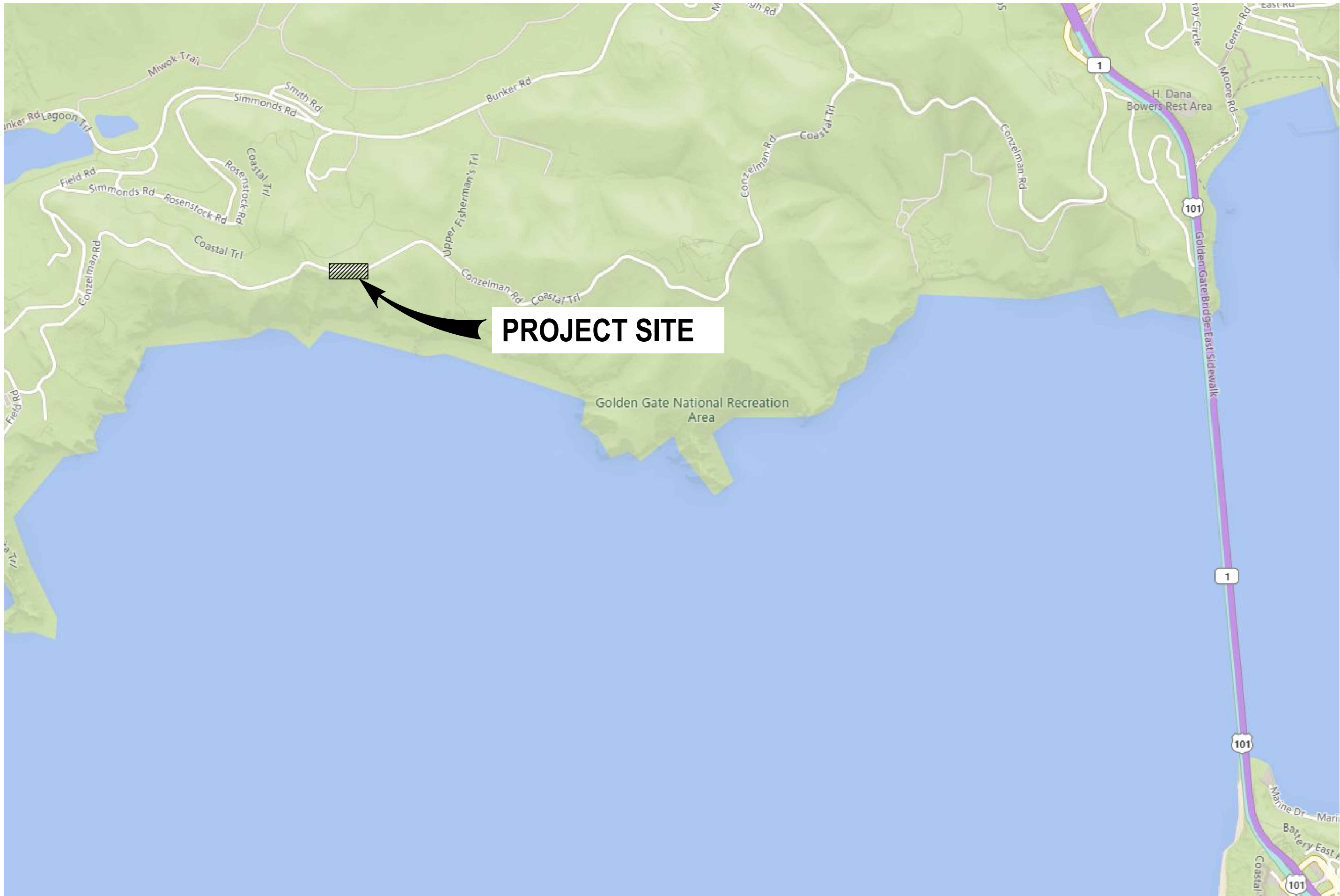


NPS GOGA 336173 - REPAIR CONZELMAN ROAD

MARIN HEADLANDS, GOLDEN GATE NATIONAL RECREATION AREA



VICINITY MAP



OWNER:	ARCHITECT	CIVIL ENGINEERING:	STRUCTURAL ENGINEERING:	SURVEY
NPS, DSC CONTRACTING SERVICES DIVISION 12795 W. ALAMEDA PKWY P.O. BOX 25287 DENVER CO 80225	LGA ARCHITECTURE 241 W. CHARLESTON BLVD., SUITE 107 LAS VEGAS, NV 89102	COFFMAN ENGINEERS INC. 6320 CANOGA AVE, STE 1300 WOODLAND HILLS, CA 91367	COFFMAN ENGINEERS INC. 6320 CANOGA AVE, STE 1300 WOODLAND HILLS, CA 91367	GUIDA GEOSPATIAL SOLUTIONS 4695 CHABOT DR, SUITE 115 PLEASANTON, CA 94588



GOLDEN GATE NATIONAL RECREATION AREA



INDEX	
Sheet Number	Sheet Title
G1.0	COVER SHEET
G2.0	SURVEY
X1.0	DEMOLITION PLAN
X1.1	EROSION AND SEDIMENT CONTROL PLAN
C1.0	PLAN AND PROFILE
C2.0	CROSS-SECTIONS AND DETAILS
C2.1	DETAILS
S0.1	GENERAL NOTES
S0.2	GENERAL NOTES
S1.0	PLAN AND PROFILE
S2.0	ENLARGED PLAN AND DETAILS
S6.0	TYPICAL DETAILS
S6.1	TYPICAL DETAILS
XS16-116-1	CALIFORNIA ST-75 BRIDGE RAIL DETAILS NO. 1 (FOR REFERENCE ONLY)
XS16-116-2	CALIFORNIA ST-75 BRIDGE RAIL DETAILS NO. 2 (FOR REFERENCE ONLY)
XS16-116-3	CALIFORNIA ST-75 BRIDGE RAIL DETAILS NO. 3 (FOR REFERENCE ONLY)
XS16-116-4	CALIFORNIA ST-75 BRIDGE RAIL DETAILS NO. 4 (FOR REFERENCE ONLY)
XS16-116-5	CALIFORNIA ST-75 BRIDGE RAIL DETAILS NO. 5 (FOR REFERENCE ONLY)
B13.2C	3-TUBE CURB MOUNT RAIL - SHT. 2 OF 3 (FOR REFERENCE ONLY)
B13.2B	3-TUBE CURB MOUNT RAIL - SHT. 3 OF 3 (FOR REFERENCE ONLY)

P:\125\065\25404\NPS GOGA CONZELMAN ROAD WALL\00 DWGS\254040 - G1.0 COVER SHEET.DWG:G1.0 COVER SHEET - HAWKINS, MARIAN - LAST SAVED: July 10, 2026: PLOT DATE: 7/10/26

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JUNE 20, 2028

Signature

Expiration Date of the License



Mark	Sheet	REVISION	Date	Initial

QUALITY DESIGN CERTIFICATION

☐ Prepared in Accordance with Design Development (Title 1)

OR

☐ Variance from Design Development (Title 1)

OR

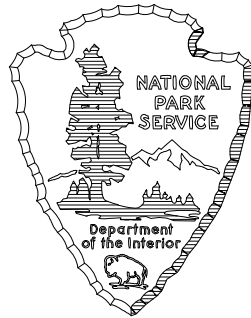
☐ Construction Drawing Not Preceded by Design Development (Title 1)

Drawing No.

Date

Project Manager

Date



UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
DENVER SERVICE CENTER

TITLE OF DRAWING
COVER SHEET

LOCATION WITHIN PARK

NAME OF PARK
GOLDEN GATE NATIONAL RECREATION AREA

REGION
8.9.10.12

COUNTY
MARIN

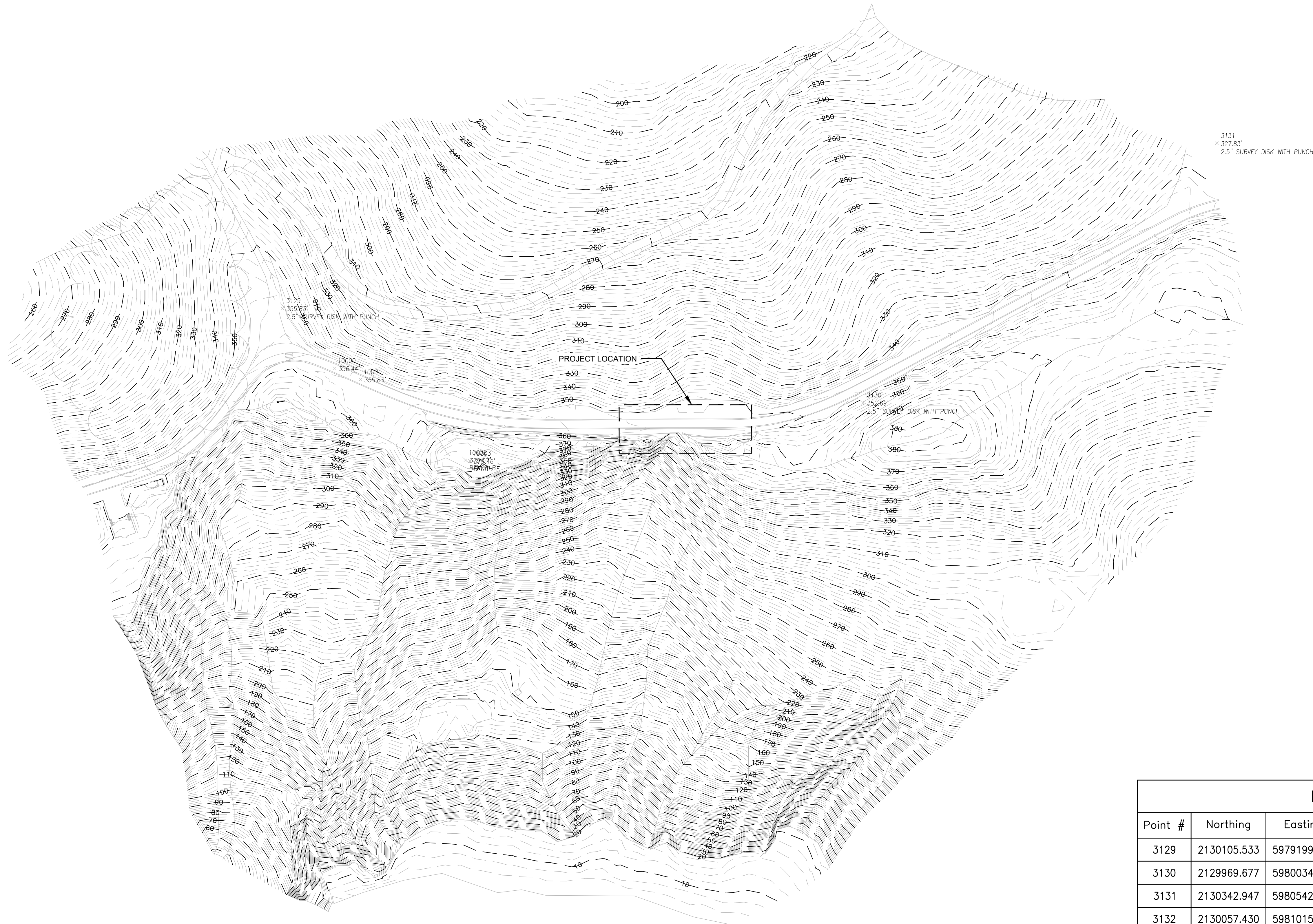
STATE
CALIFORNIA

DRAWING NO.
641
193558

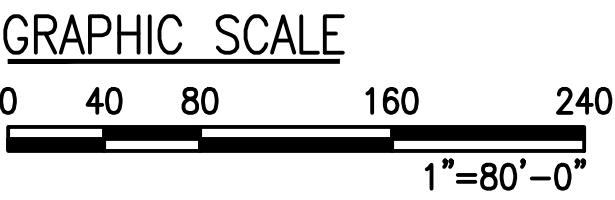
PMIS/PKG. NO.
336173

SHEET
1 OF 20

P:\1A\25\055\25404\NPS GOGA CONZELMAN ROAD WALL\00 DWG\SG1\0 SHEETS\SG1\SURVEY DWG.DWG - SURVEY - DRUM, ALEX - LAST SAVED: July 10, 2026 - PLOT DATE: 7/10/26



Point Table				
Point #	Northing	Easting	Elevation	Description
3129	2130105.533	5979199.006	355.83	2.5" SURVEY DISK WITH PUNCH
3130	2129969.677	5980034.070	352.69	2.5" SURVEY DISK WITH PUNCH
3131	2130342.947	5980542.924	327.83	2.5" SURVEY DISK WITH PUNCH
3132	2130057.430	5981015.105	318.45	2.5" SURVEY DISK WITH PUNCH



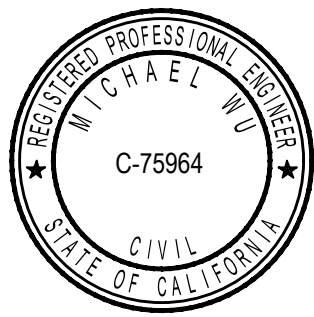
UTILITY STATEMENT
LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM DRAWINGS AND FIELD LOCATES SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.

THE EXISTING INFORMATION SHOWN ON THESE PLANS IS PER THE SURVEY COMPLETED BY:
GUIDA GEOSPATIAL SOLUTIONS
4695 CHABOT DR, SUITE 115
PLEASANTON, CA 94566
(925) 398-0805
DATED: 11/06/2024
THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND CONTACT THE ENGINEER IF DISCREPANCIES ARE NOTED.

BENCH MARK
U.S. DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE MONUMENTS, NAVD 88, US SURVEY FEET
BASIS OF BEARING
NAD83(2011) CALIFORNIA COORDINATE SYSTEM ZONE 3 (EPOCH 2002.00), US SURVEY FEET.
ORTHO IMAGE
ORTHO IMAGE PROVIDED BY NEARMAP. IMAGE DATE IS SEPTEMBER 2, 2024. ORTHORECTIFIED IMAGE WAS GEOREFERENCED TO SURVEY DATA.

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Exp. 06/30/28
Expiration Date of the License

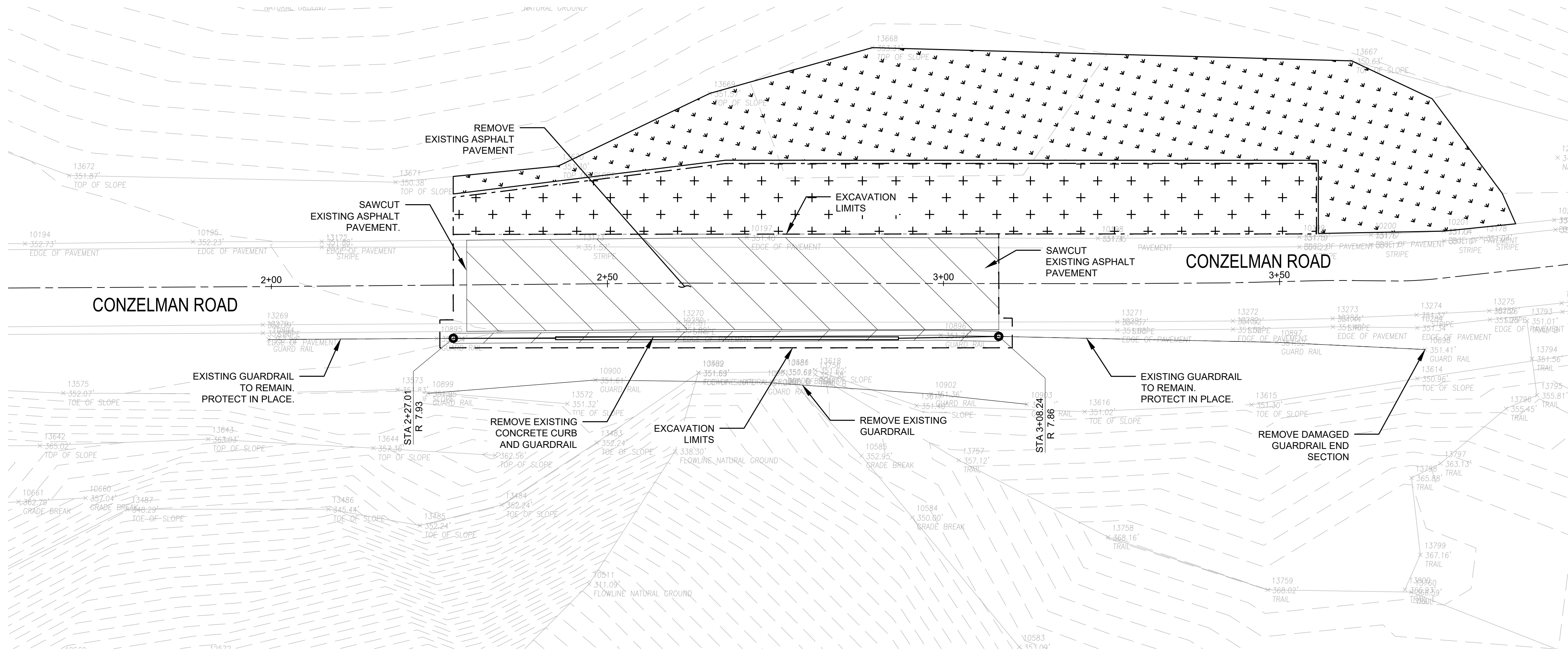


DESIGNED: LM
CADD: LM
TECH REVIEW: LM
DATE: 07/10/2026

SUB SHEET NO.
G2.0

TITLE OF SHEET
SURVEY
GOLDEN GATE NATIONAL RECREATION AREA

DRAWING NO. **641**
193558
PKG. NO. 336173
SHEET **2** OF **20**



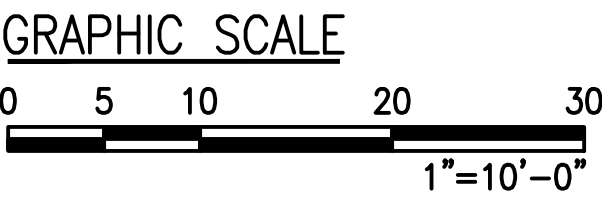
A PLAN VIEW - CONZELMAN ROAD
SCALE: 1"=10'

LEGEND:

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXCAVATION LIMITS
- REMOVE EXISTING ASPHALT
- REMOVE EXISTING GUARDRAILS

NOTES:

- CONTRACTOR TO REMOVE ALL VEGETATION WITHIN EXCAVATION LIMITS.
- CONTRACTOR TO REMOVE ASPHALT PAVEMENT AND CONCRETE CURB ALONG CONZELMAN ROAD AS SPECIFIED ON PLANS.
- CONTRACTOR TO REMOVE GUARDRAILS AND ITS APPLICABLE DAMAGED END TERMINALS AS SPECIFIED ON PLANS.

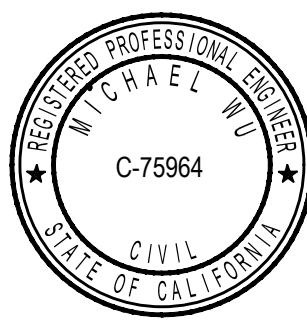


Know what's below.
Call before you dig.

UTILITY STATEMENT
LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM DRAWINGS AND FIELD LOCATES SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.

THE EXISTING INFORMATION SHOWN ON THESE PLANS IS PER THE SURVEY COMPLETED BY:
GUIDA GEOSPATIAL SOLUTIONS
4695 CHABOT DR, SUITE 115
PLEASANTON, CA 94566
(925) 398-0805
DATED: 11/06/2024
THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND CONTACT THE ENGINEER IF DISCREPANCIES ARE NOTED.

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Michael Wu
Signature
Exp. 06/30/28
Expiration Date of the License



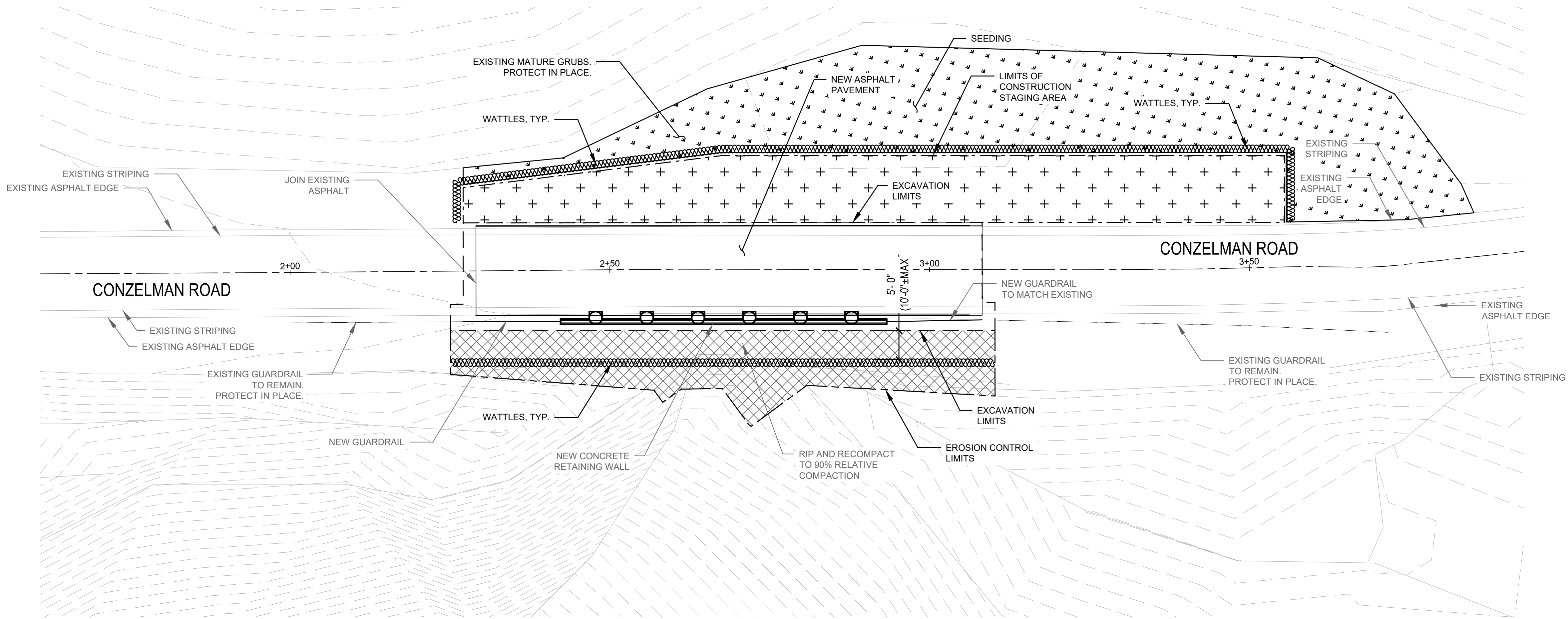
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CADD: LM
TECH REVIEW: LM
DATE: 07/10/2026

SUB SHEET NO.
X1.0

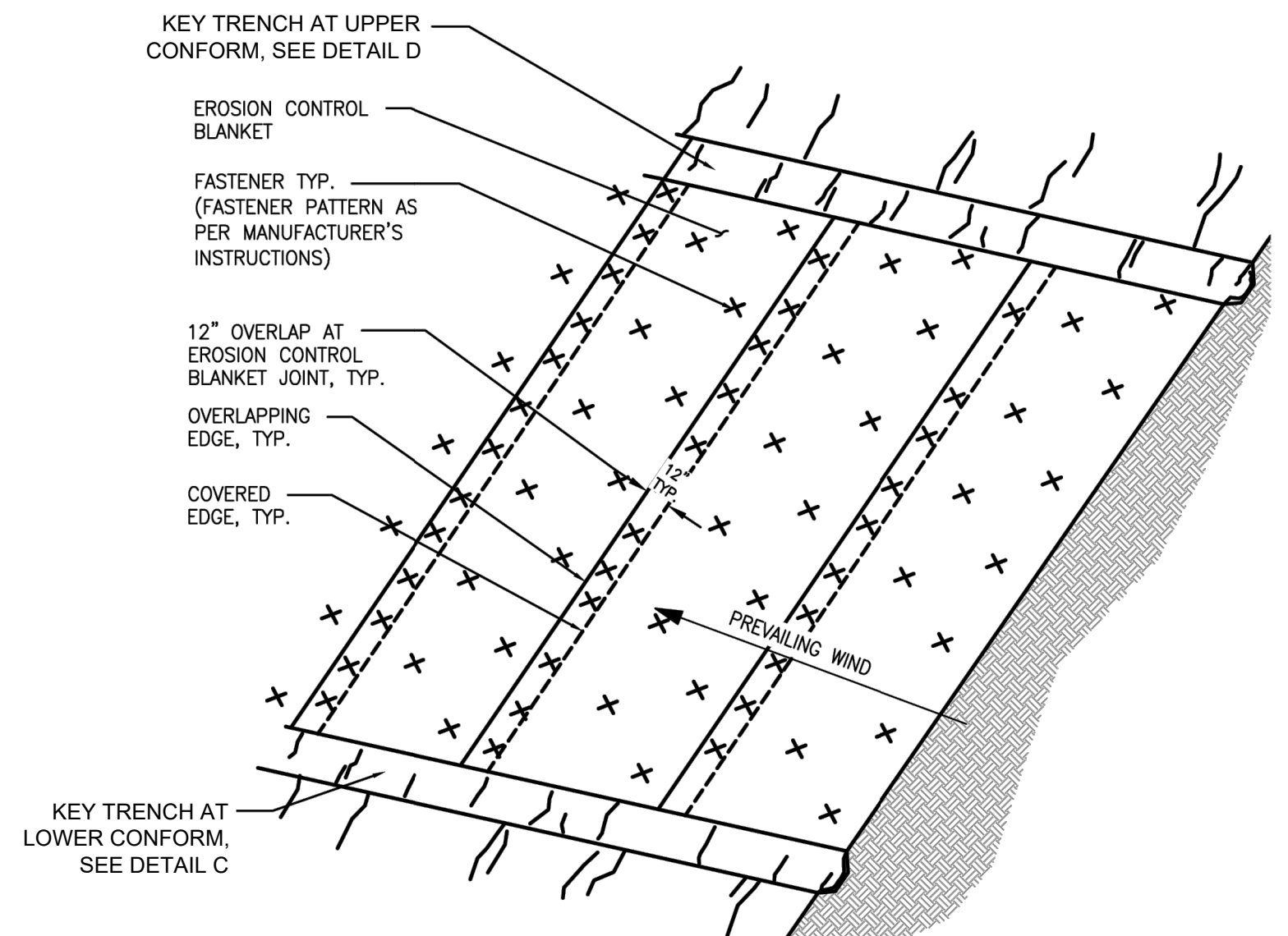
TITLE OF SHEET
X0 - DEMO
GOLDEN GATE NATIONAL RECREATION AREA

DRAWING NO. **641**
193558
PKG. NO. 336173
SHEET **3** OF **20**

P:\LA25\085\25404\NPS GOGA CONZELMAN ROAD WALL\00 DWGS\010 SHEETS\X1 ESCP DWG.DWG EROSION AND SEDIMENT CONTROL PLAN: DRUM, ALEX: LAST SAVED: July 10, 2026: PLOT DATE: 7/10/26



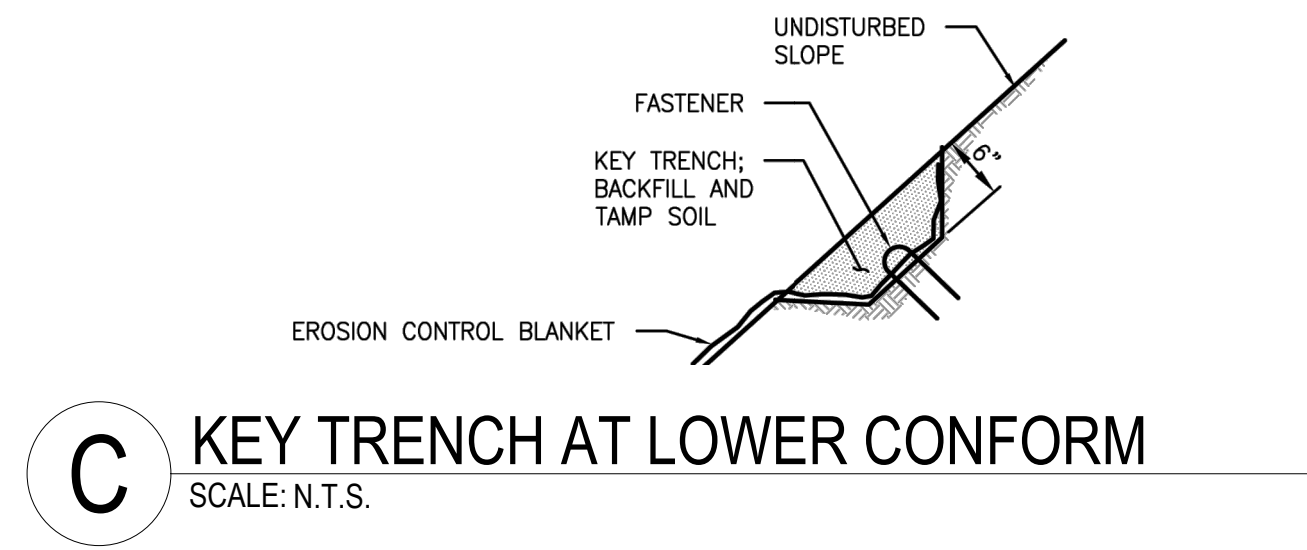
A PLAN VIEW - CONZELMAN ROAD
SCALE: 1"=10'



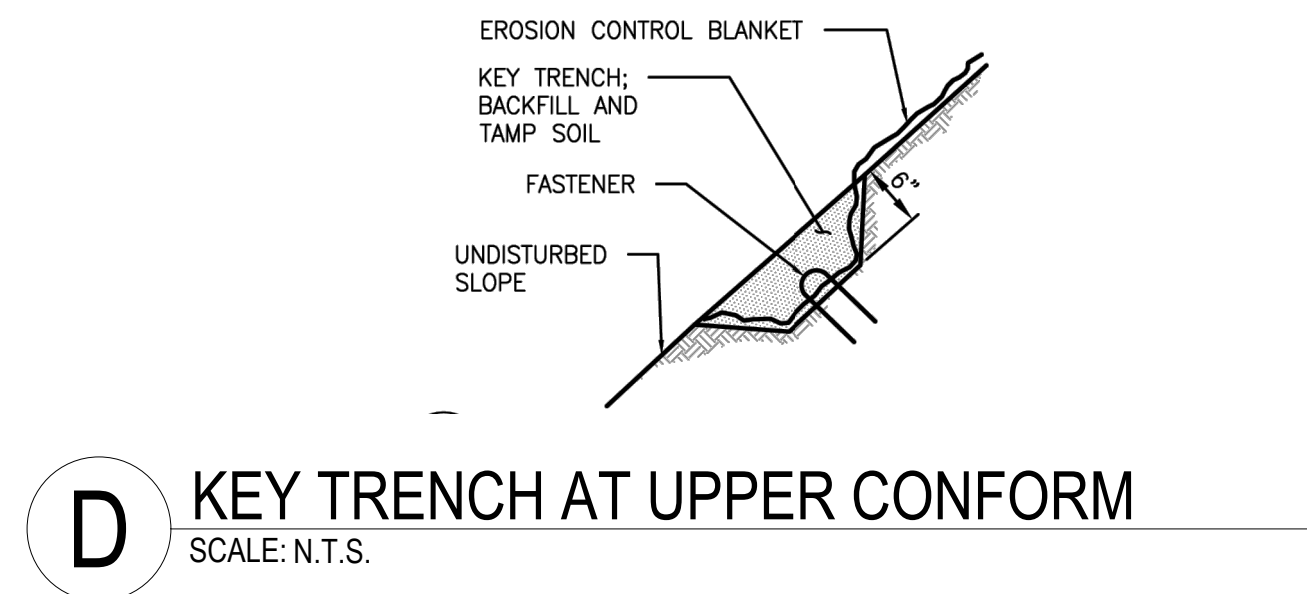
B EROSION CONTROL BLANKET ON SLOPE
SCALE: N.T.S.

- LEGEND:**
- EXISTING MAJOR CONTOUR
 - EXISTING MINOR CONTOUR
 - - - EXCAVATION LIMITS
 - - - EROSION CONTROL LIMITS
 - WATTLES, TYP.
 - EROSION CONTROL BLANKET AND SEEDING
 - SEEDING

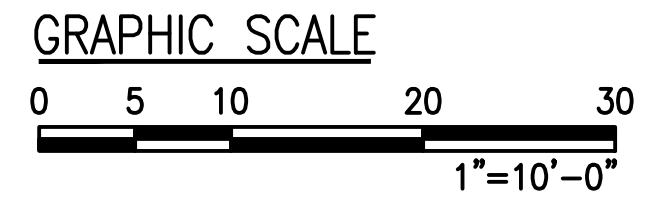
- NOTES:**
1. PROVIDE EROSION AND SEDIMENT CONTROL MEASURES AS REQUIRED TO PREVENT OFF-SITE MIGRATION OF SEDIMENT.
 2. PROTECT NATURAL FEATURES AND EXISTING IMPROVEMENTS DURING CONSTRUCTION.



C KEY TRENCH AT LOWER CONFORM
SCALE: N.T.S.

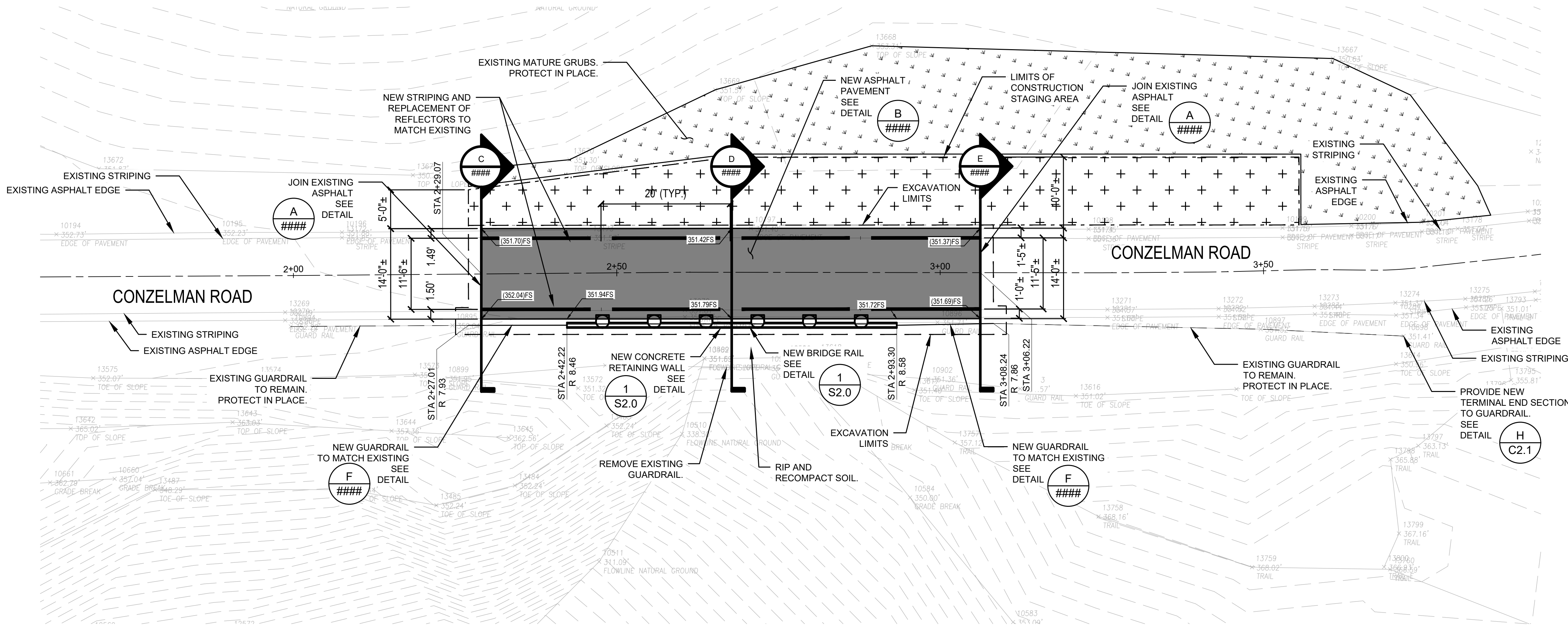


D KEY TRENCH AT UPPER CONFORM
SCALE: N.T.S.

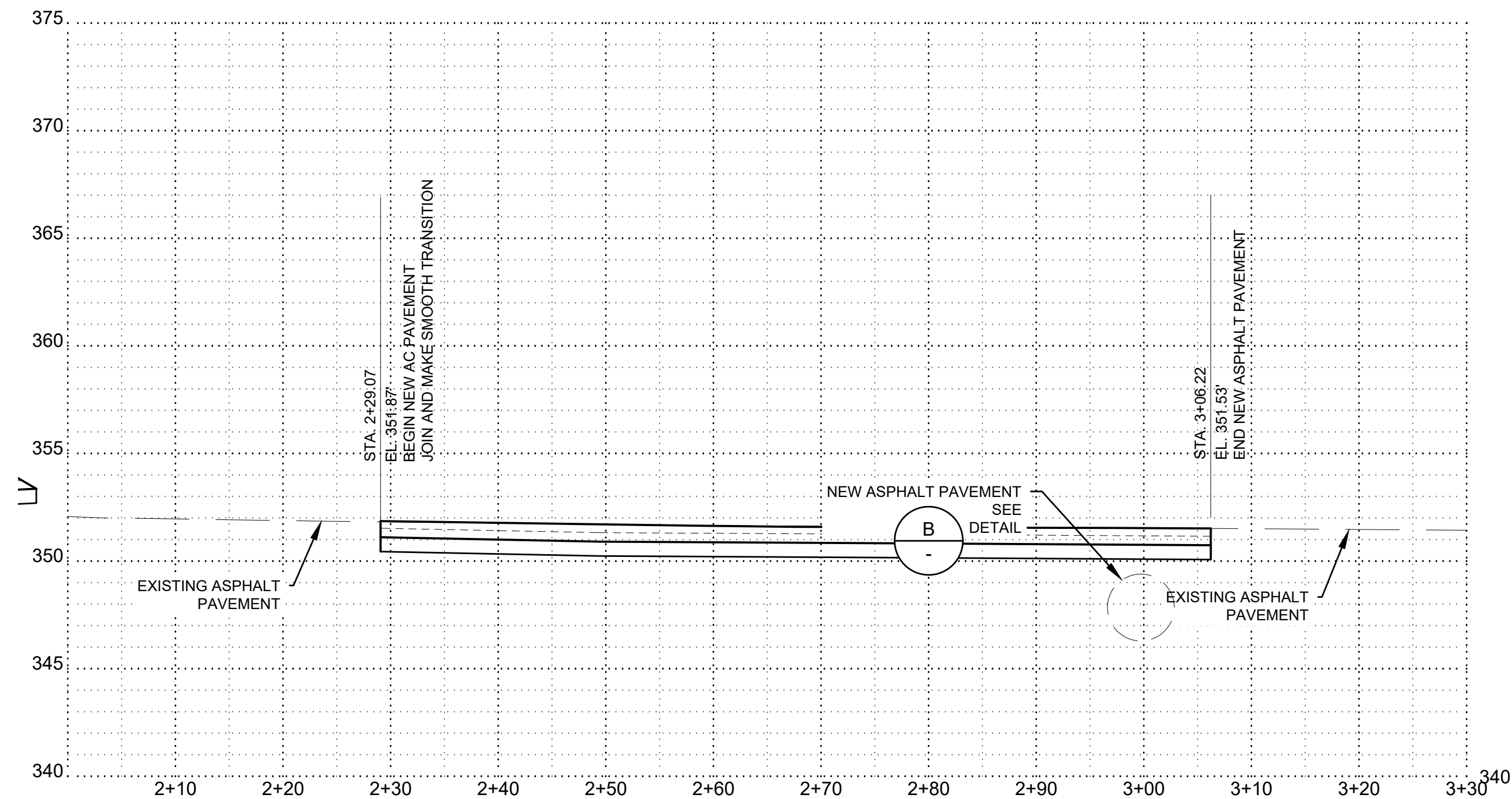


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. <i>Michael Wu</i> Signature Exp. 06/30/28 Expiration Date of the License			DESIGNED: LM	SUB SHEET NO. X1.1	TITLE OF SHEET EROSION AND SEDIMENT CONTROL PLAN GOLDEN GATE NATIONAL RECREATION AREA	DRAWING NO. 641 193558
CADD: LM	TECH REVIEW LM		DATE: 7/10/2026			

P:\LA25\05525404\NPS GOGA CONZELMAN ROAD WALL\00 DWGS\010 SHEETS\01 PLAN AND PROFILE - DRUM, ALEX - LAST SAVED: July 10, 2026 - PLOT DATE: 7/10/26



B PLAN VIEW - CONZELMAN ROAD
SCALE: 1"=10'



A PROFILE - CONZELMAN ROAD
SCALE: H: 1"=10', V: 1"=5'



Know what's below.
Call before you dig.

LEGEND:

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXCAVATION LIMITS
- NEW ASPHALT PAVEMENT
- NEW RETAINING WALL
- LIMITS OF CONSTRUCTION AREA
(TO BE USED FOR CONSTRUCTION VEHICLE ACCESS, STAGING AREA, ETC.)
- EXISTING MAJURE SHRUBS

NOTES:

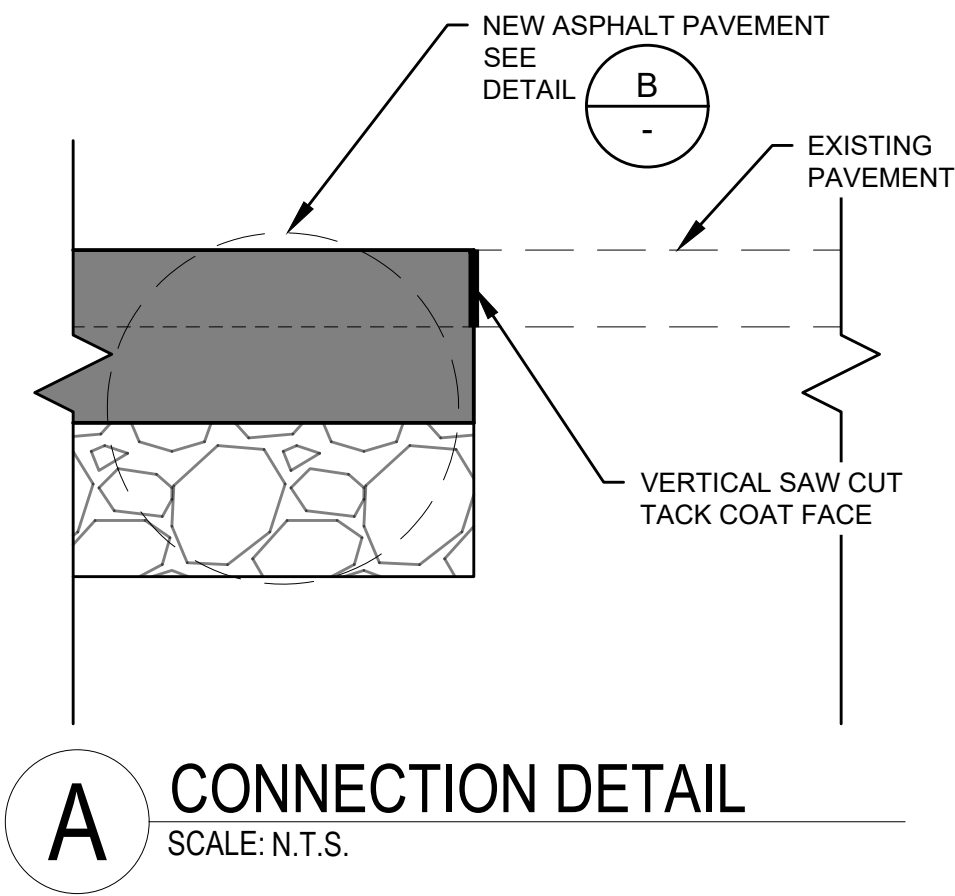
- ANY EXISTING INFRASTRUCTURE, SITE FEATURES, OR PROPERTY DAMAGED AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE APPROPRIATE AGENCY.
- ALL CONSTRUCTION SHALL CONFORM TO APPLICABLE STATE AND/OR LOCAL CODES. THE CONTRACTOR SHALL HAVE A COPY OF CURRENT CODES MAINTAINED ON SITE AT ALL TIMES.
- ALL SIGNAGE AND PAVEMENT MARKINGS SHALL COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), OR AS OTHERWISE SPECIFIED. INSTALLATION OF SIGNS SHALL BE GOVERNED BY LOCAL CODES. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING EXISTING THERMOPLASTIC STRIPING AND REFLECTORS (IN KIND).
- THE CONTRACTOR IS RESPONSIBLE TO LOCATE AND PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE UTILITY PROTECTION CENTER AT LEAST 72 HOURS PRIOR TO ANY SITE WORK FOR PROPER IDENTIFICATION OF EXISTING UTILITIES.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING ITEMS AND DIMENSIONS TO REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
- ALL GRADE BREAKS SHALL BE CONSTRUCTED AS A VERTICAL CURVE TO AVOID ANY DEFINED CRESTS OR SUMPS.
- CONTRACTOR TO TEST MATERIAL FOR CONTAMINANTS AND DISPOSE OF PROPERLY.

GRAPHIC SCALE

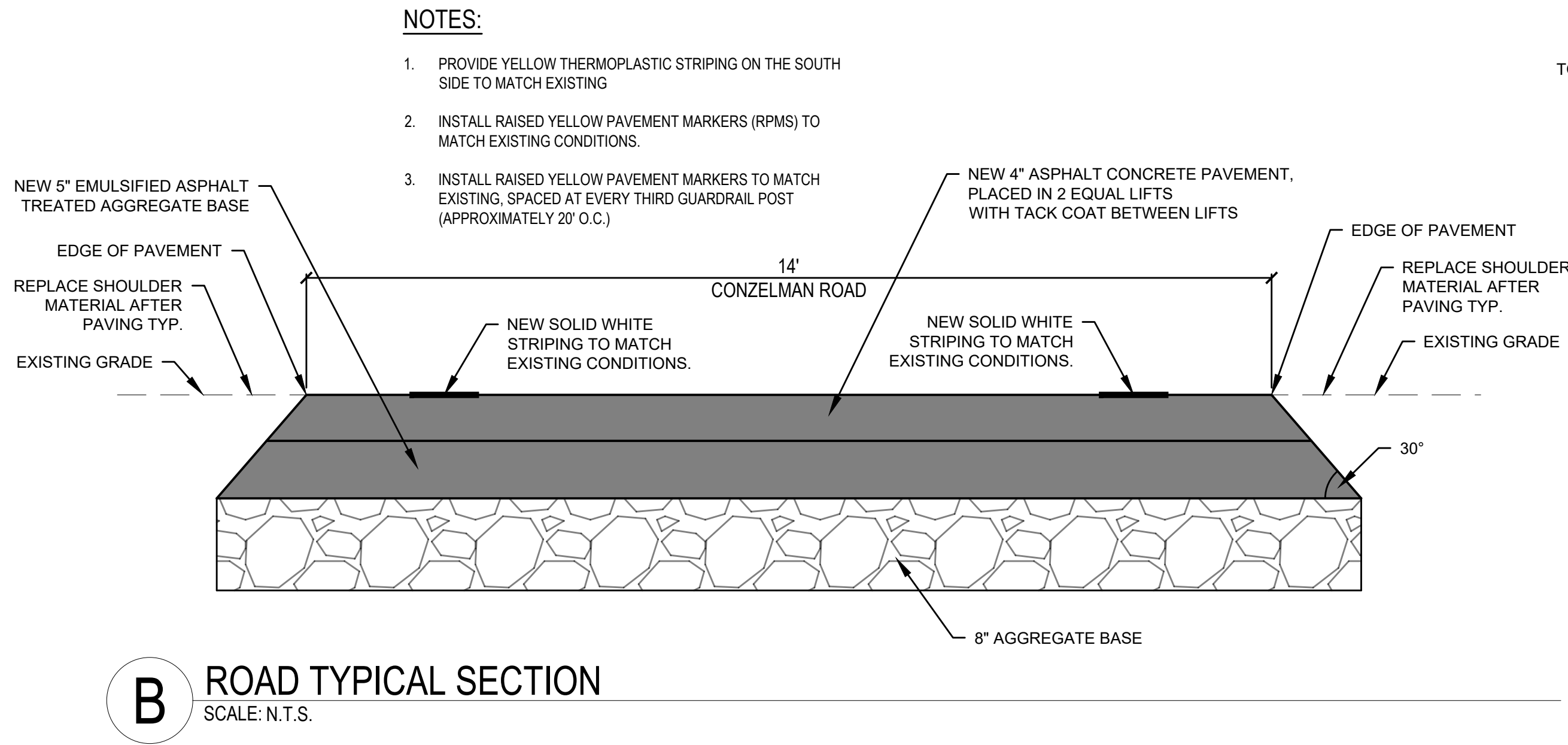


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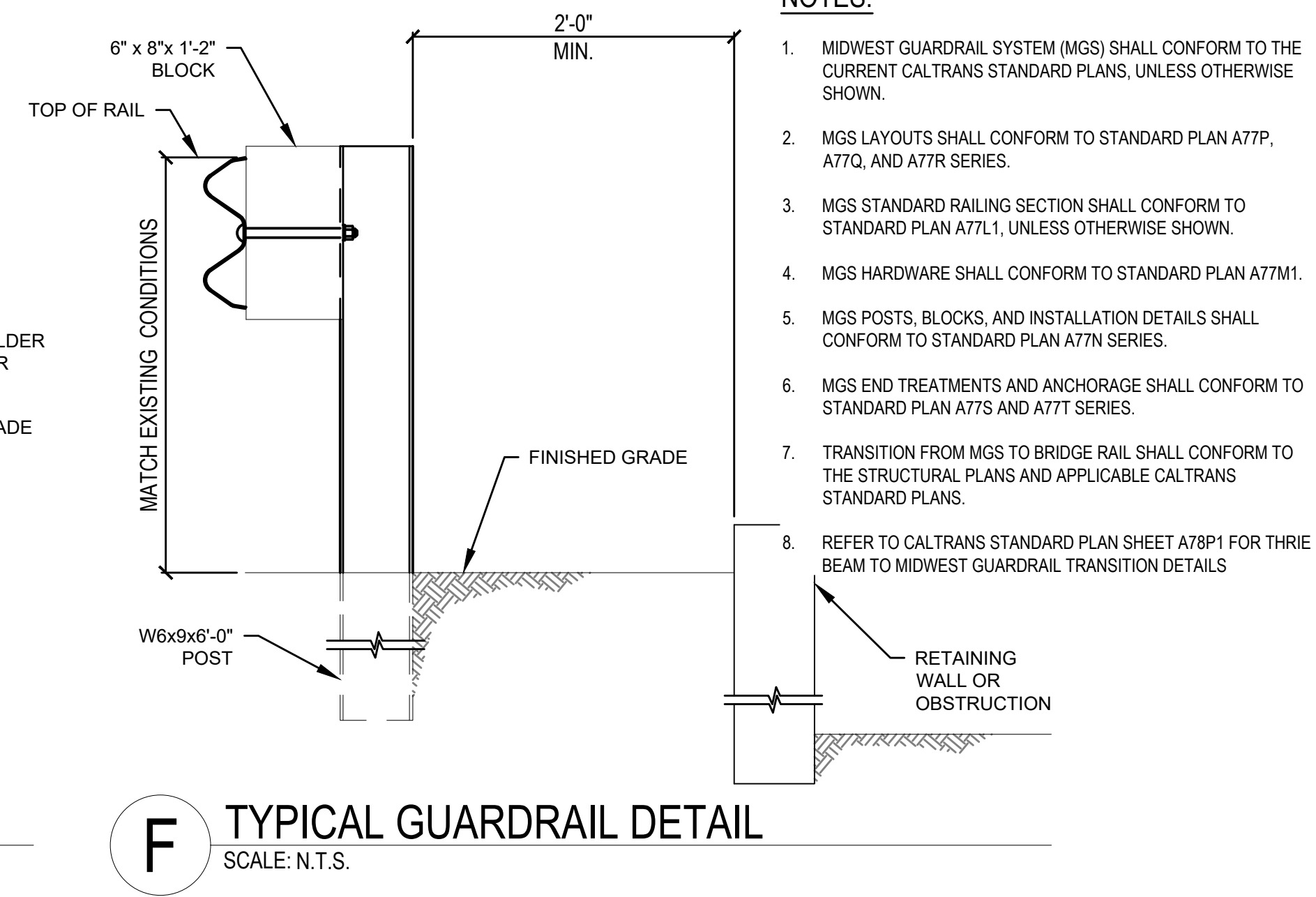
P:\LA25\055\25404\NPS GOGA CONZELMAN ROAD WALL\00 DWG\SC10 SHEETS\C2-CROSS-SECTIONS - DRUM, ALEX. LAST SAVED: July 10, 2026 - PLOT DATE: 7/10/26



A CONNECTION DETAIL
SCALE: N.T.S.



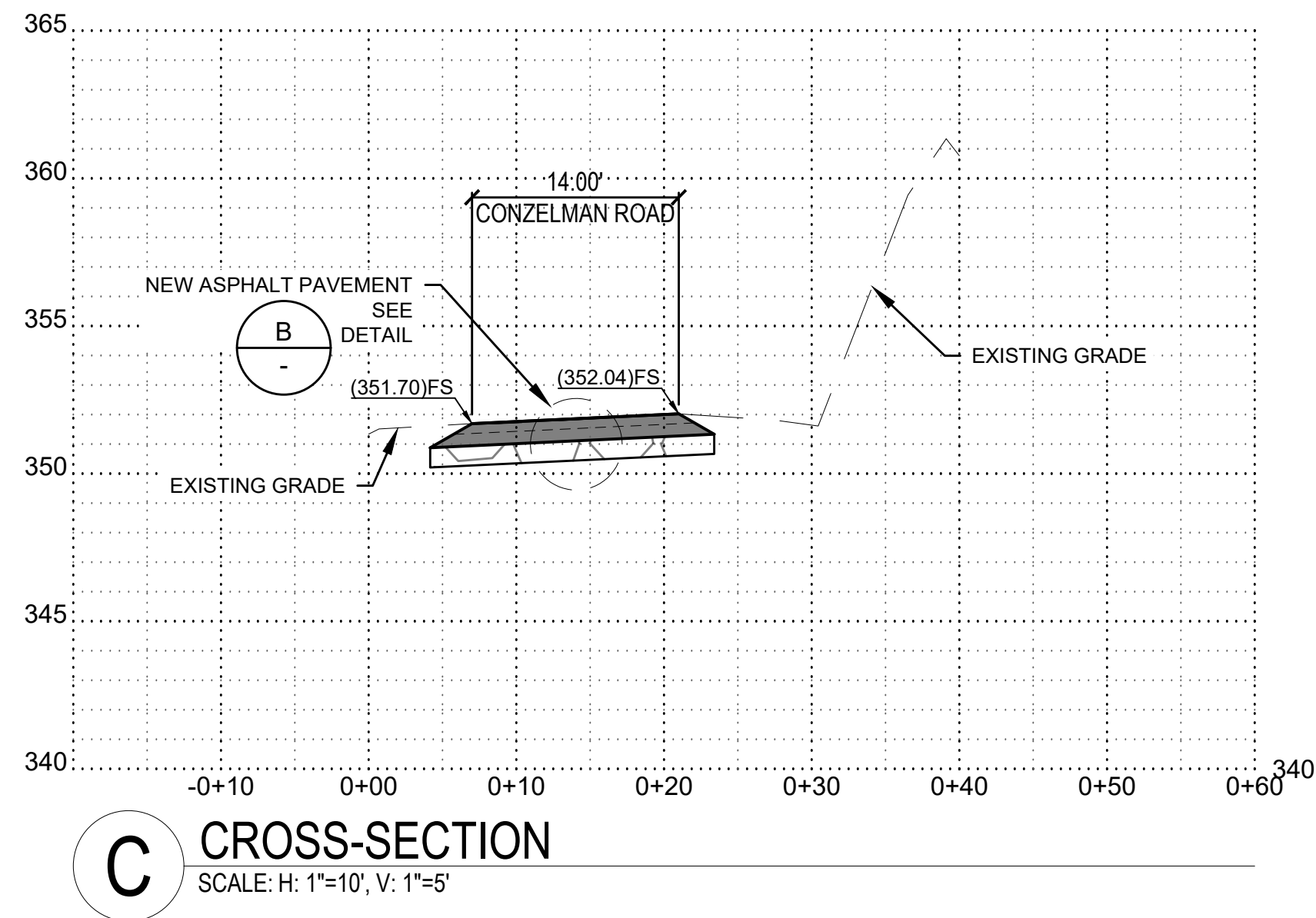
B ROAD TYPICAL SECTION
SCALE: N.T.S.



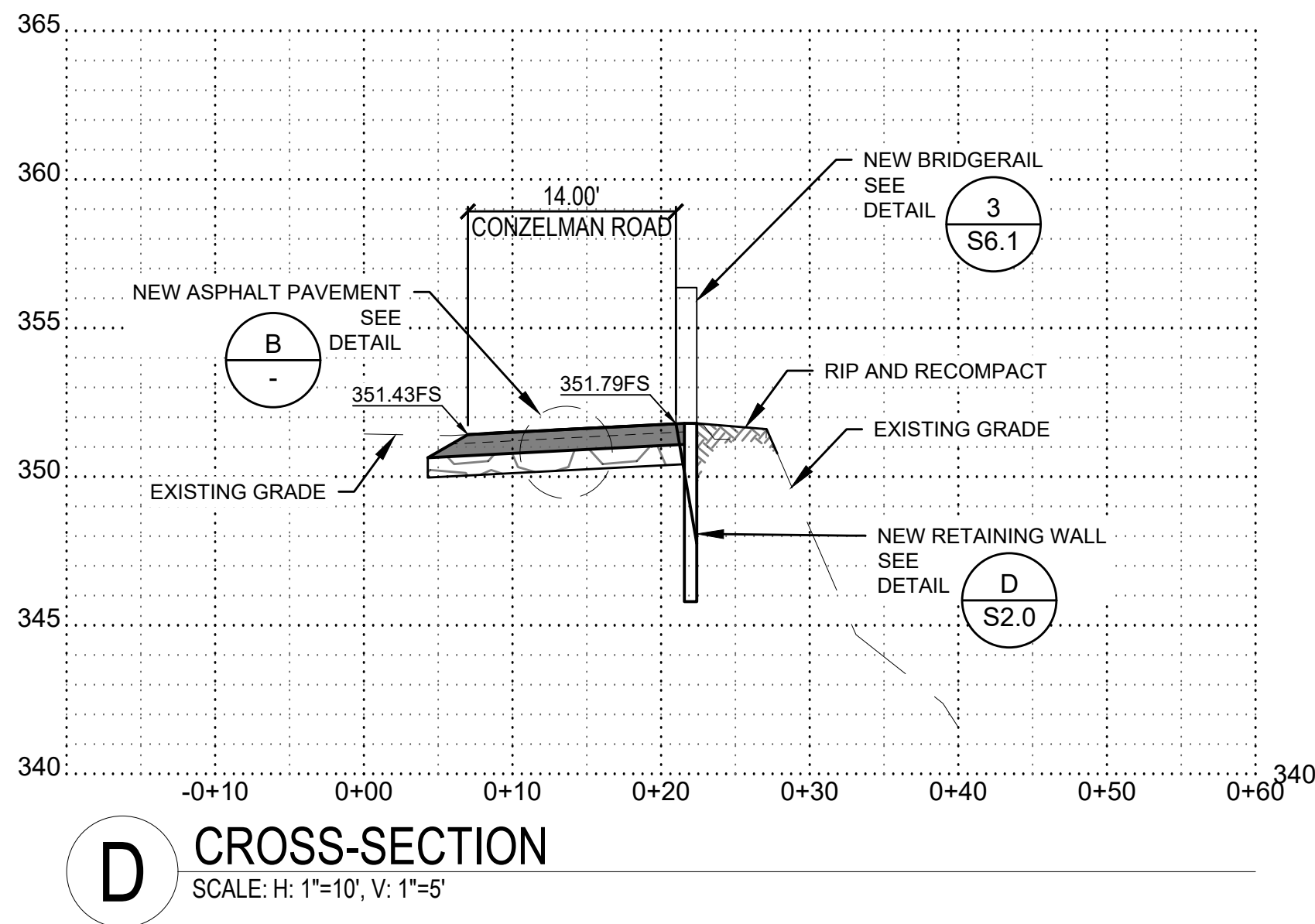
F TYPICAL GUARDRAIL DETAIL
SCALE: N.T.S.

NOTES:

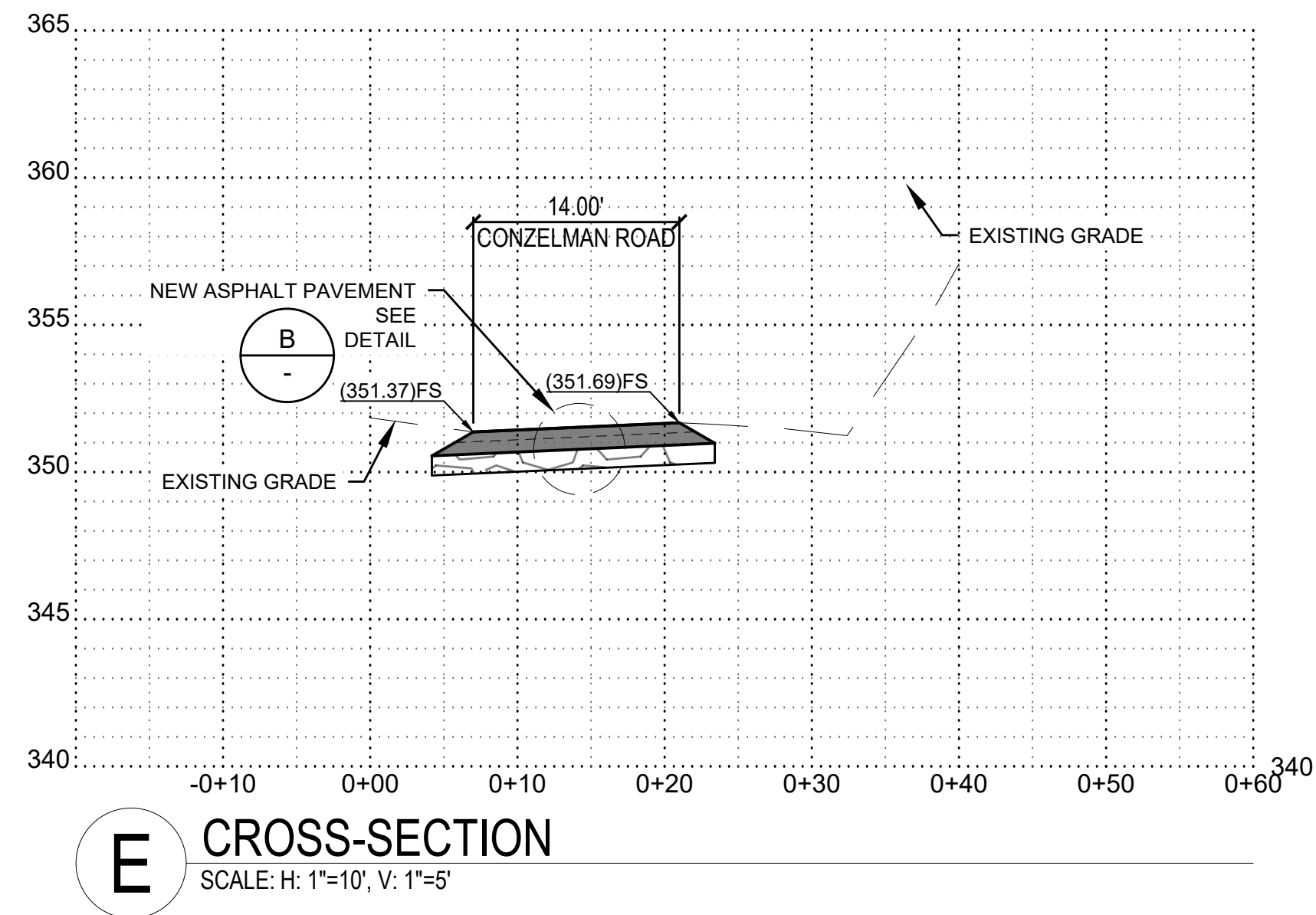
1. MIDWEST GUARDRAIL SYSTEM (MGS) SHALL CONFORM TO THE CURRENT CALTRANS STANDARD PLANS, UNLESS OTHERWISE SHOWN.
2. MGS LAYOUTS SHALL CONFORM TO STANDARD PLAN A77P, A77Q, AND A77R SERIES.
3. MGS STANDARD RAILING SECTION SHALL CONFORM TO STANDARD PLAN A77L1, UNLESS OTHERWISE SHOWN.
4. MGS HARDWARE SHALL CONFORM TO STANDARD PLAN A77M1.
5. MGS POSTS, BLOCKS, AND INSTALLATION DETAILS SHALL CONFORM TO STANDARD PLAN A77N SERIES.
6. MGS END TREATMENTS AND ANCHORAGE SHALL CONFORM TO STANDARD PLAN A77S AND A77T SERIES.
7. TRANSITION FROM MGS TO BRIDGE RAIL SHALL CONFORM TO THE STRUCTURAL PLANS AND APPLICABLE CALTRANS STANDARD PLANS.
8. REFER TO CALTRANS STANDARD PLAN SHEET A78P1 FOR THRIE BEAM TO MIDWEST GUARDRAIL TRANSITION DETAILS



C CROSS-SECTION
SCALE: H: 1"=10', V: 1"=5'



D CROSS-SECTION
SCALE: H: 1"=10', V: 1"=5'



E CROSS-SECTION
SCALE: H: 1"=10', V: 1"=5'

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CADD: LM	TECH REVIEW LM		DATE: 07/10/2026			
GOLDEN GATE NATIONAL RECREATION AREA			PKG. NO. 336173			



P:\LA25\065\25404\NPS GOGA CONZELMAN ROAD WALL\0.0 DWGS\S254040 - S0.1 GENERAL NOTES.DWG \$0.1 GENERAL NOTES : HAWKINS, MARIAN : LAST SAVED: July 10, 2026 : PLOT DATE: 7/10/26

ABBREVIATIONS

ADDL.	ADDITIONAL
ALT.	ALTERNATE
B.	BOTTOM
B.O.F.	BOTTOM OF FOOTING
BOT.	BOTTOM
CBC	CALIFORNIA BUILDING CODE
C.G.	CENTER OF GRAVITY
C.I.P.	CAST-IN-PLACE
CL	CENTER LINE
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
DBL.	DOUBLE
DBA.	DOWEL BAR ANCHOR
DL	DEAD LOAD
DIA.	DIAMETER
DIM.	DIMENSION
DWG.	DRAWING
DWL.	DOWEL
(E)	EXISTING
EL.	ELEVATION
EMBED.	EMBEDMENT
EQ.	EQUAL OR EQUIVALENT
EXT.	EXTERIOR
FDN.	FOUNDATION
F.F.	FINISHED FLOOR
F.O.C.	FACE OF CONCRETE
F.S.	FAR SIDE
FTG.	FOOTING
GR	GRADE
HT.	HEIGHT
HORIZ.	HORIZONTAL
I.D.	INSIDE DIAMETER
INT.	INTERIOR
I.O.R.	INSPECTOR OF RECORD
JT.	JOINT
L.L.	LIVE LOAD
MAX.	MAXIMUM
MIN.	MINIMUM
MISC.	MISCELLANEOUS
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
O.H.	OPPOSITE HAND
OPNG.	OPENING
OPP.	OPPOSITE
PLCS.	PLACES
P.W.	PLATE WASHER
REF.	REFERENCE
REINF.	REINFORCEMENT
REQD.	REQUIRED
SCHED.	SCHEDULE
SECT.	SECTION
SEOR	STRUCTURAL ENGINEER OF RECORD
SIM.	SIMILAR
SPEC.	SPECIFICATION
SQ.	SQUARE
S.S.	STAINLESS STEEL
STD.	STANDARD
STGR.	STAGGER
STIFF.	STIFFENERS
T&B	TOP & BOTTOM
THK.	THICKNESS/THICK
T.O.S.	TOP OF SLAB
T.O.W.	TOP OF WALL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
V.I.F.	VERIFY IN FIELD
W.P.	WORK POINT
WT.	WEIGHT
W/O	WITHOUT
XS	EXTRA STRONG (STEEL PIPE)
XXS	DOUBLE EXTRA STRONG (STEEL PIPE)

CALIFORNIA GENERAL STRUCTURAL NOTES:

GENERAL:

THE STRUCTURAL CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE STRUCTURE IS DESIGNED TO BE A STABLE UNIT AS A COMPLETED WHOLE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN, ERECT AND INSPECT TEMPORARY SHORES, BRACES, ETC. TO SUPPORT THE STRUCTURE AGAINST ALL ANTICIPATED LOADS INCLUDING GRAVITY, WIND AND LATERAL EARTH PRESSURE UNTIL ITS COMPLETION. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THESE METHODS OF CONSTRUCTION. CONSTRUCTION MATERIAL SHALL BE PLACED ON FRAMED FLOORS AND ROOFS SUCH THAT THE DESIGN LIVE LOADS ARE NOT EXCEEDED.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS PRIOR TO STARTING CONSTRUCTION. RESOLVE ANY DISCREPANCY WITH THE ARCHITECT.

WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE LATEST EDITIONS OF THE CALIFORNIA BUILDING CODE AND TESTING STANDARDS.

NOTES AND DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER THE GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. "TYPICAL" DETAILS ARE NOT FLAGGED ON THE DRAWINGS, BUT APPLY UNLESS NOTED OTHERWISE.

COORDINATION:

ALL DRAWINGS ARE CONSIDERED TO BE PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE DRAWINGS AND SPECIFICATIONS AMONG THE SUBCONTRACTORS AND ARCHITECT PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES THAT ARE FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO START OF CONSTRUCTION. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.

COORDINATION SHALL INCLUDE, BUT NOT BE LIMITED TO, VERIFYING THE LOCATION AND WEIGHT OF ALL MECHANICAL AND ELECTRICAL EQUIPMENT AS WELL AS THE SIZE AND LOCATION OF ALL MECHANICAL OPENINGS IN ROOFS, FLOORS AND WALLS. UNLESS OTHERWISE NOTED ON THE DRAWINGS, DO NOT PENETRATE ANY STRUCTURAL ELEMENTS SUCH AS BEAMS, COLUMNS, WALLS, SLABS, ETC. WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT.

ALL DEPRESSIONS, ELEVATIONS AND SLOPES SHOULD BE COORDINATED WITH THE ARCHITECT AND PLANNED FINISHES. ALL WEATHER EXPOSED SURFACES SHOULD BE SLOPED TO DRAIN PER ARCHITECTURAL OR OTHER DRAWINGS.

COORDINATION SHALL INCLUDE, BUT NOT BE LIMITED TO, DETERMINING THE LOCATION OF ALL EXISTING UTILITY LINES THAT MAY INTERFERE WITH THE INSTALLATION OF THE NEW STRUCTURAL ELEMENTS. THE CONTRACTOR SHALL INFORM THE OWNER IF INTERFERENCE IS ENCOUNTERED. THE OWNER WILL DETERMINE IF THE LINES ARE TO BE REMOVED OR RELOCATED.

SHOP DRAWINGS AND SUBMITTALS:

SHOP DRAWINGS AND SUBMITTALS TO THE ENGINEER ARE REQUIRED FOR ALL STRUCTURAL WORK, UNLESS OTHERWISE AGREED TO BY THE ARCHITECT/ENGINEER. NO WORK SHALL PROCEED WITHOUT THE REVIEW AND APPROVAL OF SHOP/ERECTION/LAYOUT DRAWINGS BY THE ARCHITECT AND ENGINEER. ALL SUBMITTALS SHALL BE MADE IN A TIMELY MANNER ALLOWING ADEQUATE TIME AS NEEDED BY THE ARCHITECT AND ENGINEER FOR REVIEW.

THE CONTRACTOR SHALL REVIEW AND APPROVE ALL SHOP DRAWINGS PRIOR TO ENGINEERING REVIEW. SUBMISSIONS FOR ENGINEERING REVIEW SHALL INCLUDE A REPRODUCIBLE AND ONE COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED. ELECTRONIC SUBMITTALS MAY BE ACCEPTED.

ANY STRUCTURAL ENGINEERING DESIGN PROVIDED BY OTHERS SHALL BE SUBMITTED FOR REVIEW AND SHALL BEAR THE SEAL OF A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

TRADES PROVIDING SHOP DRAWINGS SHOULD PROPERLY COORDINATE WITH ALL OTHER ALL OTHER TRADES AND SHOW OTHER POSSIBLE CONFLICTS OR OVERLAPPING ELEMENTS FROM OTHER TRADES ON THEIR SUBMITTAL FOR REVIEW.

REQUIRED SHOP DRAWINGS AND SUBMITTALS:

CONCRETE REINFORCEMENT SHOP DRAWINGS AND MILL CERTS
CONCRETE MIX DESIGNS AND GROUT PRODUCTS

INSPECTIONS AND SPECIAL INSPECTIONS:

THE CONTRACTOR SHALL EMPLOY A GENERAL INSPECTOR TO PROVIDE INSPECTION PER THE CBC AND LOCAL CODES. ALL INSPECTORS SHALL BE APPROVED BY THE AUTHORITY HAVING JURISDICTION.

THE CONTRACTOR WILL EMPLOY AN ICBO CERTIFIED SPECIAL INSPECTOR TO PROVIDE INSPECTION OF THE FOLLOWING ITEMS PER CBC SECTION 1701 AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION:

CONCRETE:
DURING THE PLACEMENT OF CONCRETE AND THE TAKING OF TEST SPECIMENS. SEE PROJECT SPECIFICATIONS FOR FREQUENCY OF TESTING.

REINFORCING STEEL:
DURING THE PLACEMENT OF REINFORCING STEEL IN REINFORCED CONCRETE.

STRUCTURAL OBSERVATIONS:

STRUCTURAL OBSERVATION IS REQUIRED FOR THE STRUCTURAL SYSTEM IN ACCORDANCE WITH CBC CHAPTER 17. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEMS AT SIGNIFICANT CONSTRUCTION STAGES AND THE COMPLETED STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE BUILDING INSPECTOR OR THE DEPUTY INSPECTOR.

THE STRUCTURAL OBSERVER SHALL PERFORM SITE VISITS AT THOSE STEPS IN THE PROGRESS OF THE WORK THAT ALLOW FOR CORRECTION OF DEFICIENCIES WITHOUT SUBSTANTIAL EFFORT OR UNCOVERING OF THE WORK INVOLVED. AT A MINIMUM, THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES REQUIRE A SITE VISIT AND AN OBSERVATION REPORT FROM THE STRUCTURAL OBSERVER.

CONSTRUCTION STAGES AND ELEMENTS TO BE OBSERVED

PRIOR TO CONCRETE PLACEMENT/FOUNDATION REINFORCEMENT AND ANCHOR BOLTS
PRIOR TO COVERING WALLS

CODE:

2025 CALIFORNIA BUILDING CODE

SEISMIC:	
SITE CLASS -----	BC
RISK CATEGORY -----	II
IMPORTANCE FACTOR -----	1.0
SEISMIC DESIGN CATEGORY -----	D
Ss -----	1.93
S1 -----	0.74
SDS -----	1.16
SD1 -----	0.49

SNOW LOADS DO NOT APPLY TO THIS SITE.
FLOOD LOADS DO NOT APPLY TO THIS SITE.
WIND LOADS DO NOT APPLY TO THIS PROJECT.

FOUNDATION:

GEOTECHNICAL REPORT BY: TERRACON

DATE: FEBRUARY 23, 2026 PROJECT NO: R1255074

PILE DESIGN VALUES SEE GEOTECHNICAL REPORT.

SOIL FILL TO BE VERIFIED IN WRITING BY A FIELD SOILS ENGINEER AS MEETING THE REQUIREMENTS OF THE GEOTECHNICAL REPORT.

SCOPE OF WORK:

1. BRIDGE RAIL GRADE BEAM, RETAINING WALL, AND PILE FOUNDATIONS.



P:\LA25\065\25404\NPS GOGA CONZELMAN ROAD WALL\0.0 DWGS\0254040 - S0.2 GENERAL NOTES.DWG S0.2 GENERAL NOTES : HAWKINS, MARIAN : LAST SAVED: July 10, 2026 : PLOT DATE: 7/10/26



RETAINING WALLS:

DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE OR GROUT HAS REACHED FULL DESIGN STRENGTH. BACKFILL SHALL NOT EXCEED THE RETAINED HEIGHT OR SLOPE SHOWN ON DRAWINGS.

WALLS BELOW GRADE SHALL BE BRACED AS REQUIRED TO RESIST LATERAL EARTH PRESSURE UNTIL CONCRETE REACHES 28 DAY STRENGTH. THE CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS AND INSTALLATION OF SUCH BRACING.

ALL RETAINING WALLS ARE DESIGNED TO BE FULLY DRAINED. WATERPROOFING AND DRAINAGE TO BE SPECIFIED BY OTHERS.

CONCRETE:

CONCRETE CONSTRUCTION SHALL CONFORM WITH THE LATEST EDITION OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE". SUBMIT MIX DESIGNS FOR EACH CLASS OF CONCRETE. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE UNLESS NOTED OTHERWISE. ALL LIGHTWEIGHT CONCRETE TO BE SAND LIGHTWEIGHT CONCRETE.

CONCRETE CONTAINING SUPERPLASTICIZING ADMIXTURE SHALL HAVE A SLUMP NOT EXCEEDING 3", TO BE FIELD VERIFIED, PRIOR TO ADDING ADMIXTURE, AND NOT EXCEEDING 8" AT PLACEMENT. CONCRETE NOT CONTAINING SUPERPLASTICIZING ADMIXTURE SHALL HAVE A SLUMP NOT EXCEEDING 5" AT PLACEMENT. ADDITION OF WATER TO A MIX WITH INSUFFICIENT SLUMP WILL NOT BE PERMITTED, EXCEPT AS ALLOWED PER ASTM C494.

MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND UNDER-FLOOR DUCTS, ETC. CAST CLOSURE POUR AROUND COLUMNS AFTER DEAD LOAD IS APPLIED.

MINIMUM CONCRETE MIX DESIGN REQUIREMENTS SHALL BE AS FOLLOWS:

ITEM	28 DAY STRENGTH F'c (PSI)	MAX. SIZE AGGREGATE	DENSITY
CONC. PILE -----	5,000	3/4"	150 PCF
CONC. WALL -----	5,000	3/4"	150 PCF

NOTE: A HIGHER GRADE OF CONCRETE MAY BE SUBSTITUTED FOR THOSE SHOWN ABOVE BUT WILL BE SUBJECT TO THE CODE REQUIREMENTS OF THE HIGHER GRADE.

AGGREGATE AND AGGREGATE GRADATION SHALL CONFORM TO ASTM C33.

AIR ENTRAINMENT IS OPTIONAL AND WILL BE REVIEWED IN MIX SUBMITTAL.

FLY ASH SHALL BE CLASS F ONLY AND WILL BE REVIEWED IN MIX SUBMITTAL.

WET CURING IS RECOMMENDED SUBMIT METHOD FOR CURING TO SEOR.

CONCRETE COVER OVER REINFORCING SHALL BE AS FOLLOWS U.N.O.:
POURED AGAINST EARTH ----- 3"
EXPOSED TO EARTH, BUT POURED AGAINST FORMS ----- 2"

BEFORE CONCRETE IS POURED, CHECK WITH ALL TRADES TO INSURE PROPER PLACEMENT OF ALL OPENINGS, SLEEVES, CURBS, CONDUITS, BOLTS, INSERTS, ETC. RELATING TO WORK.

ALL SLEEVES NOT SPECIFICALLY SHOWN ON DRAWINGS SHALL BE LOCATED BY THE TRADES INVOLVED & SHALL BE APPROVED BY STRUCTURAL ENGINEER.

DRYPACK CONCRETE SHALL BE ONE PART PORTLAND CEMENT & ONE PART SAND WITH SUFFICIENT WATER TO ALLOW A SMALL AMOUNT OF PASTE TO COME TO THE SURFACE.

CONCRETE GROUT SHALL BE NON-SHRINKING WITH SUFFICIENT WATER TO ALLOW POURING. MINIMUM ULTIMATE COMPRESSIVE STRENGTH F'C AT 28 DAYS SHALL BE 4000 PSI.

REINFORCING STEEL:

DEFORMED BARS:

ASTM A615 GRADE 60 U.N.O. REINFORCING TO BE WELDED SHALL BE ASTM A706, GRADE 60, LOW ALLOY U.N.O.

WELDED WIRE FABRIC:

ASTM A82 AND ASTM A185. PROVIDE IN FLAT SHEETS.

WELDING:

UNLESS NOTED OTHERWISE, WELDING OF REINFORCING STEEL IS PROHIBITED. WHERE WELDING IS NOTED, WELD IN ACCORDANCE WITH AWS D1.4 USING E90 SERIES ELECTRODES. SUBMIT MILL TEST REPORTS ON THE REINFORCING TO BE WELDED AND THE PROPOSED WELDING PROCEDURE.

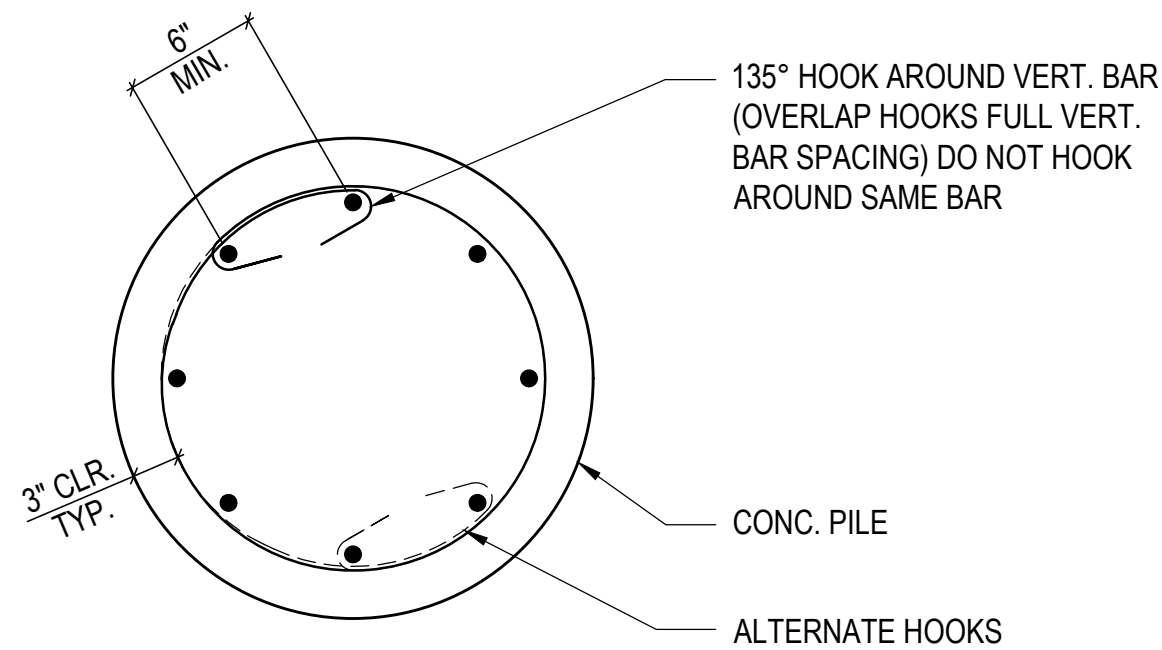
LAP SPLICES IN CONCRETE:

SEE TYPICAL DETAIL FOR LAP SPLICES IN CONCRETE BEAMS, WALLS, SLABS AND FOOTINGS. UNLESS NOTED OTHERWISE, LAP SPLICES IN CONCRETE BEAMS, WALLS, SLABS AND FOOTINGS SHALL BE CLASS "B" TENSION LAP SPLICES AND LAP SPLICES IN CONCRETE COLUMNS SHALL BE STANDARD COMPRESSION LAP SPLICES PER LATEST EDITION OF ACI 318. STAGGER ALTERNATE SPLICES A MINIMUM OF ONE LAP LENGTH. LAPS IN WELDED WIRE FABRIC SHALL BE MADE SO THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2 INCHES. ALL SPLICE LOCATIONS SUBJECT TO APPROVAL.

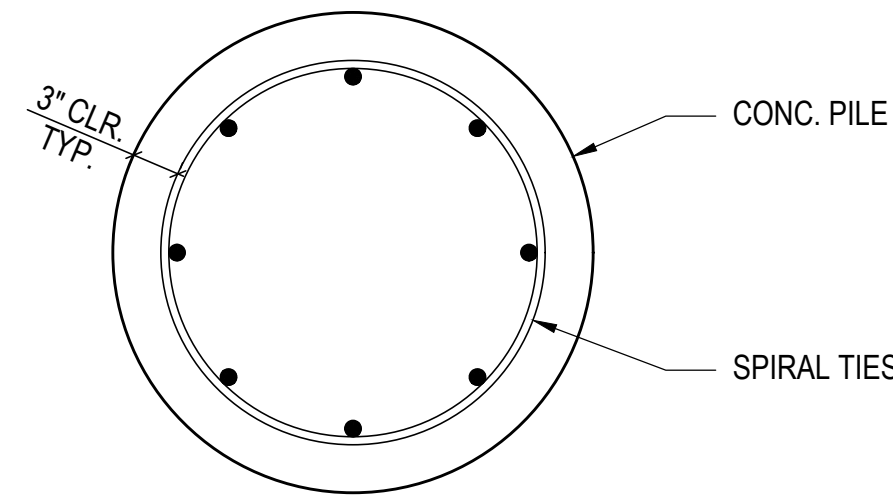
PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS. SPACING SHOWN FOR REINFORCING BARS ARE MAXIMUM ON CENTERS. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. DOWEL ALL VERTICAL REINFORCING TO THE FOUNDATION. CONCRETE COLUMN DOWEL EMBEDMENT SHALL BE A STANDARD COMPRESSION DOWEL EMBEDMENT LENGTH ACCORDING TO THE LATEST EDITION OF ACI 318. SECURELY TIE ALL BARS IN POSITION PRIOR TO PLACING CONCRETE. SUPPORT SLAB REINFORCEMENT WITH CONCRETE BLOCKS OR SUPPORT CHAIRS. REINFORCING SHALL NOT BE SUPPORTED BY STAKES DRIVEN INTO THE GROUND.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  Signature JUNE 20, 2028 Expiration Date of the License	 07/10/2026	DESIGNED:	SUB SHEET NO. S0.2	TITLE OF SHEET GENERAL NOTES GOLDEN GATE NATIONAL RECREATION AREA	DRAWING NO.
		DU / TM			641
		CADD:			193558
		MBH / AYB			PKG. NO.
TECH REVIEW	336173	SHEET			
DU / TM		9			
DATE:		OF			
06/26/2026		20			

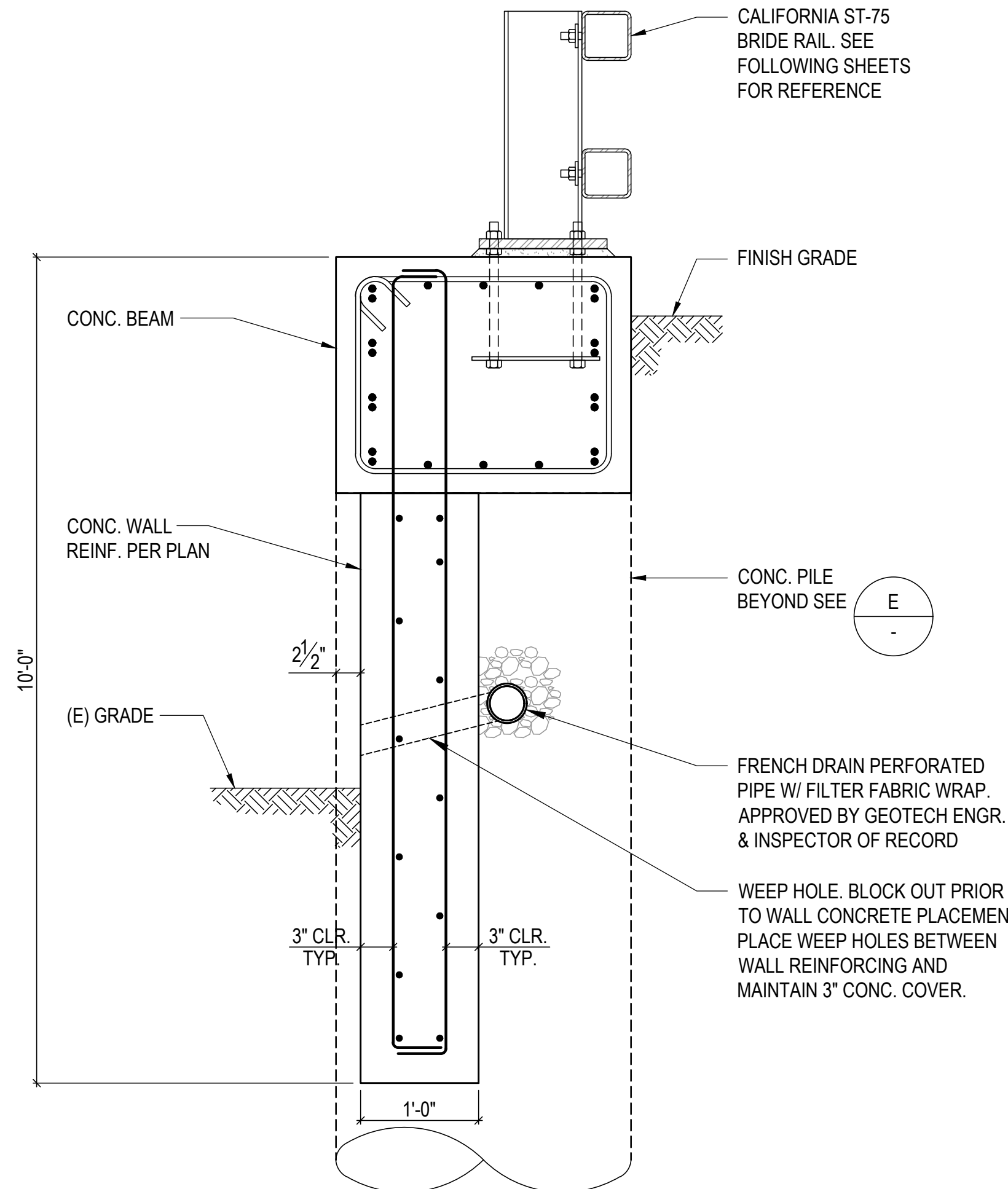
P:\LA25\05525404\NPS GOGA CONZELMAN ROAD WALL\0.0 DWGS\S254040 - S2.0 ENLARGED PLAN AND DETAILS DWG.S2.1 WALL SECTION & DETAILS : HAWKINS, MARIAN : LAST SAVED: July 9, 2026 : PLOT DATE: 7/10/26



PILE SECTION (C)

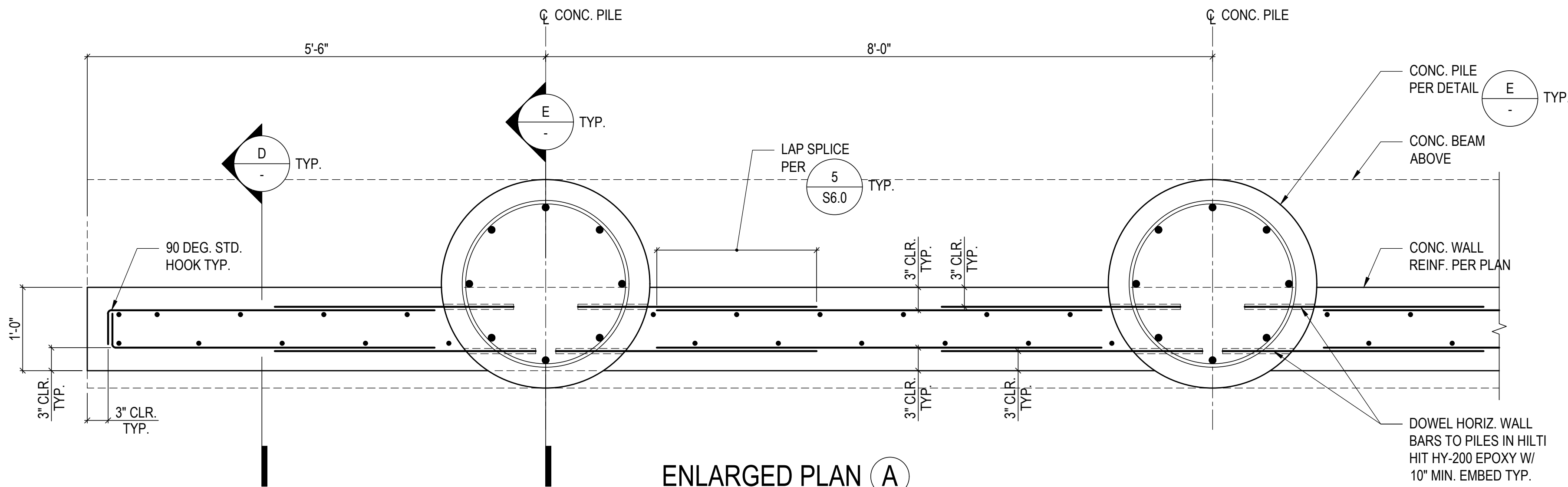


PILE SECTION (B)



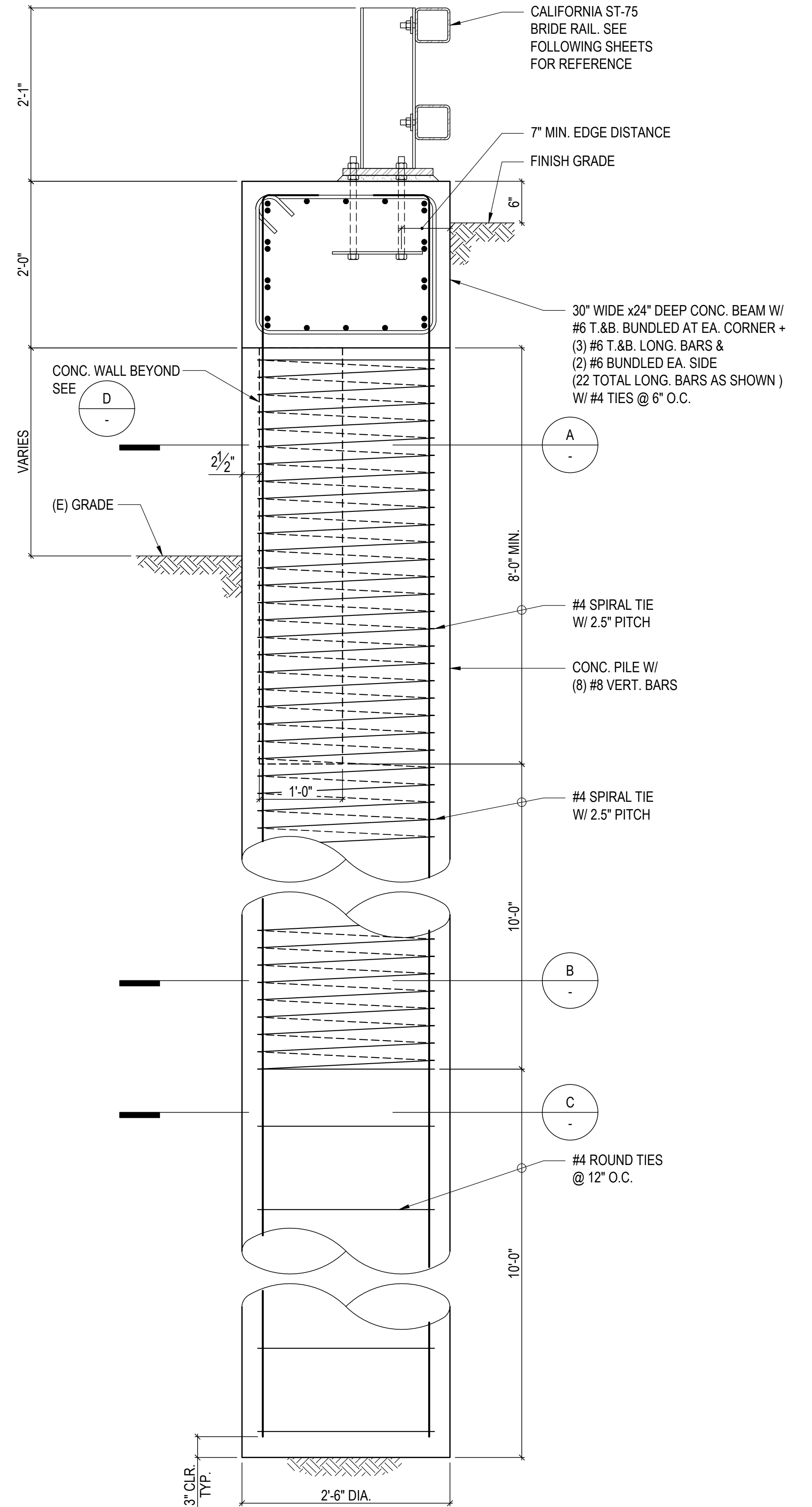
RETAINING WALL SECTION (D)

NOTE:
1. FOR TRAFFIC BARRIERS SEE CIVIL DRAWINGS.



ENLARGED PLAN (A)

1 RETAINING WALL ENLARGED PLAN & DETAILS
S2.1 SCALE: 1" = 1'-0"



PILE ELEVATION (E)



Know what's below.
Call before you dig.

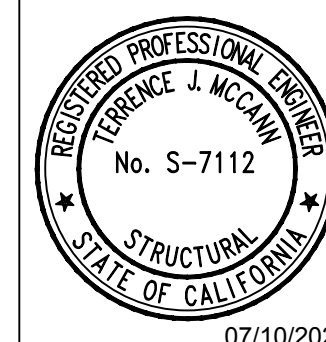
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

[Signature]

Signature

JUNE 20, 2028

Expiration Date
of the License



DESIGNED:

DU / TM

CADD:

MBH / AYB
TECH REVIEW

DU / TM

DATE:

06/26/2026

SUB SHEET NO.

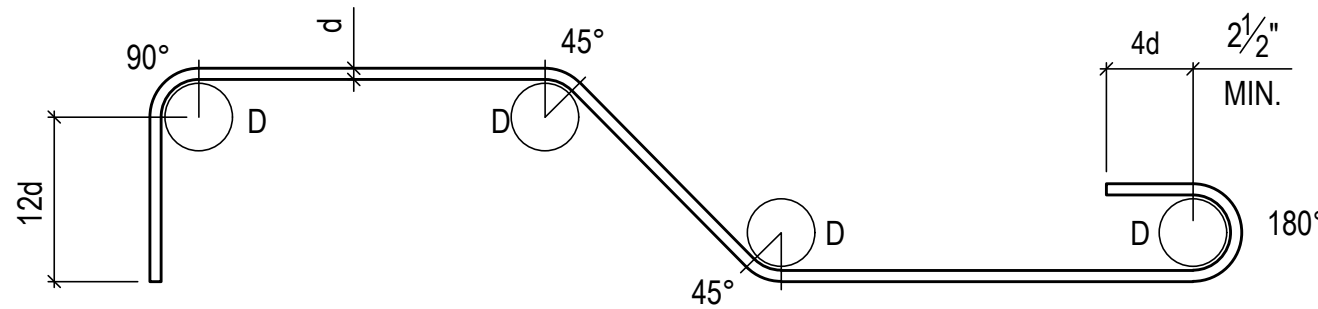
S2.0

TITLE OF SHEET
ENLARGED PLAN AND DETAILS

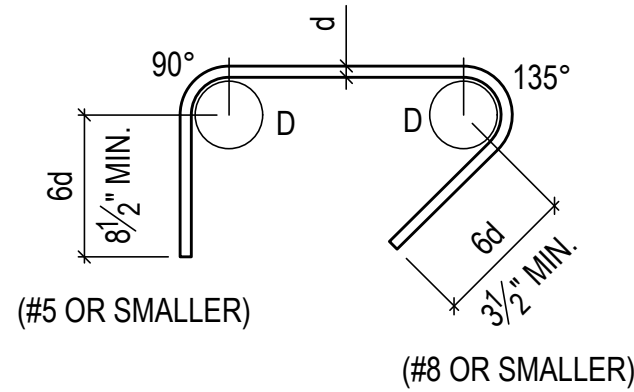
GOLDEN GATE NATIONAL RECREATION AREA

DRAWING NO.
641
193558

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NO.
336173
SHEET
11
OF
20



TYPICAL HOOKS & BENDS



TIES & STIRRUPS

Ls = LAP SPLICE
D = 6d FOR #3 THRU #8
D = 8d FOR #9 THRU #11
D = 4d MIN. FOR TIES & STIRRUPS
(#5 OR SMALLER)

1 REINFORCING BAR DETAILS

S6.0 SCALE: 1" = 1'-0"

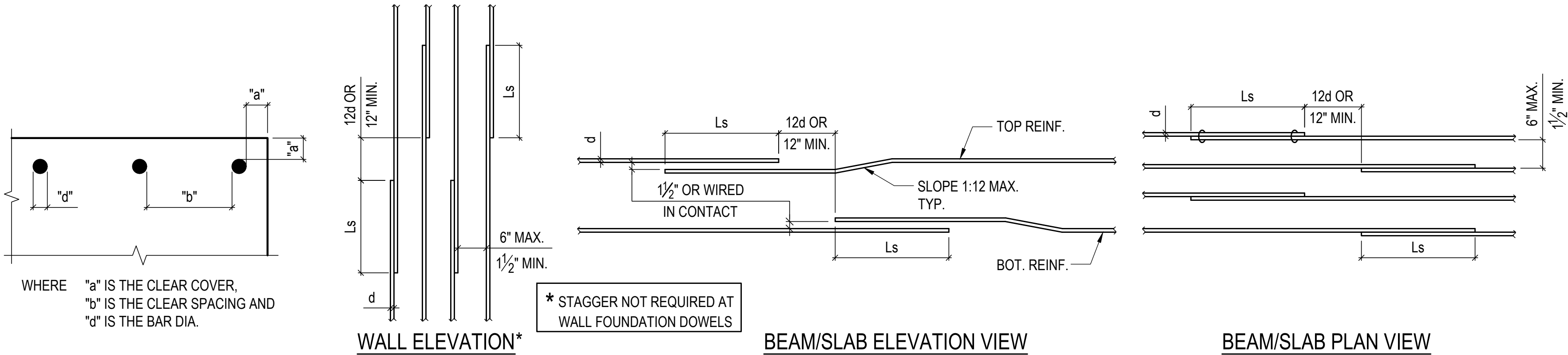
LAP SPLICE SCHEDULE "CLASS B" (STRAIGHT BARS) 'Ls'																	
	CONCRETE STRENGTH Fc'	BAR															
		#4		#5		#6		#7		#8		#9		#10		#11	
		TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
CLEAR COVER ≥ d AND CLEAR SPACING ≥ 2d	3000 PSI	37	29	47	36	56	43	81	63	93	72	105	81	118	91	131	101
	4000 PSI	33	25	41	31	49	37	71	54	81	62	91	70	102	79	113	87
	5000 PSI	29	23	36	28	43	34	63	49	72	56	81	63	92	70	102	78
OTHER CASES	3000 PSI	56	43	70	54	84	65	122	94	139	107	157	121	177	136	196	151
	4000 PSI	49	37	61	47	73	56	106	81	121	93	136	105	153	118	170	131
	5000 PSI	43	32	54	42	65	50	95	73	108	83	122	94	137	106	152	117

DEVELOPMENT LENGTH SCHEDULE "CLASS A" (STRAIGHT & HOOKED BARS) 'Ld'																	
	CONCRETE STRENGTH Fc'	BAR															
		#4		#5		#6		#7		#8		#9		#10		#11	
		TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
STRAIGHT	CLEAR COVER ≥ d AND CLEAR SPACING ≥ 2d	3000 PSI	29	22	36	28	43	33	63	48	72	55	81	62	91	70	101
		4000 PSI	25	19	31	24	37	29	54	42	62	48	70	54	79	61	87
		5000 PSI	23	17	28	22	34	26	49	38	56	43	63	48	70	54	80
	OTHER CASES	3000 PSI	43	33	54	42	65	50	94	72	107	83	121	93	136	105	151
		4000 PSI	37	29	47	36	56	43	81	63	93	72	105	81	118	91	131
HOOK	STANDARD	5000 PSI	34	26	42	32	50	39	73	56	83	64	94	72	106	81	117
		3000 PSI	11		14		17		20		22		25		28		31
		4000 PSI	10		12		15		17		19		22		25		27
	OTHER CASES	5000 PSI	9		11		13		15		17		20		22		24
		3000 PSI	11		14		17		20		22		25		28		31

NOTE:
1. T = TOP BAR, Ls = LAP SPLICE LENGTH
2. "d" INDICATES BAR DIAMETER.
3. ALL DIMENSIONS SHOWN IN TABLE ABOVE ARE IN INCHES.

NOTES:

- TABULATED VALUES AND NOTES ARE PER ACI318-19.
- SPLICES SHALL BE CONTACT TENSION LAP SPLICES U.N.O.
- LENGTHS SHOWN ARE FOR GRADE 60 UNCOATED BARS.
- ALL LAP SPLICES SHALL BE CLASS B, UNLESS CLASS A IS SPECIFICALLY APPROVED BY THE ENGINEER.
- THE SCHEDULES SHOWN ON THIS DETAIL APPLY TO NORMAL WEIGHT CONCRETE.
- FOR LIGHTWEIGHT CONCRETE, INCREASE LAP SPLICE LENGTH BY 33%.
- ALL HORIZONTAL AND VERITICAL SPLICES SHALL BE STAGGERED AS SHOWN BELOW WHERE POSSIBLE U.N.O. WHERE SPLICES ARE NOT STAGGERED THE LAP SPLICE LENGTH SHALL BE INCREASED BY 30%.
- THE SMALLER BAR LAP LENGTH SHALL BE USED WHEN SPlicing BARS OF DIFFERENT SIZES.
- TOP BARS ARE HORIZONTAL BARS PLACED SO THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.
- LAP LENGTHS SPECIFICALLY DETAILED ON DRAWINGS SHALL GOVERN IN LIEU OF THE LAP LENGTHS SCHEDULED. OTHERWISE, ALL DETAILING AND PLACEMENT OF REINFORCING SHALL COMPLY WITH THE LAP SPLICE SCHEDULES AND DETAILS.
- BUNDLED BAR SPLICES:
 - INDIVIDUAL BAR SPLICES WITHIN THE BUNDLE SHALL NOT OVERLAP EACH OTHER.
 - INCREASE LAP LENGTH 20% AT THREE BAR BUNDLES.
 - INCREASE LAP LENGTH 33% AT FOUR BAR BUNDLES.
- FOR #14 AND #18 BARS, USE MECHANICAL SPLICE IN ACCORDANCE WITH ACI-318 REQUIREMENTS.
- EPOXY COATED BAR DEVELOPMENT & SPLICES:
HOOKS: INCREASE DEVELOPMENT & LAP LENGTH 20%.
- CONT.
STRAIGHT BARS:
 - WHEN CONCRETE COVER IS LESS THAN 3d OR CLEAR SPACING IS LESS THAN 6d, INCREASE DEVELOPMENT & LAP LENGTH 50%.
 - FOR OTHER CASES, INCREASE LAP LENGTH 20%.
- HOOK PORTION OF SCHEDULE ASSUMES A STANDARD 90° HOOK.
- SEISMIC CONDITIONS:
 - SEISMIC DIAPHRAGM AND COLLECTOR BARS REQUIRE NO INCREASE TO HOOK OR LAP SPLICE LENGTHS.
 - VERTICAL BARS OF SPECIAL REINFORCED CONCRETE WALLS SHALL HAVE A BOTTOM BAR LAP SPLICE INCREASED BY 25%.
 - DEVELOPMENT LENGTHS AND LAP SPLICES FOR CONCRETE SPECIAL MOMENT RESISTING FRAMES ARE NOT COVERED BY THIS DETAIL AND MUST MEET ALL ACI 318 CHAPTER 18 REQUIREMENTS.



5 TYPICAL NORMAL WEIGHT CONCRETE REINFORCING LAP SPLICE SCHEDULE

S6.0 SCALE: 1" = 1'-0"



Know what's below.
Call before you dig.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

[Signature]

JUNE 20, 2028

Signature

Expiration Date of the License



DESIGNED:

DU / TM

CADD:

MBH / AYB

TECH REVIEW

DU / TM

DATE:

06/26/2026

SUB SHEET NO.

S6.0

TITLE OF SHEET
TYPICAL DETAILS

GOLDEN GATE NATIONAL RECREATION AREA

DRAWING NO.
641
193558

PKG. NO.

336173

SHEET

12

OF

20

CALIFORNIA ST-75 BRIDE RAIL. SEE FOLLOWING SHEETS FOR REFERENCE

LIMITS OF EXCAVATION SEE CIVIL DWGS.

FINISH GRADE

CONC. BEAM

CONC. WALL REINF. PER PLAN

(E) GRADE

CONC. PILE BEYOND SEE

1 1 1

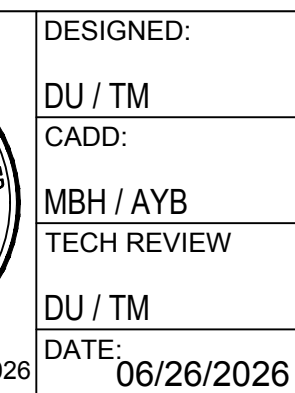
BENCH CUT AS NECESSARY

NOTE:
CONTRACTOR TO DETERMINE BENCH CUTS AND EXCAVATION SLOPES. CONFIRM WITH GEOTECHNICAL ENGINEER AND FOLLOW OSHA STANDARDS

NOTE:
CONTRACTOR TO DETERMINE BENCH CUTS
AND EXCAVATION SLOPES. CONFIRM WITH
GEOTECHNICAL ENGINEER AND FOLLOW
OSHA STANDARDS

5 TYPICAL EXCAVATION DETAIL

S6.1 SCALE: 1" = 1'-0"

Expiration Date
of the License

S6.1

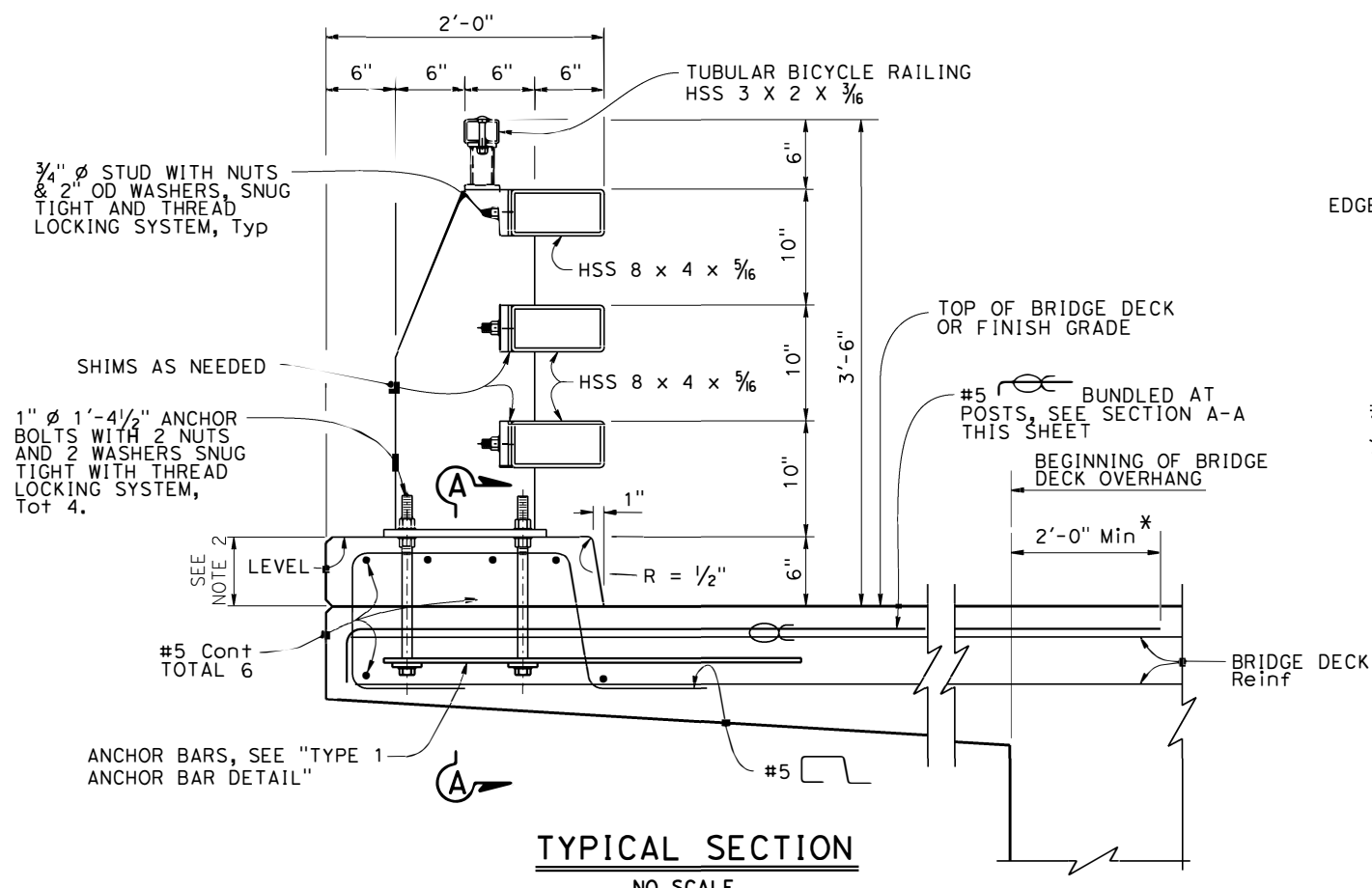
TITLE OF SHEET
TYPICAL DETAILS

GOLDEN GATE NATIONAL RECREATION AREA

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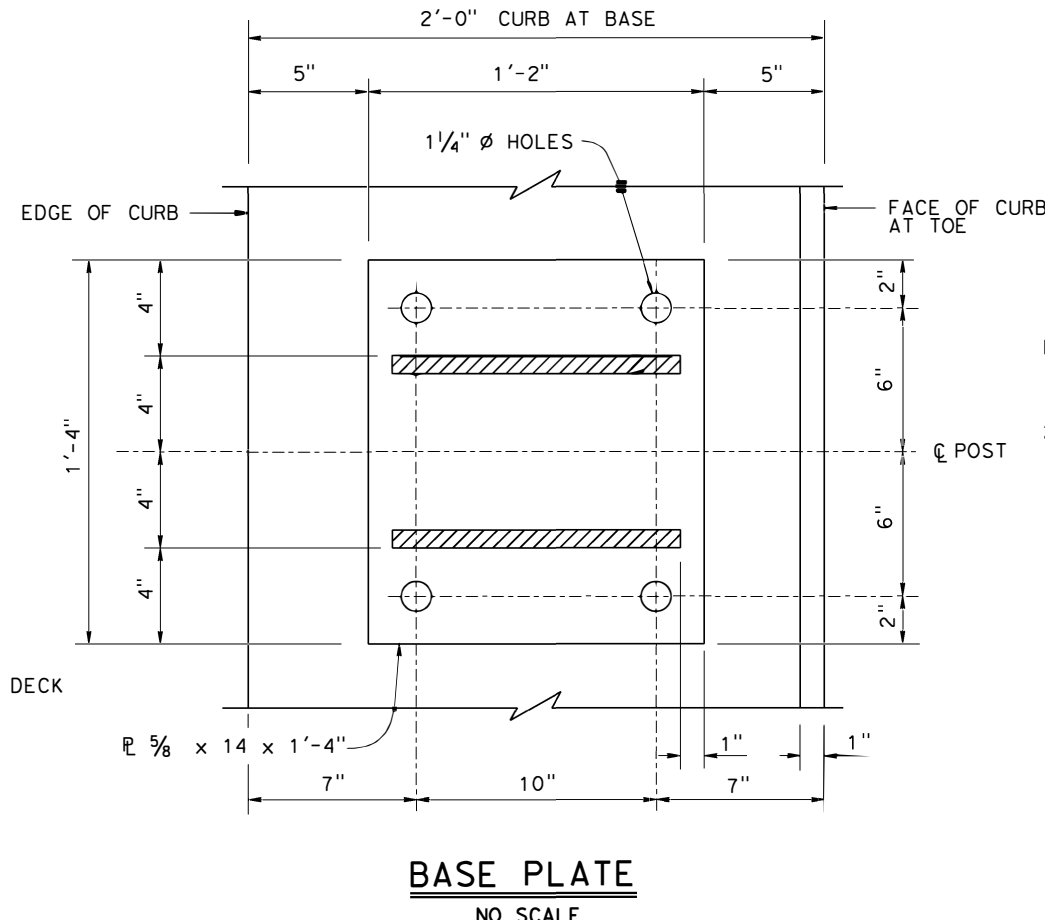
PKG.
NO.
6173

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
DDDD	CCCC	RRRR	PPPP	????	####
REGISTERED CIVIL ENGINEER			X	DATE	
MM/DD/YYYY			X	NO.	
PLANS APPROVAL DATE			X	EXP.	
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.			X	CIVIL	
THE REGISTERED CIVIL ENGINEER FOR THE PROJECT IS RESPONSIBLE FOR THE SELECTION AND PROPER APPLICATION OF THE COMPONENT DESIGN AND ANY MODIFICATIONS SHOWN.					



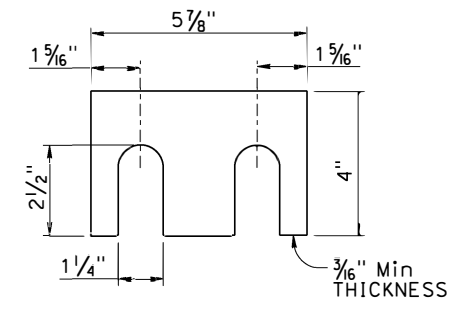
TYPICAL SECTION
NO SCALE

* #5 Bundled at posts to extend 2'-0" Min beyond beginning of bridge deck overhang.



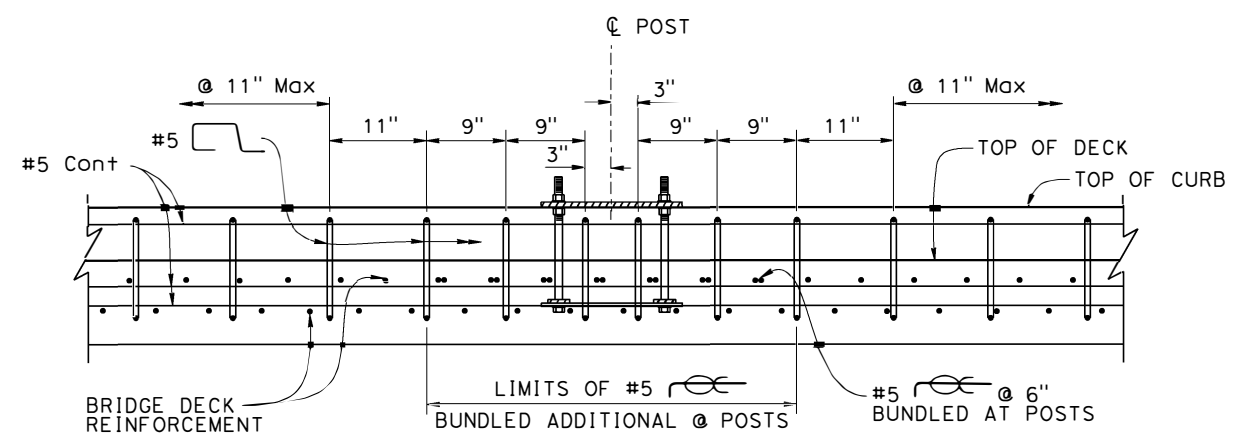
BASE PLATE
NO SCALE

- NOTES:
- Anchor bolts may be tack welded to anchorage.
 - Curb dimension at back side of rail will vary by bridge deck cross slope, and if overlay is placed on the bridge deck.



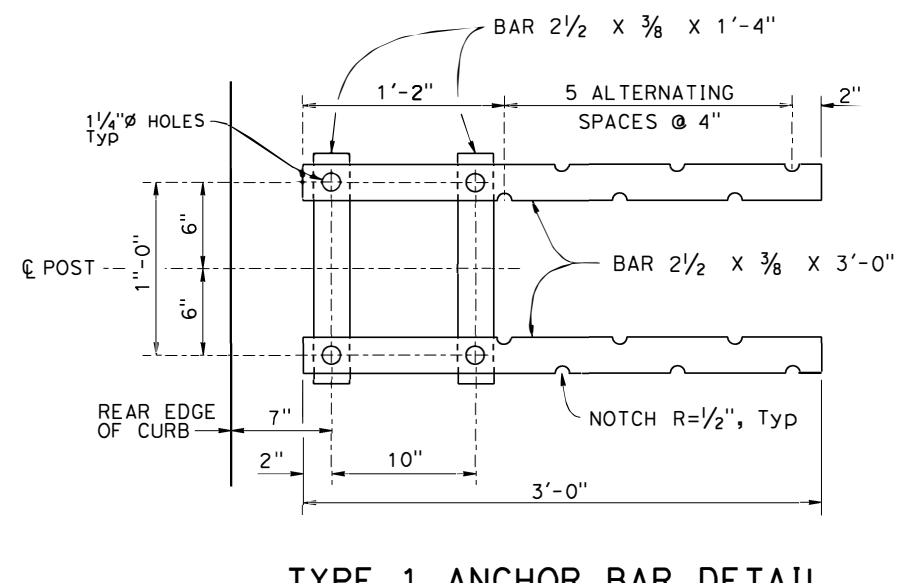
SHIM DETAILS
NO SCALE

NOTE:
Shims as needed between posts and HSS rail tubes.

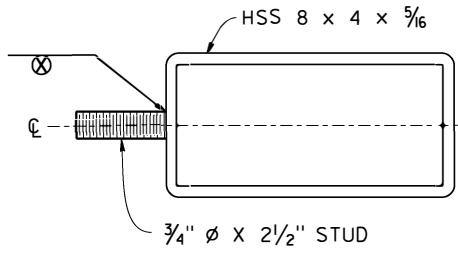


SECTION A-A
NO SCALE

NOTE:
POST NOT SHOWN FOR CLARITY



TYPE 1 ANCHOR BAR DETAIL
NO SCALE



RAIL SECTION AT POST
NO SCALE

FOR REFERENCE ONLY

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
DDDD	CCCC	RRRR	PPPP	????	####
REGISTERED CIVIL ENGINEER			X	DATE	
MM/DD/YYYY					
PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
THE REGISTERED CIVIL ENGINEER FOR THE PROJECT IS RESPONSIBLE FOR THE SELECTION AND PROPER APPLICATION OF THE COMPONENT DESIGN AND ANY MODIFICATIONS SHOWN.					

REGISTERED PROFESSIONAL ENGINEER

X

No.

X

Exp.

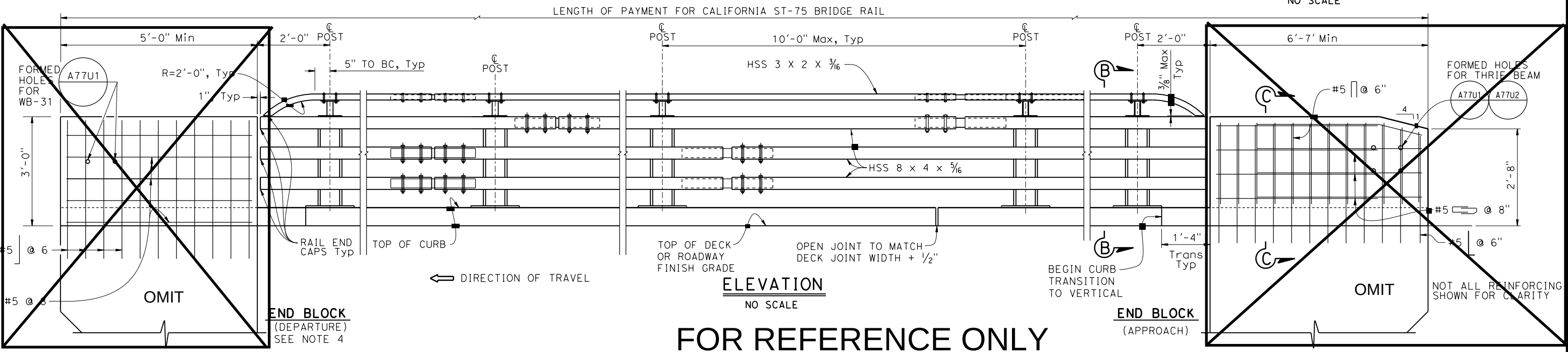
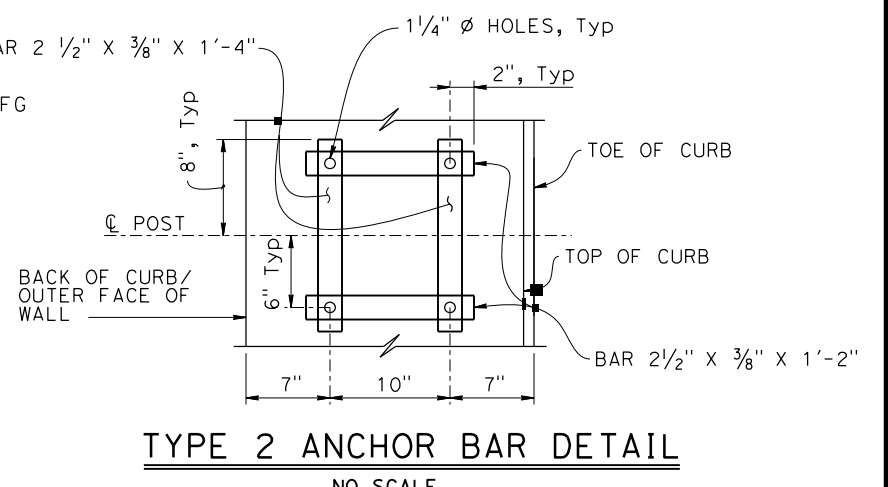
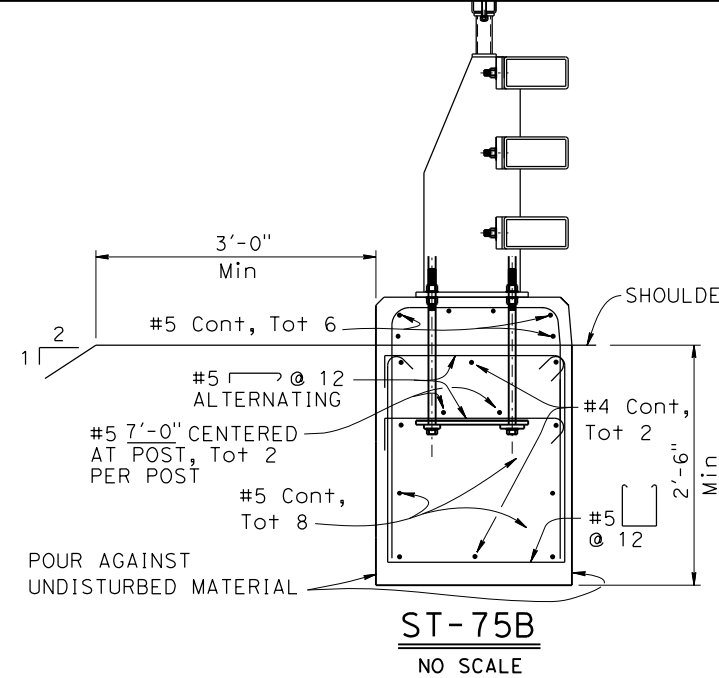
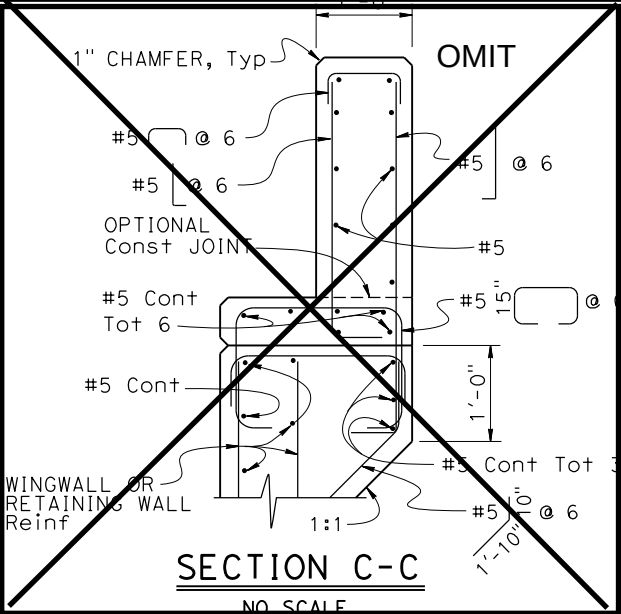
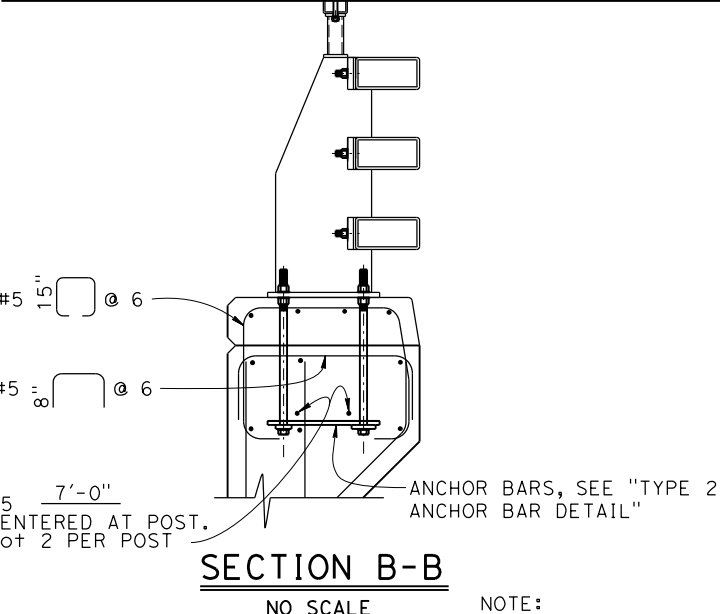
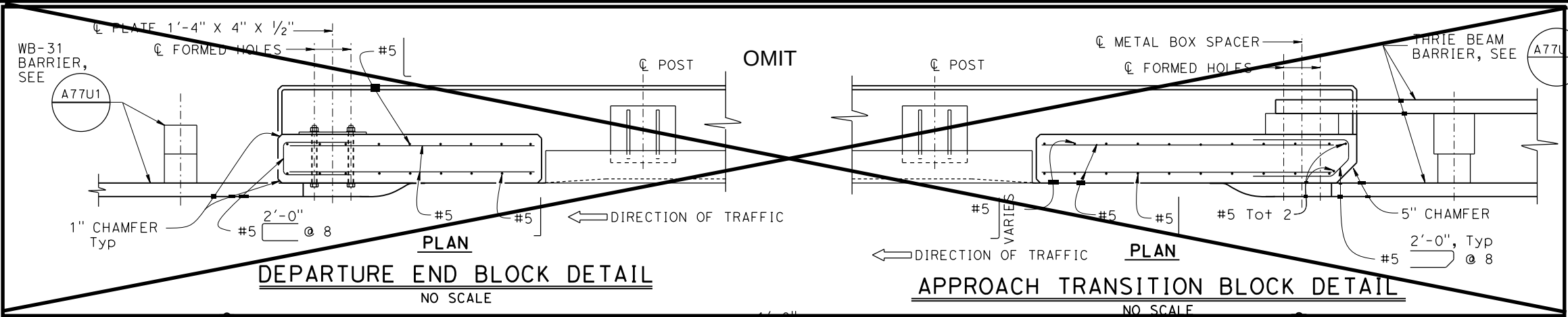
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CIVIL

STATE OF CALIFORNIA

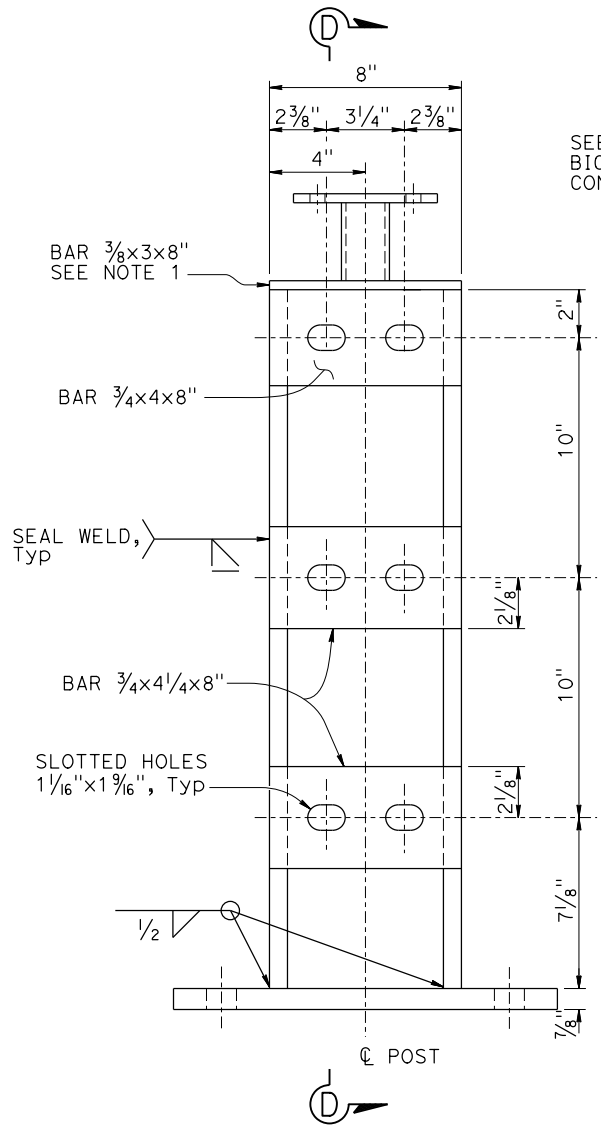
NOTES:

- All horizontal members are parallel to longitudinal profile grade.
- Posts are normal to profile grade of structure.
- Posts are vertical to the transverse cross section.
- If departure end block is within the Clear Recovery Zone (CRZ, 30 feet for expressways and freeways and 20 feet for conventional highways) of opposing traffic, then use the approach end block at the departure end.
- Anchor bolts may be tack welded to anchorage.

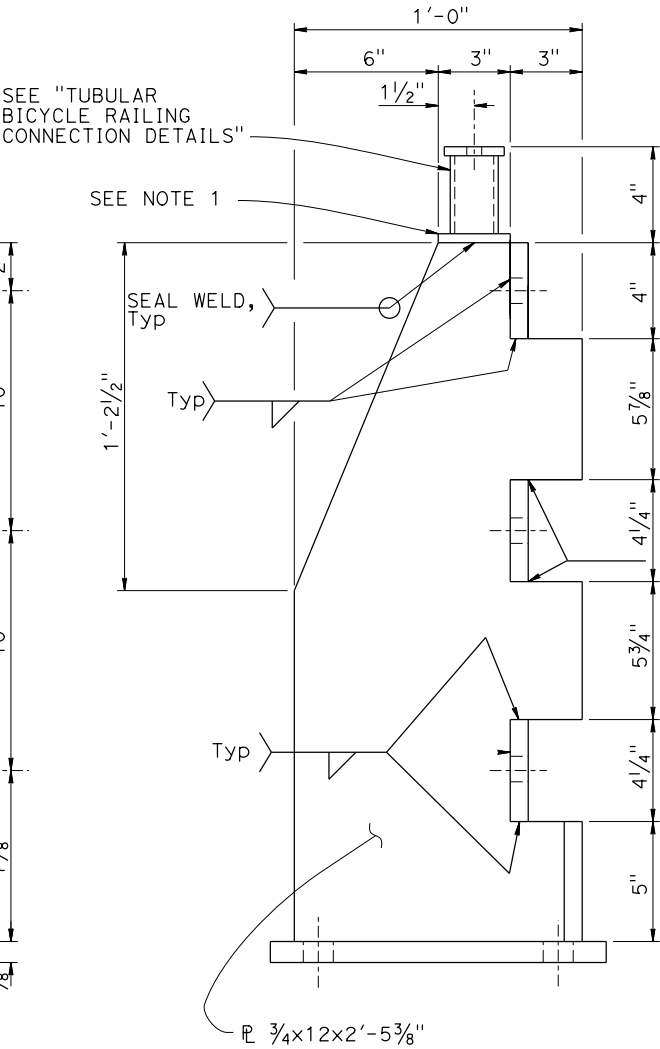


FOR REFERENCE ONLY

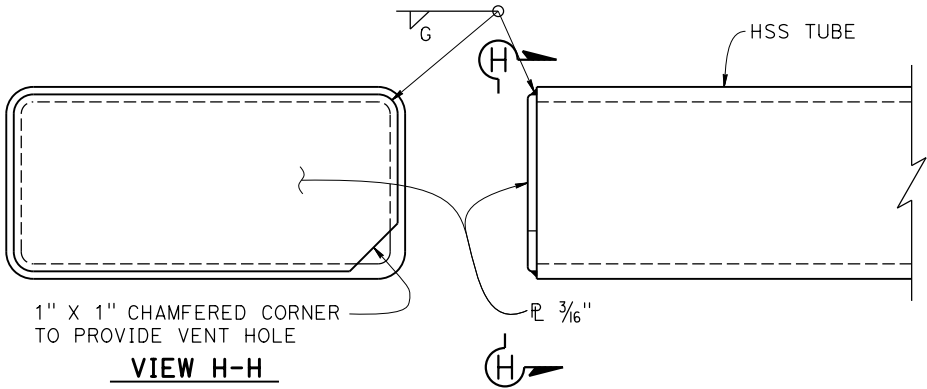
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
DDDD	CCCC	RRRR	PPPP	????	####
REGISTERED CIVIL ENGINEER			X	DATE	
MM/DD/YYYY					
PLANS APPROVAL DATE					
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					
THE REGISTERED CIVIL ENGINEER FOR THE PROJECT IS RESPONSIBLE FOR THE SELECTION AND PROPER APPLICATION OF THE COMPONENT DESIGN AND ANY MODIFICATIONS SHOWN.					



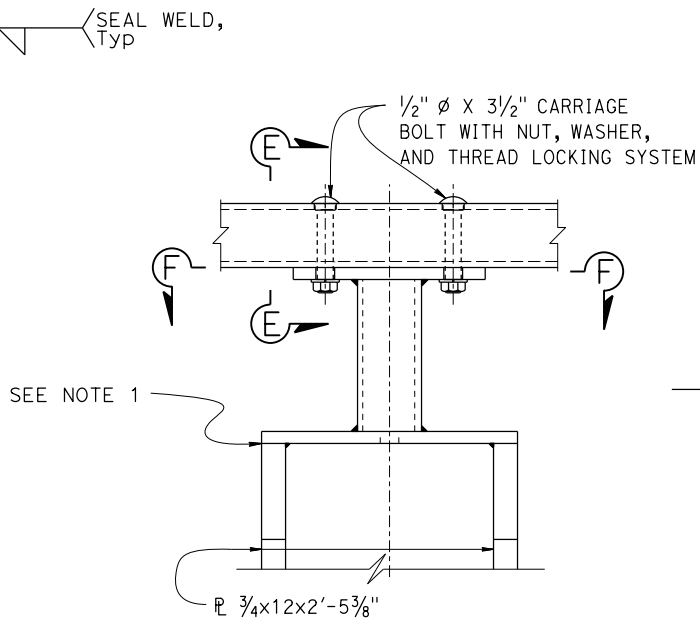
POST DETAIL
NO SCALE



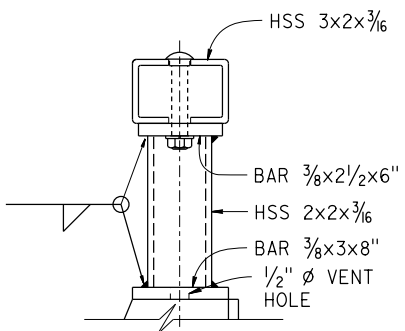
SECTION D-D
NO SCALE



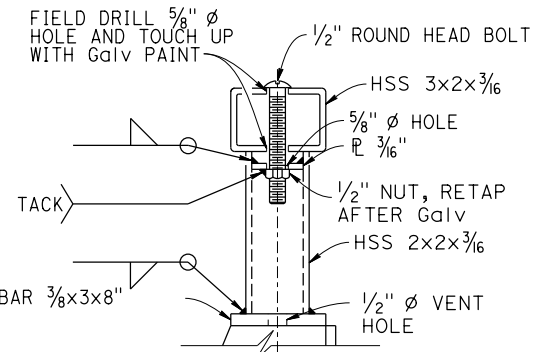
VIEW H-H
RAIL END CAP
NO SCALE
NOTE: For vehicular rail tube and bicycle railing tubes.



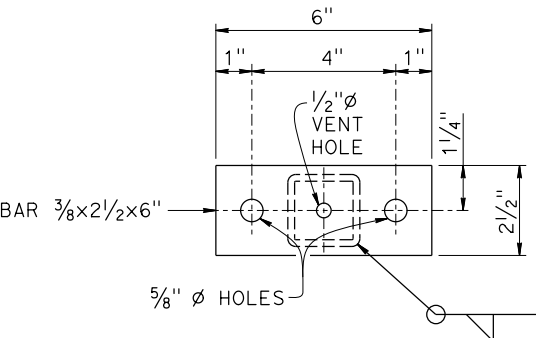
ELEVATION



SECTION E-E



SECTION E-E
ALTERNATIVE



SECTION F-F
TUBULAR BICYCLE RAILING CONNECTION DETAILS

FOR REFERENCE ONLY NO SCALE

Dist

COUNTY

ROUTE

POST MILES
TOTAL PROJECT

SHEET
NO.

TOTAL
SHEETS

DDDD

CCCC

RRRR

PPPP

???

####

REGISTERED CIVIL ENGINEER

X

DATE

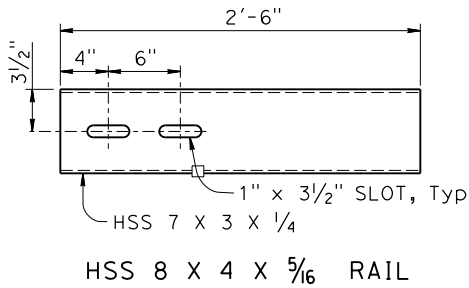
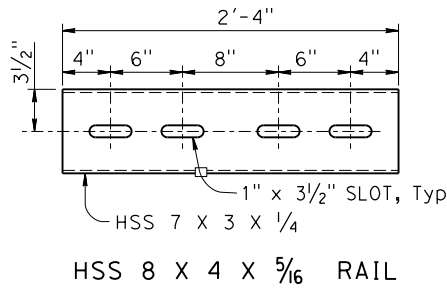
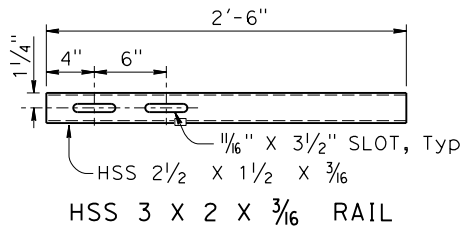
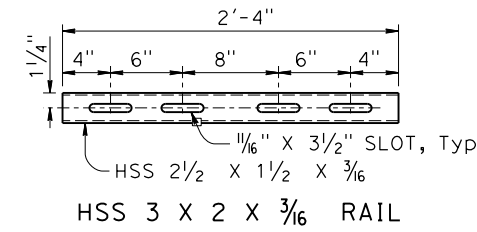
MM/DD/YYYY

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS
SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR
COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

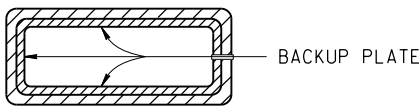
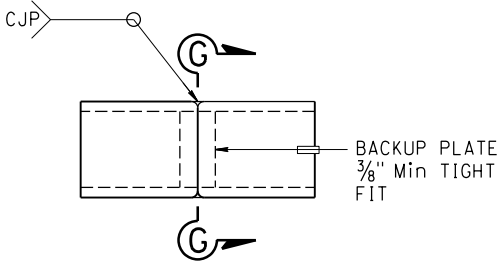
REGISTERED PROFESSIONAL ENGINEER
X
No. X
Exp. X
CIVIL
STATE OF CALIFORNIA

THE REGISTERED CIVIL ENGINEER FOR THE PROJECT IS RESPONSIBLE FOR THE SELECTION
AND PROPER APPLICATION OF THE COMPONENT DESIGN AND ANY MODIFICATIONS SHOWN.



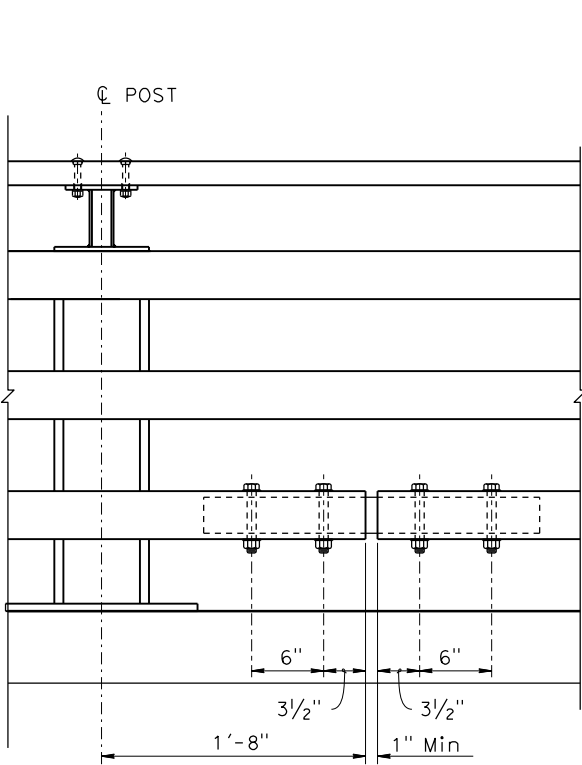
STANDARD SLEEVES
DETAILS
NO SCALE

EXPANSION SLEEVES
DETAILS
NO SCALE

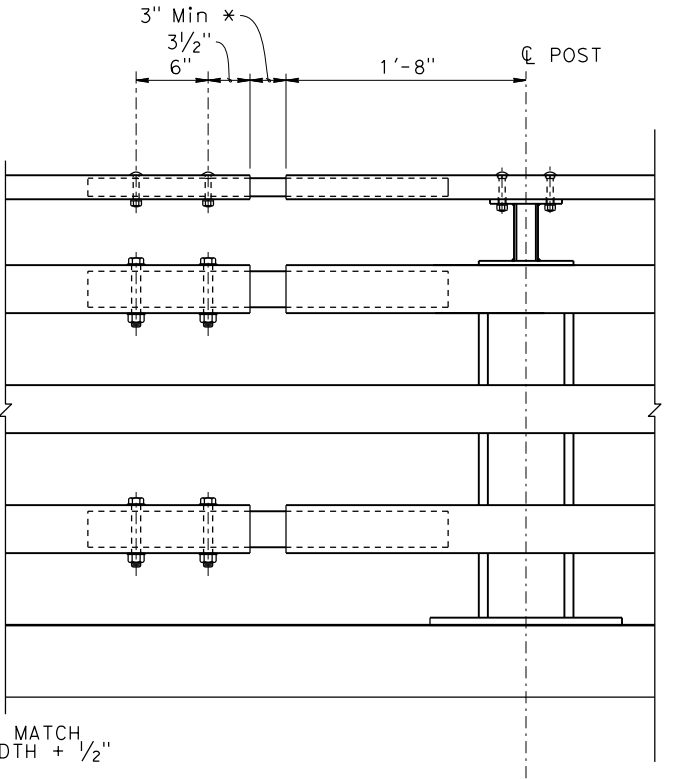
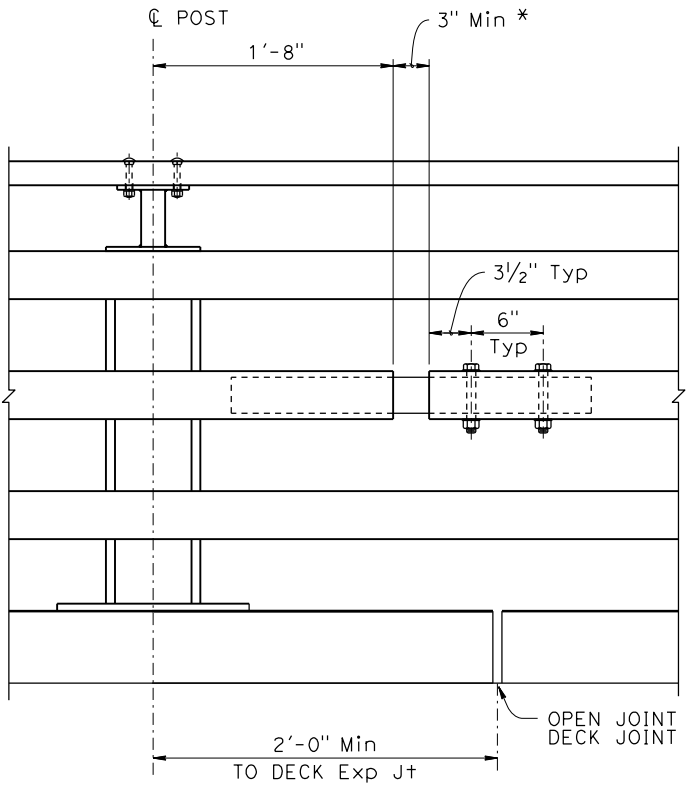
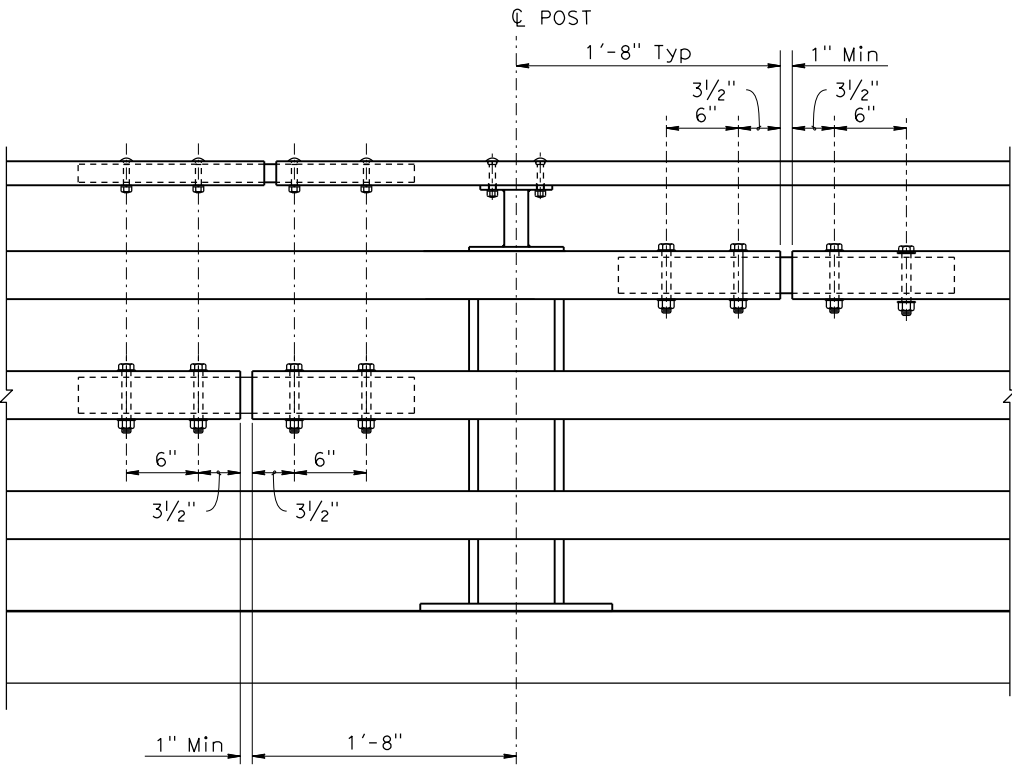


SECTION G-G
ALTERNATE TUBE
WELDED STANDARD SPLICE
NO SCALE

- NOTES:
- HS bolts with nut and washers, snug tightened, and thread locking system.
 - Use 1/2"Ø x 3 5/16 BOLTS (HSS 3 x 2 x 3/16)
Use 3/4"Ø x 5 5/16 BOLTS (HSS 8 x 4 x 5/16)
 - Each rail length must be continuous over a minimum of two posts.
 - The fabricator must check that the tubular sleeve splices conform to the dimensions indicated to assure proper clearance.
 - Except for expansion splices, not more than one splice permitted per same side of post.

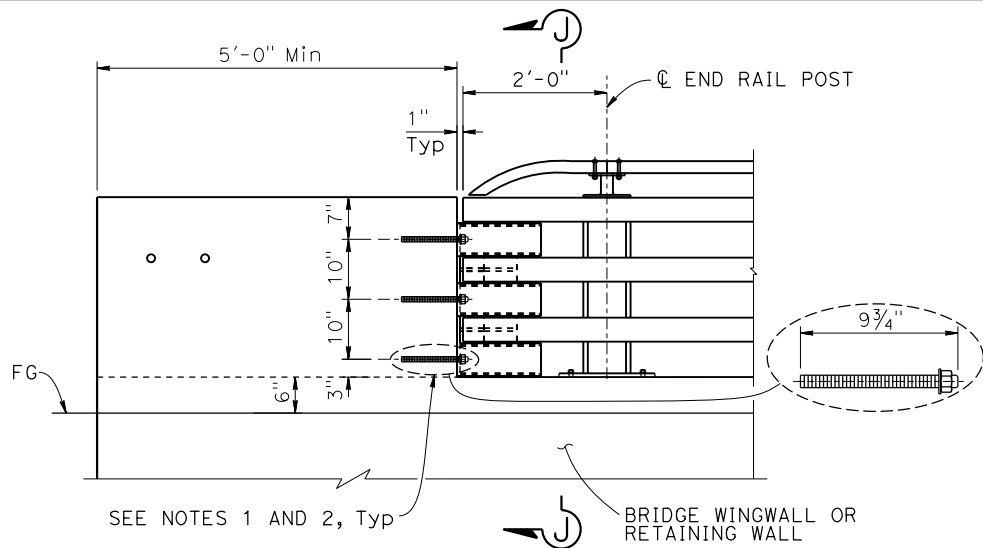


STANDARD SPLICE
NO SCALE



EXPANSION SPLICE
NO SCALE
* MATCH DECK OR WALL JOINT

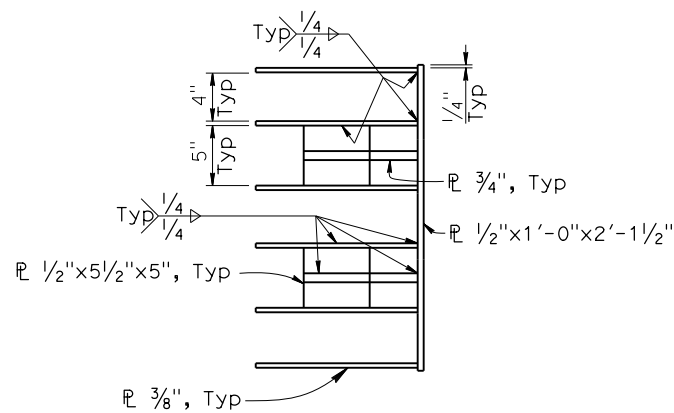
FOR REFERENCE ONLY



PARAPET SHOE AT DEPARTURE END BLOCK

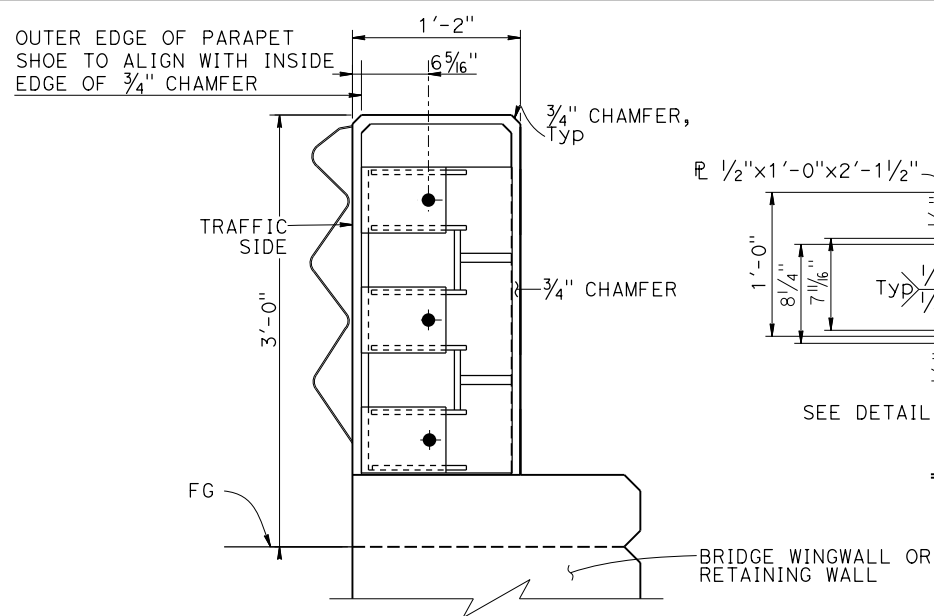
3/4" = 1'-0"

NOTE: Parapet shoe connection to approach end block is similar.



SECTION Q-Q

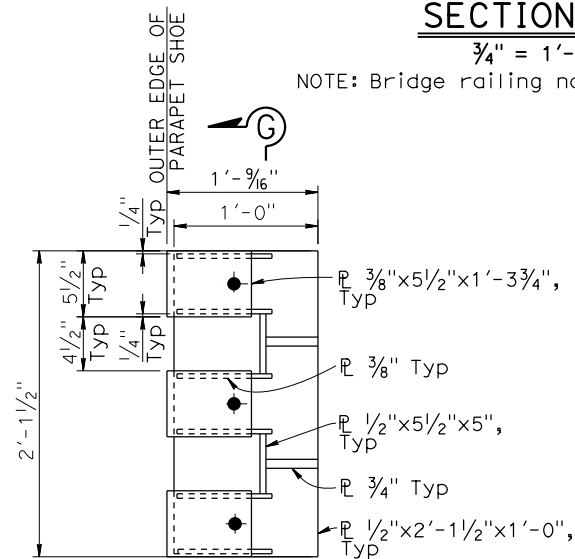
1 1/2" = 1'-0"



SECTION J-J

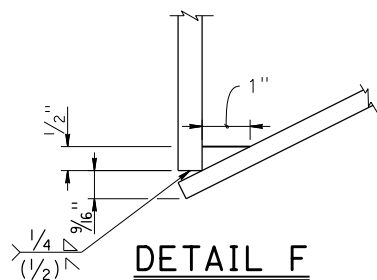
3/4" = 1'-0"

NOTE: Bridge railing not shown clarity.



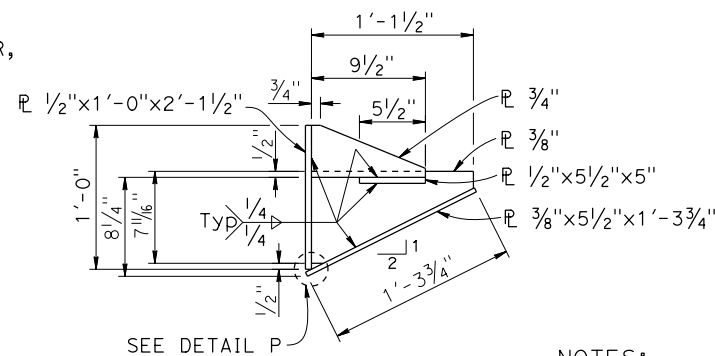
VIEW M-M

1 1/2" = 1'-0"



DETAIL F

6" = 1'-0"

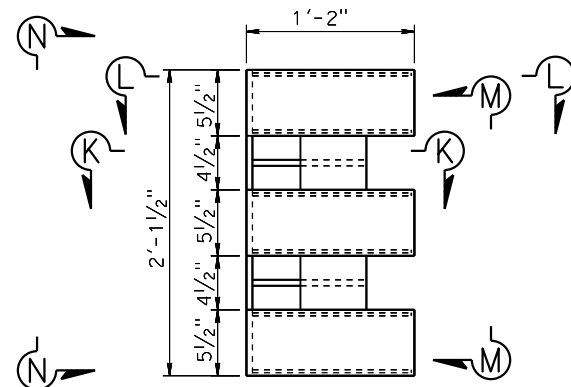


SECTION K-K

1 1/2" = 1'-0"

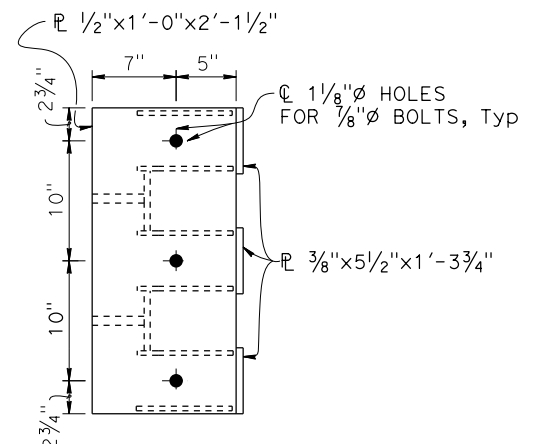
NOTES:

- Anchor bolts must be 7/8" Dia and ASTM F1554 Grade 105 fully threaded rods with heavy hex nut and one hardened washer (1 3/4" OD) each. Embed threaded rods 8" into concrete anchor block with DRILL AND BOND (CHEMICAL ADHESIVE) anchorage system.
- DRILL AND BOND (CHEMICAL ADHESIVE) anchorages is subjected to approval of Engineer. Installation procedure must comply with manufacture's instructions.



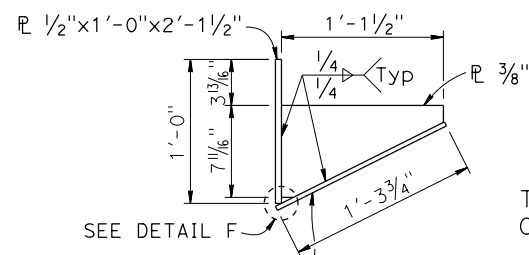
PARAPET SHOE ELEVATION

1 1/2" = 1'-0"



VIEW N-N

1 1/2" = 1'-0"

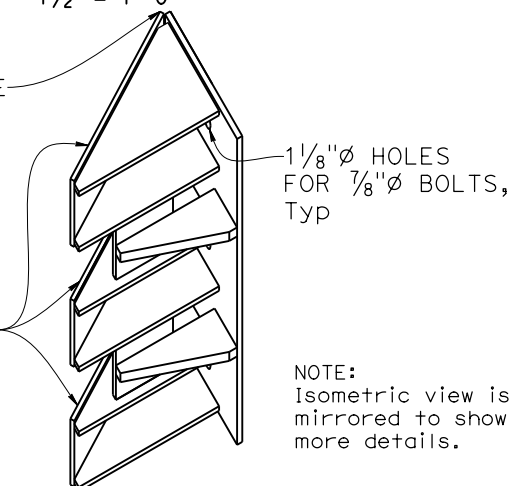


SECTION L-L

1 1/2" = 1'-0"

OUTER EDGE OF PARAPET SHOE

TRAFFIC SIDE OF PARAPET SHOE

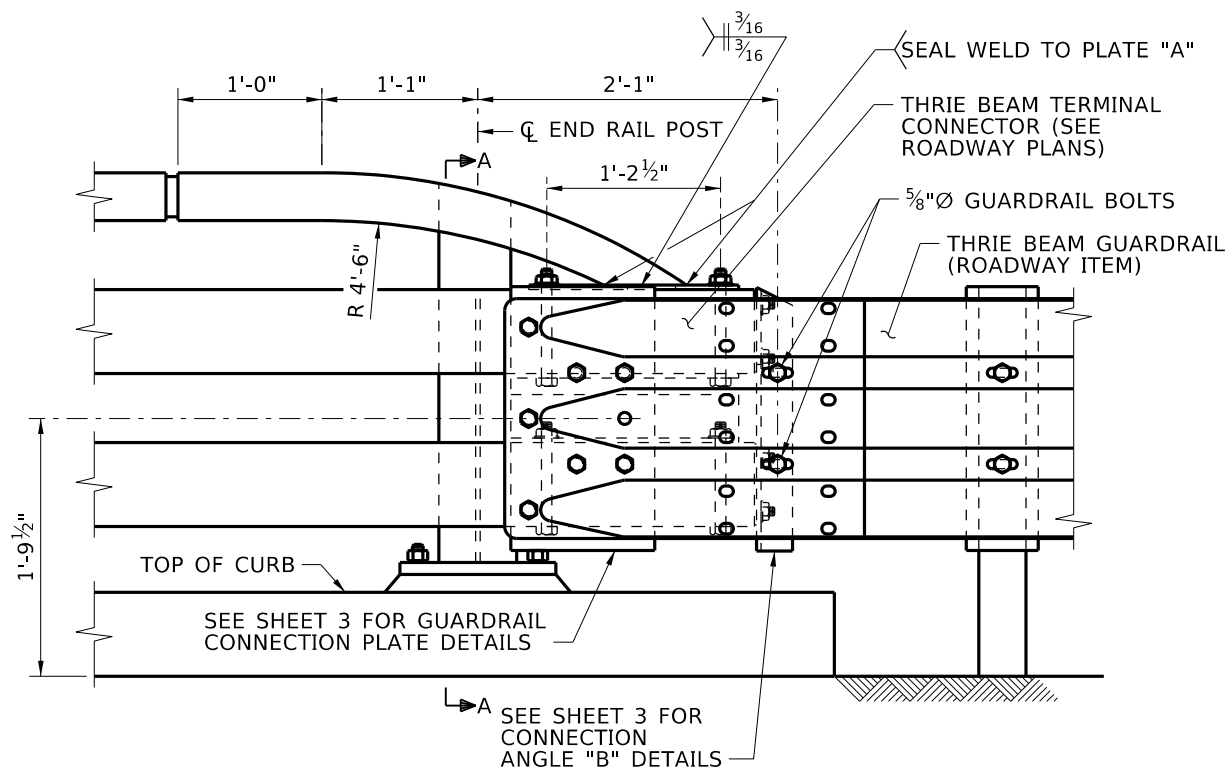


ISOMETRIC VIEW

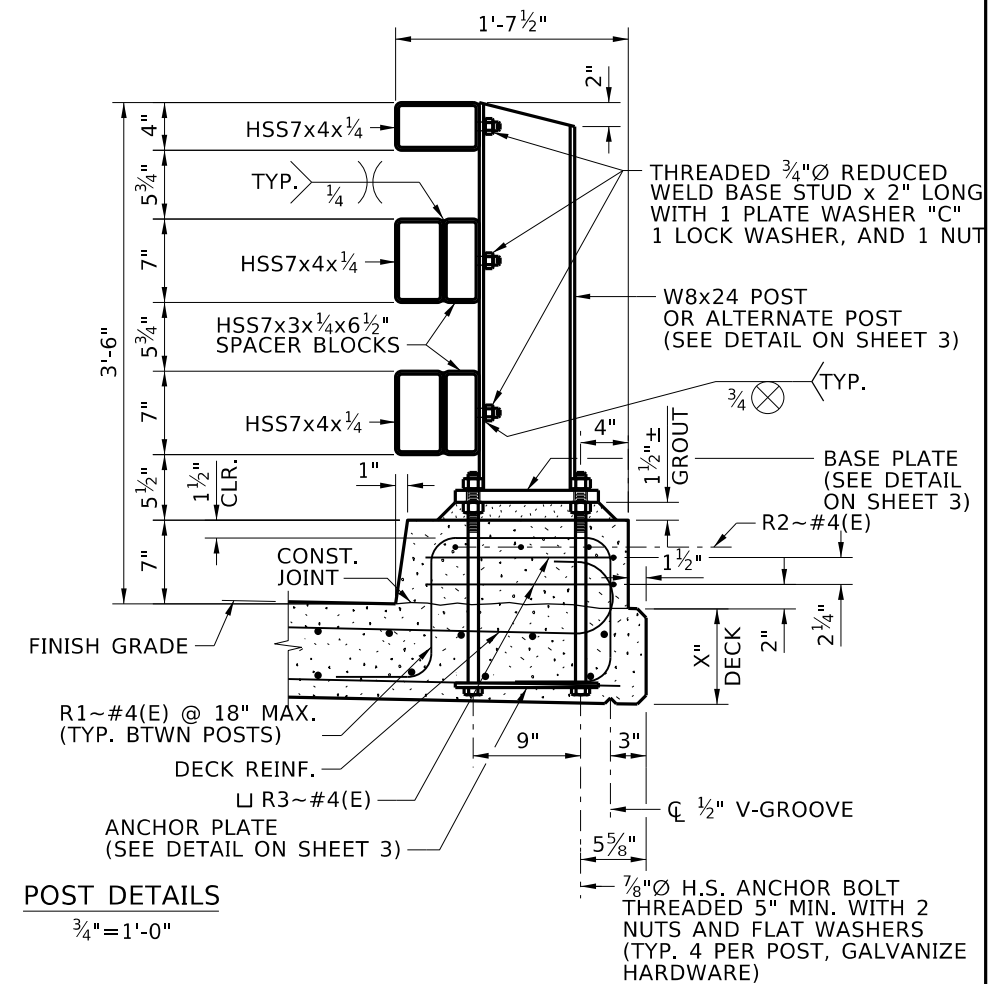
1 1/2" = 1'-0"

FOR REFERENCE ONLY

BRIDGE STANDARD DETAILS			STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION			DIVISION OF ENGINEERING SERVICES			CALIFORNIA ST-75 BRIDGE RAIL DETAILS No. 5												
xs16-116-5 FILE NO.	JULY 2022 APPROVAL DATE	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California							BRIDGE No.		POST MILE		REVISION DATES		SHEET		OF				
									X	X	X	X	04-26-22	05-10-22	7/5/22	6-14-22	18	20			
Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html			DATE PLOTTED => 21-JUL-2022 FILE => 20220721_xs16-116-5.dgn			TIME PLOTTED => 13:07 USERNAME => s148360			ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			UNIT: X PROJECT NUMBER & PHASE: X			CONTRACT No.: X			DISREGARD PRINTS BEARING EARLIER REVISION DATES			
									0 1 2 3												



TRANSITION CONNECTION



FOR REFERENCE ONLY

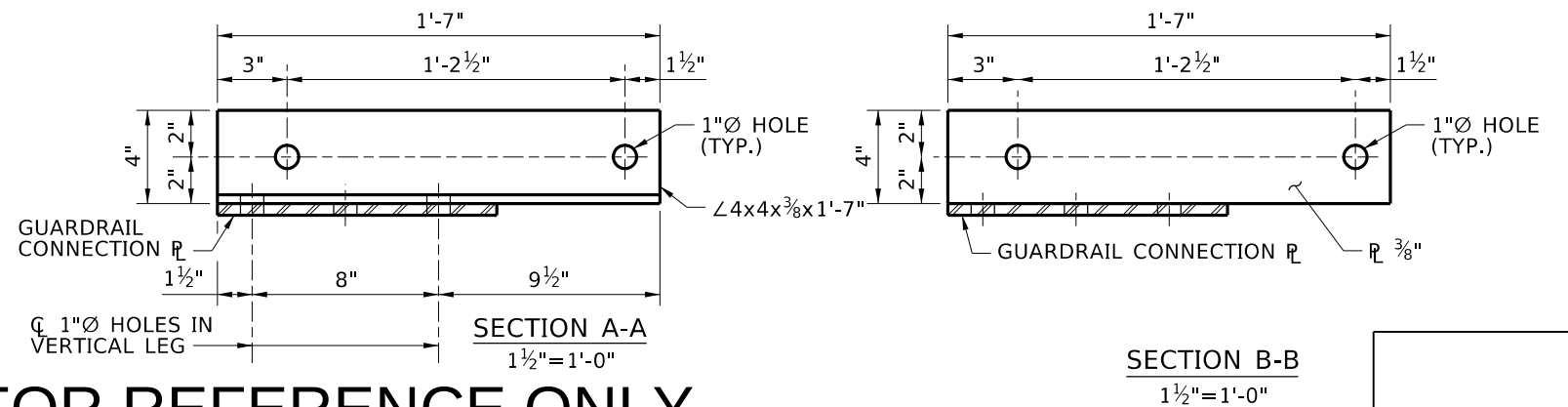
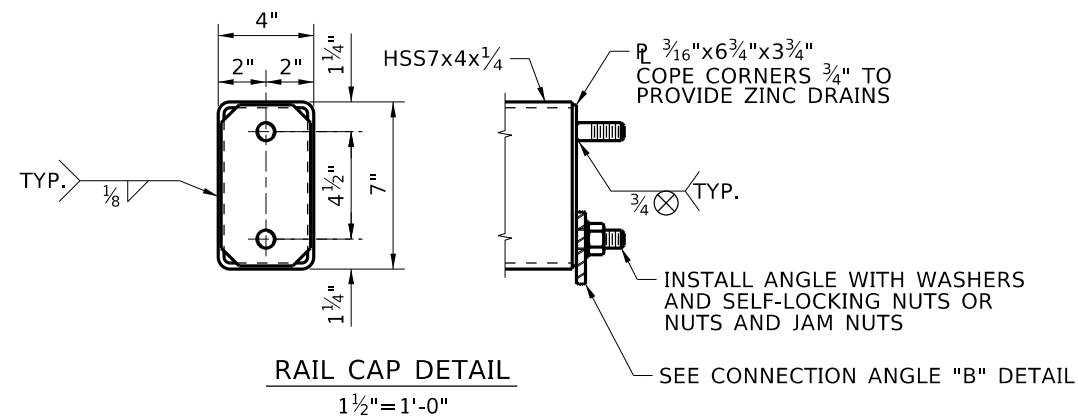
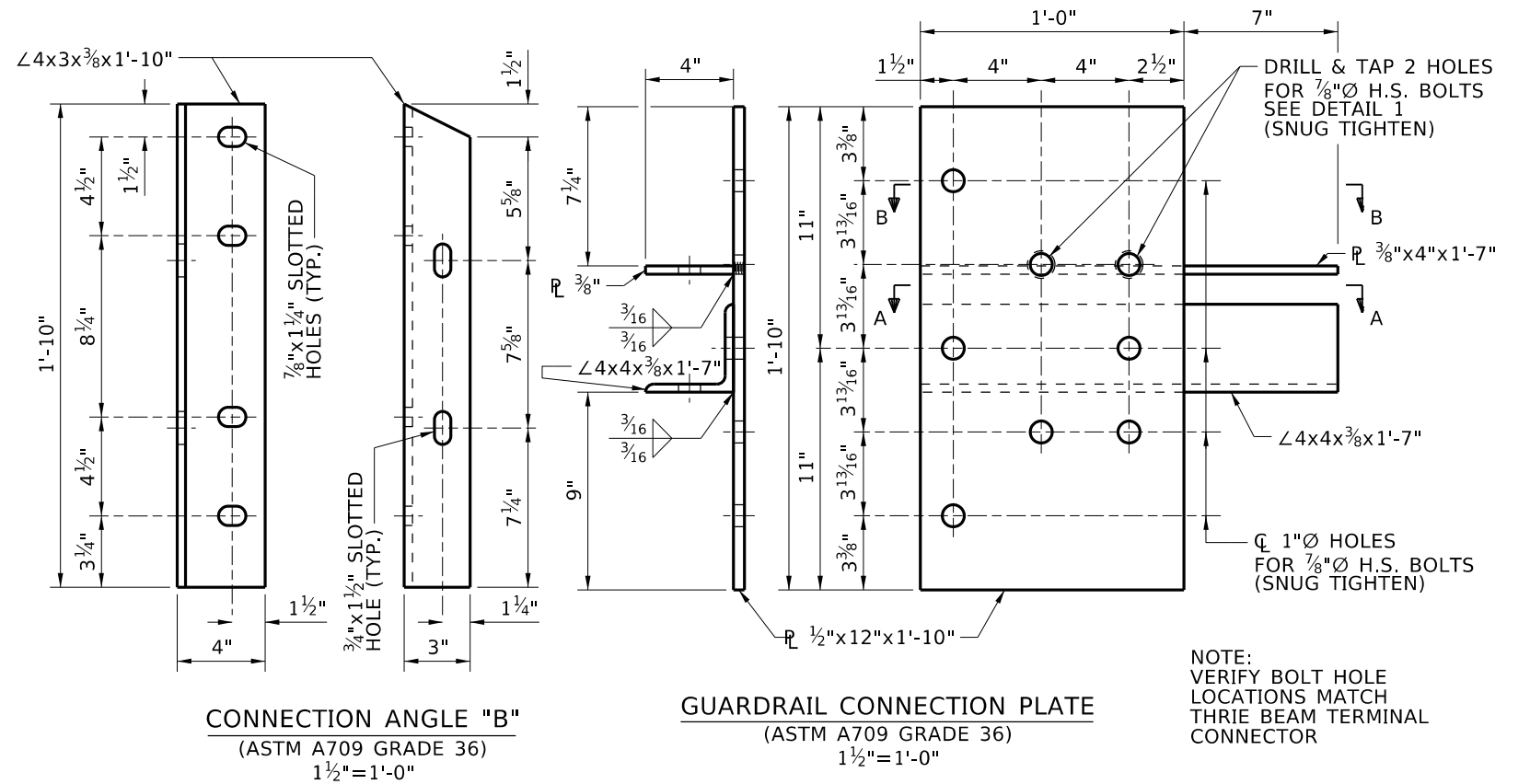
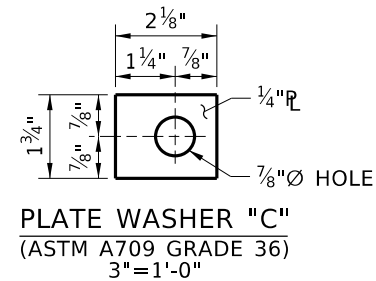
REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	CADD FILE NAME	DRAWING DATE:	APPROVED BY:	BRIDGE ENGINEER	DATE:	ENGLISH	PROJECT NO.	3-TUBE CURB MOUNT RAIL - SHT. 2 OF 3	BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	DESIGN CHECKED										BRIDGE KEY NO.	
△				DETAILED										COUNTY	KEY NO.
△				DWG. CHECKED										BRIDGE DWG. NO.	SHEET
△				CORRECTIONS										B13.2B	19 OF 20
△															

IDAHO
TRANSPORTATION
DEPARTMENT

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

APPROVED BY: **MICHAEL T. JOHNSON** DATE: _____

WITHOUT END WALL		BRIDGE KEY NO.	
WITH OR WITHOUT APPROACH SLAB		COUNTY	
BRIDGE DESIGN MANUAL B13.2B		KEY NO.	
		BRIDGE DWG. NO.	
		SHEET	
		19 OF 20	



REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	IDAHO TRANSPORTATION DEPARTMENT  YOUR Safety→YOUR Mobility→YOUR Economic Opportunity	ENGLISH PROJECT NO.	3-TUBE CURB MOUNT RAIL - SHEET 3 OF 3		BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	DESIGN CHECKED	CADD FILE NAME			WITHOUT END WALL WITH OR WITHOUT APPROACH SLAB BRIDGE DESIGN MANUAL, B13.2C		BRIDGE KEY NO.	
▲				DETAILED	Standards/Bridge Standard Drawings/ B13_2C.dgn					COUNTY	KEY NO.
▲				DWG. CHECKED						BRIDGE DWG. NO. B13.2C	SHEET 20 OF 20
▲				CORRECTIONS	DRAWING DATE: DEC 2025	APPROVED BY: BRIDGE ENGINEER MICHAEL T. JOHNSON DATE: _____					