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7. STEEL RAILING, TYPE S1 DETAILS
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HIGHWAY STANDARDS (SEE SPECIFICATIONS)

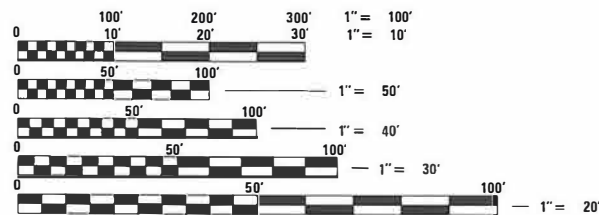
- 00001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
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- 630301-09 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
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- 725001-01 OBJECT AND TERMINAL MARKERS
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
- BLR 27-1 TRAFFIC BARRIER TERMINAL TYPE 5A

SOIL BORINGS (SEE SPECIFICATIONS)

DESIGN CLASSIFICATION: RURAL LOCAL ROAD

ADT₂₀₂₂ : 50

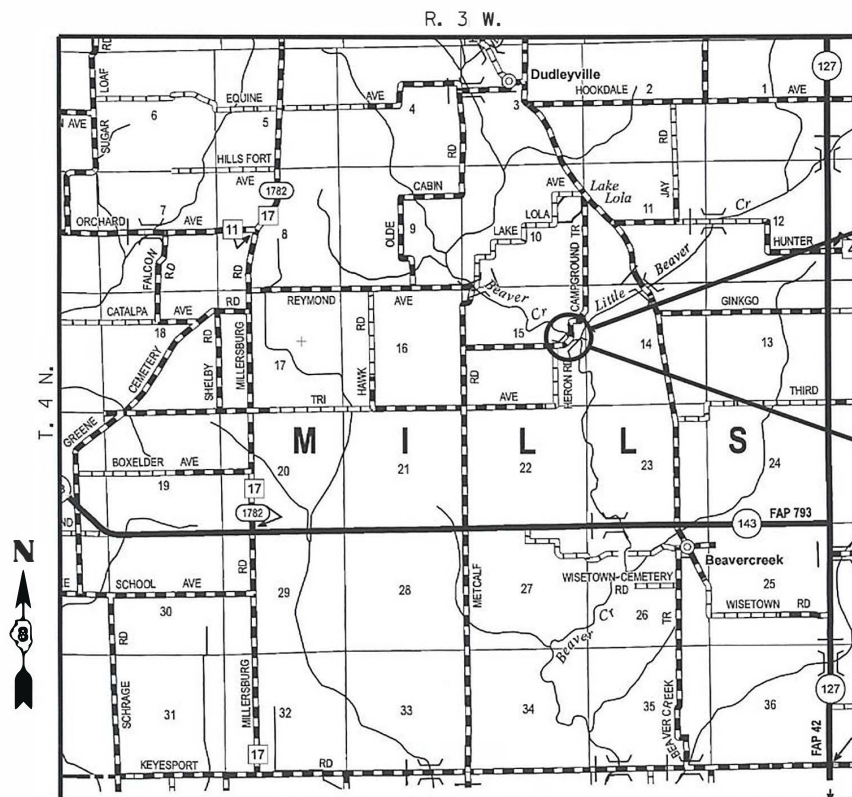
DESIGN SPEED: 30 MPH



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
1-800-892-0123 or 811 Website: <http://www.illinois1call.com>

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
**PLANS FOR PROPOSED
STR FUNDING**
TR 164 (CAMPGROUND TRAIL)
OVER LITTLE BEAVER CREEK
SECTION 19-04120-00-BR
PROJECT NO. EF2X(852)
MILLS ROAD DISTRICT
BOND COUNTY
JOB NO. C-98-032-24

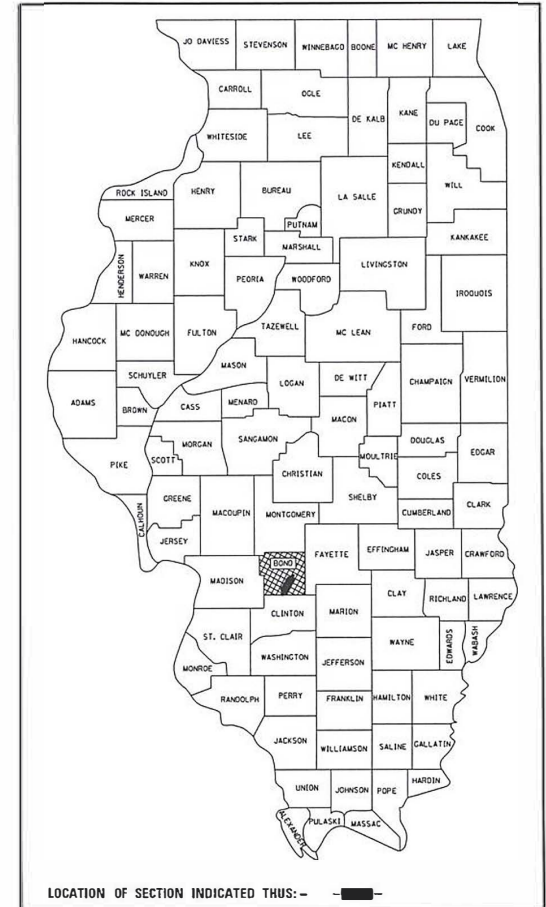


NOT TO SCALE

LOCATION: NEAR THE SE CORNER OF THE NE 1/4, SECTION 15, T4N, R3W, 3RD P.M.
GROSS LENGTH OF PROJECT: 600.00 FT. = 0.114 MI.
NET LENGTH OF PROJECT: 600.00 FT. = 0.114 MI.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	19-04120-00-BR	BOND	11	1
CONTRACT NO. 97825				

GCL JOB NO. 21-6022



LOCATION OF SECTION INDICATED THIS: -

SECTION ENDS
STA. 13+00.00

SECTION 19-04120-00-BR INCLUDES THE CONSTRUCTION OF A SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE CARRYING TR 164 OVER LITTLE BEAVER CREEK. 80'-0 7/8" BK. TO BK. ABUTMENTS X 24' WIDE. 15° AHEAD LEFT SKEW. EXISTING STRUCTURE NO. 003-3404 PROPOSED STRUCTURE NO. 003-3415

SECTION BEGINS
STA. 7+00.00

BOND COUNTY
HIGHWAY DEPARTMENT

APPROVED: 10/30/23
J. B.
BOND COUNTY, COUNTY ENGINEER

PASSED: 11/2/23
R. S.
DISTRICT EIGHT ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
BASED ON LIMITED
REVIEW: 11/2/23
B. L. T.
REGION FIVE ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**



B.L.T. 10/26/2023
BRENT L. TAYLOR
SALEM, ILLINOIS
ILLINOIS LICENSED PROFESSIONAL
ENGINEER NO. 062-066114
EXPIRES: NOV. 30, 2025

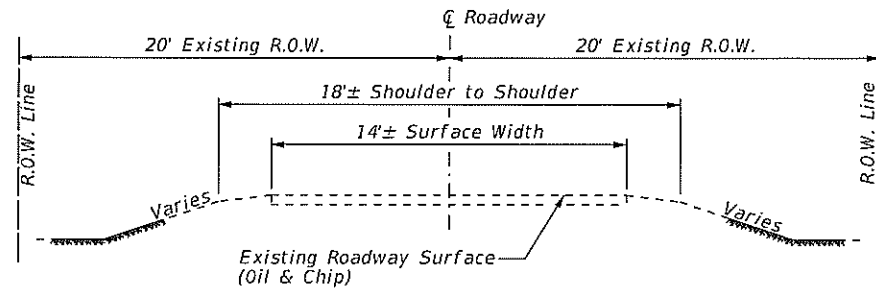
UTILITIES

Design Phase Locate

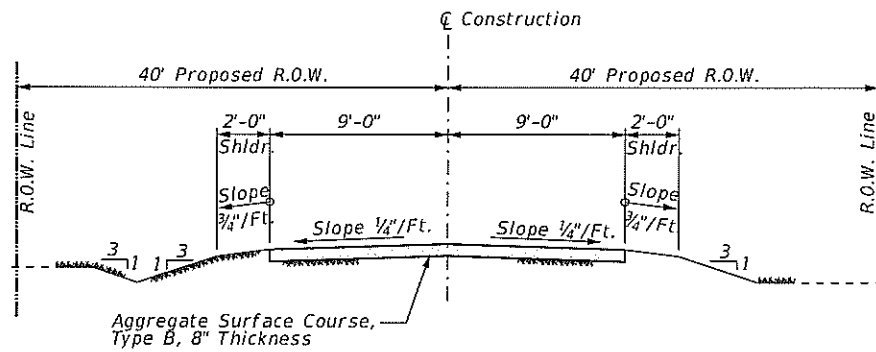
J.U.L.I.E. Dig No. X232282124-00X
Date: 08/16/2023

Electric: Southwestern Electric Coop.
Phone: 800-637-8667

Communications: ATT/Distribution
Email: G11629@ATT.COM



**TYPICAL SECTION
EXISTING APPROACH ROADWAY**



**TYPICAL SECTION
PROPOSED APPROACH ROADWAY**

EXTRA BARS FOR TEST SAMPLES				
Bar	No.	Size	Length	Shape
v(E)	2	#5	6'-0"	—
h(E)	2	#6	10'-0"	—
p(E)	1	#7	26'-8"	—
Reinforcement Bars, Epoxy Coated			Pound	100

These bars shall be identical to and delivered with the bars of the same mark listed on the bridge sheets. This chart assumes that all bars of the same size on the job will have the same heat numbers. If bars of the same size on the job have different heat numbers, then the Contractor shall supply additional bars from other heat numbers for sampling by the Engineer at no additional cost.

The weight of these extra bars has been included in the Summary of Quantities for the project.

The Contractor shall cut test bars as directed by the Engineer (if required for transport, etc.) The cost for cutting the bars shall be included in the cost of Reinforcement Bars, Epoxy Coated and no additional compensation will be allowed.

GENERAL NOTES

- This section shall be constructed according to the plans, the Special Provisions, and the "Standard Specifications for Road and Bridge Construction", adopted January 1, 2022.
- Roadway Centerline profiles refer to the finished surface.
- Existing utilities shown are located from surface observations or information provided by the respective utilities and must be considered approximate and are only included for the convenience of the bidder. There may be others, the exact location of which are unknown and not shown. The Contractor will be responsible for notifying the respective utilities before work is begun. Field marking of underground utilities may be obtained by providing a minimum of 48 hours advance notice through the J.U.L.I.E. system by calling 1-800-892-0123, 811, or by direct contact with non-members of J.U.L.I.E.
- Factors used for quantity calculations are as follows:
 Stone Riprap 130 pounds/cu. ft.
 Aggregate Surface or Base Course 2.1 tons/cu. yd.
 Porous Granular Embankment (Special) 2.1 tons/cu. yd.

COMMITMENTS

- No tree clearing will be allowed or performed from April 1 through September 30, in an effort to conserve the Northern Long-Eared bat and the Indiana bat.
- Existing fence removal and replacement within the limits of construction will be done by others and will be coordinated by the Township. The removal will be done prior to construction.
- The County Engineer will notify emergency, school, and postal service providers of the road closure prior to the start of construction.

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	TOTAL QUANTITY
* 20100500	TREE REMOVAL, ACRES	ACRE	0.6
20200100	EARTH EXCAVATION	CU YD	105
20300100	CHANNEL EXCAVATION	CU YD	205
20400800	FURNISHED EXCAVATION	CU YD	700
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	473
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	32.6
50300280	CONCRETE ENCASEMENT	CU YD	2.8
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	1872
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5120
* 50900205	STEEL RAILING, TYPE S1	FOOT	160
51201600	FURNISHING STEEL PILES HP12x53	FOOT	545
51202305	DRIVING PILES	FOOT	545
51203600	TEST PILE STEEL HP12x53	EACH	1
51500100	NAME PLATES	EACH	1
* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	2
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2
67100100	MOBILIZATION	LSUM	1
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
X2070302	POROUS GRANULAR EMBANKMENT (SPECIAL)	TON	126
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.75
X2810808	STONE DUMPED RIPRAP, CLASS A4 (SPECIAL)	TON	161
# Z0076600	TRAINEES	HOUR	500
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1
# Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500

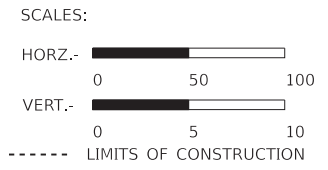
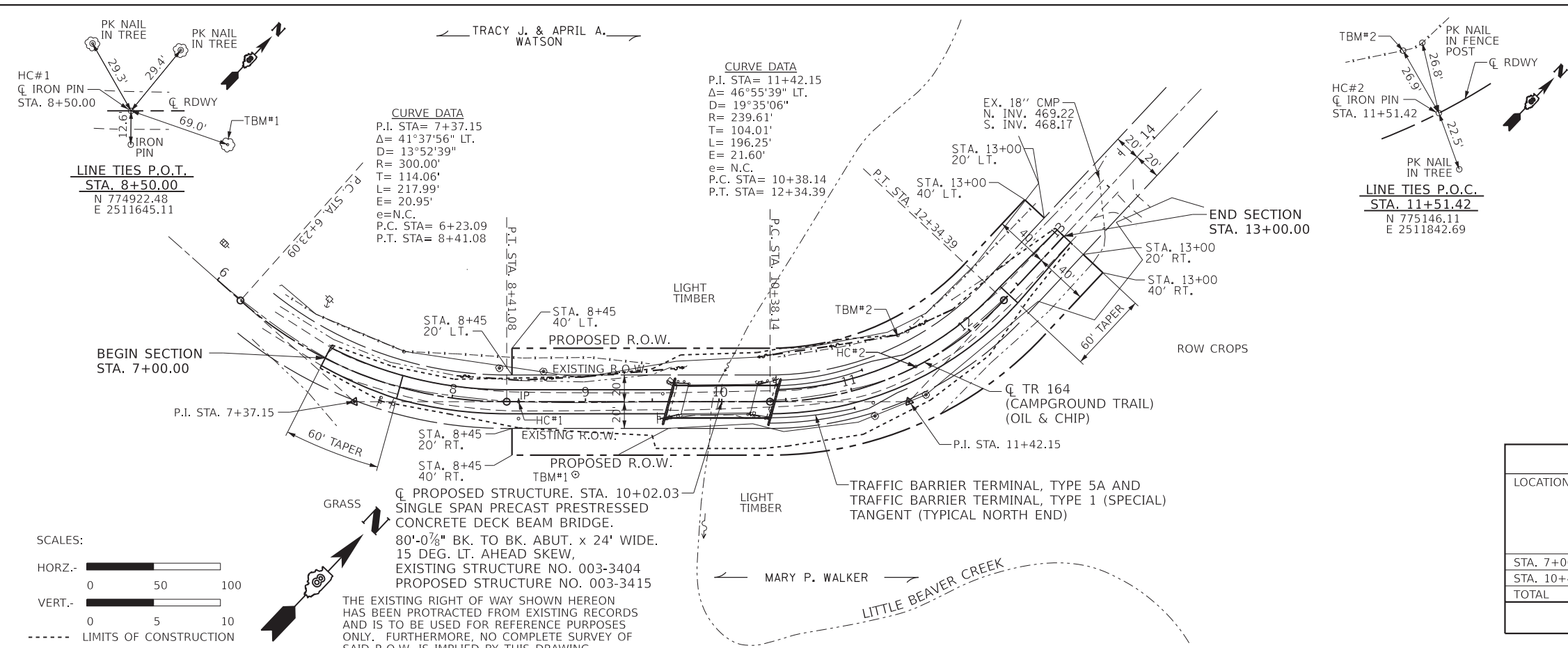
** STONE DUMPED RIPRAP, CLASS A4 AS CALLED OUT IN THE PLANS REFERS TO STONE DUMPED RIPRAP, CLASS A4 (SPECIAL)

* SPECIALTY ITEMS

0042

DATE	BY	SURVEYED	ALIGNED	CHECKED	RT. OF WAY CHECKED
PLAN	NOTE BOOK NO.	NO.	NO.	NO.	NO.

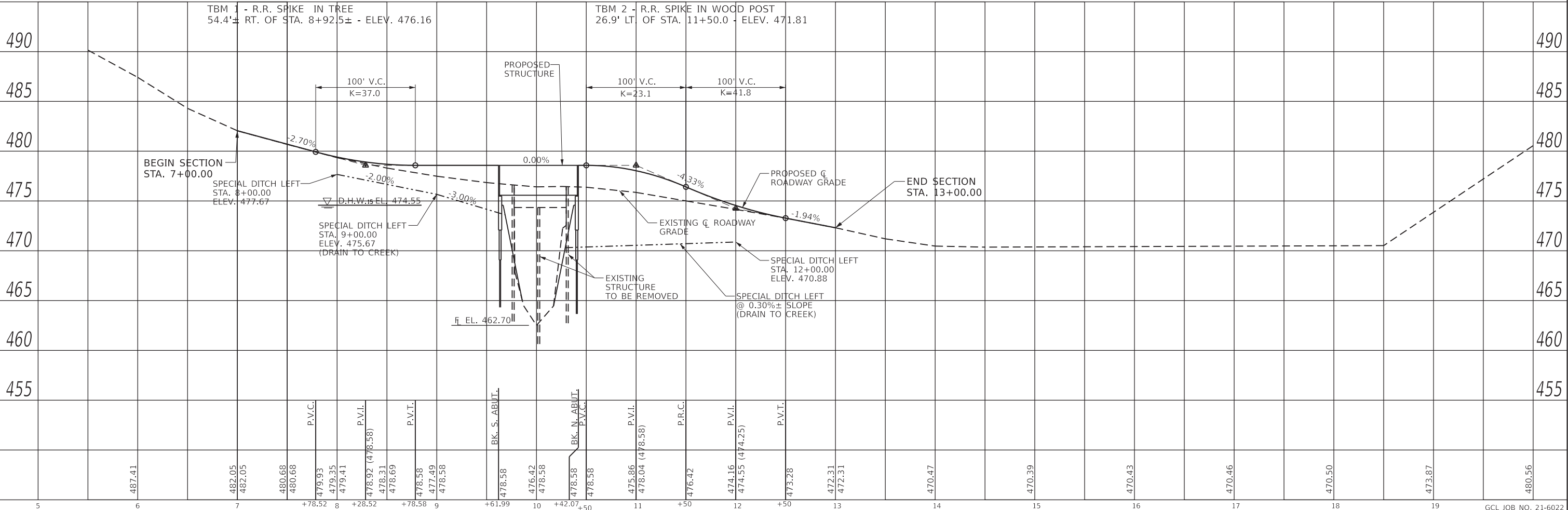
DATE	BY	SURVEYED	NOTED	CHECKED	STRUCTURE NOTATION CPND
PROFILE	NOTE BOOK NO.	NO.	NO.	NO.	NO.



TREE REMOVAL, ACRES	
LOCATION (Q TO PROPOSED R.O.W.)	ACRE
LT., STA. 8+45 TO STA. 12+00	0.3
RT., STA. 9+25 TO STA. 12+50	0.3
TOTAL	0.6

EARTHWORK SCHEDULE				
LOCATION	EARTH EXCAVATION CU. YD.	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE* CU. YD.	EMBANKMENT CU. YD.	EARTHWORK BALANCE** WASTE (+) OR SHORTAGE (-) CU. YD.
STA. 7+00.00 TO STA. 9+61.99	49	37	216	-179
STA. 10+42.07 TO STA. 13+00.00	56	42	561	-519
TOTAL	105	79	777	-698

*25% SHRINKAGE **FURNISHED EXCAVATION



5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	487.41	482.05	482.05	480.68	480.68	479.93	479.35	479.41	478.92 (478.58)	478.31	478.69	478.58	477.49	478.58	478.58	476.42	478.58	478.58	475.86	478.04 (478.58)	476.42	474.16	474.55 (474.25)	473.28	472.31	472.31	470.47	470.39	470.43	470.46	470.50	473.87	480.56
GONZALEZ COMPANIES, LLC 7 CARPENTER DRIVE SALEM, IL 62881 PHONE (618) 222-2221 www.gonzalezcs.com ILLINOIS PROFESSIONAL DESIGN FIRM 184,004564		DESIGNED - BLT	REVISIED -	DATE - 10/26/2023	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		PLAN AND PROFILE OF ROADWAY		ROUTE TR 164		SECTION 19-04120-00-BR	COUNTY BOND	TOTAL SHEETS 11	SHEET NO. 3	CONTRACT NO. 97825		GCL JOB NO. 21-6022																													

BENCH MARK: TBM#1: R.R. Spike in Base of Tree
 54.4'± Rt. of Sta. 8+92.5± - Elev. 476.16
 TBM#2: R.R. Spike in Wood Fence Corner Post
 26.9'± Lt. of Sta. 11+50.0± - Elev. 471.81

Existing Structure: Structure No.: 003-3404. Two span bridge with precast concrete channel beams on closed timber abutments with concrete caps and a timber pile bent pier with concrete cap. 53.3'± L. x 22.5'± W. To be removed.

BILL OF MATERIALS (BRIDGE ONLY)

ITEM	UNIT	TOTAL
Channel Excavation	Cu Yd	205
Removal of Existing Structures	Each	1
Concrete Structures	Cu Yd	32.6
Concrete Encasement	Cu Yd	2.8
PPCDB (33" Depth)	Sq Ft	1872
* Reinforcement Bars, Epoxy Coated	Pound	5120
Steel Railing, Type S1	Foot	160
Furnishing Steel Piles HP12x53	Foot	545
Driving Piles	Foot	545
Test Pile Steel HP12x53	Each	1
Name Plates	Each	1
Terminal Marker - Direct Applied	Each	4
Porous Granular Embankment (Special)	Ton	126
** Stone Dumped Riprap, Class A4 (Special)	Ton	161

* See Sheet 2 for Test Bars
 ** Stone Dumped Riprap, Class A4 as called out in the plans refers to Stone Dumped Riprap, Class A4 (Special)

GENERAL NOTES

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

Channel excavation shall be excavated as shown within the limits of the proposed bridge, then tapered to the existing channel 36' Lt. & Rt. (from Centerline of the Bridge). If the Engineer deems the material satisfactory, it may be used to construct the roadway embankment.

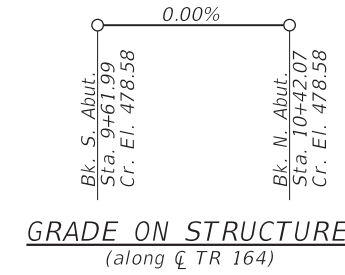
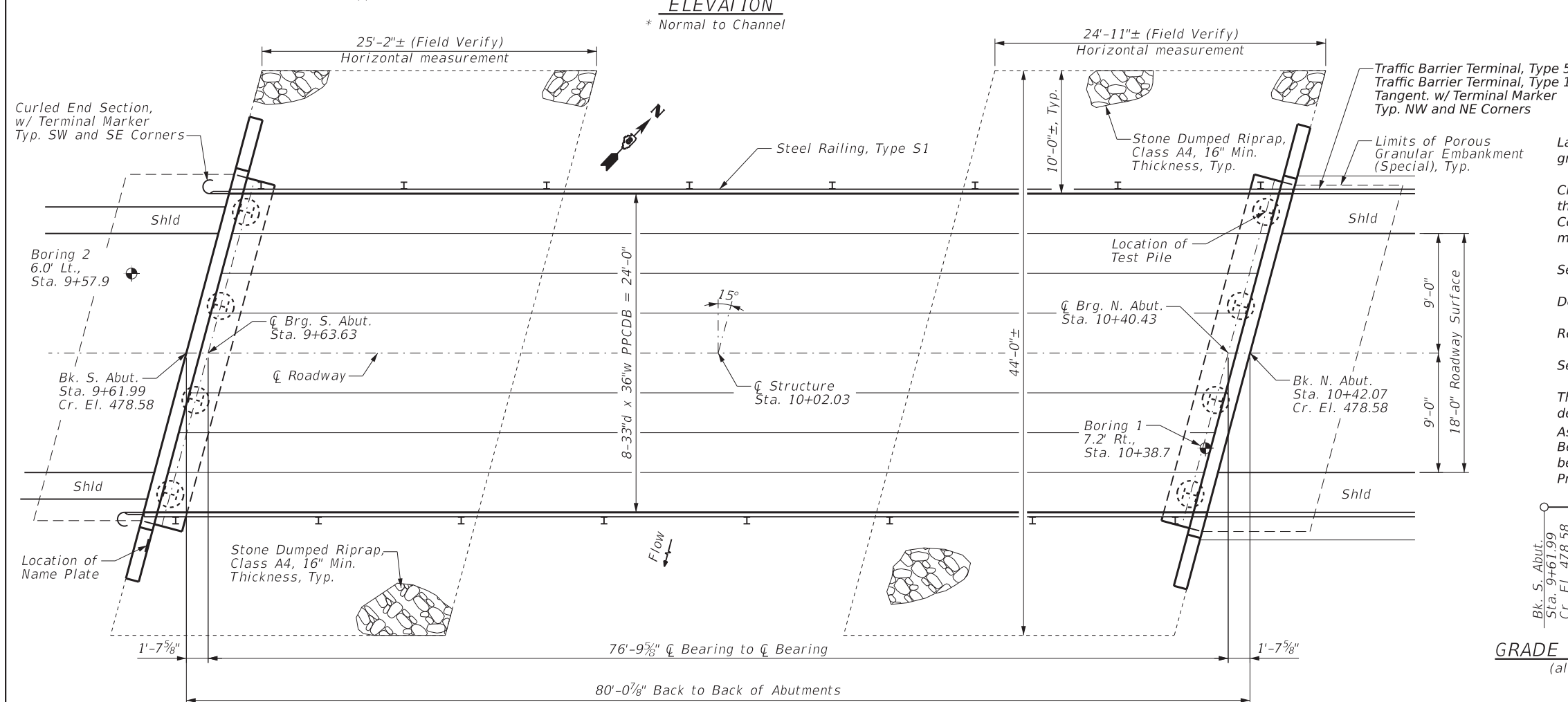
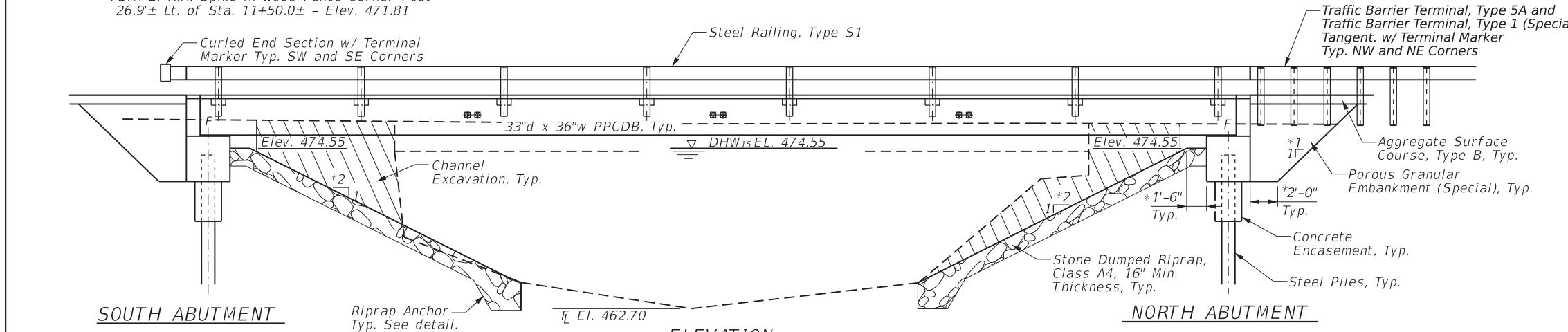
See Specifications for Soil Borings.

Do not scale these drawings.

Reinforcement bars designated (E) shall be epoxy coated.

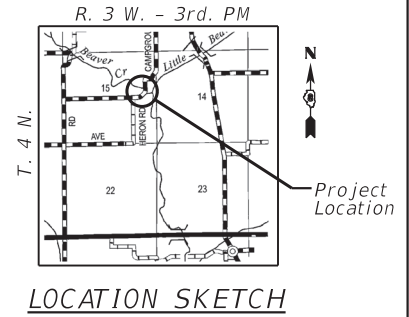
See Section 502 of the Standard Specifications for Structural Excavation.

The abutment bearing seat surfaces for the precast prestressed concrete deck beams shall be adjusted by shimming to assure firm and even bearing. As required, 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.



LITTLE BEAVER CREEK
 BUILT 20___ BY
 BOND COUNTY
 SEC. 19-04120-00-BR
 TR 164 STA. 10+02.03
 LOADING HL-93
 STRUCTURE NO. 003-3415

NAME PLATE
 See Std. 515001



WATERWAY INFORMATION

Drainage Area = 31.53 sq. mi. Exist. Low Grade Elev. 470.39 @ Sta. 15+00
 Prop. Low Grade Elev. 470.39 @ Sta. 15+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	15	4000	461	537	474.55	0.03	0.05	474.58	474.60	
Base	100	6330	461	613	475.73	0.04	0.03	475.77	475.76	
Max. Calc.	500	8440	461	613	476.63	0.04	0.04	476.67	476.67	

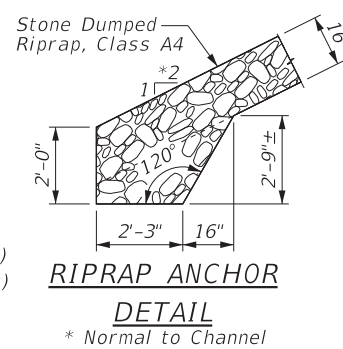
PLAN
LOADING HL-93
 50#/sq. ft. included for future wearing surface.

DESIGN SPECIFICATIONS
 AASHTO LRFD Bridge Design Specifications, 2020 (9th Edition)

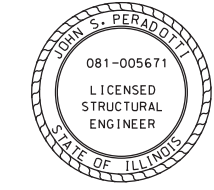
SEISMIC DATA
 Seismic Performance Zone (SPZ) = 3
 Soil Site Classification = E
 $S_{D1} = 0.356$ $S_{D5} = 0.782$

DESIGN STRESSES
FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
PRECAST PRESTRESSED UNITS
 $f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi (1/2" low lax. strands)
 $f_{pbt} = 201,960$ psi (1/2" low lax. strands)
 $f_y = 60,000$ psi (reinforcement)



I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.



John S. Peradotti
 Salem, Illinois
 Illinois Licensed Structural Engineer No. 081-005671
 Signed: 10/26/2023
 Expires Nov. 30, 2024

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

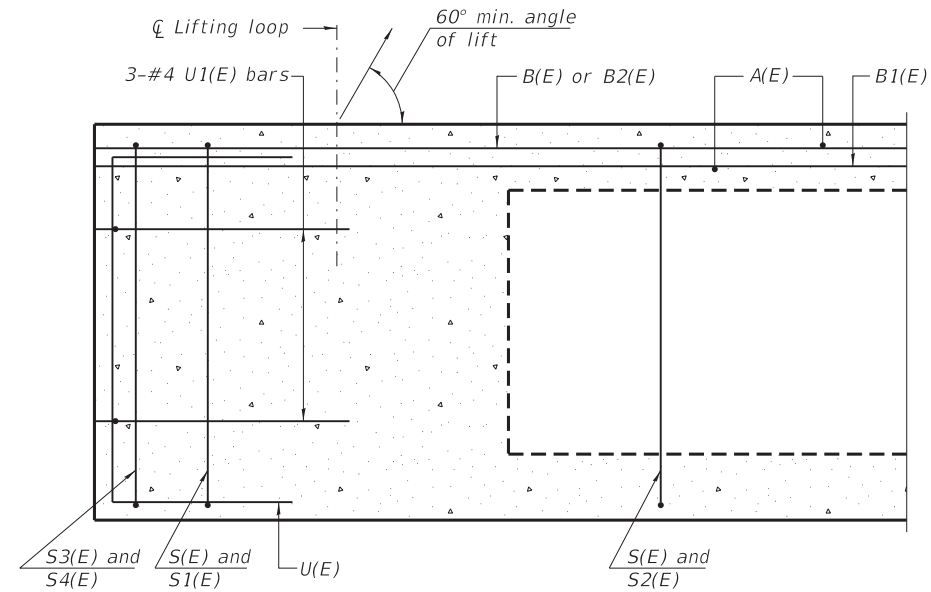
GENERAL PLAN AND ELEVATION
 STRUCTURE NUMBER 003-3415

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	19-04120-00-BR	BOND	11	4
CONTRACT NO. 97825				

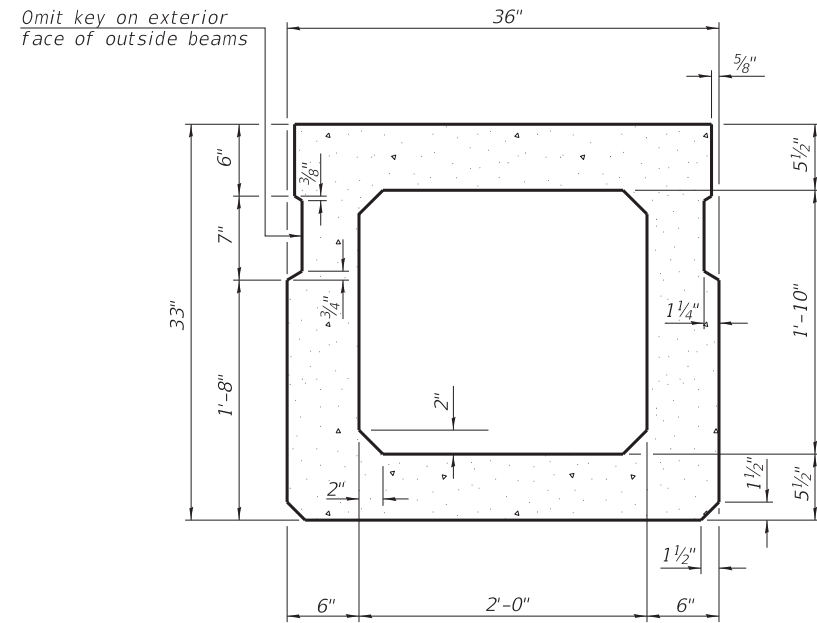
gonzalez
 GONZALEZ COMPANIES, LLC
 7 CARPENTER DRIVE
 SALEM, IL 62881
 PHONE (618) 222-2221
 www.gonzalezcs.com
 ILLINOIS PROFESSIONAL DESIGN FIRM 184,004564

DESIGNED	DRAWN	CHECKED	DATE	REVISED
JSP	JN/JMW	BLT	10/26/2023	-

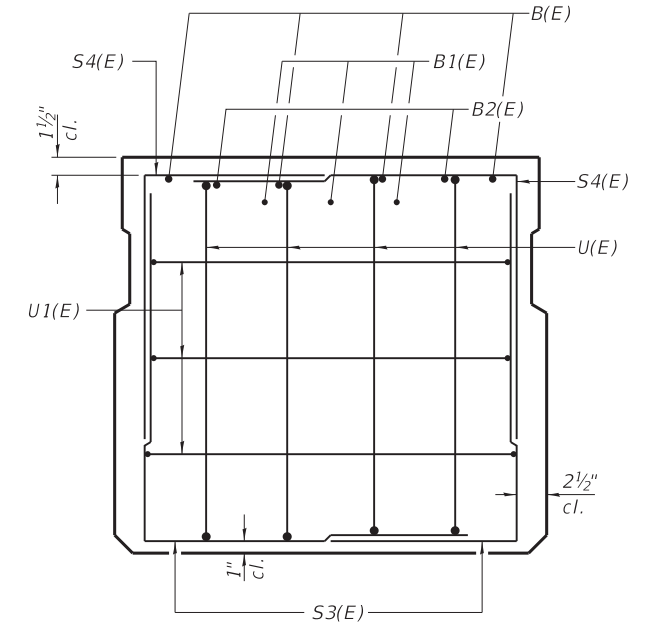
GCL JOB NO. 21-6022



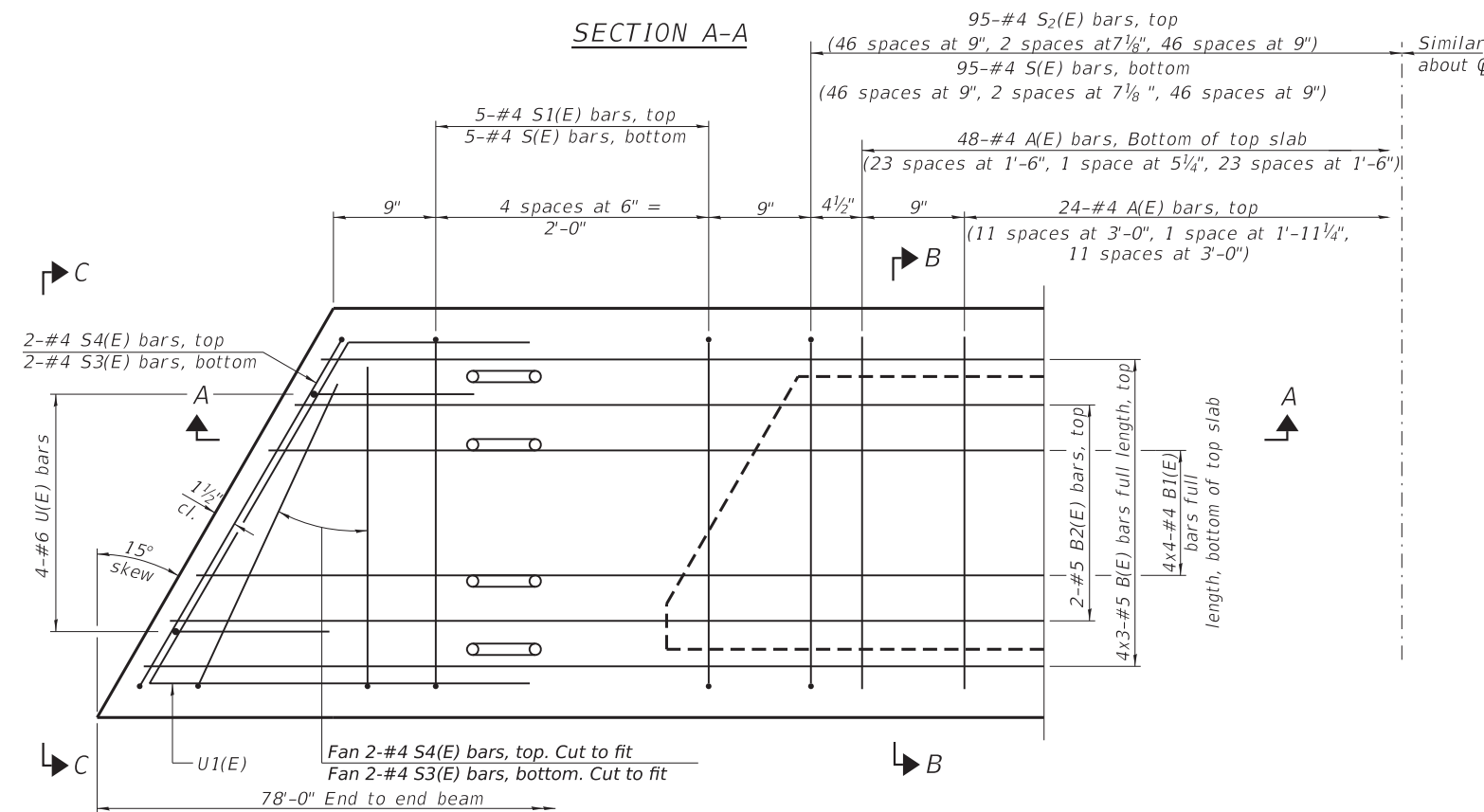
SECTION A-A



SECTION B-B
(Showing dimensions)



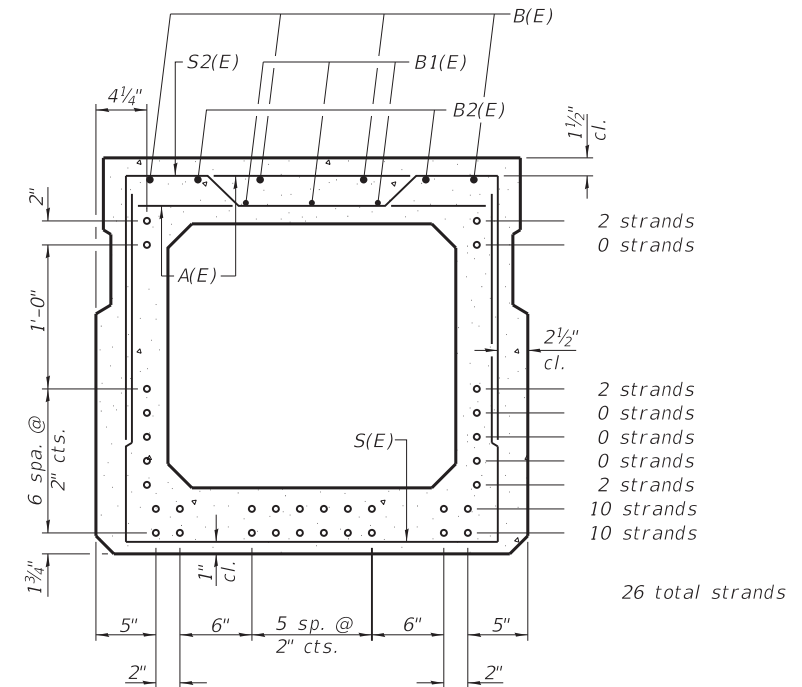
VIEW C-C



PLAN VIEW

Note: Spacing of S(E) and S₂(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

Bars indicated thus: 4x3-#5 etc. indicates 4 lines of bars with 3 lengths per line.



SECTION B-B
(Showing reinforcement and permissible strand locations)

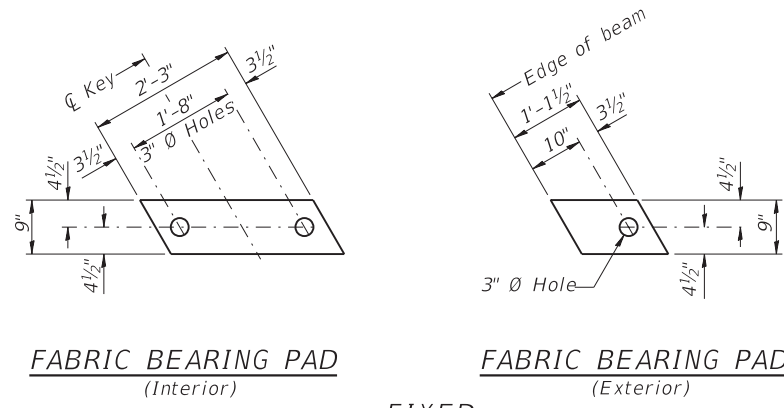
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	72	#4	2'-7"	—
B(E)	12	#5	27'-7"	—
B1(E)	16	#4	21'-0"	—
B2(E)	4	#5	10'-0"	—
S(E)	105	#4	7'-8"	┌
S1(E)	10	#4	6'-5"	┌
S2(E)	95	#4	6'-8"	┌
S3(E)	8	#4	5'-2"	┌
S4(E)	8	#4	4'-6"	┌
U(E)	8	#6	5'-0"	┌
U1(E)	6	#4	5'-10"	┌

Note: See Sheet 6 for additional details and Bill of Material.

MINIMUM BAR LAP
#4 bar = 2'-0"
#5 bar = 2'-6"

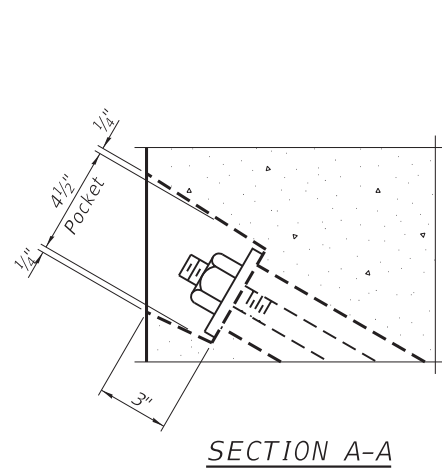


FABRIC BEARING PAD
(Interior)

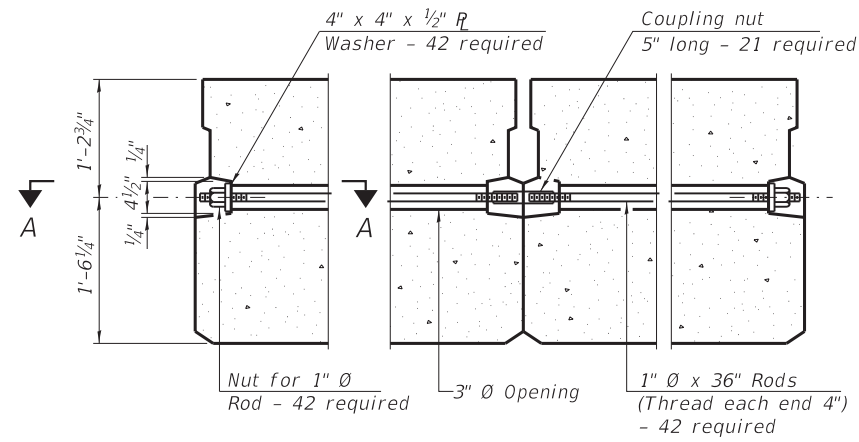
FABRIC BEARING PAD
(Exterior)

FIXED

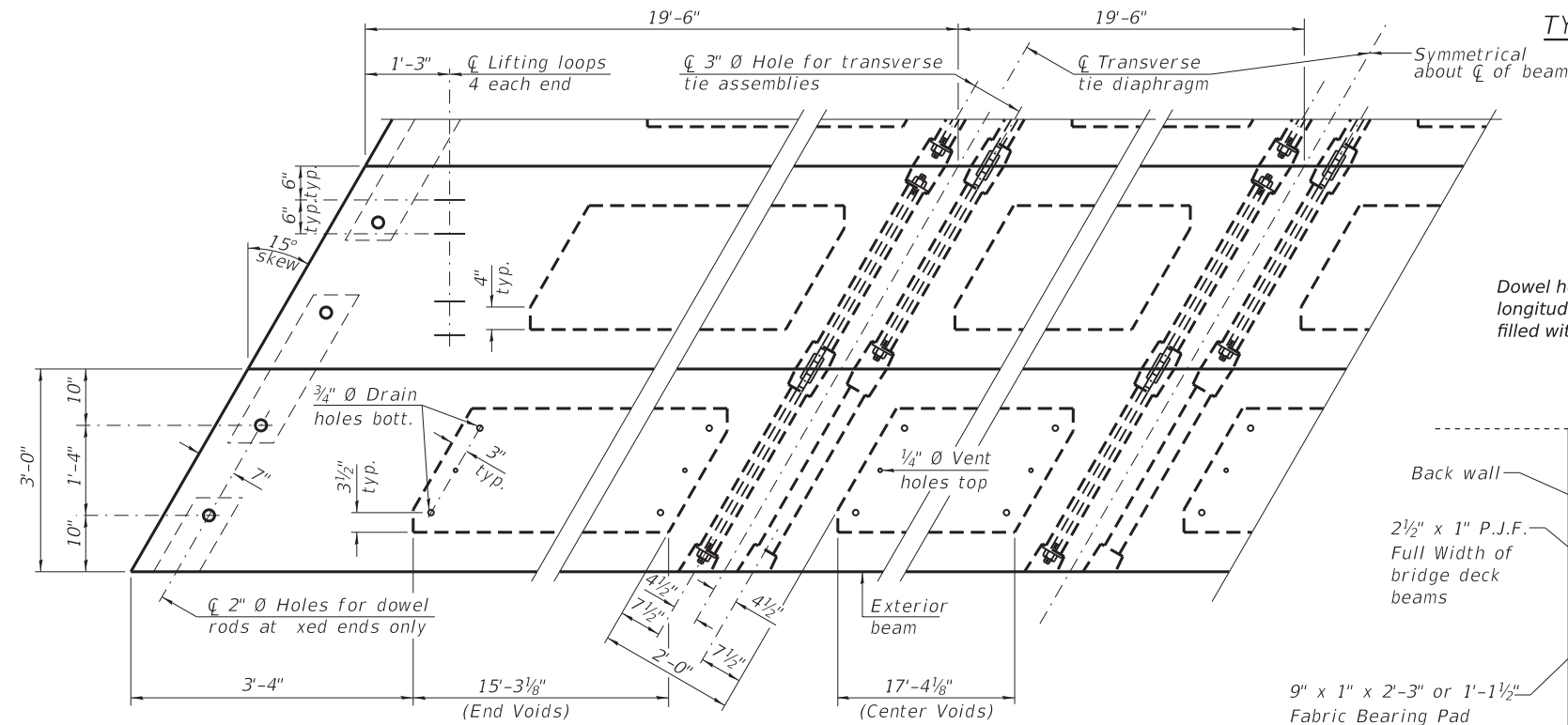
Notes: All bearing pads shall be 1" thick.



SECTION A-A

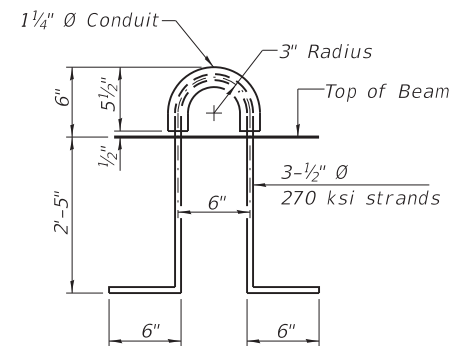


TYPICAL TRANSVERSE TIE ASSEMBLY

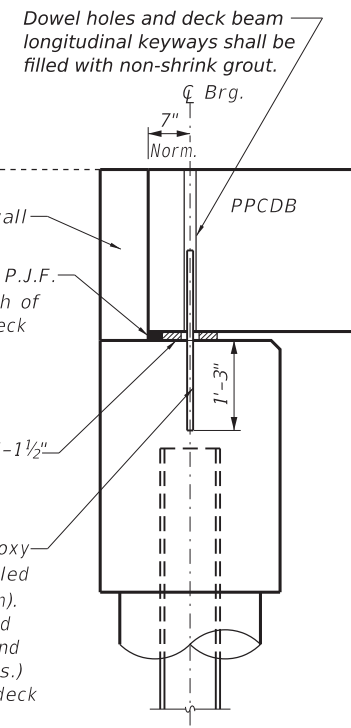


PLAN VIEW

Note: Connect beams in pairs with the transverse tie configuration shown.

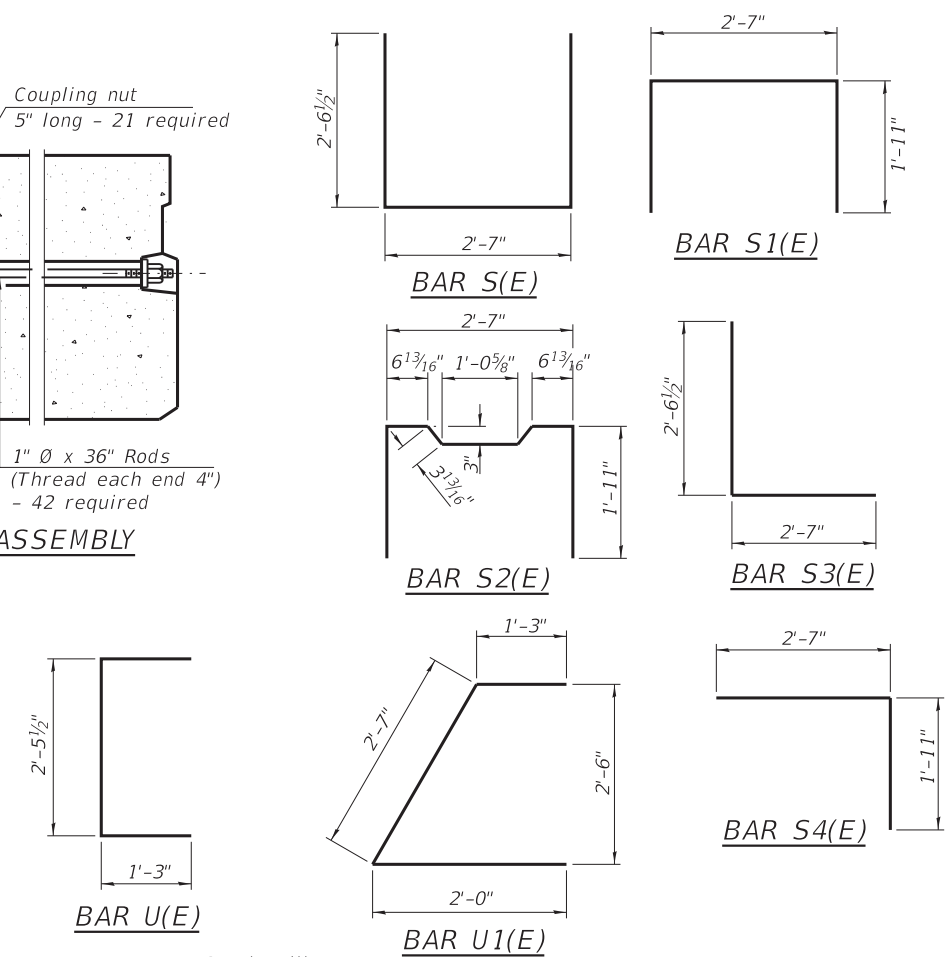


LIFTING LOOP DETAIL



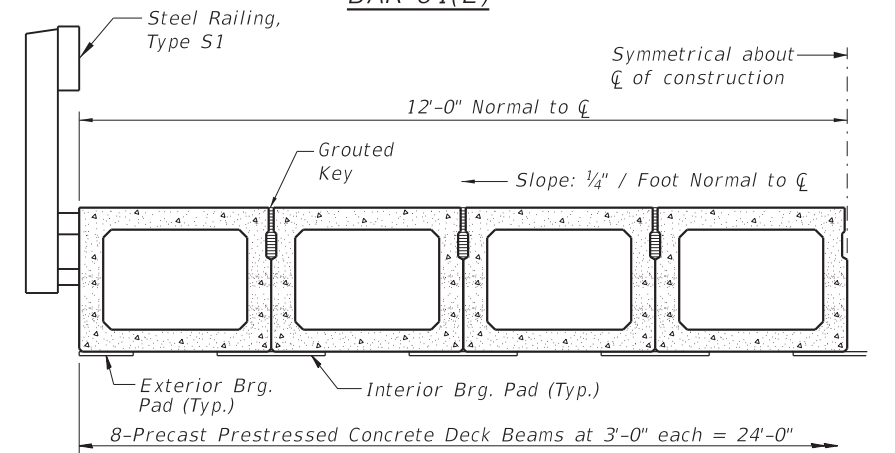
FIXED BEARING ABUTMENT

1" x 2'-6" Dowel Rods (Epoxy Coated) in 1 1/2" holes drilled in cap (2 Ea. End, Ea. Beam). Dowel rods shall be grouted after beams are in place and allowed to cure (min. 24 hrs.) prior to start of grouting deck beam longitudinal keyways.



BAR U(E)

BAR U1(E)



HALF CROSS SECTION

See Sheet 7 for the details showing the spacing and mounting of posts and rails to the PPCDB.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (33" depth)	Sq. Ft.	1872
---	---------	------

NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Reinforcement bars shall conform to ASTM A 706, Grade 60. (IL. Modified).
- The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
- Compressive strength of prestressed concrete, f_c , shall be 6000 psi.
- Compressive strength of prestressed concrete at release, f_{ci} , shall be 5000 psi.



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7 CARPENTER DRIVE
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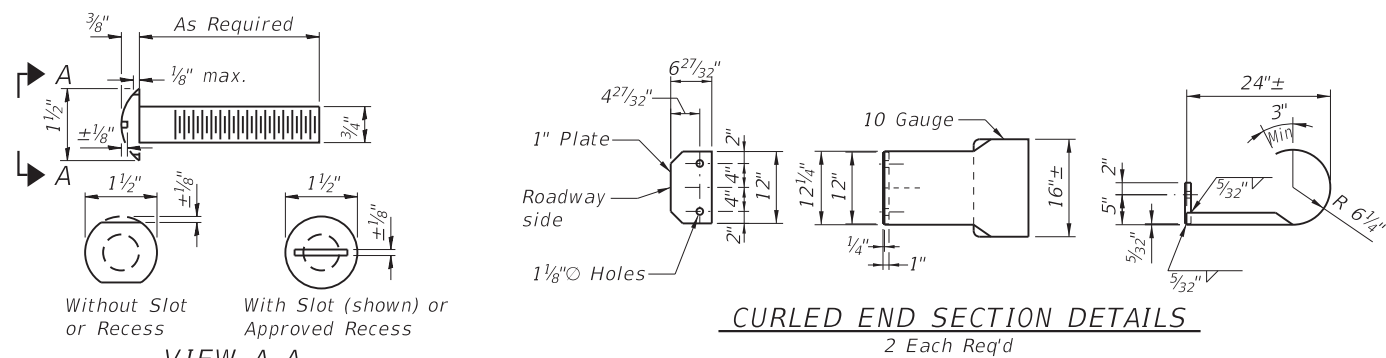
DESIGNED - JSP	REVISED -
DRAWN - JN/JMW	REVISED -
CHECKED - BLT	REVISED -
DATE - 10/26/2023	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST PRESTRESSED CONCRETE DECK BEAM DETAILS

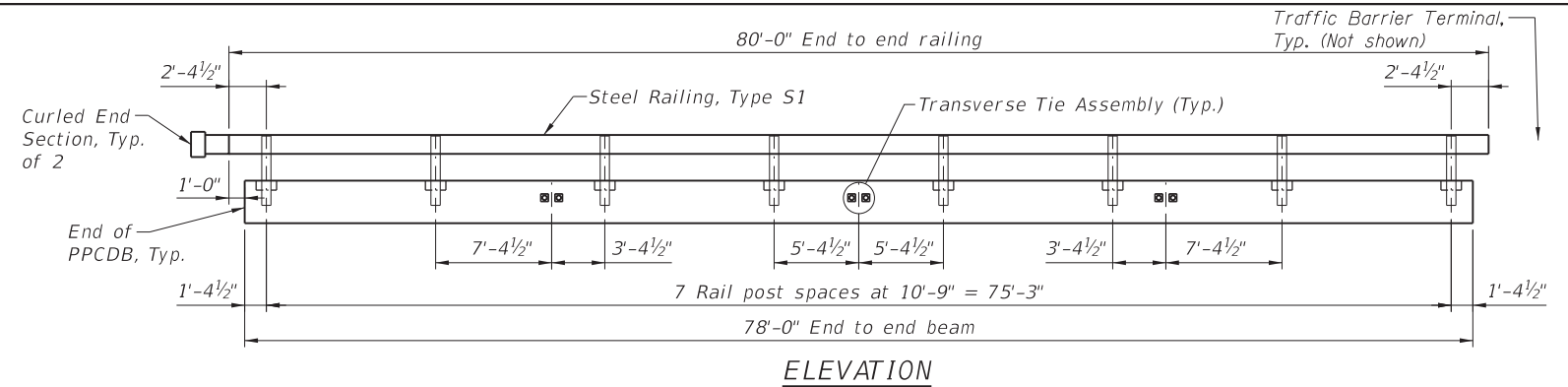
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TR 164		19-04120-00-BR	BOND	11	6
CONTRACT NO. 97825					

GCL JOB NO. 21-6022

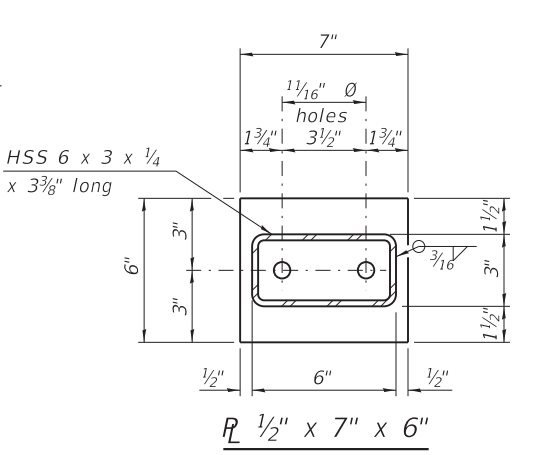
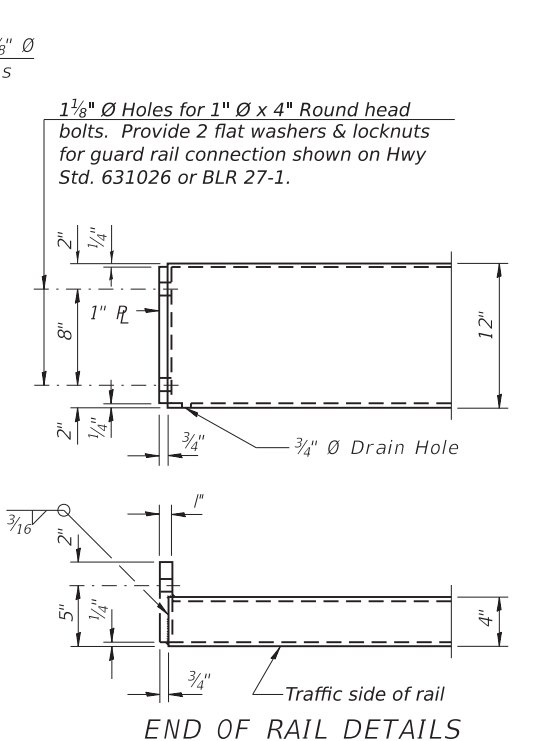
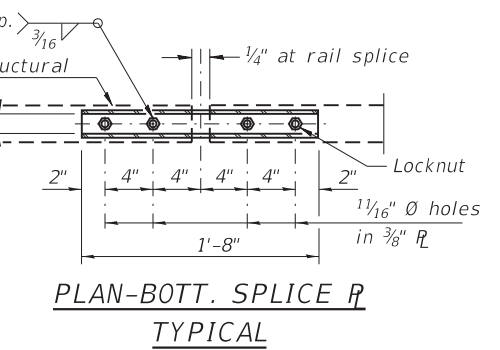
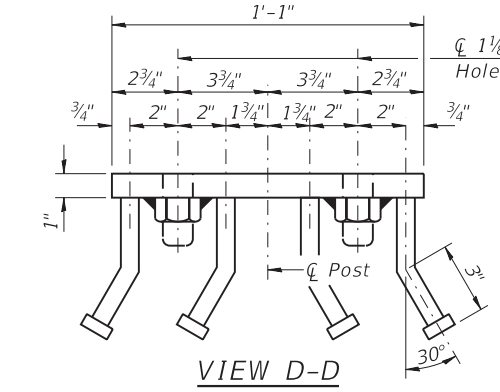
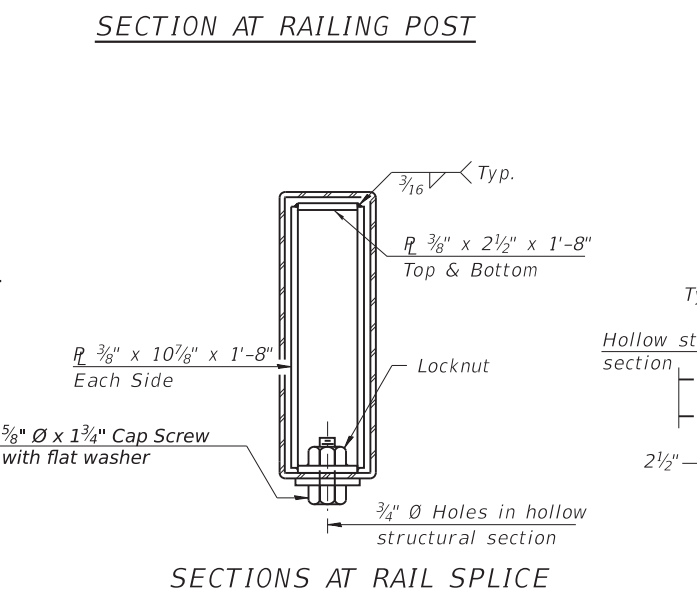
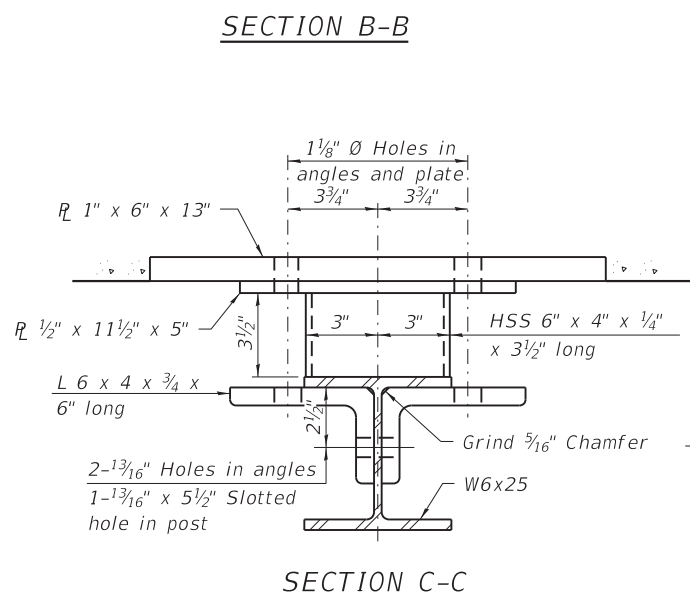
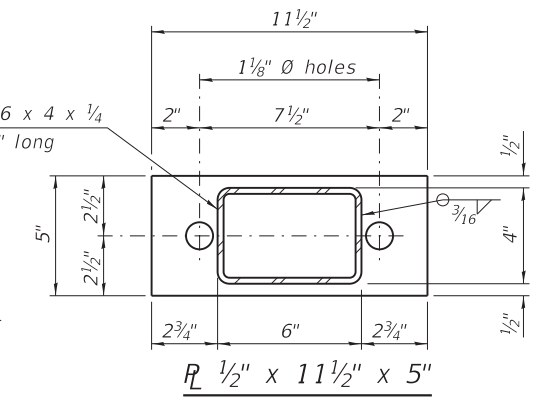
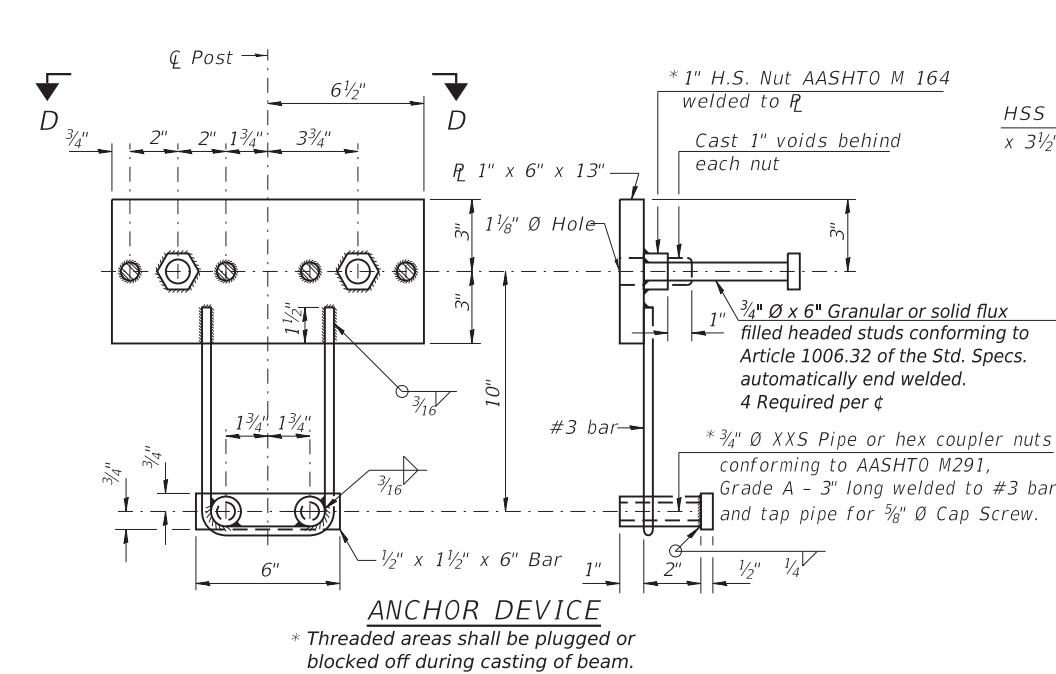
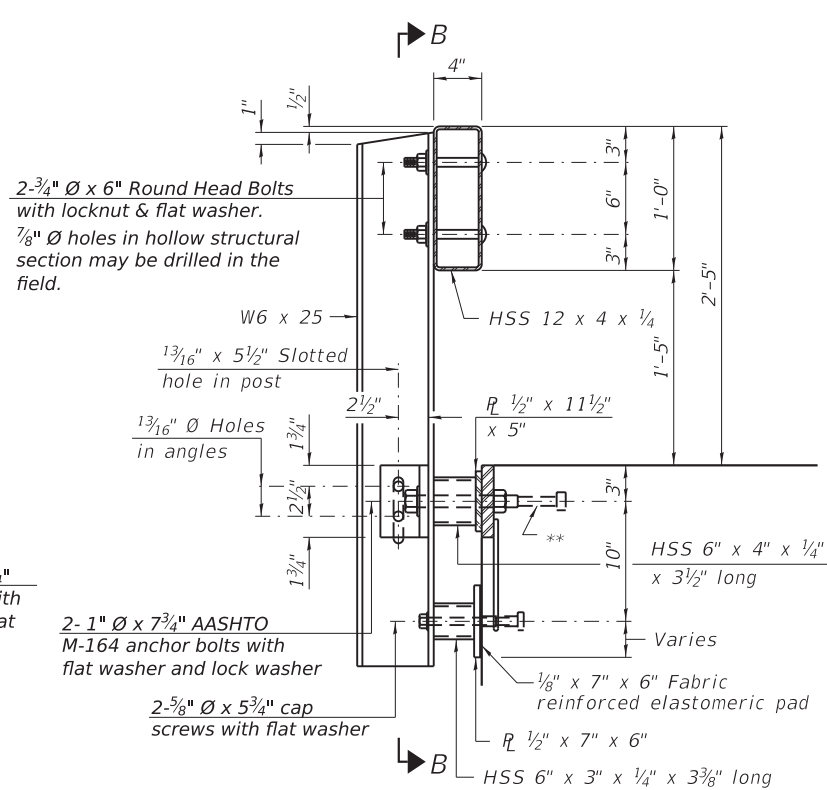
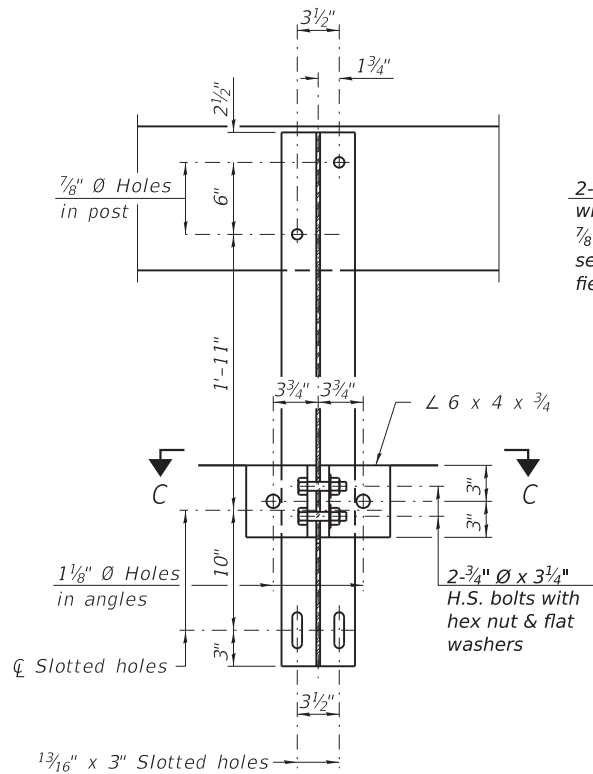


VIEW A-A
ROUND HEAD BOLT

Without Slot or Recess
With Slot (shown) or Approved Recess



Note: The cost of the Curled End Sections shall be included in the contract unit price per foot for "STEEL RAILING, TYPE S1", and no additional compensation will be allowed.



Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device. The anchorage studs may be bent down 1/2 inch to accommodate the top reinforcement bar placement.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S1	Foot	160

R-23A (10'-9" Maximum Post Spacing)

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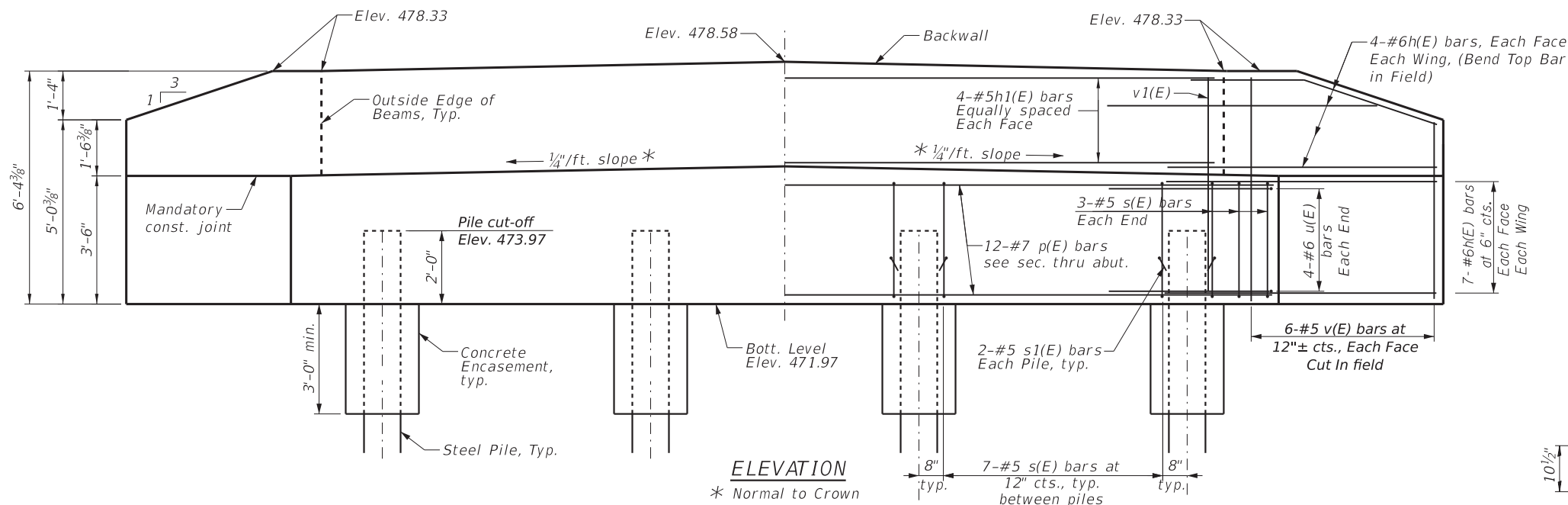
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CHECKED - BLT
DATE - 10/26/2023

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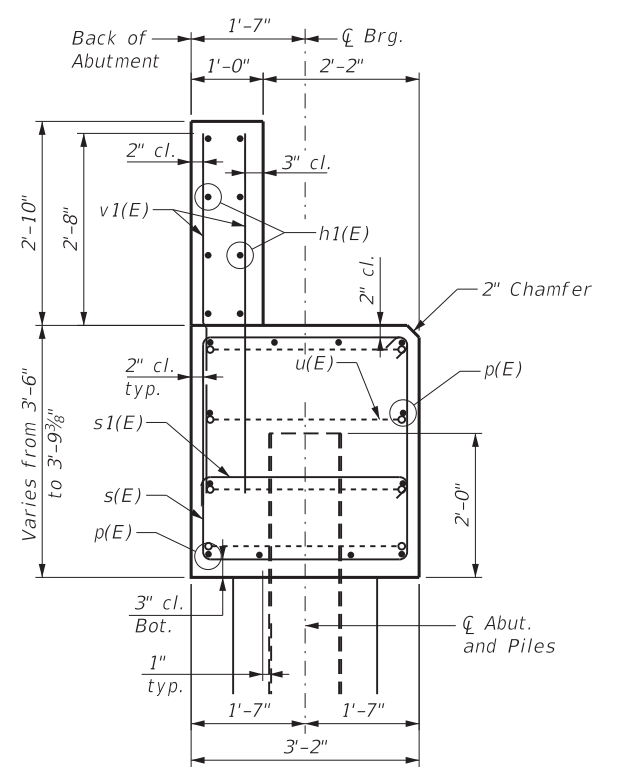
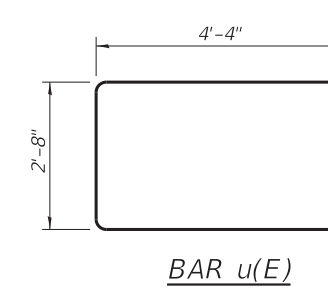
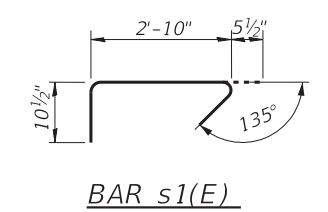
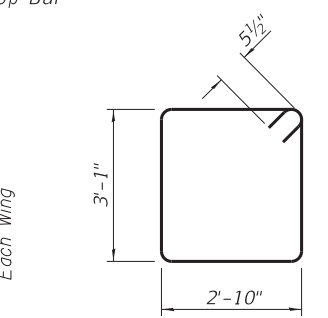
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STEEL RAILING, TYPE S1 DETAILS

GCL JOB NO. 21-6022
ROUTE SECTION COUNTY TOTAL SHEETS SHEET NO.
TR 164 19-04120-00-BR BOND 11 7
CONTRACT NO. 97825



ELEVATION
* Normal to Crown

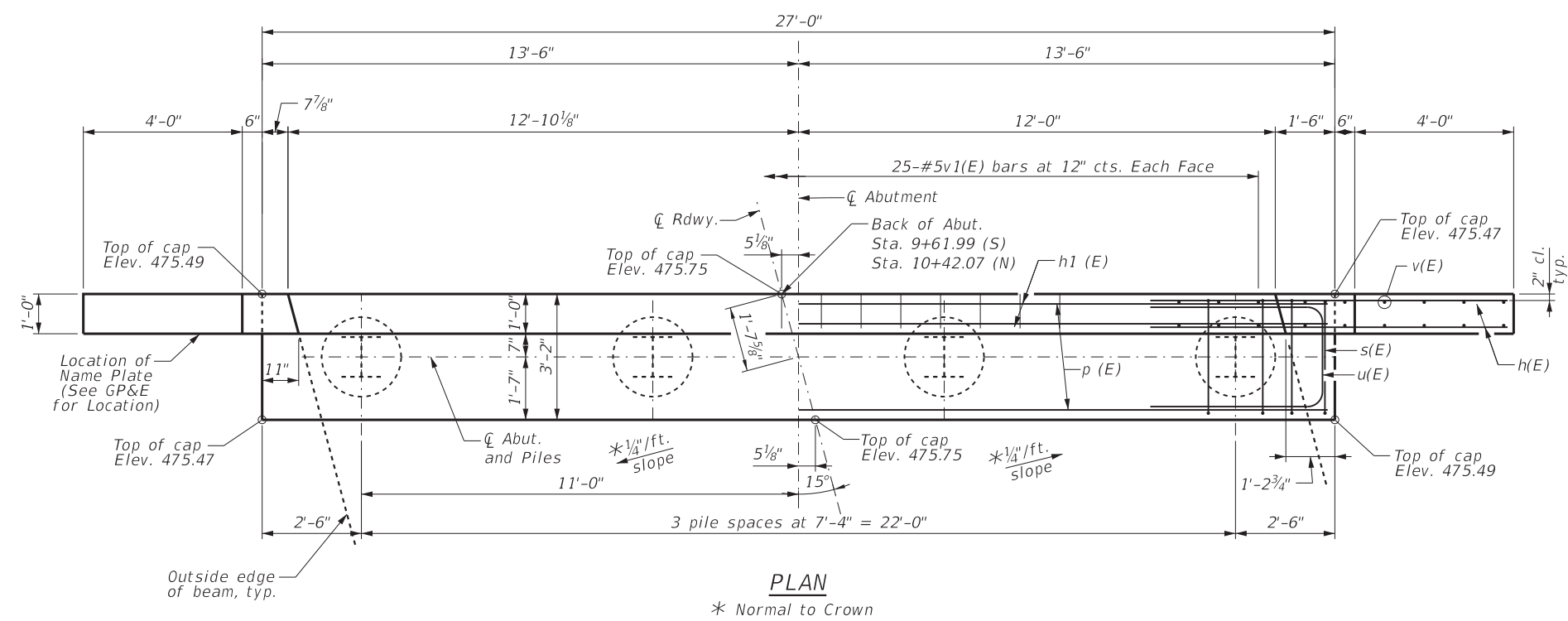


SECTION THRU ABUTMENT
(Normal to Abutment)

BILL OF MATERIAL FOR ONE ABUTMENT

Bar	No.	Size	Length	Shape
h(E)	44	#6	10'-0"	—
h1(E)	8	#5	24'-6"	—
p(E)	12	#7	26'-8"	—
s(E)	27	#5	12'-9"	□
s1(E)	8	#5	4'-2"	└
u(E)	8	#6	11'-4"	┌
v(E)	24	#5	6'-0"	—
v1(E)	50	#5	5'-10"	—
Concrete Structures		Cu Yd	16.3	
Concrete Encasement		Cu Yd	1.4	
Reinforcement Bars, Epoxy Coated		Pound	2510	
Furnishing Steel Piles HP12x53		Foot	S. Abut. 308 N. Abut. 237	
Driving Piles		Foot	S. Abut. 308 N. Abut. 237	
Test Pile, Steel HP12x53		Each	S. Abut. 0 N. Abut. 1	

Notes:
For details of Piles and Concrete Encasement, see sheet 9.



PLAN
* Normal to Crown

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60 (IL Modified).
All exposed edges shall have standard 3/4" chamfer, unless otherwise noted or as directed by the Engineer.
All clearances between rebar and form surface shall be 2", unless otherwise noted.
Space reinforcement in cap to miss PPCDB dowel rods.
The Steel H-piles shall be according to AASHTO M270 Grade 50.

The Contractor shall drive one (1) Test Pile of the size indicated in a permanent location as shown on the plans or as directed by the Engineer before ordering the remainder of the piles.
The Test Pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.
The back wall and portion of the wingwalls above the construction joint shall be cast against the in-place deck beams.
The position of the 90° & 135° hooked ends of the s1(E) bar shall be alternated between adjacent bars horizontally.

PILE DATA SOUTH ABUTMENT

Type: Steel HP12x53
Nominal Required Bearing: 418 kips
Factored Resistance Available: 230 kips
Est. Length: 77'/pile
No. Production Piles: 4
No. Test Piles: 0

PILE DATA NORTH ABUTMENT

Type: Steel HP12x53
Nominal Required Bearing: 418 kips
Factored Resistance Available: 230 kips
Est. Length: 79'/pile
No. Production Piles: 3
No. Test Piles: 1

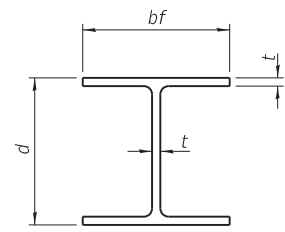
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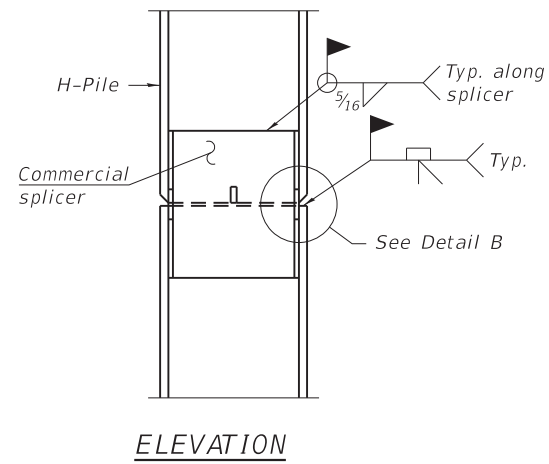
ABUTMENT DETAILS

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	19-04120-00-BR	BOND	11	8
CONTRACT NO. 97825				

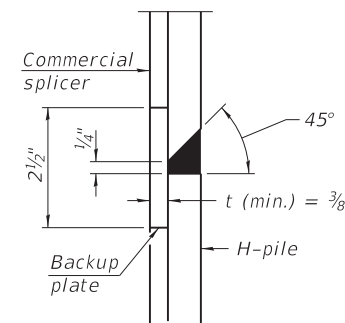


STEEL PILE TABLE

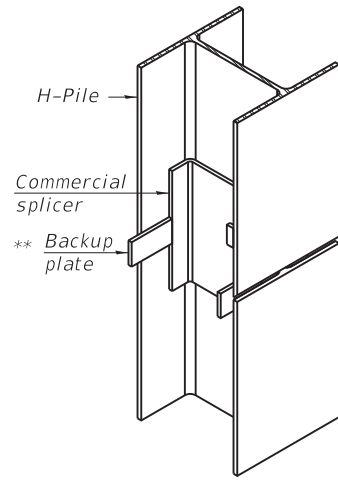
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION

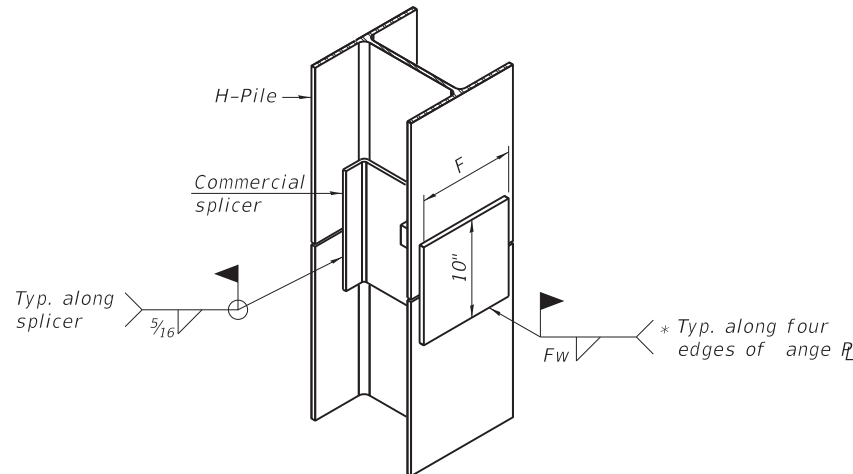


DETAIL "B"



ISOMETRIC VIEW

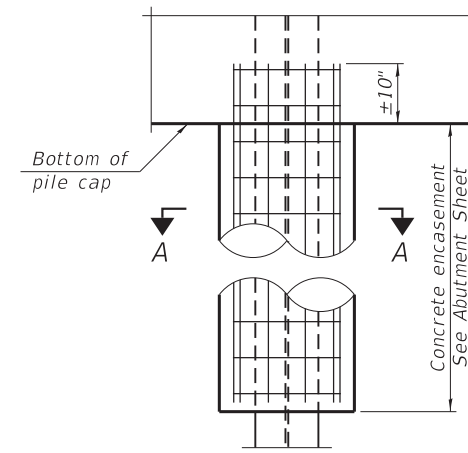
WELDED COMMERCIAL SPLICE



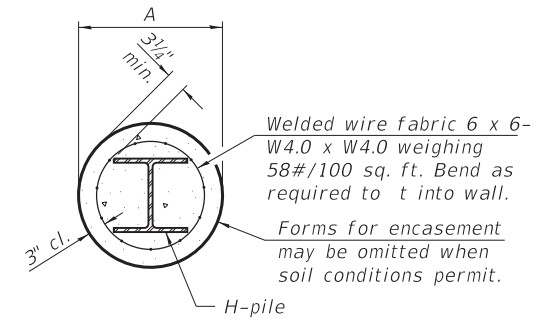
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each angle.
- ** Remove portions of backup plates that extend outside the angles.
- *** Weld size per pile shoe manufacturer (5/16" min.).

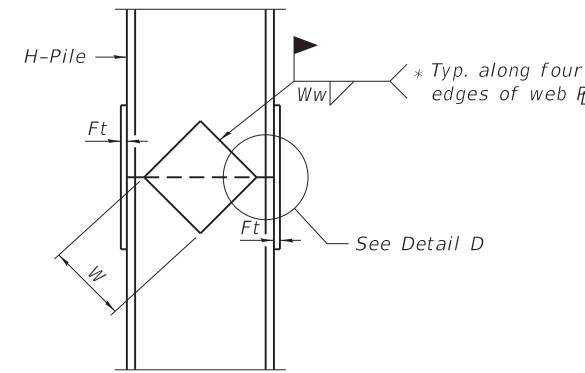


ELEVATION

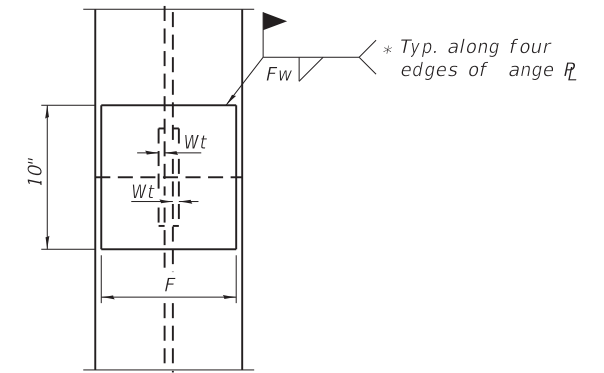


SECTION A-A

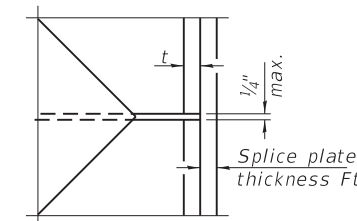
INDIVIDUAL PILE CONCRETE ENCASEMENT
(when specified)



ELEVATION



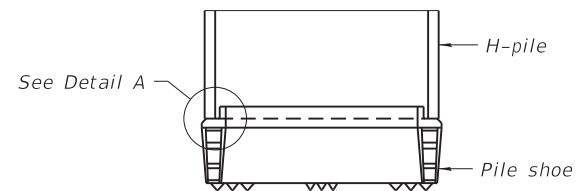
END VIEW



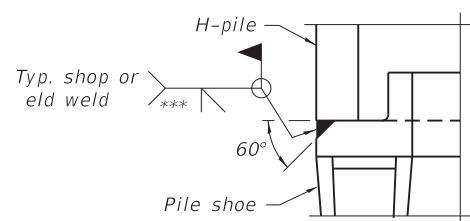
DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"



ELEVATION



DETAIL A

SHOE ATTACHMENT

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.



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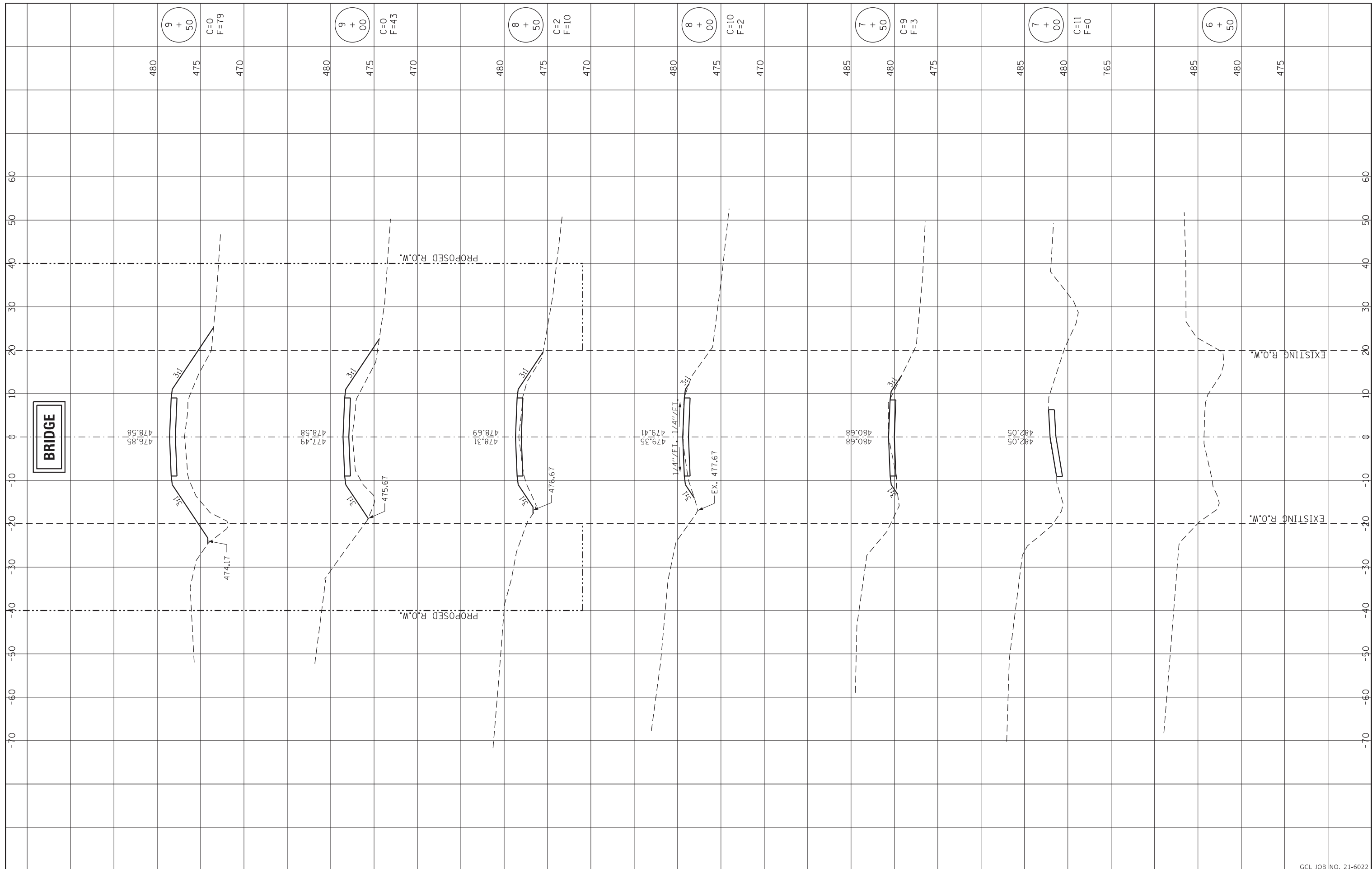
HP PILE DETAILS

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	19-04120-00-BR	BOND	11	9
CONTRACT NO. 97825				

GCL JOB NO. 21-6022

FINAL SURVEY NO.	SURVEYED BY	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED BY	DATE
NOTE BOOK	TEMPLATE	
AREAS CHECKED		



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DATE -	10/26/2023	REVISED -	

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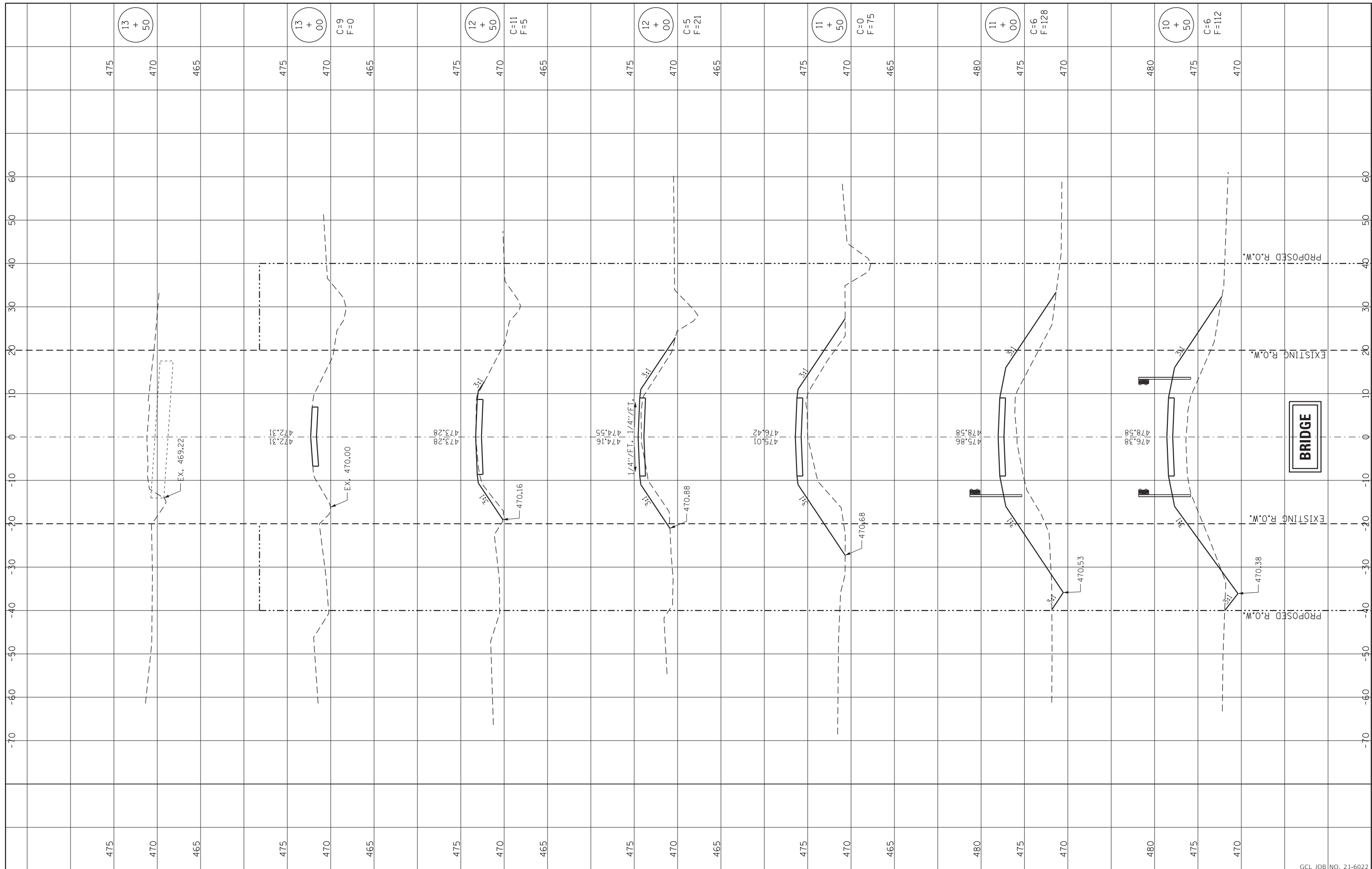
CROSS SECTIONS OF ROADWAY
 STA. 6+50 TO STA. 9+50

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	19-04120-00-BR	BOND	11	10
CONTRACT NO. 97825				

GCL JOB NO. 21-6022

FINAL SURVEY NO.	SURVEYED AREAS	BY	DATE
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	CHECKED AREAS		

ORIGINAL SURVEY NO.	SURVEYED AREAS	BY	DATE
NOTE BOOK NO.	TEMPLATE AREAS		
	CHECKED AREAS		



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CROSS SECTIONS OF ROADWAY
STA. 10+50 TO STA. 13+50

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 164	19-04120-00-BR	BOND	11	11
CONTRACT NO. 97825				

GCL JOB NO. 21-6022