

SHEET INDEX

T-1	TITLE SHEET AND LOCATION MAP
IOP-1	NOTES, LEGEND, AND ABBREVIATIONS
X-1	TYPICAL SECTIONS
L-1&2	LAYOUT AND PROFILE
G-1	GRADING
SC-1	STAGE CONSTRUCTION STAGE 1
SC-2	STAGE CONSTRUCTION STAGE 2
PD-1	PAVEMENT DELINEATION PLAN & QUANTITIES
EC-1	EROSION CONTROL
S-001	STRUCTURAL GENERAL PLAN
S-002	STRUCTURAL DECK CONTOURS
S-003	STRUCTURAL FOUNDATION PLAN
S-004	STRUCTURAL ABUTMENT LAYOUT
S-005	STRUCTURAL ABUTMENT DETAILS NO. 1
S-006	STRUCTURAL ABUTMENT DETAILS NO. 2
S-007	STRUCTURAL TYPICAL SECTION
S-008	STRUCTURAL CONCRETE SLAB DETAILS NO. 1
S-009	STRUCTURAL CONCRETE SLAB DETAILS NO. 2

CACHE SLOUGH MITIGATION BANK WATER CROSSING STRUCTURE

ON STATE ROUTE 84
SOLANO COUNTY, CA

TO BE SUPPLEMENTED BY CALIFORNIA
DEPARTMENT OF TRANSPORTATION
STANDARD PLANS AND SPECIFICATIONS
DATED 2023

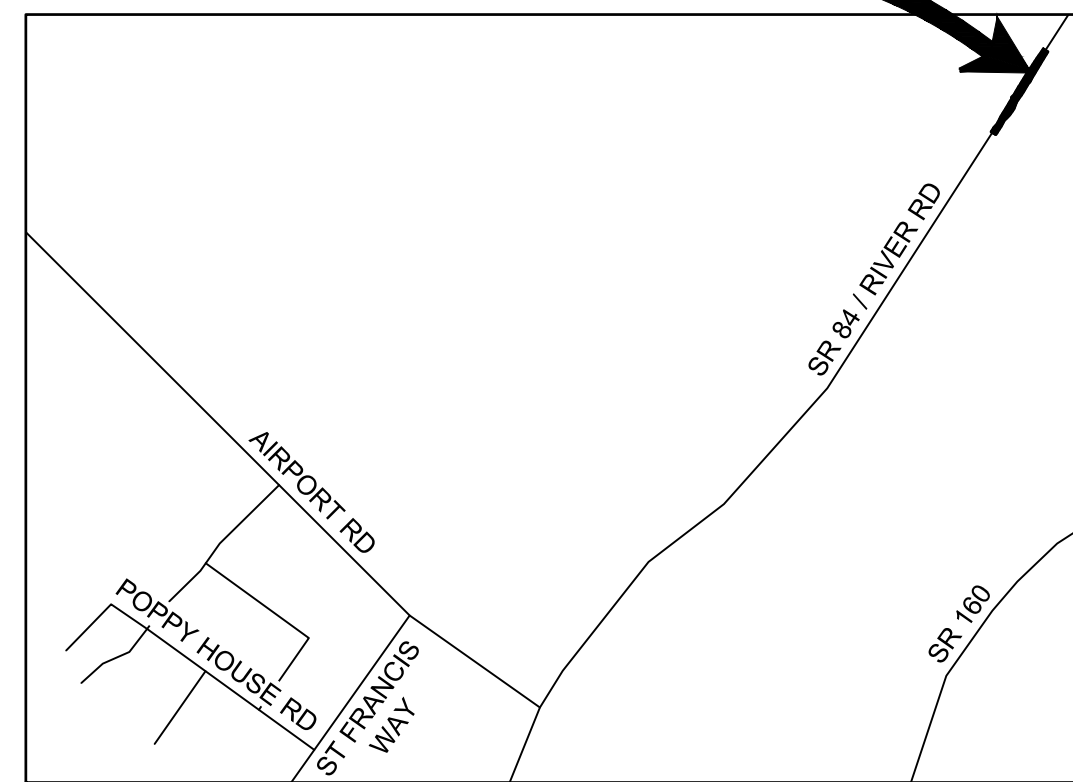
HORIZONTAL DATUM:

THE HORIZONTAL DATUM IS THE CALIFORNIA COORDINATE SYSTEM OF 1983 (NAD 83), ZONE 2 (0402) DERIVED FROM RTK GPS TIES TO PUBLISHED NGS SURVEY POINTS ISELTON RESET 1970 (P.I.D. JS1817), SHAG (P.I.D. AE9858), B 474 (P.I.D. JS2048), AND DROUIN RM 2 (P.I.D. JS1926), UPDATED TO EPOCH 2017.50 USING THE HTDP UTILITY TOOL FROM THE NGS GEODETIC TOOL KIT. COORDINATES AND DISTANCES ARE GRID VALUES, TO OBTAIN GROUND DISTANCES, DIVIDE GRID DISTANCES BY THE PROJECT SPECIFIC SCALE FACTOR OF 1.00003224.

VERTICAL DATUM:

VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) DERIVED FROM RTK GPS TIES TO DROUIN RM 2 (P.I.D. JS1926) WITH A PUBLISHED ELEVATION OF 133.70 FEET.

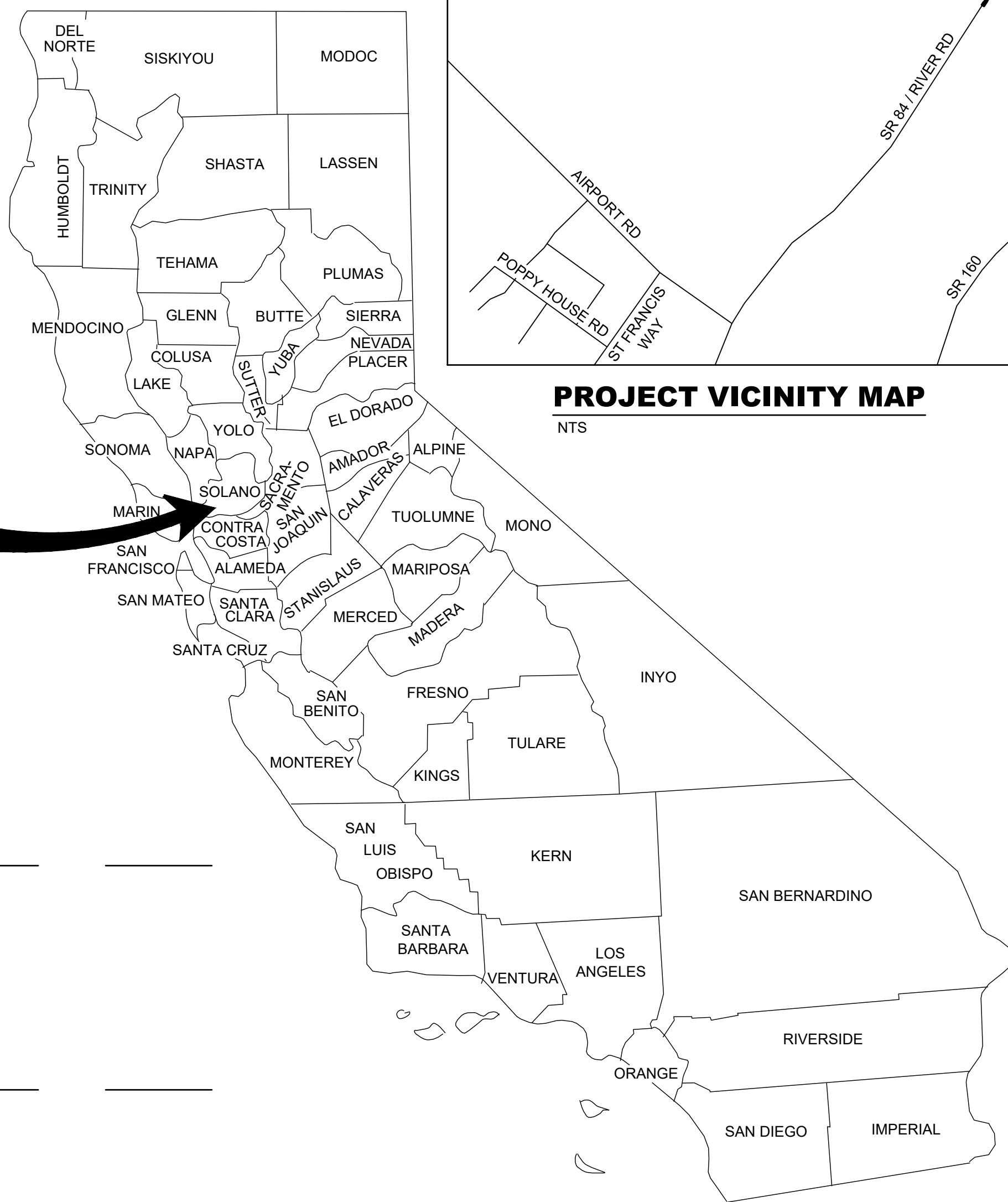
PROJECT SITE



PROJECT VICINITY MAP

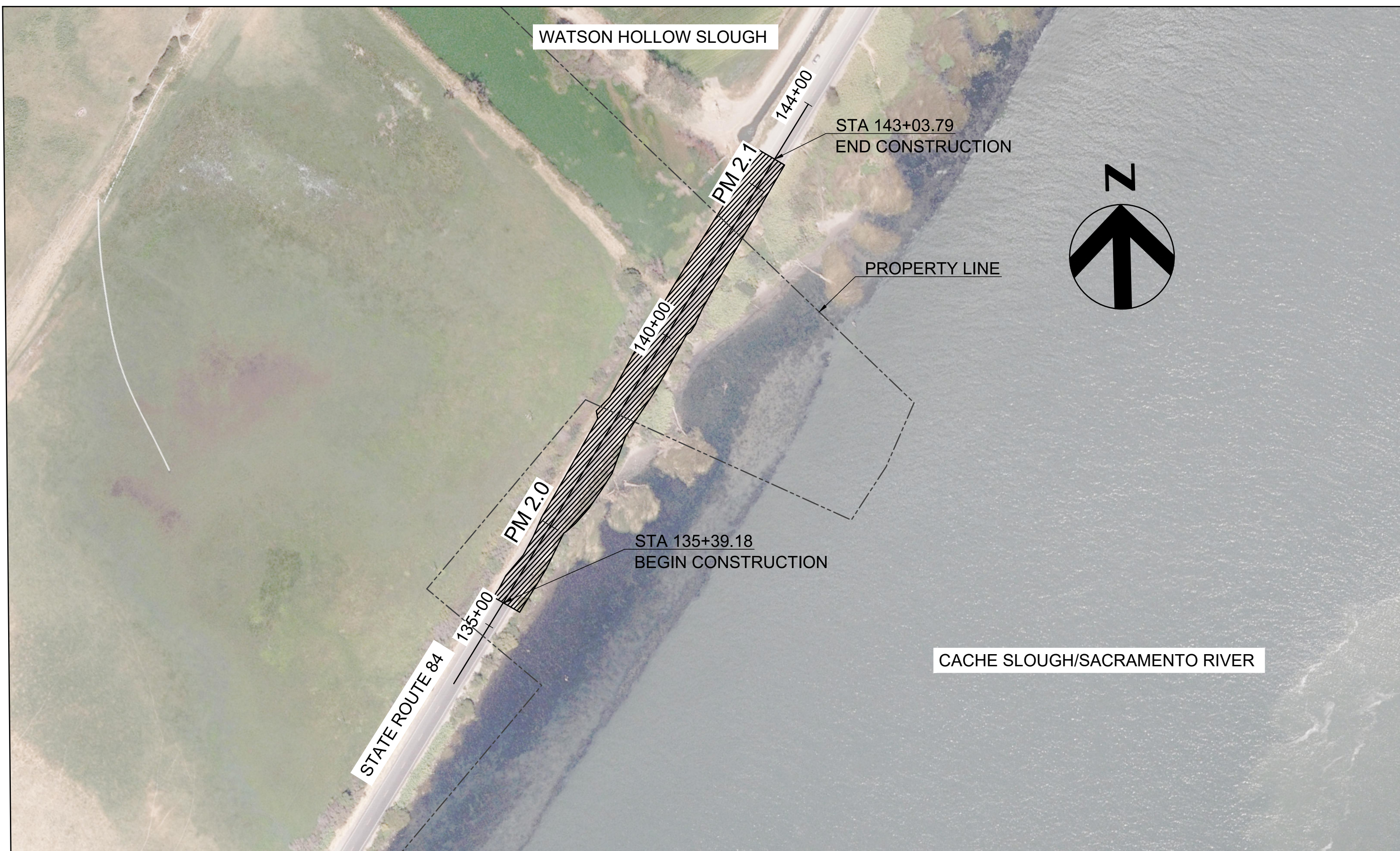
NTS

PROJECT VICINITY



CALIFORNIA STATE MAP

NTS



LOCATION MAP

NTS

APPROVED:

NAME
TITLE

REVIEWED:

NAME
TITLE

65% NOT FOR CONSTRUCTION

PROJECT MANAGER	D. JABBOUR
DESIGNED BY	T. CRANE
DRAWN BY	T. CRANE
CHECKED BY	H. QUAN
TECHNICAL LEAD	G. ARMSTRONG
DATE	MAY 29, 2024
PROJECT NUMBER	10364495



**CACHE SLOUGH MITIGATION BANK
WATER CROSSING STRUCTURE**

TITLE SHEET AND LOCATION MAP



FILENAME | 10364495ab001.dwg
SCALE | AS NOTED

SHEET

T-1

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LEGEND

- PROPERTY LINE
- CALTRANS MAINTENANCE ACCESS EASEMENT
- OVERHEAD ELECTRIC (PG&E)
- EXISTING FENCE
- EXISTING WATER EDGE
- CALTRANS EASEMENT
- SAWCUT
- EXISTING TOE OF SLOPE
- PROPOSED CUT
- PROPOSED FILL
- MIDWEST GUARDRAIL SYSTEM
- NORTH ARROW

ABBREVIATIONS

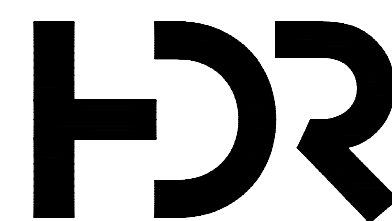
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AITS	ALTERNATIVE IN-LINE TERMINAL SYSTEM
BB	BEGIN BRIDGE
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
CL	CENTERLINE
Det	DETAIL
E	EAST
EB	END BRIDGE
EL	ELEVATION
EP	EDGE OF PAVEMENT
ETW	EDGE OF TRAVEL WAY
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
FG	FINISHED GRADE
HMA	HOT MIX ASPHALT
HORIZ.	HORIZONTAL
HP	HINGE POINT
Lt	LEFT
LVC	LENGTH OF VERTICAL CURVE
MGS	MIDWEST GUARDRAIL SYSTEM
MPH	MILES PER HOUR
N	NORTH
OG	ORIGINAL GRADE
PT	POINT
PVI	POINT OF VERTICAL INTERSECTION
Rt	RIGHT
R/W	RIGHT-OF-WAY
Rdwy	ROADWAY
SR	STATE ROUTE
STA	STATION
STD	STANDARD
TR	TRANSITION RAILING
VERT.	VERTICAL
(OH) E	Existing OVERHEAD ELECTRIC (PG&E)
WHS	WATSON HOLLOW SLOUGH

GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFIC CONDITIONS AND TECHNICAL SPECIFICATIONS WHICH IS A SEPARATE DOCUMENT NOT INCLUDED IN THIS PLAN SET. ALL WORK SHALL ALSO BE PERFORMED IN ACCORDANCE WITH CALTRANS STANDARD PLANS AND SPECIFICATIONS (LATEST REVISION), INCLUDING ANY ADDENDA.
2. DRAWING BASE MAP IS BASED ON PARCEL INFORMATION PROVIDED BY THE COUNTY. PARCEL LINES ARE APPROXIMATE AND ARE FOR INFORMATION PURPOSES ONLY.
3. SPECIFIC NOTES AND DETAILS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
4. THE CONTRACTOR SHALL NOTIFY SOLANO COUNTY BY PHONE (707) 784-6060 AT LEAST 2 WEEKS PRIOR TO COMMENCING CONSTRUCTION WORK AND PRIOR TO RESUMING WORK ON SITE AFTER AN EXTENDED SHUT DOWN (LONGER THAN ONE WEEK IN DURATION).
5. SOLANO COUNTY IS A MEMBER OF THE UNDERGROUND SERVICE ALERT (U.S.A) ONE CALL PROGRAM. ALL CONTRACTORS ON THIS PROJECT SHALL NOTIFY U.S.A. HOURS (2 WORKING DAYS) IN ADVANCE OF PERFORMING ANY EXCAVATION WORK OR DEMOLITION OF IMPROVEMENTS. THE TOLL FREE PHONE NUMBER IS 811.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY LOCATIONS, ELEVATIONS, ETC. OF EXISTING FACILITIES AND TO IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY FIELD CONFLICTS.
7. ALL MATERIALS AND WORKMANSHIP SHALL FULLY CONFORM WITH THE SPECIFICATIONS, STANDARDS, AND ORDINANCES OF THE CALTRANS STANDARD PLANS AND SPECIFICATIONS (LATEST REVISION).
8. CONTRACTOR SHALL MEET WITH CITY PRIOR TO START OF CONSTRUCTION. 48 HOURS NOTICE TO THE ENGINEER IS REQUIRED ON ALL INSPECTIONS.
9. CONTRACTOR IS RESPONSIBLE TO MAKE ALL ARRANGEMENTS FOR SITE INSPECTIONS AND ENSURE THAT ALL CURRENT STANDARDS FOR THE CITY, COUNTY, AND CALTRANS ARE FOLLOWED PRIOR TO BEGINNING ANY PHASE OF CONSTRUCTION WORK.
10. CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO START OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
11. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGEMENTS TO PAY FOR ALL MATERIAL TESTING REQUIRED FOR QUALITY ASSURANCE/ACCEPTANCE OF THIS PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE TO IT THAT ALL MATERIAL TESTING REQUIRED BY THE ENGINEER AND QUALITY CONTROL TESTING, PER THE SPECIFIC CONDITIONS, IS PERFORMED. ENGINEER WILL ONLY PERFORM QUALITY ASSURANCE TESTING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER 24 HOURS IN ADVANCE OF QUALITY ASSURANCE TESTING TO ALLOW THE ENGINEER TO SCHEDULE MATERIAL TESTING LAB SAMPLING OR TESTING.
12. DUST CONTROL DURING ALL PHASES OF CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN GOOD HOUSEKEEPING WITHIN THE CONSTRUCTION AREA AND STAGING AREA.
13. WATER FOR DUST CONTROL AND USE FOR COMPACTION IS REQUIRED AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PAY FOR ANY FEES OR DEPOSITS.
14. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL THE PROPOSED ROUTE(S) FOR ALL CONSTRUCTION TRAFFIC RELATED TO THE PROJECT. UPON APPROVAL, THE CONTRACTOR SHALL STRICTLY ADHERE TO THAT ROUTE(S) ONLY, UNLESS WRITTEN PERMISSION IS OBTAINED TO CHANGE THE ROUTE(S). IN ADDITION TO THE CONTRACTOR'S PROPOSED ROUTE(S), A DETOUR PLAN SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER.
15. BIDDERS SHOULD NOTE THE PRESENCE OF OVERHEAD UTILITIES IN THE WORK AREA. AS PART OF THEIR PRE-BID INSPECTION, BIDDERS SHALL NOTE THE TYPE AND LOCATION OF OVERHEAD UTILITIES IN THE PROPOSED WORK AREA. BIDDER'S PRICE SHALL INCLUDE PROVISIONS FOR WORKING IN AREAS WHERE UTILITIES EXIST AT THE TIME OF BIDDING, AND NO ADDITIONAL COMPENSATION IS ALLOWED.
16. THE CONTRACTOR SHALL MAINTAIN ACCESS TO RESIDENCES AFFECTED BY THE PROJECT THROUGHOUT THE LIFE OF THE CONTRACT AS SPECIFIED IN THE SPECIFIC CONDITIONS.
17. QUANTITIES OF EXISTING MONUMENTS, MAINTENANCE HOLES, WATER VALVES, ETC. ARE APPROXIMATED BASED ON FIELD OBSERVATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES.
18. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL UTILITIES NOT LESS THAN TWO (2) WEEKS PRIOR TO ANY EXCAVATION SO THAT LINES CAN BE MARKED. CONTRACTOR SHALL EXERCISE CARE DURING EXCAVATION OR DEMOLITION, PARTICULARLY IN LOCATION WITH UTILITIES THAT WILL REMAIN IN SERVICE.
19. ANY DAMAGE TO THE EXISTING FACILITIES INCLUDING TREES, LANDSCAPING, IRRIGATION, FENCES, WALLS, SIDEWALK, MAILBOXES, UTILITIES, AND OTHER PAVEMENT SURFACES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL RESTORE ANY AND ALL PAVEMENT AND OTHER FACILITIES OUTSIDE LIMITS OF WORK AFFECTED BY THE CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VIDEOTAPE OR DOCUMENT EXISTING CONDITIONS PRIOR TO START OF WORK TO SUBSTANTIATE ANY PREVIOUS DAMAGE, ETC.; COPIES OF WHICH SHALL BE PROVIDED TO THE ENGINEER.
20. ALL SURVEY MONUMENTS SHALL ONLY BE RESET BY A REGISTERED CIVIL ENGINEER OR LICENSED LAND SURVEYOR AT THE DIRECTION OF THE ENGINEER.
21. TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN, AND OTHER DEVICES TO PROVIDE FOR SAFE PASSAGE OF PUBLIC VEHICULAR, BICYCLE, AND PEDESTRIAN TRAFFIC IN ACCORDANCE WITH CA MUTCD.
22. TYPICAL DETAILS REFERRED TO ON THESE DRAWINGS ARE FROM THE LATEST VERSIONS OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD PLANS.
23. CONTRACTOR SHALL POSSESS A VALID CLASS 'A' LICENSE AT THE TIME OF AWARD OF THE CONTRACT.
24. CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A 3 WEEK LOOK AHEAD SCHEDULE AT WEEKLY MEETING; AND DAILY SCHEDULE OF PLANNED WORK BY 8:00 A.M. FOR MILL AND FILL, BASE REPAIR, AND CRACK SEALING WORK.

65% NOT FOR CONSTRUCTION

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ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	D. JABBOUR
DESIGNED BY	T. CRANE
DRAWN BY	T. CRANE
CHECKED BY	H. QUAN
TECHNICAL LEAD	G. ARMSTRONG
DATE	MAY 29, 2024
PROJECT NUMBER	10364495



CACHE SLOUGH MITIGATION BANK WATER CROSSING STRUCTURE

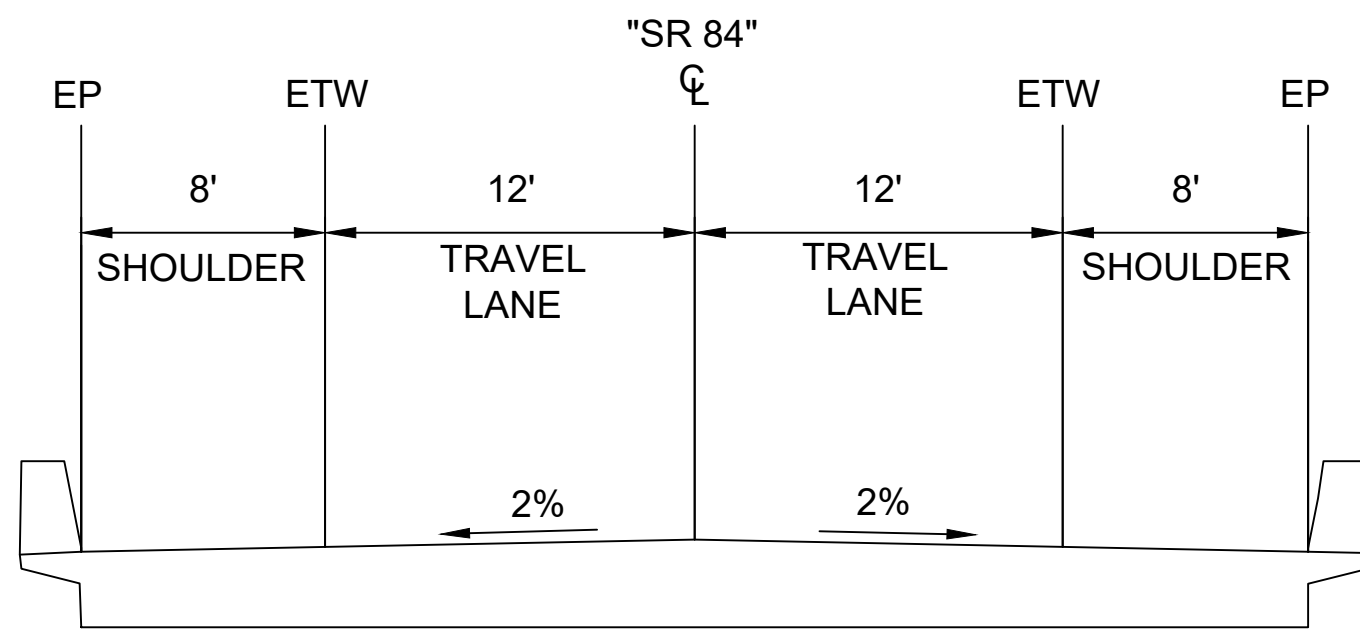
NOTES, LEGEND, AND ABBREVIATIONS



FILENAME | 10364495iop001.dwg
SCALE | AS NOTED

SHEET
IOP-1

- NOTES:
- DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS
 - EXACT LOCATIONS AND TYPES OF GUARD RAILING ARE SHOWN ON THE LAYOUT SHEET
 - REFER TO BRIDGE GENERAL PLAN FOR EXACT BRIDGE SECTION DETAILS AND PAVEMENT STRUCTURE SECTIONS



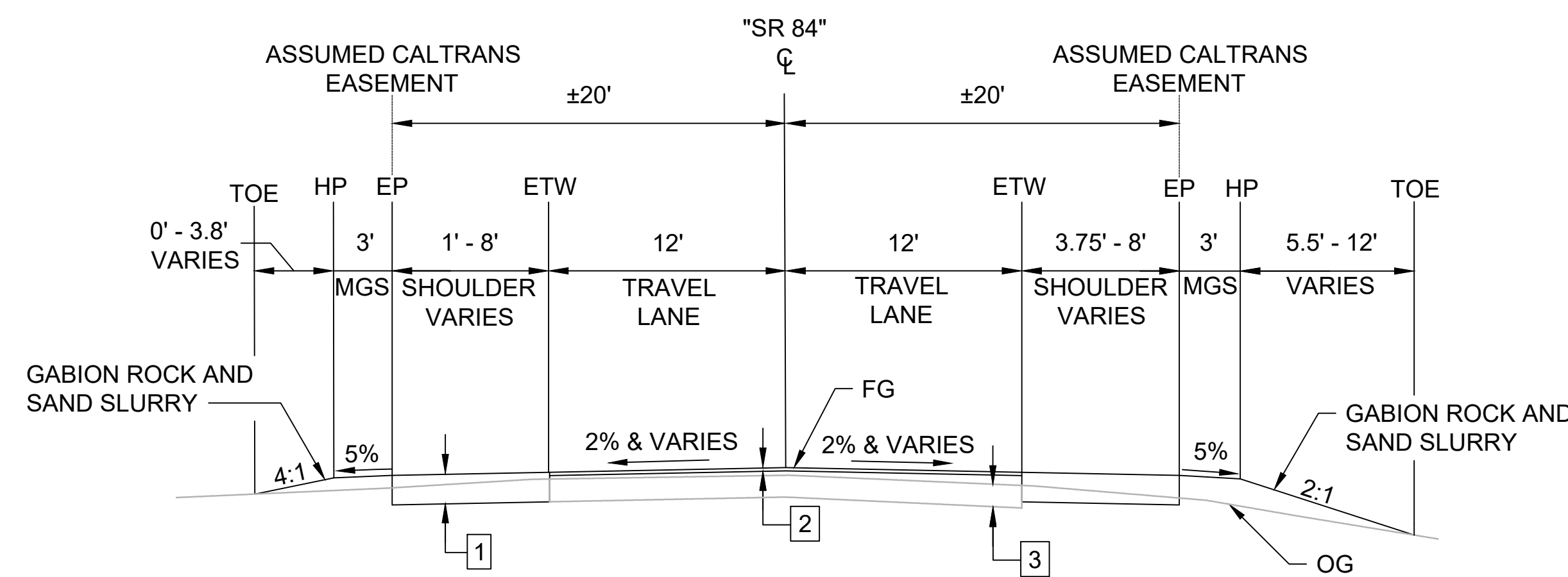
TYPICAL STRUCTURE SECTION - STATE ROUTE 84
 STA 138+92.28 TO STA 139+53.28
 NOT TO SCALE

DESIGN DESIGNATION		
ADT (2013)	D	
ADT (2033)	T	
DHV	V	55
ESAL	TI	8 (ASSUMED)
	R	5 (ASSUMED)

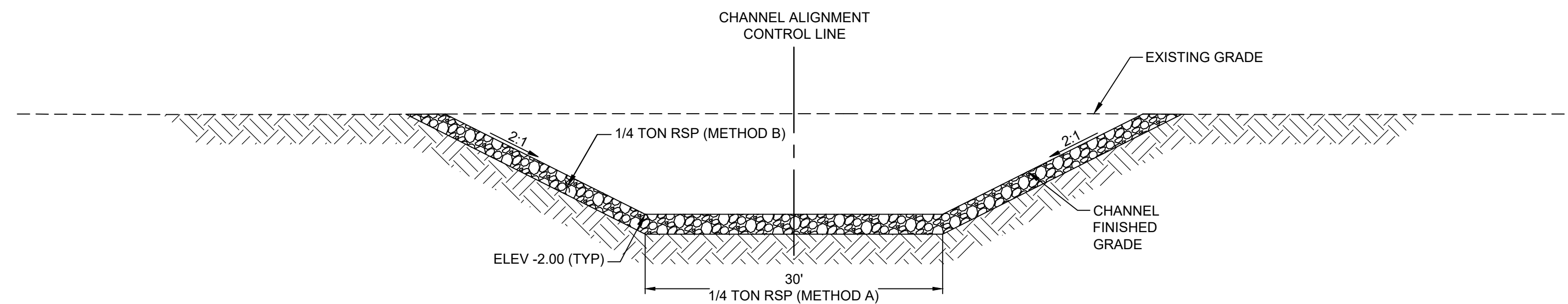
PAVEMENT CLIMATE REGION
 CENTRAL COAST

TYPICAL PAVEMENT STRUCTURE SECTION

- 1 6" HMA TYPE A
16" AB (CLASS 2)
- 2 2" COLD PLANE
2" MIN. HMA TYPE 2 OVERLAY
- 3 EXISTING STRUCTURAL SECTION
ASSUMED 6" HMA / 16" AB



TYPICAL SECTION - STATE ROUTE 84
 STA 135+39.18 TO STA 138+92.28
 STA 139+53.28 TO STA 143+03.79
 NOT TO SCALE



TYPICAL SECTION - CHANNEL
 STA 0+96.49 TO STA 03+43.08
 NOT TO SCALE

65% NOT FOR CONSTRUCTION

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ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	D. JABBOUR
DESIGNED BY	T. CRANE
DRAWN BY	T. CRANE
CHECKED BY	H. QUAN
TECHNICAL LEAD	G. ARMSTRONG
DATE	APRIL 5, 2024
PROJECT NUMBER	10364495



**CACHE SLOUGH MITIGATION BANK
 WATER CROSSING STRUCTURE**

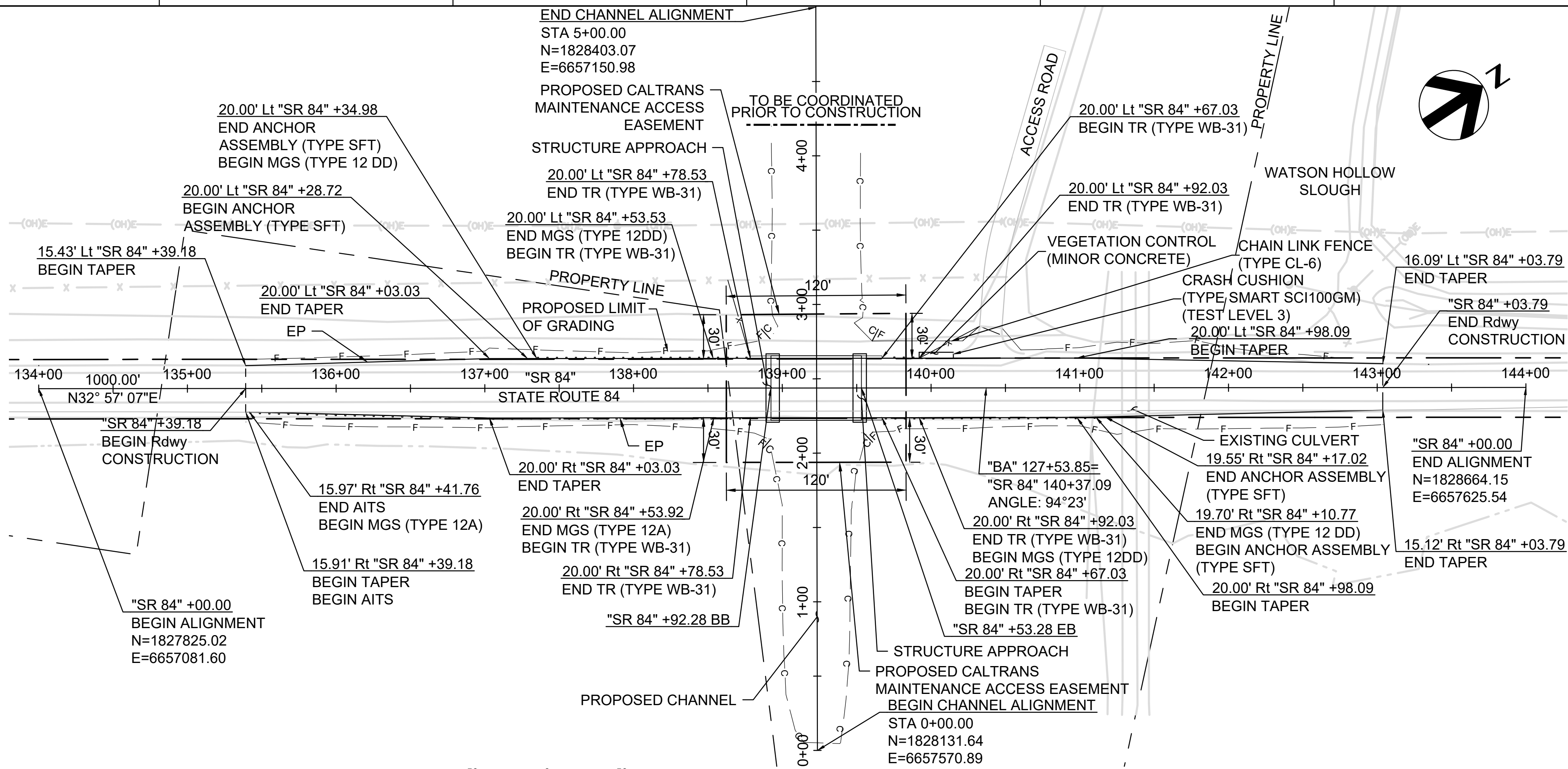
TYPICAL SECTIONS



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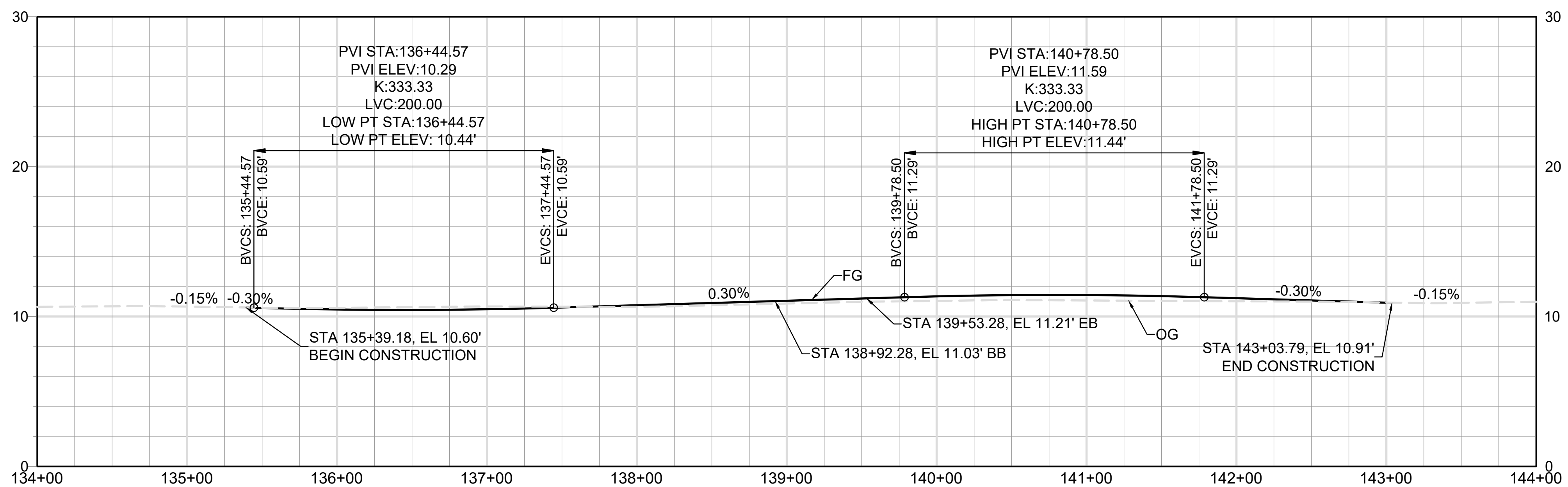
SHEET
 X-1

- NOTES:
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
 - EXISTING TREES/BRUSH NOT SHOWN ON LAYOUT SHEET.



PLAN - ROUTE 84
SCALE: 1" = 50'

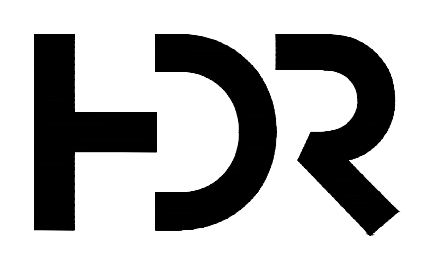
DESIGN SPEED: 55 MPH
POSTED SPEED: 45 MPH



PROFILE - ROUTE 84
SCALE: 1" = 5' VERTICAL
1" = 50' HORIZONTAL

65% NOT FOR CONSTRUCTION

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ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	D. JABBOUR
DESIGNED BY	T. CRANE
DRAWN BY	T. CRANE
CHECKED BY	H. QUAN
TECHNICAL LEAD	G. ARMSTRONG
DATE	MAY 29, 2024
PROJECT NUMBER	10364495



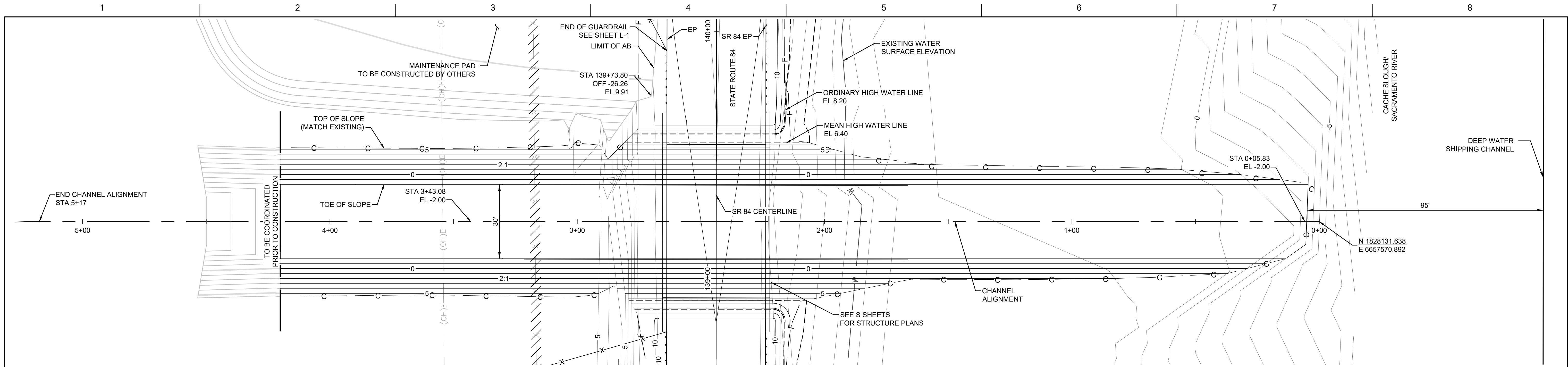
**CACHE SLOUGH MITIGATION BANK
WATER CROSSING STRUCTURE**

LAYOUT AND PROFILE

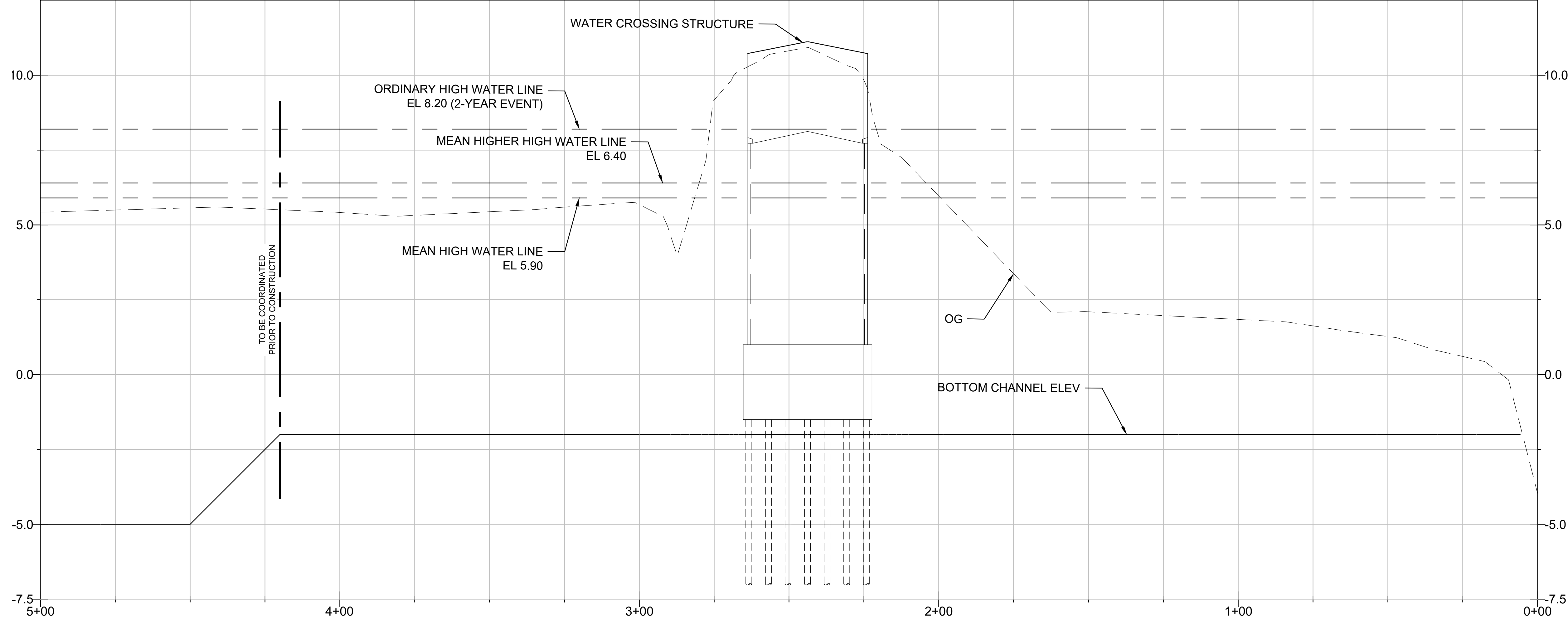


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SCALE | AS NOTED

SHEET
L-1

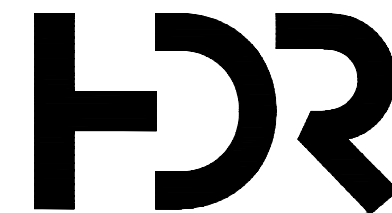


PLAN
SCALE: 1"=20'



CHANNEL PROFILE
SCALE: 1"=20'

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ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	D. JABBOUR
DESIGNED BY	T. CRANE
DRAWN BY	T. CRANE
CHECKED BY	H. QUAN
TECHNICAL LEAD	G. ARMSTRONG
DATE	MAY 29, 2024
PROJECT NUMBER	10364495



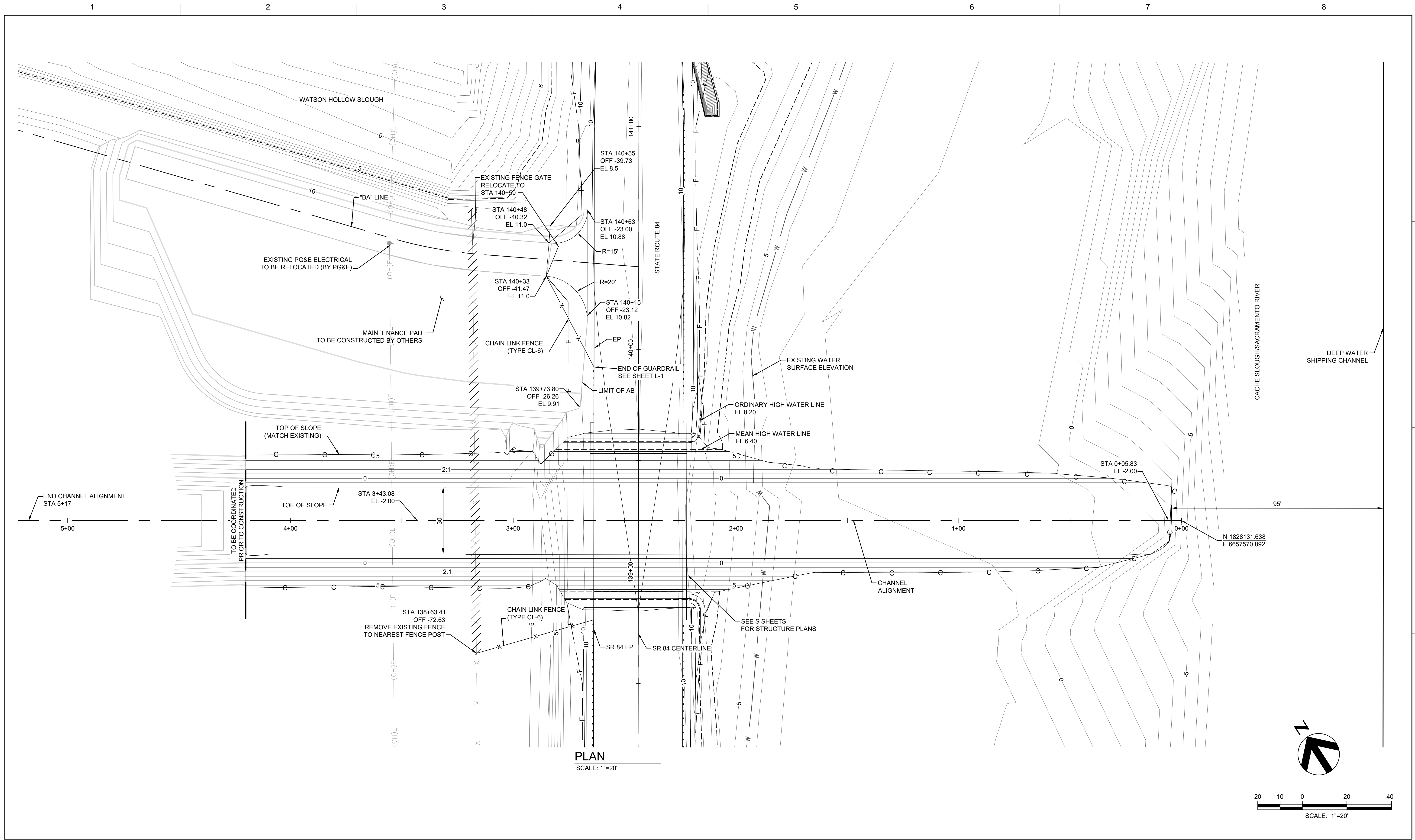
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WATER CROSSING STRUCTURE
LAYOUT AND PROFILE**



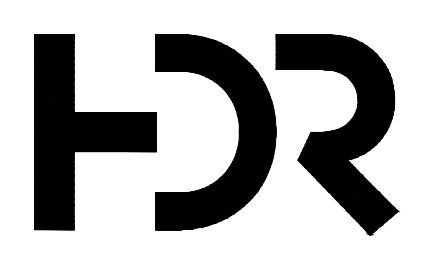
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SCALE | AS SHOWN

SHEET
L-2

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PLAN
 SCALE: 1"=20'



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	D. JABBOUR
DESIGNED BY	D. TEAK
DRAWN BY	A. JACKSON
CHECKED BY	B. KRCELIC
TECHNICAL LEAD	D. TEAK
DATE	FEBRUARY 5, 2024
PROJECT NUMBER	10364495

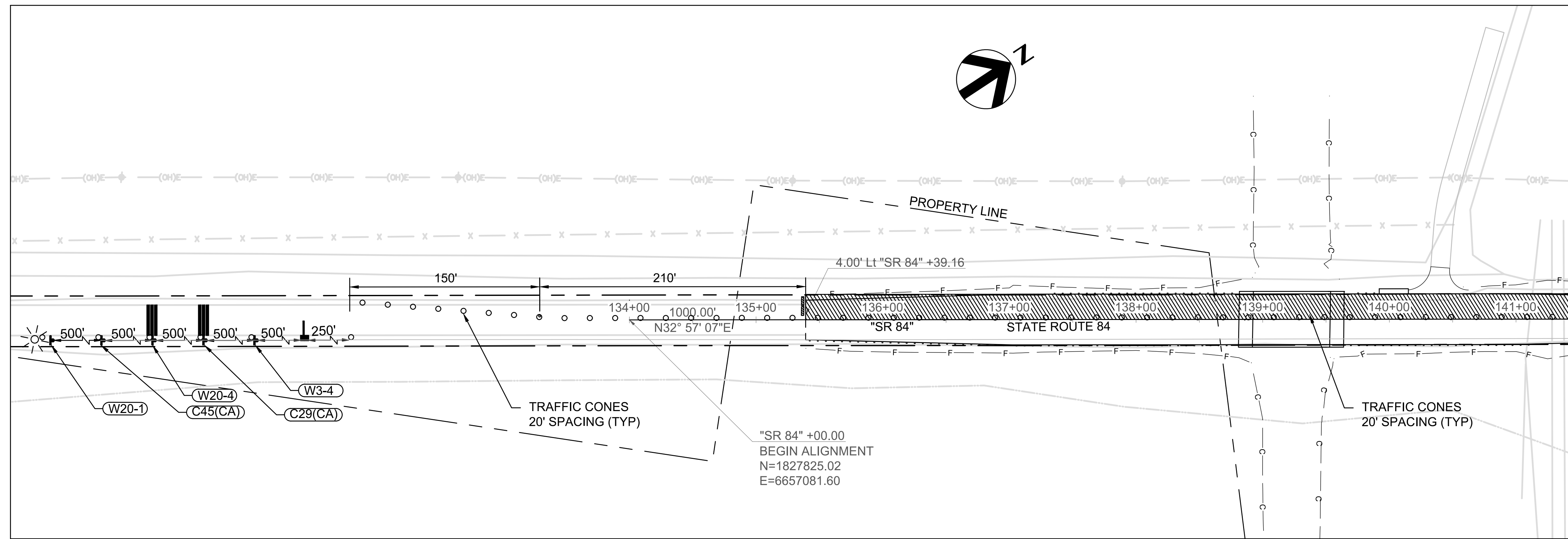


**CACHE SLOUGH MITIGATION BANK
 WATER CROSSING STRUCTURE
 GRADING AND FENCE PLAN**



FILENAME | 10364495ha001.dwg
 SCALE | AS SHOWN

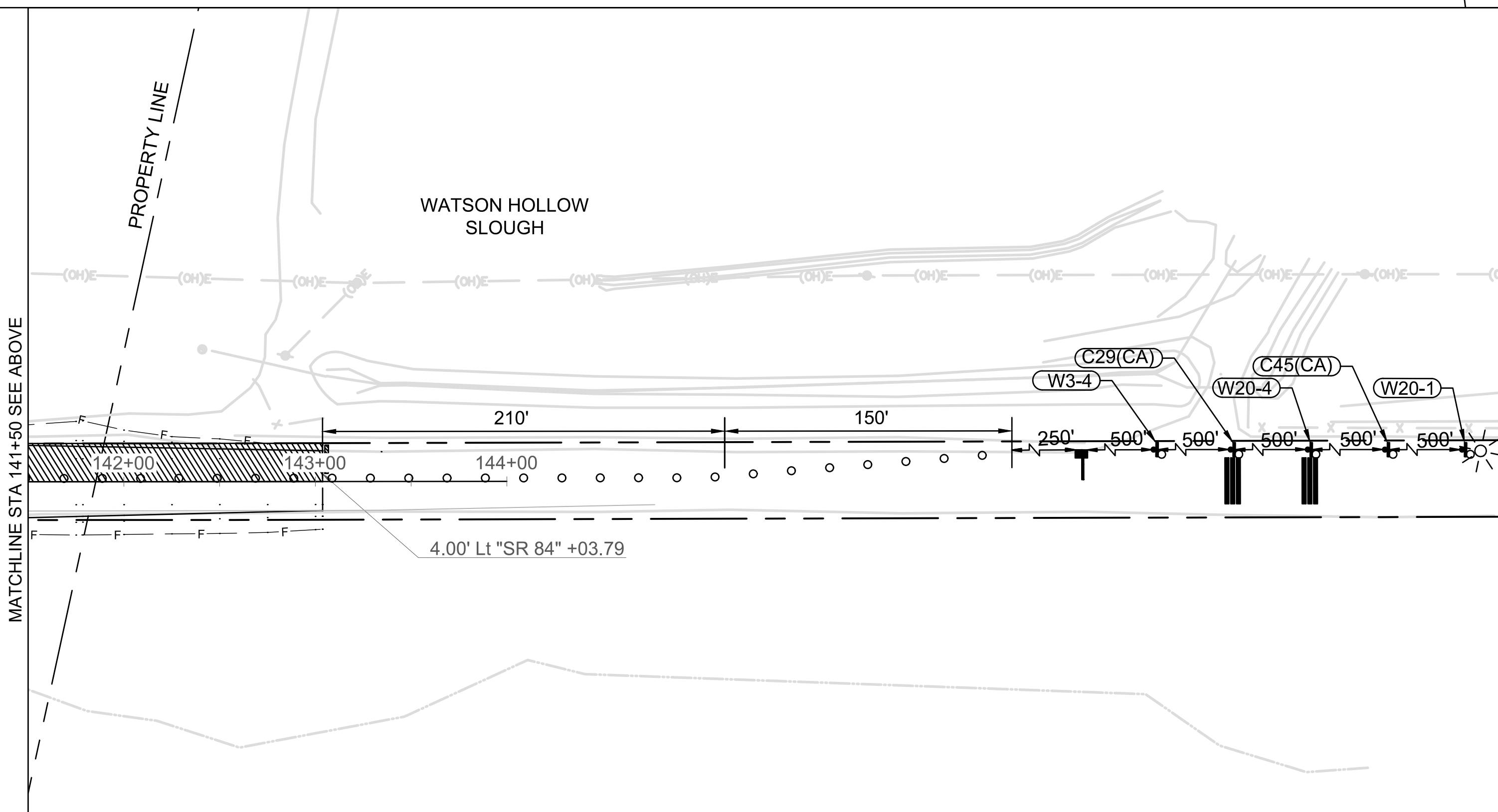
SHEET
G-1



NOTES:
 1. APPROXIMATE 40' EASEMENT IS CENTERED ABOUT THE EXISTING ROAD CENTERLINE.
 2. EXISTING TREES/BRUSH NOT SHOWN ON LAYOUT SHEET.

STAGE 1:
 1. ONE-WAY REVERSIBLE TRAFFIC CONTROL, WARNING SIGNS, RUMBLE STRIPS, AND FLAGGERS TO BE PLACED PER CALTRANS STD PLANS T9 AND T13.
 2. SAWCUT, CONDUCT ROADWAY EXCAVATION AND REMOVE BASE AND SURFACING.
 3. CONSTRUCT ROADWAY-RELATED WORK ON NORTH SIDE OF SR 84.

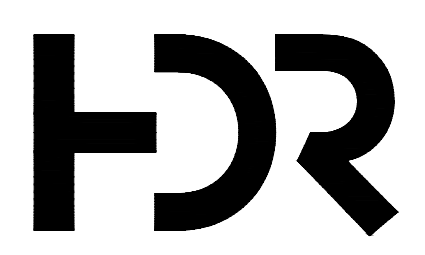
- LEGEND:**
- WORK ZONE
 - TRAFFIC CONE
 - TYPE III BARRICADE
 - WARNING SIGN
 - WARNING SIGN No.
 - PORTABLE TRANSVERSE RUMBLE STRIP ARRAY
 - AUTOMATED FLAGGER ASSISTANCE DEVICE
 - PORTABLE FLASHING BEACON



PLAN - ROUTE 84
 SCALE: 1" = 50'
 SCALE IN FEET

65% NOT FOR CONSTRUCTION

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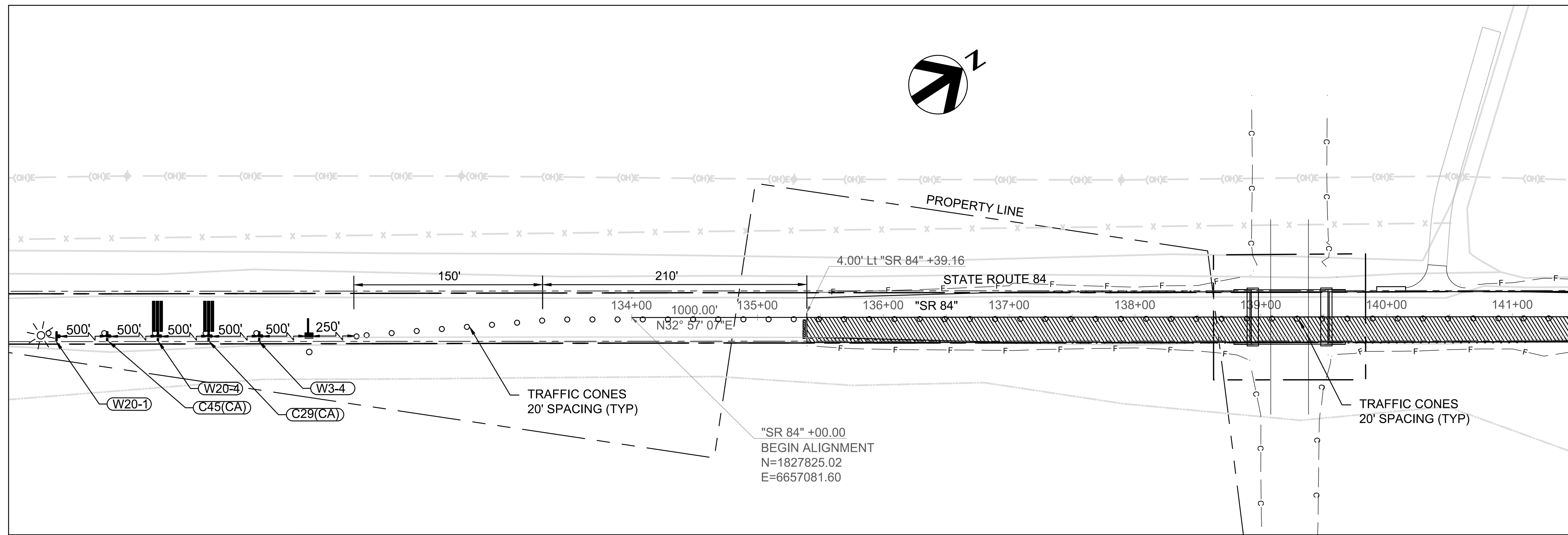
**CACHE SLOUGH MITIGATION BANK
 WATER CROSSING STRUCTURE**

 STAGE CONSTRUCTION
 STAGE 1



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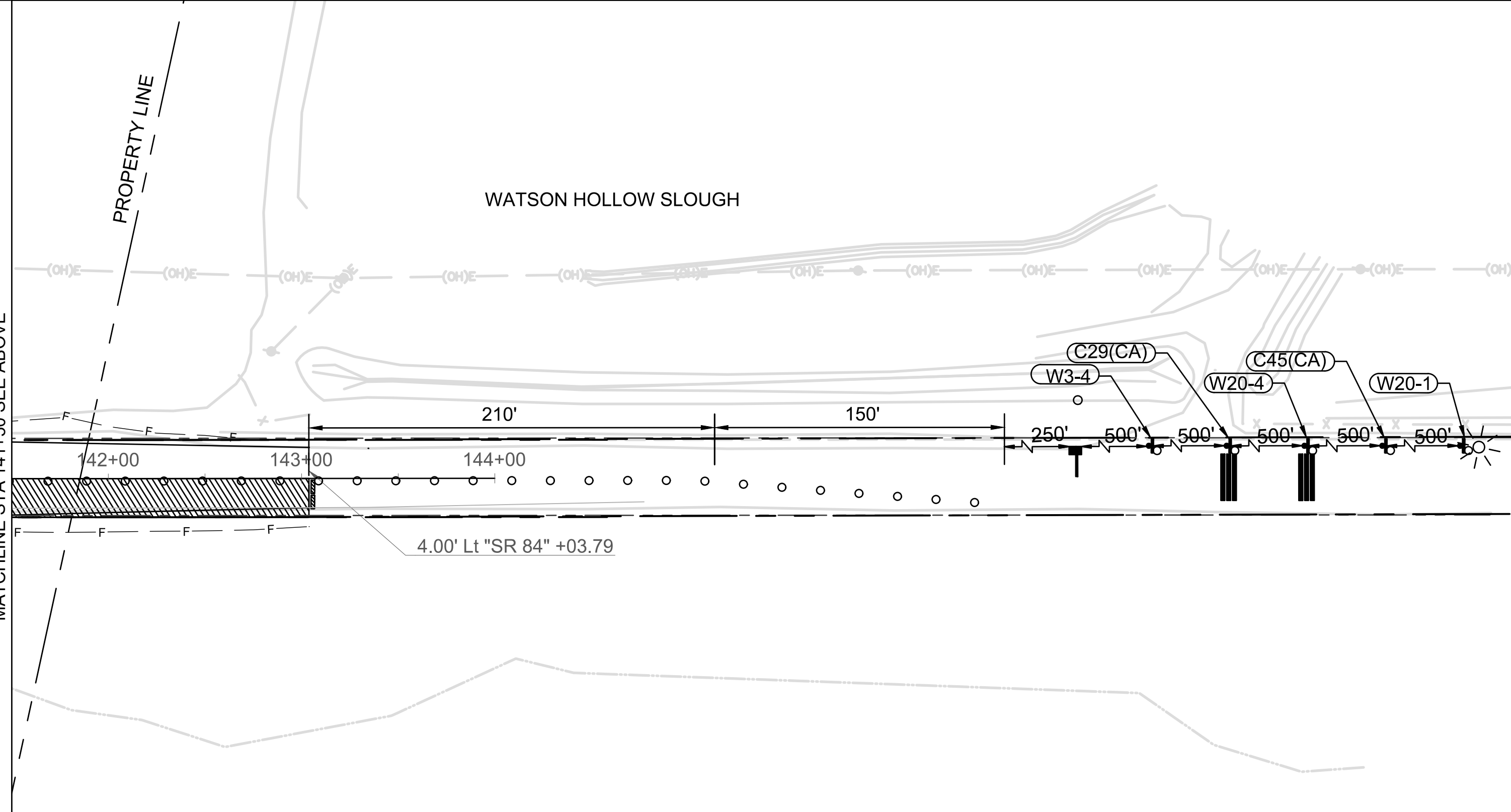
SHEET
 SC-1



- NOTES:**
- APPROXIMATE 40' EASEMENT IS CENTERED ABOUT THE EXISTING ROAD CENTERLINE.
 - EXISTING TREES/BRUSH NOT SHOWN ON LAYOUT SHEET.

- STAGE 1:**
- ONE-WAY REVERSIBLE TRAFFIC CONTROL, WARNING SIGNS, RUMBLE STRIPS, AND FLAGGERS TO BE PLACED PER CALTRANS STD PLANS T9 AND T13.
 - SAWCUT, CONDUCT ROADWAY EXCAVATION AND REMOVE BASE AND SURFACING.
 - CONSTRUCT ROADWAY-RELATED WORK ON NORTH SIDE OF SR 84.
 - DURING NIGHTTIME, TEMPORARY TRAFFIC CONTROL SIGNALS SHALL BE USED.

- LEGEND:**
- WORK ZONE
 - TRAFFIC CONE
 - TYPE III BARRICADE
 - WARNING SIGN
 - WARNING SIGN No.
 - PORTABLE TRANSVERSE RUMBLE STRIP ARRAY
 - AUTOMATED FLAGGER ASSISTANCE DEVICE
 - PORTABLE FLASHING BEACON

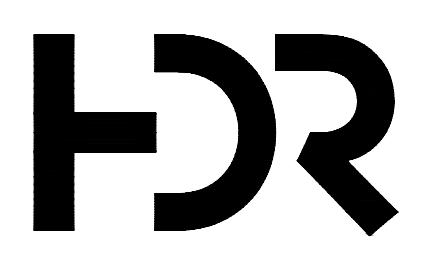


PLAN - ROUTE 84
SCALE: 1" = 50'



65% NOT FOR CONSTRUCTION

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ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	D. JABBOUR
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**CACHE SLOUGH MITIGATION BANK
WATER CROSSING STRUCTURE**




STAGE CONSTRUCTION
STAGE 2

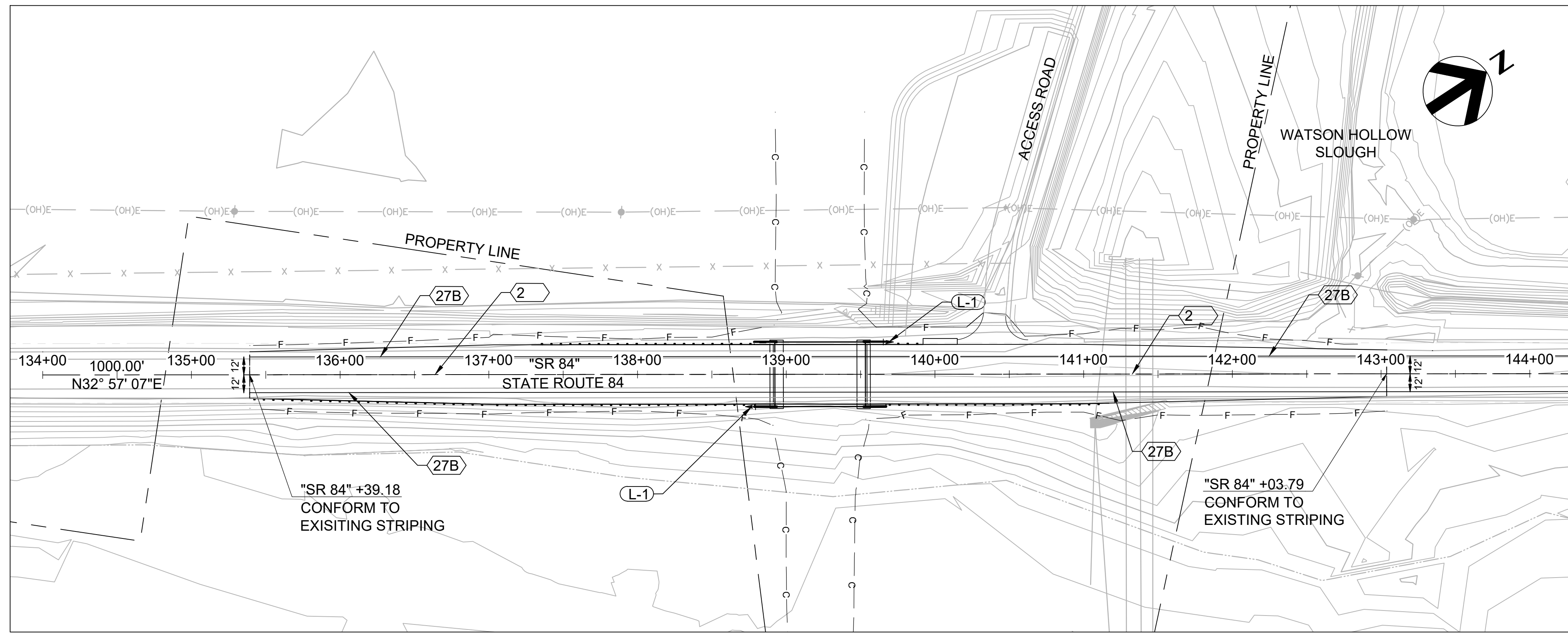


FILENAME 10364495ma002.dwg
SCALE AS NOTED

SHEET
SC-2

LEGEND

-  PAVEMENT DELINEATION DETAIL
-  OBJECT MARKER DETAIL No.
-  OBJECT MARKER SYMBOL



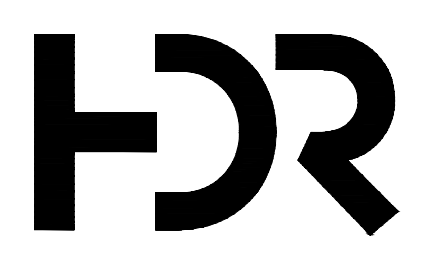
PLAN - ROUTE 84
SCALE: 1" = 50'

PAVEMENT DELINEATION QUANTITIES

SHEET No.	LOCATION	DIRECTION	DETAIL No.	THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)		YELLOW PAVEMENT MARKER (RETROREFLECTIVE)	OBJECT MARKER (TYPE L-1)
				6"			
				WHITE	(BROKEN 8-4) YELLOW		
PD-1	"SR 84" STA 135+39.18 TO "SR 84" 143+03.79	EB/WB	2		765	32	
PD-1	"SR 84" STA 135+39.18 TO "SR 84" 143+03.79	WB	27B	765			
PD-1	"SR 84" STA 135+39.18 TO "SR 84" 143+03.79	EB	27B	765			
PD-1	"SR 84" STA 138+80.87	EB					1
PD-1	"SR 84" STA 139+64.65	WB					1
TOTALS				1,530	765	32	2

65% NOT FOR CONSTRUCTION

HDR-MS\standard.ctb C:\pwworking\west01\cds400964110364495na001.dwg - 5/29/2024 9:02:57 AM



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	D. JABBOUR
DESIGNED BY	T. CRANE
DRAWN BY	T. CRANE
CHECKED BY	H. QUAN
TECHNICAL LEAD	G. ARMSTRONG
DATE	MAY 29, 2024
PROJECT NUMBER	10364495



**CACHE SLOUGH MITIGATION BANK
WATER CROSSING STRUCTURE**

PAVEMENT DELINEATION
PLAN AND QUANTITIES






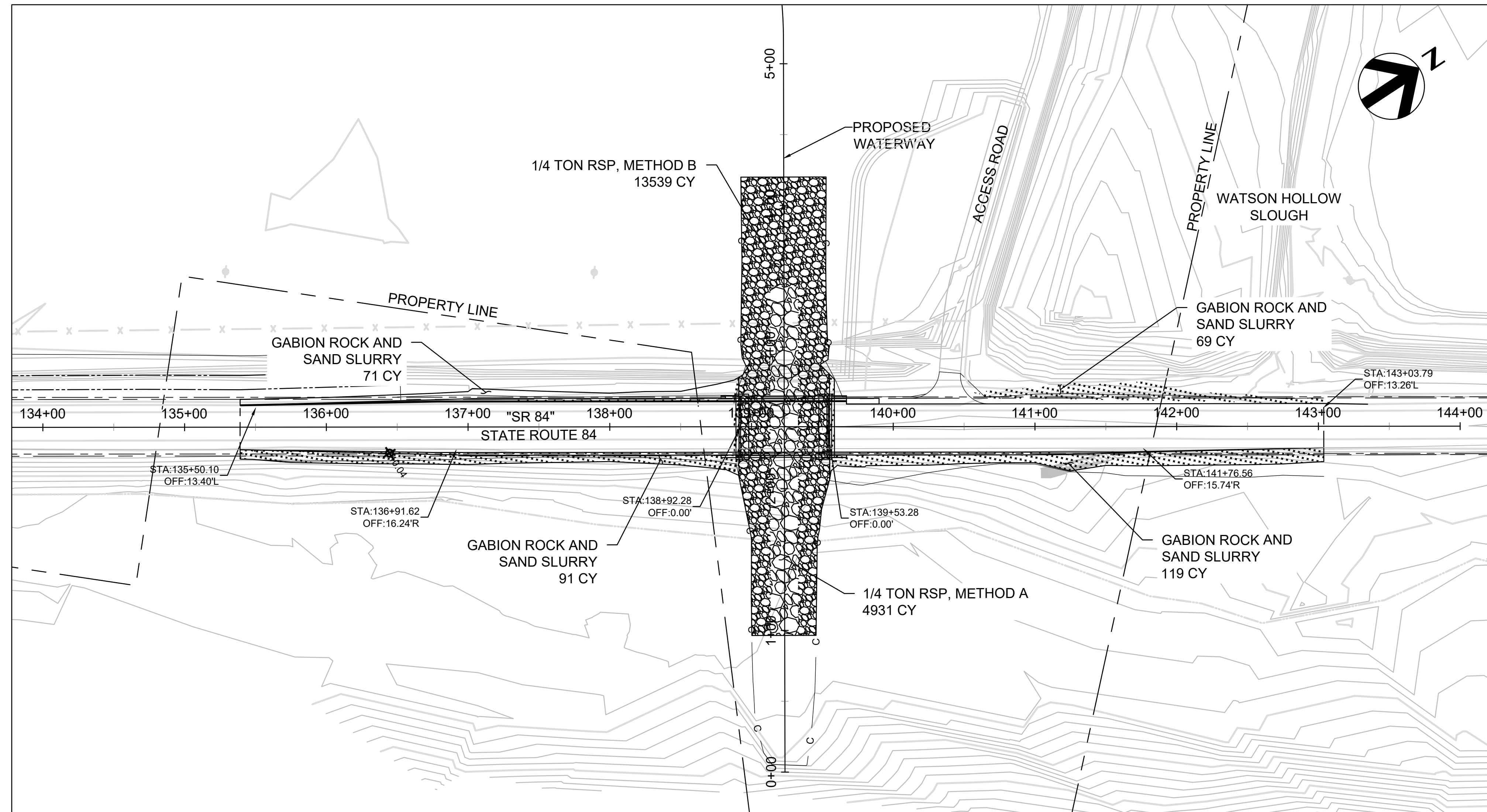
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SCALE | AS NOTED

SHEET
PD-1

NOTES:
 1. FOR ACCURATE RIGHT OF WAY DATA,
 CONTACT RIGHT OF WAY ENGINEERING
 AT THE DISTRICT OFFICE.

LEGEND

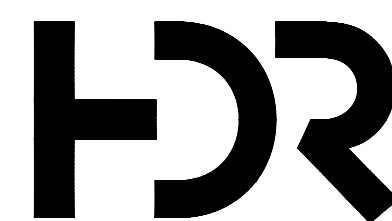
-  GABION ROCK AND SAND SLURRY
-  ROCK SLOPE PROTECTION (1/4 TON, METHOD A)
-  ROCK SLOPE PROTECTION (1/4 TON, METHOD B)



PLAN - ROUTE 84
 SCALE: 1" = 50'

65% NOT FOR CONSTRUCTION

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ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	D. JABBOUR
DESIGNED BY	T. CRANE
DRAWN BY	T. CRANE
CHECKED BY	H. QUAN
TECHNICAL LEAD	G. ARMSTRONG
DATE	APRIL 5, 2024
PROJECT NUMBER	10364495



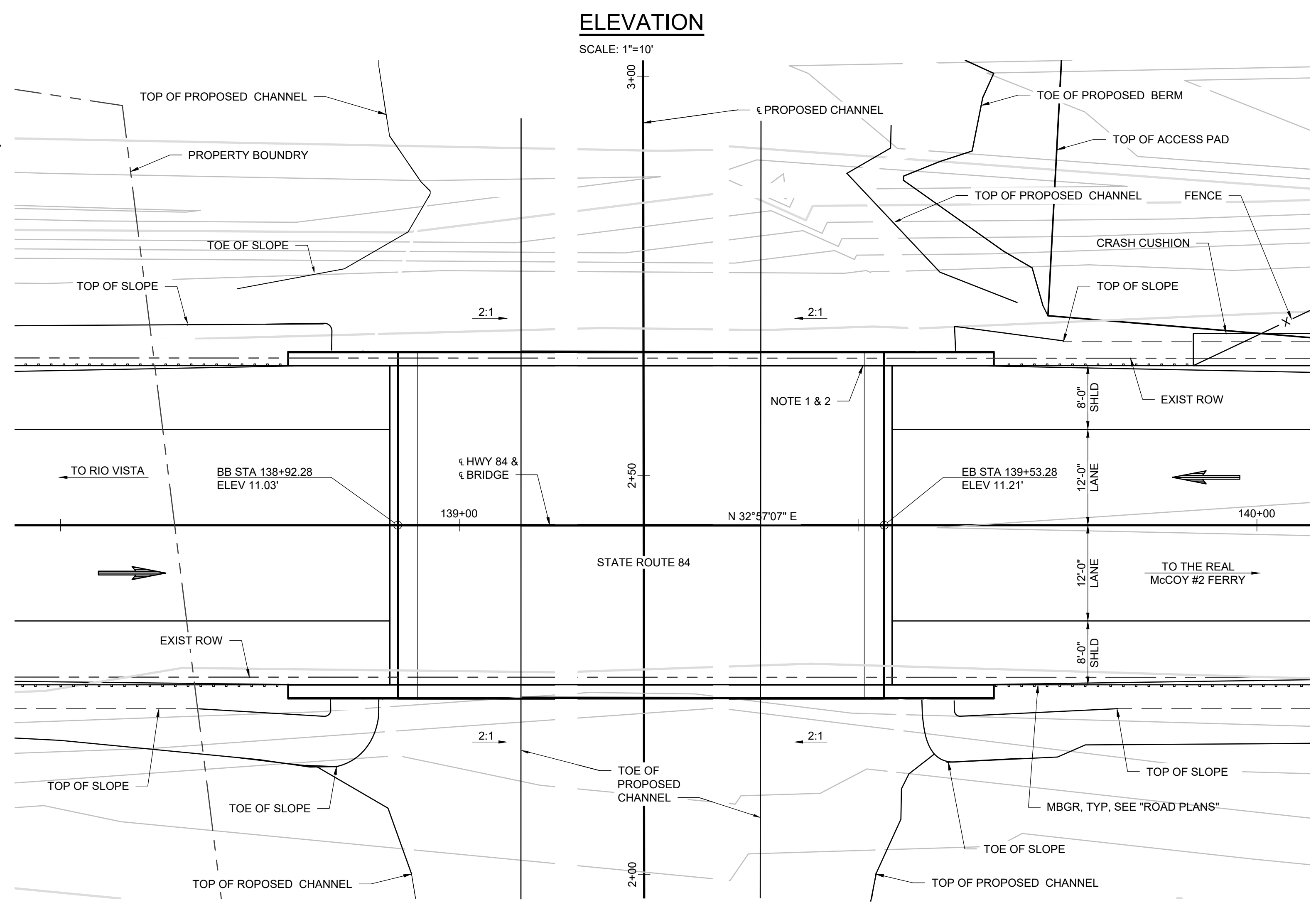
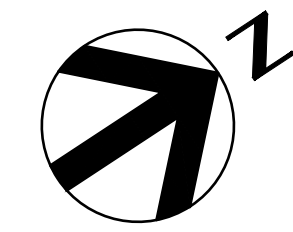
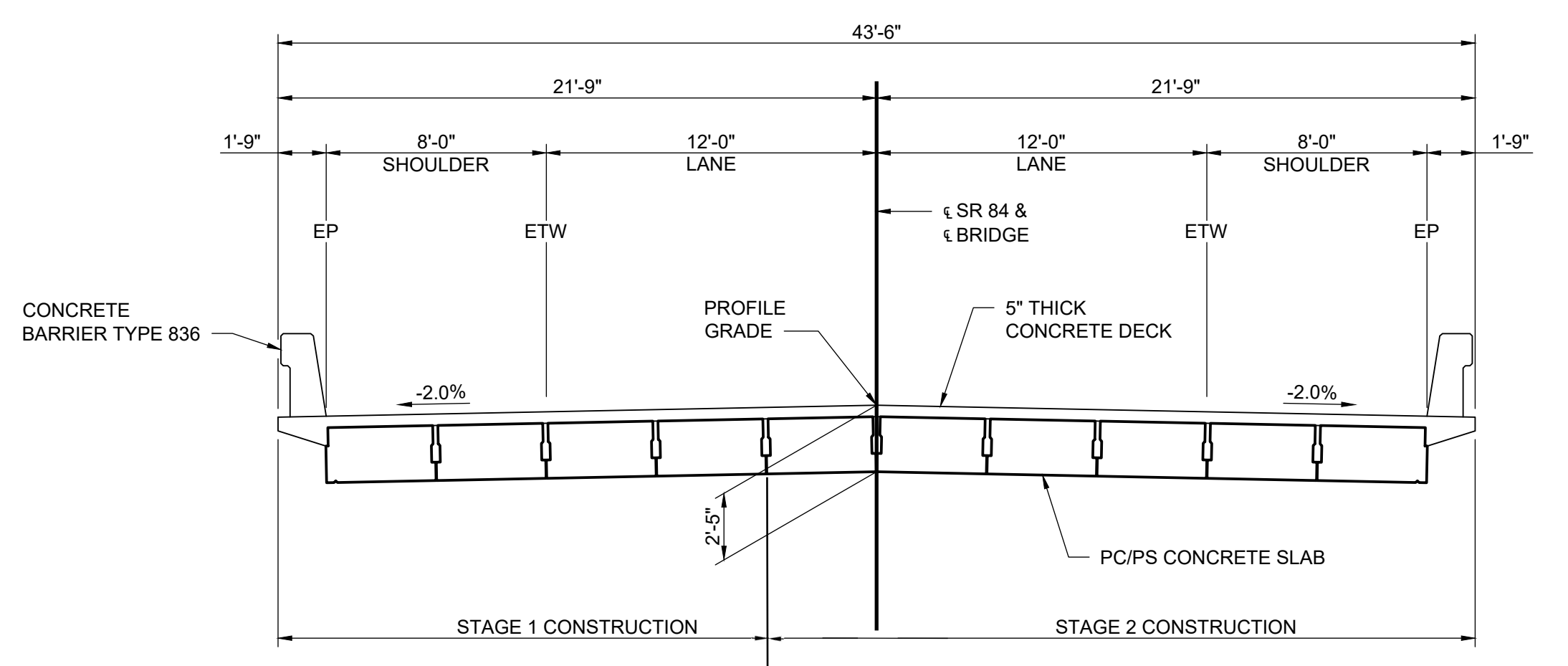
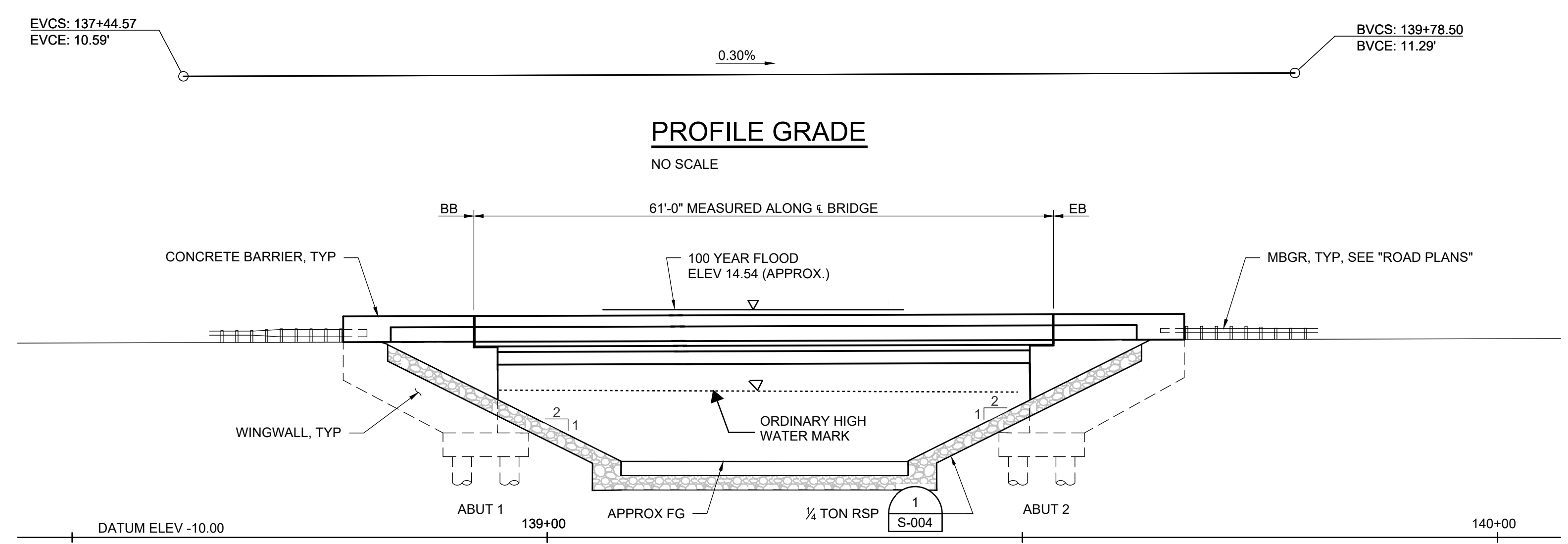
**CACHE SLOUGH MITIGATION BANK
 WATER CROSSING STRUCTURE**

EROSION CONTROL



FILENAME | 10364495te001.dwg
 SCALE | AS NOTED

SHEET
 EC-1



INDEX TO PLANS

- S-001 GENERAL PLAN
- S-002 DECK CONTOURS
- S-003 FOUNDATION PLAN
- S-004 TYPICAL ABUTMENT LAYOUT
- S-005 ABUTMENT DETAILS NO. 1
- S-006 ABUTMENT DETAILS NO. 2
- S-007 TYPICAL SECTION
- S-008 PRECAST PRESTRESSED CONCRETE SLAB DETAILS NO. 1
- S-009 PRECAST PRESTRESSED CONCRETE SLAB DETAILS NO. 2

CALTRANS STANDARD PLANS DATED 2023

- A10A ABBREVIATIONS (SHEET 1 OF 2)
- A10B ABBREVIATIONS (SHEET 2 OF 2)
- A10C LINES AND SYMBOLS (SHEET 1 OF 3)
- A10D LINES AND SYMBOLS (SHEET 2 OF 3)
- A10E LINES AND SYMBOLS (SHEET 3 OF 3)
- A62B LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE SURCHARGE AND WALL
- A62C LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
- B0-1 BRIDGE DETAILS
- B0-3 BRIDGE DETAILS
- B0-5 BRIDGE DETAILS
- B0-13 BRIDGE DETAILS
- B6-21 JOINT SEALS (MAXIMUM MOVEMENT RANGE = 2")
- B11-79 CONCRETE BARRIER TYPE 836 DETAILS NO. 1
- B11-80 CONCRETE BARRIER TYPE 836 DETAILS NO. 2

STANDARD PLAN SHEET NO.

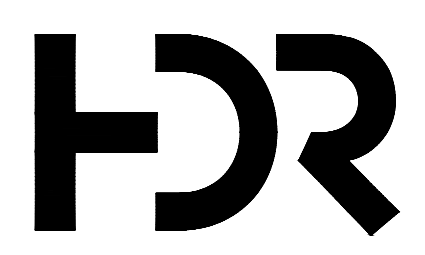
DETAIL NO.

NOTES:

1. PAINT "BRIDGE NO. XX-XXXX" AND YEAR OF CONSTRUCTION.
2. REFER TO "ROAD PLANS" FOR ROADWAY IMPROVEMENTS NOT SHOWN ON THIS DRAWING.

65% NOT FOR CONSTRUCTION

PLAN
SCALE: 1"=10'



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**CACHE SLOUGH MITIGATION BANK
WATER CROSSING STRUCTURE**

GENERAL PLAN

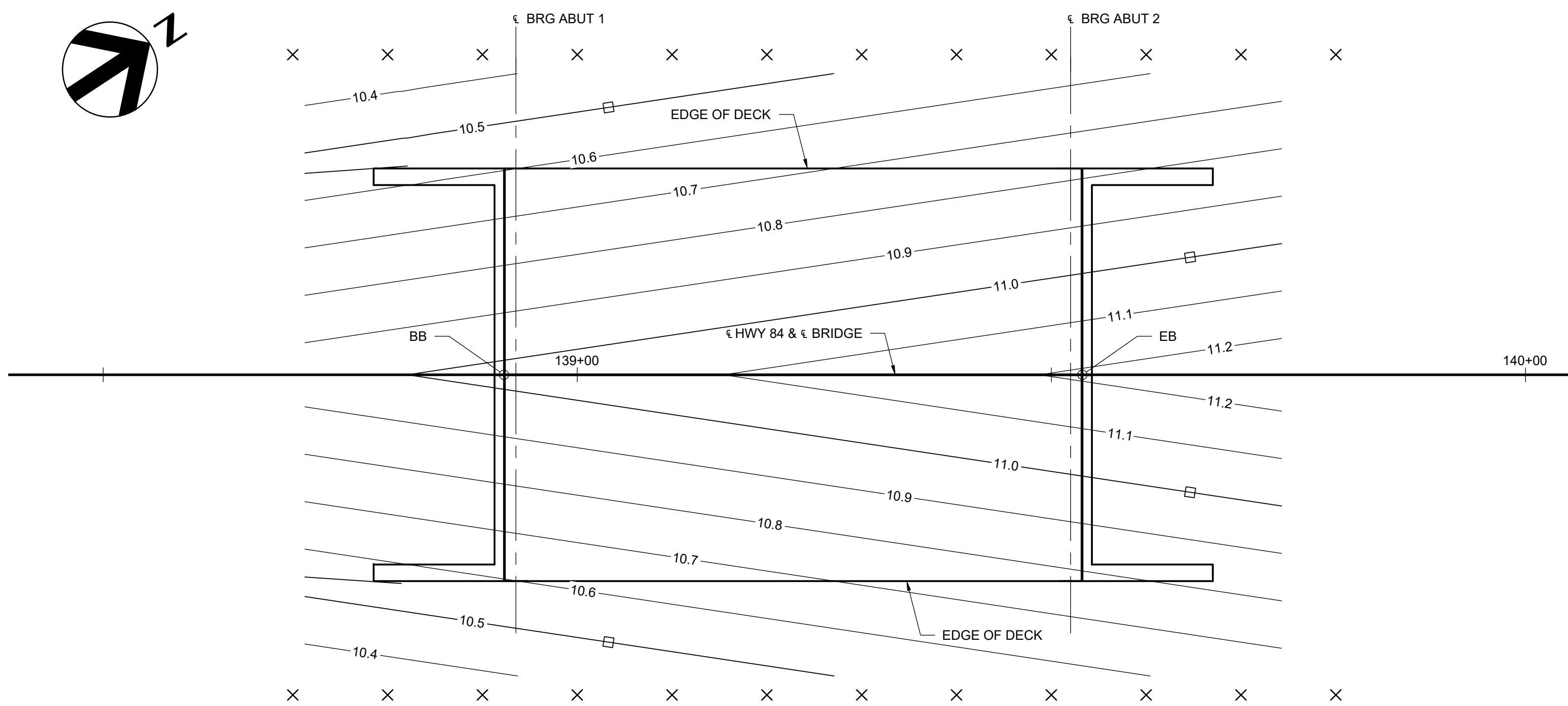
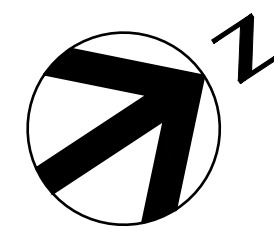


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SCALE AS NOTED

SHEET
S-001

NOTES:

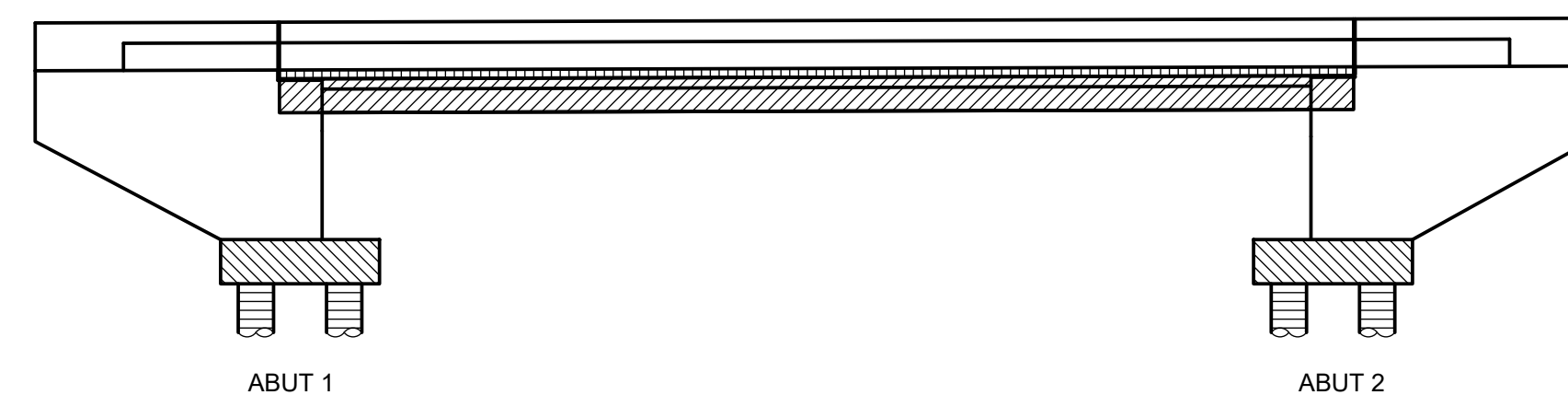
1. CONTOURS DO NOT INCLUDE CAMBER OR ALLOWANCE FOR FALSEWORK SETTLEMENT.
2. CONTOUR INTERVAL = 0.1'.
3. □ - INDICATES 0.5' CONTOURS.
4. X - INDICATES 10' INTERVALS MEASURED ALONG "± BRIDGE".



PLAN
SCALE: 1"=10'

QUANTITIES:

STRUCTURE EXCAVATION (BRIDGE)	263	CY
STRUCTURE BACKFILL (BRIDGE)	143	CY
24" CISS CONCRETE PILING	1,372	LF
STRUCTURAL CONCRETE, BRIDGE FOOTING	77	CY
STRUCTURAL CONCRETE, BRIDGE	159	CY
FURNISH PRECAST PRESTRESSED CONCRETE SLAB	2,440	SF
ERECT PRECAST PRESTRESSED CONCRETE DECK UNIT	10	EA
BAR REINFORCING STEEL (BRIDGE)	21,000	LB
JOINT SEAL (MR=1/2")m	87	LF
CONCRETE BARRIER (836)	186	LF
MISCELLANEOUS METAL (BRIDGE)	500	LB



NOTES:

- STRUCTURAL CONCRETE, BRIDGE (f_c = 4,000 PSI @ 28 DAYS)
- ▨ STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER) (f_c = 5,000 PSI @ 28 DAYS)
- ▩ STRUCTURAL PRECAST CONCRETE, (f_c = SEE "PRECAST PRESTRESSED CONCRETE SLAB DETAILS" SHEET S-009)
- ▧ STRUCTURAL CONCRETE, BRIDGE FOOTING (f_c = 4,000 PSI @ 28 DAYS)
- ▦ STRUCTURAL CONCRETE, BRIDGE PILES (f_c = 4,000 PSI @ 28 DAYS)

CONCRETE STRENGTH AND TYPE LIMITS

NO SCALE

GENERAL NOTES

LOAD AND RESISTANCE FACTOR DESIGN

- DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4th EDITION AND THE CALTRANS AMENDMENTS, PREFACE DATED DEC 2008.
- SEISMIC DESIGN: CALTRANS SEISMIC DESIGN CRITERIA (SDS), VERSION 1.4 JULY 2005.
- DEAD LOAD: INCLUDES 35 PSF FOR FUTURE WEARING SURFACE.
- LIVE LOAD: HL-93 AND PERMIT DESIGN LOAD.
- SEISMIC LOADING: DESIGN ARS CURVE, SEE "GEOTECHNICAL" (SOIL PROFILE TYPE D) MAGNITUDE = 6.8± 0.25 SPECTRUM PEAK ROCK ACCELERATION = 0.2g.
- REINF CONCRETE: f_y = 60,000 PSI
f_c = 3,600 PSI, UNLESS NOTED OTHERWISE
n = 8
- PRESTRESSED CONCRETE: SEE "PRESTRESSING NOTES" ON PRECAST PRESTRESSED CONCRETE SLAB DETAILS" SHEET S-009.
- GROUT: SEE "PRESTRESSING NOTES" ON PRECAST PRESTRESSED CONCRETE SLAB DETAILS" SHEET S-009.
- PILES: SEE "PILE DATA TABLE" ON "FOUNDATION PLAN" SHEET S-003.
- GEOTECHNICAL: SEE "GEOTECHNICAL DESIGN REPORT"

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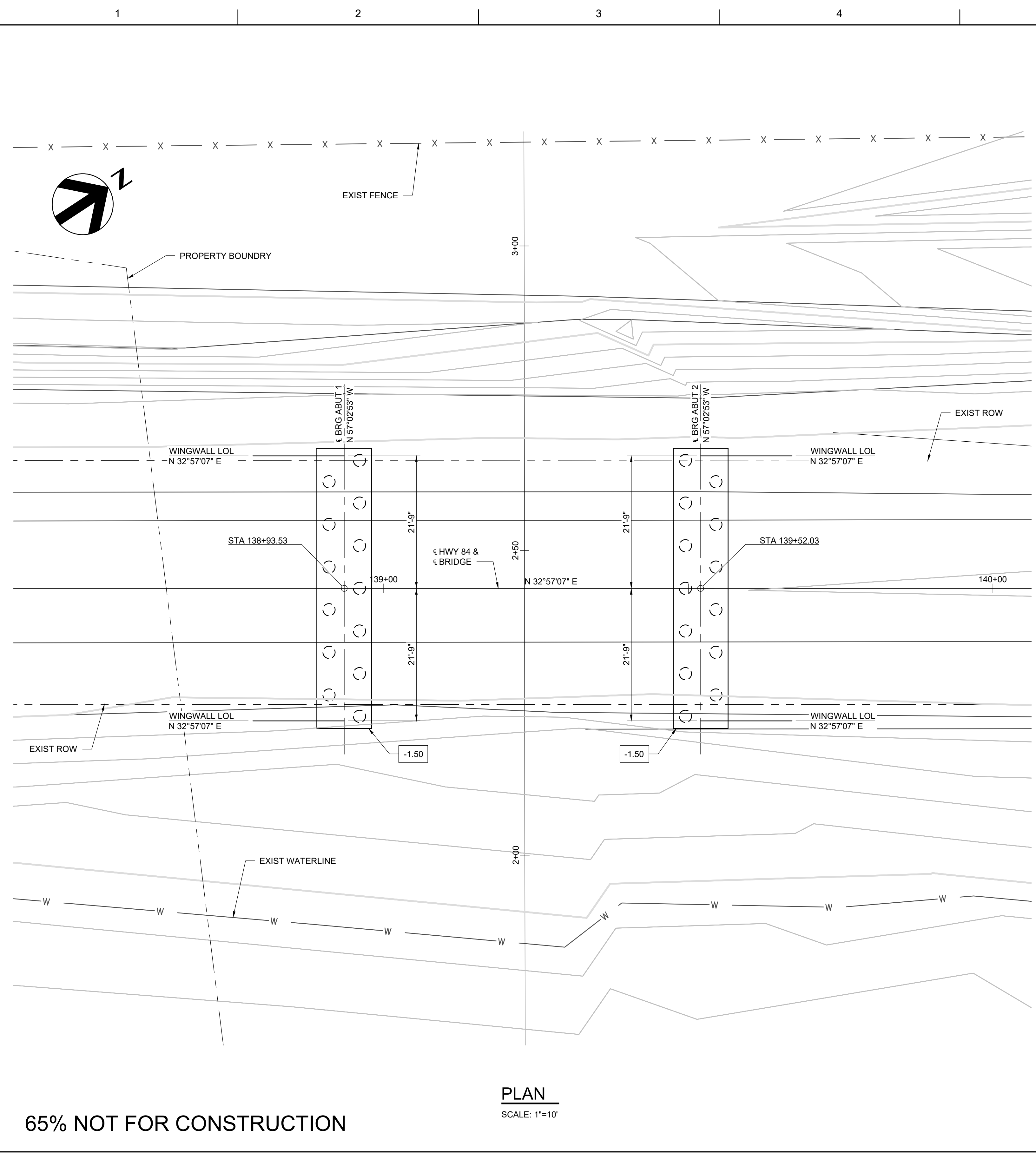
**CACHE SLOUGH MITIGATION BANK
WATER CROSSING STRUCTURE**

DECK CONTOURS



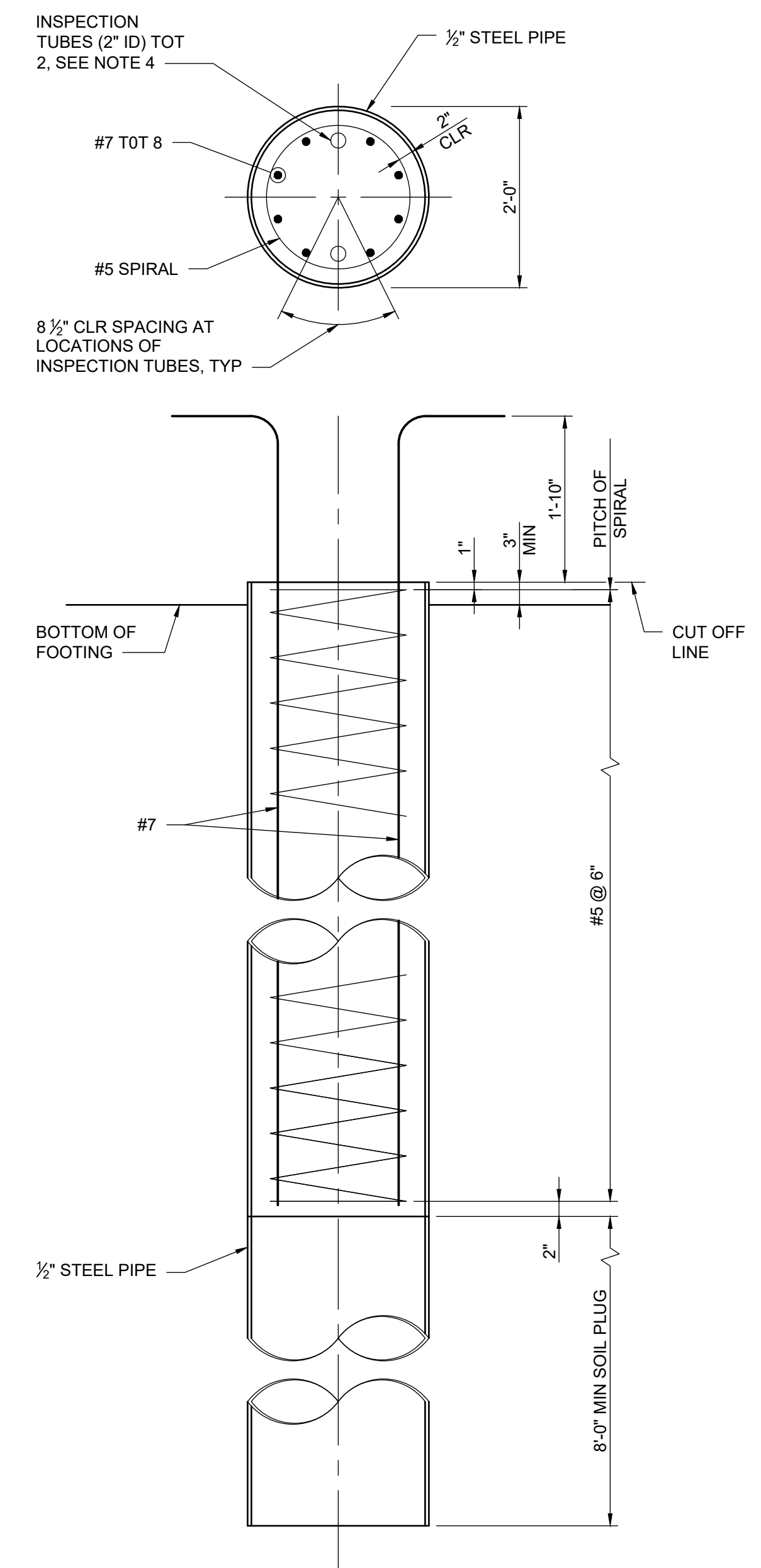
FILENAME | S-002.dwg
SCALE | AS NOTED

SHEET
S-002



PLAN
SCALE: 1"=10'

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PILE NOTES:

- REINFORCEMENT EXTENDING INTO FOOTING SHALL BE HOOKED AS SHOWN TO PROVIDE CLEARANCE TO TOP OF FOOTING.
- LAPPED SPLICES IN SPIRAL PILE REINFORCEMENT SHALL BE LAPPED AT LEAST 80 WIRE/BAR DIAMETERS. SPIRAL PILE REINFORCEMENT AT SPLICES AND AT ENDS SHALL BE TERMINATED WITH A 135° HOOK WITH A 6" TAIL HOOKED AROUND A LONGITUDINAL BAR.
- PILES SHALL BE EXTENDED ONLY IN ACCORDANCE WITH DETAILS SHOWN IN THE PROJECT PLANS.
- THE INSPECTION TUBES COULD BE OMITTED IF THE CONCRETE IS POURED IN DRY CONDITION.

24" CISS PILE DETAIL
SCALE: 3/4"=1'-0"

LOCATION	TYPE	NOMINAL RESISTANCE		CUT-OFF ELEV	TIP ELEV
		COMPRESSION	TENSION		
ABUT 1	24" CISS	220 KIPS	0	-1.25	-54.0
ABUT 2	24" CISS	220 KIPS	0	-1.25	-54.0

HYDROLOGIC SUMMARY:

FLOOD EVENT	WATER ELEV
100 YR	14.33 (APPROX.)
10 YR	6.77 (APPROX.)

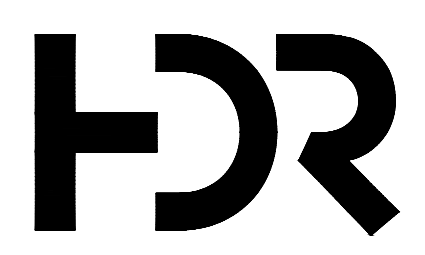
SEE "STORM DRAINAGE MASTER PLAN" PREPARED BY MBK ENGINEERING.

NOTES:

- CONTOURS SHOWN ARE EXISTING GROUND.
- SEE "ROAD PLANS" FOR TYPE AND LOCATIONS OF ALL EXISTING AND PROPOSED UTILITIES.
- LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. VERIFY LOCATIONS OF ALL AFFECTED UTILITIES PRIOR TO PERFORMING ANY EXCAVATION.
- TOPOGRAPHIC SURVEY AND INFORMATION PROVIDED BY COUNTY.

LEGEND:

- INDICATES BOTTOM OF FOOTING ELEVATION.
- INDICATES STRUCTURE INSTALLED UNDER THIS CONTRACT.
- INDICATES EXISTING FEATURES.
- INDICATES CISS PILE.



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DATE	MAY 29, 2024
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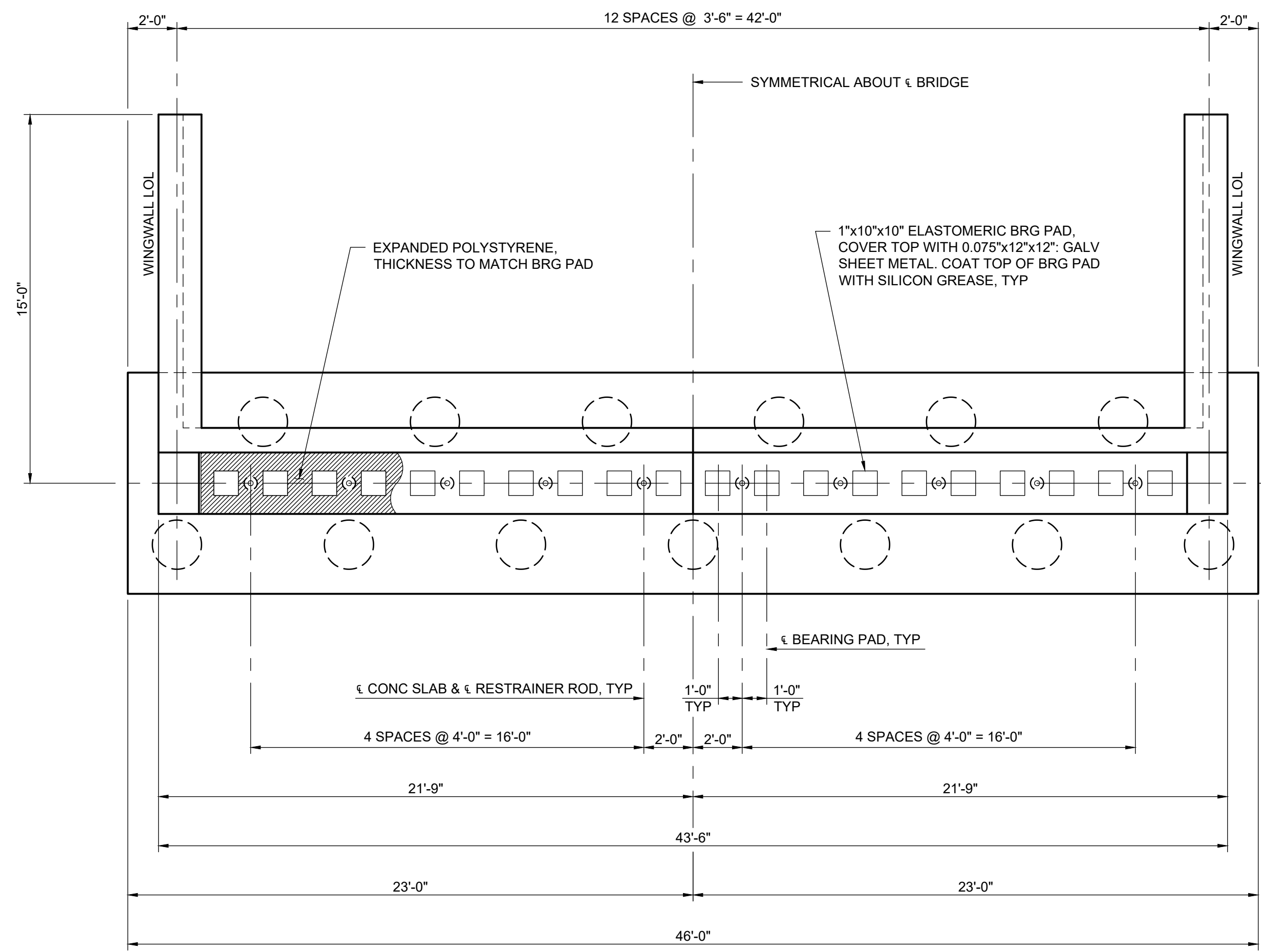
**CACHE SLOUGH MITIGATION BANK
WATER CROSSING STRUCTURE**

FOUNDATION PLAN



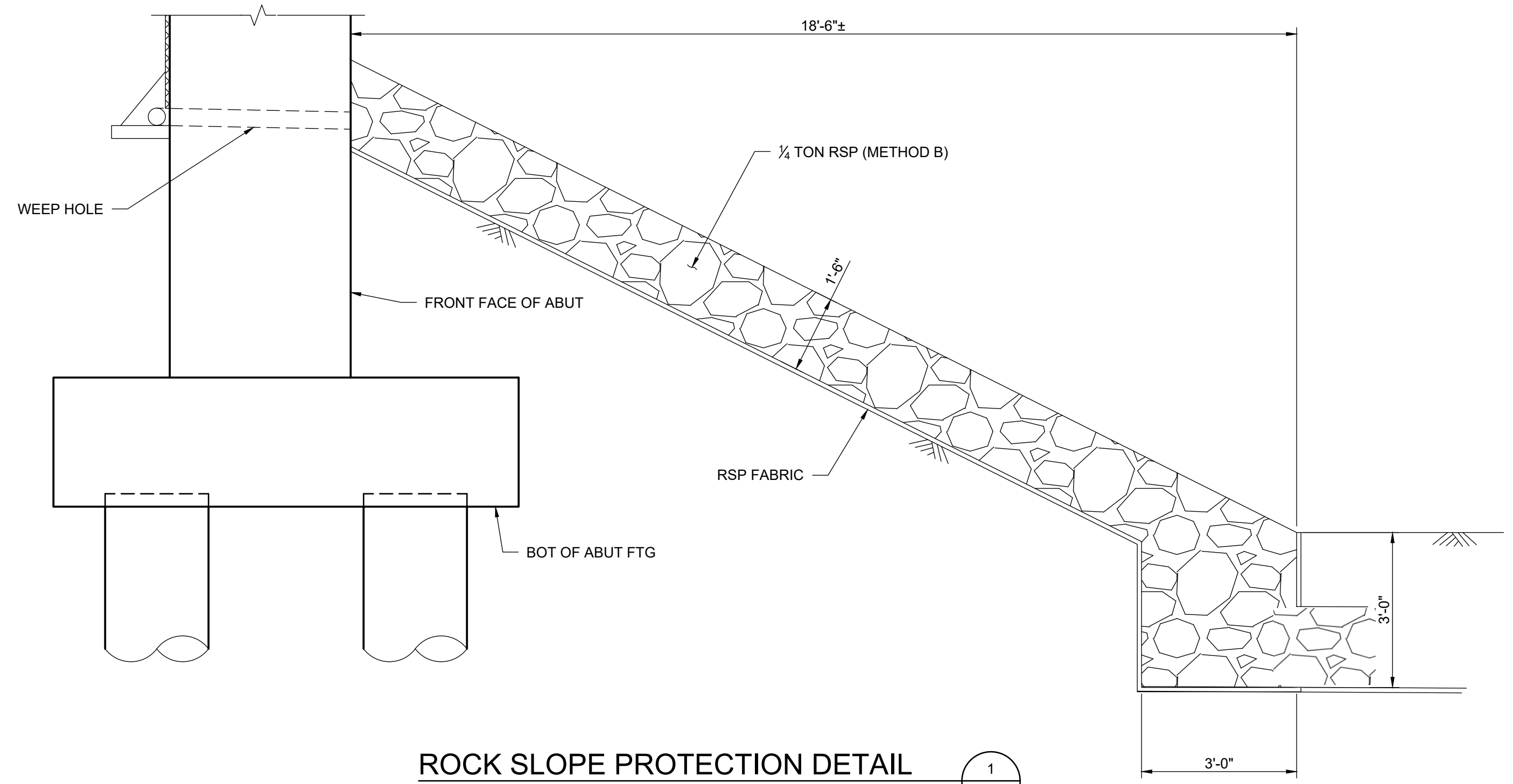
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SCALE | AS NOTED

SHEET
S-003



PLAN

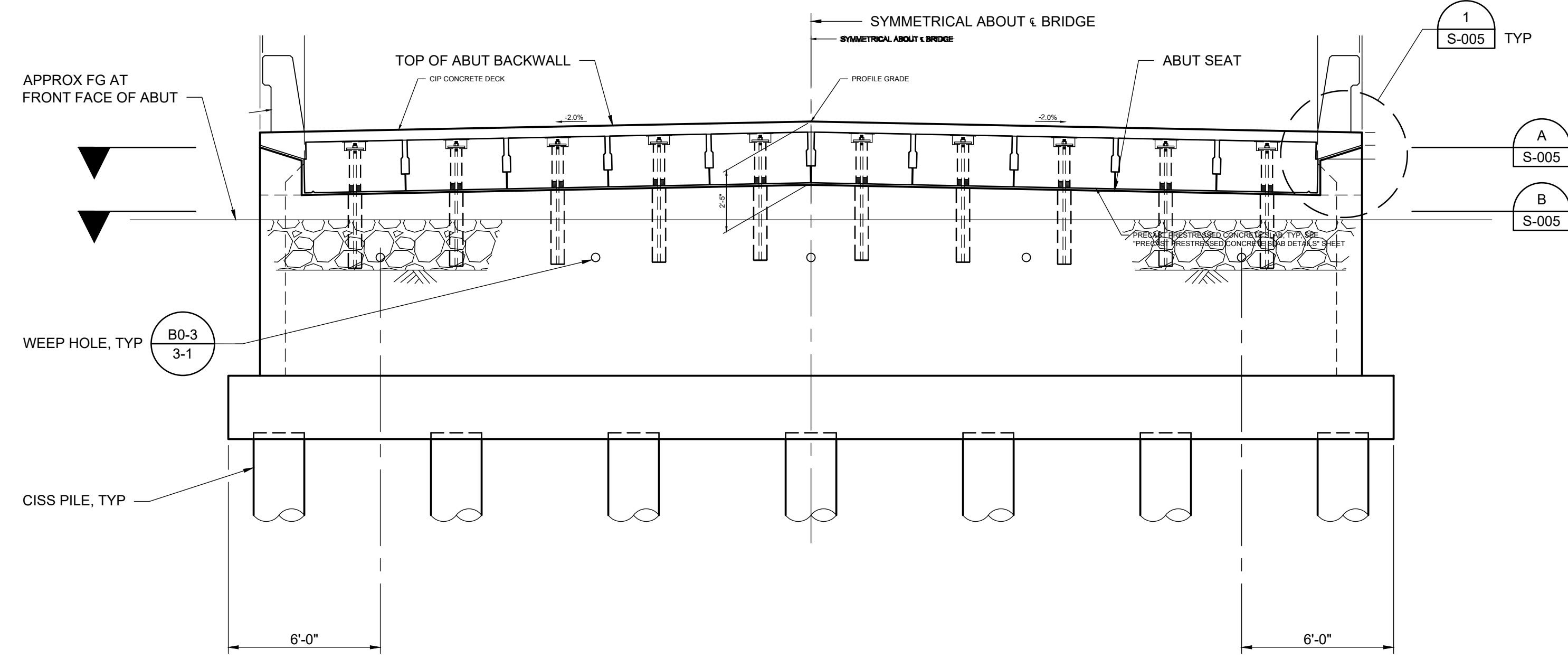
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ROCK SLOPE PROTECTION DETAIL

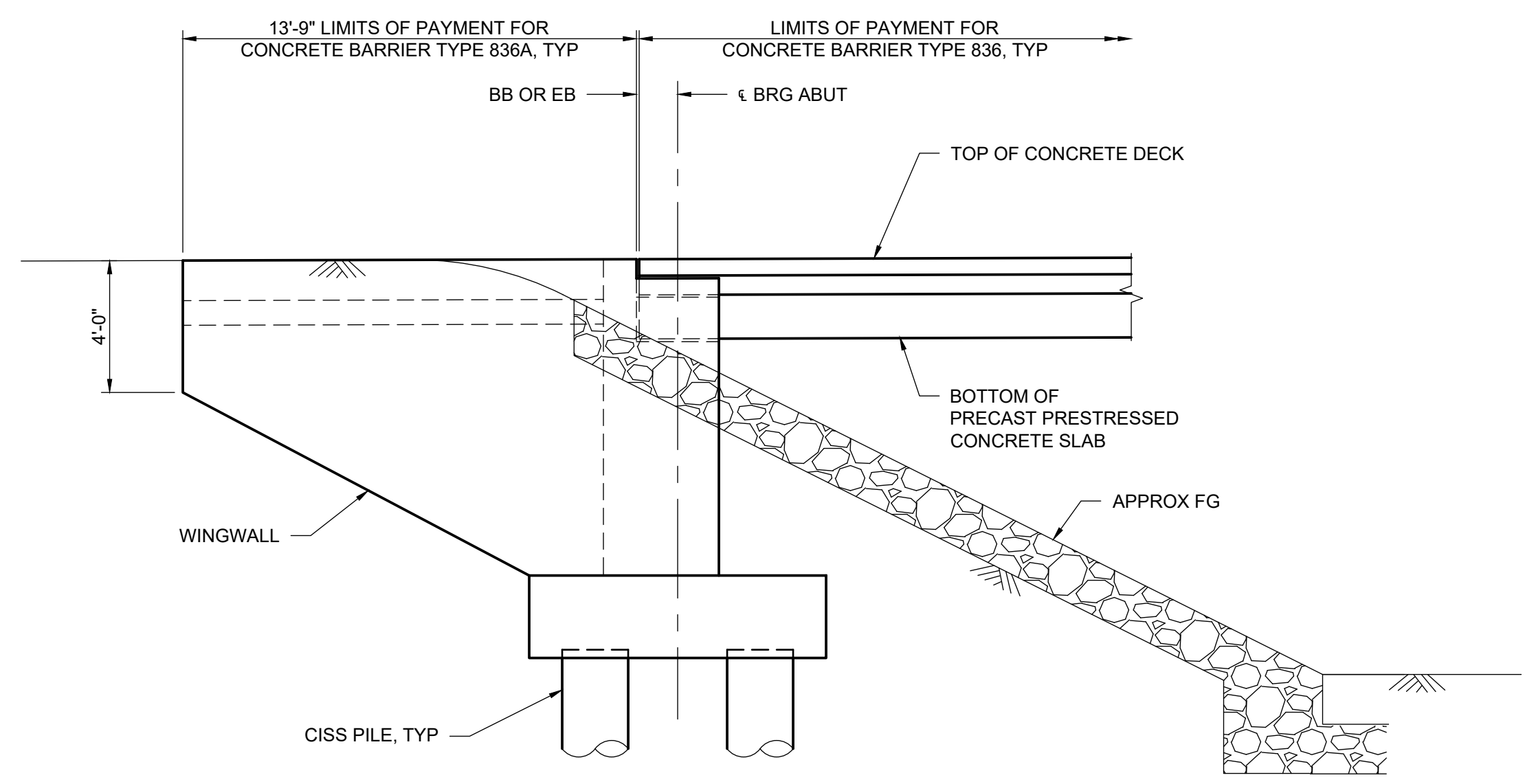
SCALE: 1/2"=1'-0"

1
S-001



ELEVATION

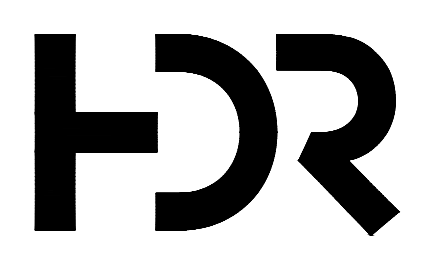
SCALE: 1/4"=1'-0"



WINGWALL ELEVATION

SCALE: 1/4"=1'-0"

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ISSUE	DATE	DESCRIPTION

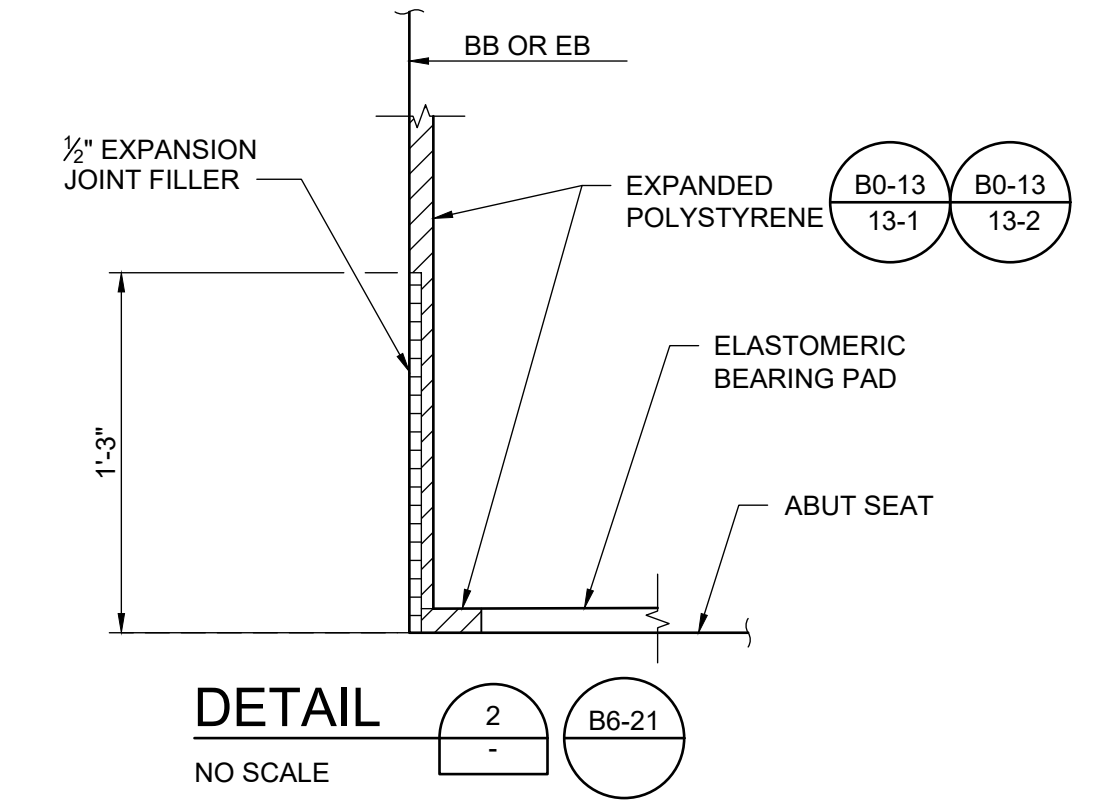
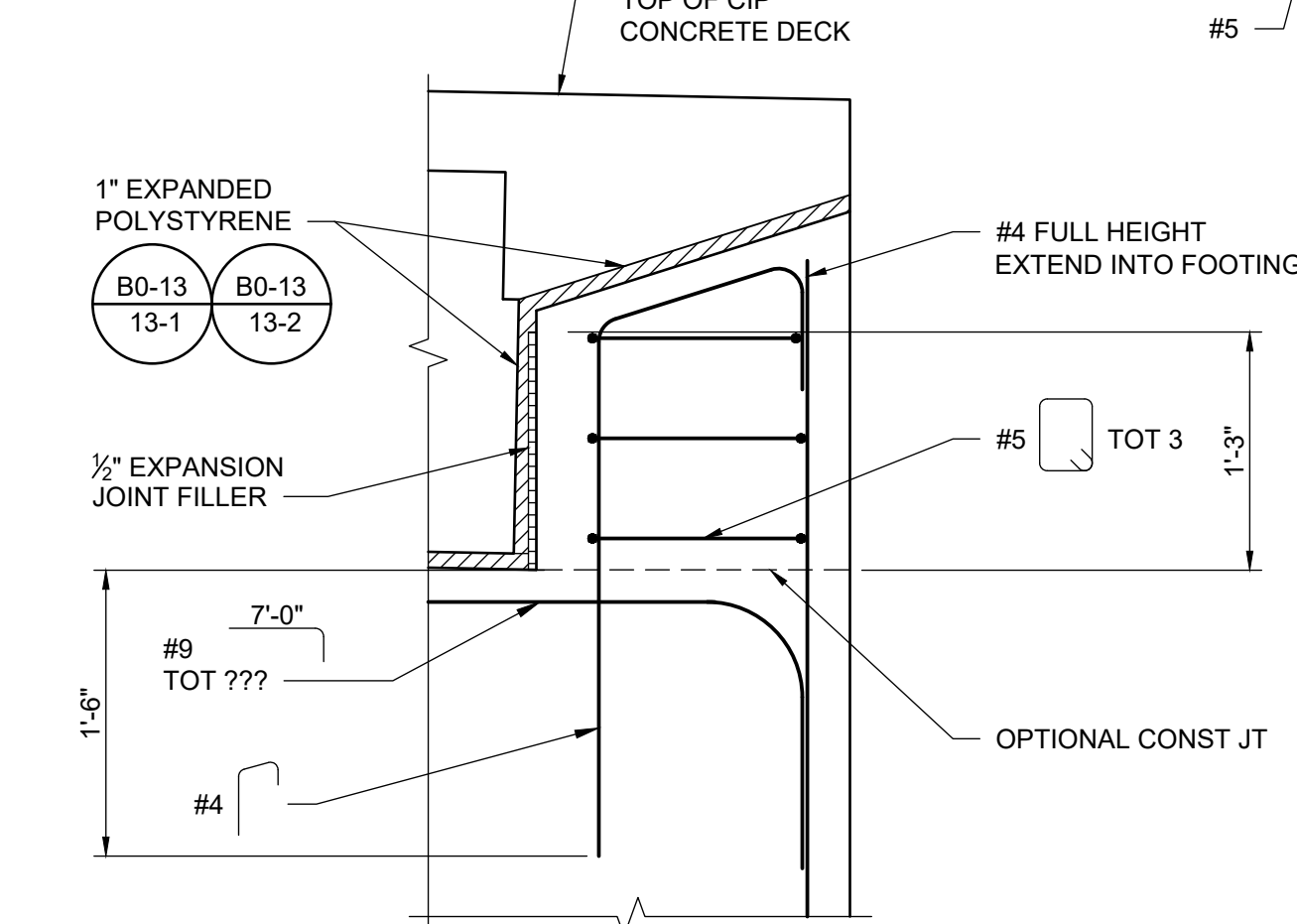
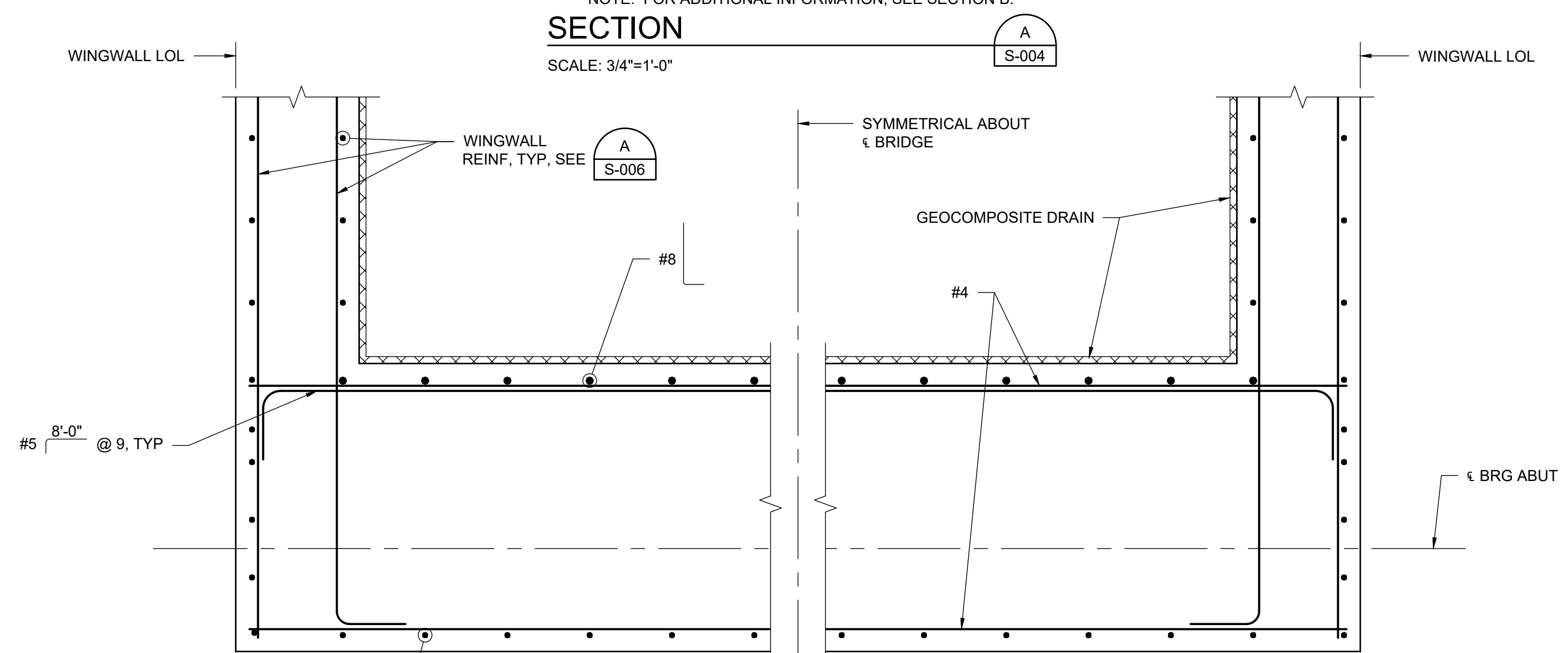
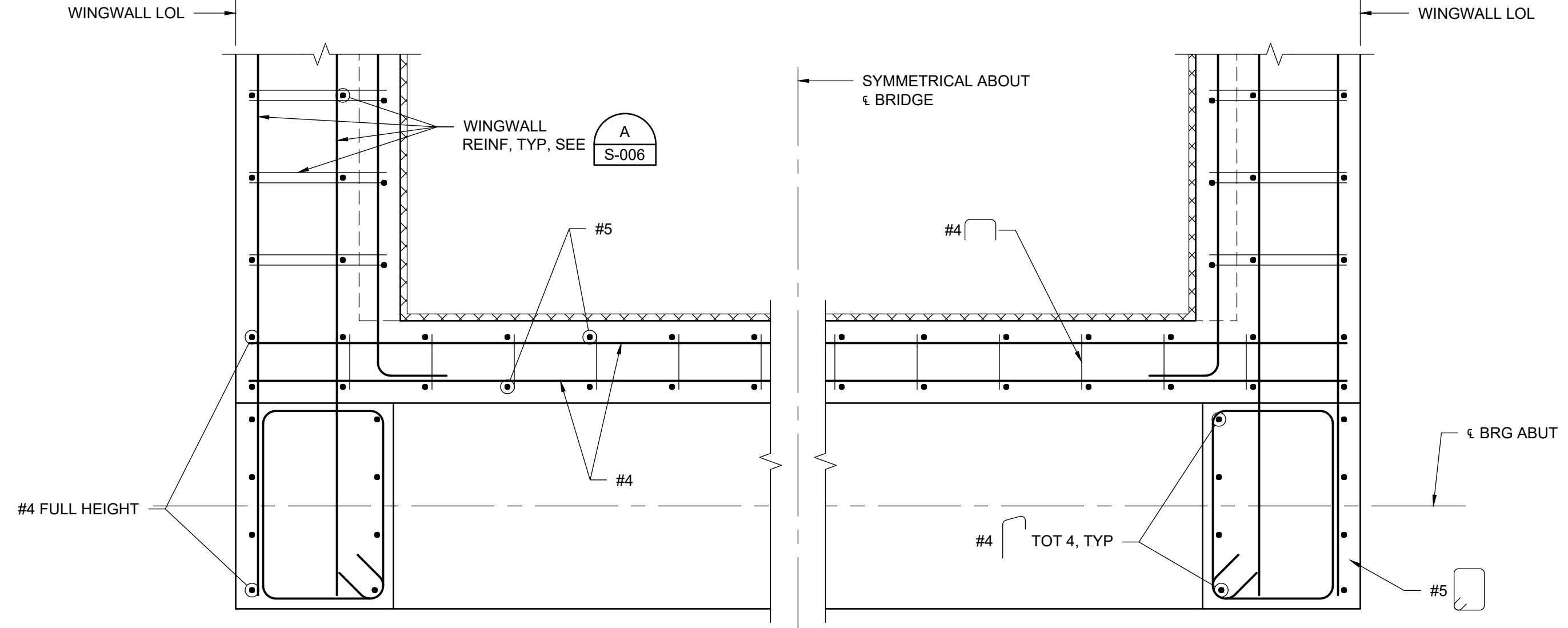
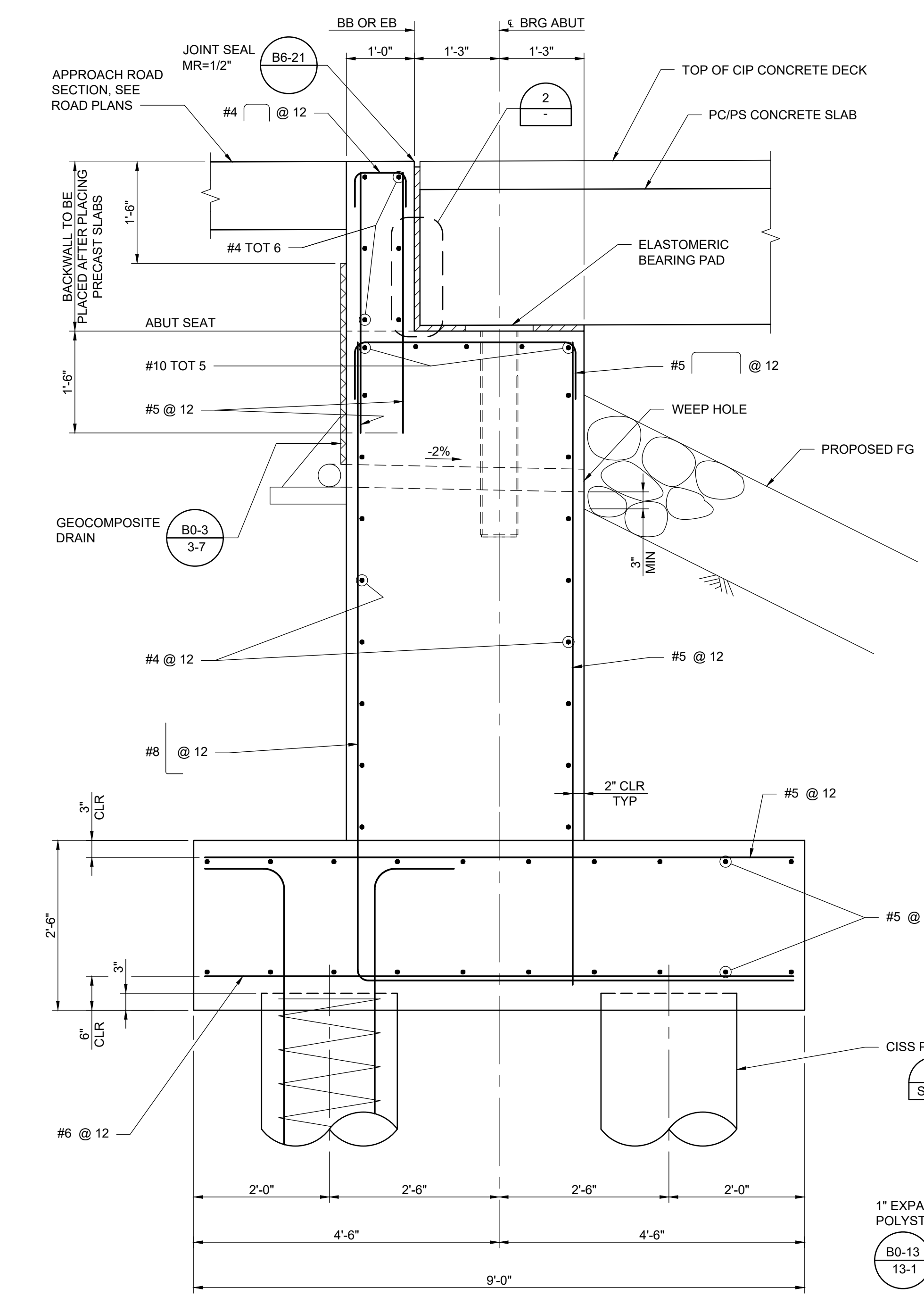
PROJECT MANAGER	D. JABBOUR
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DATE	MAY 29, 2024
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**CACHE SLOUGH MITIGATION BANK
WATER CROSSING STRUCTURE**

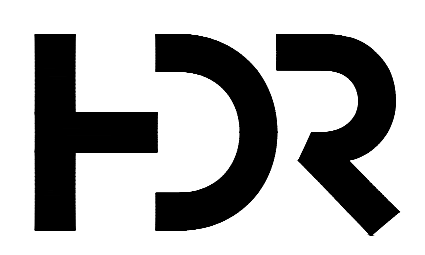
TYPICAL ABUTMENT LAYOUT





65% NOT FOR CONSTRUCTION

NOTE: ABUTMENT REINF NOT SHOWN.



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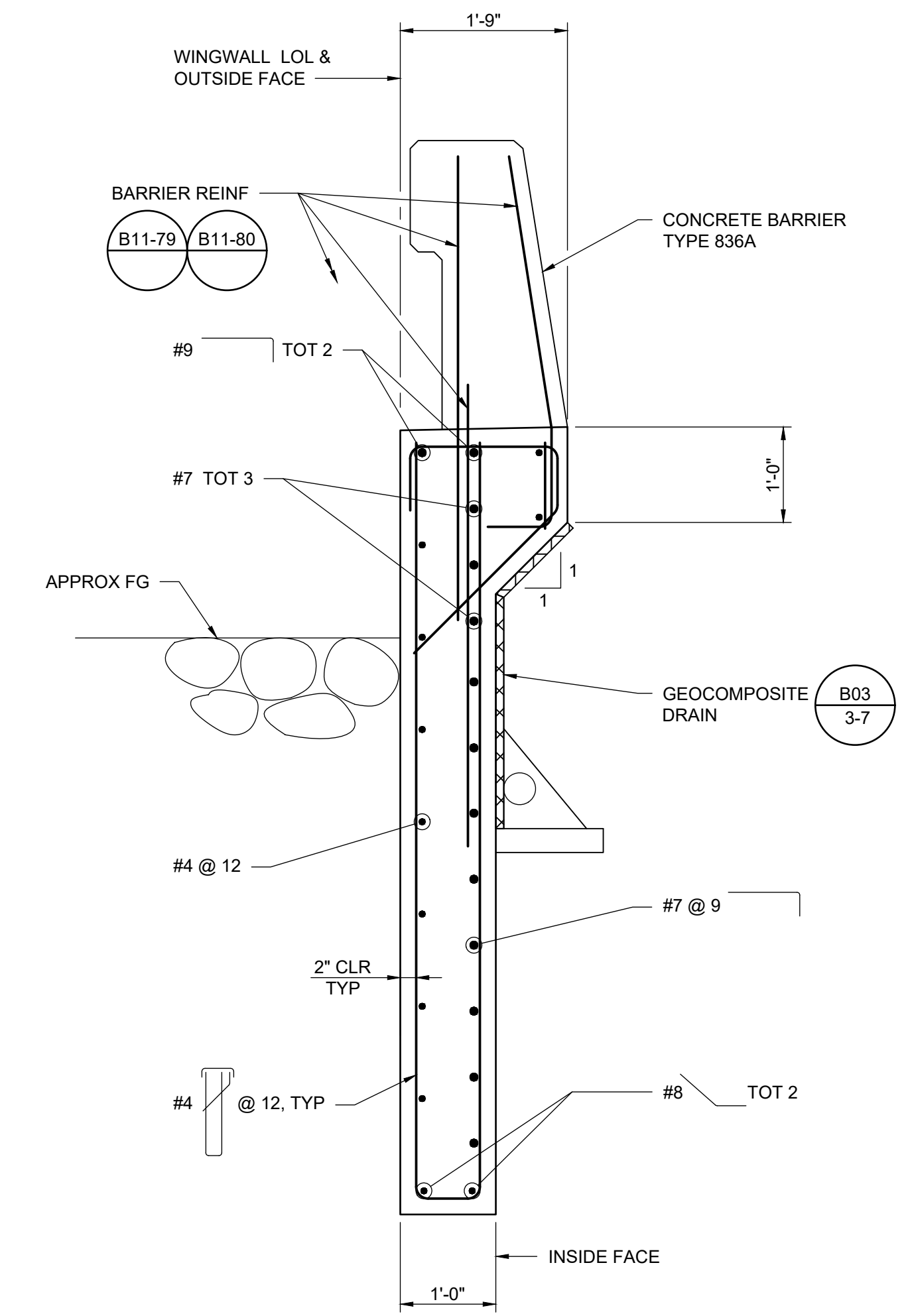
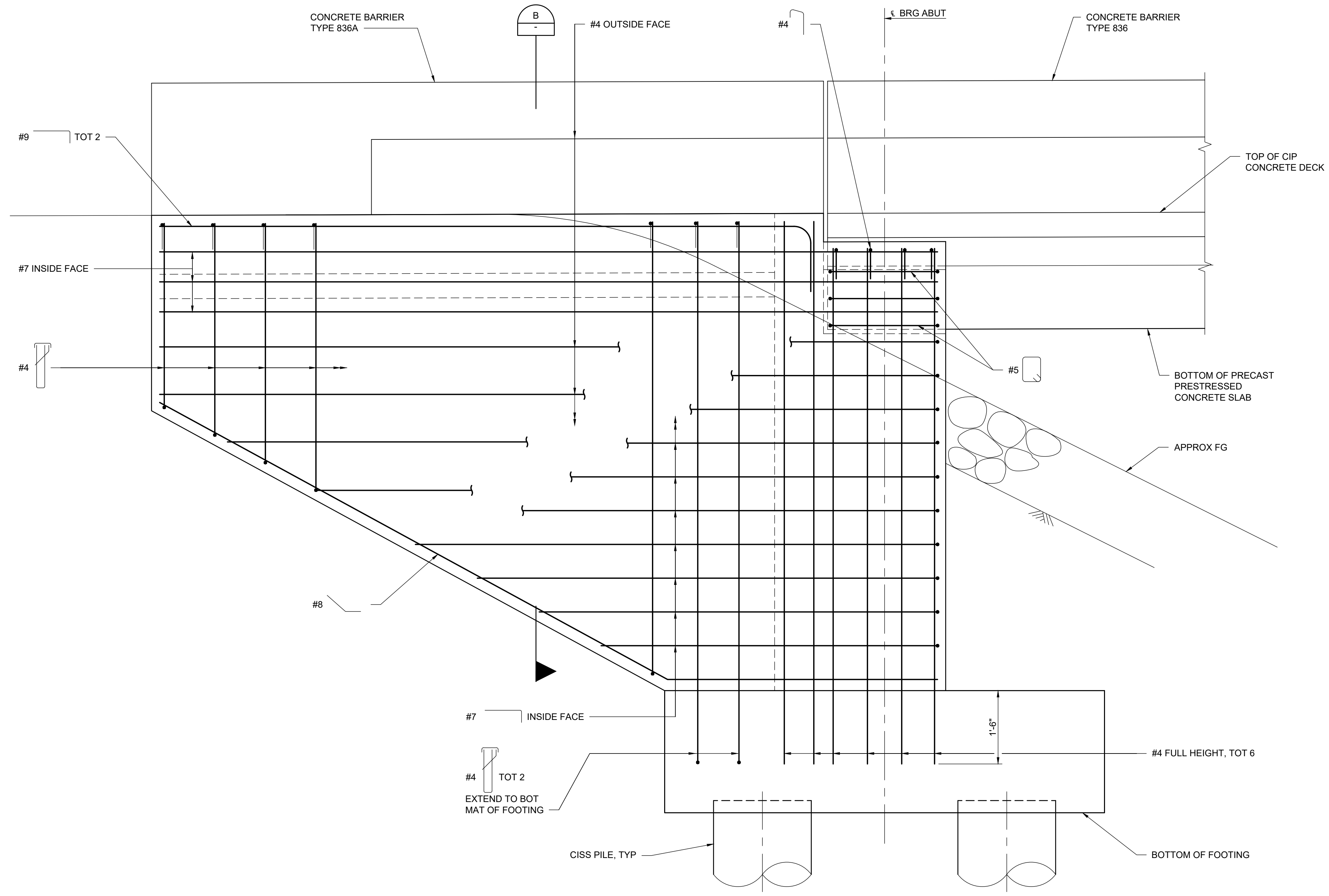


**CACHE SLOUGH MITIGATION BANK
WATER CROSSING STRUCTURE**

ABUTMENT DETAILS NO. 1



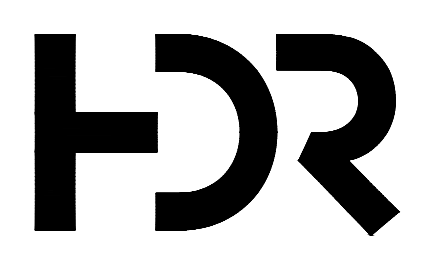
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SCALE	AS NOTED		



SECTION
SCALE: 3/4"=1'-0"

NOTE: TYPICAL WINGWALL AT ABUTMENT 1 SHOWN, WINGWALLS AT ABUTMENT 2 SIMILAR.
TYPICAL WINGWALL ELEVATION
SCALE: 3/4"=1'-0"

65% NOT FOR CONSTRUCTION



ISSUE	DATE	DESCRIPTION

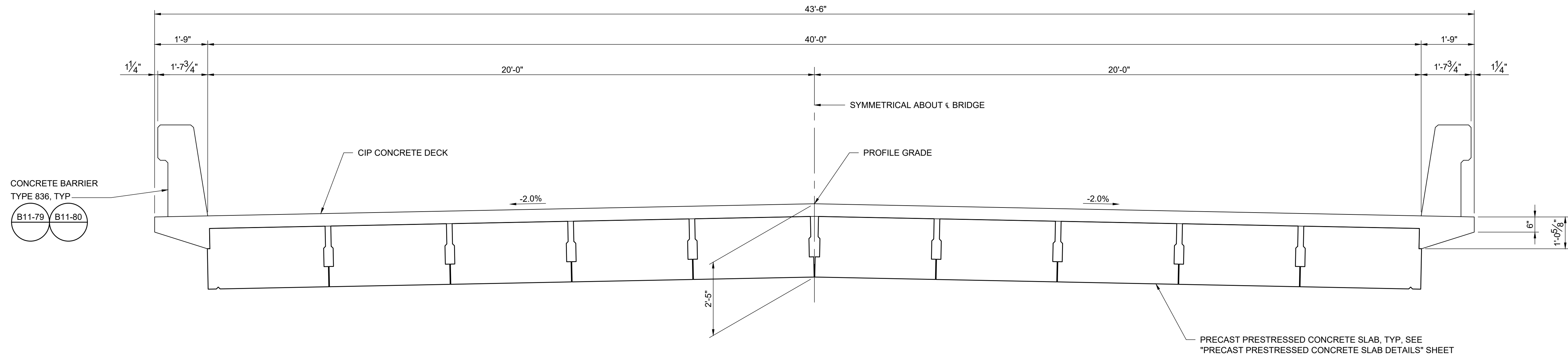
PROJECT MANAGER	D. JABBOUR
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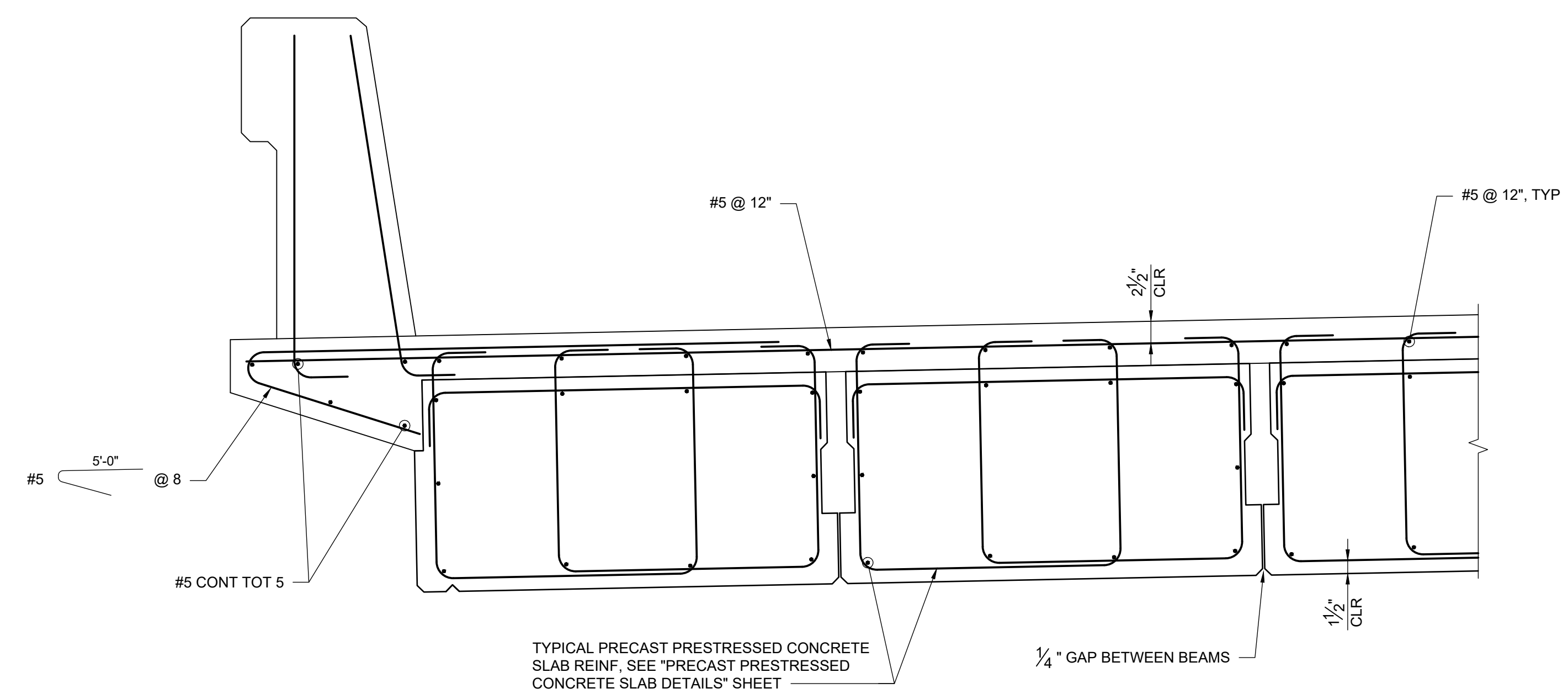
**CACHE SLOUGH MITIGATION BANK
WATER CROSSING STRUCTURE**

ABUTMENT DETAILS NO. 2



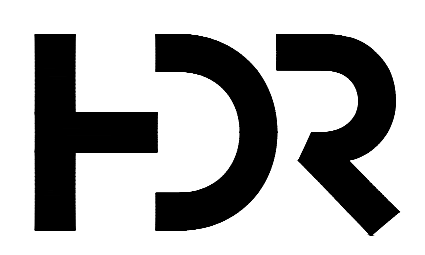


TYPICAL SECTION
 SCALE: 1/2"=1'-0"



PARTIAL TYPICAL SECTION
 SCALE: 1"=1'-0"

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ISSUE	DATE	DESCRIPTION

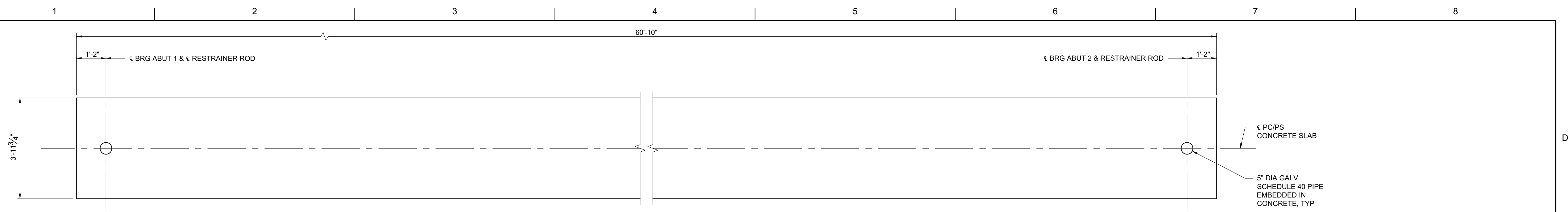
PROJECT MANAGER	D. JABBOUR
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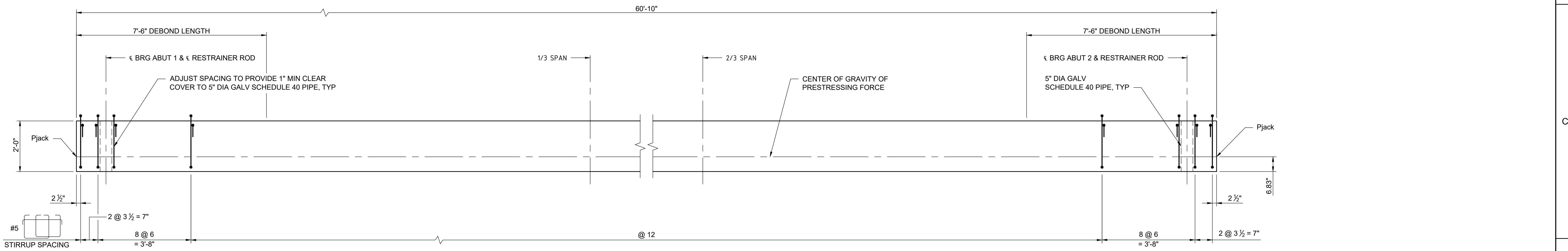
**CACHE SLOUGH MITIGATION BANK
 WATER CROSSING STRUCTURE**

TYPICAL SECTION

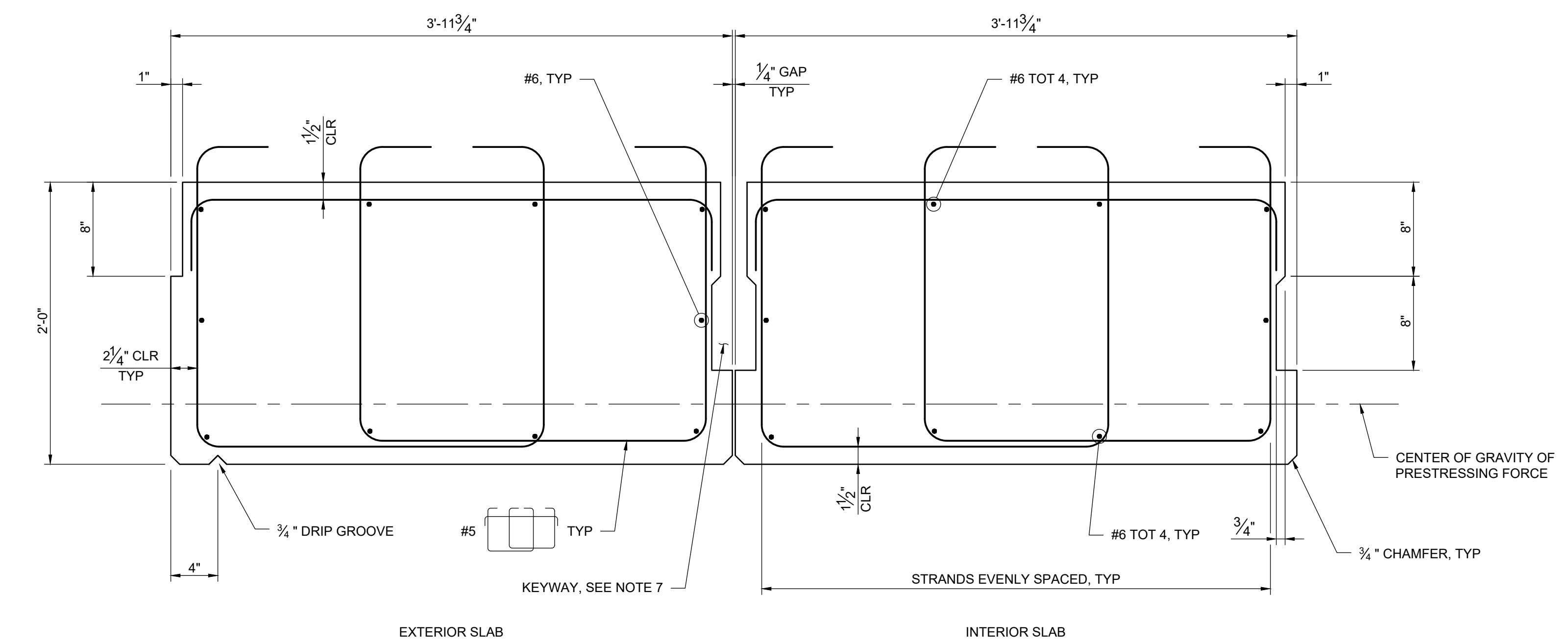




PLAN
SCALE: 1/2"=1'-0"



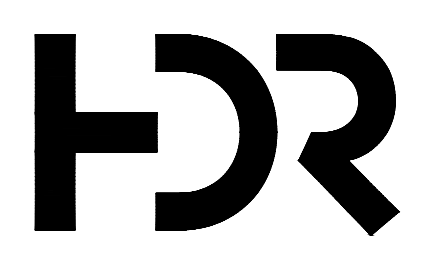
ELEVATION
SCALE: 1/2"=1'-0"



TYPICAL PRECAST PRESTRESSED CONCRETE SLAB
SCALE: 1 1/2"=1'-0"

- PRESTRESSING NOTES:**
- DESIGN BASED ON 270 KSI LOW RELAXATION 1/2" DIA STRAND.
 - NUMBER OF STRANDS PER SLAB: 30 STRANDS
 - Pjack IS THE FORCE REQUIRED PER SLAB AFTER ALL LOSSES DUE TO CREEP AND SHRINKAGE OF CONCRETE AND CREEP OF STEEL HAVE OCCURED.
Pjack = 1318 KIPS
 - SLABS DESIGNED FOR PRETENSIONING.
 - CONCRETE STRENGTH:
f_c = 6000 PSI AT 28 DAYS
f_{ci} = 4500 PSI AT TIME OF STRESSING
 - TOTAL NUMBER OF PRECAST SLABS = 10
 - KEYWAYS TO BE FILLED WITH GROUT:
GROUT STRENGTH, f_c = 6000 PSI

65% NOT FOR CONSTRUCTION



ISSUE	DATE	DESCRIPTION

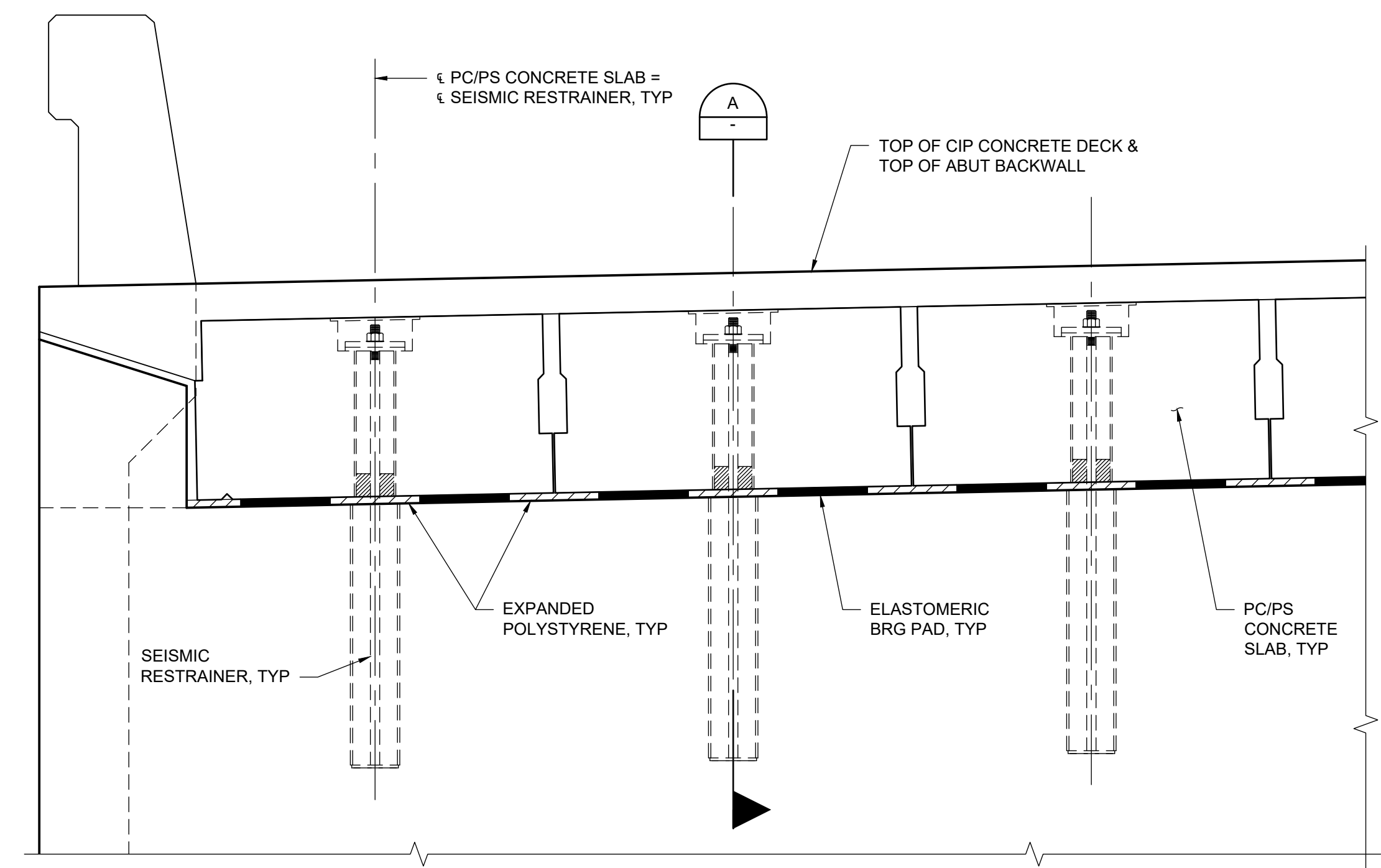
PROJECT MANAGER	D. JABBOUR
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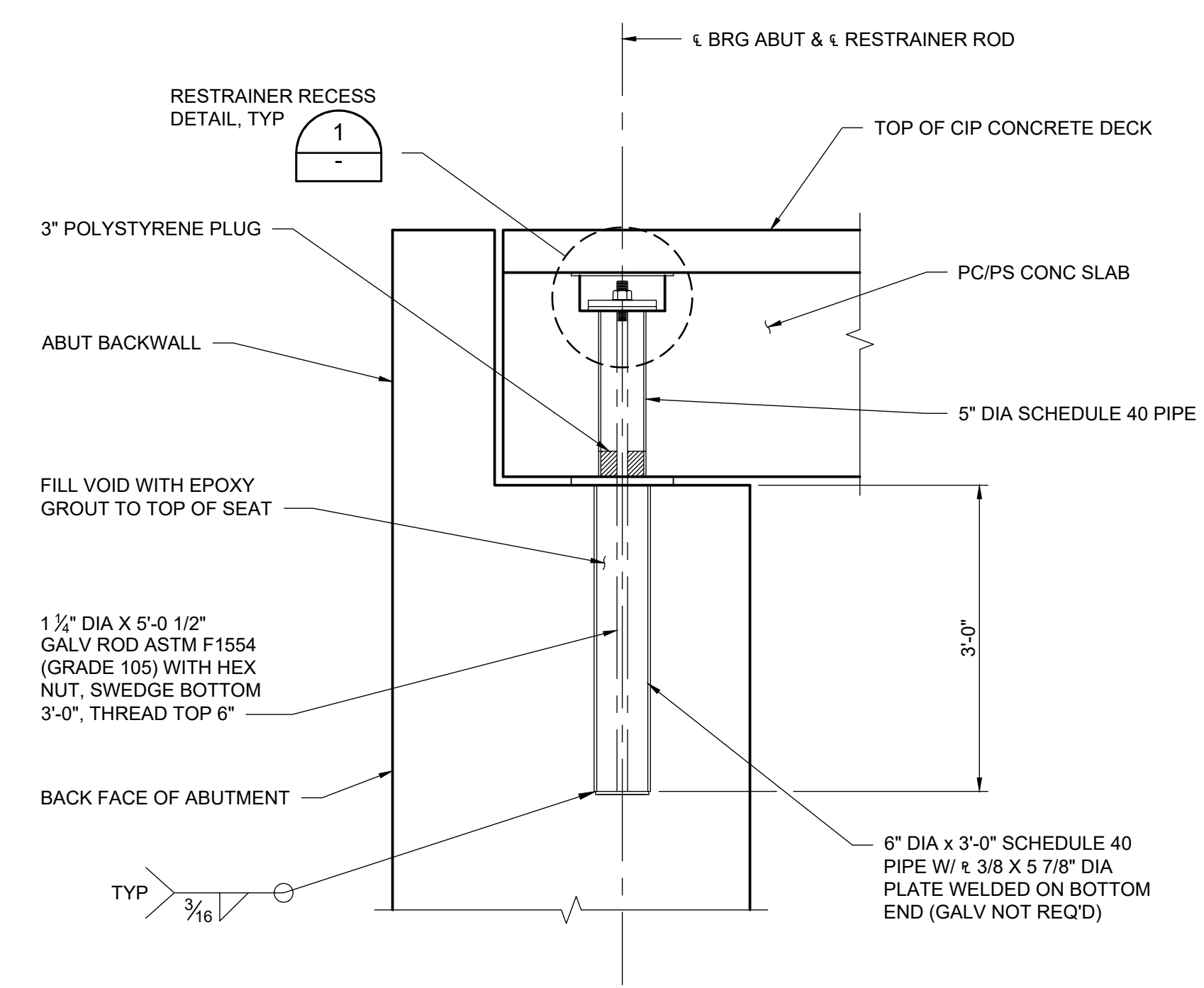
**CACHE SLOUGH MITIGATION BANK
WATER CROSSING STRUCTURE**

PRECAST PRESTRESSED CONCRETE SLAB
DETAILS NO. 1

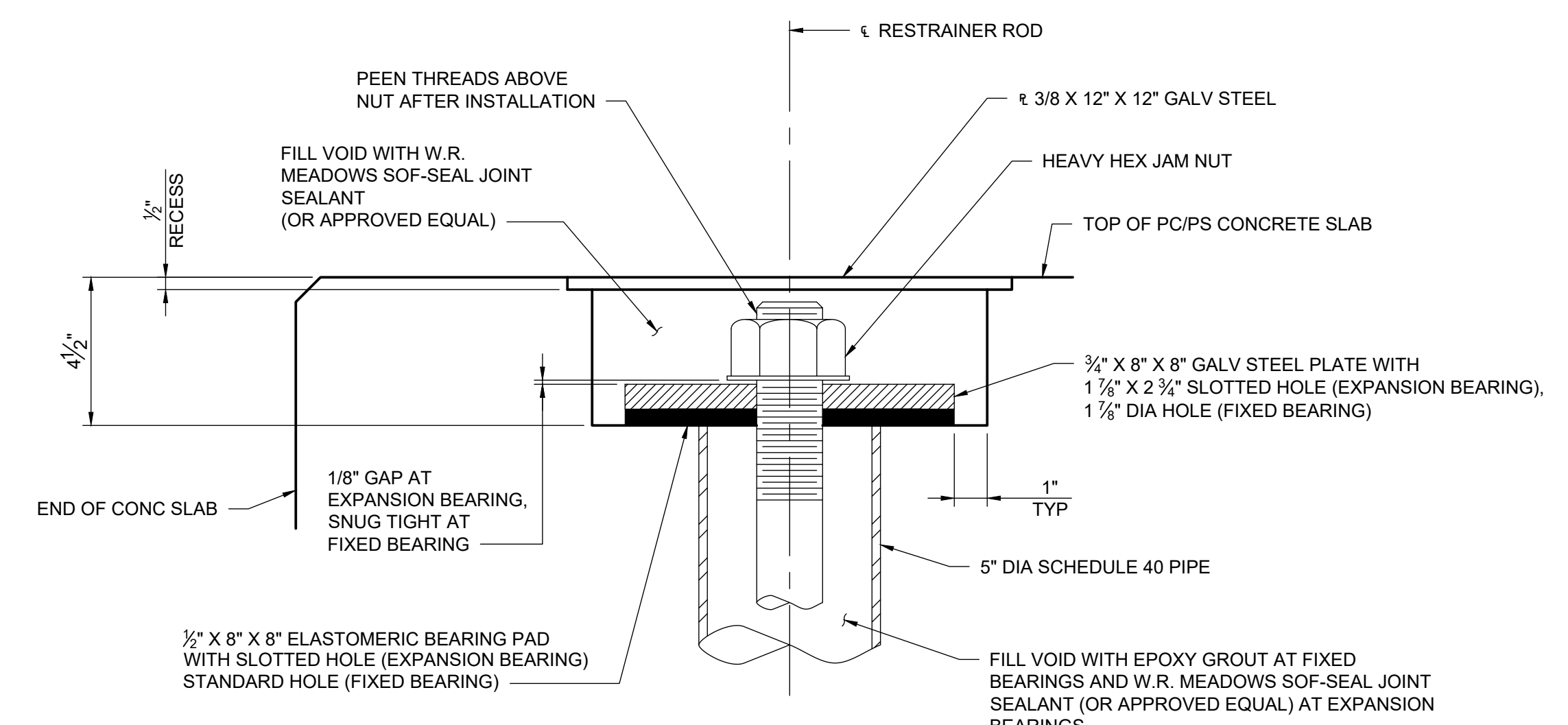




PARTIAL ELEVATION - SEISMIC RESTRAINERS
SCALE: 3/4"=1'-0"

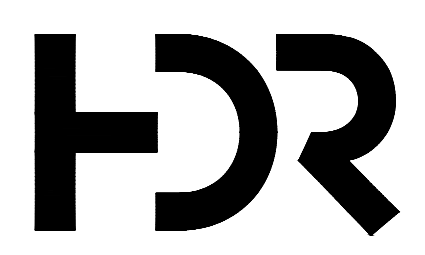


SECTION
SCALE: 3/4"=1'-0"



RESTRAINER RECESS DETAIL
NO SCALE

65% NOT FOR CONSTRUCTION



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**CACHE SLOUGH MITIGATION BANK
WATER CROSSING STRUCTURE**

PRECAST PRESTRESSED CONCRETE SLAB
DETAILS NO. 2

