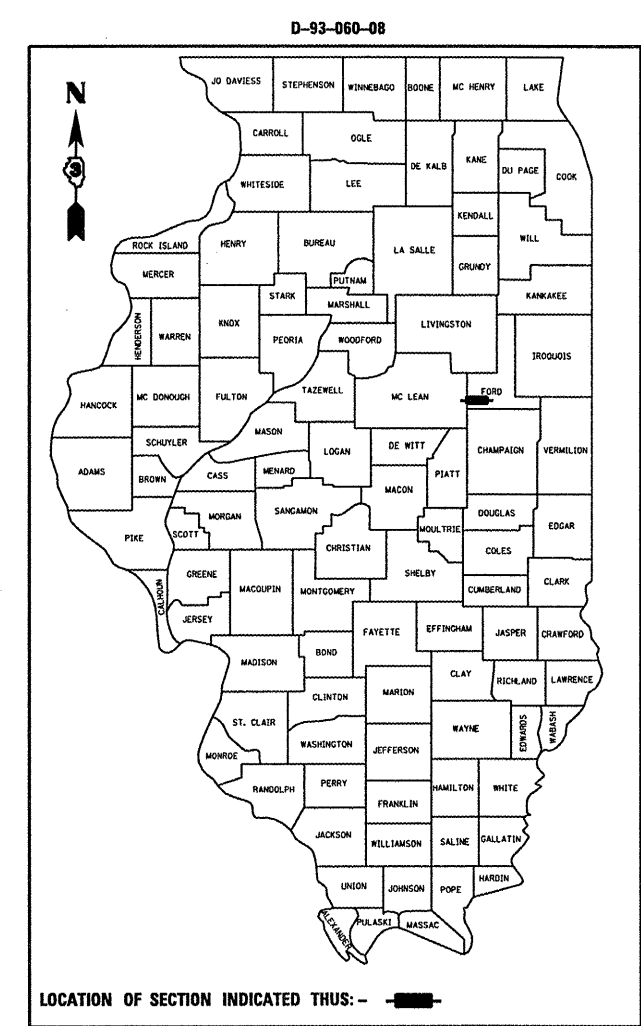


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(19-BR-1)	FORD	15	1
FED. ROAD DIST. NO. -		ILLINOIS	CONTRACT NO. 66819	

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**PROPOSED**  
**HIGHWAY PLANS**

**FAP ROUTE 693 (IL 9)**  
**SECTION (19-BR-1)**

**C-93-093-08**  
**FORD COUNTY**  
**DECK BEAM REPLACEMENT & SUPPORT**



**FUNCTIONAL CLASSIFICATION**  
RURAL - MINOR ARTERIAL  
F.A.P. ROUTE 693 (IL 9)  
2005 ADT = 1550  
P.V = 88.4%    M.U. = 6.5%    S.U. = 5.2%

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 3/25 2008  
*George E. Ryan*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
May 9, 2008  
*Eric E. Harm*  
INTERIM ENGINEER OF DESIGN AND ENVIRONMENT  
May 9, 2008  
*Christine M. Reed*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

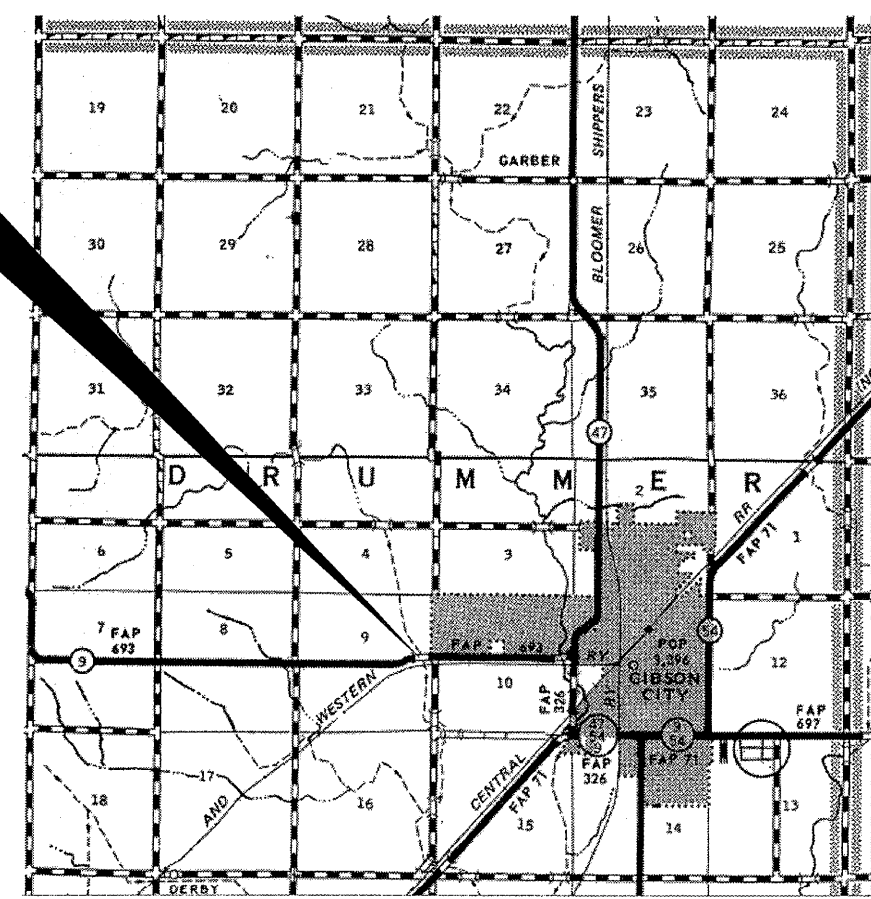
**INDEX OF SHEETS**

1. COVER SHEET
2. GENERAL NOTES
- 3 - 4. SUMMARY OF QUANTITIES
5. TYPICAL SECTIONS
- 6 - 8. STAGING DETAILS
9. TEMPORARY CONCRETE BARRIER
10. TYPICAL PAVEMENT MARKING
11. PLAN AND ELEVATION
- 12 - 15. REPAIR DETAILS

**STANDARDS**

- |           |  |
|-----------|--|
| 000001-05 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS                               |
| 001006    | DECIMAL OF AN INCH AND OF A FOOT   |
| 482011-03 | HMA SHOULDER STRIPS/SHOULDERS WITH RS OR WIDENING & RS PROJECTS            |
| 701001-01 | OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 4.5 m (15') AWAY                     |
| 701006-02 | OFF-ROAD OPERATIONS 2L, 2W, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE |
| 701011-01 | OFF-ROAD MOVING OPERATIONS 2L, 2W, DAY ONLY                                |
| 701201-02 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH                        |
| 701206-01 | LANE CLOSURE, 2L, 2W, NIGHT ONLY, FOR SPEEDS ≥ 45 MPH                      |
| 701301-02 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS                                |
| 701311-02 | LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY                         |
| 701321-09 | LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER                           |
| 701326-02 | LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH               |
| 701901    | TRAFFIC CONTROL DEVICES  |
| 704001-04 | TEMPORARY CONCRETE BARRIER   |

**PROJECT LOCATION**  
SN 027-0005  
1.04 MILES WEST OF IL ROUTE 47



**LOCATION MAP**  
NOT TO SCALE  
POINT LOCATION

MICROFILMED \_\_\_\_\_  
REEL NUMBER \_\_\_\_\_  
AWARDED \_\_\_\_\_  
RESIDENT ENGINEER \_\_\_\_\_  
AS BUILT CHANGES WERE MADE  
ON THE FOLLOWING SHEETS \_\_\_\_\_

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

**DISTRICT 3 NO. (815) 434-6131**  
**PROJECT ENGINEER: JOE KANNEL**  
**UNIT CHIEF: RON WOODSHANK**

**CONTRACT NO. 66819**

**GENERAL NOTES**

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 THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY FURNISHED BASED UPON THE UNIT BID PRICE FOR THE WORK.

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

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE "JULIE" NUMBER IS 1-800-892-0123. A MINIMUM OF FORTY-EIGHT (48) HOURS ADVANCE NOTICE IS REQUIRED.

THE COST OF ANY SAW CUTS MADE TO COMPLETE THE WORK AS DESCRIBED IN PLAN DETAILS, UNLESS OTHERWISE NOTED, SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED WITH THE VARIOUS REMOVAL PAY ITEMS INVOLVED.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.

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.

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.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

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

ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.

	HMA SURFACE	HMA WIDENING
PG GRADE	PG64-22	PG64-22
MAX % RAP ALLOWABLE	15%**	25%**
DESIGN AIR VOIDS	4.0%	4.0%
MIXTURE COMPOSITION	IL 12.5 or IL 9.5	IL 19.0
FRICTION AGGREGATE	MIXTURE C	
DENSITY CONTROL METHOD	NUCLEAR	NUCLEAR

\*\*IF RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED. THIS WILL BE DETERMINED BY THE ENGINEER.

DATE: 3.25.08

PREPARED BY: Ruf Powell  
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: Herbert K. Jager  
DISTRICT CONSTRUCTION ENGINEER

[Signature]  
DISTRICT MATERIALS ENGINEER

Bruce Hecker  
DISTRICT OPERATIONS ENGINEER

FILE NAME =	USER NAME = woodshankr1	DESIGNED - RLW	REVISED - ---
c:\projects\deek beam repl 08\sn 027-0005.dgn		DRAWN - RLW	REVISED - ---
	PLOT SCALE = 1/8" = 103.4029' / IN.	CHECKED - ---	REVISED - ---
	PLOT DATE = Mar 24, 2008 - 10:37:37 AM	DATE - ---	REVISED - ---

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**GENERAL NOTES**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(19-BR-1)I	FORD	15	2
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 66819	

# SUMMARY OF QUANTITIES

CONSTRUCTION CODE TYPE:

SFTY-2A

RURAL  
100% STATE  
TOTAL  
QUANTITY

CODE NO.	ITEM	UNIT	RURAL 100% STATE TOTAL QUANTITY
20200500	EARTH EXCAVATION (WIDENING)	CU YD	94
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	342
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	6
44001005	HOT-MIX ASPHALT SURFACE REMOVAL	SQ YD	4.8
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	337.8
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	10,390
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	42.7
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	85
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1

FILE NAME =	USER NAME = woodshenk1	DESIGNED - RLW	REVISED - ---
ci:\projects\deck beam repl 08\an 027-0005.dgn		DRAWN - RLW	REVISED - ---
	PLOT SCALE = 1/8" = 1/8" IN.	CHECKED - ---	REVISED - ---
	PLOT DATE = Mar 27, 2008 - 10:52:28 AM	DATE - ---	REVISED - ---

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

## SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(19-BR-1)I	FORD	15	3
CONTRACT NO. 66819				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

# SUMMARY OF QUANTITIES

CONSTRUCTION CODE TYPE:

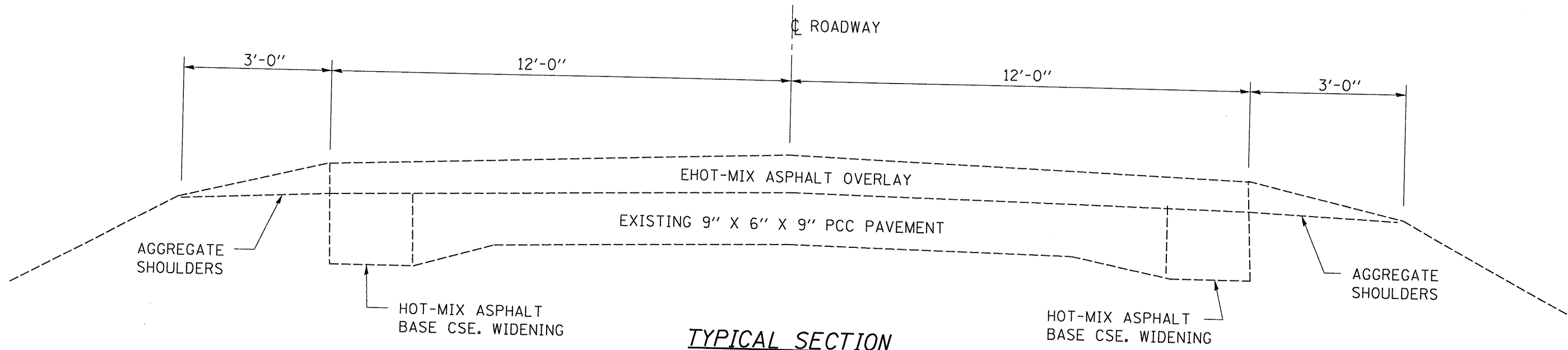
SFTY-2A

RURAL  
100% STATE  
TOTAL  
QUANTITY

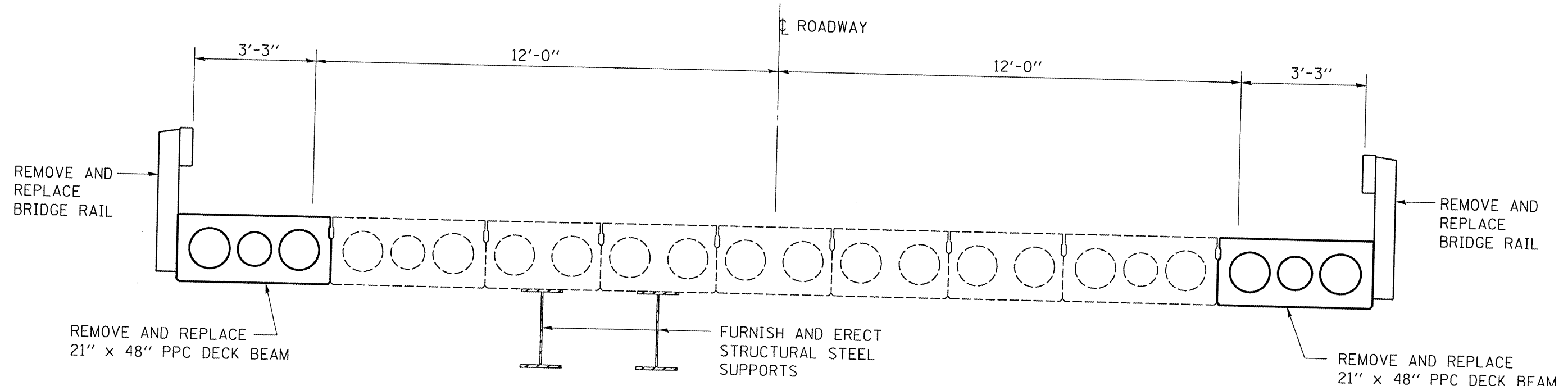
CODE NO.	ITEM	UNIT	RURAL 100% STATE TOTAL QUANTITY
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70400100	TEMPORARY CONCRETE BARRIER	FOOT	227
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	227
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	532
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	144
78300100	PAVEMENT MARKING REMOVAL	SQ FT	212
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	337.8
50900905	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	85
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	2
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
* Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2

\* SPECIALTY ITEM

FILE NAME =	USER NAME = woodshankr1	DESIGNED - RLW	REVISED - ---	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\projects\deck beam repl 00\an 027-0025.dgn		DRAWN - RLW	REVISED - ---			693	(19-BR-11)	FORD	15	4	
PLOT SCALE = 103.4029' / IN.		CHECKED - ---	REVISED - ---			CONTRACT NO. 66819					
PLOT DATE = Mar 27, 2008 - 10:52:34 AM		DATE - ---	REVISED - ---			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
				SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. _____ TO STA. _____							



**TYPICAL SECTION**  
 STA. 859+00 TO STA. 861+99  
 STA. 862+41 TO STA. 865+00



**TYPICAL SECTION**  
 STA. 861+99 TO STA. 862+41

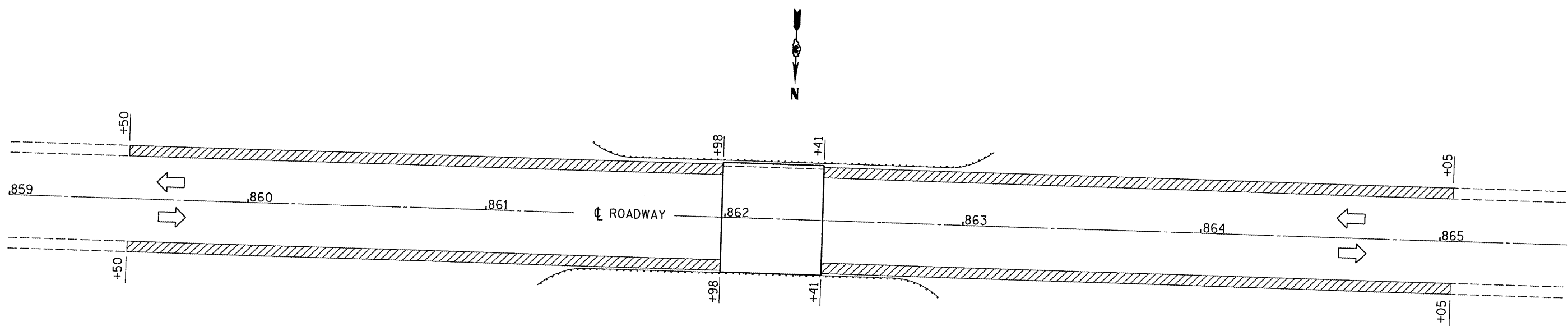
FILE NAME =	USER NAME = woodshankr1	DESIGNED - RLW	REVISED - ---
ct:\projects\view\deck beam repl 08\en 07-0005.dgn		DRAWN - RLW	REVISED - ---
PLOT SCALE = 1/8" = 1'-0"		CHECKED - ---	REVISED - ---
PLOT DATE = Mar 14, 2008 - 08:19:16 AM		DATE - ---	REVISED - ---

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

**TYPICAL SECTIONS**

F.A.P. RTE. 693	SECTION (19-BR-1)	COUNTY FORD	TOTAL SHEETS 15	SHEET NO. 5
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 66819	

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



*BILL OF MATERIALS*

EARTH EXCAVATION WIDENING	CU YD	94
HOT-MIX ASPHALT BASE	SO YD	342
COURSE WIDENING		

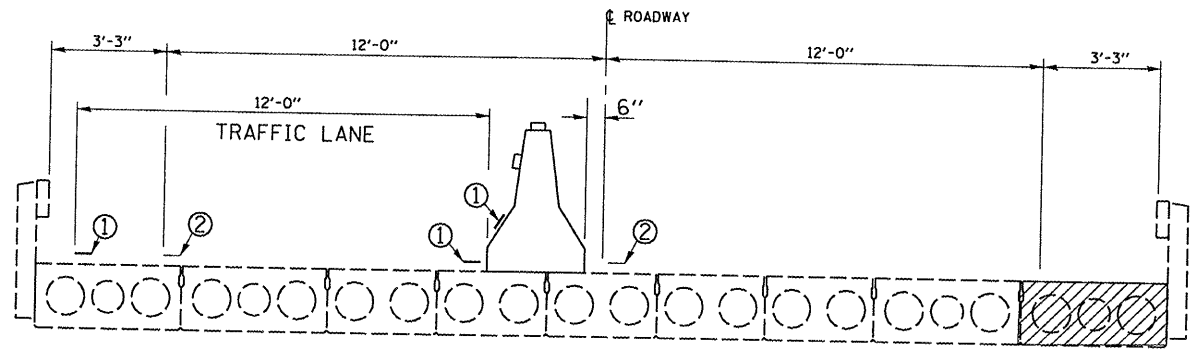
FILE NAME =	USER NAME = woodshenkr]	DESIGNED - RLW	REVISED -
e:\projects\view\deck beam repl 08\en 07-0085.dgn		DRAWN - RLW	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**STAGING DETAILS - STAGE I**

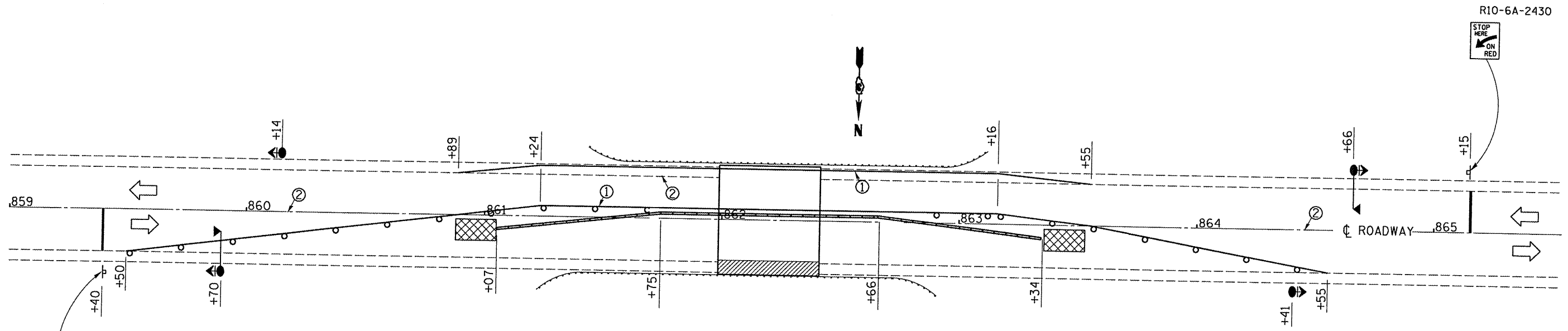
SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(19-BR-1)I	FORD	15	6
CONTRACT NO. 66819				



**CROSS SECTION**  
LOOKING WEST

- NOTES:
1. THE CONTRACTOR HAS THE OPTION OF USING EITHER THE LINE ON THE TEMPORARY CONCRETE BARRIER OR ON THE PAVEMENT.
  2. THE COST OF THE REFLECTORS AND THE BARRIER/PAVEMENT MARKING LINE IS INCLUDED IN THE COST OF THE TEMPORARY CONCRETE BARRIER.
  3. THE COST OF THE TEMPORARY PAVEMENT MARKING IS INCLUDED IN THE COST OF STANDARD 701321



- ① TEMPORARY PAVEMENT MARKING LINE 4"
- ② PAVEMENT MARKING REMOVAL

**BILL OF MATERIAL**

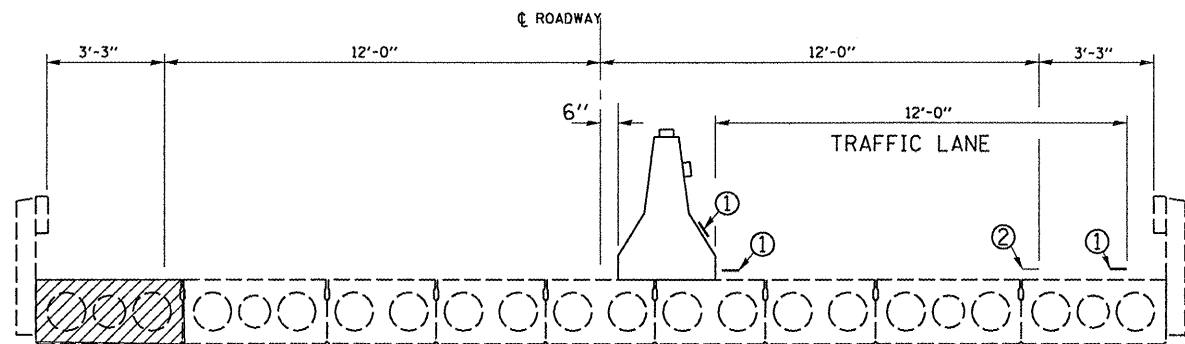
PAVEMENT MARKING REMOVAL	SQ FT	124
TEMPORARY CONCRETE BARRIER	FOOT	227
IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE, TEST LEVEL 3)	EACH	2

**SYMBOLS**

- Work area
- Sign
- Type III barricade
- Microwave detector
- Traffic signal with backplate
- Impact attenuator
- Drum with steady burning light at 25' cts.
- Temporary concrete barrier
- Double vertical panel at 25' cts.
- Crystal, bidirectional barrier wall/guardrail marker at 25' cts.

SEE STANDARD 701321 FOR DETAILS NOT SHOWN

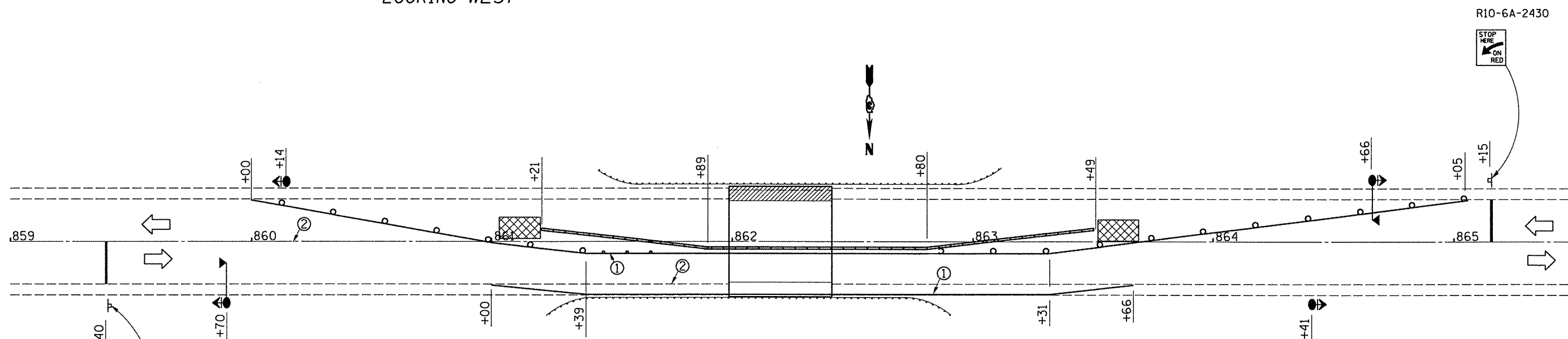
FILE NAME =	USER NAME = woodshankr1	DESIGNED - RLW	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGING DETAILS - STAGE II</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PROJECTS\view\deck beam repl 08\an 07-0005.dgn		DRAWN - RLW	REVISED -			693	(19-BR-1)I	FORD	15	7	
PLOT SCALE = 1/8" = 1' / IN.		CHECKED -	REVISED -			CONTRACT NO. 66819					
PLOT DATE = Mar 14, 2008 - 08:19:27 AM		DATE -	REVISED -			FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					



**CROSS SECTION**  
LOOKING WEST

**NOTES:**

1. THE CONTRACTOR HAS THE OPTION OF USING EITHER THE LINE ON THE TEMPORARY CONCRETE BARRIER OR ON THE PAVEMENT.
2. THE COST OF THE REFLECTORS AND THE BARRIER/PAVEMENT MARKING LINE IS INCLUDED IN THE COST OF THE TEMPORARY CONCRETE BARRIER.
3. THE COST OF THE TEMPORARY PAVEMENT MARKING IS INCLUDED IN THE COST OF STANDARD 701321



- ① TEMPORARY PAVEMENT MARKING LINE 4"
- ② PAVEMENT MARKING REMOVAL

**BILL OF MATERIAL**

PAVEMENT MARKING REMOVAL	SQ FT	88
RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	227
IMPACT ATTENUATOR, RELOCATE (NON-REDIRECTIVE, TEST LEVEL 3)	EACH	2
THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	532
THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	144

**SYMBOLS**

Work area

Sign

Type III barricade

Microwave detector

Traffic signal with backplate

Impact attenuator

Drum with steady burning light at 25' cts.

Temporary concrete barrier

Double vertical panel at 25' cts.

Crystal, bidirectional barrier wall/guardrail marker at 25' cts.

SEE STANDARD 701321 FOR DETAILS NOT SHOWN

FILE NAME =	USER NAME = woodshenkr1	DESIGNED - RLW	REVISED - ---
or\projects\view\deck beam repl 00\an 07-2005.dgn		DRAWN - RLW	REVISED - ---
	PLOT SCALE = 1/8" = 1' / IN.	CHECKED - ---	REVISED - ---
	PLOT DATE = Mar 14, 2008 - 08:19:32 AM	DATE - ---	REVISED - ---

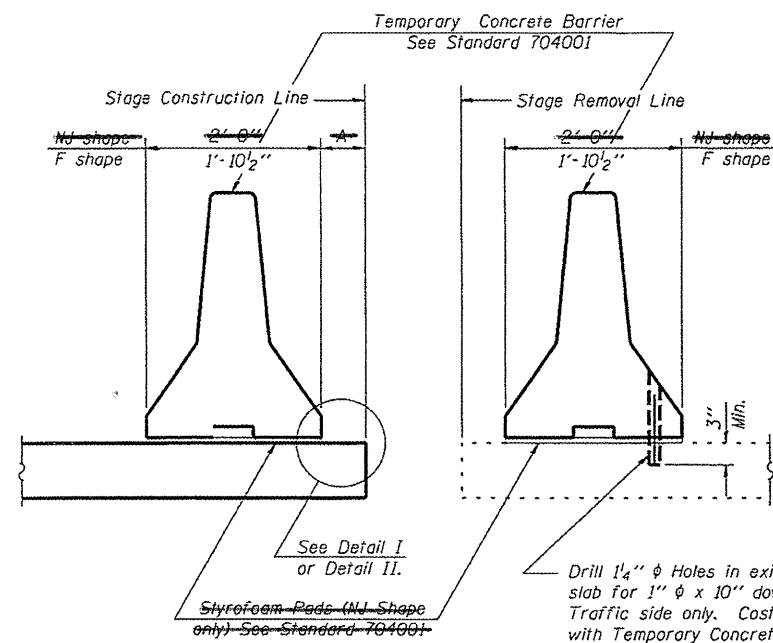
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**STAGING DETAILS - STAGE III**

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

F.A.P. RTE. 693	SECTION (19-BR-1)	COUNTY FORD	TOTAL SHEETS 15	SHEET NO. 8
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT			CONTRACT NO. 66819	





NEW SLAB

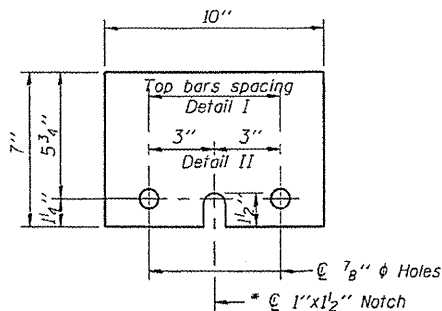
EXISTING SLAB

**SECTIONS THRU SLAB**

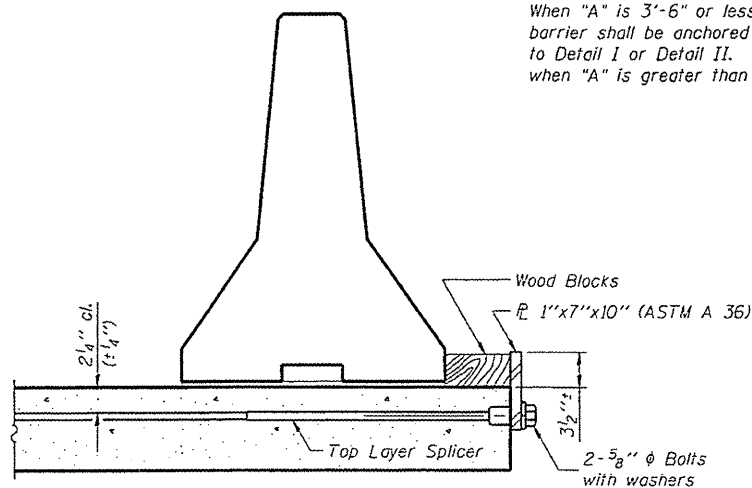
**NOTES**

- Detail I - With Bar Splicer or Couplers: Connect one (1) 1"x7"x10" steel  $\bar{P}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.
  - Detail II - With Extended Reinforcement Bars: Connect one (1) 1"x7"x10" steel  $\bar{P}$  to the concrete slab with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier.

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".

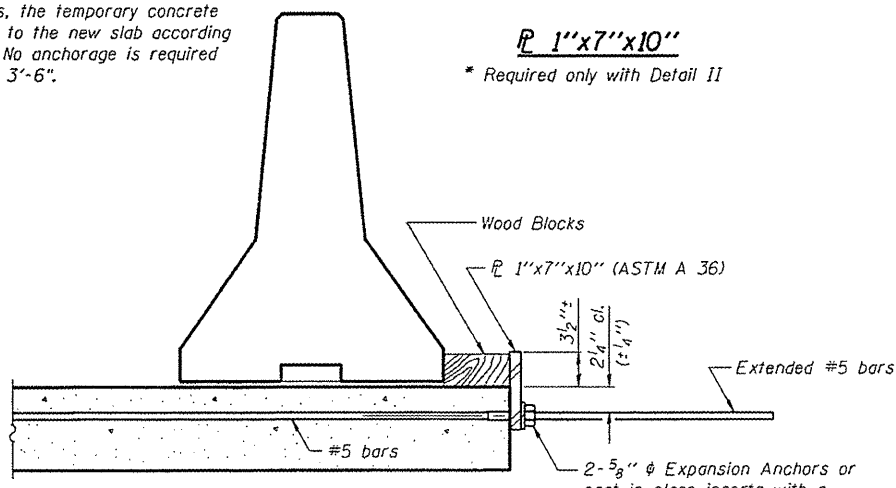


**1"x7"x10"**  
\* Required only with Detail II



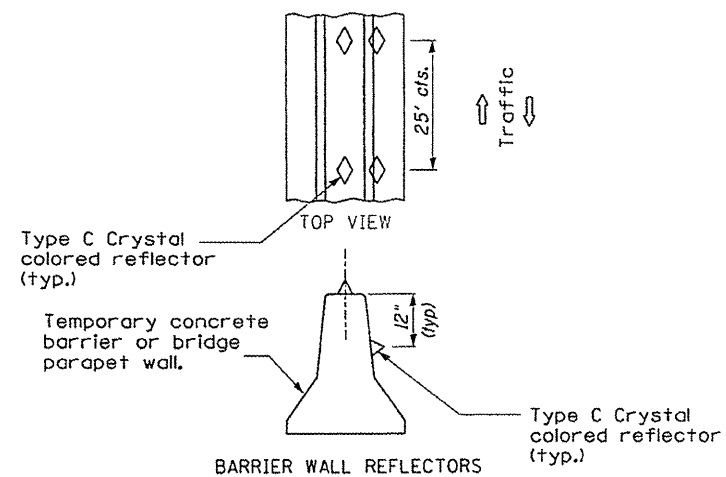
**DETAIL I**

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.

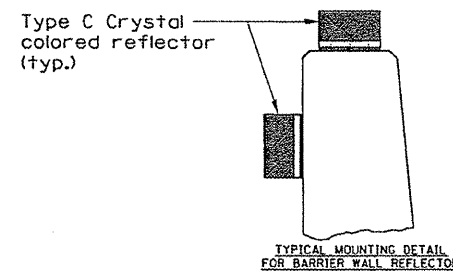


**DETAIL II**

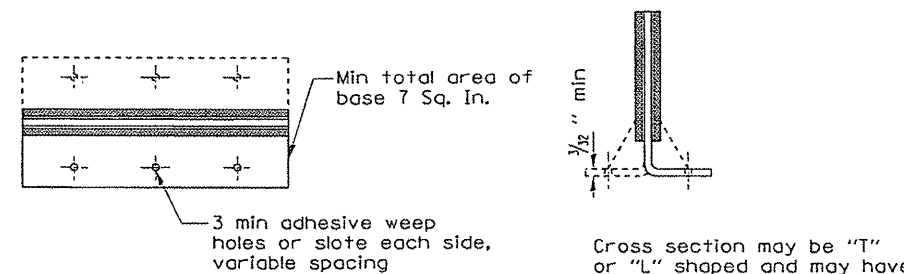
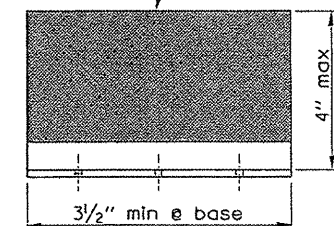
The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



**DETAIL A**



Min. reflective area 6 1/2" each side may be rectangular or slight trapezoid



**TYPE C REFLECTOR**

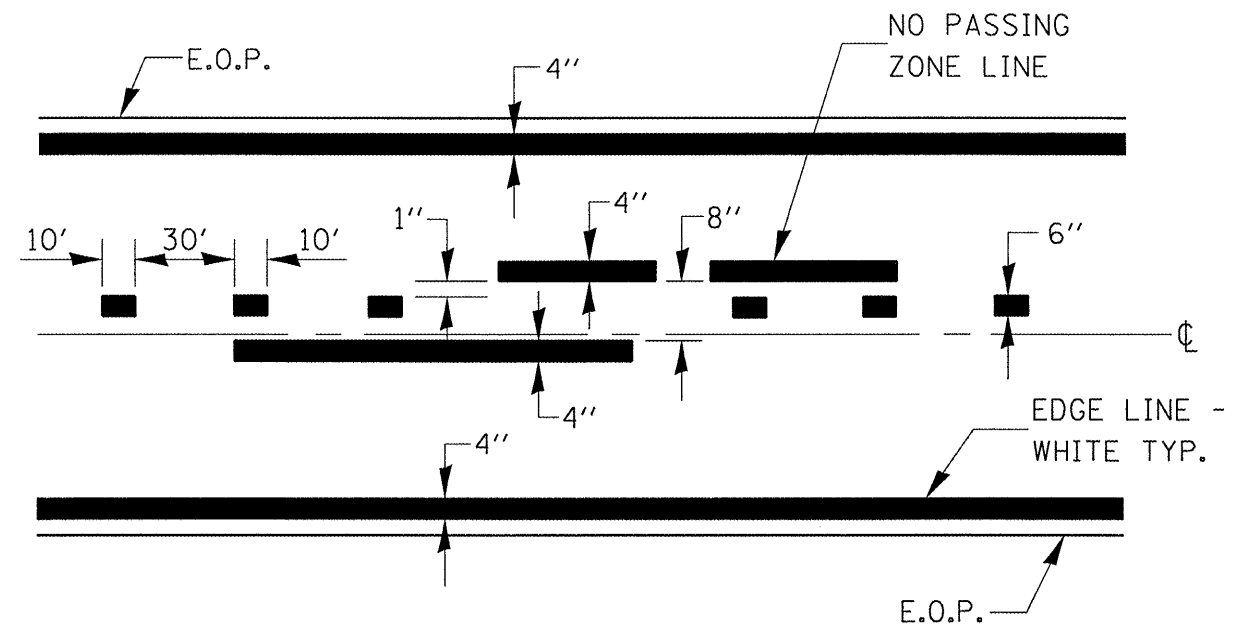
FILE NAME =	USER NAME = woodshank1	DESIGNED - RLW	REVISED - ---
c:\projects\view\deck beam repl 08/10/2	7-0005.dgn	DRAWN - RLW	REVISED - ---
PLOT SCALE = 1/8"=1'-0"		CHECKED - ---	REVISED - ---
PLOT DATE = Mar 14, 2008 - 08:19:37 AM		DATE - ---	REVISED - ---

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CONCRETE BARRIER**

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

F.A.P. RTE. 693	SECTION (19-BR-1)	COUNTY FORD	TOTAL SHEETS 5	SHEET NO. 1
CONTRACT NO. 66819			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	



CENTERLINE & NO PASSING ZONE LINES - YELLOW  
 (SEE TYPICAL SECTIONS)

# PAVEMENT MARKING

FILE NAME =	USER NAME = woodshankr1	DESIGNED - RLW	REVISED - ---
c:\projects\view\deck beam repl 08\en 027-0085.dgn		DRAWN - RLW	REVISED - ---
PLOT SCALE = 103.4029' / IN.		CHECKED - ---	REVISED - ---
PLOT DATE = Mar 14, 2008 - 08:19:42 AM		DATE - -----	REVISED - ---

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**TYPICAL PAVEMENT MARKING**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(19-BR-1)I	FORD	15	10
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT			CONTRACT NO. 66819	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FA 693		FORD	15	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract Number: 66819

**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 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.

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.

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.

See Section 584 of the Standard Specifications for Epoxy Grouting of Threaded Rods.

The cost of epoxy grouting threaded rods shall be included with Furnishing and Erecting Structural Steel.

The Contractor has the option of using used steel. See special provisions.

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

**DESIGN STRESSES**

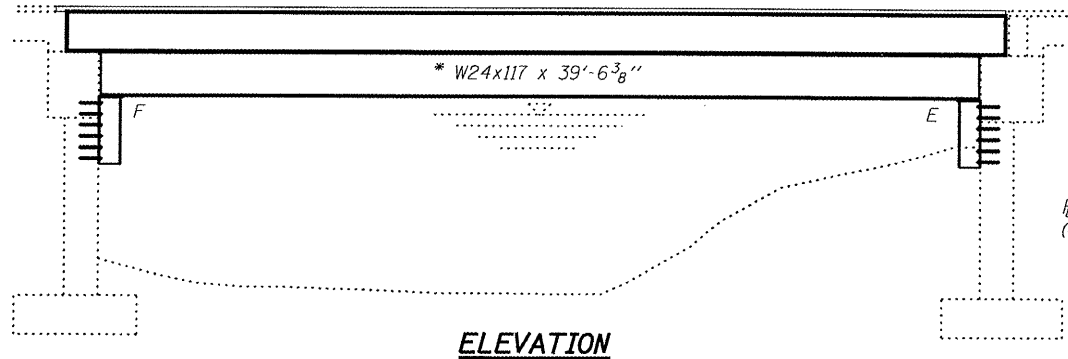
PRECAST PRESTRESSED UNITS  
 $f'_c = 6,000$  psi  
 $f'_{ci} = 5,000$  psi  
 $f'_s = 270,000$  psi ( $\frac{1}{2}$ "  $\phi$  low lax strands)  
 $f'_{si} = 201,960$  psi ( $\frac{1}{2}$ "  $\phi$  low lax strands)

**TOTAL BILL OF MATERIAL**

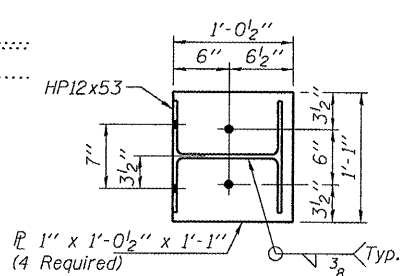
ITEM	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	337.8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	337.8
Hot-Mix Asphalt Surface Removal	Sq. Yd.	5.2
HMA Surface Course Mix "C" N50	Tons	4.8
PC Mortar Fairing Course	Foot	85
Waterproofing Membrane System	Sq. Yd.	42.8
Removing and Re-erecting Existing Railing	Foot	85
Furnishing and Erecting Structural Steel	Pound	10,390
Asbestos Bearing Pad Removal	Each	2

**PLAN AND ELEVATION**  
**FA 693 OVER W. BR. DRUMMER CREEK**  
**FORD COUNTY**  
**SN 027-0005**

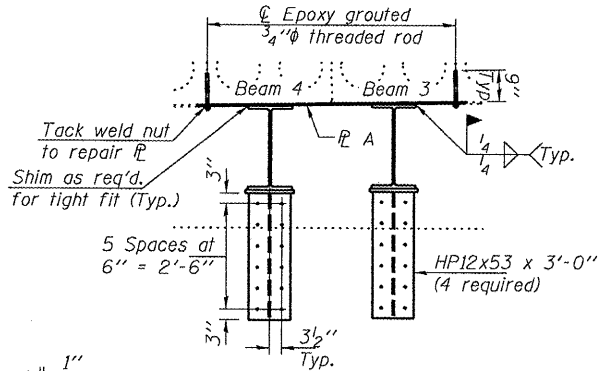
\* Contractor is to verify beam length prior to ordering material. Other sections meeting the section modulus requirements shown may be allowed subject to approval by the Bureau of Bridges and Structures, however, no additional payment will be allowed if the contractor chooses a heavier steel section than the one specified in the plans. Maximum girder depth = 24", Min. Sx = 291 in<sup>3</sup>.



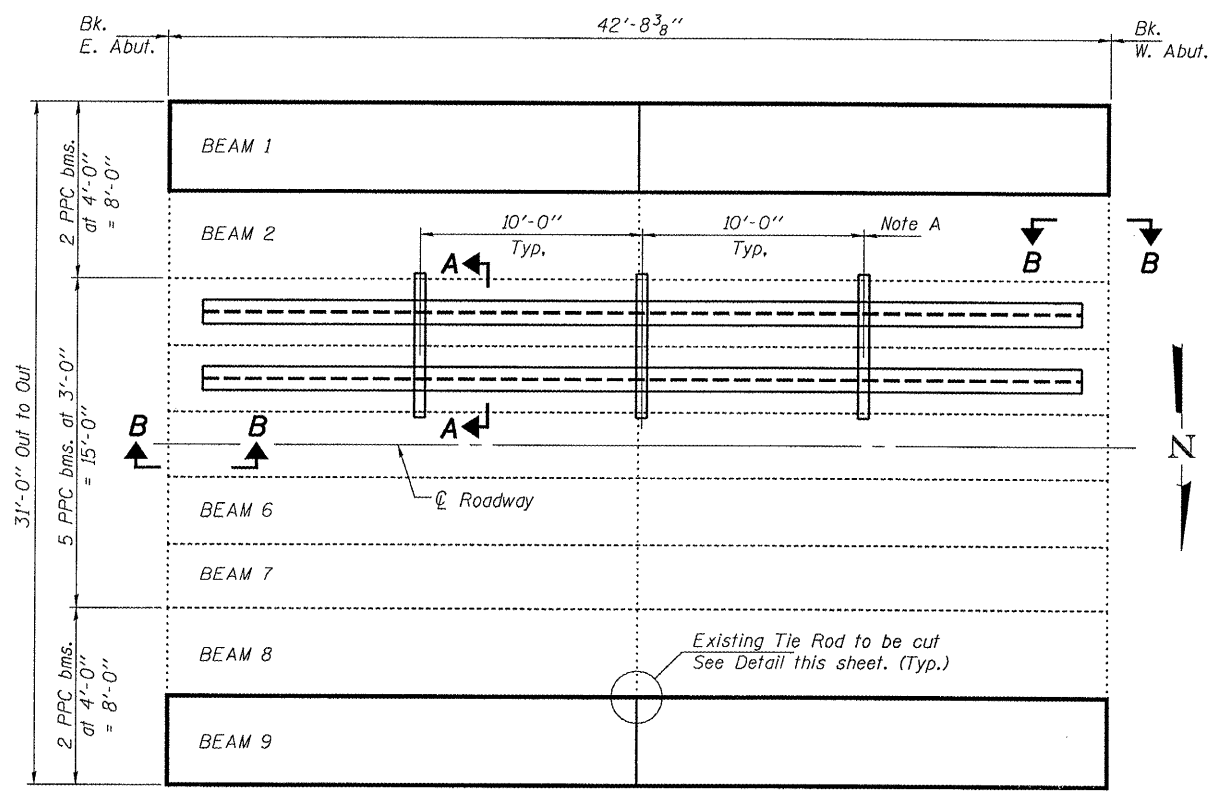
**ELEVATION**



**SECTION C-C**

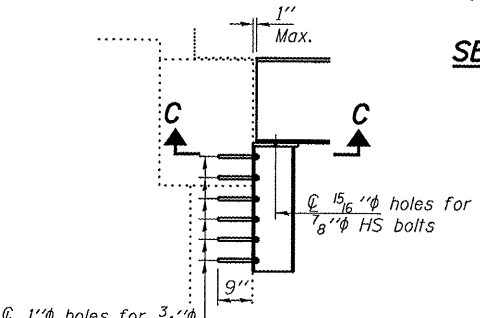


**SECTION A-A**

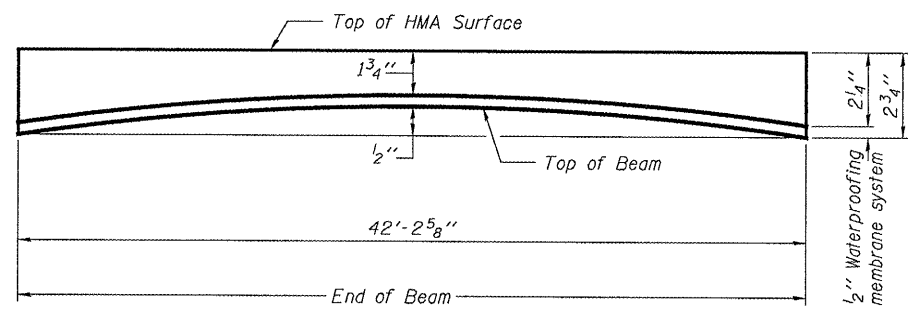


**PLAN**

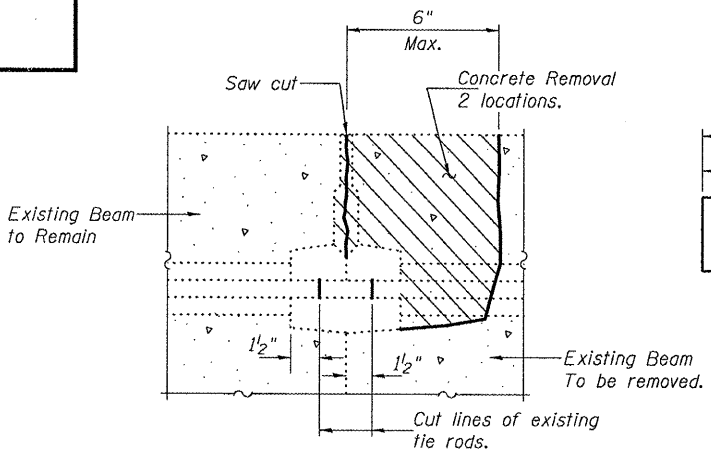
Note A:  
 $\phi$  Transverse tie  $\phi$ 's (3 per span). Place additional shims at midpoints between tie  $\phi$ 's. Securely weld shims to top flange of support beam. Minimum shim size is 6" x flange width.



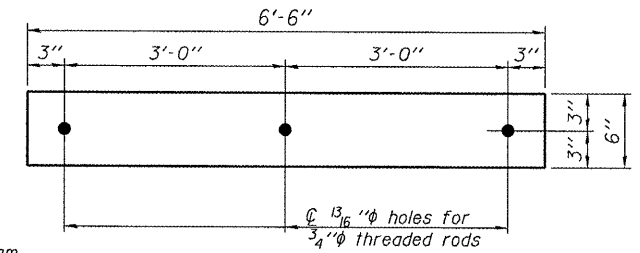
**SECTION B-B**



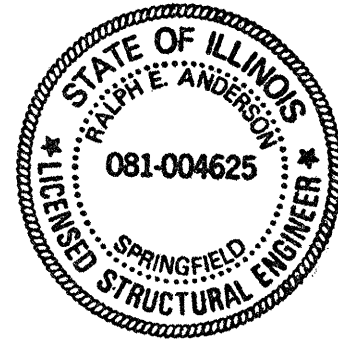
**ANTICIPATED INITIAL CAMBER DIAGRAM**



**BEAM REMOVAL DETAIL AT TRANSVERSE TIES**



**TRANSVERSE TIE R A**  
 $\frac{1}{2}$ " x 6'-6" x 6" (3 req'd.)



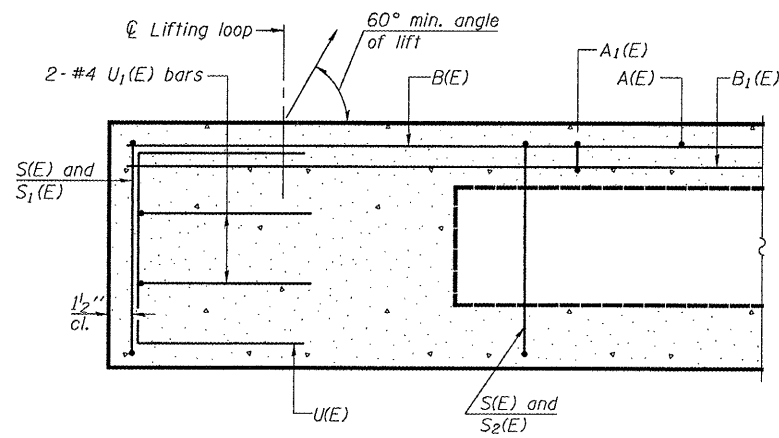
DESIGNED: [Signature]  
 CHECKED: [Signature]  
 DRAWN: Steffen  
 CHECKED: ASB ATH  
 EXAMINED: [Signature] MAY 2, 2008  
 PASSED: [Signature]

Expires: November 30, 2008

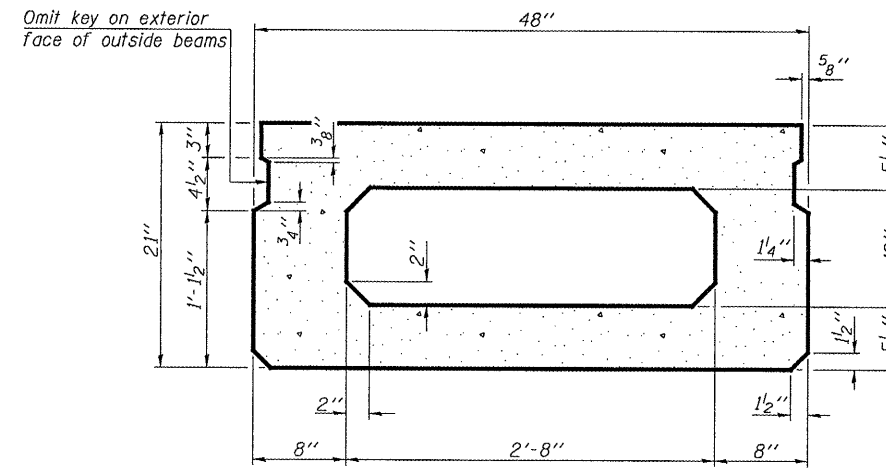
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2
FA 693		FORD	15	12	5 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

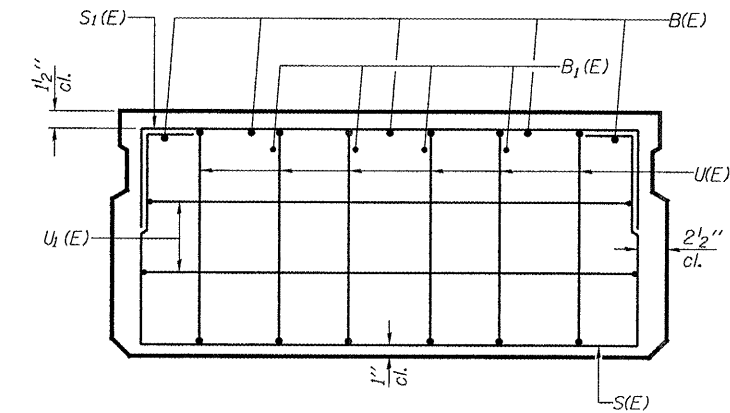
Contract Number: 66819



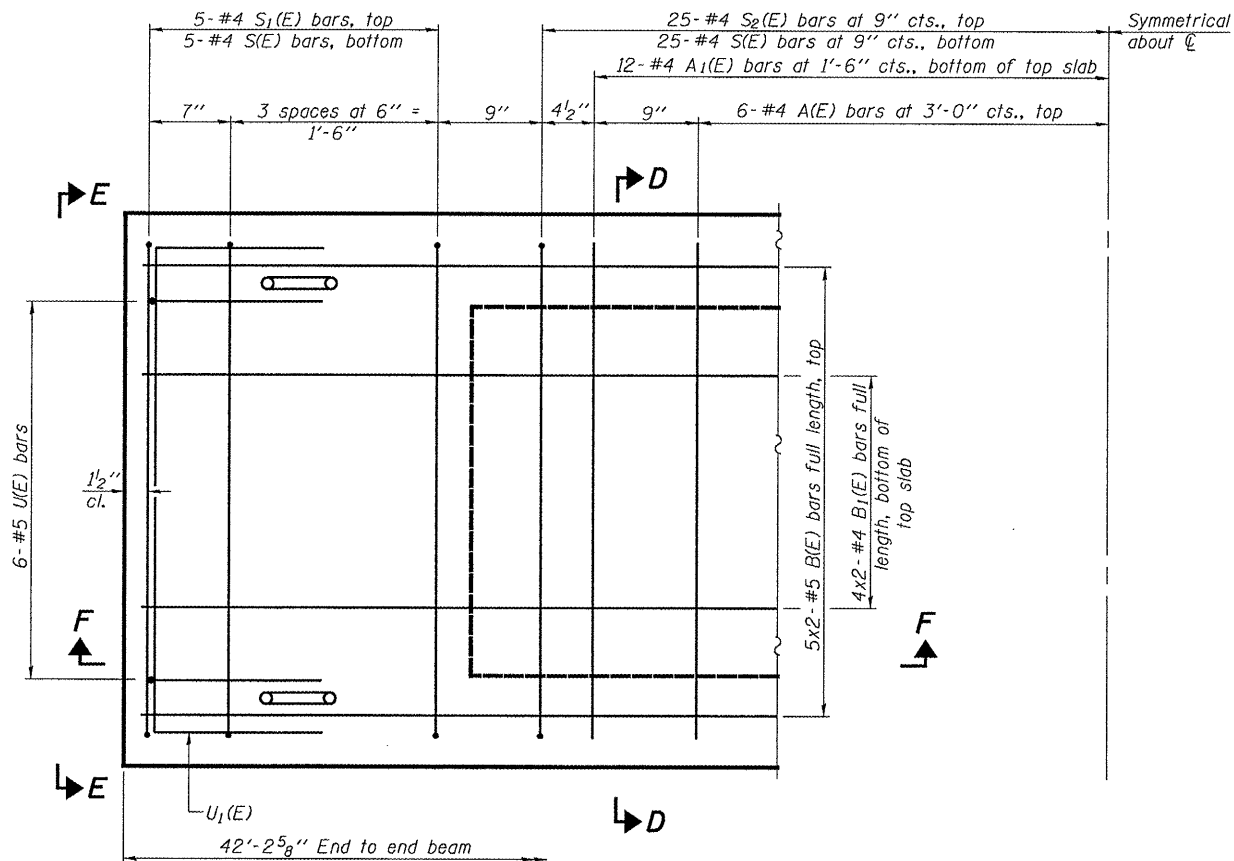
**SECTION F-F**



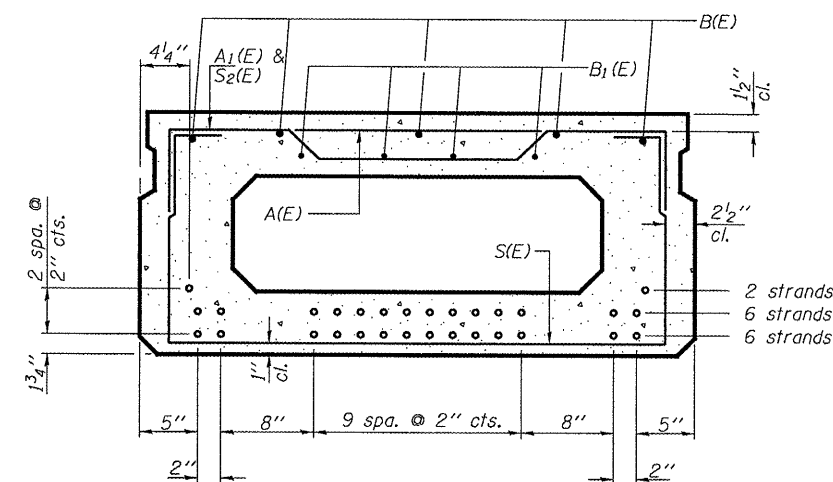
**SECTION D-D**  
(Showing dimensions)



**VIEW E-E**



**PLAN VIEW**



**SECTION D-D**

(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.

**BAR LIST**  
**ONE BEAM ONLY**  
(For Information Only)

Bar	No.	Size	Length	Shape
A(E)	12	#4	3'-7"	—
A1(E)	24	#4	3'-10"	—
B(E)	10	#5	22'-1"	—
B1(E)	8	#4	21'-10"	—
S(E)	60	#4	7'-5"	U
S1(E)	10	#4	5'-11"	U
S2(E)	50	#4	6'-2"	U
U(E)	12	#5	4'-0"	U
U1(E)	4	#4	6'-0"	U

Note: See sheet 3 of 5 for additional details and Bill of Material.

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

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.

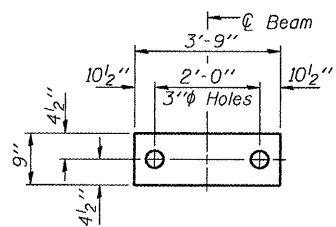
DESIGNED	AJB
CHECKED	ATH
DRAWN	Steffen
CHECKED	AJB ATH

MAY 2, 2008  
EXAMINED *A. Carl Hines*  
ENGINEER OF STRUCTURAL SERVICES  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

**BEAM DETAILS**  
**FAP 693 OVER W. BR. DRUMMER CREEK**  
**FORD COUNTY**  
**SN 027-0005**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FA 693		FORD	13	5 SHEETS
Contract Number: 66819				

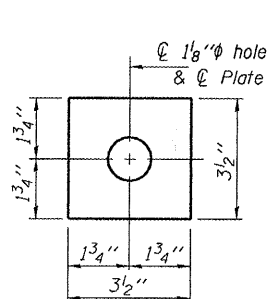
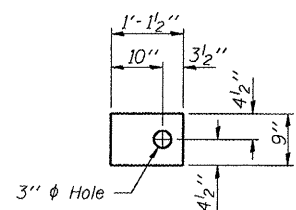


**FABRIC BEARING PAD**

**FABRIC ADJUSTING SHIM**

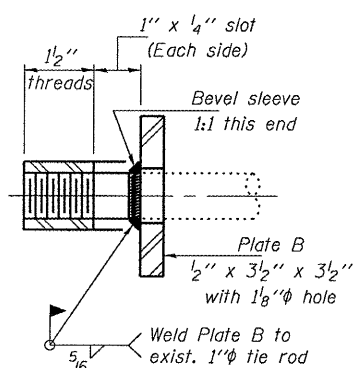
**FIXED**

Note: Omit holes when using expansion bearings.

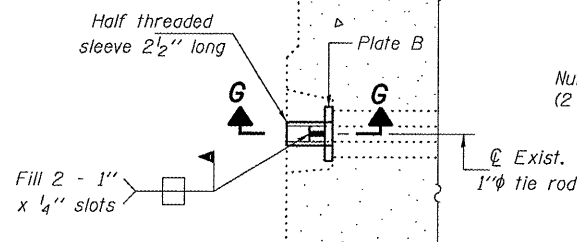


**PLATE B**  
(2 Required)

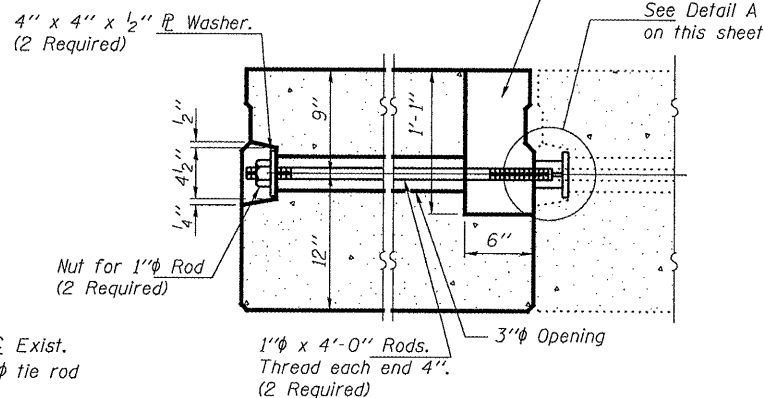
6" x 6" x 1'-1" Blockout to be filled with Class BS Concrete after Beams have been installed. Cost shall be included in the cost of Precast Prestressed Concrete Deck Beams (21'). Contractor shall ensure exposed strands within Blockout are not damaged during installation.



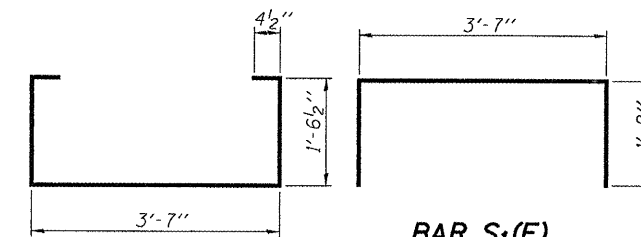
**SECTION G-G**  
(2 Required)



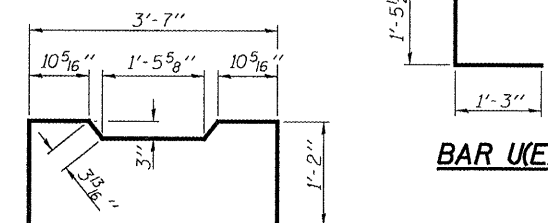
**DETAIL A**



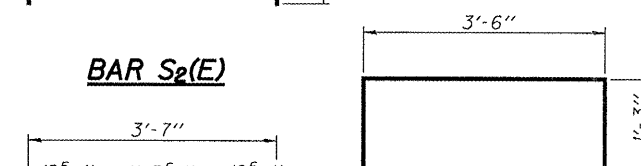
**TRANSVERSE TIE ASSEMBLY**



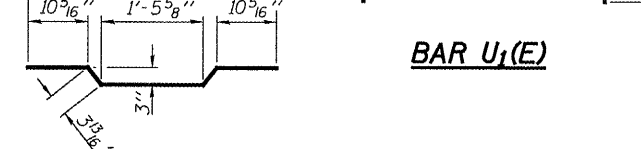
**BAR S(E)**



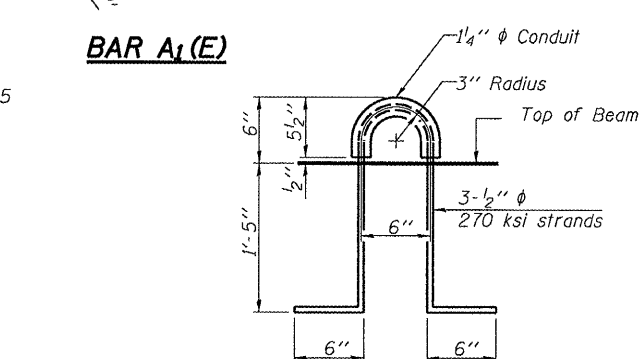
**BAR U(E)**



**BAR S2(E)**



**BAR U1(E)**



**BAR A1(E)**

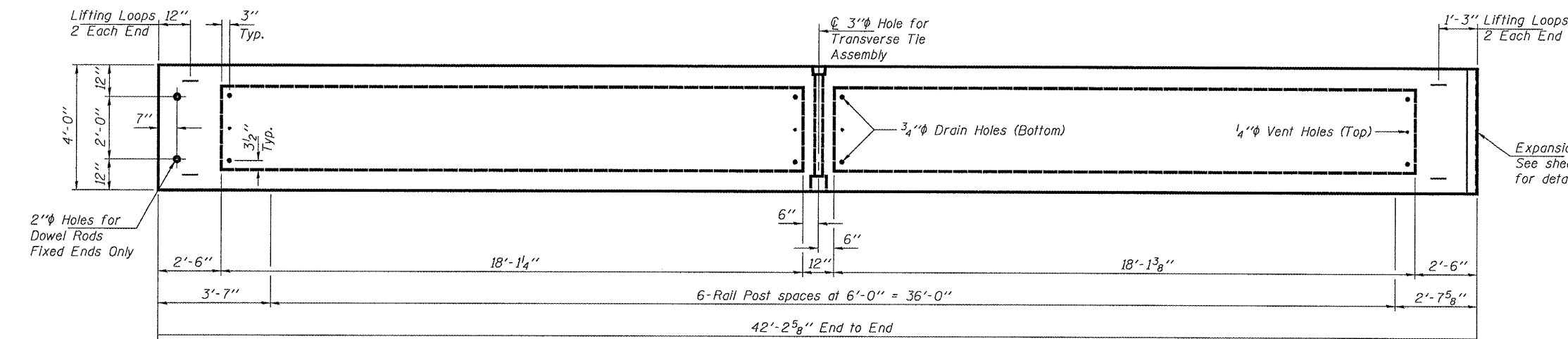
**LIFTING LOOP DETAIL**

**BILL OF MATERIAL**

Precast Prestressed Conc. Deck Bms. (21' depth)	Sq. Ft. 337.8
---	---------------

**BEAM DETAILS**

**FAP 693 OVER W. BR. DRUMMER CREEK**  
**FORD COUNTY**  
**SN 027-0005**



**BEAM PLAN**

**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. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place. Reinforcement bars shall conform to ASTM A 706 (IL MOD), 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.

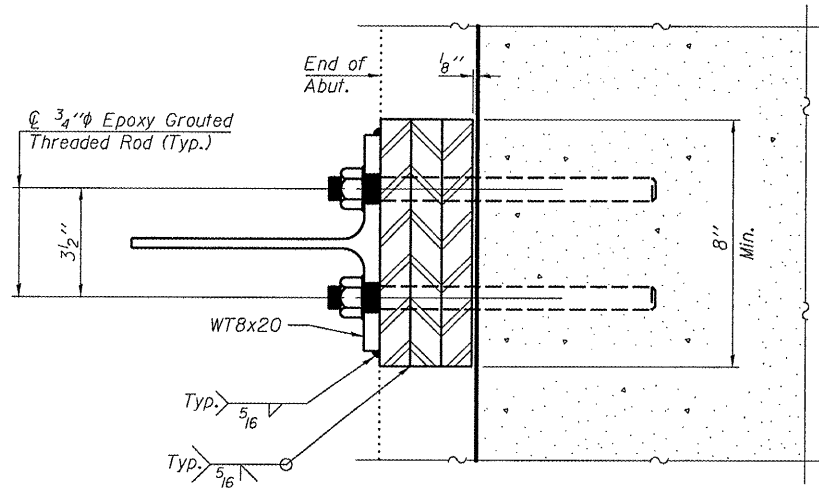
DESIGNED	AJB
CHECKED	ATH
DRAWN	Steffen
CHECKED	AJB ATH

MAY 2, 2008  
EXAMINED *A. Carl Hoyer*  
ENGINEER OF STRUCTURAL SERVICES  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

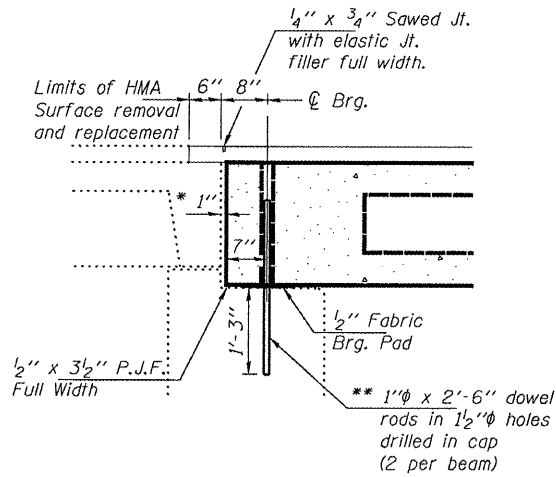
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 693		FORD	15	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract Number: 66819



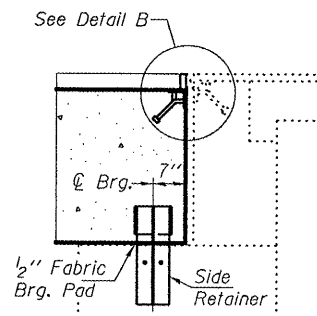
SECTION H-H



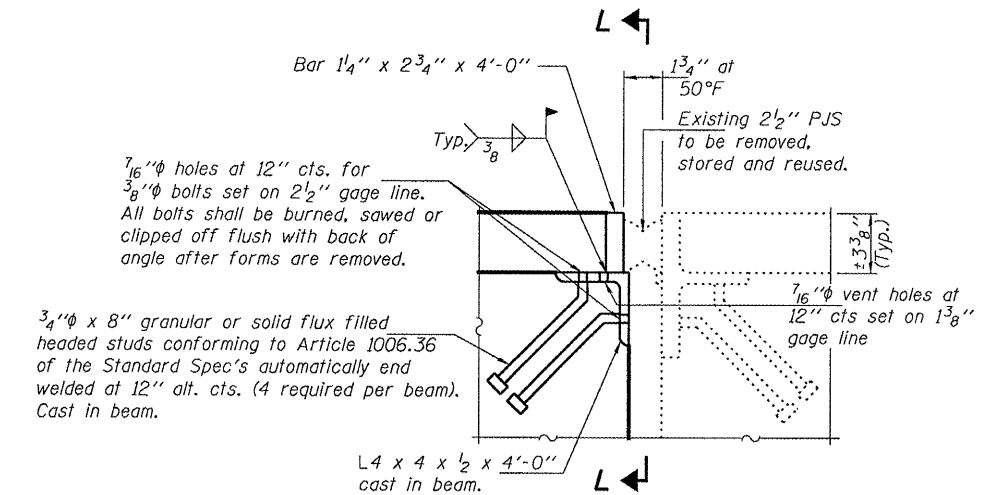
TYPICAL SECTION  
AT EAST ABUTMENT

\* 1" Joint shall be filled with non-shrink grout. Dimension may vary to accommodate tolerance in beam lengths.

\*\* 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.

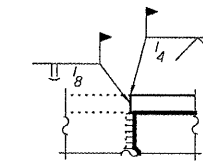


TYPICAL SECTION  
AT WEST ABUTMENT

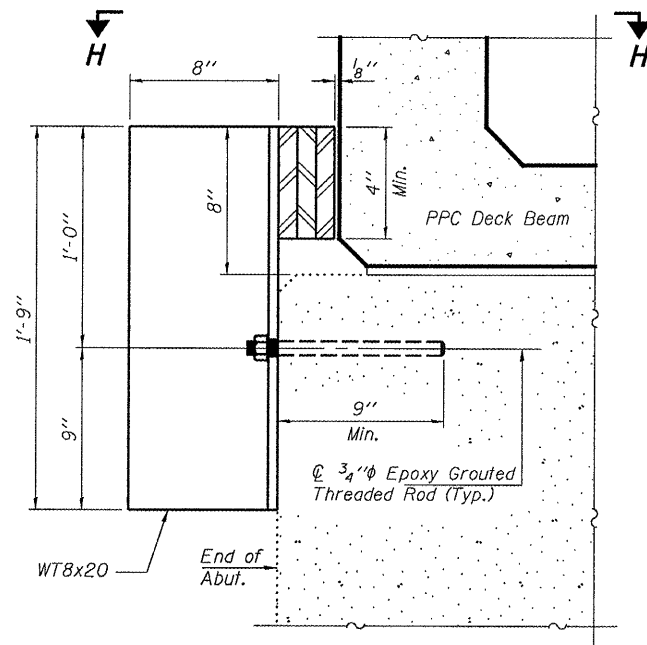


DETAIL B

(Cost included with PPC Deck Beams)

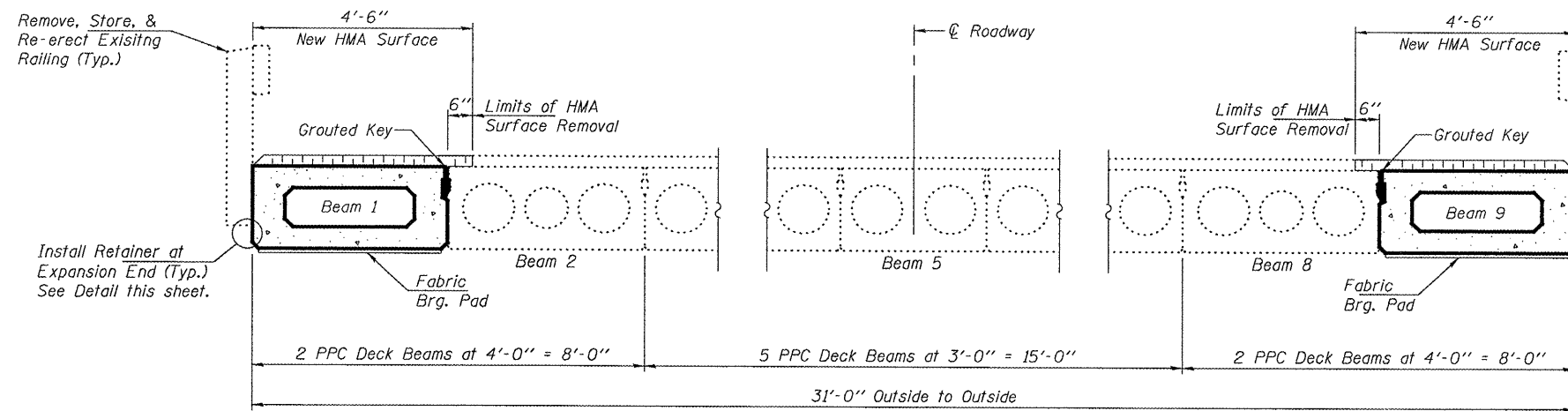


SECTION L-L



EXPANSION JOINT  
RETAINER DETAILS

(Cost included with PPC Deck Beams)



PARTIAL CROSS SECTION

(Looking West)

DESIGNED	AJB
CHECKED	ATH
DRAWN	Steffen
CHECKED	AJB ATH

MAY 2, 2008  
EXAMINED *A. Carl Hoyer*  
ENGINEER OF STRUCTURAL SERVICES  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

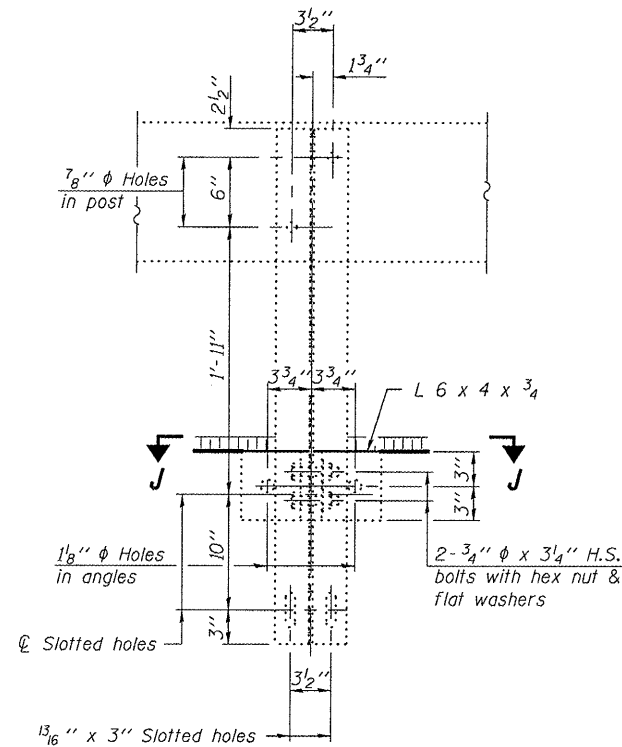
REPAIR DETAILS  
FAP 693 OVER W. BR. DRUMMER CREEK  
FORD COUNTY  
SN 027-0005

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

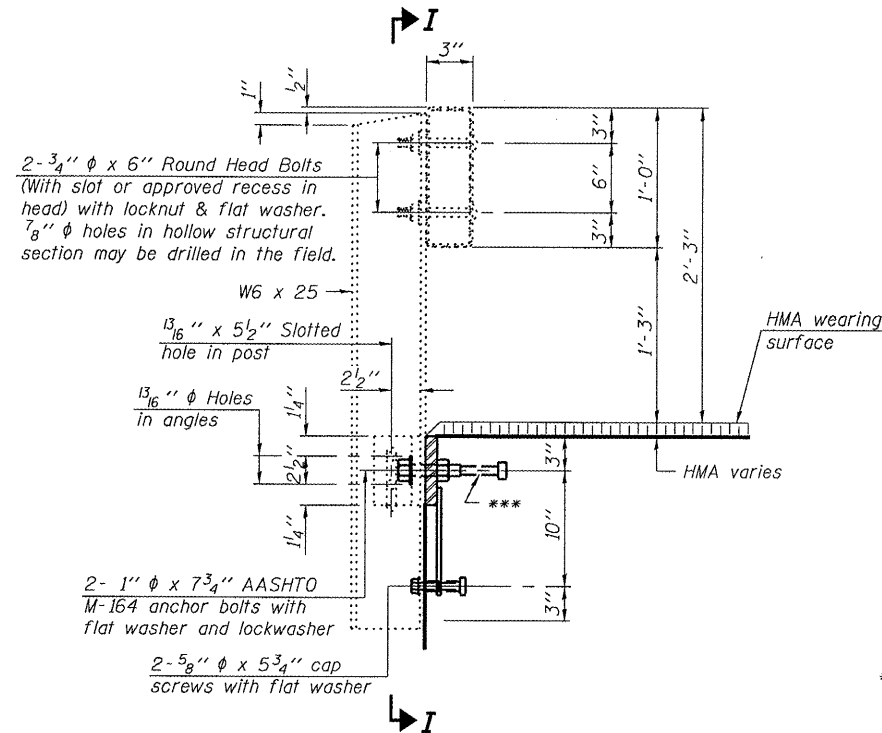
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FA 693		FORD	15	15
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5  
5 SHEETS

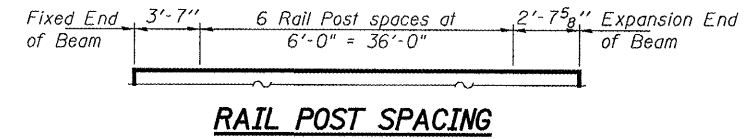
Contract Number: 66819



SECTION I-I

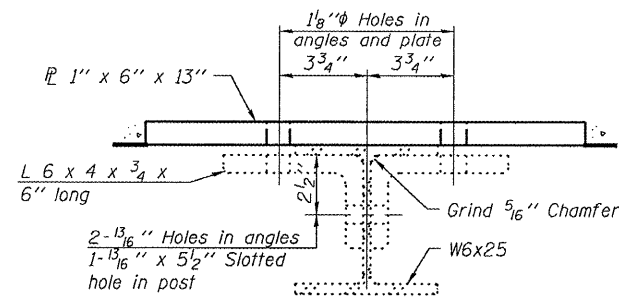


SECTION AT RAILING POST

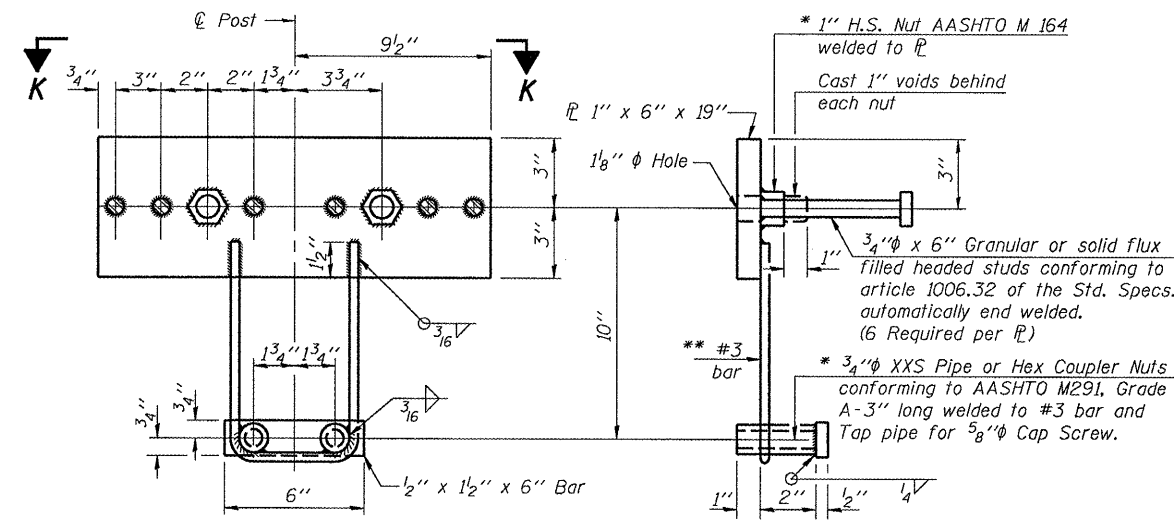


Notes:  
All field drilled holes shall be coated with an approved zinc rich paint before erection.  
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

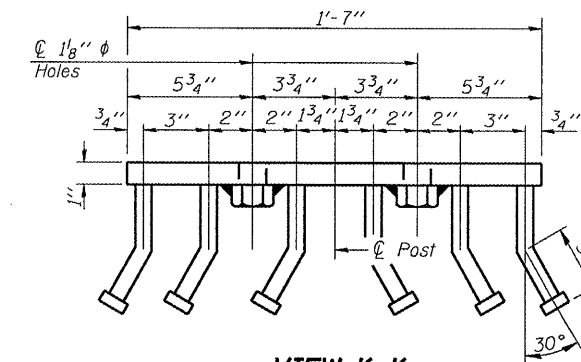
- \* Threaded areas shall be plugged or blocked off during casting of beam.
- \*\* Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".
- \*\*\* The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



SECTION J-J



ANCHOR DEVICE



VIEW K-K

BILL OF MATERIAL

Item	Unit	Quantity
Removing & Re-erecting Existing Railing	Foot	85

DESIGNED	AJB
CHECKED	ATH
DRAWN	Steffen
CHECKED	AJB ATH

MAY 2, 2008  
EXAMINED *Carl Hovner*  
ENGINEER OF STRUCTURAL SERVICES  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

RAILING DETAILS  
FAP 693 OVER W. BR. DRUMMER CREEK  
FORD COUNTY  
SN 027-0005