

## INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES AND COMMITMENTS
- 3 SUMMARY OF QUANTITIES
- 4-7 TYPICAL SECTIONS
- 8 SCHEDULE OF QUANTITIES
- 9 PLAN SHEET
- 10 TRAFFIC CONTROL STAGING PLAN
- 11 WIDTH RESTRICTION SIGNING DETAIL
- 12-22 STRUCTURAL DETAILS

## **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
701201-05	LANE CLOSURE, 2L 2W, DAY ONLY 45MPH OR MORE
701301-04	LANE CLOSURE, 2L 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L 2W, MOVING OPERATIONS DAY ONLY
701321-19	LANE CLOSURE, 2L 2W, BRIDGE REPAIR WITH BARRIER
701901-11	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPOICAL PAVEMENT MARKINGS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

## DESIGN DESIGNATION

IL 96: MINOR ARTERIAL  
ADT: 1000 (2023)  
SU: 20  
MU: 60

EX SN 036-0009  
IL 96 OVER DUGOUT CREEK  
STA 346 + 60.28  
160'-2 1/2" BACK TO BACK OF ABUTMENTS  
3- SPAN CONTINUOUS STEEL I-BEAM

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**

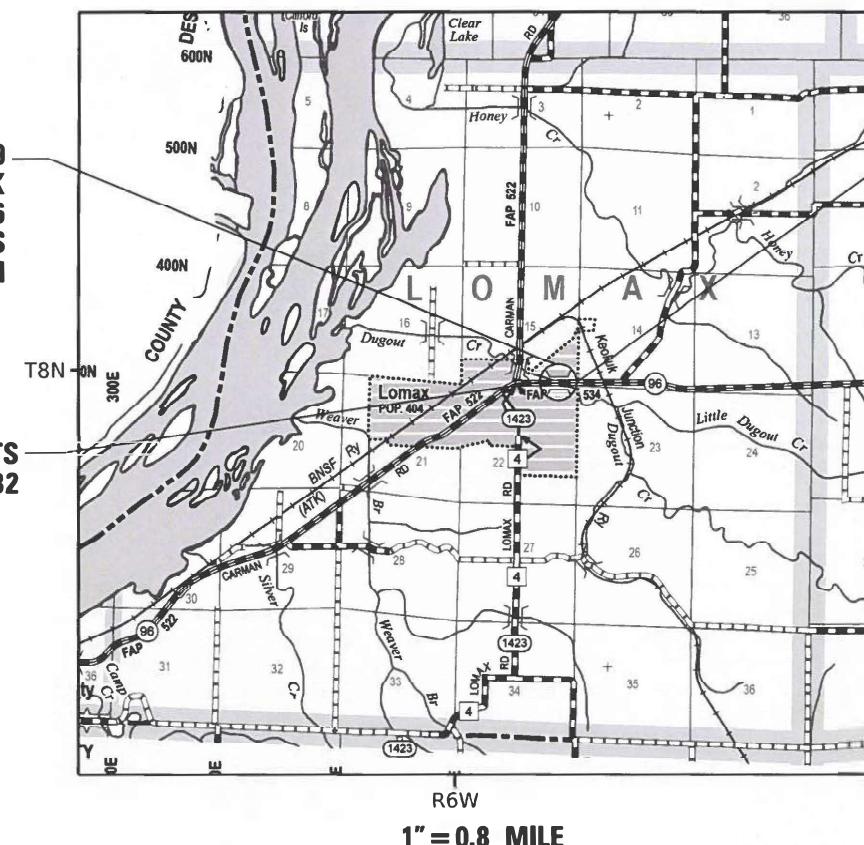
**PROJECT ENGINEER: BEN TELLEFSON  
PROJECT MANAGER: MARK ECKHOFF  
CONTRACT NO. 68K58  
CATALOG NO. 036696-00D**

# PROPOSED HIGHWAY PLANS

**FAP 534 (IL 96)  
SECTION [(12B)BR]BRR  
BRIDGE REHABILITATION OVER DUGOUT CREEK  
HENDERSON COUNTY**

**C-94-107-25**

→ END IMPROVEMENTS  
STA. 349 + 05.40



1" = 0.8 MILE

**GROSS LENGTH = 500.08 FT. = 0.095 MIL**  
**NET LENGTH = 500.08 FT. = 0.095 MILE**

A circular professional engineer license seal. The outer ring contains the text "PROFESSIONAL ENGINEER" at the top and "ILLINOIS" at the bottom. The inner circle contains "LICENSURE" at the top and "STATE OF ILLINOIS" at the bottom. In the center, it says "TIMOTHY B. PADGETT, PE" and "062-049162".

11/25/2025



**PLANS PREPARED BY:**  
4940 Old Collinsville Road  
Swansea, Illinois 62226  
Tel: 618.624.4488  
[www.twm-inc.com](http://www.twm-inc.com)      Illinois Professional  
Design Firm  
No. 184-001220  
License Expires: 4/30/2027  
**ILLINOIS - MISSOURI - TENNESSEE**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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

## **COMMITMENTS**

NO COMMITMENTS HAVE BEEN MADE FOR THIS PROJECT.

## **GENERAL NOTES**

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

## **ENVIRONMENTAL REVIEWS**

PRIOR TO THE USE OF ANY PROPOSED BORROW AREAS, USE AREAS (TEMPORARY ACCESS ROADS, DETOURS, RUN-AROUNDS, ETC.) AND/OR WASTE AREAS, THE CONTRACTOR SHALL FILE THE REQUIRED ENVIRONMENTAL RESOURCE REQUEST SURVEYS ACCORDING TO SECTION 107.22 OF THE STANDARD SPECIFICATIONS. THESE SURVEYS ARE REQUIRED IN ORDER FOR THE DEPARTMENT TO CONDUCT CULTURAL AND BIOLOGICAL RESOURCE SURVEYS FOR THE PROPOSED SITE.

THE REQUIRED ENVIRONMENTAL RESOURCE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:

- \*BDE FORM 2289 (BORROW SITE REVIEW)
- \*BDE FORM 2290 (WASTE/USE AREA REVIEW)
- \*A LOCATION MAP SHOWING THE SIZE LIMITS AND LOCATION OF THE USE AREA
- \*COLOR PHOTOGRAPHS DEPICTING THE USE AREA
- \*BORROW AREA ENTRY AGREEMENT FORM - D4 PI0101

PRIOR TO ANY WASTE MATERIALS BEING REMOVED FROM THE CONSTRUCTION SITE THE REQUIRED ENVIRONMENTAL RESOURCE SURVEYS SHALL BE OBTAINED AND FILED BY THE CONTRACTOR. EXCESS WASTE PRODUCTS REMOVED FROM THE CONSTRUCTION SITE SHALL BE DISPOSED OF AS REQUIRED IN SECTION 202.03 OF THE STANDARD SPECIFICATIONS.

ANY PROTRUDING METAL BARS SHALL BE REMOVED PRIOR TO THE DISPOSAL OF BROKEN CONCRETE AT APPROVED DISPOSAL SITES.

PLEASE NOTE THAT A MINIMUM OF FOUR WEEKS SHALL BE ALLOWED FOR THE DISTRICT TO OBTAIN THE REQUIRED WASTE SITE ENVIRONMENTAL CLEARANCES AND SIX WEEKS FOR THE REQUIRED BORROW SITE ENVIRONMENTAL CLEARANCES.

## **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.

## **PROPERTY OWNER ACCESS REQUIREMENTS**

ACCESS MUST BE MAINTAINED TO ALL EXISTING PROPERTIES DURING CONSTRUCTION PER ARTICLE 107.09 UNLESS ARRANGEMENTS ARE MADE IN WRITING BY THE CONTRACTOR WITH THE PROPERTY OWNER WITH A COPY TO THE ENGINEER FOR SHORT-TERM CLOSURES.

## **DROP OFF POLICY**

AT ANY TIME A GREATER THAN 12" DROP-OFF IS LOCATED WITHIN 8 FT OF THE EDGE OF THE NEAREST OPEN TRAFFIC LANE, THAT LANE SHALL BE CLOSED UNTIL THE DROP-OFF IS BROUGHT UP TO LESS THAN 12".

NO OVERNIGHT LANE CLOSURES WILL BE ALLOWED.



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

USER NAME	= dlee	DESIGNED	-	JCL	REVISED	-
		DRAWN	-	JCL	REVISED	-
PLOT SCALE	= 40,0000 * / in.	CHECKED	-	TBP	REVISED	-
PLOT DATE	= 11/14/2025	DATE	-	OCTOBER 2025	REVISED	-

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

## **GENERAL NOTES AND COMMITMENTS**

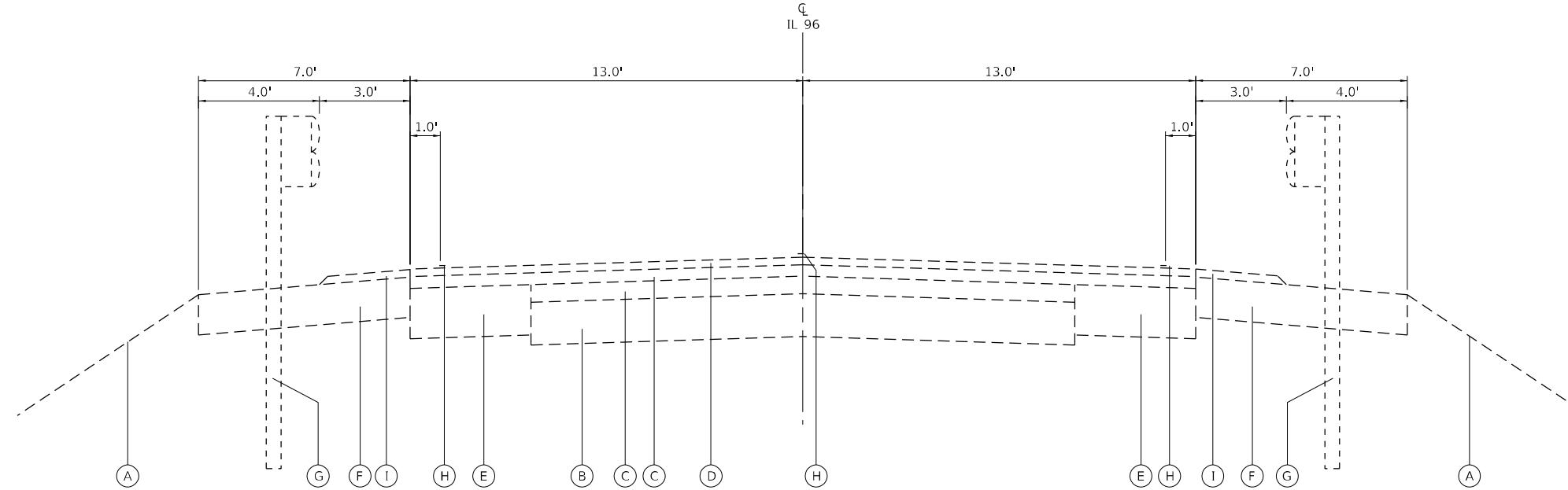
SCALE: N/A	SHEET 1	OF 1	Sheets	STA.	TO STA.	F.A.P RTE.	SECTION	COUNTY	TOTAL Sheets	SHEET NO.
543	(12B)BRJBR	HENDERSON	22	2						CONTRACT NO. 68K58

ILLINOIS CONTRACT MAINTENANCE



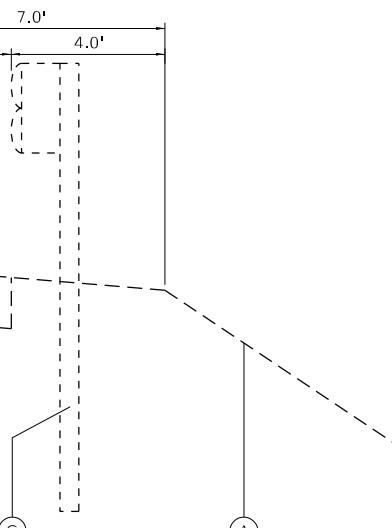
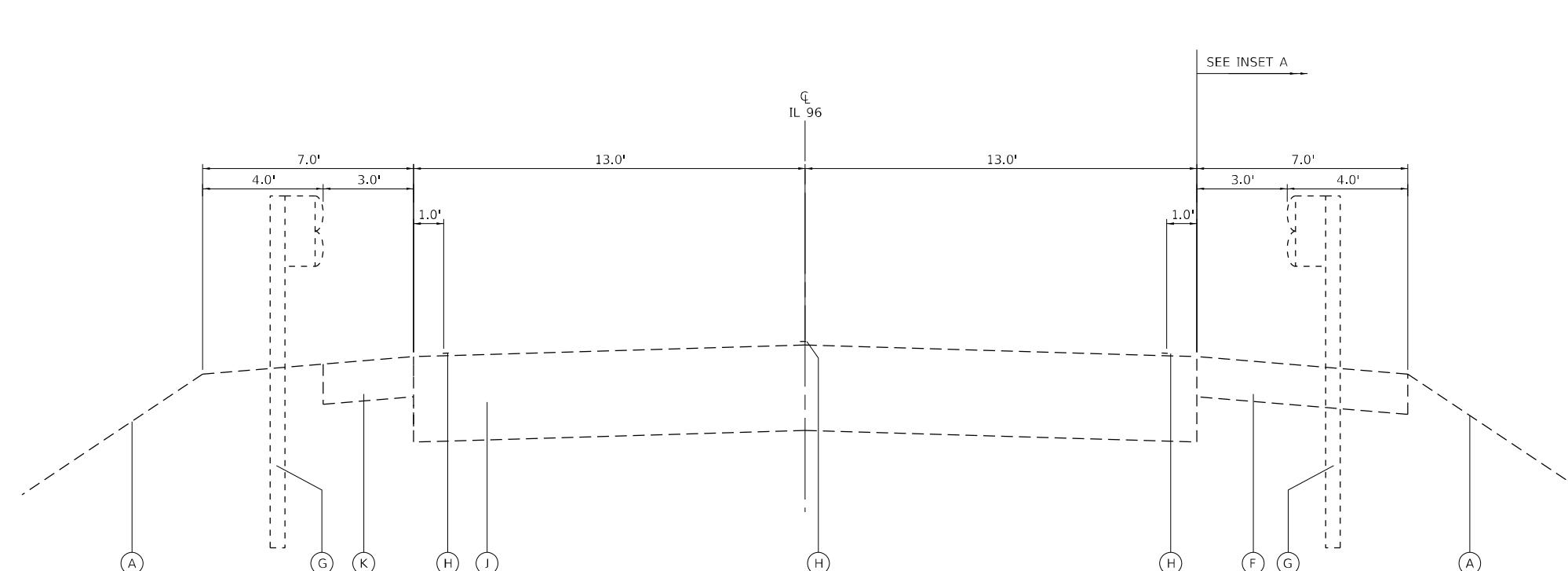
### LEGEND

- (A) EX. EMBANKMENT
- (B) EX. AGGREGATE BASE
- (C) EX. HMA OVERLAYS
- (D) EX. HMA SURFACE COURSE, 1 1/2"
- (E) EX. HMA BASE COURSE WIDENING
- (F) EX. HMA SHOULDER, 8"
- (G) EX. STEEL PLATE BEAM GUARDRAIL, TY A
- (H) EX. PAVEMENT MARKING
- (I) EX. HMA SHOULders, 1.5"
- (J) EX. PCC BRIDGE APPROACH PAVEMENT, 17"
- (K) EX. PCC APPROACH SHOULDER PAVEMENT
  
- (1) PR. BASE COURSE WIDENING, 8"
- (2) PR. SUBBASE GRANULAR MATERIAL TYPE B, 4"
- (3) PR. PAINT PAVEMENT MARKING - LINE 6"



### EXISTING TYPICAL SECTION

STA. 344+05.32 TO STA. 345+47.86  
STA. 347+72.66 TO STA. 349+05.40



### INSET A

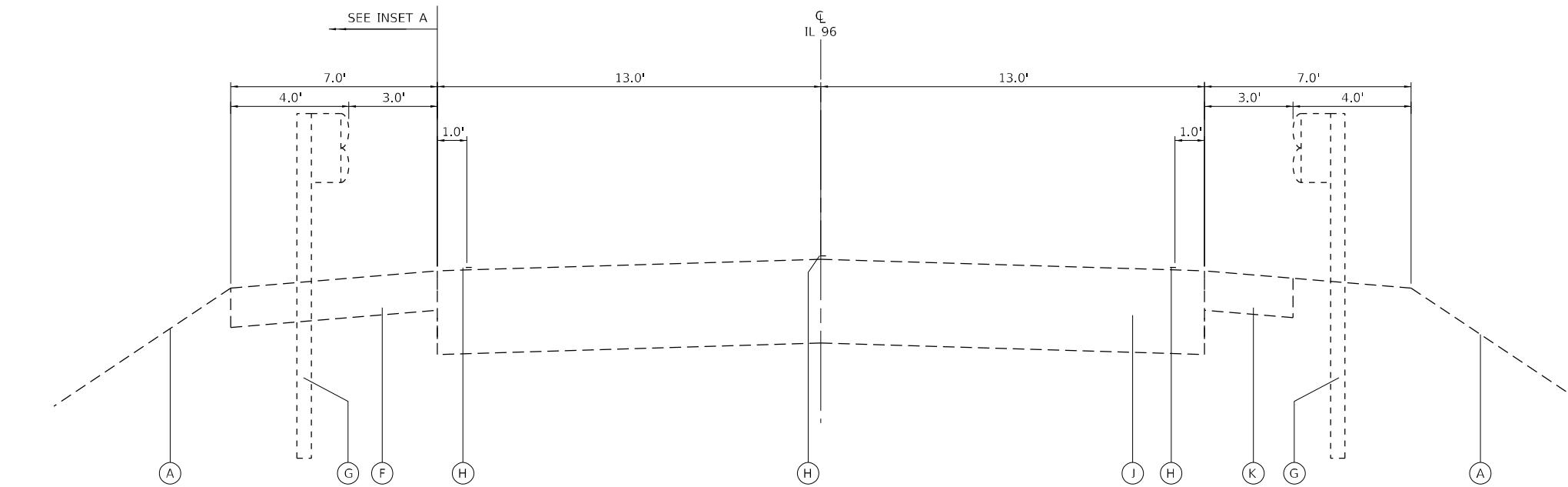
STA. 345+74.98 (RT) TO STA. 345+98.55 (RT)

### EXISTING TYPICAL SECTION

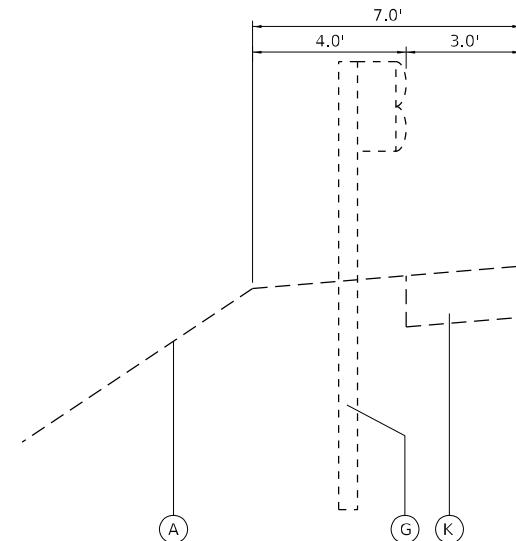
STA. 345+47.86 (LT) TO STA. 345+69.48 (LT)  
STA. 345+47.86 (RT) TO STA. 345+74.98 (RT)

**LEGEND**

- (A) EX. EMBANKMENT
- (B) EX. AGGREGATE BASE
- (C) EX. HMA OVERLAYS
- (D) EX. HMA SURFACE COURSE, 1 1/2"
- (E) EX. HMA BASE COURSE WIDENING
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- (3) PR. PAINT PAVEMENT MARKING - LINE 6"


**EXISTING TYPICAL SECTION**

STA. 347+43.07 (LT) TO STA. 347+72.66 (LT)  
 STA. 347+51.37 (RT) TO STA. 347+72.66 (RT)


**INSET A**

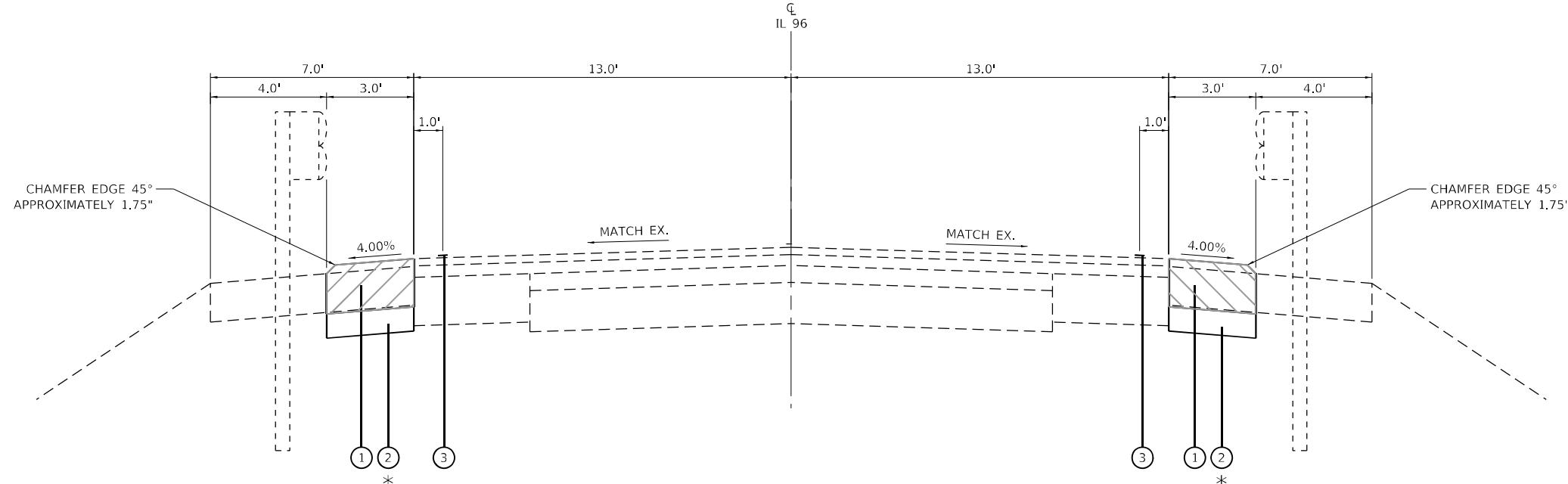
STA. 347+22.30 (LT) TO STA. 347+43.07 (LT)

## LEGEND

- (A) EX. EMBANKMENT
- (B) EX. AGGREGATE BASE
- (C) EX. HMA OVERLAYS
- (D) EX. HMA SURFACE COURSE, 1 1/2"
- (E) EX. HMA BASE COURSE WIDENING
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- (2) PR. SUBBASE GRANULAR MATERIAL TYPE B, 4"
- (3) PR. PAINT PAVEMENT MARKING - LINE 6"

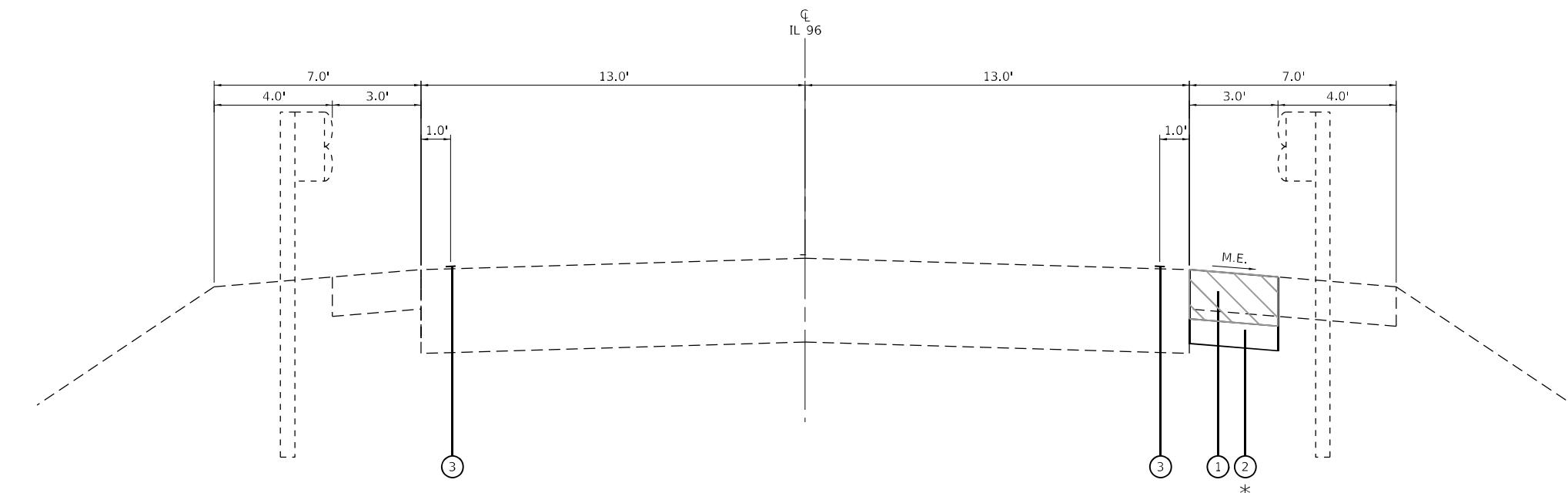


\* EARTH EX. INCLUDED IN THE UNIT COST OF PR. SUBBASE GRANULAR MATERIAL TYPE B, 4"



### PROPOSED TYPICAL SECTION

STA. 344+05.32 (LT) TO STA. 345+47.86 (LT)  
 STA. 344+49.81 (RT) TO STA. 345+47.86 (RT)  
 STA. 347+72.66 (LT) TO STA. 349+05.40 (LT)  
 STA. 347+72.66 (RT) TO STA. 348+69.53 (RT)



### PROPOSED TYPICAL SECTION

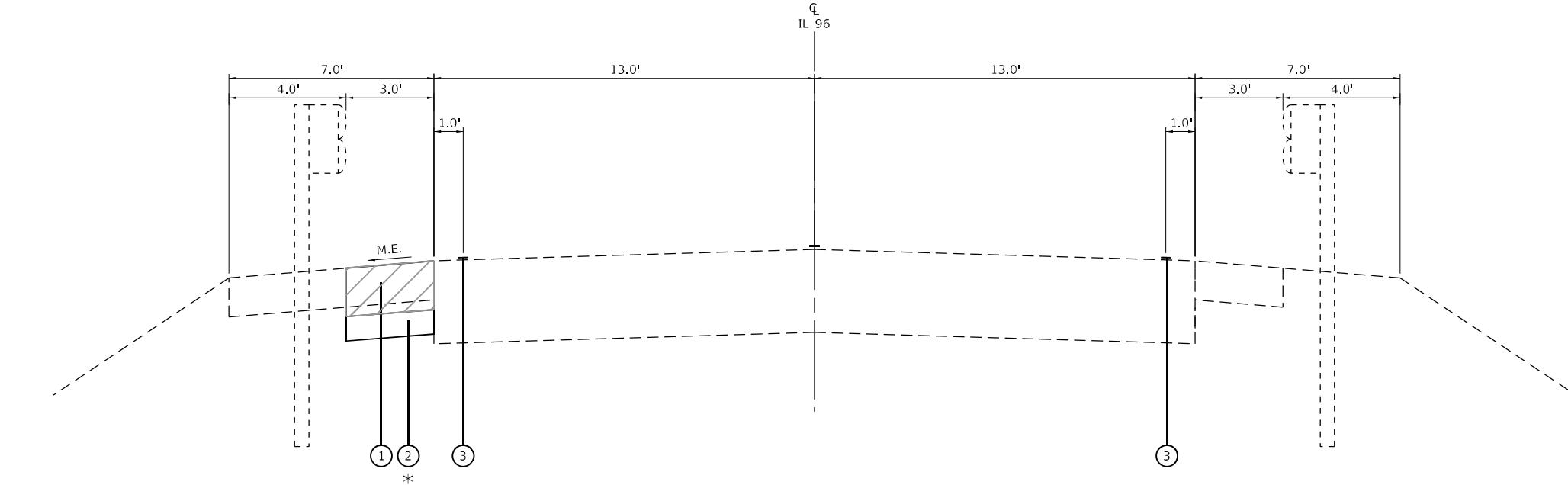
STA. 345+47.86 (LT) TO STA. 345+69.48 (LT)  
 STA. 345+47.86 (RT) TO STA. 345+74.98 (RT)

**LEGEND**

- (A) EX. EMBANKMENT
- (B) EX. AGGREGATE BASE
- (C) EX. HMA OVERLAYS
- (D) EX. HMA SURFACE COURSE, 1 1/2"
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\* EARTH EX. INCLUDED IN THE UNIT COST OF PR. SUBBASE GRANULAR MATERIAL TYPE B, 4"


**PROPOSED TYPICAL SECTION**

STA. 347+43.07 (LT) TO STA. 347+72.66 (LT)  
STA. 347+51.37 (RT) TO STA. 347+72.66 (RT)

PAVEMENT SCHEDULE								
LOCATION				SUBBASE GRANULAR MATERIAL, TYPE B	BASE COURSE WIDENING 8"	PAVED SHOULDER REMOVAL	AGGREGATE SURFACE COURSE, TYPE B	PAINT PAVEMENT MARKING - LINE 6"
STATION	TO	STATION	NOTES	TON	SQ YD	SQ YD	TON	FOOT
344+05.32	TO	345+47.86	LT	11.1	47.5	47.5		
344+05.32	TO	349+05.40	LANE LINE LT					500.1
344+49.81	TO	345+74.98	RT	9.7	41.7	41.7		
344+49.81	TO	348+69.35	LANE LINE RT					419.5
347+43.07	TO	349+05.40	LT	12.6	54.1	54.1		
347+72.66	TO	348+69.35	RT	7.5	32.2	32.2		
348+04.78	TO	349+00.40	LT				2.9	
ACTUAL TOTAL:				41.0	175.6	175.6	2.9	919.6
PAY TOTAL:				41	176	176	3	920

TRAFFIC CONTROL AND PROTECTION SCHEDULE									
LOCATION	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)	TEMPORARY BRIDGE TRAFFIC SIGNALS	TEMPORARY RUMBLE STRIPS	PAVEMENT MARKING BLACKOUT TAPE, 5"	SHORT TERM PAVEMENT MARKING REMOVAL	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3
	EACH	EACH	EACH	FOOT	SQ FT	FOOT	FOOT	EACH	EACH
STAGE 1				550.7	229.4	437.5		2	
STAGE 2		1	1	6	498.5	207.7		362.5	2
ACTUAL TOTAL:	1	1	6	1049.2	437.1	437.5	362.5	2	2
PAY TOTAL:	1	1	6	1049	437	437.5	362.5	2	2



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

USER NAME = dlee  
DESIGNED - JCL  
DRAWN - JCL  
PLOT SCALE = 10,0000 \* / in.  
PLOT DATE = 11/14/2025

REVISED -  
REVISED -  
CHECKED - TBP  
DATE - OCTOBER 2025

REVISED -  
REVISED -  
REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

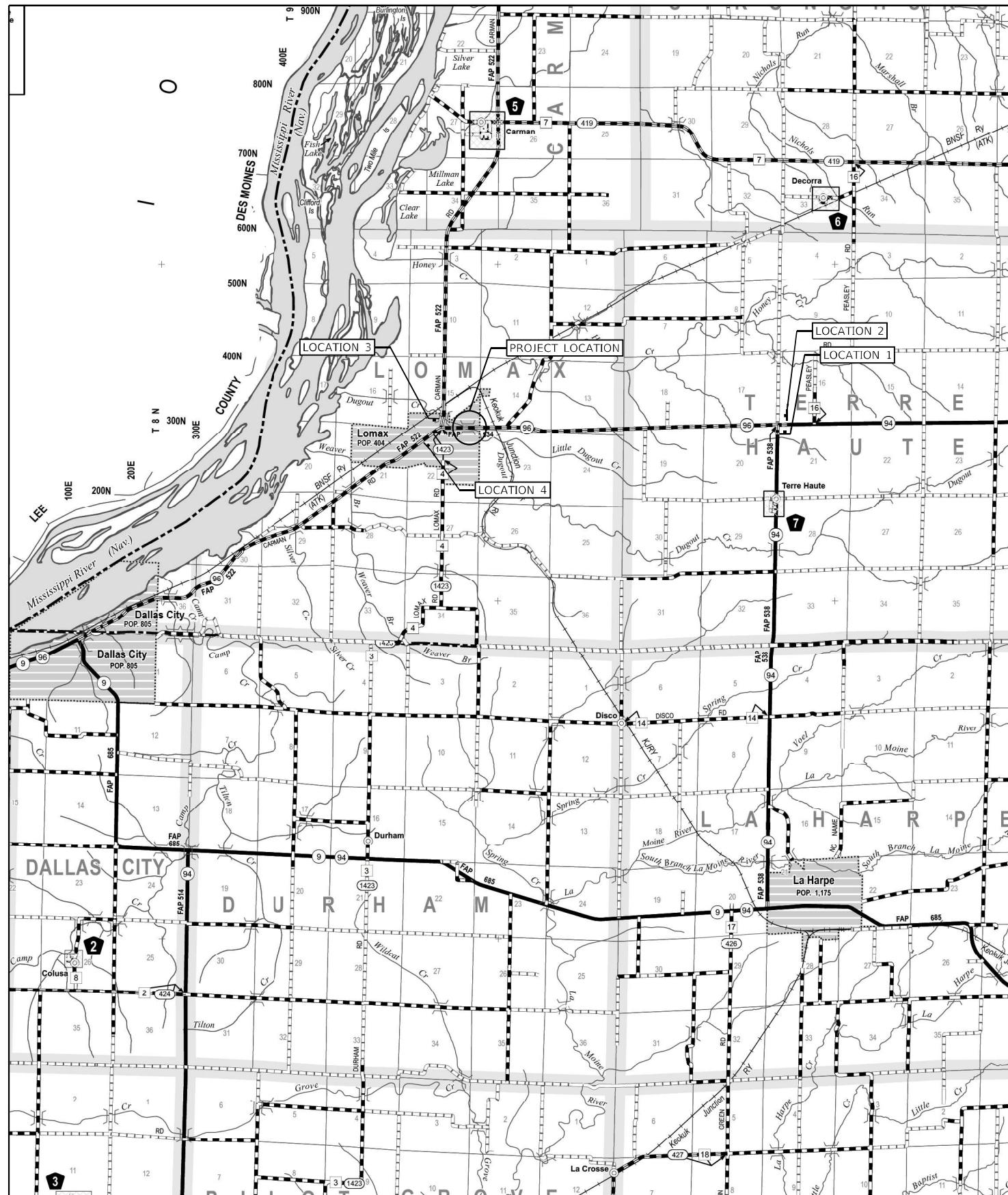
**SCHEDULE OF QUANTITIES**

SCALE: N/A SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P RTE. 543	SECTION ((12B)BRJBR	COUNTY HENDERSON	TOTAL SHEETS 22	SHEET NO. 8
				CONTRACT NO. 68K58
				ILLINOIS CONTRACT MAINTENANCE



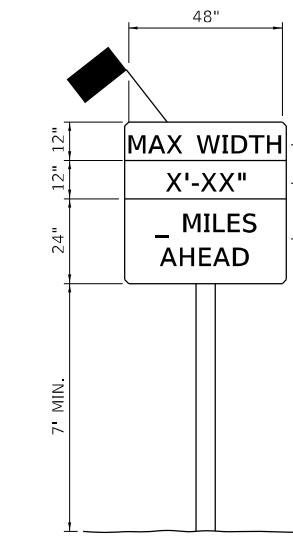




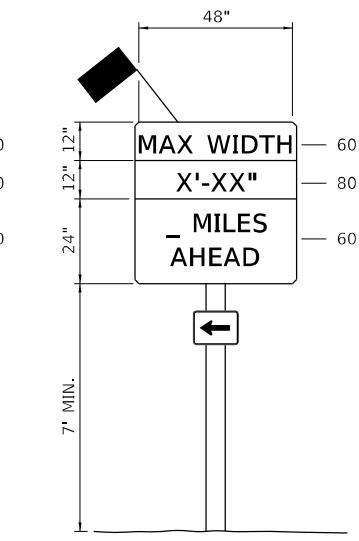
### GENERAL NOTES:

1. ACTUAL MAXIMUM WIDTH ARE TO BE MEASURED BY THE ENGINEER AFTER TEMPORARY CONCRETE BARRIER WALL IS PLACED FOR STAGE 1.
2. ALL SIGNS SHALL BE POST MOUNTED IN ACCORDANCE WITH ARTICLE 701.14 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE MUTCD. SEE SPECIAL PROVISIONS.

LOCATION	SIGNS	DISTANCE
1 IL 94 NB AT IL 96	B,C	4.4 MILES
2 IL 94 WB AT IL 96	A,C	4.4 MILES
3 CARMAN ROAD SB AT IL 96	B,D	0.3 MILES
4 IL 96 EB AT CARMAN ROAD	A,D	0.3 MILES



**SIGN A**  
W12-I103 (48X48)



**SIGN B**  
W12-I103 (48X48)  
W16-5P (21X15)



**SIGN C**  
"NORTH" - M3-2 (24X12)  
"IL 96" - M1-I100 (24X24)



**SIGN D**  
"SOUTH" - M3-2 (24X12)  
"IL 96" - M1-I100 (24X24)

### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

#### FAP 543 (IL 96) WIDTH RESTRICTION SIGNING DETAIL

### INDEX OF SHEETS

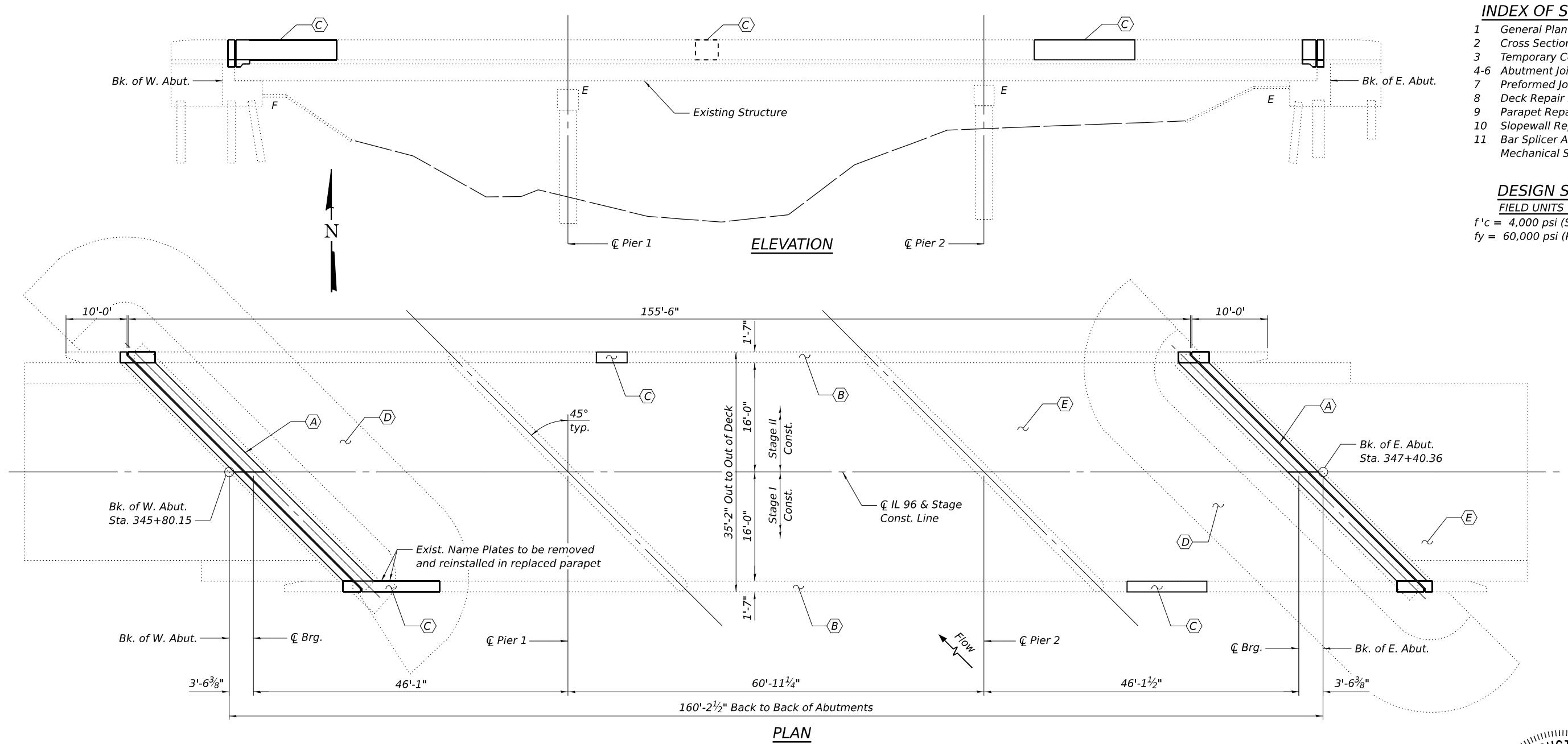
- 1 General Plan & Elevation
- 2 Cross Sections
- 3 Temporary Concrete Barrier
- 4-6 Abutment Joint Replacement Details
- 7 Preformed Joint Strip Seal
- 8 Deck Repair Plan
- 9 Parapet Repair Details
- 10 Slopewall Repair Details
- 11 Bar Splicer Assembly and Mechanical Splicer Details

### DESIGN STRESSES

FIELD UNITS (New Const.)

$f'c = 4,000 \text{ psi}$  (Superstructure)

$f_y = 60,000 \text{ psi}$  (Reinforcement)



### GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

Prior to the pouring the new concrete 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.

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.

East 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.

Removal of the existing parapet protective coat is not required.

### TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	14.8
Concrete Superstructure	Cu. Yd.	14.8
* Protective Coat	Sq. Yd.	30
Reinforcement Bars, Epoxy Coated	Pound	2,170
Bar Splicers	Each	24
Preformed Joint Strip Seal	Foot	95
Surface Filler (Special)	Gallon	1.0
** Protective Coat (Special)	Sq. Yd.	250
Slope Wall Slurry Pumping	Cu. Yd.	21
Approach Slab Repair (Partial Depth)	Sq. Yd.	5
Deck Slab Repair (Partial)	Sq. Yd.	3
Relocating Name Plates	Each	2

\* Apply to new expansion joint concrete at deck grade between the parapets as well as the deck and approach slab patches.

\*\* Apply to existing & replaced parapets from end to end of wingwalls.

- (A) Remove and replace expansion joints at abutments
- (B) Protective Coat (Special) and Surface Filler (Special) applied to all surfaces of parapets (see Parapet Sealing Detail on sheet 9 of 11)
- (C) Remove and replace parapet (see sheet 9 of 11)
- (D) Slope wall repairs (see sheet 10 of 11)
- (E) Deck Slab Repair (Partial) and Approach Slab Repair (Partial Depth). See sheet 8 of 11.



Signed: 12/5/2025  
Expires: 11/30/2026

### GENERAL PLAN & ELEVATION

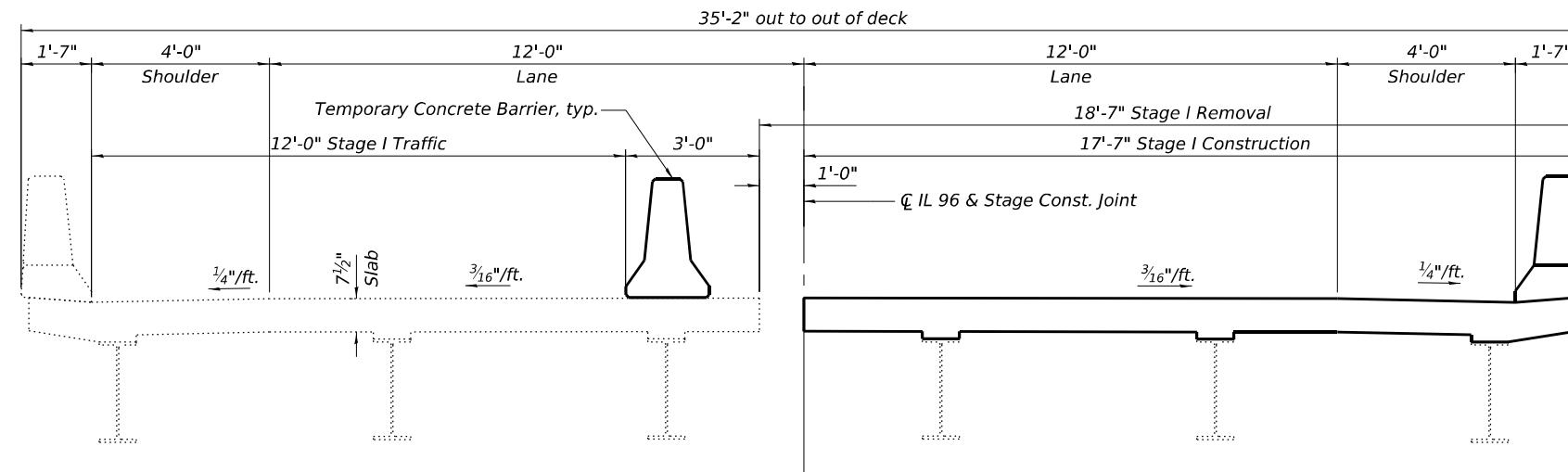
### IL 96 OVER DUGOUT CREEK

### F.A.P. 543 - SECTION [(12B)BR]BRR

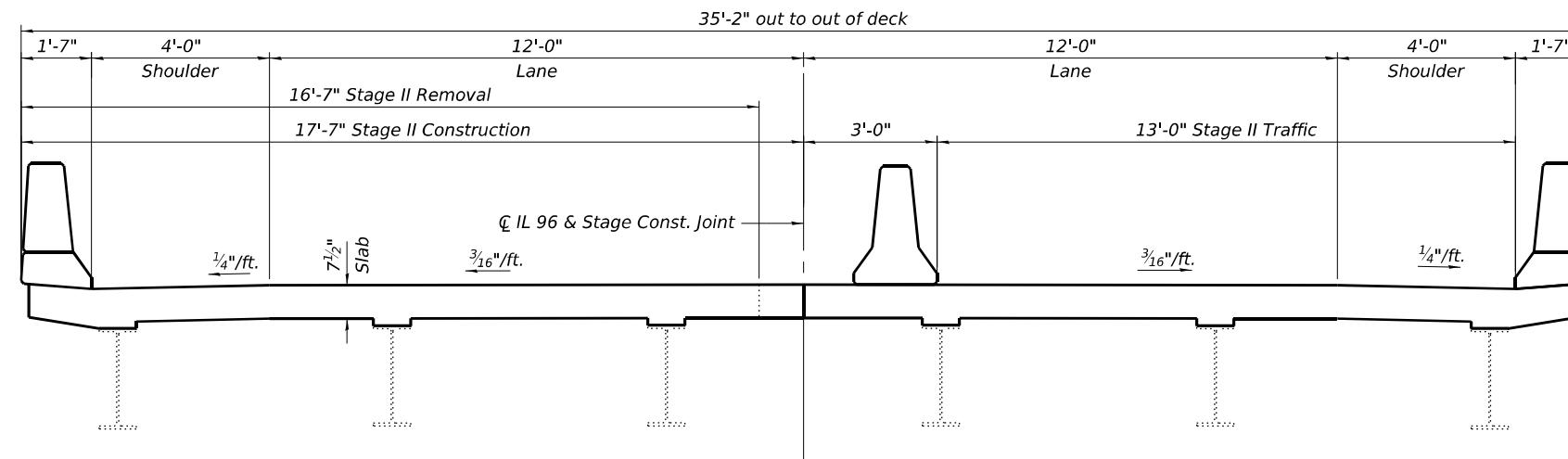
HENDERSON COUNTY

STA. 346+60.26

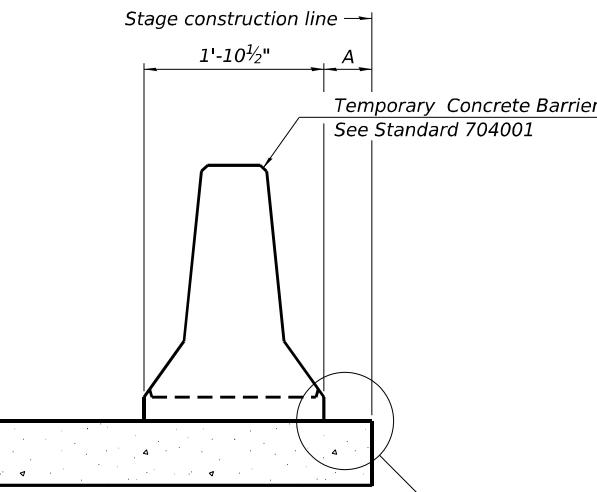
STRUCTURE NO. 036-0009



**STAGE I CONSTRUCTION AT ABUTMENT**  
(Looking East)

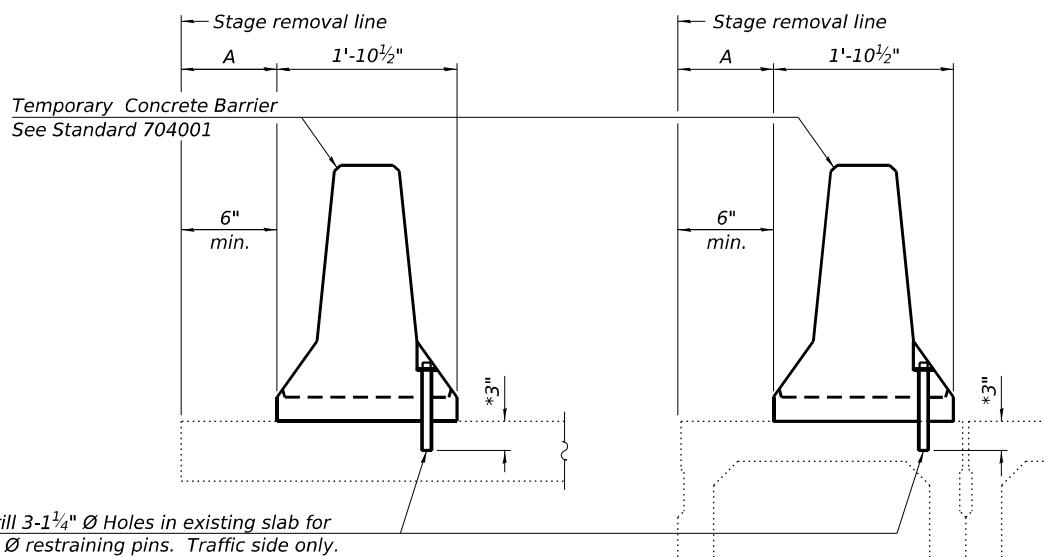


**STAGE II CONSTRUCTION AT ABUTMENT**  
(Looking East)



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

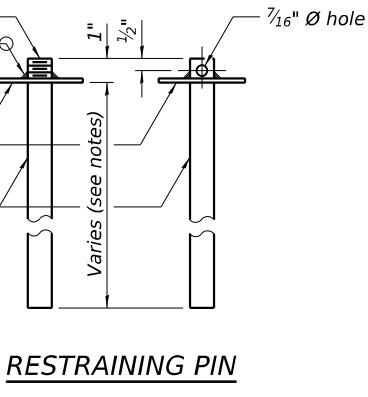
NEW SLAB OR NEW DECK BEAM



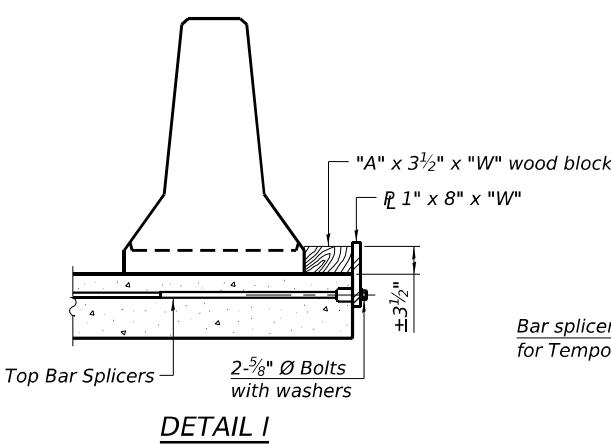
\* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING SLAB

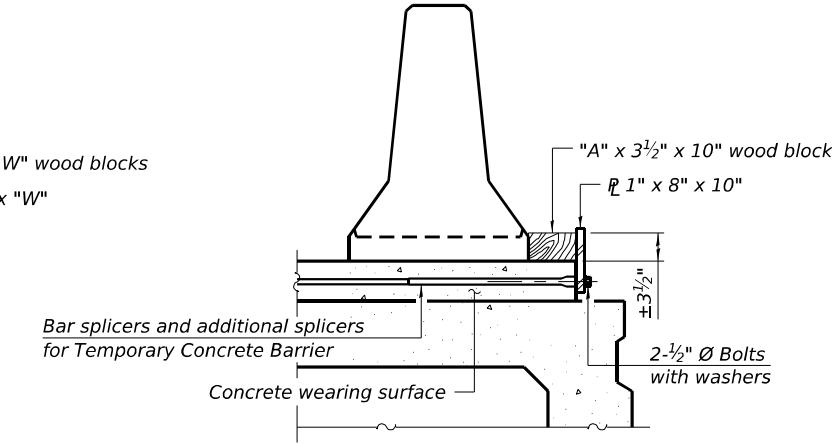
EXISTING DECK BEAM



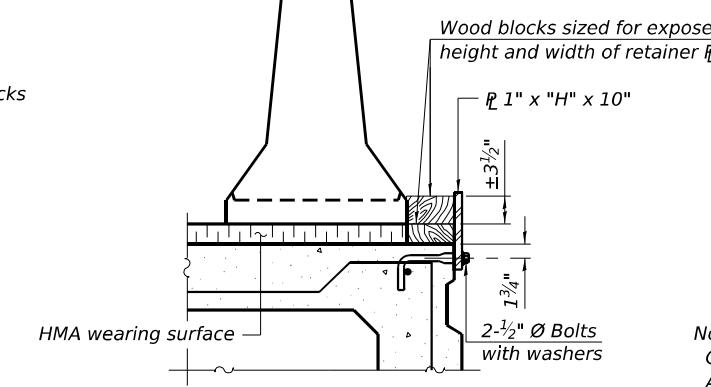
RESTRAINING PIN



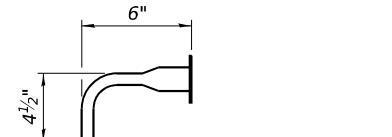
DETAIL I



DETAIL II



DETAIL III



BAR SPlicer FOR #4 BAR - DETAIL III

**Notes:**

Cost of retainer assembly is included with Temporary Concrete Barrier. A retainer assembly shall be located at the approximate  $\frac{C}{4}$  of each temporary concrete barrier.

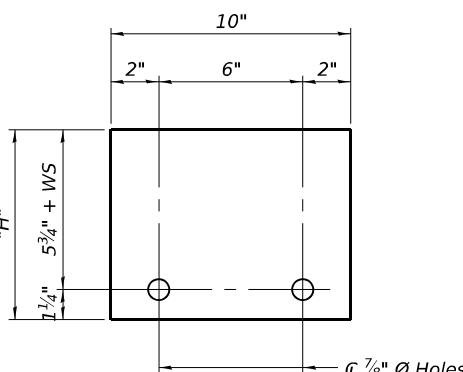
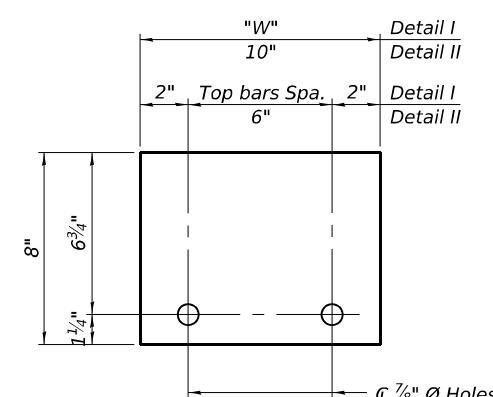
The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1 1/2", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splices shall be provided at 6'-0" centers and paired with the bar splices of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splices is included with the concrete wearing surface.

Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splices, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splices is included with the deck beam.



RAILING CRITERIA

NCRP 350 Test Level	3
Railing Weight (plf)	440

R-27

5-15-2023

STEEL RETAINER P 1" x 8" x "W"

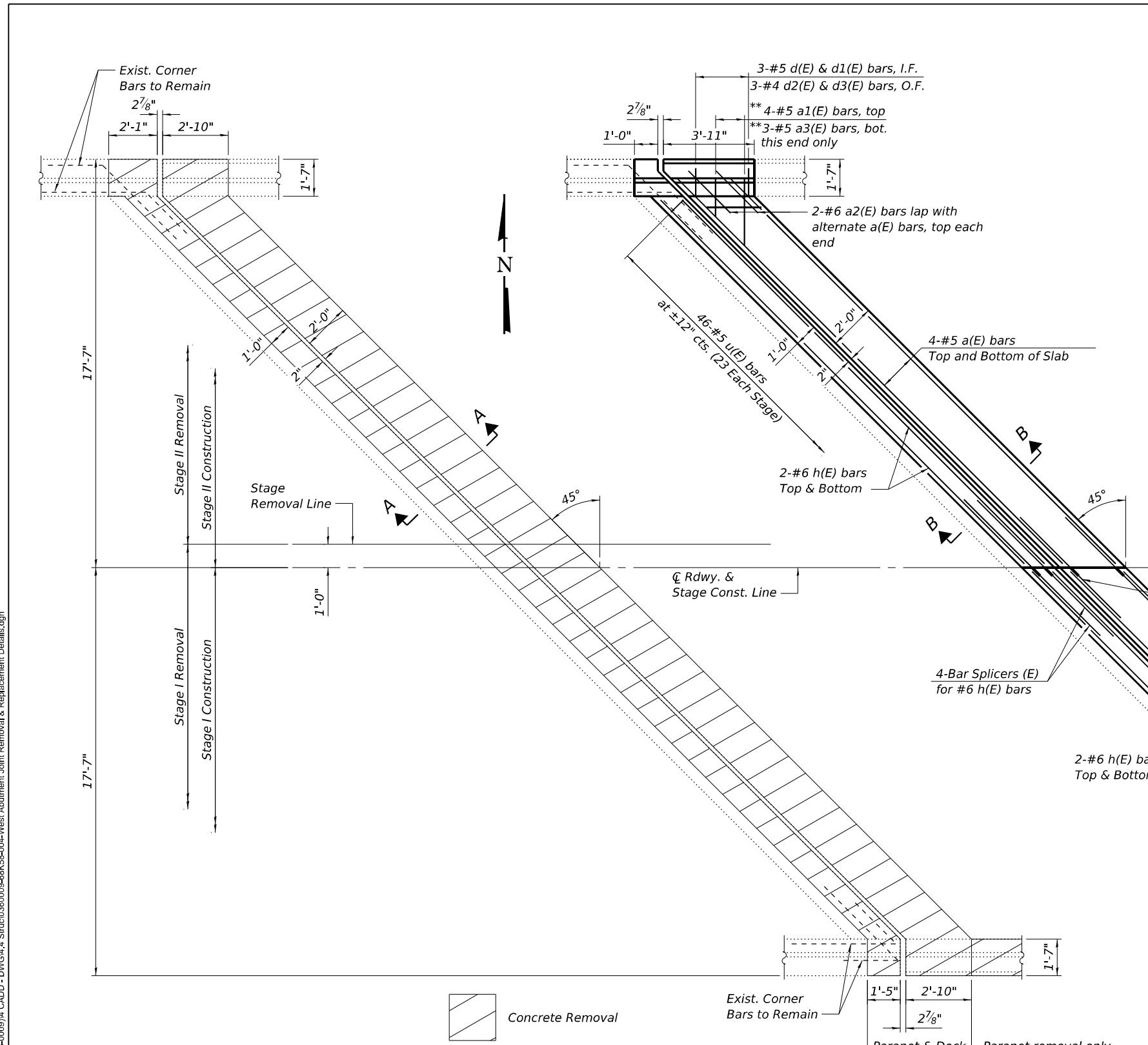
(Detail I and II)

STEEL RETAINER P 1" x "H" x 10"

(Detail III)

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER  
STRUCTURE NO. 036-0009

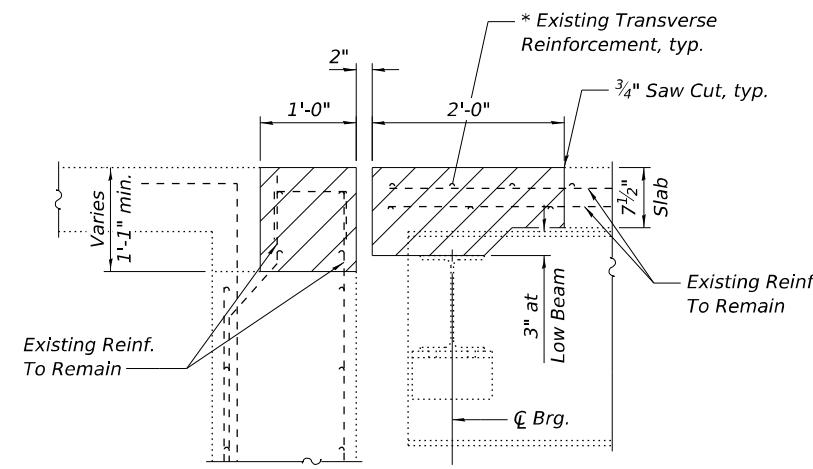


\* Existing transverse reinforcement parallel to skew to be removed.  
Existing transverse reinforcement perpendicular to roadway to remain.

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

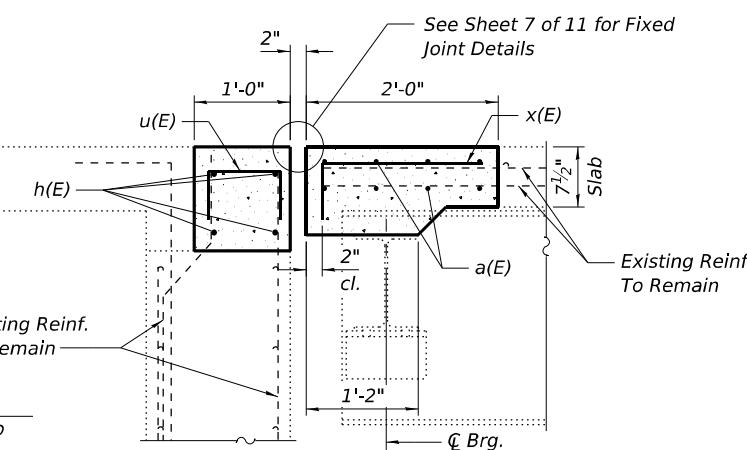
#### W. ABUT. CONCRETE REMOVAL PLAN

Notes:  
See Sheet 6 of 11 for parapet details & Bill of Material  
See Sheet 11 of 11 for Bar Splicer details



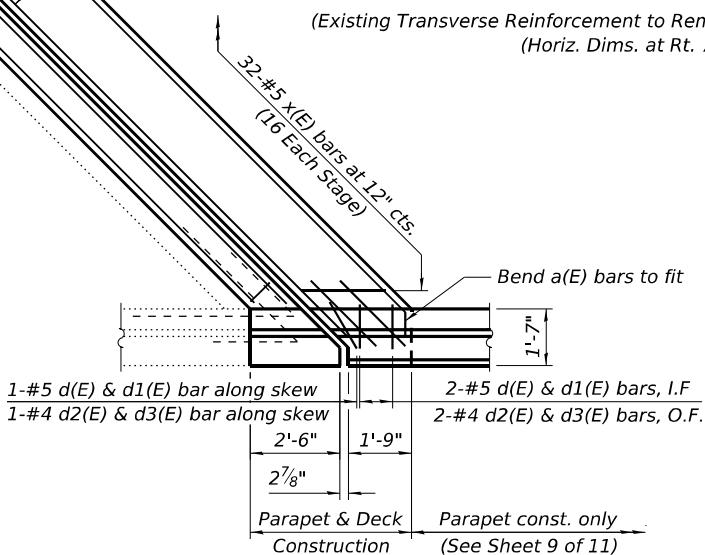
#### SECTION A-A

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

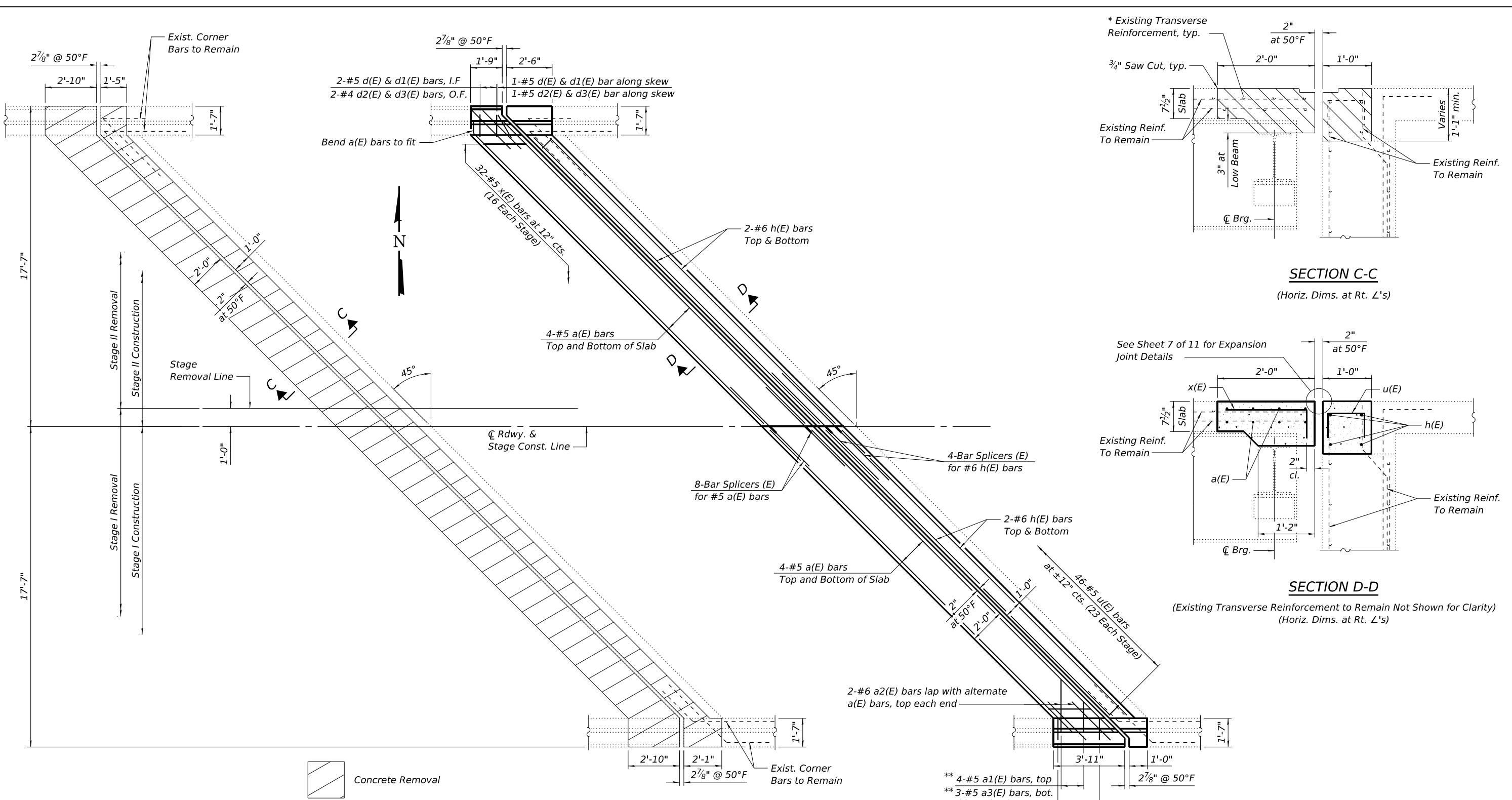


#### SECTION B-B

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



#### W. ABUT. CONCRETE REPLACEMENT PLAN



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

#### *E. ABUT. CONCRETE REMOVAL PLAN*

\*\* Cut bars to fit skew and use remainder of bars in opposite corner at West Abutment

### Notes:

See Sheet 6 of 11 for parapet details & Bill of Material  
See Sheet 11 of 11 for Bar Splicer details

### *E. ABUT. CONCRETE REPLACEMENT PLAN*

MODEL: Default  
FILE NAME: P:\120  
 TWM  
ENGINEERING  
GEOSPATIAL SERVICES

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

USER NAME =	mhoerner
PLOT SCALE =	0.167' / in.
PLOT DATE =	12/5/2025

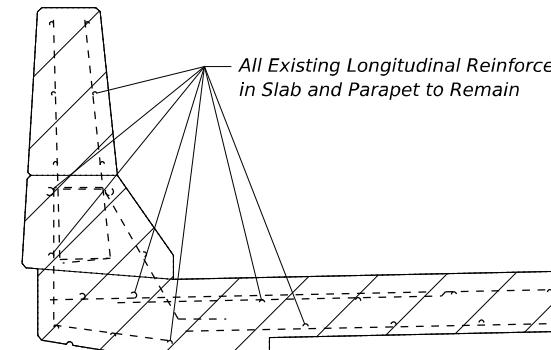
DESIGNED	-	JMM	REV
CHECKED	-	JBE	REV
DRAWN	-	JMM	REV
CHECKED	-	JBE	REV

SED	-	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

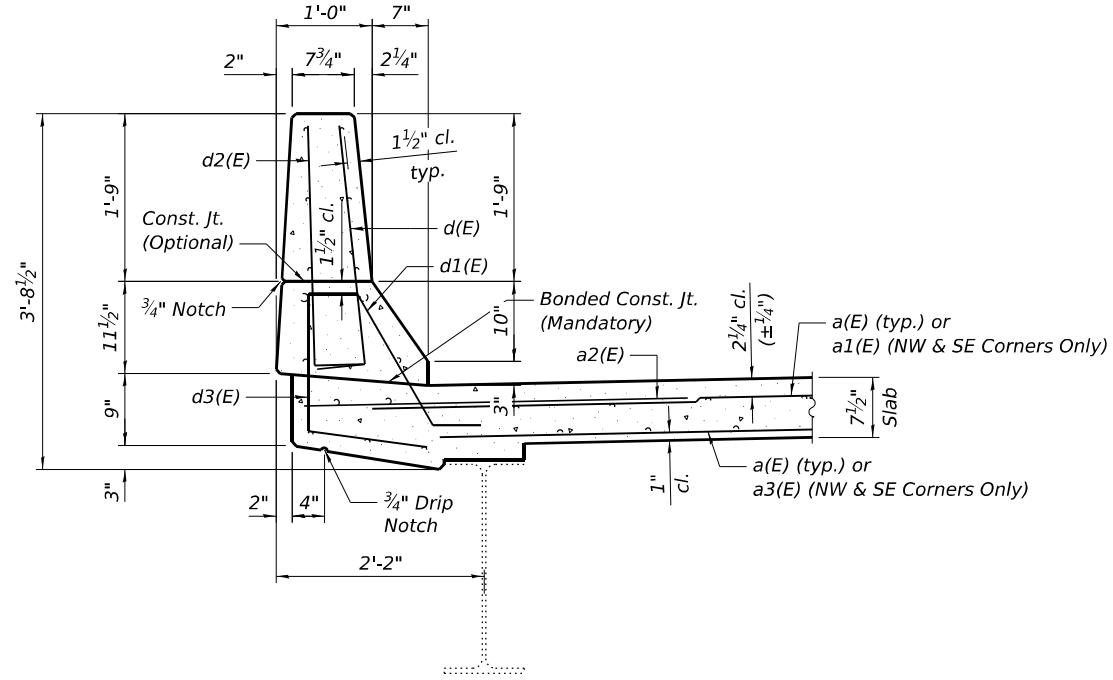
**EAST ABUTMENT JOINT REPLACEMENT DETAILS**  
**STRUCTURE NO. 036-0009**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
543	[(12B)BR]BRR	HENDERSON	22	16
CONTRACT NO. 68K58				
	ILLINOIS	FED. AID PROJECT		



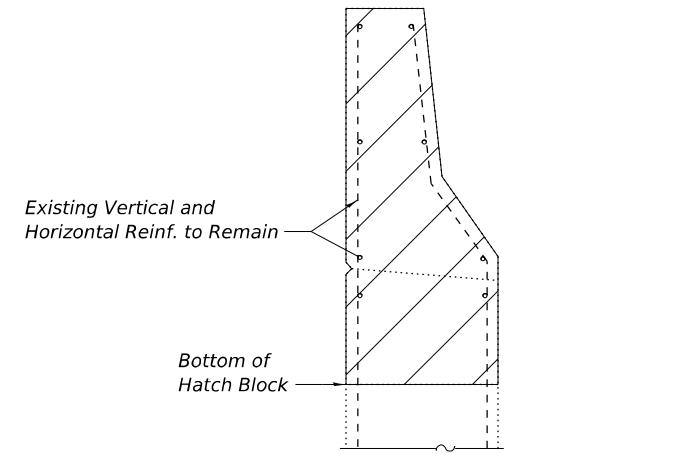
SECTION THRU PARAPET AT DECK

(Showing Removal)

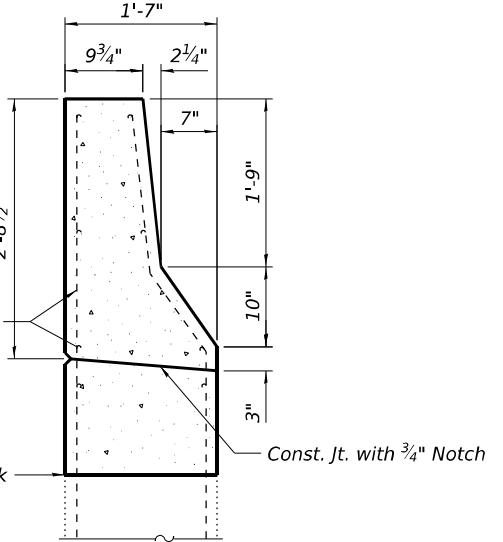


SECTION THRU PARAPET AT DECK

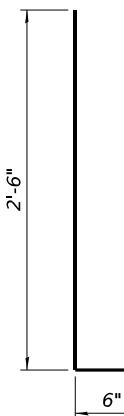
(Proposed)



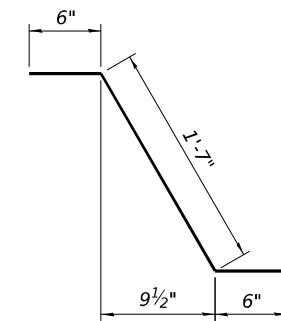
SECTION THRU WINGWALL PARAPET



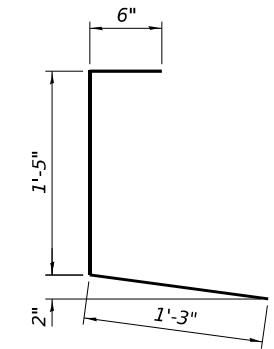
SECTION THRU WINGWALL PARAPET



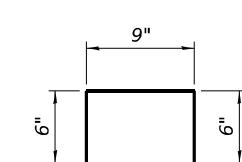
BARS d(E) & d2(E)



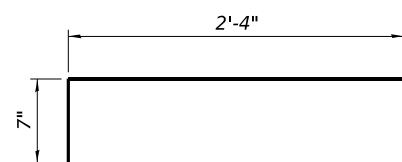
BAR d1(E)



BAR d3(E)



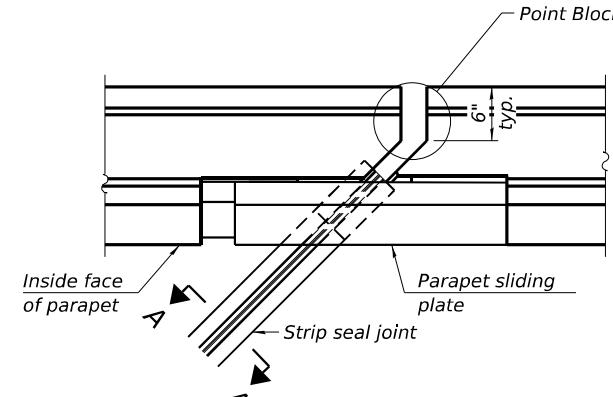
BAR u(E)



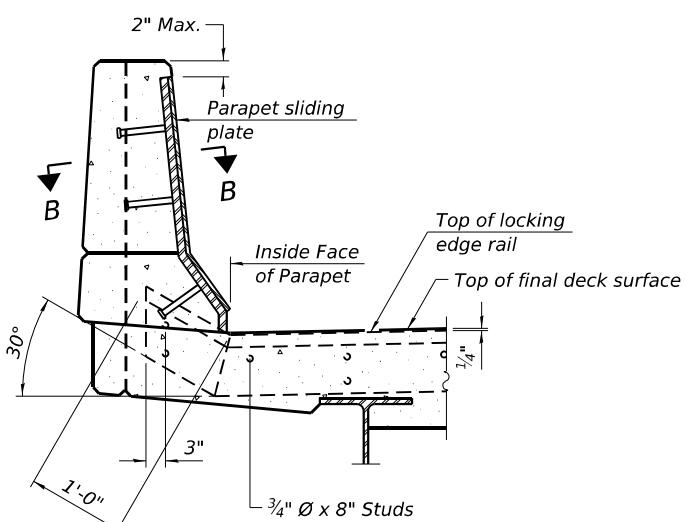
BAR x(E)

BILL OF MATERIAL - TWO ABUTMENTS

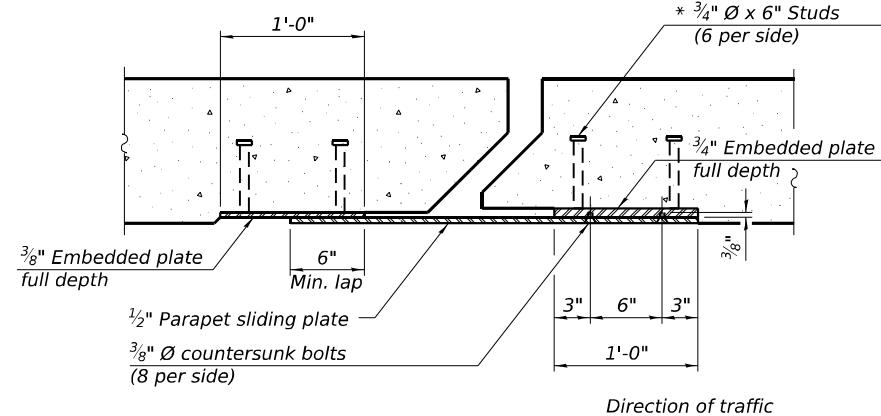
Bar	No.	Size	Length	Shape
a(E)	32	#5	23'-3"	—
a1(E)	8	#5	4'-4"	—
a2(E)	8	#6	3'-5"	—
a3(E)	6	#5	3'-2"	—
d(E)	12	#5	3'-0"	L
d1(E)	12	#5	2'-7"	L
d2(E)	12	#4	3'-0"	L
d3(E)	12	#4	3'-2"	L
h(E)	16	#6	22'-3"	—
u(E)	92	#5	1'-9"	L
x(E)	64	#5	2'-11"	—
Concrete Removal		Cu. Yd.	12.5	
Concrete Superstructure		Cu. Yd.	12.5	
Reinforcement Bars, Epoxy Coated		Pound	1,890	



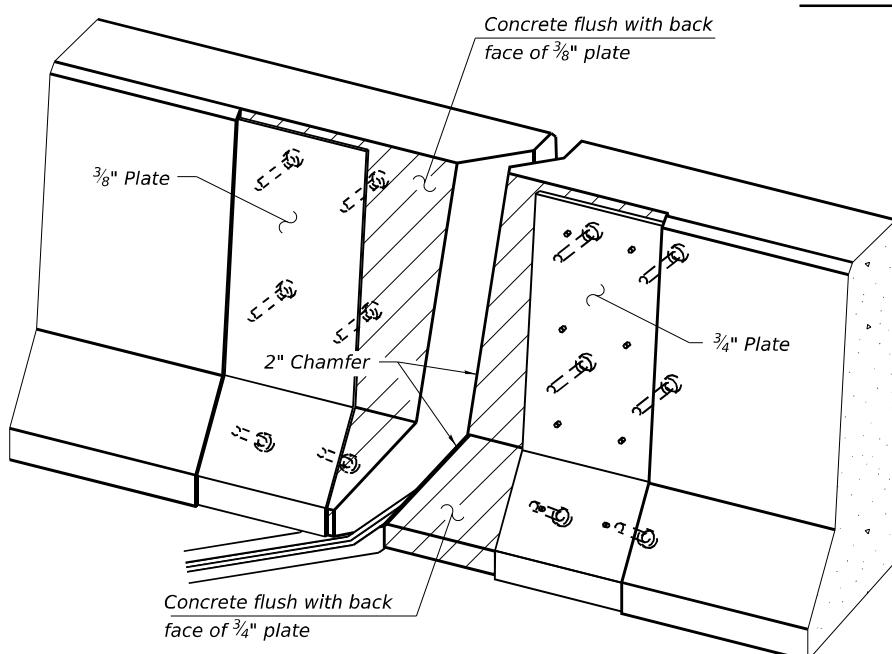
PLAN AT PARAPET



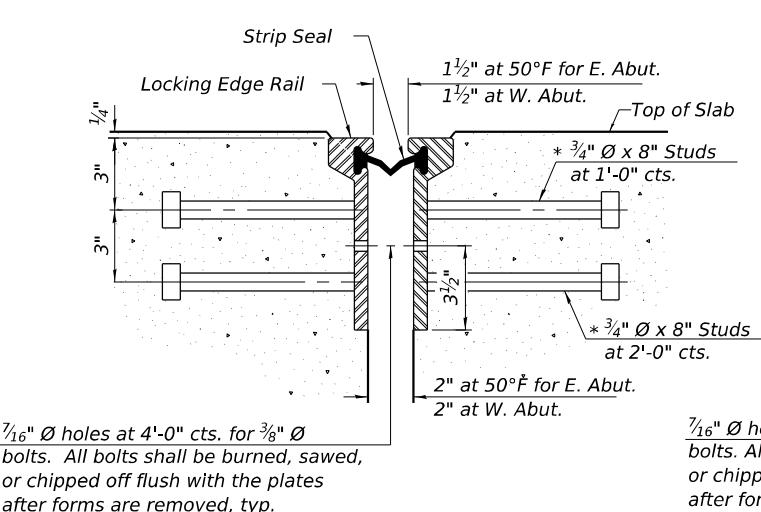
SECTION AT PARAPET



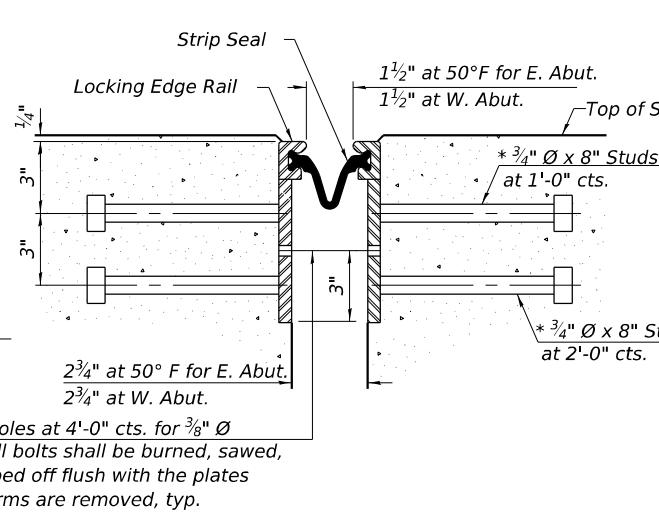
SECTION B-B



TRIMETRIC VIEW  
(Showing embedded plates only)



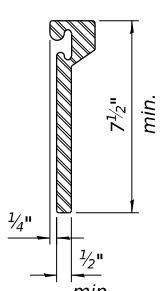
SECTION THRU  
ROLLED RAIL JOINT



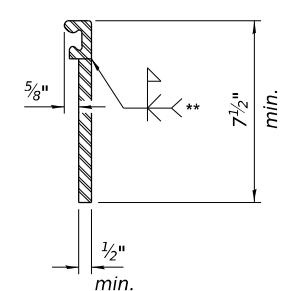
SECTION A-A

SECTION THRU  
WELDED RAIL JOINT

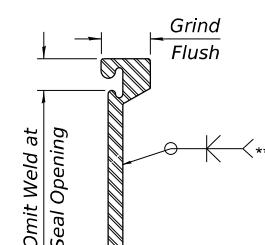
\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED  
EXTRUDED RAIL



WELDED RAIL



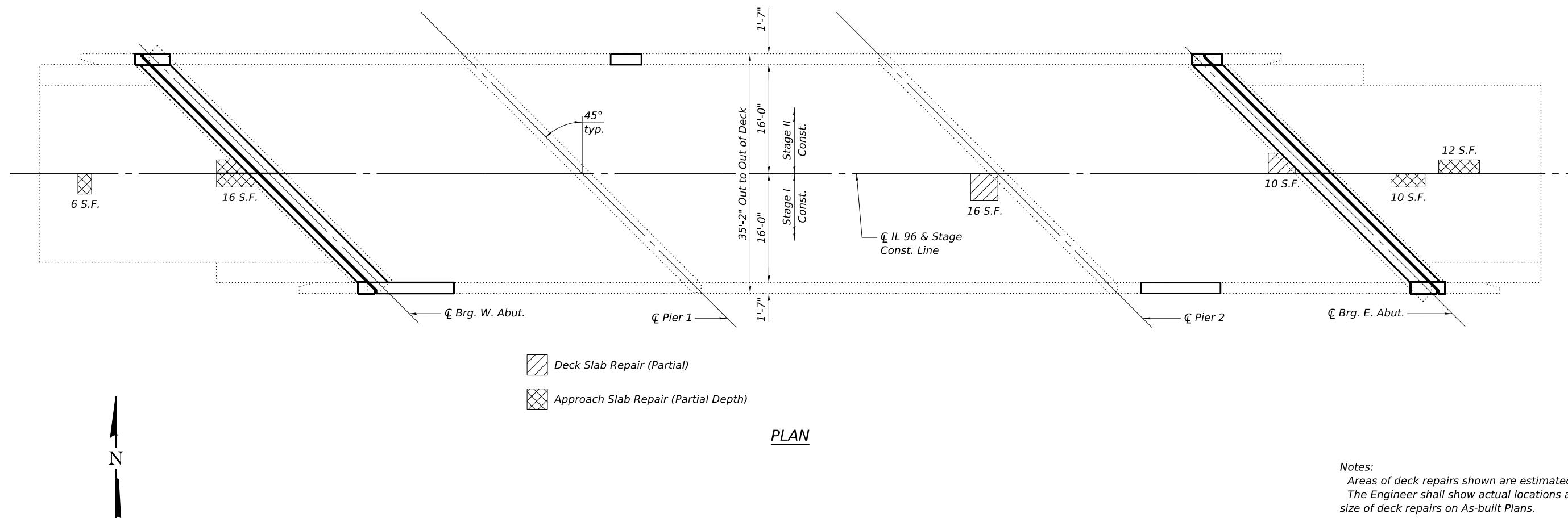
LOCKING  
EDGE  
RAIL SPLICE

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

LOCKING EDGE RAILS

BILL OF MATERIAL

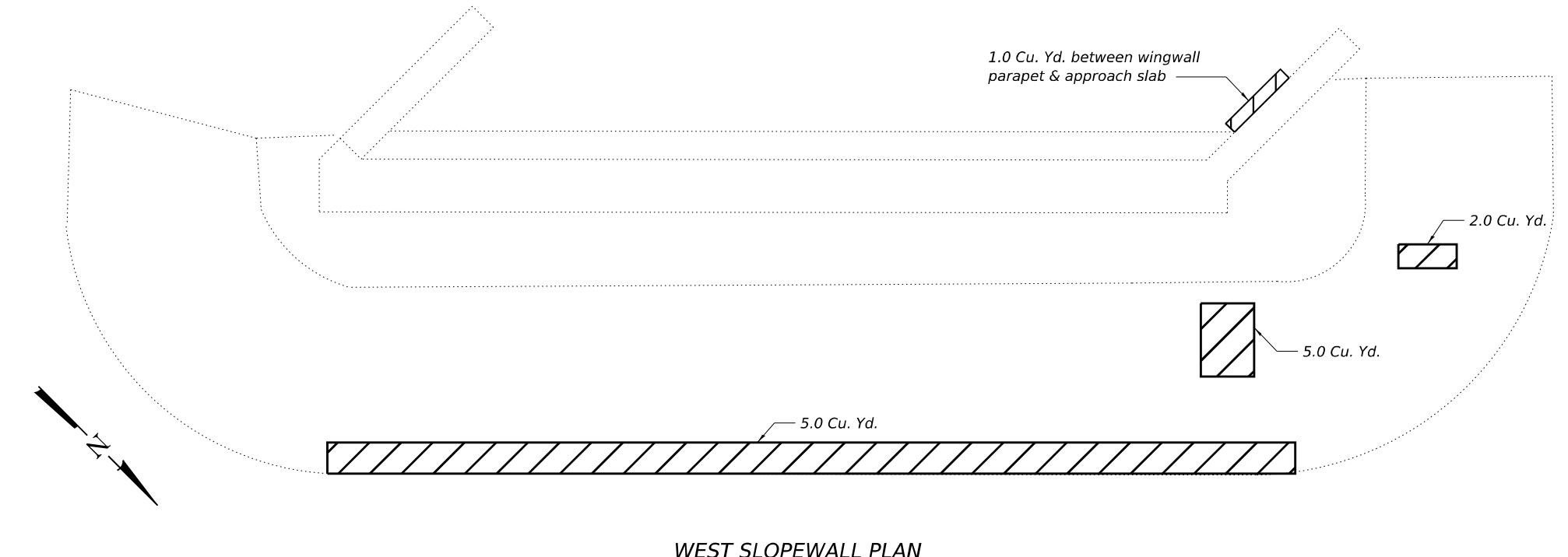
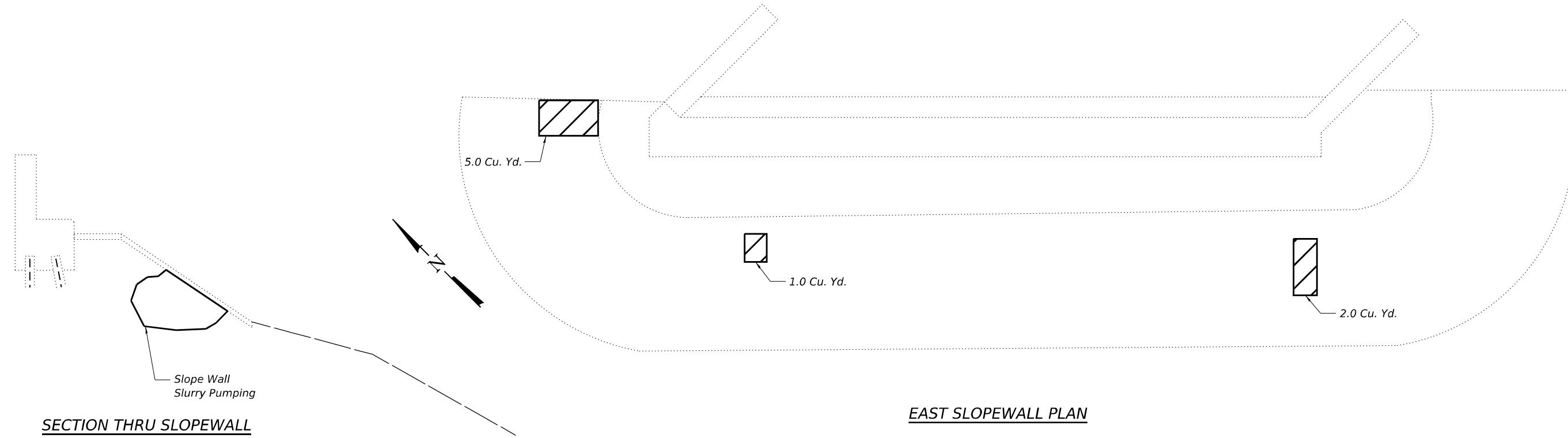
Item	Unit	Total
Preformed Joint Strip Seal	Foot	95



#### BILL OF MATERIAL

ITEM	UNIT	TOTAL
Approach Slab Repair (Partial Depth)	Sq. Yd.	5
Deck Slab Repair (Partial)	Sq. Yd.	3



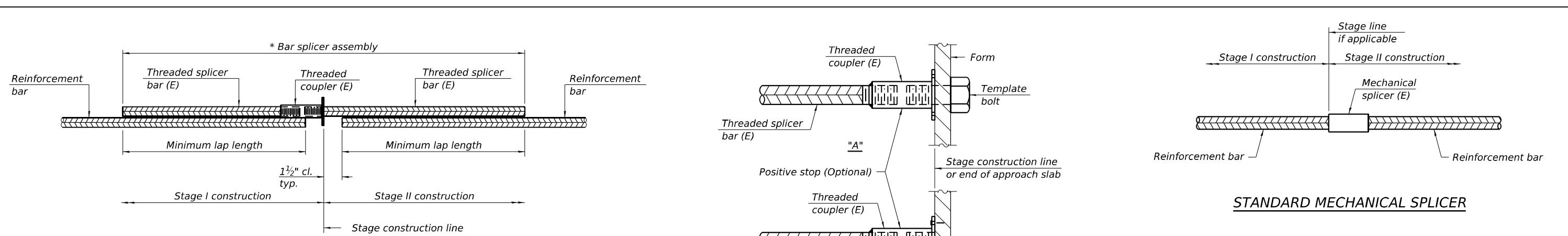


Slope Wall Slurry Pumping

**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Slope Wall Slurry Pumping	Cu. Yd.	21

Volumes of Slope Wall Slurry Pumping shown are estimated



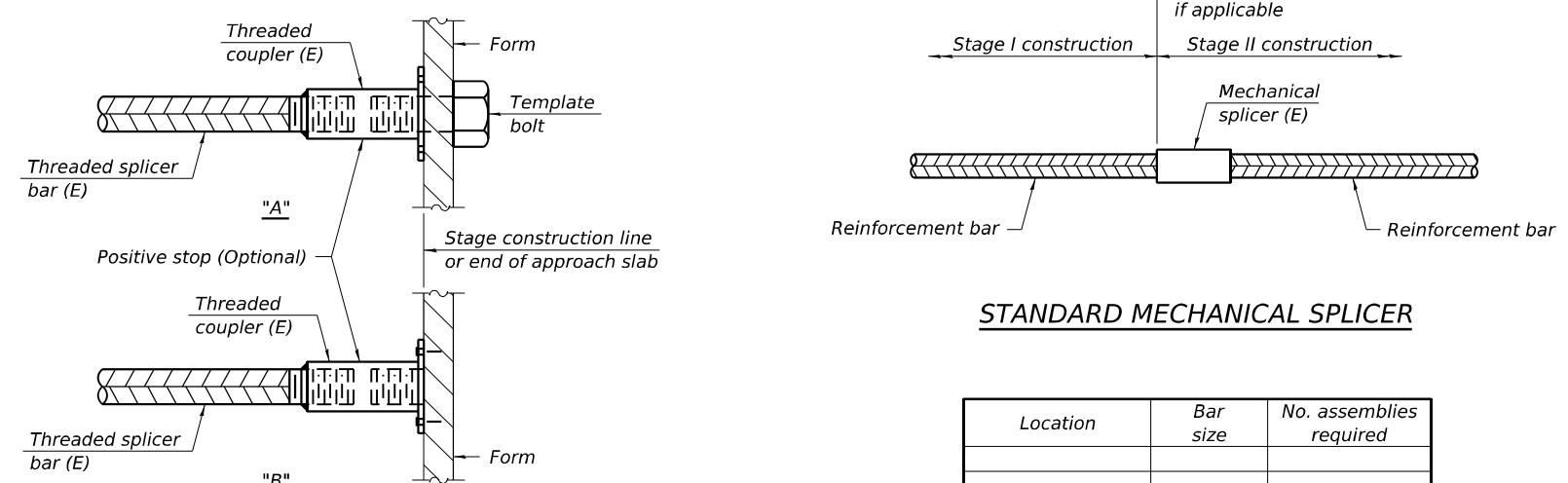
#### STANDARD BAR SPlicer ASSEMBLY PLAN

Only bar splicer assemblies as presented on the approved QPL list may be used.

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Abut. Hatch Block	#6	8	3'-11"
Deck	#5	16	3'-10"



#### STANDARD MECHANICAL SPlicer

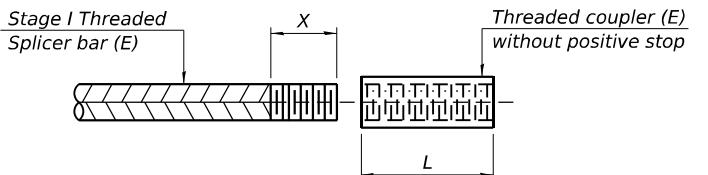
Location	Bar size	No. assemblies required

#### INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



#### THREADING OF ASSEMBLIES

The threaded length "X" shall be no more than L/2. The bar should be tightened until 0-1 thread(s) is/are exposed.

#### Notes:

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.