

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

FAP ROUTE 542 (IL 61)  
SECTION (105B)I-1  
MCDONOUGH COUNTY  
**EMERGENCY BRIDGE BEAM REPLACEMENTS**  
C-94-139-07

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	(105B)I-1	MCDONOUGH	13	1
FED. ROAD DIST. NO.	IL 61	CONTRACT NO. 68760		

**INDEX OF SHEETS**

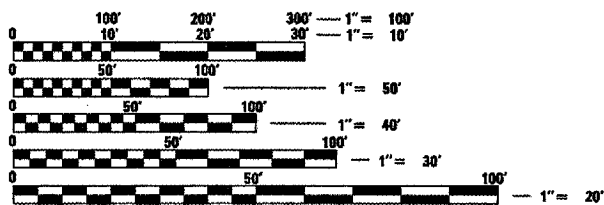
- 1 COVER SHEET
- 2 COMMITMENTS & GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- 4 TYPICAL SECTIONS
- 5 SCHEDULE OF QUANTITIES
- 6 TRAFFIC STAGING PLAN
- 7 STAGE REMOVAL & CONSTRUCTION
- 8 PLAN AND ELEVATION
- 9-13 BEAM DETAILS

**LIST OF STANDARDS**

- 635006-02 701301-02
- 635011-01 701901
- 701011-01 701321-09
- 701006-02 704001-04

**DESIGN DESIGNATION**

- ADT = 1500 (2006)
- MU = 60
- SU = 100



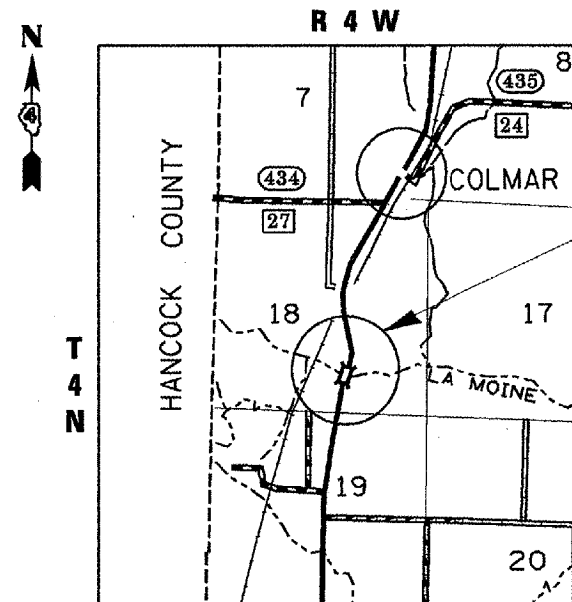
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

**SQUAD LEADER: NICHOLAS JACK**  
**PROJECT DESIGNER: GEORGE RAMIA**

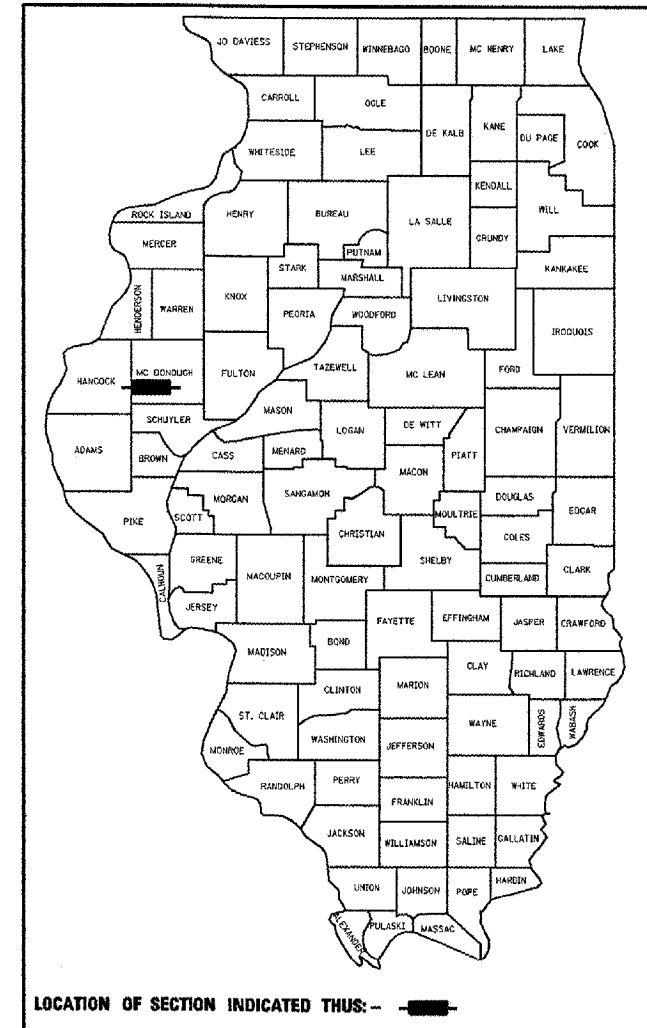
CONTRACT NO. 68760  
CATALOG NO. 022500 000

GROSS LENGTH OF PROJECT 745.5 FT (0.141 MILES)  
NET LENGTH OF PROJECT 745.5 FT (0.141 MILES)



PROPOSED IMPROVEMENT

D-94-095-07



**DESCRIPTION:**  
THE PROPOSED IMPROVEMENT CONSISTS OF THE EMERGENCY BRIDGE REMOVAL AND REPLACEMENT OF 11 BEAMS ON STRUCTURE 055-0010 CARRYING IL 61 OVER LAMOINE RIVER AT STA. (758+83.5 old plans) 286+11.8 1 MILE SOUTH OF COLMAR

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 007 24 20 07

*[Signature]*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 20 07  
*[Signature]*  
ENGINEER OF DESIGN AND ENVIRONMENT

December 7 20 07  
*[Signature]*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

# COMMITMENTS

No commitments have been made for this project.

## BITUMINOUS CONCRETE MIXTURE REQUIREMENTS

The following mixture requirements are applicable for this Project: Contract 68760

IL 61 over the Lamoine River

Mixture Use(s):	Sand Mix/Leveling Binder	Surface
AC/PG:	SBS or SBR PB 70-22	64-22
RAP % (Max)**:	0%	15%
Design Air Voids:	2.5% @ N=50	4.0% @ N=50
Mixture Composition: (Gradation Mixture)	IL 4.75	IL 9.5 or 12.5
Friction Aggregate:	N/A	Mix D

\*\* If RAP option is selected, the asphalt cement grade may need to be adjusted; this will be determined by the Materials Engineer.

Notes: Individual lift thickness will be no less than 3 X nominal maximum aggregate size and no more than 6 X nominal maximum aggregate size.

The asphalt sand seal protection layer specified in Section 581 of the Standard Specifications shall be omitted and replaced with Leveling Binder (Hand Method), N50.

The Leveling Binder (Hand Method), N50 will be paid for separately by the ton.

# GENERAL NOTES

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

## ENVIRONMENTAL REVIEWS

Prior to the use of any proposed borrow areas, use areas (temporary access roads, detours, run-arounds, etc.) and/or waste areas, the Contractor shall file the required environmental resource request surveys according to Section 107.22 of the Standard Specifications. These surveys are required in order for the Department to conduct cultural and biological resource surveys for the proposed site.

Prior to any waste materials being removed from the construction site the required environmental resource surveys will need to be obtained and filed by the Contractor. Excess waste products removed from the construction site shall be disposed of as required in Section 202.03 of the Standard Specifications.

Any protruding metal bars shall be removed prior to the disposal of broken concrete at approved disposal sites.

The required environmental resource documentation shall include the following:

- \* BDE Form 2289 (Environmental Survey Request)
- \* A location map showing the size limits and location of the use area
- \* Signed property owner agreement form-D4 P10100
- \* Color photographs depicting the use area
- \* Borrow Area Entry Agreement form-D4 P10101

Please note that a minimum of two weeks shall be allowed for the District to obtain the required environmental clearances.

## ENGINEERS FIELD OFFICE

Add the following sentence to the end of paragraph 670.02 (i) and 670.04 (e):

All of the telephone lines provided shall have unpublished numbers.

FILE NAME = c:\projects\1161bridge\plan81.dgn	USER NAME = mcfadden,jk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>COMMITMENTS &amp; GENERAL NOTES</b>	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	PLOT SCALE = 100.0000' / IN.	DRAWN -	REVISED -			542	(1058)-1	MCDONOUGH	13	2	
	PLOT DATE = 10/19/2007	CHECKED -	REVISED -			CONTRACT NO. 68760					
		DATE -	REVISED -			SHEET NO. 13 OF 2 SHEETS					

# SUMMARY OF QUANTITIES

		100% STATE SAFETY-2A McDONOUGH COUNTY		
CODE NO.	ITEM	UNIT	RURAL	TOTAL
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	48	48
40600525	LEVELING BINDER (HAND METHOD), N50	TON	13	13
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	44	44
44001005	HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	70	70
50102400	CONCRETE REMOVAL	CU YD	18.7	18.7
50300255	CONCRETE SUPERSTRUCTURE	CU YD	18.3	18.3
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	2,469	2,469
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,560	1,560
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	318	318
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	1,213	1,213
67000400	ENGINEER FIELD OFFICE, TYPE A	CAL MO	2	2
67100100	MOBILIZATION	L SUM	1	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70106700	TEMPORARY RUMBLE STRIP	EACH	6	6
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	1,600	1,600

		100% STATE SAFETY-2A McDONOUGH COUNTY		
CODE NO.	ITEM	UNIT	RURAL	TOTAL
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	533	533
70400100	TEMPORARY CONCRETE BARRIER	FOOT	762.5	762.5
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	762.5	762.5
*78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2,000	2,000
78200530	BARRIER WALL MARKERS, TYPE C	EACH	4	4
X0301424	SILICONE JOINT SEALER	FOOT	30	30
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	2,501	2,501
X0320887	POLYMER CONCRETE	CU FT	3.1	3.1
Z0001900	ASBETOS BEARING PAD REMOVAL	EACH	11	11
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 ITEM

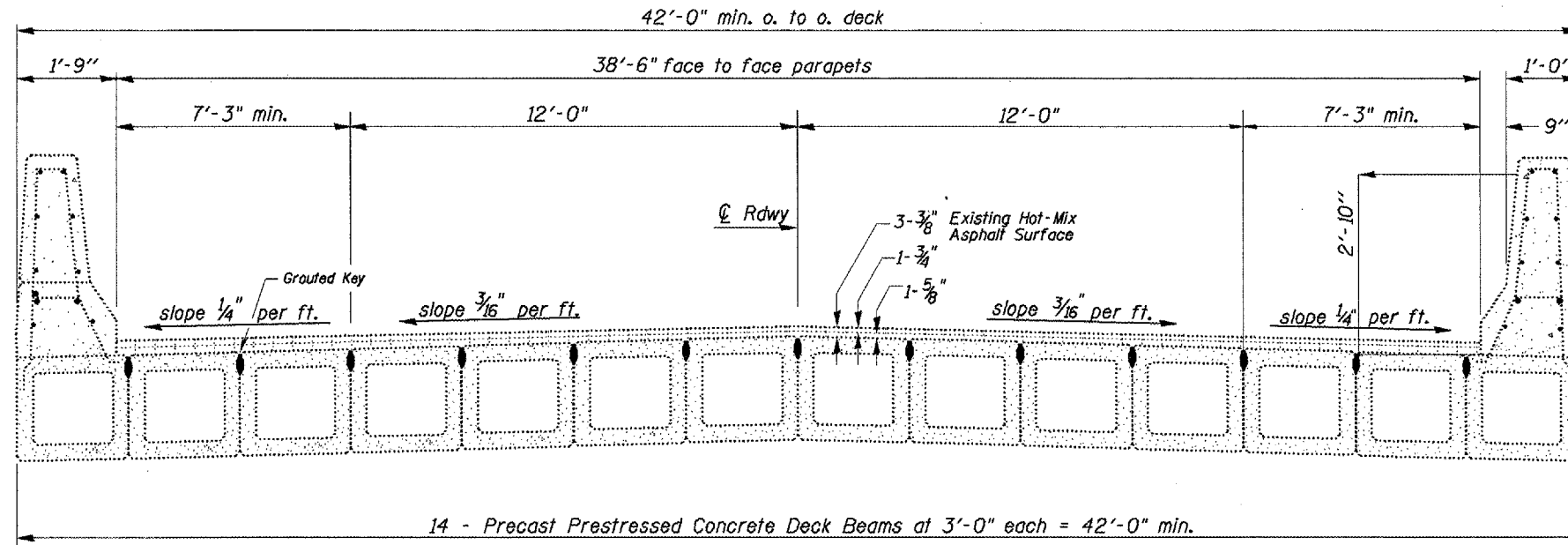
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

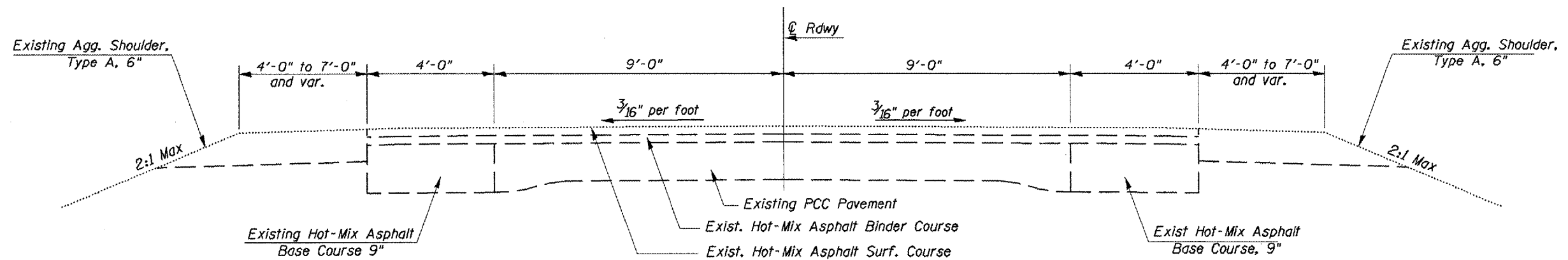
SUMMARY OF QUANTITIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	(105BI)-1	McDONOUGH	13	3
CONTRACT NO. 68760				

# TYPICAL SECTIONS



**EXISTING BRIDGE DECK TYPICAL SECTION**



**EXISTING TYPICAL SECTION**

Sta. 282+90 To Sta. 291+08.3

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	(105B)-1	MCDONOUGH	13	4

CONTRACT NO. 68760

# SCHEDULE OF QUANTITIES

LOCATIONS STA. TO STA.	HMA SURF CSE MIX "D" N50	HMA SURF REM	BIT MAT (PRIME COAT)	LEVELING BINDER (HAND METHOD), N50
	TON	SQ YD	GALLON	TON
283+83.05 - 288+40.55	44	70	48	13
<b>TOTAL</b>	44	70	48	13

LOCATIONS STA. TO STA.	SHORT - TERM PAVEMENT MARKING	WORK ZONE PAVEMENT MARKING REMOVAL	PAINT PAVEMENT MARKING LINE 4"
	FOOT	SQ FT	FOOT
283+83.05 - 288+40.55	1,600	533	2,000
<b>TOTAL</b>	1,600	533	2,000

LOCATIONS STA. TO STA.	CONCRETE REMOVAL	CONCRETE SUPERSTRUCTURE	REINFORCEMENT BARS EPOXY COATED
	CU YD	CU YD	POUND
283+83.05 - 288+40.55	18.7	18.3	1,560
<b>TOTAL</b>	18.7	18.3	1,560

LOCATIONS STA. TO STA.	TEMPORARY CONCRETE BARRIER	RELOCATE TEMP CONC BARRIER
	FOOT	FOOT
283+30.98 - 289+92.62	762.5	762.5
<b>TOTAL</b>	762.5	762.5

LOCATIONS STA. TO STA.	P P CONC DECK BEAM (33' DEPTH)	REM OF EXIST P P CONC DECK BEAMS	ASBESTOS BEARING PAD REMOVAL
	SQ FT	SQ FT	EACH
283+83.05 - 288+40.55	2,469	2,501	11
<b>TOTAL</b>	2,469	2,501	11

LOCATIONS STA. TO STA.	IMPACT ATT TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	IMPACT ATT RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	TEMPORARY RUMBLE STRIP
	EACH	EACH	EACH
283+30.98 - 289+92.62	2	2	6
<b>TOTAL</b>	2	2	6

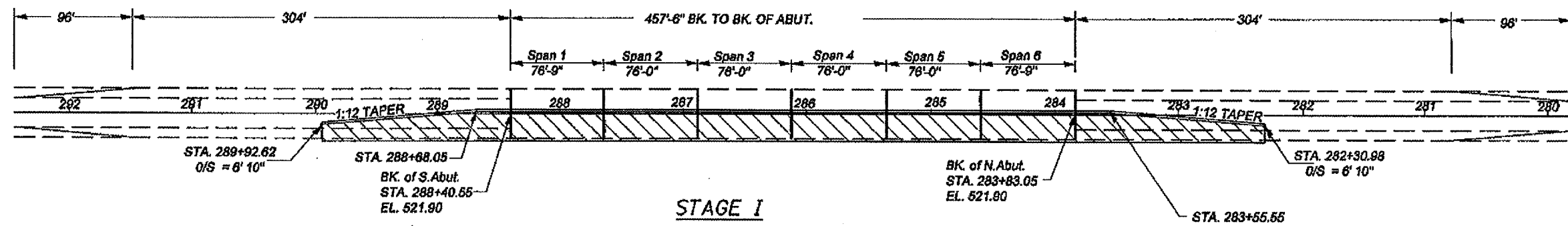
LOCATIONS STA. TO STA.	WATERPROOFING MEMBRANE SYSTEM
	SQ YD
283+83.05 - 288+40.55	318
<b>TOTAL</b>	318

LOCATIONS STA. TO STA.	POLYMER CONCRETE	SILICONE JOINT SEALER	BARRIER WALL REFLECTOR, TYPE C
	CU FT	FOOT	EACH
283+30.98 - 289+40.55	3.1	30	4
<b>TOTAL</b>	3.1	30	4

LOCATIONS STA. TO STA.	P C MORTAR FAIRING COURSE
	FOOT
283+83.05 - 288+40.55	1,213
<b>TOTAL</b>	1,213

LOCATIONS STA. TO STA.	MOBILIZATION	T C & PROT STANDARD 701321	ENGINEER FIELD OFFICE TYPE A	TEMPORARY BRIDGE TRAFFIC SIGNAL
	L SUM	EACH	CAL. MO.	EACH
283+30.98 - 289+92.62	1	1	2	1
<b>TOTAL</b>	1	1	2	1

# STAGING PLANS



**STAGE I**

**NOTE:**  
For each TRAFFIC CONTROL AND PROTECTION STANDARD 701321, one "BE PREPARED TO STOP" (W3-4) shall be placed at each approach, 500' after the "ROAD CONSTRUCTION AHEAD" sign. The cost for each sign shall be included in the cost of the TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

Four W12-1103 signs, as described in the Special Provisions, will be required. Two signs shall be placed at the intersection of US 136 and IL 61. Two signs shall be placed at the intersection of IL 61 and IL 101. These signs shall be located at the direction of the Engineer. The costs shall be included with the cost of the TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

For each TRAFFIC CONTROL AND PROTECTION STANDARD 701321, one (W12-1102) shall be placed at each approach, 500' after the "BE PREPARED TO STOP" (W3-4) sign but located 500' prior to the "SIGNAL" sign. The cost for each sign shall be included in the cost of the TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

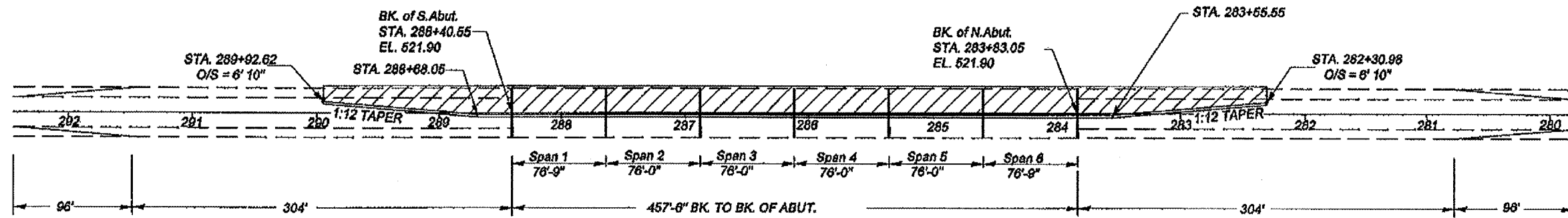
**LEGEND**

Work Area

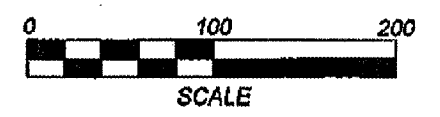
Temporary Concrete Barrier

**NOTE:**  
Refer to Highway Standard 701321

The cost for all material, labor & equipment required to remove and reinstall the guardrail end section attached to the concrete parapet at Beam #14 will be paid for per Article 109.04 of the Standard Specifications.

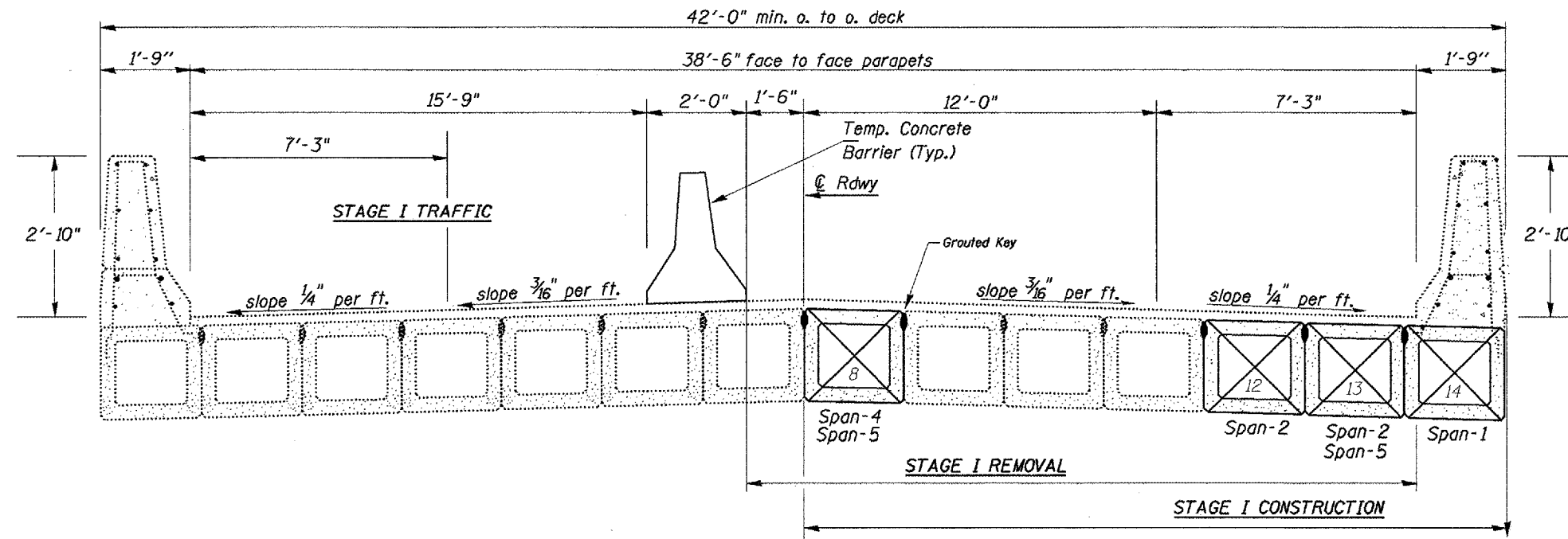


**STAGE II**



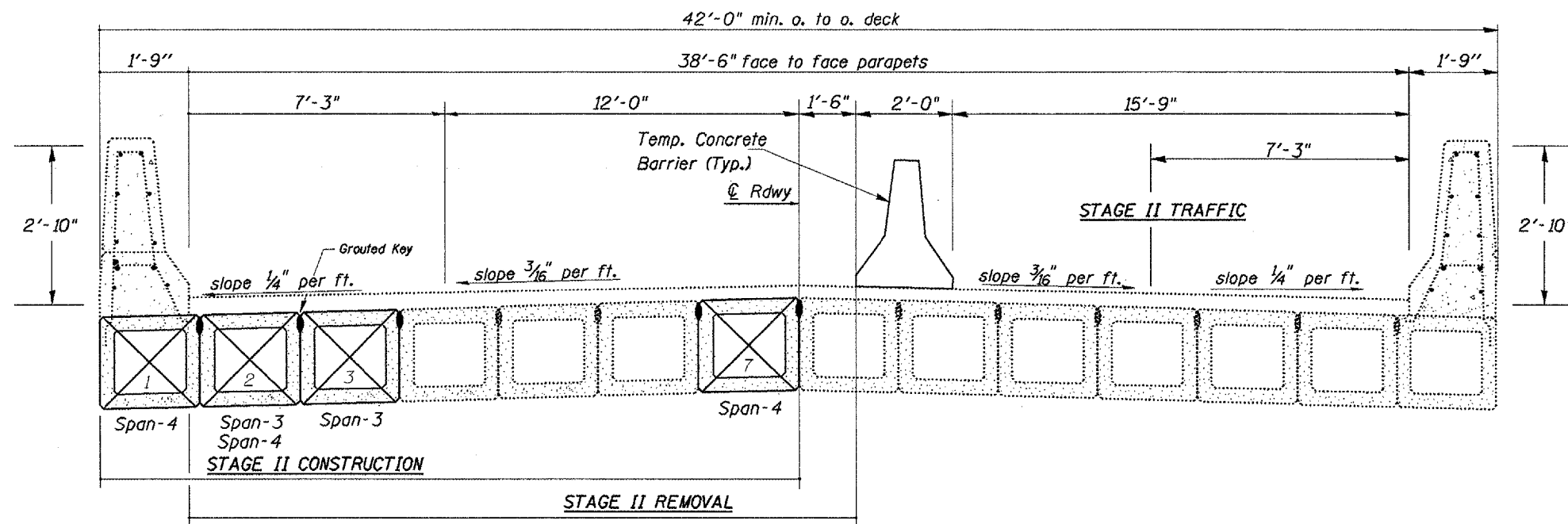
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	PLOT DATE = 11/16/2007	DATE -	REVISIONS -			SCALE: 1" = 100'		SHEET NO. 13 OF 6 SHEETS		STA. 282+40 TO STA. 289+85	
						CONTRACT NO. 68760		FED. ROAD DIST. NO. IL 61			

# STAGE REMOVAL AND CONSTRUCTION



**STAGE I CROSS SECTION**

(Looking NORTH)



**STAGE II CROSS SECTION**

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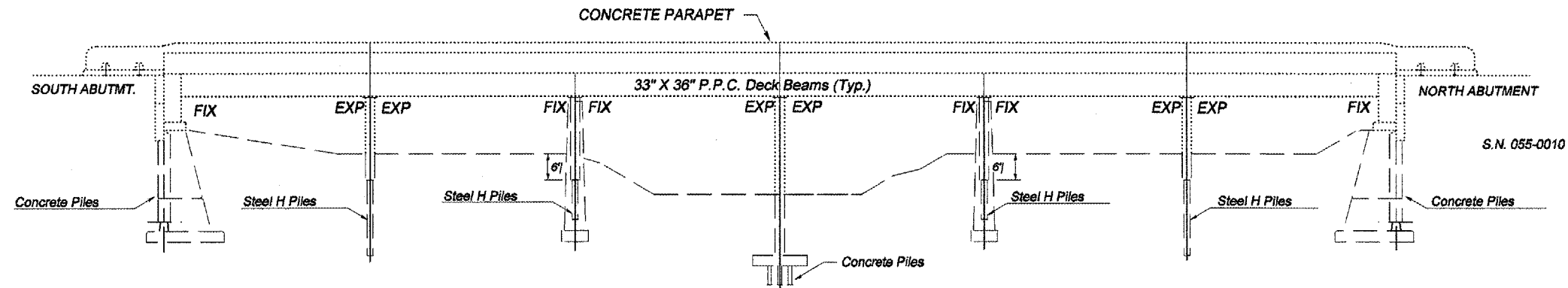
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STAGE REMOVAL AND CONSTRUCTION

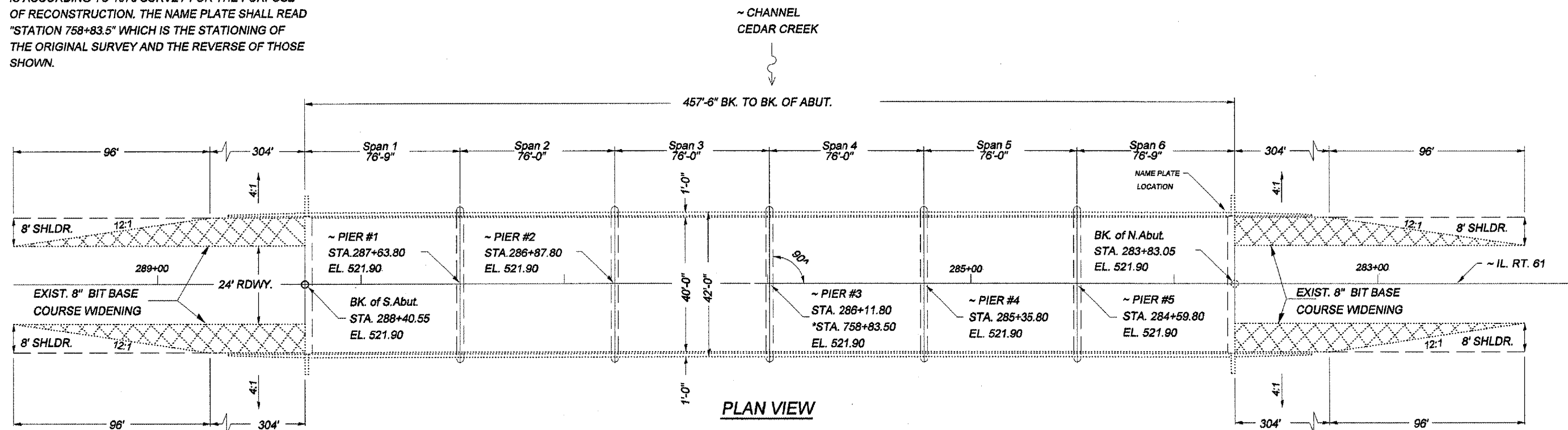
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	(105B)I-1	MCDONOUGH	13	7
			CONTRACT NO. 68760	

# GENERAL PLAN AND ELEVATION



**ELEVATION**

NOTE 1:  
 \* STATIONS SHOWN ON THESE PLANS (286+11.8.)  
 IS ACCORDING TO 1970 SURVEY FOR THE PURPOSE  
 OF RECONSTRUCTION. THE NAME PLATE SHALL READ  
 "STATION 758+83.5" WHICH IS THE STATIONING OF  
 THE ORIGINAL SURVEY AND THE REVERSE OF THOSE  
 SHOWN.



**PLAN VIEW**

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 DRAWN -  
 CHECKED -

REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
542	(105B)I-1	MCDONOUGH	13	8

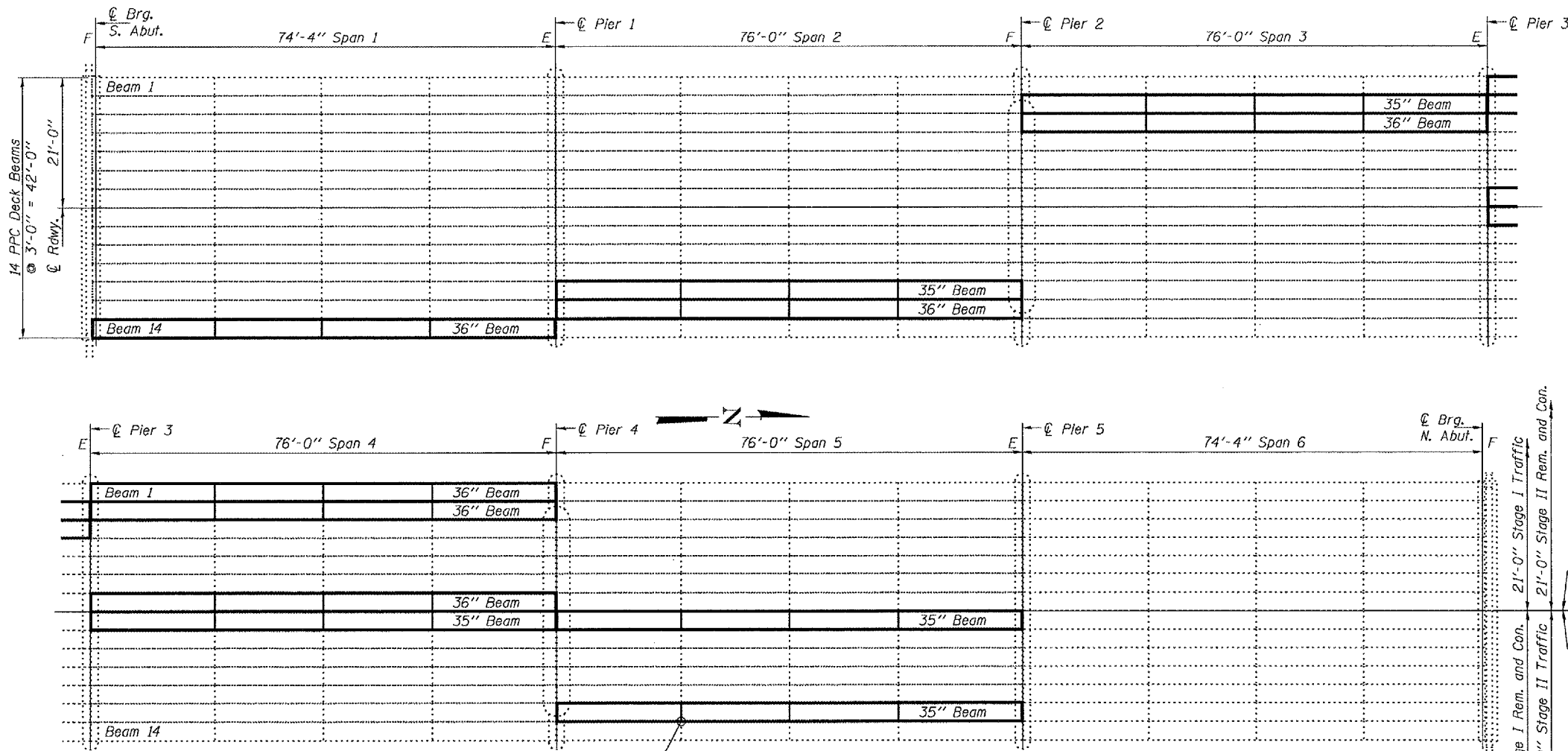
CONTRACT NO. 68760



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 1 5 SHEETS
FA 36		MC DONOUGH	13	9	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract Number: 68760



**GENERAL NOTES**

The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams when developing construction procedures.

If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new or existing beams. To distribute load to multiple beams and protect the existing surface, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. If heavy equipment will be placed on new PPC deck beams, the following shall be done prior to placement of the timber mats: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys.

The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

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.

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.

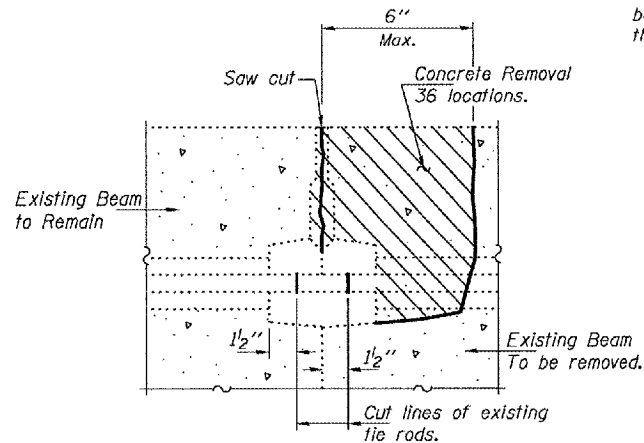
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Temporary concrete barrier shall only be anchored into the overlay and not into the PPC Deck Beams.

Existing tie rods to be cut, typ. See detail this sheet.

**PLAN**



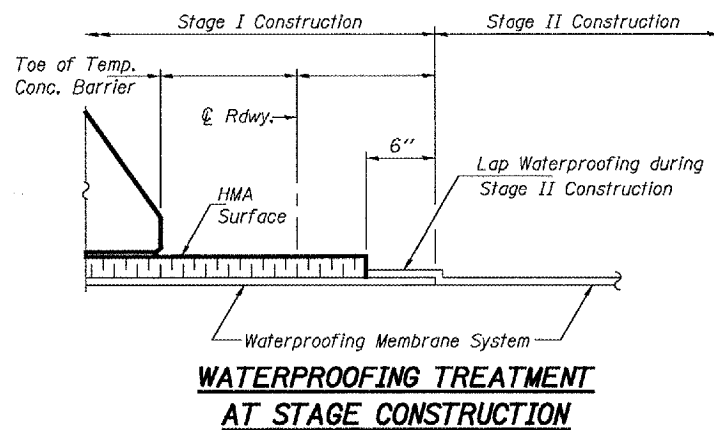
**BEAM REMOVAL DETAIL AT TRANSVERSE TIES**

DESIGNED	Adrian T. Holloway
CHECKED	[Signature]
DRAWN	ballva
CHECKED	ATH AJB

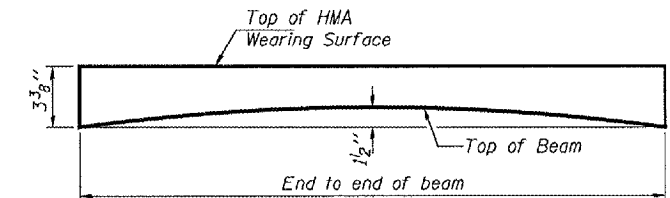
NOVEMBER 7, 2007  
EXAMINED [Signature]  
PASSED [Signature]  
ENGINEER OF BRIDGES AND STRUCTURES



Expires: November 30, 2008



**WATERPROOFING TREATMENT AT STAGE CONSTRUCTION**



**ANTICIPATED INITIAL CAMBER DIAGRAM**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	2501
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	2469
HMA Surface Removal	Sq. Yd.	69.5
HMA Surface Course Mix "D" N50	Tons	43.6
PC Mortar Fairing Course	Foaf	1213
Asbestos Bearing Pad Removal	Each	11
Waterproofing Membrane System	Sq. Yd.	318.2
Silicone Joint Sealer	Foaf	30
Polymer Concrete	Cu. Ft.	3.1
Concrete Removal	Cu. Yd.	18.7
Concrete Superstructure	Cu. Yd.	18.3
Reinforcement Bars, Epoxy Coated	Pound	1560

**DESIGN STRESSES**

FIELD UNITS  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)

**PRECAST PRESTRESSED UNITS**

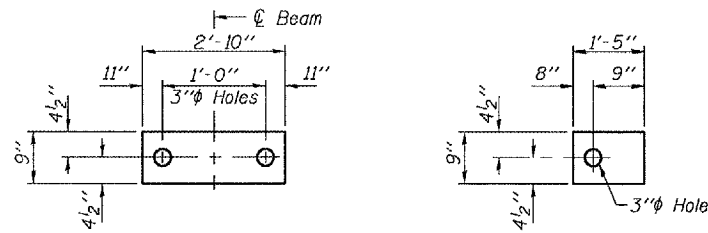
f'c = 5,000 psi  
f'ci = 4,000 psi  
f's = 270,000 psi (1/2" low lax strands)  
f'si = 201,960 psi (1/2" low lax strands)

**PLAN AND ELEVATION**  
FA 36  
MCDONOUGH COUNTY  
SN 055-0010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

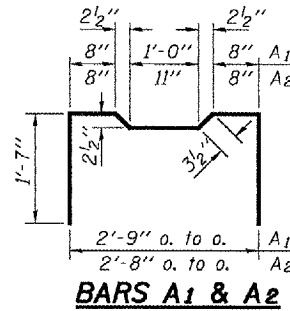
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2
FA 36		MC DONOUGH	13	10	5 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract Number: 68760

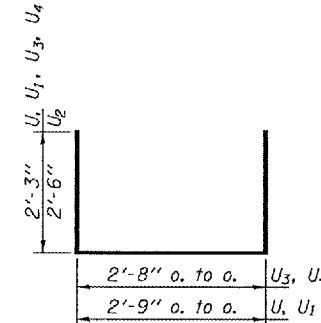


FABRIC BEARING PAD FABRIC ADJUSTING SHIM  
FIXED

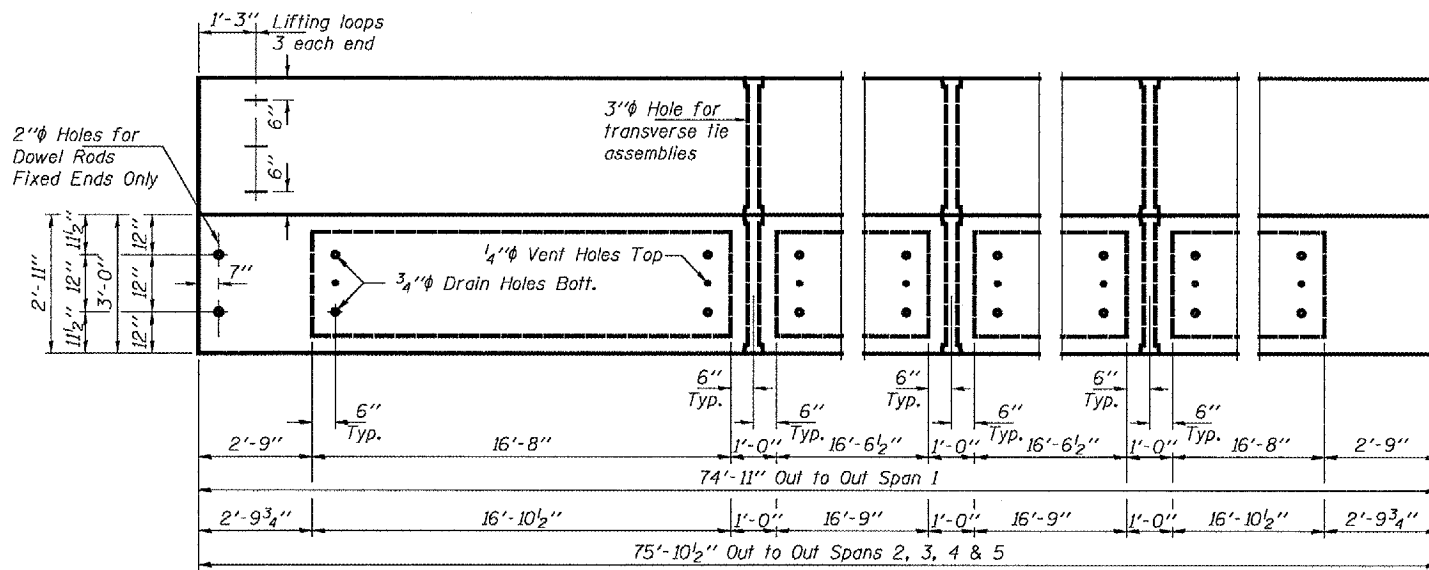
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EXPANSION



BARS A1 & A2

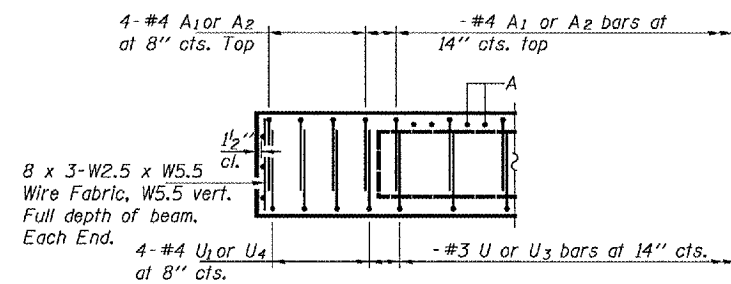


BARS U, U1, U3 & U4

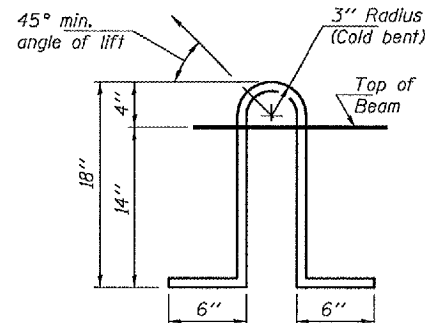


PLAN

See sheets 4 & 5 of 5 for additional reinforcement bars cast in beams.



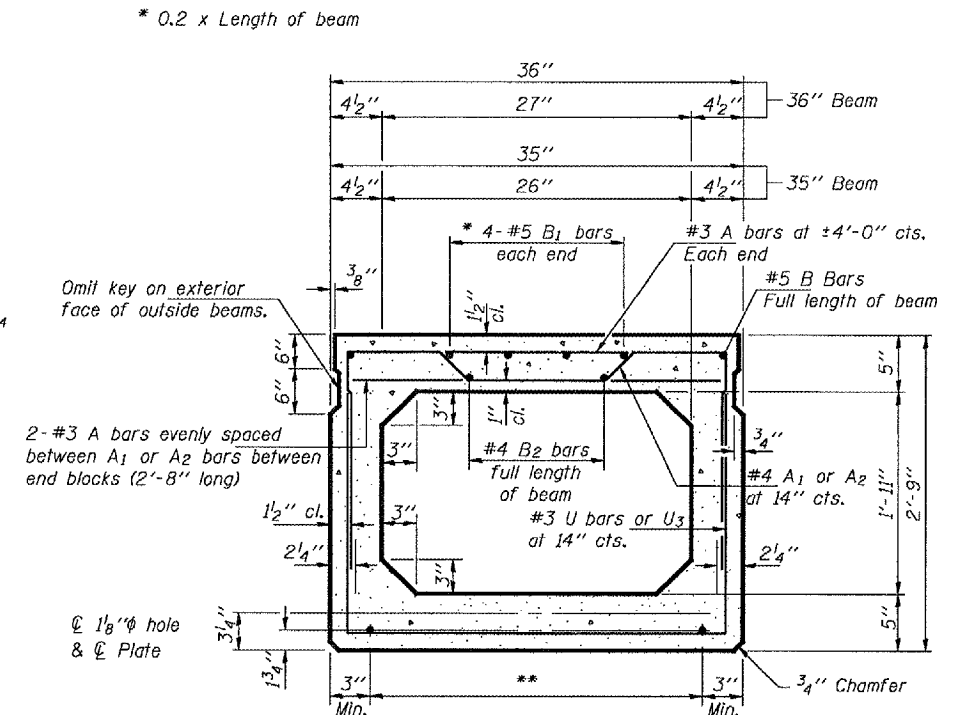
END ELEVATION



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 3-1/2" φ-270 ksi strands, as shown. The 1" φ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Non prestressing steel shall conform to ASTM A 706 (IL MOD), Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions shown shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Corrosion Inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'cl, shall be 4000 p.s.i.



TYPICAL SECTION

17-1/2" φ Strands Each Strand Stressed to 30,900 Lbs.  
8-Strands 1 3/4" up, 5-Strands 3/4" up  
2-Strands 6" up, 2-Strands 9" up.

TRANSVERSE PLACEMENT GUIDELINES

1. Place strands symmetrically about centerline of beam.
2. The minimum distance from center to center of strands in all directions shall be 2".
3. The minimum clearance from strand to dowel hole shall be 1/2".
4. The minimum clearance from strand to void shall be 1/2".

Vertical placement of strands shall not be adjusted to satisfy the above guidelines.

BILL OF MATERIAL

Item	Unit	Total
Precast Prestressed Conc. Deck Bms.	Sq. Ft.	2469

REPAIR DETAILS  
FA 36  
MCDONOUGH COUNTY  
SN 055-0010

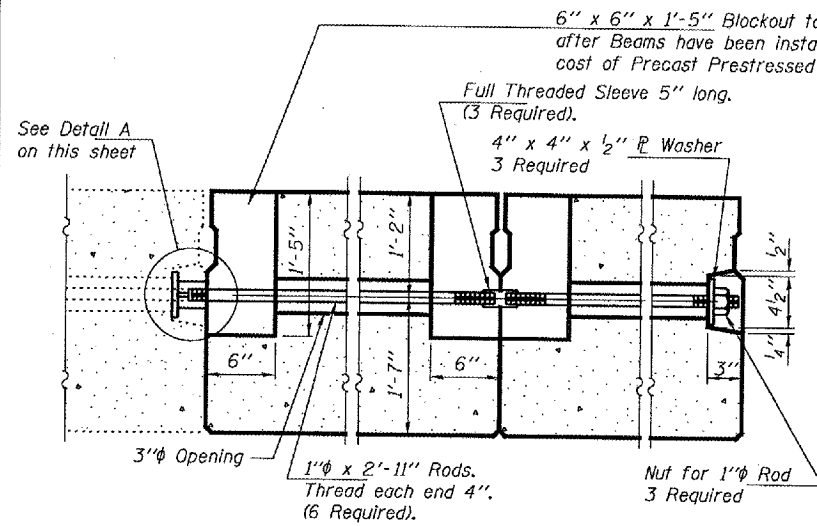
DESIGNED	ATH
CHECKED	AJB
DRAWN	balliva
CHECKED	ATH AJB

NOVEMBER 7, 2007  
EXAMINED *Carl P. ...*  
PASSED *Ralph E. Anderson*  
ENGINEER OF STRUCTURAL SERVICES  
ENGINEER OF BRIDGES AND STRUCTURES

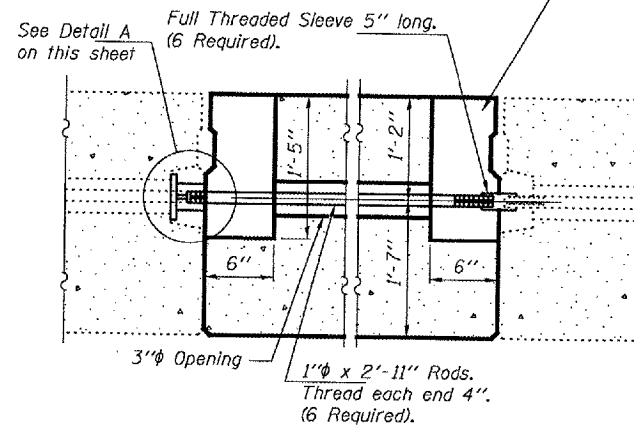
PD-5-S 11-1-06

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

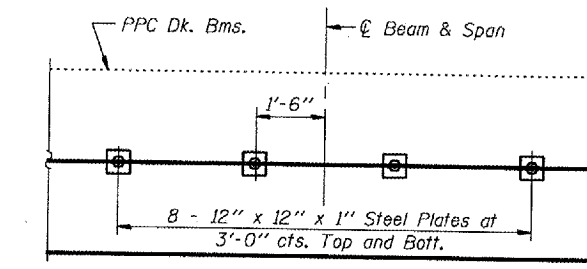
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 5 SHEETS
FA 36		MC DONOUGH	13	11	
FED. ROAD DIST. NO. 7		BALTIC	FED. AID PROJECT		Contract Number: 68760



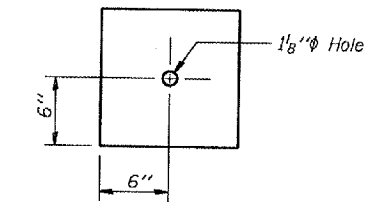
**TRANSVERSE TIE ASSEMBLY**  
(Typ. span 4 beams 1 & 2 replacement)



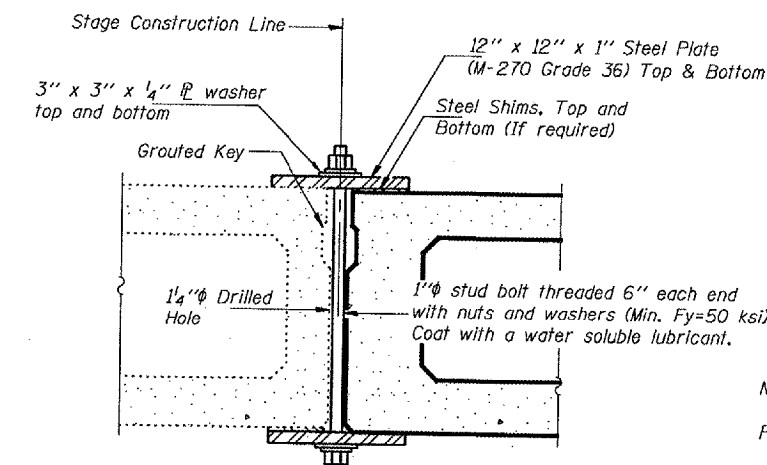
**TRANSVERSE TIE ASSEMBLY**  
(Typ. span 5 beams 8 & 13 replacement)



**PLAN**

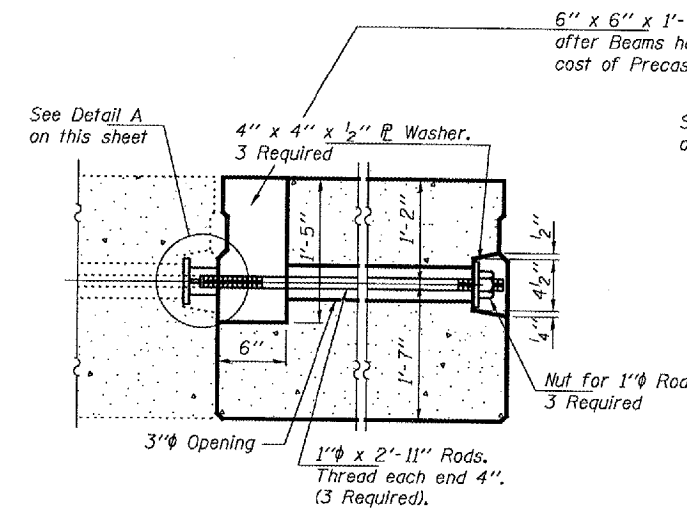


**CLAMPING PLATE**

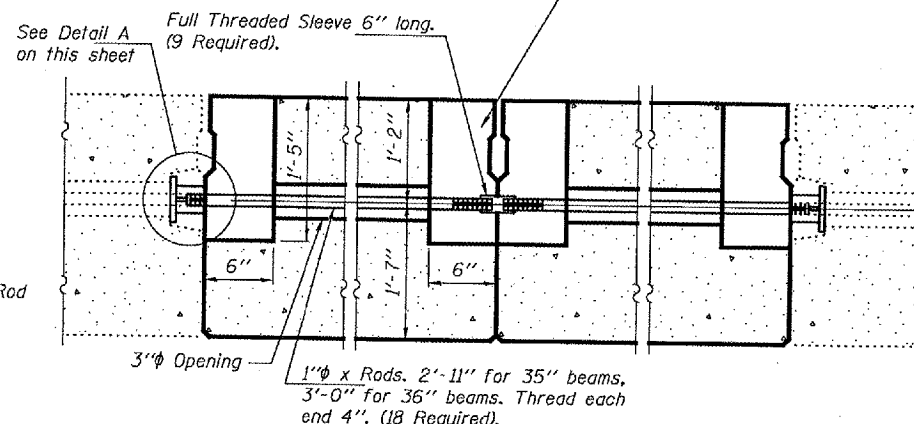


**SECTION**

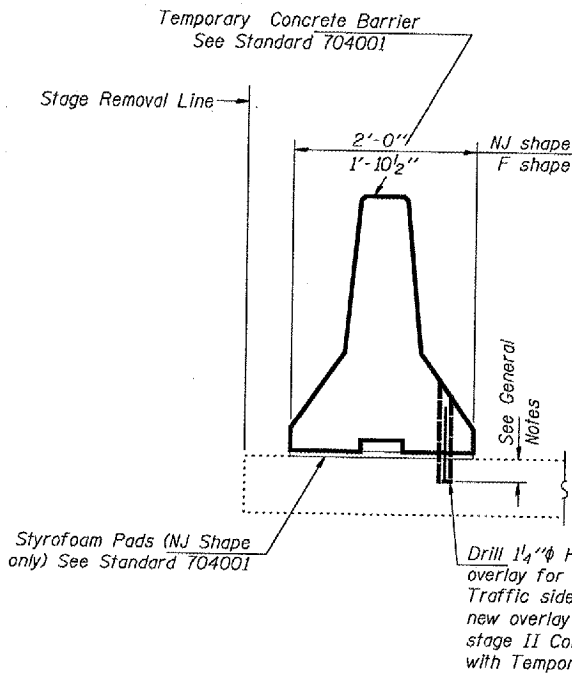
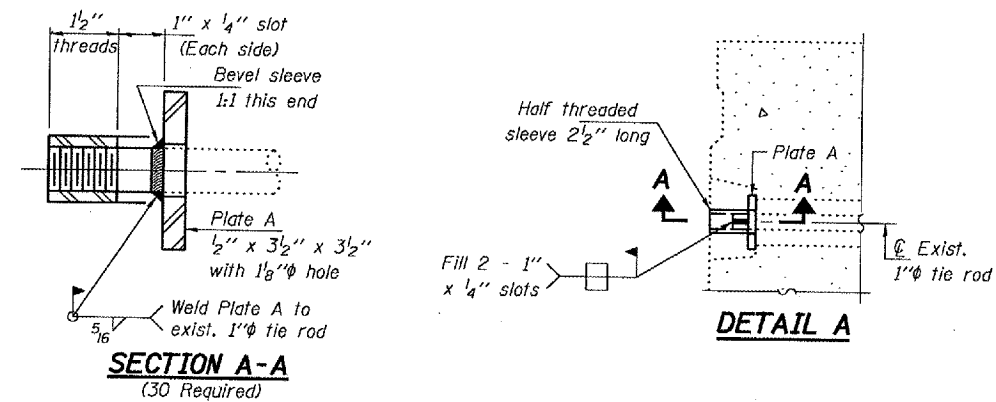
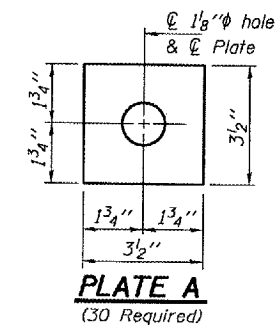
Notes:  
See Special Provisions for Stage Construction Precast Prestressed Concrete Deck Beams.  
See sheet 1 of 5 for Stage traffic lanes.  
Cost is included with Precast Prestressed Concrete Deck Beams.



**TRANSVERSE TIE ASSEMBLY**  
(Typ. span 1 beam 14 replacement)



**TRANSVERSE TIE ASSEMBLY**  
(Typ. except as noted)



**TEMPORARY CONCRETE BARRIER**  
See Roadway Plans for Quantity

DESIGNED	ATH
CHECKED	AJB
DRAWN	baliva
CHECKED	ATH AJB

NOVEMBER 7, 2007

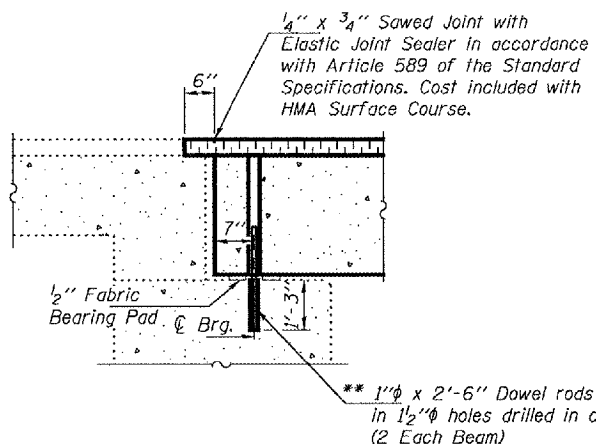
EXAMINED *Carl Perry*  
ENGINEER OF STRUCTURAL SERVICES

PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

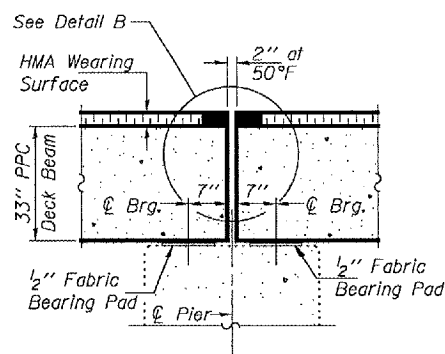
**REPAIR DETAILS**  
FA 36  
MCDONOUGH COUNTY  
SN 055-0010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 4 5 SHEETS
FA 36		MC DONOUGH	13	12	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		Contract Number: 68760

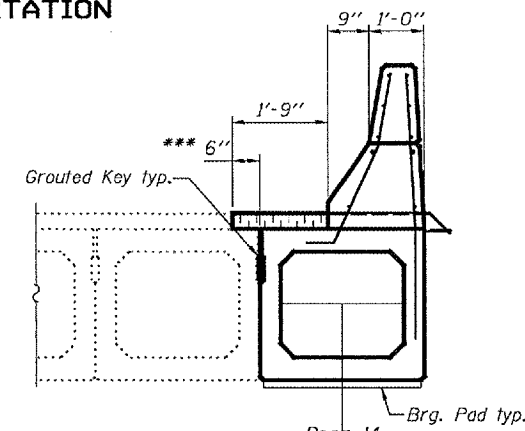


TYPICAL SECTION AT ABUTMENTS



TYPICAL SECTION AT PIERS 1, 3, & 5

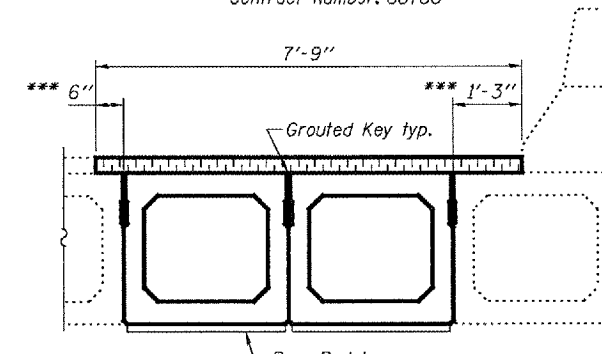
BAR D(E)



PARTIAL CROSS SECTION

(Span 1, Looking North)

\*\*\* Limits of HMA Surface Removal. Existing waterproofing to remain. Lap new waterproofing 6" over existing.

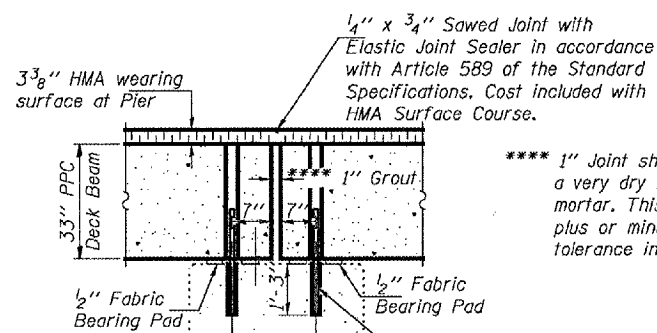


PARTIAL CROSS SECTION

(Span 2, Looking North)

(Span 3, Looking South)

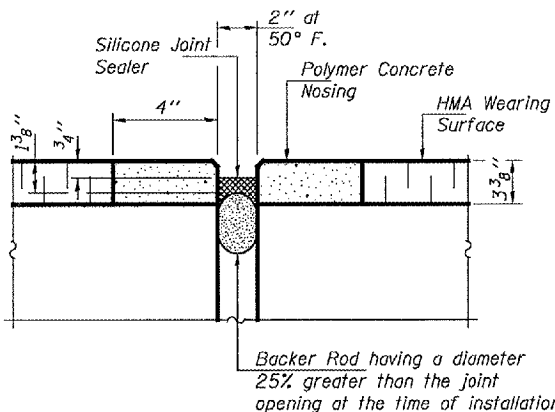
Beam 12, Sp. 2 Beam 13, Sp. 2  
Beam 3, Sp. 3 Beam 2, Sp. 3



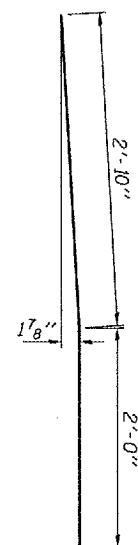
\*\*\*\* 1" Joint shall be packed with a very dry mix of 2:1 sand and PC mortar. This dimension may vary plus or minus to accommodate tolerance in beam lengths.

TYPICAL SECTION AT PIERS 2 & 4

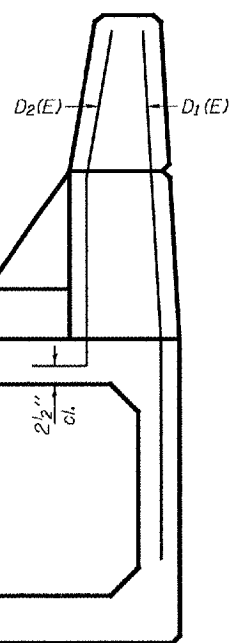
\*\* Existing Dowel Rods shall be cut off & ground flush with the top of the existing concrete. Cost included with Removal of Existing P.P.C. Deck Beams. Proposed Dowel Rods shall be grouted after beams are in place and allowed to cure (Min. 24 hrs.) prior to grouting shear keys.



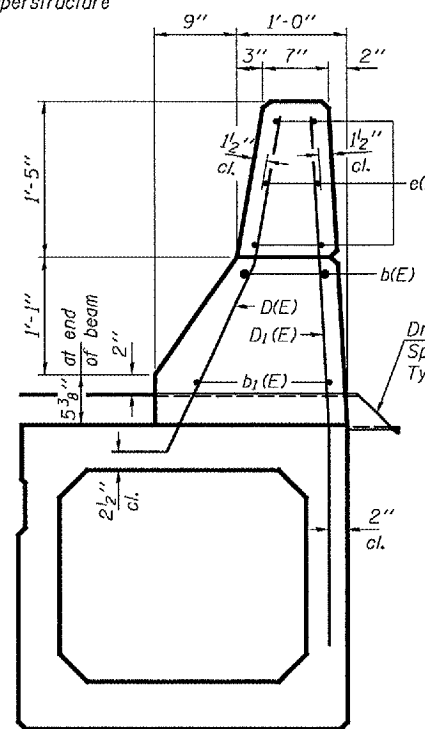
DETAIL B



BAR D<sub>1</sub>(E)



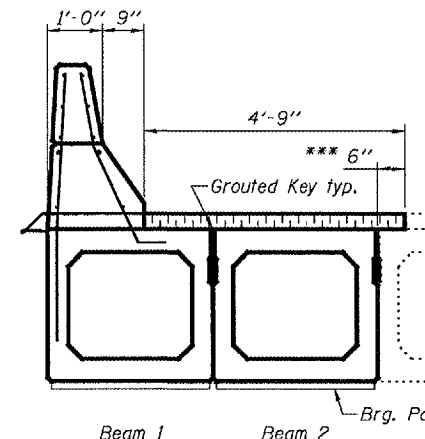
END VIEW OF CURB



SECTION THRU CURB

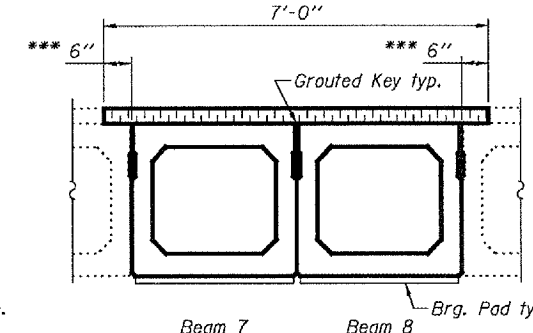
Drain tubes at 6'-0" cts. Space to miss D(E) & D<sub>1</sub>(E) bars Typ. spans 1 & 4.

See sheet 5 of 5 for spacing of bars D(E), D<sub>1</sub>(E) & D<sub>2</sub>(E).



PARTIAL CROSS SECTION

(Span 4, Looking North)



PARTIAL CROSS SECTION

(Span 5, Looking North)

DESIGNED	ATH
CHECKED	AJB
DRAWN	baliva
CHECKED	ATH AJB

NOVEMBER 7, 2007

EXAMINED *Carl Proyer*  
ENGINEER OF STRUCTURAL SERVICES

PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

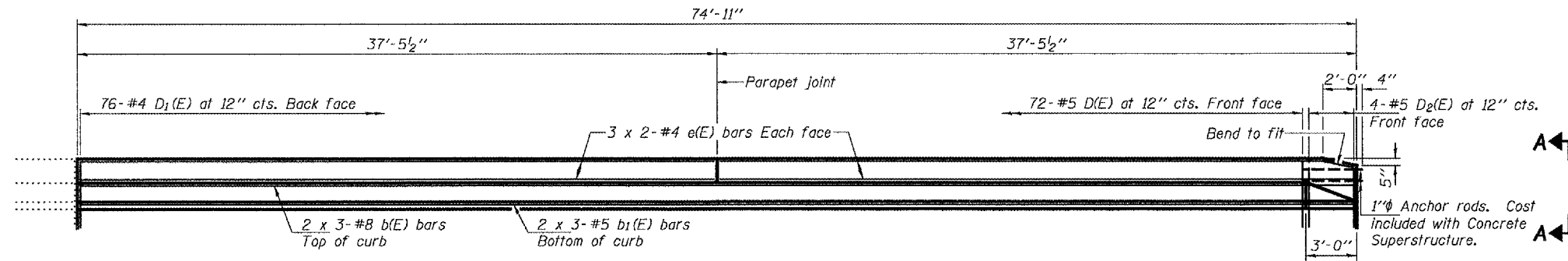
REPAIR DETAILS  
FA 36  
MCDONOUGH COUNTY  
SN 055-0010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

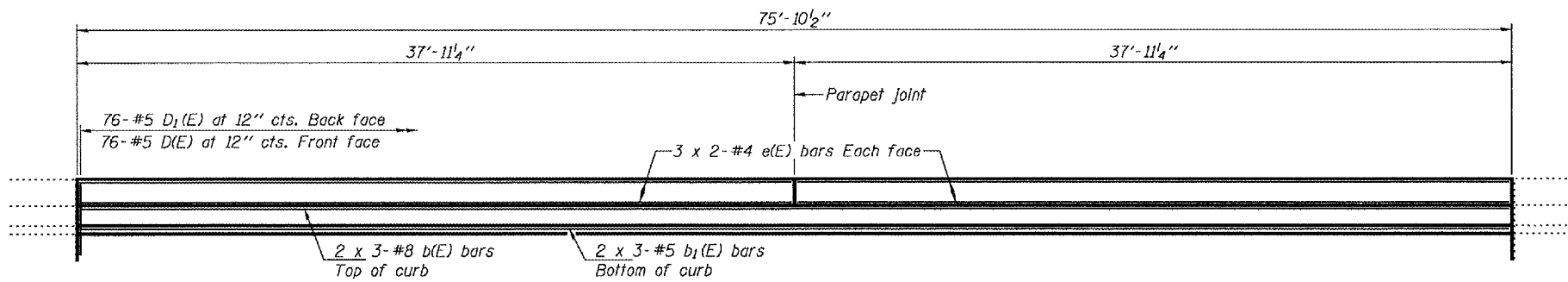
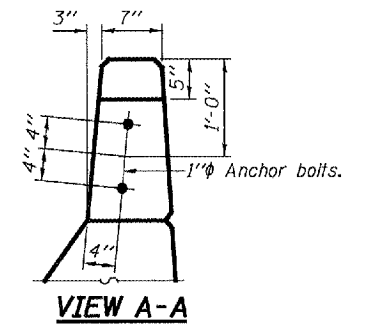
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FA 36		MC DONOUGH	13	13
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

SHEET NO. 5  
5 SHEETS

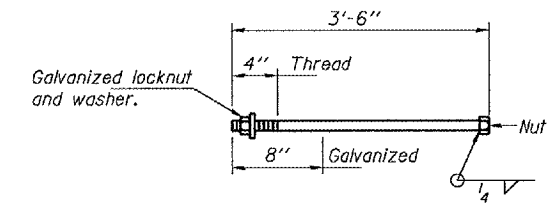
Contract Number: 68760



**SPAN 1 PARAPET ELEVATION**  
(Looking East)



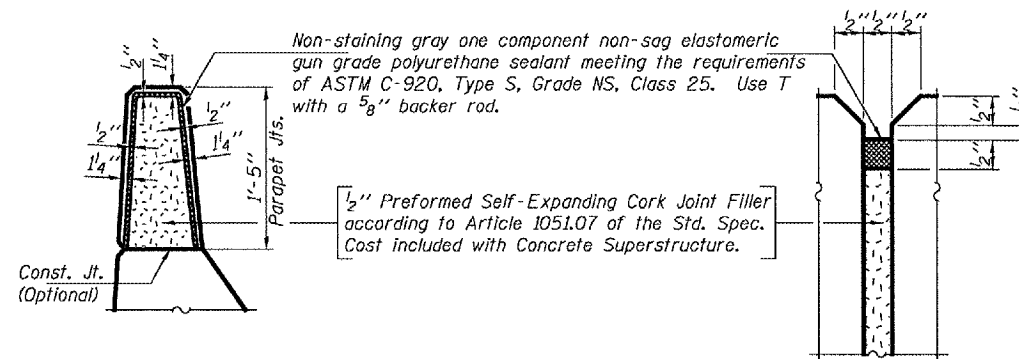
**SPAN 4 PARAPET ELEVATION**  
(Looking West)



**1" ANCHOR ROD**

**MINIMUM BAR LAPS**

- #4 bar = 1'-8"
- #5 bar = 2'-2"
- #8 bar = 4'-6"



**PARAPET JOINT DETAILS**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
e(E)	24	#4	19'-9"	—
b(E)	12	#8	28'-3"	—
b <sub>1</sub> (E)	12	#5	26'-8"	—
Reinforcement Bars, Epoxy Coated			Pound	1560
Concrete Superstructure			Cu. Yds.	18.3

Bars indicated thus 2 x 3-#5 etc. Indicates 2 lines of bars with 3 lengths per line.

**REPAIR DETAILS**  
**FA 36**  
**MCDONOUGH COUNTY**  
**SN 055-0010**

DESIGNED	ATH
CHECKED	AJB
DRAWN	baliva
CHECKED	ATH AJB

NOVEMBER 7, 2007  
EXAMINED *Carl K...*  
ENGINEER OF STRUCTURAL SERVICES  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES