

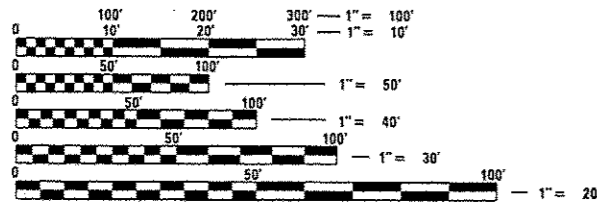
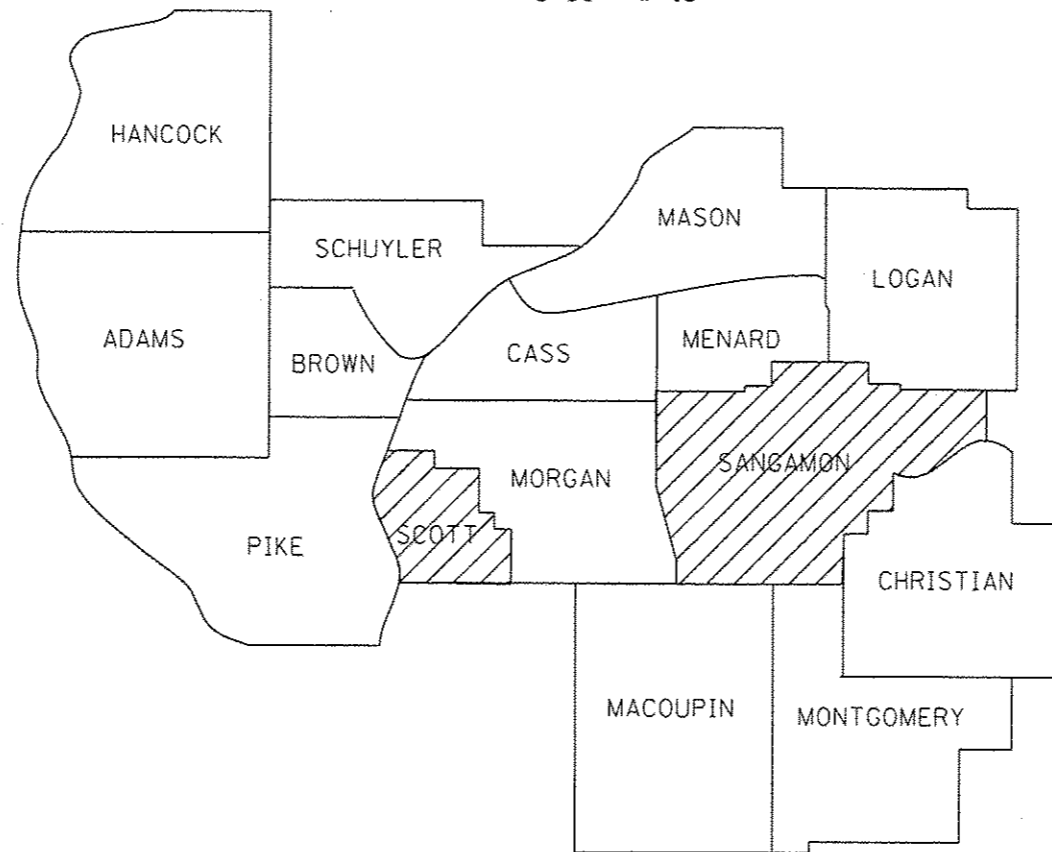
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
BRIDGE PAINTING**

VARIOUS ROUTES  
SECTION D6 BDGE PAINTING 2016-1

BRIDGE PAINTING  
SANGAMON & SCOTT COUNTIES

C-96-065-15



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

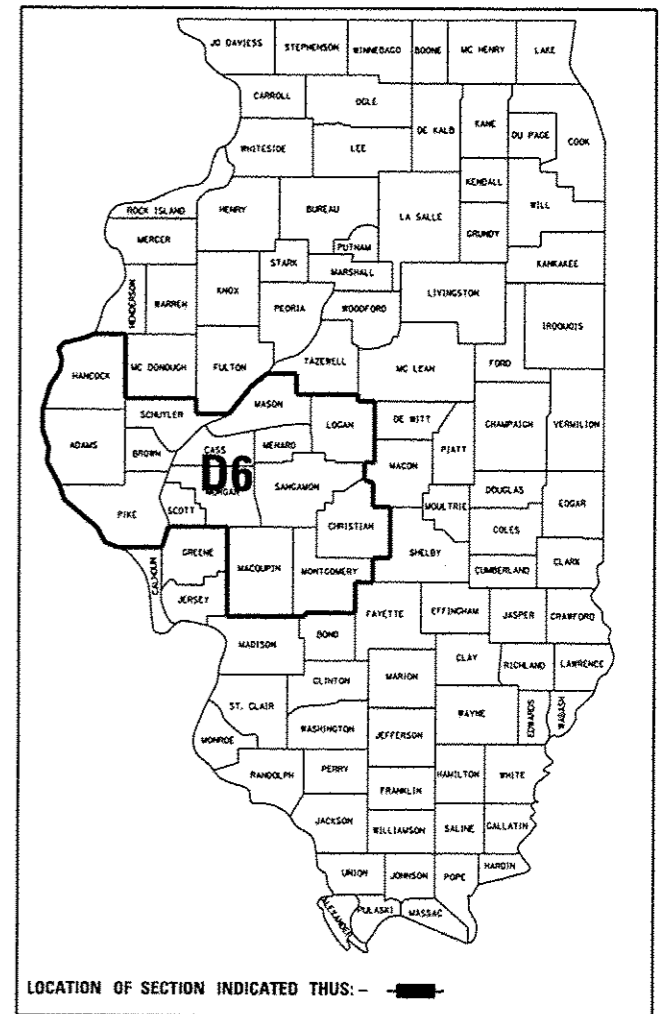
BRIDGE MAINTENANCE ENGINEER - BRANDON DUDLEY (217) 785-9290  
BRIDGE INSPECTION ENGINEER - DAVE COPENBARGER (217) 785-5306

CONTRACT NO. 72H88

GROSS LENGTH = NA  
NET LENGTH = NA

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. D6 BDGE PAINTING 2016-1			17	1
* SANGAMON & SCOTT ILLINOIS			CONTRACT NO. 72H88	

\* 17-3 = 14 TOTAL SHEETS  
D-96-088-15



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED July 5 20 15  
Ray E. Dutton  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Aug 14 20 15  
John D. Baranzelli, P.E.  
ENGINEER OF DESIGN AND ENVIRONMENT

Aug 14 20 15  
Orter Osman, P.E.  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX, STANDARDS, GENERAL NOTES, SIGNATURES, & SUMMARY OF QUANTITIES
- 3-4 BRIDGE LOCATION MAPS
- \* 5-17 EXISTING BRIDGE PLANS (FOR INFORMATION ONLY)

\* SHEETS 13-15 DELETED.

GENERAL NOTES:


1. STRUCTURES TO BE PAINTED SHALL BE AS SPECIFIED ON THE PLAN SHEETS. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". THE AREAS TO BE PAINTED ON EACH BRIDGE SHALL BE AS SPECIFIED ON THE PLAN SHEETS. ALL AREAS TO BE PAINTED SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING PER SSPC SP 10. ALL EXISTING STEEL CLEANED SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. THE COLOR OF THE FINAL FINISH COAT FOR EACH BRIDGE SHALL BE AS SPECIFIED ON THE PLAN SHEETS. THE COLORS SPECIFIED ON THE PLAN SHEETS SHALL CORRESPOND WITH THE COLOR SPECIFICATIONS SHOWN IN THE TABLE ON THIS PAGE.
2. THE USE OF AIR MONITORS WILL BE REQUIRED AT STRUCTURES SPECIFIED ON THE PLAN SHEETS. A MINIMUM OF 2 MONITORS WILL BE REQUIRED AT EACH SPECIFIED BRIDGE TO MONITOR ABRASIVE BLASTING OPERATIONS AT THOSE SITES. SEE SPECIAL PROVISIONS FOR "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES".
3. THE "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES" PAY ITEMS SHALL BE APPLICABLE AS CALLED OUT IN THE PLAN NOTES FOR EACH INDIVIDUAL STRUCTURE.
4. THE SSPC-OP-1 AND SSPC-OP2 PAINTING CONTRACTOR CERTIFICATIONS WILL BE REQUIRED FOR THESE BRIDGES.
5. CARE SHALL BE TAKEN NOT TO DAMAGE RUBBER BEARING OR JOINT COMPONENTS DURING BLASTING AND CLEANING OPERATIONS. ANY DAMAGE TO THESE COMPONENTS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. UPON COMPLETION OF PAINTING OPERATIONS AT EACH LOCATION, THE CONTRACTOR SHALL REMOVE ALL DEBRIS FROM PIER OR ABUTMENT CAPS UPON WHICH PAINTING OPERATIONS TOOK PLACE. FINAL CLEANUP SHALL BE CONSIDERED INCIDENTAL TO THE PAINT PAY ITEM FOR THE RESPECTIVE LOCATION. THE ENGINEER SHALL HAVE THE RIGHT TO WITHHOLD PAYMENT UNTIL SATISFACTORY CLEANUP IS ACHIEVED.


HIGHWAY STANDARDS

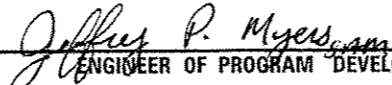
- 701101-04
- 701106-02
- ~~701400-08~~
- ~~701401-09~~
- 701901-04

COLOR SPECIFICATION TABLE	
COLOR SPECIFIED	COLOR SPECIFICATION
GRAY	MUNSELL 5B 7/1
GREEN	MUNSELL 7.5G 4/8

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
DISTRICT 6**

EXAMINED July 6th 20 15  
  
 ENGINEER OF OPERATIONS

EXAMINED June 29 20 15  
  
 ENGINEER OF PROJECT IMPLEMENTATION

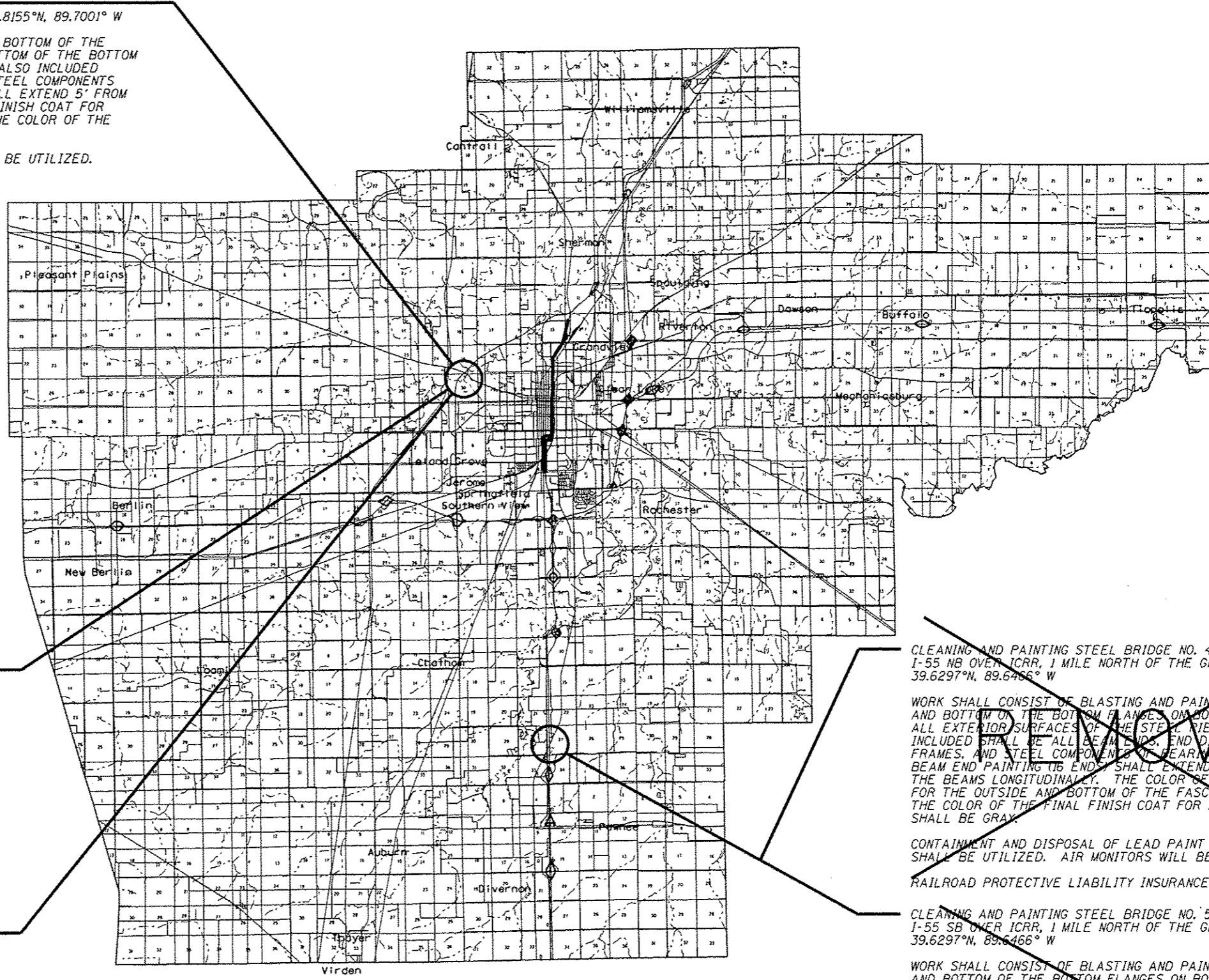
EXAMINED July 1 20 15  
  
 ENGINEER OF PROGRAM DEVELOPMENT

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				100% STATE BRIDGE 0014 VARIOUS
67100100	MOBILIZATION	L SUM	1	1
<del>70100800</del>	<del>TRAFFIC CONTROL AND PROTECTION STANDARD 701401</del>	<del>L SUM</del>	<del>1</del>	<del>1</del>
<del>X7010410</del>	<del>SPEED DISPLAY TRAILER</del>	<del>CAL MO</del>	<del>2</del>	<del>2</del>
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1	1
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1	1
<del>Z0007104</del>	<del>CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 4</del>	<del>L SUM</del>	<del>1</del>	<del>1</del>
<del>Z0007105</del>	<del>CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 5</del>	<del>L SUM</del>	<del>1</del>	<del>1</del>
Z0007106	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 6	L SUM	1	1
Z0007107	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 7	L SUM	1	1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1	1
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1	1
<del>Z0010504</del>	<del>CLEANING AND PAINTING STEEL BRIDGE NO. 4</del>	<del>L SUM</del>	<del>1</del>	<del>1</del>
<del>Z0010505</del>	<del>CLEANING AND PAINTING STEEL BRIDGE NO. 5</del>	<del>L SUM</del>	<del>1</del>	<del>1</del>
Z0010506	CLEANING AND PAINTING STEEL BRIDGE NO. 6	L SUM	1	1
Z0010507	CLEANING AND PAINTING STEEL BRIDGE NO. 7	L SUM	1	1
<del>Z0048665</del>	<del>RAILROAD PROTECTIVE LIABILITY INSURANCE</del>	<del>L SUM</del>	<del>1</del>	<del>1</del>

CLEANING AND PAINTING STEEL BRIDGE NO. 1, SN 084-0180  
 IL 97 OVER SPRING CREEK, 0.1 MILES EAST OF IL 4 IN SPRINGFIELD, 39.8155°N, 89.7001° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS AND THE INNER HALF AND BOTTOM OF THE BOTTOM FLANGE ON BOTH BEAMS ADJACENT TO THE LONGITUDINAL DECK JOINT. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT BOTH ABUTMENTS. BEAM END PAINTING (28 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL BE REQUIRED.



CLEANING AND PAINTING STEEL BRIDGE NO. 2, SN 084-0181  
 IL 4 SB OVER SPRING CREEK, 0.3 MILES SOUTH OF  
 IL 97 IN SPRINGFIELD, 39.8129°N, 89.7043° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT BOTH ABUTMENTS. BEAM END PAINTING (12 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL BE REQUIRED.

CLEANING AND PAINTING STEEL BRIDGE NO. 3, SN 084-0182  
 IL 4 NB OVER SPRING CREEK, 0.3 MILES SOUTH OF  
 IL 97 IN SPRINGFIELD, 39.8129°N, 89.7043° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT BOTH ABUTMENTS. BEAM END PAINTING (12 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL BE REQUIRED.

CLEANING AND PAINTING STEEL BRIDGE NO. 4, SN 084-0112  
 I-55 NB OVER ICRR, 1 MILE NORTH OF THE GLENARM INTERCHANGE,  
 39.6297°N, 89.6466° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS AND ALL EXTERIOR SURFACES OF THE STEEL PIER CAP AT PIER 2. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT PIERS 1 AND 3. BEAM END PAINTING (16 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL BE REQUIRED.

RAILROAD PROTECTIVE LIABILITY INSURANCE WILL BE REQUIRED.

CLEANING AND PAINTING STEEL BRIDGE NO. 5, SN 084-0113  
 I-55 SB OVER ICRR, 1 MILE NORTH OF THE GLENARM INTERCHANGE,  
 39.6297°N, 89.6466° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS AND ALL EXTERIOR SURFACES OF THE STEEL PIER CAP AT PIER 2. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT PIERS 1 AND 3. BEAM END PAINTING (16 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL BE REQUIRED.

RAILROAD PROTECTIVE LIABILITY INSURANCE WILL BE REQUIRED.

SANGAMON COUNTY

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SANGAMON COUNTY LOCATION MAP

FILE NAME *	USER NAME * dudleybm	DESIGNED -	REVISED -
D:\OPERATIONS\Bridges\Bridgplans\CAD\7488 - Sangamon & Scott County paint 2016.p		DRANWjgn -	REVISED -
PLOT SCALE * 100.0000' / in.		CHECKED -	REVISED -
PLOT DATE * 11/17/2015		DATE -	REVISED -

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 06 BDGE PAINTING 2016-1			17	3
* SANGAMON & SCOTT			CONTRACT NO. 72H88	
[ILLINOIS] FED. AID PROJECT				

SCALE: _____	SHEET _____ OF _____ SHEETS	STA. _____ TO STA. _____
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SCOTT COUNTY

CLEANING AND PAINTING STEEL BRIDGE NO. 6, SN 086-0023  
 I-72 EB OVER WALNUT CREEK, 1.2 MILES WEST OF THE SANGAMON COUNTY LINE,  
 39.6812°N, 90.3952° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT BOTH ABUTMENTS. BEAM END PAINTING (14 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL NOT BE REQUIRED.

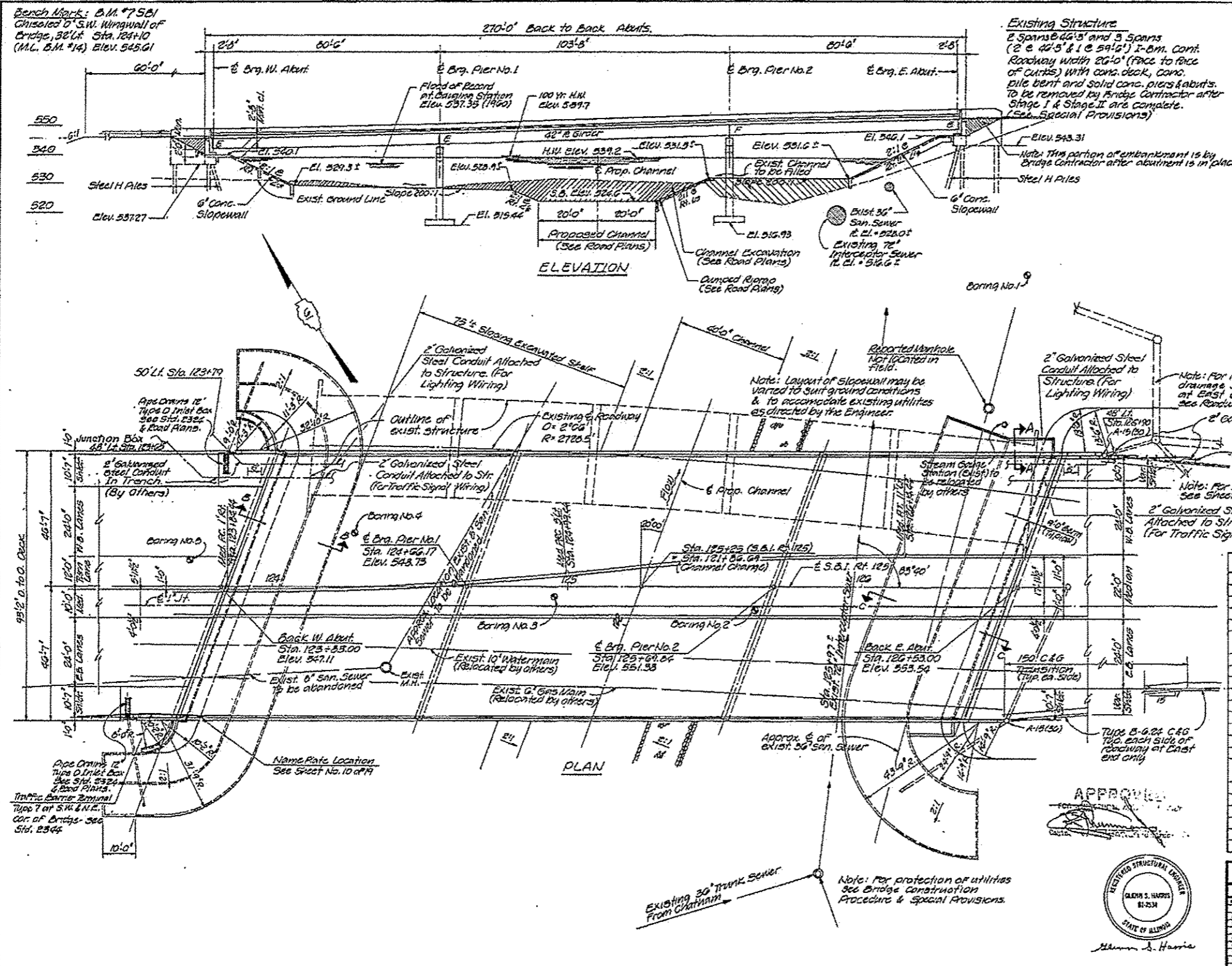
CLEANING AND PAINTING STEEL BRIDGE NO. 7, SN 086-0024  
 I-72 WB OVER WALNUT CREEK, 1.2 MILES WEST OF THE SANGAMON COUNTY LINE,  
 39.6812°N, 90.3952° W

WORK SHALL CONSIST OF BLASTING AND PAINTING THE OUTER HALF AND BOTTOM OF THE BOTTOM FLANGES ON BOTH FASCIA BEAMS. ALSO INCLUDED SHALL BE ALL BEAM ENDS, END DIAPHRAGMS OR CROSS FRAMES, AND STEEL COMPONENTS OF BEARINGS AT BOTH ABUTMENTS. BEAM END PAINTING (14 ENDS) SHALL EXTEND 5' FROM THE ENDS OF THE BEAMS LONGITUDINALLY. THE COLOR OF THE FINAL FINISH COAT FOR THE OUTSIDE AND BOTTOM OF THE FASCIA BEAMS SHALL BE GREEN. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR SURFACES SHALL BE GRAY.

CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES SHALL BE UTILIZED. AIR MONITORS WILL NOT BE REQUIRED.

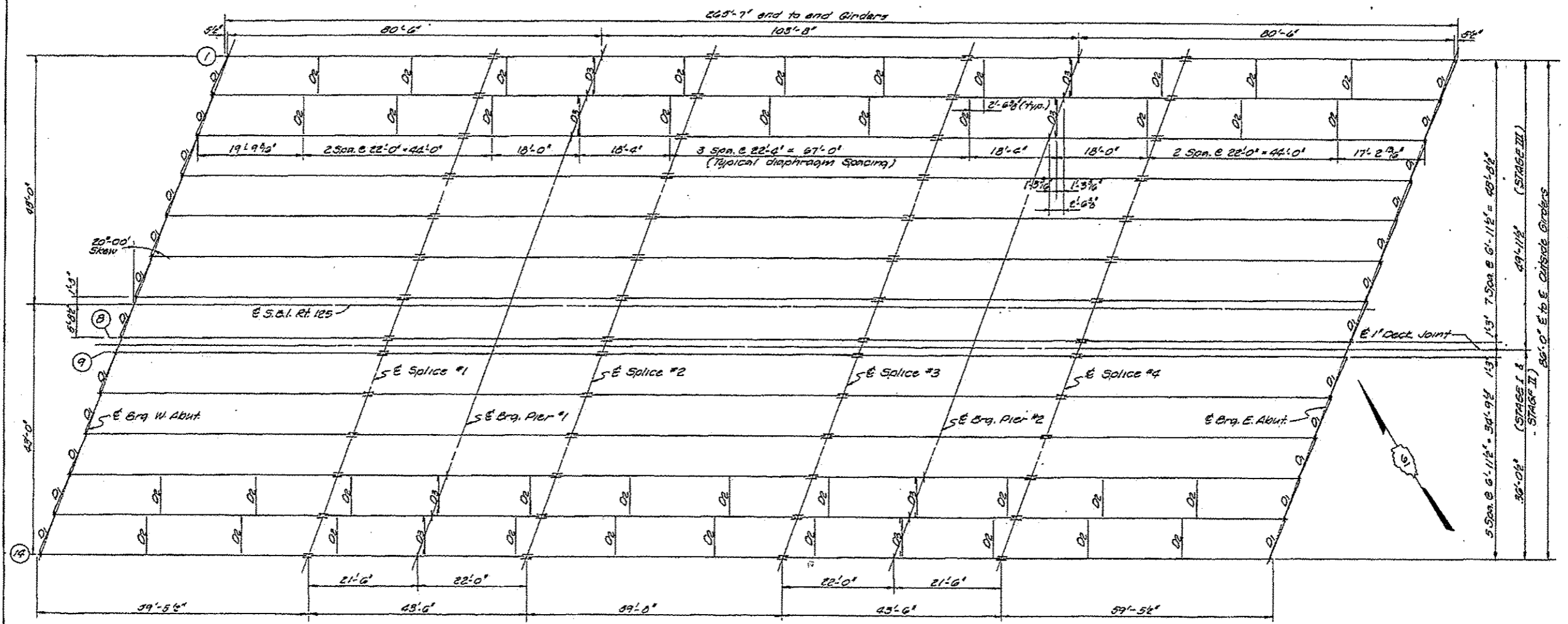
FILE NAME *	USER NAME * dcdlaybn	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SCOTT COUNTY LOCATION MAP</b>				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
D:\OPERATIONS\Bridges\Bridgplans.CAD\7	HBB - Sangamon & Scott County paint 2016	DRAWN -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	VAR.	06 BDGE PAINTING 2016-1	17	4
Default	PLOT SCALE * 100.0000' / in.	CHECKED -	REVISED -												
	PLOT DATE * 7/7/2015	DATE -	REVISED -												
											CONTRACT NO. 72H88		[ILLINOIS] FED. AID PROJECT		





Sheet No. 12  
of 19 sheets

DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
02-07	5B-1	SANGAMON	10	28

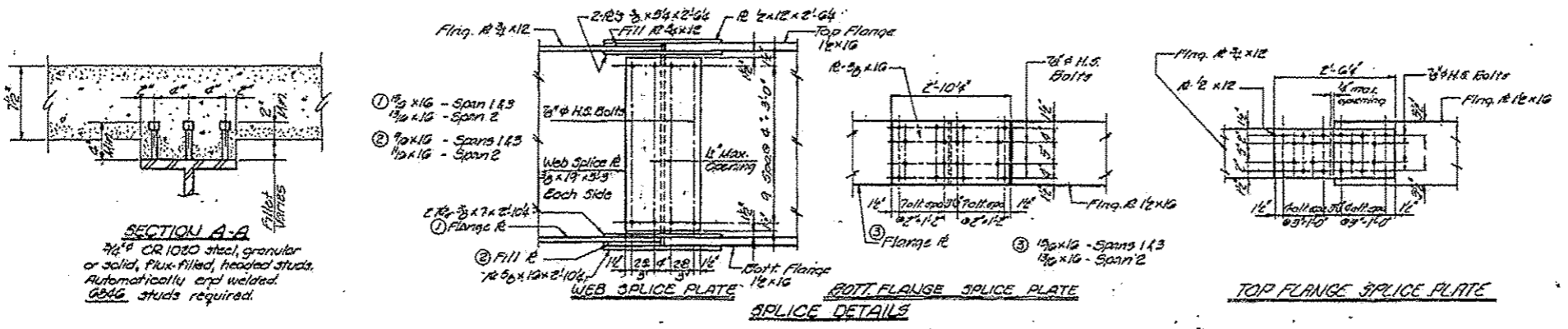
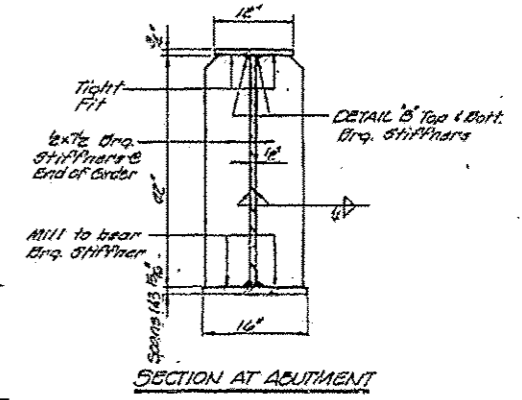
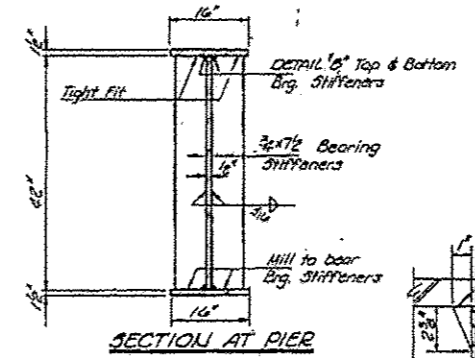
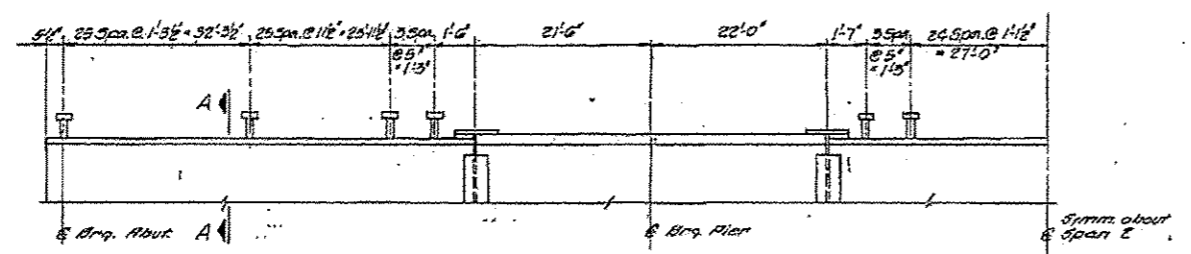
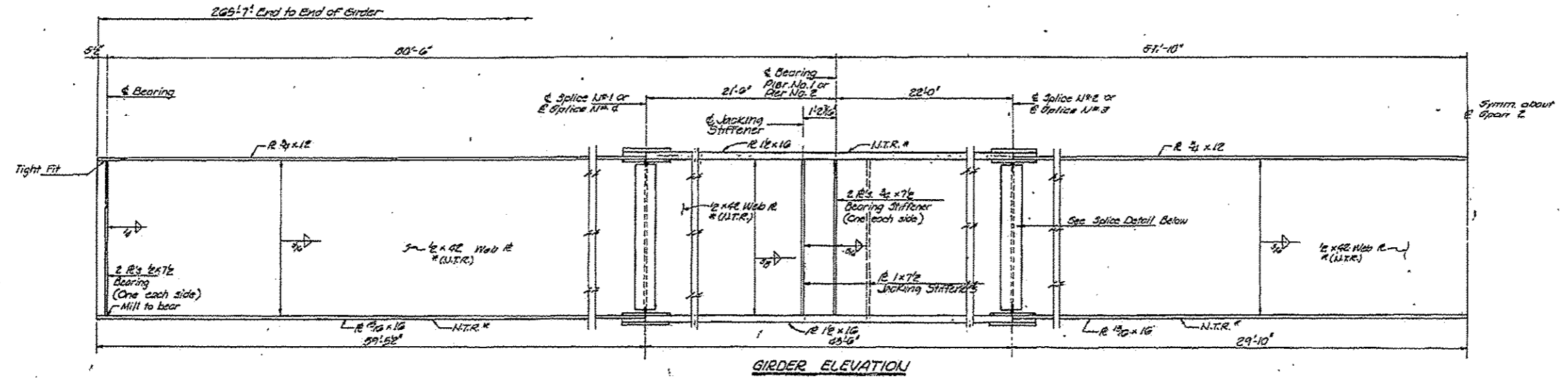


**FRAMING PLAN**  
 All end diaphragms to be W16x40 - D1  
 All diaphragms at Piers to be W33x118 - D2  
 All other diaphragms to be W16x30 - D2  
 See Sheet No. 14 for Top of Web Elevations.

REVISIONS		DATE	BY	CHKD
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

**STRUCTURAL STEEL FRAMING**  
 STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 S.B.I. 125 OVER SPRING CREEK  
 P.A. 67 SECTION 5(B-1) PROJ.  
 S.B.I. 125 AD (S.B.I. 125) SANGAMON CO.  
 HOMER L. CHASTAIN & ASSOCIATES  
 CONSULTING ENGINEERS  
 DECATUR, ILLINOIS

NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA-67	S(15-1)	SANGAMON	110	59
ILLINOIS FEDERAL AID PROJECT				



\* Note:  
The main load carrying member components subject to the Supplemental Requirements for Notch Toughness (Spec 2) are the Flanges, Webs and splice plates of the Steel girders.

**SECTION A-A**  
3/4" CR 1080 steel granular or solid, flux-filled, headed studs. Automatically erp welded. G55G studs required.

REVISIONS		STRUCTURAL STEEL	
1		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
2		S.D. 1.125 OVER SPRING CREEK	
3		FA. 67 SECTION S(15-1) PROJ.	
4		STA 125+100(S.D.1.125) SANGAMON CO.	
5		HOMER L. CHASTAIN & ASSOCIATES	
6		CONSULTING ENGINEERS	
7		DECATUR, ILLINOIS	
8		DESIGNED BY	DATE
9		CHECKED BY	DATE
10		DATE	DATE

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PA-67	S.R-1	SANGAMON	110	60
778 ROADWAY NO.	ILLINOIS	PROJECT		

**MOMENT TABLE - Composite 3 Span**  
(Composite in Positive Moment Areas only)

**INTERIOR GIRDER MOMENT TABLE**

Loc. (in')	1st Span L	Pier	2nd Span R
$I_e$ (in <sup>4</sup> )	15,740	25,803	18,785
$I_e$ (in <sup>4</sup> )	36,315		33,672
$S_x$ (in <sup>3</sup> )	721	1147	655
$S_x$ (in <sup>3</sup> )	1007		919
$M^+$ (K)	0.850	0.850	0.850
$M^-$ (K)	319	-284	231
$M^+$ (EAL)	5.3	9.2	5.2
$M^-$ (K)	0.320	0.320	0.320
$M^+$ (K)	143	-205	145
$M^-$ (K)	616	-352	635
$M^+$ (K)	150	-127	140
TOTAL (K)	909	-926	950
$Q_6$ (K/IN)	10.6	9.9	12.4
$Q_6$ TOTAL (K)	14.1	14.1	17.6
$V^+$ (K)	52.2		48.0

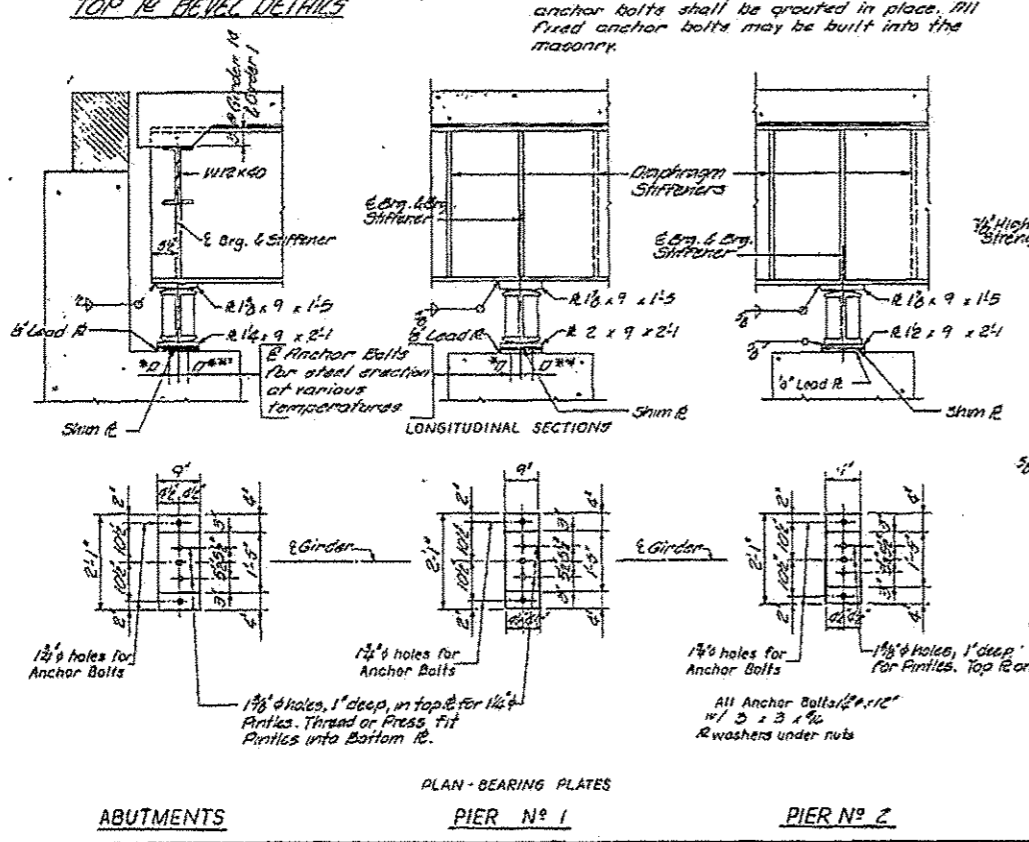
**REACTION TABLE**

**INTERIOR GIRDER REACTION TABLE**

Loc.	Abut.	Pier
FR. 1 (K)	33.1	124.7
FR. 2 (K)	39.6	60.1
FR. 3 (K)	9.1	15.9
TOTAL (K)	81.8	200.7

**Y VALUES**

W. Abut.	0
Pier No. 1	7.32
Pier No. 2	7.32
E. Abut.	5.9



**TOP OF WEB ELEVATION \***

LOCATION	Stn. 1	Stn. 2	Stn. 3	Stn. 4	Stn. 5	Stn. 6	Stn. 7	Stn. 8	Stn. 9	Stn. 10	Stn. 11	Stn. 12	Stn. 13	Stn. 14
E. Brq. W. Abut.	546.007	546.072	546.138	546.203	546.270	546.337	546.405	546.472	546.540	546.608	546.676	546.744	546.812	546.880
E. Girder #1	547.081	547.156	547.231	547.306	547.381	547.456	547.531	547.606	547.681	547.756	547.831	547.906	547.981	548.056
E. Brq. Pier #1	547.606	547.606	547.606	547.756	547.756	547.906	547.906	547.906	547.906	547.906	547.906	547.906	547.906	547.906
E. Girder #2	548.131	548.206	548.281	548.356	548.431	548.506	548.581	548.656	548.731	548.806	548.881	548.956	549.031	549.106
E. Girder #3	549.131	549.206	549.281	549.356	549.431	549.506	549.581	549.656	549.731	549.806	549.881	549.956	550.031	550.106
E. Brq. Pier #2	550.231	550.231	550.231	550.381	550.381	550.531	550.531	550.531	550.531	550.531	550.531	550.531	550.531	550.531
E. Girder #4	550.831	550.906	550.981	551.056	551.131	551.206	551.281	551.356	551.431	551.506	551.581	551.656	551.731	551.806
E. Brq. E. Abut.	552.300	552.405	552.480	552.555	552.630	552.705	552.780	552.855	552.930	553.005	553.080	553.155	553.230	553.305

**SHIM PLATE THICKNESS 'Y'**

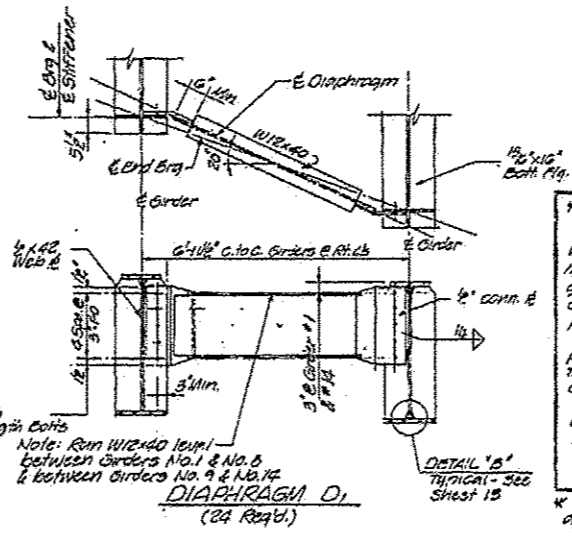
LOCATION	Stn. 1	Stn. 2	Stn. 3	Stn. 4	Stn. 5	Stn. 6	Stn. 7	Stn. 8
W. Abut.	0	0	0	0	0	0	0	0
Pier #1	0	1/2	0	1/2	0	1/2	0	1/2
Pier #2	0	1/2	0	1/2	0	1/2	0	1/2
E. Abut.	0	1/2	0	1/2	0	1/2	0	1/2

**NOTES ON SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS**

a)  $D^+$  Side of Brq. away from fixed Brq.)  
 $D^+$  1/2" per each 100' of expansion for every 15' rise above normal temperature of 50°F.

$D^+$  Side of Brq. toward fixed Brq.)  
 $D^+$  1/2" per each 100' of expansion for every 15' rise above normal temperature of 50°F.

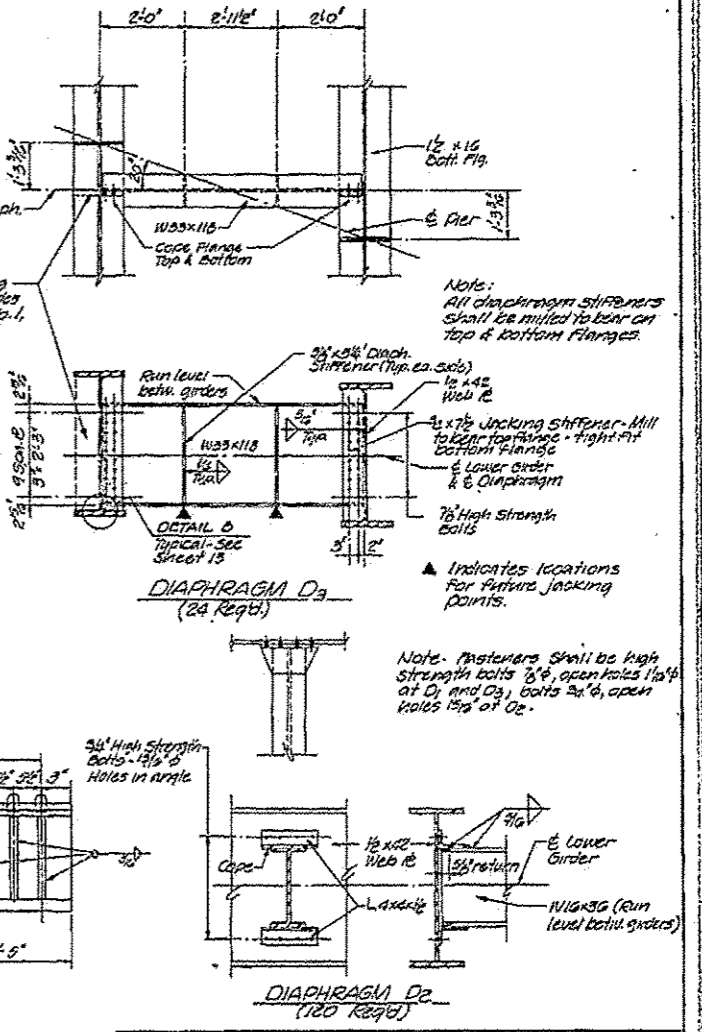
b) After girders have been erected and dimensions  $D^+$  or  $D^-$  determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.



**JACKING PROCEDURE:**

- At abutments, jacks will be placed on the abutment & under the individual girders. Jacking against diaphragms will not be permitted.
- At pier jacks will be placed on the pier under the stiffeners in the diaphragms.
- Variations in procedure must be approved by the BRIDGE and TRAFFIC STRUCTURE OFFICE.

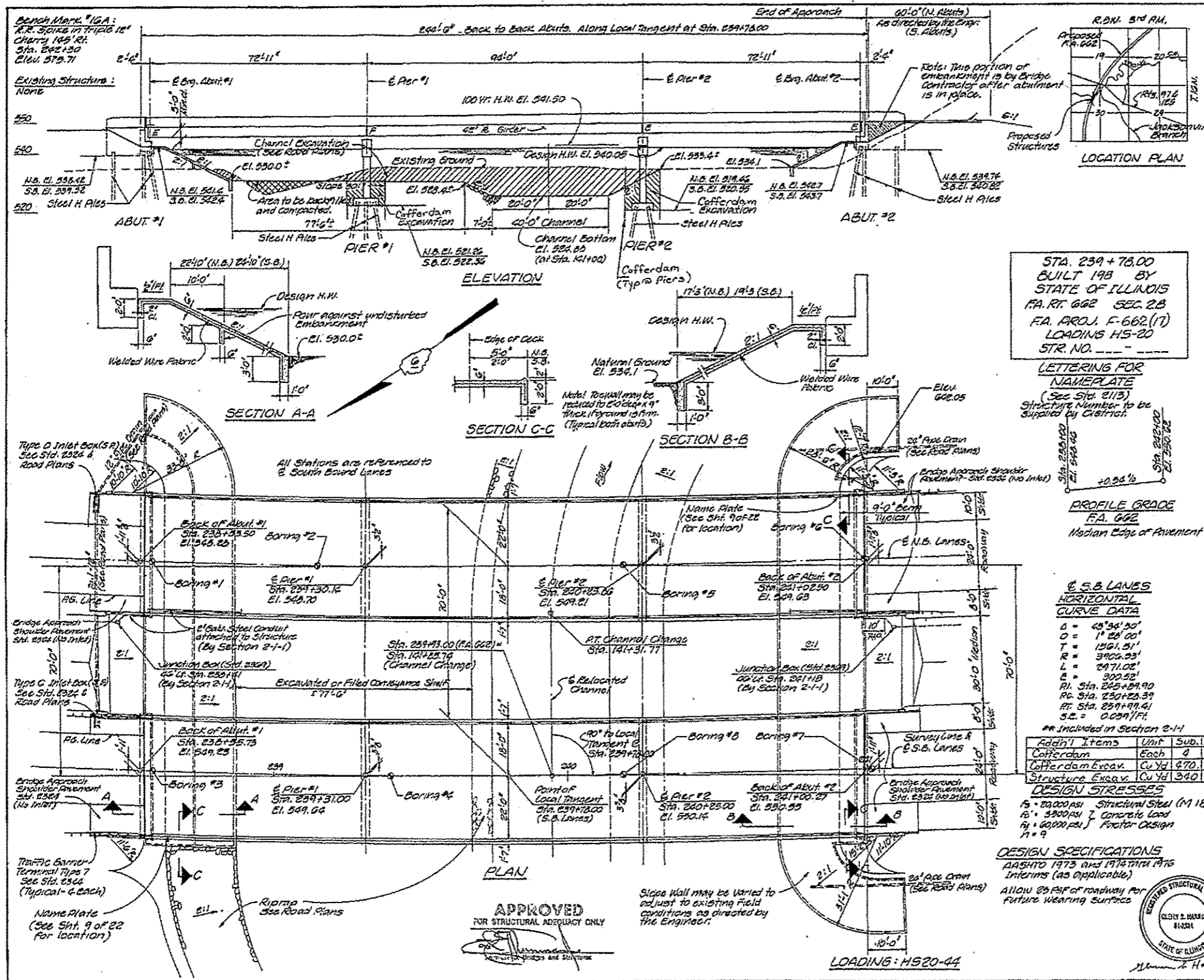
\* For future jacking - Not applicable to this contract.



**STRUCTURAL STEEL DETAILS**

DESIGNED BY	DATE
STATE OF ILLINOIS	JUL 10 1977
DEPARTMENT OF TRANSPORTATION	DESIGNED BY DATE
	6/24 1977
S.B. 1125 OVER SPRING CREEK	PROJECT NO.
PA. 67 SECTION S(B-1) PROJ.	2250-20
ST. 125+00 (S.B. 1125) SANGAMON CO.	SHEET NO.
HOMER L. CHASTAIN & ASSOCIATES	60
CONSULTING ENGINEERS	
DECATUR, ILLINOIS	





Sheet No. 1  
of 22 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA-662	2B	SANGAMON	71	27

**GENERAL NOTES**

See Proposal for Boring Data.  
Fasteners shall be high strength bolts. Bolts 3/8", open holes 1/2", unless otherwise noted.  
Calculated weight of Structural Steel = 529,300 pounds.  
The basic lead silica chromate paint system shall be used for shop and field painting of structural steel, except where noted.  
Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.  
Anchor bolts shall be set before bolting diaphragms over supports.  
Slope wall shall be reinforced with welded wire fabric 6"x6" W4.0xW4.0 weighing 38 lbs. per 100 sq.ft.  
The Contractor shall drive four Steel Test Piles HP10x42 in permanent locations, one each of Abutment #1 (N.B.), Pier #1 (S.B.), Pier #2 (N.B.) and Abutment #2 (S.B.) as directed by the Engineer before ordering the remainder of the piles.  
Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.

STA. 239+78.00  
BUILT 198  
BY  
STATE OF ILLINOIS  
FA. RT. 662 SEC. 2B  
FA. PROJ. F-662(1)  
LOADING HS-20  
STR. NO. \_\_\_\_\_

**LETTERING FOR NAMEPLATE**  
(See Sht. 21B)  
Structure Number to be supplied by District.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.  
The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X concrete, except the aggregates shall conform to the requirements of Handrail Concrete.  
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2 inch adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates.  
The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for North Toughness Zone 2. These components are the tension flanges, webs and all splice plate material of the steel girders.  
For Channel Excavation see Road Plans.

**PROFILE GRADE**  
FA. 662  
Median Edge of Pavement

**WATERWAY INFORMATION**

Drainage Area	95.9 Sq. Mi.
Character	Cultivated, wooded
Required Opening (Below 50 yr. H.W.)	2100 Sq. Ft.
Present Opening	None
Proposed Opening (Below 50 yr. H.W.)	2119 Sq. Ft.
Ordinary Water	228.6'
Low Water	228.9'
Design Discharge Q100	8200 CFS
Created Head	0.75 Ft.
Design Discharge Q10	10,140 CFS
Created Head	0.90 Ft.
* Flood of Record Discharge - 6750 CFS at Gauging Station 0.190	
* Gauging Station is located approx. 1.900' downstream.	

**S.B. LANES**

**HORIZONTAL CURVE DATA**

Δ	43°34'30"
O	1°28'00"
T	1261.51'
R	3105.23'
L	2471.02'
E	300.52'
Pt. Sta.	250+89.90
Pc Sta.	250+23.39
Pt. Sta.	251+91.41
S.C.	0.0391/ft.

\*\* Included in Section 2-11

Add'l Items	Unit	Sub.	Total
Cofferdam	Each	4	4
Cofferdam Excav.	Cu Yd	470	470
Structure Excav.	Cu Yd	340	340

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPERSTR.	SUBSTR.	TOTAL
Protective Coat	Sq. Yd.	2669	—	2669
Class X Concrete	Cu. Yd.	618.3	487.0	1105.3
Structural Steel	Weight	—	—	—
Steel Shear Connectors	Each	5724	—	5724
Reinforcement Bars	Pounds	—	38,320	38,320
Reinforcement Bars (Ready Mixed)	Pounds	163,190	—	163,190
Steel Piles HP10x42	Un. Ft.	—	3937	3937
Test Pile Steel HP10x42	Each	—	4	4
Name Plates	Each	2	—	2
Slope Wall 6"	Sq. Yd.	—	1049	1049
Neoprene Expansion Joint 24"	Un. Ft.	173	—	173
Galvanized Steel Conduit attached to Structure - 2"	Un. Ft.	231	—	231
Draining Steel Piles	Un. Ft.	—	3937	3937
Fiber Drains	Each	76	—	76

**DESIGN STRESSES**

15' - 20,000 PSI Structural Steel (M183)  
15' - 3000 PSI Concrete Load  
15' - 6000 PSI Friction Design  
11' - 9

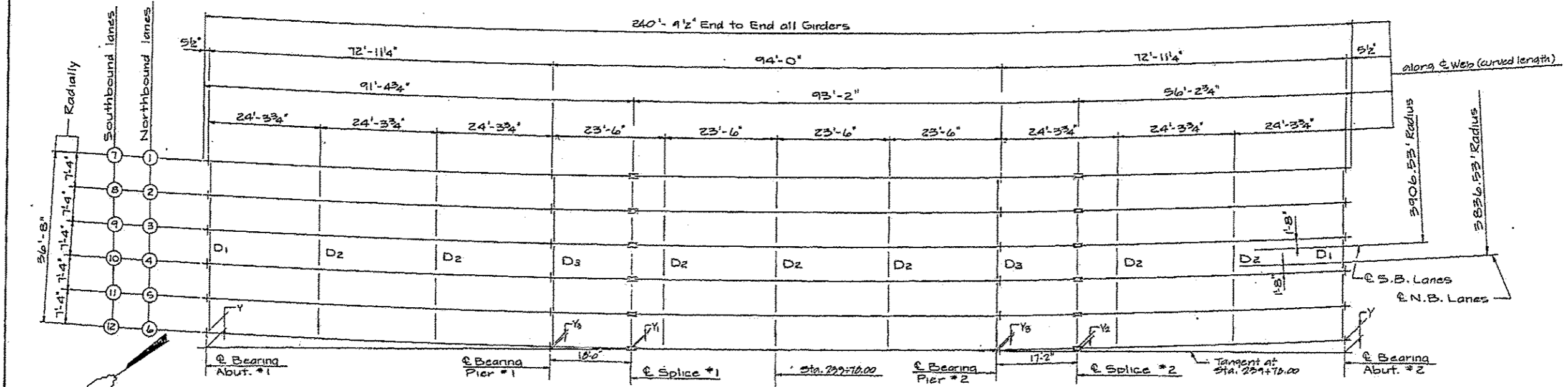
**DESIGN SPECIFICATIONS**  
AASHTO 1973 and 1974 First Ed.  
Interims (as applicable)  
ALLOW 25'± of roadway for future wearing surface

**GENERAL PLAN AND ELEVATION**

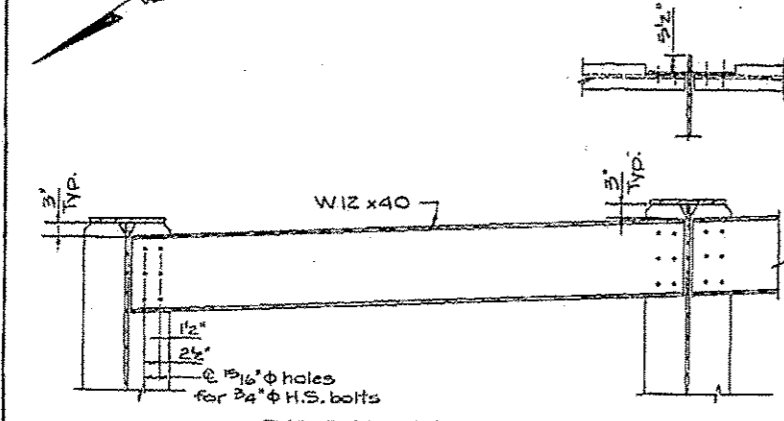
REVISIONS	DATE	DESCRIPTION
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2	1/11/79	REVISED
3	1/11/79	REVISED
4	1/11/79	REVISED
5	1/11/79	REVISED
6	1/11/79	REVISED
7	1/11/79	REVISED
8	1/11/79	REVISED
9	1/11/79	REVISED
10	1/11/79	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
FA. 662 OVER SPRING CREEK  
SECTION 2B PROJ.  
STA. 239+78.00 (FA. 662) SANGAMON CO.  
HOMER L. CHASTAIN & ASSOCIATES  
CONSULTING ENGINEERS  
DECATUR, ILLINOIS

DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
04/02	20	SANGAMON	71	37

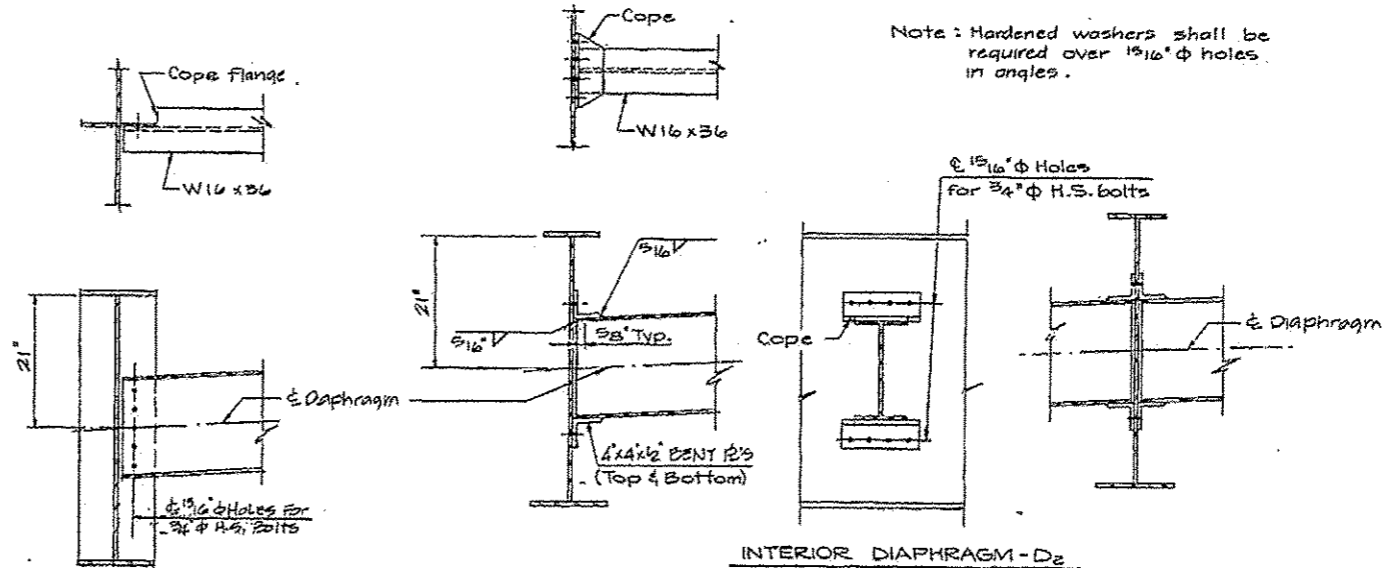


**FRAMING PLAN**  
 All end diaphragms to be W12x40 (D1)  
 All interior diaphragms to be W16x36 (D2)  
 All Pier diaphragms to be W16x36 (D3)



**Y OFFSETS**

GIRDER NO.	Y	Y <sub>1</sub>	Y <sub>2</sub>	Y <sub>3</sub>
1	1.000	0.110	0.540	0.220
2	1.001	0.110	0.538	0.220
3	1.002	0.110	0.537	0.220
4	1.003	0.110	0.536	0.220
5	1.004	0.109	0.535	0.220
6	1.005	0.109	0.534	0.220
7	1.006	0.108	0.533	0.220
8	1.007	0.108	0.532	0.220
9	1.008	0.108	0.531	0.220
10	1.009	0.107	0.530	0.220
11	1.010	0.107	0.529	0.220
12	1.011	0.107	0.528	0.220



**TOP OF WEB ELEVATIONS\***

GIRDER NO.	RADIUS	ABUT. 1	PIER 1	SPLICE 1	PIER 2	SPLICE 2	ABUT. 2
1	3816.20'	546.66	547.06	547.16	547.58	547.60	547.98
2	3823.53'	546.94	547.35	547.45	547.84	547.96	548.27
3	3830.86'	547.23	547.63	547.73	548.15	548.25	548.55
4	3838.20'	547.52	547.92	548.02	548.44	548.53	548.84
5	3845.53'	547.81	548.21	548.31	548.72	548.82	549.12
6	3852.86'	548.09	548.49	548.59	549.01	549.10	549.41
7	3860.20'	547.76	548.16	548.26	548.67	548.76	549.06
8	3867.53'	548.05	548.44	548.54	548.95	549.05	549.35
9	3874.86'	548.34	548.73	548.83	549.24	549.33	549.63
10	3882.20'	548.62	549.02	549.11	549.52	549.62	549.92
11	3889.53'	548.91	549.30	549.40	549.81	549.90	550.20
12	3896.86'	549.20	549.59	549.69	550.09	550.19	550.49

\* For Fabrication only

**FRAMING PLAN AND DIAPHRAGM DETAILS**

REVISION	DATE	BY	CHKD	APP'D

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

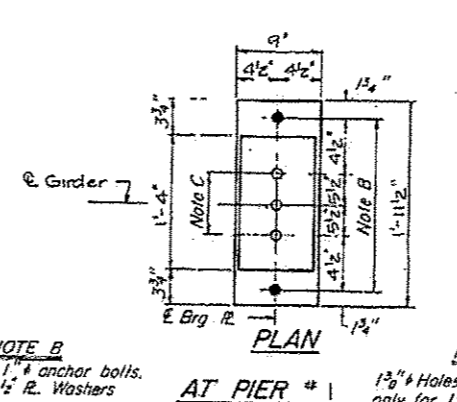
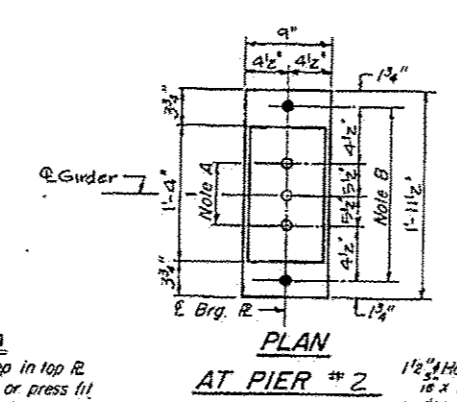
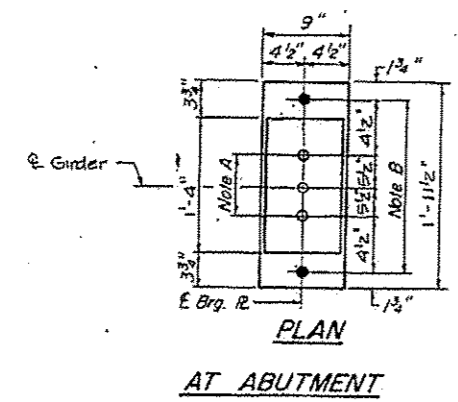
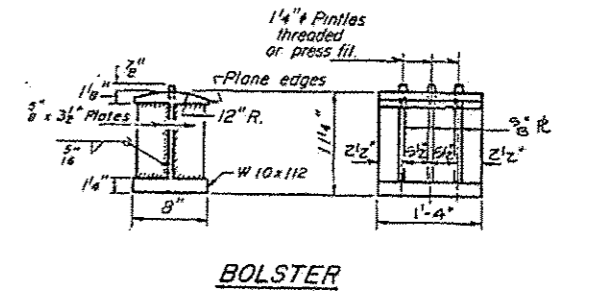
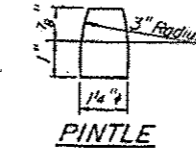
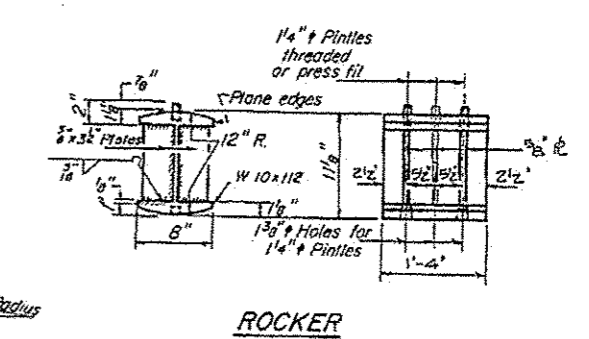
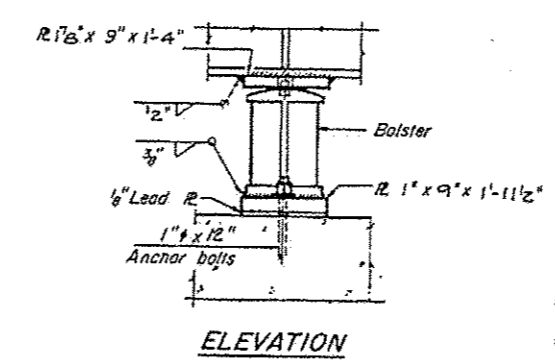
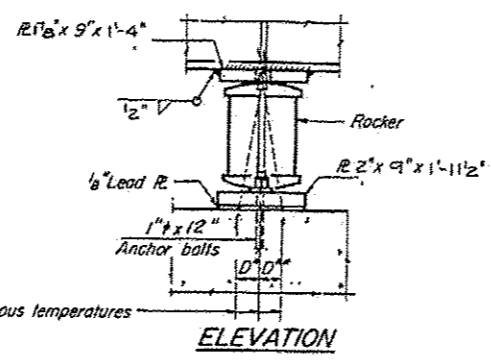
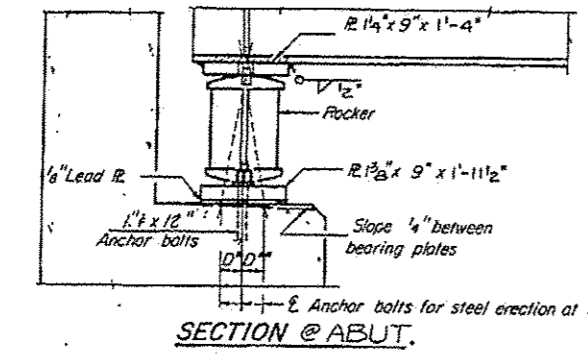
F.A. 602 OVER SPRING CREEK  
 F.A. 602 SECTION 212 PROJ.  
 STA. 239+00 (F.A. 602) SANGAMON CO.

HOMER L. CHASTAIN & ASSOCIATES  
 CONSULTING ENGINEERS  
 DECATUR, ILLINOIS

DRAWN BY: BWH 3-18  
 CHECKED BY: GSH 4-18  
 DATE: 3-18-18

PROJECT NO.: 2250-10  
 SHEET NO.:





**NOTE A**  
 1 3/8" Holes - 1" deep in top R.  
 for pintles Thread or press fit  
 pintles into bottom R.

**NOTE B**  
 1 1/2" Holes for 1" anchor bolts.  
 1 1/2 x 2 1/2 x 2 1/2 R. Washers  
 under nut.

**NOTE C**  
 1 3/8" Holes 1" deep in top R.  
 only for 1 1/4" pintles

**NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.**

- a) D\* (Side of brg away from fixed brg.)  
 D\* = 1/8" per each 100' of expansion for every 15° fall below the normal temp. of 50°F.  
 D\*\* (Side of brg. toward fixed brg.)  
 D\*\* = 1/8" per each 100' of expansion for every 15° rise above the normal temp. of 50°F.
- b) After beams have been erected and dimensions D\* or D\*\* determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

**BEARING ASSEMBLY DETAILS**

DESIGN DATA

	0.4 SPAN 1	PIER	0.5 SPAN 2
I <sub>2</sub> (in <sup>4</sup> )	11,587	19,944	11,962
I <sub>2c</sub> (in <sup>4</sup> )	29,937		31,216
S <sub>2</sub> (in <sup>3</sup> )	554	894	584
S <sub>2c</sub> (in <sup>3</sup> )	781		820
Q (k/ft)	883	883	883
M <sub>0</sub> (ft.k)	274	696	271
f <sub>s-non-comp</sub> (ksi)	5.94	9.34	5.56
S <sub>D</sub> (ft.k)	302	302	302
M <sub>2sp</sub> (ft.k)	115	193	140
M <sub>2</sub> (ft.k)	581	459	631
M <sub>2mp</sub> (ft.k)	139	110	151
TOTAL (ft.k)	835	762	922
f <sub>s-comp</sub> (ksi)	12.83	10.23	13.49
f <sub>s total</sub> (ksi)	18.77	19.57	19.07
VR (k)	54.0		

	ABUT.	PIER 1	PIER 2
R <sub>2</sub> (k)	30.3	111.6	111.6
R <sub>4</sub> (k)	41.0	62.6	62.6
Imp. (k)	9.9	15.0	15.0
R <sub>total</sub> (k)	81.2	189.2	189.2

I<sub>2</sub> and S<sub>2</sub> are the moment of inertia and section modulus of the steel section used in computing f<sub>s total</sub>.  
 I<sub>2c</sub> and S<sub>2c</sub> are the moment of inertia and section modulus of the composite section used in computing f<sub>s total</sub>.  
 VR is the maximum 1/2 L + impact shear range in span used to determine shear connector spacing.

Reproduced From I.D.P.T.  
 Base Sheet 1-2-6 8-1-70

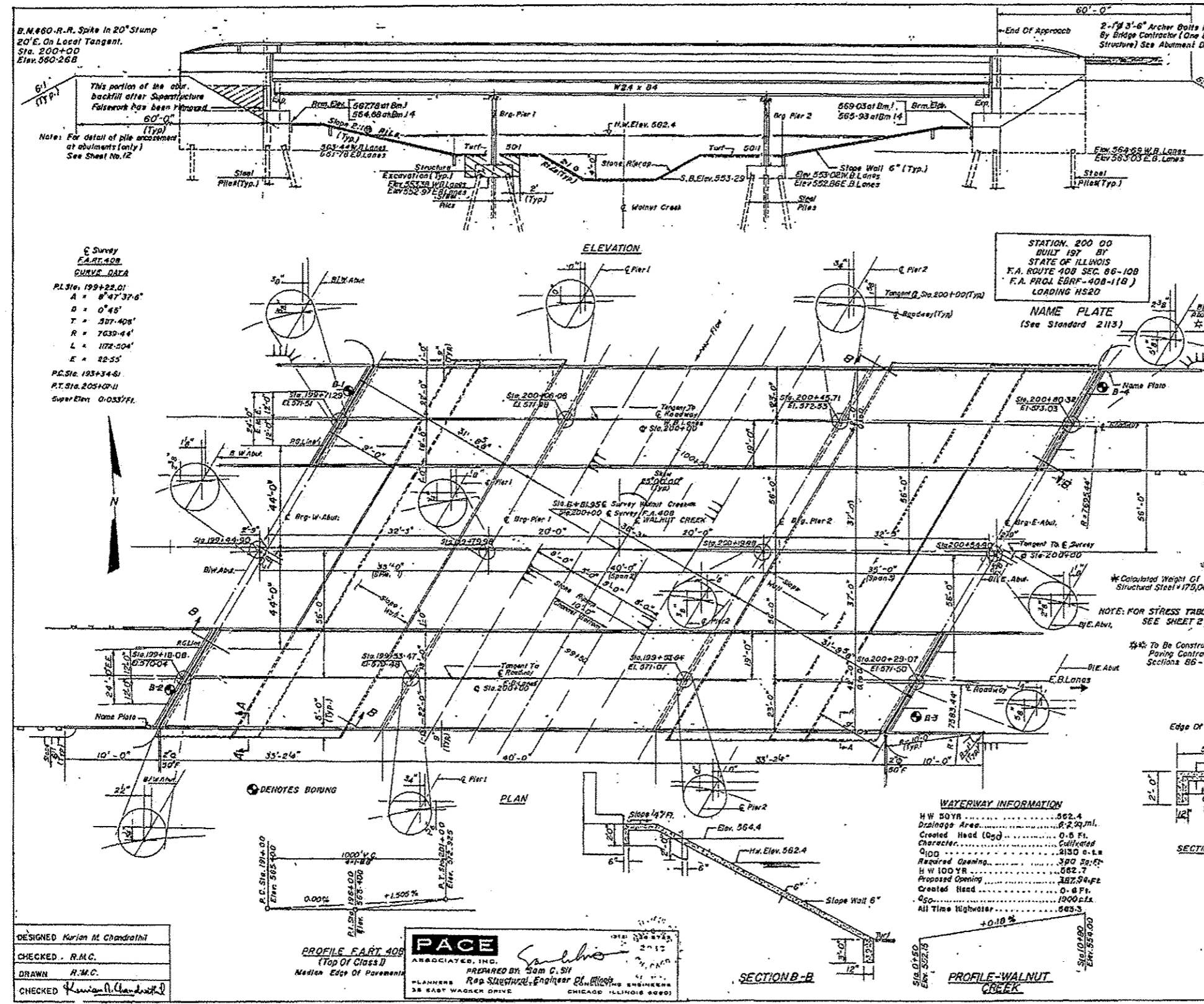
**BEARING DETAILS**

REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PROJECT NO. 2850-10
1	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET NO.
2	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
3	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
4	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
5	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
6	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
7	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
8	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
9	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
10	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 P.A. 662 OVER SPRING CREEK  
 P.A. 662 SECTION 05 PROJ.  
 STA. 834+00 TO P.A. 662, SANGAMON CO.  
 HOMER L. CHASTAIN & ASSOCIATES  
 CONSULTING ENGINEERS  
 DECATUR, ILLINOIS



X Sheets 13-14-15 Deleted



DATE	12/11/19	SHEET	12	SHEETS	16
NO.	408	NO.	37	NO.	12
PROJECT		SCOTT		P-96-028-72	

**GENERAL NOTES:**

ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE SHOWN.

FIELD CONNECTION SHALL BE BOLTED USING HIGH STRENGTH BOLTS. BOLTS 1/2" Ø OPEN HOLES 1 1/2" Ø, UNLESS OTHERWISE NOTED.

THE BASIC LEAD SILICO CHROMATE PAINT SYSTEM SHALL BE USED FOR SHOP & FIELD PAINTING OF STRUCTURAL STEEL.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS 305 TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-HOUR THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORT. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGM OVER SUPPORTS.

SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6" X 6" 12S11, WEAVING 300 PER 100 SQ. FT.

LAYOUT OF SLOPE WALLS MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.

THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE HIGHEST EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.

THE CONTRACTOR SHALL DRIVE TWO TEST PILES ONE EACH AT PIER 1, EAST BOUND LANES, AND PIER 2, WEST BOUND LANES IN PERMANENT LOCATION AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF THE PILES.

THE CONCRETE PAVEMENT ABOVE THE INDICATED CONSTRUCTION JOINT AT THE TOP OF THE SLAB SHALL BE CONSTRUCTED OF CLASS X CONCRETE, EXCEPT THE ACCURATES SHALL CONFORM TO THE REQUIREMENTS OF STANDARD SPECIFICATIONS.

PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH WATER PROOFING MEMBRANE SYSTEM IS APPLIED.

BEARING SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF ± 1/8" INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRADING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTED SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.

THE 140K LOAD CARRYING MEMBER CONCRETE SUBJECT TO THE SUPPLEMENTAL REQUIREMENTS FOR TIE-BARS AND THE WELDS, SPLICE PLATES, AND THE PLATES OF THE WIDE FLANGE BEAMS.

**Survey**  
PART 408  
CURVE DATA

PL. Sta. 199+28.01  
A = 84°37'6"  
D = 0°45'  
T = 307'-408"  
R = 7630'-44"  
L = 172'-504"  
E = 22'-55"

PC. Sta. 193+34.61  
PT. Sta. 205+07.11  
Supr. Elev. 0-033771

STATION 200 00  
BUILT 197 BY  
STATE OF ILLINOIS  
F.A. ROUTE 408 SEC. 86-108  
F.A. PROJ. EBRF-408-118  
LOADING HS20

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER STRUCT.	SUB STRUCT.	TOTAL
Structure Excavation	Cu.Yds	---	180	180
Bituminous Concrete Surface Course, Class I	Tons	73.8	---	73.8
Class X Concrete	Cu.Yds	2543	254.3	2843
Class X Concrete	Cu.Yds	2783	177.6	455.9
Structural Steel	L.S.	---	---	L.S.
Aluminum Rolling	Lin. Ft.	498	---	498
Steel Piles (HP 10X 42)	Lin. Ft.	---	410	410
Reinforcement Bars	Lbs.	62270	30970	93240
Water Proofing Membrane System	Sq. Yds	912	---	912
Preformed Joint Scales (28")	Lin. Ft.	93	---	93
Test Pile Steel (HP 10X 42)	Each	---	---	2
Name Plates	Each	2	---	2
Slope Wall 6 Inch	Sq. Yds	---	725	725
Protective Coat	Sq. Yds	212	---	212

**DESIGN LOADS**  
HS 20-44 And Allowance For 25 P.S.F. Future Wearing Surface.

**DESIGN STRESSES**

f<sub>c</sub> = 1400 P.S.I. Except As Follows:  
f<sub>c</sub> = 1200 P.S.I. For Deck Slab  
n = 10  
f<sub>s</sub> = 20000 P.S.I. For A307 Structural Steel  
f<sub>s</sub> = 20000 P.S.I. For Reinforcement Steel  
V = 75 P.S.I. Allowable Shear in Footings

Allowable Live Load Deflection = L/1000 (Non-Composite)

**DESIGN SPECIFICATIONS:**  
AASHTO, 1973 As Applicable

**APPROVED**  
FOR STRUCTURAL ACCURACY ONLY

**GENERAL PLAN & ELEVATION**  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
Project CORF-408-1(B)  
F.A. ROUTE 408- SEC 86-108  
F.A. 408 OVER WALNUT CREEK

SCOTT COUNTY  
STATION 200+00  
Rev. 8-25-75  
Rev. 10-15-75

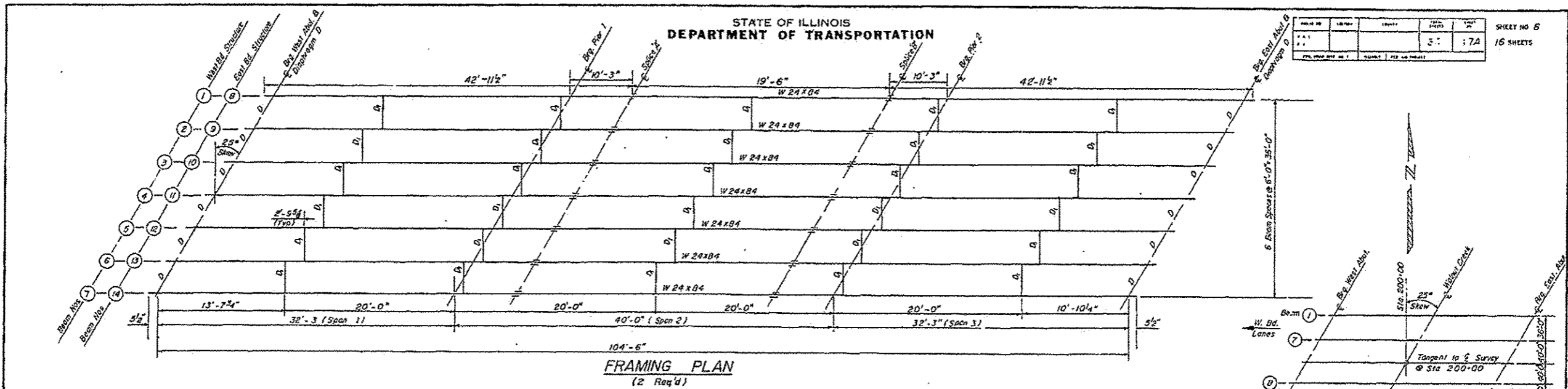
DESIGNED Kurian M. Chandralini  
CHECKED R.M.C.  
DRAWN R.M.C.  
CHECKED Kurian M. Chandralini

**PACE ASSOCIATES, INC.**  
PREPARED BY Sam C. Shi  
REGISTERED PROFESSIONAL ENGINEER  
28 EAST WAGNER DRIVE CHICAGO, ILLINOIS 60601

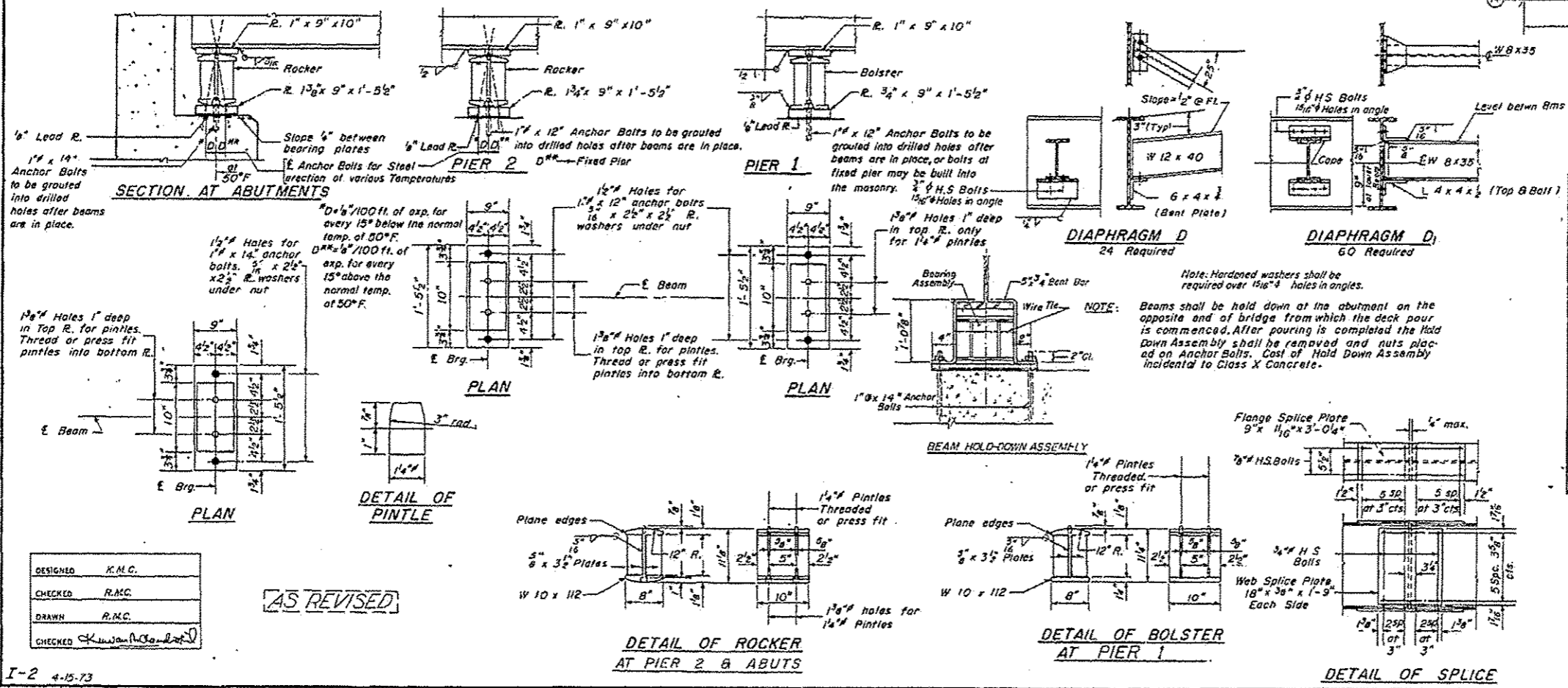


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DATE	BY	SCALE	SHEET NO.
7/1/2015	R.M.C.	1/4" = 1'-0"	16



KEY PLAN



ELEVATIONS - TOP OF BEAMS

Beam No.	LOCATION					
	E. Brg. At Abut.	E. Brg. Pier 1	E. Splice	E. Splice	E. Brg. Pier 2	E. Brg. At Abut.
1	571.53	571.95	572.04	572.20	572.39	573.00
2	571.29	571.69	571.80	571.95	572.15	572.76
3	571.05	571.44	571.56	571.72	571.91	572.52
4	570.81	571.20	571.32	571.48	571.67	572.28
5	570.57	570.95	571.05	571.24	571.43	572.04
6	570.33	570.72	570.84	571.00	571.19	571.81
7	570.09	570.48	570.60	570.78	570.95	571.55
8	569.87	570.26	570.38	570.54	570.73	571.34
9	569.63	570.02	570.14	570.30	570.49	571.10
10	569.39	569.78	569.90	570.06	570.25	570.86
11	569.15	569.54	569.66	569.82	570.01	570.62
12	568.91	569.30	569.42	569.58	569.77	570.38
13	568.67	569.06	569.18	569.34	569.53	570.14
14	568.43	568.82	568.94	569.10	569.29	569.90

\* For Fabrication Only

ILLINOIS DEPARTMENT OF TRANSPORTATION  
STRUCTURAL STEEL  
F.A. ROUTE 408 SECTION 86 - 108  
F.A. 408 OVER WALNUT CREEK  
SCOTT COUNTY  
STATION 200+00.00

DESIGNED	K.M.C.
CHECKED	R.M.C.
DRAWN	R.M.C.
CHECKED	[Signature]

AS REVISED

I-2 4-15-73