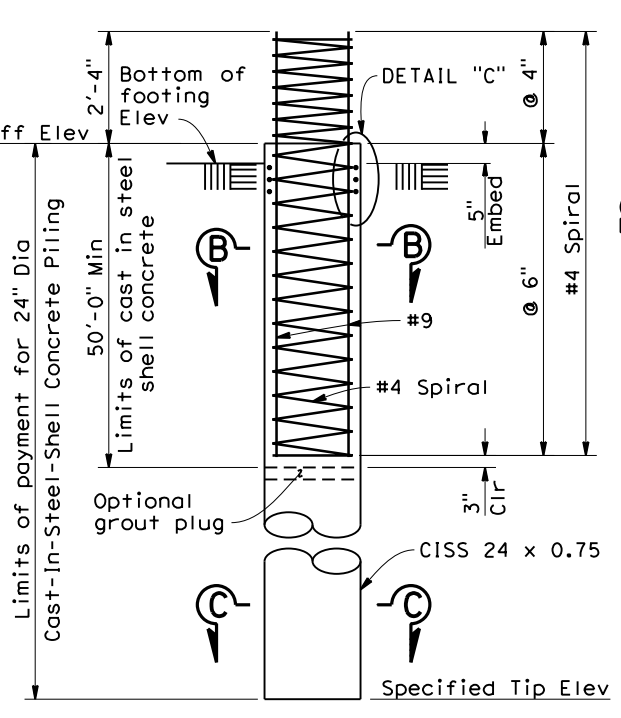
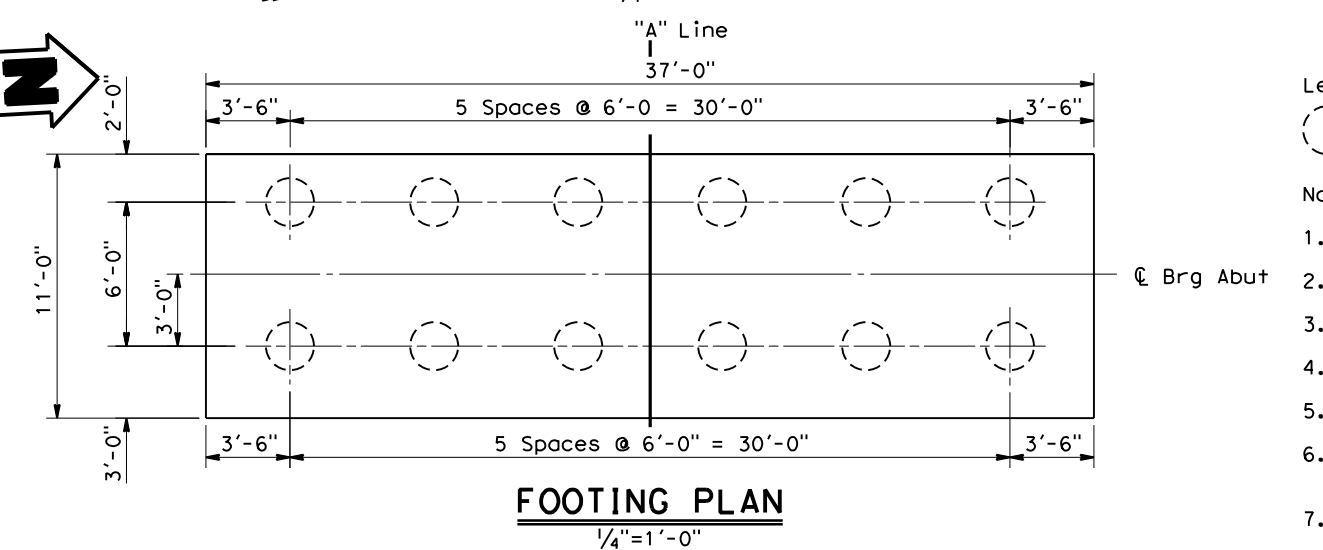
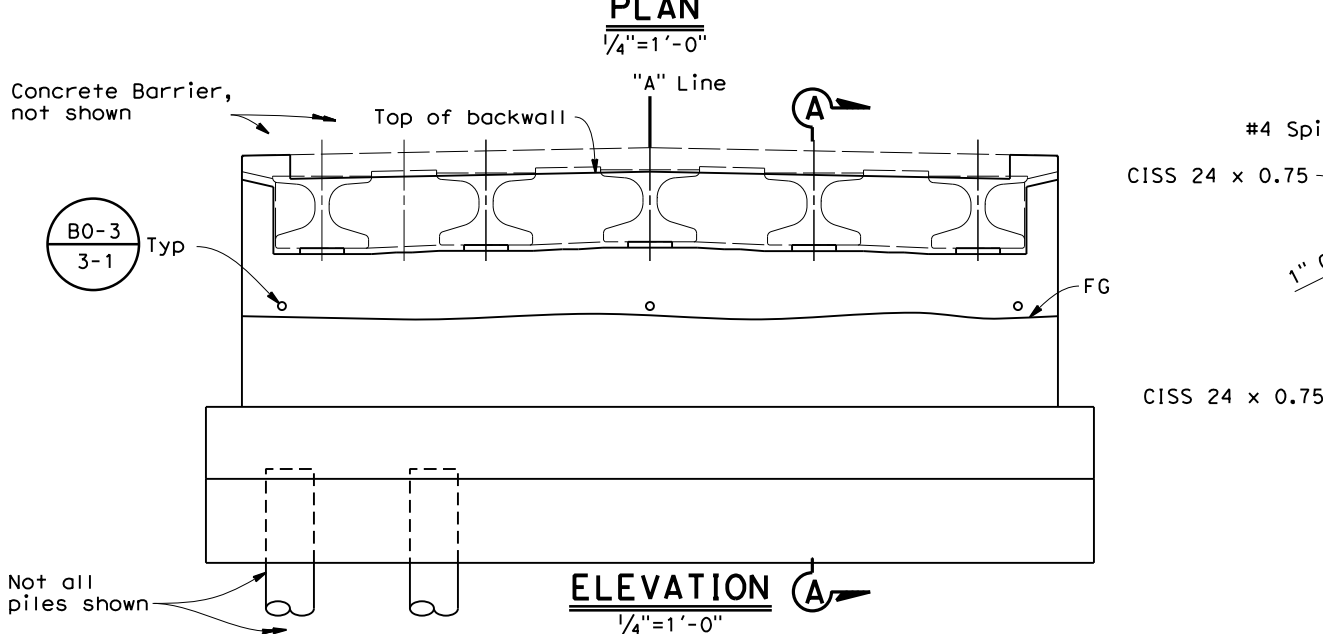
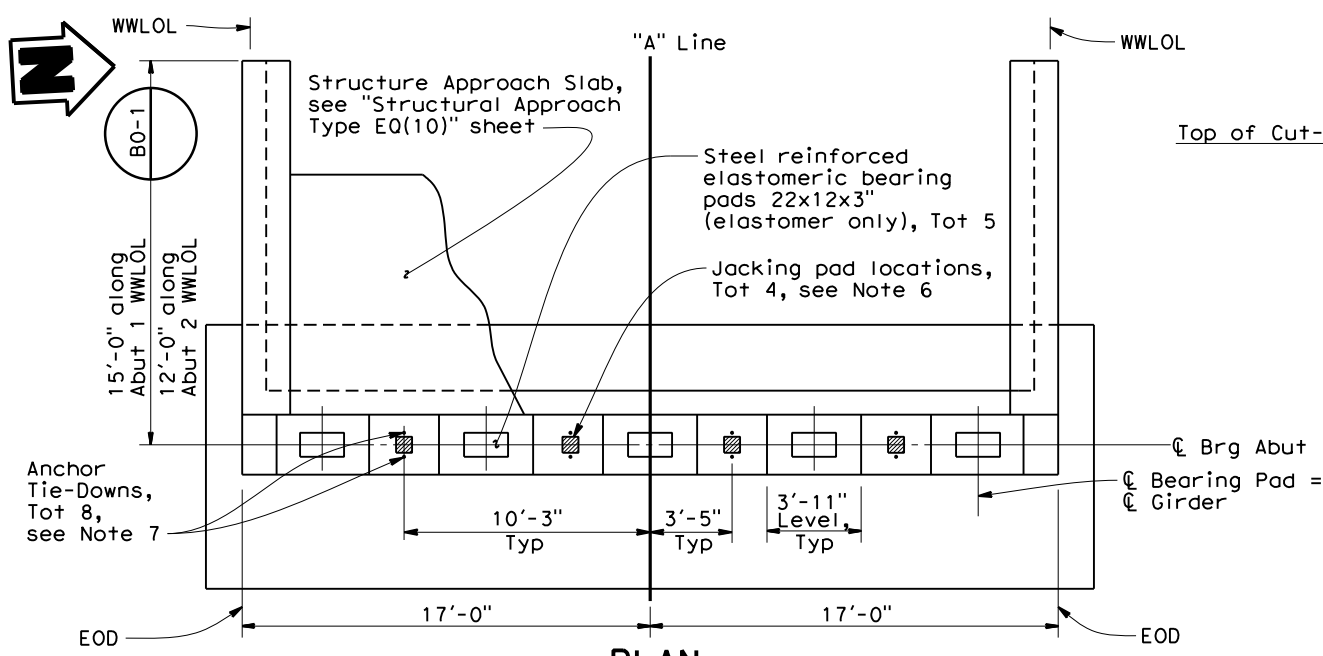
REVISION DATES	SHEET	OF
5/22/15 12/06/19	3	15



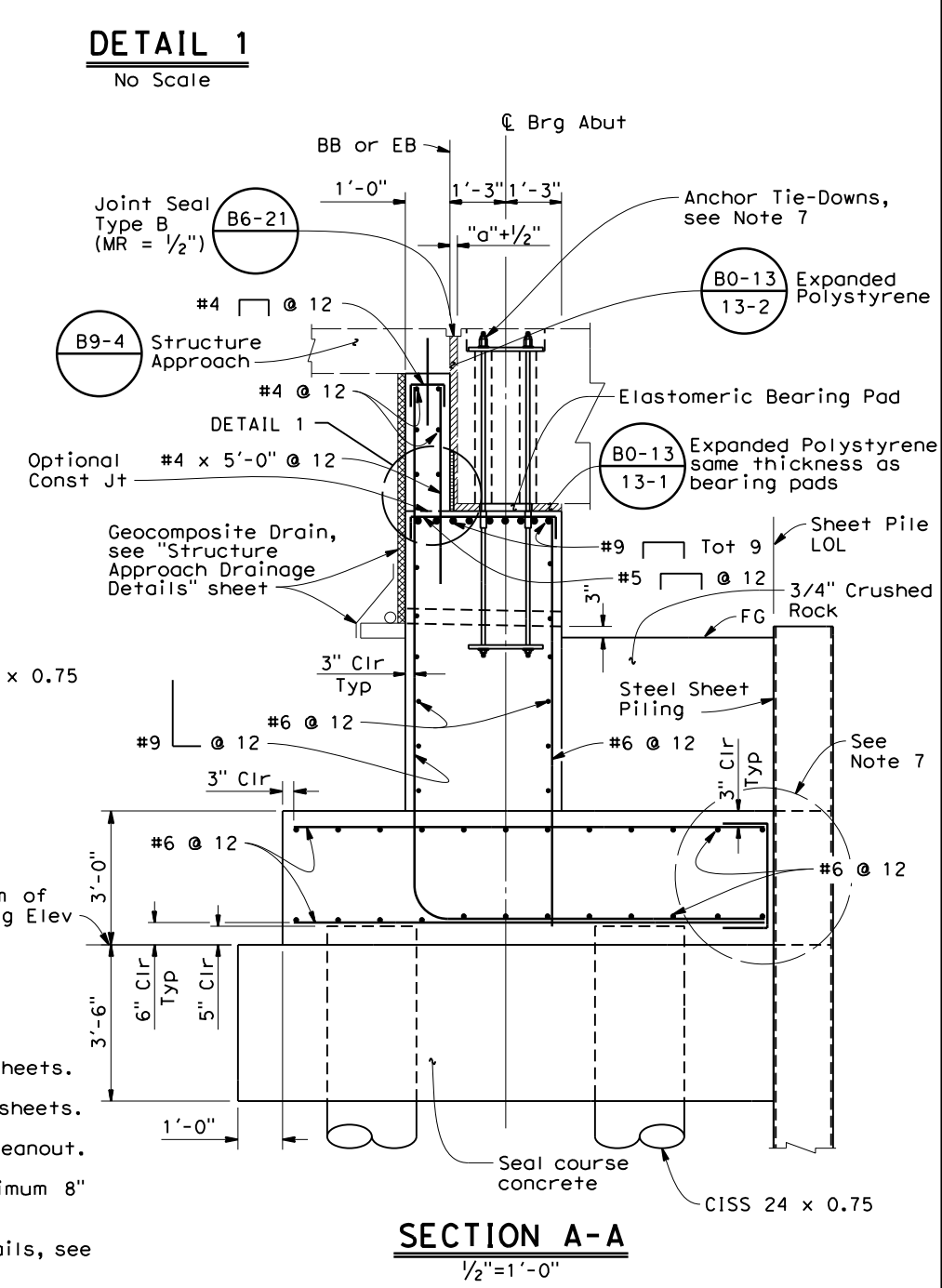
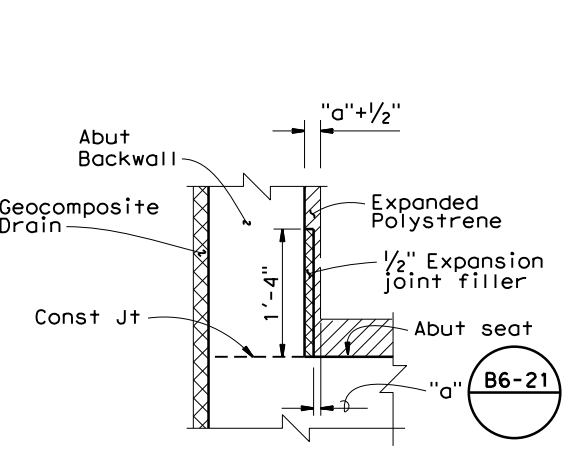
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Hum	CR	0.19	17	28

Scott McCauley 11-8-22  
 REGISTERED CIVIL ENGINEER DATE  
 PLANS APPROVAL DATE  
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 COUNTY OF HUMBOLDT  
 DEPARTMENT OF PUBLIC WORKS  
 1106 2nd Street  
 Eureka, CA 95501



- Legend:
- Indicates vertical CISS 24 x 0.75
- Notes:
- Abutment 1 shown, Abutment 2 similar.
  - All reinforcement shall be pre-fabricated epoxy coated.
  - For sections and details not shown, see Abutment Detail sheets.
  - For Elastomeric Bearing Pad Details, see Abutment Detail sheets.
  - Retain 15 feet of undisturbed soil plug in piles during cleanout.
  - Jacking pads are for future grade raise only. Provide minimum 8" square level surface for jacking pads.
  - For Anchor Tie-Down and Permanent Sheet Pile shoring details, see "Miscellaneous Details" sheet.



X	DESIGN OVERSIGHT
X	SIGN OFF DATE

DESIGN	BY L. Smith	CHECKED J. Chou
DETAILS	BY B. Maechler	CHECKED J. Chou
QUANTITIES	BY J. Cruz	CHECKED H. Chou

PREPARED FOR THE  
**COUNTY OF HUMBOLDT**  
 DEPARTMENT OF PUBLIC WORKS

Scott McCauley  
 PROJECT ENGINEER

BRIDGE NO.	04C0260
POST MILE	0.19

**SWAIN SLOUGH BRIDGE**  
**ABUTMENT LAYOUT**

DESIGN DETAIL SHEET (ENGLISH) (REV.03/14/12)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: PROJECT NUMBER & PHASE: X

CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	5/22/15	12/06/19
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SHEET	4	OF	15
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USERNAME => scott.mccauley PLOTTED => 11/17/2022 TIME PLOTTED => 9:55:20 AM

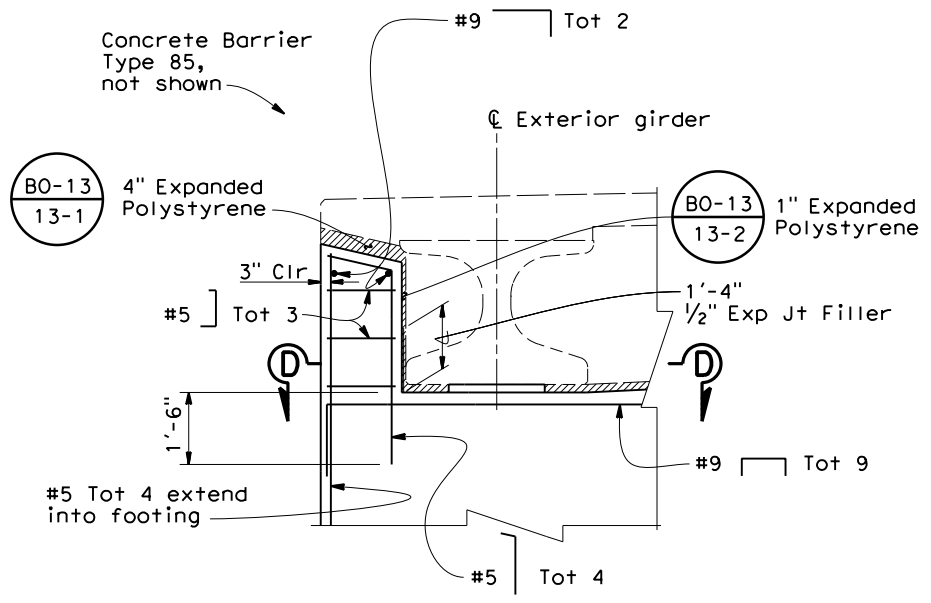
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Hum	CR	0.19	18	28

Scott McCauley 11-8-22  
 REGISTERED CIVIL ENGINEER DATE  
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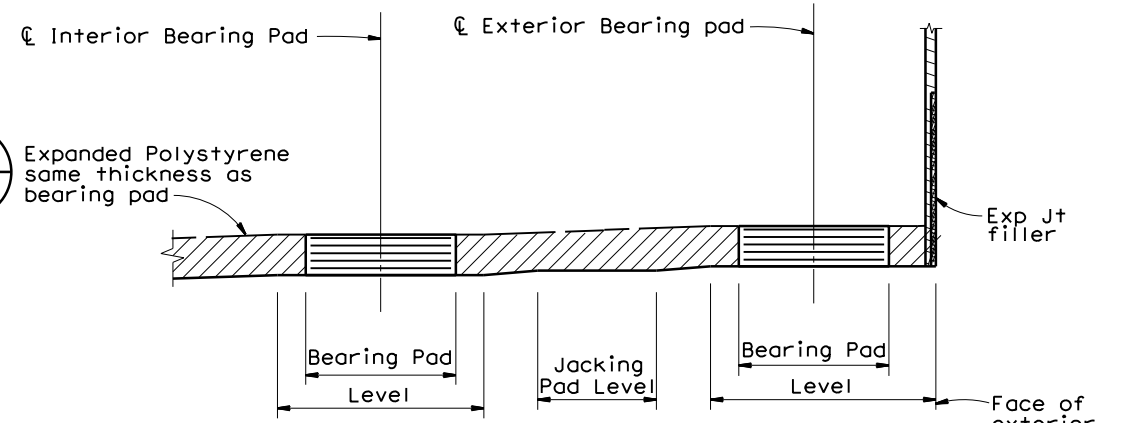
REGISTERED PROFESSIONAL ENGINEER  
 SCOTT A. MCCAULEY  
 No. 71495  
 Exp. 12-31-23  
 CIVIL  
 STATE OF CALIFORNIA

QUINCY ENGINEERING, INC  
 11017 Cobblestone Drive, Suite 100  
 Rancho Cordova, CA 95670

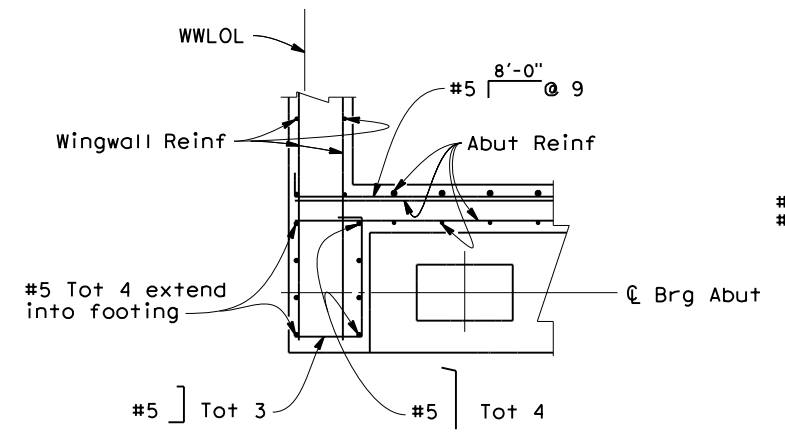
COUNTY OF HUMBOLDT  
 DEPARTMENT OF PUBLIC WORKS  
 1106 2nd Street  
 Eureka, CA 95501



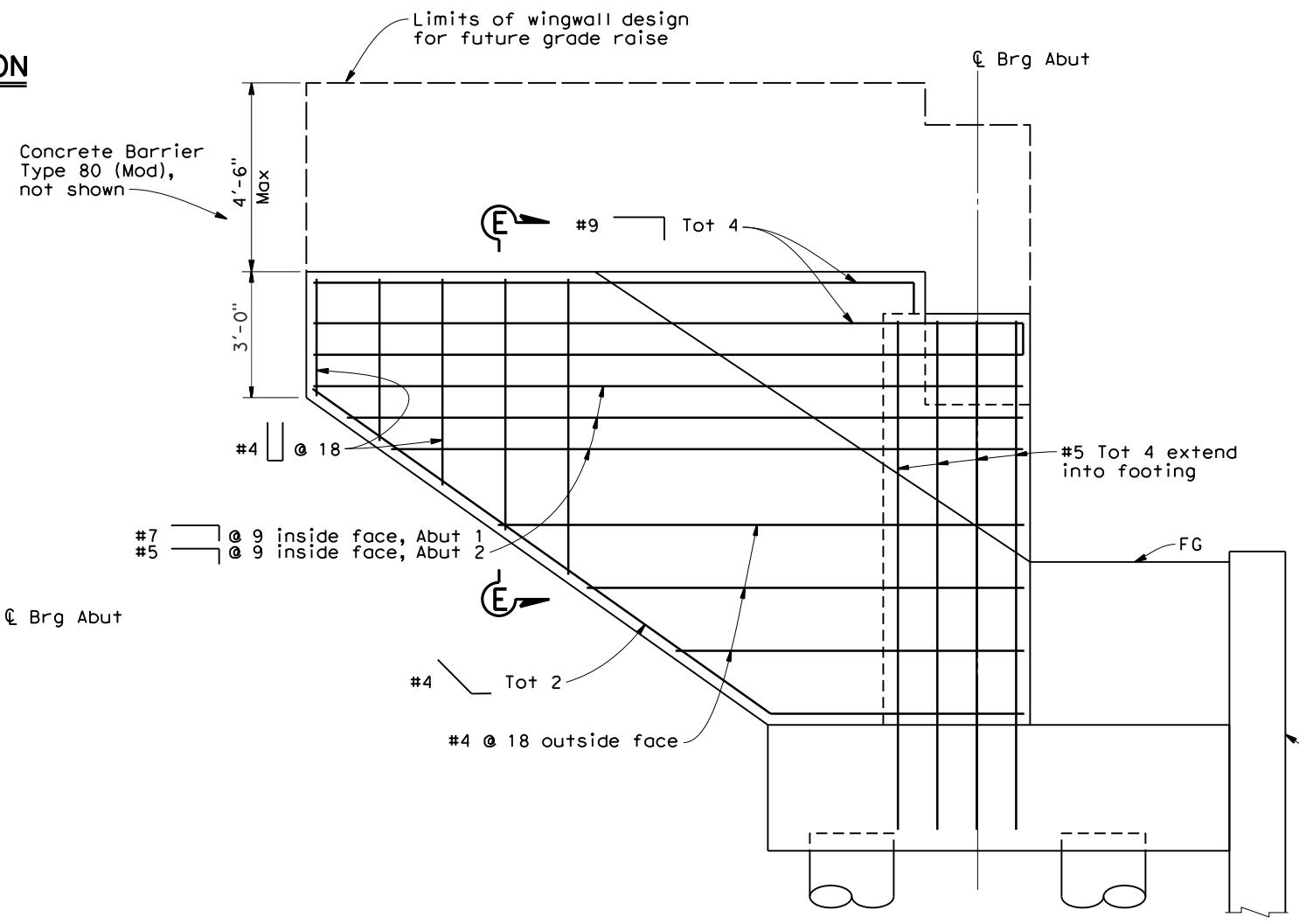
**SHEAR KEY ELEVATION**  
1/2"=1'-0"



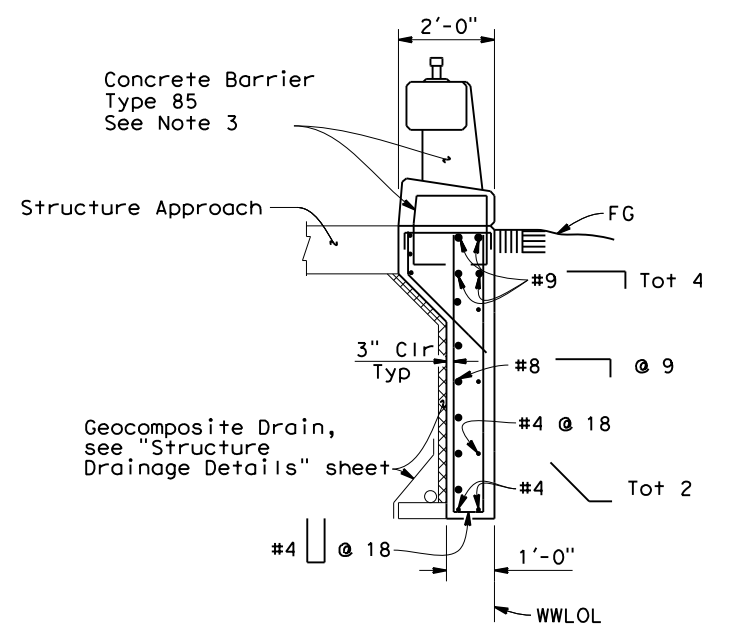
**BEARING PAD DETAIL**  
No Scale



**SECTION D-D**  
1/2"=1'-0"



**WINGWALL ELEVATION**  
1/2"=1'-0"



**SECTION E-E**  
1/2"=1'-0"

- Notes:
- All reinforcement shall be pre-fabricated epoxy coated.
  - For Anchor Tie-Down and Permanent Sheet Pile shoring details, see "Miscellaneous Details" sheet.
  - For barrier details and reinforcement, see Concrete Barrier Type 85 Detail Sheets

X	DESIGN OVERSIGHT
X	SIGN OFF DATE

DESIGN	BY L. Smith	CHECKED J. Chou
DETAILS	BY B. Maechler	CHECKED J. Chou
QUANTITIES	BY J. Cruz	CHECKED H. Chou

PREPARED FOR THE  
**COUNTY OF HUMBOLDT**  
 DEPARTMENT OF PUBLIC WORKS

Scott McCauley  
 PROJECT ENGINEER

BRIDGE NO.	04C0260
POST MILE	0.19

**SWAIN SLOUGH BRIDGE**  
**ABUTMENT DETAILS No. 1**

DESIGN DETAIL SHEET (ENGLISH) (REV.03/14/12)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0 1 2 3

UNIT: PROJECT NUMBER & PHASE: X

CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
5/22/15 12/06/19	5	15

USERNAME => scott.mccauley PLOTTED => 11/17/2022 TIME PLOTTED => 9:55:21 AM

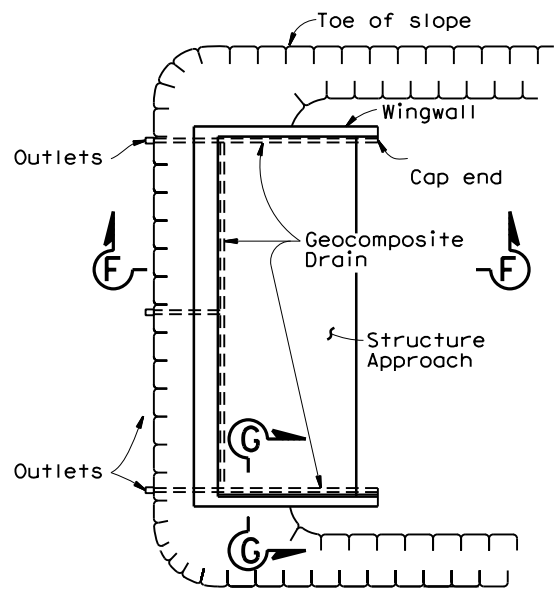
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Hum	CR	0.19	19	28

Scott McCauley 11-8-22  
 REGISTERED CIVIL ENGINEER DATE  
 SCOTT A. MCCAULEY  
 No. 71495  
 Exp. 12-31-23  
 CIVIL  
 STATE OF CALIFORNIA

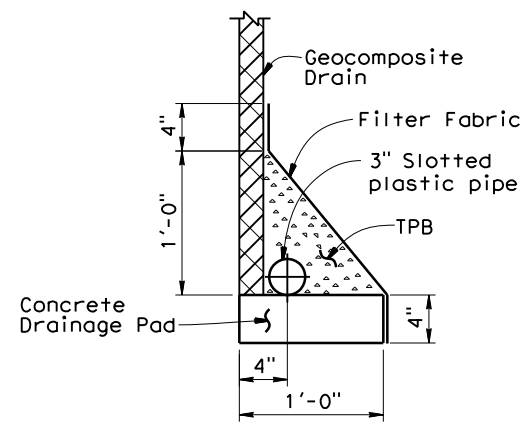
PLANS APPROVAL DATE  
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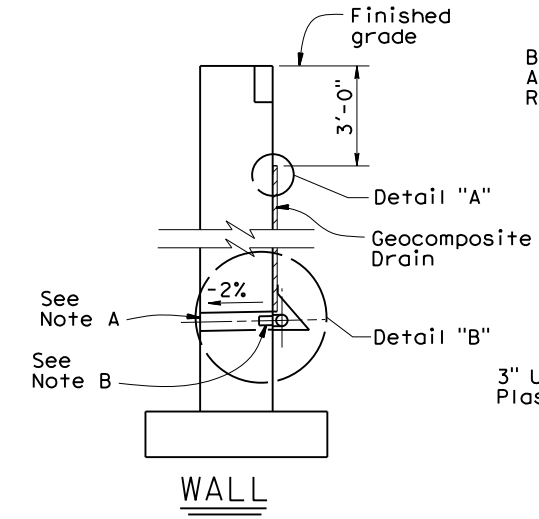
COUNTY OF HUMBOLDT  
 DEPARTMENT OF PUBLIC WORKS  
 1106 2nd Street  
 Eureka, CA 95501



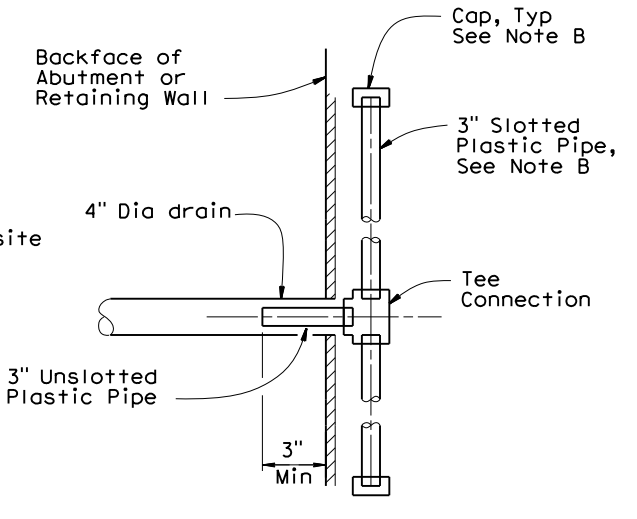
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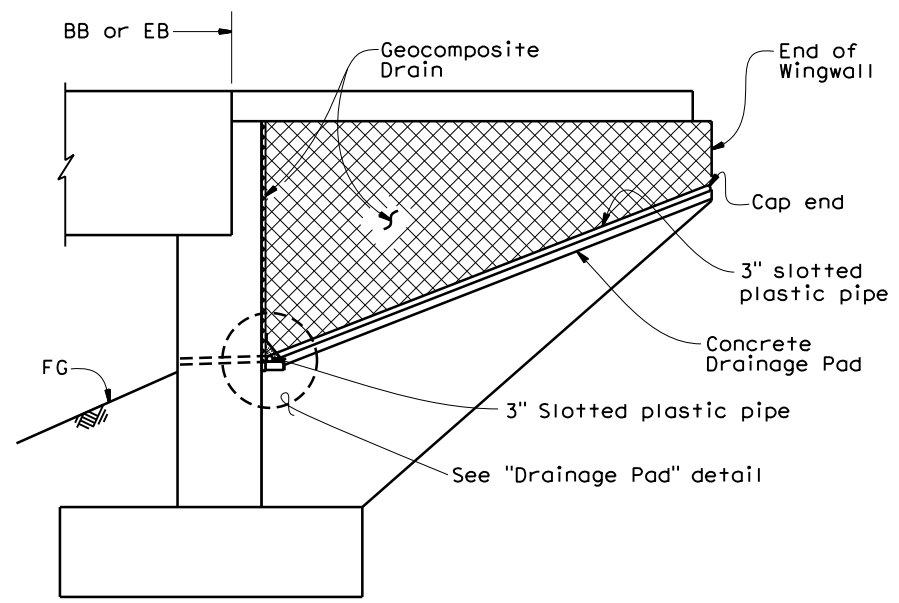
**DRAINAGE PAD**  
No Scale



**WALL SECTION**

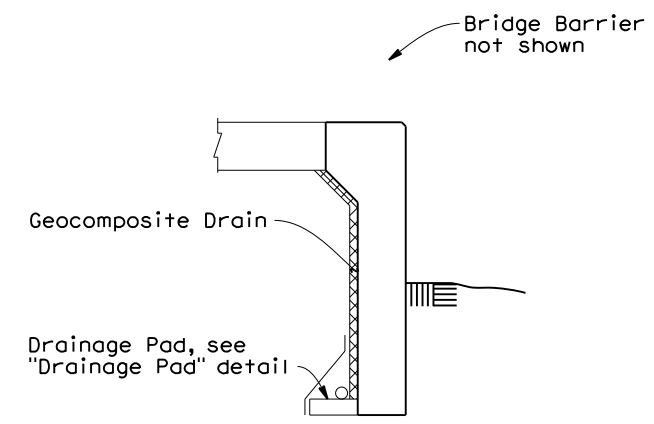


**SECTION A-A**

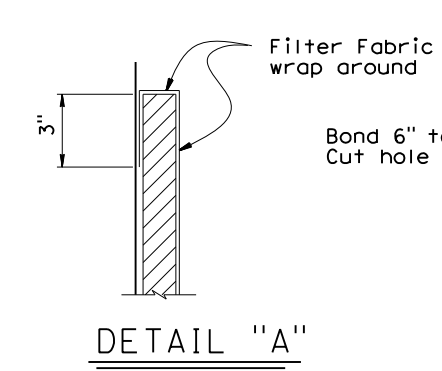


**SECTION F-F**  
No Scale

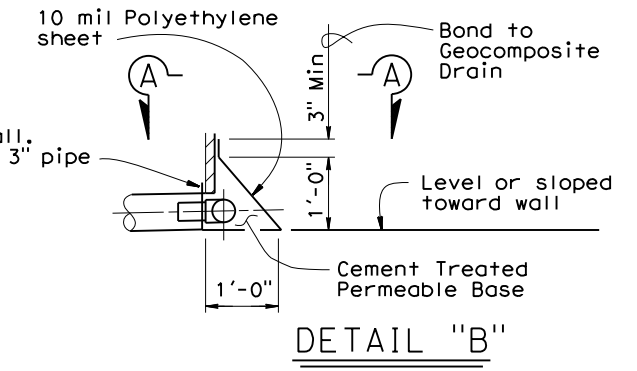
NOTE: TPB not shown for clarity.



**SECTION G-G**  
No Scale



**DETAIL "A"**



**DETAIL "B"**

**ALTERNATIVE DRAINAGE DETAILS  
WEEP HOLE AND GEOCOMPOSITE DRAIN**

No Scale

- Notes:
- 4" Dia drains at intermediate sag points and at 25' max center to center. Exposed wall drains shall be located 3"± above finished grade.
  - Geocomposite drain, cement treated permeable base, and 3" Dia slotted plastic pipe continuous behind retaining wall or abutment. Cap ends of pipe. Provide "Tee" connection at each 4" Dia drain.
  - Connect the low end of plastic pipe to the main outlet pipe as applicable.

X	DESIGN OVERSIGHT
X	SIGN OFF DATE

DESIGN	BY L. Smith	CHECKED J. Chou
DETAILS	BY B. Maechler	CHECKED J. Chou
QUANTITIES	BY J. Cruz	CHECKED H. Chou

PREPARED FOR THE <b>COUNTY OF HUMBOLDT</b> DEPARTMENT OF PUBLIC WORKS	
Scott McCauley PROJECT ENGINEER	BRIDGE NO. 04C0260 POST MILE 0.19

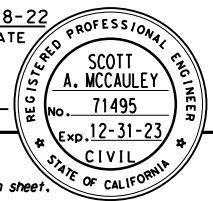
UNIT: PROJECT NUMBER & PHASE: X		CONTRACT NO.: X
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<b>SWAIN SLOUGH BRIDGE</b> <b>ABUTMENT DETAILS No. 2</b>	
DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES 5/22/15 12/06/19
SHEET 6	OF 15

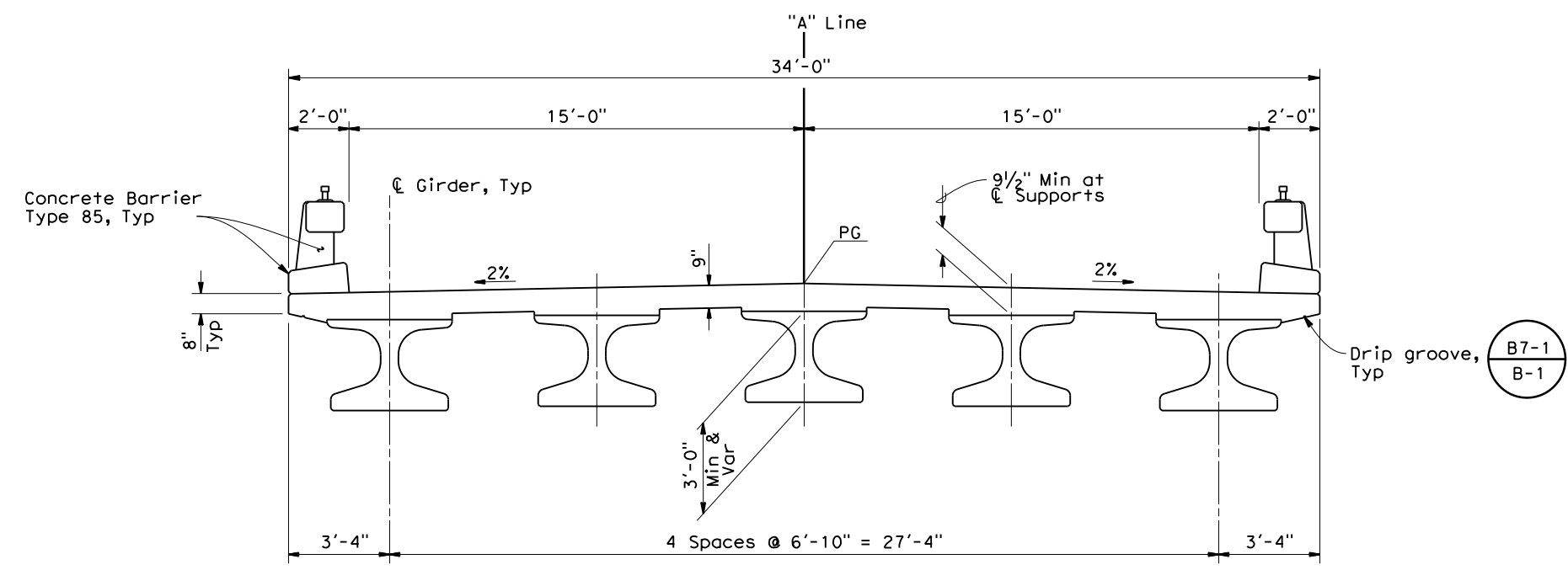
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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Hum	CR	0.19	20	28

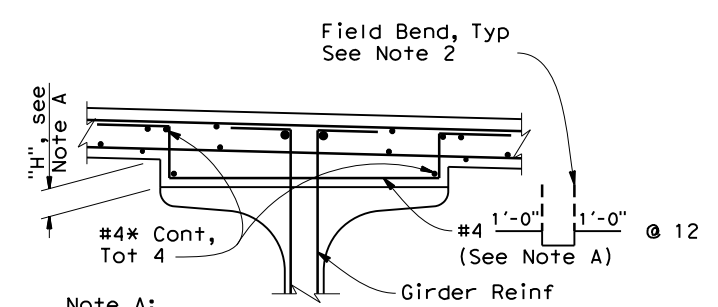
Scott McCauley 11-8-22  
 REGISTERED CIVIL ENGINEER DATE  
 PLANS APPROVAL DATE  
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 1106 2nd Street  
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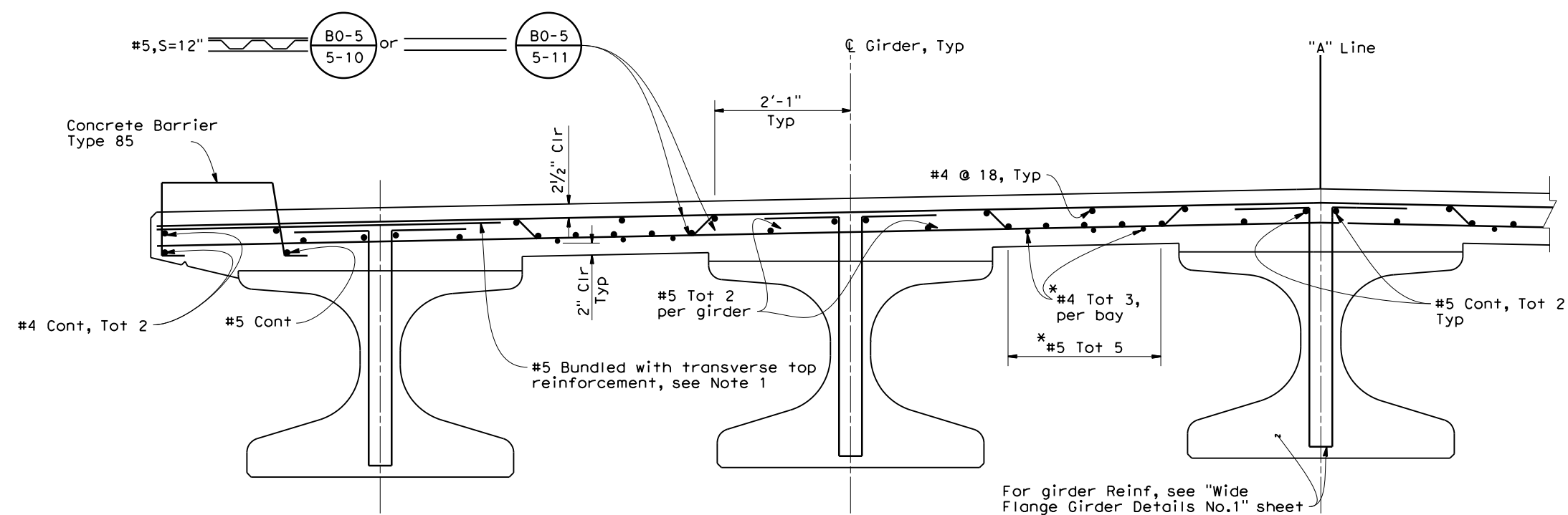


**TYPICAL SECTION**  
3/8"=1'-0"



Note A:  
 Reinforcement shown is in addition to Typical Section Reinf. Reinf to be placed over length of each girder where H > 2".

**HAUNCH DETAILS**  
3/4"=1'-0"



**PART TYPICAL SECTION**  
3/4"=1'-0"

\* Distribution Reinforcement, see Note 3

**Notes:**

1. Provide additional top transverse deck reinforcement for a distance of 5 feet at the ends of barrier rail at expansion joint. Bundle with top transverse reinforcement on bridge and extend 16" beyond centerline of exterior girder.
2. All reinforcement shall be pre-fabricated epoxy coated.
3. For limits of distribution reinforcement into end diaphragm, see "Girder Layout" sheet.
4. For barrier details and reinforcement, see Concrete Barrier Type 85 Detail sheets.

X DESIGN OVERSIGHT  
 X SIGN OFF DATE

DESIGN	BY L. Smith	CHECKED J. Chou
DETAILS	BY B. Maechler	CHECKED J. Chou
QUANTITIES	BY J. Cruz	CHECKED H. Chou

PREPARED FOR THE  
 COUNTY OF HUMBOLDT  
 DEPARTMENT OF PUBLIC WORKS

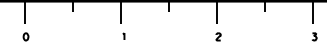
Scott McCauley  
 PROJECT ENGINEER

BRIDGE NO.	04C0260
POST MILE	0.19

**SWAIN SLOUGH BRIDGE**  
**TYPICAL SECTION**

DESIGN DETAIL SHEET (ENGLISH) (REV.03/14/12)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



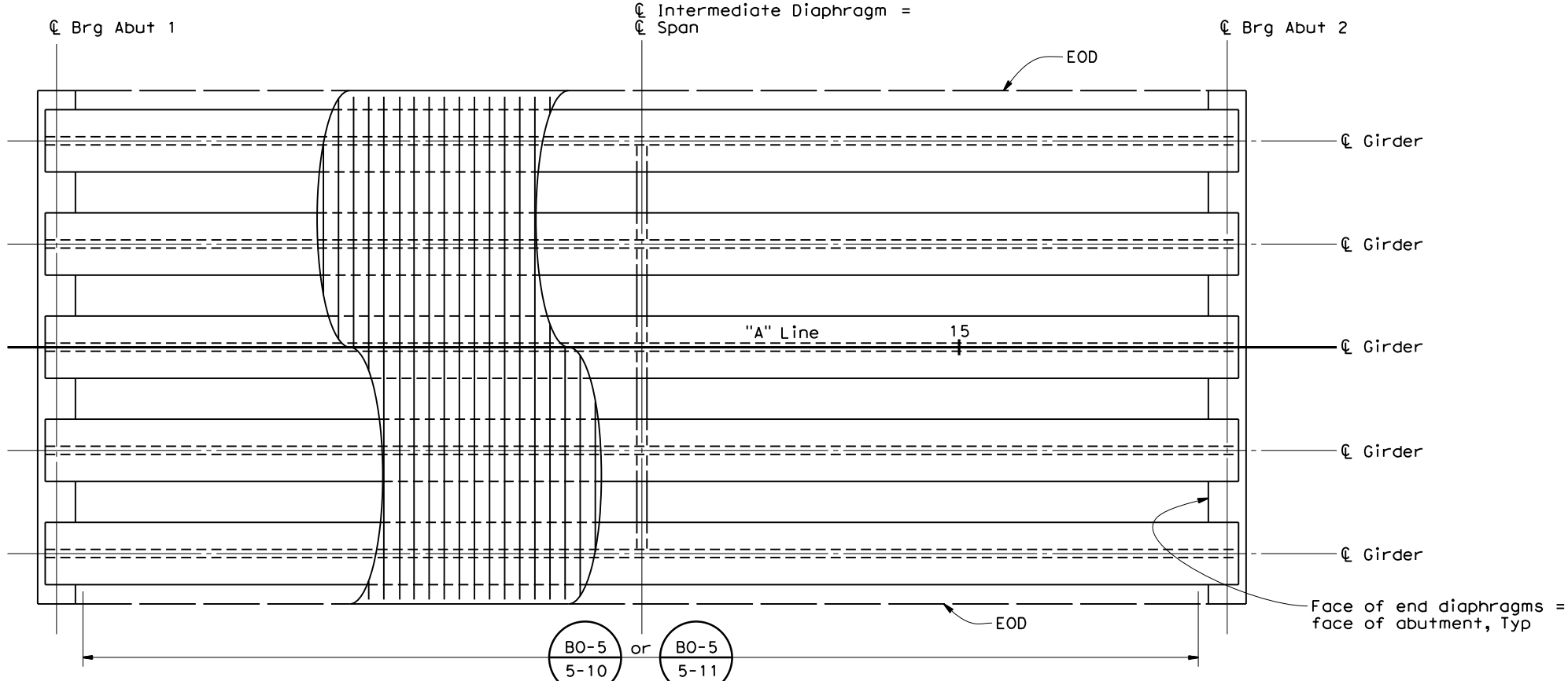
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 PROJECT NUMBER & PHASE: X

CONTRACT NO.: X

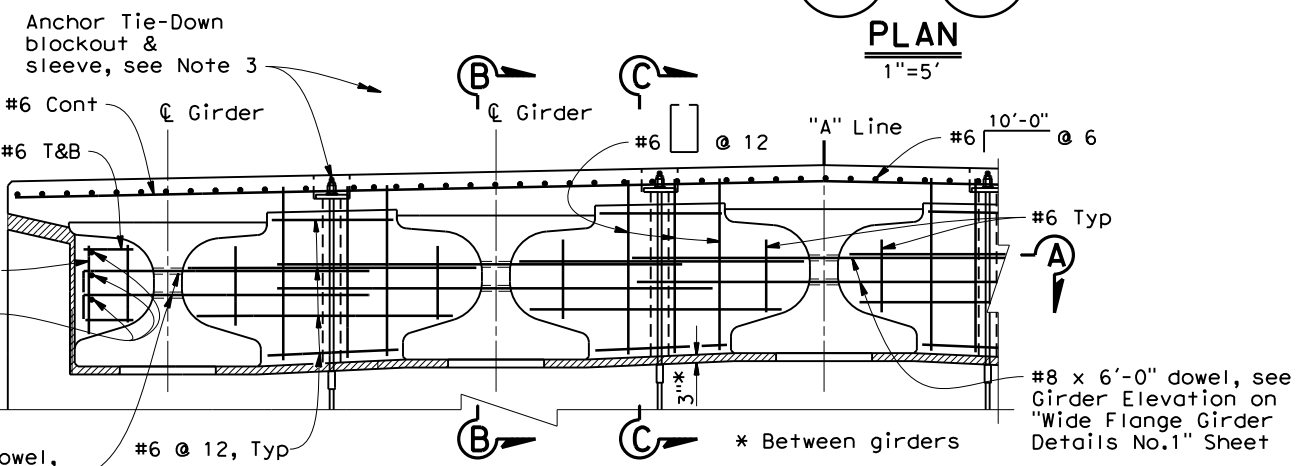
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
5/22/15 12/06/19	7	15

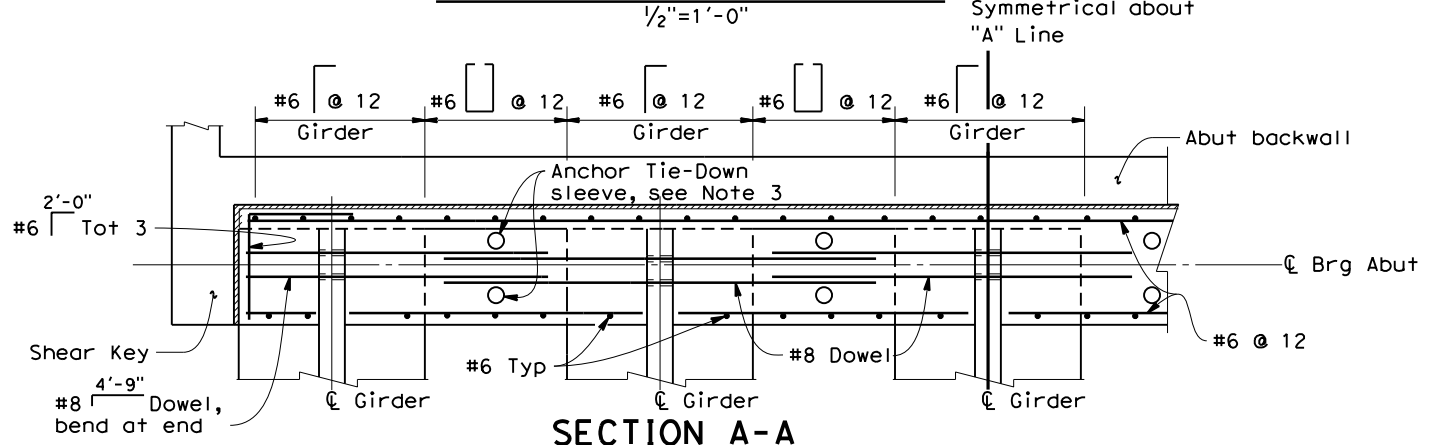
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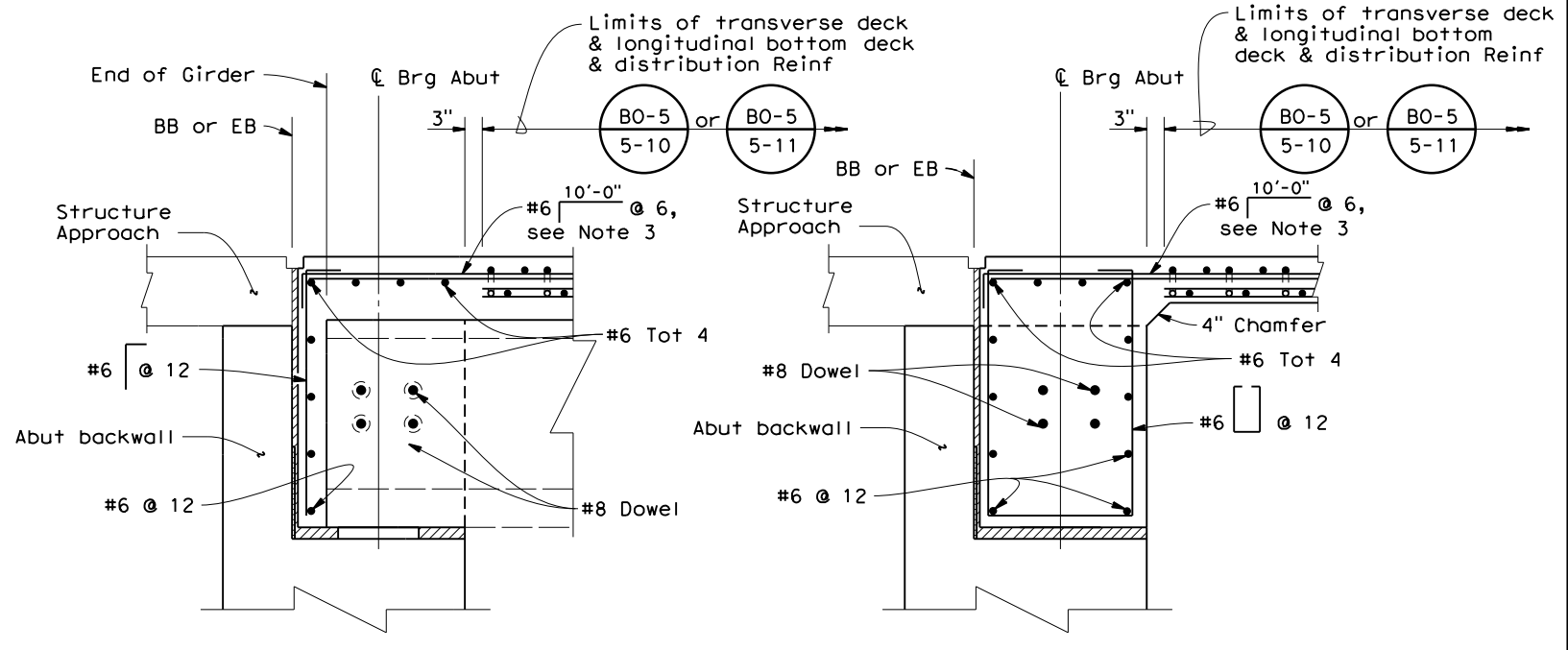
**PLAN**  
1"=5'



**END DIAPHRAGM ELEVATION**  
1/2"=1'-0"



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



**SECTION B-B**  
3/4"=1'-0"

**SECTION C-C**  
3/4"=1'-0"

- Notes:
1. For Intermediate Diaphragm, see "Wide Flange Girder Details No. 2" sheet.
  2. All reinforcement shall be pre-fabricated epoxy coated.
  3. Adjust reinforcement to clear sleeve. For Anchor Tie-Down details, see "Miscellaneous Details" sheet.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Hum	CR	0.19	21	28

Scott McCauley 11-8-22  
 REGISTERED CIVIL ENGINEER DATE

SCOTT A. MCCAULEY  
 No. 71495  
 Exp. 12-31-23  
 CIVIL  
 STATE OF CALIFORNIA

PLANS APPROVAL DATE

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 Rancho Cordova, CA 95670

COUNTY OF HUMBOLDT  
 DEPARTMENT OF PUBLIC WORKS  
 1106 2nd Street  
 Eureka, CA 95501

X DESIGN OVERSIGHT  
 X SIGN OFF DATE

DESIGN	BY L. Smith	CHECKED J. Chou
DETAILS	BY B. Maechler	CHECKED J. Chou
QUANTITIES	BY J. Cruz	CHECKED H. Chou

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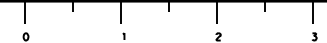
Scott McCauley  
 PROJECT ENGINEER

BRIDGE NO.	04C0260
POST MILE	0.19

**SWAIN SLOUGH BRIDGE**  
**GIRDER LAYOUT**

DESIGN DETAIL SHEET (ENGLISH) (REV.03/14/12)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



UNIT: PROJECT NUMBER & PHASE: X  
 CONTRACT NO.: X

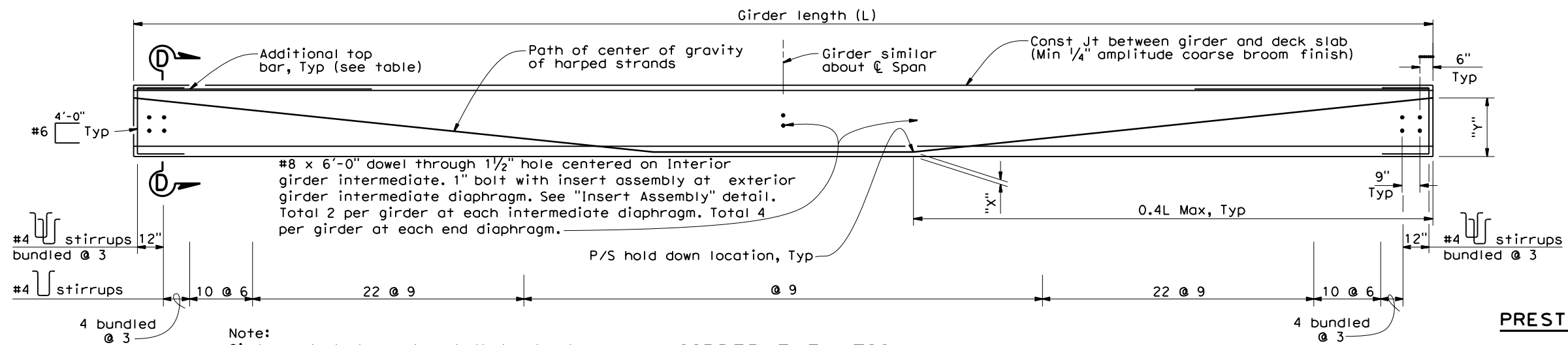
REVISION DATES	SHEET	OF
5/22/15 12/06/19	8	15

USERNAME => scott.mccauley PLOTTED => 11/17/2022 TIME PLOTTED => 9:55:23 AM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Hum	CR	0.19	22	28

Scott McCauley 11-8-22  
 REGISTERED CIVIL ENGINEER DATE  
 SCOTT A. MCCAULEY  
 No. 71495  
 Exp. 12-31-23  
 CIVIL  
 STATE OF CALIFORNIA

PLANS APPROVAL DATE  
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 QUINCY ENGINEERING, INC  
 11017 Cobblecreek Drive, Suite 100  
 Rancho Cordova, CA 95670  
 COUNTY OF HUMBOLDT  
 DEPARTMENT OF PUBLIC WORKS  
 1106 2nd Street  
 Eureka, CA 95501



Note:  
Girder ends to be cast such that a level surface is provided at bearing pads

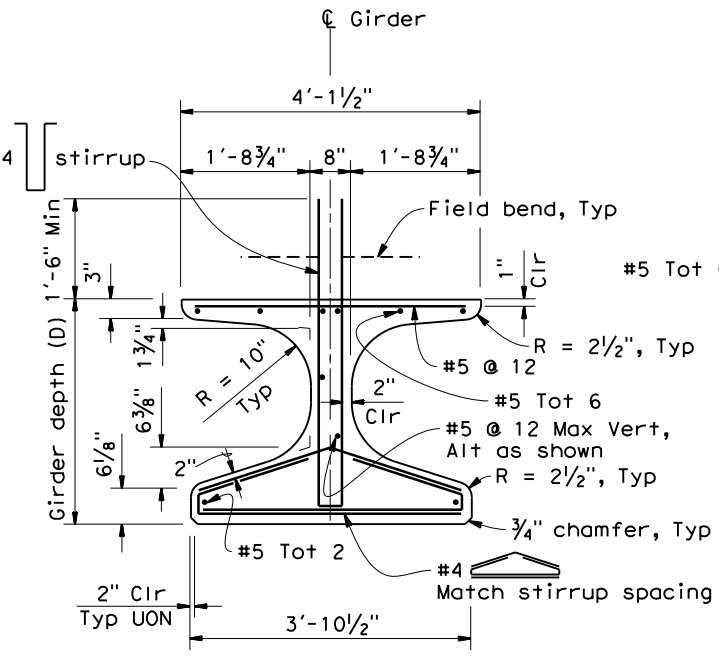
**GIRDER ELEVATION**  
No Scale

LOCATION	GIRDER LENGTH (L)	GIRDER DEPTH (D)	"X" (in)		"Y" (in)*	JACKING FORCE (P)	As, Min (in')	CONCRETE STRENGTH (ksi)		MIDSPAN DEAD LOAD DEFLECTION (in)		ADDITIONAL TOP BAR (EACH END)
			Straight Strands	Harped Strands				f'ci	f'c	DECK	RAIL	
ALL GIRDERS	79'-0"	36"	Straight Strands	3.75		1300 kips	6.4	5.5	6.5	0.9	0.10	#8 x 8' Tot 4
			Harped Strands	4.75	31.5							

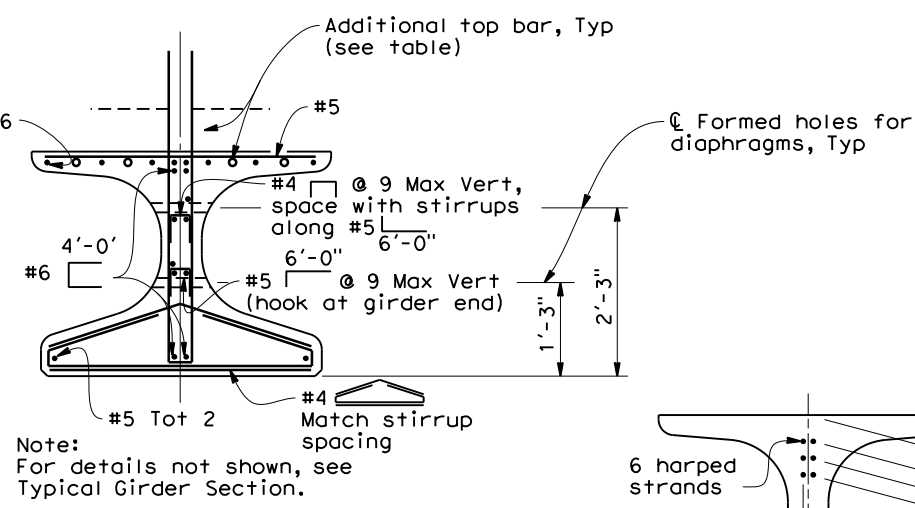
\* Prestressing steel c.g. dimension is for harped strands only. See Strand Template detail.

**PRESTRESSING NOTES**

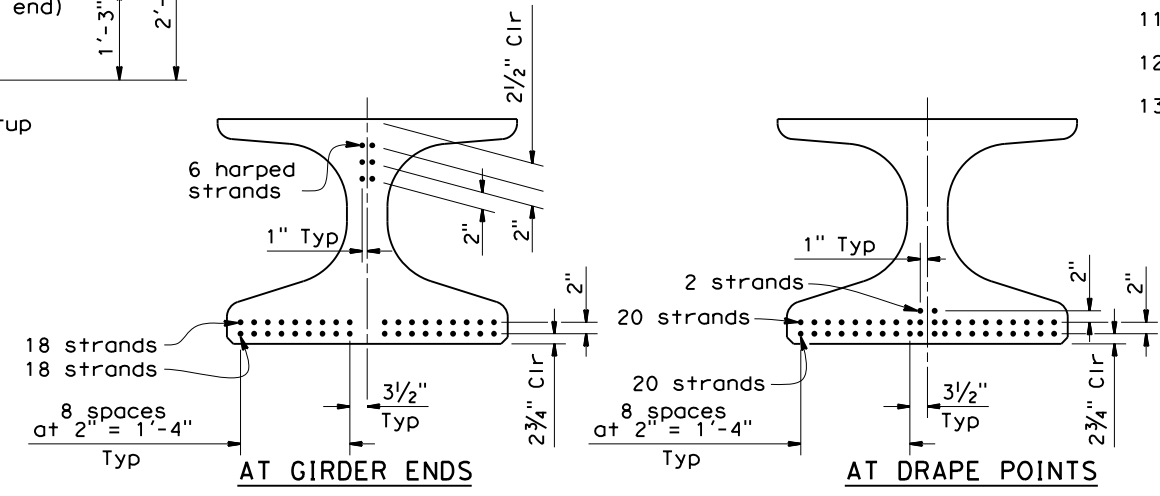
- The Jacking Force (P) is the jacking force required at the point of control along the span. The jacking force does not include any fabrication specific losses.
- The maximum tensile stress in the prestressing steel upon release shall not exceed 75% of the specified minimum ultimate tensile strength of the prestressing steel.
- The maximum temporary tensile stress (jacking stress) in the prestressing steel shall not exceed 80% of the specified minimum ultimate tensile strength of the prestressing steel.
- Concrete strength:  
f'ci is at time of initial stressing  
f'c is at 28 days
- Deflection components are informational and will be used to set screed line elevations.
- Screed line elevations for deck concrete will be determined by the Engineer.
- Prestressing strand shall be 270 ksi low relaxation.
- Strands shall be placed as low as possible in the strand template and symmetrical about C girder.
- Strands may be bundled in groups consisting of 3 vertically, 2 horizontally, and separated at the ends.
- The minimum distance "S" between groups or individual strands is 1 3/4" for 0.5" diameter strand.
- "S" is measured between centers of adjacent strands.
- Approval by the Engineer is required for deviation.
- The prestressing stand and all reinforcement shall be pre-fabricated epoxy coated.



**TYPICAL GIRDER SECTION**  
No Scale



**SECTION D-D**  
No Scale



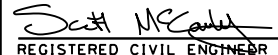
**STRAND TEMPLATE**

Note: Template shown is for 0.5" diameter strand

Note: For Welded Wire Reinforcement (WWR), see "Wide Flange Girder Details No. 2" sheet.

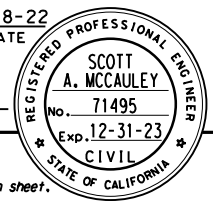
X DESIGN OVERSIGHT X SIGN OFF DATE DESIGN DETAIL SHEET (ENGLISH) (REV.03/14/12)	DESIGN BY L. Smith CHECKED J. Chou	PREPARED FOR THE <b>COUNTY OF HUMBOLDT</b> DEPARTMENT OF PUBLIC WORKS	BRIDGE NO. 04C0260 PROJECT ENGINEER Scott McCauley	<b>SWAIN SLOUGH BRIDGE</b> <b>WIDE FLANGE GIRDER DETAILS No. 1</b>
	DETAILS BY B. Maechler CHECKED J. Chou		POST MILE 0.19	
	QUANTITIES BY J. Cruz CHECKED H. Chou	UNIT: PROJECT NUMBER & PHASE: X CONTRACT NO.: X	REVISION DATES: 5/22/15, 12/06/19 SHEET 9 OF 15	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Hum	CR	0.19	23	28

 11-8-22  
 REGISTERED CIVIL ENGINEER DATE

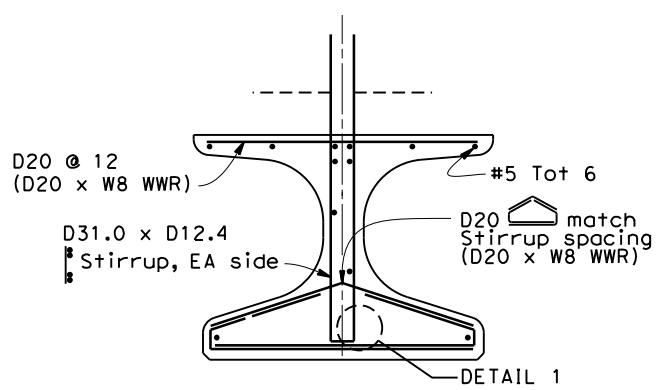
PLANS APPROVAL DATE

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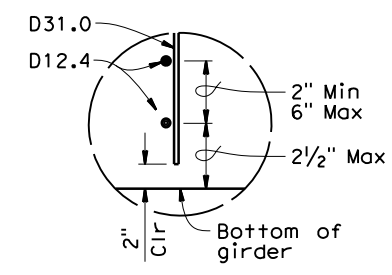
**QUINCY ENGINEERING, INC**  
 11017 Cobblestone Drive, Suite 100  
 Rancho Cordova, CA 95670

COUNTY OF HUMBOLDT  
 DEPARTMENT OF PUBLIC WORKS  
 1106 2nd Street  
 Eureka, CA 95501



- Notes:
1. For details shown but not noted, see "Typical Girder Section" detail.
  2. W8 WWR not shown.

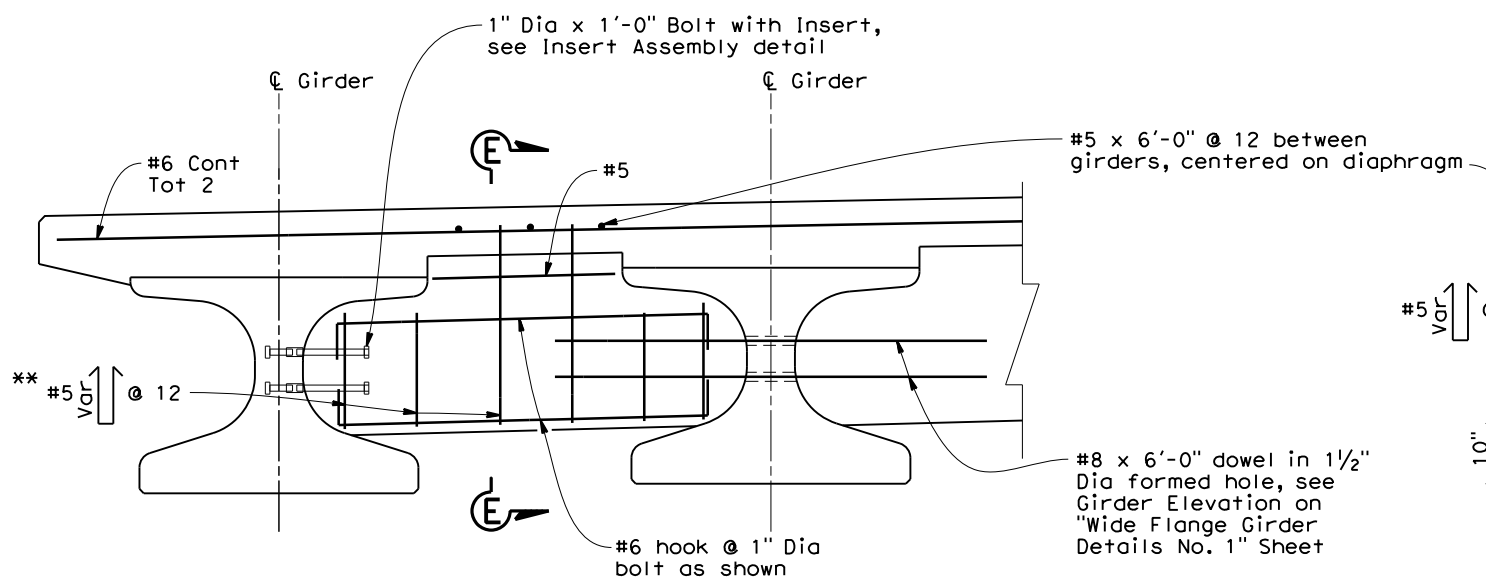
**WELDED WIRE REINFORCEMENT (WWR) ALTERNATIVE**  
No Scale



- Notes:
1. Bottom of stirrup WWR detail shown, top similar.
  2. Longitudinal wire area shall be 40% or greater of vertical deformed wire's area.

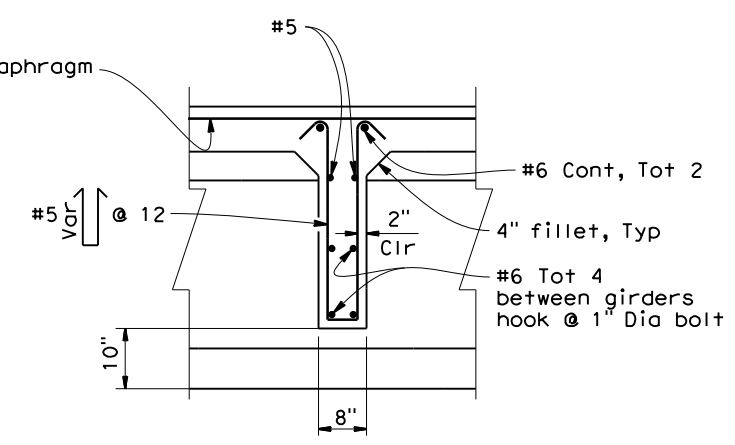
**DETAIL 1**  
No Scale

- Note:
- 1) All reinforcement shall be pre-fabricated epoxy coated.



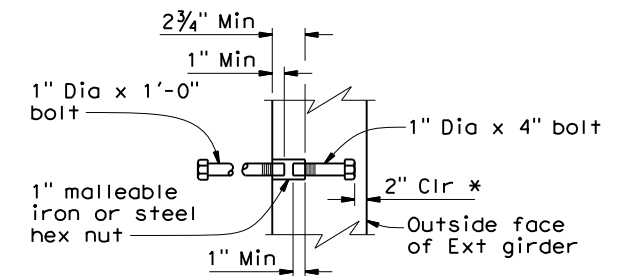
**INTERMEDIATE DIAPHRAGM**  
1/2"=1'-0"

\*\* Hooks inward below girder top flange



**SECTION E-E**  
3/4"=1'-0"

Note:  
Diaphragm may be vertical or normal to deck grade



\* Dimension may be increased when insert assembly is used at end block

**INSERT ASSEMBLY**  
No Scale

X	DESIGN OVERSIGHT
X	SIGN OFF DATE

DESIGN	BY L. Smith	CHECKED J. Chou
DETAILS	BY B. Maechler	CHECKED J. Chou
QUANTITIES	BY J. Cruz	CHECKED H. Chou

**PREPARED FOR THE COUNTY OF HUMBOLDT**  
 DEPARTMENT OF PUBLIC WORKS

Scott McCauley  
 PROJECT ENGINEER

BRIDGE NO.	04C0260
POST MILE	0.19

**SWAIN SLOUGH BRIDGE**  
**WIDE FLANGE GIRDER DETAILS No. 2**

DESIGN DETAIL SHEET (ENGLISH) (REV.03/14/12)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

0	1	2	3
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UNIT: PROJECT NUMBER & PHASE: X

CONTRACT NO.: X

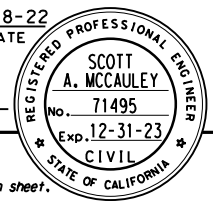
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
5/22/15 12/06/19	10	15

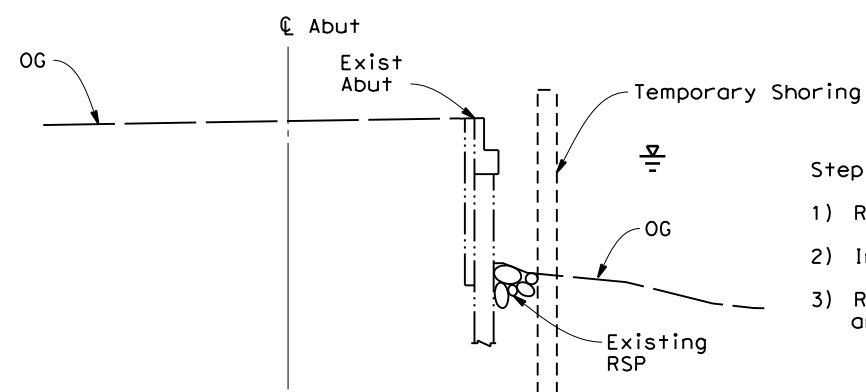
USERNAME => scott.mccauley PLOTTED => 11/17/2022 TIME PLOTTED => 9:55:24 AM

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Hum	CR	0.19	24	28

Scott McCauley 11-8-22  
 REGISTERED CIVIL ENGINEER DATE  
 PLANS APPROVAL DATE  
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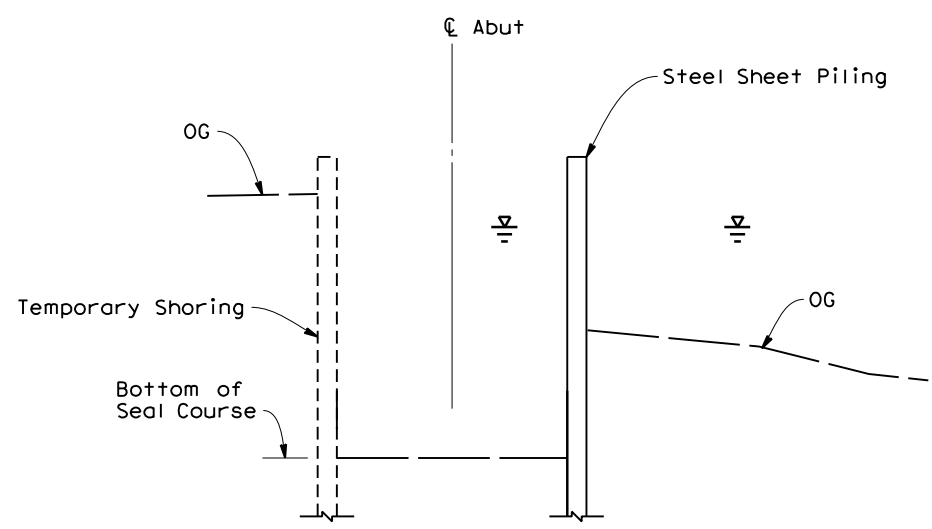


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 Eureka, CA 95501



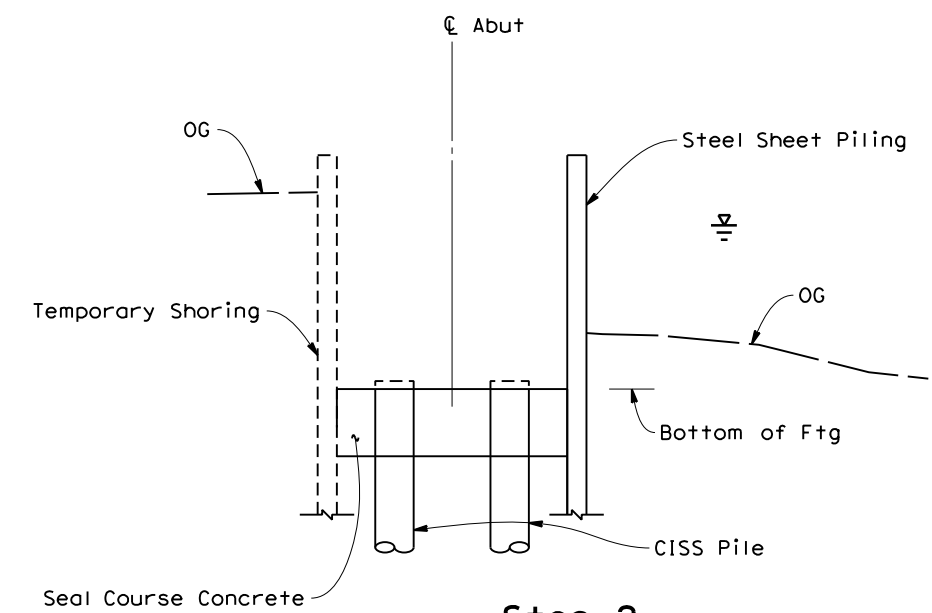
- Step 0:**
- 1) Remove Existing Superstructure
  - 2) Install Temporary Shoring
  - 3) Remove Existing Abutments and RSP

**Step 0**  
No Scale



- Step 1:**
- 1) Move Temporary Shoring and Install Steel Sheet Piling
  - 2) Excavate to bottom of seal course

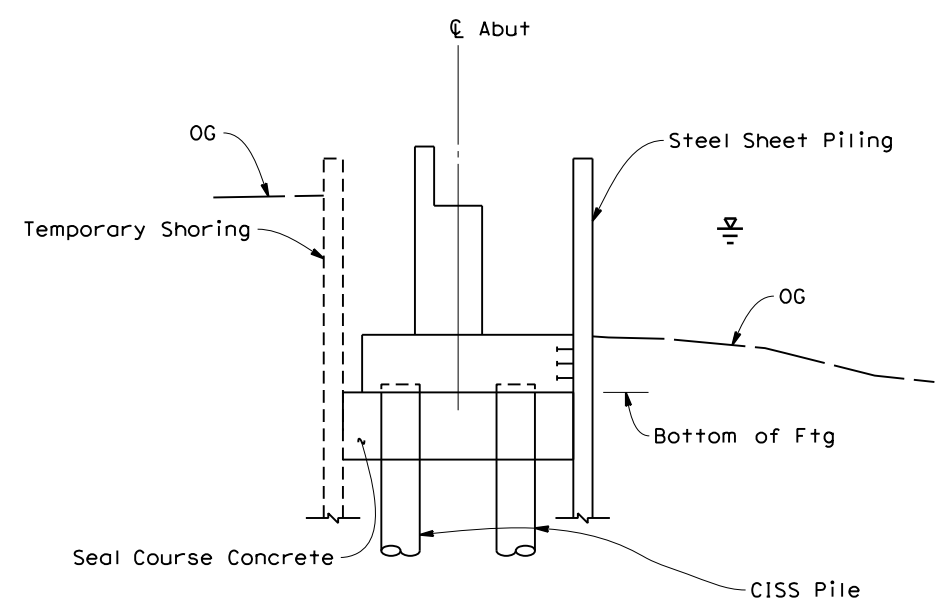
**Step 1**  
No Scale



- Step 2:**
- 1) Drive CISS Piles
  - 2) Install Seal Course Concrete
  - 3) Dewater Excavation area
  - 3) Install Pile reinforcement

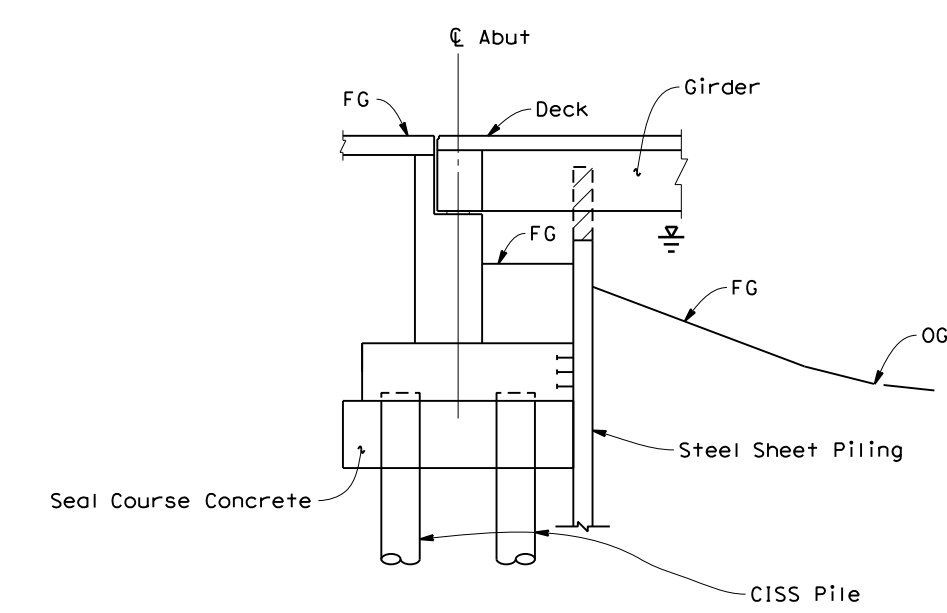
**Step 2**  
No Scale

- Notes:**
1. Temporary Shoring and Steel Sheet Piling shall prevent seepage within Abut footing construction area, contamination of slough from removal of sediments, & leeching of seal course and footing concrete.
  2. Abutment 1 shown, Abutment 2 similar.



- Step 3:**
- 1) Install studs on sheet pile. Form and pour abutment footing. Pour abutment footing concrete neat along permanent sheet pile shoring.
  - 2) Construct abutment, stem, and backwall

**Step 3**  
No Scale



- Step 4:**
- 1) Remove Temporary Shoring
  - 2) Backfill in front of and behind Abutment
  - 3) Cut-off top of permanent sheet pile
  - 4) Place girders and construct superstructure

**Step 4**  
No Scale

**Legend:**  

 Approx ordinary high-tide water surface elevation (WSE)

X DESIGN OVERSIGHT  
 X SIGN OFF DATE

DESIGN	BY L. Smith	CHECKED J. Chou
DETAILS	BY B. Maechler	CHECKED J. Chou
QUANTITIES	BY J. Cruz	CHECKED H. Chou

PREPARED FOR THE  
**COUNTY OF HUMBOLDT**  
 DEPARTMENT OF PUBLIC WORKS

BRIDGE NO.	04C0260
POST MILE	0.19

**SWAIN SLOUGH BRIDGE**  
**CONSTRUCTION SEQUENCE**

DESIGN DETAIL SHEET (ENGLISH) (REV.03/14/12)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: PROJECT NUMBER & PHASE: X

CONTRACT NO.: X

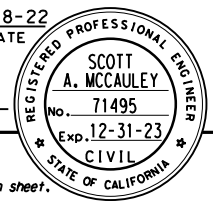
REVISION DATES	SHEET	OF
5/22/15 12/06/19	11	15

USERNAME => scott.mccauley PLOTTED => 11/17/2022 TIME PLOTTED => 9:55:25 AM

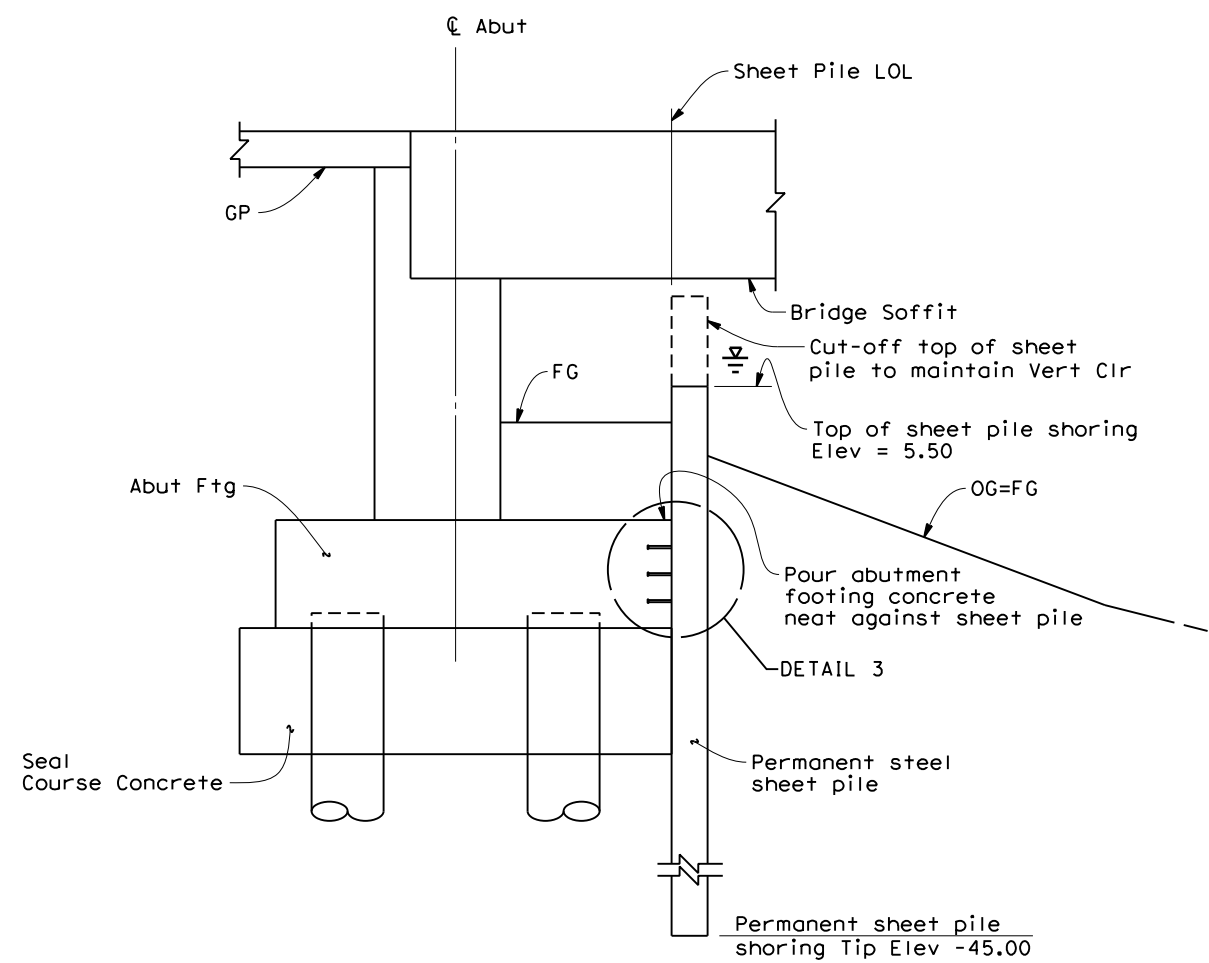


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	Hum	CR	0.19	25	28

Scott McCauley 11-8-22  
 REGISTERED CIVIL ENGINEER DATE  
 PLANS APPROVAL DATE  
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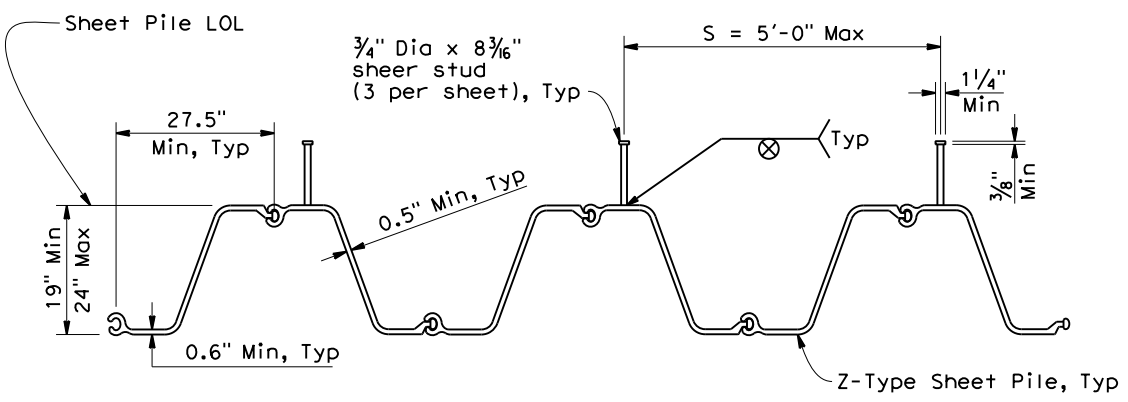


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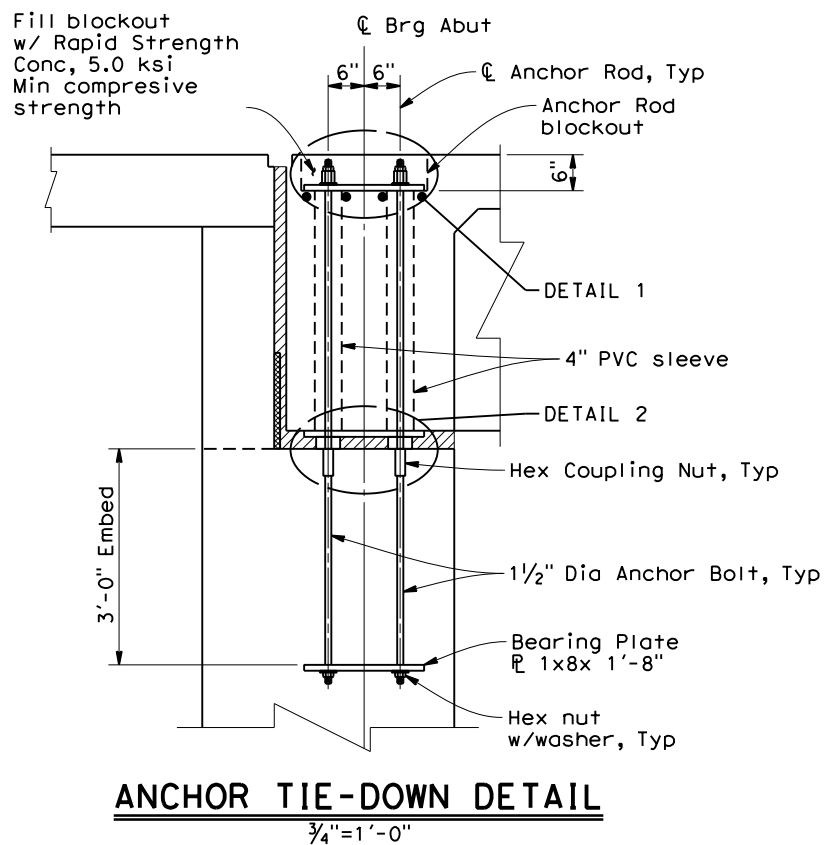
Note: Abutment 1 shown, Abutment 2 similar.

**ELEVATION**  
3/8" = 1'-0"

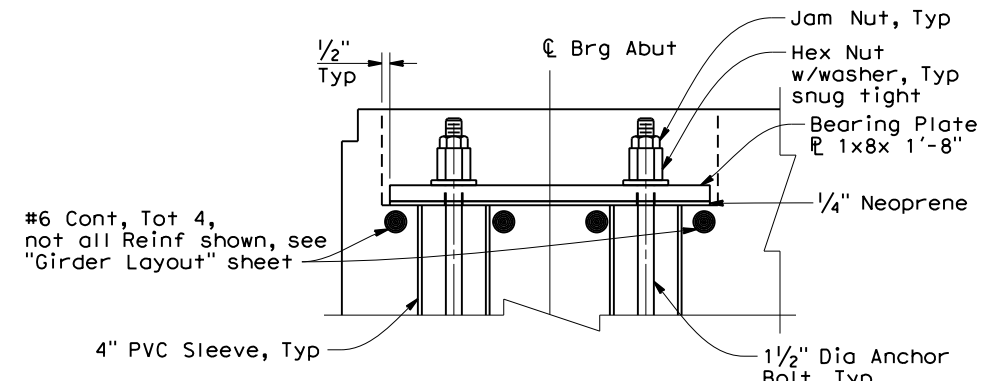


Note: Minimum Elastic Section Modulus = 70 in<sup>3</sup>/ft

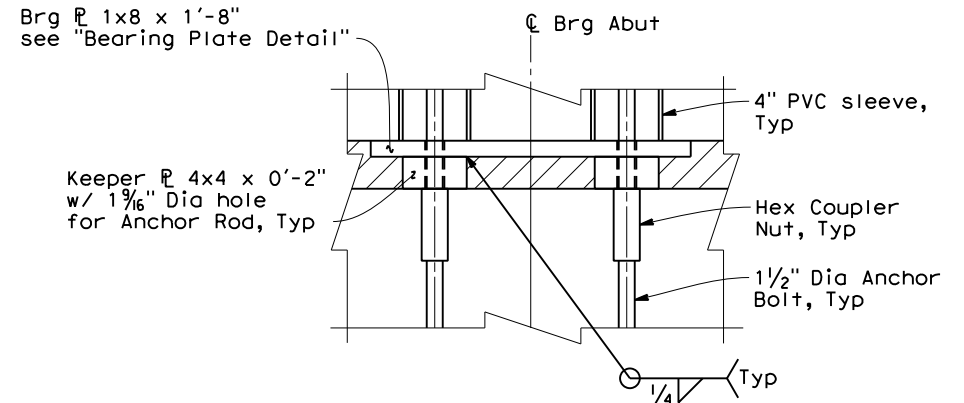
**SECTION A-A**  
No Scale



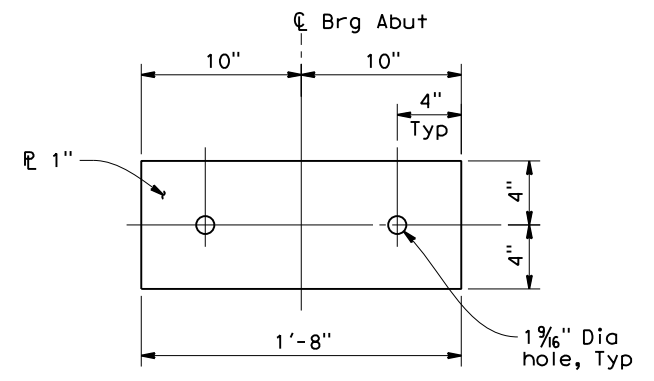
**ANCHOR TIE-DOWN DETAIL**  
3/4" = 1'-0"



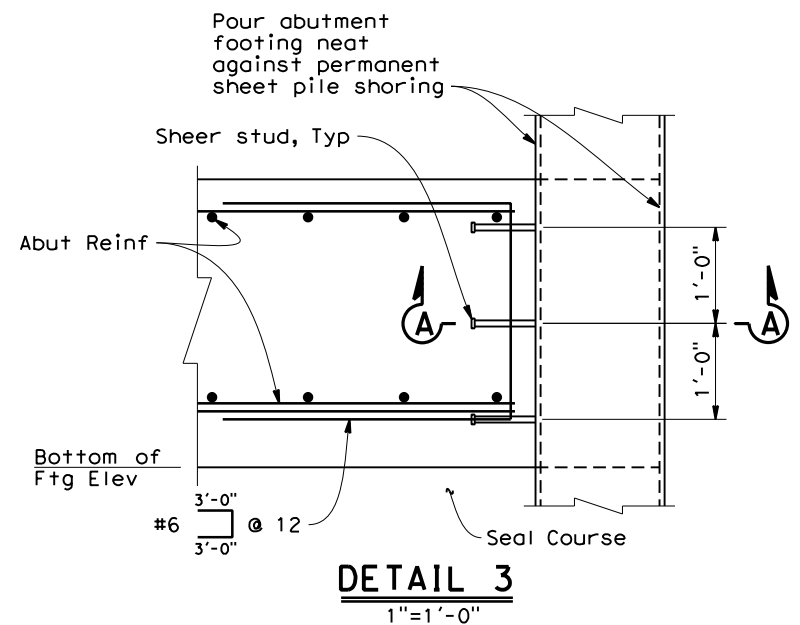
**DETAIL 1**  
No Scale



**DETAIL 2**  
No Scale



**BEARING PLATE DETAIL**  
No Scale



Legend:  

 Approx ordinary high-tide water surface elevation (WSE)

**DETAIL 3**  
1" = 1'-0"

X	DESIGN OVERSIGHT
X	SIGN OFF DATE

DESIGN	BY L. Smith	CHECKED J. Chou
DETAILS	BY B. Maechler	CHECKED J. Chou
QUANTITIES	BY J. Cruz	CHECKED H. Chou

PREPARED FOR THE  
**COUNTY OF HUMBOLDT**  
 DEPARTMENT OF PUBLIC WORKS

Scott McCauley  
 PROJECT ENGINEER

BRIDGE NO.	04C0260
POST MILE	0.19

**SWAIN SLOUGH BRIDGE**  
**MISCELLANEOUS DETAILS**

DESIGN DETAIL SHEET (ENGLISH) (REV.03/14/12)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

UNIT: PROJECT NUMBER & PHASE: X

CONTRACT NO.: X

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
5/22/15 12/06/19	12	15

USERNAME => scott.mccauley PLOTTED => 11/17/2022 TIME PLOTTED => 9:55:25 AM

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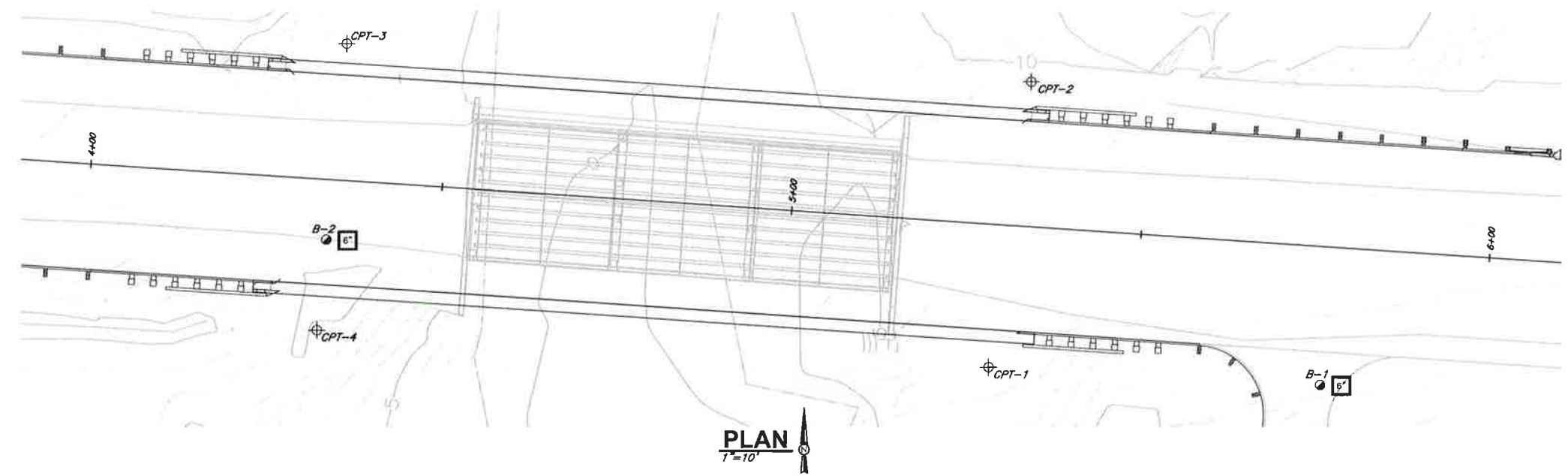
Gary D. Simpson 10-31-2014  
 CERTIFIED ENGINEERING GEOLOGIST DATE  
 10.31.14  
 PLANS APPROVAL DATE



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 812 W WABASH  
 EUREKA, CA 95501 FILE No. 012163

QUINCY ENGINEERING, INC.  
 3247 RAMOS CIRCLE  
 SACRAMENTO, CA 95827-2501



- NOTES:**
- THIS LOTB SHEET WAS PREPARED IN ACCORDANCE WITH THE "CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL" (2010).
  - FIELD CLASSIFICATION OF SOILS WAS IN ACCORDANCE WITH ASTM D2488-06 "DESCRIPTION AND IDENTIFICATION OF SOILS (VISUAL-MANUAL PROCEDURE).
  - STANDARD PENETRATION TESTS WERE COMPLETED IN ACCORDANCE WITH ASTM D 1586-11 USING A HAMMER WITH AN AUTOMATED DROP SYSTEM. DRILL RODS WERE 1 5/8-INCH DIAMETER "A" RODS, 1.4-INCH INSIDE DIAMETER SPLIT SPOON SAMPLER WAS DRIVEN WITHOUT BRASS LINERS.
  - 2.5-INCH INSIDE DIAMETER MODIFIED CALIFORNIA SAMPLER WAS DRIVEN IN THE SAME MANNER AS SPT, BUT WITH BRASS LINERS.
  - 3.0-INCH SHELBY TUBE WAS PUSHED INTO SOFT SOILS.
  - THE LENGTH OF EACH SAMPLES INTERVAL IS SHOWN GRAPHICALLY ON THE BORING LOG. WHOLE NUMBER BLOW COUNTS ("N") REPRESENT THE "STANDARD PENETRATION RESISTANCE" INTERVAL IN ACCORDANCE WITH ASTM D1586-11. WHERE LESS THAN 1 FOOT OF PENETRATION IS ACHIEVED, THE BLOW COUNT SHOWN IS FOR THAT FRACTION OF THE INTERVAL ACTUALLY PENETRATED AND THE AMOUNT OF PENETRATION IS SHOWN IN INCHES.
  - SPT HAMMER ENERGY MEASUREMENTS WERE NOT TAKEN DURING FIELD EXPLORATION.
  - GROUNDWATER SURFACE (GWS) ELEVATIONS IN THE BORINGS INDICATED ON THE LOG OF TEST BORINGS SHEETS REFLECT THE FLUID LEVEL IN THE BORING ON THE SPECIFIED DATE.
  - SEISMIC CONE PENETRATION TESTING LOGS SHOW SHEAR WAVE VELOCITY IN FEET PER SECOND.
  - ELECTRONIC MEDIA FOR PLAN VIEW PROVIDED BY QUINCY ENGINEERING.
  - BORING AND CPT ELEVATIONS ESTIMATED FROM TOPOGRAPHY PROVIDED BY QUINCY ENGINEERING.

DESIGN OVERSIGHT	DRAWN BY C. NEWELL	John Dailey, G.E. FIELD INVESTIGATION BY:	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 04C-0173	PINE HILL BRIDGE	
SIGN OFF DATE	CHECKED BY G.D. SIMPSON	DATE: October 2012	Jason P. Jurrens PROJECT ENGINEER	POST MILES	LOG OF TEST BORINGS	
GS GEOLOGIST LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)	ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			UNIT: PROJECT NUMBER & PHASE: X	CONTRACT NO.: X	DISREGARD PRINTS BEARING EARLIER REVISION DATES
				REVISION DATES	SHEET	OF
				X	13	15

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	HUM	CR		27	28

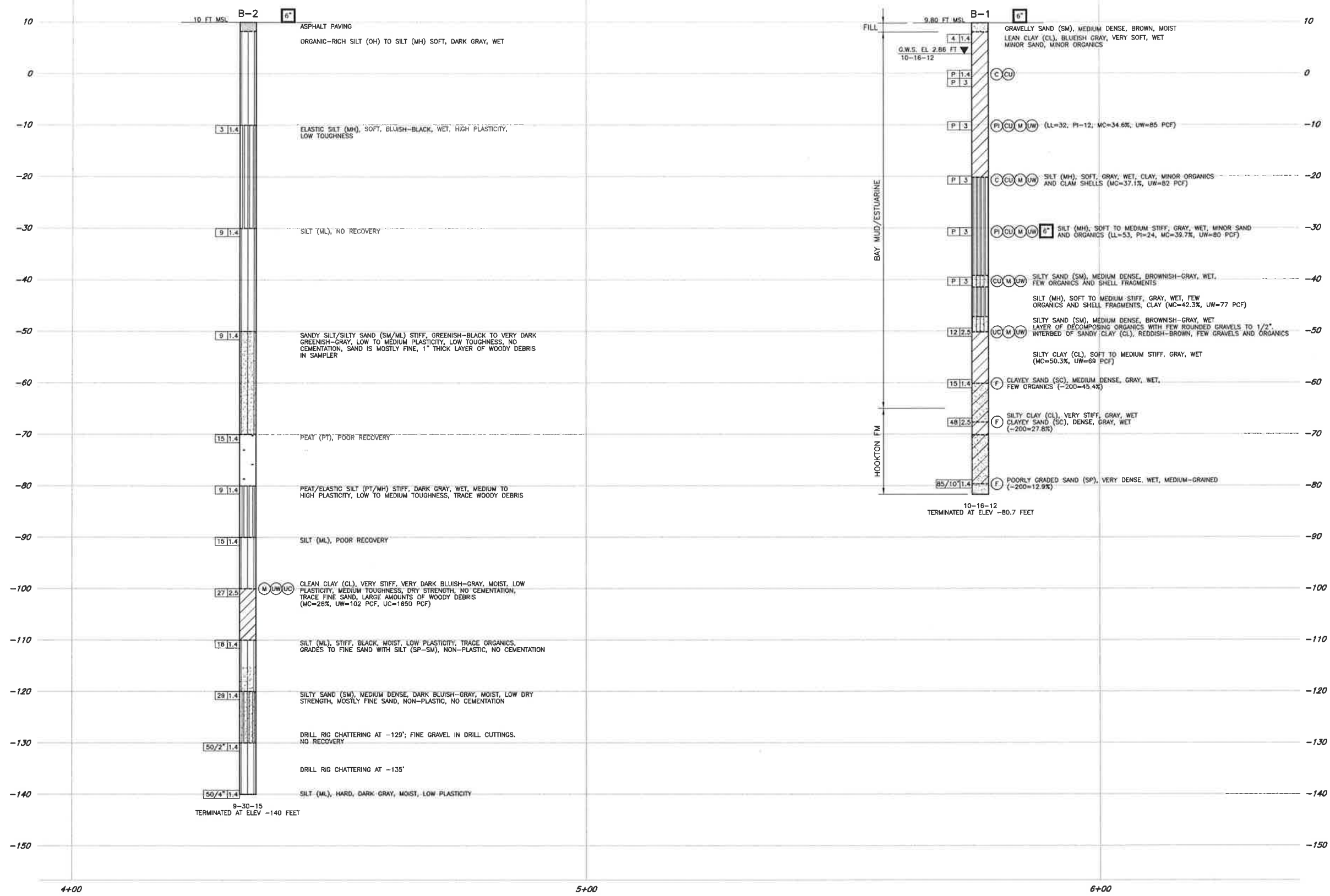
Gary D. Simpson 10-31-2014  
 CERTIFIED ENGINEERING GEOLOGIST DATE

10-31-14  
 PLANS APPROVAL DATE

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 SACRAMENTO, CA 95827-2501



**PROFILE**  
 NTS

DESIGN OVERSIGHT	DRAWN BY C. NEWELL	John Dailey, G.E.	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	Jason P. Jurens PROJECT ENGINEER	BRIDGE NO. 04C-0173	PINE HILL BRIDGE	
SIGN OFF DATE	CHECKED BY G.D. SIMPSON	DATE: October 2012			POST MILES	LOG OF TEST BORINGS	
GS GEOLOGIST LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: X	CONTRACT NO.: X	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES X
						SHEET 14	OF 15

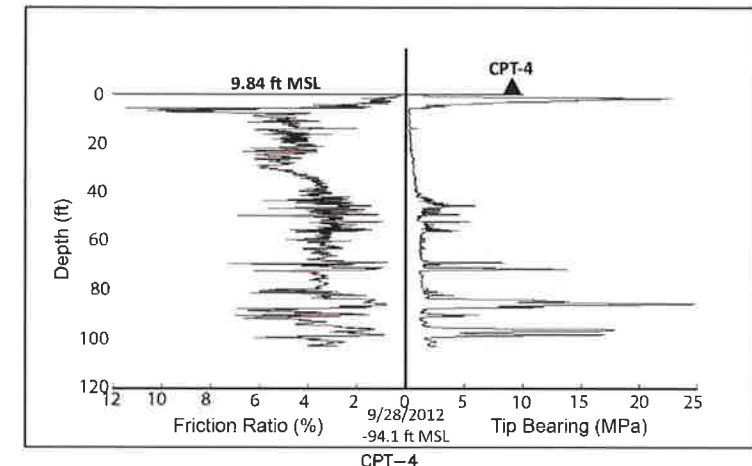
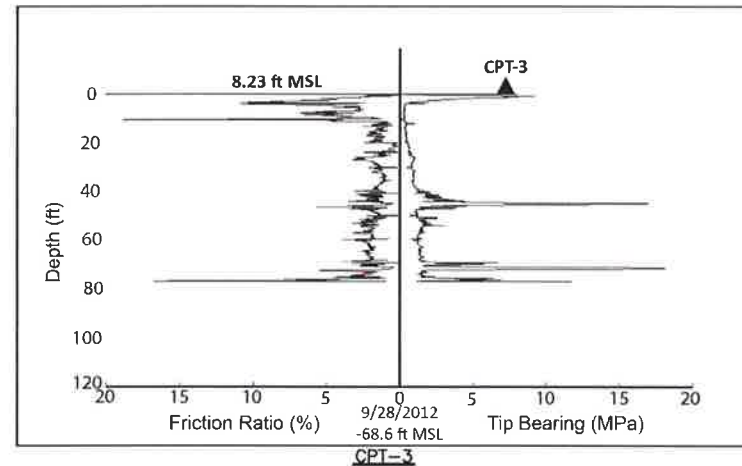
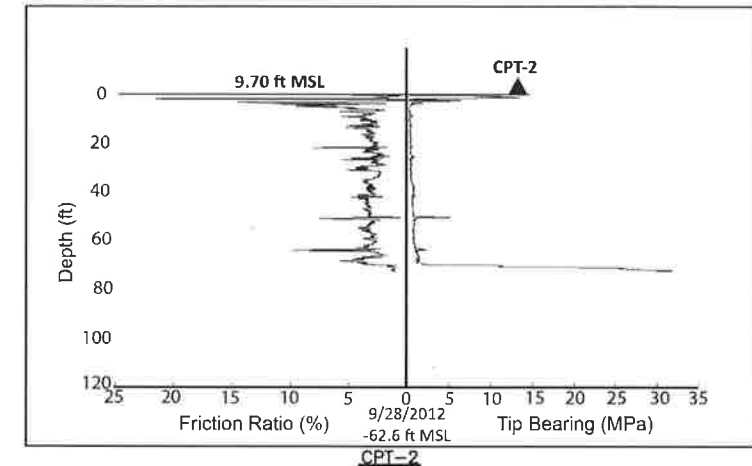
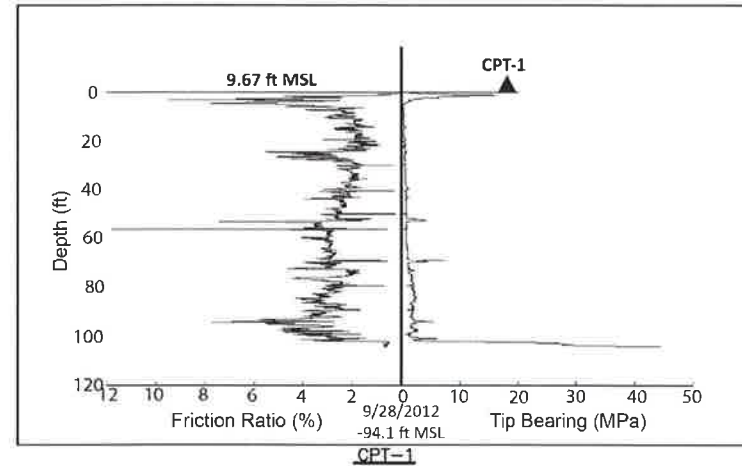
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
01	HUM	CR		28	28

**Gary D. Simpson** 10-31-2014  
 CERTIFIED ENGINEERING GEOLOGIST DATE  
 10-31-14  
 PLANS APPROVAL DATE

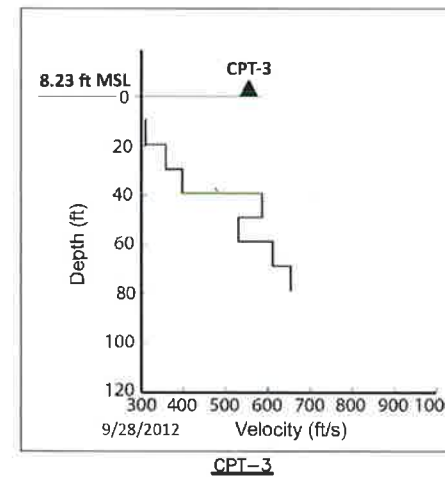
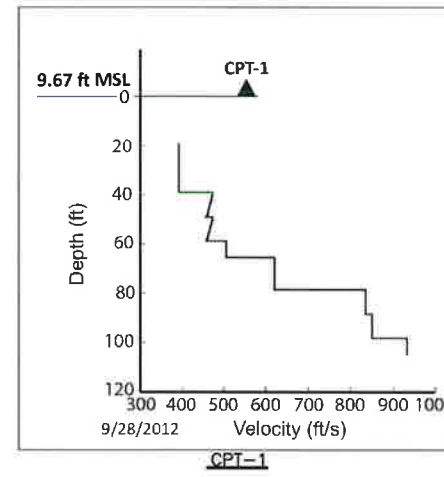
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**CONE PENETRATION TEST (CPT) BORINGS**



**SEISMIC CONE PENETRATION BORINGS**

DESIGN OVERSIGHT	DRAWN BY C. NEWELL	John Dailey, G.E. FIELD INVESTIGATION BY:	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 04C-0173	PINE HILL BRIDGE LOG OF TEST BORINGS
SIGN OFF DATE	CHECKED BY G.D. SIMPSON	DATE: October 2012	Jason P. Jurens PROJECT ENGINEER	POST MILES	
GS GEOLOGIST LOG OF TEST BORINGS SHEET (ENGLISH) (REV. 03/14/12)			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS	UNIT: PROJECT NUMBER & PHASE: X	CONTRACT NO.: X
				DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES X
				SHEET 15	OF 15