

INDEX OF SHEETS

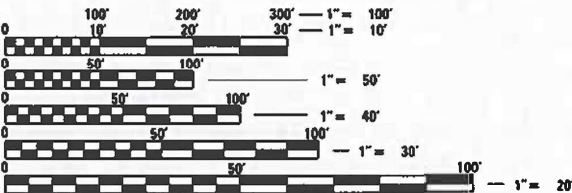
- 1 COVER SHEET
- 2 GENERAL NOTES AND COMMITMENTS
- 3 SUMMARY OF QUANTITIES
- 4 DETOUR SIGNING PLAN
- 5-6 TRAFFIC CONTROL AND PROTECTION (SPECIAL) SHEETS
- 7-28 STRUCTURAL PLANS

HIGHWAY STANDARDS

- 000001-09 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 701001-02 OFF-RD OPERATIONS 2L 2W MORE THAN 15FT
- 701006-05 OFF-RD OPERATIONS 2L 2W 15' TO 24" FROM PAVEMENT EDGE
- 701011-04 OFF-RD MOVING OPERATIONS 2L 2W DAY ONLY
- 701101-05 OFF-RD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
- 701106-02 OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
- 701301-04 LANE CLOSURE, 2L 2W, SHORT TIME OPERATIONS
- 701427-05 LANE CLOSURE MULTILANE INTERMITTENT OR MOVING OPERATIONS 40MPH OR LESS
- 701801-06 SIDEWALK, CORNER OR CROSSWALK CLOSURE
- 701901-11 TRAFFIC CONTROL DEVICES
- 720001-01 SIGN PANEL MOUNTING DETAILS

TRAFFIC DATA - ADT

ADT: 6950 (2023)
SU: 225
MU: 170
MINOR ARTERIAL



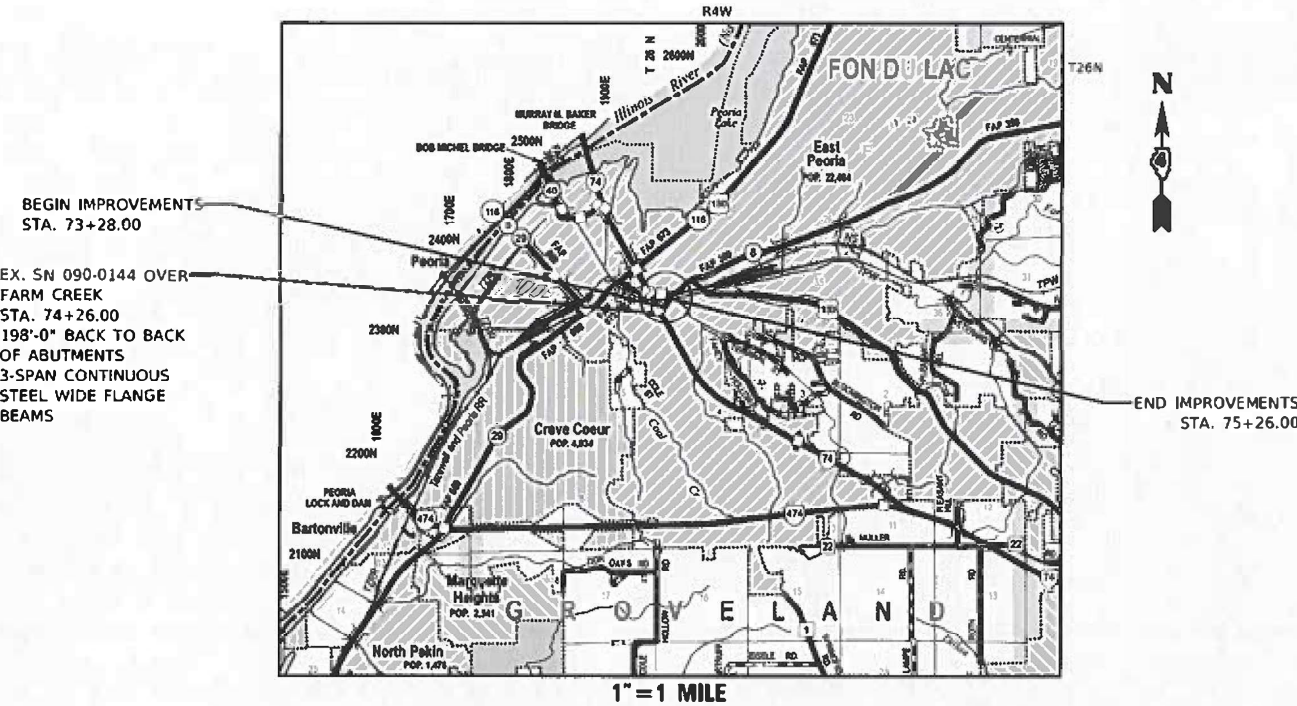
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: BEN TELLEFSON
PROJECT MANAGER: MARK ECKHOFF
CONTRACT NO. 68J43
CATALOG NO. 036547-00D

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS
FAU 6750 (WASHINGTON STREET)
SECTION [(104B-1)BR]BRR
BRIDGE REHABILITATION OVER FARM CREEK
TAZEWELL COUNTY
C-94-095-24



LOCATION MAP

GROSS LENGTH = 198 FT. = 0.038 MILE
NET LENGTH = 198 FT. = 0.038 MILE



TIMOTHY B. PADGETT, P.E. EXPIRATION DATE
LICENSE NO. 062-049162 11-30-2025

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	1
ILLINOIS CONTRACT NO. 68J43				

D-94-067-24



PLANS PREPARED BY:



4940 Old Collinsville Road
Swansea, Illinois 62226
Tel: 618.624.4488
www.twm-inc.com
Illinois Professional Design Firm
No. 184-001220
License Expires: 4/30/2025
ILLINOIS • MISSOURI • TENNESSEE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED October 14 20 25
Kevin L. Darnett REGIONAL ENGINEER
December 5 2025
Scott A. Etkin ENGINEER OF DESIGN AND ENVIRONMENT
December 5 2025
Timothy B. Padgett DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

COMMITMENTS

COMMITMENTS ARE NOT TO BE ALTERED WITHOUT THE WRITTEN APPROVAL OF ALL PARTIES TO WHICH THE COMMITMENT WAS MADE.

NO COMMITMENTS HAVE BEEN MADE FOR THIS PROJECT.

GENERAL NOTES

ADDITIONAL SUPPLEMENTAL TRAFFIC CONTROL

THE DEPARTMENT RESERVES THE RIGHT AT ANY TIME TO ADD ADDITIONAL TRAFFIC CONTROL SYSTEMS OR DEVICES WITHIN THE ACTIVE CONTRACT LIMITS, BY MEANS OF AN ADDITIONAL CONTRACT. ALL TERMS OF ARTICLE 105.08 OF THE STANDARD SPECIFICATIONS SHALL BE FOLLOWED BY EACH CONTRACTOR.

SIGNING

SIGN LOCATIONS MAY VARY FROM THE STATIONS SHOWN ON THE PLANS IN ACCORDANCE WITH DIRECTIONS FROM THE ENGINEER AT THE TIME OF CONSTRUCTION. SIGN LOCATIONS MAY BE ADJUSTED IN THE FIELD TO AVOID ANY FOUND UTILITIES.

ALL WOOD POST LOCATIONS SHALL BE VERIFIED WITH THE BUREAU OF OPERATIONS, TRAFFIC SECTION, BEFORE INSTALLATION.

NO SURVEY WAS PERFORMED FOR THIS PROJECT. THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS.

STRUCTURAL COORDINATION

SEE STRUCTURE PLANS FOR PEDESTRIAN ACCESS DURING CONSTRUCTION.

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				CONSTRUCTION CODE
				100% STATE
CODE NO.	PAY ITEM	UNIT	TOTAL QUANTITY	BRIDGE PRESERVATION
				0047
				URBAN
50102400	CONCRETE REMOVAL	CU YD	25.8	25.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	25.6	25.6
50300300	PROTECTIVE COAT	SQ YD	63	63
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3080	3080
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3630	3630
52000110	PREFORMED JOINT STRIP SEAL	FOOT	171	171
67100100	MOBILIZATION	L SUM	1	1
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	180	180
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	100	100
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	75	75
X0324966	CONCRETE HEALER SEALER	SQ YD	1377	1377
X5030530	FLOOR DRAIN EXTENSION	EACH	6	6
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
X5051204	STRUCTURAL STEEL REMOVAL	POUND	2980	2980
X5051206	STRUCTURAL STEEL REPAIR	POUND	2480	2480
X7200203	DETOUR SIGNING	L SUM	1	1



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IL DESIGN FIRM
LICENSE NO:
184-001220

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	DRAWN = JCL
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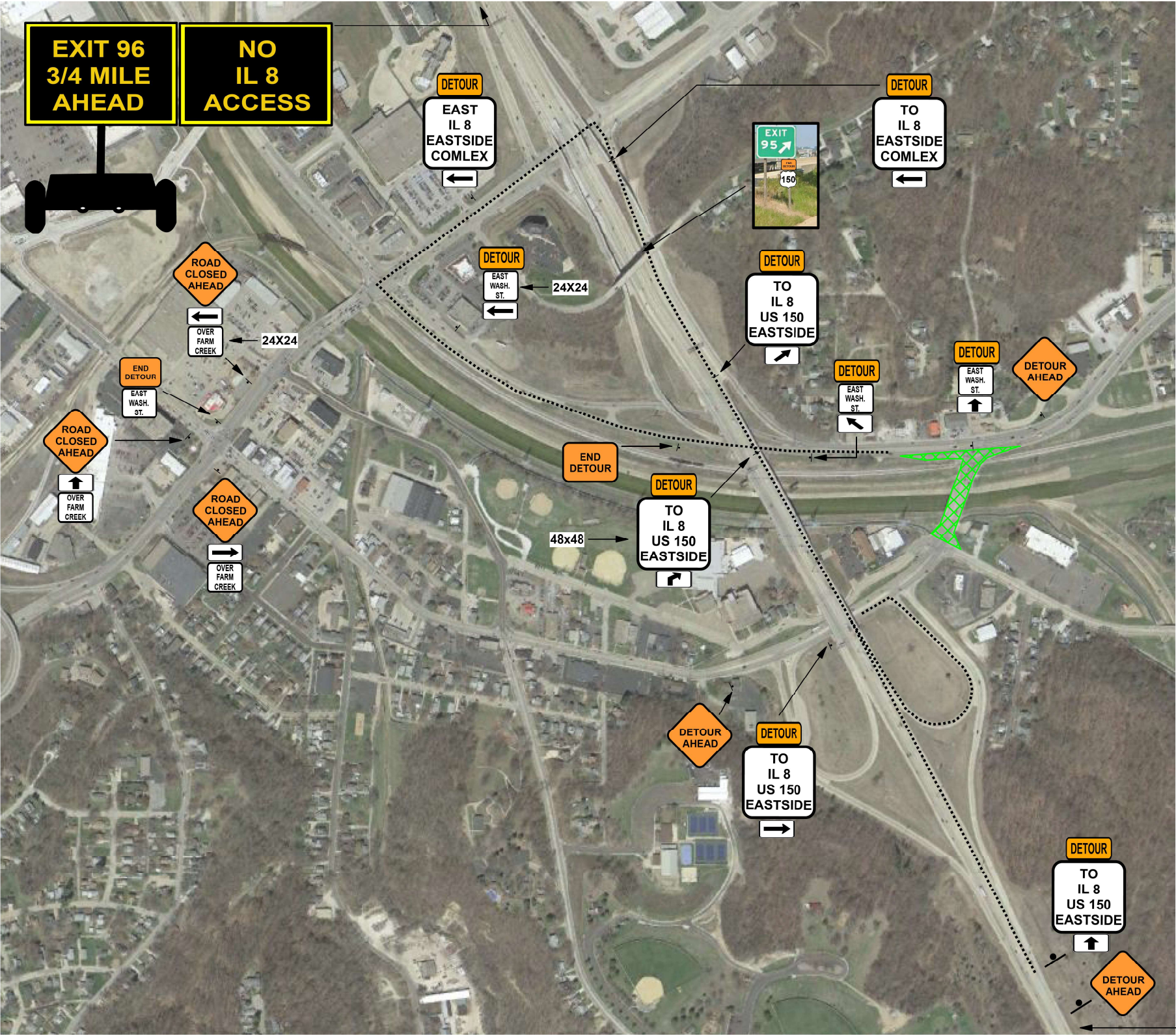
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	3
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				



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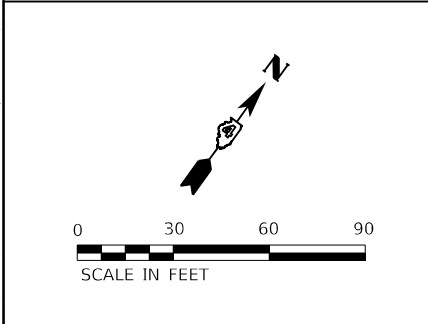
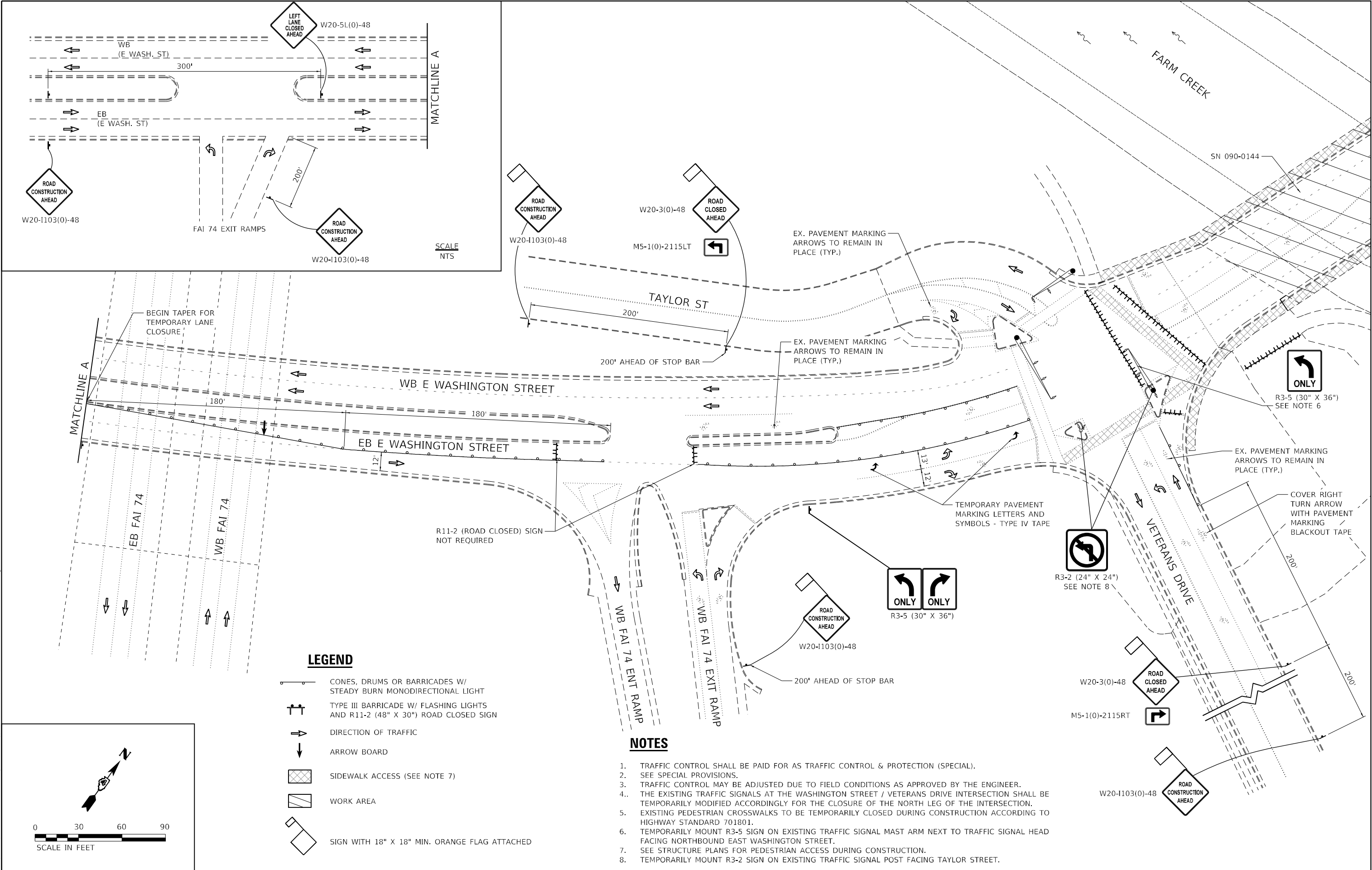
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR SIGNING PLAN

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	4
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				



LEGEND

- CONES, DRUMS OR BARRICADES W/ STEADY BURN MONODIRECTIONAL LIGHT
- TYPE III BARRICADE W/ FLASHING LIGHTS AND R11-2 (48" X 30") ROAD CLOSED SIGN
- DIRECTION OF TRAFFIC
- ARROW BOARD
- SIDEWALK ACCESS (SEE NOTE 7)
- WORK AREA
- SIGN WITH 18" X 18" MIN. ORANGE FLAG ATTACHED

NOTES

- TRAFFIC CONTROL SHALL BE PAID FOR AS TRAFFIC CONTROL & PROTECTION (SPECIAL).
- SEE SPECIAL PROVISIONS.
- TRAFFIC CONTROL MAY BE ADJUSTED DUE TO FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- THE EXISTING TRAFFIC SIGNALS AT THE WASHINGTON STREET / VETERANS DRIVE INTERSECTION SHALL BE TEMPORARILY MODIFIED ACCORDINGLY FOR THE CLOSURE OF THE NORTH LEG OF THE INTERSECTION.
- EXISTING PEDESTRIAN CROSSWALKS TO BE TEMPORARILY CLOSED DURING CONSTRUCTION ACCORDING TO HIGHWAY STANDARD 701801.
- TEMPORARILY MOUNT R3-5 SIGN ON EXISTING TRAFFIC SIGNAL MAST ARM NEXT TO TRAFFIC SIGNAL HEAD FACING NORTHBOUND EAST WASHINGTON STREET.
- SEE STRUCTURE PLANS FOR PEDESTRIAN ACCESS DURING CONSTRUCTION.
- TEMPORARILY MOUNT R3-2 SIGN ON EXISTING TRAFFIC SIGNAL POST FACING TAYLOR STREET.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL & PROTECTION (SPECIAL)
E WASHINGTON STREET

SCALE: 1"=30' SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	5
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				

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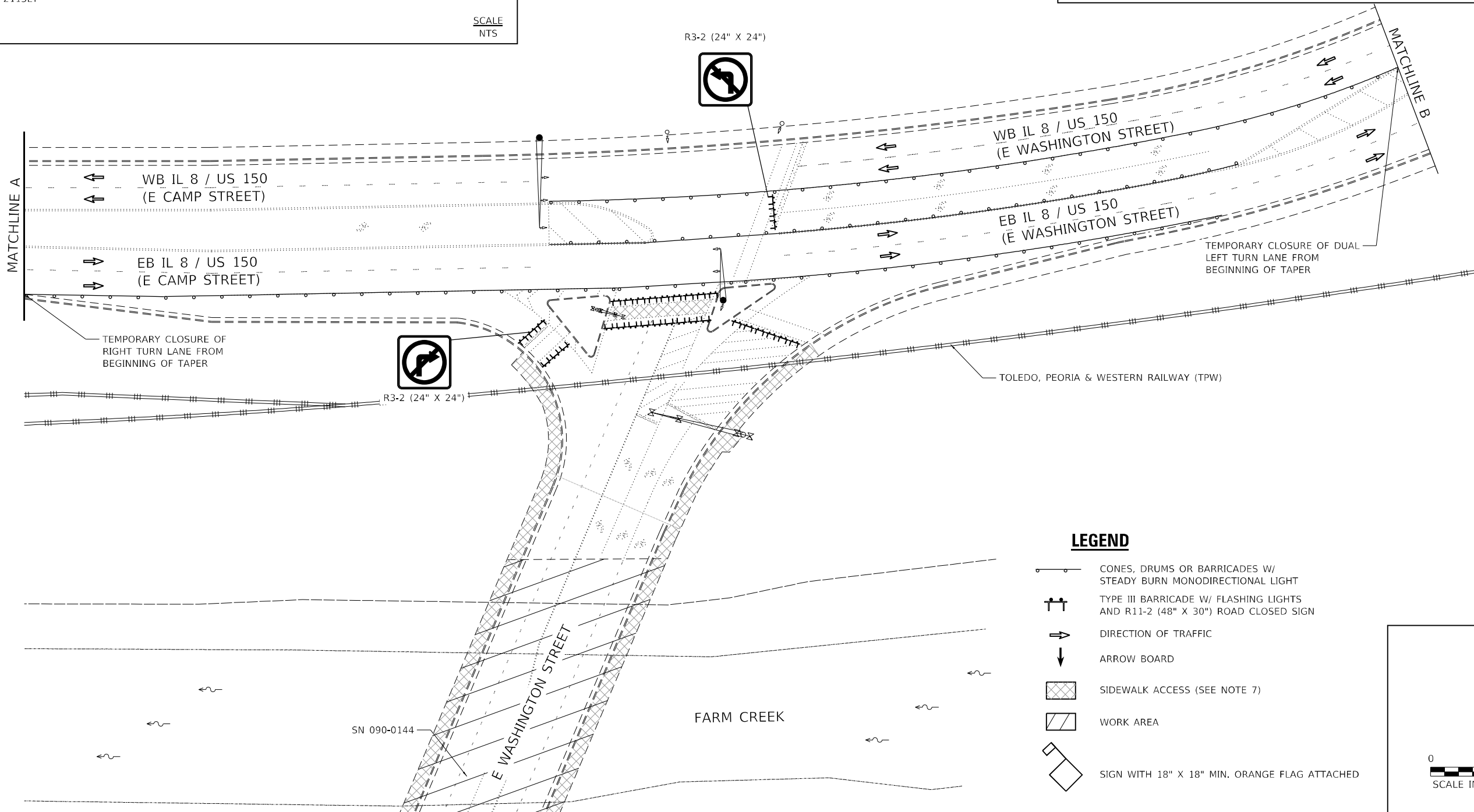
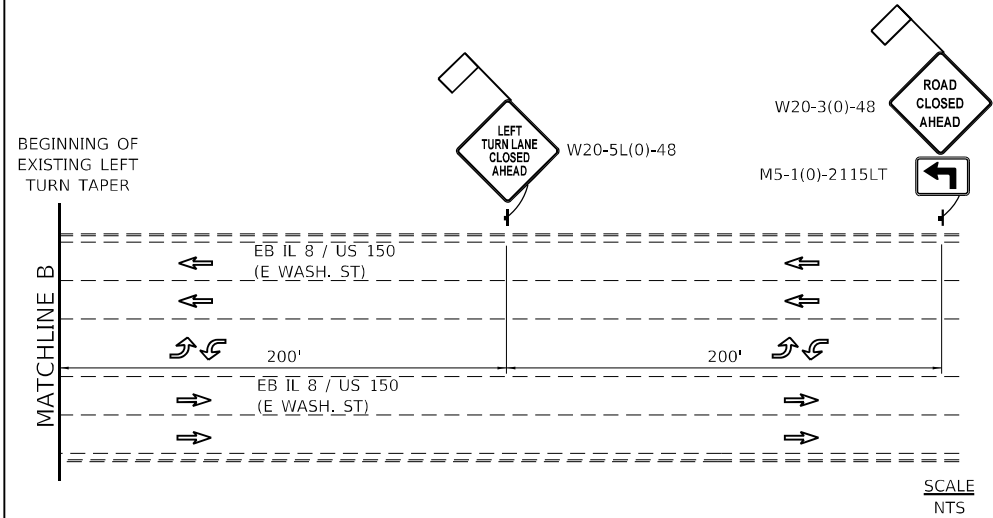
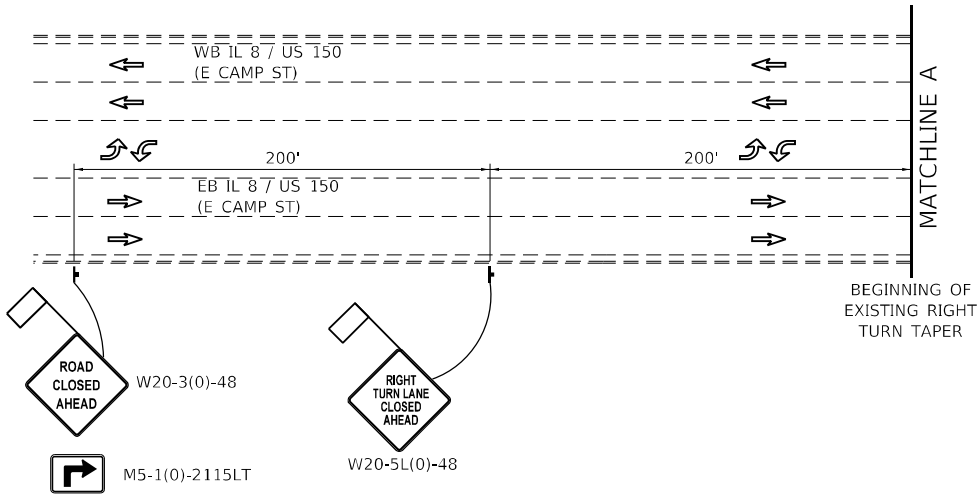
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DRAWN - JCL
CHECKED - TBP
DATE -
PLOT SCALE = 60,0000 * / in.
PLOT DATE = 7/3/2025

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DRAWN - JCL
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DATE -

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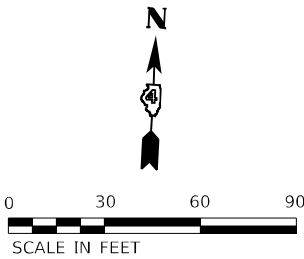
NOTES

1. TRAFFIC CONTROL SHALL BE PAID FOR AS TRAFFIC CONTROL & PROTECTION (SPECIAL).
2. SEE SPECIAL PROVISIONS.
3. TRAFFIC CONTROL MAY BE ADJUSTED DUE TO FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. THE EXISTING TRAFFIC SIGNALS AT THE WASHINGTON STREET / CAMP STREET INTERSECTION SHALL BE TEMPORARILY MODIFIED ACCORDINGLY FOR THE CLOSURE OF THE SOUTH LEG OF THE INTERSECTION.
5. EXISTING PEDESTRIAN CROSSWALKS TO BE TEMPORARILY CLOSED DURING CONSTRUCTION ACCORDING TO HIGHWAY STANDARD 701801.
6. THE TYPE III BARRICADES CAN BE TEMPORARILY REMOVED AS NEEDED FOR CONTRACTOR ACCESS FOR INGRESS OR EGRESS FROM THE WORK ZONE.
7. SEE STRUCTURE PLANS FOR PEDESTRIAN ACCESS DURING CONSTRUCTION.



LEGEND

- CONES, DRUMS OR BARRICADES W/ STEADY BURN MONODIRECTIONAL LIGHT
- TYPE III BARRICADE W/ FLASHING LIGHTS AND R11-2 (48" X 30") ROAD CLOSED SIGN
- DIRECTION OF TRAFFIC
- ARROW BOARD
- SIDEWALK ACCESS (SEE NOTE 7)
- WORK AREA
- SIGN WITH 18" X 18" MIN. ORANGE FLAG ATTACHED



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL & PROTECTION (SPECIAL)
E WASHINGTON STREET

SCALE: 1"=30' SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	6
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				

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LICENSE NO:
184-001220

USER NAME	= dlee
DESIGNED	- JCL
DRAWN	- JCL
PLOT SCALE	= 60,0000 * / in.
DATE	= 7/3/2025

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REVISD	-
REVISD	-
REVISD	-

Traffic Control: Traffic will be detoured during construction. Contractor shall provide a minimum of one pedestrian path across the bridge at all times during construction.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	25.8
Concrete Superstructure	Cu. Yd.	25.6
*Protective Coat	Sq. Yd.	63
Reinforcement Bars, Epoxy Coated	Pound	3630
Furnishing and Erecting Structural Steel	Pound	3080
Preformed Joint Strip Seal	Foot	171
Concrete Healer Sealer	Sq. Yd.	1377
Floor Drain Extension	Each	6
Structural Steel Removal	Pound	2980
Structural Steel Repair	Pound	2480

*Apply to new concrete only

- A

Remove and Replace Joints at Abutments
- B

Extend Floor Drains
- C

Structural Steel Repairs
- D

Overlay with Concrete Healer Sealer
(Between Curbs and From Joint to Joint of Abutments)

DESIGN STRESSES

FIELD UNITS (New Const.)

f_c = 4,000 psi (Concrete Superstructure)
f_y = 60,000 psi (Reinforcement)
f_y = 36,000 psi (M270 Grade 36)

INDEX OF SHEETS

- 1General Plan and Elevation
- 2Cross Sections
- 3-5Abutment Joint Removal & Replacement Details
- 6-7Preformed Joint Strip Seal - Sidewalk
- 8-9Diaphragm & Beam Repair Details
- 10-22Existing Structure Plans

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Fasteners shall be ASTM F 3125 Grade A325 Type 1, mechanically galvanized bolts. Bolts in 3/4" ϕ , holes 13/16" ϕ , unless otherwise noted.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new deck, all heavy or loose rust, loose mill scale, and other loose detrimental foreign material shall be removed from the surfaces in contact with concrete (SSPC-SP3 standards). Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be paid for according to Article 109.04 of the Standard Specifications.

Plan dimensions and details relative to the existing structure have been taken from 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.

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel or Structural Steel Repairs.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures", and the Standard Specifications. The color of the final finish coat shall be Blue, Munsell No. 10B 3/6. Cost included with Structural Steel Repair.

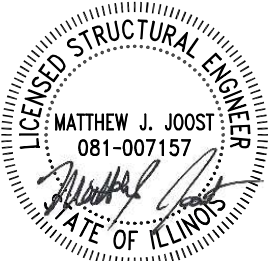
No field welding is permitted except as specified in the contract documents.

All new structural steel shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel".

Existing reinforcement bars extending into the removal area shall be cleaned, straightened, and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system at the contractor's expense.

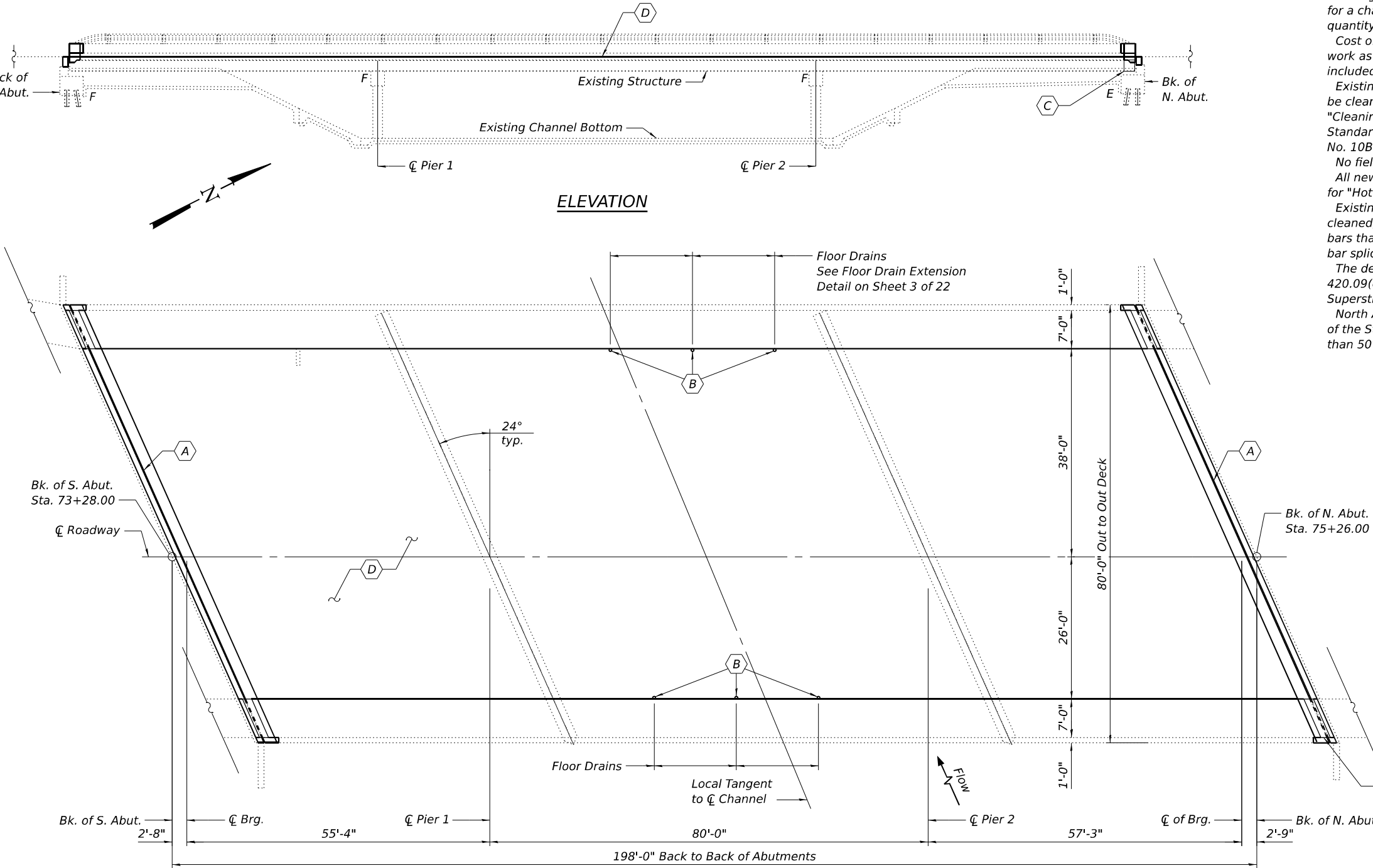
The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

North Abutment joint opening shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.



Signed: 7/3/2025
Expires: 11/30/2026

GENERAL PLAN & ELEVATION
EAST WASHINGTON ST.
OVER FARM CREEK
F.A.U. RTE. 6750
SEC [(104B-2)BR]BRR
TAZEWELL COUNTY
STA. 74+26.00
STRUCTURE NO. 090-0144



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 090-0144

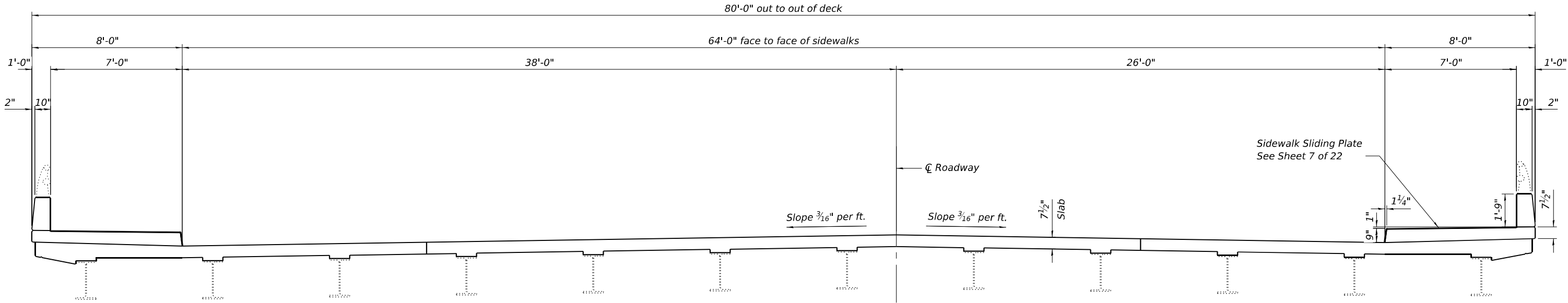
SHEET 1 OF 22 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	7
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				

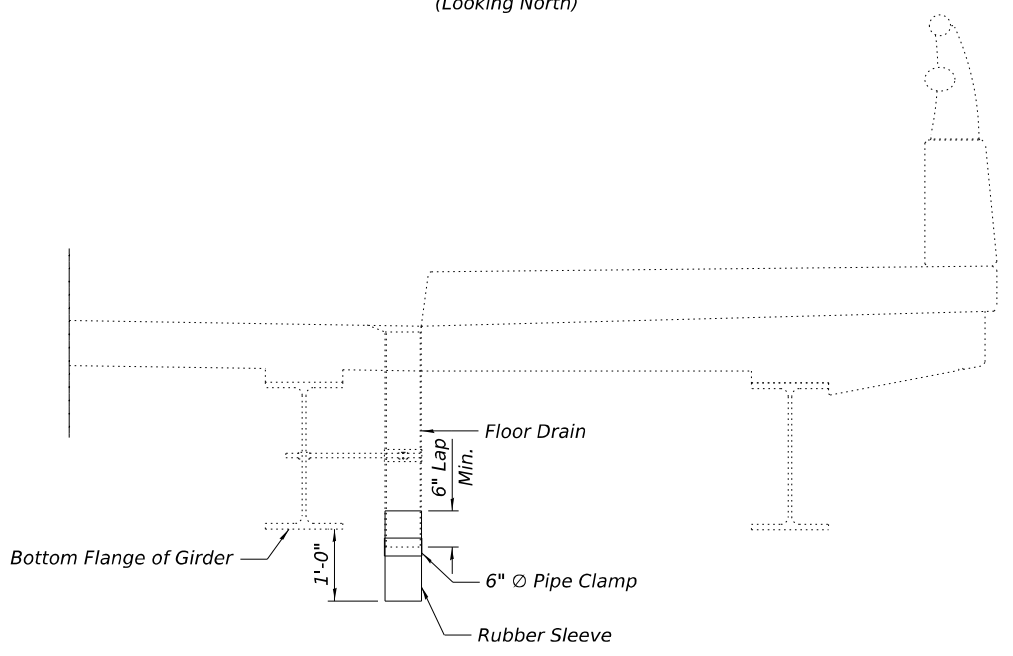
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PLOT DATE = 7/3/2025	DRAWN - JMM	REVISED -
	CHECKED - MJJ	REVISED -



CROSS SECTION AT ABUTMENTS
(Looking North)



FLOOR DRAIN EXTENSION
(6 Required)

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PLOT DATE =	7/3/2025	CHECKED -	MJJ	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
STRUCTURE NO. 090-0144

SHEET 2 OF 22 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	8
CONTRACT NO. 68J43				
		ILLINOIS	FED. AID PROJECT	

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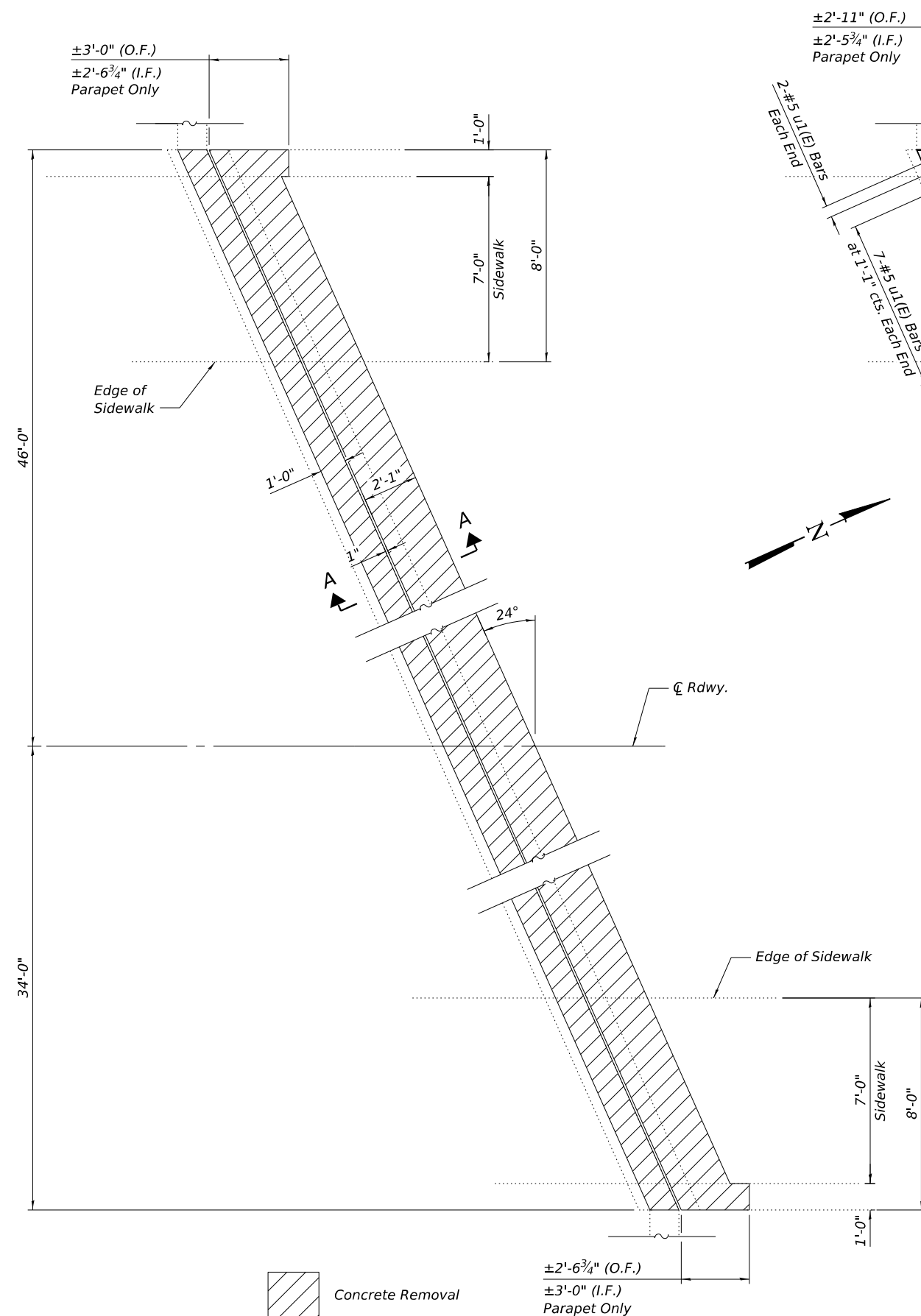
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

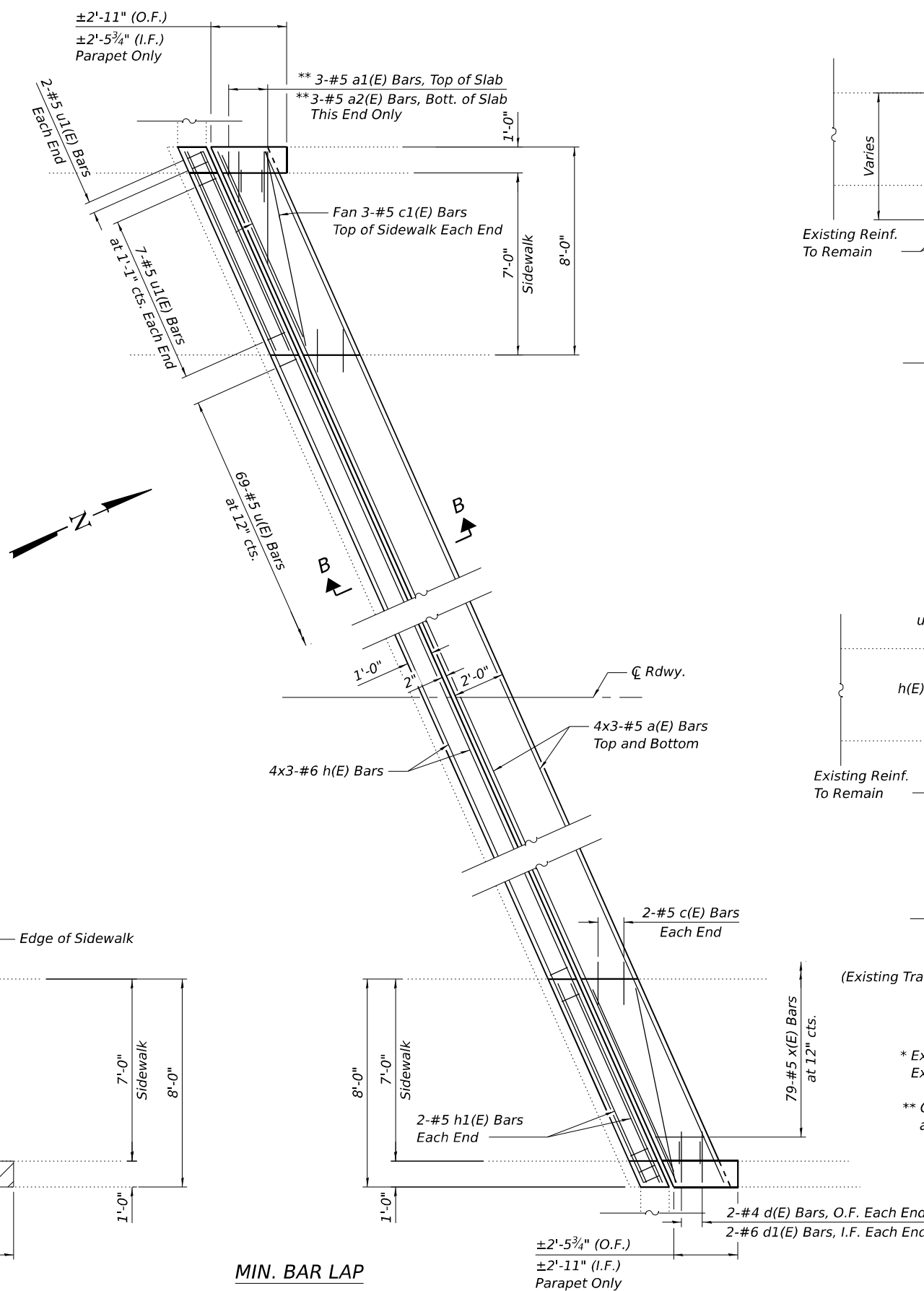
SOUTH ABUTMENT JOINT REPLACEMENT DETAILS
STRUCTURE NO. 090-0144

SHEET 3 OF 22 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	9
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				

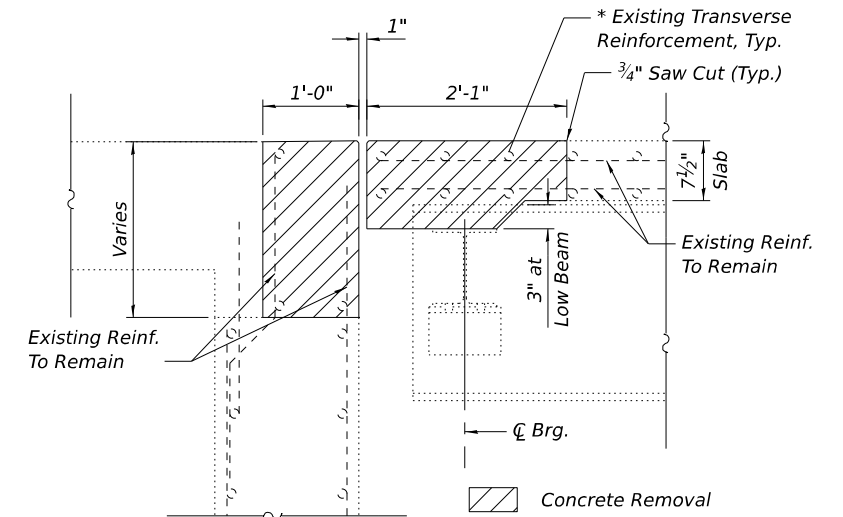


S. ABUT. CONCRETE REMOVAL PLAN

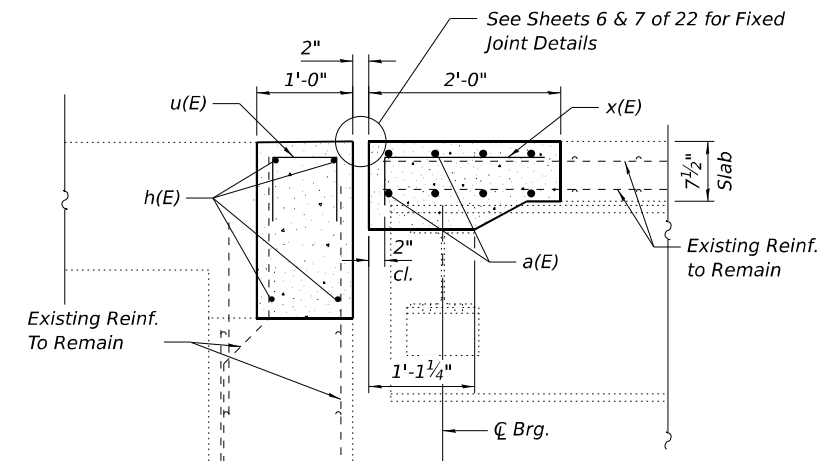


MIN. BAR LAP
#5 Bar = 3'-6"
#6 Bar = 4'-0"

S. ABUT. CONCRETE REPLACEMENT PLAN



SECTION A-A
(Horiz. Dims. at Rt. L's)



SECTION B-B

(Existing Transverse Reinforcement to Remain Not Shown for Clarity)
(Horiz. Dims. at Rt. L's)

* Existing transverse reinforcement parallel to skew to be removed.
Existing transverse reinforcement perpendicular to roadway to remain.

** Cut bars to fit skew and use remainder of bars in opposite corner at North Abutment.

Notes:
See Sheet 5 of 22 for sidewalk details & Bill of Material.
Bars indicated thus 5x3-#5 etc. indicates 5 lines of bars with 3 lengths per line.
Parapet removal limits shall be field verified by Contractor. Adjust limits as required to provide 6" minimum clearance for railing anchorage. See Rail Terminal Section detail on Sheet 5 of 22.

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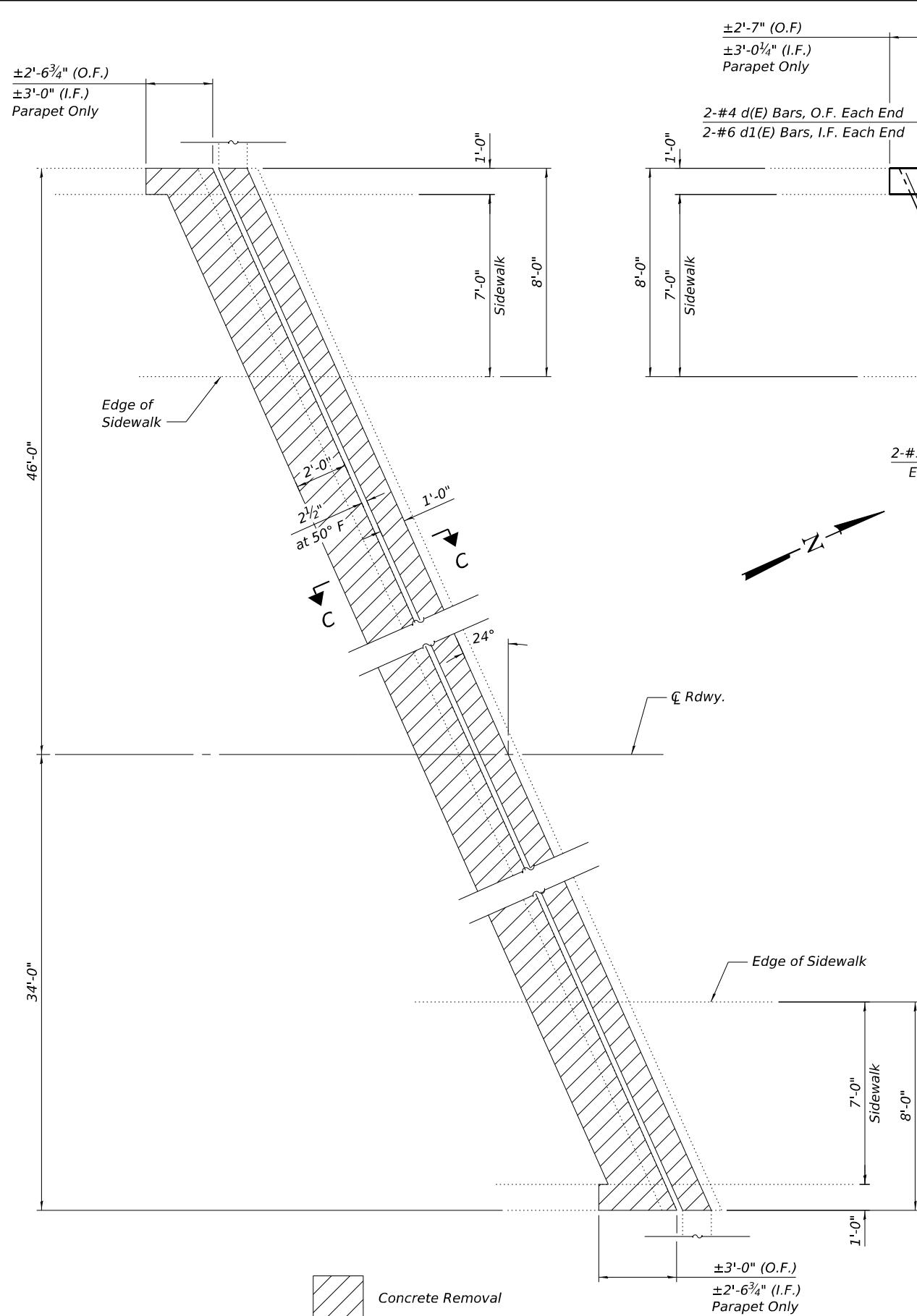
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

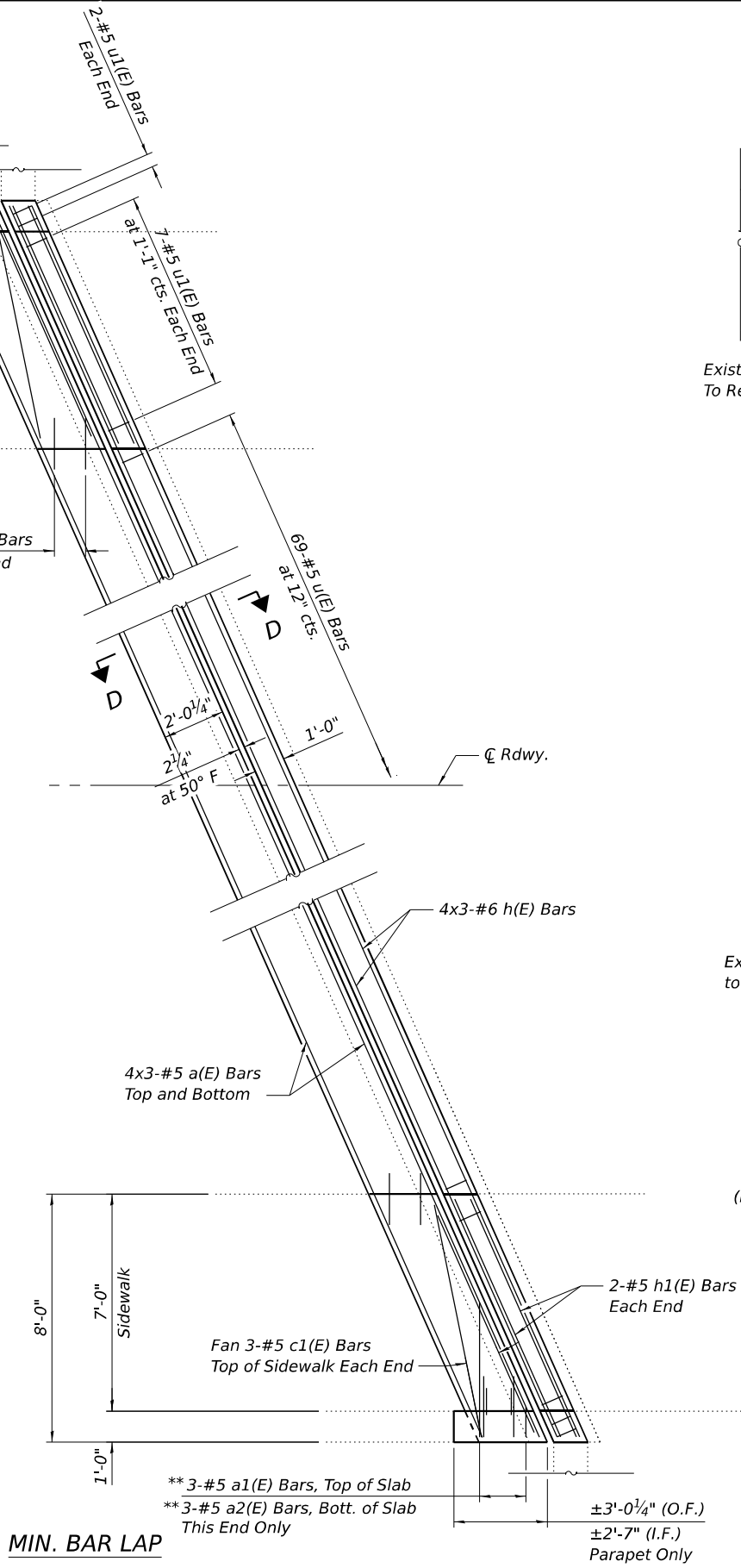
NORTH ABUTMENT JOINT REPLACEMENT DETAILS
STRUCTURE NO. 090-0144

SHEET 4 OF 22 SHEETS

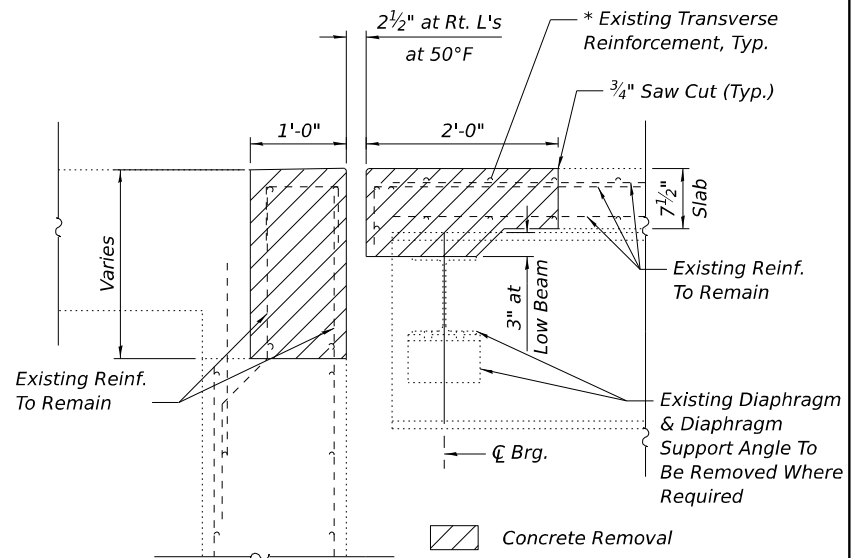
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	10
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				



N. ABUT. CONCRETE REMOVAL PLAN

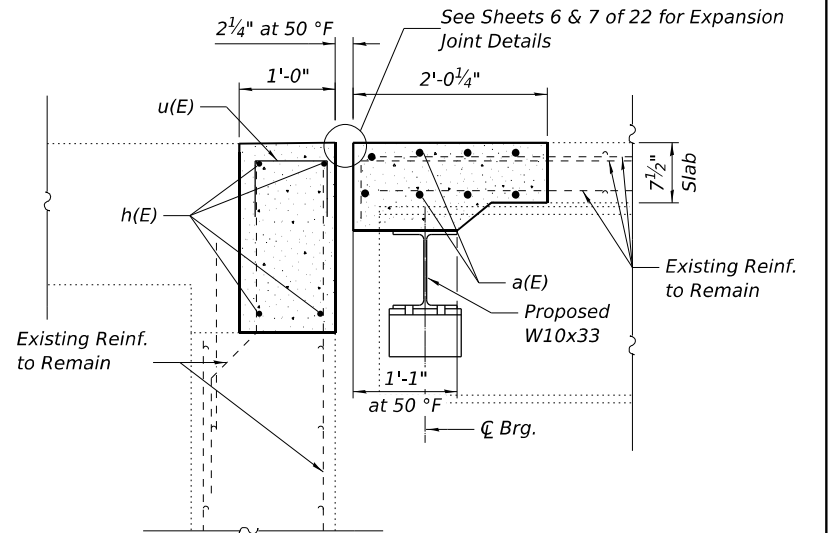


N. ABUT. CONCRETE REPLACEMENT PLAN



SECTION C-C

(Horiz. Dims. at Rt. L's)



SECTION D-D

(Existing Transverse Reinforcement to Remain Not Shown for Clarity)
(Horiz. Dims. at Rt. L's)

* Existing transverse reinforcement parallel to skew to be removed.
Existing transverse reinforcement perpendicular to roadway to remain.

** Cut bars to fit skew and use remainder of bars in opposite corner at South Abutment.

Notes:
See Sheet 5 of 22 for sidewalk details & Bill of Material.
Bars indicated thus 5x3-#5 etc. indicates 5 lines of bars with 3 lengths per line.
Parapet removal limits shall be field verified by Contractor. Adjust limits as required to provide 6" minimum clearance for railing anchorage. See Rail Terminal Section detail on Sheet 5 of 22.

MODEL: Default
FILE NAME: P:\2023\230994\N - IL 8 over Farm Creek (SN 090-0144)\4 CADD - DWG\4.4 StrucDrawings\0900144-68J43-005-Abutment Joint Removal & Replacement Details.dgn
7/3/2025 2:32:30 PM



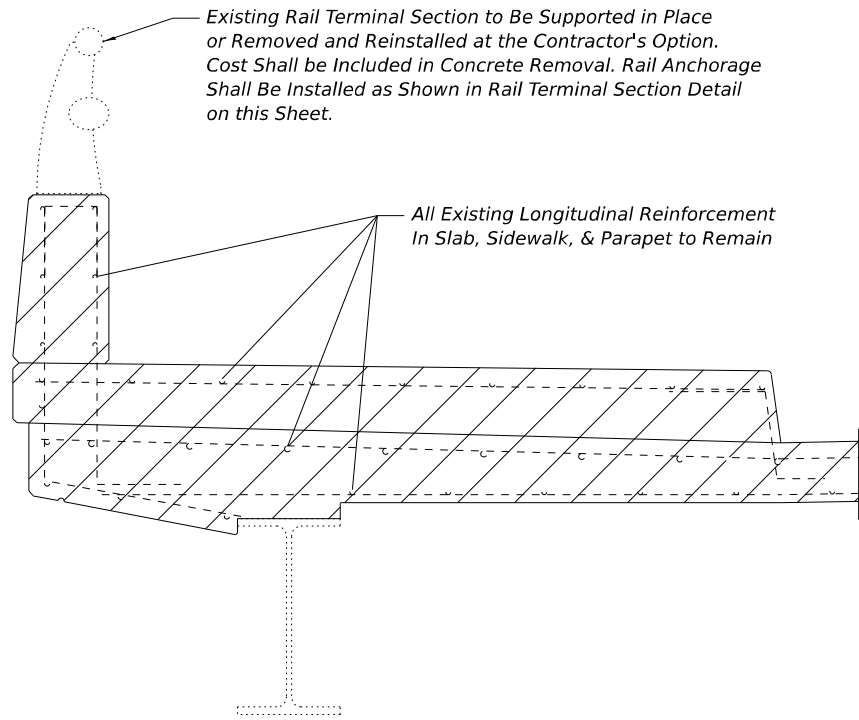
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		CHECKED -	JBE	REVISED -	
PLOT SCALE =	0.167' / in.	DRAWN -	JMM	REVISED -	
PLOT DATE =	7/3/2025	CHECKED -	JBE	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

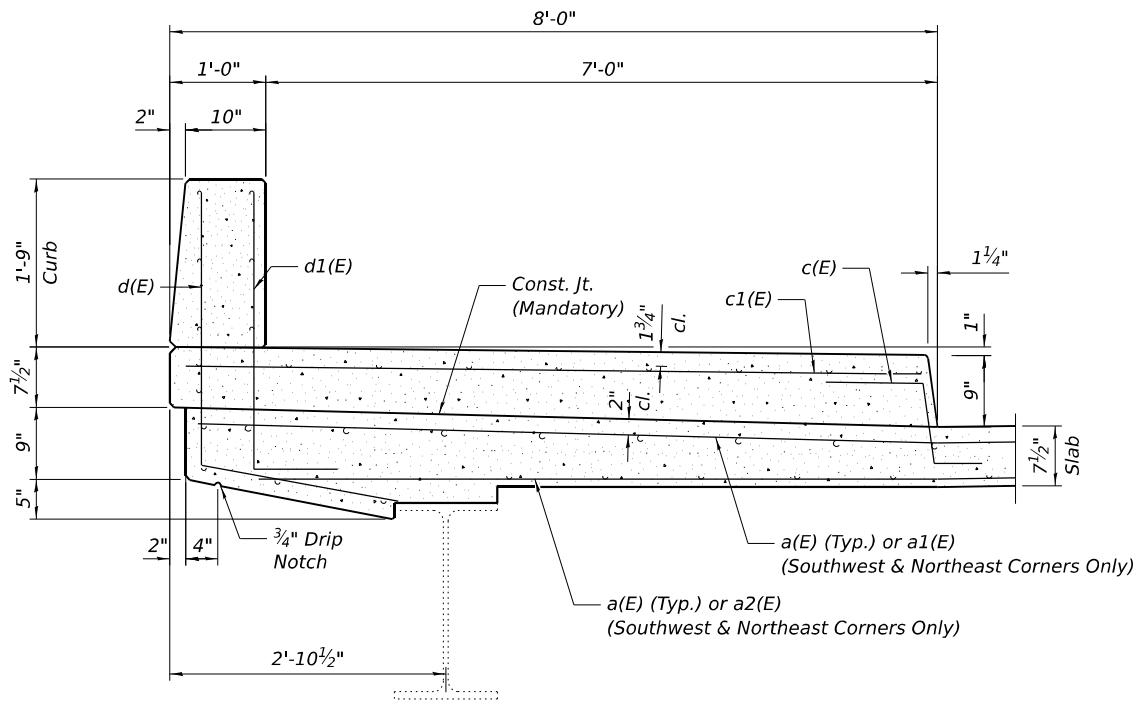
JOINT REPLACEMENT DETAILS
STRUCTURE NO. 094-0144

SHEET 5 OF 22 SHEETS

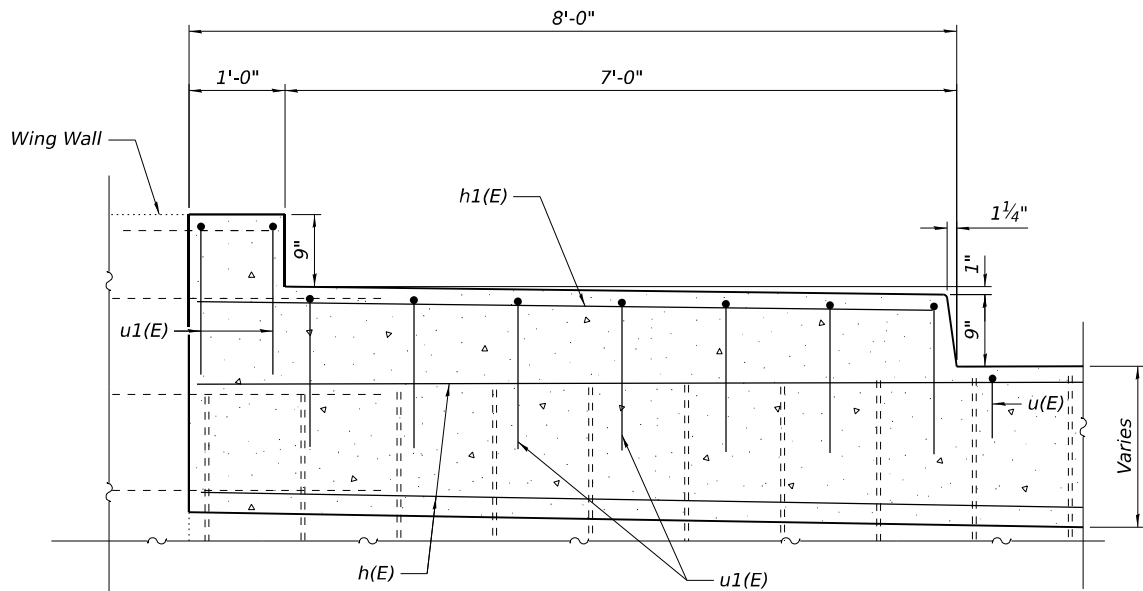
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6750	[(104B-2)BR]BRR	TAZEWELL	28	11
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				



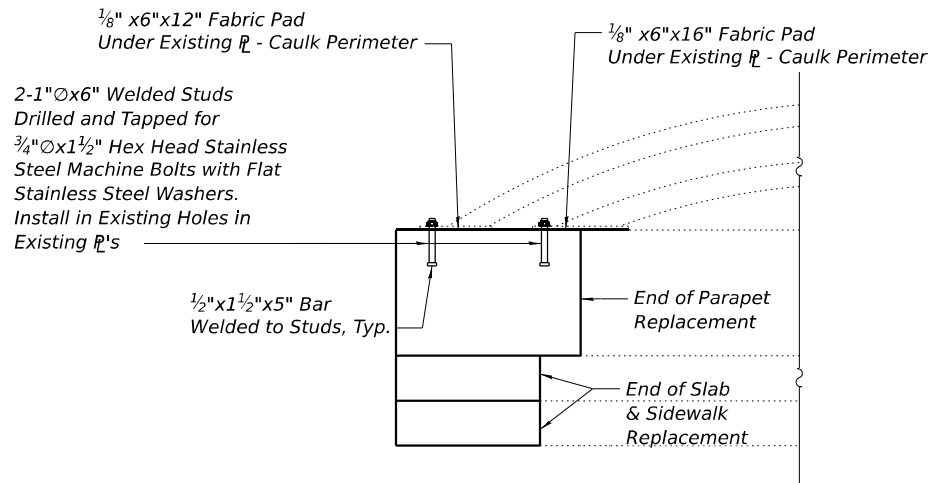
SECTION THRU SIDEWALK AT DECK
(Showing Removal)



SECTION THRU SIDEWALK AT DECK
(Proposed)

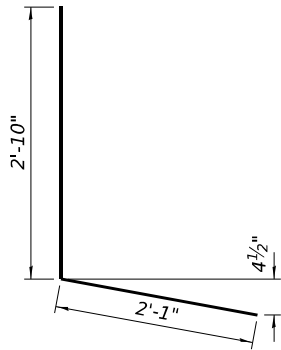


SECTION THRU SIDEWALK AT ABUTMENT

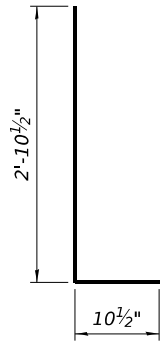


RAIL TERMINAL SECTION

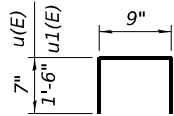
Notes:
Cost of new rail anchorage devices and fabric pad shall be included with Concrete Superstructure.
See Sheets 3 and 4 of 22 for outside face and inside face dimensions for each abutment.



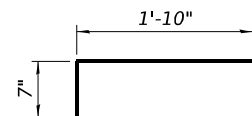
BAR d(E)



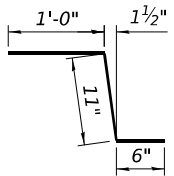
BAR d1(E)



BAR u(E) & u1(E)



BAR x(E)



BAR c(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	48	#5	31'-5"	—
a1(E)	3	#5	7'-1"	—
a2(E)	3	#5	5'-8"	—
c(E)	8	#5	2'-5"	└
c1(E)	12	#5	7'-8"	—
d(E)	8	#4	4'-11"	└
d1(E)	8	#6	3'-9"	└
h(E)	24	#6	31'-9"	—
h1(E)	8	#5	8'-6"	—
u(E)	138	#5	1'-11"	┐
u1(E)	36	#5	3'-9"	┐
x(E)	79	#5	2'-5"	┐
Concrete Removal			Cu. Yd.	25.8
Concrete Superstructure			Cu. Yd.	25.6
Reinforcement Bars, Epoxy Coated			Pound	3630

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 conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The manufacturer's reommended installation methods shall be followed.

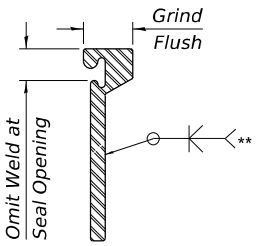
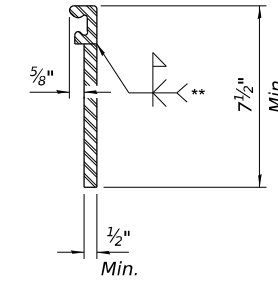
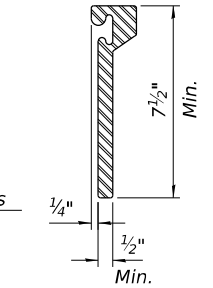
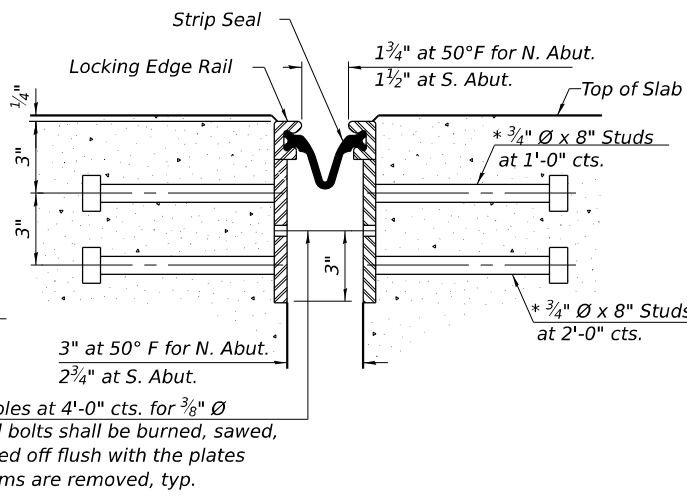
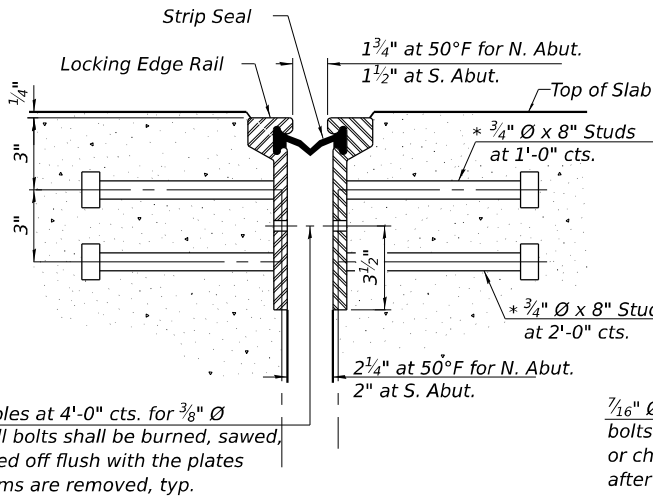
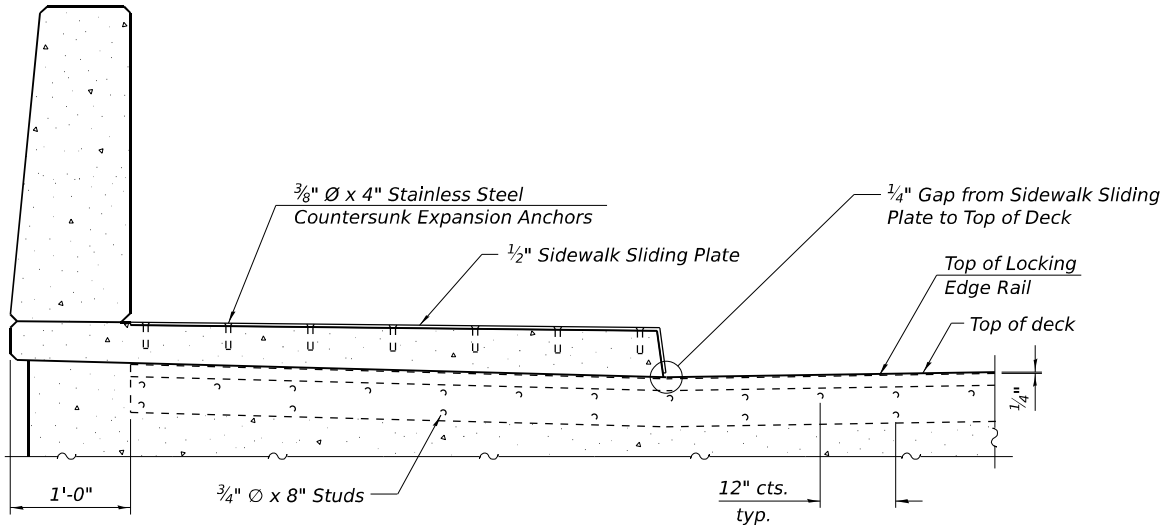
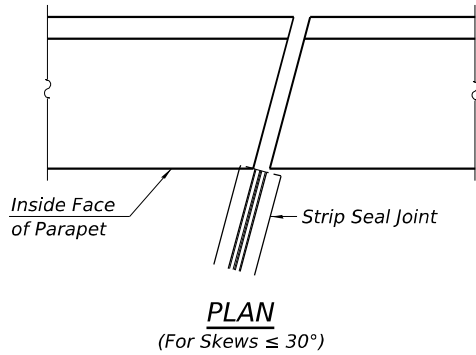
The joint opneing and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet.

Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments shall be 3/16", sealed with suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

Cost of sidewalk sliding plates, anchorage studs, and expansion anchors included with Preformed Joint Strip Seal.



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

SECTION THRU ROLLED RAIL JOINT

SECTION THRU WELDED RAIL JOINT

ROLLED EXTRUDED RAIL

WELDED RAIL

LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	171

LOCKING EDGE RAILS

(Sheet 1 of 2)

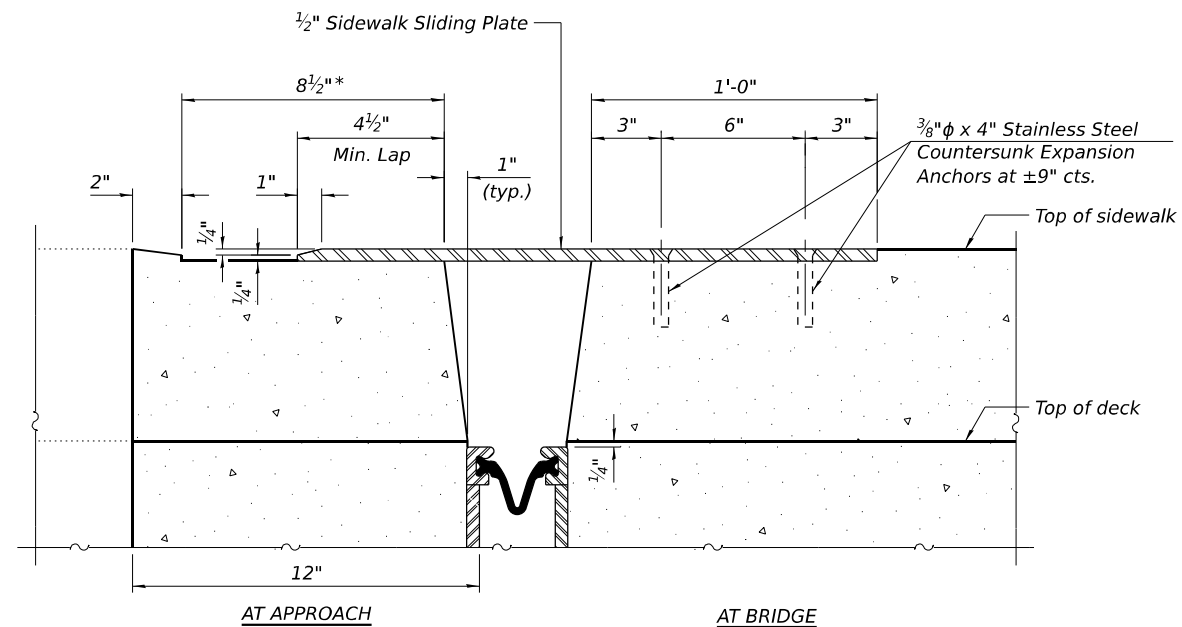
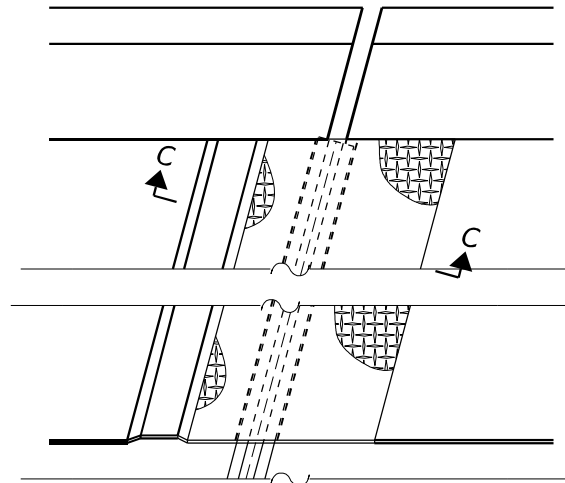
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL - SIDEWALK
STRUCTURE NO. 090-0144

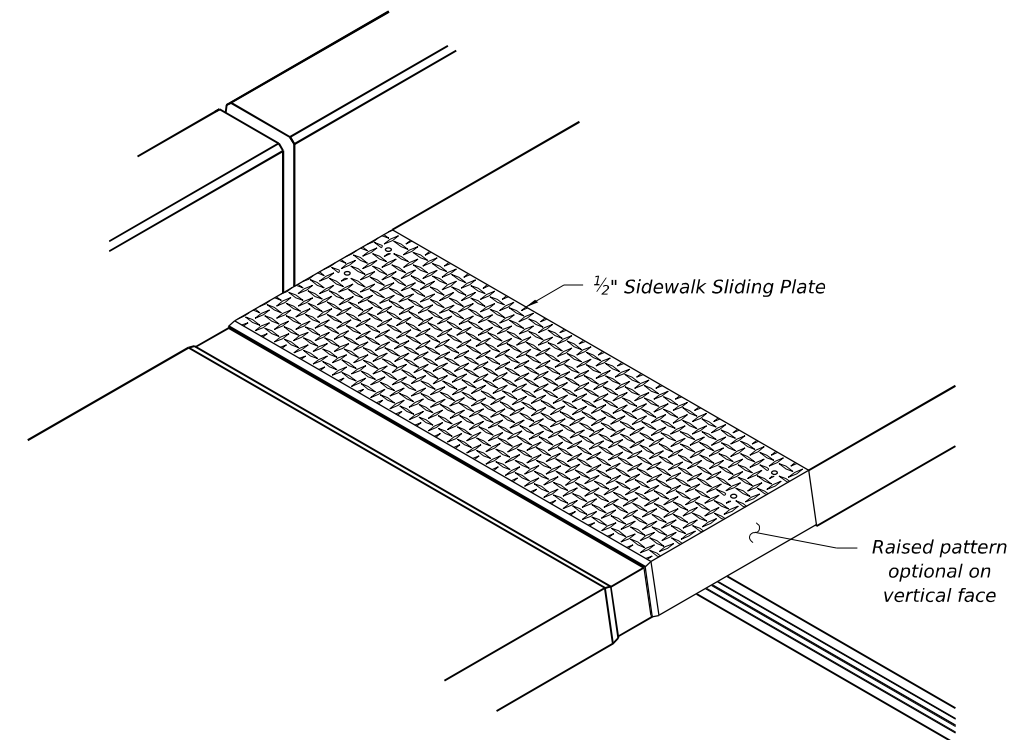
SHEET 6 OF 22 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	12
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				

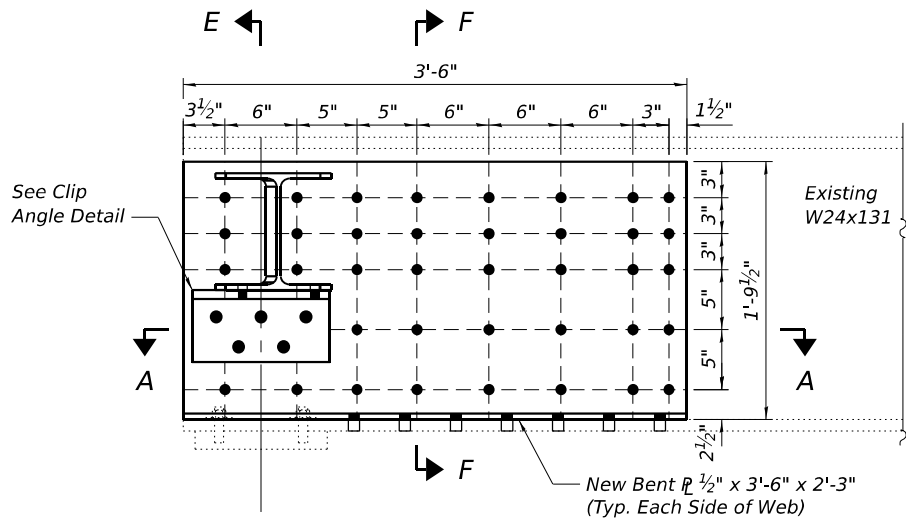
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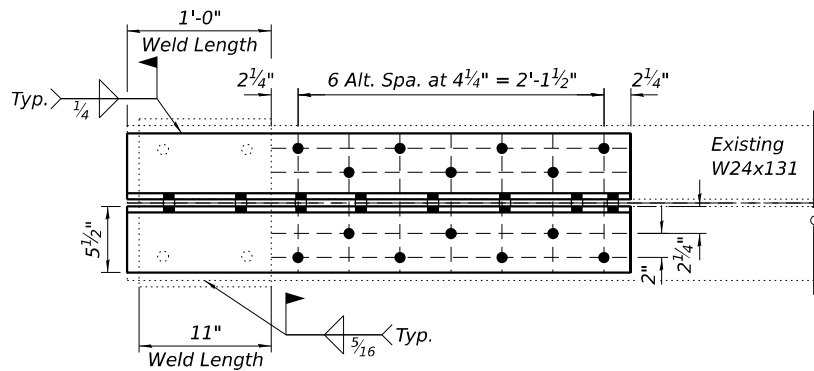
**Dimensions are based on a Welded Rail Strip Seal Joint. If the contractor elects to use the Rolled Rail Strip Seal Joint, dimensions may require adjustment.*



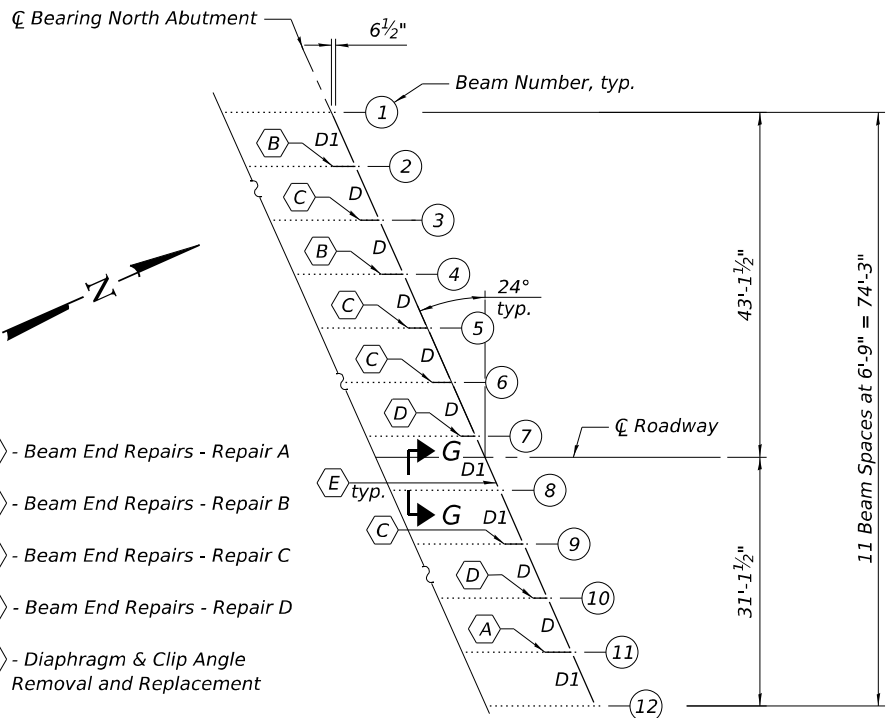
(Sheet 2 of 2)



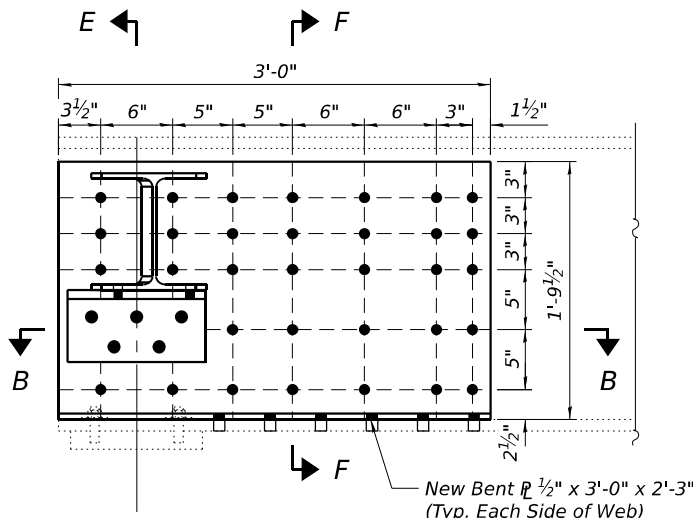
REPAIR A
(1 Location)



SECTION A-A

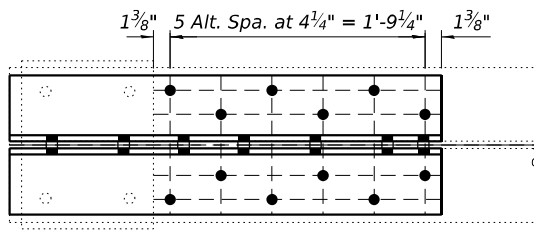


FRAMING PLAN - SPAN 3
All Beams are W24 x 131



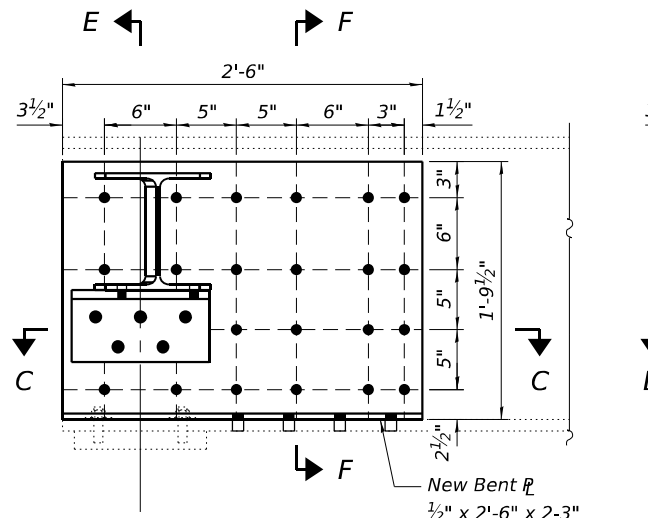
REPAIR B
(2 Locations)

For details not shown, See Repair A



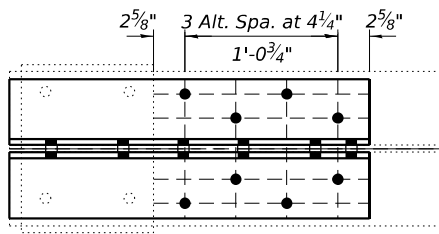
SECTION B-B

For details not shown, See Section A-A and Repair B



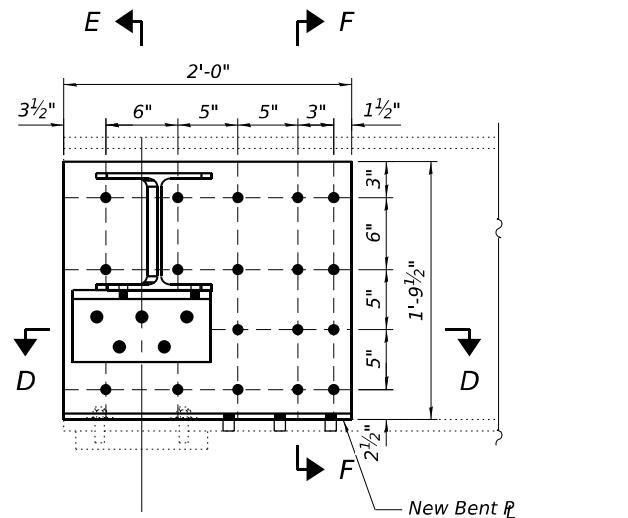
REPAIR C
(4 Locations)

For details not shown, See Repair A



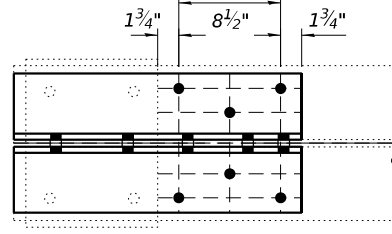
SECTION C-C

For details not shown, See Section A-A and Repair C



REPAIR D
(2 Locations)

For details not shown, See Repair A



SECTION D-D

For details not shown, See Section A-A and Repair D

NOTES

- All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
- Diaphragm connection holes shall be $1\frac{5}{16}$ " ϕ for $\frac{3}{4}$ " ϕ bolts. Two hardened washers shall be required at diaphragm connections.
- Omit diaphragm support angle on outside face of Beams 1 and 12.
- Existing diaphragm support angle to be removed using air-arc method and grind smooth all weld material remaining on web. Cost included with the Structural Steel Removal.
- All holes in existing steel shall be field drilled using shop drilled holes in new steel as a template, except as noted.
- Equivalent bent plate may be used in lieu of clip angle shown.
- Cost of furnishing and erecting steel diaphragms and diaphragm support angles shall be included with Furnishing and Erecting Structural Steel.
- Cost of furnishing and erecting steel for beam end repairs shall be included with Structural Steel Repair.
- Removal of existing diaphragm support angles, where required, and diaphragms shall be included in Structural Steel Removal.
- For Sections E-E, F-F, G-G, and Diaphragm D & D1 details, see Sheet 9 of 22.

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Removal	Pound	2980
Furnishing and Erecting Structural Steel	Pound	3080
Structural Steel Repair	Pound	2480

BOLT HOLE LEGEND

- $\circ$ Field drill holes
 $\bullet$ Shop drill holes

CLIP ANGLE

$\angle$ 6x4x $\frac{3}{4}$ " x 11 $\frac{1}{2}$ "
(18 Required)

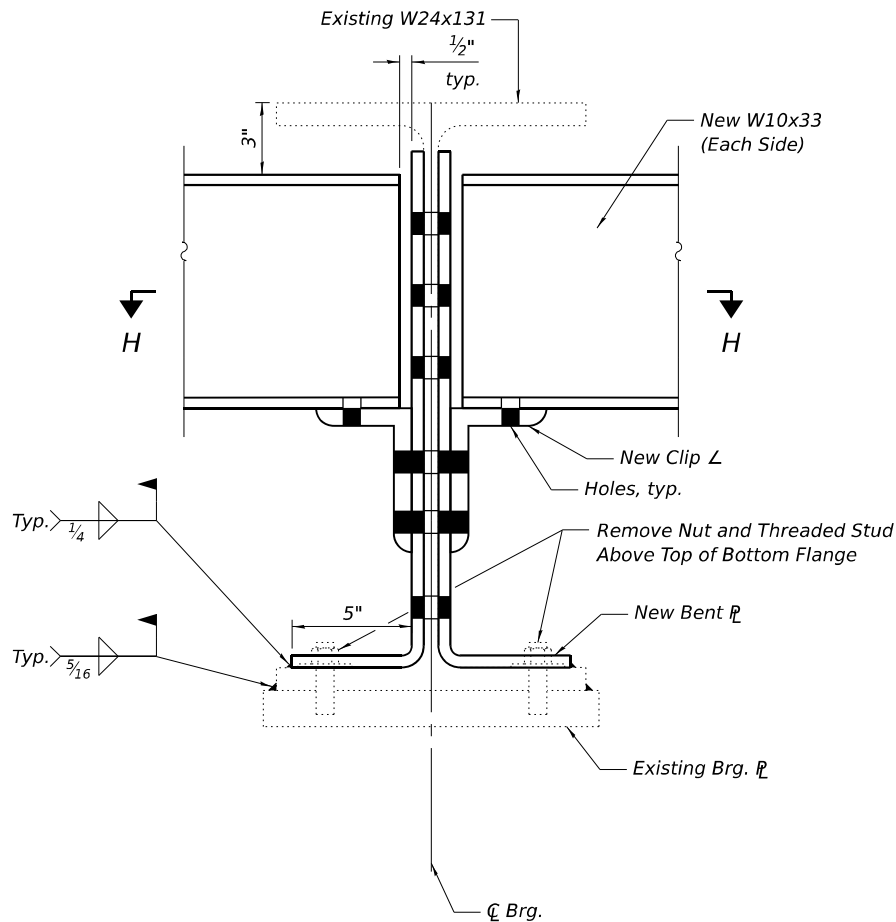
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM & BEAM REPAIR DETAILS
STRUCTURE NO. 090-0144

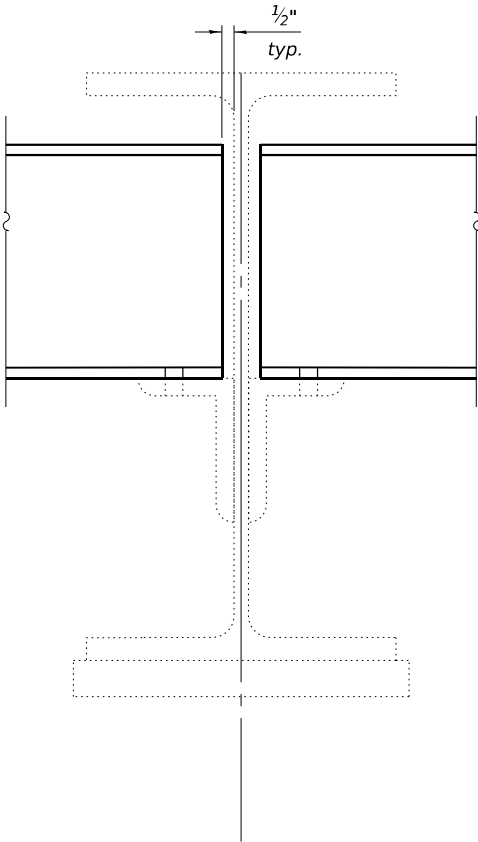
SHEET 8 OF 22 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				

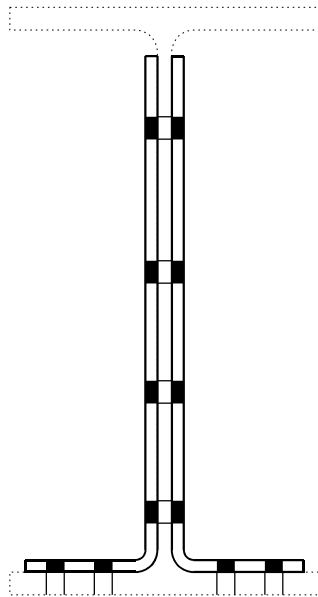
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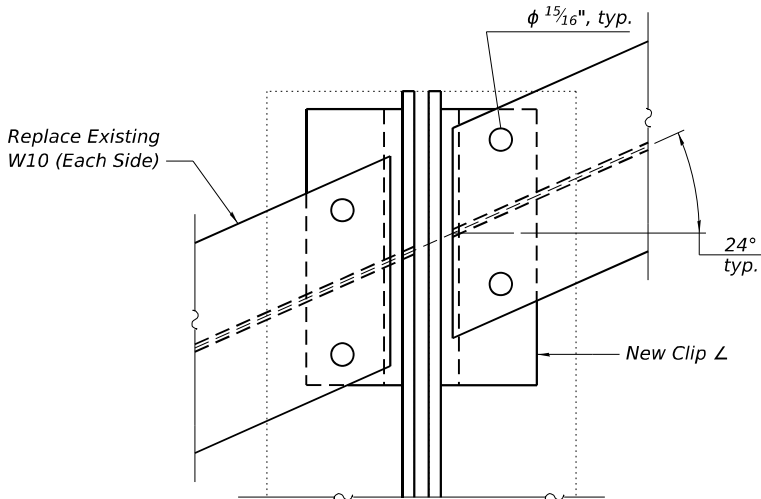
SECTION E-E
(Repairs A & B shown, Repairs C & D similar)



SECTION G-G
Beam 8 Shown. Beams 1 and 12 Similar, with Diaphragms on Interior Face Only.
For details not shown, See Section E-E



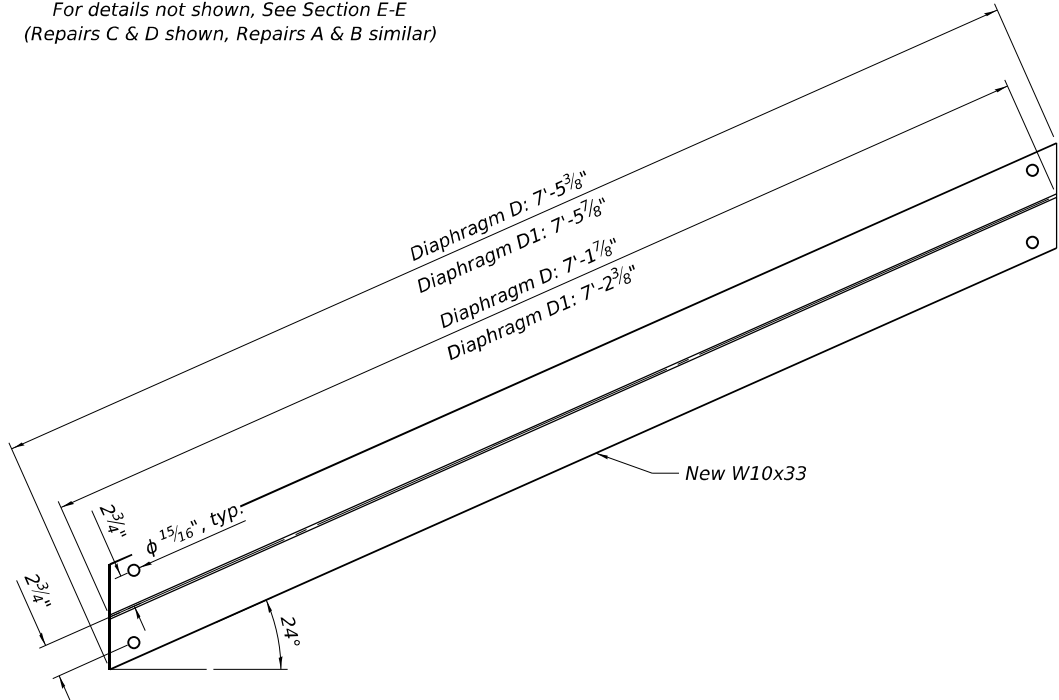
SECTION F-F
For details not shown, See Section E-E
(Repairs C & D shown, Repairs A & B similar)



SECTION H-H

BOLT HOLE LEGEND

- Field drill holes
- Shop drill holes



DIAPHRAGM D & D1

(D: 7 Required, D1: 4 Required)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM & BEAM REPAIR DETAILS
STRUCTURE NO. 090-0144

SHEET 9 OF 22 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	15
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				

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Bench Mark: Chiseled square on E. end of headwall on the north side of Farm Creek 100'± west of bridge. S.N. 090-0036. Elev. 458.87 (TBM 'A')

Existing Structure: Sta. 74+25.52 SBI Rte. 121, Section 104-B-1, Built in 1953; Structure # 090-0036. The structure is a one span truss with a Bk. to Bk. abut. of 121'-0" and a width of 65'-0" O. to O. of deck. The contractor shall remove existing structure and replace it with a 3 span W.F. structure. Traffic shall be detoured.

No salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Note: Hatched areas indicate removal of existing pier and abutment to 6" below the bottom of the slope wall. The cost of this removal is included in "Removal of Existing Structures".
For Sections A-A, B-B and C-C see sheet 2 of 24.
The removal of existing roadway and excavation behind the existing abutments is incidental to "Removal of Existing Structures".

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
6750	104B-DBR	TAZEWELL	87	43
24 SHEETS				

GENERAL NOTES

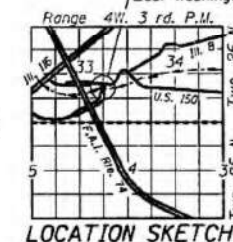
Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$ " ϕ , open holes $\frac{9}{16}$ " ϕ , unless otherwise noted.
Calculated weight of Structural Steel M183 = 38950 lbs. and M223 = 32410 lbs.
The Zinc-silicate and vinyl paint system shall be used for shop and field painting of Structural Steel except where otherwise noted. The color of the vinyl finish coat shall be Munsell No. 10B 3/6 "Blue".
Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
Anchor bolts shall be set before bolting diaphragms over supports.
The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 223 Grade 50.
The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These Components are the wide flange beams and all splice plate material of the wide flange beams.
Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ " adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
The contractor shall drive 2 test piles, one in a permanent location at south abutment and one at pier 2 as directed by the Engineer before ordering the remainder of piles.
All top surfaces of both abutment seats shall receive Bridge Seat Sealer treatment. Estimated quantity = 488 sq. ft.
For cantilever forming brackets see Special Provisions.

TOTAL BILL OF MATERIAL

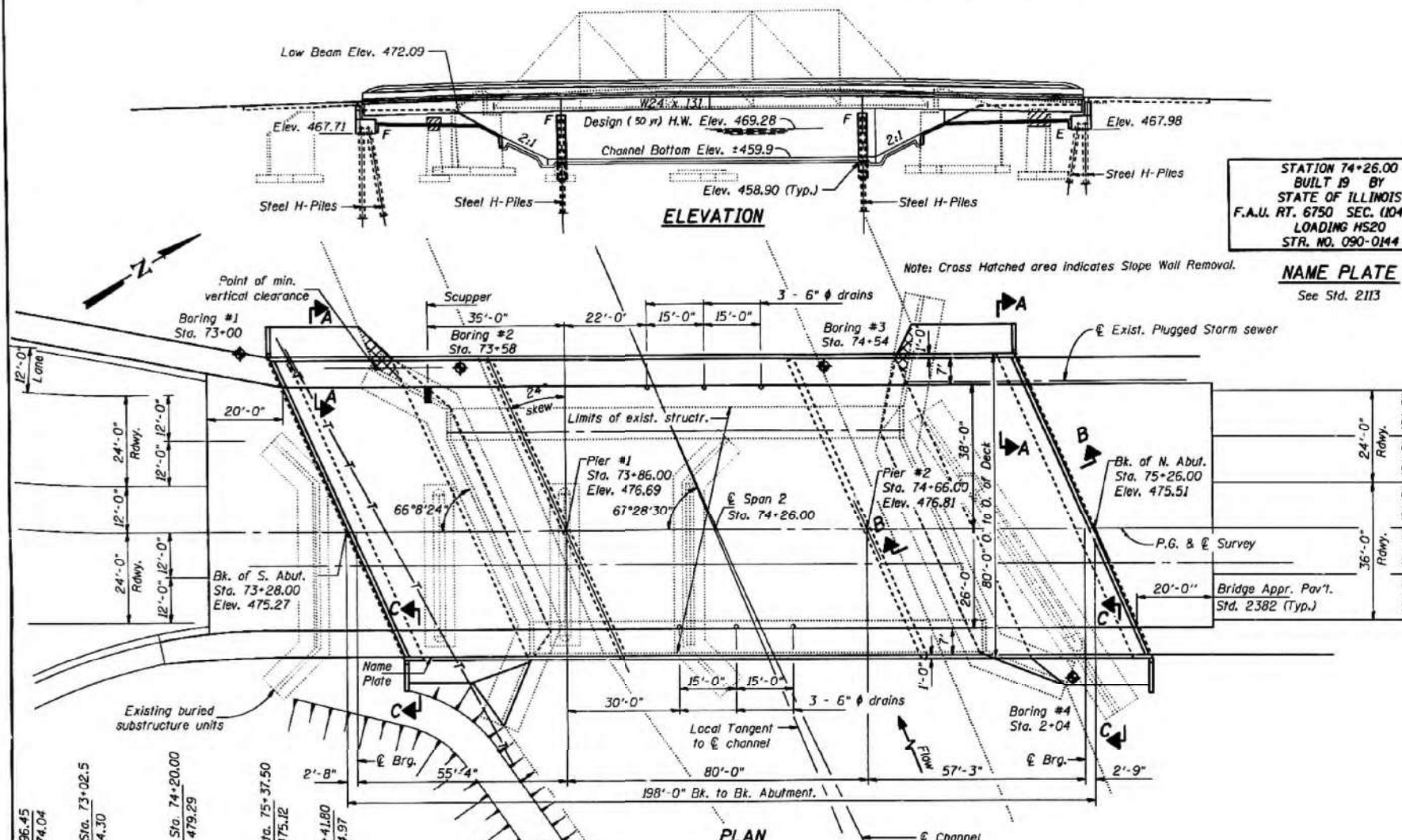
Item	Unit	Super	Sub	Total
Removal of Existing Structures	Each			1
Concrete Removal	Cu. Yd.		13	13
Structure Excavation	Cu. Yd.		201	201
Floor Drains	Each	6		6
Preformed Joint Seal 1 $\frac{1}{2}$ "	Lin. Ft.	89		89
Class X Concrete Superstructure	Cu. Yd.	503.9		503.9
Protective Coat	Sq. Yd.	444		444
Elastomeric Bearing Assembly Type II	Each	12		12
Class X Concrete	Cu. Yd.		312.1	312.1
Structural Steel	L.S.	1		1
Stud Shear Connectors	Each	6840		6840
Aluminum Railing, Type L	Lin. Ft.	385		385
Reinforcement Bars, Epoxy Coated	Pound	106570	28700	135270
Steel Piles HPI0 x 42	Lin. Ft.		1531	1531
Steel Piles HPI0 x 57	Lin. Ft.		897	897
Test Pile Steel HPI0 x 42	Each		1	1
Test Pile Steel HPI0 x 57	Each		1	1
Name Plates	Each	1		1
Slope Wall Removal	Sq. Yd.		35	35
Slope Wall 6"	Sq. Yd.		743	743
Slope Wall 9"	Sq. Yd.		85	85
Bridge Seat Sealer	L.S.		1	1
Drainage Scuppers	Each	1		1
Neoprene Expansion Joint 2 $\frac{1}{2}$ "	Lin. Ft.	88		88
Preformed Joint Filler	Lin. Ft.		348	348
Bridge Deck Grooving	Sq. Yd.	1408		1408

* Quantity is for top and inside surfaces of sidewalk and parapet.

Structure Replacement
East Washington Street Bridge



GENERAL PLAN
EAST WASHINGTON ST.
OVER FARM CREEK
F.A.U. ROUTE 6750 SECTION 104B-DBR
TAZEWELL COUNTY
STATION 74+26.00
STRUCTURE NUMBER 090-0144



WATERWAY INFORMATION

Drainage Area = 57.8 Sq. Mi.		Low Grade Elev. * Sta.		Flood		Flood		Flood		Flood	
Freq.	Yr.	0	Opening Sq. Ft.	Nat.	Head - Ft.	Headwater El.	Headwater El.	Headwater El.	Headwater El.	Headwater El.	Headwater El.
Corps of Engineers		19400	1259	1306	472.65	0.0	0.0	472.65	472.65		
Design	50	10766	896	889	469.28	0.0	0.0	469.28	469.28		
Base	100	12672	1000	1001	470.25	0.0	0.0	470.25	470.25		
Overtopping											
Max. Calc.	500	17287	1197	1225	472.08	0.0	0.0	472.08	472.08		

* Leveed channel

PROFILE GRADE F.A.U. RTE. 6750

DESIGNED	Chris Elliott
CHECKED	Paul W. Swet
DRAWN	Paul W. Swet
CHECKED	GRA

EXAMINED	April 15 1991
ENGINEER OF BRIDGE DESIGN	Paul W. Swet
ENGINEER OF BRIDGES AND STRUCTURES	Paul W. Swet
DIRECTOR OF HIGHWAYS	Paul W. Swet

DESIGN SPECIFICATIONS

1989 AASHTO, 1990 Interim Specifications & 1983 Seismic Guide Specifications

LOADING HS 20-44

Allow 25# / sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinf.)
 $f_y = 50,000$ psi (M223 Grade 50)

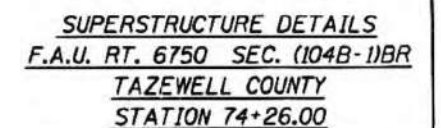
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0144

SHEET 10 OF 22 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	104B-DBR	TAZEWELL	28	16
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	18
CONTRACT NO. 68J43				
ILLINOIS		FED. AID PROJECT		



Notes: Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 3 x 2 #5 etc. indicates 3 lines of bars with 2 lengths per line.

See End of Seal Cut-Out Details

TYPICAL END OF SEAL TREATMENTS

DESIGNED <i>Chen Shat</i>	APR 15 1991
CHECKED <i>Richard M. Put</i>	EXAMINED <i>Carl E. Chubb</i> DIRECTOR OF HIGHWAYS
DRAWN <i>Joe Sutherland</i>	PASSED <i>Carl E. Chubb</i> DIRECTOR OF BRIDGES AND STRUCTURES
CHECKED <i>Carl</i>	APPROVED _____ DIRECTOR OF HIGHWAYS

*** Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be $\frac{1}{8}$ ". Seal space with Silicone Sealant suitable for Structural Steel.

Back of Abut.

Preformed Jt. Seal ($1\frac{3}{4}$ ")

*** $\frac{1}{2}$ " x 5" x 85° - $0\frac{3}{4}$ " long Fabricate to crown.

$\frac{1}{2}$ "

$\frac{3}{8}$ "

$\frac{7}{8}$ " ϕ Holes at 12" cts. for $\frac{7}{8}$ " ϕ bolts. All bolts shall be burned, sawed or chipped off flush with the plates after forms are removed.

*** $\frac{1}{4}$ " x $\frac{1}{2}$ " Bars ($2\frac{1}{4}$ " from top of plate)
Tack weld at 6" cts.

DETAIL A

$\frac{3}{4}$ " ϕ x 6" Granular or solid flux filled headed studs conforming to Article 710.38 of the Std. Specs. Automatically and welded at 12" cts. (172 Required)

Note: After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for Structural Steel.

*** Cut retainer bars in sidewalk 6" short of sidewalk face.

ed

5" 5" 7-7/8" 9"

1/2" Hole

Slit

60°

80°

Slit

END OF SEAL CUT-OUT DETAILS

SUPERSTRUCTURE DETAILS
F.A.U. RT. 6750 SEC. (104B-1)BR
TAZEWELL COUNTY
STATION 74+26.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	19
		CONTRACT NO. 68J43		
	ILLINOIS	FED. AID PROJECT		

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.
2 1/2"	2 1/2"	1 3/4" Min.
4"	3"	2 1/2" Min.

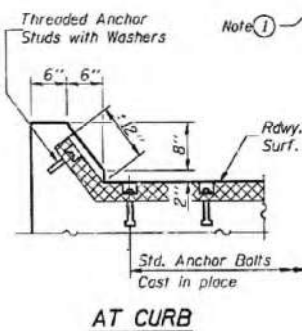
INSTALLATION NOTES

- Install sponge mandrels into positions shown to form flap convolution.
- Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
- Install continuous seal in roadway.
- Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

SKEW LIMITATIONS

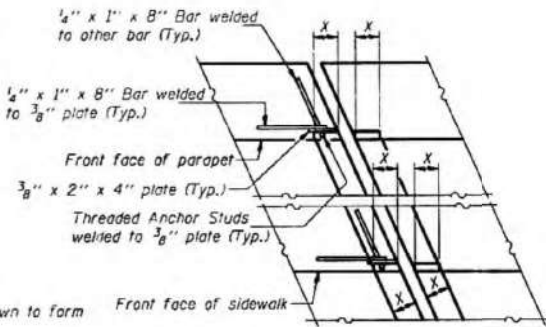
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at 12" cts.



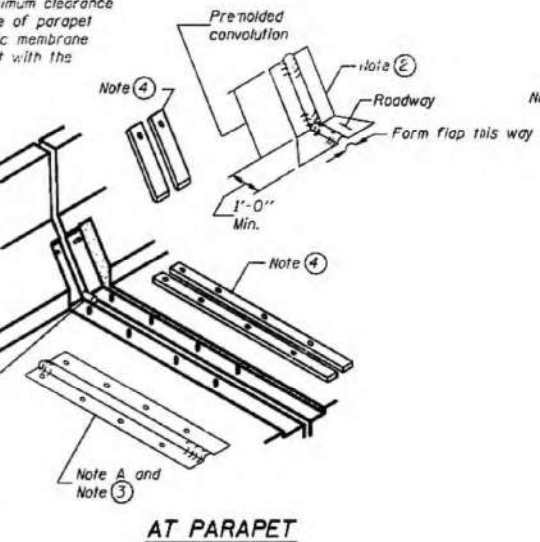
AT CURB

DESIGNED	Chen Elliott
CHECKED	Joe Sutherland
DRAWN	Joe Sutherland
CHECKED	Joe Sutherland

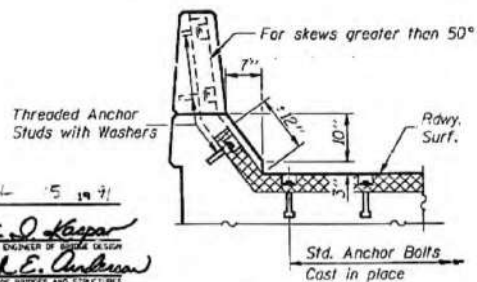
EJ-CS 12-31-87



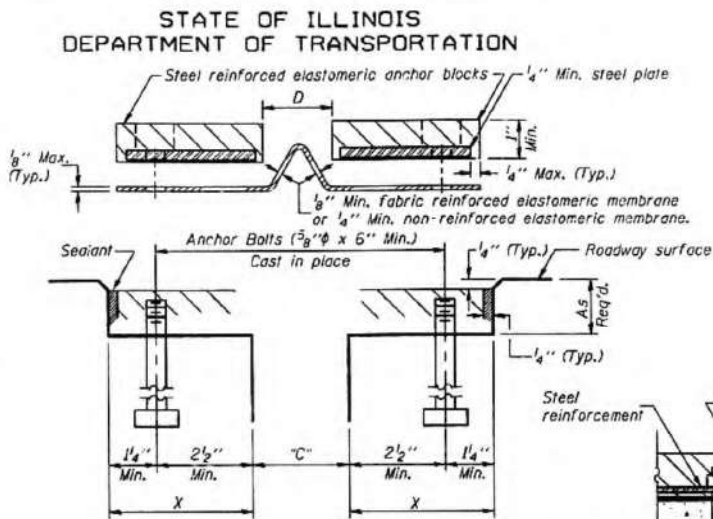
FORMING BLOCKOUT SKETCH



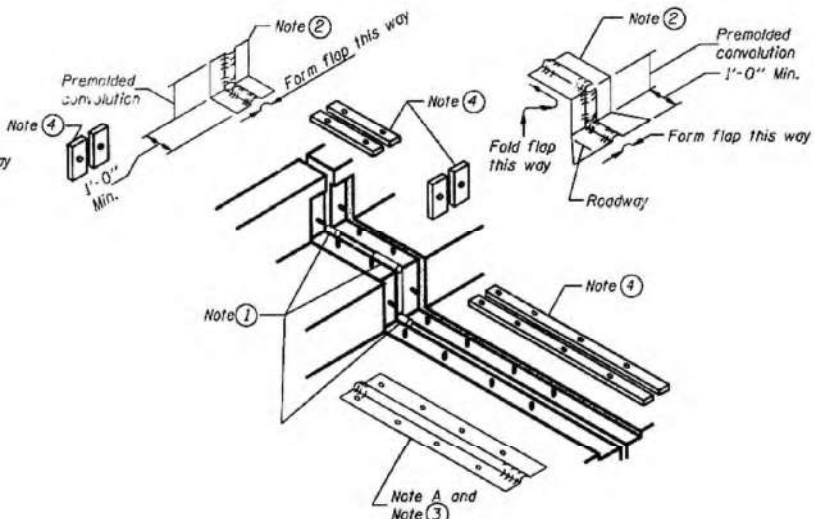
AT PARAPET



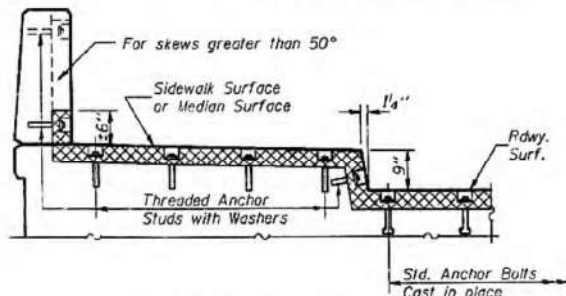
AT PARAPET



CROSS SECTION

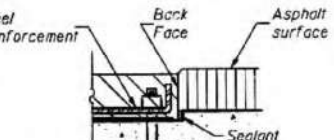


AT SIDEWALK OR MEDIAN



AT SIDEWALK OR MEDIAN
TYPICAL END TREATMENTS

ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE



GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

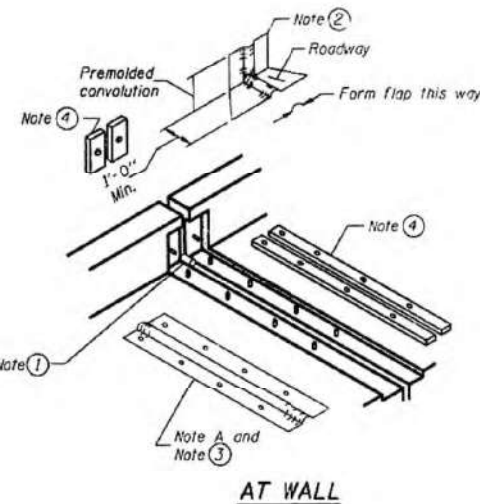
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

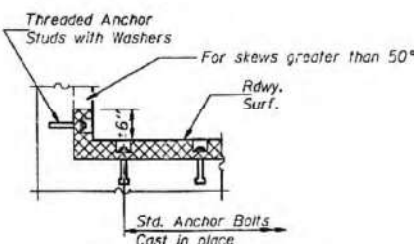
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.



AT WALL



AT WALL

CONTINUOUS SEAL TYPE
NEOPRENE EXPANSION JOINTS
For 2", 2 1/2" and 4" Movement

F.A.U. RT. 6750 SEC. (104B-1)BR
TAEWELL COUNTY
STATION 74+26.00

FOR INFORMATION ONLY

MODEL: Default
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7/3/2025 2:32:59 PM



TWM, INC.
www.twm-inc.com
IL DESIGN FIRM
LICENSE NO:
184-001220

USER NAME =	jmesenbrink
DESIGNED -	
CHECKED -	
PLOT SCALE =	0.167' / in.
PLOT DATE =	7/3/2025

DESIGNED -	
CHECKED -	
DRAWN -	JMM
CHECKED -	MJJ

REVISD -	
REVISD -	
REVISD -	
REVISD -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0144

SHEET 14 OF 22 SHEETS

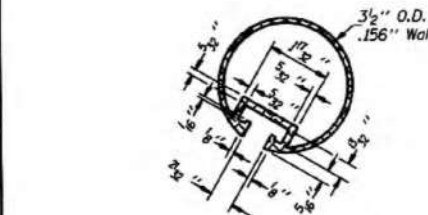
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6750	[(104B-2)BR]BRR	TAEWELL	28	20
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				

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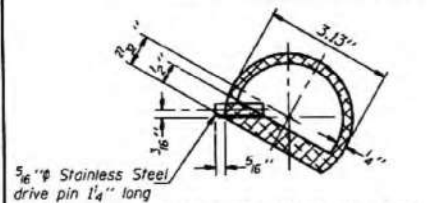
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

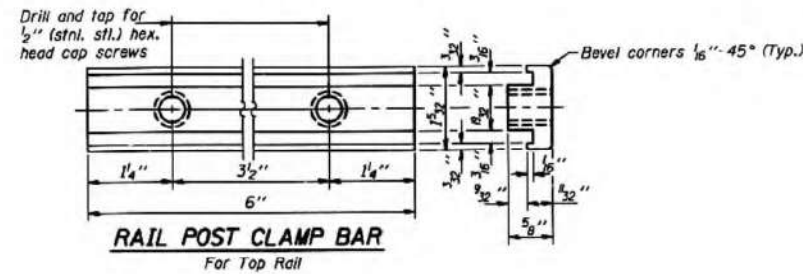
ROUTE NO.	SECTION	QUANTITY	DATE	SHEET NO. 12
6750	104B-11BR	TAZEWELL	87	54
24 SHEETS				



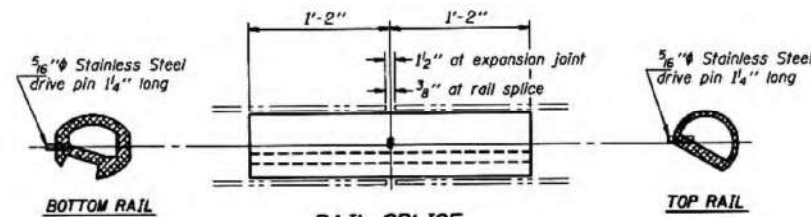
SECTION THRU TOP RAIL



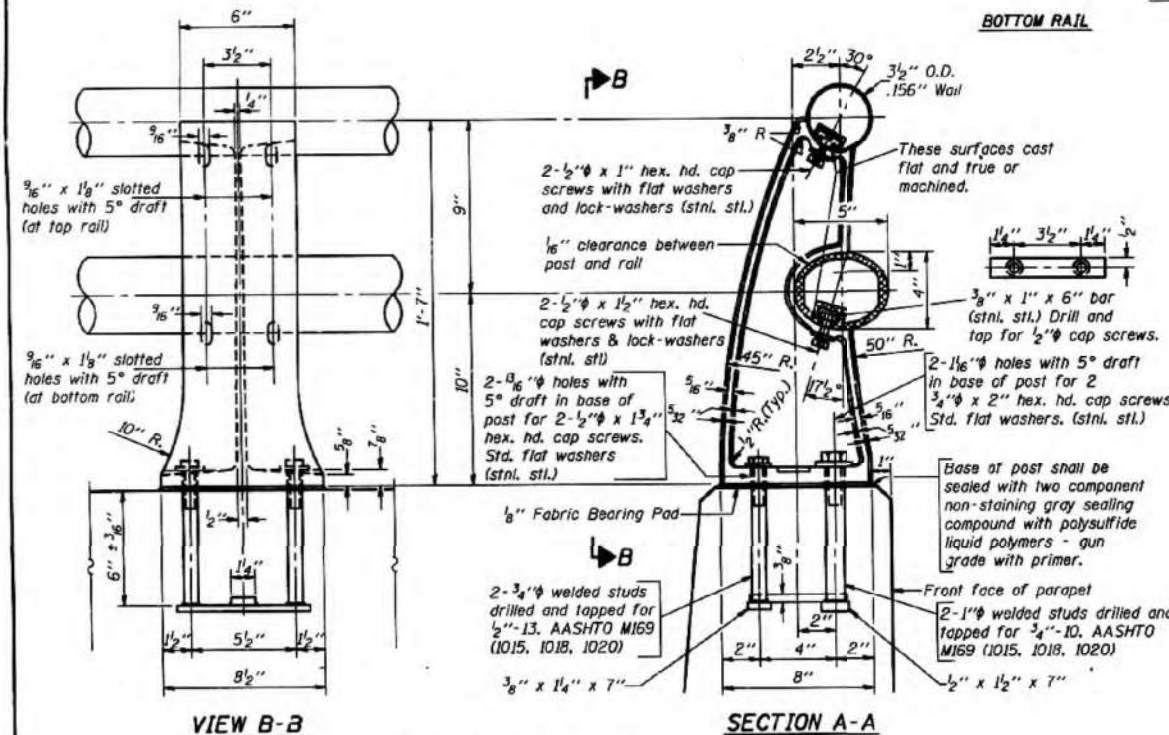
SECTION THRU SPLICE
TOP RAIL



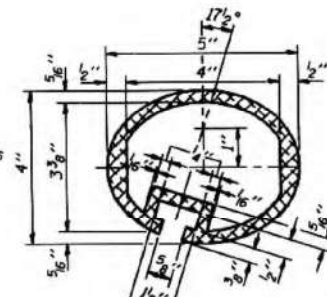
RAIL POST CLAMP BAR
For Top Rail



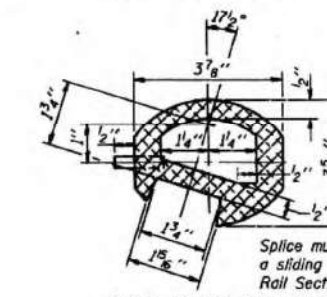
RAIL SPLICE



RAIL POST DETAILS

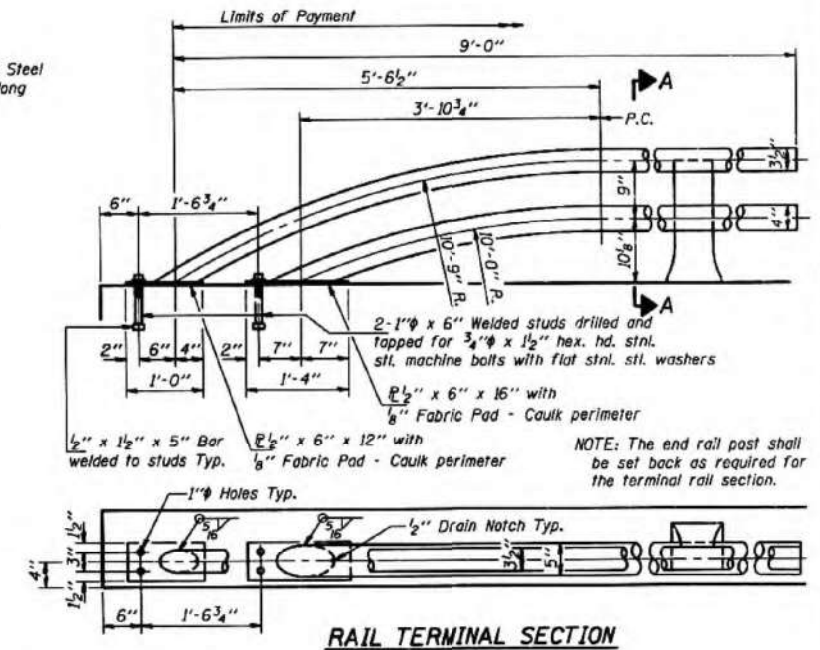


SEC. THRU ELLIPTICAL
RAIL SECTION



SEC. THRU SPLICE

Notes: All Posts shall be normal to parapet.
All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.
All joints in rail shall be spliced per detail.
Provide 1-1/8" and 2-1/8" Aluminum Shims for 25% of the Posts.
Rail elements shall be parallel to Grade - high spots will be ground and low spots shimmed.
Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per linear foot for ALUMINUM RAILING, TYPE L.
Aluminum alloy rail shall conform to ASTM B221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.



RAIL TERMINAL SECTION

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type L	Lin. Ft.	385

TYPE L
ALUMINUM RAILING
F.A.U. RT. 6750 SEC. (104B-11BR)
TAZEWELL COUNTY
STATION 74+26.00

DESIGNED *Chin Ellett*
CHECKED *Robert M. Best*
DRAWN *Joe Sutherland*
CHECKED *GAM*
APPROVED *Robert E. Anderson*
DIRECTOR OF HIGHWAYS

R-20 12-31-87

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0144

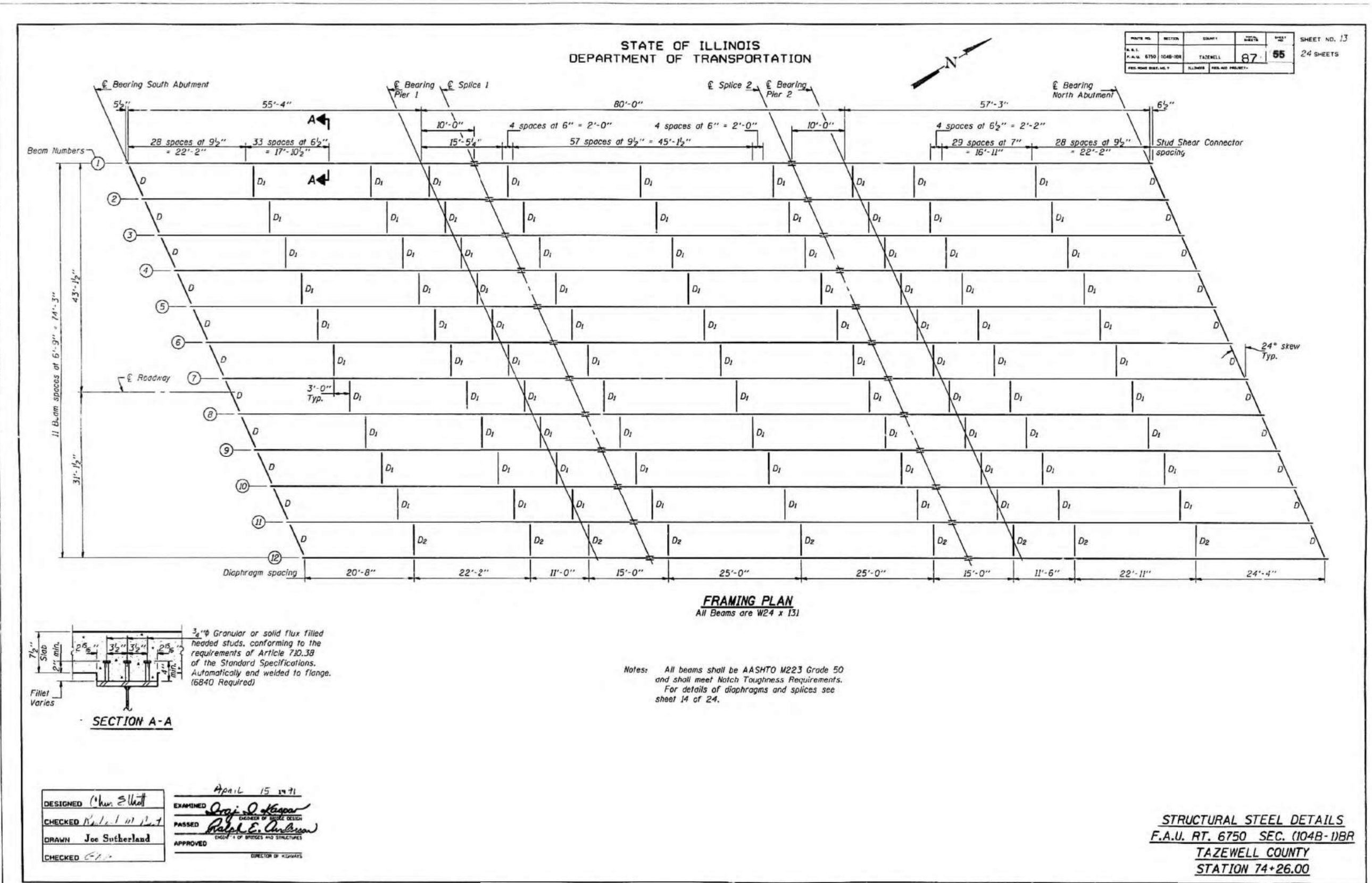
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	21
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				

TWM, INC.
ENGINEERING
GEOSPATIAL SERVICES
IL DESIGN FIRM
LICENSE NO. 184-001220

USER NAME = jmesenbrink	DESIGNED -	REVISED -
PLOT SCALE = 0.167' / in.	CHECKED -	REVISED -
PLOT DATE = 7/3/2025	DRAWN - JMM	REVISED -
	CHECKED - MJJ	REVISED -

MODEL: Default
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FOR INFORMATION ONLY



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	SHEET	SHEET NO.
6750	104B-11BR	TAZEWELL	87	56
SHEET NO. 14				24 SHEETS

TOP OF FLANGE ELEVATIONS

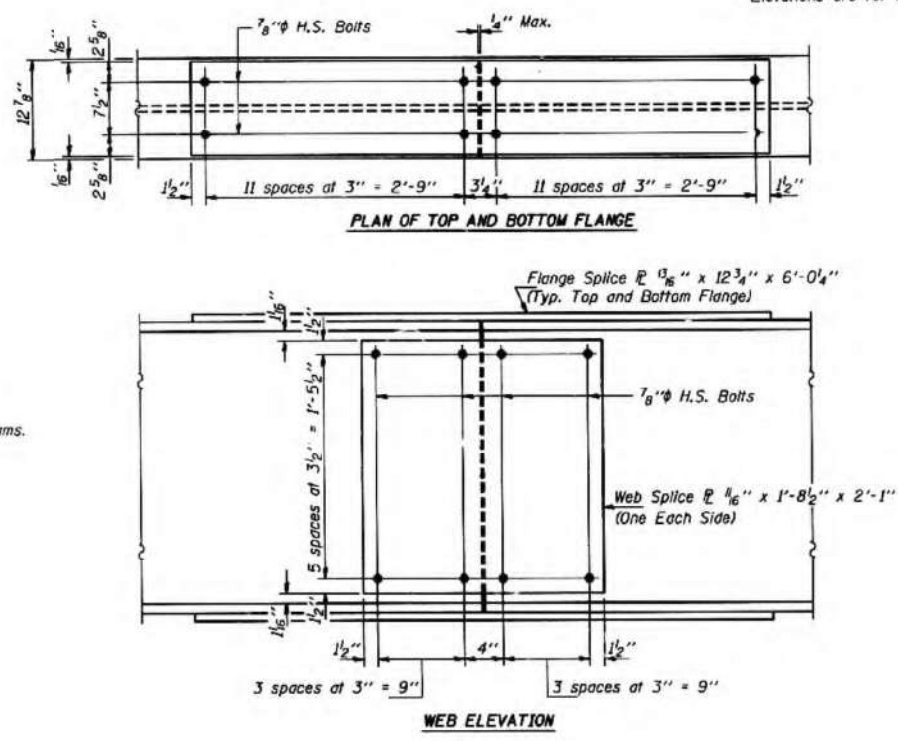
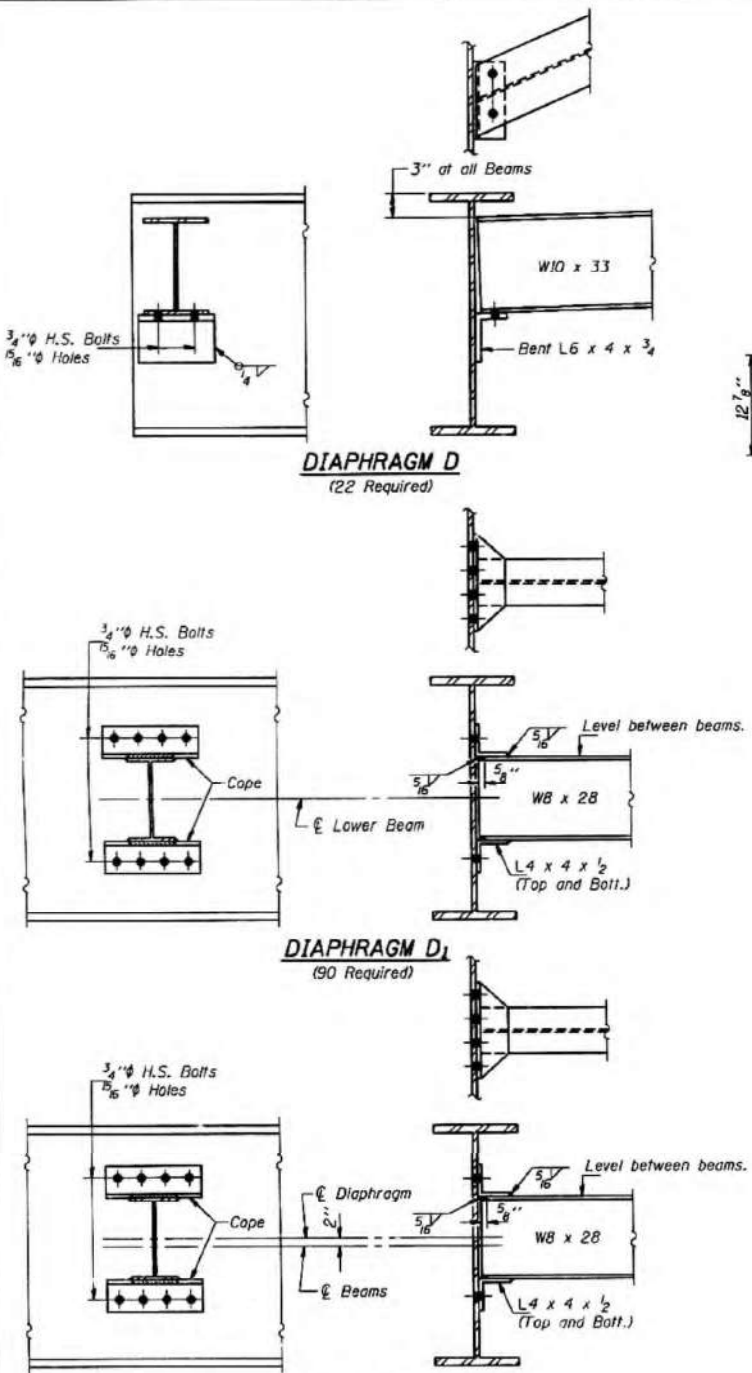
Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8	Beam 9	Beam 10	Beam 11	Beam 12
Br. South Abut.	473.43	473.55	473.77	473.98	474.20	474.41	474.62	474.69	474.68	474.67	474.66	474.74
Br. Pier 1	474.96	475.02	475.19	475.35	475.51	475.66	475.81	475.83	475.77	475.70	475.63	475.66
Splice 1	475.24	475.29	475.44	475.59	475.74	475.89	476.03	476.04	475.97	475.89	475.81	475.83
Splice 2	475.71	475.70	475.80	475.89	475.98	476.06	476.14	476.10	475.96	475.82	475.68	475.65
Br. Pier 2	475.59	475.57	475.65	475.74	475.81	475.89	475.96	475.90	475.76	475.61	475.46	475.41
Br. North Abut.	474.89	474.81	474.84	474.86	474.89	474.90	474.92	474.80	474.60	474.40	474.19	474.09

* Elevations are for fabrication only and do not include Dead Load Deflections.

INTERIOR BEAM MOMENT TABLE					
	0.4 Span 1	Pier 1	0.5 Span 2	Pier 2	0.6 Span 3
Is (in ⁴)	4020	4020	4020	4020	4020
Ic (in ⁴)	11003	11003	11003	11003	11003
Ss (in ³)	329	329	329	329	329
Sc (in ³)	483.9	483.9	483.9	483.9	483.9
Z (in ³)	370	370	370	370	370
Q (K/ft.)	0.811	1.184	0.811	1.184	0.811
M _E (K)	141.5	530.9	251.6	547.3	158.7
s _E (K/ft.)	0.373	0.373	0.373	0.373	0.373
M _{SE} (K)	81.2	156.5	81.2	156.5	81.2
M _L (K)	381.5	250.3	509.6	261.2	405.4
M (Imp) (K)	105.7	66.6	124.4	67.6	111.1
S ₁ (M _L +I) (K)	812.0	538.2	1056.7	548.0	860.8
M _u (K)	1345.1	1389.8	1904.2	1423.9	1441.7
M _u (K)	2685	1542	2685	1542	2685
f _{st} non-comp (k.s.i.)	5.2	19.4	9.2	20.0	5.8
f _{st} (comp) (k.s.i.)	2.0	3.9	3.9	2.2	2.2
f _{st} (k.s.i.)	20.1	19.6	26.2	20.0	21.3
f _s (Overload) (k.s.i.)	27.3	39.0	39.3	40.0	29.3
VR (K)	50.6	52.3	52.3	51.0	51.0

INTERIOR BEAM REACTION TABLE				
	S. Abut.	Pier 1	Pier 2	N. Abut.
R _P (K)	23.2	89.5	91.1	24.4
R _L (K)	35.7	46.1	46.6	36.0
Imp. (K)	9.9	12.0	12.1	9.9
R (Total) (K)	68.8	147.6	149.8	70.3

Is and Ss are the moment of inertia and section modulus of the steel section used in computing f_s (Overload).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing f_s (Overload).
VR is the maximum Live Load + Impact shear range in span.
M_a (Applied Moment) = 1.3(M_E + M_{SE} + S₁(M_L + I)).
M_u is the Full Plastic Moment Capacity for Compact, Braced section.
f_s (Overload) is the sum of the stresses due to M_E + M_{SE} + S₁(M_L + I).
Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.



Notes: Two hardened washers shall be required over all bolt holes in diaphragms.
All splice plate material shall meet Notch Toughness Requirements.
All splice plate material shall be AASHTO M223, Grade 50.
All diaphragms and connecting angles shall be M163.

DESIGNED Chen Elliot
CHECKED Rick S. M. East
DRAWN Joe Sutherland
CHECKED EAH
EXAMINED David J. Hagan
PASSED Ralph E. Anderson
APPROVED Director of Highways

STRUCTURAL STEEL DETAILS
F.A.U. RT. 6750 SEC. (104B-11BR)
TAZEWELL COUNTY
STATION 74+26.00

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0144

SHEET 17 OF 22 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	23
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				

MODEL: Default
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7/3/2025 2:33:22 PM



TWM, INC.
www.twm-inc.com
IL DESIGN FIRM
LICENSE NO:
184-001220

USER NAME = jmesenbrink
DESIGNED -
CHECKED -
PLOT SCALE = 0.167' / in.
PLOT DATE = 7/3/2025

DESIGNED -
CHECKED -
DRAWN - JMM
CHECKED - MJJ
DESIGNED BY
ENGINEER OF RECORD
APPROVED
DIRECTOR OF HIGHWAYS

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

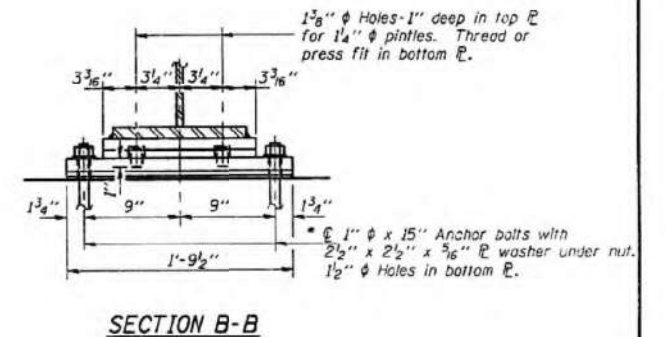
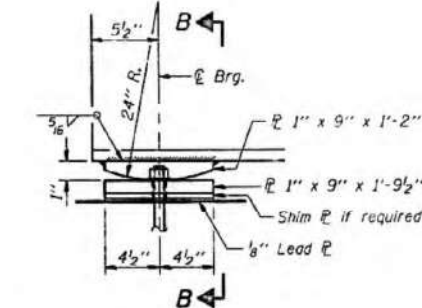
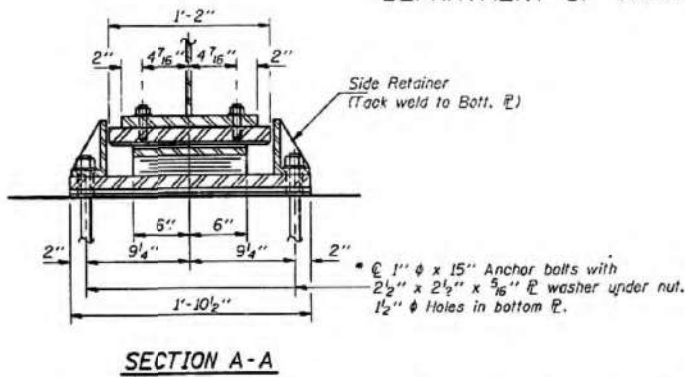
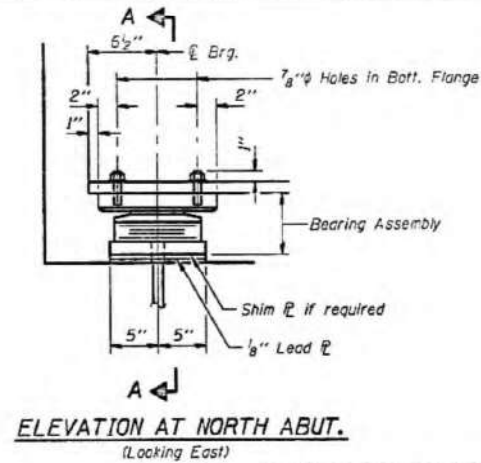
EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0144

SHEET 18 OF 22 SHEETS

F.A.U. RT. 6750
SECTION
COUNTY
TOTAL SHEETS
SHEET NO.
6750
1104B-2(BR)BRR
TAZEWELL
28
24
CONTRACT NO. 68J43
ILLINOIS
FED. AID PROJECT

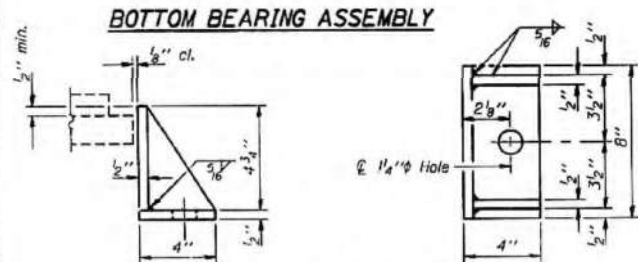
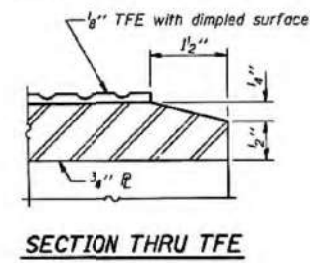
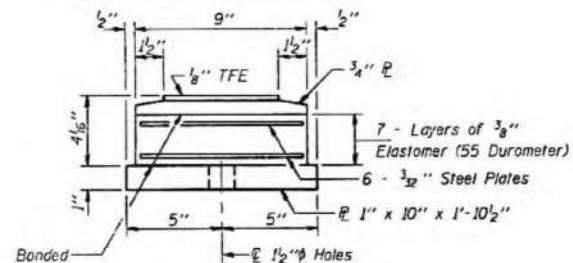
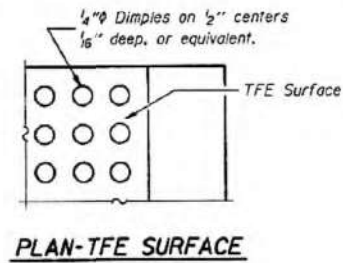
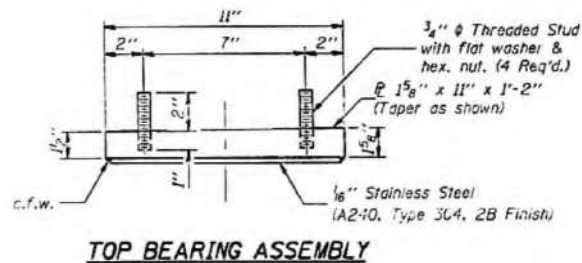
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	SHEET NO.	SHEET
6750	1104B-2(BR)BRR	TAZEWELL	67	57
SHEET NO. 15				
24 SHEETS				



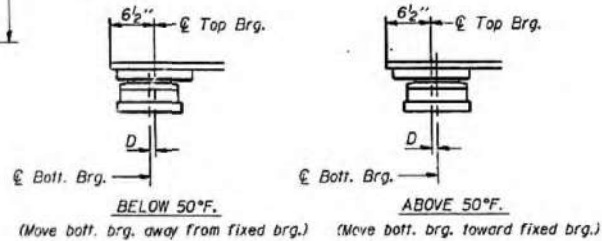
TYPE II TFE ELASTOMERIC EXP. BRG.

* Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet 16 of 24 for Anchor Bolt installation.



Notes: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

SHIM PLATE THICKNESS TABLE

Location	S. Abut.	Pier 1	Pier 2	N. Abut.
Beam 1				
Beam 2				
Beam 3				
Beam 4				
Beam 5				
Beam 6				
Beam 7				
Beam 8				
Beam 9				
Beam 10				
Beam 11				
Beam 12				

Notes: All shim plates shall be M183.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12

BEARING DETAILS

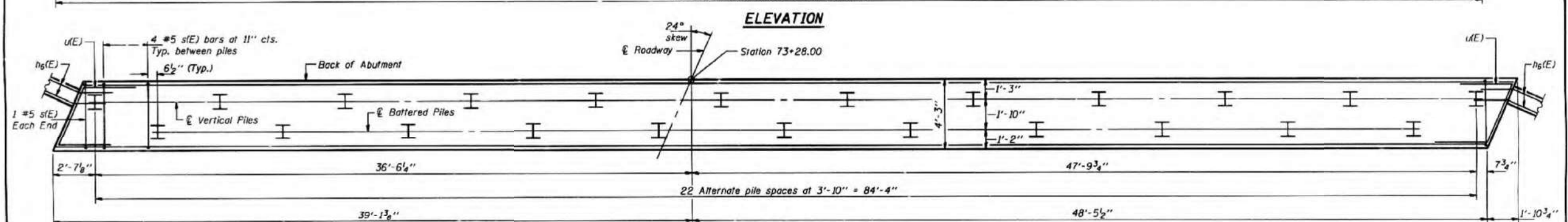
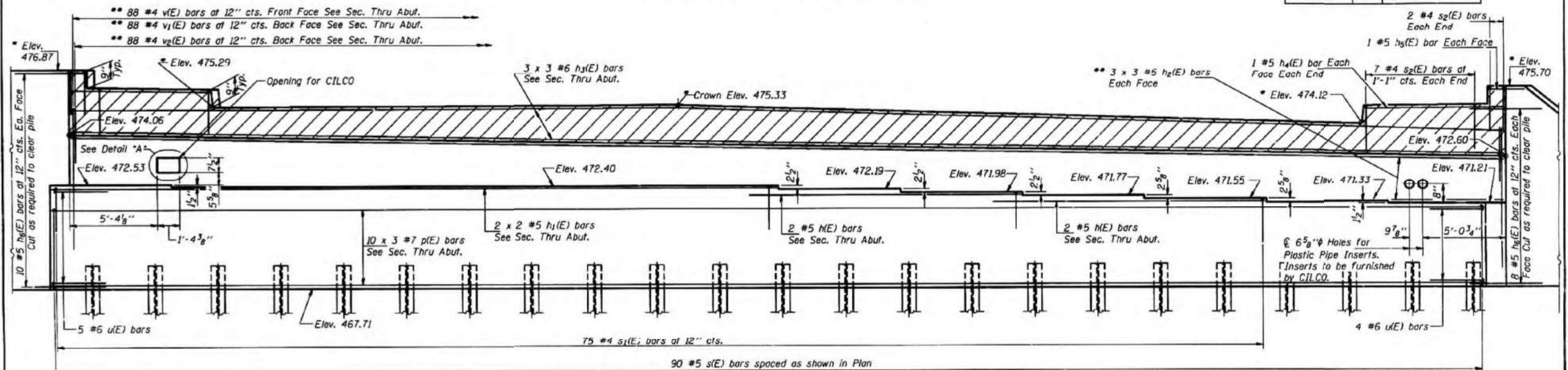
F.A.U. RT. 6750 SEC. 1104B-1(BR)
TAZEWELL COUNTY
STATION 74+26.00

FOR INFORMATION ONLY

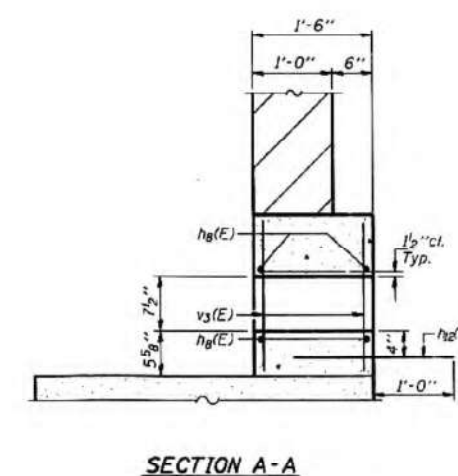
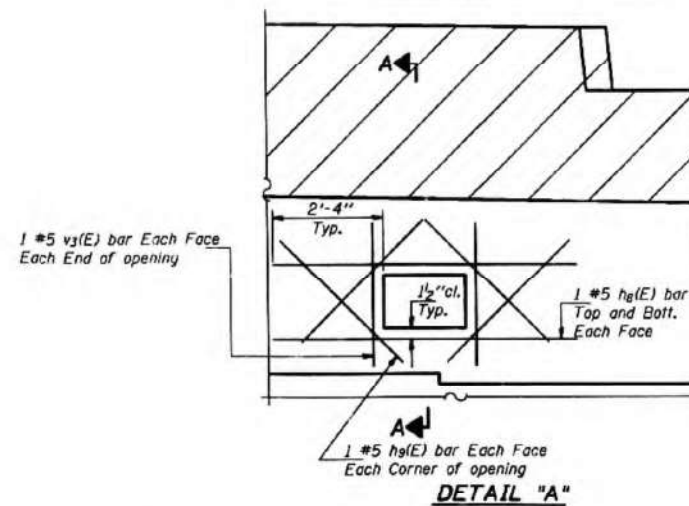
TAMERAN

ROUTE NO.	SECTION	COUNTY	TAX MAP NO.	SHEET NO.
R.R. 1 P.M. 6750	0048-00R	TAZEWELL	87	59
FED. ROAD DIST. NO. 7		FED. AID PROJECT NO.		

SHEET NO. 17
24 SHEETS



Notes: See sheet 18 of 24 for remaining abutment details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 3 x 3 #6 etc. indicates 3 lines of bars
with 3 lengths per line.
All exposed edges shall have a standard $\frac{3}{4}$ " chamfer.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Hatched area to be poured after superstructure is in place and form
work is removed. Concrete in hatched area shall be filled with superstructure
as "Class X Concrete Superstructure".



PILE DATA

Type:	Steel HPI0 x 42
Capacity:	Drive to Refusal
Est. Length:	33'
No. Required:	22 + 1 Test Pile

MIN. BAR LAPS

#5 bars = 2'-2"
#6 bars = 2'-7"
#7 bars = 3'-5"

SOUTH ABUTMENT
F.A.U. RT. 6750 SEC. (104B-1)BR
TAZEWELL COUNTY
STATION 74+26.00

FOR^D INFORMATION^C ONLY^B



TWM, INC.
WWW.TWM-INC.COM
IL DESIGN FIRM
LICENSE NO:
184-001220

USER NAME =	jmesenbrink
PLOT SCALE =	0.167' / in.
PLOT DATE =	7/3/2025

	DESIGNED	-	
	CHECKED	-	
	DRAWN	-	JMM
	CHECKED	-	MJJ

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0144

SHEET 19 OF 22 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	25
		CONTRACT NO. 68J43		
		ILLINOIS FED. AID PROJECT		

		CONTRACT
ILLINOIS	FED. AID PROJECT	



 TWM, INC. WWW.TWMINC.COM	USER NAME = jmesenbrink	DESIGNED -	REVISED -

MODEL: Default
FILE NAME: P:\2023\230984\N - IL 8 over Farm Creek (SN 090-0144)\4-CADD - DWG\4.4-StructDrawings\0900144-68J43-02-Existing North Abutment Details.dgn
7/3/2025 2:33:39 PM

FOR INFORMATION ONLY



TWM, INC.
www.twm-inc.com
IL DESIGN FIRM
LICENSE NO:
184-001220

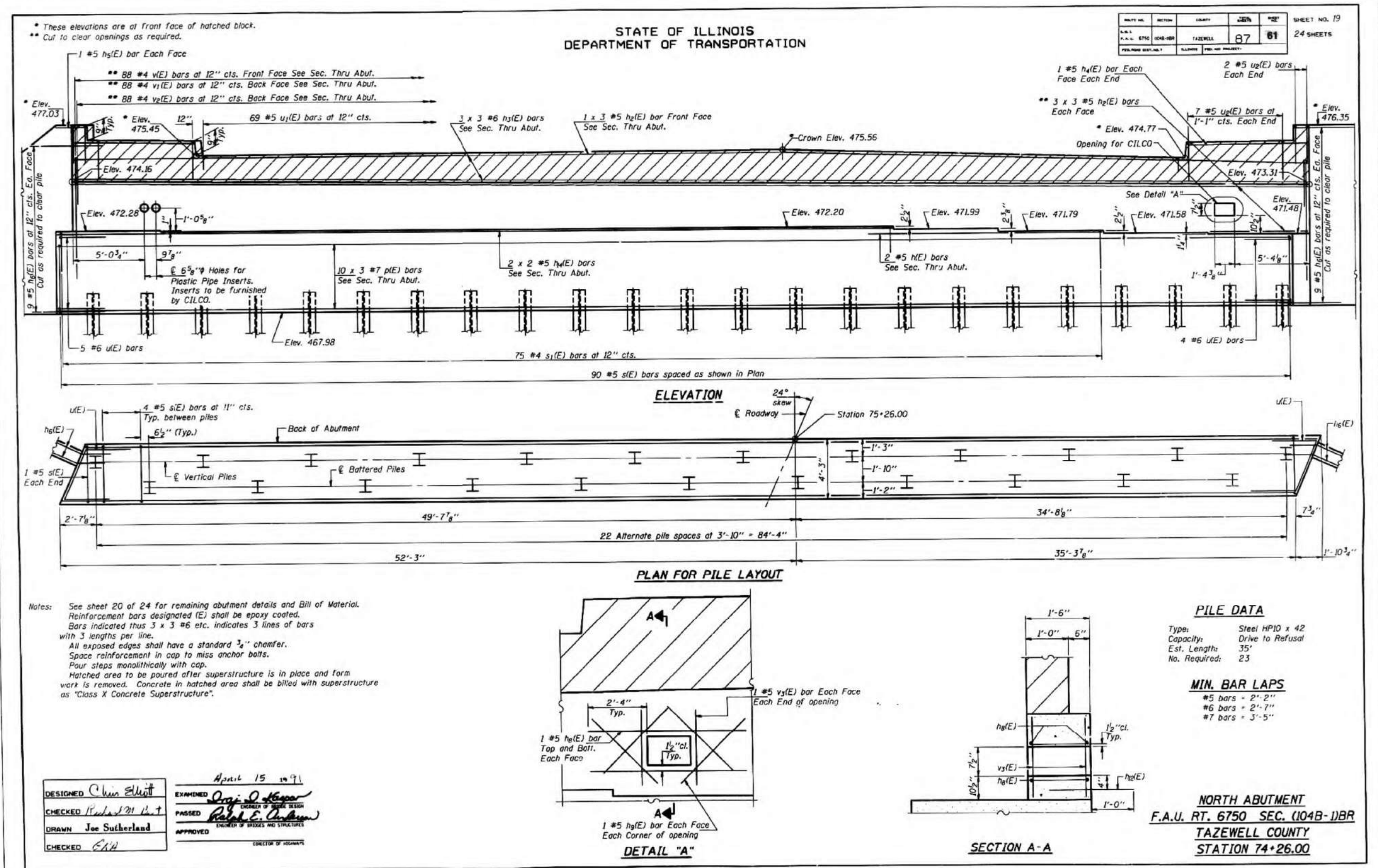
USER NAME = jmesenbrink	DESIGNED -	REVISD -
PLOT SCALE = 0.167' / in.	CHECKED -	REVISD -
PLOT DATE = 7/3/2025	DRAWN - JMM	REVISD -
	CHECKED - MJJ	REVISD -

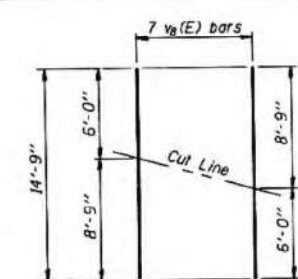
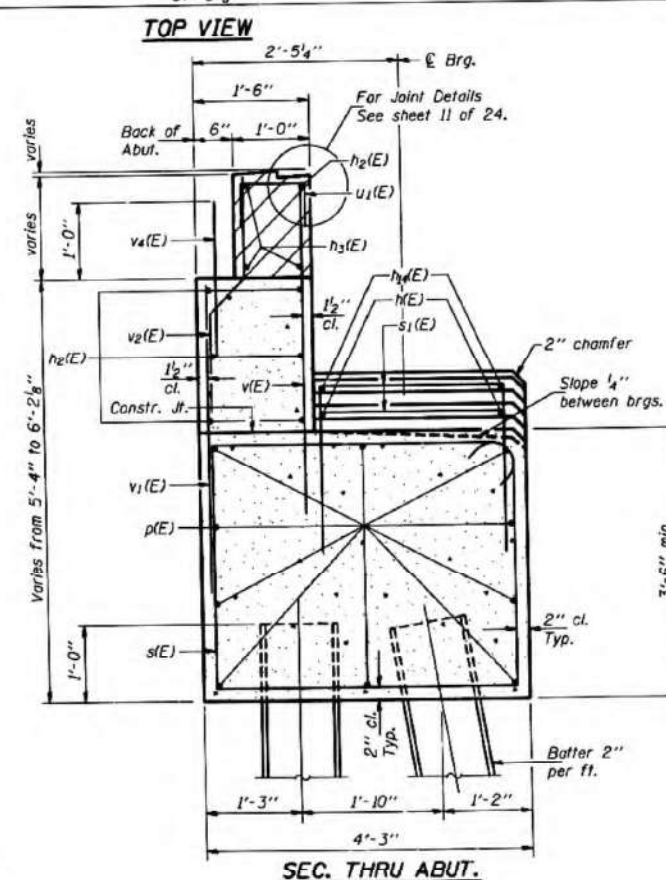
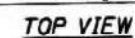
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLANS
STRUCTURE NO. 090-0144

SHEET 21 OF 22 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6750	[(104B-2)BR]BRR	TAZEWELL	28	27
CONTRACT NO. 68J43				
ILLINOIS FED. AID PROJECT				





FIELD CUTTING DIAGRAM

* Order $v_B(E)$ bars full length. Cut to fit as shown and use remainder of bars in opposite face.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
ME	2	#5	17'-0"	
1 ₁₂ (E)	21	#5	30'-7"	
1 ₁₃ (E)	9	#6	30'-10"	
1 ₁₄ (E)	4	#5	8'-6"	
1 ₁₅ (E)	2	#5	1'-8"	
1 ₁₆ (E)	36	#5	4'-0"	
1 ₁₇ (E)	18	#5	6'-9"	
1 ₁₈ (E)	4	#5	6'-0"	
1 ₁₉ (E)	8	#5	2'-0"	
1 ₂₀ (E)	3	#7	2'-0"	
1 ₂₁ (E)	20	#5	6'-3"	
1 ₂₂ (E)	4	#5	30'-8"	
p(E)	30	#7	31'-6"	
s(E)	90	#5	15'-1"	□
s ₁ (E)	75	#4	7'-6"	□
u(E)	9	#6	9'-2"	┐
u ₁ (E)	69	#5	1'-11"	┐
u ₂ (E)	18	#5	3'-9"	┐
v(E)	88	#4	5'-6"	
v ₁ (E)	88	#4	4'-2"	
v ₂ (E)	88	#4	3'-8"	
v ₃ (E)	4	#5	1'-7"	
v ₄ (E)	70	#5	2'-0"	
v ₅ (E)	16	#5	8'-1"	
v ₆ (E)	7	#5	14'-9"	
Structure Excavation			Cu. Yd.	105.
Class X Concrete			Cu. Yd.	68.
Reinforcement Bars			Pound	598
Epoxy Coated				
Steel Piles HP10x42			Lin. Ft.	805

Reinforcement bars designated (E) shall be epoxy coated.

NORTH ABUTMENT

F.A.U. RT. 6750 SEC. (104B-1)BR
TAZEWELL COUNTY
STATION 74+26.00

Diagram showing a square structure with a base dimension of 3'-11" and a height dimension of 5/2". The structure is labeled **BAR s(E)**.

Diagram of a frame structure with dimensions and bar labels:

- Vertical dimensions on the left: 2'-6" (total height), 7" (height of the first column segment), and 1'-6" (height of the second column segment).
- Horizontal dimensions at the top: 2'-6" (width of the top beam), 9" (width of the first column segment), and 9" (width of the second column segment).
- Bar labels on the right: $s_1(E)$ (top beam), $u_1(E)$ (first column segment), and $u_2(E)$ (second column segment).

BARS $s_1(E)$, $u_1(E)$ and $u_2(E)$

BAR u(E)

Diagram of a cantilever beam fixed to a wall on the left. A downward point load of 55 lb is applied at the free end. The beam has a total length of 1.3 ft. At the free end, there is a 1.9 ft vertical dimension and an 8 ft horizontal dimension. The beam is labeled "BAR v2(E)".

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