

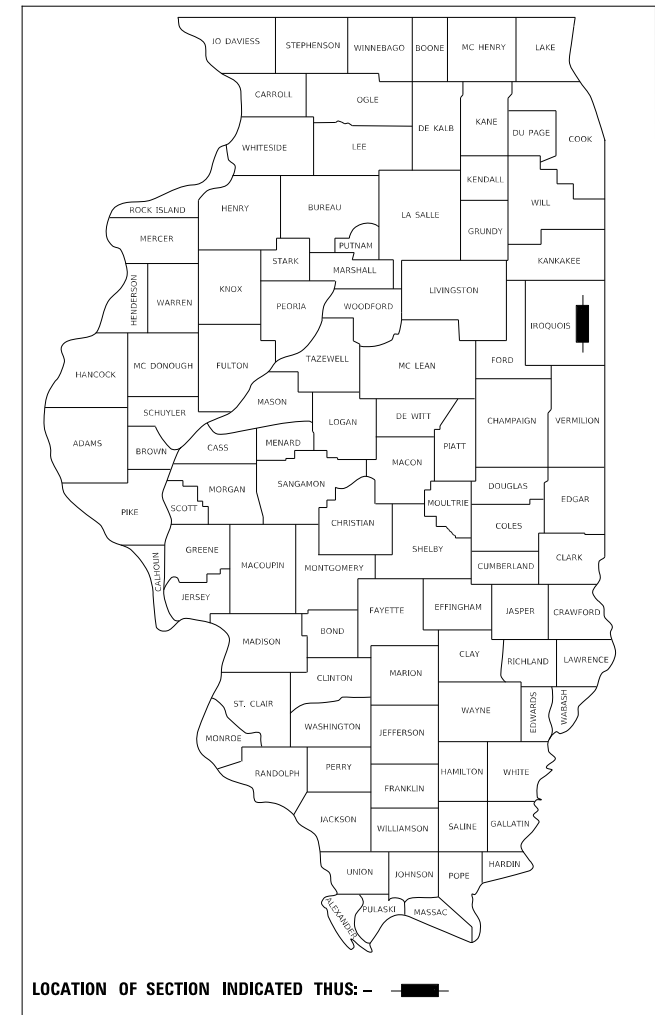
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	1
CONTRACT NO. 87850				
FED ROAD DIST. NO.7	ILLINOIS	FED AID PROJECT NO. 54W8(571)		

INDEX OF SHEETS

03-07-2025 LETTING ITEM 128

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES, TYPICAL SECTIONS, SUMMARY OF QUANTITIES
3	TRAFFIC CONTROL PLAN
4	PLAN SHEET
5-25	STRUCTURE PLANS

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION PLANS FOR PROPOSED LOCAL BRIDGE FORMULA PROGRAM IROQUOIS COUNTY SECTION 22-00149-03-BR F.A.S. 330 (COUNTY HIGHWAY 31) OVER IROQUOIS RIVER PROJECT NO. 54W8(571) JOB NUMBER C-93-004-25

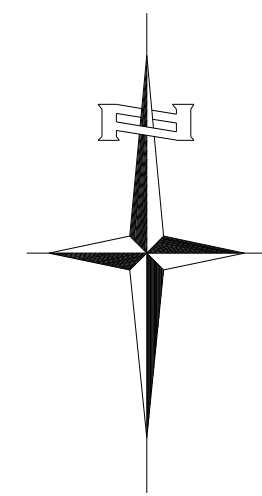
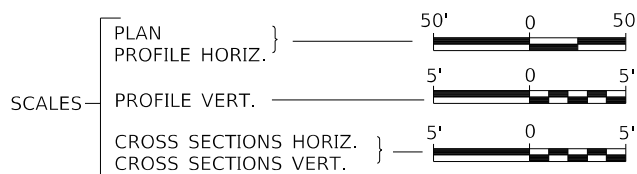


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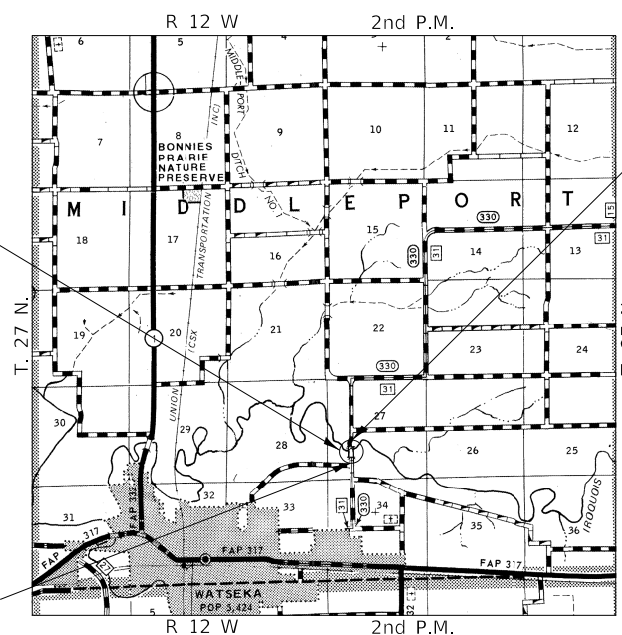
HIGHWAY STANDARDS

- 000001-08 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 420406 PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB
- 630301-09 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS

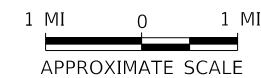
- 631032-10 TRAFFIC BARRIER TERMINAL, TYPE 6A
- 701901-10 TRAFFIC CONTROL DEVICES
- BLR 21-9 TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS



EXISTING STRUCTURE SN 038-4603
THREE SPAN STEEL PLATE GIRDER W/ A REINFORCED CONC. DECK ON STUB ABUTMENTS AND HAMMERHEAD PIERS
±254'-4 3/4" BK TO BK, ±34'-6" O TO O DECK, 30° SKEW RT AH.



LOCATION MAP



NET LENGTH OF PROJECT = 350 FEET = 0.066 MILES

DESIGN CLASSIFICATION: MAJOR COLLECTOR
DESIGN ADT = 1420 (2044)
DESIGN SPEED = 50 MPH

UTILITY COMPANIES
EASTERN ILLINI ELECTRIC COOP
PAXTON, IL
AT&T COMMUNICATIONS

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

CONTRACT NO. 87850

SECTION 22-00149-03-BR
ENDS
STATION 640+25.50

SECTION 22-00149-03-BR
BEGINS
STATION 636+75.50

APPROVED DECEMBER 20, 2024
Ala Hanwood
IROQUOIS COUNTY ENGINEER

PASSED January 3, 2025
[Signature]
DISTRICT THREE ENGINEER OF LOCAL ROADS & STREETS

Released For Bid Based on Limited Review January 3, 2025
Juha Thompson
REGION TWO ENGINEER
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE: _____

 EXP: 11/30/2025
Jacob P. Savage
 SIGNATURE
 ENGINEERS SEAL

Hutchison Engineering, Inc.
 JACKSONVILLE-SHOREWOOD
 PEORIA-QUAD CITIES-CARBONDALE
 2024 JOB#4968

4968E001

COMMITMENTS

THERE ARE NO COMMITMENTS FOR THIS PROJECT.

GENERAL NOTES

ALL WASTE OR UNDESIRABLE MATERIAL AS IDENTIFIED BY THE ENGINEER SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY AT THE CONTRACTOR'S EXPENSE.

ALL EXISTING PRIVATELY OWNED UTILITIES REQUIRING ADJUSTMENT WILL BE MADE BY THE UTILITY COMPANY INVOLVED. WHERE NO PROVISIONS HAVE BEEN MADE FOR ADJUSTMENTS ON THE PLANS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO DELAYS OR INCONVENIENCES CAUSED BY THE SAID UTILITY ADJUSTMENTS.

ALL EXISTING DRAINAGE STRUCTURES NOT BEING REMOVED BY THE CONTRACTOR THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST KNOWLEDGE OF THE COUNTY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL INDEMNIFY THE COUNTY, ITS OFFICERS AND EMPLOYEES AGAINST ALL CLAIMS DUE TO DAMAGE TO CORPORATE OR PRIVATE PROPERTY RESULTING FROM HIS CONSTRUCTION OPERATIONS AS DESCRIBED IN ARTICLES 107.20 AND 107.26 OF THE STANDARD SPECIFICATIONS.

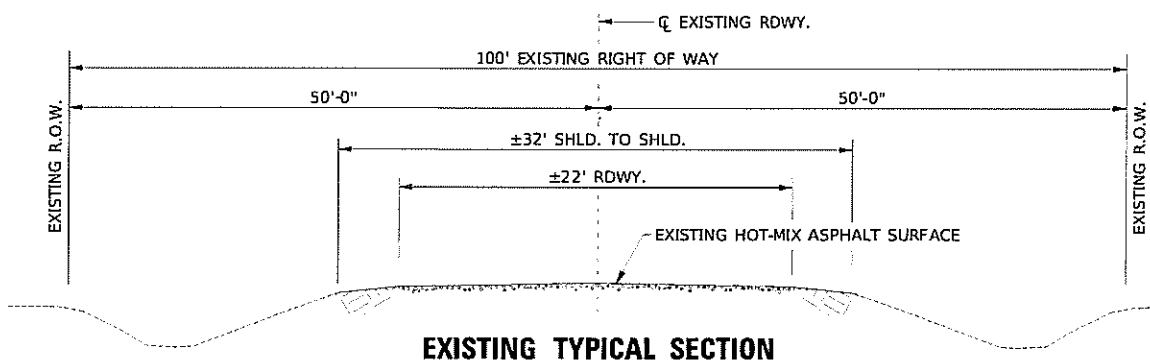
WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE PROPERTY MARKERS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

ALL ELEVATIONS SHOWN REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

	HMA BINDER	HMA SURFACE
PG GRADE:	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4% @ N50	4% @ N50
MIXTURE COMPOSITION:	IL-19.0	IL-9.5
FRICTION AGGREGATE:		MIXTURE C
DENSITY TEST METHOD:	CORES	CORES
MIXTURE WEIGHT:	112#/SQ YD/IN	112#/SQ YD/IN
QUALITY MANAGEMENT PROGRAM:	LR1030-2	LR1030-2
SUBLOT SIZE:	N/A	N/A
LOCATION(S):	STA. 636+75.50-636+93.87 STA. 640+07.13-640+25.50	STA. 636+75.50-636+93.87 STA. 640+07.13-640+25.50

If RAP option is selected, the asphalt cement grade may need to be adjusted. This will be determined by the Engineer.



EXISTING TYPICAL SECTION

STATION TO STATION	WIDTH	LENGTH	SQ YD
636+75.50 - 637+22.72	22'	47.22'	118
639+78.28 - 640+25.50	22'	47.80'	117
TOTAL			235

STATION TO STATION	SIDE	WIDTH	LENGTH	SQ YD
635+78.17 - 636+21.17	RT	3.63' AVG.	43.00'	17
636+21.17 - 636+75.50	RT	7.33'	54.33'	44
636+75.50 - 637+08.32	RT	4.33'	32.82'	16
637+08.32 - 637+18.67	RT	3.54' AVG.	10.35'	4
639+82.33 - 639+92.55	LT	3.54' AVG.	10.35'	4
639+92.55 - 640+25.50	LT	4.33'	32.82'	16
640+25.50 - 640+79.83	LT	7.33'	54.33'	44
640+79.83 - 641+30.00	LT	3.63' AVG.	50.17'	20
TOTAL				165

STATION TO STATION	SIDE	EACH
636+81.17 - 637+18.67	RT	1
639+83.33 - 640+19.83	LT	1
TOTAL		2

STATION TO STATION	SIDE	EACH
636+87.89 - 637+00.39	LT	1
640+00.61 - 640+13.11	RT	1
TOTAL		2

STATION TO STATION	SIDE	EACH
636+31.17 - 636+81.17	RT	1
640+19.83 - 640+69.83	LT	1
TOTAL		2

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	QUANTITY
28100209	STONE RIPRAP, CLASS A5	TON	820
28200200	FILTER FABRIC	SQ YD	865
42000070	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB	SQ YD	130
42001300	PROTECTIVE COAT	SQ YD	1003.8
44000173	HOT-MIX ASPHALT SURFACE REMOVAL, 6"	SQ YD	235
48203013	HOT-MIX ASPHALT SHOULDERS, 4"	SQ YD	165
50102400	CONCRETE REMOVAL	CU YD	11.2
50200100	STRUCTURE EXCAVATION	CU YD	255
50300225	CONCRETE STRUCTURES	CU YD	144.5
50300255	CONCRETE SUPERSTRUCTURE	CU YD	20.7
50300280	CONCRETE ENCASEMENT	CU YD	10.0
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	83.1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	47,480
50900200	STEEL RAILING, TYPE 2399	FOOT	87
51200957	FURNISHING METAL SHELL PILES 12" X 0.250"	FOOT	1,170
51202305	DRIVING PILES	FOOT	1,170
51203200	TEST PILE METAL SHELLS	EACH	2
52000110	PREFORMED JOINT STRIP SEAL	FOOT	84
52100010	ELASTOMERIC BEARING ASSEMBLY TYPE 1	EACH	10
52100520	ANCHOR BOLTS, 1"	EACH	20
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	120
58700300	CONCRETE SEALER	SQ FT	650
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	110
60146304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	100
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2
63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	2
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2
63200310	GUARDRAIL REMOVAL	FOOT	350
67100100	MOBILIZATION	L SUM	1
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	10
Z0003617	REMOVAL OF EXISTING SUB-STRUCTURES	EACH	2
Z0073400	TEMPORARY SUPPORT SYSTEM	EACH	2

① SPECIALTY ITEM

STATION TO STATION	WIDTH	SQ YD
636+75.50 - 636+93.87	29.50'	65
640+07.13 - 640+25.50	29.50'	65
TOTAL		130

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**IROQUOIS COUNTY
F.A.S. 330 (CH 31) OVER
IROQUOIS RIVER**

**GENERAL NOTES, TYPICAL SECTIONS,
SUMMARY OF QUANTITIES, SCHEDULE OF QUANTITIES**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. 636+75.50 TO STA. 640+25.50

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	2
FED. ROAD DIST. NO. 7 ILLINOIS			CONTRACT NO. 87850	
FED. AID PROJECT NO. 54W815711				

R 12 W, 2nd PM



1 BRIDGE CLOSED AT IROQUOIS RIVER 7 MILES AHEAD LOCAL TRAFFIC ONLY
 BRIDGE CLOSED AT IROQUOIS RIVER 7 MILES AHEAD LOCAL TRAFFIC ONLY

R11-3
 TO BE PLACED AT INTERSECTION OF US 52 AND 2200 E RD 7 MILES NORTH OF STRUCTURE

2 BRIDGE CLOSED AT IROQUOIS RIVER 1 1/4 MILES AHEAD LOCAL TRAFFIC ONLY
 BRIDGE CLOSED AT IROQUOIS RIVER 1 1/4 MILES AHEAD LOCAL TRAFFIC ONLY

R11-3

3 ROAD CLOSED 3/4 MILE AHEAD LOCAL TRAFFIC ONLY
 ROAD CLOSED 3/4 MILE AHEAD LOCAL TRAFFIC ONLY

R11-3



4 ROAD CLOSED AHEAD

ROAD CLOSED AHEAD



5 ROAD CLOSED 500 FT

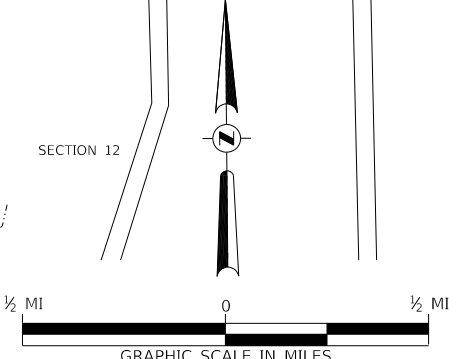
ROAD CLOSED 500 FT



6 TYPE III BARRICADES

TYPE III BARRICADES

SEE STANDARD BLR 21 AND SPECIAL PROVISIONS



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	DATE - 12/27/2024	REVISED -

**IROQUOIS COUNTY
 F.A.S. 330 (C.H. 31)
 OVER IROQUOIS RIVER**

TRAFFIC CONTROL PLAN

SCALE: NONE SHEET 1 OF 1 SHEETS STA. 636+93.87 TO STA. 640+07.13

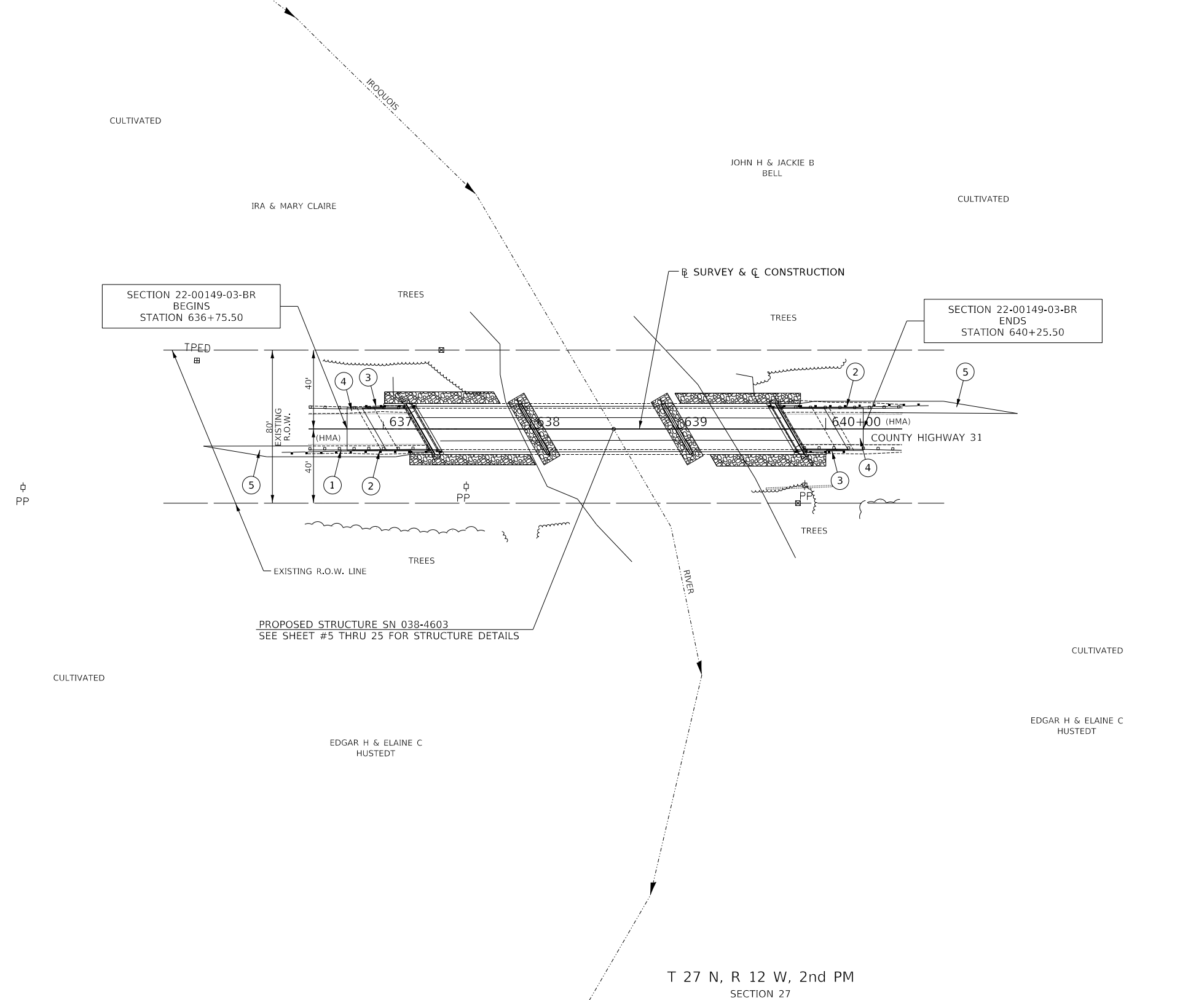
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330	22-00149-03-BR	IROQUOIS	25	3
CONTRACT NO. 87850				
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. 54W8(571)		

T 27 N, R 12 W, 2nd PM
SECTION 27

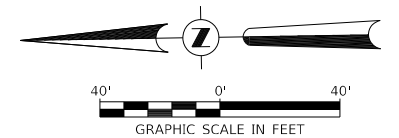
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	PLOTTED	BY
NOTE BOOK NO.	ALIGNED	CHECKED
	CADD FILE NAME	

PROFILE	SURVEYED	DATE
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NOTE BOOK NO.	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	

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- ① GUARDRAIL TO BE REMOVED
- ② PROPOSED TRAFFIC BARRIER TERMINALS TYPE 6A AND TYPE 1 SPECIAL TANGENT
- ③ PROPOSED TRAFFIC BARRIER TERMINALS TYPE 2
- ④ HMA PAVEMENT CONNECTORS
- ⑤ 4" PAVED HMA SHOULDERS



T 27 N, R 12 W, 2nd PM
SECTION 27

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	DRAWN - JPS	REVISED - _____
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PLOT DATE = 12/31/2024	DATE - 12/27/2024	REVISED - _____

**IROQUOIS COUNTY
F.A.S. 330 (CH 31) OVER
IROQUOIS RIVER**

PLAN

SCALE: 1"=50' SHEET NO. 1 OF 1 SHEETS STA. 636+75.50 TO STA. 640+25.50

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	4
CONTRACT NO. 87850				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. 54W8(571)		

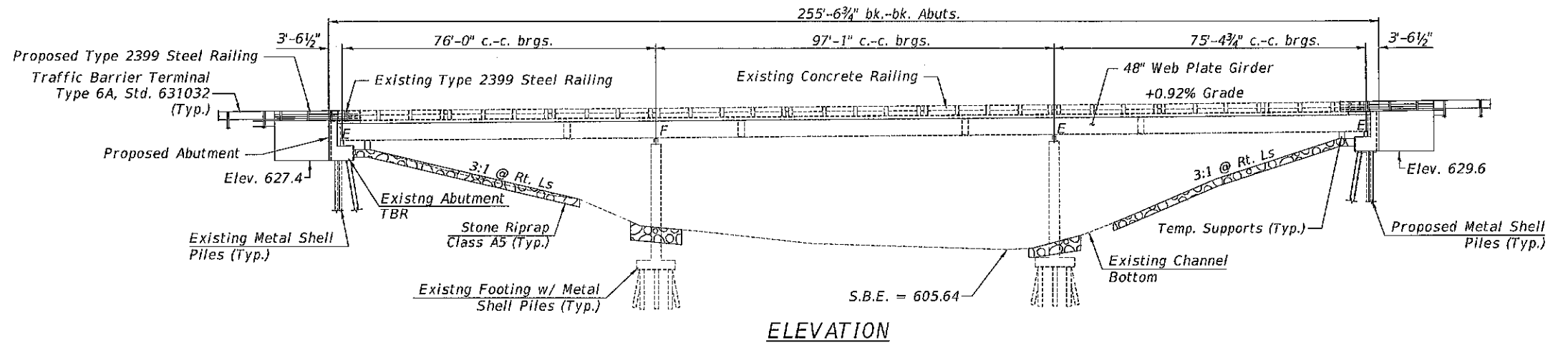
B. M. #1: RR Spike In Power Pole Sta. 637+57, 38' RT. El. 626.73
 B. M. #2: Cut "□" on S.W. Concrete Wingwall Sta. 639+87, 18' RT. El. 639.80

Existing Structure:

Three-span steel girder bridge with concrete deck superstructure supported on stub concrete open abutments with piles and hammerhead piers on footings and piles. The structure is 254'-4 3/4" back to back of abutments, 34'-6" out to out of deck with 30° skew. The structure was constructed in 1965.
 Str. No. 038-4603

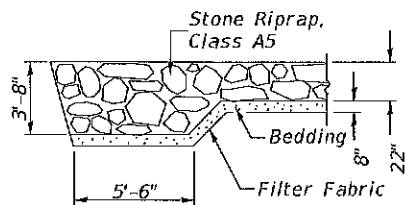
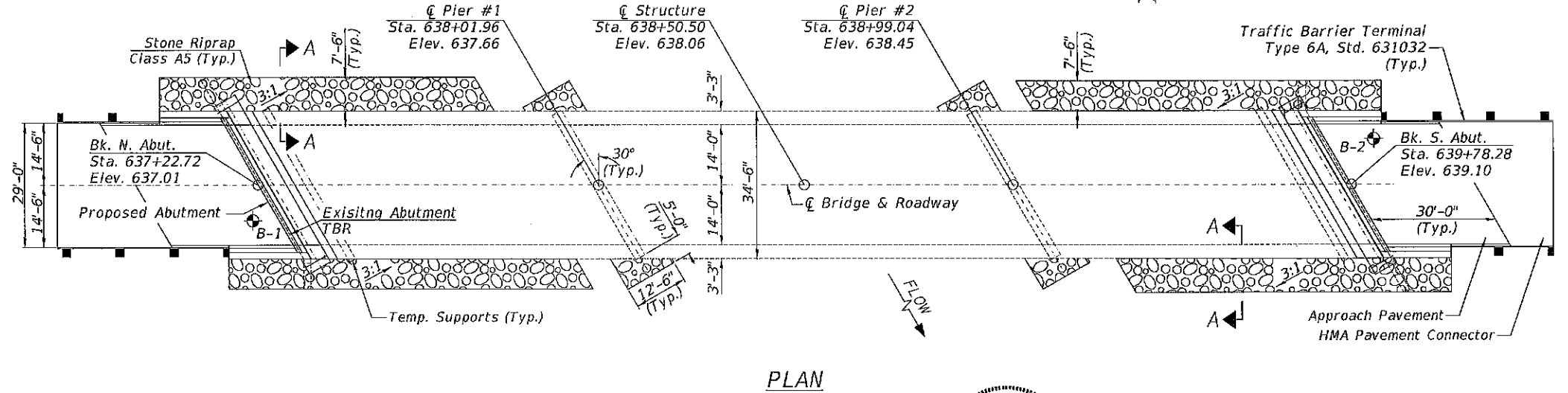
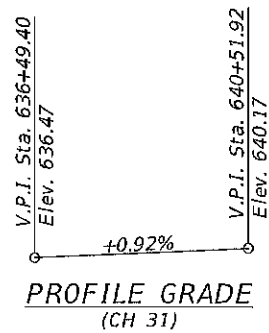
Salvage: Steel bridge railing.

Traffic to be closed during construction.



INDEX OF SHEETS

SH. #'s	DESCRIPTION
1	General Plan and Elevation
2	Bill of Material, Details and General Notes
3	Partial Deck Removal
4	Superstructure
5	Superstructure Details
6	Approach Slab
7	Approach Slab Details
8	Bearings
9	Steel Railing, Type 2399
10-12	South Abutment
13-15	North Abutment
16	Metal Shell Pile Details



SECTION A-A

DESIGN SCOUR ELEVATION TABLE

	Design Scour Elevations (ft.)				Item 113
	N. Abut.	Pier #1	Pier #2	S. Abut.	
Q100	627.4	605.2	600.6	629.6	5
Q200	627.4	605.2	600.6	629.6	
Design	627.4	605.2	600.6	629.6	
Check	627.4	605.2	600.6	629.6	

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

DESIGN STRESSES

PROPOSED

(FIELD UNITS)
 $f'_c = 5,000$ p.s.i. (Superstructure)
 $f'_c = 3,500$ p.s.i. (Substructure)
 $f_y = 60,000$ p.s.i. (Rein.)
 $f_y = 36,000$ p.s.i. (Structural Steel)
 (AASHTO M270 Grade 36)

EXISTING

(FIELD UNITS)
 $f'_c = 3,500$ p.s.i. (Superstructure)
 $f'_c = 3,500$ p.s.i. (Substructure)
 $f_y = 40,000$ p.s.i. (Rein.)
 $f_y = 36,000$ p.s.i. (Structural Steel)
 (AASHTO M270 Grade 36)

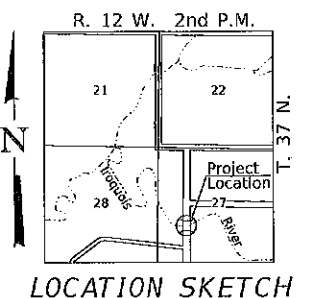
LOADING HL-93 (Proposed Abutments)

LOADING HS-20 (Existing structure to remain in place)



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 Specification for Highway Bridges. This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

Illinois Structural No. 6527
 Expires 11/30/2026



LOCATION SKETCH

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Hutchison Engineering, Inc.
 JACKSONVILLE-SHOREWOOD
 PRORIA-QUAD CITIES-CARBONDALE

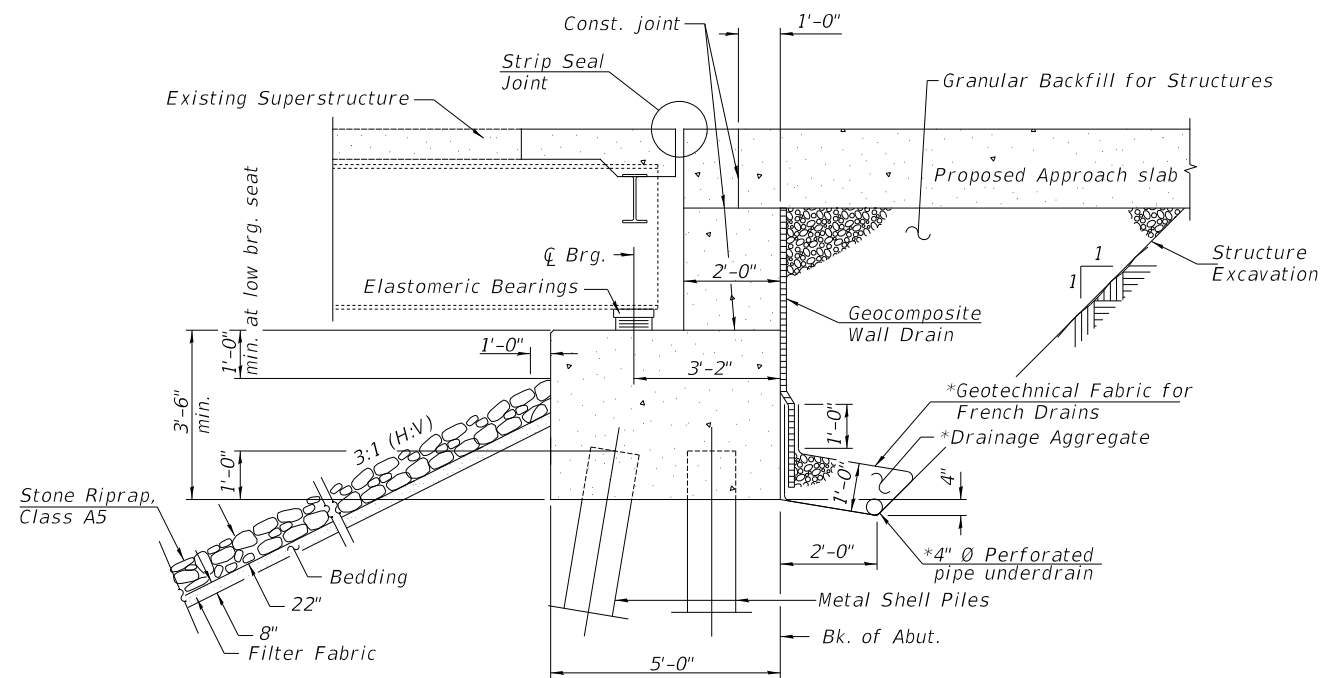
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	DATE - 11/05/2024	REVISED -

IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER

GENERAL PLAN & ELEVATION

SCALE: N/A SHEET 1 OF 21 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	5
	SN 038-4603			CONTRACT NO. 87850
		ILLINOIS		FED. AID PROJECT NO. 54WR(57)J



SECTION THRU ABUTMENTS

(Horizontal Dim. @ Rt. L's)

* Included in the cost of Pipe Underdrains for Structures.
(See Special Provisions)

Note:

All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into *concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

All excavation beyond that required to construct the new concrete abutments shall be included in the cost of Removal of Existing Sub-Structures.

Reinforcement bars designated (E) shall be epoxy coated.

Granular Backfill behind the abutments shall be compacted according to Article 205.06 of the Standard Specifications.

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

No field welding is permitted except as specified in the contract documents.

The temporary support system shall be in place prior to abutment removal.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
① Granular Backfill for Structures	CU YD	—	120	120
Stone Riprap, Class A5	TON	—	820	820
Filter Fabric	SQ YD	—	865	865
① Removal of Existing Sub-Structure	EACH	—	2	2
Structure Excavation	CU YD	—	255	255
Concrete Structures	CU YD	—	144.5	144.5
Concrete Superstructure	CU YD	20.7	—	20.7
Concrete Superstructure (Approach Slab)	CU YD	83.1	—	83.1
Concrete Encasement	CU YD	—	10.0	10.0
① Protective Coat	SQ YD	1003.8	—	1003.8
Concrete Removal	CU YD	11.2	—	11.2
Concrete Sealer	SQ FT	—	650	650
Reinforcement Bars, Epoxy Coated	POUND	36,280	11,200	47,480
Steel Railing, Type 2399	FOOT	87	—	87
Anchor Bolts 1"	EACH	20	—	20
Elastomeric Bearing Assembly Type 1	EACH	—	10	10
Furnishing Metal Shell Piles 12" x 0.250"	FOOT	—	1,170	1,170
Driving Piles	FOOT	—	1,170	1,170
Test Pile Metal Shells	EACH	—	2	2
Preformed Joint Strip Seal	FOOT	—	84	84
① Temporary Support System	EACH	—	2	2
Geocomposite Wall Drain	SQ YD	—	110	110
Pipe Underdrains for Structures 4"	FOOT	—	100	100
① Jack and Remove Existing Bearings	EACH	10	—	10

① See Special Provisions

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Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD
PEORIA-QUAD CITIES-CARBONDALE

USER NAME = JSavage	DESIGNED - ZL/JPS	REVISED -
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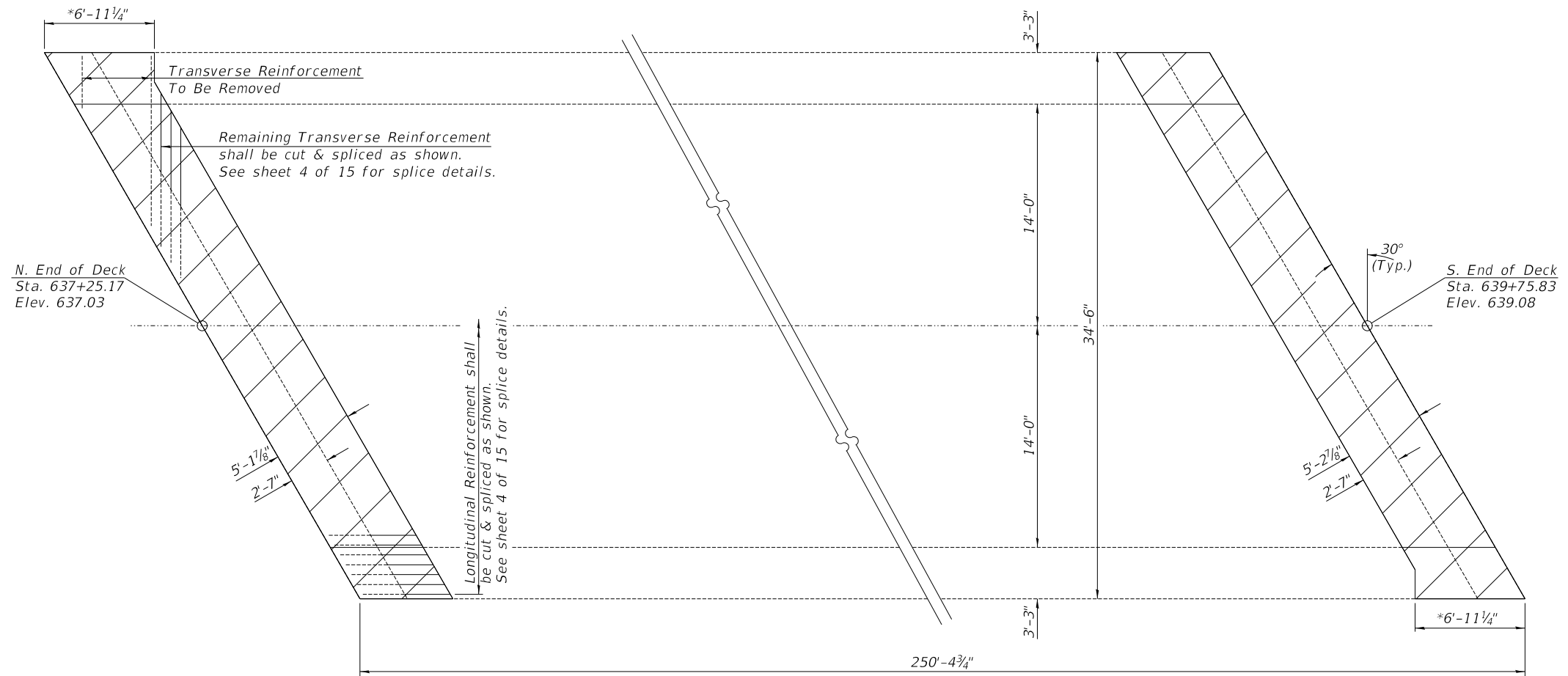
**IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER**

GENERAL NOTES, DETAILS & BILL OF MATERIALS

SCALE: N/A SHEET 2 OF 21 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	6
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54WB(571)		

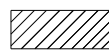

*Dimension to be adjusted as necessary to remove transverse rebar close to concrete removal line.



PLAN

Note:
Existing transverse and longitudinal reinforcement in the deck not being removed shall be cleaned, straightened, and incorporated into the new construction.

LEGEND

-  CONCRETE REMOVAL
-  EXISTING REINFORCEMENT CUT LINE

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	CU YD	11.2

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Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD
PEORIA-QUAD CITIES-CARBONDALE

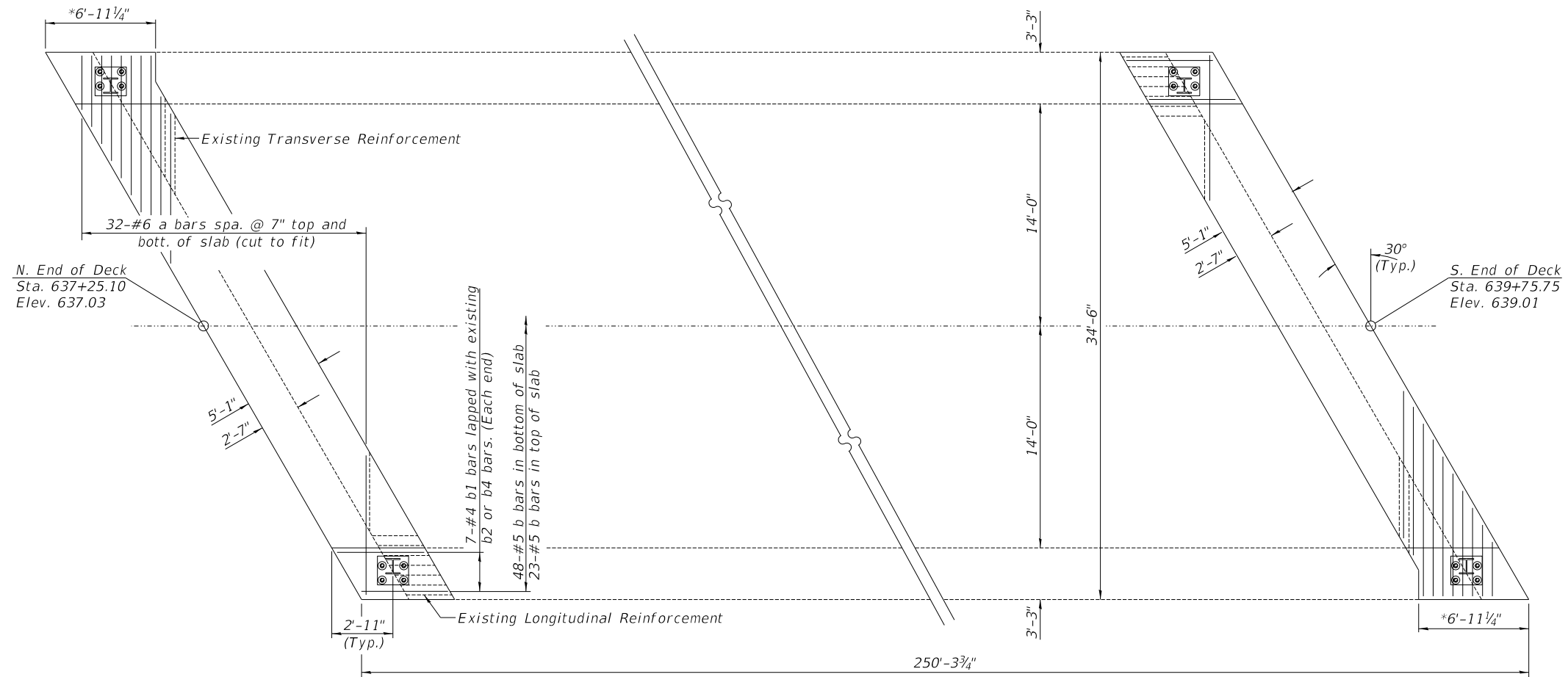
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IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER

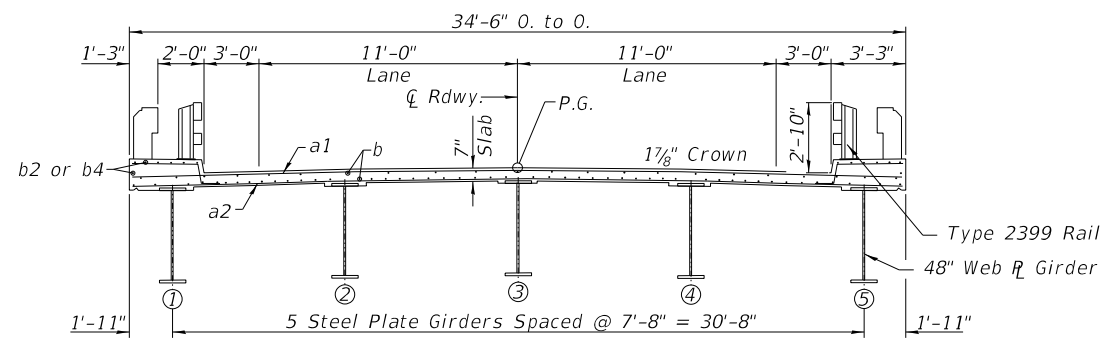
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	7
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54W8(571)		

*Dimension to be adjusted as necessary to remove transverse rebar close to concrete removal line.



PLAN



EXISTING CROSS SECTION

**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	128	#6	9'-2"	————
b(E)	142	#5	5'-6"	————
b1(E)	28	#4	5'-6"	————
Concrete Superstructure			Cu. Yd.	13.0
Protective Coat			Sq. Yd.	45.2
Reinforcement Bars, Epoxy Coated			Pound	2,680

MODEL: Default
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2023

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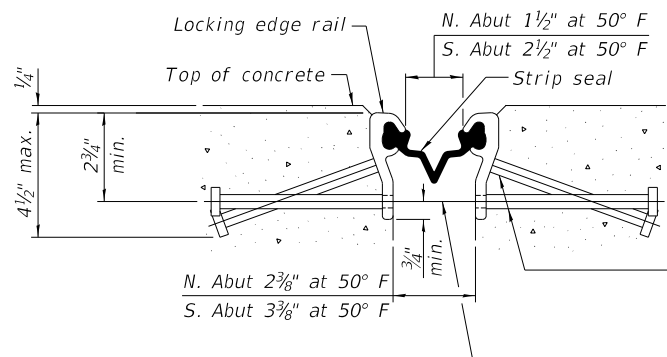
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**IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER**

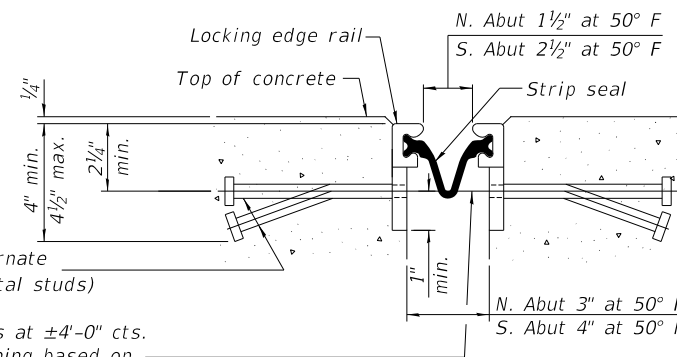
SUPERSTRUCTURE

SCALE: N/A SHEET 4 OF 21 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	8
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54W8(571)		



SHOWING ROLLED RAIL JOINT

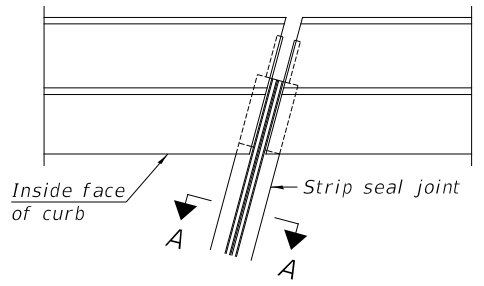


SHOWING WELDED RAIL JOINT

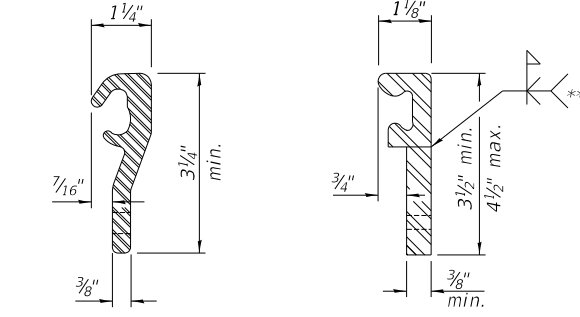
* 5/8" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)
 3/8" Ø threaded rods in 7/16" Ø holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



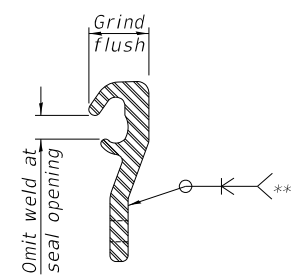
PLAN AT PARAPET



ROLLED (EXTRUDED) RAIL WELDED RAIL

LOCKING EDGE RAILS

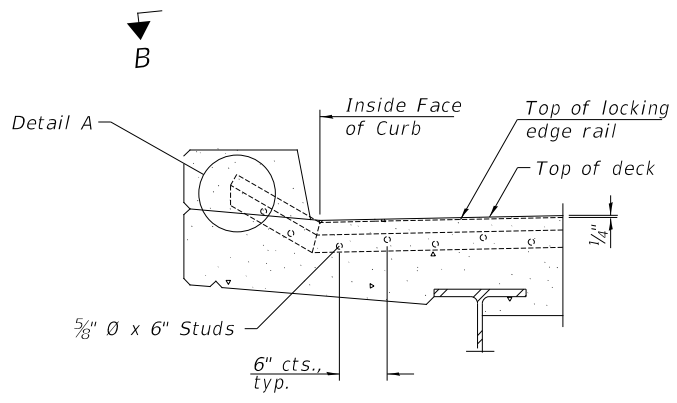
** Back gouge not required if complete joint penetration is verified by mock-up.



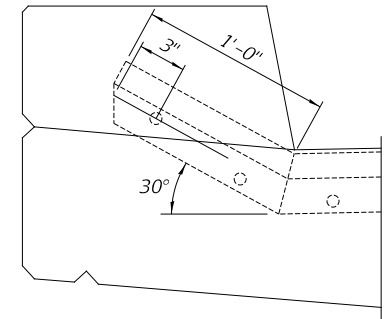
LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

Notes:
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
 The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4 1/2" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.
 The manufacturer's recommended installation methods shall be followed.
 All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
 The Maximum space between locking edge rail segments shall be 3/16" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.
 The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.



SECTION AT PARAPET



DETAIL A

EXPANSION JOINT BILL OF MATERIAL

BAR NO.	SIZE	LENGTH	SHAPE
Preformed Joint		FOOT	84
Strip Seal			

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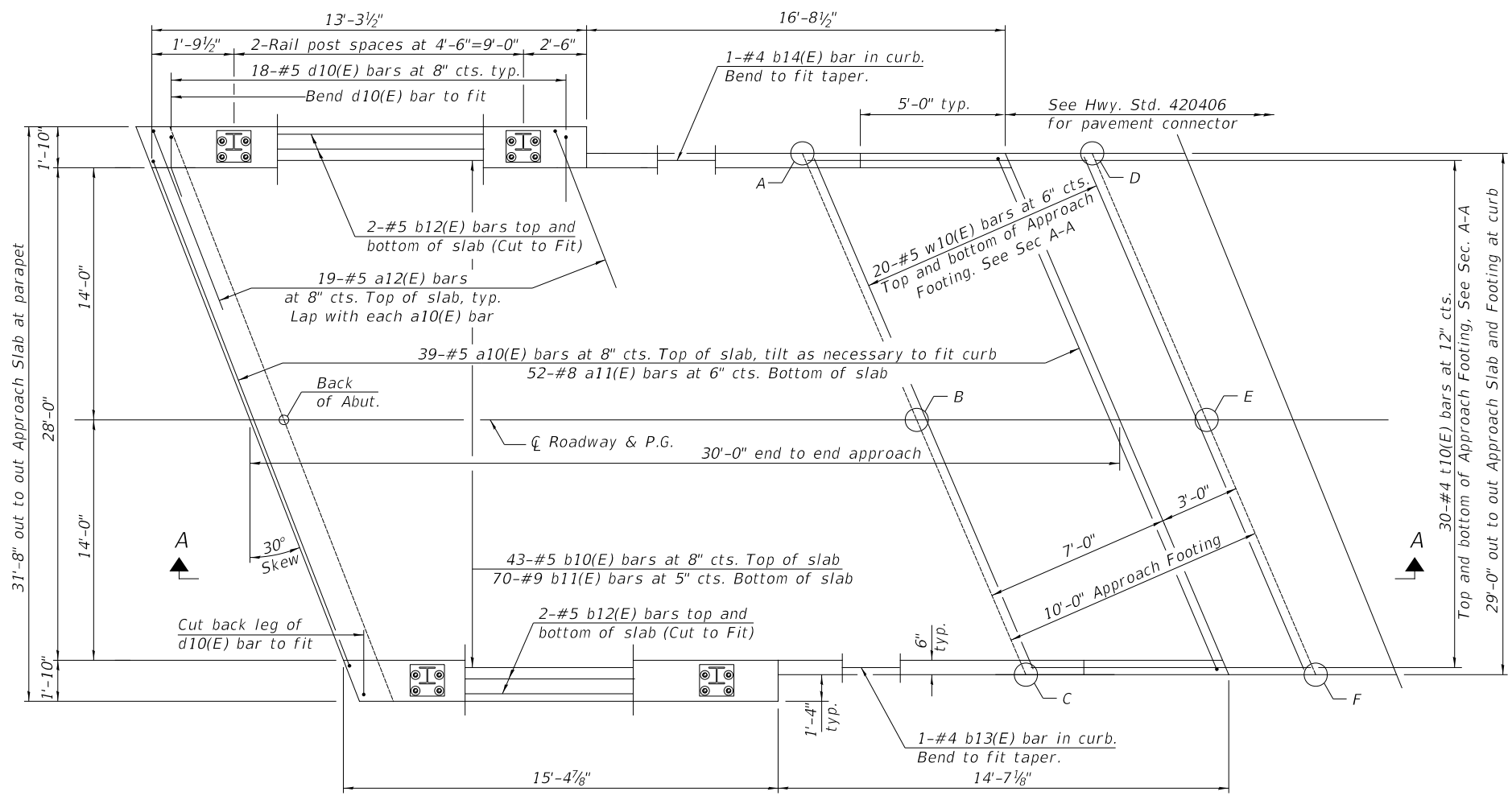
Hutchison Engineering, Inc.
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 PEORIA-QUAD CITIES-CARBONDALE

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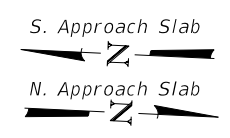
IROQUOIS COUNTY
 F.A.S. 330 (CH 31)
 OVER IROQUOIS RIVER

PREFORMED JOINT STRIP SEAL		
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	9
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54W8(571)		

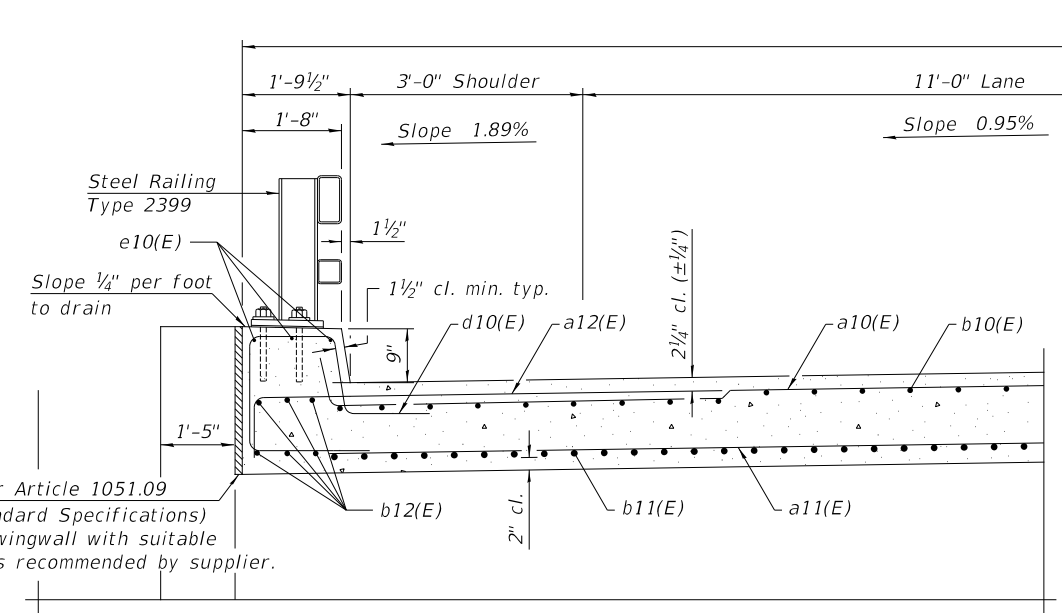


PLAN

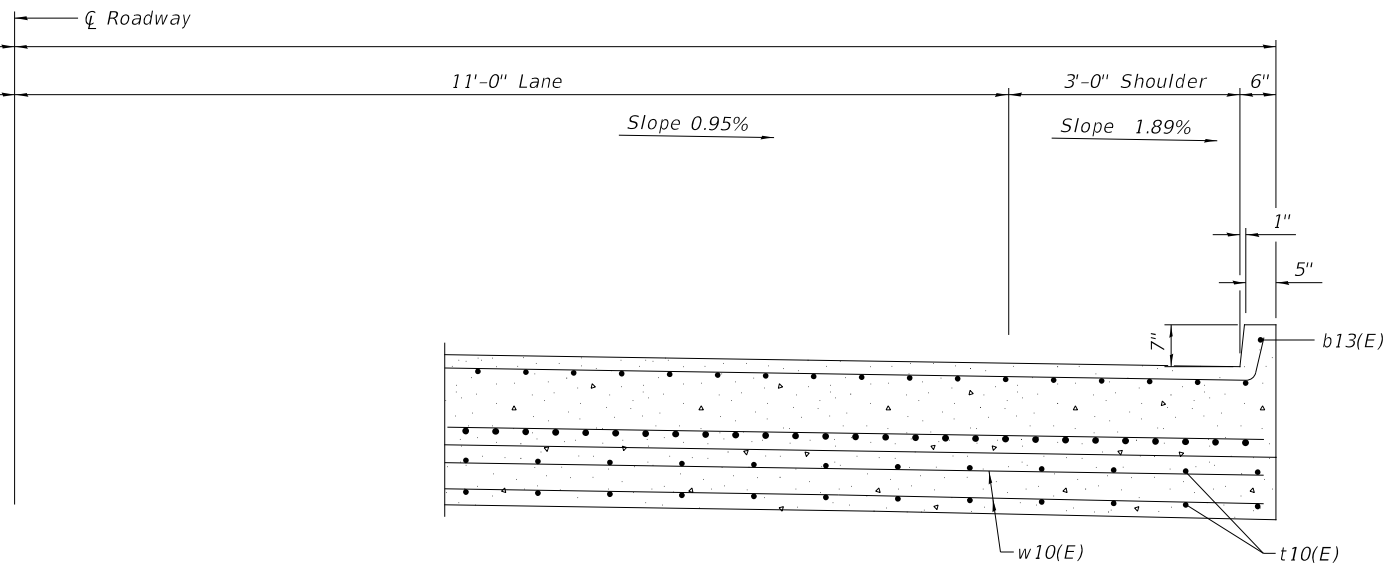


TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

South Approach			North Approach		
Point/Location	Top	Bottom	Point/Location	Top	Bottom
A -	637.77	636.94	A -	635.45	634.62
B -	638.04	637.21	B -	635.57	634.73
C -	637.92	637.09	C -	635.29	634.46
D -	637.88	637.04	D -	635.34	634.51
E -	638.15	637.32	E -	635.46	634.63
F -	638.03	637.20	F -	635.19	634.36



NEAR ABUTMENT



CROSS SECTION
(Looking South at South Approach, Looking North at North Approach)

AT APPROACH FOOTING

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Hutchison Engineering, Inc.
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PEORIA-QUAD CITIES-CARBONDALE

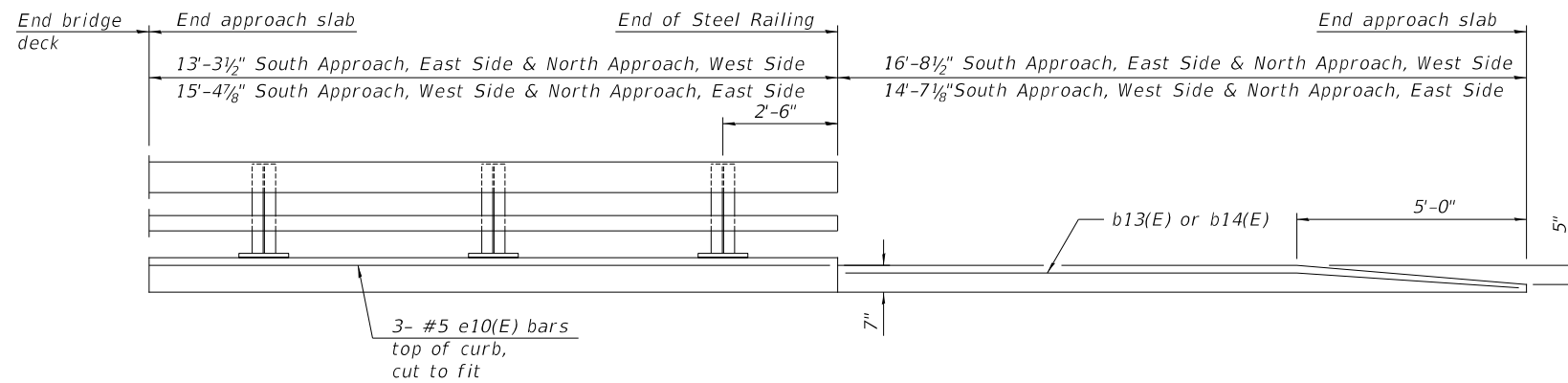
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IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER

APPROACH SLAB

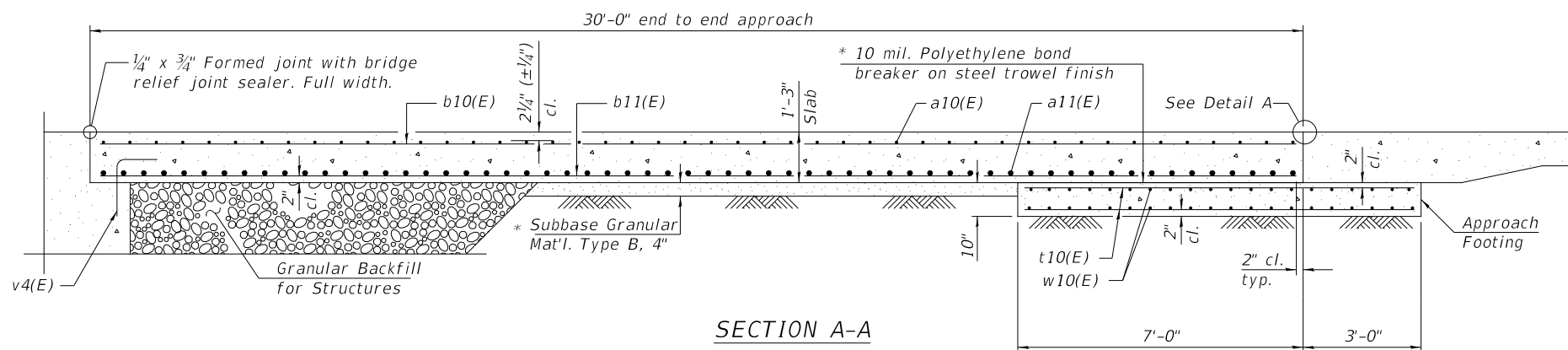
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F.A.S. RTE. 330	SECTION 22-00149-03-BR	COUNTY IROQUOIS	TOTAL SHEETS 25	SHEET NO. 10
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54W8(571)		



INSIDE ELEVATION OF RAILING AND CURB

Notes:
 Curb concrete under railing shall be paid for as Concrete Superstructure.
 Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
 Approach footing concrete shall be paid for as Concrete Structures.
 The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
 Cost of excavation for approach footing included with Concrete Structures.
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 21.
 See sheet 10 thru 15 of 21 for hatched block details.
 HMA Pavement Connector shall have a minimum 1.5" Surface Course lift. The remainder shall consist of Binder Course.

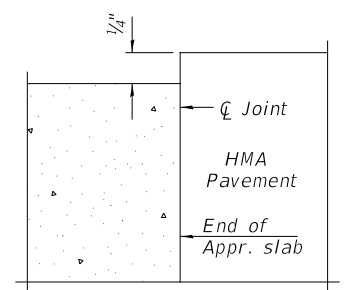


SECTION A-A

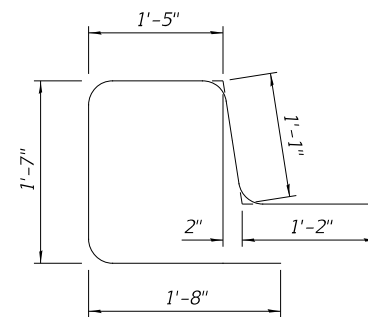
* Cost included with Concrete Superstructure (Approach Slab).

TWO APPROACHES
 BILL OF MATERIAL

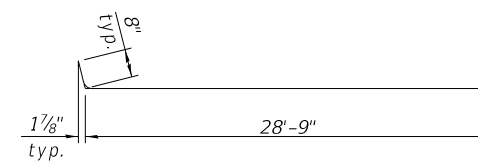
Bar	No.	Size	Length	Shape
a10(E)	78	#5	30'-1"	┌───┐
a11(E)	104	#8	33'-1"	┌───┐
a12(E)	76	#5	7'-4"	┌───┐
b10(E)	86	#5	29'-8"	───
b11(E)	140	#9	29'-8"	───
b12(E)	16	#5	16'-2"	───
b13(E)	2	#4	14'-2"	───
b14(E)	2	#4	16'-0"	───
d10(E)	72	#5	6'-8"	└─┘
e10(E)	12	#4	16'-2"	───
t10(E)	120	#4	11'-2"	───
w10(E)	80	#5	33'-1"	───
Concrete Superstructure			Cu. Yd.	7.7
Concrete Superstructure (Approach Slab)			Cu. Yd.	83.1
Concrete Structures			Cu. Yd.	26.9
Reinforcement Bars, Epoxy Coated			Pound	33,600



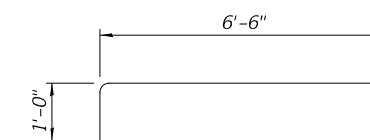
FLEXIBLE PAVEMENT
 DETAIL A



BAR d10(E)



BAR a10(E)



BAR a12(E)

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 2023

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 JOB#4968

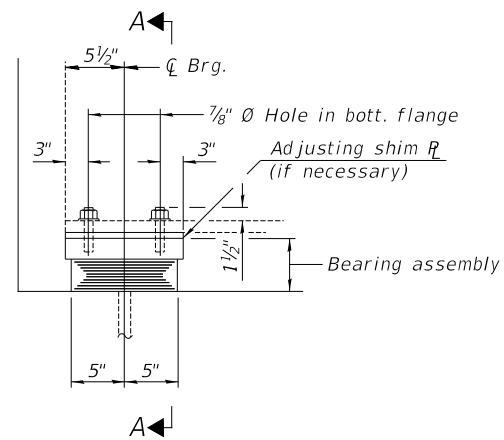
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IROQUOIS COUNTY
 F.A.S. 330 (CH 31)
 OVER IROQUOIS RIVER

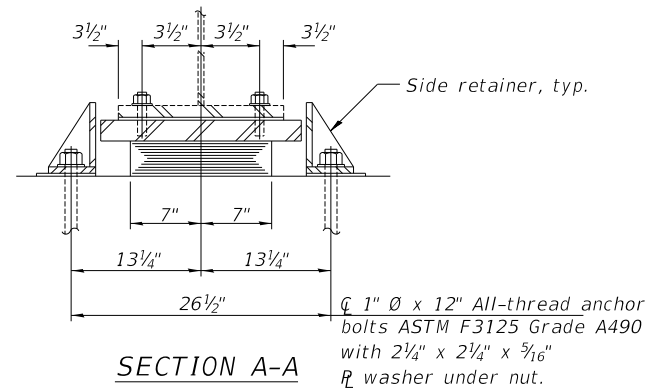
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 SHEET 7 OF 21 SHEETS

APPROACH SLAB DETAILS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	11
	SN 038-4603		CONTRACT NO. 87850	
	ILLINOIS	FED. AID PROJECT NO. 54W8(571)		

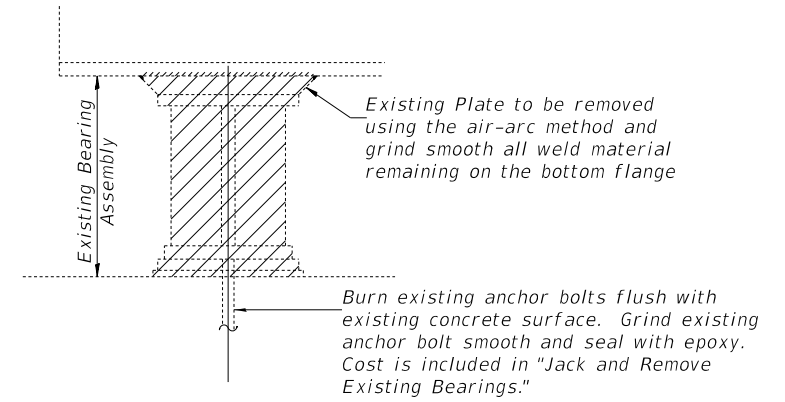


ELEVATION AT ABUT.



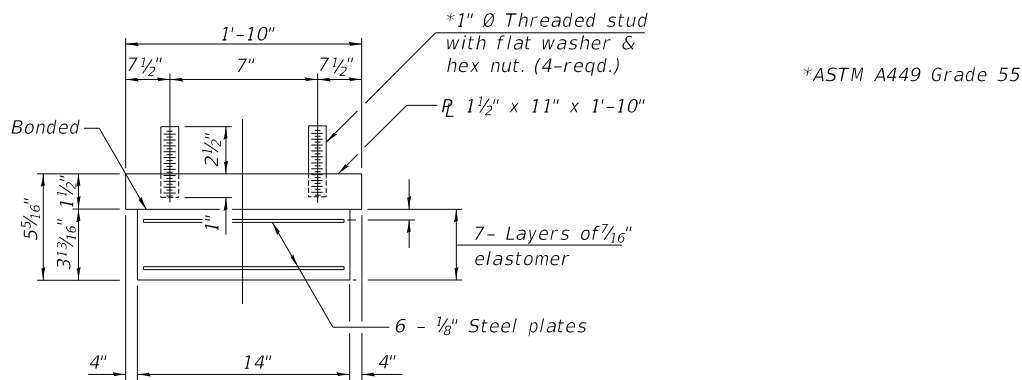
SECTION A-A

Notes:
 Side retainers and stainless steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.
 Anchor bolts and side retainers at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
 The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50W.
 All bearing plates, side retainers, anchor bolts, studs, nuts, washers, and fill plates shall be galvanized according to AASHTO M111 or M232 as applicable.
 H.S. bolts in bearing assembly shall be galvanized according to AASHTO M298 Class 50.
 Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown in the bearing details.

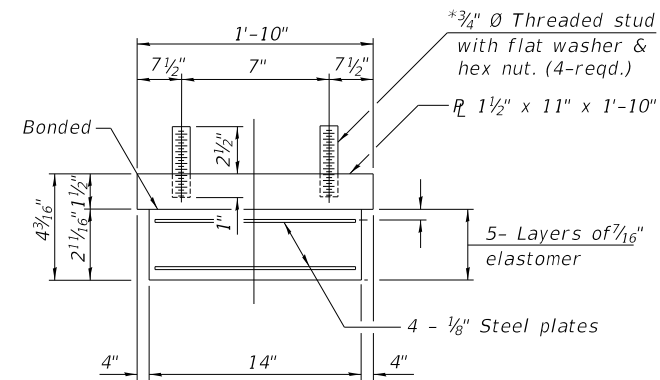


EXISTING BEARING REMOVAL DETAIL

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY AT SOUTH ABUTMENT

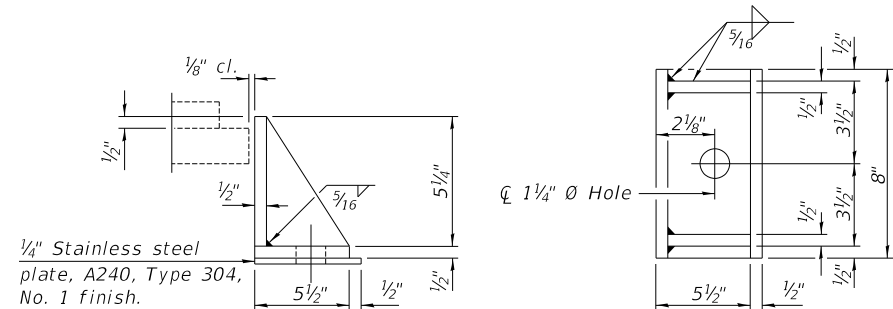


BEARING ASSEMBLY AT NORTH ABUTMENT

JACK AND REMOVE EXISTING BEARING PROCEDURE

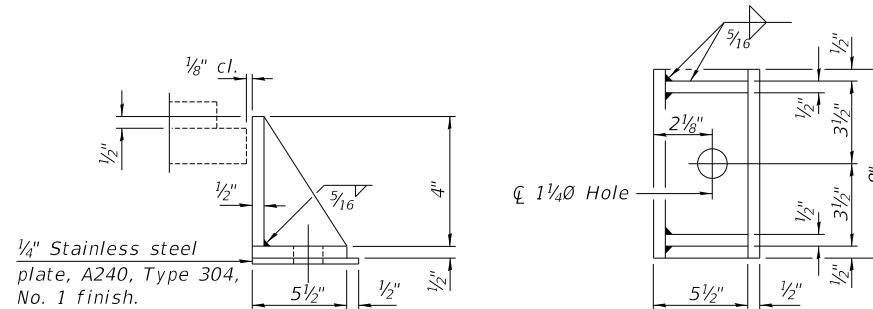
1. The Contractor shall submit for approval by the Engineer, plans for lifting existing beams and installing new bearings prior to commencing any related work. This work shall be done after existing concrete deck is partially removed and prior to pouring of the new concrete. The maximum dead load reaction per beam (weight of steel & existing deck only) is 33k. Minimum jack capacity = 66k.
2. Prior to ordering any material, the Contractor shall verify steel extension and shim plate thicknesses required at each bearing.
3. The bottom flange of the existing beam shall be cleaned as specified for Structural Steel.
4. The new bearings and steel extensions shall be in place and the jacks shall be lowered before the new concrete deck is poured.

Note:
 Shim plates shall not be placed under bearing assembly.



SIDE RETAINER AT SOUTH ABUTMENT

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



SIDE RETAINER AT NORTH ABUTMENT

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	10
Anchor Bolts	Each	20
Jack and Remove Existing Bearings	Each	10

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 2023

Hutchison Engineering, Inc.
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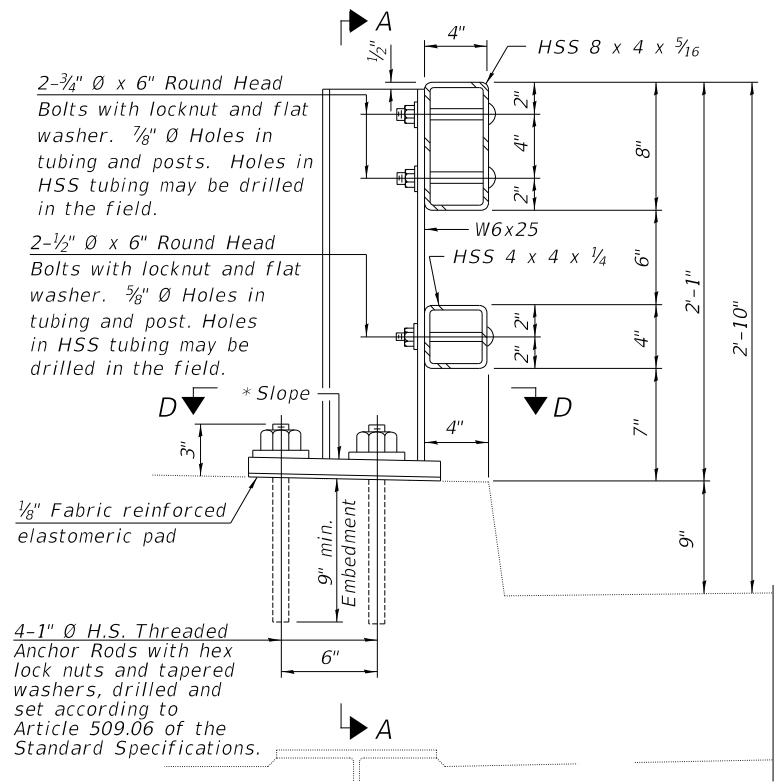
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IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER

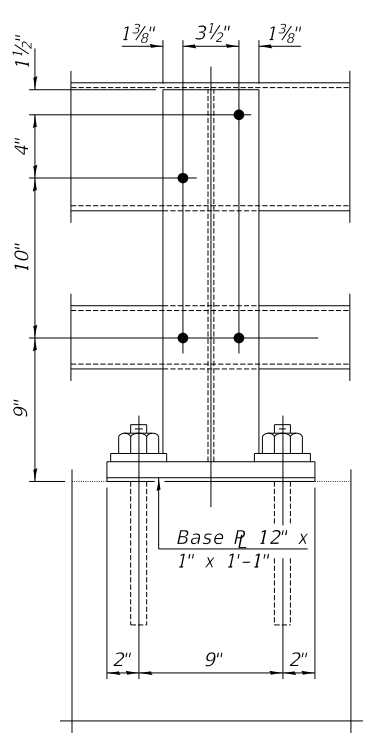
BEARINGS		
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	12
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54WB(571)		

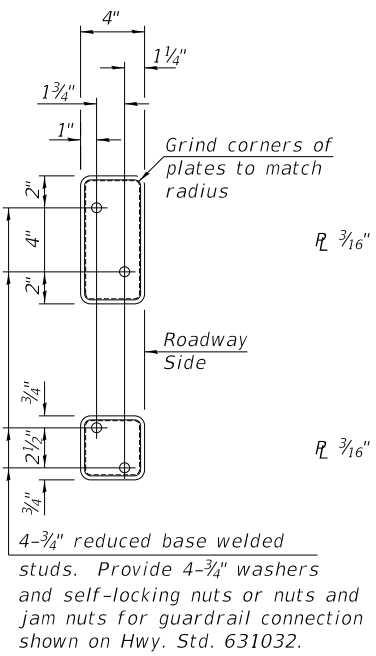
Notes:
 Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
 Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
 All HSS tubing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.
 Rail splice inserts may be built out of 2 - 3/8" bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions are matched.
 All round head bolts shall be ASTM A307 with locknuts according to ASTM A563 grade A.
 The Steel Railing, Type 2399 quantity shall be adjusted according to amount of existing rail that is salvaged and utilized in the new construction.
 See sheets 4 & 6 of 21 for rail spacing and rail post locations.



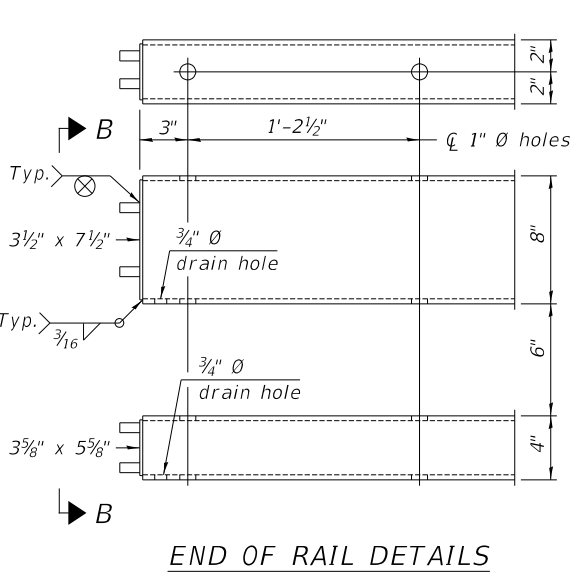
SECTION AT RAIL POST



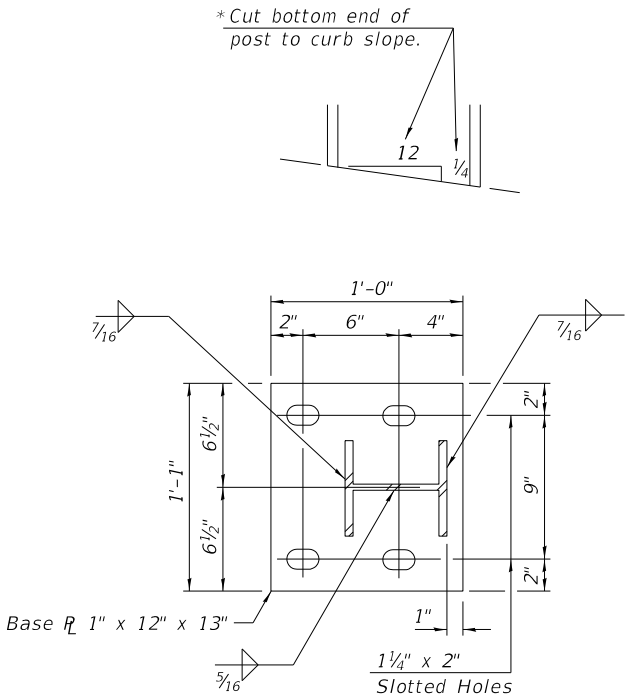
SECTION A-A



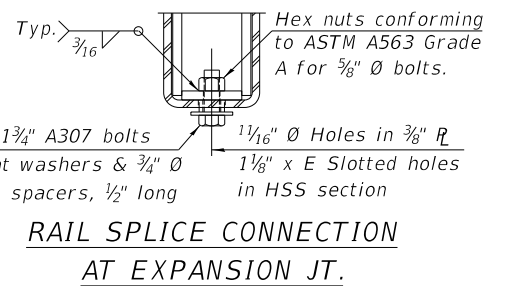
VIEW B-B



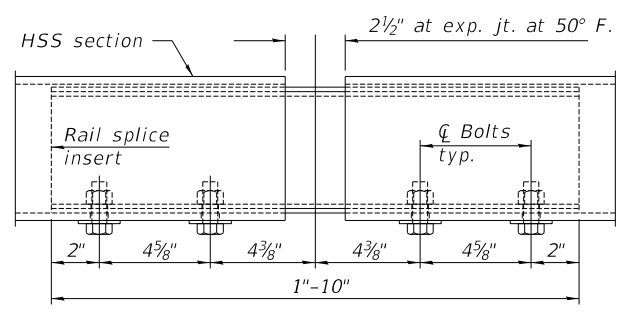
END OF RAIL DETAILS



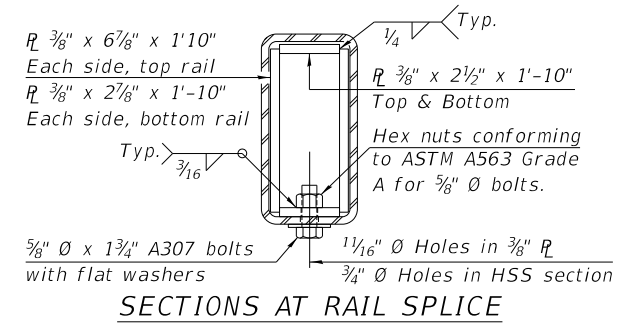
SECTION D-D



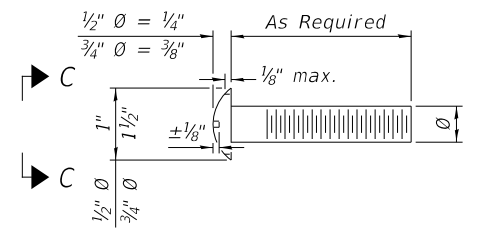
RAIL SPLICE CONNECTION AT EXPANSION JT.



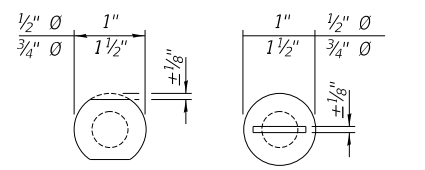
RAIL SPLICE ELEVATION



SECTIONS AT RAIL SPLICE



DETAIL OF 1/2" Ø & 3/4" Ø ROUND HEAD BOLTS



VIEW C-C

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	87

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 2023 JOB#4968

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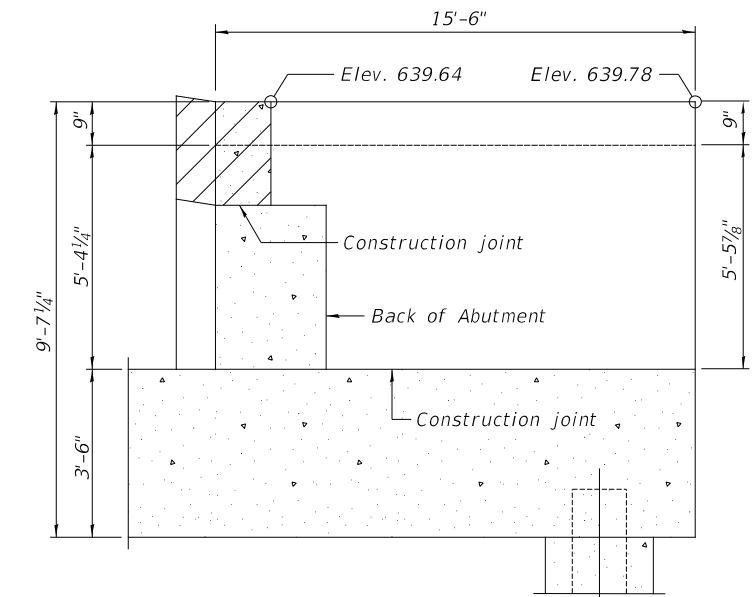
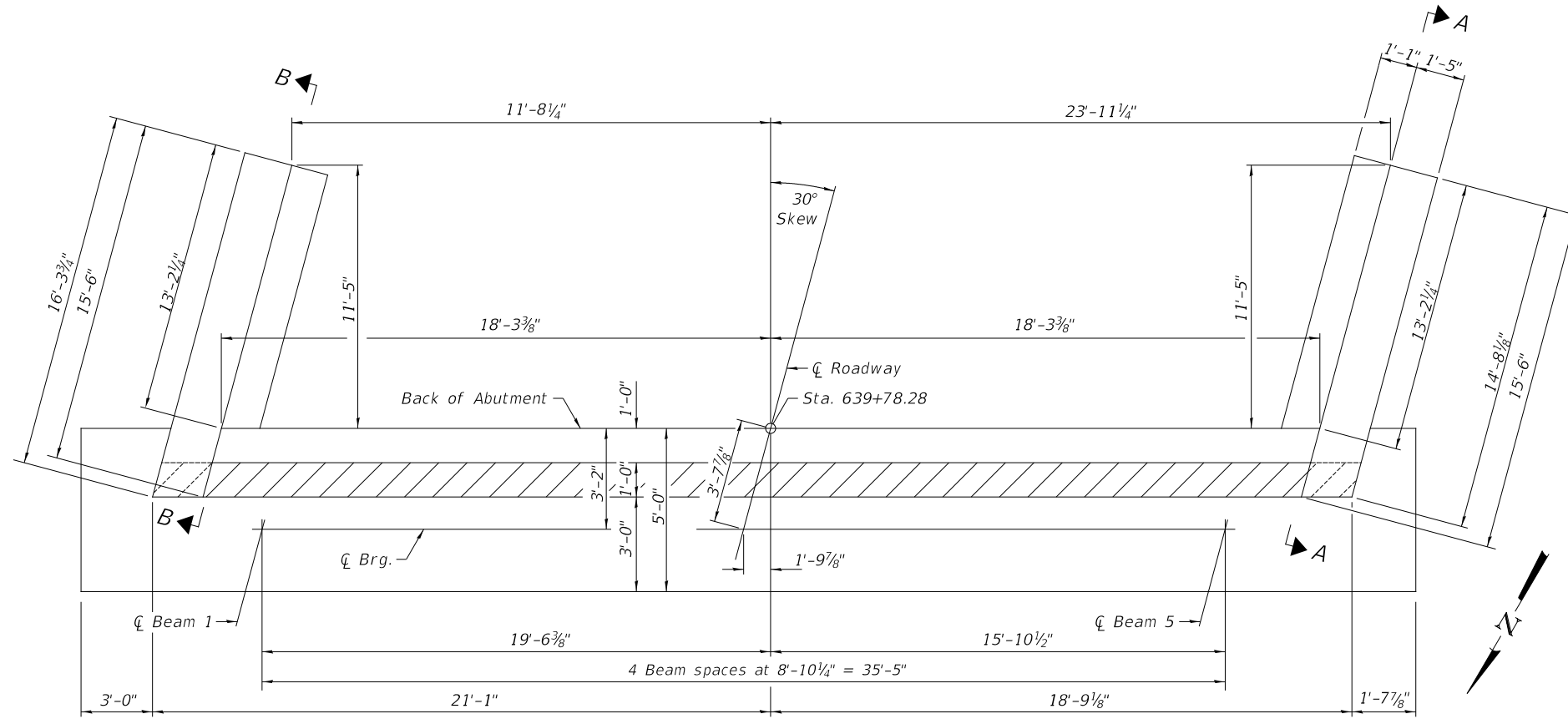
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**IROQUOIS COUNTY
 F.A.S. 330 (CH 31)
 OVER IROQUOIS RIVER**

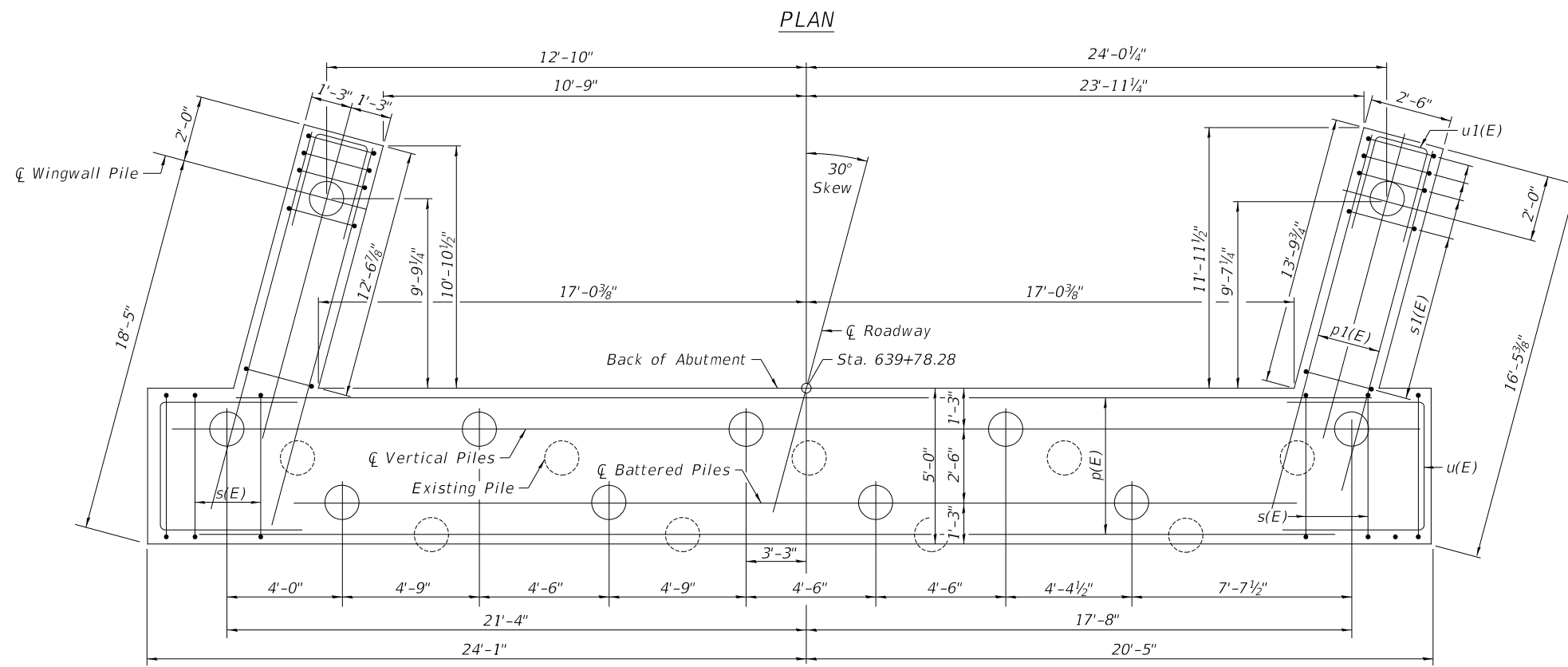
STEEL RAILING, TYPE 2399

SCALE: N/A	SHEET 9 OF 21 SHEETS
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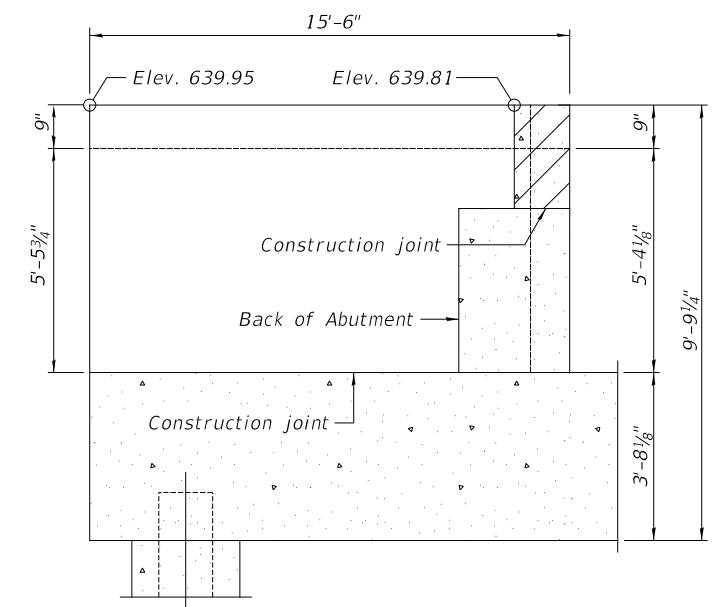
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	13
	SN 038-4603			CONTRACT NO. 87850
		ILLINOIS		FED. AID PROJECT NO. 54WB(571)



SECTION B-B
(Showing dimensions)



PILE CAP PLAN



SECTION A-A
(Showing dimensions)

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2023

Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD
PEORIA-QUAD CITIES-CARBONDALE

USER NAME = JSavage
PLOT SCALE = SSCALE5
PLOT DATE = 12/27/2024

DESIGNED - JPS
DRAWN - ZL
CHECKED - BAN
DATE - 11/06/2024

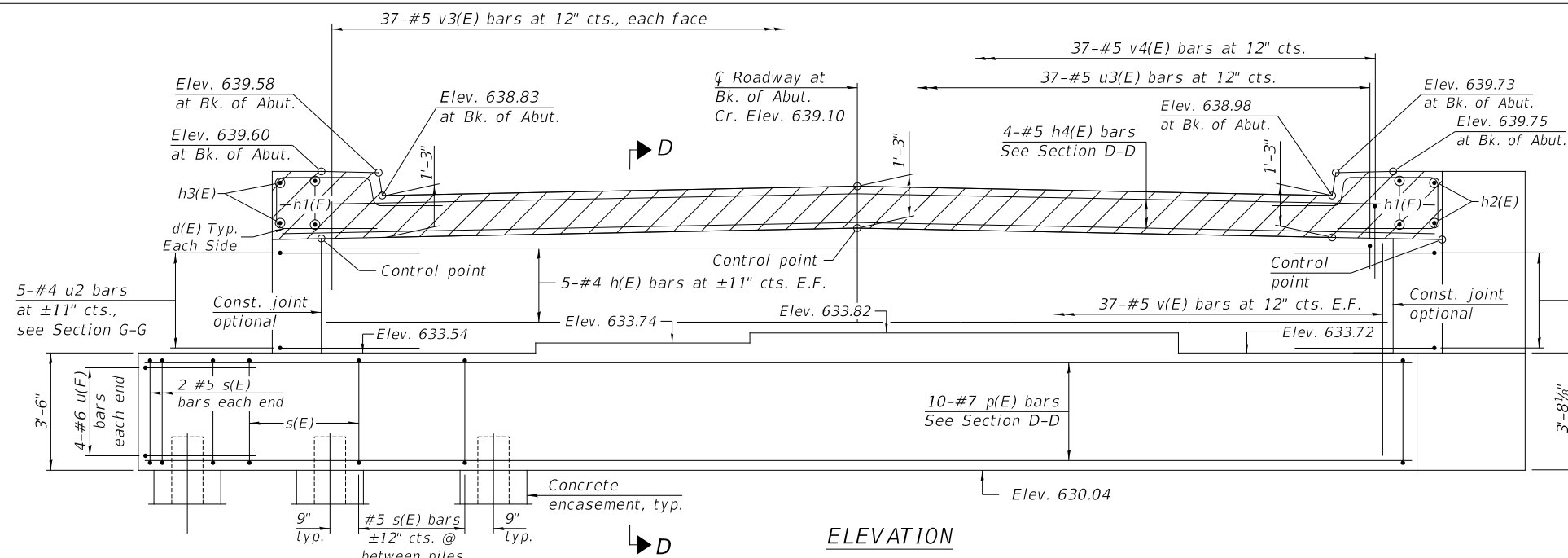
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REVISED -

**IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER**

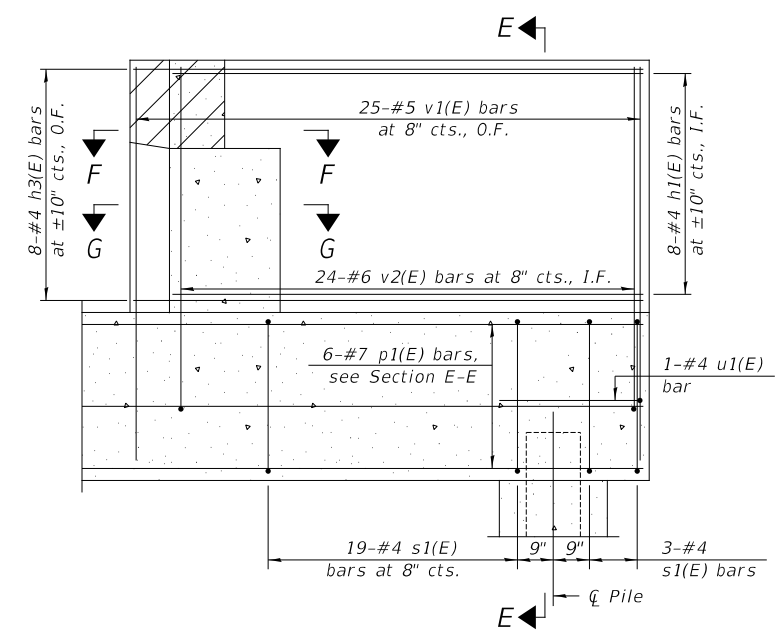
SOUTH ABUTMENT

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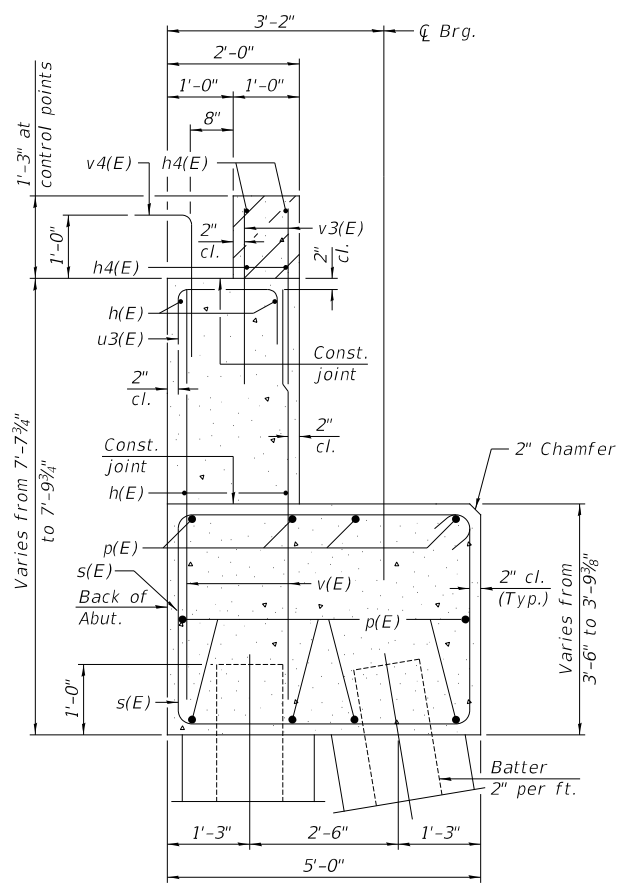
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330	22-00149-03-BR	IROQUOIS	25	14
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54W8(571)		



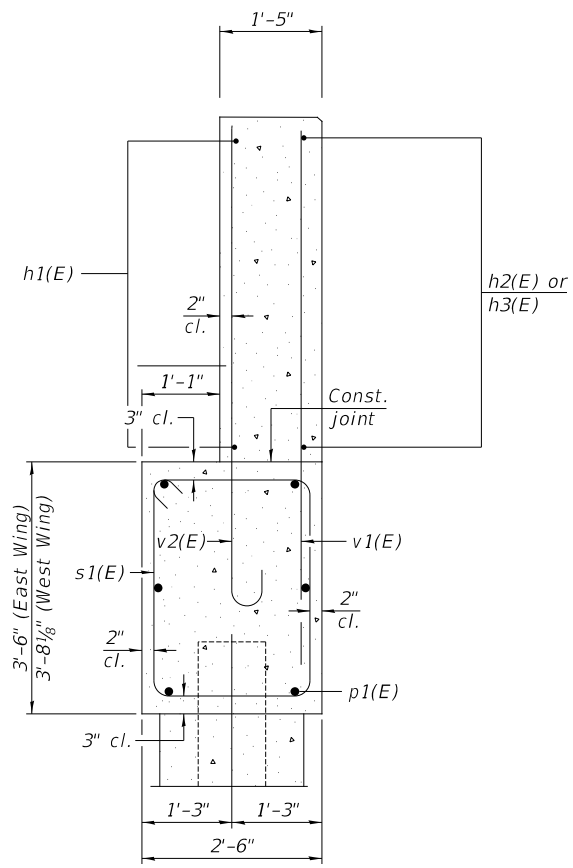
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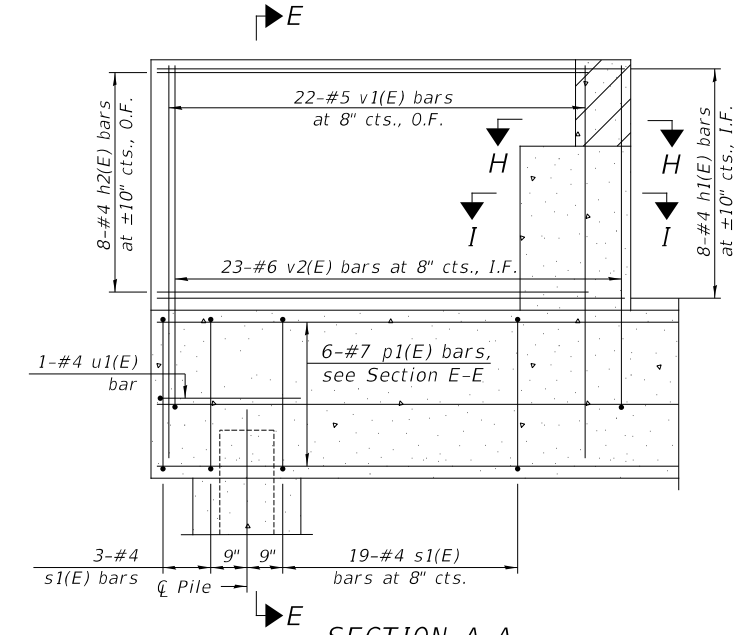
SECTION B-B
(Showing reinforcement)



SEC. THRU ABUT.
(Horizontal Dim. @ Rt. L's)



SECTION E-E
(At Rt. L's)



SECTION A-A
(Showing reinforcement)

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Hutchison Engineering, Inc.
 JACKSONVILLE-SHOREWOOD
 PEORIA-QUAD CITIES-CARBONDALE
 JOB#4968

USER NAME = JSavage	DESIGNED - JPS	REVISED -
PLOT SCALE = 55CALES	DRAWN - ZL	REVISED -
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	DATE - 11/06/2024	REVISED -

IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER

SOUTH ABUTMENT
 SCALE: N/A SHEET 11 OF 21 SHEETS

F.A.S. RTE. 330	SECTION 22-00149-03-BR	COUNTY IROQUOIS	TOTAL SHEETS 25	SHEET NO. 15
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54W8(571)		

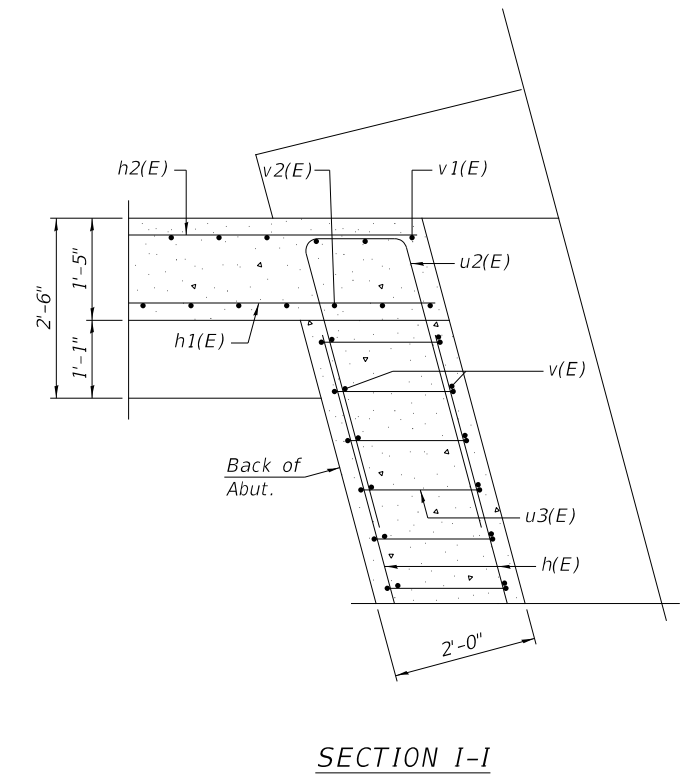
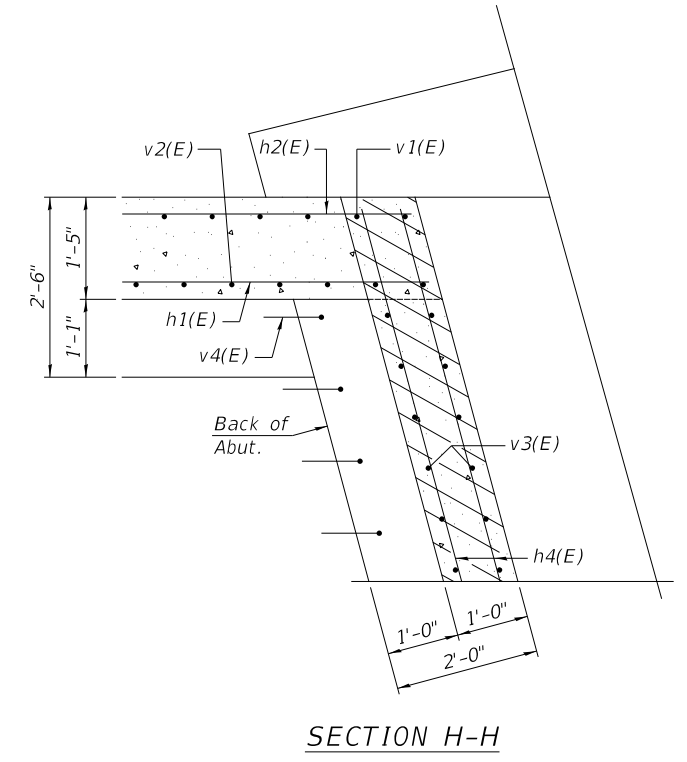
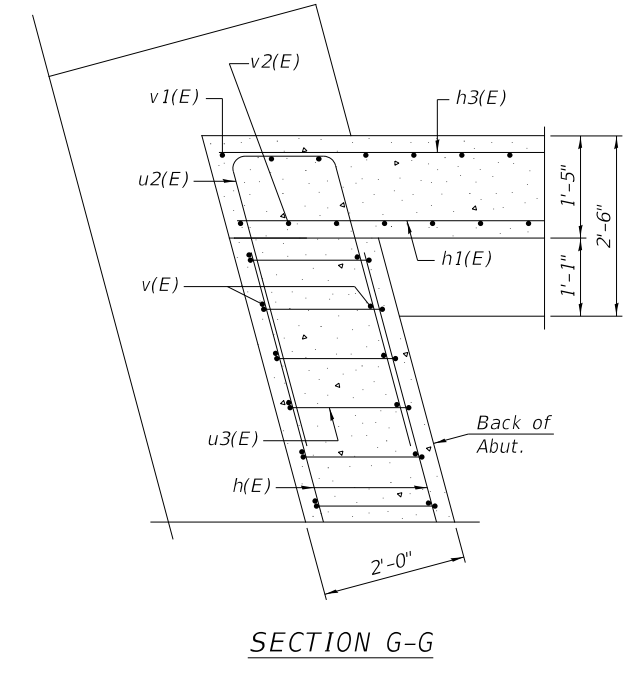
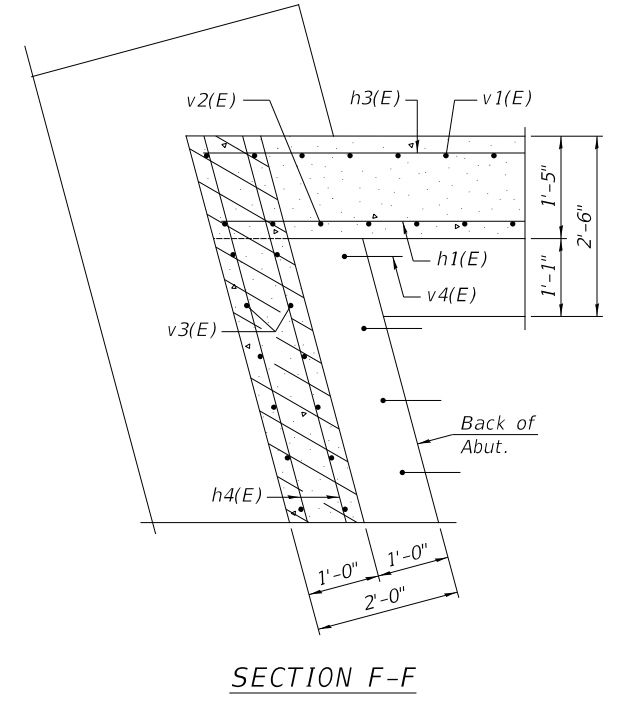
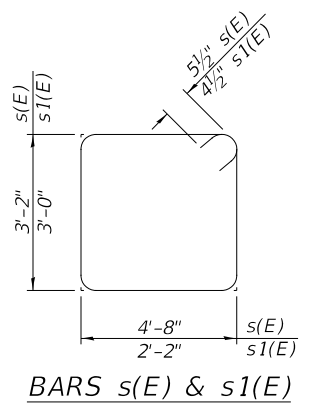
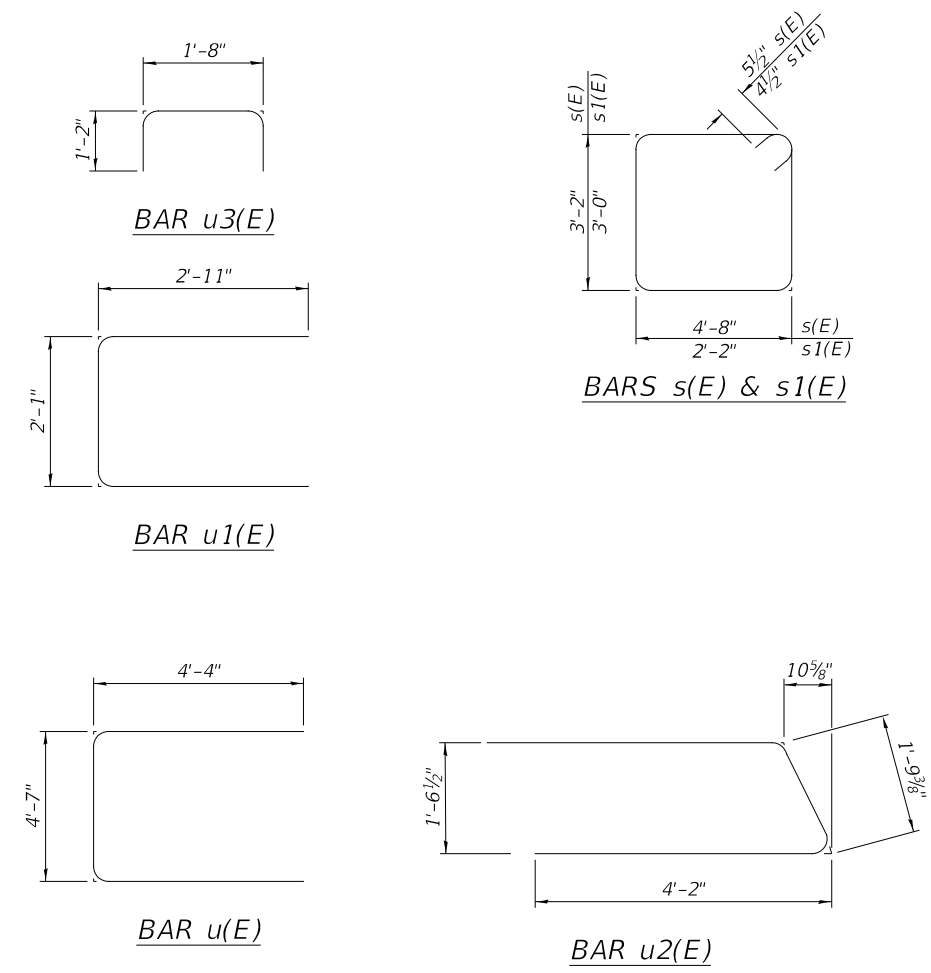
Notes:
 Hatched area to be poured separately after superstructure falsework has been removed and after approach slab side formwork has been removed.
 Quantity of concrete in hatched area included with Concrete Superstructure on sheet 4 of 21.
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles and Concrete Encasement, see sheet 21 of 21.
 The top of back wall and approach slab seat shall have a constant slope determined from the control points shown.
 Concrete Sealer shall be applied to the bearing seats and front faces of the hatched block, back wall, and abutment cap.

**S. ABUTMENT
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d(E)	4	#5	8'-10"	
h(E)	10	#4	39'-6"	—
h1(E)	16	#4	15'-3"	—
h2(E)	8	#4	14'-5"	—
h3(E)	8	#4	16'-0"	—
h4(E)	4	#5	39'-7"	—
p(E)	10	#7	44'-2"	—
p1(E)	12	#7	17'-6"	—
s(E)	38	#5	16'-7"	
s1(E)	44	#4	11'-1"	
u(E)	8	#6	13'-3"	
u1(E)	2	#4	7'-11"	
u2(E)	10	#4	10'-2"	
u3(E)	37	#5	4'-0"	
v(E)	74	#5	7'-2"	—
v1(E)	44	#5	9'-0"	—
v2(E)	46	#6	7'-6"	
v3(E)	74	#5	4'-0"	—
v4(E)	37	#5	4'-6"	
Structure Excavation		Cu. Yd.	130	
Concrete Structures		Cu. Yd.	58.8	
Reinforcement Bars, Epoxy Coated		Pound	5,600	
Furnishing - Piles, Metal Shell		Foot	570	
12"x0.250" walls		Foot	570	
Driving Piles, Metal Shell		Each	1	
12"x0.250" walls				
Concrete Encasement		Cu. Yd.	5.0	
Concrete Sealer		Sq. Ft.	325	

PILE DATA

Type: Metal Shell 12"x0.250" walls
 Nominal Required Bearing: 293 kips
 Factored Resistance Available: 161 kips
 Est. Length: 57 ft
 No. Production Piles: 11
 No. Test Piles: 1



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 2023

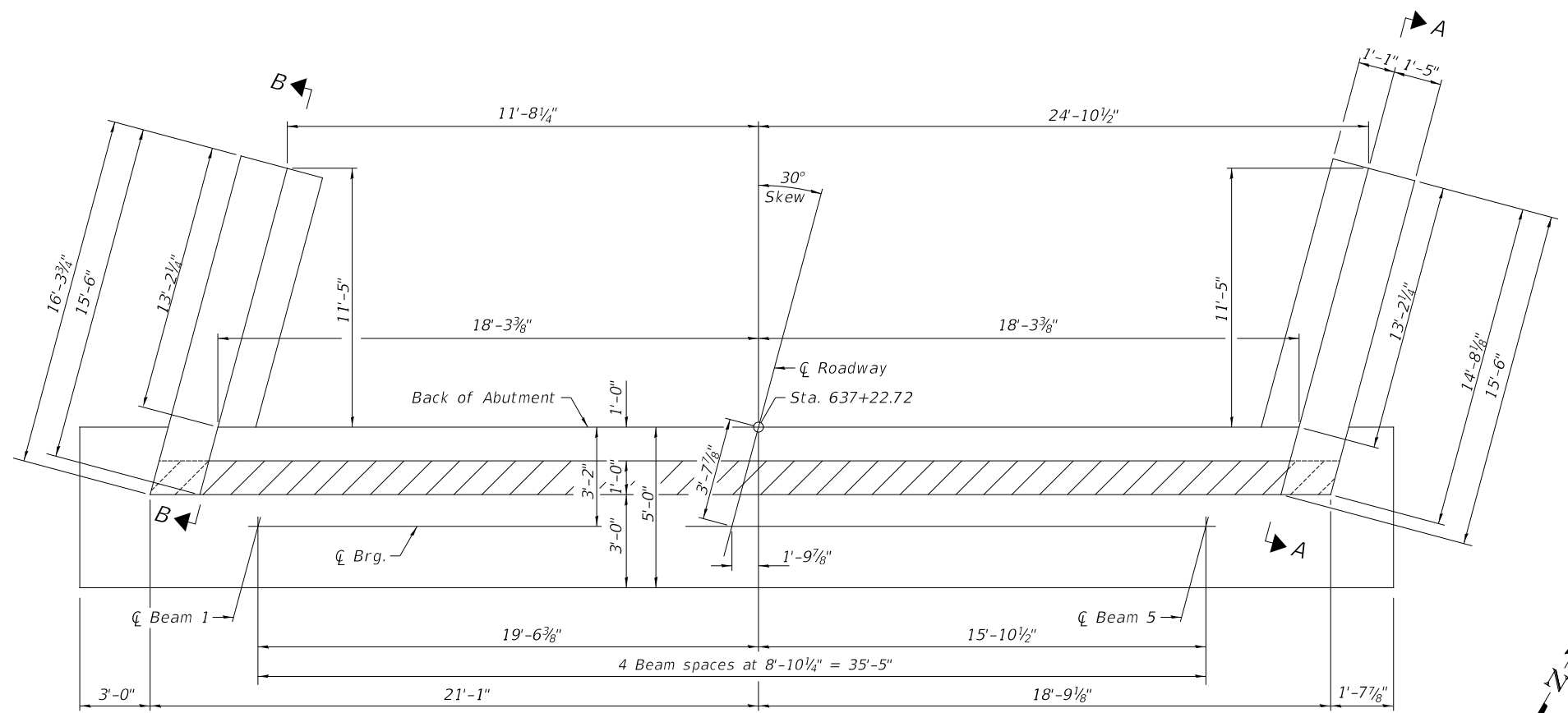
Hutchison Engineering, Inc.
 JACKSONVILLE-SHOREWOOD
 PEORIA-QUAD CITIES-CARBONDALE

USER NAME = JSavage	DESIGNED - JPS	REVISED -
PLOT SCALE = SSCALE5	DRAWN - ZL	REVISED -
PLOT DATE = 12/27/2024	CHECKED - BAN	REVISED -
	DATE - 11/06/2024	REVISED -

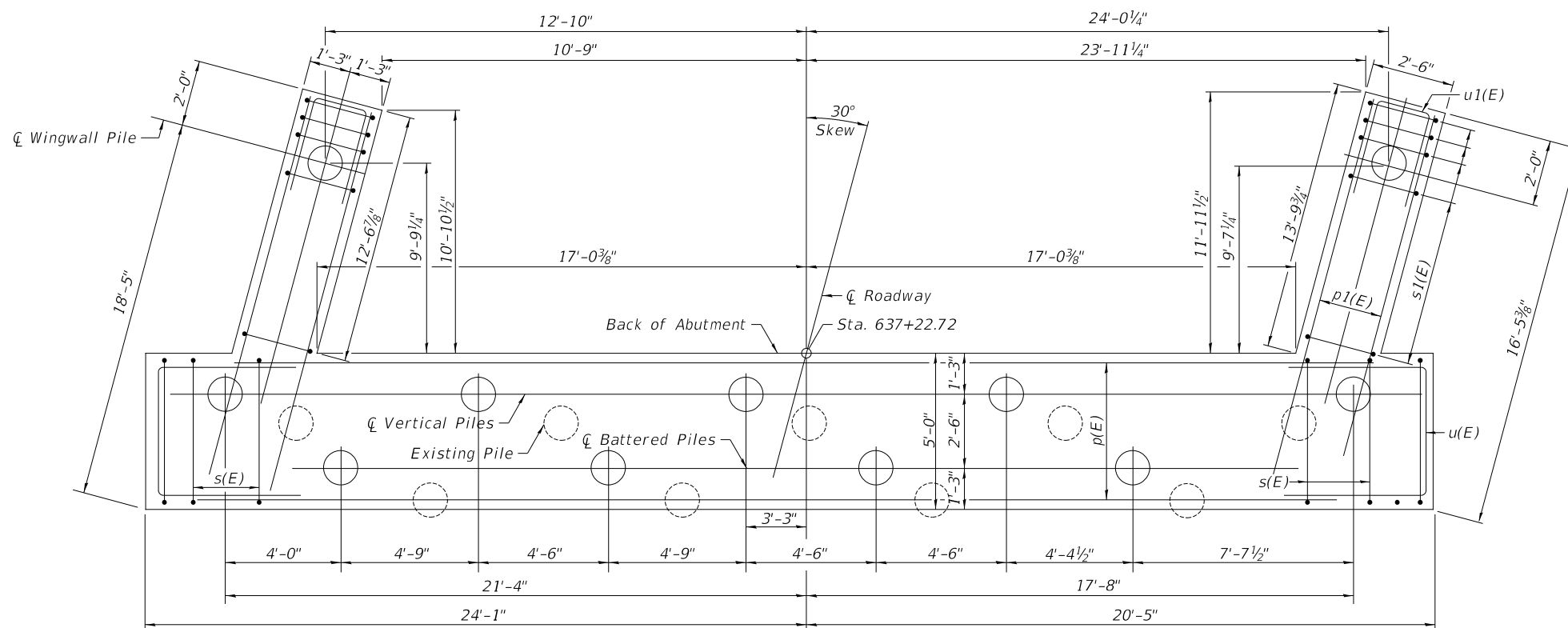
**IROQUOIS COUNTY
 F.A.S. 330 (CH 31)
 OVER IROQUOIS RIVER**

SOUTH ABUTMENT
 SCALE: N/A SHEET 12 OF 21 SHEETS

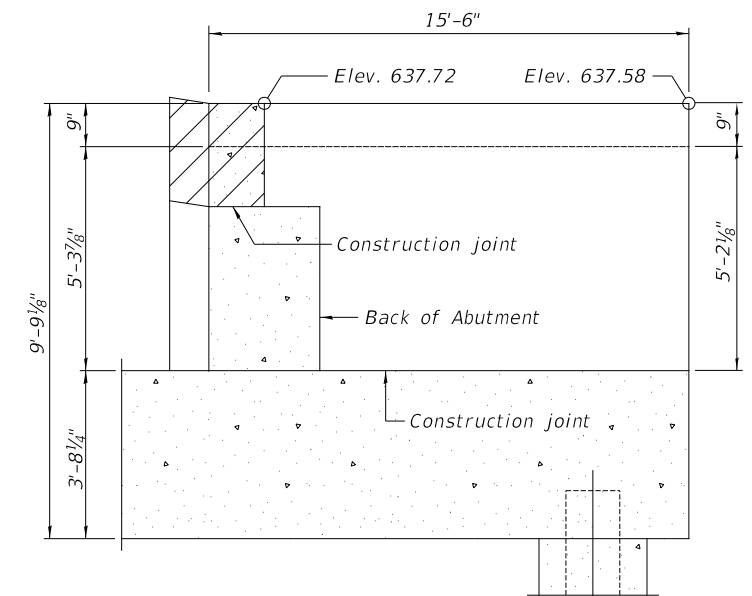
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330	22-00149-03-BR	IROQUOIS	25	16
	SN 038-4603		CONTRACT NO. 87850	
		ILLINOIS	FED. AID PROJECT NO. 54W8(571)	



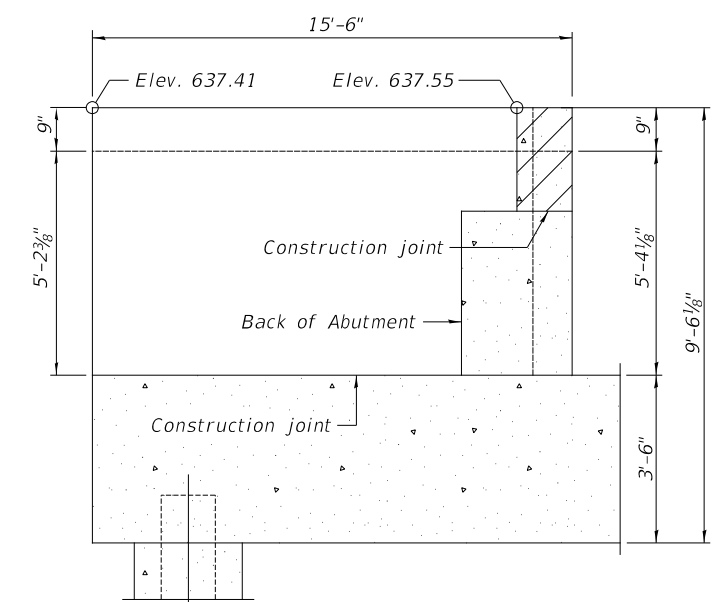
PLAN



PILE CAP PLAN



SECTION B-B
(Showing dimensions)



SECTION A-A
(Showing dimensions)

Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD
PEORIA-QUAD CITIES-CARBONDALE

USER NAME = JSavage
PLOT SCALE = 5SCALE5
PLOT DATE = 12/27/2024

DESIGNED - JPS
DRAWN - ZL
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DATE - 11/06/2024

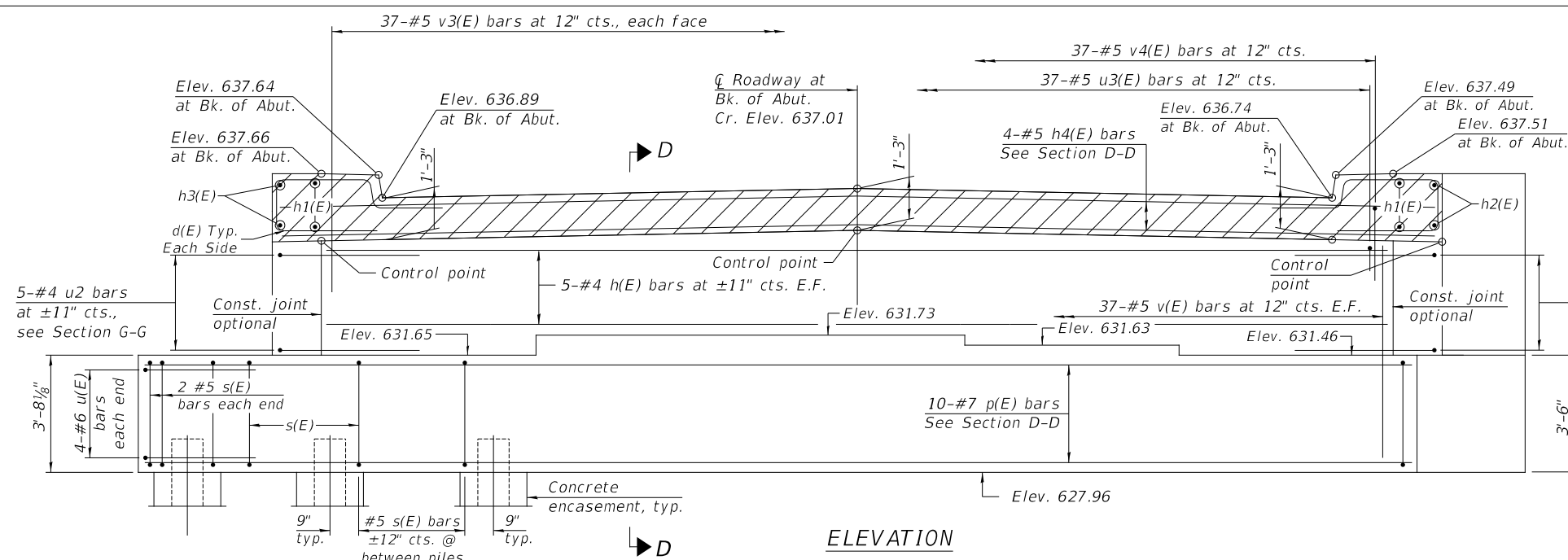
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REVISED -

IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER

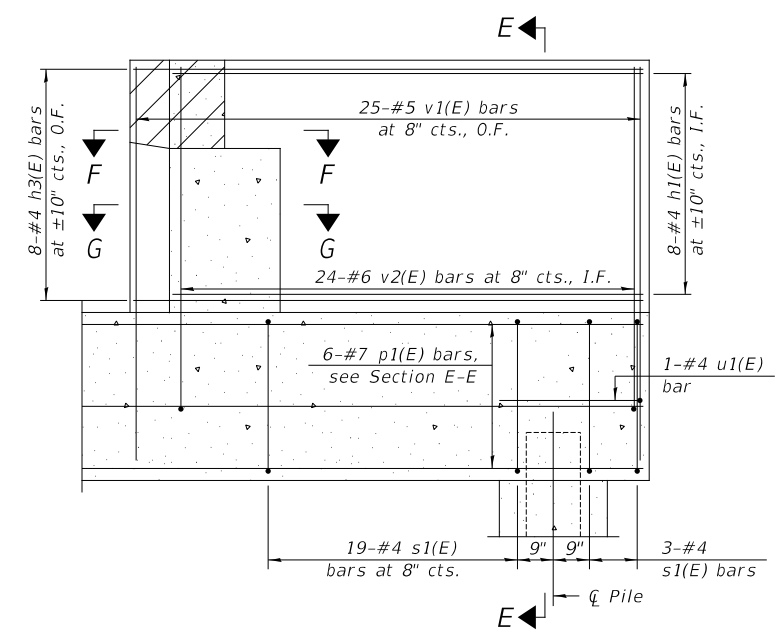
NORTH ABUTMENT
SCALE: N/A SHEET 13 OF 21 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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SN 038-4603			CONTRACT NO. 87850	
ILLINOIS			FED. AID PROJECT NO. 54W8(571)	

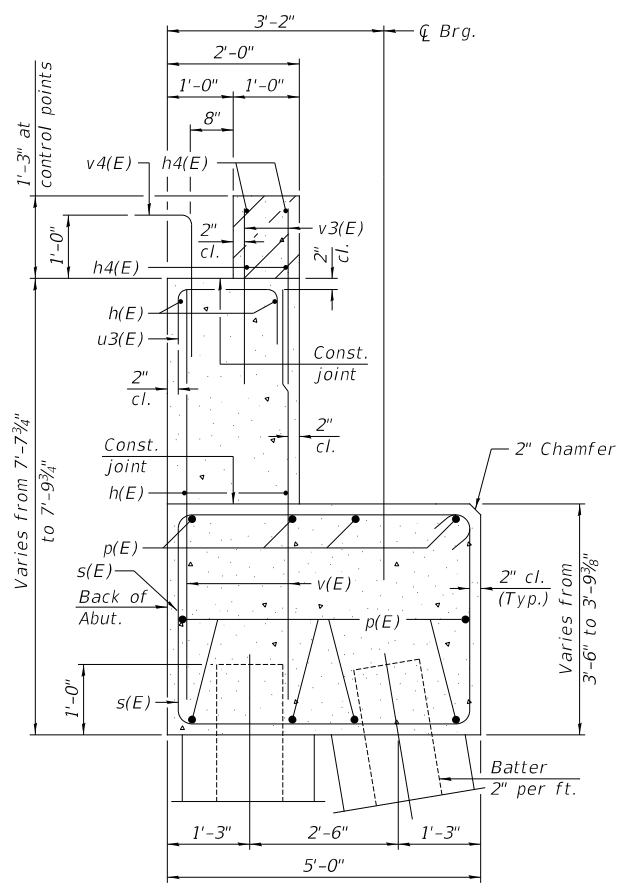
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2023 JOB#4968



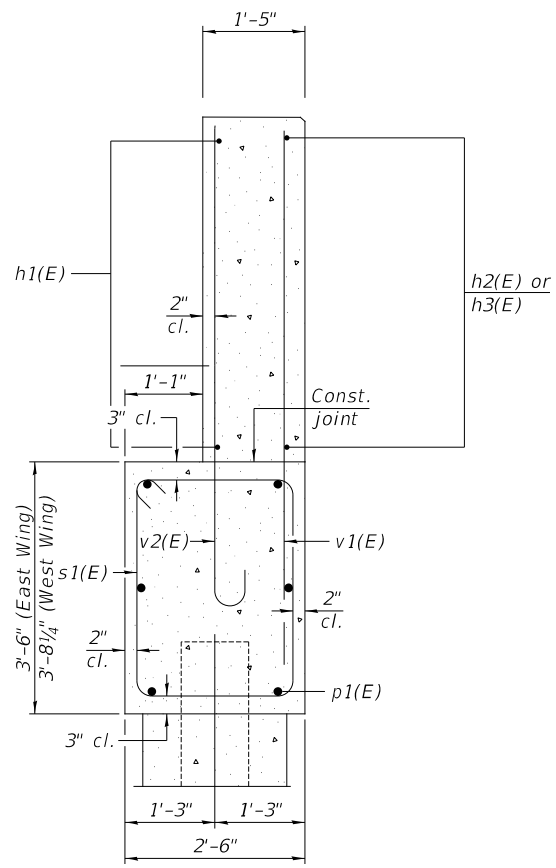
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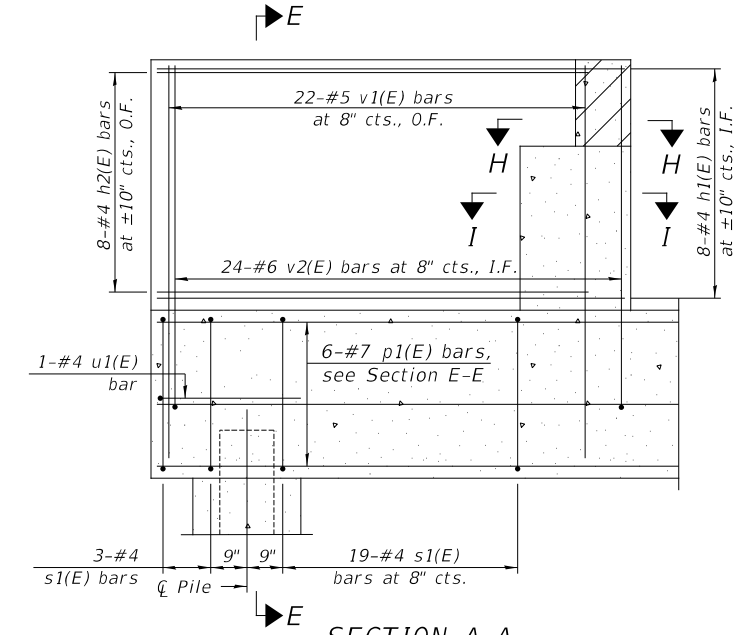
SECTION B-B
(Showing reinforcement)



SEC. THRU ABUT.
(Horizontal Dim. @ Rt. L's)



SECTION E-E
(At Rt. L's)



SECTION A-A
(Showing reinforcement)

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 2023

Hutchison Engineering, Inc.
 JACKSONVILLE-SHOREWOOD
 PEORIA-QUAD CITIES-CARBONDALE
 JOB#4968

USER NAME = JSavage	DESIGNED - JPS	REVISED -
PLOT SCALE = 55CALES	DRAWN - ZL	REVISED -
PLOT DATE = 12/27/2024	CHECKED - BAN	REVISED -
	DATE - 11/06/2024	REVISED -

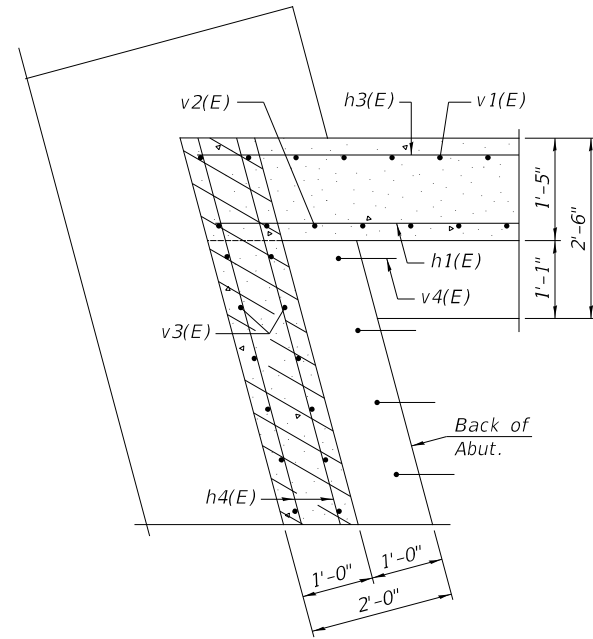
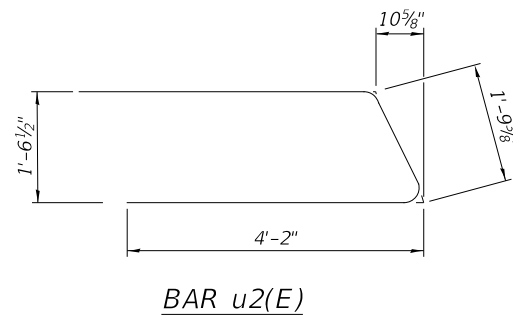
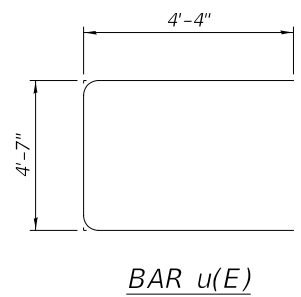
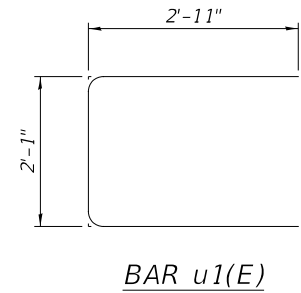
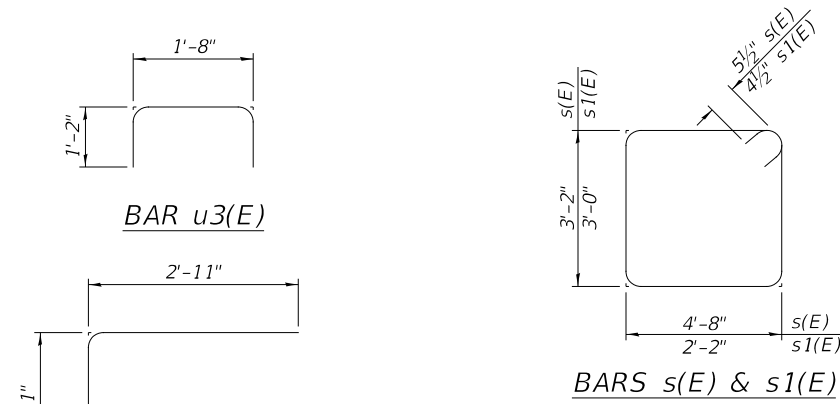
IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER

SCALE: N/A
 SHEET 14 OF 21 SHEETS

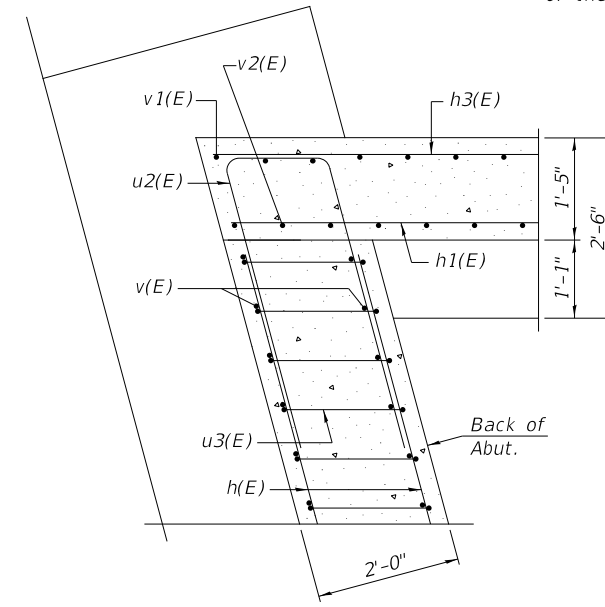
NORTH ABUTMENT

F.A.S. RTE. 330	SECTION 22-00149-03-BR	COUNTY IROQUOIS	TOTAL SHEETS 25	SHEET NO. 18
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54W8(571)		

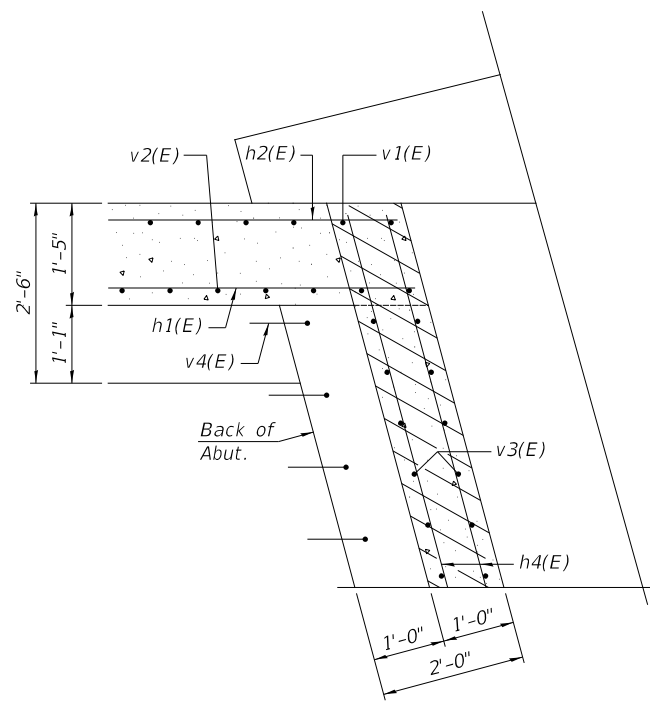
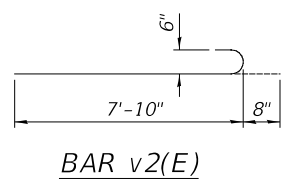
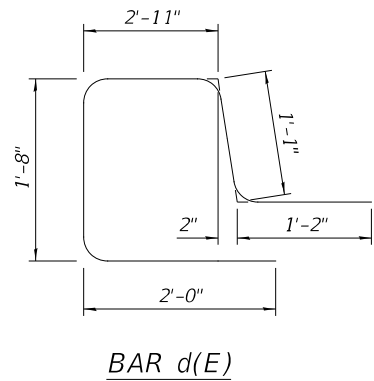
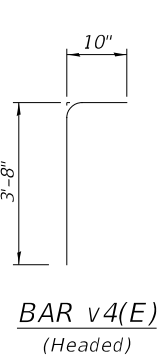
Notes:
 Hatched area to be poured separately after superstructure falsework has been removed and after approach slab side formwork has been removed.
 Quantity of concrete in hatched area is included with Concrete Superstructure on sheet 4 of 21.
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles and Concrete Encasement, see sheet 21 of 21.
 The top of back wall and approach slab seat shall have a constant slope determined from the control points shown.
 Concrete Sealer shall be applied to the bearing seats and front faces of the hatched block, back wall, and abutment cap.



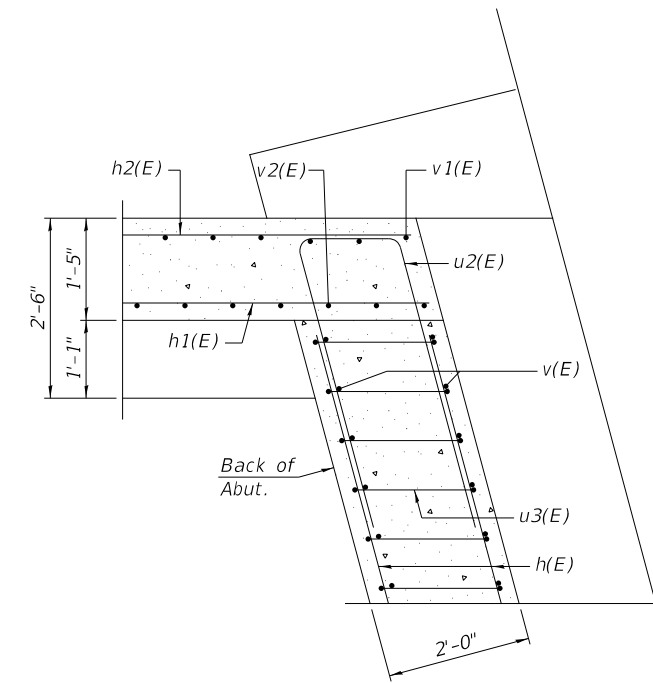
SECTION F-F



SECTION G-G



SECTION H-H



SECTION I-I

**N. ABUTMENT
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d(E)	4	#5	8'-10"	
h(E)	10	#4	39'-6"	
h1(E)	16	#4	15'-3"	
h2(E)	8	#4	14'-5"	
h3(E)	8	#4	16'-0"	
h4(E)	4	#5	39'-7"	
p(E)	10	#7	44'-2"	
p1(E)	12	#7	17'-6"	
s(E)	38	#5	16'-7"	
s1(E)	44	#4	11'-1"	
u(E)	8	#6	13'-3"	
u1(E)	2	#4	7'-11"	
u2(E)	10	#4	10'-2"	
u3(E)	37	#5	4'-0"	
v(E)	74	#5	7'-2"	
v1(E)	44	#5	9'-0"	
v2(E)	46	#6	7'-6"	
v3(E)	74	#5	4'-0"	
v4(E)	37	#5	4'-6"	
Structure Excavation			Cu. Yd.	125
Concrete Structures			Cu. Yd.	58.8
Reinforcement Bars, Epoxy Coated			Pound	5,600
Furnishing Metal Shell Piles 12"x0.250"			Foot	600
Driving Piles			Foot	600
Test Pile Metal Shells			Each	1
Concrete Encasement			Cu. Yd.	5.0
Concrete Sealer			Sq. Ft.	325

PILE DATA

Type: Metal Shell 12"x0.250" walls
 Nominal Required Bearing: 294 kips
 Factored Resistance Available: 162 kips
 Est. Length: 60 ft
 No. Production Piles: 11
 No. Test Piles: 1

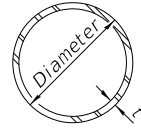
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Hutchison Engineering, Inc. JACKSONVILLE-SHOREWOOD PEORIA-QUAD CITIES-CARBONDALE	USER NAME = JSavage	DESIGNED - JPS	REVISED -
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	DATE = 12/27/2024	CHECKED - BAN	REVISED -
	DATE = 11/06/2024	DATE = 11/06/2024	REVISED -

**IROQUOIS COUNTY
 F.A.S. 330 (CH 31)
 OVER IROQUOIS RIVER**

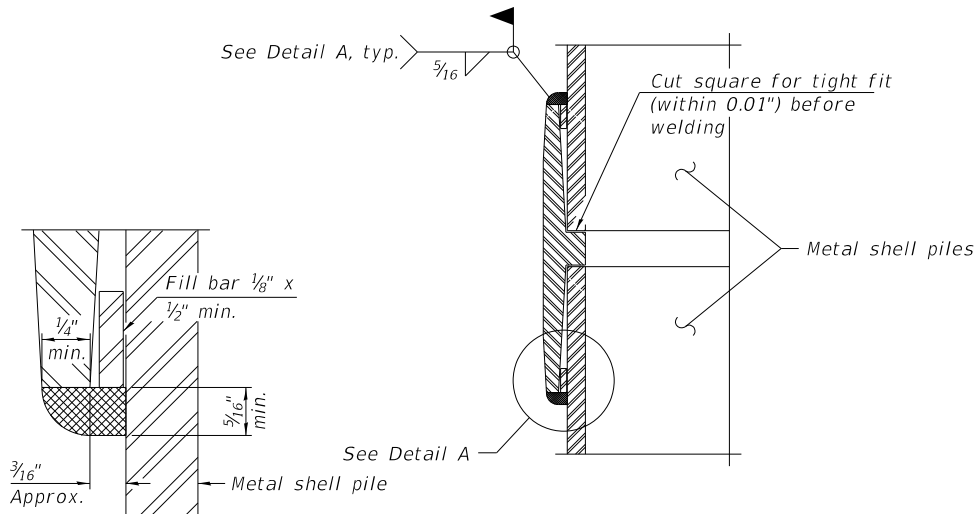
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	19
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54W8(571)		

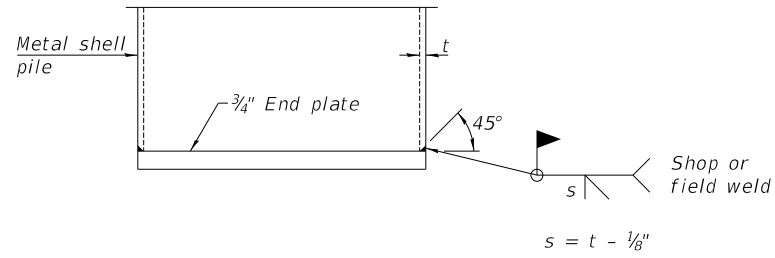
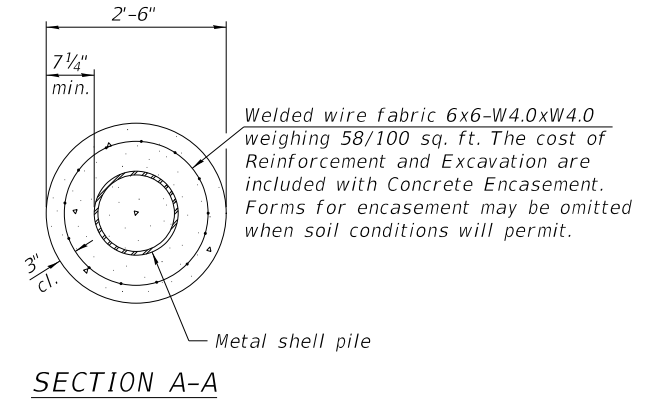
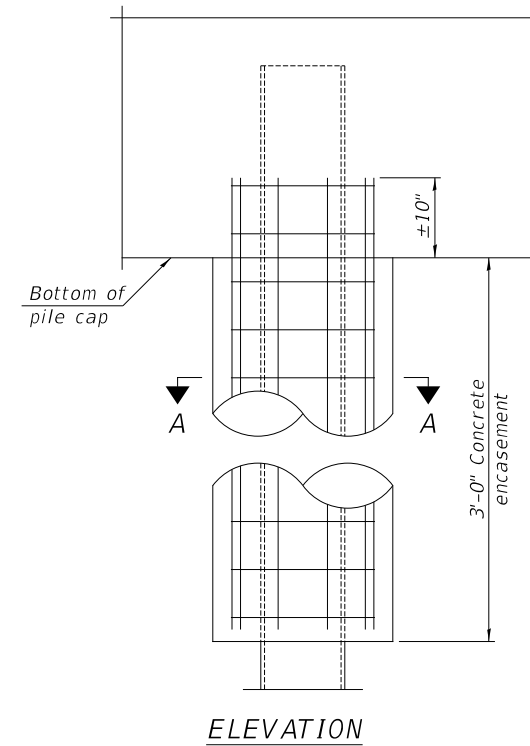


METAL SHELL PILE TABLE

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.250"	31.40	0.0267
PP14	0.250"	36.75	0.0368
PP14	0.312"	45.65	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470

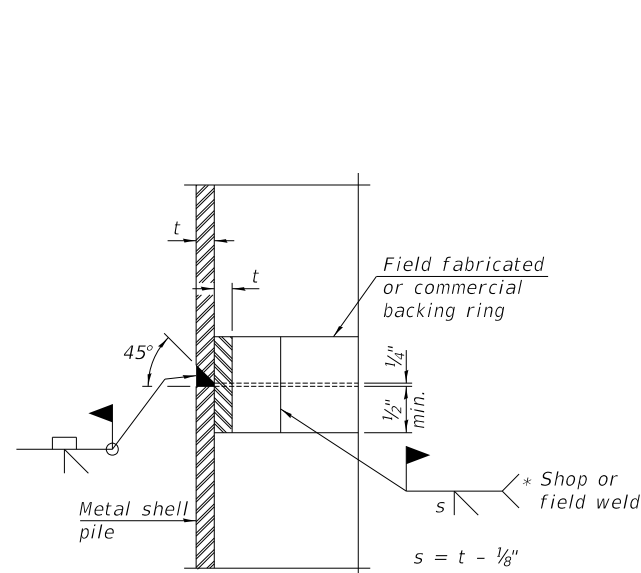


DETAIL A



WELDED COMMERCIAL SPLICE

Notes:
 The $\frac{1}{8}$ " x $\frac{1}{2}$ " min. fill bar may be constructed of 2 bars with a $\frac{1}{8}$ " max. gap between them.
 Pile segments shall be driven to solid contact with splicer before welding.

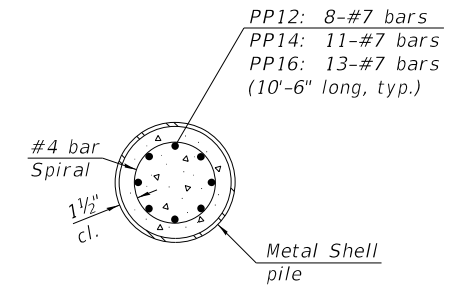
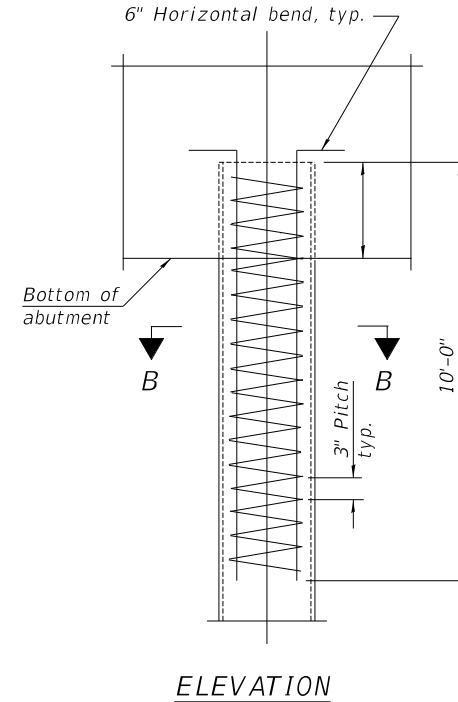


COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.

Note:
 The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

INDIVIDUAL PILE CONCRETE ENCASUREMENT
 (When specified)



SECTION B-B

The cost of Reinforcement is included with Furnishing Metal Shell Piles 12"x0.250"

REINFORCEMENT AT ABUTMENTS
 (Omit when concrete encasement is specified)

MODEL: Default
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Hutchinson Engineering, Inc.

JACKSONVILLE-SHOREWOOD
 PEORIA-QUAD CITIES-CARBONDALE

2023 JOB#4968

USER NAME = JSavage
 PLOT SCALE = SCALES
 PLOT DATE = 12/27/2024

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 CHECKED - BAN
 DATE - 04/10/2023

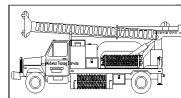
REVISED -
 REVISED -
 REVISED -
 REVISED -

IROQUOIS COUNTY
 F.A.S. 330 (CH 31)
 OVER IROQUOIS RIVER

METAL SHELL DETAILS

SCALE: N/A SHEET 16 OF 21 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	20
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54W8(571)		



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 1 of 5

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

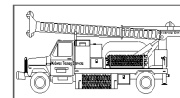
Client: Hutchison Engineering, Inc.
Project Name Section No. 22-00149-03-BR SN 038-4603
Project Site: Middleport Twp.
Iroquois County, Illinois

Boring No. B-1
Surface Elev. 637.00
Auger Depth 91' Rotary Depth NA
Start Date 07/08/23 Finish Date 07/08/23

Location: 7' RT of Centerline, Station 637+20
North Abutment

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
637.00										Randy Safranski Diedrich D-120	
636.00	Asphalt over Aggregate		1								
635.00			2								
634.00			3	1	SS	1.2	6	B	17		
633.00			4								
632.00			5	2	SS	1.1	5	B	18		
631.00			6								
630.00			7								
629.00	Medium Stiff to Stiff Brown/Black Silty Clay (Fill)		8	3	SS	1.2	5	B	17		
628.00			9								
627.00			10	4	SS	1.2	6	S	17		
626.00			11								
625.00			12								
624.00			13	5	SS	0.8	5	S	19		
623.00			14								
622.00			15	6	SS	1.0	5	B	18		
621.00			16								
620.00			17								
619.00			18	7	SS	1.2	7	B	17		
618.00			19								
617.00	Medium Stiff to Stiff Black Silty Clay		20	8	SS	1.3	6	S	25		

Groundwater Data: Static water level after auger removal - Elevation 607
Comments:



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 2 of 5

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.
Project Name Section No. 22-00149-03-BR SN 038-4603
Project Site: Middleport Twp.
Iroquois County, Illinois

Boring No. B-1
Surface Elev. 637.00
Auger Depth 91' Rotary Depth NA
Start Date 07/08/23 Finish Date 07/08/23

Location: 7' RT of Centerline, Station 637+20
North Abutment

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
616.00										Randy Safranski Diedrich D-120	
615.00			22								
614.00	Medium Stiff to Stiff Gray Clay		23	9	SS	1.4	7	B	24		
613.00			24								
612.00			25								
611.00			26	10	SS	1.4	6	B	25		
610.00			27								
609.00			28	11	SS	---	7	---	22		
608.00	Loose Gray Clay & Fine Sand		29								
607.00			30								
606.00			31	12	SS	---	5	---	21		Water
605.00			32								
604.00			33	13	SS	1.3	6	B	26		
603.00			34								
602.00	Medium Stiff to Stiff Gray Clay		35	14	SS	1.3	6	B	27		
601.00			36								
600.00			37								
599.00			38								
598.00			39								
597.00			40								
596.00			41	15	SS	1.9	8	B	30		

Groundwater Data: Static water level after auger removal - Elevation 607
Comments:

MODEL: D:\draft\... FILE NAME: V131968 - CH 31 over Iroquois River (Iroquois) (CADD) Sheets\968-001.dgn

Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD
PEORIA-QUAD CITIES-CARBONDALE

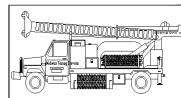
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PLOT SCALE = 55CALES	DRAWN - ZL	REVISED -
PLOT DATE = 12/27/2024	CHECKED - BAN	REVISED -
	DATE - 12/20/2023	REVISED -

**IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER**

SOIL BORINGS

SCALE: N/A SHEET 17 OF 21 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	21
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54W8(571)		



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 3 of 5

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

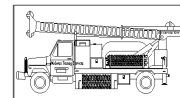
Client: Hutchison Engineering, Inc.
Project Name Section No. 22-00149-03-BR SN 038-4603
Project Site: Middleport Twp.
Iroquois County, Illinois

Boring No. B-1
Surface Elev. 637.00
Auger Depth 91' Rotary Depth NA
Start Date 07/08/23 Finish Date 07/08/23

Location: 7' RT of Centerline, Station 637+20
North Abutment

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
595.00										Randy Safranski Diedrich D-120	
594.00			43								
593.00			44								
592.00			45								
591.00			46	16	SS	1.6	7	B	31		
590.00	Medium Stiff to Stiff Gray Clay		47								
589.00			48								
588.00			49								
587.00			50								
586.00			51	17	SS	1.9	7	B	31		
585.00			52								
584.00			53								
583.00			54								
582.00			55								
581.00			56	18	SS	2.6	10	B	16		
580.00	Stiff to Very Stiff Gray Clay Till		57								
579.00			58								
578.00			59								
577.00			60								
576.00			61	19	SS	2.3	9	B	18		
575.00			62								

Groundwater Data: Static water level after auger removal - Elevation 607
Comments:



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 4 of 5

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.
Project Name Section No. 22-00149-03-BR SN 038-4603
Project Site: Middleport Twp.
Iroquois County, Illinois

Boring No. B-1
Surface Elev. 637.00
Auger Depth 91' Rotary Depth NA
Start Date 07/08/23 Finish Date 07/08/23

Location: 7' RT of Centerline, Station 637+20
North Abutment

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
574.00										Randy Safranski Diedrich D-120	
573.00	Stiff to Very Stiff Gray Clay Till		64								
572.00			65								
571.00			66	20	SS	2.0	8	B	21		
570.00			67								
569.00			68								
568.00			69								
567.00			70								
566.00	Medium Stiff to Stiff Gray Clay		71	21	SS	1.7	7	B	35		
565.00			72								
564.00			73								
563.00			74								
562.00			75								
561.00			76	22	SS	1.4	5	B	36		
560.00			77								
559.00			78								
558.00			79								
557.00			80								
556.00	Medium Dense Gray Silt		81	23	SS	---	14	---	27		
555.00			82								
554.00			83								

Groundwater Data: Static water level after auger removal - Elevation 607
Comments:

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FILE NAME: V:\1908 - CH 31 over Iroquois River (Iroquois) (CADD)\CADD_Sheets\968-001.dgn

Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD
PEORIA-QUAD CITIES-CARBONDALE

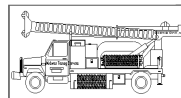
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PLOT DATE = 12/27/2024	CHECKED - BAN	REVISED -
	DATE - 12/20/2023	REVISED -

**IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER**

SOIL BORINGS

SCALE: N/A SHEET 18 OF 21 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	22
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54WB(571)		



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 5 of 5

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

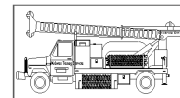
Client: Hutchison Engineering, Inc.
Project Name Section No. 22-00149-03-BR SN 038-4603
Project Site: Middleport Twp.
Iroquois County, Illinois

Boring No. B-1
Surface Elev. 637.00
Auger Depth 91' Rotary Depth NA
Start Date 07/08/23 Finish Date 07/08/23

Location: 7' RT of Centerline, Station 637+20
North Abutment

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
553.00											
552.00			85								
551.00	Medium Dense Gray Silt		86	24	SS	---	10	---	28		
550.00			87								
549.00			88								
548.00			89								
547.00			90								
546.00			91	25	SS	---	13	---	27		
545.00			92								
544.00			93								
543.00			94								
542.00			95								
541.00			96								
540.00			97								
539.00			98								
538.00			99								
-100.00			100								
-101.00			101								
535.00			102								
534.00			103								
533.00			104								

Groundwater Data: Static water level after auger removal - Elevation 607
Comments:



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 1 of 5

Phone: 815-223-6696
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e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.
Project Name Section No. 22-00149-03-BR SN 038-4603
Project Site: Middleport Twp.
Iroquois County, Illinois

Boring No. B-2
Surface Elev. 639.50
Auger Depth 91' Rotary Depth NA
Start Date 07/08/23 Finish Date 07/08/23

Location: 8' LT of Centerline, Station 639+81
South Abutment

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
639.50											
638.50	Asphalt over Aggregate		1								
637.50			2								
636.50			3	1	SS	---	12	---	14		
635.50			4								
634.50	Medium Dense Brown Gravelly Clay Loam (Fill)		5	2	SS	---	16	---	15		
633.50			6								
632.50			7								
631.50			8	3	SS	---	20	---	15		
630.50			9								
629.50			10								
628.50			11	4	SS	---	28	---	16		
627.50			12								
626.50	Medium Dense Brown/Gray Silt		13	5	SS	---	17	---	15		
625.50			14								
624.50			15	6	SS	---	16	---	14		
623.50			16								
622.50			17								
621.50			18	7	SS	---	16	---	18		
620.50			19								
619.50			20	8	SS	---	15	---	22		

Groundwater Data: Static water level after auger removal - Elevation 627.5
Comments:

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Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD
PEORIA-QUAD CITIES-CARBONDALE

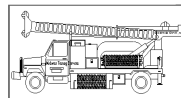
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PLOT DATE = 12/27/2024	DATE - 12/20/2023	REVISED -

**IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER**

SOIL BORINGS

SCALE: N/A SHEET 19 OF 21 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	23
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54W8(571)		



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 2 of 5

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

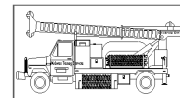
Client: Hutchison Engineering, Inc.
Project Name Section No. 22-00149-03-BR SN 038-4603
Project Site: Middleport Twp.
Iroquois County, Illinois

Boring No. B-2
Surface Elev. 639.50
Auger Depth 91' Rotary Depth NA
Start Date 07/08/23 Finish Date 07/08/23

Location: 8' LT of Centerline, Station 639+81
South Abutment

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
618.50										Randy Safranski Diedrich D-120	
617.50			22								
616.50			23	9	SS	1.4	7	B	25		
615.50			24								
614.50			25	10	SS	1.5	6	B	24		
613.50			26								
612.50			27								
611.50			28	11	SS	1.2	7	B	28		
610.50	Stiff Gray Clay		29								
609.50			30	12	SS	1.2	8	B	29		
608.50			31								
607.50			32								
606.50			33	13	SS	1.2	6	B	28		
605.50			34								
604.50			35	14	SS	1.2	6	B	27		
603.50			36								
602.50			37								
601.50			38								
600.50			39								
599.50			40	15	SS	1.4	6	B	30		
598.50			41								

Groundwater Data: Static water level after auger removal - Elevation 627.5
Comments:



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 3 of 5

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.
Project Name Section No. 22-00149-03-BR SN 038-4603
Project Site: Middleport Twp.
Iroquois County, Illinois

Boring No. B-2
Surface Elev. 639.50
Auger Depth 91' Rotary Depth NA
Start Date 07/08/23 Finish Date 07/08/23

Location: 8' LT of Centerline, Station 639+81
South Abutment

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
597.50										Randy Safranski Diedrich D-120	
596.50			43								
595.50			44								
594.50			45								
593.50			46	16	SS	1.7	8	B	31		
592.50	Stiff to Very Stiff Gray Clay		47								
591.50			48								
590.50			49								
589.50			50	17	SS	1.7	12	B	31		
588.50			51								
587.50			52								
586.50			53								
585.50			54								
584.50			55	18	SS	2.2	12	B	16		
583.50	Stiff to Very Stiff Gray Clay Till		56								
582.50			57								
581.50			58								
580.50			59								
579.50			60								
578.50			61	19	SS	1.9	8	B	18		
577.50			62								

Groundwater Data: Static water level after auger removal - Elevation 627.5
Comments:

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Hutchison Engineering, Inc.
JACKSONVILLE-SHOREWOOD
PEORIA-QUAD CITIES-CARBONDALE

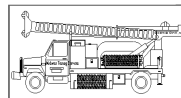
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PLOT SCALE = 55CALES	DRAWN - ZL	REVISED -
PLOT DATE = 12/27/2024	CHECKED - BAN	REVISED -
	DATE - 12/20/2023	REVISED -

IROQUOIS COUNTY
F.A.S. 330 (CH 31)
OVER IROQUOIS RIVER

SOIL BORINGS

SCALE: N/A SHEET 20 OF 21 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
330	22-00149-03-BR	IROQUOIS	25	24
SN 038-4603		CONTRACT NO. 87850		
ILLINOIS		FED. AID PROJECT NO. 54WB(571)		



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 4 of 5

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

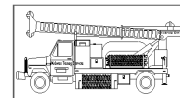
Client: Hutchison Engineering, Inc.
Project Name Section No. 22-00149-03-BR SN 038-4603
Project Site: Middleport Twp.
Iroquois County, Illinois

Boring No. B-2
Surface Elev. 639.50
Auger Depth 91' Rotary Depth NA
Start Date 07/08/23 Finish Date 07/08/23

Location: 8' LT of Centerline, Station 639+81
South Abutment

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
576.50										Randy Safranski Diedrich D-120	
575.50	Stiff to Very Stiff Gray Clay Till		64								
574.50			65	20	SS	2.1	9	B	21		
573.50			66								
572.50			67								
571.50			68								
570.50			69								
569.50	Medium Stiff to Stiff Gray Clay		70	21	SS	1.5	7	B	35		
568.50			71								
567.50			72								
566.50			73								
565.50			74								
564.50			75	22	SS	1.5	7	B	22		
563.50			76								
562.50			77								
561.50			78								
560.50			79								
559.50			80	23	SS	---	21	---	26		
558.50	Medium Dense Gray Silt		81								
557.50			82								
556.50			83								

Groundwater Data: Static water level after auger removal - Elevation 627.5
Comments:



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 5 of 5

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.
Project Name Section No. 22-00149-03-BR SN 038-4603
Project Site: Middleport Twp.
Iroquois County, Illinois

Boring No. B-2
Surface Elev. 639.50
Auger Depth 91' Rotary Depth NA
Start Date 07/08/23 Finish Date 07/08/23

Location: 8' LT of Centerline, Station 639+81
South Abutment

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
555.50										Randy Safranski Diedrich D-120	
554.50			85								
553.50	Medium Dense Gray Silt		86	24	SS	---	10	---	28		
552.50			87								
551.50			88								
550.50			89								
549.50			90								
548.50			91	25	SS	---	11	---	28		
547.50			92								
546.50			93								
545.50			94								
544.50			95								
543.50			96								
542.50			97								
541.50			98								
540.50			99								
-100.00			100								
-101.00			101								
537.50			102								
536.50			103								
535.50			104								

Groundwater Data: Static water level after auger removal - Elevation 627.5
Comments:

MODEL: D:\draft\... FILE NAME: V131968 - CH 31 over Iroquois River (Iroquois) (CADD)\CADD_Sheets\968-001.dgn