

PROPOSED HIGHWAY PLANS

FAP ROUTE 798 (IL 115)
SECTION (107)I

STRUCTURE SUPPORT MEASURES
STRUCTURE NO. 027-2506
CARRYING FAP ROUTE 798 (IL 115)
OVER UNNAMED STREAM
4.1 MILES SOUTH OF US ROUTE 24
FORD COUNTY

C-93-019-12

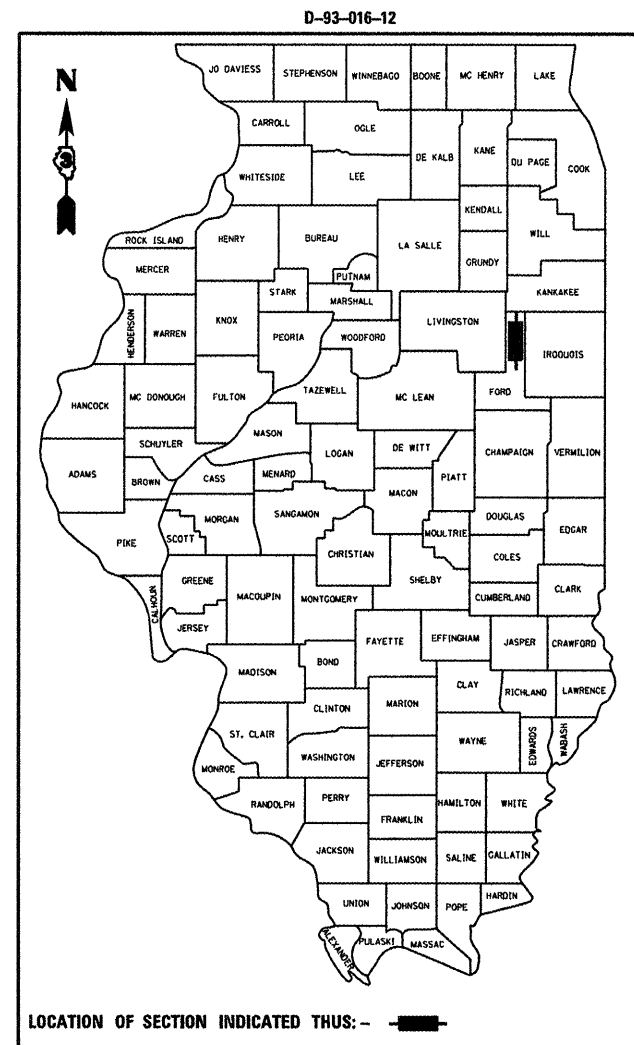
F.A.P. RTE. 798	SECTION (107)I	COUNTY FORD	TOTAL SHEETS 10	SHEET NO. 1
ILLINOIS CONTRACT NO. 66B70				

INDEX OF SHEETS

1. COVER SHEET
2. GENERAL NOTES
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8. ROADWAY DETAILS
9. GENERAL PLAN & REPAIR DETAILS
10. BAR SPLICER AND MECHANICAL SPLICER DETAILS

STANDARDS

- | | |
|-----------|--|
| 000001-06 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 001001-02 | AREAS OF REINFORCEMENT BARS |
| 001006 | DECIMAL OF AN INCH AND OF A FOOT |
| 701006-03 | OFF-ROAD OPERATIONS 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE |
| 701201-04 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS \geq 45 MPH |
| 701301-04 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| 701311-03 | LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY |
| 701316-06 | LANE CLOSURE, 2L, 2W, BRIDGE REPAIR, FOR SPEEDS \geq 45 MPH |
| 701901-02 | TRAFFIC CONTROL DEVICES |



RURAL	
MINOR ARTERIAL	
FAP 798 (IL 115)	
2011	
ADT	550
P.V.	87.27%
S.U.	3.64%
M.U.	9.09%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

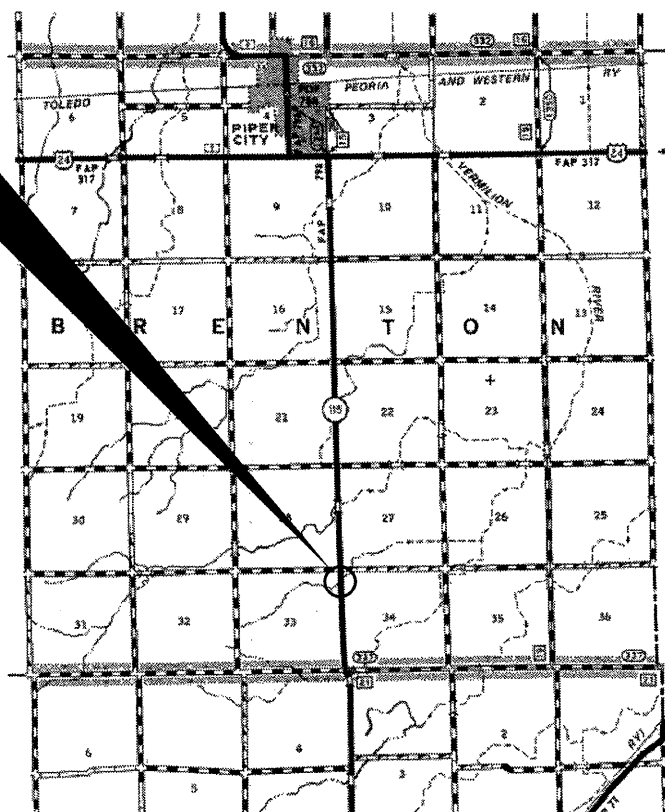
SUBMITTED 2-16 2012
Eric S. Therkaldsen
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 23 2012
John D. Baranzelli, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT

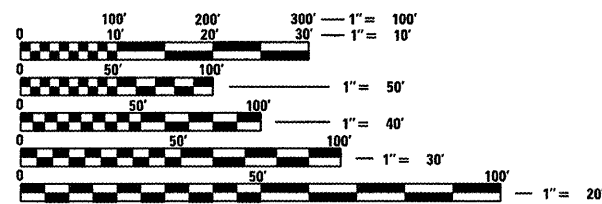
March 23 2012
William R. Frey, Jr.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

PROJECT LOCATION
STRUCTURE NO. 027-2506



GROSS LENGTH = 15.5 FT. = 0.003 MILE
NET LENGTH = 15.5 FT. = 0.003 MILE



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 EXCAVATION
1-800-892-0123
OR 811

DISTRICT NO. 3 (815) 434-6131

PROJECT ENGINEER: JOE KANNEL P.E.
UNIT CHIEF: RON WOODSHANK
TOWNSHIP: BRENTON

CONTRACT NO. 66B70

GENERAL NOTES

COMMITMENTS

THE THICKNESS OF HMA SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA IS PLACED.

THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS.

ON EXISTING PAVEMENT WHICH MAY BE SUPERELEVATED, THE NEW HMA PAVEMENT SHALL BE BUILT WITH THE SAME SUPERELEVATION UNLESS NEW SUPERELEVATION RATES ARE GIVEN ON THE PLANS.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.

THE CONTRACTOR SHALL CONTACT JULIE AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH UTILITIES ARE IN THE AREA.

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS	2.05	TONS / CU YD
HMA RESURFACING	112	LBS / SQ YD / IN

BITUMINOUS MATERIALS (PRIME COAT) RATES		
SURFACE TYPE	ESTIMATED TRUCK APPLICATION RATE	RESIDUAL RATE
MILLED HMA OR PCC PAVEMENT	0.08 GAL / SQ YD	0.04 GAL / SQ YD
EXISTING PAVEMENT	0.05 GAL / SQ YD	0.025 GAL / SQ YD
FOG COAT (BETWEEN ADDITIONAL HMA LIFTS)	0.05 GAL / SQ YD	0.025 GAL / SQ YD

ESTIMATED TRUCK APPLICATION RATE USED FOR CALCULATING PLAN QUANTITIES

MIX DESIGN					
MIX	PG GRADE	DESIGN AIR VOIDS	MIX COMPOSITION	FRICTION AGG	DENSITY CONTROL
HMA SURFACE	PG64-22	4.0% @ N50	IL 9.5	MIXTURE C	SATISFACTION OF ENGINEER

DATE: 2-16-12

PREPARED BY: Don Brin
DISTRICT STUDIES & PLANS ENGINEER

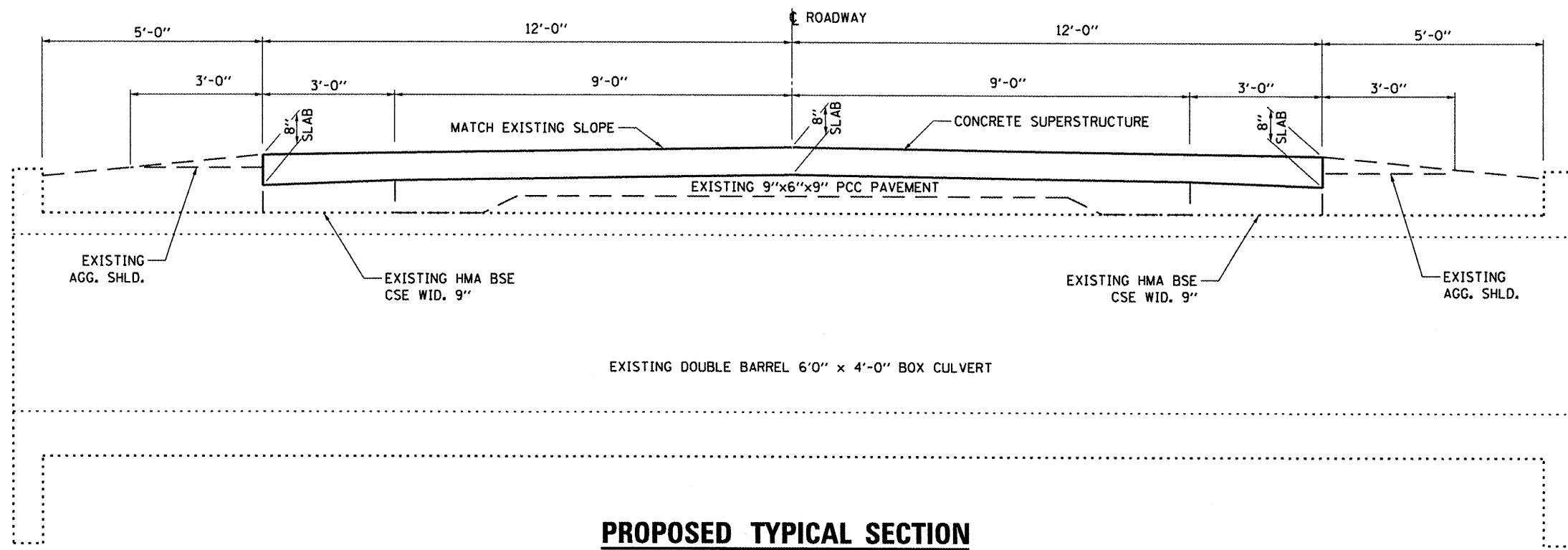
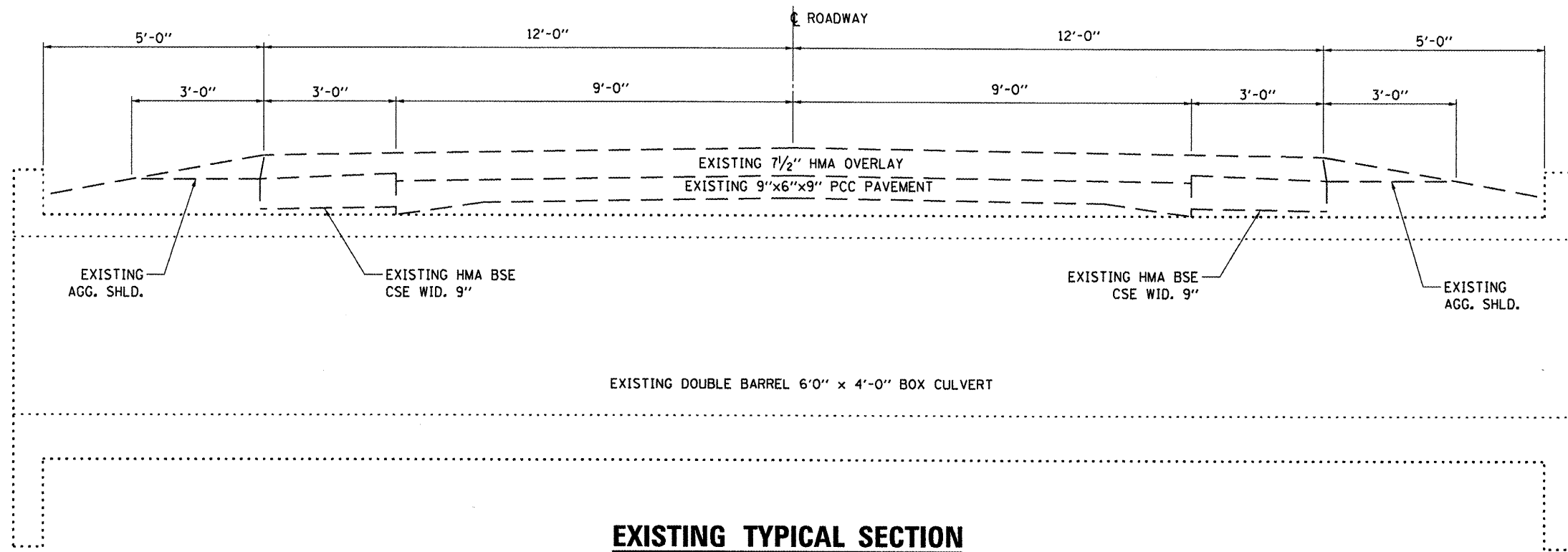
EXAMINED BY: Herb J...
DISTRICT CONSTRUCTION ENGINEER

W...
DISTRICT MATERIALS ENGINEER

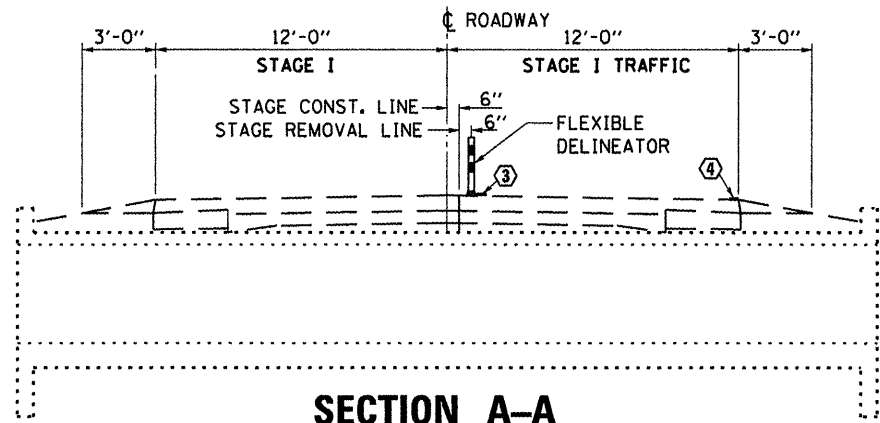
Bruce A. H...
DISTRICT OPERATIONS ENGINEER

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				STATE FUNDS	100% STATE
				STRUCTURE	
				0014	
				RURAL	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	9		9
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	9		9
44000182	HOT-MIX ASPHALT SURFACE REMOVAL, 8"	SQ YD	41.3		41.3
48101200	AGGREGATE SHOULDERS, TYPE B	TON	3		3
50300255	CONCRETE SUPERSTRUCTURE	CU YD	9.2		9.2
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2100		2100
50800515	BAR SPLICERS	EACH	30		30
67100100	MOBILIZATION	L SUM	1		1
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	1		1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1		1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	20		20
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1		1
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	111		111
* 78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	20		20
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	107		107
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1		1

*SPECIALITY ITEMS

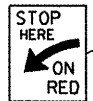
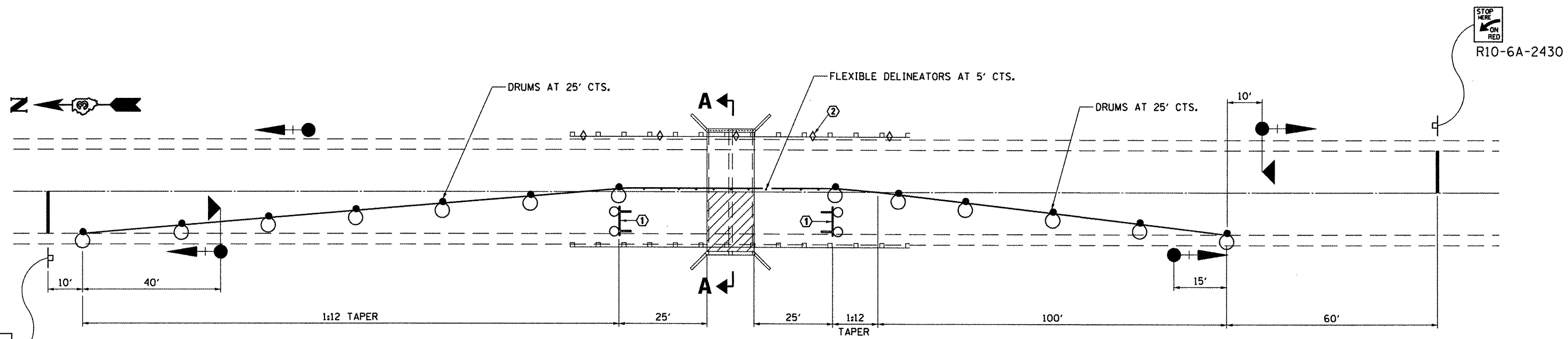


FILE NAME =	USER NAME = petelijj	DESIGNED - RON WOODSHANK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL ROADWAY SECTION AT STATION 215 + 47		F.A.P. RTE.:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
ci:\pw_work\pedit\petelijj\d0278071\0366870-sht-details.dgn		DRAWN - RON WOODSHANK	REVISED -		SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	798	(107)I	FORD	10	4
		CHECKED -	REVISED -										
		DATE -	REVISED -										
	PLOT SCALE = 100.0000' / 1" / 1" / 1"												
	PLOT DATE = 2/16/2012												
								CONTRACT NO. 66B70					
								ILLINOIS FED. AID PROJECT					



SECTION A-A
LOOKING NORTH

- ① Type III barricade to be placed when no work is being performed.
- ② Guardrail markers at 25' (7.6 m) cts. See Standard 635011
- ③ Temporary Pavement Marking
- ④ Existing pavement marking



R10-6A-2430

SYMBOLS

- Work area
- Sign
- Type III barricade
- Microwave detector
- Traffic signal with backplate
- Drum with steady burning bi-directional light
- Crystal, bidirectional guardrail marker

GENERAL NOTES

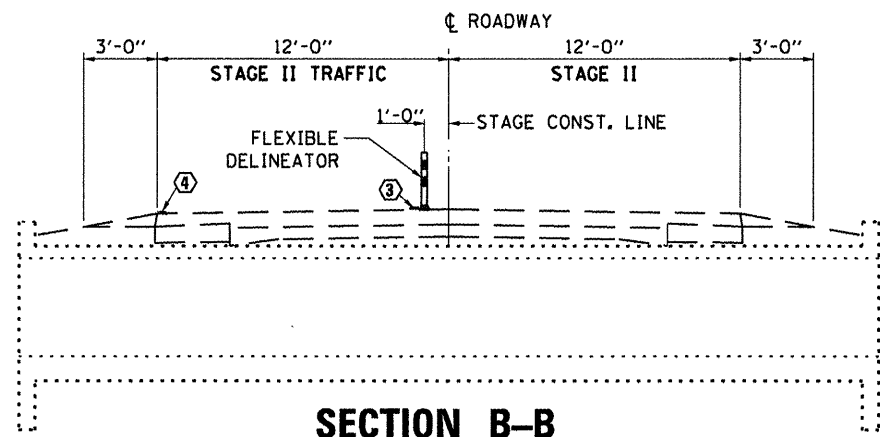
This Detail is used where, at any time, any vehicle, equipment, workers, or their activities will encroach on one lane of a bridge. Traffic signals and a positive barrier are required.

See traffic Control and Protection, Standard 701316 for advanced signing details.

Traffic signals shall be operational only when all traffic controls are in place. When traffic signals are not in operation, flaggers shall be used and traffic control shall conform to Standard 701201.

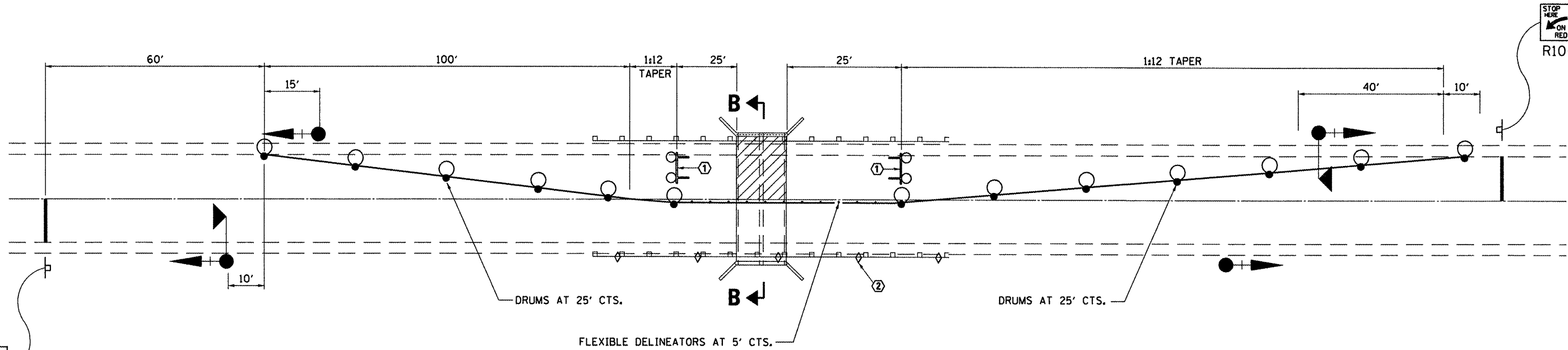
Existing or temporary pavement markings shall be on both sides of open lane from stop bar to stop bar.

FILE NAME =	USER NAME = petelyj	DESIGNED - RON WOODSHANK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGING DETAILS FOR STAGE I CONSTRUCTION		F.A.P. RTE. = 798	SECTION (107)I	COUNTY FORD	TOTAL SHEETS 10	SHEET NO. 5	
CONTRACT NO. 66B70	CONTRACT NO. 66B70	DRAWN - RON WOODSHANK	REVISED -		SCALE:	SHEET NO. 1 OF 2 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT				
	PLOT SCALE = 100.0000' / 1in.	CHECKED -	REVISED -									
	PLOT DATE = 2/16/2012	DATE -	REVISED -									



SECTION B-B
LOOKING NORTH

- ① Type III barricade to be placed when no work is being performed.
- ② Guardrail markers at 25' (7.6 m) cts. See Standard 635011
- ③ Temporary Pavement Marking
- ④ Existing pavement marking



STOP HERE ON RED
R10-6A-2430

STOP HERE ON RED
R10-6A-2430

SYMBOLS

- Work area
- Sign
- Type III barricade
- Traffic signal with microwave detector and backplate
- Drum with steady burning bi-directional light
- Crystal, bidirectional guardrail marker

GENERAL NOTES

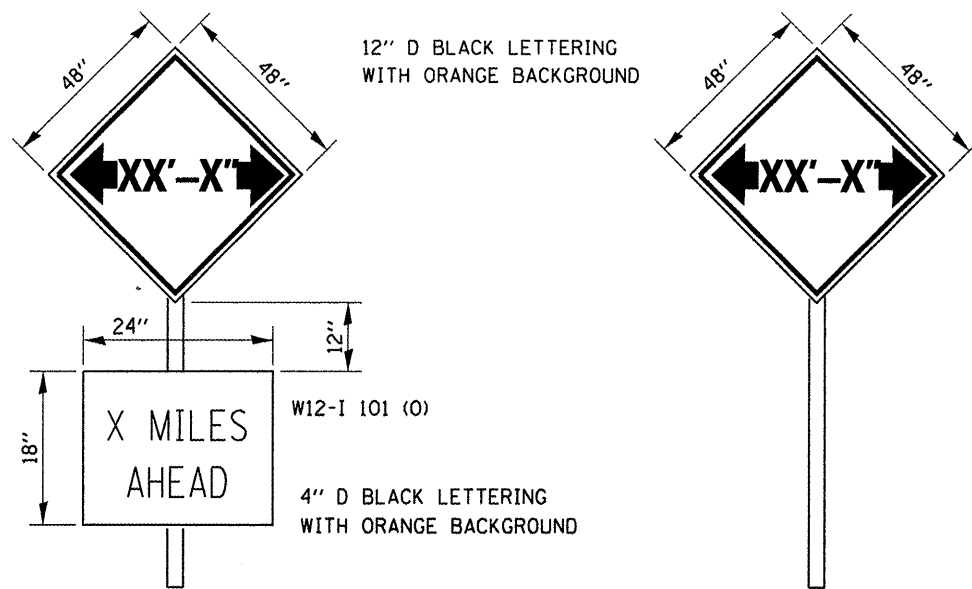
This Detail is used where, at any time, any vehicle, equipment, workers, or their activities will encroach on one lane of a bridge. Traffic signals and a positive barrier are required.

See traffic Control and Protection, Standard 701316 for advanced signing details.

Traffic signals shall be operational only when all traffic controls are in place. When traffic signals are not in operation, flaggers shall be used and traffic control shall conform to Standard 701201.

Existing or temporary pavement markings shall be on both sides of open lane from stop bar to stop bar.

FILE NAME =	USER NAME = patelyj	DESIGNED - RON WOODSHANK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGING DETAILS FOR STAGE II CONSTRUCTION		F.A.P. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pw_work\p\dot\patelyj\0278071\036678-sht-details.dgn	DRAWN - RON WOODSHANK	REVISED -	798				(107)	FORD	10	6	
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -	CONTRACT NO. 66B70								
PLOT DATE = 2/16/2012	DATE -	REVISED -	[ILLINOIS] FED. AID PROJECT								



TO BE POST MOUNTED AS SHOWN ELSEWHERE IN THE PLANS.

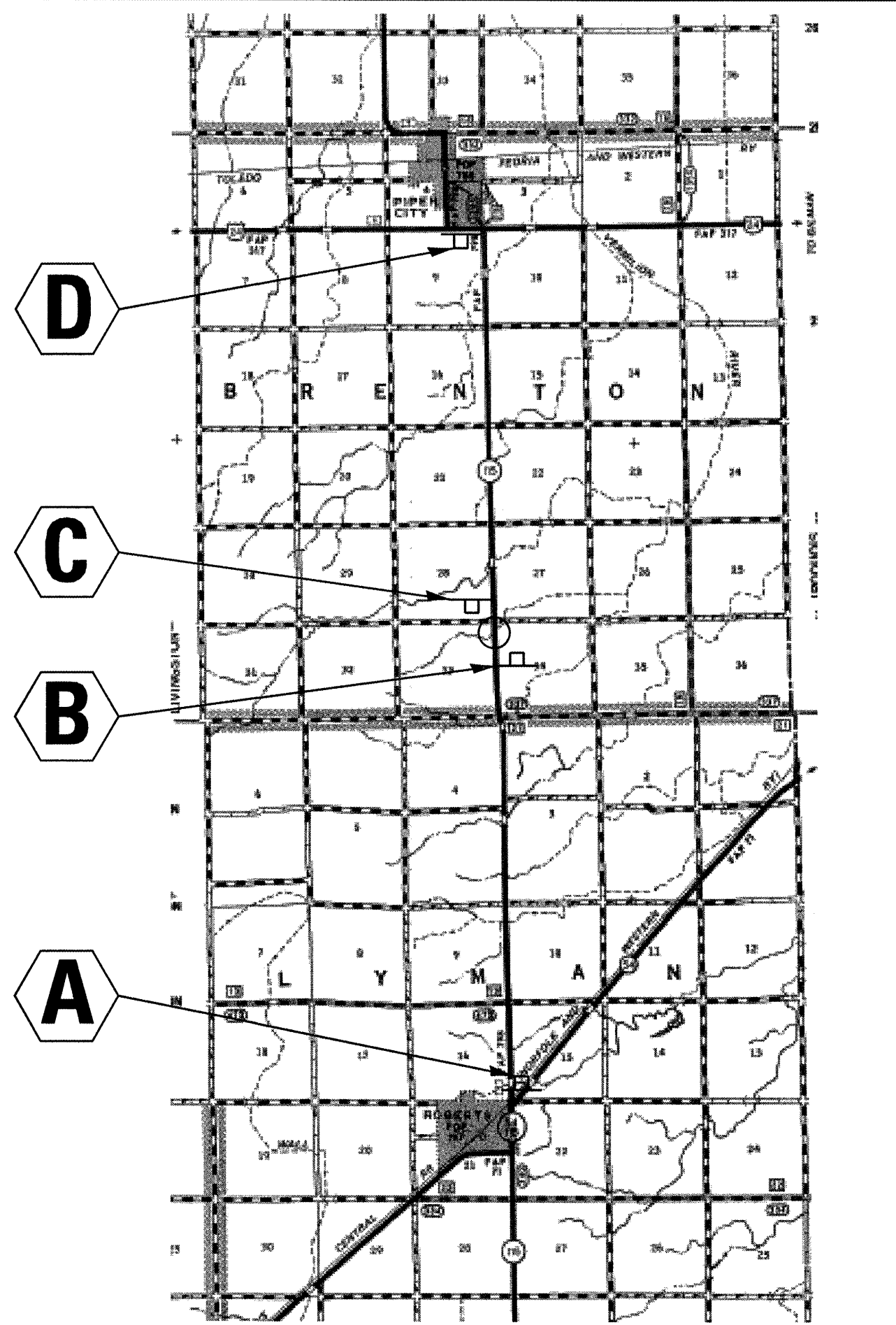
THE ENGINEER WILL NOTIFY DISTRICT 3 BUREAU OF OPERATIONS 14 CALENDAR DAYS PRIOR TO INSTALLING ANY TRAFFIC CONTROL DEVICES THAT WILL RESTRICT THE PAVEMENT WIDTH.

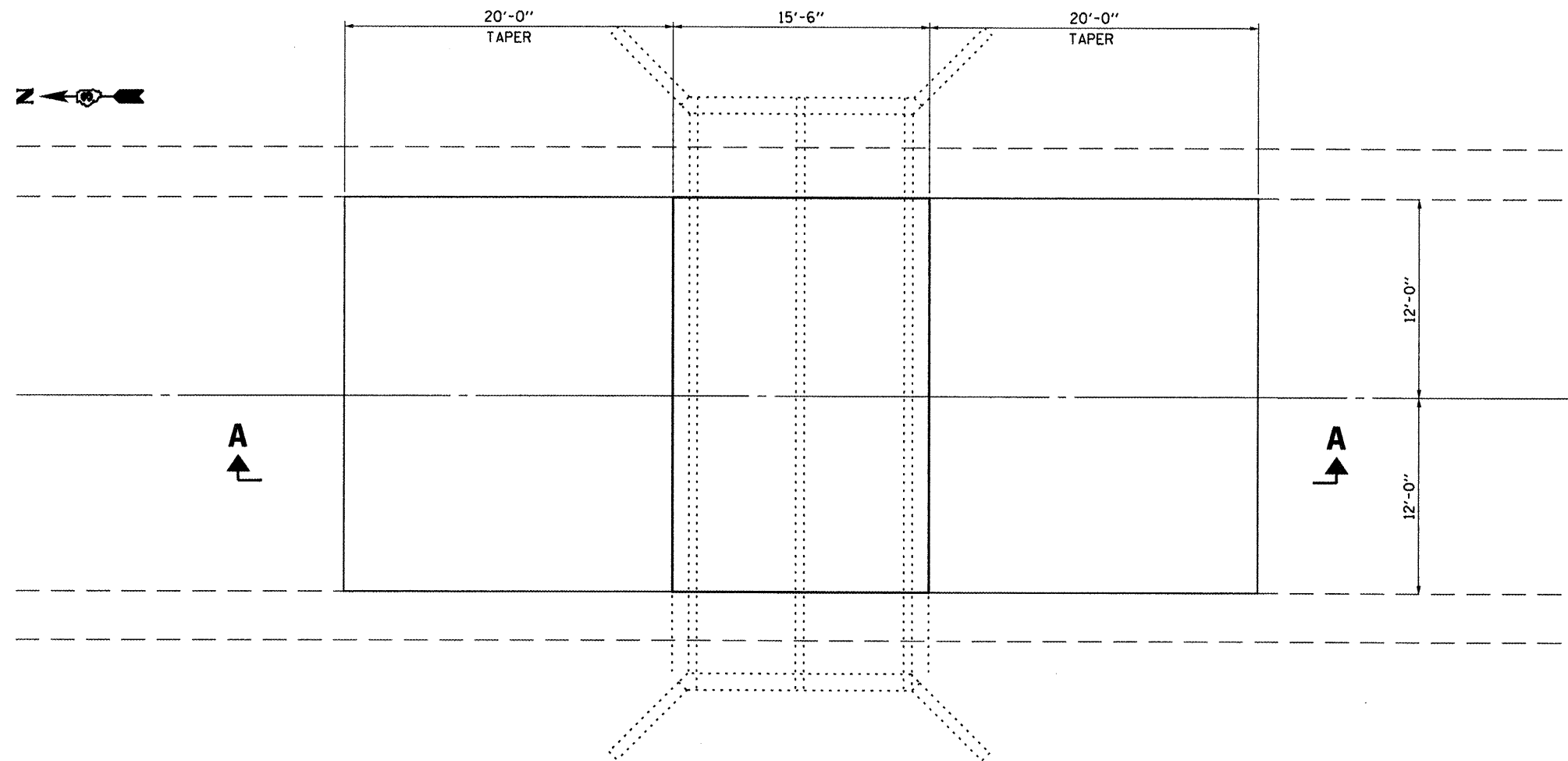
THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO MEET THIS REQUIREMENT.

COST OF SUPPLYING, INSTALLING, MAINTAINING AND REMOVING WIDTH RESTRICTION SIGNS SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL AND PROTECTION PAY ITEMS.

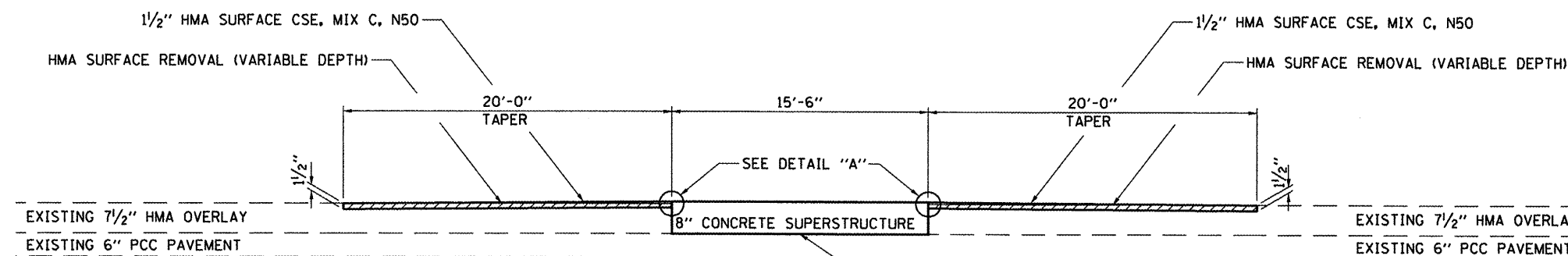
WIDTH RESTRICTION SIGNING DETAILS

WIDTH RESTRICTION SIGNING TABLE				
NO. OF SIGNS	TYPE OF SIGN	SIGN DESIGNATION	LOCATION	WIDTH RESTRICTION & DISTANCE
1	WIDTH RESTRICTION W12-1-101-10) M6-1	A	ON IL RTE. 115 NE CORNER INTERSECTION WITH IL RTE. 54	9'-6" 4.5 MILES
1	WIDTH RESTRICTION	B	WITHIN TRAFFIC CONTROL AND PROTECTION STANDARD 701316	9'-6"
1	WIDTH RESTRICTION	C	WITHIN TRAFFIC CONTROL AND PROTECTION STANDARD 701316	9'-6"
1	WIDTH RESTRICTION W12-1-101-10) M6-1	D	ON IL RTE. 115 SW CORNER INTERSECTION WITH US RTE. 24	9'-6" 4.1 MILE

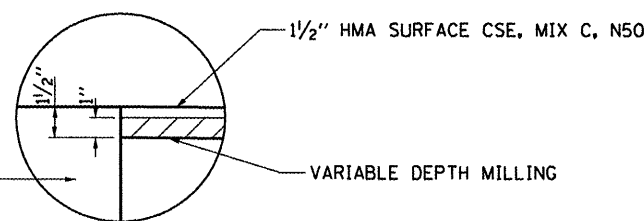




PLAN



SECTION A-A



DETAIL "A"

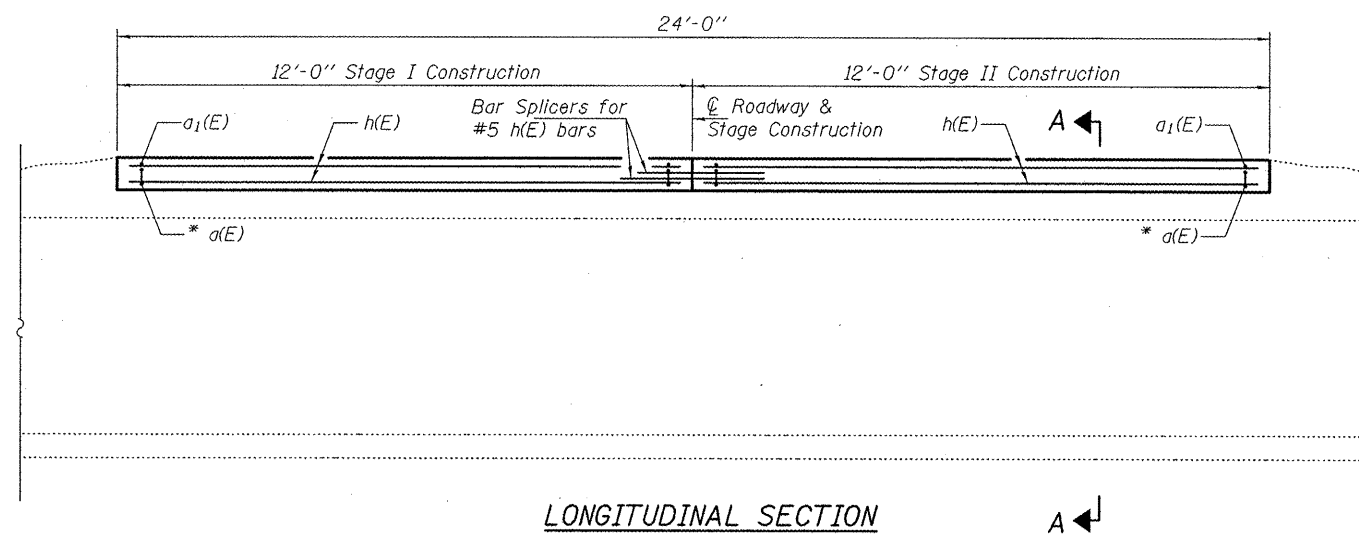
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	PLOT SCALE = 100.0000' / 1in.	CHECKED -	REVISED -
	PLOT DATE = 2/16/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

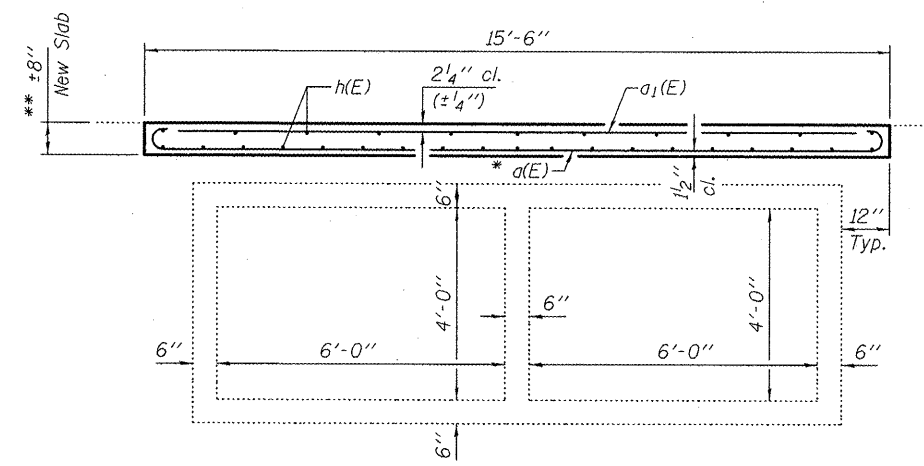
ROADWAY DETAILS

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
798	(107)	FORD	10	8
CONTRACT NO. 66B70				
ILLINOIS FED. AID PROJECT				

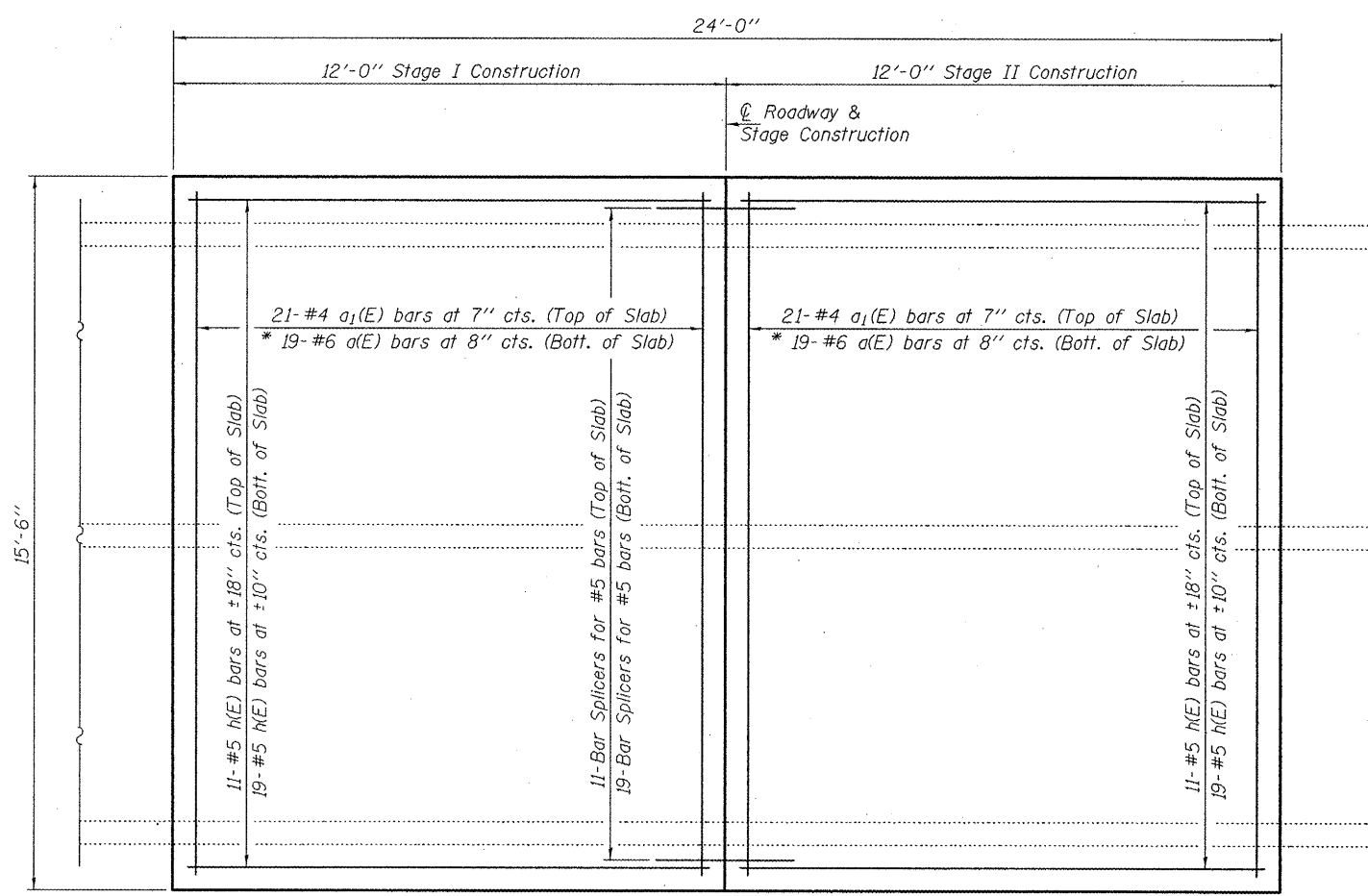


LONGITUDINAL SECTION A-A



SECTION A-A

- * Tilt hook of a(E) bars if necessary to maintain clearance.
- ** Remove 8" of existing overlay and replace with 8" concrete slab as shown. Removal is to be limited to the 8" shown. Slope to match roadway. Cost of removal included with Hot-Mix Asphalt Surface Removal.



PLAN

GENERAL NOTES

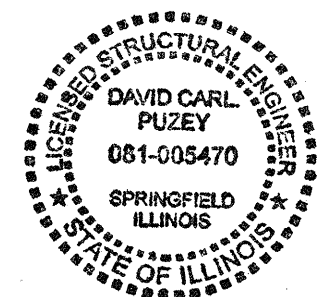
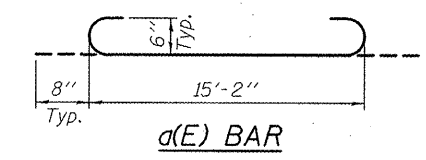
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work. Reinforcement bars designated (E) shall be epoxy coated. The slab surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

DESIGN STRESSES

FIELD UNITS
 $f'c = 3,500 \text{ psi}$
 $f_y = 60,000 \text{ psi (Reinf.)}$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	38	#6	16'-6"	U
a1(E)	42	#4	15'-2"	—
h(E)	60	#5	11'-8"	—
Bar Splicers			Each	30
Hot-Mix Asphalt Surface Removal			Sq. Yd.	41.3
Reinforcement Bars, Epoxy Coated			Pound	2,100
Concrete Superstructure			Cu. Yd.	9.2

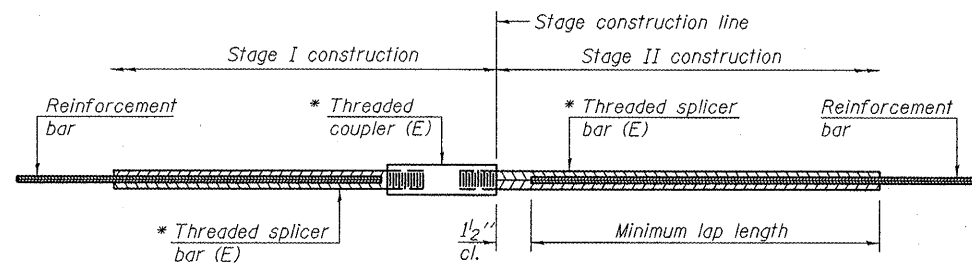


DESIGNED	<i>[Signature]</i>	EXAMINED	<i>[Signature]</i>	DATE	MARCH 16, 2012
CHECKED	<i>[Signature]</i>	PASSED	<i>[Signature]</i>		
DRAWN	Kyle M. Steffen				
CHECKED	<i>[Signature]</i>				

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & REPAIR DETAILS
 ILLINOIS ROUTE 115 OVER STREAM
 SN 027-2506
 SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
798	(107)I	FORD	10	9
CONTRACT NO. 66870			ILLINOIS FED. AID PROJECT	



STANDARD BAR SPLICER ASSEMBLY

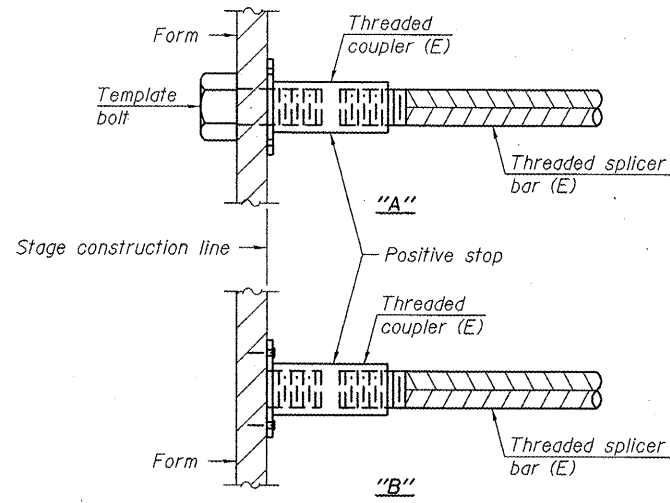
Bar size to be spliced	Minimum Lap Lengths				
	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

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

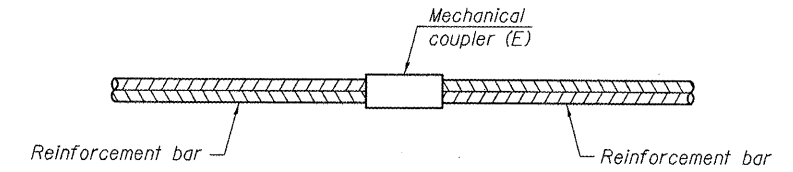
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Slab	#5	30	3



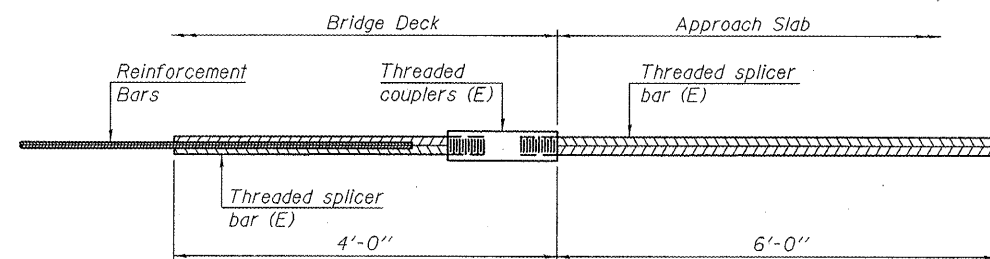
INSTALLATION AND SETTING METHODS

- "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.



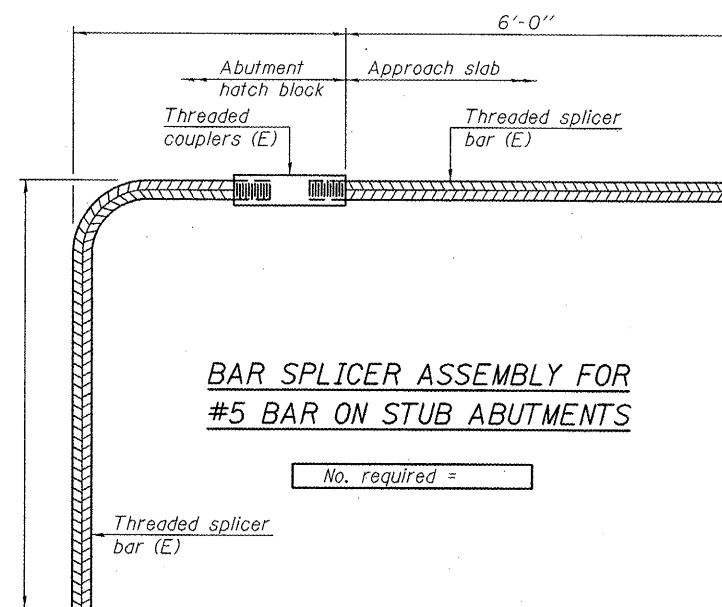
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. 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 special provision for Mechanical Splicers.
- See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 7-1-10

DESIGNED - DAB	EXAMINED	DATE - MARCH 16, 2012
CHECKED - VHV	 ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen		PASSED
CHECKED - DAB VHV	 ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
SN 027-2506

SHEET NO. 2 OF 2 SHEETS

F.A.P. RTE. 798	SECTION (107)	COUNTY FORD	TOTAL SHEETS 10	SHEET NO. 10
CONTRACT NO. 66B70			ILLINOIS FED. AID PROJECT	