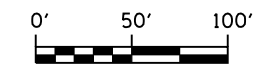
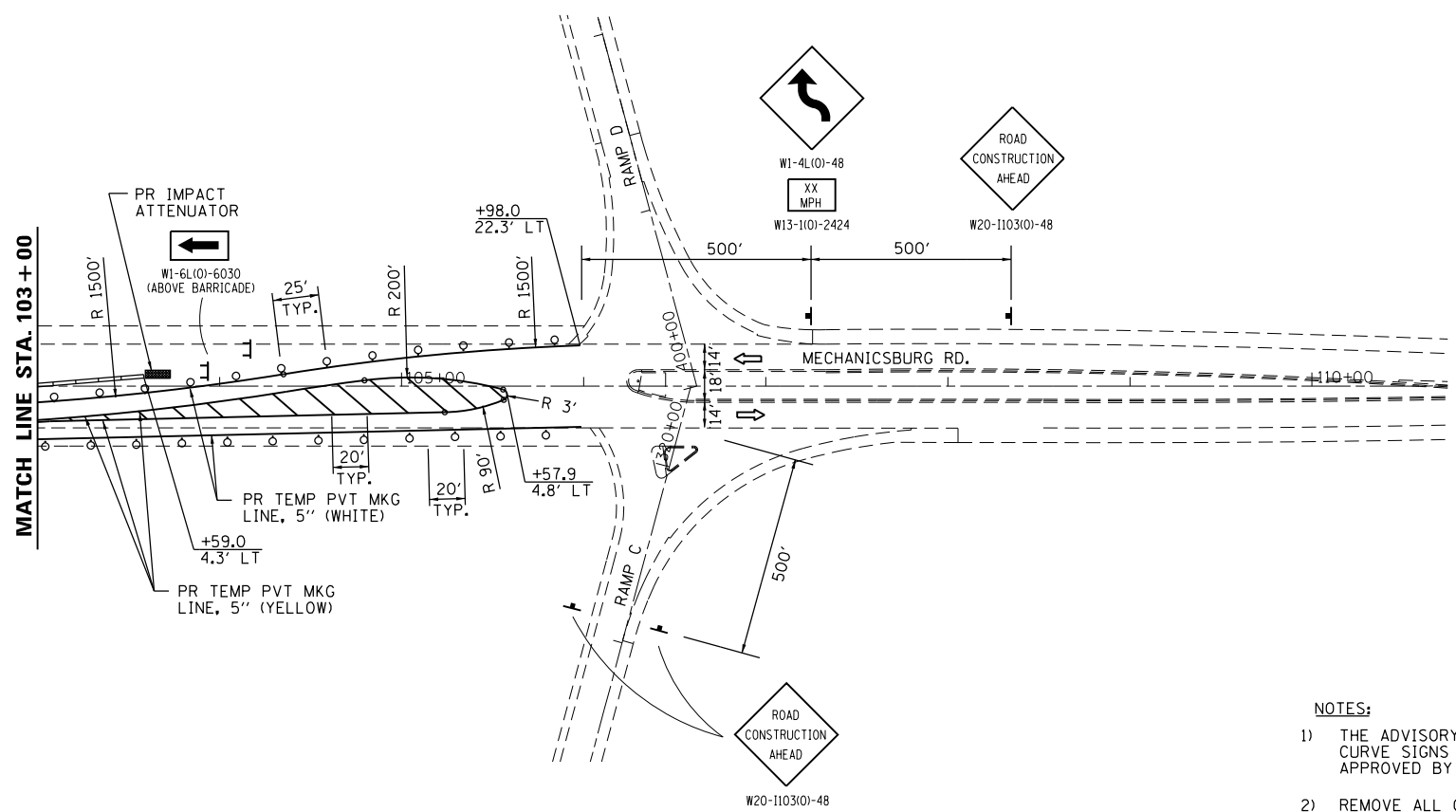
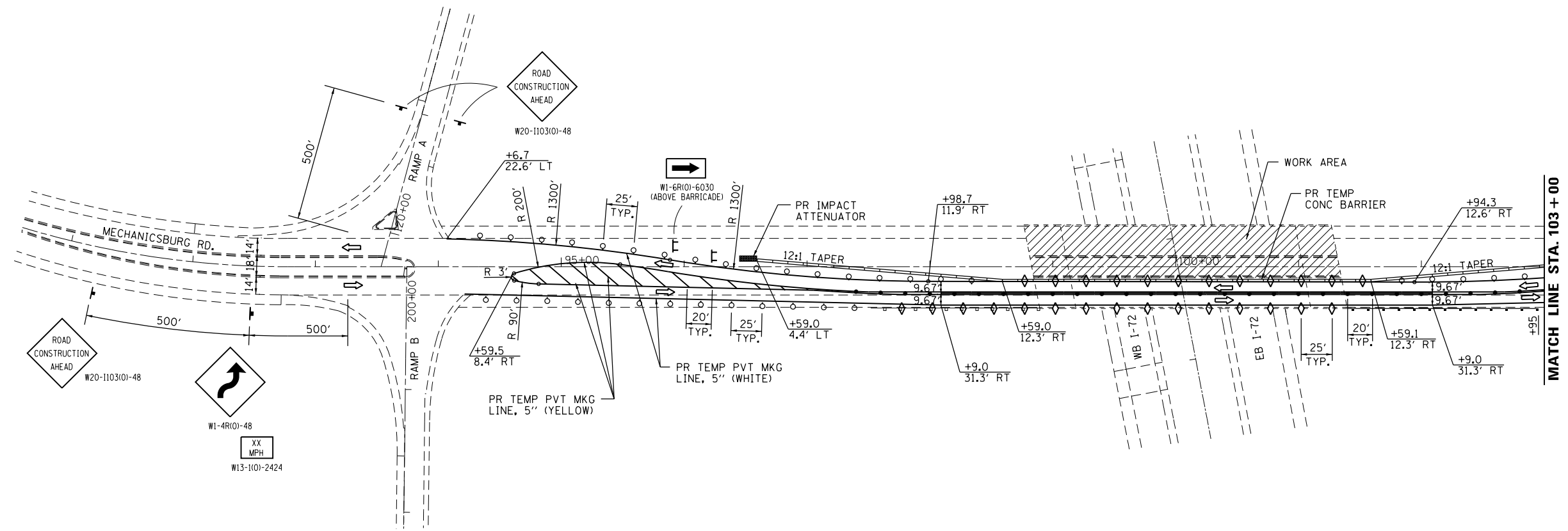


**LEGEND**












- SIGN
- DRUM WITH STEADY BURNING LIGHT
- FLEXIBLE DELINEATOR
- BARRIER WALL/GUARDRAIL MARKERS
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TRAFFIC SIGNAL
- DETECTOR LOOP
- DOUBLE VERTICAL PANEL



	USER NAME = sparksgw	DESIGNED - BTM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MAINTENANCE OF TRAFFIC – MECHANICSBURG RD. PRE-STAGE I</b>			F.A.I. RTE. 1722	SECTION *	COUNTY SANGAMON	TOTAL SHEETS 194	SHEET NO. 101
	PLOT SCALE = 100.0000' / in.	CHECKED - JSA	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT NO. 72C90		
	PLOT DATE = Sep-06-2013 09:19:57AM	DATE - 12/19/12	REVISED -		ILLINOIS FED. AID PROJECT							
FILE NAME = c:\pw\work\pwt\dot\sparksgw\d0359822\0672C90_sht.mot04.dgn					(84-10-1,2)RS-3 & (84-10-2)RS-4							



**LEGEND**

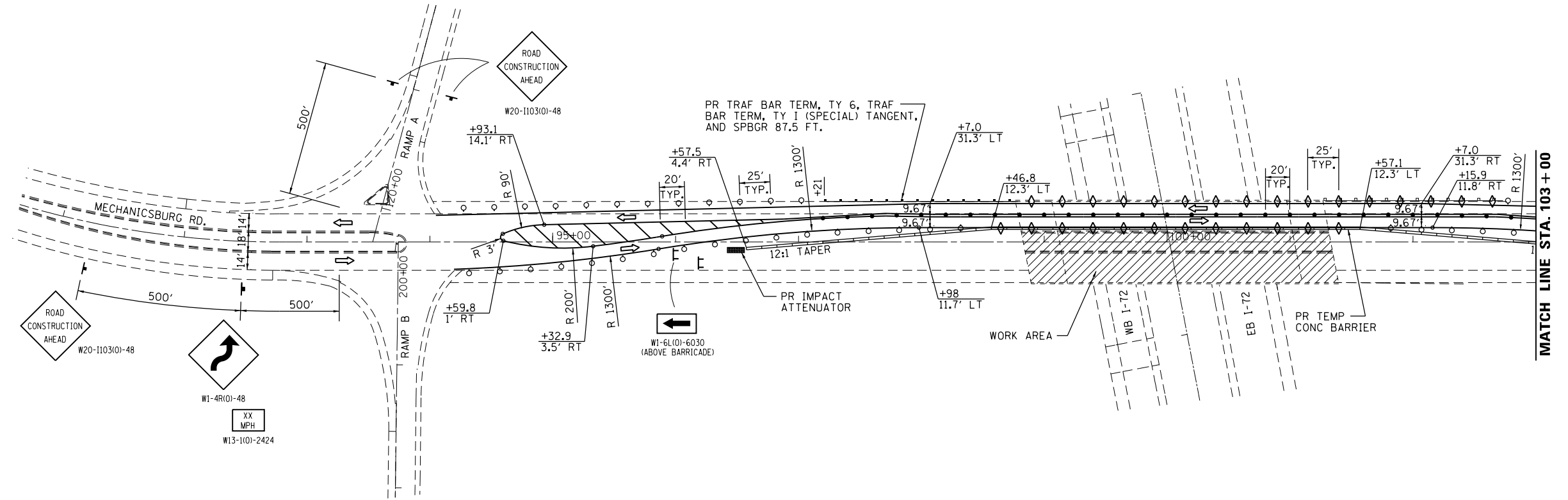
-  SIGN
-  DRUM WITH STEADY BURNING LIGHT
-  FLEXIBLE DELINEATOR
-  BARRIER WALL/GUARDRAIL MARKERS
-  TEMPORARY CONCRETE BARRIER
-  IMPACT ATTENUATOR, TEMPORARY
-  DIRECTION OF TRAFFIC
-  TYPE III BARRICADE
-  TRAFFIC SIGNAL
-  DETECTOR LOOP
-  DOUBLE VERTICAL PANEL

**NOTES:**

- 1) THE ADVISORY SPEED TO BE SHOWN BELOW THE REVERSE CURVE SIGNS SHALL BE DETERMINED AT THE SITE AND APPROVED BY THE ENGINEER.
- 2) REMOVE ALL CONFLICTING PAVEMENT MARKINGS PRIOR TO PLACING TEMPORARY STRIPING.

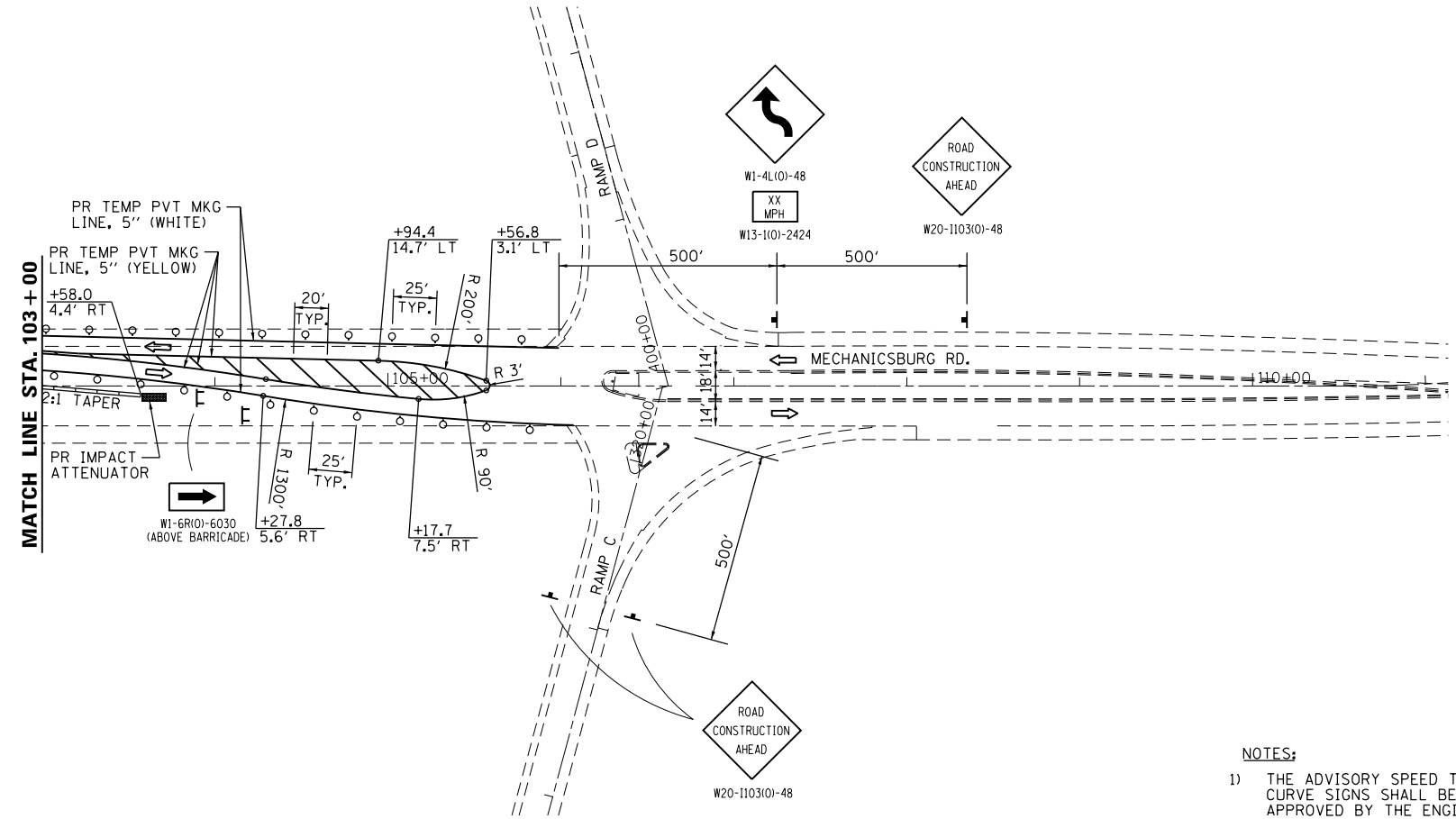


USER NAME = sparksgw PLOT SCALE = 100.0000' / in. PLOT DATE = Sep-06-2013 09:20:26AM	DESIGNED - BTM DRAWN - BTM CHECKED - JSA DATE - 12/19/12	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MAINTENANCE OF TRAFFIC – MECHANICSBURG RD. STAGE I</b>	F.A.I. RTE. 1722 SECTION * COUNTY SANGAMON TOTAL SHEETS 194 SHEET NO. 102 * (84-10-1RS-3,84-10-2RS-4)BR,I CONTRACT NO. 72C90 ILLINOIS FED. AID PROJECT (84-10-1,2)RS-3 & (84-10-2)RS-4
SCALE:      SHEET NO.      OF      SHEETS      STA.      TO STA.					



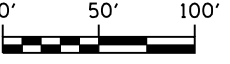
**LEGEND**

- ↑ SIGN
- DRUM WITH STEADY BURNING LIGHT
- FLEXIBLE DELINEATOR
- ◇ BARRIER WALL/GUARDRAIL MARKERS
- ▬ TEMPORARY CONCRETE BARRIER
- ▨ IMPACT ATTENUATOR, TEMPORARY
- ➔ DIRECTION OF TRAFFIC
- ⊥ TYPE III BARRICADE
- ⬅ TRAFFIC SIGNAL
- ◇ DETECTOR LOOP
- ▨ DOUBLE VERTICAL PANEL



**NOTES:**

1) THE ADVISORY SPEED TO BE SHOWN BELOW THE REVERSE CURVE SIGNS SHALL BE DETERMINED AT THE SITE AND APPROVED BY THE ENGINEER.



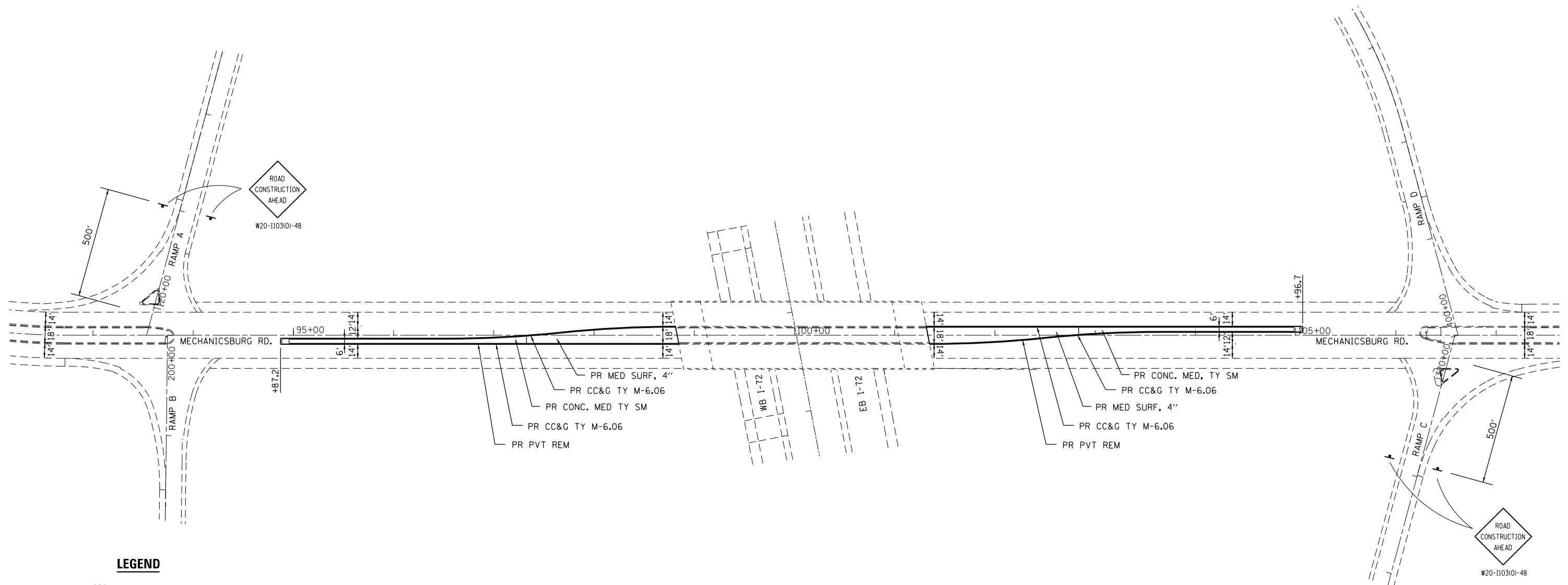
USER NAME = sparksgw	DESIGNED - BTM	REVISED -
	DRAWN - BTM	REVISED -
PLOT SCALE = 100.0000' / 1" =	CHECKED - JSA	REVISED -
PLOT DATE = Sep-06-2013 09:20:50AM	DATE - 12/19/12	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC – MECHANICSBURG RD.  
STAGE II**

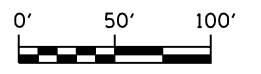
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1722	*	SANGAMON	194	103
* (84-10-1RS-3,84-10-2RS-4)BR,I			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				



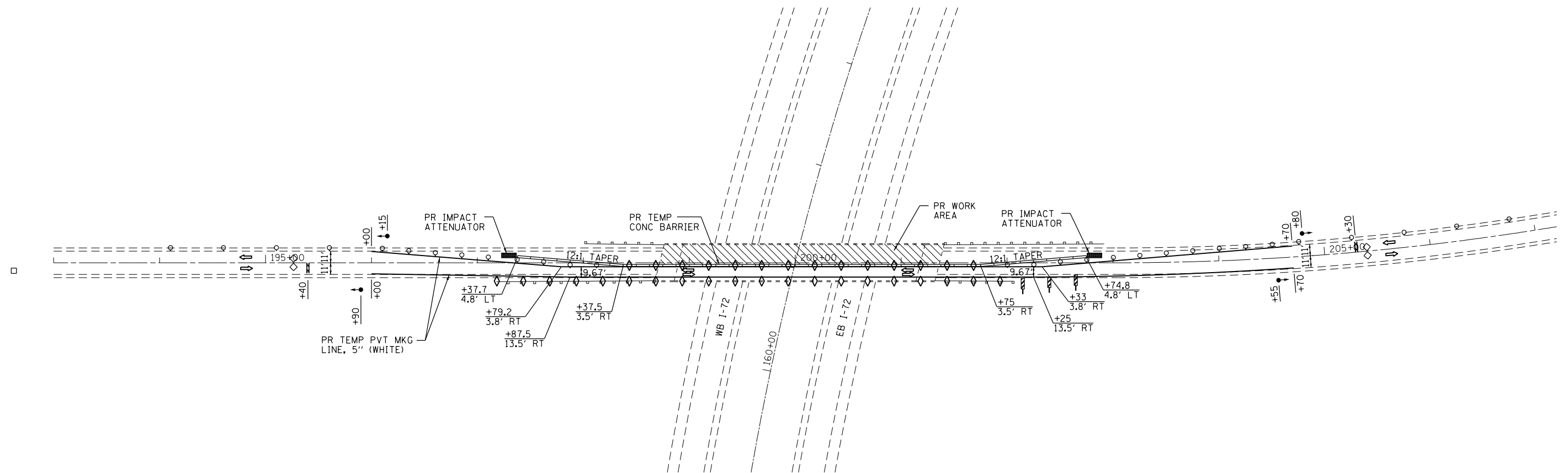
**LEGEND**

- SIGN
- DRUM WITH STEADY BURNING LIGHT
- FLEXIBLE DELINEATOR
- BARRIER WALL/GUARDRAIL MARKERS
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TRAFFIC SIGNAL
- DETECTOR LOOP
- DOUBLE VERTICAL PANEL



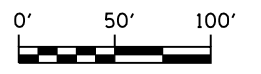
	USER NAME = sparksgw	DESIGNED - BTM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MAINTENANCE OF TRAFFIC – MECHANICSBURG RD. STAGE III</b>				F.A.I. RTE. 1722	SECTION *	COUNTY SANGAMON	TOTAL SHEETS 194	SHEET NO. 104
	PLOT SCALE = 100.0000' / in.	CHECKED - JSA	REVISED -						* (84-10-1RS-3,84-10-2RS-4)BR,I				
	PLOT DATE = Sep-06-2013 09:21:22AM	DATE - 12/19/12	REVISED -						ILLINOIS FED. AID PROJECT				
					SCALE:      SHEET NO.      OF      SHEETS      STA.      TO STA.				(84-10-1,2)RS-3 & (84-10-2)RS-4				

FILE NAME = c:\pwwork\pwwork\sparksgw\0359822\0672C90.sht.mot07.dgn

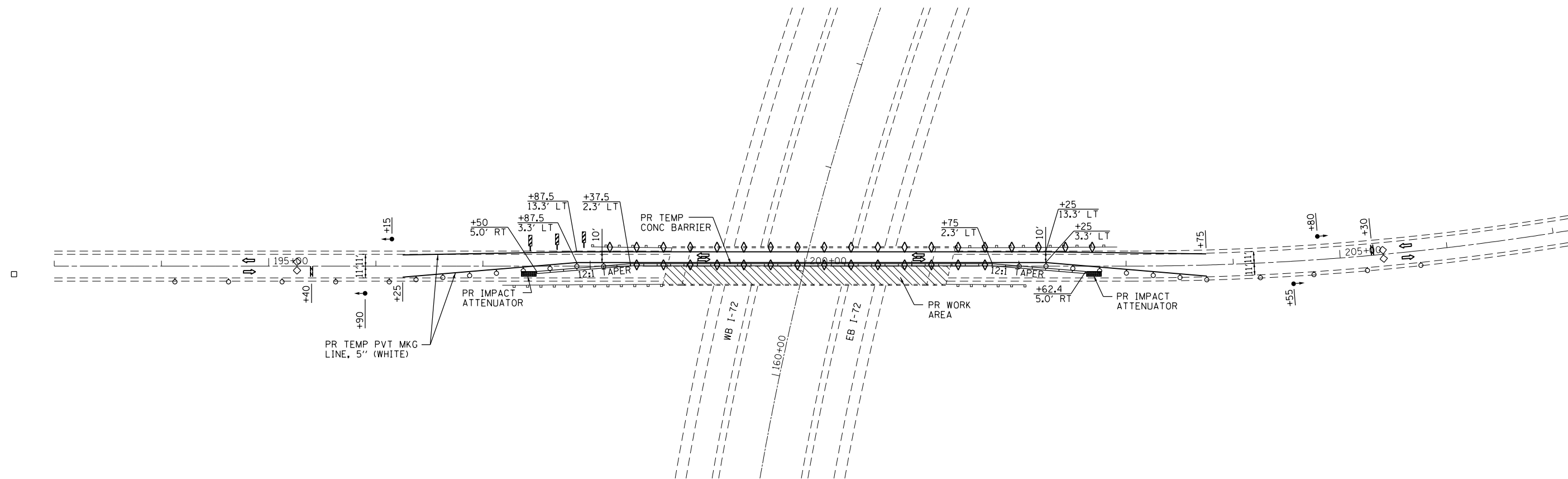


**LEGEND**

- SIGN
- DRUM WITH STEADY BURNING LIGHT
- FLEXIBLE DELINEATOR
- BARRIER WALL/GUARDRAIL MARKERS
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TRAFFIC SIGNAL
- DETECTOR LOOP
- DOUBLE VERTICAL PANEL

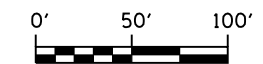


	USER NAME = sparksgw	DESIGNED - BTM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MAINTENANCE OF TRAFFIC – TR 171 STAGE I</b>				F.A.I. RTE. 1722	SECTION *	COUNTY SANGAMON	TOTAL SHEETS 194	SHEET NO. 105
	PLOT SCALE = 100.0000' / in.	CHECKED - JSA	REVISED -						* (84-10-1RS-3,84-10-2RS-4)BR,I				
	PLOT DATE = Sep-06-2013 09:21:55AM	DATE - 12/19/12	REVISED -						ILLINOIS FED. AID PROJECT				
	FILE NAME = c:\pwork\pwork\dot\sparksgw\0359822\0672C90_sht.mot08.dgn								CONTRACT NO. 72C90				
					SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.				(84-10-1,2)RS-3 & (84-10-2)RS-4



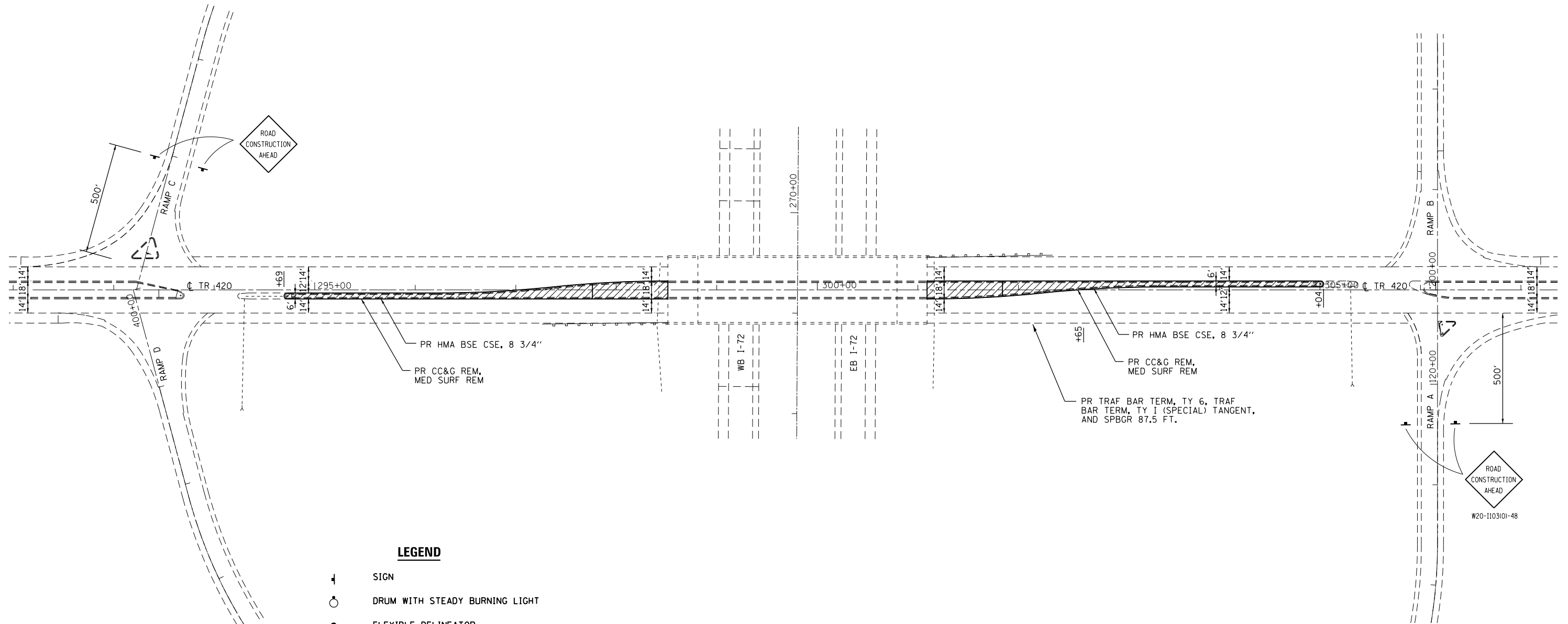
**LEGEND**

- SIGN
- DRUM WITH STEADY BURNING LIGHT
- FLEXIBLE DELINEATOR
- BARRIER WALL/GUARDRAIL MARKERS
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TRAFFIC SIGNAL
- DETECTOR LOOP
- DOUBLE VERTICAL PANEL






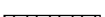







	USER NAME = sparksgw	DESIGNED - BTM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MAINTENANCE OF TRAFFIC - TR 171 STAGE II</b>	F.A.I. RTE. 1722	SECTION *	COUNTY SANGAMON	TOTAL SHEETS 194	SHEET NO. 106
	PLOT SCALE = 100.0000' / in.	CHECKED - JSA	REVISED -			* (84-10-1RS-3,84-10-2RS-4)BR,I		CONTRACT NO. 72C90		
	PLOT DATE = Sep-06-2013 09:22:18AM	DATE - 12/19/12	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT
(84-10-1,2)RS-3 & (84-10-2)RS-4										

FILE NAME = c:\pwork\pwork\dot\sparksgw\0359822\0672C90\_sht.mot09.dgn



**LEGEND**

-  SIGN
-  DRUM WITH STEADY BURNING LIGHT
-  FLEXIBLE DELINEATOR
-  BARRIER WALL/GUARDRAIL MARKERS
-  TEMPORARY CONCRETE BARRIER
-  IMPACT ATTENUATOR, TEMPORARY
-  DIRECTION OF TRAFFIC
-  TYPE III BARRICADE
-  TRAFFIC SIGNAL
-  DETECTOR LOOP
-  DOUBLE VERTICAL PANEL



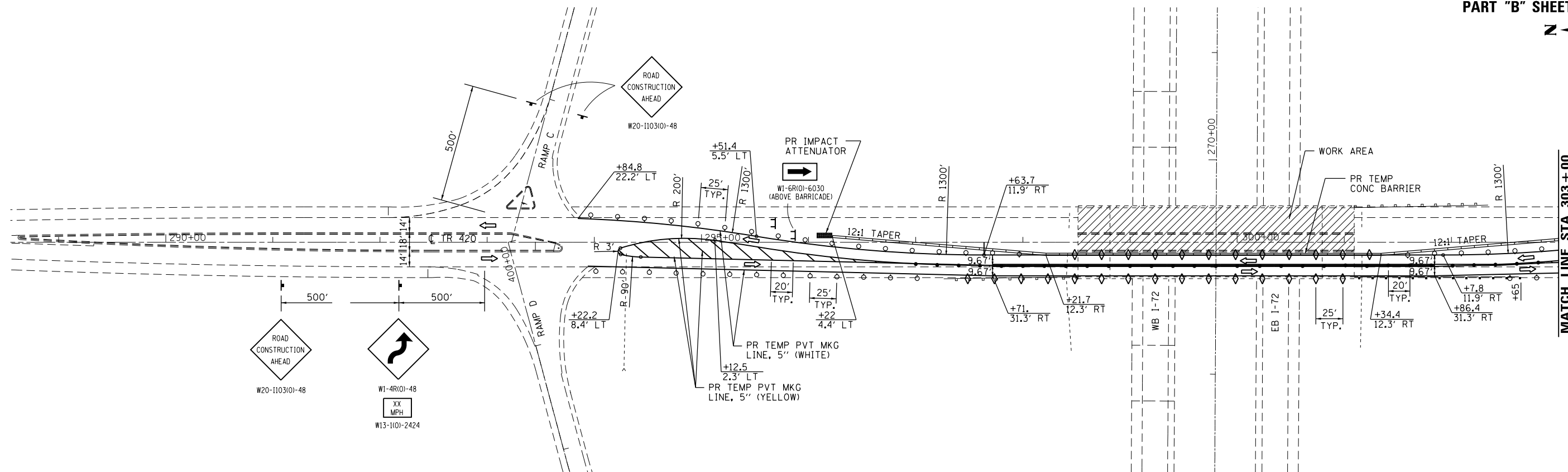
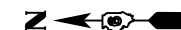
USER NAME = sparksgw	DESIGNED - BTM	REVISED -
	DRAWN - BTM	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - JSA	REVISED -
PLOT DATE = Sep-06-2013 09:22:44AM	DATE - 12/19/12	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC – TR 420  
PRE-STAGE I**

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

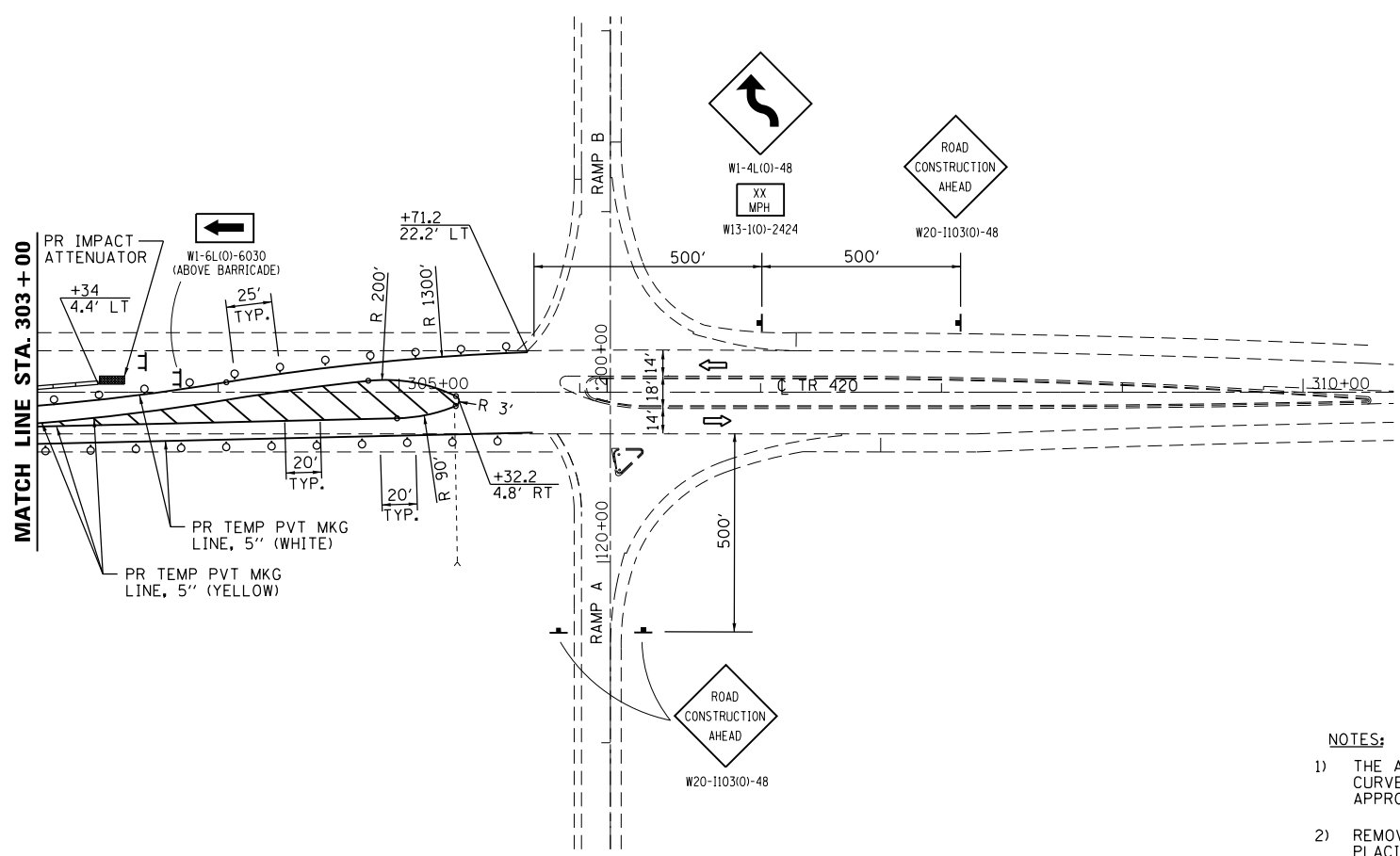
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1722	*	SANGAMON	194	107
* (84-10-1RS-3,84-10-2RS-4)BR,I			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				



MATCH LINE STA. 303 + 00

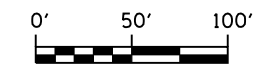
**LEGEND**

- SIGN
- DRUM WITH STEADY BURNING LIGHT
- FLEXIBLE DELINEATOR
- BARRIER WALL/GUARDRAIL MARKERS
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TRAFFIC SIGNAL
- DETECTOR LOOP
- DOUBLE VERTICAL PANEL



**NOTES:**

- 1) THE ADVISORY SPEED TO BE SHOWN BELOW THE REVERSE CURVE SIGNS SHALL BE DETERMINED AT THE SITE AND APPROVED BY THE ENGINEER.
- 2) REMOVE ALL CONFLICTING PAVEMENT MARKINGS PRIOR TO PLACING TEMPORARY STRIPING.



USER NAME = sparksgw	DESIGNED - BTM	REVISED -
	DRAWN - BTM	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - JSA	REVISED -
PLOT DATE = Sep-06-2013 09:23:51AM	DATE - 12/19/12	REVISED -

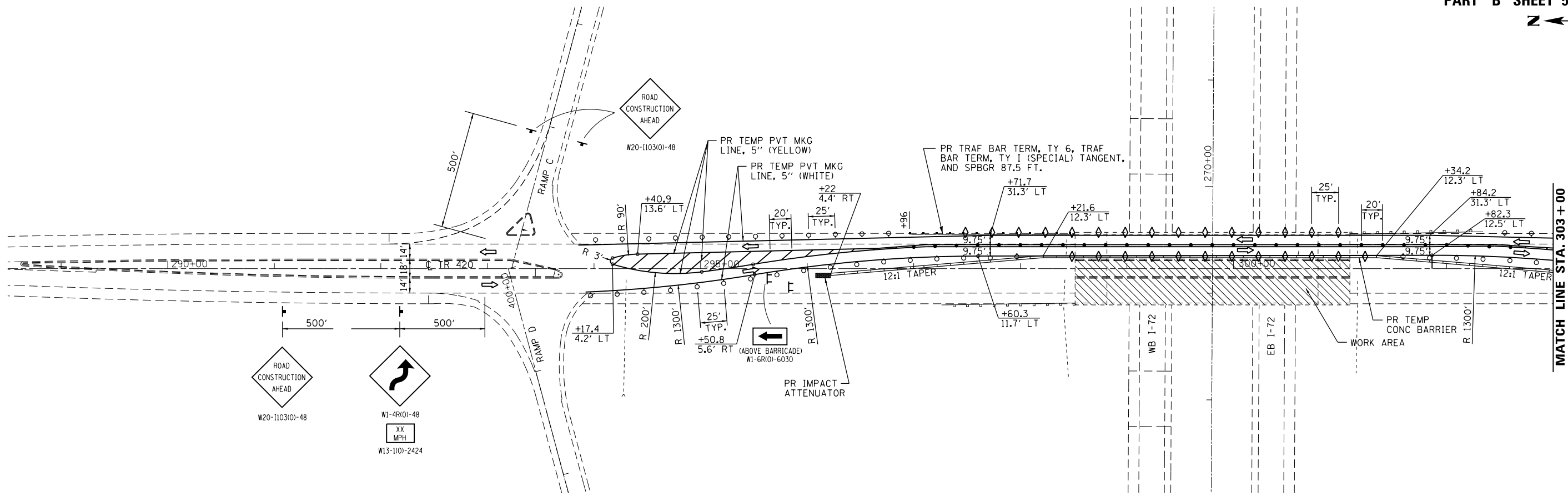
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC - TR 420  
STAGE I**

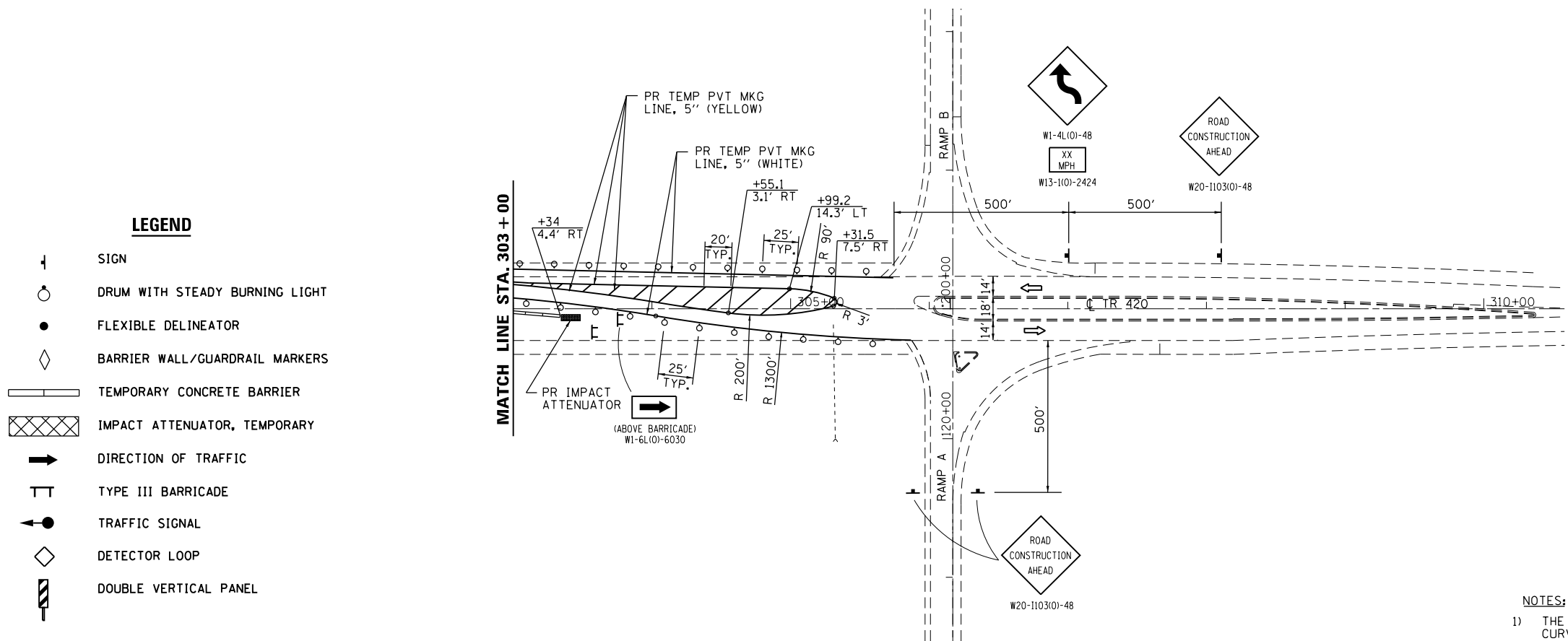
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1722	*	SANGAMON	194	108
* (84-10-1RS-3,84-10-2RS-4)BR,I			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				





MATCH LINE STA. 303 + 00

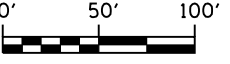


**LEGEND**

- SIGN
- DRUM WITH STEADY BURNING LIGHT
- FLEXIBLE DELINEATOR
- BARRIER WALL/GUARDRAIL MARKERS
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TRAFFIC SIGNAL
- DETECTOR LOOP
- DOUBLE VERTICAL PANEL

**NOTES:**

1) THE ADVISORY SPEED TO BE SHOWN BELOW THE REVERSE CURVE SIGNS SHALL BE DETERMINED AT THE SITE AND APPROVED BY THE ENGINEER.



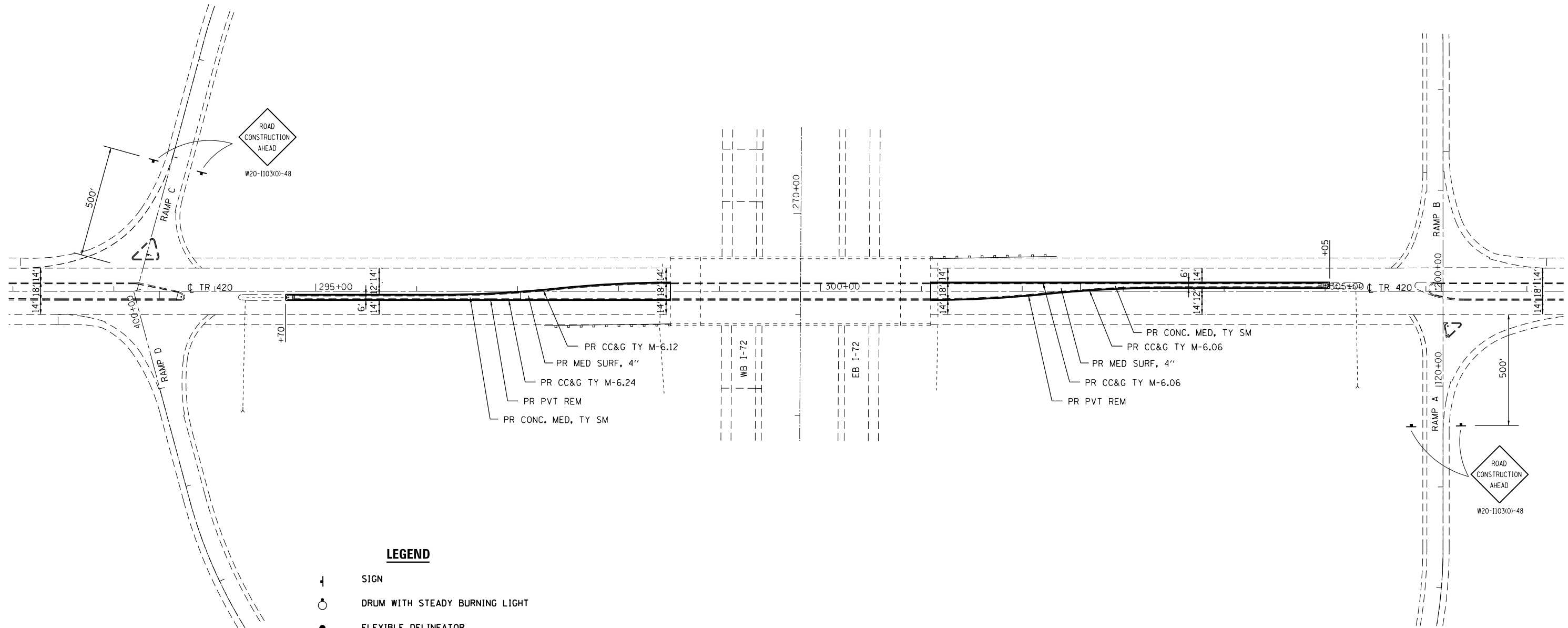
USER NAME = sparksgw	DESIGNED - BTM	REVISED -
	DRAWN - BTM	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - JSA	REVISED -
PLOT DATE = Sep-06-2013 09:24:15AM	DATE - 12/19/12	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC - TR 420  
STAGE II**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1722	*	SANGAMON	194	109
* (84-10-1RS-3,84-10-2RS-4)BR,I			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				

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



**LEGEND**

- SIGN
- DRUM WITH STEADY BURNING LIGHT
- FLEXIBLE DELINEATOR
- BARRIER WALL/GUARDRAIL MARKERS
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- TRAFFIC SIGNAL
- DETECTOR LOOP
- DOUBLE VERTICAL PANEL



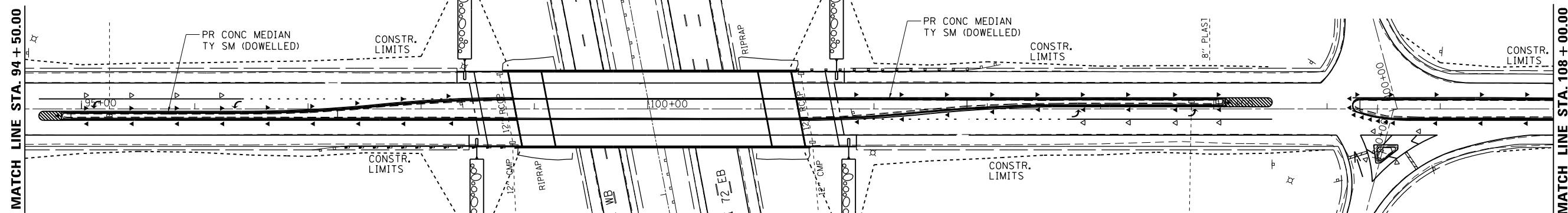
USER NAME = sparksgw	DESIGNED - BTM	REVISED -
	DRAWN - BTM	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED - JSA	REVISED -
PLOT DATE = Sep-06-2013 09:24:51AM	DATE - 12/19/12	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC - TR 420  
STAGE III**

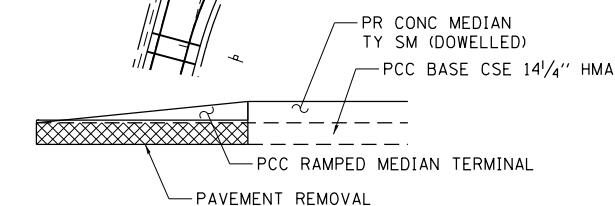
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1722	*	SANGAMON	194	110
* (84-10-1RS-3,84-10-2RS-4)BR,I			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				

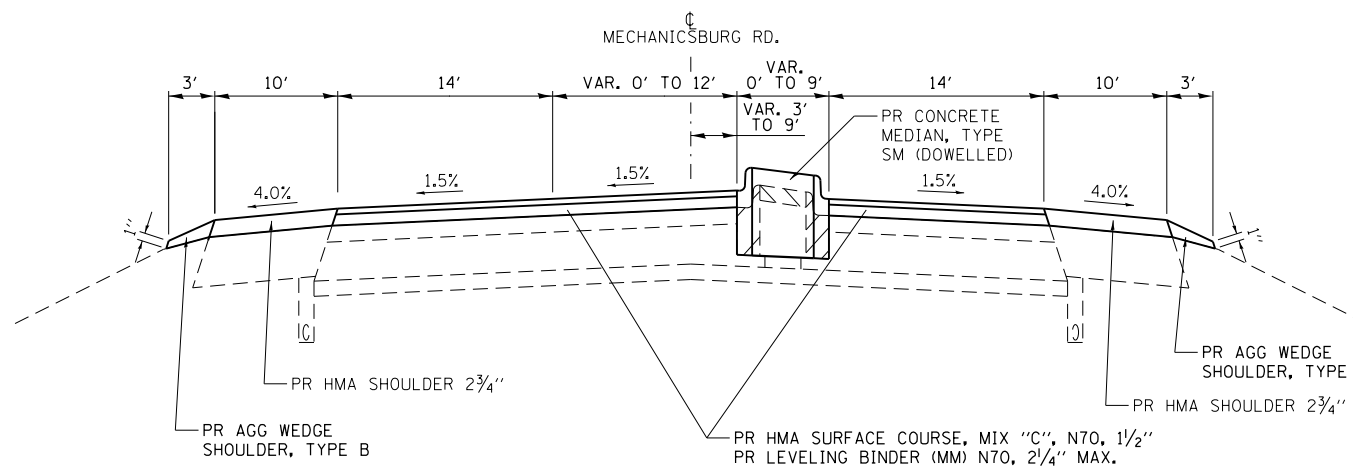


SEQUENCE OF OPERATIONS

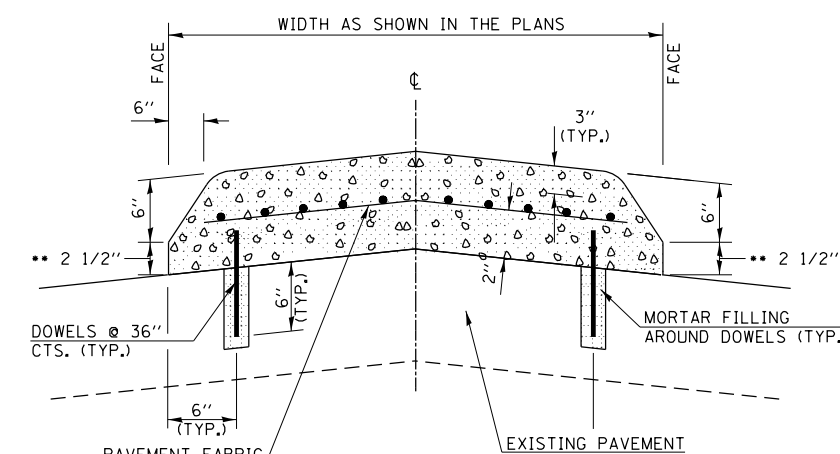
1. CONSTRUCT CONCRETE MEDIAN TYPE SM (DOWELLED)
2. REMOVE 6 FOOT OF PCC BASE COURSE 1 1/4" AND CONSTRUCT PCC RAMPED MEDIAN TERMINALS.
3. MILL EXISTING HMA OVERLAY AT EACH END OF BRIDGE AND BUTT JOINTS.
4. PLACE LEVELING BINDER, HMA SURFACE COURSE, HMA SHOULDERS, AND AGGREGATE SHOULDERS.
5. INSTALL PAVEMENT MARKINGS



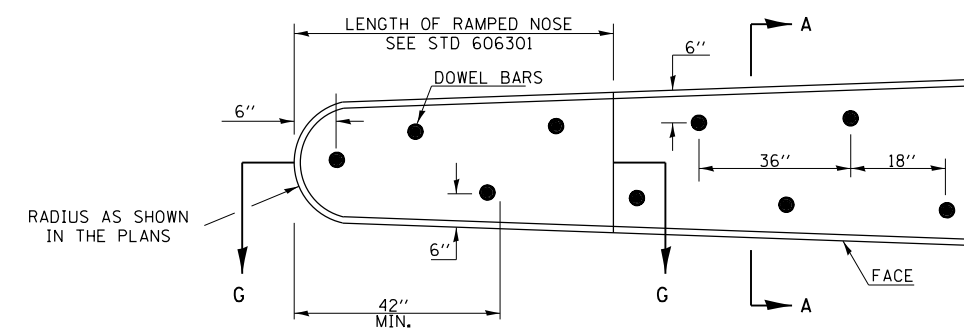
PCC RAMPED MEDIAN TERMINAL



STA. 94+84.16 TO STA. 98.46.99  
 STA. 101+63.10 TO STA. 105+10.33



SECTION A-A



PLAN OF CONCRETE MEDIAN TY SM (DOWELLED)

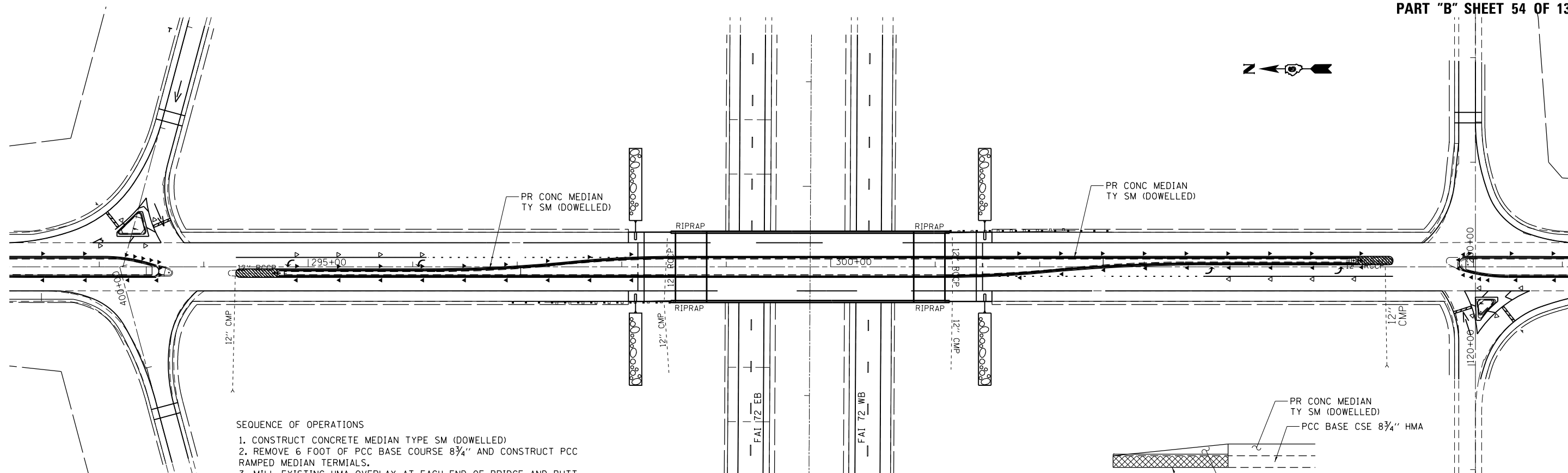
USER NAME = sparksgw	DESIGNED - BTM	REVISED -
	DRAWN - BTM	REVISED -
PLOT SCALE = 100.0002' / in.	CHECKED - JSA	REVISED -
PLOT DATE = Sep-06-2013 09:25:20AM	DATE - 12/19/12	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

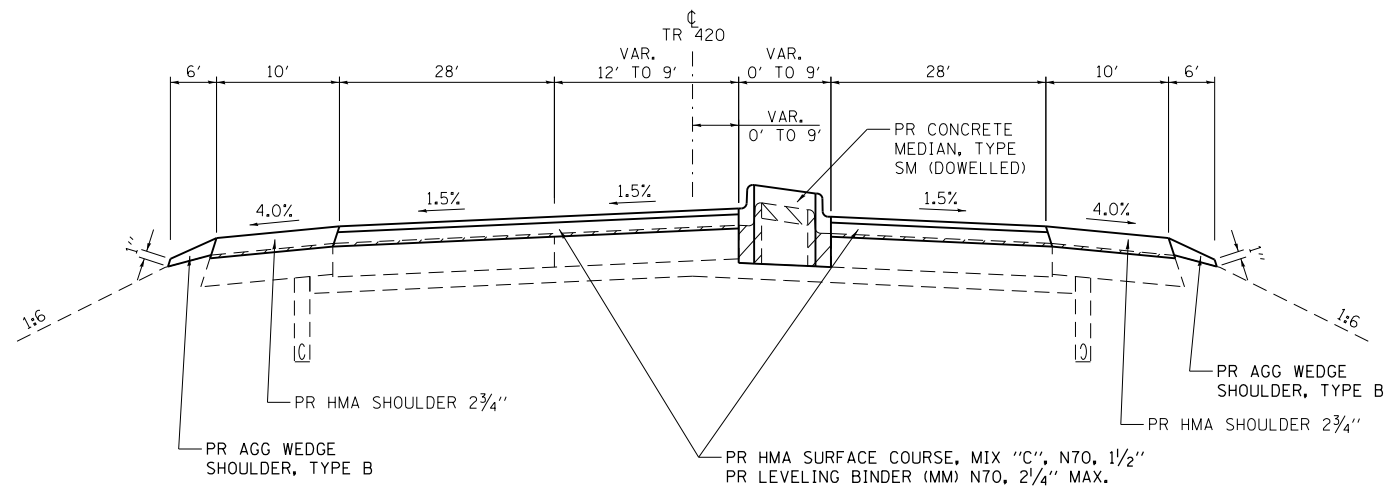
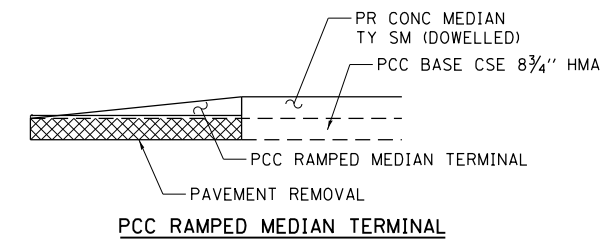
DOWELED MEDIAN DETAIL  
 CH 12 (MECHANICSBURG RD.) - FINAL PHASE

SCALE: SHEET NO. OF SHEETS STA. 94+50.00 TO STA. 108+00.00

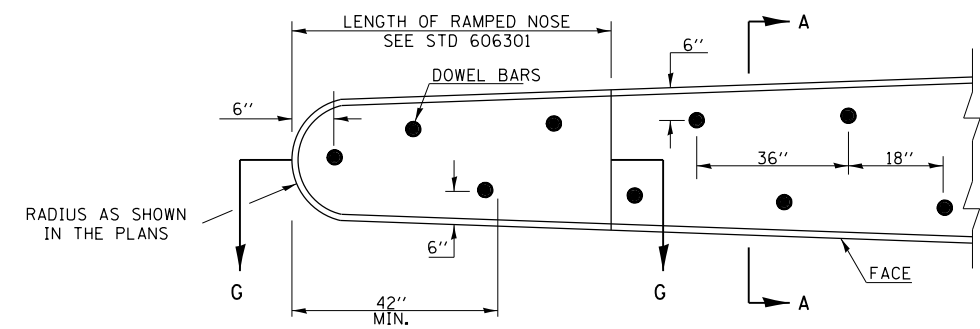
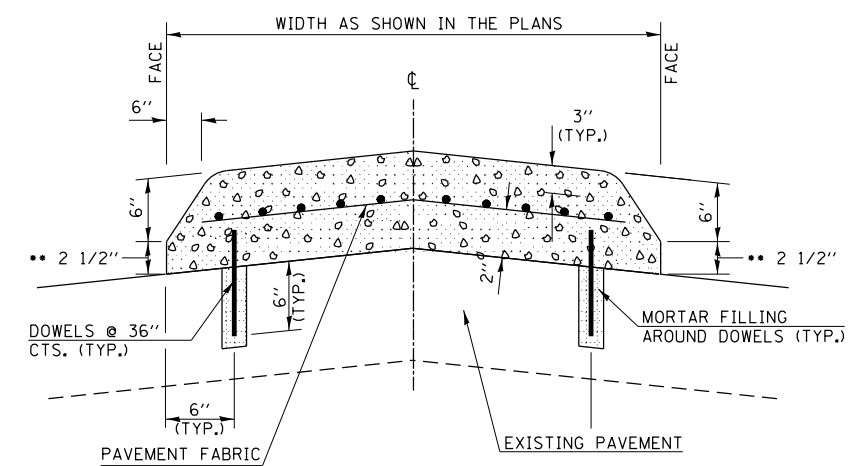
F.A.I. RTE. 1722	SECTION *	COUNTY SANGAMON	TOTAL SHEETS 194	SHEET NO. 111
* (84-10-1RS-3,84-10-2RS-4)BR,1		CONTRACT NO. 72C90		
ILLINOIS FED. AID PROJECT				



- SEQUENCE OF OPERATIONS
1. CONSTRUCT CONCRETE MEDIAN TYPE SM (DOWELLED)
  2. REMOVE 6 FOOT OF PCC BASE COURSE 8 3/4" AND CONSTRUCT PCC RAMPED MEDIAN TERMINALS.
  3. MILL EXISTING HMA OVERLAY AT EACH END OF BRIDGE AND BUTT JOINTS.
  4. PLACE LEVELING BINDER, HMA SURFACE COURSE, HMA SHOULDERS, AND AGGREGATE SHOULDERS.
  5. INSTALL PAVEMENT MARKINGS



STA. 294+70 TO STA. 298+21.40 TR 420  
 STA. 301+39.20 TO STA. 305+05.00 TR 420



USER NAME = sparksgw	DESIGNED - BTM	REVISED -
	DRAWN - BTM	REVISED -
PLOT SCALE = 100.0002' / in.	CHECKED - JSA	REVISED -
PLOT DATE = Sep-06-2013 09:25:43AM	DATE - 12/19/12	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

DOWELED MEDIAN DETAIL  
 TR 420 (OVERPASS RD.) - FINAL PHASE

F.A.I. RE. 1722	SECTION *	COUNTY SANGAMON	TOTAL SHEETS 194	SHEET NO. 112
* (84-10-1RS-3,84-10-2RS-4)BR,1		CONTRACT NO. 72C90		
ILLINOIS FED. AID PROJECT				

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

(84-10-1,2)RS-3 & (84-10-2)RS-4

Benchmark #100: Chisled square in top NW corner of NW approach parapet of bridge SN 084-0150 NAVD88, Elev. 571.65.  
 Benchmark #101: Chisled square in top SE corner of SE approach parapet of bridge SN 084-0150, NAVD88, Elev. 571.22.  
 Existing Structure: S.N. 084-0150 built in 1974 under section 84-10-1HB is a 2 span continuous welded plate girder structure with CIP concrete deck, supported by vaulted abutments supported on steel piles and a trapezoidal 5-column pier supported on steel piles. The existing structure is 195'-1" back to back existing abutments with 27'-7" vaulted approach spans at each end. The bridge deck is 8" thick with a 1/2" overlay, 68'-0" out to out with an 18'-0" median. In 1995, the overlay was replaced.  
 Bridge to be reconstructed using stage construction. One lane of Traffic to be maintained at all times. No Salvage.

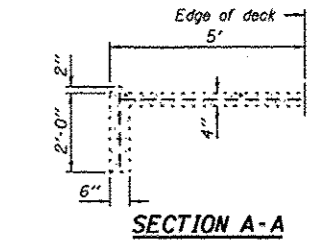
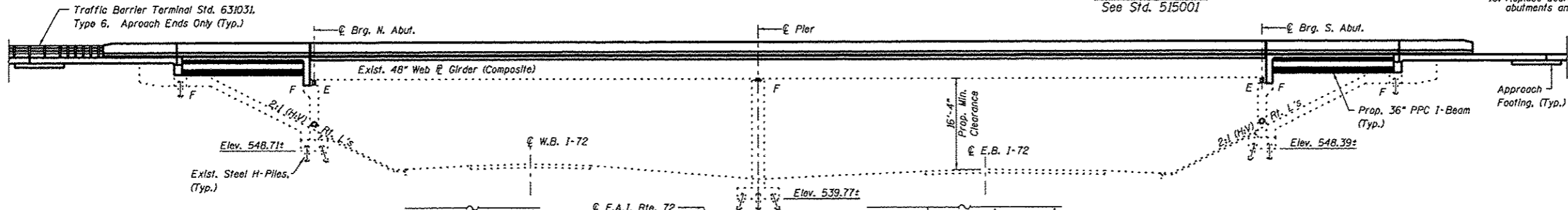
STATION 48+76.46  
 REBUILT 20... BY  
 STATE OF ILLINOIS  
 F.A.I. RTE. 72  
 SEC. (84-10-1,2) RS-3  
 LOADING HS-20  
 STRUCTURE NO. 084-0150

Existing Name Plate shall be cleaned and relocated next to New Name Plate, Cost Included with Name Plate.

**SCOPE OF WORK**

1. Remove and replace deck.
2. Remove and replace approach span.
3. Remove and replace abutment back walls.
4. Remove and replace wingwalls.
5. Install approach slab.
6. Replace the damaged stopewall sections.
7. Replace end diaphragm with channel diaphragm.
8. Install Shear Studs in Negative Moment region of Deck.
9. Jack and remove existing bearings at abutments and pier and raise profile elevation 6" while deck is off.
10. Replace bearings with new elastomeric bearings at abutments and fixed bearings at pier.

**NAME PLATE**  
 See Std. 515001



**LOADING HS20-44**  
 Allow 50#/sq. ft. For future wearing surface.

**DESIGN SPECIFICATIONS**

(New Construction)  
 2002 AASHTO "Standard Specifications for Highway Bridges"

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
 Design Spectral Acceleration at 1.0 sec. (S<sub>D1</sub>) = 0.065g  
 Design Spectral Acceleration at 2.0 sec. (S<sub>D2</sub>) = 0.179g  
 Soil Site Class = B

**DESIGN STRESSES**

**PRECAST PRESTRESSED UNITS (Exst.)**

f'c = 5,000 psi  
 f'ci = 4,000 psi  
 f'sl = 173,600 psi (1/8" stress relieved strands)  
 f's = 248,000 psi (1/8" stress relieved strands)

**PRECAST PRESTRESSED UNITS (Prop.)**

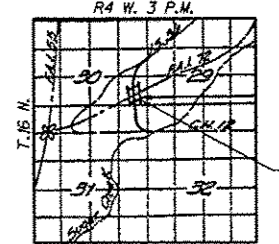
f'c = 6,000 psi  
 f'ci = 5,000 psi  
 fpbt = 201,960 psi (1/2" low lax strands)  
 fpu = 270,000 psi (1/2" low lax strands)

**FIELD UNITS (Exst. Constr.)**

fc = 1,400 psi (Substructure)  
 fc = 1,200 psi (Slab)  
 fs = 20,000 psi (Steel)  
 fs = 20,000 psi (Reinforcement)

**FIELD UNITS (New Const.)**

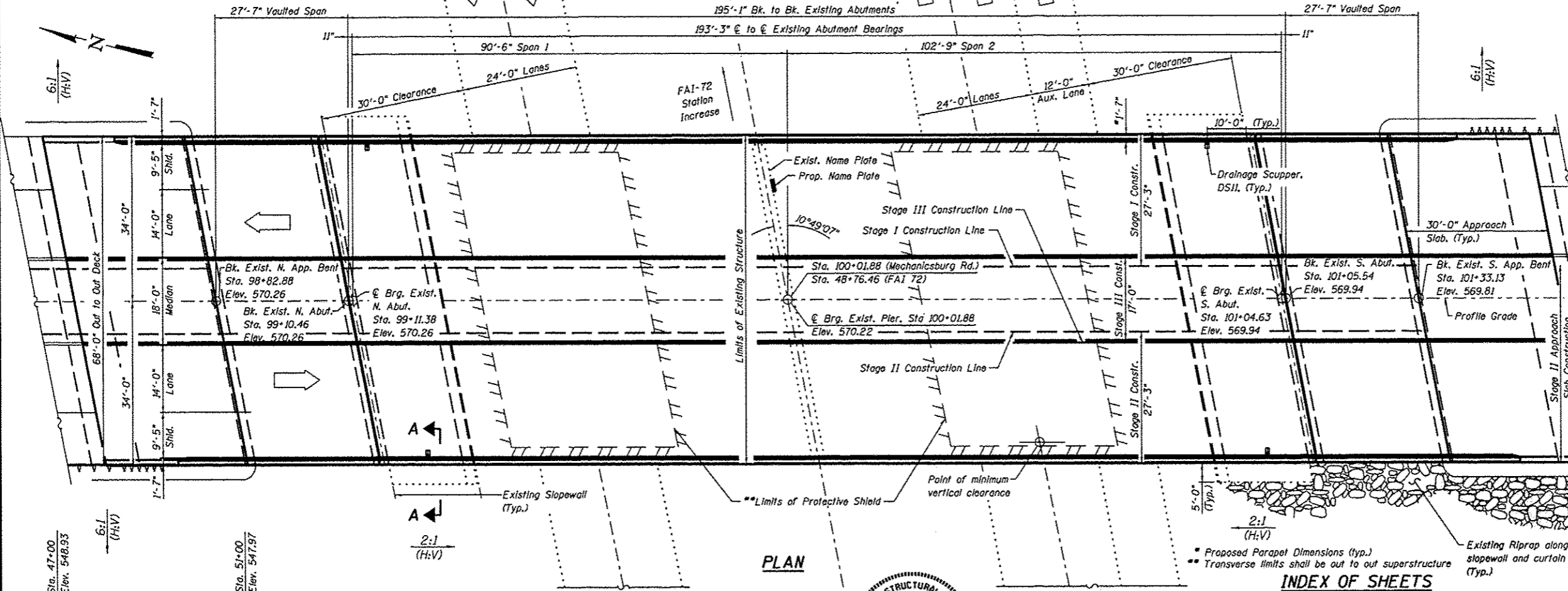
f'c = 3,500 psi  
 fy = 60,000 psi (Reinforcement)  
 fy = 36,000 psi (Steel)



**LOCATION SKETCH**

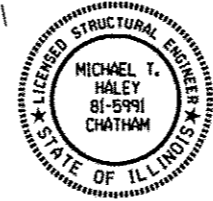
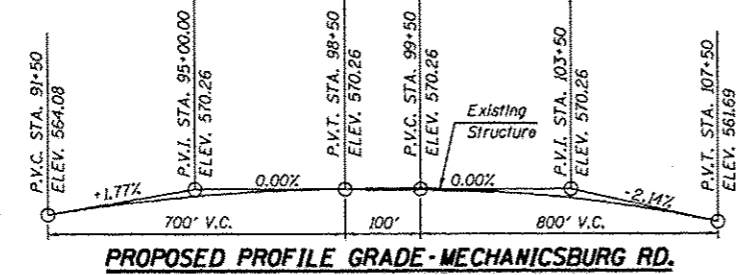
**GENERAL PLAN & ELEVATION  
 MECHANICSBURG ROAD OVER**

**F.A.I. RTE. 72**  
**SECTION (84-10-1,2) RS-3**  
**SANGAMON COUNTY**  
**STRUCTURE NO. 084-0150**  
**STA. 48+76.46**



**EXISTING PROFILE GRADE - F.A.I. RT. 72**  
 (Median Edge of Pavement)

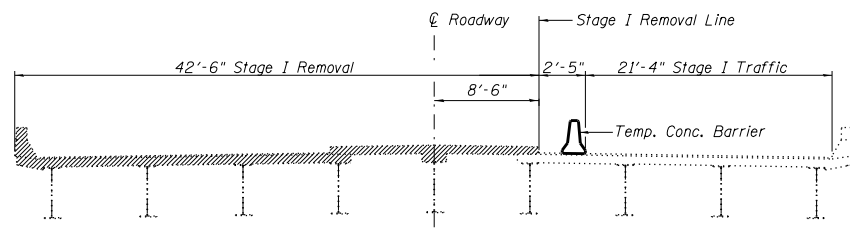
**APPROVED**  
 For Structural Adequacy Only  
 [Signature]  
 Engineer of Bridges & Structures



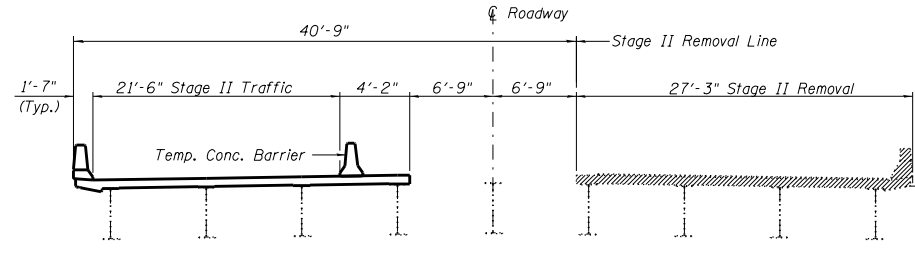
Michael T. Haley  
 Licensed Structural Engineer  
 State of Illinois No. 81-5991  
 Expires 11/30/2014  
 Michael J. Haley 9-18-2013 Date

- INDEX OF SHEETS**
- |  |   |
|--|---|
| 1. General Plan and Elevation              | 15. Bridge Approach Slab Details (2 of 2)               |
| 2. General Data                            | 16. Preformed Joint Strip Seal                          |
| 3. Temporary Concrete Barrier              | 17. Framing Plan and Beam Details                       |
| 4. Top of Slab Elevations (1 of 3)         | 18. Abutment Bearing Details                            |
| 5. Top of Slab Elevations (2 of 3)         | 19. Pier Bearing Details                                |
| 6. Top of Slab Elevations (3 of 3)         | 20. Concrete Removal, Abutments                         |
| 7. Top of Approach Slab Elevations         | 21. Concrete Removal, Appr. Bents                       |
| 8. Superstructure                          | 22. Abutments   |
| 9. Superstructure Details                  | 23. Approach Bents                                      |
| 10. Vaulted Abutment Approach Span         | 24. Concrete Repair Details                             |
| 11. Vaulted Abutment Approach Span Details | 25. Stopewall Repair Details                            |
| 12. 36" PPC I-Beam                         | 26. Bar Splicer Assembly and Mechanical Splicer Details |
| 13. 36" PPC I-Beam Details                 | 27. Drainage Scupper, DS-11                             |

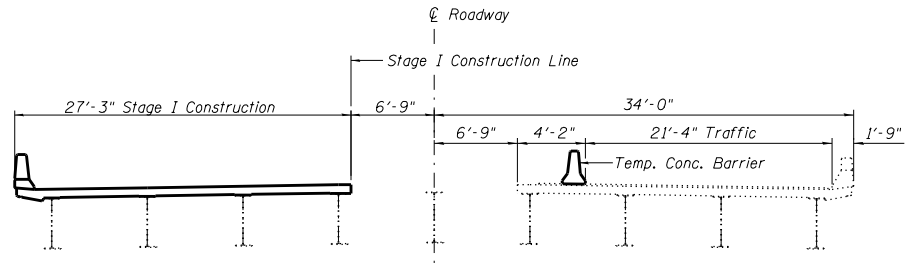
FILE NAME = CH12 over FAI-72.dgn	USER NAME *	DESIGNED - SAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION MECHANICSBURG ROAD OVER F.A.I.-72 - S.N. 084-0150	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - MTH	REVISED -			72	(84-10-1,2) RS-3	SANGAMON	194	113	
		DRAWN - TJW	REVISED -			CONTRACT NO. 72C90					
		CHECKED - MTH	REVISED -			FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					



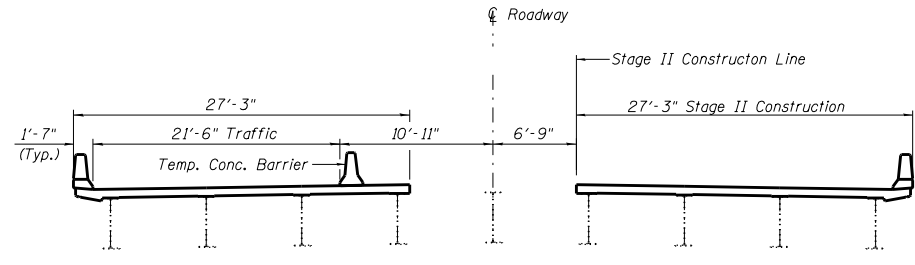
**STAGE I REMOVAL**  
(Looking South)



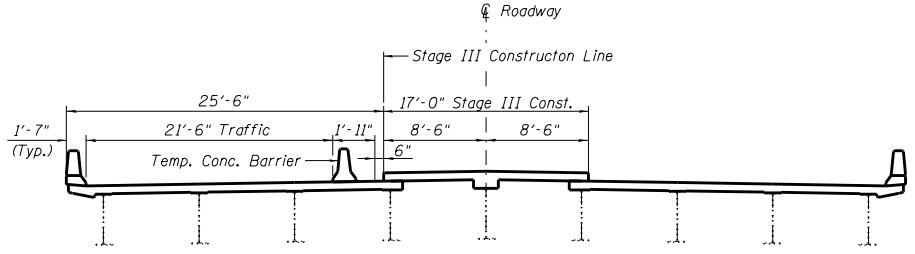
**STAGE II REMOVAL**  
(Looking South)



**STAGE I CONSTRUCTION**  
(Looking South)



**STAGE II CONSTRUCTION**  
(Looking South)



**STAGE III CONSTRUCTION**  
(Looking South)  
Staging of main spans shown; approach spans similar

Note:  
See sheet 3 of 27 for Temporary Concrete Barrier Details.  
Hatched area indicates Removal of Existing Concrete Deck.  
For quantity of Temporary Concrete Barrier, see roadway plans.  
Removal of existing bridge railing and bituminous wearing surface is included with Removal of Concrete Deck.

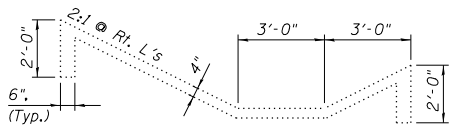
Approach Concrete Removal Limits:  
\* Removal of Existing Concrete Deck  
\*\* Concrete Removal (Superstructure)  
\*\*\* Concrete Removal (Substructure)

**GENERAL NOTES**

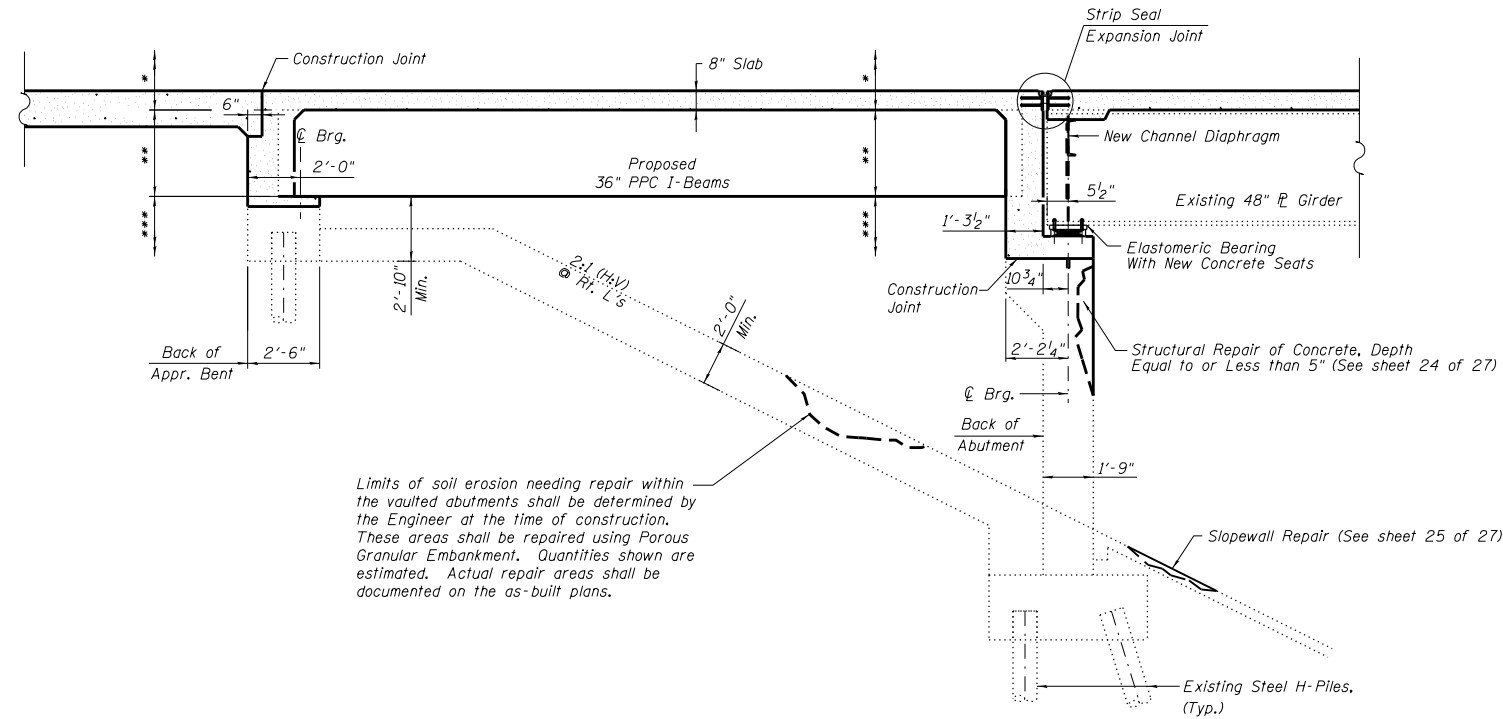
Fasteners shall be ASTM A325 Type I, mechanically galvanized bolts. Bolts 3/4 in. φ, holes 13/16 in. φ, unless otherwise noted.  
No field welding is permitted except as specified in the contract documents.  
Reinforcement bars designated (E) shall be epoxy coated.  
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.  
As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.  
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.  
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8" (0.01 Ft.)  
Concrete Sealer shall be applied to designated areas of the abutments.  
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.  
All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M 300, Type I.  
The contractor shall resurvey the I-72 vertical clearance over each lane and shoulder following the deck replacement. This work will not be paid for separately, but shall be included with the contract lump sum price for "Construction Layout".  
Slipforming of Parapets not allowed.  
Cleaning and field painting of structural steel shall be done under a separate painting contract.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Concrete Deck	Each	1	-	1
Concrete Removal	Cu. Yd.	40.2	59.0	99.2
Protective Shield	Sq. Yd.	596	-	596
Concrete Structures	Cu. Yd.	-	120.5	120.5
Concrete Superstructure	Cu. Yd.	810.9	-	810.9
Bridge Deck Grooving	Sq. Yd.	1,247	-	1,247
Protective Coat	Sq. Yd.	2,465	-	2,465
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	Foot	370.0	-	370.0
Furnishing and Erecting Structural Steel	Pound	4,940	7,960	12,900
Stud Shear Connectors	Each	1,656	-	1,656
Reinforcement Bars, Epoxy Coated	Pound	178,450	14,670	193,120
Bar Splicers	Each	234	50	284
Name Plates	Each	1	-	1
Preformed Joint Strip Seal	Foot	136	-	136
Elastomeric Bearing Assembly, Type I	Each	-	18	18
Anchor Bolts, 1"	Each	-	36	36
Anchor Bolts, 1/4"	Each	-	18	18
Concrete Sealer	Sq. Ft.	-	2,455	2,455
Asbestos Bearing Pad Removal	Each	-	27	27
Removal of Existing Concrete I-Beams	Each	14	-	14
Structural Repair of Concrete, Depth Equal to or Less than 5"	Sq. Ft.	-	145	145
Drainage Scupper, DS-11	Each	4	-	4
Jacking Existing Superstructure	L. Sum	-	1	1
Slope Wall Removal	Sq. Yd.	-	10	10
Slope Wall, 4"	Sq. Yd.	-	10	10
Controlled Low Strength Material	Cu. Yd.	-	5	5
Structural Steel Removal	Pound	6,800	-	6,800
Porous Granular Embankment	Ton	-	25	25



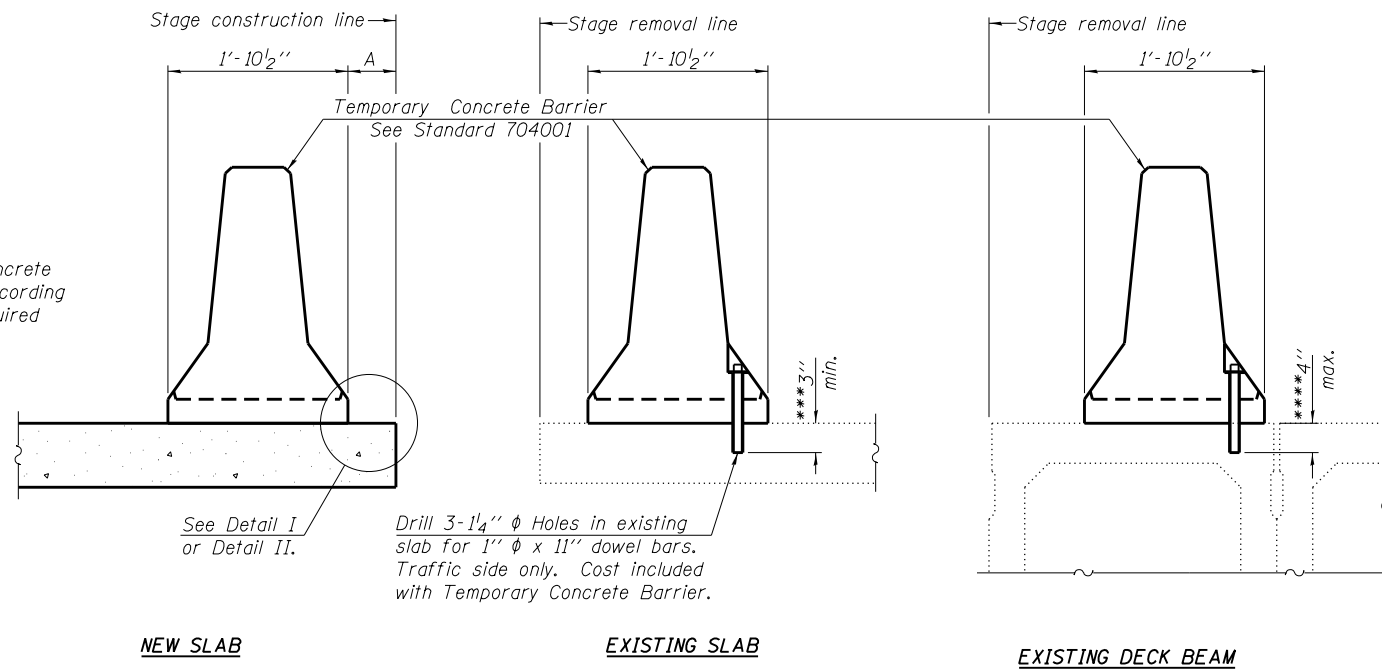
**SECTION THROUGH SLOPEWALL**



**SECTION THRU VAULTED ABUTMENT**  
(Horiz. Dim.'s @ Rt. L's)

Limits of soil erosion needing repair within the vaulted abutments shall be determined by the Engineer at the time of construction. These areas shall be repaired using Porous Granular Embankment. Quantities shown are estimated. Actual repair areas shall be documented on the as-built plans.

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".



**SECTIONS THRU SLAB OR DECK BEAM**

**NOTES**

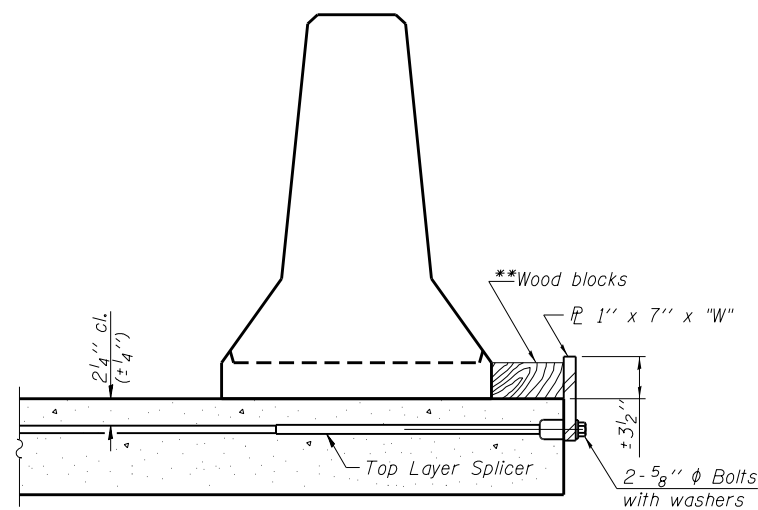
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1" x 7" x "W" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1" x 7" x "W" steel PL to the concrete slab or concrete wearing surface with 2-5/8" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each barrier panel.

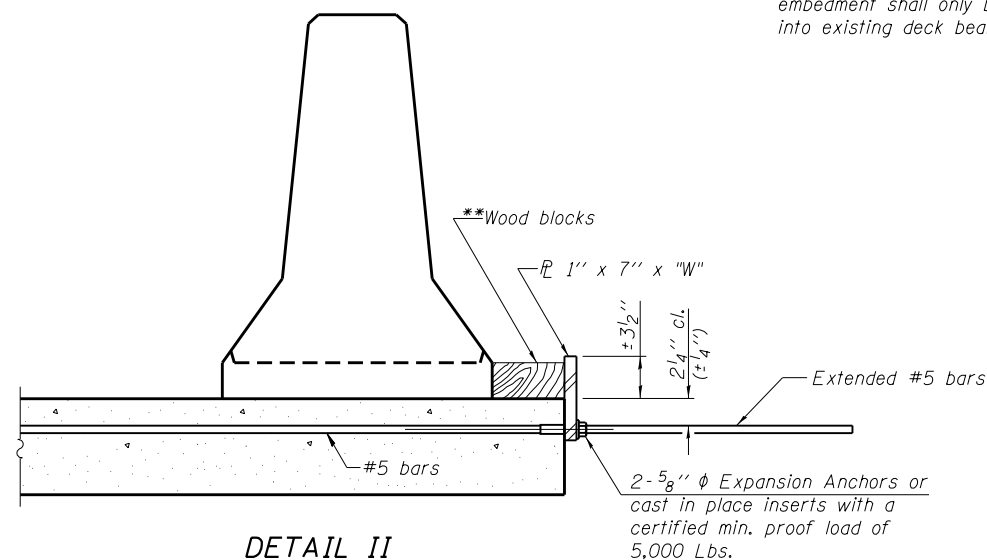
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

\*\*\* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

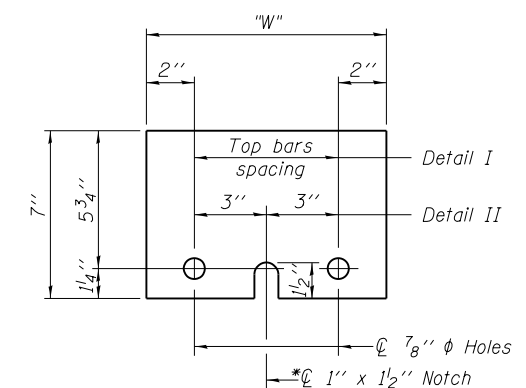
\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



**DETAIL I**



**DETAIL II**



**STEEL RETAINER PL 1" x 7" x "W"**

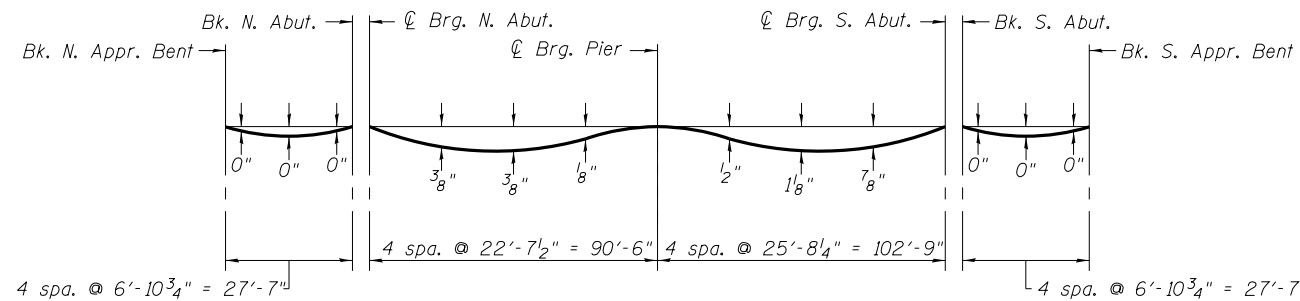
\* Required only with Detail II

\*\* Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

R-27 7-1-10

FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150</b>	F.A.I. R.T.E. = 72	SECTION =	COUNTY = SANGAMON	TOTAL SHEETS = 194	SHEET NO. = 115	
	PLOT SCALE =	CHECKED - MTH	REVISED -			* (84-10-IRS-3, 84-10-2RS-RIBR,I		CONTRACT NO. 72C90			
	PLOT DATE =	DRAWN - TJW	REVISED -			FED. ROAD DIST. NO. 6		ILLINOIS FED. AID PROJECT			
		CHECKED - MTH	REVISED -			SHEET NO. 3 OF 27 SHEETS					

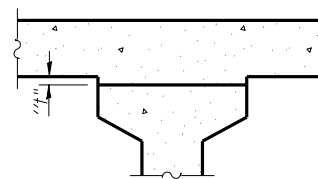


**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

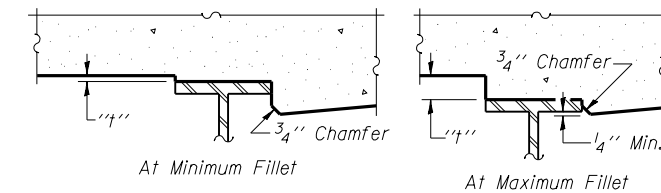
Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 5 & 6 of 27.



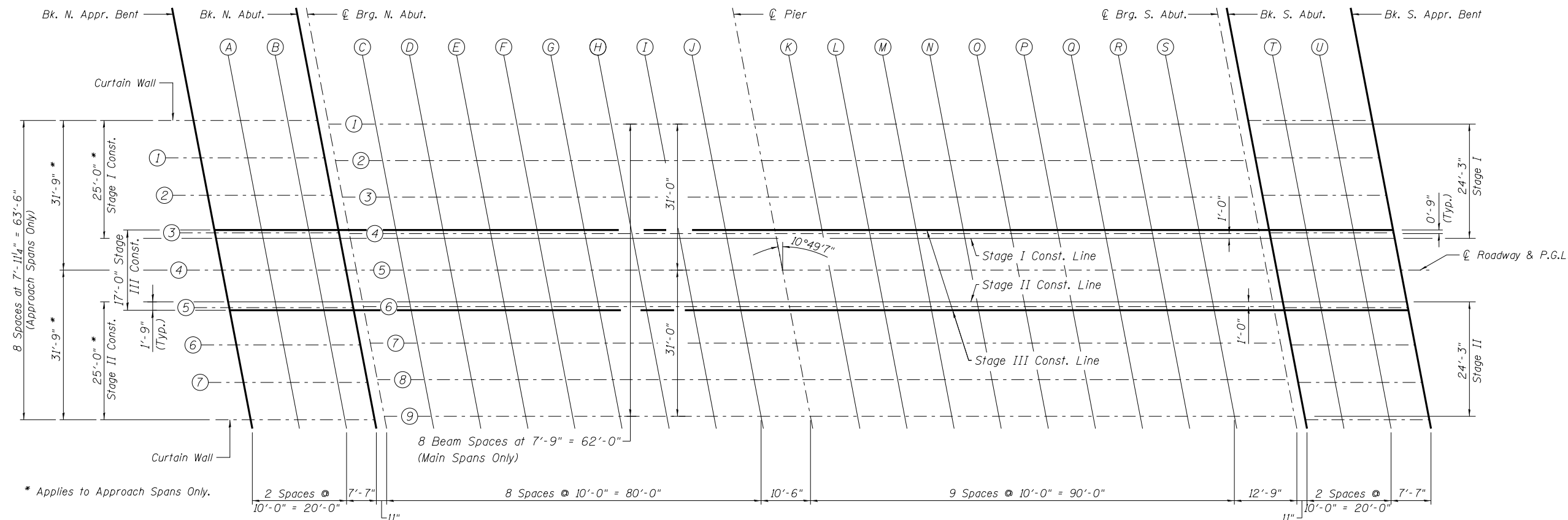
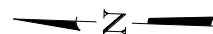
**FILLET HEIGHTS**

To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on sheets 5 & 6 of 27, minus slab thickness, equals the fillet heights "t" above top flanges of beams.



**FILLET HEIGHTS**

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below and on sheets 5 & 6 of 27, minus slab thickness, equals the fillet heights "t" above top flange of Beams.



**PLAN**

FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS (1 OF 3) MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150	F.A.I. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	DRAWN - TJW	REVISED -			72	(84-10-1,2) R5-3	SANGAMON	194	116
PLOT DATE =	CHECKED - MTH	REVISED -		SHEET NO. 4 OF 27 SHEETS		FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT CONTRACT NO. 72C90				



**BEAM 1 (EAST CURTAIN WALL\*)**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	98+76.81	-31.75	569.72	569.72
A	98+86.81	-31.75	569.72	569.73
B	98+96.81	-31.75	569.72	569.73
Bk. N. Abut.	99+04.39	-31.75	569.72	569.72
☉ Brg N. Abut.	99+05.46	-31.00	569.73	569.73
C	99+15.46	-31.00	569.73	569.75
D	99+25.46	-31.00	569.73	569.76
E	99+35.46	-31.00	569.73	569.77
F	99+45.46	-31.00	569.73	569.77
G	99+55.46	-31.00	569.73	569.76
H	99+65.46	-31.00	569.73	569.75
I	99+75.46	-31.00	569.72	569.73
J	99+85.46	-31.00	569.71	569.71
☉ Exist. Pier	99+95.96	-31.00	569.70	569.70
K	100+05.96	-31.00	569.68	569.70
L	100+15.96	-31.00	569.66	569.70
M	100+25.96	-31.00	569.64	569.70
N	100+35.96	-31.00	569.62	569.70
O	100+45.96	-31.00	569.60	569.69
P	100+55.96	-31.00	569.57	569.67
Q	100+65.96	-31.00	569.54	569.62
R	100+75.96	-31.00	569.50	569.57
S	100+85.96	-31.00	569.46	569.50
☉ Brg S. Abut.	100+98.71	-31.00	569.41	569.41
Bk. S. Abut.	100+99.47	-31.75	569.39	569.39
T	101+09.47	-31.75	569.35	569.36
U	101+19.47	-31.75	569.31	569.32
Bk. S. Appr. Bent	101+27.06	-31.75	569.27	569.27

**BEAM 2 (BEAM 1\*)**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	98+78.33	-23.81	569.88	569.88
A	98+88.33	-23.81	569.88	569.89
B	98+98.33	-23.81	569.88	569.89
Bk. N. Abut.	99+05.91	-23.81	569.88	569.88
☉ Brg N. Abut.	99+06.94	-23.25	569.89	569.89
C	99+16.94	-23.25	569.89	569.92
D	99+26.94	-23.25	569.89	569.92
E	99+36.94	-23.25	569.89	569.93
F	99+46.94	-23.25	569.89	569.93
G	99+56.94	-23.25	569.89	569.92
H	99+66.94	-23.25	569.89	569.91
I	99+76.94	-23.25	569.88	569.89
J	99+86.94	-23.25	569.87	569.87
☉ Exist. Pier	99+97.44	-23.25	569.86	569.86
K	100+07.44	-23.25	569.84	569.86
L	100+17.44	-23.25	569.83	569.86
M	100+27.44	-23.25	569.81	569.86
N	100+37.44	-23.25	569.78	569.86
O	100+47.44	-23.25	569.76	569.85
P	100+57.44	-23.25	569.73	569.83
Q	100+67.44	-23.25	569.70	569.78
R	100+77.44	-23.25	569.66	569.73
S	100+87.44	-23.25	569.63	569.66
☉ Brg S. Abut.	101+00.19	-23.25	569.57	569.57
Bk. S. Abut.	101+00.99	-23.81	569.56	569.56
T	101+10.99	-23.81	569.52	569.53
U	101+20.99	-23.81	569.47	569.48
Bk. S. Appr. Bent	101+28.58	-23.81	569.43	569.43

**BEAM 3 (BEAM 2\*)**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	98+79.85	-15.88	570.01	570.01
A	98+89.85	-15.88	570.01	570.02
B	98+99.85	-15.88	570.01	570.02
Bk. N. Abut.	99+07.43	-15.88	570.01	570.01
☉ Brg N. Abut.	99+08.42	-15.50	570.02	570.02
C	99+18.42	-15.50	570.02	570.04
D	99+28.42	-15.50	570.02	570.04
E	99+38.42	-15.50	570.02	570.05
F	99+48.42	-15.50	570.02	570.05
G	99+58.42	-15.50	570.02	570.05
H	99+68.42	-15.50	570.01	570.03
I	99+78.42	-15.50	570.00	570.01
J	99+88.42	-15.50	570.00	570.00
☉ Exist. Pier	99+98.92	-15.50	569.98	569.98
K	100+08.92	-15.50	569.97	569.98
L	100+18.92	-15.50	569.95	569.98
M	100+28.92	-15.50	569.93	569.98
N	100+38.92	-15.50	569.90	569.98
O	100+48.92	-15.50	569.88	569.97
P	100+58.92	-15.50	569.85	569.95
Q	100+68.92	-15.50	569.82	569.90
R	100+78.92	-15.50	569.79	569.85
S	100+88.92	-15.50	569.75	569.78
☉ Brg S. Abut.	101+01.67	-15.50	569.70	569.70
Bk. S. Abut.	101+02.51	-15.88	569.69	569.69
T	101+12.51	-15.88	569.65	569.66
U	101+22.51	-15.88	569.60	569.61
Bk. S. Appr. Bent	101+30.10	-15.88	569.56	569.56

**BEAM 4 (BEAM 3\*)**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	98+81.36	-7.94	570.14	570.14
A	98+91.36	-7.94	570.14	570.15
B	99+01.36	-7.94	570.14	570.15
Bk. N. Abut.	99+08.94	-7.94	570.14	570.14
☉ Brg N. Abut.	99+09.90	-7.75	570.14	570.14
C	99+19.90	-7.75	570.14	570.16
D	99+29.90	-7.75	570.14	570.16
E	99+39.90	-7.75	570.14	570.17
F	99+49.90	-7.75	570.14	570.17
G	99+59.90	-7.75	570.14	570.17
H	99+69.90	-7.75	570.13	570.15
I	99+79.90	-7.75	570.13	570.14
J	99+89.90	-7.75	570.12	570.12
☉ Exist. Pier	100+00.40	-7.75	570.10	570.10
K	100+10.40	-7.75	570.09	570.10
L	100+20.40	-7.75	570.07	570.10
M	100+30.40	-7.75	570.05	570.10
N	100+40.40	-7.75	570.03	570.10
O	100+50.40	-7.75	570.00	570.10
P	100+60.40	-7.75	569.97	570.07
Q	100+70.40	-7.75	569.94	570.03
R	100+80.40	-7.75	569.91	569.97
S	100+90.40	-7.75	569.87	569.90
☉ Brg S. Abut.	101+03.15	-7.75	569.82	569.82
Bk. S. Abut.	101+04.02	-7.94	569.81	569.81
T	101+14.02	-7.94	569.77	569.78
U	101+24.02	-7.94	569.72	569.73
Bk. S. Appr. Bent	101+31.61	-7.94	569.69	569.69

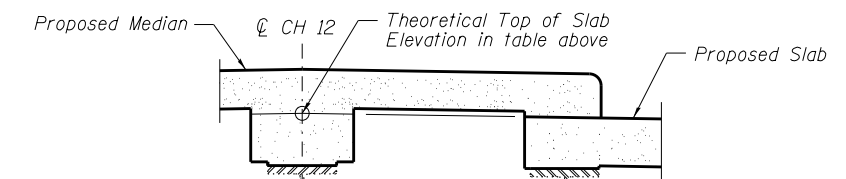
**STAGE I CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	98+81.59	-6.75	570.16	570.16
A	98+91.59	-6.75	570.16	570.17
B	99+01.59	-6.75	570.16	570.17
Bk. N. Abut.	99+09.17	-6.75	570.16	570.16
☉ Brg N. Abut.	99+10.09	-6.75	570.16	570.16
C	99+20.09	-6.75	570.16	570.18
D	99+30.09	-6.75	570.15	570.18
E	99+40.09	-6.75	570.15	570.19
F	99+50.09	-6.75	570.15	570.19
G	99+60.09	-6.75	570.15	570.18
H	99+70.09	-6.75	570.15	570.17
I	99+80.09	-6.75	570.14	570.15
J	99+90.09	-6.75	570.13	570.13
☉ Exist. Pier	100+00.59	-6.75	570.12	570.12
K	100+10.59	-6.75	570.10	570.11
L	100+20.59	-6.75	570.09	570.12
M	100+30.59	-6.75	570.07	570.12
N	100+40.59	-6.75	570.04	570.12
O	100+50.59	-6.75	570.02	570.11
P	100+60.59	-6.75	569.99	570.09
Q	100+70.59	-6.75	569.96	570.04
R	100+80.59	-6.75	569.92	569.99
S	100+90.59	-6.75	569.89	569.92
☉ Brg S. Abut.	101+03.34	-6.75	569.83	569.83
Bk. S. Abut.	101+04.25	-6.75	569.83	569.83
T	101+14.25	-6.75	569.79	569.80
U	101+24.25	-6.75	569.74	569.75
Bk. S. Appr. Bent	101+31.84	-6.75	569.71	569.71

**☉ RDWY., CROWN, PGL & BEAM 5 (BEAM 4\*)**

( Projected Slab Elevation below the median. See detail below)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	98+82.88	0.00	570.26	570.26
A	98+92.88	0.00	570.26	570.27
B	99+02.88	0.00	570.26	570.27
Bk. N. Abut.	99+10.46	0.00	570.26	570.26
☉ Brg N. Abut.	99+11.38	0.00	570.26	570.26
C	99+21.38	0.00	570.26	570.28
D	99+31.38	0.00	570.26	570.29
E	99+41.38	0.00	570.26	570.29
F	99+51.38	0.00	570.26	570.29
G	99+61.38	0.00	570.26	570.29
H	99+71.38	0.00	570.25	570.27
I	99+81.38	0.00	570.25	570.26
J	99+91.38	0.00	570.24	570.24
☉ Exist. Pier	100+01.88	0.00	570.22	570.22
K	100+11.88	0.00	570.21	570.22
L	100+21.88	0.00	570.19	570.22
M	100+31.88	0.00	570.17	570.23
N	100+41.88	0.00	570.15	570.22
O	100+51.88	0.00	570.12	570.22
P	100+61.88	0.00	570.09	570.19
Q	100+71.88	0.00	570.06	570.15
R	100+81.88	0.00	570.03	570.09
S	100+91.88	0.00	569.99	570.03
☉ Brg S. Abut.	101+04.63	0.00	569.94	569.94
Bk. S. Abut.	101+05.54	0.00	569.94	569.94
T	101+15.54	0.00	569.89	569.90
U	101+25.54	0.00	569.85	569.86
Bk. S. Appr. Bent	101+33.13	0.00	569.81	569.81



**DETAIL THRU PROP. DECK**

\* Denotes description variations for Approach Spans associated with Main Span callouts.

**STAGE II CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	98+84.17	6.75	570.16	570.16
A	98+94.17	6.75	570.16	570.17
B	99+04.17	6.75	570.16	570.17
Bk. N. Abut.	99+11.75	6.75	570.16	570.16
⊕ Brg N. Abut.	99+12.67	6.75	570.16	570.16
C	99+22.67	6.75	570.16	570.18
D	99+32.67	6.75	570.15	570.18
E	99+42.67	6.75	570.15	570.19
F	99+52.67	6.75	570.15	570.19
G	99+62.67	6.75	570.15	570.18
H	99+72.67	6.75	570.15	570.17
I	99+82.67	6.75	570.14	570.15
J	99+92.67	6.75	570.13	570.13
⊕ Exist. Pier	100+03.17	6.75	570.12	570.12
K	100+13.17	6.75	570.10	570.11
L	100+23.17	6.75	570.09	570.12
M	100+33.17	6.75	570.07	570.12
N	100+43.17	6.75	570.04	570.12
O	100+53.17	6.75	570.02	570.11
P	100+63.17	6.75	569.99	570.09
Q	100+73.17	6.75	569.96	570.04
R	100+83.17	6.75	569.92	569.99
S	100+93.17	6.75	569.89	569.92
⊕ Brg S. Abut.	101+05.92	6.75	569.83	569.83
Bk. S. Abut.	101+06.83	6.75	569.83	569.83
T	101+16.83	6.75	569.79	569.80
U	101+26.83	6.75	569.74	569.75
Bk. S. Appr. Bent	101+34.42	6.75	569.71	569.71

**BEAM 6 (BEAM 5\*)**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	98+84.40	7.94	570.14	570.14
A	98+94.40	7.94	570.14	570.15
B	99+04.40	7.94	570.14	570.15
Bk. N. Abut.	99+11.98	7.94	570.14	570.14
⊕ Brg N. Abut.	99+12.86	7.75	570.14	570.14
C	99+22.86	7.75	570.14	570.16
D	99+32.86	7.75	570.14	570.16
E	99+42.86	7.75	570.14	570.17
F	99+52.86	7.75	570.14	570.17
G	99+62.86	7.75	570.14	570.17
H	99+72.86	7.75	570.13	570.15
I	99+82.86	7.75	570.13	570.14
J	99+92.86	7.75	570.12	570.12
⊕ Exist. Pier	100+03.36	7.75	570.10	570.10
K	100+13.36	7.75	570.09	570.10
L	100+23.36	7.75	570.07	570.10
M	100+33.36	7.75	570.05	570.10
N	100+43.36	7.75	570.03	570.10
O	100+53.36	7.75	570.00	570.10
P	100+63.36	7.75	569.97	570.07
Q	100+73.36	7.75	569.94	570.03
R	100+83.36	7.75	569.91	569.97
S	100+93.36	7.75	569.87	569.90
⊕ Brg S. Abut.	101+06.11	7.75	569.82	569.82
Bk. S. Abut.	101+07.06	7.94	569.81	569.81
T	101+17.06	7.94	569.77	569.78
U	101+27.06	7.94	569.72	569.73
Bk. S. Appr. Bent	101+34.65	7.94	569.69	569.69

**BEAM 7 (BEAM 6\*)**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	98+85.91	15.88	570.01	570.01
A	98+95.91	15.88	570.01	570.02
B	99+05.91	15.88	570.01	570.02
Bk. N. Abut.	99+13.49	15.88	570.01	570.01
⊕ Brg N. Abut.	99+14.34	15.50	570.02	570.02
C	99+24.34	15.50	570.02	570.04
D	99+34.34	15.50	570.02	570.04
E	99+44.34	15.50	570.02	570.05
F	99+54.34	15.50	570.02	570.05
G	99+64.34	15.50	570.02	570.05
H	99+74.34	15.50	570.01	570.03
I	99+84.34	15.50	570.00	570.01
J	99+94.34	15.50	570.00	570.00
⊕ Exist. Pier	100+04.84	15.50	569.98	569.98
K	100+14.84	15.50	569.97	569.98
L	100+24.84	15.50	569.95	569.98
M	100+34.84	15.50	569.93	569.98
N	100+44.84	15.50	569.90	569.98
O	100+54.84	15.50	569.88	569.97
P	100+64.84	15.50	569.85	569.95
Q	100+74.84	15.50	569.82	569.90
R	100+84.84	15.50	569.79	569.85
S	100+94.84	15.50	569.75	569.78
⊕ Brg S. Abut.	101+07.59	15.50	569.70	569.70
Bk. S. Abut.	101+08.57	15.88	569.69	569.69
T	101+18.57	15.88	569.65	569.66
U	101+28.57	15.88	569.60	569.61
Bk. S. Appr. Bent	101+36.16	15.88	569.56	569.56

**BEAM 8 (BEAM 7\*)**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	98+87.43	23.81	569.88	569.88
A	98+97.43	23.81	569.88	569.89
B	99+07.43	23.81	569.88	569.89
Bk. N. Abut.	99+15.01	23.81	569.88	569.88
⊕ Brg N. Abut.	99+15.82	23.25	569.90	569.90
C	99+25.82	23.25	569.90	569.92
D	99+35.82	23.25	569.89	569.92
E	99+45.82	23.25	569.89	569.93
F	99+55.82	23.25	569.89	569.93
G	99+65.82	23.25	569.89	569.92
H	99+75.82	23.25	569.89	569.91
I	99+85.82	23.25	569.88	569.89
J	99+95.82	23.25	569.87	569.87
⊕ Exist. Pier	100+06.32	23.25	569.86	569.86
K	100+16.32	23.25	569.84	569.86
L	100+26.32	23.25	569.83	569.86
M	100+36.32	23.25	569.81	569.86
N	100+46.32	23.25	569.78	569.86
O	100+56.32	23.25	569.76	569.85
P	100+66.32	23.25	569.73	569.83
Q	100+76.32	23.25	569.70	569.78
R	100+86.32	23.25	569.66	569.73
S	100+96.32	23.25	569.63	569.66
⊕ Brg S. Abut.	101+09.07	23.25	569.57	569.57
Bk. S. Abut.	101+10.09	23.81	569.56	569.56
T	101+20.09	23.81	569.52	569.53
U	101+30.09	23.81	569.47	569.48
Bk. S. Appr. Bent	101+37.68	23.81	569.43	569.43

**BEAM 9 (WEST CURTAIN WALL\*)**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	98+88.95	31.75	569.72	569.72
A	98+98.95	31.75	569.72	569.73
B	99+08.95	31.75	569.72	569.73
Bk. N. Abut.	99+16.53	31.75	569.72	569.72
⊕ Brg N. Abut.	99+17.30	31.00	569.73	569.73
C	99+27.30	31.00	569.73	569.75
D	99+37.30	31.00	569.73	569.76
E	99+47.30	31.00	569.73	569.77
F	99+57.30	31.00	569.73	569.77
G	99+67.30	31.00	569.73	569.76
H	99+77.30	31.00	569.73	569.75
I	99+87.30	31.00	569.72	569.73
J	99+97.30	31.00	569.71	569.71
⊕ Exist. Pier	100+07.80	31.00	569.70	569.70
K	100+17.80	31.00	569.68	569.70
L	100+27.80	31.00	569.66	569.70
M	100+37.80	31.00	569.64	569.70
N	100+47.80	31.00	569.62	569.70
O	100+57.80	31.00	569.60	569.69
P	100+67.80	31.00	569.57	569.67
Q	100+77.80	31.00	569.54	569.62
R	100+87.80	31.00	569.50	569.57
S	100+97.80	31.00	569.46	569.50
⊕ Brg S. Abut.	101+10.55	31.00	569.41	569.41
Bk. S. Abut.	101+11.61	31.75	569.39	569.39
T	101+21.61	31.75	569.35	569.36
U	101+31.61	31.75	569.31	569.32
Bk. S. Appr. Bent	101+39.20	31.75	569.27	569.27

\* Denotes description variations for Approach Spans associated with Main Span callouts.

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	98+47.19	-32.417	569.70
A	98+57.19	-32.417	569.70
B	98+67.19	-32.417	569.70
S. End N. Appr. Slab	98+77.19	-32.417	569.70
N. End S. Appr. Slab	101+26.44	-32.417	569.25
C	101+36.44	-32.417	569.20
D	101+46.44	-32.417	569.15
S. End S. Appr. Slab	101+56.44	-32.417	569.09

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	98+48.98	-23.000	569.90
A	98+58.98	-23.000	569.90
B	98+68.98	-23.000	569.90
S. End N. Appr. Slab	98+78.98	-23.000	569.90
N. End S. Appr. Slab	101+28.23	-23.000	569.45
C	101+38.23	-23.000	569.40
D	101+48.23	-23.000	569.35
S. End S. Appr. Slab	101+58.23	-23.000	569.29

EAST EDGE OF MEDIAN

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	98+51.66	-9.000	570.12
A	98+61.66	-9.000	570.12
B	98+71.66	-9.000	570.12
S. End N. Appr. Slab	98+81.66	-9.000	570.12
N. End S. Appr. Slab	101+30.91	-9.000	569.67
C	101+40.91	-9.000	569.62
D	101+50.91	-9.000	569.57
S. End S. Appr. Slab	101+60.91	-9.000	569.51

STAGE I/II CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	98+52.09	-6.750	570.15
A	98+62.09	-6.750	570.15
B	98+72.09	-6.750	570.15
S. End N. Appr. Slab	98+82.09	-6.750	570.15
N. End S. Appr. Slab	101+31.34	-6.750	569.70
C	101+41.34	-6.750	569.65
D	101+51.34	-6.750	569.60
S. End S. Appr. Slab	101+61.34	-6.750	569.54

☉ ROADWAY & PGL

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	98+53.38	0.000	570.26
A	98+63.38	0.000	570.26
B	98+73.38	0.000	570.26
S. End N. Appr. Slab	98+83.38	0.000	570.26
N. End S. Appr. Slab	101+32.63	0.000	569.81
C	101+42.63	0.000	569.76
D	101+52.63	0.000	569.71
S. End S. Appr. Slab	101+62.63	0.000	569.65

WEST EDGE OF MEDIAN

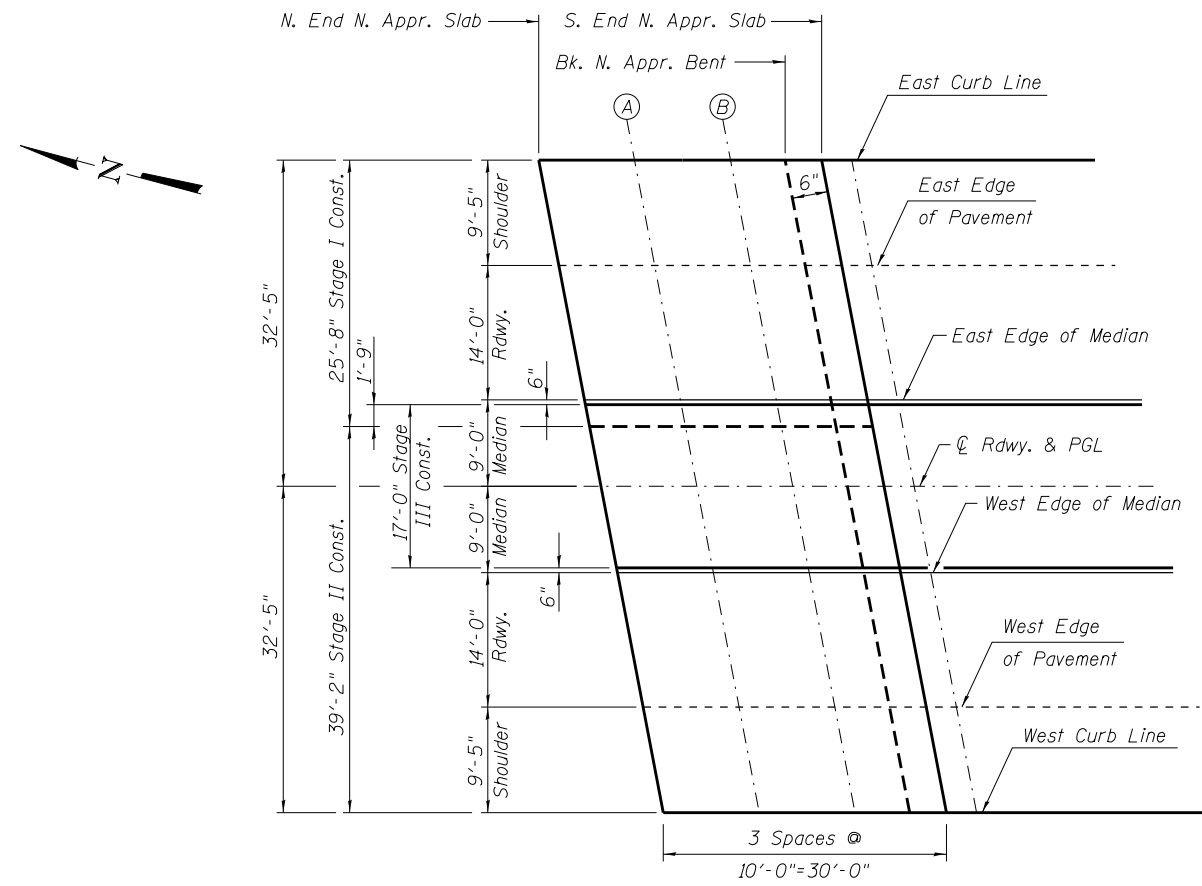
Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	98+55.10	9.000	570.12
A	98+65.10	9.000	570.12
B	98+75.10	9.000	570.12
S. End N. Appr. Slab	98+85.10	9.000	570.12
N. End S. Appr. Slab	101+34.35	9.000	569.67
C	101+44.35	9.000	569.62
D	101+54.35	9.000	569.57
S. End S. Appr. Slab	101+64.35	9.000	569.51

WEST EDGE OF PAVEMENT

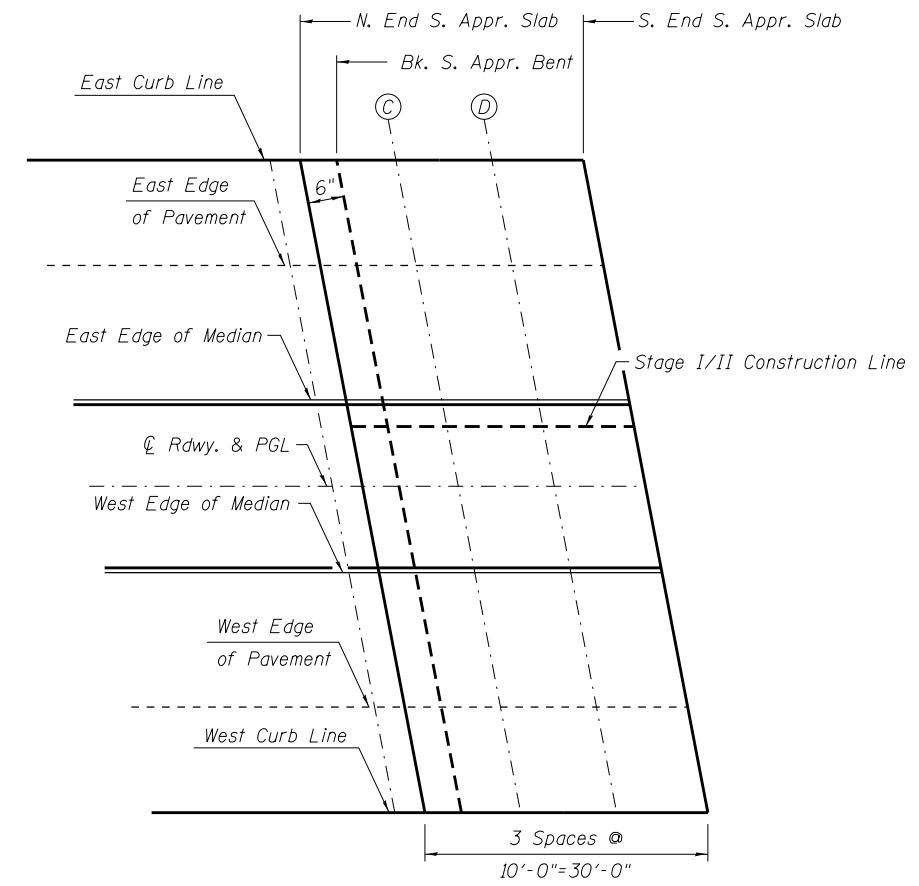
Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	98+57.78	23.000	569.90
A	98+67.78	23.000	569.90
B	98+77.78	23.000	569.90
S. End N. Appr. Slab	98+87.78	23.000	569.90
N. End S. Appr. Slab	101+37.03	23.000	569.45
C	101+47.03	23.000	569.40
D	101+57.03	23.000	569.35
S. End S. Appr. Slab	101+67.03	23.000	569.29

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	98+59.58	32.417	569.70
A	98+69.58	32.417	569.70
B	98+79.58	32.417	569.70
S. End N. Appr. Slab	98+89.58	32.417	569.70
N. End S. Appr. Slab	101+38.83	32.417	569.25
C	101+48.83	32.417	569.20
D	101+58.83	32.417	569.15
S. End S. Appr. Slab	101+68.83	32.417	569.09



**PLAN**  
(North Approach)



**PLAN**  
(South Approach)

FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
		DRAWN - TJW	REVISED -
		CHECKED - MTH	REVISED -

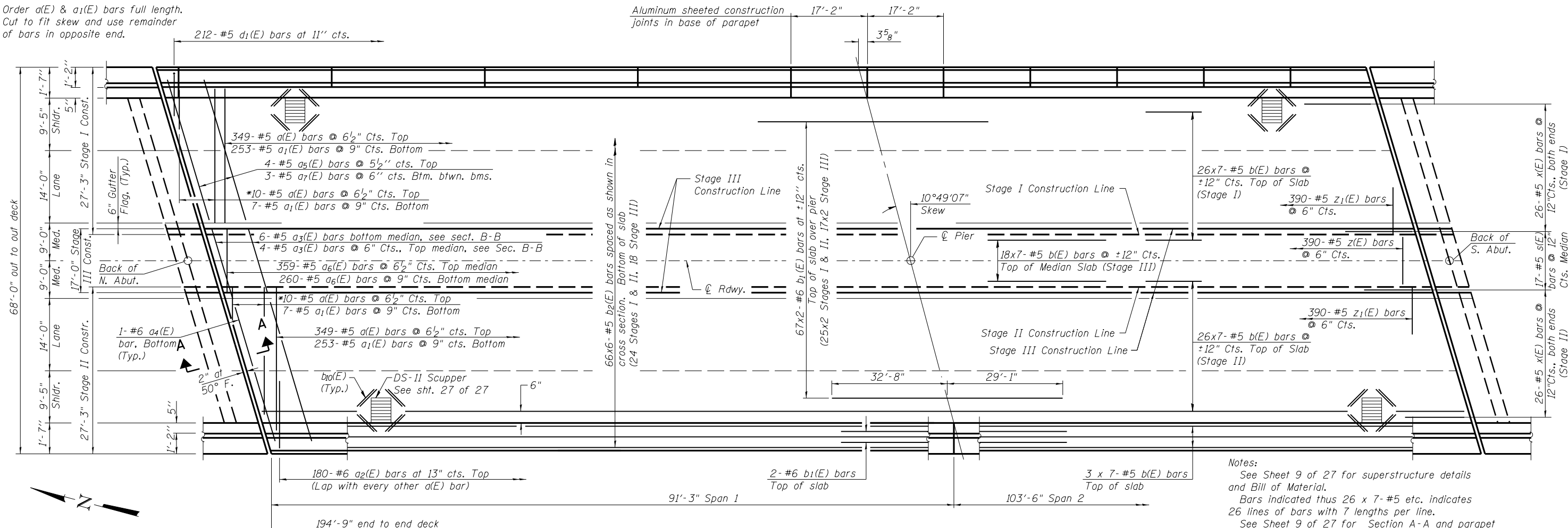
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS  
MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150

SHEET NO. 7 OF 27 SHEETS

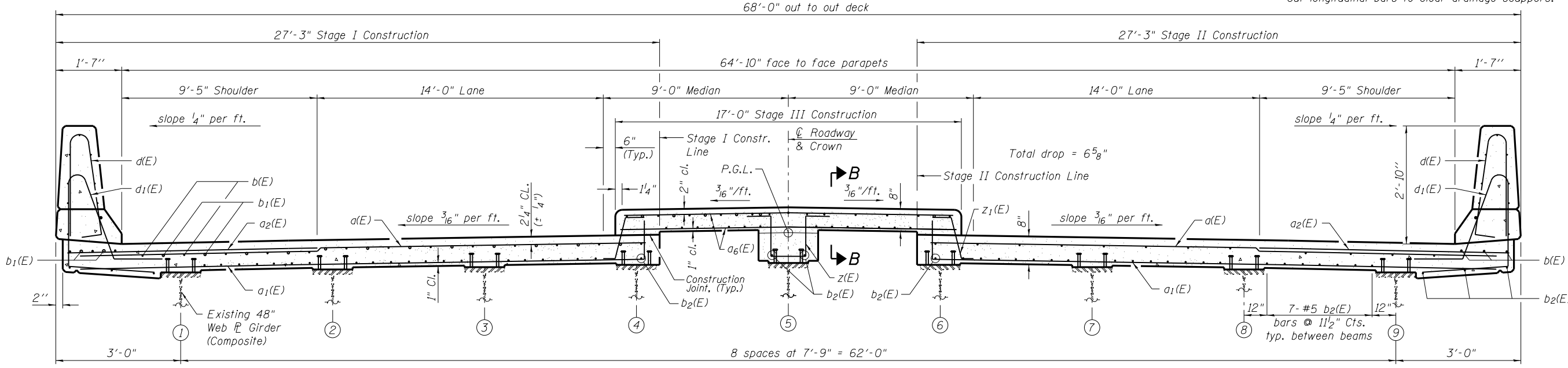
F.A.I. RTE. = 72	SECTION =	COUNTY = SANGAMON	TOTAL SHEETS = 194	SHEET NO. = 119
• (84-10-1RS-3, 84-10-2RS-R)BR,I		CONTRACT NO. 72C90		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				

\* Order a(E) & a<sub>1</sub>(E) bars full length.  
Cut to fit skew and use remainder  
of bars in opposite end.



**PLAN**

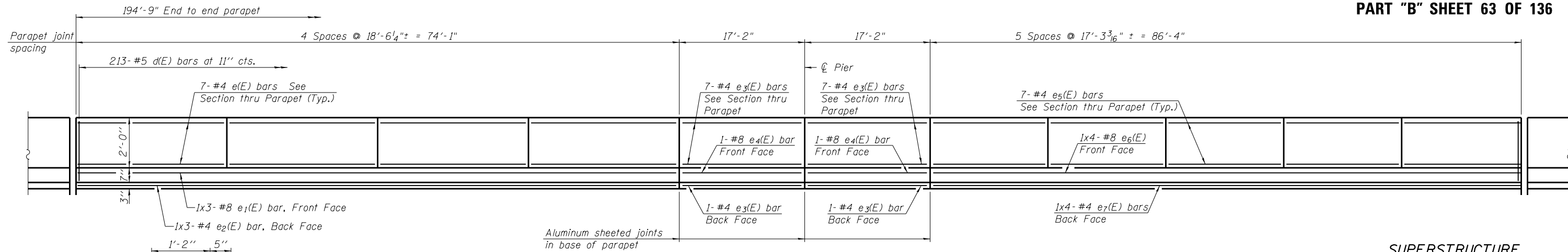
Notes:  
See Sheet 9 of 27 for superstructure details  
and Bill of Material.  
Bars indicated thus 26 x 7-#5 etc. indicates  
26 lines of bars with 7 lengths per line.  
See Sheet 9 of 27 for Section A-A and parapet  
reinforcement.  
Cut longitudinal bars to clear drainage scuppers.



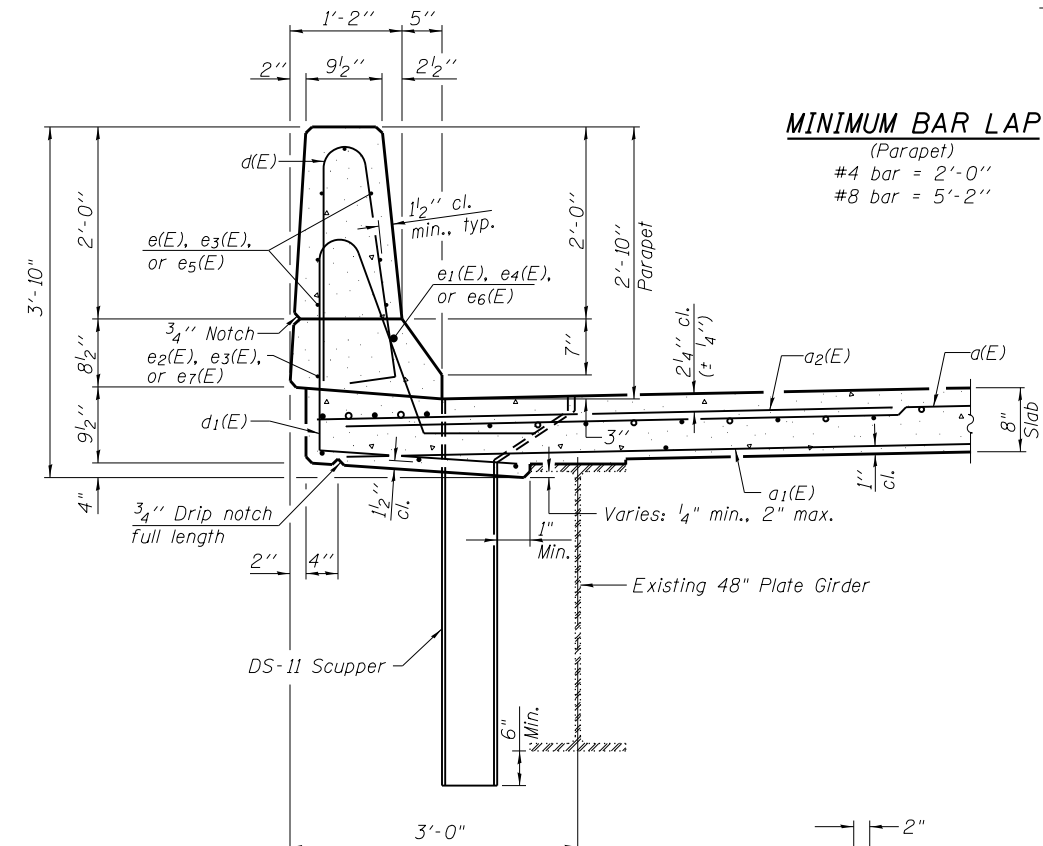
**CROSS SECTION**  
(Looking South)

**MIN. BAR LAP**  
(Deck)  
#5 Bar = 2'-7"  
#6 Bar = 3'-1"

FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUPERSTRUCTURE MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - MTH	REVISED -			72	(84-10-1,2) R5-3	SANGAMON	194	120	
	PLOT SCALE =	DRAWN - TJW	REVISED -			CONTRACT NO. 72C90					
	PLOT DATE	CHECKED - MTH	REVISED -			FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					



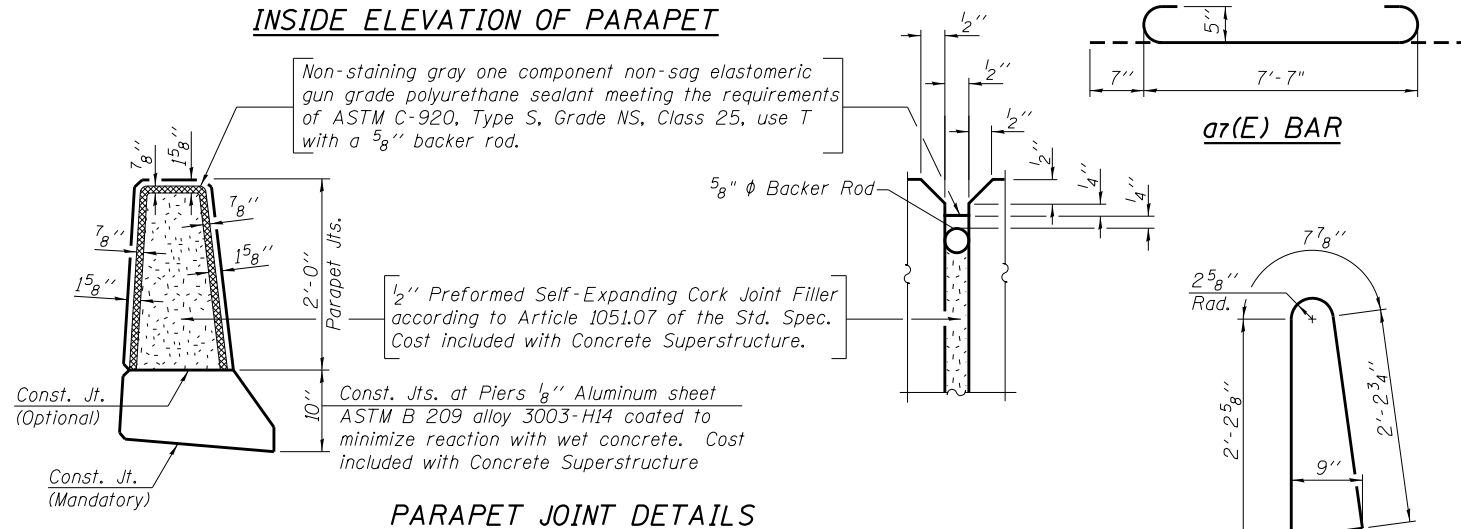
**INSIDE ELEVATION OF PARAPET**



**MINIMUM BAR LAP**  
(Parapet)  
#4 bar = 2'-0"  
#8 bar = 5'-2"

Aluminum sheeted joints in base of parapet

Non-staining gray one component non-sag elastomeric gun grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25, use T with a 5/8" backer rod.



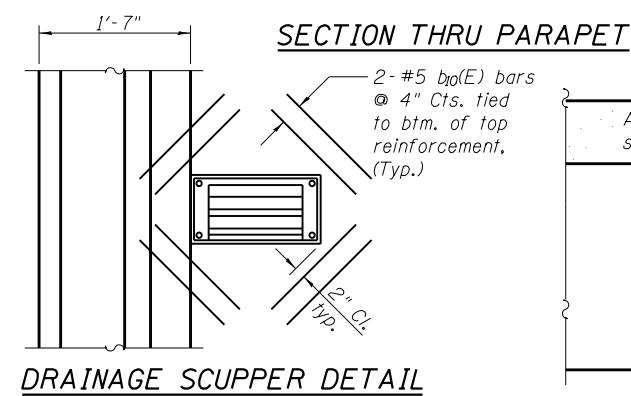
**PARAPET JOINT DETAILS**

Notes:  
Drains shall be located clear of all diaphragms.  
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coatings Spec. SSPC-SP1 prior to painting.  
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.  
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Cost of Drainage Scuppers.

**SUPERSTRUCTURE BILL OF MATERIAL**

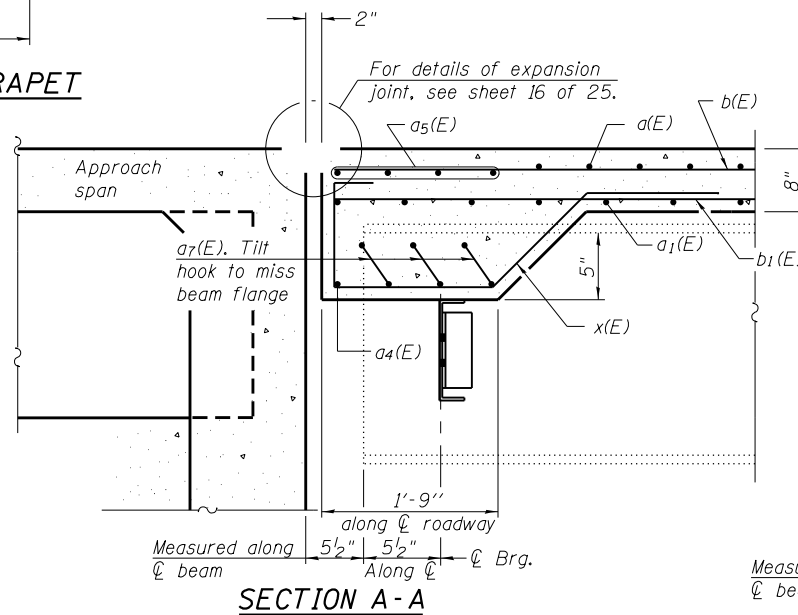
Bar	No.	Size	Length	Shape
a(E)	718	#5	26'-6"	
a1(E)	520	#5	27'-4"	
a2(E)	360	#6	6'-6"	
a3(E)	20	#5	16'-11"	
a4(E)	4	#6	26'-8"	
a5(E)	16	#5	26'-11"	
a6(E)	619	#5	16'-8"	
a7(E)	36	#5	8'-9"	
b(E)	532	#5	30'-0"	
b1(E)	134	#6	32'-5"	
b2(E)	372	#5	34'-7"	
b3(E)	32	#5	2'-0"	
d(E)	426	#5	5'-7"	
d1(E)	424	#5	7'-7"	
e(E)	56	#4	18'-2"	
e1(E)	6	#8	28'-1"	
e2(E)	6	#4	26'-0"	
e3(E)	32	#4	16'-10"	
e4(E)	4	#8	16'-10"	
e5(E)	70	#4	16'-11"	
e6(E)	8	#8	25'-5"	
e7(E)	8	#4	23'-1"	
s(E)	34	#4	4'-3"	
x(E)	104	#5	6'-5"	
z(E)	390	#5	5'-2"	
z1(E)	780	#5	2'-6"	
Reinforcement Bars, Epoxy Coated	Pound	100,880		
Concrete Superstructure	Cu. Yds.	414.5		

Bars indicated thus 1 x 3 - #8 etc. indicates 1 line of bars with 3 lengths per line.

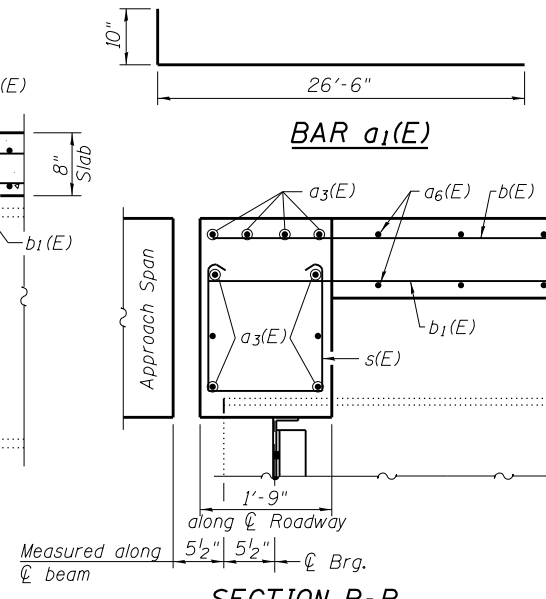


**SECTION THRU PARAPET**

**DRAINAGE SCUPPER DETAIL**

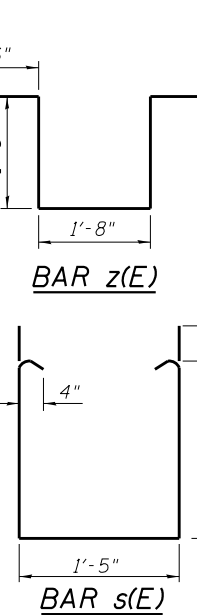


**SECTION A-A**



**SECTION B-B**

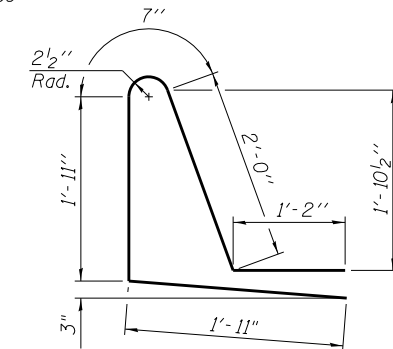
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



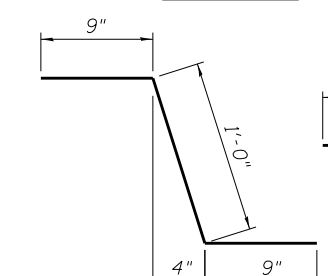
**BAR a1(E)**

**BAR z(E)**

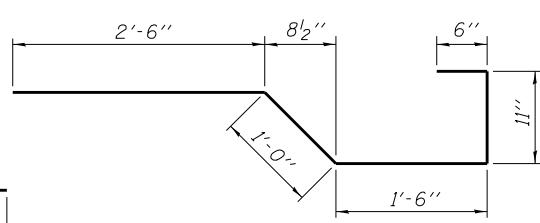
**BAR s(E)**



**BAR d1(E)**



**BAR z1(E)**



**BAR x(E)**

FILE NAME = CH12 over FAI-72.dgn

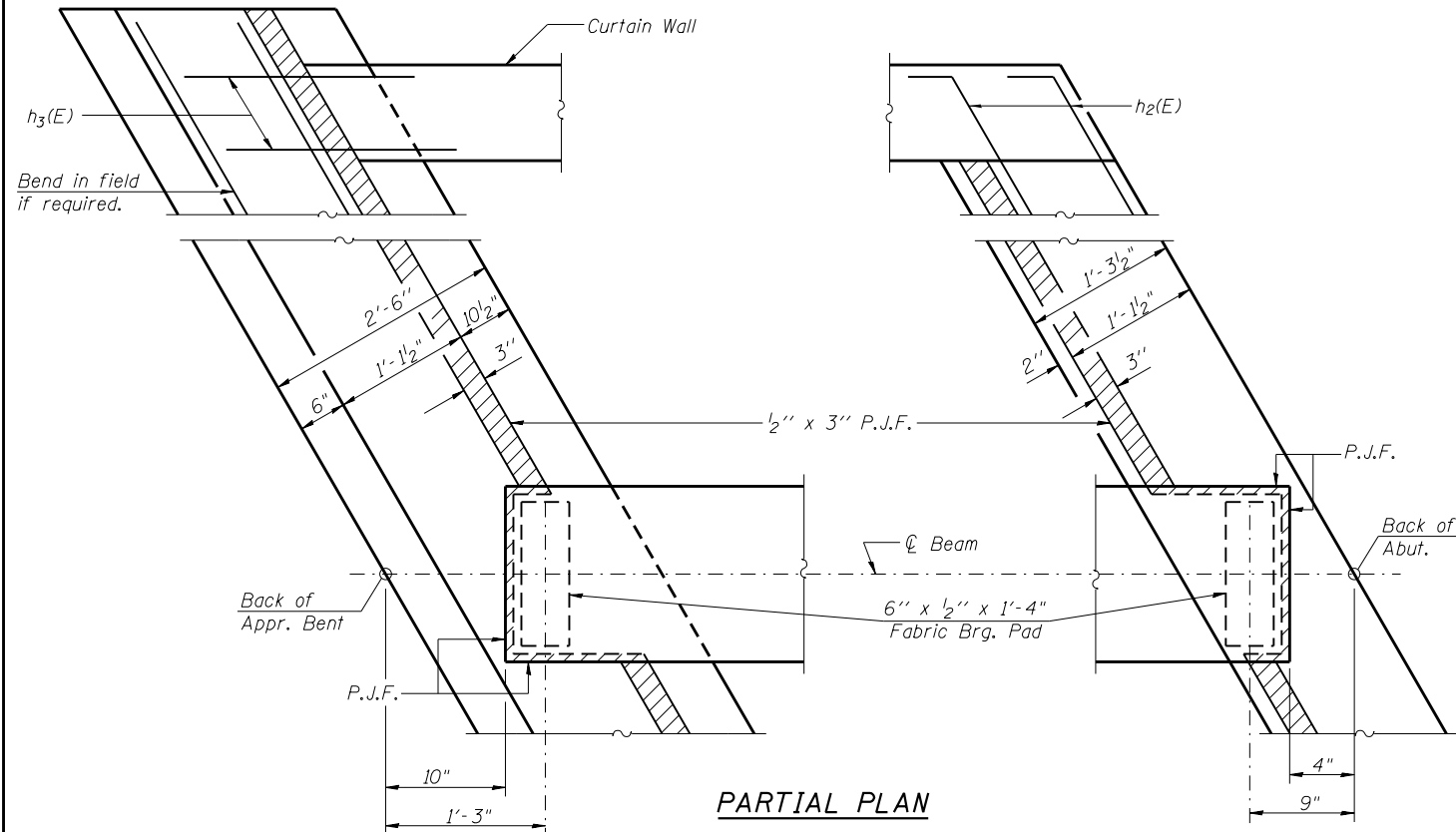
USER NAME =	DESIGNED - SAL	REVISED -
PLOT SCALE =	CHECKED - MTH	REVISED -
PLOT DATE =	DRAWN - TJW	REVISED -
	CHECKED - MTH	REVISED -

SUPERSTRUCTURE DETAILS  
MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150

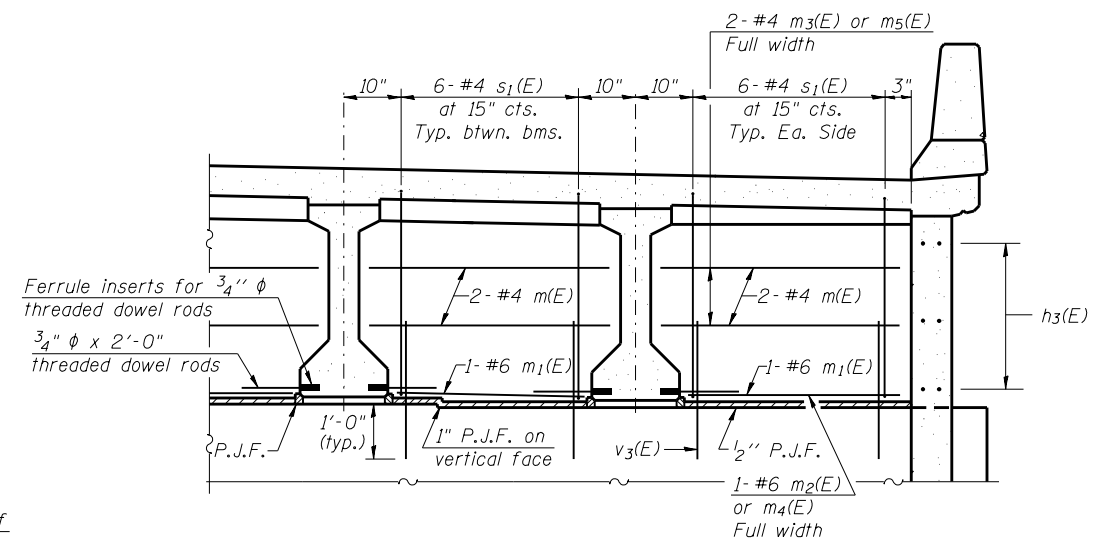
SHEET NO. 9 OF 27 SHEETS

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	.	SANGAMON	194	121
• (84-10-IRS-3, 84-10-2RS-RIBR,I		CONTRACT NO. 72C90		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				





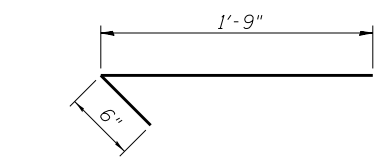
PARTIAL PLAN



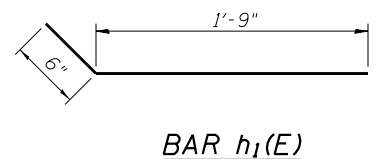
DIAPHRAGM AT APPROACH BENT

For location of m(E), m1(E), m2(E), m3(E), m4(E) and m5(E) bars see Section B-B on sheet 10 of 27.

(See "Diaphragm at Abutment" for Staging Details.)



BAR h2(E)

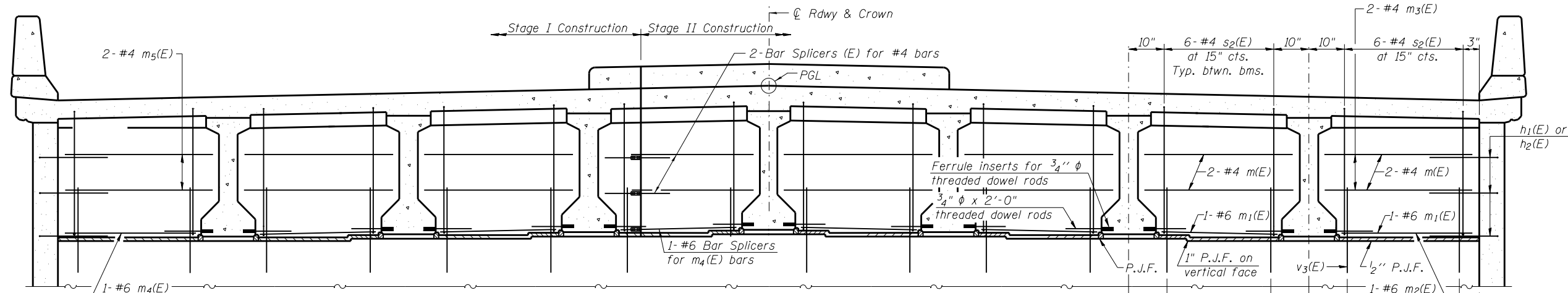


BAR h1(E)

TWO APPROACH SPANS  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	200	#5	26'-6"	
a1(E)	140	#5	27'-4"	
a2(E)	100	#6	6'-6"	
a3(E)	4	#5	16'-11"	
a4(E)	8	#6	26'-8"	
a6(E)	170	#5	16'-9"	
b3(E)	152	#5	26'-8"	
b4(E)	132	#5	26'-9"	
d(E)	120	#5	5'-7"	
d2(E)	116	#5	6'-11"	
e8(E)	56	#4	13'-2"	
e9(E)	4	#8	26'-9"	
ea(E)	4	#4	26'-9"	
h1(E)	12	#5	2'-3"	
h2(E)	12	#5	2'-3"	
h3(E)	24	#5	2'-0"	
m(E)	32	#4	7'-1"	
m1(E)	16	#6	6'-0"	
m2(E)	4	#6	39'-6"	
m3(E)	8	#4	39'-6"	
m4(E)	4	#6	25'-9"	
m5(E)	8	#4	25'-9"	
s1(E)	96	#4	8'-0"	
s2(E)	96	#4	8'-3"	
v1(E)	136	#5	3'-9"	
v2(E)	100	#5	5'-6"	
v3(E)	192	#5	2'-0"	
z1(E)	216	#5	2'-6"	
z2(E)	108	#5	4'-10"	
Reinforcement Bars, Epoxy Coated		Pound	28,880	
Concrete Superstructure		Cu. Yd.	156	
Concrete Removal		Cu. Yd.	40.2	

\* Diagram for a1(E) and z1(E) bars on sht 9 of 27

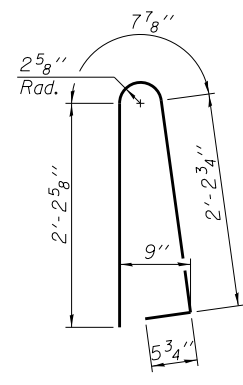


DIAPHRAGM AT ABUTMENT

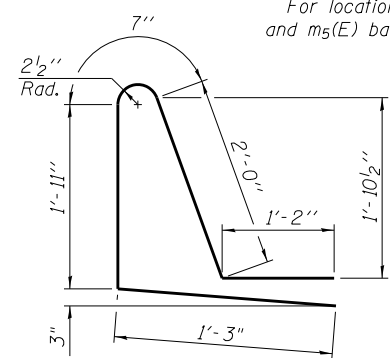
(Looking South at S. Abut., N. Abut. Similar)

For location of m(E), m1(E), m2(E), m3(E), m4(E) and m5(E) bars see Section B-B on sheet 10 of 27.

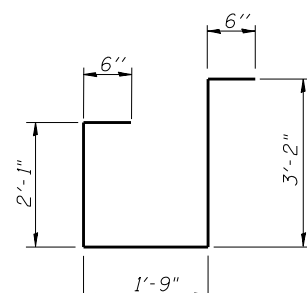
Note: Removal of existing diaphragms will be paid for as Concrete Removal.



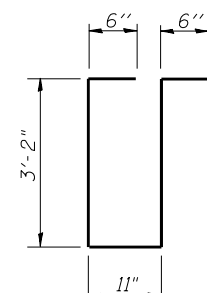
BAR d(E)



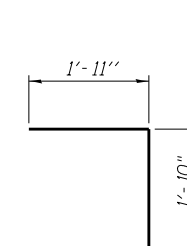
BAR d2(E)



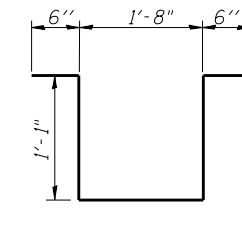
BAR s1(E)



BAR s2(E)



BAR v1(E)



BAR z2(E)

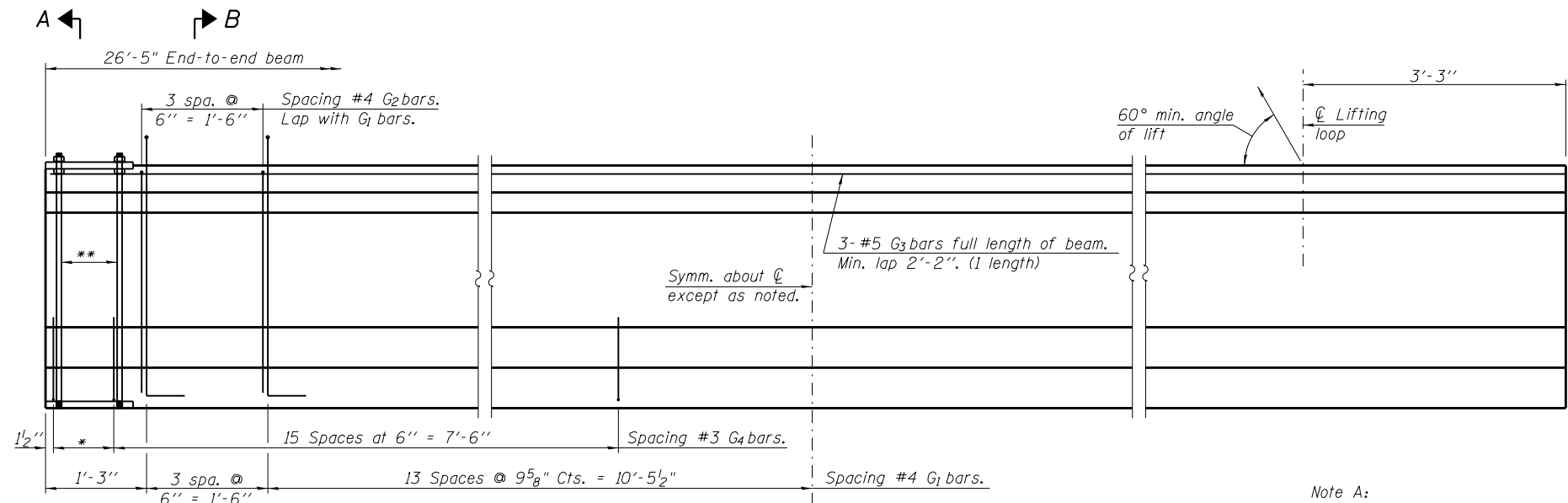
FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
		DRAWN - TJW	REVISED -
		CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

VAULTED ABUTMENT APPROACH SPAN DETAILS  
MECHANICSBURG ROAD OVER F.A.I.-72 - S.N. 084-0150

SHEET NO. 11 OF 27 SHEETS

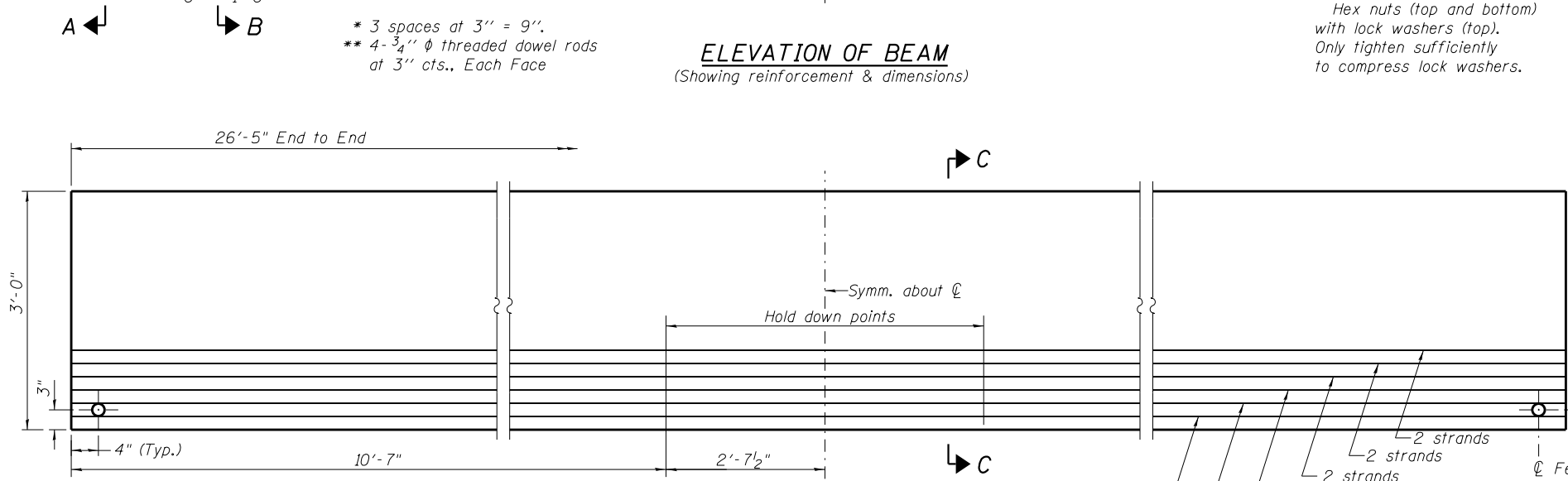
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	.	SANGAMON	194	123
• (84-10-IRS-3, 84-10-2RS-RIBR,1		CONTRACT NO. 72C90		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				



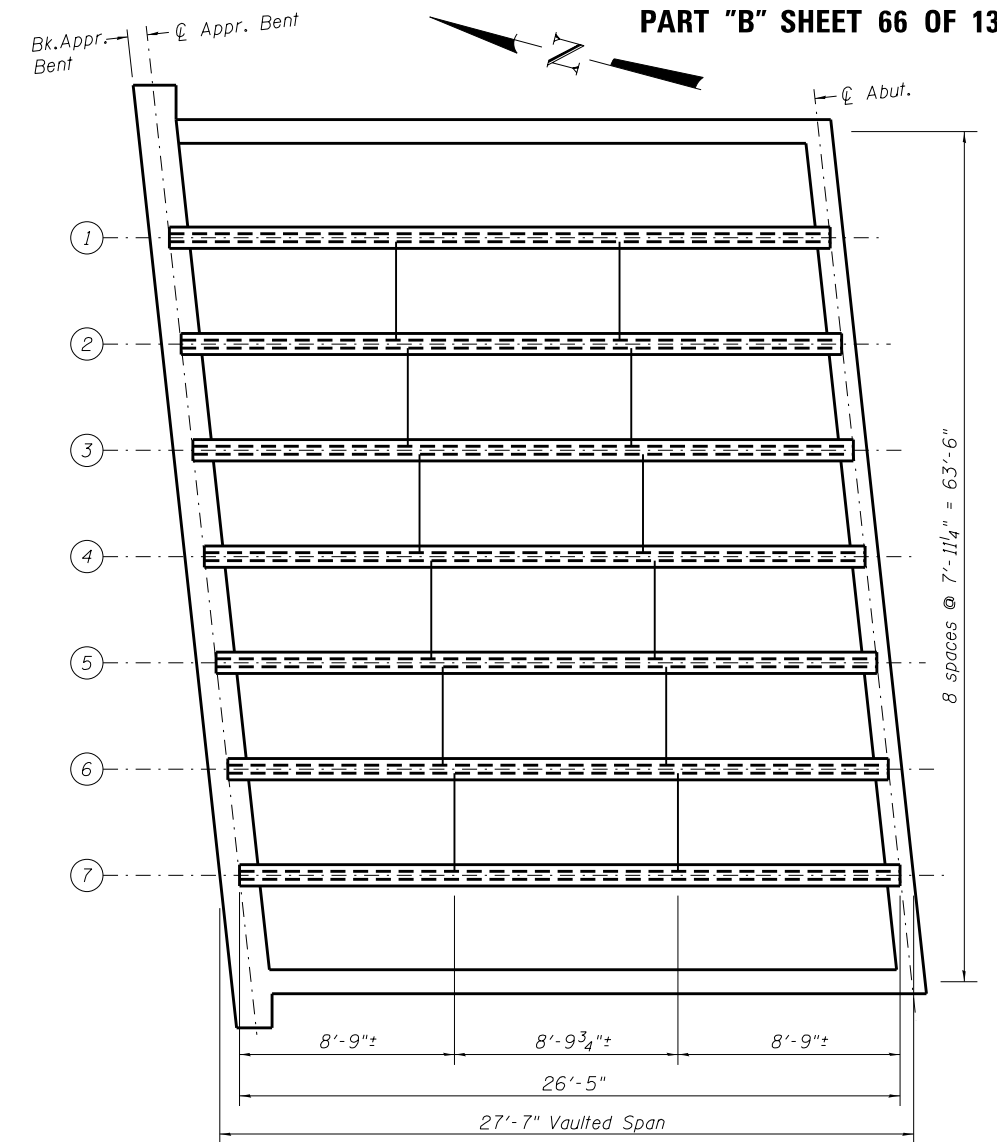
**ELEVATION OF BEAM**  
(Showing reinforcement & dimensions)

\* 3 spaces at 3" = 9".  
\*\* 4-3/4"  $\phi$  threaded dowel rods at 3" cts., Each Face

Note A:  
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



**ELEVATION OF BEAM**  
(Showing prestressing steel)

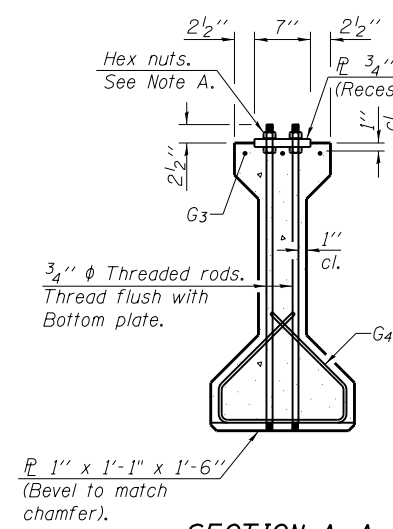


**FRAMING PLAN**  
(N. Approach Span shown, S. Approach Span similar)

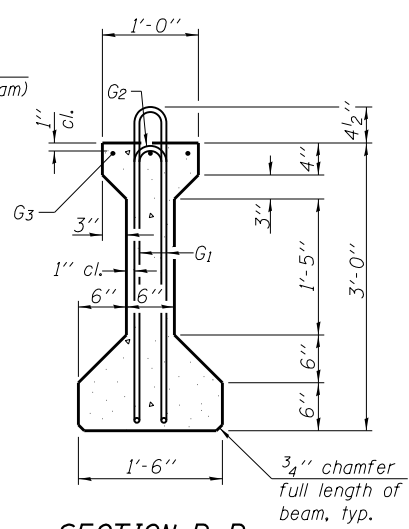
**\*\*\*BAR LIST**  
**ONE BEAM ONLY**

Bar	No.	Size	Length	Shape
G <sub>1</sub>	33	#4	7'-5"	nl
G <sub>2</sub>	33	#4	5'-8"	n
G <sub>3</sub>	3	#5	26'-1"	—
G <sub>4</sub>	38	#3	4'-1"	⊔

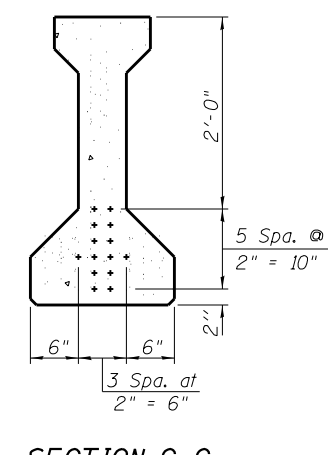
\*\*\*For information only  
Notes:  
See sheet 13 of 27 for additional details and Bill of Material.  
Required release strength,  $f'ci$ , shall be 5,000 psi.



**SECTION A-A**



**SECTION B-B**



**SECTION C-C**

I: Non-composite moment of inertia of beam section (in<sup>4</sup>).  
I': Composite moment of inertia of beam section (in<sup>4</sup>).  
S<sub>b</sub>: Non-composite section modulus for the bottom fiber of the prestressed beam (in<sup>3</sup>).  
S<sub>b</sub>': Composite section modulus for the bottom fiber of the prestressed beam (in<sup>3</sup>).  
S<sub>t</sub>: Non-composite section modulus for the top fiber of the prestressed beam (in<sup>3</sup>).  
S<sub>t</sub>': Composite section modulus for the top fiber of the prestressed beam (in<sup>3</sup>).  
Q: Un-factored non-composite dead load (kips/ft.).  
M<sub>Q</sub>: Un-factored moment due to non-composite dead load conservatively taken at 0.5 of the span (kip-ft.).  
s<sub>Q</sub>: Un-factored long-term composite (superimposed) dead load (kips/ft.).  
M<sub>sQ</sub>: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).  
M<sub>L</sub>: Un-factored live load moment on the composite section (kip-ft.).  
M<sub>I</sub>: Un-factored moment due to impact on the composite section (kip-ft.).

INTERIOR BEAM MOMENT TABLE		
0.5 Sp. 2		
I	(in <sup>4</sup> )	48,648
I'	(in <sup>4</sup> )	173,929
S <sub>b</sub>	(in <sup>3</sup> )	3,165
S <sub>b</sub> '	(in <sup>3</sup> )	5,929
S <sub>t</sub>	(in <sup>3</sup> )	2,358
S <sub>t</sub> '	(in <sup>3</sup> )	26,094
Q	(k/ft.)	1.256
M <sub>Q</sub>	(k)	102
s <sub>Q</sub>	(k/ft.)	0.689
M <sub>sQ</sub>	(k)	56
M <sub>L</sub>	(k)	155
M <sub>I</sub>	(k)	47

INTERIOR BEAM REACTION TABLE		
Abut.		
R <sub>Q</sub>	(k)	16.0
R <sub>sQ</sub>	(k)	8.8
R <sub>L</sub>	(k)	34.2
R <sub>I</sub>	(k)	10.3
R <sub>Total</sub>	(k)	69.3

PI-4-36

7-1-10

FILE NAME = CH12 over FAI-72.dgn	DESIGNED - SAL	REVISD -
USER NAME =	CHECKED - MTH	REVISD -
PLOT SCALE =	DRAWN - TJW	REVISD -
PLOT DATE =	CHECKED - MTH	REVISD -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

36" PPC I-BEAMS & FRAMING PLAN  
MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150

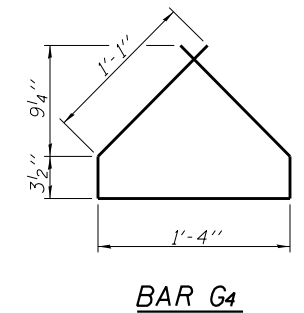
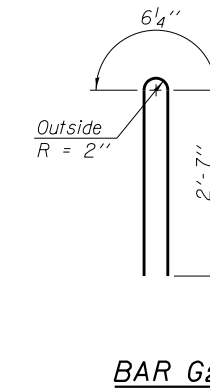
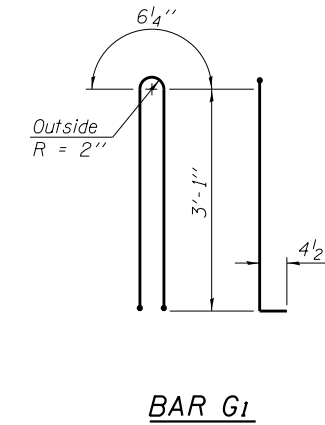
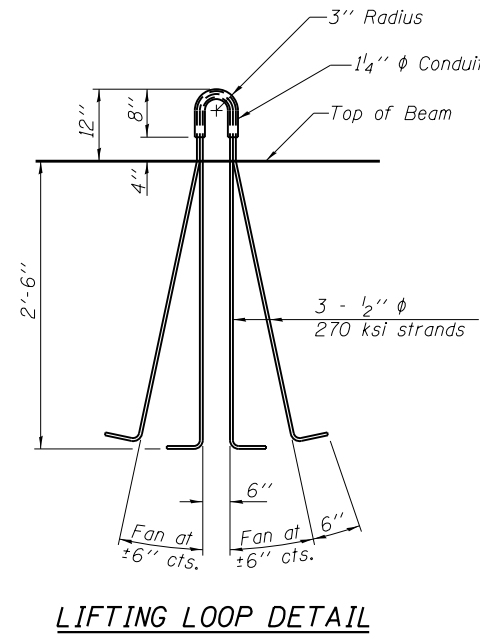
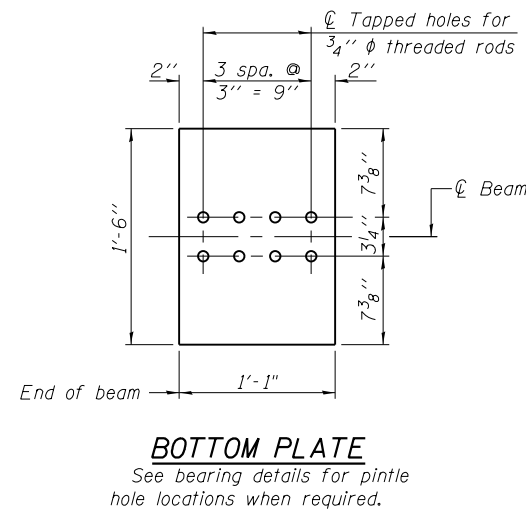
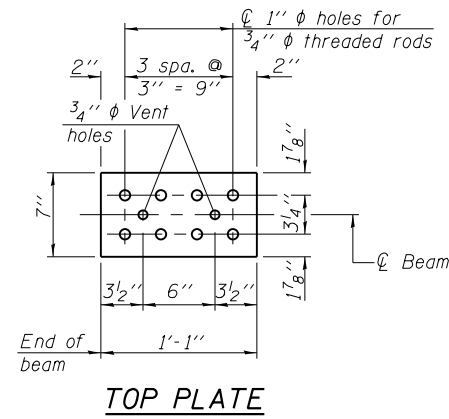
SHEET NO. 12 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	.	SANGAMON	194	124
• (84-10-IRS-3, 84-10-2RS-RIBR,I			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				



NOTES

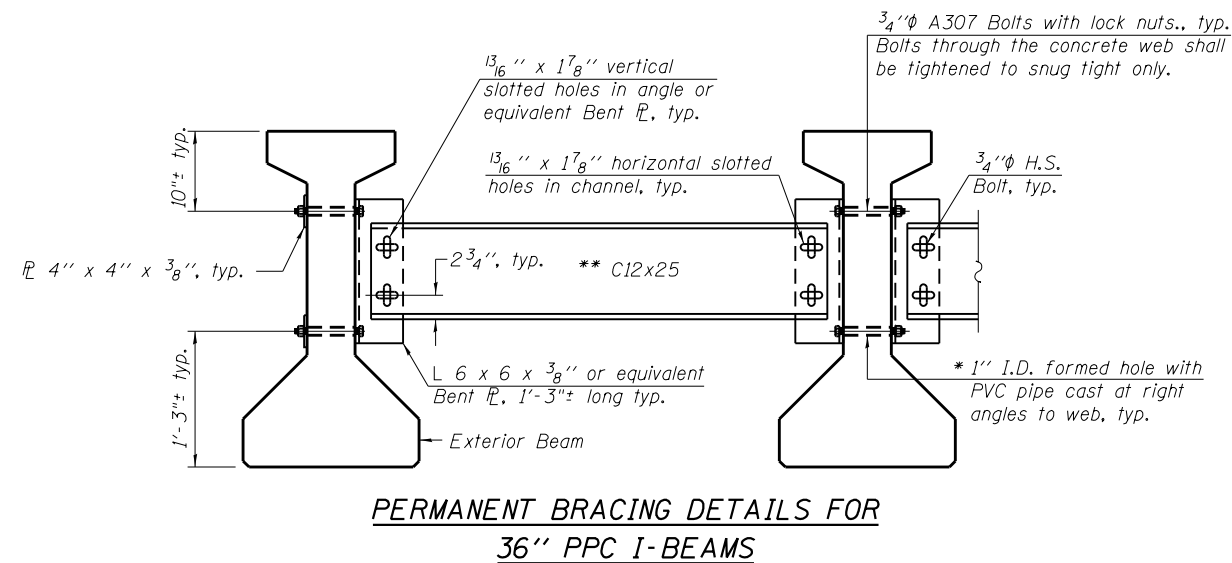
Inserts for 3/4" φ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. A minimum 2 1/2" φ lifting pin shall be used to engage the lifting loops during handling. The top and bottom plates shall be AASHTO M270 Grade 50. The bottom plates shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized. Threaded rods shall be ASTM F 1554 Grade 55.



Notes:  
 All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted. Two hardened washers are required for each set of oversized holes. All holes shall be 1 5/16" φ unless otherwise noted. 5 1/16" x 3" x 3" plate washers are required over all slotted holes. All bolts shall be galvanized according to AASHTO M232. Bracing shall be installed as beams are erected and tightened as soon as possible during erection. Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams.

\* Fabricator shall locate to miss strands within permissible tolerances.

\*\* Alternate C12x30 channels are permitted to facilitate material acquisition.



BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	Ft.	370.0

PI-4-36D

1-28-11

FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
		DRAWN - TJW	REVISED -
		CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

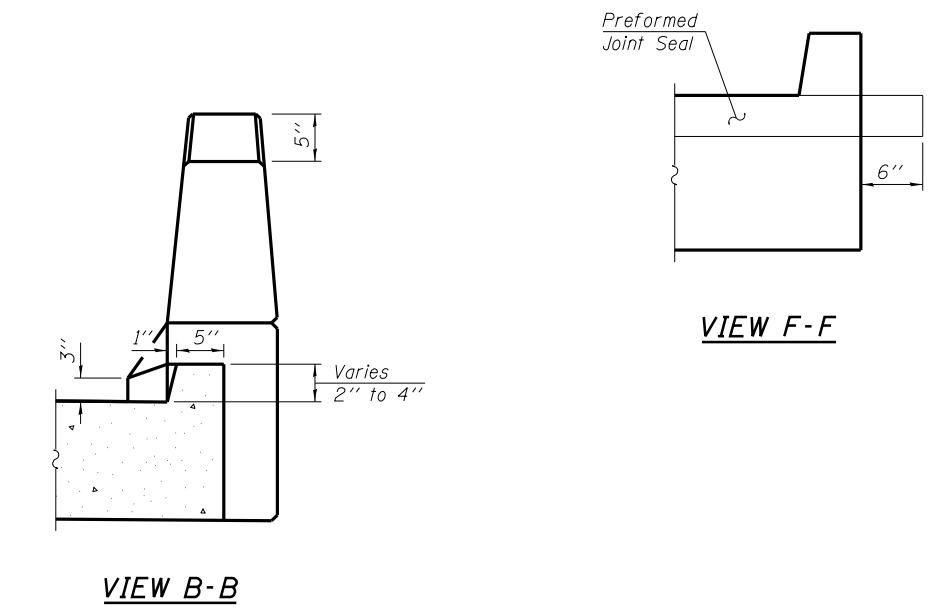
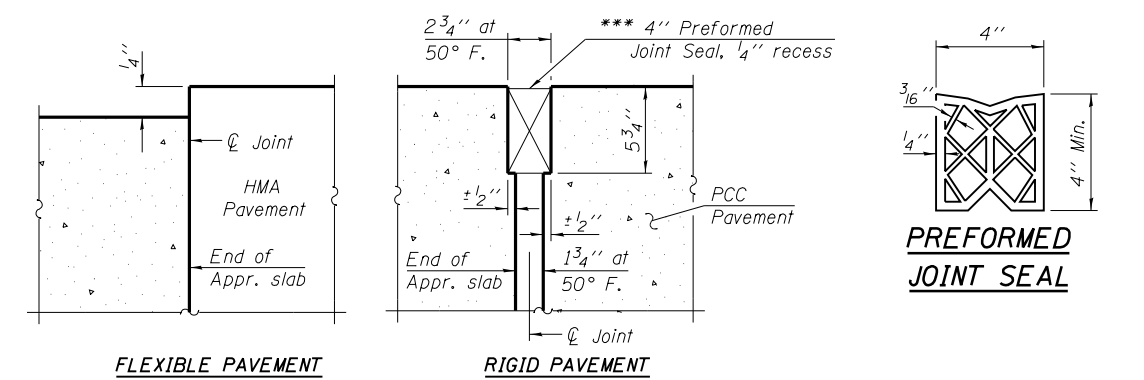
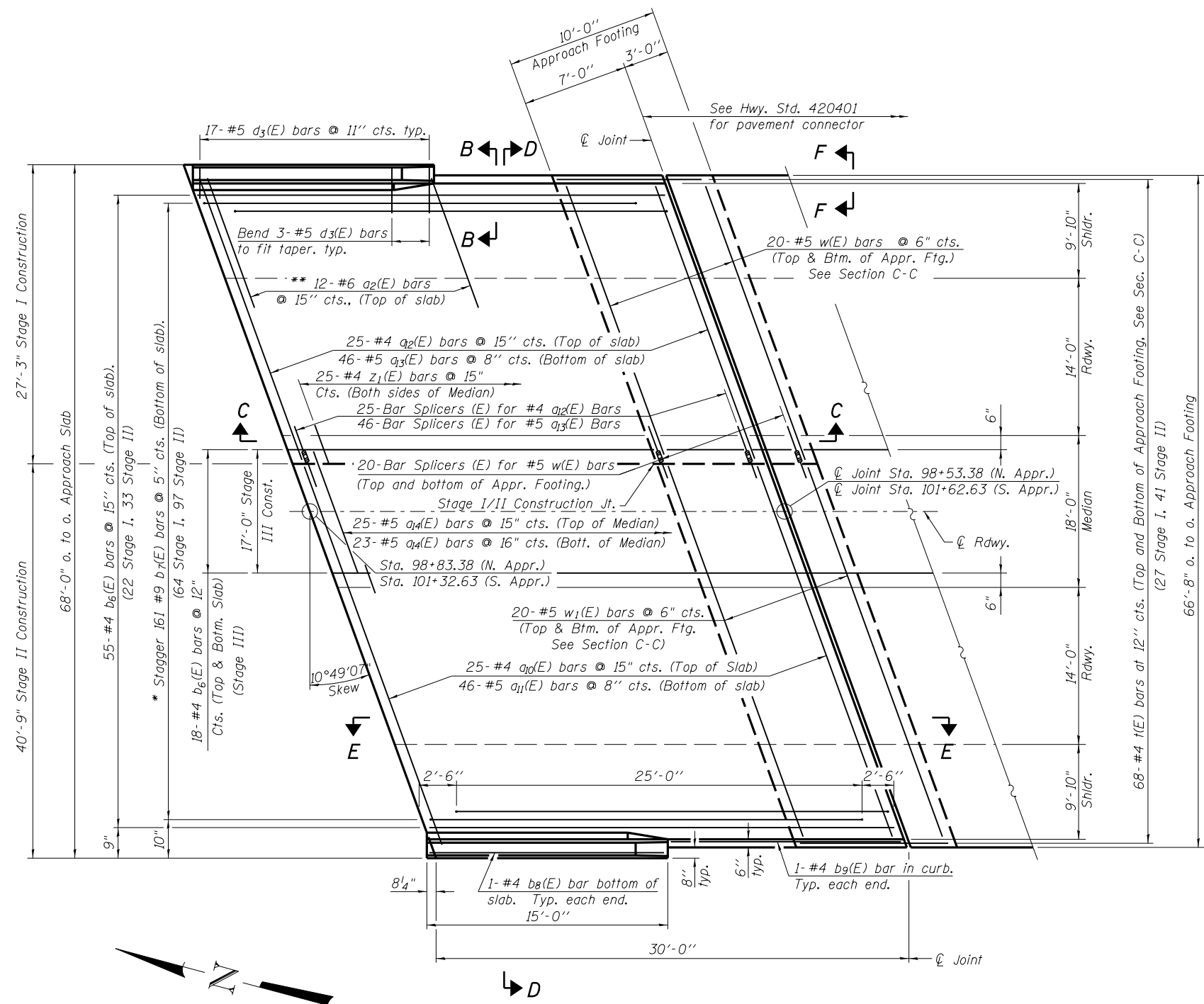
36" PPC I-BEAM DETAILS  
MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150

SHEET NO. 13 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72		SANGAMON	194	125
• (84-10-IRS-3, 84-10-2RS-RIBR,I			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				

Notes:  
See sheet 15 of 27 for Sections C-C & D-D and View E-E.  
a<sub>1</sub>(E), a<sub>11</sub>(E), a<sub>12</sub>(E) and a<sub>13</sub>(E) bar spacings measured along  $\varnothing$  Rdwy.

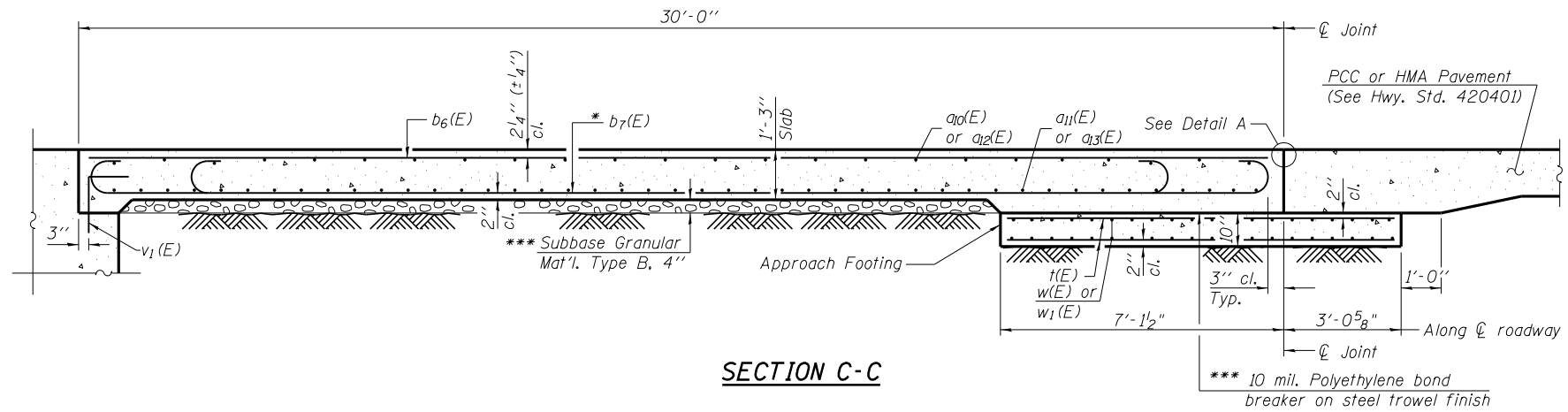
\*\*\* Cost included with Concrete Superstructure.



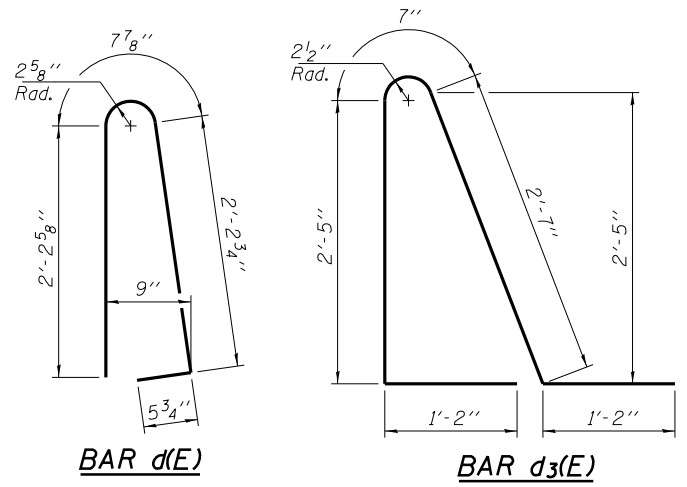
\* Tilt #9 b<sub>7</sub>(E) bars as required to maintain clearance.  
\*\* Space between a<sub>10</sub>(E) or a<sub>12</sub>(E) bars, typ. each parapet.

(Sheet 1 of 2)

FILE NAME = CH12 over FA1-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>BRIDGE APPROACH SLAB DETAILS MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - MTH	REVISED -			72	(84-10-1,2) R5-3	SANGAMON	194	126	
	PLOT SCALE =	DRAWN - TJW	REVISED -			CONTRACT NO. 72C90					
	PLOT DATE =	CHECKED - MTH	REVISED -			SHEET NO. 14 OF 27 SHEETS					
						FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					



Notes:  
 See sheet 14 of 27 for Detail A and View B-B.  
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
 Approach footing concrete shall be paid for as Concrete Structures.  
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
 For v1(E) bar details, see sheet 11 of 27.  
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
 Cost of excavation for approach footing included with Concrete Structures.  
 For additional parapet details, see sheet 14 of 27.

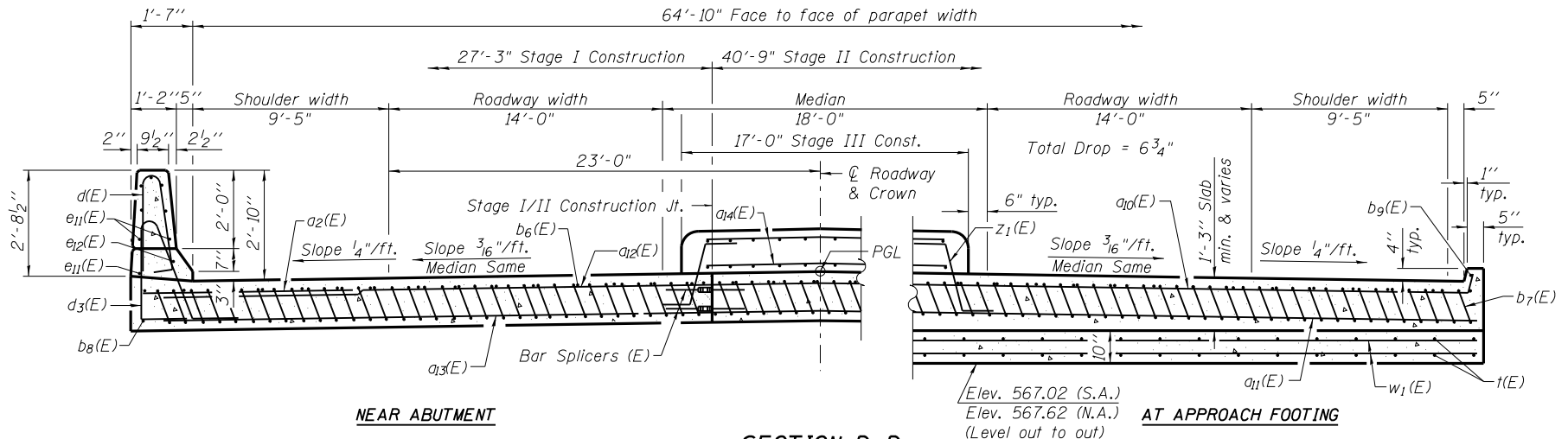


\* Tilt #9 b7(E) bars as required to maintain clearance.  
 \*\*\* Cost included with Concrete Superstructure.

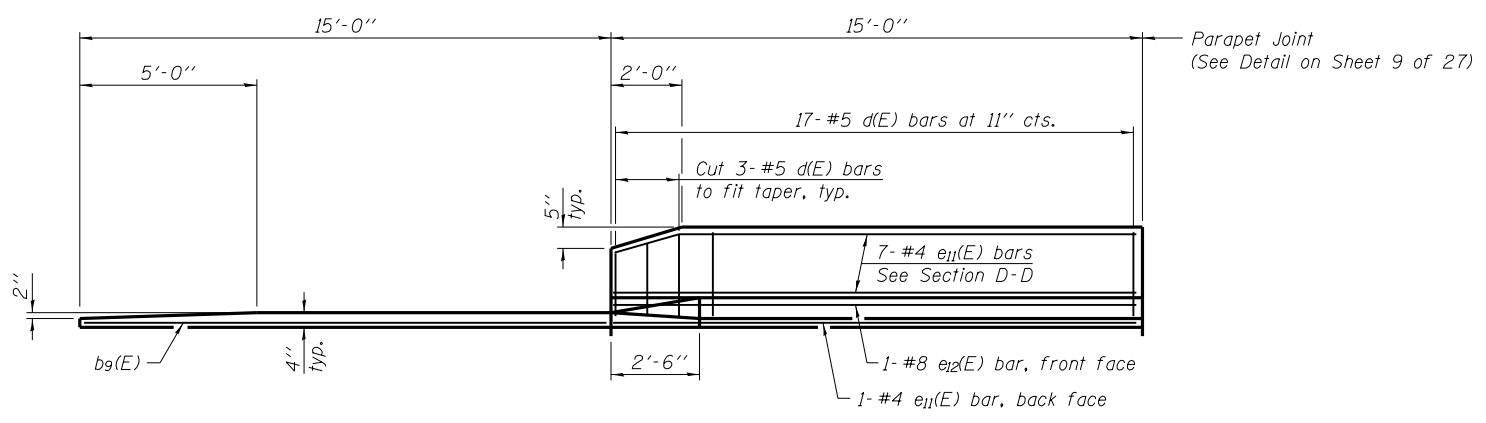
**TWO APPROACHES  
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a2(E)	48	#6	6'-6"	—
a10(E)	50	#4	40'-2"	┌
a11(E)	92	#5	39'-10"	—
a12(E)	50	#4	26'-8"	┌
a13(E)	92	#5	26'-4"	—
a14(E)	96	#5	16'-11"	—
b6(E)	182	#4	29'-8"	—
b7(E)	322	#9	29'-9"	┌
b8(E)	4	#4	14'-8"	—
b9(E)	4	#4	14'-10"	—
d(E)	68	#5	5'-7"	┌
d3(E)	68	#5	7'-11"	┌
e11(E)	32	#4	14'-8"	—
e12(E)	4	#8	14'-8"	—
t(E)	272	#4	9'-10"	—
w(E)	80	#5	25'-11"	—
w1(E)	80	#5	39'-3"	—
z1(E)	100	#5	2'-6"	┌
Concrete Superstructure		Cu. Yd.	240.4	
Concrete Structures		Cu. Yd.	42.0	
Reinforcement Bars, Epoxy Coated		Pound	55,910	

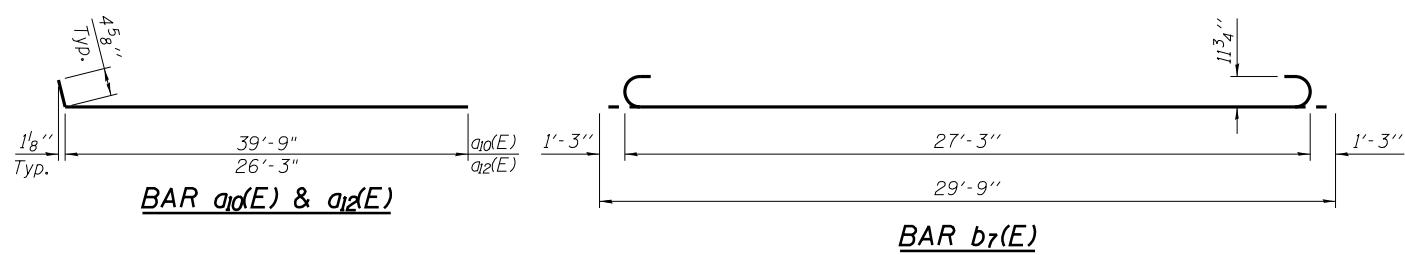
\*Dimensions for z1(E) bar on sht 9 of 27.



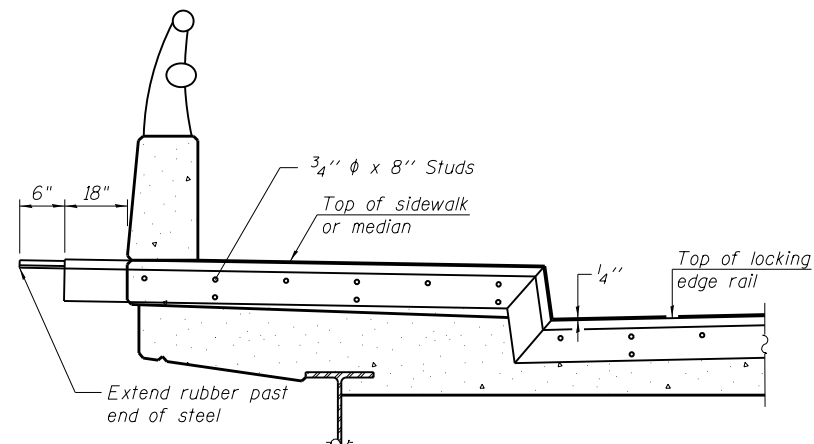
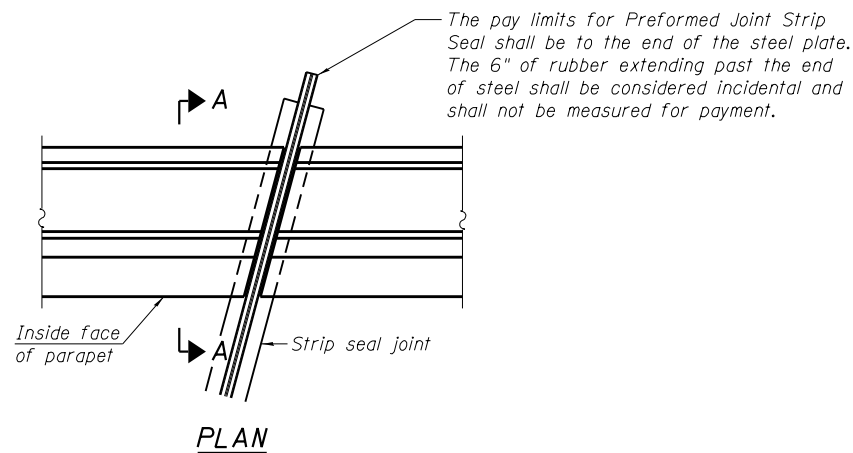
(Looking South @ South Approach, North Approach Similar)  
 (See Plan for dimensions not shown)



**VIEW E-E**

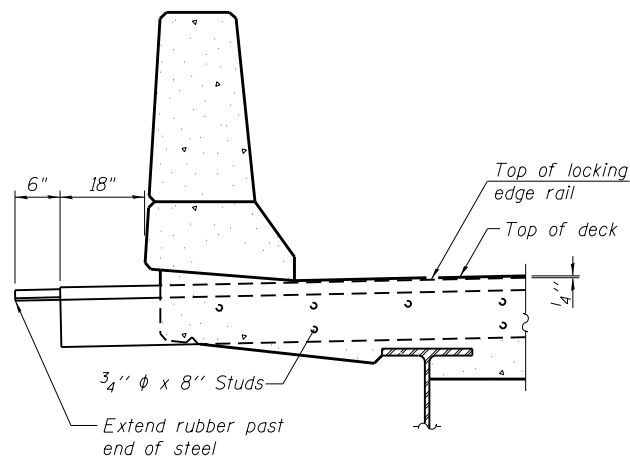


(Sheet 2 of 2)



**TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN**

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



**SECTION A-A**

**Notes:**

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

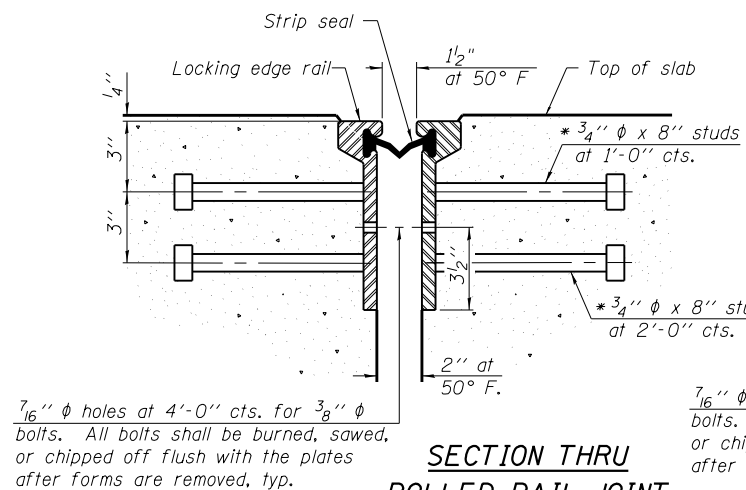
The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

The manufacturer's recommended installation methods shall be followed.

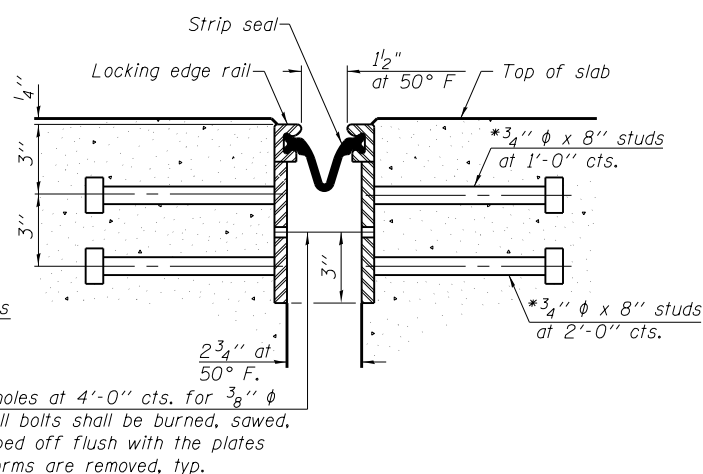
The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications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

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications. Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.

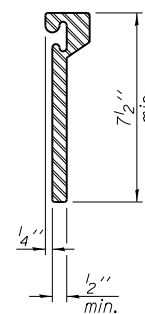


**SECTION THRU ROLLED RAIL JOINT**

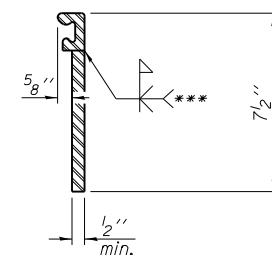


**SECTION THRU WELDED RAIL JOINT**

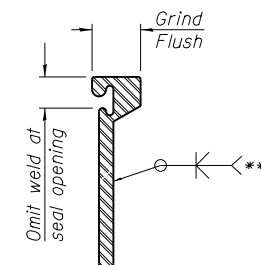
\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



**ROLLED EXTRUDED RAIL**



**WELDED RAIL**



**LOCKING EDGE RAIL SPLICE**

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

Rolled rail shown, welded rail similar.

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

**LOCKING EDGE RAILS**

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	136

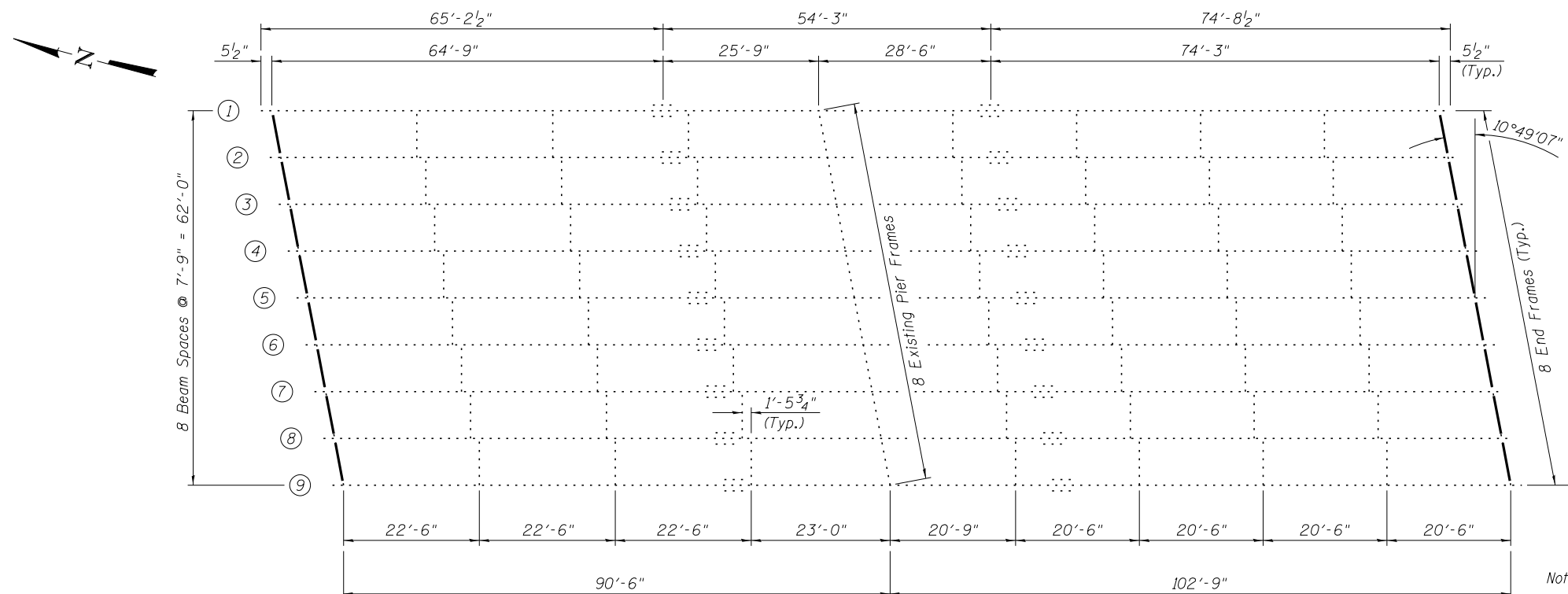
FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL  
MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150

SHEET NO. 16 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72		SANGAMON	194	128
* (84-10-1RS-3, 84-10-2RS-RIBR.1)			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				



**PLAN**

Note:  
Diaphragms will need to be unbolted along staging lines until after Stage III concrete is poured, due to differential deflections of beams.

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1	Pier	0.6 Sp. 2
$I_s$	(in <sup>4</sup> )	24,929	50,090	24,929
$I_c(n)$	(in <sup>4</sup> )	67,413	57,050	67,413
$I_c(3n)$	(in <sup>4</sup> )	47,912	57,050	47,912
$S_s$	(in <sup>3</sup> )	1218	1908	1218
$S_c(n)$	(in <sup>3</sup> )	1659	2000	1659
$S_c(3n)$	(in <sup>3</sup> )	1525	2000	1525
$\rho$	(k/')	1.063	1.185	1.063
$M\rho$	(k)	470	1448	760
$s\rho$	(k/')	0.528	0.528	0.528
$M_s\rho$	(k)	269	676	400
$M_L$	(k)	789	815	934
$M_{Imp}$	(k)	183	183	205
$^5_3 [M_L + M_{Imp}]$	(k)	1620	1663	1898
$M_a$	(k)	3067	4923	3975
$M_u$	(k)	5860	5848	5860
$f_s \rho$ non-comp	(ksi)	4.63	9.11	7.49
$f_s \rho$ (comp)	(ksi)	2.12	4.06	3.15
$f_s ^5_3 [M_L + M_{Imp}]$	(ksi)	11.72	9.98	13.73
$f_s$ (Overload)	(ksi)	18.47	23.15	24.37
$f_s$ (Total)	(ksi)	-	-	-
VR	(k)	48.1	58.4	59.9

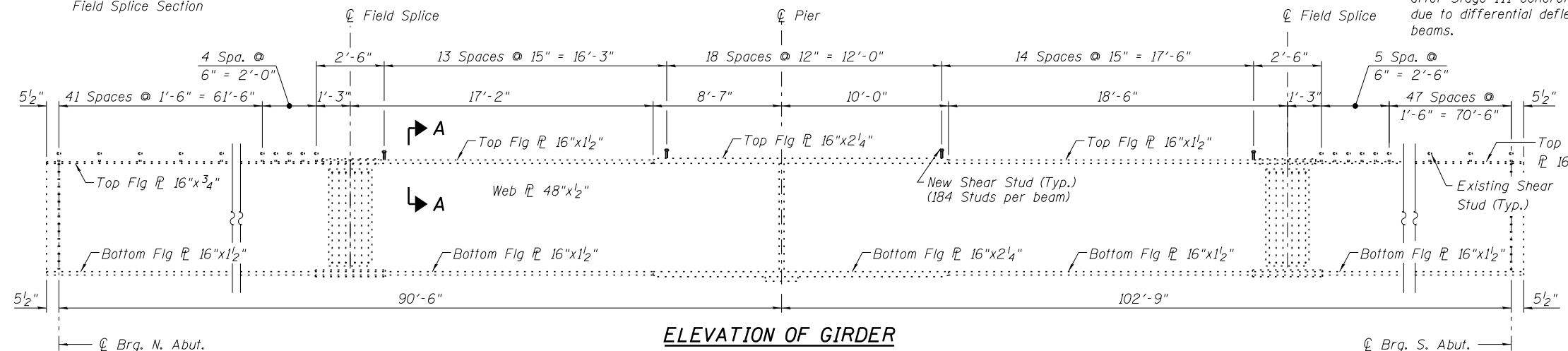
\* Compact Section  
\*\* Braced non-compact and partially braced section

INTERIOR GIRDER REACTION TABLE				
	N. Abut.	Pier	S. Abut.	
$R\rho$	(k)	47.6	199.7	59.1
$R_L$	(k)	44.4	71.2	45.1
Imp.	(k)	10.3	16.5	9.9
$R_{Total}$	(k)	102.3	287.4	114.1

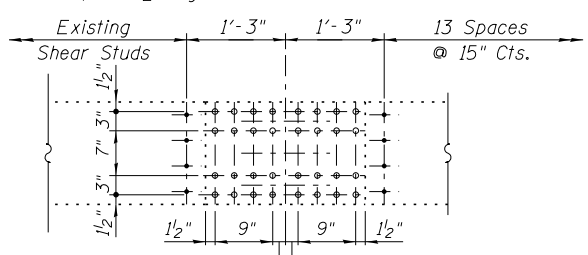
$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total and Overload) due to non-composite dead loads (in.4 and in.3).  
 $I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total and Overload) due to short-term composite live loads (in.4 and in.3).  
 $I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total and Overload) due to long-term composite (superimposed) dead loads (in.4 and in.3).

$\rho$ : Un-factored non-composite dead load (kips/ft.).  
 $M\rho$ : Un-factored moment due to non-composite dead load (kip-ft.).  
 $s\rho$ : Un-factored long-term composite (superimposed) dead load (kips/ft.).  
 $M_s\rho$ : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).  
 $M_L$ : Un-factored live load moment (kip-ft.).  
 $M_I$ : Un-factored moment due to impact (kip-ft.).  
 $M_a$ : Factored design moment (kip-ft.).  
 $1.3 [M\rho + M_s\rho + \frac{5}{8} (M_L + M_I)]$   
 $M_u$ : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).  
 $f_s$  (Overload): Sum of stresses as computed from the moments below (ksi).  
 $M\rho + M_s\rho + \frac{5}{8} (M_L + M_I)$   
 $f_s$  (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).  
 $1.3 [M\rho + M_s\rho + \frac{5}{8} (M_L + M_I)]$   
 VR: Maximum  $\pm$  impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).

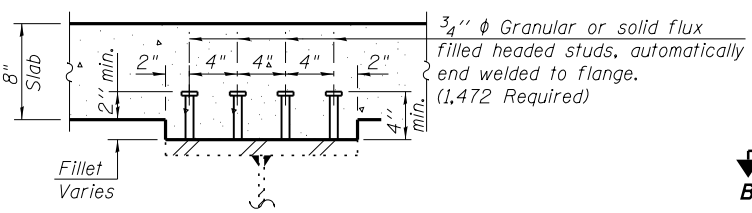
\* See Top Flange Field Splice Section



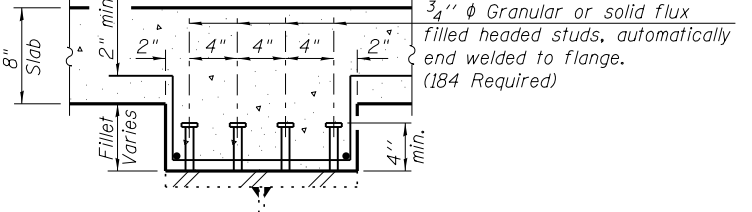
**ELEVATION OF GIRDER**  
(Typical All Girders)



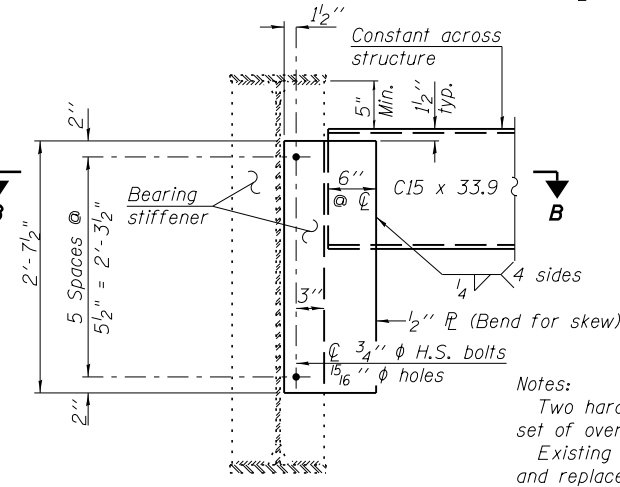
**TOP FLANGE FIELD SPLICE**  
(Solid Circles indicate Shear Studs  
Open Circles indicate Splice Plate Bolts)



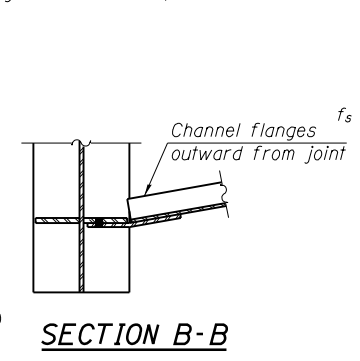
**SECTION A-A**



**SECTION A-A**  
(Deep Fillet Section @  $\phi$  Beam 5)



**END DIAPHRAGM**



**SECTION B-B**

Notes:  
Two hardened washers required for each set of oversized holes.  
Existing end diaphragms at abutments shall be removed and replaced. Cost included with Structural Steel Removal.  
Field drill 1 5/16"  $\phi$  holes for 3/4" bolts.  
Contractor will be responsible for checking to see if proposed hole locations conflict with existing holes. In such a case, match existing holes.

**BILL OF MATERIAL**

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	4,940
Structural Steel Removal	Pound	6,800

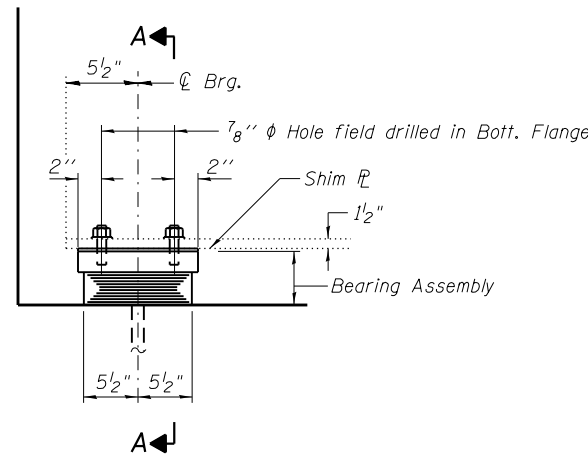
FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISIONS -
		CHECKED - MTH	REVISIONS -
		DRAWN - TJW	REVISIONS -
		CHECKED - MTH	REVISIONS -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN & BEAM DETAILS  
MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150

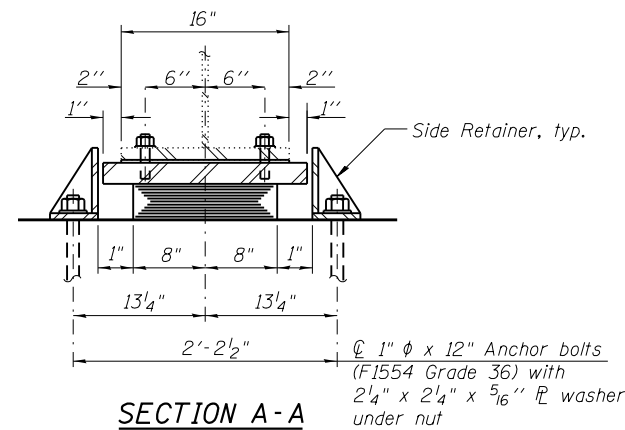
SHEET NO. 17 OF 27 SHEETS

F.A.I. RTE. 72	SECTION (84-10-1,2) R5-3	COUNTY SANGAMON	TOTAL SHEETS 194	SHEET NO. 129
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT			CONTRACT NO. 72C90	

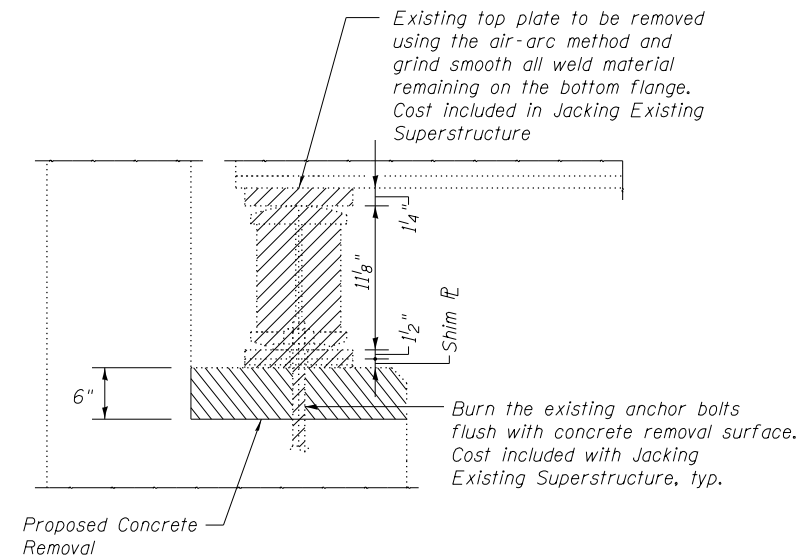


ELEVATION AT ABUT.

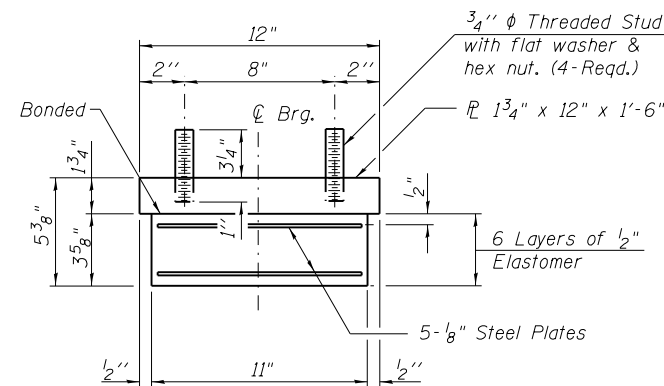
TYPE I ELASTOMERIC EXP. BRG.



SECTION A-A



EXISTING ABUTMENT BEARING REMOVAL

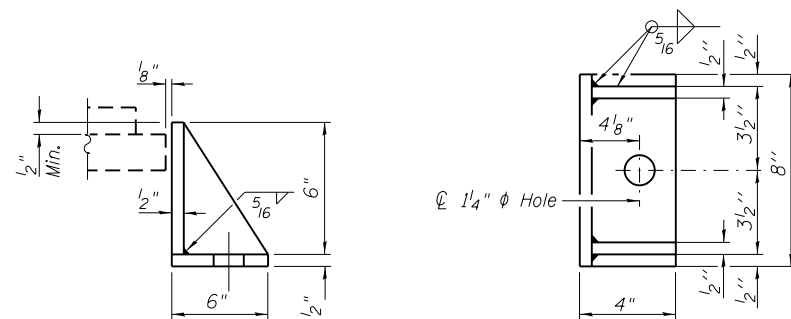


BEARING ASSEMBLY

Notes:

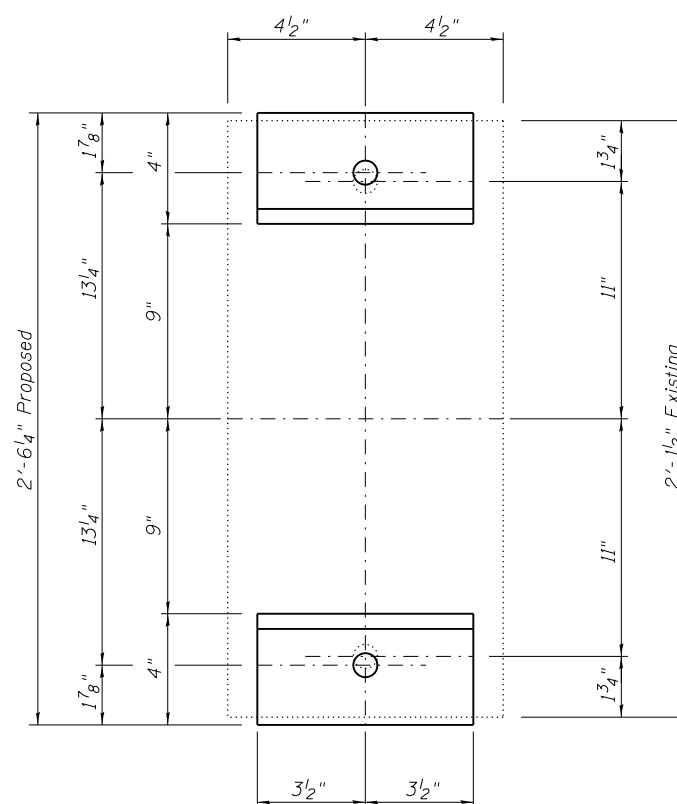
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.  
 Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as needed and as shown on bearing details.

Note:  
Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



ANCHOR BOLT LAYOUT

Note: Shown for visual only, new bearing seats will prevent interference with existing anchor bolts.

JACK AND REMOVE EXISTING BEARING PROCEDURE

(North and South Abutments)

- The Contractor shall submit for approval by the Engineer, plans for jacking existing beams and installing new bearings prior to commencing any related work.
- Jacking and removing existing bearings shall be done after existing concrete deck is removed and prior to pouring the concrete deck.
- Prior to ordering any material, the Contractor shall verify shim plate thickness required at each bearing so that total height of new bearing and fill matches height of existing bearing and shim.
- There shall be at least one jack per bearing, and the Jack shall be placed close to the bearings.
- For limitations on lift amounts, see Special Provisions.
- The new bearing shall be in place and the jacks shall be lowered before the new concrete deck is poured. Existing diaphragms to be unbolted due to differential deflections during stage construction.
- Jacking against diaphragms is prohibited.
- Cross frames are to be removed at the stage line prior to jacking and re-installed prior to the final deck pour.
- Re-bolt existing diaphragms after completion of Stage III deck pour.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

NORTH ABUTMENT BEAM REACTIONS

(Steel only)

R <sub>D</sub>	(k)	12.9
----------------	-----	------

Min. Jack Capacity = 10 Ton (Without Deck)

SOUTH ABUTMENT BEAM REACTIONS

(Steel only)

R <sub>D</sub>	(k)	16.0
----------------	-----	------

Min. Jack Capacity = 12 Ton (Without Deck)

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	18
Anchor Bolts, 1"	Each	36
Jacking Existing Superstructure	L. Sum	1

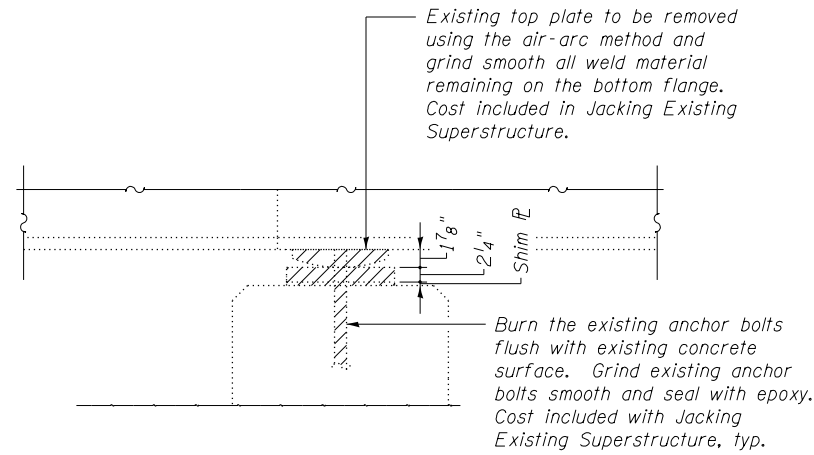
FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
		DRAWN - TJW	REVISED -
		CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ABUTMENT BEARING DETAILS  
MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150

SHEET NO. 18 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72		SANGAMON	194	130
• (84-10-IRS-3, 84-10-2RS-RIBR,I			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				



**EXISTING PIER BEARING REMOVAL**

**JACK AND REMOVE EXISTING BEARING PROCEDURE**

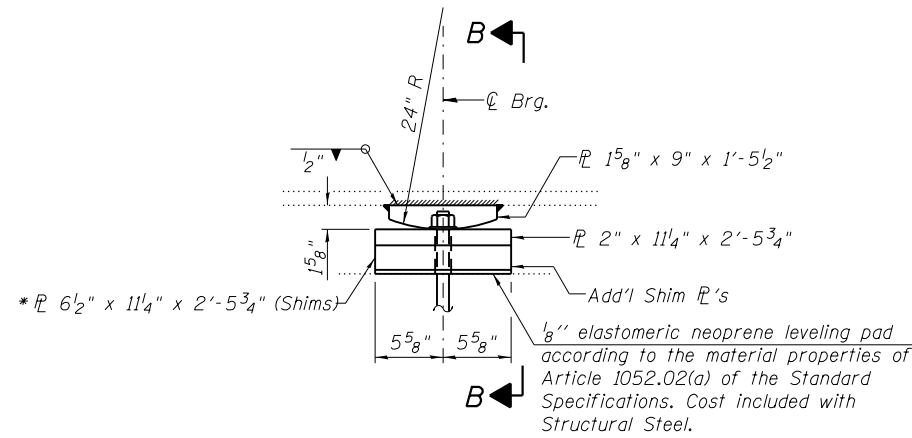
1. The Contractor shall submit for approval by the Engineer, plans for jacking existing beams and installing new bearings prior to commencing any related work.
2. Jacking and removing existing bearings shall be done after existing concrete deck is removed and prior to pouring the concrete deck.
3. Prior to ordering any material, the Contractor shall verify shim plate thickness required at each bearing so that total height of new bearing and fill matches height of existing bearing and shim.
4. There shall be at least one jack per bearing, and the Jack shall be placed close to the bearings.
5. For limitations on lift amounts, see Special Provisions.
6. The new bearing shall be in place and the jacks shall be lowered before the new concrete deck is poured. Existing diaphragms to be unbolted due to differential deflections during stage construction.
7. Jacking against diaphragms is prohibited.
8. Cross frames are to be removed at the stage line prior to jacking and re-installed prior to the final deck pour.
9. Re-bolt existing diaphragms after completion of Stage III deck pour.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

**PIER BEAM REACTIONS**  
(Steel only)

R <sub>D</sub>	(k)	36
----------------	-----	----

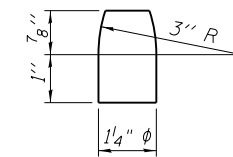
Min. Jack Capacity = 27 Ton (Without Deck)



**ELEVATION AT PIER**

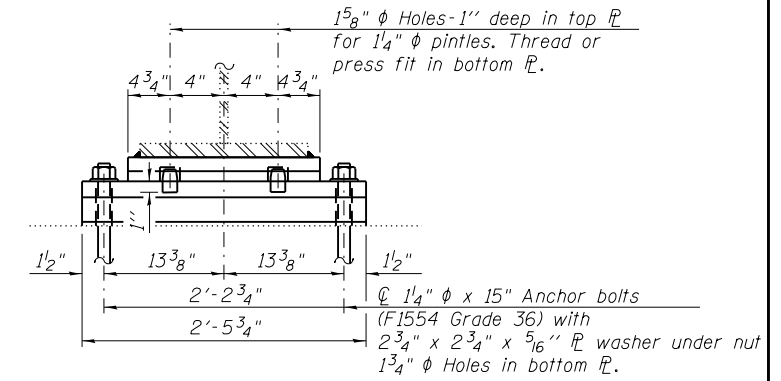
\* Lower shim plate can be composed of multiple, thinner plates for ease of fabrication.

**FIXED BEARING**

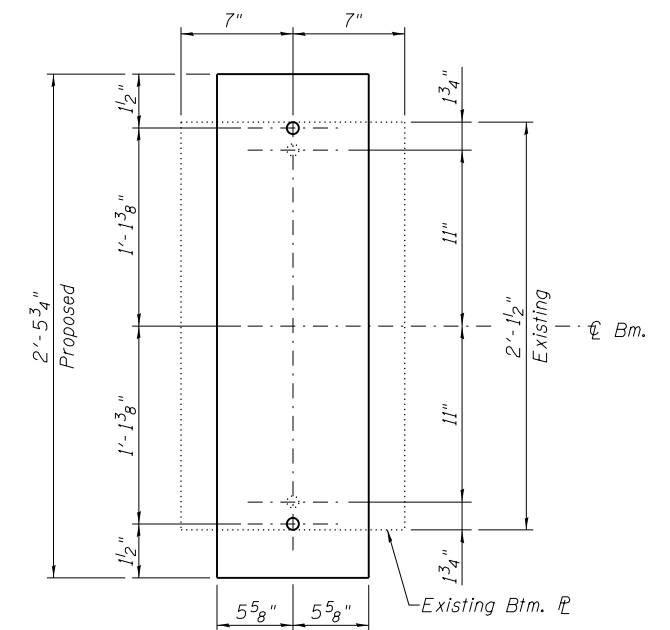


**PINTLE**

Notes:  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Anchor bolts of fixed bearings shall be installed in holes drilled after the supported member is in place.  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as needed and as shown on bearing details.



**SECTION B-B**



**ANCHOR BOLT LAYOUT**

**BILL OF MATERIAL**

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	7,960
Anchor Bolts, 1 1/4"	Each	18
Jacking Existing Superstructure	L. Sum	1

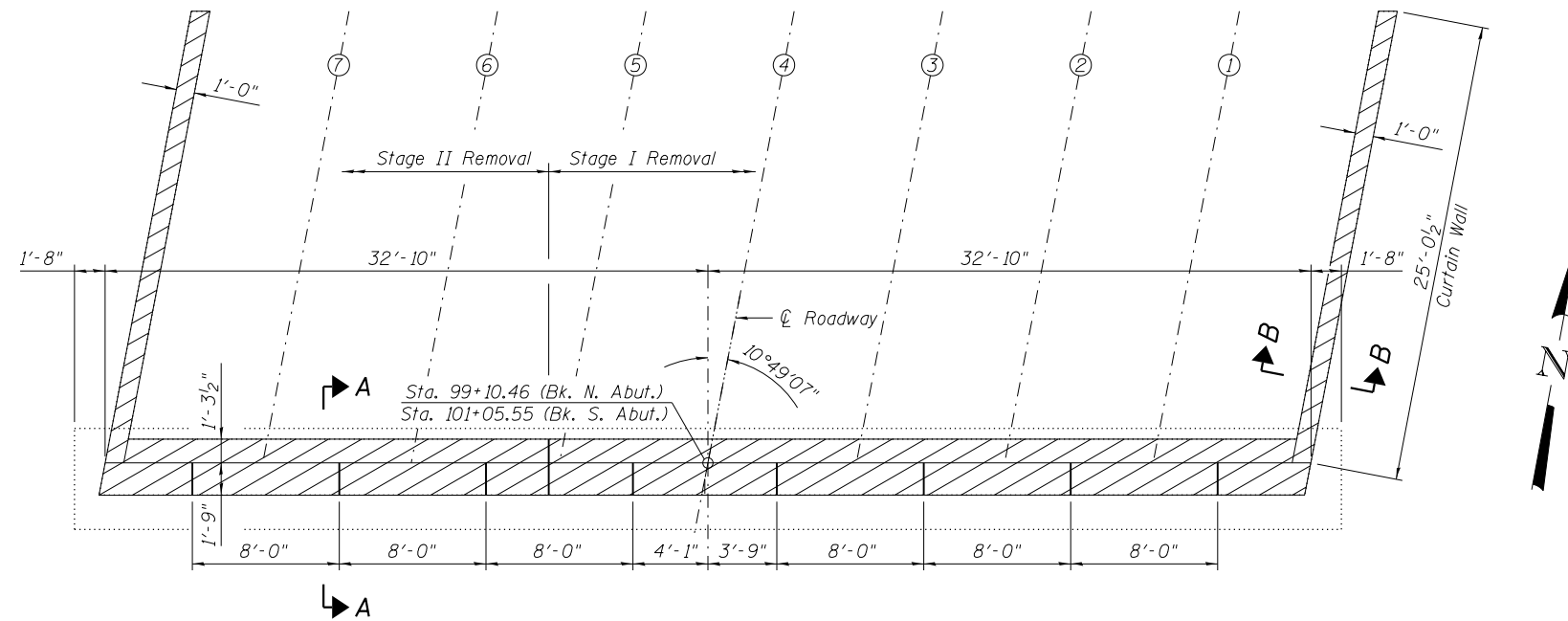
FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

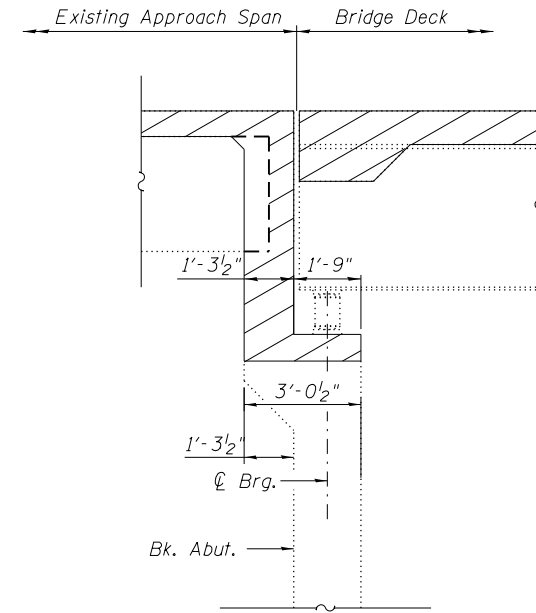
PIER BEARING DETAILS  
MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150

SHEET NO. 19 OF 27 SHEETS

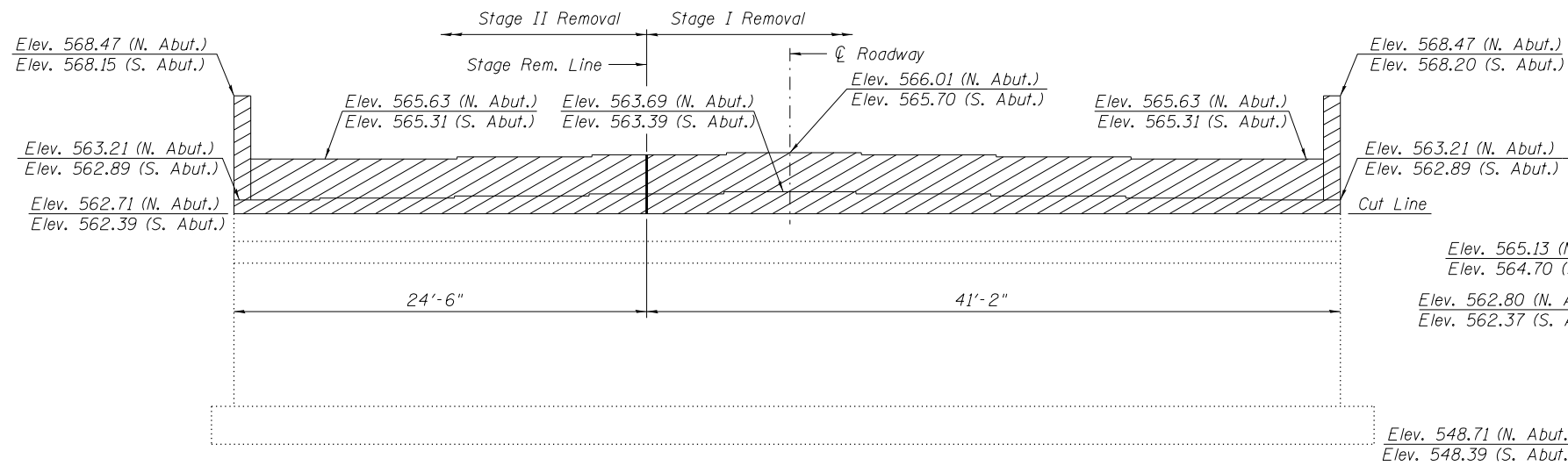
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72		SANGAMON	194	131
• (84-10-IRS-3, 84-10-2RS-RIBR, I			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				



PLAN

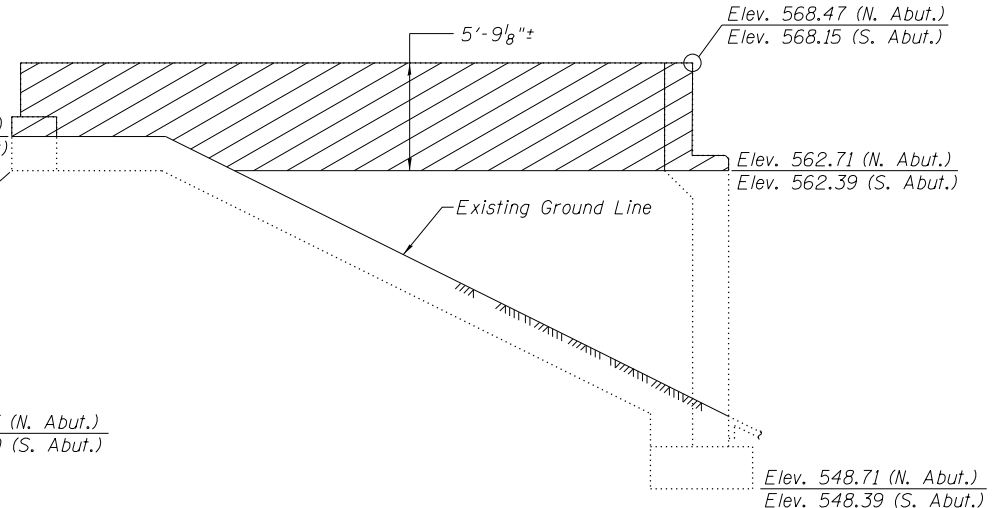


SECTION A-A



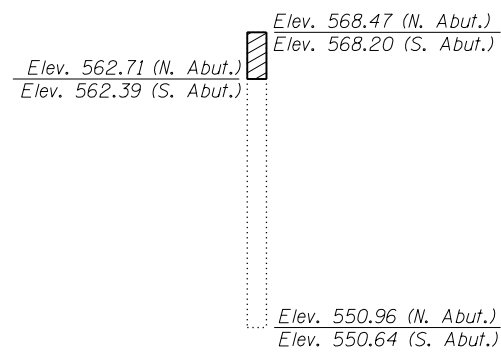
ELEVATION

(N. Abut. Shown, S. Abut. Similar)



OUTSIDE ELEVATION OF CURTAIN WALL

(Looking East)

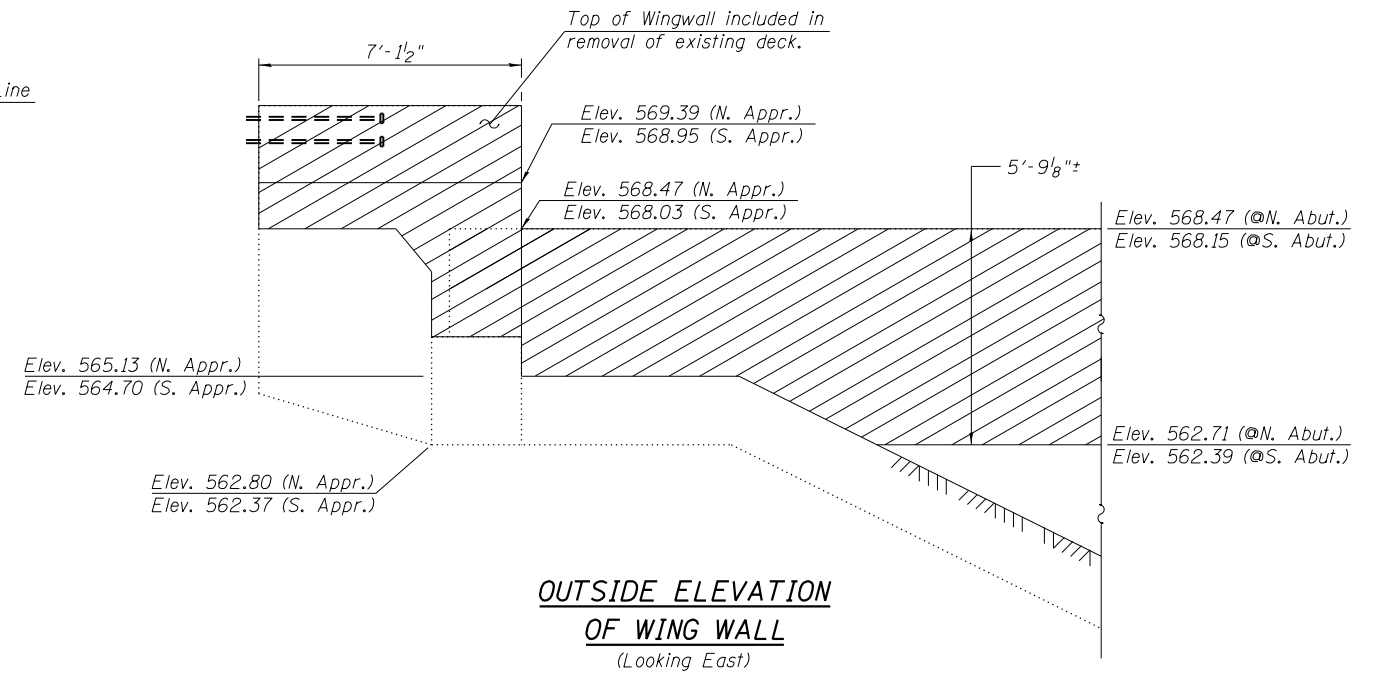
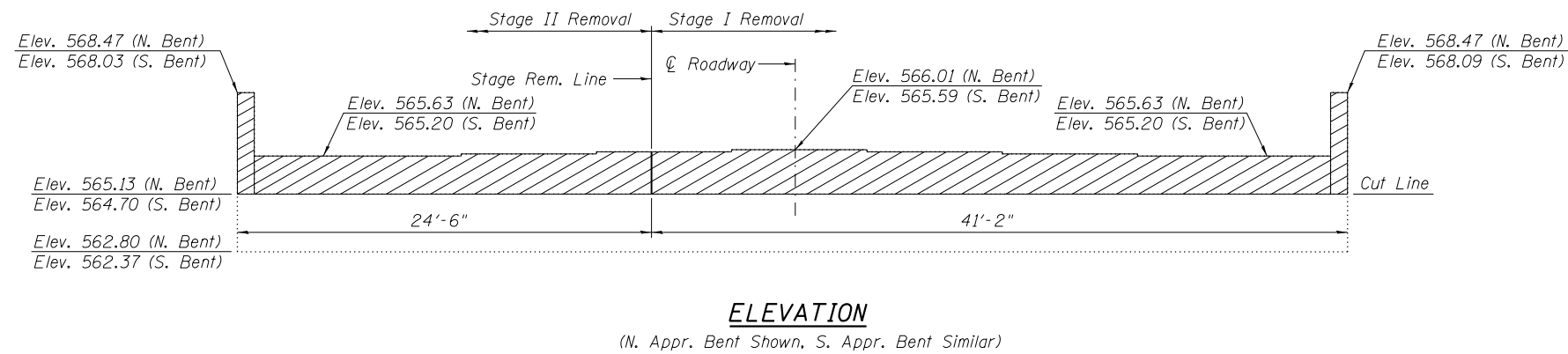
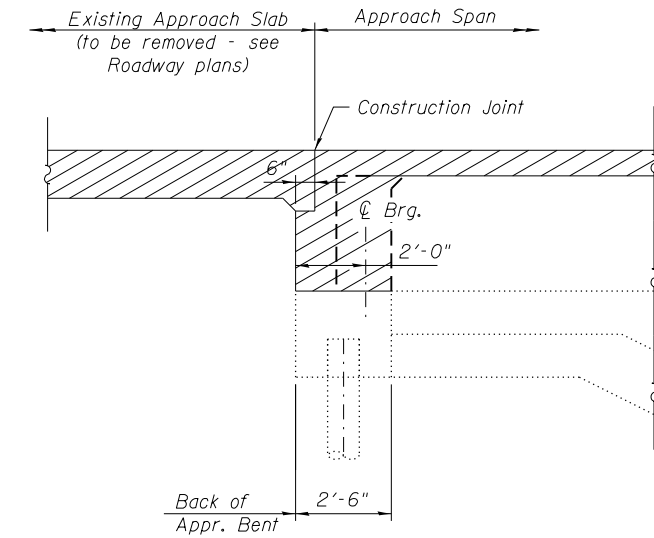
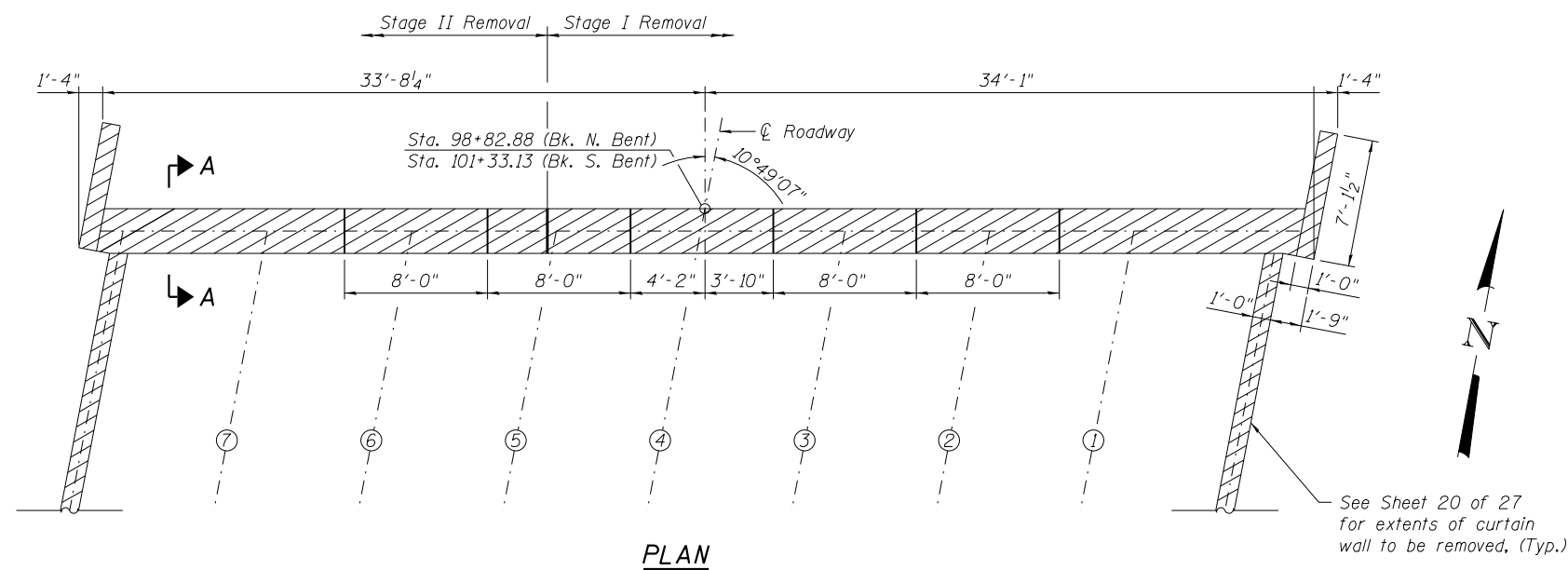


SECTION B-B

Notes:  
 Hatched area indicates Concrete Removal.  
 Existing reinforcement bars extending into the new construction shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.  
 Existing reinforcement bars not extending into the new construction shall be cut off and covered with a 2" layer of cement grout. Cost included with Concrete Removal.  
 Elevations based off datum difference of -0.62' from existing plans

FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CONCRETE REMOVAL, ABUTMENTS MECHANICSBURG ROAD OVER F.A.I.-72 - S.N.084-0150</b>	F.A.I. RTE. =	SECTION =	COUNTY =	TOTAL SHEETS =	SHEET NO. =	
		CHECKED - MTH	REVISED -			72	.	SANGAMON	194	132	
		DRAWN - TJW	REVISED -			• (84-10-1RS-3, 84-10-2RS-R)B,R,I					
		CHECKED - MTH	REVISED -			CONTRACT NO. 72C90					
SHEET NO. 20 OF 27 SHEETS						FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					



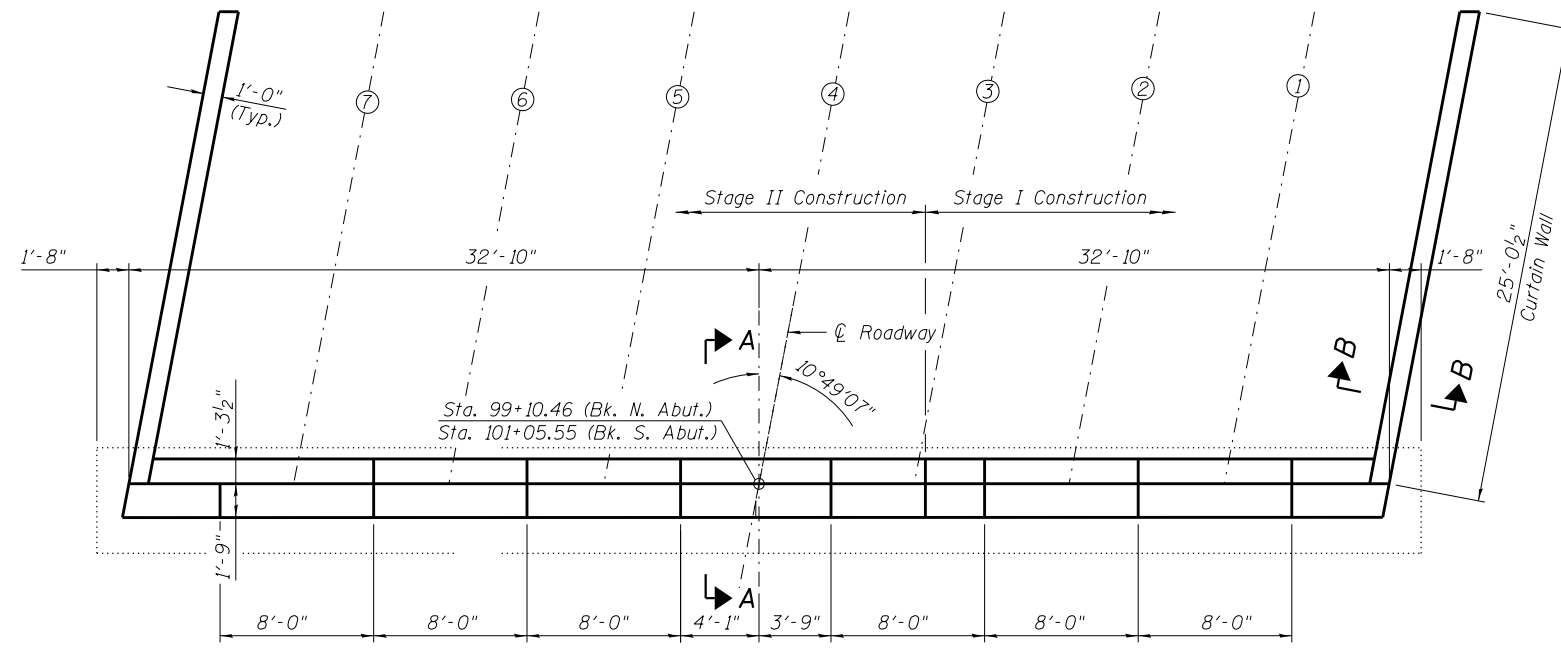


Notes:

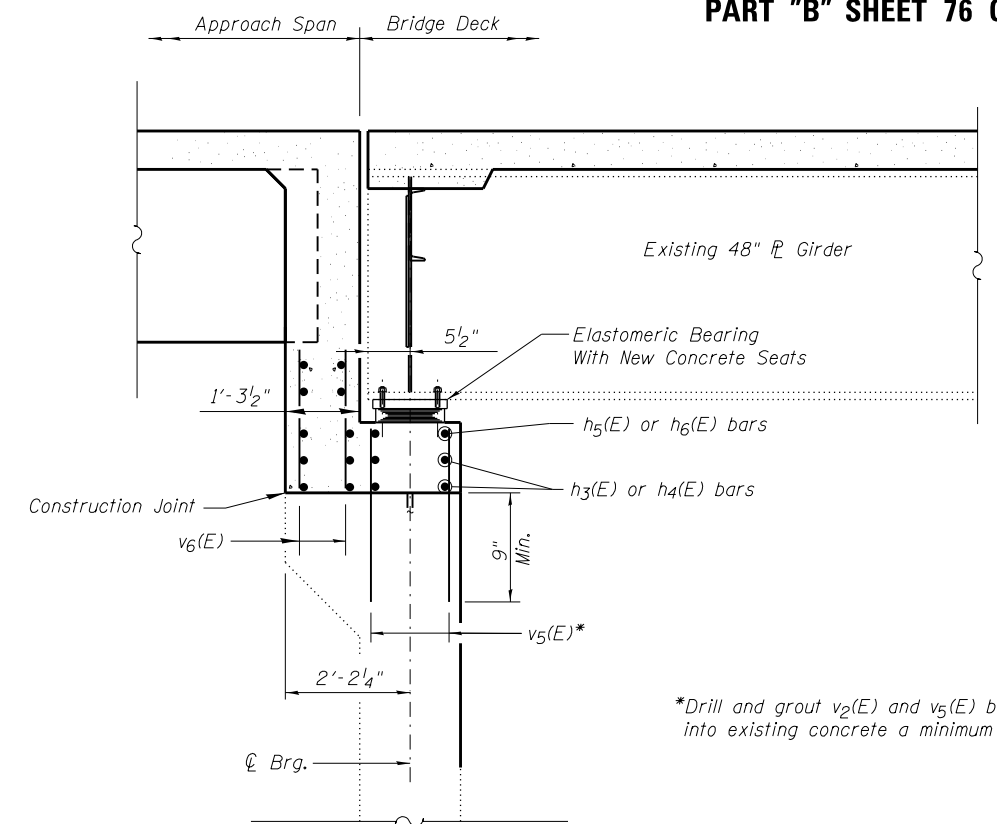
- Hatched area indicates Concrete Removal.
- Existing reinforcement bars extending into the new construction shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.
- Existing reinforcement bars not extending into the new construction shall be cut off and covered with a 2" layer of cement grout. Cost included with Concrete Removal.
- Elevations based off datum difference of -0.62' from existing plans

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	59.0

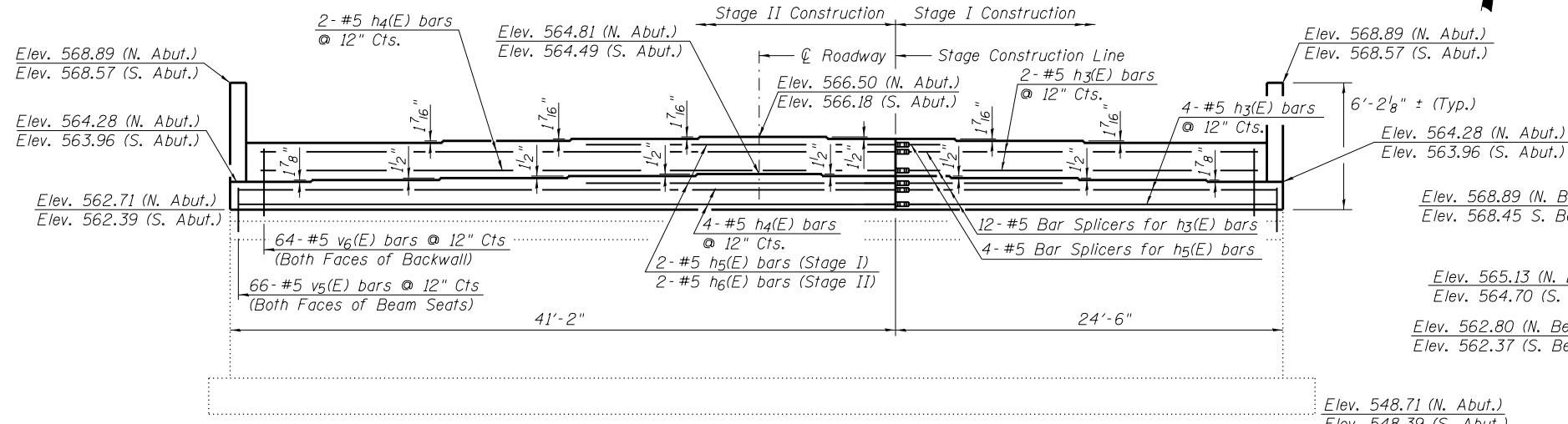


PLAN



SECTION A-A

\*Drill and grout v<sub>2</sub>(E) and v<sub>5</sub>(E) bars into existing concrete a minimum of 9".



ELEVATION

(N. Abut. Shown, S. Abut. Similar)

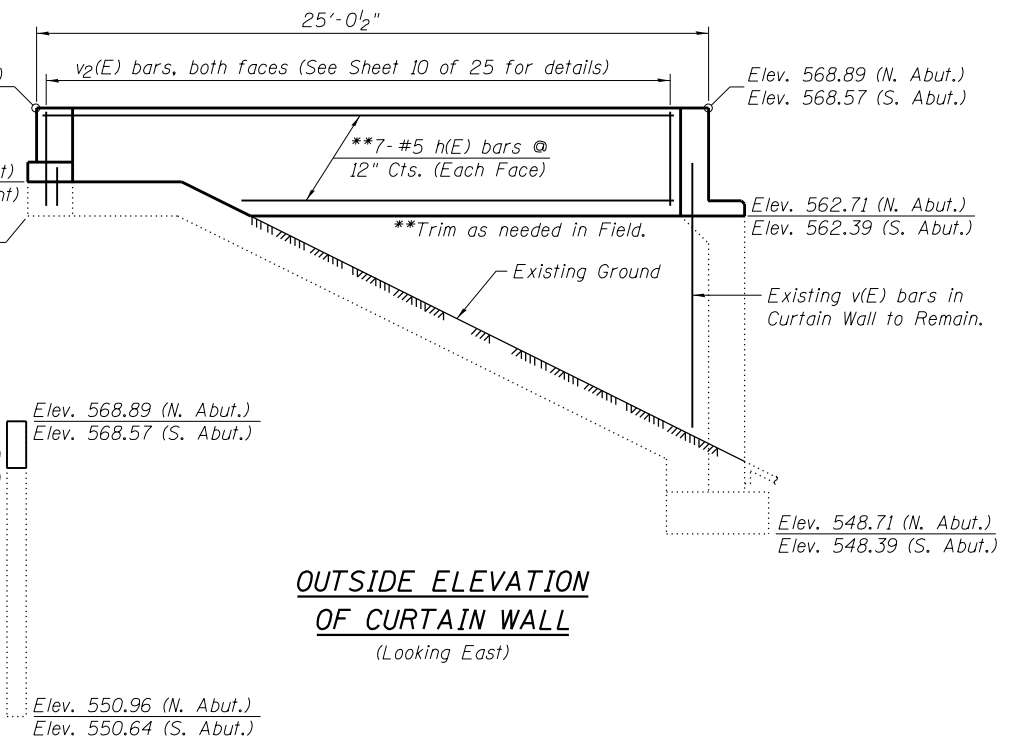
Notes:  
 Existing reinforcement bars extending into the new construction shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.  
 Existing reinforcement bars not extending into the new construction shall be cut off and covered with a 2" layer of cement grout. Cost included with Concrete Removal.  
 Concrete Sealer shall be applied to the front and side faces of the proposed backwall and on all the new concrete for the bridge seat extensions.

**BEAM SEAT ELEVATIONS**

Beam Seat Elev.	N. Abut.	S. Abut.
Beam 1	564.28	563.96
Beam 2	564.45	564.12
Beam 3	564.57	564.25
Beam 4	564.69	564.37
Beam 5	564.81	564.49
Beam 6	564.69	564.37
Beam 7	564.57	564.25
Beam 8	564.45	564.12
Beam 9	564.28	563.96

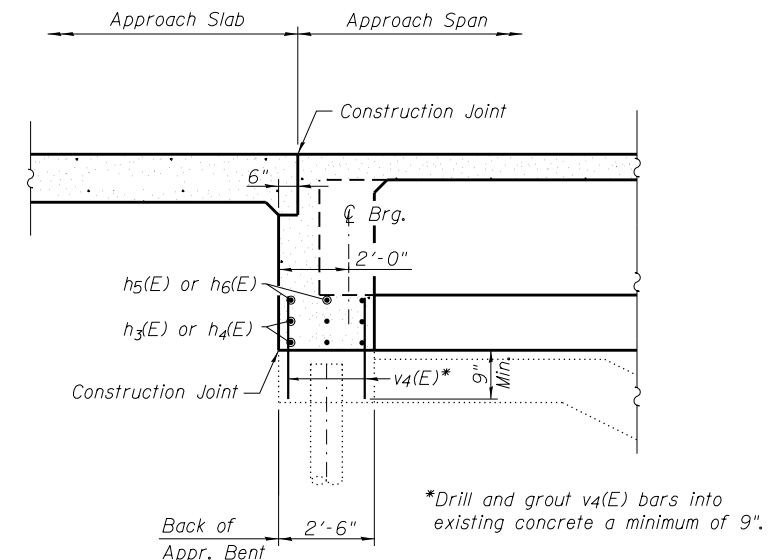
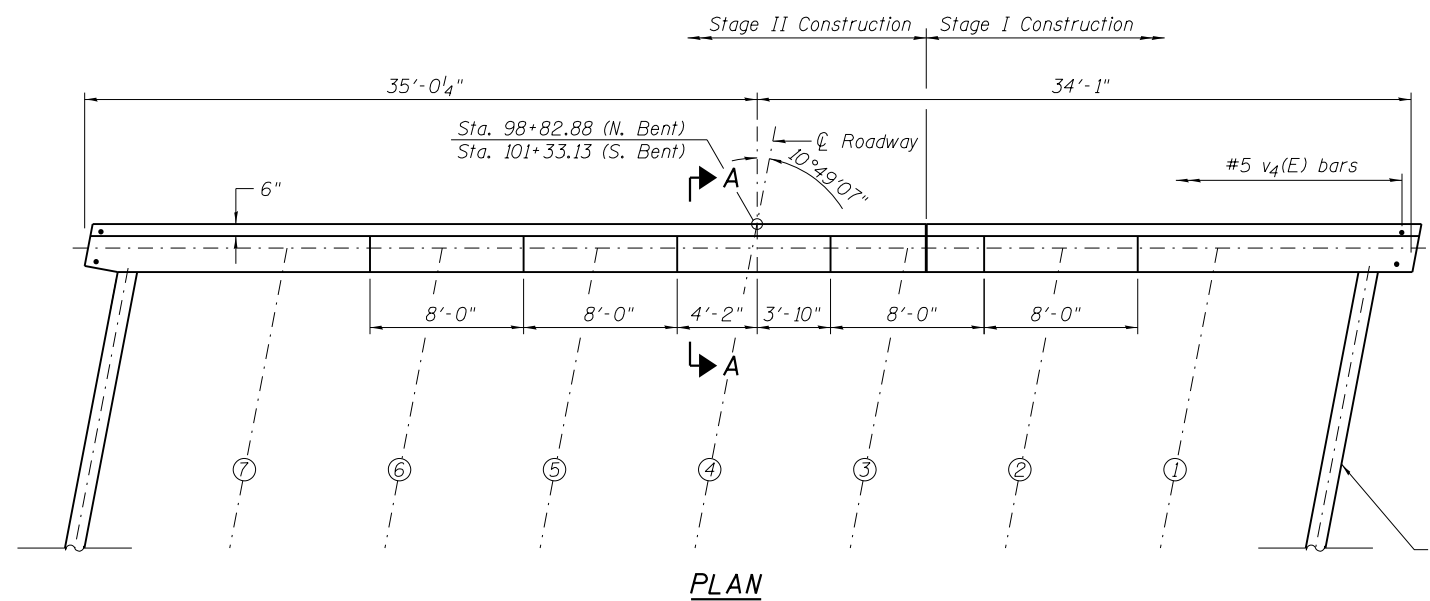
**APPROACH SPAN BEAM SEAT ELEVATIONS**

Beam Seat Elev.	N. Appr.	N. Abut.	S. Appr.	S. Abut.
Beam 1	566.14	566.14	565.69	565.81
Beam 2	566.26	566.26	565.81	565.93
Beam 3	566.38	566.38	565.93	566.06
Beam 4	566.50	566.50	566.05	566.18
Beam 5	566.38	566.38	565.93	566.06
Beam 6	566.26	566.26	565.81	565.93
Beam 7	566.14	566.14	565.69	565.81



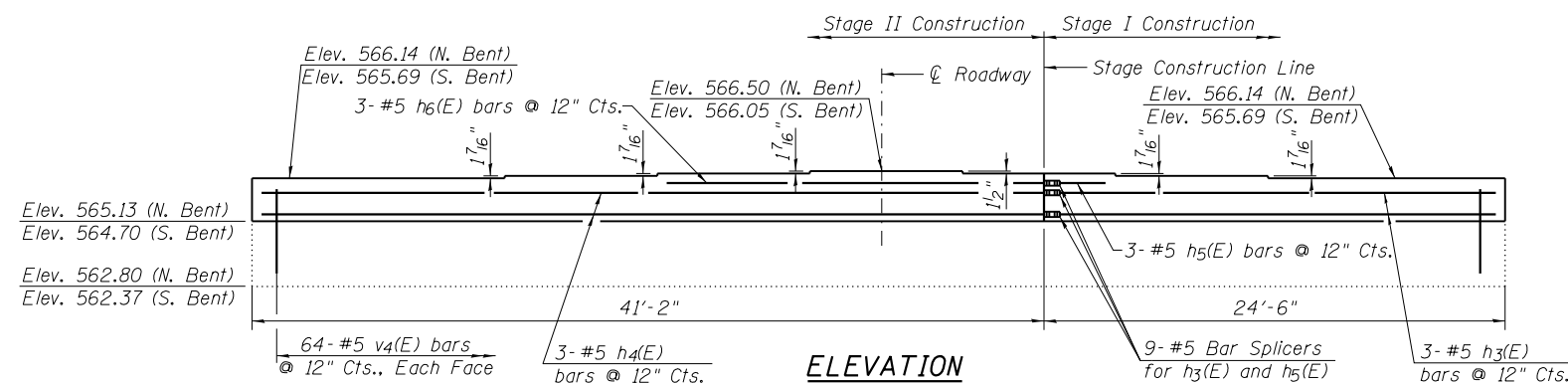
OUTSIDE ELEVATION OF CURTAIN WALL (Looking East)

SECTION B-B



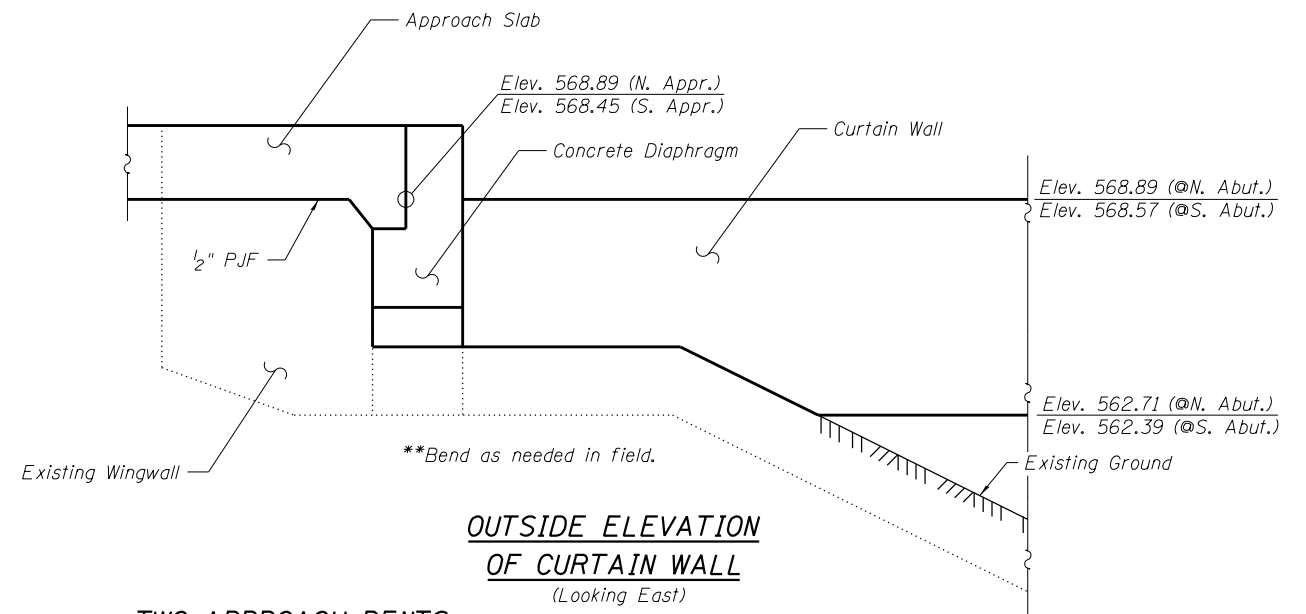
See Sheet 20 of 25 for extents of curtain wall to be removed, (Typ.)

SECTION A-A



(N. Appr. Bent Shown, S. Appr. Bent Similar)  
See Sheet 20 of 27 for Beam Seat Elevations.

ELEVATION



OUTSIDE ELEVATION OF CURTAIN WALL (Looking East)

Notes:  
Existing reinforcement bars extending into the new construction shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.  
Existing reinforcement bars not extending into the new construction shall be cut off and covered with a 2" layer of cement grout. Cost included with Concrete Removal.

TWO ABUTMENTS  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	56	#5	24'-9"	—
h3(E)	24	#5	24'-2"	—
h4(E)	24	#5	40'-10"	—
h5(E)	8	#5	3'-2"	—
h6(E)	8	#5	20'-0"	—
v5(E)	264	#5	2'-4"	—
v6(E)	256	#5	4'-2"	—

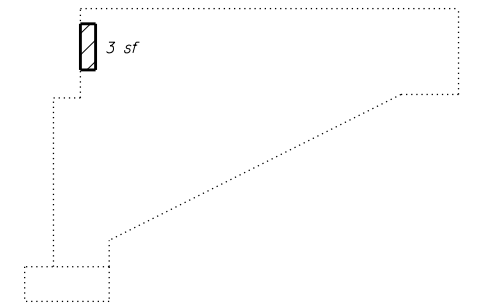
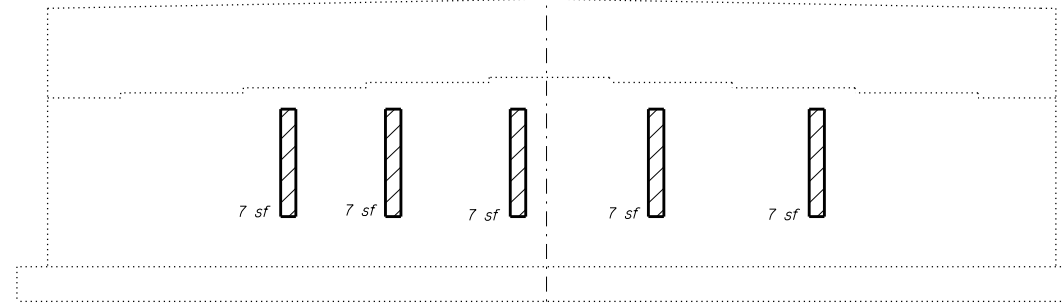
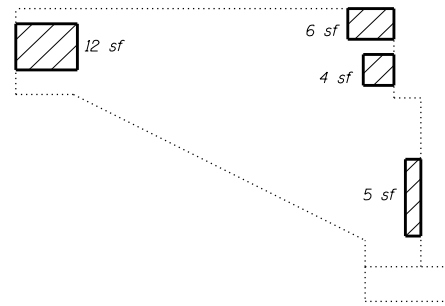
TWO APPROACH BENTS  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h3(E)	12	#5	24'-2"	—
h4(E)	12	#5	40'-10"	—
h5(E)	6	#5	3'-2"	—
h6(E)	6	#5	20'-0"	—
h7(E)	88	#5	6'-8"	—
v4(E)	256	#5	1'-9"	—
v7(E)	56	#5	6'-9"	—

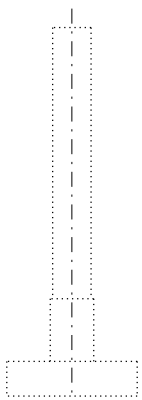
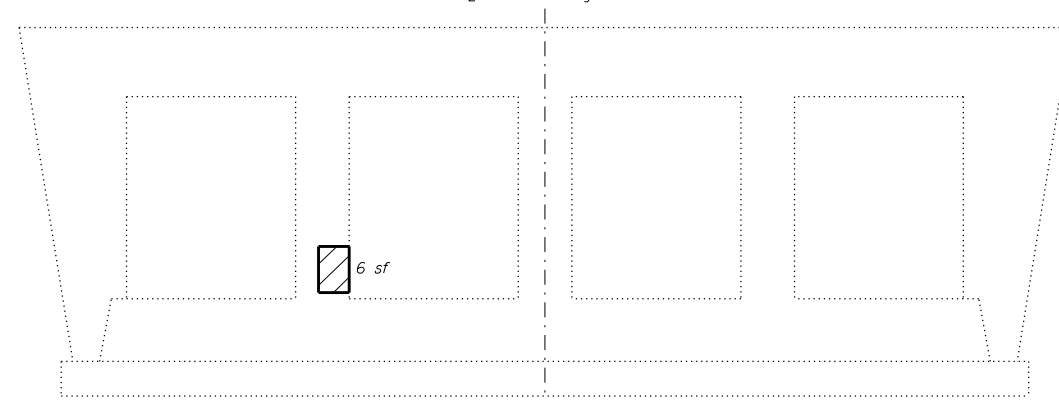
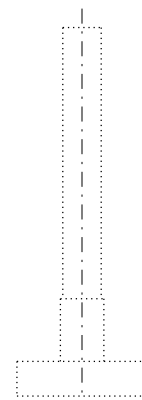
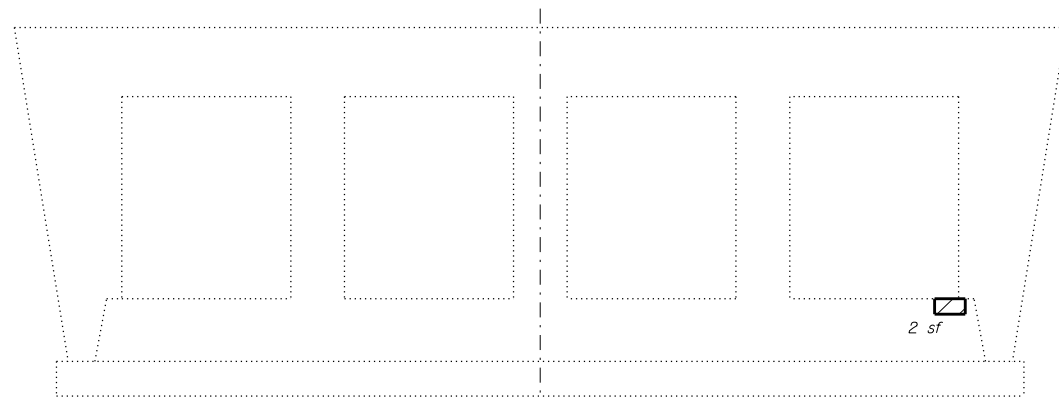
BILL OF MATERIAL

Item	Unif	Total
Concrete Structure	Cu. Yd.	78.5
Reinforcement Bars, Epoxy Coated	Sq. Yd.	7450
Bar Splicers	Each	50

Ⓞ Mechanicsburg Rd.

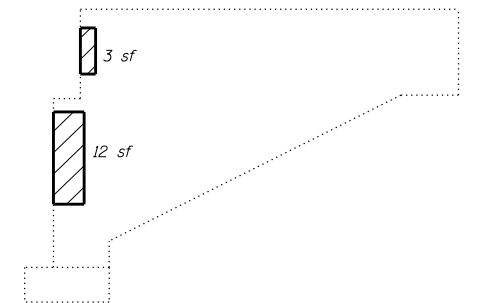
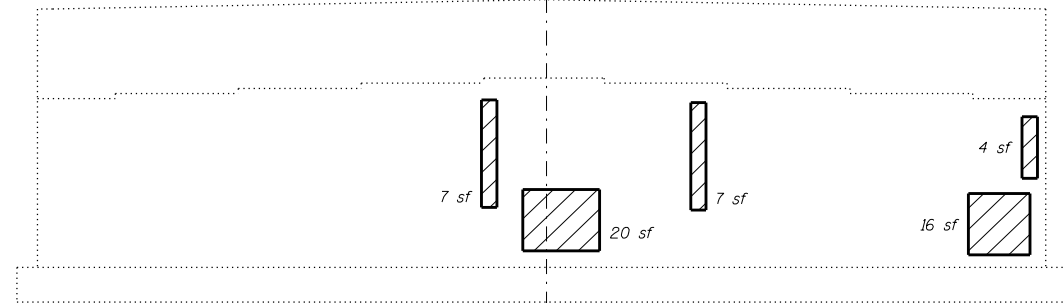
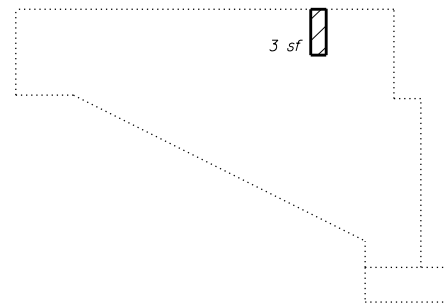


**N. ABUTMENT**  
(Looking North)



**Pier**  
(South Face)

Ⓞ Mechanicsburg Rd.



**S. ABUTMENT**  
(Looking South)

**LEGEND**  
 Structural Repair of Concrete  
 sf square feet

**NOTES**

Repair of existing concrete shall include, but may not be limited to, the areas shown. The actual areas to be repaired will be determined by the Engineer at the time of construction and documented on the as-built plans.

**BILL OF MATERIAL**

Item	Unit	Total
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	145

FILE NAME = CH12 over FAI-72.dgn

USER NAME =  
 PLOT SCALE =  
 PLOT DATE =

DESIGNED - SAL  
 CHECKED - MTH  
 DRAWN - TJW  
 CHECKED - MTH

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

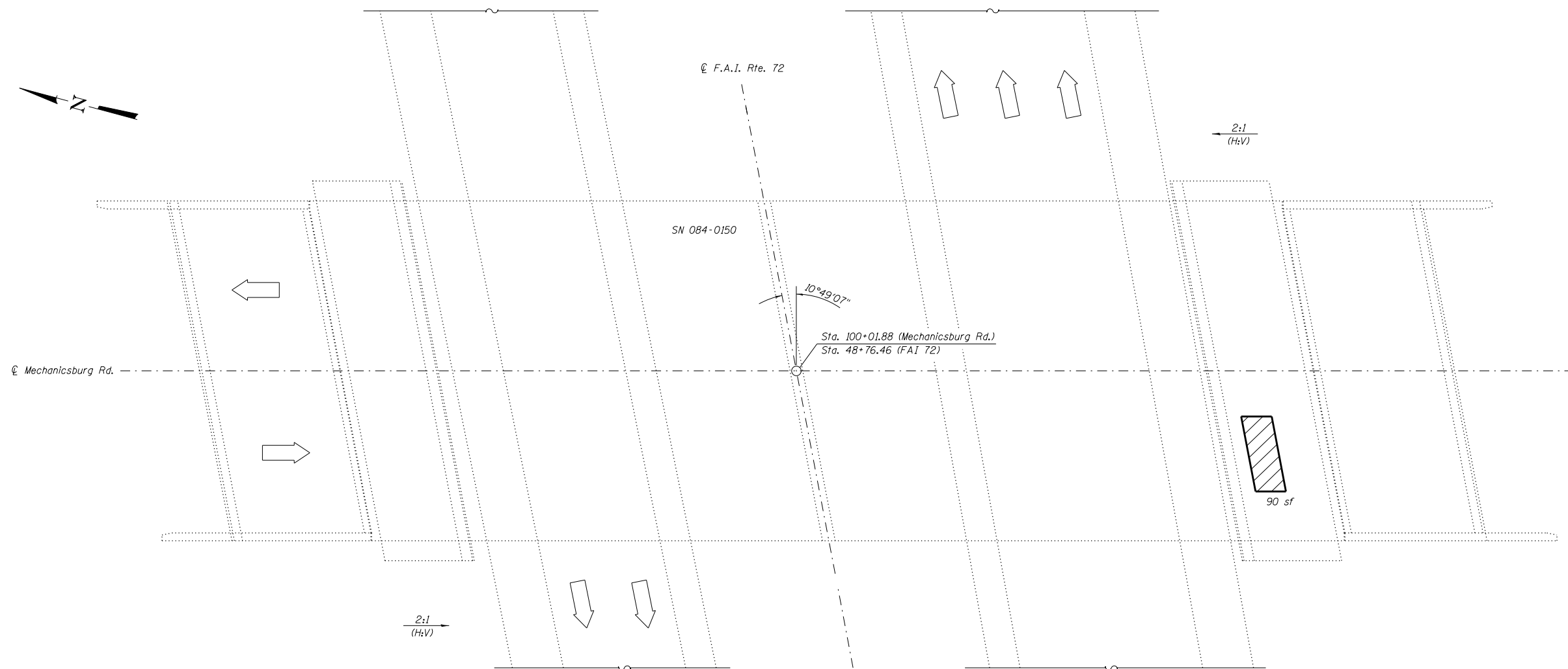
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CONCRETE REPAIR DETAILS  
 MECHANICSBURG ROAD OVER F.A.I.-72 - S.N. 084-0150

SHEET NO. 24 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	*	SANGAMON	194	136
• (84-10-1RS-3, 84-10-2RS-R)BR,I				
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				

CONTRACT NO. 72C90



PLAN

LEGEND

- Slope wall, 4"
- sf square feet

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Slope Wall Removal	Sq. Yd.	10
Slope Wall, 4"	Sq. Yd.	10
Controlled Low Strength Material	Cu. Yd.	5

Notes:

Slope wall shall be reinforced with welded wire fabric, 6"x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft. Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Slope wall Repair.

Existing and new welded wire fabric must be lapped at least 6'.

Repair of the existing slope walls shall include but may not be limited to the areas shown. The actual areas to be repaired will be determined by the Engineer at the time of construction.

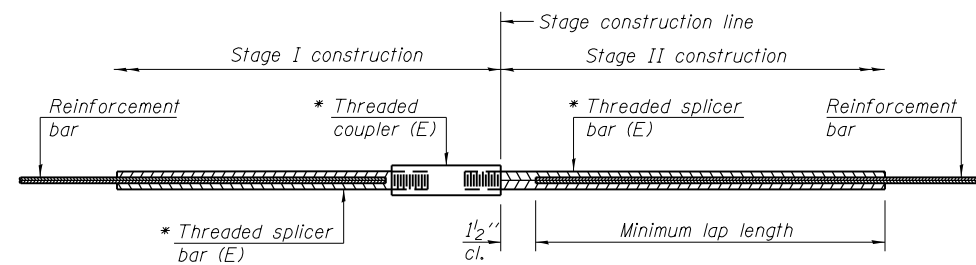
FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SLOPEWALL REPAIR DETAILS  
MECHANICSBURG ROAD OVER F.A.I.-72 - S.N. 084-0150

SHEET NO. 25 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	*	SANGAMON	194	137
• (84-10-1RS-3, 84-10-2RS-R)BR,1			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				



**STANDARD BAR SPLICER ASSEMBLY**

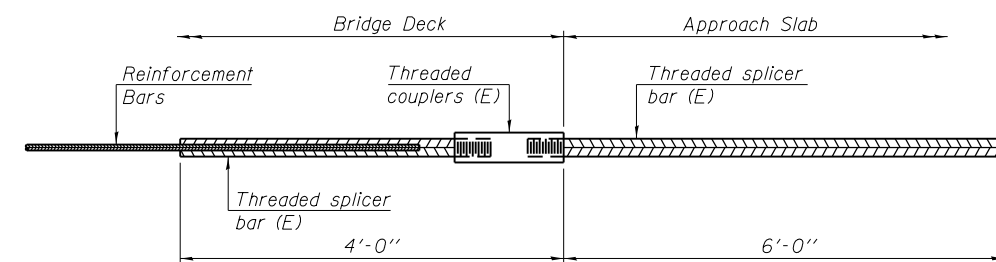
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

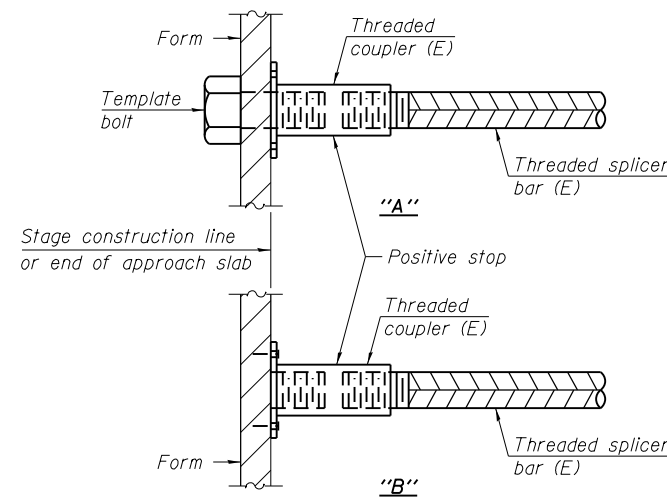
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Diaphragm	#4	8	3
	#6	4	3
Abutments	#5	32	3
	-	-	-
Approach	#4	50	4
	#5	172	3
Approach Bent	#5	18	3
	-	-	-



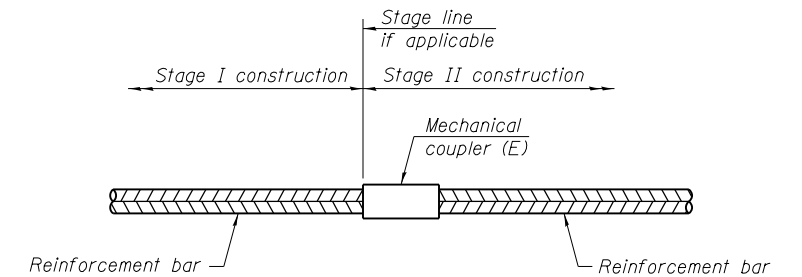
**BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

No. required =



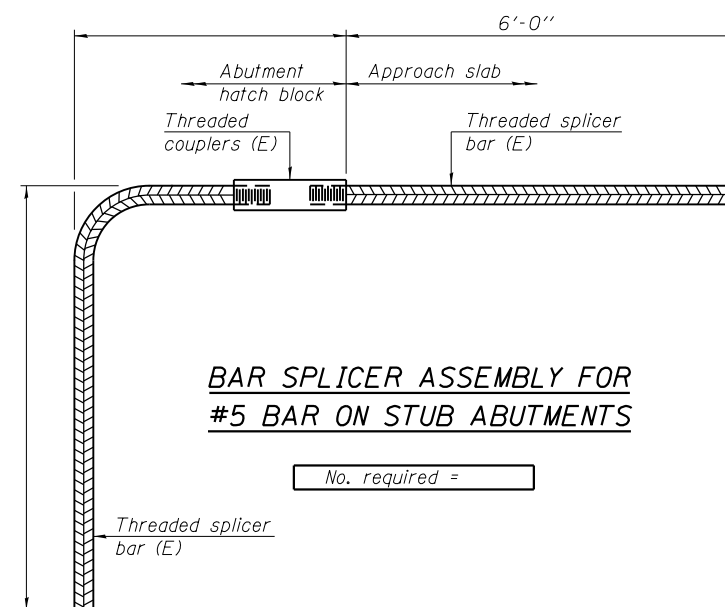
**INSTALLATION AND SETTING METHODS**

"A": Set bar splicer assembly by means of a template bolt.  
 "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E): Indicates epoxy coating.



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required =

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

1-27-12

FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

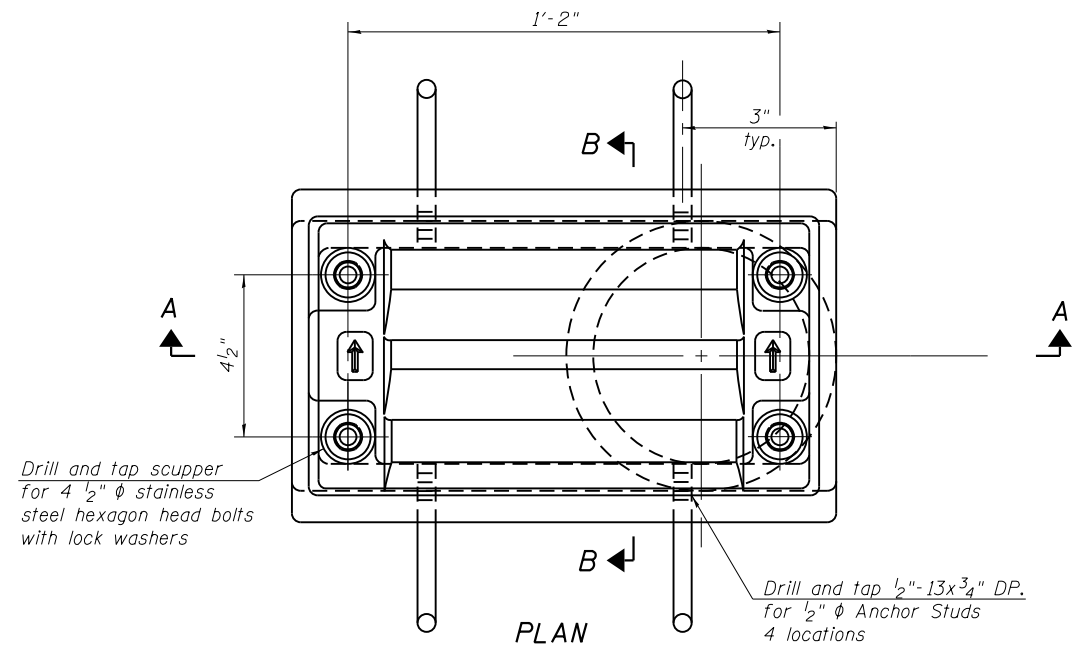
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150

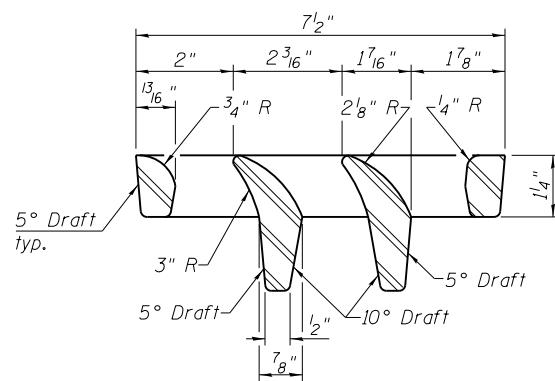
SHEET NO. 26 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72		SANGAMON	194	138
• (84-10-1RS-3, 84-10-2RS-R)BR,I			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				

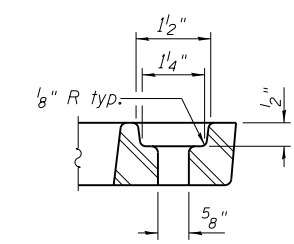
Notes:  
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.  
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.  
 Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.  
 As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.  
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.  
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.  
 Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.  
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



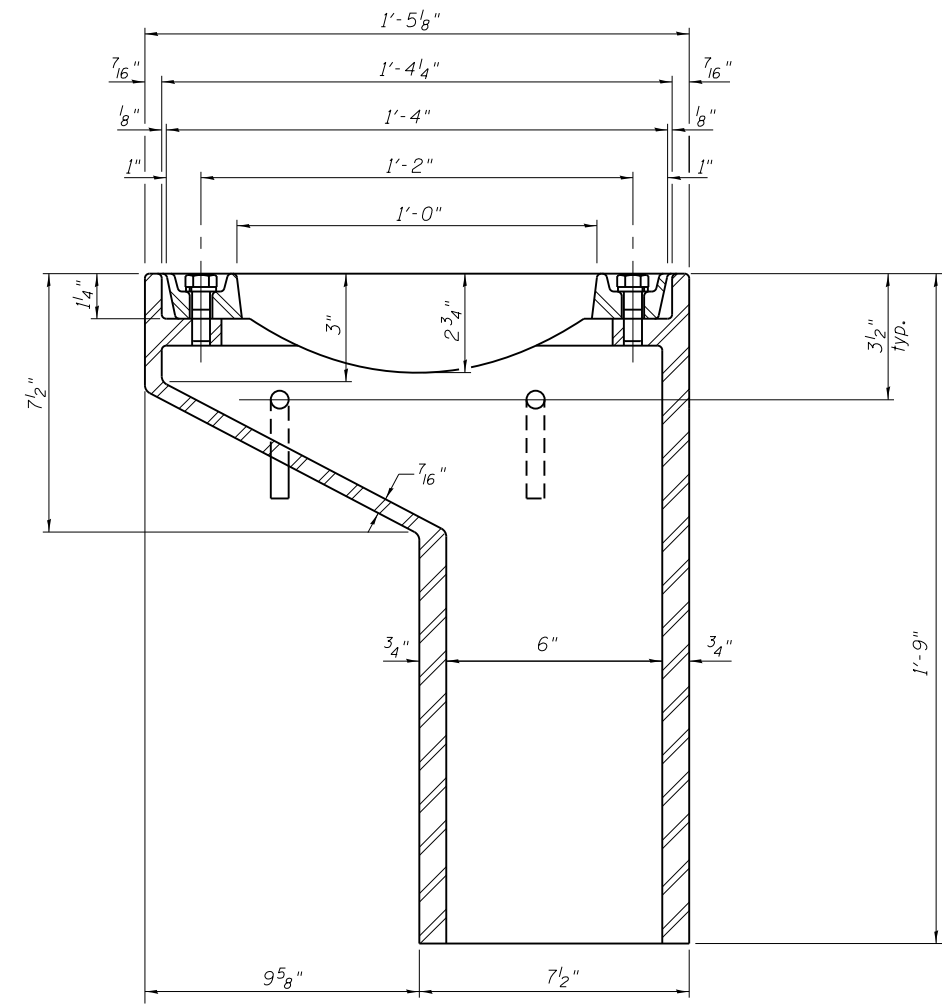
PLAN



VANE GRATE DETAIL

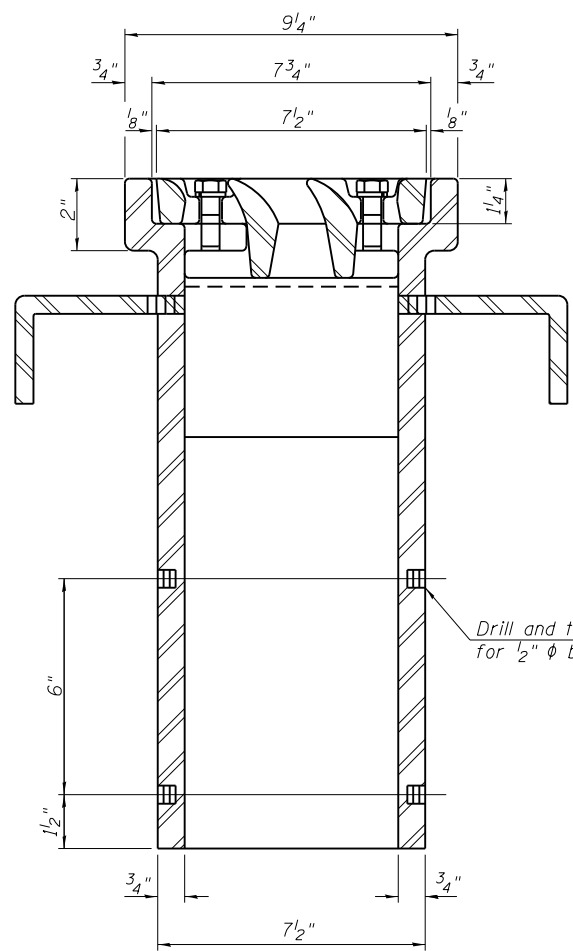


BOLT HOLE DETAIL



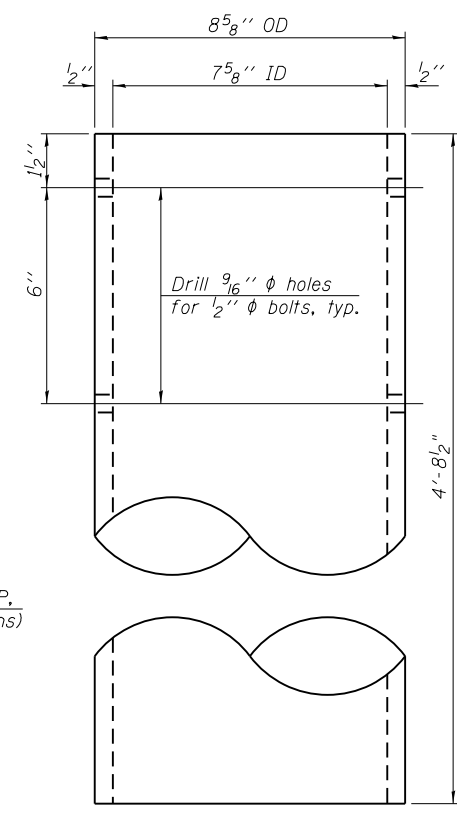
SECTION A-A

See sheet 9 of 25 for scupper location relative to parapet.

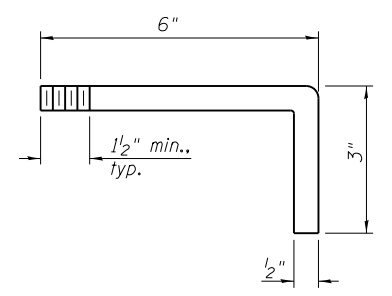


SECTION B-B

Drill and tap 1/2"-13x1/2" DP. for 1/2" φ bolts. (4 locations)



DOWNSPOUT



ANCHOR STUD DETAIL

BILL OF MATERIAL

Item	Unit	Quantity
Drainage Scupper, DS-11	Each	4

DS-11

7-1-10

FILE NAME = CH12 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-11  
 MECHANICSBURG RD. OVER F.A.I.-72 - S.N. 084-0150

SHEET NO. 27 OF 27 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	*	SANGAMON	194	139
(84-10-1RS-3,84-10-2RS-4)BR,1		CONTRACT NO. 72C90		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT (84-10-1,2)RS-3 & (84-10-2)RS-4				

Existing Structure: S.N. 084-0151 was originally built under FAI 72, Section (84-10-1HB-1) in 1974. It is a two-span, steel continuous structure with vaulted approaches. The structure length is 264'-3" back-to-back approach bents and the width is 36'-0" out-to-out. The two steel span lengths are 110'-0" and 118'-3", respectively moving up-station. In 1998, the expansion joints and overlay were removed and replaced.

Structure to be repaired using staged construction. Silicone Joints will be replaced. One lane to remain open during construction.

**GENERAL NOTES**

PART "B" SHEET 82 OF 136

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

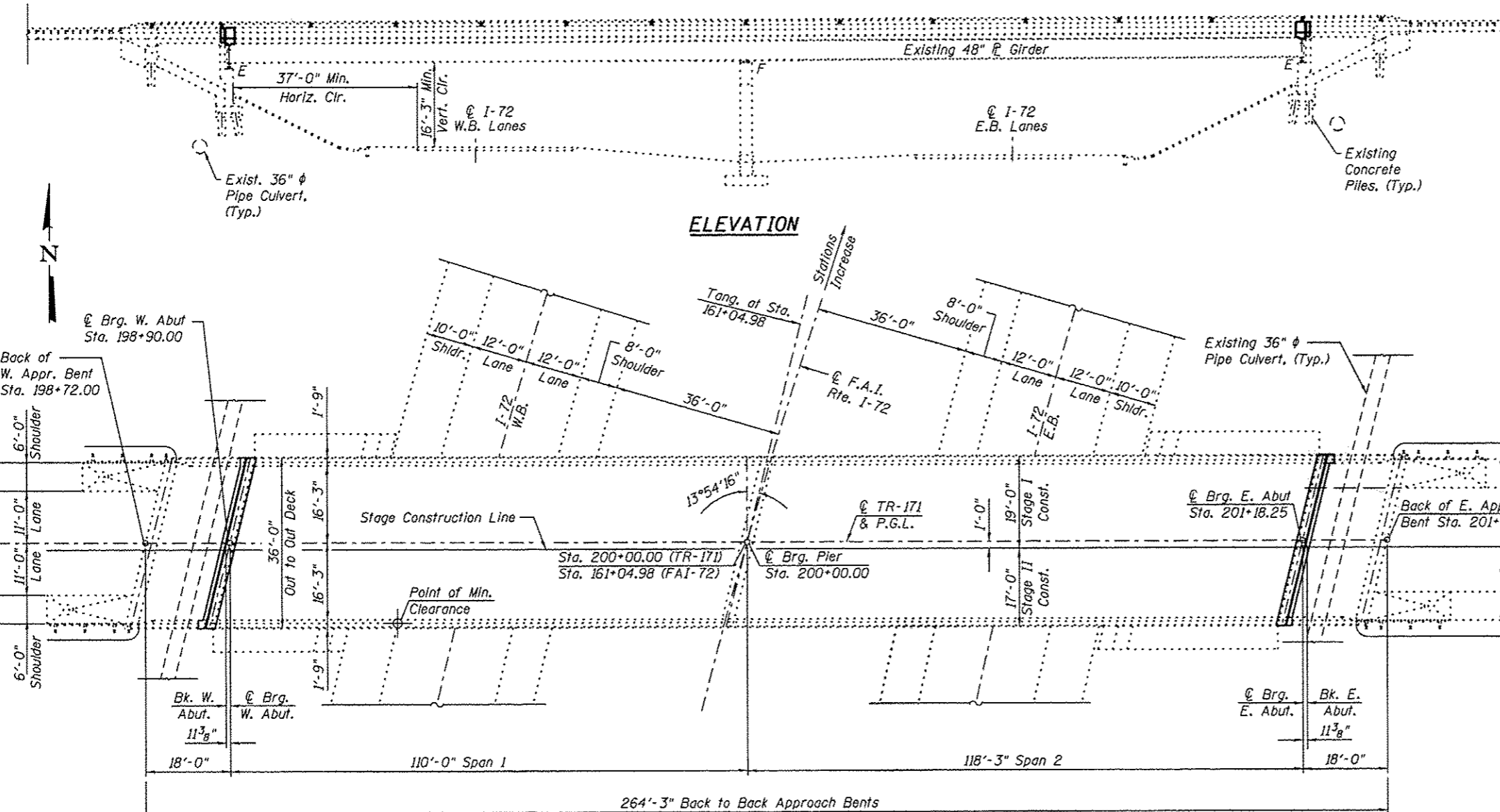
As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

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.

Cleaning and field painting of structural steel shall be done under a separate painting contract.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.



**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	5.4	-	5.4
Protective Shield	Sq. Yd.	313	-	313
Concrete Superstructure	Cu. Yd.	5.4	-	5.4
Protective Coat	Sq. Yd.	26.0	-	26.0
Reinforcement Bars, Epoxy Coated	Pound	1,330	-	1,330
Bar Splicers	Each	20	-	20
Preformed Joint Strip Seal	Foot	72	-	72
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	20	-	20
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	10	-	10
Deck Slab Repair (Partial)	Sq. Yd.	50	-	50

\* Apply on top and inside surfaces of new Concrete only.

**DESIGN STRESSES**

**FIELD UNITS (NEW)**

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

**FIELD UNITS (EXISTING)**

f'c = 1,400 psi (Substructure)  
f'c = 1,200 psi (Deck slab)  
fs = 20,000 psi (Reinforcement)  
fs = 27,000 psi (Steel)

**INDEX OF SHEETS**

1. General Plan & Elevation
2. Staging Typical
3. Deck Joint Repairs (1 of 2)
4. Deck Joint Repairs (2 of 2)
5. Preformed Joint Strip Seal
6. Deck Patching Plan
7. Bar Splicer/Mechanical Splicer Details
8. Temporary Concrete Barrier

**DESIGN SPECIFICATIONS**

(New Construction)  
2002 AASHTO "Standard Specifications for Highway Bridges"

**EXISTING LOADING HS 20-44**

Allow 25#/sq. ft. for future wearing surface.

**GENERAL PLAN & ELEVATION**

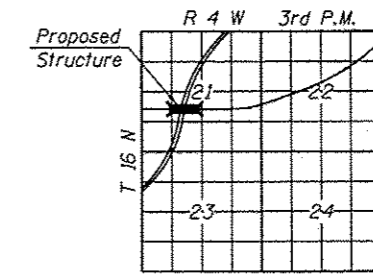
**TR-171 OVER F.A.I. RTE. 72**

**SECTION (84-10-1.2) RS-3**

**SANGAMON COUNTY**

**STATION 200+00.00**

**STRUCTURE NO. 084-0151**



**LOCATION SKETCH**



Michael T. Haley 9-5-13  
Date

Michael T. Haley  
Licensed Structural Engineer  
State of Illinois No. 81-5991  
Expires 11/30/2014

FILE NAME * Oak Crest Rd. over I-72.dgn	USER NAME *	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
		DRAWN - TJW	REVISED -
		CHECKED - MTH	REVISED -

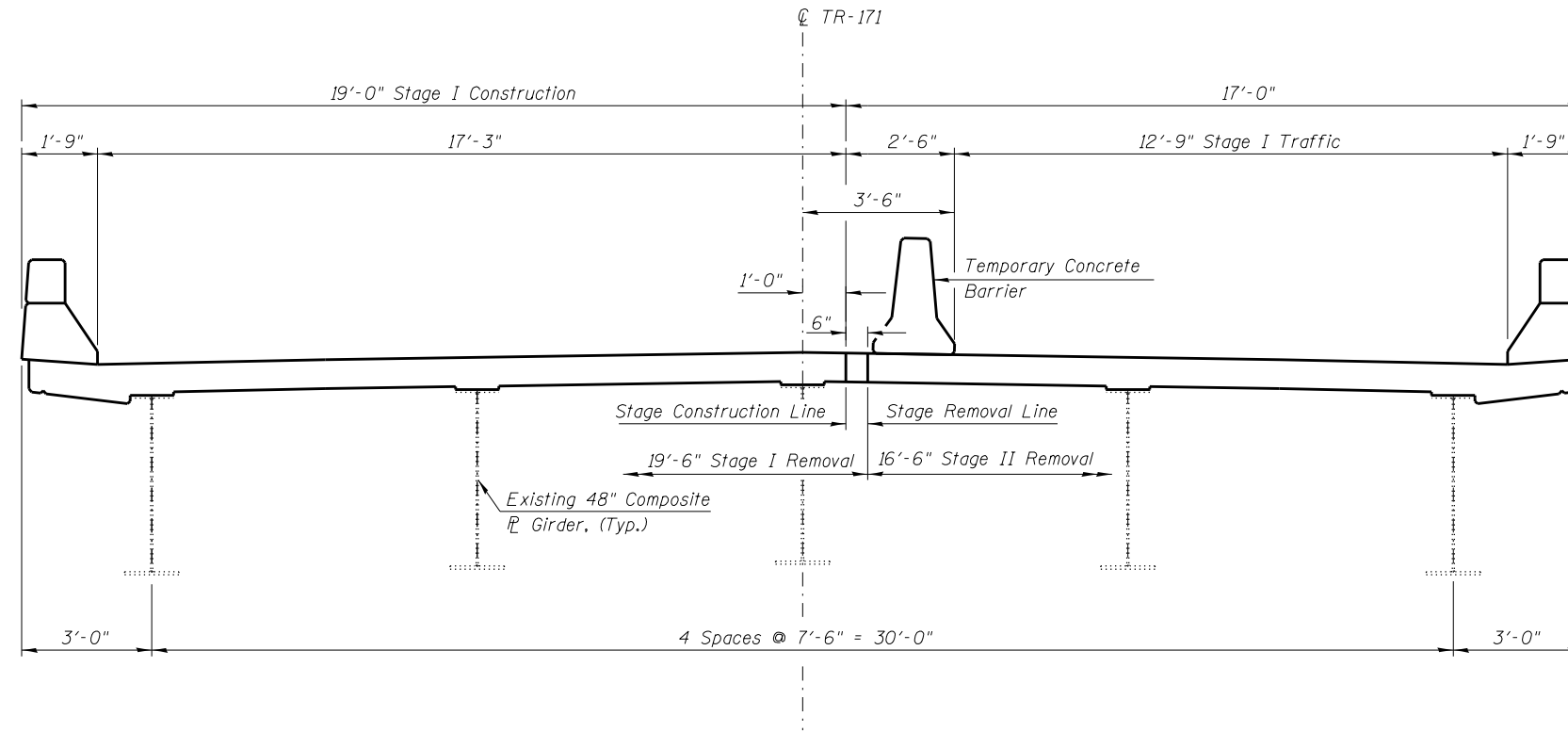
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION  
OAK CREST RD. (TR-171) OVER F.A.I.-72 - S.N. 084-0151**

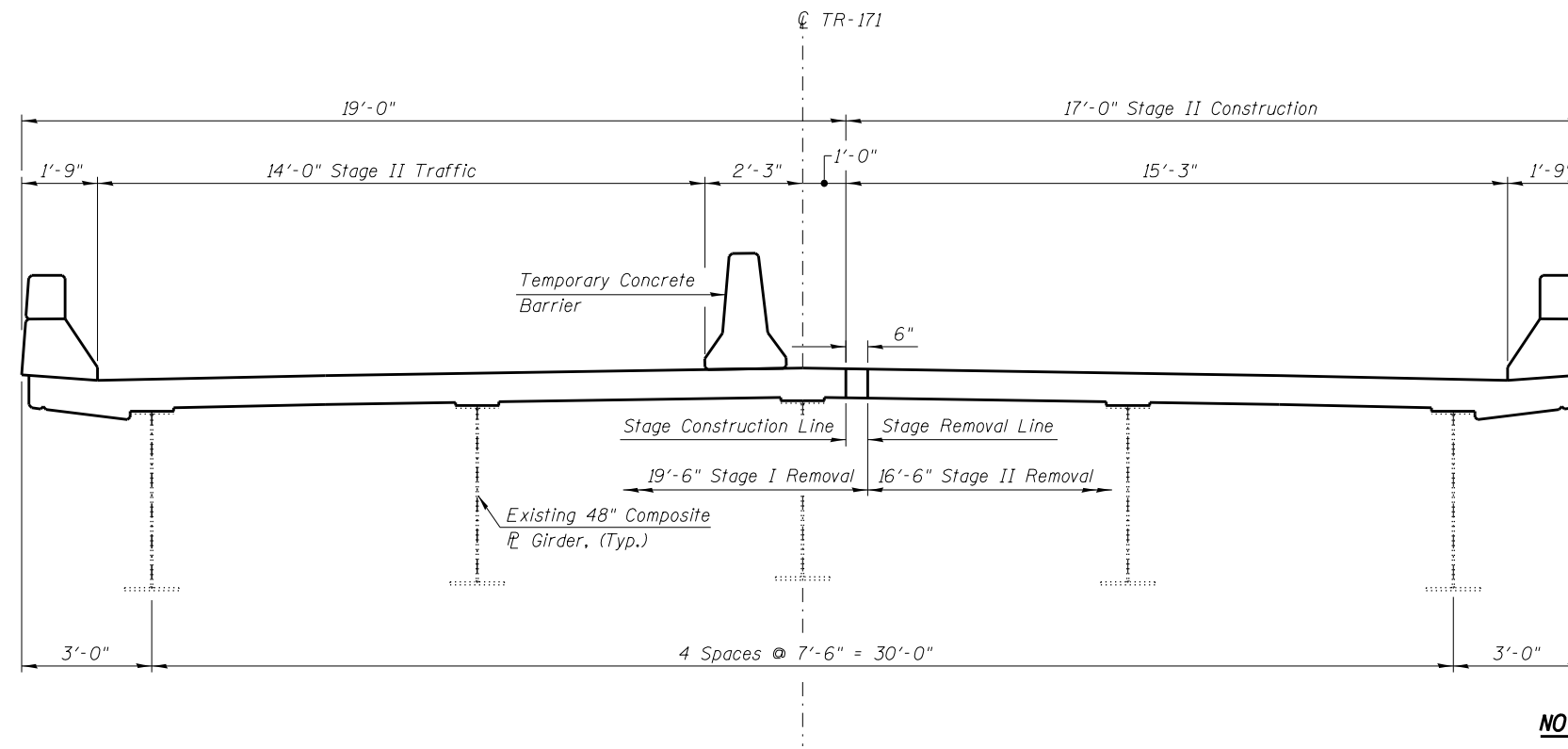
SHEET NO. 1 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
72	(84-10-1.2)RS-3	SANGAMON	194/140
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT			CONTRACT NO. 72C90





**STAGE I TYPICAL BRIDGE SECTION**  
(LOOKING EAST)



**STAGE II TYPICAL BRIDGE SECTION**  
(LOOKING EAST)

**NOTE**

Staging similar for Approaches.

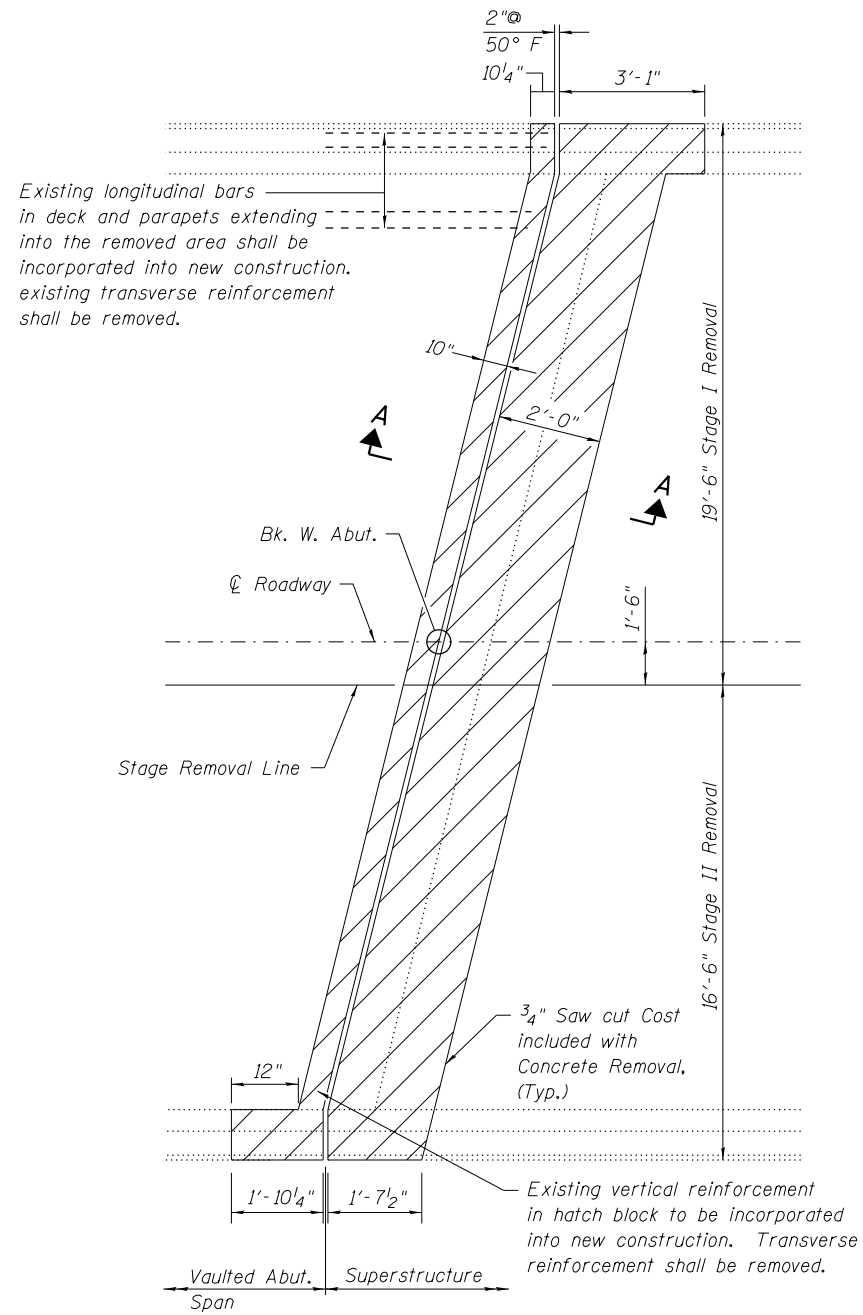
FILE NAME = Oak Crest Rd. over 1-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGING TYPICAL OAK CREST RD. (TR-171) OVER F.A.I.-72 - S.N. 084-0151</b>	F.A.I. RTE. =	SECTION =	COUNTY =	TOTAL SHEETS =	SHEET NO. =	
		CHECKED - MTH	REVISED -			72	.	SANGAMON	194	141	
	PLOT SCALE =	DRAWN - TJW	REVISED -			(84-10-1RS-3, 84-10-2RS-R)BR, I		CONTRACT NO. 72C90			
	PLOT DATE =	CHECKED - MTH	REVISED -			FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					

**NOTES:**

Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

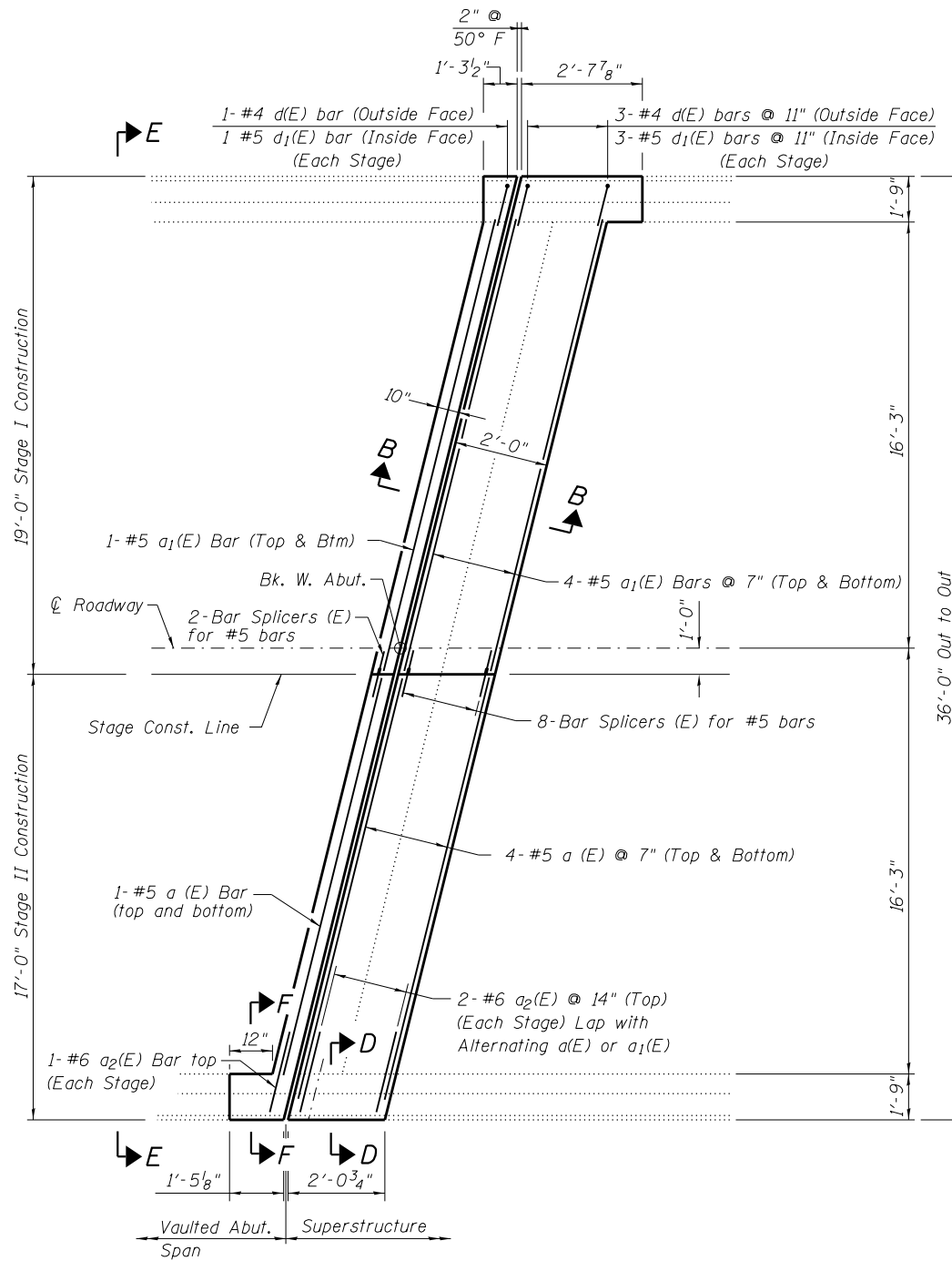
Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Work this sheet with Sheet 4 of 8. Hatched areas indicate concrete removal.



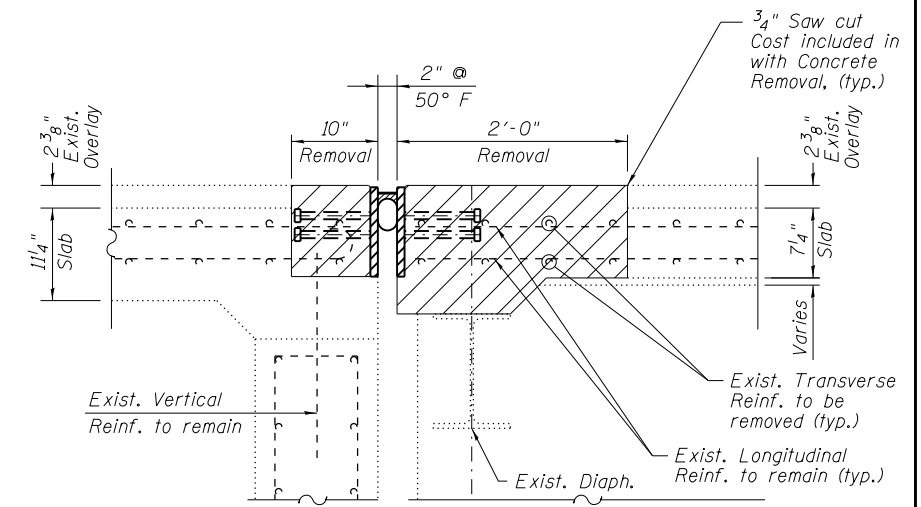
**CONCRETE REMOVAL PLAN**

(W. Abut. Shown, E. Abut. Similar)



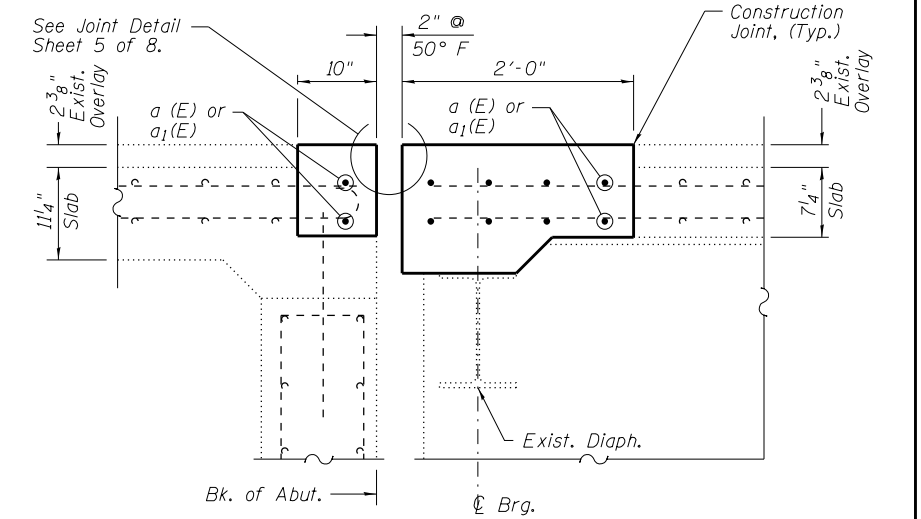
**CONCRETE REPLACEMENT PLAN**

(W. Abut. Shown, E. Abut. Similar)



**SECTION A-A**

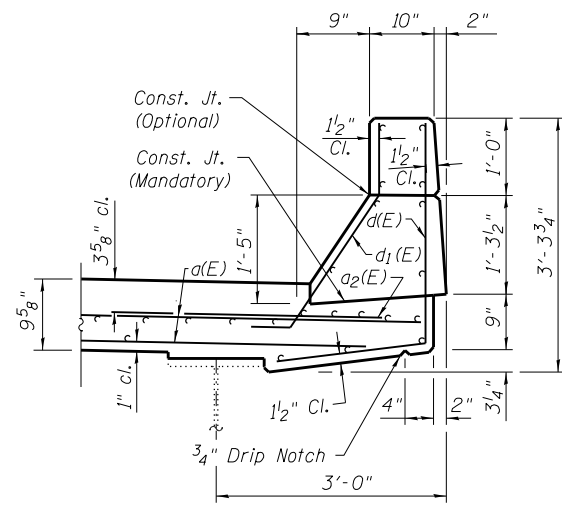
(Showing removal at deck. Dimensions at Rt. L's)



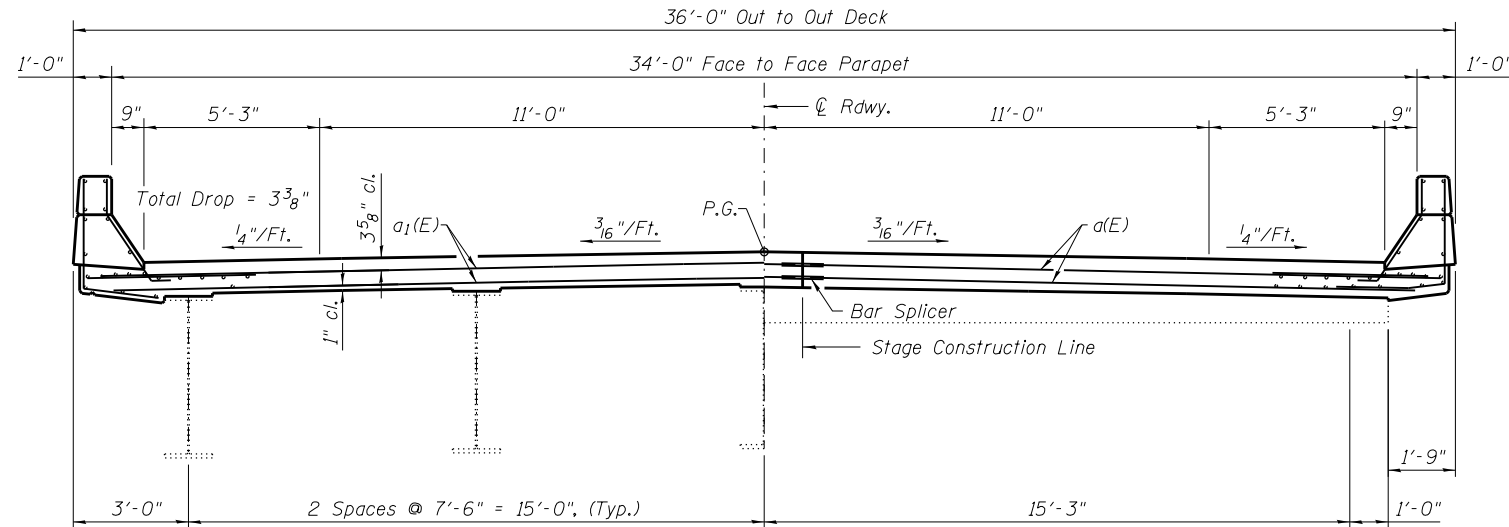
**SECTION B-B**

(Showing Proposed Section at Roadway. Dimensions at Rt. L's)

FILE NAME = Oak Crest Rd. over 1-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DECK JOINT REPAIRS (1 OF 2) OAK CREST RD. (TR-171) OVER F.A.I.-72 - S.N. 084-0151</b>	F.A.I. RTE. =	SECTION =	COUNTY =	TOTAL SHEETS =	SHEET NO. =	
		CHECKED - MTH	REVISED -			72	.	SANGAMON	194	142	
		DRAWN - TJW	REVISED -			• (84-10-IRS-3, 84-10-2RS-RIBR,I CONTRACT NO. 72C90					
		CHECKED - MTH	REVISED -			FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					

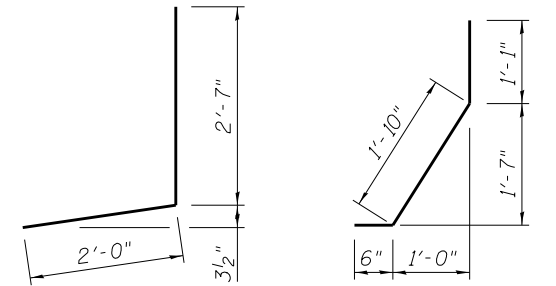


**SECTION D-D**  
(Showing Parapet at Superstructure.  
Horizontal dimensions at Rt. L's)

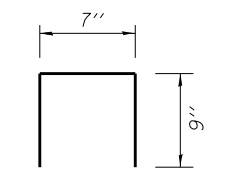


**ON DECK SIDE** **ON APPROACH SIDE**

**SECTION E-E**



**BAR d(E)** **BAR d1(E)**



**BAR d2(E)**

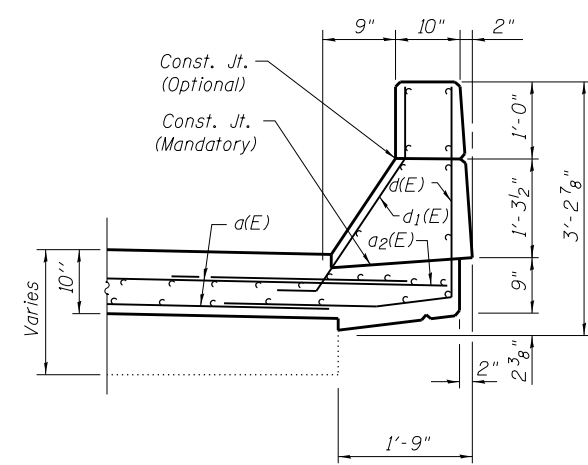
**BILL OF MATERIAL**

(Two abutments)

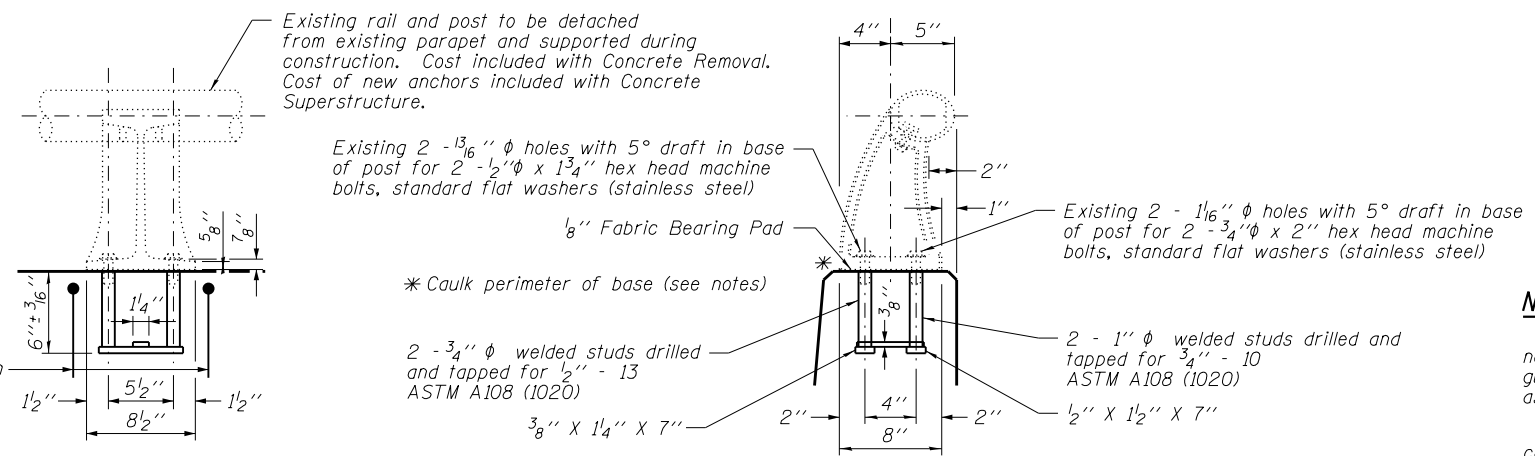
Bar	No.	Size	Length	Shape
d(E)	20	#5	16'-11"	—
a1(E)	20	#5	19'-0"	—
a2(E)	12	#6	4'-0"	—
d(E)	16	#4	4'-7"	—
d1(E)	16	#5	3'-5"	—
d2(E)	4	#5	2'-1"	—
Concrete Removal			Cu. Yd.	5.4
Concrete Superstructure			Cu. Yd.	5.4
Reinforcement Bars, Epoxy Coated			Pound	1,330
Bar Splicers			Each	20
Protective Coat			Sq. Yd.	26.0

**NOTES:**

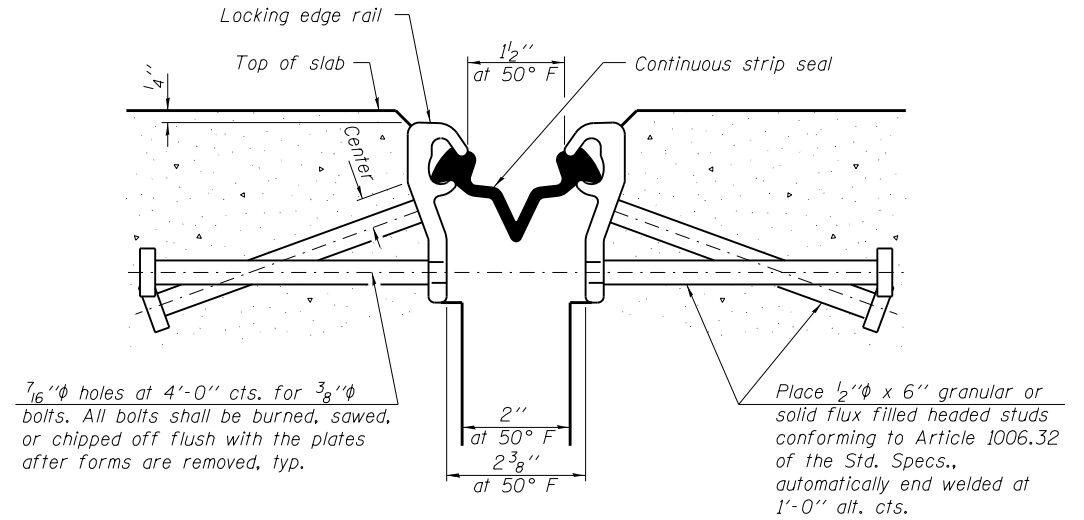
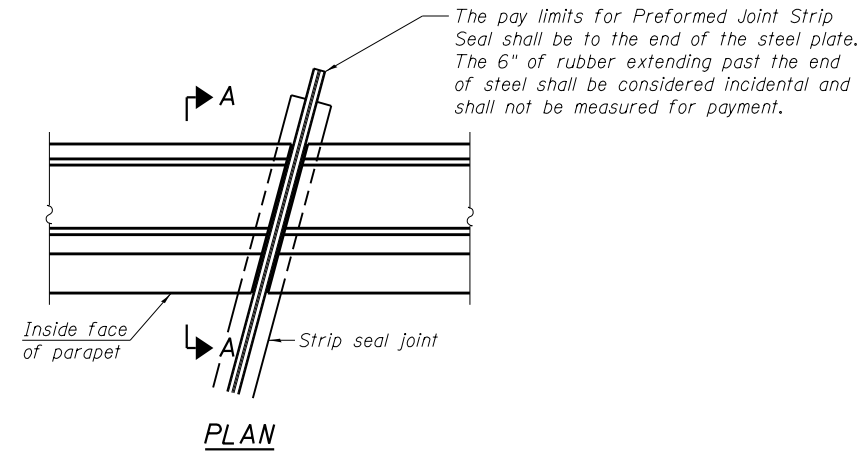
- Seal perimeter of base of post to parapet with two-component non-staining gray sealing compound with polysulfide liquid polymers, gun grade, with primer. Fabric bearing pad shall have same dimensions as base of post.
- Existing reinforcement shall be cleaned and incorporated into the new construction, as noted. Cost included with Concrete Removal.
- Any Reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- Removal of all existing expansion joints shall be included in the cost of Concrete Removal.
- Work this sheet with sheet 3 of 8.



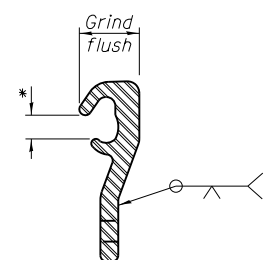
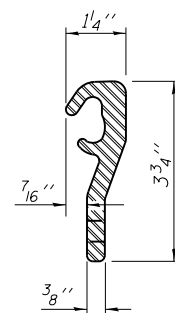
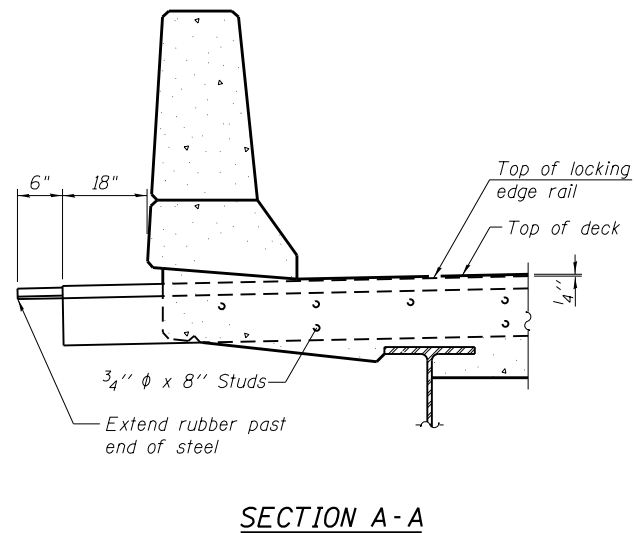
**SECTION F-F**  
(Showing Parapet at Vaulted Abut. Span.  
Horizontal dimensions at Rt. L's)



**RAIL POST DETAIL**  
(Rail posts to be removed and re-erected at  
W. Abutment only. Two (2) new anchors required.)



**SECTION THRU STRIP SEAL JOINT**  
(Dimensions at Rt. L's)



**LOCKING EDGE RAIL**

**LOCKING EDGE RAIL SPLICE**

\* Omit weld at seal opening.

Notes:

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

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joint. The manufacturer's recommended installation methods shall be followed.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications. Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

Parapet plates and anchorage studs included in the cost of Preformed Joint Strip Seal.

The inside of the Locking Edge Railing groove shall be free of weld residue.

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	72

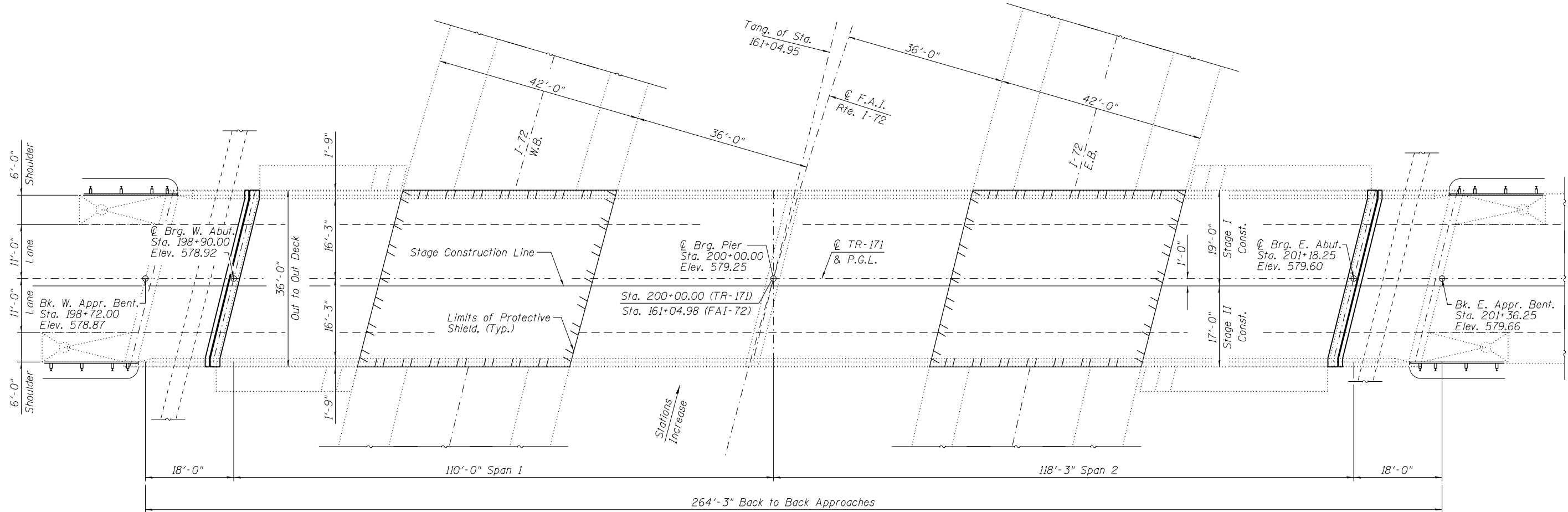
FILE NAME = Oak Crest Rd. over 1-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL  
OAK CREST RD. (TR-171) OVER F.A.I.-72 - S.N. 084-0151

SHEET NO. 5 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	.	SANGAMON	194	144
• (84-10-IRS-3, 84-10-2RS-RIBR,1			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				



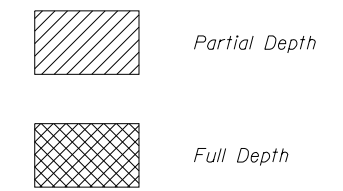
**NOTES:**

Following removal of HMA Surface, Contractor shall notify resident engineer to inspect & sound existing deck.

Quantities are estimated, actual quantities to be determined by the Resident Engineer.

Protective Shield shall be installed as directed by resident engineer to protect traffic below.

**PATCHING LEGEND**



**BILL OF MATERIAL**

Item	Unit	Total
Deck Slab Repair (Partial)	Sq. Yd.	50
Deck Slab Repair (Full Depth Type I)	Sq. Yd.	20
Deck Slab Repair (Full Depth Type II)	Sq. Yd.	10
Protective Shield	Sq. Yd.	313.0

Patch No.	Size	Deck Slab Repair (Part Depth)
PD1	EST	50
PD2		
PD3		
PD4		
PD5		
PD6		
PD7		
PD8		
PD9		
PD10		
PD11		
PD12		
PD13		
PD14		

Patch No.	Size	Deck Slab Repair (FD TY I)	Deck Slab Repair (FD TY II)
FD1	EST	20	10
FD2			
FD3			
FD4			
FD5			
FD6			
FD7			
FD8			
FD9			
FD10			
FD11			
FD12			
FD13			
FD14			

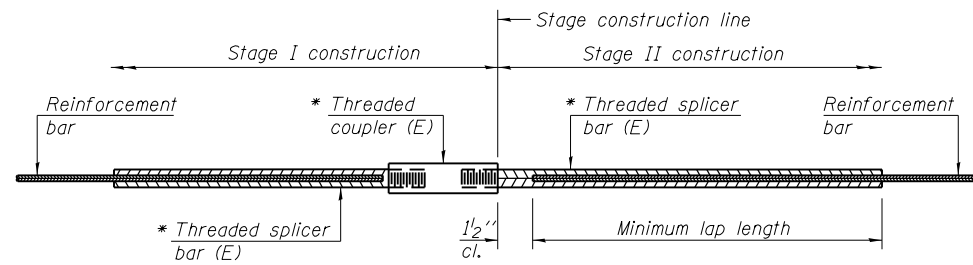
FILE NAME = Oak Crest Rd. over I-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
		DRAWN - TJW	REVISED -
		CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DECK PATCHING PLAN  
OAK CREST RD. (TR-171) OVER F.A.I.-72 - S.N.084-0151

SHEET NO. 6 OF 8 SHEETS

F.A.I. RTE. 72	SECTION	COUNTY SANGAMON	TOTAL SHEETS 194	SHEET NO. 145
• (84-10-1RS-3, 84-10-2RS-RIBR,I		CONTRACT NO. 72C90		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				



**STANDARD BAR SPLICER ASSEMBLY**

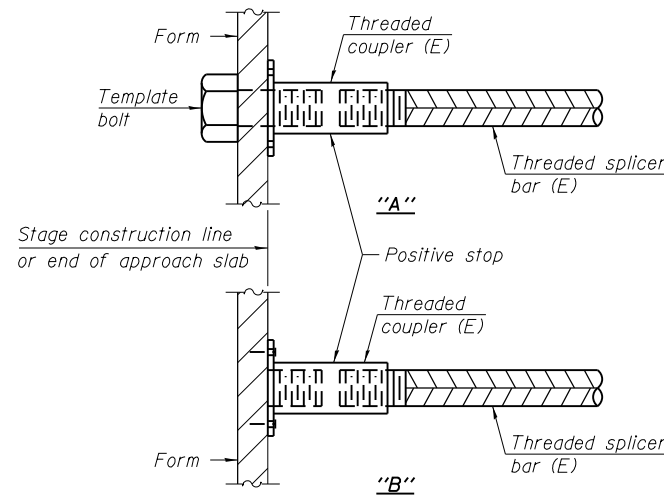
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

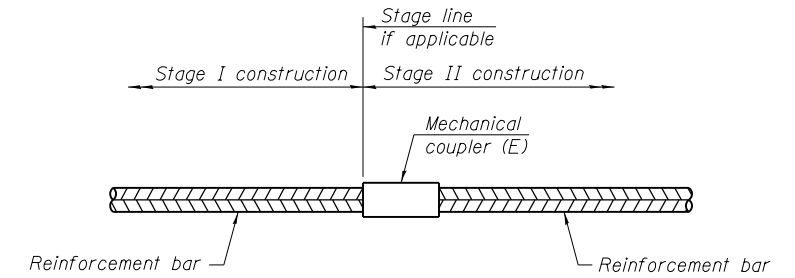
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
N. Abut.	#5	10	3
S. Abut.	#5	10	3



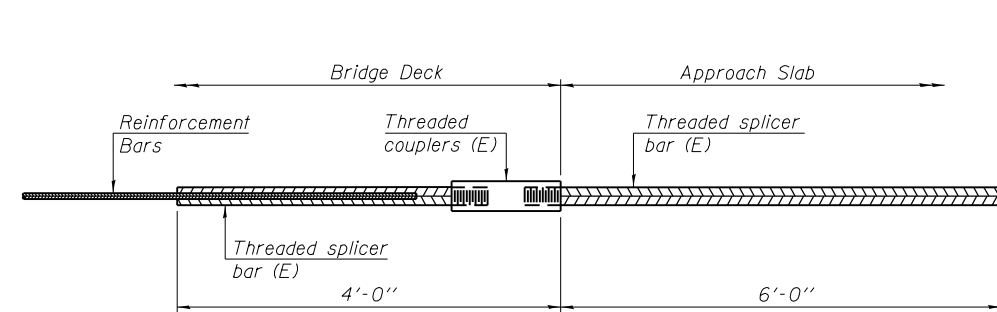
**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.



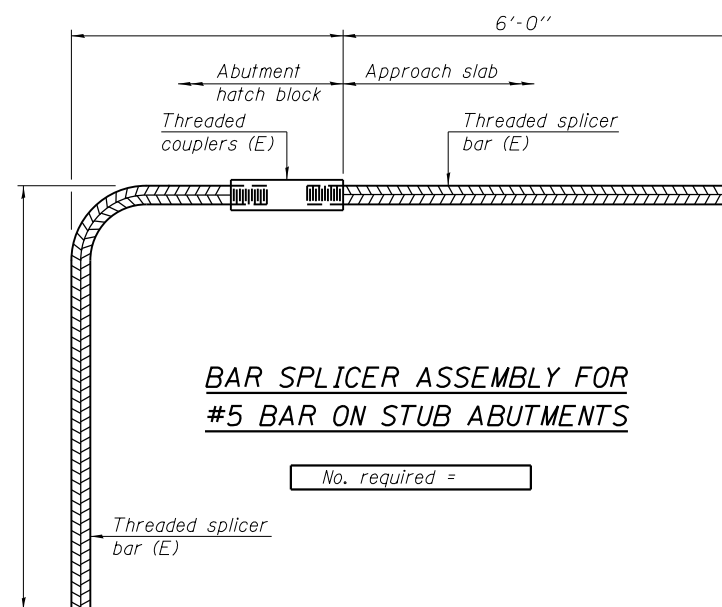
**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



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

No. required =



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required =

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

1-27-12

FILE NAME = Oak Crest Rd. over 1-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

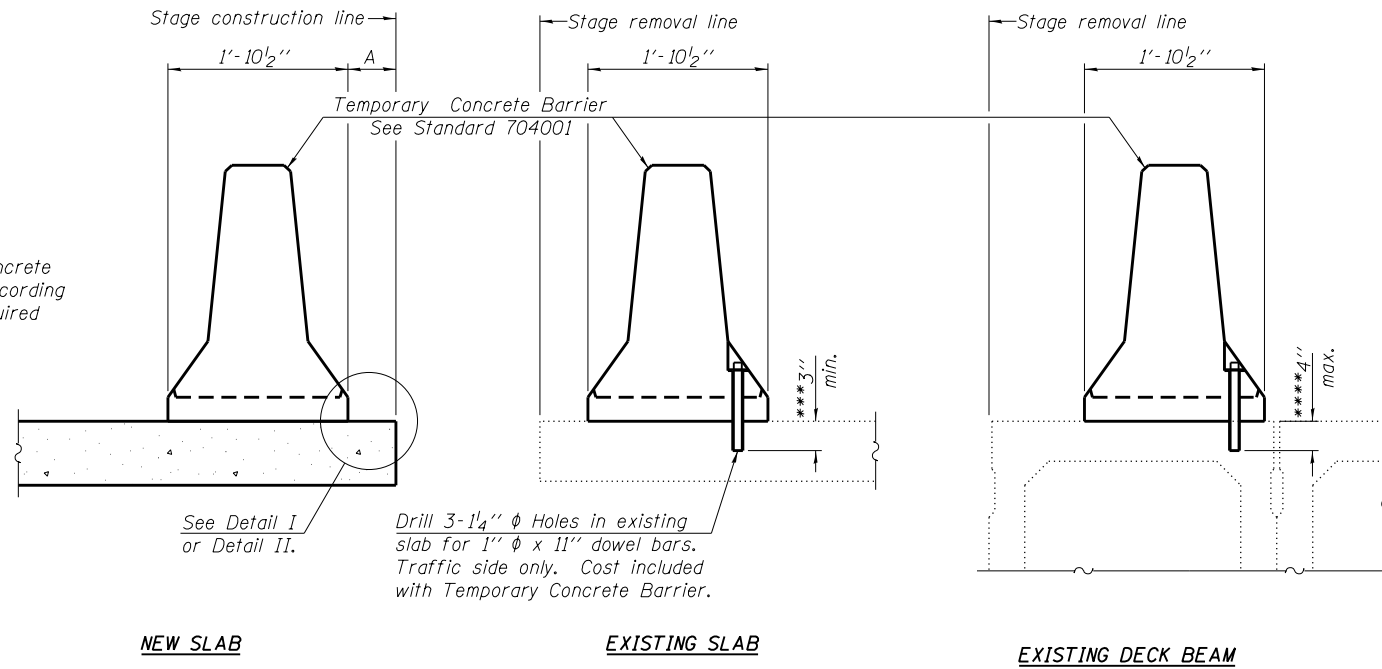
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
OAK CREST RD. (TR-171) OVER F.AI.-72 - S.N. 084-0151

SHEET NO. 7 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72		SANGAMON	194	146
• (84-10-1RS-3, 84-10-2RS-R)BR, I			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				

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".



SECTIONS THRU SLAB OR DECK BEAM

**NOTES**

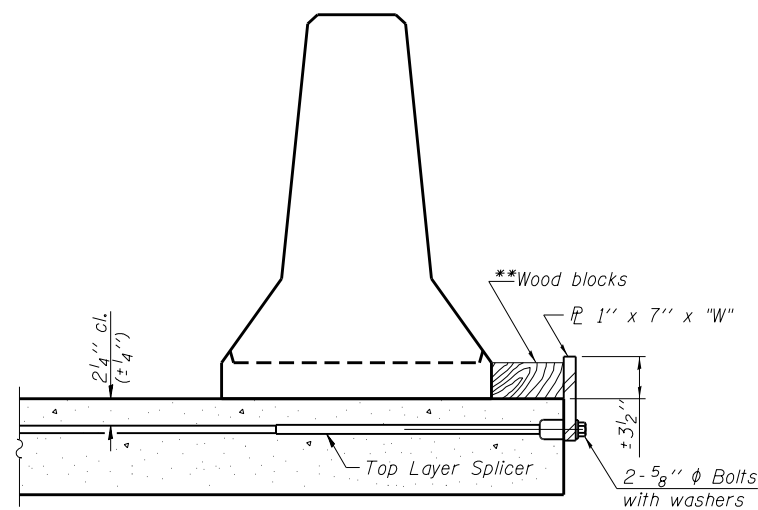
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1" x 7" x "W" steel  $\bar{L}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1" x 7" x "W" steel  $\bar{L}$  to the concrete slab or concrete wearing surface 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.

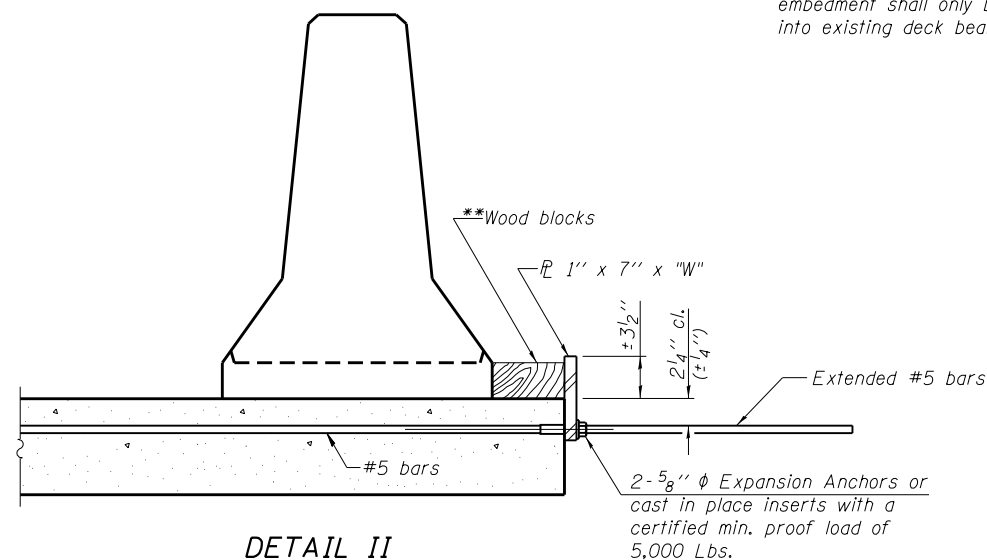
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

\*\*\* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

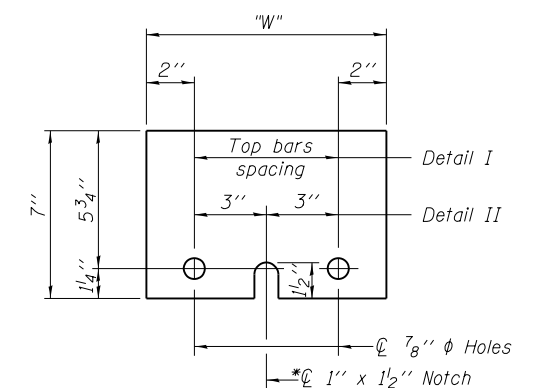
\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER  $\bar{L}$  1" x 7" x "W"

\* Required only with Detail II

\*\* Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

R-27 7-1-10

FILE NAME = Oak Crest Rd. over 1-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION OAK CREST RD. (TR 171) OVER F.A.I. 72 - S.N. 084-0151</b>	F.A.I. RTE. = 72	SECTION =	COUNTY = SANGAMON	TOTAL SHEETS = 194	SHEET NO. = 147
PLOT SCALE =	DRAWN - TJW	REVISED -	* (84-10-IRS-3, 84-10-2RS-RIBR,I			CONTRACT NO. 72C90				
PLOT DATE =	CHECKED - MTH	REVISED -	FED. ROAD DIST. NO. 6			ILLINOIS FED. AID PROJECT				
SHEET NO. 8 OF 8 SHEETS										

Benchmark: B.M. #1 - Chisled square in on north end of south median nose, Sta. 305+97.70, 5.30' Rt., NAVD88, Elev. 597.60.

Existing Structure: SN 084-0154 built in 1974 under section 84-10-1HB-2 is a 2 span continuous welded plate girder structure with CIP concrete deck, supported by vaulted abutments supported on steel piles and a trapezoidal 5-column pier supported on steel piles. The existing structure is 199'-11" back to back existing abutments with 28'-11 1/2" vaulted approach spans at each end. The bridge deck is 7 1/4" thick with a 2 3/8" overlay, 68'-0" out to out with an 18'-0" median. In 1999, the overlay and expansion joints were replaced.

Bridge to be reconstructed using stage construction. One lane of traffic to be maintained at all times.

No Salvage.

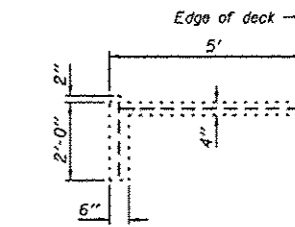
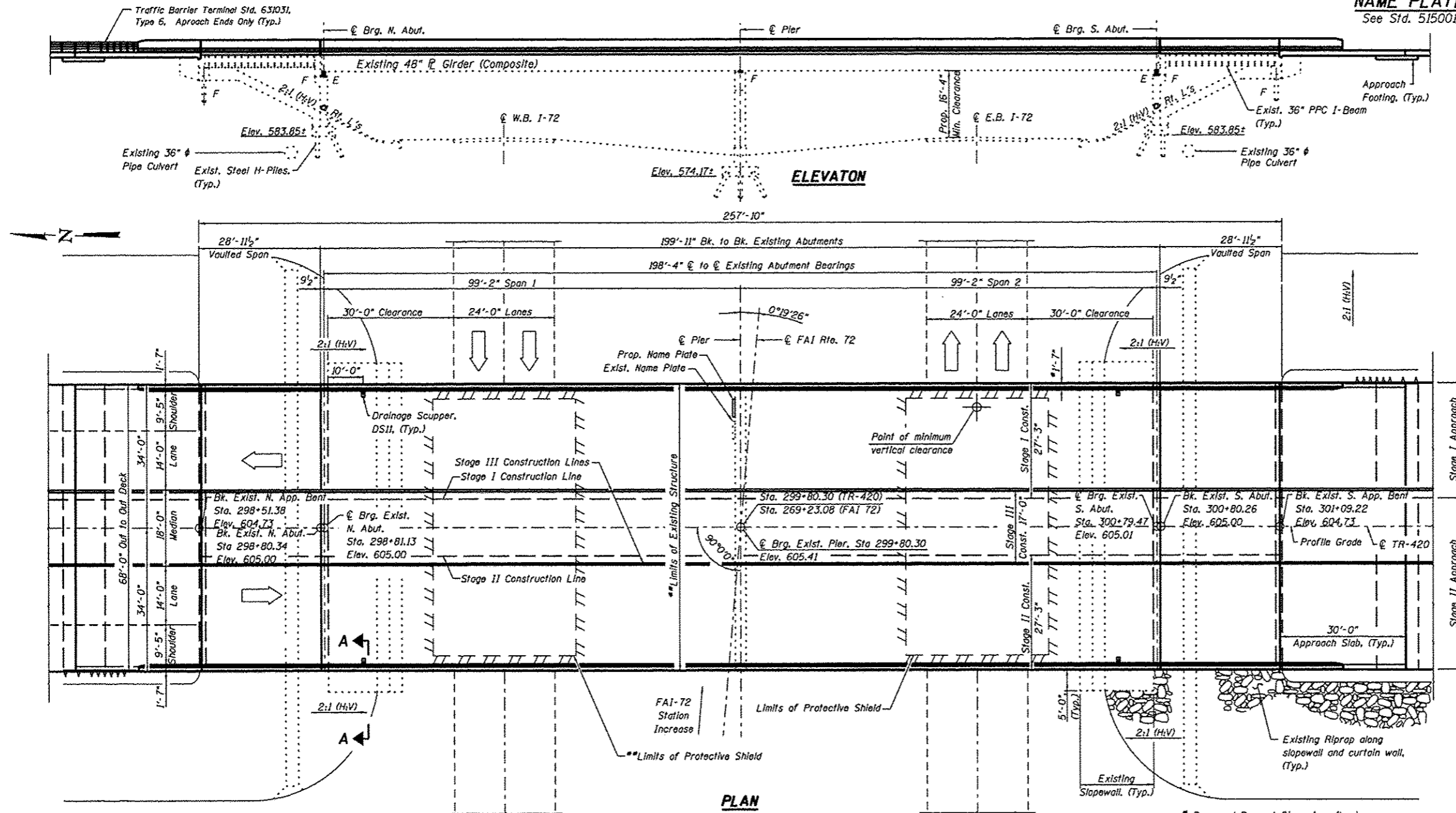
STATION 269+23.08  
REBUILT 20... BY  
STATE OF ILLINOIS  
F.A.I. RTE. 72  
SEC. (84-10-1.2) RS-3  
LOADING HS-20  
STRUCTURE NO. 084-0154

PART "B" SHEET 90 OF 136

**SCOPE OF WORK**

1. Remove and replace deck and expansion joints.
2. Extend wingwalls and Curtain walls to match new elevation.
3. Install approach slabs.
4. Repair the damaged slope/wall sections.
5. Replace and diaphragm with channel diaphragm.
6. Install Shear Studs In Negative Moment Region of Deck.
7. Jack and remove existing bearings at abutments and Pier and raise Profile Elevation 6" While Deck is off.
8. Replace bearings with new elastomeric bearings at the Abutments and fixed bearings at Pier.

**NAME PLATE**  
See Std. 515001



**SECTION A-A**

**LOADING HS20-44**

Allow 25#/sq. ft. for future wearing surface.

**DESIGN SPECIFICATIONS**

(New Construction)  
2002 AASHTO "Standard Specifications for Highway Bridges"

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. (S<sub>D1</sub>) = 0.062g  
Design Spectral Acceleration at 2.0 sec. (S<sub>D5</sub>) = 0.164g  
Soil Site Class = B

**DESIGN STRESSES**

**PRECAST PRESTRESSED UNITS (Exlst.)**

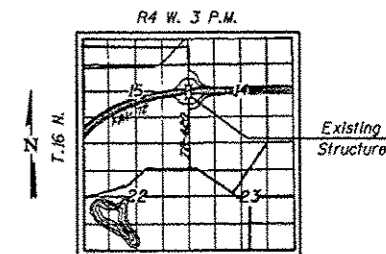
f<sub>c</sub> = 5,000 psi  
f<sub>c</sub>' = 4,000 psi  
f<sub>st</sub> = 188,700 psi (1/8" φ stress relieved strands)  
f<sub>s</sub> = 270,000 psi (1/8" φ stress relieved strands)

**FIELD UNITS (Exlst. Constr.)**

f<sub>c</sub> = 1,400 psi (Substructure)  
f<sub>c</sub> = 1,200 psi (Slab)  
f<sub>s</sub> = 20,000 psi (Steel)  
f<sub>s</sub> = 20,000 psi (Reinforcement)

**FIELD UNITS (New Const.)**

f<sub>c</sub> = 3,500 psi  
f<sub>y</sub> = 60,000 psi (Reinforcement)  
f<sub>y</sub> = 36,000 psi (Steel)



**LOCATION SKETCH**

**GENERAL PLAN & ELEVATION**

TR-420 OVER  
F.A.I. RTE. 72  
SECTION (84-10-1.2) RS-3  
SANGAMON COUNTY  
STRUCTURE NO. 084-0154  
STA. 269+23.08

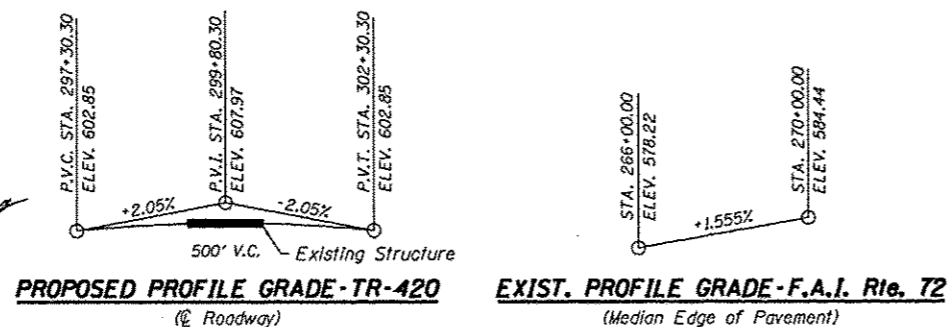
**INDEX OF SHEETS**

1. General Plan and Elevation
2. General Data
3. Temporary Concrete Barrier
4. Top of Slab Elevations (1 of 3)
5. Top of Slab Elevations (2 of 3)
6. Top of Slab Elevations (3 of 3)
7. Top of Approach Slab Elevations
8. Superstructure
9. Superstructure Details
10. Vaulted Abutment Approach Span
11. Vaulted Abutment Approach Span Details
12. Bridge Approach Slab Details (1 of 2)
13. Bridge Approach Slab Details (2 of 2)
14. Prefabricated Joint Strip Seal
15. Framing Plan and Beam Details
16. Abutment Bearing Details
17. Pier Bearing Details
18. Concrete Removal, Abutments
19. Concrete Removal, Appr. Bents
20. Abutments
21. Approach Bents
22. Concrete Repair Details
23. Slope/wall Repair Details
24. Bar Splicer Assembly and Mechanical Splicer Details
25. Drainage Scupper, DS-11



Michael T. Haley  
Licensed Structural Engineer  
State of Illinois No. 81-5991  
Expires 11/30/2014  
Date 9-18-2013

**APPROVED**  
For Structural Adequacy Only  
*De Carl Kreyer*  
Engineer of Bridges & Structures



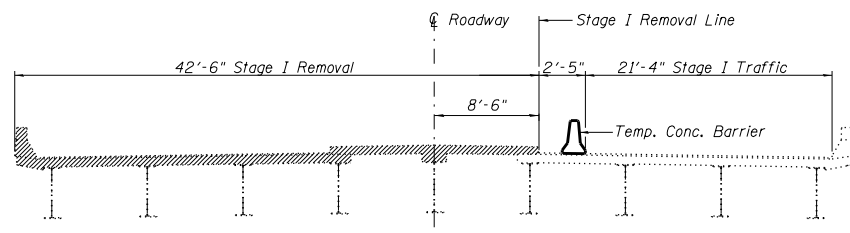
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION  
OVERPASS ROAD (TR-420) OVER F.A.I.-72 - S.N. 084-0154  
SHEET NO. 1 OF 25 SHEETS

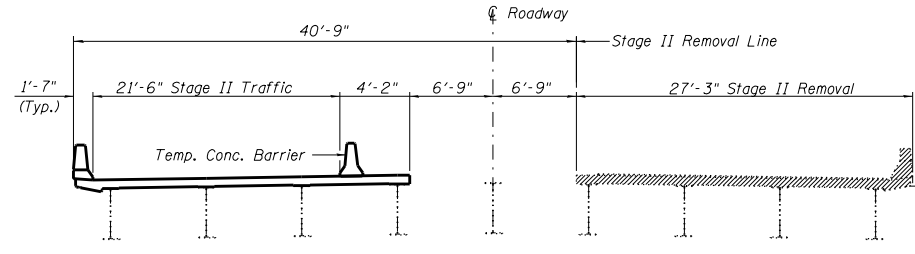
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-1.2) RS-3	SANGAMON	194	148
CONTRACT NO. 72C90			FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT	

FILE NAME	USER NAME	DESIGNED	REVISIONS
TR420 over FAI-72.dgn		SAL	-
		CHECKED	MTH
		REVISIONS	-
		DRAWN	TJM
		REVISIONS	-
		CHECKED	MTH
		REVISIONS	-

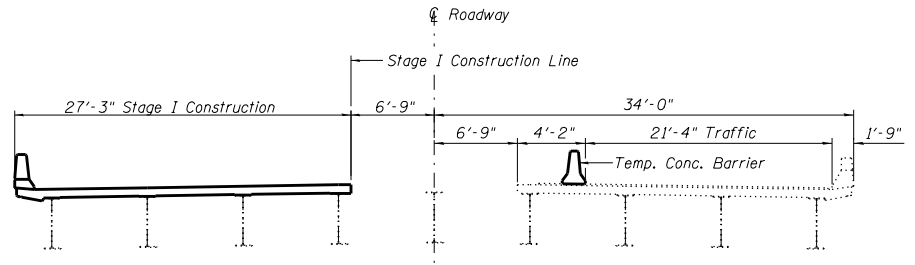




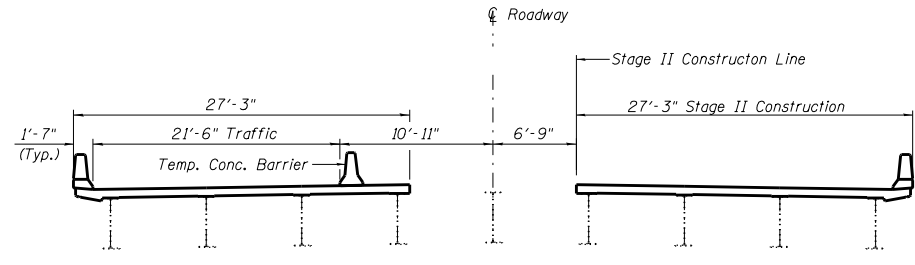
**STAGE I REMOVAL**  
(Looking South)



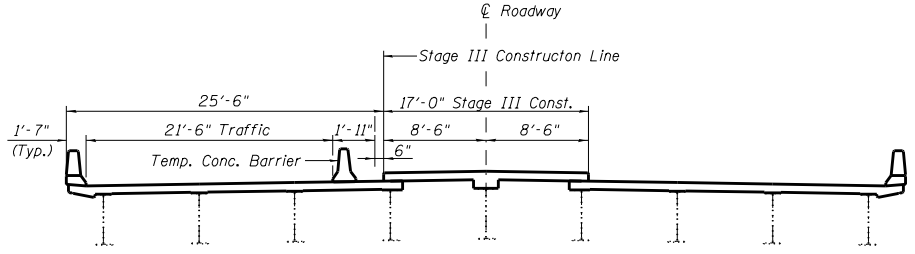
**STAGE II REMOVAL**  
(Looking South)



**STAGE I CONSTRUCTION**  
(Looking South)



**STAGE II CONSTRUCTION**  
(Looking South)



**STAGE III CONSTRUCTION**  
(Looking South)  
Staging of main spans shown,  
approach spans similar

Note:  
See sheet 3 of 25 for Temporary Concrete Barrier Details.  
Hatched area indicates Removal of Existing Concrete Deck.  
For quantity of Temporary Concrete Barrier, see roadway plans.  
Removal of existing bridge railing and bituminous wearing surface is included with Removal of Existing Concrete Deck.

**GENERAL NOTES**

Fasteners shall be ASTM A325 Type I, mechanically galvanized bolts. Bolts 3/4 in.  $\phi$ , holes 13/16 in.  $\phi$ , unless otherwise noted.  
No field welding is permitted except as specified in the contract documents.  
Reinforcement bars designated (E) shall be epoxy coated.  
Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.  
As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

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.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8" (0.01 Ft.)

Concrete Sealer shall be applied to designated areas of the abutments.

Cleaning and field painting of structural steel shall be done under a separate painting contract.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

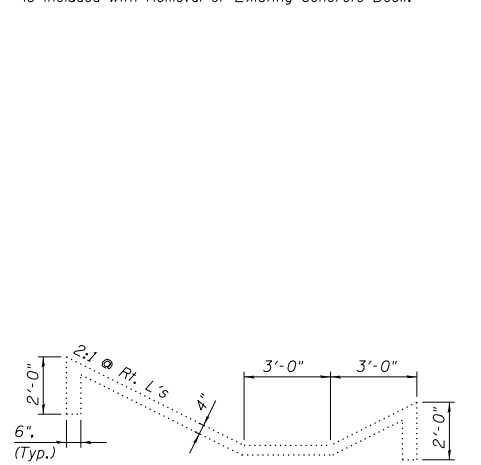
All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M 300, Type 1.

The Contractor shall resurvey the I-72 vertical clearance over each lane and shoulder following the deck replacement. This work will not be paid for separately, but shall be included with the contract lump sum price for "Construction Layout".

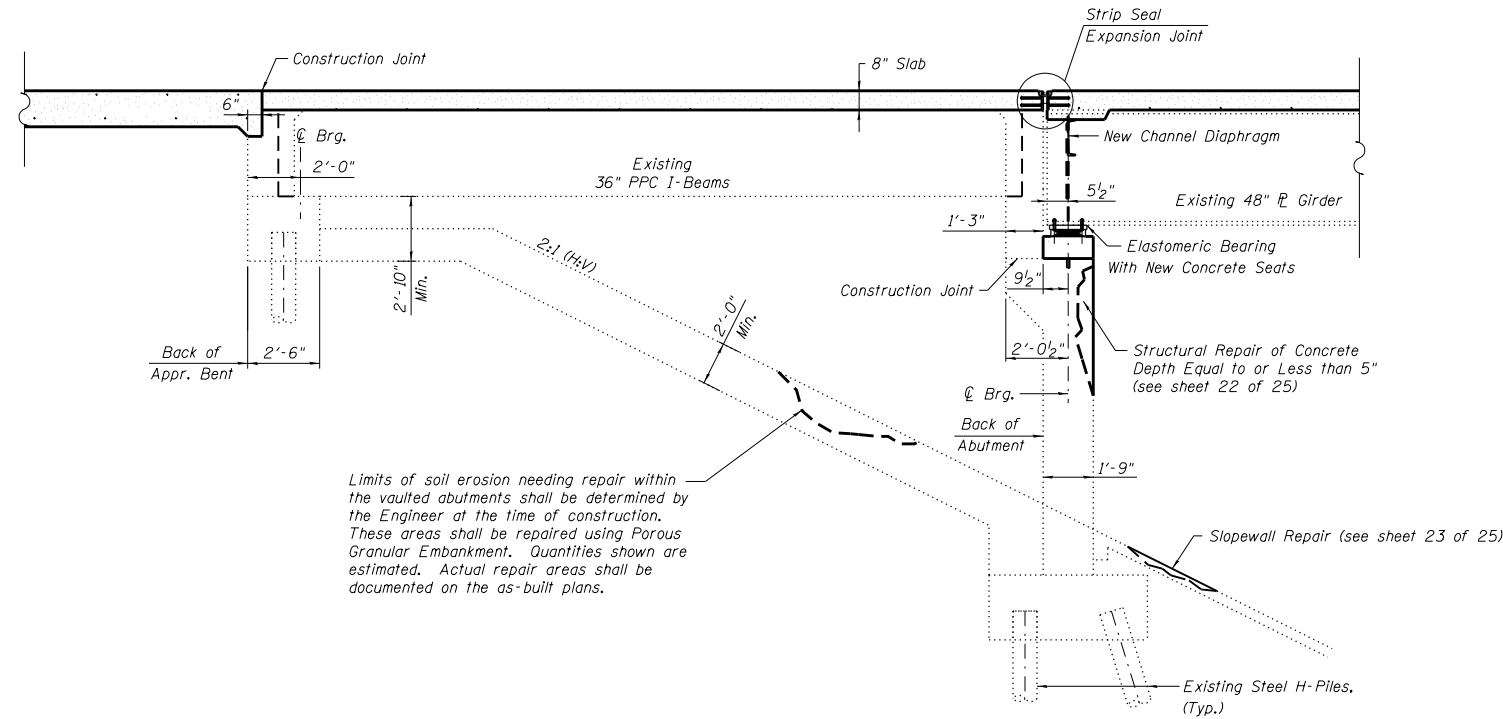
Slipforming of parapets is not allowed.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Concrete Deck	Each	1	-	1
Concrete Removal	Cu. Yd.	-	2.6	2.6
Protective Shield	Sq. Yd.	496	-	496
Concrete Structures	Cu. Yd.	-	56.0	56.0
Concrete Superstructure	Cu. Yd.	756.4	-	756.4
Bridge Deck Grooving	Sq. Yd.	1,547	-	1,547
Protective Coat	Sq. Yd.	2,604	-	2,604
Furnishing and Erecting Structural Steel	Pound	5,540	8,230	13,770
Stud Shear Connectors	Each	1,710	-	1,710
Reinforcement Bars, Epoxy Coated	Pound	182,250	9,170	191,420
Bar Splicers	Each	222	12	234
Name Plates	Each	1	-	1
Preformed Joint Strip Seal	Foot	134	-	134
Elastomeric Bearing Assembly, Type I	Each	-	18	18
Anchor Bolts, 1"	Each	-	36	36
Anchor Bolts, 1 1/2"	Each	-	18	18
Concrete Sealer	Sq. Ft.	-	392	392
Asbestos Bearing Pad Removal	Each	-	27	27
Structural Repair of Concrete, Depth Equal to or Less than 5"	Sq. Ft.	-	28	28
Drainage Scupper, DS-11	Each	4	-	4
Jacking Existing Superstructure	L. Sum	-	1	1
Slope Wall Removal	Sq. Yd.	-	8	8
Slope Wall, 4"	Sq. Yd.	-	8	8
Controlled Low Strength material	Cu. Yd.	-	4	4
Structural Steel Removal	Pound	6,900	-	6,900
Porous Granular Embankment	Ton	-	25	25



**SECTION THROUGH SLOPEWALL**



Limits of soil erosion needing repair within the vaulted abutments shall be determined by the Engineer at the time of construction. These areas shall be repaired using Porous Granular Embankment. Quantities shown are estimated. Actual repair areas shall be documented on the as-built plans.

**SECTION THRU VAULTED ABUTMENT**

(Horiz. Dim.'s @ Rt. L's)

FILE NAME TR420 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

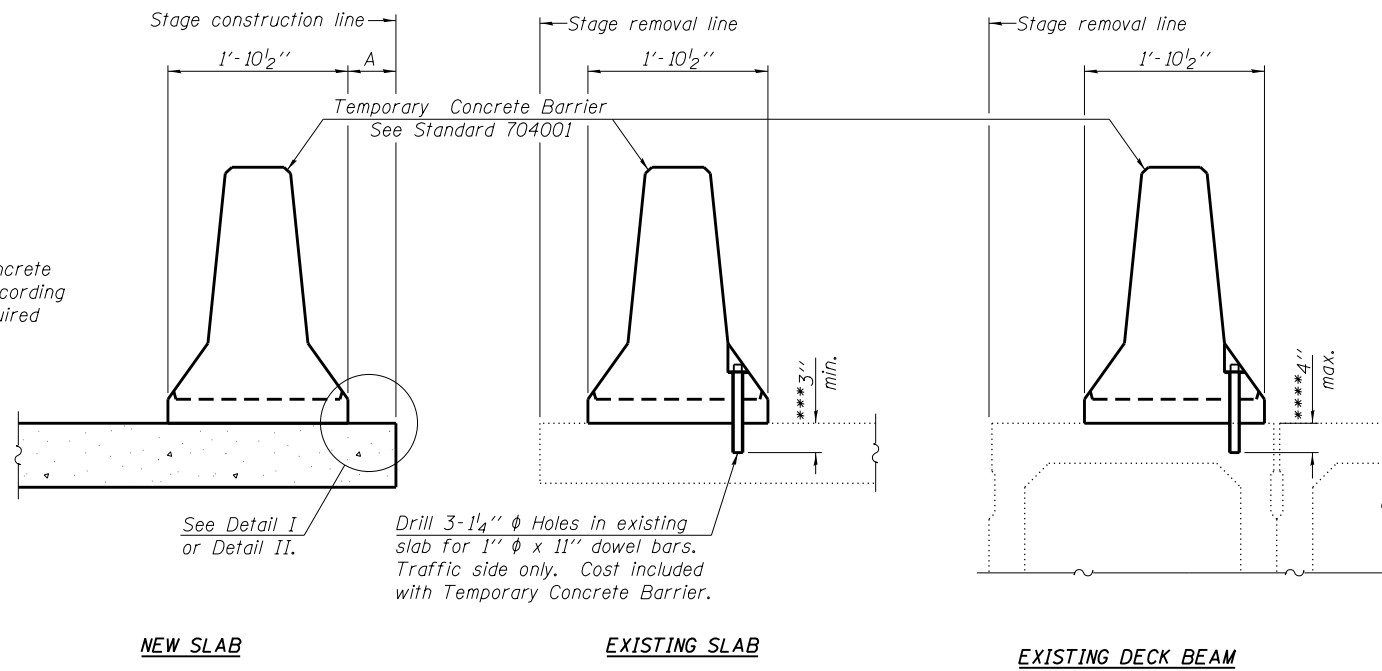
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA  
OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154**

SHEET NO. 2 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-1,2) R5-3	SANGAMON	194	149
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT			CONTRACT NO. 72C90	

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".



Drill 3-1/4"  $\phi$  Holes in existing slab for 1"  $\phi$  x 11" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

**NOTES**

Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1" x 7" x "W" steel  $\bar{r}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{c}$  of each barrier panel.

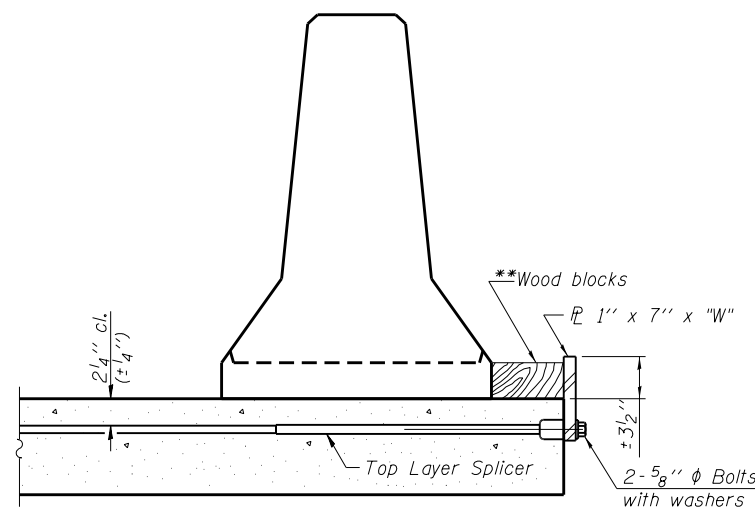
Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1" x 7" x "W" steel  $\bar{r}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{c}$  of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" 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.

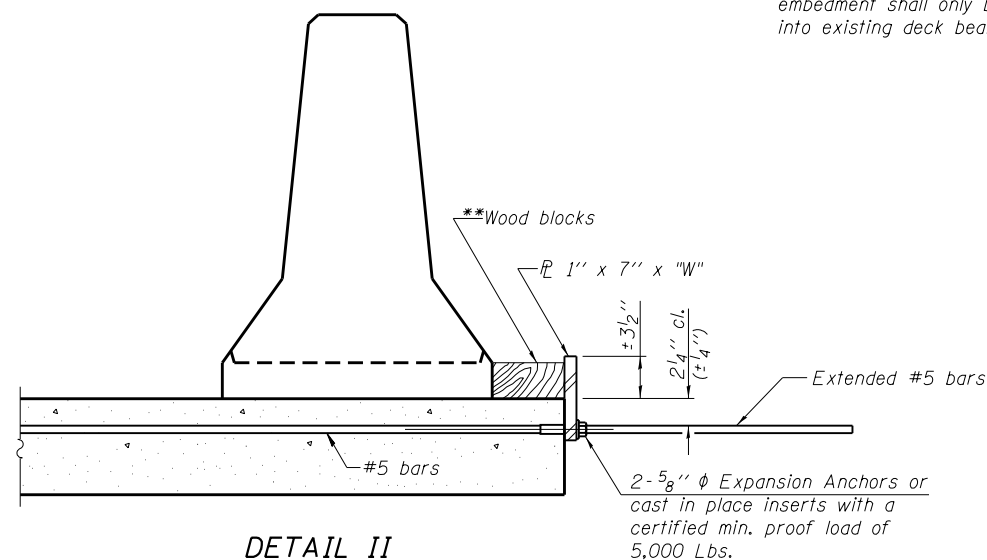
**SECTIONS THRU SLAB OR DECK BEAM**

\*\*\* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

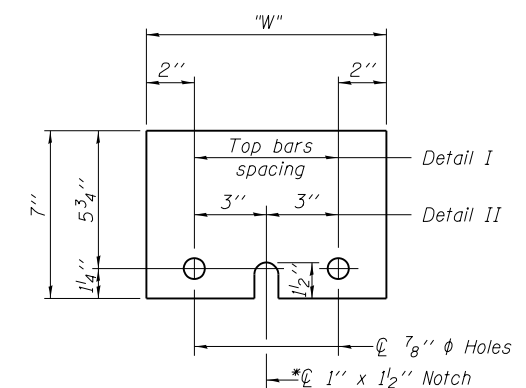
\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



**DETAIL I**



**DETAIL II**



**STEEL RETAINER  $\bar{r}$  1" x 7" x "W"**

\* Required only with Detail II

\*\* Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

R-27

7-1-10

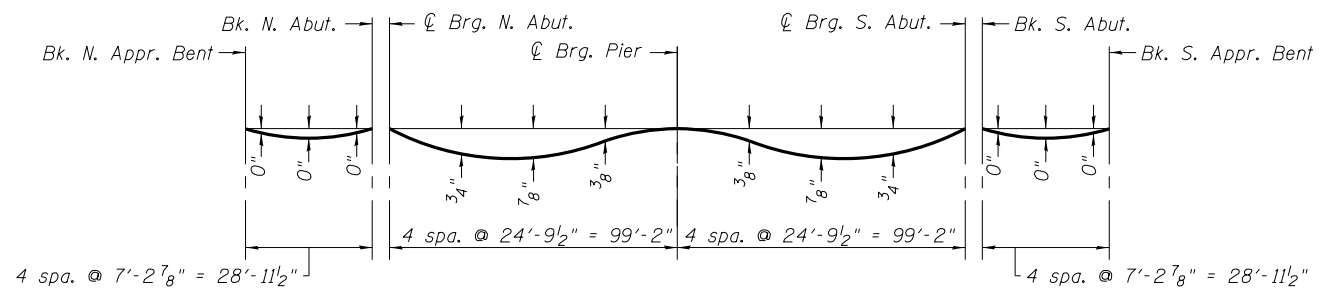
FILE NAME = TR420 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION  
OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154

SHEET NO. 3 OF 25 SHEETS

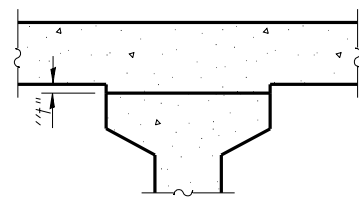
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	.	SANGAMON	194	150
• (84-10-IRS-3, 84-10-2RS-RIBR,I			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				



**DEAD LOAD DEFLECTION DIAGRAM**

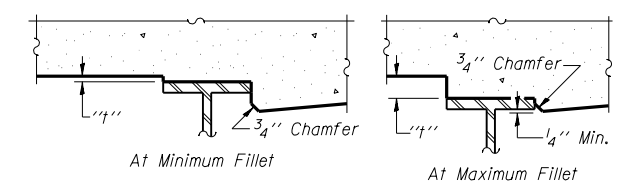
(Includes weight of concrete only.)

Note:  
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 5 & 6 of 25.



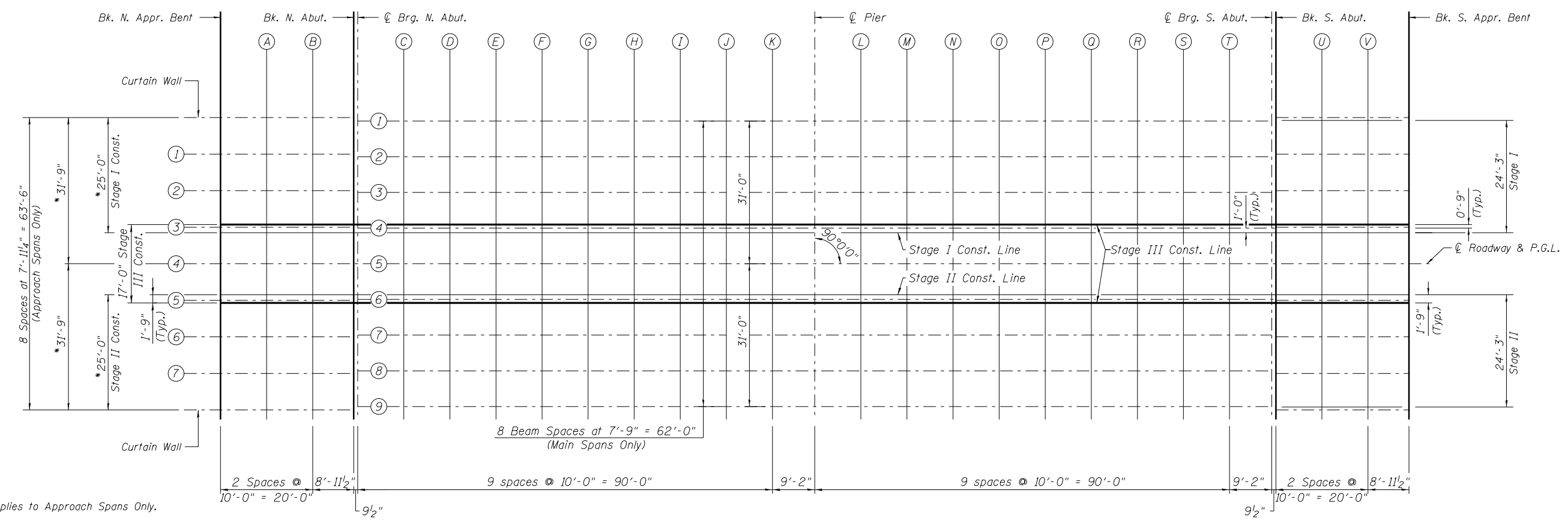
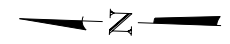
**FILLET HEIGHTS**

To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on sheets 5 & 6 of 25, minus slab thickness, equals the fillet heights "t" above top flanges of beams.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below and on sheet 5 & 6 of 25, minus slab thickness, equals the fillet heights "t" above top flange of beams.

**FILLET HEIGHTS**



**PLAN**

FILE NAME = TR420 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TOP OF SLAB ELEVATIONS (1 OF 3) OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154</b>	F.A.I. RTE. = 72	SECTION = (84-10-1,2) R5-3	COUNTY = SANGAMON	TOTAL SHEETS = 194	SHEET NO. = 151
	PLOT SCALE =	DRAWN - TJW	REVISED -			CONTRACT NO. 72C90				
	PLOT DATE =	CHECKED - MTH	REVISED -			FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				
SHEET NO. 4 OF 25 SHEETS										

**BEAM 1 (E. CURTAIN WALL\*)**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	298+51.38	-31.75	604.19	604.19
A	298+61.38	-31.75	604.28	604.28
B	298+71.38	-31.75	604.38	604.38
Bk. N. Abut.	298+80.34	-31.75	604.46	604.46
☉ Brg N. Abut.	298+81.13	-31.00	604.48	604.48
C	298+91.13	-31.00	604.55	604.57
D	299+01.13	-31.00	604.63	604.68
E	299+11.13	-31.00	604.68	604.75
F	299+21.13	-31.00	604.74	604.82
G	299+31.13	-31.00	604.78	604.85
H	299+41.13	-31.00	604.82	604.88
I	299+51.13	-31.00	604.85	604.89
J	299+61.13	-31.00	604.87	604.89
K	299+71.13	-31.00	604.88	604.89
☉ Exist. Pier	299+80.30	-31.00	604.88	604.88
L	299+90.30	-31.00	604.88	604.89
M	300+00.30	-31.00	604.87	604.89
N	300+10.30	-31.00	604.85	604.89
O	300+20.30	-31.00	604.82	604.88
P	300+30.30	-31.00	604.79	604.86
Q	300+40.30	-31.00	604.74	604.82
R	300+50.30	-31.00	604.69	604.76
S	300+60.30	-31.00	604.62	604.67
T	300+70.30	-31.00	604.56	604.58
☉ Brg S. Abut.	300+79.47	-31.00	604.48	604.48
Bk. S. Abut.	300+80.26	-31.75	604.46	604.46
U	300+90.26	-31.75	604.37	604.37
V	301+00.26	-31.75	604.28	604.28
Bk. S. Appr. Bent	301+09.22	-31.75	604.19	604.19

**BEAM 2 (BEAM 1\*)**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	298+51.38	-23.81	604.35	604.35
A	298+61.38	-23.81	604.45	604.45
B	298+71.38	-23.81	604.55	604.55
Bk. N. Abut.	298+80.34	-23.81	604.62	604.62
☉ Brg N. Abut.	298+81.13	-23.25	604.64	604.64
C	298+91.13	-23.25	604.72	604.74
D	299+01.13	-23.25	604.79	604.84
E	299+11.13	-23.25	604.85	604.92
F	299+21.13	-23.25	604.90	604.98
G	299+31.13	-23.25	604.94	605.01
H	299+41.13	-23.25	604.98	605.04
I	299+51.13	-23.25	605.01	605.05
J	299+61.13	-23.25	605.03	605.05
K	299+71.13	-23.25	605.04	605.05
☉ Exist. Pier	299+80.30	-23.25	605.05	605.05
L	299+90.30	-23.25	605.05	605.05
M	300+00.30	-23.25	605.03	605.05
N	300+10.30	-23.25	605.01	605.05
O	300+20.30	-23.25	604.98	605.04
P	300+30.30	-23.25	604.95	605.02
Q	300+40.30	-23.25	604.90	604.98
R	300+50.30	-23.25	604.85	604.92
S	300+60.30	-23.25	604.78	604.83
T	300+70.30	-23.25	604.72	604.74
☉ Brg S. Abut.	300+79.47	-23.25	604.64	604.64
Bk. S. Abut.	300+80.26	-23.81	604.62	604.62
U	300+90.26	-23.81	604.54	604.54
V	301+00.26	-23.81	604.44	604.44
Bk. S. Appr. Bent	301+09.22	-23.81	604.35	604.35

**BEAM 3 (BEAM 2\*) PART "B" SHEET 94 OF 136**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	298+51.38	-15.88	604.48	604.48
A	298+61.38	-15.88	604.58	604.58
B	298+71.38	-15.88	604.68	604.68
Bk. N. Abut.	298+80.34	-15.88	604.75	604.75
☉ Brg N. Abut.	298+81.13	-15.50	604.77	604.77
C	298+91.13	-15.50	604.84	604.86
D	299+01.13	-15.50	604.91	604.96
E	299+11.13	-15.50	604.97	605.04
F	299+21.13	-15.50	605.03	605.11
G	299+31.13	-15.50	605.07	605.14
H	299+41.13	-15.50	605.11	605.17
I	299+51.13	-15.50	605.13	605.17
J	299+61.13	-15.50	605.16	605.17
K	299+71.13	-15.50	605.16	605.17
☉ Exist. Pier	299+80.30	-15.50	605.17	605.17
L	299+90.30	-15.50	605.17	605.17
M	300+00.30	-15.50	605.15	605.17
N	300+10.30	-15.50	605.14	605.17
O	300+20.30	-15.50	605.10	605.16
P	300+30.30	-15.50	605.07	605.14
Q	300+40.30	-15.50	605.02	605.10
R	300+50.30	-15.50	604.97	605.04
S	300+60.30	-15.50	604.90	604.95
T	300+70.30	-15.50	604.84	604.86
☉ Brg S. Abut.	300+79.47	-15.50	604.77	604.77
Bk. S. Abut.	300+80.26	-15.88	604.75	604.75
U	300+90.26	-15.88	604.67	604.67
V	301+00.26	-15.88	604.57	604.57
Bk. S. Appr. Bent	301+09.22	-15.88	604.48	604.48

**BEAM 4 (BEAM 3\*)**

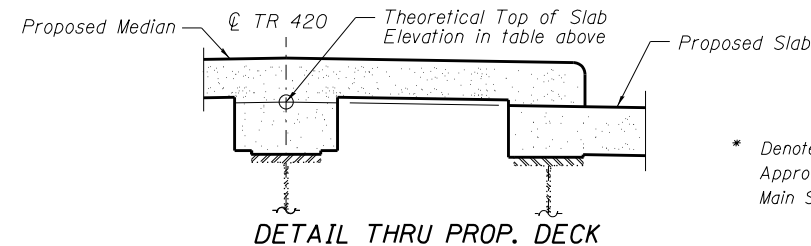
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	298+51.38	-7.94	604.61	604.61
A	298+61.38	-7.94	604.70	604.70
B	298+71.38	-7.94	604.80	604.80
Bk. N. Abut.	298+80.34	-7.94	604.87	604.87
☉ Brg N. Abut.	298+81.13	-7.75	604.89	604.89
C	298+91.13	-7.75	604.96	604.98
D	299+01.13	-7.75	605.03	605.08
E	299+11.13	-7.75	605.09	605.16
F	299+21.13	-7.75	605.15	605.23
G	299+31.13	-7.75	605.19	605.26
H	299+41.13	-7.75	605.23	605.29
I	299+51.13	-7.75	605.25	605.29
J	299+61.13	-7.75	605.28	605.29
K	299+71.13	-7.75	605.28	605.29
☉ Exist. Pier	299+80.30	-7.75	605.29	605.29
L	299+90.30	-7.75	605.29	605.29
M	300+00.30	-7.75	605.27	605.29
N	300+10.30	-7.75	605.26	605.29
O	300+20.30	-7.75	605.22	605.28
P	300+30.30	-7.75	605.19	605.26
Q	300+40.30	-7.75	605.14	605.22
R	300+50.30	-7.75	605.09	605.16
S	300+60.30	-7.75	605.03	605.08
T	300+70.30	-7.75	604.96	604.98
☉ Brg S. Abut.	300+79.47	-7.75	604.89	604.89
Bk. S. Abut.	300+80.26	-7.94	604.87	604.87
U	300+90.26	-7.94	604.79	604.79
V	301+00.26	-7.94	604.69	604.69
Bk. S. Appr. Bent	301+09.22	-7.94	604.61	604.61

**STAGE I CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	298+51.38	-6.75	604.62	604.62
A	298+61.38	-6.75	604.72	604.72
B	298+71.38	-6.75	604.82	604.82
Bk. N. Abut.	298+80.34	-6.75	604.89	604.89
☉ Brg N. Abut.	298+81.13	-6.75	604.90	604.90
C	298+91.13	-6.75	604.98	605.00
D	299+01.13	-6.75	605.05	605.10
E	299+11.13	-6.75	605.11	605.18
F	299+21.13	-6.75	605.16	605.24
G	299+31.13	-6.75	605.20	605.27
H	299+41.13	-6.75	605.24	605.30
I	299+51.13	-6.75	605.27	605.31
J	299+61.13	-6.75	605.29	605.31
K	299+71.13	-6.75	605.30	605.31
☉ Exist. Pier	299+80.30	-6.75	605.31	605.31
L	299+90.30	-6.75	605.31	605.32
M	300+00.30	-6.75	605.29	605.31
N	300+10.30	-6.75	605.27	605.31
O	300+20.30	-6.75	605.24	605.30
P	300+30.30	-6.75	605.21	605.28
Q	300+40.30	-6.75	605.16	605.24
R	300+50.30	-6.75	605.11	605.18
S	300+60.30	-6.75	605.04	605.09
T	300+70.30	-6.75	604.98	605.00
☉ Brg S. Abut.	300+79.47	-6.75	604.90	604.90
Bk. S. Abut.	300+80.26	-6.75	604.89	604.89
U	300+90.26	-6.75	604.81	604.81
V	301+00.26	-6.75	604.71	604.71
Bk. S. Appr. Bent	301+09.22	-6.75	604.62	604.62

**☉ ROADWAY, CROWN, PGL & BEAM 5 (BEAM 4\*)**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	298+51.38	0.00	604.73	604.73
A	298+61.38	0.00	604.83	604.83
B	298+71.38	0.00	604.92	604.92
Bk. N. Abut.	298+80.34	0.00	605.00	605.00
☉ Brg N. Abut.	298+81.13	0.00	605.01	605.01
C	298+91.13	0.00	605.08	605.10
D	299+01.13	0.00	605.15	605.20
E	299+11.13	0.00	605.21	605.28
F	299+21.13	0.00	605.27	605.35
G	299+31.13	0.00	605.31	605.38
H	299+41.13	0.00	605.35	605.41
I	299+51.13	0.00	605.37	605.41
J	299+61.13	0.00	605.40	605.41
K	299+71.13	0.00	605.40	605.41
☉ Exist. Pier	299+80.30	0.00	605.41	605.41
L	299+90.30	0.00	605.41	605.41
M	300+00.30	0.00	605.39	605.41
N	300+10.30	0.00	605.38	605.41
O	300+20.30	0.00	605.34	605.40
P	300+30.30	0.00	605.31	605.38
Q	300+40.30	0.00	605.26	605.34
R	300+50.30	0.00	605.21	605.28
S	300+60.30	0.00	605.15	605.20
T	300+70.30	0.00	605.08	605.10
☉ Brg S. Abut.	300+79.47	0.00	605.01	605.01
Bk. S. Abut.	300+80.26	0.00	605.00	605.00
U	300+90.26	0.00	604.92	604.92
V	301+00.26	0.00	604.82	604.82
Bk. S. Appr. Bent	301+09.22	0.00	604.73	604.73



\* Denotes description variations for Approach Spans associated with Main Span callouts.

STAGE II CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	298+51.38	6.75	604.62	604.62
A	298+61.38	6.75	604.72	604.72
B	298+71.38	6.75	604.82	604.82
Bk. N. Abut.	298+80.34	6.75	604.89	604.89
⊕ Brg N. Abut.	298+81.13	6.75	604.90	604.90
C	298+91.13	6.75	604.98	605.00
D	299+01.13	6.75	605.05	605.10
E	299+11.13	6.75	605.11	605.18
F	299+21.13	6.75	605.16	605.24
G	299+31.13	6.75	605.20	605.27
H	299+41.13	6.75	605.24	605.30
I	299+51.13	6.75	605.27	605.31
J	299+61.13	6.75	605.29	605.31
K	299+71.13	6.75	605.30	605.31
⊕ Exist. Pier	299+80.30	6.75	605.31	605.31
L	299+90.30	6.75	605.31	605.32
M	300+00.30	6.75	605.29	605.31
N	300+10.30	6.75	605.27	605.31
O	300+20.30	6.75	605.24	605.30
P	300+30.30	6.75	605.21	605.28
Q	300+40.30	6.75	605.16	605.24
R	300+50.30	6.75	605.11	605.18
S	300+60.30	6.75	605.04	605.09
T	300+70.30	6.75	604.98	605.00
⊕ Brg S. Abut.	300+79.47	6.75	604.90	604.90
Bk. S. Abut.	300+80.26	6.75	604.89	604.89
U	300+90.26	6.75	604.81	604.81
V	301+00.26	6.75	604.71	604.71
Bk. S. Appr. Bent	301+09.22	6.75	604.62	604.62

BEAM 6 (BEAM 5\*)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	298+51.38	7.94	604.61	604.61
A	298+61.38	7.94	604.70	604.70
B	298+71.38	7.94	604.80	604.80
Bk. N. Abut.	298+80.34	7.94	604.87	604.87
⊕ Brg N. Abut.	298+81.13	7.75	604.89	604.89
C	298+91.13	7.75	604.96	604.98
D	299+01.13	7.75	605.03	605.08
E	299+11.13	7.75	605.09	605.16
F	299+21.13	7.75	605.15	605.23
G	299+31.13	7.75	605.19	605.26
H	299+41.13	7.75	605.23	605.29
I	299+51.13	7.75	605.25	605.29
J	299+61.13	7.75	605.28	605.29
K	299+71.13	7.75	605.28	605.29
⊕ Exist. Pier	299+80.30	7.75	605.29	605.29
L	299+90.30	7.75	605.29	605.29
M	300+00.30	7.75	605.27	605.29
N	300+10.30	7.75	605.26	605.29
O	300+20.30	7.75	605.22	605.28
P	300+30.30	7.75	605.19	605.26
Q	300+40.30	7.75	605.14	605.22
R	300+50.30	7.75	605.09	605.16
S	300+60.30	7.75	605.03	605.08
T	300+70.30	7.75	604.96	604.98
⊕ Brg S. Abut.	300+79.47	7.75	604.89	604.89
Bk. S. Abut.	300+80.26	7.94	604.87	604.87
U	300+90.26	7.94	604.79	604.79
V	301+00.26	7.94	604.69	604.69
Bk. S. Appr. Bent	301+09.22	7.94	604.61	604.61

BEAM 7 (BEAM 6\*)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	298+51.38	15.88	604.48	604.48
A	298+61.38	15.88	604.58	604.58
B	298+71.38	15.88	604.68	604.68
Bk. N. Abut.	298+80.34	15.88	604.75	604.75
⊕ Brg N. Abut.	298+81.13	15.50	604.77	604.77
C	298+91.13	15.50	604.84	604.86
D	299+01.13	15.50	604.91	604.96
E	299+11.13	15.50	604.97	605.04
F	299+21.13	15.50	605.03	605.11
G	299+31.13	15.50	605.07	605.14
H	299+41.13	15.50	605.11	605.17
I	299+51.13	15.50	605.13	605.17
J	299+61.13	15.50	605.16	605.17
K	299+71.13	15.50	605.16	605.17
⊕ Exist. Pier	299+80.30	15.50	605.17	605.17
L	299+90.30	15.50	605.17	605.17
M	300+00.30	15.50	605.15	605.17
N	300+10.30	15.50	605.14	605.17
O	300+20.30	15.50	605.10	605.16
P	300+30.30	15.50	605.07	605.14
Q	300+40.30	15.50	605.02	605.10
R	300+50.30	15.50	604.97	605.04
S	300+60.30	15.50	604.90	604.95
T	300+70.30	15.50	604.84	604.86
⊕ Brg S. Abut.	300+79.47	15.50	604.77	604.77
Bk. S. Abut.	300+80.26	15.88	604.75	604.75
U	300+90.26	15.88	604.67	604.67
V	301+00.26	15.88	604.57	604.57
Bk. S. Appr. Bent	301+09.22	15.88	604.48	604.48

BEAM 8 (BEAM 7\*)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	298+51.38	23.81	604.35	604.35
A	298+61.38	23.81	604.45	604.45
B	298+71.38	23.81	604.55	604.55
Bk. N. Abut.	298+80.34	23.81	604.62	604.62
⊕ Brg N. Abut.	298+81.13	23.25	604.64	604.64
C	298+91.13	23.25	604.72	604.74
D	299+01.13	23.25	604.79	604.84
E	299+11.13	23.25	604.85	604.92
F	299+21.13	23.25	604.90	604.98
G	299+31.13	23.25	604.94	605.01
H	299+41.13	23.25	604.98	605.04
I	299+51.13	23.25	605.01	605.05
J	299+61.13	23.25	605.03	605.05
K	299+71.13	23.25	605.04	605.05
⊕ Exist. Pier	299+80.30	23.25	605.05	605.05
L	299+90.30	23.25	605.05	605.05
M	300+00.30	23.25	605.03	605.05
N	300+10.30	23.25	605.01	605.05
O	300+20.30	23.25	604.98	605.04
P	300+30.30	23.25	604.95	605.02
Q	300+40.30	23.25	604.90	604.98
R	300+50.30	23.25	604.85	604.92
S	300+60.30	23.25	604.78	604.83
T	300+70.30	23.25	604.72	604.74
⊕ Brg S. Abut.	300+79.47	23.25	604.64	604.64
Bk. S. Abut.	300+80.26	23.81	604.62	604.62
U	300+90.26	23.81	604.54	604.54
V	301+00.26	23.81	604.44	604.44
Bk. S. Appr. Bent	301+09.22	23.81	604.35	604.35

BEAM 9 (W. CURTAIN WALL \*)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Appr. Bent	298+51.38	31.75	604.19	604.19
A	298+61.38	31.75	604.28	604.28
B	298+71.38	31.75	604.38	604.38
Bk. N. Abut.	298+80.34	31.75	604.46	604.46
⊕ Brg N. Abut.	298+81.13	31.00	604.48	604.48
C	298+91.13	31.00	604.55	604.57
D	299+01.13	31.00	604.63	604.68
E	299+11.13	31.00	604.68	604.75
F	299+21.13	31.00	604.74	604.82
G	299+31.13	31.00	604.78	604.85
H	299+41.13	31.00	604.82	604.88
I	299+51.13	31.00	604.85	604.89
J	299+61.13	31.00	604.87	604.89
K	299+71.13	31.00	604.88	604.89
⊕ Exist. Pier	299+80.30	31.00	604.88	604.88
L	299+90.30	31.00	604.88	604.89
M	300+00.30	31.00	604.87	604.89
N	300+10.30	31.00	604.85	604.89
O	300+20.30	31.00	604.82	604.88
P	300+30.30	31.00	604.79	604.86
Q	300+40.30	31.00	604.74	604.82
R	300+50.30	31.00	604.69	604.76
S	300+60.30	31.00	604.62	604.67
T	300+70.30	31.00	604.56	604.58
⊕ Brg S. Abut.	300+79.47	31.00	604.48	604.48
Bk. S. Abut.	300+80.26	31.75	604.46	604.46
U	300+90.26	31.75	604.37	604.37
V	301+00.26	31.75	604.28	604.28
Bk. S. Appr. Bent	301+09.22	31.75	604.19	604.19

\* Denotes description variations for Approach Spans associated with Main Span callouts.

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	298+21.88	-32.417	603.83
A	298+31.88	-32.417	603.95
B	298+41.88	-32.417	604.07
S. End N. Appr. Slab	298+51.88	-32.417	604.17
N. End S. Appr. Slab	301+08.72	-32.417	604.17
C	301+18.72	-32.417	604.07
D	301+28.72	-32.417	603.95
S. End S. Appr. Slab	301+38.72	-32.417	603.83

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	298+21.88	-23.000	604.03
A	298+31.88	-23.000	604.15
B	298+41.88	-23.000	604.27
S. End N. Appr. Slab	298+51.88	-23.000	604.37
N. End S. Appr. Slab	301+08.72	-23.000	604.37
C	301+18.72	-23.000	604.27
D	301+28.72	-23.000	604.15
S. End S. Appr. Slab	301+38.72	-23.000	604.03

EAST EDGE OF MEDIAN

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	298+21.88	-9.000	604.25
A	298+31.88	-9.000	604.37
B	298+41.88	-9.000	604.49
S. End N. Appr. Slab	298+51.88	-9.000	604.59
N. End S. Appr. Slab	301+08.72	-9.000	604.59
C	301+18.72	-9.000	604.49
D	301+28.72	-9.000	604.37
S. End S. Appr. Slab	301+38.72	-9.000	604.25

☉ ROADWAY & PGL

Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	298+21.88	0.000	604.39
A	298+31.88	0.000	604.51
B	298+41.88	0.000	604.63
S. End N. Appr. Slab	298+51.88	0.000	604.73
N. End S. Appr. Slab	301+08.72	0.000	604.73
C	301+18.72	0.000	604.63
D	301+28.72	0.000	604.51
S. End S. Appr. Slab	301+38.72	0.000	604.39

WEST EDGE OF MEDIAN

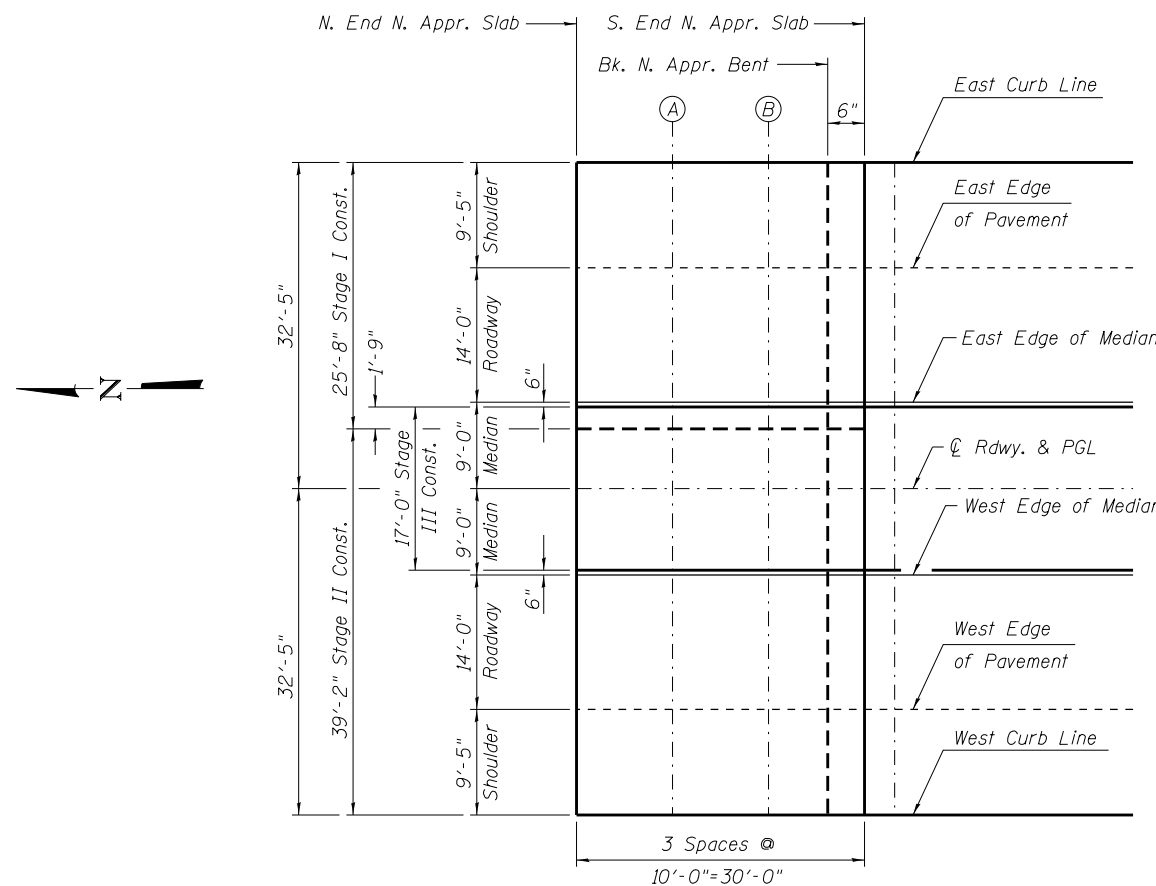
Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	298+21.88	9.000	604.25
A	298+31.88	9.000	604.37
B	298+41.88	9.000	604.49
S. End N. Appr. Slab	298+51.88	9.000	604.59
N. End S. Appr. Slab	301+08.72	9.000	604.59
C	301+18.72	9.000	604.49
D	301+28.72	9.000	604.37
S. End S. Appr. Slab	301+38.72	9.000	604.25

WEST EDGE OF PAVEMENT

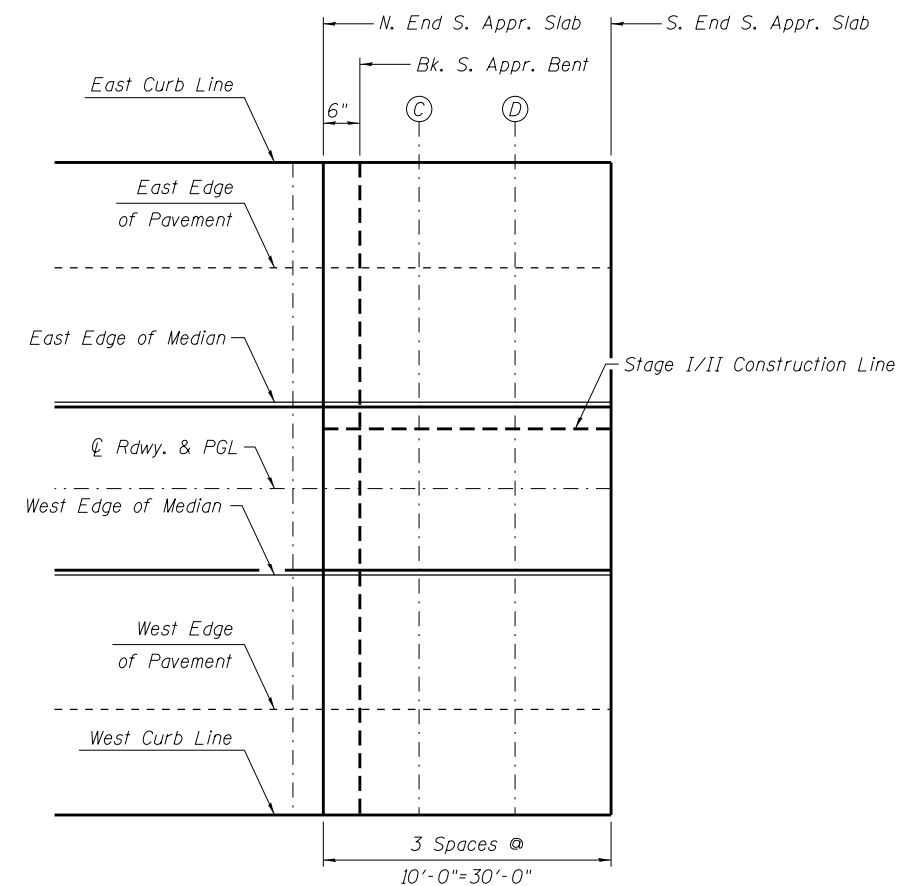
Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	298+21.88	23.000	604.03
A	298+31.88	23.000	604.15
B	298+41.88	23.000	604.27
S. End N. Appr. Slab	298+51.88	23.000	604.37
N. End S. Appr. Slab	301+08.72	23.000	604.37
C	301+18.72	23.000	604.27
D	301+28.72	23.000	604.15
S. End S. Appr. Slab	301+38.72	23.000	604.03

WEST CURB LINE

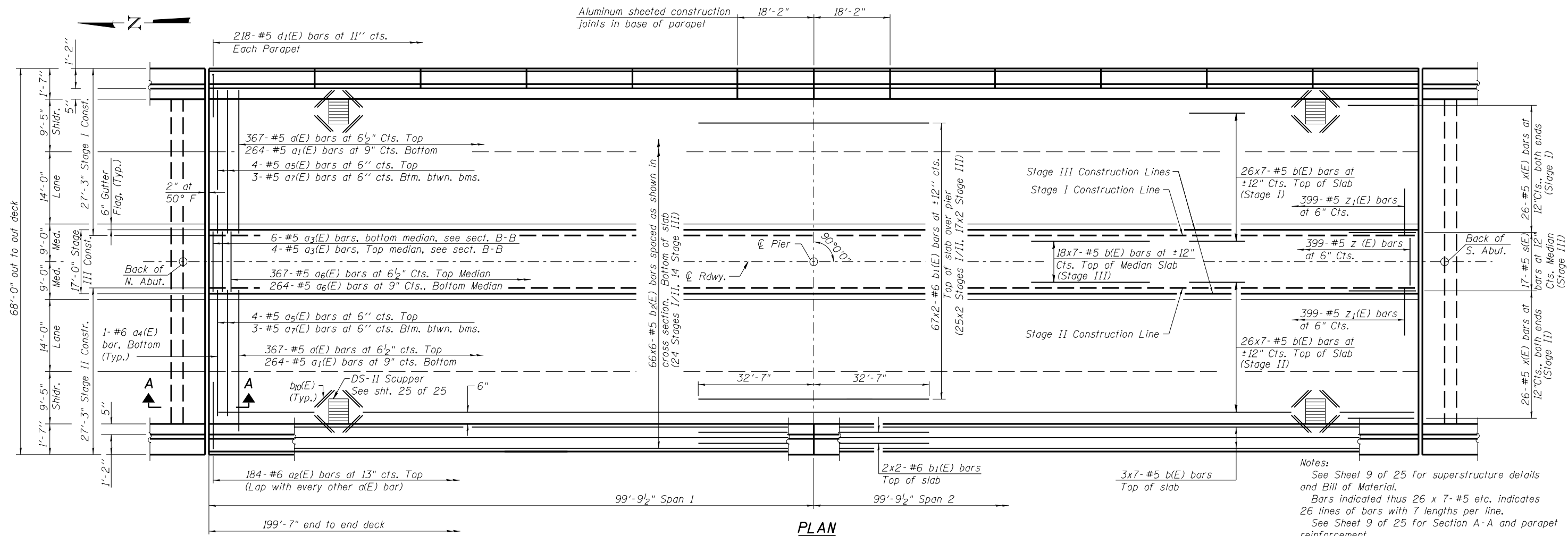
Location	Station	Offset	Theoretical Grade Elevations
N. End N. Appr. Slab	298+21.88	32.417	603.83
A	298+31.88	32.417	603.95
B	298+41.88	32.417	604.07
S. End N. Appr. Slab	298+51.88	32.417	604.17
N. End S. Appr. Slab	301+08.72	32.417	604.17
C	301+18.72	32.417	604.07
D	301+28.72	32.417	603.95
S. End S. Appr. Slab	301+38.72	32.417	603.83



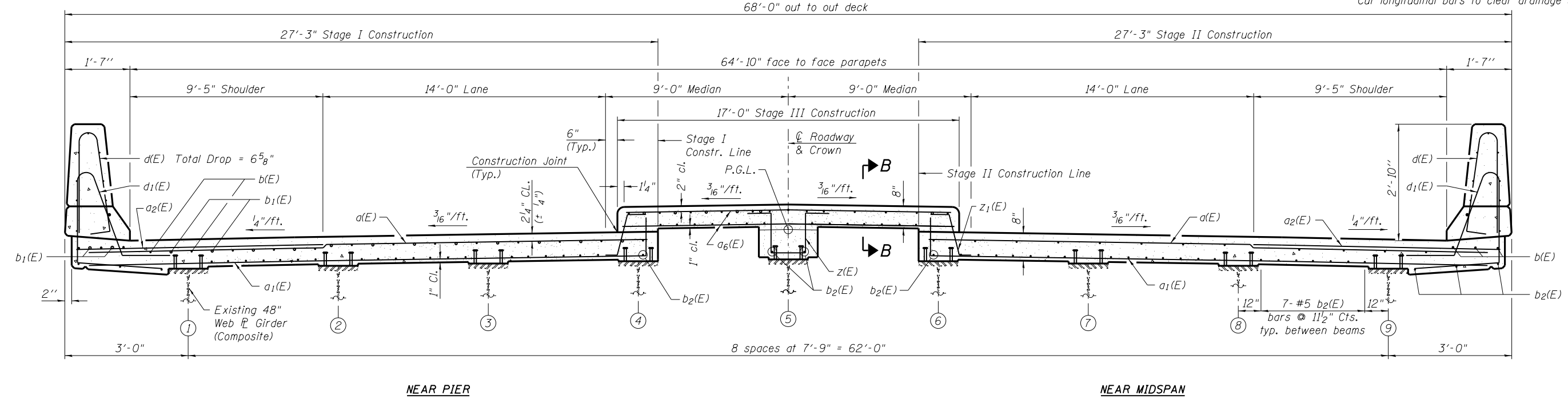
**PLAN**  
(North Approach)



**PLAN**  
(South Approach)

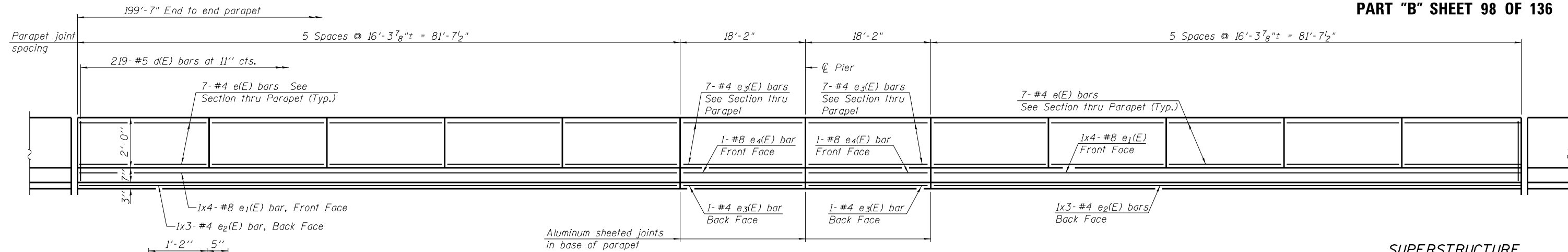


Notes:  
See Sheet 9 of 25 for superstructure details and Bill of Material.  
Bars indicated thus 26 x 7- #5 etc. indicates 26 lines of bars with 7 lengths per line.  
See Sheet 9 of 25 for Section A-A and parapet reinforcement.  
Cut longitudinal bars to clear drainage scuppers.

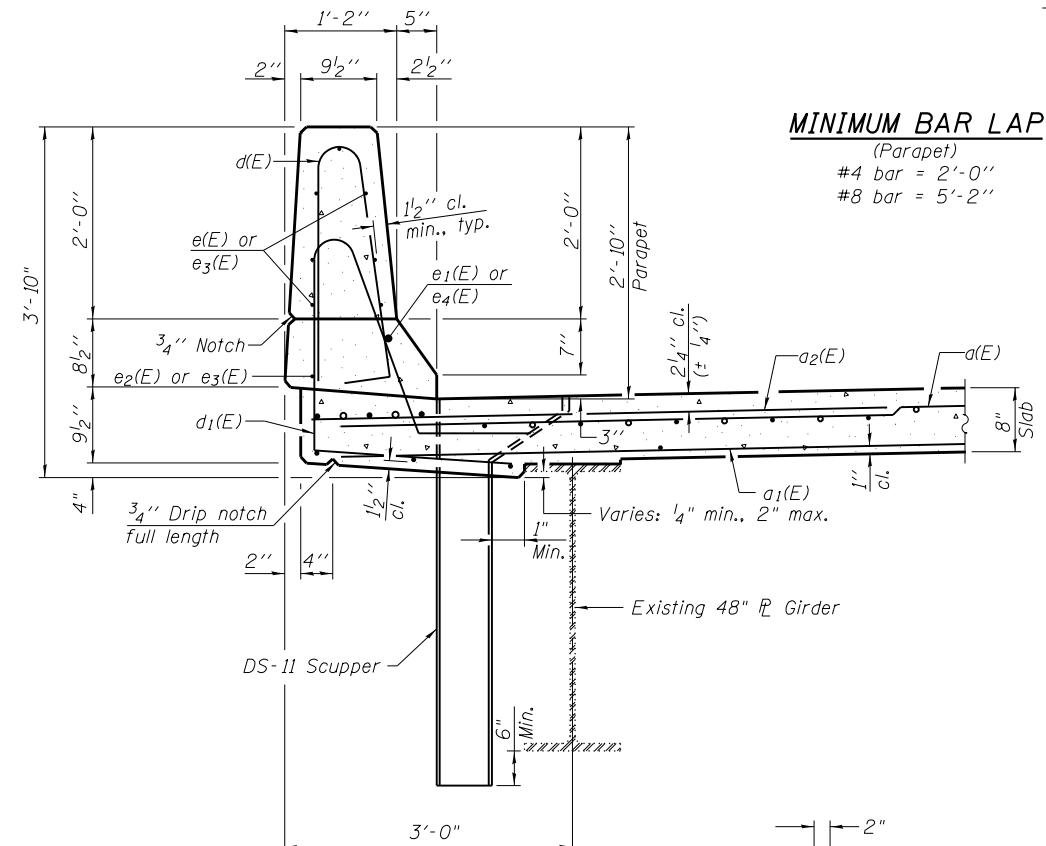


MINIMUM BAR LAP (DECK)  
#5 Bar = 2'-7"  
#6 Bar = 3'-1"

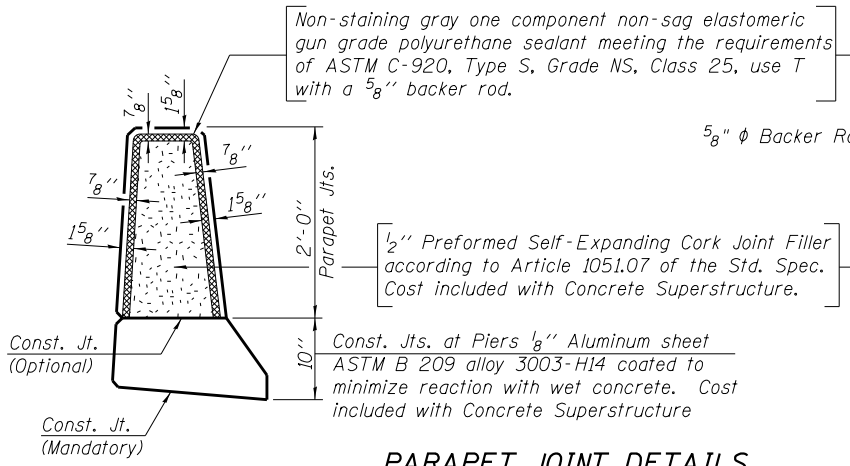
FILE NAME = TR420 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUPERSTRUCTURE OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - MTH	REVISED -			72	(84-10-1,2) R5-3	SANGAMON	194	155	
		DRAWN - TJW	REVISED -			CONTRACT NO. 72C90					
		CHECKED - MTH	REVISED -			SHEET NO. 8 OF 25 SHEETS					
				FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT							



**INSIDE ELEVATION OF PARAPET**

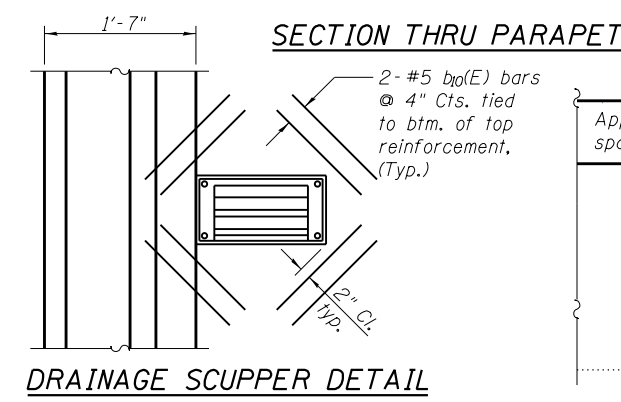


**MINIMUM BAR LAP**  
(Parapet)  
#4 bar = 2'-0"  
#8 bar = 5'-2"



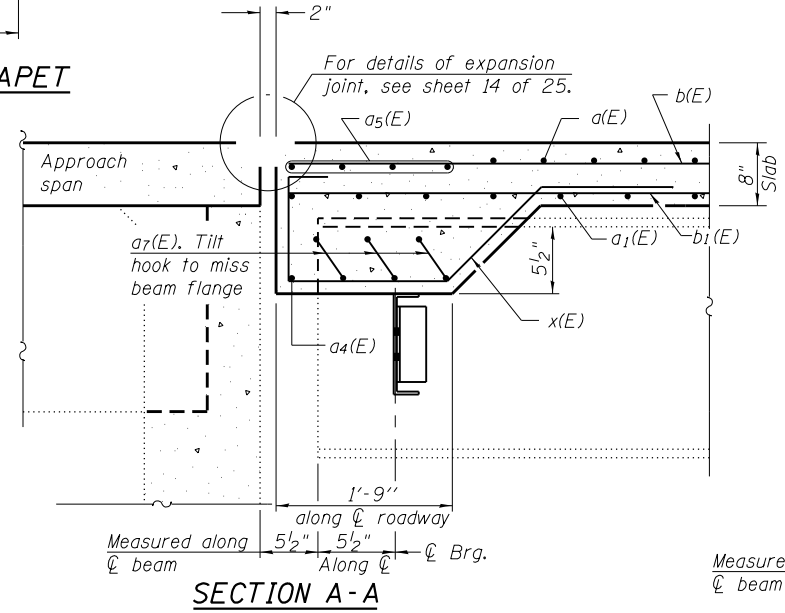
**PARAPET JOINT DETAILS**

Notes:  
Drains shall be located clear of all diaphragms.  
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coatings Spec. SSPC-SP1 prior to painting.  
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.  
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Cost of Drainage Scuppers.

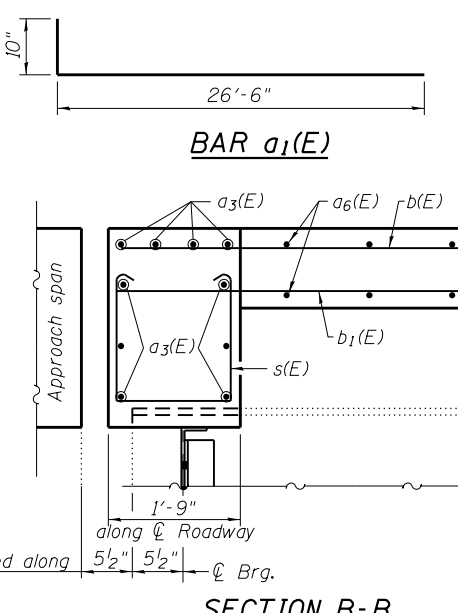


**SECTION THRU PARAPET**

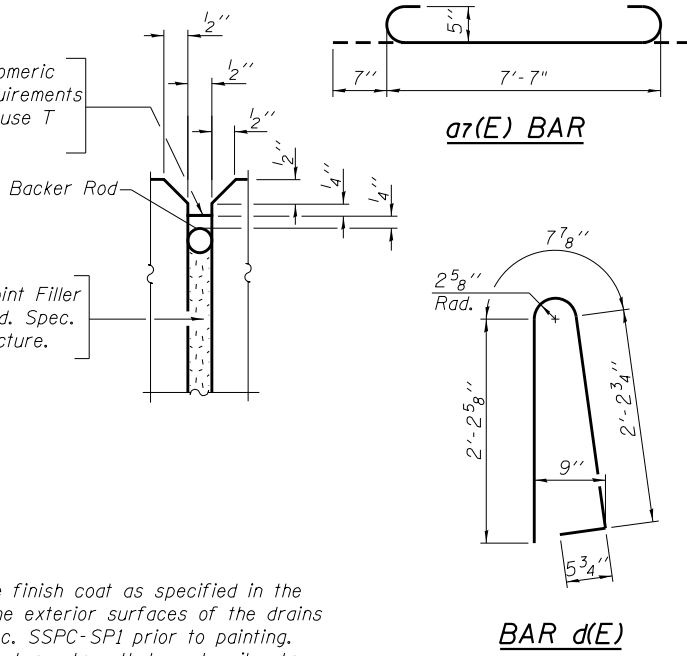
**DRAINAGE SCUPPER DETAIL**



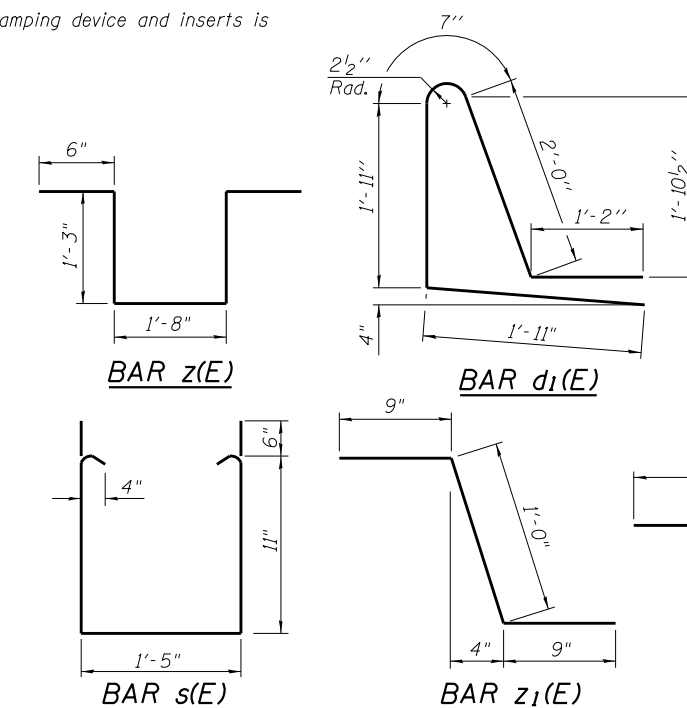
**SECTION A-A**



**SECTION B-B**



**BAR d(E)**



**BAR s(E)**

**BAR z1(E)**

**BAR x(E)**

**SUPERSTRUCTURE BILL OF MATERIAL**

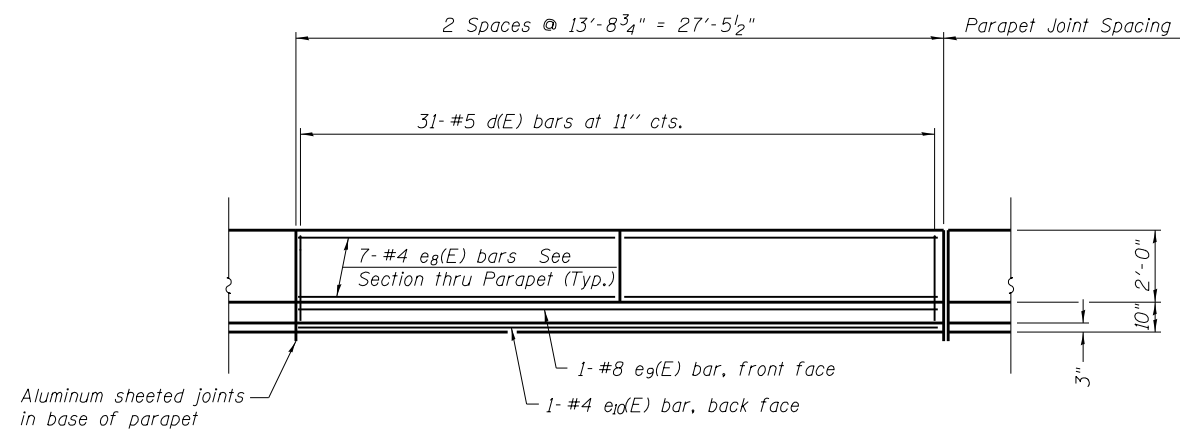
Bar	No.	Size	Length	Shape
a(E)	734	#5	26'-6"	—
a1(E)	528	#5	26'-4"	—
a2(E)	368	#6	6'-6"	—
a3(E)	20	#6	16'-10"	—
a4(E)	4	#6	26'-9"	—
a5(E)	16	#5	26'-11"	—
a6(E)	631	#5	16'-8"	—
a7(E)	36	#5	8'-9"	—
b(E)	532	#5	30'-9"	—
b1(E)	142	#6	34'-2"	—
b2(E)	372	#5	35'-5"	—
b3(E)	32	#5	2'-0"	—
d(E)	438	#5	5'-7"	—
d1(E)	436	#5	7'-7"	—
e(E)	140	#4	16'-0"	—
e1(E)	16	#8	24'-4"	—
e2(E)	12	#4	28'-7"	—
e3(E)	32	#4	17'-10"	—
e4(E)	4	#8	17'-10"	—
s(E)	34	#5	4'-3"	—
x(E)	104	#5	6'-5"	—
z(E)	399	#5	5'-2"	—
z1(E)	798	#5	2'-6"	—
Reinforcement Bars, Epoxy Coated			Pound	103,370
Concrete Superstructure			Cu. Yds.	408.8

Bars indicated thus 1 x 4 - #8 etc. indicates 1 line of bars with 4 lengths per line.

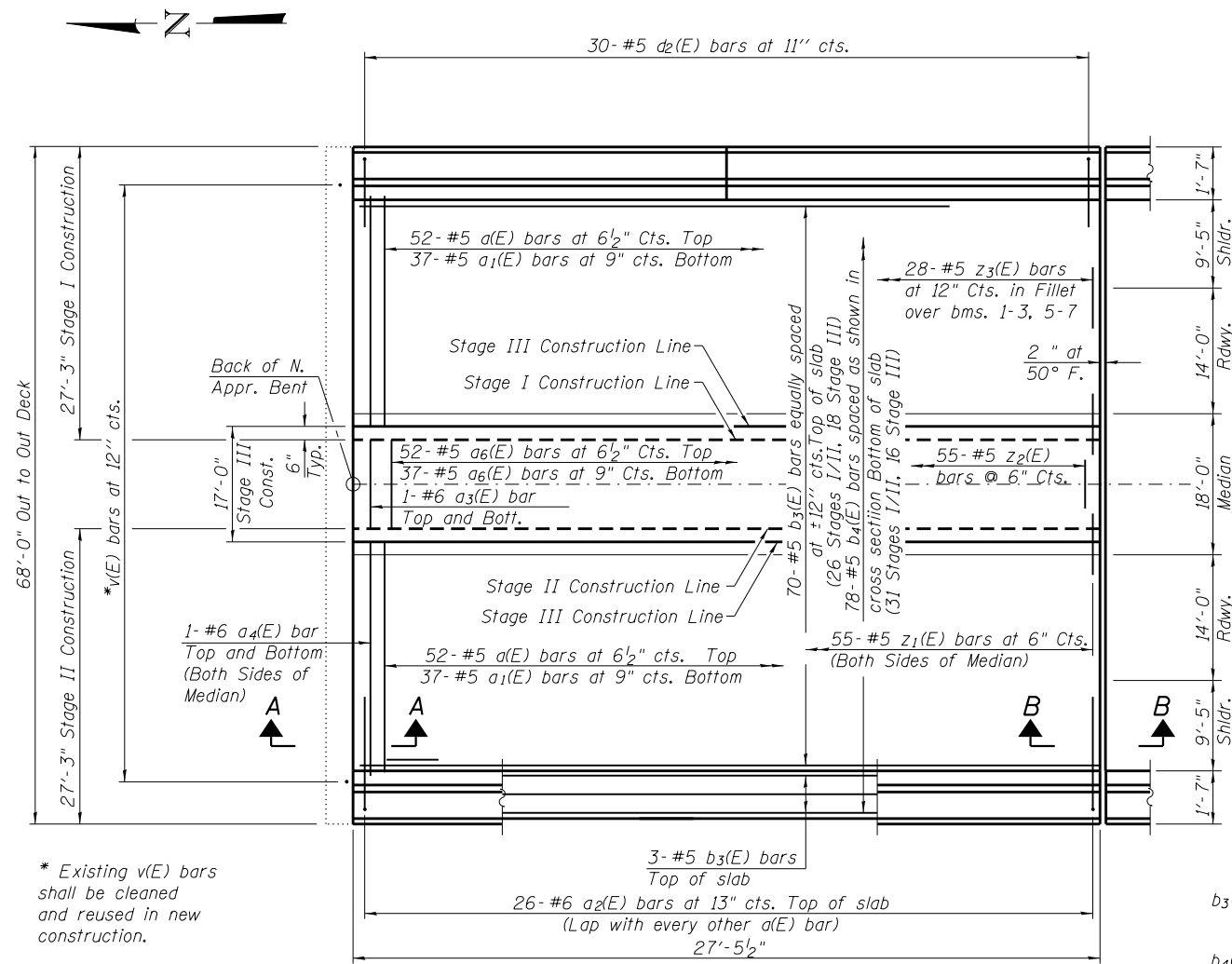


1/4" x 3/4" Formed Joint with bridge relief joint sealer (full width) See Special Provisions.

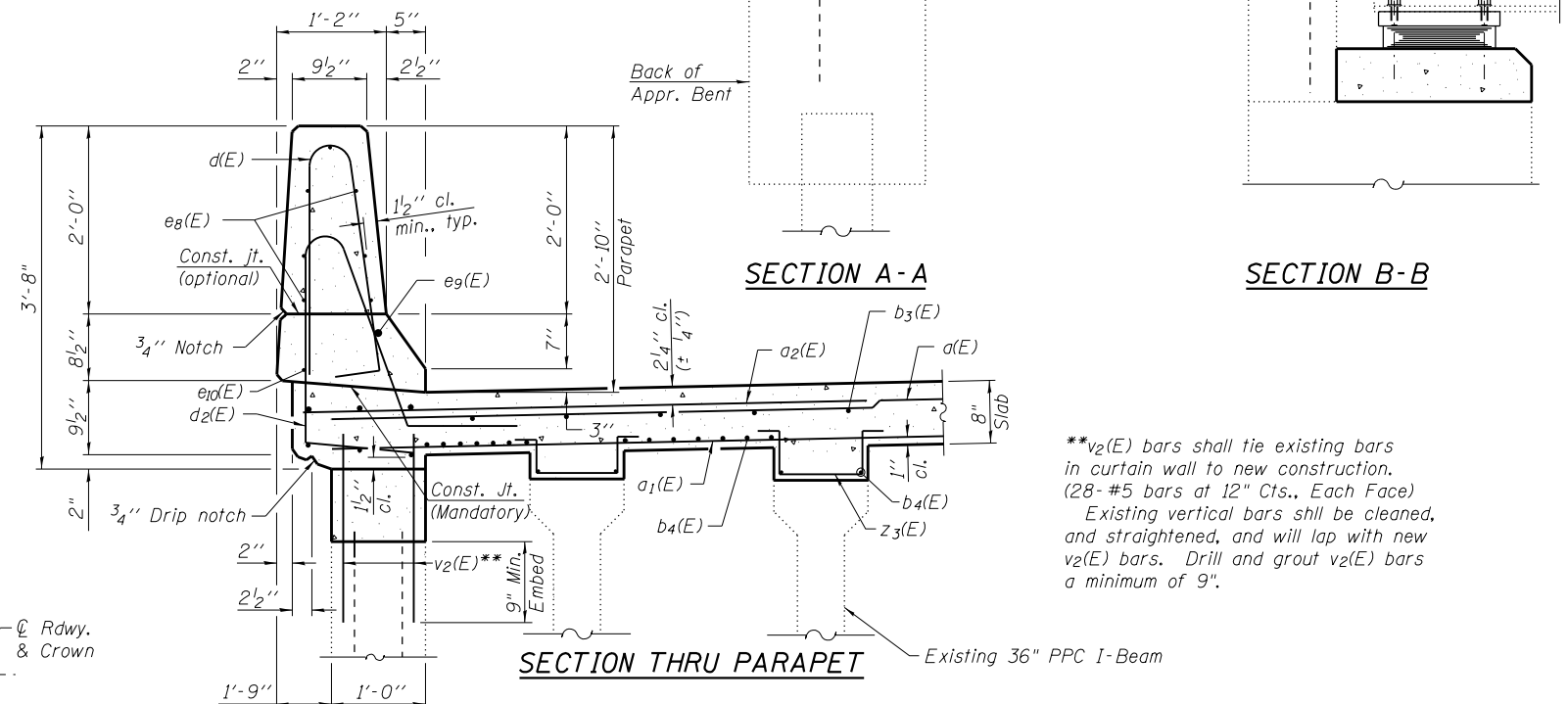
Note: Contractor shall exercise extreme care while removing concrete around PPC I- beams to ensure no damage is done to the beams.



INSIDE ELEVATION OF PARAPET

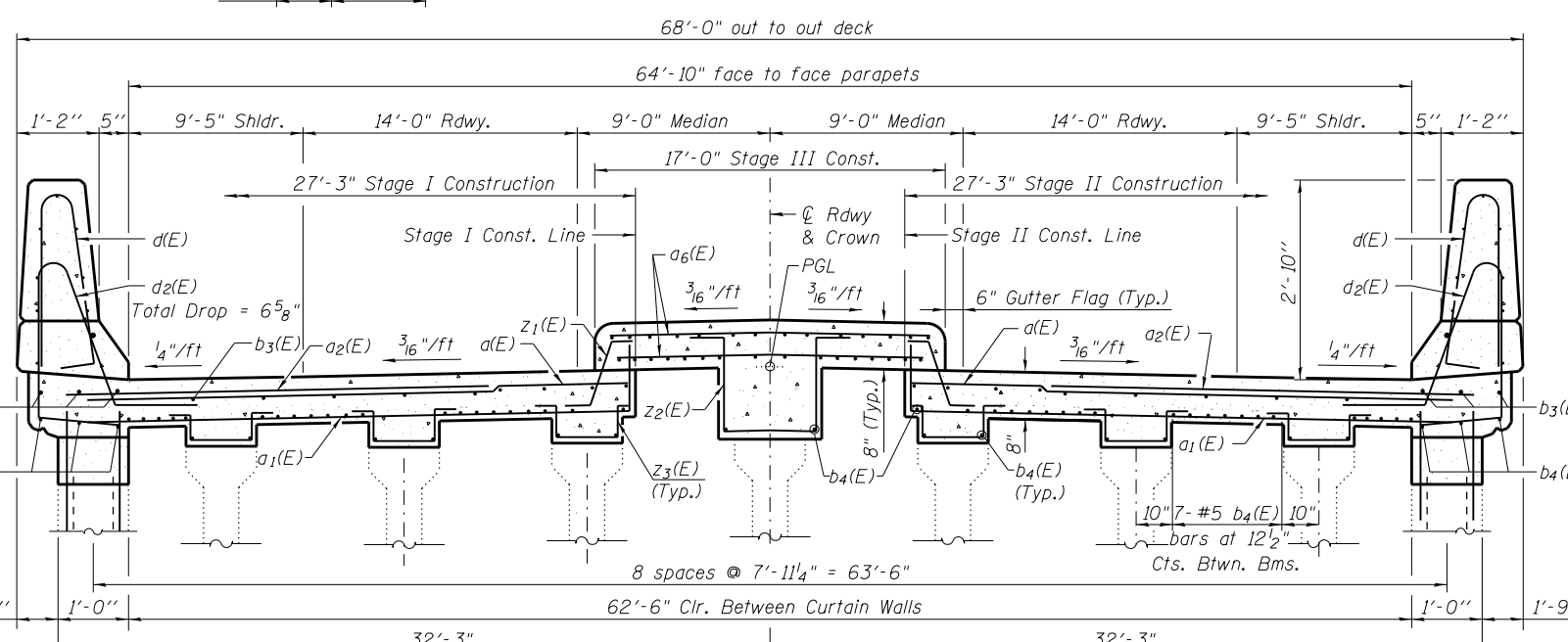


PLAN  
(N. Approach Span Shown, S. Approach Span Similar)



SECTION A-A

SECTION B-B

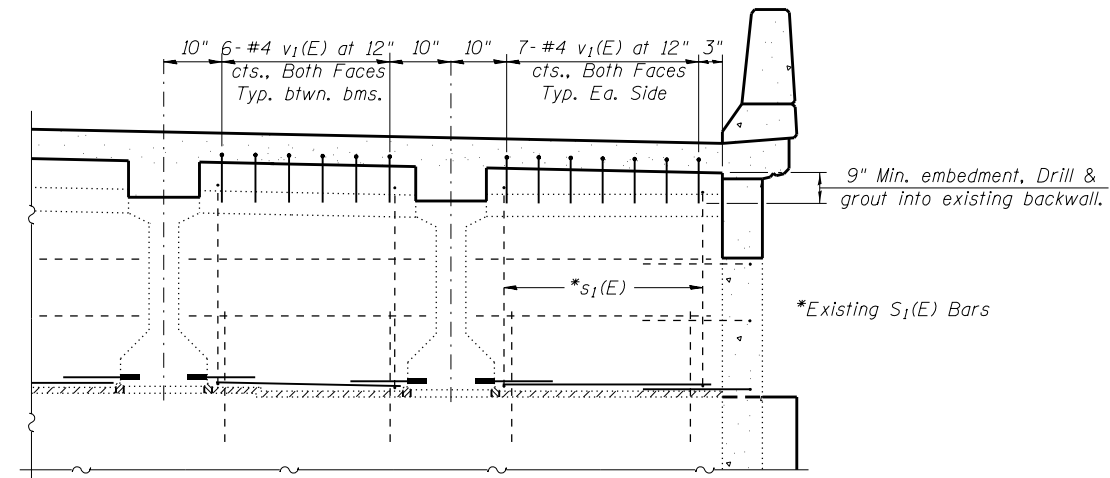


CROSS SECTION  
(Looking South)

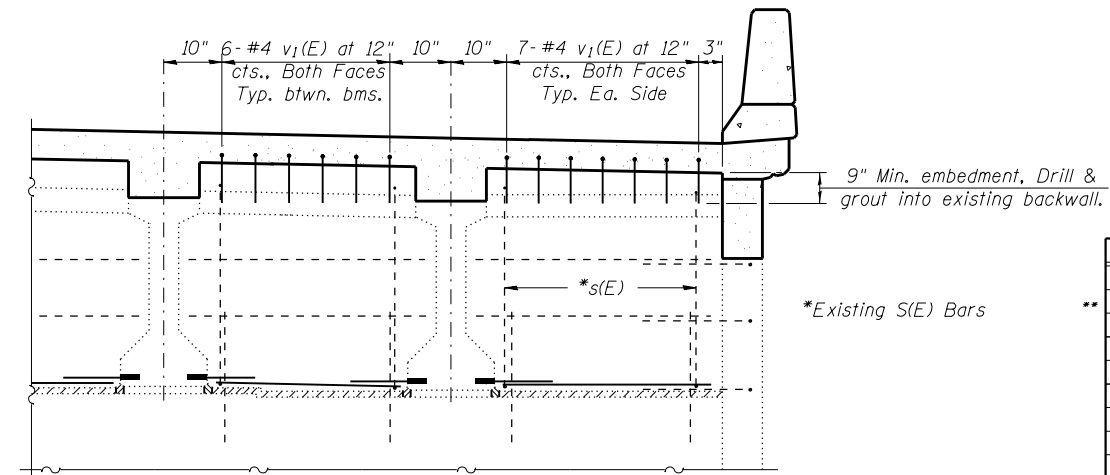
\*\*v2(E) bars shall tie existing bars in curtain wall to new construction. (28-#5 bars at 12 inch centers, each face) Existing vertical bars shall be cleaned, and straightened, and will lap with new v2(E) bars. Drill and grout v2(E) bars a minimum of 9 inch.

\* Existing v(E) bars shall be cleaned and reused in new construction.

FILE NAME TR420 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	VAULTED ABUTMENT APPROACH SPAN OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154	F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - MTH	REVISED -			72	.	SANGAMON	194	157	
	PLOT SCALE =	DRAWN - TJW	REVISED -			• (84-10-IRS-3, 84-10-2RS-RIBR,1 CONTRACT NO. 72C90					
	PLOT DATE	CHECKED - MTH	REVISED -			FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT					



DIAPHRAGM AT APPROACH BENT

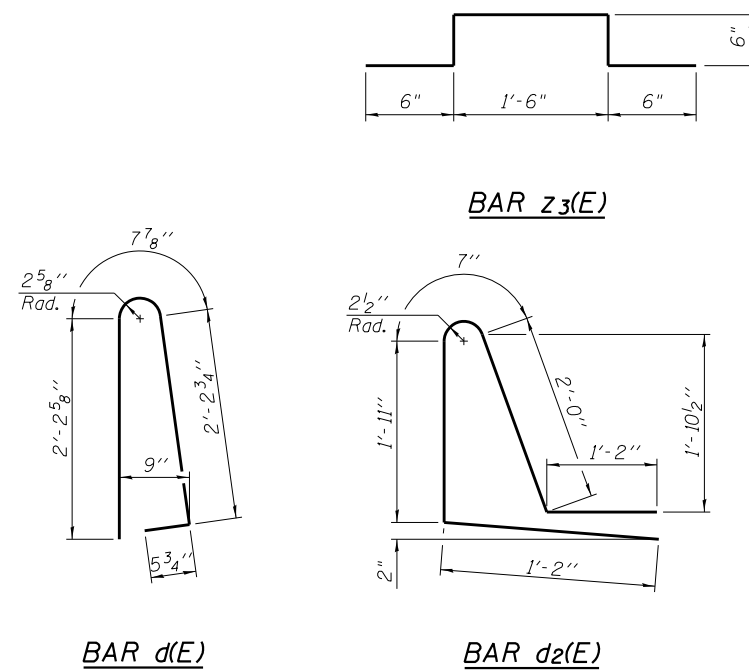


DIAPHRAGM AT ABUTMENT

TWO APPROACH SPANS  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	208	#5	26'-6"	—
a <sub>1</sub> (E)	148	#5	26'-4"	—
a <sub>2</sub> (E)	104	#6	6'-6"	—
a <sub>3</sub> (E)	4	#6	16'-10"	—
a <sub>4</sub> (E)	8	#6	26'-9"	—
a <sub>6</sub> (E)	178	#5	16'-8"	—
b <sub>3</sub> (E)	152	#5	27'-1"	—
b <sub>4</sub> (E)	156	#5	27'-2"	—
d(E)	124	#5	5'-7"	—
d <sub>2</sub> (E)	120	#5	6'-10"	—
e <sub>8</sub> (E)	56	#4	13'-6"	—
e <sub>9</sub> (E)	4	#8	27'-3"	—
e <sub>10</sub> (E)	4	#4	27'-3"	—
v <sub>1</sub> (E)	300	#5	2'-4"	—
v <sub>2</sub> (E)	224	#5	1'-5"	—
z <sub>1</sub> (E)	220	#5	2'-6"	—
z <sub>2</sub> (E)	110	#5	4'-10"	—
z <sub>3</sub> (E)	336	#5	3'-6"	—
Reinforcement Bars, Epoxy Coated			Pound	28,930
Concrete Superstructure			Cu. Yd.	124.8

\*\*Diagrams for a<sub>1</sub>(E) and z<sub>1</sub>(E) Bars on Sheet 9 of 25.



BAR d(E)

BAR z<sub>3</sub>(E)

BAR z<sub>2</sub>(E)

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

FILE NAME TR420 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

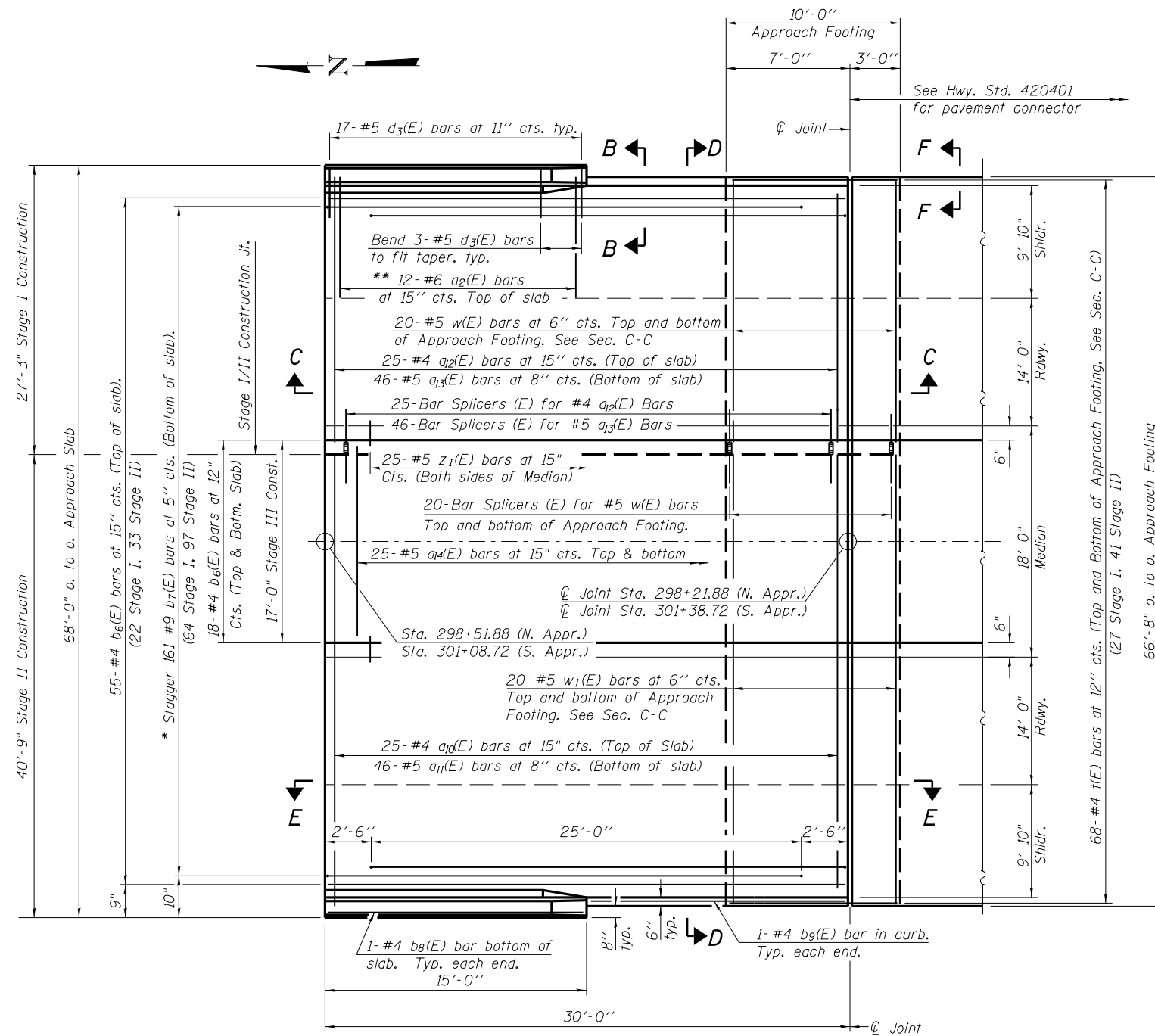
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

VAULTED ABUTMENT APPROACH SPAN DETAILS  
OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154

SHEET NO. 11 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	.	SANGAMON	194	158
• (84-10-1RS-3, 84-10-2RS-RIBR,1			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				

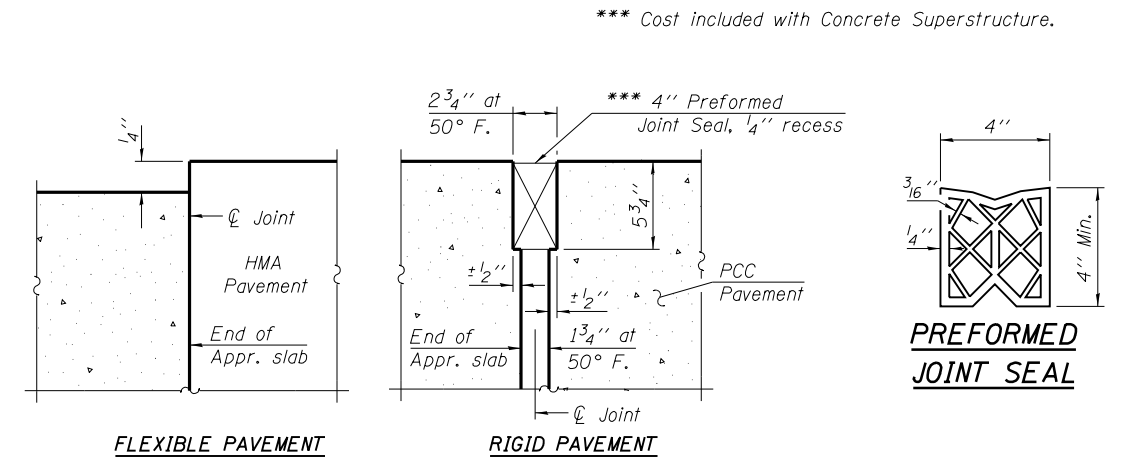
Notes:  
See sheet 13 of 25 for Sections C-C & D-D and View E-E.  
a<sub>10</sub>(E), a<sub>11</sub>(E), a<sub>12</sub>(E), a<sub>13</sub>(E) and a<sub>14</sub>(E) bar spacings measured along  $\phi$  Rdwy.



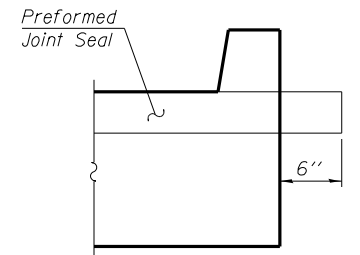
**PLAN**

(South Approach Shown,  
North Approach Similar)

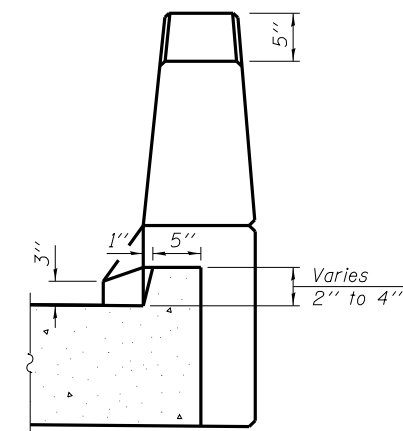
- \* Tilt #9 b<sub>7</sub>(E) bars as required to maintain clearance.
- \*\* Space between a<sub>10</sub>(E) or a<sub>12</sub>(E) bars, typ. ea. parapet.



**DETAIL A**



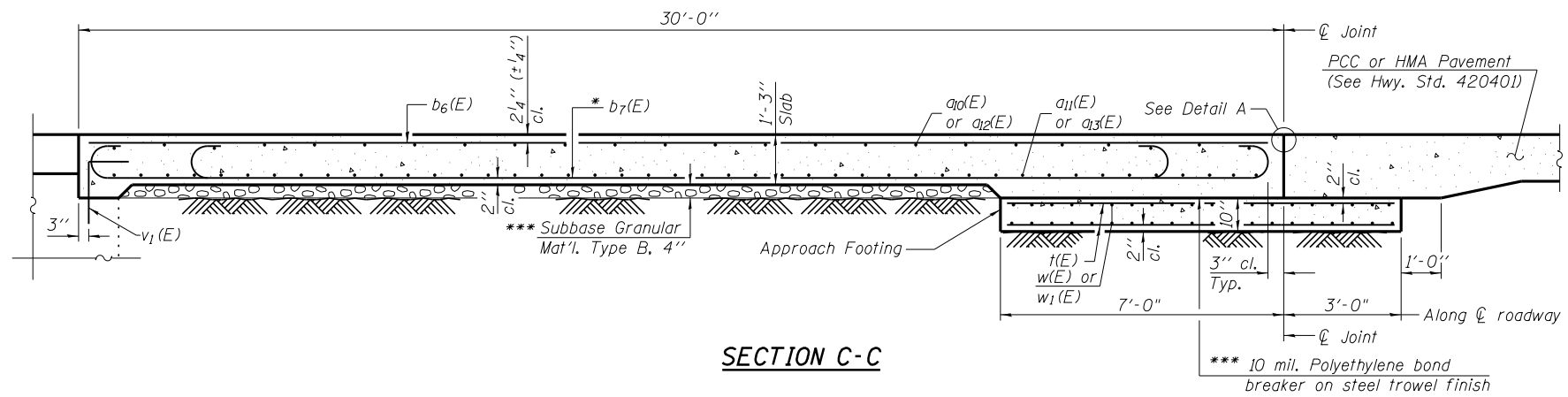
**VIEW F-F**



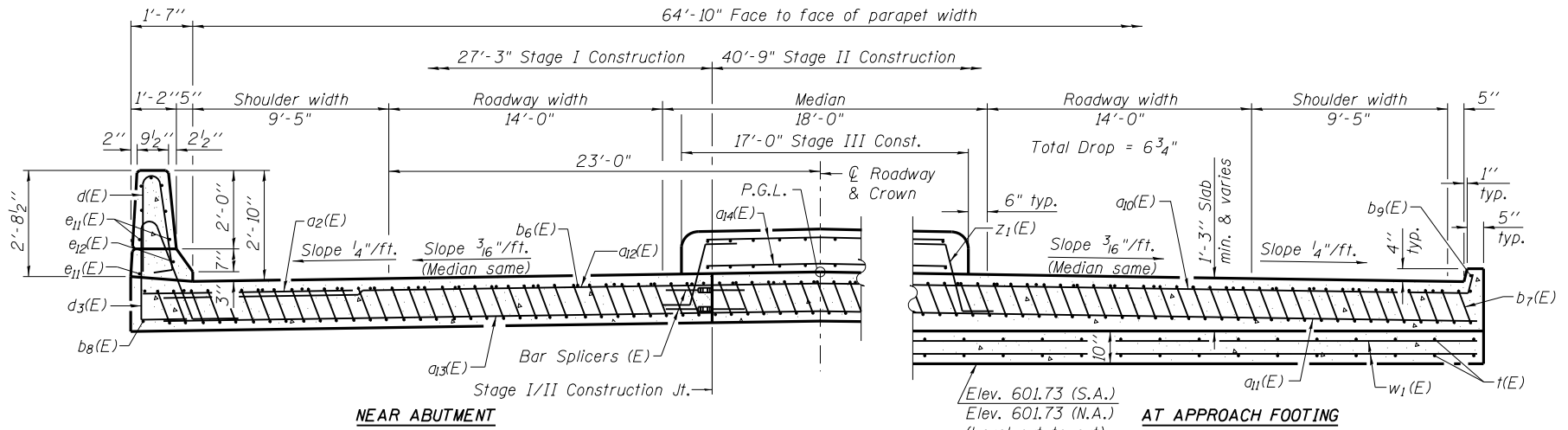
**VIEW B-B**

(Sheet 1 of 2)

FILE NAME = TR420 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>BRIDGE APPROACH SLAB DETAILS OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154</b>	F.A.I. RTE. = 72	SECTION = (84-10-1,2) R5-3	COUNTY = SANGAMON	TOTAL SHEETS = 194	SHEET NO. = 159		
	PLOT SCALE =	DRAWN - TJW	REVISED -			SHEET NO. 12 OF 25 SHEETS		CONTRACT NO. 72C90				
	PLOT DATE =	CHECKED - MTH	REVISED -			FED. ROAD DIST. NO. 6   ILLINOIS   FED. AID PROJECT						

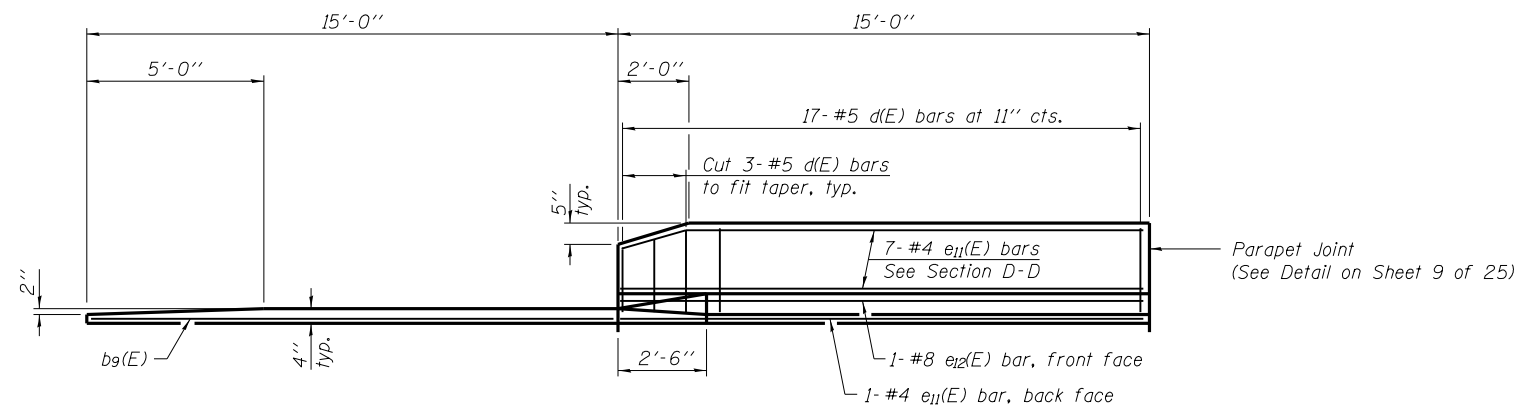


**SECTION C-C**

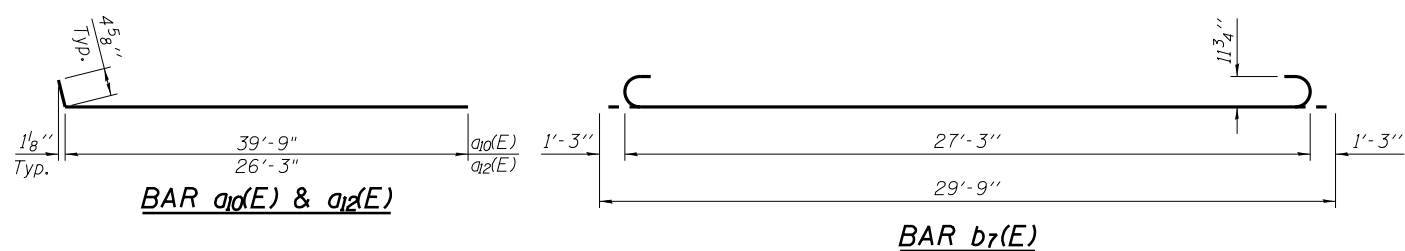


**SECTION D-D**

(Looking South @ South Approach, North Approach Similar)  
(See Plan for dimensions not shown)

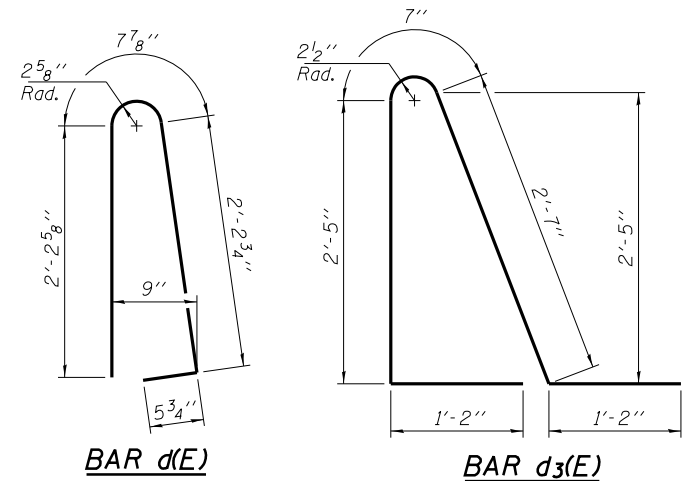


**VIEW E-E**



**Notes:**

See sheet 12 of 25 for Detail A and View B-B.  
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
Approach footing concrete shall be paid for as Concrete Structures.  
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
For v1(E) bar details, see sheet 11 of 25.  
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
Cost of excavation for approach footing included with Concrete Structures.  
For additional parapet details, see sheet 12 of 25.



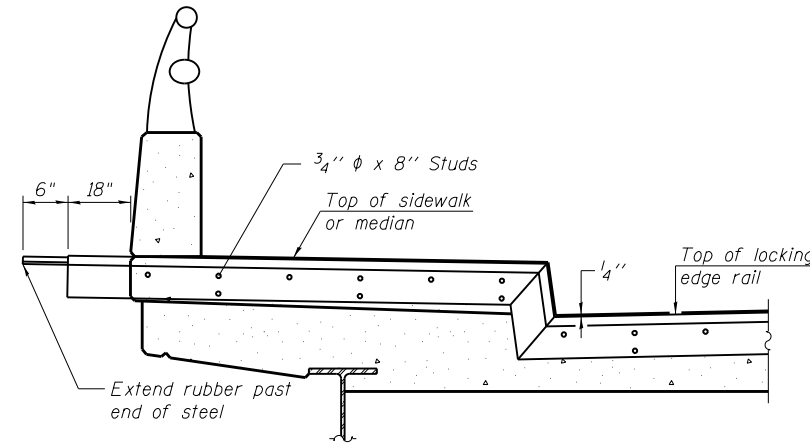
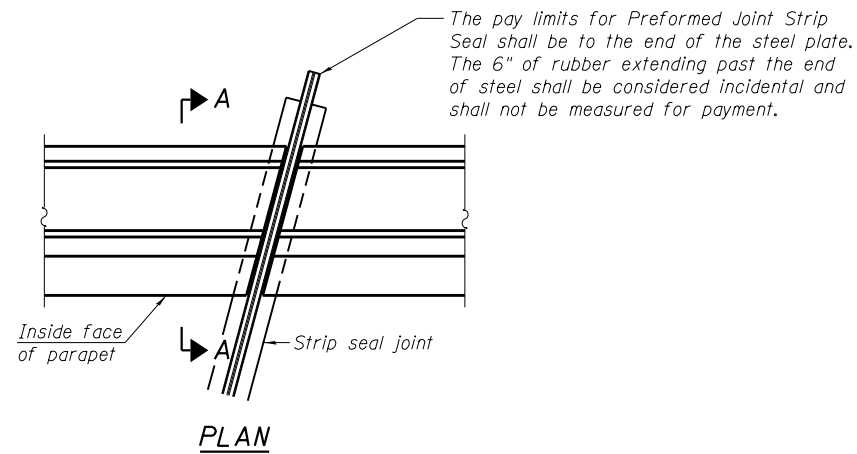
\* Tilt #9 b7(E) bars as required to maintain clearance.  
\*\*\* Cost included with Concrete Superstructure.

**TWO APPROACHES  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a2(E)	48	#6	6'-6"	—
a10(E)	50	#4	40'-2"	┌
a11(E)	92	#5	39'-10"	—
a12(E)	50	#4	26'-8"	┌
a13(E)	92	#5	26'-4"	—
a14(E)	96	#5	16'-9"	—
b6(E)	182	#4	29'-8"	—
b7(E)	322	#9	29'-9"	┌
b8(E)	4	#4	14'-8"	—
b9(E)	4	#4	14'-10"	—
d(E)	68	#5	5'-7"	┌
d3(E)	68	#5	7'-11"	┌
e11(E)	32	#4	14'-8"	—
e12(E)	4	#8	14'-8"	—
t(E)	272	#4	9'-8"	—
w(E)	80	#5	26'-3"	—
w1(E)	80	#5	39'-9"	—
z1(E)	100	#5	2'-6"	┌
Concrete Superstructure			Cu. Yd.	222.8
Concrete Structures			Cu. Yd.	42.0
Reinforcement Bars, Epoxy Coated			Pound	57,220

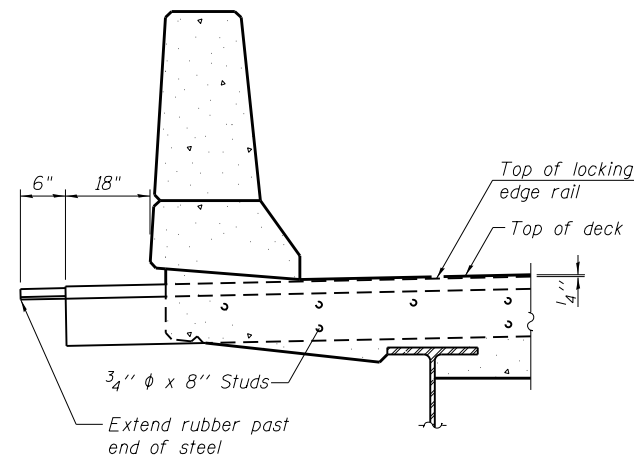
\*\* Diagram for z1(E) bar on Sheet 9 of 25.

(Sheet 2 of 2)



**TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN**

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

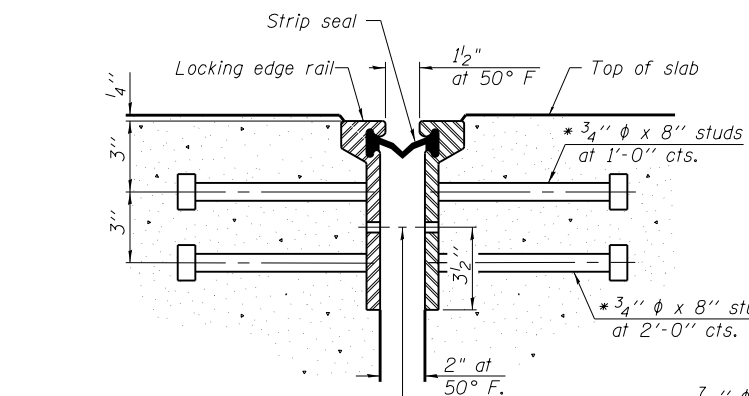


**SECTION A-A**

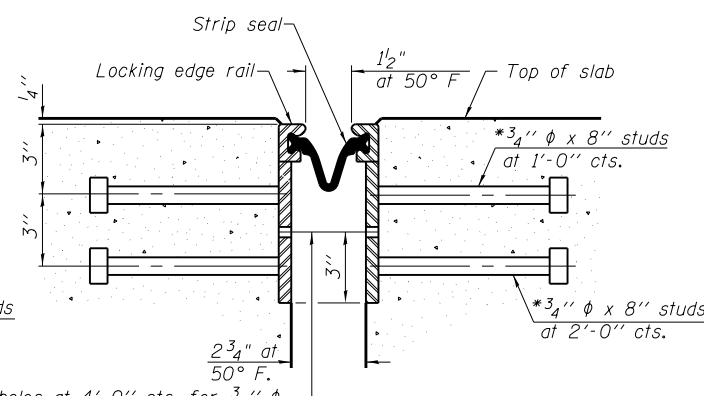
Notes:  
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.  
The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.  
The manufacturer's recommended installation methods shall be followed.

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

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications. Maximum space between rail segments shall be 3/16", sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.  
Parapet plates and anchorage studs for skew > 30° included in the cost of Preformed Joint Strip Seal.

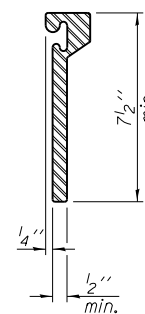


**SECTION THRU ROLLED RAIL JOINT**

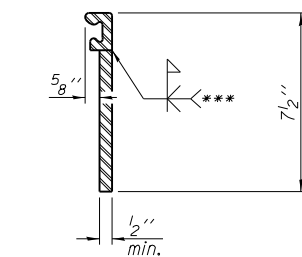


**SECTION THRU WELDED RAIL JOINT**

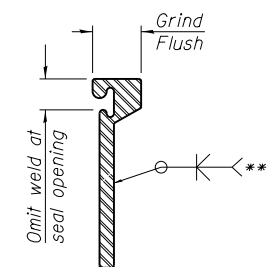
\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



**ROLLED EXTRUDED RAIL**



**WELDED RAIL**



**LOCKING EDGE RAIL SPLICE**

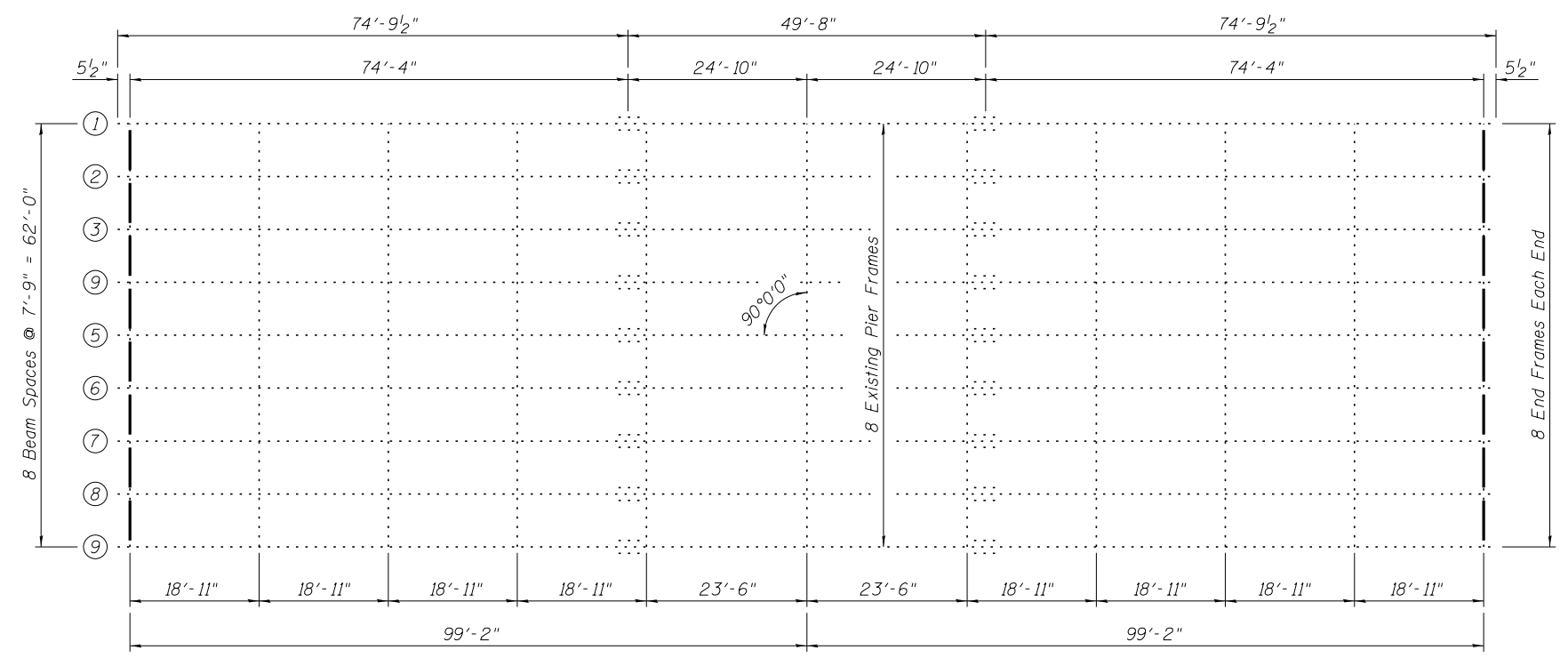
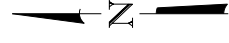
The inside of the locking edge rail groove shall be free of weld residue.  
Rolled rail shown, welded rail similar.

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

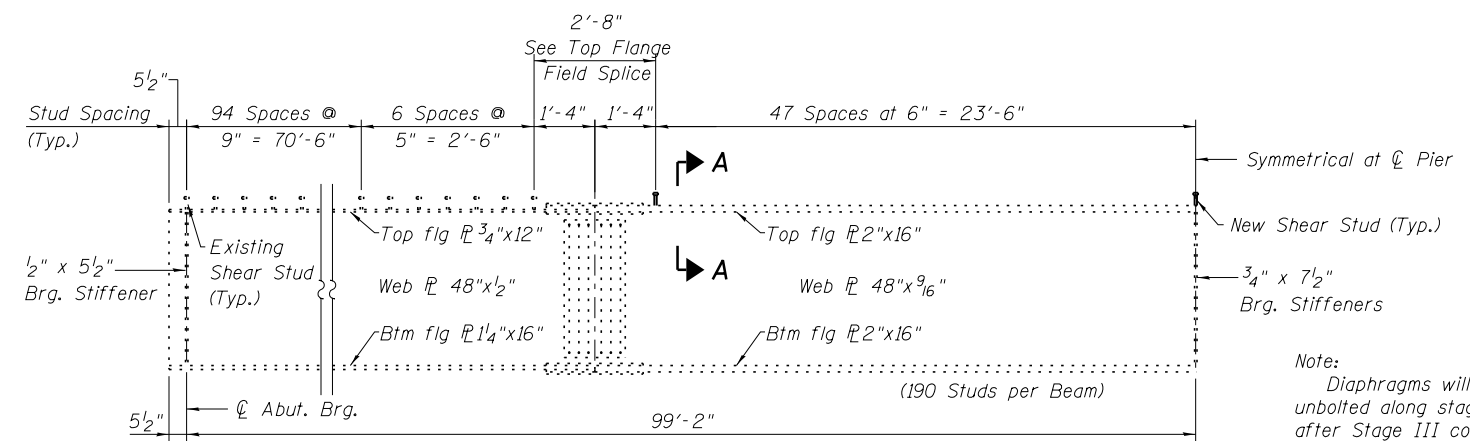
**LOCKING EDGE RAILS**

**BILL OF MATERIAL**

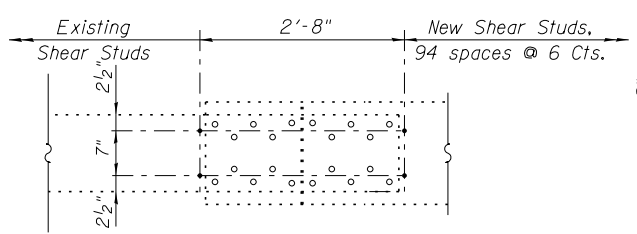
Item	Unit	Total
Preformed Joint Strip Seal	Foot	134



**PLAN**

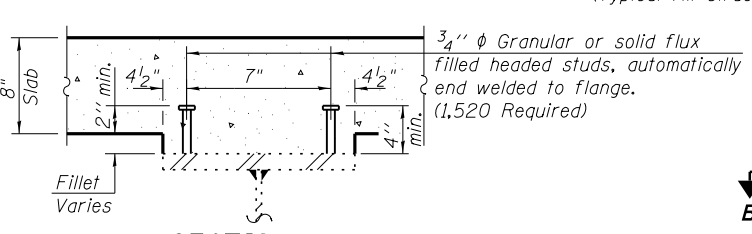


**ELEVATION OF GIRDER**  
(Typical All Girders)

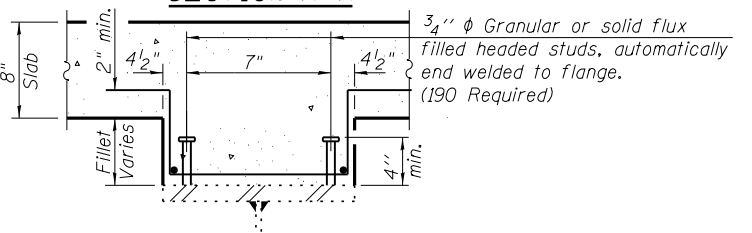


**TOP FLANGE FIELD SPLICE**

(Solid Circles indicate Shear Studs  
Open Circles indicate Splice Plate Bolts)

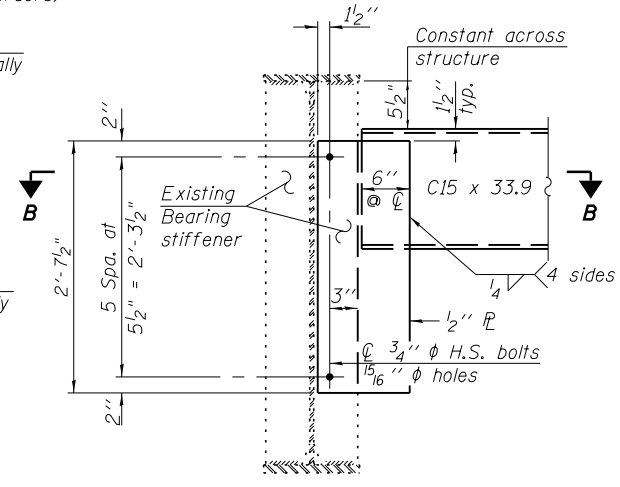


**SECTION A-A**



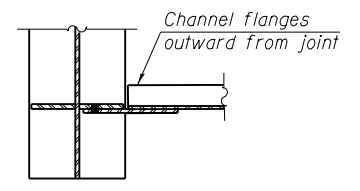
**SECTION A-A**

(Deep Fillet Section @ C Beam 5)



**END DIAPHRAGM**

Note: Two hardened washers required for each set of oversized holes.



**SECTION B-B**

INTERIOR BEAM MOMENT TABLE		
	0.4 Sp. 1 or 0.6 Sp. 2	Pier
$I_s$	(in <sup>4</sup> ) 20,679	45,205
$I_c(n)$	(in <sup>4</sup> ) 60,462	52,030
$I_c(3n)$	(in <sup>4</sup> ) 42,912	52,030
$S_s$	(in <sup>3</sup> ) 1,029	1,739
$S_c(n)$	(in <sup>3</sup> ) 1,462	1,833
$S_c(3n)$	(in <sup>3</sup> ) 1,340	1,833
$\rho$	(k/')	1.030
$M \rho$	(k)	601
$s \rho$	(k/')	0.528
$M_s \rho$	(k)	330
$M_L$	(k)	866
$M_{1M}$	(k)	193
$^5_3 [M_L + M_1]$	(k)	1,765
$M_a$	(k)	3,505
$M_u$	(k)	5,255
$f_s \rho$ non-comp	(ksi)	7.0
$f_s \rho$ (comp)	(ksi)	3.0
$f_s ^5_3 [M_L + M_1]$	(ksi)	14.5
$f_s$ (Overload)	(ksi)	24.5
$f_s$ (Total)	(ksi)	-
VR	(k)	48.9

\*Compact section  
\*\*Braced non-compact and partially braced section

INTERIOR BEAM REACTION TABLE		
	Abuts.	Pier
$R \rho$	(k) 53.2	206.8
$R_L$	(k) 45.1	74.7
$R_I$	(k) 10.1	16.7
$R_{Total}$	(k) 108.4	298.2

$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total and Overload) due to non-composite dead loads (in.4 and in.3).  
 $I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total and Overload) due to short-term composite live loads (in.4 and in.3).  
 $I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total and Overload) due to long-term composite (superimposed) dead loads (in.4 and in.3).

$\rho$ : Un-factored non-composite dead load (kips/ft.).  
 $M \rho$ : Un-factored moment due to non-composite dead load (kip-ft.).  
 $s \rho$ : Un-factored long-term composite (superimposed) dead load (kips/ft.).  
 $M_s \rho$ : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).  
 $M_L$ : Un-factored live load moment (kip-ft.).  
 $M_1$ : Un-factored moment due to impact (kip-ft.).  
 $M_a$ : Factored design moment (kip-ft.).  
 $1.3 [M \rho + M_s \rho + \frac{5}{3} (M_L + M_1)]$   
 $M_u$ : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).  
 $f_s$  (Overload): Sum of stresses as computed from the moments below (ksi).  
 $M \rho + M_s \rho + \frac{5}{3} (M_L + M_1)$   
 $f_s$  (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).  
 $1.3 [M \rho + M_s \rho + \frac{5}{3} (M_L + M_1)]$   
 VR: Maximum  $\frac{1}{2}$  + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).

**BILL OF MATERIAL**

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	5,540
Structural Steel Removal	Pound	6,900
Stud Shear Connectors	Each	1,710

Notes:  
 Two hardened washers required for each set of oversized holes.  
 Existing end diaphragms at abutments shall be removed and replaced. Cost included with Structural Steel Removal.  
 Field drill  $1 5/16$ "  $\phi$  holes for  $3/4$ "  $\phi$  bolts.  
 Contractor will be responsible for checking to see if proposed hole locations conflict with existing holes. In such a case, match existing holes.

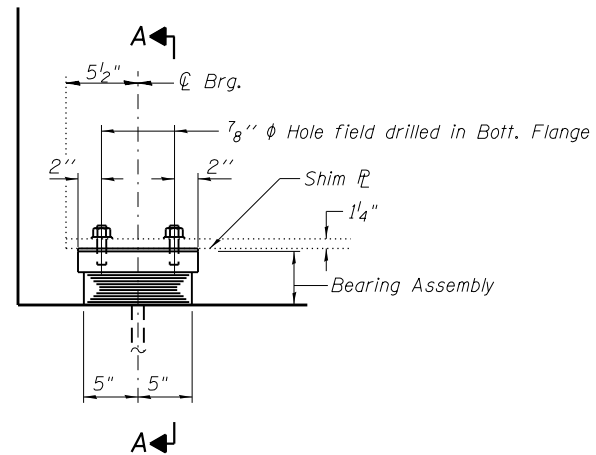
FILE NAME = TR420 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
		DRAWN - TJW	REVISED -
		CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

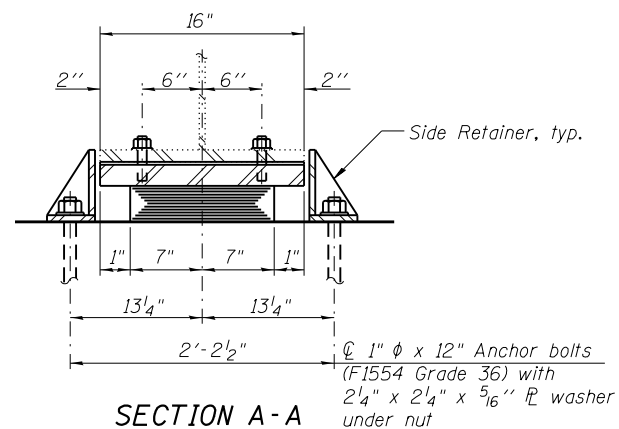
FRAMING PLAN & BEAM DETAILS  
OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154

SHEET NO. 15 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-1,2) R5-3	SANGAMON	194	162
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT			CONTRACT NO. 72C90	

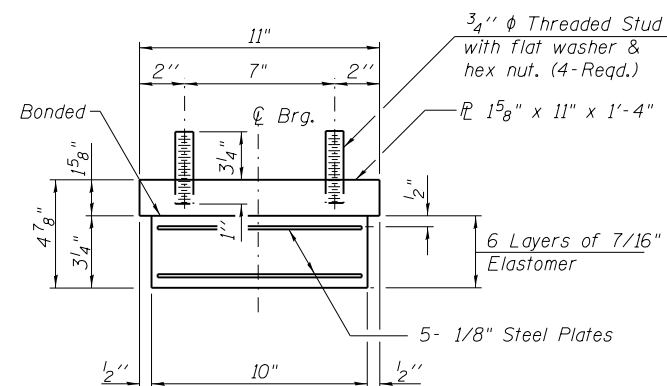


ELEVATION AT ABUT.



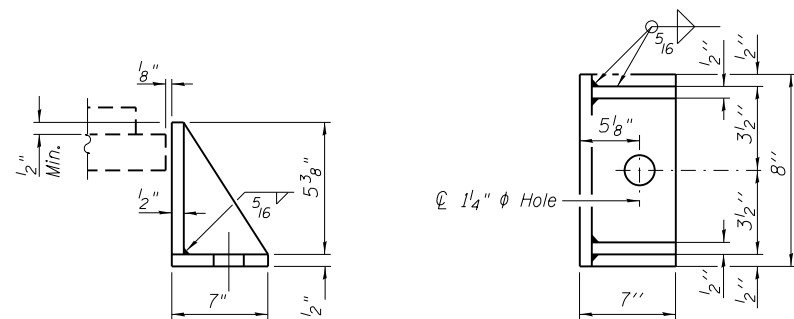
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

Note:  
Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes:

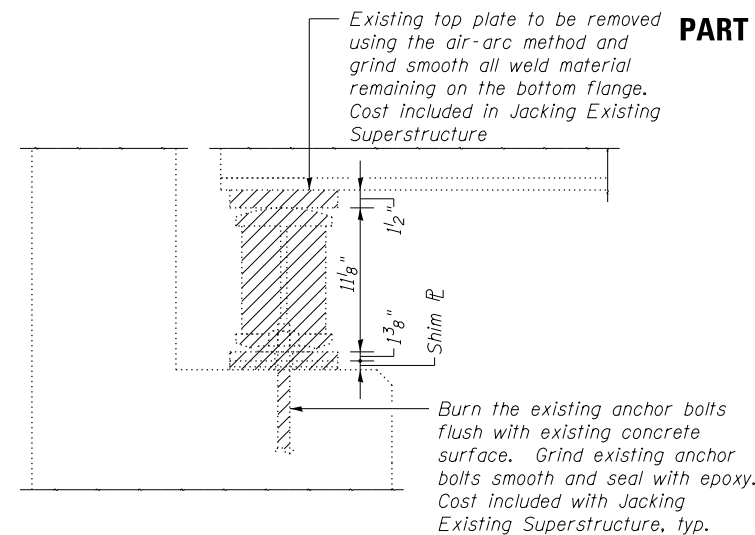
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as needed and as shown on bearing details.



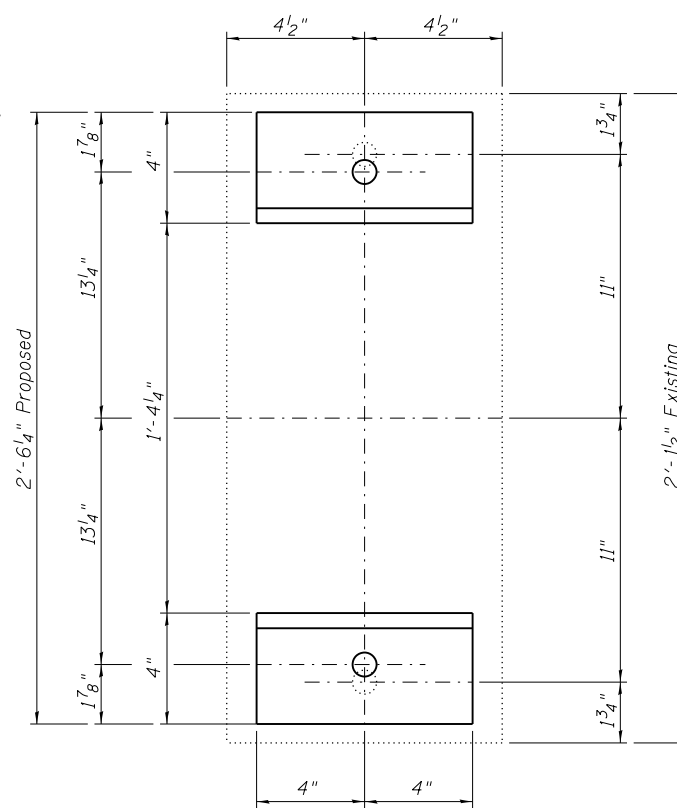
EXISTING ABUTMENT BEARING REMOVAL

JACK AND REMOVE EXISTING BEARING PROCEDURE

(North and South Abutments)

- The Contractor shall submit for approval by the Engineer, plans for jacking existing beams and installing new bearings prior to commencing any related work.
- Jacking and removing existing bearings shall be done after existing concrete deck is removed and prior to pouring the concrete deck.
- Prior to ordering any material, the Contractor shall verify shim plate thickness required at each bearing so that total height of new bearing and fill matches height of existing bearing and shim.
- There shall be at least one jack per bearing, and the Jack shall be placed close to the bearings.
- For limitations on lift amounts, see Special Provisions.
- The new bearing shall be in place and the jacks shall be lowered before the new concrete deck is poured. Existing diaphragms to be unbolted due to differential deflections during stage construction.
- Jacking against diaphragms is prohibited.
- Cross frames are to be removed at the stage line prior to jacking and re-installed prior to the final deck pour.
- Re-bolt existing diaphragms after completion of Stage III deck pour.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.



ANCHOR BOLT LAYOUT

Note: Shown for visual only, new bearing seats will prevent interference with existing anchor bolts.

BEAM REACTIONS

(Steel only)

R <sub>D</sub>	(k)	13.2
----------------	-----	------

Min. Jack Capacity = 10 Ton (Without Deck)

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	18
Anchor Bolts, 1"	Each	36
Jacking Existing Superstructure	L. Sum	1

FILE NAME = TR-420 over FAI-72.dgn

USER NAME =

DESIGNED - SAL

REVISED -

CHECKED - MTH

DRAWN - TJW

REVISI -

PLOT SCALE =

CHECKED - MTH

REVISI -

PLOT DATE =

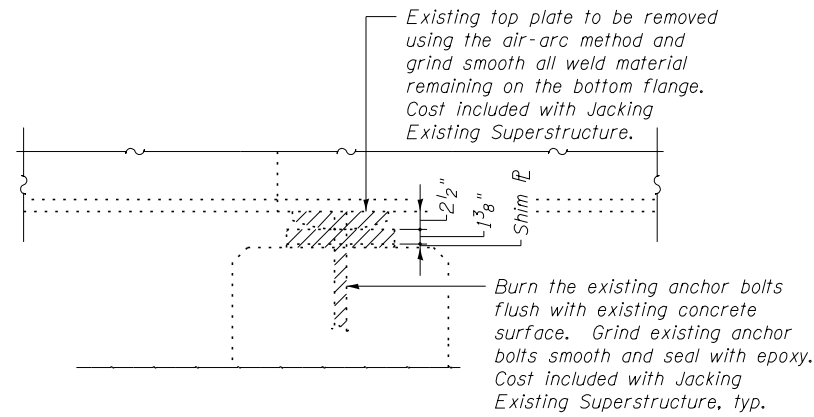
REVISI -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ABUTMENT BEARING DETAILS  
OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154

SHEET NO. 16 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72		SANGAMON	194	163
• (84-10-IRS-3, 84-10-2RS-RBR,1		CONTRACT NO.	72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				



**EXISTING PIER BEARING REMOVAL**

**JACK AND REMOVE EXISTING BEARING PROCEDURE**

(Center Pier)

1. The Contractor shall submit for approval by the Engineer, plans for jacking existing beams and installing new bearings prior to commencing any related work.
2. Jacking and removing existing bearings shall be done after existing concrete deck is removed and prior to pouring the concrete deck.
3. Prior to ordering any material, the Contractor shall verify shim plate thickness required at each bearing so that total height of new bearing and fill matches height of existing bearing and shim.
4. There shall be at least one jack per bearing, and the Jack shall be placed close to the bearings.
5. For limitations on lift amounts, see Special Provisions.
6. The new bearing shall be in place and the jacks shall be lowered before the new concrete deck is poured. Existing diaphragms to be unbolted due to differential deflections during stage construction.
7. Jacking against diaphragms is prohibited.
8. Cross frames are to be removed at the stage line prior to jacking and re-installed prior to the final deck pour.
9. Re-bolt existing diaphragms after completion of Stage III deck pour.

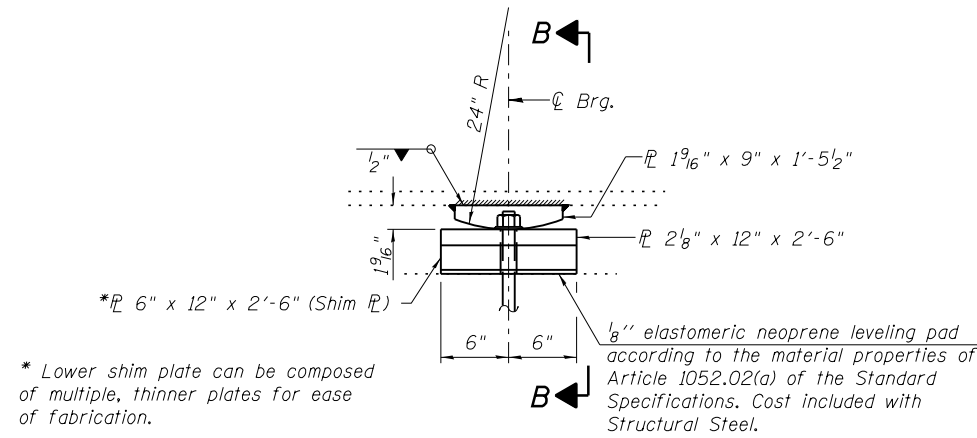
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

**BEAM REACTIONS**

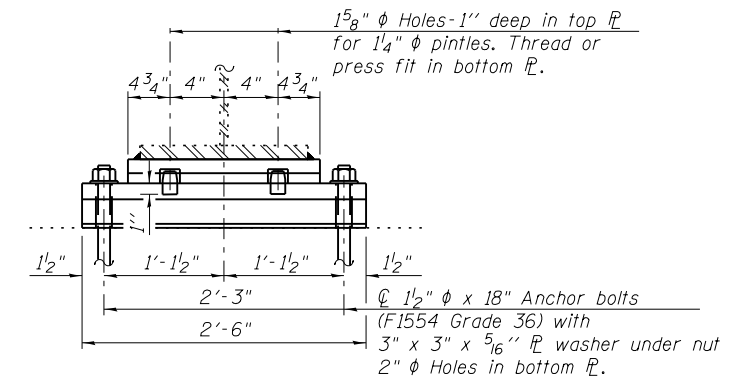
(Steel only)

RD	(k)	38
----	-----	----

Min. Jack Capacity = 30 Ton (Without Deck)

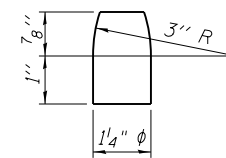


**ELEVATION AT PIER**



**SECTION B-B**

**FIXED BEARING**



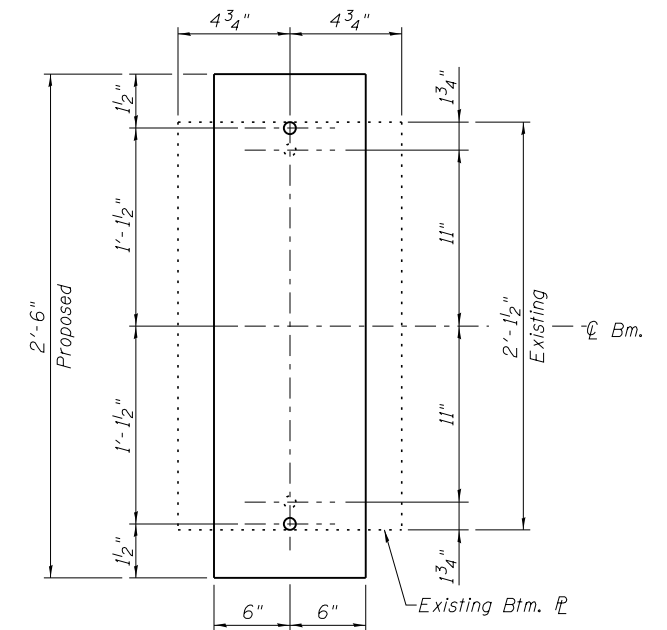
**PINTLE**

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings shall be installed in holes drilled after the supported member is in place. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Two  $\frac{1}{8}"$  adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as needed and as shown on bearing details.



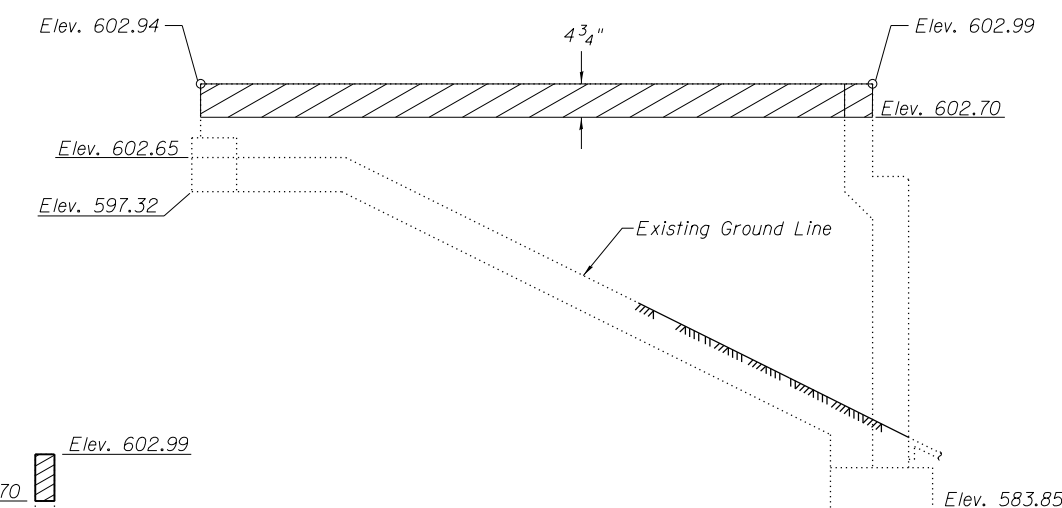
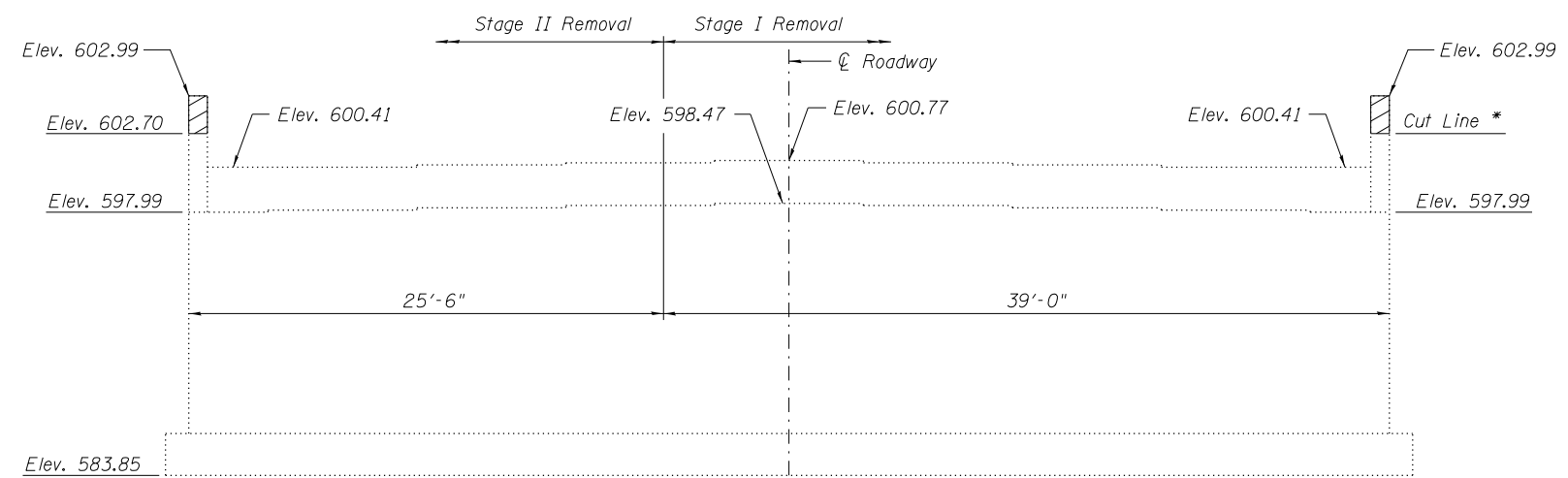
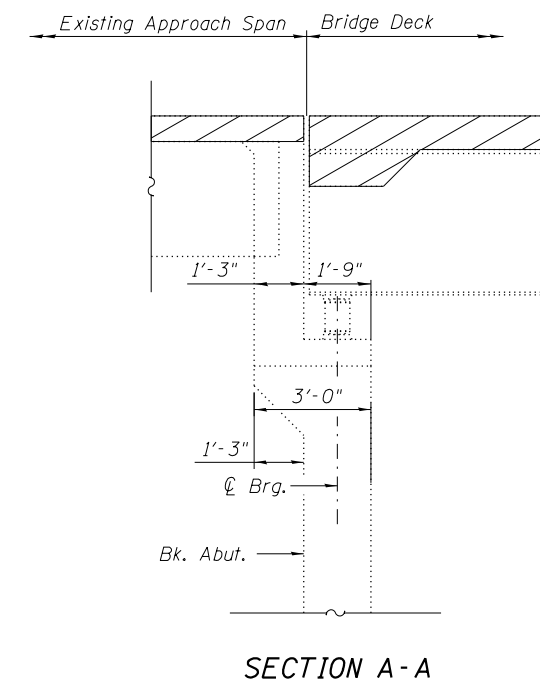
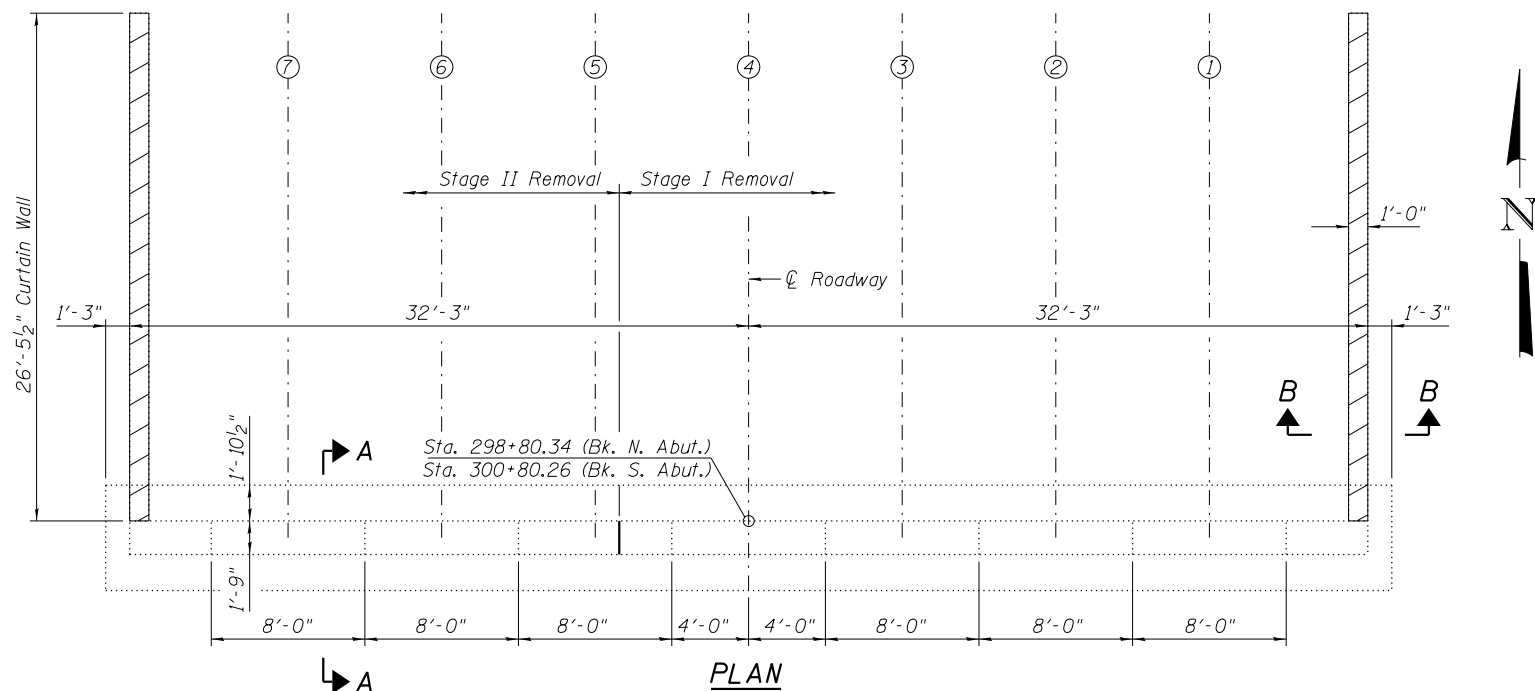
**ANCHOR BOLT LAYOUT**

Note: Some elements not to scale for clarity.

**BILL OF MATERIAL**

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	8230
Anchor Bolts, $1\frac{1}{2}"$	Each	18
Jacking Existing Superstructure	L. Sum	1





Notes:  
 Hatched area indicates Concrete Removal.  
 Existing reinforcement bars extending into the new construction shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.  
 Existing reinforcement bars not extending into the new construction shall be cut off and covered with a 2" layer of cement grout. Cost included with Concrete Removal.  
 Elevations based off a datum difference of -0.49' from existing plans.

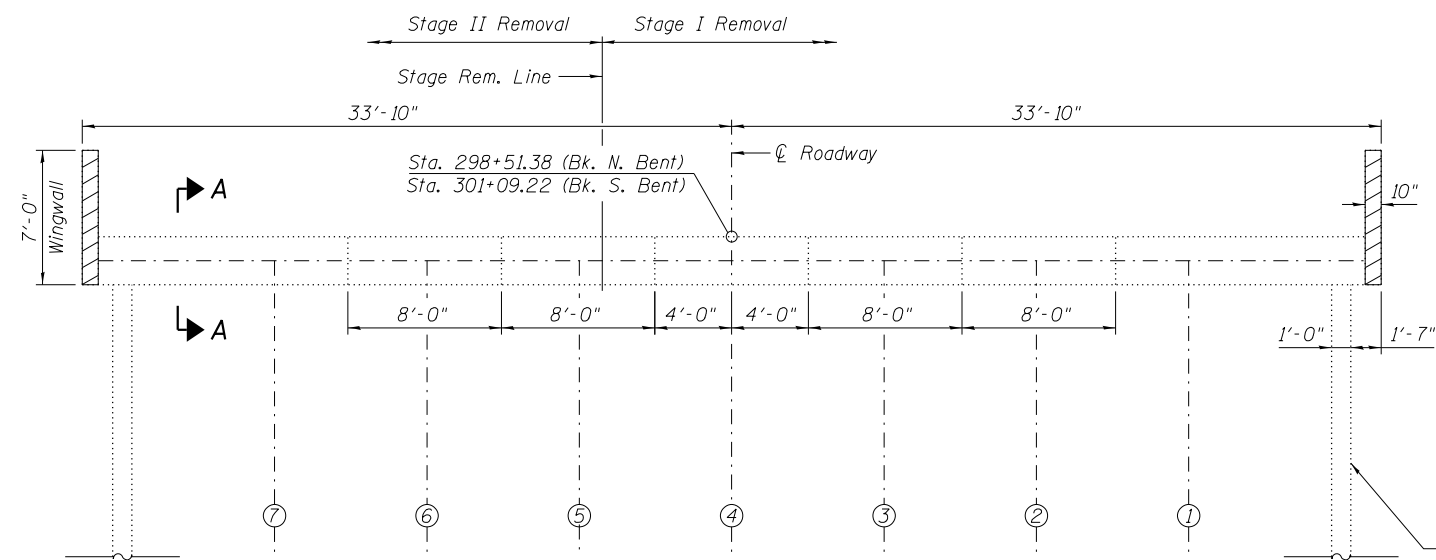
\* Top of Curtain Wall shall be removed to expose the existing rebar to allow access for extension without damaging the existing reinforcement.

**ELEVATION**

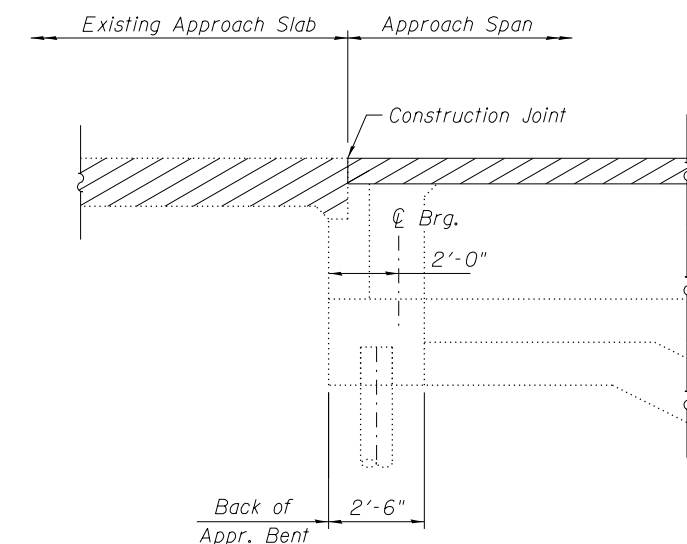
**OUTSIDE ELEVATION OF CURTAIN WALL**  
(Looking East)

**SECTION B-B**

FILE NAME TR420 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE REMOVAL, ABUTMENTS OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154	F.A.I. RTE. =	SECTION =	COUNTY =	TOTAL SHEETS =	SHEET NO. =
	PLOT SCALE =	DRAWN - TJW	REVISED -			72	*	SANGAMON	194	165
	PLOT DATE =	CHECKED - MTH	REVISED -	SHEET NO. 18 OF 25 SHEETS		(84-10-1RS-3, 84-10-2RS-R)BR,1 FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT CONTRACT NO. 72C90				

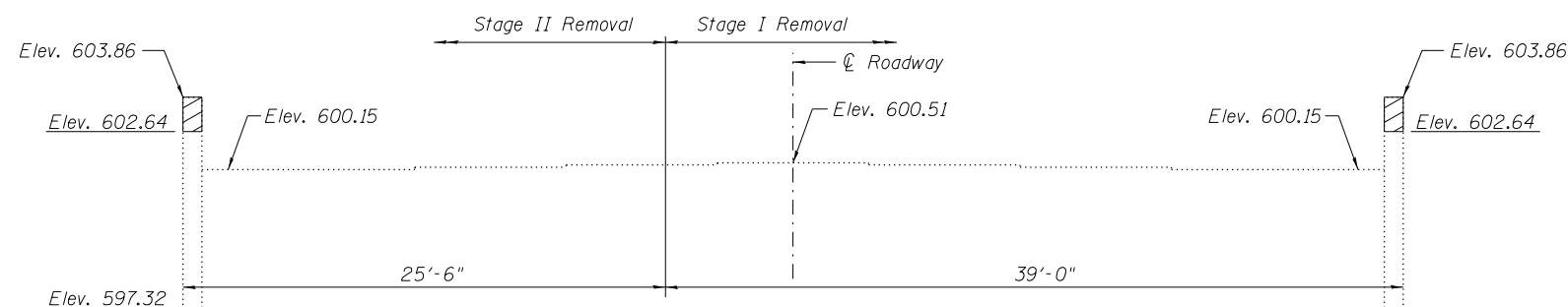


PLAN



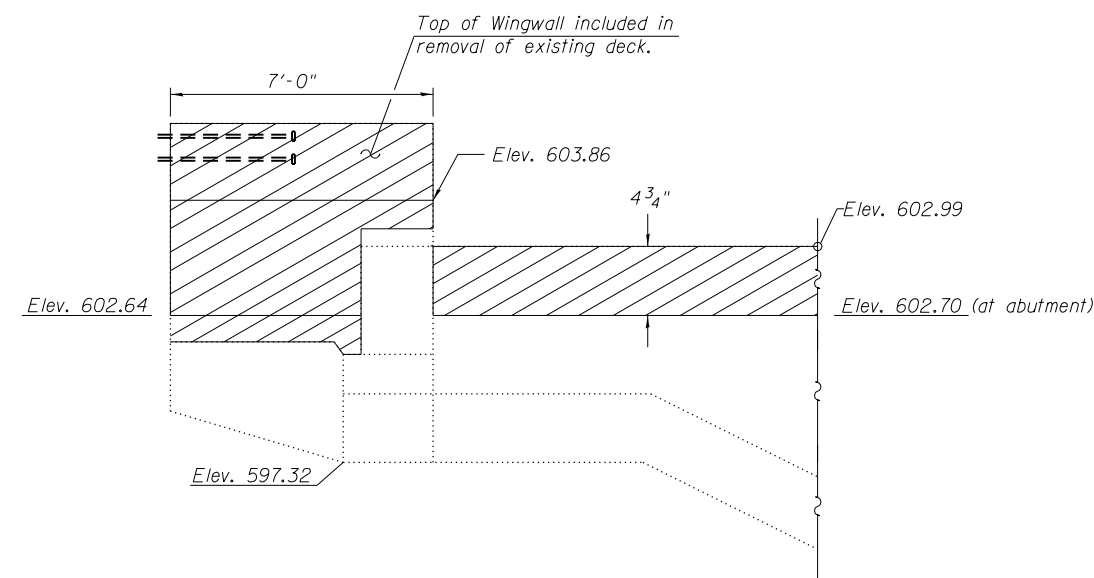
SECTION A-A

See Sheet 18 of 25 for extents of curtain wall to be removed, (Typ.)



ELEVATION

(N. Appr. Bent Shown, S. Appr. Bent Similar)



OUTSIDE ELEVATION OF WING WALL (Looking East)

Notes:  
 Hatched area indicates Concrete Removal.  
 Existing reinforcement bars extending into the new construction shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.  
 Existing reinforcement bars not extending into the new construction shall be cut off and covered with a 2" layer of cement grout. Cost included with Concrete Removal.  
 Elevations based off a datum difference of -0.49' from existing plans.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	2.6

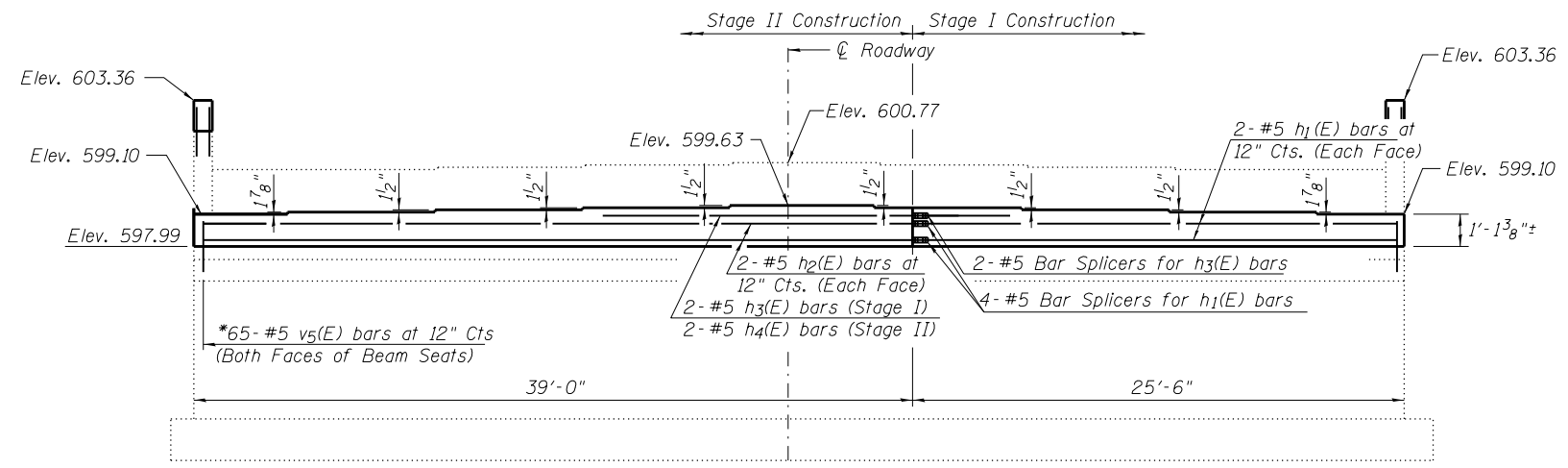
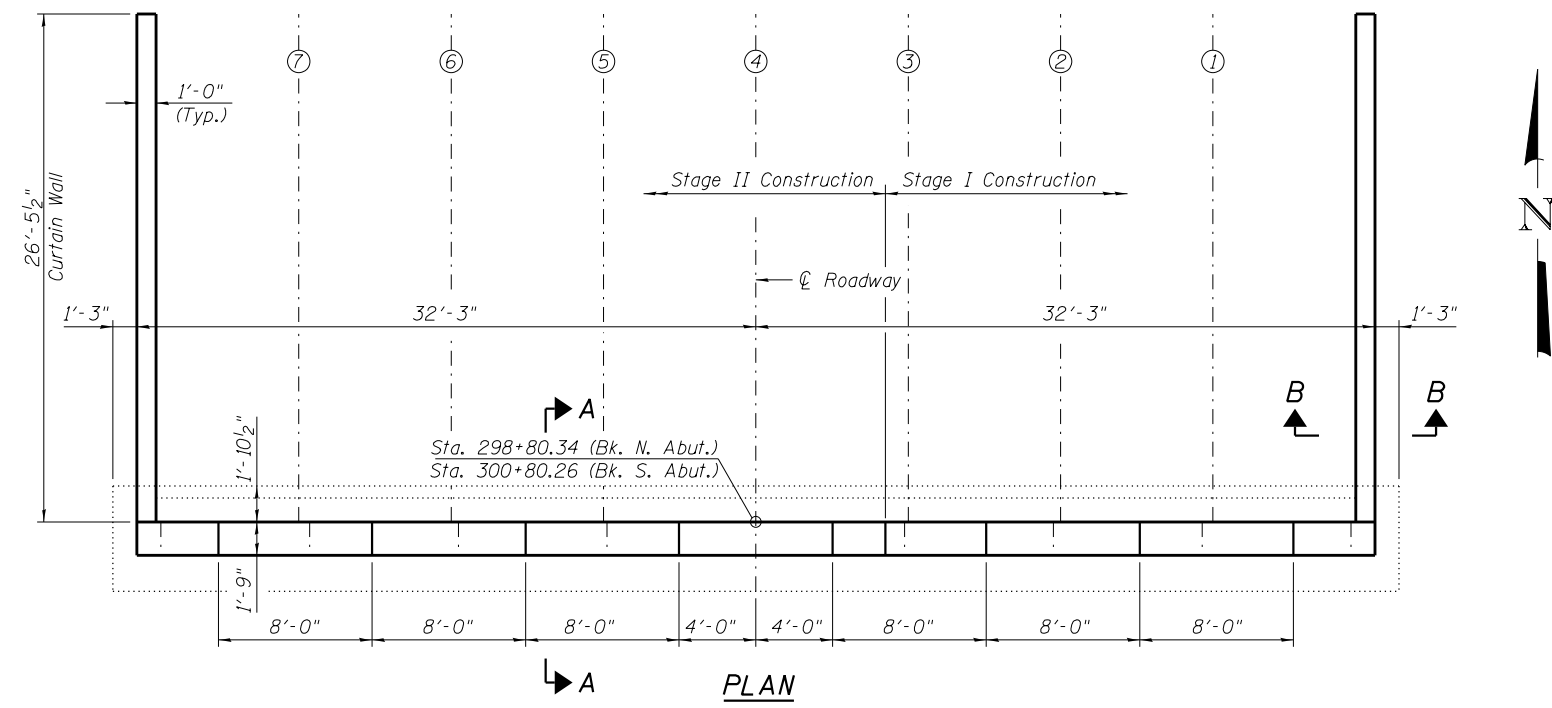
FILE NAME = TR420 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CONCRETE REMOVAL, APPROACH BENTS  
 OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154

SHEET NO. 19 OF 25 SHEETS

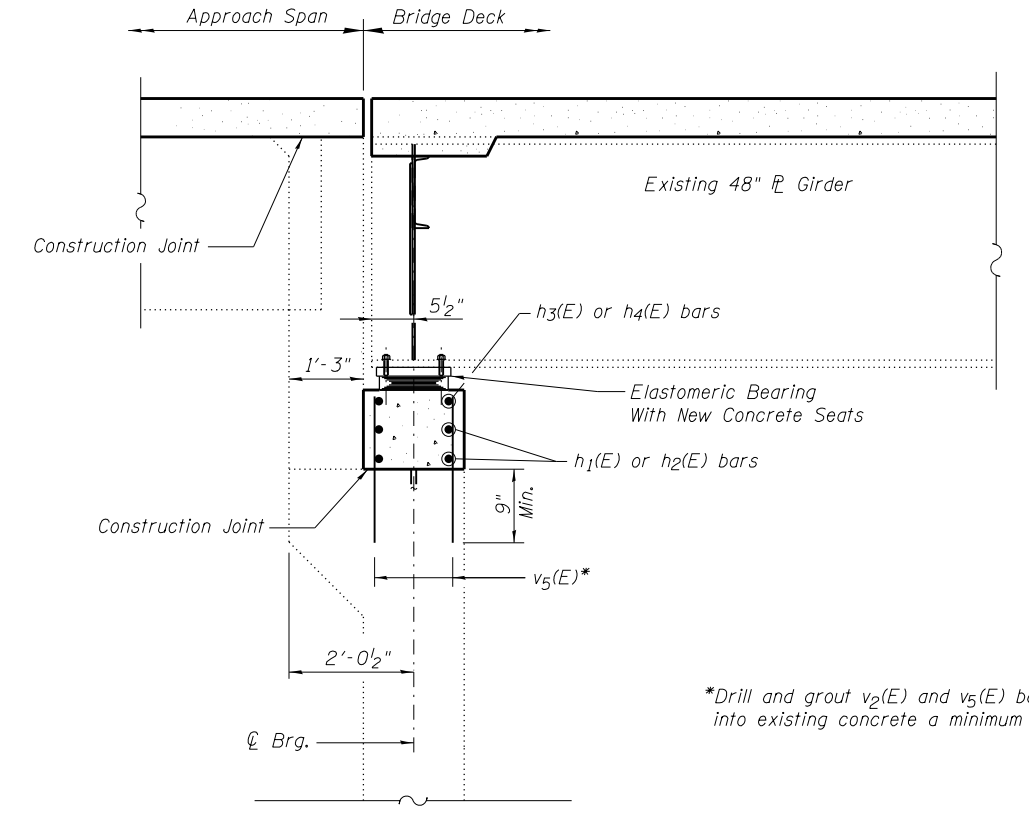
F.A.I. RTE. 72	SECTION	COUNTY SANGAMON	TOTAL SHEETS 194	SHEET NO. 166
• (84-10-1RS-3, 84-10-2RS-R)BR,I			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				



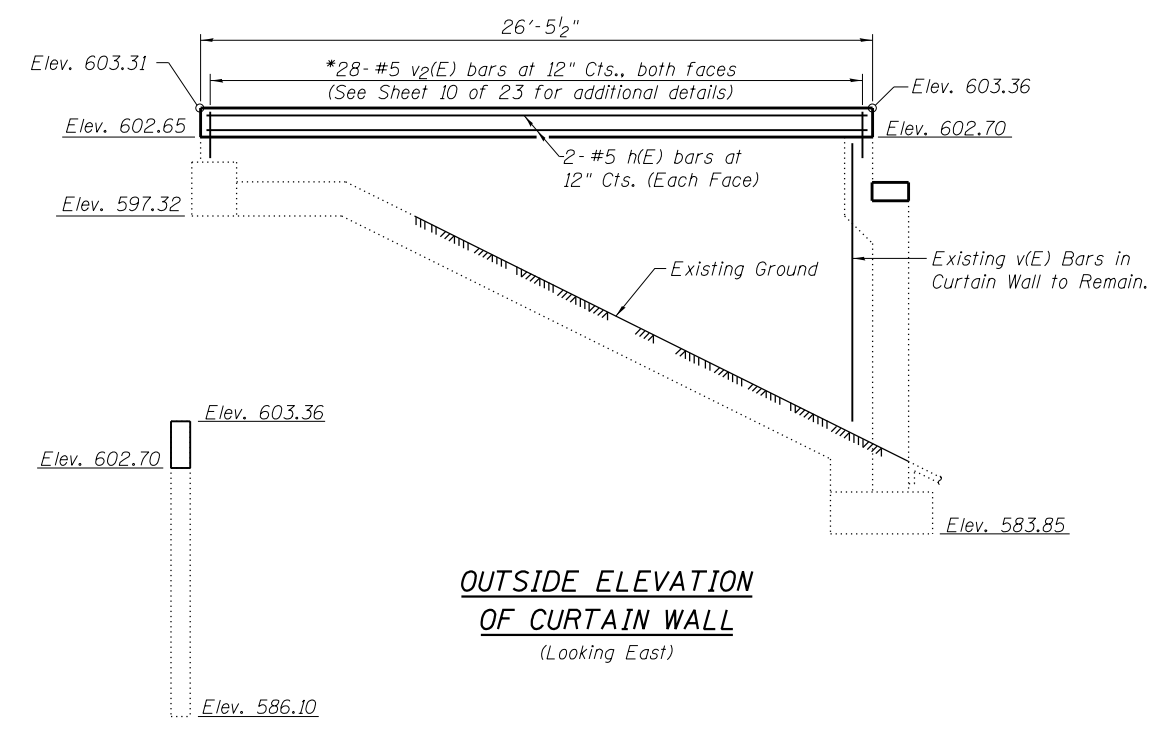
Notes:  
 Existing reinforcement bars extending into the new construction shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.  
 Existing reinforcement bars not extending into the new construction shall be cut off and covered with a 2" layer of cement grout. Cost included with Concrete Removal.  
 Concrete Sealer shall be applied to the front and side faces of the proposed backwall and on all the new concrete for the bridge seat extensions.

**BEAM SEAT ELEVATIONS**

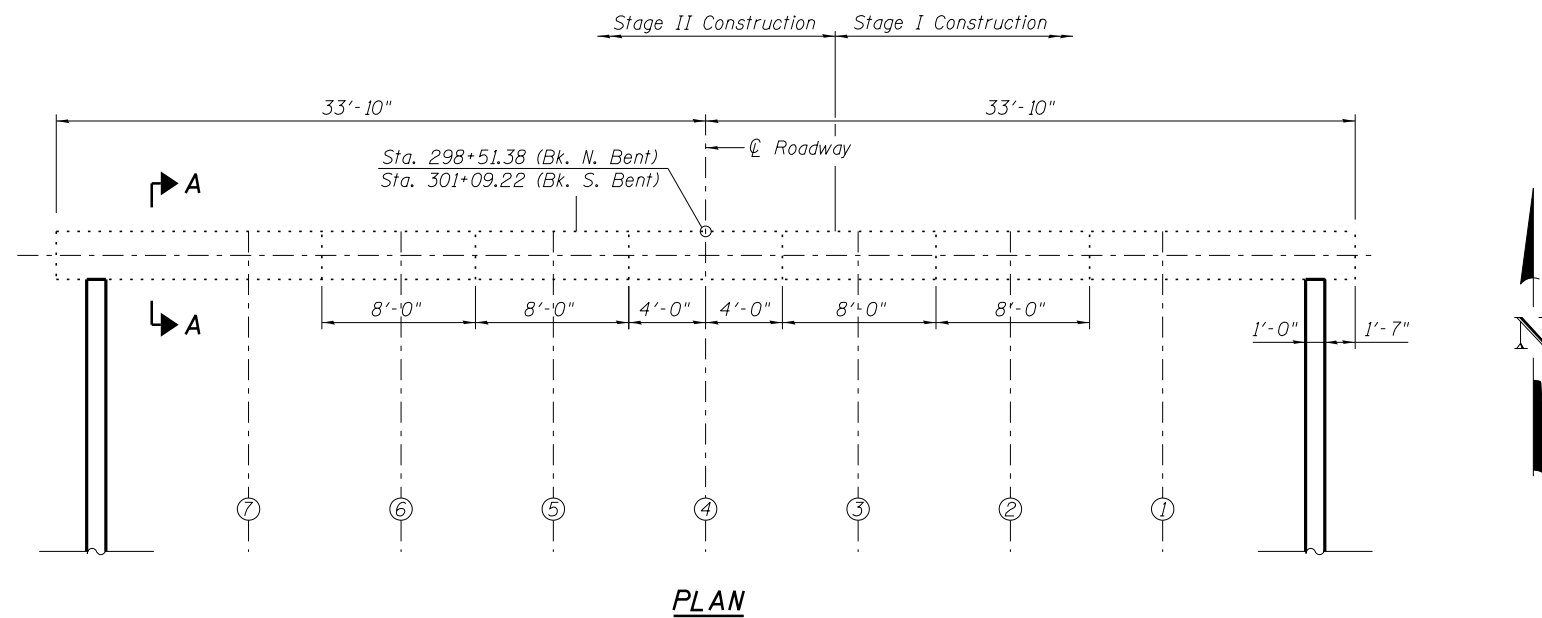
Beam Seat Elev.	N. Abut.	S. Abut.
Beam 1	599.10	599.10
Beam 2	599.26	599.26
Beam 3	599.39	599.39
Beam 4	599.51	599.51
Beam 5	599.63	599.63
Beam 6	599.51	599.51
Beam 7	599.39	599.39
Beam 8	599.26	599.26
Beam 9	599.10	599.10



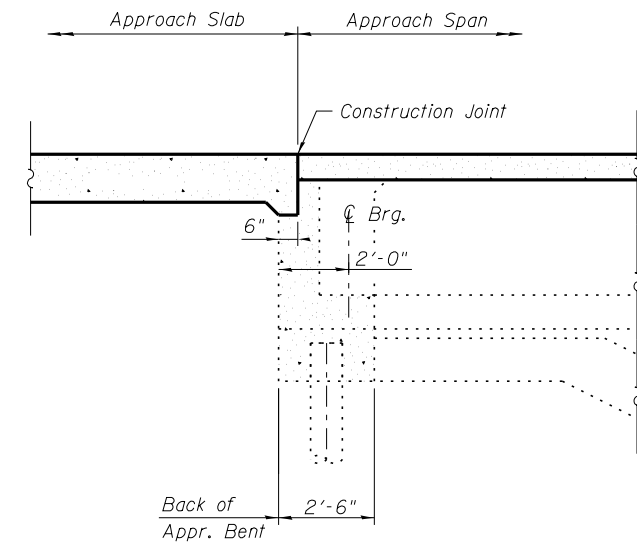
\*Drill and grout v<sub>2</sub>(E) and v<sub>5</sub>(E) bars into existing concrete a minimum of 9".



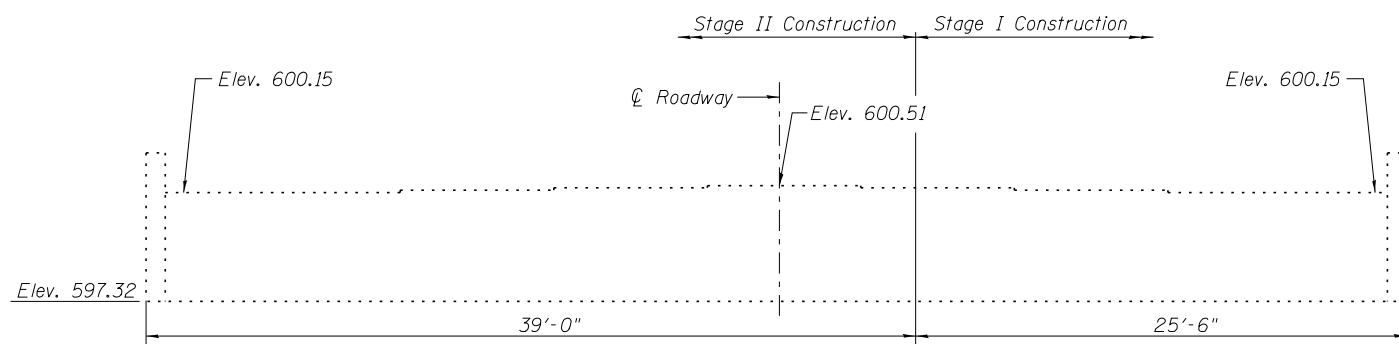
**OUTSIDE ELEVATION OF CURTAIN WALL**  
(Looking East)



**PLAN**

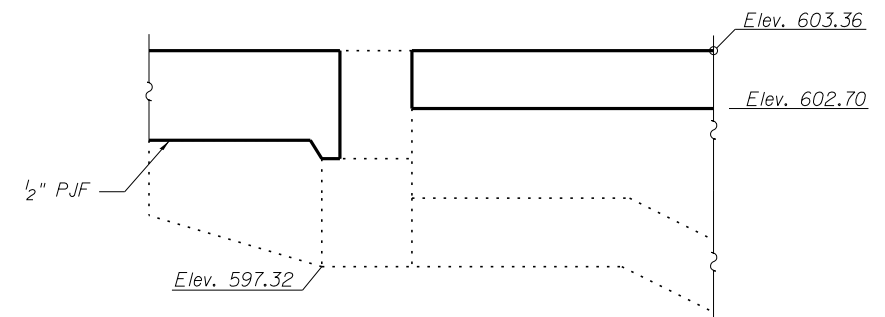


**SECTION A-A**



**ELEVATION**

(N. Appr. Bent Shown, S. Appr. Bent Similar)



**OUTSIDE ELEVATION OF WING WALL**  
(Looking East)

**Notes:**

Existing reinforcement bars extending into the new construction shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.

Existing reinforcement bars not extending into the new construction shall be cut off and covered with a 2" layer of cement grout. Cost included with Concrete Removal.

**TWO ABUTMENTS\*  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	16	#5	26'-2"	—
h <sub>1</sub> (E)	8	#5	25'-2"	—
h <sub>2</sub> (E)	8	#5	38'-8"	—
h <sub>3</sub> (E)	4	#5	3'-2"	—
h <sub>4</sub> (E)	4	#5	17'-8"	—
v <sub>5</sub> (E)	260	#5	1'-9"	—

\* Includes Curtainwall Quantities

**TWO APPROACH BENTS\*\*  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h <sub>5</sub> (E)	24	#5	6'-9"	—
v <sub>4</sub> (E)	56	#6	2'-4"	—

\*\* Includes Wingwall Quantities

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Structures	Cu. Yd.	14.0
Reinforcement Bars, Epoxy Coated	Pound	1,900
Bar Splicers	Each	12
Concrete Sealer	Sq. Ft.	392

FILE NAME = TR420 over FAI-72.dgn

USER NAME =

DESIGNED - SAL

REVISED -

CHECKED - MTH

REVISED -

PLOT SCALE =

DRAWN - TJW

REVISED -

PLOT DATE =

CHECKED - MTH

REVISED -

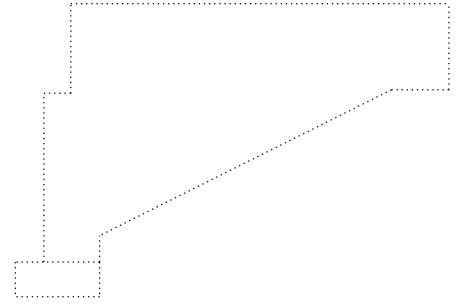
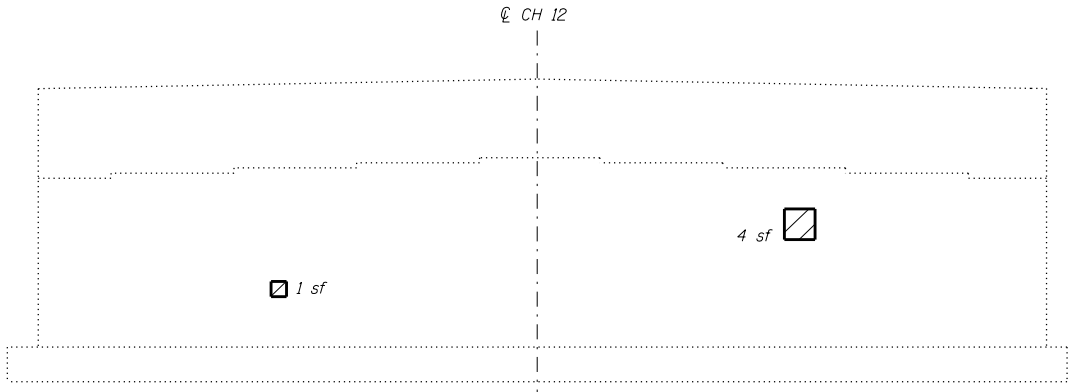
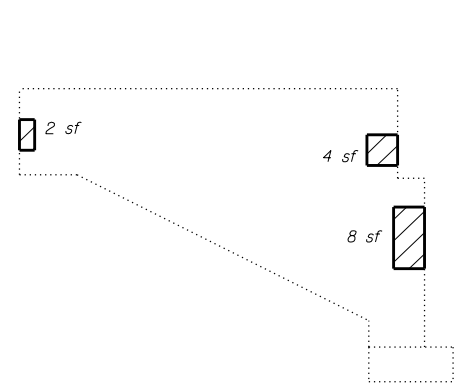
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**APPROACH BENTS  
OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154**

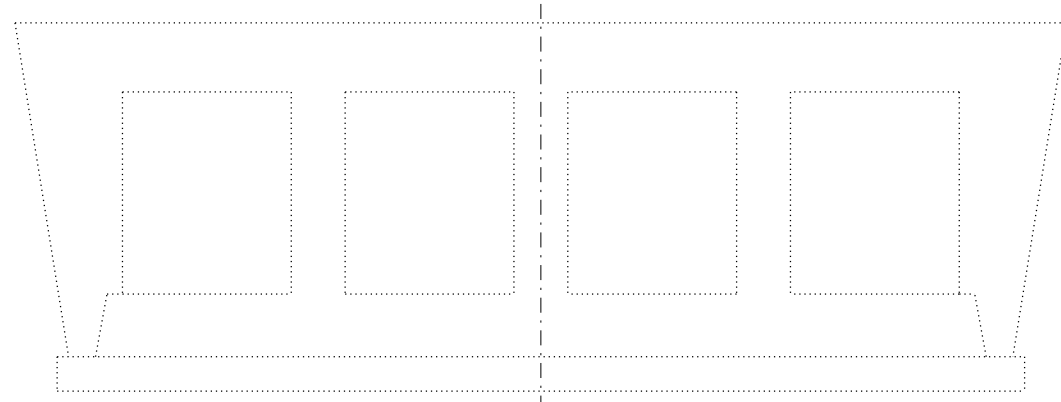
SHEET NO. 21 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-1,2) R5-3	SANGAMON	194	168
CONTRACT NO. 72C90				

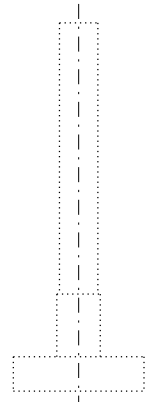
FED. ROAD DIST. NO. 6 | ILLINOIS FED. AID PROJECT



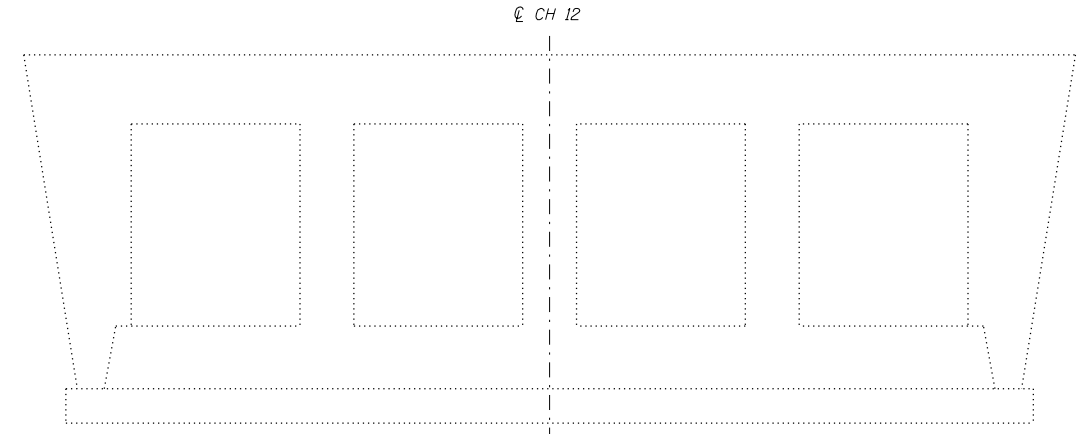
**N. ABUTMENT**  
(Looking North)



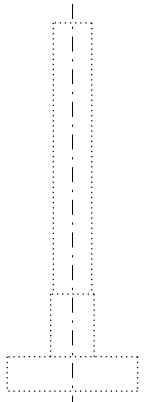
North Face



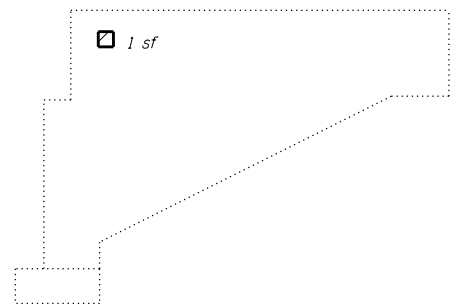
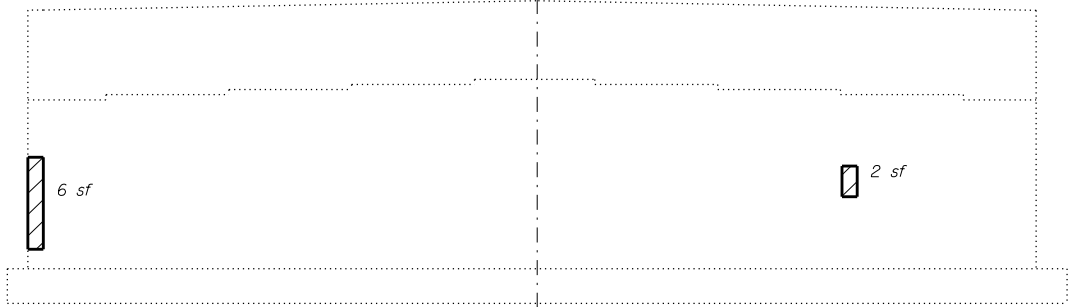
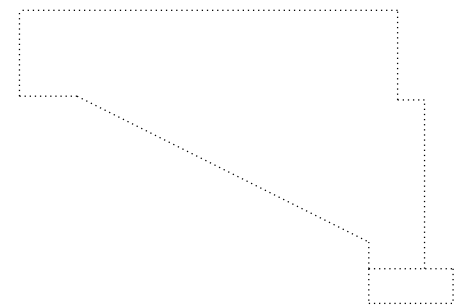
West Face



**Pier**  
(South Face)



East Face



**S. ABUTMENT**  
(Looking South)

**LEGEND**  
 Structural Repair of Concrete  
 sf square feet

**NOTES**  
 Repair of existing concrete shall include, but may not be limited to, the areas shown. The actual areas to be repaired will be determined by the Engineer at the time of construction and documented on the as-built plans.

**BILL OF MATERIAL**

Item	Unit	Total
Structural Repair of Concrete (Depth < 5')	Sq. Ft.	28

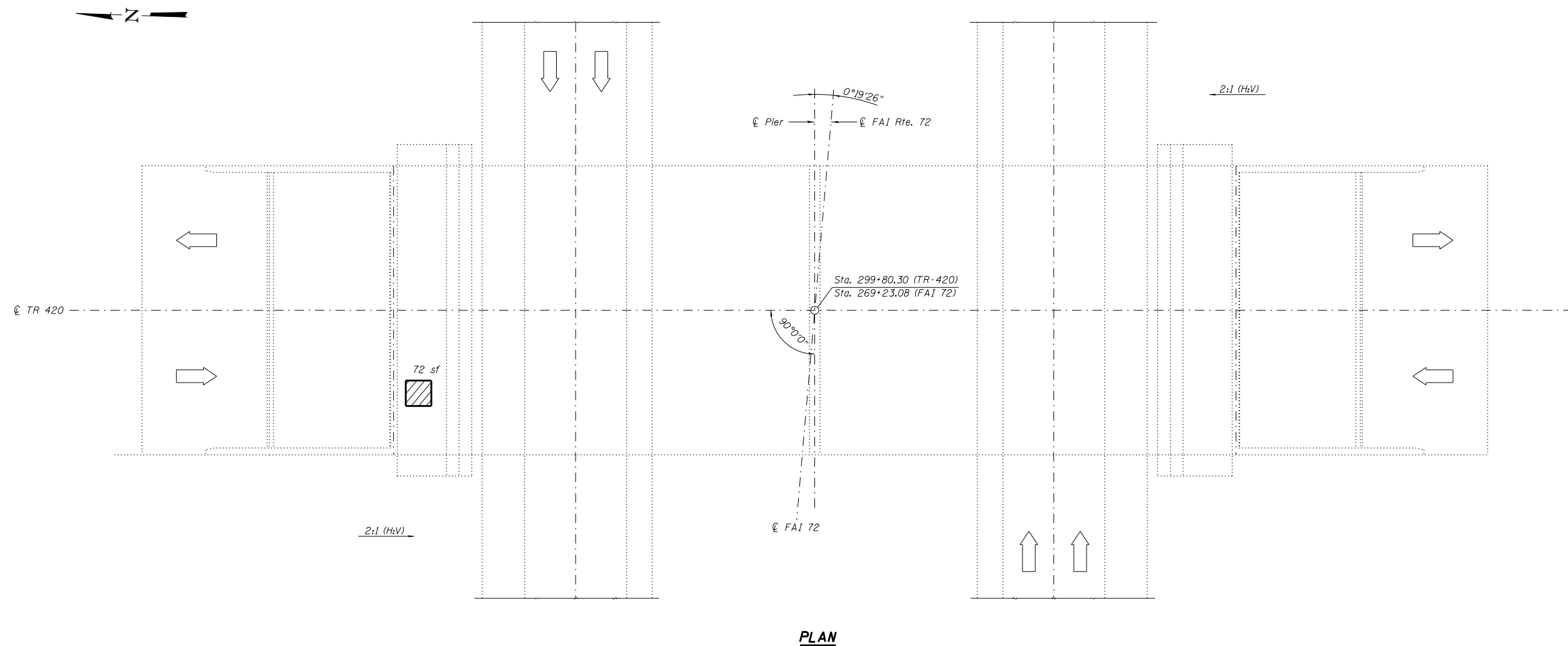
FILE NAME = TR420 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CONCRETE REPAIR DETAILS  
OVERPASS ROAD (TR-420) OVER F.A.I.-72 - S.N. 084-0154

SHEET NO. 22 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72		SANGAMON	194	169
• (84-10-IRS-3, 84-10-2RS-RIBR,1		CONTRACT NO. 72C90		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				



PLAN

**LEGEND**

- Slope Wall, 4"
- sf square feet

**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Slope Wall Removal	Sq. Yd.	8
Slope Wall, 4"	Sq. Yd.	8
Controlled Low Strength Material	Cu. Yd.	4

Notes:

Sloped wall shall be reinforced with welded wire fabric, 6"x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft. Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Sloped Wall Repair.

Existing and new welded wire fabric must be lapped at least 6".

Repair of the existing slope walls shall include but may not be limited to the areas shown. The actual areas to be repaired will be determined by the Engineer at the time of construction.

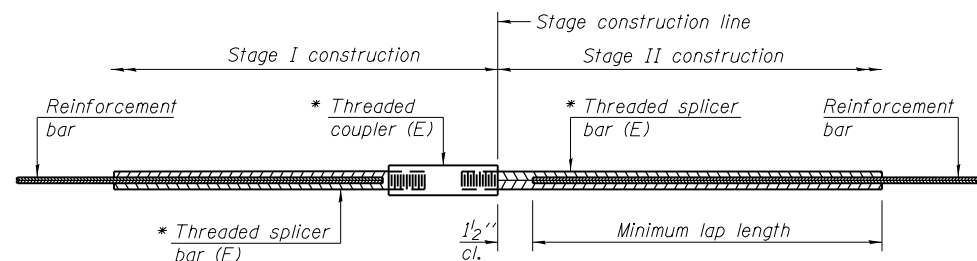
FILE NAME = TR420 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SLOPEWALL REPAIR DETAILS  
OVERPASS ROAD (TR-420) OVER F.A.I.-72 - S.N. 084-0154

SHEET NO. 23 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72		SANGAMON	194	170
• (84-10-IRS-3, 84-10-2RS-RIBR,I			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				



**STANDARD BAR SPLICER ASSEMBLY**

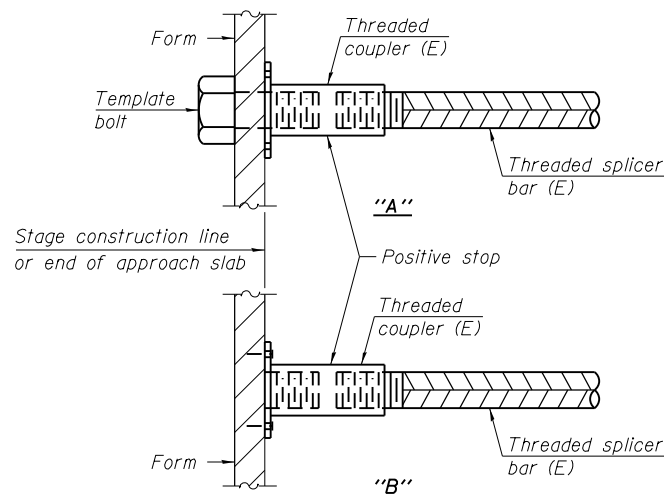
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

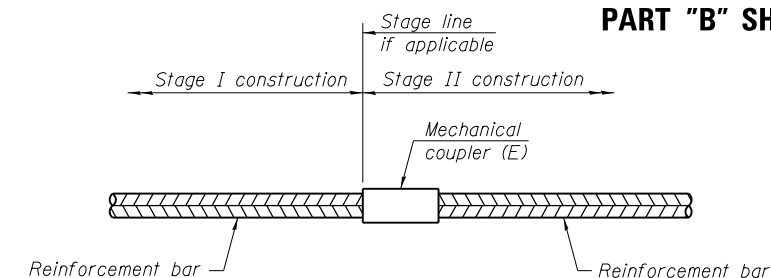
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Diaphragm	-	-	-
Abutments	#5	12	3
	-	-	-
Approach	#4	50	4
	#5	172	3
Approach Bent	-	-	-
	-	-	-



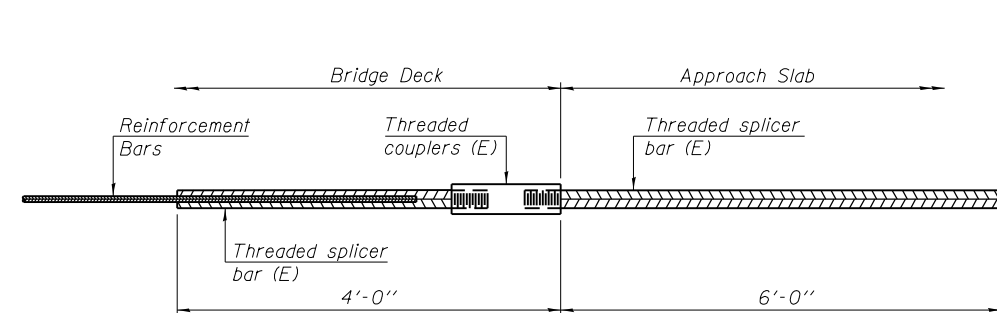
**INSTALLATION AND SETTING METHODS**

"A": Set bar splicer assembly by means of a template bolt.  
 "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E): Indicates epoxy coating.



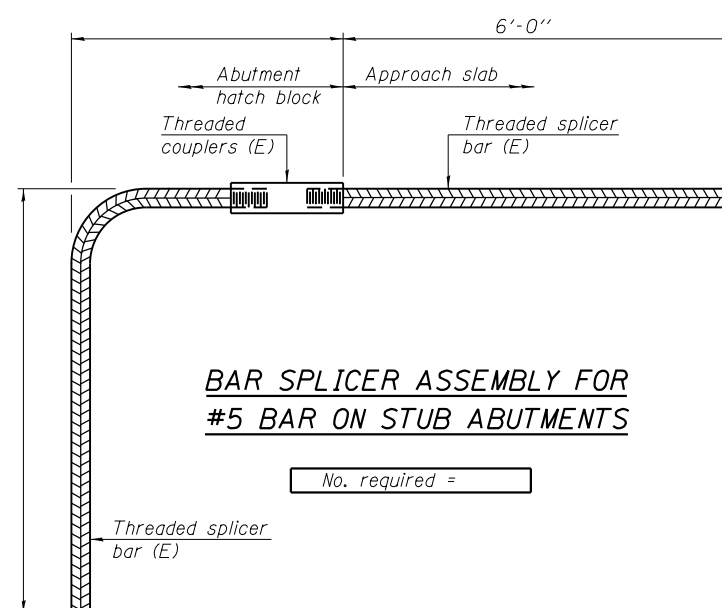
**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



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

No. required =



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required =

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

1-27-12

FILE NAME = TR420 over FAI-72.dgn	USER NAME =	DESIGNED - SAL	REVISED -
		CHECKED - MTH	REVISED -
	PLOT SCALE =	DRAWN - TJW	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154

SHEET NO. 24 OF 25 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72		SANGAMON	194	171
• (84-10-1RS-3, 84-10-2RS-R)B.R.I			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				

Notes:  
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.  
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

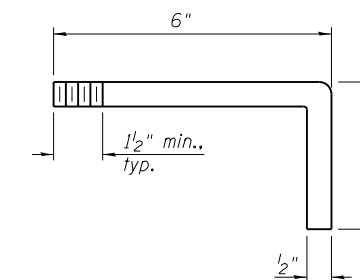
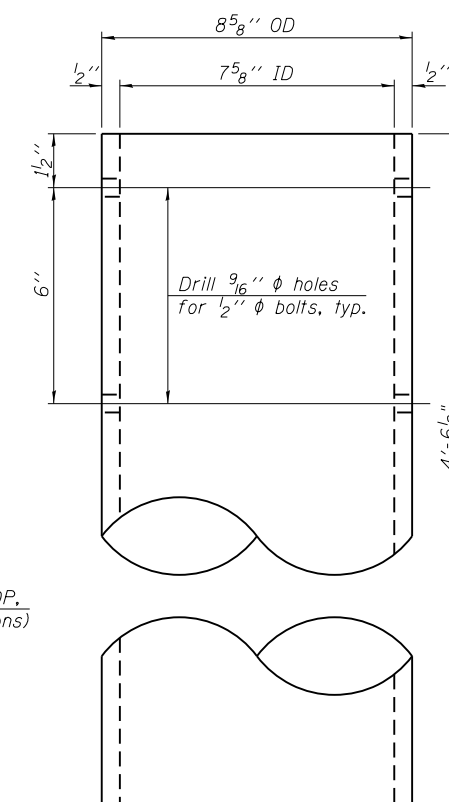
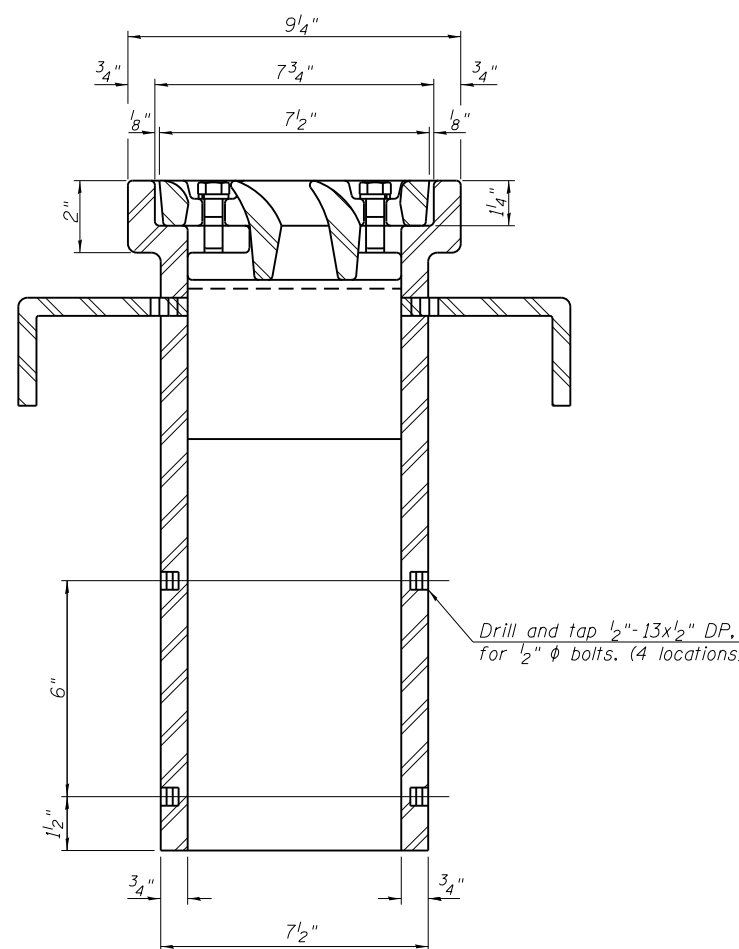
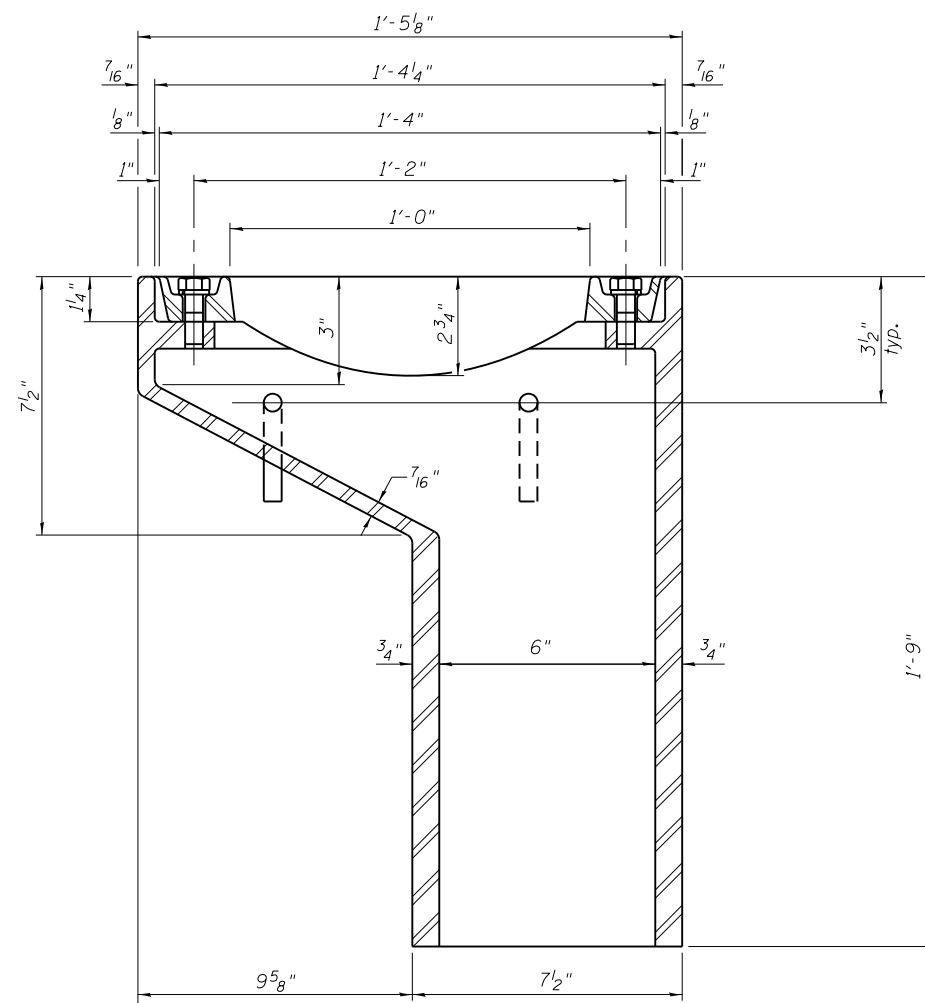
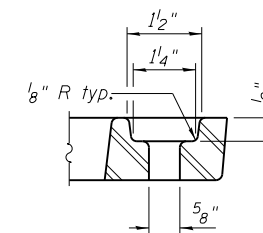
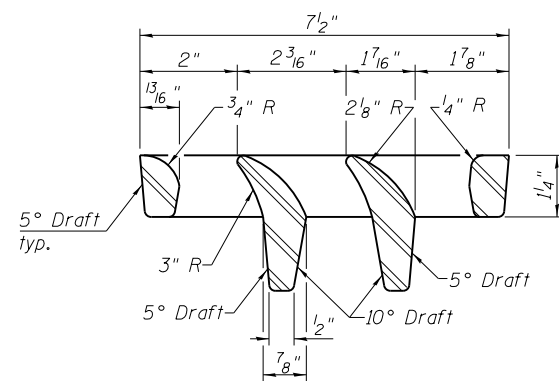
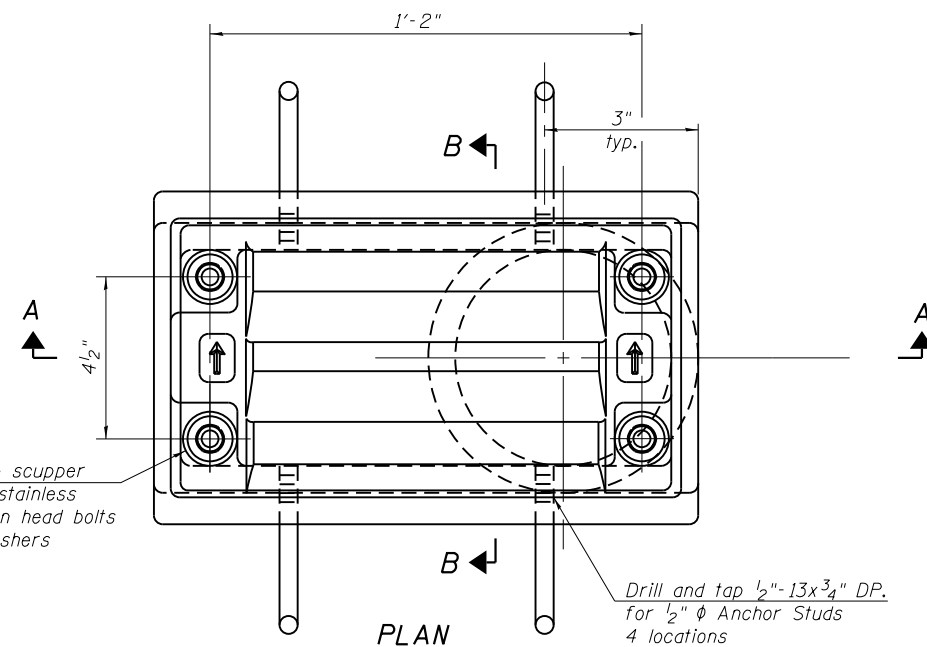
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



SECTION A-A  
 See sheet 9 of 25 for scupper location relative to parapet.

SECTION B-B

DOWNSPOUT

BILL OF MATERIAL

Item	Unit	Quantity
Drainage Scupper, DS-11	Each	4

DS-11 7-1-10

FILE NAME = TR420 over FA1-72.dgn

USER NAME =

PLOT SCALE =

PLOT DATE =

DESIGNED - SAL

CHECKED - MTH

DRAWN - TJW

CHECKED - MTH

REVISED -

REVISED -

REVISED -

REVISED -

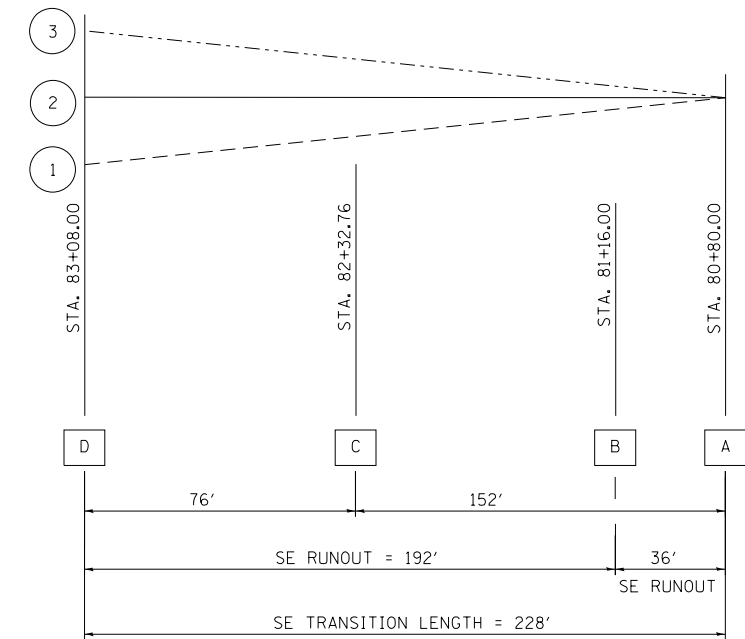
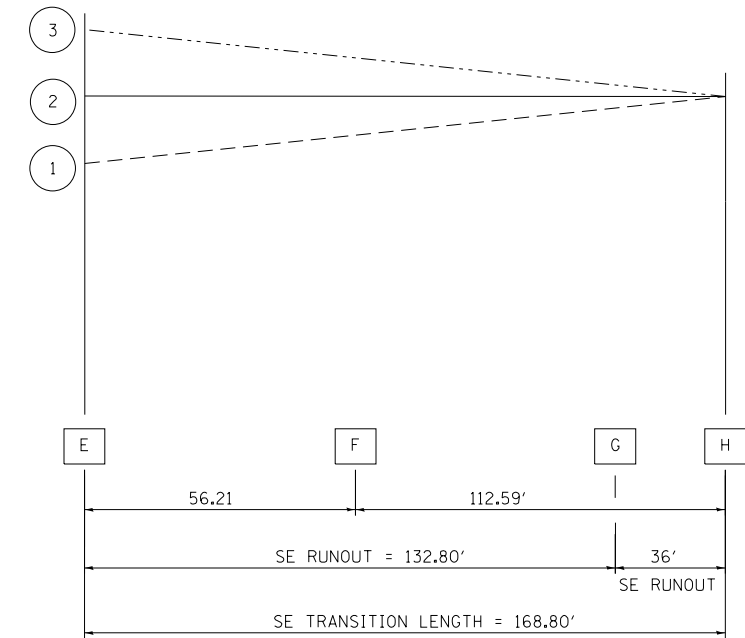
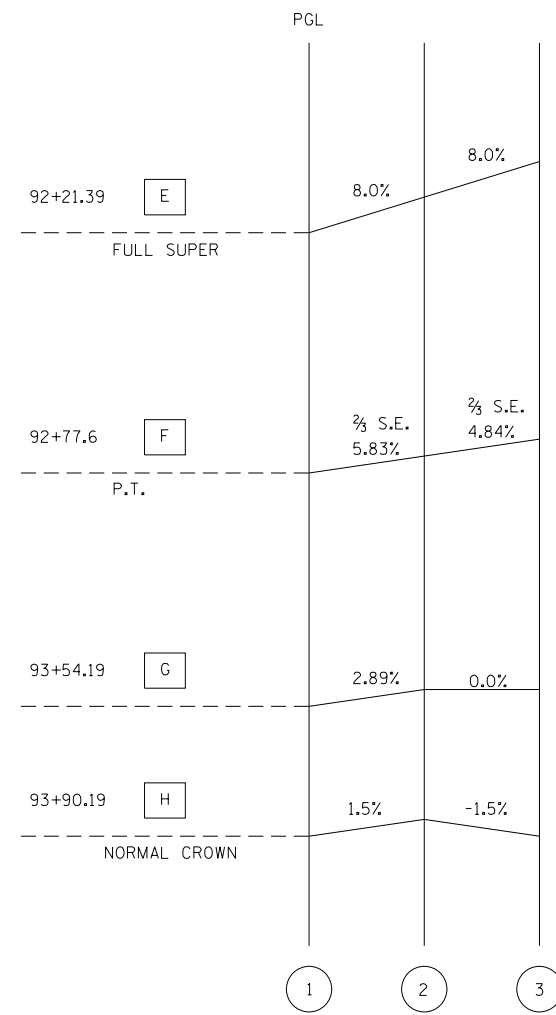
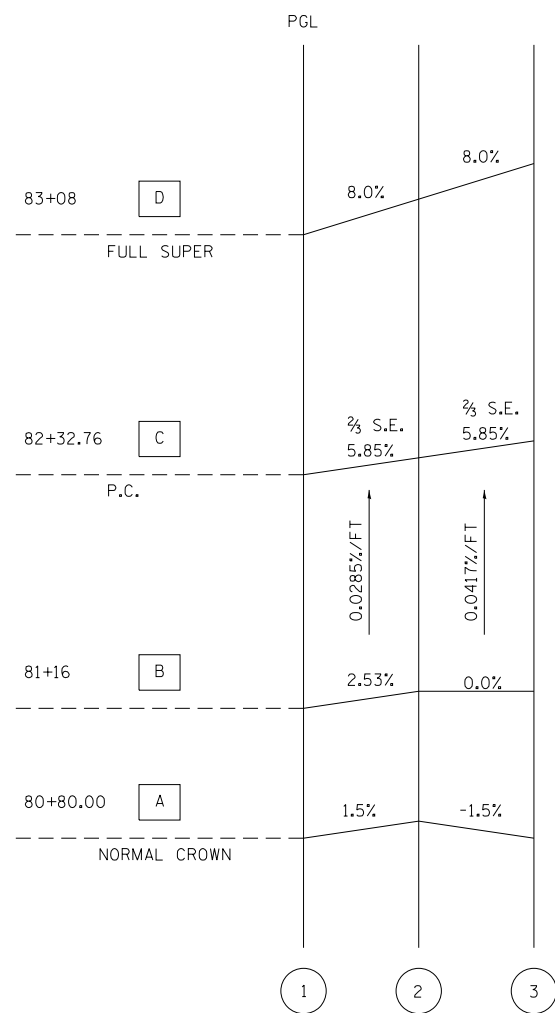
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

DRAINAGE SCUPPER, DS-11  
 OVERPASS RD. (TR-420) OVER F.A.I.-72 - S.N. 084-0154

SHEET NO. 25 OF 25 SHEETS

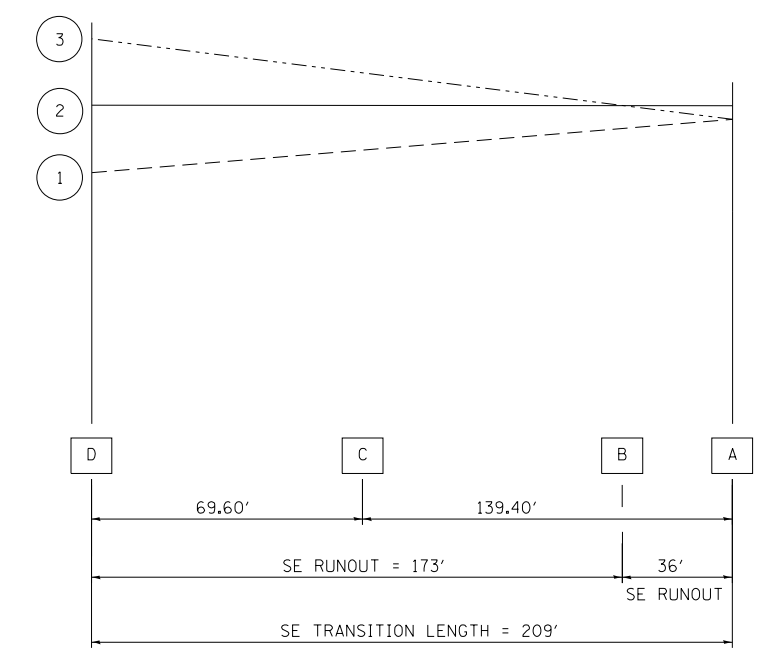
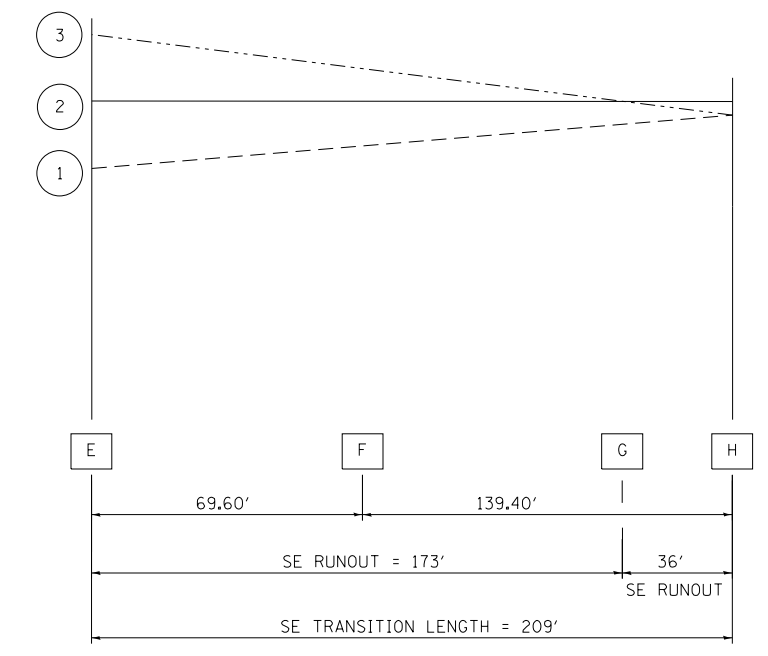
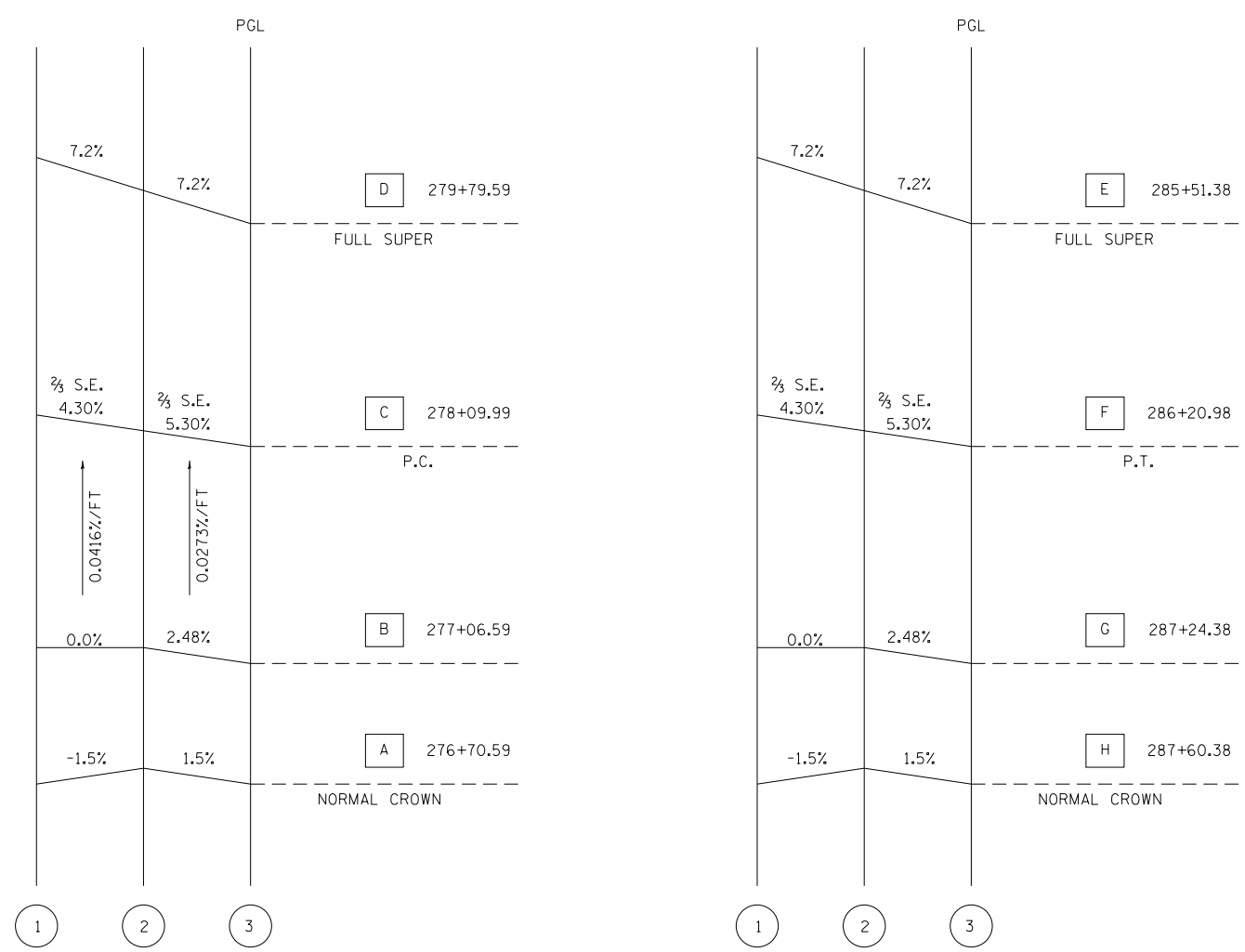
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72		SANGAMON	194	172
• (84-10-1RS-3, 84-10-2RS-R)B.R.I			CONTRACT NO. 72C90	
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				





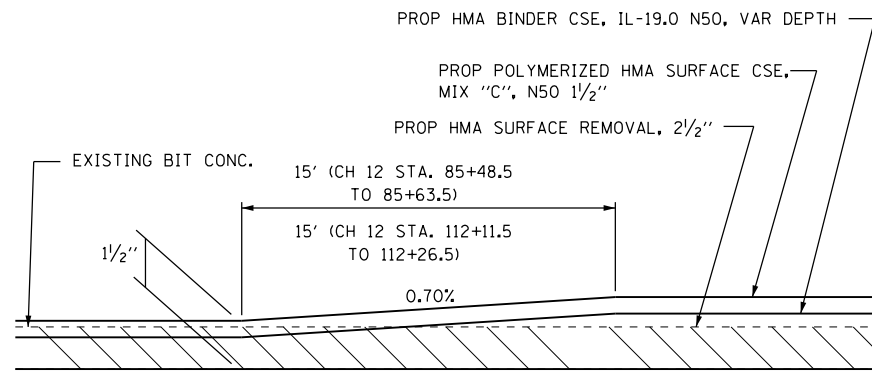
SE = 8.0%, SE RUNOFF LENGTH = 192'/138.8'

USER NAME = sparksgw PLOT SCALE = 2.0000' / in. PLOT DATE = Sep-06-2013 09:27:03AM	DESIGNED - BTM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUPERELEVATION TRANSITION DETAILS</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN - BTM	REVISED -		72	*	SANGAMON	194	173			
	CHECKED - JSA	REVISED -		SCALE:      SHEET NO.    OF    SHEETS    STA.                    TO STA.			* (84-10-1RS-3,84-10-2RS-4)BR,I <b>CONTRACT NO. 72C90</b>				
	DATE - 12/19/12	REVISED -					ILLINOIS FED. AID PROJECT (84-10-1,2)RS-3 & (84-10-2)RS-4				

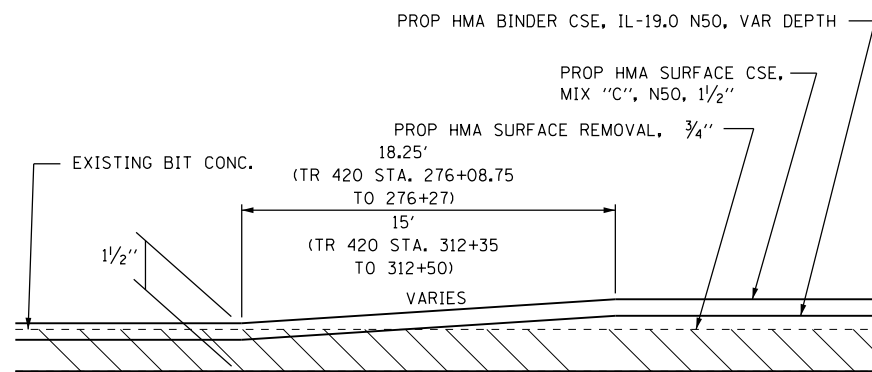


SE = 7.2%, SE RUNOFF LENGTH = 173'

USER NAME = sparksgw	DESIGNED - BTM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUPERELEVATION TRANSITION DETAILS</b>			F.A.I. RTE. = 72	SECTION = *	COUNTY = SANGAMON	TOTAL SHEETS = 194	SHEET NO. = 174
PLOT SCALE = 2.0000' / in.	CHECKED - JSA	REVISED -		<b>TR 420</b>			* (84-10-1RS-3,84-10-2RS-4)BR,I			<b>CONTRACT NO. 72C90</b>	
PLOT DATE = Sep-06-2013 09:27:22AM	DATE = 12/19/12	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT				
				(84-10-1,2)RS-3 & (84-10-2)RS-4							

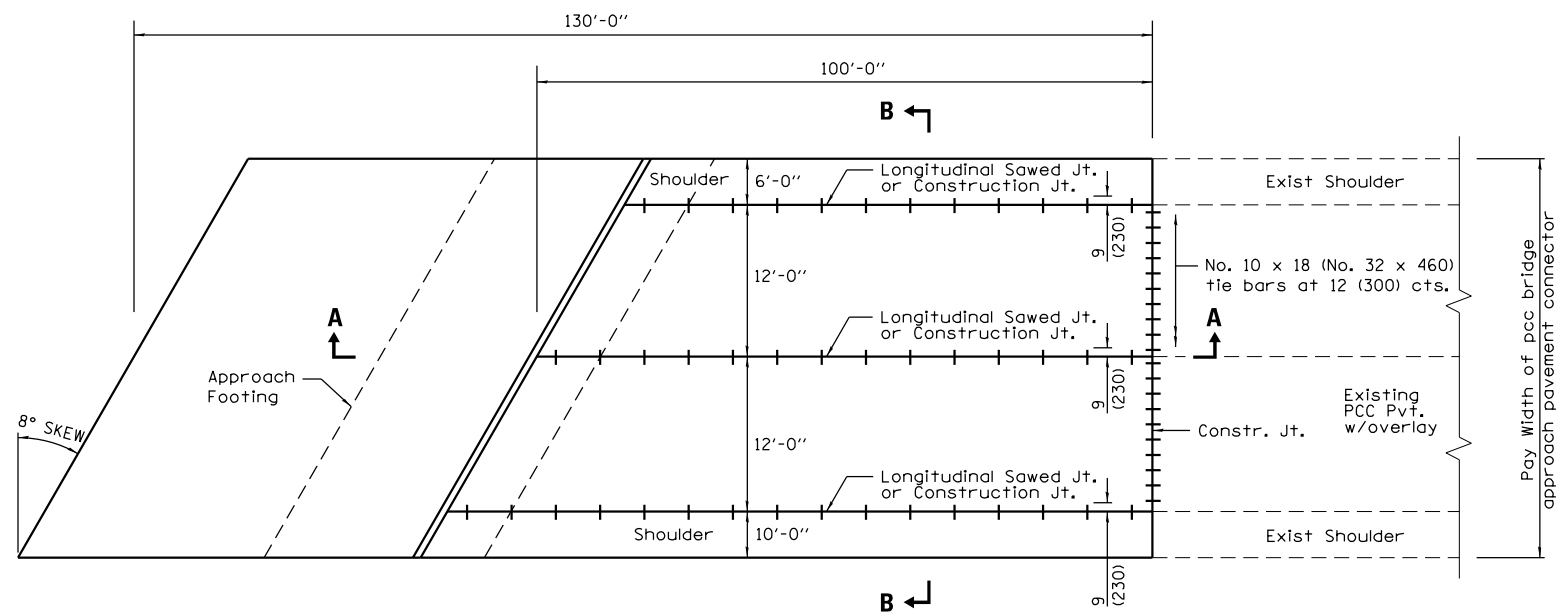


BUTT JOINT DETAIL CH 12

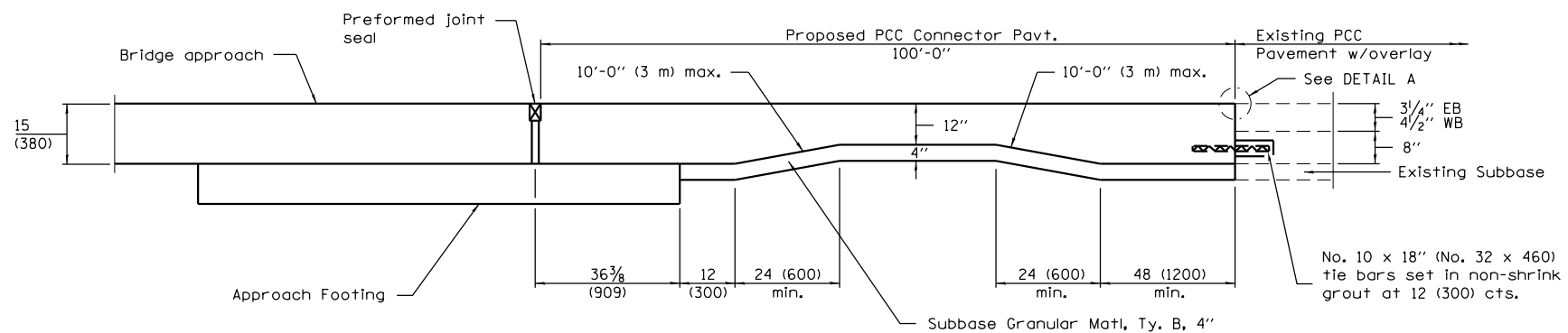


BUTT JOINT DETAIL TR 420

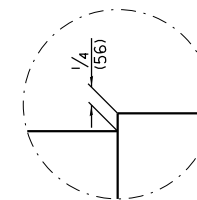
USER NAME = sparksgw	DESIGNED - BTM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>BUTT JOINT &amp; RAMP DETAILS</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 2.0000' / in.	DRAWN - BTM	REVISED -					72	*	SANGAMON	194	175
PLOT DATE = Sep-06-2013 09:27:49AM	CHECKED - JSA	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT NO. 72C90		
	DATE - 12/19/12	REVISED -		ILLINOIS FED. AID PROJECT							



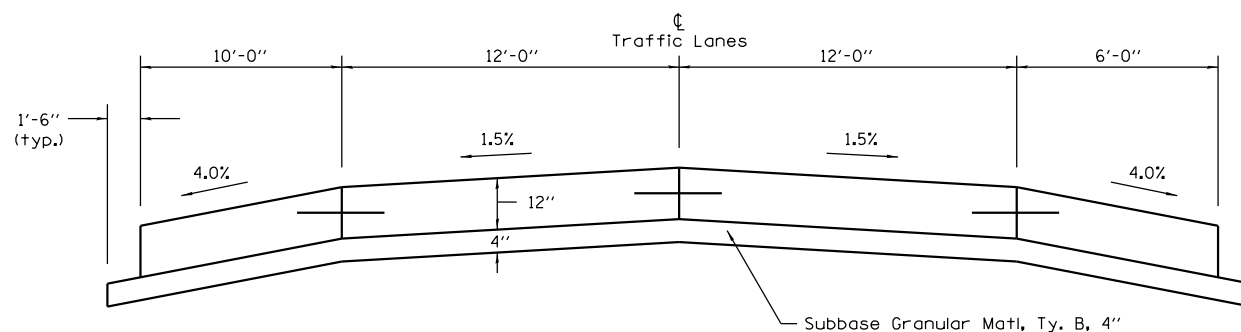
**BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)**



**SECTION A-A**



**DETAIL A**



**SECTION B-B**

**GENERAL NOTES**

See Standard 421001 for reinforcement details not shown.

See Standard 420001 for joint details not shown.

See structural plans for additional details of the approach pavement.

See plans for details of bridge approach, approach footing, and preformed joint seal.

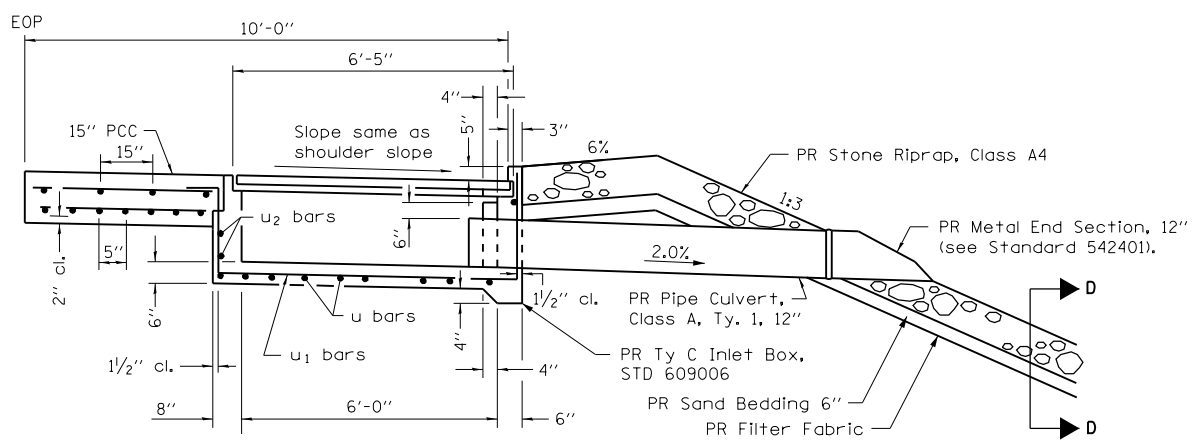
All dimensions are in inches unless otherwise indicated.

Reinforcement and tie bars will not be paid for separately, but shall be included in the cost for Bridge Approach Pavement Connector (PCC).

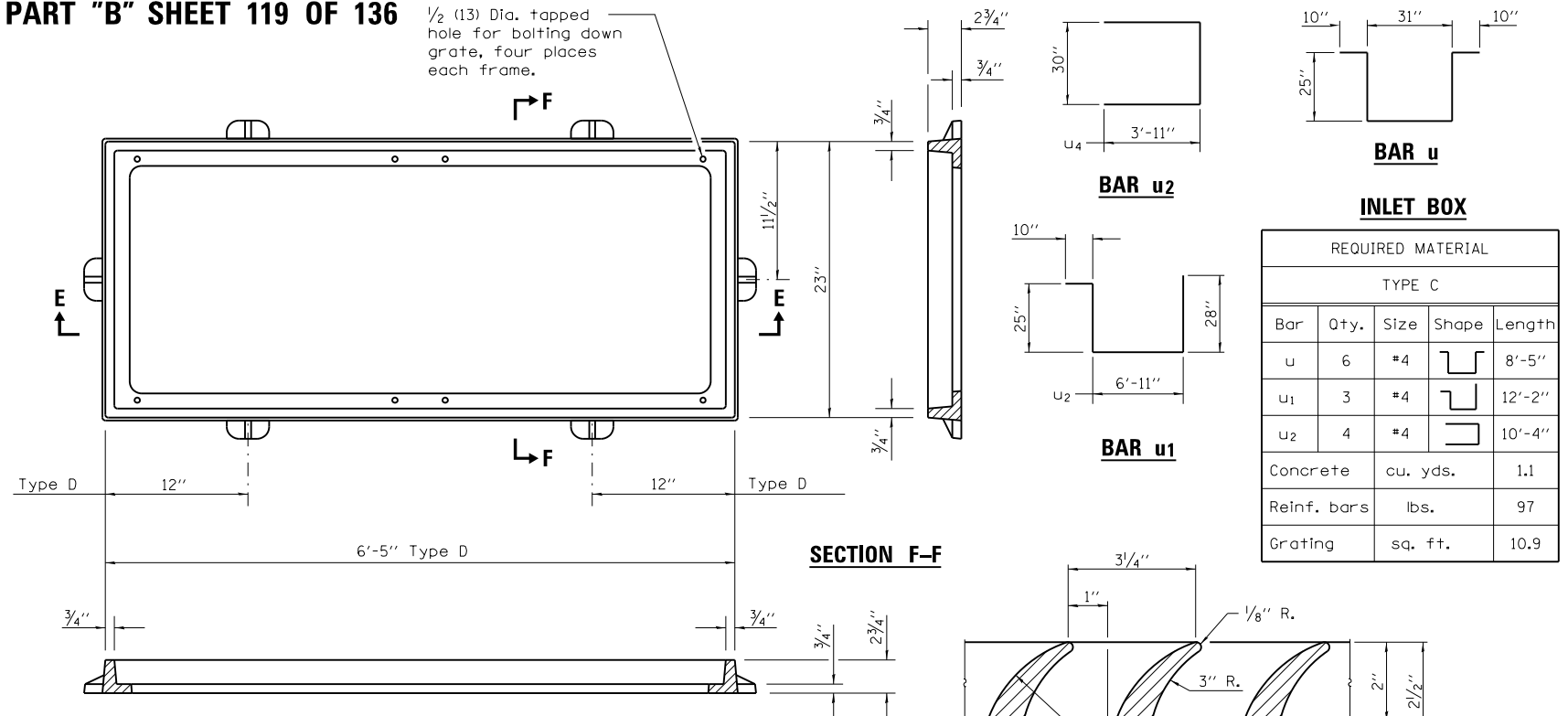
Reinforcement bars shall be epoxy coated.

USER NAME = sparksgw	DESIGNED - BTM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) DETAIL</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLLOT SCALE = 40.0000' / in.	DRAWN - BTM	REVISED -					72	*	SANGAMON	194	176
PLLOT DATE = Sep-06-2013 09:28:15AM	CHECKED - JSA	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			*184-10-1RS-3,84-10-2RS-4IBR,I				
DATE - 12/19/12	REVISED -	REVISED -					ILLINOIS FED. AID PROJECT				

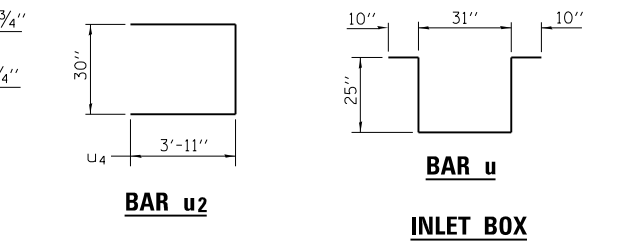
1/2 (13) Dia. tapped hole for bolting down grate, four places each frame.



SECTION B-B

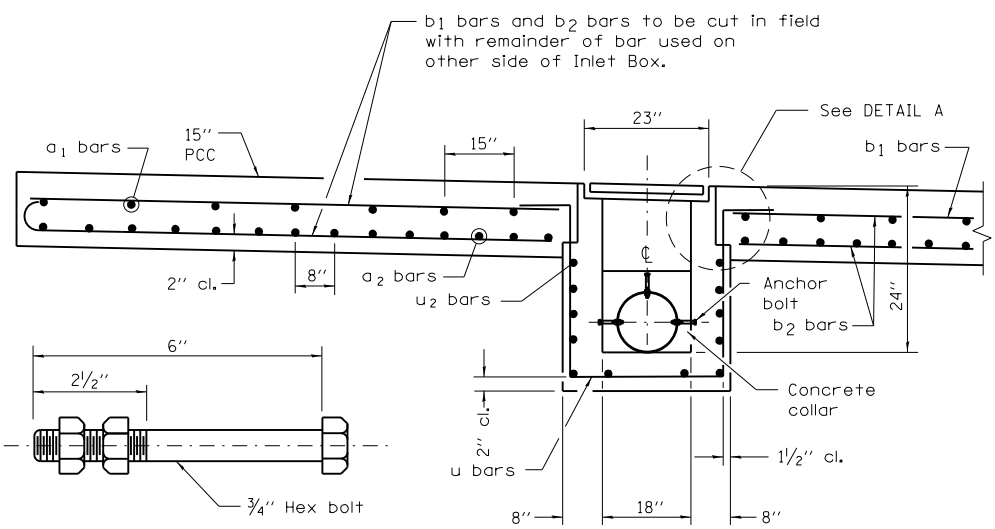


SECTION F-F  
DETAIL OF CAST FRAME



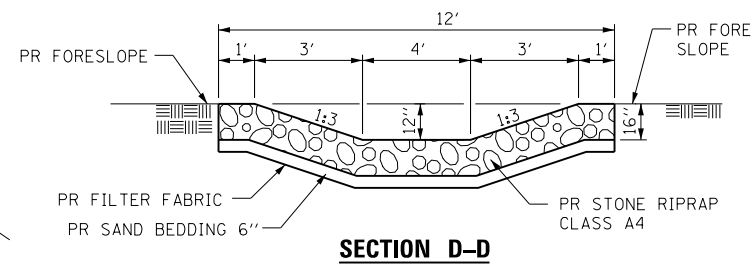
**REQUIRED MATERIAL**

TYPE C				
Bar	Qty.	Size	Shape	Length
u	6	#4	U	8'-5"
u1	3	#4	U	12'-2"
u2	4	#4	U	10'-4"
Concrete	cu. yds.			1.1
Reinf. bars	lbs.			97
Grating	sq. ft.			10.9

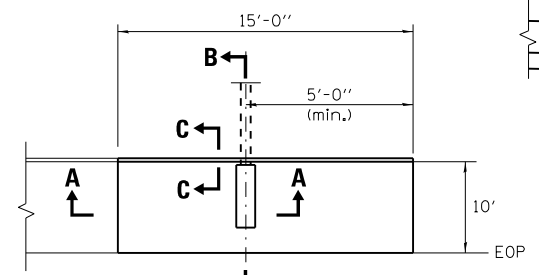


ANCHOR BOLT  
(Used to tie pipe to concrete collar)

SECTION A-A

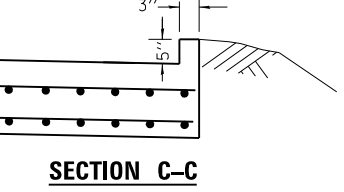


SECTION D-D



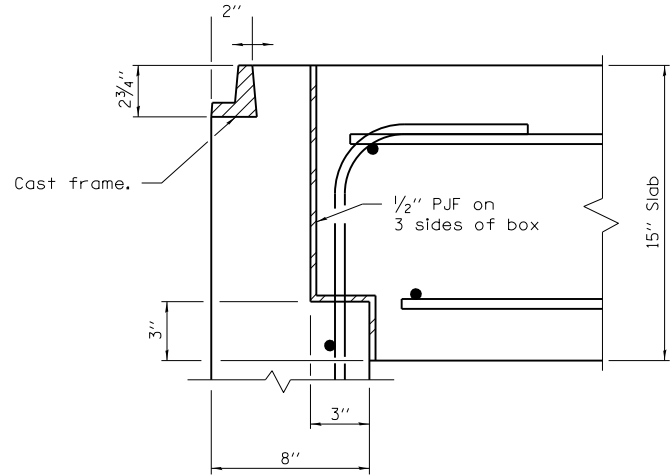
TYPICAL DETAIL PLAN  
APPROACH SHOULDER &  
DRAIN DETAIL

STA. 1946+81.24 LT  
STA. 1946+81.24 RT  
STA. 1946+81.24 LT  
STA. 1946+81.24 RT



SECTION C-C

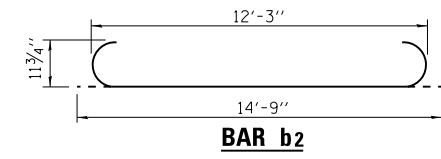
BOX OUTLET  
WHEN PRECAST



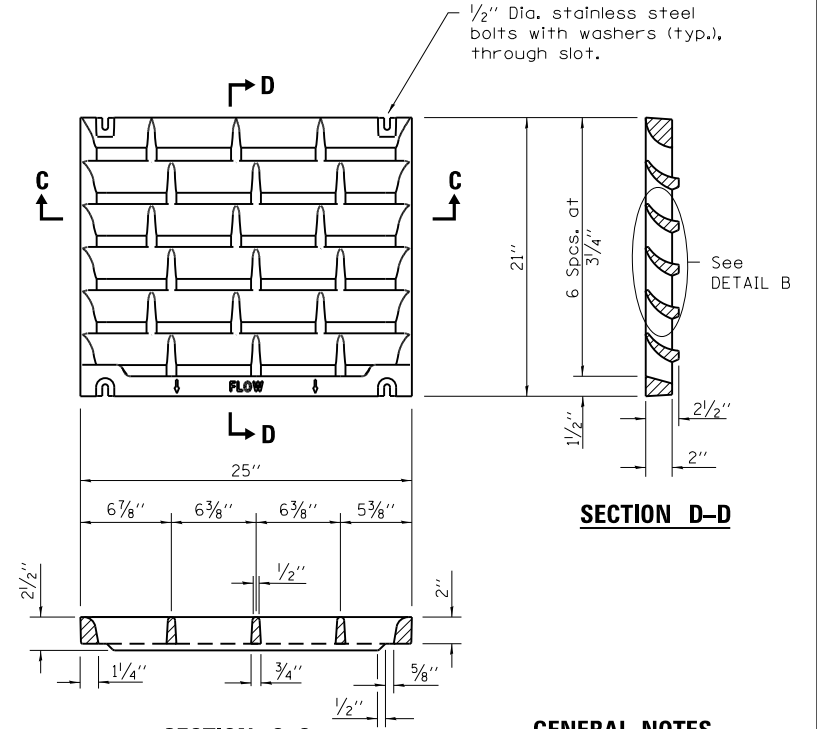
DETAIL A

**REQUIRED MATERIAL**

APPROACH SHLDR PVT				
Bar	Qty.	Size	Shape	Length
a1	13	#4	—	9'-9"
a2	31	#5	—	9'-9"
b1	5	#4	—	14'-9"
b2	15	#9	U	14'-9"
Concrete	cu. yds.			5.7
Reinf. bars	lbs.			1,202



BAR b2



SECTION C-C  
DETAIL OF CAST GRATE  
Type C requires 2 grates

**GENERAL NOTES**

All exposed edges of the inlet, except the upper perimeter, shall be beveled 3/4 (20).  
All dimensions are in inches (millimeters) unless otherwise shown.

INLET TYPE	SHOULDER WIDTH	O-O GRATING FRAME	INLET BOX INSIDE WIDTH	INLET BOX INSIDE LENGTH
Type D	10'	6'-5"	6'-0"	18"

USER NAME = sparksgw	DESIGNED - BTM	REVISED -
PLOT SCALE = 40.0000' / in.	DRAWN - BTM	REVISED -
PLOT DATE = Sep-06-2013 09:28:40AM	CHECKED - JSA	REVISED -
	DATE - 12/19/12	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

APPROACH PAVEMENT SHOULDER & DRAINS DETAILS  
& MISCELLANEOUS DETAILS

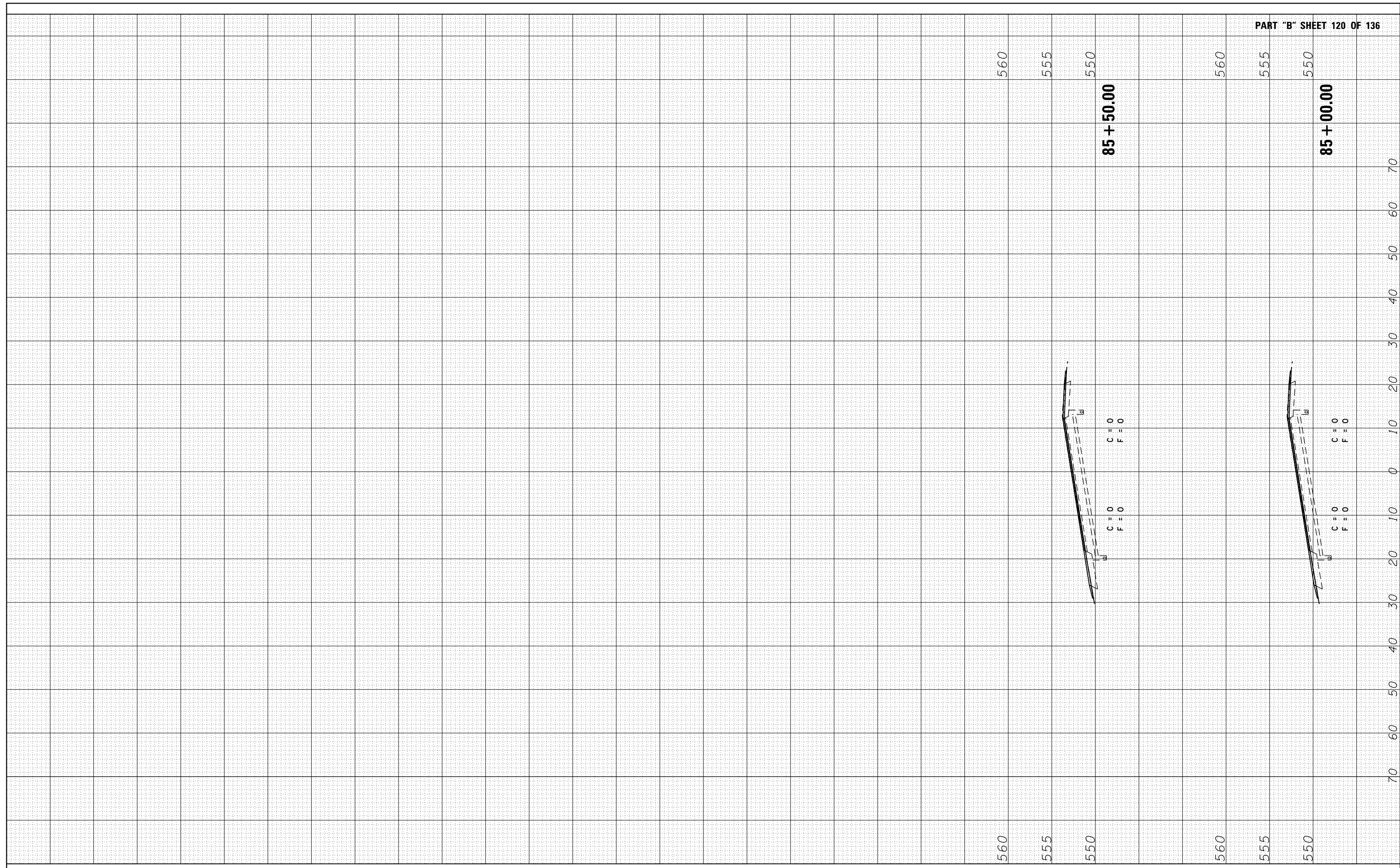
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RE. 72	SECTION *	COUNTY SANGAMON	TOTAL SHEETS 194	SHEET NO. 177
*184-10-1RS-3,84-10-2RS-4BR,I		CONTRACT NO. 72C90	ILLINOIS FED. AID PROJECT	

(84-10-1,2RS-3 & (84-10-2RS-4

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE
NOTE BOOK	TEMPLATE AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE
NOTE BOOK	TEMPLATE AREAS CHECKED		



FILE NAME =	USER NAME = sparksgw	DESIGNED - BTM	REVISED -
c:\pw_work\pwidot\sparksgw\d0360033\0672C90.shd	chi2.dgn	DRAWN - BTM	REVISED -
	PLOT SCALE = 20.0000' / in.	CHECKED - JSA	REVISED -
	PLOT DATE = Sep-06-2013 10:48:36AM	DATE - 9/20/12	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

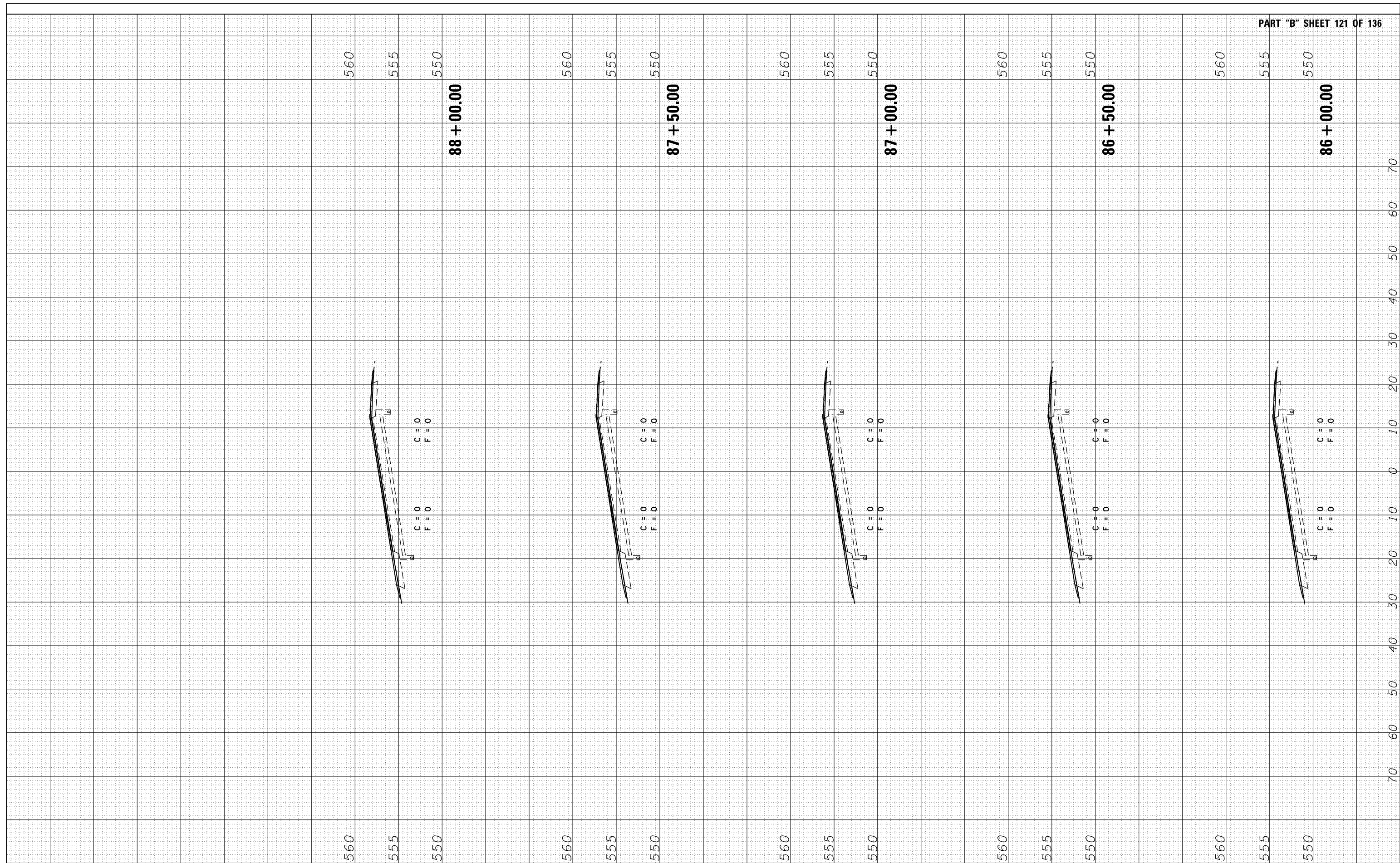
CROSS SECTIONS  
MECHANICSBURG RD.

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	•	SANGAMON	194	178
•(84-10-IRS-3,84-10-2RS-4)BR,1			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE



FILE NAME -	USER NAME = sparksgw	DESIGNED -	BTM	REVISED -	
		DRAWN -	BTM	REVISED -	
		CHECKED -	JSA	REVISED -	
		DATE -	9/20/12	REVISED -	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

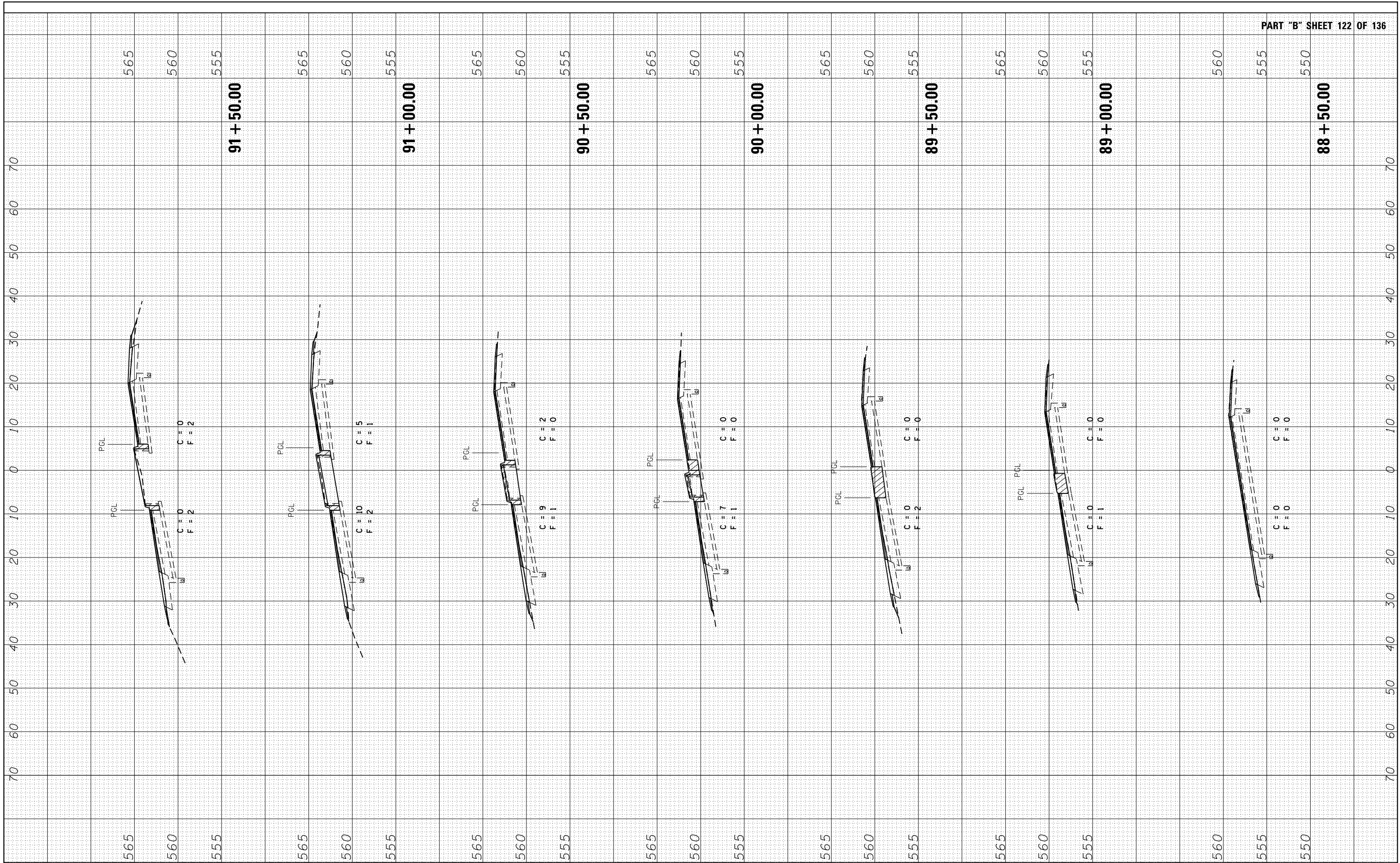
**CROSS SECTIONS  
MECHANICSBURG RD.**

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	•	SANGAMON	194	179
•(84-10-IRS-3,84-10-2RS-4)BR,1			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED
NOTE BOOK NO.	TEMPLATE AREAS CHECKED
DATE	BY

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED
NOTE BOOK NO.	TEMPLATE AREAS CHECKED
DATE	BY



FILE NAME -	USER NAME = sparksgw	DESIGNED - BTM	REVISED -
es:\pw_work\pwidot\sparksgw\d0360033\0672C90.shx.chi2.dgn		DRAWN - BTM	REVISED -
	PLOT SCALE = 20.0000' / in.	CHECKED - JSA	REVISED -
	PLOT DATE = Sep-06-2013 10:49:17AM	DATE - 9/20/12	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
MECHANICSBURG RD.

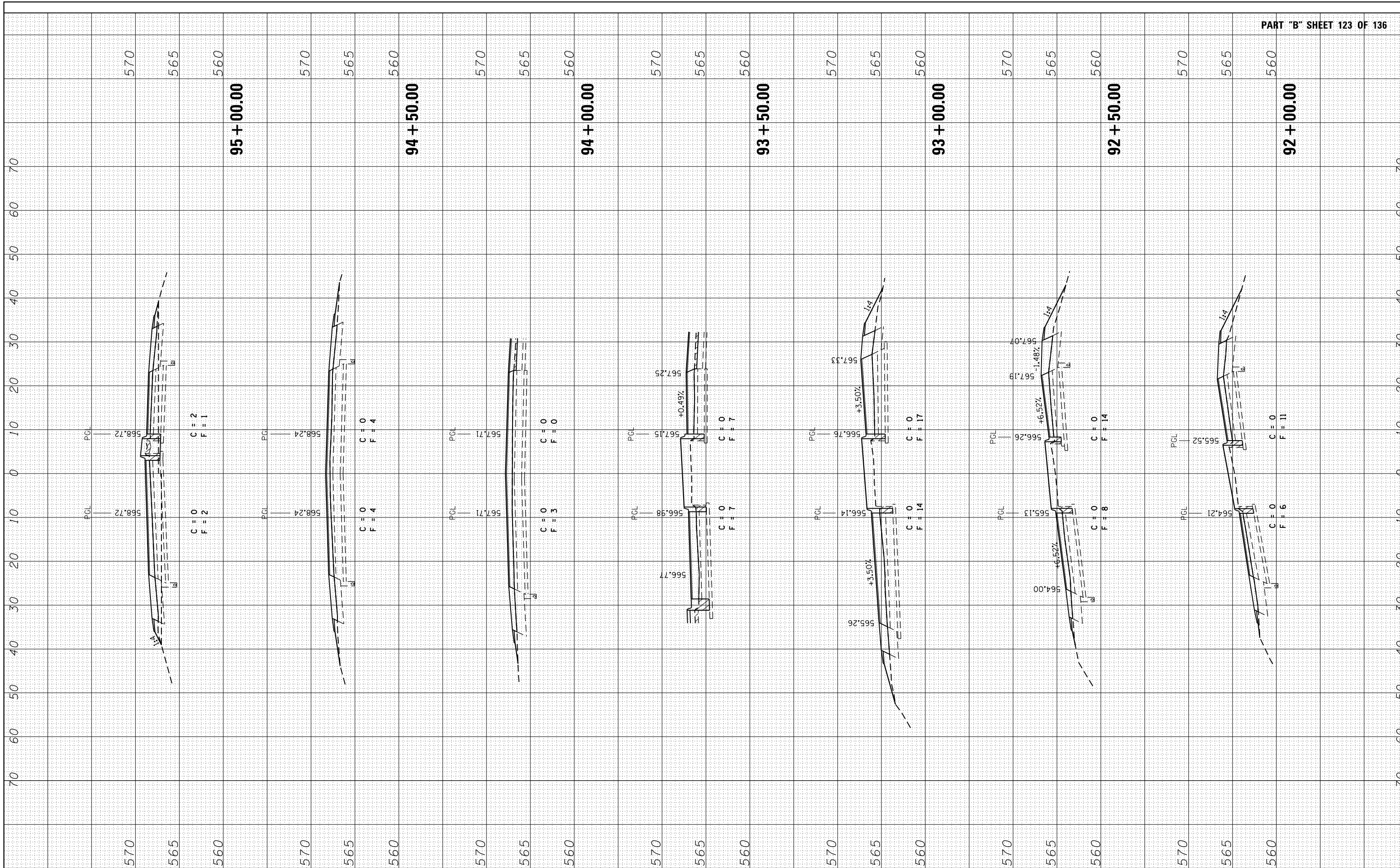
SCALE: SHEET NO. OF SHEETS STA. 88+50 TO STA. 91+50

F.A.I. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	•	SANGAMON	194	180
•(84-10-IRS-3,84-10-2RS-4)BR,1			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				



FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



FILE NAME -	USER NAME = sparksgw	DESIGNED - BTM	REVISED -
		DRAWN - BTM	REVISED -
		CHECKED - JSA	REVISED -
		DATE - 9/20/12	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

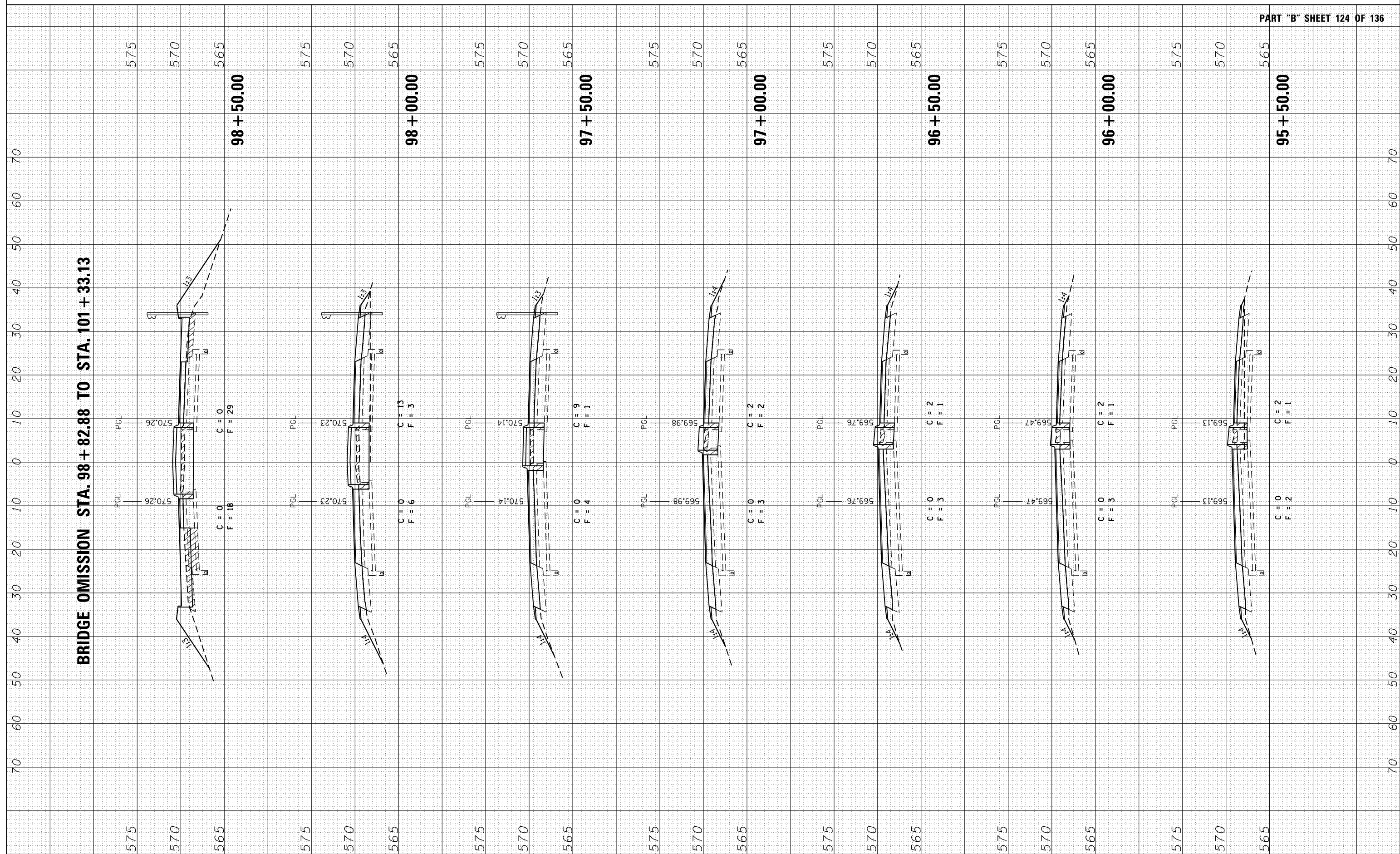
<b>CROSS SECTIONS MECHANICSBURG RD.</b>			
SCALE:	SHEET NO.	OF SHEETS	STA. 92+00 TO STA. 95+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	•	SANGAMON	194	181
•(84-10-IRS-3,84-10-2RS-4)BR,I			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

**BRIDGE OMISSION STA. 98 + 82.88 TO STA. 101 + 33.13**



FILE NAME -	USER NAME = sparksgw	DESIGNED - BTM	REVISED -
		DRAWN - BTM	REVISED -
		CHECKED - JSA	REVISED -
		DATE - 9/20/12	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
MECHANICSBURG RD.**

SCALE:	SHEET NO.	OF	SHEETS	STA.	95+50	TO	STA.	98+50
--------	-----------	----	--------	------	-------	----	------	-------

F.A.I. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	•	SANGAMON	194	182
•(84-10-IRS-3,84-10-2RS-4)BR,1			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				

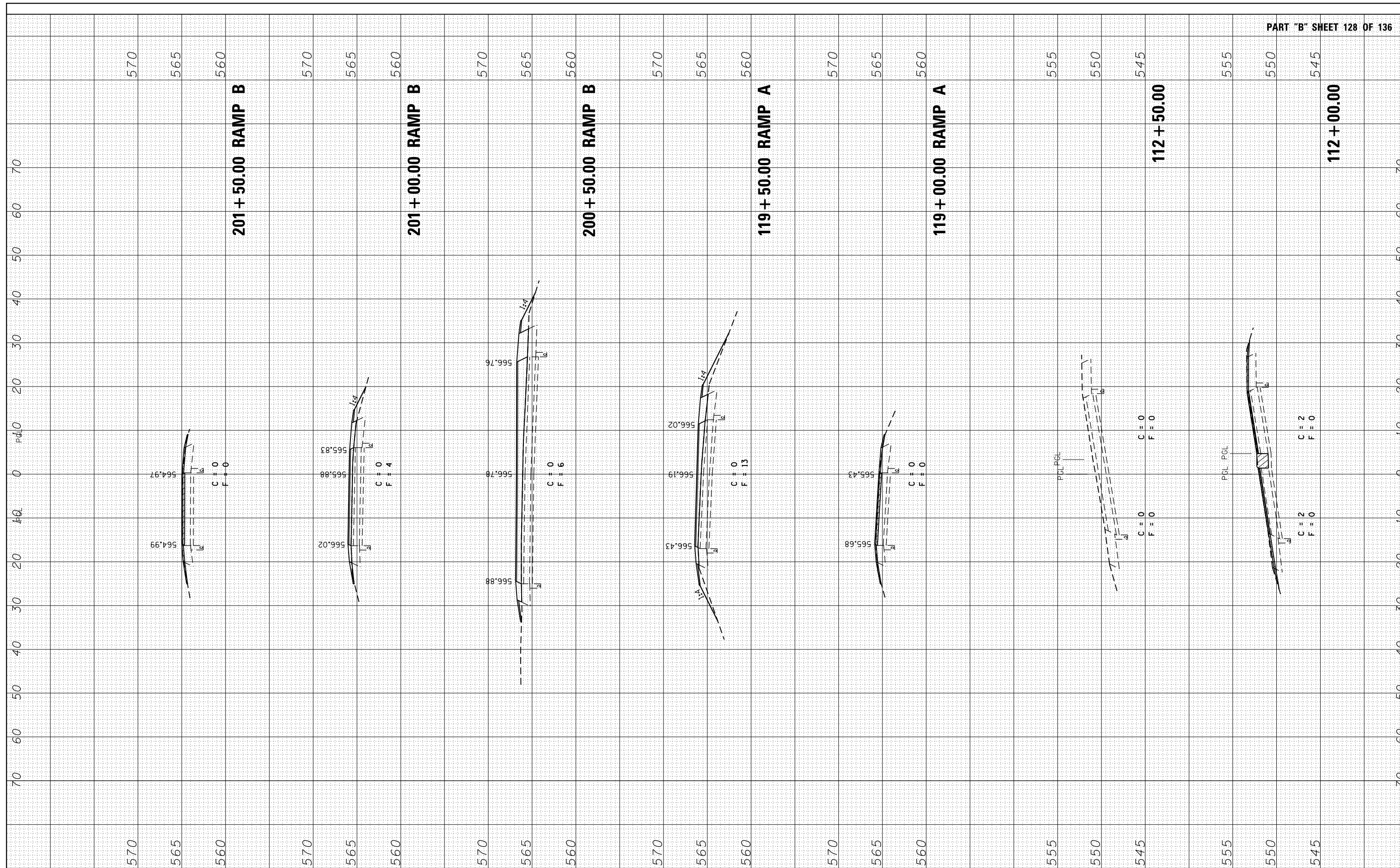






FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED
NOTE BOOK NO.	AREAS CHECKED
DATE	

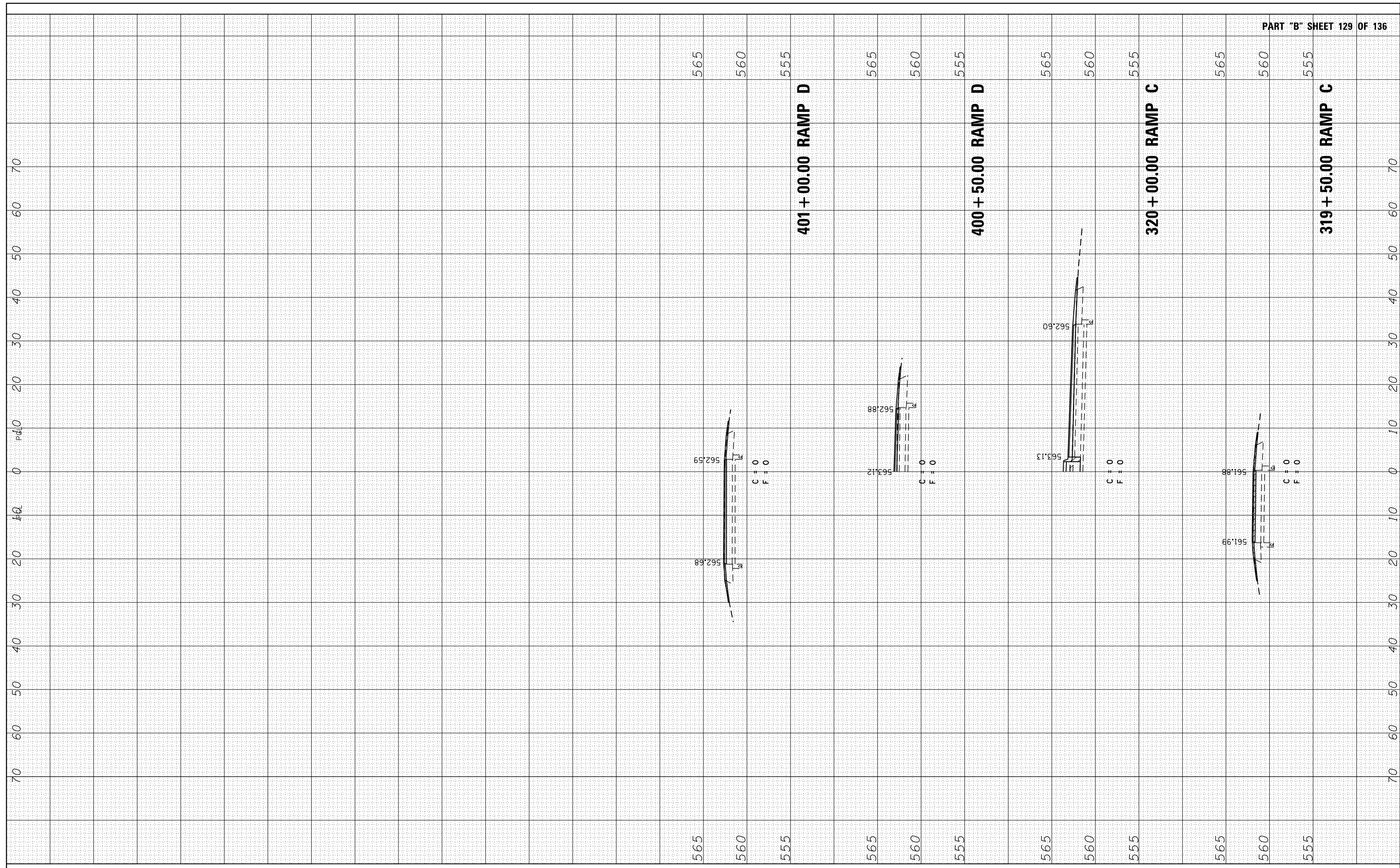
ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED
NOTE BOOK NO.	AREAS CHECKED
DATE	



FILE NAME =	USER NAME = sparksgw	DESIGNED - BTM	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b> <b>MECHANICSBURG RD.</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
es:\pw_work\pwidot\sparksgw\d0360033\0672C90.shx	chi2.dgn	DRAWN - BTM	REVISED -		72	.	SANGAMON	194	186			
PLOT SCALE = 20.0000' / in.	CHECKED - JSA	REVISIED -	REVISIED -		•(84-10-IRS-3,84-10-2RS-4)BR,1				CONTRACT NO. 72C90			
PLOT DATE = Sep-06-2013 10:51:00AM	DATE - 9/20/12	REVISIED -	REVISIED -		SCALE:	SHEET NO.	OF SHEETS	STA. 112+00	TO STA. 112+50	ILLINOIS FED. AID PROJECT		

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



FILE NAME =	USER NAME = sparksgw	DESIGNED - BTM	REVISED -
		DRAWN - BTM	REVISED -
	PLOT SCALE = 20.0000' / in.	CHECKED - JSA	REVISED -
	PLOT DATE = Sep-06-2013 10:51:17AM	DATE - 9/20/12	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS  
MECHANICSBURG RD.**

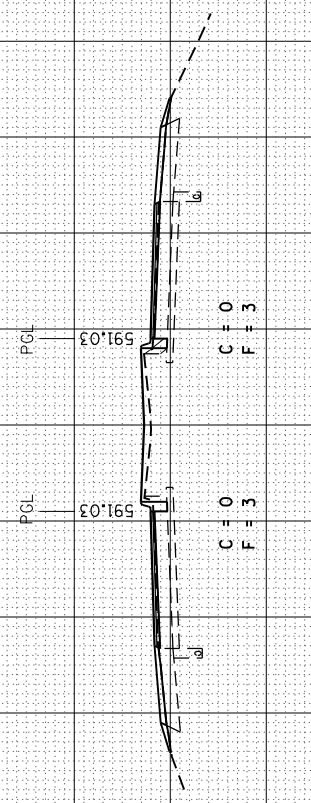
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	•	SANGAMON	194	187
•(84-10-IRS-3,84-10-2RS-4)BR,I			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				

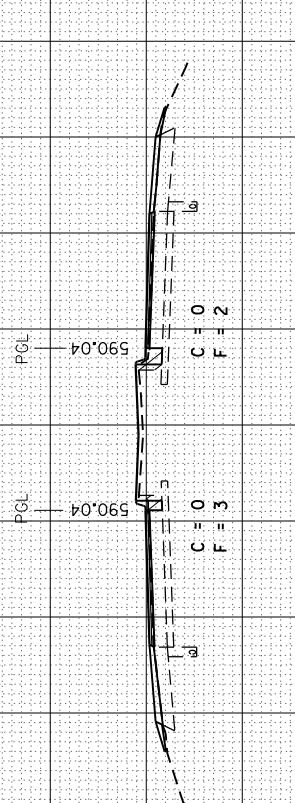
FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

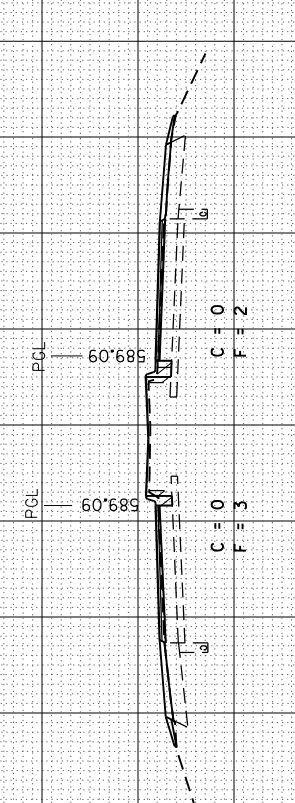
595  
590  
585  
**291 + 50**



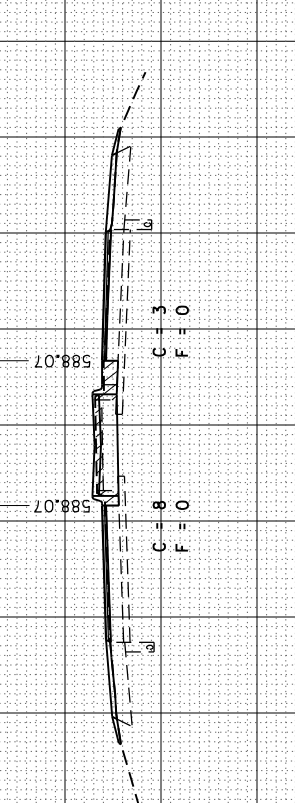
595  
590  
585  
**291 + 00**



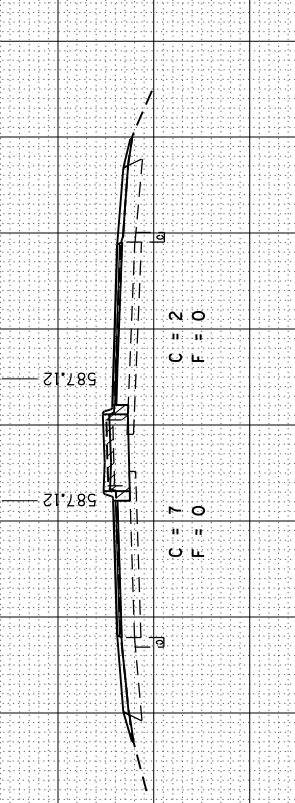
595  
590  
585  
**290 + 50**



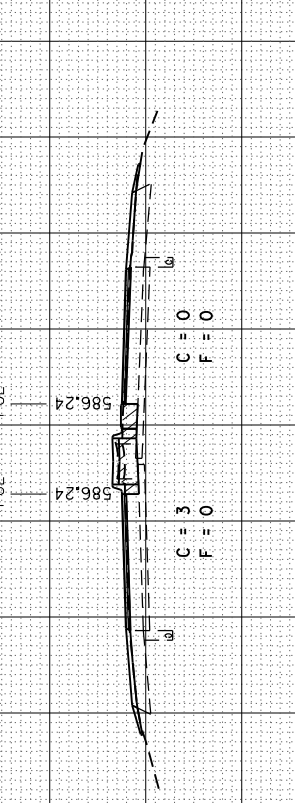
590  
585  
580  
**290 + 00**



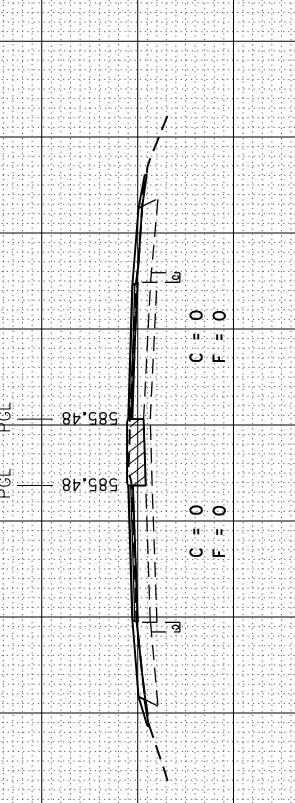
590  
585  
580  
**289 + 50**



590  
585  
580  
**289 + 00**



590  
585  
580  
**288 + 50**



FILE NAME =	USER NAME = sparksgw	DESIGNED - BTM	REVISED -
		DRAWN - BTM	REVISED -
		CHECKED - JSA	REVISED -
		DATE - 9/20/12	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

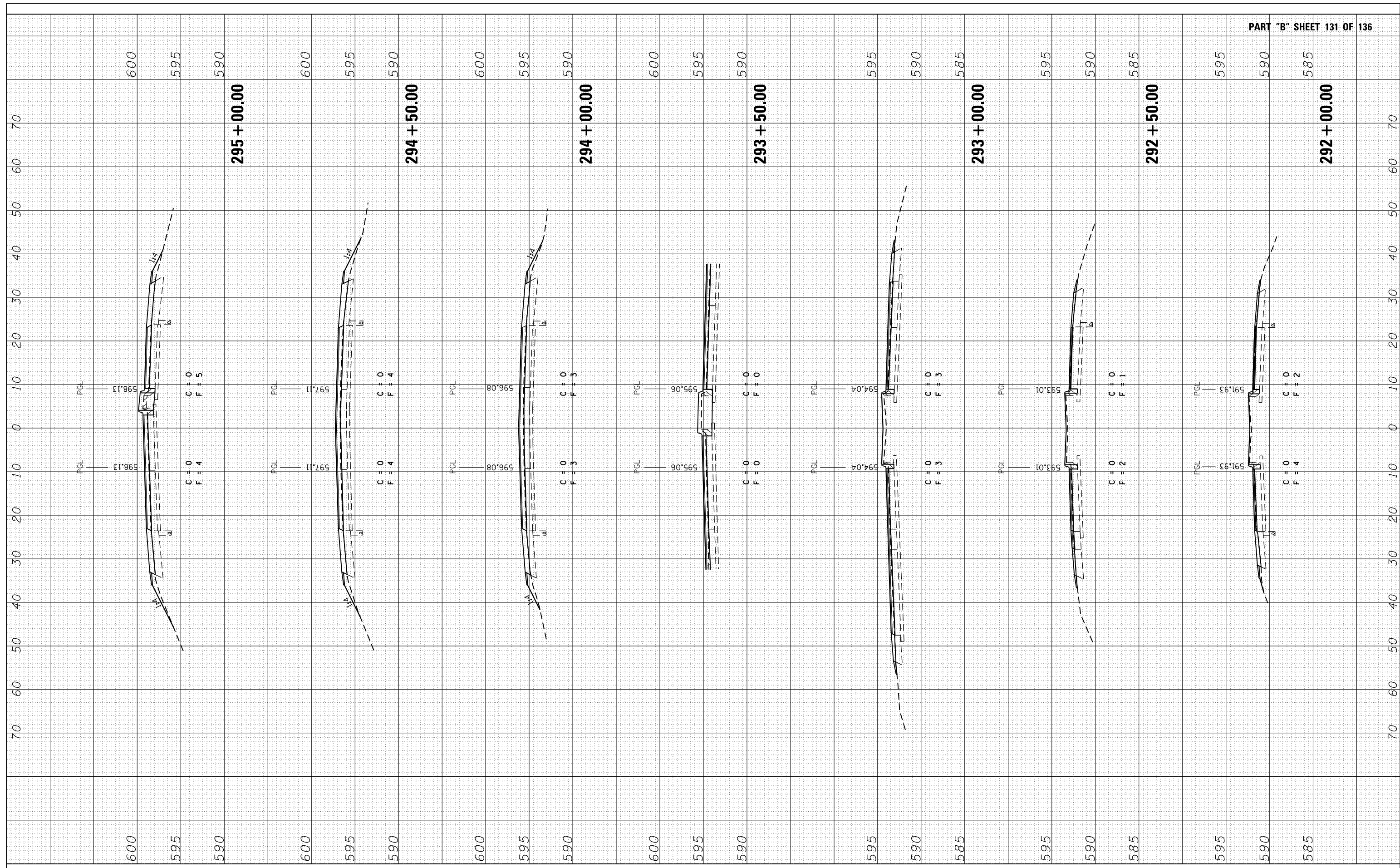
<b>CROSS SECTIONS TR 420 (OVERPASS RD.)</b>			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	•	SANGAMON	194	188
•(84-10-IRS-3,84-10-2RS-4)BR,1			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				



FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED
BY	DATE
NO.	

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED
BY	DATE
NO.	



FILE NAME -	USER NAME = sparksgw	DESIGNED - BTM	REVISED -
c:\pw_work\pwidot\sparksgw\d0359822\0672C90.sh	t-420.dgn	DRAWN - BTM	REVISED -
	PLOT SCALE = 20.0000' / in.	CHECKED - JSA	REVISED -
	PLOT DATE = Sep-06-2013 09:45:37AM	DATE - 9/20/12	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

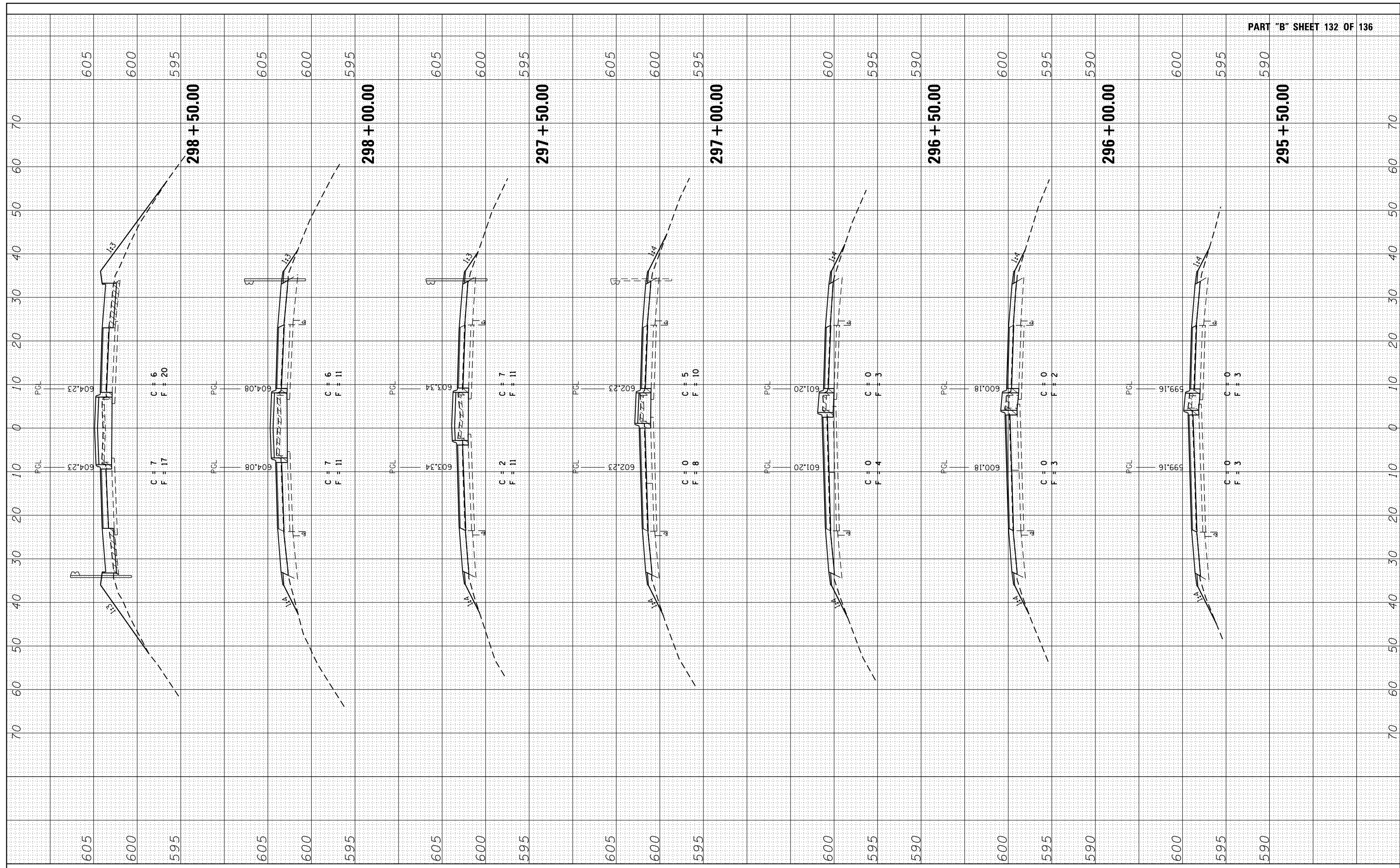
**CROSS SECTIONS  
TR 420 (OVERPASS RD.)**

SCALE: SHEET NO. OF SHEETS STA. 292+00 TO STA. 295+00

F.A.I. RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	•	SANGAMON	194	189
•(84-10-IRS-3,84-10-2RS-4)BR,I			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



FILE NAME - c:\pw\work\p1dot\sparksq\d0359822\0672C90.sh  
 USER NAME = sparksq  
 PLOT SCALE = 20.0000' / in.  
 PLOT DATE = Sep-06-2013 09:45:18AM

DESIGNED - BTM  
 DRAWN - BTM  
 CHECKED - JSA  
 DATE - 9/20/12

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

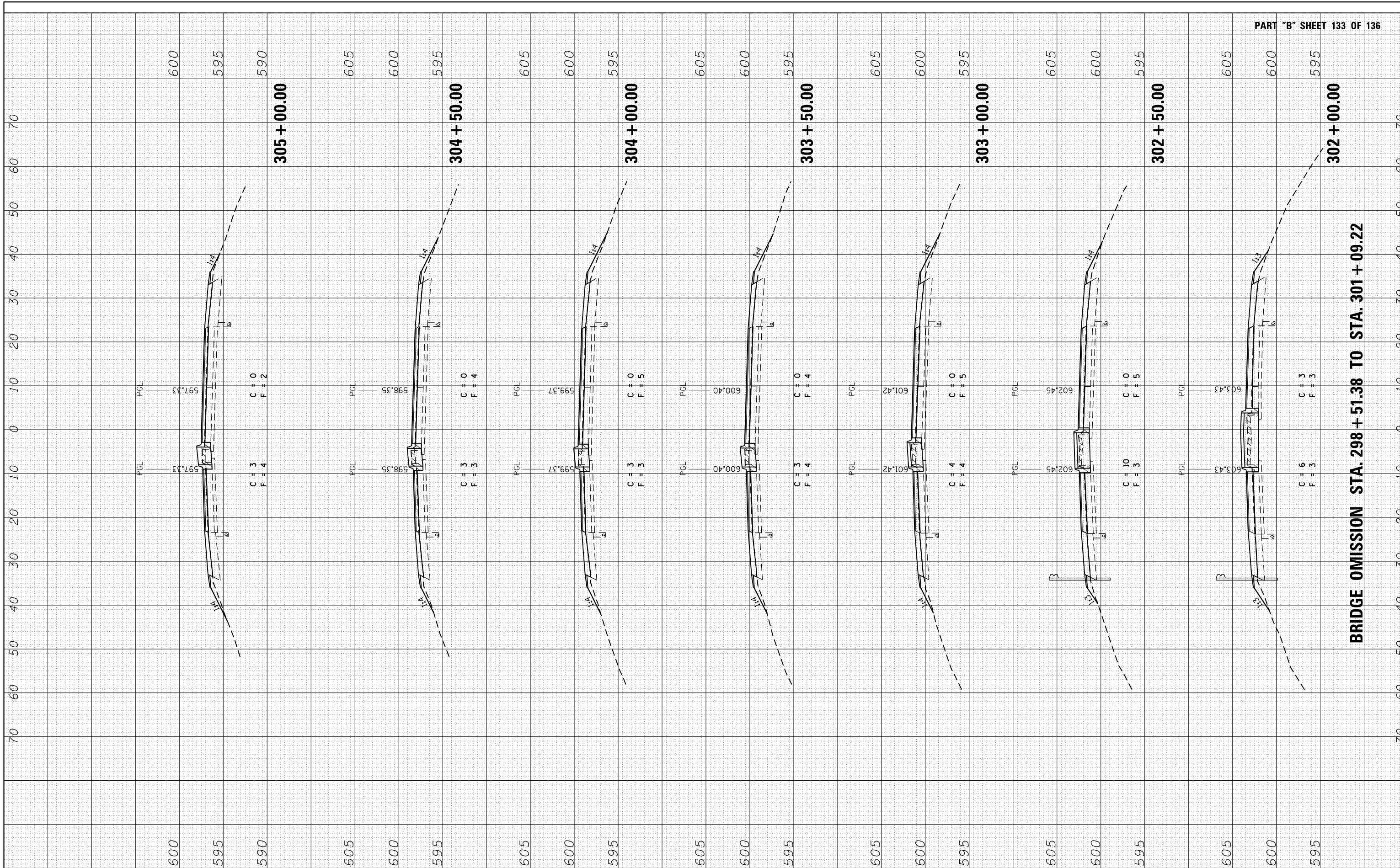
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS  
 TR 420 (OVERPASS RD.)  
 SCALE: SHEET NO. OF SHEETS STA. 295+50 TO STA. 298+50

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	•	SANGAMON	194	190
•(84-10-IRS-3,84-10-2RS-4)BR,1			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				

BY	DATE

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
AREAS CHECKED	TEMPLATE
	AREAS CHECKED



BRIDGE OMISSION STA. 298 + 51.38 TO STA. 301 + 09.22

FILE NAME -	USER NAME = sparksgw	DESIGNED - BTM	REVISED -
		DRAWN - BTM	REVISED -
		CHECKED - JSA	REVISED -
		DATE - 9/20/12	REVISED -

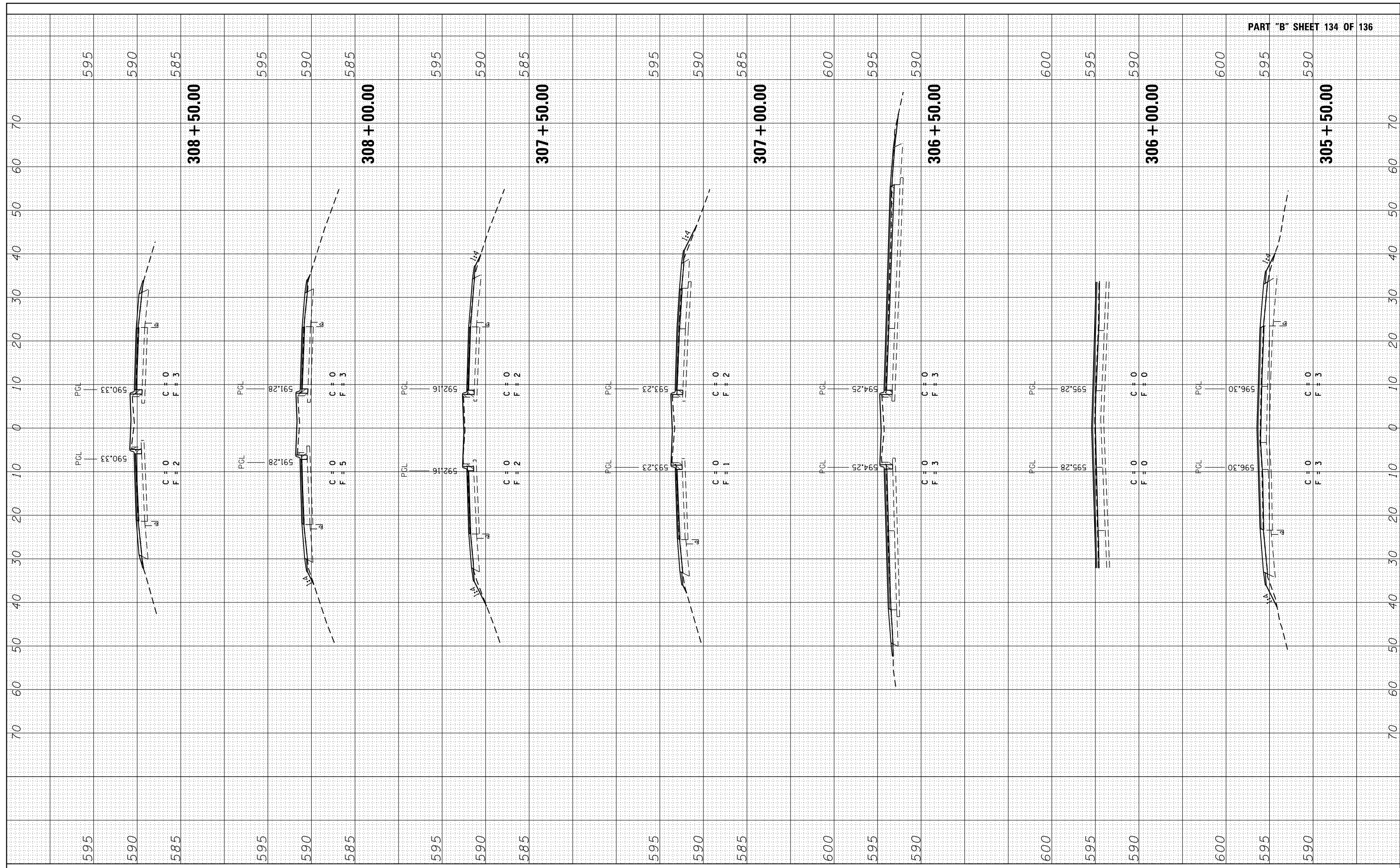
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS TR 420 (OVERPASS RD.)			
SCALE:	SHEET NO.	OF SHEETS	STA. 302+00 TO STA. 305+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	•	SANGAMON	194	191
•(84-10-IRS-3,84-10-2RS-4)BR,I			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED
NOTE BOOK	TEMPLATE AREAS CHECKED
BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED
NOTE BOOK	TEMPLATE AREAS CHECKED
BY	DATE



FILE NAME -	USER NAME = sparksgw	DESIGNED - BTM	REVISED -
es:\pw_work\pwidth\sparksgw\d0359822\0672C90.sh	tr-420.dgn	DRAWN - BTM	REVISED -
	PLOT SCALE = 20.0000' / in.	CHECKED - JSA	REVISED -
	PLOT DATE = Sep-06-2013 09:44:24AM	DATE - 9/20/12	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

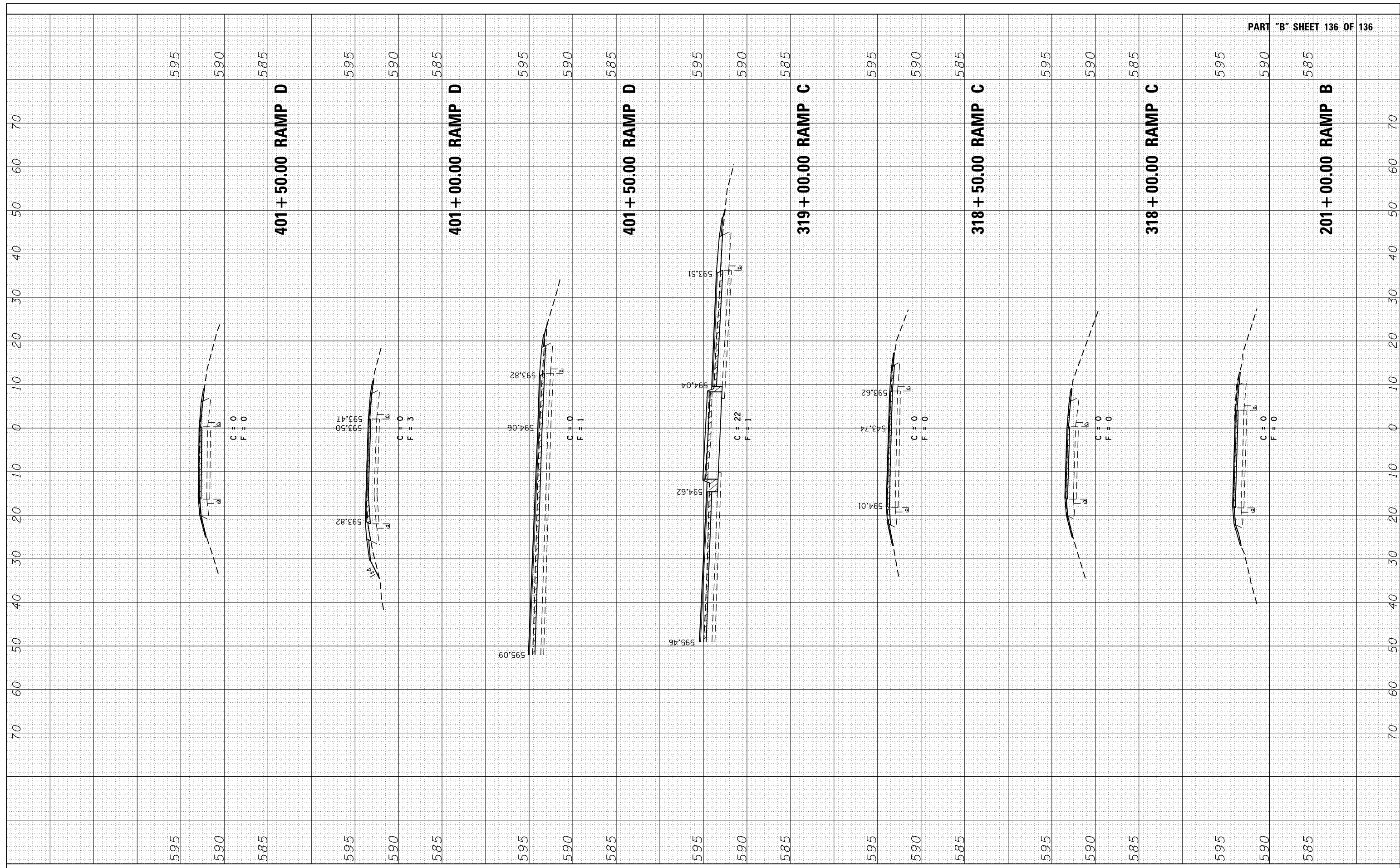
CROSS SECTIONS TR 420 (OVERPASS RD.)			
SCALE:	SHEET NO.	OF SHEETS	STA. 305+50 TO STA. 308+50

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	•	SANGAMON	194	192
•(84-10-IRS-3,84-10-2RS-4)BR,1			CONTRACT NO. 72C90	
ILLINOIS FED. AID PROJECT				



FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE



FILE NAME -	USER NAME = sparksgw	DESIGNED - BTM	REVISED -	<p align="center"><b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b></p> <p align="center"><b>CROSS SECTIONS</b> <b>TR 420 (OVERPASS RD.)</b></p>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - BTM	REVISED -		72	•	SANGAMON	194	194
		CHECKED - JSA	REVISED -		•(84-10-IRS-3,84-10-2RS-4)BR,I		CONTRACT NO. 72C90		
		DATE - 9/20/12	REVISED -		ILLINOIS	FED. AID PROJECT			
PLOT SCALE = 20.0000' / in. PLOT DATE = Sep-06-2013 09:43:47AM				SCALE:	SHEET NO.	OF SHEETS	STA. 88+50	TO STA. 91+50	