03-07-2025 LETTING ITEM 069 INDEX OF SHEETS SHEET NO. COVER SHEET GENERAL NOTES SUMMARY OF QUANTITIES TYPICAL SECTIONS SCHEDULES PLAN SHEET **PAVEMENT MARKING SHEET** MAINTENANCE OF TRAFFIC 10-13 14-23 STRUCTURAL SHEETS **GUARDRAIL EROSION CONTROL TREATMENTS**

HIGHWAY STANDARDS

0

0

0

0

DECIMAL OF AN INCH AND OF A FOOT 280001-07 TEMPORARY EROSION CONTROL SYSTEMS LANE CLOSURE, 21. 2W, DAY ONLY, FOR SPEEDS > 45 MPH 701201-05 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER 701321-19 LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > 45 MPH 701326-04 701901-10 TRAFFIC CONTROL DEVICES TEMPORARY CONCRETE BARRIER 704001-08 TYPICAL PAVEMENT MARKINGS 780001-05

GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

DESIGN DESIGNATION

782006-01

IL-94: MAJOR COLLECTOR ADT: 350 SU: 30 MU: 50

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

PROPOSED HIGHWAY PLANS

FAS ROUTE 1412 (IL 94) SECTION [(105B)BR]BRR
IL-94 OVER N. HENDERSON CREEK BRIDGE REPAIR **HENDERSON COUNTY**

C-94-092-24 **LOCATION OF IMPROVEMENT** SN 036-0040 **BEGIN SECTION** STA. 95 + 52 **END SECTION** STA. 104 + 98 T PO DEST ALAN S. HE 062-054934 LICENSED TA TAKE 17

PROJECT ENGINEER: BEN TELLEFSON PROJECT MANAGER: MARK ECKHOFF

GROSS LENGTH = 946.00 FT. = 0.179 MILE NET LENGTH = 663.00 FT. = 0.126 MILE



Collinsville 100 Lanter Court, Suite 1 Collinsville, IL 62234 Belleville

BRIAN HEIL P.E. IL P.E. NO. 062-054934

License Expires 11/30/2025

(Applies to Sheets 1-13)

1 South Church 5 Belleville B. 62220 618.416.4688

820 South Main, Suite 305 St. Charles, MO 63301 636.493.6277 BLUNOIS DESIGN FIRM LICENSE NO.: 184.901115

St. Louis

720 Olive, Suite 700 St. Louis, MO 63101 314.588.8381

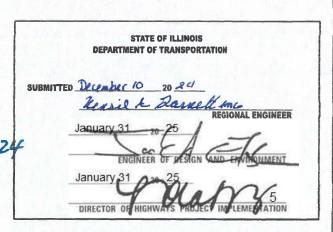
St. Charles

SECTION COUNTY HENDERSON 25 1 1412 [(105B)BR]BRR BLUNOIS CONTRACT NO. 68J40

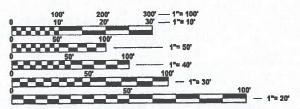
D-94-064-24



PROJECT DESCRIPTION: BRIDGE EXPANSION JOINT REPLACEMENT AND BRIDGE DECK REPAIR.



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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.

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123 OR 811

CONTRACT NO. 68J40

GENERAL NOTES:

GENERAL

- 1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO ORDERING MATERIALS AND COMMENCING CONSTRUCTION.
- 2. THE CONTRACTOR SHALL CONFINE ALL OPERATIONS TO THE CONSTRUCTION LIMITS LINE SHOWN ON THE PLANS. ANY AREA DISTURBED BEYOND THESE LIMITS SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- 3. APPROACH PAVEMENT DRAINAGE GRATES SHALL BE TACK WELDED TO THE FRAME AT FOUR LOCATIONS ON THE GRATE. THE COST FOR THIS WORK SHALL BE INCLUDED IN TRAFFIC CONTROL STANDARD 701321.

PAVEMENT MARKING

4. THE CONTRACTOR SHALL APPLY SHORT-TERM PAVEMENT MARKINGS TO THE MILLED, PRIMED AND EACH HOT-MIX ASPHALT LAYER. A QUANTITY FOR SHORT-TERM MARKING EQUAL TO THE AMOUNT OF PERMANENT PAVEMENT MARKING TIMES THE NUMBER OF REQUIRED APPLICATIONS HAS BEEN INCLUDED IN THE PLANS. ONLY THE FINAL APPLICATION OF SHORT-TERM PAVEMENT MARKINGS SHALL BE REMOVED AND SEPARATE PAYMENT WILL BE MADE FOR SHORT-TERM PAVEMENT MARKING REMOVAL AND PAVEMENT MARKING REMOVAL.

COMMITMENTS:

NONE

MIXTURES TABLE

LOCATION(S):	IL 94	IL 94
MIXTURE USE(S):	LOWER HMA SHOULDER	UPPER 1.5" HMA SHOULDER
PG:	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4.0% @ Ndes=50	4.0% @ Ndes=50
MIXTURE COMPOSITION:	IL 19.0	IL 9.5
FRICTION AGG:	N/A	MIX D
MIXTURE WEIGHT:	112.0 LB/SQ YD/IN	112.0 LB/SQ YD/IN
QUALITY MANAGEMENT PROGRAM:	QCP	QCP
SUBLOT SIZE:	1,000 TONS	1,000 TONS
MATERIAL TRANSFER DEVICE (REQUIRED?)	NO	NO

MODEL: General Notes [Sheet]

• OATES	USER NAME = breanna.frahm	DESIGNED -	REVISED -
O A I E S		DRAWN -	REVISED -
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LINOIS DESIGN FIRM LICENSE NO.: 184.001115	PLOT DATE = 12/6/2024	DATE -	REVISED -

SCALE:

	0 =N=	DAI 1101			F.A.S RTE	SEC ⁻	TION		COUNTY	TOTAL SHEETS	SHEET NO.
	GENE	RAL NO	ΓES		1412	[(105B)E	BRJBRR		HENDERSON	25	2
									CONTRACT	NO. 68	J40
SHEET 1	OF 1	SHEETS	STA.	TO STA.			ILLINOIS	FED. AII	PROJECT		

20200100 EARTH EXCAVATION CU YD 140 140 ACRE 25000750 MOWING 3.25 3.25 31101200 SUBBASE GRANULAR MATERIAL, TYPE B 4" SQ YD 313 313 44201796 CLASS D PATCHES, TYPE IV, 12 INCH SQ YD 74 74 HOT-MIX ASPHALT SHOULDERS, 8" 313 313 50102400 CONCRETE REMOVAL CU YD 17.2 17.2 50300255 CONCRETE SUPERSTRUCTURE CU YD 18 18 50300300 PROTECTIVE COAT SQ YD 227 227 50800205 REINFORCEMENT BARS, EPOXY COATED POUND 2,110 2,110 50800515 BAR SPLICERS EACH 52000110 PREFORMED JOINT STRIP SEAL FOOT 90 90 59000200 EPOXY CRACK INJECTION FOOT 40 40 FOOT 63000001 STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS 350 350 63100085 TRAFFIC BARRIER TERMINAL, TYPE 6 EACH 4 4

O A T E S ASSOCIATES

USER NAME = breanna.frahm DESIGNED -REVISED _ DRAWN -REVISED -CHECKED -REVISED www.oatesassociates.com | LLINOIS DESIGN FIRM LICENSE NO.: 184.001115 | PLOT DATE | = 12/9/2024

REVISED -

DATE -

SP CODE NO.

ITEM

DEPARTMENT OF TRANSPORTATION

					F.A.S RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
SU	MMARY	OF QUA	NTITIE	:5	1412	[(105B)BR]BRR		HENDERSON	25	3
								CONTRACT	NO. 68.	J40
SHEET 1	OF 3	SHEETS	STA.	TO STA.		ILLINOIS F	FED. AID	PROJECT		

CONSTRUCTION CODE

HENDERSON COUNTY SN 036-0040

0047

100% STATE

TOTAL

QUANTITY

UNIT

STATE OF ILLINOIS

SP = SEE PROJECT SPECIFIC SPECIAL PROVISIONS

SCALE:

NOTES: SI = SPECIALTY ITEM

							CONSTRUC	CTION CODE	
						HENDERSON COUNTY			
					TOTAL	SN 036-0040			
SI	I SP	CODE NO.	ITEM	UNIT	QUANTITY	0047			
-						100% STATE			
*		63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4			
		63200310	GUARDRAIL REMOVAL	FOOT	833	833			
		67100100	MOBILIZATION L	L SUM	1	1			
_									
=		70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1			
-						_			
-		70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1			
-		70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1			
-									
		70103815	TRAFFIC CONTROL SURVEILLANCE C	CAL DA	5	5			
		70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1			
50									
_		70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6			
		70107004	PAVEMENT MARKING BLACKOUT TAPE, 4"	FOOT	3,569	3,569			
53		122,00				2,353			
-		70107025	CHANGEABLE MESSAGE SIGN C	CAL DA	14	14			
		70300100	SHORT TERM PAVEMENT MARKING	FOOT	212	212			
-		70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	70.5	70.5			
_		70.400-00		500-					
_	-	70400100	TEMPORARY CONCRETE BARRIER	FOOT	587.5	587.5			
1									

NOTES: SI = SPECIALTY ITEM SP = SEE PROJECT SPECIFIC SPECIAL PROVISIONS

ij	OATES	
Ž	ASSOCIATES	
Ľ	www.oatesassociates.com	
디	LLINOIS DESIGN FIRM LICENSE NO.: 184.001115	

	USER NAME = breanna.frahm	DESIGNED _	REVISED _
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		CHECKED -	REVISED -
1115	PLOT DATE = 12/9/2024	DATE -	REVISED _

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

							F.A.S RTE.	SECTION	COUNTY	TOTAL	SHEET NO.
		SUI	MMAKY	OF QUA	NTITIES		1412	[(105B)BR]BRR	HENDERSON	25	4
Į									CONTRACT	NO. 68.	J40
Ì	SCALE:	SHEET 2	OF 3	SHEETS		ILLINOIS FED. A	D PROJECT				

				TOTAL	SN 036-0040			
SI SP	CODE NO.	ITEM	UNIT	QUANTITY	0047			
					100% STATE			
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	587.5	587.5			
	70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2			
	, 5555235		271011	-				
				_	_			
	70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2			
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	3,569	3,569			
*	X7830050	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL	EACH	12	12			
*	X7830052	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REPLACEMENT	EACH	12	12			
	Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	47	47			
	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	10	10			
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1			
					_			
	70016300	DECK CLAD DEDAID (DADTAL)	50.70	170	170			
	Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	170	170			
\perp								
\perp								

NOTES: SI = SPECIALTY ITEM SP = SEE PROJECT SPECIAL PROVISIONS

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Ž	ASSOCIATES	
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디	LLINOIS DESIGN FIRM LICENSE NO.: 184.001115	

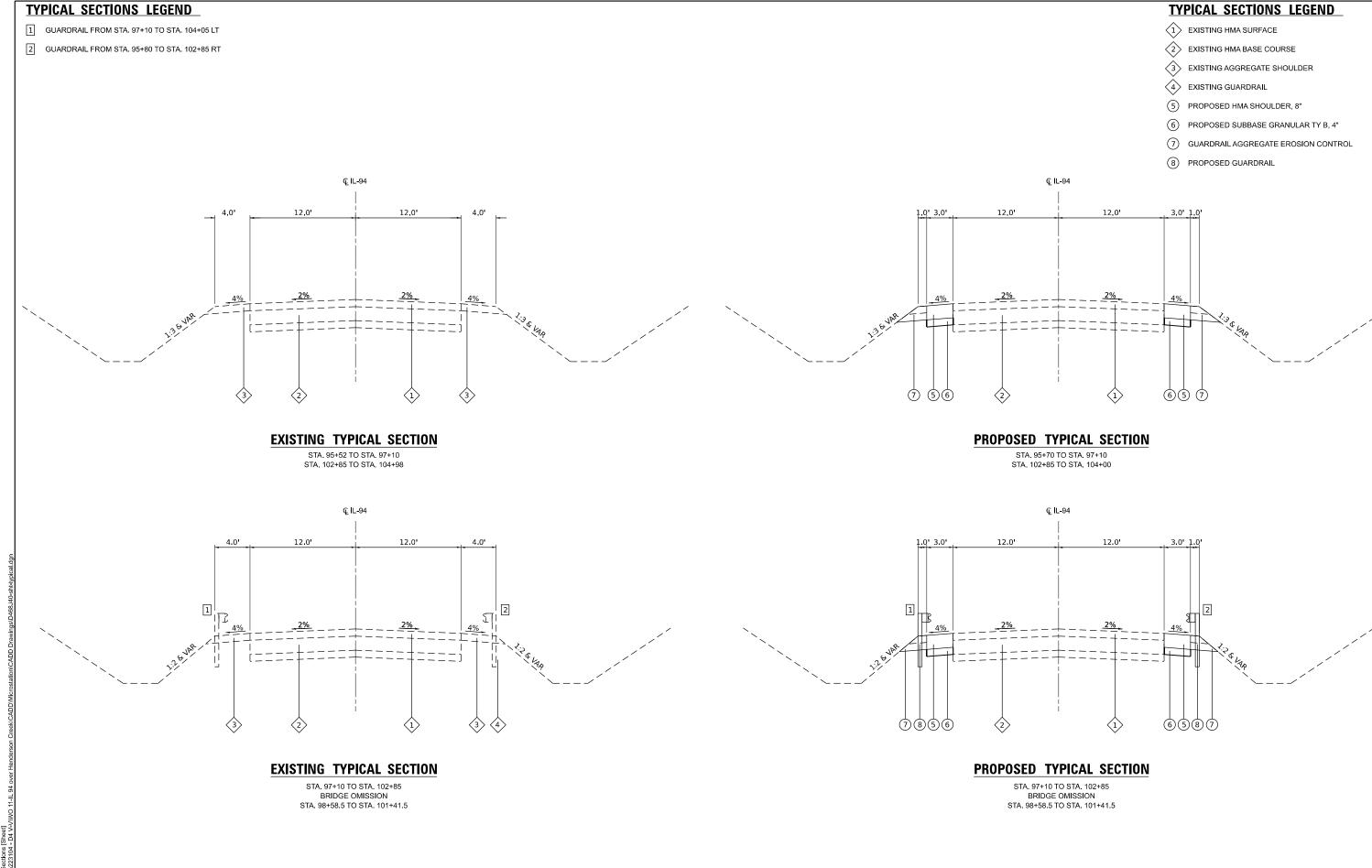
	USER NAME = breanna.frahm	DESIGNED _	REVISED _
		DRAWN -	REVISED -
		CHECKED -	REVISED -
1115	PLOT DATE = 12/6/2024	DATE _	REVISED _

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

							_	F.A.S RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
П			SUMM	AKY	OF QUA	MTITIE	S	1412	[(105B)BR]BRR		HENDERSON	25	5
Į,						CONTRACT	NO. 68	J40					
	SCALE:	SHEET 3	OF	3	SHEETS	STA.	TO STA.		ILLINOIS	FED. A	PROJECT		

CONSTRUCTION CODE

HENDERSON COUNTY



FILE NAME: H:\P\223104

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:

PAVEMENT MARKING

STATION	STATION	OFFSET	COMMENT	PAVT MK BLKOUT	SHORT TERM PAVT MKING	SHORT TRM PAVT MK	PAINT PVT	MK LINE 4	RAISED REF PM REFL REM	RAISED REF PM REFL RP
				TAPE 4		REM	(YELLOW)	(WHITE)		
				(FOOT)	(FOOT)	(SQ FT)	(FOOT)	(FOOT)	(EACH)	(EACH)
95+36	98+07	CL	SOLID+SKIP DASH	339	34	12	339		3	3
95+46	104+54	RT	WHITE	908	18	6		908		
95+96	105+04	LT	WHITE	908	18	6		908		
98+07	105+14	CL	DOUBLE YELLOW	1414	141	47	1414		9	9
TOTAL				3,569	212	71	1,753	1,816	12	12

TRAFFIC CONTROL SURVEILLANCE

LOCATION	TC SURVEILLANCE
	(CAL DA)
IL 94	5
TOTAL	5

MOWING

STATION	OFFSET	MOWING
		(ACRE)
99+30	RT	0.75
99+81	LT	0.75
105+14	RT	1.00
105+14	LT	0.75
		3,25
	99+30 99+81 105+14	99+30 RT 99+81 LT 105+14 RT

1. ASSUME 2 APPLICATIONS.

EARTHWORK

STATION	STATION	OFFSET	EARTH EXCAVATION
			(CU YD)
95+70	98+27	RT	40
96+50	98+51	LT	30
101+49	104+00	RT	35
101+73	104+00	LT	35
		·	
TOTAL			140

PAVEMENT

STATION	STATION	OFFSET	SUB GRAN MAT B 4	CL D PATCH T4 12	HMA SHOULDERS 8	SPBGR TY A 6FT POSTS	TRAF BAR TERM T6	TR BAR TRM T1 SPL TAN	GUARDRAIL REMOV	GDRL AGG EROS CONT
			(SQ YD)	(SQ YD)	(SQ YD)	(FOOT)	(EACH)	(EACH)	(FOOT)	(TON)
95+70	98+27	RT	86		86	•	<u> </u>	<u> </u>	, ,	13
95+79	98+46	RT							266	
96+50	98+51	LT	67		67					10
96+57	98+07	RT				150.0				
97+11	98+74	LT							164	
97+69		RT						1		
97+99		LT						1		
98+12	98+37	LT				25.0				
98+62		LT					1			
99+57		RT					1			
101+27		RT					1			
101+30	102+86	RT							157	
101+49	104+00	RT	84		84					13
101+57		LT					1			
101+57	104+03	LT							246	
101+63	101+88	RT				25.0				
101+73	104+00	LT	76		76					11
101+88		RT						1		
101+93	103+43	I T				150 0				
103+43		LT						1		
104+48	104+73	RT		39						
104+48	104+73	LT		35						
TOTAL			313	74	313	350.0	4	4	833	47

TRAFFIC CONTROL AND PROTECTION

	LOCATION	MOBILIZATION	TRAF CONT-PROT 701321	TRAF CONT-PROT 701201	TRAF CONT-PROT 701326	TEMP BR TRAF SIGNALS	TEMP RUMBLE STRIPS	CHANGEABLE MESSAGE SN	TEMP CONC BARRIER	REL TEMP CONC BARRIER	IMP ATTN TEMP NRD TL3	IMP ATTN REL NRD TL3	CONSTRUCTION LAYOUT														
		(L SUM)	(L SUM)	(L SUM)	(L SUM)	(EACH)	(EACH)	(CAL DA)	(FOOT)	(FOOT)	(EACH)	(EACH)	(L SUM)														
Г	IL 94	1	1	1	1							-	1														
	IL 94 (STAGE 1)			·	·			·			·		·			1 6	6	6	1 6		1 6		587.5		2	_	
	IL 94 (STAGE 2)					'	0	14		587.5		2															
Г	TOTAL	1	1	1	1	1	6	14	587.5	587.5	2	2	1														

DESIGNED -REVISED -OATES REVISED -DRAWN -CHECKED -REVISED www.oatesassociates.com

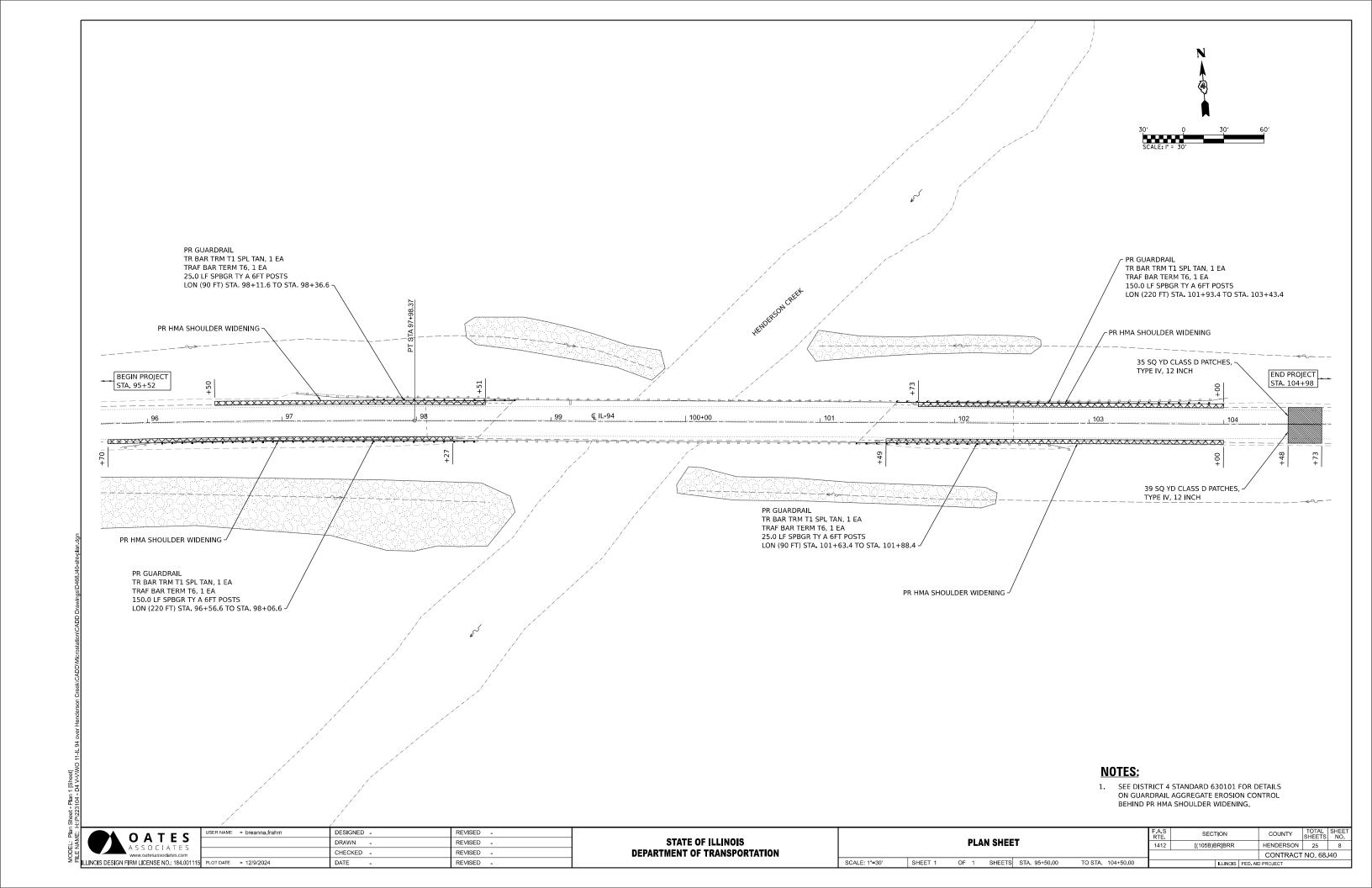
LLINOIS DESIGN FIRM LICENSE NO.: 184.001115 PLOT DATE = 12/6/2024

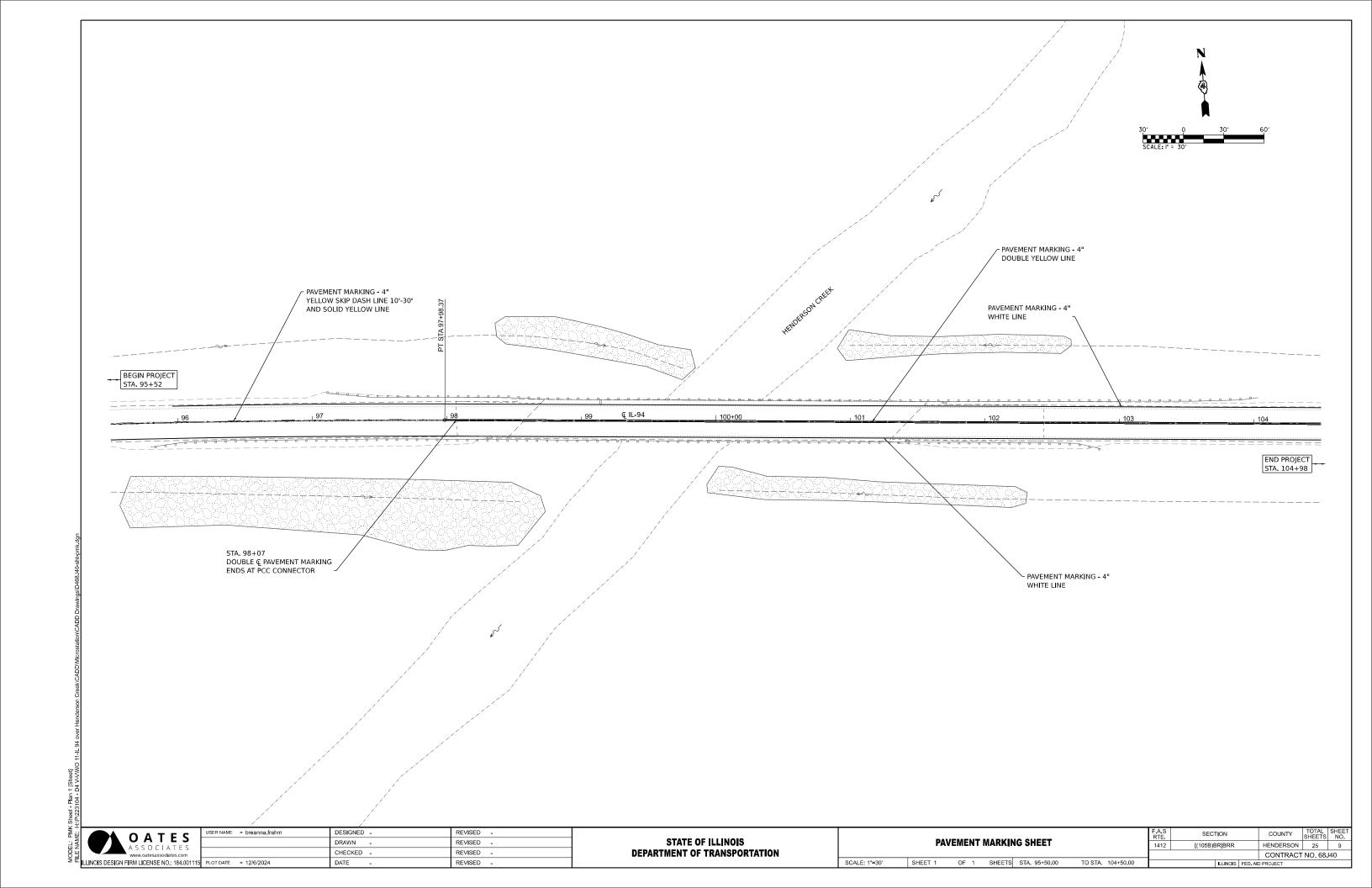
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

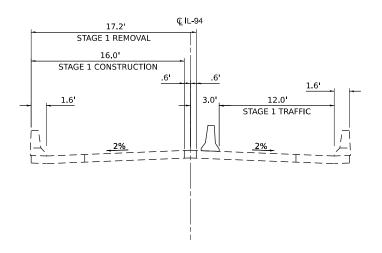
SCALE:

00115011150	F.A.S RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCHEDULES	1412 [(105B)BR]BRR		HENDERSON	25	7
			CONTRACT	NO. 68J	J40
SHEET 1 OF 1 SHEETS STA. TO STA.		ILLINOIS FED AIR	DPO IECT		-

SEE HIGHWAY STANDARD 780001 FOR PAVEMENT MARKING DETAILS.

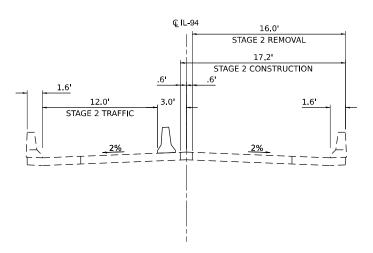






STAGE 1 TYPICAL SECTION

STA, 98+01 TO STA, 102+43



STAGE 2 TYPICAL SECTION

STA. 98+07 TO STA. 102+49

i		USE
	O A I E S	
	A 5 5 O C A E 5	
	ILLINOIS DESIGN FIRM LICENSE NO : 184 001115	PLC

USER NAME = breanna.frahm	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 12/6/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC						SEC-	TION		COUNTY	TOTAL SHEETS	SHE
TYPICAL SECTIONS					1412	[(105B)E	BRJBRR		HENDERSON	25	10
I I FICAL SECTIONS									CONTRACT	NO. 68J	40
SHEET 1	OF 4	SHEETS	STA.	TO STA.			ILLINOIS	FED. AIC	PROJECT		

GENERAL NOTES

VERTICAL PANELS, DRUMS WITH STEADY BURNING LIGHTS, TYPE III BARRICADES, SIGNS, GUARDRAIL REFLECTORS, BARRIER WALL REFLECTORS, AND DETECTOR LOOPS, SHALL BE INCLUDED IN THE COST OF THE PAY ITEM "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321"

THIS WORK SHALL SUPPLEMENT AND BE IN ACCORDANCE WITH HIGHWAY STANDARD 701321.

FOR DIMENSIONS AND SPACING NOT SHOWN, SEE HIGHWAY STANDARD 701321.

THE CONTRACTOR SHALL PLACE MAX WIDTH SIGNS BEFORE IMPLEMENTING ANY STAGE TRAFFIC CONTROL.

REMOVE ALL CONFLICTING PAVEMENT MARKINGS.

TRAFFIC CONTROL MAY BE ADJUSTED DUE TO FIELD CONDITIONS APPROVED BY ENGINEER.

STAGE CONSTRUCTION SEQUENCE

THE FOLLOWING STAGE CONSTRUCTION SEQUENCE IS FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR PLANNING AND EXECUTING THIS PROJECT, WHICH SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

PRF-STAGE 1:

CONSTRUCT HOT-MIX ASPHALT BASE COURSE WIDENING ALONG NORTHBOUND AND SOUTHBOUND LANES. UTILIZE TRAFFIC CONTROL AND PROTECTION STANDARD 701326.

EXISTING GUARDRAIL TO REMAIN IN PLACE.
SET UP STAGE 1 TRAFFIC CONTROL STANDARD 701321.

STAGE 1:

CONSTRUCT SOUTH HALF OF SN 036-0040 IMPROVEMENTS. EXISTING GUARDRAIL TO REMAIN IN PLACE. REMOVE STAGE 1 TRAFFIC CONTROL STANDARD 701321.

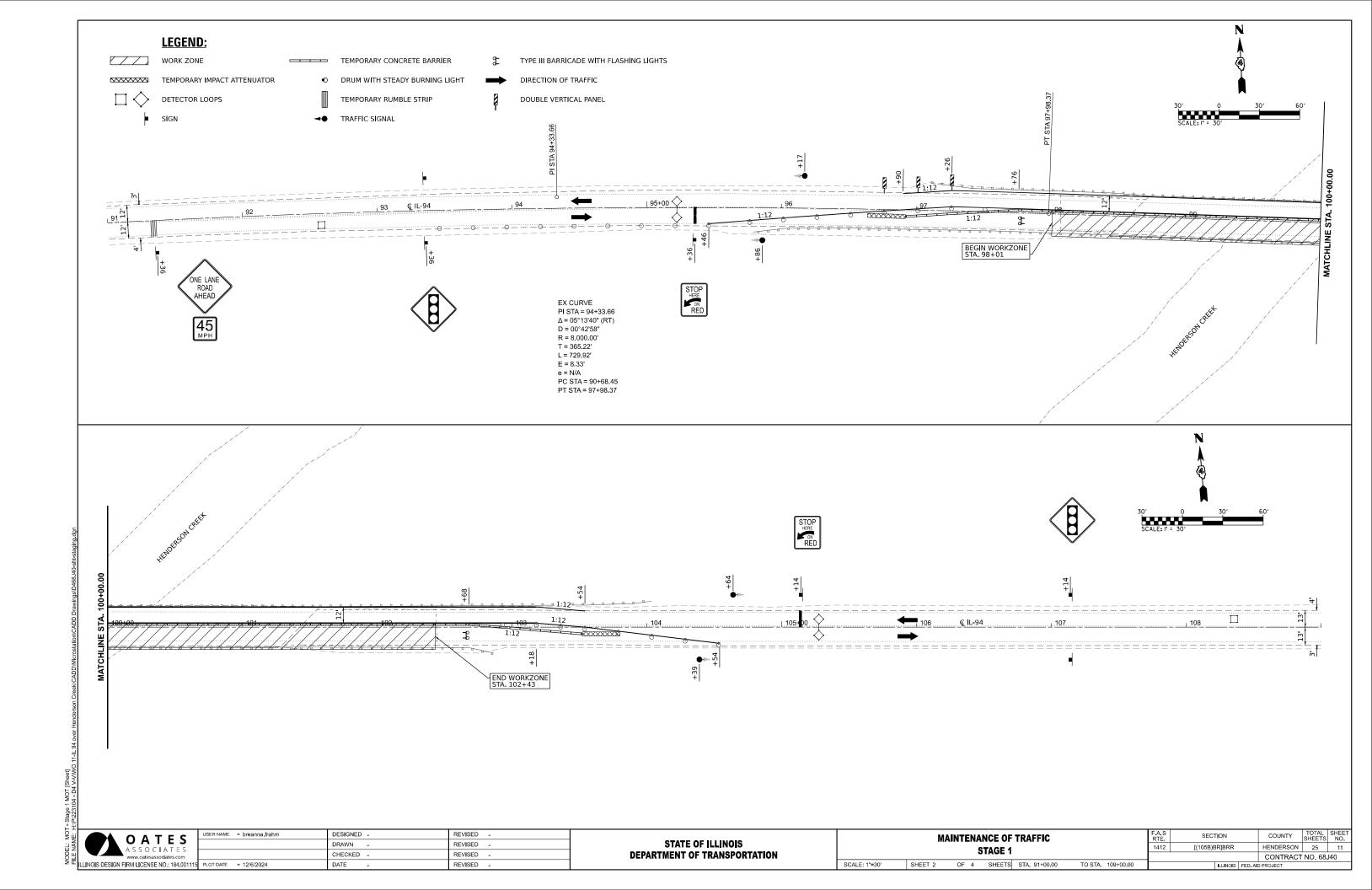
STAGE 2

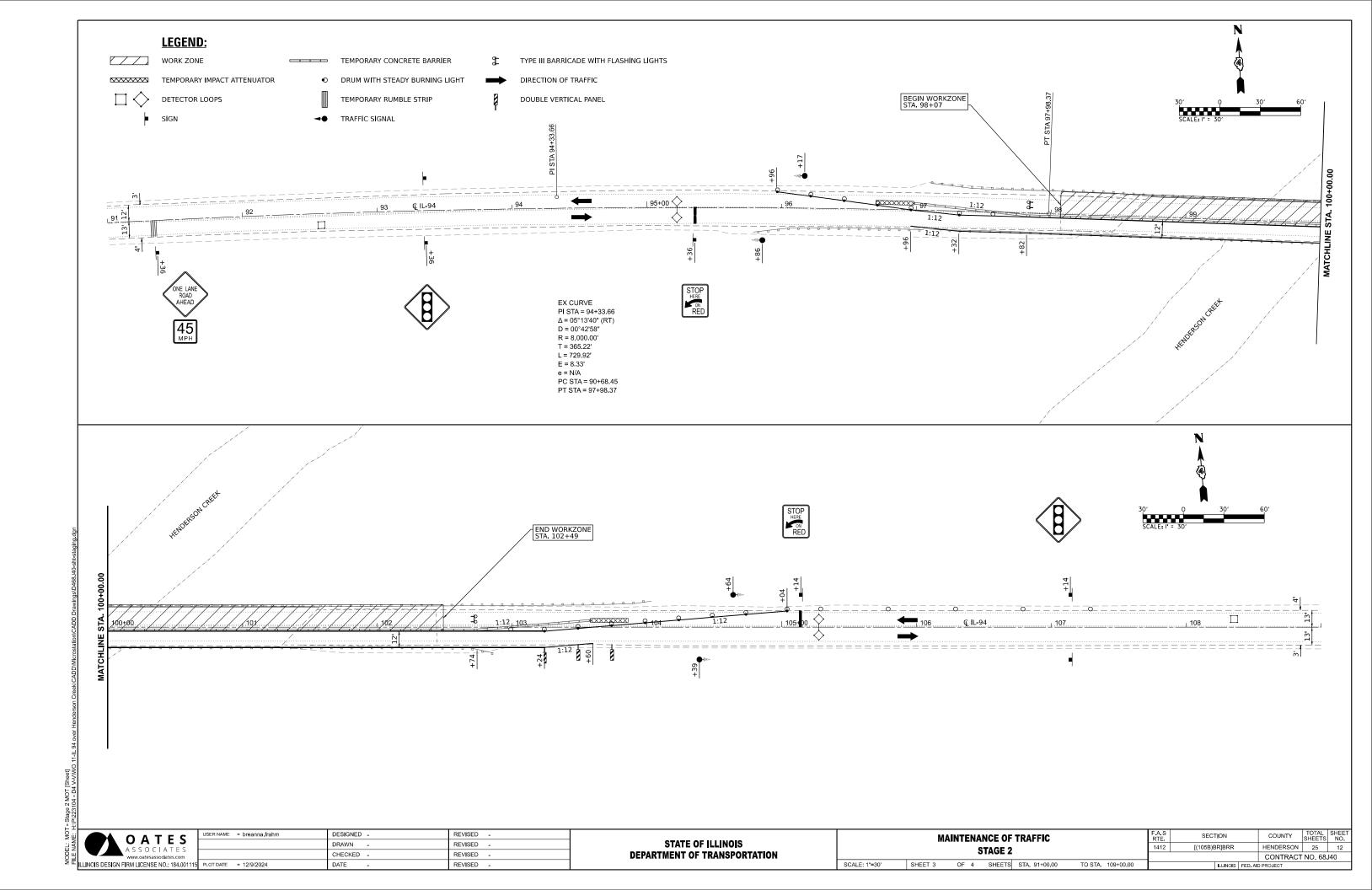
SET UP STAGE TWO TRAFFIC CONTROL STANDARD 701321. CONSTRUCT NORTH HALF OF SN 036-0040 IMPROVEMENTS. EXISTING GUARDRAIL TO REMAIN IN PLACE. REMOVE STAGE 2 TRAFFIC CONTROL STANDARD 701321.

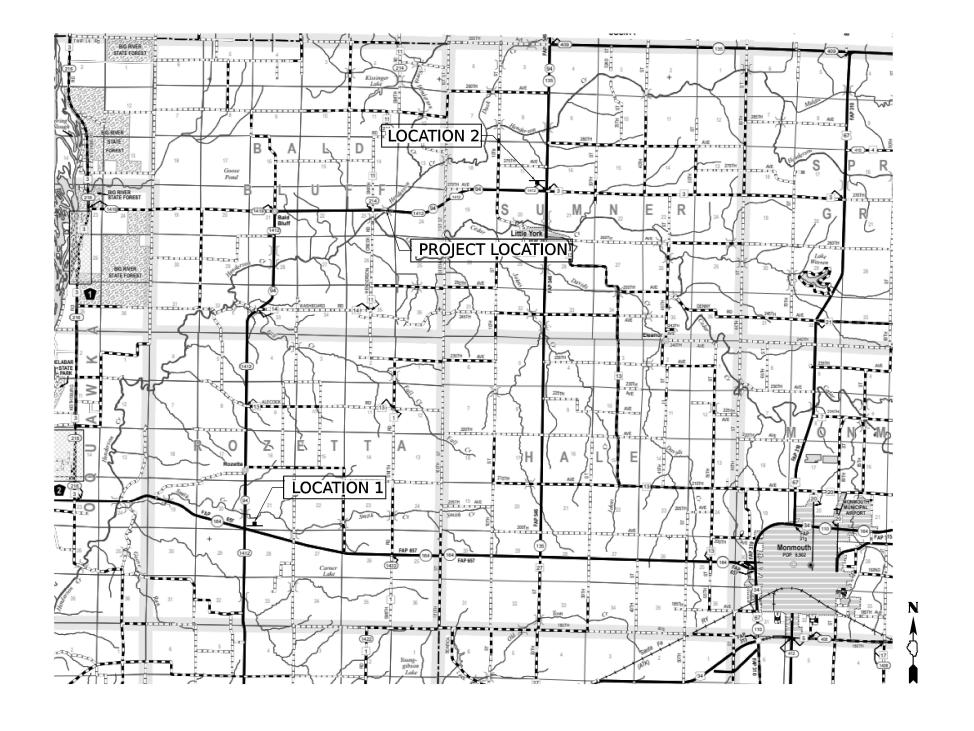
STAGE 3:

INSTALL PAVEMENT MARKINGS.
UTILIZE TRAFFIC CONTROL AND PROTECTION STANDARD 701311.

SCALE:



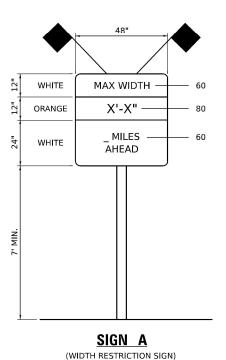




GENERAL NOTES:

ACTUAL MAXIMUM WIDTH ARE TO BE MEASURED BY THE ENGINEER AFTER TEMPORARY CONCRETE BARRIER WALL IS PLACED FOR STAGE 1.

ALL SIGNS SHALL BE POST MOUNTED IN ACCORDANCE WITH ARTICLE 701.14 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.



NORTH

ILLINOIS

SIGN C "NORTH" - M3-1 (24x12) IL 94 - M1-100.2 (24x24)

SOUTH ILLINOIS

SIGN D

"SOUTH" - M3-3 (24x12) IL 94 - M1-100.2 (24x24)

LOCATIO	N	SIGNS	DISTANCE
1	IL 94 SB AT IL 135	A/C	9.0 MILES
2	IL 94 NB AT IL 164	A/D	3.5 MILES

TO STA.

OATES LLINOIS DESIGN FIRM LICENSE NO.: 184.001115 PLOT DATE = 12/9/2024

JSER NAME = breanna.frahm DESIGNED -REVISED -DRAWN . REVISED -CHECKED -REVISED DATE REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

MAINTENANCE OF TRAFFIC MAXIMUM WIDTH SIGNING DETAIL

SCALE:

SECTION COUNTY 1412 [(105B)BR]BRR HENDERSON 25 13 CONTRACT NO. 68J40

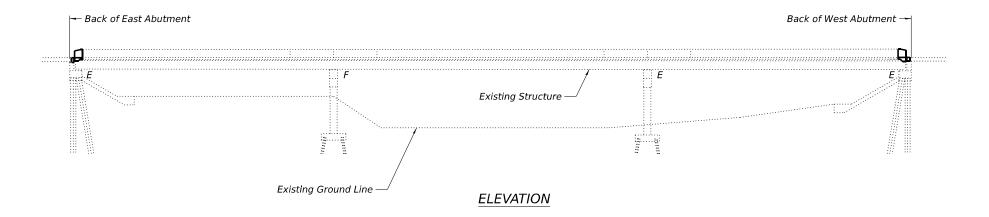
SHEET 4 OF 4 SHEETS STA.

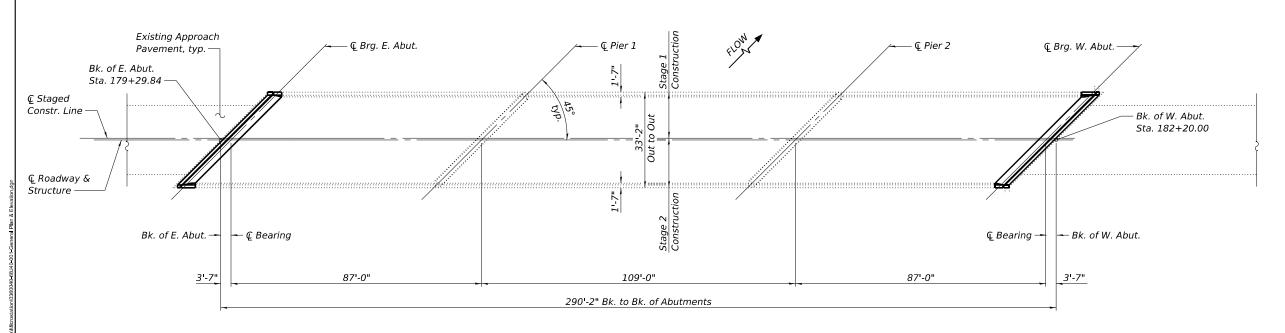


- Replace expansion joints.
 Deck slab repair as directed by the Engineer.
 Structural repair of concrete at abutments.
 Epoxy Crack Injection at abutments.

INDEX OF SHEETS

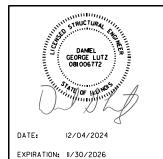
Sheet No.	<u>Description</u>
1	General Plan & Elevations
2	General Data
3	Staging Details
4	Cross Section
5	Joint Removal Details
6	Joint Replacement Details
7	Superstructure Details
8	Temporary Concrete Barrier
9	Preformed Joint Strip Seal
10	Bar Splicer Assembly Details







PLAN



GENERAL PLAN & ELEVATION IL-94 OVER HENDERSON CREEK F.A.S RTE. 1412 SEC [(105B)BR]BRR HENDERSON COUNTY STATION 180+74.92 *STRUCTURE NO. 036-0040*

O A T E S ASSOCIATES	
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	USER NAME = biraj budhathoki	DESIGNED -	BB	REVISED -	
		CHECKED -	ORG	REVISED -	
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15	PLOT DATE = 12/9/2024	CHECKED -	ORG	REVISED -	

STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	

				ELEVATION 36-0040	
CHEET	- 4	OF	10	CHEETS	

F.A.S RTE	SECTION			COUNTY	TOTAL SHEETS	SHEE NO.
1412	[(105B)BR]BRR			HENDERSON	25	14
				CONTRACT	NO. 68	J40
		II I MOIC	EED AL	D DDO IECT		

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	17.2
Concrete Superstructures	Cu. Yd.	18.0
Protective Coat ①	Sq. Yd.	227
Reinforcement Bars, Epoxy Coated	Pound	2,110
Bar Splicers	Each	26
Preformed Joint Strip Seal	Foot	90
Epoxy Crack Injection	Foot	40
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	10
Deck Slab Repair (Partial)	Sq. Yd.	170

Notes:

① Apply to new concrete only: expansion joint concrete and deck patches.

DECK SLAB REPAIR (PARTIAL) SCHEDULE (DECK AND APPROACHES)

Location	Unit	Total
Eastbound Lane	Sq. Yd.	100
Westbound Lane	Sa. Yd.	70

EPOXY CRACK INJECTION SCHEDULE

Location	Unit	Total
East Abutment	Foot	25
West Abutment	Foot	15

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

Prior to 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 and 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 the concrete removal shall be replaced with an approved bar splicer or anchorage system at the contractor's expense.

The quantities of Deck Slab Repair (Partial), Epoxy Crack Injection and Structural Repair of Concrete (Depth \leq 5") includes additional 20% for repair areas not visually identified in the field. The Engineer shall show actual locations and quantities of repairs on as-built plans.

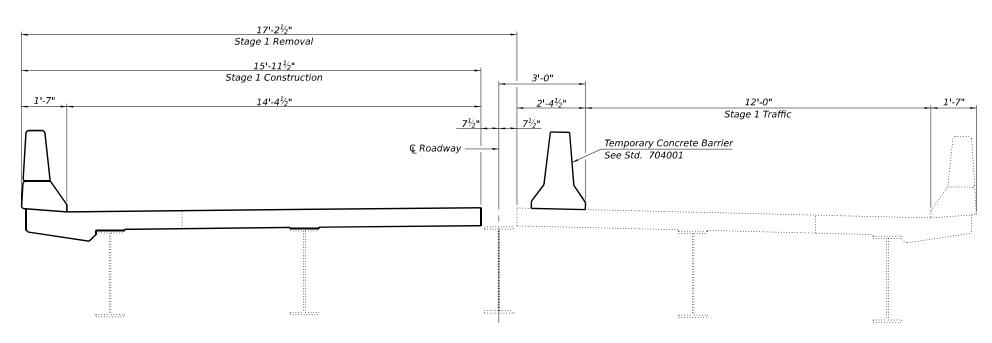
Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

The guardrail attached to the bridge shall be removed as needed to complete the work and reattached once work is completed. Cost shall be included in Concrete Removal.

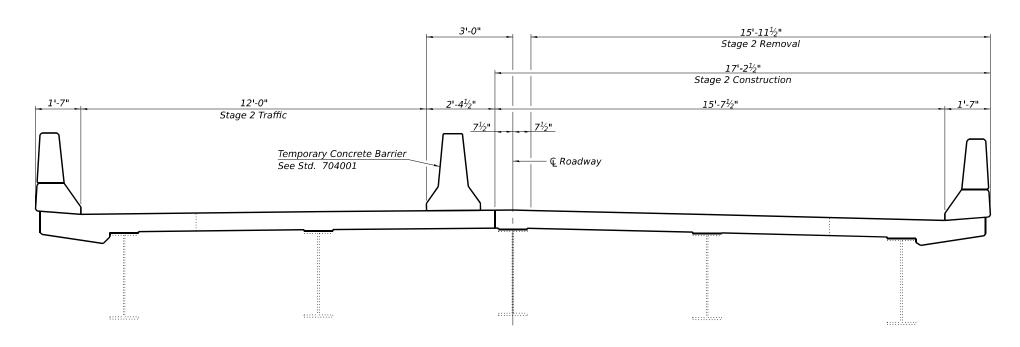
STRUCTURAL REPAIR OF CONCRETE (DEPTH ≤ 5") SCHEDULE

			_
Location	Unit	Repair Dimension	Tc
West Abutment	Sa. Ft.	2½' X 4'	1

GENERAL DATA STRUCTURE NO. 036-0040		SECTION	COUNTY	TOT
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51 KOO1 CKE NO. 030-0040			CONTRACT	NO.
SHEET 2 OF 10 SHEETS		ILLINOIS FED. A	D PROJECT	

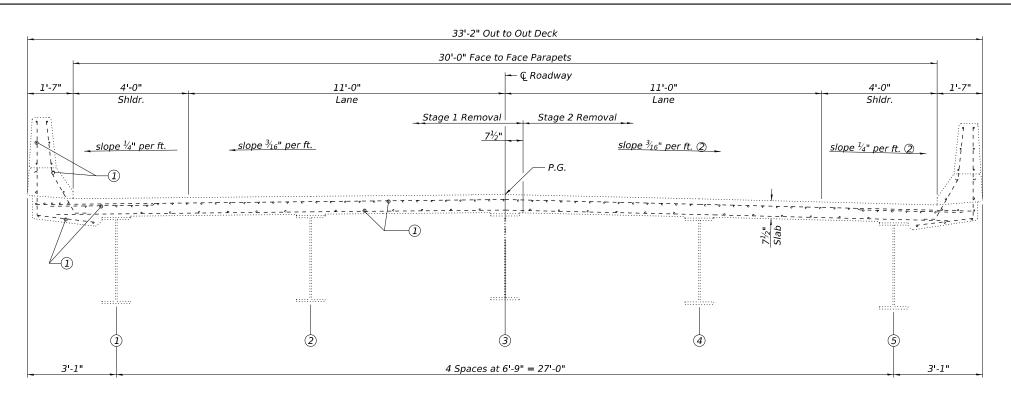


STAGE 1 CONSTRUCTION THRU EXPANSION JOINT (Looking West)



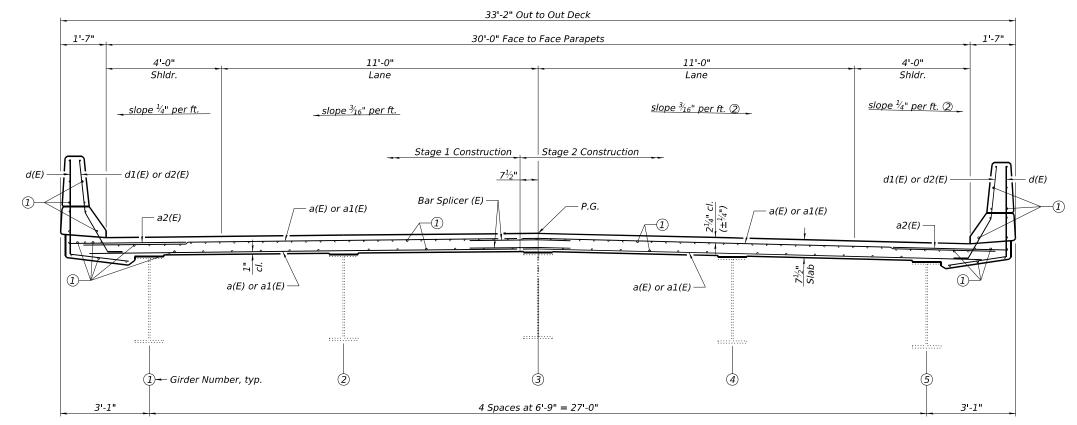
STAGE 2 CONSTRUCTION THRU EXPANSION JOINT (Looking West)

	USER NAME = biraj budhathoki	DESIGNED - BB	REVISED -		STAGING DETAILS	F.A.S RTF	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
ASSOCIATES		CHECKED - ORG	REVISED -	STATE OF ILLINOIS	STRUCTURE NO. 036-0040	1412	[(105B)BR]BRR	HENDERSON	25 16
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EXISTING CROSS SECTION THRU EXPANSION JOINT

(Looking West)



Notes:

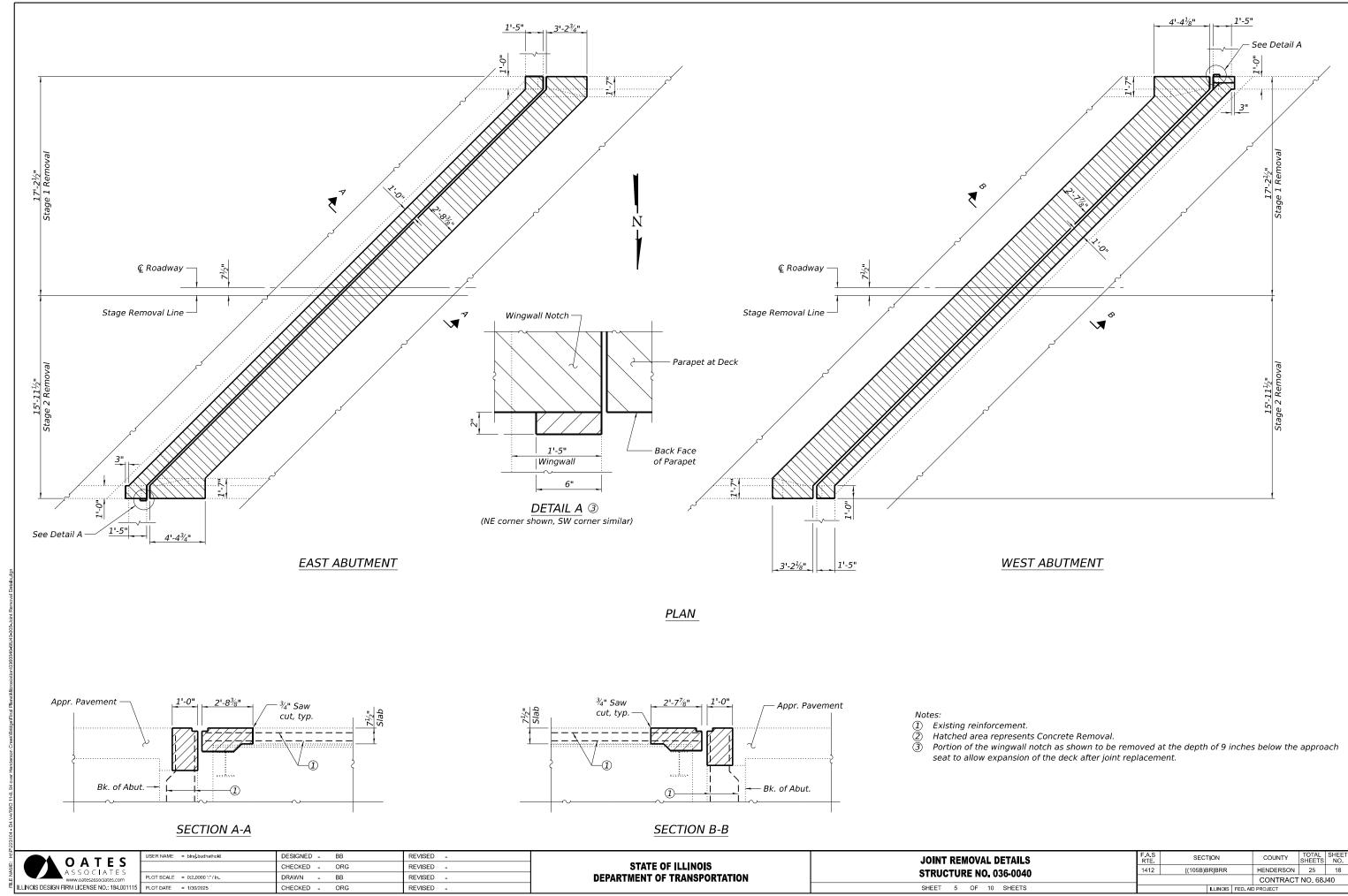
- Existing reinforcement.
 Varies to 0.002 ft. per ft. S.E. at Sta. 182+20.00

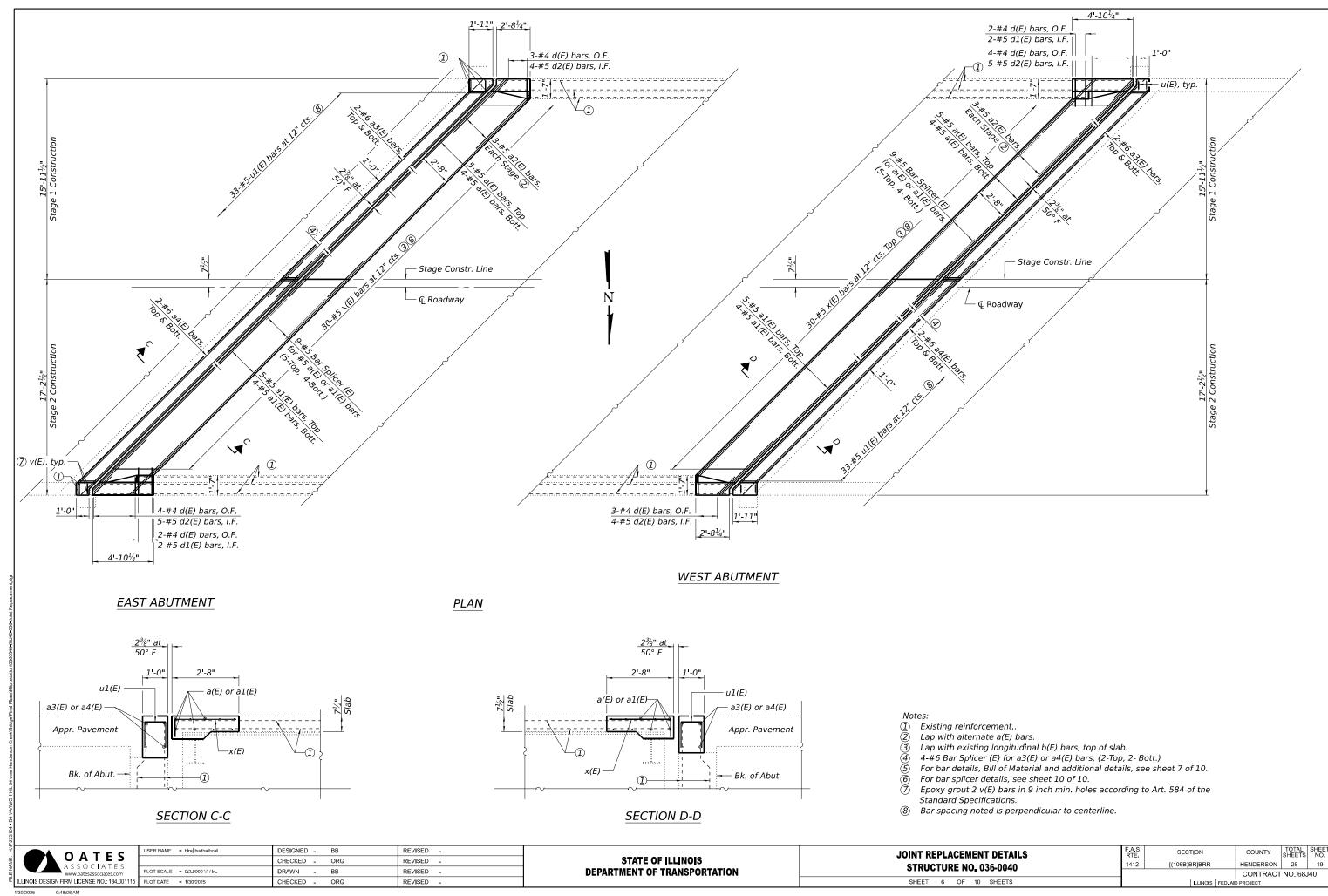
PROPOSED CROSS SECTION THRU EXPANSION JOINT

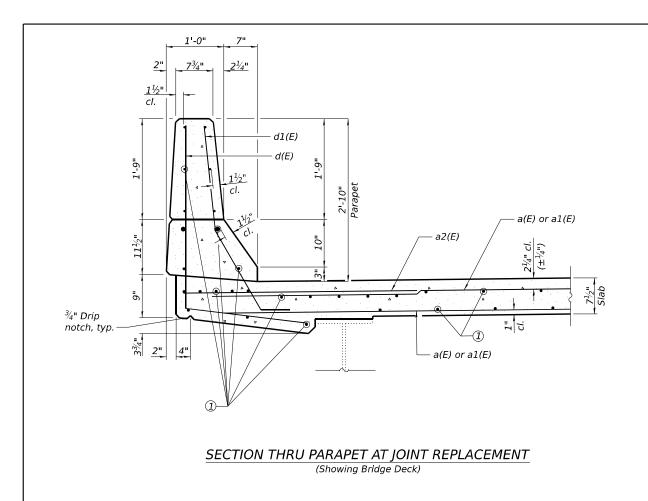
(Looking West)

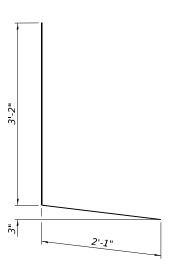
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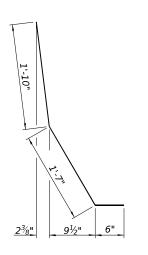
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

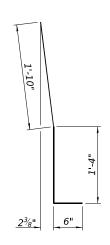








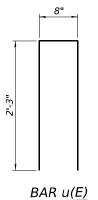




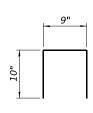
BAR d(E)

BAR d1(E)

BAR d2(E)







BAR u1(E)



	DILL	. 01 1	IAIENIA	<u>-</u>
Bar	No.	Size	Length	Shape
a(E)	18	#5	22'-2"	
a1(E)	18	#5	24'-0"	
a2(E)	12	#5	6'-0"	
a3(E)	8	#6	22'-2"	
a4(E)	8	#6	24'-0"	
d(E)	18	#4	5'-3"	ı
d1(E)	4	#5	3'-11"	Ī
d2(E)	18	#5	3'-8"	l
u(E)	8	#4	5'-2"	_
u1(E)	66	#5	2'-5"	
v(E)	4	#5	5'-6"	
x(E)	60	#5	3'-11"	_
Concre	te Rem	oval	Cu. Yd.	17.2
Concrete Superstructure		Cu. Yd.	18.0	
Reinforcement Bars, Epoxy Coated		Pound	2,110	

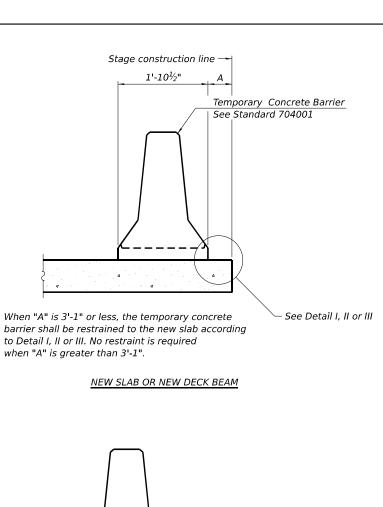
Notes:
① Existing reinforcement.

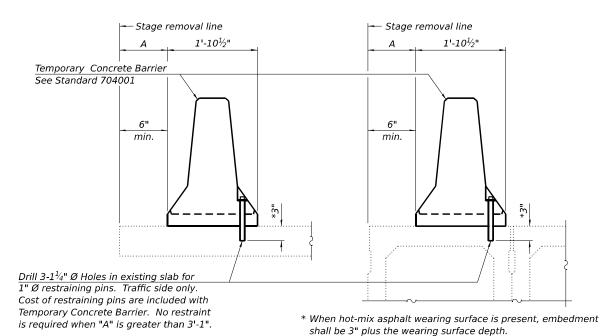
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DEPARTMENT OF TRANSPORTATION

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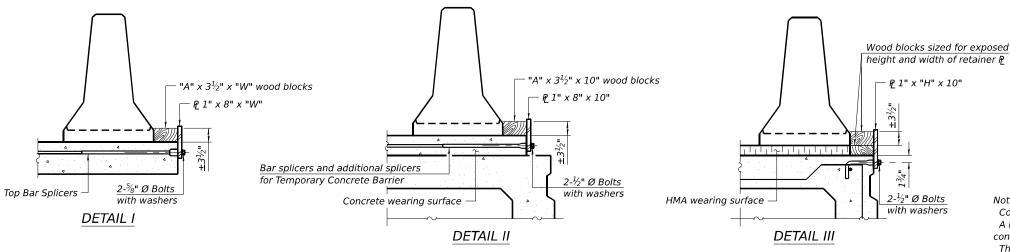


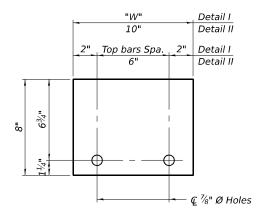
1x8 UNC 7/16" Ø hole US Std. $1\frac{1}{16}$ " I.D. $\times 2\frac{1}{2}$ " O.D. x approx. 8 gauge thick washer 1" Ø pin RESTRAINING PIN

EXISTING SLAB

EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

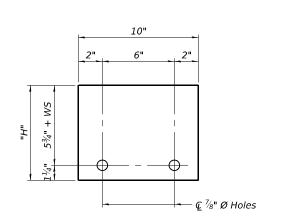




(Detail I and II)

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

Railing Weight (plf) 440 R-27 5-15-2023



STEEL RETAINER P 1" x "H" x 10" (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 $\mathcal C$ 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 $1\frac{1}{2}$ ", 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 splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers 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 splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

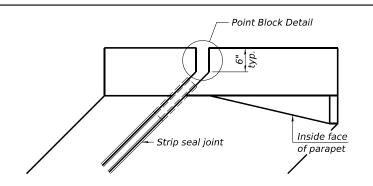
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NCHRP 350 Test Level

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STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** TEMPORARY CONCRETE BARRIERS FOR STAGE CONSTRUCTION SECTION 1412 **STRUCTURE NO. 036-0040** SHEET 8 OF 10 SHEETS

COUNTY [(105B)BR]BRR HENDERSON 25 21 CONTRACT NO. 68J40

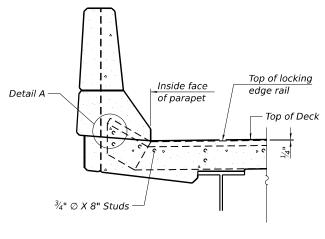


SE parapet shown, NW parapet similar

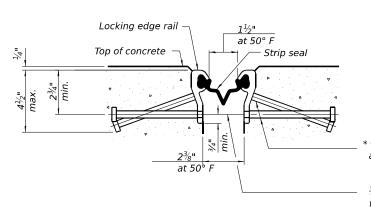
Point Block Detail Inside face Strip seal joint of parapet

SW parapet shown, NE parapet similar

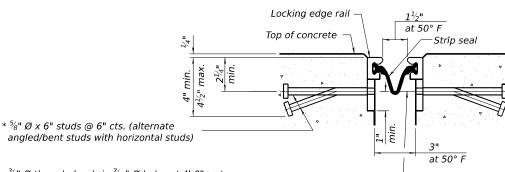
PLAN AT PARAPET



ELEVATION AT PARAPET DETAIL A



SHOWING ROLLED RAIL JOINT



 $\frac{3}{8}$ " Ø threaded rods in $\frac{7}{16}$ " Ø holes at 4'-0" ± cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

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

SHOWING WELDED RAIL JOINT

The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". 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.

Notes:

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed.

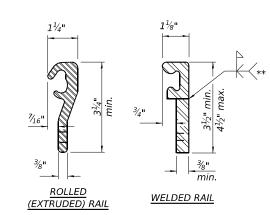
The manufacturer's recommended installation methods shall be followed.

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

The Maximum space between locking edge rail segments shall be $\frac{3}{16}$ " and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

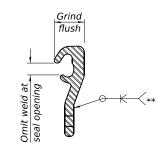
Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal. 34" F-shape barrier shown.

The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.



LOCKING EDGE RAILS

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



LOCKING EDGE RAIL SPLICE

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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	90

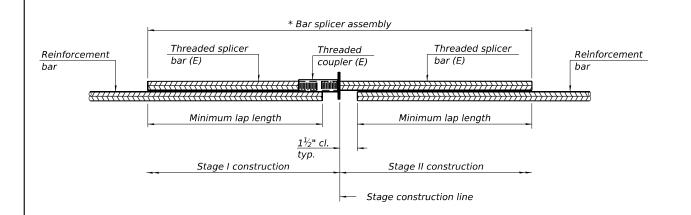
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Р	PREFORMED JOINT STRIP SEAL STRUCTURE NO. 036-0040					
	SHEET	9	OF	10	SHEETS	

.S E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.				
12	[(105B)BR]BRR	HENDERSON	25	22				
		CONTRACT	NO. 68	J40				



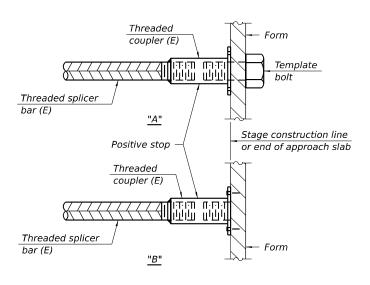
STANDARD BAR SPLICER ASSEMBLY PLAN

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

Threaded splicer bar length = min. lap length + $1\frac{1}{2}$ " + thread length

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

Location	Bar	No. assemblies	Minimum	
Location	size required		lap length	
Deck	#5	18	3'-6"	
Abut. Hatchblock	#6	8	4'-10"	

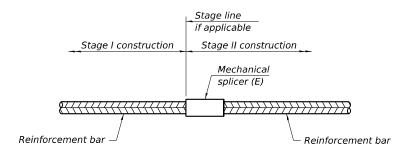


INSTALLATION AND SETTING METHODS

"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.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

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.

BSD-1

5-15-2023

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BAR SPLICER ASSEMBLY DETAILS	RTE.	
STRUCTURE NO. 036-0040	1412	[6
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SHEET 10 OF 10 SHEETS		

DRAIL INSTALLATIONS WHERE GRADES ARE EQUAL TO OR GREATER THAN 1% AND AT INLETS. (INCLUDE DISTRICT SPECIAL ROL" AT GUARDRAIL INSTALLATIONS WHERE GRADES ARE LESS THAN 1% (INCLUDE DISTRICT SPECIAL PROVISION). BLE. DIVIDING LINE IS IL 97. Guardrail

PCC or
HMA
Shoulder

ThicknessSee plans

Comb. CC&G, Type B
Pan Width - See Plans

Geotextile Fabric (stapled)

Guardrail Aggregate
Erosion Control

TYPICAL SECTION WITH COMBINATION CONCRETE CURB & GUTTER

SER NAME = Eric.Thomas

PLOT DATE = 12/7/2022

DESIGNED

DRAWN

DATE

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GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

- This work shall consist of grading as needed, furnishing and installing geotextile
 fabric and staples, and furnishing, placing and shaping crushed aggregate around
 and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.
- 2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.
- After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12 minimum overlap. A knife cut for guardrail post installation is necessary.
- 4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.
- 5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.
- 6. Materials shall meet the following requirements:
- A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.
- B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.

GUARDRAIL EROSION CONTROL TREATMENTS

SCALE:NOT TO SCALE SHEET 1 OF 2 SHEETS STA.

All dimensions are in inches

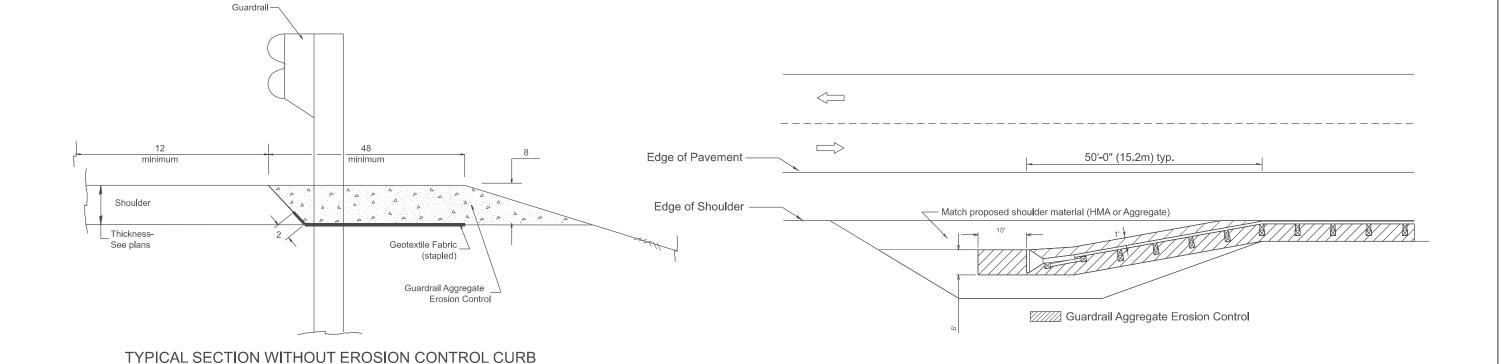
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[(105B)BR]BRR

COUNTY

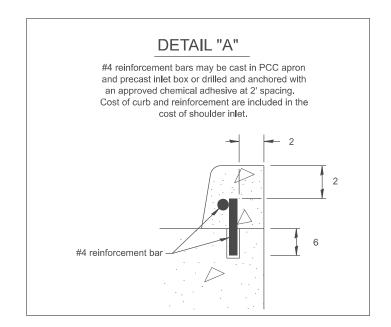
DISTRICT 4 DETAIL NO. 630101 CONTRACT NO. 68J40

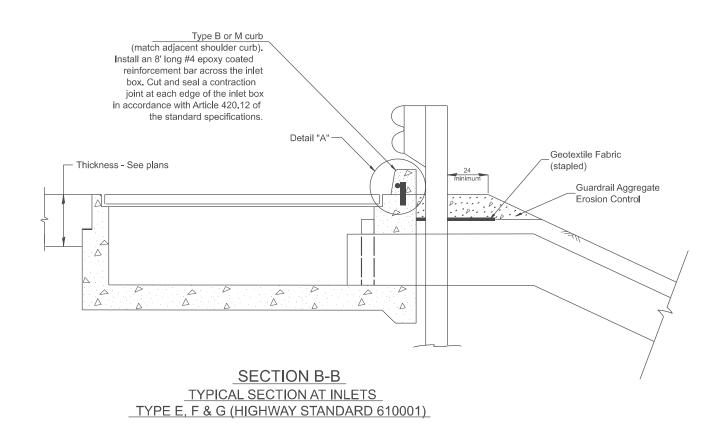
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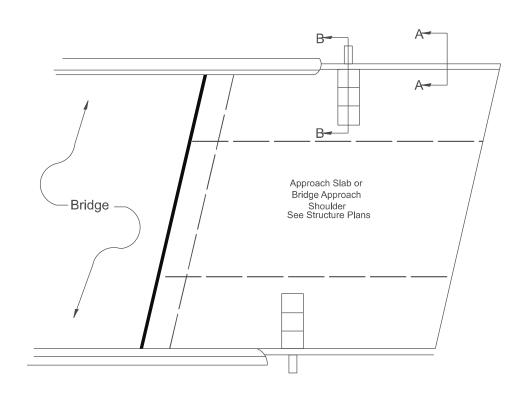


STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

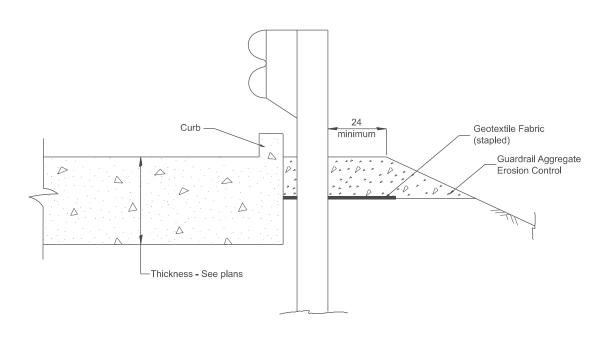






PLAN VIEW

APPROACH SLAB OR SHOULDER PLACEMENT



SECTION A-A

TYPICAL SECTION WITH BRIDGE APPROACH CURB

All dimensions are in inches unless otherwise noted.

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