CONTRACT NO. 74202

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	*	MACON	18	1

* D7 JOINT REPAIRS 2007-3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

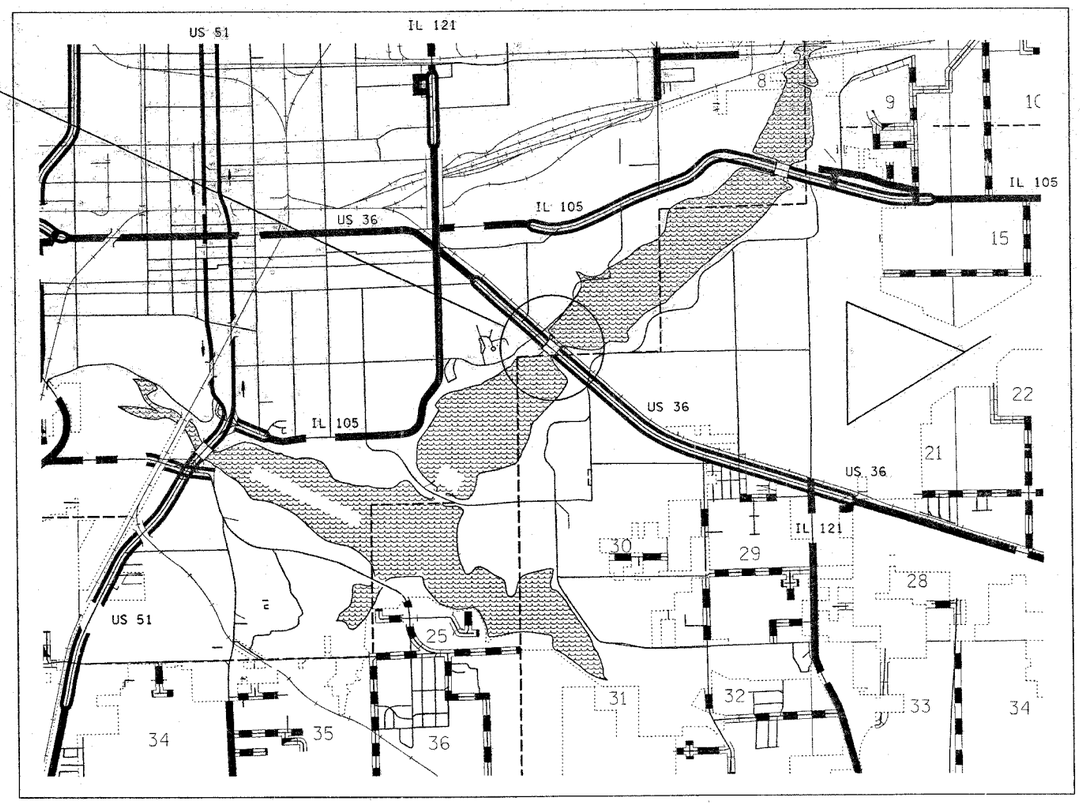
PROPOSED
HIGHWAY PLANS

FAP ROUTE 320 (US 36)
SECTION D-7 JOINT REPAIRS 2007-3

MACON COUNTY
C-97-120-06

FOR INDEX OF SHEETS, SEE SHEET NO. 2

STRUCTURE NO. 058-0020
BEGINING STA. 170+98.53
THREE SPAN STRUCTURE
CONTINUOUS STEEL PLATE GIRDERS
WITH REINFORCED CONCRETE DECK
BK. TO BK. ABUTMENT = 464'-10"
END STA. 175+63.37



D-97-074-06

LOCATION OF SECTION INDICATED THUS:- ■

100' 200' 300' — 1"= 100'
10' 20' 30' — 1"= 10'
50' 100' — 1"= 50'
50' 100' — 1"= 40'
50' 100' — 1"= 30'
50' 100' — 1"= 20'

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 29th 2007
Christine M. Reed
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
May 11, 2007
Eric E. Harm (for)
Interim ENGINEER OF DESIGN AND ENVIRONMENT
May 11, 2007
Milton R. Sees, P.E. (for)
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER : MIKE ALLEN
SQUAD LEADER :
DESIGNER : KEVIN BRADY
TELEPHONE : 217/342-3951 EX 316 OR 343

CONTRACT NO. 74202

ADT (2005) = 25,600

GROSS LENGTH = 4500'
NET LENGTH = 4500'

CONTRACT NO. 74202

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	MACON	18	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D7 JOINT REPAIRS 2007-3

INDEX OF SHEETS

LIST OF HIGHWAY STANDARDS

000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-01	AREAS OF REINFORCEMENT REBARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701101-01	OFF-ROAD OPERATIONS, MULTILANE, 45m (15') TO 600mm (24") FROM PAVEMENT EDGE
701106-01	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 45m (15') AWAY
701423-01	LANE CLOSURE, MULTILANE, WITH BARRIER, FOR SPEEDS > 45 MPH TO 55 MPH
701426-02	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEED > 45 MPH
702001-06	TRAFFIC CONTROL DEVICES
704001-03	TEMPORARY CONCRETE BARRIER
720001	SIGN PANEL MOUNTING DETAILS
720006-01	SIGN PANEL ERECTION DETAILS
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PVEMENT MARKERS

GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2007; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" INDICATED ON THE CHECK SHEET, AND "THE SPECIAL PROVISIONS" INCLUDED IN THE PROPOSAL.

THE PROJECT IS LOCATED ON US-36 IN DECATUR. STRUCTURE * 058-0020 CROSSES LAKE DECATUR IN MACON COUNTY.

THE WORK INCLUDED IN THIS PROJECT WILL CONSIST OF REMOVAL AND REPLACEMENT OF THE EXISTING NEOPRENE EXPANSION JOINTS AT BOTH ABUTMENTS WITH PREFORMED JOINT STRIP SEAL EXPANSION JOINTS AND ALL OTHER WORK NECESSARY TO COMPLETE THIS PROJECT.

THE QUANTITIES OF PAINT PAVEMENT MARKING LINE WERE COMPUTED AS FOLLOWS:

780 FEET (WHITE)

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATION AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE J.U.L.I.E. NUMBER IS 800-892-0123. A MINIMUM OF 96 HOURS ADVANCE NOTICE IS REQUESTED.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, HIGHWAY STANDARDS & GENERAL NOTES SN 058-0020

SCALE: VERT. HORIZ. DRAWN BY

DATE CHECKED BY

PLOT DATE = 3/29/2007
FILE NAME = c:\projects\74202s\sb7406psa.dgn
PLOT SCALE = 50.0000 '/ IN.
USER NAME = swortzrw

CONTRACT NO. 74202

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
642	*	MACON	18	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D7 JOINT REPAIRS 2007-3

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: SFTY-2A 100% STATE		
	50102400	CONCRETE REMOVAL	CU YD	25.6	25.6		
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	25.6	25.6		
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5490	5490		
	50800515	BAR SPLICERS	EACH	80	80		
	52000110	PREFORMED JOINT STRIP SEAL	FOOT	138	138		
	67100100	MOBILIZATION	L SUM	1	1		
	70300100	SHORT-TERM PAVEMENT MARKING	FOOT	312	312		
	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	9172	9172		
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	3058	3058		
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	1187.5	1187.5		
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1187.5	1187.5		
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	780	780		
*	78100300	REPLACEMENT REFLECTOR	EACH	52	52		
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	260	260		
	X0322050	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL	EACH	52	52		
	X7010825	TRAFFIC CONTROL AND PROTECTION, STANDARD 701423 (SPECIAL)	L SUM	1	1		
	Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
	Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2		

*SPECIALTY ITEMS

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SN 058-0020

SCALE: VERT. HORIZ.

DRAWN BY

DATE

CHECKED BY

CONTRACT NO. 74202

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	*	MACON	18	4
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D7 JOINT REPAIRS 2007-3

N

X0322050 RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL

STATION	TO	STATION		EACH
160+43.90		175+77.90	(EB)	20.0
175+77.90		201+34.00	(WB)	32.0
			TOTAL =	52.0

70300220 TEMPORARY PAINT PAVEMENT MARKING LINE 4"

STATION	TO	STATION		TYPE	FOOT
160+43.90		175+77.90	(EB)	4" SOLID	1534.0
170+83.90		201+34.00	(WB)	4" SOLID	3050.0
				TOTAL =	4584.0

70400100 TEMPORARY CONCRETE BARRIER

STATION	TO	STATION		FOOT
169+57.87		175+77.90	(EB)	612.5
170+83.90		176+66.00	(WB)	575.0
			TOTAL =	1187.5

78300100 PAVEMENT MARKING REMOVAL

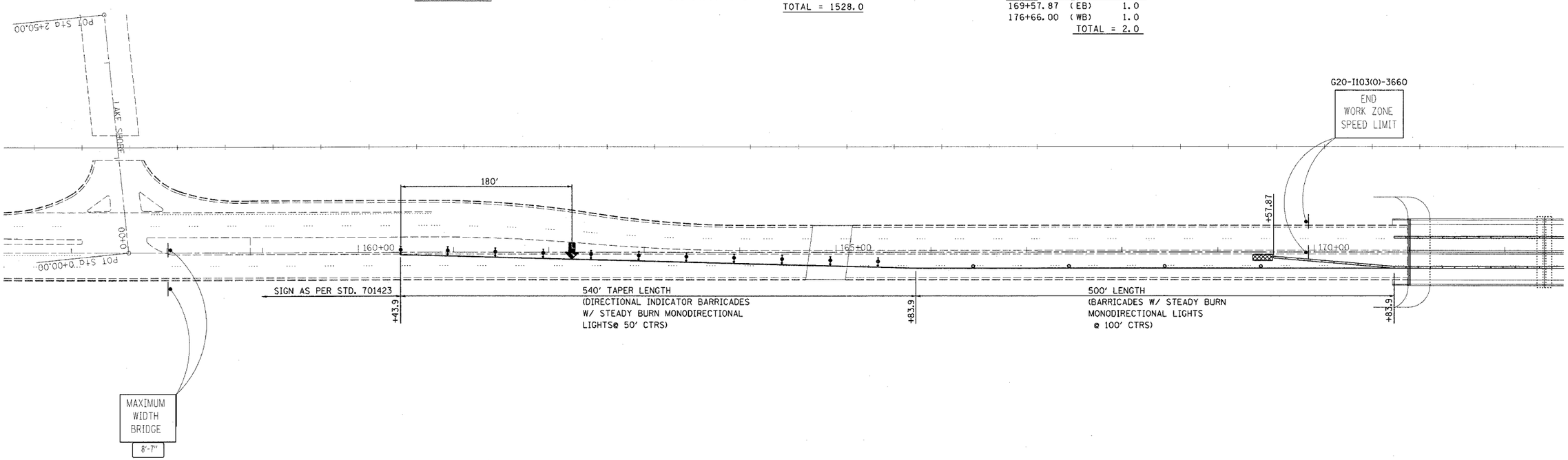
STATION	TO	STATION		TYPE	SQ FT
160+43.90		165+83.90	(EB)	4" SKIP DASH	47.0
175+77.90		201+34.00	(WB)	4" SKIP DASH	213.0
				TOTAL =	260.0

70301000 WORK ZONE PAVEMENT MARKING REMOVAL

STATION	TO	STATION		TYPE	SQ FT
160+43.90		175+77.90	(EB)	4" SOLID	511.0
170+83.90		201+34.00	(WB)	4" SOLID	1017.0
				TOTAL =	1528.0

Z0030250 IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3

STATION		EACH
169+57.87	(EB)	1.0
176+66.00	(WB)	1.0
	TOTAL =	2.0



LEGEND

- BARRICADES W/ STEADY BURN MONODIRECTIONAL LIGHT
- DIRECTION INDICATOR BARRICADES
- SIGN
- ARROW BOARD
- IMPACT ATTENUATOR

TRAFFIC CONTROL AND PROTECTION STANDARD 701423 (SPECIAL) SHALL BE IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701423 AND WITH THE DETAILS IN THE PLANS.

PRISMATIC CURB REFLECTORS ARE REQUIRED AS A PART OF TRAFFIC CONTROL AND PROTECTION STANDARD 701423 (SPECIAL). CRYSTAL MARKERS WILL BE INSTALLED ON THE RIGHT (OUTSIDE) ON THE TOP OF THE CURB AND AMBER MARKERS WILL BE INSTALLED ON THE LEFT (INSIDE) CURBS. SEE DETAIL SHEET 11.

TOTAL NUMBER OF CRYSTAL PRISMATIC CURB REFLECTORS: 12 EACH

TOTAL NUMBER OF AMBER PRISMATIC CURB REFLECTORS: 34 EACH

TOTAL NUMBER OF PRISMATIC CURB REFLECTORS: 46 EACH

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTR. & PROT. 701423 (SPECIAL) STAGE I SN 058-0020

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

PLOT DATE = 3/29/2007
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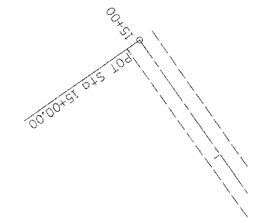
USER NAME = swarren

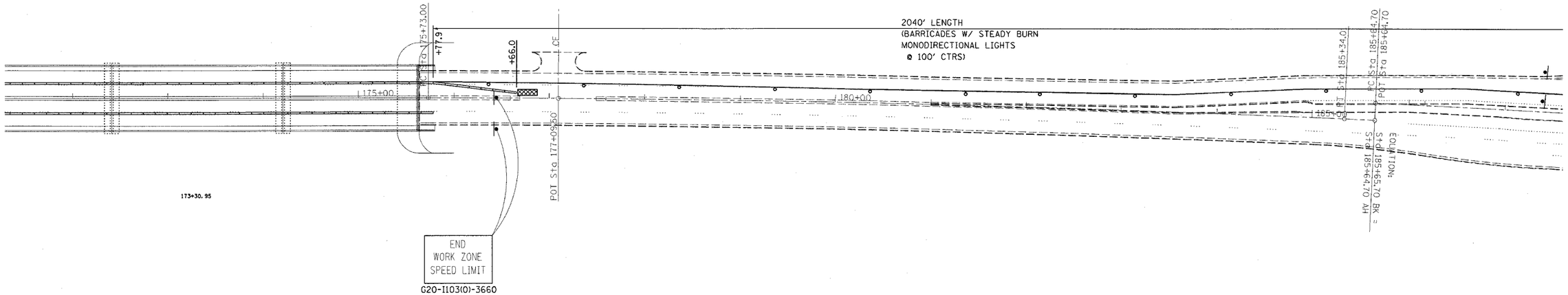
CONTRACT NO. 74202

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	•	MACON	18	5
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D7 JOINT REPAIRS 2007-3



EXIST. CURVE C1
PI STA. = 180+53.59
Δ = 2° 34' 00" (RT)
D = 0° 16' 01"
R = 21,452.43'
T = 480.59'
L = 961.01'
E = 5.38'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 175+73.00
P.T. STA. = 185+34.01



LEGEND

- BARRICADES W/ STEADY BURN MONODIRECTIONAL LIGHT
- DIRECTION INDICATOR BARRICADES
- SIGN
- ARROW BOARD
- IMPACT ATTENUATOR

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTR. & PROT.
701423 (SPECIAL)
STAGE I
SN 058-0020

SCALE: VERT.
HORIZ.
DATE
DRAWN BY
CHECKED BY

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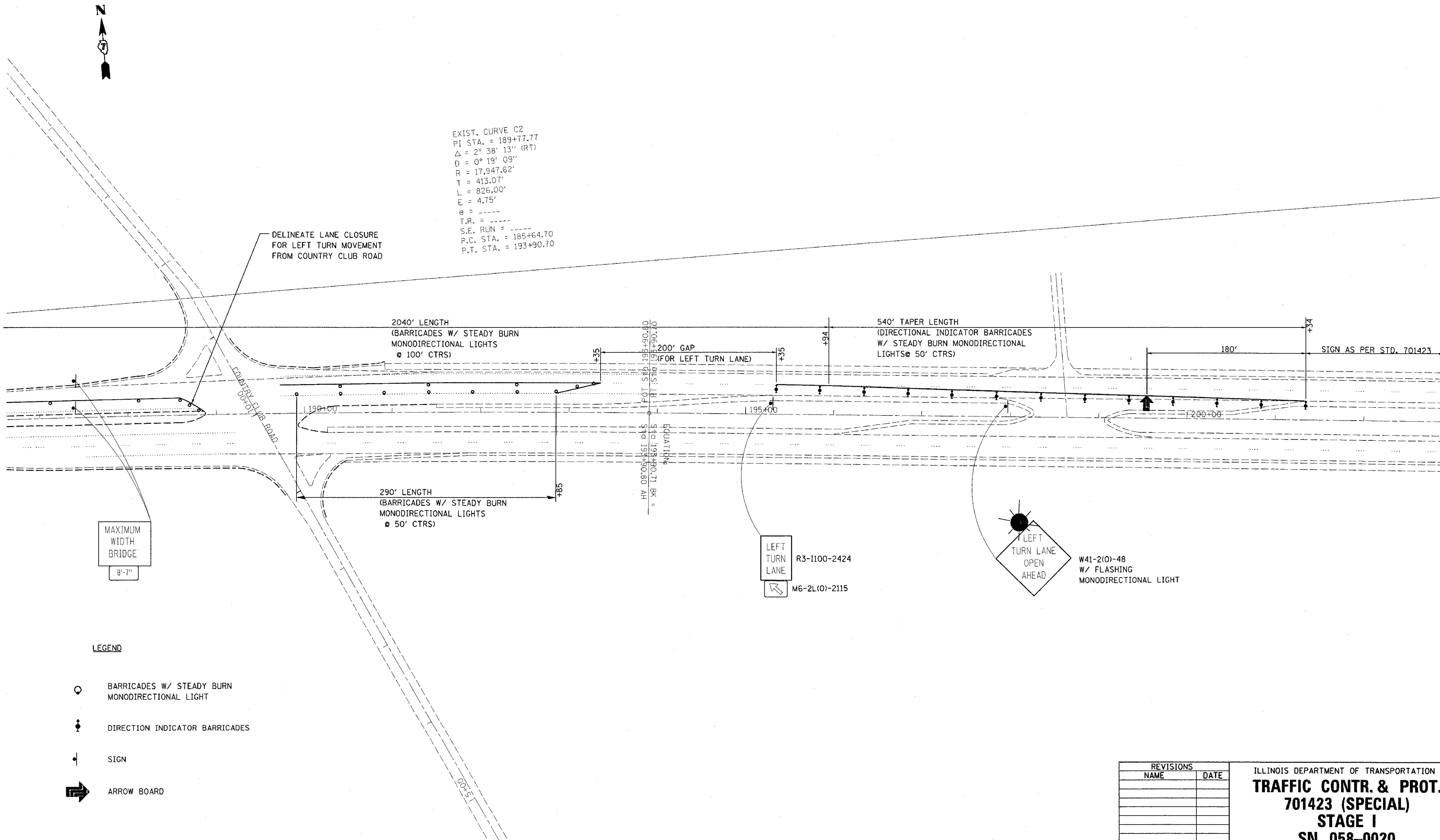
USER NAME = swarburn

CONTRACT NO. 74202

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	*	MACON	18	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D7 JOINT REPAIRS 2007-3



LEGEND

- BARRICADES W/ STEADY BURN MONODIRECTIONAL LIGHT
- DIRECTION INDICATOR BARRICADES
- SIGN
- ARROW BOARD

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTR. & PROT.
701423 (SPECIAL)
STAGE I
SN 058-0020

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

PLOT DATE = 3/29/2007
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USER NAME = swartzrw

CONTRACT NO. 74202

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	•	MACON	18	7
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D7 JOINT REPAIRS 2007-3

N

70300220 TEMPORARY PAINT PAVEMENT MARKING LINE 4"

STATION	TO	STATION		TYPE	FOOT
160+40.00		175+77.90	(EB)	4" SOLID	1538.0
170+84.00		201+34.00	(WB)	4" SOLID	3050.0
				TOTAL =	4588.0

70400200 RELOCATE TEMPORARY CONCRETE BARRIER

STATION	TO	STATION		FOOT
169+57.90		175+77.90	(EB)	612.5
170+84.00		176+65.80	(WB)	575.0
			TOTAL =	1187.5

78001110 PAINT PAVEMENT MARKING - LINE 4"

STATION	TO	STATION		TYPE	FOOT
160+43.90		165+83.90	(EB)	4" SKIP DASH	140.0
175+77.90		201+34.00	(WB)	4" SKIP DASH	640.0
				TOTAL =	780.0

70301000 WORK ZONE PAVEMENT MARKING REMOVAL

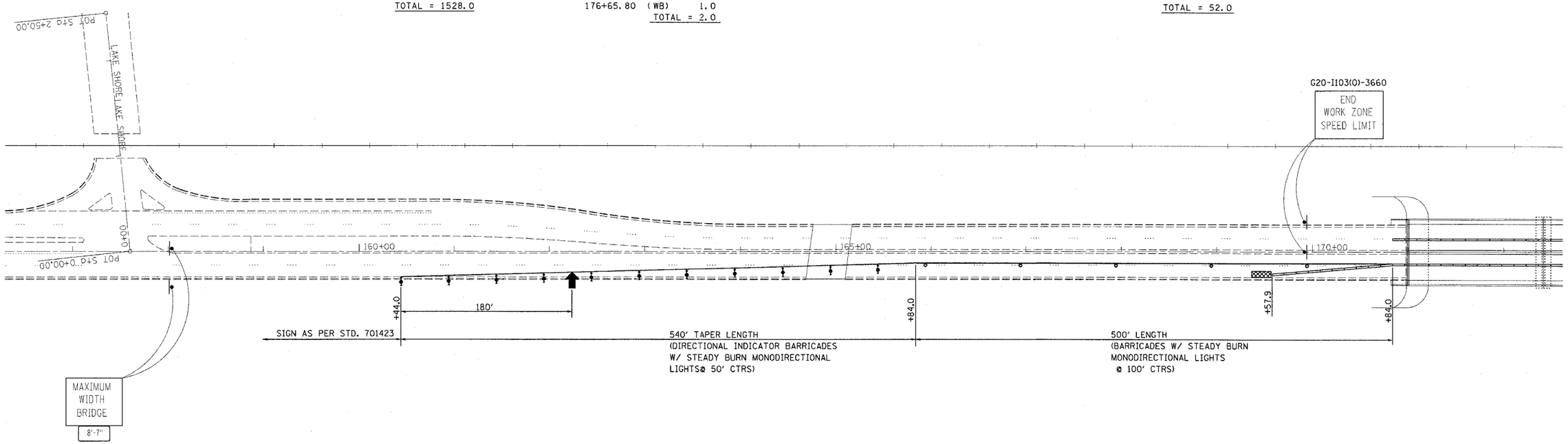
STATION	TO	STATION		TYPE	SQ FT
160+40.00		175+77.90	(EB)	4" SOLID	513.0
170+84.00		201+34.00	(WB)	4" SOLID	1017.0
				TOTAL =	1528.0

Z0030350 IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3

STATION		EACH
169+57.90	(EB)	1.0
176+65.80	(WB)	1.0
	TOTAL =	2.0

78100300 REPLACEMENT REFLECTOR

STATION	TO	STATION		EACH
160+43.90		175+77.90	(EB)	20.0
175+77.90		201+34.00	(WB)	32.0
			TOTAL =	52.0



70300100 SHORT - TERM PAVEMENT MARKING

STATION	TO	STATION		TYPE	FOOT
160+43.90		165+83.90	(EB)	4" SKIP DASH	56.0
175+77.90		201+34.00	(WB)	4" SKIP DASH	256.0
				TOTAL =	312.0

LEGEND

- BARRICADES W/ STEADY BURN MONODIRECTIONAL LIGHT
- DIRECTION INDICATOR BARRICADES
- SIGN
- ARROW BOARD
- IMPACT ATTENUATOR

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USER NAME = mercer

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

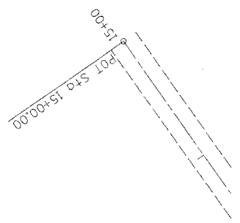
TRAFFIC CONTR. & PROT. 701423 (SPECIAL) STAGE II SN 058-0020

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

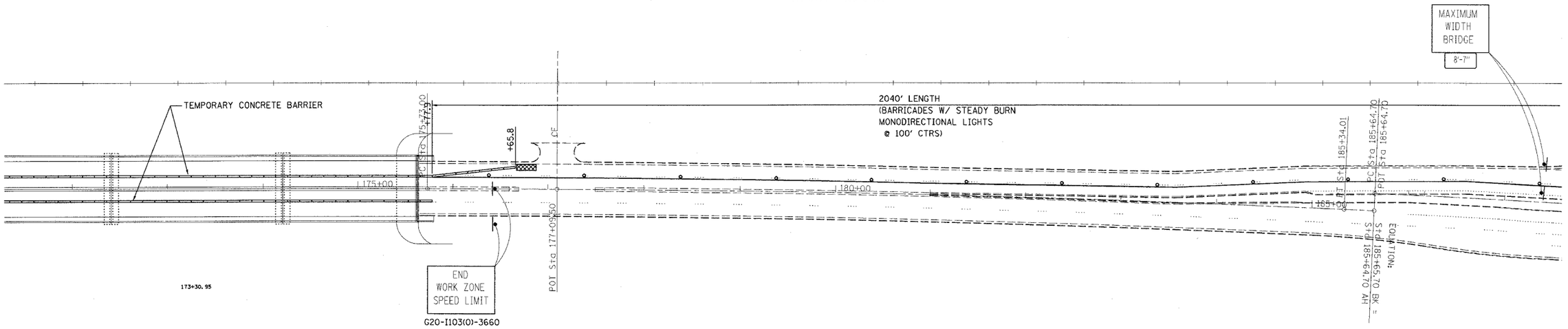
CONTRACT NO. 74202

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	*	MACON	16	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 07 JOINT REPAIRS 2007-3



EXIST. CURVE C1
PI STA. = 180+53.59
Δ = 2° 34' 00" (RT)
D = 0° 16' 01"
R = 21,452.43'
T = 480.59'
L = 961.01'
E = 5.38'
e = _____
T.R. = _____
S.E. RUN = _____
P.C. STA. = 175+73.00
P.T. STA. = 185+34.01



LEGEND

- BARRICADES W/ STEADY BURN MONODIRECTIONAL LIGHT
- DIRECTION INDICATOR BARRICADES
- SIGN
- ARROW BOARD
- IMPACT ATTENUATOR

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTR. & PROT.
701423 (SPECIAL)
STAGE II
SN 058-0020

SCALE: VERT. HORIZ.
DRAWN BY
DATE
CHECKED BY

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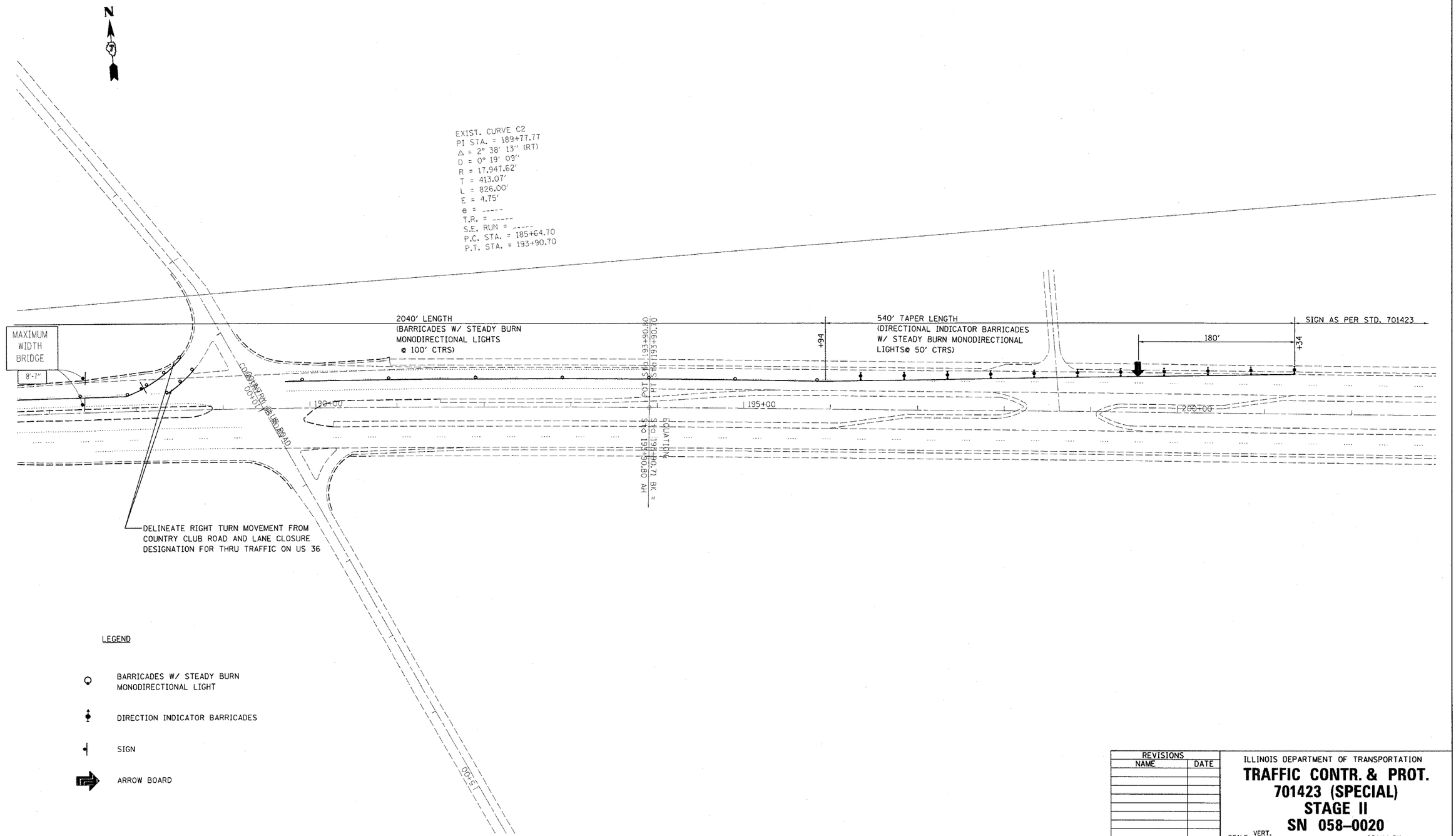
CONTRACT NO. 74202

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	•	MACON	16	9
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D7 JOINT REPAIRS 2007-3



REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTR. & PROT.
701423 (SPECIAL)
STAGE II
SN 058-0020

SCALE: VERT. HORIZ.
DRAWN BY
DATE
CHECKED BY

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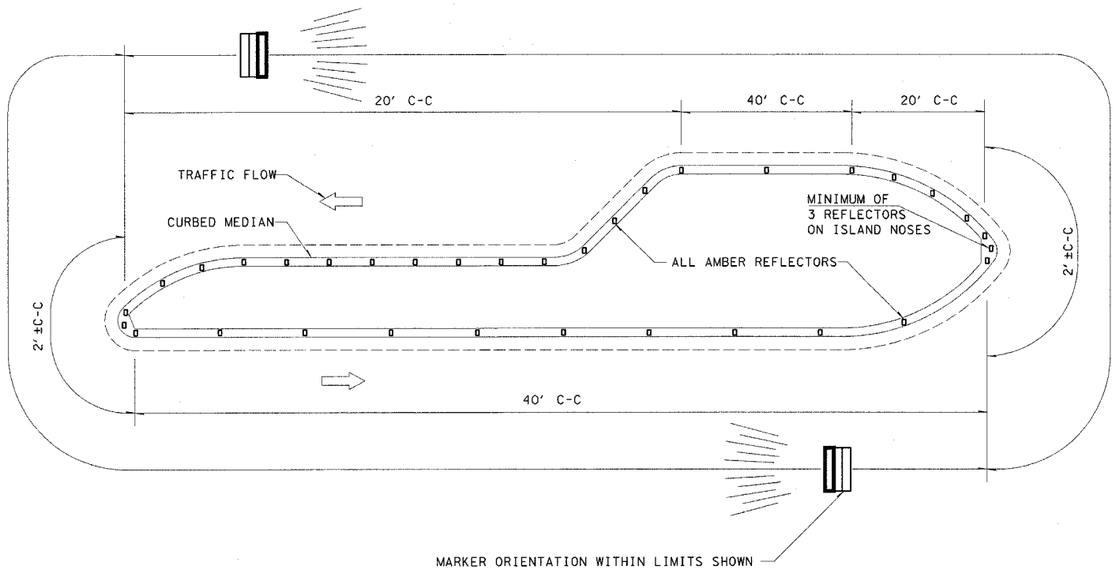
CONTRACT NO. 74202

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	•	MACON	18	10
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D7 JOINT REPAIRS 2007-3

TYPICAL PLACEMENT OF PRISMATIC REFLECTORS ON CURBS

(IN UNLIGHTED AREAS)



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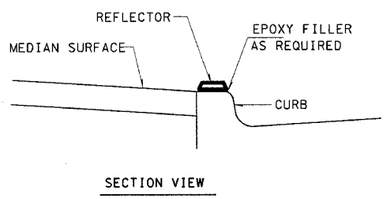
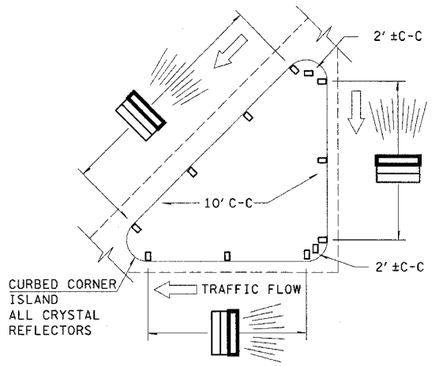


SECTION VIEW



1. PRISMATIC REFLECTORS SHALL BE MONO-DIRECTIONAL AND POSITIONED SO THAT THE REFLECTIVE FACE IS FACING THE APPROACHING TRAFFIC
2. PRISMATIC REFLECTORS SHALL BE SECURED IN PLACE WITH AN EPOXY ADHESIVE.
3. PRISMATIC REFLECTORS SHALL BE EITHER AMBER OR CRYSTAL IN COLOR.

REVISIONS	
NAME	DATE
MMO	12-99

ILLINOIS DEPARTMENT OF TRANSPORTATION

PRISMATIC REFLECTOR DETAILS SN 058-0020

SCALE: VERT. HORIZ.
DRAWN BY
DATE ISSUED: 05-04-98 CHECKED BY

EPRC

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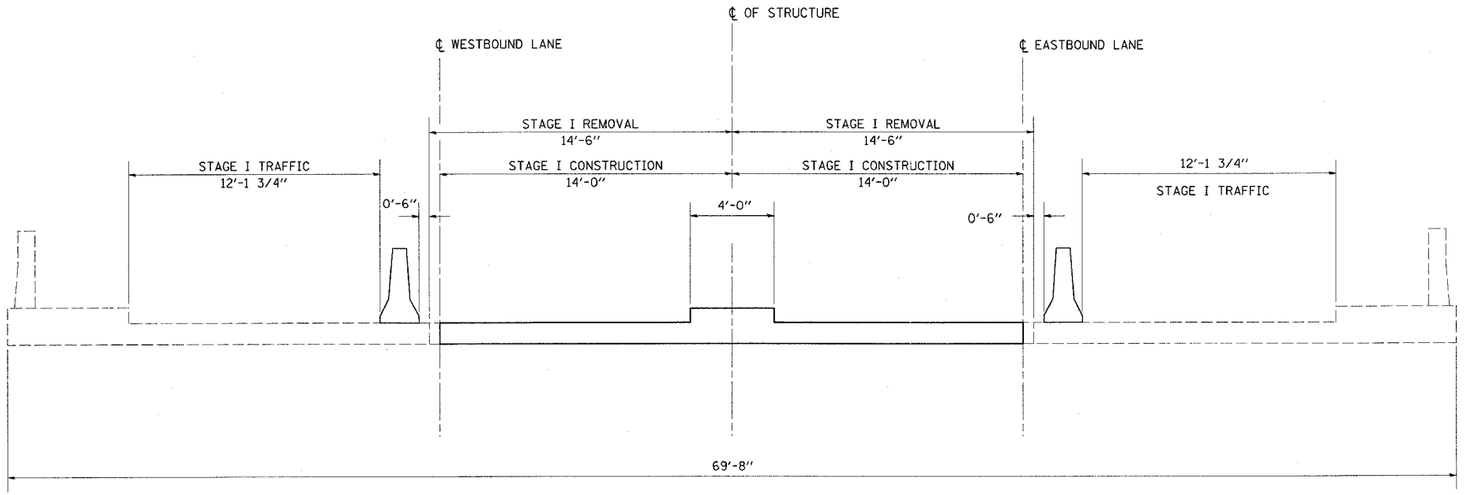
CONTRACT NO. 74202

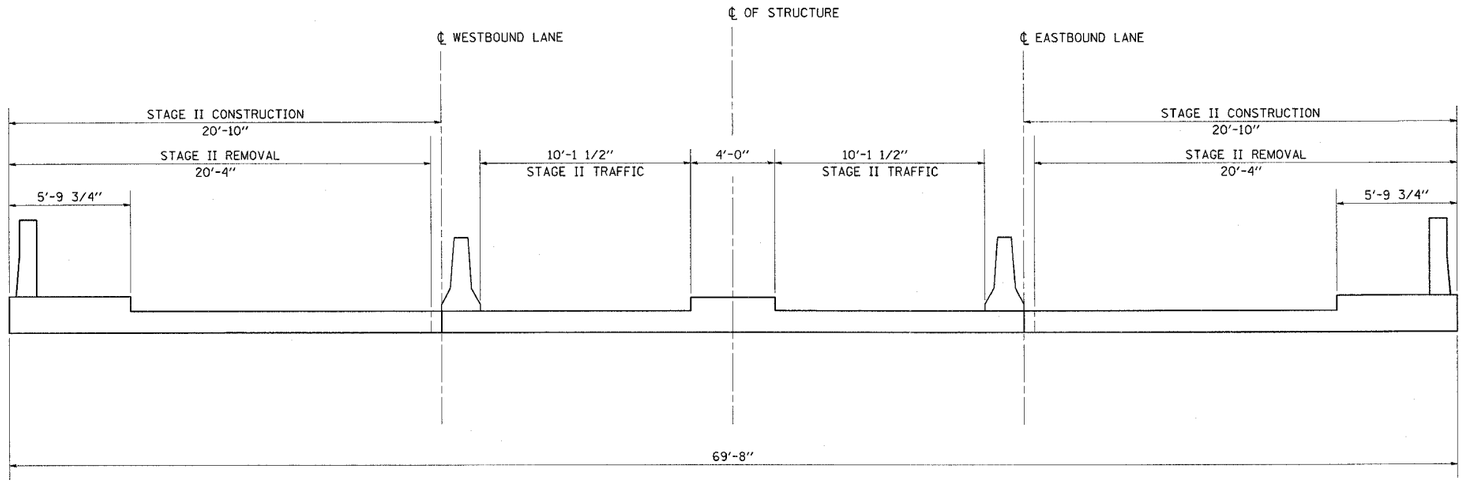
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	*	MACON	18	11
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D7 JOINT REPAIRS 2007-3

STAGE I



STAGE II



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REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTION STAGE I & II SN 058-0020

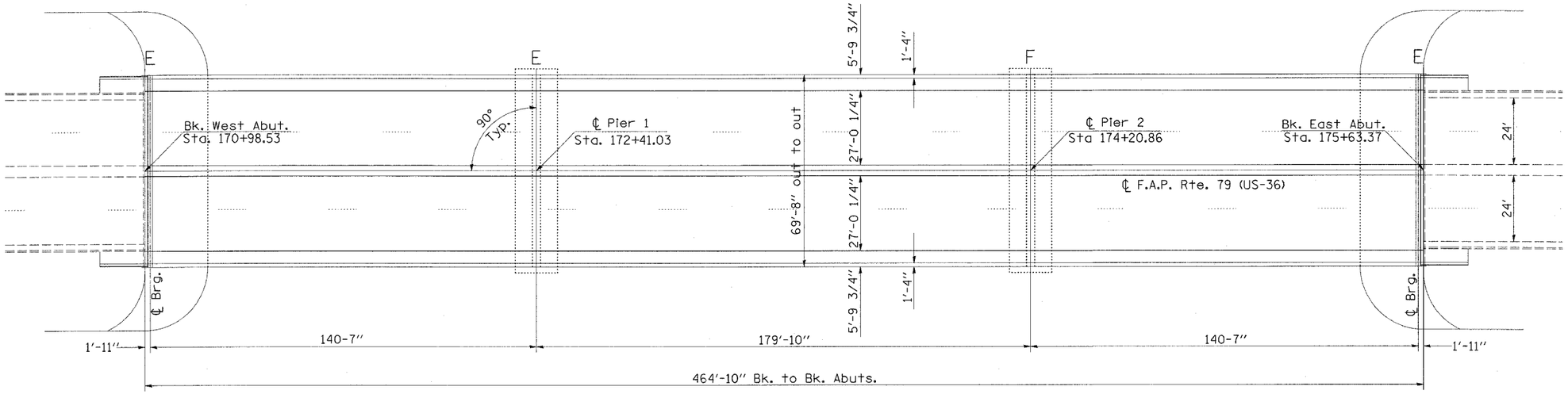
SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

CONTRACT NO. 74202

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	*	MACON	18	12
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* D7 JOINT REPAIRS 2007-3

EXISTING STRUCTURE: Structure No. 058-0020 carries US-36 over Lake Decatur. A three span continuous plate girder 69'-8" o. to o. and 464'-10" bk. to bk. of abutments built in 1956. Structural repairs completed in 1986.



GENERAL PLAN VIEW

BRIDGE GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

Plan dimensions and details relative to existing plans are subject to routine 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 based upon 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. Cost included with Concrete Removal.

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

Removal and reinstallation of one existing Type L Aluminum Railing support post at each corner of the bridge will be necessary for construction of the expansion joints. The existing handrail sections and support posts shall be reused. New bolts, bearing pads, and post support anchor assemblies as detailed in the plans are to be provided and installed for the reinstallation of the supports. This work and all materials shall be included in the contract unit price for Concrete Superstructure.

Removal of all existing expansion joints shall be included in the contract unit price for Concrete Removal.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. 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 included in the pay item covering the removal of the existing concrete.

Removal and reinstallation of the conduit attached to the outside face of the parapet will be necessary to construct the expansion joints. The Contractor will be responsible for coordinating with the utility in performing the removal and reinstallation of the conduit. The Contractor shall use care during concrete removal so as not to damage the conduit. The cost of this work, including the mounting hardware to reinstall the conduit, shall be included in the unit price for Concrete Superstructure. Following is the contact information for the utility:

Name:	Robert Davis	Business:	(217)424-4232
Title:	Construction Supervisor	Mobile:	(217)519-0689
Company:	Insight Communications	Business Fax:	(217)429-0170
	1275 North Water Street		
	Decatur, IL 62521		

TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
CONCRETE REMOVAL	CU. YD.	25.6
PREFORMED JOINT STRIP SEAL	FOOT	138
CONCRETE SUPERSTRUCTURE	CU. YD.	25.6
REINFORCEMENT BARS, EPOXY COATED	POUND	5490
BAR SPLICERS	EACH	80

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL PLAN VIEW
BRIDGE GENERAL NOTES
BILL OF MATERIALS
SN 058-0020

SCALE: VERT. HORIZ.
DATE
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CONTRACT NO. 74202

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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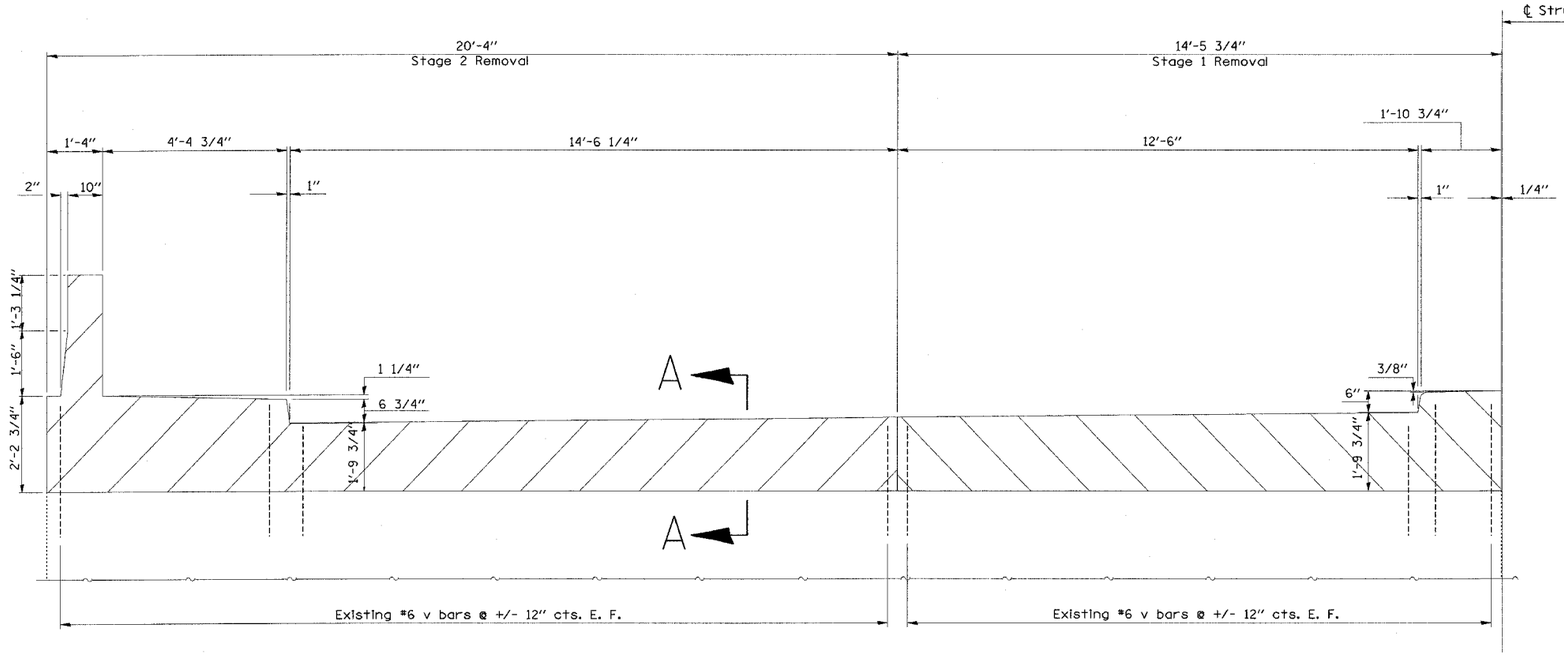
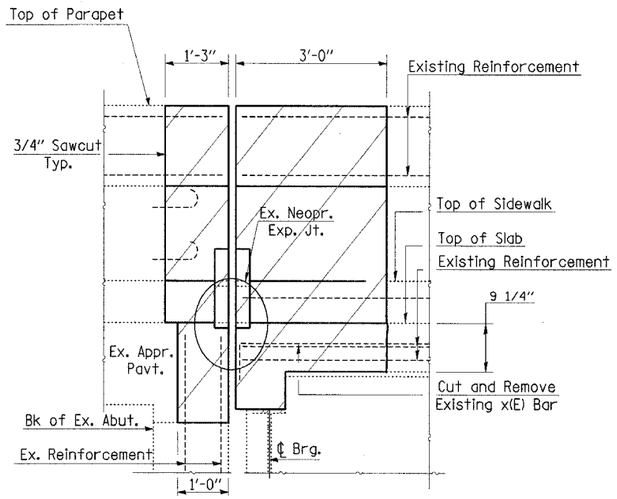
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

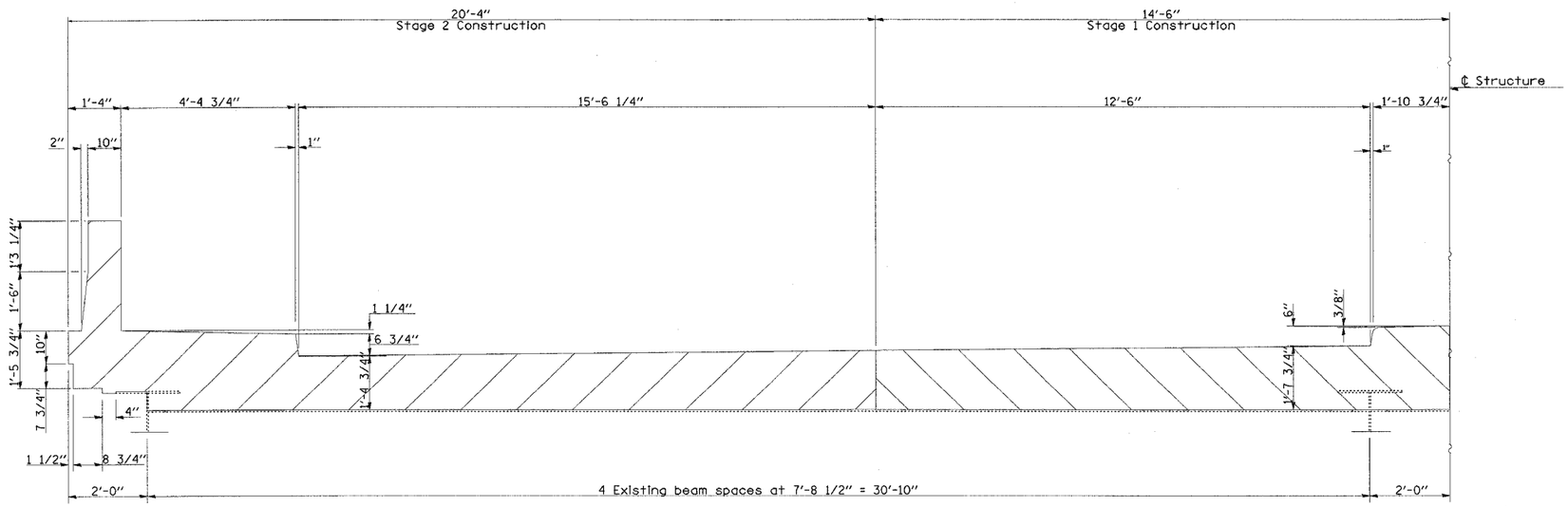
• D-7 JOINT REPAIRS 2007-3



HALF ELEVATION
(ABUTMENT)



EXISTING EXPANSION JOINT
SECTION A-A



HALF ELEVATION
(DECK)

Note: 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. Cost included with Concrete Removal.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

CONCRETE REMOVAL
SN 058-0020

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CONTRACT NO. 74202

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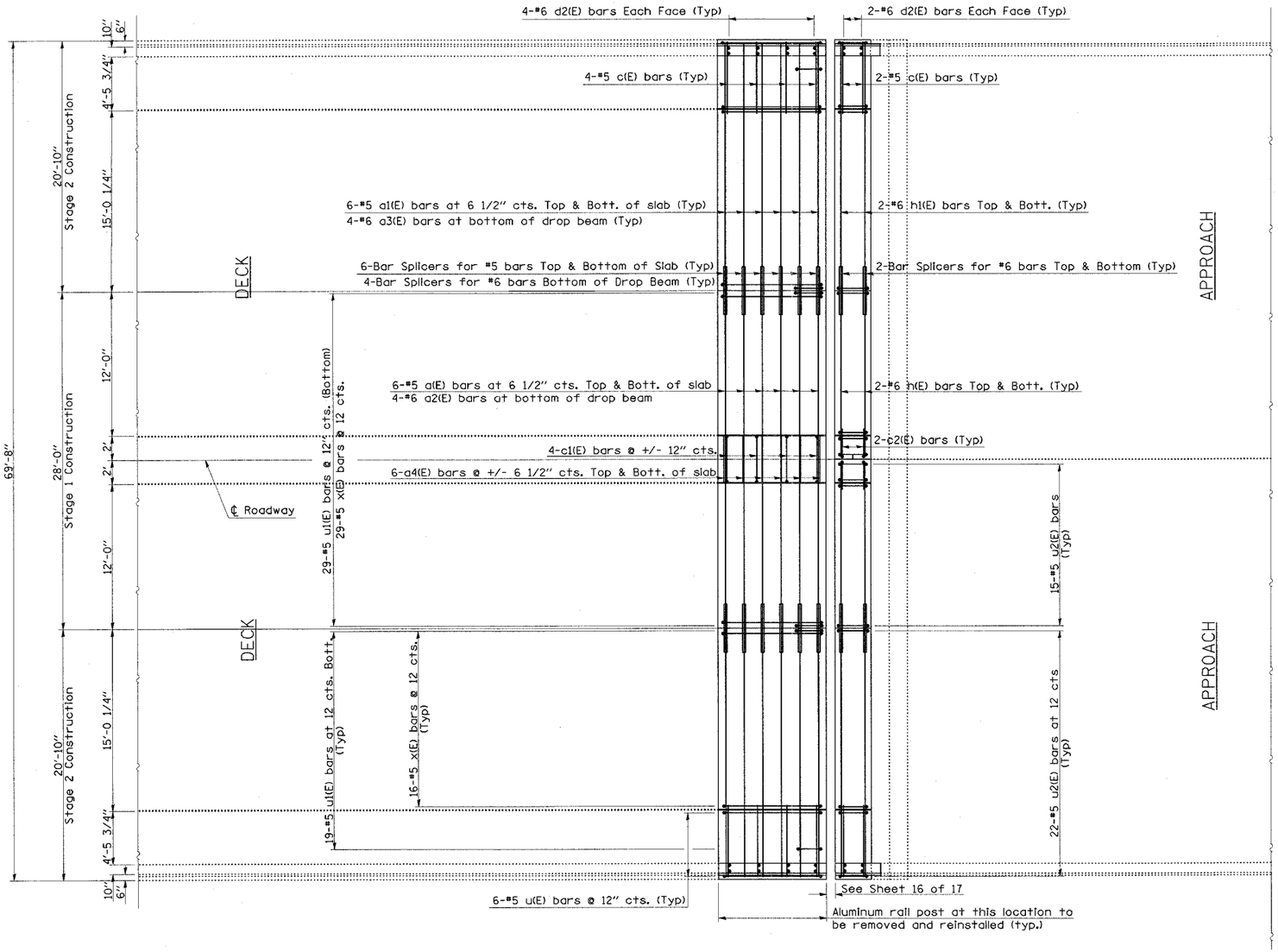
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D-7 JOINT REPAIRS 2007-3

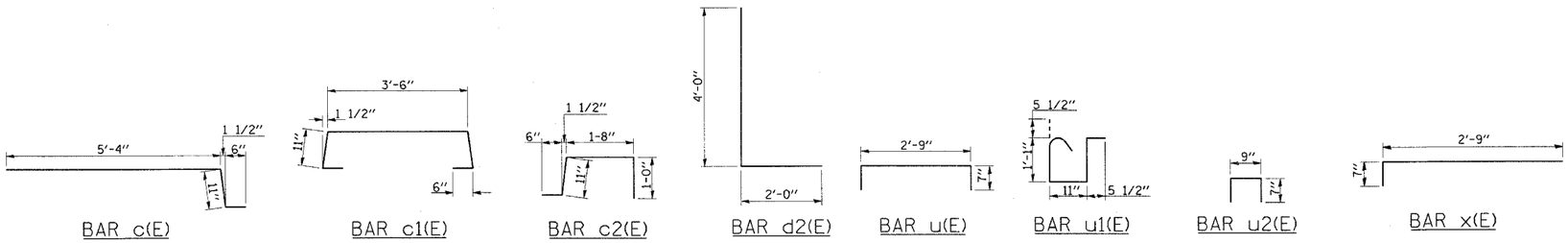


PLAN VIEW OF DECK/ABUTMENT REINFORCEMENT DETAIL

BAR LIST - PER ABUTMENTS - STR #058-0020

BAR	NUMBER OF BARS STAGE I	NUMBER OF BARS STAGE II	TOTAL	SIZE	LENGTH	SHAPE
a(E)	12		12	#5	27'-9"	
a1(E)		24	24	#5	20'-7"	
a2(E)	4		4	#6	27'-9"	
a3(E)		8	8	#6	18'-7"	
a4(E)	12		12	#5	4'-0"	
c(E)		12	12	#5	6'-9"	
c1(E)	4		4	#5	6'-4"	
c2(E)	4		4	#5	4'-1"	
d2(E)		24	24	#6	6'-0"	
h(E)	8		8	#6	13'-8"	
h1(E)		8	8	#6	20'-7"	
u(E)		12	12	#5	3'-11"	
u1(E)	29	38	67	#5	4'-0"	
u2(E)	30	44	74	#5	1'-11"	
x(E)	29	32	61	#5	3'-4"	
CONCRETE REMOVAL					CU. YD.	25.6
REINFORCEMENT BARS (EPOXY COATED)					POUND	5490
CONCRETE SUPERSTRUCTURE					CU. YD.	25.6

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED



REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT REINFORCEMENT DETAILS SN 058-0020

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DATE
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CHECKED BY

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CONTRACT NO. 74202

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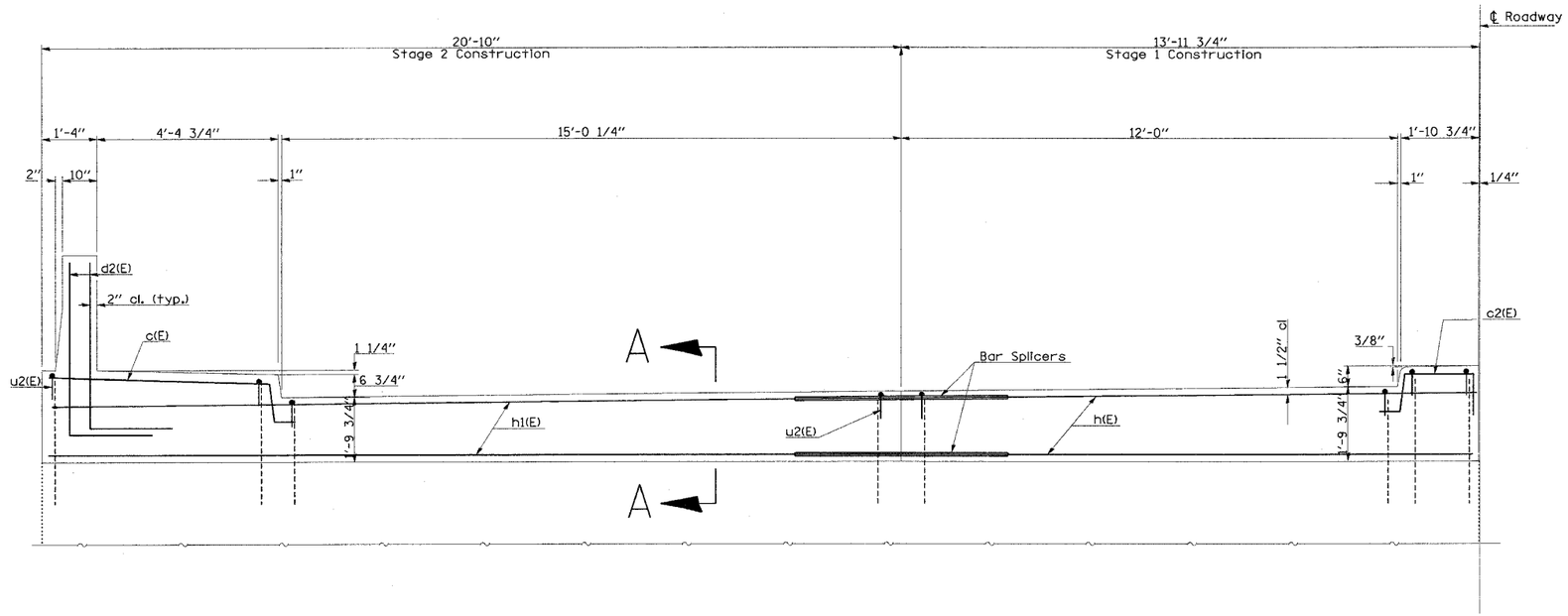
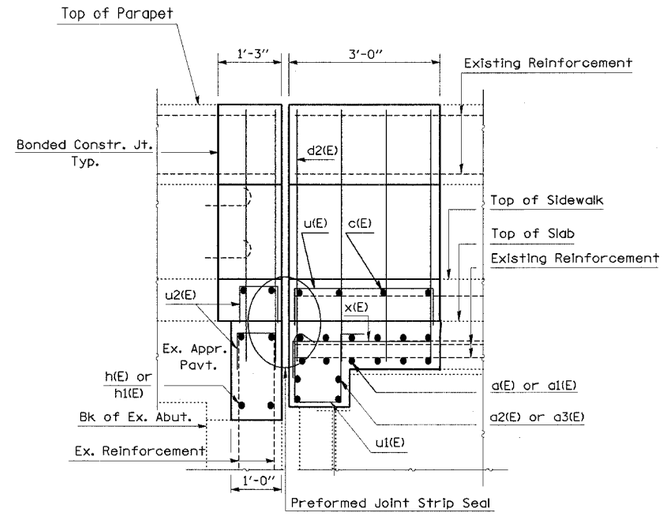
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D-7 JOINT REPAIR 2007-3

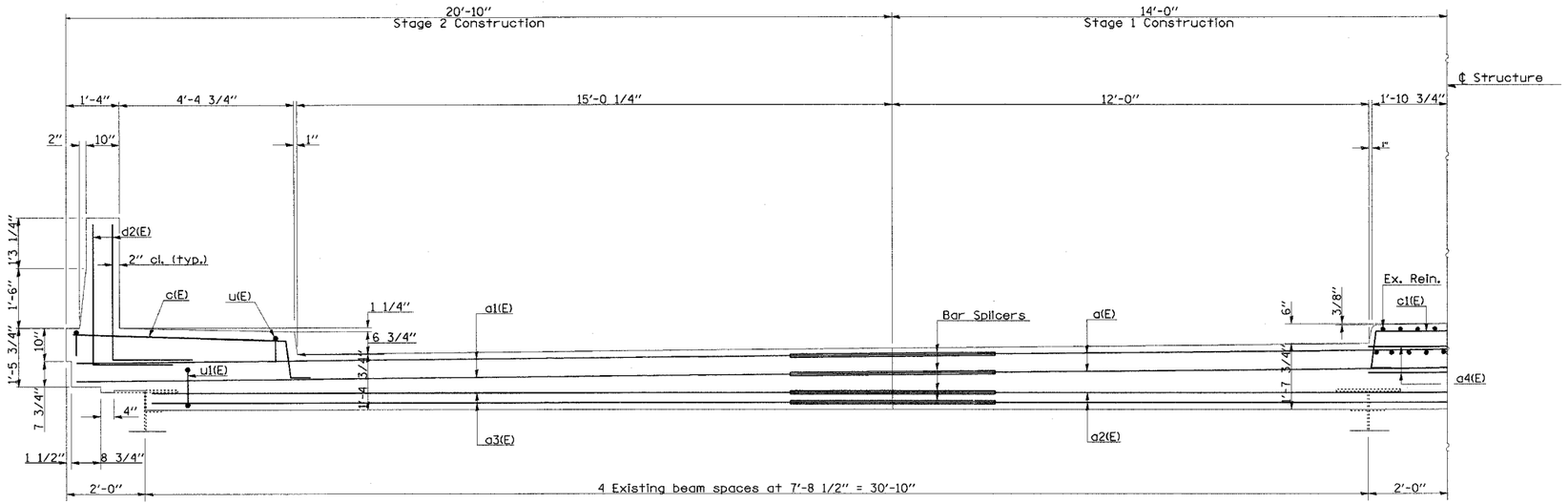


HALF ELEVATION
(ABUTMENT)



PROPOSED EXPANSION JOINT

SECTION A-A



HALF ELEVATION
(DECK)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT REINFORCEMENT DETAILS SN 058-0020

SCALE: VERT.
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DATE

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CONTRACT NO. 74202

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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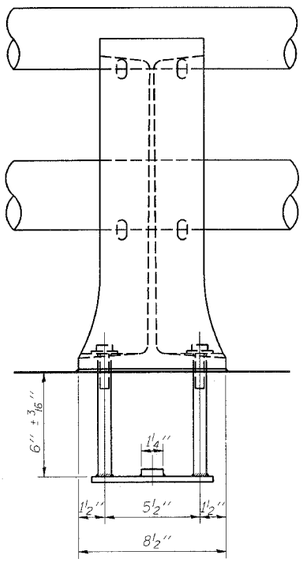
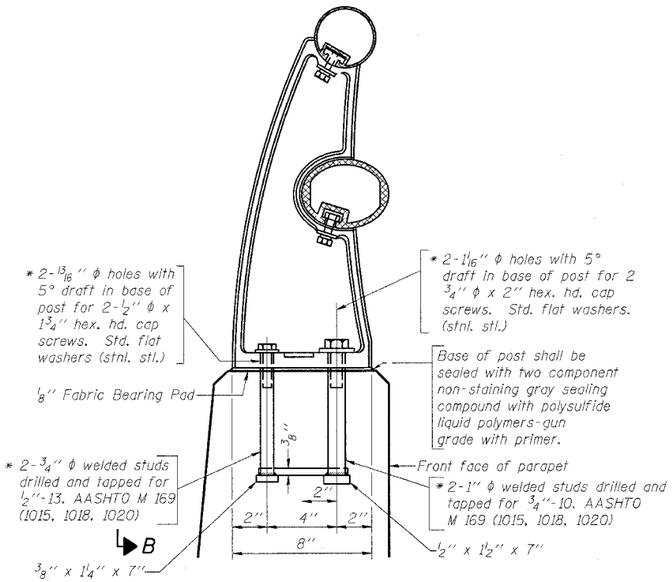
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D7 JOINT REPAIRS 2007-3



NOTE: Aluminum railing support post are to be removed, cleaned and reinstalled during construction. New bolts, bearing pads, and post support anchor assemblies are to be provided. (4 Locations)



* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and epoxy grouting stainless steel anchor rods of the same diameter and grade as the specified cap screws. Embedment shall be according to the manufacturer's specifications.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

RAIL POST SUPPORT ANCHOR DETAILS SN 058-0020

SCALE: VERT. HORIZ.

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DATE

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PLOT DATE = 3/29/2007
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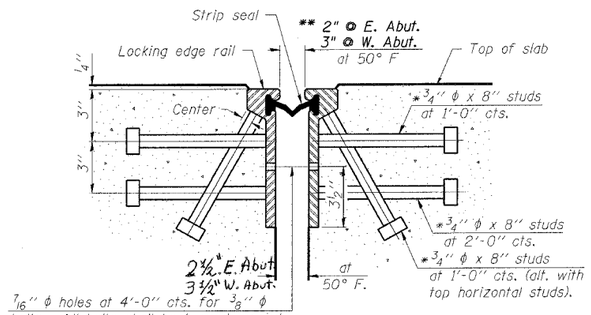
CONTRACT NO. 74202

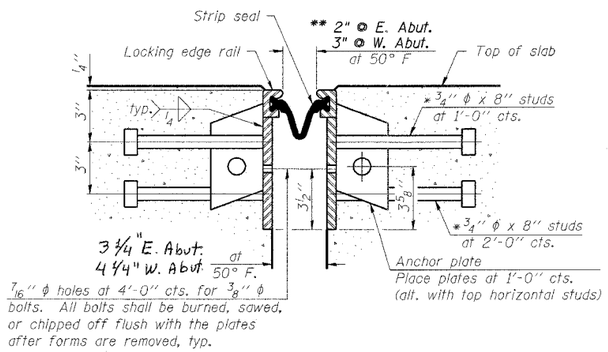
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	•	MACON	18	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D7 JOINT REPAIRS 2007-3

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

** When joint is fixed, dimension is set at 1 1/2".





Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

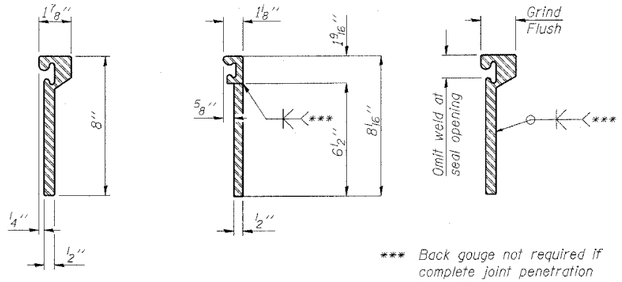
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

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

SECTION THRU ROLLED RAIL JOINT

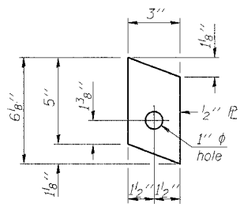
SECTION THRU WELDED RAIL JOINT



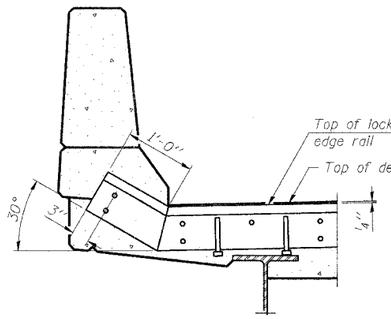
ROLLED (EXTRUDED) RAIL

WELDED RAIL

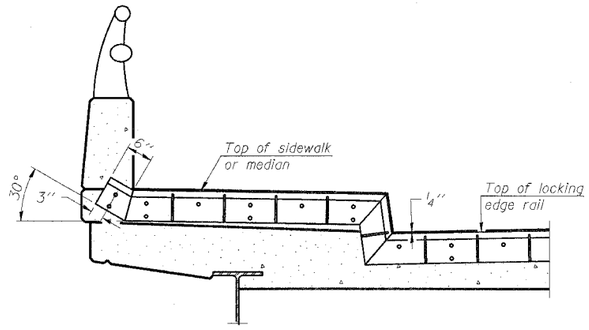
*** Back gouge not required if complete joint penetration is verified by mock-up.



ANCHOR ℄ (for welded rail)



AT PARAPET



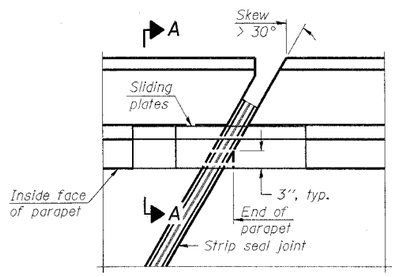
AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

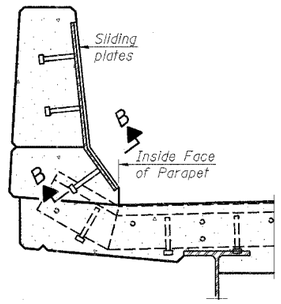
LOCKING EDGE RAILS

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.



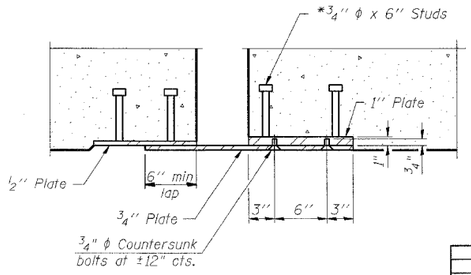
PLAN



SECTION A-A

POINT BLOCK DETAILS
(for skews > 30°)

TYPICAL END TREATMENTS



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	138'

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL SN 058-0020

SCALE: VERT. HORIZ.

DATE

DRAWN BY

CHECKED BY

EJ-SSJ 11-1-06

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CONTRACT NO. 74202

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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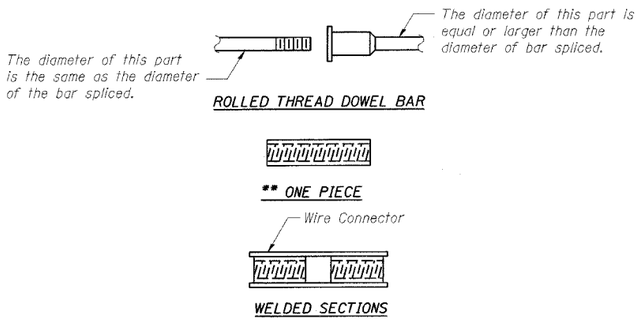
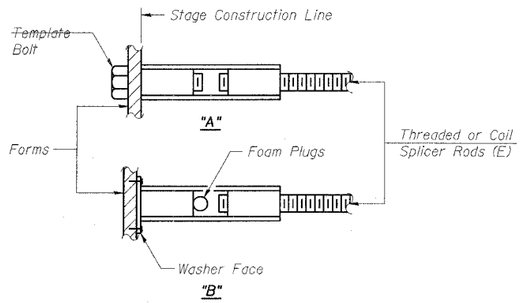
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• D7 JOINT REPAIRS 2007-3



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



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.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

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

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

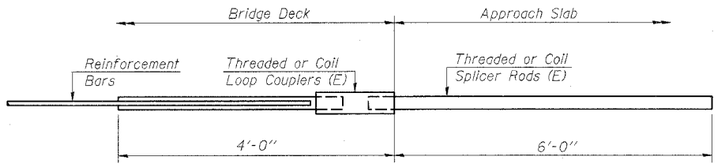
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times fy \times A_t$

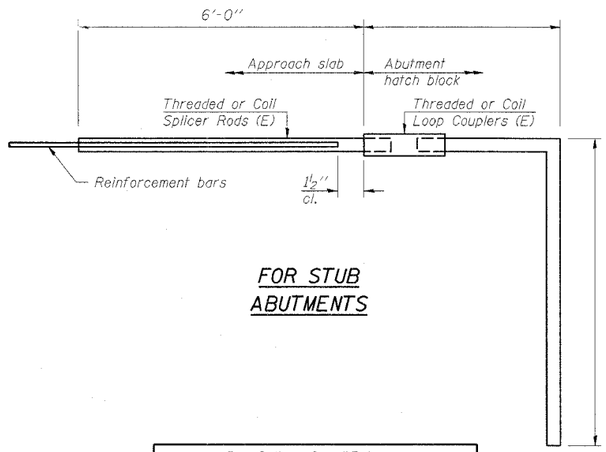
Where fy = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



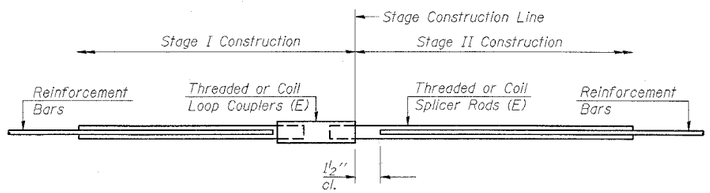
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location
*5	48.0	a(E)/a1(E) bars
*6	16.0	a2(E)/a3(E) bars
*6	16.0	h(E)/h1(E) bars

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY DETAILS SN 058-0020

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

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