

**INDEX OF SHEETS**

1. TITLE SHEET
2. GENERAL NOTES & QUANTITIES
3. DETOUR PLAN
4. GENERAL PLAN AND ELEVATION
5. TOP OF SLAB ELEVATIONS
6. SUPERSTRUCTURE
7. PREFORMED JOINT STRIP SEAL
8. STEEL BRIDGE RAIL, TYPE SM
9. BRIDGE FENCE
10. BEAM ELEVATION
11. SOUTH ABUTMENT BEARING ASSEMBLY
12. NORTH ABUTMENT BEARING ASSEMBLY
13. ABUTMENTS
14. SCOUR COUNTERMEASURES

**LIST OF STANDARDS**

- 515001-03 NAME PLATE FOR BRIDGES
- 630001-08 STEEL PLATE BEAM GUARDRAIL
- 631031-08 TRAFFIC BARRIER TERMINAL, TYPE 6
- 631032-05 TRAFFIC BARRIER TERMINAL, TYPE 6A
- 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 664001-02 CHAIN LINK FENCE
- 701006-03 OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
- 701201-03 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
- 701301-03 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701901-01 TRAFFIC CONTROL DEVICES
- 720001-01 SIGN PANEL MOUNTING DETAILS
- 720006-02 SIGN PANEL ERECTION DETAILS
- 720011-01 METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
- 728001-01 TELESCOPING STEEL SIGN SUPPORT
- 729001-01 APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS AND MARKERS)
- 731001-01 BASE FOR TELESCOPING STEEL SIGN SUPPORT
- 780001-02 TYPICAL PAVEMENT MARKINGS
- BLR 21-8 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
- BLR 22-6 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS**

**PLANS FOR PROPOSED  
BRIDGE REHABILITATION PROJECT  
F.A.U. ROUTE 5148 (PERRYVILLE ROAD)  
COUNTY HIGHWAY 11  
OVER SOUTH BRANCH KISHWAUKEE RIVER**

**SECTION 08-00448-00-BR  
WINNEBAGO COUNTY  
PROJECT BHM-5099(085)  
JOB NUMBER C-92-101-09**



LOCATION OF SECTION INDICATED, THUS: - -

**APPROVED** *Sanjay K. Verma* 20 10  
COUNTY ENGINEER

**PASSED** *February 11, 2010*  
DISTRICT ENGINEER OF LOCAL ROADS & STREETS

**RELEASING FOR BID BASED ON LIMITED REVIEW** *February 11, 2010*  
DEPUTY DIRECTOR OF HIGHWAYS/REGION 2 ENGINEER

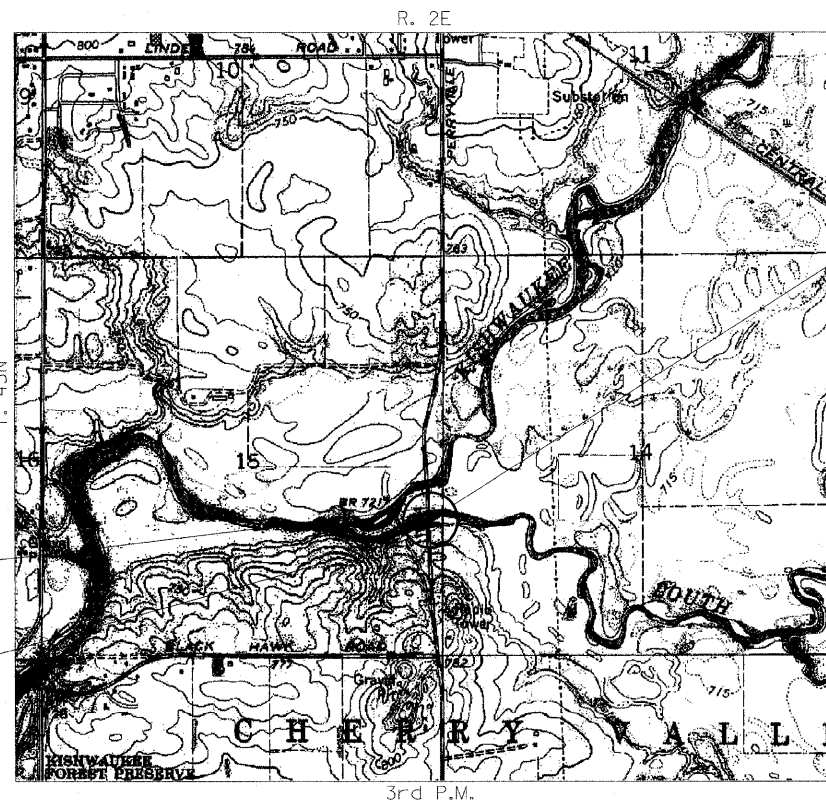
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOLL FREE**

JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS  
(J.U.L.I.E.) TELEPHONE NUMBER  
1-800-892-0123

**UTILITY NOTE**

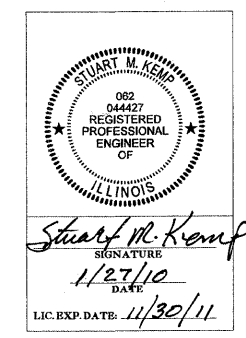
THE LOCATIONS OF THOSE BURIED AND ABOVEGROUND UTILITIES SHOWN ARE APPROXIMATE, ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY, AND ARE NOT TO BE REFERENCED FOR CONSTRUCTION PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVEGROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED AMONG THE CONTRACTOR, UTILITY COMPANY, AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS, ASSOCIATED WITH BURIED AND ABOVEGROUND UTILITIES REMAIN THE SOLE RESPONSIBILITY OF THE CONTRACTOR.



IMPROVEMENT BEGINS STATION 35+49

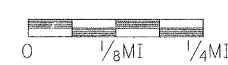
IMPROVEMENT ENDS STATION 37+67

**PROPOSED IMPROVEMENTS**  
CONCRETE BRIDGE DECK REPLACEMENT, REPLACEMENT OF EXPANSION JOINTS, REPLACEMENT OF ABUTMENT BACK WALLS, REPLACEMENT OF ABUTMENT BEARINGS, MAKE EXISTING BEAMS COMPOSITE, AND SCOUR REMEDIATION, EXISTING AND NEW STRUCTURE NUMBER 101-3064.



**TRAFFIC DATA**  
HIGHWAY CLASSIFICATION: MINOR ARTERIAL (URBAN)  
2010 ADT: 4,050 2% TRUCKS  
DESIGN SPEED: 55 MPH  
POSTED SPEED: 55 MPH

**LOCATION PLAN**



SCALE OF LAYOUT

NET LENGTH = 218 FEET (0.04 MI)

Corporate License Number 184-001-084

PROJECT NO.	09L0003
DATE	01/28/10



F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5148	08-00448-00-BR	Winnebago	14	1
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT			<b>CONTRACT NO. 85509</b>	

**CONTRACT NO. - 85509**

01/27/10  
1/27/10  
DRAWN  
REVIEWED

**GENERAL NOTES**

- CONTRACTORS BIDDING THIS PROJECT SHALL VISIT THE SITE BEFORE BIDDING.
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCY IMMEDIATELY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO ANY UTILITY LINES AND EXISTING IMPROVEMENTS TO REMAIN THAT ARE DAMAGED AS A RESULT OF THE WORK.
- ALL SECTIONS, DETAILS, AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS OTHERWISE SHOWN.
- ALL ELEVATIONS, STATIONS, AND OFFSETS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ALL PAVEMENT TO BE REMOVED SHALL BE SAW CUT FULL DEPTH AT THE LIMITS OF REMOVAL. PAYMENT FOR THE SAW CUT SHALL BE INCLUDED IN THE COST OF THE ITEM BEING REMOVED.

**UTILITY CONTACTS**

UTILITY NAME	TYPE	PHONE NUMBER
COMMONWEALTH EDISON CO. 123 ENERGY AVENUE ROCKFORD, ILLINOIS 61109	ELECTRICAL	(815) 490-2320
COMCAST COMMUNICATIONS 4450 KISHWAUKEE STREET ROCKFORD, ILLINOIS 61109	CABLE TV	(815) 395-8977
AT&T LONG DISTANCE NETWORK SERVICES 866 ROCK CREEK ROAD PLANO, ILLINOIS 60545	COMMUNICATIONS	(847) 420-9115
SBC 2404 8TH AVENUE ROCKFORD, ILLINOIS 61108	COMMUNICATIONS	(815) 394-7276
NICOR GAS 4651 LINDEN ROAD ROCKFORD, ILLINOIS 61109	GAS	(815) 965-5416

**SUMMARY OF QUANTITIES**

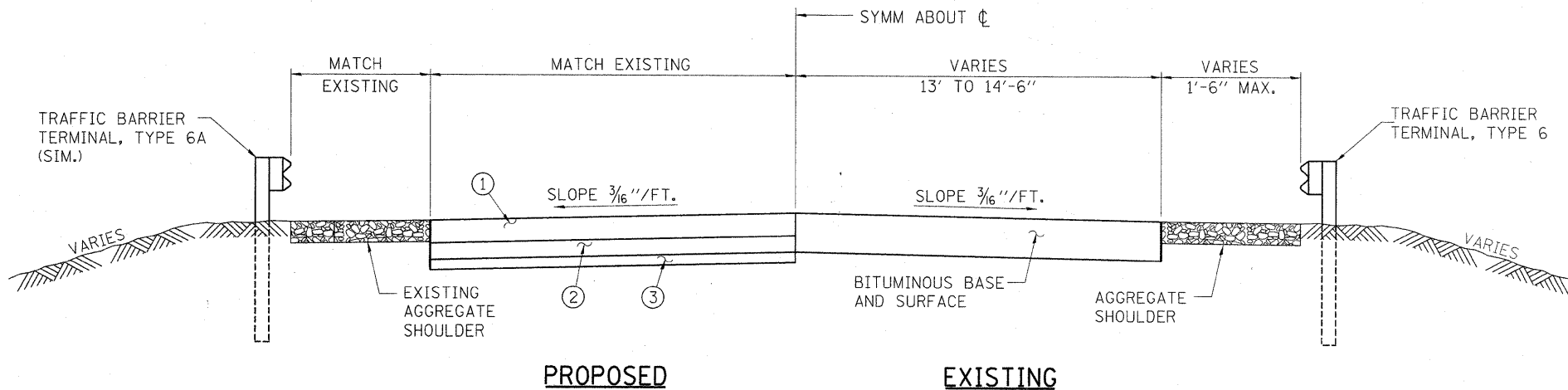
CONSTRUCTION TYPE CODE: X071-2A

CODE PAY ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
* 20300300	CHANNEL EXCAVATION (SPECIAL)	CU. YD.	54
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	123
28200200	FILTER FABRIC	SQ. YD.	104
* 50104800	REMOVAL OF EXISTING CONCRETE DECK	L. SUM	1
50300255	CONCRETE SUPERSTRUCTURE	CU. YD.	144.2
50300260	BRIDGE DECK GROOVING	SQ. YD.	518
50300300	PROTECTIVE COAT	SQ. YD.	552
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1780
50500505	STUD SHEAR CONNECTORS	EACH	2150
* 50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	10
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	39,580
* 50901115	STEEL RAILING (SPECIAL)	FOOT	315
51500100	NAME PLATES	EACH	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	64
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	5
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	5
52100520	ANCHOR BOLTS, 1"	EACH	20
* 63300115	REMOVAL AND REINSTALLATION OF EXISTING STEEL PLATE BEAM GUARDRAIL, SINGLE RAIL	FOOT	100
* 63300315	REMOVAL AND REINSTALLATION OF EXISTING TERMINAL SECTION, SINGLE RAIL	EACH	4
* 67100100	MOBILIZATION	L. SUM	1
70103700	TRAFFIC CONTROL COMPLETE	L. SUM	1
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	870
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	6
* X0656300	PAVEMENT REMOVAL AND REPLACEMENT	SQ. YD.	187
* XX002053	LANDSCAPE RESTORATION	L. SUM	1
* XX006853	CHANNEL SURVEY	L. SUM	1
* Z0013798	CONSTRUCTION LAYOUT	L. SUM	1
* Z0018905	DRILL AND GROUT BARS	EACH	128

\* SEE SPECIAL PROVISIONS, HIGHWAY STANDARDS, GENERAL NOTES, AND/OR DETAILS IN PLANS

Δ SPECIALTY ITEMS

BITUMINOUS PAVEMENT DESIGN		
LOCATION(S):	PERRYVILLE ROAD, WINNEBAGO CO., IL	
MIXTURE USE(S):	8" BINDER COURSE	2" SURFACE COURSE
PG:	PG58-28	PG58-28
DESIGN AIR VOIDS:	4% @ N50	4% @ N50
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL 19.0	IL 9.5 OR IL 12.5
FRICTION AGGREGATE:	N/A	MIXTURE D
MIXTURE WEIGHT:	112 LB/SQ YD/IN	112 LB/SQ YD/IN



**PROPOSED** **EXISTING**

**TYPICAL APPROACH ROADWAY SECTION**

STA. 35+49.41 TO STA. 35+79.41  
STA. 37+36.99 TO STA. 37+66.99

- HOT MIX ASPHALT PAVEMENT, FULL DEPTH, 10"
- SUB-BASE GRANULAR MATERIAL, TYPE A, 8"
- SUB-BASE GRANULAR MATERIAL, TYPE B, 4"

**GENERAL NOTES & QUANTITIES**

**PERRYVILLE ROAD BRIDGE  
OVER SOUTH BRANCH KISHWAUKEE RIVER  
F.A.U. ROUTE 5148  
SECTION 08-00448-00-BR  
WINNEBAGO COUNTY  
STRUCTURE NUMBER 101-3064  
STATION 36+58.20**

Corporate License Number 184-001-084		F.A.U. ROUTE		SECTION		COUNTY		TOTAL SHEETS		SHEET NO.	
© Copyright Hanson Professional Services Inc. 2009		09L0003		5148		08-00448-00-BR		Winnebago		14 2	
LAYOUT DRAWN REVIEWED		SMK JDM SMK		DATE 01/28/10		CONTRACT NO. 85509		FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT			


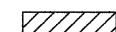




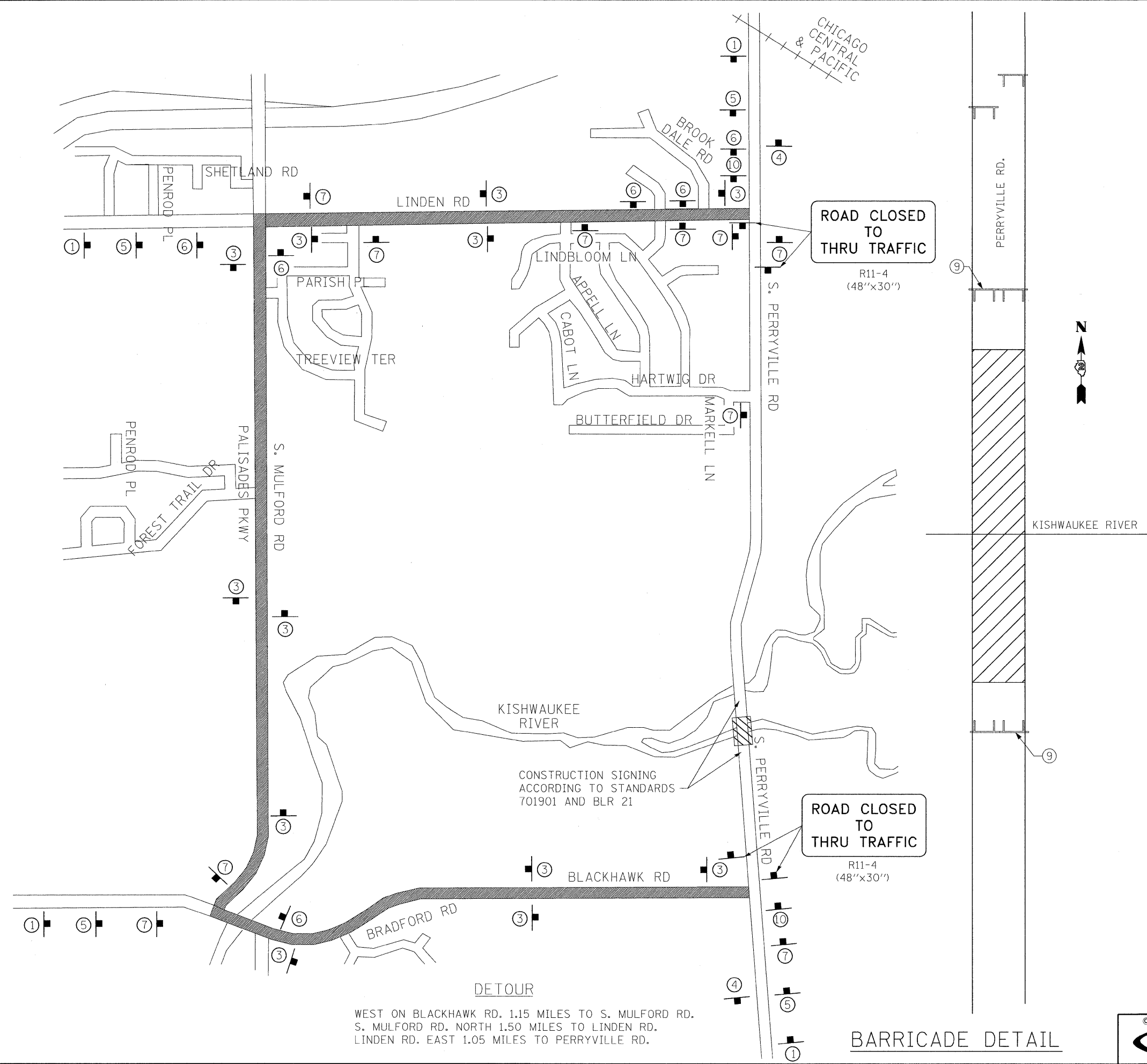
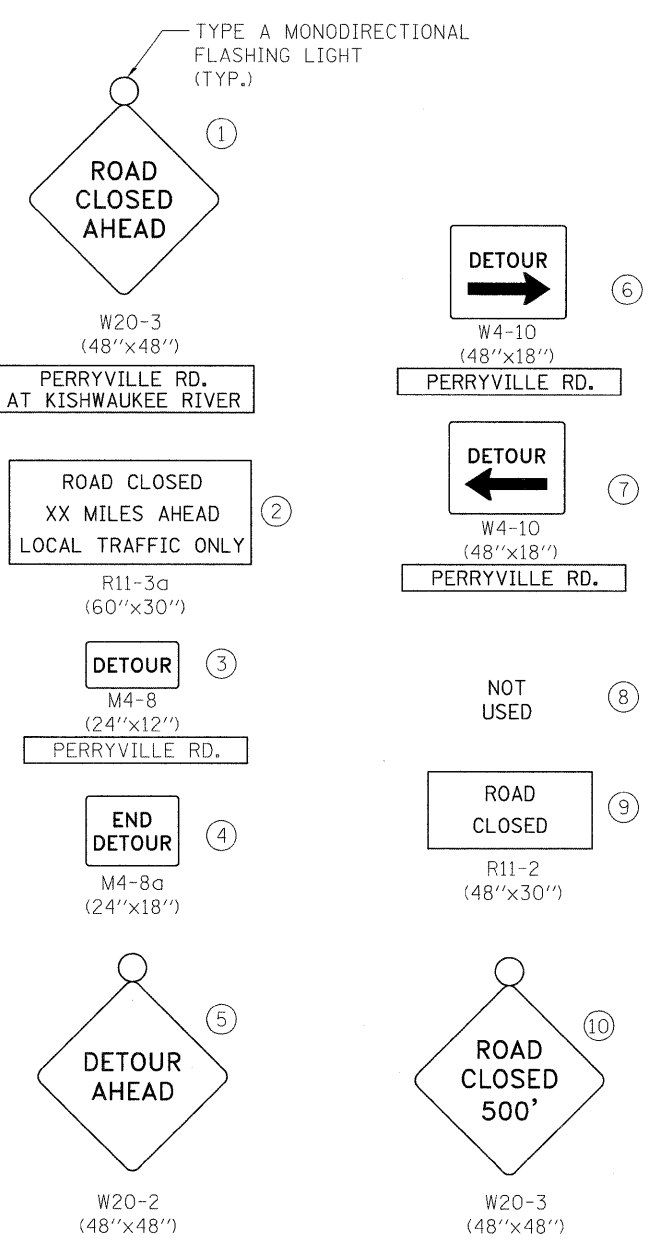
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SMK

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 LAYOUT: SNK 01/28/10  
 DRAWN: JDM 01/28/10  
 REVIEWED: SNK 01/28/10

**LEGEND**

-  DETOUR ROUTE
-  PROJECT LOCATION
-  SIGN LOCATION
-  SIGN BARRICADE TYPE III LOCATION



**DETOUR PLAN**

**PERRYVILLE ROAD BRIDGE  
 OVER SOUTH BRANCH KISHWAUKEE RIVER  
 F.A.U. ROUTE 5148  
 SECTION 08-00448-00-BR  
 WINNEBAGO COUNTY  
 STRUCTURE NUMBER 101-3064  
 STATION 36+58.20**

Corporate License Number 194-001-084		© Copyright Hanson Professional Services Inc. 2009		TOTAL SHEETS		SHEET NO.	
09L0003	F.A.U. ROUTE	SECTION	COUNTY	14	3		
	5148	08-00448-00-BR	Winnebago			CONTRACT NO. 85509	
01/28/10	FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT						

B.M. - Chiseled square on top of the SE Wing Wall. Elev. 726.04

Existing Structure - S.N. 101-3064 consists of a three span continuous steel beam reinforced concrete deck superstructure on solid reinforced concrete piers and spill-thru abutments. The existing bridge is 157'-7" long and 32'-0" wide. The bridge was built in 1969 under Section 144-B-CF.

Salvage - Existing Name Plate

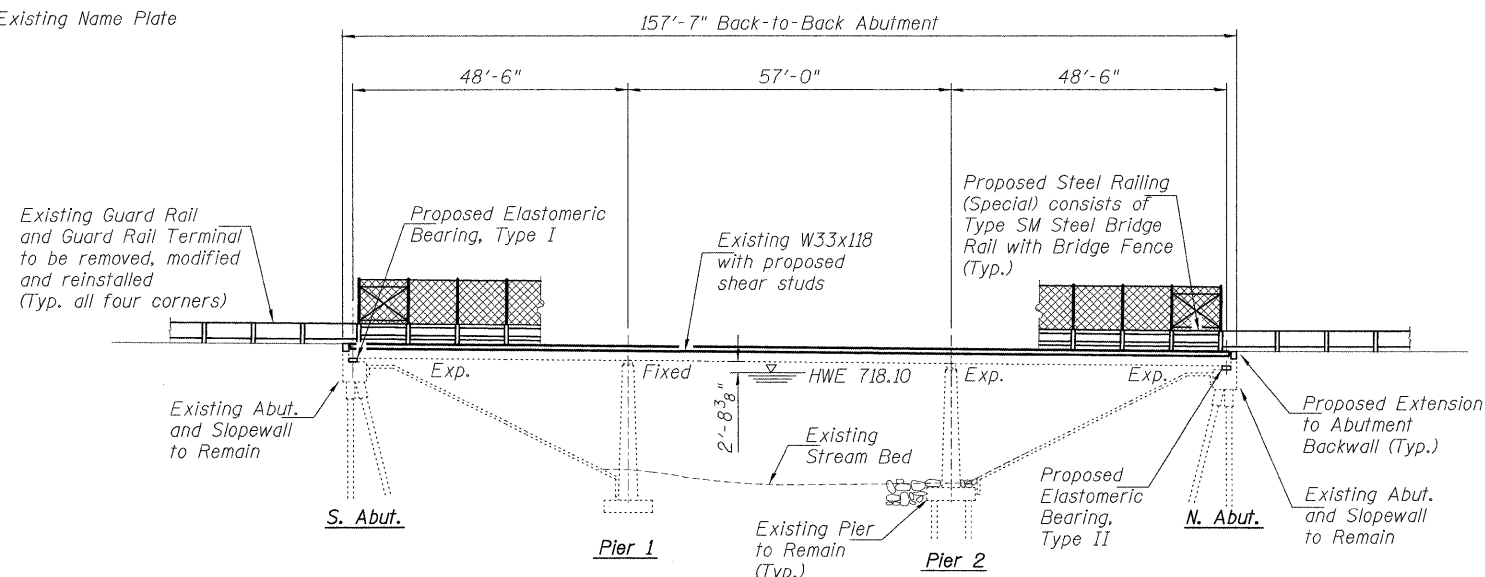
**KISHWAUKEE RIVER  
RE-BUILT 20... BY  
WINNEBAGO COUNTY  
SEC. 08-00448-00-BR  
F.A.U. RT. 5148 STA. 36+58.2  
STR. NO. 101-3064 LOADING HS20-44**

**LETTERING FOR NAME PLATE**

Locate Name Plate at Corner of Bridge  
(See Std. 515001-02 and General Note 9)

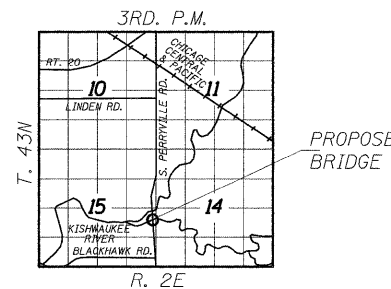
**TOTAL BILL OF MATERIAL**

Item	Unit	Super	Sub.	Total
Removal of Existing Concrete Deck	L. Sum.	1	---	1
Concrete Superstructure	Cu. Yd.	141.4	2.8	144.2
Bridge Deck Grooving	Sq. Yd.	518	---	518
Protective Coat	Sq. Yd.	552	---	552
Furnishing & Erecting Structural Steel	Pound	1780	---	1780
Stud Shear Connectors	Each	2150	---	2150
Jack and Remove Existing Bearings	Each	10	---	10
Reinforcement Bars, Epoxy Coated	Lbs.	39070	510	39580
Steel Railing (Special)	Foot	315	---	315
Name Plates	Each	1	---	1
Preformed Joint Strip Seal	Foot	64	---	64
Elastomeric Bearing Assembly, Type I	Each	5	---	5
Elastomeric Bearing Assembly, Type II	Each	5	---	5
Anchor Bolts, 1"	Each	---	20	20
Drill and Grout Bars	Each	---	128	128



**ELEVATION**

Looking West



**LOCATION SKETCH**

**DESIGN SPECIFICATIONS**

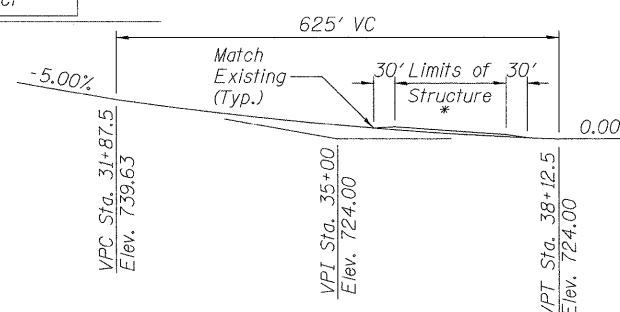
2002 AASHTO Standard Specifications - 17th ed.

**LOADING HS20-44**

Allow 50 #/sq. ft. for future wearing surface.

**GENERAL NOTES**

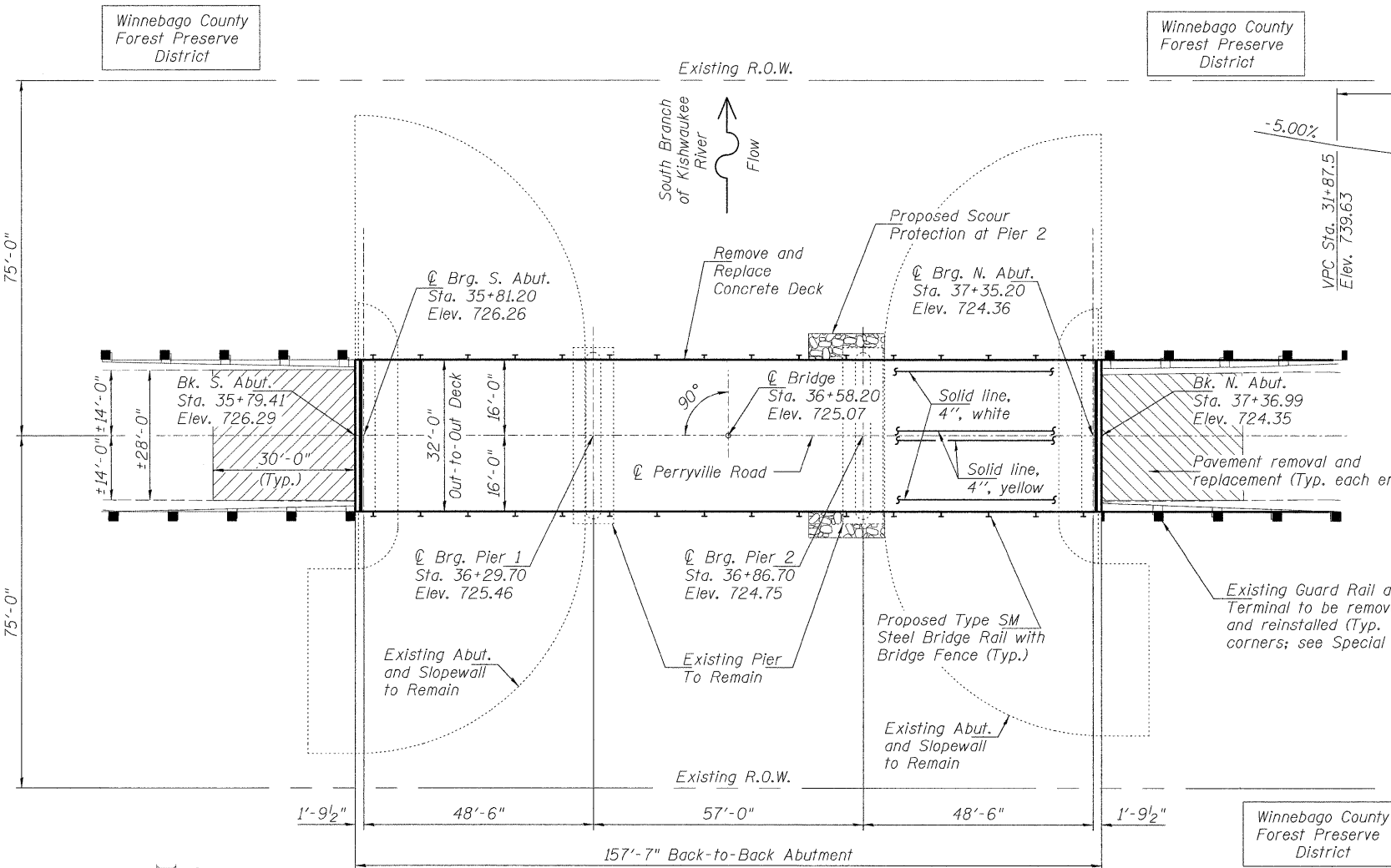
1. Calculated weight of Structural Steel = 1780 lbs.
2. No field welding is permitted except as specified in the contract documents.
3. Reinforcement bars shall conform to the requirements of ASTM A 706, Grade 60. See Special Provisions.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete deck.
6. Plan dimensions and details relative to existing plans are subject to routine variation. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price for the work.
7. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
8. The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources, if required, for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR permit number as shown in the contract plans.
9. Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.



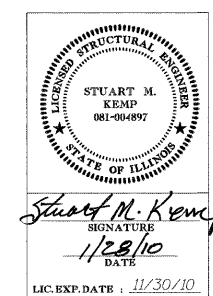
**PROFILE GRADE**

Perryville Road

\* All bridge elevations have been increased 0.12 ft. to accommodate IDOT policies for bridge deck thickness and minimum fillet thickness.



**PLAN**



"I certify that to the best of my knowledge, information and belief, this bridge 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.'"

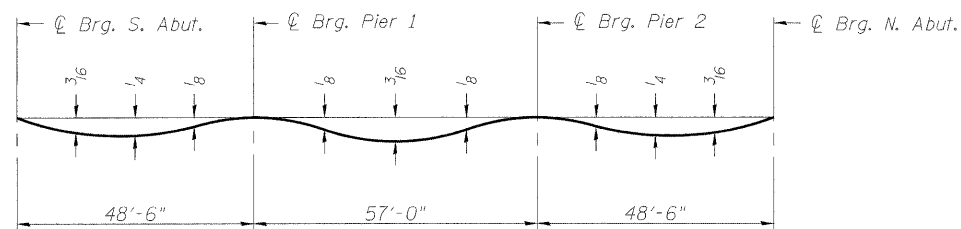
**GENERAL PLAN AND ELEVATION**

**PERRYVILLE ROAD BRIDGE  
OVER SOUTH BRANCH KISHWAUKEE RIVER  
F.A.U. ROUTE 5148  
SECTION 08-00448-00-BR  
WINNEBAGO COUNTY  
STRUCTURE NUMBER 101-3064  
STATION 36+58.20**

SHEET NO. 1 11 SHEETS	F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	5148	08-00448-00-BR	Winnebago	14	4
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT			CONTRACT NO. 85509		

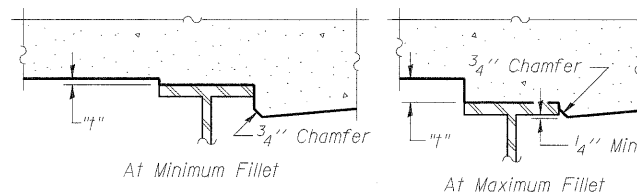


01/28/10  
 LAYOUT  
 SNK  
 01/28/10  
 DRAWN  
 JDM  
 01/28/10  
 REVIEWED  
 SNK  
 01/28/10



**DEAD LOAD DEFLECTION DIAGRAM**  
(Includes weight of concrete only.)

Note:  
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



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

**FILLET HEIGHTS**

**BEAMS 1 AND 5**

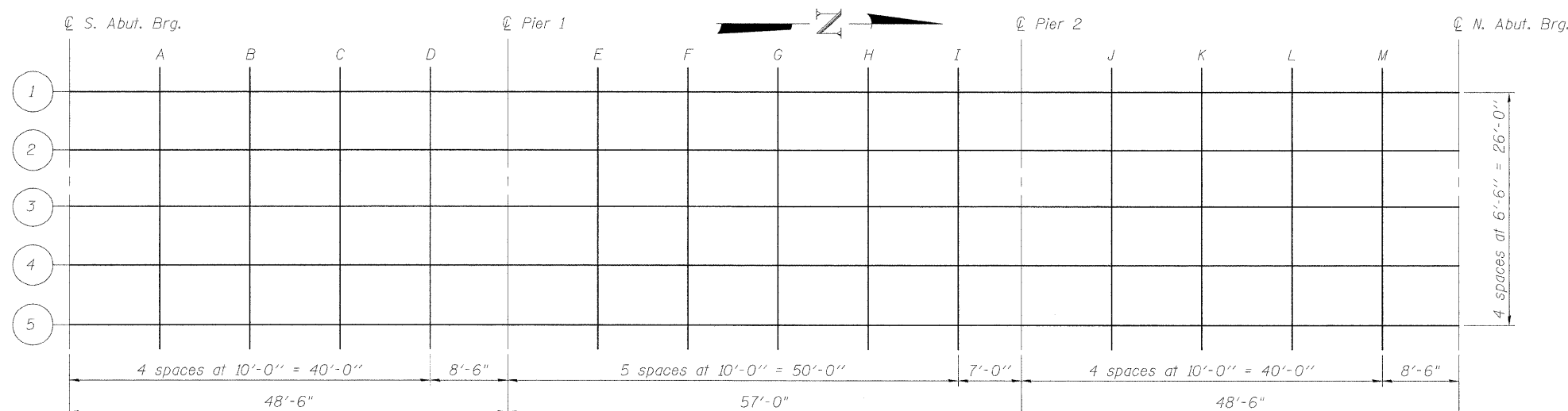
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	35+79.41	13.000	726.090	726.090
CL Brg. S. Abut.	35+81.20	13.000	726.057	726.057
A	35+91.20	13.000	725.876	725.889
B	36+01.20	13.000	725.703	725.722
C	36+11.20	13.000	725.538	725.553
D	36+21.20	13.000	725.381	725.386
CL Pier 1	36+29.70	13.000	725.254	725.254
E	36+39.70	13.000	725.111	725.116
F	36+49.70	13.000	724.977	724.989
G	36+59.70	13.000	724.851	724.866
H	36+69.70	13.000	724.733	724.743
I	36+79.70	13.000	724.622	724.625
CL Pier 2	36+86.7	13.000	724.550	724.550
J	36+96.70	13.000	724.453	724.461
K	37+06.70	13.000	724.365	724.381
L	37+16.70	13.000	724.284	724.302
M	37+26.70	13.000	724.211	724.223
CL Brg. N. Abut.	37+35.20	13.000	724.156	724.156
Bk. N. Abut.	37+36.99	13.000	724.145	724.145

**BEAMS 2 AND 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	35+79.41	6.5	726.192	726.192
CL Brg. S. Abut.	35+81.20	6.5	726.158	726.158
A	35+91.20	6.5	725.977	725.990
B	36+01.20	6.5	725.804	725.823
C	36+11.20	6.5	725.639	725.654
D	36+21.20	6.5	725.482	725.488
CL Pier 1	36+29.70	6.5	725.355	725.355
E	36+39.70	6.5	725.213	725.218
F	36+49.70	6.5	725.079	725.091
G	36+59.70	6.5	724.952	724.967
H	36+69.70	6.5	724.834	724.845
I	36+79.70	6.5	724.724	724.727
CL Pier 2	36+86.7	6.5	724.651	724.651
J	36+96.70	6.5	724.555	724.562
K	37+06.70	6.5	724.466	724.482
L	37+16.70	6.5	724.386	724.404
M	37+26.70	6.5	724.313	724.324
CL Brg. N. Abut.	37+35.20	6.5	724.257	724.257
Bk. N. Abut.	37+36.99	6.5	724.247	724.247

**BEAM 3 & P.G.L.**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	35+79.41	0.000	726.293	726.293
CL Brg. S. Abut.	35+81.20	0.000	726.260	726.260
A	35+91.20	0.000	726.079	726.092
B	36+01.20	0.000	725.906	725.925
C	36+11.20	0.000	725.741	725.756
D	36+21.20	0.000	725.584	725.590
CL Pier 1	36+29.70	0.000	725.457	725.457
E	36+39.70	0.000	725.314	725.319
F	36+49.70	0.000	725.180	725.192
G	36+59.70	0.000	725.054	725.069
H	36+69.70	0.000	724.936	724.946
I	36+79.70	0.000	724.825	724.828
CL Pier 2	36+86.7	0.000	724.753	724.753
J	36+96.70	0.000	724.656	724.664
K	37+06.70	0.000	724.568	724.584
L	37+16.70	0.000	724.487	724.506
M	37+26.70	0.000	724.414	724.426
CL Brg. N. Abut.	37+35.20	0.000	724.359	724.359
Bk. N. Abut.	37+36.99	0.000	724.348	724.348

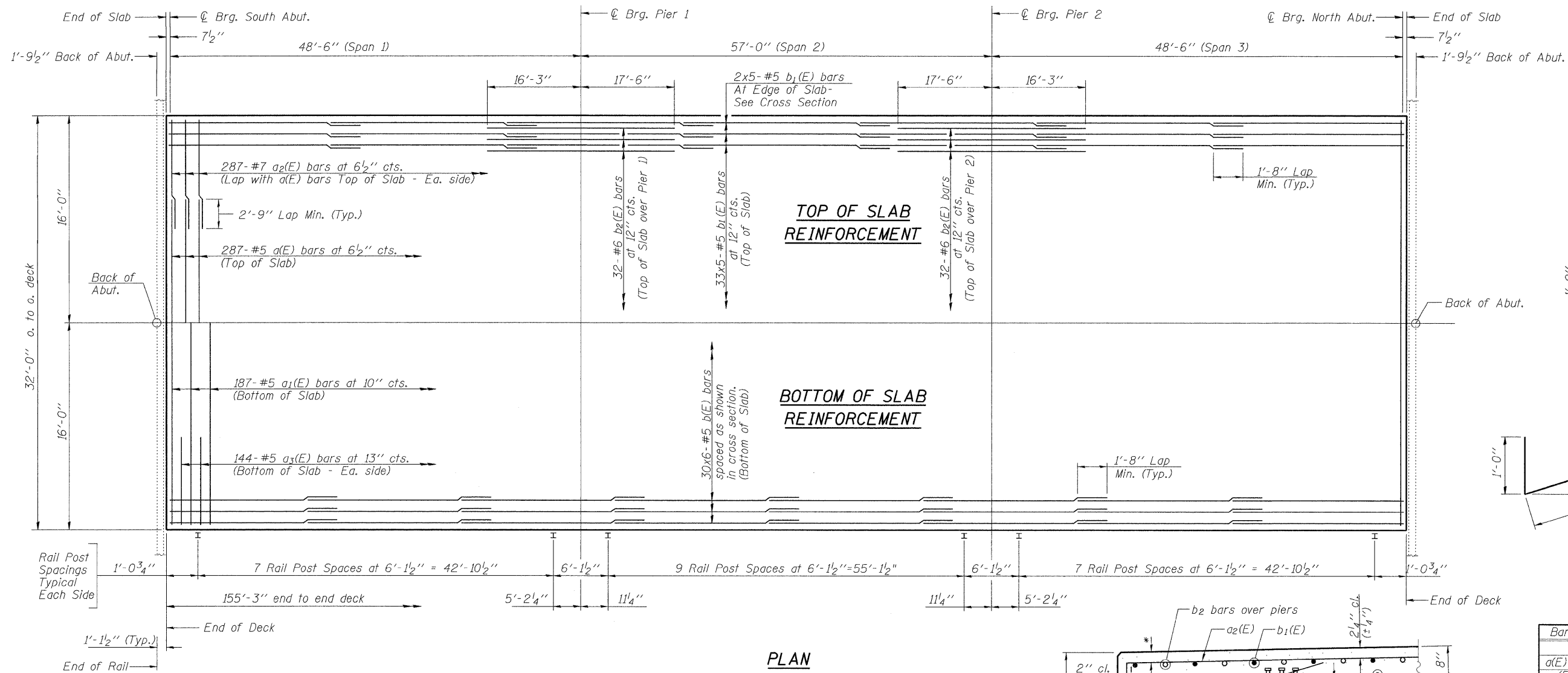


**DIAGRAMMATIC PLAN - TOP OF CONCRETE ELEVATIONS**

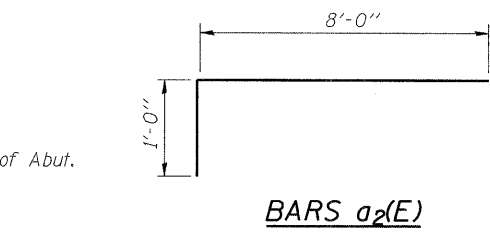
**TOP OF SLAB ELEVATIONS**  
PERRYVILLE ROAD BRIDGE  
OVER SOUTH BRANCH KISHWAUKEE RIVER  
F.A.U. ROUTE 5148  
SECTION 08-00448-00-BR  
WINNEBAGO COUNTY  
STRUCTURE NUMBER 101-3064  
STATION 36+58.20

01/27/2010  
 A:\05\05\09\00003\Card\Struct\Sheet\5-005-705 Tables.dgn  
 SWK 01/28/10  
 JDM 01/28/10  
 SWK 01/28/10

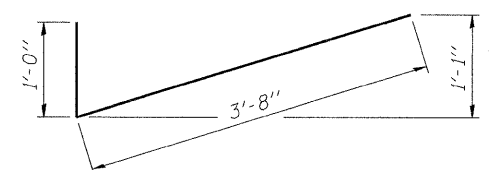
09L0003	© Copyright Hanson Professional Services Inc. 2009		F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
01/28/10			5148	08-00448-00-BR	Winnebago	14	5
			FED. ROAD DIST. NO. 2		ILLINOIS FED. AID PROJECT		



PLAN



BARS a2(E)

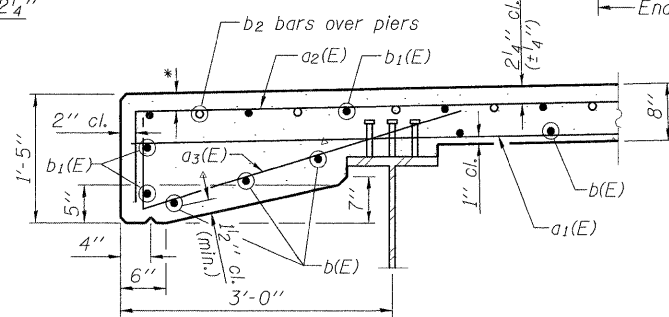


BARS a3(E)

**SUPERSTRUCTURE  
BILL OF MATERIAL**

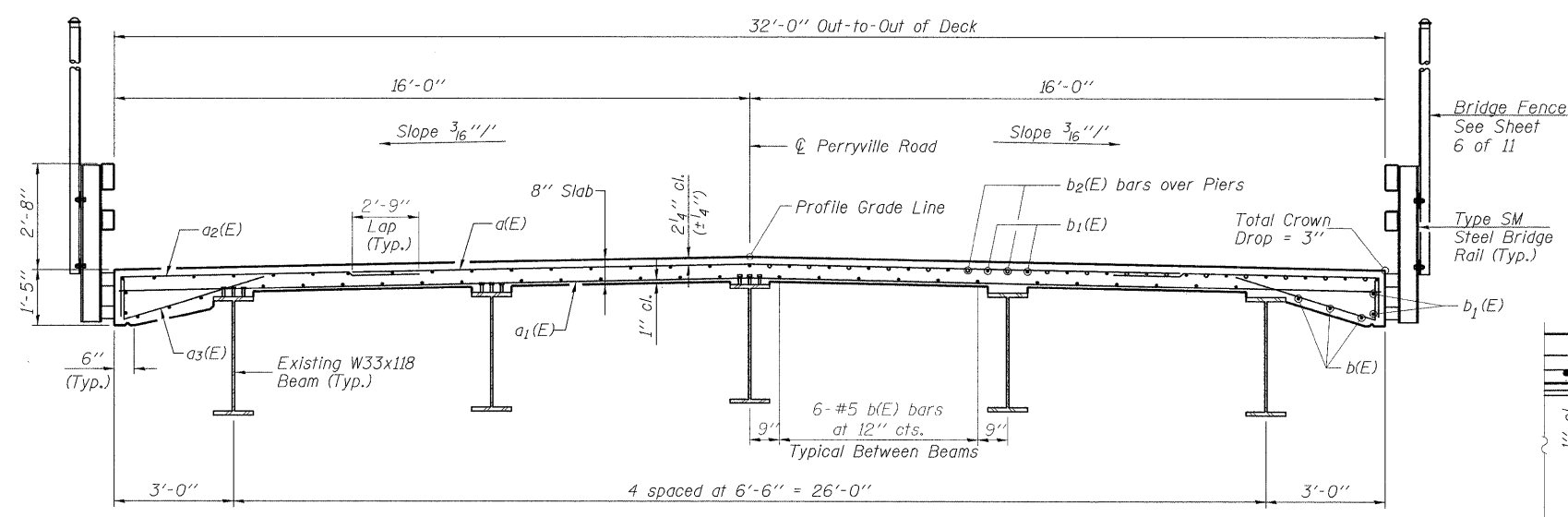
Bar	No.	Size	Length	Shape
a(E)	287	#5	21'-2"	—
a1(E)	187	#5	31'-8"	—
a2(E)	574	#7	9'-0"	—
a3(E)	288	#5	4'-8"	✓
b(E)	180	#5	27'-3"	—
b1(E)	185	#5	32'-4"	—
b2(E)	64	#6	33'-9"	—
Reinforcement Bars, Epoxy Coated			Pound	39,070
Concrete Superstructure			Cu. Yds.	141.4

Reinforcement bars designated (E) shall be epoxy coated.  
Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.



SECTION THRU EDGE OF SLAB

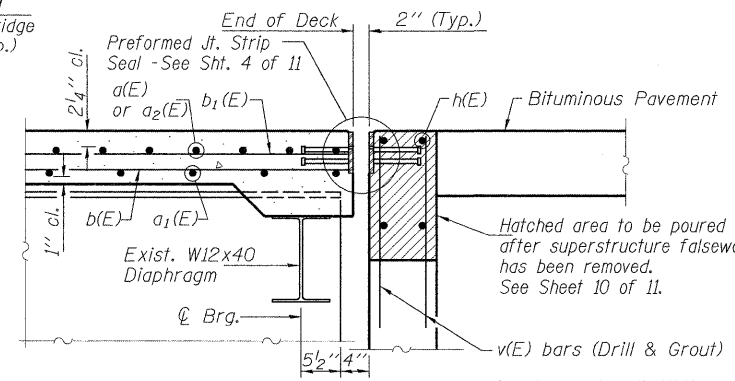
\* Reinforcement bars in the top deck may be placed with a 1/2 inch minimum clearance in the area of the rail post anchor devices. The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



NEAR MIDSPAN

NEAR PIER

**PROPOSED BRIDGE CROSS SECTION**



SECTION THRU ABUTMENTS

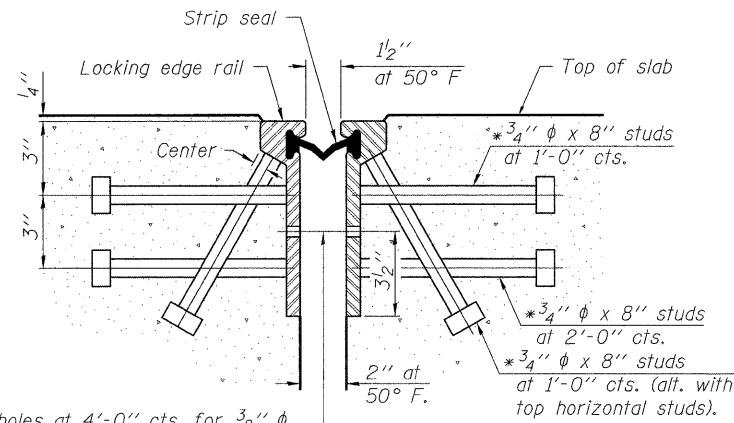
**SUPERSTRUCTURE**  
**PERRYVILLE ROAD BRIDGE**  
**OVER SOUTH BRANCH KISHWAUKEE RIVER**  
**F.A.U. ROUTE 5148**  
**SECTION 08-00448-00-BR**  
**WINNEBAGO COUNTY**  
**STRUCTURE NUMBER 101-3064**  
**STATION 36+58.20**

SHEET NO. 3	F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
11 SHEETS	5148	08-00448-00-BR	Winnebago	14	6
			CONTRACT NO. 85509		



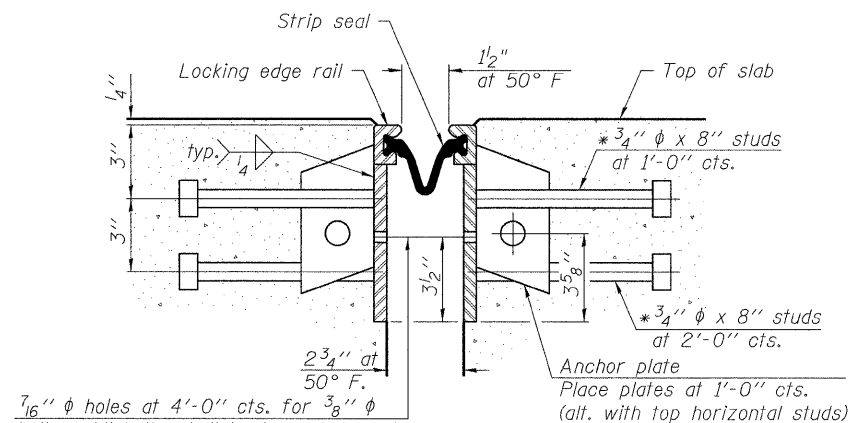
02/01/2010  
 SMK 01/28/10  
 JDM 01/28/10  
 SMK 01/28/10  
 LAYOUT  
 DRAWN  
 REVIEWED

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



7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

**SECTION THRU  
ROLLED RAIL JOINT**

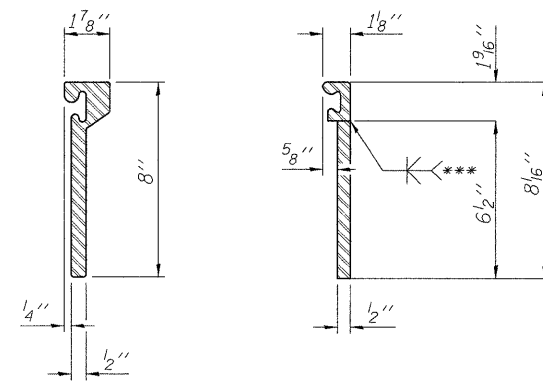


7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

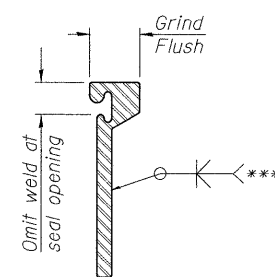
**SECTION THRU  
WELDED RAIL JOINT**

**Notes:**

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches. The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints. The manufacturer's recommended installation methods shall be followed. The deck dimensions detailed on Sheet 3 of 11 are based on the use of rolled rail joints. If the Contractor elects to use welded rail joints, the deck dimensions and end rail post spacing shall be modified accordingly.



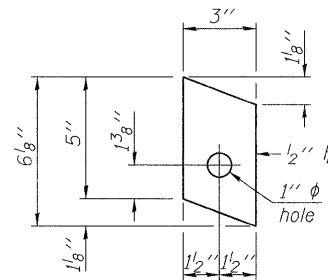
**ROLLED  
(EXTRUDED) RAIL      WELDED RAIL**



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

**LOCKING EDGE  
RAIL SPLICE**

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



**ANCHOR PLATE  
(for welded rail)**

**LOCKING EDGE RAILS**

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	64

**PREFORMED JOINT STRIP SEAL**

PERRYVILLE ROAD BRIDGE  
OVER SOUTH BRANCH KISHWAUKEE RIVER  
F.A.U. ROUTE 5148  
SECTION 08-00448-00-BR  
WINNEBAGO COUNTY  
STRUCTURE NUMBER 101-3064  
STATION 36+58.20

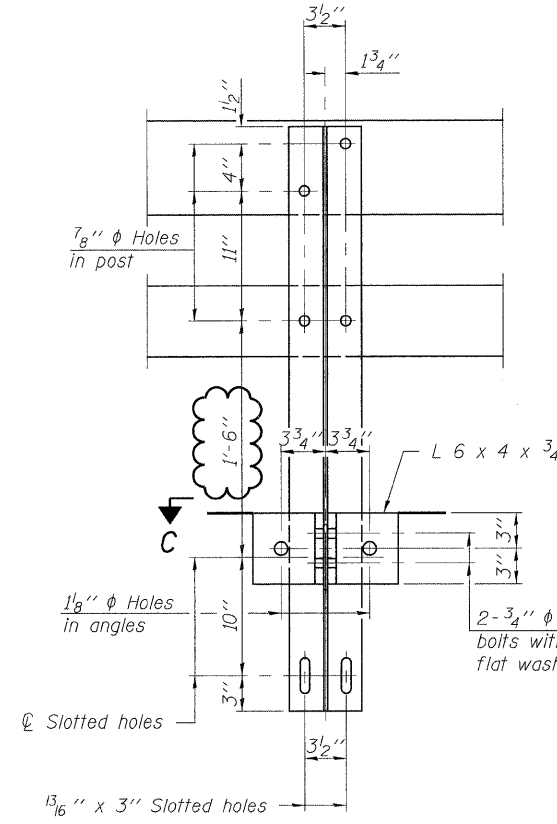
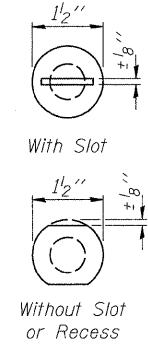
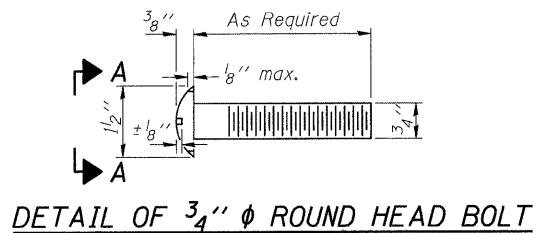
01/27/2010  
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DRAWN: JDM 01/28/10  
REVIEWED: SNK 01/28/10

09L0003  
01/28/10

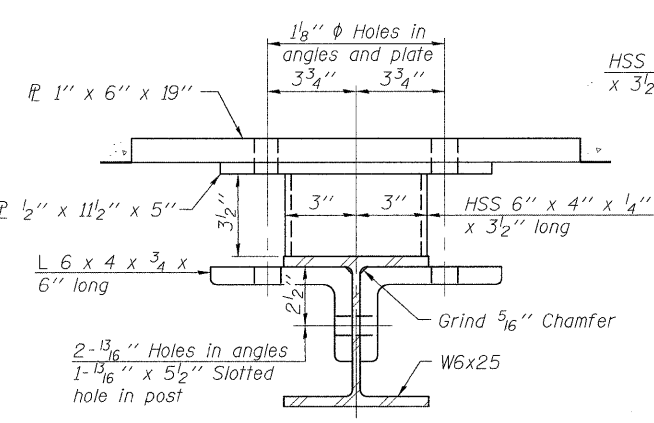
Corporate License Number 194-001-084  
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**HANSON**

SHEET NO. 4  
11 SHEETS

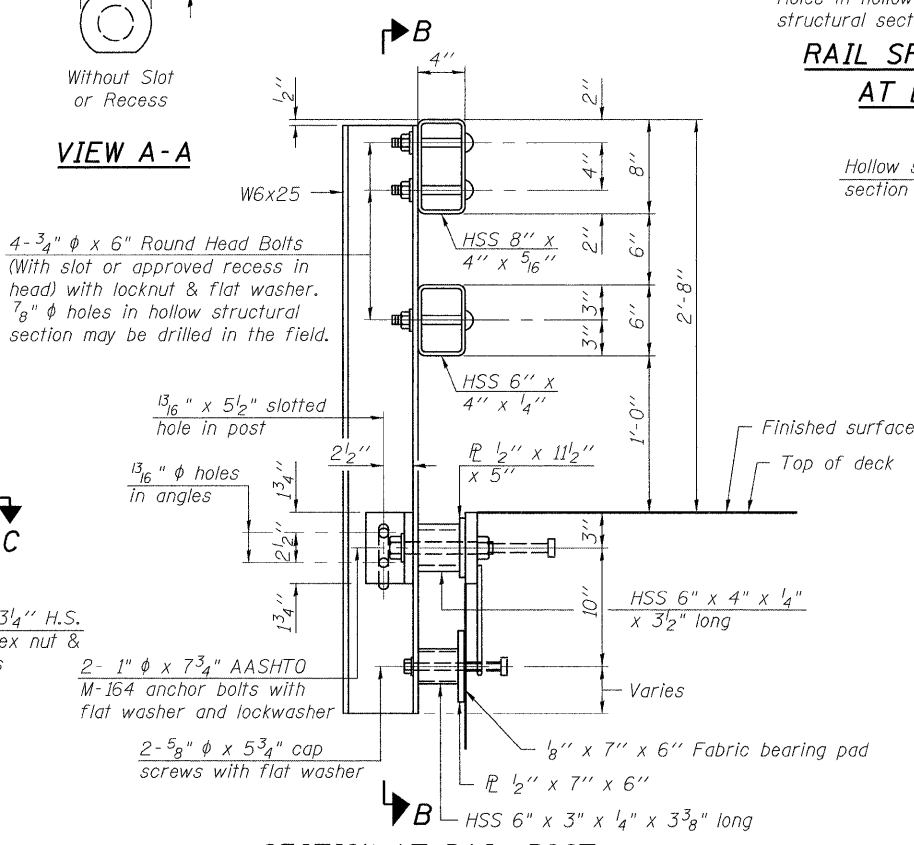
F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5148	08-00448-00-BR	Winnebago	14	7
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT			CONTRACT NO. 85509	



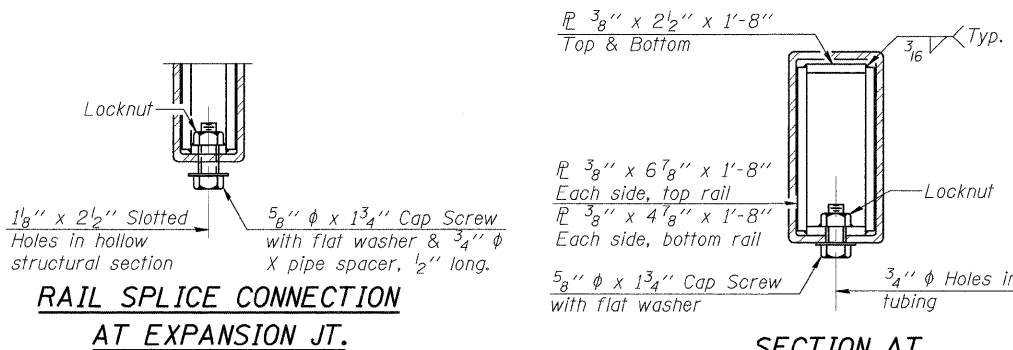
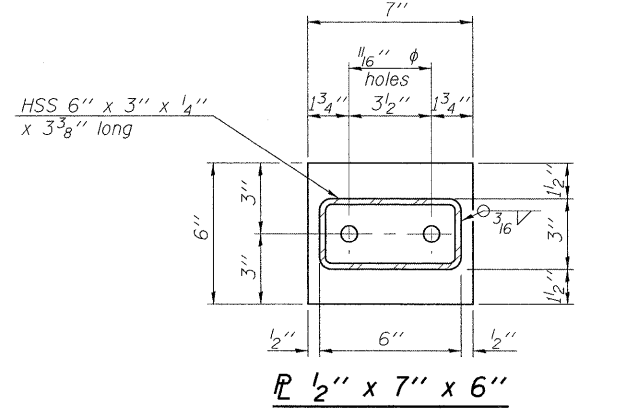
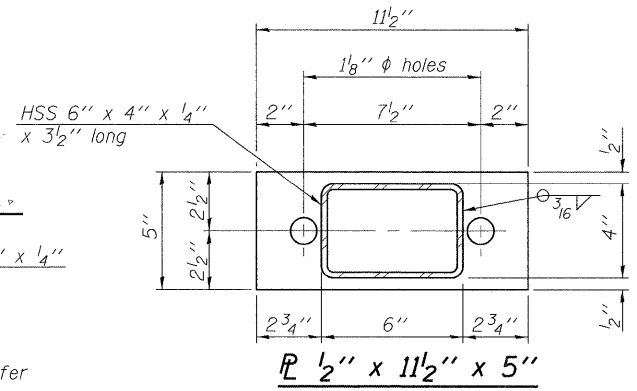
SECTION B-B



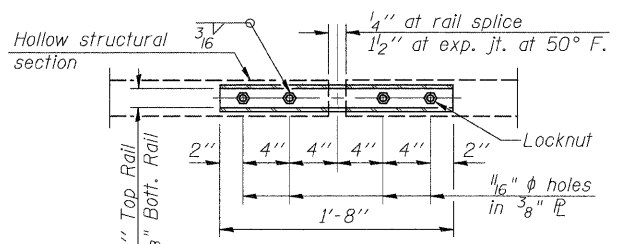
SECTION C-C



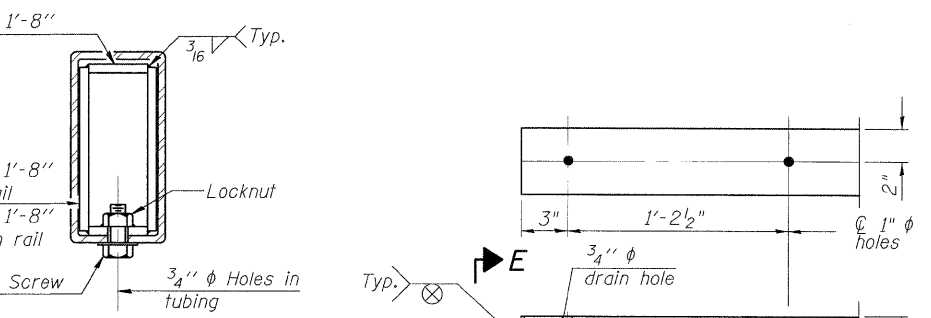
SECTION AT RAIL POST



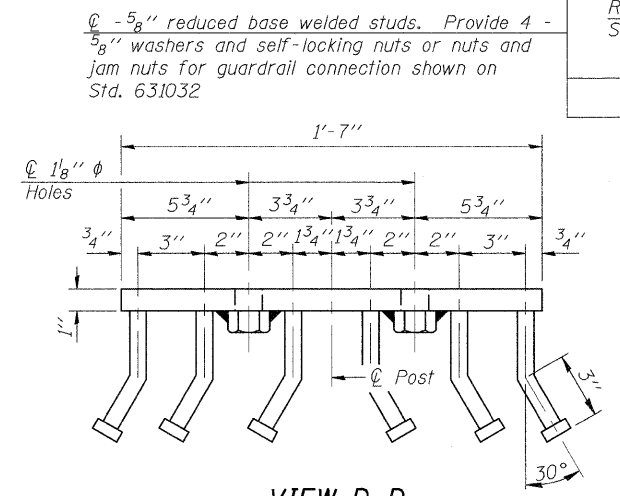
RAIL SPLICE CONNECTION AT EXPANSION JT.



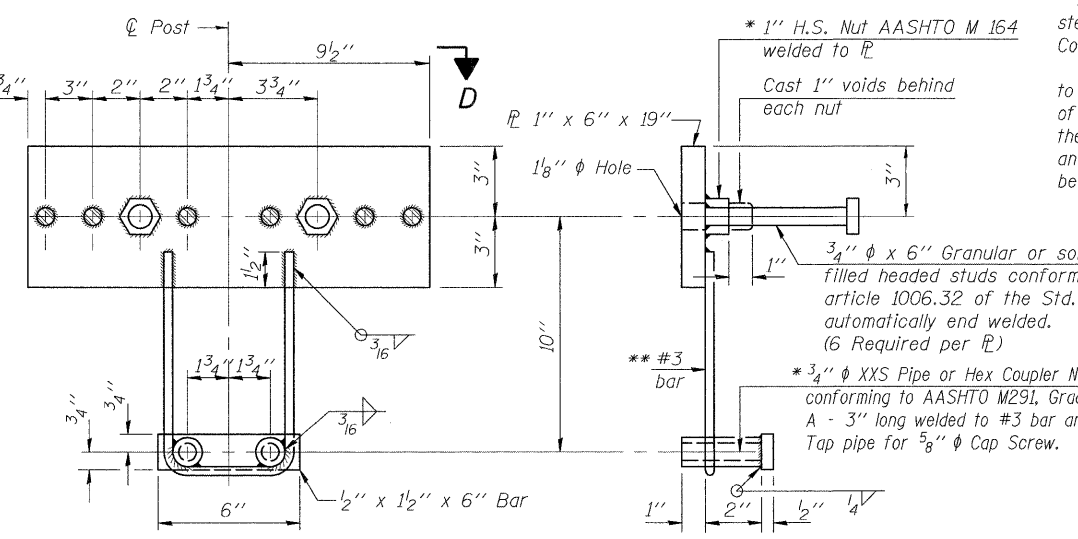
PLAN-BOTT. SPLICE TYPICAL



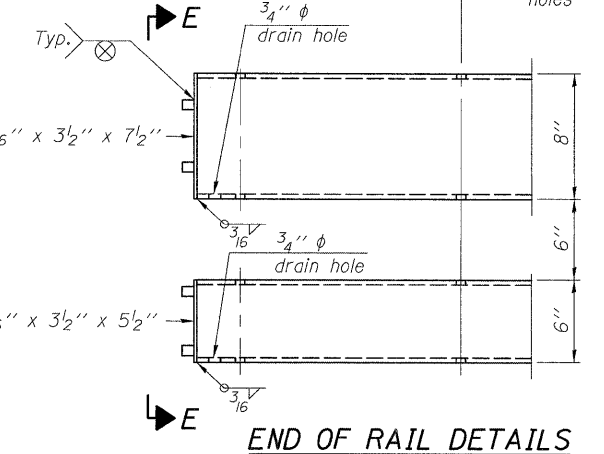
SECTION AT RAIL SPLICE



VIEW D-D



ANCHOR DEVICE



END OF RAIL DETAILS

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F. All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50. Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164. All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232. All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted. Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM. 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 Bridge Rail, Type SM. The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.

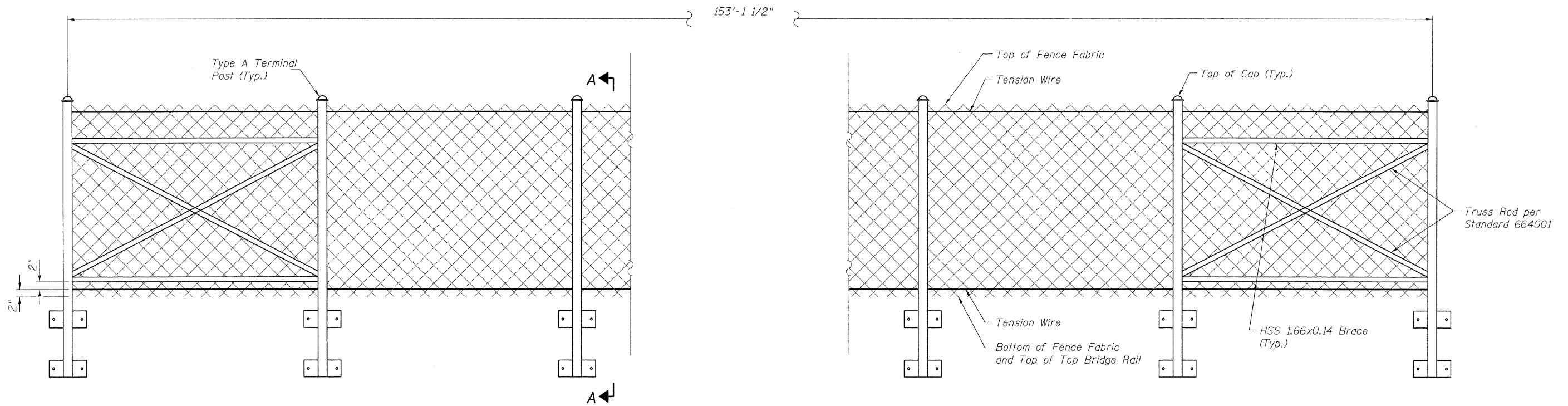
BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing (Special)	Foot	315

**STEEL BRIDGE RAIL - TYPE SM**  
**PERRYVILLE ROAD BRIDGE**  
**OVER SOUTH BRANCH KISHWAUKEE RIVER**  
**F.A.U. ROUTE 5148**  
**SECTION 08-00448-00-BR**  
**WINNEBAGO COUNTY**  
**STRUCTURE NUMBER 101-3064**  
**STATION 36+58.20**

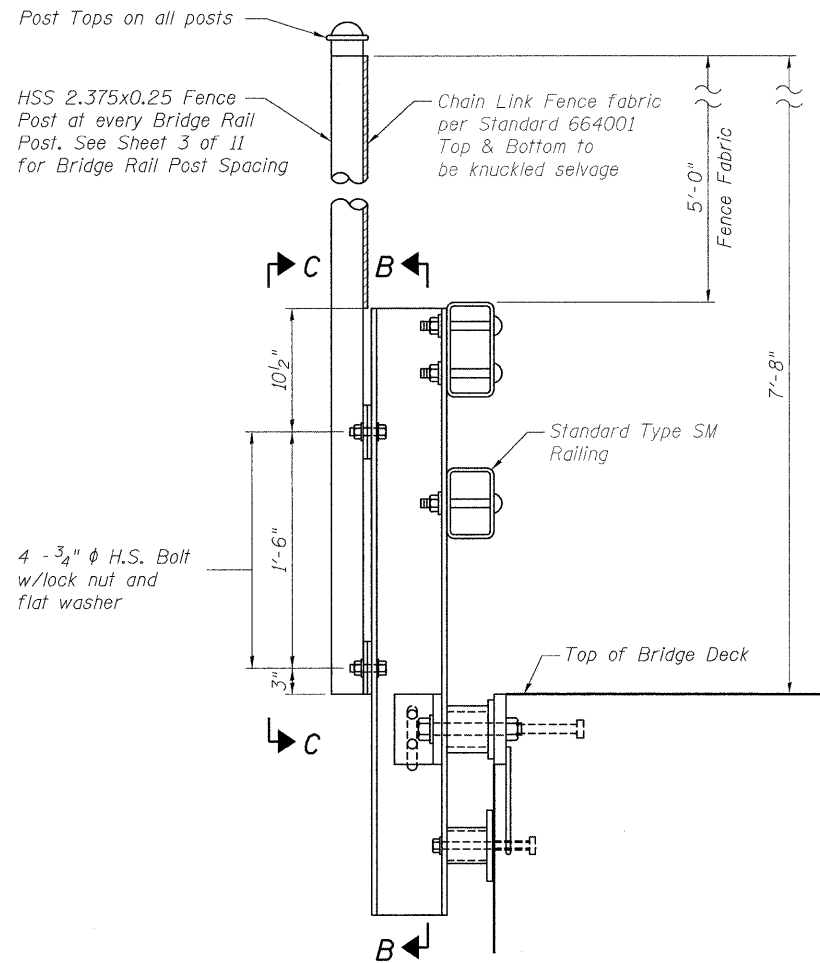
01/27/2010  
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 DRAWN: JDM 01/28/10  
 REVIEWED: SNK 01/28/10



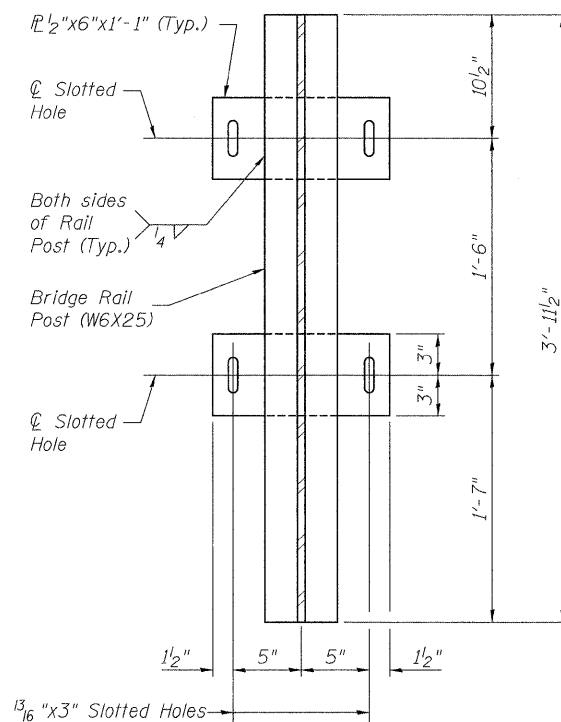


**ELEVATION VIEW OF BRIDGE FENCE**

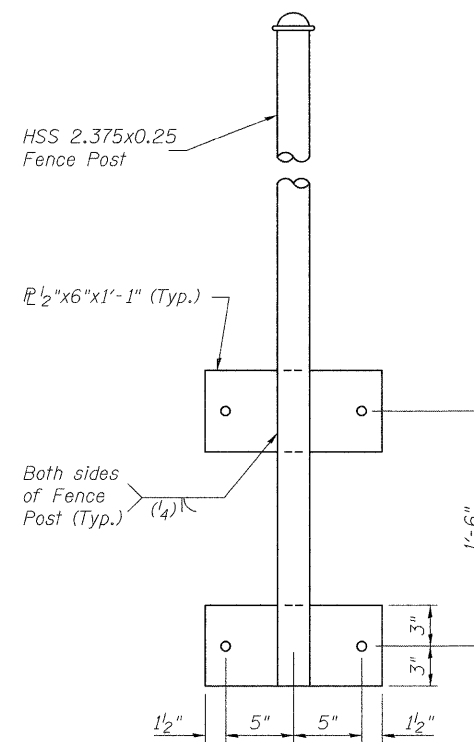
Type SM Bridge Rail not shown for clarity  
 Fence Fabric to be installed on roadway side.  
 Fence Fabric to be Knuckled selvage at top and bottom.



**SECTION A-A**



**SECTION B-B**



**SECTION C-C**

**NOTES:**

Hollow Structural Section (HSS) shall conform to the requirements of ASTM designation A 500 Grade B (Fy = 42 ksi).  
 All steel plates shall conform to the requirements of AASHTO M270 Grade 36.  
 All bolts, nuts and washers shall conform to the requirements of AASHTO M164.  
 All bolts, nuts and washers shall be galvanized according to AASHTO M232.  
 The truss rod and tension wire shall be fabricated and galvanized in accordance with Standard 664001 and Section 664 of the Standard Specifications.  
 All posts, braces and plates shall be galvanized after shop fabrication according to AASHTO M111 and ASTM A385.  
 The 3/4\" diameter high strength bolts connecting the fence post assembly to the bridge rail post assembly shall be tightened according to Article 505.04(f)(2).  
 Cost of Bridge Fence included with Steel Railing (Special).

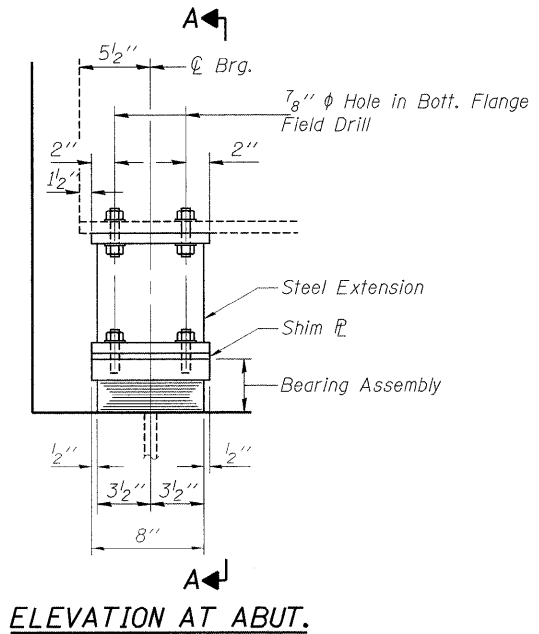
**BRIDGE FENCE**  
**PERRYVILLE ROAD BRIDGE**  
**OVER SOUTH BRANCH KISHWAUKEE RIVER**  
**F.A.U. ROUTE 5148**  
**SECTION 08-00448-00-BR**  
**WINNEBAGO COUNTY**  
**STRUCTURE NUMBER 101-3064**  
**STATION 36+58.20**

01/27/2010  
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 LAYOUT: SMK 01/28/10  
 DRAWN: JDM 01/28/10  
 REVIEWED: SMK 01/28/10

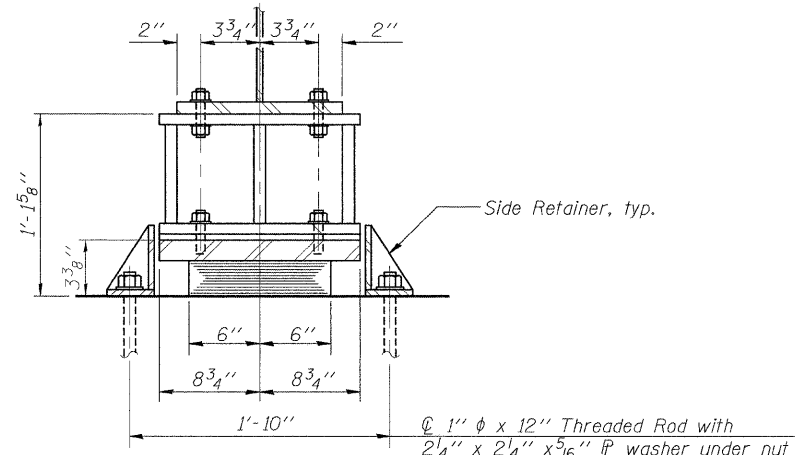
SHEET NO. 6 11 SHEETS	F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	5148	08-00448-00-BR	Winnebago	14	9
DATE: 01/28/10			CONTRACT NO. 85509		
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT					





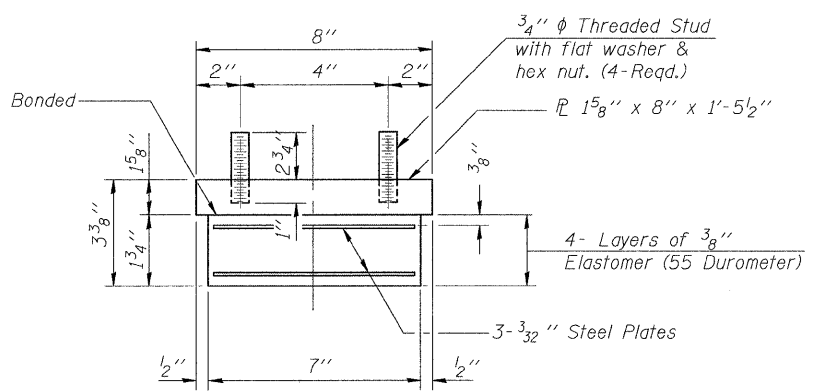


**ELEVATION AT ABUT.**



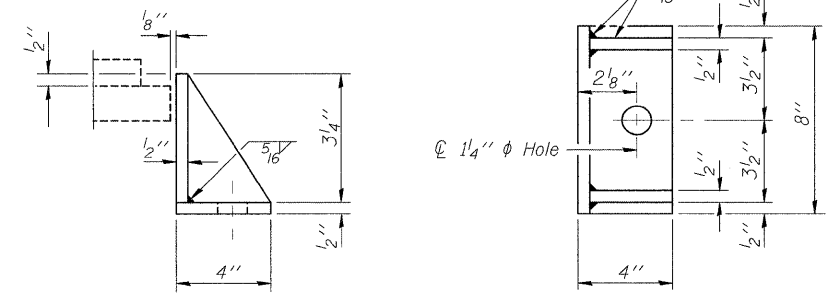
**SECTION A-A**

**TYPE I ELASTOMERIC EXP. BRG.**



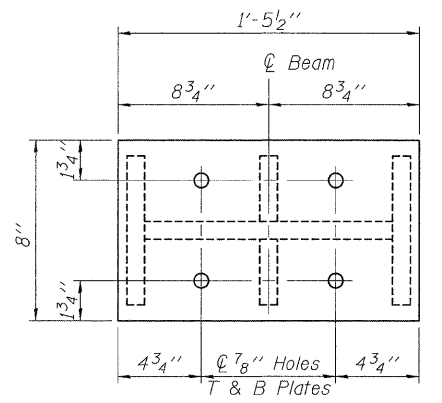
**BEARING ASSEMBLY**

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

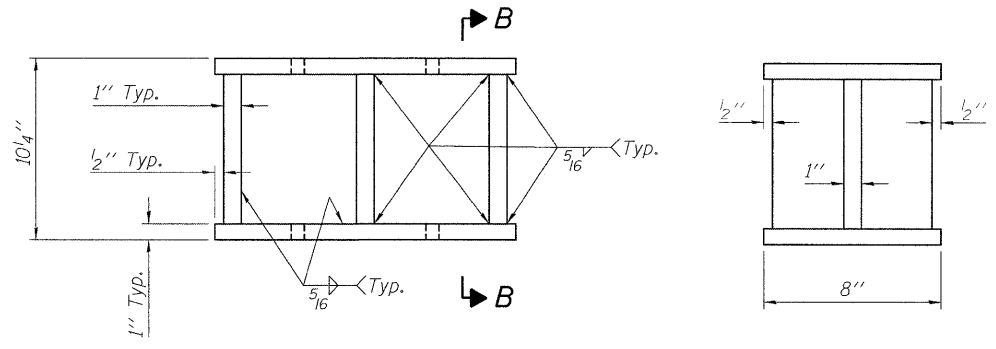


**SIDE RETAINER**

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



**PLAN STEEL EXTENSION**



**ELEVATION STEEL EXTENSION**

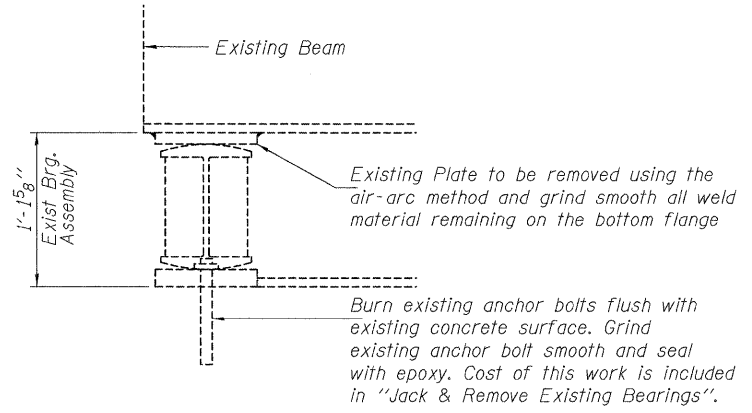
**SECTION B-B**

- Notes:
1. Steel extensions will be paid for as Structural Steel.
  2. The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.
  3. Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
  4. All embedded and separate bearing plates, side retainers, steel extensions, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 (as applicable).
  5. H.S. bolts in bearing assembly shall be galvanized according to AASHTO M298 Class 50.

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	5

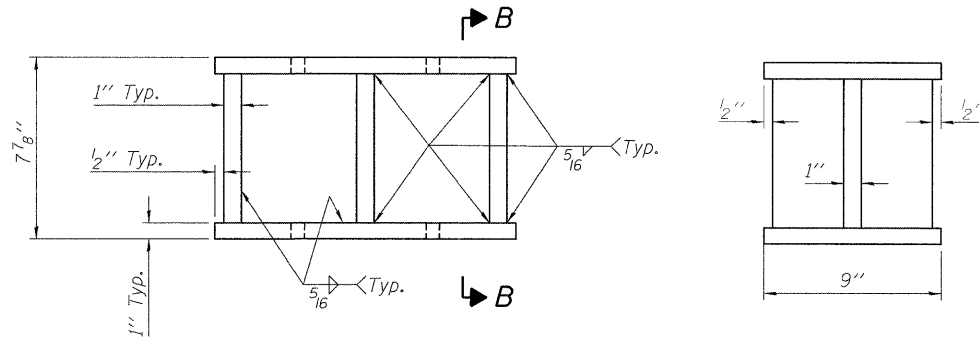
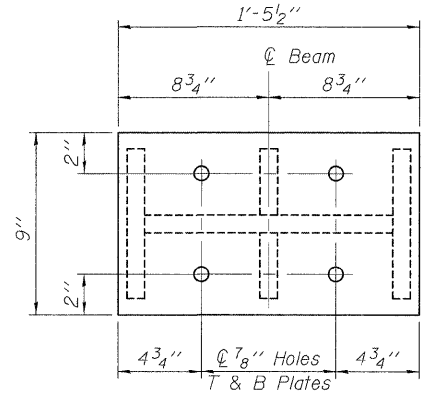
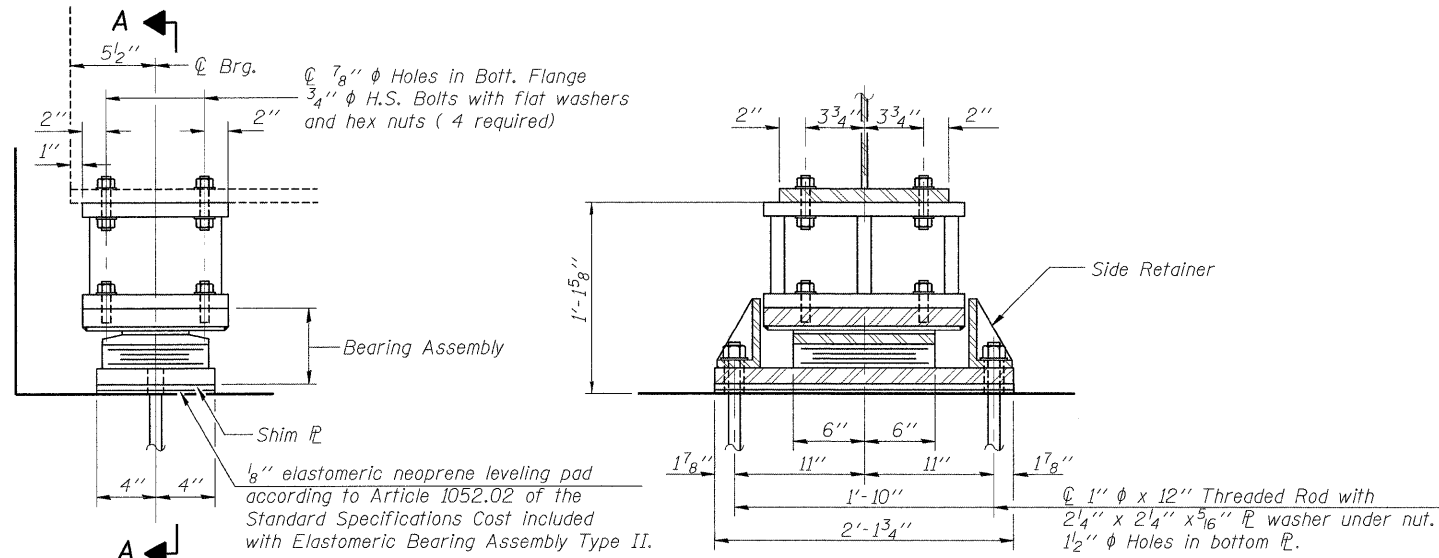
**SOUTH ABUTMENT BEARING ASSEMBLY**  
 PERRYVILLE ROAD BRIDGE  
 OVER SOUTH BRANCH KISHWAUKEE RIVER  
 F.A.U. ROUTE 5148  
 SECTION 08-00448-00-BR  
 WINNEBAGO COUNTY  
 STRUCTURE NUMBER 101-3064  
 STATION 36+58.20



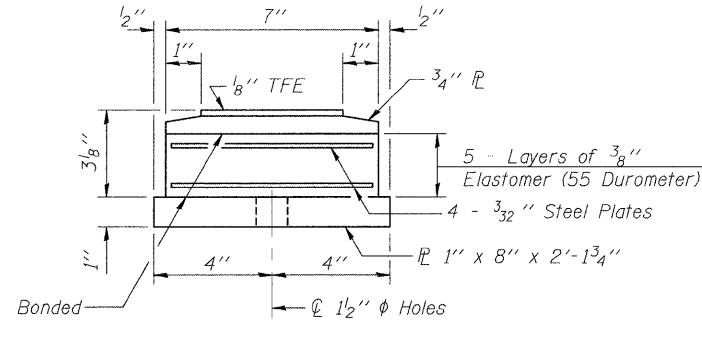
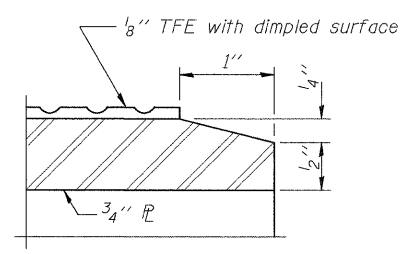
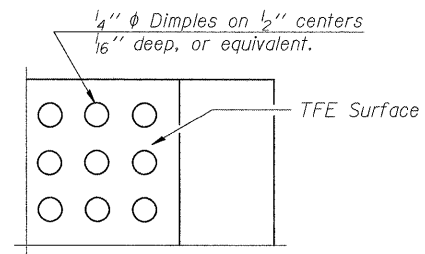
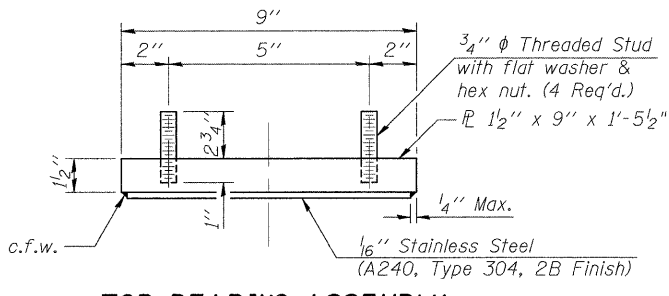
**EXISTING ABUTMENT BEARING**

01/27/2010  
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 DRAWN JDM 01/28/10  
 REVIEWED SMK 01/28/10

09L0003	Corporate License Number 184-001-084 © Copyright Hanson Professional Services Inc. 2009	F.A.U. ROUTE 5148	SECTION 08-00448-00-BR	COUNTY Winnebago	TOTAL SHEETS 14	SHEET NO. 11
DATE 01/28/10	<b>HANSON</b>	SHEET NO. 8 11 SHEETS		CONTRACT NO. 85509		
FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT						

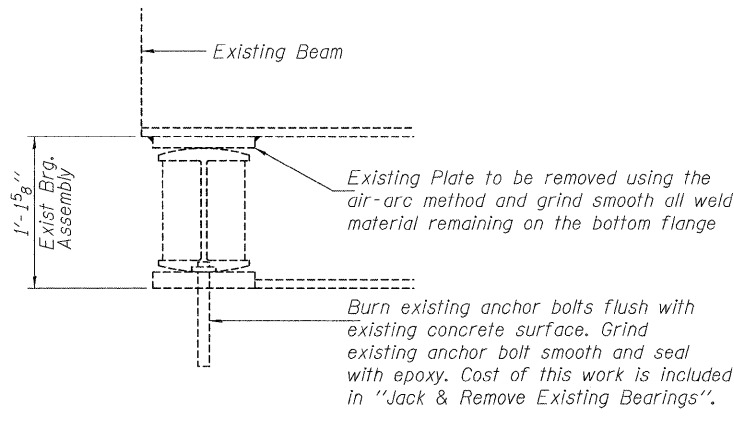
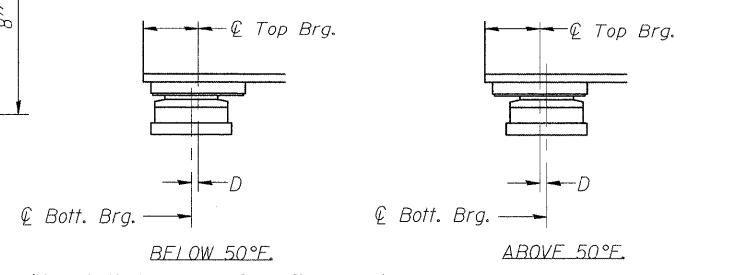


- Notes:**
- The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.
  - Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
  - All embedded and separate bearing plates, side retainers, steel extensions, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 (as applicable).
  - H.S. bolts in bearing assembly shall be galvanized according to AASHTO M298 Class 50.



**Notes:**

The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces. Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	5

**NORTH ABUTMENT BEARING ASSEMBLY**

**PERRYVILLE ROAD BRIDGE OVER SOUTH BRANCH KISHWAUKEE RIVER**

F.A.U. ROUTE 5148

SECTION 08-00448-00-BR

WINNEBAGO COUNTY

STRUCTURE NUMBER 101-3064

STATION 36+58.20

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09L0003

DATE 01/28/10

11 SHEETS

F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5148	08-00448-00-BR	Winnebago	14	12

CONTRACT NO. 85509

FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT

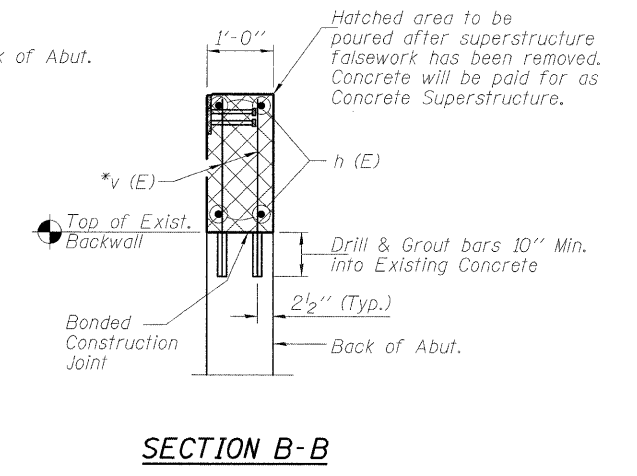
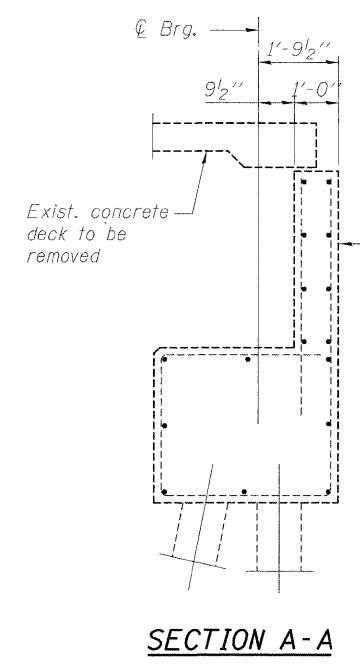
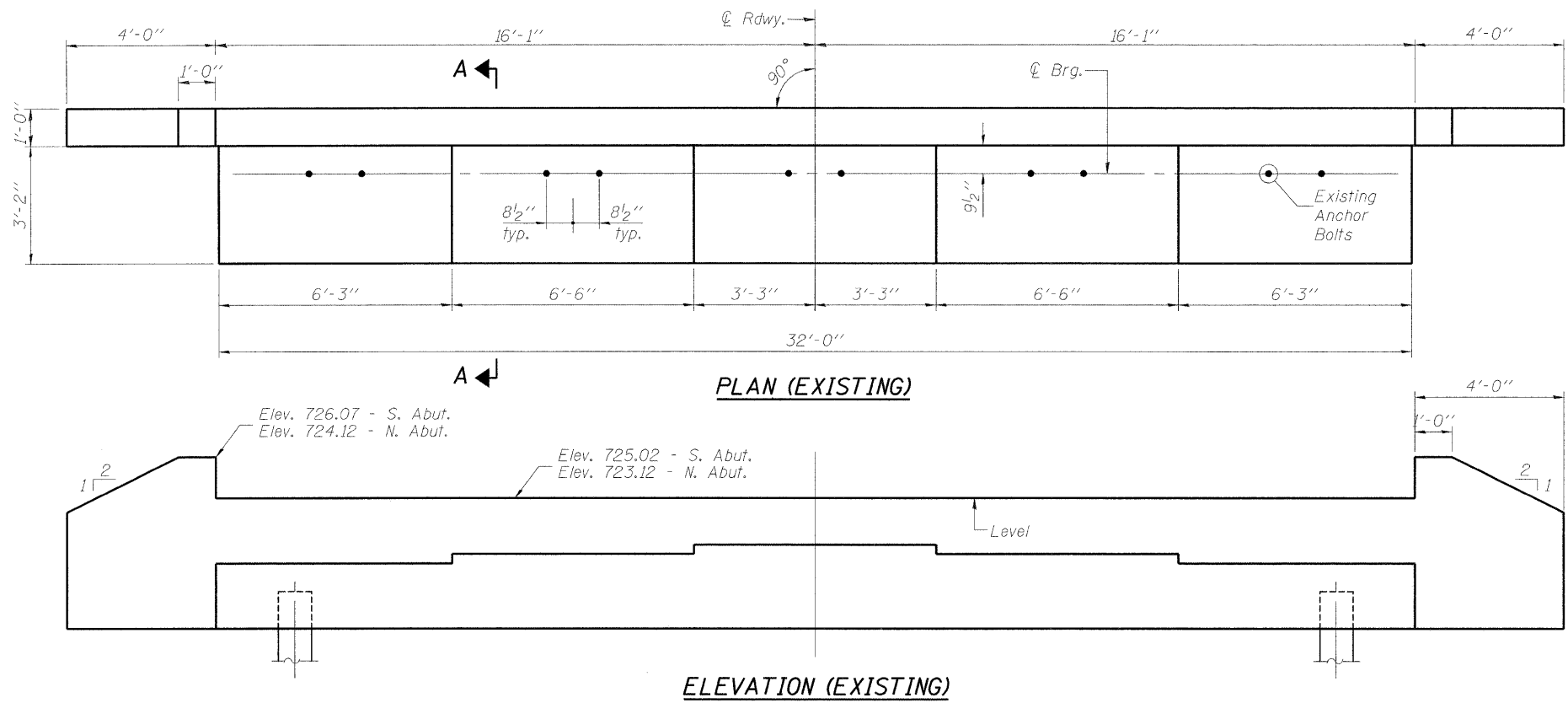
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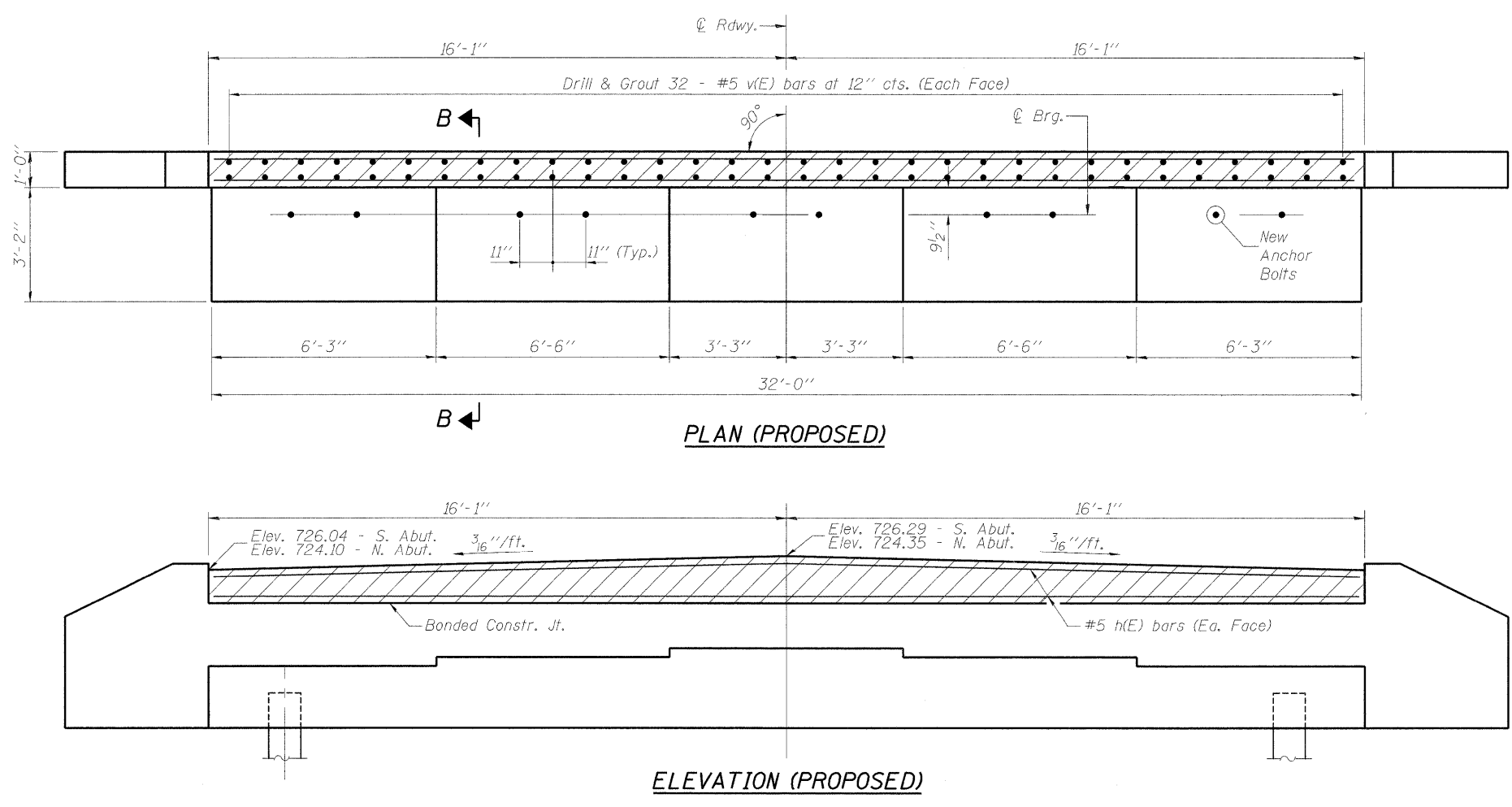
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\* v(E) bars may be cut in field to exact length required to match deck cross slope



**BILL OF MATERIAL (Both Abutments)**

Bar	No.	Size	Length	Shape
h(E)	8	#5	31'-10"	—
v(E)	128	#5	1'-10"	—
Concrete Superstructure		Cu. Yd.	2.8	
Reinforcement Bars, Epoxy Coated		Pound	510	
Drill and Grout Bars		Each	128	
Anchor Bolts, 1"		Each	20	

**ABUTMENTS**

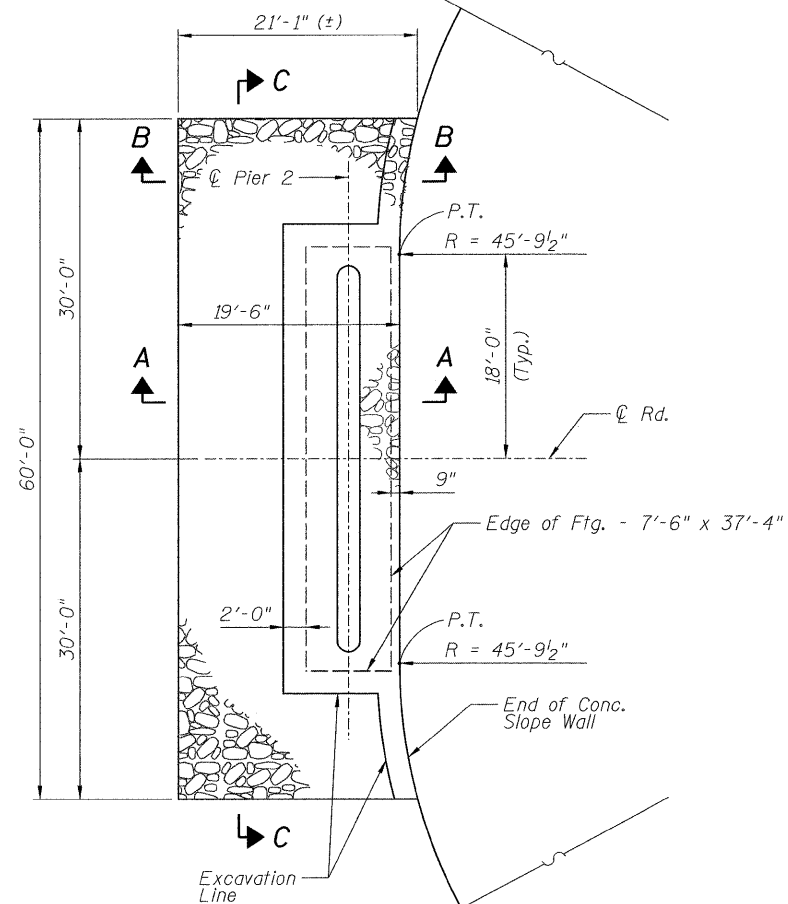
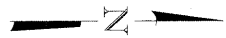
PERRYVILLE ROAD BRIDGE  
OVER SOUTH BRANCH KISHWAUKEE RIVER  
F.A.U. ROUTE 5148  
SECTION 08-00448-00-BR  
WINNEBAGO COUNTY  
STRUCTURE NUMBER 101-3064  
STATION 36+58.20

Corporate License Number B34-001-084  
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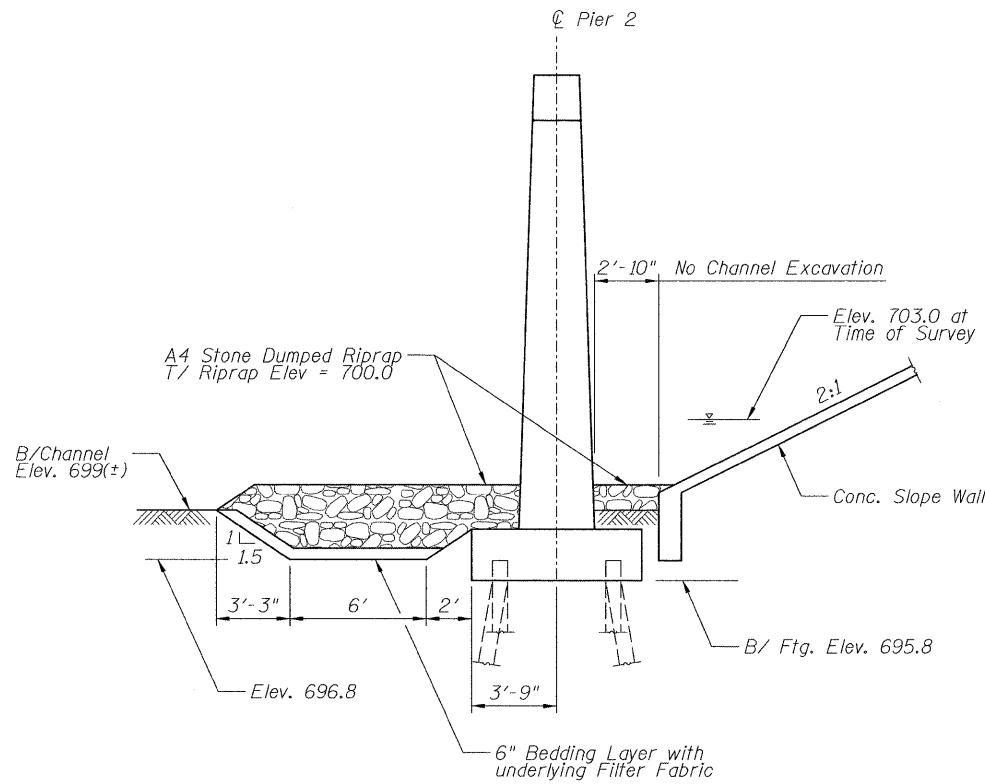
**HANSON**

DATE: 01/28/10	SHEET NO. 10	F.A.U. ROUTE: 5148	SECTION: 08-00448-00-BR	COUNTY: Winnebago	TOTAL SHEETS: 14	SHEET NO.: 13
	11 SHEETS	CONTRACT NO. 85509		FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT		

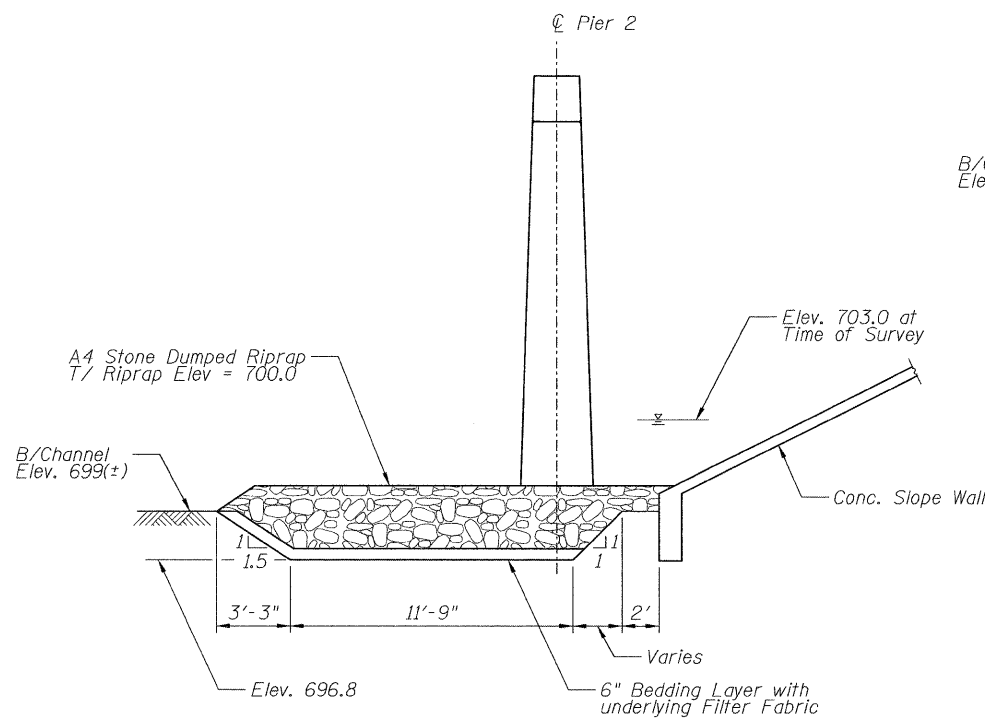
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 LAYOUT: SMK 01/28/10  
 DRAWN: JDM 01/28/10  
 REVIEWED: SMK 01/28/10



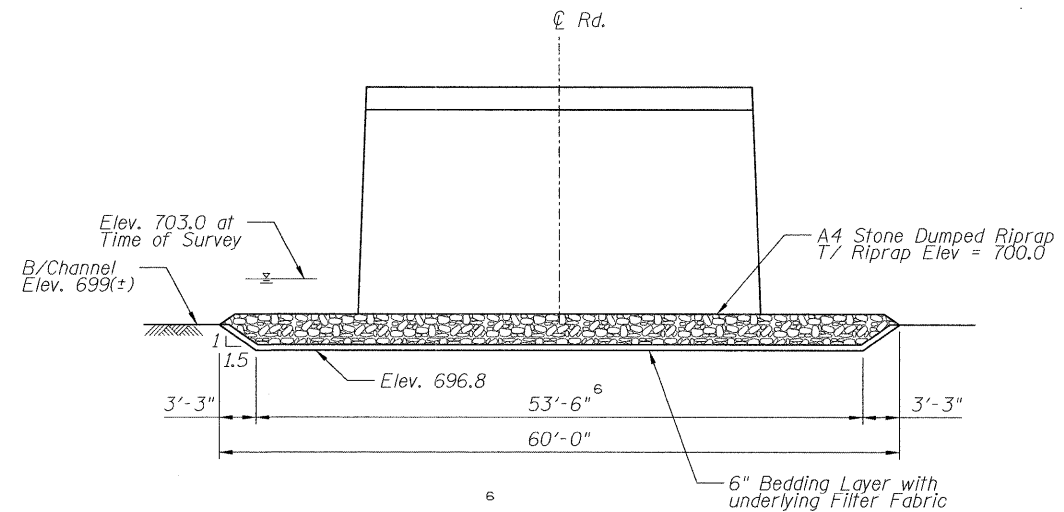
**PLAN**



**SECTION A-A**



**SECTION B-B**



**SECTION C-C**

**NOTES**

1. The Contractor shall exercise caution during all countermeasure installation operations to prevent any damage to structural components or utilities not within the scope of these outlined repairs. Structural components or utilities that are not within scope of these repairs and improvements that are damaged during the repair operations shall be repaired or replaced at the expense of the Contractor to the satisfaction of the Owner.
2. The channel contour shown on this plan based on a survey conducted in Summer 2009. To verify the current channel conditions, the Contractor shall perform a survey of the channel bottom conditions surrounding Pier 2 prior to excavation. Contractor shall verify the actual pier dimensions and existing channel bottom contours, this survey shall be performed by the Contractor to determine the required extent of material to be excavated and the volume of riprap to be placed. Any additional material required as a result of changes to the channel contour shall be paid for at the contract unit price for Stone Dumped Riprap, Class A4 in accordance with the Specifications.
3. The Contractor shall obtain and comply with all federal, state, and local permits prior to beginning construction. The costs associated with obtaining and complying with permits shall be incidental to the contract.
4. Prior to excavation, the Contractor shall be responsible for locating all utilities that could potentially be damaged by construction or construction equipment.
5. After excavation is complete, the Contractor shall dispose of excavation material in accordance with federal, state, and local laws.
6. Prior to placing geotextile, remove all debris that protrudes from the channel bottom that may puncture the geotextile.
7. All construction shall be in accordance with O.S.H.A. requirements.
8. After construction is complete, the jobsite shall be cleaned of all construction related debris to the satisfaction of the Engineer.
9. Excavation shall not encroach within 2'-0" of the face of the footings or the toe of the north slope wall.

**SCOUR COUNTERMEASURES PLAN**  
**PERRYVILLE ROAD BRIDGE**  
**OVER SOUTH BRANCH KISHWAUKEE RIVER**  
**F.A.U. ROUTE 5148**  
**SECTION 08-00448-00-BR**  
**WINNEBAGO COUNTY**  
**STRUCTURE NUMBER 101-3064**  
**STATION 36+58.20**

01/27/10  
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LAYOUT	SMK	01/28/10
DRAWN	MWH	01/28/10
REVIEWED	SMK	01/28/10

JOB NO. 09L0003		Corporate License Number 194-001-084		F.A.U. ROUTE 5148		SECTION 08-00448-00-BR		COUNTY Winnebago		TOTAL SHEETS 14		SHEET NO. 14	
DATE 01/28/10				SHEET NO. 11		CONTRACT NO. 85509		FED. ROAD DIST. NO. 2		ILLINOIS		FED. AID PROJECT	
				11 SHEETS									