

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS1523	*	Champaign	38	1
FED. ROAD DIST. NO. 7	ILL. 009	FED. AID PROJECT-		

*09-00956-00-BR

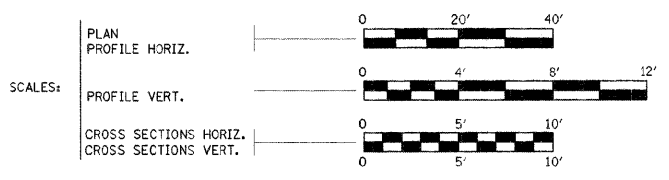
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SUMMARY OF QUANTITIES & GENERAL NOTES
3	SCHEDULE OF QUANTITIES
4	TYPICAL SECTIONS
5	PLAN & PROFILE
6	PAVEMENT MARKING PLAN
7	EROSION CONTROL PLAN
8-13	BRIDGE APPROACH PAVEMENT & CONNECTOR
14-15	APPROACH PAVEMENT ELEVATIONS
16-17	PAVED DITCH (SPECIAL)
18-22	TRAFFIC BARRIER TERMINAL, TYPE 6A (SPECIAL)
23-38	BRIDGE PLANS

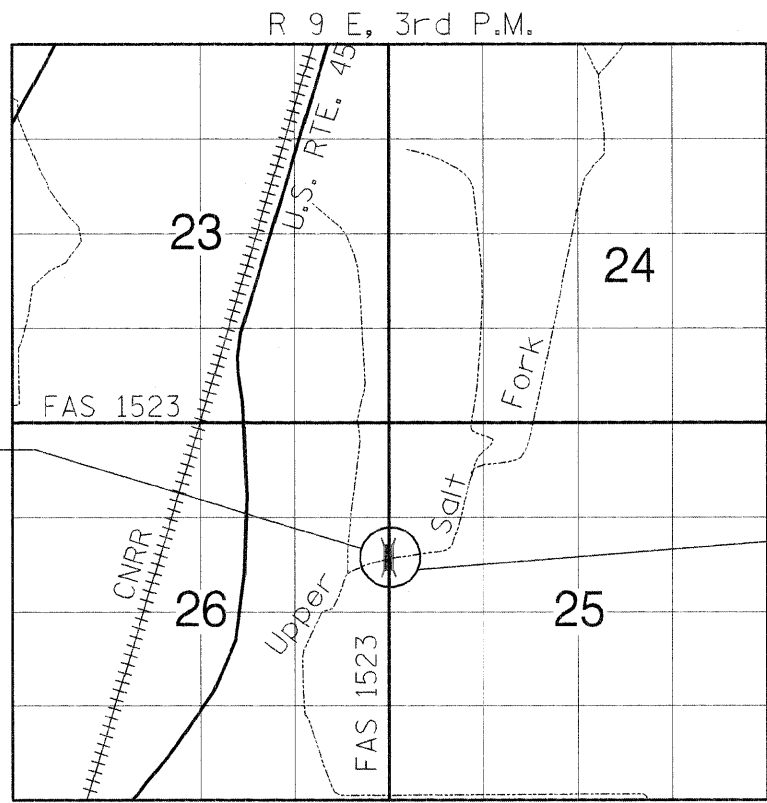
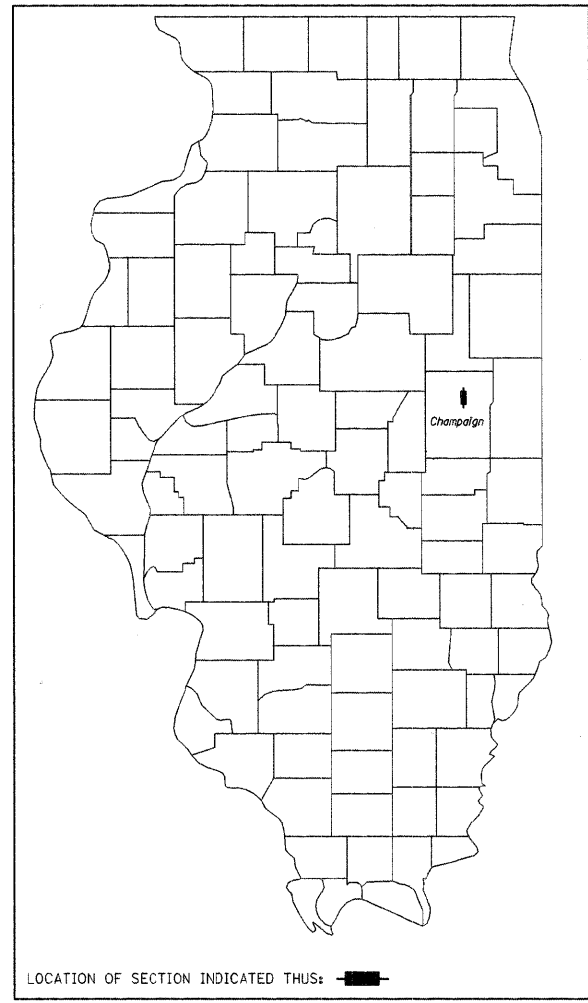
LIST OF STANDARD DRAWINGS

STANDARD NO.	DESCRIPTION
000001 - 06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
280001 - 05	TEMPORARY EROSION CONTROL SYSTEMS
515001 - 03	NAME PLATE FOR BRIDGES
630001 - 09	STEEL PLATE BEAM GUARDRAIL
630301 - 05	SHOULDER WIDENING FOR GUARDRAIL TERMINALS
631032 - 06	TRAFFIC BARRIER TERMINAL TYPE 6A
701101 - 02	OFF ROAD OPERATIONS, MULTILANE, 15' TO 24' FROM PAVEMENT EDGE
701421 - 03	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS >= 45 MPH TO 55 MPH
701422 - 03	LANE CLOSURE, MULTILANE, FOR SPEEDS >= 45 MPH TO 55 MPH
701901 - 01	TRAFFIC CONTROL DEVICES
780001 - 02	TYPICAL PAVEMENT MARKINGS
BLR 21 - 8	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION OF RURAL LOCAL HIGHWAYS
BLR 23 - 3	TRAFFIC BARRIER TERMINAL TYPE 1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
**PLANS FOR PROPOSED
BRIDGE REPLACEMENT**



CHAMPAIGN COUNTY
SECTION 09-00956-00-BR
JOB NO. C-95-313-11
FAS 1523/COUNTY HIGHWAY 55
BRIDGE REPLACEMENT AND
REHABILITATION PROGRAM
PROJECT NO. BRS-1523(101)



Project Begins at Sta. 8+88.5

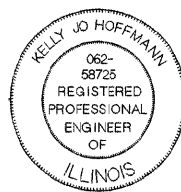
Project Ends at Sta. 11+11.5

APPROVED 3/2 20 11
Jeff Blue
JEFF BLUE, PE CHAMPAIGN COUNTY ENGINEER

PASSED March 9 20 11
JA
DISTRICT FIVE ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review March 10 20 11
[Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION THREE ENGINEER
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

COMMITMENTS-NONE



Kelly Jo Hoffmann
KELLY JO HOFFMANN
Illinois Licensed Professional Engineer Number 58725
License Expires 11/30/2011

LOCATION MAP

ADT = 2150 (CURRENT), 2150 (DESIGN)
FUNCTIONAL CLASS = MAJOR COLLECTOR

NET LENGTH OF SECTION = 223 FEET = 0.042 MILES



FRAUENHOFFER & ASSOCIATES
A division of Engineering Resource Associates, Inc.
Consulting Engineers, Scientists, & Surveyors

3002 CROSSING COURT
CHAMPAIGN, IL 61822
PHONE (217) 351-6268
FAX (217) 355-1902

FOR JOINT UTILITY INFORMATION
CALL TOLL FREE 1-800-892-0123

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS1523	*	CHAMPAIGN	38	2
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

* 09-00956-00-BR
Contract No. 91452

SUMMARY OF QUANTITIES - SEC. 09-00956-00-BR

CODE	DESCRIPTION	UNIT	QUANTITY
20200100	Earth Excavation	Cu. Yd.	50
20400800	Furnished Excavation	Cu. Yd.	105
21101615	Top Soil Furnish & Place, 4"	Sq. Yd.	1265
*25000200	Seeding, Class 2	Acre	0.27
*25000400	Nitrogen Fertilizer Nutrient	Pound	40
*25000500	Phosphorus Fertilizer Nutrient	Pound	40
*25000600	Potassium Fertilizer Nutrient	Pound	40
*25100115	Mulch, Method 2	Acre	0.27
*28000250	Temporary Erosion Control Seeding	Pound	30
*28000305	Temporary Ditch Checks	Foot	40
*28000400	Perimeter Erosion Barrier	Foot	545
*28000500	Inlet & Pipe Protection	Each	4
31101200	Sub-base Granular Material, Type B 4"	Sq. Yd.	72
*40201000	Aggregate for Temporary Access	Tons	100
*40300100	Bituminous Materials (Prime Coat)	Gal	230
*40603310	Hot Mix Asphalt Surface Course, Mix "C", N50	Ton	80
44000100	Pavement Removal	Sq. Yd.	103
44000157	Hot-Mix Asphalt Surface Removal, 2"	Sq. Yd.	568
50100100	Removal of Existing Structures	Each	1
50200100	Structure Excavation	Cu. Yd.	385
50300225	Concrete Structures	Cu. Yd.	81.1
50300255	Concrete Superstructures	Cu. Yd.	301
50300260	Bridge Deck Grooving	Sq. Yd.	729
50300300	Protective Coat	Sq. Yd.	793
*50500105	Furnishing & Erecting Structural Steel	L. Sum	1
50800105	Reinforcement Bars	Pound	2960
50800205	Reinforcement Bars, Epoxy Coated	Pound	68090
50800515	Bar Splicers	Each	108
Δ50901050	Steel Railing, Type SM	Foot	151
51500100	Name Plates	Each	1
51201400	Furnishing Steel Piles HP10x42	Foot	1400
51202305	Driving Piles	Foot	1400
51203400	Test Pile Steel HP10x42	Each	2
51204650	Pile Shoes	Each	30
59100100	Geocomposite Wall Drain	Sq. Yds.	115
*X6061460	Paved Ditch (Special)	Foot	55
Δ63100087	Traffic Barrier Terminal, Type 6A	Each	1
Δ*X6310088	Traffic Barrier Terminal, Type 6A (Special)	Each	1
Δ63100167	Traffic Barrier Terminal, Type 1 (Special) Tangent	Each	1
*X6640304	Chain Link Fence to be Removed and Re-erected	Foot	24
67100100	Mobilization	L. Sum	1
*X7010216	Traffic Control and Protection (Special)	L. Sum	1
Δ78001110	Paint Pavement Marking - Line 4"	Foot	1300
*X0325109	Porous Granular Material	Cu. Yd.	160
*XX004565	Grouted Riprap	Sq. Yds.	290
*XX004566	Concrete Cut-Off Wall	Cu. Yd.	10.8
*Z0013798	Construction Layout	L. Sum	1
*Z0046304	Pipe Underdrains For Structures 4"	Foot	230

MIXTURE REQUIREMENTS TABLE

MIXTURE	SURFACE
PG	PG 64-22
RAP	15%
Design Voids	4.0% @ N _{des} = 50
Mix Composition	IL 9.5
Friction Aggregate	Mix C

GENERAL NOTES

- New Fasteners shall be AASHTO M164 Type 1, mechanically Galvanized Bolts. Bolts 7/8" dia. holes 1 1/8" dia., unless otherwise noted.
- Calculated weight of new Structural Steel = 149,000 lbs.
- All new structural steel shall be AASHTO M 270 Grade 50W, except where otherwise noted.
- No field welding is permitted.
- Reinforcement bars shall conform to the requirements of ASTM A706 Gr 60 (IL Modified). See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevation within a tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
- Structural steel shall only be painted for a distance equal to the depth of the embedment into the concrete cap plus 3 in. Those areas shall be primed in the shop with a Department approved zinc rich primer. No field painting shall be required. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel". The cost of painting & preparing shall be incidental to the cost of Furnishing & Erecting Structural Steel.
- All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
- The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection. Formwork shall be removed prior to the placement of the bridge approach pavement.
- Portions of the guardrail near the bridge shall be vertically adjusted to connect the end of the Type SM Bridge Railing.
- CA-6 shall be used as the Aggregate for Temporary Access. The aggregate shall be the property of the Contractor.

UTILITIES.
Call J.U.L.I.E. 1-800-892-0123
The Contractor shall coordinate the relocation of any utilities with the utility company where they conflict with the proposed improvements.

• See Special Provisions
Δ Specialty Items

DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J.R. Wolf				
APVD	J.A. Fraenhoffer	NO.	DATE	REVISION	BY



FRAUENHOFFER & ASSOCIATES
A Division of Engineering Resource Associates, Inc.
Consulting Engineers, Scientists, & Surveyors

3002 CROSSING COURT
CHAMPAIGN, IL 61822
PHONE (217) 351-6268
FAX (217) 355-1902

SUMMARY OF QUANTITIES & GENERAL NOTES
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET	2
DWG NO.	7052SOQ.dgn
DATE	FEB 2011
PROJ NO.	7052

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAS1523	*	CHAMPAIGN	38	3
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

* 09-00956-00-BR

Contract No. 91452

SCHEDULE OF QUANTITIES - SEC. 09-00956-00-BR

20200100

EARTH EXCAVATION		
LOCATION		CU. YDS.
STA. 9+38.50 TO STA. 9+61.71		22
STA. 10+38.29 TO STA. 10+61.50		22
Paved Ditches (3 ditches @ 2 C.Y. each)		6
TOTAL		50

20400800

FURNISHED EXCAVATION		
LOCATION		CU. YDS.
STA. 9+34.00 TO STA. 9+70.10 RT		25
STA. 10+29.90 TO STA. 11+23.65 LT		80
TOTAL		105

31101200

SUB-BASE GRANULAR MATERIAL, TYPE B 4"		
LOCATION		SQ. YDS.
Bridge Approach Pavement		36
Bridge Approach Pavement Connectors		36
TOTAL		72

40300100

BITUMINOUS MATERIALS (PRIME COAT)		
LOCATION		GAL.
STA. 8+88.50 TO STA. 9+38.50		115
STA. 10+61.50 TO STA. 11+11.50		115
TOTAL		230

40600300

HOT MIX ASPHALT SURFACE COURSE "C", N50		
LOCATION		TONS
STA. 8+88.50 TO STA. 9+38.50		40
STA. 10+61.50 TO STA. 11+11.50		40
TOTAL		80

44000100

PAVEMENT REMOVAL		
LOCATION		SQ. YDS.
STA. 9+38.50 TO STA. 9+61.71		51.5
STA. 10+38.29 TO STA. 10+61.50		51.5
TOTAL		103

44000157

HOT-MIX ASPHALT SURFACE REMOVAL, 2"		
LOCATION		SQ. YDS.
STA. 8+88.50 TO STA. 9+38.50		284
STA. 10+61.50 TO STA. 11+11.50		284
TOTAL		568

50300260

BRIDGE DECK GROOVING		
LOCATION		SQ. YDS.
Bridge Approach Pavement		200
Bridge Approach Pavement Connector		68
Bridge		461
TOTAL		729

50300300

PROTECTIVE COAT		
LOCATION		SQ. YDS.
Bridge Approach Pavement		209
Bridge Approach Pavement Connector		72
Bridge		490
Paved Ditches		22
TOTAL		793

63100087

TRAFFIC BARRIER TERMINAL, TYPE 6A		
LOCATION		EACH
STA. 10+29.90 TO STA. 10+73.65 LT		1
TOTAL		1

63100087S

TRAFFIC BARRIER TERMINAL, TYPE 6A (SPECIAL)		
LOCATION		EACH
STA. 9+34.00 TO STA. 9+70.10 RT		1
TOTAL		1

63100167

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT		
LOCATION		EACH
STA. 10+73.65 TO STA. 11+23.65 LT		1
TOTAL		1

DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J.R. Wolf				
APVD	J.A. Fraenhoffer	NO.	DATE	REVISION	BY



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CHAMPAIGN, IL 61822
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FAX (217) 355-1902

SCHEDULE OF QUANTITIES

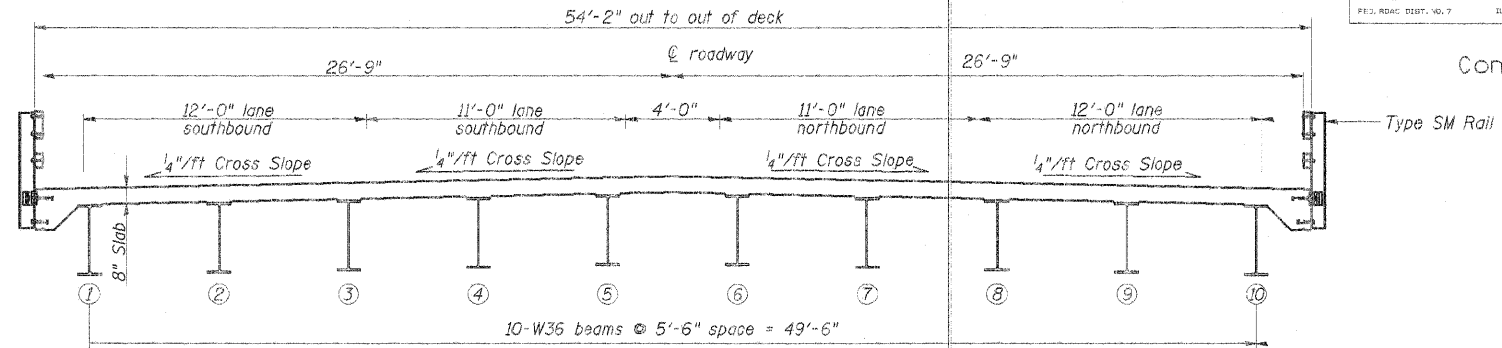
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET 3

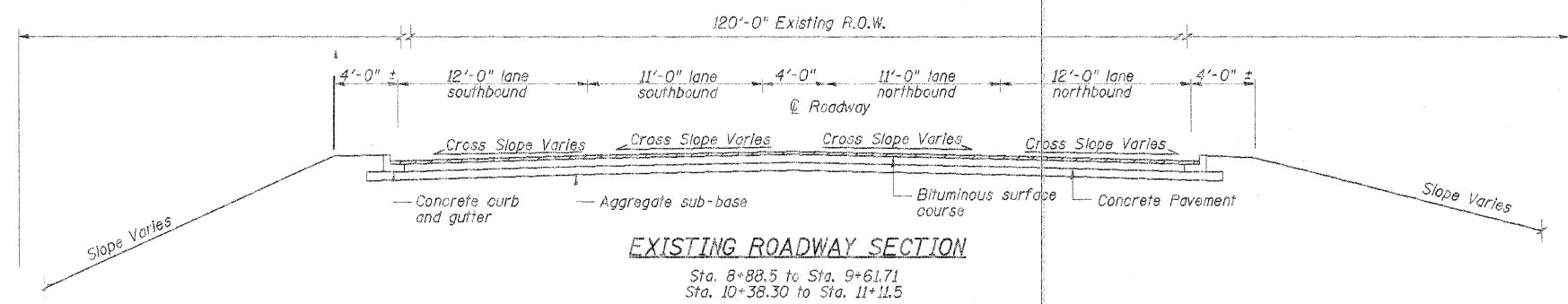
DWG NO. 7052SQ.Q.dgn
DATE FEB 2011
PROJ NO. 7052

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAS1523	*	CHAMPAIGN	38	4
FED. ROAD DIST. NO. 7		ILL. DIST.	FED. AID PROJECT	

* 09-00956-00-BR
Contract No. 91452

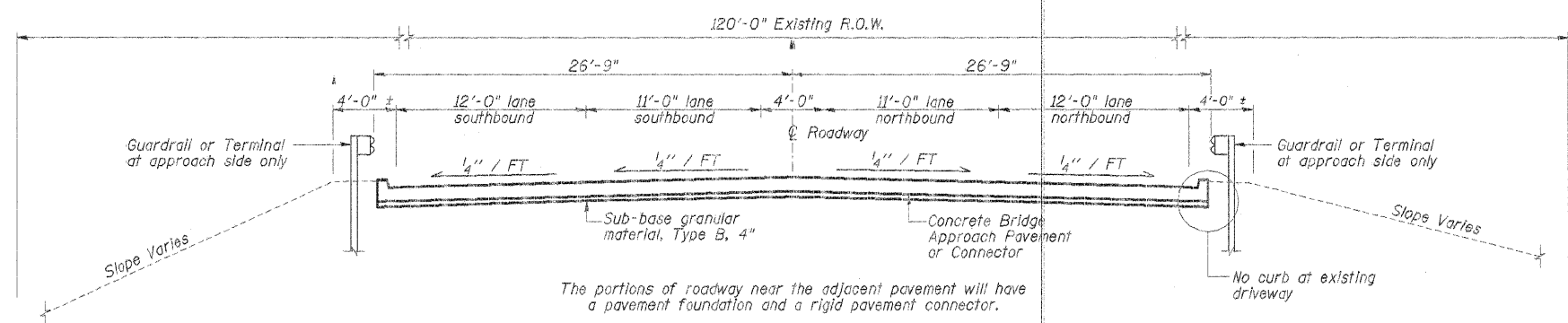


PROPOSED SUPERSTRUCTURE SECTION



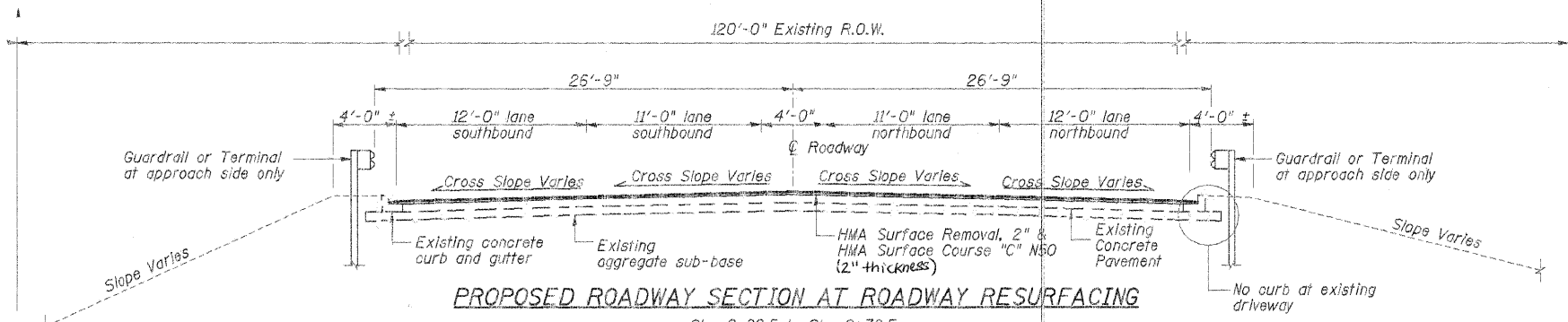
EXISTING ROADWAY SECTION

Sta. 8+88.5 to Sta. 9+61.71
Sta. 10+38.30 to Sta. 11+11.5



PROPOSED ROADWAY SECTION AT BRIDGE APPROACH PAVEMENT

Sta. 9+38.5 to Sta. 9+61.71
Sta. 10+38.30 to Sta. 10+61.5



PROPOSED ROADWAY SECTION AT ROADWAY RESURFACING

Sta. 8+88.5 to Sta. 9+38.5
Sta. 10+61.5 to Sta. 11+11.5

DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J.R. Wolf				
APVD	A. Fraenhöffer	NO.	DATE	REVISION	BY

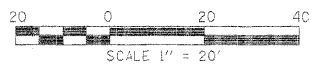
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A Division of Engineering Resource Associates, Inc.
Consulting Engineers, Scientists, & Surveyors

3032 CROSSING COURT
CHAMPAIGN, IL 61822
P-ONE (217) 351-6268
FAX (217) 355-802

TYPICAL SECTIONS		SHEET 4
FAS 1523 (CH 55) OVER UPPER SALT FORK		DWG NO. 705250Q.dgn
SEC 09-00956-00-BR		DATE FEB 2011
CHAMPAIGN COUNTY		PROJ NO. 7052

ROUTE NO.	DISTRICT	COUNTY	SHEET NO.	TOTAL SHEETS
FAS 1523	*	Champaign	38	5

*09-00956-00-BR



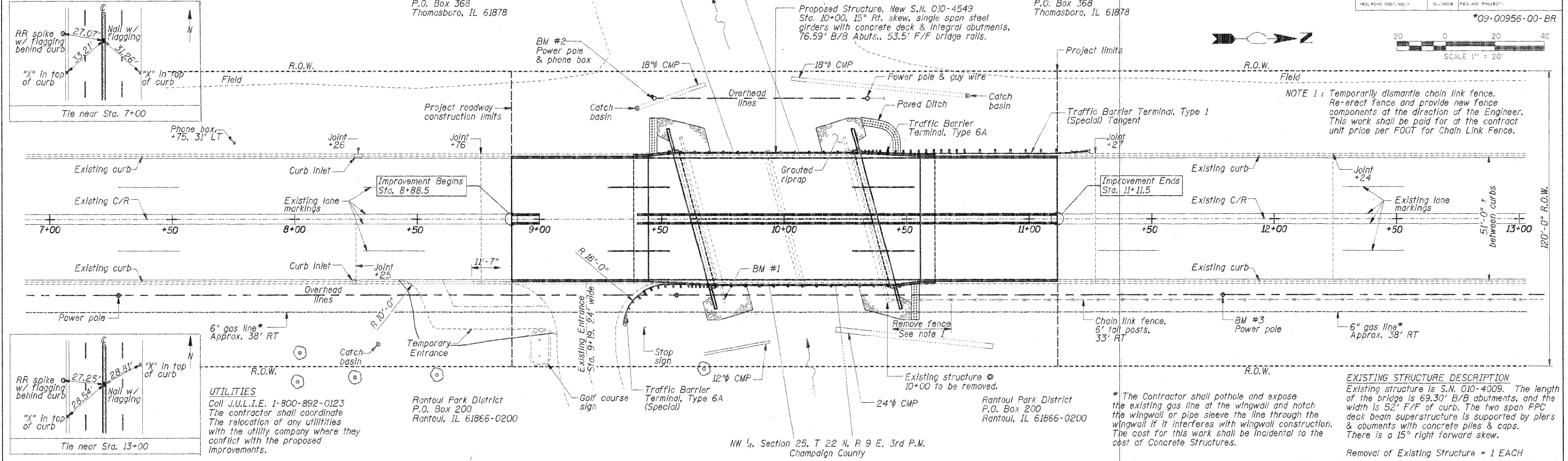
BM #1 - Chiseled "□" in top of SE wingwall, Elev. 100.04
 BM #2 - Spike in power pole at STA 9+47, 49' LT., Elev. 97.11
 BM #3 - Spike in power pole at STA 11+79, 31' RT., Elev. 100.57

Schuler Homes
 P.O. Box 368
 Thomasboro, IL 61878

Schuler Homes
 P.O. Box 368
 Thomasboro, IL 61878

NE 1/4, Section 26, T 22 N, R 9 E, 3rd P.M.
 Champaign County

NW 1/4, Section 25, T 22 N, R 9 E, 3rd P.M.
 Champaign County



NOTE 1: Temporarily dismantle chain link fence. Re-erect fence and provide new fence components at the direction of the Engineer. This work shall be paid for at the contract unit price per FOOT for Chain Link Fence.

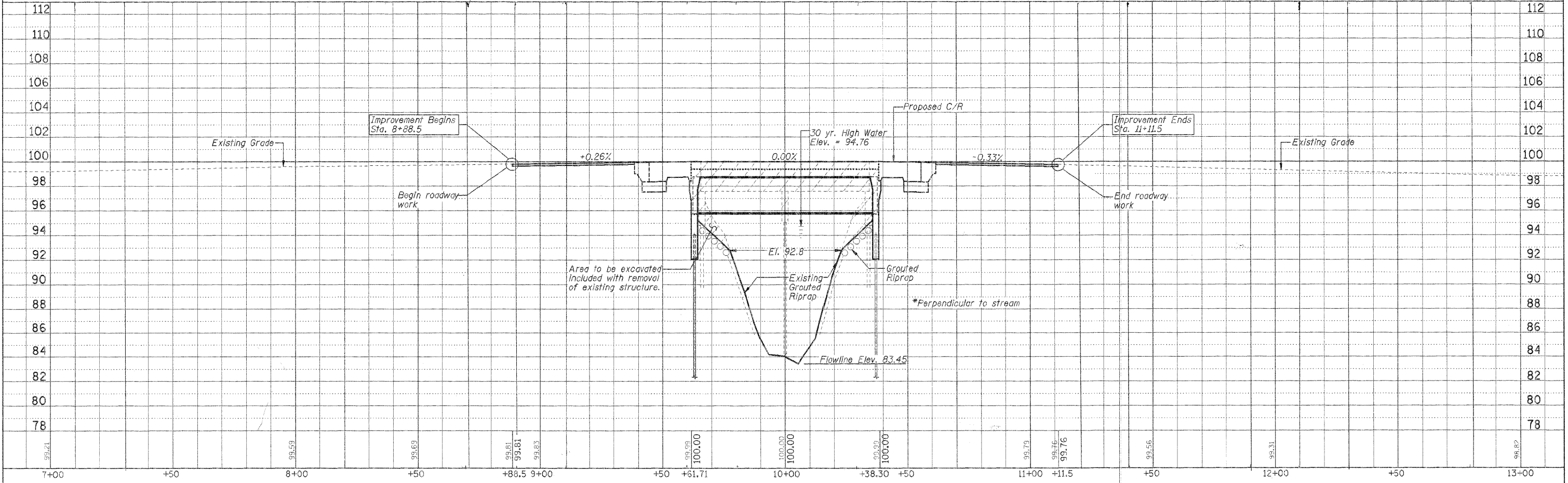
UTILITIES
 Call J.U.L.I.E. 1-800-892-0123
 The contractor shall coordinate the relocation of any utilities with the utility company where they conflict with the proposed improvements.

Rantoul Park District
 P.O. Box 200
 Rantoul, IL 61866-0200

Rantoul Park District
 P.O. Box 200
 Rantoul, IL 61866-0200

* The Contractor shall pothole and expose the existing gas line at the wingwall and notch the wingwall or pipe sleeve the line through the wingwall if it interferes with wingwall construction. The cost for this work shall be incidental to the cost of Concrete Structures.

EXISTING STRUCTURE DESCRIPTION
 Existing structure is S.N. 010-4009. The length of the bridge is 69.30' B/B abutments, and the width is 52' F/F of curb. The two span PPC deck beam superstructure is supported by piers & abutments with concrete piles & caps. There is a 15° right forward skew.
 Removal of Existing Structure = 1 EACH



PLAN & PROFILE STA. 7+00 TO STA. 13+00

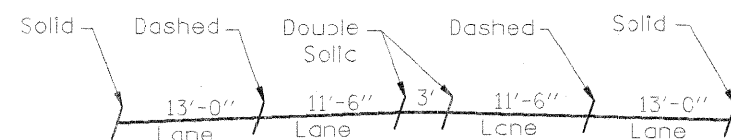
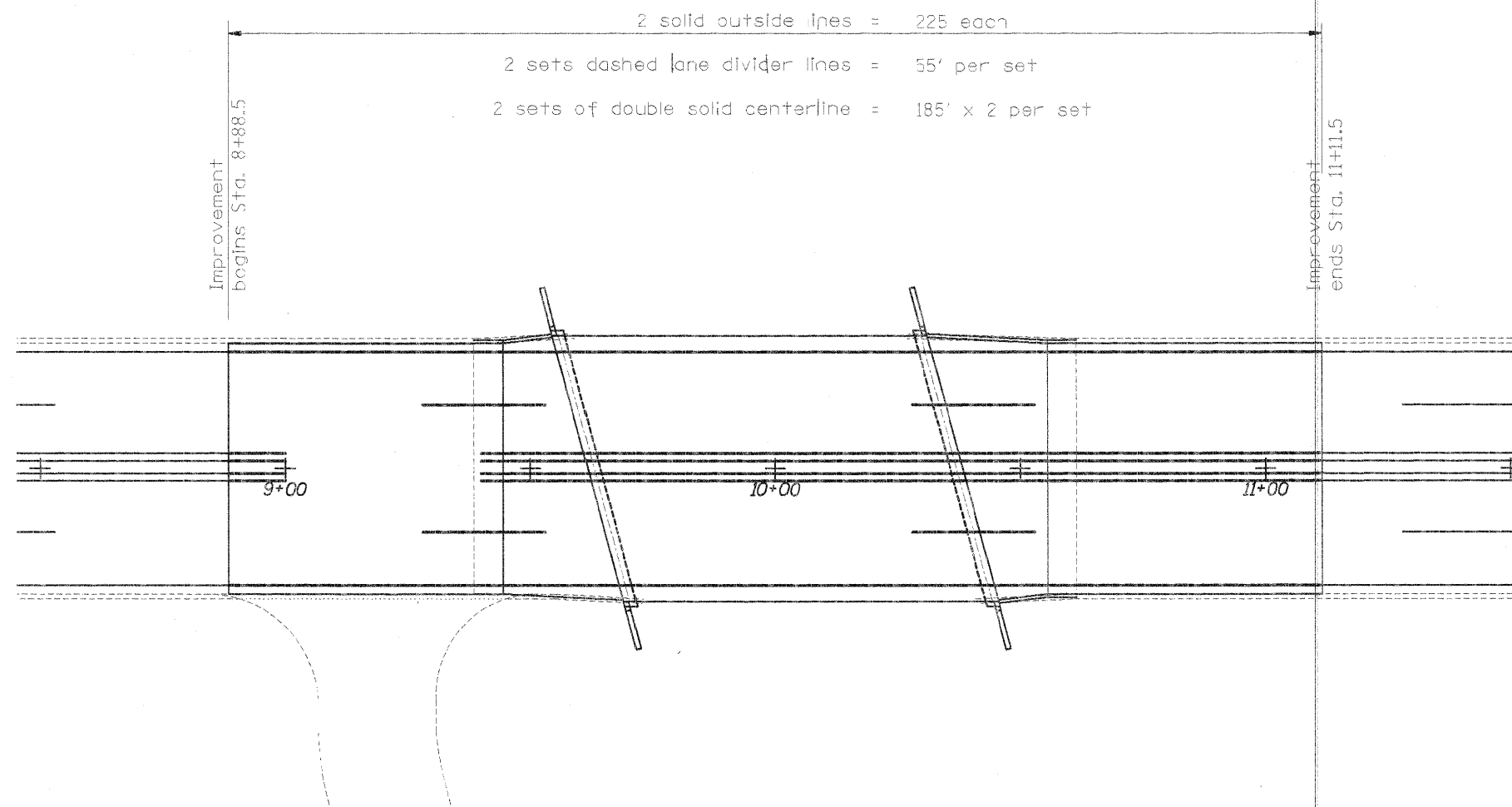
DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 SURVEYED: _____
 ALIGNED: _____
 PLAN: _____
 NO. _____

DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 SURVEYED: _____
 ALIGNED: _____
 PROFILE: _____
 NO. _____

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ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAS1523	*	CHAMPAIGN	38	6
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

* 09-00956-00-BR
Contract No. 91452



STRIPING CROSS SECTION

BILL OF MATERIAL

ITEM	UNIT	FOOT
Paint Pavement Marking - Line 4"	Foot	1300

DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J.R. Wolf				
APVD	J.A. Fraunhoffer	NO.	DATE	REVISION	BY



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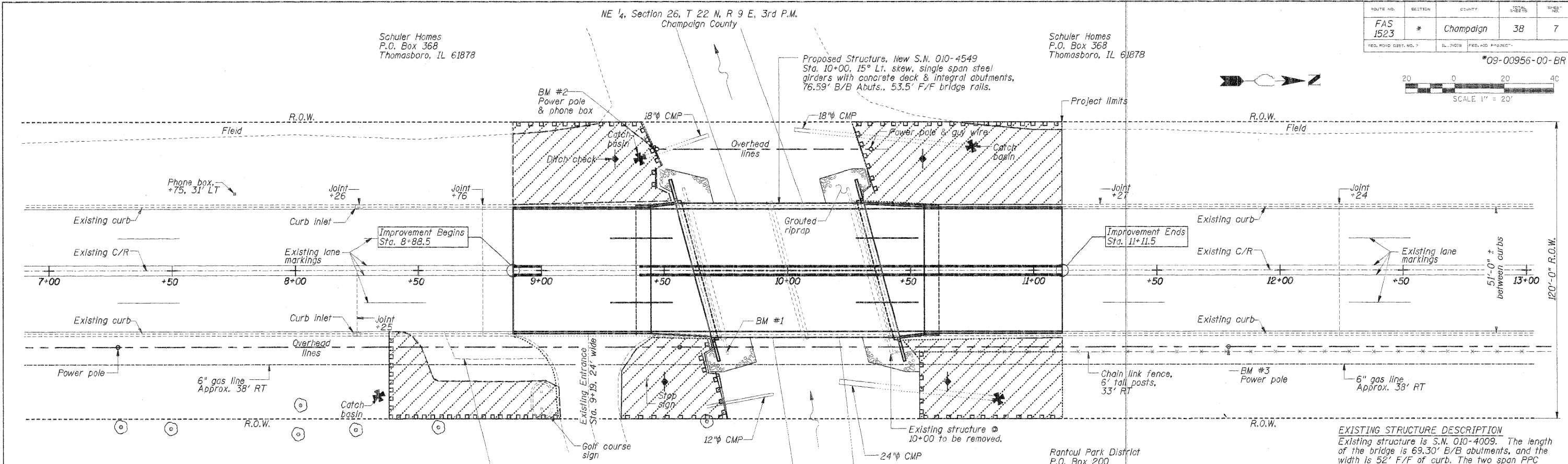
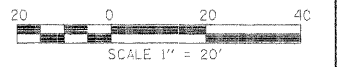
3002 CROSSING COURT
 CHAMPAIGN, IL 61822
 PHONE (217) 351-6268
 FAX (217) 355-1902

PAVEMENT MARKING PLAN
 FAS 1523 (CH 55) OVER UPPER SALT FORK
 SEC 09-00956-00-BR
 CHAMPAIGN COUNTY

SHEET	5
DWG NO.	7052pc.dwg
DATE	FEB 2011
PROJ NO.	7052

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
FAS 1523	*	Champaign	38	7
FED. ROAD DIST. NO. 7		ILL. DIST. NO.	FED. AID PROJECT NO.	

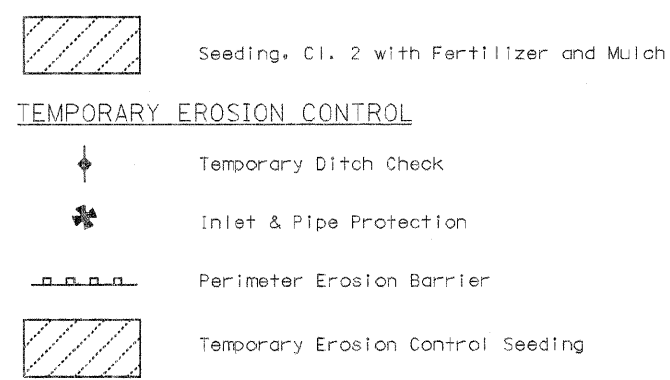
*09-00956-00-BR



EROSION CONTROL SEQUENCE

1. Placement of perimeter erosion control barrier prior to commencement of any work. See Standard 280001.
2. Construct a temporary entrance.
3. Removal of the existing structure & pavement removal.
4. Earth excavation, structure excavation, & asphalt surface removal.
5. Construction of the substructure.
6. Placement of steel and concrete deck & concrete approach pavements.
7. Place grouted riprap.
8. Placement of bituminous surface, coarse.
9. Install guardrail and bridge rail.
10. Removal and proper clean up of the temporary erosion controls.
11. Placement of the permanent erosion controls.

PERMANENT EROSION CONTROL



25000400, 25000500, 25000600

**NITROGEN FERTILIZER NUTRIENT;
POTASSIUM FERTILIZER NUTRIENT;
PHOSPHORUS FERTILIZER NUTRIENT**

LOCATION	POUND
STA. 8+38.00 TO STA. 9+61.71 RT	15
STA. 8+88.50 TO STA. 9+61.71 LT	10
STA. 10+38.30 TO STA. 11+11.50 LT/RT	15
(110 LBS/ACRE) TOTAL 40	

25000200, 25100115

**SEEDING CLASS 2;
MULCH METHOD 2**

LOCATION	ACRE
STA. 8+38.00 TO STA. 9+61.71 RT	0.10
STA. 8+88.50 TO STA. 9+61.71 LT	0.05
STA. 10+38.30 TO STA. 11+11.50 LT/RT	0.12
TOTAL 0.27	

28000305

TEMPORARY DITCH CHECKS

LOCATION	FOOT
STA. 9+30 LT	10
STA. 9+50 RT	10
STA. 10+55 LT	10
STA. 10+65 RT	10
TOTAL 40	

4020100

AGGREGATE FOR TEMPORARY ACCESS

LOCATION	TONS
TEMPORARY ENTRANCE @ STA. 8+60.50 RT	100
TOTAL 100	

28000400

PERIMETER EROSION BARRIER

LOCATION	FOOT
STA. 8+88.50 TO STA. 9+54.40 LT	100
STA. 8+38.00 TO STA. 9+12.00 RT	120
STA. 9+32.00 TO STA. 9+77.80 RT	90
STA. 10+22.71 TO STA. 11+11.50 LT	135
STA. 10+45.60 TO STA. 11+11.50 LT	100
TOTAL 545	

21101615

TOP SOIL FURNISH & PLACE, 4"

LOCATION	SO. YD.
STA. 8+38.00 TO STA. 9+61.71 RT	469
STA. 8+88.50 TO STA. 9+61.71 LT	223
STA. 10+38.30 TO STA. 11+11.50 LT/RT	573
TOTAL 1265	

28000250

TEMPORARY EROSION CONTROL SEEDING

LOCATION	POUND
STA. 8+38.00 TO STA. 9+61.71 RT	10
STA. 8+88.50 TO STA. 9+61.71 LT	5
STA. 10+38.30 TO STA. 11+11.50 LT/RT	15
(100 LBS/ACRE) TOTAL 30	

EXISTING STRUCTURE DESCRIPTION
Existing structure is S.N. 010-4009. The length of the bridge is 69.30' B/B abutments, and the width is 52' F/F of curb. The two span PPC deck beam superstructure is supported by piers & abutments with concrete piles & caps. There is a 15° right forward skew.

Removal of Existing Structure = 1 EACH

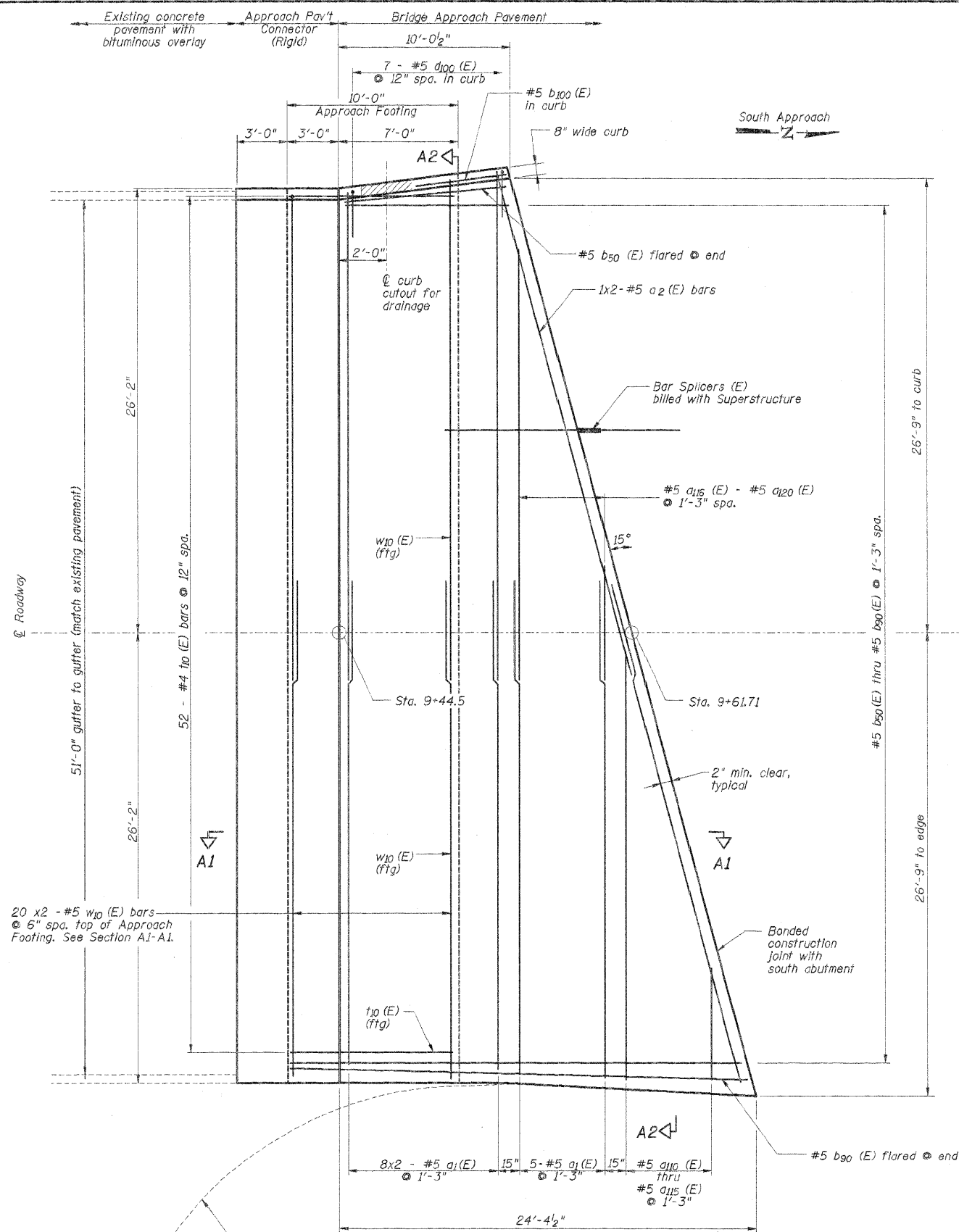
NOTE: Turf and topsoil removal and disposal shall be incidental to Removal of Existing Structures.

BILL OF MATERIAL - EROSION CONTROL

ITEM	UNIT	QUANTITY
Top Soil Furnish & Place, 4"	SO. YD.	1265
Seeding, Class 2	ACRE	0.27
Nitrogen Fertilizer Nutrient	POUND	40
Phosphorus Fertilizer Nutrient	POUND	40
Potassium Fertilizer Nutrient	POUND	40
Mulch, Method 2	ACRE	0.27
Temporary Erosion Control Seeding	POUND	30
Temporary Ditch Checks	EACH	40
Perimeter Erosion Barrier	FOOT	545
Inlet & Pipe Protection	EACH	4
Aggregate for Temporary Access	TONS	100

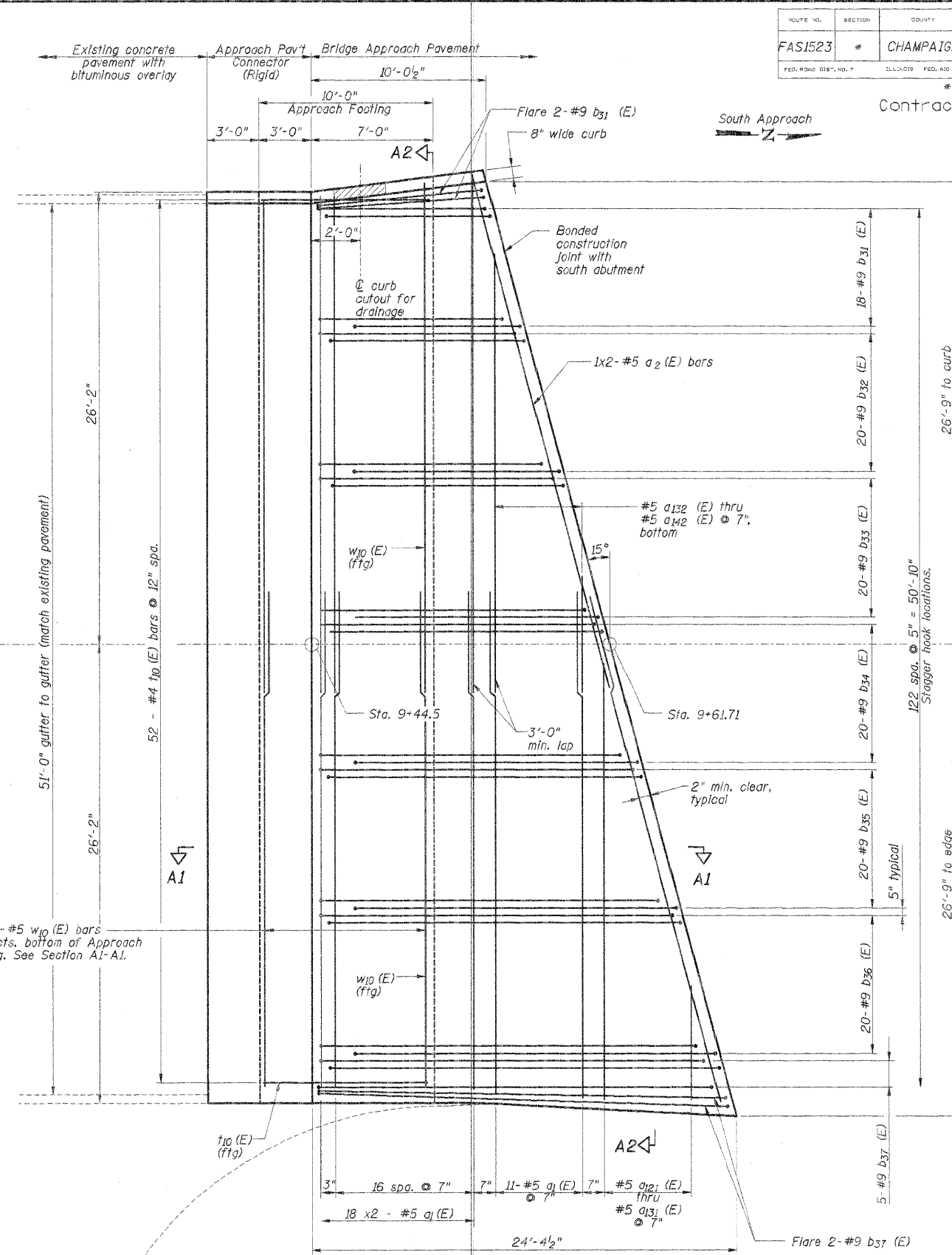
ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
FAS1523	*	CHAMPAIGN	38	8

* 09-00956-00-BR
Contract No. 91452



PLAN - TOP REINFORCEMENT

NOTE: d(E) bars in curb shall be placed to avoid curb cut out.



PLAN - BOTTOM REINFORCEMENT

DSGN	K.J. Hoffmann				
DR	B.A. Clark				
CHK	J.R. Wolf				
APVD	J.A. Fraunhoffer	NO.	DATE	REVISION	BY

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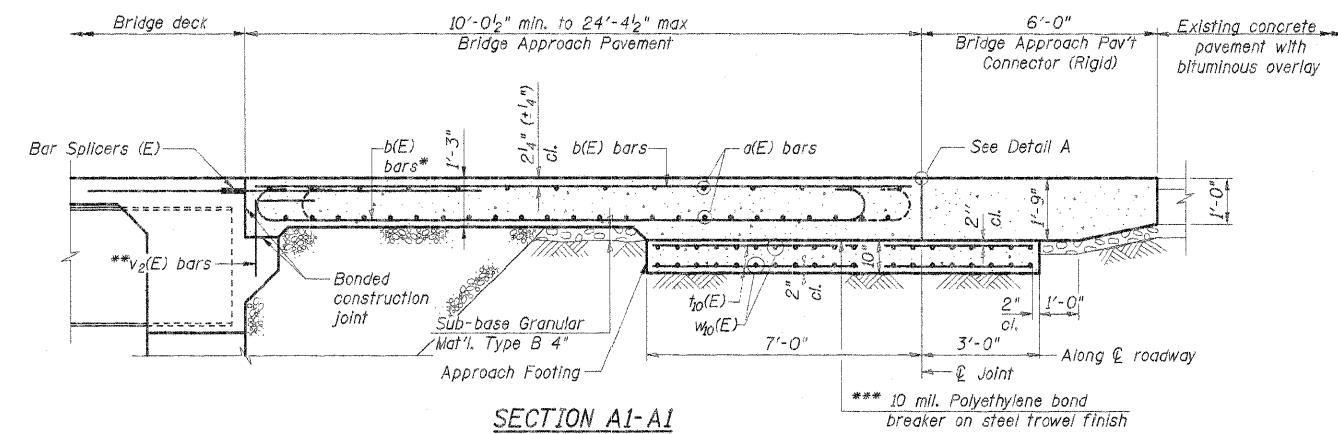
3002 CROSSING COURT
CHAMPAIGN, ILL. 61822
PHONE (217) 351-6268
FAX (217) 355-1902

SOUTH BRIDGE APPROACH PAV'T (SHEET 1 OF 2)

FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

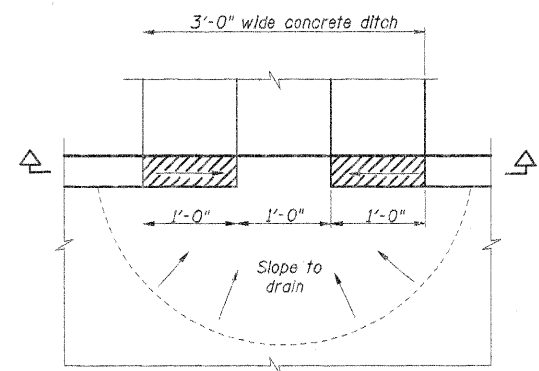
SHEET 8

DWG NO. 7052apcr.dgn
DATE FEB 2011
PROJ NO. 7052

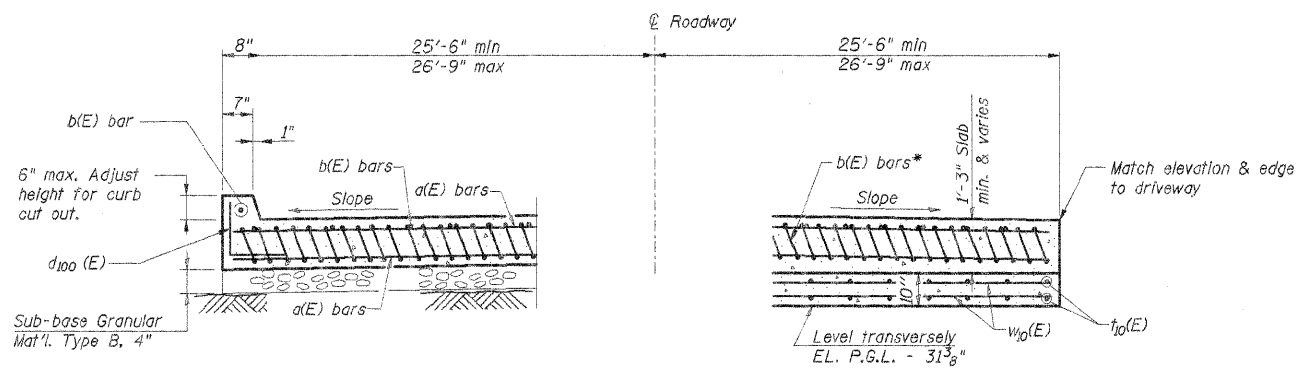


SECTION A1-A1

Bar splicers are billed with Superstructure.
* Tilt hooked #9 b(E) bars as required to maintain clearance.
** va(E) are billed with Superstructure
*** Cost included with Concrete Superstructure.



CURB CUT-OUT DETAIL

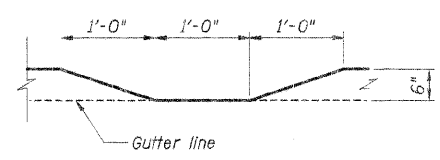


NEAR ABUTMENT

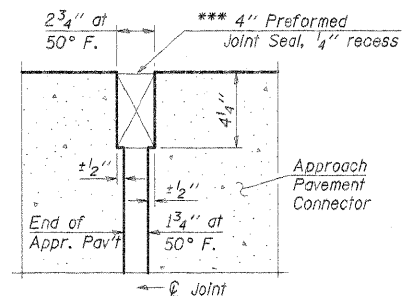
SECTION A2-A2

(See Plan for dimensions not shown)

AT APPROACH FOOTING

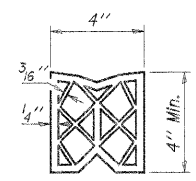


CURB CUT-OUT SECTION



RIGID PAVEMENT DETAIL A

*** Cost Included with Concrete Superstructure.



PREFORMED JOINT SEAL

**REINFORCING LIST (PART 1)
SOUTH BRIDGE
APPROACH PAVEMENT**

Bar	No.	Size	Length	Shape
a1 (E)	68	# 5	29'-0"	—
a2 (E)	4	# 5	29'-6"	—
a10 (E)	1	# 5	3'-9"	—
a11 (E)	1	# 5	8'-5"	—
a112 (E)	1	# 5	13'-0"	—
a113 (E)	1	# 5	17'-7"	—
a114 (E)	1	# 5	22'-2"	—
a115 (E)	1	# 5	26'-7"	—
a116 (E)	1	# 5	7'-10"	—
a117 (E)	1	# 5	12'-6"	—
a118 (E)	1	# 5	17'-2"	—
a119 (E)	1	# 5	21'-10"	—
a120 (E)	1	# 5	26'-6"	—
a121 (E)	1	# 5	25'-0"	—
a122 (E)	1	# 5	22'-11"	—
a123 (E)	1	# 5	20'-10"	—
a124 (E)	1	# 5	18'-9"	—
a125 (E)	1	# 5	16'-9"	—
a126 (E)	1	# 5	14'-8"	—
a127 (E)	1	# 5	12'-8"	—
a128 (E)	1	# 5	10'-7"	—
a129 (E)	1	# 5	8'-6"	—
a130 (E)	1	# 5	6'-5"	—
a131 (E)	1	# 5	4'-5"	—
a132 (E)	1	# 5	27'-10"	—
a133 (E)	1	# 5	25'-8"	—
a134 (E)	1	# 5	23'-6"	—
a135 (E)	1	# 5	21'-4"	—
a136 (E)	1	# 5	19'-2"	—
a137 (E)	1	# 5	17'-0"	—
a138 (E)	1	# 5	14'-10"	—
a139 (E)	1	# 5	12'-7"	—
a140 (E)	1	# 5	10'-5"	—
a141 (E)	1	# 5	8'-3"	—
a142 (E)	1	# 5	6'-1"	—
b31 (E)	20	# 9	12'-0"	—
b32 (E)	20	# 9	14'-3"	—
b33 (E)	20	# 9	16'-6"	—
b34 (E)	20	# 9	18'-8"	—
b35 (E)	20	# 9	20'-11"	—
b36 (E)	20	# 9	23'-2"	—
b37 (E)	7	# 9	23'-10"	—

**REINFORCING LIST (PART 2)
SOUTH BRIDGE
APPROACH PAVEMENT**

Bar	No.	Size	Length	Shape
d50 (E)	2	# 5	10'-0"	—
d51 (E)	1	# 5	10'-4"	—
d52 (E)	1	# 5	10'-8"	—
d53 (E)	1	# 5	11'-0"	—
d54 (E)	1	# 5	11'-4"	—
d55 (E)	1	# 5	11'-8"	—
d56 (E)	1	# 5	12'-0"	—
d57 (E)	1	# 5	12'-4"	—
d58 (E)	1	# 5	12'-8"	—
d59 (E)	1	# 5	13'-0"	—
d60 (E)	1	# 5	13'-4"	—
d61 (E)	1	# 5	13'-8"	—
d62 (E)	1	# 5	14'-0"	—
d63 (E)	1	# 5	14'-4"	—
d64 (E)	1	# 5	14'-8"	—
d65 (E)	1	# 5	15'-0"	—
d66 (E)	1	# 5	15'-4"	—
d67 (E)	1	# 5	15'-8"	—
d68 (E)	1	# 5	16'-0"	—
d69 (E)	1	# 5	16'-4"	—
d70 (E)	1	# 5	16'-8"	—
d71 (E)	1	# 5	17'-0"	—
d72 (E)	1	# 5	17'-4"	—
d73 (E)	1	# 5	17'-8"	—
d74 (E)	1	# 5	18'-0"	—
d75 (E)	1	# 5	18'-4"	—
d76 (E)	1	# 5	18'-8"	—
d77 (E)	1	# 5	19'-0"	—
d78 (E)	1	# 5	19'-4"	—
d79 (E)	1	# 5	19'-8"	—
d80 (E)	1	# 5	20'-0"	—
d81 (E)	1	# 5	20'-4"	—
d82 (E)	1	# 5	20'-8"	—
d83 (E)	1	# 5	21'-0"	—
d84 (E)	1	# 5	21'-4"	—
d85 (E)	1	# 5	21'-8"	—
d86 (E)	1	# 5	22'-0"	—
d87 (E)	1	# 5	22'-4"	—
d88 (E)	1	# 5	22'-8"	—
d89 (E)	1	# 5	23'-0"	—
d90 (E)	2	# 5	23'-4"	—
d100 (E)	7	# 5	2'-4"	—
T10 (E)	104	# 4	9'-8"	—
W10 (E)	80	# 5	28'-4"	—

**BILL OF MATERIAL
SOUTH BRIDGE
APPROACH PAVEMENT**

Reinforcement Bars, Epoxy Coated	Lbs.	14270
Concrete Superstructure	Cu. Yds.	52
Concrete Structures	Cu. Yds.	16.3
Bridge Deck Grooving	Sq. Yd.	100
Protective Coat	Sq. Yd.	104
Sub-base Granular Mat'l. Type B 4"	Sq. Yd.	18
Earth Excavation	Cu. Yd.	22

NOTES:

Approach slab concrete shall be measured and paid for as Concrete Superstructures.

Approach Footing concrete shall be measured and paid for as Concrete Structures.

Reinforcement bars designated (E) shall be epoxy coated.

The approach footing maximum applied service bearing pressure (0max) = 2.0 ksf.

DSGN	K.J. Hoffmann				
DR	B.A. Clark				
CHK	J.R. Wolf				
APVD	A. Fraenhoffer	NO.	DATE	REVISION	BY

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A division of Engineering Resource Associates, Inc.
Consulting Engineers, Scientists, & Surveyors

3002 CROSSING COURT
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PHONE (217) 351-6268
FAX (217) 355-1802

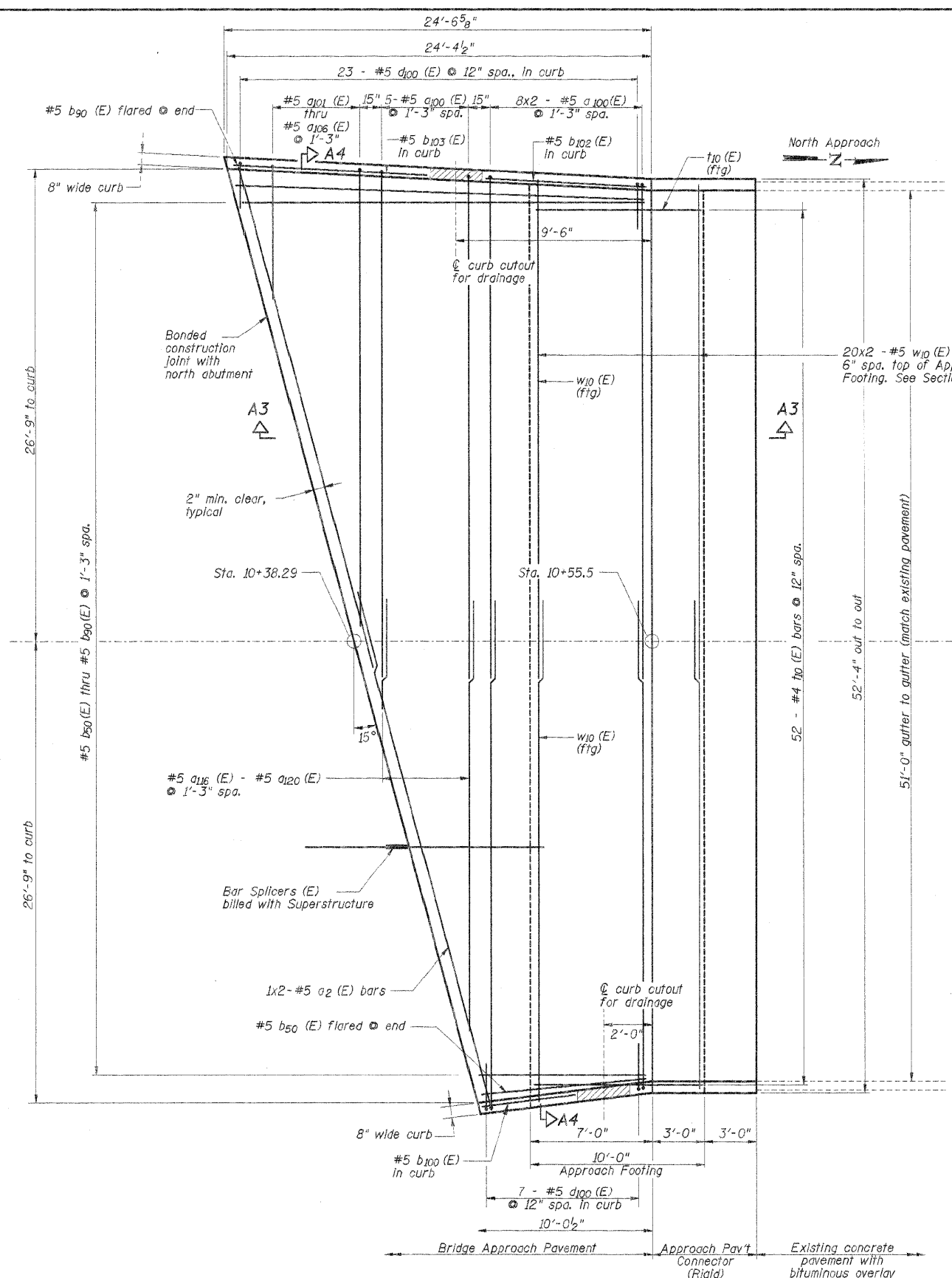
SOUTH BRIDGE APPROACH PAV'T (SHEET 2 OF 2) SHEET 9

FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

DWG NO. 7052ap.or.dgn
DATE FEB 2011
PROJ NO. 7052

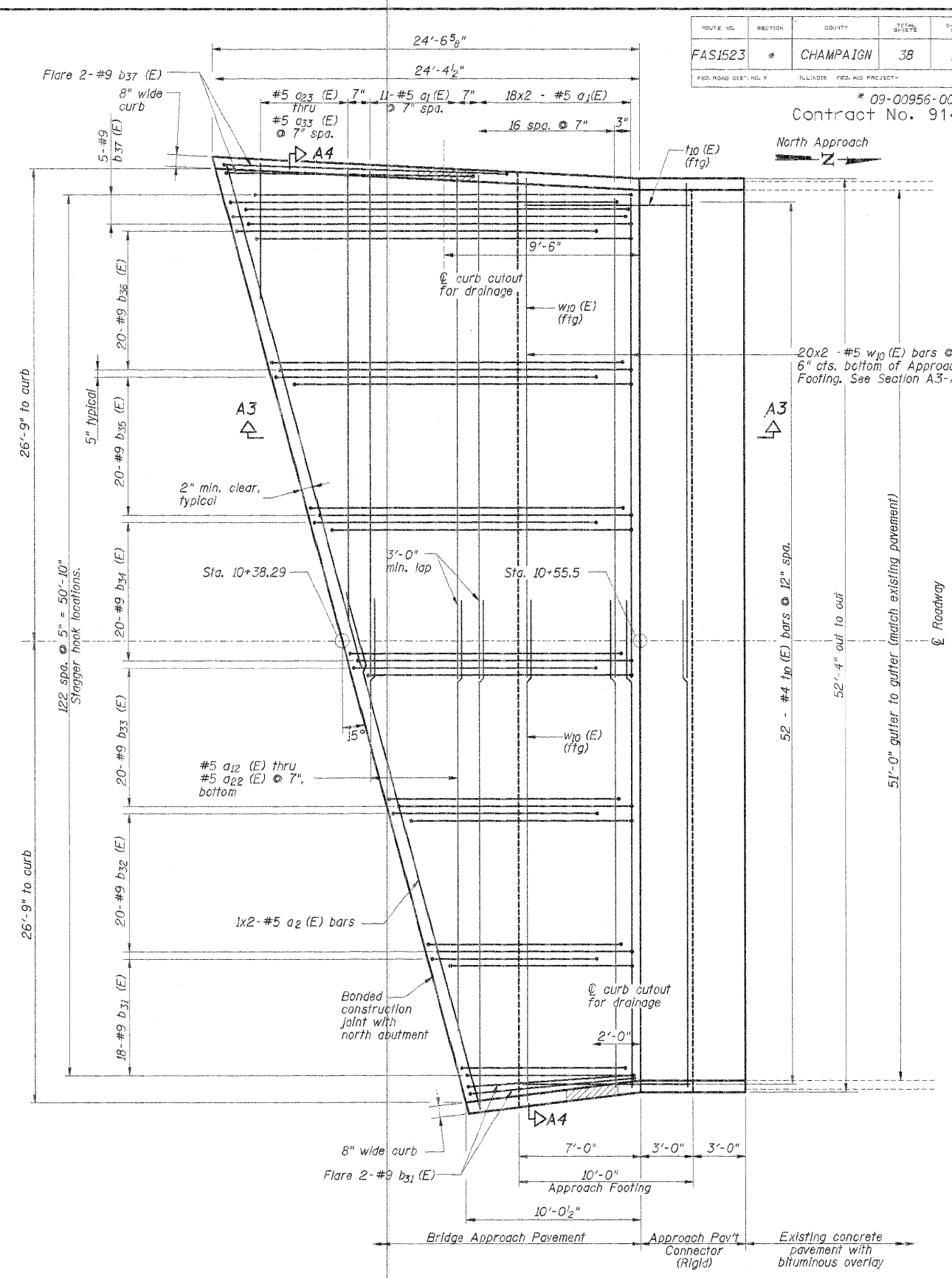
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS1523	*	CHAMPAIGN	38	10
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJ. DIST.				

* 09-00956-00-BR
Contract No. 91452



PLAN - TOP REINFORCEMENT

NOTE: d(E) bars in curb shall be placed to avoid curb cut out.



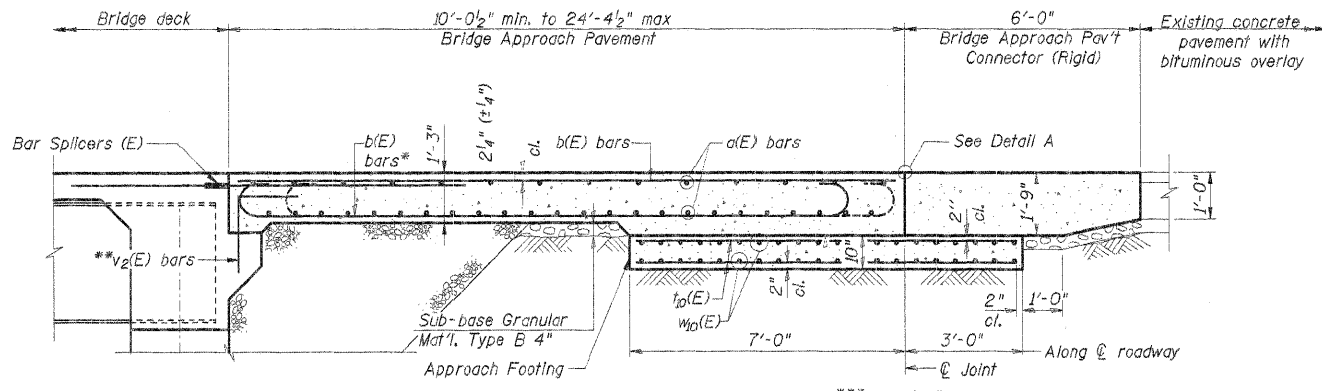
PLAN - BOTTOM REINFORCEMENT

DSGN	J. Hoffmann				
DR	B.A. Clark				
CHK	J.R. Wolf				
APVD	J.A. Fraunhoffer				
NO.	DATE	REVISION	BY	APVD	

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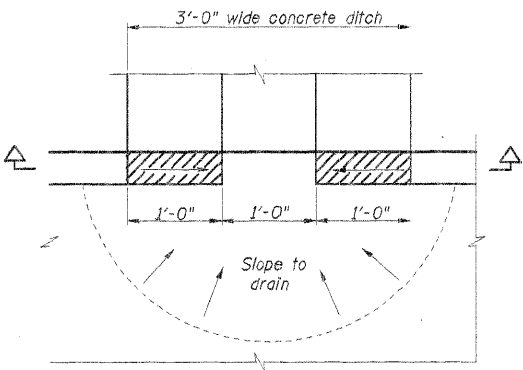
3002 CROSSING COURT
CHAMPAIGN, IL 61822
PHONE (217) 351-6268
FAX (217) 355-1902

NORTH BRIDGE APPROACH PAV'T (SHEET 1 OF 2) SHEET 10
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY
DWG NO. 7052aport.dgn
DATE FEB 2011
PROJ. NO. 7052

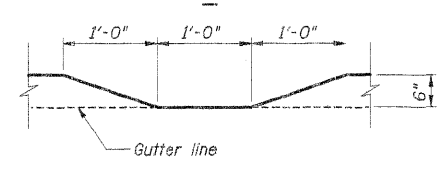


SECTION A3-A3

Bar splicers are billed with Superstructure.
* Tilt hooked #9 b(E) bars as required to maintain clearance.
** v2(E) are billed with Superstructure.
*** Cost Included with Concrete Superstructure.



CURB CUT-OUT DETAIL



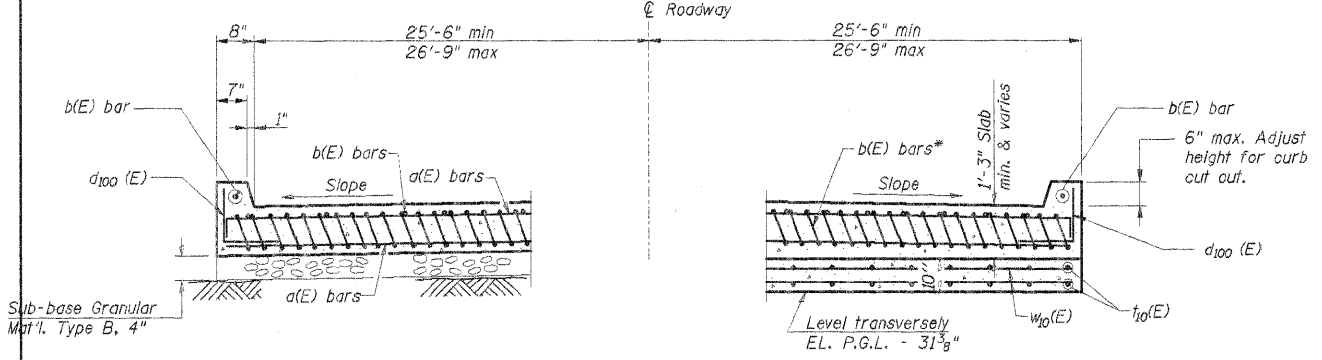
CURB CUT-OUT SECTION

REINFORCING LIST (PART 1)
NORTH BRIDGE
APPROACH PAVEMENT

Bar	No.	Size	Length	Shape
a1 (E)	47	# 5	28'-8"	—
a2 (E)	4	# 5	29'-6"	—
a12 (E)	1	# 5	27'-2"	—
a13 (E)	1	# 5	25'-0"	—
a14 (E)	1	# 5	22'-9"	—
a15 (E)	1	# 5	20'-7"	—
a16 (E)	1	# 5	18'-5"	—
a17 (E)	1	# 5	16'-3"	—
a18 (E)	1	# 5	14'-1"	—
a19 (E)	1	# 5	11'-11"	—
a20 (E)	1	# 5	9'-9"	—
a21 (E)	1	# 5	7'-7"	—
a22 (E)	1	# 5	5'-4"	—
a23 (E)	1	# 5	26'-3"	—
a24 (E)	1	# 5	24'-1"	—
a25 (E)	1	# 5	21'-11"	—
a26 (E)	1	# 5	19'-10"	—
a27 (E)	1	# 5	17'-8"	—
a28 (E)	1	# 5	15'-6"	—
a29 (E)	1	# 5	13'-4"	—
a30 (E)	1	# 5	11'-3"	—
a31 (E)	1	# 5	9'-1"	—
a32 (E)	1	# 5	6'-11"	—
a33 (E)	1	# 5	4'-9"	—
a100 (E)	21	# 5	29'-2"	—
a101 (E)	1	# 5	4'-11"	—
a102 (E)	1	# 5	9'-6"	—
a103 (E)	1	# 5	14'-3"	—
a104 (E)	1	# 5	18'-9"	—
a105 (E)	1	# 5	23'-3"	—
a106 (E)	1	# 5	27'-11"	—
a116 (E)	1	# 5	7'-10"	—
a117 (E)	1	# 5	12'-6"	—
a118 (E)	1	# 5	17'-2"	—
a119 (E)	1	# 5	21'-10"	—
a120 (E)	1	# 5	26'-6"	—
b31 (E)	20	# 9	12'-0"	—
b32 (E)	20	# 9	14'-3"	—
b33 (E)	20	# 9	16'-6"	—
b34 (E)	20	# 9	18'-8"	—
b35 (E)	20	# 9	20'-11"	—
b36 (E)	20	# 9	23'-2"	—
b37 (E)	7	# 9	23'-10"	—
d100 (E)	30	# 5	2'-4"	—
t10 (E)	104	# 4	9'-8"	—
w10 (E)	80	# 5	28'-4"	—

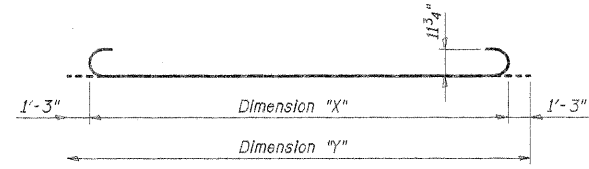
REINFORCING LIST (PART 2)
NORTH BRIDGE
APPROACH PAVEMENT

Bar	No.	Size	Length	Shape
b50 (E)	2	# 5	10'-0"	—
b51 (E)	1	# 5	10'-4"	—
b52 (E)	1	# 5	10'-8"	—
b53 (E)	1	# 5	11'-0"	—
b54 (E)	1	# 5	11'-4"	—
b55 (E)	1	# 5	11'-8"	—
b56 (E)	1	# 5	12'-0"	—
b57 (E)	1	# 5	12'-4"	—
b58 (E)	1	# 5	12'-8"	—
b59 (E)	1	# 5	13'-0"	—
b60 (E)	1	# 5	13'-4"	—
b61 (E)	1	# 5	13'-8"	—
b62 (E)	1	# 5	14'-0"	—
b63 (E)	1	# 5	14'-4"	—
b64 (E)	1	# 5	14'-8"	—
b65 (E)	1	# 5	15'-0"	—
b66 (E)	1	# 5	15'-4"	—
b67 (E)	1	# 5	15'-8"	—
b68 (E)	1	# 5	16'-0"	—
b69 (E)	1	# 5	16'-4"	—
b70 (E)	1	# 5	16'-8"	—
b71 (E)	1	# 5	17'-0"	—
b72 (E)	1	# 5	17'-4"	—
b73 (E)	1	# 5	17'-8"	—
b74 (E)	1	# 5	18'-0"	—
b75 (E)	1	# 5	18'-4"	—
b76 (E)	1	# 5	18'-8"	—
b77 (E)	1	# 5	19'-0"	—
b78 (E)	1	# 5	19'-4"	—
b79 (E)	1	# 5	19'-8"	—
b80 (E)	1	# 5	20'-0"	—
b81 (E)	1	# 5	20'-4"	—
b82 (E)	1	# 5	20'-8"	—
b83 (E)	1	# 5	21'-0"	—
b84 (E)	1	# 5	21'-4"	—
b85 (E)	1	# 5	21'-8"	—
b86 (E)	1	# 5	22'-0"	—
b87 (E)	1	# 5	22'-4"	—
b88 (E)	1	# 5	22'-8"	—
b89 (E)	1	# 5	23'-0"	—
b90 (E)	2	# 5	23'-4"	—
b100 (E)	1	# 5	6'-6"	—
b102 (E)	1	# 5	8'-0"	—
b103 (E)	1	# 5	13'-0"	—



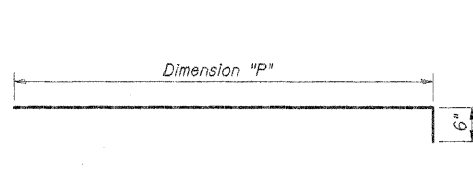
SECTION A4-A4

(See Plan for dimensions not shown)



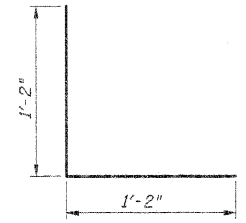
BAR b31 (E) thru b37 (E)

Bar	"X"	Length
b31 (E)	9'-6"	12'-0"
b32 (E)	11'-9"	14'-3"
b33 (E)	14'-0"	16'-6"
b34 (E)	16'-2"	18'-8"
b35 (E)	18'-5"	20'-11"
b36 (E)	20'-8"	23'-2"
b37 (E)	21'-4"	23'-10"

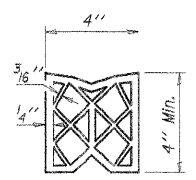


BAR a100 (E) thru a106 (E)

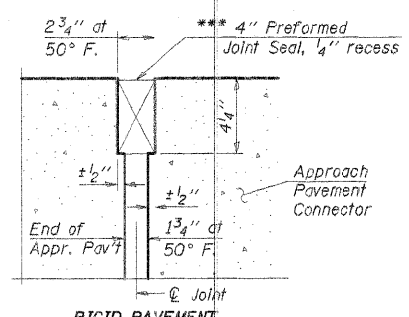
Bar	"P"	Length
a100 (E)	28'-8"	29'-2"
a101 (E)	4'-5"	4'-11"
a102 (E)	9'-0"	9'-6"
a103 (E)	13'-7"	14'-3"
a104 (E)	18'-3"	18'-9"
a105 (E)	22'-9"	23'-3"
a106 (E)	27'-5"	27'-11"



BAR d100 (E)



PREFORMED JOINT SEAL



RIGID PAVEMENT DETAIL A

*** Cost Included with Concrete Superstructure.

BILL OF MATERIAL
SOUTH BRIDGE
APPROACH PAVEMENT

Reinforcement Bars, Epoxy Coated	Lbs.	14320
Concrete Superstructure	Cu. Yds.	52
Concrete Structures	Cu. Yds.	16.3
Bridge Deck Grooving	Sq. Yd.	100
Protective Coat	Sq. Yd.	105
Sub-base Granular Mat'l, Type B 4"	Sq. Yd.	18
Earth Excavation	Cu. Yd.	22

NOTES:
Approach slab concrete shall be measured and paid for as Concrete Superstructures.
Approach footing concrete shall be measured and paid for as Concrete Structures.
Reinforcement bars designated (E) shall be epoxy coated.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

DESIGN	NO.	DATE	REVISION	BY	APVD
J. Hoffmann					
E.A. Clark					
J.R. Wolf					
J.A. Fraunhoffer					

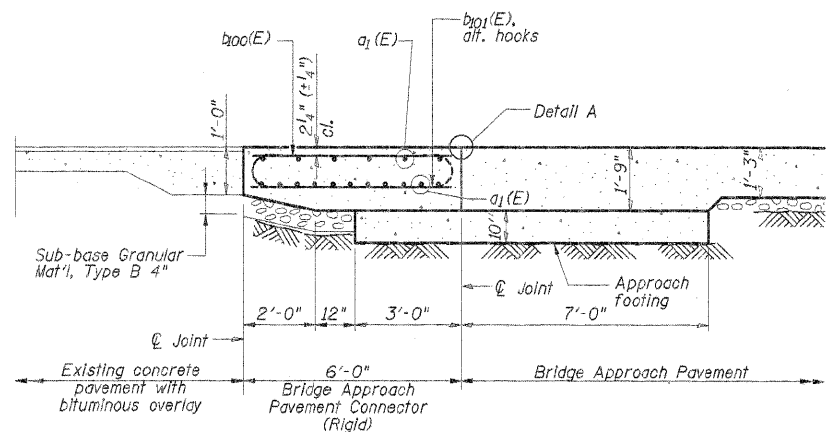
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A Division of Engineering Resource Associates, Inc.
Consulting Engineers, Scientists, & Surveyors

3002 CROSSING COURT
CHAMPAIGN, IL 61822
PHONE (217) 351-6268
FAX (217) 355-1802

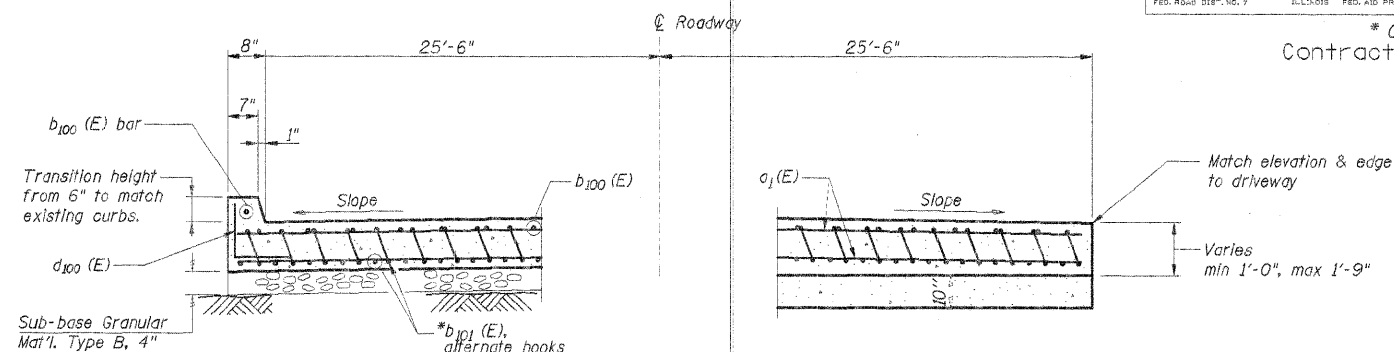
NORTH BRIDGE APPROACH PAV'T (SHEET 2 OF 2) SHEET 11
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY
DWG NO. 7052apcr.dgn
DATE FEB 2011
PROJ NO. 7052

ROUTE NO.	SECTION	COUNTY	DIST. SHEET	SHEET NO.
FAS1523	*	CHAMPAIGN	38	12
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

* 09-00956-00-BR
Contract No. 91452

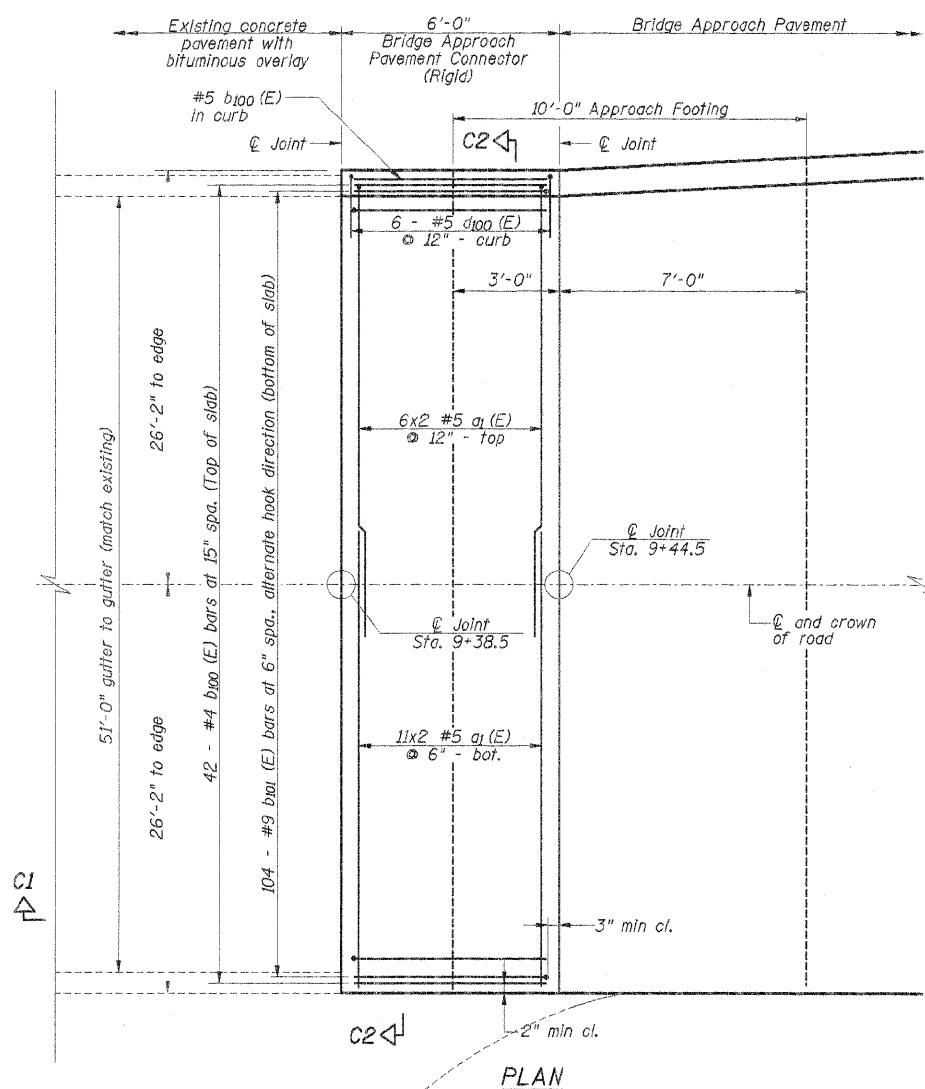


SECTION C1-C1

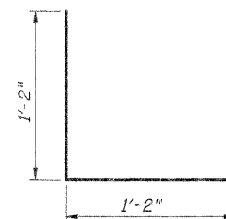


SECTION C2-C2

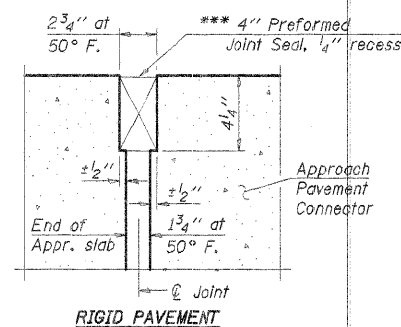
* Tilt hooked #9b101(E) bars as required to maintain clearance.



PLAN



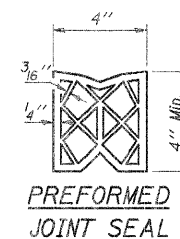
BAR d100(E)



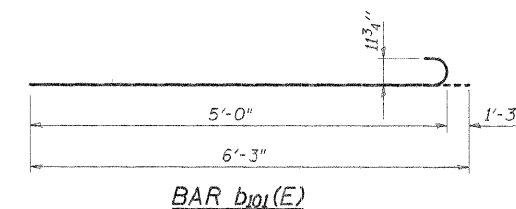
RIGID PAVEMENT

DETAIL A

*** Cost is incidental to Concrete Superstructure.



PREFORMED JOINT SEAL



BAR b101(E)

BILL OF MATERIAL
SOUTH BRIDGE APPROACH
PAVEMENT CONNECTOR (RIGID)

Bar	No.	Size	Length	Shape
a ₁ (E)	34	# 5	29'-0"	—
b ₁₀₀ (E)	43	# 4	5'-6"	—
b ₁₀₁ (E)	104	# 9	6'-3"	—
d ₁₀₀ (E)	6	# 5	2'-4"	┘
Reinforcement Bars, Epoxy Coated			Lbs.	3420
Concrete Superstructure			Cu. Yds.	21.5
Bridge Deck Grooving			Sq. Yds.	34
Protective Coat			Sq. Yds.	36
Sub-base Granular Mat'l Type B, 4"			Sq. Yds.	18

DSGN	J. Hoffmann				
DR	B.A. Clark				
CHK	J.R. Wolf				
APVD	J.A. Fraunhoffer	NO.	DATE	REVISION	BY

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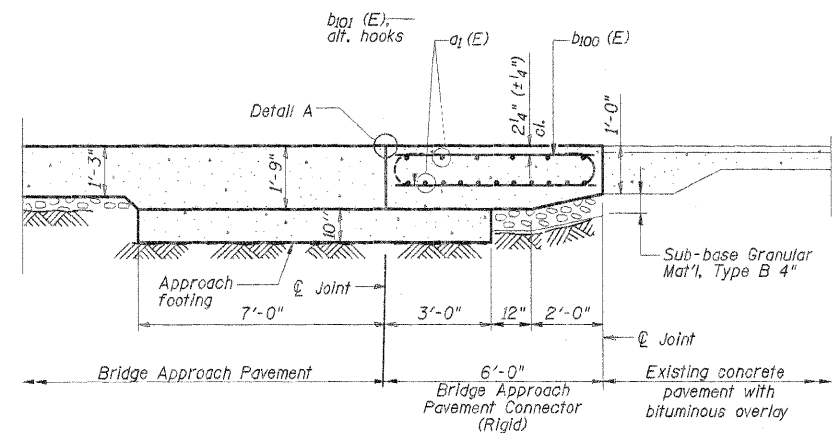
3002 CROSSING COURT
CHAMPAIGN, IL 61822
PHONE (217) 261-6268
FAX (217) 355-1902

S. BRIDGE APPROACH PAV'T CONNECTOR (RIGID)
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

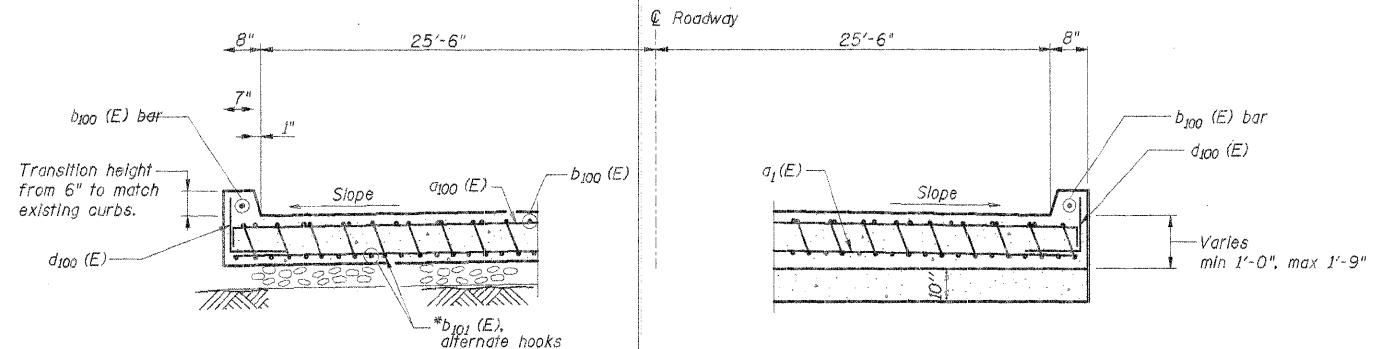
SHEET	12
DWG NO.	7052apav.dgn
DATE	FEB 2011
PROJ NO.	7052

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS1523	#	CHAMPAIGN	38	13
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

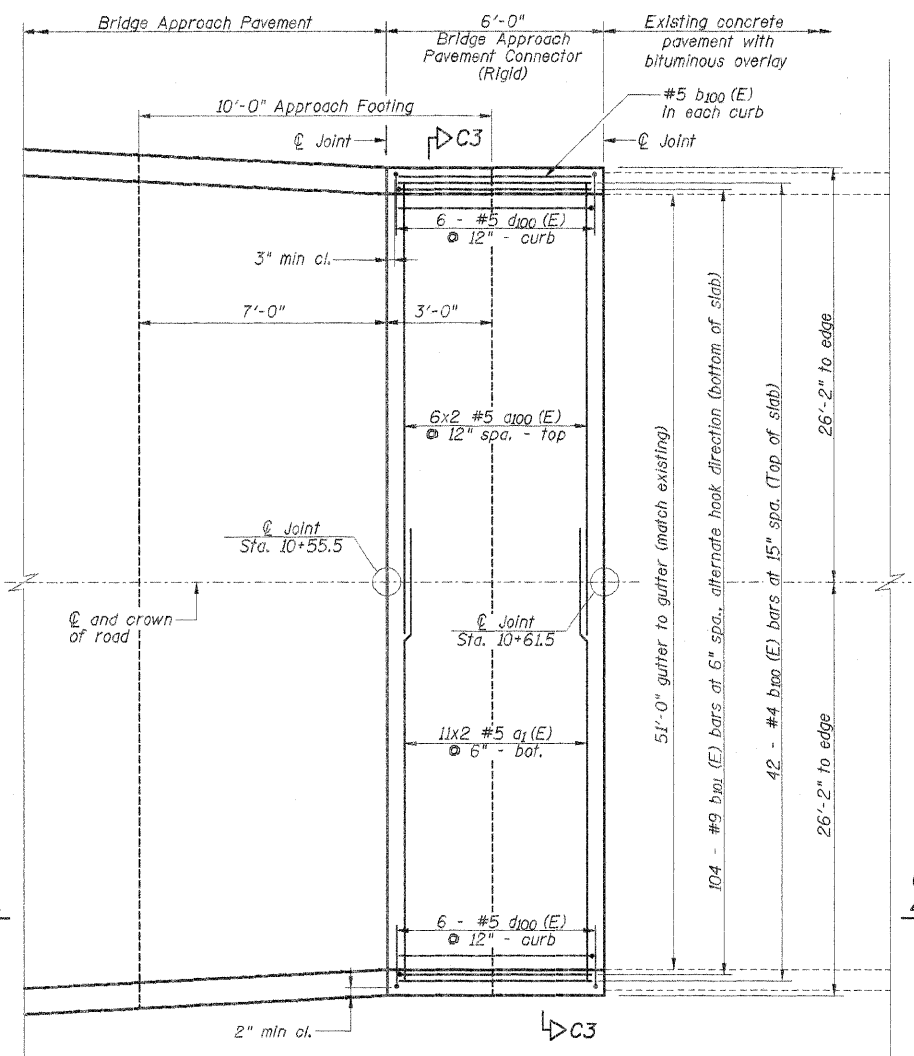
* 09-00956-00-BR
Contract No. 91452



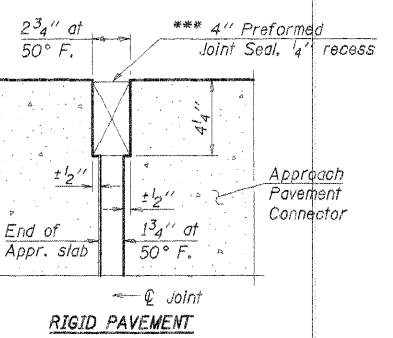
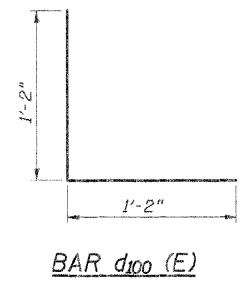
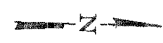
SECTION C1-C1



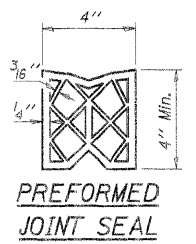
SECTION C3-C3



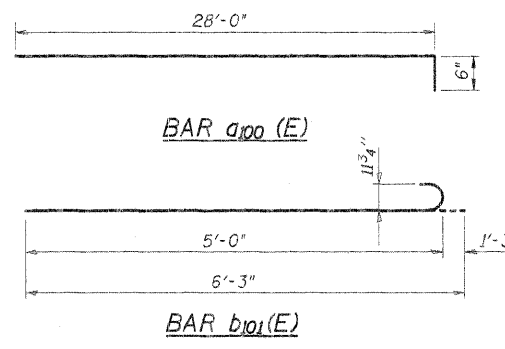
PLAN



DETAIL A



NOTE: Contractor shall cut 6" leg in field to accommodate variable curb height. Maintain 2" clear.



BILL OF MATERIAL NORTH BRIDGE APPROACH PAVEMENT CONNECTOR (RIGID)				
Bar	No.	Size	Length	Shape
a1 (E)	22	# 5	29'-0"	—
d100 (E)	12	# 5	29'-2"	—
b100 (E)	44	# 4	5'-6"	—
b101 (E)	104	# 9	6'-3"	—
d100 (E)	12	#5	2'-4"	—
Reinforcement Bars, Epoxy Coated			Lbs.	3440
Concrete Superstructure			Cu. Yds.	21.5
Bridge Deck Grooving			Sq. Yds.	34
Protective Coat			Sq. Yds.	36
Sub-base Granular Mat'l Type B, 4"			Sq. Yds.	18

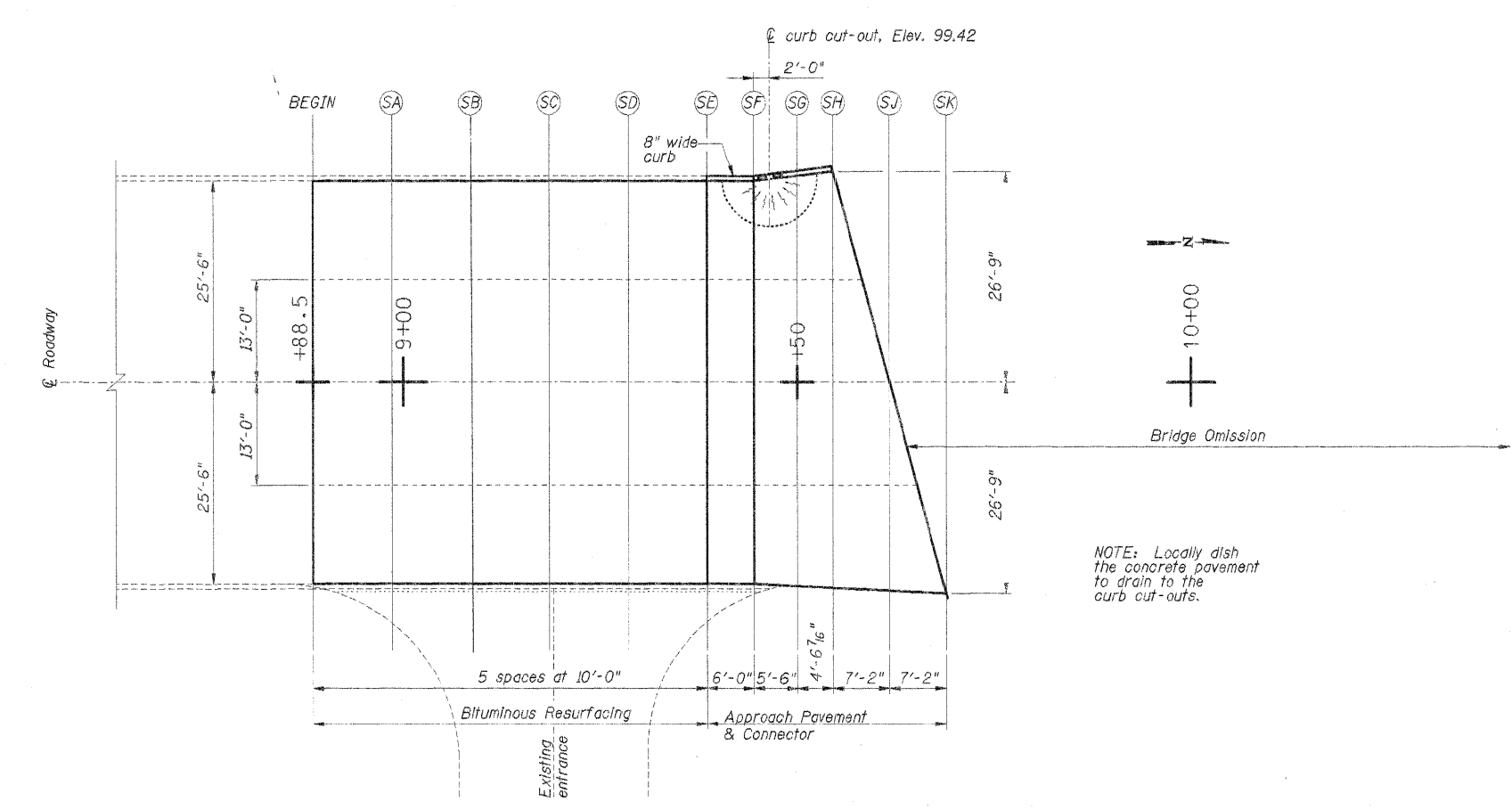
DSGN	K.J. Hoffmann				
DR	B.A. Clark				
CHK	J.R. Wolf				
APVD	J.A. Fraunhoffer				
	NO.	DATE	REVISION	BY	APVD

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CHAMPAIGN, IL 61822
PHONE (217) 351-6268
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N. BRIDGE APPROACH PAV'T CONNECTOR (RIGID)
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET	13
DWG NO.	7052acor.dgn
DATE	FEB 2011
PROJ NO.	7052



NOTE: Locally dish the concrete pavement to drain to the curb cut-outs.

South Approach
West Curb Line

Location	Station	Offset	Pavement Elevations
Begin Resurfacing	8+88.50	25.50' LT	match
Line SA (bituminous)	8+98.50	25.50' LT	99.341
Line SB (bituminous)	9+08.50	25.50' LT	99.360
Line SC (bituminous)	9+18.50	25.50' LT	99.378
Line SD (bituminous)	9+28.50	25.50' LT	99.404
Line SE (Begin Connector)	9+38.50	25.50' LT	99.430
Line SF (End Connector)	9+44.50	25.97' LT	99.423*
Line SG (concrete)	9+50.00	26.40' LT	99.434*
Line SH (Back of S. Abutment-W)	9+54.54	26.75' LT	99.443
Line SJ (Back of S. Abutment-CL)	9+61.71	-	-
Line SK (Back of S. Abutment-E)	9+68.87	-	-

*Elevation adjusted for sloping to curb cut-out.

South Approach
13' West of ϕ

Location	Station	Offset	Pavement Elevations
Begin Resurfacing	8+88.50	13.00' LT	match
Line SA (bituminous)	8+98.50	13.00' LT	99.584
Line SB (bituminous)	9+08.50	13.00' LT	99.606
Line SC (bituminous)	9+18.50	13.00' LT	99.628
Line SD (bituminous)	9+28.50	13.00' LT	99.654
Line SE (Begin Connector)	9+38.50	13.00' LT	99.680
Line SF (End Connector)	9+44.50	13.00' LT	99.696
Line SG (concrete)	9+50.00	13.00' LT	99.710
Line SH (Back of S. Abutment-W)	9+54.54	13.00' LT	99.720
Line SJ (Back of S. Abutment-CL)	9+61.71	-	-
Line SK (Back of S. Abutment-E)	9+68.87	-	-

South Approach
 ϕ Roadway

Location	Station	Offset	Pavement Elevations
Begin Resurfacing	8+88.50	0.00'	match
Line SA (bituminous)	8+98.50	0.00'	99.836
Line SB (bituminous)	9+08.50	0.00'	99.862
Line SC (bituminous)	9+18.50	0.00'	99.888
Line SD (bituminous)	9+28.50	0.00'	99.914
Line SE (Begin Connector)	9+38.50	0.00'	99.940
Line SF (End Connector)	9+44.50	0.00'	99.956
Line SG (concrete)	9+50.00	0.00'	99.970
Line SH (Back of S. Abutment-W)	9+54.54	0.00'	99.982
Line SJ (Back of S. Abutment-CL)	9+61.71	0.00'	100.000
Line SK (Back of S. Abutment-E)	9+68.87	-	-

South Approach
13' East of ϕ

Location	Station	Offset	Pavement Elevations
Begin Resurfacing	8+88.50	13.00' RT	match
Line SA (bituminous)	8+98.50	13.00' RT	99.584
Line SB (bituminous)	9+08.50	13.00' RT	99.606
Line SC (bituminous)	9+18.50	13.00' RT	99.628
Line SD (bituminous)	9+28.50	13.00' RT	99.654
Line SE (Begin Connector)	9+38.50	13.00' RT	99.680
Line SF (End Connector)	9+44.50	13.00' RT	99.696
Line SG (concrete)	9+50.00	13.00' RT	99.710
Line SH (Back of S. Abutment-W)	9+54.54	13.00' RT	99.720
Line SJ (Back of S. Abutment-CL)	9+61.71	-	-
Line SK (Back of S. Abutment-E)	9+68.87	-	-

South Approach
East Edge of Pavement/Curb Line

Location	Station	Offset	Pavement Elevations
Begin Resurfacing	8+88.50	25.50' RT	match
Line SA (bituminous)	8+98.50	25.50' RT	match
Line SB (bituminous)	9+08.50	25.50' RT	match
Line SC (bituminous)	9+18.50	25.50' RT	match
Line SD (bituminous)	9+28.50	25.50' RT	match
Line SE (Begin Connector)	9+38.50	25.50' RT	match
Line SF (End Connector)	9+44.50	25.75' RT	match
Line SG (concrete)	9+50.00	25.97' RT	99.450
Line SH (Back of S. Abutment-W)	9+54.54	26.16' RT	99.455
Line SJ (Back of S. Abutment-CL)	9+61.71	26.46' RT	99.461
Line SK (Back of S. Abutment-E)	9+68.87	26.75' RT	99.443

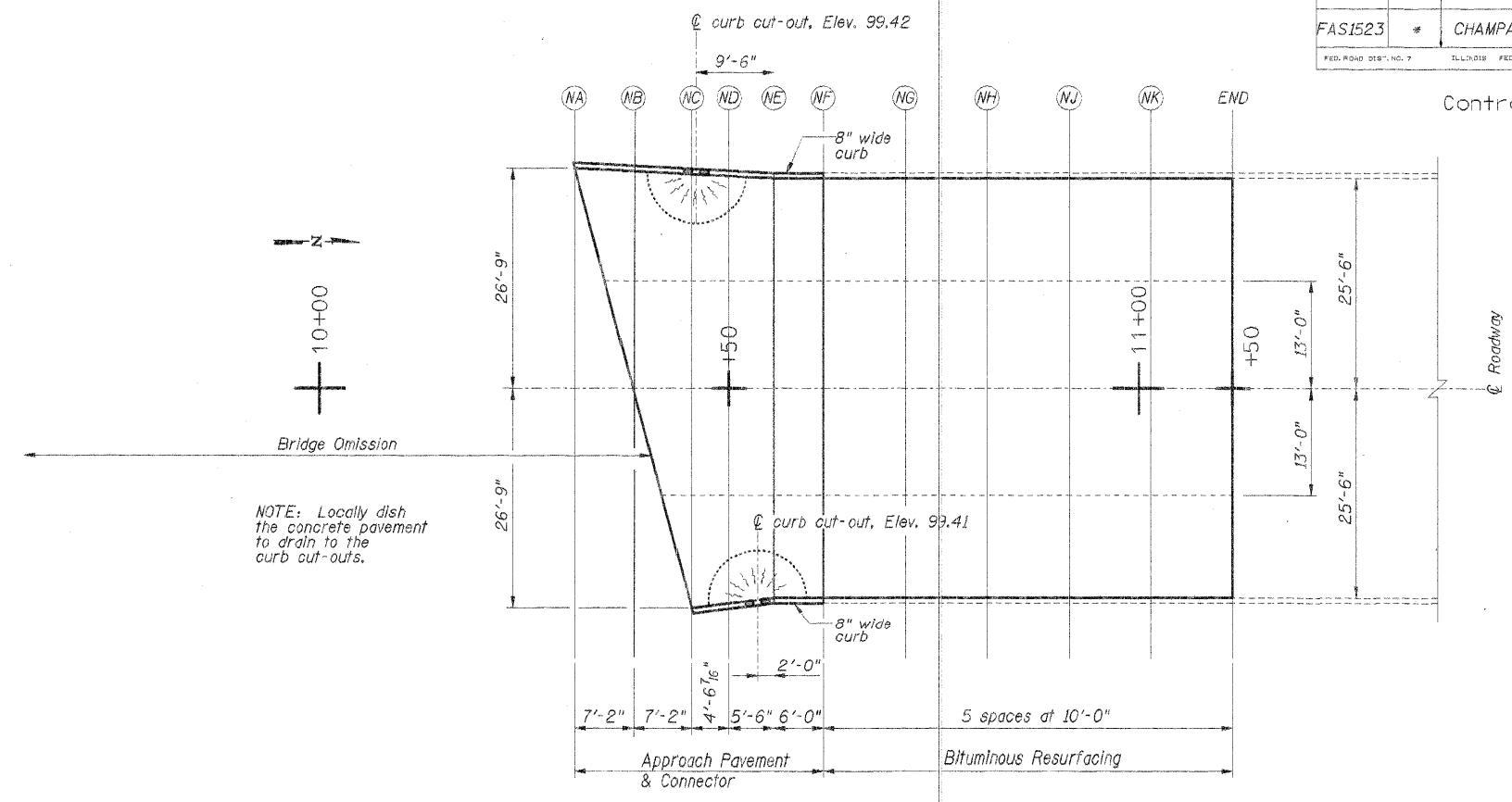
DSGN	K.J. Hoffmann				
DR	N.J. Liggett				
CHK	J.R. Wolf				
APVD	J.A. Fraunhoffer	NO.	DATE	REVISION	BY

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Consulting Engineers, Scientists, & Surveyors

3002 CROSSING COURT
CHAMPAIGN, ILL. 61822
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FAX (217) 351-1802

APPROACH ELEVATIONS (SHEET 1 OF 2)
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET	14
DWG NO.	7052ep.or.dgn
DATE	FEB 2011
PROJ NO.	7052



NOTE: Locally dish the concrete pavement to drain to the curb cut-outs.

North Approach
West Curb Line

Location	Station	Offset	Pavement Elevations
Line NA (Back of N. Abutment-W)	10+31.13	26.75' LT	99.443
Line NB (Back of N. Abutment-CL)	10+38.29	26.46' LT	99.460
Line NC (Back of N. Abutment-E)	10+45.46	26.16' LT	99.422*
Line ND	10+50.00	25.97' LT	99.424*
Line NE (Begin Connector)	10+55.50	25.75' LT	99.430
Line NF (End Connector)	10+61.50	25.50' LT	99.415
Line NG (bituminous)	10+71.50	25.50' LT	99.382
Line NH (bituminous)	10+81.50	25.50' LT	99.349
Line NJ (bituminous)	10+91.50	25.50' LT	99.328
Line NK (bituminous)	11+01.50	25.50' LT	99.307
End Resurfacing	11+11.50	25.50' LT	match

*Elevation adjusted for sloping to curb cut-out.

North Approach
13' West of C

Location	Station	Offset	Pavement Elevations
Line NA (Back of N. Abutment-W)	10+31.13	-	-
Line NB (Back of N. Abutment-CL)	10+38.29	-	-
Line NC (Back of N. Abutment-E)	10+45.46	13.00' LT	99.717
Line ND	10+50.00	13.00' LT	99.702
Line NE (Begin Connector)	10+55.50	13.00' LT	99.684
Line NF (End Connector)	10+61.50	13.00' LT	99.664
Line NG (bituminous)	10+71.50	13.00' LT	99.631
Line NH (bituminous)	10+81.50	13.00' LT	99.598
Line NJ (bituminous)	10+91.50	13.00' LT	99.571
Line NK (bituminous)	11+01.50	13.00' LT	99.544
End Resurfacing	11+11.50	13.00' LT	match

North Approach
C Roadway

Location	Station	Offset	Pavement Elevations
Line NA (Back of N. Abutment-W)	10+31.13	-	-
Line NB (Back of N. Abutment-CL)	10+38.29	0.00'	100.000
Line NC (Back of N. Abutment-E)	10+45.46	0.00'	99.976
Line ND	10+50.00	0.00'	99.961
Line NE (Begin Connector)	10+55.50	0.00'	99.943
Line NF (End Connector)	10+61.50	0.00'	99.923
Line NG (bituminous)	10+71.50	0.00'	99.890
Line NH (bituminous)	10+81.50	0.00'	99.857
Line NJ (bituminous)	10+91.50	0.00'	99.824
Line NK (bituminous)	11+01.50	0.00'	99.791
End Resurfacing	11+11.50	0.00'	match

North Approach
13' East of C

Location	Station	Offset	Pavement Elevations
Line NA (Back of N. Abutment-W)	10+31.13	-	-
Line NB (Back of N. Abutment-CL)	10+38.29	-	-
Line NC (Back of N. Abutment-E)	10+45.46	13.00' RT	100.00
Line ND	10+50.00	13.00' RT	99.702
Line NE (Begin Connector)	10+55.50	13.00' RT	99.684
Line NF (End Connector)	10+61.50	13.00' RT	99.664
Line NG (bituminous)	10+71.50	13.00' RT	99.631
Line NH (bituminous)	10+81.50	13.00' RT	99.598
Line NJ (bituminous)	10+91.50	13.00' RT	99.571
Line NK (bituminous)	11+01.50	13.00' RT	99.544
End Resurfacing	11+11.50	13.00' RT	match

North Approach
East Curb Line

Location	Station	Offset	Pavement Elevations
Line NA (Back of N. Abutment-W)	10+31.13	-	-
Line NB (Back of N. Abutment-CL)	10+38.29	-	-
Line NC (Back of N. Abutment-E)	10+45.46	26.75' RT	99.443
Line ND	10+50.00	26.40' RT	99.425*
Line NE (Begin Connector)	10+55.50	25.97' RT	99.410*
Line NF (End Connector)	10+61.50	25.50' RT	99.415
Line NG (bituminous)	10+71.50	25.50' RT	99.382
Line NH (bituminous)	10+81.50	25.50' RT	99.349
Line NJ (bituminous)	10+91.50	25.50' RT	99.328
Line NK (bituminous)	11+01.50	25.50' RT	99.307
End Resurfacing	11+11.50	25.50' RT	match

*Elevation adjusted for sloping to curb cut-out.

DSGN	K.J. Hoffmann				
DR	N.J. Liggett				
CHK	J.R. Wolf				
APVD	J.A. Frauenhoffer	NO.	DATE	REVISION	BY

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Consulting Engineers, Scientists, & Surveyors

3002 CROSSING COURT
CHAMPAIGN, IL 61822
PHONE (217) 351-6268
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APPROACH ELEVATIONS (SHEET 2 OF 2)

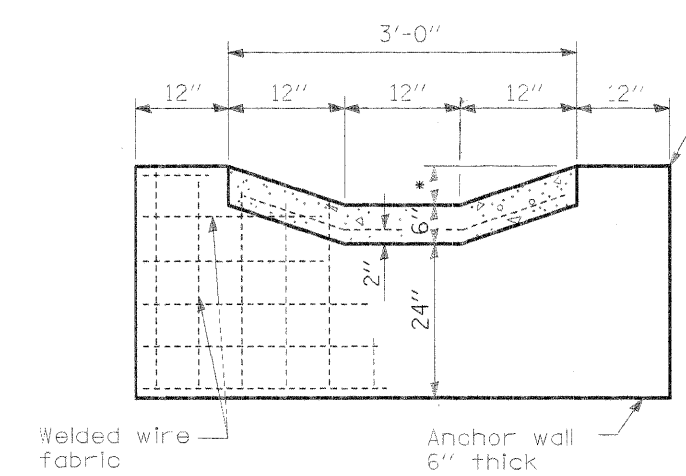
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET	15
DWG NO.	7052a.cor.dgn
DATE	FEB 2011
PROJ. NO.	7052

ROUTE ID	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
FAS1523	#	CHAMPAIGN	38	16
FED. ROAD DES. NO. 7		ILL. 508		FED. AID PROJECT

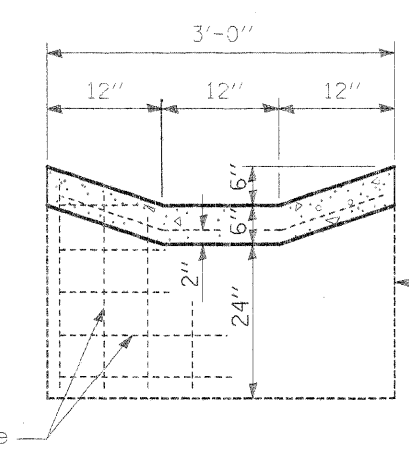
* 09-00956-00-BR
Contract No. 91452

* = Equal to curb height where abuts against the approach pavement. Transition to a height of 6 inches.



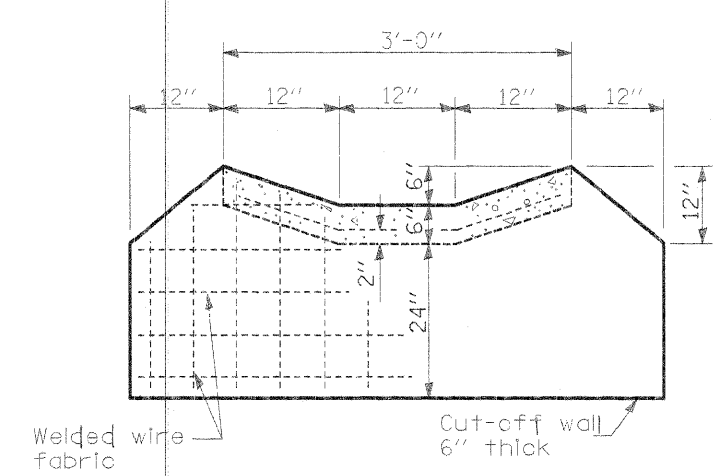
ELEVATION
PAVED DITCH - UPSTREAM END

Top of anchor wall shall conform to the top of the adjacent curb line.

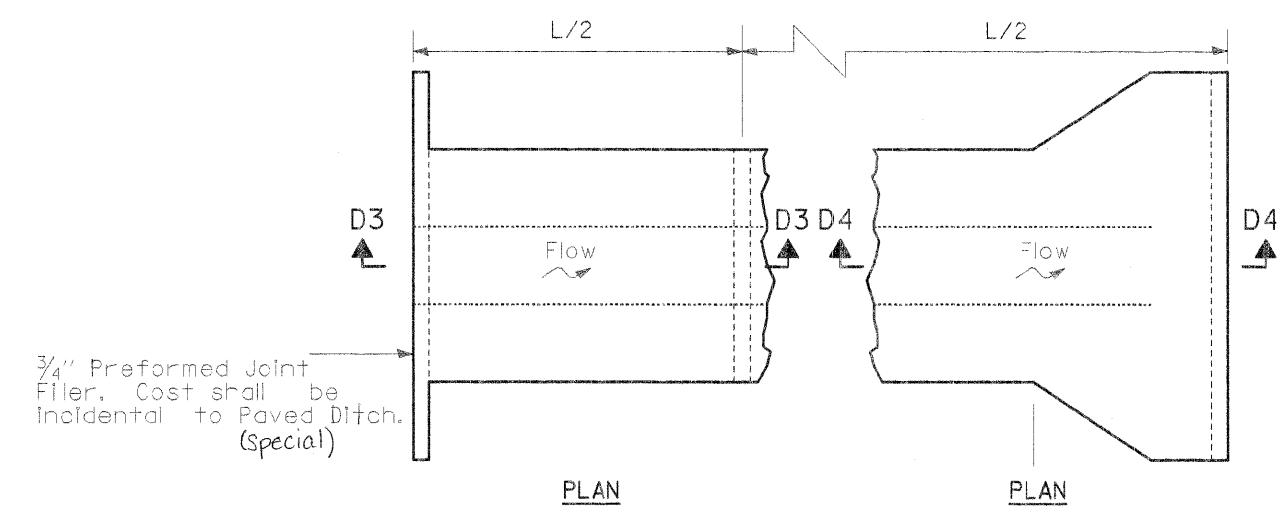


ELEVATION
PAVED DITCH

Anchor wall 6" thick



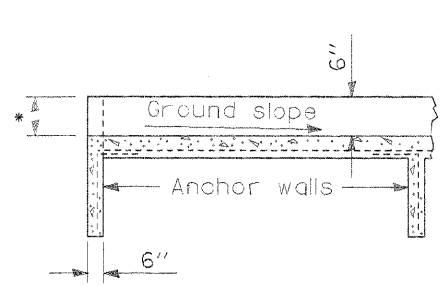
ELEVATION
PAVED DITCH - DOWNSTREAM END



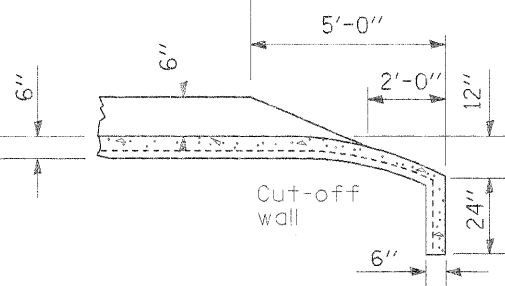
3/4" Preformed Joint Filer. Cost shall be incidental to Paved Ditch. (Special)

PLAN

PLAN



SECTION D3-D3



SECTION D4-D4

DETAIL OF UPSTREAM END

DETAIL OF DOWNSTREAM END

PAVED DITCH - GENERAL NOTES

- Approximate Concrete Areas:
- Paved Ditch (Special) = 0.36 Sq. Yds./Ft. wall
 - Anchor Wall (upstream) = 1.39 Sq. Yds.
 - Anchor Wall (at L/2) = 0.72 Sq. Yds.
 - Cut-off Wall & Flare = 17.35 Sq. Yds.

The cost of concrete & welded wire fabric is incidental to the cost of "PAVED DITCH (SPECIAL)".

DSGN	K.J. Hoffmann				
DR	N.J. Liggett				
CHK	J.R. Wolf				
APVD	A.Frauenhoffer	NO.	DATE	REVISION	BY

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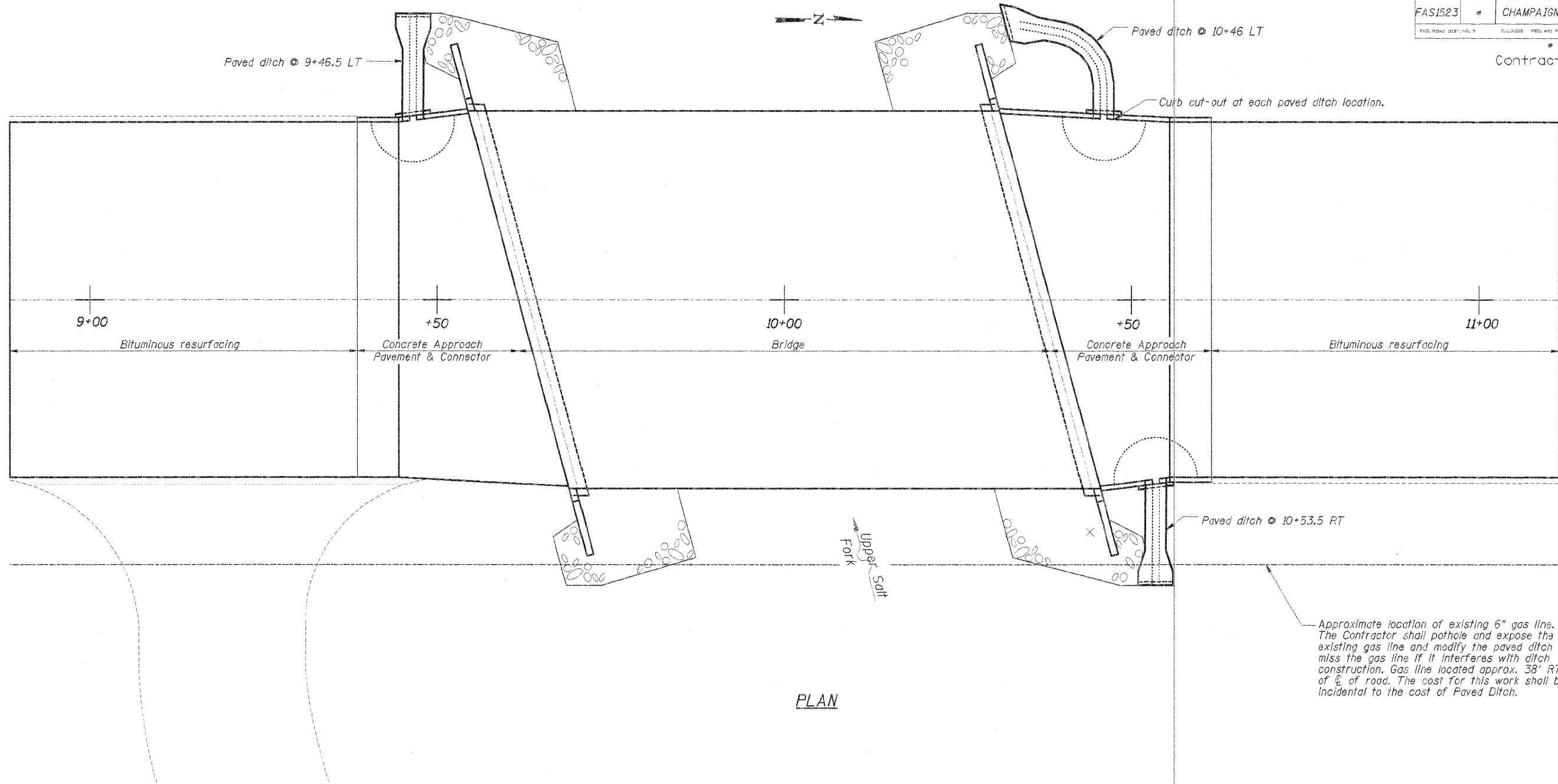
3002 CROSSING COURT
CHAMPAIGN, IL 61822
PHONE (217) 351-6268
FAX (217) 355-1902

PAVED DITCH (SPECIAL) (SHEET 1 OF 2)
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET	16
DWG NO.	7052ditch.dgn
DATE	FEB 2011
PROJ NO.	7052

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS1523	*	CHAMPAIGN	38	17

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT
 *09-00956-00-BR
 Contract No. 91452



PLAN

Approximate location of existing 6" gas line. The Contractor shall pothole and expose the existing gas line and modify the paved ditch to miss the gas line if it interferes with ditch construction. Gas line located approx. 38' RT of C of road. The cost for this work shall be incidental to the cost of Paved Ditch.

PAVED DITCH (SPECIAL)	
LOCATION	FOOT
Sta. 9+46.5 LT	15.5
Sta. 10+46 LT	24.0
Sta. 10+53.5 RT	15.5
TOTAL	55

EARTH EXCAVATION	
LOCATION	Cu. Yds.
Sta. 9+46.5 LT	2
Sta. 10+46 LT	2
Sta. 10+53.5 RT	2
TOTAL	6

PROTECTIVE COAT	
LOCATION	Sq. Yds.
Sta. 9+46.5 LT	6.25
Sta. 10+46 LT	5.5
Sta. 10+53.5 RT	6.25
TOTAL	22

BILL OF MATERIAL - PAVED DITCHES		
ITEM	UNIT	QUANTITY
Paved Ditch (Special)	Foot	55
Earth Excavation	Cu. Yds.	6
Protective Coat	Sq. Yds.	22

DSGN	K. J. Hoffmann				
DR	N. J. Liggett				
CHK	J. R. Wolf				
APVD	J. A. Fraenhoffer	NO.	DATE	REVISION	BY

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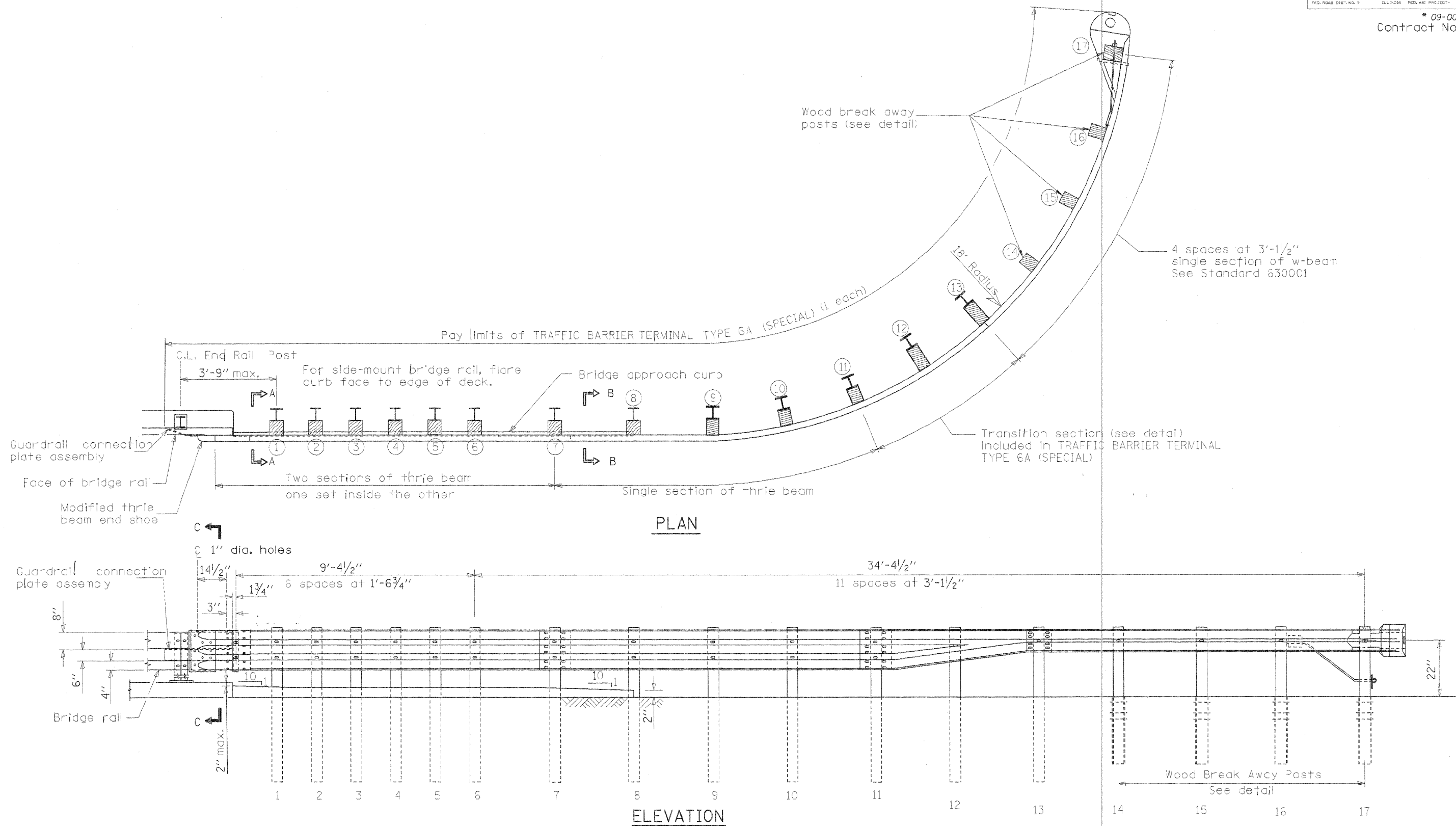
3002 CROSSING COURT
 CHAMPAIGN, IL 61822
 PHONE (217) 351-6268
 FAX (217) 355-1902

PAVED DITCH (SPECIAL) (SHEET 2 OF 2)
 FAS 1523 (CH 55) OVER UPPER SALT FORK
 SEC 09-00956-00-BR
 CHAMPAIGN COUNTY

SHEET	17
DWG NO.	7052ditch.dgn
DATE	FEB 2011
PROJ NO.	7052

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAS1523	*	CHAMPAIGN	38	18
FED. ROAD DIST. NO. 7		ILL. 2005 FED. AID PROJECT		

* 09-00956-00-BR
Contract No. 91452



Sheet 1 of 5

DESIGN	J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J.R. Wolf				
APVD	J.A. Fraunhoffer	NO.	DATE	REVISION	BY
					APVD

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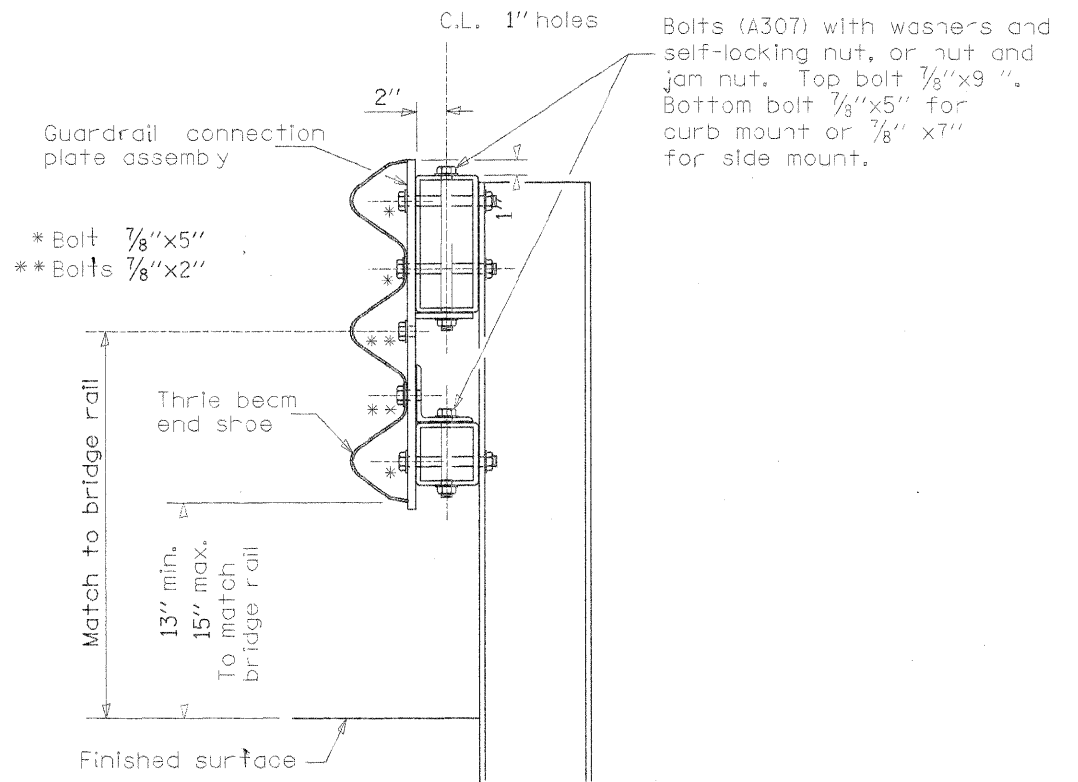
3002 CROSSING COURT
CHAMPAIGN, IL 61822
PHONE (217) 355-6268
FAX (217) 355-1802

TRAFFIC BARRIER TERMINAL TYPE 6A (SPECIAL)
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

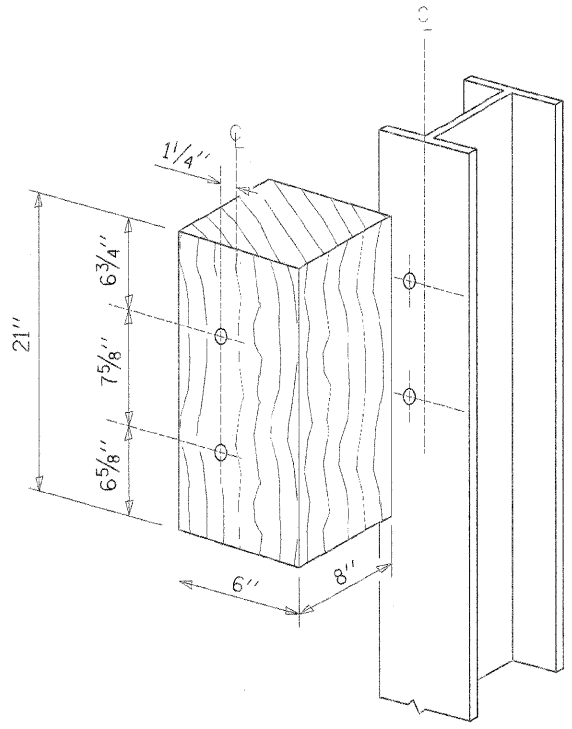
SHEET	18
DWG NO.	7052*6A.dgn
DATE	FEB 2011
PROJ NO.	7052

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAS1523	*	CHAMPAIGN	38	19
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

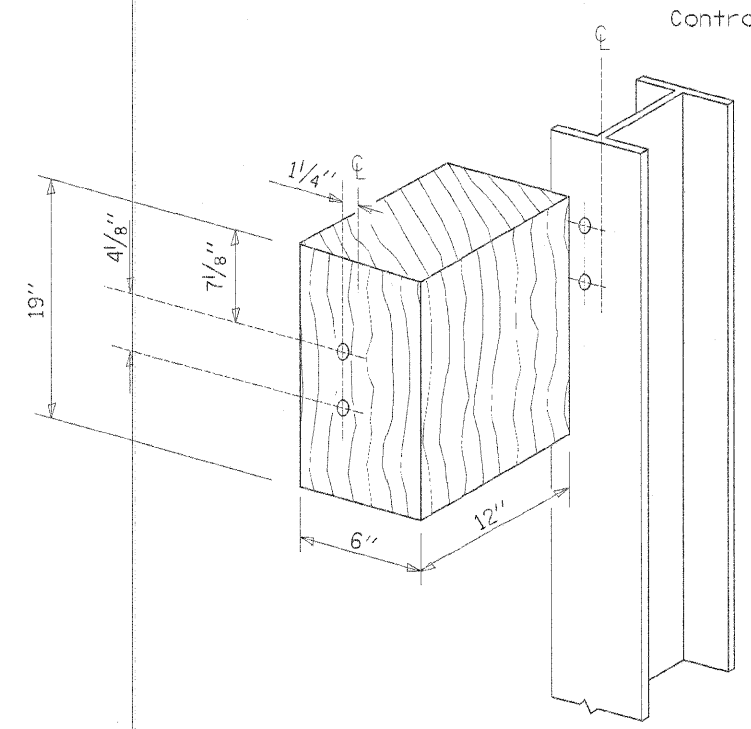
* 09-00956-00-BR
Contract No. 91452



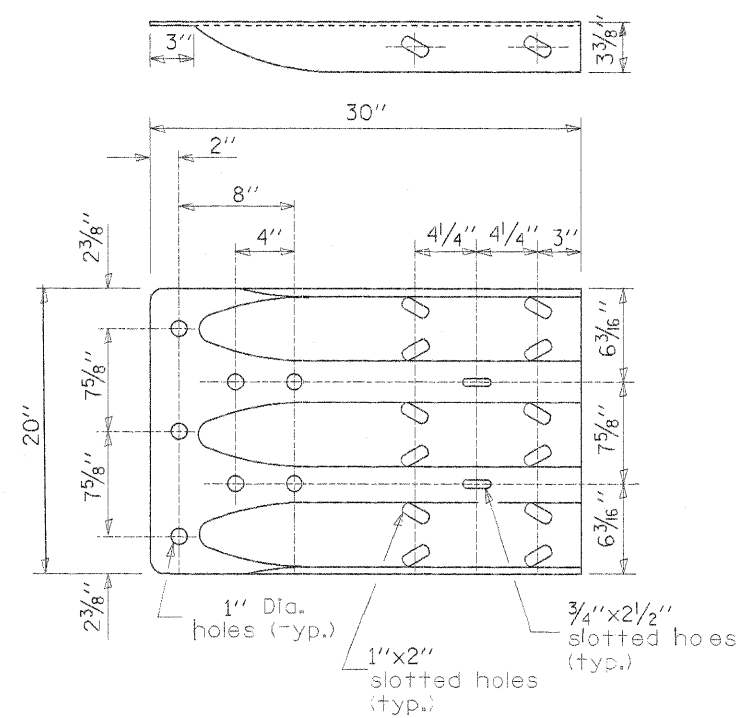
SECTION C-C



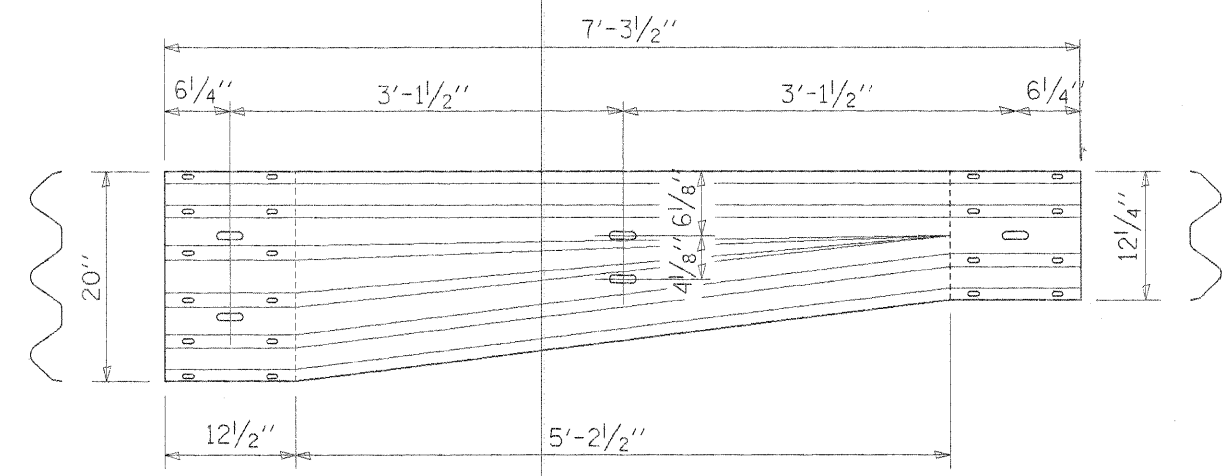
POSTS 1-11 WOOD BLOCKOUT DETAIL



POSTS 12-13 WOOD BLOCKOUT DETAIL



MODIFIED THRIE BEAM END SHOE DETAIL



TRANSITION SECTION
(10 gauge rail element)

Sheet 2 of 5

DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J.R. Wolf				
APVD	J.A. Fraunhoffer	NO.	DATE	REVISION	BY
					APVD

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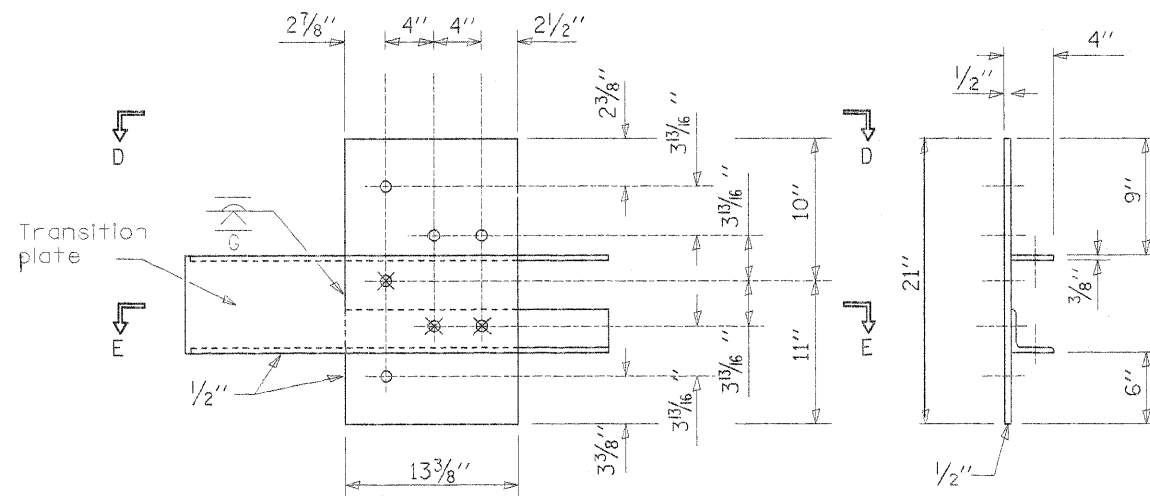
3002 CROSSING COURT
CHAMPAIGN, IL 61822
PHONE (217) 351-6268
FAX (217) 355-1902

TRAFFIC BARRIER TERMINAL TYPE 6A (SPECIAL)
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET	19
DWG NO.	7052*16A.dgn
DATE	FEB 2011
PROJ NO.	7052

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAS1523	*	CHAMPAIGN	38	20
FED. ROAD DIST. NO. 7	ILL. DIST. NO.	FED. AID PROJECT-		

* 09-00956-00-BR
Contract No. 91452

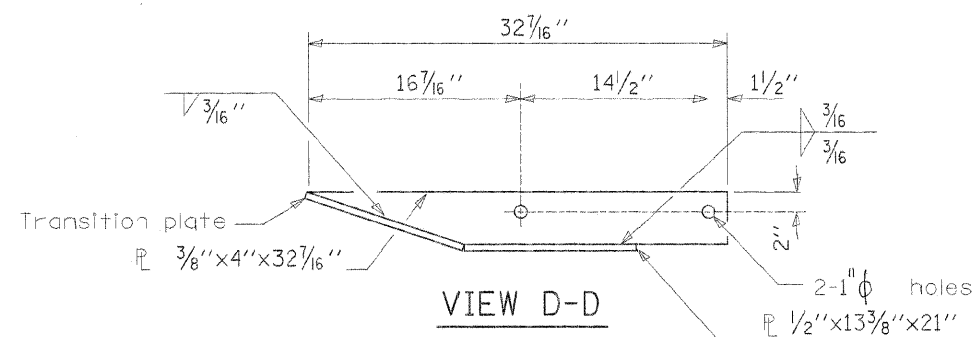


- C.L. 4-1" holes for 7/8" H.S. bolts and nuts
- ⊗ Drill and tap 3 holes for 7/8" H.S. bolts.

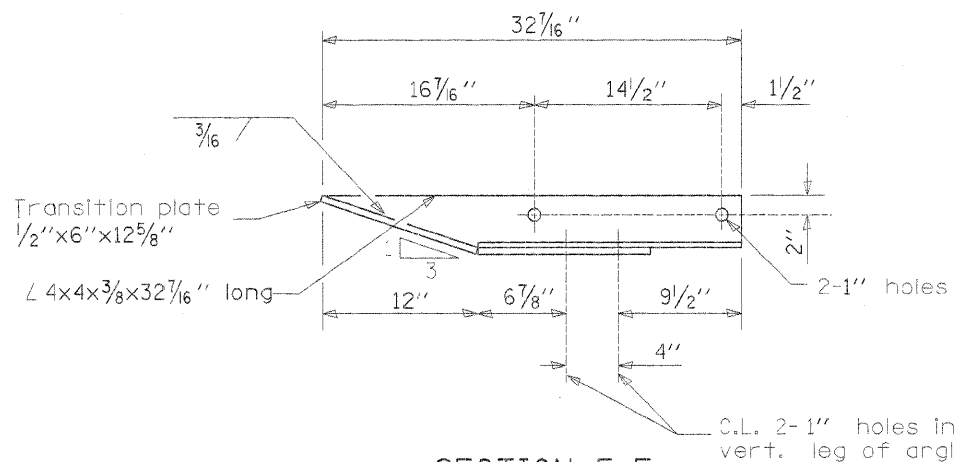
LEGEND

GUARDRAIL CONNECTION PLATE ASSEMBLY DETAILS

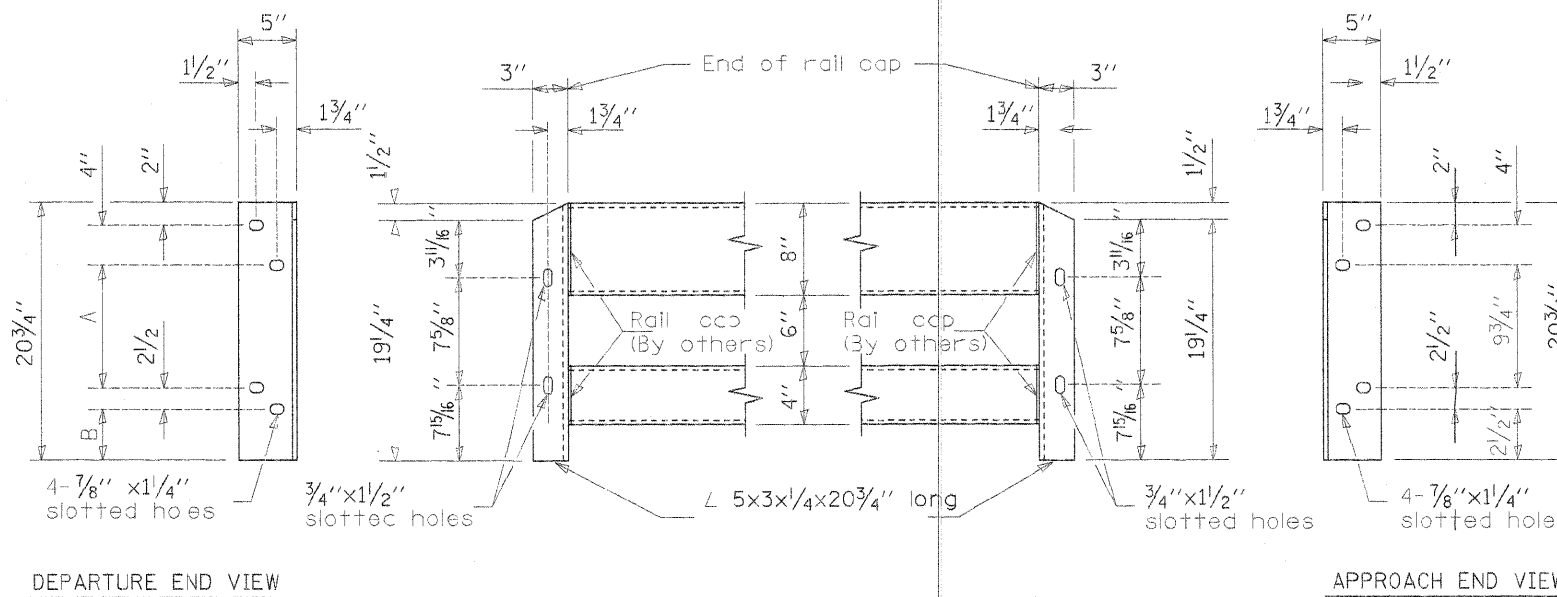
(Mirror for opposite end)



VIEW D-D



SECTION E-E



CONNECTION ANGLES

(Install angles to rail caps using 3/8" washers and self-locking nuts or nuts and jam nuts, to be provided by others.)

Sheet 3 of 5

DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J.R. Wolf				
APVD	J.A. Fraunhoffer	NO.	DATE	REVISION	BY

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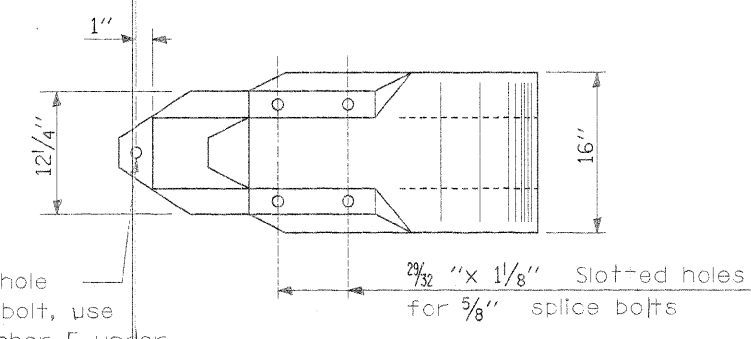
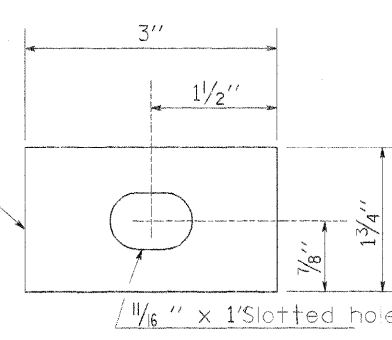
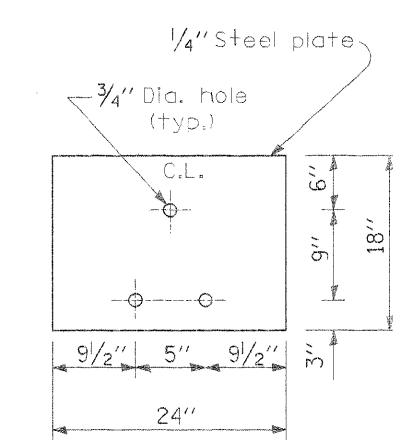
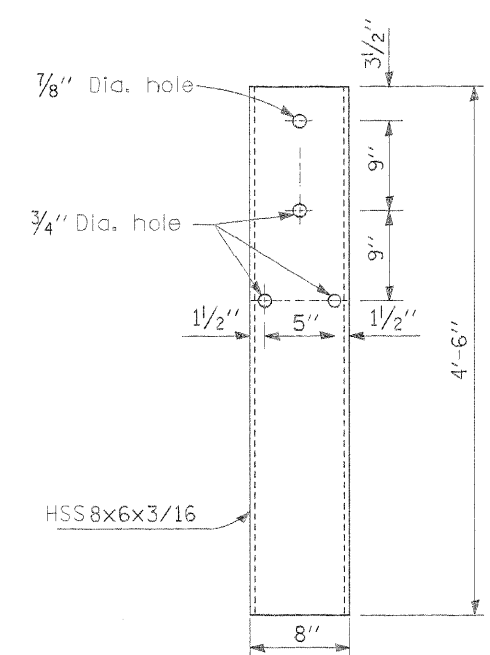
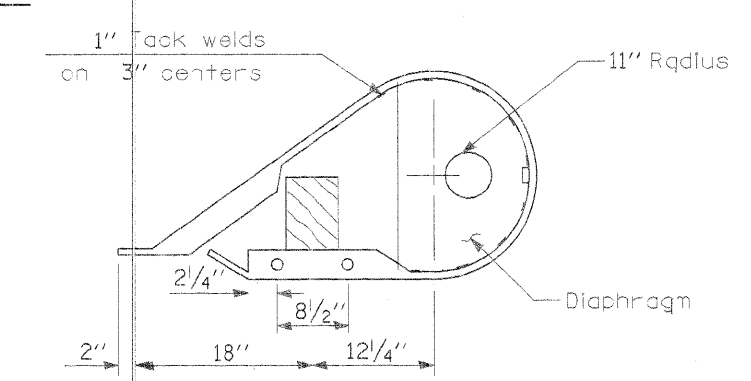
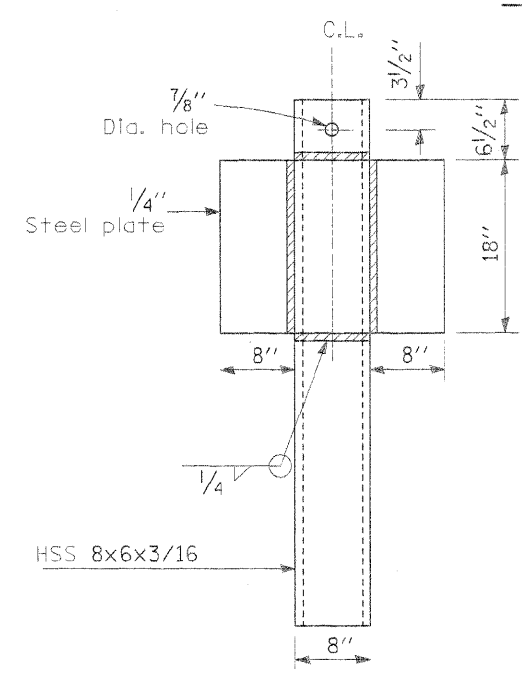
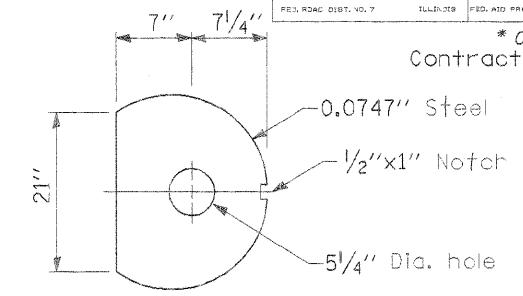
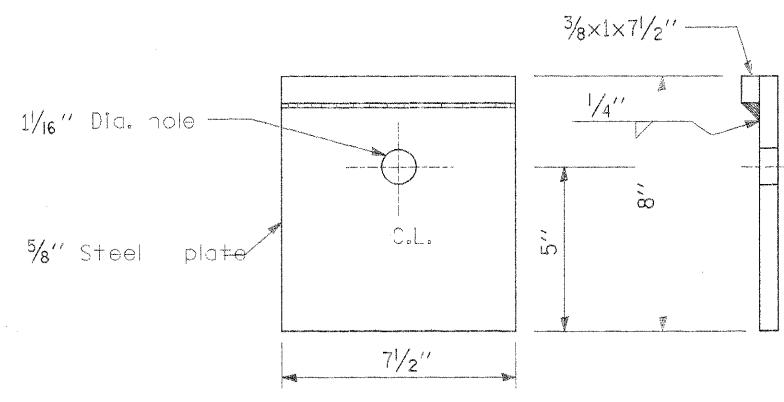
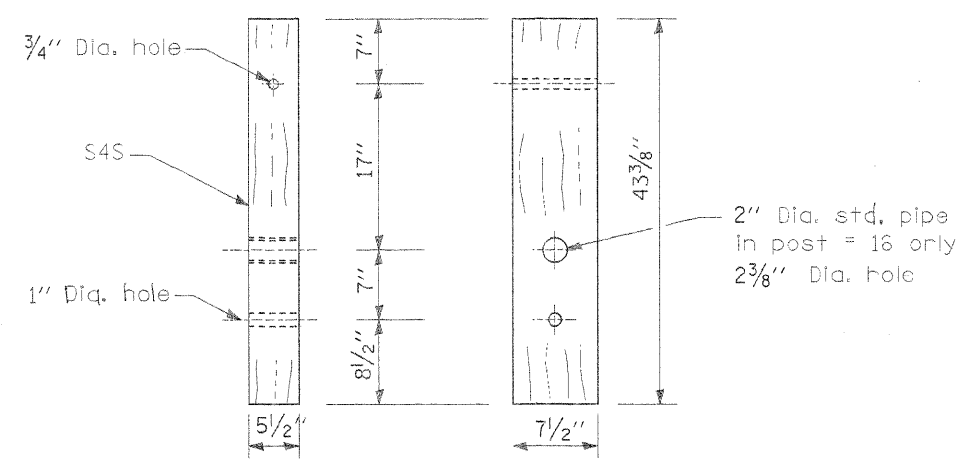
TRAFFIC BARRIER TERMINAL TYPE 6A (SPECIAL)

FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET	20
DWG NO.	7052*6A.dgn
DATE	FEB 2011
PROJ NO.	7052

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAS1523	*	CHAMPAIGN	38	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

* 09-00956-00-BR
Contract No. 91452



3/4" Dia. hole for 5/8" bolt, use plate Washer F under head and nut at this bolt only.

Sheet 4 of 5

DSGN	K.J. Hoffmann				
DR	K.J. Hoffmann				
CHK	J.R. Wolf				
APVD	J.A. Fraunhoffer	NO.	DATE	REVISION	BY
					APVD

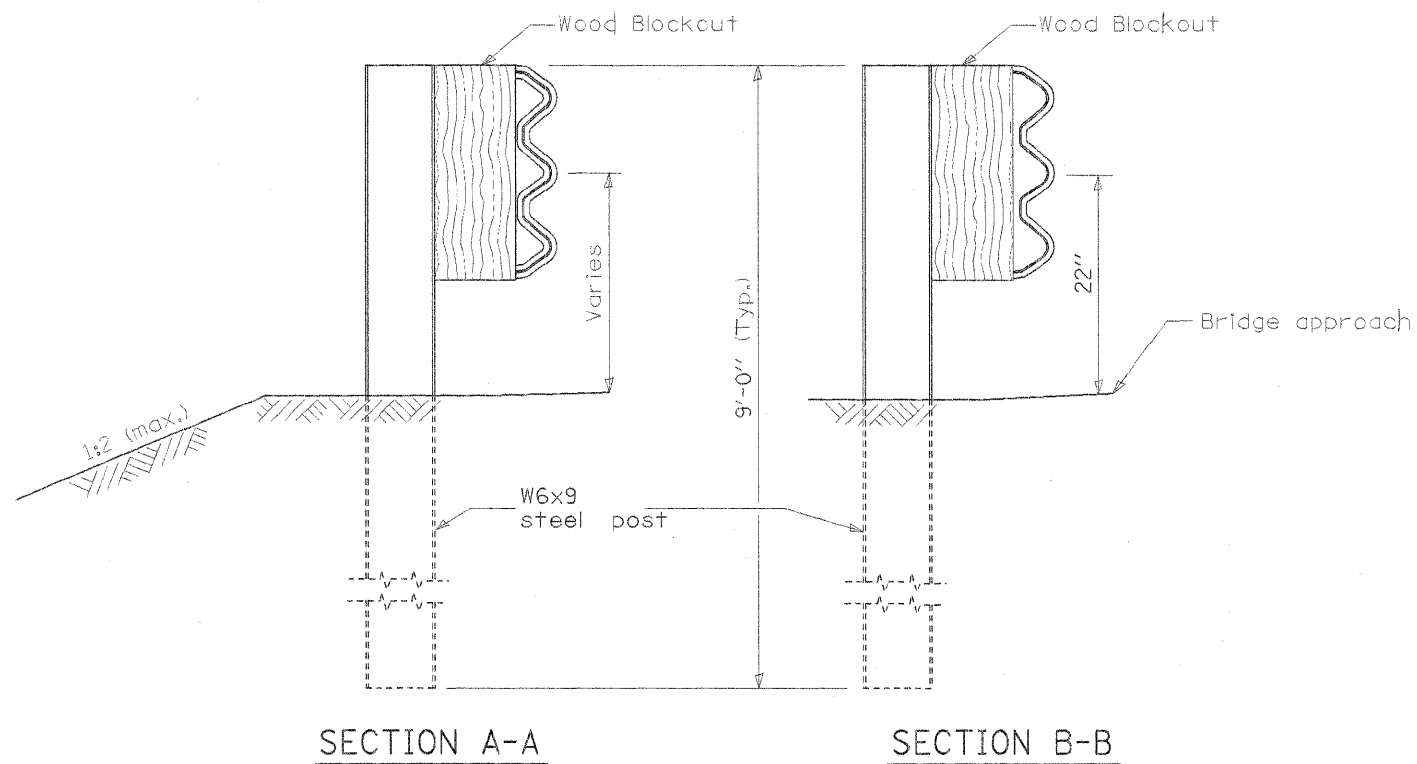
FRAUENHOFFER & ASSOCIATES
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CHAMPAIGN, IL 61822
PHONE (217) 351-6266
FAX (217) 355-1902

TRAFFIC BARRIER TERMINAL TYPE 6A (SPECIAL)		SHEET 21
FAS 1523 (CH 55) OVER UPPER SALT FORK SEC 09-00956-00-BR CHAMPAIGN COUNTY		DWG NO. 70E2*6A.dgn DATE FEB 2011 PROJ NO. 7052

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS1523	#	CHAMPAIGN	38	22
FED. AID DIST. NO. 7		ILL. DIST. FED. AID PROJECT		

* 09-00956-00-BR
Contract No. 91452



GENERAL NOTES

See Standard B.L.R. 26 and 630001 for details of guardrail not shown.

The trailing 4 posts shall be wood breakaway posts.

A two-piece assembly may be substituted for the one piece nose shown above.

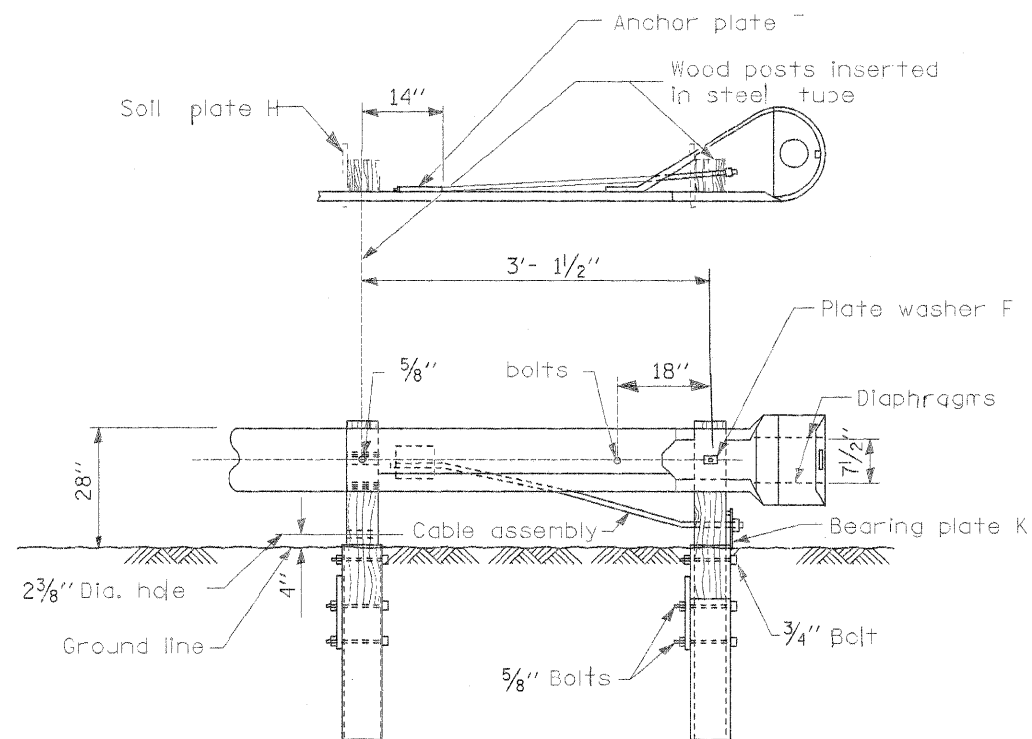
The bearing plate K shall be held in position by (2) two eight penny nails driven into the post and bent over the top of the plate.

This standard shows attachment to curb mounted bridge rail. Attachment to side mounted bridge rail is similar.

The beam rail shall be bolted to block-out at all posts.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches unless otherwise shown.



WOOD BREAKAWAY POSTS
TUBULAR STEEL FOUNDATIONS

Sheet 5 of 5

NO.	DATE	REVISION	BY	APVD



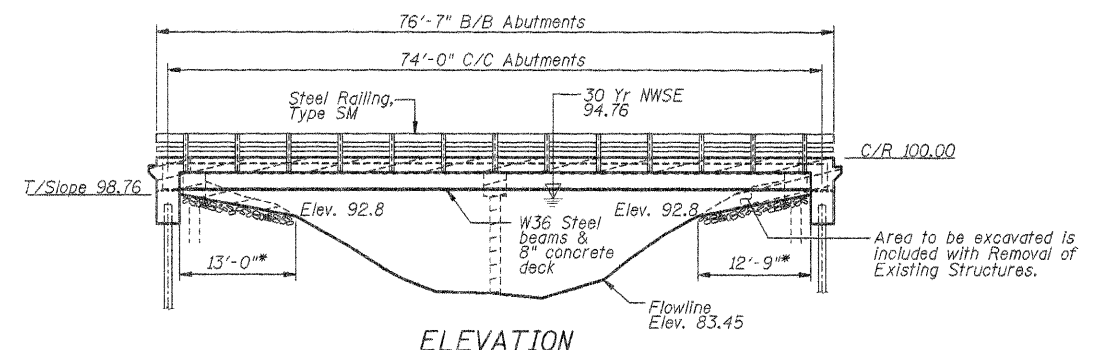
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PHONE (217) 351-6268
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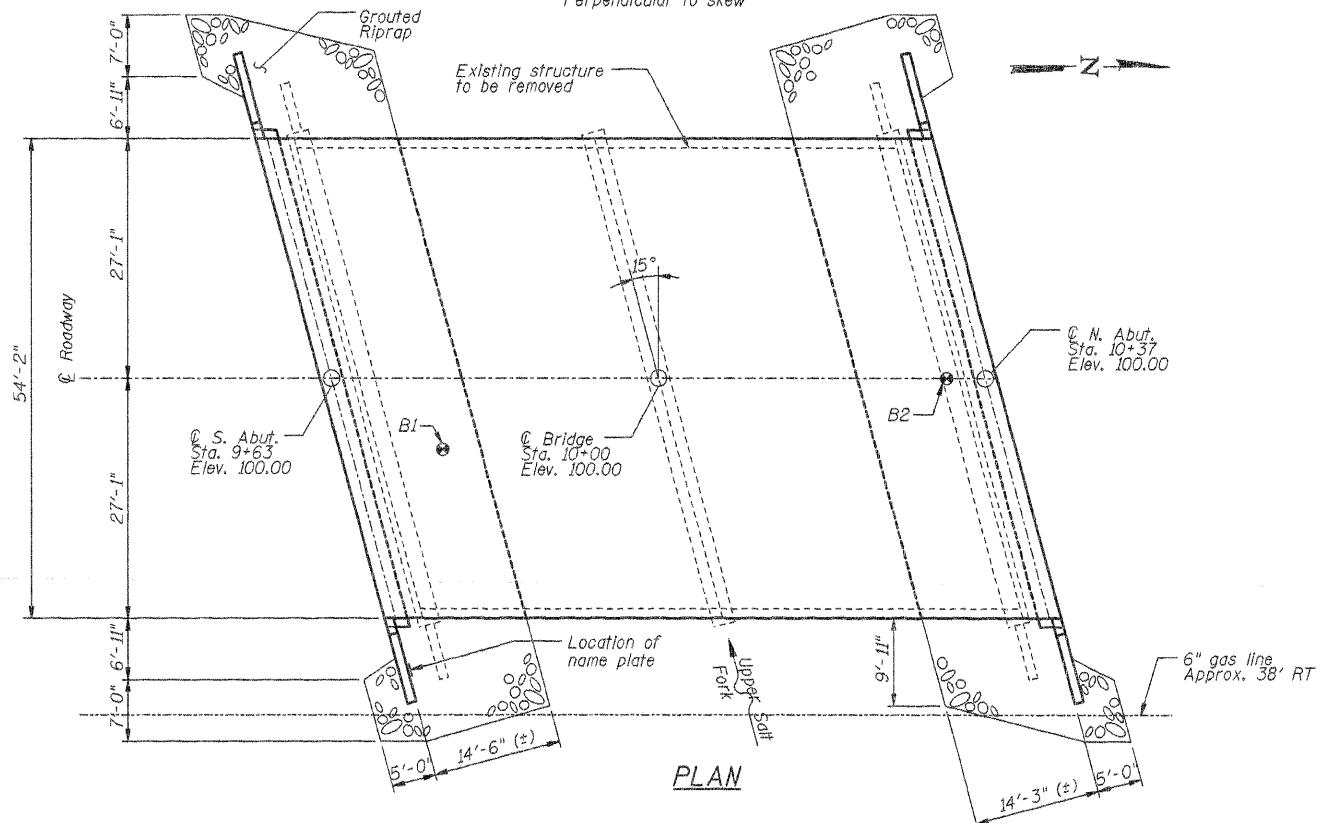
TRAFFIC BARRIER TERMINAL TYPE 6A (SPECIAL)		SHEET 22
FAS 1523 (CH 55) OVER UPPER SALT FORK		DWG NO. 7052*6A.dgn
SEC 09-00956-00-BR		DATE FEB 2011
CHAMPAIGN COUNTY		PROJ NO. 7052

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS1523	*	CHAMPAIGN	38	23
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

* 09-00956-00-BR
Contract No. 91452



ELEVATION
* Perpendicular to skew



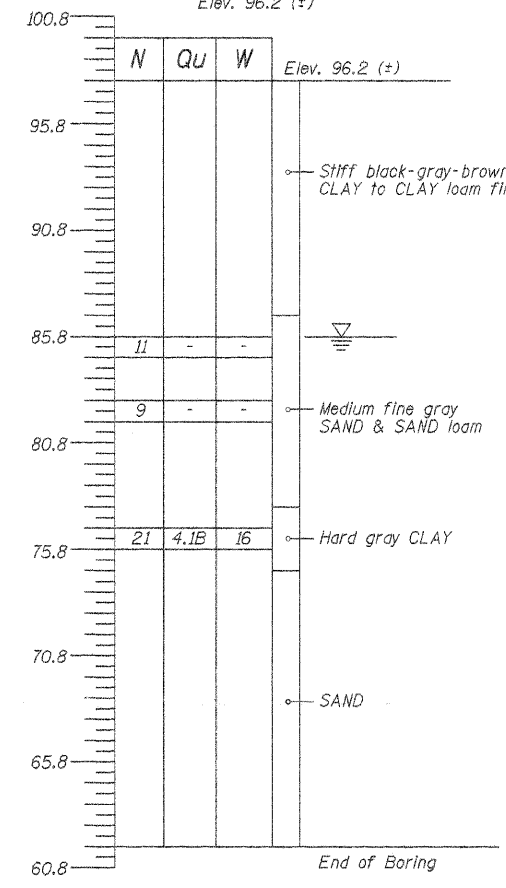
PLAN

BORING DATA

N - Standard Penetration Test - Blows per foot to drive 2" O.D. split spoon sampler 12" with 140 lb. hammer falling 30".
 Qu - Unconfined Compressive Strength - Tons/Sq. Ft.
 W - Water Content - Percentage of oven dry weight - %

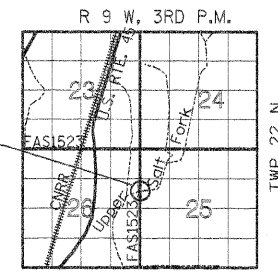
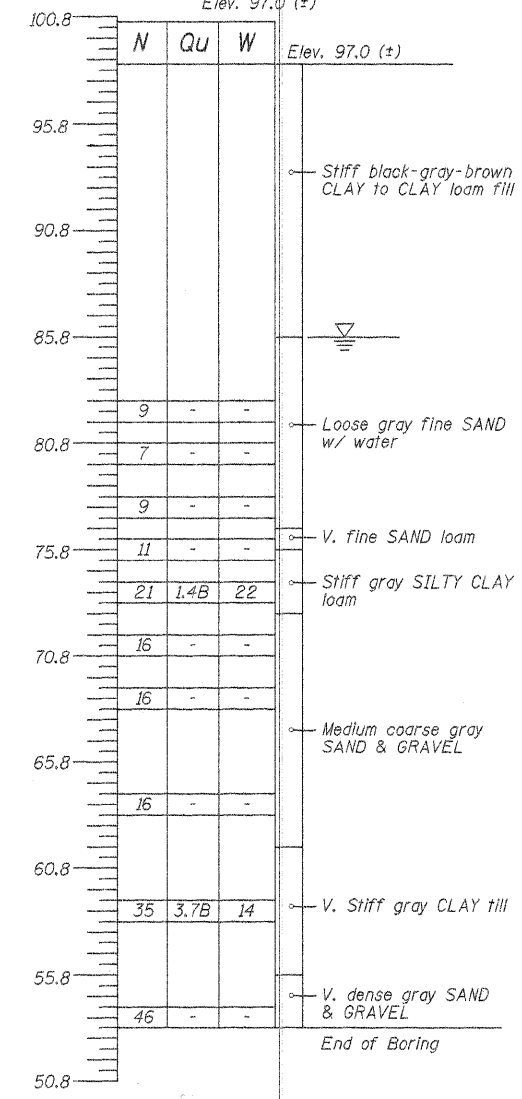
BORING B-1

Location: STA 9+75.6 (±), 8 ft RT
Elev. 96.2 (±)



BORING B-2

Location: STA 10+32.6 (±), @
Elev. 97.0 (±)

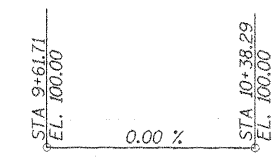


LOCATION SKETCH

STRUCTURE NO. 010-4549
 SEC. 09-00956-00-BR BUILT 20...
 FAS 1523/CH 55
 CHAMPAIGN COUNTY
 LOADING HL 93

NAME PLATE

See Standard 515001



PROFILE GRADE

DESIGN SPECIFICATIONS

AASHTO LRFD (2007) and applicable Interims

DESIGN LOADING

HL-93
 25 P.S.F Future Wearing Surface

DESIGN STRESSES

$f'_c = 3,500$ psi (Cast in Place Concrete)
 $f_y = 60,000$ psi (M270 Grades 50 & 50W)
 $f_y = 60,000$ psi (Reinforcement)

WATERWAY DATA

Drainage Area	8.2 Sq. Mi.
Existing Opening (30 Yr.)	344 Sq. Ft.
Required Opening (30 Yr.)	313 Sq. Ft.
Proposed Opening (30 Yr.)	374 Sq. Ft.
Design Discharge (30 Yr.)	1610 C.F.S.
Computed Discharge (100 Yr.)	2,160 C.F.S.
30 Year Head	0.02 Ft.
100 Year Head	0.13 Ft.

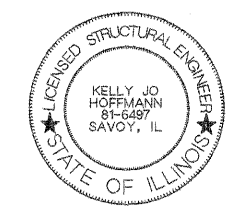
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Material (Special)	Cu. Yd.	-	160	160
Removal of Existing Structures	Each	1	-	1
Structure Excavation	Cu. Yd.	-	385	385
Concrete Structures	Cu. Yd.	-	48.5	48.5
Concrete Superstructures (bridge deck)	Cu. Yd.	154	-	154
Bridge Deck Grooving	Sq. Yd.	461	-	461
Protective Coat	Sq. Yd.	490	-	490
Furnishing & Erecting Structural Steel	L. Sum	1	-	1
Reinforcement Bars	Pound	-	2960	2960
Reinforcement Bars, Epoxy Coated	Pound	31770	830	32600
Bar Splicers	Each	108	-	108
Steel Railing, Type SM	Foot	151	-	151
Name Plates	Each	-	1	1
Furnishing Steel Piles HP10x42	Foot	-	1400	1400
Driving Piles	Foot	-	1400	1400
Test Pile Steel HP10x42	Each	-	2	2
Pile Shoes	Each	-	30	30
Geocomposite Wall Drain	Sq. Yds.	-	115	115
Pipe Underdrains For Structures 4"	Foot	-	230	230
Grouted Riprap	Sq. Yds.	-	290	290
Concrete Cut-Off Wall	Cu. Yd.	-	10.8	10.8

GENERAL NOTES

- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- The Contractor shall drive 1 steel test pile in a permanent location at each abutment and each pier as directed by the Engineer before ordering the remainder of piles.
- Boring Data is shown only as as guide to bidders in estimating soil conditions which may be encountered during construction.
- Class SI or MS Concrete shall be used in the abutments and piers.
- Class BS concrete shall be used for the bridge deck.

"I certify that to the best of my knowledge, information and belief, this bridge/box culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current 'AASHTO Standard Specifications for Highway Bridges'."



Kelly Jo Hoffmann
 Illinois Licensed Structural Engineer Number 6497
 License Expires 11/30/12

DSGN	K.J. Hoffmann				
DR	B.A. Clark				
CHK	J.R. Wolf				
APVD	A. Fraenhoffer	NO.	DATE	REVISION	BY

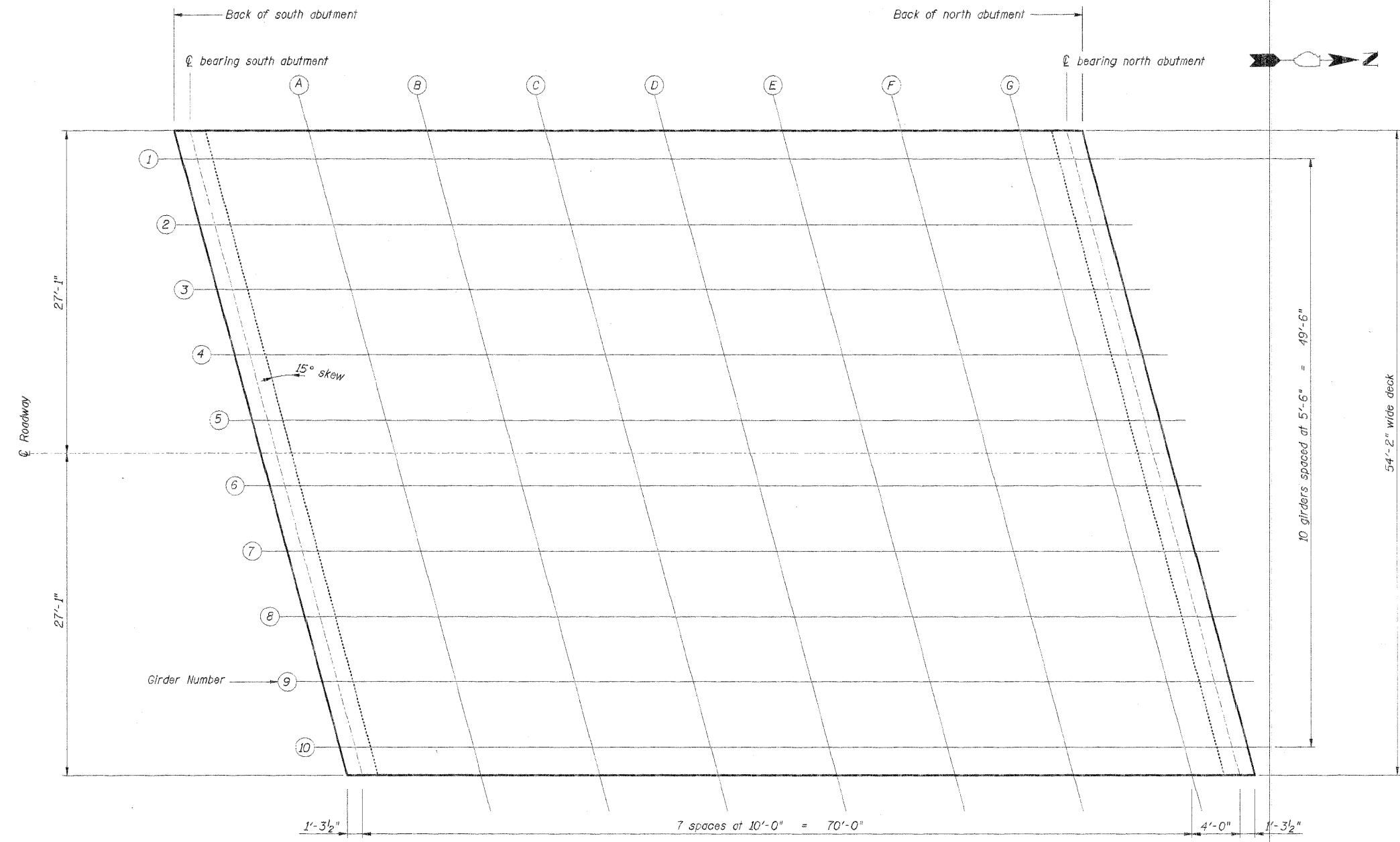
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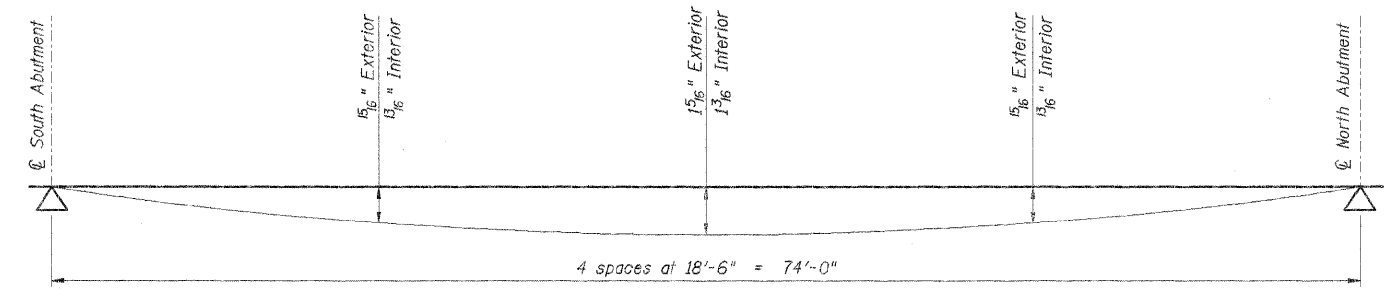
GENERAL PLAN AND ELEVATION		SHEET 23
FAS 1523 (CH 55) OVER UPPER SALT FORK SEC 09-00956-00-BR CHAMPAIGN COUNTY		DWG NO. 7052GPE.dgn
		DATE FEB 2011
		PROJ NO. 7052

ROUTE NO.	SECTION	COUNTY	SHEET NO.
FAS1523	*	CHAMPAIGN	38
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	

* 09-00956-00-BR
Contract No. 91452



DECK FRAMING PLAN



DEAD LOAD DEFLECTION DIAGRAM FOR GIRDERS
(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 25 and 26.

DSGN	J. Hoffmann				
DR	N.J. Liggatt				
CHK	J.R. Wolf				
APVD	J.A. Fraenhoffer	NO.	DATE	REVISION	BY
					APVD

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TOP OF SLAB ELEVATIONS (SHEET 1 OF 3)
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET	24
DWG NO.	7052TOS.dgn
DATE	FEB 2011
PROJ NO.	7052

W. Edge of Deck

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of south abutment	9+54.45	27'-1" LT	99.436	99.436
CL bearing south abutment	9+55.74	27'-1" LT	99.436	99.436
Line A	9+65.74	27'-1" LT	99.436	99.483
Line B	9+75.74	27'-1" LT	99.436	99.520
Line C	9+85.74	27'-1" LT	99.436	99.543
Line D	9+95.74	27'-1" LT	99.436	99.547
Line E	10+05.74	27'-1" LT	99.436	99.531
Line F	10+15.74	27'-1" LT	99.436	99.499
Line G	10+25.74	27'-1" LT	99.436	99.455
CL bearing north abutment	10+29.74	27'-1" LT	99.436	99.436
Back of north abutment	10+31.04	27'-1" LT	99.436	99.436

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of south abutment	9+55.07	24'-9" LT	99.484	99.484
CL bearing south abutment	9+56.37	24'-9" LT	99.484	99.484
Line A	9+66.37	24'-9" LT	99.484	99.531
Line B	9+76.37	24'-9" LT	99.484	99.568
Line C	9+86.37	24'-9" LT	99.484	99.591
Line D	9+96.37	24'-9" LT	99.484	99.595
Line E	10+06.37	24'-9" LT	99.484	99.579
Line F	10+16.37	24'-9" LT	99.484	99.547
Line G	10+26.37	24'-9" LT	99.484	99.503
CL bearing north abutment	10+30.37	24'-9" LT	99.484	99.484
Back of north abutment	10+31.66	24'-9" LT	99.484	99.484

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of south abutment	9+56.55	19'-3" LT	99.599	99.599
CL bearing south abutment	9+57.84	19'-3" LT	99.599	99.599
Line A	9+67.84	19'-3" LT	99.599	99.640
Line B	9+77.84	19'-3" LT	99.599	99.672
Line C	9+87.84	19'-3" LT	99.599	99.692
Line D	9+97.84	19'-3" LT	99.599	99.695
Line E	10+07.84	19'-3" LT	99.599	99.682
Line F	10+17.84	19'-3" LT	99.599	99.654
Line G	10+27.84	19'-3" LT	99.599	99.616
CL bearing north abutment	10+31.84	19'-3" LT	99.599	99.599
Back of north abutment	10+33.14	19'-3" LT	99.599	99.599

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of south abutment	9+58.02	13'-9" LT	99.714	99.714
CL bearing south abutment	9+59.32	13'-9" LT	99.714	99.714
Line A	9+69.32	13'-9" LT	99.714	99.755
Line B	9+79.32	13'-9" LT	99.714	99.787
Line C	9+89.32	13'-9" LT	99.714	99.807
Line D	9+99.32	13'-9" LT	99.714	99.810
Line E	10+09.32	13'-9" LT	99.714	99.797
Line F	10+19.32	13'-9" LT	99.714	99.769
Line G	10+29.32	13'-9" LT	99.714	99.731
CL bearing north abutment	10+33.32	13'-9" LT	99.714	99.714
Back of north abutment	10+34.61	13'-9" LT	99.714	99.714

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of south abutment	9+59.50	8'-3" LT	99.828	99.828
CL bearing south abutment	9+60.79	8'-3" LT	99.828	99.828
Line A	9+70.79	8'-3" LT	99.828	99.869
Line B	9+80.79	8'-3" LT	99.828	99.901
Line C	9+90.79	8'-3" LT	99.828	99.921
Line D	10+00.79	8'-3" LT	99.828	99.924
Line E	10+10.79	8'-3" LT	99.828	99.911
Line F	10+20.79	8'-3" LT	99.828	99.883
Line G	10+30.79	8'-3" LT	99.828	99.845
CL bearing north abutment	10+34.79	8'-3" LT	99.828	99.828
Back of north abutment	10+36.08	8'-3" LT	99.828	99.828

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of south abutment	9+60.97	2'-9" LT	99.943	99.943
CL bearing south abutment	9+62.26	2'-9" LT	99.943	99.943
Line A	9+72.26	2'-9" LT	99.943	99.984
Line B	9+82.26	2'-9" LT	99.943	100.016
Line C	9+92.26	2'-9" LT	99.943	100.036
Line D	10+02.26	2'-9" LT	99.943	100.039
Line E	10+12.26	2'-9" LT	99.943	100.026
Line F	10+22.26	2'-9" LT	99.943	99.998
Line G	10+32.26	2'-9" LT	99.943	99.960
CL bearing north abutment	10+36.26	2'-9" LT	99.943	99.943
Back of north abutment	10+37.56	2'-9" LT	99.943	99.943

P.G.L./CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of south abutment	9+61.71	0'-0"	100.000	100.000
CL bearing south abutment	9+63.00	0'-0"	100.000	100.000
Line A	9+73.00	0'-0"	100.000	100.041
Line B	9+83.00	0'-0"	100.000	100.073
Line C	9+93.00	0'-0"	100.000	100.093
Line D	10+03.00	0'-0"	100.000	100.096
Line E	10+13.00	0'-0"	100.000	100.083
Line F	10+23.00	0'-0"	100.000	100.055
Line G	10+33.00	0'-0"	100.000	100.017
CL bearing north abutment	10+37.00	0'-0"	100.000	100.000
Back of north abutment	10+38.29	0'-0"	100.000	100.000

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of south abutment	9+60.97	2'-9" RT	99.943	99.943
CL bearing south abutment	9+62.26	2'-9" RT	99.943	99.943
Line A	9+72.26	2'-9" RT	99.943	99.984
Line B	9+82.26	2'-9" RT	99.943	100.016
Line C	9+92.26	2'-9" RT	99.943	100.036
Line D	10+02.26	2'-9" RT	99.943	100.039
Line E	10+12.26	2'-9" RT	99.943	100.026
Line F	10+22.26	2'-9" RT	99.943	99.998
Line G	10+32.26	2'-9" RT	99.943	99.960
CL bearing north abutment	10+36.26	2'-9" RT	99.943	99.943
Back of north abutment	10+37.56	2'-9" RT	99.943	99.943

GIRDER 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of south abutment	9+63.92	8'-3" RT	99.828	99.828
CL bearing south abutment	9+65.21	8'-3" RT	99.828	99.828
Line A	9+75.21	8'-3" RT	99.828	99.869
Line B	9+85.21	8'-3" RT	99.828	99.901
Line C	9+95.21	8'-3" RT	99.828	99.921
Line D	10+05.21	8'-3" RT	99.828	99.924
Line E	10+15.21	8'-3" RT	99.828	99.911
Line F	10+25.21	8'-3" RT	99.828	99.883
Line G	10+35.21	8'-3" RT	99.828	99.845
CL bearing north abutment	10+39.21	8'-3" RT	99.828	99.828
Back of north abutment	10+40.50	8'-3" RT	99.828	99.828

DSGN	K.J. Hoffmann				
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APVD	J.A. Fraunhofer	NO.	DATE	REVISION	BY

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TOP OF SLAB ELEVATIONS (SHEET 2 OF 3)		SHEET 26
FAS 1523 (CH 55) OVER UPPER SALT FORK SEC 09-00956-00-BR CHAMPAIGN COUNTY		DWG NO. 7362TOS.dgn
		DATE FEB 2011
		PROJ NO. 7052

GIRDER 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of south abutment	9+65.39	13'-9" RT	99.714	99.714
CL bearing south abutment	9+66.68	13'-9" RT	99.714	99.714
Line A	9+76.68	13'-9" RT	99.714	99.755
Line B	9+86.68	13'-9" RT	99.714	99.787
Line C	9+96.68	13'-9" RT	99.714	99.807
Line D	10+06.68	13'-9" RT	99.714	99.810
Line E	10+16.68	13'-9" RT	99.714	99.797
Line F	10+26.68	13'-9" RT	99.714	99.769
Line G	10+36.68	13'-9" RT	99.714	99.731
CL bearing north abutment	10+40.68	13'-9" RT	99.714	99.714
Back of north abutment	10+41.98	13'-9" RT	99.714	99.714

GIRDER 9

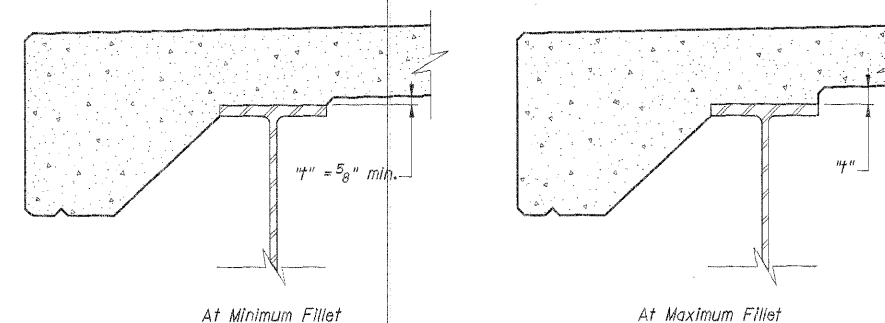
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of south abutment	9+66.86	19'-3" RT	99.599	99.599
CL bearing south abutment	9+68.16	19'-3" RT	99.599	99.599
Line A	9+78.16	19'-3" RT	99.599	99.640
Line B	9+88.16	19'-3" RT	99.599	99.672
Line C	9+98.16	19'-3" RT	99.599	99.692
Line D	10+08.16	19'-3" RT	99.599	99.695
Line E	10+18.16	19'-3" RT	99.599	99.682
Line F	10+28.16	19'-3" RT	99.599	99.654
Line G	10+38.16	19'-3" RT	99.599	99.616
CL bearing north abutment	10+42.16	19'-3" RT	99.599	99.599
Back of north abutment	10+43.45	19'-3" RT	99.599	99.599

GIRDER 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of south abutment	9+68.34	24'-9" RT	99.484	99.484
CL bearing south abutment	9+69.63	24'-9" RT	99.484	99.484
Line A	9+79.63	24'-9" RT	99.484	99.531
Line B	9+89.63	24'-9" RT	99.484	99.568
Line C	9+99.63	24'-9" RT	99.484	99.591
Line D	10+09.63	24'-9" RT	99.484	99.595
Line E	10+19.63	24'-9" RT	99.484	99.579
Line F	10+29.63	24'-9" RT	99.484	99.547
Line G	10+39.63	24'-9" RT	99.484	99.503
CL bearing north abutment	10+43.63	24'-9" RT	99.484	99.484
Back of north abutment	10+44.93	24'-9" RT	99.484	99.484

E. Edge of Deck

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of south abutment	9+68.96	27'-1" RT	99.436	99.436
CL bearing south abutment	9+70.26	27'-1" RT	99.436	99.436
Line A	9+80.26	27'-1" RT	99.436	99.483
Line B	9+90.26	27'-1" RT	99.436	99.520
Line C	10+00.26	27'-1" RT	99.436	99.543
Line D	10+10.26	27'-1" RT	99.436	99.547
Line E	10+20.26	27'-1" RT	99.436	99.531
Line F	10+30.26	27'-1" RT	99.436	99.499
Line G	10+40.26	27'-1" RT	99.436	99.455
CL bearing north abutment	10+44.26	27'-1" RT	99.436	99.436
Back of north abutment	10+45.55	27'-1" RT	99.436	99.436



FILLET HEIGHTS

To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets 25 and 26, minus slab thickness, equals the fillet heights "f" above top flange of beams.

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TOP OF SLAB ELEVATIONS (SHEET 3 OF 3)

FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET 26

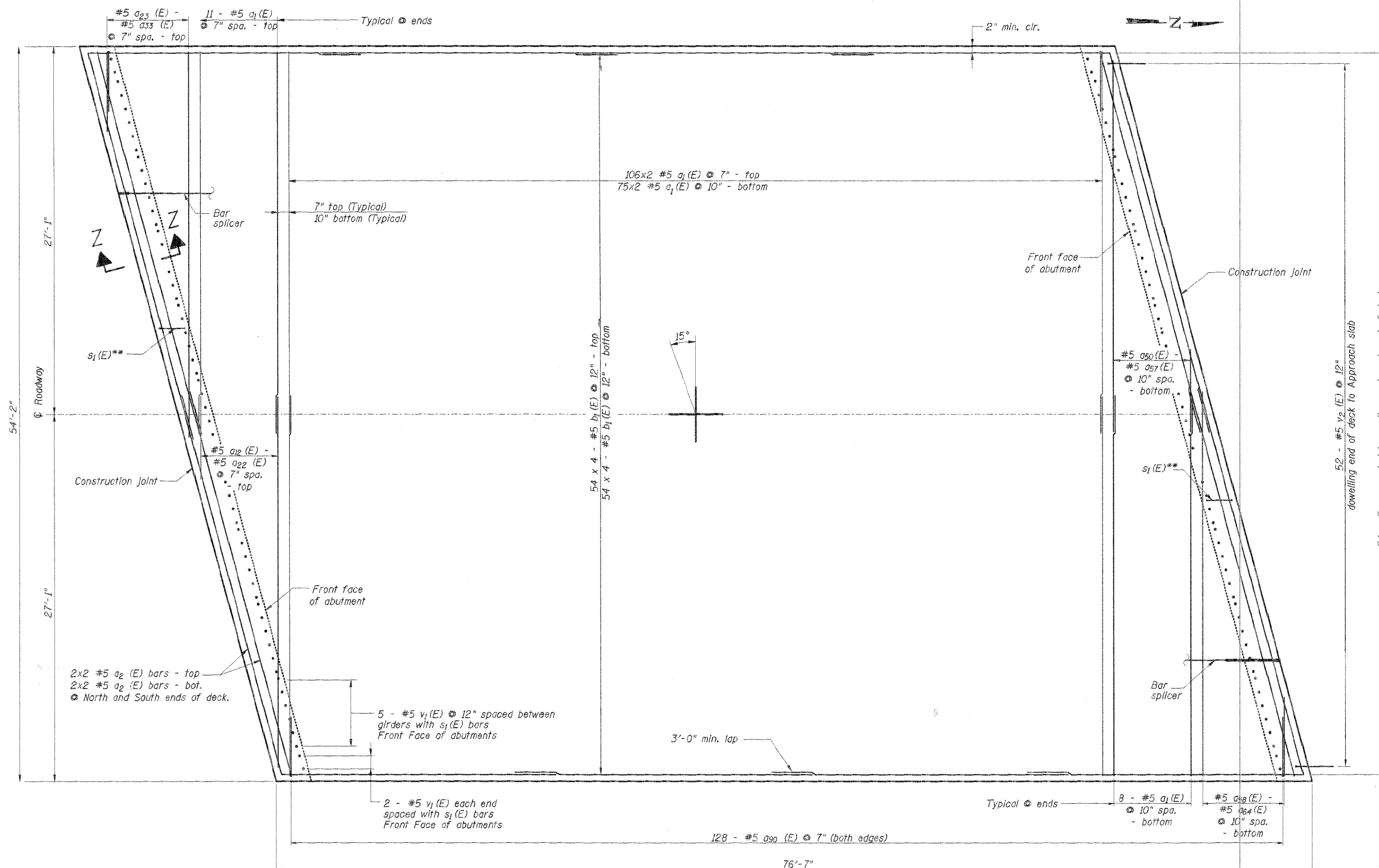
DWG NO. 7362TDS.dgn

DATE FEB 2011

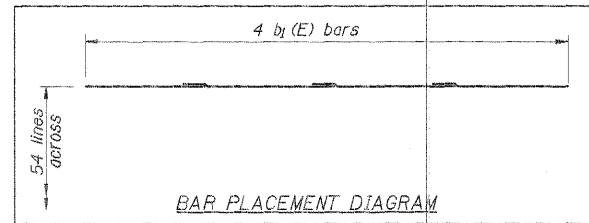
PROJ NO. 7052

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
FAS1523	*	CHAMPAIGN	38	27
FED. ROAD DIST. NO. 7		ILL. 118	FED. AID PROJECT	

* 09-00956-00-BR
Contract No. 91452



DECK PLAN



BILL OF MATERIAL SUPERSTRUCTURE

Bar	No.	Size	Length	Shape
a1 (E)	381	# 5	28'-8"	—
a2 (E)	16	# 5	29'-6"	—
a12 (E)	2	# 5	27'-2"	—
a13 (E)	2	# 5	25'-0"	—
a14 (E)	2	# 5	22'-9"	—
a15 (E)	2	# 5	20'-7"	—
a16 (E)	2	# 5	18'-5"	—
a17 (E)	2	# 5	16'-3"	—
a18 (E)	2	# 5	14'-1"	—
a19 (E)	2	# 5	11'-11"	—
a20 (E)	2	# 5	9'-9"	—
a21 (E)	2	# 5	7'-7"	—
a22 (E)	2	# 5	5'-4"	—
a23 (E)	2	# 5	28'-4"	—
a24 (E)	2	# 5	26'-2"	—
a25 (E)	2	# 5	24'-0"	—
a26 (E)	2	# 5	21'-10"	—
a27 (E)	2	# 5	19'-8"	—
a28 (E)	2	# 5	17'-6"	—
a29 (E)	2	# 5	15'-4"	—
a30 (E)	2	# 5	13'-1"	—
a31 (E)	2	# 5	10'-11"	—
a32 (E)	2	# 5	8'-9"	—
a33 (E)	2	# 5	6'-7"	—
a50 (E)	2	# 5	25'-5"	—
a51 (E)	2	# 5	22'-4"	—
a52 (E)	2	# 5	19'-3"	—
a53 (E)	2	# 5	16'-1"	—
a54 (E)	2	# 5	3'-0"	—
a55 (E)	2	# 5	9'-11"	—
a56 (E)	2	# 5	6'-9"	—
a57 (E)	2	# 5	3'-8"	—
a58 (E)	2	# 5	25'-9"	—
a59 (E)	2	# 5	22'-7"	—
a60 (E)	2	# 5	19'-6"	—
a61 (E)	2	# 5	16'-5"	—
a62 (E)	2	# 5	13'-3"	—
a63 (E)	2	# 5	10'-2"	—
a64 (E)	2	# 5	7'-1"	—
a90 (E)	256	# 5	8'-5"	—
b1 (E)	464	# 5	23'-0"	—
m1 (E)	16	# 6	30'-6"	—
m2 (E)	152	# 6	5'-4"	—
s1 (E)	98	# 5	10'-0"	—
s2 (E)	98	# 5	5'-11"	—
v1 (E)	210	# 5	6'-0"	—
v2 (E)	104	# 5	3'-6"	—
Reinforcement Bars, Epoxy Coated			Lbs.	31770
Concrete Superstructure			Cu. Yds.	154.0
Bar Splicers			Each	108
Bridge Deck Grooving			Sq. Yds.	461
Protective Coat			Sq. Yds.	490

**See Abutment Details, sheets 35-37 for bar placement.
The quantity for Concrete Superstructure includes the volume of the fillets.

Notes : Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus "54 x 4 - #5 b etc..." indicates 54 lines of bars with 18 lengths per line. See Bar Placement Diagram.
See Sheets 8, 9, 10, & 11 for Bridge Approach Pavement.

Work Sheets 27 & 28 together.

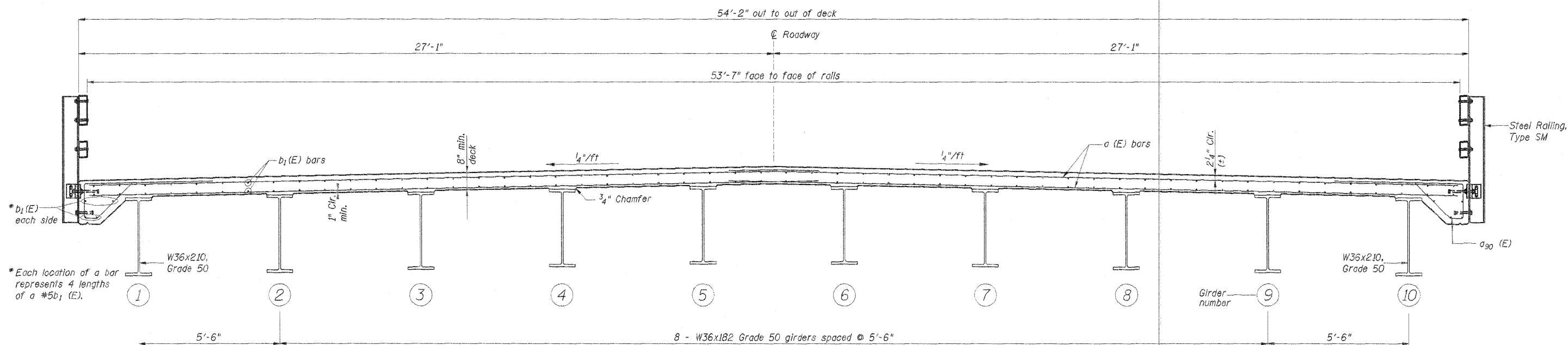
DSGN	J. Hoffmann				
DR	B.A. Clark				
CHK	J.R. Wolf				
APVD	J.A. Fraunhofer	NO.	DATE	REVISION	BY

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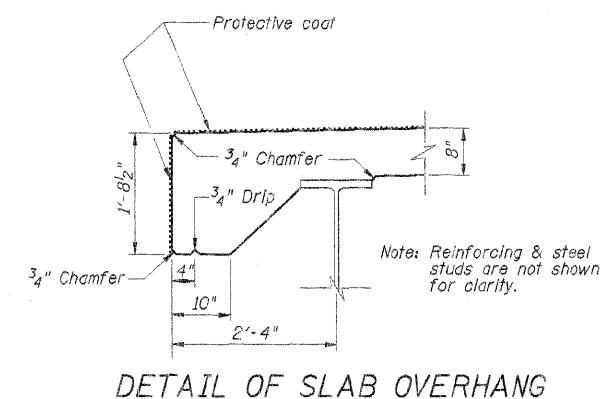
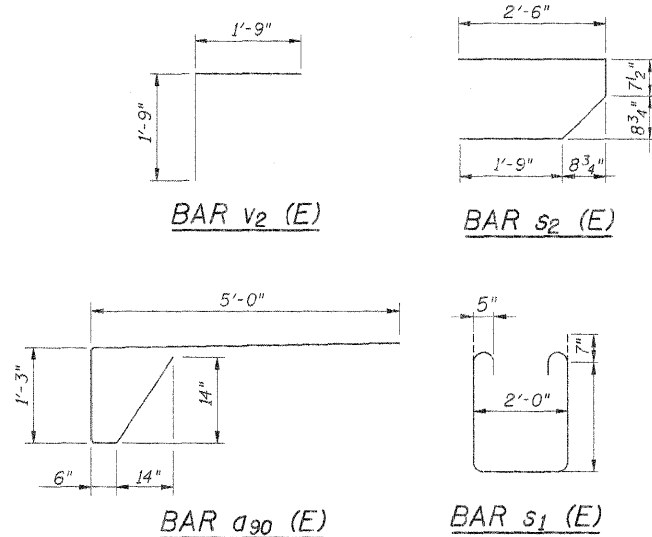
SUPERSTRUCTURE (SHEET 1 OF 2)
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY
SHEET 27
DWG 702sup.dgn
DATE FEB 2011
PROJ NO. 7052

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
FAS1523	#	CHAMPAIGN	38	28
FED. ROAD DIST. NO. 7		ILL. DIST. NO.		FED. AID PROJECT NO.

* 09-00956-00-BR
Contract No. 91452



SUPERSTRUCTURE SECTION
looking upstation



Work Sheets 27 & 28 together.

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CHK	J.R. Wolf				
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					APVD

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SUPERSTRUCTURE (SHEET 2 OF 2)
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET	28
DWG NO.	7052sup.dgn
DATE	FEB 2011
PROJ NO.	7052

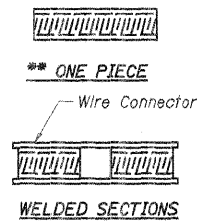
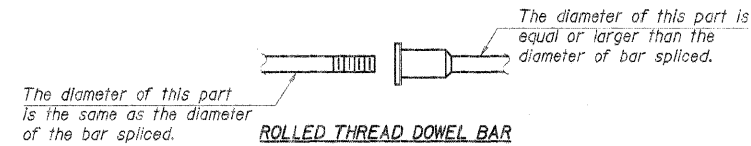
NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
(Tension in kips)

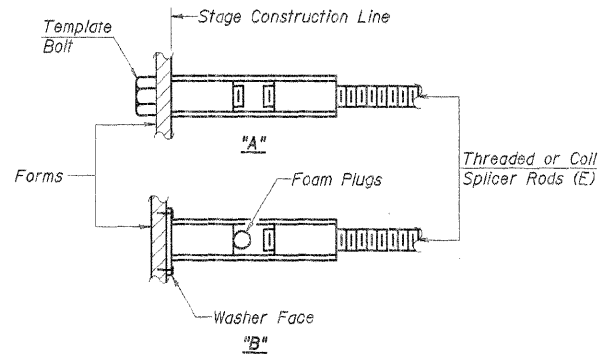
Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

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



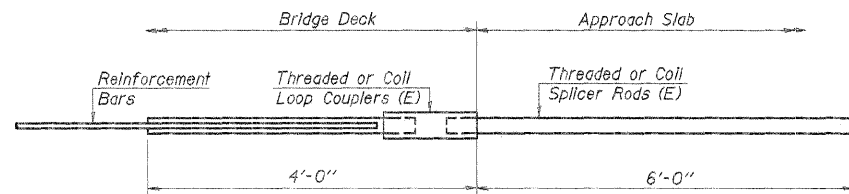
BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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



FOR INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity = 23.0 kips - tension	
Min. Pull-out Strength = 12.3 kips - tension	
No. Required = 108	

BSD-1

10-1-08

DSGN	IDOT				
DR	IDOT				
CHK	IDOT				
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BAR SPLICER ASSEMBLY

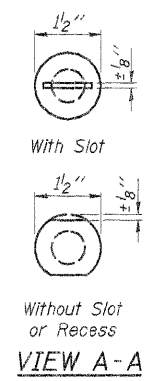
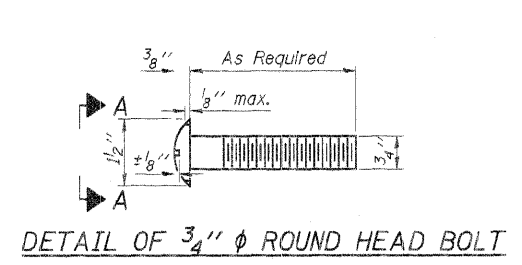
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET 29

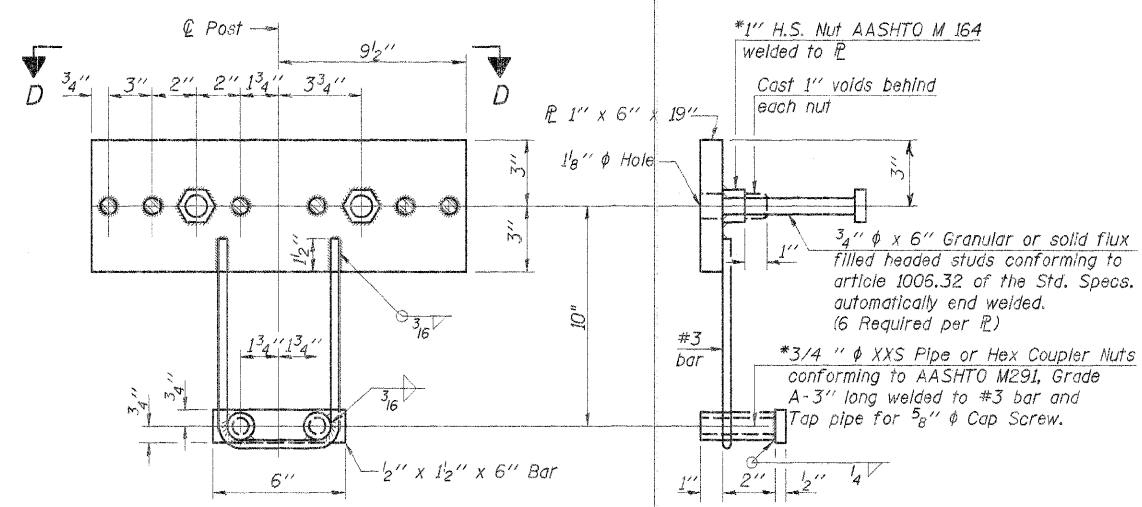
DWG NO. 7022ABT.dgn
DATE FEB 2011
PROJ NO. 7052

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
FAS1523	*	CHAMPAIGN	38	30
FED. ROAD DIST. NO. 7	ILL. 118	FED. AID PROJ. DIST.		

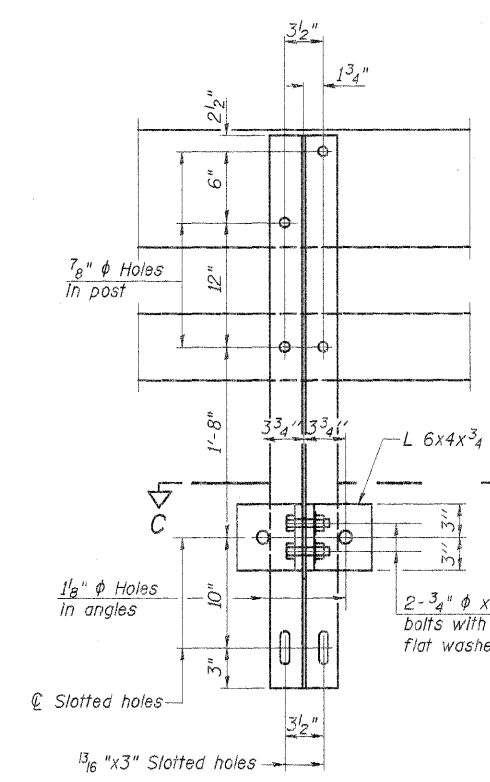
* 09-00956-00-BR
Contract No. 91452



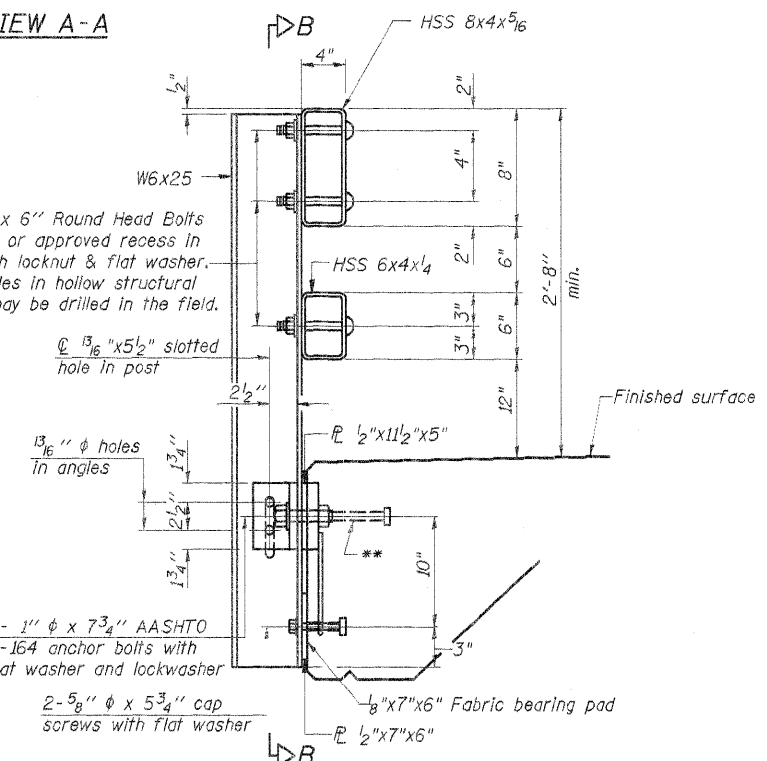
4- 3/4" ϕ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" ϕ holes in hollow structural section may be drilled in the field.



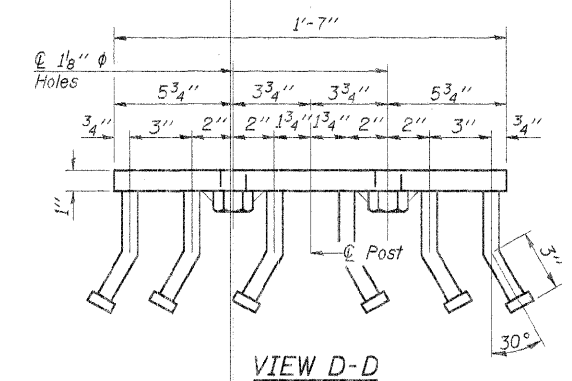
*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.



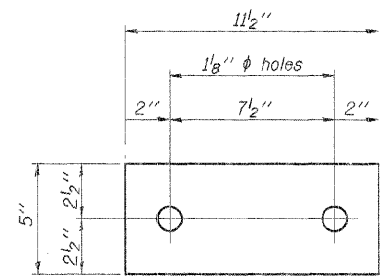
SECTION B-B



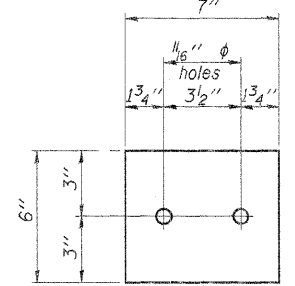
SECTION AT RAIL POST



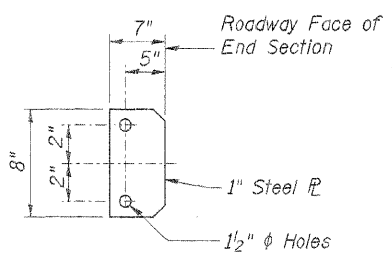
VIEW D-D



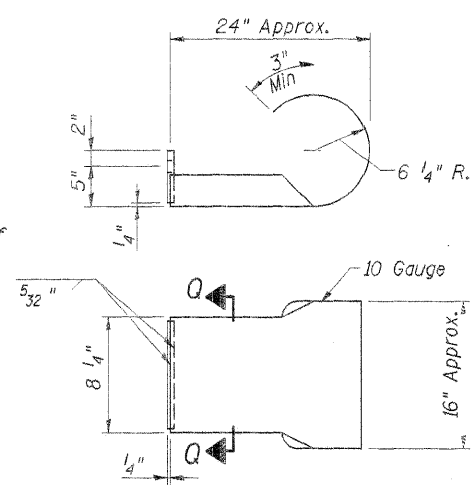
1/2" x 11 1/2" x 5"



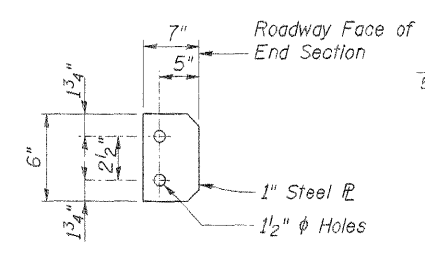
1/2" x 7" x 6"



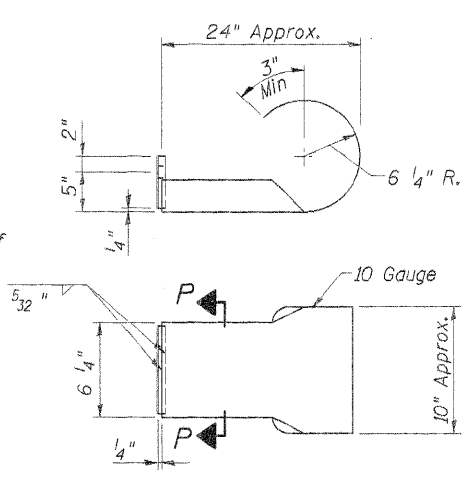
SECTION Q-Q



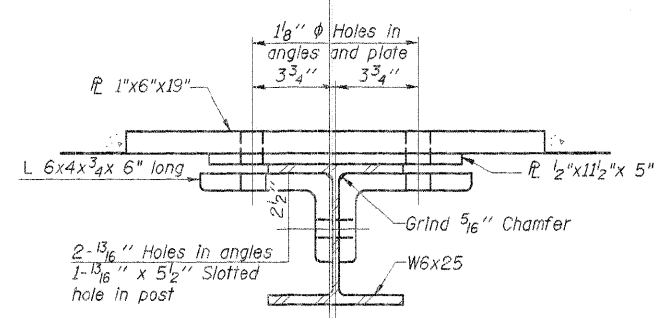
CURLED END SECTION DETAIL FOR TOP BRIDGE RAIL



SECTION P-P



CURLED END SECTION DETAIL FOR BOTTOM BRIDGE RAIL



SECTION C-C

DSGN	K.J. Hoffmann				
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STEEL RAILING, TYPE SM (SHEET 2 OF 2)
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

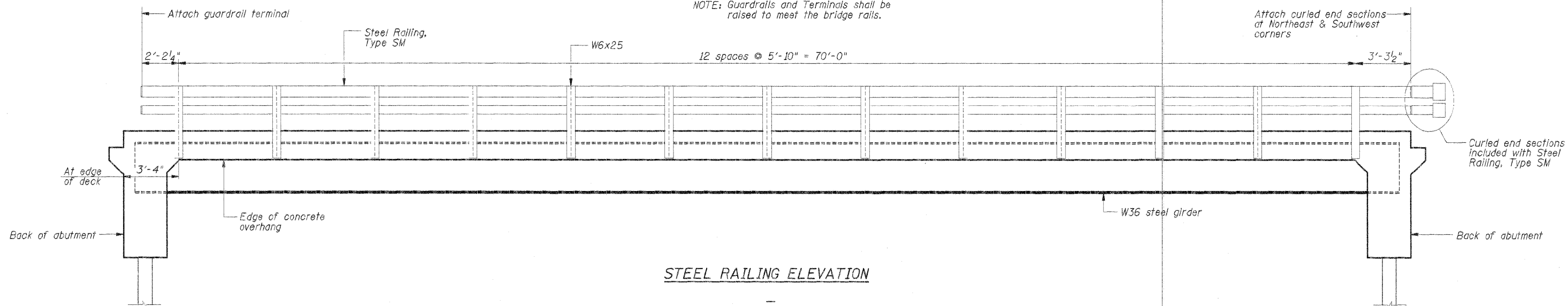
SHEET	30
DWG NO.	7052SM.dwg
DATE	FEB 2011
PROJ NO.	7052

R-34CWS

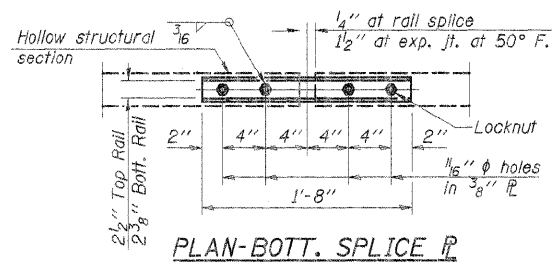
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAS1523	*	CHAMPAIGN	38	31
FED. ROAD DIST. NO. 7	ILLIN-318	FED. AID PROJECT-		

* 09-00956-00-BR
Contract No. 91452

NOTE: Guardrails and Terminals shall be raised to meet the bridge rails.

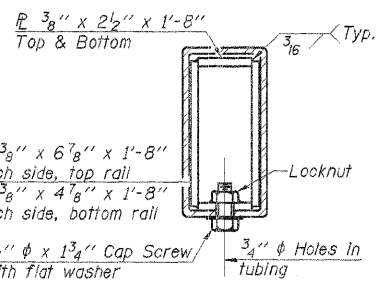


STEEL RAILING ELEVATION



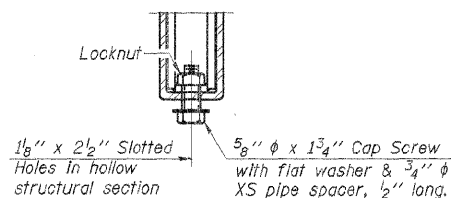
PLAN-BOTT. SPLICE R TYPICAL

Updated in Revision 1



SECTION AT RAIL SPLICE

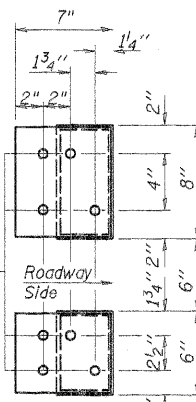
Updated in Revision 1



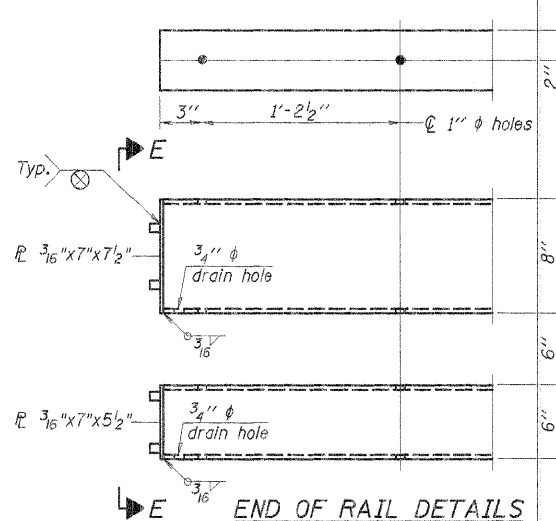
RAIL SPLICE CONNECTION AT EXPANSION JT.

Updated in Revision 1

4 - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032



VIEW E-E



END OF RAIL DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	151

NOTES

All field drilled holes shall be coated with an approved zinc rich paint before erection.

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.

Steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow ralling movement.

** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

R-34CWS

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STEEL RAILING, TYPE SM (SHEET 2 OF 2)

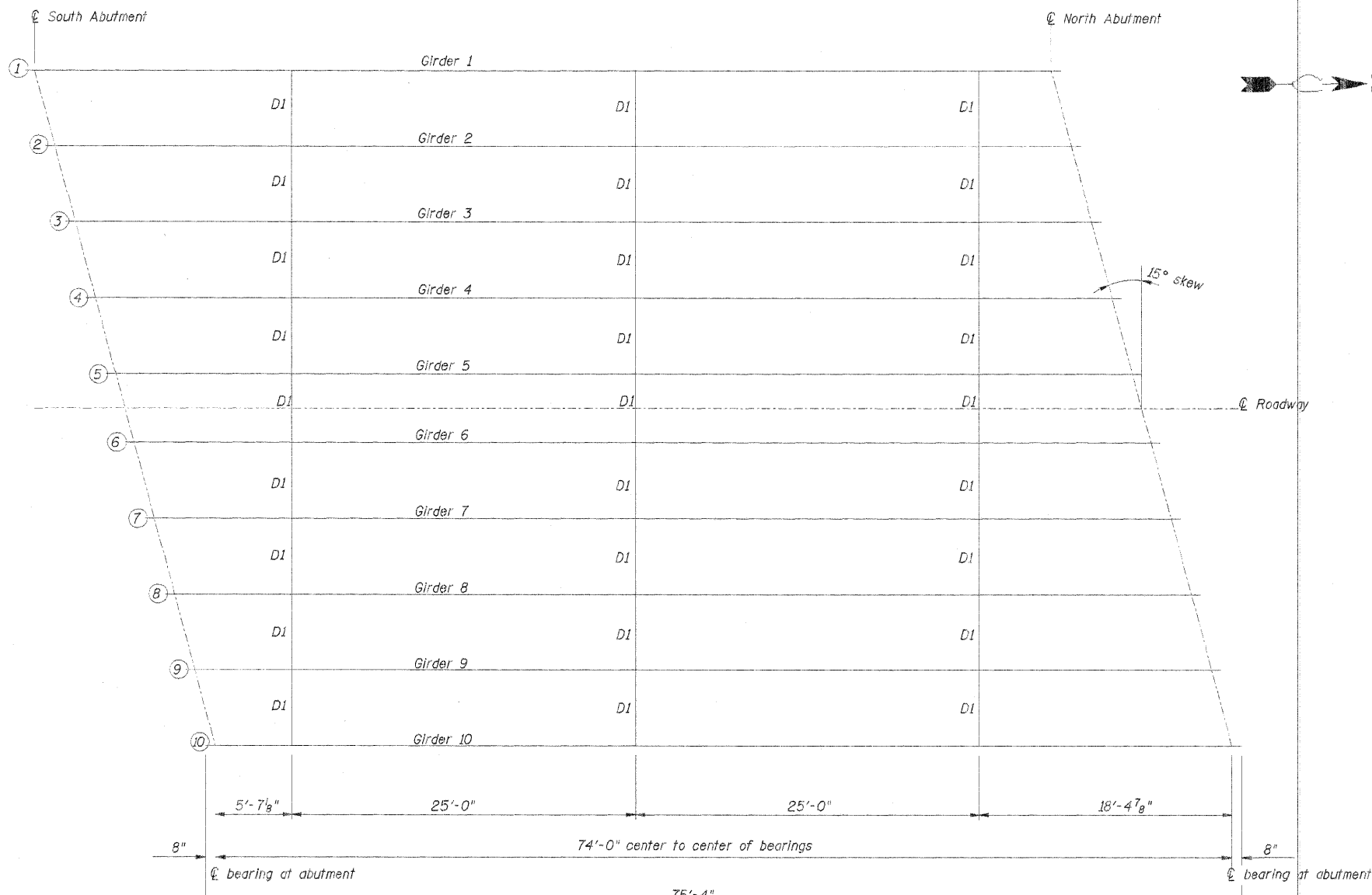
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET 31

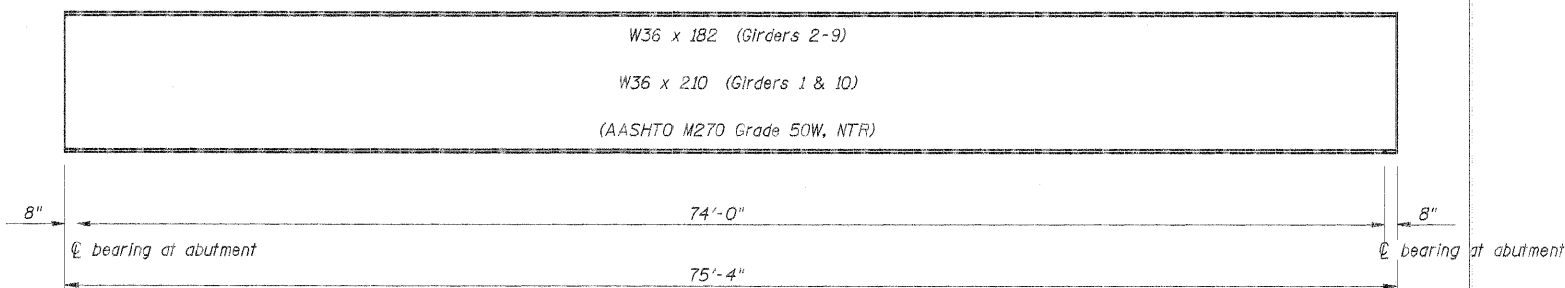
DWG NO. 7052SM.dgr
DATE FEB 2011
PROJ NO. 7052

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAS1523	*	CHAMPAIGN	38	32
FED. ROAD DIST. NO. 7		ILL. DIST. NO.		FED. AID PROJECT NO.

* 09-00956-00-BR
Contract No. 91452



FRAMING PLAN



ELEVATION OF GIRDERS

DSGN	K.J. Hoffmann				
DR	N.J. Liggett				
CHK	J.R. Wolf				
APVD	A. Fraenhoffer	NO.	DATE	REVISION	BY
					APVD



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STEEL FRAMING DETAILS (SHEET 1 OF 2)
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET	32
DWG NO.	7052st1.dgn
DATE	FEB 2011
PROJ NO.	7052

INTERIOR GIRDER REACTION TABLE

	(K)	Abut.
R _{DC}	29.2	
R _{DW}	6.6	
R _L	54.9	
R _{IM}	13.2	
R (Total)	103.9	

EXTERIOR GIRDER REACTION TABLE

	(K)	Abut.
R _{DC}	37.3	
R _{DW}	6.2	
R _L	52.0	
R _{IM}	12.5	
R (Total)	108	

INTERIOR GIRDER MOMENT TABLE

	(K/ft.)	0.5 Span
I _s	(in ⁴)	11300
S _s	(in ³)	623
DC	(K/ft.)	0.775
DW	(K/ft.)	0.175
M _{dc}	(K)	530
M _{dw}	(K)	120
M (L+IM)	(K)	944.2
M _u (Strength I)	(K)	2495
f _s DC	(k.s.i.)	10.22
f _s DW	(k.s.i.)	2.31
f _s (L+IM)	(k.s.i.)	18.19
f _s 1.75(L+IM)	(k.s.i.)	31.83
f _s (SERVICE II)	(k.s.i.)	36.18
f _s (Total)(Strength I)	(k.s.i.)	48.07
VR	(K)	68.1

EXTERIOR GIRDER MOMENT TABLE

	(K/ft.)	0.5 Span
I _s	(in ⁴)	13200
S _s	(in ³)	719
DC	(K/ft.)	0.990
DW	(K/ft.)	0.165
M _{dc}	(K)	678
M _{dw}	(K)	113
M (L+IM)	(K)	1106.5
M _u (Strength I)	(K)	2953
f _s DC	(k.s.i.)	11.31
f _s DW	(k.s.i.)	1.88
f _s (L+IM)	(k.s.i.)	18.47
f _s 1.75(L+IM)	(k.s.i.)	32.32
f _s (SERVICE II)	(k.s.i.)	37.20
f _s (Total)(Strength I)	(k.s.i.)	49.28
VR	(K)	64.5

TOP OF GIRDER ELEVATIONS

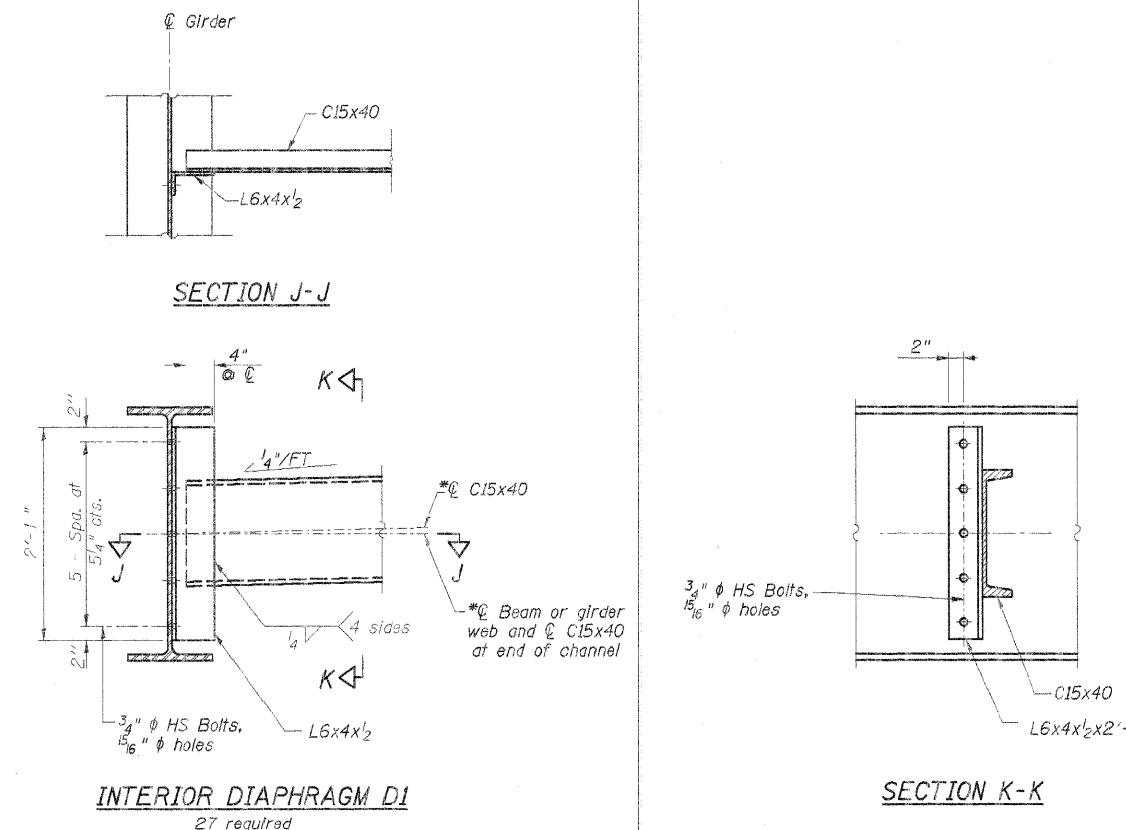
Location	Girder 1		Girder 2		Girder 3		Girder 4		Girder 5	
	Station	Elevation	Station	Elevation	Station	Elevation	Station	Elevation	Station	Elevation
@ bearing S. Abut	9+56.37	98.765	9+57.84	98.880	9+59.32	98.995	9+60.79	99.109	9+62.26	99.224
0.25 L	9+84.62	98.685	9+86.09	98.811	9+87.57	98.926	9+89.04	99.040	9+90.51	99.155
0.50 L	10+12.87	98.653	10+14.34	98.783	10+15.82	98.898	10+17.29	99.012	10+18.76	99.127
0.75 L	10+41.12	98.685	10+42.59	98.811	10+44.07	98.926	10+45.54	99.040	10+47.01	99.155
@ bearing N. Abut	10+30.37	98.765	10+31.84	98.880	10+33.32	98.995	10+34.79	99.109	10+36.26	99.224

Location	Girder 6		Girder 7		Girder 8		Girder 9		Girder 10	
	Station	Elevation	Station	Elevation	Station	Elevation	Station	Elevation	Station	Elevation
@ bearing S. Abut	9+63.74	99.224	9+65.21	99.109	9+66.68	98.995	9+68.16	98.880	9+69.63	98.765
0.25 L	9+91.99	99.155	9+93.46	99.040	9+94.93	98.926	9+96.41	98.811	9+97.88	98.695
0.50 L	10+20.24	99.127	10+21.71	99.012	10+23.18	98.898	10+24.66	98.783	10+26.13	98.668
0.75 L	10+48.49	99.155	10+49.96	99.040	10+51.43	98.926	10+52.91	98.811	10+54.38	98.695
@ bearing N. Abut	10+37.74	99.224	10+39.21	99.109	10+40.68	98.995	10+42.16	98.880	10+43.63	98.765

* Beam elevation include deflection from weight of concrete only.

DEFINITIONS

- I_s, S_s : The moment of inertia and section modulus of the steel section used in computing f_s (Total)(Strength I & Service II) due to non-composite dead loads (in⁴ and in³)
- VR : Maximum un-factored shear range in span.
- DC : Un-factored non-composite dead load (kips/ft.)
- M_{dc} : Un-factored moment due to non-composite dead load (k)
- DW : Un-factored long-term composite (superimposed future wearing surface only) dead load (kip/ft.)
- M_{dw} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (k)
- M (L+IM) : Un-factored live load moment plus dynamic load allowance (Impact) (k)
- M_u (Strength I) : Factored design moment (k).
[1.25M_{dc} + 1.5M_{dw} + 1.75M (L+IM)]
- f_s (Service II) : Sum of stresses as computed from the moments below (ksi).
[M_{dc} + M_{dw} + 1.3M (L+IM)]
- f_s (Total)(Strength I) : Sum of stresses as computed from the moments below on non compact section (ksi).
[1.25M_{dc} + 1.5M_{dw} + 1.75M (L+IM)]



Note:
Two hardened washers required for each set of oversized holes.
*Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.
The alternate, C15x50, if utilized, shall be provided at no additional cost to the Department.

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DR	N.J. Liggett				
CHK	J.R. Wolf				
APVD	A. Fraenhoffer	NO.	DATE	REVISION	BY

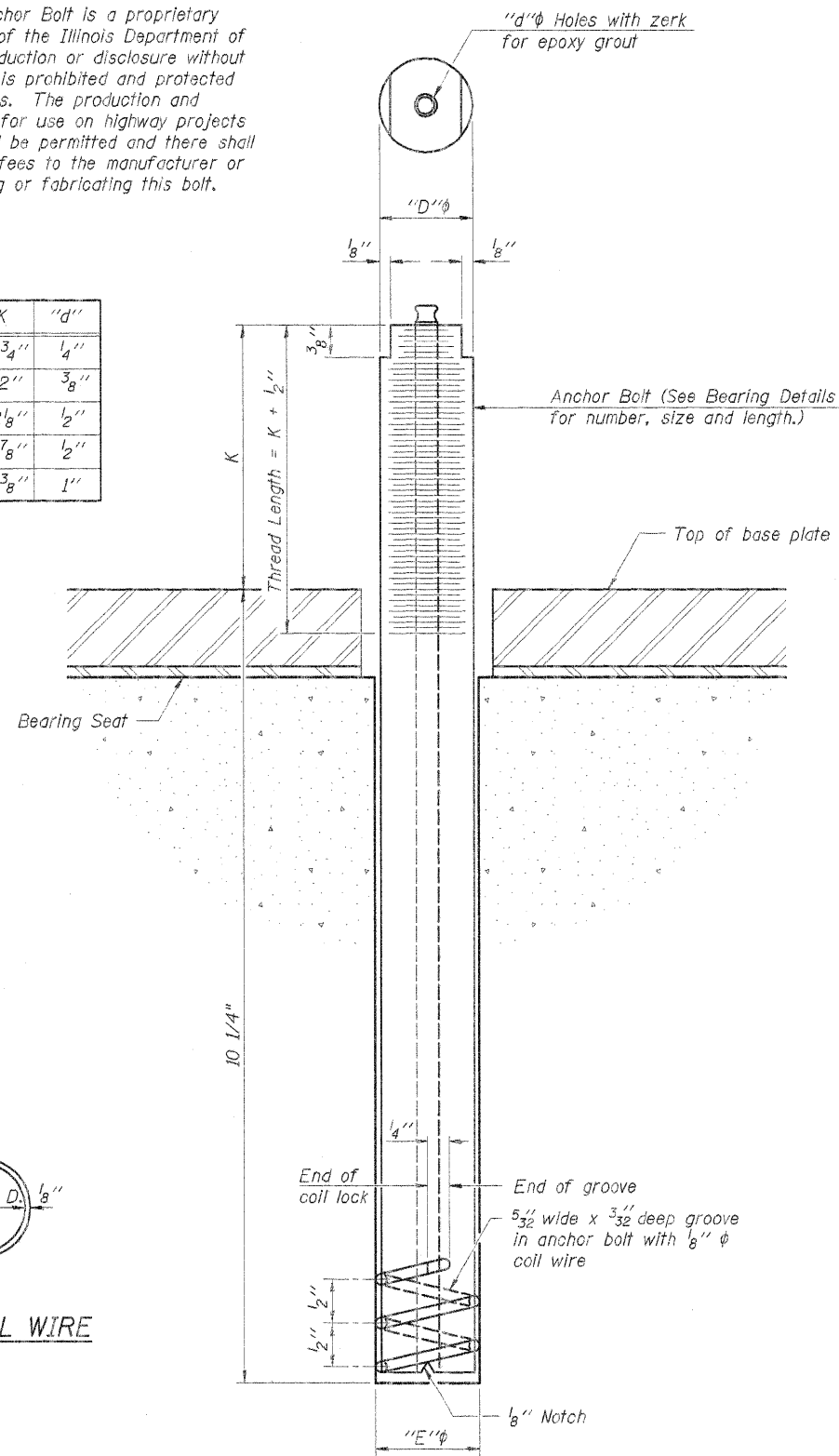
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STEEL FRAMING DETAILS (SHEET 2 OF 2)		SHEET 33
FAS 1523 (CH 55) OVER UPPER SALT FORK		DWG NO. 7022stl.dgn
SEC 09-00956-00-BR		DATE FEB 2011
CHAMPAIGN COUNTY		PROJ NO. 7052

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted. Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming. The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing & Erecting Structural Steel.

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers. The coil wire shall be made of any suitable soft steel wire. The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed. The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

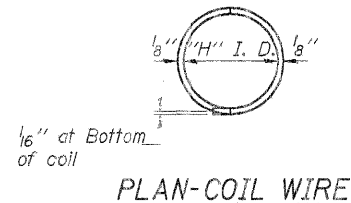
1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

- The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer of the type specified.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Anchor bolts may be ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105.



PLAN-COIL WIRE

DSGN	K.J. Hoffmann				
DR	N.J. Liggett				
CHK	J.R. Wolf				
APVD	A. Fraenhoffer	NO.	DATE	REVISION	BY

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ANCHOR BOLT DETAIL

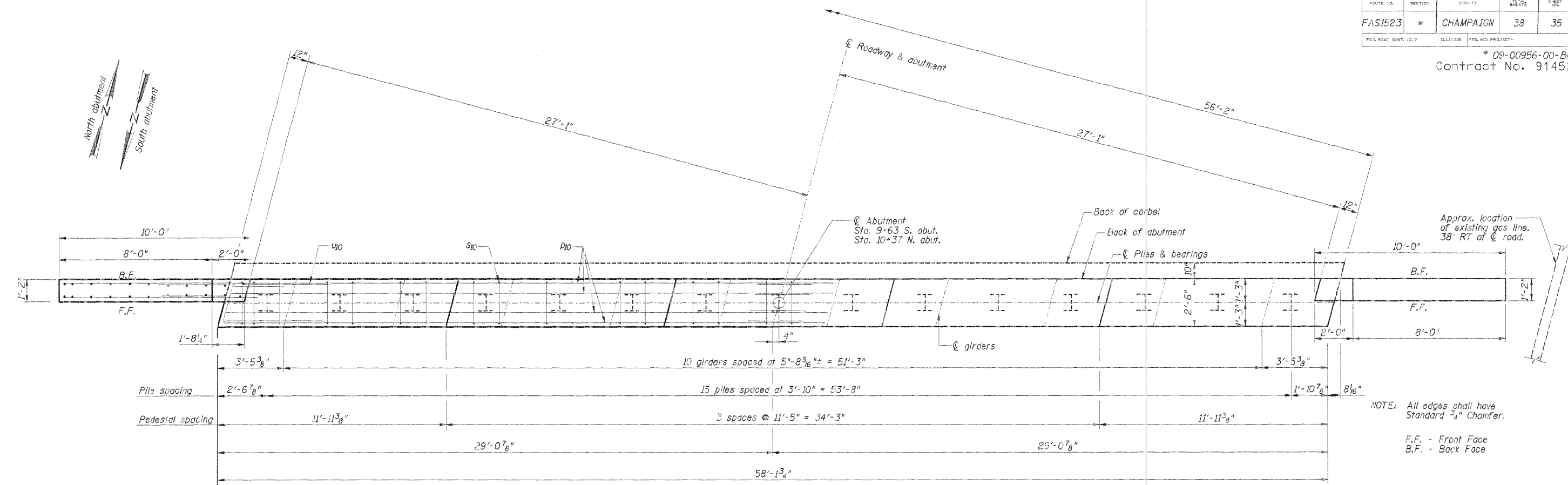
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET 34

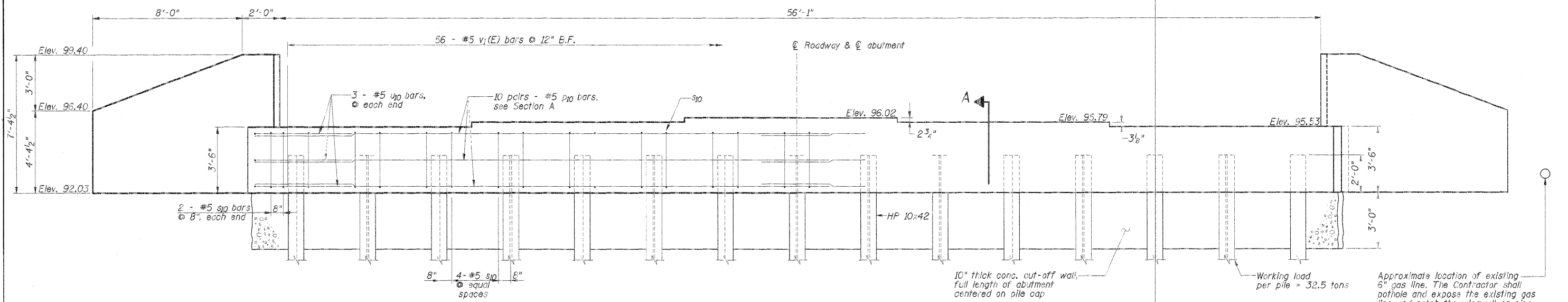
DWG NO. 7052anch.dgn
DATE FEB 2011
PROJ NO. 7052

ROUTE NO.	SECTION	COUNTY	SHEET	TOTAL SHEETS
FAS1523	*	CHAMPAIGN	38	35
FED. ROAD DIST. NO. 7		ILL. DIST.	FED. AID PROJECT	

* 09-00956-00-BR
Contract No. 91452



NOTE: All edges shall have Standard 3/4" Chamfer.
F.F. - Front Face
B.F. - Back Face



Work sheets 35, 36, & 37 together.

DSGN	K.J. Hoffmann				
DR	S.P. Pirth				
CHK	J.R. Wolf				
APVD	A. Fraunhofer	NO.	DATE	REVISION	BY
					APVD

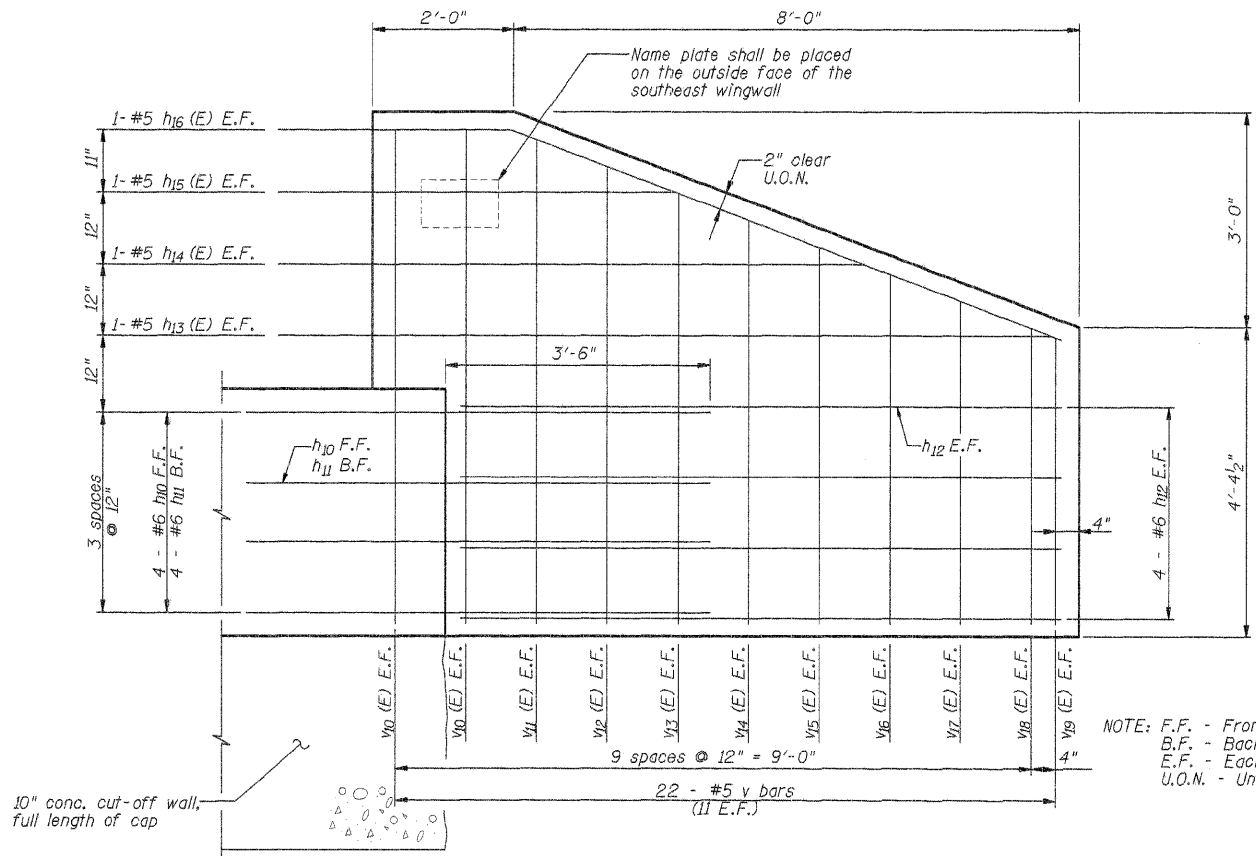
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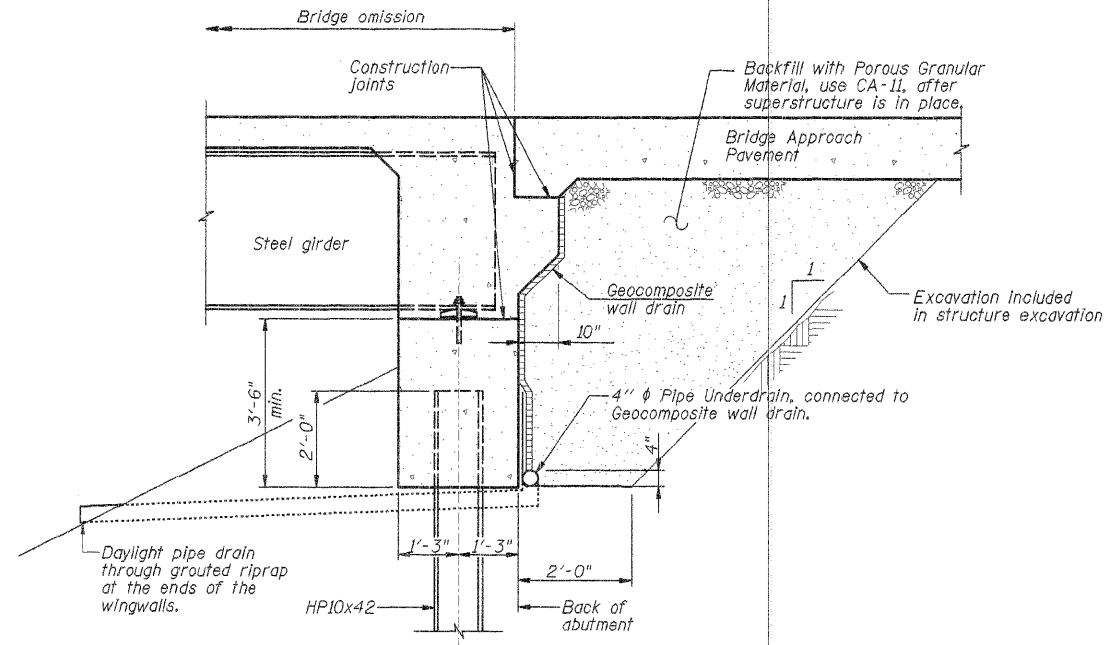
ABUTMENT DETAILS (SHEET 1 OF 3)		SHEET 35
FAS 1523 (CH 55) OVER UPPER SALT FORK		DWG NO. 7052ABT.dgn
SEC 09-00956-00-BR		DATE FEB 2011
CHAMPAIGN COUNTY		PROJ NO. 7052

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS1523	*	CHAMPAIGN	38	36
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

* 09-00956-00-BR
Contract No. 91452



NOTE: F.F. - Front Face
B.F. - Back Face
E.F. - Each Face
U.O.N. - Unless otherwise noted



SECTION THRU INTEGRAL ABUTMENT

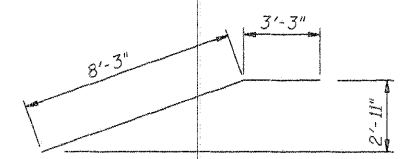
PILE DATA

Location: Abutments
Pile Type and Size: Steel HP 10x42
Nominal Required Bearing: 196 kips
Factored Resistance Available: 98 kips
Estimated Pile Length: 50 ft.
No. of Production Piles: 14 @ North Abutment
14 @ South Abutment
No. of Test Piles: 1 @ North Abutment
1 @ South Abutment

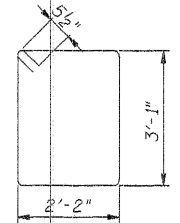
Note: The Steel H-piles shall be according to AASHTO M270 Grade 50.

BILL OF MATERIAL - 2 ABUTS.

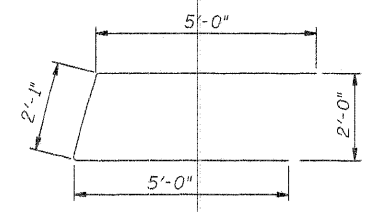
Bar	No.	Size	Length	Shape
h10	16	# 6	5'-2"	—
h11	16	# 6	7'-0"	—
h12	32	# 5	8'-6"	—
h13 (E)	8	# 5	11'-0"	—
h14 (E)	8	# 5	8'-4"	—
h15 (E)	8	# 5	5'-8"	—
h16 (E)	8	# 5	11'-6"	—
P10	40	# 5	30'-6"	—
S10	80	# 5	11'-5"	□
U10	12	# 5	12'-1"	⊓
v10 (E)	16	# 5	7'-0"	—
v11 (E)	8	# 5	6'-11"	—
v12 (E)	8	# 5	6'-6"	—
v13 (E)	8	# 5	6'-2"	—
v14 (E)	8	# 5	5'-9"	—
v15 (E)	8	# 5	5'-5"	—
v16 (E)	8	# 5	5'-0"	—
v17 (E)	8	# 5	4'-8"	—
v18 (E)	8	# 5	4'-3"	—
v19 (E)	8	# 5	4'-1"	—
Concrete Structures		Cu. Yds.	48.5	
Reinforcement Bars		Lbs.	2960	
Reinforcement Bars, Epoxy Coated		Lbs.	830	
Test Pile, Steel HP10x42	Each		2	
Furnishing Steel Piles	Foot		1400	
Driving Piles	Foot		1400	
Metal Shoes	Each		30	
Name Plate	Each		1	
Concrete Cut-off Wall		Cu. Yds.	10.8	
Structure Excavation		Cu. Yds.	385	
Porous Granular Embankment		Cu. Yds.	160	
Pipe Underdrains		Foot	230	
Geocomposite Wall Drain		Sq. Yds.	115	



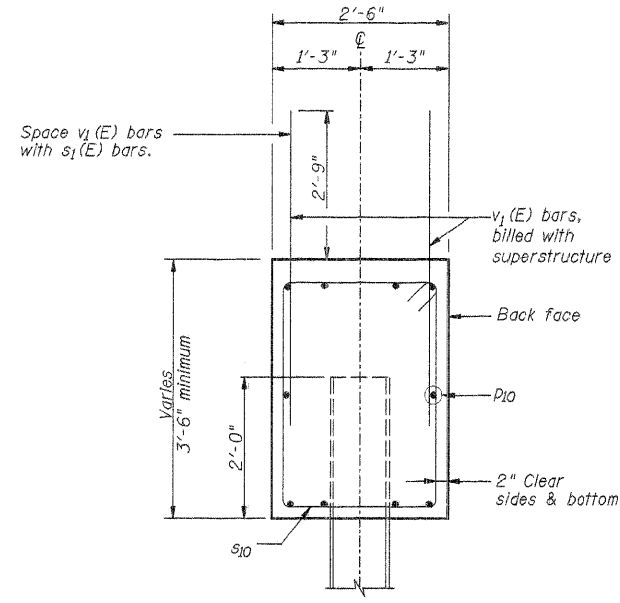
BAR h16



BAR S10



BAR U10



SECTION A
(Perpendicular to centerline of Abutment)

Work sheets 35, 36, & 37 together.

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CHK	J.R. Wolf				
APVD	J.A. Frauenhoffer	NO.	DATE	REVISION	BY

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ABUTMENT DETAILS (SHEET 2 OF 3)

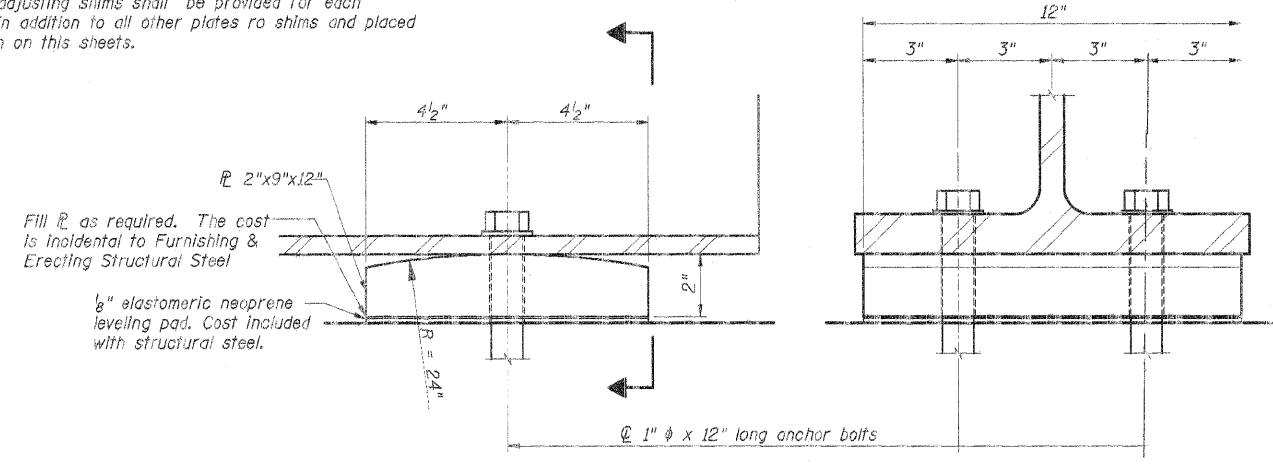
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET	36
DWG NO.	7052ABT.dgn
DATE	FEB 2011
PROJ NO.	7052

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS1523	#	CHAMPAIGN	38	37
FED. ROAD DIST. NO. 7		ILL. DIST.	FED. AID PROJECT-	

* 09-00956-00-BR
Contract No. 91452

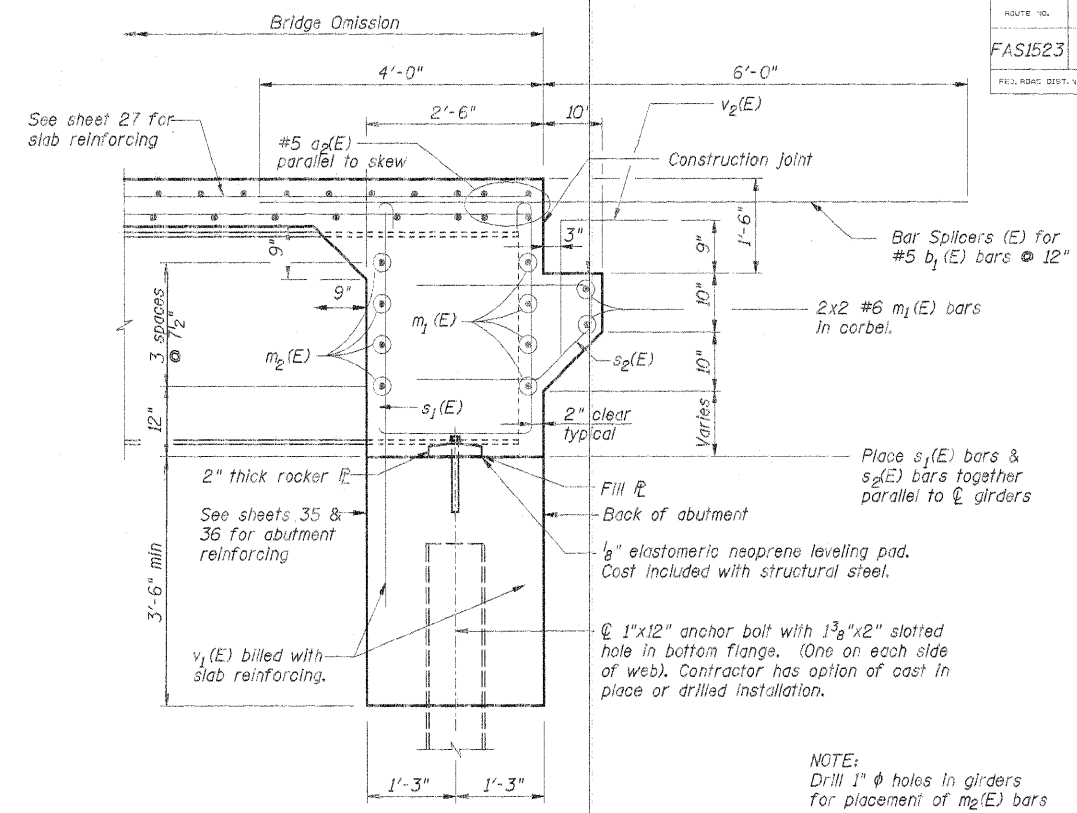
NOTES:
Reinforcing Bars and Concrete in diaphragm are billed with the Superstructure. See sheets 27 & 28.
Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on this sheets.



ELEVATION AT ABUTMENT SECTION

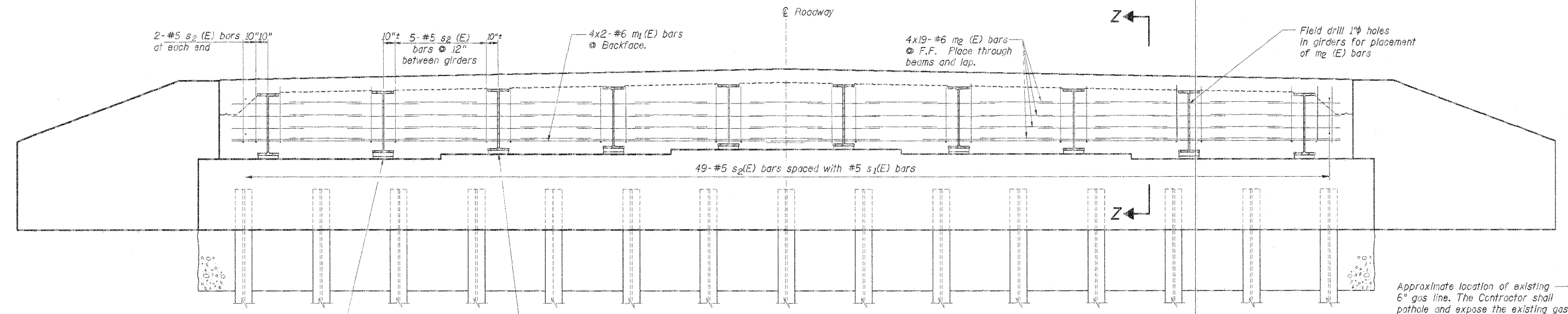
ROCKER PLATE DETAIL

20 Plates and 40 bolts required
Cost is incidental to Furnishing & Erecting Structural Steel.



SECTION Z-Z
(Perpendicular to C of abutment)

NOTE:
Drill 1" holes in girders for placement of m2(E) bars



ELEVATION

Shim plates shall be used to accommodate girders 2, 4, 7, & 9. Cost is incidental with Furnishing & Erecting Structural Steel.

2" thick rocker plate and 1/8" elastomeric neoprene leveling pad.

Approximate location of existing 6" gas line. The Contractor shall pothole and expose the existing gas line and notch the wingwall or pipe sleeve the line through the wingwall if it interferes with wingwall construction. Gas line located approx. 38' RT of C of road. The cost for this work shall be incidental to the cost of Concrete Structures.

Work sheets 35, 36, & 37 together.

DSGN	K.J. Hoffmann				
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CHK	J.R. Wolf				
APVD	A. Fraenhoffer	NO.	DATE	REVISION	BY
					APVD

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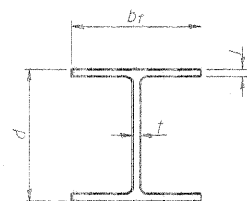
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ABUTMENT DETAILS (SHEET 3 OF 3)
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET	37
DWG NO.	7052ABT.dwg
DATE	FEB 2011
PROJ NO.	7052

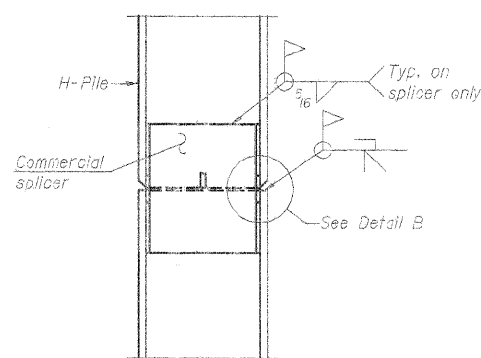
ROUTE NO.	SECTION	COUNTY	SHEET	TOTAL SHEETS
FAS1523	#	CHAMPAIGN	38	38
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

* 09-00956-00-BR
Contract No. 91452

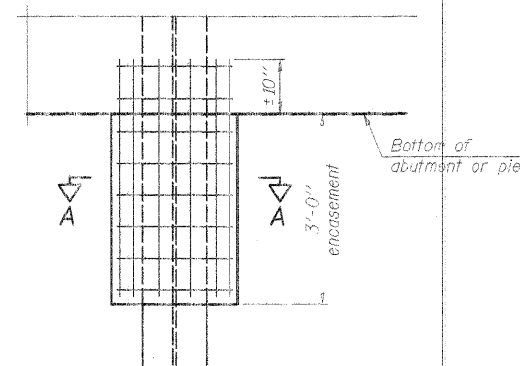


STEEL PILE TABLE

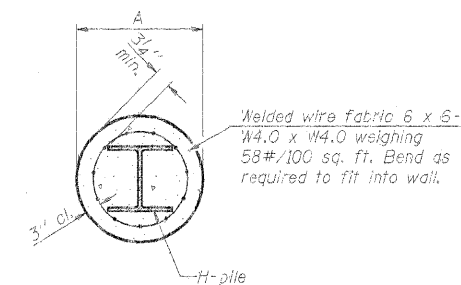
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/2"	14 7/8"	1 1/8"	30"
x102	14"	14 3/4"	1 1/8"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/8"	24"
x74	12 1/2"	12 1/4"	5/8"	24"
x63	12"	12 1/2"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 5/8"	7/16"	18"



ELEVATION



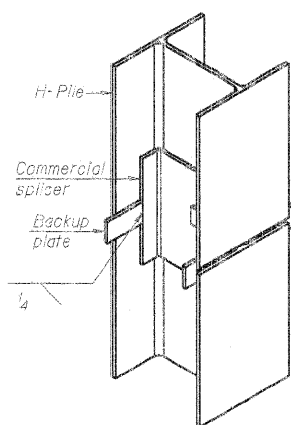
ELEVATION



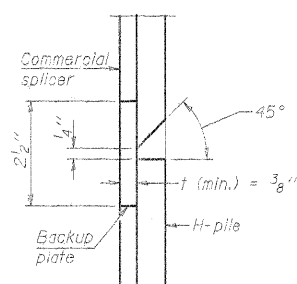
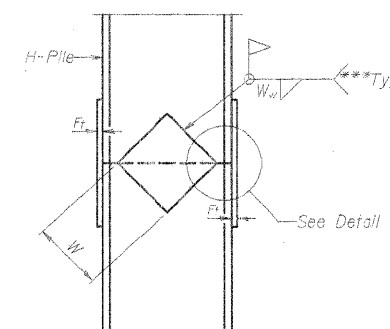
SECTION A-A

Note:
Forms for encasement may be omitted when soil conditions permit.

PILE ENCASEMENT

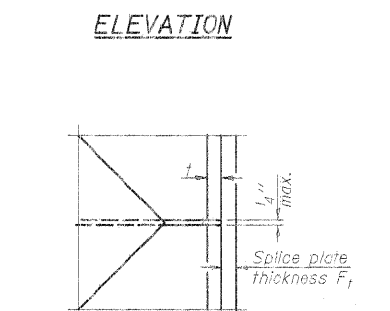


ISOMETRIC VIEW

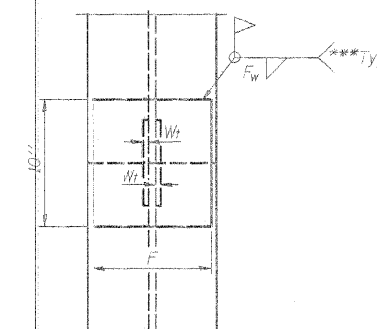


DETAIL "B"

WELDED COMMERCIAL SPLICE



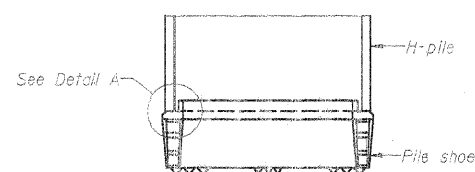
DETAIL D



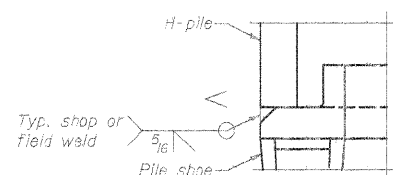
END VIEW

Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 1/2"	1 1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 1/2"	1 1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5 1/2"	1 1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 1/2"	1 1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5 1/2"	1 1/2"
x74	10"	7/8"	11/16"	6 1/2"	5 1/2"	1 1/2"
x63	10"	5/8"	1/2"	6 1/2"	1 1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1 1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1 1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1 1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1 1/2"	3/8"

WELDED PLATE FIELD SPLICE

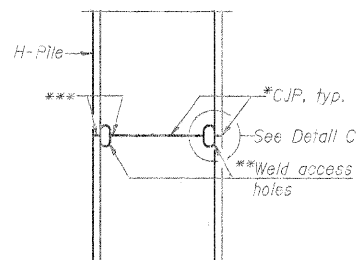


ELEVATION

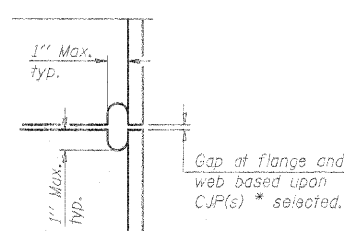


DETAIL A

H-PILE SHOE ATTACHMENT



ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE

* Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.

** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.

*** Interrupt welds 1/4" from end of each pile.

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP

10-1-C8

DSGN	IDOT				
DR	IDOT				
CHK	IDOT				
APVD	J.A. Fraenhoffer	NO.	DATE	REVISION	BY

FRAUENHOFFER & ASSOCIATES
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PILE DETAILS
FAS 1523 (CH 55) OVER UPPER SALT FORK
SEC 09-00956-00-BR
CHAMPAIGN COUNTY

SHEET 38
JWG 7052pile.dgn
DATE FEB 2011
PROJ NO. 7052