

F.A.S. RTE. 1323	SECTION (39 C-BR)I	COUNTY KANKAKEE	TOTAL SHEETS 9	SHEET NO. 1
ILLINOIS		CONTRACT NO. 66B23		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAS ROUTE 1323 (IL 115)
SECTION (39 C-BR)I

BRIDGE REPAIR
SN 046-0107
CARRYING FAS 1323 (IL 115) OVER GAR CREEK
2.0 MILES SOUTHWEST OF KANKAKEE
KANKAKEE COUNTY

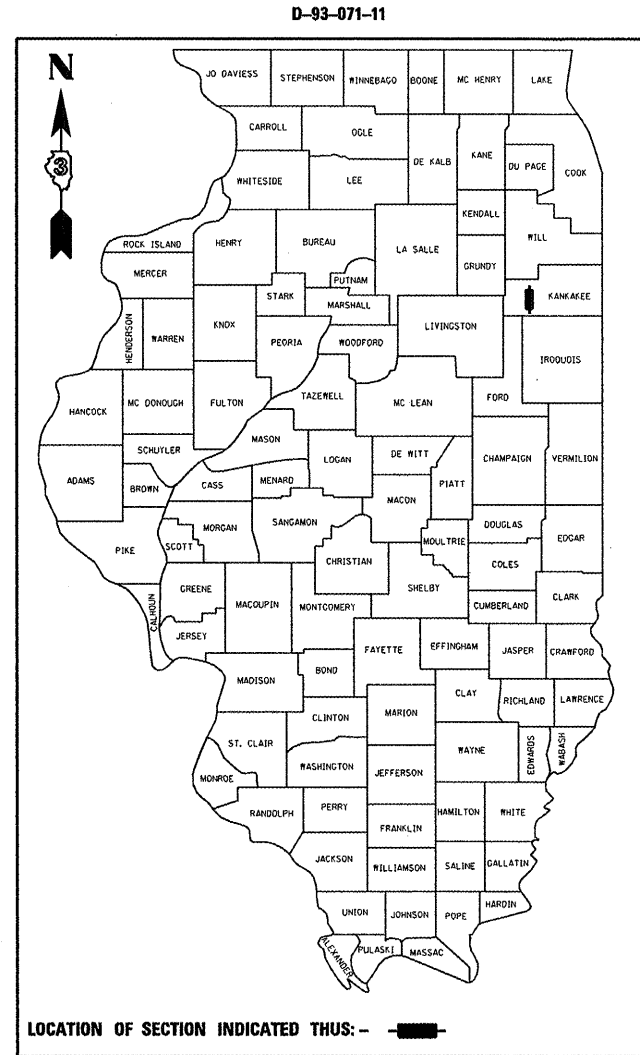
C-93-089-11

INDEX OF SHEETS

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7. PPC DECK BEAM DETAILS
8. PPC DECK BEAM DETAILS
9. REPAIR DETAILS

STANDARDS

- | | |
|-----------|--|
| 000001-06 | STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS |
| 001006 | DECIMAL OF AN INCH AND OF A FOOT |
| 701001-02 | OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 4.5 m (15') AWAY |
| 701006-03 | OFF-ROAD OPERATIONS 2L, 2W, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE |
| 701011-02 | OFF-ROAD MOVING OPERATIONS 2L, 2W, DAY ONLY |
| 701201-04 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS \geq 45 MPH |
| 701301-04 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| 701321-11 | LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER |
| 701901-01 | TRAFFIC CONTROL DEVICES |
| 704001-06 | TEMPORARY CONCRETE BARRIER |



FUNCTIONAL CLASSIFICATION
 MINOR ARTERIAL
 FAS RTE. 1323 (IL 115)
 2009 ADT 2750
 P.V. 92.7%
 S.U. 3.6%
 M.U. 3.6%

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

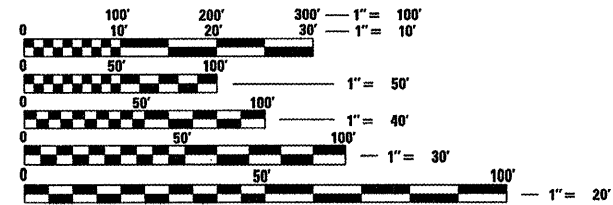
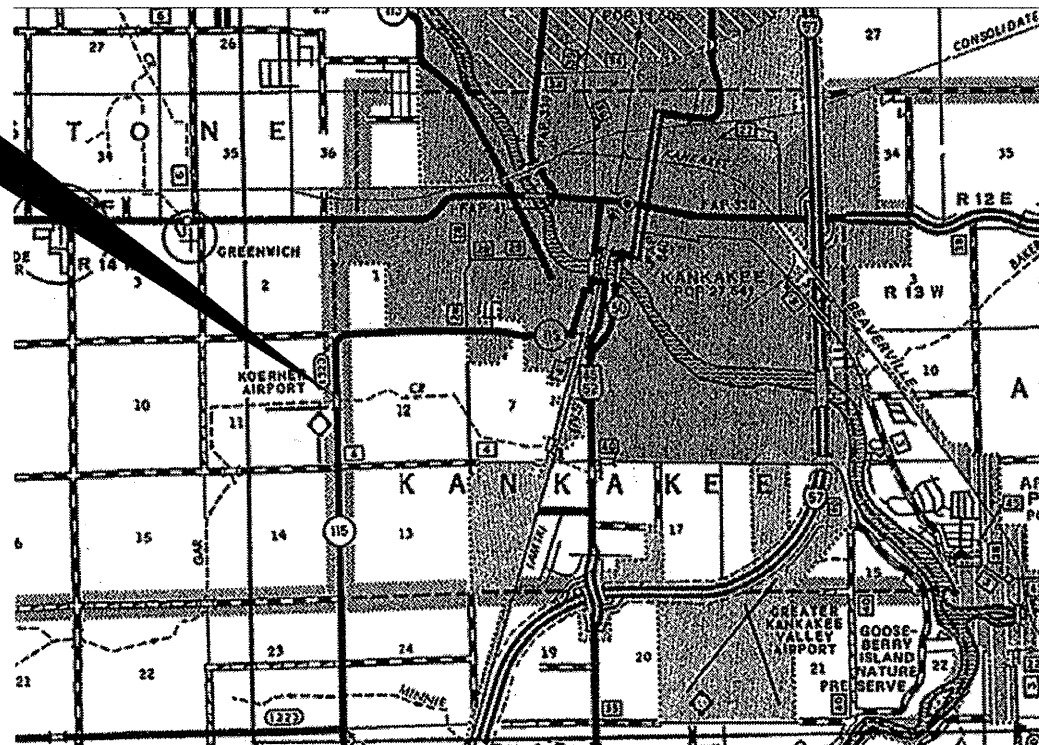
SUBMITTED 02/25 20 11
Eric S. Therkaldsen
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 25 20 11
Scott E. Stitt, P.E.
 Acting ENGINEER OF DESIGN AND ENVIRONMENT

March 25 20 11
Christine M. Reader
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

PROJECT LOCATION



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

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

CONTRACT NO. 66B23

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.

COST OF REMOVAL AND RE-INSTALLATION OF ALL MEMBERS NECESSARY TO COMPLETE THE WORK AS DETAILED ON THE PLANS AND AS SPECIFIED IN THE SPECIAL PROVISIONS SHALL BE INCLUDED WITH FURNISHING AND ERECTING STRUCTURAL STEEL.

FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

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.

COMMITMENTS

1. SN 046-0107 IS RESTRICTED TO 25 TON LOAD LIMIT

DATE: 02/25/2011
 PREPARED BY: T. Dan Brown
 DISTRICT STUDIES & PLANS ENGINEER
 EXAMINED BY: Hubert K. Long
 DISTRICT CONSTRUCTION ENGINEER
Wayne Phillips
 DISTRICT MATERIALS ENGINEER
James A. Huschen
 DISTRICT OPERATIONS ENGINEER

FILE NAME =	USER NAME = petelyj	DESIGNED - RON WOODSHANK	REVISED - -----	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\petdot\petelyj\02257563\036623-ahc-details.DGN	DRAWN - RON WOODSHANK	REVISED - -----	1323			(39 C-BR)	KANKAKEE	9	2	
PLOT SCALE = 100.0648' / IN.	CHECKED - -----	REVISED - -----	CONTRACT NO. 66B23							
PLOT DATE = Feb 15, 2011 - 09:31:13 AM	DATE - -----	REVISED - -----	ILLINOIS FED. AID PROJECT							
				SCALE: -----	SHEET NO. 1 OF 1 SHEETS	STA. -----	TO STA. -----			

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				STATE FUNDS 100% STATE STRUCTURE 0014 RURAL
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	8	8
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	201.8	201.8
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	31	31
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	139	139
67100100	MOBILIZATION	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
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70400100	TEMPORARY CONCRETE BARRIER	FOOT	179	179
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	207.6	207.6
X4400196	HOT-MIX ASPHALT SURFACE REMOVAL, SPECIAL	SQ YD	8	8
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	1	1
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2

FILE NAME =	USER NAME = petelyj	DESIGNED - RON WOODSHANK	REVISED -
ca:\pwwork\pwwid\petelyj\02257563\0366823-ah-t-detail.dgn		DRAWN - RON WOODSHANK	REVISED -
PLOT SCALE = 99.9919 ' / IN.		CHECKED -	REVISED -
PLOT DATE = Feb 24, 2011 - 03:16:19 PM		DATE -	REVISED -

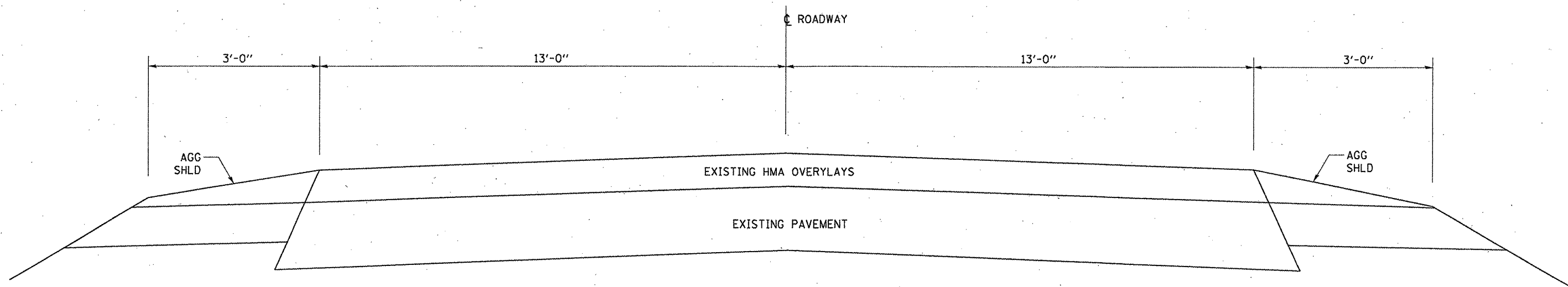
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

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

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1323	(39 C-BR)	KANKAKEE	9	3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66B23	

Rev.



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

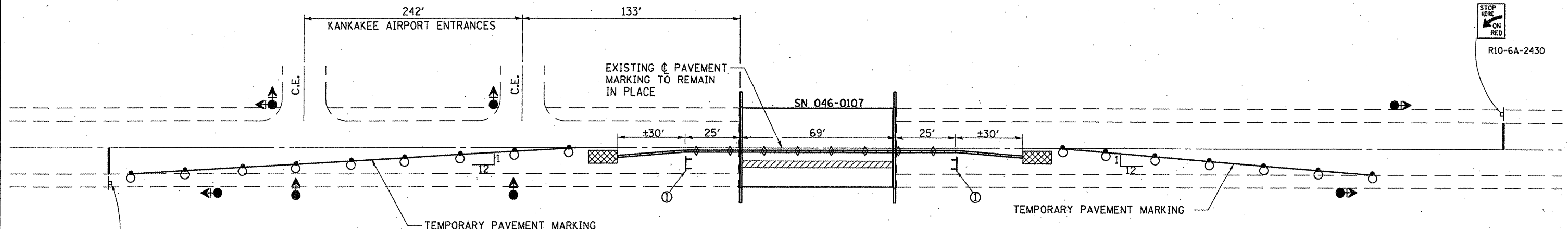
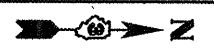
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL ROADWAY SECTION

FILE NAME =	USER NAME = petelyj	DESIGNED - RON WOODSHANK	REVISED -
al\pw\work\p\ridot\petelyj\0257563\0368	23-shr-details.DGN	DRAWN - RON WOODSHANK	REVISED -
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	PLOT DATE = Feb 24, 2011 - 03:17:29 PM	DATE -	REVISED -

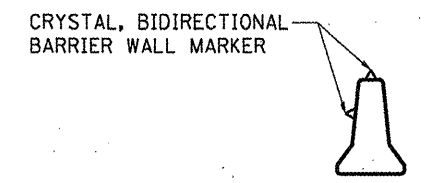
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1323	(39 C-BR1)	KANKAKEE	9	4
CONTRACT NO. 66B23				
ILLINOIS FED. AID PROJECT				

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



PLAN

- ① TYPE III BARRICADE TO BE PLACED WHEN NO WORK IS BEING PERFORMED.
- ② BARRIER WALL/GUARDRAIL MARKERS AT 25' CTS. SEE STANDARDS 635011 AND 704001



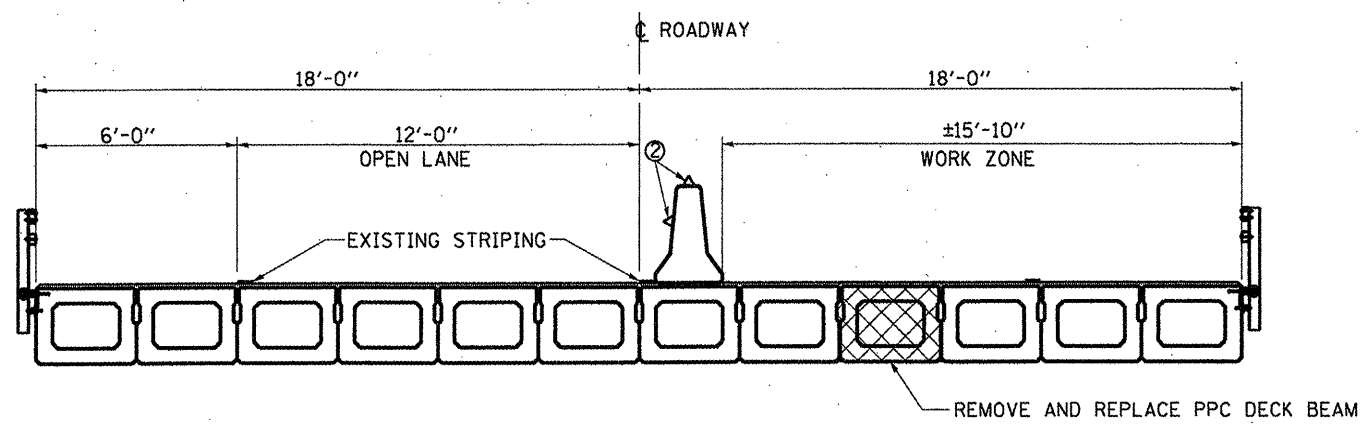
TEMPORARY BARRIER WALL

SYMBOLS

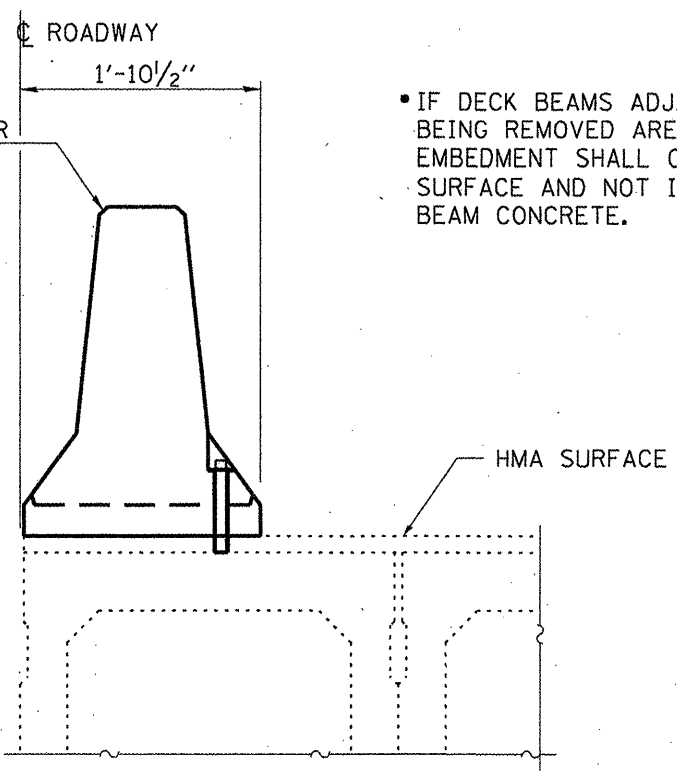
- WORK AREA
- SIGN
- TYPE III BARRICADE
- TRAFFIC SIGNAL WITH BACKPLATES
- DRUM WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- TEMPORARY CONCRETE BARRIER
- TEMPORARY IMPACT ATTENUATOR
- CRYSTAL, BI-DIRECTIONAL BARRIER WALL/GUARDRAIL MARKER

TEMPORARY CONCRETE BARRIER
SEE STANDARD 704001

• IF DECK BEAMS ADJACENT TO THE DECK BEAM BEING REMOVED ARE TO REMAIN IN PLACE, EMBEDMENT SHALL ONLY BE INTO WEARING SURFACE AND NOT INTO EXISTING DECK BEAM CONCRETE.



CROSS SECTION
LOOKING NORTH



ANCHOR DETAIL

GENERAL NOTES

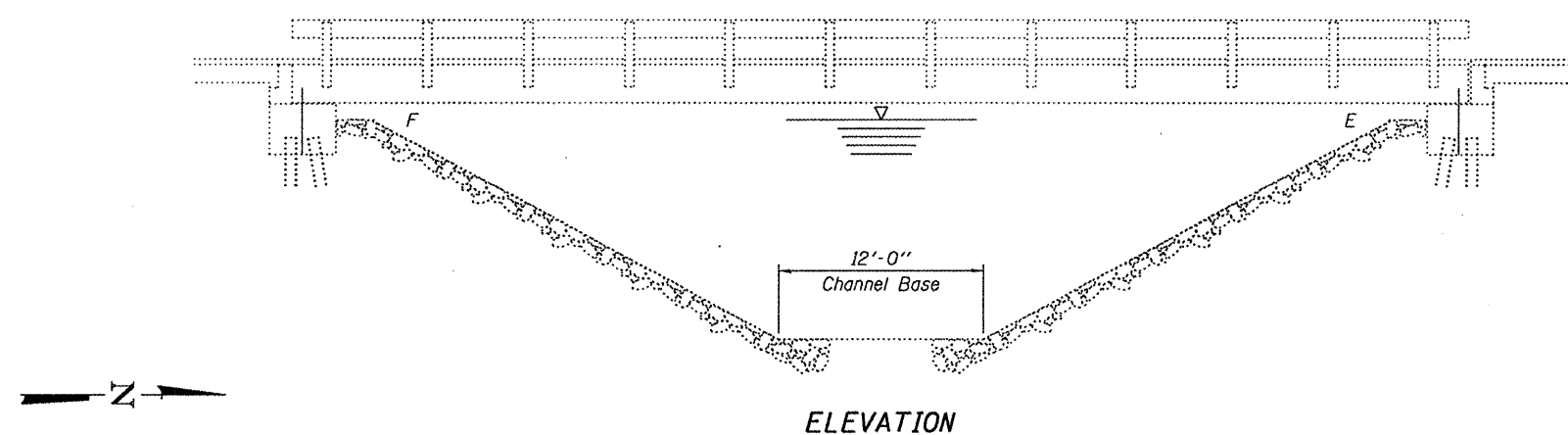
THIS DETAIL SHEET SHALL BE USED WHERE, AT ANY TIME TRAFFIC CONTROL AND PROTECTION, STANDARD, 701321 AND 704001 ARE SPECIFIED.

TEMPORARY PAVEMENT MARKINGS WHEN SHOWN ON TRAFFIC CONTROL AND PROTECTION STANDARDS OR PLAN DETAILS, SHALL BE PAID FOR ACCORDING TO ARTICLE 703.07 OF THE STANDARD SPECIFICATIONS.

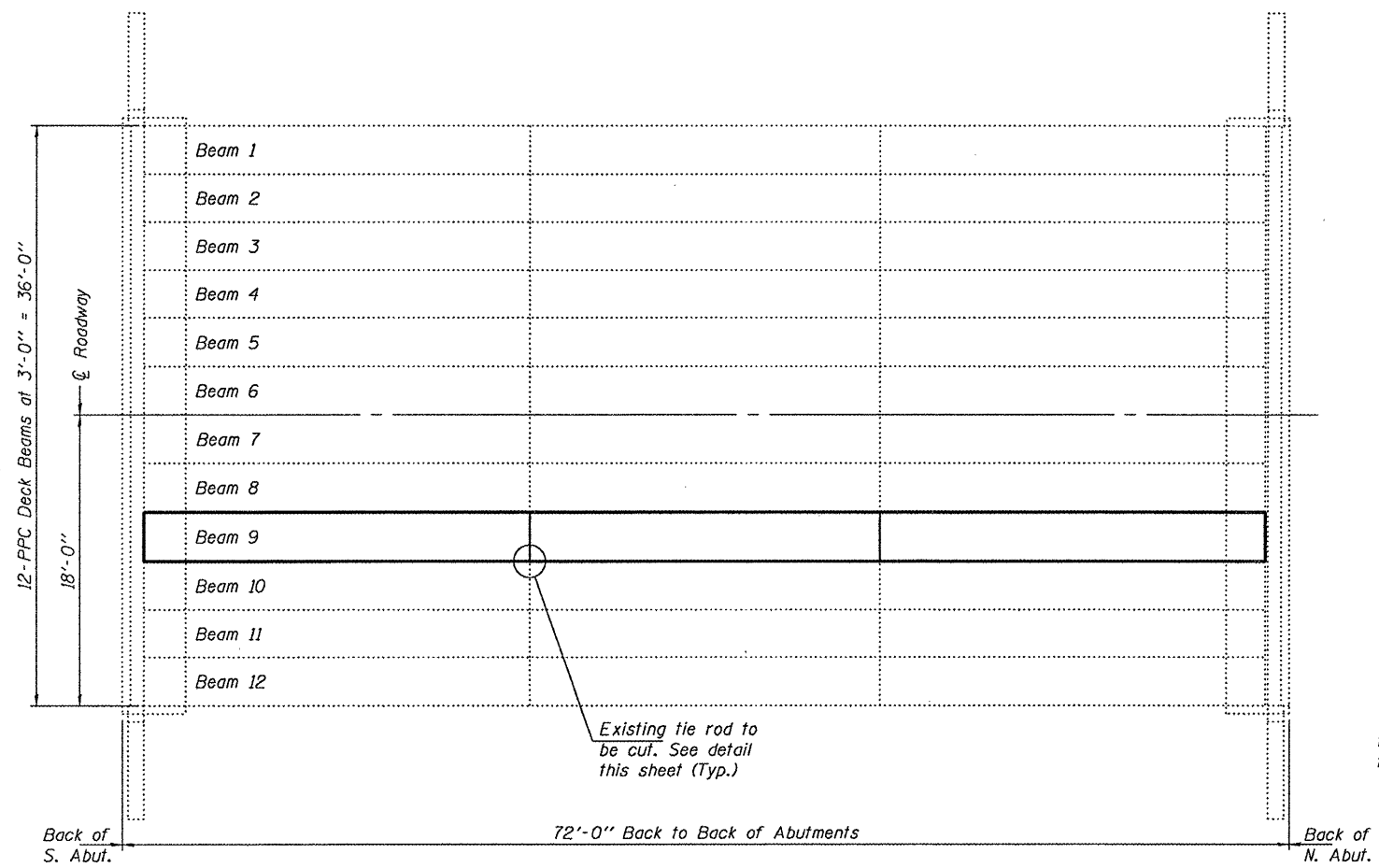
TEMPORARY PAVEMENT MARKING REMOVAL SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE STANDARD OR DETAILS REQUIRING TEMPORARY PAVEMENT MARKING.

NOTE: SEE TRAFFIC CONTROL AND PROTECTION STANDARD 701321 FOR DETAILS NOT SHOWN

FILE NAME =	USER NAME = potelijj	DESIGNED - RON WOODSHANK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pw\work\predit\potelijj\d0257563\0366823-sht-details.DGN	DRAWN - RON WOODSHANK	REVISED -	1323			(39 C-BR)	KANKAKEE	9	5	
PLOT SCALE = 100.0025' / IN.	CHECKED -	REVISED -	CONTRACT NO. 66B23							
PLOT DATE = Feb 24, 2011 - 03:19:22 PM	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							
SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. _____ TO STA. _____										



ELEVATION



PLAN

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

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.

The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractors 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.

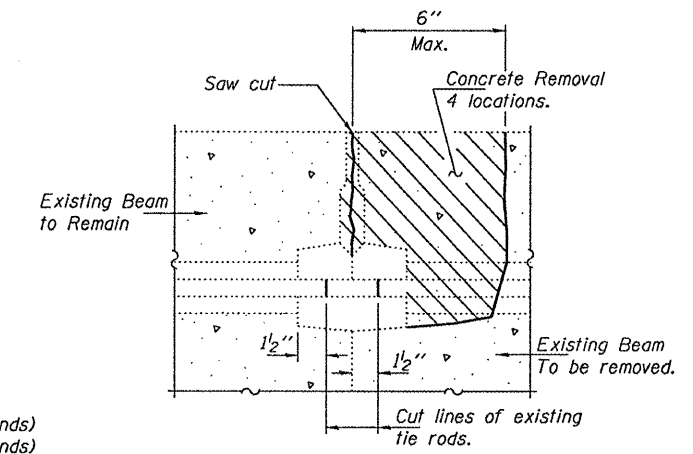
Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of Removal of Existing PPC Deck Beams.

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

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

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with PPC Deck Beams.

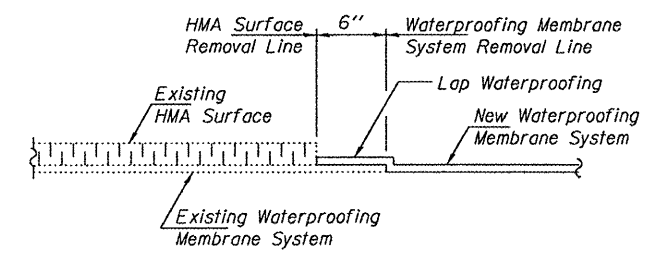
DESIGN STRESSES
PRECAST PRESTRESSED UNITS
 $f'_c = 6,000 \text{ psi}$
 $f'_{ci} = 5,000 \text{ psi}$
 $f'_s = 270,000 \text{ psi}$ ($\frac{1}{2}$ " ϕ low lax strands)
 $f'_{si} = 201,960 \text{ psi}$ ($\frac{1}{2}$ " ϕ low lax strands)



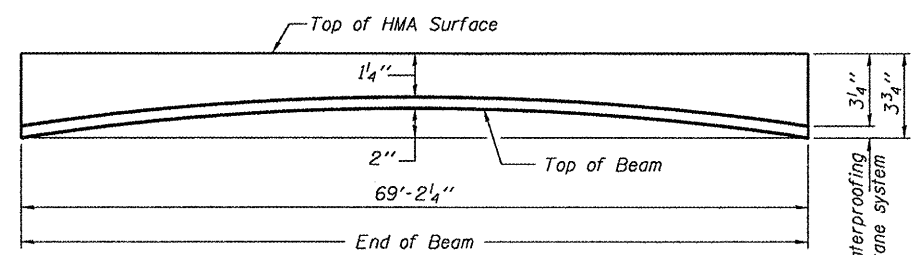
BEAM REMOVAL DETAIL AT TRANSVERSE TIES

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	207.6
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	201.8
Hot-Mix Asphalt Surface Removal, Special	Sq. Yd.	7.9
HMA Surface Course Mix "D" N50	Tons	3.9
PC Mortar Fairing Course	Foot	139
Waterproofing Membrane System	Sq. Yd.	31.0
Asbestos Bearing Pad Removal	Each	1



WATERPROOFING TREATMENT



ANTICIPATED INITIAL CAMBER DIAGRAM



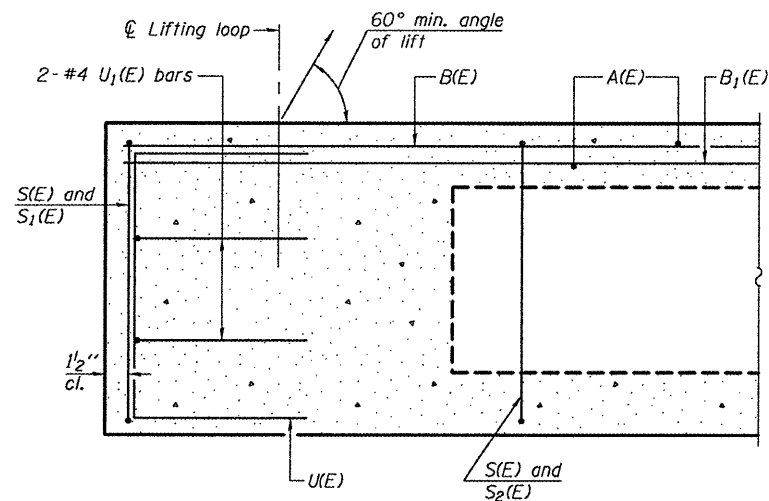
DESIGNED: <i>David T. Holloway</i>	EXAMINED: <i>Jan F. Jull</i>	DATE: MARCH 15, 2011
CHECKED: <i>ATH</i>	PASSED: <i>Jan F. Jull</i>	
DRAWN: Kyle M. Steffen	ACTING ENGINEER OF STRUCTURAL SERVICES	
CHECKED: <i>ATH</i>	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

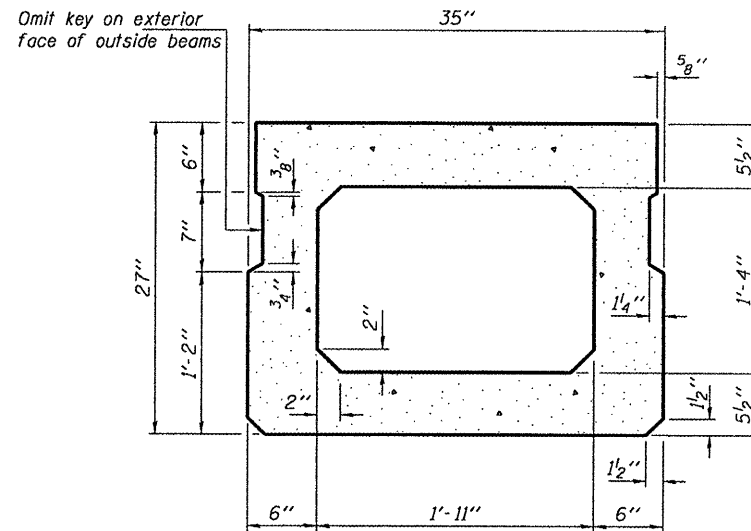
GENERAL PLAN & ELEVATION
SN 046-0107

F.A.L. RTE. 6188	SECTION (39C-BR1)	COUNTY KANKAKEE	TOTAL SHEETS 9	SHEET NO. 6
SHEET NO. 1 OF 4 SHEETS			CONTRACT NO. 66B23	
ILLINOIS FED. AID PROJECT				

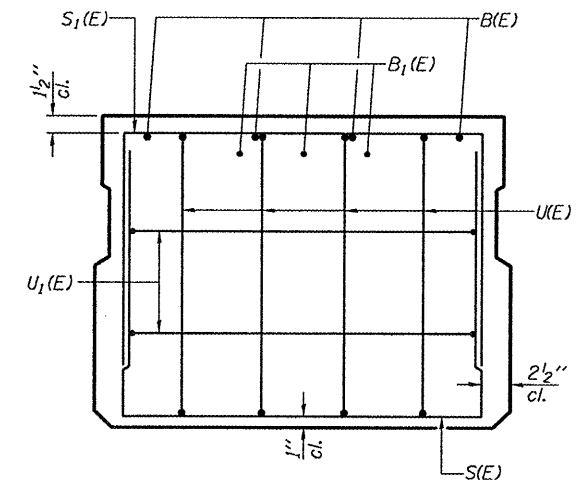
ILLINOIS ROUTE 115
OVER GAR CREEK



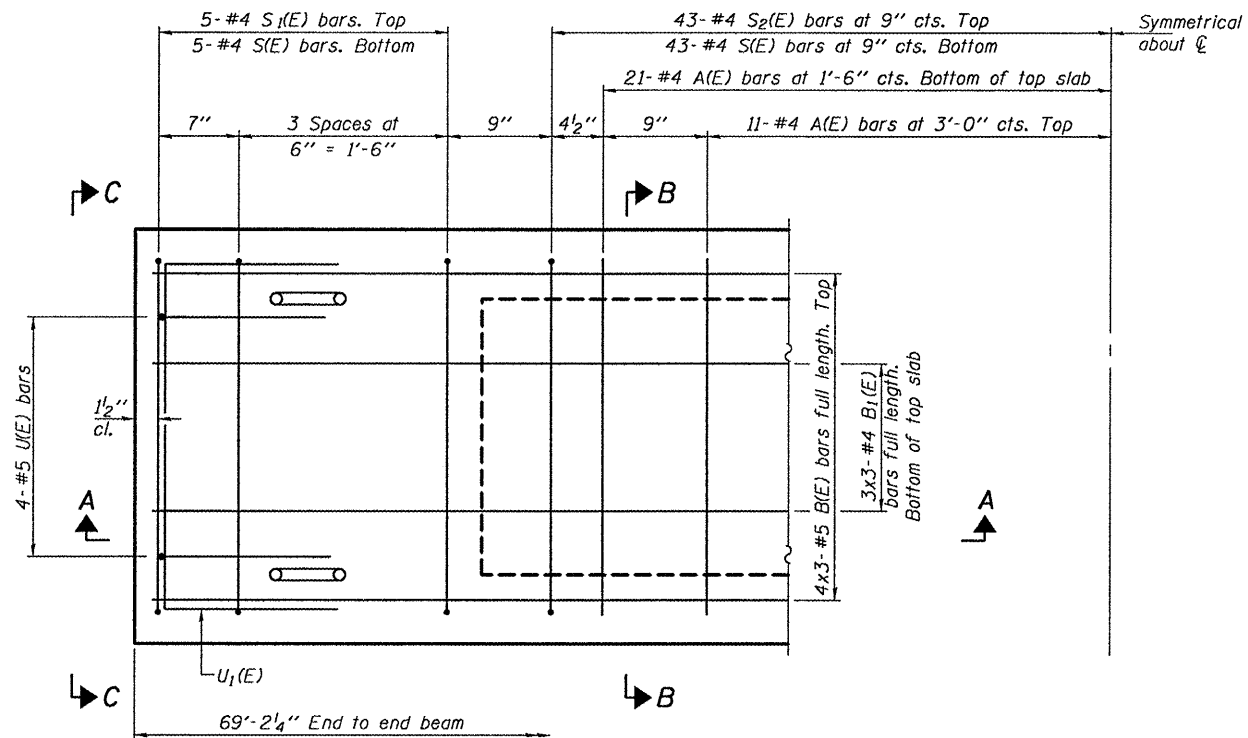
SECTION A-A



SECTION B-B
(Showing dimensions)

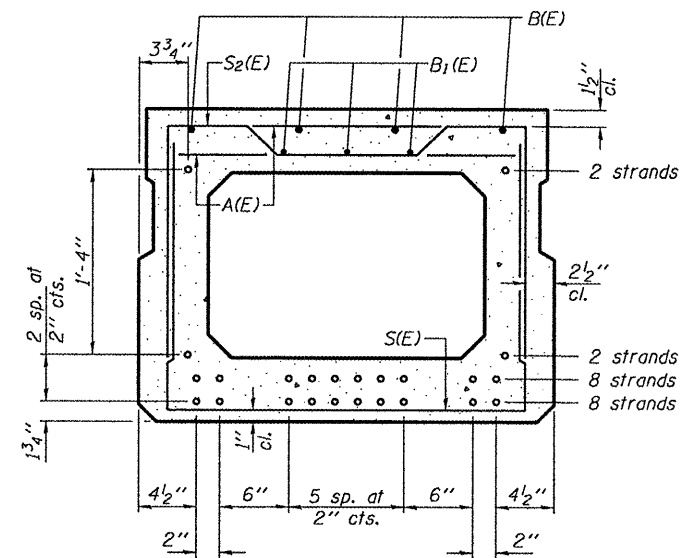


VIEW C-C



PLAN VIEW

Note: Spacing of S(E) and S₂(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION B-B

(Showing reinforcement and permissible strand locations)
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

Bars indicated thus 4x3-#5 etc. indicates 4 lines of bars with 3 lengths per line.

MINIMUM BAR LAP

#4 bar = 2'-0"
#5 bar = 2'-6"

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	64	#4	2'-7"	—
B(E)	12	#5	24'-8"	—
B ₁ (E)	9	#4	24'-4"	—
S(E)	96	#4	6'-4"	U
S ₁ (E)	10	#4	5'-10"	U
S ₂ (E)	86	#4	6'-1"	U
U(E)	8	#5	4'-6"	U
U ₁ (E)	4	#4	4'-11"	U

Note: See sheet 3 of 4 for additional details and Bill of Material.

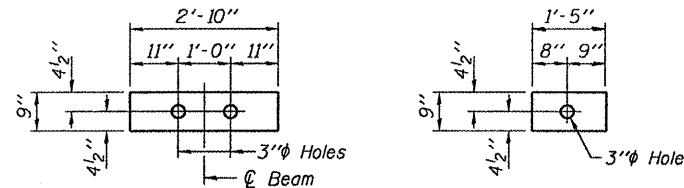
DESIGNED - ATH	EXAMINED	DATE - MARCH 15, 2011
CHECKED - GGE	<i>James F. Jaffe</i> ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED	
CHECKED - ATH GGE	<i>Carl R. ...</i> ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PPC DECK BEAM DETAILS
SN 046-0107

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6188	(39C-BR)I	KANKAKEE	9	7
			CONTRACT NO. 66B23	
ILLINOIS FED. AID PROJECT				

SHEET NO. 2 OF 4 SHEETS



FABRIC BEARING PAD FABRIC ADJUSTING SHIM

FIXED
Note: Omit holes when using expansion bearings.

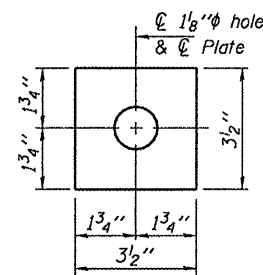
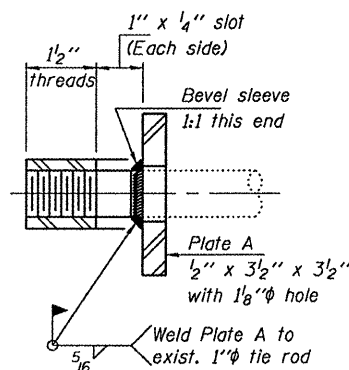
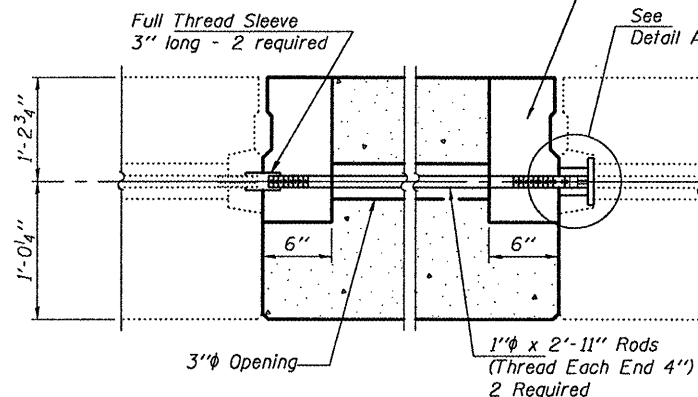


PLATE A
(2 Required)

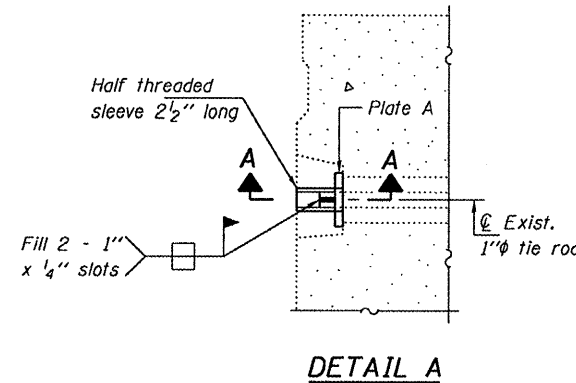


SECTION A-A
(2 Required)

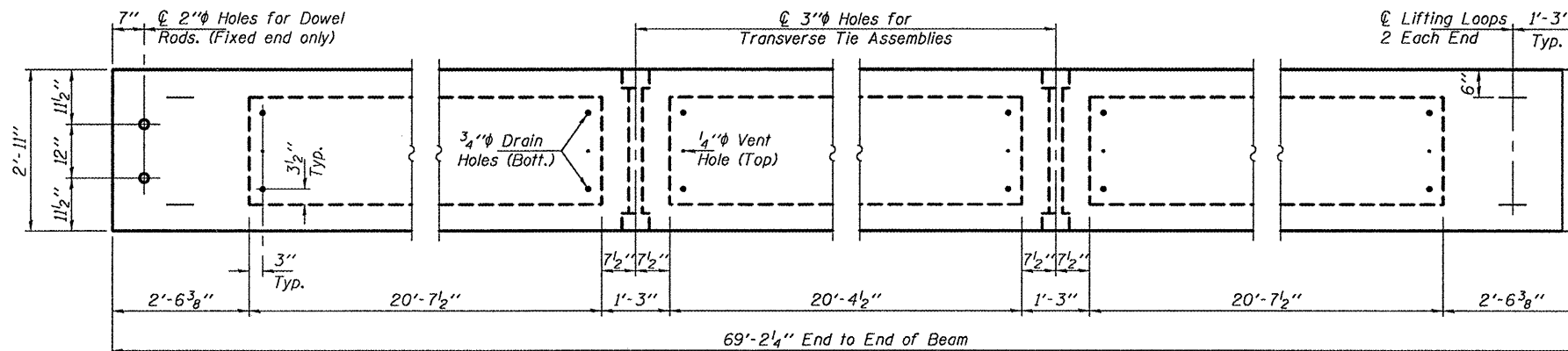
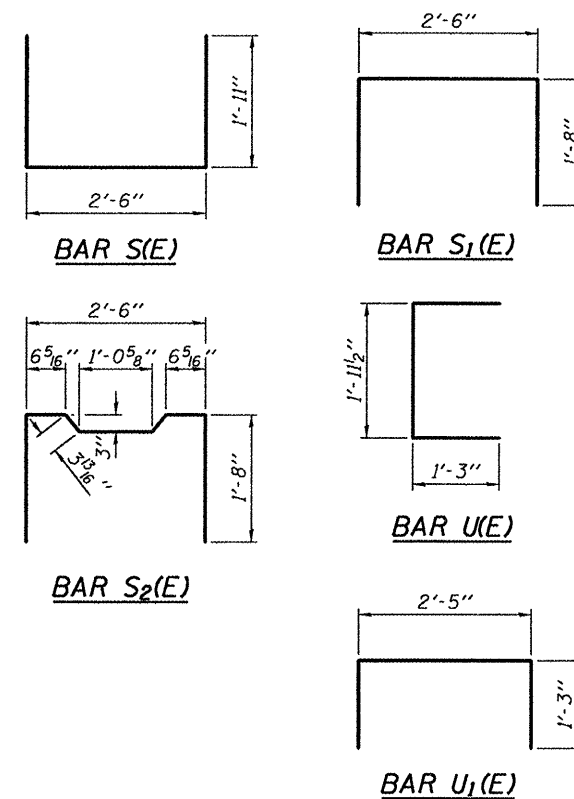
6" x 6" x 16 1/2" Blockout to be filled with non-shrink grout as specified in the special provision Concrete Deck Beams (Min. compressive strength at 7 days = 6,000 psi) after beams have been installed. Cost shall be included in the cost of Precast Prestressed Concrete Deck Beams (27" Depth). (Typ.)



TYPICAL TRANSVERSE TIE ASSEMBLY

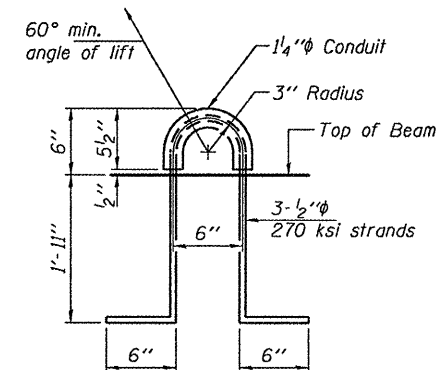


DETAIL A



BEAM PLAN

Expansion End. See sheet 4 of 4 for details.



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. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). Two 1/8" fabric adjusting shims of the dimensions shown shall be provided for each bearing pad location. A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling. Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Compressive strength of prestressed concrete, f'c, shall be 6000 psi. Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	201.8
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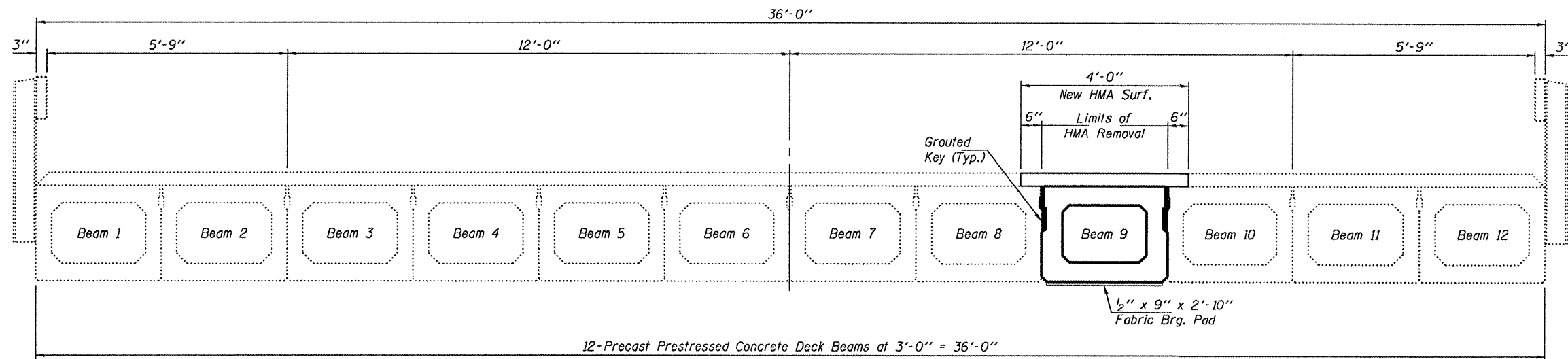
DESIGNED - ATH	EXAMINED - <i>James F. [Signature]</i>	DATE - MARCH 15, 2011
CHECKED - GGE	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>[Signature]</i>	
CHECKED - ATH GGE	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

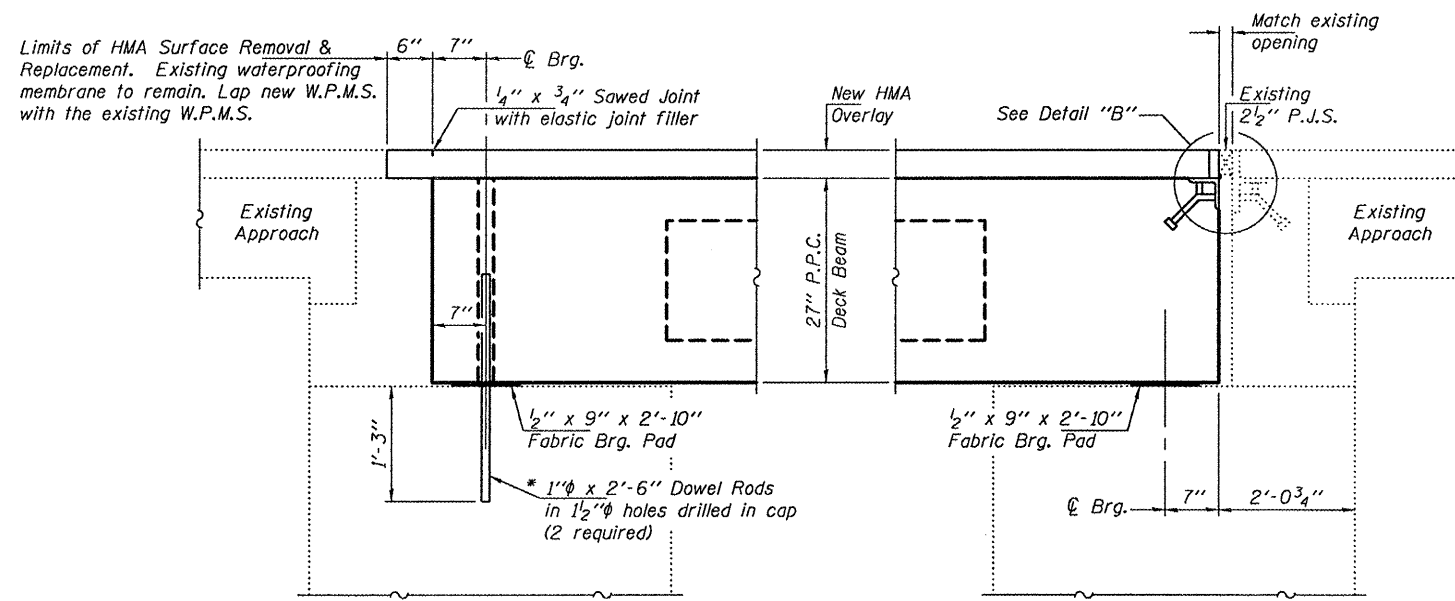
**PPC DECK BEAM DETAILS
SN 046-0107**

F.A.U. RTE. 6188	SECTION (39C-BR1)	COUNTY KANKAKEE	TOTAL SHEETS 9	SHEET NO. 8
CONTRACT NO. 66B23			ILLINOIS FED. AID PROJECT	

SHEET NO. 3 OF 4 SHEETS



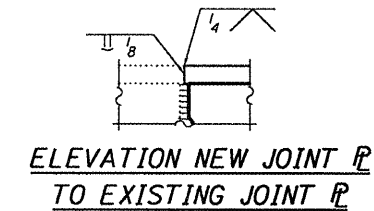
CROSS SECTION
(Looking North)



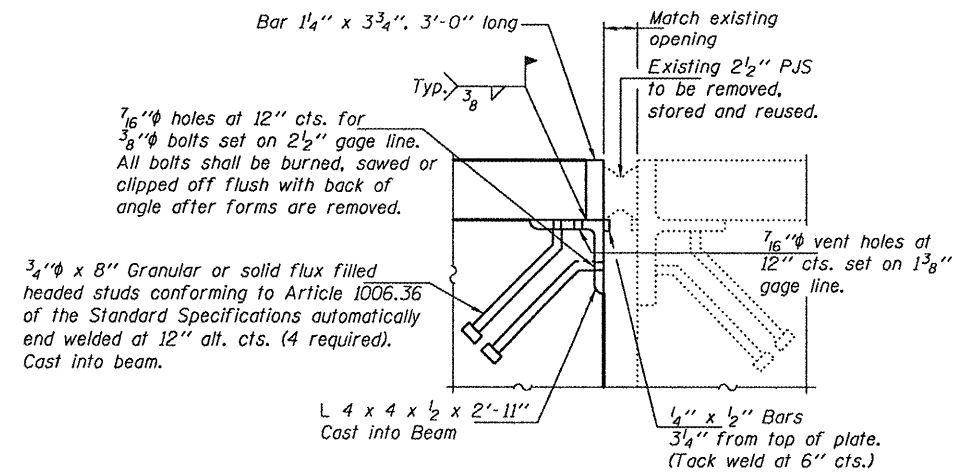
SECTION THRU SOUTH ABUTMENT.

SECTION THRU NORTH ABUTMENT.

* Existing dowel rods are to be burned off, ground flush, and sealed with epoxy prior to placement of new beams. Cost included in Removal of Existing PPC Deck Beams. After beams have been erected holes shall be drilled into cap and dowel rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure a minimum of 24 hours prior to grouting the shear keys.



ELEVATION NEW JOINT P TO EXISTING JOINT P



DETAIL "B"

DESIGNED - ATH	EXAMINED - <i>Jayne F. [Signature]</i>	DATE - MARCH 15, 2011
CHECKED - GGE	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>[Signature]</i>	
CHECKED - ATH GGE	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

DESIGNED - ATH	EXAMINED - <i>Jayne F. [Signature]</i>	DATE - MARCH 15, 2011
CHECKED - GGE	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffen	PASSED - <i>[Signature]</i>	
CHECKED - ATH GGE	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
SN 046-0107

F.A.U. RTE. 6188	SECTION (39C-BR1)	COUNTY KANKAKEE	TOTAL SHEETS 9	SHEET NO. 9
CONTRACT NO. 66B23			ILLINOIS FED. AID PROJECT	

SHEET NO. 4 OF 4 SHEETS