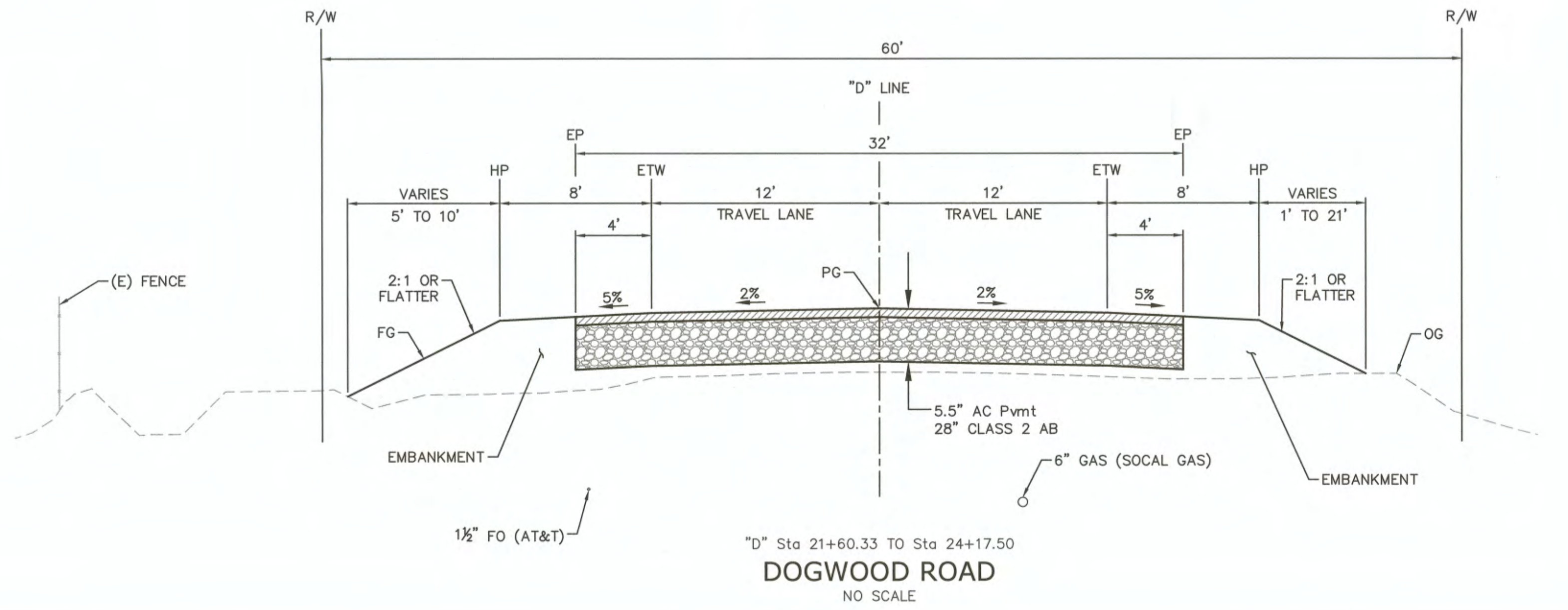
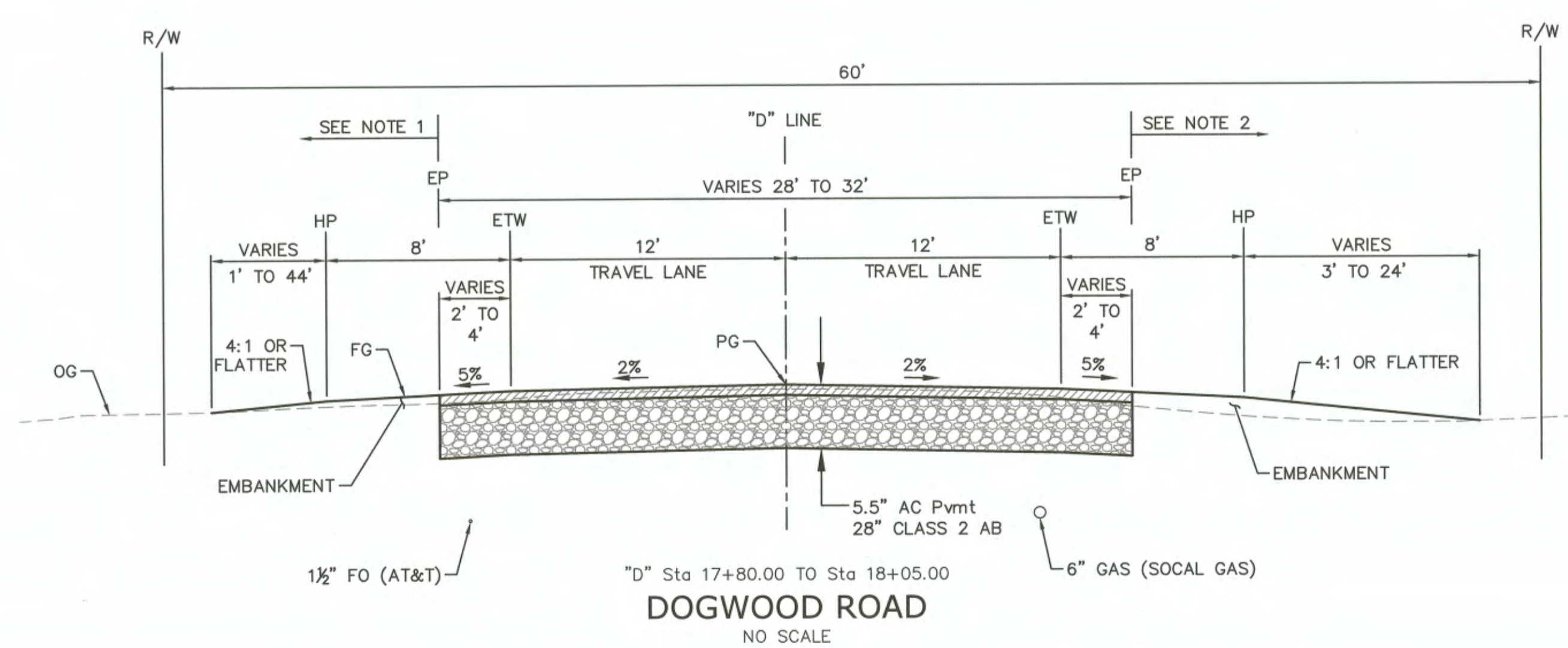
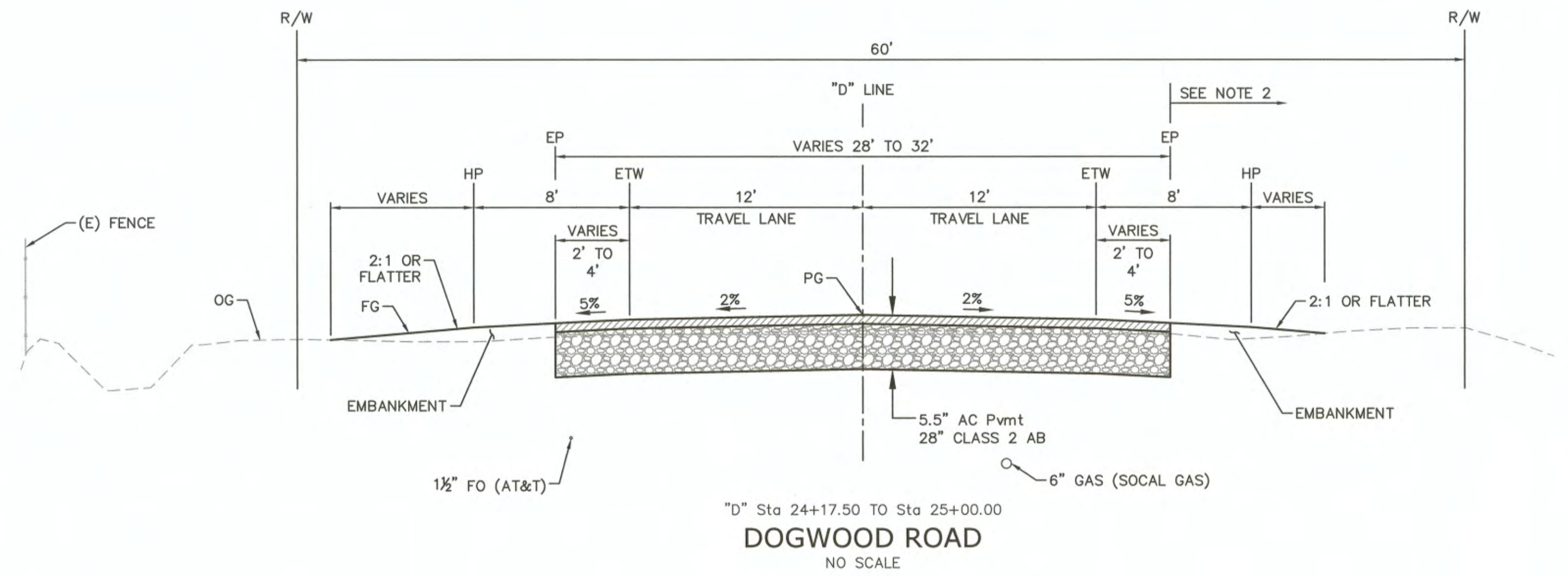
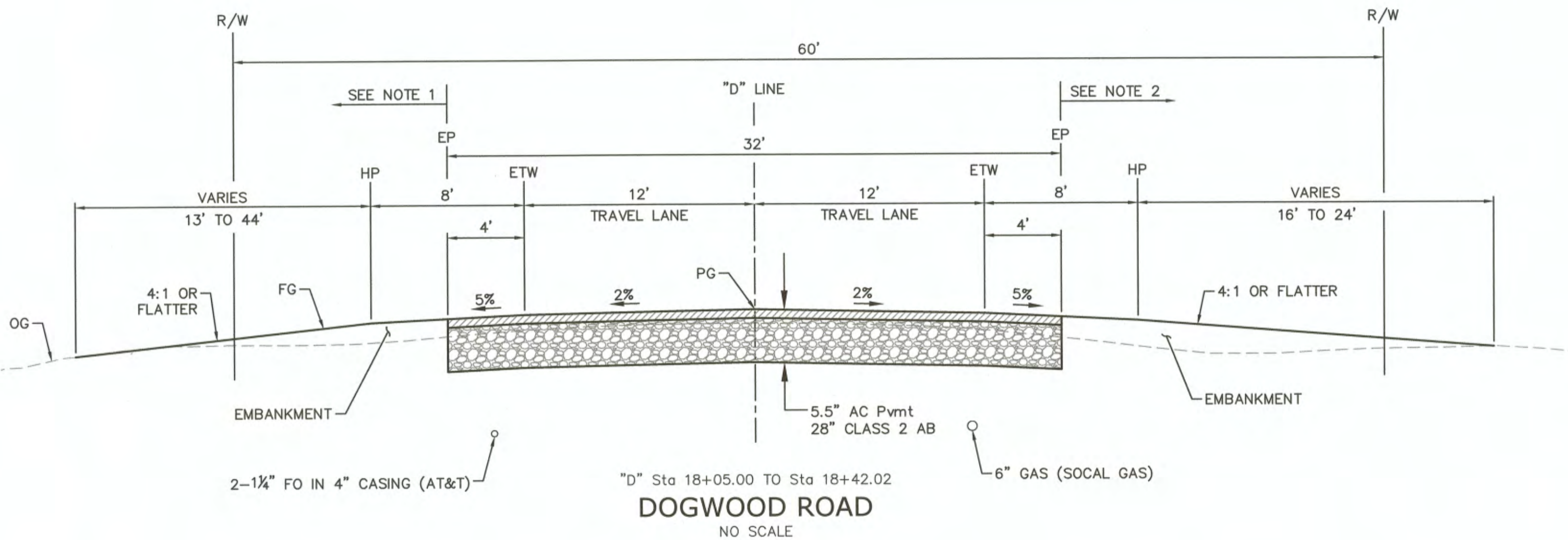
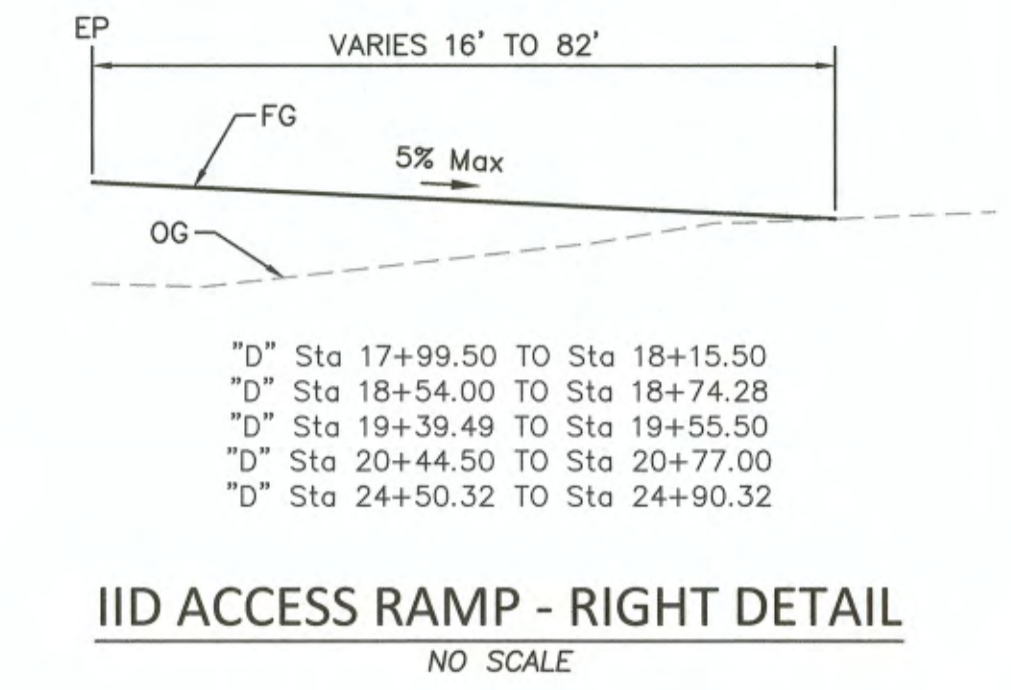
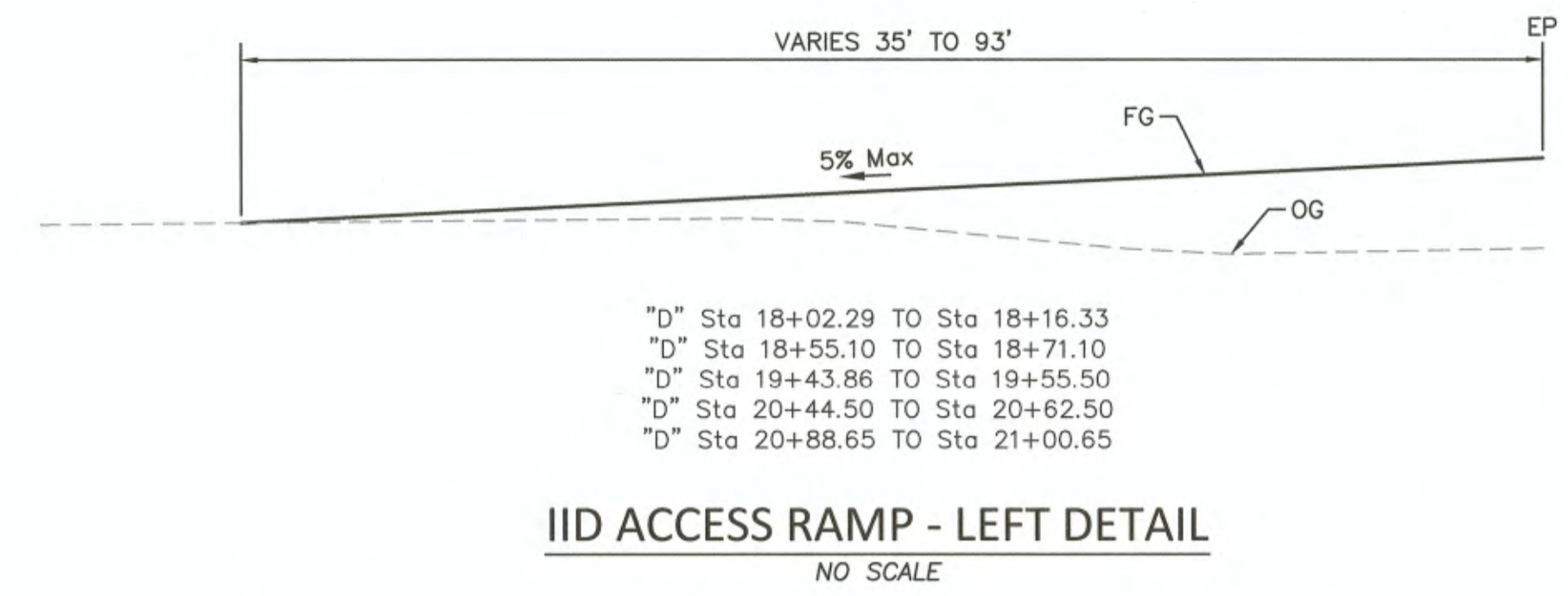
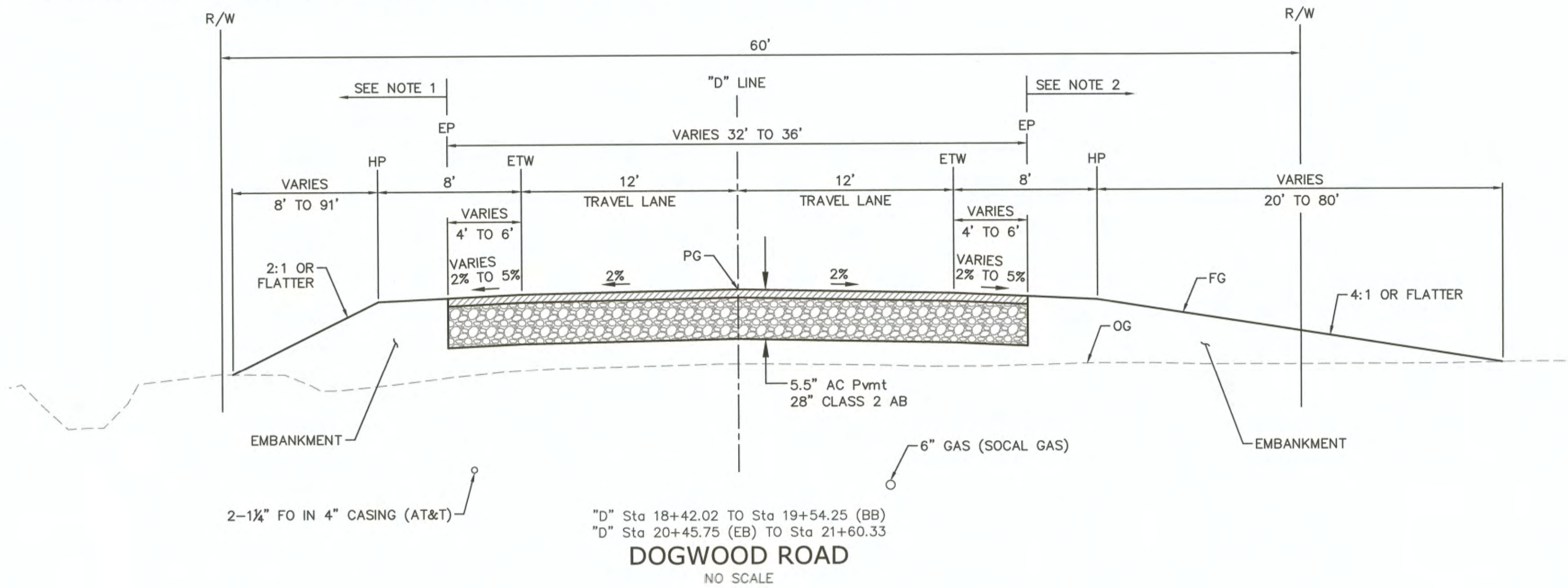
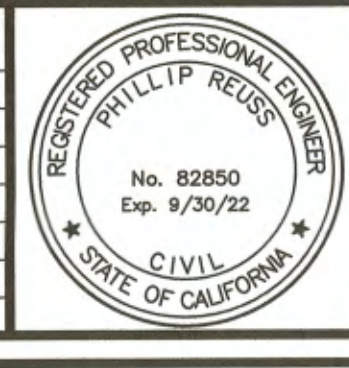


NOTES

1. FOR ADDITIONAL EDGE CONDITION DETAILS AT IID ACCESS RAMP, SEE IID ACCESS RAMP - LEFT DETAIL ON THIS SHEET.
2. FOR ADDITIONAL EDGE CONDITION DETAILS AT IID ACCESS RAMP, SEE IID ACCESS RAMP - RIGHT DETAIL ON THIS SHEET.



REVISION	DATE	COMMENTS



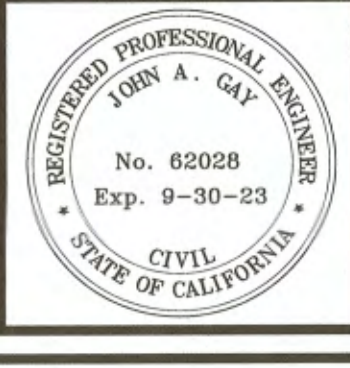
PREPARED UNDER THE DIRECT SUPERVISION OF:

Phillip Reuss

PHILLIP REUSS, P.E.
NV5

3/11/22 DATE

82850 R.C.E. No.
9/30/22 REG. EXP.



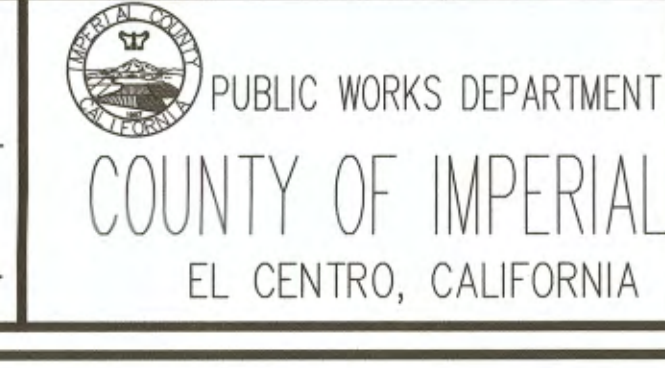
COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
APPROVED FOR CONSTRUCTION BY:

John A. Gay

JOHN A. GAY, P.E.
ROAD COMMISSIONER

3/17/2022 DATE

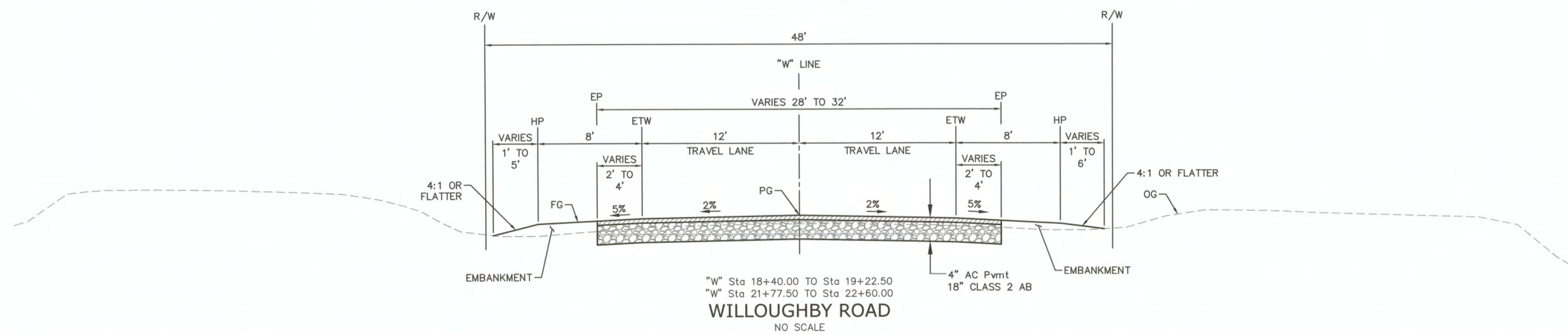
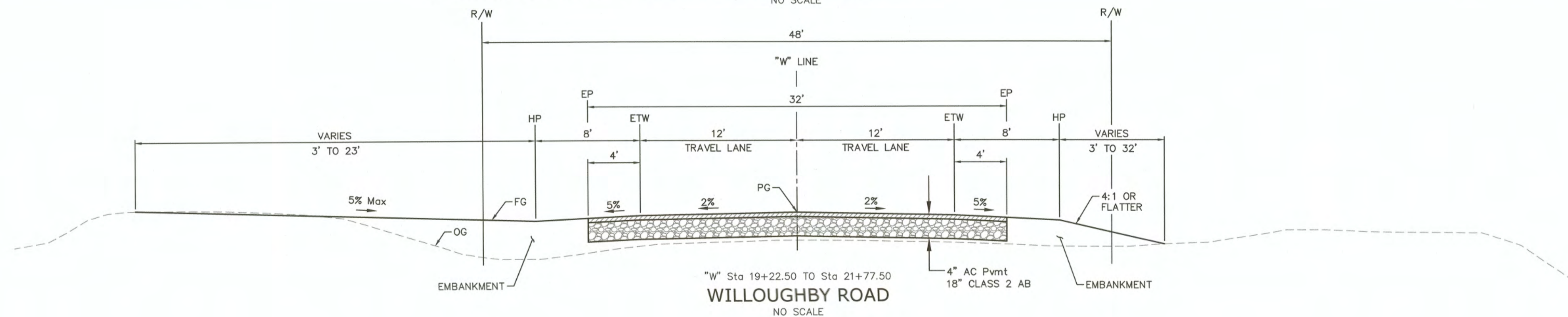
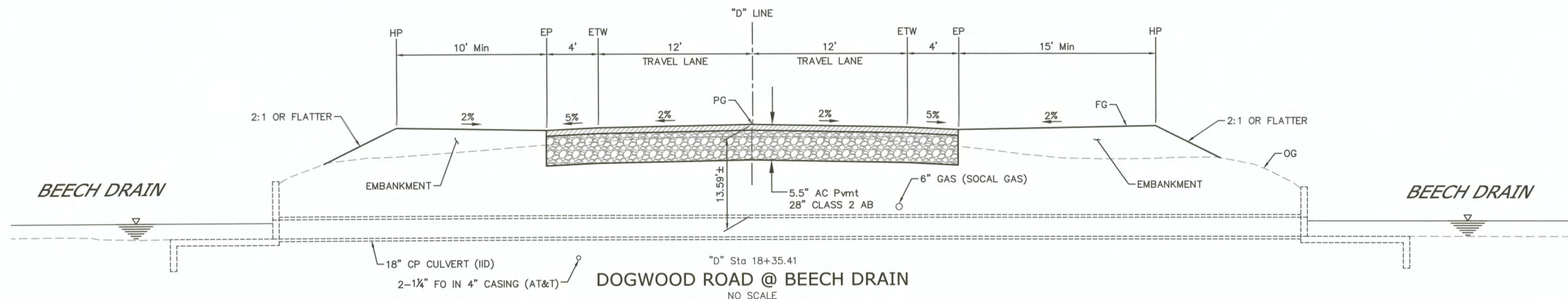
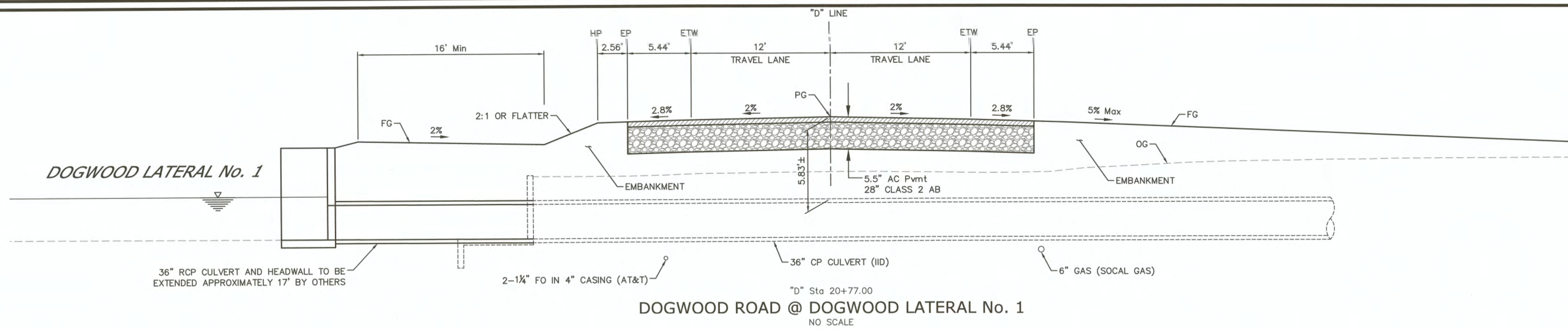
62028 R.C.E. No.
9/30/23 REG. EXP.



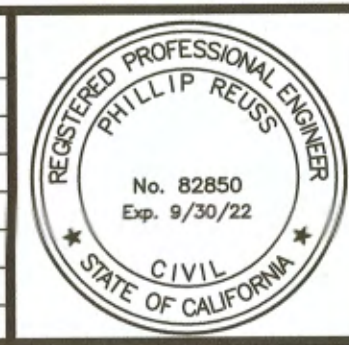
DATE 3/11/2022
DRAWN PAR
SCALE AS SHOWN
CHECKED JLA

**DOGWOOD ROAD BRIDGE REPLACEMENT
OVER CENTRAL MAIN CANAL
BRIDGE NO. 58C-0226**

TYPICAL CROSS SECTIONS	
REFERENCE X-1	B-195 R-968
SHEET 2	OF 18

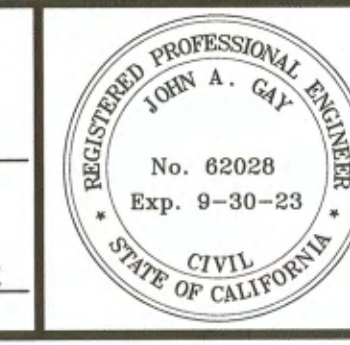


REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:

 PHILLIP REUSS, P.E.
 NV5
 3/11/22
 DATE



COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:

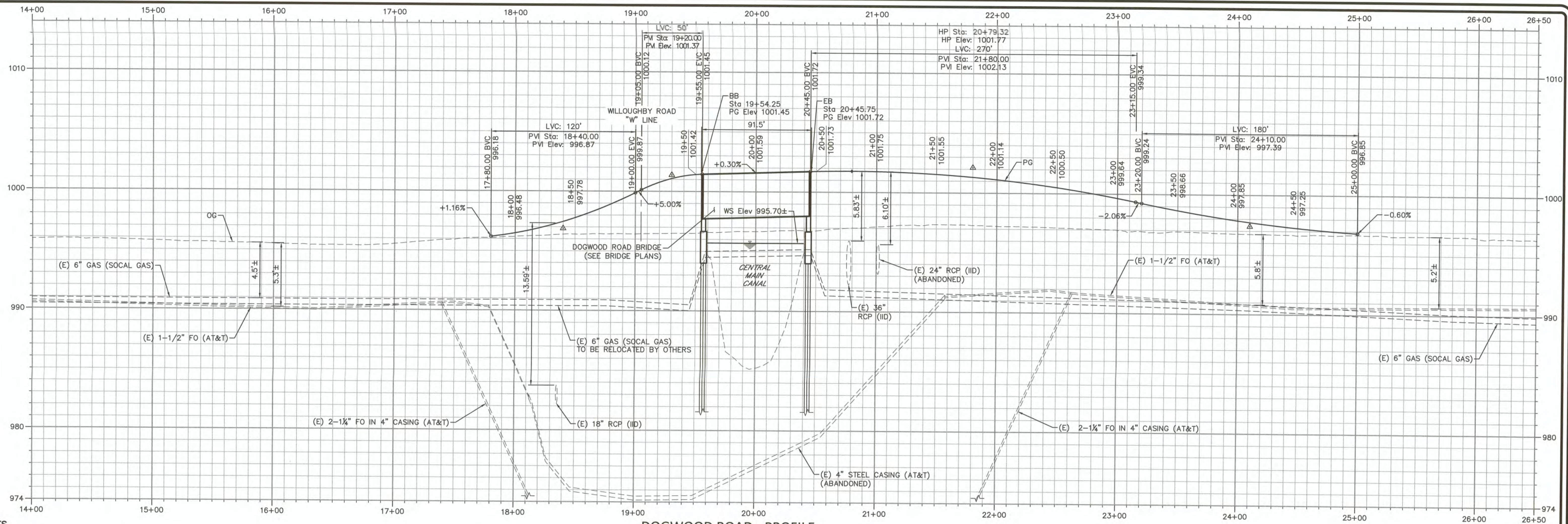
 JOHN A. GAY, P.E.
 ROAD COMMISSIONER
 03/17/2022
 DATE

62028
 R.C.E. No.
 9/30/23
 REG. EXP.

DATE 3/11/2022
 DRAWN PAR
 SCALE AS SHOWN
 CHECKED JLA

DOGWOOD ROAD BRIDGE REPLACEMENT
 OVER CENTRAL MAIN CANAL
 BRIDGE NO. 58C-0226

TYPICAL CROSS SECTIONS	
REFERENCE	B-195 R-968
X-2	SHEET OF 3 18

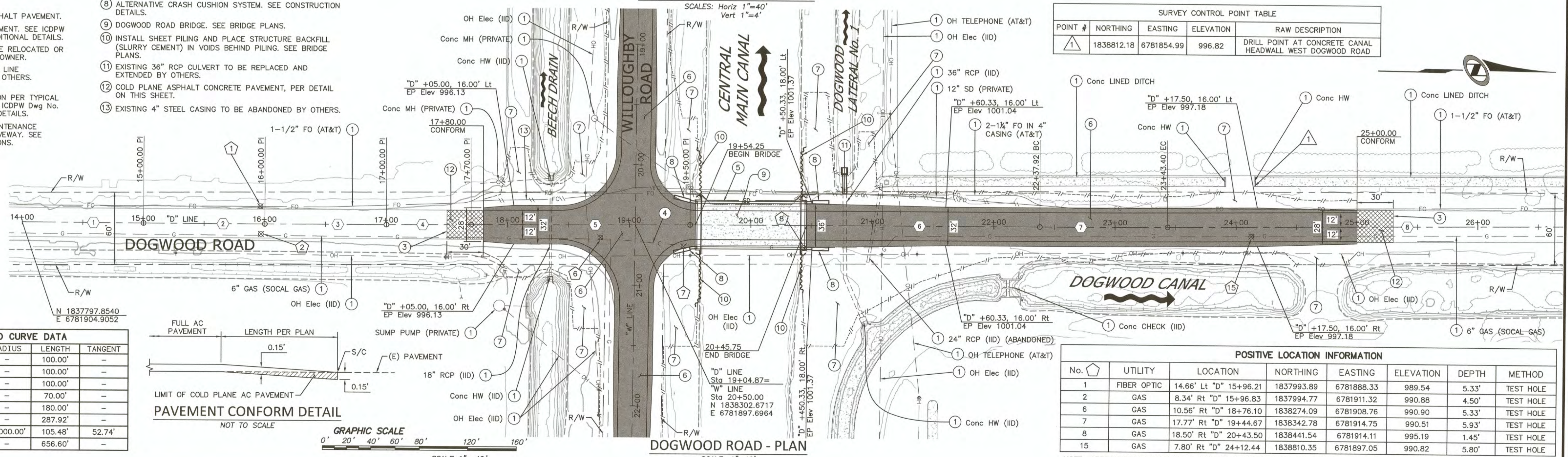


DOGWOOD ROAD - PROFILE

CONSTRUCTION NOTES

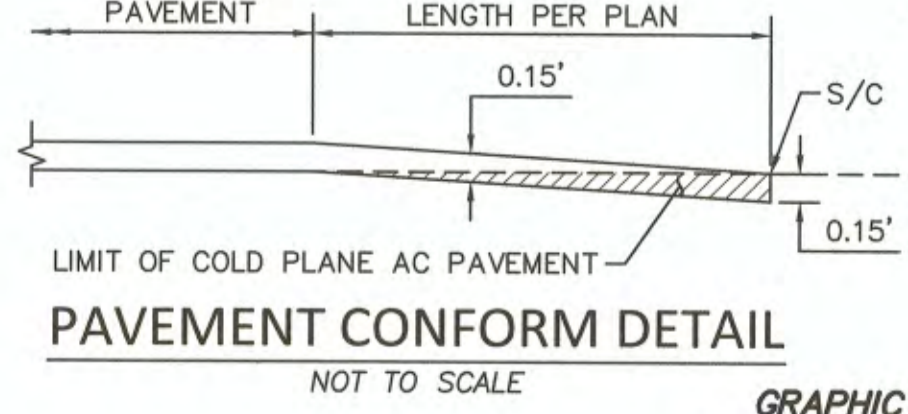
- 1 PROTECT IN PLACE.
- 2 SAWCUT EXISTING ASPHALT PAVEMENT.
- 3 MATCH EXISTING PAVEMENT. SEE ICDPW Dwg No. 453 FOR ADDITIONAL DETAILS.
- 4 EXISTING UTILITY TO BE RELOCATED OR ADJUSTED BY UTILITY OWNER.
- 5 PRIVATE STORM DRAIN LINE TO BE RELOCATED BY OTHERS.
- 6 NEW PAVEMENT SECTION PER TYPICAL CROSS SECTIONS. SEE ICDPW Dwg No. 440 FOR ADDITIONAL DETAILS.
- 7 GRADED RAMP TO MAINTENANCE ACCESS ROAD OR DRIVEWAY. SEE TYPICAL CROSS SECTIONS.
- 8 ALTERNATIVE CRASH CUSHION SYSTEM. SEE CONSTRUCTION DETAILS.
- 9 DOGWOOD ROAD BRIDGE. SEE BRIDGE PLANS.
- 10 INSTALL SHEET PILING AND PLACE STRUCTURE BACKFILL (SLURRY CEMENT) IN VOIDS BEHIND PILING. SEE BRIDGE PLANS.
- 11 EXISTING 36" RCP CULVERT TO BE REPLACED AND EXTENDED BY OTHERS.
- 12 COLD PLANE ASPHALT CONCRETE PAVEMENT, PER DETAIL ON THIS SHEET.
- 13 EXISTING 4" STEEL CASING TO BE ABANDONED BY OTHERS.

SURVEY CONTROL POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	RAW DESCRIPTION
1	1838812.18	6781854.99	996.82	DRILL POINT AT CONCRETE CANAL HEADWALL WEST DOGWOOD ROAD



DOGWOOD ROAD - PLAN

LINE AND CURVE DATA				
NO	DELTA/BEARING	RADIUS	LENGTH	TANGENT
1	N 00°28'29" W	-	100.00'	-
2	N 00°38'43" W	-	100.00'	-
3	N 00°49'58" W	-	100.00'	-
4	N 01°09'06" W	-	70.00'	-
5	N 01°01'01" W	-	180.00'	-
6	N 00°47'15" W	-	287.92'	-
7	Δ=00°36'16"	10,000.00'	105.48'	52.74'
8	N 01°23'31" W	-	656.60'	-



POSITIVE LOCATION INFORMATION							
No.	UTILITY	LOCATION	NORTHING	EASTING	ELEVATION	DEPTH	METHOD
1	FIBER OPTIC	14.66' Lt "D" 15+96.21	1837993.89	6781888.33	989.54	5.33'	TEST HOLE
2	GAS	8.34' Rt "D" 15+96.83	1837994.77	6781911.32	990.88	4.50'	TEST HOLE
6	GAS	10.56' Rt "D" 18+76.10	1838274.09	6781908.76	990.90	5.33'	TEST HOLE
7	GAS	17.77' Rt "D" 19+44.67	1838342.78	6781914.75	990.51	5.93'	TEST HOLE
8	GAS	18.50' Rt "D" 20+43.50	1838441.54	6781914.11	995.19	1.45'	TEST HOLE
15	GAS	7.80' Rt "D" 24+12.44	1838810.35	6781897.05	990.82	5.80'	TEST HOLE

NOTE: APPROXIMATE LOCATION OF EXISTING UTILITIES BASED ON POT HOLE SURVEY CONDUCTED IN JANUARY 2022.

REVISION	DATE	COMMENTS

PREPARED UNDER THE DIRECT SUPERVISION OF:

Phillip Reuss
 PHILLIP REUSS, P.E.
 NVS
 No. 82850
 Exp. 9/30/22
 CIVIL
 STATE OF CALIFORNIA

82850 R.C.E. No.
 9/30/22 REG. EXP.

COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:

John A. Gay
 JOHN A. GAY, P.E.
 ROAD COMMISSIONER
 No. 62028
 Exp. 9-30-23
 CIVIL
 STATE OF CALIFORNIA

62028 R.C.E. No.
 9/30/23 REG. EXP.

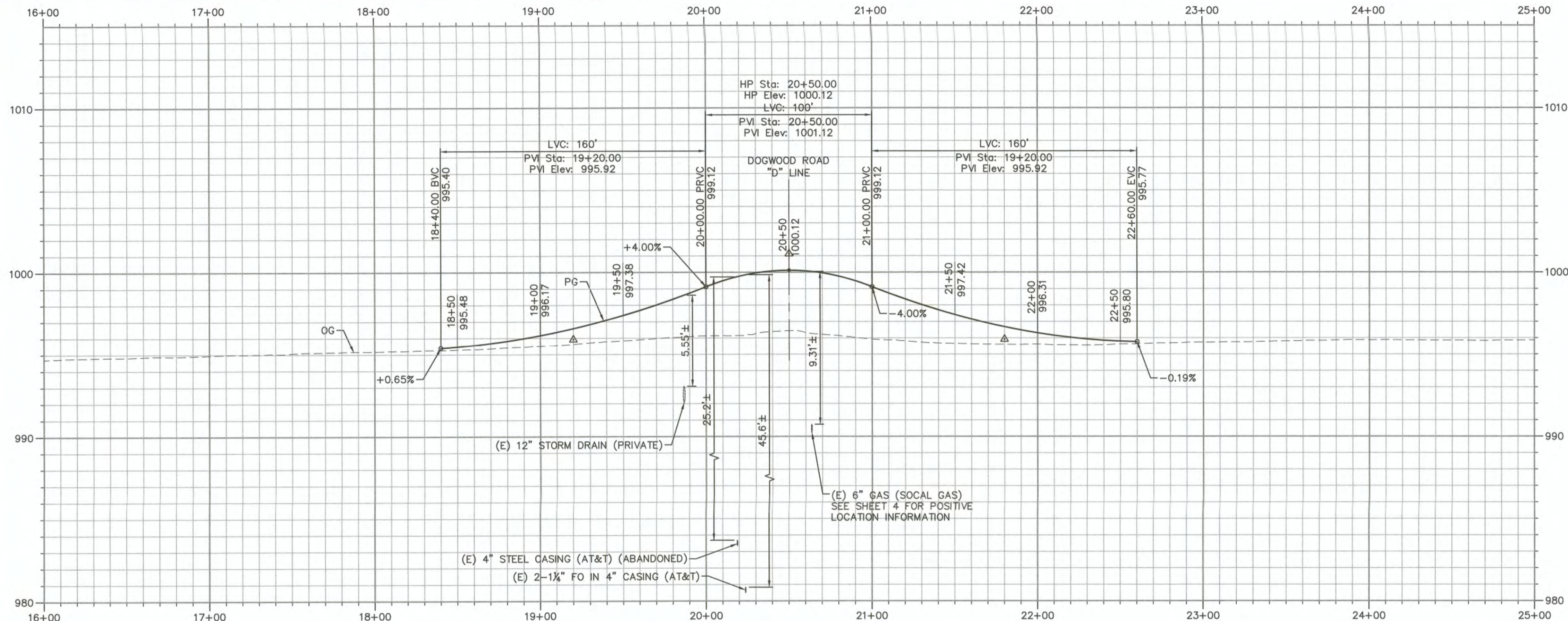
PUBLIC WORKS DEPARTMENT
 COUNTY OF IMPERIAL
 EL CENTRO, CALIFORNIA

DATE 3/11/2022
 DRAWN PAR
 SCALE AS SHOWN
 CHECKED JLA

PLAN AND PROFILE
 DOGWOOD ROAD
 BRIDGE NO. 58C-0226

REFERENCE PP-1

B-195
 R-968
 SHEET OF 4 18

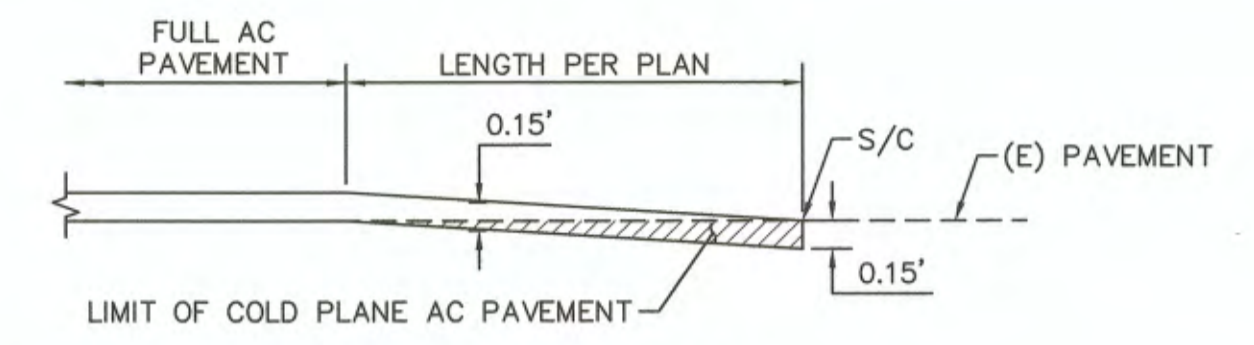


WILLOUGHBY ROAD - PROFILE

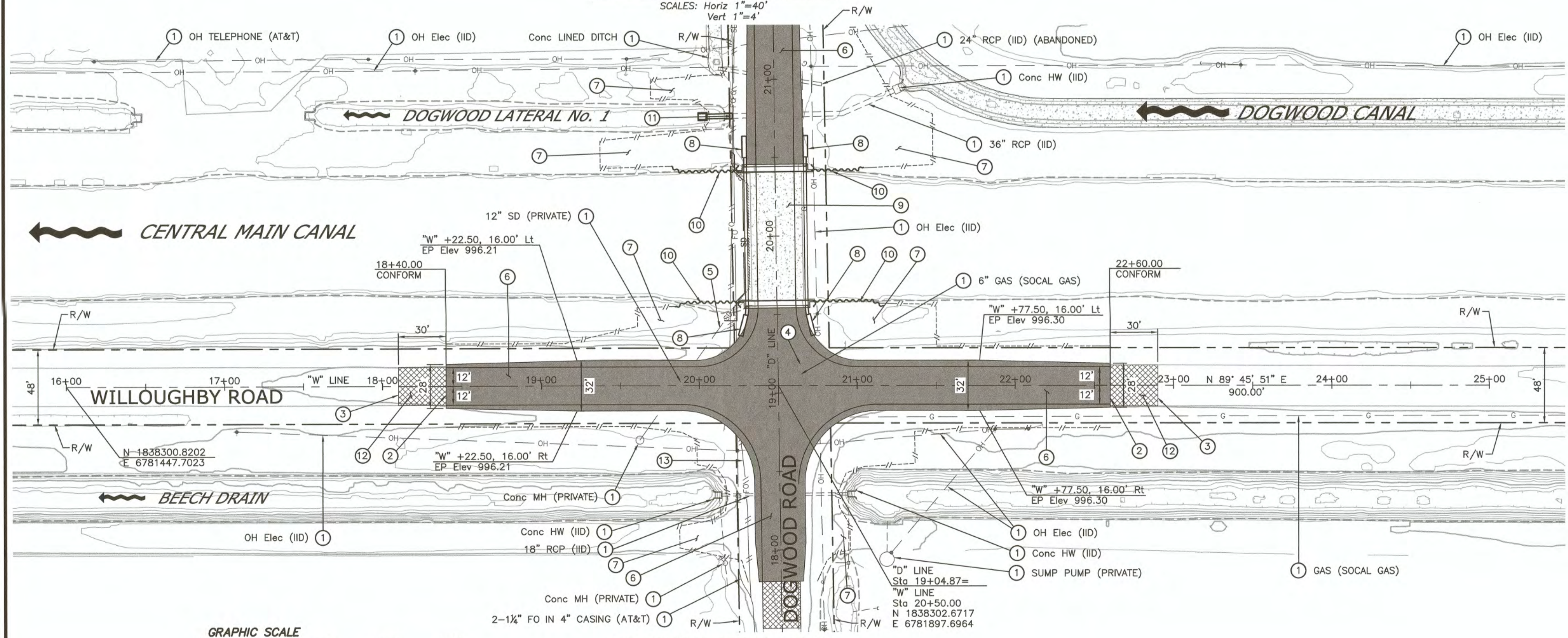
SCALES: Horiz 1"=40'
Vert 1"=4'

CONSTRUCTION NOTES

- 1 PROTECT IN PLACE.
- 2 SAWCUT EXISTING ASPHALT PAVEMENT.
- 3 MATCH EXISTING PAVEMENT. SEE ICDPW Dwg No. 453 FOR ADDITIONAL DETAILS.
- 4 EXISTING UTILITY TO BE RELOCATED OR ADJUSTED BY UTILITY OWNER.
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- 8 ALTERNATIVE CRASH CUSHION SYSTEM. SEE CONSTRUCTION DETAILS.
- 9 DOGWOOD ROAD BRIDGE. SEE BRIDGE PLANS.
- 10 INSTALL SHEET PILING AND PLACE STRUCTURE BACKFILL (SLURRY CEMENT) IN VOIDS BEHIND PILING. SEE BRIDGE PLANS.
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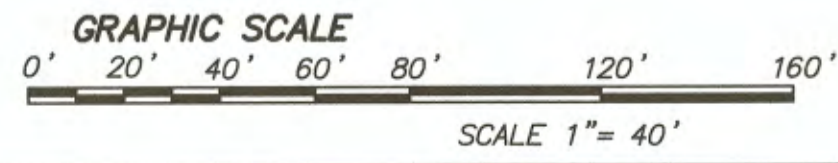


PAVEMENT CONFORM DETAIL
NOT TO SCALE



WILLOUGHBY ROAD - PLAN

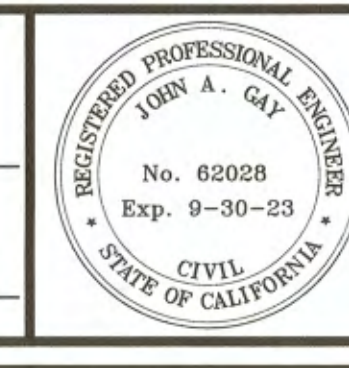
SCALE: 1"=40'



REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:
Phillip Reuss
 PHILLIP REUSS, P.E.
 NVS
 3/11/22
 DATE

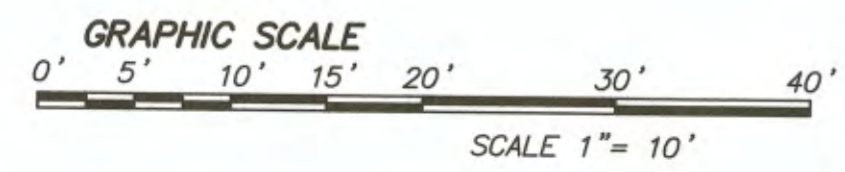
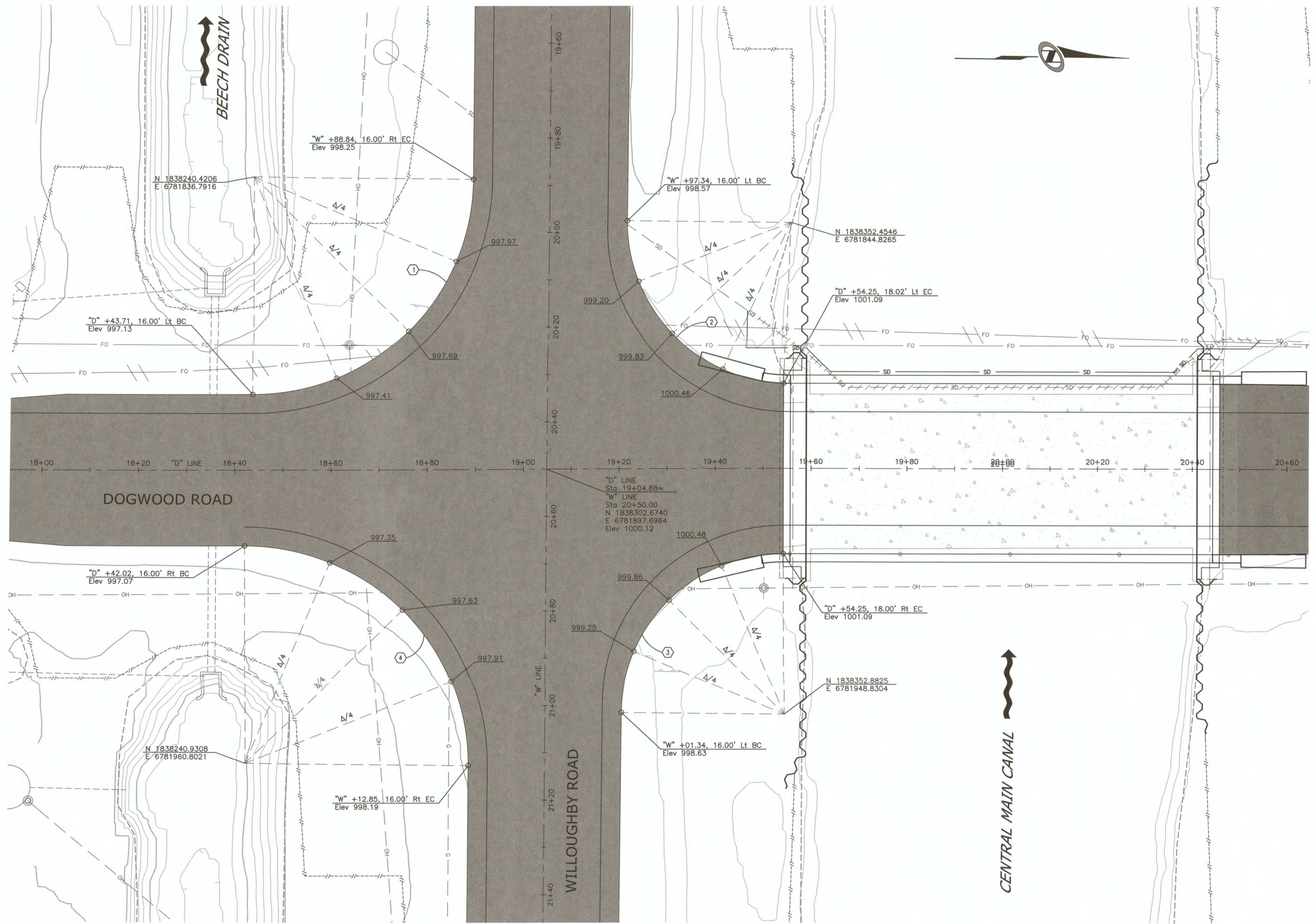


COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:
John A. Gay
 JOHN A. GAY, P.E.
 ROAD COMMISSIONER
 03/17/2022
 DATE

COUNTY OF IMPERIAL
 PUBLIC WORKS DEPARTMENT
 EL CENTRO, CALIFORNIA
 DATE: 3/11/2022
 DRAWN: PAR
 SCALE: AS SHOWN
 CHECKED: JLA

PLAN AND PROFILE
 WILLOUGHBY ROAD
 DOGWOOD ROAD BRIDGE REPLACEMENT
 OVER CENTRAL MAIN CANAL
 BRIDGE NO. 58C-0226
 REFERENCE: PP-2

CURVE DATA				
No.	RADIUS	DELTA	LENGTH	TANGENT
①	46.00'	89° 13' 08"	71.63'	45.38'
②	34.00'	90° 33' 07"	53.73'	34.33'
③	34.00'	89° 26' 53"	53.08'	33.67'
④	46.00'	90° 46' 52"	72.88'	46.63'

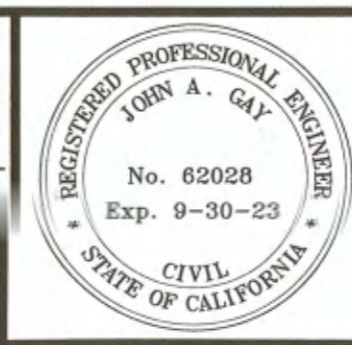


INTERSECTION DETAILS
SCALE: 1"=10'

REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:
Phillip Reuss
 PHILLIP REUSS, P.E.
 No. 82850
 R.C.E. No. 9/30/22
 DATE 3/11/22 REG. EXP. 9/30/22



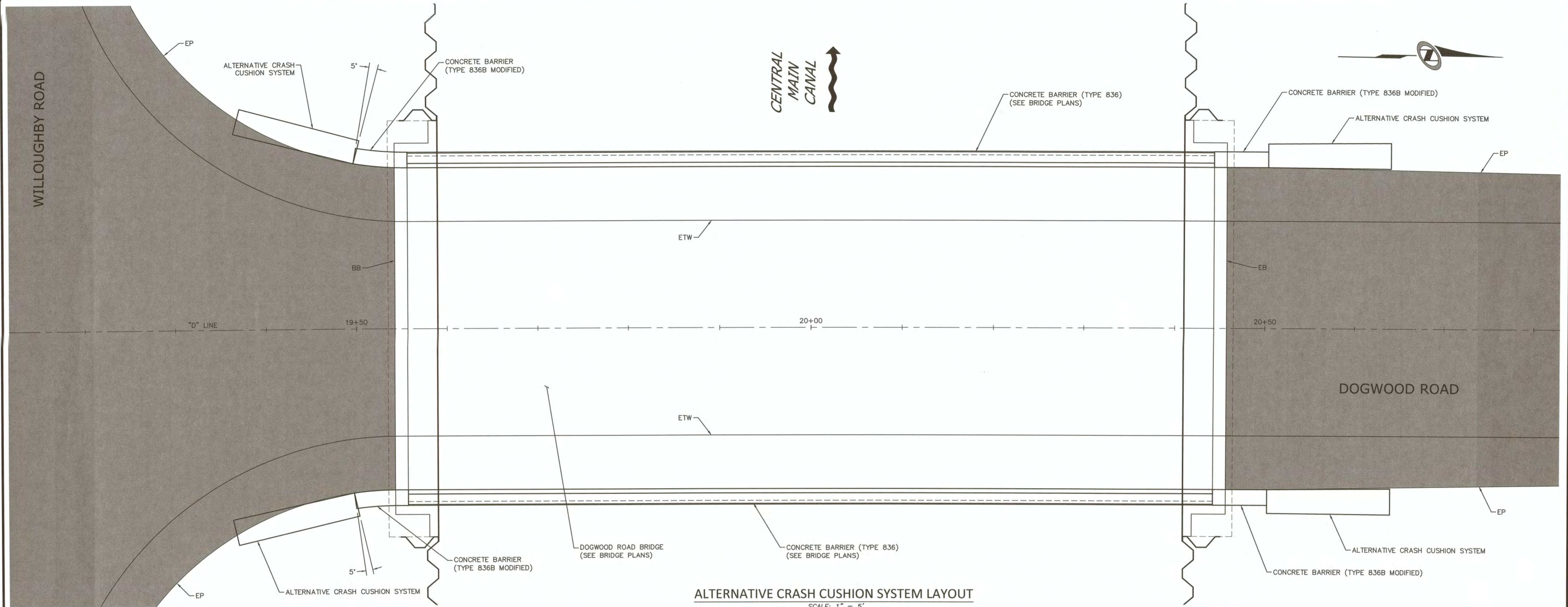
COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:
John A. Gay
 JOHN A. GAY, P.E.
 ROAD COMMISSIONER
 No. 62028
 R.C.E. No. 9/30/23
 DATE 03/17/2022 REG. EXP. 9/30/23



DATE 3/11/2022
 DRAWN PAR
 SCALE AS SHOWN
 CHECKED JLA

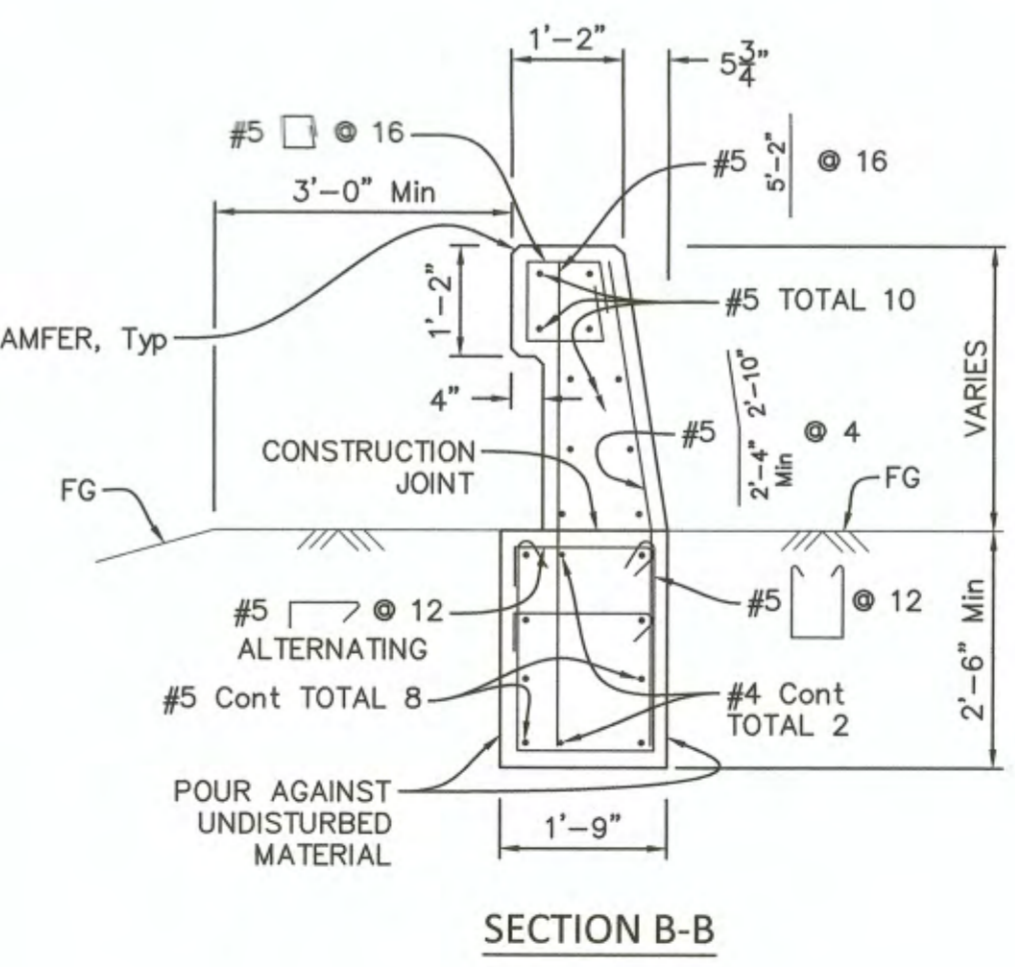
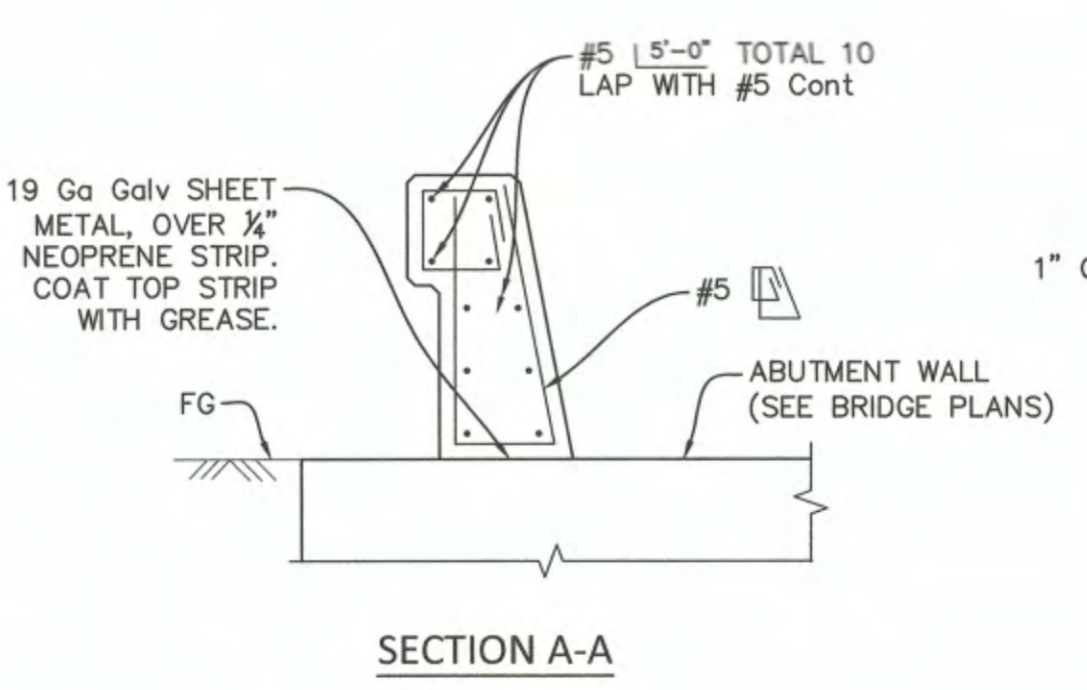
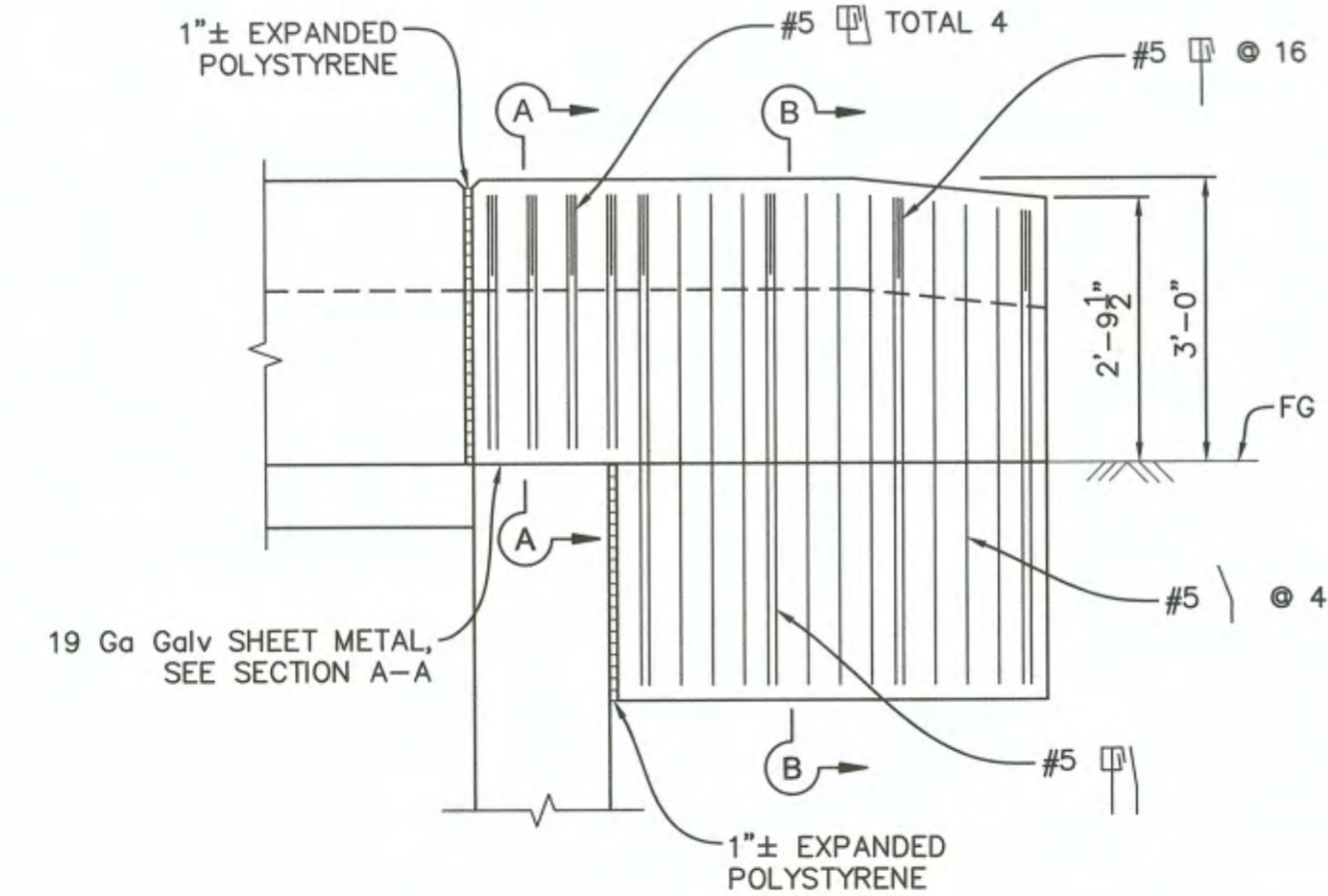
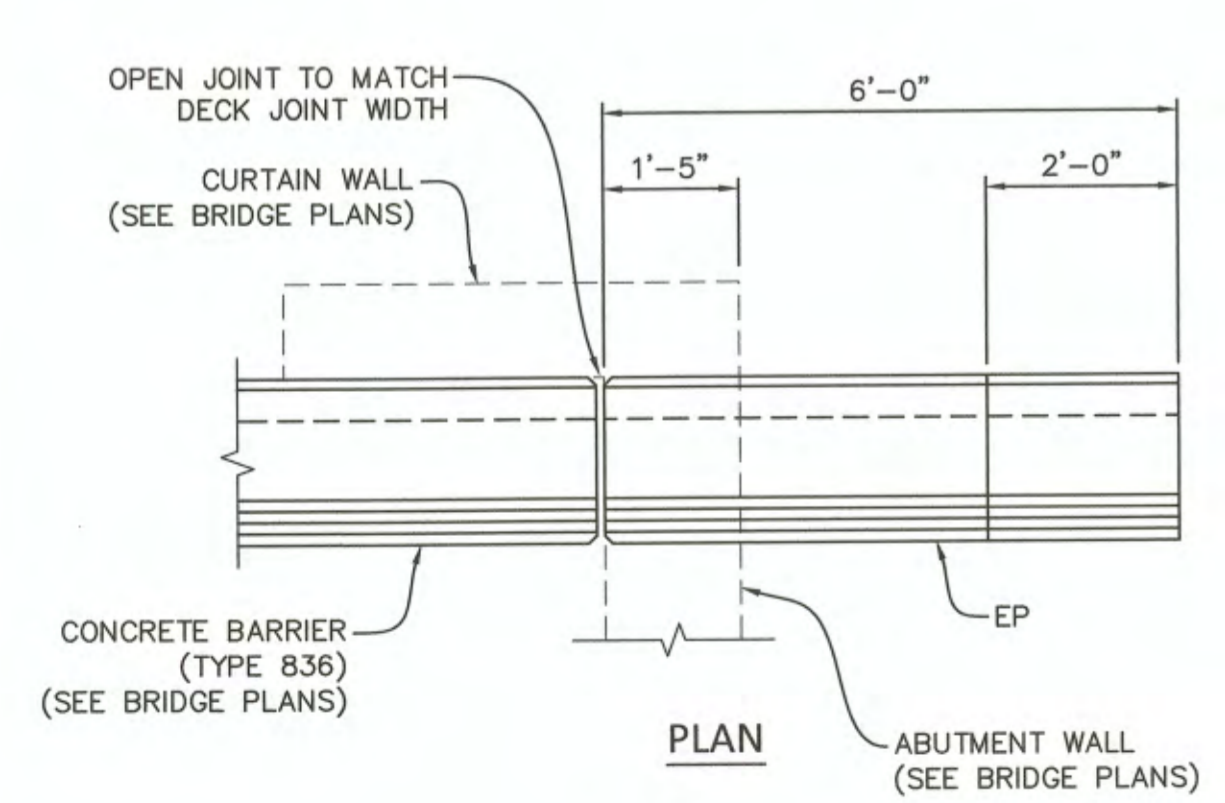
**DOGWOOD ROAD BRIDGE REPLACEMENT
 OVER CENTRAL MAIN CANAL
 BRIDGE NO. 58C-0226**

CONSTRUCTION DETAILS	
REFERENCE C-1	B-195 R-968 SHEET OF 6 18



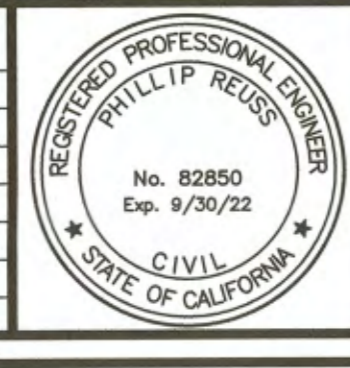
ALTERNATIVE CRASH CUSHION SYSTEM LAYOUT
SCALE: 1" = 5'

- NOTES**
- FOR CRASH CUSHION INSTALLATION DETAILS, SEE MANUFACTURER'S PRODUCT MANUAL OF SELECTED CRASH CUSHION. FOR ALLOWABLE ALTERNATIVE CRASH CUSHION SYSTEMS, SEE SPECIAL PROVISIONS.
 - FOR CONCRETE BARRIER DETAILS NOT SHOWN, SEE CALTRANS REVISED STANDARD PLANS RSP B11-79 AND RSP B11-80.



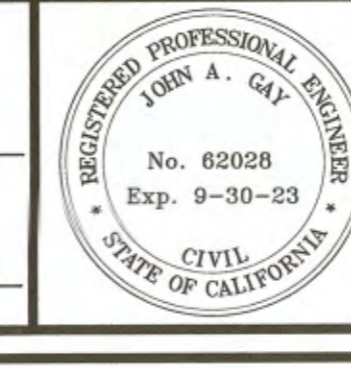
CONCRETE BARRIER (TYPE 836B MODIFIED) DETAIL
NO SCALE

REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:

 PHILLIP REUSS, P.E.
 NV5
 DATE: 3/11/22
 REG. EXP.: 9/30/22



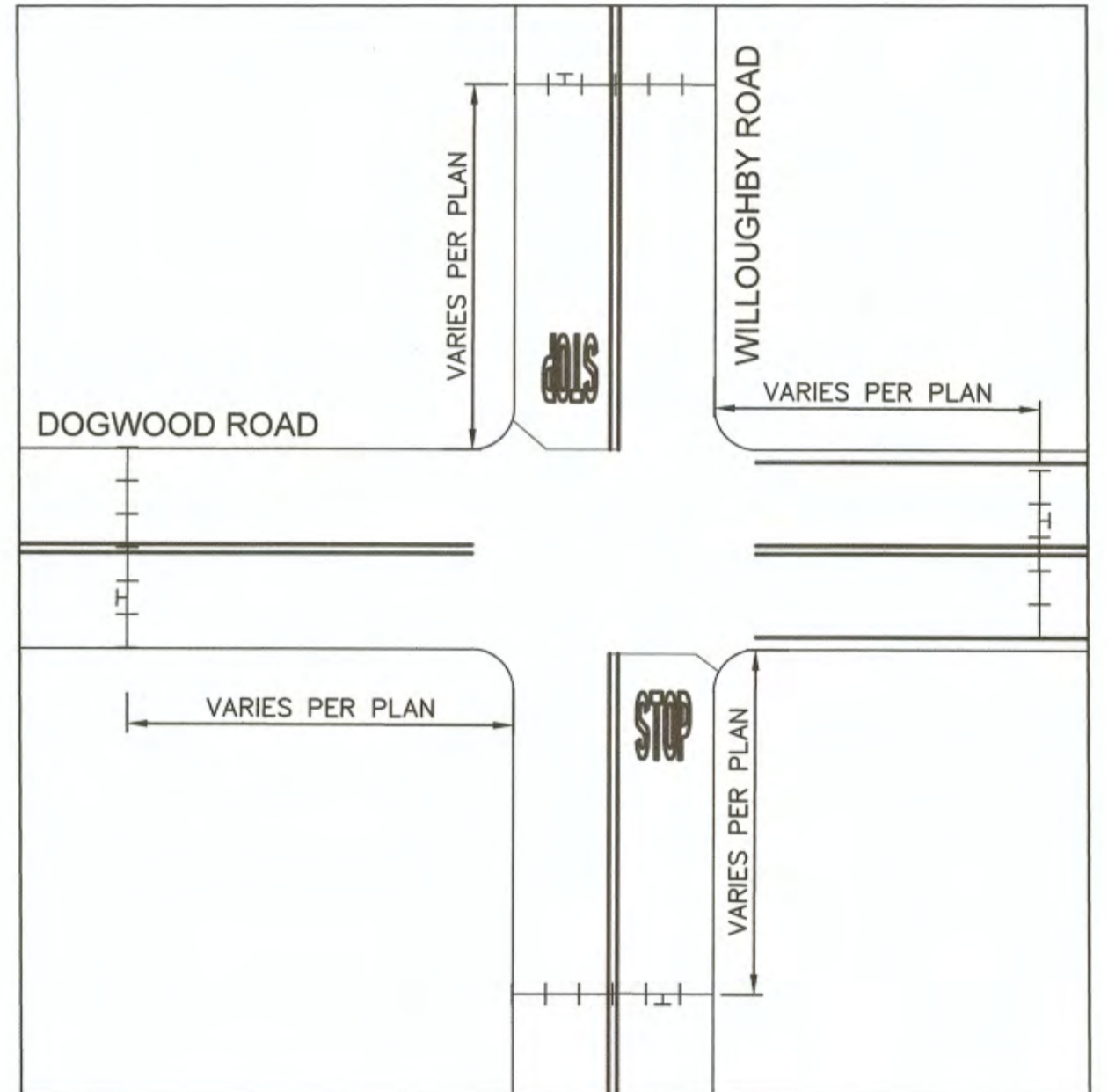
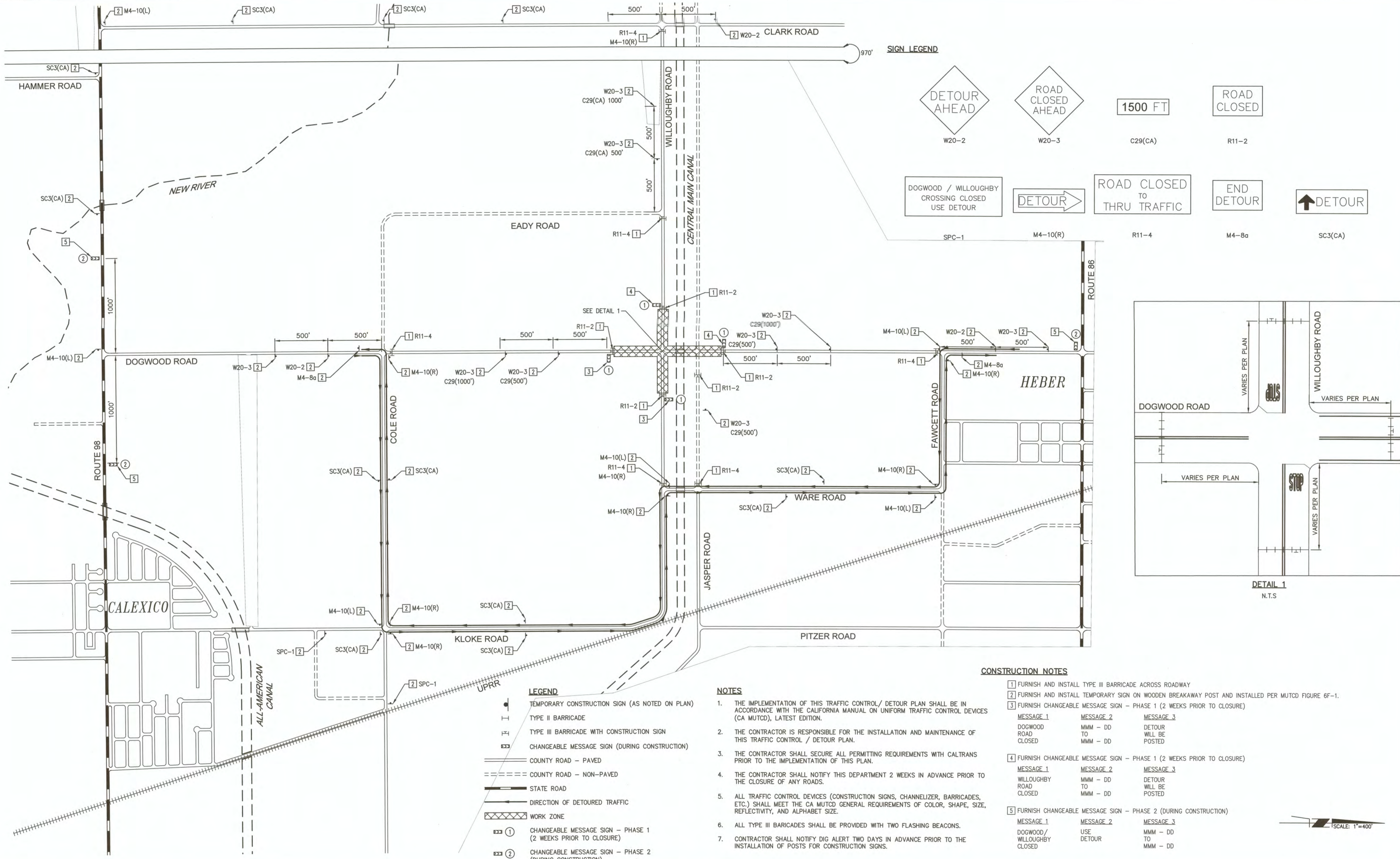
COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:

 JOHN A. GAY, P.E.
 ROAD COMMISSIONER
 DATE: 03/17/2022
 R.C.E. No.: 62028
 REG. EXP.: 9/30/23

PUBLIC WORKS DEPARTMENT
 COUNTY OF IMPERIAL
 EL CENTRO, CALIFORNIA
 DATE: 3/11/2022
 DRAWN: PAR
 SCALE: AS SHOWN
 CHECKED: JLA

**DOGWOOD ROAD BRIDGE REPLACEMENT
 OVER CENTRAL MAIN CANAL
 BRIDGE NO. 58C-0226**

CONSTRUCTION DETAILS	
REFERENCE: C-2	B-195 R-968
SHEET: 7	OF: 18



- LEGEND**
- TEMPORARY CONSTRUCTION SIGN (AS NOTED ON PLAN)
 - |— TYPE II BARRICADE
 - |—|— TYPE III BARRICADE WITH CONSTRUCTION SIGN
 - |—|— CHANGEABLE MESSAGE SIGN (DURING CONSTRUCTION)
 - — — COUNTY ROAD - PAVED
 - · — · — COUNTY ROAD - NON-PAVED
 - — — STATE ROAD
 - — — DIRECTION OF DETOURED TRAFFIC
 - X—X—X— WORK ZONE
 - ① CHANGEABLE MESSAGE SIGN - PHASE 1 (2 WEEKS PRIOR TO CLOSURE)
 - ② CHANGEABLE MESSAGE SIGN - PHASE 2 (DURING CONSTRUCTION)

- NOTES**
1. THE IMPLEMENTATION OF THIS TRAFFIC CONTROL / DETOUR PLAN SHALL BE IN ACCORDANCE WITH THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), LATEST EDITION.
 2. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF THIS TRAFFIC CONTROL / DETOUR PLAN.
 3. THE CONTRACTOR SHALL SECURE ALL PERMITTING REQUIREMENTS WITH CALTRANS PRIOR TO THE IMPLEMENTATION OF THIS PLAN.
 4. THE CONTRACTOR SHALL NOTIFY THIS DEPARTMENT 2 WEEKS IN ADVANCE PRIOR TO THE CLOSURE OF ANY ROADS.
 5. ALL TRAFFIC CONTROL DEVICES (CONSTRUCTION SIGNS, CHANNELIZER, BARRICADES, ETC.) SHALL MEET THE CA MUTCD GENERAL REQUIREMENTS OF COLOR, SHAPE, SIZE, REFLECTIVITY, AND ALPHABET SIZE.
 6. ALL TYPE III BARRICADES SHALL BE PROVIDED WITH TWO FLASHING BEACONS.
 7. CONTRACTOR SHALL NOTIFY DIG ALERT TWO DAYS IN ADVANCE PRIOR TO THE INSTALLATION OF POSTS FOR CONSTRUCTION SIGNS.

- CONSTRUCTION NOTES**
- 1 FURNISH AND INSTALL TYPE III BARRICADE ACROSS ROADWAY
 - 2 FURNISH AND INSTALL TEMPORARY SIGN ON WOODEN BREAKAWAY POST AND INSTALLED PER MUTCD FIGURE 6F-1.
 - 3 FURNISH CHANGEABLE MESSAGE SIGN - PHASE 1 (2 WEEKS PRIOR TO CLOSURE)

MESSAGE 1	MESSAGE 2	MESSAGE 3
DOGWOOD ROAD TO CLOSED	MMM - DD	DETOUR WILL BE POSTED
 - 4 FURNISH CHANGEABLE MESSAGE SIGN - PHASE 1 (2 WEEKS PRIOR TO CLOSURE)

MESSAGE 1	MESSAGE 2	MESSAGE 3
WILLOUGHBY ROAD TO CLOSED	MMM - DD	DETOUR WILL BE POSTED
 - 5 FURNISH CHANGEABLE MESSAGE SIGN - PHASE 2 (DURING CONSTRUCTION)

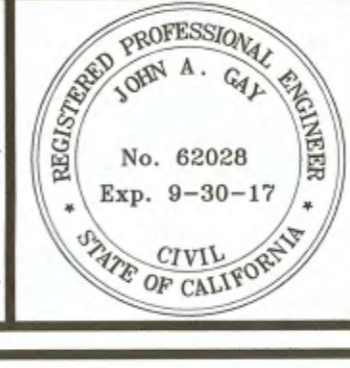
MESSAGE 1	MESSAGE 2	MESSAGE 3
DOGWOOD / WILLOUGHBY CLOSED	USE DETOUR	MMM - DD TO MMM - DD



REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:
 Dawn L. Wilson, T.E.
 T.E. No. 62562
 8/8/17 DATE
 3/31/18 REG. EXP.



COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:
 John A. Gay, PE
 ROAD COMMISSIONER
 03/17/2022 DATE
 62028 R.C.E. No.
 9/30/17 REG. EXP.



DATE: 9/25/2017
 DRAWN: BJS
 SCALE: AS SHOWN
 CHECKED: DLW

DOGWOOD ROAD BRIDGE REPLACEMENT OVER CENTRAL MAIN CANAL BRIDGE NO. 58C-0226

TRAFFIC CONTROL / DETOUR PLAN	
REFERENCE: DE-1	B-195 R-968
SHEET 8	OF 18

NOTES:

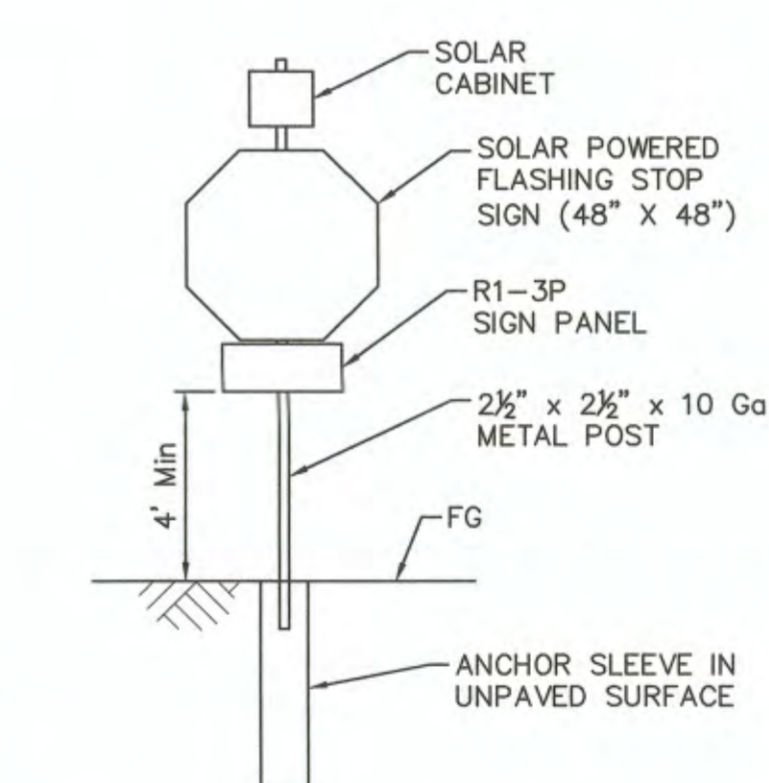
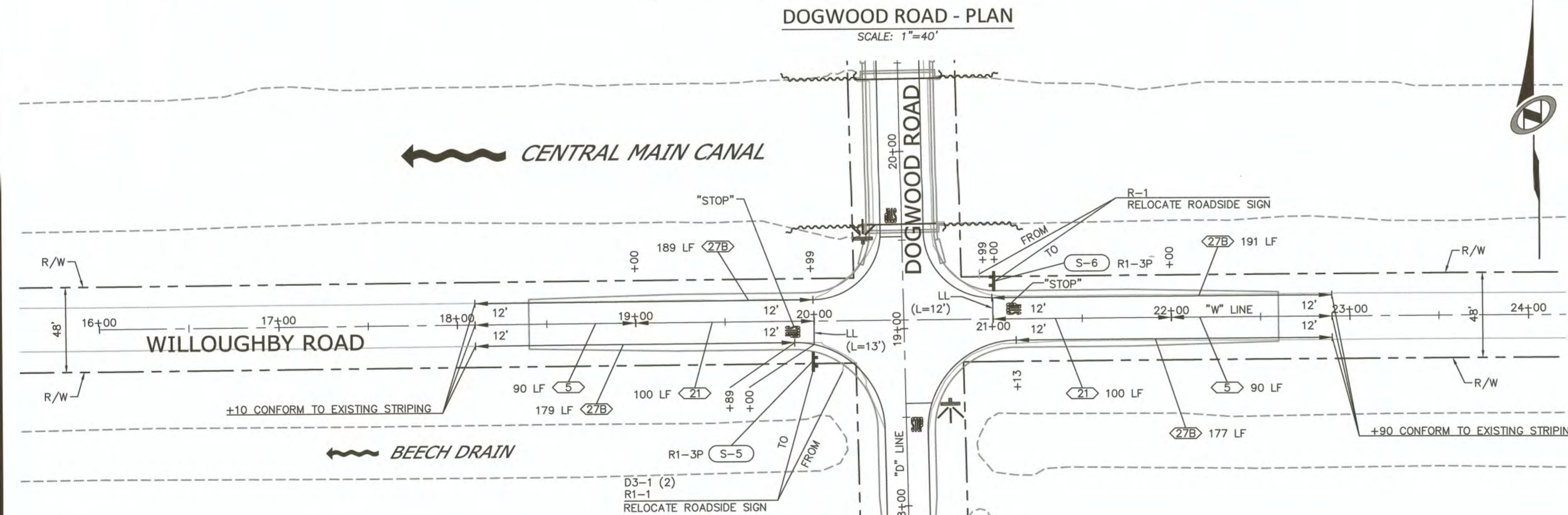
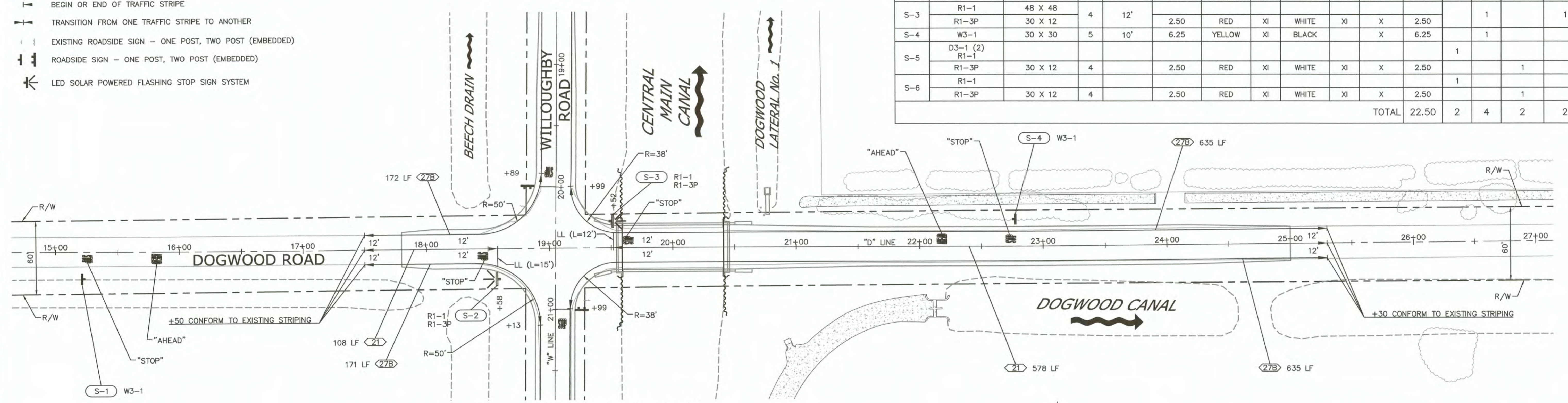
- FOR ROADSIDE SIGN INSTALLATION DETAILS, SEE CALTRANS STANDARD PLANS RS1 AND RS2.
- FOR METAL POST INSTALLATION DETAILS, SEE CALTRANS REVISED STANDARD PLANS RSP RS5 AND RSP RS6. POST SIZE SHALL BE 2 1/2" x 2 1/2" x 10 GAUGE.
- FEDERAL MUTCD SIGN DESIGNATIONS ARE SHOWN UNLESS DESIGNATED BY (CA) WHICH INDICATES A CALIFORNIA SIGN DESIGNATION.
- EXACT SIGN LOCATION TO BE DETERMINED BY THE ENGINEER.
- "C" DIMENSION = VERTICAL CLEARANCE FROM ETW TO BOTTOM OF SIGN PANEL.

LEGEND

- PAINTED TRAFFIC STRIPE PER CALTRANS STRIPING DETAILS. SEE CALTRANS STD PLAN A20A AND REVISED STD PLAN RSP A20B.
- SYMBOL FOR ROADSIDE SIGN NUMBER
- PAINT WHITE PAVEMENT MARKING WORDS PER CALTRANS STANDARD PLAN A24D.
- BEGIN OR END OF TRAFFIC STRIPE
- TRANSITION FROM ONE TRAFFIC STRIPE TO ANOTHER
- EXISTING ROADSIDE SIGN - ONE POST, TWO POST (EMBEDDED)
- ROADSIDE SIGN - ONE POST, TWO POST (EMBEDDED)
- LED SOLAR POWERED FLASHING STOP SIGN SYSTEM

ROADSIDE SIGN AND SIGN PANEL QUANTITIES

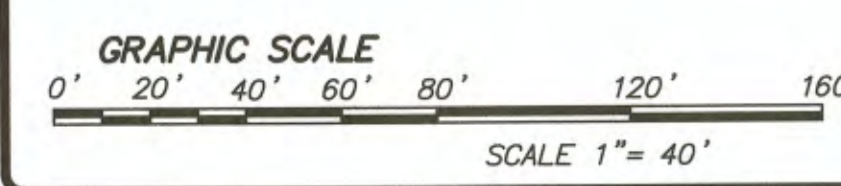
SIGN No.	SIGN DESIGNATION	SIGN PANEL SIZE (INCHES)	"C" DIM IN FEET	METAL POST LENGTH	PANEL AREA SQFT	BACKGROUND		LEGEND		PROTECTIVE OVERLAY PREMIUM FILM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063" UNFRAMED)	RELOCATE ROADSIDE SIGN		INSTALL ROADSIDE SIGN PANEL ON EXISTING POST	LED SOLAR POWERED FLASHING STOP SIGN SYSTEM	SIGN MESSAGE/ DESCRIPTION
						SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	SHEETING COLOR	RETROREFLECTIVE ASTM TYPE			EA	EA			
S-1	W3-1	30 X 30	5	10'	6.25	YELLOW	XI	BLACK		X	6.25		1			STOP AHEAD
S-2	R1-1	48 X 48	4	12'	2.50	RED	XI	WHITE	XI	X	2.50		1		1	STOP ALL WAY
	R1-3P	30 X 12														
S-3	R1-1	48 X 48	4	12'	2.50	RED	XI	WHITE	XI	X	2.50		1		1	STOP ALL WAY
	R1-3P	30 X 12														
S-4	W3-1	30 X 30	5	10'	6.25	YELLOW	XI	BLACK		X	6.25		1			STOP AHEAD
S-5	D3-1 (2) R1-1											1		1		ALL WAY
	R1-3P	30 X 12														
S-6	R1-1											1		1		ALL WAY
	R1-3P	30 X 12	4		2.50	RED	XI	WHITE	XI	X	2.50			1		ALL WAY
TOTAL											22.50	2	4	2	2	



- NOTES:**
- SOLAR CABINET SHALL BE 13W TOP-OF-POLE SELF-CONTAINED SOLAR CABINET BY TAPCO, OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
 - FLASHING STOP SIGN SHALL BE BLINKSTOP FLASHING LED STOP SIGN BY TAPCO, OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
 - FOR METAL POST AND SIGN INSTALLATION DETAILS, SEE CALTRANS REVISED STANDARD PLANS RSP RS5 AND RSP RS6.

PAVEMENT DELINEATION QUANTITIES

LOCATION/STATION	DIRECTION	PAINT TRAFFIC STRIPE (2-COAT)			THERMOPLASTIC PAVEMENT MARKING		
		6" YELLOW		6" WHITE	"AHEAD"	"STOP"	LIMIT LINE
		DETAIL 5	DETAIL 21	DETAIL 27B			
LF	LF	LF	SQFT	SQFT	SQFT		
"D" 15+00 TO 16+00	NB				31	22	
"D" 17+50 TO "W" 19+89	SB			172			
"D" 17+50 TO 18+58		108					
"D" 17+50 TO "W" 21+13	NB			171		22	15
"W" 19+99 TO "D" 25+30	SB			635	31	44	12
"W" 20+99 TO "D" 25+30	NB			635			
"D" 19+52 TO 25+30		578					
"W" 18+10 TO 19+99	WB			189			
"W" 18+10 TO 19+00		90					
"W" 18+10 TO 20+00	EB			179		22	13
"W" 19+00 TO 20+00		100					
"W" 21+00 TO 22+90	WB			191		22	12
"W" 21+00 TO 22+00		100					
"W" 21+13 TO 22+90	EB			177			
"W" 22+00 TO 22+90		90					
SUBTOTAL		180	886	2,349	62	132	52
TOTAL				3,415		246	



REVISION	DATE	COMMENTS

PREPARED UNDER THE DIRECT SUPERVISION OF:

PHILLIP REUSS, P.E.
 No. 82850
 Exp. 9/30/22
 CIVIL ENGINEER
 STATE OF CALIFORNIA

82850 R.C.E. No.
 9/30/22 REG. EXP.

COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:

JOHN A. GAY, F.E.
 No. 62028
 Exp. 9-30-23
 CIVIL ENGINEER
 STATE OF CALIFORNIA

62028 R.C.E. No.
 9/30/23 REG. EXP.

PUBLIC WORKS DEPARTMENT
COUNTY OF IMPERIAL
 EL CENTRO, CALIFORNIA

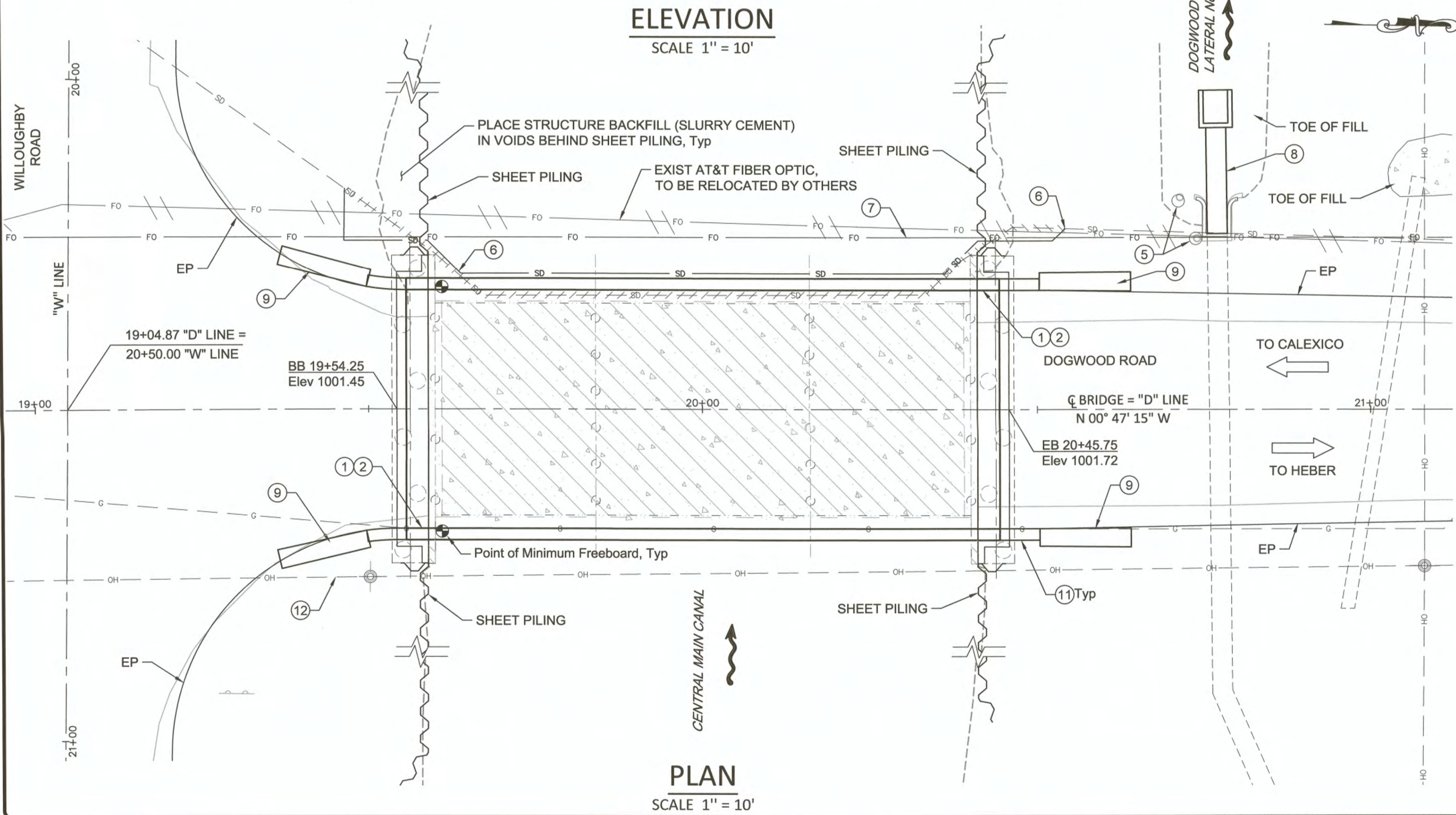
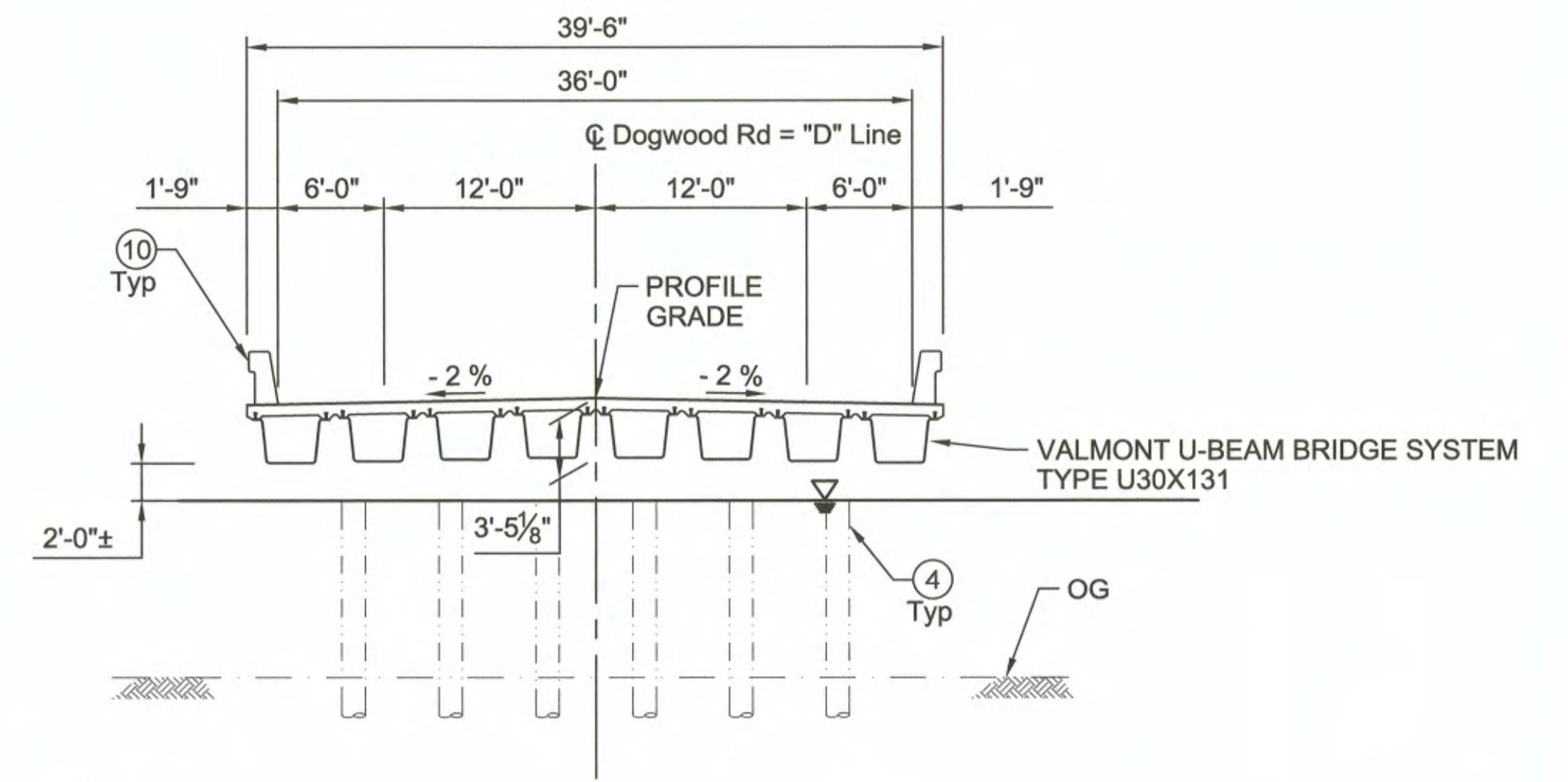
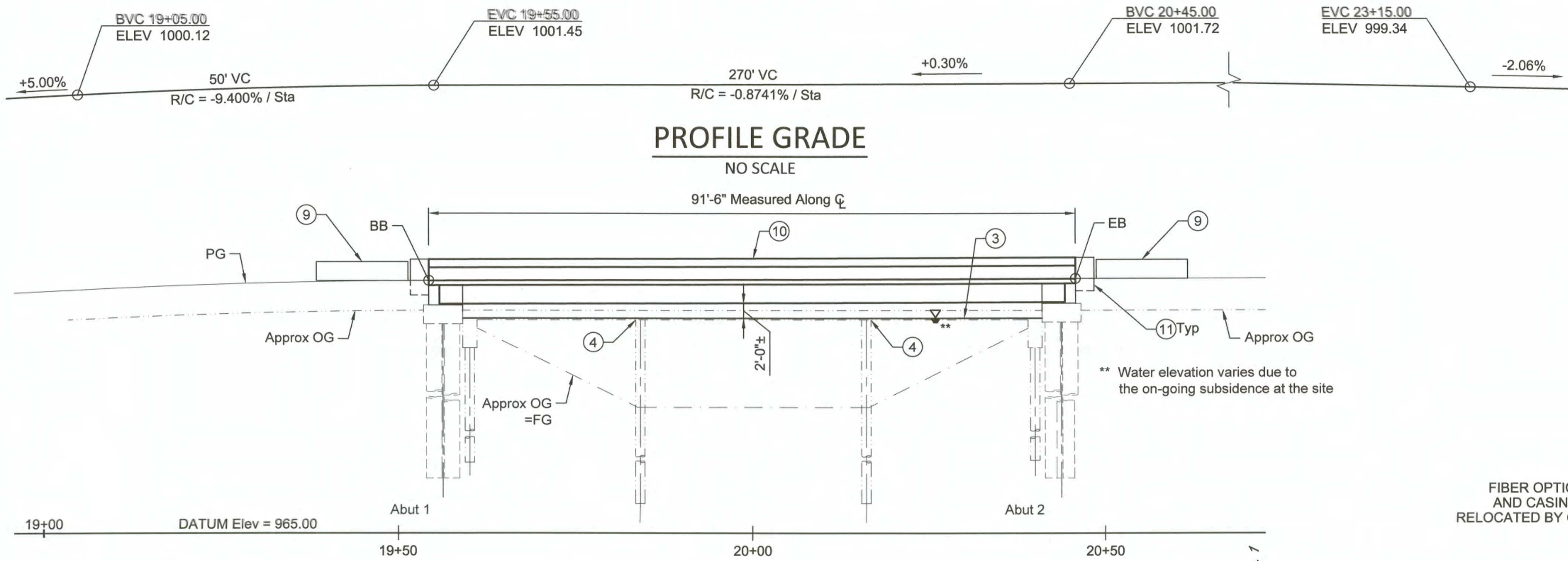
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 DRAWN: PAR
 SCALE: AS SHOWN
 CHECKED: JLA

**DOGWOOD ROAD BRIDGE REPLACEMENT
 OVER CENTRAL MAIN CANAL
 BRIDGE NO. 58C-0226**

SIGNING & STRIPING PLAN

REFERENCE: PD-1

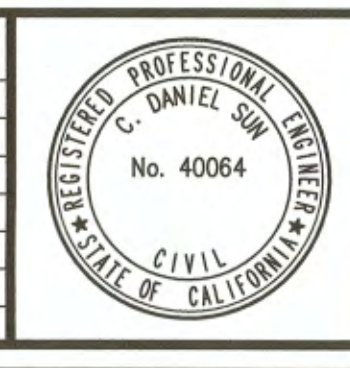
B-195 R-968
 SHEET 9 OF 18



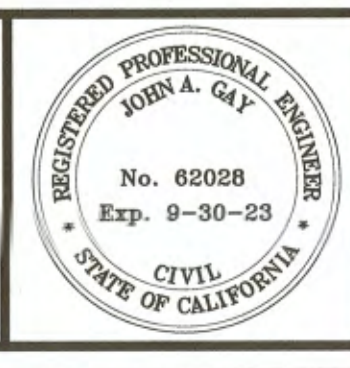
- ### LEGEND
- Direction of Traffic
 - Direction of Flow of Water
 - Existing Structure
 - Limits of Bridge Removal
 - Fiber Optic Cable in 4" Steel Duct
 - 6" High Pressure Gas Line To Be Relocated By Others
 - Overhead Electrical/Telephone Facilities
 - Private Drain Line
 - Power Pole
 - Point of Minimum Freeboard

- ### NOTES
- ① Paint "BRIDGE NUMBER: 58C-0226"
 - ② Paint "DOGWOOD ROAD BRIDGE"
 - ③ High Water Surface Elevation = 995.7± **
 - ④ Cutoff Existing Piles at water line
 - ⑤ Existing Bollards
 - ⑥ Private Storm Drain Line to be relocated By Others
 - ⑦ Proposed location of AT&T Fiber Optic Cable, By Others
 - ⑧ Existing Culverts To Be Extended By Others As Necessary
 - ⑨ Crash Cushion, See Roadway Plans
 - ⑩ Concrete Barrier (Type 836)
 - ⑪ Concrete Barrier (Type 836B, Modified) See Roadway Plans
 - ⑫ OH Line to be relocated By Others

REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:
Daniel Sun
 DANIEL SUN, P.E.
 NVS
 3/11/22
 DATE



COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:
John A. Gay
 JOHN A. GAY, P.E.
 ROAD COMMISSIONER
 03/17/2022
 DATE

62028
 R.C.E. No.
 9/30/23
 REG. EXP.
 PUBLIC WORKS DEPARTMENT
 COUNTY OF IMPERIAL
 EL CENTRO, CALIFORNIA

DATE 11/9/2021
 DRAWN SRD
 SCALE AS SHOWN
 CHECKED CDS
**DOGWOOD ROAD BRIDGE REPLACEMENT
 OVER CENTRAL MAIN CANAL
 BRIDGE NO. 58C-0226**

GENERAL PLAN	
REFERENCE	B-195 R-968
S-1	SHEET 10 OF 18

N:\21-0001139\Cadd\Bridge\5-01_General_Plan.dwg [Mar-11-2022:11:29]

GENERAL NOTES LOAD AND RESISTANCE FACTOR DESIGN

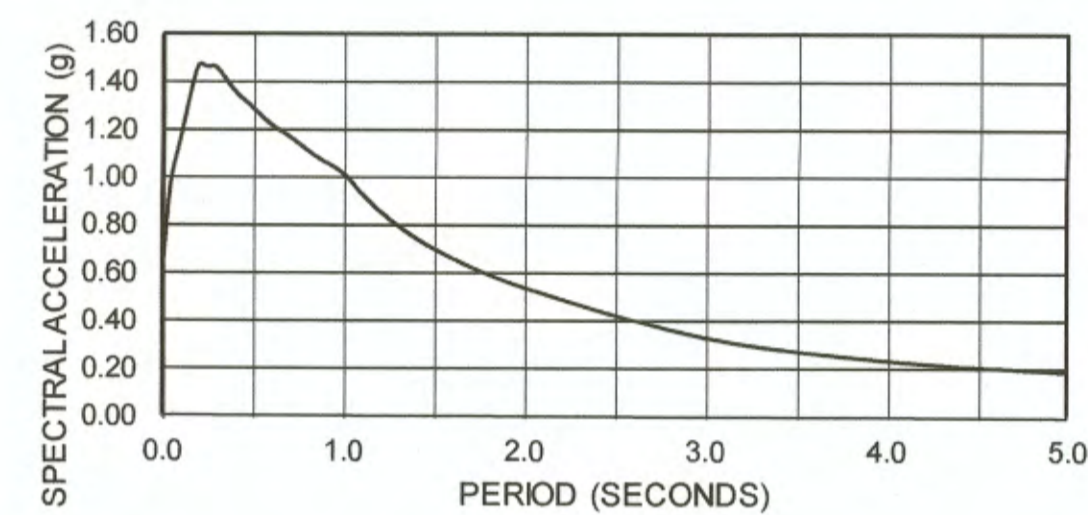
DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS EIGHTH EDITION, AND THE CALTRANS AMENDMENTS,

SEISMIC DESIGN CRITERIA: CALTRANS SEISMIC DESIGN CRITERIA (SDC), VERSION 2.0 APRIL 2019

DEAD LOAD: INCLUDES 0.035 KSF FOR FUTURE UTILITIES
BRIDGE DESIGN INCLUDES ADDED DEAD LOAD FOR FUTURE TWO-FOOT RAISING OF BRIDGE.

LIVE LOADING: HL-93 AND PERMIT DESIGN LOAD

SEISMIC LOADING: SITE SPECIFIC ACCELERATION RESPONSE SPECTRAL CURVE
SOIL PROFILE $V_{s30} = 270$ m/s
MAXIMUM MAGNITUDE = 6.7
PEAK GROUND ACCELERATION = 0.65g



ARS CURVE

REINFORCED CONCRETE:
 $f'_c = 3.6$ ksi (UNLESS OTHERWISE NOTED)
 $f_y = 60$ ksi
 $n = 8$

ANCHOR BOLTS: ASTM A490

HORIZONTAL CONTROL:

POINT #	LATITUDE	LONGITUDE	NORTHING (FT)	EASTING (FT)	CONV. ANGLE	C.F.
DB0654	32°48'35.434"	115°22'49.005"	1,875,553.37	6,828,893.14	+0°28'40.5"	0.99999569

ALL DISTANCES SHOWN HEREON ARE GRID DISTANCES PER THE CALIFORNIA STATE PLANE COORDINATE SYSTEM. NAD83, ZONE 6. TO OBTAIN GROUND DISTANCES MULTIPLY GRID DISTANCES BY GROUND COMBINATION FACTOR OF $GCF=0.99999569$. DISTANCES SHOWN PER RECORDED REFERENCES MAY OR MAY NOT BE IN TERMS OF THE STATE PLANE COORDINATE SYSTEM.

VERTICAL CONTROL:
FIRST VERTICAL ORDER (NVVD88) STATION USED FOR VERTICAL CALIBRATION, ACCORDING TO THE NATIONAL GEODETIC SURVEY (NGS) DATA SHEETS PUBLISHED IN THE WEBSITE WWW.NGS.NOAA.GOV

POINT #	LATITUDE	LONGITUDE	NORTHING (FT)	EASTING (FT)	NAVD88 ELEVATION
DB0654	32°48'35.434"	115°22'49.005"	1,875,553.37	6,828,893.14	-11.28 FEET (+1000)=988.72

THIS MONUMENT IS LOCATED AT HOLTVILLE, 0.05 MI NORTH OF JUNCTION OF HOLT AVENUE AND WEST FOURTH STREET, 83.3 FT NORTH OF THE NORTH RAIL OF THE HOLTON INTERURBAN RAILWAY, 42 FT WEST OF THE CENTER LINE OF THE AVENUE, 42.4 FT NORTH OF THE RAILROAD CROSSING SIGN POST, 84 FT SOUTHEAST OF POWER POLE 53181D, 91 FT SOUTHWEST OF POWER POLE 530120D WITH STREET LIGHT 1.4 FT WEST OF A WITNESS POST AND IN THE TOP OF A CONCRETE POST WHICH PROJECTS 0.4 FT, SECTION 36, T15S, R15E.

CONSTRUCTION BENCHMARK
BENCHMARK DRILL POINT AT CONCRETE CANAL HEADWALL WEST DOGWOOD ROAD, APPROXIMATELY 510 FT NORTH OF WILLOUGHBY ROAD, ELEVATION = 996.82
COORDINATES: N 1,838,812.179
E 6,781,854.989

INDEX TO BRIDGE PLANS

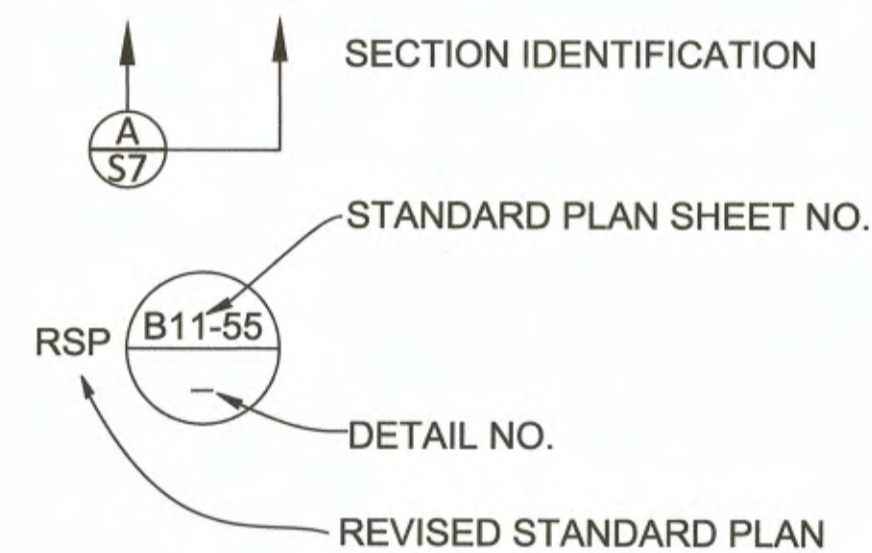
SHEET NO. TITLE

S-1	GENERAL PLAN
S-2	INDEX TO PLANS
S-3	FOUNDATION PLAN
S-4	ABUTMENT LAYOUT
S-5	ABUTMENT DETAILS
S-6	SHEET PILE LAYOUT
S-7	LOG OF TEST BORINGS 1
S-8	LOG OF TEST BORINGS 2
S-9	LOG OF TEST BORINGS 3

STANDARD PLANS DATED 2018

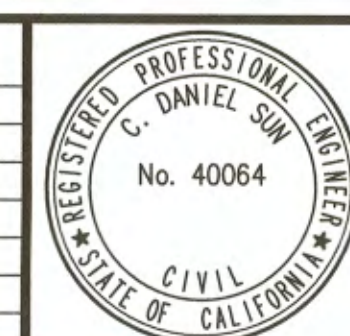
A3A	ABBREVIATIONS (SHEET 1 OF 3)
A3B	ABBREVIATIONS (SHEET 2 OF 3)
A3C	ABBREVIATIONS (SHEET 3 OF 3)
A10A	LEGEND - LINES AND SYMBOLS (SHEET 1 OF 5)
A10B	LEGEND - LINES AND SYMBOLS (SHEET 2 OF 5)
A10C	LEGEND - LINES AND SYMBOLS (SHEET 3 OF 5)
A10D	LEGEND - LINES AND SYMBOLS (SHEET 4 OF 5)
A10E	LEGEND - LINES AND SYMBOLS (SHEET 5 OF 5)
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL - BRIDGE
RSP B0-1	BRIDGE DETAILS
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
RSP B11-79	CONCRETE BARRIER TYPE 836 DETAILS No. 1
RSP B11-80	CONCRETE BARRIER TYPE 836 DETAILS No. 2

PLAN SYMBOLS

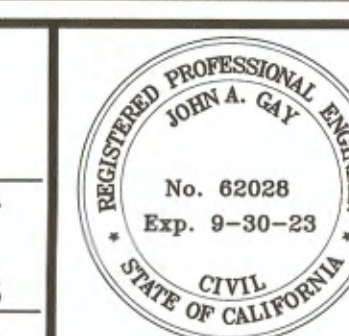


PLEASE NOTE THAT ACTUAL GROUND ELEVATIONS WILL VARY DUE TO ON-GOING LOCALIZED SUBSIDENCE.

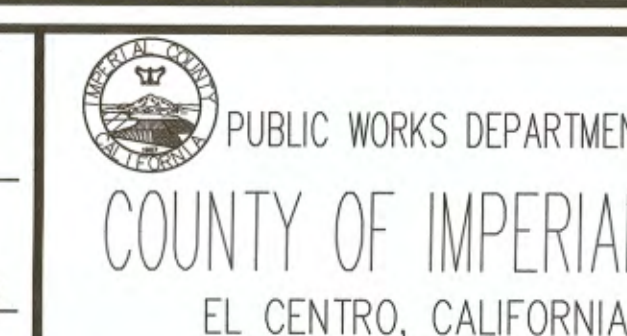
REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:
Daniel Sun
DANIEL SUN, P.E.
NVS
DATE: 2/08/22
40064
R.C.E. No.
12/30/23
REG. EXP.



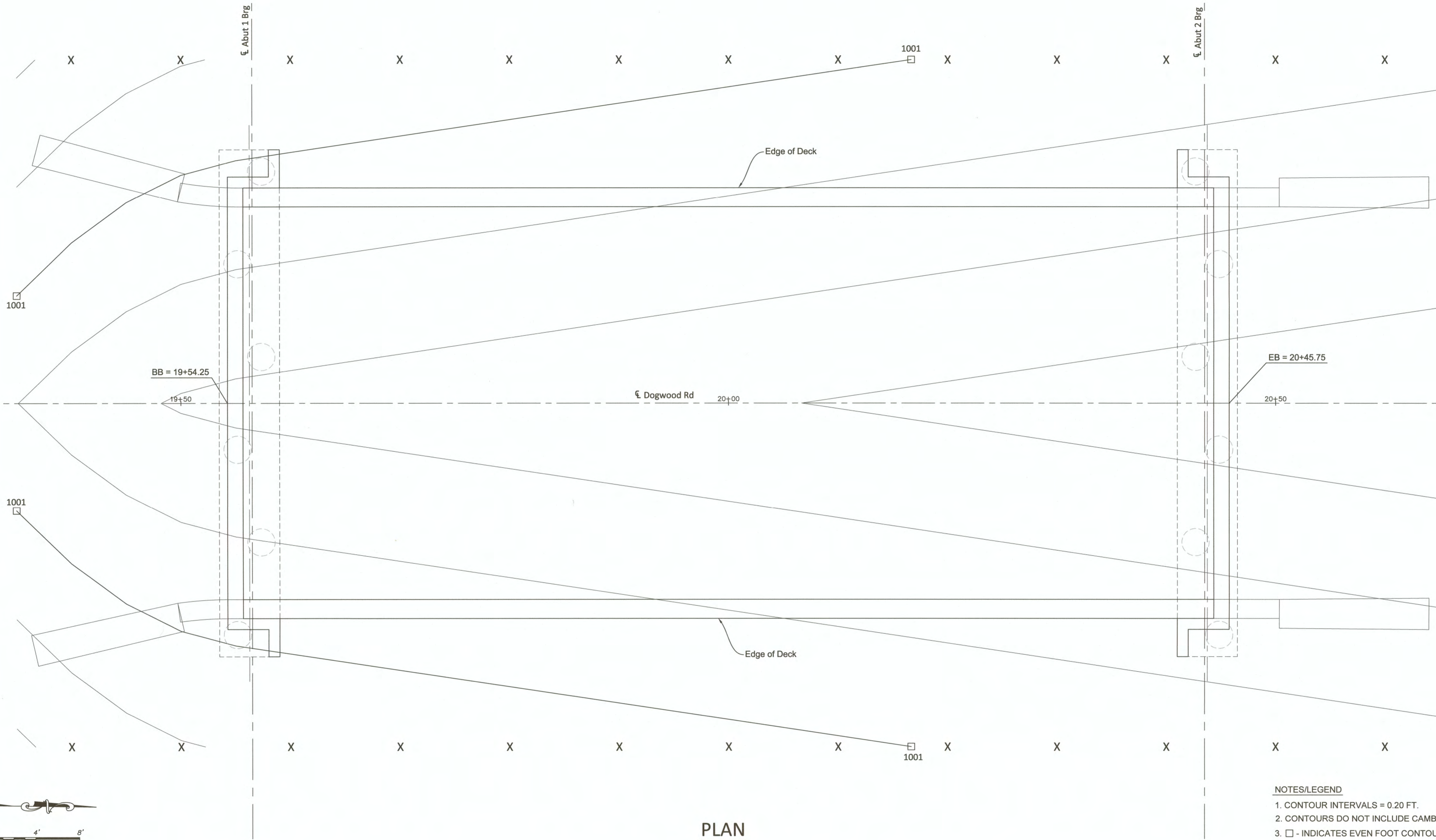
COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
APPROVED FOR CONSTRUCTION BY:
John A. Gay
JOHN A. GAY, P.E.
ROAD COMMISSIONER
DATE: 03/17/2022
62028
R.C.E. No.
9/30/23
REG. EXP.



DATE: 11/9/2021
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SCALE: AS SHOWN
CHECKED: CDS

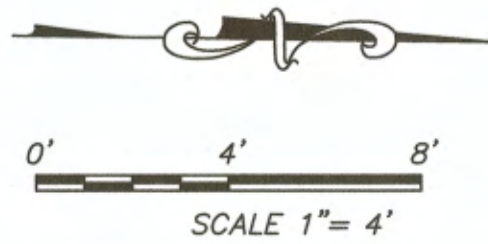
DOGWOOD ROAD BRIDGE REPLACEMENT
OVER CENTRAL MAIN CANAL
BRIDGE NO. 58C-0226

INDEX TO PLANS	
REFERENCE	B-195 R-968
S-2	SHEET OF 11 OF 18



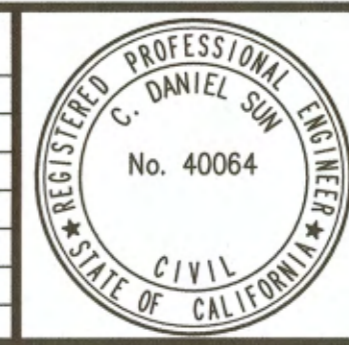
PLAN

SCALE 1" = 4'



- NOTES/LEGEND**
1. CONTOUR INTERVALS = 0.20 FT.
 2. CONTOURS DO NOT INCLUDE CAMBER
 3. □ - INDICATES EVEN FOOT CONTOUR
 4. X - INDICATES 10FT INTERVALS

REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:
C. Sun
 DANIEL SUN, P.E.
 NVS
 2/08/22
 DATE

40064
 R.C.E. No.
 12/30/23
 REG. EXP.



COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:
John Gay
 JOHN A. GAY, P.E.
 ROAD COMMISSIONER
 4/4/2022
 DATE

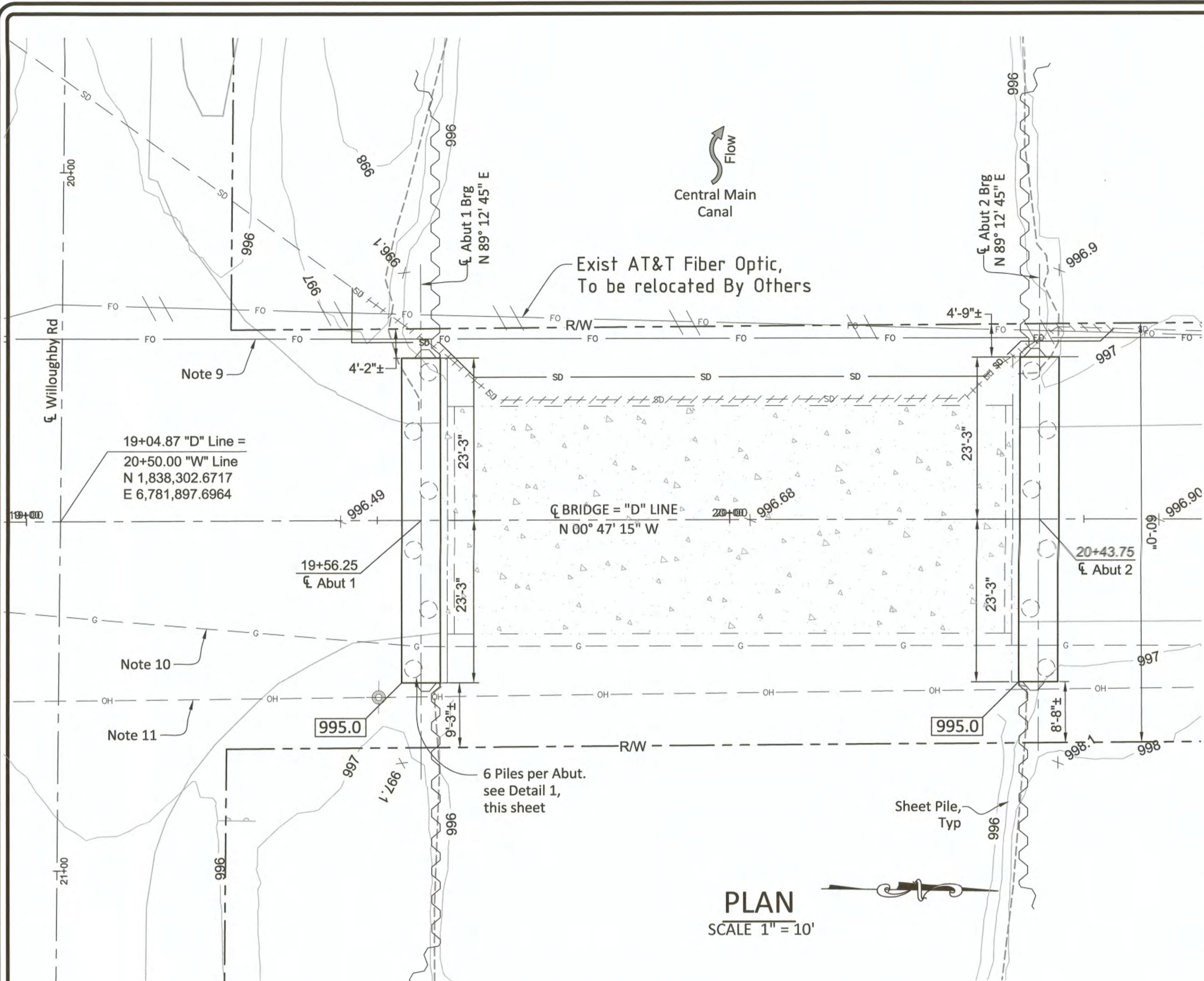
62028
 R.C.E. No.
 9/30/23
 REG. EXP.



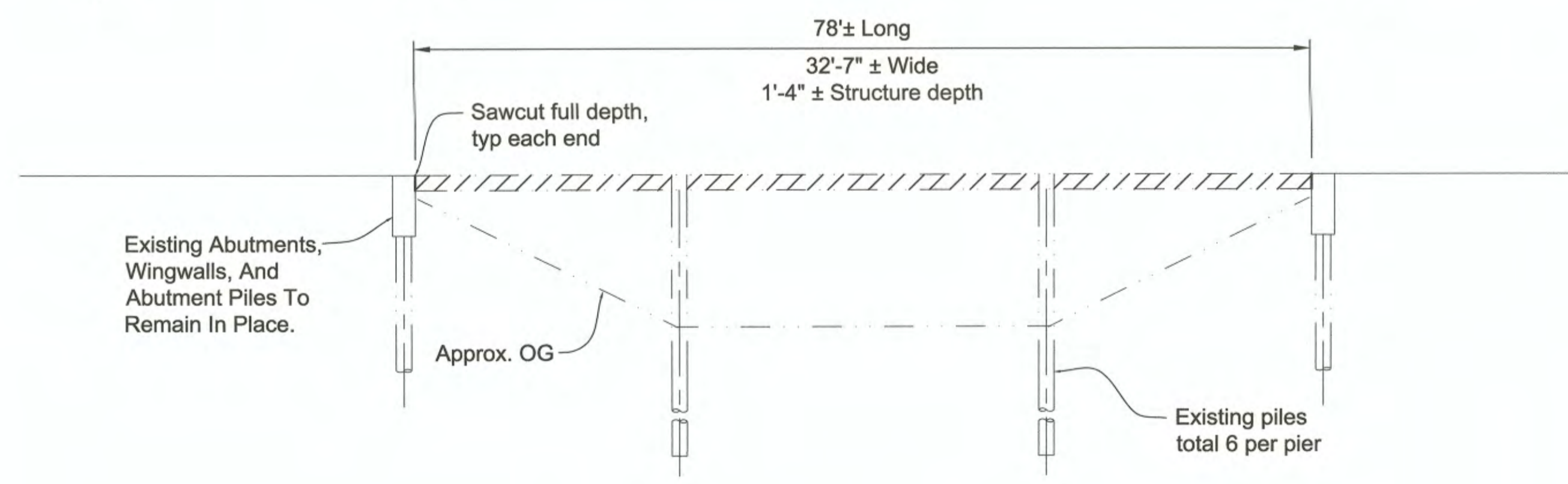
DATE: 11/9/2021
 DRAWN: SRD
 SCALE: AS SHOWN
 CHECKED: CDS

**DOGWOOD ROAD BRIDGE REPLACEMENT
 OVER CENTRAL MAIN CANAL
 BRIDGE NO. 58C-0226**

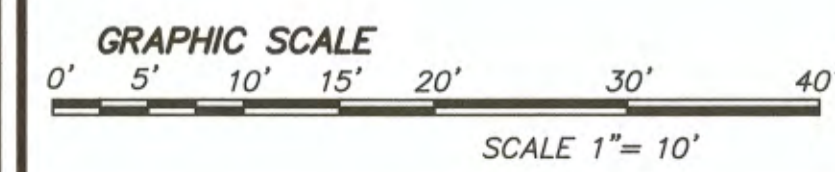
DECK CONTOURS	
REFERENCE	B-195 R-968
S-2A	SHEET OF 11A 18



PLAN
SCALE 1" = 10'



ELEVATION - EXISTING BRIDGE REMOVAL
SCALE 1" = 10'



PILE DATA TABLE

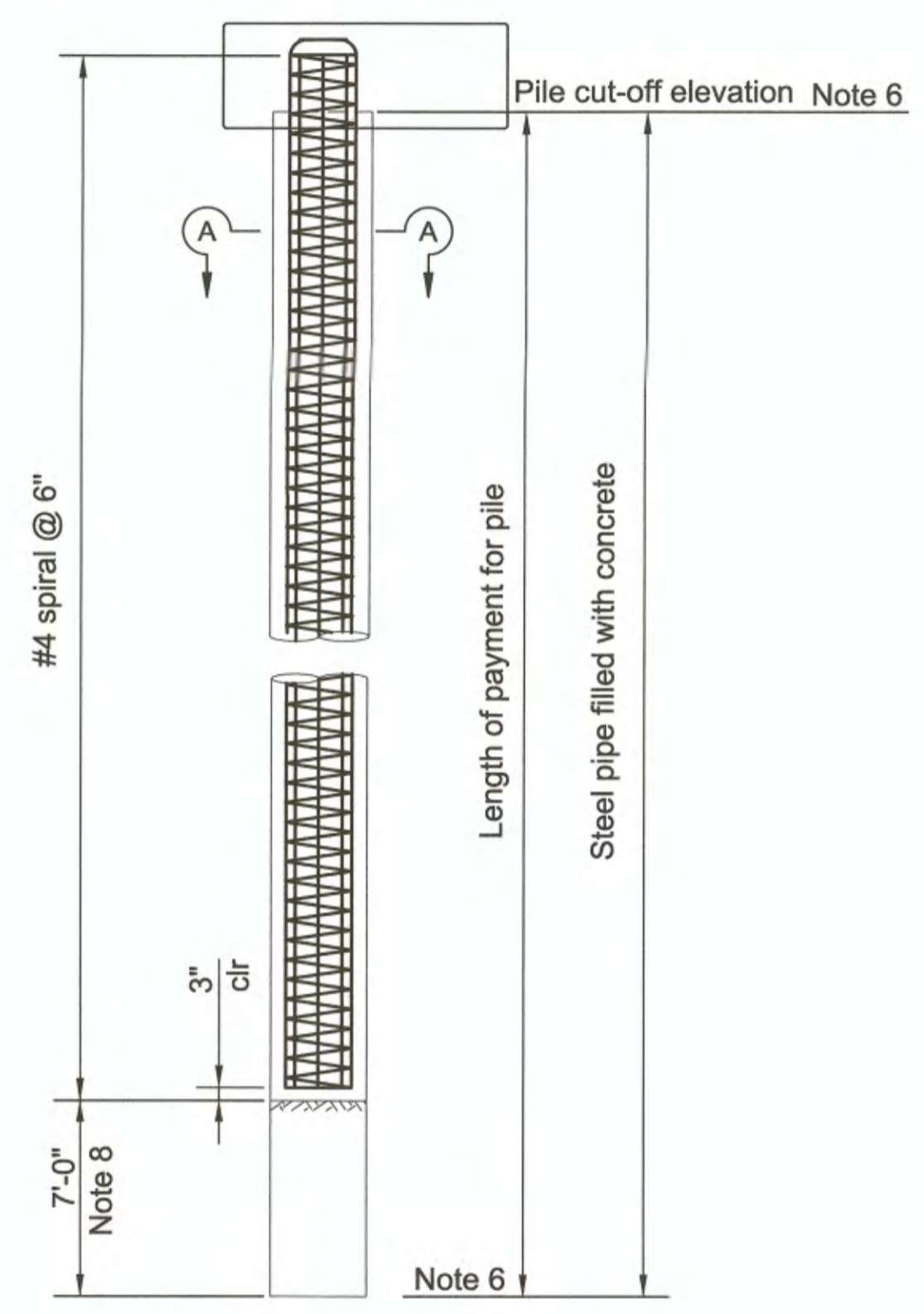
Location	Pile Type	Required Nominal Driving Resistance (kips)	Nominal Resistance (kips)		Cut-Off Elevations (ft)	Design Tip Elevations (ft)	Specified Tip Elevations (ft)
			Compression	Tension			
Abut 1	CISS 30x0.5	420	420	30	995.42	926(a) 926(c)	926
Abut 2	CISS 30x0.5	420	420	30	995.42	934(a) 934(c)	934

PILE DATA Notes:

- Design tip elevations are controlled by: (a) Compression, (c) Settlement.
- Specified tip elevation shall not be raised above the design tip elevation for Settlement.
- Vibratory installation should be used for pile installation to elevation 965 feet (30 feet below cut-off elevation). Piles should be installed with driving/impact methods below elevation 965 to the specified pile tip elevation.
- To seal the bottom of CISS piles, the top of soil plug should be at elevation 931 at Abutment 1 and 939 at Abutment 2. Additionally, a seal course thickness of 2 feet above the soil plug elevation is required to counteract the hydrostatic force of the groundwater and allow for pile reinforcement and concrete to be poured in the dry.

LEGEND

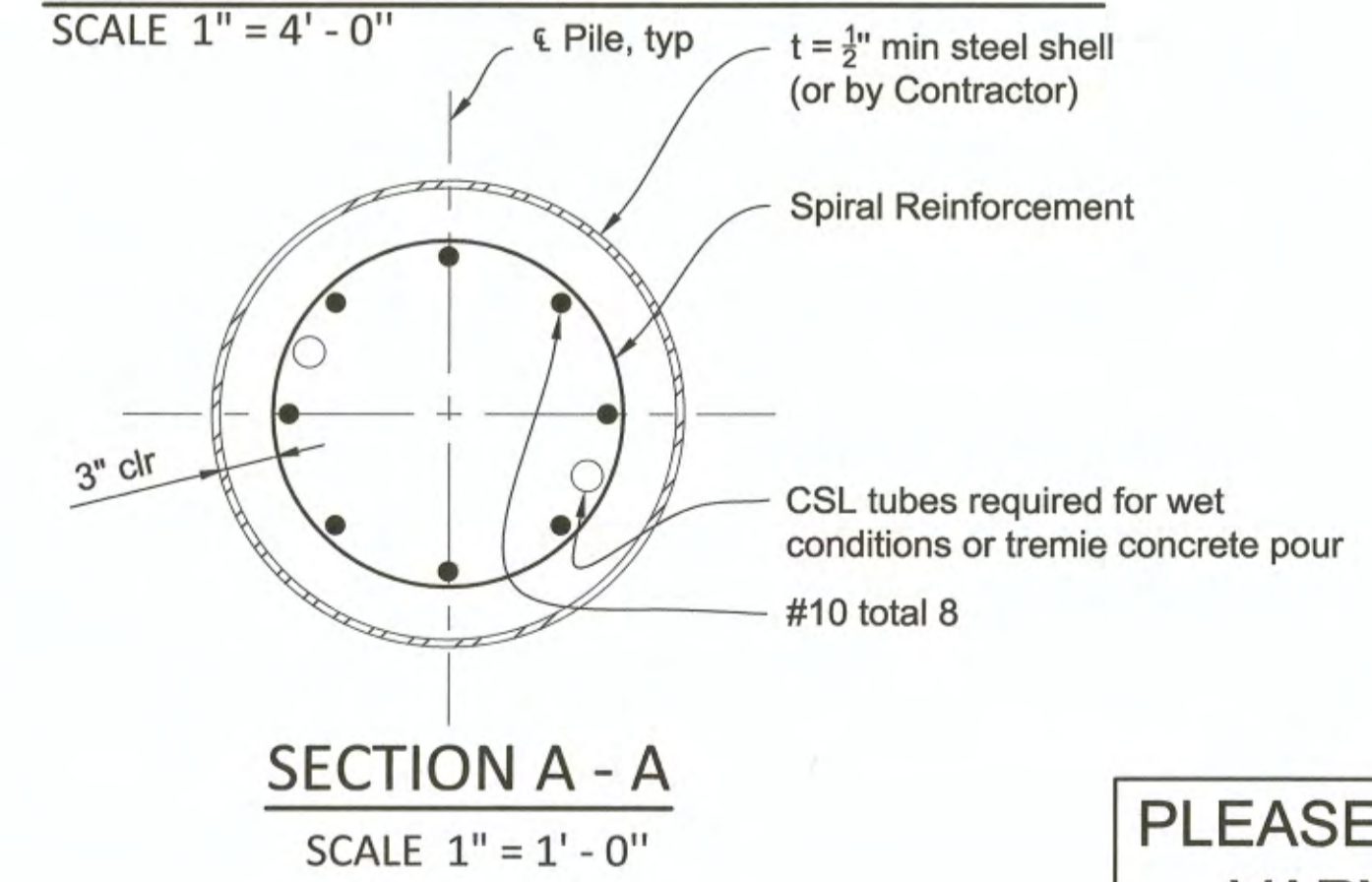
- Indicates limits of Bridge Removal (Portion)
- Indicates bottom of pile cap elevation
- Indicates existing ground spot elevations
- Indicates existing 12" pressure storm water line (to be relocated)
- Indicates new 12" pressure storm water line relocation
- Indicates 6" HP gas line (to be relocated by others)
- Indicates high voltage overhead power lines
- Indicates 4" fiber optic line (protect in place)
- Indicates Power Pole



NOTES:

- Topographic lines indicate existing original ground elevations.
- Contractor shall locate existing utilities prior to driving piles.
- Centerline of Abutments are perpendicular to centerline of Dogwood Rd.
- No splices allowed in main reinforcement.
- Aggregate must be 1" maximum combined grading.
- See pile data table for specified tip and pile cutoff elevation.
- Pile spiral reinforcement at splices and at ends shall be terminated by a 135° hook with a 6" tail around the longitudinal bars.
- Limits of undisturbed soil plug shall be 5' with additional 2' of seal course on top of it.
- Proposed location of AT&T Fiber Optic line by others.
- Gas line to be relocated by others prior to pile driving operations.
- Overhead line to be relocated by others.

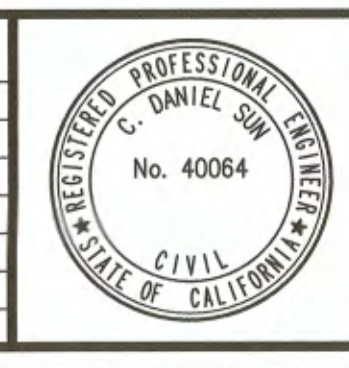
1 30" CAST IN STEEL SHELL (CISS) CONCRETE PILE DETAIL



SECTION A - A
SCALE 1" = 1' - 0"

PLEASE NOTE THAT ACTUAL GROUND ELEVATIONS WILL VARY DUE TO ON-GOING LOCALIZED SUBSIDENCE.

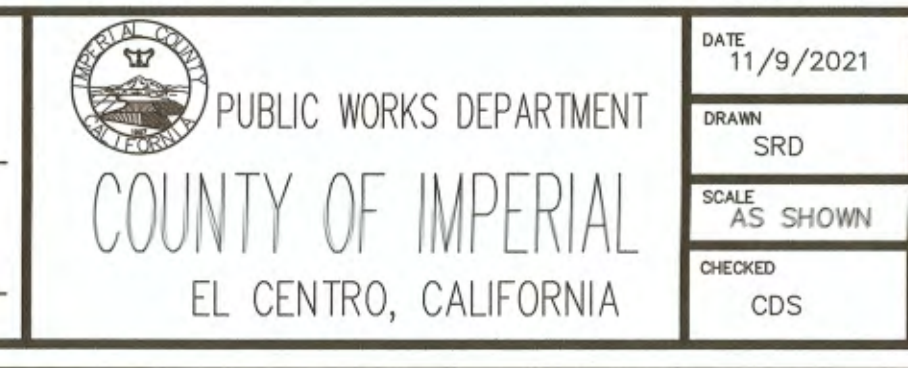
REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:
Daniel Sun, P.E.
 No. 40064
 R.C.E. No.
 3/11/22
 DATE
 12/30/23
 REG. EXP.



COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:
John A. Gay, P.E.
 ROAD COMMISSIONER
 No. 62028
 R.C.E. No.
 03/17/2022
 DATE
 9/30/23
 REG. EXP.



DATE: 11/9/2021
 DRAWN: SRD
 SCALE: AS SHOWN
 CHECKED: CDS

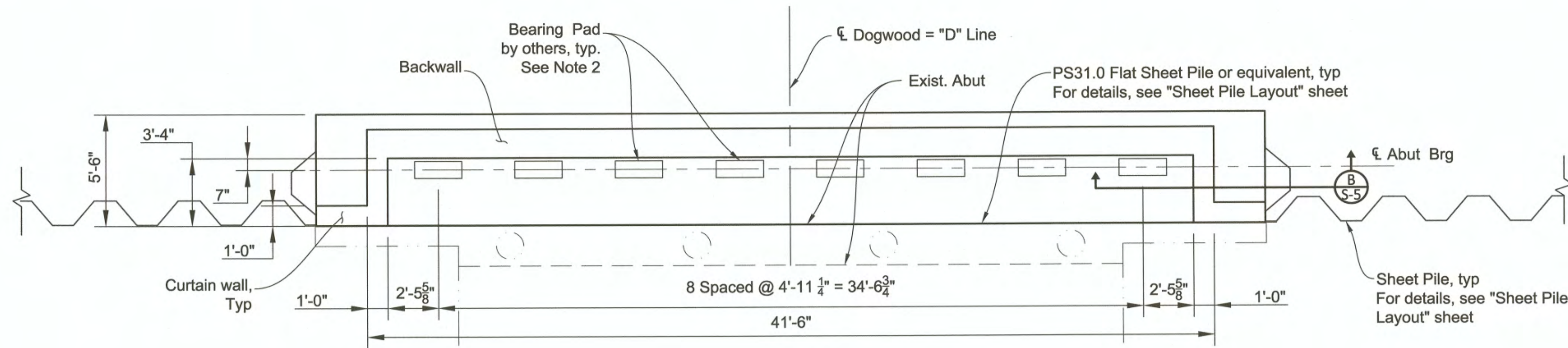
FOUNDATION PLAN

DOGWOOD ROAD BRIDGE REPLACEMENT OVER CENTRAL MAIN CANAL BRIDGE NO. 58C-0226

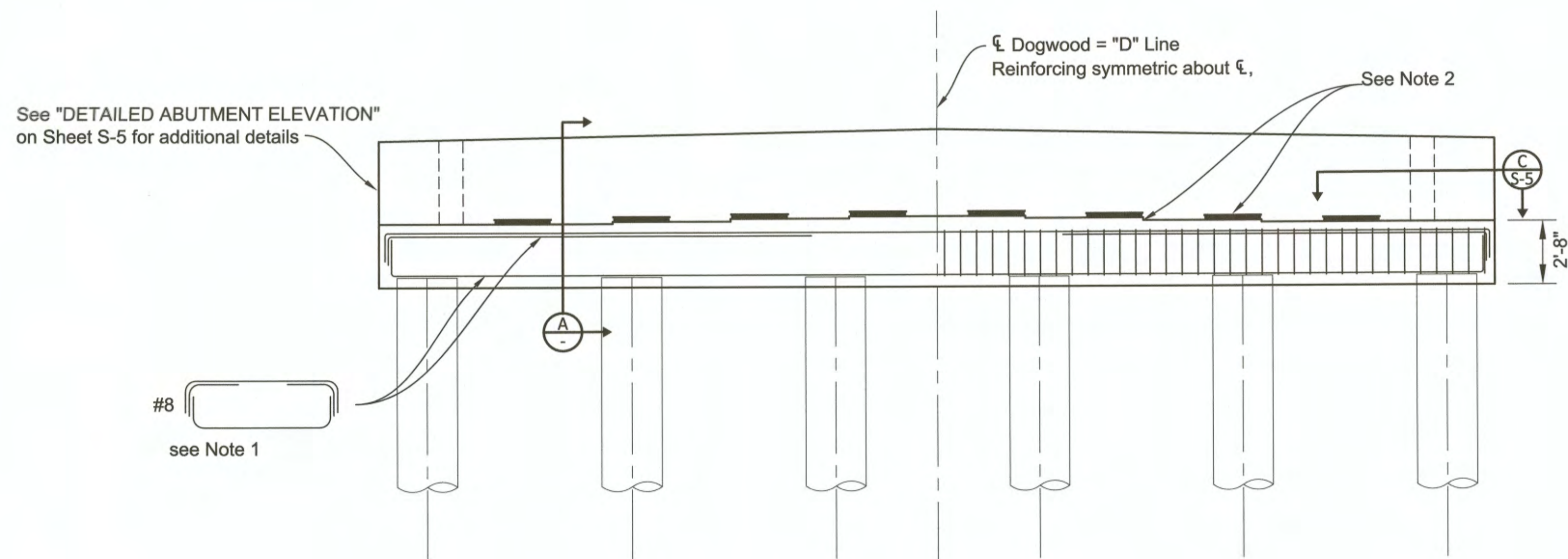
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B-195 R-968
 SHEET 12 OF 18

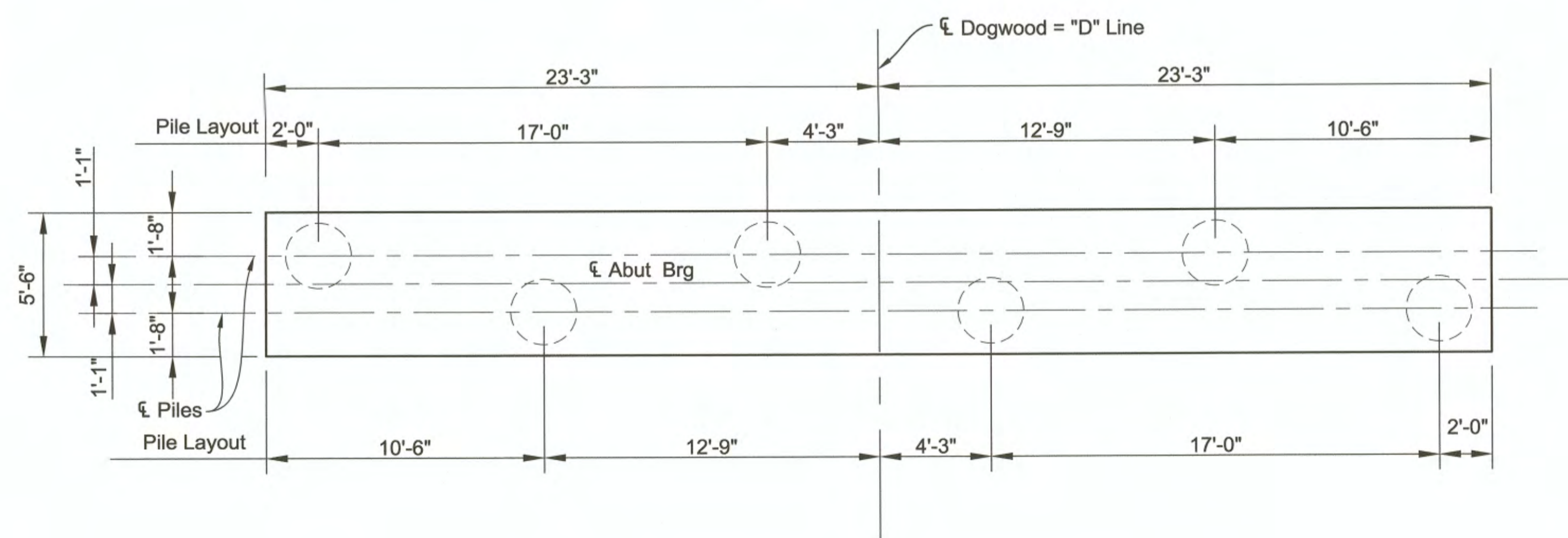
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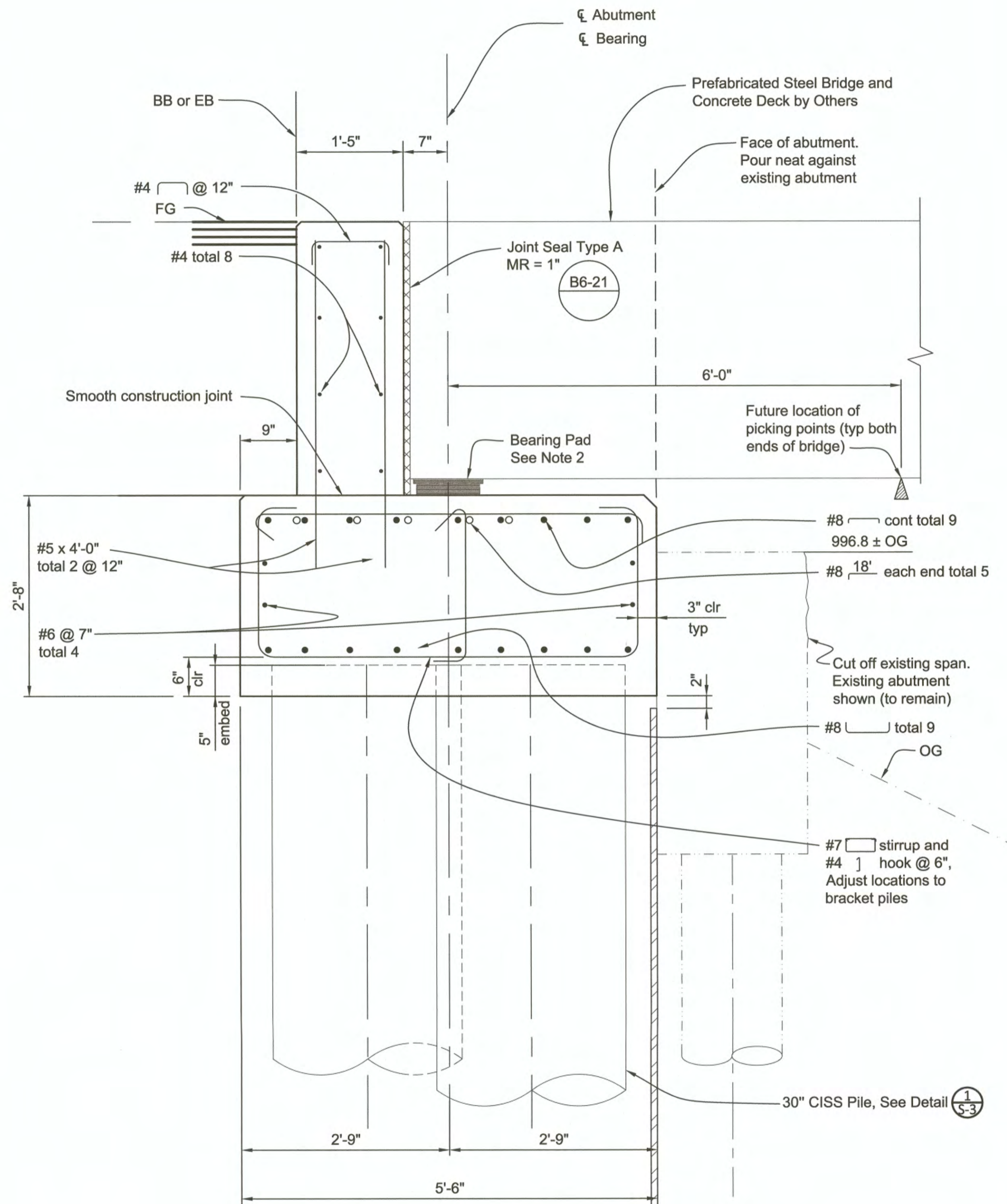
ABUTMENT PLAN
SCALE 1/4" = 1'-0"



ABUTMENT ELEVATION
SCALE 1/4" = 1'-0"



ABUTMENT FOOTING PLAN
SCALE 1/4" = 1'-0"

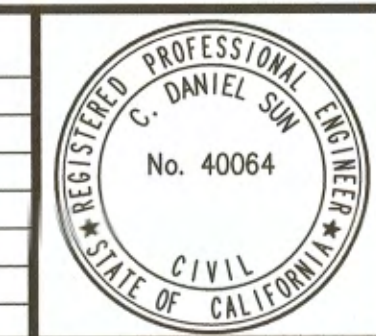


SECTION A
SCALE 1" = 1'-0"

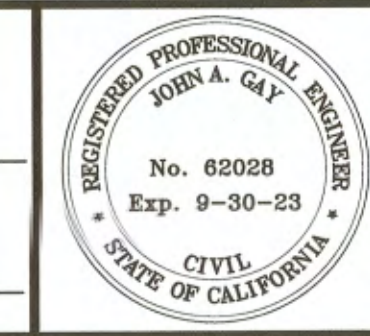
- LEGEND**
- Indicates discontinuous reinforcement
 - ▲ Indicates future picking points

- NOTES**
1. Not all reinforcing shown for clarity.
 2. See Valmont U-Beam Bridge System Plans for bearing pads, bolts and step layout.

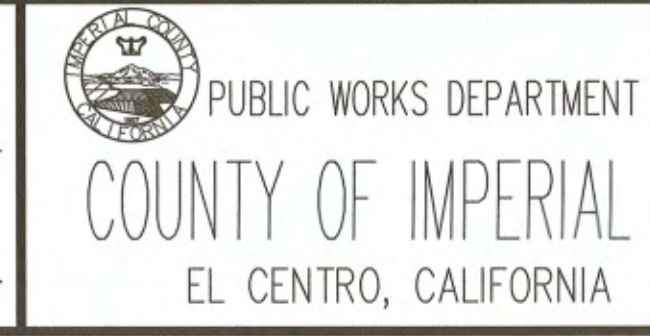
REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:
Daniel Sun
 DANIEL SUN, P.E.
 NVS
 2/08/22 DATE
 12/30/23 REG. EXP.



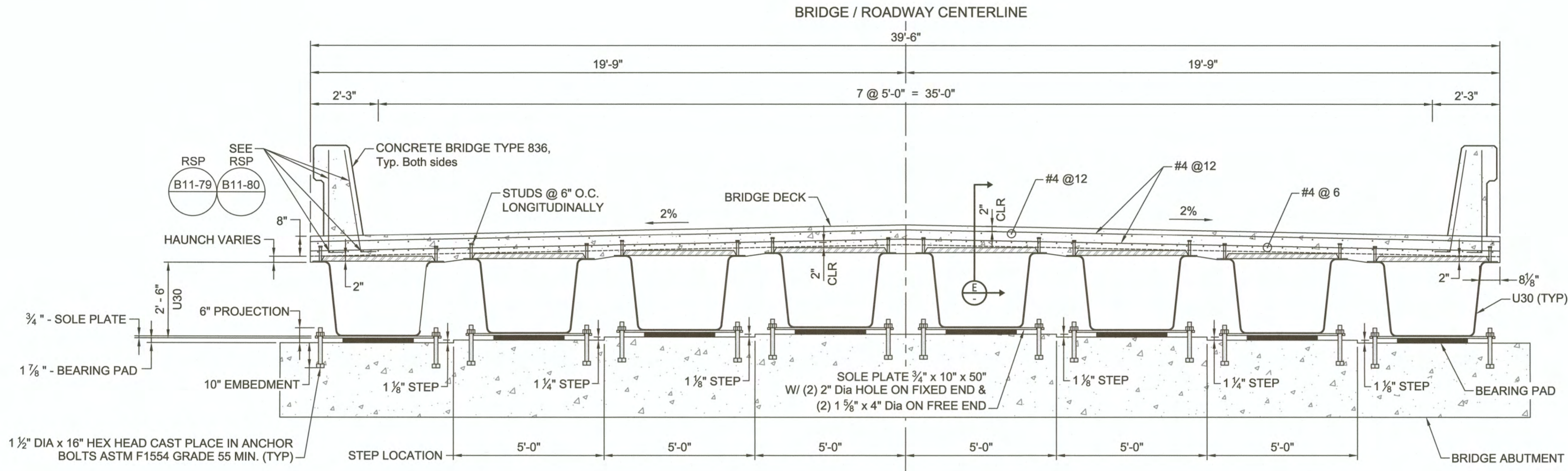
COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:
John A. Gay
 JOHN A. GAY, P.E.
 ROAD COMMISSIONER
 03/17/22 DATE
 62028 R.C.E. No.
 9/30/23 REG. EXP.



DATE 11/9/2021
 DRAWN SRD
 SCALE AS SHOWN
 CHECKED CDS

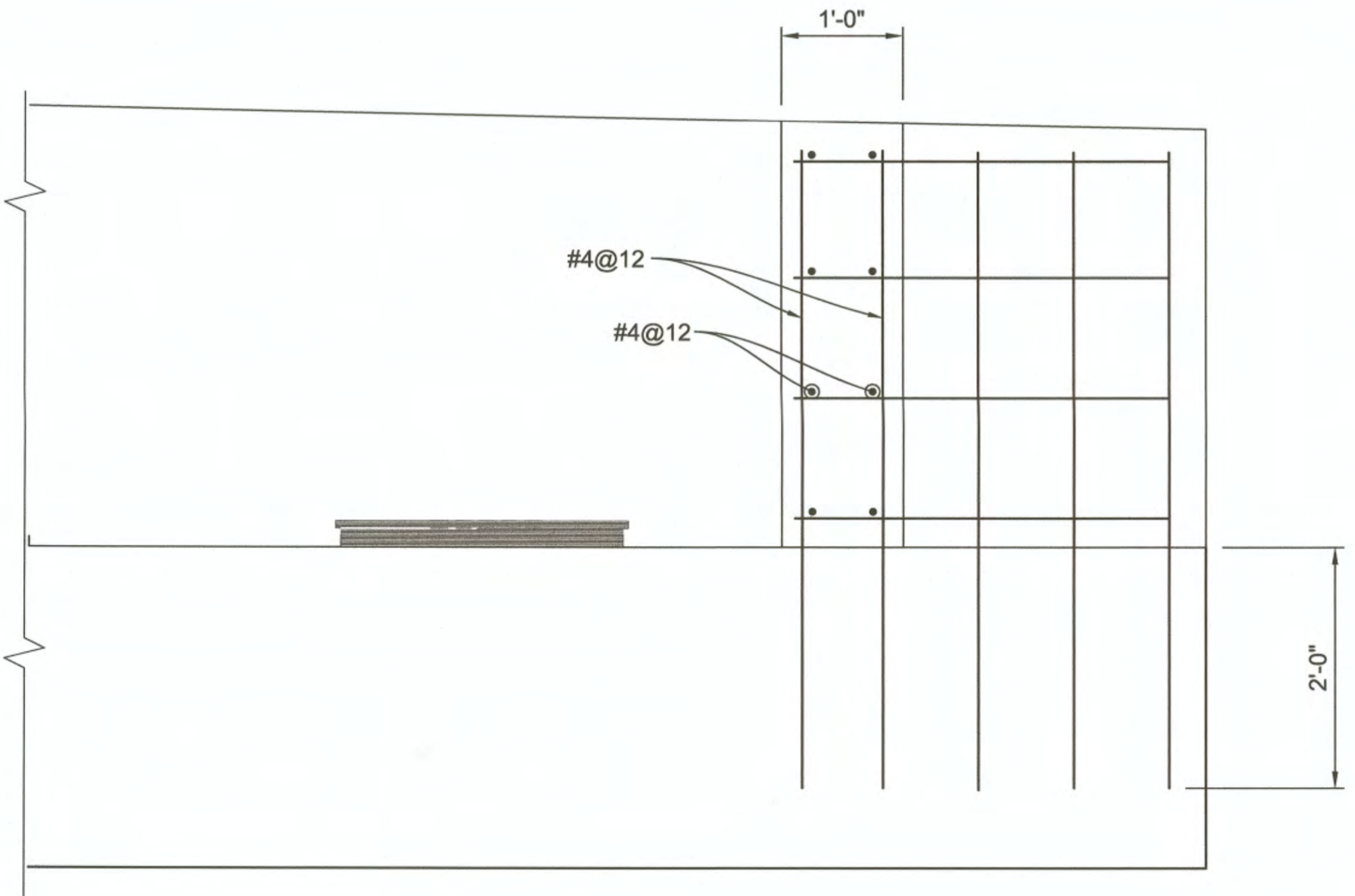
**DOGWOOD ROAD BRIDGE REPLACEMENT
 OVER CENTRAL MAIN CANAL
 BRIDGE NO. 58C-0226**

ABUTMENT LAYOUT	
REFERENCE	B-195 R-968
S-4	SHEET 13 OF 18

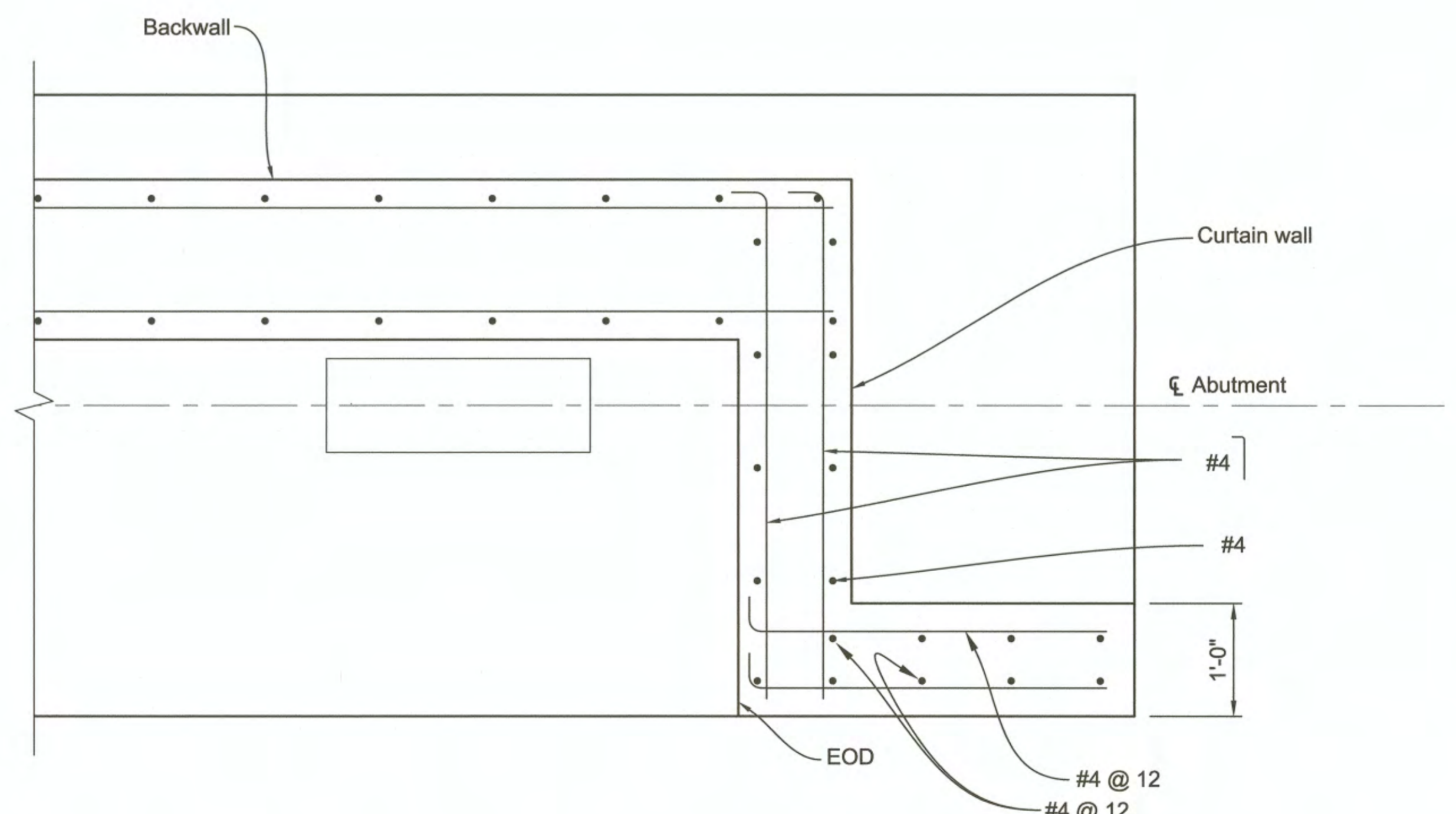


DETAILED ABUTMENT ELEVATION

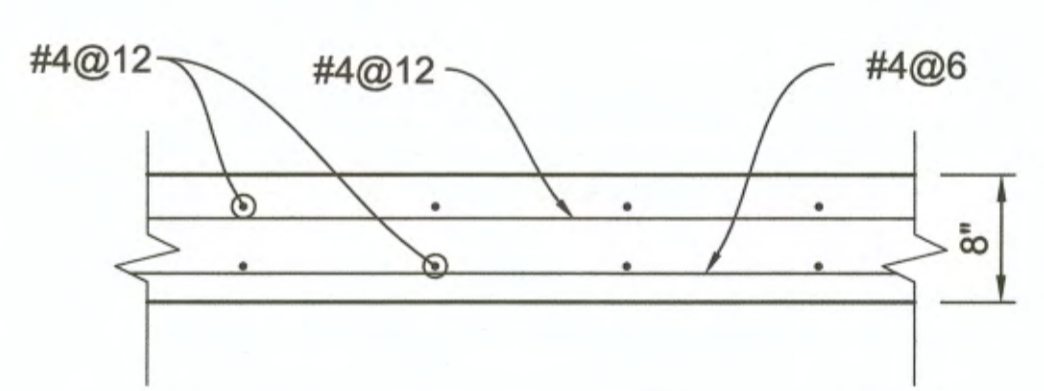
SCALE 1/2" = 1'-0"



B SECTION
SCALE 1" = 1'-0"

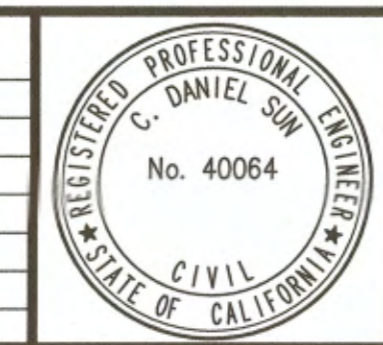


C SECTION
SCALE 1" = 1'-0"



E SECTION
SCALE 1" = 1'-0"

REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:

Daniel Sun

DANIEL SUN, P.E.
NV5

2/08/22 DATE

40064 R.C.E. No.
12/30/23 REG. EXP.



COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
APPROVED FOR CONSTRUCTION BY:

John A. Gay

JOHN A. GAY, P.E.
ROAD COMMISSIONER

4/4/2022 DATE

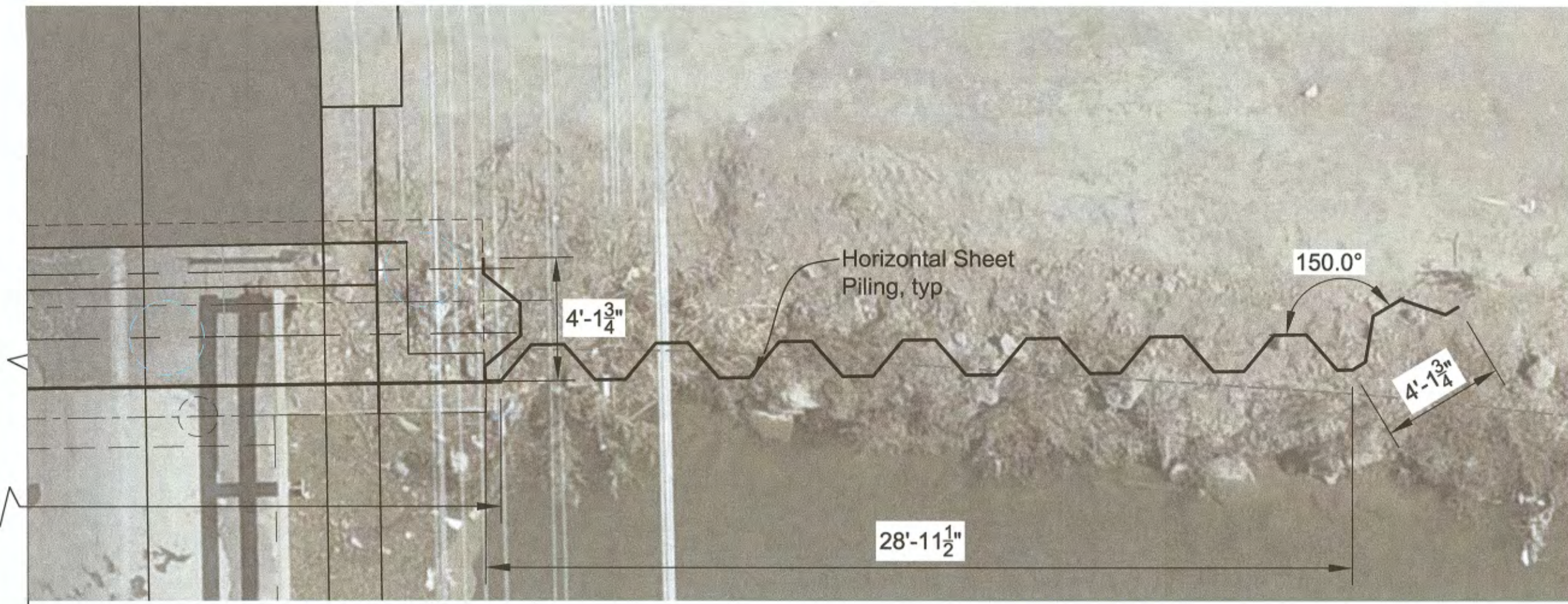
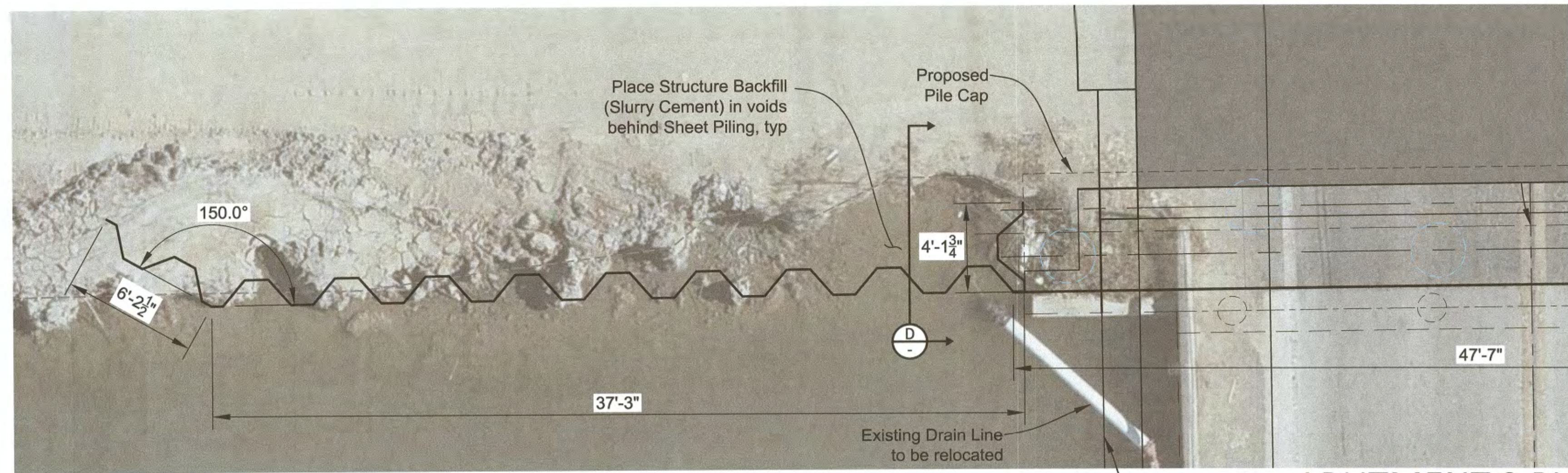
62028 R.C.E. No.
9/30/23 REG. EXP.

PUBLIC WORKS DEPARTMENT
COUNTY OF IMPERIAL
EL CENTRO, CALIFORNIA

DATE 11/9/2021
DRAWN SRD
SCALE AS SHOWN
CHECKED CDS

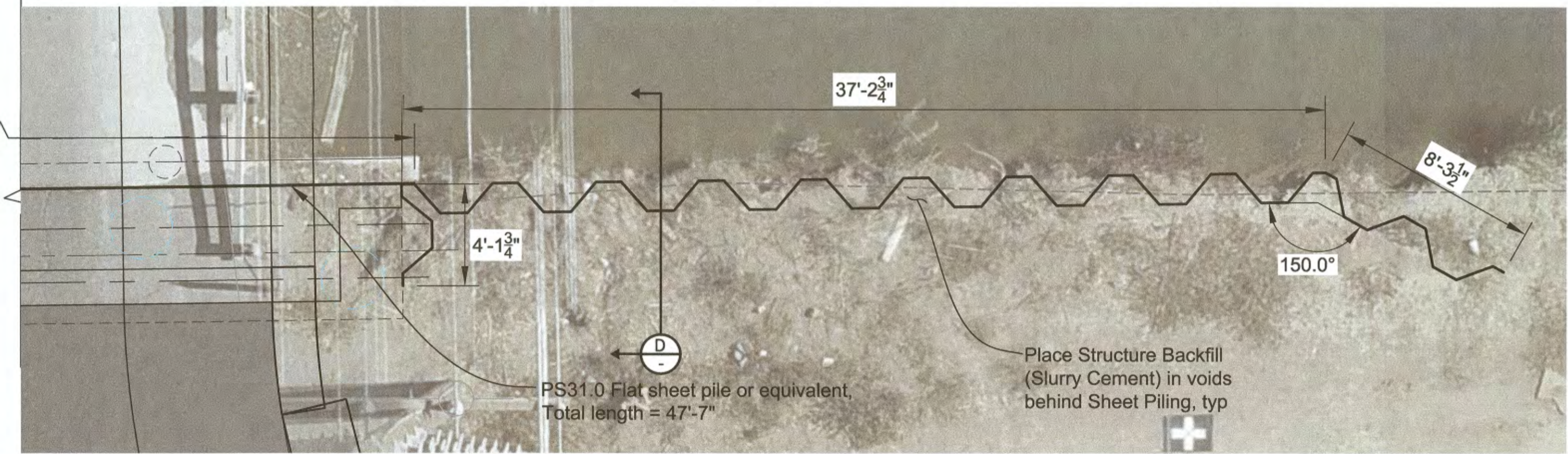
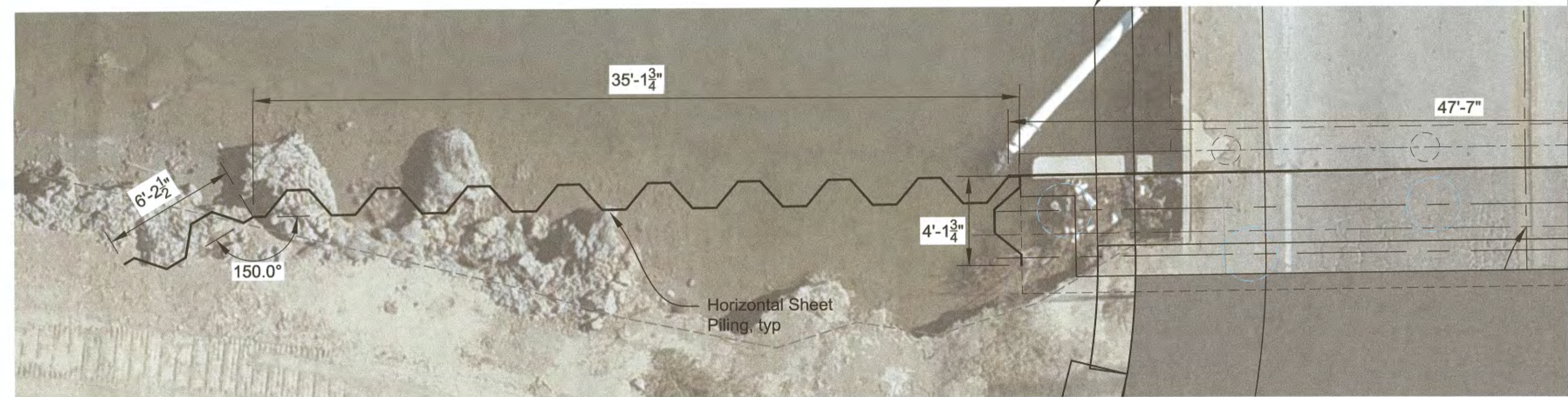
DOGWOOD ROAD BRIDGE REPLACEMENT
OVER CENTRAL MAIN CANAL
BRIDGE NO. 58C-0226

ABUTMENT DETAILS	
REFERENCE	B-195 R-968
S-5 R1	SHEET OF 14 18



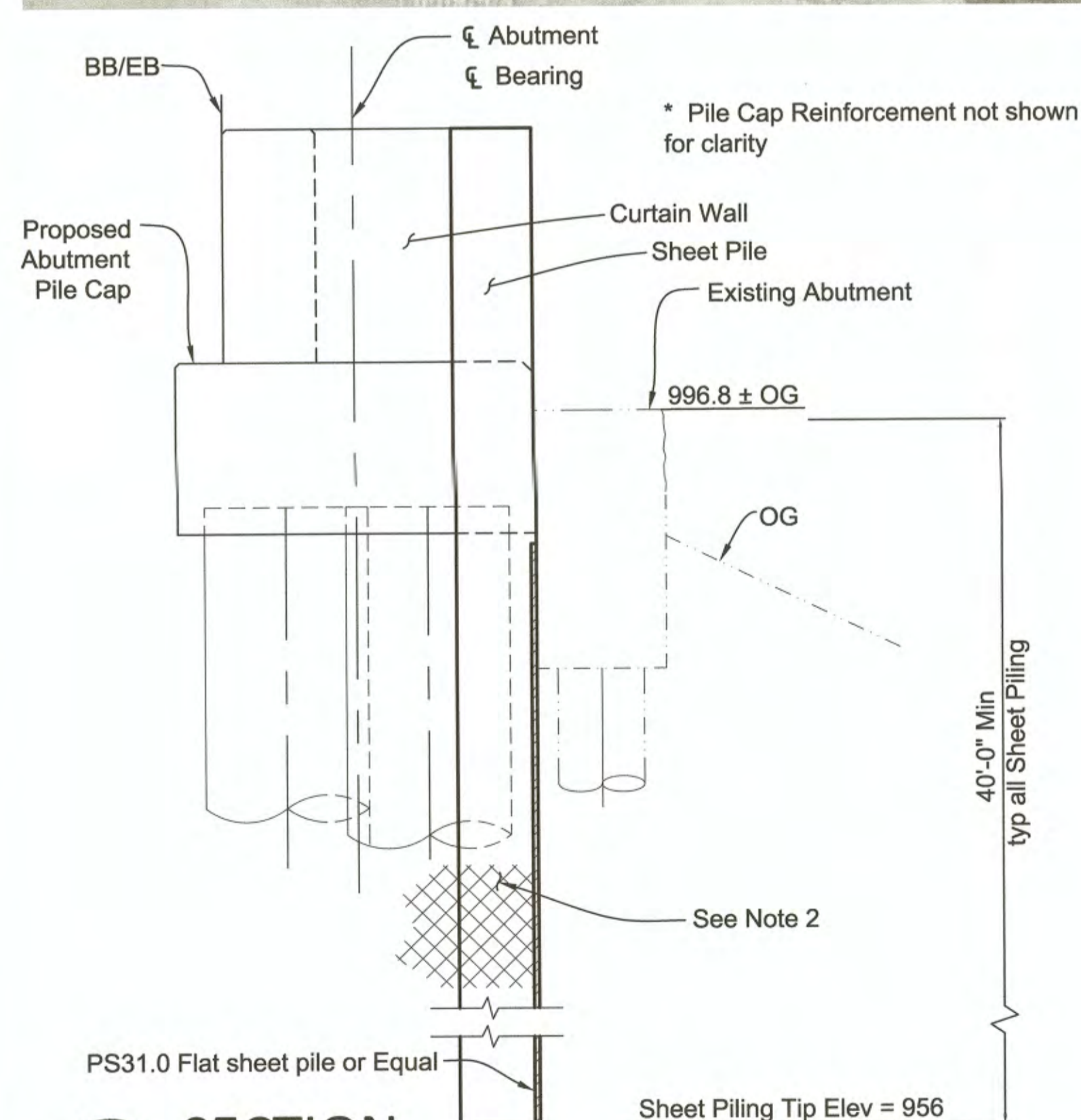
ABUTMENT 2 PLAN

SCALE 1/4" = 1'-0"



ABUTMENT 1 PLAN

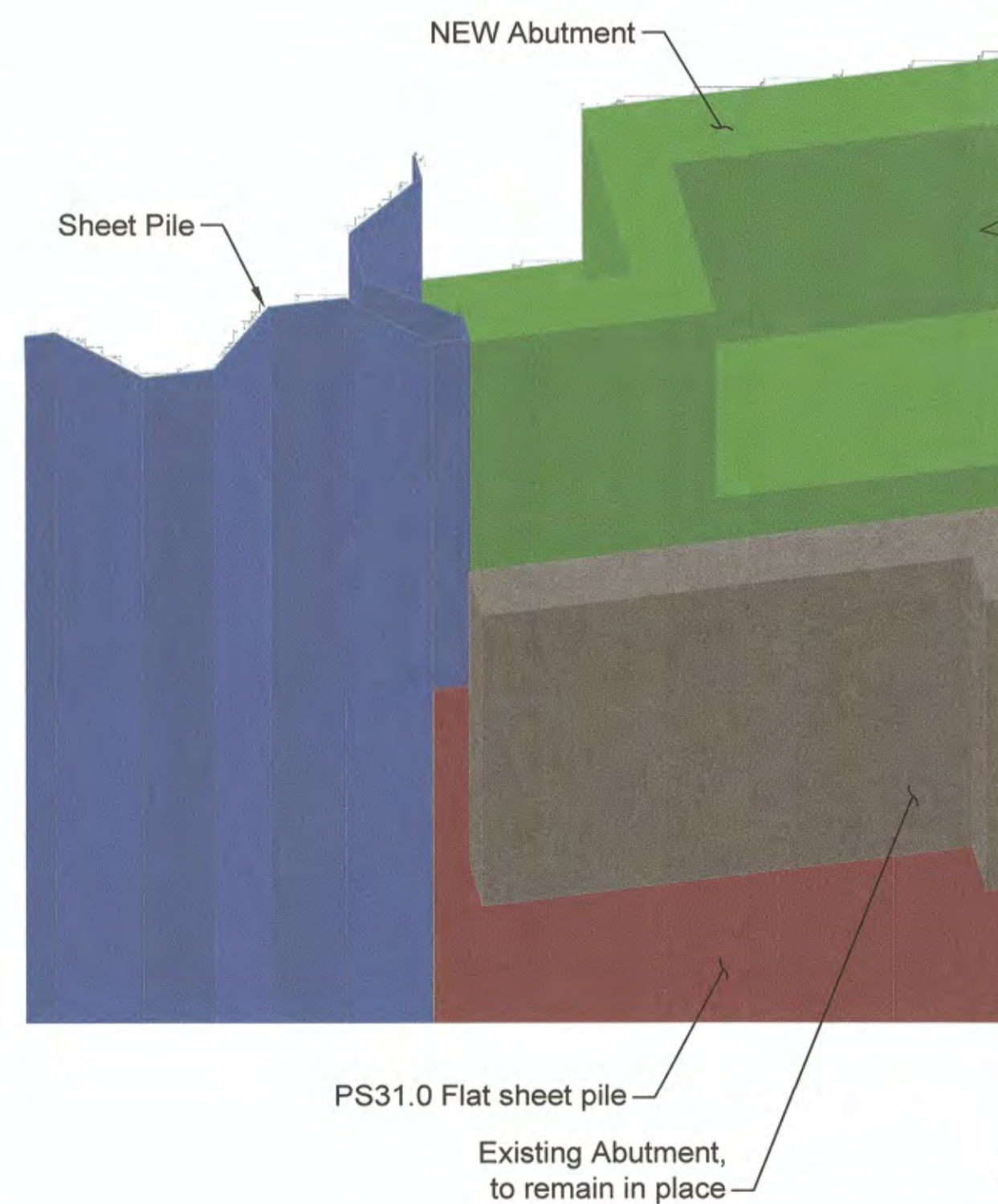
SCALE 1/4" = 1'-0"



NOTES

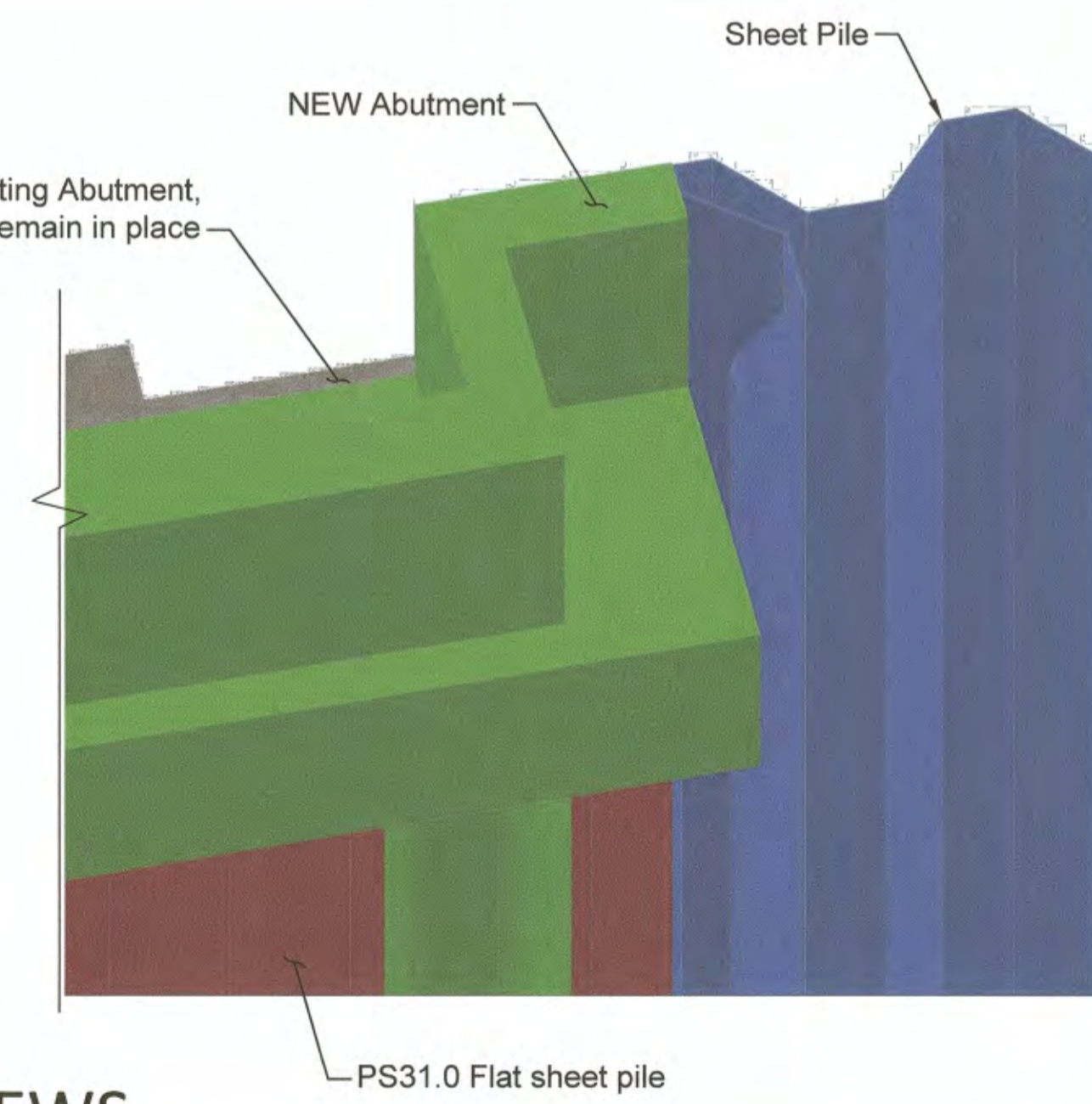
1. Place sheet piling at all 4 bridge corners as shown in plan view. MINIMUM SECTION MODULUS SHALL BE 45.63 in³ / FT
2. Place Structure backfill (Slurry Cement) in voids behind Sheet Piling.

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

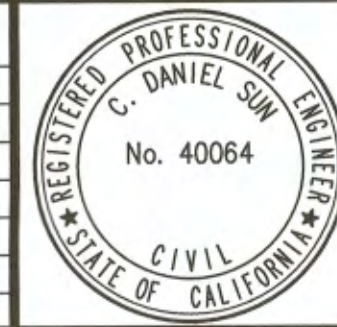


ISO VIEWS

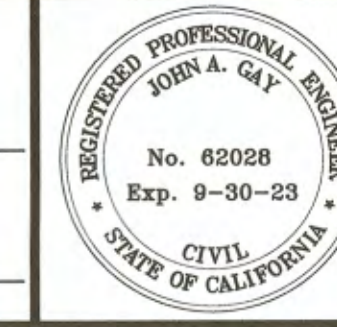
SCALE: NONE



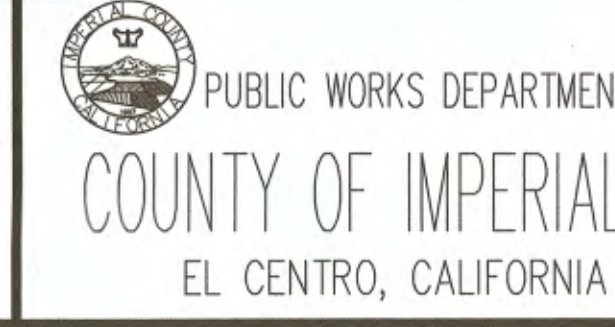
REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:
Daniel Sun
 DANIEL SUN, P.E.
 NV5
 2/08/22 DATE
 12/30/23 REG. EXP.



COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:
John A. Gay
 JOHN A. GAY, P.E.
 ROAD COMMISSIONER
 03/17/2022 DATE
 62028 R.C.E. No.
 9/30/23 REG. EXP.



DATE 11/9/2021
 DRAWN SRD
 SCALE AS SHOWN
 CHECKED CDS

**DOGWOOD ROAD BRIDGE REPLACEMENT
 OVER CENTRAL MAIN CANAL
 BRIDGE NO. 58C-0226**

SHEET PILE LAYOUT	
REFERENCE	B-195 R-968
S-6	SHEET 15 OF 18

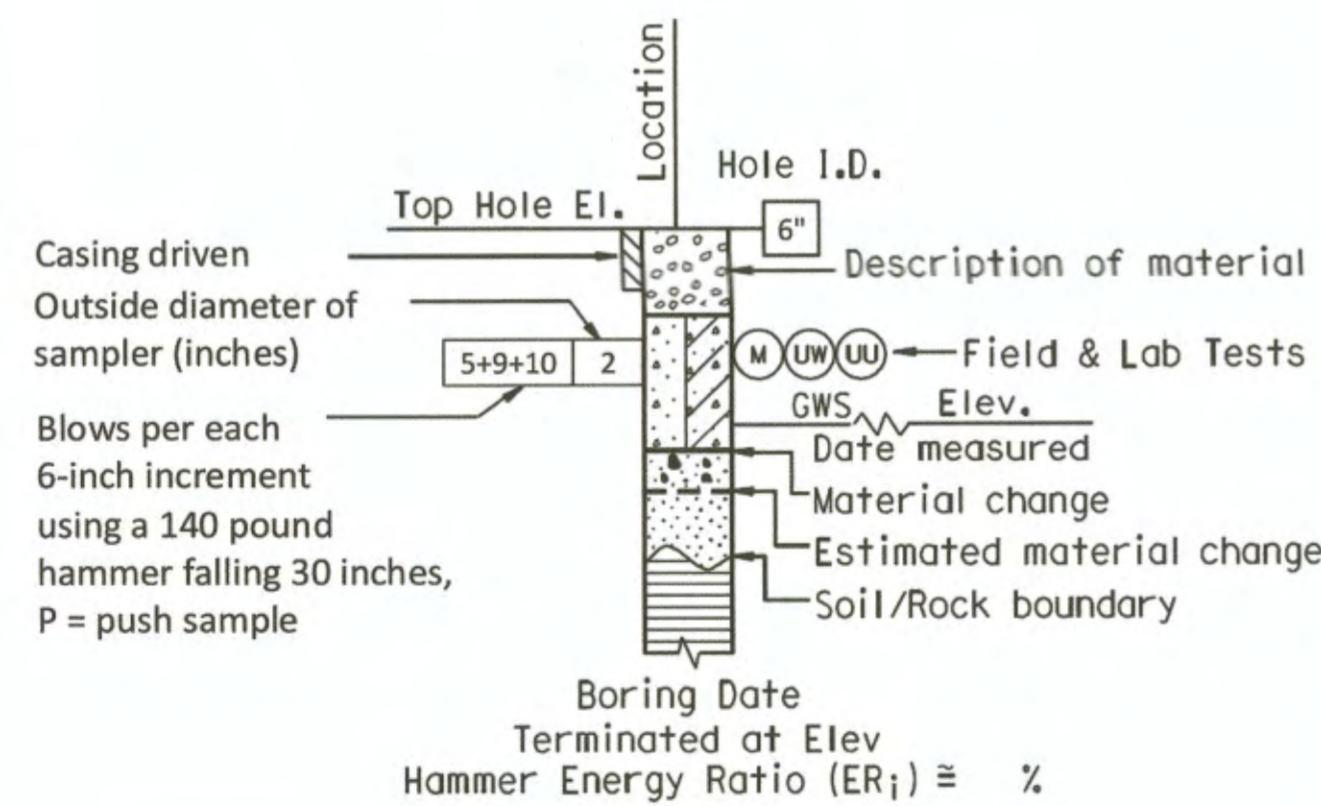
CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

CONSISTENCY OF COHESIVE SOILS				
Description	Unconfined Compressive Strength (tsf)	Pocket Penetrometer Measurement (tsf)	Torvane Measurement (tsf)	Field Approximation
Very Soft	< 0.25	< 0.25	< 0.12	Easily penetrated several inches by fist
Soft	0.25 to 0.50	0.25 to 0.50	0.12 to 0.25	Easily penetrated several inches by thumb
Medium Stiff	0.50 to 1.0	0.50 to 1.0	0.25 to 0.50	Penetrated several inches by thumb with moderate effort
Stiff	1 to 2	1 to 2	0.50 to 1.0	Readily indented by thumb but penetrated only with great effort
Very Stiff	2 to 4	2 to 4	1.0 to 2.0	Readily indented by thumbnail
Hard	> 4.0	> 4.0	> 2.0	Indented by thumbnail with difficulty

BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring
	R	Rotary drilled boring
	P	Rotary percussion boring (air)
	R	Rotary drilled diamond core
	HD HA	Hand driven (1-inch soil tube) Hand Auger
	D	Dynamic Cone Penetration Boring
	CPT	Cone Penetration Test (ASTM D 5778-95)
	O	Other

Note: Size in inches.

PLASTICITY OF FINE-GRAINED SOILS	
Description	Criteria
Nonplastic	A 1/8-inch thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.



HOLLOW STEM AUGER

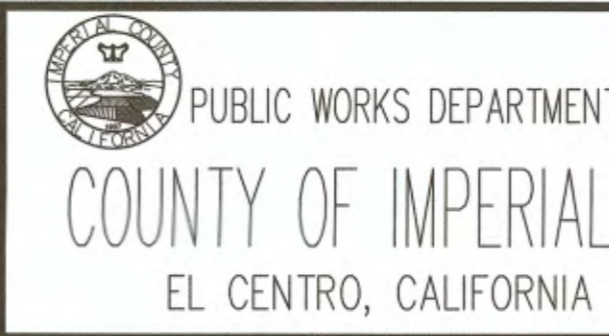
REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:
Carl Henderson
 CARL FRANCISCO HENDERSON
 NVS
 GE 2886
 R.C.E. No.
 2/08/22
 DATE
 6/30/23
 REG. EXP.



COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:
John A. Gay
 JOHN A. GAY, P.E.
 ROAD COMMISSIONER
 03/17/2022
 DATE
 62028
 R.C.E. No.
 9/30/23
 REG. EXP.



DATE 5/6/2016
 DRAWN GC
 SCALE AS SHOWN
 CHECKED G. GAU

DOGWOOD ROAD BRIDGE REPLACEMENT
 OVER CENTRAL MAIN CANAL
 BRIDGE NO. 58C-0042

SOIL LEGEND	
REFERENCE	B-195 R-968
S-7	SHEET 16 OF 18

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

GROUP SYMBOLS AND NAMES			
Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
	Well-graded GRAVEL Well-graded GRAVEL with SAND		Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
	Poorly graded GRAVEL Poorly graded GRAVEL with SAND		
	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND		SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
	Poorly graded GRAVEL with SILT Poorly graded GRAVEL with SILT and SAND		SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
	Poorly graded GRAVEL with CLAY (or SILTY CLAY) Poorly graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
	SILTY GRAVEL SILTY GRAVEL with SAND		ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
	CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND		ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
	Well-graded SAND Well-graded SAND with GRAVEL		
	Poorly graded SAND Poorly graded SAND with GRAVEL		Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
	Poorly graded SAND with SILT Poorly graded SAND with SILT and GRAVEL		
	Poorly graded SAND with CLAY (or SILTY CLAY) Poorly graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
	SILTY SAND SILTY SAND with GRAVEL		
	CLAYEY SAND CLAYEY SAND with GRAVEL		ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
	PEAT		ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
	COBBLES COBBLES and BOULDERS BOULDERS		

FIELD AND LABORATORY TESTING	
(C)	Consolidation (ASTM D 2435)
(CL)	Collapse Potential (ASTM D 5333)
(CP)	Compaction Curve (CTM 216)
(CR)	Corrosivity Testing (CTM 643, CTM 422, CTM 417)
(CU)	Consolidated Undrained Triaxial (ASTM D 4767)
(DS)	Direct Shear (ASTM D 3080)
(EI)	Expansion Index (ASTM D 4829)
(M)	Moisture Content (ASTM D 2216)
(OC)	Organic Content-% (ASTM D 2974)
(P)	Permeability (CTM 220)
(PA)	Particle Size Analysis (ASTM D 422)
(PI)	Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
(PL)	Point Load Index (ASTM D 5731)
(PM)	Pressure Meter
(PP)	Pocket Penetrometer
(R)	R-Value (CTM 301)
(SE)	Sand Equivalent (CTM 217)
(SG)	Specific Gravity (AASHTO T 100)
(SL)	Shrinkage Limit (ASTM D 427)
(SW)	Swell Potential (ASTM D 4546)
(TV)	Pocket Torvane
(UC)	Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
(UU)	Unconsolidated Undrained Triaxial (ASTM D 2850)
(UW)	Unit Weight (ASTM D 4767)
(VS)	Vane Shear (AASHTO T 223)

APPARENT DENSITY OF COHESIONLESS SOILS	
Description	SPT N ₆₀ (Blows / 12 inches)
Very loose	0 - 4
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	> 50

MOISTURE	
Description	Criteria
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

PERCENT OR PROPORTION OF SOILS	
Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5 to 10%
Little	15 to 25%
Some	30 to 45%
Mostly	50 to 100%

PARTICLE SIZE		
Description	Size	
Boulder	> 12"	
Cobble	3" to 12"	
Gravel	Coarse	3/4" to 3"
	Fine	No. 4 to 3/4"
Sand	Coarse	No. 10 to No. 4
	Medium	No. 40 to No. 10
	Fine	No. 200 to No. 40

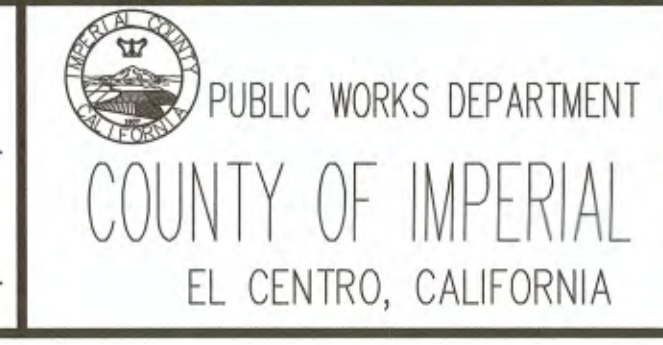
REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:
Carl Henderson
 CARL FRANCISCO HENDERSON
 NV5
 2/08/22 DATE
 GE 2886 R.C.E. No.
 6/30/23 REG. EXP.



COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
 APPROVED FOR CONSTRUCTION BY:
John A. Gay
 JOHN A. GAY, P.E.
 ROAD COMMISSIONER
 03/19/2022 DATE
 62028 R.C.E. No.
 9/30/23 REG. EXP.



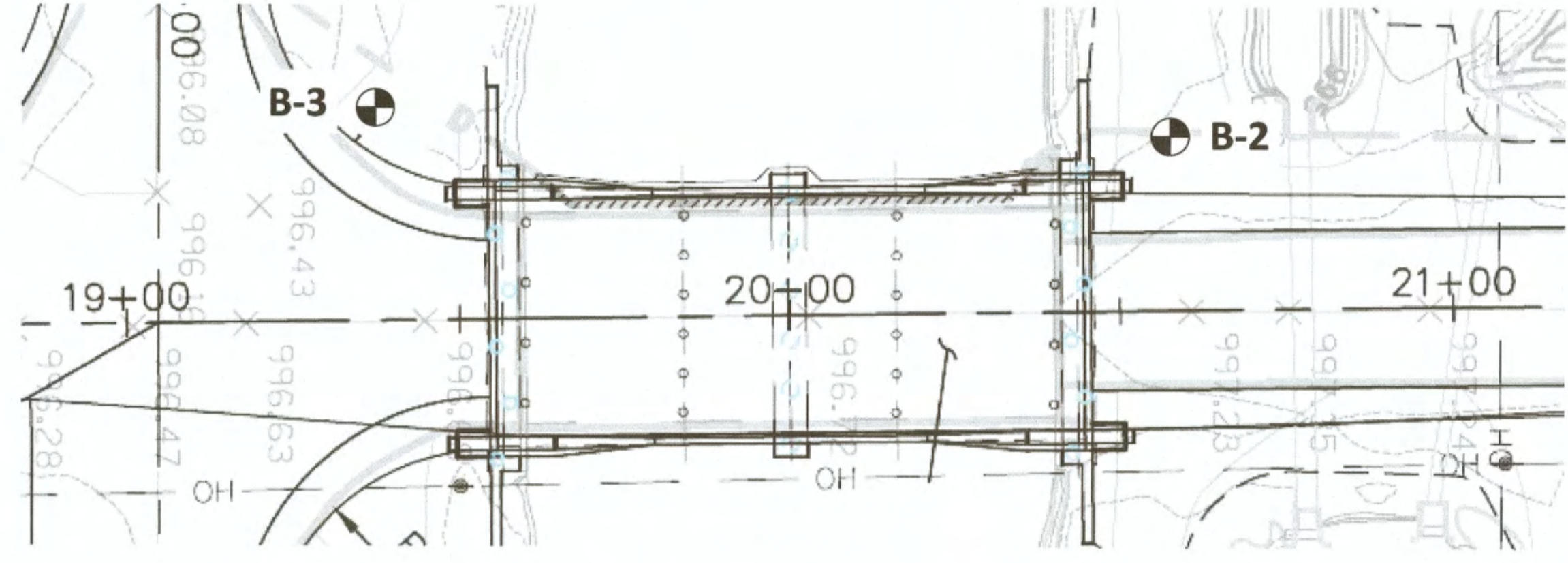
DATE 5/6/2016
 DRAIN GC
 SCALE AS SHOWN
 CHECKED G. GAU

DOGWOOD ROAD BRIDGE REPLACEMENT
 OVER CENTRAL MAIN CANAL
 BRIDGE NO. 58C-0042

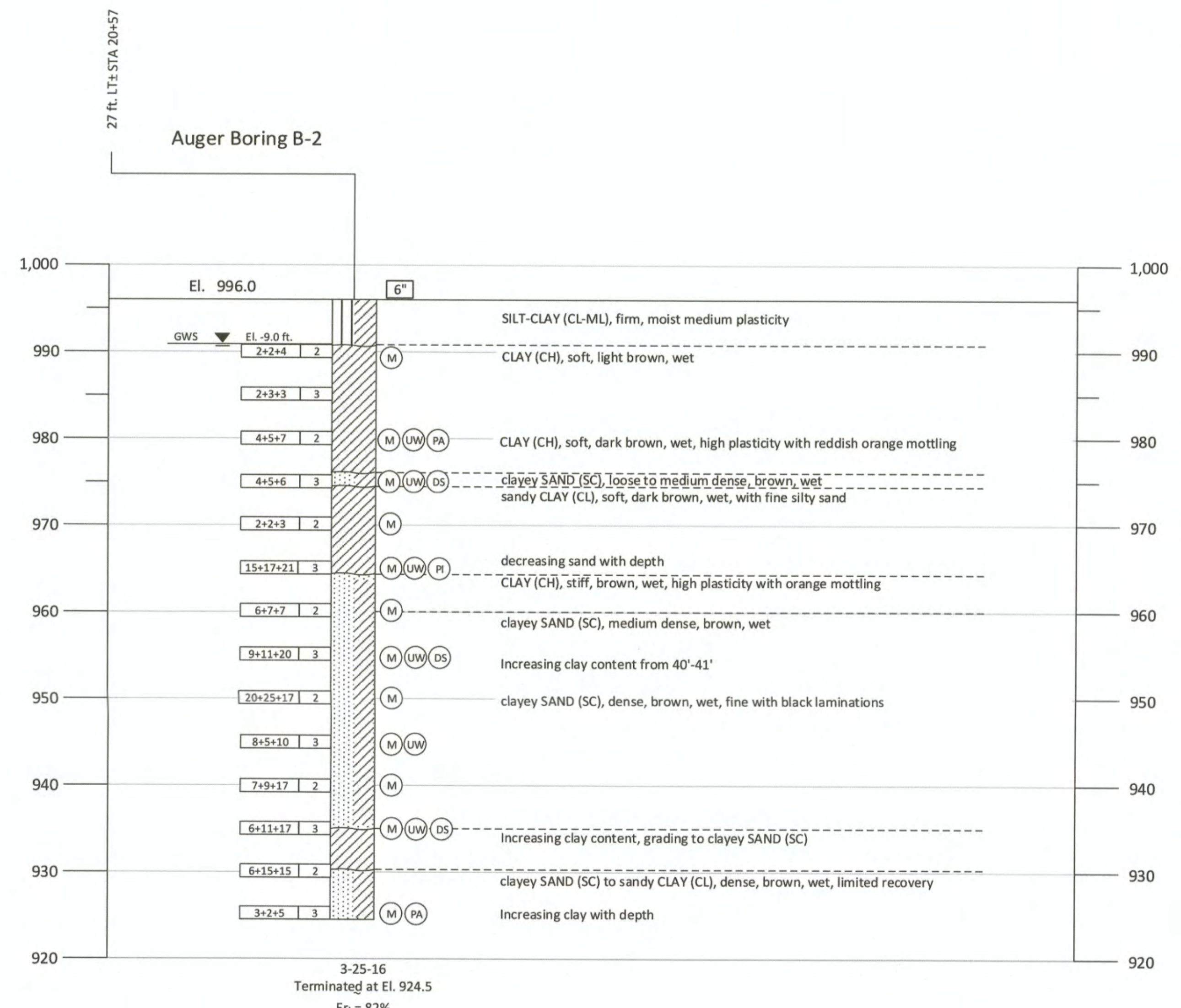
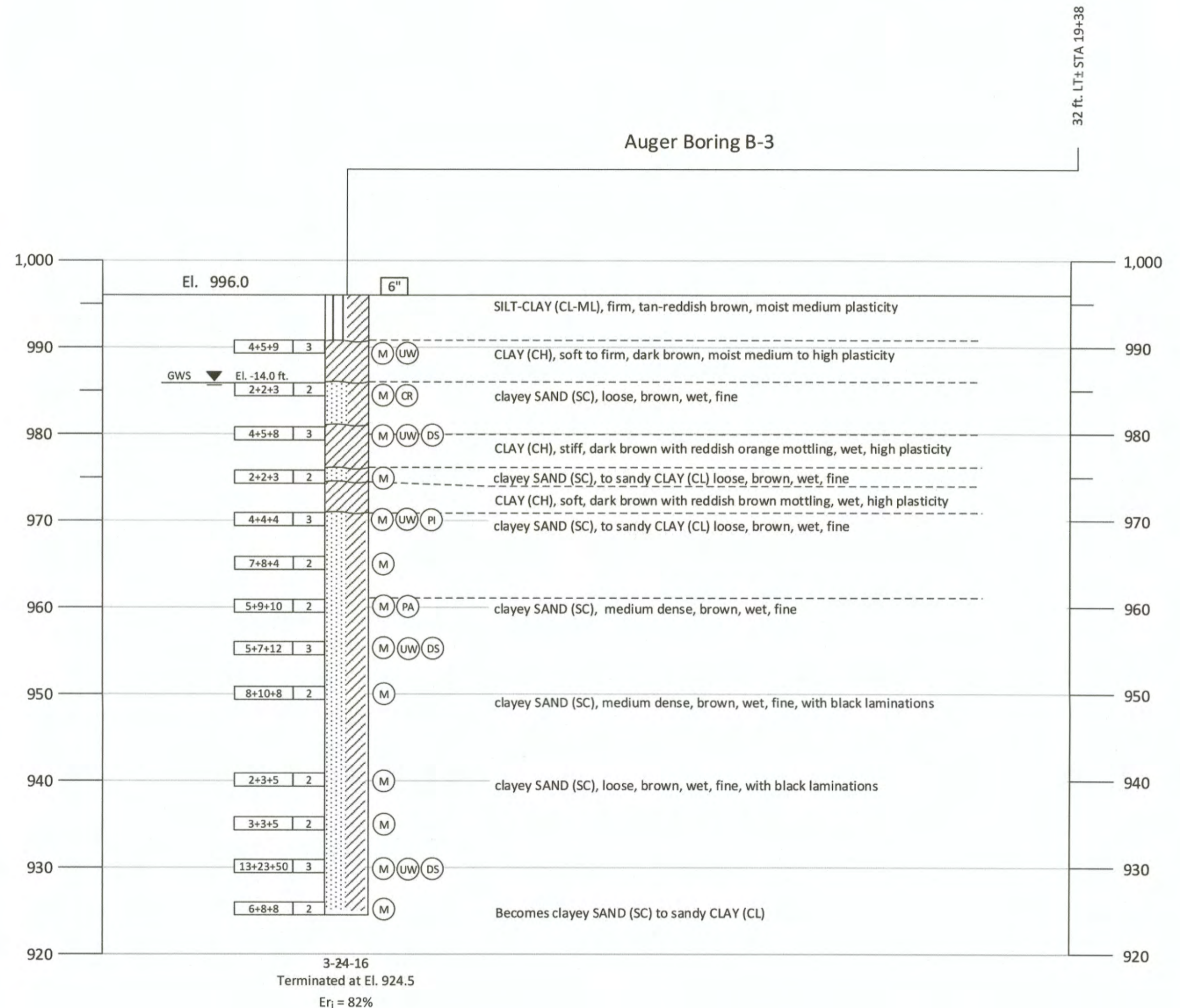
SOIL LEGEND	
REFERENCE	
S-8	B-195 R-968
	SHEET 17 OF 18

N:\21-0001139\Cadd\Bridges\07-09_L0TBs.dwg\Mar-11-2022:11:30

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)



PLAN
1" = 20'

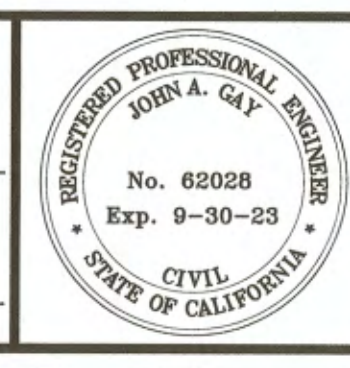


PROFILE
Horizontal 1" = 1'
Vertical 1" = 10'

REVISION	DATE	COMMENTS



PREPARED UNDER THE DIRECT SUPERVISION OF:
Carl Henderson
CARL FRANCISCO HENDERSON
NVS
2/08/22
DATE



COUNTY OF IMPERIAL PUBLIC WORKS DEPARTMENT
APPROVED FOR CONSTRUCTION BY:
John A. Gay
JOHN A. GAY, P.E.
ROAD COMMISSIONER
03/17/2022
DATE

PUBLIC WORKS DEPARTMENT
COUNTY OF IMPERIAL
EL CENTRO, CALIFORNIA

DATE 5/6/2016
DRAWN GC
SCALE AS SHOWN
CHECKED G. GAU

DOGWOOD ROAD BRIDGE REPLACEMENT
OVER CENTRAL MAIN CANAL
BRIDGE NO. 58C-0042

LOG OF TEST BORING	
REFERENCE	B-195 R-968
S-9	SHEET 18 OF 18