

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

F.A.I. RTE. 70 & F.A.P. RTE. 328 (I-70/US45)
SECTION D7 BRIDGE PAINTING 2013-1

**BRIDGE PAINTING
FAYETTE & EFFINGHAM COUNTIES**

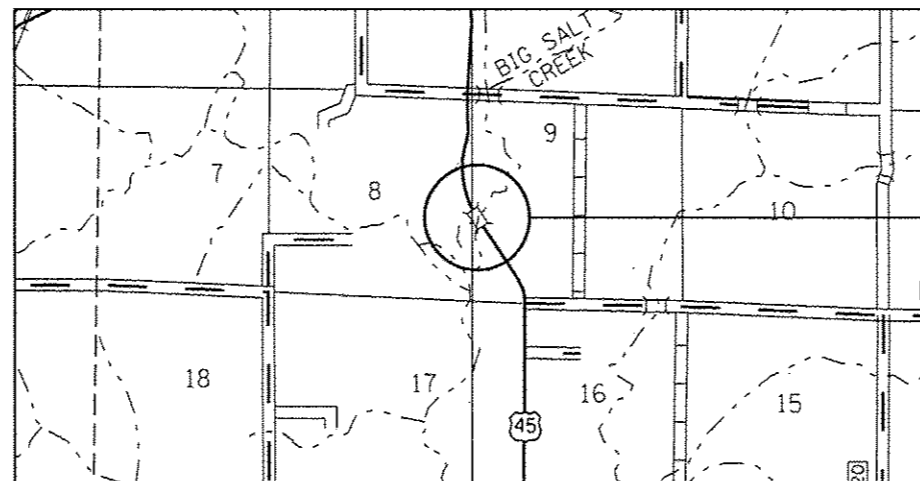
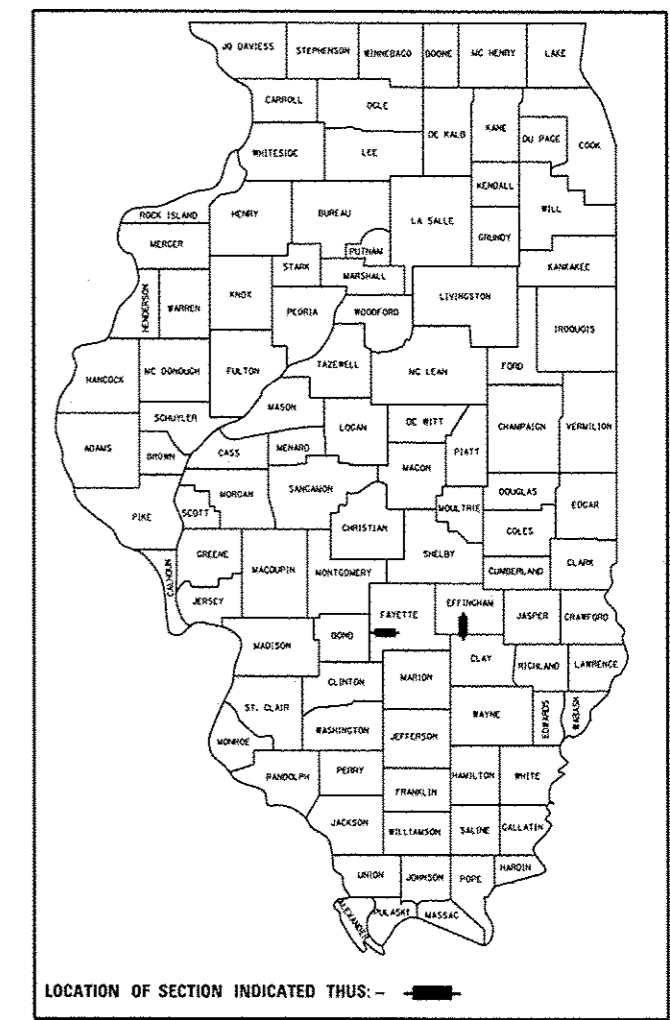
C-97-106-12

FOR INDEX OF SHEETS, SEE SHEET NO. 2

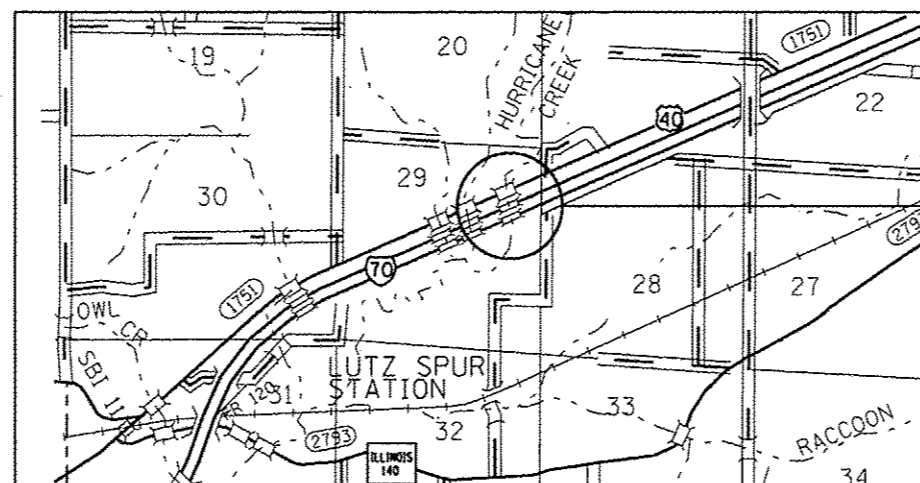
ADT LOCATION #1 = 2,600 (2011)
ADT LOCATION #2 = 20,300 (2010)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	D7 BRIDGE PAINTING 2013-1	**	11	1
			ILLINOIS CONTRACT NO. 74579	

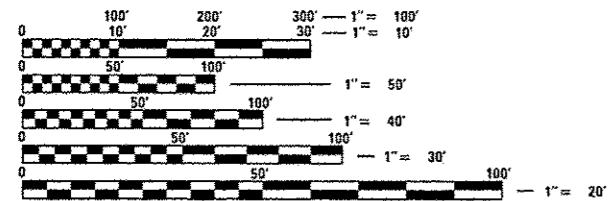
F.A.I. RTE. 70 & F.A.P. RTE. 328 (U.S. RTE. 45)
** FAYETTE & EFFINGHAM COUNTIES
xxx 11+1=12



LOCATION #1
SN 025-0083
EFFINGHAM COUNTY



LOCATION #2
SN 026-0009
SN 026-0010
FAYETTE COUNTY



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: TOM RONAN
PROJECT MANAGER: TOM RONAN
PHONE: (217)-342-8320
CONTRACT NO. 74579

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *Oct 2 20 12*
Roger L. Drishell/pos
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Dec 7 20 12
John D. Barancelli, P.E. /bl
ENGINEER OF DESIGN AND ENVIRONMENT

Dec 7 20 12
William R. Fray /bl
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	INDEX OF SHEETS, GENERAL NOTES, LOCATION DESCRIPTIONS,
3	SUMMARY OF QUANTITIES
4	LOCATION MAPS
5-11	EXISTING STRUCTURE PLANS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 11:

STANDARD 701001-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701006-04	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701101-03	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701106-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701901-03	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES

GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2012; THE SUPPLEMENTAL SPECIFICATIONS, THE RECURRING SPECIAL PROVISIONS, AND THE SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

THE PROPOSED PROJECT IS LOCATED AT 2 LOCATIONS IN DISTRICT 7. THE FIRST LOCATION IS AT STRUCTURE NUMBER 025-0083 ON US ROUTE 45 IN EFFINGHAM COUNTY. THE SECOND LOCATION IS AT STRUCTURE NUMBERS 026-0009 AND 026-0010 ON FAI ROUTE 70 IN FAYETTE COUNTY. STEEL BRIDGE NUMBER 1 IS STRUCTURE NUMBER 025-0083. STEEL BRIDGE NUMBER 2 IS STRUCTURE NUMBER 026-0009. STEEL BRIDGE NUMBER 3 IS STRUCTURE NUMBER 026-0010.

THE WORK INCLUDED IN THIS SECTION CONSISTS OF CLEANING AND PAINTING 3 BRIDGES AT 2 LOCATIONS AS SPECIFIED IN THE PLANS AND SPECIAL PROVISIONS.

THE STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED AS SPECIFIED IN THE PLANS AND THE SPECIAL PROVISIONS.

ALL DECK DRAINS SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THEIR OWN EXPENSE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ALL TRASH AND PAINTING DEBRIS, EXCLUDING WASTE BARRELS OR ROLL - OFF DUMPSTERS, SHALL BE REMOVED BEFORE BEGINNING WORK AT ANOTHER LOCATION.

ONLY STRUCTURAL STEEL IS TO BE PAINTED. ALL OTHER SURFACES WILL BE PROTECTED FROM BEING PAINTED. ALL PAINT AND OVERSPRAY WILL BE REMOVED AT THE CONTRACTOR'S EXPENSE.

THE SSPC OP1 AND OP2 PAINTING CONTRACTOR CERTIFICATION WILL BE REQUIRED FOR THIS PROJECT.

LOCATIONS

LOCATION #1

ROUTE: FAP 328
 MARKED: US 45
 SECTION: 3B-1
 STATION: 505+22.75
 STRUCTURE NUMBER: 025-0083

TYPE OF BRIDGE: Wide Flange I Beams-4 Spans (6 Beams)
 LOCATION: 3 Miles south of the Illinois Route 37 Junction
 FEATURE CARRIED/SPANNED: US 45 over Big Salt Creek

COLOR OF THE FINISH COAT SHALL BE REDDISH BROWN, MUNSELL 2.5YR 3/4.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All structural steel, including beams, bearings and diaphragms, within 10' (measured along the beam) of the abutments and any expansion joint, shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning. The entire east fascia beam shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning.

The designated areas cleaned per Near White Metal Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 1 - OZ/E/U.

Two air monitors will be required at this location.

LOCATION #2

ROUTE: FAI 70 EB & WB
 MARKED: I-70
 SECTION: 26.0B4
 STATION: 138+78
 STRUCTURE NUMBERS: 026-0009 & 026-0010

TYPE OF BRIDGES: Wide Flange I Beams-3 Spans (7 Beams)
 LOCATION: 2.9 miles east of the Bond County line
 FEATURE CARRIED/SPANNED: I-70 over Hurricane Creek

COLOR OF THE FINISH COAT SHALL BE GRAY, MUNSELL 5B 7/1.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All structural steel, including beams, bearings and diaphragms, within 5' (measured along the beam) of the abutments and any expansion joint, shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning. Both fascia beams, in their entirety, shall be cleaned by SSPC-SP10- Near White Metal Blast Cleaning.

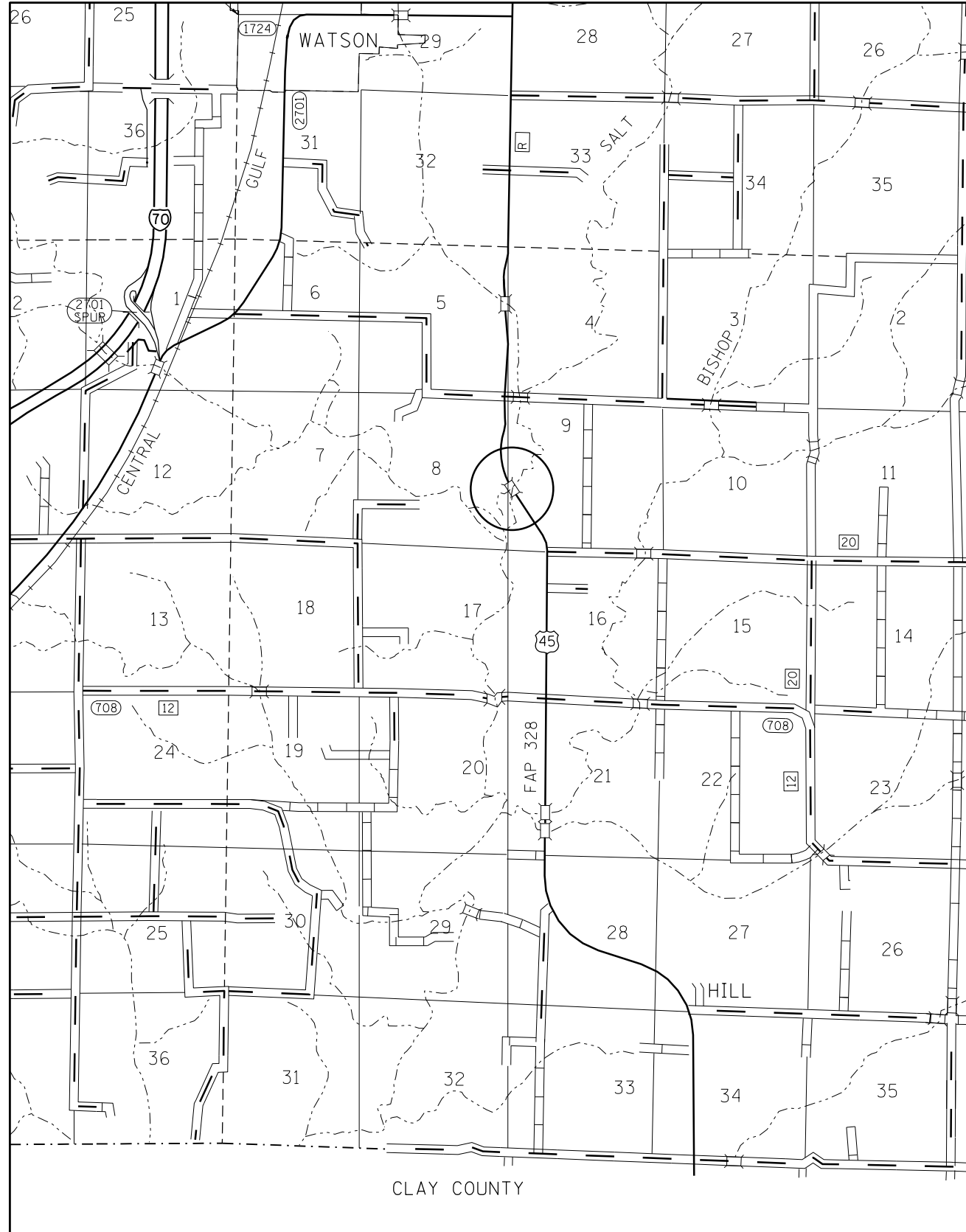
The designated areas cleaned per Near White Metal Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 1 - OZ/E/U.

One air monitor will be required at this location.

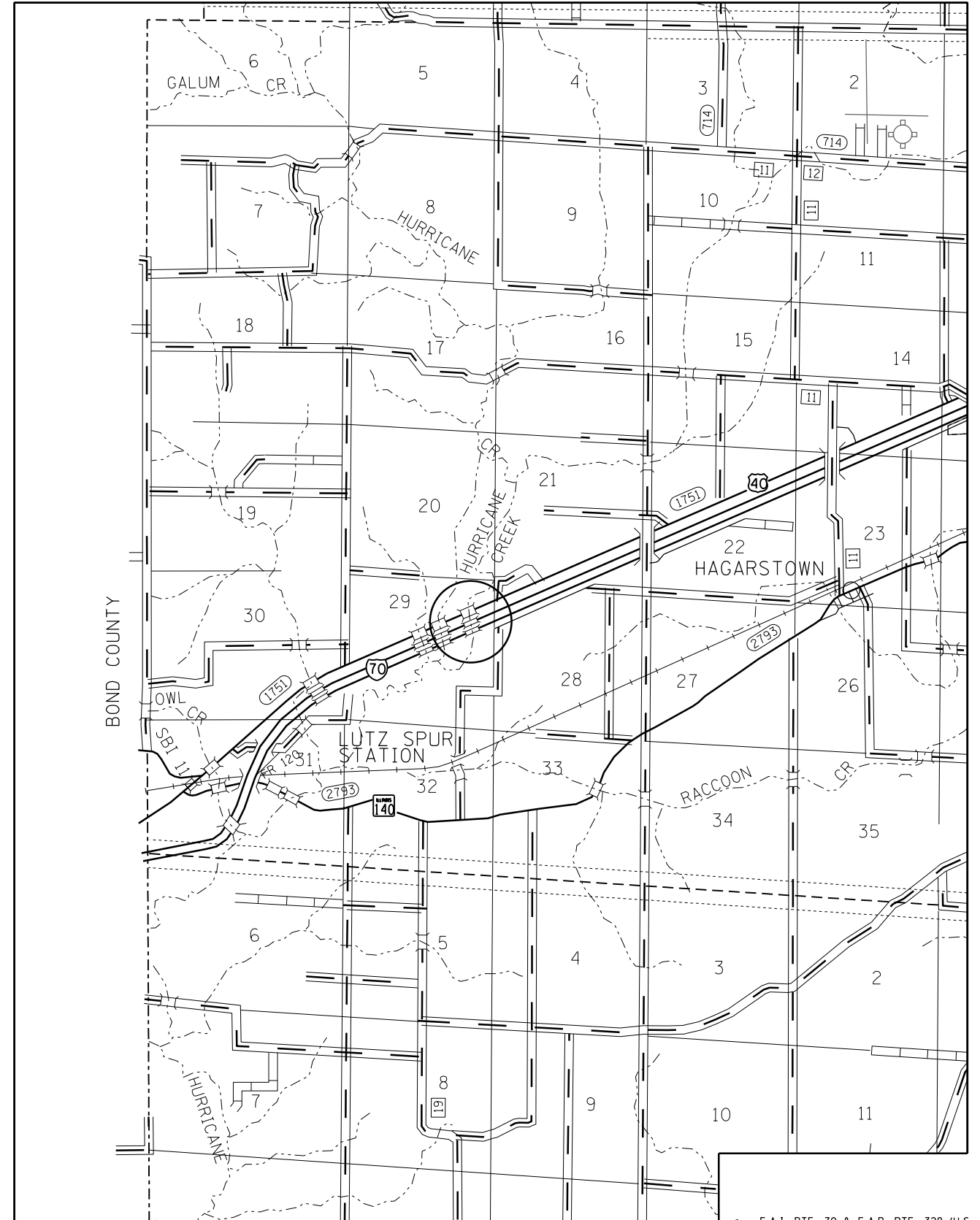
* F.A.I. RTE. 70 & F.A.P. RTE 328 (U.S. RTE. 45)
 ** FAYETTE & EFFINGHAM COUNTIES

FILE NAME	USER NAME	DESIGNED	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		INDEX OF SHEETS, GENERAL NOTES AND LOCATION DESCRIPTIONS		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		DRAWN	REVISED									
		CHECKED	REVISED									
		DATE	REVISED									
								CONTRACT NO. 74579		ILLINOIS FED. AID PROJECT		

LOCATION #1
EFFINGHAM COUNTY
STRUCTURE 025-0083



LOCATION #2
FAYETTE COUNTY
STRUCTURES 026-0009 (EB) & 026-0010 (WB)



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Default	PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
	PLOT DATE = 10/23/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION MAPS	
SCALE: N/A	SHEET 1 OF 1 SHEETS
STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	07 BRIDGE PAINTING 2013-	••	11	4
CONTRACT NO. 74579				
ILLINOIS FED. AID PROJECT				

•• F.A.I. RTE. 70 & F.A.P. RTE. 328 (U.S. RTE. 45)
FAYETTE & EFFINGHAM COUNTIES

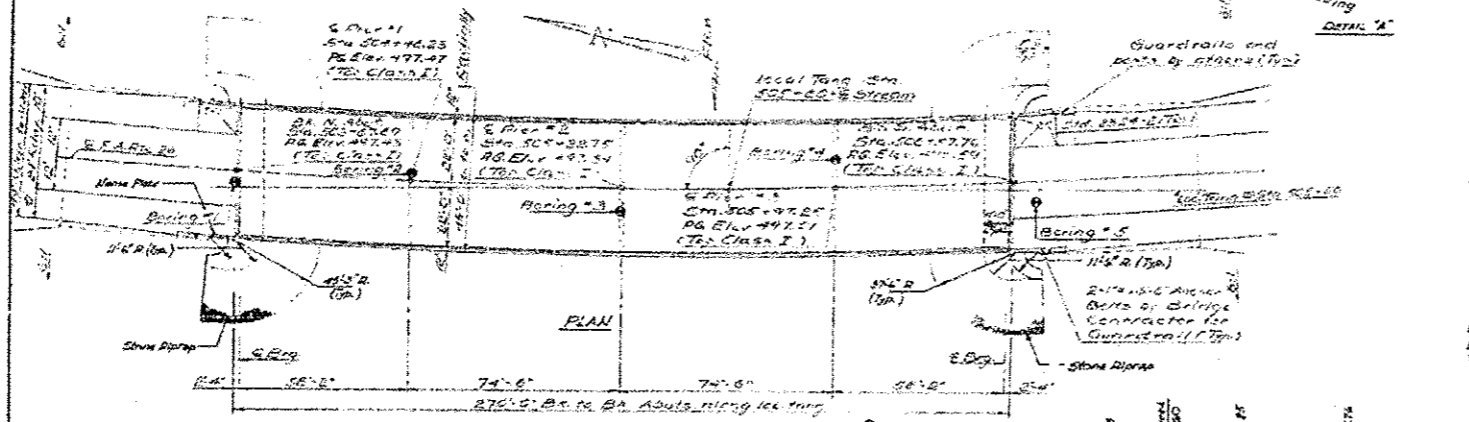
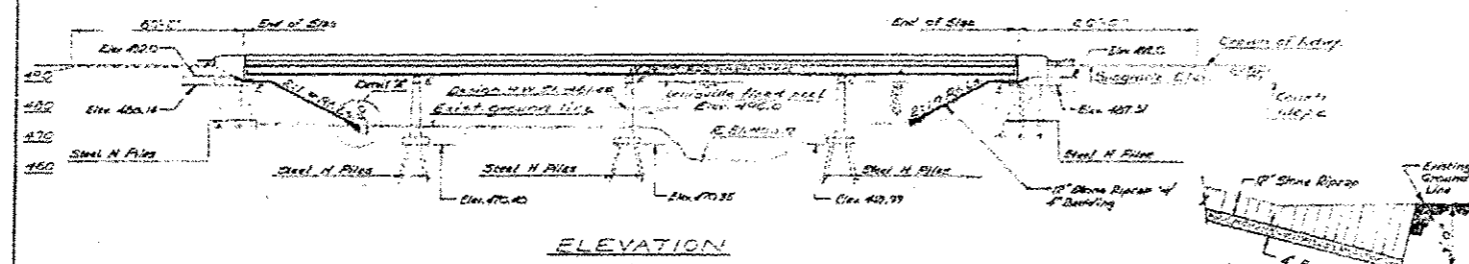
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SN 025-0083	DT BRIDGE PAINTING 2013-	FAYETTE & EFFINGHAM	10	5

E.M. 3016-USGS Checked on SW Wingwall
with Salt Creek bridge elev. 457.32.
Existing structure @ Sta. 505+75 to be removed.
Built in 1900 as S.B. I.R.R. 25' x 6' 8"
with 2 C.C. on solid pier and abut.
with concrete deck entrance. Existing
structure to be used as the abut.
structure.

GENERAL NOTES

All reinforcement bars shall be tested 24 diameters unless otherwise shown.
Fasteners shall be high strength bolts. Bolts 3/4" diam. shall be 50ksi unless otherwise noted.
Estimated weight of Structural Steel = 271,130 Lbs.
All structural steel shall be AASHTO M222 unpainted.
Layout of Riprap may be varied in the field to suit ground conditions as directed by the Engineer.
Final grading of construction accessories will not be permitted to be below the top of deck or greater nor to the road slope for a distance equal to one-fourth the span length with any less than two supports. Final grading in other areas will be permitted only when approved by the Engineer.
Anchor bolts shall be set before placing parapets over supports.
The Contractor shall drive 3 steel (14" O.D. x 36") test piles. (See Sht. # 4 & 5) in permanent location as directed by the Engineer before ordering the remainder of piles.
The embankment configuration shown shall be the minimum requirement and shall be constructed prior to construction of the abutments.
The concrete rail section above the masonry construction just at the top of the pier shall be constructed of Class II Concrete, except the approaches shall conform to the requirements of Standard Concrete.
Parapets shall not be applied in surfaces to which Waterproofing Membrane System is applied.
Bracing steel surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made when by grinding the surface or by shimming the bracing. Ten (10) bracing shims of the dimensions of the bottom bracing plate, shall be provided for each bracing in column in all other plans or sheets.
See Proposal for boring logs.



TOTAL BILL OF MATERIAL

ITEM	QUANTITY	UNIT	PRICE	TOTAL
Class II Concrete	271,130	CU YD	64.2	17,416.46
Class A Concrete	271,130	CU YD	52.7	14,288.57
Structural Steel	271,130	LBS	1.3	352,469.00
Reinforcement Bars	36,360	LB	1.3	47,268.00
Steel Piles (HP 61.5)	3	LINEAL FT	160.0	480.00
Test Piles - Steel (HP 61.5)	3	LINEAL FT	160.0	480.00
Name Plates	1	EACH	1.00	1.00
Stone Riprap	1225	CU YD	12.25	15,006.25
Waterproofing Membrane System	1762	SQ YD	1.25	2,202.50
Silt Conc. Surface Course Class I	100	CU YD	1.00	100.00
Asphalt Expansion Joint (3")	30	LINEAL FT	3.00	90.00
Structure Excavation	312	CU YD	3.12	973.44

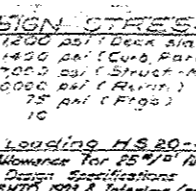
CURVE DATA
STATION 500+00 TO 505+75
R = 475'-11" (29.9)
D = 17'-32" (0.0)
P = 37.56 (6.6)
T = 16.52 (1.9)
L = 340.72
E = 3.07 (7.7)
G.E. = 0.67 (1.6)
APPROX. IN 200'
STATION 500+00 TO 505+75
TO STA. 485+25.41
STA. 515+67.79
TO STA. 517+67.79

STATION 500+00 TO 505+75
BUILT BY
STATE OF ILLINOIS
F.A. RTE. 26 SEC. 3B-1
F.A. PROJECT # 23 (10)
LOADING HS 20

WATERWAY INFORMATION

Drainage Area: 1940 SQ. MI.
Character: Pasture
Present Opening: 66' 1" (Under N.W. Corner of 1st) to 246' 0" (Under N.W. Corner of 2nd) to 180' 0" (Under 1st) to 176' 0" (Under N.W. Corner of 1st) without proposed Levee to 355' 0" (Under Elev. 490) with proposed Levee to 355' 0" (Under Elev. 490)
Proposed Opening: 13159 cfs

OFFSET SKETCH



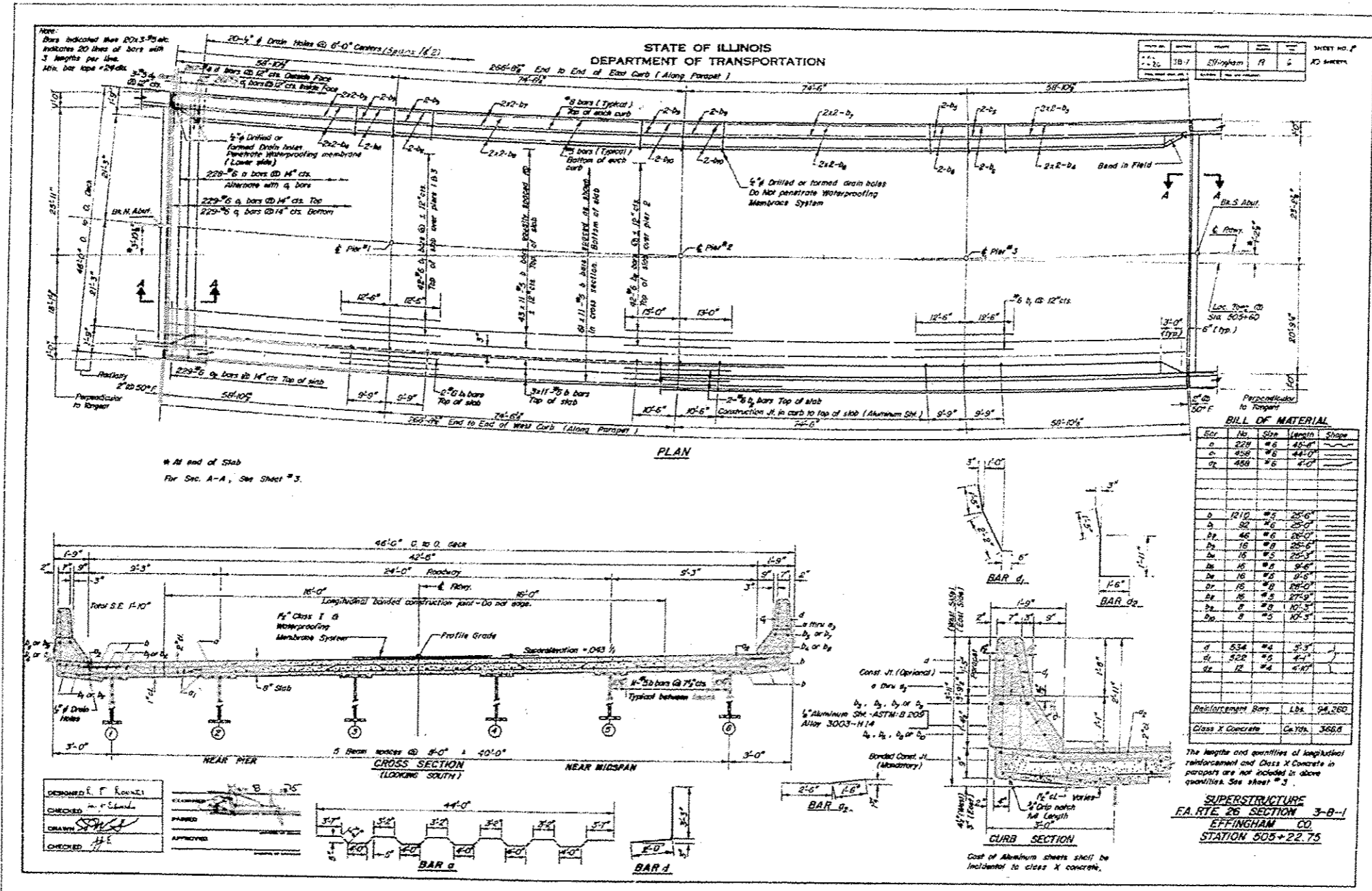
DESIGN STRESSES

1400 psf Deck Slab
1400 psf (Curb, Parapet & Sub)
27000 psf (Subgrade - M-252 unpaved)
20000 psf (Pavement)
75 psf (Fills)
10
LOADING HS 20-44
Allowance for 25% Future M.C.
Design Specifications
AASHTO 1993 & Interims (as applicable)

GENERAL PLAN & ELEVATION
PROJECT # 23 (10) 10.1
F.A. RTE. 26 OVER SALT CREEK
F.A. RTE. 26 SECTION 3B-1
EFFINGHAM CO.
STA. 505+28.75

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	PLT DATE: 10/23/2012	CHECKED: -	REVISED: -			ILLINOIS FED. AID PROJECT

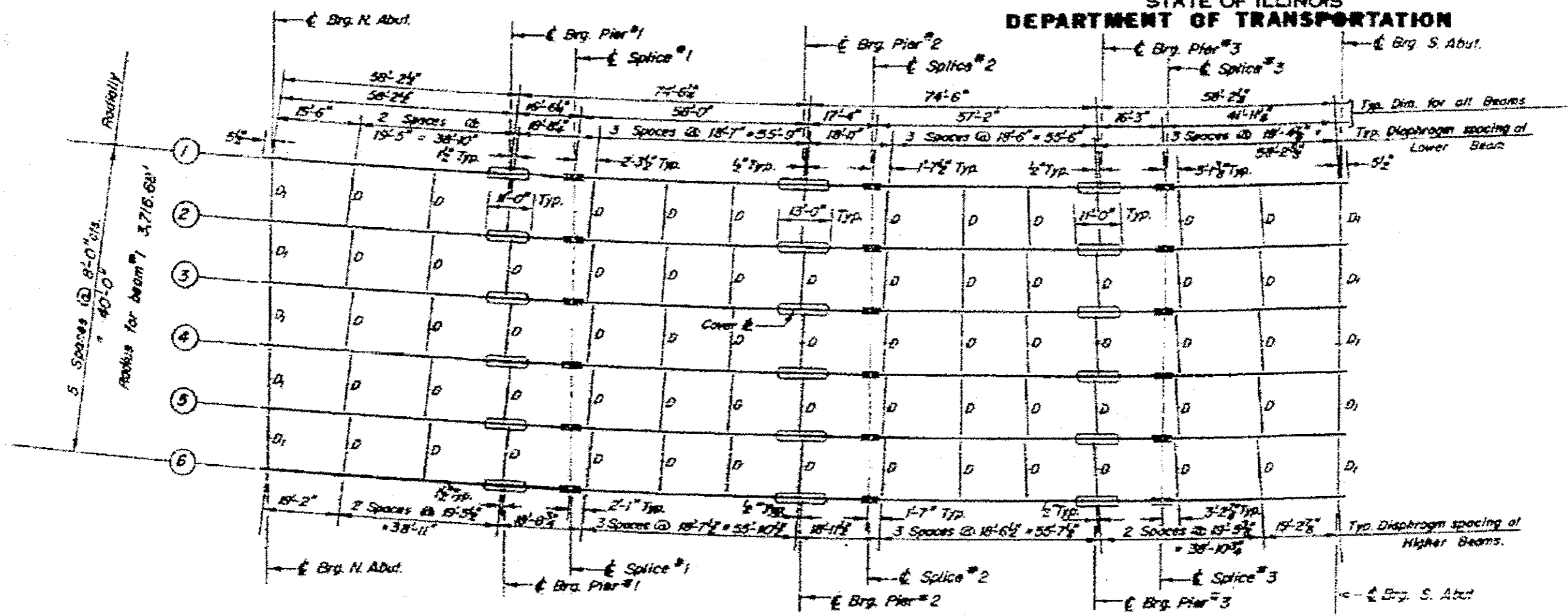
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FAYETTE & EFFINGHAM COUNTIES



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Default	PLOT SCALE = 1/8"=1'-0"	CHECKED -	REVISED -		SCALE: NA					
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										ILLINOIS FED. AID PROJECT

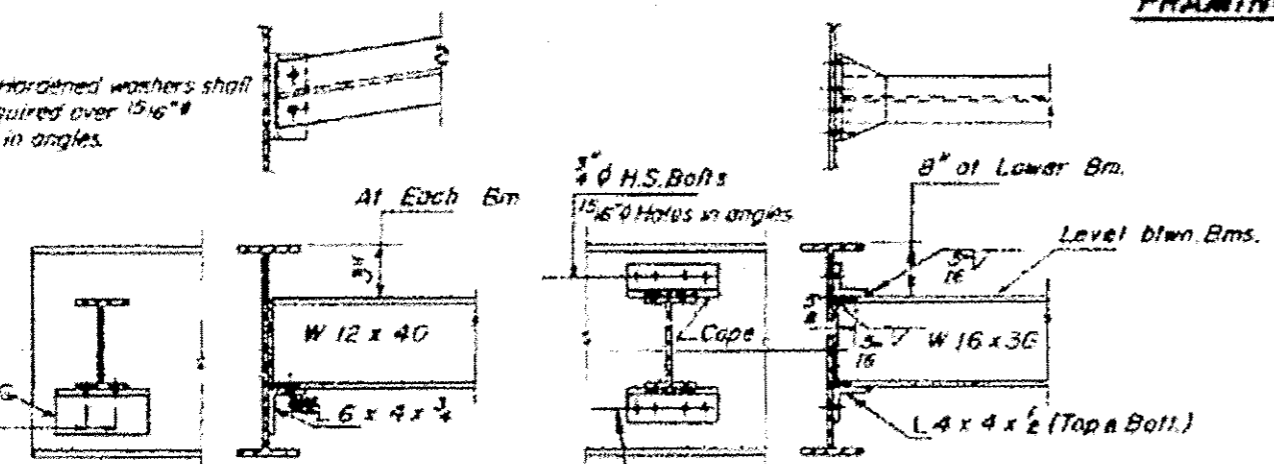
F.A.I. RTE. 70 & F.A.P. RTE. 328 (U.S. RTE. 45)
FAYETTE & EFFINGHAM COUNTIES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

Note: Hardened washers shall be required over 15/16" holes in angles.



DIAPHRAGM D1 10 Required
DIAPHRAGM D2 65 Required

** Band Angle to Fit Superstructure

FILE NAME -	USER NAME - steffenn	DESIGNED -	REVISED -
ohpwwork\pwwork\steffenn\1003072013\074579-shr-plan.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

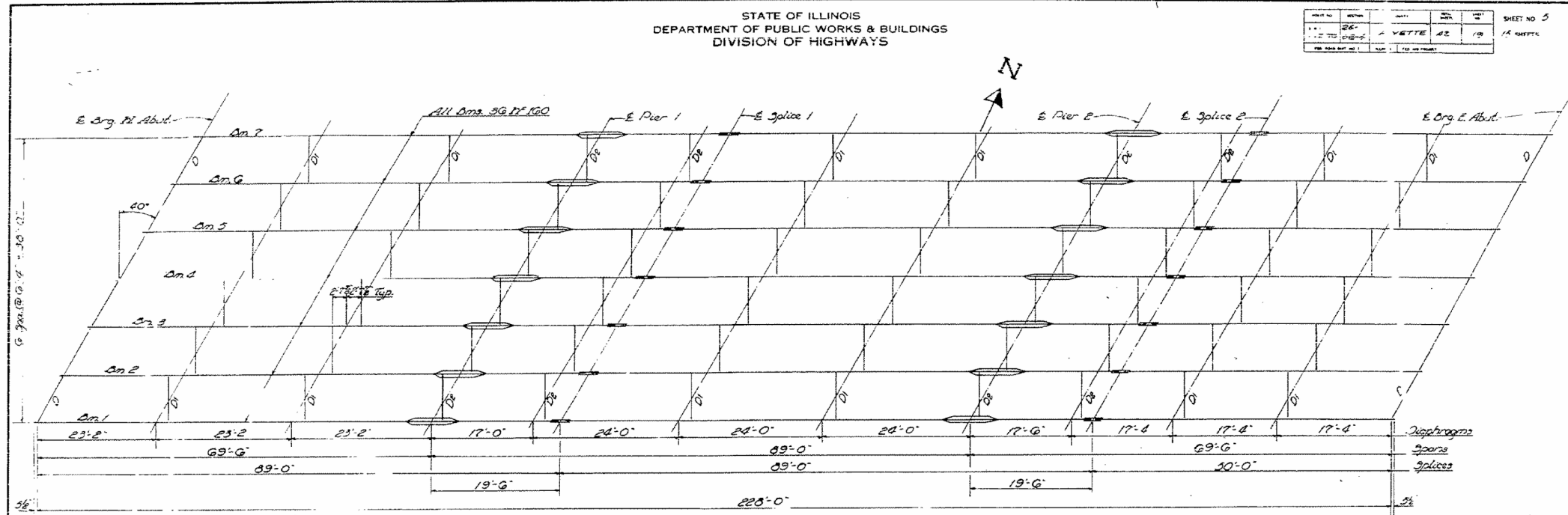
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLAN
SCALE: NA SHEET 3 OF 7 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DT BRIDGE PAINTING 2013-			11	7
			CONTRACT NO. 74579	
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

PROJECT NO.	SECTION	SHEET	TOTAL SHEETS
74579	26	62	110
SHEET NO. 5			



STRUCTURAL STEEL LAYOUT

In lieu of shop welds, angles may be attached in shop with high strength bolts or 8" C.I.M.

DIAPHRAGM D
24 Required

DIAPHRAGM D & D2
24 Required

SPLICE

TOP OF BEAM ELEVATIONS

West Bound Bridge				East Bound Bridge				
Beam	1 @ 7	2 @ 6	3 @ 5	4	Beam	1 @ 7	3 @ 6	4 @ 5
E. Org. N.A.	501.987	502.045	502.157	502.202	E. Org. N.A.	501.657	501.690	501.957
Pier 1	502.075	502.194	502.303	502.340	Pier 1	501.635	501.976	502.103
Splice 1	502.174	502.233	502.344	502.339	Splice 1	501.674	502.077	502.142
Pier 2	502.260	502.300	502.439	502.330	Pier 2	502.060	502.163	502.239
Splice 2	502.301	502.421	502.330	502.376	Splice 2	502.061	502.204	502.330
E. Org. E. Abut.	502.406	502.329	502.235	502.287	E. Org. E. Abut.	502.166	502.309	502.433

Table of Moments & Reactions - Interior Bms.

	Moments			Reactions	
	1 Span @ Pier 1	3 Spans @		Abut.	Pier 1
O.L.	296	642	503	240	62.0
L.L.	434	459	443	38.9	50.0
Imp.	111	107	103		
Total	841	1188	649	62.9	132.0

Moments are in Ft. Kips
Reactions are in Kips

COVER PLATE

COVER PLATE

STRUCTURAL STEEL

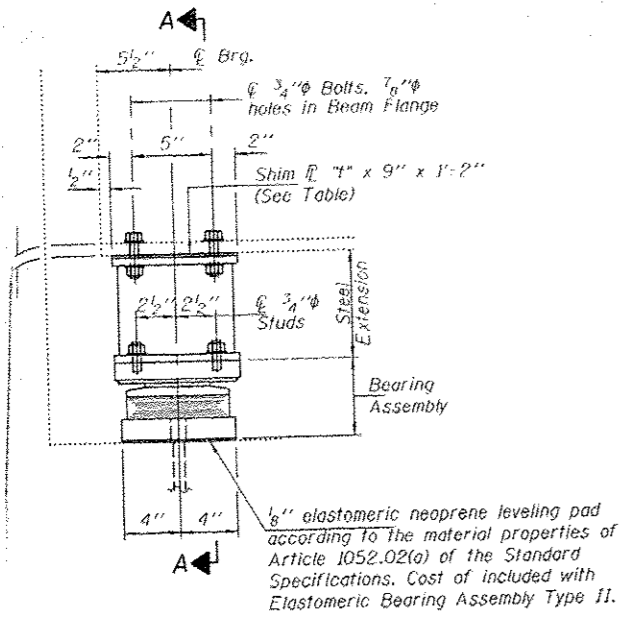
FALPT 70-36C.26-06-4
FAYETTE COUNTY
STA. 138 + 76

DESIGNED: James H. Vance
CHECKED: James H. Vance
DRAWN: J. H. Vance
CHECKED: J. H. Vance

DATE: Jan 25 1965

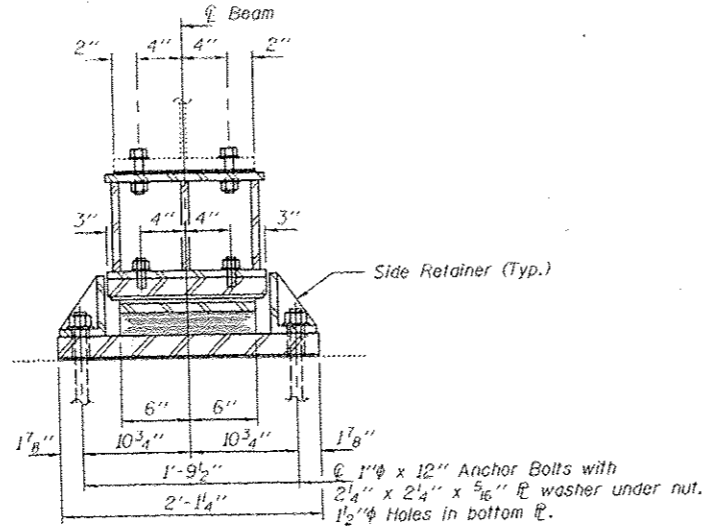
APPROVED: [Signature]

Available to Deflection - 5 span/1000



ELEVATION AT ABUTMENT

TYPE II ELASTOMERIC EXP. BRG.

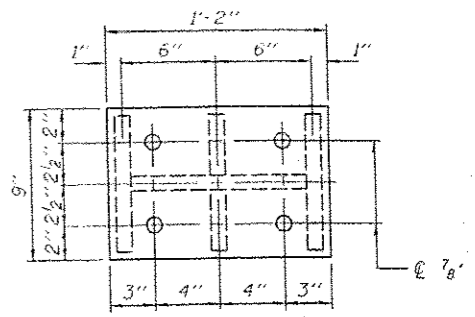


SECTION A-A

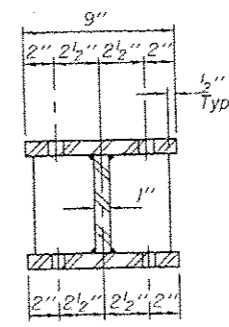
Notes:
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. Jack capacity = 40 Tons.
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
 Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
 Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.
 The 1/8" PTFE 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 1. The bond agent shall be applied on the full area of the contact surfaces.
 Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

BEAM REACTIONS

RP	(K)	24.0
RL	(K)	38.9
Imp.	(K)	10.0
R (Total)	(K)	72.9

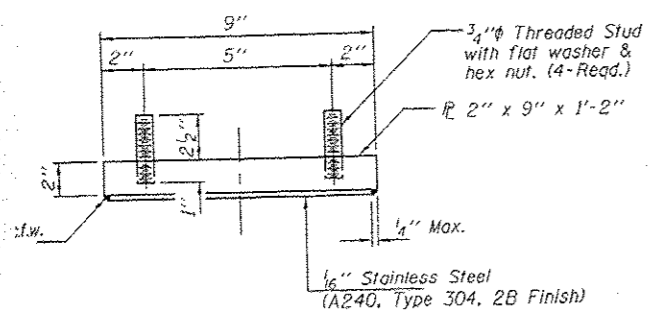


PLAN TOP AND BOTTOM PLATE

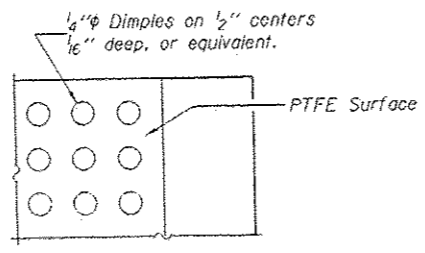


SECTION B-B

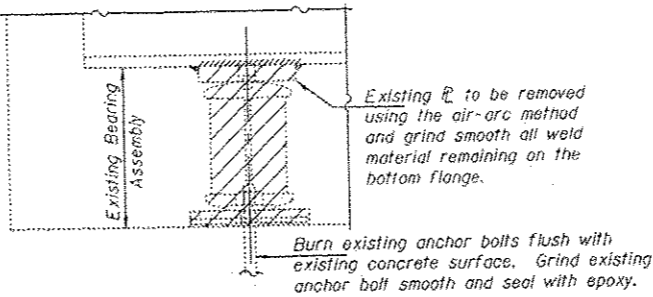
STEEL EXTENSION DETAIL



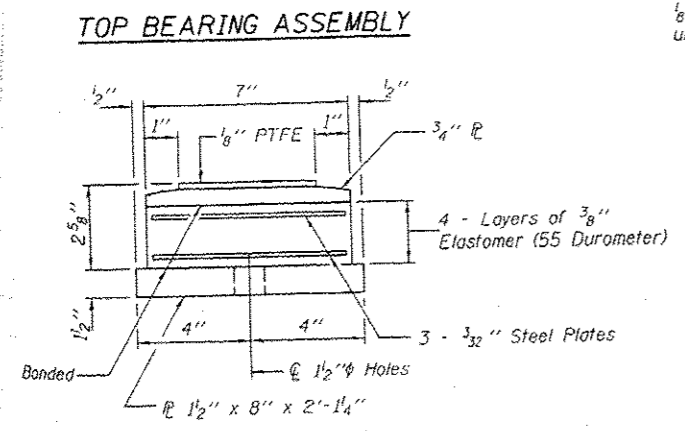
TOP BEARING ASSEMBLY



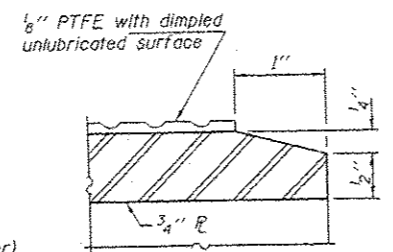
PLAN-PTFE SURFACE



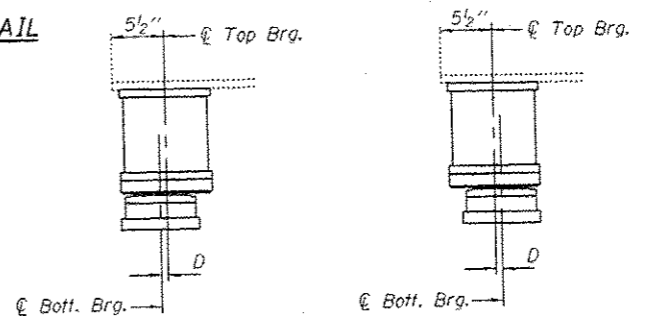
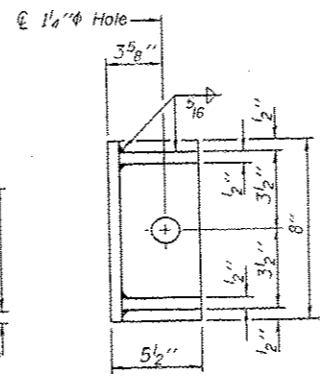
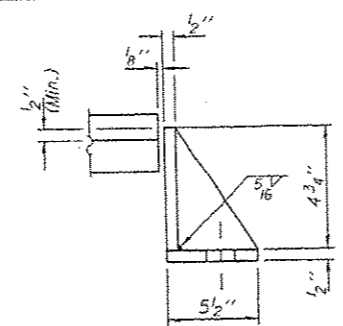
EXISTING BEARING REMOVAL DETAIL



BOTTOM BEARING ASSEMBLY



SECTION THRU PTFE



BELOW 50° F. (Move bott. brg. away from fixed brg.)
 ABOVE 50° F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.
 D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

SHIM PLATES

SN	Beam	Abut.	"#"
026-0009	4	W & E	5/16"
026-0010	4	W & E	7/8"
026-0010	5	W & E	7/8"

FILE NAME :	USER NAME : steffanmk	DESIGNED :	REVISED :
cd:\pwork\pwidest\steffanmk\d0307265.D	74579-shr-plan.dgn	DRAWN :	REVISED :
		CHECKED :	REVISED :
Default	PLOT DATE : 10/23/2012	DATE :	REVISED :

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLAN

SCALE: NA SHEET 3 OF 7 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DT BRIDGE PAINTING 2013-	**	11	11
			CONTRACT NO. 74579	
ILLINOIS FED. AID PROJECT				