

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FA RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
VAR.	90[7(HB-1,HB);6HB;15-1-HB]BP	TAZEWELL	28	1
		ILLINOIS	CONTRACT NO. 68E02	

INDEX OF SHEETS

- 1.COVER SHEET
- 2.GENERAL NOTES
- 3-4 SUMMARY OF QUANTITIES
- 5-24 PLAN SHEETS
- 25-28 TRAFFIC CONTROL DETAIL

HIGHWAY STANDARDS

- 701101-05
- 701106-02
- 701400-09
- 701402-12
- 701423-10
- 701426-09
- 701428-01
- 701601-09
- 701901-07
- 704001-08
- AADT
- LOCATION 1&2 29,200 SU 450 /MU 600
- LOCATION 3 16,000 SU 900 /MU 2850
- LOCATION 4 16,000 SU 900 /MU 2850
- LOCATION 5 41,400 SU 1950 /MU 4550

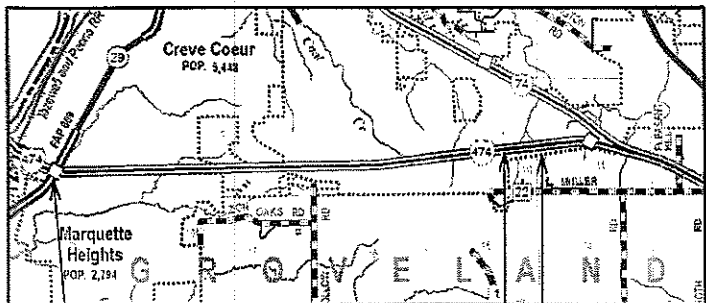
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER TOM INGLIS (309)671-3450
PROJECT MANAGER MIKE LEWIS (309)671-3454
CONTRACT NO. 68E02
CATALOG NO. 035538-00D

PROPOSED
HIGHWAY PLANS

I 474 (FAI 474) I 74 (FAI 74)
SECTION 90[7(HB-1,HB);6HB;15-1-HB]BP
PROJECT NHPP-N60I(501)
BRIDGE PAINTING
TAZEWELL COUNTY

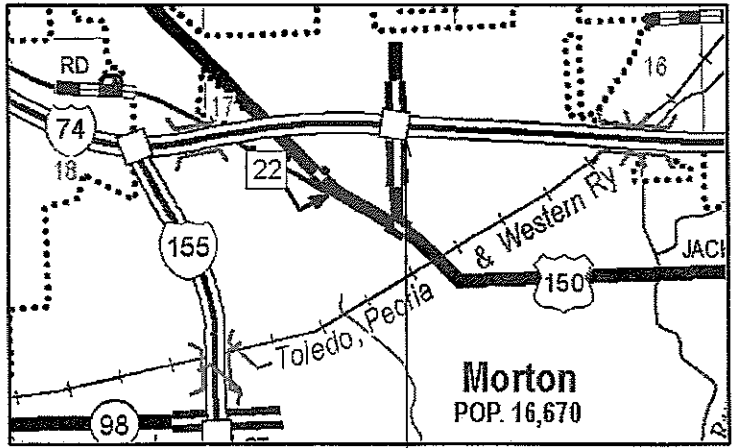
C-94-017-18



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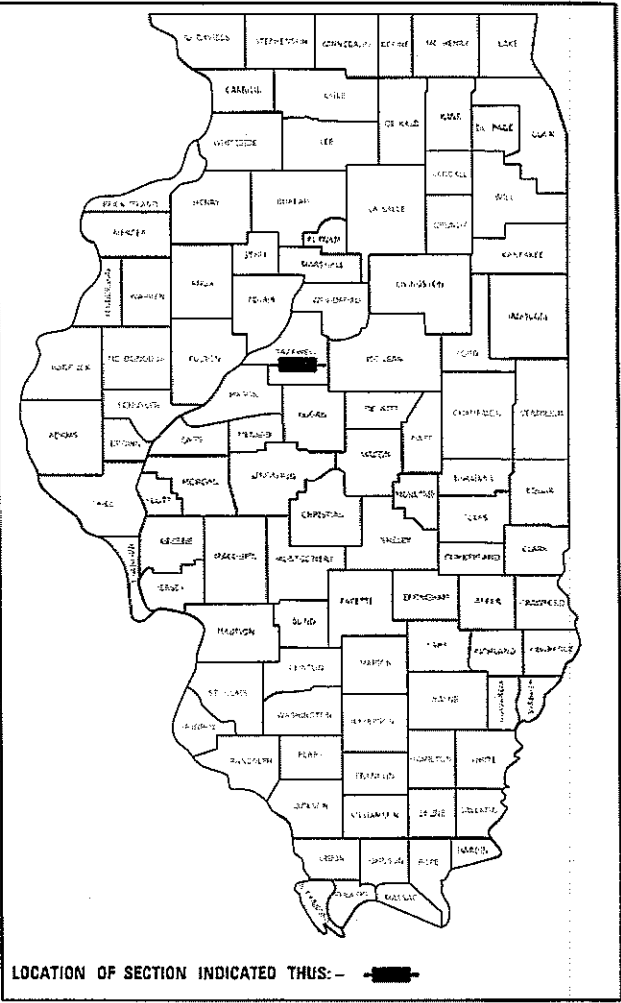
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S.N. 090-0104

LOCATIONS 1&2
S.N. 090-0106
S.N. 090-0107



LOCATION 5
S.N. 090-0141

D-94-015-18



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Mar 20 2018
Kensel A Barnett (KSD)
REGION THREE ENGINEER

May 11 2018
Paul P. Chaf
ENGINEER OF DESIGN AND ENVIRONMENT

May 11 2018
Paul P. Chaf
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

Model: Default
File: \\net01\p\c\en\04671\STD\PLNS\56802.dwg
User: j\50821\B-ldg
Version: 2013
Title: BRIDGE PAINTING 68E02

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				TAZEWELL	
				90/10	
				FED/STATE	
				0047	
				URBAN	
50606701	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 1	L SUM	1	1	
50606702	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 2	L SUM	1	1	
50606703	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 3	L SUM	1	1	
50606704	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 4	L SUM	1	1	
50606705	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 5	L SUM	1	1	
67100100	MOBILIZATION	L SUM	1	1	
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	4	4	
70100325	TRAFFIC CONTROL AND PROTECTION, STANDARD 701423	EACH	2	2	
70400500	TEMPORARY CONCRETE BARRIER (STATE OWNED)	FOOT	1364	1364	
70400600	RELOCATE TEMPORARY CONCRETE BARRIER (STATE OWNED)	FOOT	1486	1486	
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	4	
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	8	8	
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	

14

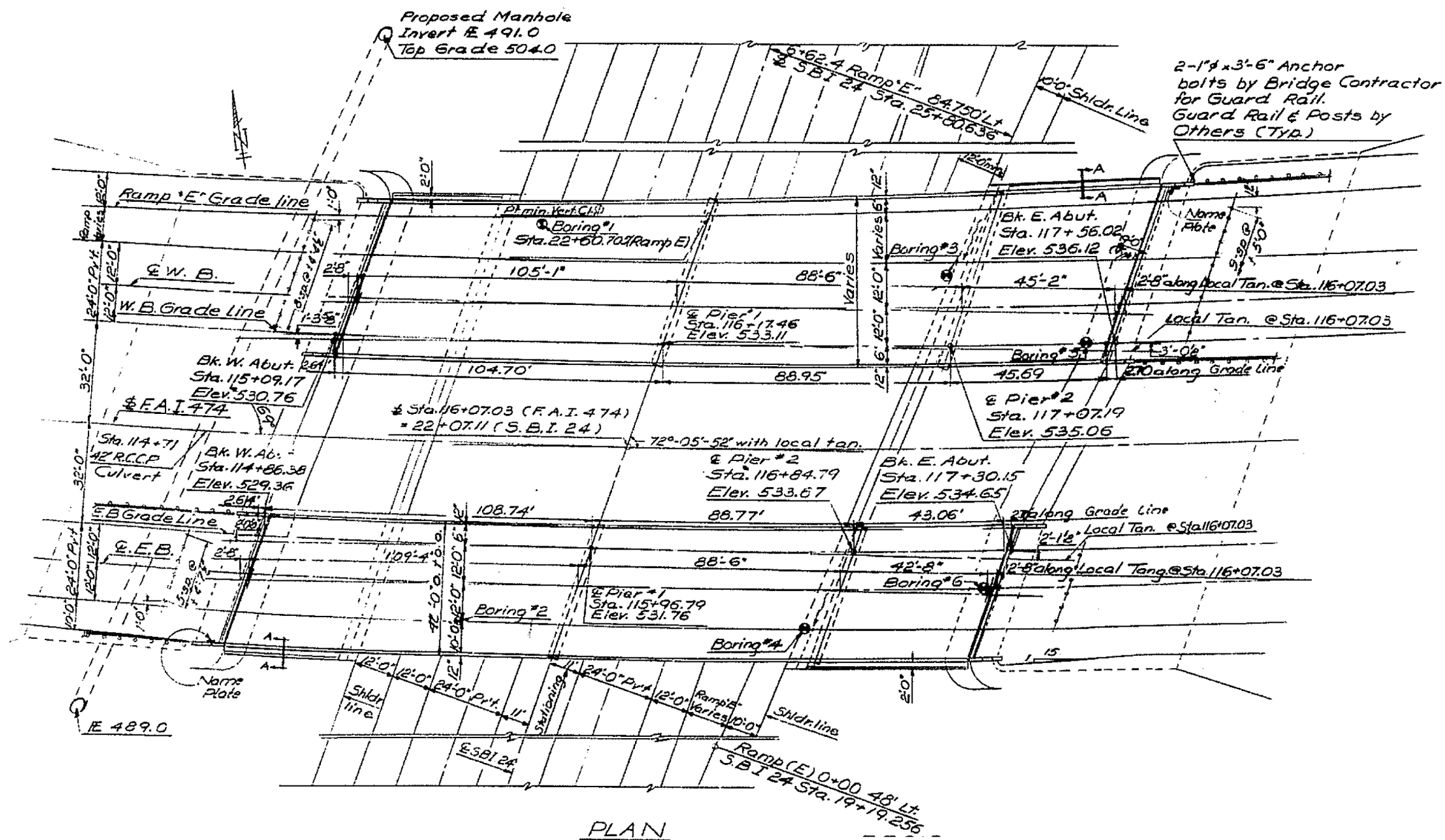
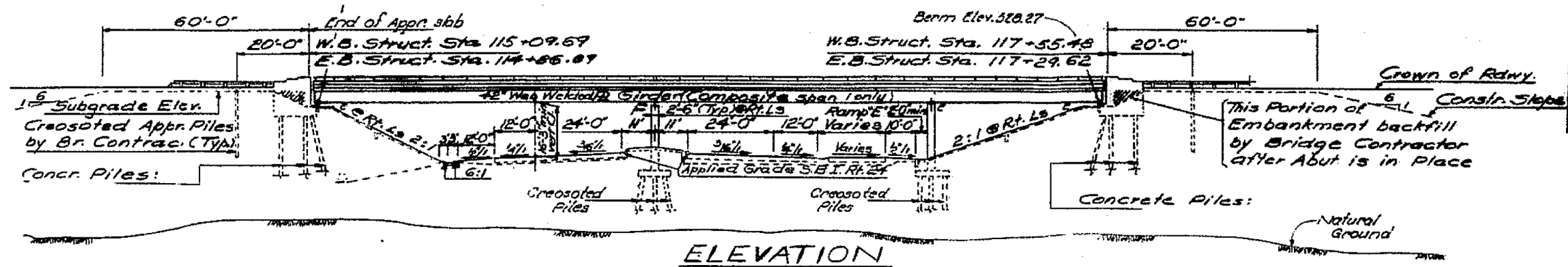
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	DRAWN -	REVISED -
PLOT SCALE = 200.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. BOITMB-1,HB16HB15-1-HB3BF	TAZEWELL	28	3	
CONTRACT NO. 68E02				
ILLINOIS FED. AID PROJECT				

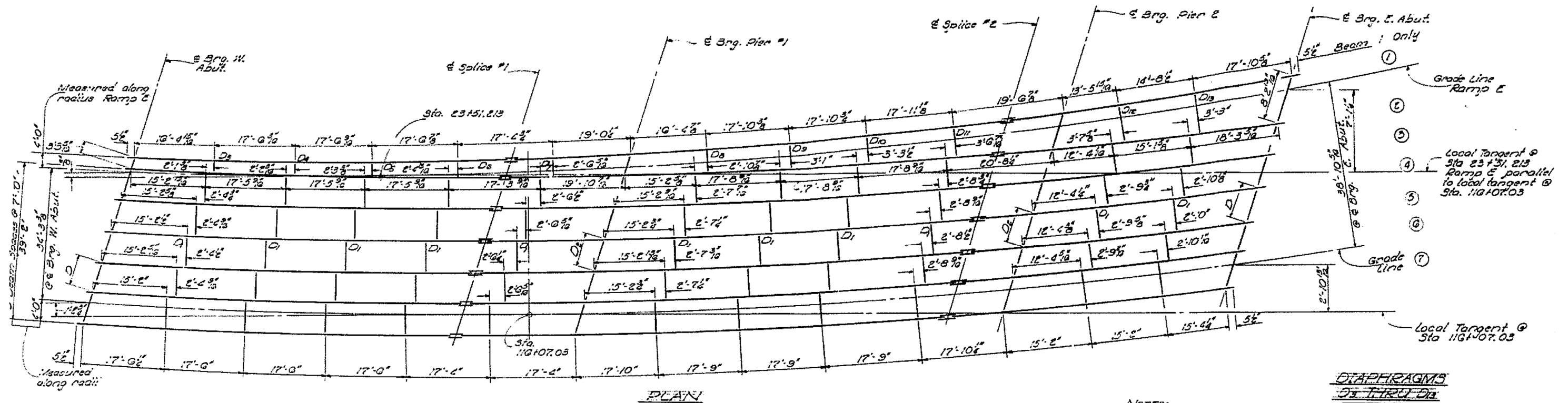
S.N. 090-0106 EB S.N. 090-0107 WB
FOR INFORMATION ONLY



LOCATION 1
WB I-474
US 24/IL 29

USER NAME = appenzellerj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN SHEET				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -						VAR.	007(HB-1,HB);6HB;15-1-HB)BH	TAZEWELL	28	5
PLOT SCALE = 200.0000' / in.	CHECKED -	REVISED -						CONTRACT NO. 68E02				
PLOT DATE = 3/22/2018	DATE -	REVISED -										
			SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED. AID PROJECT		

S.N. 090-0107
FOR INFORMATION ONLY



DIAPHRAGMS
OF THROAT

Diaph	Length
D ₃	3'-5 1/2"
D ₄	3'-9 1/2"
D ₅	4'-1 1/2"
D ₆	4'-5 1/2"
D ₇	4'-9 1/2"
D ₈	5'-5 1/2"
D ₉	5'-9 1/2"
D ₁₀	6'-1 3/8"
D ₁₁	6'-3 1/2"
D ₁₂	7'-1 1/4"
D ₁₃	7'-6 3/8"

NOTES:
All beams shall be fabricated
according to their respective radii.
All longitudinal dimensions are
given along E-Girders.
All Diaphragms are radial.
For Beam Hold Down Detail
see sheet #2.

ANGLE $E = B$

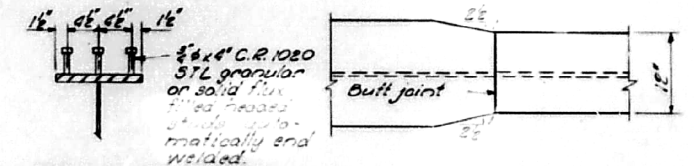
	Bro. M. Asut.	Bro. Pier 1	Bro. Pier 2	Bro. L. Asut.
Brn. 1	17°-41.5, 14"	19°-21'-52.47"	20°-47'-34.04"	21°-31'-30.72"
Brn. 2	16°-36'-34.40"	18°-14'-55.77"	19°-40'-12.05"	20°-24'-0.56"
Brn. 3	16°-38'-20.71"	18°-12'-27.68"	19°-57'-31.51"	20°-21'-13.54"
Brn. 4	16°-30'-7.67"	18°-10'-0.32"	19°-34'-51.70"	20°-18'-27.55"
Brn. 5	16°-27'-55.24"	18°-7'-33.64"	19°-32'-12.76"	20°-15'-41.93"
Brn. 6	16°-25'-43.36"	18°-5'-7.57"	19°-29'-54.45"	20°-12'-57.22"
Brn. 7	16°-23'-32.12"	18°-2'-42.22"	19°-26'-56.88"	20°-10'-13.32"

D & D DIMENSIONS

D Dim.	Loc.	E Brg. W. Abut.	Pier 1	Pier 2	E Brg. C. Abut.
Bm. 7 to Bm. 8	8'-2"	8'-2 ¹ / ₂ "	8'-3 ¹ / ₁₀ "	8'-4 ¹ / ₈ "	
Bm. 8 to Bm. 5	8'-2"	8'-2 ¹ / ₂ "	8'-3 ¹ / ₈ "	8'-4 ¹ / ₈ "	
Bm. 5 to Bm. 4	8'-2"	8'-2 ¹ / ₂ "	8'-3 ¹ / ₈ "	8'-4 ¹ / ₈ "	
Bm. 4 to Bm. 3	8'-2 ¹ / ₁₀ "	8'-2 ¹ / ₁₀ "	8'-3 ¹ / ₁₀ "	8'-4 ¹ / ₈ "	
Bm. 3 to Bm. 2	8'-2 ¹ / ₂ "	8'-3"	8'-3 ¹ / ₁₀ "	8'-4 ¹ / ₈ "	
Bm. 2 to Bm. 1	3'-3 ¹ / ₂ "	3'-3 ¹ / ₂ "	7'-3 ¹ / ₂ "	8'-2 ¹ / ₈ "	

LOCATION 1
WB I-474
US 24/IL 29

MODEL: Default
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A diagram of a skewed girder. A vertical line represents the centerline of the girder. A horizontal line represents the centerline of the bridge stiffener. The intersection of these two lines is labeled "Point of Rotation". A line labeled "Skew Line" is drawn at an angle to the vertical centerline. The angle between the vertical centerline and the skew line is labeled 31° . A dashed line perpendicular to the skew line is labeled "Radius". The label "E. Brg Stiffener" points to the horizontal line. The label "Outside of Ext. Girder" points to the right side of the diagram.

[illegible][illegible]

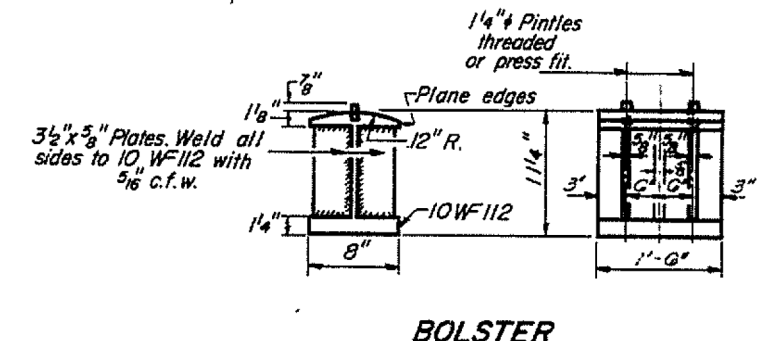
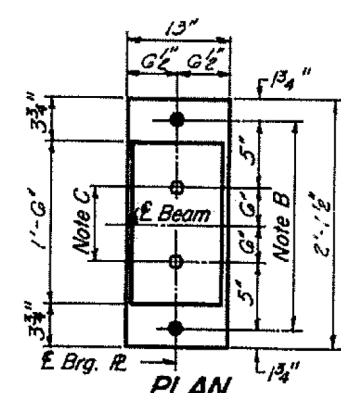
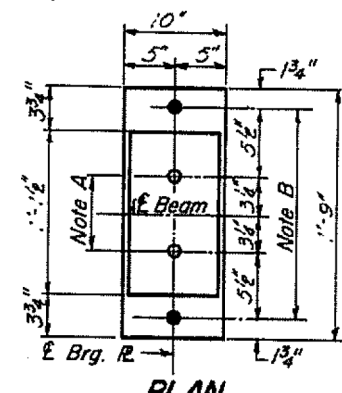
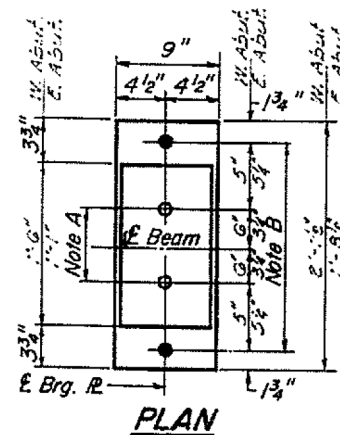
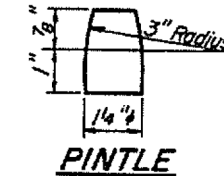
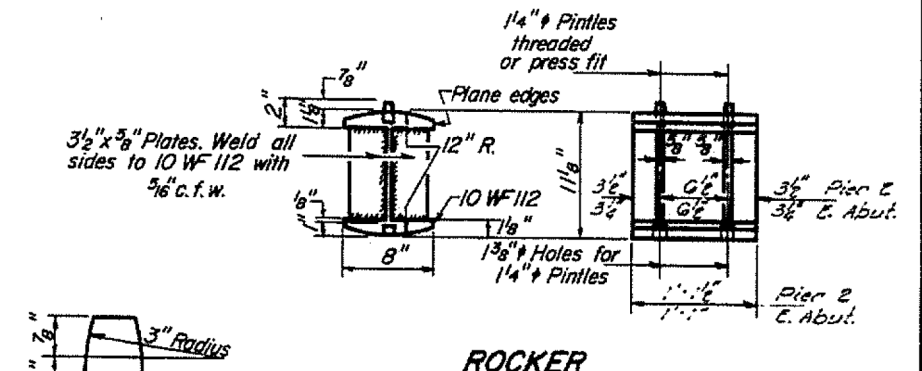
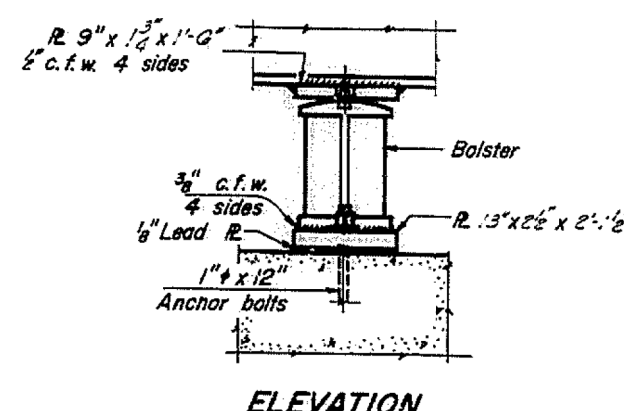
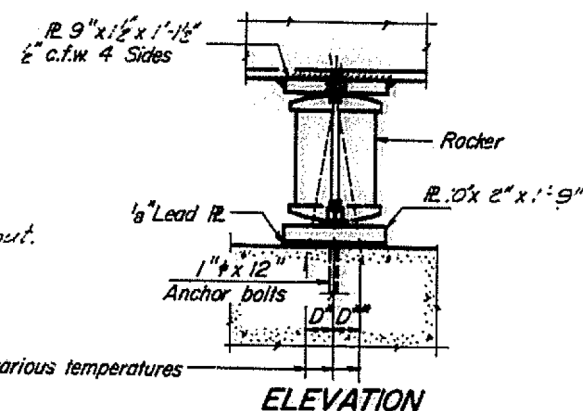
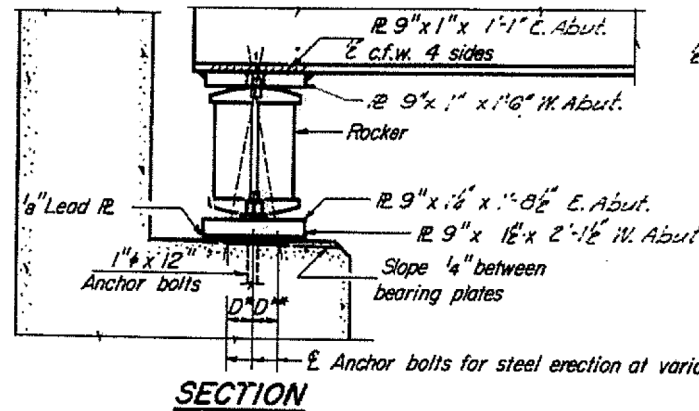
Hand-drawn structural drawings of a bridge deck. The top drawing is a plan view showing a rectangular deck with dimensions 12' x 3' x 1' and 12' x 3' x 1'. It includes a central section with dimensions 4' x 3' and 12' x 3' x 1'. A table on the right lists bridge components: Brm. 1, Brm. 2, Brm. 3, Brm. 4, Brm. 5, Brm. 6, Brm. 7. The bottom drawing is a cross-section showing the deck's internal structure with dimensions 12' x 3' x 1' and 12' x 3' x 1'. It includes a central section with dimensions 4' x 3' and 12' x 3' x 1'. The text "SPILLER" and "8 x 14 S. Bolts" is written at the bottom.

<u>BEAM DIMENSIONS</u>											
	Radius	A	B	C	D	E	h_1	h_2	h_3	L	F
Brn. 1	355R.18	78°11'2"	15°40'3"	60°11'2"	11°12'4"	39°7'0"	103°3'6"	89°5'9"	46°1'16"	545°1'3"	62°6"
Brn. 2	355R.0.0	78°5'3"	15°4'2"	60°5'2"	11°4'5"	39°5'3"	104°9'3"	89°10'0"	45°5'9"	240°46'6"	6°6"
Brn. 3	355R.7.85	78°5'3"	15°4'3"	60°5'2"	11°4'5"	39°5'3"	104°9'3"	89°10'0"	45°5'9"	240°3'6"	6°6"
Brn. 4	360S.68	78°5'3"	15°4'2"	60°4'2"	11°4'2"	39°2'10"	104°9'6"	89°10'2"	45°5'10"	240°4'6"	6°6"
Brn. 5	360S.51	78°4'4"	15°4'4"	60°4'6"	11°4'3"	39°2'2"	104°8'3"	88°11'3"	45°5'8"	240°4'6"	5°11'6"
Brn. 6	362R.35	78°4'4"	15°3'3"	60°4'6"	11°4'3"	39°2'2"	104°8'3"	88°11'2"	45°5'8"	240°3'10"	5°5'6"
Brn. 7	362S.18	78°4'4"	15°3'6"	60°4'6"	11°4'6"	39°2'2"	104°8'3"	88°11'2"	45°5'8"	240°2'3"	5°5'6"

LOCATION 1
WB I-474
US 24/IL 29

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	90[7(HB-1,HB);6HB;15-1-HB]BP	TAZEWELL	28	7
		CONTRACT NO. 68E02		
ILLINOIS		FED. AID PROJECT		

S.N. 090-0107
FOR INFORMATION ONLY



AT ABUTMENTS

NOTE A
1 1/2" 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.
2 1/2" x 2 1/2" x 5/16" R. Washers
under nut.

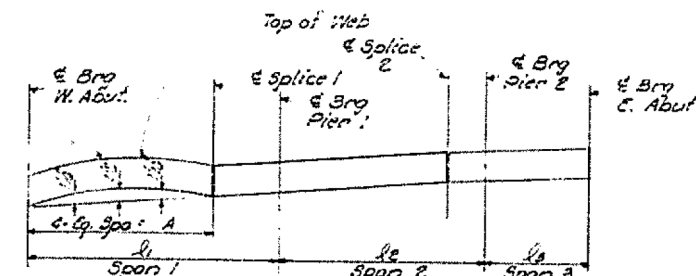
NOTE C
1 1/2" Holes 1" deep in top R.
only for 1 1/4" pintles.

BEARING ASSEMBLY DETAILS

3LE - Unsymmetrical 3 Span
(Composite in Positive Moment Area Span 1 only)

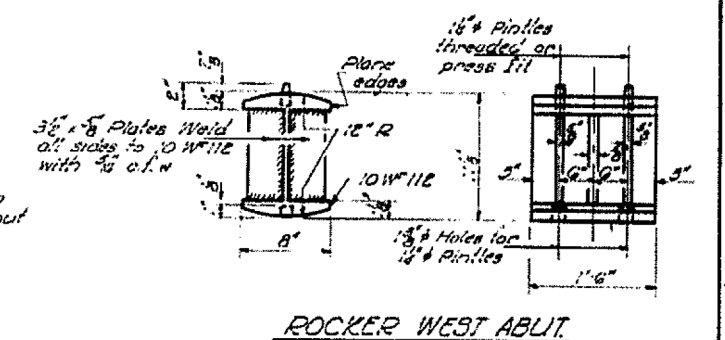
INTERIOR GIRDER MOMENT TABLE					
	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
Is (in ⁴)	2,073.2	3,836.5	1,564.3	1,564.3	9,900.8
Ic (in ⁴)	57740.2				
Sc (in ³)	1,305.8	1,650	707	707	457.8
Q (K/ft)	1.001	1.455	1.433	1.393	1.354
MR (K)	82.1	1793.0	291.4	503	143.9
Is p (K/ft)	7.54	13.04	2.95	8.54	3.77
SD (K/ft)	.475				
MS p (K)	432.9				
ME (K)	989.8	743.2	539.5	409.3	312.6
MTMP (K)	211.8	1,06.5	126.3	108.9	93.1
Total (K)	1,634.5	909.7	665.8	518.2	405.7
Is 4 Sp (K/ft)	11.25	6.62	11.30	8.8	10.63
Is TOTAL (K/ft)	18.79	19.08	16.25	17.34	14.40
VR (K)	61.87				

INTERIOR GIRDER REACTION TABLE				
	W. Abut.	Pier 1	Pier 2	E. Abut.
R ₁ (K)	60.9	173.5	92.0	20.3
R ₂ (K)	46.0	72.0	55.1	38.7
Imo. (K)	9.8	12.1	12.9	11.4



CAMBER DIAGRAM
for dimensions A, L₁, L₂, L₃, see sheet #18

TOP OF WEB ELEVATIONS							
Loc.	Span	1	2	3	4	5	6
Br. W. Abut.		528.48	528.61	528.88	529.15	529.42	529.69
Splice #1		530.16	530.32	530.59	530.86	531.13	531.40
Br. Pier #1		530.72	530.89	531.16	531.43	531.70	531.97
Splice #2		532.37	532.57	532.84	533.11	533.38	533.65



LOCATION 1
WB I-474
US 24/IL 29

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

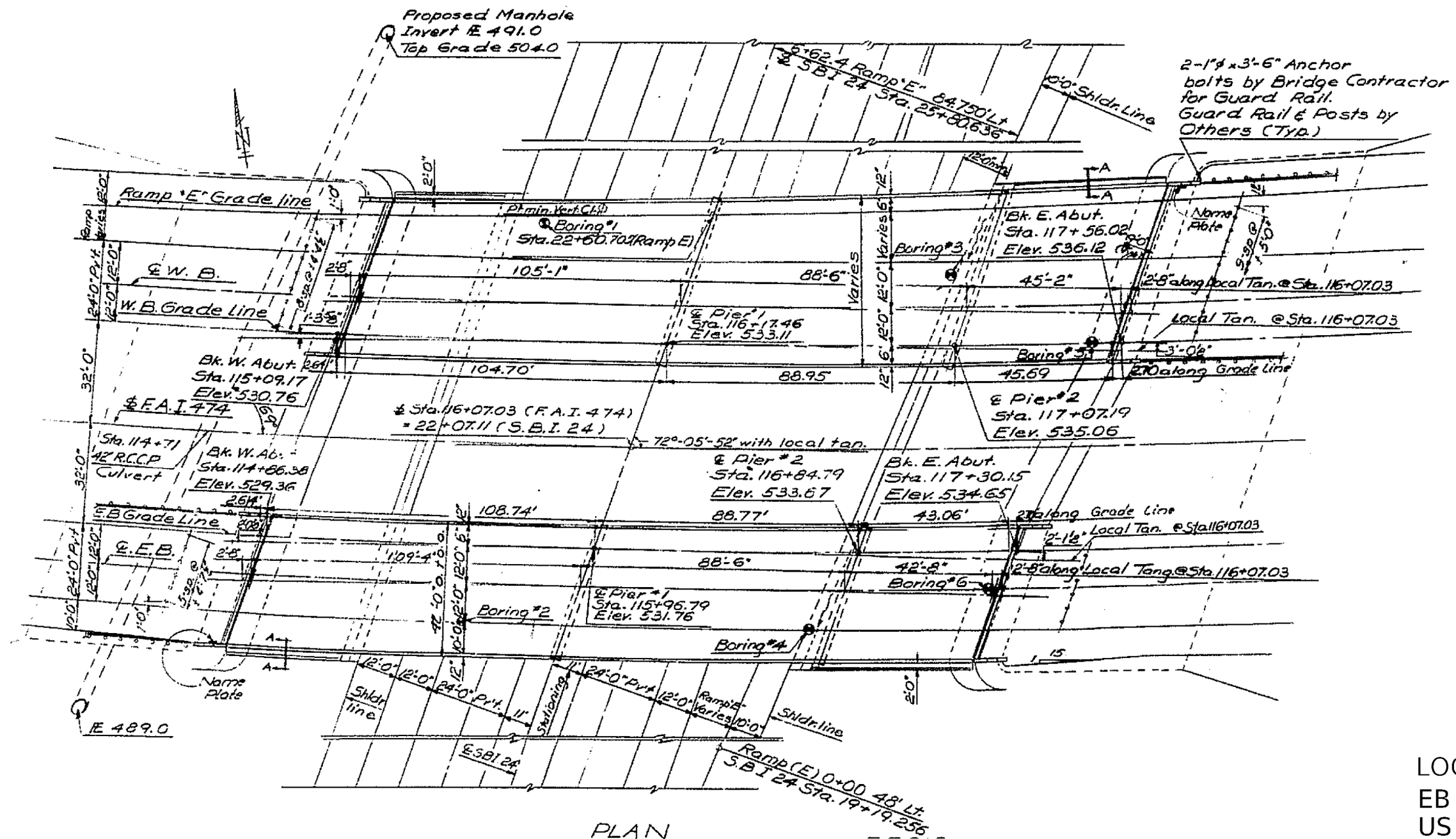
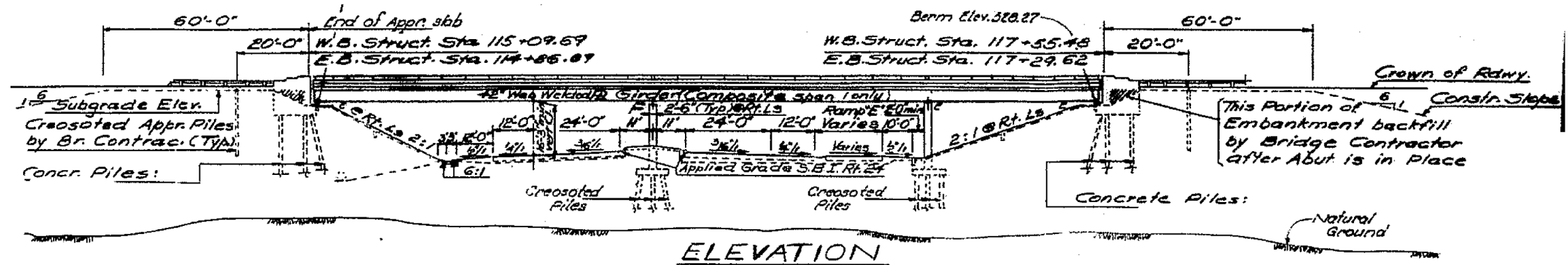
PLAN SHEET

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 3017(HB-1,HB),6HB,15-1(HB)BF		TAZEWELL	28	8
CONTRACT NO. 68E02				
ILLINOIS FED. AID PROJECT				

USER NAME = appenzellerj	DESIGNED -	REVISED -
DRAWN -	REVISED -	REVISED -
PLOT SCALE = 200.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2018	DATE -	REVISED -

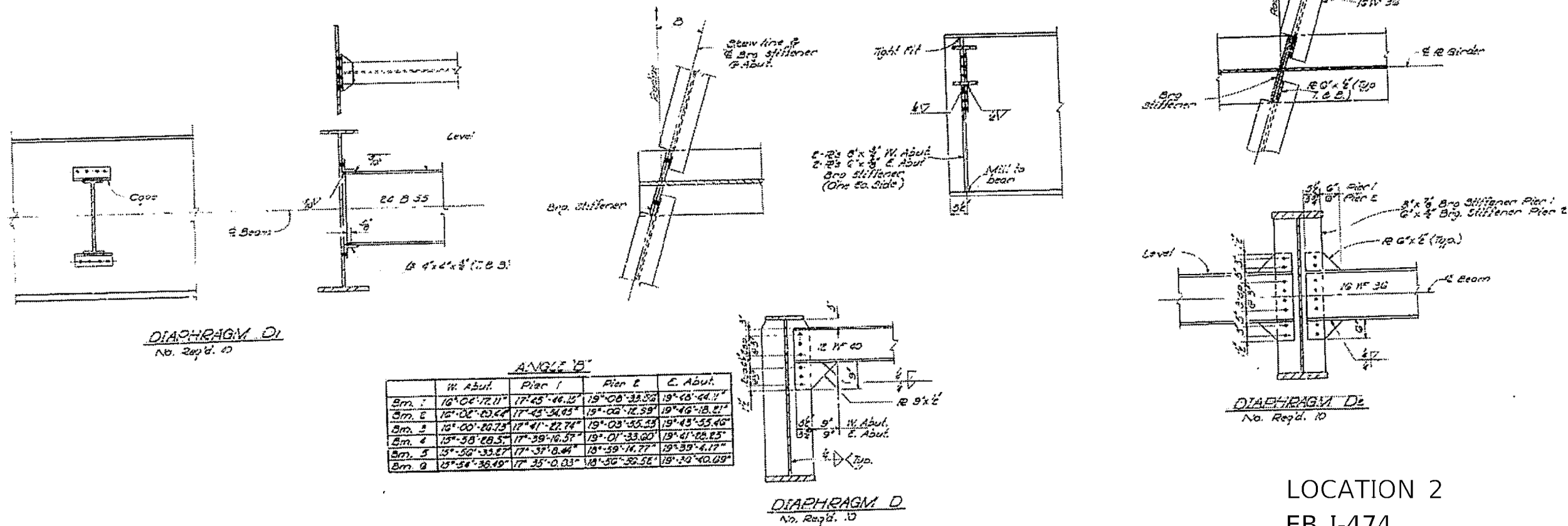
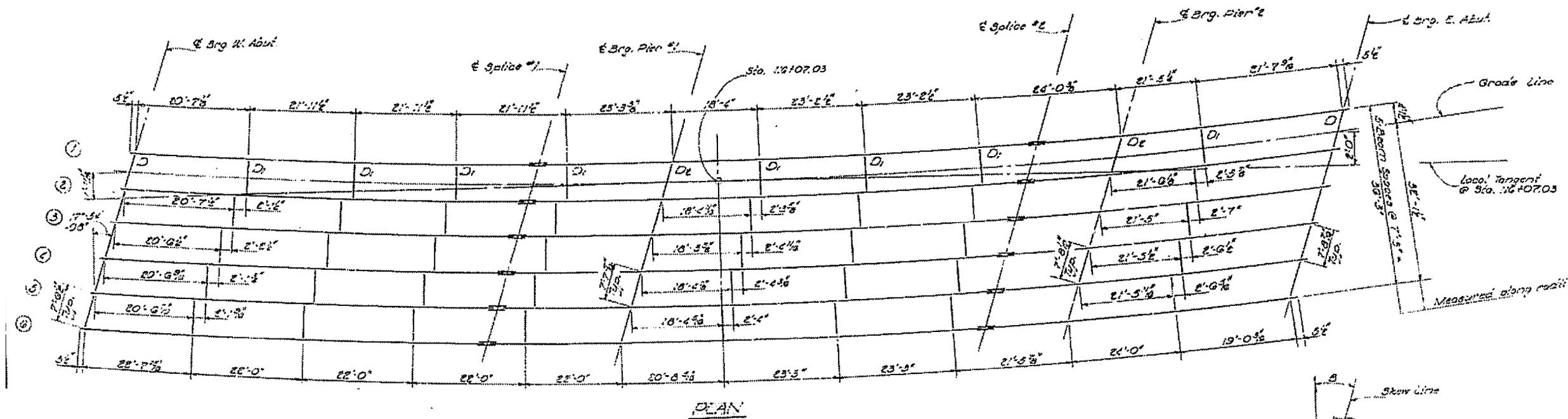
S.N. 090-0106 EB S.N. 090-0107 WB
FOR INFORMATION ONLY



LOCATION 2
EB I-474
US 24/IL 29

USER NAME = appenzellerjj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN SHEET	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	DRAWN -	REVISED -			VAR.	00[7(HB-1,HB);6HB;15-1-HB]BF	TAZEWELL	28	9	
PLOT SCALE = 200.0000' / in.	CHECKED -	REVISED -			CONTRACT NO. 68E02					
PLOT DATE = 3/22/2018	DATE -	REVISED -			SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
							ILLINOIS FED. AID PROJECT			

S.N. 090-0106
FOR INFORMATION ONLY



LOCATION 2
EB I-474
US 24/IL 29

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	DRAWN -	REVISED -
PLOT SCALE = 200.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2018	DATE -	REVISED -

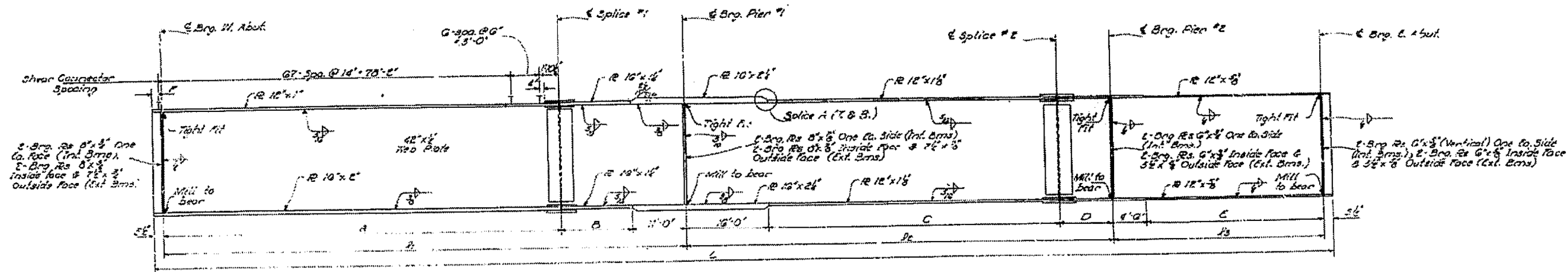
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET

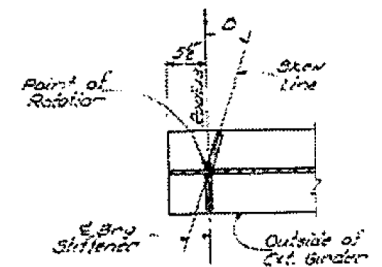
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 68E02				
ILLINOIS FED. AID PROJECT				

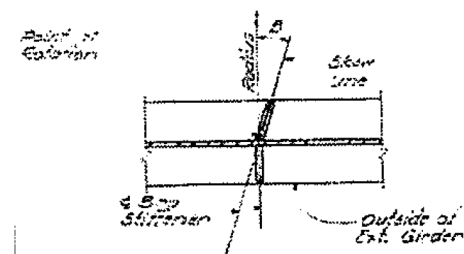
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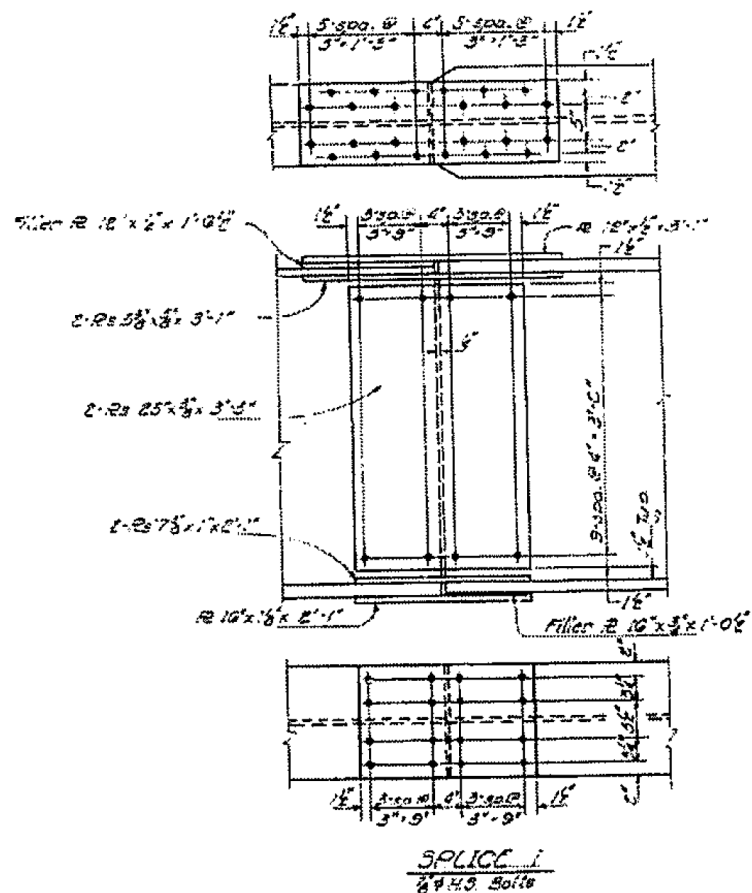
ELEVATION



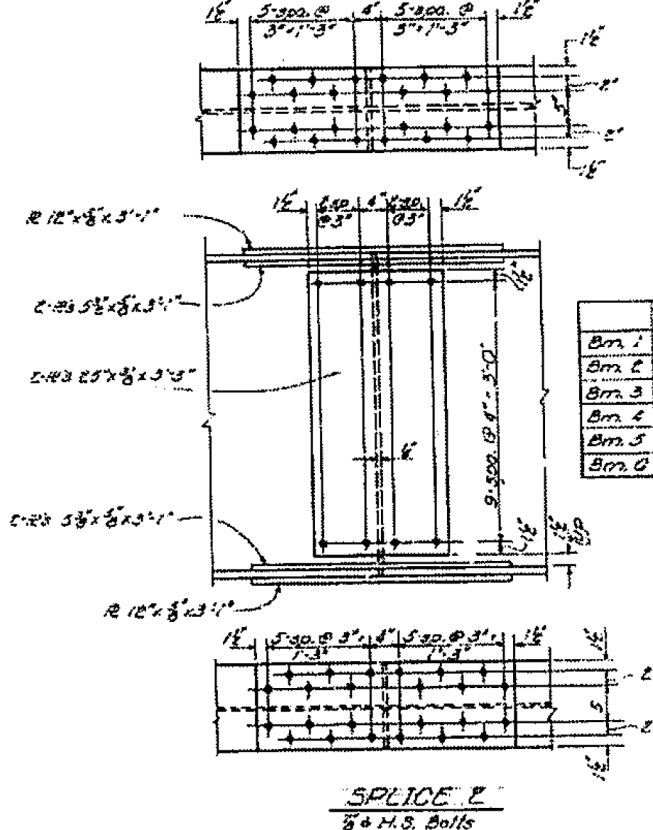
LOCATION DETAIL END
BEARING STIFFENER



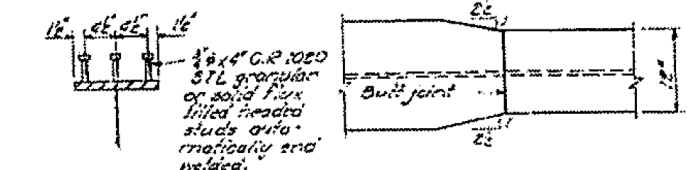
LOCATION DETAIL BEARING
STIFFENER PIERS I, B, C



SPLICE I
3/4" H.S. Bolts



SPLICE E
3/4" H.S. Bolts



PLAN VIEW OF SPLICE A

SHAR CONNECTORS
22C Reg'd Co. Girder
Span one only

BEAM DIMENSIONS

	Radius	A	B	C	D	E	F	G	H	I	J	K	L	M
Bm. 1	3085.06	25'-0"	14'-3"	0'-8"	1'-0"	35'-0"	108'-9"	38'-9"	43'-0"	24'-0"	5'			
Bm. 2	3095.31	25'-0"	14'-3"	0'-8"	1'-0"	35'-0"	108'-9"	38'-9"	43'-0"	24'-0"	5'			
Bm. 3	3095.56	25'-0"	14'-3"	0'-8"	1'-0"	35'-0"	108'-9"	38'-9"	43'-0"	24'-0"	5'			
Bm. 4	3700.81	25'-0"	14'-3"	0'-8"	1'-0"	35'-0"	108'-9"	38'-9"	43'-0"	24'-0"	5'			
Bm. 5	3710.06	25'-0"	14'-3"	0'-8"	1'-0"	35'-0"	108'-9"	38'-9"	43'-0"	24'-0"	5'			
Bm. 6	3721.31	25'-0"	14'-3"	0'-8"	1'-0"	35'-0"	108'-9"	38'-9"	43'-0"	24'-0"	5'			

Work this sheet with sheet # 15.

LOCATION 2
EB I-474
US 24/IL 29

MODEL: Default
FILE NAME: C:\GENDRAFT\STD\PLANS\Squid15.inpl\68E02 Bridge Washing 2013 & others\68E02 Bridge Washing 2013.dgn

USER NAME = appenzellerj	DESIGNED -	REVISED -
DRAWN -	REVISED -	
PLOT SCALE = 200,000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2018	DATE -	REVISED -

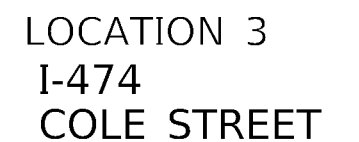
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET

SCALE: SHEET OF SHEETS STA. TO STA.

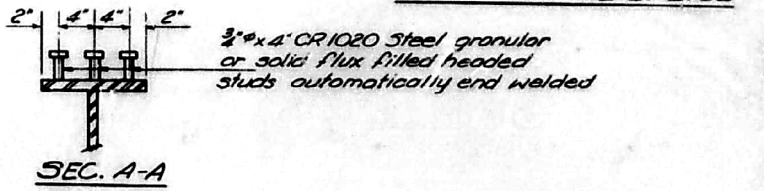
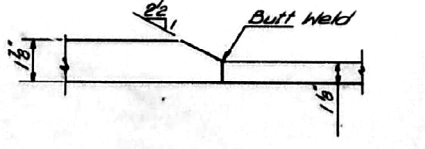
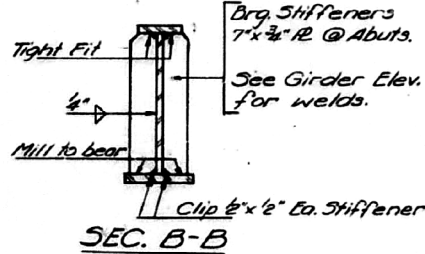
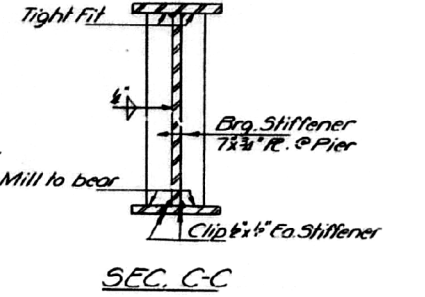
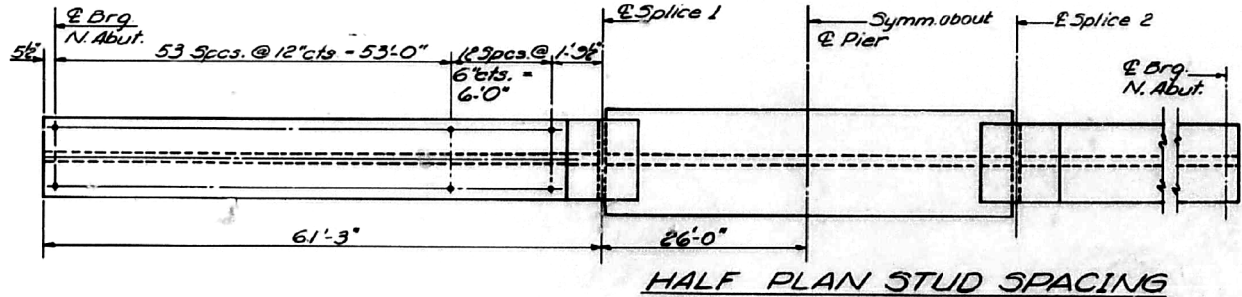
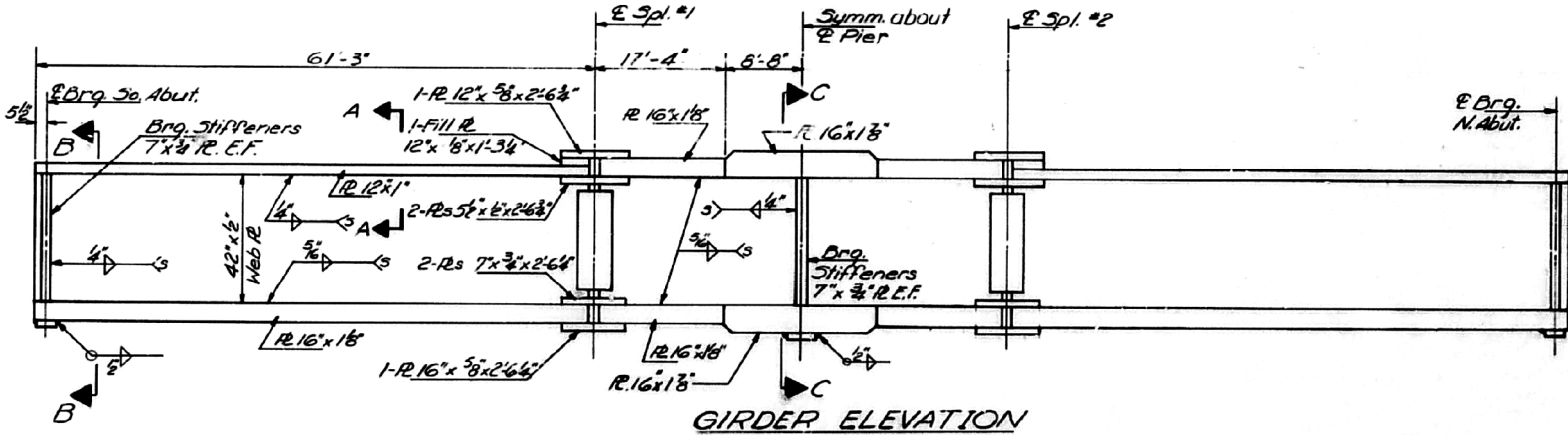
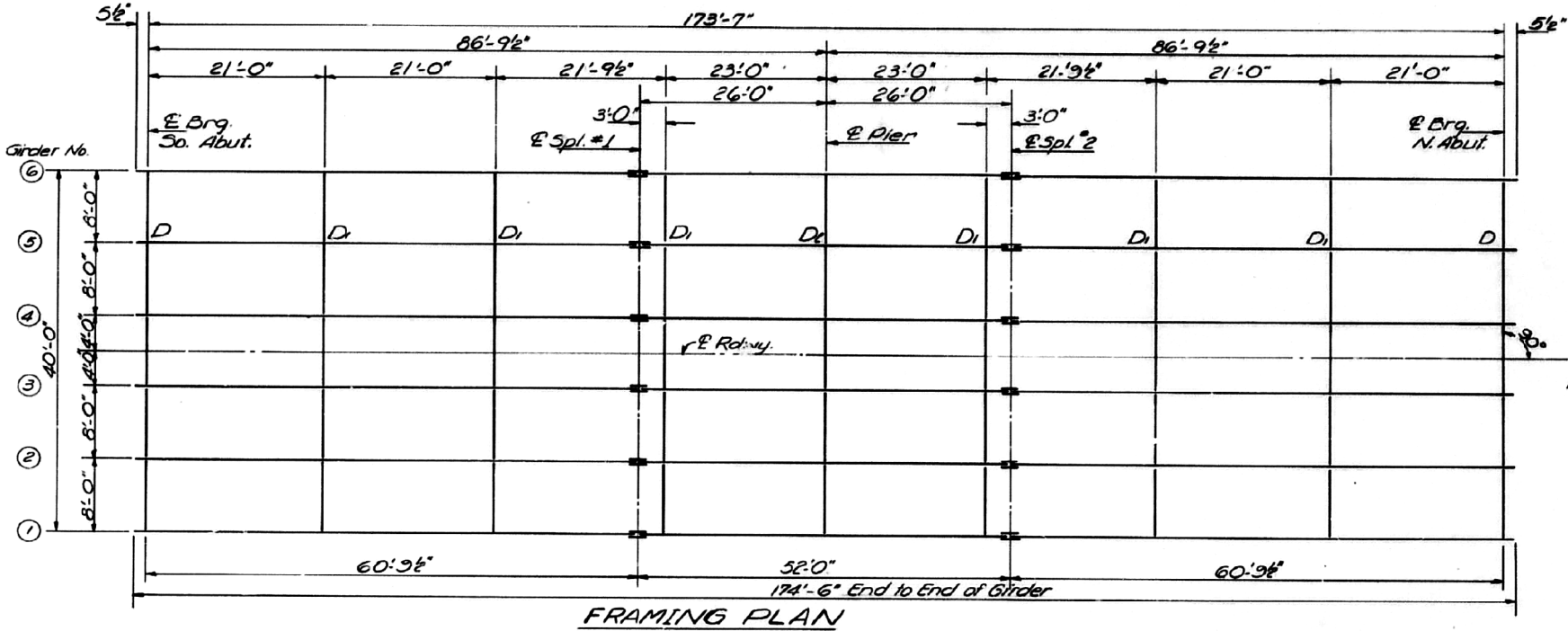
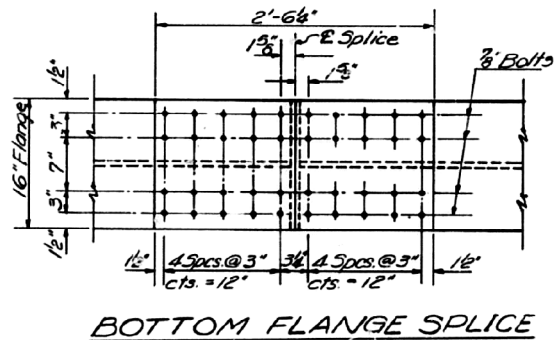
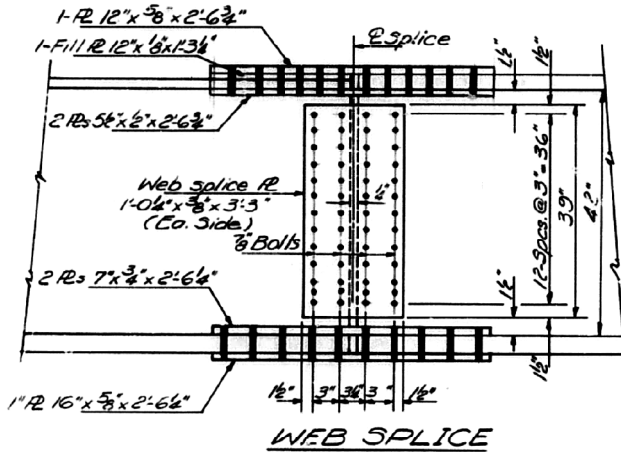
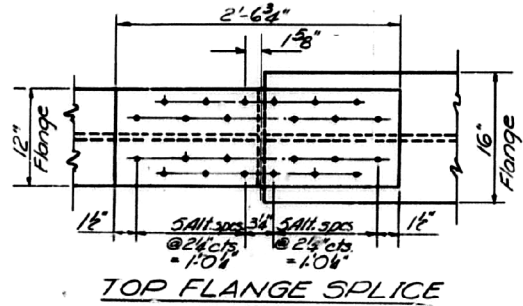
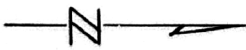
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 3017(HB-1,HB),6HB,15-1(HB)BF	TAZEWELL	28	12	
CONTRACT NO. 68E02				
ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: C:\PDP\GENDRAFT\STD+PLUS\Squad15_inollis\68B21-Bridge Washing_2013 & others\68E02\68E02_BRIDGE_PAINTING2018.dgn



USER NAME = appenzellerj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN SHEET					F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -							VAR.	90 7(HB-1,HB);6HB;15-1-HB BH	TAZEWELL	28	13
PLOT SCALE = 200.0000' / in.	CHECKED -	REVISED -		CONTRACT NO. 68E02									
PLOT DATE = 3/22/2018	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT			

S.N. 090-0105
FOR INFORMATION ONLY



LOCATION 3
I-474
COLE STREET

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET

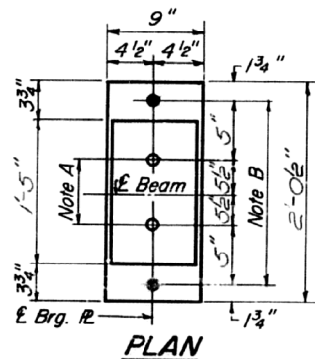
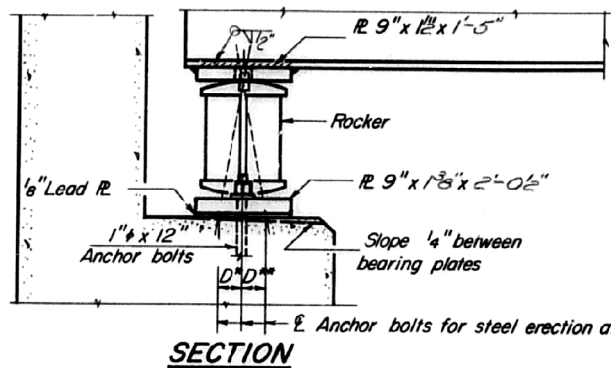
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 90[7(HB-1,HB);6HB;15-1(HB)]BR	TAZEWELL	28	14	
CONTRACT NO. 68E02				
ILLINOIS FED. AID PROJECT				

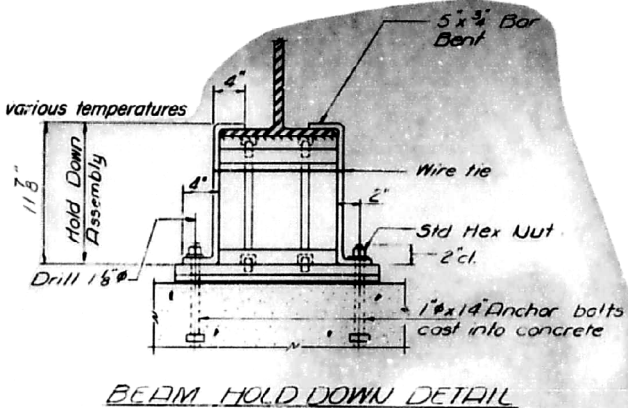
USER NAME = jochumsjg	DESIGNED -	REVISED -
DRAWN -	REVISED -	
PLOT SCALE = 200,000' / in.	CHECKED -	REVISED -
PLOT DATE = 5/14/2018	DATE -	REVISED -

MODEL Default
FILE NAME: 306DRAFT15TDSRPLUS15 Inpdl68821 Bridge Washing 2013 & others68E02 68E02 BRIDGE PAVING2018.dgn

S.N. 090-0105
FOR INFORMATION ONLY



AT ABUTMENT



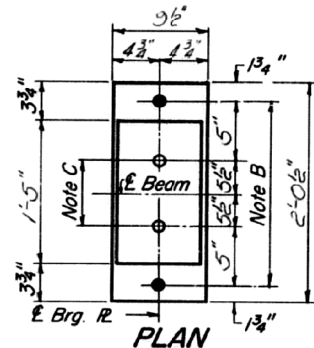
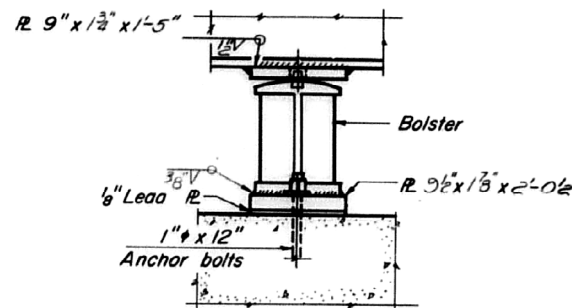
BEAM HOLD DOWN DETAIL

Note: Beams shall be held down at the Abutment on the opposite end of Bridge from which the deck pour is commenced. After pouring is completed the Hold Down Assembly shall be removed and Nuts placed on Anchor Bolts.

Cost of Hold Down Assembly, incidental to Class X Concrete.

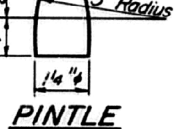
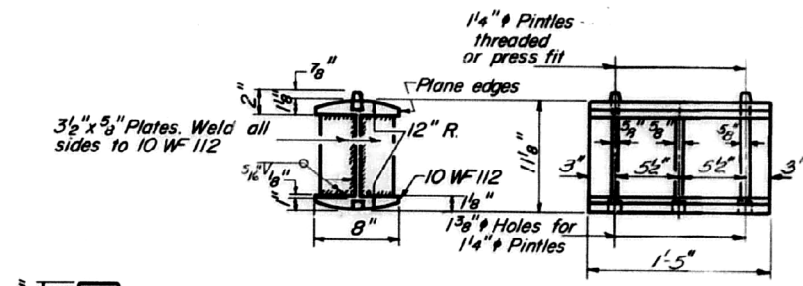
NOTE A
1 3/8" Holes - 1" deep in top R.
for pintles. Thread or press fit
pintles into bottom R.

NOTE B
1 1/2" Holes for 1" anchor bolts.
2 1/2" x 2 1/2" x 1/16" R. Washers
under nut.

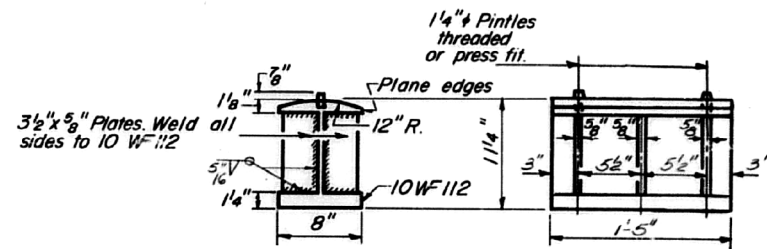


AT PIER

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



ROCKER AT ABUT



BOLSTER AT PIER

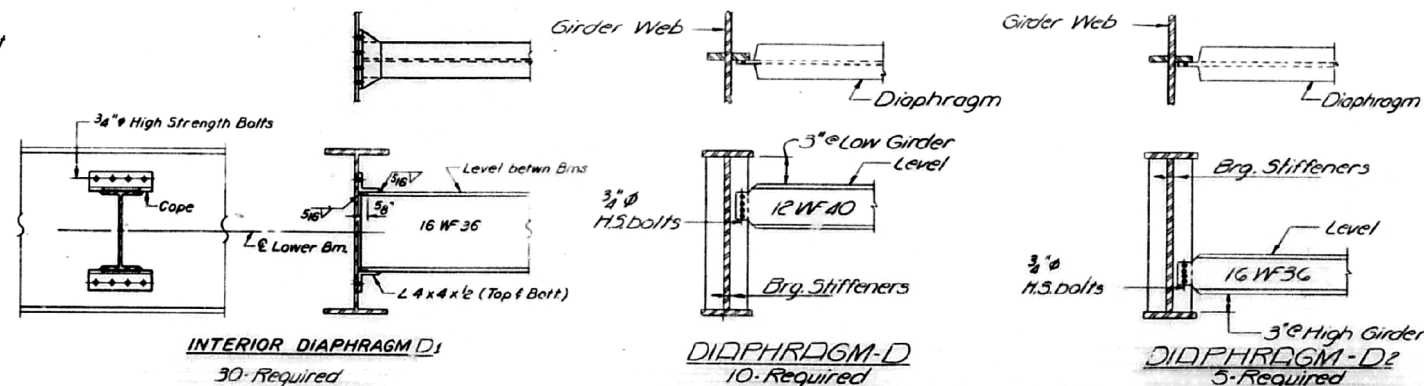
NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

- 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

ELEVATION TOP OF WEB

LOC. of Girder	1 F.G.	2 F.G.	3 F.G.
E Brg. So. Abut.	756.03	756.20	756.32
E Field Spl. 1	756.61	756.78	756.90
E Brg. Pier 3	756.72	756.89	757.21
E Field Spl. 2	756.88	757.05	757.17
E Brg. No. Abut.	757.02	757.19	757.31



CROSS FRAME DETAILS

LOCATION 3
I-474
COLE STREET

MODEL Default
FILE NAME: 3000DRAFT15D04RUS1504015 Inpills68021 Bridge Washing 2013 & others6802168021 BRIDGE PAINTING2018.dgn

USER NAME = jochumsjg	DESIGNED -	REVISED -
DRAWN -	REVISED -	
PLOT SCALE = 200,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 5/14/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET

SCALE: SHEET OF SHEETS STA. TO STA.

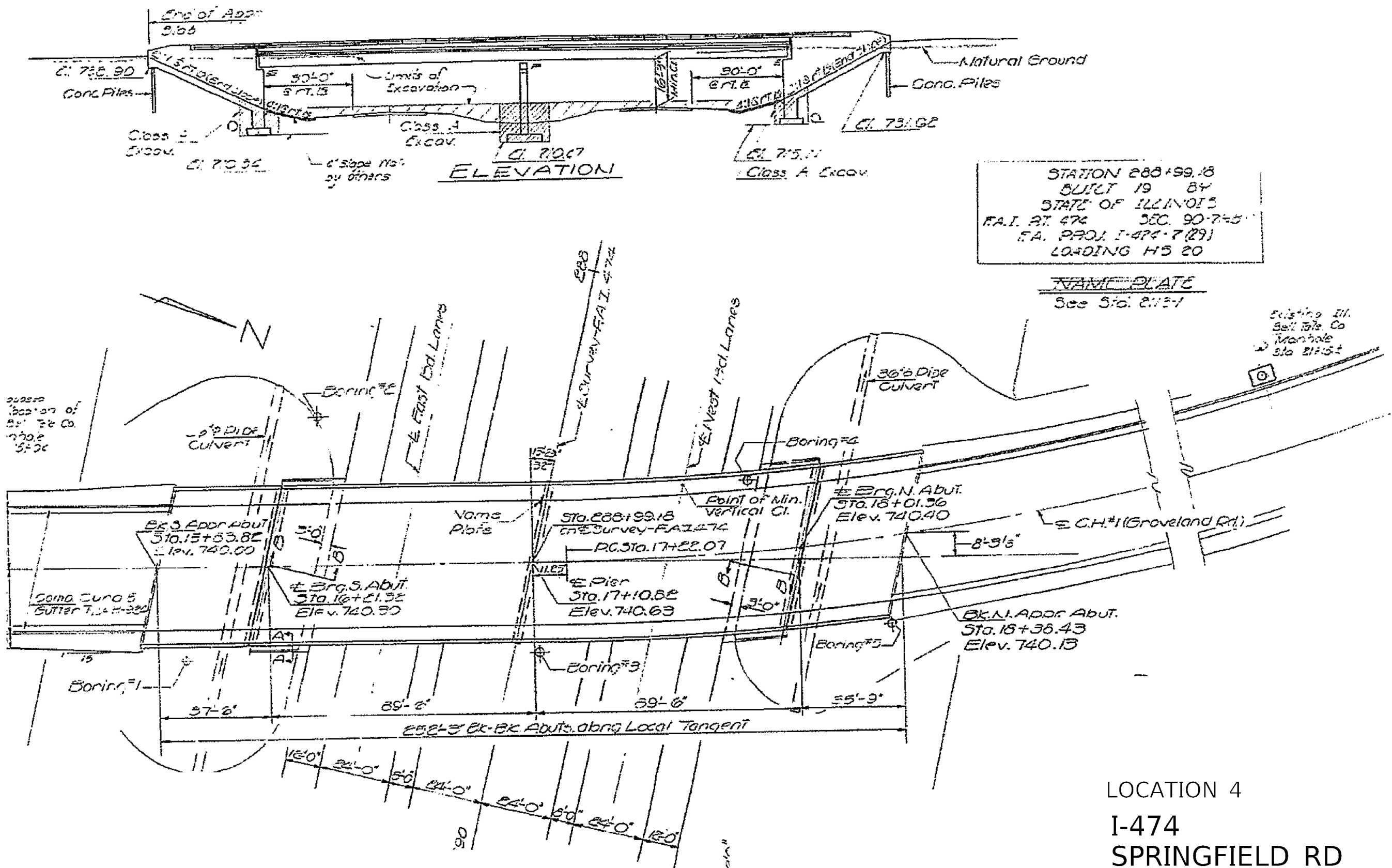
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 30[7(HB-1,HB);6HB;15-1(HB)]BR	TAZEWELL	28	15	
CONTRACT NO. 68E02				
ILLINOIS FED. AID PROJECT				

THE CONTENTS OF THIS SHEET HAVE BEEN DELETED

MODEL Default
FILE NAME: 305ENDRAFT15TDSRPLUS\Squad15 In\Illis68E021-Bridge Washing 2013 & others\68E02168E02 BRIDGE PAINTING2018.dgn

	USER NAME = jochumsjg	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN SHEET					F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -							VAR.	90[7(HB-1,HB);6HB;15-1-HB]BR	TAZEWELL	28	16
	PLOT SCALE = 200.0000 ' / in.	CHECKED -	REVISED -		CONTRACT NO. 68E02									
	PLOT DATE = 5/15/2018	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.			
											ILLINOIS	FED. AID PROJECT		

S.N. 090-0104
FOR INFORMATION ONLY



STATION 288+99.18
BUILT 19 BY
STATE OF ILLINOIS
F.A.I. AT 474 SEC. 90-7-5
F.A. PROJ. I-474-7(29)
LOADING HS 20

NAME PLATE
See Sta. 211-1

Existing Ill.
Bell Co.
Manhole
Sta. 211-5

LOCATION 4
I-474
SPRINGFIELD RD

MODEL: Default
FILE NAME: C:\GENDRAFT\STD\PLANS\Springfield1 Bridge Working 2013 & others\68E02\68E02 BRIDGE PLANING\2018.dgn

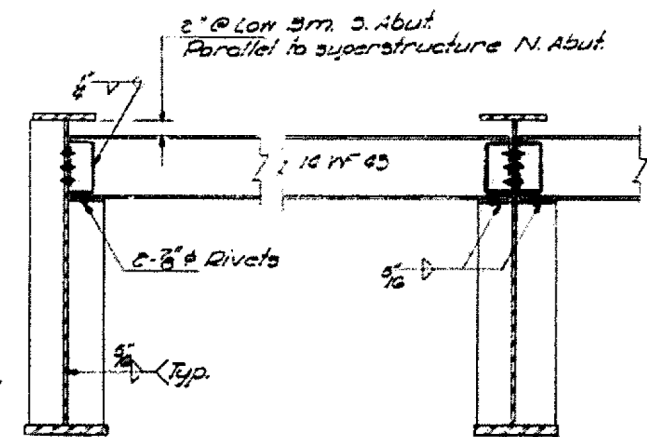
USER NAME = appenzellerj	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 200,000" / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

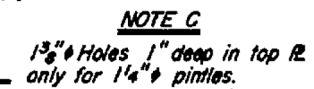
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 3017(HB-1,HB),6HB,15-1(HB)BF		TAZEWELL	28	17
CONTRACT NO. 68E02				
ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: C:\PO\GENDRAFT\STD&PLNS\Squad15_inallis\68B21-Bridge Washing_2013 & others\68E02\68E02_BRIDGE PAINTING2018.dgn



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	90[7(HB-1,HB);6HB;15-1-HB]BF	TAZEWELL	28	18
		CONTRACT NO. 68E02		
ILLINOIS		FED. AID PROJECT		

MODEL: Default
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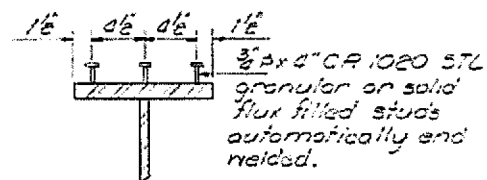
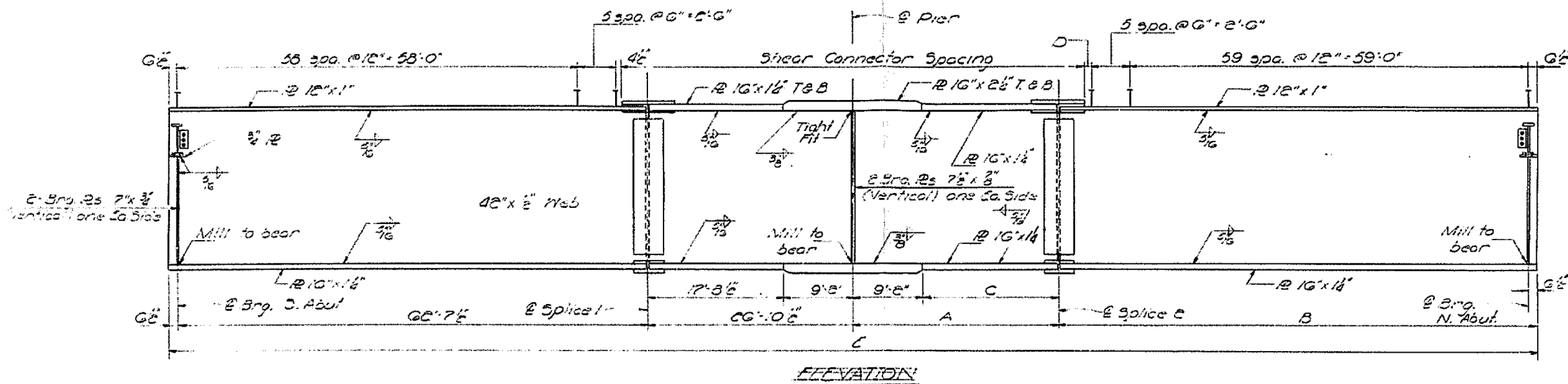


USER NAME = appenzellerj	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 200.0000' = 1 in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2018	DATE -	REVISED -

PLAN SHEET				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

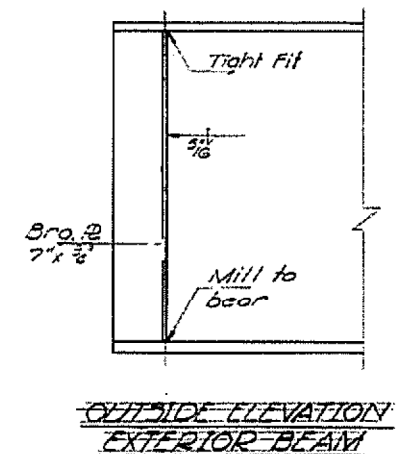
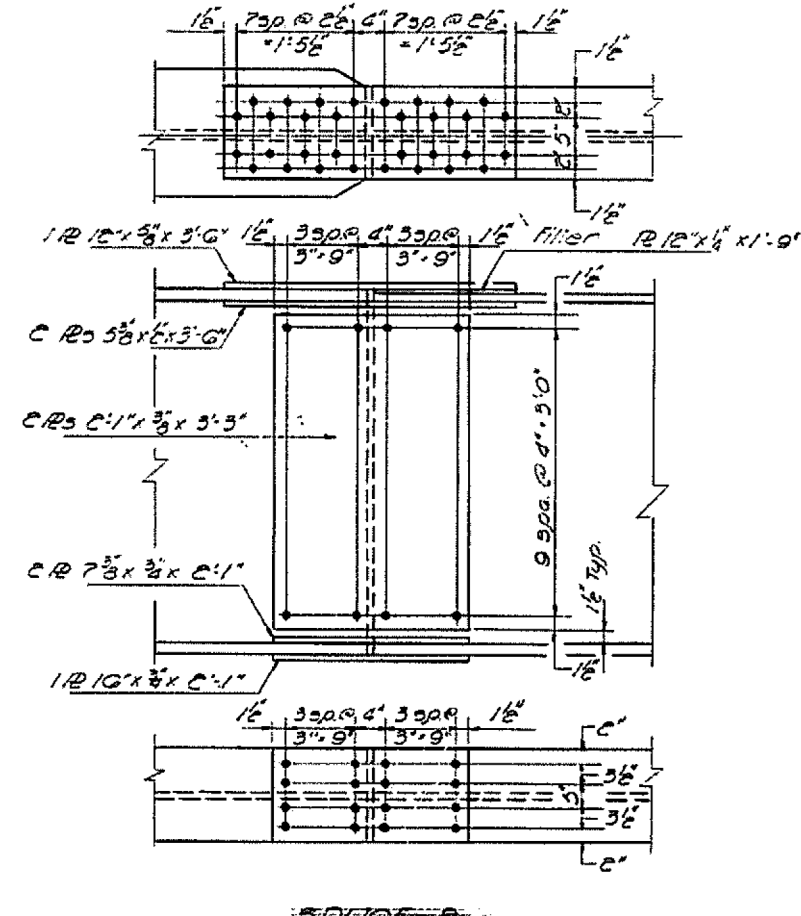
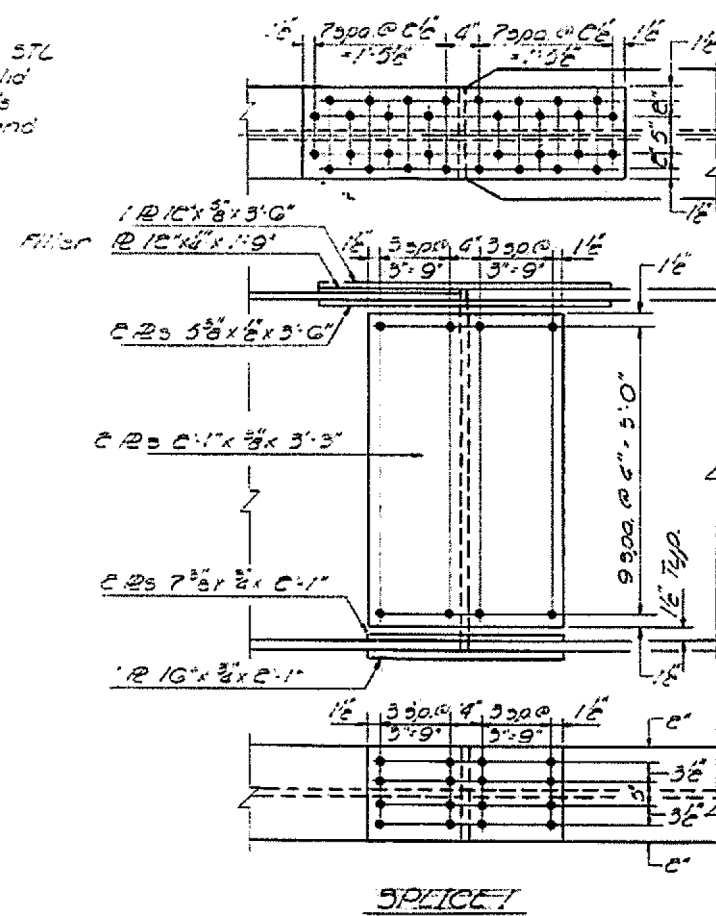
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	90[7(HB-1,HB);6HB;15-1-HB]BP	TAZEWELL	28	19
		CONTRACT NO. 68E02		
		ILLINOIS FED. AID PROJECT		

S.N. 090-0104
FOR INFORMATION ONLY



BEAM DIMENSIONS

Beam	A	B	C	D	E
1	66'-11 3/8"	64'-4 3/8"	17'-9 3/8"	6 3/8"	181'-4"
C	66'-11 3/8"	64'-3 3/8"	17'-9 3/8"	5 3/8"	181'-5 3/8"
3	66'-11 3/8"	64'-2 3/8"	17'-9 3/8"	5 1/8"	181'-2 3/8"
4	66'-11"	64'-2"	17'-9"	4 5/8"	181'-1 5/8"
5	66'-10 3/8"	64'-1 3/8"	17'-8 3/8"	3 3/8"	181'-0 3/8"
G	66'-10 3/8"	64'-0 3/8"	17'-8 3/8"	3 1/8"	181'-0"
7	66'-10 3/8"	64'-0 3/8"	17'-8 3/8"	2 3/8"	180'-11 1/8"



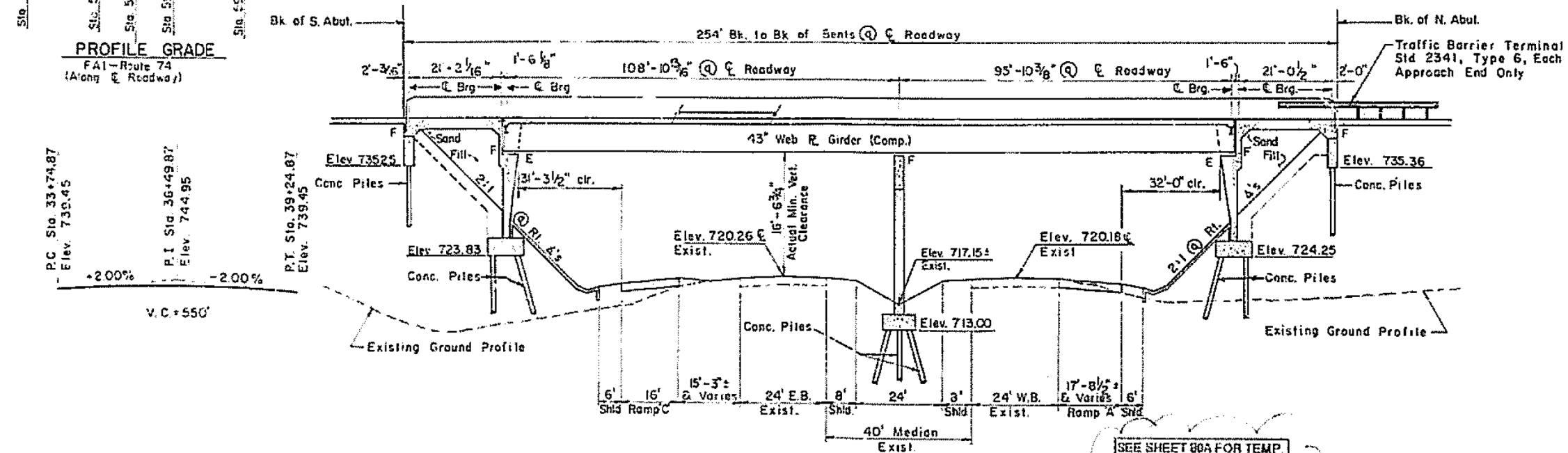
LOCATION 4
I-474
SPRINGFIELD RD

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 3017(HB-1,HB),6HB,15-1(HB)BF	TAZEWELL	28	20	
CONTRACT NO. 68E02				
ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: C:\PROJEC\ENID\BRAFT\STDS\PI\NS\Squad15_in\illies688211_Bridges_Machion_2013_5_others\68E0768E07_BRIDGE_BAINTINGC2018.dwg

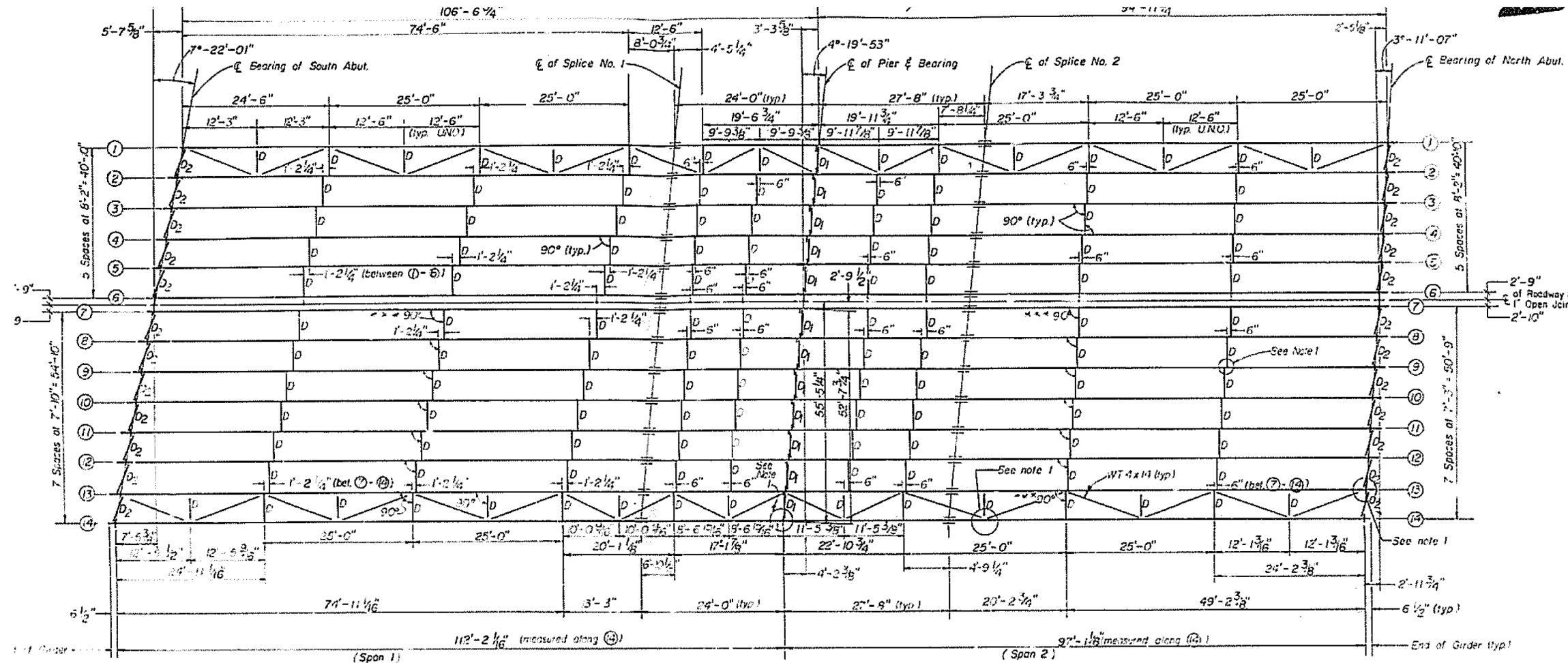


USER NAME = appenzellerj	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 200.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2018	DATE -	REVISED -

PLAN SHEET				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	90[7(HB-1,HB);6HB;15-1-HB]BF	TAZEWELL	28	21
		CONTRACT NO. 68E02		
ILLINOIS		FED. AID PROJECT		

S.N. 090-0141
FOR INFORMATION ONLY



EAST STRUCTURE			
INTERIOR GIRDER MOMENT TABLE			
	Span 1	Pier	Span 2
I_x (in ⁴)	16218.1	23944.9	13261.3
I_y (in ⁴)	48836.3	—	36975.0
S_x (in ³)	906.7	1049.6	640.5
S_y (in ³)	1301.2	—	935.6
Q (K/ft)	0.98	1.31	0.98
M_D (K)	803.3	1459.1	431.7
s_D (K/ft)	0.29	—	0.29
M_S (K)	302.5	367.2	193.1
M_L (K)	1036.2	722.1	640.3
M_{imp} (K)	217.6	158.8	193.5
S_3 (M _u + I) (K)	2089.7	1468.2	1722.7
M_u (K)	4154.2	4282.9	3052.0
M_u (K)	4970.3	4373.3	3696.5
f_s non-comp (ksi)	10.6	16.7	8.1
f_s (comp) (ksi)	2.8	4.2	2.5
f_s (L + I) (ksi)	19.3	16.8	23.1
f_s (Overload) (ksi)	32.7	37.7	32.7
f_s (Total) (ksi)	42.5	49.0	42.5
VR (K)	59.0	—	58.7

INTERIOR GIRDER REACTION TABLE			
	S. Abut.	Pier	N. Abut.
R_D (K)	52.3	152.7	38.9
R_L (K)	51.2	79	42.1
Imp (K)	10.7	17.2	10.6
R_{Total} (K)	114.3	257.9	95.6

WEST STRUCTURE			
INTERIOR GIRDER MOMENT TABLE			
	Span 1	Pier	Span 2
I_x (in ⁴)	16218.1	23944.9	13261.3
I_y (in ⁴)	48836.3	—	36975.0
S_x (in ³)	906.7	1049.6	640.5
S_y (in ³)	1301.2	—	935.6
Q (K/ft)	0.98	1.31	0.98
M_D (K)	795.94	1482.3	462.4
s_D (K/ft)	0.33	—	0.33
M_S (K)	322.1	336.2	218.3
M_L (K)	1058.8	730.6	686.4
M_{imp} (K)	226.6	160.7	202.6
S_3 (M _u + I) (K)	2142.3	1485.5	1831.7
M_u (K)	4238.4	4373.2	3266.1
M_u (K)	4972.1	4373.3	3617.6
f_s non-comp (ksi)	10.5	16.9	8.7
f_s (comp) (ksi)	3.0	4.5	2.8
f_s (L + I) (ksi)	19.8	17.0	23.5
f_s (Overload) (ksi)	33.3	38.4	35.0
f_s (Total) (ksi)	44.3	49.9	45.5
VR (K)	61.5	—	60.9

INTERIOR GIRDER REACTION TABLE			
	S. Abut.	Pier	N. Abut.
R_D (K)	53.6	171.7	42.2
R_L (K)	52.5	81.8	52.0
Imp (K)	11.3	18.0	11.7
R_{Total} (K)	117.8	271.5	105.9

TOP OF WEB ELEVATIONS

LOCATION	GDR. 1	GDR. 2	GDR. 3	GDR. 4	GDR. 5	GDR. 6	GDR. 7	GDR. 8	GDR. 9	GDR. 10	GDR. 11	GDR. 12	GDR. 13	GDR. 14
Br. S. Abutment	740.49	740.66	740.78	740.90	741.02	741.14	741.13	741.00	740.87	740.74	740.61	740.48	740.35	740.22
Splice No. 1	740.82	741.00	741.12	741.25	741.38	741.51	741.51	741.39	741.27	741.15	741.04	740.92	740.80	740.68
Br. N. Abutment	740.78	740.96	741.08	741.21	741.34	741.47	741.47	741.35	741.23	741.11	741.00	740.88	740.76	740.64
Splice No. 2	740.74	740.92	741.04	741.17	741.30	741.43	741.43	741.31	741.19	741.07	740.96	740.84	740.72	740.60
Br. N. Abutment	740.53	740.71	740.84	740.97	741.10	741.23	741.23	741.12	741.01	740.90	740.79	740.68	740.57	740.46

For fabrication only, does not include dead load deflection

TOP OF WEB CAMBER VALUES

LOCATION	GDR. 1	GDR. 2	GDR. 3	GDR. 4	GDR. 5	GDR. 6	GDR. 7	GDR. 8	GDR. 9	GDR. 10	GDR. 11	GDR. 12	GDR. 13	GDR. 14
A at 1st Quarter Pt	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3"	3"	3"	3"	3"	3"	3"	3"
B at 3rd Quarter Pt	3 1/4"	3 1/4"	3 1/4"	3 1/4"	3 1/4"	3 1/4"	3 3/4"	3 3/4"	3 3/4"	3 3/4"	3 3/4"	3 3/4"	3 3/4"	3 3/4"
C at 1st Quarter Pt	3"	3"	3"	3"	3"	3"	3 5/8"	3 5/8"	3 5/8"	3 5/8"	3 5/8"	3 5/8"	3 5/8"	3 5/8"
D at 3rd Quarter Pt	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"	2 1/8"
E at 1st Quarter Pt	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2"	2"	2"	2"	2"	2"	2"	2"
F at 3rd Quarter Pt	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"

Camber for concrete deck slab and steel dead load only

Note 1 -
See Sheet 14
For Bracing Connection Details
at D-Abutments, D₁, D₂, Midspan of D₁
Aligns with E Pier.

I_x and S_x are the moment of inertia and section modulus of the steel section used in computing f_s (Total and Overload).
 I_y and S_y are the moment of inertia and section modulus of the composite section used in computing f_s (Total and Overload).

VR is the maximum f_s + impact shear range in span.

f_s (Total) is the sum of the stresses due to -

1.2 [$M_D + M_S + S_3(M_L + I)$]

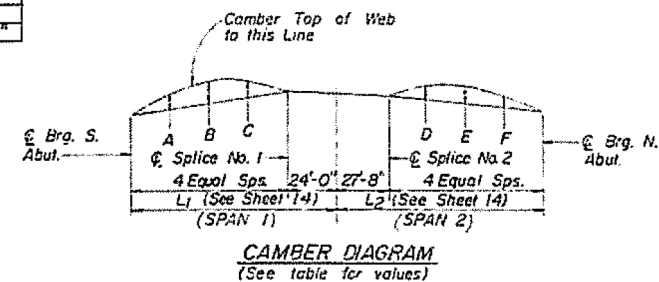
f_s (Overload) is the sum of stresses due to - $M_D + M_S + \frac{5}{8}(M_L + I)$

M_D - Moment due to dead loads on non-composite section.

M_S - Moment due to dead loads on composite section.

M_L - Moment due to live load on non-composite or composite section.

I - Live load impact.



* M_u = Maximum capacity for braced non-compact section
Computed according to AASHTO 10.40.2 and 10.50.1
* M_u (Applied moment) = 1.3 [$M_D + M_S + \frac{5}{8}(M_L + I)$]

LOCATION 5
I-74
MORTON AVE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

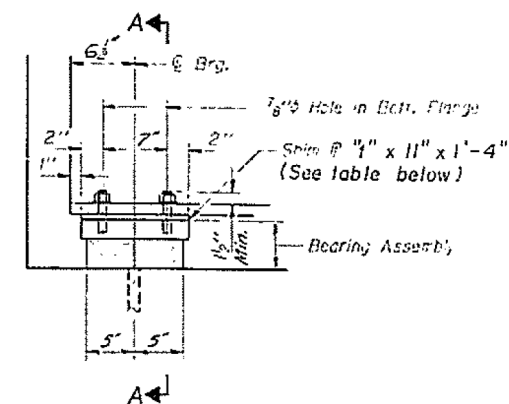
PLAN SHEET

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	3017(HB-1,HB),6HB,15-1(HB)BR	TAZEWELL	28	22
CONTRACT NO. 68E02				

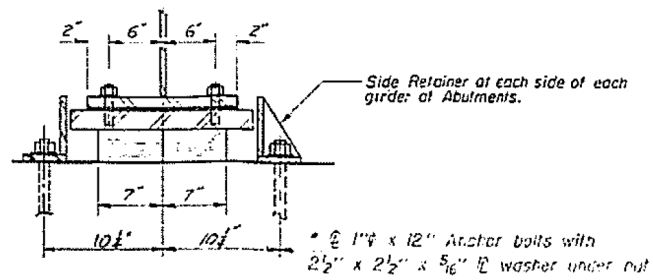
SCALE: SHEET OF SHEETS STA. TO STA.

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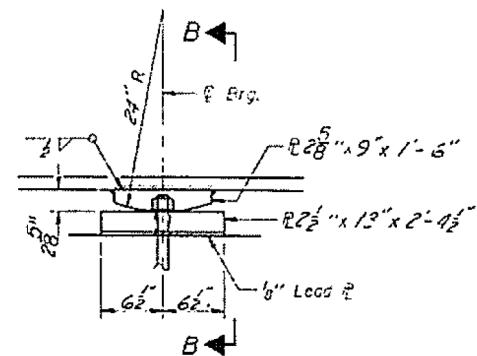
S.N. 090-0141
FOR INFORMATION ONLY



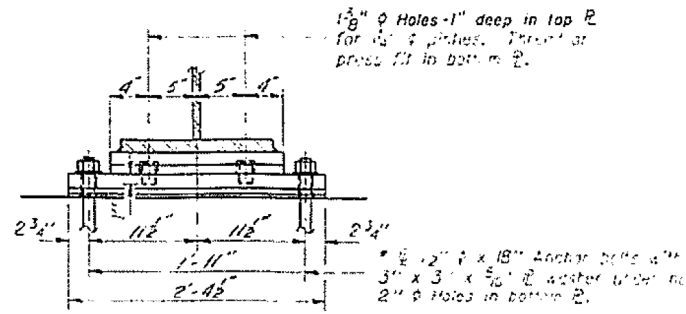
ELEVATION AT ABUT.



SECTION A-A



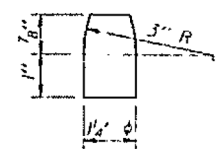
ELEVATION AT PIER



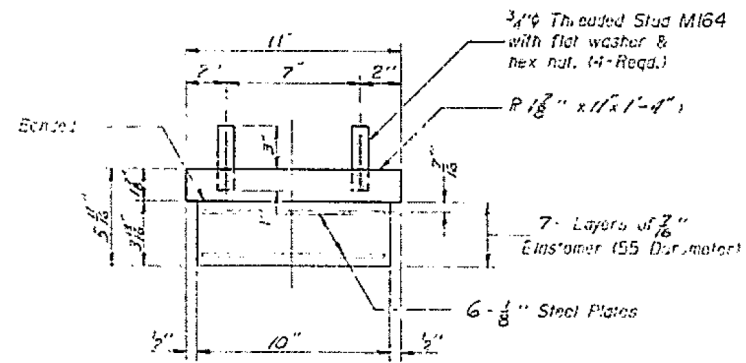
SECTION B-B

* Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet #16 for Anchor Bolt installation.

FIXED BEARING
(14 Required)



PINTLE

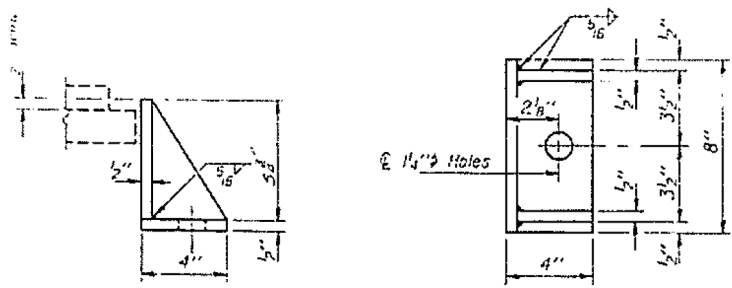


BEARING ASSEMBLY

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

TABLE OF "t" DIMENSIONS

GIRDER NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
S. Abut.	-	-	-	-	-	0 1/8"	-	-	-	-	-	-	-	-
Pier	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N. Abut.	-	-	-	-	-	-	-	-	-	-	-	-	-	-



SIDE RETAINER

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

LOCATION 5
I-74
MORTON AVE

MODEL: Default
FILE NAME: C:\GENDRAFT\STD\PLANS\Sheet15.inpld(68E2) Bridge Washing 2013 & others(68E02) 68E02 BRIDGE PAINTING(2018).dgn

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DRAWN -	REVISED -	
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PLOT DATE = 3/22/2018	DATE -	REVISED -

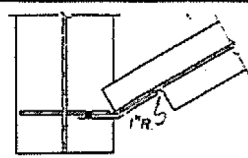
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET

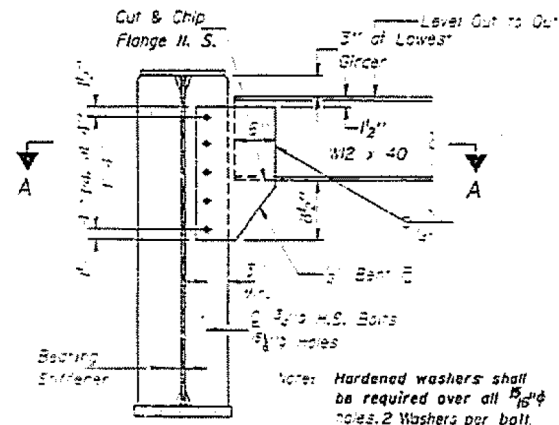
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	90[7(HB-1,HB);6HB;15-1(HB)BF]	TAZEWELL	28	23
CONTRACT NO. 68E02				
ILLINOIS FED. AID PROJECT				

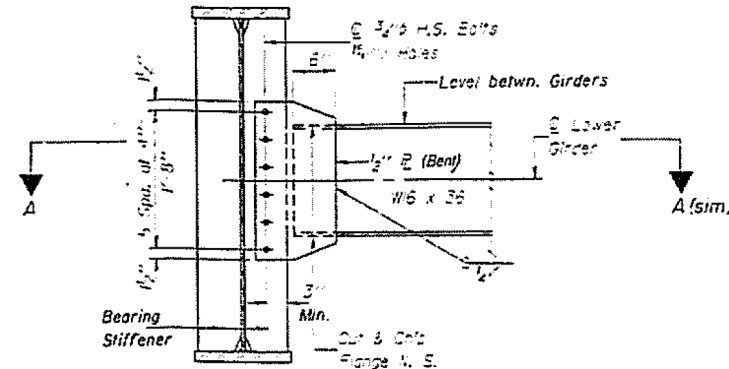
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FOR INFORMATION ONLY



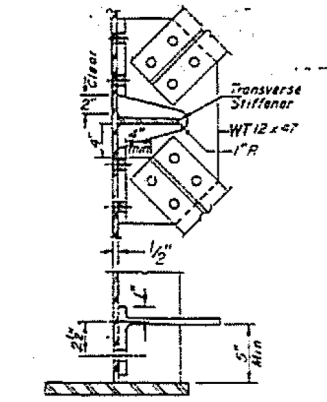
SECTION A-A



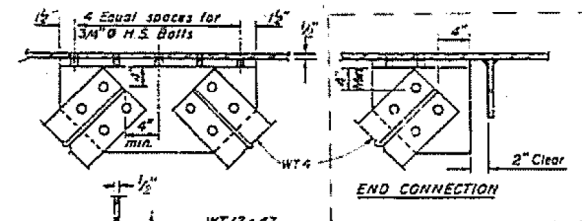
END DIAPHRAGM-D2



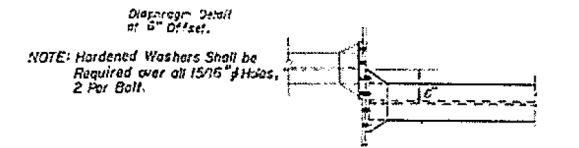
INTERIOR DIAPHRAGM AT PIER-D1



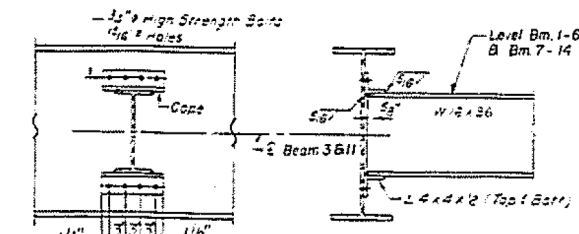
WITH TRANSVERSE STIFFENER AND CROSS FRAME CONN. PLATE



WITHOUT CROSS FRAME CONN. PLATE

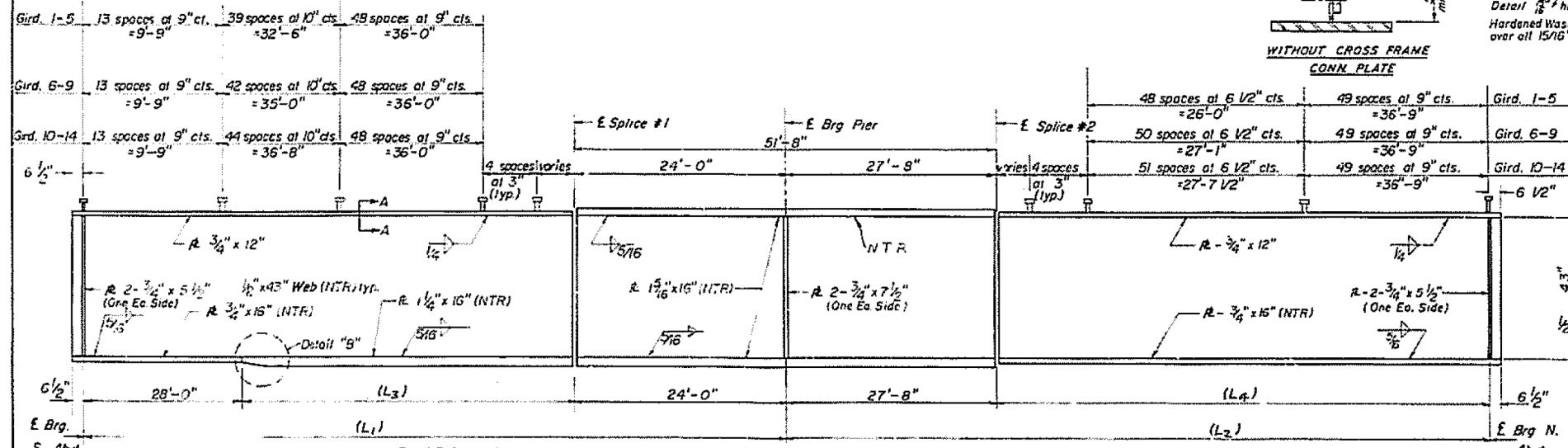


Diaphragm Detail at 0" Offset.



INTERIOR DIAPHRAGM-D

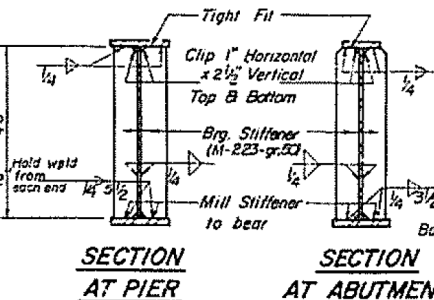
See "Notes to Fabricator", Sheet 13, for Diaphragm - Girder Orientation



GIRDER ELEVATION

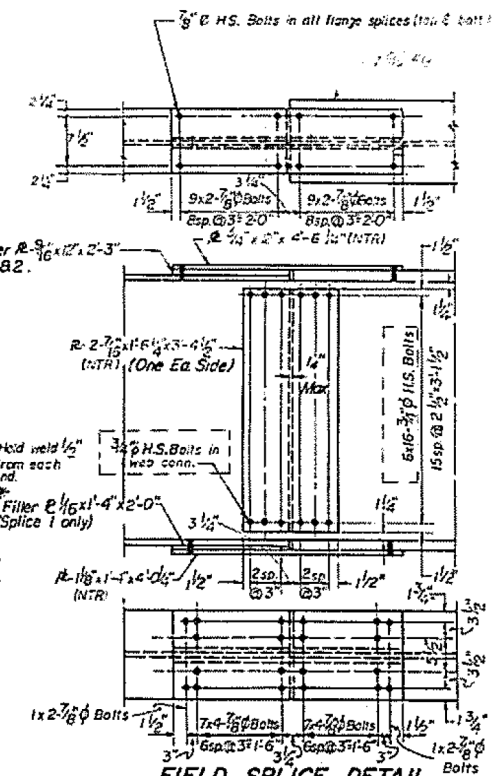
"NTR" denotes plates to which notch toughness requirements are applicable.

Girder No.	Span Length (L1)	Span Length (L2)	Length (L3)	Length (L4)
No. 1	106'-6 3/4"	94'-11 3/4"	54'-5 3/4"	67'-3 3/4"
No. 2	107'-0 1/16"	95'-1 3/4"	55'-0 1/16"	67'-5 3/4"
No. 3	107'-5 3/16"	95'-3 3/4"	55'-5 3/16"	67'-7 3/4"
No. 4	107'-10 9/16"	95'-5 1/16"	55'-10 9/16"	67'-9 1/16"
No. 5	108'-3 1/16"	95'-7 1/16"	56'-3 1/16"	67'-11 1/16"
No. 6	108'-9 1/16"	95'-9 1/16"	56'-9 1/16"	68'-1 1/16"
No. 7	109'-0 1/2"	95'-11"	57'-0 1/2"	68'-3"
No. 8	109'-5 1/8"	96'-0 5/16"	57'-5 1/8"	68'-4 1/8"
No. 9	109'-11 1/4"	96'-2 1/16"	57'-11 1/4"	68'-6 1/16"
No. 10	110'-4 1/2"	96'-5"	58'-4 1/2"	68'-9"
No. 11	110'-9 7/8"	96'-7"	58'-9 7/8"	68'-11"
No. 12	111'-3 1/4"	96'-9 1/16"	59'-3 1/4"	69'-1 1/16"
No. 13	111'-8 5/8"	96'-11 1/16"	59'-8 5/8"	69'-3 1/16"
No. 14	112'-2 1/16"	97'-1 1/8"	60'-2 1/16"	69'-5 1/8"



SECTION AT PIER

SECTION AT ABUTMENT



FIELD SPICE DETAIL
SPICE NO. 1 & NO. 2 (AS NOTED)

* Provide bottom filler plate at Splice NO. 2 (typ.) as Detailed on Bottom Except Plate Thickness=9/16"

LOCATION 5
I-74
MORTON AVE

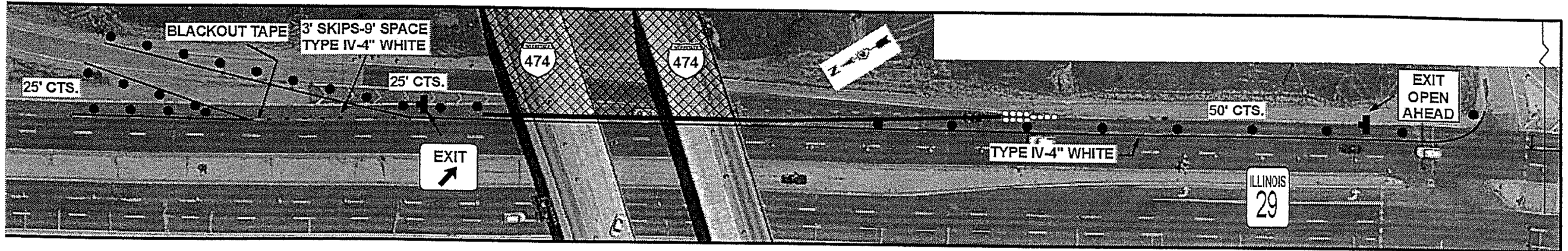
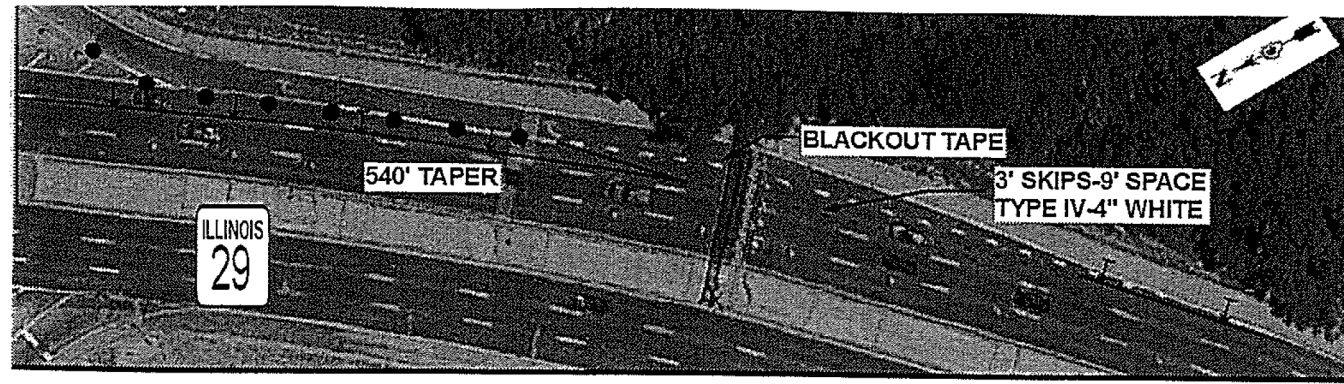
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DRAWN -	REVISED -	
PLOT SCALE = 200.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET

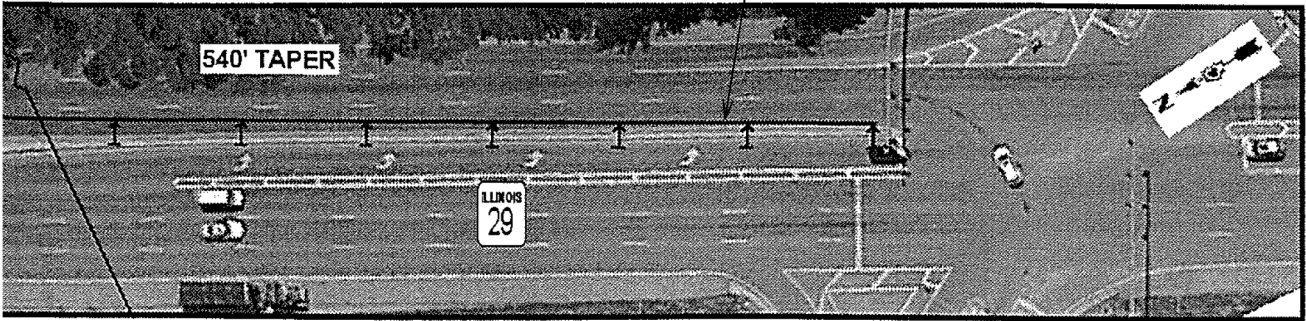
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 3017(HB-1,HB)6HB,15-1(HB)BF		TAZEWELL	28	24
			CONTRACT NO. 68E02	

STAGE 1
NORTHBOUND IL 29

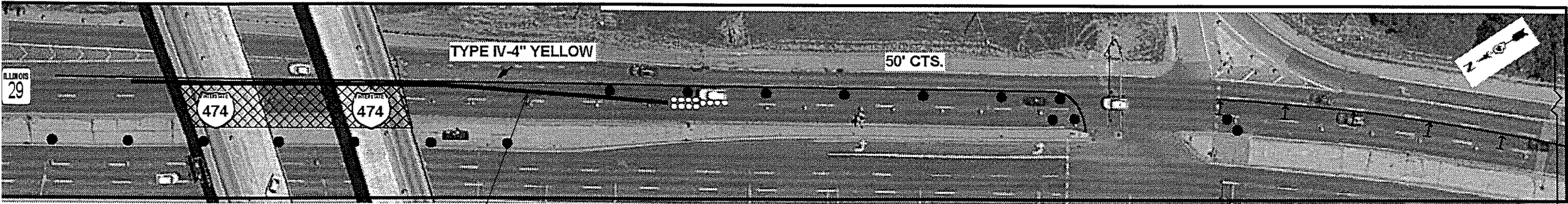
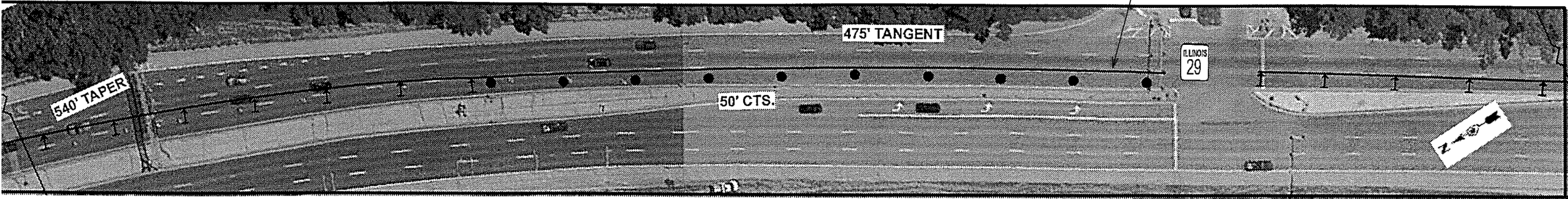
TRAFFIC CONTROL AND PROTECTION, STANDARD 701423 SHALL BE USED AS A REFERENCE FOR ALL SIGN AND DEVICE PLACEMENT IN ADDITION TO AS SHOWN

TYPE IV - 4" Yellow



STAGE 2
NORTHBOUND IL 29

TYPE IV - 4" Yellow



TEMPORARY CONCRETE BARRIER WALL

TRAFFIC CONTROL AND PROTECTION, STANDARD 701423 SHALL BE USED AS A REFERENCE FOR ALL SIGN AND DEVICE PLACEMENT IN ADDITION TO AS SHOWN

MODEL Default
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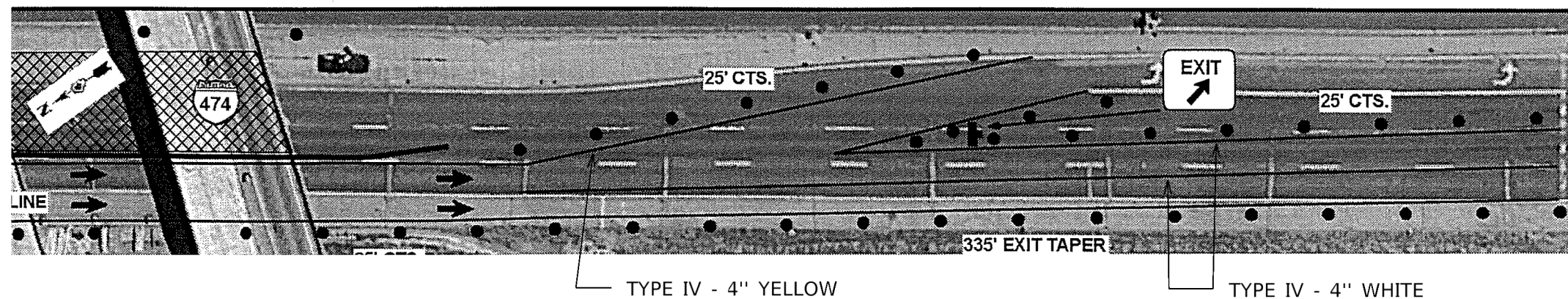
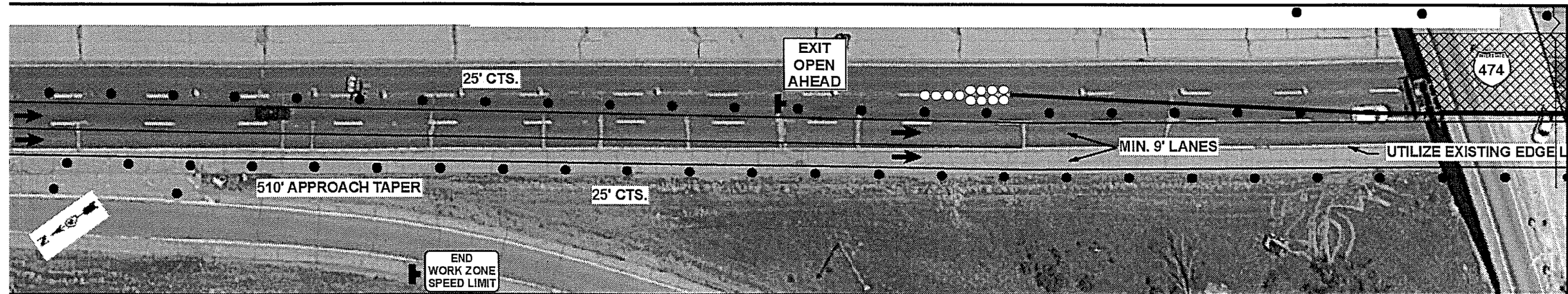
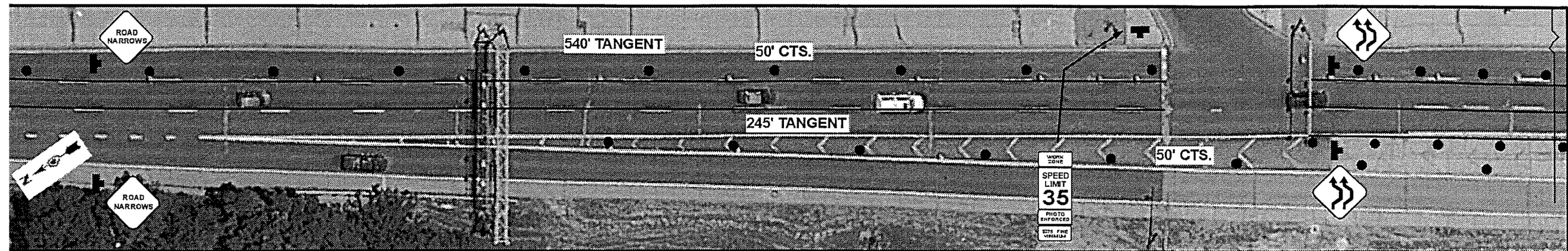
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DRAWN -	REVISED -	
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PLOT DATE = 3/22/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN SHEET

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. 30[7(HB-1,HB);6HB;15-1(HB)BR]	TAZEWELL	28	26	
CONTRACT NO. 68E02				
ILLINOIS FED. AID PROJECT				

STAGE 3
SOTHBOUND IL 29

USER NAME = appenzellerj	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 200.0000' = 1 in.	CHECKED -	REVISED -
PLOT DATE = 3/22/2018	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN SHEET

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	90[7(HB-1,HB);6HB;15-1-HB]BF	TAZEWELL	28	27
		CONTRACT NO. 68E02		
ILLINOIS		FED. AID PROJECT		

