68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	853
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 1 OF 160

BENCH MARKS

B. M. #31 : Chiseled " L " on N.W. wingwall of bridge S.N. 090-0001 (I-74 over Illinois River), Elev. 147.145
B. M. #32 : Apex of R.O.W. Monument at N.E. corner of bridge S.N. 072-0018 (Jefferson Ave. over I-74), Elev. 152.851

EXISTING STRUCTURE

S.N. 090-0001 built as F.A.I. Rte. 05 - F.A. Rte. 9, Sec. 100-E-F-P in 1956, consists of 14 spans, including 4 north approach spans (23.063m, 24.384m, 23.876m, 24.282m); 5 main spans (128.245m, 137.160m, 182.880m, 128.245m, 137.245m); and 5 south approach spans (37.186m, 36.576m, 36.576m, 36.805m, 23.089m).

North approach spans are simply supported concrete decks on steel plate girders. Main spans are concrete decks on steel floor beams and stringers supported by a steel truss. South approach spans are concrete deck on continuous steel plate girders.

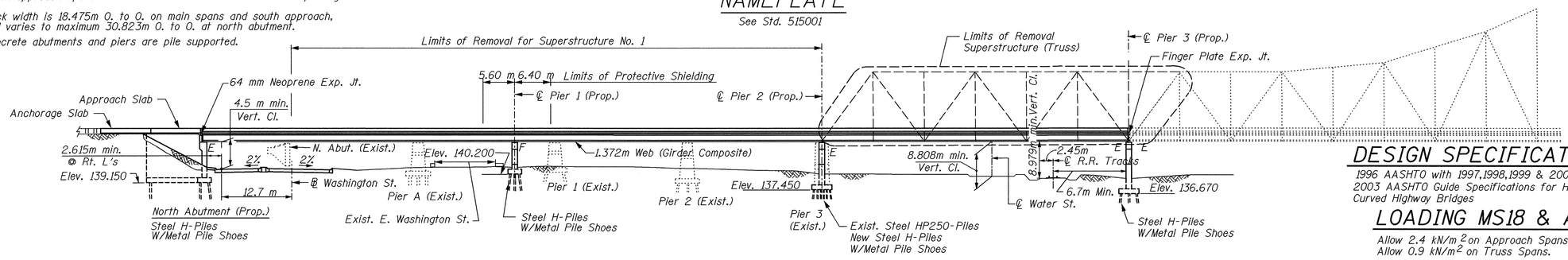
Deck width is 18.475m O. to O. on main spans and south approach, and varies to maximum 30.823m O. to O. at north abutment.

Concrete abutments and piers are pile supported.

STATION 150+475.243
BUILT 200_ BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. 90-10D-1-BRY
LOADING MS18
STR. NO. 090-0001

NAMEPLATE

See Std. 515001



E L E V A T I O N

DESIGN SPECIFICATIONS

1996 AASHTO with 1997,1998,1999 & 2000 Interims
2003 AASHTO Guide Specifications for Horizontally Curved Highway Bridges

LOADING MS18 & ALT.

Allow 2.4 kN/m^2 on Approach Spans.
Allow 0.9 kN/m^2 on Truss Spans.

DESIGN STRESSES

REINFORCED CONCRETE

f'c = 24 MPa
fy = 400 MPa (Reinf.)

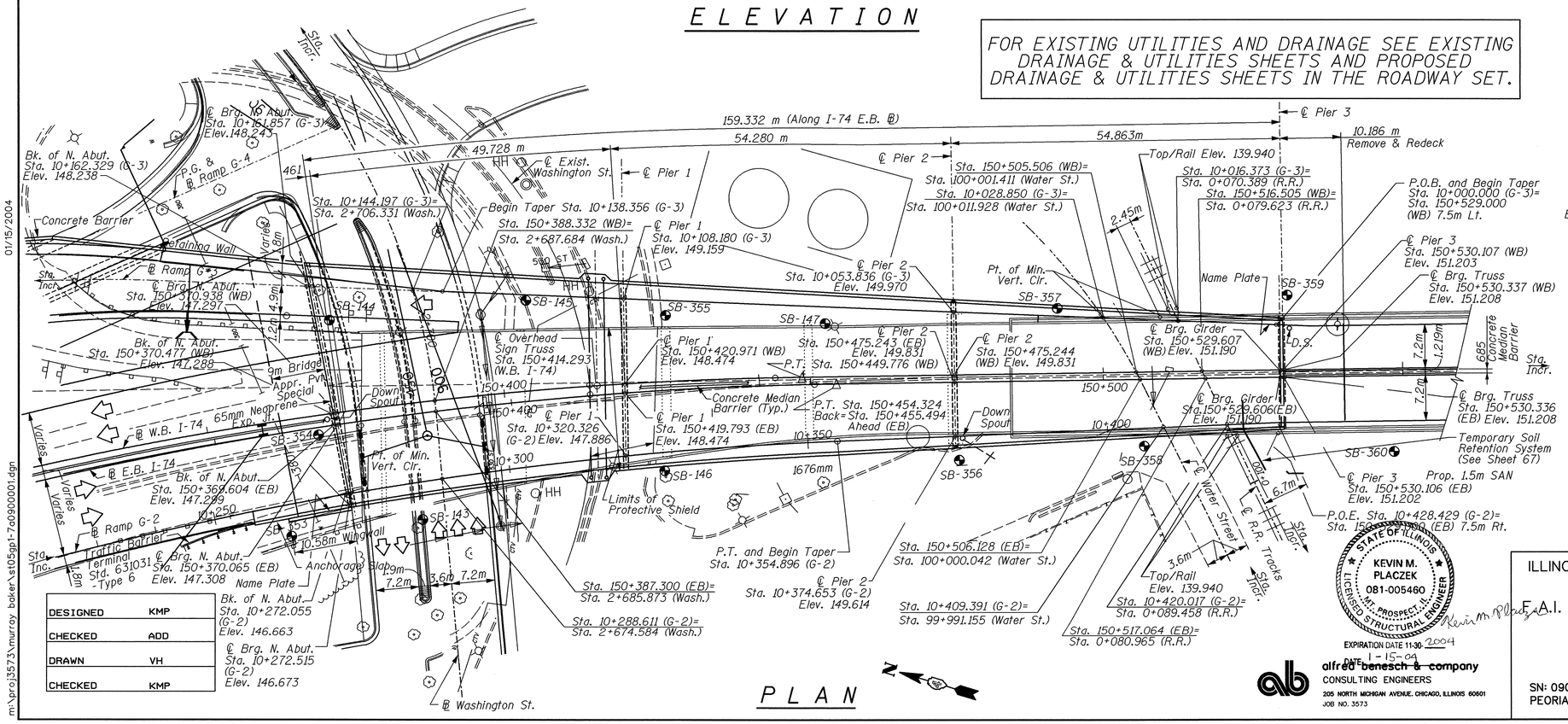
STRUCTURAL STEEL

fy = 345 MPa M270M Gr345 (New)
fy = 250 MPa M270M Gr250 (New)
fy = 225 MPa (Existing Truss (Low-Alloy))
fy = 350 MPa (Existing Truss (Carbon))

SEISMIC DATA

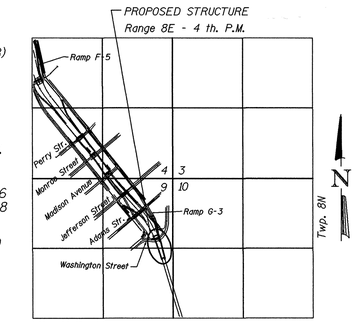
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04
Site Coefficient (S) = 1.0

FOR EXISTING UTILITIES AND DRAINAGE SEE EXISTING DRAINAGE & UTILITIES SHEETS AND PROPOSED DRAINAGE & UTILITIES SHEETS IN THE ROADWAY SET.



P L A N

DESIGNED	KMP
CHECKED	ADD
DRAWN	VH
CHECKED	KMP



LOCATION SKETCH

STATE OF ILLINOIS
KEVIN M. PLACZEK
081-005460
MT. PROSPECT, IL
LICENSED STRUCTURAL ENGINEER
EXPIRATION DATE 11-30-2004
DATE 1-15-04

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

GENERAL PLAN
(NORTH APPROACH)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

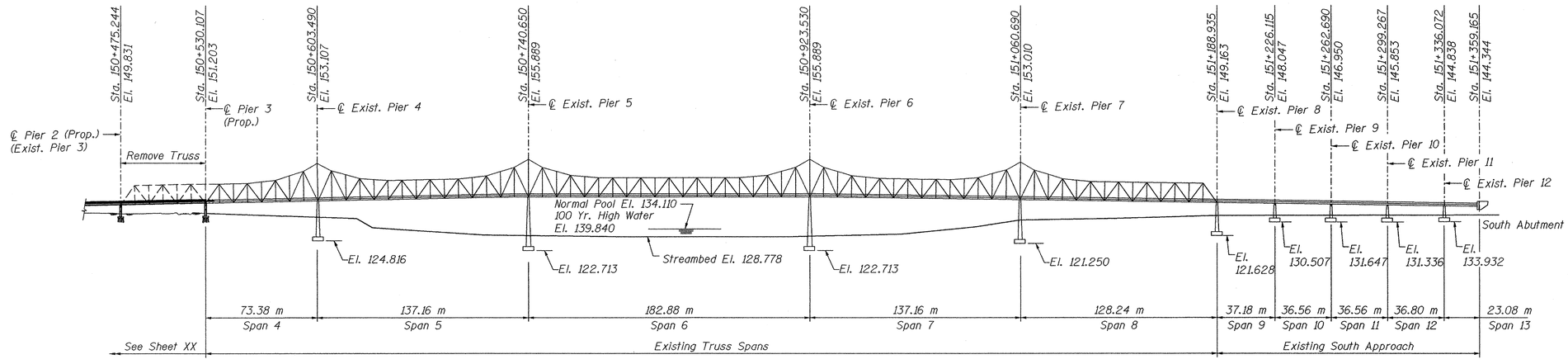
STA. 150+475.243
DATE: 1-14-04

01/15/2004
m:\proj3573\murray baker\st05gp1-7a0900001.dgn

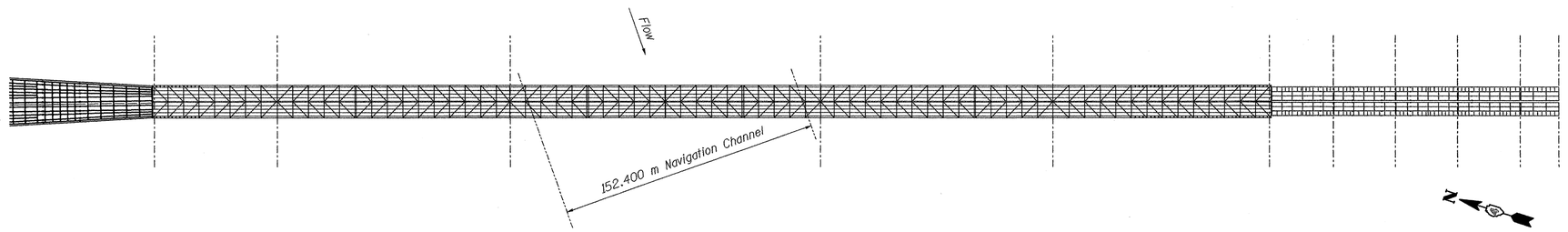
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	854
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 2 OF 160



ELEVATION



PLAN

DESIGNED	KMP
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

Notes:
1. *For truss repair details, see Sheets 71-74 & 84-89.*
2. *See General Notes for Cleaning and Painting*
3. *Coordinate all work with the U.S. Coast Guard when working over waterway...*

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
GENERAL PLAN
(TRUSS & SOUTH APPROACH)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003

m:\proj\3573\murray baker\st05gp3-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	855
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 3 OF 160

CURVE DATA

CONSTITUTION (CURVE 1)
- △ = 4° 30′ 40"
- R = 1520.499 m
- T = 59.889 m
- L = 119.717 m
- E = 1.179 m
- PCC = 99+998.145
- PC = 99+878.428
- SE = N.C.

Transition in N/A
Transition out N/A

CONSTITUTION (CURVE 2)
- △ = 48° 31′ 34"
- R = 102.494 m
- T = 46.198 m
- L = 86.806 m
- E = 9.931 m
- PCC = 99+998.145
- PT = 100+084.951
- SE = N.C.

Transition in N/A
Transition out N/A

W.B. I-74
- △ = 25° 55′ 51"
- R = 637.000 m
- T = 146.658 m
- L = 288.293 m
- E = 16.665 m
- PC = 150+161.483
- PI = 150+308.141
- PT = 150+449.776
- SE = 0.055

Transition in 150+112 to 150+181
Transition out 150+430 to 150+499

WASHINGTON
- △ = 40° 45′ 43"
- R = 112.750 m
- T = 41.889 m
- L = 80.214 m
- E = 7.530 m
- PC = 2+684.774
- PI = 2+726.663
- PT = 2+764.987
- SE = N.C.

Transition in N/A
Transition out N/A

RAMP G-2
- △ = 14° 08′ 20.82"
- R = 622.110 m
- T = 77.152 m
- L = 153.521 m
- E = 4.766 m
- PC = 10+201.376
- PI = 10+278.528
- PT = 10+354.896
- SE = 0.055

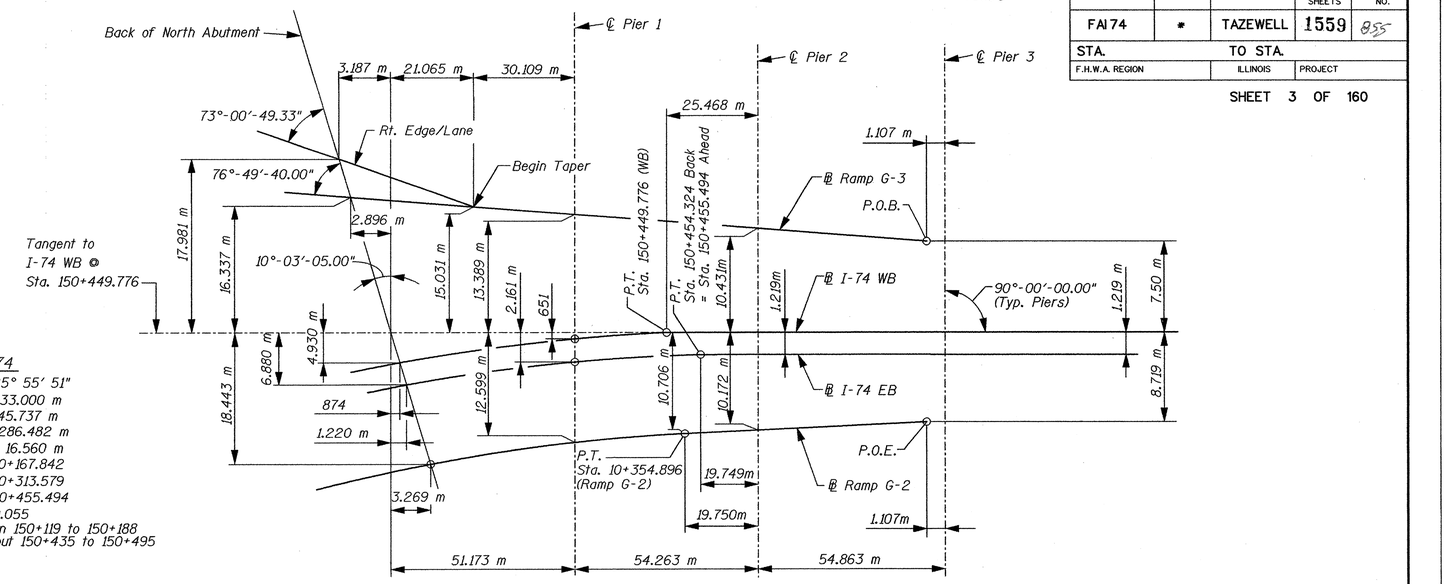
Transition in N/A
Transition out N/A

RAMP G-3
- △ = 16° 51′ 15"
- R = 200.000 m
- T = 29.630 m
- L = 58.832 m
- E = 2.183 m
- PC = 10+187.501
- PI = 10+217.131
- PT = 10+246.333
- SE = 0.058

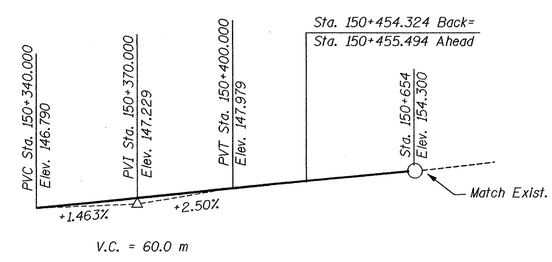
Transition in 10+177 to 10+209
Transition out 10+224 to 10+290

E.B. I-74
- △ = 25° 55′ 51"
- R = 633.000 m
- T = 145.737 m
- L = 286.482 m
- E = 16.560 m
- PC = 150+167.842
- PI = 150+313.579
- PT = 150+455.494
- SE = 0.055

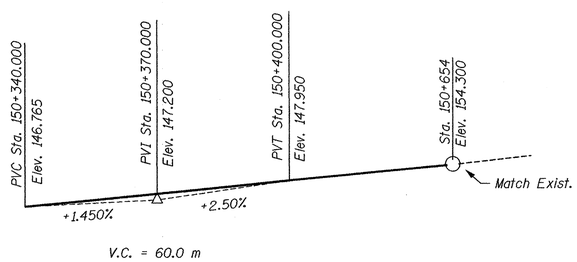
Transition in 150+119 to 150+188
Transition out 150+435 to 150+495



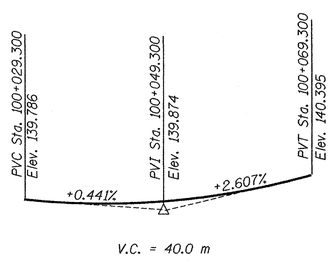
OFFSET SKETCH



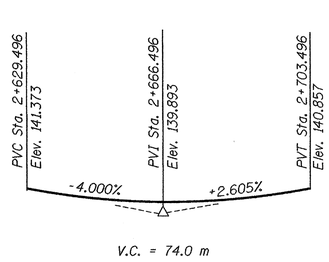
PROFILE GRADE E.B. I-74



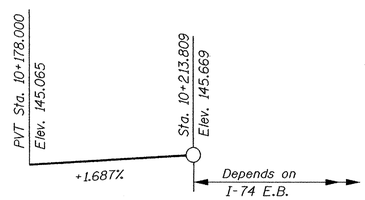
PROFILE GRADE W.B. I-74



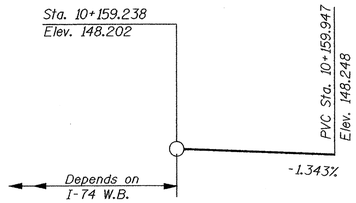
PROFILE GRADE CONSTITUTION



PROFILE GRADE WASHINGTON ST.



PROFILE GRADE RAMP G-2



PROFILE GRADE RAMP G-3

DESIGNED	
CHECKED	
DRAWN	VH
CHECKED	

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

GENERAL PLAN

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05gp2-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	856
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

SHEET 4 OF 160

INDEX OF BRIDGE SHEETS

Sheet No.	Title
1	General Plan (North Approach)
2	General Plan (Truss & South Approach)
3	General Plan
4	Index of Drawings
5	Bill of Materials
6	General Notes
7	Foundation Layout Plan
8	Top of Slab Elevations
9	Top of Slab Elevations
10	Top of Slab Elevations
11	Top of Slab Elevations
12	Top of Slab Elevations
13	Top of Slab Elevations
14	Top of Slab Elevations
15	Top of Slab Elevations
16	Deck Plan - Spans 1 & 2 (Top)
17	Deck Plan -Spans 1 & 2 (Bottom)
18	Deck Plan -Span 3 (Top)
19	Deck Plan -Span 3 (Bottom)
20	Deck Cross-Sections and Details
21	Deck Cross-Sections and Details
22	Parapet Details- East Fascia Parapet
23	Parapet Details - West Fascia Parapet
24	Median Barrier
25	Parapet Details - Sign Truss Support
26	Parapet Details - Sign Truss Support
27	Parapet Details -Transition on Truss
28	Deck Reinforcing Details
29	Deck Drainage Plan
30	Drainage Scupper, Type 1
31	Drainage Scupper, Type 3
32	Drainage Scupper, DS-12
33	Drainage Details
34	Expansion Joint - 65 mm Neoprene
35	Finger Plate Expansion Joint Details 1
35A	Finger Plate Expansion Joint Details 2
36	Finger Plate Expansion Joint Details 3
37	Framing Plan
38	Girder Details (Girder 1)
39	Girder Details (Girders 2, 3, 4 & 9)
40	Girder Details (Girders 5, 6, 7 & 8)
41	Girder Details (Girder 10)
41A	Girder Details (Girder 11)
42	Girder Details (Girders 2A, 4A, 9A & 10A)
43	Girder Camber Diagrams
44	Splice Details
45	Girder Moment Tables I
46	Girder Moment Tables II
47	Girder Reaction Tables
48	Cross Frame Details
49	Cross Girder and Connection Details
50	Elastomeric Bearings, Type I - N. Abutment
51	Fixed Floating Bearing Details - Pier 1
52	Guided Expansion Floating Bearing Details -Pier 2
52A	Elastomeric Bearings, Type II, Pier 3 (Span 3)
53	Guided Expansion Floating Bearing Details - Pier 3 (Truss)
54	Non-Guided Expansion Floating Bearing Details - Floorbeam L6
55	Anchor Bolt Details
56	North Abutment Footing
57	North Abutment Plan and Elevation
58	North Abutment West Wingwall
59	North Abutment East Wingwall
60	North Abutment Details
61	Pier 1 Plan and Elevation
62	Pier 1 Details
63	Pier 2 Plan and Elevation
64	Pier 2 Details
65	Pier 3 Plan and Elevation
66	Pier 3 Details
67	Pier 3 Details
68	Bridge Approach Pavement (Special)
69	Bridge Approach Pavement (Special)
70	Anchorage Slab Detail
71	Existing Plan and Elevation (Spans 4 & 5)
72	Existing Plan and Elevation (Span 6)
73	Existing Plan and Elevation (Spans 7 & 8)
74	Existing Plan and Elevation (Spans 9 - 12)
75	Concrete Repairs Piers 4 and 5
76	Concrete Repairs Piers 6 and 7
77	Concrete Repairs Piers 8 and 9
78	Concrete Repairs Piers 10 and 11
79	Truss Modification Procedure
79A	Temporary Shoring for Truss Modification
79B	Truss Modifications - Incremental Elevs. & Displ.
80	Cutting Truss Element: Load Transfer Device Details 1
81	Cutting Truss Element: Load Transfer Device Details 2
82	Cutting Truss Element: Load Transfer Device Details 3
83	Cutting Truss Element: Load Transfer Device Details 4
84	Pin Replacement Details - Jacking Device
85	Pin Replacement Details - Jacking Device Details
85A	Pin Replacement Details - Parapet Modifications
86	Pin Replacement Details - Top Assembly
87	Pin Replacement Details - Bottom Assembly
88	Pin Replacement Details - Pin Details
89	Truss Modifications - Main Chords
89A	Truss Modifications - Main Chord Details
89B	Truss Modifications - Panel Point L6 Details
89C	Truss Modifications - Panel Point L7 and U7 Details
91	Truss Modifications -Bracing
91A	Expansion Joint Replacement at Panel Points L34 & L44
92	Fixed Bearing Details - Pier 5
93	Fixed Bearing Details - Pier 5 (Replacement Details)
94	Floor Beam Details at L6
95	Stringer Replacement (L6-L7)
96	Truss Repair Details 1
97	Truss Repair Details 2 (Lateral Bracing at L42W)
98	Truss Repair Details 3
99	Stringer Repair Details (Stringer 9 between L68 & L69)
99A	Parapet Modifications for Lighting Junction Boxes
100	Bar Splicer (Coupler) Details
101	Soil Borings I
102	Soil Borings II
103	Soil Borings III
104	Soil Borings IV
105	Soil Borings V
106	Soil Borings VI
107	Soil Borings VII
108	Soil Borings VIII
109	Soil Borings IX
110	Soil Borings X
111	Soil Borings XI
112	Soil Borings XII
113	Soil Borings XIII

Existing Plans

114	General Plan and Elevation (Existing 1983 Plans Sheet 1 of 75)
115	General Data (Existing 1983 Plans Sheet 2 of 75)
116	General Plan and Elevation (Existing 1955 Plans Sheet 1 of 42)
	Existing North Approach
117	Framing Plan (North Approach) (Existing 1954 Plans Sheet 6 of 11)
118	N. Approach Super. -Cross Section Span A (Existing 1983 Plans Sheet 14 of 75)
	Existing Truss
119	Lever Arms and Nominal Lengths for Truss (Existing 1955 Plans Sheet 9 of 42)
120	Fabricated Lengths and Cambers (Existing 1955 Plans Sheet 10 of 42)
121	Stress Makeup L0-L14 & L78-L64 (Existing 1955 Plans Sheet 11 of 42)
122	Stress Makeup L14-L29 & L64-L49 (Existing 1955 Plans Sheet 12 of 42)

Existing Plans (Continued)

123	Stress Makeup L29-L39 & L49-L39 (Existing 1955 Plans Sheet 13 of 42)
124	Bearing Details @ Piers 3 and 8 (Existing 1955 Plans Sheet 14 of 42)
125	Bearing Details @ Piers 4-5-6 & 7 (Existing 1955 Plans Sheet 15A of 42)
126	Truss Details L0-L3 (Existing 1955 Plans Sheet 16 of 42)
127	Truss Details L4-L8 (Existing 1955 Plans Sheet 17 of 42)
128	Truss Details L9-L13 (Existing 1955 Plans Sheet 18 of 42)
129	Truss Details L14 (Existing 1955 Plans Sheet 19 of 42)
130	Truss Details L15-L19 (Existing 1955 Plans Sheet 20 of 42)
131	Truss Details L19 (Existing 1955 Plans Sheet 21 of 42)
132	Truss Details L20-L23 (Existing 1955 Plans Sheet 22 of 42)
133	Truss Details L24-L28 (Existing 1955 Plans Sheet 23 of 42)
134	Truss Details L29 (Existing 1955 Plans Sheet 24 of 42)
135	Truss Details L30-L34 (Existing 1955 Plans Sheet 25 of 42)
136	Truss Details L35-L39 (Existing 1955 Plans Sheet 26 of 42)
137	Inter. Fl. Bms. A, A1, B, B1, C, C1 & D (Existing 1955 Plans Sheet 27 of 42)
138	Intermediate Floor Beams E & F (Existing 1955 Plans Sheet 28 of 42)
139	Expansion Device @ E&F (Existing 1955 Plans Sheet 29 of 42)
140	Exp. Guard and Dets. @ Prs. 3 & 8 (Existing 1955 Plans Sheet 30 of 42)
141	End Floor Beams Piers 3 & 8 (Existing 1955 Plans Sheet 31 of 42)
142	Superstructure Layout (Truss) (Existing 1983 Plans Sheet 34 of 75)
143	Cross Sections at Panel 1 & 2 (Existing 1983 Plans Sheet 35 of 75)
144	Cross Sections at Panels 3 thru 78 (Existing 1983 Plans Sheet 36 of 75)
145	Structural Steel Repairs Truss Spans (Existing 1983 Plans Sheet 67 of 75)
146	Struct. Steel - Rem. and Replcemnt. of Stgrs. 4-8 (Exist. 1983 Plns. Sht. 68 of 75)
147	Structural Steel -Diaphragm Replacement (Exist. 1983 Plns. Sht. 69 of 75)
148	Exist. Jnt. Sup. Dets. at Panel Pts. 34 & 44 (Existing 1983 Plans Sheet 66 of 75)
	Existing South Approach
149	Framing and Camber Girder Spans (Existing 1955 Plans Sheet 3 of 42)
150	Girder Details 4-Span Unit (Existing 1955 Plans Sheet 4 of 42)
151	Girder Details 4-Span Unit (Existing 1955 Plans Sheet 5 of 42)
152	Girder Details Simple Span Unit (Existing 1955 Plans Sheet 6 of 42)
153	Cross Section South Approach (Existing 1983 Plans Sheet 25 of 75)
	Existing North Approach Slab and North Approach Substructure
154	North Approach Slab (Existing 1983 Plans Sheet 12 of 75)
155	Existing North Abutment (Existing 1955 Plans Sheet 2 of 7)
156	Existing Pier A (Existing 1955 Plans Sheet 3 of 7)
157	Existing Exp. Pier 1 (Existing 1955 Plans Sheet 4 of 7)
158	Existing Fixed Pier 2 (Existing 1955 Plans Sheet 5 of 7)
159	Piers A, 1 & 2 Details (Existing 1955 Plans Sheet 6 of 7)
160	Existing Pier 3 (Existing 1954 Plans Sheet 2 of 11)

DESIGNED	KMP
CHECKED	ADD
DRAWN	KMP
CHECKED	ADD

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

INDEX OF DRAWINGS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-14-04

01/15/2004

m:\proj3573\murray baker\st05ntl-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	857
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 5 OF 160

TOTAL BILL OF MATERIAL

ITEMS	UNITS	SUPER	SUB	TOTAL
REMOVAL OF EXISTING SUPERSTRUCTURES NO. 1	EACH	1		1
REMOVAL OF EXISTING SUPERSTRUCTURES (TRUSS)	L SUM	1		1
REMOVAL OF EXISTING SUB-STRUCTURES	EACH		4	4
STUD SHEAR CONNECTORS	EACH	16008		16008
CLEANING AND PAINTING STEEL BRIDGE	L SUM	1		1
CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1		1
METAL SHOES	EACH		280	280
NAME PLATES	EACH	2		2
POROUS GRANULAR EMBANKMENT	CU M		1452	1452
BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ M	389		389
CONCRETE REMOVAL	CU M		402.7	402.7
STRUCTURE EXCAVATION	CU M		7412	7412
NEOPRENE EXPANSION JOINT 65MM	METER	41.4		41.4
NEOPRENE EXPANSION JOINT 100MM	METER	39.0		39.0
CONCRETE STRUCTURES	CU M		1919.0	1919.0
CONCRETE SUPERSTRUCTURE	CU M	1347.9		1347.9
BRIDGE DECK GROOVING	SQ M	4071		4071
PROTECTIVE COAT	SQ M	5140		5140
FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	0.75		0.75
FURNISHING AND ERECTING STRUCTURAL STEEL (TRUSS)	L SUM	1		1
REINFORCEMENT BARS, EPOXY COATED	KG	216530	182940	399470
FURNISHING STEEL PILES HP250X62	METER		717.0	717.0
FURNISHING STEEL PILES HP310X94	METER		2967.0	2967.0
DRIVING STEEL PILES	METER		3684.0	3684.0
TEST PILE STEEL HP250X62	EACH		1	1
TEST PILE STEEL HP310X94	EACH		3	3
BRIDGE SEAT SEALER	SQ M		79	79
EPOXY CRACK SEALING	METER		173	173
HIGH PERFORMANCE - ENHANCED SHOTCRETE	SQ M		75	75
FORM LINER LIMESTONE SURFACE	SQ M		55	55
FORM LINER PARAPET SURFACE	SQ M	351		351
FABRIC REINFORCED ELASTOMERIC TROUGH	METER	22.2		22.2
PROTECTIVE SHIELD	SQ M		276	276
DRAINAGE SCUPPERS, TYPE 1	EACH	14		14
REMOVE AND REPLACE TRUSS PINS	EACH	16		16
DRAINAGE SCUPPERS, DS-12	EACH	4		4
BAR SPLICERS	EACH		257	257
DRAINAGE SYSTEM	L SUM	0.9		0.9
JACK AND REMOVE EXISTING BEARINGS (SPECIAL)	EACH	1		1
TEMPORARY SOIL RETENTION SYSTEM	SQ M		21.0	21.0
DRAINAGE SCUPPERS, TYPE 3	EACH	12		12
TRUSS MODIFICATIONS	L SUM	1		1
FLOATING BEARINGS, FIXED 2220 KN	EACH	13		13
FLOATING BEARINGS, GUIDED EXPANSION, 2660 KN	EACH	11		11
FLOATING BEARINGS, NON-GUIDED EXPANSION, 1100 KN	EACH	1		1
FLOATING BEARINGS, GUIDED EXPANSION, 3100 KN	EACH	2		2
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	15		15
ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	11		11
FLOATING BEARINGS, FIXED 2700 KN	EACH	1		1
RIVET REMOVAL AND REPLACEMENT	EACH	720		720

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

BILL OF MATERIAL

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-14-04

01/14/2004

m:\proj3573\murray baker\st05nt2-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	858
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 6 OF 160

GENERAL NOTES

1. Fasteners shall be high strength bolts. Bolts M22, open holes 24 mm, unless otherwise noted.

2. Calculated mass of Structural Steel
   M-270M Grade 250: 4,150 kg (N. Approach)
   M-270M Grade 345: 1,200,960 kg (N. Approach)
   M-270M Grade 345: 3,350 kg (Furnishing and Erecting Structural Steel (Truss))
   M-270M Grade 345: 81,800 kg (Truss Modifications) ⚠1

3. The structural steel bearing plates of the Floating Bearing Assemblies and Elastomeric Bearing Assemblies shall conform to the requirements of AASHTO M 270M Grade 345.

4. All structural steel shall conform to the requirements of AASHTO M 270M Grade 345 unless otherwise noted.

5. The roadway expansion plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications.

6. Roadway expansion guards shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.

7. Field welding of construction accessories will not be permitted to beams or girders.

8. Anchor bolts shall be set before bolting cross frames over supports.

9. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges, webs, all truss elements, all splice plate material except fill plates, connection plates and bearing stiffeners.

10. Reinforcement bars shall conform to the requirements of AASHTO M-31M or M-322M, Grade 400. ⚠1

11. All construction joints shall be bonded.

12. The back face of closed abutments and their wingwalls shall be waterproofed according to Article 503.18 of the Standard Specifications.

13. Bearing seat surfaces shall be constructed or adjusted to the designated levations within a tolerance of 3 mm. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 3 mm adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

14. Bridge seat sealer shall be applied to the seat area of North Abutment and Pier 3.

15. When the deck pour is stopped for the day at one or more of the transverse Bonded Construction Joints in the deck Pouring Sequence as shown on sheet 18, the next pour shall not be made until both of the following requirements are met:
   a) At least 72 hours shall have elapsed from the end of the previous pour.
   b) The concrete strength shall have attained a minimum flexural strength of 4.5 MPa or a minimum compressive strength of 24 MPa.

16. The Contractor shall drive 1 test pile in a permanent location at each substructure unit as directed by the Engineer before ordering the remainder of the piles.

17. The organic zinc rich primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The color of the final finish coat for all steel surfaces shall be Warm Gray, Munsell Number 2.5Y 5/1.
   See Special Provision for "Cleaning and Painting New Metal Structures." . The three coat paint system shall be applied in the shop.

18. The contractor shall submit for engineer's review detailed erection plan and procedures including but not limited to staging positions, falsework locations and design, sequence of girder erection and bolt tightening, and provisions for stability of girders and bearings during erection. The engineer's review of such plan and procedures shall include review by the Bureau of Bridges and Structures. The contractor's erection plan and procedures shall be sealed and signed by a licensed structural engineer in the State of Illinois. Engineer's approval of such plan and procedures does not relieve the contractor of any responsibility.

19. Cleaning and painting the existing structural steel shall be as specified in the Special Provision for "Cleaning and Painting Existing Steel Structures". All existing steel shall be cleaned per Near White Blast Cleaning - SSPC-SP10. All existing steel shall be painted according to the requirements of Paint System 1 - OZ/E/U. The color of the final finish coat shall be Warm Gray, Munsell Number 2.5Y 5/1.

20. Existing bird screens of the truss portion of the bridge must be removed prior to cleaning the existing steel.

21. The SSPC-QP2 Painting Contractor Certification will be required for cleaning and painting of the existing structural steel.

22. The Contractor shall submit calculations and details demonstrating the structural integrity of the truss is maintained under the additional imposed loads of the containment system, see special provisions.

23. A minimum of four air monitors will be required to monitor abrasive blasting operations at this site, see special provision for "Containment and Disposal of Lead Paint Cleaning Residues".

⚠1 24. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

25. Blasting is not allowed for removal of the existing structure.

26. The Contractor shall submit a procedure for removal of the existing structure to the Department and the owners of the utilities under the structure for approval.

27. The Contractor shall coordinate all demolition and construction activities with the Railroad.

28. All dimensions are in millimeters (mm) except as noted.

29. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

30. Existing Signs, Roadway and Decorative Lighting shall be removed prior to cleaning and painting the steel. Lighting shall be installed after the final coat of paint has been fully cured. See Lighting and Signing Plans for details and pay items.

31. The Contractor shall coordinate all work on the bridge over the Illinois River with the U.S. Coast Guard for approval. Potential delays due to obtaining Coast Guard Approval will not be accepted as a claim against the State.

32. Limits of "Removal of Existing Superstructures No.1 extend from the ℄ Existing North Abutment Expansion Joint to the ℄ Expansion joint of Existing Pier 3.

33. The limits of "Removal of the Existing Superstructures (Truss) extend from the Expansion Joint of Existing Pier 3 to the limits of steel members and concrete deck shown on the plans.

⚠1 34. Removal of Existing North Abutment and Piers A, Pier 1 and Pier 2 are included in the cost of Removal of Existing Sub-Structure, while removal of Existing Pier 3 is included in the cost of Concrete Removal.

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
GENERAL NOTES

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

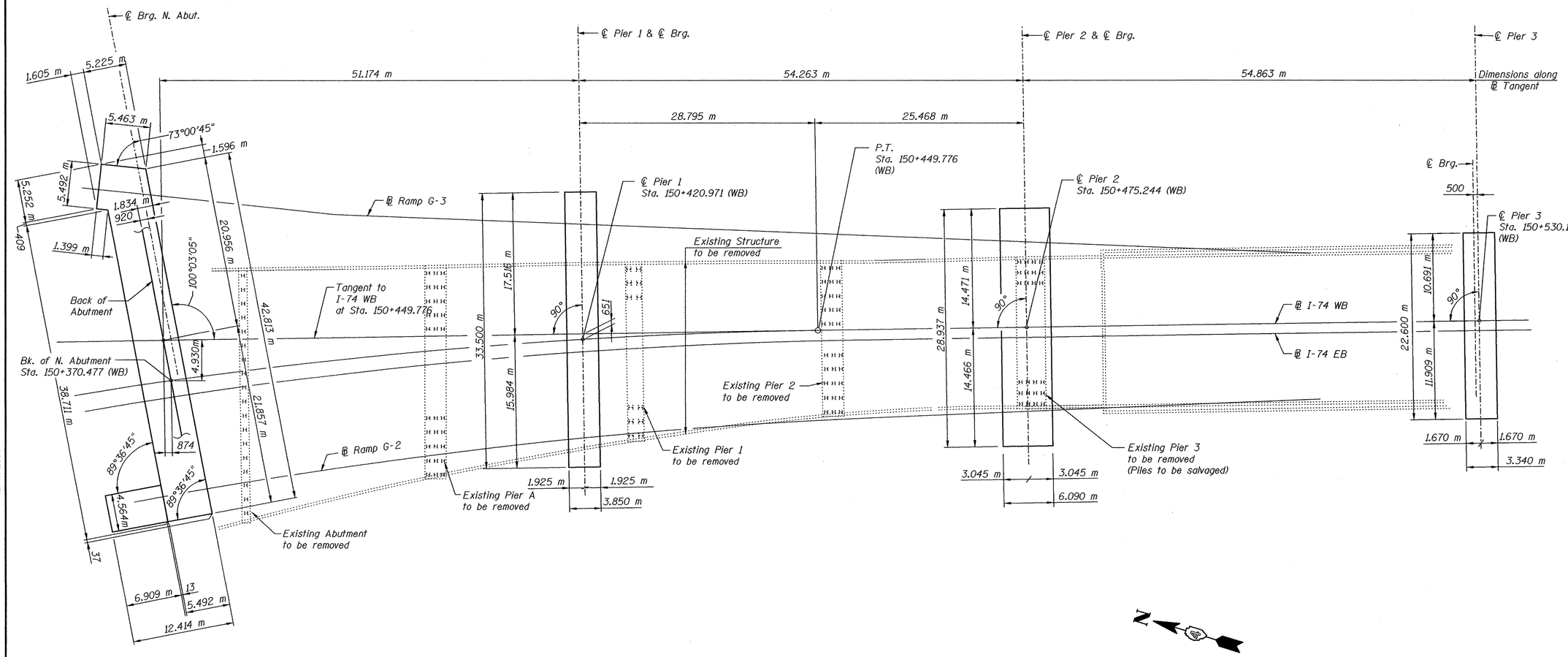
⚠1 5/03/04 CDF REVISED 6-4-04

5/3/2004
M:\proj3573\Murray Baker\st05nt3-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	859
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 7 OF 160



FOUNDATION PLAN

DESIGNED	ADD
CHECKED	WJZ
DRAWN	VH
CHECKED	ADD

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
FOUNDATION PLAN

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

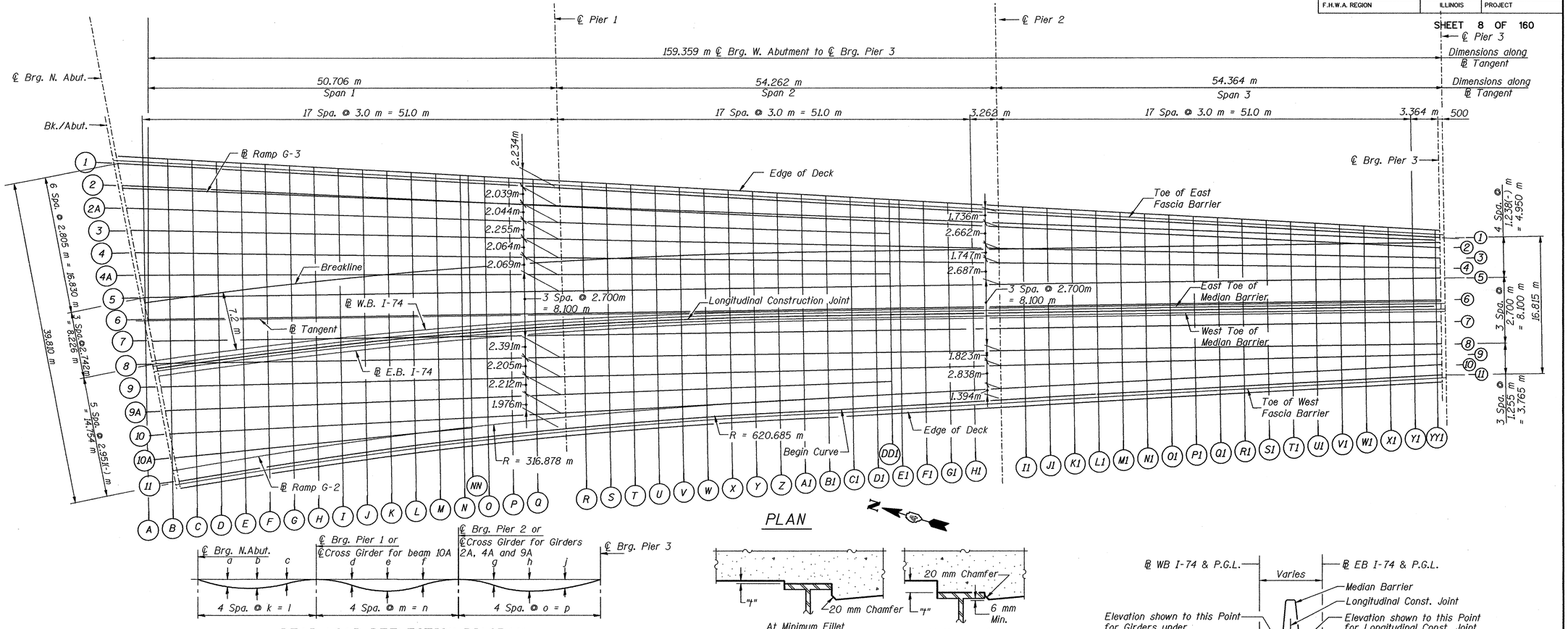
STA. 150+475.243
DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05fp1-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	860
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

SHEET 8 OF 160



PLAN

DEAD LOAD DEFLECTION DIAGRAM

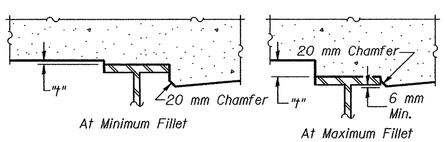
(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.
All dimensions are in millimeters (mm) except as noted.
All offsets are in meters.

DEAD LOAD DEFLECTION TABLE

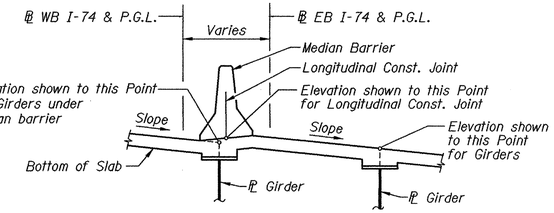
Girder	a	b	c	d	e	f	g	h	j	k (m)	l (m)	m (m)	n (m)	o (m)	p (m)
1	109	137	77	-13	-4	-11	69	129	104	13.572	54.287	13.600	54.401	13.625	54.501
2	125	156	86	-14	5	5	65	126	103	13.441	53.764	13.592	54.368	13.617	54.468
2A	126	157	87	-18	-5	5	-	-	-	13.309	53.235	10.203	40.812	-	-
3	116	144	80	-12	4	-3	64	123	100	13.179	52.715	13.575	54.298	13.600	54.398
4	111	138	76	-11	6	-2	64	122	100	13.053	52.210	13.571	54.282	13.596	54.382
4A	111	138	76	-14	-1	8	-	-	-	12.927	51.706	10.192	40.767	-	-
5	104	129	69	-1	18	5	57	106	85	12.803	51.212	13.566	54.263	13.591	54.363
6	102	126	67	3	21	1	70	128	102	12.684	50.734	13.566	54.263	13.591	54.363
7	97	120	64	5	22	2	70	127	102	12.564	50.255	13.566	54.263	13.591	54.363
8	90	112	60	4	22	5	54	99	80	12.444	49.776	13.566	54.263	13.591	54.363
9	91	112	61	-2	15	2	63	123	101	12.316	49.264	13.567	54.266	13.592	54.366
9A	91	112	61	-7	8	14	-	-	-	12.190	48.761	10.194	40.776	-	-
10	85	109	64	-19	-12	-18	76	138	111	12.067	48.269	13.577	54.306	13.602	54.406
10A	64	97	91	-	-	-	-	-	-	9.212	36.847	-	-	-	-
11	67	87	53	-14	-7	-13	68	127	103	11.890	47.561	13.584	54.337	13.603	54.411

FILLET HEIGHTS



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

TOP OF SLAB ELEVATION DETAILS



NOTES:

1. Screed points are located at 3m intervals along each girder or baseline.
   Note, these points do not necessarily fall on the lettered screed lines. These lines are schematic only.
2. Work this sheet with Sheets 8-15.

DESIGNED	ADD
CHECKED	TL
DRAWN	VH
CHECKED	TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

TOP OF SLAB ELEVATIONS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003

m:\proj3573\murray baker\st05slt-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	861
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 9 OF 160

TOE OF EAST FASCIA BARRIER

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut	150+369.245	-25.118	148.377	148.377
CL Brg. N. Abut.	150+369.692	-25.032	148.382	148.382
A	150+372.861	-24.384	148.419	148.450
B	150+375.699	-23.818	148.455	148.511
C	150+378.543	-23.265	148.492	148.573
D	150+381.391	-22.726	148.532	148.633
E	150+384.244	-22.199	148.574	148.692
F	150+387.101	-21.686	148.618	148.747
G	150+389.963	-21.186	148.663	148.801
H	150+392.829	-20.700	148.711	148.851
I	150+395.699	-20.226	148.761	148.898
J	150+398.574	-19.767	148.813	148.943
K	150+401.452	-19.320	148.867	148.986
L	150+404.334	-18.887	148.922	149.025
M	150+407.220	-18.467	148.977	149.064
N	150+410.110	-18.061	149.033	149.100
O	150+413.003	-17.668	149.090	149.138
P	150+415.899	-17.289	149.147	149.176
Q	150+418.799	-16.924	149.205	149.218
CL Pier 1	150+421.702	-16.572	149.263	149.263
R	150+424.608	-16.233	149.323	149.314
S	150+427.517	-15.908	149.382	149.369
T	150+430.429	-15.597	149.440	149.425
U	150+433.343	-15.300	149.481	149.467
V	150+436.260	-15.016	149.524	149.512
W	150+439.180	-14.746	149.566	149.557
X	150+442.102	-14.489	149.610	149.603
Y	150+445.026	-14.246	149.654	149.649
Z	150+447.952	-14.017	149.688	149.684
A1	150+450.905	-13.801	149.716	149.712
B1	150+453.897	-13.587	149.746	149.740
C1	150+456.889	-13.374	149.776	149.769
D1	150+459.882	-13.160	149.809	149.799
E1	150+462.874	-12.947	149.842	149.830
F1	150+465.867	-12.733	149.876	149.864
G1	150+468.859	-12.519	149.912	149.901
H1	150+471.851	-12.306	149.949	149.941
CL Pier 2	150+475.244	-12.064	149.992	149.992
I1	150+478.236	-11.850	150.031	150.042
J1	150+481.229	-11.636	150.072	150.097
K1	150+484.221	-11.423	150.113	150.155
L1	150+487.214	-11.209	150.156	150.215
M1	150+490.206	-10.995	150.200	150.277
N1	150+493.198	-10.782	150.245	150.339
O1	150+496.191	-10.568	150.292	150.400
P1	150+499.183	-10.355	150.341	150.461
Q1	150+502.175	-10.141	150.417	150.546
R1	150+505.168	-9.927	150.494	150.625
S1	150+508.160	-9.714	150.571	150.701
T1	150+511.153	-9.500	150.647	150.771
U1	150+514.145	-9.286	150.724	150.837
V1	150+517.137	-9.073	150.801	150.898
W1	150+520.130	-8.859	150.877	150.956
X1	150+523.122	-8.646	150.954	151.010
Y1	150+526.115	-8.432	151.031	151.062
CL Brg. Pier 3	150+529.607	-8.183	151.120	151.120

GIRDER 1

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+369.263	-24.739	148.362	148.362
CL Brg. N. Abut.	150+369.712	-24.620	148.366	148.366
A	150+372.813	-23.988	148.402	148.433
B	150+375.653	-23.423	148.438	148.495
C	150+378.499	-22.871	148.476	148.557
D	150+381.349	-22.333	148.515	148.617
E	150+384.204	-21.808	148.557	148.675
F	150+387.063	-21.296	148.601	148.731
G	150+389.927	-20.797	148.647	148.784
H	150+392.795	-20.311	148.695	148.834
I	150+395.667	-19.839	148.745	148.882
J	150+398.543	-19.381	148.797	148.927
K	150+401.423	-18.935	148.851	148.970
L	150+404.307	-18.504	148.906	149.009
M	150+407.195	-18.085	148.961	149.048
N	150+410.086	-17.680	149.017	149.085
O	150+412.981	-17.289	149.074	149.123
P	150+415.879	-16.911	149.131	149.161
Q	150+418.781	-16.547	149.189	149.203
CL Pier 1	150+421.686	-16.196	149.248	149.248
R	150+424.593	-15.857	149.307	149.299
S	150+427.504	-15.532	149.367	149.354
T	150+430.417	-15.221	149.425	149.410
U	150+433.334	-14.923	149.466	149.452
V	150+436.252	-14.640	149.508	149.496
W	150+439.174	-14.369	149.551	149.542
X	150+442.097	-14.113	149.595	149.588
Y	150+445.023	-13.870	149.639	149.634
Z	150+447.951	-13.641	149.673	149.670
A1	150+450.905	-13.424	149.702	149.698
B1	150+453.897	-13.211	149.733	149.728
C1	150+456.889	-12.997	149.765	149.757
D1	150+459.882	-12.784	149.798	149.789
E1	150+462.874	-12.570	149.832	149.821
F1	150+465.867	-12.356	149.868	149.856
G1	150+468.859	-12.143	149.905	149.893
H1	150+471.851	-11.929	149.942	149.935
CL Pier 2	150+475.244	-11.687	149.987	149.987
I1	150+478.236	-11.472	150.027	150.038
J1	150+481.229	-11.257	150.069	150.094
K1	150+484.221	-11.042	150.111	150.153
L1	150+487.213	-10.827	150.155	150.214
M1	150+490.205	-10.612	150.200	150.278
N1	150+493.198	-10.397	150.246	150.340
O1	150+496.190	-10.182	150.294	150.403
P1	150+499.182	-9.967	150.344	150.464
Q1	150+502.175	-9.752	150.421	150.549
R1	150+505.167	-9.537	150.497	150.629
S1	150+508.159	-9.322	150.574	150.704
T1	150+511.151	-9.107	150.651	150.775
U1	150+514.144	-8.892	150.727	150.841
V1	150+517.136	-8.677	150.804	150.902
W1	150+520.128	-8.462	150.881	150.959
X1	150+523.121	-8.246	150.957	151.013
Y1	150+526.113	-8.031	151.034	151.065
CL Brg. Pier 3	150+529.607	-7.780	151.123	151.123

GIRDER 2

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+369.396	-21.933	148.252	148.252
CL Brg. N. Abut.	150+369.846	-21.823	148.257	148.257
A	150+372.469	-21.315	148.289	148.315
B	150+375.326	-20.776	148.325	148.378
C	150+378.187	-20.249	148.364	148.441
D	150+381.053	-19.736	148.405	148.503
E	150+383.923	-19.236	148.448	148.564
F	150+386.798	-18.750	148.493	148.621
G	150+389.676	-18.277	148.540	148.677
H	150+392.559	-17.817	148.590	148.729
I	150+395.446	-17.371	148.641	148.778
J	150+398.337	-16.938	148.694	148.825
K	150+401.232	-16.519	148.750	148.870
L	150+404.130	-16.113	148.806	148.912
M	150+407.031	-15.721	148.863	148.952
N	150+409.937	-15.342	148.920	148.991
O	150+412.845	-14.977	148.978	149.030
P	150+415.757	-14.626	149.037	149.069
Q	150+418.672	-14.288	149.096	149.112
CL Pier 1	150+421.589	-13.964	149.156	149.158
R	150+424.510	-13.652	149.217	149.209
S	150+427.433	-13.354	149.278	149.266
T	150+430.359	-13.069	149.337	149.323
U	150+433.287	-12.799	149.380	149.366
V	150+436.218	-12.542	149.424	149.411
W	150+439.151	-12.299	149.468	149.458
X	150+442.086	-12.070	149.513	149.506
Y	150+445.023	-11.854	149.558	149.553
Z	150+447.962	-11.652	149.597	149.593
A1	150+450.923	-11.463	149.633	149.629
B1	150+453.917	-11.277	149.670	149.665
C1	150+456.911	-11.091	149.708	149.701
D1	150+459.906	-10.905	149.747	149.738
E1	150+462.900	-10.718	149.787	149.775
F1	150+465.894	-10.532	149.828	149.816
G1	150+468.888	-10.346	149.871	149.859
H1	150+471.882	-10.159	149.914	149.905
CL Pier 2	150+475.244	-9.950	149.964	149.962
I1	150+478.238	-9.763	150.009	150.017
J1	150+481.232	-9.576	150.055	150.078
K1	150+484.226	-9.388	150.103	150.141
L1	150+487.221	-9.201	150.152	150.207
M1	150+490.215	-9.014	150.201	150.275
N1	150+493.209	-8.826	150.252	150.342
O1	150+496.203	-8.639	150.303	150.410
P1	150+499.197	-8.452	150.357	150.476
Q1	150+502.191	-8.264	150.434	150.561
R1	150+505.185	-8.077	150.510	150.641
S1	150+508.180	-7.890	150.587	150.718
T1	150+511.174	-7.702	150.663	150.789
U1	150+514.168	-7.515	150.740	150.855
V1	150+517.162	-7.328	150.816	150.917
W1	150+520.156	-7.140	150.893	150.975
X1	150+523.150	-6.953	150.969	151.029
Y1	150+526.144	-6.766	151.046	151.082
CL Brg. Pier 3	150+529.607	-6.549	151.134	151.140

BASELINE RAMP G3

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+369.610	-21.534	148.240	148.240
CL Brg. N. Abut.	150+369.863	-21.487	148.244	148.244
A	150+372.412	-21.013	148.275	148.301
B	150+375.274	-20.495	148.313	148.365
C	150+378.140	-19.989	148.353	148.430
D	150+381.010	-19.498	148.395	148.493
E	150+383.885	-19.019	148.439	148.554
F	150+386.764	-18.554	148.485	148.613
G	150+389.647	-18.102	148.533	148.669
H	150+392.534	-17.664	148.583	148.722
I	150+395.424	-17.239	148.635	148.773
J	150+398.318	-16.828	148.689	148.821
K	150+401.216	-16.430	148.746	148.866
L	150+404.118	-16.046	148.803	148.909
M	150+407.022	-15.676	148.861	148.950
N	150+409.930	-15.319	148.919	148.990
O	150+412.841	-14.975	148.978	149.030
P	150+415.755	-14.645	149.038	149.070
Q	150+418.672	-14.329	149.098	149.114
CL Pier 1	150+421.592	-14.027	149.159	149.161
R	150+424.514	-13.738	149.220	149.213
S	150+427.439	-13.463	149.282	149.270
T	150+430.367	-13.201	149.343	149.328
U	150+433.296	-12.954	149.387	149.372
V	150+436.228	-12.720	149.431	149.419
W	150+439.162	-12.500	149.476	149.466
X	150+442.098	-12.293	149.522	149.515
Y	150+445.035	-12.101	149.568	149.563
Z	150+447.974	-11.922	149.608	149.604
A1	150+450.936	-11.756	149.643	149.639
B1	150+453.932	-11.593	149.680	149.675
C1	150+456.927	-11.430	149.718	149.711
D1	150+459.923	-11.266	149.757	149.748
E1	150+462.919	-11.103	149.797	149.785
F1	150+465.914	-10.940	149.838	149.825
G1	150+468.910	-10.776	149.879	149.867
H1	150+471.905	-10.613	149.922	149.913
CL Pier 2	150+475.244	-10.431	149.970	149.969
I1	150+478.240	-10.268	150.014	150.022
J1	150+481.235	-10.104	150.060	150.082
K1	150+484.231	-9.941	150.106	150.144
L1	150+487.226	-9.778	150.153	150.209
M1	150+490.222	-9.614	150.201	150.275
N1	150+493.217	-9.451	150.250	150.341
O1	150+496.213	-9.288	150.300	150.406
P1	150+499.208	-9.124	150.352	150.470
Q1	150+502.204	-8.961	150.428	150.555
R1	150+505.200	-8.798	150.505	150.636
S1	150+508.195	-8.634	150.581	150.712
T1	150+511.191	-8.471	150.657	150.783
U1	150+514.186	-8.308	150.733	150.849
V1	150+517.182	-8.144	150.810	150.911
W1	150+520.177	-7.981	150.886	150.969
X1	150+523.173	-7.818	150.962	151.022
Y1	150+526.168	-7.654	151.039	151.075
YY1	150+529.000	-7.500	151.111	151.116

DESIGNED	ADD
CHECKED	TL
DRAWN	VH
CHECKED	TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
TOP OF SLAB ELEVATIONS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003

m:\proj\3573\murray baker\st05sl2-7a090001.dgn

E-S (M) 4-30-97

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	862
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 10 OF 160

GIRDER 2A

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+369.530	-19.125	148.143	148.143
CL Brg. N. Abut.	150+369.982	-19.026	148.147	148.147
A	150+372.117	-18.643	148.175	148.196
B	150+374.991	-18.140	148.213	148.261
C	150+377.870	-17.651	148.254	148.327
D	150+380.753	-17.174	148.296	148.391
E	150+383.640	-16.711	148.341	148.454
F	150+386.532	-16.262	148.388	148.514
G	150+389.427	-15.826	148.436	148.572
H	150+392.326	-15.403	148.487	148.627
I	150+395.229	-14.994	148.540	148.679
J	150+398.135	-14.599	148.596	148.729
K	150+401.045	-14.217	148.653	148.776
L	150+403.958	-13.849	148.711	148.820
M	150+406.874	-13.494	148.770	148.862
N	150+409.794	-13.154	148.829	148.903
O	150+412.716	-12.826	148.889	148.944
P	150+415.642	-12.513	148.950	148.985
Q	150+418.570	-12.213	149.011	149.030
CL Pier 1	150+421.501	-11.927	149.073	149.077
R	150+424.434	-11.652	149.135	149.128
S	150+427.369	-11.392	149.198	149.186
T	150+430.307	-11.145	149.259	149.245
U	150+433.247	-10.911	149.304	149.289
V	150+436.189	-10.692	149.349	149.337
W	150+439.133	-10.486	149.395	149.385
X	150+442.079	-10.295	149.442	149.434
Y	150+445.027	-10.117	149.489	149.483
Z	150+447.976	-9.953	149.532	149.528
A1	150+450.944	-9.802	149.574	149.570
B1	150+453.940	-9.653	149.617	149.612
C1	150+456.937	-9.505	149.660	149.654
D1	150+459.933	-9.356	149.705	149.696
DD1	150+461.744	-9.266	149.732	149.722

GIRDER 3

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+369.666	-16.317	148.033	148.033
CL Brg. N. Abut.	150+370.119	-16.229	148.038	148.038
A	150+371.768	-15.957	148.060	148.077
B	150+374.660	-15.491	148.100	148.144
C	150+377.556	-15.038	148.143	148.211
D	150+380.457	-14.599	148.187	148.278
E	150+383.361	-14.174	148.233	148.343
F	150+386.268	-13.762	148.282	148.406
G	150+389.180	-13.364	148.332	148.466
H	150+392.095	-12.979	148.385	148.524
I	150+395.013	-12.608	148.440	148.579
J	150+397.935	-12.250	148.497	148.631
K	150+400.860	-11.907	148.556	148.681
L	150+403.787	-11.576	148.616	148.728
M	150+406.718	-11.260	148.676	148.772
N	150+409.652	-10.957	148.738	148.815
O	150+412.588	-10.668	148.799	148.858
P	150+415.527	-10.393	148.862	148.901
Q	150+418.468	-10.132	148.925	148.947
CL Pier 1	150+421.411	-9.884	148.989	148.995
R	150+424.357	-9.650	149.053	149.047
S	150+427.305	-9.429	149.118	149.107
T	150+430.255	-9.223	149.182	149.167
U	150+433.206	-9.030	149.228	149.213
V	150+436.159	-8.851	149.275	149.262
W	150+439.114	-8.686	149.323	149.312
X	150+442.070	-8.534	149.371	149.363
Y	150+445.028	-8.397	149.420	149.414
Z	150+447.987	-8.274	149.468	149.463
A1	150+450.961	-8.163	149.515	149.512
B1	150+453.959	-8.055	149.564	149.560
C1	150+456.957	-7.947	149.614	149.608
D1	150+459.956	-7.839	149.664	149.655
E1	150+462.954	-7.731	149.714	149.704
F1	150+465.952	-7.623	149.766	149.753
G1	150+468.950	-7.515	149.817	149.805
H1	150+471.948	-7.407	149.870	149.860
CL Pier 2	150+475.244	-7.289	149.928	149.924
I1	150+478.242	-7.180	149.982	149.986
J1	150+481.240	-7.071	150.036	150.053
K1	150+484.238	-6.962	150.091	150.123
L1	150+487.236	-6.854	150.146	150.196
M1	150+490.234	-6.745	150.203	150.269
N1	150+493.232	-6.636	150.259	150.344
O1	150+496.230	-6.528	150.316	150.417
P1	150+499.228	-6.419	150.376	150.490
Q1	150+502.226	-6.310	150.452	150.576
R1	150+505.224	-6.202	150.527	150.658
S1	150+508.222	-6.093	150.603	150.735
T1	150+511.220	-5.984	150.679	150.807
U1	150+514.218	-5.876	150.755	150.875
V1	150+517.216	-5.767	150.831	150.938
W1	150+520.214	-5.658	150.907	150.997
X1	150+523.212	-5.550	150.983	151.052
Y1	150+526.211	-5.441	151.059	151.104
CL Brg. Pier 3	150+529.607	-5.318	151.145	151.161

GIRDER 4

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+369.802	-13.511	147.923	147.923
CL Brg. N. Abut.	150+370.257	-13.432	147.929	147.929
A	150+371.427	-13.251	147.945	147.957
B	150+374.335	-12.811	147.986	148.025
C	150+377.247	-12.384	148.030	148.094
D	150+380.163	-11.971	148.075	148.163
E	150+383.082	-11.572	148.123	148.230
F	150+386.005	-11.187	148.173	148.295
G	150+388.931	-10.815	148.225	148.357
H	150+391.861	-10.456	148.279	148.417
I	150+394.794	-10.112	148.335	148.474
J	150+397.730	-9.781	148.393	148.528
K	150+400.668	-9.464	148.453	148.580
L	150+403.610	-9.161	148.515	148.629
M	150+406.554	-8.871	148.577	148.675
N	150+409.501	-8.596	148.639	148.720
O	150+412.451	-8.334	148.703	148.764
P	150+415.402	-8.086	148.766	148.808
Q	150+418.356	-7.852	148.831	148.855
CL Pier 1	150+421.312	-7.631	148.896	148.905
R	150+424.270	-7.424	148.962	148.958
S	150+427.230	-7.232	149.028	149.018
T	150+430.191	-7.052	149.091	149.077
U	150+433.154	-6.887	149.138	149.123
V	150+436.119	-6.736	149.185	149.171
W	150+439.085	-6.599	149.235	149.223
X	150+442.052	-6.476	149.286	149.277
Y	150+445.020	-6.366	149.338	149.331
Z	150+447.989	-6.271	149.391	149.386
A1	150+450.970	-6.189	149.445	149.441
B1	150+453.969	-6.109	149.500	149.496
C1	150+456.968	-6.029	149.556	149.550
D1	150+459.967	-5.949	149.612	149.604
E1	150+462.966	-5.869	149.669	149.658
F1	150+465.965	-5.789	149.726	149.713
G1	150+468.964	-5.709	149.783	149.771
H1	150+471.963	-5.629	149.841	149.831
CL Pier 2	150+475.244	-5.542	149.905	149.900
I1	150+478.243	-5.461	149.964	149.966
J1	150+481.242	-5.381	150.023	150.038
K1	150+484.241	-5.301	150.083	150.112
L1	150+487.240	-5.220	150.143	150.189
M1	150+490.239	-5.140	150.203	150.267
N1	150+493.238	-5.060	150.264	150.346
O1	150+496.236	-4.980	150.326	150.424
P1	150+499.235	-4.899	150.389	150.501
Q1	150+502.234	-4.819	150.465	150.587
R1	150+505.233	-4.739	150.540	150.670
S1	150+508.232	-4.659	150.616	150.747
T1	150+511.231	-4.578	150.692	150.821
U1	150+514.230	-4.498	150.767	150.889
V1	150+517.229	-4.418	150.843	150.952
W1	150+520.228	-4.337	150.919	151.011
X1	150+523.227	-4.257	150.994	151.067
Y1	150+526.226	-4.177	151.070	151.119
CL Brg. Pier 3	150+529.607	-4.086	151.155	151.176

GIRDER 4A

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+369.940	-10.704	147.814	147.814
CL Brg. N. Abut.	150+370.396	-10.635	147.820	147.820
A	150+371.084	-10.538	147.830	147.837
B	150+374.009	-10.136	147.873	147.907
C	150+376.938	-9.747	147.918	147.978
D	150+379.871	-9.372	147.965	148.049
E	150+382.807	-9.010	148.014	148.118
F	150+385.746	-8.663	148.066	148.186
G	150+388.688	-8.329	148.120	148.251
H	150+391.633	-8.009	148.175	148.313
I	150+394.581	-7.702	148.233	148.372
J	150+397.531	-7.410	148.293	148.429
K	150+400.485	-7.131	148.354	148.483
L	150+403.441	-6.867	148.414	148.530
M	150+406.399	-6.616	148.474	148.575
N	150+409.359	-6.379	148.535	148.619
O	150+412.322	-6.156	148.597	148.661
P	150+415.286	-5.946	148.659	148.705
Q	150+418.253	-5.751	148.723	148.750
CL Pier 1	150+421.221	-5.570	148.787	148.798
R	150+424.191	-5.402	148.852	148.850
S	150+427.162	-5.248	148.918	148.909
T	150+430.134	-5.108	148.984	148.970
U	150+433.108	-4.982	149.037	149.023
V	150+436.083	-4.870	149.093	149.078
W	150+439.059	-4.772	149.149	149.137
X	150+442.036	-4.689	149.207	149.197
Y	150+445.013	-4.619	149.265	149.259
Z	150+447.991	-4.563	149.325	149.320
A1	150+450.978	-4.520	149.386	149.382
B1	150+453.978	-4.479	149.447	149.443
C1	150+456.978	-4.439	149.508	149.503
D1	150+459.977	-4.398	149.570	149.562
DD1	150+461.744	-4.375	149.606	149.597

12/16/2003

m:\proj3573\murray baker\st05sl3-7a0900001.dgn

DESIGNED	ADD
CHECKED	TL
DRAWN	VH
CHECKED	TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
TOP OF SLAB ELEVATIONS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

E-S (M) 4-30-97

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	863
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 11 OF 160

GIRDER 5

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+370.079	-7.896	147.704	147.704
CL Brg. N. Abut.	150+370.537	-7.838	147.711	147.711
A	150+370.745	-7.811	147.714	147.716
B	150+373.687	-7.447	147.759	147.789
C	150+376.633	-7.096	147.804	147.860
D	150+379.582	-6.760	147.848	147.928
E	150+382.534	-6.437	147.894	147.995
F	150+385.489	-6.127	147.943	148.060
G	150+388.447	-5.832	147.994	148.123
H	150+391.407	-5.551	148.047	148.184
I	150+394.370	-5.283	148.103	148.242
J	150+397.335	-5.029	148.161	148.298
K	150+400.303	-4.790	148.221	148.351
L	150+403.272	-4.564	148.283	148.402
M	150+406.244	-4.352	148.345	148.449
N	150+409.218	-4.154	148.409	148.496
O	150+412.193	-3.970	148.473	148.541
P	150+415.170	-3.800	148.538	148.587
Q	150+418.149	-3.644	148.604	148.634
CL Pier 1	150+421.129	-3.503	148.671	148.685
R	150+424.110	-3.375	148.738	148.739
S	150+427.092	-3.261	148.807	148.799
T	150+430.075	-3.161	148.876	148.862
U	150+433.060	-3.075	148.937	148.922
V	150+436.044	-3.004	149.000	148.985
W	150+439.030	-2.946	149.063	149.051
X	150+442.016	-2.902	149.128	149.118
Y	150+445.002	-2.873	149.193	149.186
Z	150+447.989	-2.858	149.260	149.254
A1	150+450.981	-2.855	149.326	149.322
B1	150+453.981	-2.855	149.393	149.389
C1	150+456.981	-2.855	149.461	149.455
D1	150+459.981	-2.855	149.528	149.520
E1	150+462.981	-2.855	149.595	149.585
F1	150+465.981	-2.855	149.662	149.650
G1	150+468.981	-2.855	149.729	149.717
H1	150+471.981	-2.855	149.796	149.785
CL Pier 2	150+475.244	-2.855	149.869	149.862
I1	150+478.244	-2.855	149.936	149.936
J1	150+481.244	-2.855	150.003	150.012
K1	150+484.244	-2.855	150.070	150.095
L1	150+487.244	-2.855	150.138	150.178
M1	150+490.244	-2.855	150.205	150.262
N1	150+493.244	-2.855	150.272	150.348
O1	150+496.244	-2.855	150.339	150.432
P1	150+499.244	-2.855	150.407	150.515
Q1	150+502.244	-2.855	150.482	150.601
R1	150+505.244	-2.855	150.557	150.684
S1	150+508.244	-2.855	150.632	150.763
T1	150+511.244	-2.855	150.707	150.837
U1	150+514.244	-2.855	150.782	150.906
V1	150+517.244	-2.855	150.857	150.971
W1	150+520.244	-2.855	150.932	151.031
X1	150+523.244	-2.855	151.007	151.087
Y1	150+526.244	-2.855	151.082	151.139
CL Brg. Pier 3	150+529.607	-2.855	151.166	151.196

BREAKLINE

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+370.114	-7.200	147.677	147.677
CL Brg. N. Abut.	150+370.569	-7.200	147.686	147.686
A	150+370.865	-7.200	147.692	147.694
B	150+373.831	-7.200	147.752	147.782
C	150+376.798	-7.200	147.813	147.869
D	150+379.764	-7.200	147.876	147.956
E	150+382.730	-7.200	147.940	148.041
F	150+385.697	-7.200	148.006	148.124
G	150+388.663	-7.200	148.074	148.205
H	150+391.630	-7.200	148.143	148.281
I	150+394.596	-7.200	148.213	148.353
J	150+397.563	-7.200	148.286	148.422
K	150+400.529	-7.200	148.359	148.487
L	150+403.496	-7.200	148.433	148.550
M	150+406.462	-7.200	148.508	148.609
N	150+409.429	-7.200	148.582	148.666
O	150+412.395	-7.200	148.656	148.720
P	150+415.362	-7.200	148.730	148.772
Q	150+418.328	-7.200	148.804	148.828
CL Pier 1	150+421.293	-7.200	148.878	148.887
R	150+424.261	-7.200	148.953	148.949
S	150+427.227	-7.200	149.027	149.017
T	150+430.194	-7.200	149.100	149.086
U	150+433.160	-7.200	149.154	149.139
V	150+436.127	-7.200	149.209	149.194
W	150+439.093	-7.200	149.263	149.252
X	150+442.060	-7.200	149.317	149.309
Y	150+445.026	-7.200	149.372	149.366
Z	150+447.993	-7.200	149.426	149.422
A1	150+450.973	-7.200	149.481	149.477
B1	150+453.973	-7.200	149.536	149.532
C1	150+456.973	-7.200	149.591	149.585
D1	150+459.973	-7.200	149.646	149.638
E1	150+462.973	-7.200	149.702	149.691
F1	150+465.973	-7.200	149.757	149.744
G1	150+468.973	-7.200	149.812	149.800
H1	150+471.973	-7.200	149.867	149.857
CL Pier 2	150+475.244	-7.200	149.927	149.923
I1	150+478.245	-7.200	149.982	149.986
J1	150+481.245	-7.200	150.037	150.055
K1	150+484.245	-7.200	150.092	150.124
L1	150+487.245	-7.200	150.147	150.197
M1	150+490.245	-7.200	150.202	150.269
N1	150+493.245	-7.200	150.258	150.342
O1	150+496.245	-7.200	150.313	150.413
P1	150+499.245	-7.200	150.369	150.484
Q1	150+502.245	-7.200	150.444	150.569
R1	150+505.245	-7.200	150.519	150.650
S1	150+508.245	-7.200	150.594	150.725
T1	150+511.245	-7.200	150.669	150.795
U1	150+514.245	-7.200	150.744	150.860
V1	150+517.245	-7.200	150.819	150.920
W1	150+520.245	-7.200	150.894	150.977
X1	150+523.245	-7.200	150.969	151.030
Y1	150+526.245	-7.200	151.044	151.080
CL Brg. Pier 3	150+529.607	-7.200	151.128	151.134

GIRDER 6

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+370.216	-5.157	147.567	147.567
CL Brg. N. Abut.	150+370.676	-5.099	147.573	147.573
B	150+373.368	-4.766	147.608	147.634
C	150+376.326	-4.414	147.650	147.702
D	150+379.287	-4.076	147.694	147.771
E	150+382.251	-3.752	147.740	147.838
F	150+385.219	-3.441	147.789	147.904
G	150+388.188	-3.145	147.840	147.968
H	150+391.161	-2.862	147.893	148.029
I	150+394.136	-2.593	147.949	148.088
J	150+397.114	-2.339	148.007	148.145
K	150+400.094	-2.098	148.068	148.199
L	150+403.076	-1.871	148.130	148.251
M	150+406.060	-1.658	148.193	148.299
N	150+409.046	-1.460	148.256	148.346
O	150+412.034	-1.275	148.321	148.392
P	150+415.024	-1.104	148.386	148.438
Q	150+418.015	-0.948	148.453	148.485
CL Pier 1	150+421.007	-0.805	148.519	148.536
R	150+424.001	-0.677	148.587	148.590
S	150+426.996	-0.563	148.656	148.648
T	150+429.992	-0.462	148.725	148.713
U	150+432.989	-0.376	148.794	148.780
V	150+435.986	-0.304	148.865	148.850
W	150+438.984	-0.246	148.936	148.924
X	150+441.983	-0.203	149.008	148.998
Y	150+444.982	-0.173	149.082	149.074
Z	150+447.981	-0.158	149.156	149.150
A1	150+450.981	-0.155	149.230	149.226
B1	150+453.981	-0.155	149.305	149.301
C1	150+456.981	-0.155	149.379	149.374
D1	150+459.981	-0.155	149.454	149.447
E1	150+462.981	-0.155	149.528	149.519
F1	150+465.981	-0.155	149.603	149.591
G1	150+468.981	-0.155	149.677	149.665
H1	150+471.981	-0.155	149.752	149.740
CL Pier 2	150+475.244	-0.155	149.833	149.825
I1	150+478.244	-0.155	149.908	149.906
J1	150+481.244	-0.155	149.982	149.989
K1	150+484.244	-0.155	150.057	150.079
L1	150+487.244	-0.155	150.131	150.169
M1	150+490.244	-0.155	150.206	150.261
N1	150+493.244	-0.155	150.281	150.354
O1	150+496.244	-0.155	150.355	150.445
P1	150+499.244	-0.155	150.430	150.536
Q1	150+502.244	-0.155	150.505	150.623
R1	150+505.244	-0.155	150.580	150.706
S1	150+508.244	-0.155	150.655	150.786
T1	150+511.244	-0.155	150.730	150.861
U1	150+514.244	-0.155	150.805	150.931
V1	150+517.244	-0.155	150.880	150.996
W1	150+520.244	-0.155	150.955	151.056
X1	150+523.244	-0.155	151.030	151.113
Y1	150+526.244	-0.155	151.105	151.166
CL Brg. Pier 3	150+529.607	-0.155	151.189	151.223

GIRDER 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+370.354	-2.419	147.419	147.419
CL Brg. N. Abut.	150+370.816	-2.361	147.425	147.425
B	150+373.046	-2.086	147.454	147.476
C	150+376.016	-1.732	147.496	147.544
D	150+378.990	-1.393	147.540	147.613
E	150+381.966	-1.067	147.586	147.681
F	150+384.946	-0.755	147.635	147.748
G	150+387.928	-0.457	147.686	147.812
H	150+390.913	-0.173	147.740	147.875
I	150+393.901	0.096	147.795	147.935
J	150+396.891	0.352	147.854	147.992
K	150+399.883	0.594	147.976	148.109
* L	150+402.878	0.822	148.051	148.174
M	150+404.807	-0.612	148.127	148.236
N	150+407.796	-0.384	148.195	148.288
O	150+410.788	-0.171	148.258	148.332
P	150+413.781	0.028	148.322	148.377
Q	150+416.775	0.213	148.387	148.422
CL Pier 1	150+419.772	0.384	148.452	148.471
R	150+422.770	0.540	148.519	148.523
S	150+425.770	0.683	148.586	148.578
T	150+428.770	0.811	148.654	148.642
U	150+431.772	0.925	148.722	148.708
V	150+434.775	1.024	148.792	148.777
W	150+437.779	1.110	148.865	148.852
X	150+440.784	1.181	148.939	148.928
Y	150+443.789	1.238	149.014	149.007
Z	150+446.795	1.281	149.090	149.085
A1	150+449.801	1.310	149.167	149.163
B1	150+452.807	1.324	149.245	149.241
C1	150+456.980	1.326	149.323	149.318
D1	150+459.980	1.326	149.401	149.395
E1	150+462.980	1.326	149.479	149.470
F1	150+465.980	1.326	149.558	149.546
G1	150+468.980	1.326	149.636	149.623
H1	150+471.980	1.326	149.714	149.702
CL Pier 2	150+475.243	1.326	149.799	149.790
I1	150+478.243	1.326	149.877	149.874
J1	150+481.243	1.326	149.955	149.961
K1	150+484.243	1.326	150.033	150.053
L1	150+487.243	1.326	150.111	150.146
M1	150+490.243	1.326	150.189	150.242
N1	150+493.243	1.326	150.268	150.338
O1	150+496.243	1.326	150.344	150.432
P1	150+499.243	1.326	150.419	150.523
Q1	150+502.243	1.326	150.494	150.611
R1	150+505.243	1.326	150.569	150.695
S1	150+508.243	1.326	150.644	150.775
T1	150+511.243	1.326	150.719	150.851
U1	150+514.243	1.326	150.794	150.921
V1	150+517.243	1.326	150.869	150.987
W1	150+520.243	1.326	150.944	151.049
X1	150+523.243	1.326	151.019	151.106
Y1	150+526.243	1.326	151.094	151.159
CL Brg. Pier 3	150+529.606	1.326	151.179	151.217

* Stations and Offsets above asterisk based on WB I-74.
Stations and Offsets below asterisk based on EB I-74.

DESIGNED	ADD
CHECKED	TL
DRAWN	VH
CHECKED	TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
TOP OF SLAB ELEVATIONS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003
m:\proj3573\Murray Baker\st05sl4-7a0900001.dgn

E-S (M) 4-30-97

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	865 4
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 12 OF 160

BASELINE WB I-74

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+370.594	0.000	147.291	147.291
CL Brg. N. Abut.	150+370.937	0.000	147.297	147.297
B	150+372.971	0.000	147.338	147.355
C	150+375.971	0.000	147.400	147.444
D	150+378.971	0.000	147.463	147.532
E	150+381.971	0.000	147.528	147.622
F	150+384.971	0.000	147.594	147.707
G	150+387.971	0.000	147.662	147.788
H	150+390.971	0.000	147.731	147.867
I	150+393.971	0.000	147.802	147.942
J	150+396.971	0.000	147.875	148.013
K	150+399.971	0.000	147.949	148.082
L	150+402.971	0.000	148.024	148.147
M	150+405.971	0.000	148.099	148.208
N	150+408.971	0.000	148.174	148.264
O	150+411.971	0.000	148.249	148.320
P	150+414.971	0.000	148.324	148.376
Q	150+417.971	0.000	148.399	148.432
CL Pier 1	150+420.971	0.000	148.474	148.491
R	150+423.971	0.000	148.549	148.552
S	150+426.971	0.000	148.624	148.617
T	150+429.971	0.000	148.699	148.687
U	150+432.971	0.000	148.774	148.760
V	150+435.971	0.000	148.849	148.835
W	150+438.971	0.000	148.924	148.912
X	150+441.971	0.000	148.999	148.989
Y	150+444.971	0.000	149.074	149.067
Z	150+447.971	0.000	149.149	149.144
A1	150+450.971	0.000	149.224	149.220
B1	150+453.971	0.000	149.299	149.295
C1	150+456.971	0.000	149.374	149.369
D1	150+459.971	0.000	149.449	149.442
E1	150+462.971	0.000	149.524	149.515
F1	150+465.971	0.000	149.599	149.588
G1	150+468.971	0.000	149.674	149.662
H1	150+471.971	0.000	149.749	149.738
CL Pier 2	150+475.244	0.000	149.831	149.823
I1	150+478.244	0.000	149.906	149.904
J1	150+481.244	0.000	149.981	149.988
K1	150+484.244	0.000	150.056	150.078
L1	150+487.244	0.000	150.131	150.169
M1	150+490.244	0.000	150.206	150.261
N1	150+493.244	0.000	150.281	150.355
O1	150+496.244	0.000	150.356	150.446
P1	150+499.244	0.000	150.431	150.537
Q1	150+502.244	0.000	150.506	150.624
R1	150+505.244	0.000	150.581	150.708
S1	150+508.244	0.000	150.656	150.787
T1	150+511.244	0.000	150.731	150.862
U1	150+514.244	0.000	150.806	150.932
V1	150+517.244	0.000	150.881	150.997
W1	150+520.244	0.000	150.956	151.058
X1	150+523.244	0.000	151.031	151.115
Y1	150+526.244	0.000	151.106	151.167
CL Brg. Pier 3	150+529.607	0.000	151.190	151.224

GIRDER 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+370.493	0.320	147.271	147.271
CL Brg. N. Abut.	150+370.957	0.378	147.277	147.277
B	150+372.721	0.595	147.300	147.317
* C	150+375.704	0.950	147.436	147.480
D	150+377.697	-0.611	147.498	147.567
E	150+380.674	-0.256	147.542	147.633
F	150+383.654	0.085	147.589	147.699
G	150+386.637	0.413	147.638	147.762
H	150+389.623	0.726	147.689	147.823
I	150+392.613	1.025	147.743	147.882
J	150+395.605	1.310	147.799	147.937
K	150+398.599	1.581	147.857	147.991
L	150+401.596	1.837	147.918	148.042
M	150+404.596	2.080	147.979	148.091
N	150+407.597	2.308	148.042	148.137
O	150+410.601	2.522	148.105	148.182
P	150+413.607	2.722	148.169	148.227
Q	150+416.615	2.908	148.234	148.273
CL Pier 1	150+419.624	3.080	148.300	148.321
R	150+422.635	3.237	148.367	148.373
S	150+425.647	3.380	148.434	148.429
T	150+428.661	3.509	148.503	148.492
U	150+431.676	3.623	148.572	148.557
V	150+434.692	3.723	148.642	148.627
W	150+437.708	3.809	148.720	148.707
X	150+440.726	3.881	148.801	148.790
Y	150+443.744	3.938	148.883	148.875
Z	150+446.762	3.981	148.966	148.960
A1	150+449.781	4.010	149.050	149.046
B1	150+452.800	4.024	149.134	149.130
C1	150+456.980	4.026	149.219	149.214
D1	150+459.980	4.026	149.303	149.297
E1	150+462.980	4.026	149.388	149.379
F1	150+465.980	4.026	149.473	149.462
G1	150+468.980	4.026	149.557	149.545
H1	150+471.980	4.026	149.642	149.630
CL Pier 2	150+475.243	4.026	149.734	149.724
I1	150+478.243	4.026	149.818	149.814
J1	150+481.243	4.026	149.903	149.907
K1	150+484.243	4.026	149.987	150.005
L1	150+487.243	4.026	150.072	150.104
M1	150+490.243	4.026	150.156	150.206
N1	150+493.243	4.026	150.241	150.308
O1	150+496.243	4.026	150.321	150.406
P1	150+499.243	4.026	150.396	150.497
Q1	150+502.243	4.026	150.471	150.586
R1	150+505.243	4.026	150.546	150.671
S1	150+508.243	4.026	150.621	150.751
T1	150+511.243	4.026	150.696	150.828
U1	150+514.243	4.026	150.771	150.899
V1	150+517.243	4.026	150.846	150.966
W1	150+520.243	4.026	150.921	151.028
X1	150+523.243	4.026	150.996	151.086
Y1	150+526.243	4.026	151.071	151.140
CL Brg. Pier 3	150+529.606	4.026	151.155	151.197

EAST TOE OF MEDIAN BARRIER

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+370.510	0.647	147.253	147.253
CL Brg. N. Abut.	150+370.971	0.645	147.263	147.263
B	150+372.914	0.635	147.302	147.319
C	150+375.917	0.620	147.365	147.408
D	150+378.920	0.605	147.429	147.497
E	150+381.923	0.590	147.494	147.589
F	150+384.926	0.575	147.561	147.674
G	150+387.928	0.561	147.630	147.756
H	150+390.931	0.546	147.700	147.836
I	150+393.933	0.531	147.772	147.912
J	150+396.936	0.517	147.846	147.984
K	150+399.938	0.502	147.921	148.054
L	150+402.940	0.488	147.997	148.119
M	150+405.943	0.473	148.073	148.181
N	150+408.945	0.459	148.148	148.238
O	150+411.947	0.444	148.224	148.295
P	150+414.949	0.430	148.300	148.352
Q	150+417.951	0.416	148.376	148.408
CL Pier 1	150+420.953	0.401	148.452	148.468
R	150+423.955	0.387	148.528	148.530
S	150+426.956	0.373	148.603	148.596
T	150+429.958	0.359	148.679	148.667
U	150+432.960	0.345	148.756	148.741
V	150+435.961	0.331	148.833	148.818
W	150+438.963	0.317	148.909	148.897
X	150+441.964	0.304	148.986	148.976
Y	150+444.966	0.290	149.062	149.055
Z	150+447.967	0.276	149.139	149.133
A1	150+450.968	0.264	149.215	149.211
B1	150+453.968	0.263	149.291	149.287
C1	150+456.968	0.268	149.366	149.361
D1	150+459.968	0.268	149.442	149.435
E1	150+462.968	0.268	149.518	149.508
F1	150+465.968	0.268	149.593	149.582
G1	150+468.968	0.268	149.669	149.657
H1	150+471.968	0.268	149.745	149.733
CL Pier 2	150+475.244	0.268	149.828	149.820
I1	150+478.244	0.268	149.903	149.901
J1	150+481.244	0.268	149.979	149.986
K1	150+484.244	0.268	150.055	150.077
L1	150+487.244	0.268	150.130	150.168
M1	150+490.244	0.268	150.206	150.261
N1	150+493.244	0.268	150.282	150.355
O1	150+496.244	0.268	150.358	150.448
P1	150+499.244	0.268	150.433	150.539
Q1	150+502.244	0.268	150.508	150.626
R1	150+505.244	0.268	150.583	150.710
S1	150+508.244	0.268	150.658	150.789
T1	150+511.244	0.267	150.733	150.864
U1	150+514.244	0.267	150.808	150.934
V1	150+517.244	0.267	150.883	150.999
W1	150+520.244	0.267	150.958	151.060
X1	150+523.244	0.267	151.033	151.117
Y1	150+526.244	0.267	151.108	151.170
CL Brg. Pier 3	150+529.607	0.267	151.192	151.227

LONGITUDINAL CONSTRUCTION JOINT

Location	WB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+370.527	0.990	147.294	147.294
CL Brg. N. Abut.	150+370.988	0.987	147.303	147.303
B	150+372.873	0.978	147.340	147.357
C	150+375.878	0.963	147.402	147.446
D	150+378.882	0.948	147.465	147.534
E	150+381.886	0.933	147.529	147.624
F	150+384.891	0.918	147.596	147.708
G	150+387.895	0.903	147.663	147.789
H	150+390.899	0.889	147.732	147.868
I	150+393.903	0.874	147.803	147.942
J	150+396.907	0.859	147.876	148.014
K	150+399.911	0.845	147.950	148.082
L	150+402.915	0.830	148.025	148.147
M	150+405.919	0.816	148.100	148.208
N	150+408.923	0.801	148.175	148.264
O	150+411.927	0.787	148.250	148.320
P	150+414.930	0.773	148.325	148.377
Q	150+417.934	0.758	148.400	148.432
CL Pier 1	150+420.937	0.744	148.475	148.491
R	150+423.941	0.730	148.550	148.552
S	150+426.944	0.716	148.625	148.617
T	150+429.947	0.702	148.700	148.687
U	150+432.951	0.688	148.775	148.761
V	150+435.954	0.674	148.851	148.836
W	150+438.957	0.660	148.926	148.913
X	150+441.960	0.646	149.001	148.990
Y	150+444.963	0.632	149.076	149.068
Z	150+447.966	0.619	149.151	149.145
A1	150+450.968	0.606	149.226	149.222
B1	150+453.968	0.605	149.300	149.296
C1	150+456.968	0.610	149.375	149.370
D1	150+459.968	0.610	149.450	149.443
E1	150+462.968	0.610	149.525	149.516
F1	150+465.968	0.610	149.600	149.589
G1	150+468.968	0.610	149.675	149.663
H1	150+471.968	0.610	149.750	149.739
CL Pier 2	150+475.244	0.610	149.832	149.824
I1	150+478.244	0.610	149.907	149.906
J1	150+481.244	0.610	149.983	149.990
K1	150+484.244	0.610	150.058	150.080
L1	150+487.244	0.610	150.133	150.170
M1	150+490.244	0.610	150.208	150.263
N1	150+493.244	0.610	150.283	150.356
O1	150+496.244	0.610	150.358	150.448
P1	150+499.244	0.610	150.433	150.539
Q1	150+502.244	0.610	150.508	150.626
R1	150+505.244	0.610	150.583	150.710
S1	150+508.244	0.610	150.658	150.789
T1	150+511.244	0.610	150.733	150.864
U1	150+514.244	0.610	150.808	150.934
V1	150+517.244	0.610	150.883	150.999
W1	150+520.244	0.610	150.958	151.060
X1	150+523.244	0.610	151.033	151.117
Y1	150+526.244	0.610	151.108	151.169
CL Brg. Pier 3	150+529.607	0.610	151.192	151.226

* Stations and Offsets above asterisk based on WB I-74.
Stations and Offsets below asterisk based on EB I-74.

DESIGNED	ADD
CHECKED	TL
DRAWN	VH
CHECKED	TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
TOP OF SLAB ELEVATIONS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

m:\proj\3573\murray baker\st05sl5-7a0900001.dgn 12/16/2003

E-S (M) 4-30-97

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	865
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 13 OF 160

WEST TOE OF MEDIAN BARRIER

Location	EB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+369.577	-0.647	147.334	147.334
CL Brg. N. Abut.	150+370.037	-0.645	147.343	147.343
B	150+371.857	-0.637	147.379	147.396
C	150+374.854	-0.623	147.439	147.483
D	150+377.851	-0.610	147.501	147.570
E	150+380.848	-0.596	147.565	147.656
F	150+383.845	-0.583	147.630	147.740
G	150+386.842	-0.569	147.696	147.821
H	150+389.839	-0.556	147.764	147.899
I	150+392.837	-0.542	147.834	147.973
J	150+395.834	-0.529	147.905	148.044
K	150+398.832	-0.516	147.978	148.111
L	150+401.829	-0.502	148.052	148.175
M	150+404.827	-0.489	148.127	148.235
N	150+407.825	-0.475	148.201	148.293
O	150+410.822	-0.462	148.275	148.349
P	150+413.820	-0.448	148.349	148.404
Q	150+416.818	-0.435	148.423	148.459
CL Pier 1	150+419.816	-0.421	148.498	148.516
R	150+422.814	-0.408	148.572	148.576
S	150+425.812	-0.394	148.646	148.639
T	150+428.810	-0.381	148.720	148.708
U	150+431.808	-0.367	148.794	148.780
V	150+434.807	-0.354	148.869	148.854
W	150+437.805	-0.341	148.942	148.929
X	150+440.803	-0.327	149.016	149.005
Y	150+443.802	-0.314	149.089	149.082
Z	150+446.800	-0.300	149.163	149.157
A1	150+449.799	-0.287	149.236	149.232
B1	150+452.798	-0.273	149.310	149.306
C1	150+456.967	-0.267	149.384	149.379
D1	150+459.967	-0.267	149.459	149.452
E1	150+462.967	-0.267	149.533	149.524
F1	150+465.967	-0.267	149.607	149.596
G1	150+468.967	-0.267	149.682	149.669
H1	150+471.967	-0.267	149.756	149.744
CL Pier 2	150+475.243	-0.267	149.837	149.829
I1	150+478.243	-0.267	149.912	149.909
J1	150+481.243	-0.267	149.986	149.992
K1	150+484.243	-0.267	150.060	150.080
L1	150+487.243	-0.267	150.135	150.170
M1	150+490.243	-0.267	150.209	150.261
N1	150+493.243	-0.267	150.283	150.354
O1	150+496.243	-0.267	150.358	150.446
P1	150+499.243	-0.267	150.433	150.537
Q1	150+502.243	-0.267	150.508	150.624
R1	150+505.243	-0.267	150.583	150.709
S1	150+508.243	-0.267	150.658	150.789
T1	150+511.243	-0.267	150.733	150.864
U1	150+514.243	-0.267	150.808	150.935
V1	150+517.243	-0.267	150.883	151.001
W1	150+520.243	-0.267	150.958	151.063
X1	150+523.243	-0.267	151.033	151.120
Y1	150+526.243	-0.267	151.108	151.173
CL Brg. Pier 3	150+529.606	-0.267	151.192	151.230

BASELINE EB I-74

Location	EB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+369.713	0.000	147.301	147.301
CL Brg. N. Abut.	150+370.064	0.000	147.308	147.308
B	150+371.793	0.000	147.342	147.359
C	150+374.793	0.000	147.404	147.447
D	150+377.793	0.000	147.466	147.535
E	150+380.793	0.000	147.531	147.622
F	150+383.793	0.000	147.596	147.707
G	150+386.793	0.000	147.664	147.788
H	150+389.793	0.000	147.733	147.867
I	150+392.793	0.000	147.803	147.942
J	150+395.793	0.000	147.875	148.014
K	150+398.793	0.000	147.949	148.082
L	150+401.793	0.000	148.024	148.147
M	150+404.793	0.000	148.099	148.208
N	150+407.793	0.000	148.174	148.267
O	150+410.793	0.000	148.249	148.322
P	150+413.793	0.000	148.324	148.379
Q	150+416.793	0.000	148.399	148.434
CL Pier 1	150+419.793	0.000	148.474	148.493
R	150+422.793	0.000	148.549	148.553
S	150+425.793	0.000	148.624	148.616
T	150+428.793	0.000	148.699	148.687
U	150+431.793	0.000	148.774	148.759
V	150+434.793	0.000	148.849	148.834
W	150+437.793	0.000	148.924	148.911
X	150+440.793	0.000	148.999	148.988
Y	150+443.793	0.000	149.074	149.066
Z	150+446.793	0.000	149.149	149.143
A1	150+449.793	0.000	149.224	149.220
B1	150+452.793	0.000	149.299	149.295
C1	150+455.793	0.000	149.345	149.340
D1	150+458.793	0.000	149.420	149.413
E1	150+461.793	0.000	149.495	149.486
F1	150+464.793	0.000	149.570	149.559
G1	150+467.793	0.000	149.645	149.632
H1	150+470.793	0.000	149.720	149.708
CL Pier 2	150+475.243	0.000	149.831	149.822
I1	150+478.243	0.000	149.906	149.903
J1	150+481.243	0.000	149.981	149.986
K1	150+484.243	0.000	150.056	150.076
L1	150+487.243	0.000	150.131	150.166
M1	150+490.243	0.000	150.206	150.258
N1	150+493.243	0.000	150.281	150.351
O1	150+496.243	0.000	150.356	150.443
P1	150+499.243	0.000	150.431	150.534
Q1	150+502.243	0.000	150.506	150.622
R1	150+505.243	0.000	150.581	150.706
S1	150+508.243	0.000	150.656	150.786
T1	150+511.243	0.000	150.731	150.862
U1	150+514.243	0.000	150.806	150.933
V1	150+517.243	0.000	150.881	150.999
W1	150+520.243	0.000	150.956	151.060
X1	150+523.243	0.000	151.031	151.117
Y1	150+526.243	0.000	151.106	151.171
CL Brg. Pier 3	150+529.606	0.000	151.190	151.228

GIRDER 9

Location	EB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+369.658	1.294	147.229	147.229
CL Brg. N. Abut.	150+370.121	1.351	147.235	147.235
B	150+371.379	1.505	147.251	147.264
C	150+374.366	1.858	147.293	147.332
D	150+377.356	2.198	147.336	147.401
E	150+380.350	2.524	147.382	147.470
F	150+383.346	2.835	147.431	147.538
G	150+386.346	3.133	147.481	147.604
H	150+389.348	3.416	147.535	147.667
I	150+392.352	3.685	147.590	147.729
J	150+395.360	3.940	147.648	147.787
K	150+398.369	4.181	147.708	147.844
L	150+401.381	4.407	147.771	147.898
M	150+404.395	4.620	147.835	147.949
N	150+407.411	4.818	147.899	147.998
O	150+410.429	5.001	147.965	148.045
P	150+413.448	5.171	148.031	148.092
Q	150+416.469	5.326	148.098	148.139
CL Pier 1	150+419.492	5.467	148.166	148.190
R	150+422.516	5.593	148.234	148.243
S	150+425.541	5.705	148.304	148.300
T	150+428.566	5.803	148.374	148.364
U	150+431.593	5.887	148.445	148.431
V	150+434.621	5.956	148.517	148.502
W	150+437.649	6.011	148.602	148.588
X	150+440.677	6.051	148.690	148.679
Y	150+443.706	6.078	148.779	148.771
Z	150+446.735	6.089	148.869	148.863
A1	150+449.765	6.087	148.959	148.955
B1	150+452.794	6.070	149.050	149.046
C1	150+456.978	6.040	149.141	149.137
D1	150+459.978	6.009	149.232	149.226
E1	150+462.978	5.978	149.322	149.314
F1	150+465.978	5.946	149.412	149.402
G1	150+468.978	5.915	149.502	149.490
H1	150+471.977	5.884	149.592	149.580
CL Pier 2	150+475.243	5.849	149.689	149.679
I1	150+478.243	5.818	149.779	149.774
J1	150+481.243	5.786	149.868	149.871
K1	150+484.243	5.754	149.958	149.973
L1	150+487.243	5.722	150.047	150.076
M1	150+490.243	5.690	150.136	150.182
N1	150+493.242	5.659	150.224	150.288
O1	150+496.242	5.627	150.308	150.390
P1	150+499.242	5.595	150.383	150.481
Q1	150+502.242	5.563	150.458	150.570
R1	150+505.242	5.531	150.533	150.656
S1	150+508.242	5.500	150.609	150.738
T1	150+511.241	5.468	150.684	150.815
U1	150+514.241	5.436	150.759	150.888
V1	150+517.241	5.404	150.834	150.956
W1	150+520.241	5.372	150.910	151.019
X1	150+523.241	5.340	150.985	151.078
Y1	150+526.241	5.309	151.060	151.133
CL Brg. Pier 3	150+529.606	5.273	151.145	151.191

GIRDER 9A

Location	EB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+369.782	4.249	147.069	147.069
CL Brg. N. Abut.	150+370.247	4.299	147.075	147.075
B	150+371.010	4.381	147.086	147.093
C	150+374.015	4.693	147.129	147.164
D	150+377.023	4.992	147.176	147.236
E	150+380.034	5.276	147.224	147.308
F	150+383.048	5.545	147.275	147.379
G	150+386.064	5.801	147.328	147.448
H	150+389.082	6.042	147.384	147.515
I	150+392.103	6.270	147.442	147.580
J	150+395.126	6.482	147.503	147.642
K	150+398.151	6.681	147.566	147.702
L	150+401.178	6.865	147.631	147.759
M	150+404.206	7.035	147.697	147.814
N	150+407.236	7.190	147.764	147.865
O	150+410.267	7.332	147.832	147.916
P	150+413.300	7.458	147.901	147.966
Q	150+416.334	7.571	147.971	148.016
CL Pier 1	150+419.369	7.669	148.041	148.068
R	150+422.405	7.752	148.113	148.124
S	150+425.441	7.821	148.185	148.183
T	150+428.479	7.875	148.258	148.249
U	150+431.516	7.915	148.332	148.318
V	150+434.554	7.941	148.406	148.391
W	150+437.592	7.952	148.498	148.483
X	150+440.630	7.949	148.593	148.581
Y	150+443.669	7.931	148.689	148.679
Z	150+446.706	7.899	148.785	148.779
A1	150+449.744	7.853	148.882	148.877
B1	150+452.781	7.792	148.979	148.975
C1	150+456.969	7.719	149.076	149.072
D1	150+459.968	7.644	149.172	149.167
DD1	150+461.743	7.599	149.229	149.222

DESIGNED	ADD
CHECKED	TL
DRAWN	VH
CHECKED	TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
TOP OF SLAB ELEVATIONS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05sl6-7a0900001.dgn

E-S (M) 4-30-97

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI74	*	TAZEWELL	1559	866
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 14 OF 160

GIRDER 10

Location	EB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+369.907	7.204	146.909	146.909
CL Brg. N. Abut.	150+370.375	7.248	146.915	146.915
B	150+370.646	7.273	146.920	146.922
C	150+373.669	7.543	146.966	146.993
D	150+376.695	7.799	147.014	147.063
E	150+379.723	8.040	147.065	147.134
F	150+382.753	8.267	147.119	147.204
G	150+385.786	8.480	147.175	147.273
H	150+388.820	8.679	147.233	147.339
I	150+391.857	8.863	147.294	147.403
J	150+394.895	9.033	147.357	147.465
K	150+397.935	9.188	147.422	147.524
L	150+400.976	9.329	147.490	147.583
M	150+404.018	9.456	147.559	147.639
N	150+407.062	9.568	147.629	147.693
O	150+410.107	9.666	147.700	147.746
P	150+413.152	9.749	147.772	147.800
Q	150+416.198	9.818	147.844	147.857
CL Pier 1	150+419.245	9.873	147.917	147.917
R	150+422.293	9.913	147.991	147.982
S	150+425.340	9.938	148.066	148.051
T	150+428.388	9.950	148.141	148.123
U	150+431.436	9.946	148.218	148.198
V	150+434.484	9.929	148.295	148.276
W	150+437.531	9.897	148.393	148.375
X	150+440.579	9.850	148.495	148.480
Y	150+443.625	9.789	148.598	148.584
Z	150+446.671	9.713	148.701	148.689
A1	150+449.716	9.624	148.804	148.791
B1	150+452.761	9.519	148.908	148.894
C1	150+456.952	9.402	149.011	148.995
D1	150+459.950	9.283	149.112	149.095
E1	150+462.947	9.164	149.213	149.195
F1	150+465.945	9.046	149.313	149.296
G1	150+468.943	8.927	149.413	149.399
H1	150+471.940	8.808	149.512	149.503
CL Pier 2	150+475.243	8.677	149.621	149.621
I1	150+478.241	8.558	149.719	149.731
J1	150+481.239	8.439	149.817	149.845
K1	150+484.236	8.320	149.914	149.960
L1	150+487.234	8.201	150.010	150.075
M1	150+490.232	8.082	150.106	150.191
N1	150+493.229	7.963	150.201	150.303
O1	150+496.227	7.844	150.288	150.405
P1	150+499.225	7.725	150.364	150.493
Q1	150+502.222	7.606	150.440	150.577
R1	150+505.220	7.488	150.516	150.656
S1	150+508.217	7.369	150.592	150.731
T1	150+511.215	7.250	150.668	150.800
U1	150+514.213	7.131	150.744	150.864
V1	150+517.210	7.012	150.820	150.923
W1	150+520.208	6.893	150.896	150.979
X1	150+523.206	6.774	150.972	151.031
Y1	150+526.203	6.655	151.048	151.080
CL Brg. Pier 3	150+529.606	6.520	151.134	151.134

GIRDER 10A

Location	EB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+370.034	10.173	146.748	146.748
CL Brg. N. Abut.	150+370.503	10.196	146.756	146.756
C	150+371.363	10.236	146.771	146.778
D	150+374.410	10.369	146.825	146.855
E	150+377.458	10.487	146.882	146.932
F	150+380.507	10.591	146.942	147.008
G	150+383.557	10.681	147.004	147.084
H	150+386.607	10.756	147.068	147.159
I	150+389.659	10.816	147.135	147.231
J	150+392.711	10.863	147.204	147.302
K	150+395.763	10.894	147.275	147.371
L	150+398.815	10.911	147.349	147.438
M	150+401.868	10.914	147.425	147.505
N	150+404.921	10.903	147.502	147.570
NN	150+407.973	10.876	147.580	147.633

BASELINE RAMP G2

Location	EB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+370.166	11.731	146.665	146.665
CL Brg. N. Abut.	150+370.570	11.720	146.673	146.673
C	150+373.433	11.644	146.735	146.752
D	150+376.488	11.562	146.803	146.837
E	150+379.542	11.481	146.872	146.922
F	150+382.596	11.400	146.943	147.007
G	150+385.650	11.318	147.015	147.090
H	150+388.703	11.237	147.089	147.171
I	150+391.756	11.155	147.165	147.251
J	150+394.809	11.074	147.242	147.328
K	150+397.861	10.992	147.321	147.403
L	150+400.913	10.911	147.402	147.476
M	150+403.964	10.830	147.482	147.547
N	150+407.015	10.748	147.563	147.616
O	150+410.065	10.667	147.644	147.683
P	150+413.115	10.585	147.725	147.749
Q	150+416.165	10.504	147.805	147.817
CL Pier 1	150+419.214	10.423	147.886	147.886
R	150+422.263	10.341	147.967	147.960
S	150+425.312	10.260	148.047	148.036
T	150+428.360	10.179	148.128	148.115
U	150+431.408	10.097	148.209	148.195
V	150+434.455	10.016	148.289	148.276
W	150+437.502	9.935	148.390	148.377
X	150+440.548	9.854	148.494	148.483
Y	150+443.594	9.772	148.598	148.588
Z	150+446.640	9.691	148.701	148.692
A1	150+449.685	9.610	148.804	148.795
B1	150+452.730	9.529	148.907	148.896
C1	150+456.923	9.448	149.008	148.996
D1	150+459.922	9.367	149.108	149.095
E1	150+462.921	9.286	149.208	149.194
F1	150+465.920	9.205	149.308	149.294
G1	150+468.919	9.124	149.407	149.395
H1	150+471.918	9.043	149.505	149.498
CL Pier 2	150+475.243	8.953	149.615	149.615
I1	150+478.242	8.872	149.712	149.723
J1	150+481.241	8.791	149.810	149.835
K1	150+484.240	8.710	149.907	149.948
L1	150+487.239	8.629	150.004	150.061
M1	150+490.238	8.548	150.100	150.176
N1	150+493.237	8.467	150.196	150.288
O1	150+496.236	8.386	150.284	150.389
P1	150+499.235	8.305	150.359	150.476
Q1	150+502.234	8.223	150.435	150.559
R1	150+505.232	8.142	150.511	150.639
S1	150+508.231	8.061	150.586	150.713
T1	150+511.230	7.980	150.662	150.783
U1	150+514.229	7.899	150.738	150.848
V1	150+517.228	7.818	150.813	150.909
W1	150+520.227	7.737	150.889	150.966
X1	150+523.226	7.656	150.965	151.019
Y1	150+526.225	7.575	151.040	151.071
YY1	150+529.000	7.500	151.110	151.110

GIRDER 11

Location	EB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+370.163	13.157	146.586	146.586
CL Brg. N. Abut.	150+370.632	13.144	146.596	146.596
C	150+373.247	13.074	146.653	146.670
D	150+376.309	12.993	146.721	146.755
E	150+379.370	12.911	146.790	146.840
F	150+382.431	12.830	146.861	146.925
G	150+385.492	12.748	146.933	147.008
H	150+388.552	12.666	147.007	147.089
I	150+391.612	12.585	147.083	147.169
J	150+394.672	12.503	147.160	147.246
K	150+397.731	12.421	147.239	147.321
L	150+400.790	12.340	147.320	147.395
M	150+403.848	12.258	147.401	147.466
N	150+406.906	12.177	147.482	147.534
O	150+409.963	12.095	147.563	147.602
P	150+413.021	12.013	147.644	147.668
Q	150+416.077	11.932	147.725	147.736
CL Pier 1	150+419.134	11.850	147.806	147.806
R	150+422.189	11.769	147.886	147.879
S	150+425.245	11.687	147.967	147.956
T	150+428.300	11.606	148.048	148.035
U	150+431.355	11.524	148.129	148.115
V	150+434.409	11.443	148.210	148.196
W	150+437.463	11.361	148.313	148.300
X	150+440.516	11.280	148.421	148.410
Y	150+443.570	11.199	148.528	148.519
Z	150+446.622	11.117	148.635	148.626
A1	150+449.675	11.036	148.742	148.732
B1	150+452.726	10.955	148.848	148.838
C1	150+456.922	10.852	148.954	148.942
D1	150+459.920	10.725	149.059	149.046
E1	150+462.917	10.598	149.164	149.149
F1	150+465.914	10.471	149.268	149.254
G1	150+468.912	10.343	149.371	149.359
H1	150+471.909	10.216	149.474	149.466
CL Pier 2	150+475.243	10.075	149.587	149.587
I1	150+478.241	9.947	149.689	149.700
J1	150+481.238	9.820	149.790	149.815
K1	150+484.235	9.693	149.890	149.931
L1	150+487.233	9.566	149.990	150.047
M1	150+490.230	9.439	150.089	150.165
N1	150+493.227	9.311	150.188	150.279
O1	150+496.225	9.184	150.277	150.382
P1	150+499.222	9.057	150.353	150.469
Q1	150+502.219	8.930	150.429	150.553
R1	150+505.216	8.802	150.505	150.632
S1	150+508.214	8.675	150.581	150.707
T1	150+511.211	8.548	150.657	150.777
U1	150+514.208	8.421	150.733	150.843
V1	150+517.206	8.294	150.809	150.904
W1	150+520.203	8.166	150.885	150.962
X1	150+523.200	8.039	150.961	151.015
Y1	150+526.198	7.912	151.037	151.067
CL Brg. Pier 3	150+529.606	7.767	151.123	151.123

DESIGNED	ADD
CHECKED	TL
DRAWN	VH
CHECKED	TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
TOP OF SLAB ELEVATIONS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

m:\proj3573\murray baker\st05sl7-7a0900001.dgn 12/16/2003

E-S (M) 4-30-97

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	867
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 15 OF 155

TOE OF WEST FASCIA BARRIER

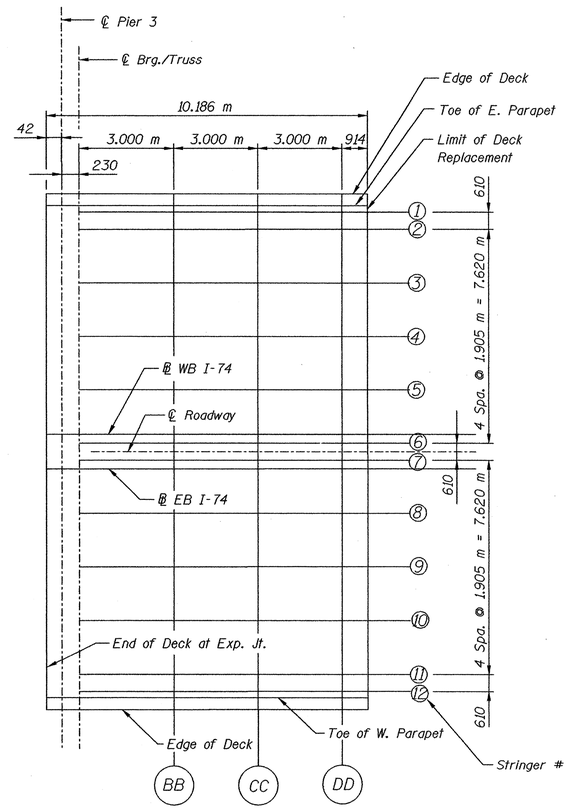
Location	EB I-74 Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	150+370.179	13.531	146.566	146.566
CL Brg. N. Abut.	150+370.649	13.519	146.576	146.576
C	150+373.187	13.541	146.626	146.643
D	150+376.252	13.555	146.688	146.723
E	150+379.318	13.555	146.753	146.804
F	150+382.384	13.539	146.821	146.885
G	150+385.449	13.510	146.890	146.965
H	150+388.514	13.466	146.963	147.045
I	150+391.578	13.407	147.037	147.123
J	150+394.642	13.334	147.114	147.199
K	150+397.705	13.246	147.193	147.275
L	150+400.767	13.144	147.275	147.350
M	150+403.828	13.027	147.358	147.423
N	150+406.888	12.896	147.442	147.494
O	150+409.947	12.750	147.526	147.565
P	150+413.003	12.590	147.612	147.636
Q	150+416.059	12.415	147.698	147.709
CL Pier 1	150+419.112	12.226	147.784	147.784
R	150+422.171	12.235	147.860	147.853
S	150+425.230	12.229	147.937	147.925
T	150+428.289	12.209	148.015	148.001
U	150+431.348	12.174	148.093	148.079
V	150+434.406	12.125	148.172	148.159
W	150+437.464	12.062	148.276	148.263
X	150+440.521	11.984	148.385	148.375
Y	150+443.577	11.891	148.495	148.485
Z	150+446.633	11.784	148.605	148.596
A1	150+449.687	11.662	148.715	148.706
B1	150+452.740	11.526	148.825	148.815
C1	150+456.935	11.378	148.934	148.922
D1	150+459.931	11.227	149.041	149.028
E1	150+462.927	11.076	149.148	149.134
F1	150+465.923	10.925	149.253	149.240
G1	150+468.920	10.775	149.359	149.347
H1	150+471.916	10.624	149.463	149.455
CL Pier 2	150+475.243	10.456	149.578	149.578
I1	150+478.241	10.330	149.681	149.691
J1	150+481.238	10.204	149.782	149.807
K1	150+484.235	10.078	149.884	149.924
L1	150+487.233	9.952	149.984	150.042
M1	150+490.230	9.825	150.084	150.160
N1	150+493.227	9.699	150.184	150.275
O1	150+496.225	9.573	150.273	150.379
P1	150+499.222	9.447	150.349	150.466
Q1	150+502.220	9.321	150.425	150.550
R1	150+505.217	9.195	150.501	150.629
S1	150+508.214	9.068	150.577	150.704
T1	150+511.212	8.942	150.653	150.774
U1	150+514.209	8.816	150.729	150.840
V1	150+517.206	8.690	150.805	150.901
W1	150+520.204	8.564	150.881	150.958
X1	150+523.201	8.437	150.957	151.012
Y1	150+526.198	8.311	151.033	151.064
CL Brg. Pier 3	150+529.606	8.168	151.120	151.120

AT TRUSS DECK REPLACEMENT

Location	Station (WB I-74)	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Toe of E. Parapet				
CL Brg./Truss	150+530.337	-8.129	151.139	151.139
BB	150+533.337	-8.127	151.227	151.234
CC	150+536.337	-8.125	151.309	151.316
DD	150+539.337	-7.924	151.390	151.393
Stringer 1				
CL Brg./Truss	150+530.337	-7.925	151.141	151.141
BB	150+533.337	-7.925	151.229	151.236
CC	150+536.337	-7.925	151.311	151.318
DD	150+539.337	-7.925	151.390	151.393
Stringer 2				
CL Brg./Truss	150+530.337	-7.315	151.146	151.146
BB	150+533.337	-7.315	151.234	151.238
CC	150+536.337	-7.315	151.316	151.321
DD	150+539.337	-7.315	151.395	151.398
Stringer 3				
CL Brg./Truss	150+530.337	-5.410	151.162	151.162
BB	150+533.337	-5.410	151.250	151.255
CC	150+536.337	-5.410	151.332	151.338
DD	150+539.337	-5.410	151.412	151.414
Stringer 4				
CL Brg./Truss	150+530.337	-3.505	151.178	151.179
BB	150+533.337	-3.505	151.267	151.272
CC	150+536.337	-3.505	151.348	151.354
DD	150+539.337	-3.505	151.428	151.431
Stringer 5				
CL Brg./Truss	150+530.337	-1.600	151.195	151.195
BB	150+533.337	-1.600	151.283	151.288
CC	150+536.337	-1.600	151.365	151.370
DD	150+539.337	-1.600	151.444	151.447
Baseline WB I-74				
CL Brg./Truss	150+530.337	0.000	151.208	151.209
BB	150+533.337	0.000	151.297	151.301
CC	150+536.337	0.000	151.378	151.384
DD	150+539.337	0.000	151.458	151.461
E. Toe of Median				
CL Brg./Truss	150+530.337	0.268	151.211	151.211
BB	150+533.337	0.268	151.299	151.303
CC	150+536.337	0.268	151.381	151.386
DD	150+539.337	0.268	151.460	151.463
Stringer 6				
CL Brg./Truss	150+530.337	0.305	151.211	151.211
BB	150+533.337	0.305	151.299	151.304
CC	150+536.337	0.305	151.381	151.386
DD	150+539.337	0.305	151.461	151.463

AT TRUSS DECK REPLACEMENT

Location	Station (EB I-74)	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Stringer 7				
CL Brg./Truss	150+530.336	-0.304	151.240	151.240
BB	150+533.336	-0.304	151.328	151.333
CC	150+536.336	-0.304	151.410	151.415
DD	150+539.336	-0.304	151.490	151.492
W. Toe of Median				
CL Brg./Truss	150+530.336	-0.267	151.240	151.240
BB	150+533.336	-0.267	151.328	151.332
CC	150+536.336	-0.267	151.410	151.415
DD	150+539.336	-0.267	151.489	151.492
Baseline EB I-74				
CL Brg./Truss	150+530.336	0.000	151.237	151.238
BB	150+533.336	0.000	151.326	151.330
CC	150+536.336	0.000	151.407	151.413
DD	150+539.336	0.000	151.487	151.490
Stringer 8				
CL Brg./Truss	150+530.336	1.601	151.224	151.224
BB	150+533.336	1.601	151.312	151.317
CC	150+536.336	1.601	151.394	151.399
DD	150+539.336	1.601	151.473	151.476
Stringer 9				
CL Brg./Truss	150+530.336	3.506	151.207	151.208
BB	150+533.336	3.506	151.296	151.301
CC	150+536.336	3.506	151.377	151.383
DD	150+539.336	3.506	151.457	151.460
Stringer 10				
CL Brg./Truss	150+530.336	5.411	151.191	151.191
BB	150+533.336	5.411	151.279	151.284
CC	150+536.336	5.411	151.361	151.367
DD	150+539.336	5.411	151.441	151.443
Stringer 11				
CL Brg./Truss	150+530.336	7.316	151.175	151.175
BB	150+533.336	7.316	151.263	151.267
CC	150+536.336	7.316	151.345	151.350
DD	150+539.336	7.316	151.424	151.427
Stringer 12				
CL Brg./Truss	150+530.336	7.926	151.169	151.170
BB	150+533.336	7.926	151.258	151.265
CC	150+536.336	7.926	151.340	151.347
DD	150+539.336	7.926	151.419	151.422
Toe of W. Parapet				
CL Brg./Truss	150+530.336	8.130	151.168	151.168
BB	150+533.336	8.128	151.256	151.263
CC	150+536.336	8.126	151.338	151.345
DD	150+539.336	7.925	151.419	151.422



Plan

Truss Deck Replacement

DESIGNED	ADD
CHECKED	TL
DRAWN	VH
CHECKED	TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
TOP OF SLAB ELEVATIONS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003

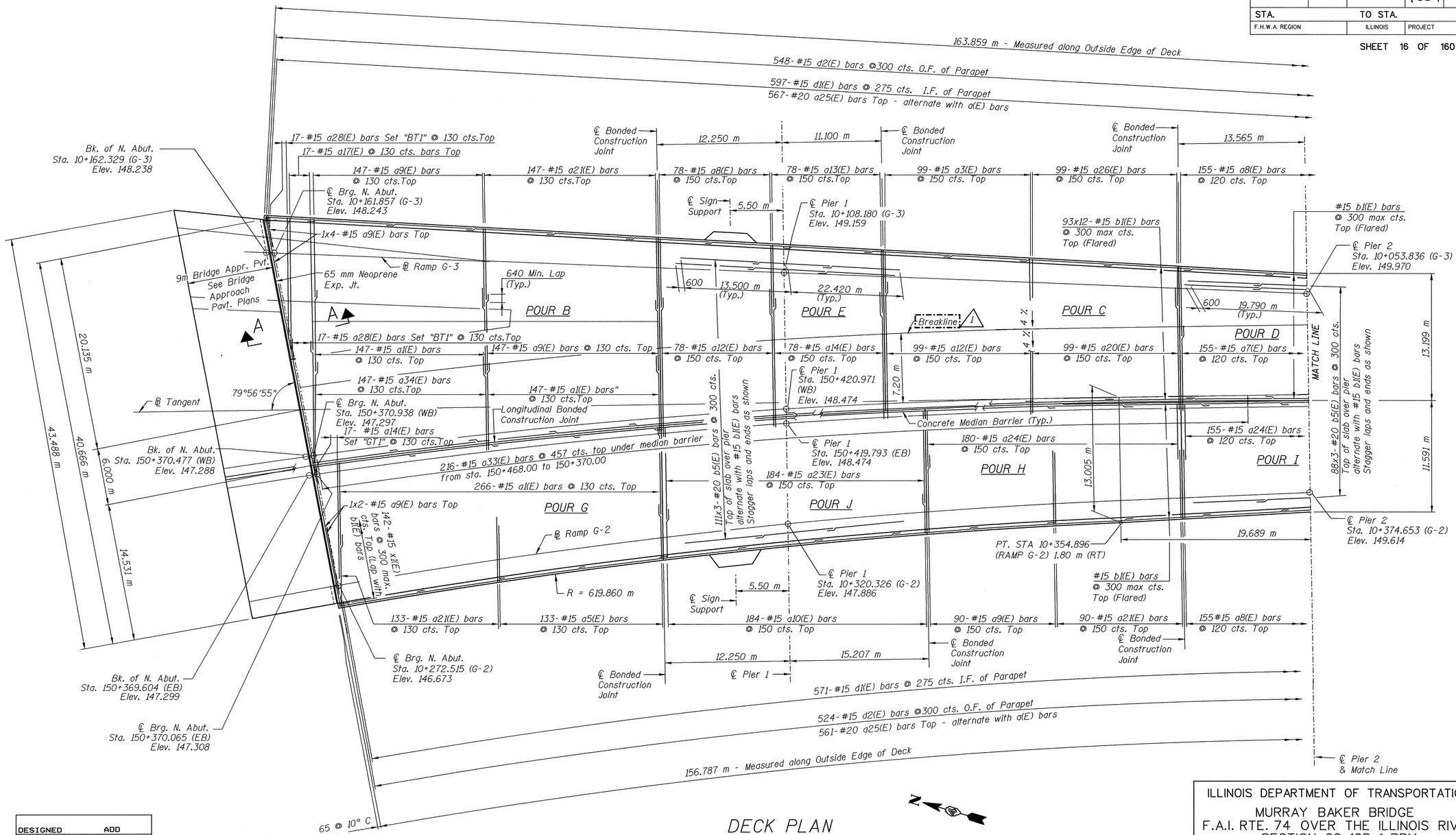
m:\proj3573\murray baker\st05sl8-7a0900001.dgn

E-S (M) 4-30-97

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	868
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 16 OF 160



DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

DECK PLAN
(Top Reinforcememt)

NOTES:
1. See Sheet 28 for notes and superstructure Bill of Materials.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

DECK PLAN
SPANS 1 & 2 (TOP)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF REVISED 6-4-04

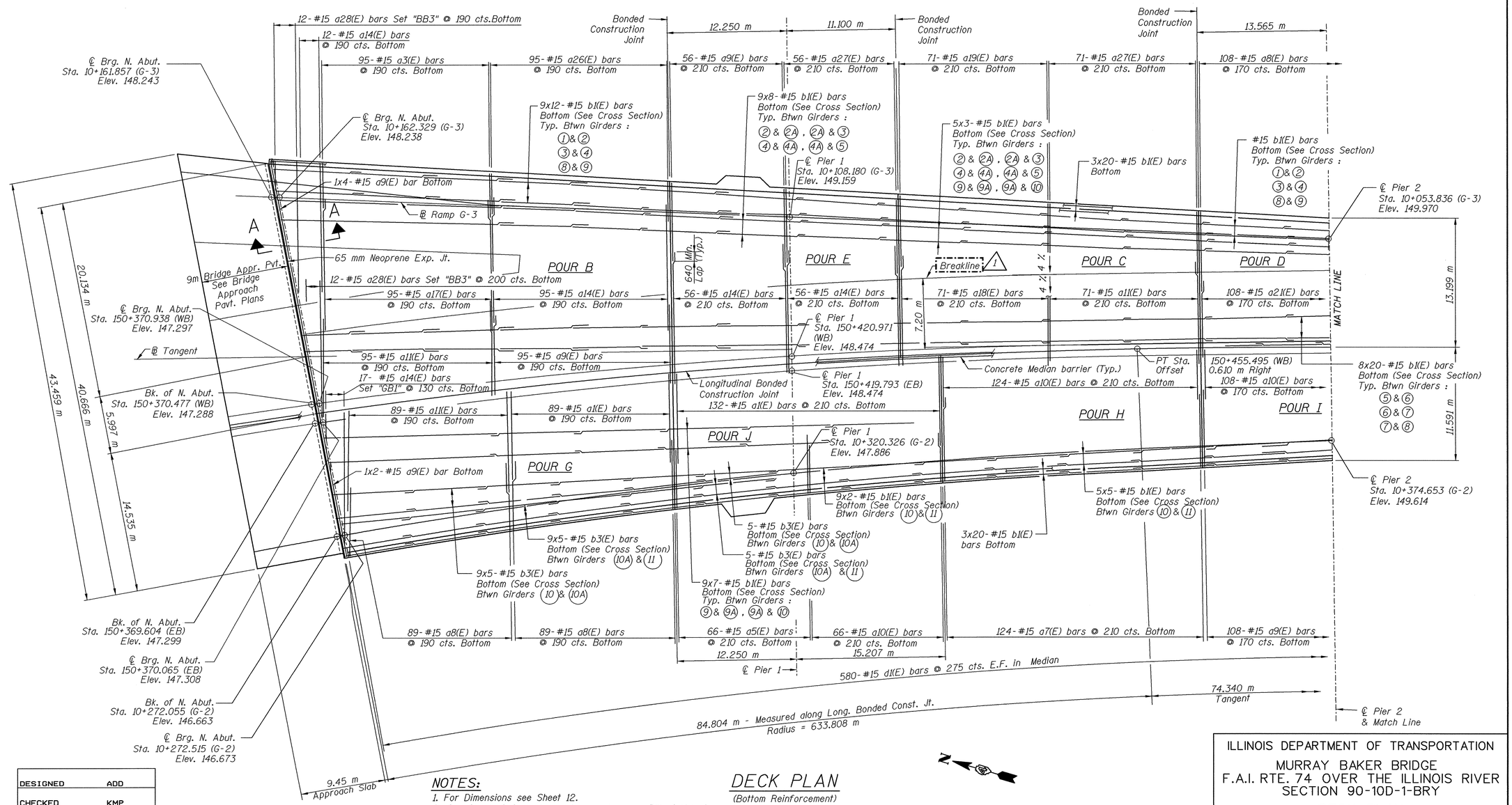
5/6/2004

M:\proj3573\Murray Baker\st05dp1-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	869
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 17 OF 160



DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

NOTES:

1. For Dimensions see Sheet 12.
2. See Sheet 16 for notes and superstructure Bill of Materials.
3. For Scupper Types and locations see sheet 29.
4. For Scupper Reinforcement see sheet 21.
5. Cut b1(E) bars at longitudinal Construction Joint as required.

DECK PLAN

(Bottom Reinforcement)

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

DECK PLAN
SPANS 1 & 2 (BOTTOM)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF REVISED 6-4-04

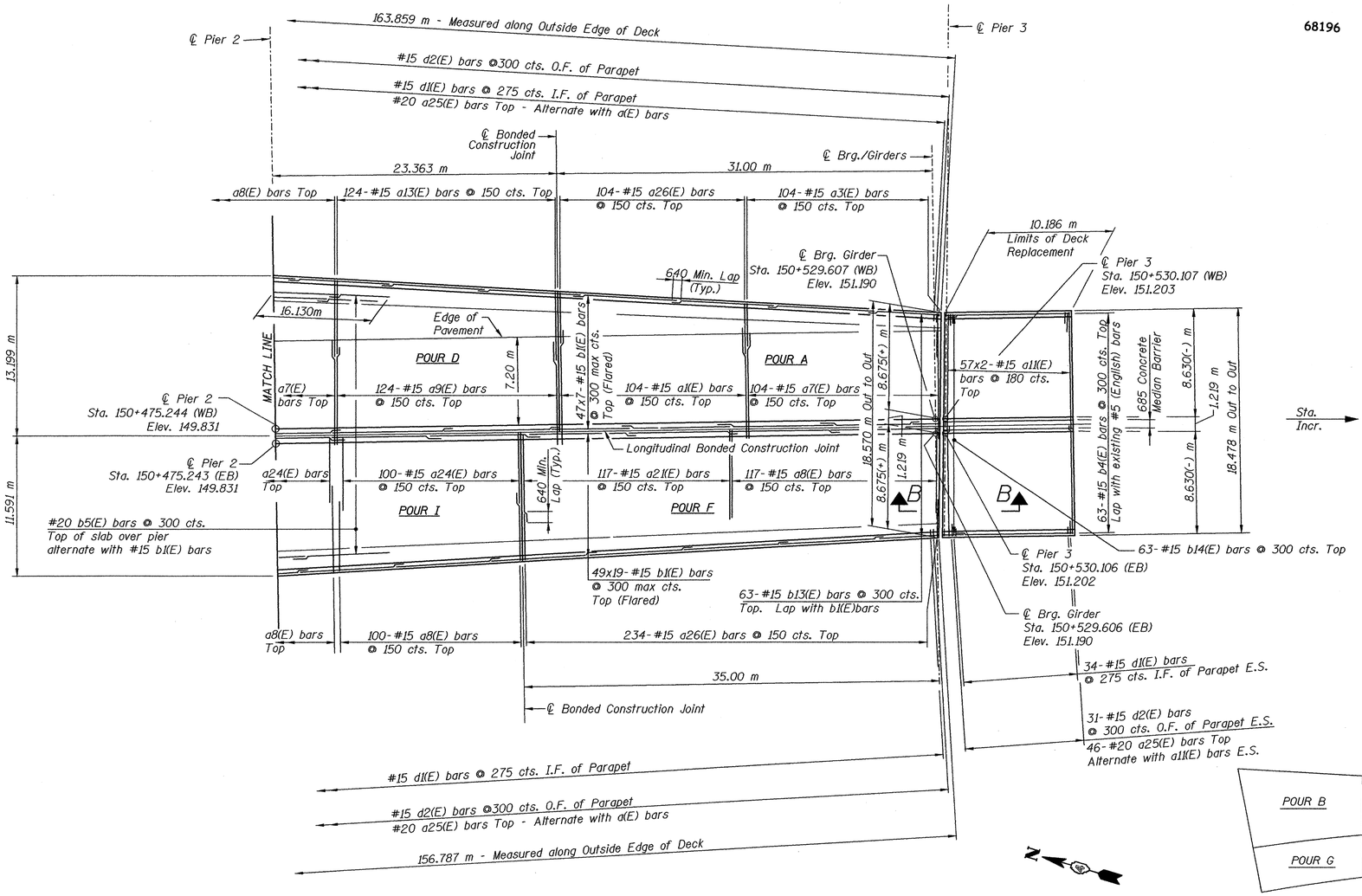
5/6/2004

M:\proj3573\Murray Baker\st05dp2-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	870
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 18 OF 160

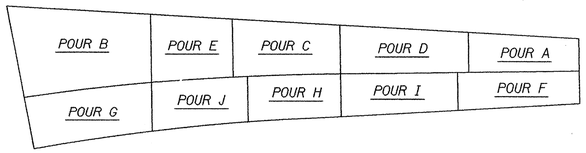
68196



DECK PLAN
(Top Reinforcement)

NOTES:

1. All dimensions are in millimeters unless otherwise noted.
2. Reinforcement bars designated "(E)" shall be epoxy coated.
3. Use the following minimum lap lengths unless otherwise noted:
   #15 - 640
   #20 - 790
   #25 - 1320
4. For Parapet Elevation, Details, and Reinforcement, see Sheets 22-27.
5. I.F. Designates Inside Face
   O.F. Designates Outside Face
   E.S. Designates Each Face
6. Bars indicated thus 2 x 8 - #15 etc. indicates 2 lines of Bars with 8 lengths per line.
7. Work this sheet with sheet 16.



POUR SEQUENCE

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

DECK PLAN
SPAN 3 (TOP)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

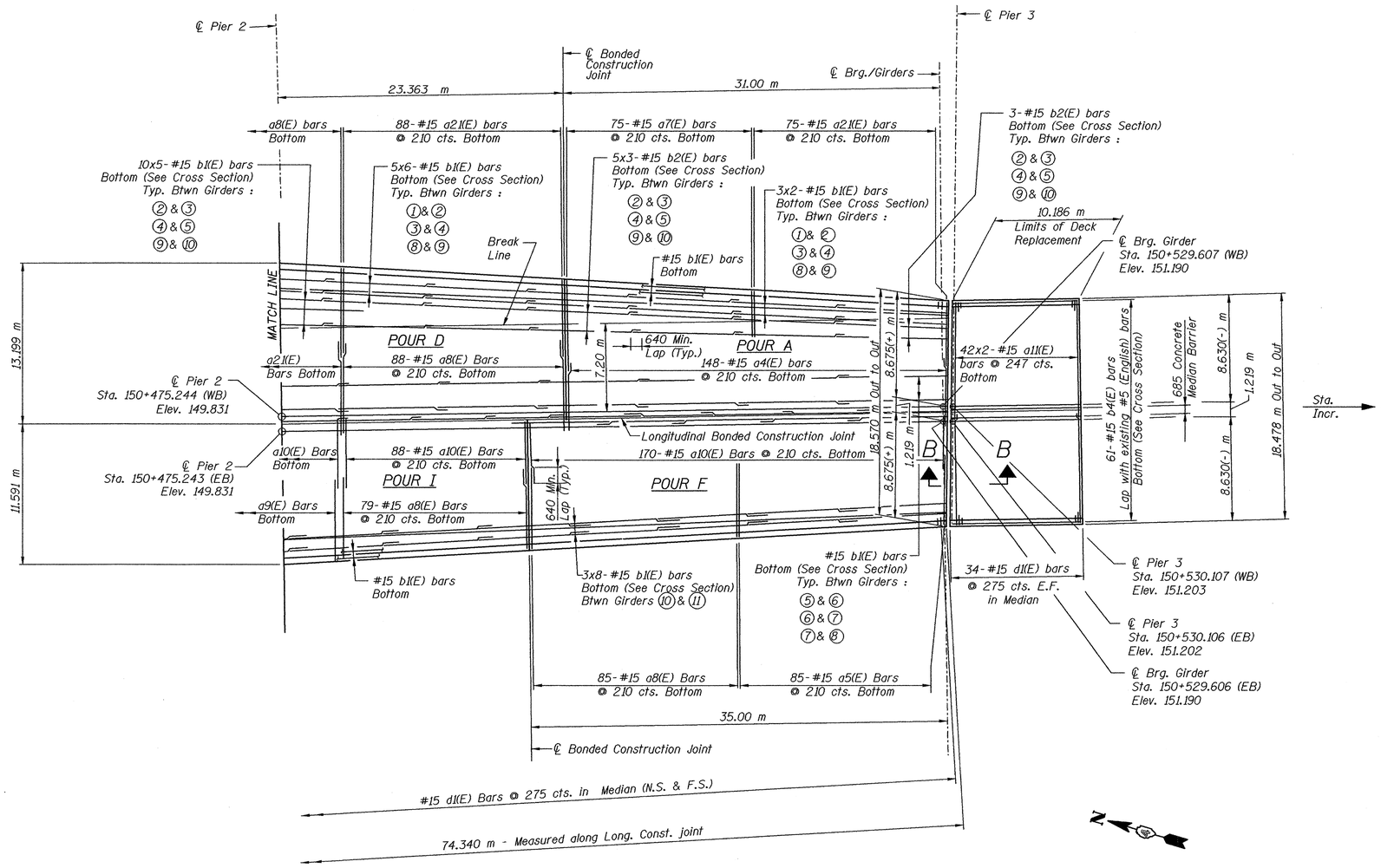
12/16/2003

m:\proj3573\murray baker\s105dp3-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	871
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 19 OF 160

68196



DECK PLAN
(Bottom Reinforcement)

NOTES:

1. All dimensions are in millimeters unless otherwise noted.
2. Reinforcement bars designated "(E)" shall be epoxy coated.
3. Use the following minimum lap lengths unless otherwise noted:
   #15 - 640
   #20 - 790
   #25 - 1320
4. For Parapet Elevation, Details, and Reinforcement, see Sheets 22-27.
5. I.F. Designates Inside Face
   O.F. Designates Outside Face
   E.S. Designates Each Face
6. Bars indicated thus 2 x 8 - #15 etc. indicates 2 lines of Bars with 8 lengths per line.
7. Work this sheet with sheet 17.

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

DECK PLAN
SPAN 3 (BOTTOM)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

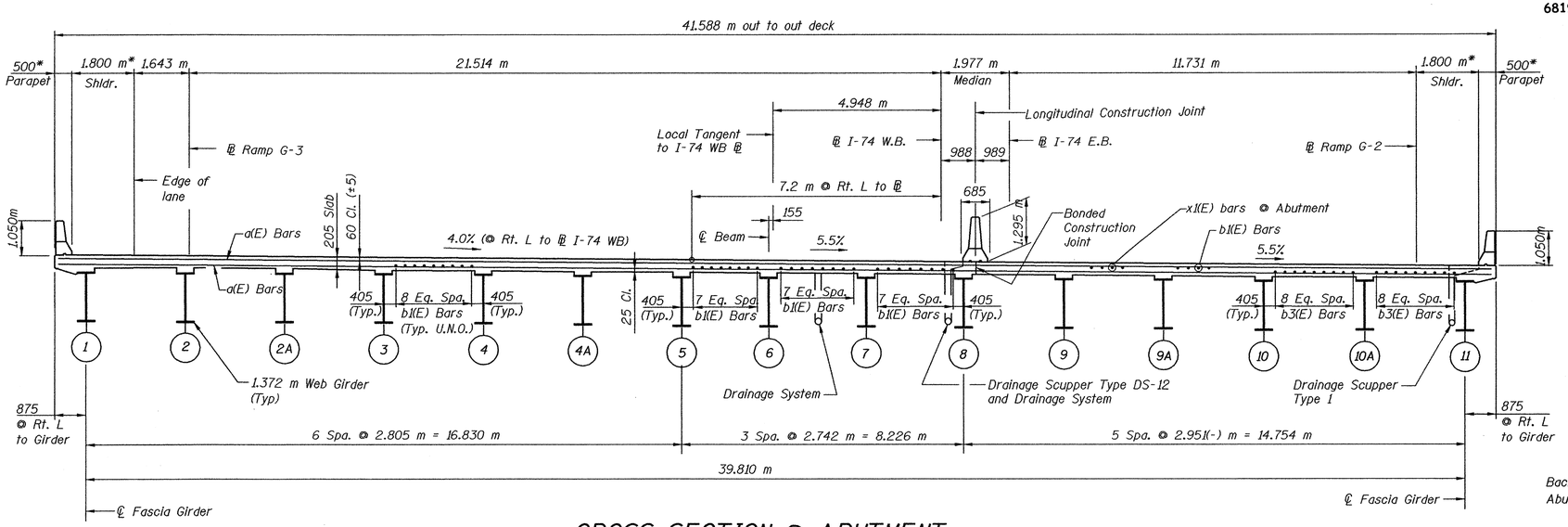
12/16/2003

m:\proj3573\murray baker\st05dp4-7a0900001.dgn

68196

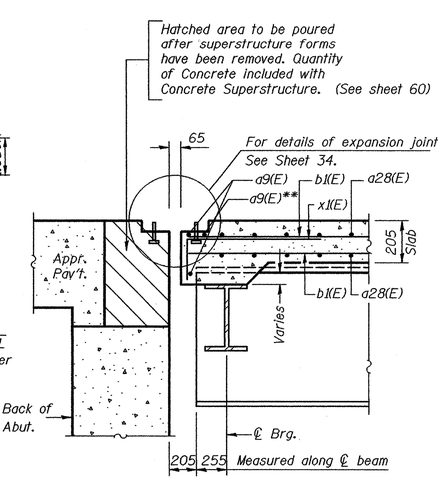
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	87-
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 20 OF 160

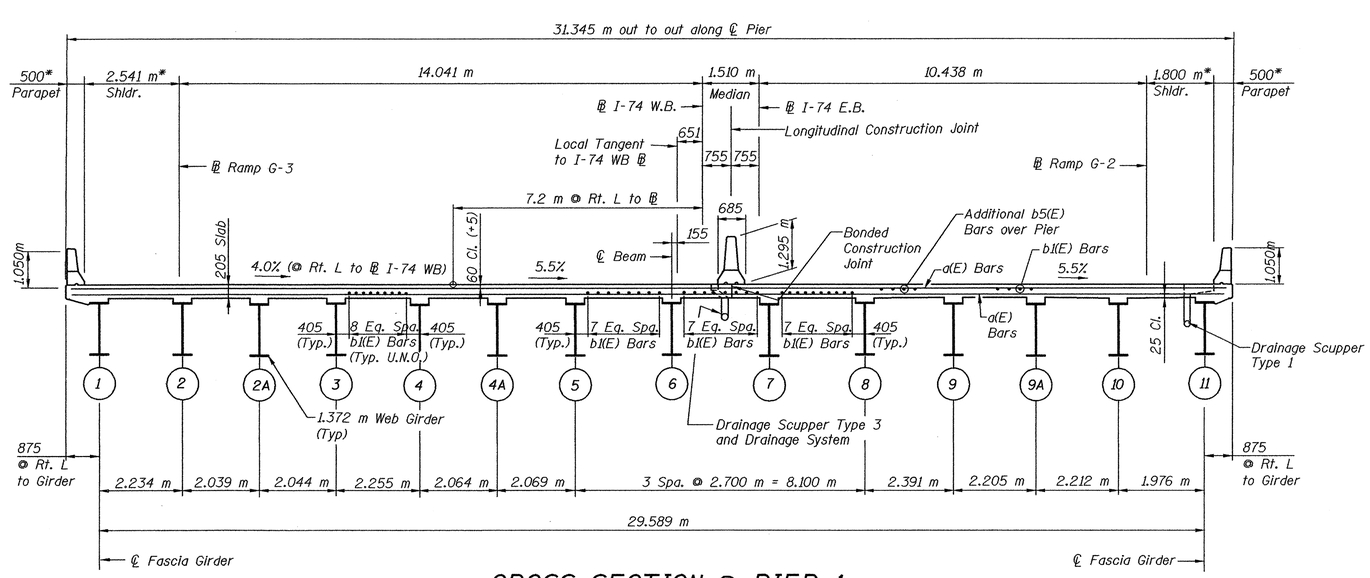


CROSS SECTION @ ABUTMENT

Dimensions Along ℄ Brg. (U.N.O.)

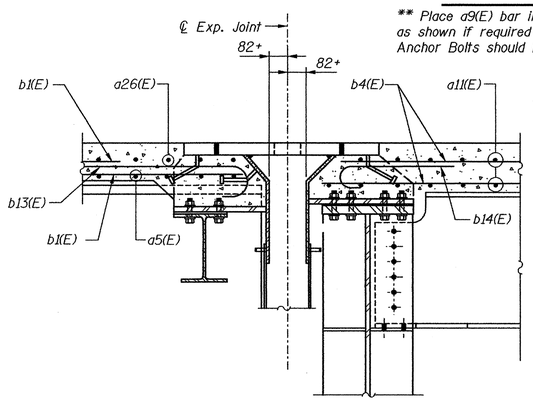


SECTION A-A



CROSS SECTION @ PIER 1

Dimensions Along ℄ Brg. (U.N.O.)



** Place a9(E) bar in back of anchor bolt as shown if required to maintain 25 mm cl. Anchor Bolts should be tied to a9(E) bars.

SECTION B-B

* Dim. @ Rt. L to Rdwy. ℄ or Edge of Lane

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

DECK CROSS SECTIONS AND DETAILS

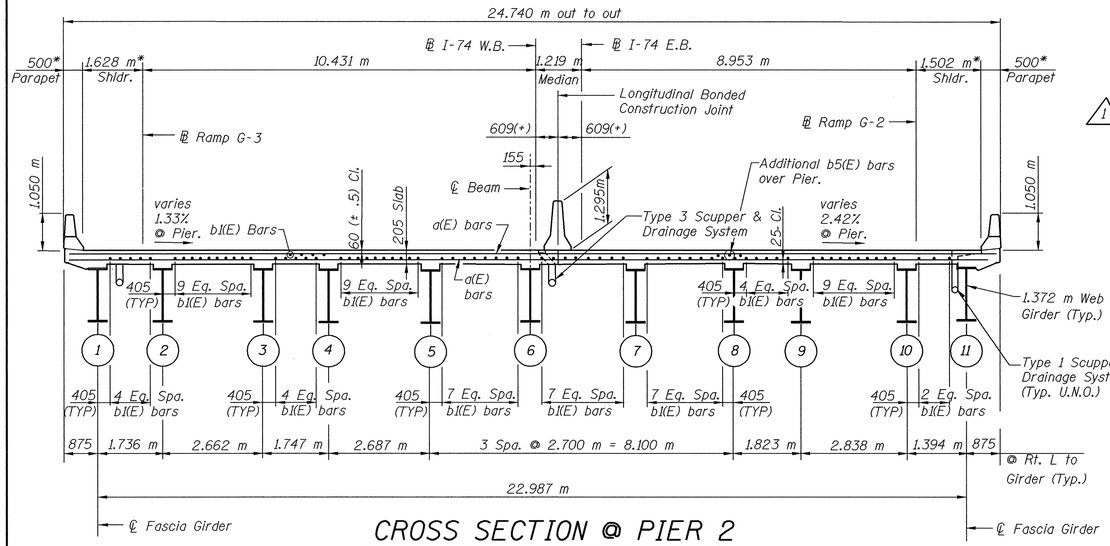
SN: 090-0001 STA. 150+475.243
PEORIA - TAZEWELL CO., IL. DATE: 12-16-03

12/16/2003
m:\proj\3573\murray baker\st05ax1-7a0900001.dgn

68196

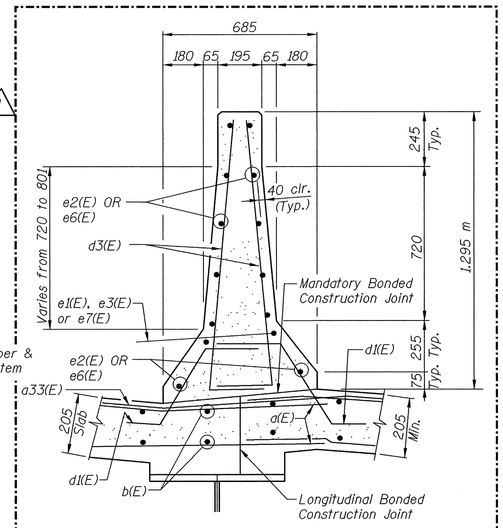
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	873
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 21 OF 160



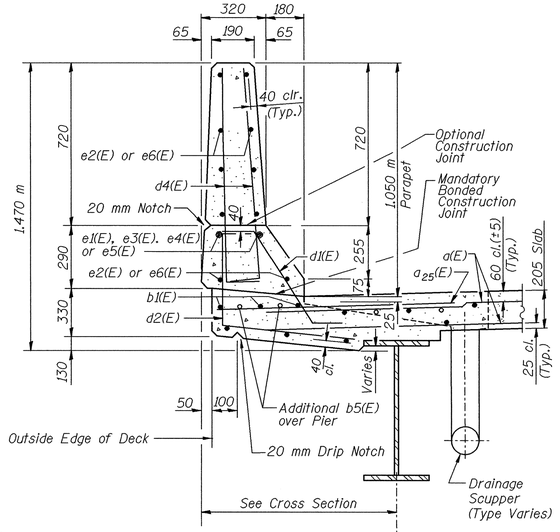
CROSS SECTION @ PIER 2

Dimensions Along ℄ Brg. (U.N.O.)

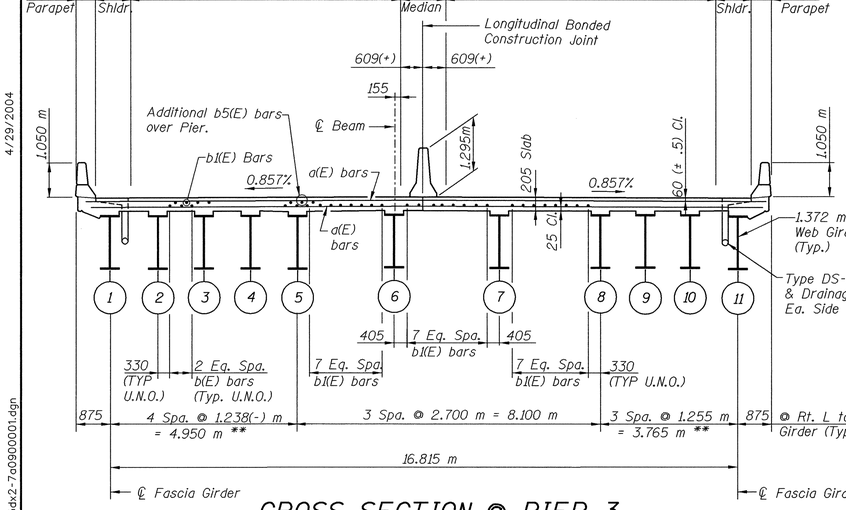


SECTION THRU MEDIAN

Looking Upstation

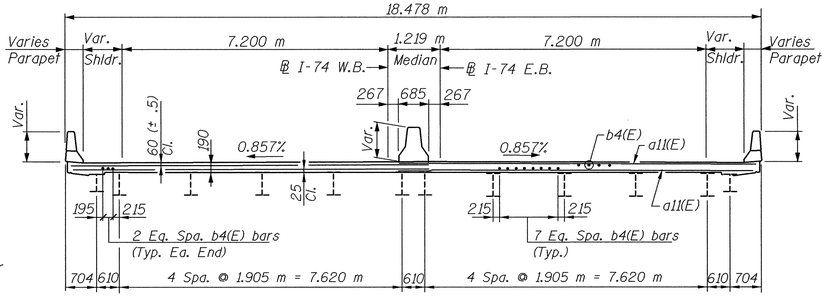


SECTION THRU PARAPET

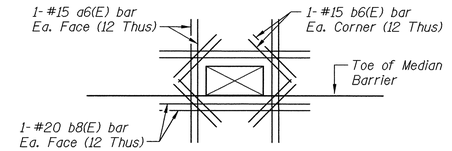


CROSS SECTION @ PIER 3

Dimensions Along ℄ Brg. (U.N.O.)

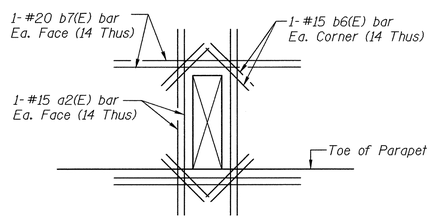


CROSS SECTION THRU DECK BETWEEN L6 & L7 (TRUSS)



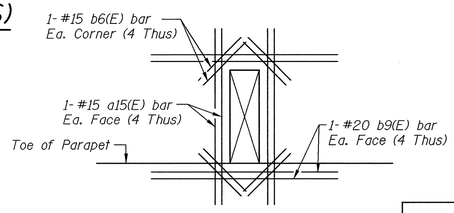
TYPE 3 SCUPPER REINFORCEMENT

Cut longitudinal and transverse reinforcement to clear Scupper.



TYPE 1 SCUPPER REINFORCEMENT

Cut longitudinal and transverse reinforcement to clear drainage scuppers.



TYPE DS-12 SCUPPER REINFORCEMENT

Cut longitudinal and transverse reinforcement to clear drainage scuppers.

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

* Dim. @ Rt. L to Rdwy. ℄ or Edge of Lane

** Dim. @ Piers. Varies over Spans.

Notes:

1. Work this sheet with sheets 18, 19 and 27.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

DECK CROSS SECTIONS AND DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 ADD REVISED 6-4-04

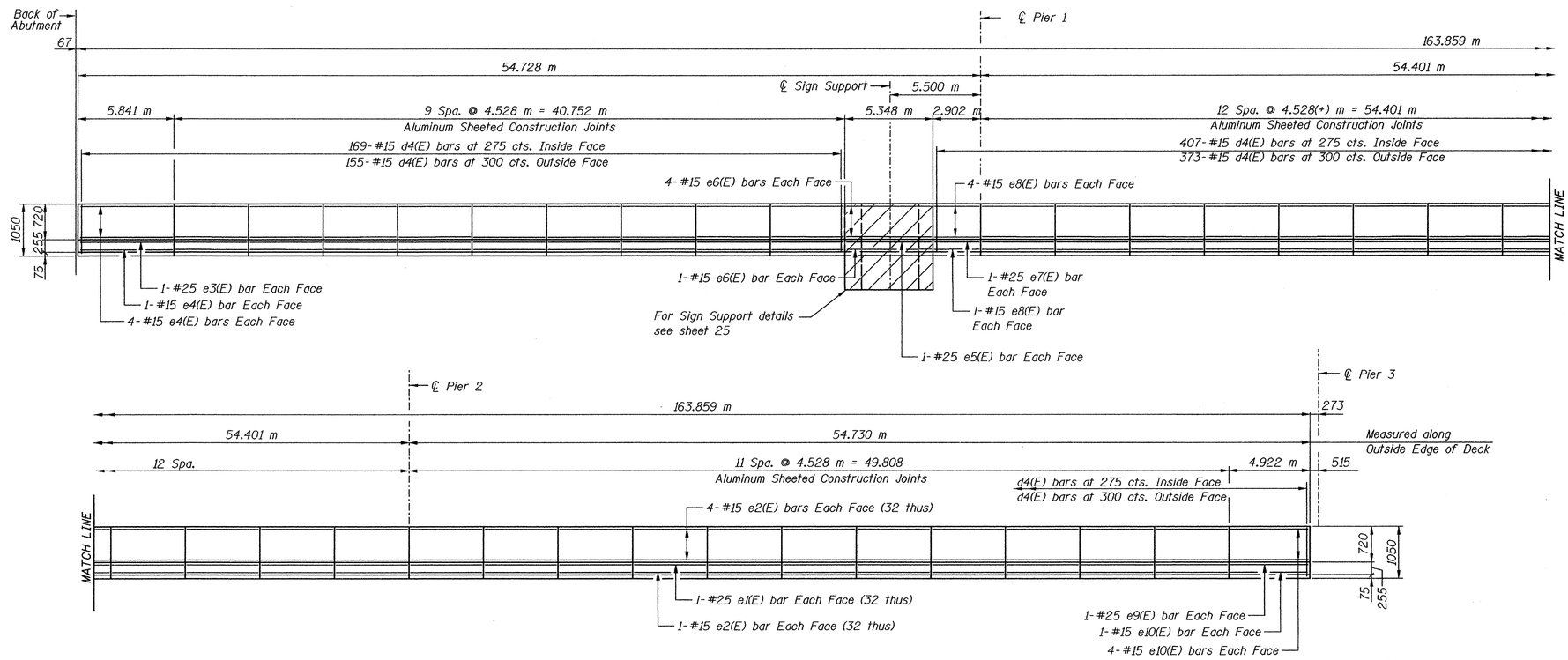
4/29/2004

M:\proj3573\Murray Baker\st05dx2-7a0900001.dgn

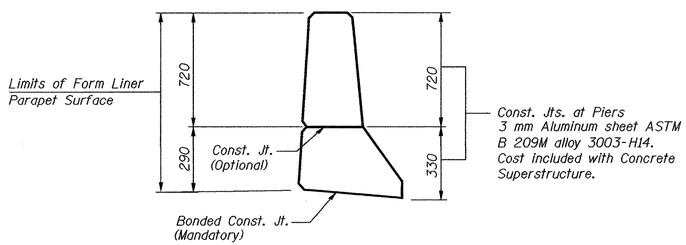
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	874
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 22 OF 160

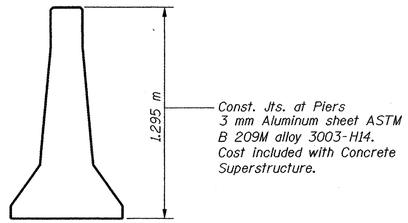
68196



INSIDE ELEVATION OF EAST PARAPET



FASCIA PARAPET



MEDIAN BARRIER

PARAPET JOINT DETAILS

NOTES:

1. Parapets shall not be slip formed.
2. Parapet form liner to be used for outside face of parapets.

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

PARAPET DETAILS
EAST FASCIA PARAPET

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

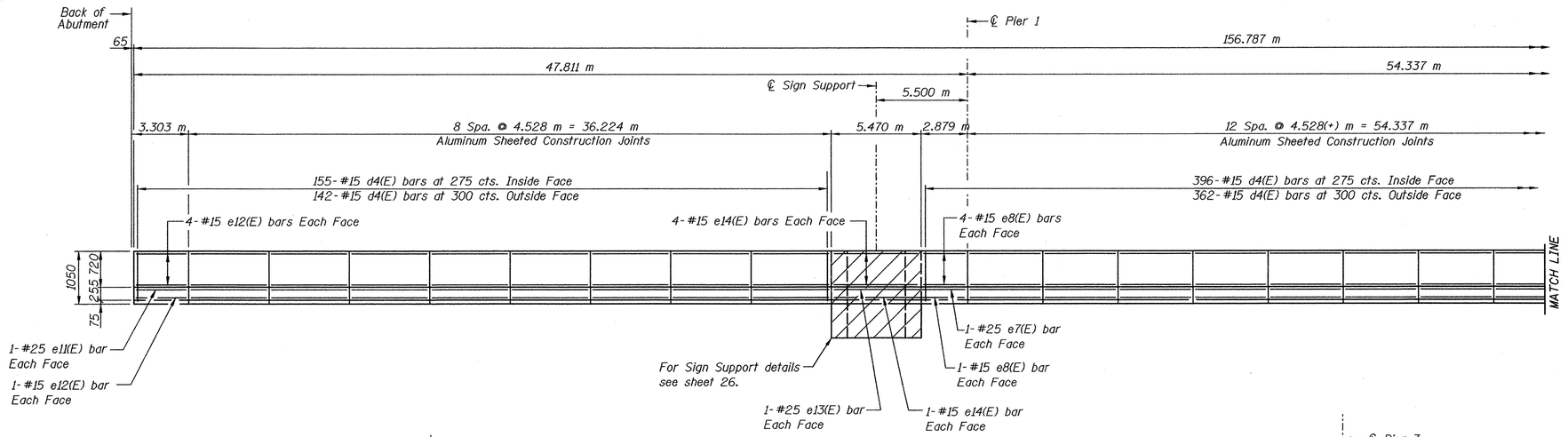
12/16/2003

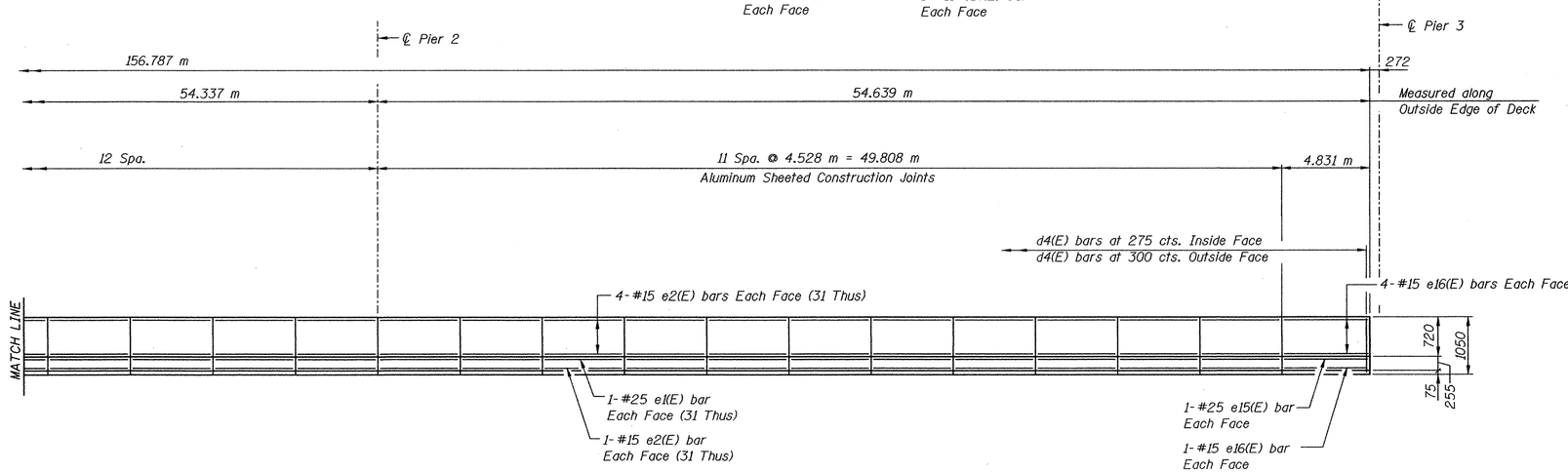
m:\proj3573\murray baker\st05pdf1-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	875
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

SHEET 23 OF 160





OUTSIDE ELEVATION OF WEST PARAPET

Notes:

1. Parapets shall not be slip formed.
2. Parapet form liner to be used for outside face of parapets. (See Sheet 22 for limits).

DESIGNED	ADD
CHECKED	
DRAWN	VH
CHECKED	

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

PARAPET DETAILS
WEST FASCIA PARAPET

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

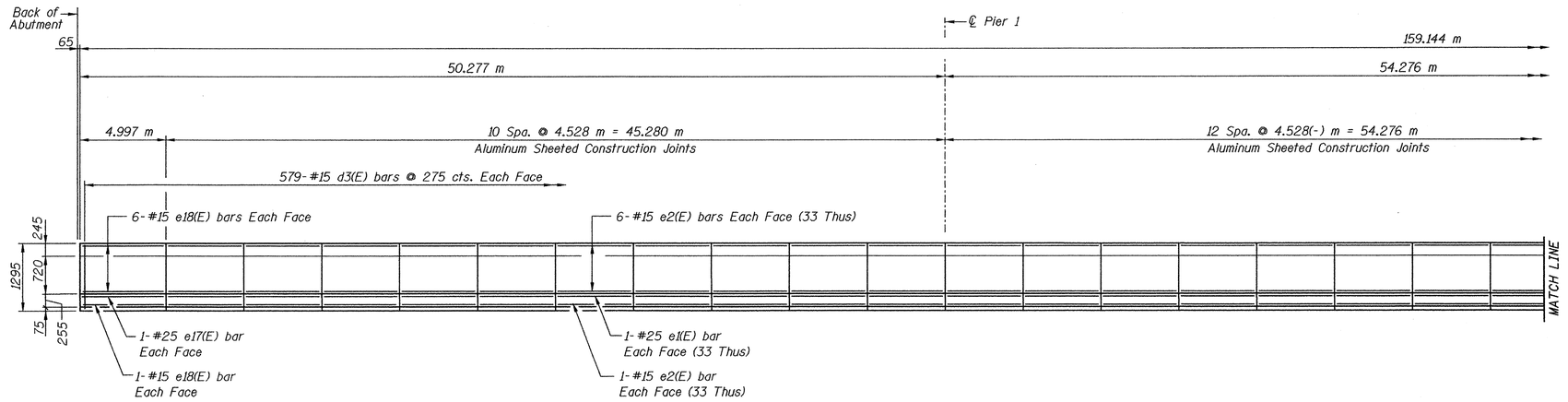
12/16/2003

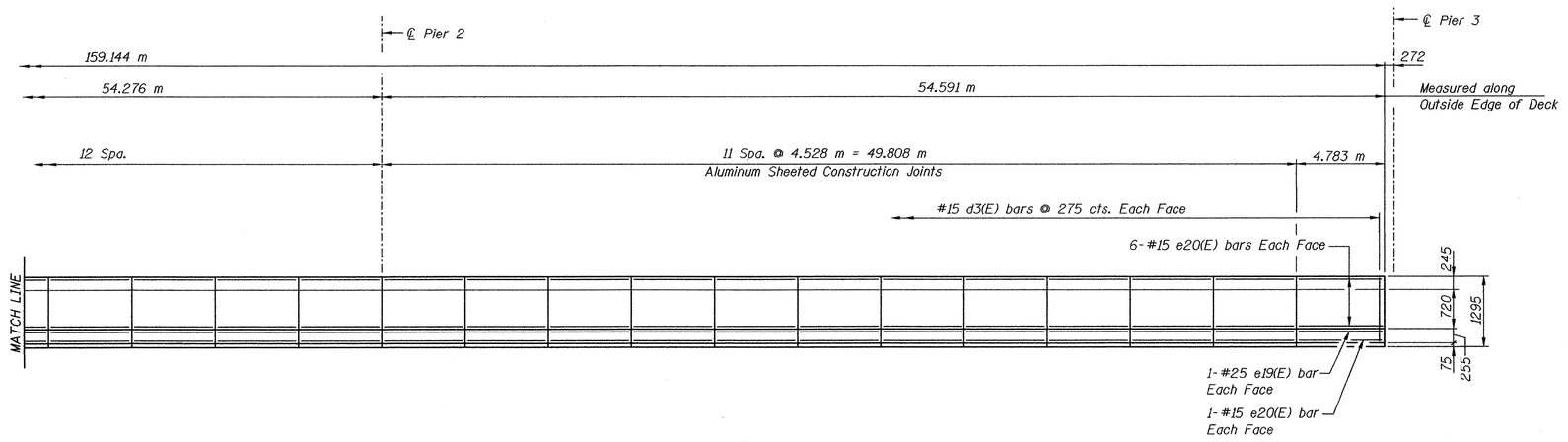
m:\proj3573\murray baker\st05pd2-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	876
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 24 OF 160

68196





ELEVATION OF MEDIAN BARRIER

(Looking East)

Notes:

1. Barrier shall not be slip formed.
2. Parapet form liner to be used for both faces of barrier.

DESIGNED	ADD
CHECKED	
DRAWN	VH
CHECKED	

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

MEDIAN BARRIER

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

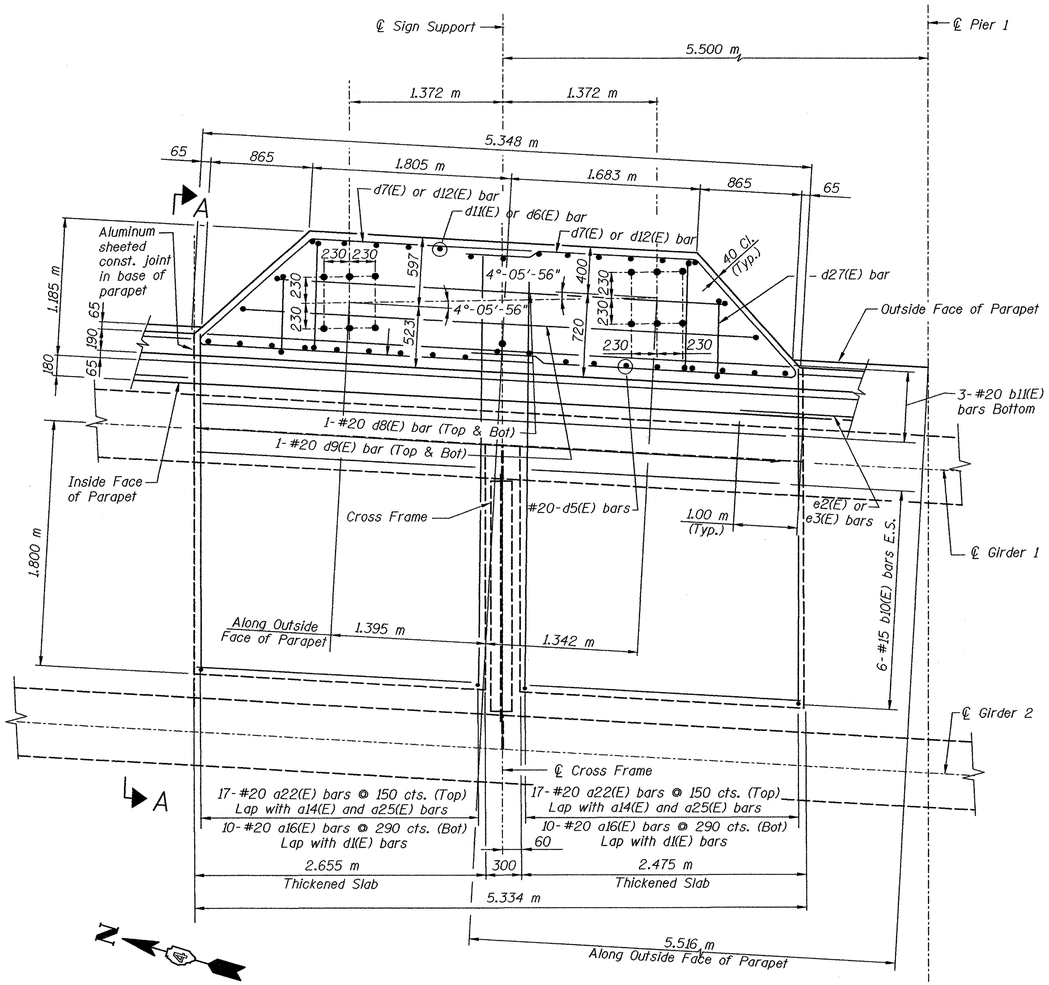
STA. 150+475.243
DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05pd3-7a0900001.dgn st05pd3-7a0900001.dgn

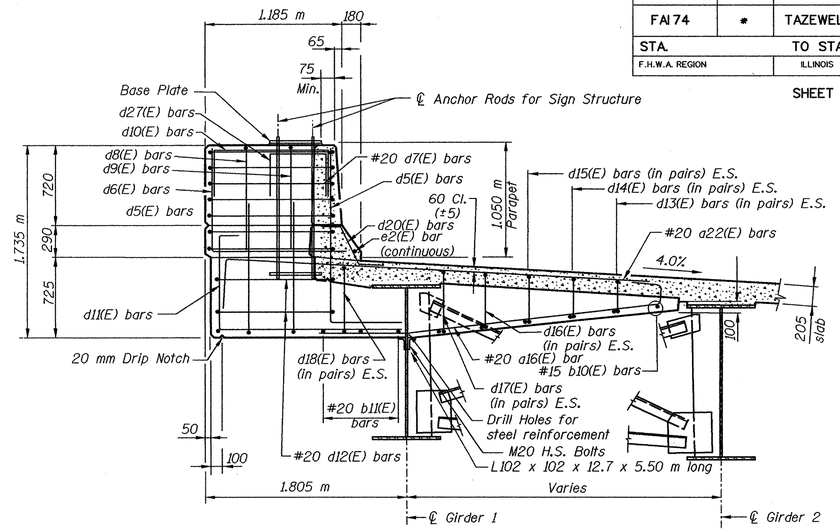
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	877
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

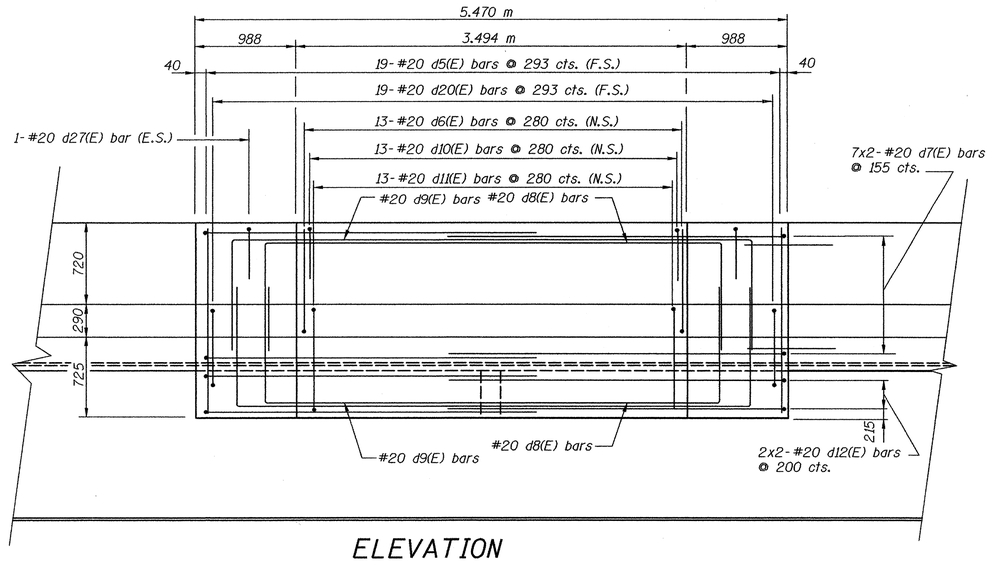
SHEET 25 OF 160



PLAN EAST PARAPET



SECTION A-A



ELEVATION

(Looking West)

NOTES:

1. For details of anchor rods and baseplate, See Signing Plans.
2. Cost of anchor rods is included with "Concrete Superstructure."
3. N.S. designates Near Side.
   F.S. designates Far Side.
   E.S. designates Each Side.
4. Use templates to set anchor rods (See Signing Plans).

MIN. BAR LAP
#15 BAR = 640
#20 BAR = 790

DESIGNED	KMP
CHECKED	RJW/ADD
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
PARAPET DETAILS-
SIGN TRUSS SUPPORT

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

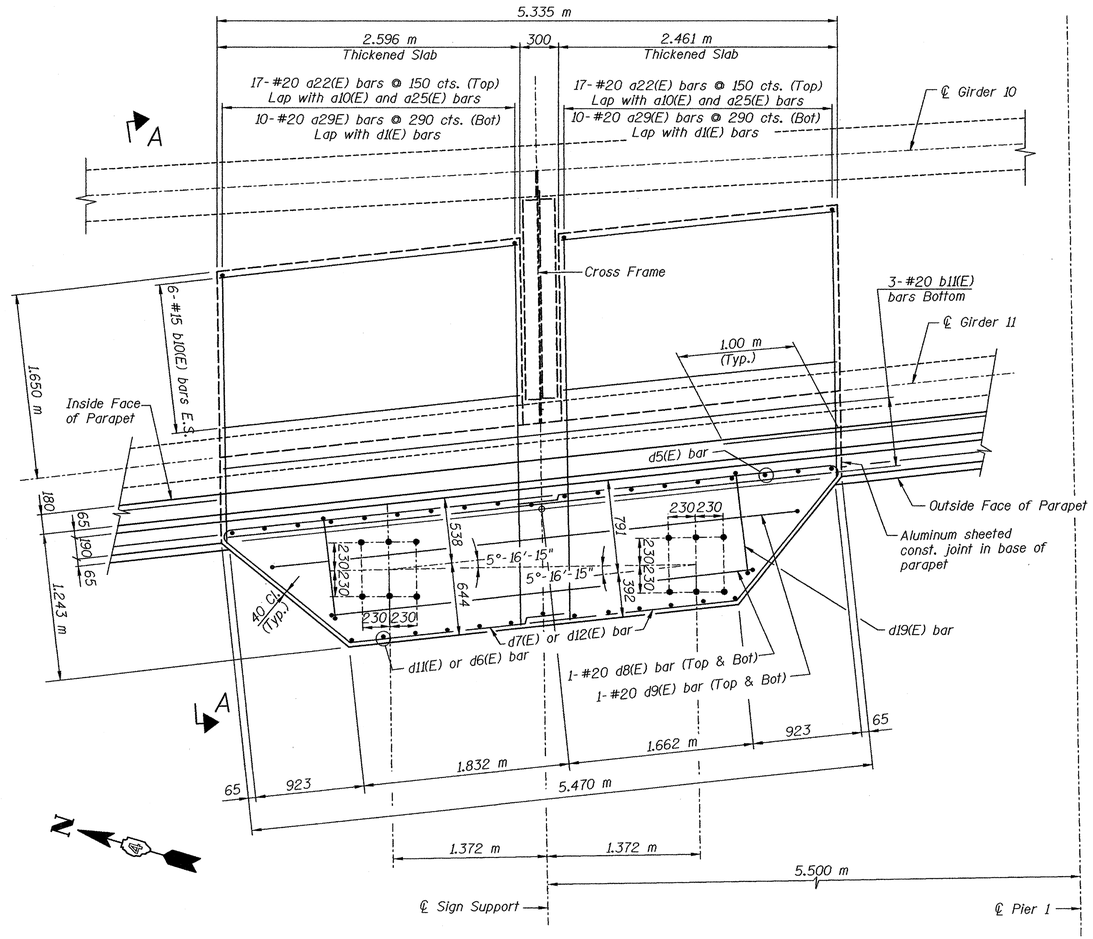
STA. 150+475.243
DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05sit-7a0900001.dgn

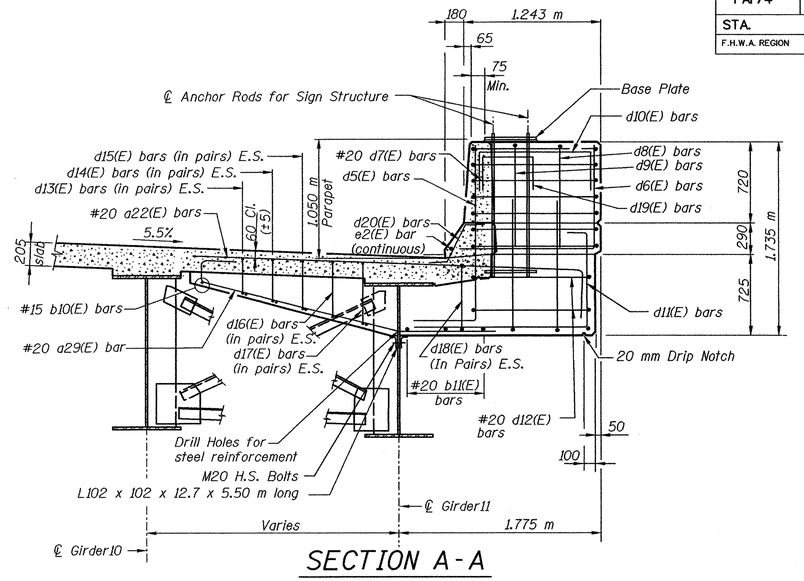
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	978
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

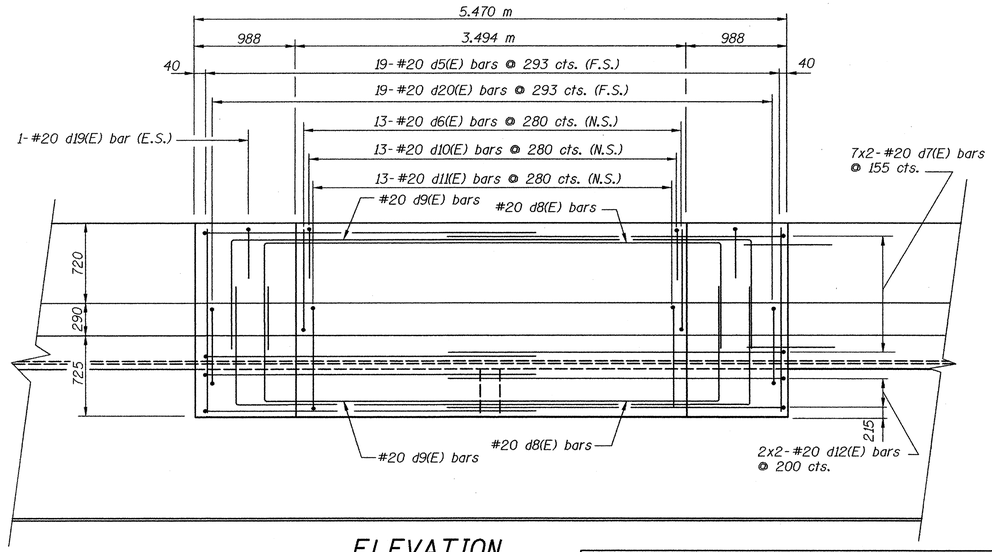
SHEET 26 OF 160



PLAN WEST PARAPET



SECTION A-A



ELEVATION

(Looking East)

NOTES:

1. For details of anchor rods and baseplate, See Signing Plans.
2. Cost of anchor rods is included with "Concrete Superstrucure."
3. N.S. designates Near Side.
   F.S. designates Far Side.
   E.S. designates Each Side.
4. Use templates to set anchor rods (See Signing Plans).
5. For Anchor Rod and Base Plate details see Lighting Plans.

MIN. BAR LAP
#15 BAR = 640
#20 BAR = 790

DESIGNED	KMP
CHECKED	ADD
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

PARAPET DETAILS- SIGN TRUSS SUPPORT

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

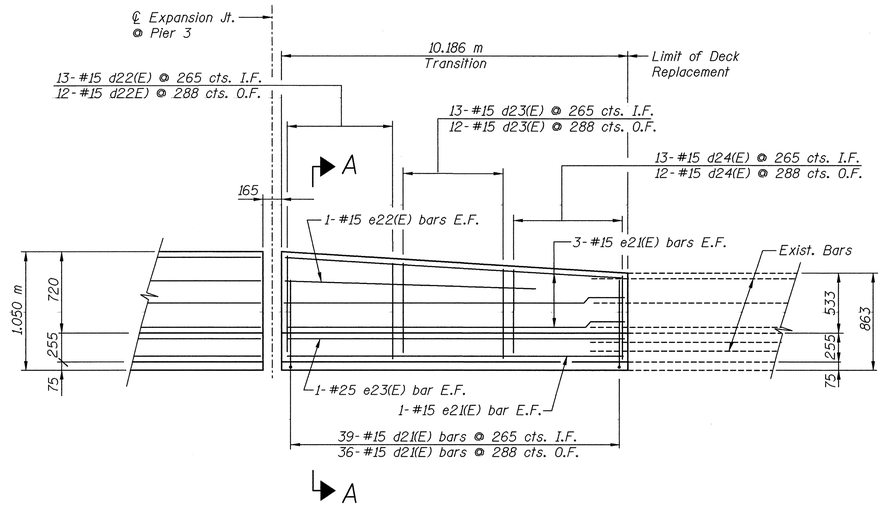
12/16/2003

m:\proj3573\murray baker\st05sl2-7a0900001.dgn

68196

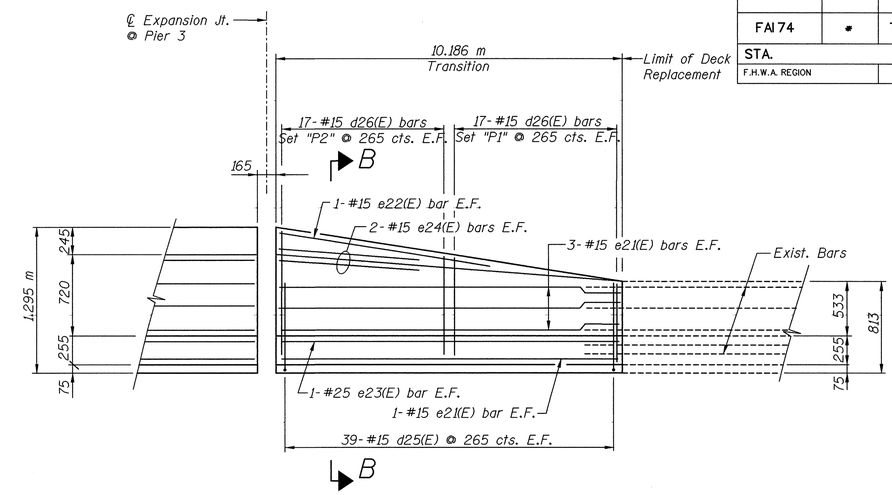
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	879
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 27 OF 160



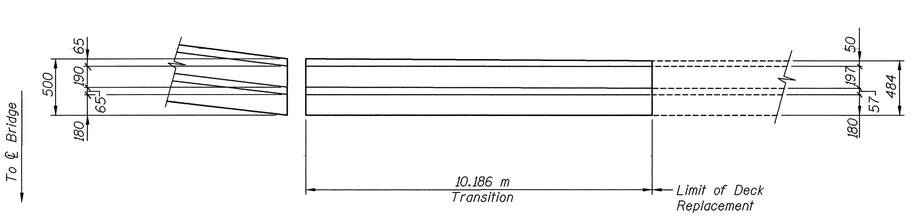
INSIDE ELEVATION OF EAST TRANSITION PARAPET

(Elevation of West Parapet similar)

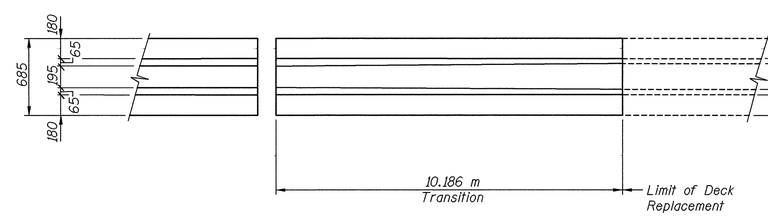


ELEVATION AT MEDIAN TRANSITION

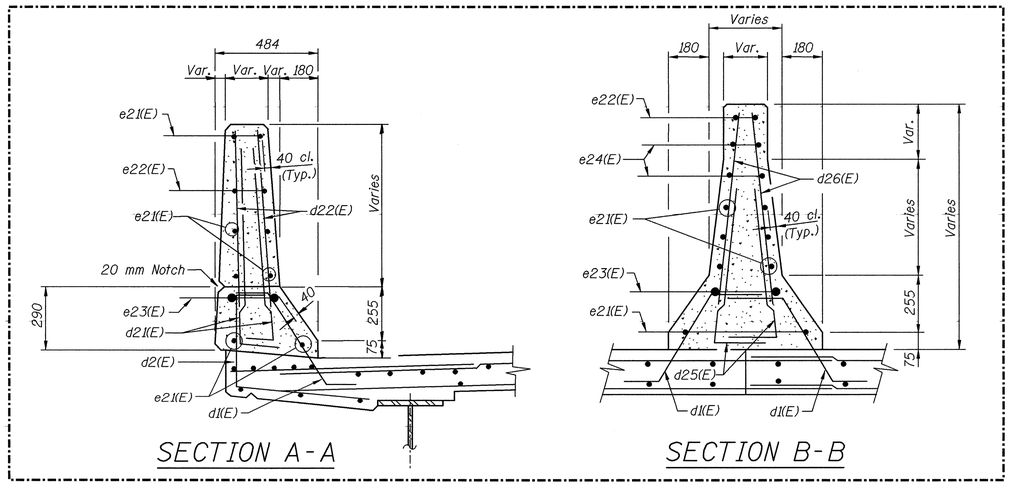
(Looking East)



PLAN



PLAN



SECTION A-A

SECTION B-B

Notes:

1. E.F. denotes Each Face.
   I.F. denotes Inside Face.
   O.F. denotes Outside Face.
2. Min. Bar Lap
   #15 Bar = 640
   #25 Bar = 1320
3. For Concrete Deck Details see sheets 18 & 19.

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

PARAPET TRANSITION DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

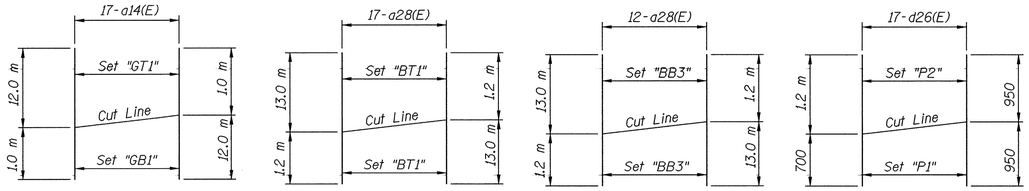
alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

1 4/29/04 CDF REVISED 6-4-04

5/6/2004

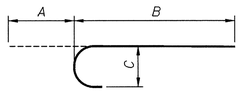
M:\proj3573\Murray Baker\st05pd4-7a090001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	880
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	



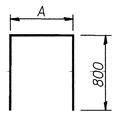
a14(E) Pour G | a28(E) Pour B | a28(E) Pour B | d26(E) Parapet

BAR CUTTING DIAGRAMS



Bar	A	B	C
b13(E)	180	5.140m	130
b14(E)	180	640	130

BARS b13(E) & b14(E)



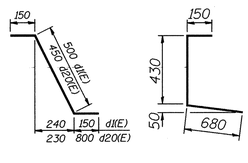
Bar	A
d13(E)	270
d14(E)	330
d15(E)	380
d16(E)	440
d17(E)	490
d18(E)	580

BARS d13(E) thru d18(E)

BARS d10(E), d19(E) & d27(E)

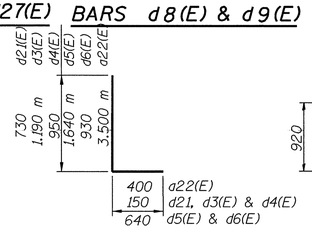
BARS d8(E) & d9(E)

BAR d25(E)

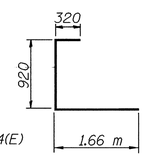


BAR d1(E) & BAR d20(E)

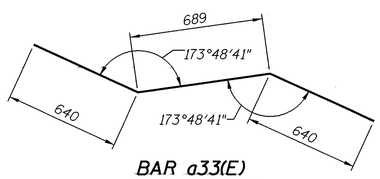
BAR d2(E)



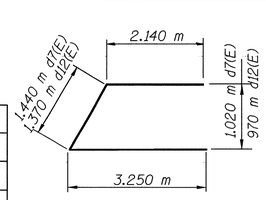
BARS a22(E) & d21(E) & BAR d3(E) - d6(E)



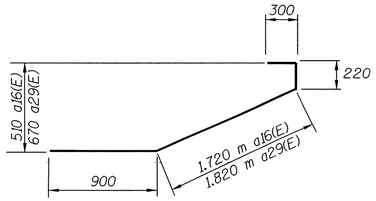
BAR d11(E)



BAR a33(E)



BARS d7(E) & d12(E)



BAR a16(E) & a29(E)

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
a1(E)	885	#15	9.000	
a2(E)	56	#15	2.110	
a3(E)	298	#15	4.500	
a4(E)	148	#15	5.500	
a5(E)	284	#15	6.000	
a6(E)	48	#15	1.250	
a7(E)	458	#15	8.500	
a8(E)	1143	#15	7.000	
a9(E)	785	#15	8.000	
a10(E)	740	#15	5.000	
a11(E)	453	#15	10.000	
a12(E)	177	#15	14.000	
a13(E)	202	#15	6.400	
a14(E)	314	#15	13.000	
a15(E)	16	#15	1.720	
a16(E)	20	#20	3.140	
a17(E)	112	#15	13.500	
a18(E)	71	#15	11.000	
a19(E)	71	#15	7.250	
a20(E)	99	#15	12.500	
a21(E)	758	#15	7.500	
a22(E)	68	#20	3.550	
a23(E)	184	#15	9.500	
a24(E)	435	#15	5.750	
a25(E)	1174	#20	1.400	
a26(E)	532	#15	4.000	
a27(E)	127	#15	6.750	
a28(E)	29	#15	14.200	
a29(E)	20	#20	3.240	
a33(E)	216	#15	1.969	
a34(E)	147	#15	10.800	
b1(E)	4129	#15	9.000	
b2(E)	54	#15	8.000	
b3(E)	100	#15	7.000	
b4(E)	124	#15	10.000	
b5(E)	597	#20	12.500	
b6(E)	240	#15	0.600	
b7(E)	56	#20	1.840	
b8(E)	48	#20	1.900	
b9(E)	16	#20	1.820	
b10(E)	24	#15	2.440	
b11(E)	6	#20	5.250	
b13(E)	63	#15	5.320	
b14(E)	63	#15	0.820	
d1(E)	1884	#15	0.800	
d2(E)	1134	#15	1.260	
d3(E)	1158	#15	1.550	
d4(E)	2159	#15	1.100	
d5(E)	38	#20	2.280	
d6(E)	26	#20	1.570	
d7(E)	28	#20	6.830	
d8(E)	4	#20	6.460	
d9(E)	4	#20	7.090	
d10(E)	26	#20	1.680	
d11(E)	26	#20	2.900	
d12(E)	8	#20	6.760	
d13(E)	8	#20	1.870	
d14(E)	8	#20	1.930	

1

Bar	No.	Size	Length (m)	Shape
d15(E)	8	#20	1.990	
d16(E)	8	#20	2.050	
d17(E)	8	#20	2.100	
d18(E)	8	#20	2.180	
d19(E)	2	#20	1.470	
d20(E)	38	#20	1.4	
d21(E)	150	#15	0.880	
d22(E)	50	#15	0.840	
d23(E)	50	#15	0.780	
d24(E)	50	#15	0.720	
d25(E)	78	#15	0.850	
d26(E)	34	#15	1.900	
d27(E)	2	#20	1.340	
e1(E)	192	#25	4.430	
e2(E)	1092	#15	4.430	
e3(E)	2	#25	5.740	
e4(E)	10	#15	5.740	
e5(E)	2	#25	5.250	
e6(E)	10	#15	5.250	
e7(E)	4	#25	2.800	
e8(E)	20	#15	2.800	
e9(E)	2	#25	4.820	
e10(E)	10	#15	4.820	
e11(E)	2	#25	3.200	
e12(E)	10	#15	3.200	
e13(E)	2	#25	5.370	
e14(E)	10	#15	5.370	
e15(E)	2	#25	4.730	
e16(E)	10	#15	4.730	
e17(E)	2	#25	4.900	
e18(E)	14	#15	4.900	
e19(E)	2	#25	4.680	
e20(E)	14	#15	4.680	
e21(E)	16	#15	8.670	
e22(E)	4	#15	6.500	
e23(E)	4	#25	8.670	
e24(E)	4	#15	4.330	
x1(E)	142	#15	1.280	
Reinforcement Bars, Epoxy Coated			KG	215,170
Concrete Superstructure			CU M	1338.4
Bridge Deck Grooving			CU M	4071
Protective Coat			CU M	5140
Form Liner-Parapet Surface			SQ M	351

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 1 x -#15 etc. indicates 1 line of bars with lengths per line.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

DECK REINFORCING DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF REVISED 6-4-04

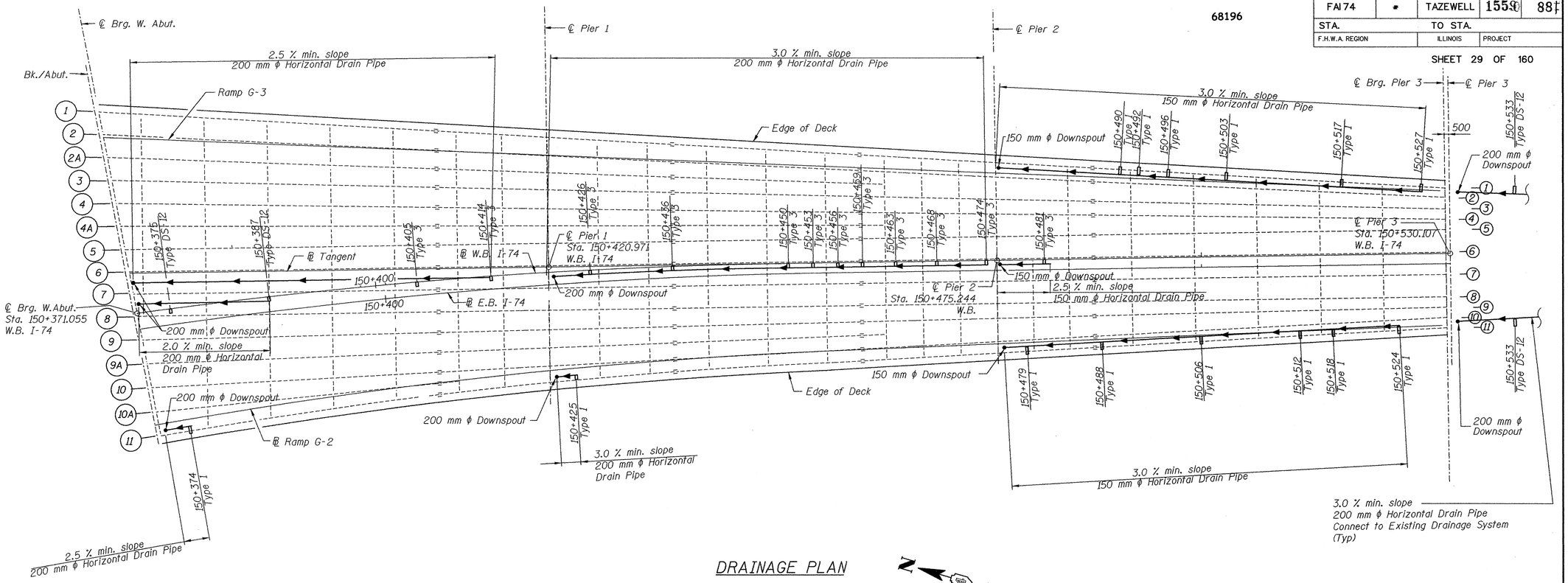
5/6/2004

M:\pro\3573\Murray Baker\st05dp5-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	88
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 29 OF 160

68196



DRAINAGE PLAN

N

NOTES:

1. Scupper locations provided along WB and EB stationing according to the nearest of the two base lines.
2. All pipes and fittings shall be reinforced fiberglass conforming to the requirements of ASTM D2996 designation code RT RP-11AE-5112. Pipes and fittings with Class C or Class F liners are also acceptable.
3. All connections of pipes and fittings shall be made with a threaded gasket coupler system or bolted gasketed flange system.
4. Runs of pipe shall be supported at spacing not exceeding those set by the manufacturer at the pipe. Straps shall have 120 degree contact and must have split fiberglass pipe protective sleave bonded in place with adhesive.
5. Pipe hangers shall be provided on all horizontal pipes at each Tee, Elbow or change in direction and at intermediate points not more than 1.50 m on centers. (See Sheet 33.)
6. See sheet 21 for Typical Additional Scupper Reinforcement.
7. Drain shall be located clear of all diaphragms.
8. For scuppers Type DS-12, Type 1 & Type 3 see sheets 30-32.

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

DECK DRAINAGE PLAN

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

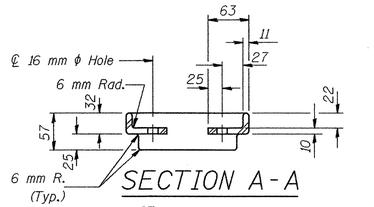
12/16/2003

m:\proj3573\murray baker\st05dr-7a0900001.dgn

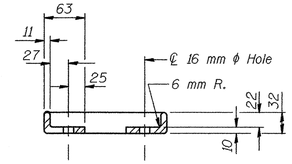
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	882
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

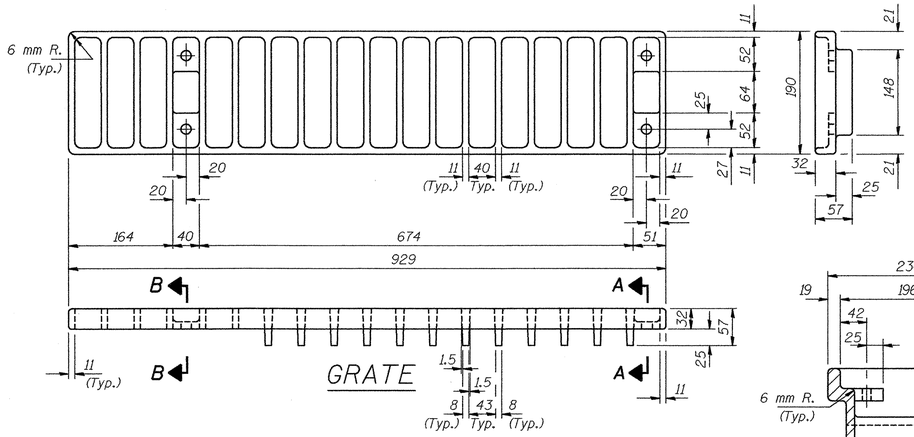
SHEET 30 OF 160



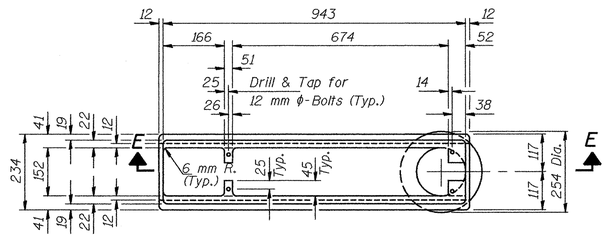
SECTION A-A

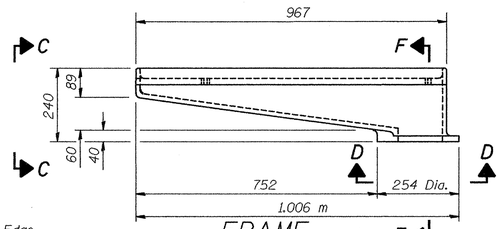


SECTION B-B

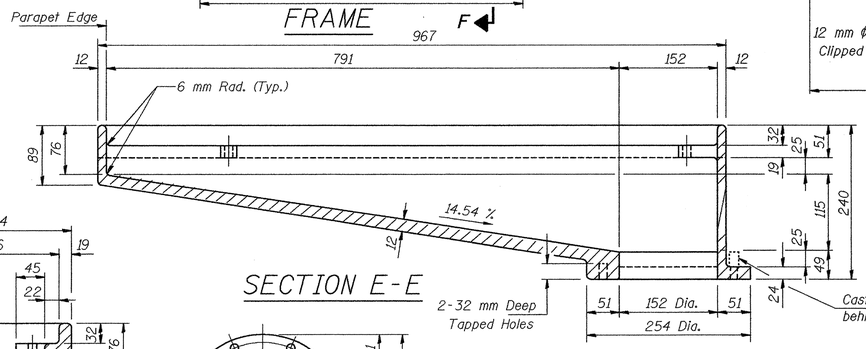


GRATE

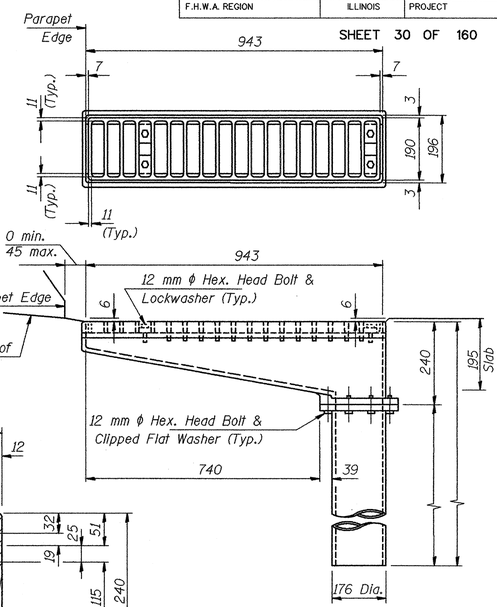




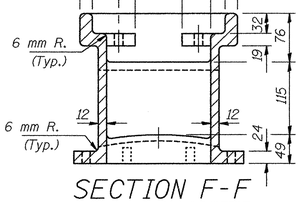
FRAME



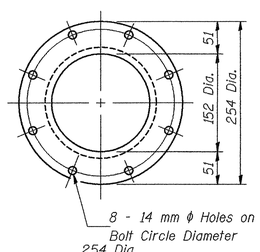
SECTION E-E

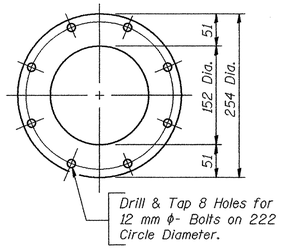


DRAINAGE SCUPPER

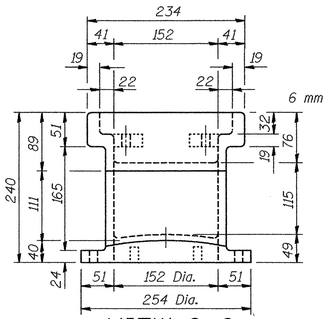


SECTION F-F

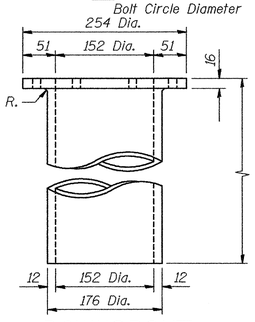




VIEW D-D



VIEW C-C



DOWNSPOUT

NOTES:

1. All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 30.
2. Bolts and washers shall conform to the requirements of ASTM A 307.
3. All bolts and washers shall be galvanized according to AASHTO M 232. As an alternate bolts and washers may be stainless steel.
4. Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper will be paid for at the unit bid price each for "DRAINAGE SCUPPERS, TYPE 1."
5. The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.
6. All dimensions are in millimeters (mm) except as noted.
7. Edge of scupper to be placed at edge of parapet except when prohibited by wide top flange of beam.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers, Type 1	Each	14

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

DRAINAGE SCUPPER, TYPE 1

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

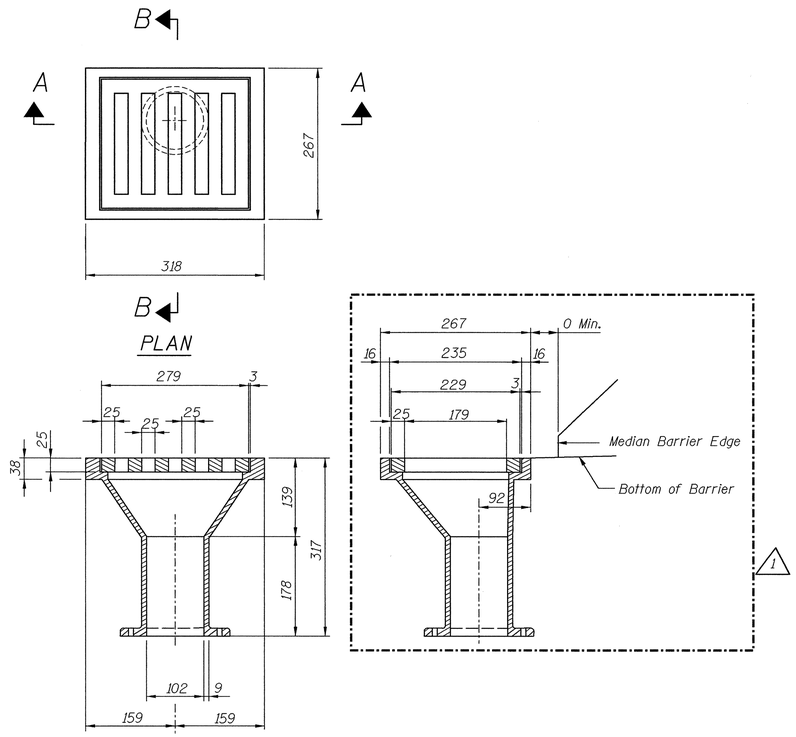
12/16/2003

m:\proj3573\murray baker\st05dr1-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	883
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 31 OF 160



SECTION A-A

SECTION B-B

TYPE 3 ROADWAY DRAIN

NOTES:

1. All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
2. Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232M.
3. The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
4. As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
5. Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.
6. The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
7. Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scuppers, Type 3.
8. All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL

Item	Unit	Quantity
Drainage Scuppers, Type 3	EACH	12

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
DRAINAGE SCUPPER, TYPE 3

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

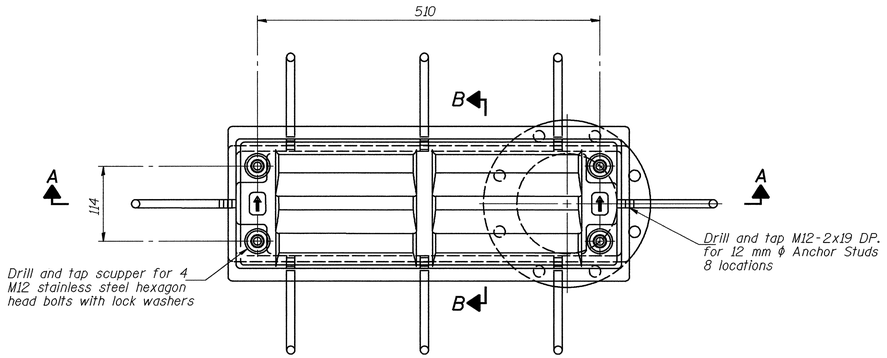
1 4/29/04 KMP REVISED 6-4-04

4/29/2004
m:\proj3573\murray baker\st05dr2-7a0900001.dgn

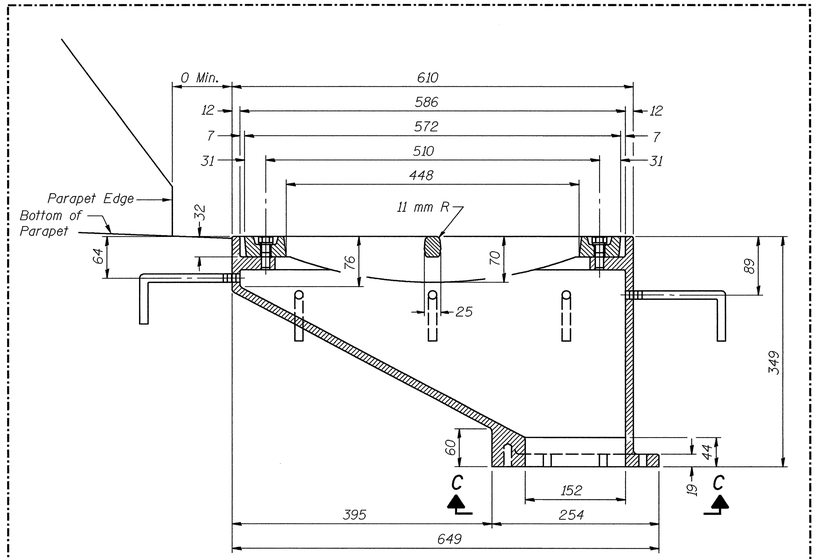
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	884
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

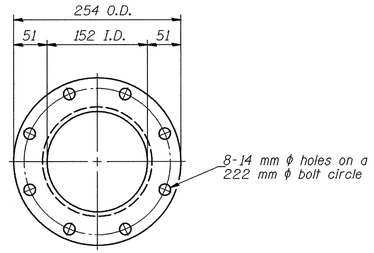
SHEET 32 OF 160

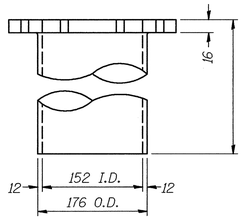


PLAN

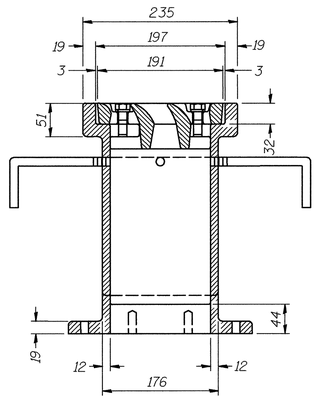


SECTION A-A

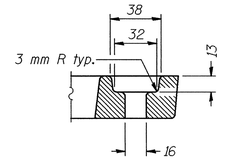




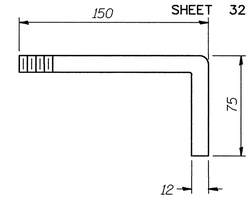
DOWNSPOUT



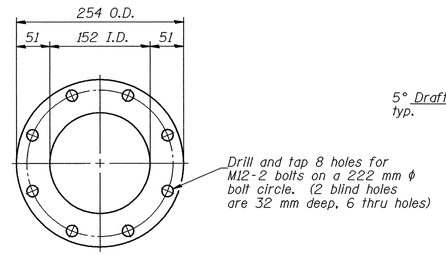
SECTION B-B



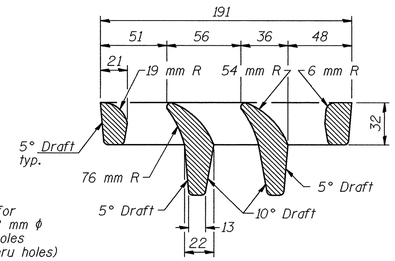
BOLT HOLE DETAIL



ANCHOR STUD DETAIL



VIEW C-C



VANE GRATE DETAIL

Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232M.

The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-12.

All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	4

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

DRAINAGE SCUPPER, DS-12

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 KMP REVISED 6-4-04

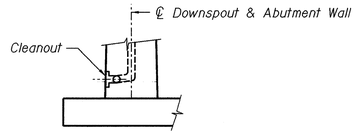
4/29/2004

m:\proj3573\murray baker\st05dr3-7a0900001.dgn

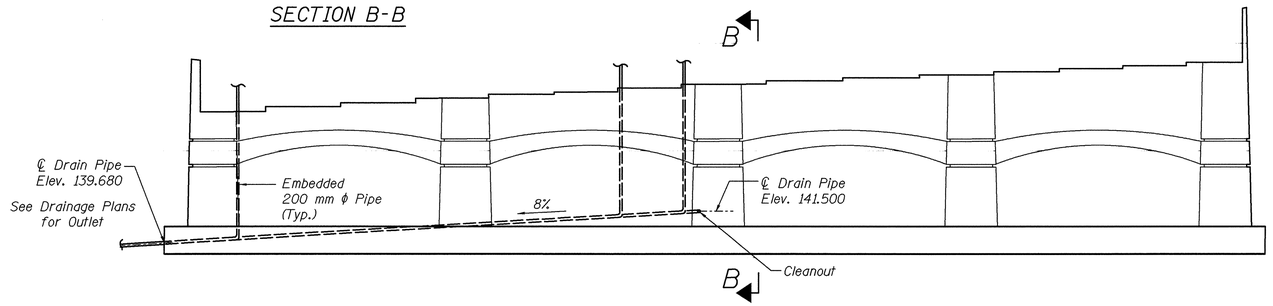
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	885
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

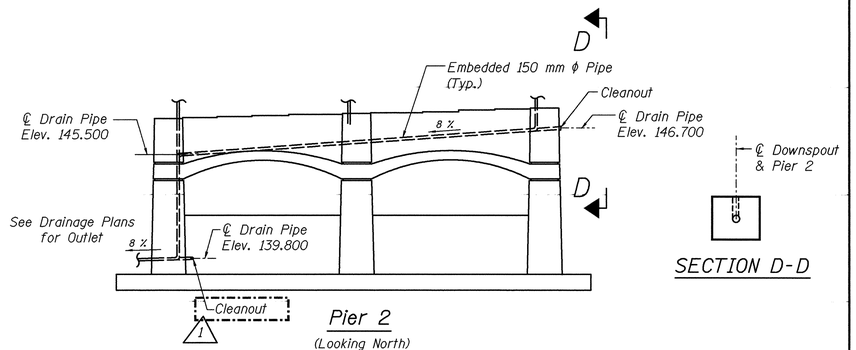
SHEET 33 OF 160



SECTION B-B

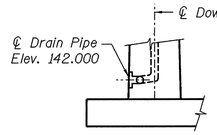


N. Abutment
(Looking North)

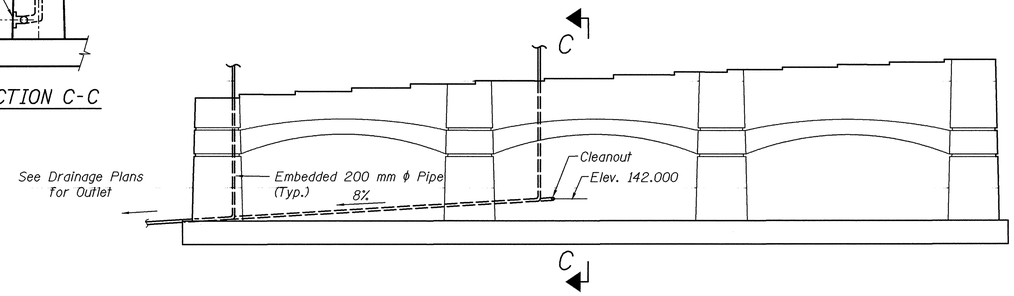


Pier 2
(Looking North)

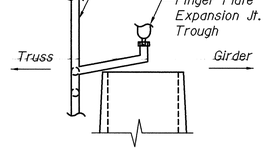
SECTION D-D



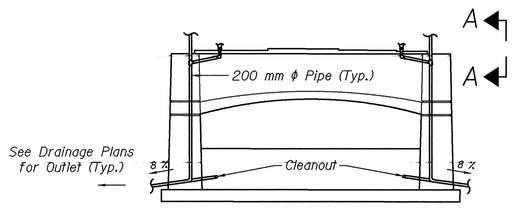
SECTION C-C



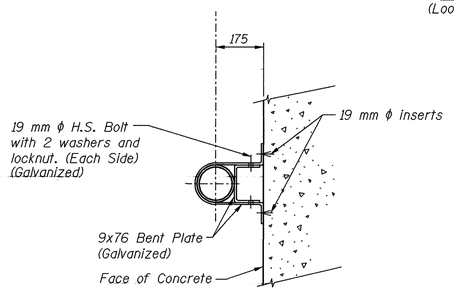
Pier 1
(Looking North)



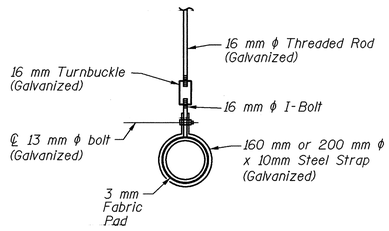
Section A-A
(East Side Shown-West Side
Similar, Opposite Hand)



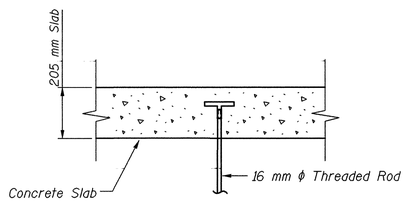
Pier 3
(Looking North)



Pipe Support Detail



Hanger Detail



Insert Detail

Notes:

1. All pipes and fittings shall be fiberglass pipe meeting the requirements of A.S.T.M. D-2996.
2. All steel hardware such as hangers, straps, and bolts shall conform to the requirements of A.S.T.M A-307.
3. The surface of the fiberglass pipe shall be free of bond inhibiting agents.
4. Work this sheet with sheets 29-32.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

BILL OF MATERIAL

Item	Unit	Total
Drainage System	L SUM	0.9

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

DRAINAGE DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF REVISED 6-4-04

5/6/2004

m:\proj3573\murray baker\st05dr4-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	886
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

SHEET 34 OF 160

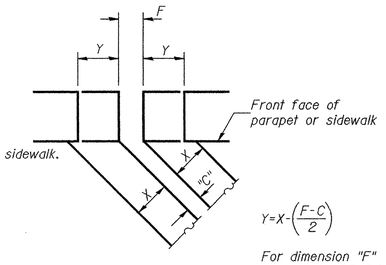
Joint Size	"C" at 10 °C	"D" at 10 °C
50	50	40 Min.
65	65	45 Min.
100	75	65 Min.

INSTALLATION NOTES

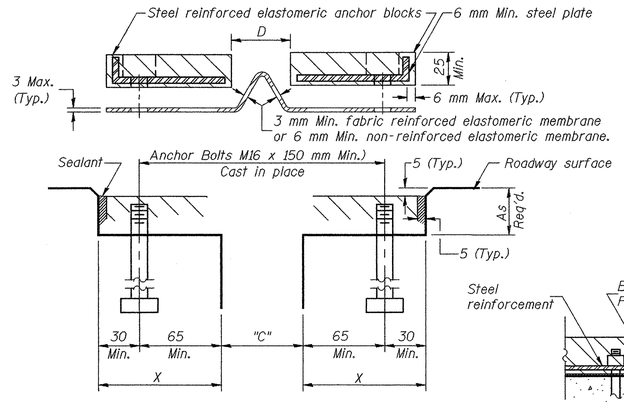
(1) Install continuous seal in roadway, parapet, curb, and sidewalk.

(2) Install anchor blocks as indicated.

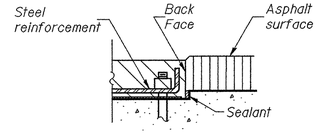
NOTE A: Maximum spacing of anchor bolts shall be 300 centers.



FORMING BLOCKOUT SKETCH



CROSS SECTION



ANCHOR BLOCK WITH ASPHALT SURFACE

SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed according to dimension "D", might require modifications to insure a minimum clearance of 40 mm from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±300 cts.

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

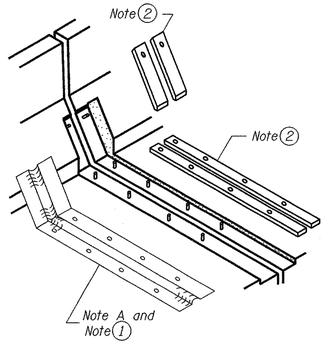
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

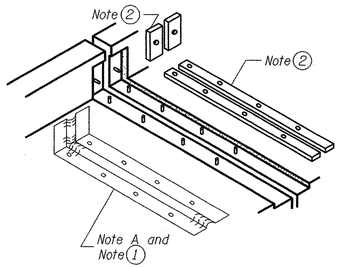
Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 10 °C.

The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.

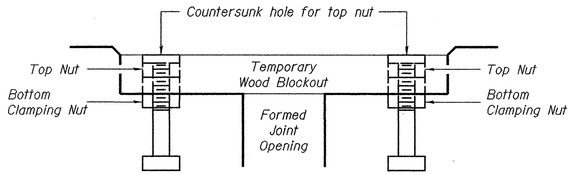
All dimensions are in millimeters (mm) except as noted.



AT PARAPET



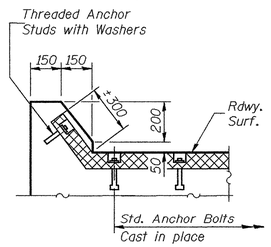
AT WALL



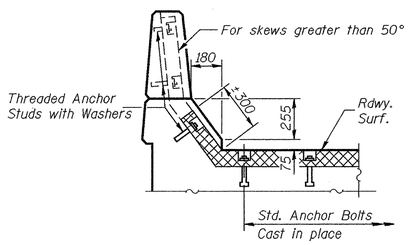
Note: Stud needs to be threaded lower to allow for use of clamping nut.

Anchor studs should be stainless

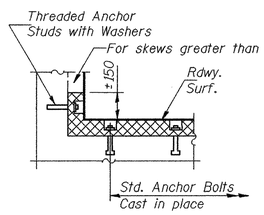
RECOMMENDED BLOCKOUT DETAIL



AT CURB



AT PARAPET



AT WALL

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Neoprene Expansion Joint, 65 mm	m	41.4

DESIGNED	ADD
CHECKED	ADD
DRAWN	VH
CHECKED	ADD

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
EXPANSION JOINT
65 mm NEOPRENE

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

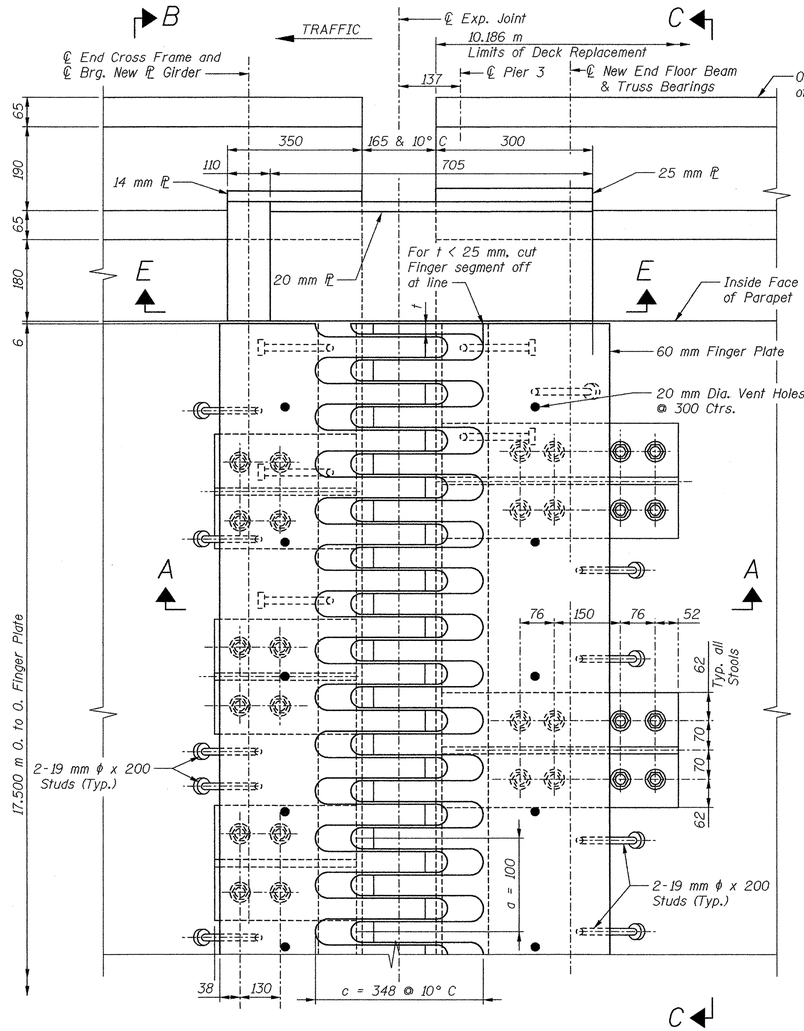
12/16/2003

m:\proj3573\murray baker\st05ej-7a0900001.dgn

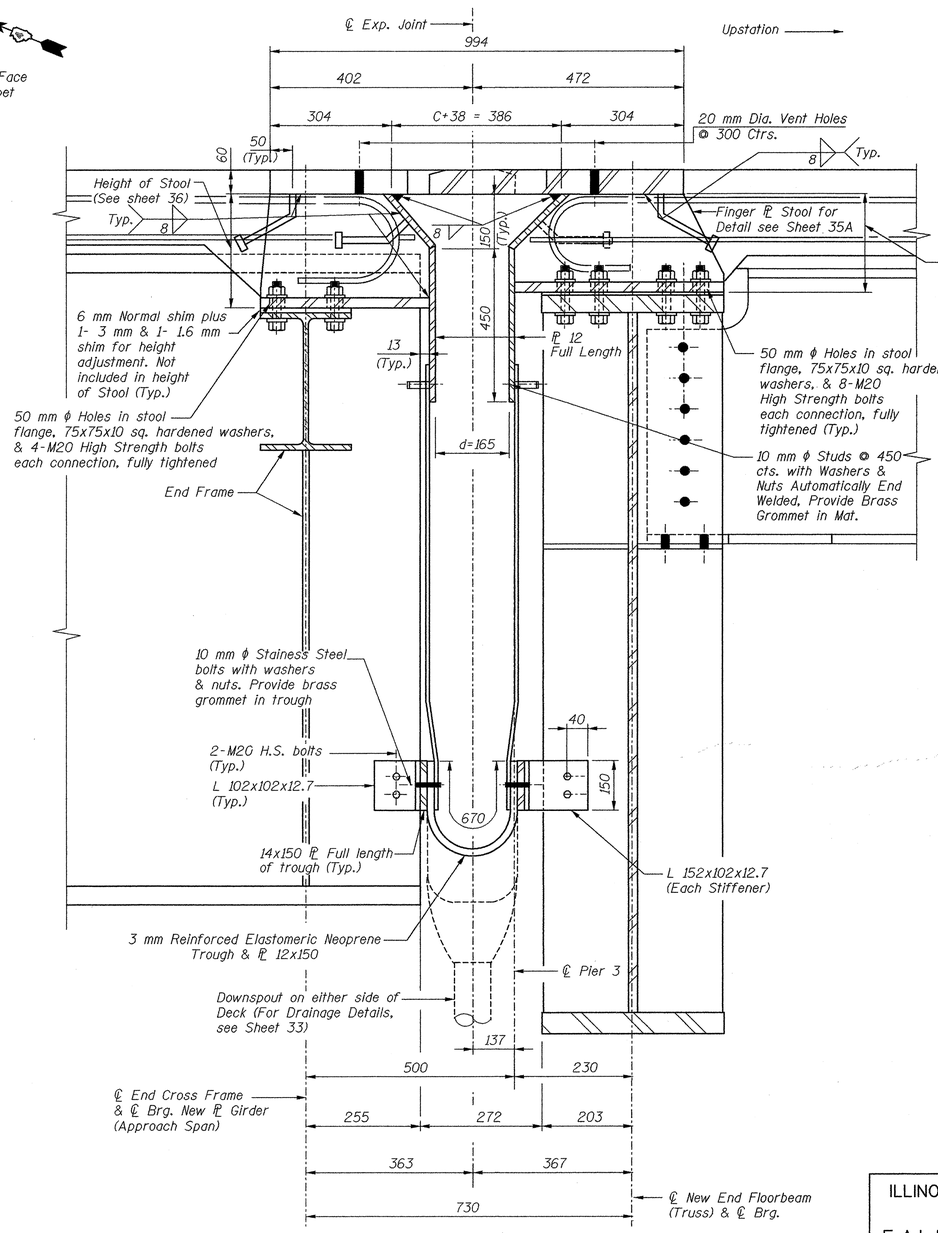
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	887
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 35 OF 160

68196



PLAN OF FINGER PLATE



SECTION A-A

NOTES:

1. Work this sheet with sheets 35A & 36.
2. For Floorbeam Details see sheet 94,
   for End Frame Details see sheet 47.

DESIGNED	ADD
CHECKED	KMP
DRAWN	RMG
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

FINGER PLATE
EXPANSION JOINT DETAILS 1

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

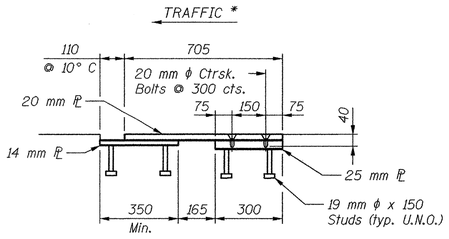
12/16/2003

m:\proj3573\murray baker\st05ej1-7d090001.dgn

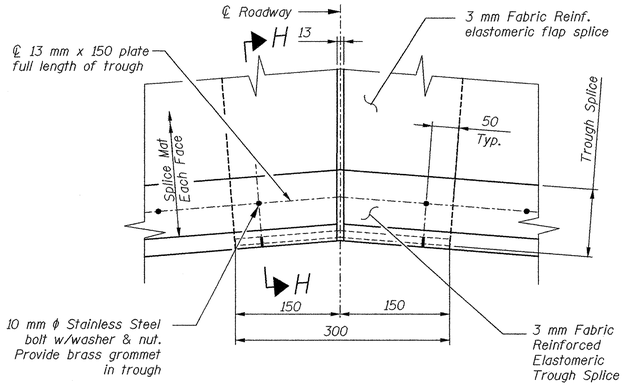
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	888
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

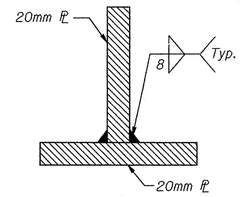
SHEET 35A OF 160



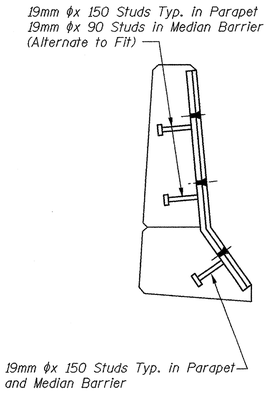
SECTION F-F



TROUGH SPLICE DETAIL

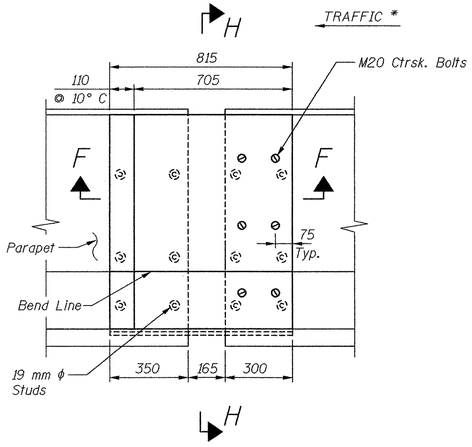


FINGER PLATE STOOL DETAIL



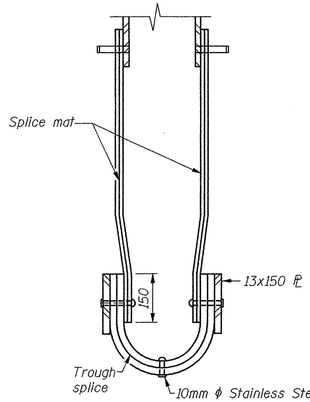
SECTION H-H

Fascia Parapet shown. Both Faces of Median Barrier similar and shall be cast out on top of finger plate joint.

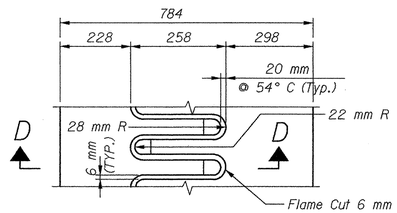


SECTION E-E

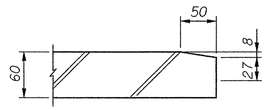
* Traffic Flow should be towards opening in Steel Plates.



SECTION H-H



FLAME CUTTING DIAGRAM



SECTION D-D

DESIGNED	ADD
CHECKED	KMP
DRAWN	RMG
CHECKED	KMP

NOTES:

1. Work this sheet with sheet 35 & 36.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
FINGER PLATE
EXPANSION JOINT DETAILS 2

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

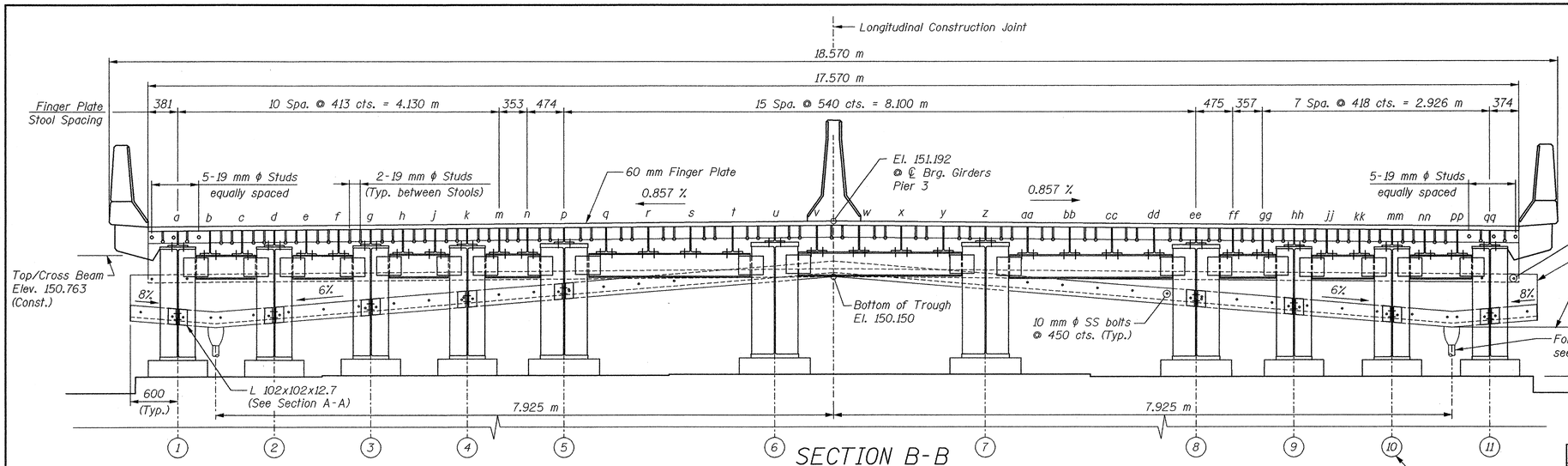
12/16/2003

m:\proj3573\murray baker\st05e\ta-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI74	*	TAZEWELL	1559	889
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

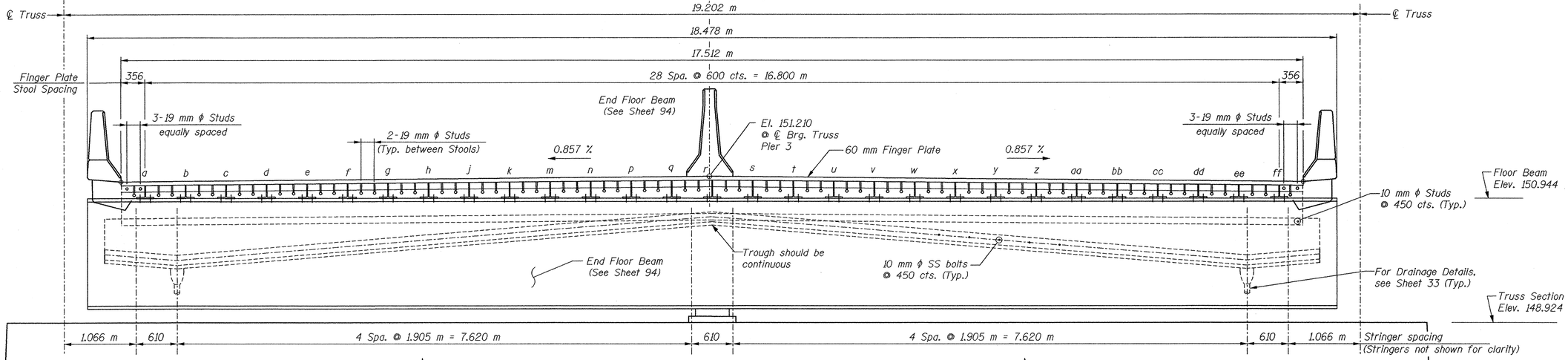
SHEET 36 OF 160

68196



SECTION B-B

(Dimensions along ℄ Brg. Girders, Partial End Frames shown for clarity)



SECTION C-C

(Dimensions along ℄ Brg. Truss)

BILL OF MATERIAL

Item	Unit	Total
Fabric Reinforced Elastomeric Trough	Meter	22.2

STOOL HEIGHTS (mm)

	a	b	c	d	e	f	g	h	j	k	m	n	p	q	r	s	t	u	v	w	x	y	z	aa	bb	cc	dd	ee	ff	gg	hh	jj	kk	mm	nn	pp	qq
Section B-B	184	297	301	194	308	312	189	319	322	200	329	332	183	341	346	350	355	193	363	363	359	354	183	345	340	335	331	189	322	319	205	312	308	202	301	298	184
Section C-C	131	136	141	147	152	157	162	167	172	177	183	188	193	198	200	198	193	188	183	177	172	167	162	157	152	147	141	136	131	—	—	—	—	—	—	—	—

DESIGNED	ADD
CHECKED	YS
DRAWN	RMG
CHECKED	YS

NOTES:
1. Work this sheet with sheet 35 & 35A
2. See sheets 9 thru 14 for Grade elevations at ℄ Pier 3.
3. Expansion Joint designed for expansion ±90 mm from mean temperature of 10°C; expansion tributing length of Structure is 186.0 m. The installation Temperature shall be taken as the mean shade Air Temperature under the Structure for 24 hours prior to Joint Installation. For each 1°C temperature change from mean value 2 mm total joint horizontal adjustment is required.
4. Material: Steel in accordance with AASHTO M 270M Grade 345. All Expansion Joint Details including Connections shall be Hot-Dipped Galvanized in accordance with AASHTO M 232. H. S. bolts shall be A 325M, hardened washers- F 436M.
5. No Intermediate Field Splices are permitted. Joint Components to be fully assembled in the Shop for Inspection and Approval. Joints to be shipped to the Job-site Fully Assembled.
6. For End Cross Frame at Pier 3, see sheet 47 For Truss Floor Beam at Pier 3, see sheet 94.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

FINGER PLATE EXPANSION JOINT DETAILS 3

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

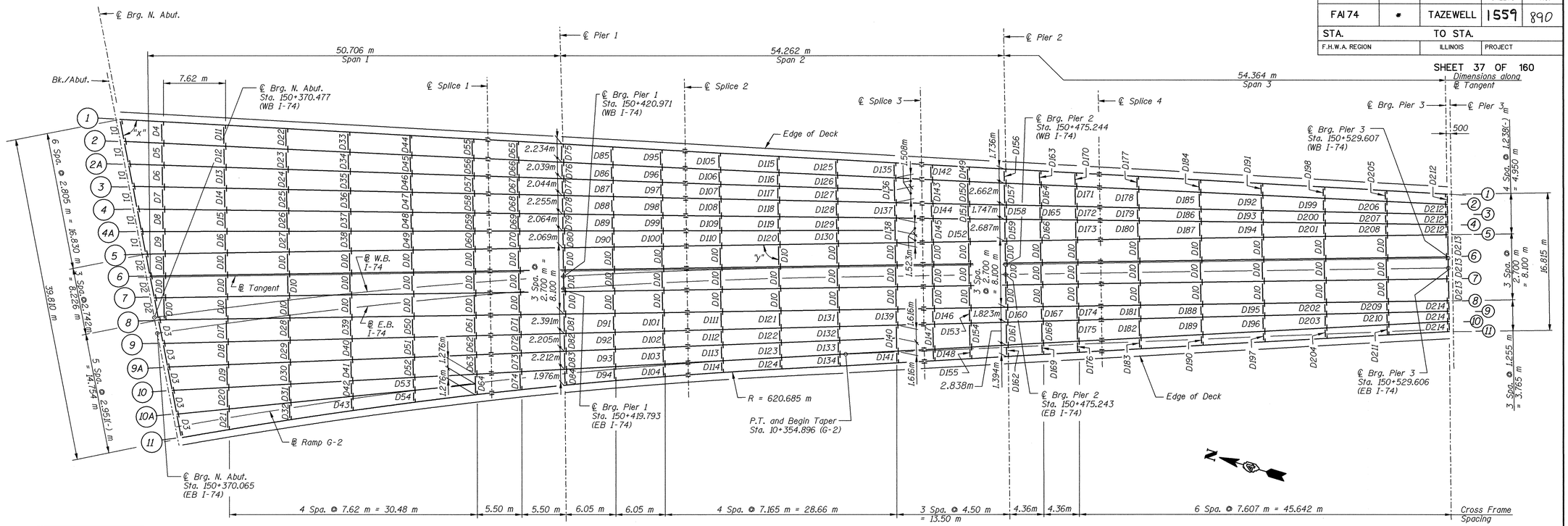
12/16/2003

m:\proj3573\murray baker\st05ej2-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	890
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 37 OF 160



Girder No.	ANGLE "x"	ANGLE "y"
1	75°51'53"	94°05'02"
2	76°23'19"	93°33'36"
2A	77°07'58"	92°48'57"
3	77°53'08"	92°03'47"
4	78°25'19"	91°31'36"
4A	79°10'52"	90°46'03"
5	79°56'55"	90°00'00"
6	79°56'55"	90°00'00"
7	79°56'55"	90°00'00"
8	79°56'55"	90°00'00"
9	80°32'51"	89°24'04"
9A	81°22'35"	88°34'20"
10	82°12'52"	87°44'03"
10A	84°46'45"	85°10'10"
11*	———	87°35'18"

* Angle applies where girder is tangent.

Angle "x" is measured at the north abutment.

Angle "y" is measured at Piers 1, 2, 3 and all interior Cross Frames, Cross Girders, or End Cross Frames.

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

FRAMING PLAN

INTERIOR CROSS FRAME / CROSS GIRDER / END CROSS FRAME LENGTH TABLE

Mark	"L" (m)
D1	2.805
D2	2.742
D3	2.951

Mark	"L" (m)
D4	2.685
D5	2.678
D6	2.691
D7	2.715
D8	2.714
D9	2.727
D10	2.700

Mark	"L" (m)
D11	2.615
D12	2.579
D13	2.590
D14	2.644
D15	2.613
D16	2.625
D17	2.824
D18	2.806
D19	2.820
D20	2.646
D21	2.540

Mark	"L" (m)
D22	2.545
D23	2.480
D24	2.490
D25	2.573
D26	2.512
D27	2.523
D28	2.745
D29	2.696
D30	2.708
D31	2.303
D32	2.080

Mark	"L" (m)
D33	2.475
D34	2.381
D35	2.390
D36	2.501
D37	2.411
D38	2.421
D39	2.665
D40	2.585
D41	2.596
D42	1.961
D43	1.716

Mark	"L" (m)
D44	2.405
D45	2.281
D46	2.289
D47	2.430
D48	2.310
D49	2.319
D50	2.585
D51	2.475
D52	2.485
D53	1.618
D54	1.448

Mark	"L" (m)
D55	2.335
D56	2.182
D57	2.189
D58	2.358
D59	2.209
D60	2.217
D61	2.506
D62	2.364
D63	2.373
D64	2.552

Mark	"L" (m)
D65	2.285
D66	2.110
D67	2.117
D68	2.307
D69	2.136
D70	2.143
D71	2.448
D72	2.285
D73	2.293
D74	2.239

Mark	"L" (m)
D75	2.234
D76	2.039
D77	2.044
D78	2.255
D79	2.064
D80	2.069
D81	2.391
D82	2.205
D83	2.212
D84	1.976

Mark	"L" (m)
D85	2.179
D86	1.960
D87	1.965
D88	2.199
D89	1.983
D90	1.980
D91	2.327
D92	2.118
D93	2.124
D94	1.743

Mark	"L" (m)
D95	2.123
D96	1.881
D97	1.885
D98	2.142
D99	1.903
D100	1.907
D101	2.264
D102	2.030
D103	2.035
D104	1.570

Mark	"L" (m)
D105	2.057
D106	1.788
D107	1.791
D108	2.075
D109	1.808
D110	1.811
D111	2.189
D112	1.927
D113	1.930
D114	1.441

Mark	"L" (m)
D115	1.991
D116	1.694
D117	1.696
D118	2.008
D119	1.713
D120	1.715
D121	2.114
D122	1.823
D123	1.825
D124	1.395

Mark	"L" (m)
D125	1.926
D126	1.601
D127	1.602
D128	1.941
D129	1.618
D130	1.619
D131	2.039
D132	1.719
D133	1.720
D134	1.433

Mark	"L" (m)
D135	1.860
D136	3.015
D137	1.873
D138	3.046
D139	1.965
D140	3.231
D141	1.428

Mark	"L" (m)
D142	1.819
D143	2.897
D144	1.831
D145	2.927
D146	1.918
D147	3.100
D148	1.417

Mark	"L" (m)
D149	1.777
D150	2.780
D151	1.789
D152	2.807
D153	1.871
D154	2.969
D155	1.405

Mark	"L" (m)
D156	1.736
D157	2.662
D158	1.747
D159	2.687
D160	1.823
D161	2.838
D162	1.394

Mark	"L" (m)
D163	1.696
D164	2.547
D165	1.706
D166	2.570
D167	1.778
D168	2.711
D169	1.383

Mark	"L" (m)
D170	1.656
D171	2.433
D172	1.665
D173	2.454
D174	1.732
D175	2.584
D176	1.372

Mark	"L" (m)
D177	1.586
D178	2.234
D179	1.594
D180	2.251
D181	1.653
D182	2.363
D183	1.352

Mark	"L" (m)
D184	1.516
D185	2.035
D186	1.523
D187	2.049
D188	1.573
D189	2.141
D190	1.333

Mark	"L" (m)
D191	1.446
D192	1.836
D193	1.451
D194	1.846
D195	1.494
D196	1.920
D197	1.314

Mark	"L" (m)
D198	1.376
D199	1.636
D200	1.380
D201	1.643
D202	1.414
D203	1.698
D204	1.294

Mark	"L" (m)
D205	1.307
D206	1.437
D207	1.309
D208	1.440
D209	1.335
D210	1.477
D211	1.275

Mark	"L" (m)
D212	1.238
D213	2.700
D214	1.255

NOTES:

1. "L" dimension is the length between ℄'s of girders along a line parallel to and offset from ℄ Pier 1 (U.N.O.).
2. For End Frames D1, D2 & D3 the "L" dimension is the length between the ℄'s of girders measured along the ℄ Bearing at the North Abutment.
3. Work this sheet with Sheets 38-44, 48 & 49. 1

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

FRAMING PLAN

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF REVISED 6-4-04

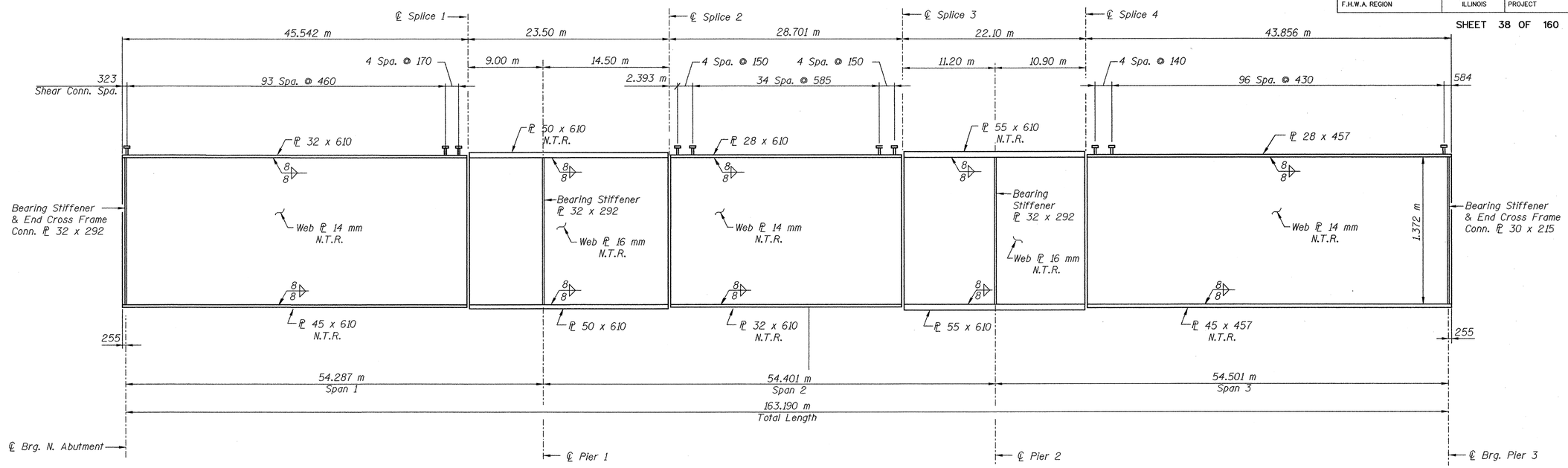
4/29/2004

m:\proj3573\murray baker\st05fr1-7a0900001.dgn

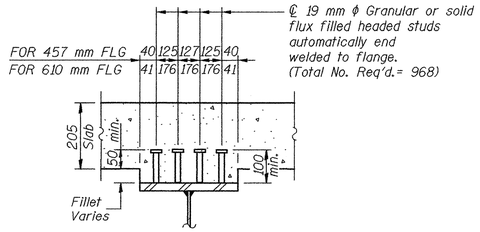
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	891
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 38 OF 160



GIRDER 1 ELEVATION



SHEAR CONNECTOR DETAIL

DESIGNED	ADD/PKS
CHECKED	KMP
DRAWN	VH
CHECKED	KMP/TL

NOTES:

1. N.T.R denotes plates which Notch Toughness Requirement are applicable.
2. Girders, cross frames and splice plates shall be AASHTO M270m grade 345 except fill plates.
3. Fill plates shall be AASHTO M270m grade 250.
4. Work this sheet with sheets 37 and 43-52.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

GIRDER DETAILS
(GIRDER 1)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

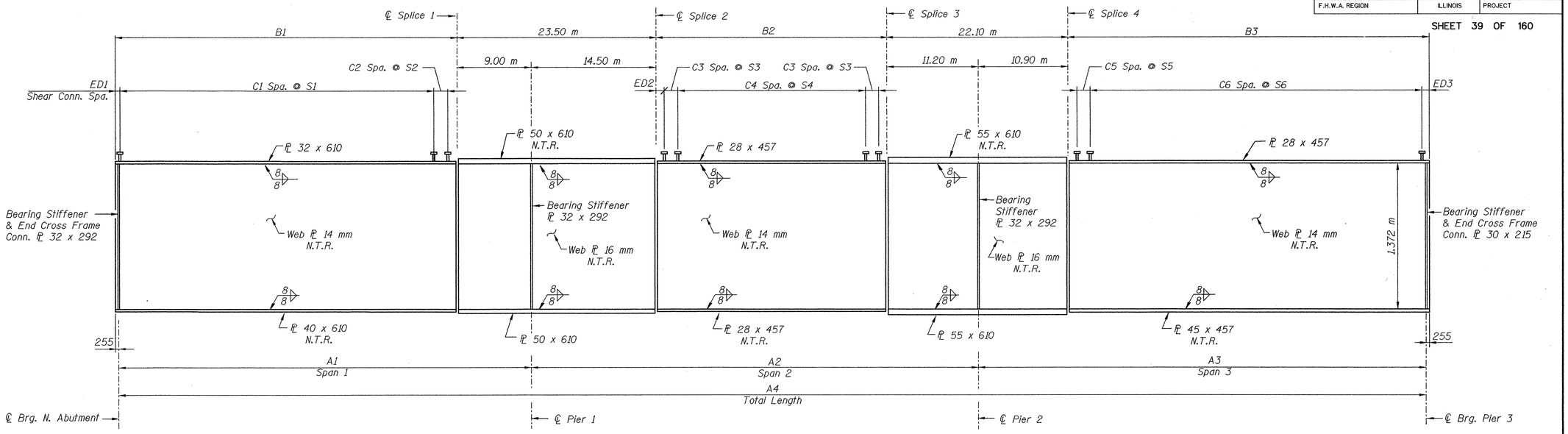
12/16/2003

m:\proj3573\murray baker\st05gr1-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	892
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

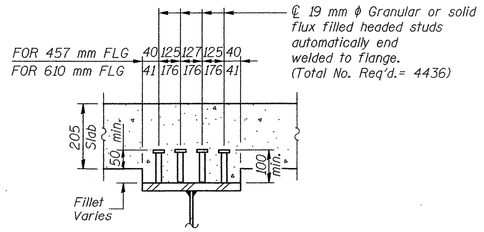
SHEET 39 OF 160



GIRDER 2, 3, 4 AND 9 ELEVATION

Girder No.	Girder Dimensions (meters)							Shear Connector Spacing (mm)								
	A1	A2	A3	A4	B1	B2	B3	S1	S2	S3	S4	S5	S6	ED1	ED2	ED3
2	53.764	54.368	54.468	162.600	45.019	28.668	43.823	435	150	150	485	130	350	431	2629	391
3	52.715	54.298	54.398	161.412	43.970	28.598	43.753	430	150	150	490	130	360	623	2392	317
4	52.210	54.282	54.382	160.875	43.465	28.582	43.737	430	150	150	490	130	345	633	2187	578
9	49.264	54.266	54.366	157.896	40.519	28.566	43.721	415	150	150	480	115	345	371	1241	362

Shear Connector No. of Spaces					
C1	C2	C3	C4	C5	C6
94	5	5	49	5	113
93	5	5	49	5	109
92	5	5	49	5	113
90	5	5	51	6	114



SHEAR CONNECTOR DETAIL

NOTES:

1. N.T.R denotes plates which Notch Toughness Requirement are applicable.
2. Girders, cross frames and splice plates shall be AASHTO M270m grade 345 except fill plates.
3. Fill plates shall be AASHTO M270m grade 250.
4. Work this sheet with sheets 37 and 43-52.

DESIGNED	ADD/PKS
CHECKED	KMP
DRAWN	VH
CHECKED	KMP/TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

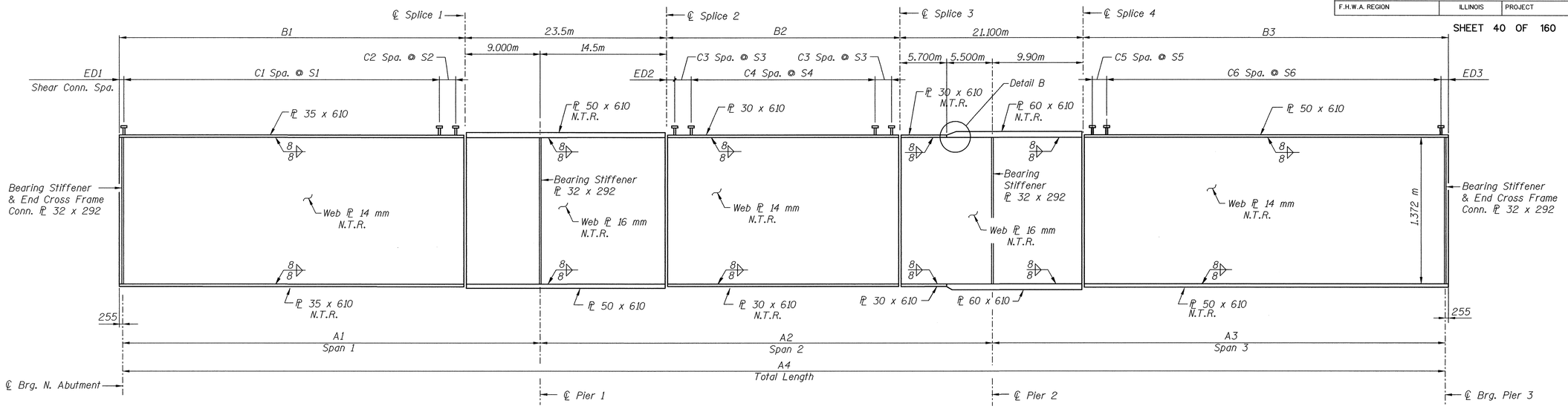
ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
GIRDER DETAILS
(GIRDERS 2, 3, 4 & 9)
SN: 090-0001
PEORIA - TAZEWELL CO., IL.
STA. 150+475.243
DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05gr2-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	893
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

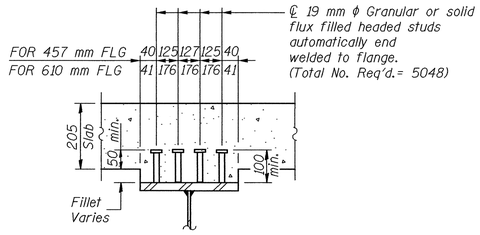
SHEET 40 OF 160



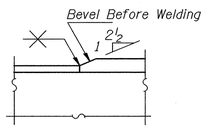
GIRDERS 5, 6, 7 AND 8 ELEVATION

Girder No.	Girder Dimensions (meters)							Shear Connector Spacing (mm)								
	A1	A2	A3	A4	B1	B2	B3	S1	S2	S3	S4	S5	S6	ED1	ED2	ED3
5	51.212	54.263	54.363	159.838	42.467	28.563	44.718	430	150	150	510	150	520	603	710	420
6	50.734	54.263	54.363	159.360	41.989	28.563	44.718	300	125	125	355	125	360	630	647	256
7	50.255	54.263	54.363	158.881	41.510	28.563	44.718	300	125	125	350	125	335	485	466	508
8	49.776	54.263	54.363	158.403	41.031	28.563	44.718	315	125	125	355	125	320	630	694	335

Shear Connector No. of Spaces					
C1	C2	C3	C4	C5	C6
89	5	5	49	5	78
129	6	6	61	6	119
128	6	6	62	6	127
121	6	6	62	6	133



SHEAR CONNECTOR DETAIL



DETAIL "B"

NOTES:

1. N.T.R denotes plates which Notch Toughness Requirement are applicable.
2. Girders, cross frames and splice plates shall be AASHTO M270m grade 345 except fill plates.
3. Fill plates shall be AASHTO M270m grade 250.
4. Work this sheet with sheets 37 and 43-52.

DESIGNED	ADD/PKS
CHECKED	KMP
DRAWN	VH
CHECKED	KMP/TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
GIRDER DETAILS
(GIRDERS 5, 6, 7 & 8)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

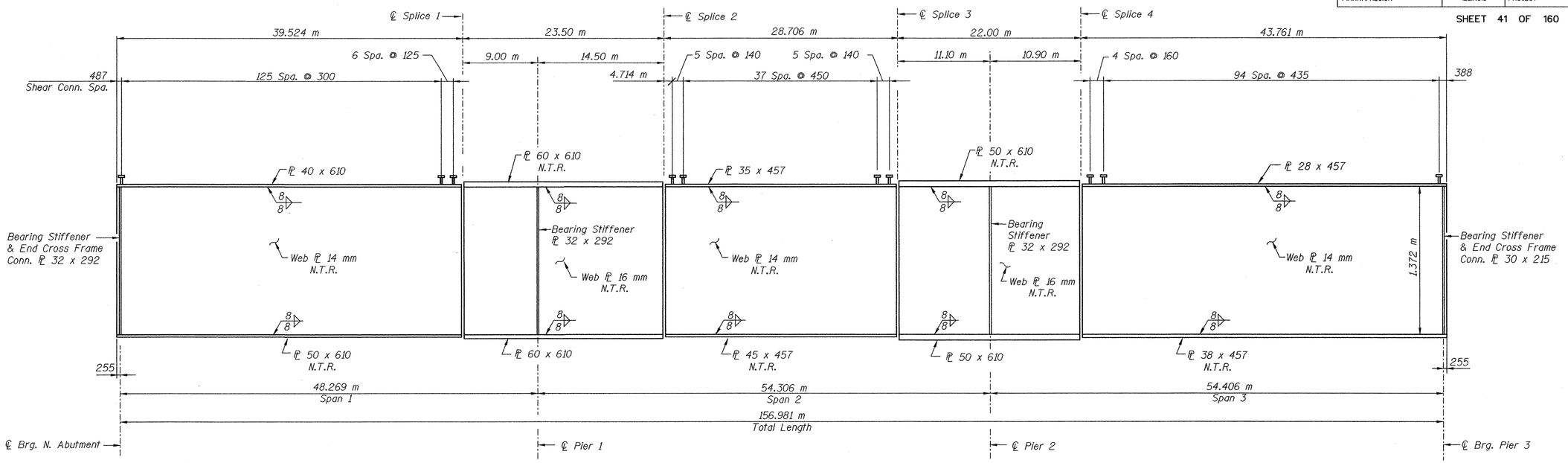
STA. 150+475.243
DATE: 1-14-04

01/14/2004
m:\proj3573\murray_baker\st05gr3-7a0900001.dgn

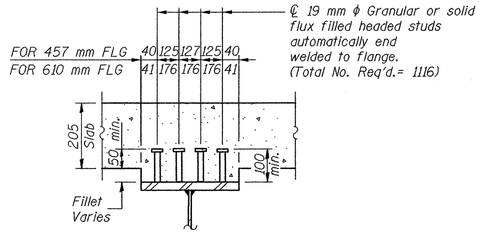
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	894
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 41 OF 160



GIRDER 10 ELEVATION



SHEAR CONNECTOR DETAIL

NOTES:

1. N.T.R denotes plates which Notch Toughness Requirement are applicable.
2. Girders, cross frames and splice plates shall be AASHTO M270m grade 345 except fill plates.
3. Fill plates shall be AASHTO M270m grade 250.
4. Work this sheet with sheets 37 and 43-52.

DESIGNED	ADD/KMP
CHECKED	KMP
DRAWN	VH
CHECKED	KMP/TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

GIRDER DETAILS
(GIRDER 10)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

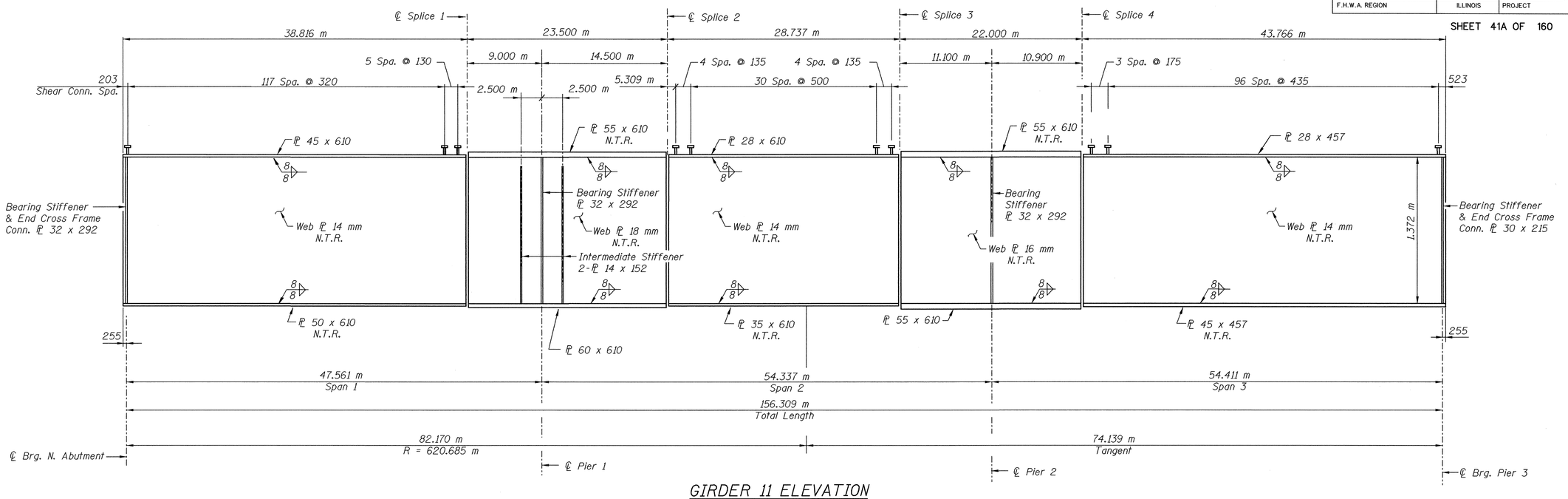
12/16/2003

m:\proj3573\Murray Baker\st05gr4-7a0900001.dgn

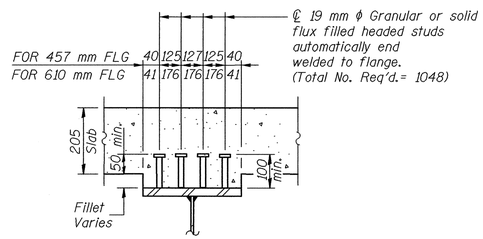
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	895
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 41A OF 160



GIRDER 11 ELEVATION



SHEAR CONNECTOR DETAIL

NOTES:

1. N.T.R denotes plates which Notch Toughness Requirement are applicable.
2. Girders, cross frames and splice plates shall be AASHTO M270m grade 345 except fill plates.
3. Fill plates shall be AASHTO M270m grade 250.
4. Work this sheet with sheets 37 and 43-52.

DESIGNED	ADD/PKS
CHECKED	KMP
DRAWN	VH
CHECKED	KMP/TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

GIRDER DETAILS
(GIRDER 11)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

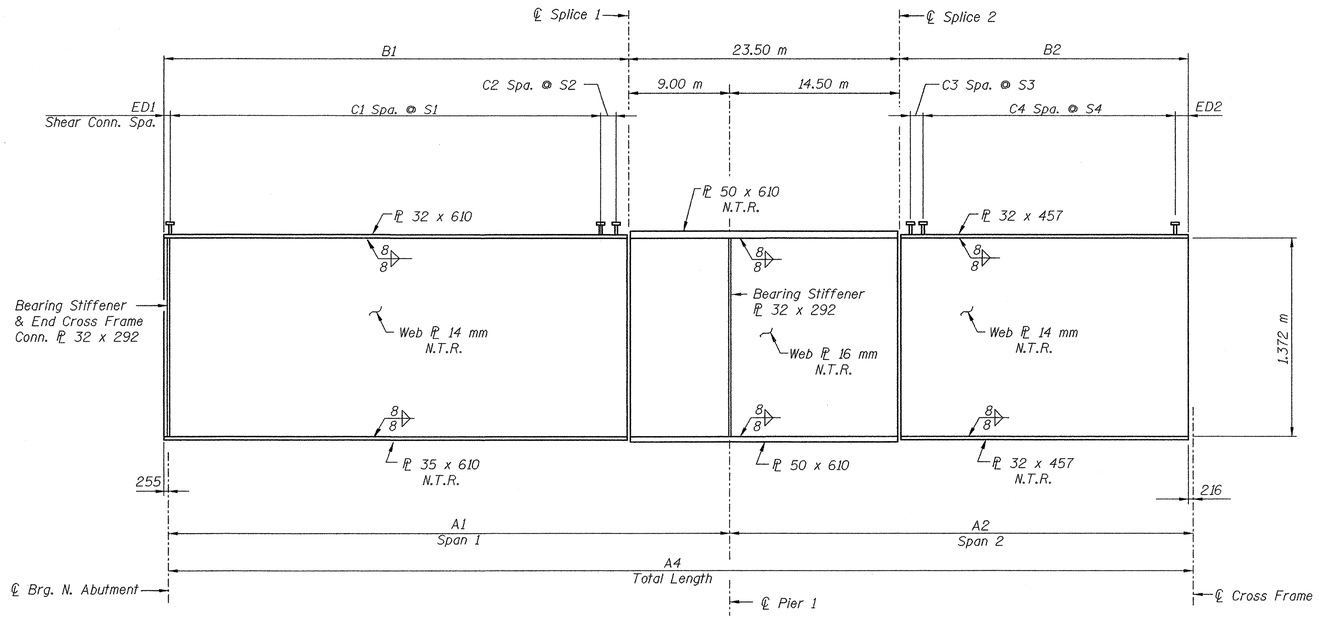
STA. 150+475.243
DATE: 1-14-04

01/14/2004
m:\proj3573\Murray Baker\st05gr44-7a0900001.dgn

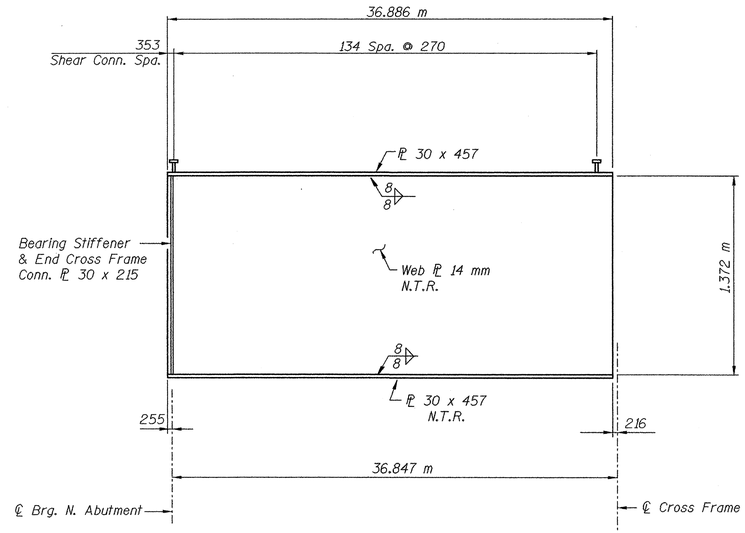
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	895
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 42 OF 160



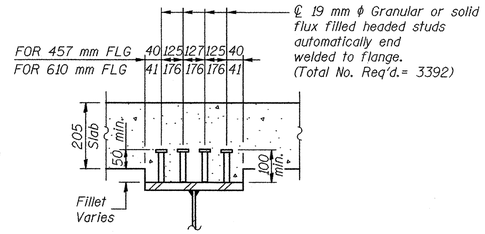
GIRDERS 2A, 4A AND 9A ELEVATION



GIRDER 10A ELEVATION

Girder No.	Girder Dimensions (meters)					Shear Connector Spacing (mm)					
	A1	A2	A4	B1	B2	S1	S2	S3	S4	ED1	ED2
2A	53.235	40.812	94.047	44.490	26.096	300	145	110	245	654	142
4A	51.706	40.767	92.473	42.961	26.051	300	145	115	240	504	168
9A	48.761	40.776	89.537	40.016	26.060	305	125	100	245	779	150

Shear Connector No. of Spaces			
C1	C2	C3	C4
137	5	5	90
133	5	5	95
121	6	6	99



SHEAR CONNECTOR DETAIL

NOTES:

1. N.T.R denotes plates which Notch Toughness Requirement are applicable.
2. Girders, cross frames and splice plates shall be AASHTO M270m grade 345 except fill plates.
3. Fill plates shall be AASHTO M270m grade 250.
4. Work this sheet with sheets 37 and 43-52.

DESIGNED	ADD/PKS
CHECKED	KMP
DRAWN	VH
CHECKED	KMP/TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

GIRDER DETAILS
(GIRDERS 2A, 4A, 9A & 10A)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

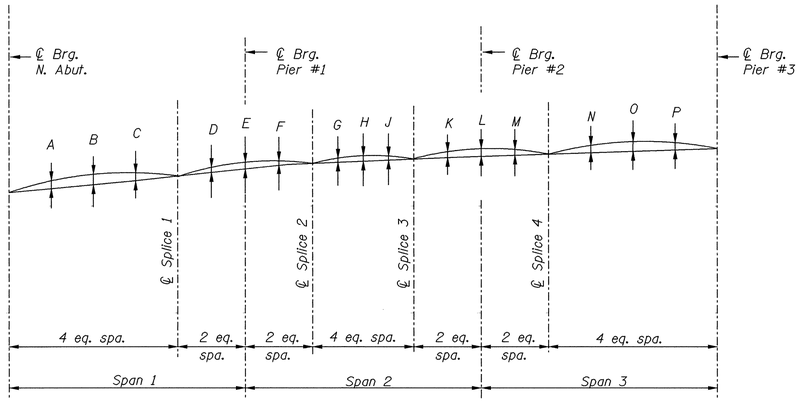
12/16/2003

m:\proj3573\murray baker\st05gr5-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	897
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

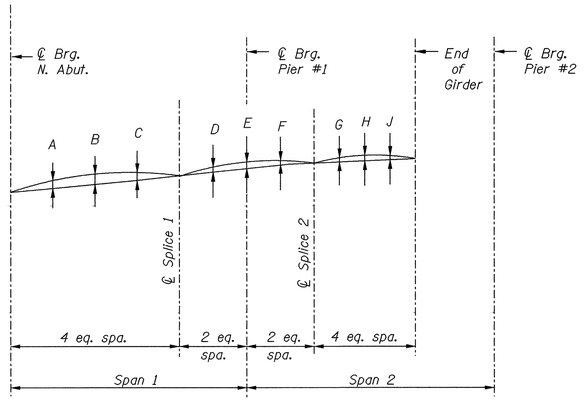
SHEET 43 OF 160



CAMBER DIAGRAM

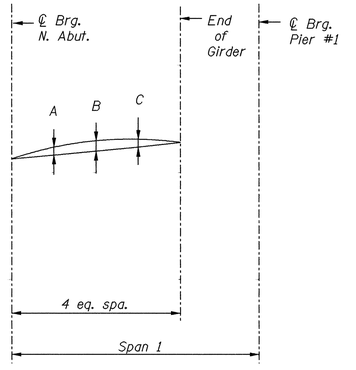
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
Girder 1	75	100	75	0	0	0	53	70	53	-15	-20	-15	60	80	60
Girder 2	83	110	83	-19	-28	-26	45	60	45	-23	-30	-22	68	90	68
Girder 3	75	100	75	-19	-28	-26	30	40	30	-23	-30	-22	75	100	75
Girder 4	68	90	68	-19	-28	-26	15	20	15	-23	-30	-22	90	120	90
Girder 5	75	100	75	-19	-28	-26	15	20	15	-23	-30	-22	83	110	83
Girder 6	60	80	60	-19	-28	-26	38	50	38	-15	-20	-15	105	140	105
Girder 7	38	50	38	-19	-28	-26	38	50	38	-15	-20	-15	105	140	105
Girder 8	38	50	38	-19	-28	-26	30	40	30	-23	-30	-22	90	120	90
Girder 9	53	70	53	-19	-28	-26	38	50	38	-23	-30	-22	113	150	113
Girder 10	45	60	45	-31	-47	-43	19	25	19	-19	-25	-19	128	170	128
Girder 11	53	70	53	-15	-24	-21	19	25	19	-61	-80	-59	135	180	135

1



CAMBER DIAGRAM

	A	B	C	D	E	F	G	H	J
Girder 2A	83	110	83	-19	-28	-26	23	30	23
Girder 4A	75	100	75	-19	-28	-26	23	30	23
Girder 9A	45	60	45	-19	-28	-26	23	30	23



CAMBER DIAGRAM

	A	B	C
Girder 10A	53	70	53

TOP OF WEB ELEVATIONS (FOR FABRICATION ONLY)

Location \ Girder	1	2	2A	3	4	4A	5	6	7	8	9	9A	10	10A	11
℄ Brg. N. Abut.	148.084	147.975	147.865	147.756	147.647	147.538	147.426	147.288	147.140	146.992	146.953	146.793	146.625	146.476	146.301
℄ Splice 1	148.813	148.745	148.655	148.558	148.467	148.355	148.211	148.057	147.996	147.841	147.695	147.574	147.443	147.343	147.313
℄ Brg. Pier #1	148.942	148.850	148.766	148.681	148.594	148.480	148.369	148.212	148.148	147.995	147.855	147.740	147.581	-	147.493
℄ Splice 2	149.149	149.092	149.017	148.952	148.872	148.755	148.697	148.537	148.467	148.316	148.187	148.082	147.926	-	147.845
℄ Splice 3	149.499	149.492	149.434	149.417	149.379	149.312	149.325	149.226	149.169	149.104	149.040	148.941	148.910	-	148.859
℄ Brg. Pier #2	149.675	149.652	-	149.618	149.598	-	149.553	149.519	149.487	149.415	149.375	-	149.302	-	149.207
℄ Splice 4	149.885	149.867	-	149.872	149.871	-	149.833	149.843	149.836	149.776	149.760	-	149.733	-	149.703
℄ Brg. Pier #3	150.845	150.856	-	150.867	150.877	-	150.866	150.889	150.879	150.855	150.867	-	150.856	-	150.845

1

DESIGNED	ADD
CHECKED	TL
DRAWN	ADD
CHECKED	TL

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
GIRDER CAMBER DIAGRAMS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

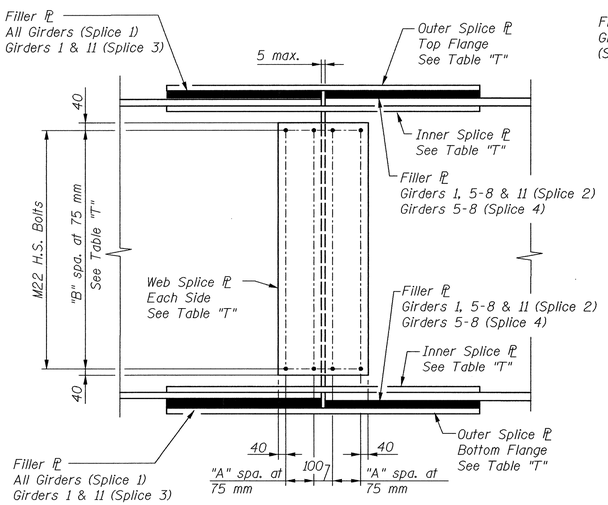
1 4/29/04 ADD REVISED 6-4-04

5/6/2004
M:\proj3573\Murray Baker\st05cm1a-7a0900001.dgn

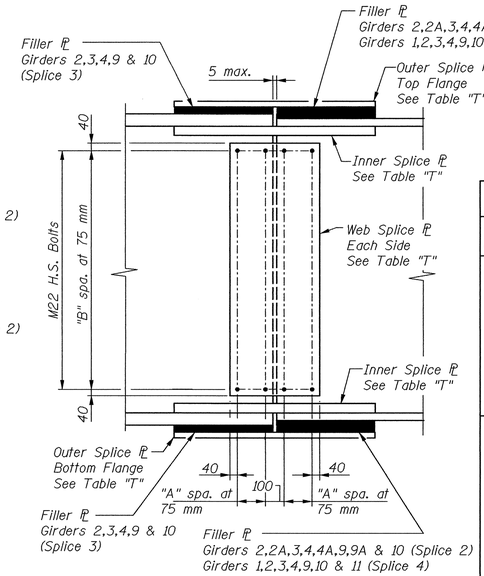
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	898
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

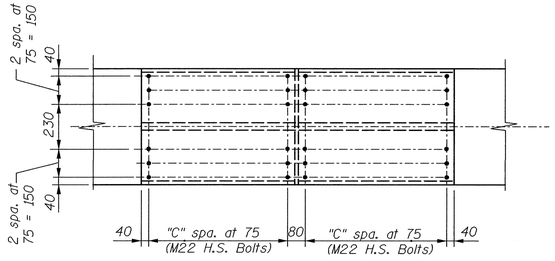
SHEET 44 OF 160



ELEVATION

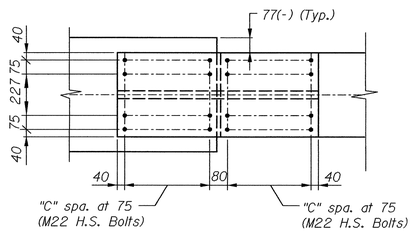


ELEVATION



TOP AND BOTTOM PLAN

SPLICE #1 (ALL GIRDERS)
SPLICE #2 (GIRDERS 1,5-8,11)
SPLICE #3 (GIRDERS 1,5-8,11)
SPLICE #4 (GIRDERS 5-8)



TOP AND BOTTOM PLAN

SPLICE #2 (GIRDERS 2,2A,3,4,4A,9,9A & 10)
SPLICE #3 (GIRDERS 2,3,4,9 & 10)
SPLICE #4 (GIRDERS 1,2,3,4,9,10 & 11)

TABLE "T"

Splice Designation	Girders	TOP FLANGE Outer Splice ℄	TOP FLANGE Filler ℄	TOP FLANGE Inner Splice ℄	TOP FLANGE C	WEB Splice ℄'s	WEB A	WEB B	BOTTOM FLANGE Outer Splice ℄	BOTTOM FLANGE Filler ℄	BOTTOM FLANGE Inner Splice ℄	BOTTOM FLANGE C
1	1	25x610x1.210 m	18x610x605	38x230x1.210 m	7	12x480x1.205 m	2	15	25x610x1.210 m	4x610x605	38x230x1.210 m	7
	2,3,4,9	20x610x1.210 m	18x610x605	30x230x1.210 m	7	12x480x1.205 m	2	15	20x610x1.210 m	10x610x605	30x230x1.210 m	7
	2A,4A,9A	16x610x1.210 m	18x610x605	25x230x1.210 m	7	12x480x1.205 m	2	15	16x610x1.210 m	14x610x605	25x230x1.210 m	7
	5,6,7,8	16x610x1.210 m	14x610x605	25x230x1.210 m	7	12x480x1.205 m	2	15	16x610x1.210 m	14x610x605	25x230x1.210 m	7
	10	25x610x1.360 m	20x610x680	38x230x1.360 m	8	12x480x1.205 m	2	15	25x610x1.360 m	10x610x680	38x230x1.360 m	8
	11	25x610x1.360 m	10x610x680	38x230x1.360 m	8	12x480x1.205 m	2	15	25x610x1.360 m	10x610x680	38x230x1.360 m	8
2	1	16x610x1.210 m	22x610x605	25x230x1.210 m	7	12x480x1.205 m	2	15	16x610x1.210 m	18x610x605	25x230x1.210 m	7
	2,3,4,9	14x457x1.210 m	22x457x605	25x155x1.210 m	7	12x480x1.205 m	2	15	14x457x1.210 m	22x457x605	25x155x1.210 m	7
	2A,4A,9A	20x457x1.210 m	18x457x605	30x155x1.210 m	7	12x480x1.205 m	2	15	20x457x1.210 m	18x457x605	30x155x1.210 m	7
	5,6,7,8	16x457x910	20x610x455	25x155x910	5	12x480x1.205 m	2	15	16x457x910	20x610x455	25x155x910	5
	10	25x457x1.510 m	25x457x755	38x155x1.510 m	9	12x480x1.205 m	2	15	25x457x1.510 m	14x457x755	38x155x1.510 m	9
	11	16x610x1.210 m	25x610x605	25x230x1.210 m	7	12x480x1.205 m	2	15	16x610x1.210 m	25x610x605	25x230x1.210 m	7
3	1,11	16x610x1.210 m	25x610x605	25x230x1.210 m	7	12x480x1.205 m	2	15	16x610x1.210 m	20x610x605	25x230x1.210 m	7
	2,3,4,9	14x457x1.210 m	25x457x605	25x155x1.210 m	7	12x480x1.205 m	2	15	14x457x1.210 m	25x457x605	25x155x1.210 m	7
	10	25x457x1.360 m	14x457x680	38x155x1.360 m	8	12x480x1.205 m	2	15	25x457x1.360 m	4x457x680	38x155x1.360 m	8
	5,6,7,8	16x610x760	-	25x230x760	4	12x480x1.205 m	2	15	16x610x760	-	25x230x760	4
4	1,2,3,4,9,11	25x457x1.360 m	25x457x680	38x155x1.360 m	8	12x480x1.205 m	2	15	25x457x1.360 m	10x457x680	38x155x1.360 m	8
	5,6,7,8	25x610x1.360 m	10x610x680	38x230x1.360 m	8	12x480x1.205 m	2	15	25x610x1.360 m	10x610x680	38x230x1.360 m	8
	10	20x457x1.210m	22x457x605	30x155x1.210 m	7	12x480x1.205 m	2	15	20x457x1.210 m	12x457x605	30x155x1.210 m	7

NOTES:

1. All splice plates shall be M270M Grade 345 steel and conform to Notch Thoughness Requirements.
2. All fill plates shall be AASHTO M270m Grade 250.
3. Work this sheet with sheets 37-42.

DESIGNED	KMP
CHECKED	KWS
DRAWN	VH
CHECKED	KMP/KWS

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SPLICE DETAILS

SN: 090-0003
PEORIA-TAZEWELL CO., IL.
STA. 150+475.243
DATE: 1-14-04

01/14/2004
m:\proj3573\murray baker\st05sp1-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	899
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 45 OF 160

GIRDER MOMENT TABLE - GIRDER 1

		0.4 Sp. #1	Pier #1	0.5 Sp. #2	Pier #2	0.6 Sp. #3
Is	($10^6 mm^4$)	26021	34425	21034	37763	19106
Ic (n)	($10^6 mm^4$)	51250	--	39947	--	39024
Ic (3n)	($10^6 mm^4$)	37908	--	29995	--	28338
Ss	($10^3 mm^3$)	40280	46710	30573	50894	30521
Sc (n)	($10^3 mm^3$)	48624	--	37125	--	38072
Sc (3n)	($10^3 mm^3$)	45236	--	34398	--	34942
Z	($10^3 mm^3$)	--	50960	--	55470	--
$\mathcal{D}$	(kN/m)	17.20	24.23	14.97	23.38	13.31
$M\mathcal{D}$	(kN-m)	3847	6925	701	6614	2748
$s\mathcal{D}$	(kN/m)	6.86	--	6.28	--	6.09
$Ms\mathcal{D}$	(kN-m)	1659	--	968	--	1397
$M\mathcal{L}$	(kN-m)	2467	2252	1594	2393	1859
M (Imp)	(kN-m)	395	360	255	330	297
$5/3\ [M\mathcal{L}+M(Imp)]$	(kN-m)	4770	4354	3082	4538	3594
Ma	(kN-m)	13358	14662	6175	14498	10061
Mu*	(kN-m)	17769	17580	14432	19135	12548
$fs\mathcal{D}$ (non-comp)	(MPa)	95	148	23	130	90
$fs\mathcal{D}$ (comp)	(MPa)	37	--	28	--	40
$fs\ 5/3\ [M\mathcal{L}+M(Imp)]$	(MPa)	98	93	83	89	94
fs (Overload)	(MPa)	230	241	134	219	224
fs (Total)**	(MPa)	--	--	--	--	--
VR	(kN)	225	--	200	--	171

* Compact, Braced Section.
** Non-Compact Section.

GIRDER MOMENT TABLE - GIRDER 2

		0.4 Sp. #1	Pier #1	0.5 Sp. #2	Pier #2	0.6 Sp. #3
Is	($10^6 mm^4$)	24573	34253	15550	37575	19006
Ic (n)	($10^6 mm^4$)	48226	--	31081	--	38857
Ic (3n)	($10^6 mm^4$)	35981	--	23245	--	28212
Ss	($10^3 mm^3$)	36674	46549	21787	50715	30455
Sc (n)	($10^3 mm^3$)	44393	--	27610	--	37989
Sc (3n)	($10^3 mm^3$)	41299	--	25308	--	34862
Z	($10^3 mm^3$)	--	50947	--	55356	--
$\mathcal{D}$	(kN/m)	18.68	18.24	13.72	18.97	13.28
$M\mathcal{D}$	(kN-m)	4112	5243	712	4684	2793
$s\mathcal{D}$	(kN/m)	7.73	6.86	6.13	7.44	6.13
$Ms\mathcal{D}$	(kN-m)	1551	2709	1146	2995	1025
$M\mathcal{L}$	(kN-m)	2820	2450	1487	2131	1876
M (Imp)	(kN-m)	468	404	245	351	309
$5/3\ [M\mathcal{L}+M(Imp)]$	(kN-m)	5480	4757	2888	4138	3643
Ma	(kN-m)	14486	16521	6169	15362	9699
Mu*	(kN-m)	17026	17532	11248	19083	12526
$fs\mathcal{D}$ (non-comp)	(MPa)	112	113	33	92	92
$fs\mathcal{D}$ (comp)	(MPa)	38	--	45	--	29
$fs\ 5/3\ [M\mathcal{L}+M(Imp)]$	(MPa)	123	102	105	82	96
fs (Overload)	(MPa)	270	215	188	174	214
fs (Total)**	(MPa)	--	--	--	--	--
VR	(kN)	261	--	201	--	166

* Compact, Braced Section.
** Non-Compact Section.

1

GIRDER MOMENT TABLE - GIRDER 2A

		0.4 Sp. #1	Pier	0.6 Sp. #2
Is	($10^6 mm^4$)	23147	34253	17425
Ic (n)	($10^6 mm^4$)	44551	--	33162
Ic (3n)	($10^6 mm^4$)	33591	--	24961
Ss	($10^3 mm^3$)	33114	46549	24275
Sc (n)	($10^3 mm^3$)	40137	--	30090
Sc (3n)	($10^3 mm^3$)	37327	--	27666
Z	($10^3 mm^3$)	--	50898	--
$\mathcal{D}$	(kN/m)	18.24	17.80	13.43
$M\mathcal{D}$	(kN-m)	3890	5121	621
$s\mathcal{D}$	(kN/m)	7.59	--	5.84
$Ms\mathcal{D}$	(kN-m)	1749	--	419
$M\mathcal{L}$	(kN-m)	2563	2088	1216
M (Imp)	(kN-m)	427	359	235
$5/3\ [M\mathcal{L}+M(Imp)]$	(kN-m)	4983	4079	2418
Ma	(kN-m)	13808	14554	4495
Mu*	(kN-m)	15591	17532	12067
$fs\mathcal{D}$ (non-comp)	(MPa)	117	110	26
$fs\mathcal{D}$ (comp)	(MPa)	47	--	15
$fs\ 5/3\ [M\mathcal{L}+M(Imp)]$	(MPa)	124	88	80
fs (Overload)	(MPa)	285	198	125
fs (Total)**	(MPa)	--	--	--
VR	(kN)	256	--	171

* Compact, Braced Section.
** Non-Compact Section.

1

GIRDER MOMENT TABLE - GIRDER 6

		0.4 Sp. #1	Pier #1	0.5 Sp. #2	Pier #2	0.6 Sp. #3
Is	($10^6 mm^4$)	24121	34253	19731	40943	33822
Ic (n)	($10^6 mm^4$)	45699	--	39433	--	58941
Ic (3n)	($10^6 mm^4$)	35639	--	30609	--	46501
Ss	($10^3 mm^3$)	33461	46549	27644	54902	45964
Sc (n)	($10^3 mm^3$)	40395	--	34234	--	53653
Sc (3n)	($10^3 mm^3$)	37901	--	32008	--	50601
Z	($10^3 mm^3$)	--	50898	--	59944	--
$\mathcal{D}$	(kN/m)	19.26	21.02	18.68	21.89	20.72
$M\mathcal{D}$	(kN-m)	3699	5280	1121	6012	4766
$s\mathcal{D}$	(kN/m)	8.17	8.17	8.17	8.61	8.61
$Ms\mathcal{D}$	(kN-m)	1654	2157	747	2470	2087
$M\mathcal{L}$	(kN-m)	2708	2748	2106	2990	3146
M (Imp)	(kN-m)	465	462	347	494	519
$5/3\ [M\mathcal{L}+M(Imp)]$	(kN-m)	5288	5351	4088	5805	6108
Ma	(kN-m)	13833	16624	7743	18573	16848
Mu*	(kN-m)	15848	17532	13753	20645	20379
$fs\mathcal{D}$ (non-comp)	(MPa)	111	113	41	109	104
$fs\mathcal{D}$ (comp)	(MPa)	44	--	23	--	41
$fs\ 5/3\ [M\mathcal{L}+M(Imp)]$	(MPa)	131	115	119	106	114
fs (Overload)	(MPa)	281	228	186	215	256
fs (Total)**	(MPa)	--	--	--	--	--
VR	(kN)	277	--	275	--	277

* Compact, Braced Section.
** Non-Compact Section.

1

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span

Ma (Applied Moment)=$1.3[M\mathcal{D} + Ms\mathcal{D} + 5/3(M\mathcal{L} + M(Imp))]$.

(fs+fl)(overload) is the sum of the stress due to $M\mathcal{D} + Ms\mathcal{D} + 5/3(M\mathcal{L} + M(Imp)) + Mbl/1.3$

fs (Total) is the sum of the stress due to $1.3[M\mathcal{D} + Ms\mathcal{D} + 5/3(M\mathcal{L} + M(Imp))]$

Sbl is the section modulus for one flange plate for lateral flange bending

Mbl is the lateral bending moment for flange plate (factored)

fl is the calculated normal stress at the edge of flange due to lateral bending (factored)

$M\mathcal{L}$ and $R\mathcal{L}$ include the effects of centrifugal force and superelevation

Fcr - Critical average flange stress (smaller of Fcr1 or Fcr2 for partially braced flanges and Fy for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4).

Fcr (Overload) - Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5.

1

Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.

The Plastic Moment capacity (Mu) is computed to AASHTO 10.48.1 & 10.50.1.1.

fs (Overload) is the sum of the stresses due to M DL + MsDL + 5/3(M LL + M (Imp))

M DL - Moment due to dead loads on non-composite section.

MsDL - Moment due to dead loads on composite section.

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

M (Imp) - Moment due to live load impact on non-composite or composite section.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
GIRDER MOMENT TABLES I

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 KMP REVISED 6-4-04

5/6/2004

M:\proj3573\Murray Baker\st05dt1-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	900
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 46 OF 160

GIRDER MOMENT TABLE - GIRDER 10

		0.4 Sp. #1	Pier #1	0.5 Sp. #2	Pier #2	0.6 Sp. #3
Is	($10^6 mm^4$)	30452	41580	19715	34425	17787
Ic (n)	($10^6 mm^4$)	56529	--	42309	--	35434
Ic (3n)	($10^6 mm^4$)	42545	--	30806	--	26058
Ss	($10^3 mm^3$)	44981	55663	30805	46710	26991
Sc (n)	($10^3 mm^3$)	53229	--	38816	--	33683
Sc (3n)	($10^3 mm^3$)	49702	--	35779	--	30911
Z	($10^3 mm^3$)	--	60950	--	50960	--
$\mathcal{D}$	(kN/m)	18.56	24.67	14.47	24.15	11.73
M $\mathcal{D}$	(kN-m)	4159	6294	633	5571	2578
s $\mathcal{D}$	(kN/m)	7.28	--	5.69	--	6.04
Ms $\mathcal{D}$	(kN-m)	1862	--	-300	--	1578
M $\mathcal{L}$	(kN-m)	3224	2829	1677	2846	2261
M (Imp)	(kN-m)	548	481	268	398	362
5/3 [M$\mathcal{L}$+M(Imp)]	(kN-m)	6287	5517	3242	5407	4371
Ma	(kN-m)	16000	15354	4648	14271	11086
Mu*	(kN-m)	20048	21027	14553	17580	11890
fs $\mathcal{D}$ (non-comp)	(MPa)	92	113	21	119	96
fs $\mathcal{D}$ (comp)	(MPa)	37	--	-8	--	51
fs 5/3 [M$\mathcal{L}$+M(Imp)]	(MPa)	118	99	84	116	130
fs (Overload)	(MPa)	248	212	96	235	276
fs (Total)**	(MPa)	--	--	--	--	--
VR	(kN)	285	--	219	--	202

* Compact, Braced Section.
** Non-Compact Section.

GIRDER MOMENT TABLE - GIRDER 11

		0.4 Sp. #1	Pier #1	0.5 Sp. #2	Pier #2	0.6 Sp. #3
Is	($10^6 mm^4$)	32280	39817	21034	37764	19106
Ic (n)	($10^6 mm^4$)	56601	--	39086	--	38564
Ic (3n)	($10^6 mm^4$)	43340	--	29247	--	28045
Ss	($10^3 mm^3$)	45593	55072	30573	50826	30521
Sc (n)	($10^3 mm^3$)	53246	--	36943	--	37994
Sc (3n)	($10^3 mm^3$)	49816	--	33969	--	34839
Sbi	($10^3 mm^3$)	3100	3721	1984	3410	1566
$\mathcal{D}$	(kN/m)	16.75	23.45	13.01	22.14	11.78
M $\mathcal{D}$	(kN-m)	3688	7871	411	6214	2618
s $\mathcal{D}$	(kN/m)	7.28	--	5.69	--	6.04
Ms $\mathcal{D}$	(kN-m)	1949	--	-27	--	1643
M $\mathcal{L}$	(kN-m)	2753	2710	1475	2482	2387
M (Imp)	(kN-m)	468	461	236	397	382
5/3 [M$\mathcal{L}$+M(Imp)]	(kN-m)	5368	5285	2852	4798	4615
Ma	(kN-m)	14307	17102	4207	14316	11539
Mbl	(kN-m)	23	86	20	0	0
fs $\mathcal{D}$ (non-comp)	(MPa)	81	143	13	122	86
fs $\mathcal{D}$ (comp)	(MPa)	39	--	-1	--	47
fs 5/3 [M$\mathcal{L}$+M(Imp)]	(MPa)	101	96	77	94	121
fwl	(MPa)	7	23	10	0	0
fs (Overload)	(MPa)	227	257	97	217	254
fs (Total)	(MPa)	287	311	117	282	331
for(Overload)	(MPa)	328	318	328	345	345
VR	(kN)	281	--	225	--	204
Fcr	(MPa)	306	--	306	--	345

1

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span

Ma (Applied Moment)=1.3[M$\mathcal{D}$ + Ms$\mathcal{D}$ +5/3(M$\mathcal{L}$ + M(Imp))].

(fs+fl)(overload) is the sum of the stress due to M$\mathcal{D}$ + Ms$\mathcal{D}$ +5/3(M$\mathcal{L}$ + M(Imp)) + Mbl/1.3

fs (Total) is the sum of the stress due to 1.3[M$\mathcal{D}$ + Ms$\mathcal{D}$ +5/3(M$\mathcal{L}$ + M(Imp))]

Sbl is the section modulus for one flange plate for lateral flange bending

Mbl is the lateral bending moment for flange plate (factored)

fl is the calculated normal stress at the edge of flange due to lateral bending (factored)

M$\mathcal{L}$ and R$\mathcal{L}$ include the effects of centrifugal force and superelevation

Fcr - Critical average flange stress (smaller of Fcr1 or Fcr2 for partially braced flanges and Fy for continuously braced flanges) computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges (Sections 5.2, 5.3 and 5.4).

Fcr (Overload) - Critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5. 1

Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.

The Plastic Moment capacity (Mu) is computed to AASHTO 10.48.1 & 10.50.1.1.

fs (Overload) is the sum of the stresses due to M DL + MsDL + 5/3(M LL + M (Imp))

M DL - Moment due to dead loads on non-composite section.

MsDL - Moment due to dead loads on composite section.

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

M (Imp) - Moment due to live load impact on non-composite or composite section.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
GIRDER MOMENT TABLES II

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 KMP REVISED 6-4-04

5/6/2004
M:\proj3573\Murray Baker\st05d12-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	901
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 47 OF 160

68196

GIRDER REACTION TABLE - GIRDER 1

		N. Abut.	Pier #1	Pier #2	Pier #3
R D	(kN)	514	1355	1246	390
R L	(kN)	240	435	373	191
Imp.	(kN)	41	44	37	31
R (Total)	(kN)	796	1834	1656	612

GIRDER REACTION TABLE - GIRDER 2

		N. Abut.	Pier #1	Pier #2	Pier #3
R D	(kN)	552	1483	1569	355
R L	(kN)	275	467	428	187
Imp.	(kN)	47	47	43	30
R (Total)	(kN)	873	1997	2040	572

GIRDER REACTION TABLE - GIRDER 2A

		N. Abut.	Pier #1	End
R D	(kN)	545	1390	210
R L	(kN)	277	395	168
Imp.	(kN)	33	75	28
R (Total)	(kN)	855	1860	406

GIRDER REACTION TABLE - GIRDER 3

		N. Abut.	Pier #1	Pier #2	Pier #3
R D	(kN)	542	1455	1602	355
R L	(kN)	272	459	408	196
Imp.	(kN)	46	51	65	22
R (Total)	(kN)	860	1965	2075	572

GIRDER REACTION TABLE - GIRDER 4

		N. Abut.	Pier #1	Pier #2	Pier #3
R D	(kN)	537	1445	1611	355
R L	(kN)	286	463	410	186
Imp.	(kN)	31	46	66	32
R (Total)	(kN)	854	1954	2086	572

GIRDER REACTION TABLE - GIRDER 4A

		N. Abut.	Pier #1	End
R D	(kN)	529	1367	214
R L	(kN)	265	416	165
Imp.	(kN)	45	50	31
R (Total)	(kN)	839	1833	411

GIRDER REACTION TABLE - GIRDER 5

		N. Abut.	Pier #1	Pier #2	Pier #3
R D	(kN)	524	1529	1869	518
R L	(kN)	268	476	532	234
Imp.	(kN)	46	76	53	26
R (Total)	(kN)	837	2081	2454	779

GIRDER REACTION TABLE - GIRDER 6

		N. Abut.	Pier #1	Pier #2	Pier #3
R D	(kN)	534	1560	1711	628
R L	(kN)	268	551	577	286
Imp.	(kN)	45	61	58	46
R (Total)	(kN)	847	2171	2346	960

GIRDER REACTION TABLE - GIRDER 7

		N. Abut.	Pier #1	Pier #2	Pier #3
R D	(kN)	528	1550	1715	628
R L	(kN)	267	549	547	300
Imp.	(kN)	45	60	88	30
R (Total)	(kN)	840	2159	2349	958

GIRDER REACTION TABLE - GIRDER 8

		N. Abut.	Pier #1	Pier #2	Pier #3
R D	(kN)	531	1497	1514	527
R L	(kN)	272	519	458	246
Imp.	(kN)	46	57	73	25
R (Total)	(kN)	850	2073	2046	798

GIRDER REACTION TABLE - GIRDER 9

		N. Abut.	Pier #1	Pier #2	Pier #3
R D	(kN)	524	1430	1678	363
R L	(kN)	293	477	430	188
Imp.	(kN)	32	48	69	32
R (Total)	(kN)	849	1955	2176	583

GIRDER REACTION TABLE - GIRDER 9A

		N. Abut.	Pier #1	End
R D	(kN)	515	1370	238
R L	(kN)	271	429	170
Imp.	(kN)	47	51	32
R (Total)	(kN)	833	1850	441

GIRDER REACTION TABLE - GIRDER 10

		N. Abut.	Pier #1	Pier #2	Pier #3
R D	(kN)	600	1422	1072	387
R L	(kN)	312	562	453	205
Imp.	(kN)	56	62	50	33
R (Total)	(kN)	968	2046	1575	625

GIRDER REACTION TABLE - GIRDER 10A

		N. Abut.	End
R D	(kN)	391	383
R L	(kN)	268	267
Imp.	(kN)	54	54
R (Total)	(kN)	713	704

GIRDER REACTION TABLE - GIRDER 11

		N. Abut.	Pier #1	Pier #2	Pier #3
R D	(kN)	550	2052	1191	368
R L	(kN)	283	569	427	209
Imp.	(kN)	51	63	68	23
R (Total)	(kN)	884	2684	1686	600

Notes:

1. Reactions provided are Service Load Reactions.

DESIGNED	ADD
CHECKED	
DRAWN	ADD
CHECKED	

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

GIRDER REACTION TABLES

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

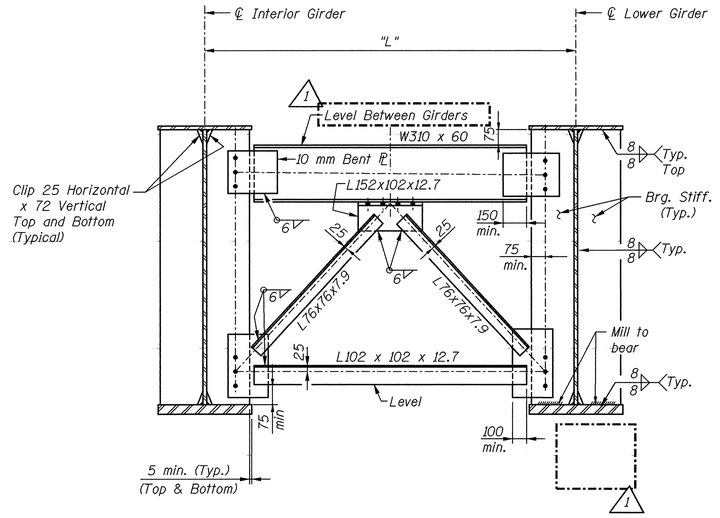
12/16/2003

m:\proj3573\murray baker\st05dt2a-7a0900001.dgn

68196

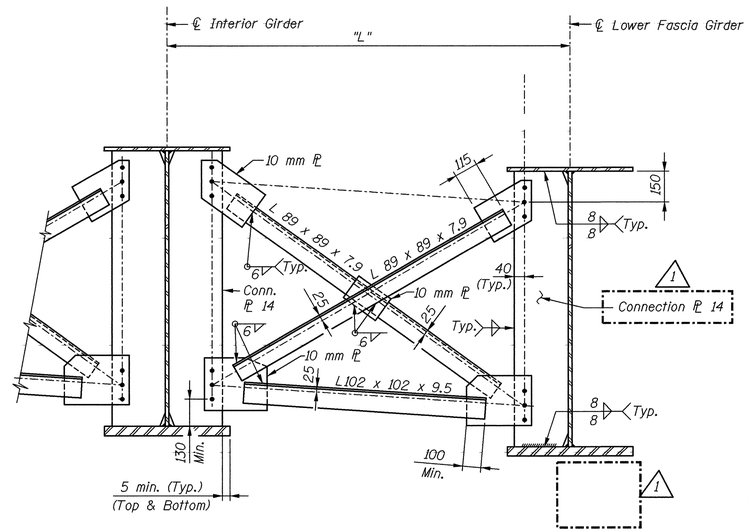
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	902
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 48 OF 160

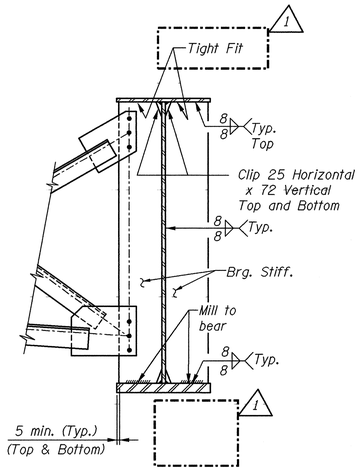


END CROSS FRAME D212, D213, & D214

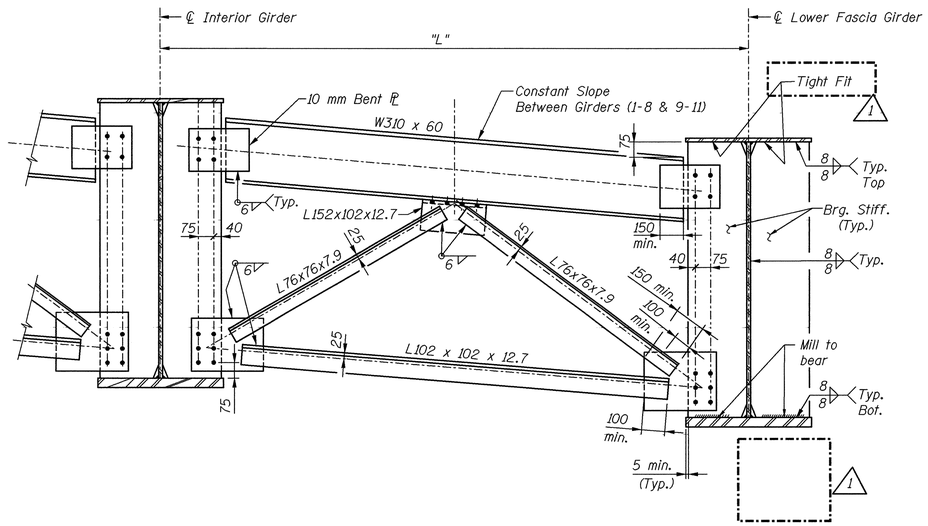
(PIER 3)



TYPICAL INTERIOR CROSS FRAME

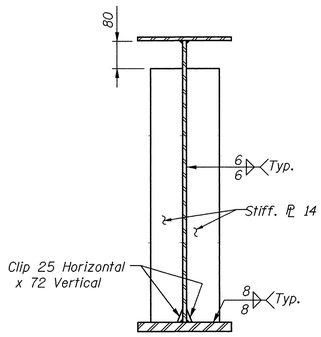


SECTION OF BEARING STIFFENERS AT PIERS 1 & 2



END CROSS FRAME D1, D2 & D3

(NORTH ABUTMENT)



INTERMEDIATE STIFFENERS GIRDER 11 SPANS 1 & 2

NOTES:

1. All bolts in cross frames, end frames and cross girders shall be M22 H.S. bolts.
2. Detail 28 mm ϕ holes for all M22 H.S. bolts unless noted otherwise.
3. N.T.R. denotes plates where Notch Tougness Requirements are applicable.
4. Cross frames, end frames and gross girders between Girders 10 & 11 shall conform to the Notch Toughness Requirements.
4. All Cross Frames and Connection Plates shall be AASHTO M270 Grade 345.
5. Work this Sheet with Sheets 38-42
6. For Dimension "L" see sheet 37.

1 7. Two Hardened Washers shall be required over all oversized Bolt Holes.

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
CROSS FRAME DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

1 4/29/04 CDF REVISED 6-4-04

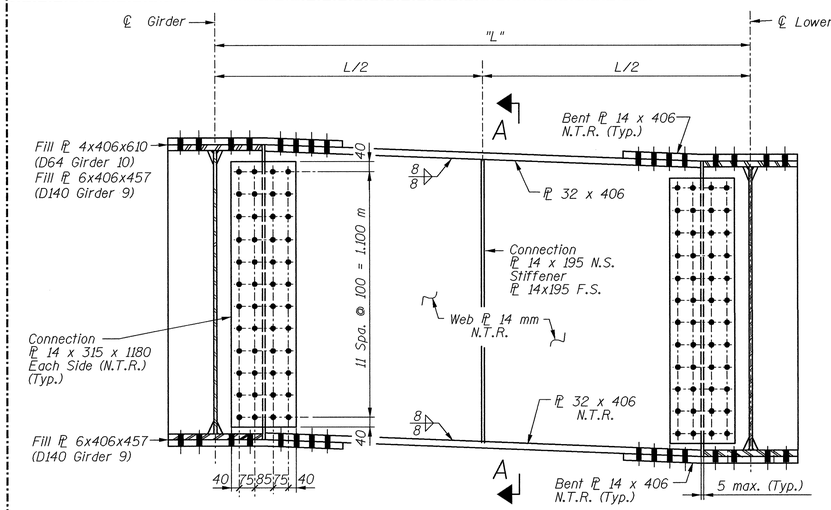
5/6/2004

M:\proj\3573\Murray Baker\st05dt-7a0900001.dgn

68196

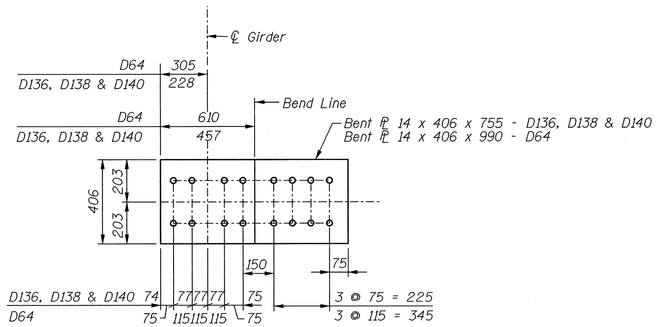
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	903
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 49 OF 160

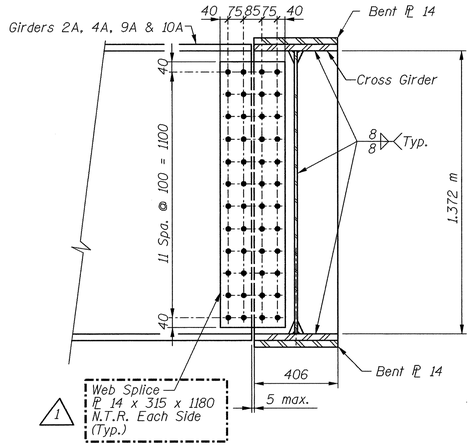


CROSS GIRDERS D64, D136, D138 & D140

(Looking South)



BENT PLATE



SECTION A-A

NOTES:

1. N.T.R. denotes plates where Notch Tougness Requirements are applicable.
2. All Girders and Connection Plates shall be AASHTO M270 Grade 345.
3. Work this Sheet with Sheets 38-42
4. See sheet 48 for additional notes.

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

CROSS GIRDER AND CONNECTION DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 KMP REVISED 6-4-04

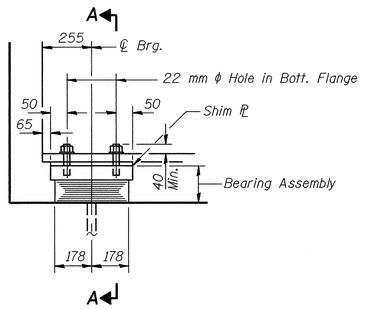
4/29/2004

m:\proj\3573\murray baker\st05dd2-7d0900001.dgn

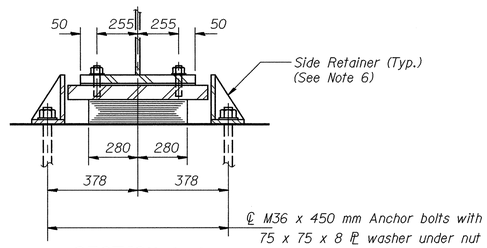
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	904
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 50 OF 160

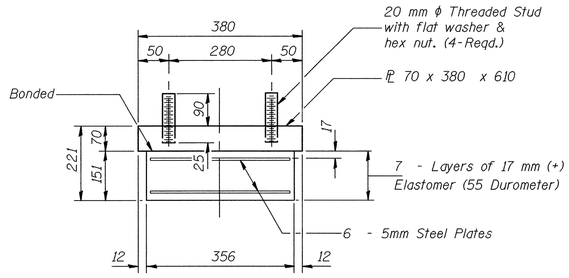


ELEVATION AT ABUT.



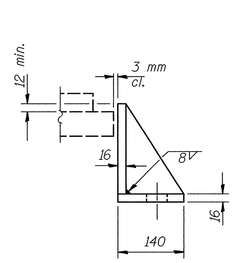
SECTION A-A

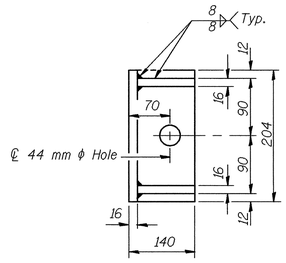
TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

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





SIDE RETAINER

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

NOTES:

1. The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270M Grade 345, unless otherwise noted. Anchor bolts, studs, nuts, and washers shall be hot-dipped galvanized in accordance with AASHTO M 232M.
2. See sheet 37 for Girder layout.
3. Contractor shall be responsible for meeting AASHTO edge distance requirements and for ensuring adequate clearances for installation of all Anchor Bolts and threaded studs.
4. See sheet 55 for Anchor Bolt details.
5. Anchor Bolts paid for by Furnishing and Erecting Structural Steel (L Sum).
6. Use Side Retainer for Girders 3, 4, 4A, 5, 6, 7, 8, 9 & 9A.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	15

DESIGNED	KWS
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
ELASTOMERIC BEARINGS, TYPE I
NORTH ABUTMENT
SN: 090-0001
PEORIA - TAZEWELL CO., IL.
STA. 150+475.243
DATE: 1-21-04

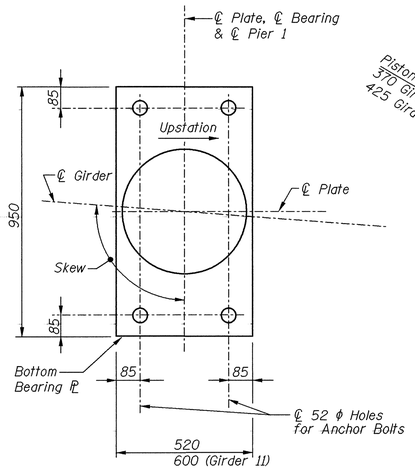
1 4/29/04 CDF REVISED 6-4-04

4/29/2004
m:\proj3573\murray baker\st05bd1-7a0900001.dgn

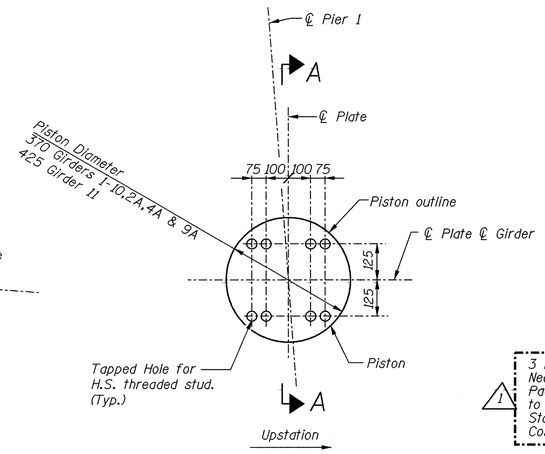
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	905
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 51 OF 160

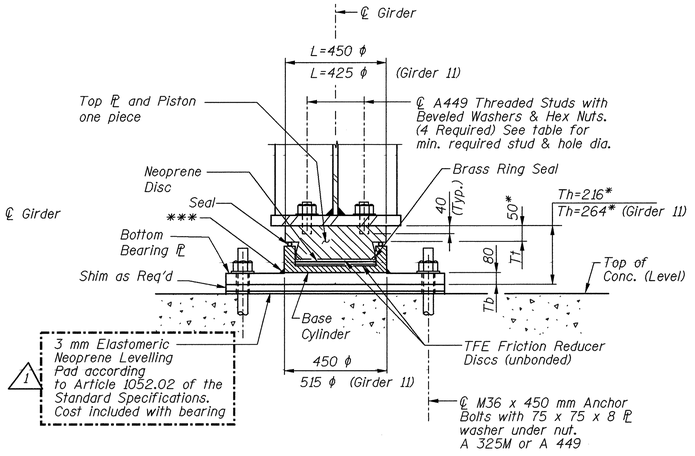


PLAN
BOT. BRG. ℙ &
BASE CYLINDER



PLAN
TOP ℙ - PISTON

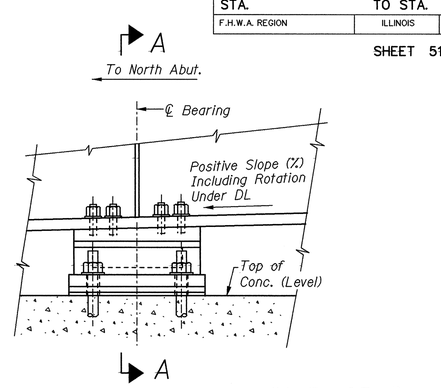
Girder not shown for clarity. 1



*** Weld may be omitted if base cylinder is recessed into bottom bearing plate

SECTION A-A

*Note: Dimensions Tt and Th are given at ℄ bearing. Thicknesses will vary because girders are sloped.



Note: Top of Top ℙ is sloped. Bottom of ℙ is to be level.

ELEVATION

FLOATING BEARING - FIXED

(N. T. S.) 1

LOCATION	TYPE	VERT. DESIGN LOAD** KN	HORIZONTAL DESIGN LOAD** PER BRG. kN	GIRDER NO.	SLOPE OF TOP OF TOP ℙ (%)	MIN REQUIRED ROTATION RANGE, RADIANS (clockwise positive)	MIN. DIA. A449 STUD	A449 STUD HOLE DIA. AT GIRDER BOTTOM ℙ
Pier 1	Floating Bearings, Fixed	2220	731	1 2 2A 3 4 4A 5 6 7 8 9 9A 10	1.8 1.8 1.8 1.8 1.8 1.8 1.8 2.8 2.8 2.8 2.8 2.8 2.8	±0.035	M22	24
Pier 1	Floating Bearings, Fixed	2700	731	11	2.8	±0.035	M22	24

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Fixed 2220 KN	Each	13
Floating Bearings, Fixed 2700 KN	Each	1

NOTES:

1. All steel for the Floating Bearings shall conform to the requirements of AASHTO M 270M Grade 345, unless otherwise noted. See details for Anchor Bolt materials. Anchor bolts, studs, nuts, and washers shall be hot-dipped galvanized in accordance with AASHTO M 232M. Teflon and stainless steel materials shall conform to AASHTO requirements and IDOT "Special Provisions for Floating Bearings".
2. See sheet 37 for Girder layout.
3. Dimensions and Bearing characteristics shown in contract drawings are exclusively those necessary for Bearing detailing. Total bearing height (Th) is based on samples of three different bearing Manufacturers. Actual Bearing height may differ from contract plans. Contractor to verify Bearing height and adjust seat elevations, if required, prior to placing pier concrete.
4. Bearing assemblies shall be designed and assembled to allow replacement by jacking the superstructure.

** 5. Vertical and Horizontal Design Loads are service loads.

6. Contractor shall be responsible for meeting AASHTO edge distance requirements and for ensuring adequate clearances for installation of all Anchor Bolts and threaded studs.
7. See sheet 55 for Anchor Bolt Details.
8. Anchor Bolts paid for by Furnishing and Erecting Structural Steel (L Sum).

DESIGNED	ADD
CHECKED	WJZ/YS
DRAWN	VH
CHECKED	WJZ/YS

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
FIXED FLOATING BEARING DETAILS
PIER 1
SN: 090-0001
PEORIA - TAZEWELL CO., IL.
STA. 150+475.243
DATE: 1-21-04

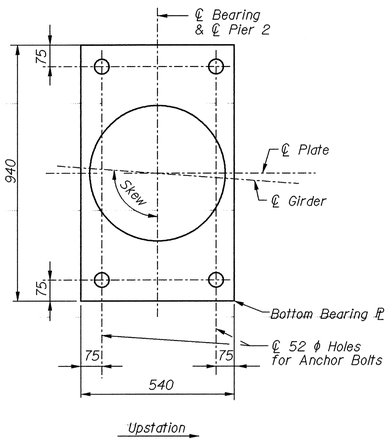
1 4/29/04 CDF REVISED 6-4-04

5/6/2004
M:\proj3573\Murray Baker\s105bd3-7a0900001.dgn

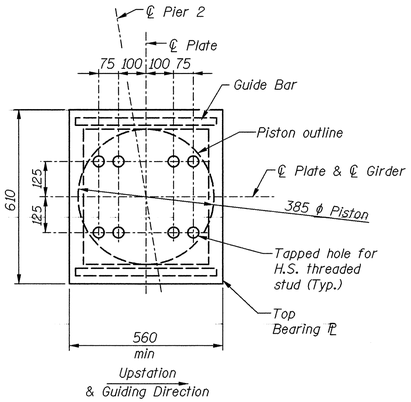
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	906
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 52 OF 160

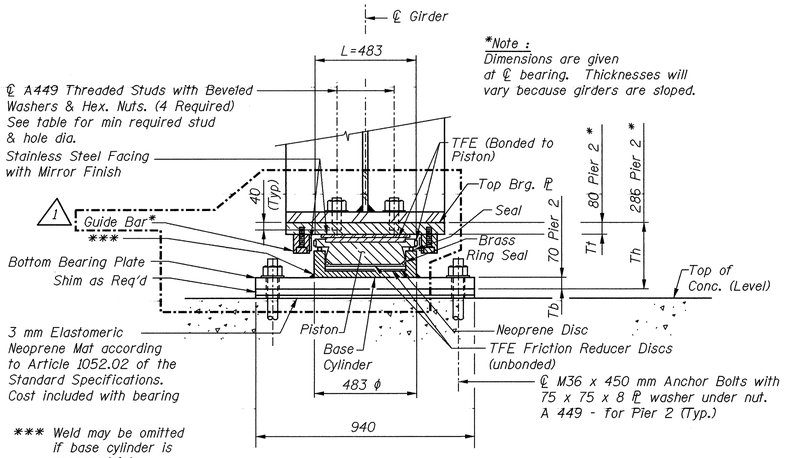


PLAN
PIER 2 BOT. BRG. ℙ & BASE CYLINDER



PLAN
PIER 2 TOP BRG. ℙ & PISTON

Girder not shown for clarity.
Plan Dimensions of Top Plate and Guide Bars to be determined by Bearing Fabricator.

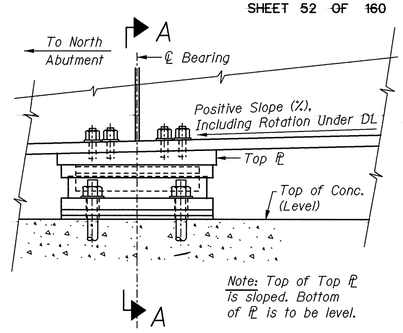


Note : Dimensions are given at ℄ bearing. Thicknesses will vary because girders are sloped.

*** Weld may be omitted if base cylinder is recessed into bottom bearing plate (Optional)

SECTION A-A

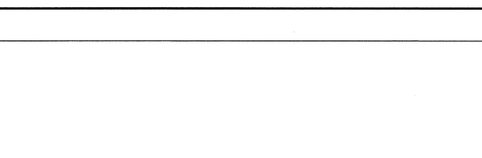
1 *As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.



Note: Top of Top ℙ is sloped. Bottom of ℙ is to be level.

ELEVATION

LOCATION	TYPE	VERT. DESIGN LOAD** KN	GIRDER NO.	SLOPE OF TOP OF TOP ℙ (%)	ROTATION RANGE, RADIANS	MAX. THEORETICAL THERMAL MOVEMENT @ 10 °C	MIN. DIA. A449 STUD	A449 STUD HOLE DIA. AT GIRDER BOTTOM ℙ
Pier 2 Girders 1 thru 11	Floating Bearings, Guided Expansion	2660	1 2 3 4 5 6 7 8 9 10 11	2.1 2.1 2.1 2.1 2.1 2.1 2.8 2.8 2.8 2.8 2.8	±0.035	±27 mm	M22	24



SETTING ANCHOR BOLTS AT GUIDED AND NON-GUIDED BEARINGS

D= 1 mm per each 10 m of expansion (contraction) length for every 8 °C temperature change from the normal temp. of +10 °C

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Guided Expansion 2660 KN	Each	11

NOTES:

1. *All steel for the Floating Bearings shall conform to the requirements of AASHTO M 270M Grade 345, unless otherwise noted. See details for threaded studs and anchor bolt materials. Anchor bolts, studs, nuts, and washers shall be hot-dipped galvanized in accordance with AASHTO M 232M. Teflon and stainless steel materials shall conform to AASHTO requirements and "Special Provisions for Floating Bearings".*
2. *See sheet 37 for Girder layout.*
3. *Dimensions and Bearing characteristics shown in contract drawings are exclusively those necessary for Bearing detailing. Total bearing height (Th) is based on samples of three different bearing Manufacturers. Actual Bearing height may differ from contract plans. Contractor to verify Bearing height and adjust seat elevations, if required, prior to placing pier concrete.*
4. *Bearing assemblies shall be designed and assembled to allow its replacement by jacking the superstructure.*

** 5. *Vertical Design Loads are service loads; horizontal design loads shall be 20% of vertical load, unless otherwise noted.*
6. *Contractor shall be responsible for meeting AASHTO edge distance requirements and for ensuring adequate clearances for installation of all anchor bolts and threaded studs.*
7. *See sheet 55 for Anchor Bolt details.*
8. *Anchor Bolts paid for by Furnishing and Erecting Structural Steel (L Sum).*

DESIGNED	ADD
CHECKED	WJZ/YS
DRAWN	VH
CHECKED	WJZ/YS

FLOATING BEARING - GUIDED EXPANSION

(N. T. S.)

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
GUIDED EXPANSION
FLOATING BEARING DETAILS
PIER 2
SN: 090-0001
PEORIA - TAZEWELL CO., IL.
STA. 150+475.243
DATE: 1-21-04

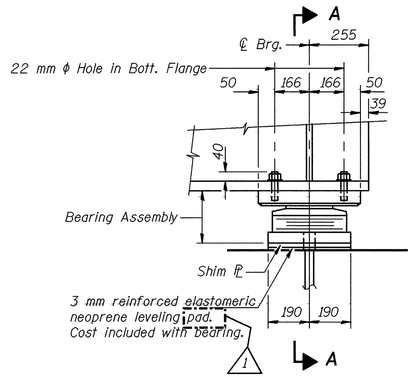
1 4/29/04 WJZ REVISED 6-4-04

5/6/2004
M:\proj3573\Murray Baker\st05bd4-7a0900001.dgn

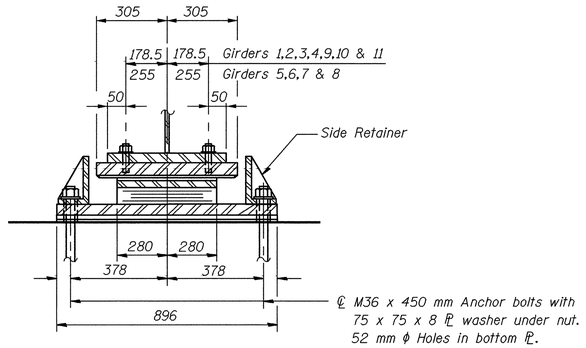
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	907
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 52A OF 160

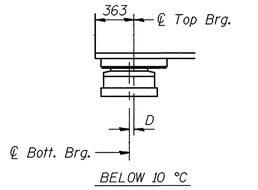


ELEVATION AT PIER 3



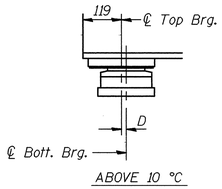
SECTION A-A

TYPE II ELASTOMERIC EXP. BRG.



BELOW 10 °C

(Move bott. brg. away from fixed brg.)

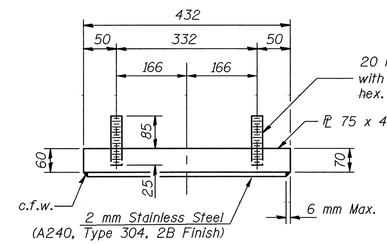


ABOVE 10 °C

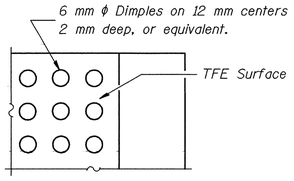
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

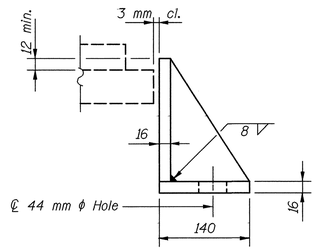
D= 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.

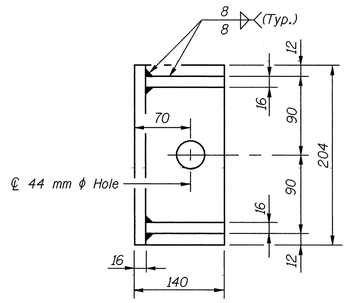


TOP BEARING ASSEMBLY



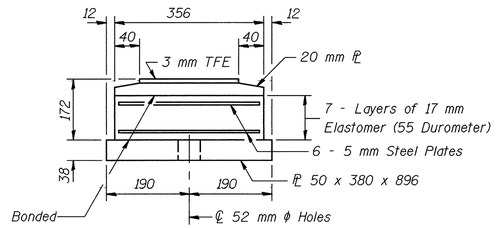
PLAN-TFE SURFACE



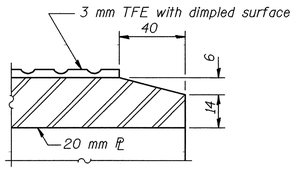


SIDE RETAINER

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



BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

Note: The 3 mm TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

NOTES:

1. The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270M Grade 345, unless otherwise noted. Anchor bolts, studs, nuts, and washers shall be hot-dipped galvanized in accordance with AASHTO M 232M.
2. See sheet 37 for Girder layout.
3. See sheet 55 for Anchor Bolt installation.
4. Anchor Bolts are paid for by Furnishing and Erecting Structural Steel (L Sum).

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	11

DESIGNED	KWS
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

TYPE II ELASTOMERIC BEARINGS
PIER 3 (SPAN 3)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF REVISED 6-4-04

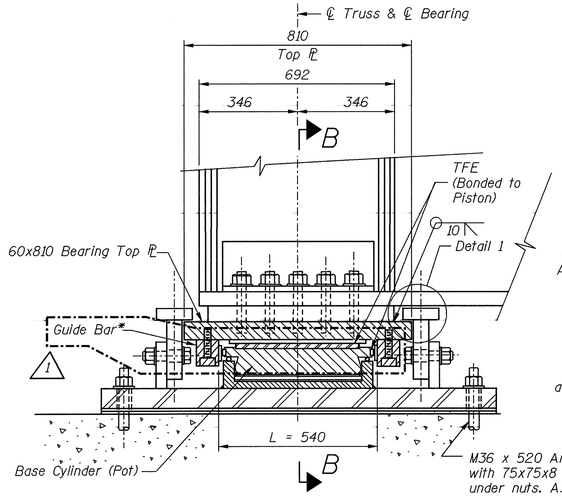
5/6/2004

M:\proj3573\Murray Baker\st05b4a-7a0900001.dgn

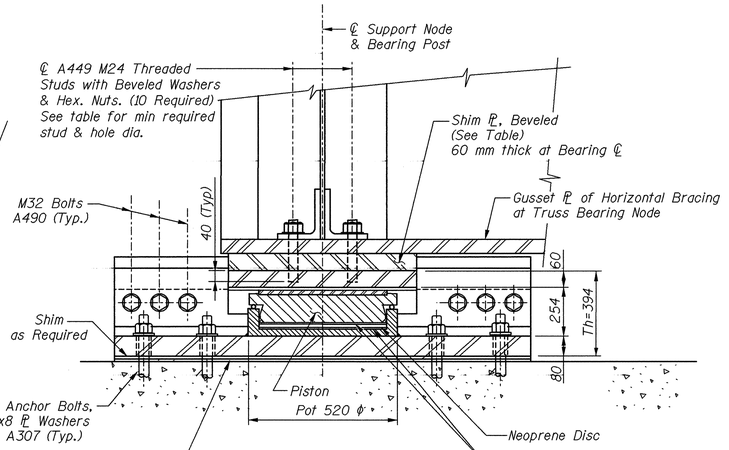
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	908
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 53 OF 160



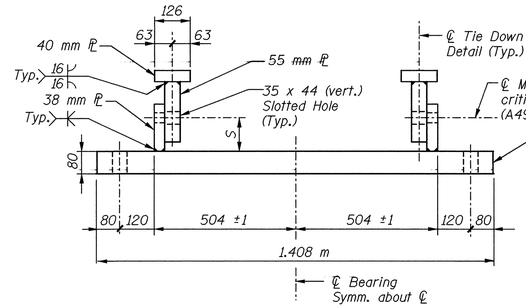
SECTION A-A



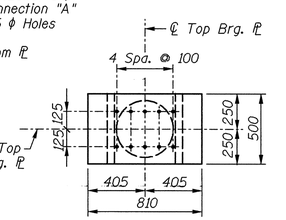
SECTION B-B

Upstation
Guiding Direction

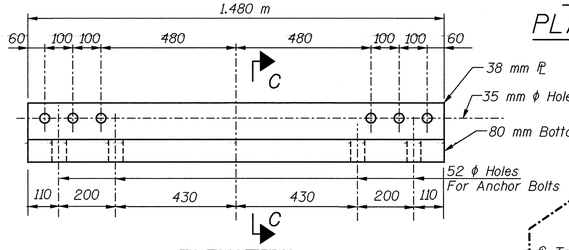
*As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece. 1



SECTION C-C



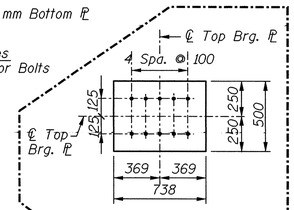
TOP BEARING PLATE ASSEMBLY



ELEVATION

(Tie down Detail not shown for clarity)

BOTTOM ASSEMBLY

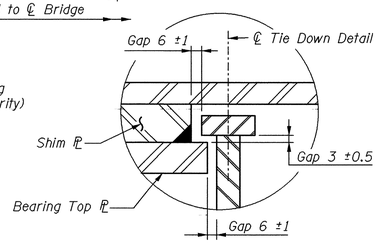


SHIM PLATE

1

PLAN

(Bottom horizontal Bracing Gusset ℙ not shown for clarity)



DETAIL 1

(Tie Down Detail)

1

LOCATION	TYPE	VERT. DESIGN LOAD,** KN		SLOPE OF TOP OF TOP ℙ, %	MIN. REQUIRED ROTATION RANGE, RADIANS (Clockwise Positive)	MAX. THEORETICAL THERMAL MOVEMENT @ 10 °C	MIN. DIA. A449 STUD	A449 STUD HOLE DIA. AT GIRDER BOTTOM ℙ
		POSITIVE	UPLIFT					
Pier 3 (Truss)	Floating Bearings, Guided Expansion	3100	780	Level	±0.035	±63 mm	M24	26

NOTES:

1. All steel for the Floating Bearings shall conform to the requirements of AASHTO M 270M Grade 345, unless otherwise noted. See details for threaded studs and Anchor Bolt materials. Anchor bolts, studs, nuts, and washers shall be hot-dipped galvanized in accordance with AASHTO M 232M. Teflon and stainless steel materials shall conform to AASHTO requirements and IDOT "Special Provisions for Floating Bearings".
2. See sheet 37 for Girder layout.
3. Dimensions and Bearing characteristics shown in contract drawings are exclusively those necessary for Bearing detailing. Total bearing height (Th) is based on samples of three different bearing Manufacturers. Actual Bearing height may differ from contract plans. Contractor to verify Bearing height and adjust seat elevations, if required, prior to placing pier concrete.
4. Bearing assemblies shall be designed and assembled to allow them to replace by jacking the superstructure.

** 5. Vertical Design Loads are service loads; horizontal design loads shall be 20% of vertical load, unless otherwise noted. Horizontal load is not applicable in combination with uplift.

6. Contractor shall be responsible for meeting AASHTO edge distance requirements and for ensuring adequate clearances for installation of all Anchor Bolts and threaded studs.

1 7. See sheet 52 for Anchor Bolt setting requirements, sheet 65 for Anchor Bolt layout, and sheet 55 for Anchor Bolt details.

8. Anchor Bolts paid for by Furnishing and Erecting Structural Steel (L Sum).

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Guided Expansion 3100 KN	Each	2

DESIGNATIONS

L - Transverse Length of Piston (Distance between Guiding Bars)
S - Dimensions to be specified at Bearing Design.

DESIGNED	KMP
CHECKED	YS
DRAWN	VH
CHECKED	YS

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
GUIDED EXPANSION
FLOATING BEARING DETAILS
PIER 3 (TRUSS)
SN: 090-0001
PEORIA - TAZEWELL CO., IL.
STA. 150+475.243
DATE: 1-21-04

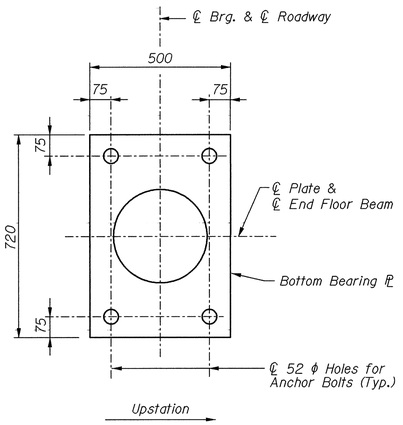
1 4/29/04 WJZ REVISED 6-4-04

5/6/2004
m:\proj3573\murray baker\st05bd5-7a0900001.dgn

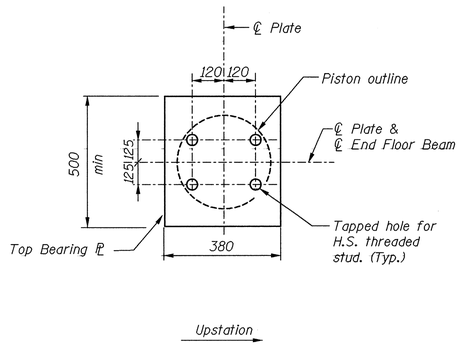
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	909
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 54 OF 160

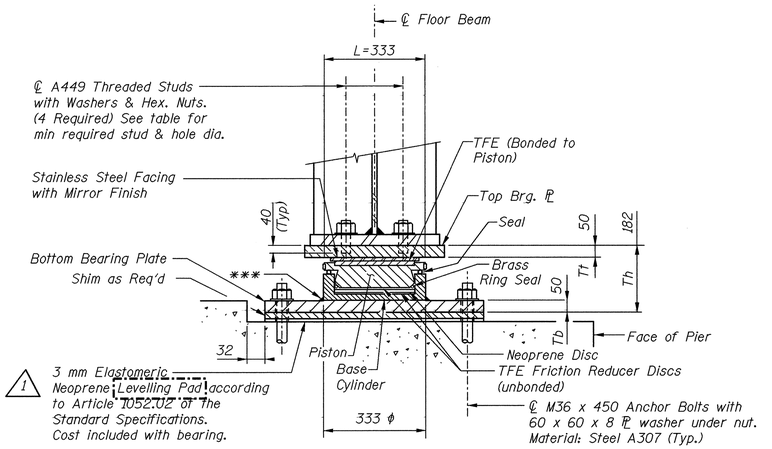


PLAN
PIER 3 BOT. BRG. ℙ
& BASE CYLINDER

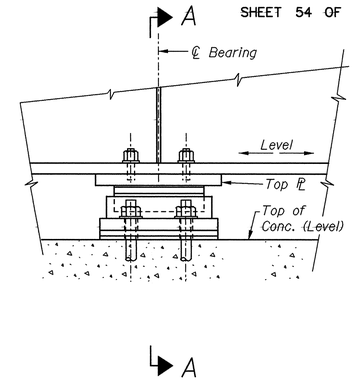


PLAN
PIER 3 TOP BRG. ℙ
& PISTON

Floor Beam not shown for clarity.



SECTION A-A



ELEVATION

FLOATING BEARING - NON GUIDED EXPANSION

(N. T. S.)

LOCATION	TYPE	VERT. DESIGN LOAD** KN	1 MIN ROTATION RANGE REQUIRED, RADIANS (clockwise positive)	MAX. THEORETICAL THERMAL MOVEMENT @ 10 °C	MIN. DIA. A449 STUD	A449 STUD HOLE DIA. AT GIRDER BOTTOM ℙ
PIER 3 ℄ END FLOOR BEAM	Floating Bearing, Non Guided Expansion	1100	±0.035	±63 mm	M24	26

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Non-Guided Expansion 1100 KN	Each	1

NOTES:

1. All steel for the Floating Bearings shall conform to the requirements of AASHTO M 270M Grade 345, unless otherwise noted. See details for anchor bolt materials. Anchor bolts, studs, nuts, and washers shall be hot-dipped galvanized in accordance with AASHTO M 232M. Teflon and stainless steel materials shall conform to AASHTO requirements and IDOT "Special Provisions for Floating Bearings".
2. See sheet 94 for End Floor Beam layout.
3. Dimensions and Bearing characteristics shown in contract drawings are exclusively those necessary for Bearing detailing. Total bearing height (Th) is based on samples of three different bearing Manufacturers. Actual Bearing height may differ from contract plans. Contractor to verify Bearing height and adjust seat elevations, if required, prior to placing pier concrete.
4. Bearing assemblies shall be designed and assembled to allow replacement by jacking the superstructure.

** 5. Vertical Design Loads are service loads.

6. Contractor shall be responsible for meeting AASHTO edge distance requirements and for ensuring adequate clearances for installation of all anchor bolts and threaded studs.
7. See sheet 55 for anchor bolt installation.
8. Anchor Bolts paid for by Furnishing and Erecting Structural Steel (L Sum).
9. See Sheet 52 for Setting Anchor Bolts requirements.

DESIGNED	ADD
CHECKED	WJZ
DRAWN	VH
CHECKED	ADD

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
NON-GUIDED EXPANSION
FLOATING BEARING DETAILS
PIER 3-END FLOOR BEAM
SN: 090-0001 STA. 150+475.243
PEORIA - TAZEWELL CO., IL. DATE: 1-21-04

1 4/29/04 CDF REVISED 6-4-09

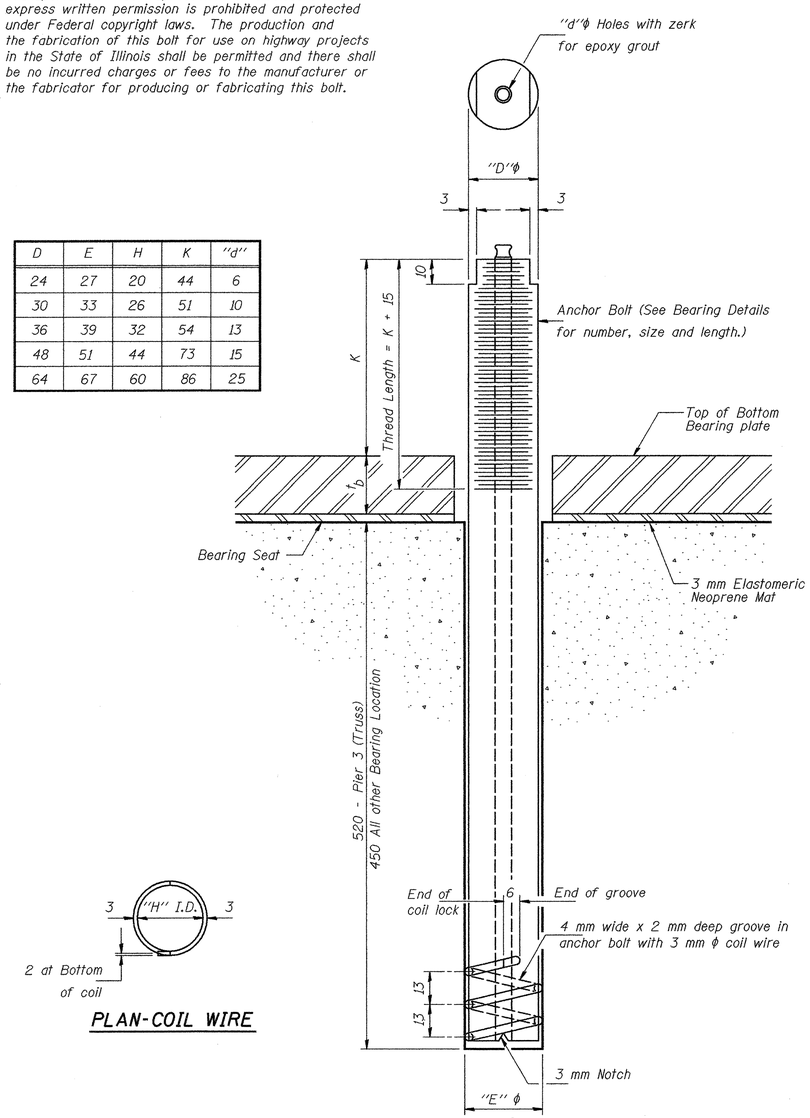
5/6/2004
M:\proj3573\Murray Baker\st05bd8-7d0900001.dgn

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

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	910
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

SHEET 55 OF 160



D	E	H	K	"d"
24	27	20	44	6
30	33	26	51	10
36	39	32	54	13
48	51	44	73	15
64	67	60	86	25

PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Material
N. Abut.	A307
Pier 1	A449
Pier 2	A449
Pier 3	A307
Pier 3 Truss	A307

ASTM F 1554 (Fy = 724 MPa), ASTM A 449 and AASHTO M 314 (Fy = 724 MPa) anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

All dimensions are in millimeters (mm) except as noted.

NOTES:

1. For Anchor Bolt dimensions and quantities, see Bearing Details Sheets 49-54

DESIGNED	ADD
CHECKED	KMP/YS
DRAWN	VH
CHECKED	KMP/YS

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

FLOATING BEARING DETAILS-
ANCHOR BOLTS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

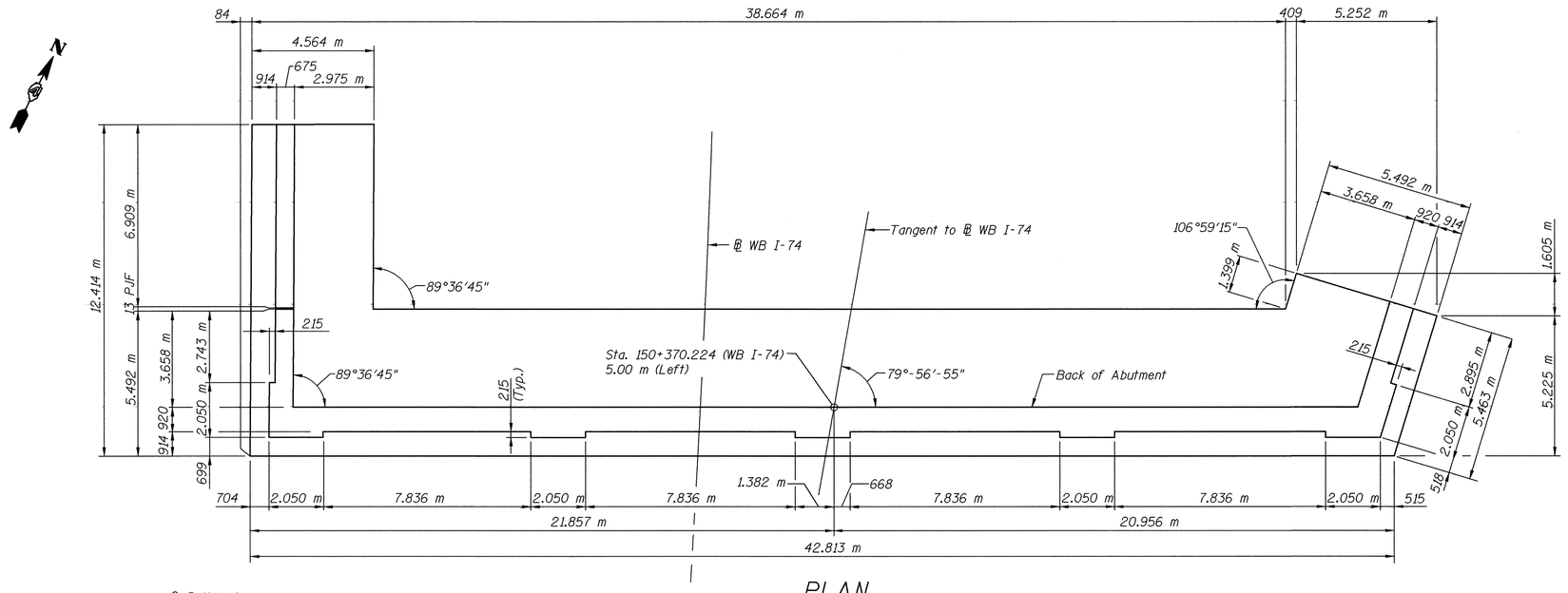
12/16/2003

m:\proj3573\murray baker\st05an-7a090000l.dgn

68196

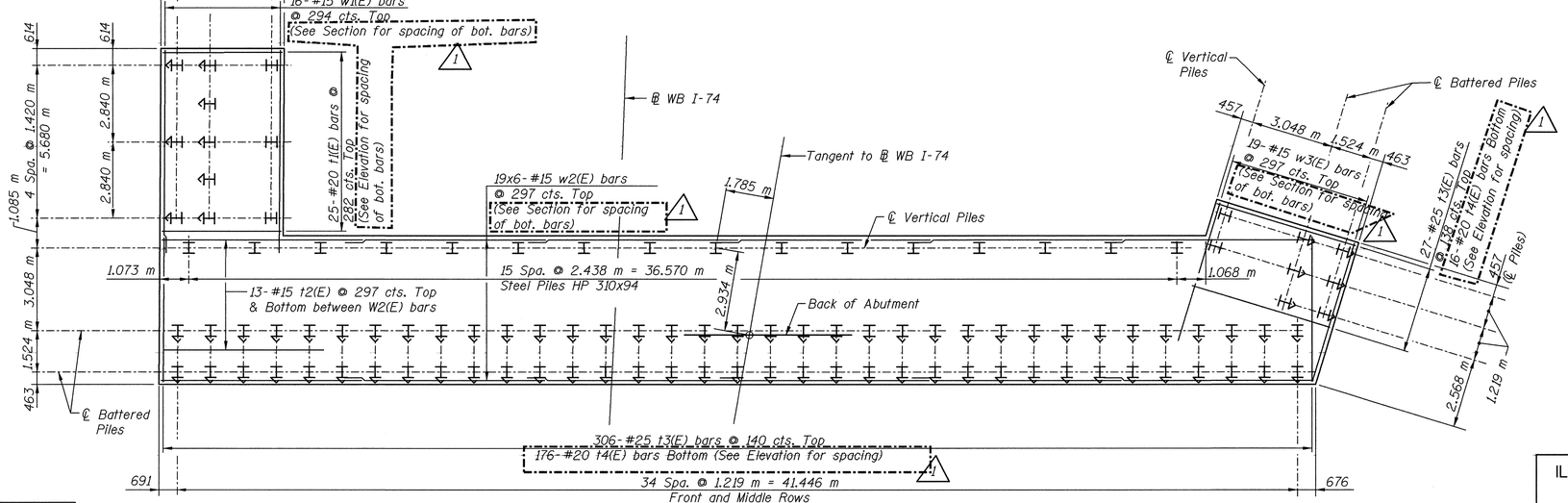
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	911
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 56 OF 160



PLAN

(Showing Dimensions of Footing and Bottom of Wall)



PLAN

(Showing Reinforcement and Pile Layout)

LEGEND

I --DENOTES VERTICAL PILES

I --DENOTES 1:3 BATTERED PILES

NORTH ABUTMENT - PILE DATA:

Type: HP 310X94
Capacity: Driven to Refusal
Estimated length: 14.8 m
No. Required: 104 and 1 Test Pile

Note:
Use the following lap lengths except as noted: # 15-890

DESIGNED	ADD
CHECKED	WJZ
DRAWN	VH
CHECKED	ADD

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

NORTH ABUTMENT FOOTING

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 WJZ REVISED 6-4-04

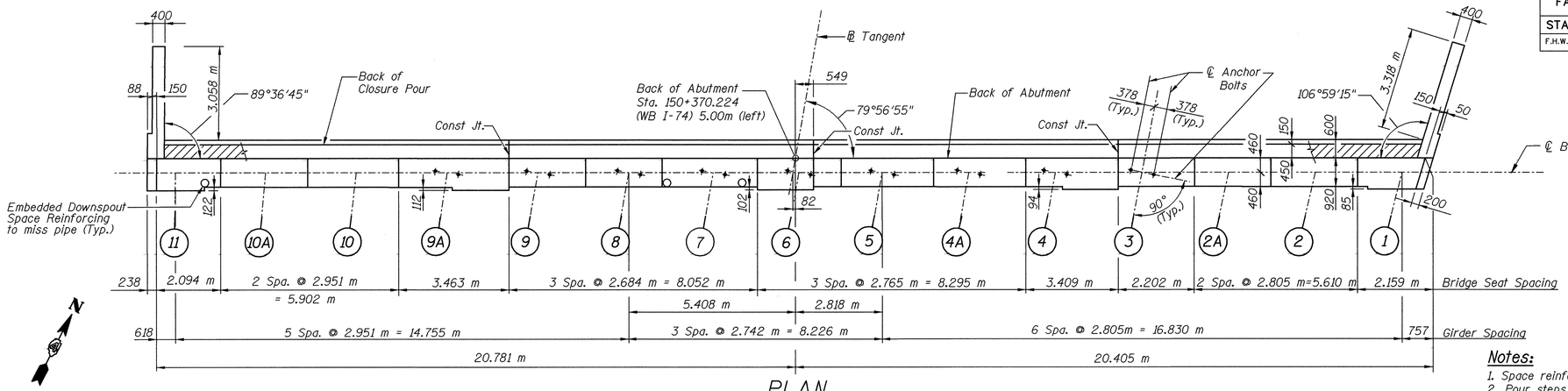
5/6/2004

M:\proj3573\Murray Baker\st05aft-7a0900001.dgn

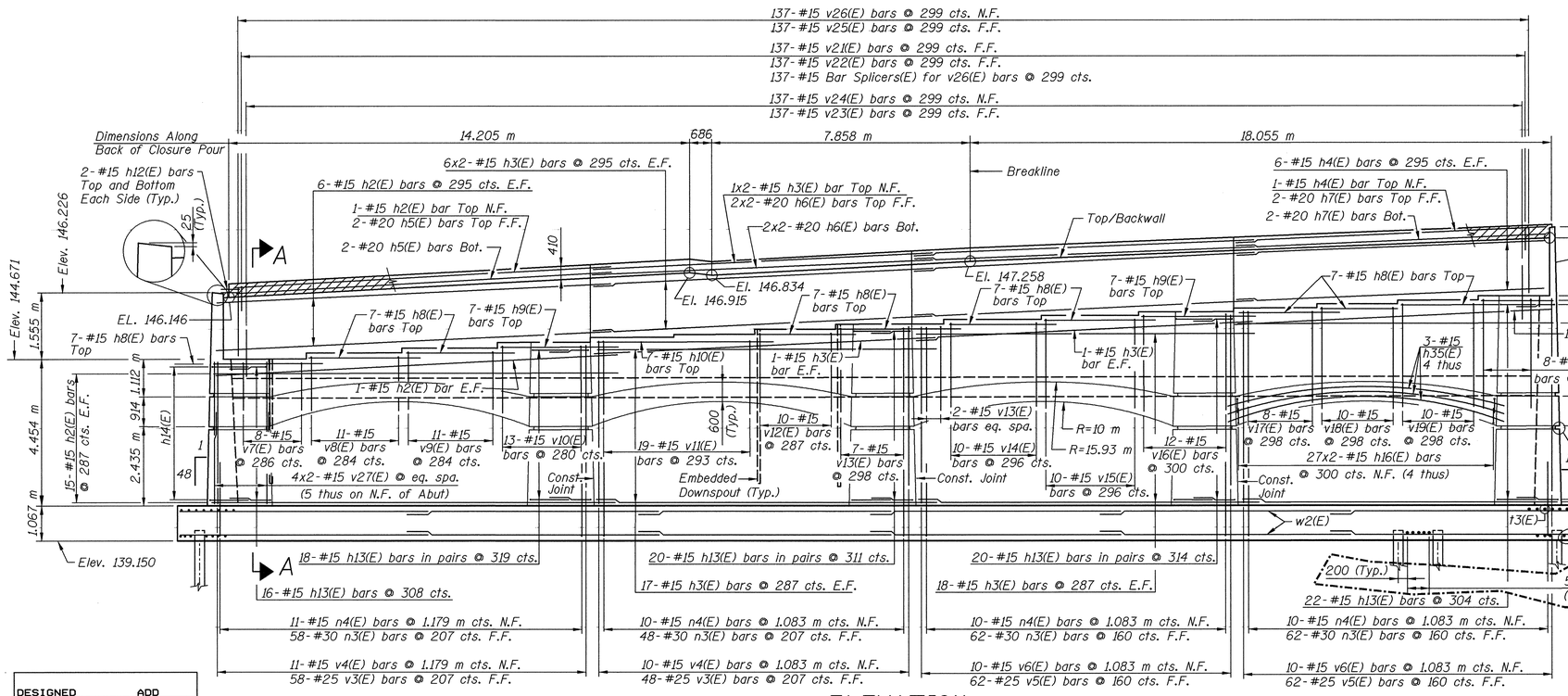
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1659	912
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 57 OF 160



PLAN



ELEVATION

GIRDER SEAT TABLE

Girder No.	11	10A	10	9A	9	8	7	6	5	4A	4	3	2A	2	1
Seat Elevation	144.671	144.861	144.990	145.165	145.320	145.364	145.512	145.660	145.798	145.910	146.014	146.123	146.237	146.342	146.446
Step (mm)	0	190	130	175	155	44	148	148	138	112	104	109	114	104	104

Notes:

1. Space reinforcing in cap to miss anchor bolts.
2. Pour steps monolithically with cap.
3. N.F. denotes near face
   F.F. denotes far face.
   E.F. denotes each face
4. All dimensions are in millimeters (mm) except as noted.
5. For 25 mm reveal detail see sheet 60.
6. Use the following lap lengths except as noted:
   #15 Vert.- 640 #20 - 790 #30 - 1850
   #15 Horiz.- 890
7. Bars indicated thus 2x3-#15 indicates 2 lines of bars with 3 lengths of bars per line.
8. Work this sheet with sheets 58-60.
9. Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
10. For additional reinforcement in the closure pour, see sheet 60.

DESIGNED	ADD
CHECKED	WJZ
DRAWN	VH
CHECKED	ADD

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
N. ABUTMENT PLAN AND ELEVATION

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

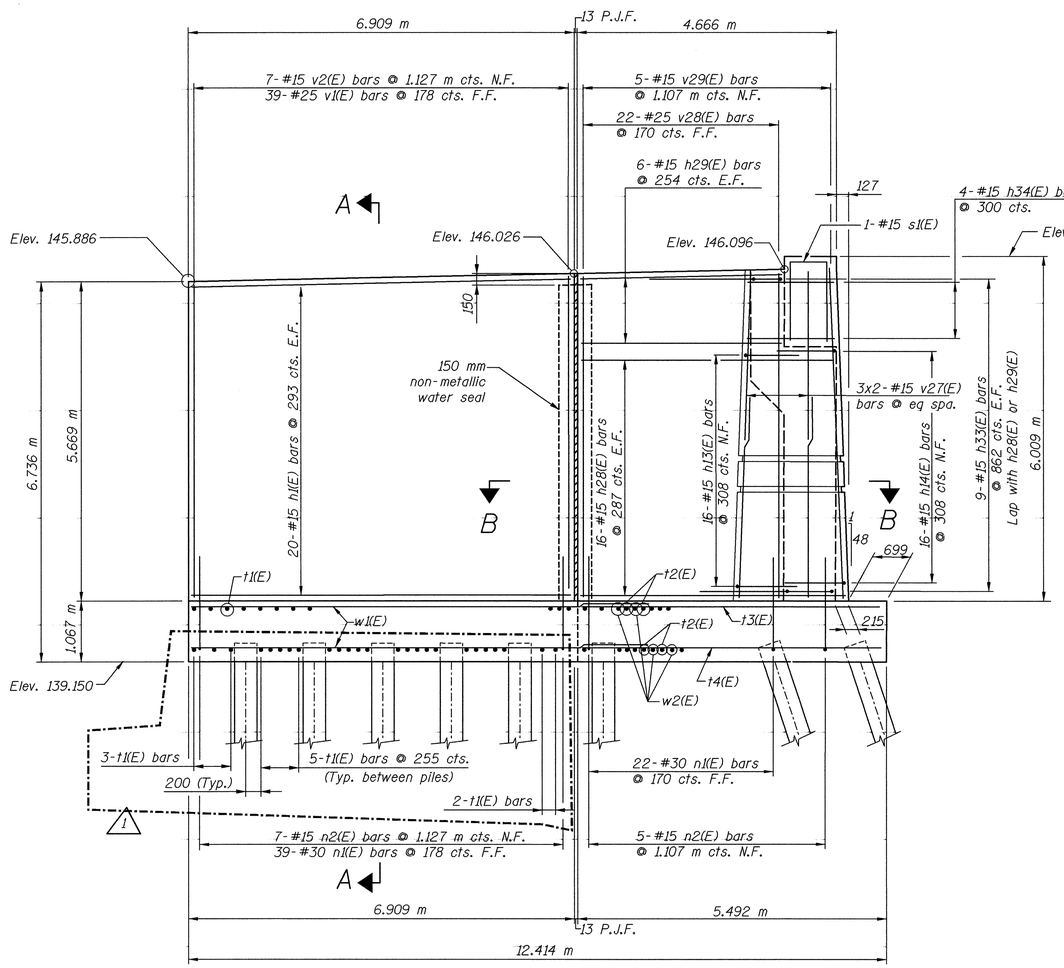
1 4/29/04 WJZ REVISED 6-4-04

5/6/2004
M:\proj3573\Murray Baker\st05ab1-7a0900001.dgn

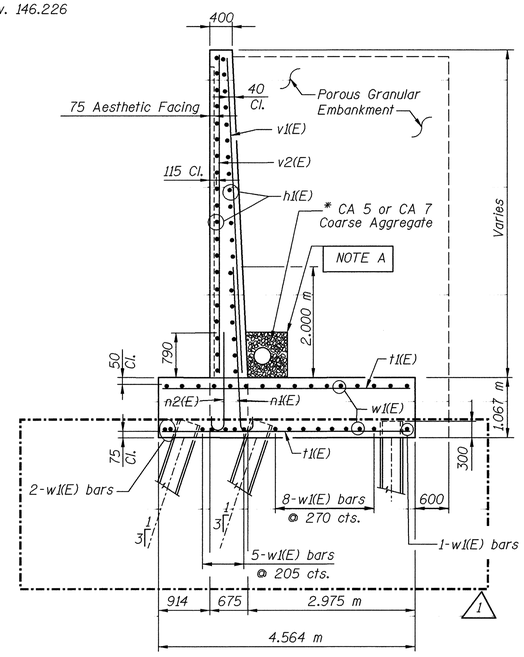
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	913
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 58 OF 160

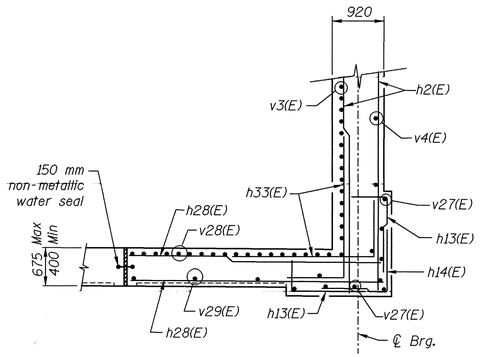


ELEVATION



SECTION A-A

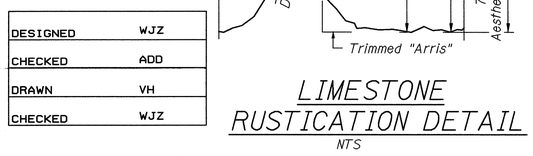
* Cost included with "Porous Granular Embankment"



SECTION B-B

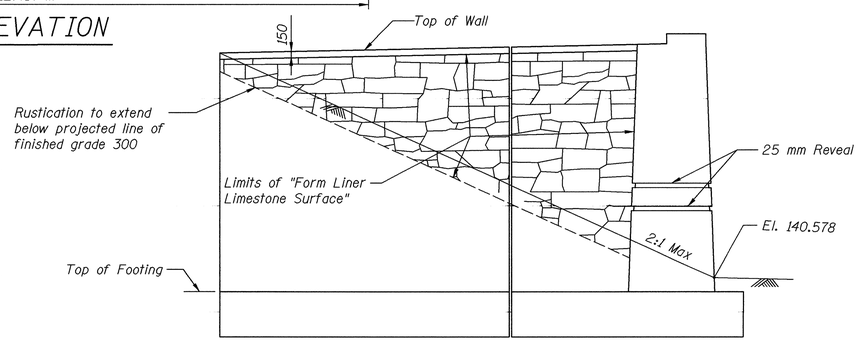
NOTE A:

* 150 mm ϕ Perforated Pipe Drain according to Section 601 of the Standard Specifications in 600 x 600 block of coarse aggregate wrapped in Geotechnical Filter Fabric for French Drains.



LIMESTONE RUSTICATION DETAIL

NTS



WEST WINGWALL RUSTICATION LAYOUT

NTS

Notes:

1. For pile layout see sheet 56
2. F.F. denotes far face
   N.F. denotes near face
   E.F. denotes each face
3. Bars indicated thus: 9x2-#15 indicates 9 lines of bars with 2 lengths per line.
4. For 25 mm reveal detail see sheet 60

DESIGNED	WJZ
CHECKED	ADD
DRAWN	VH
CHECKED	WJZ

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

NORTH ABUTMENT
WEST WINGWALL

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 WJZ REVISED 6-4-04

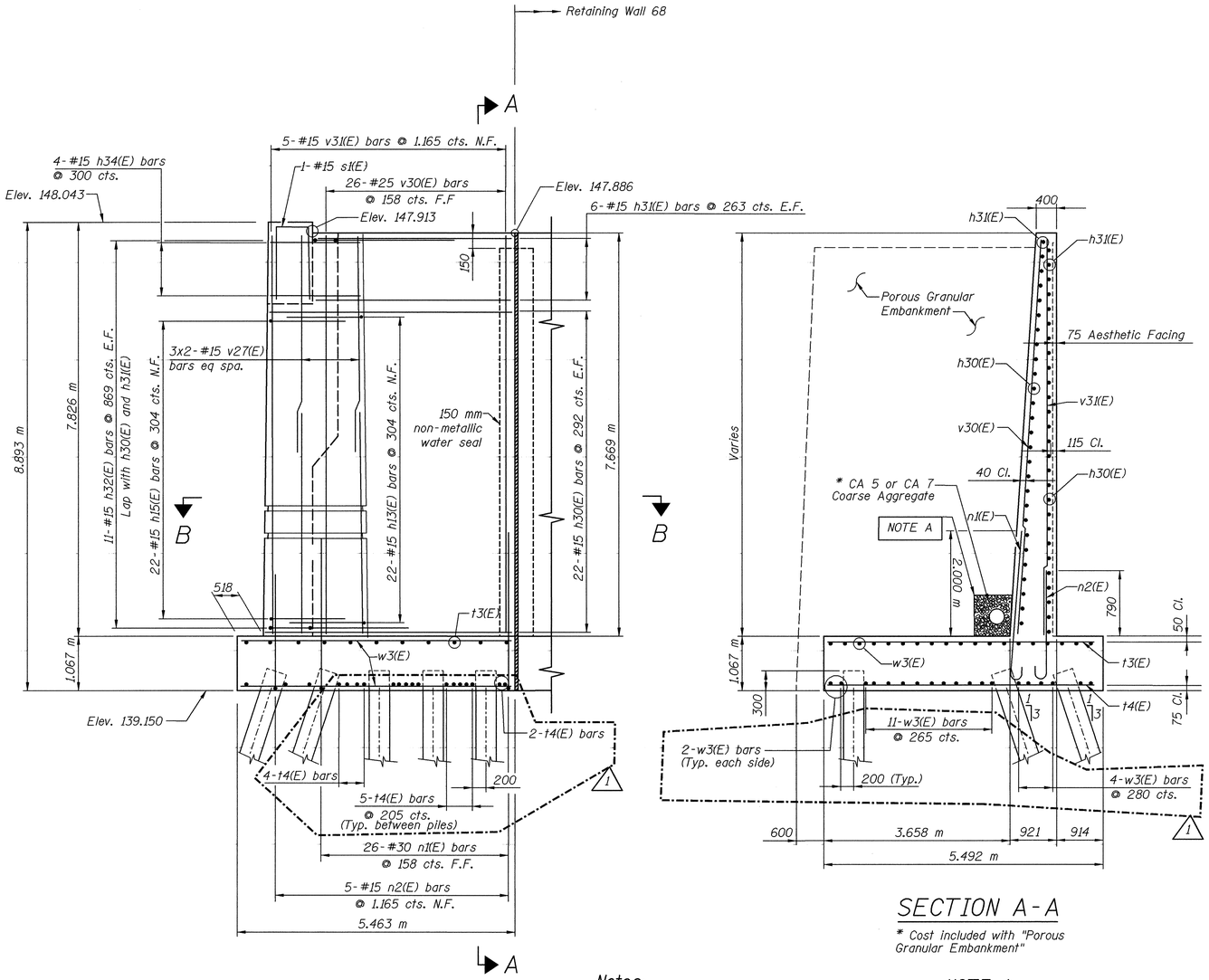
5/6/2004

M:\proj3573\Murray Baker\st05ww1-7a090001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	914
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

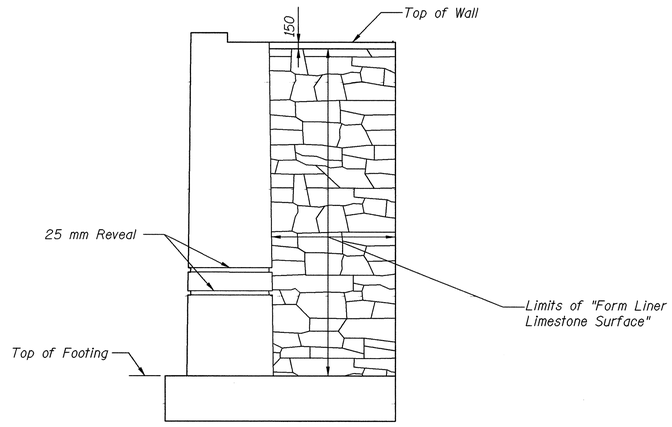
SHEET 59 OF 160



ELEVATION

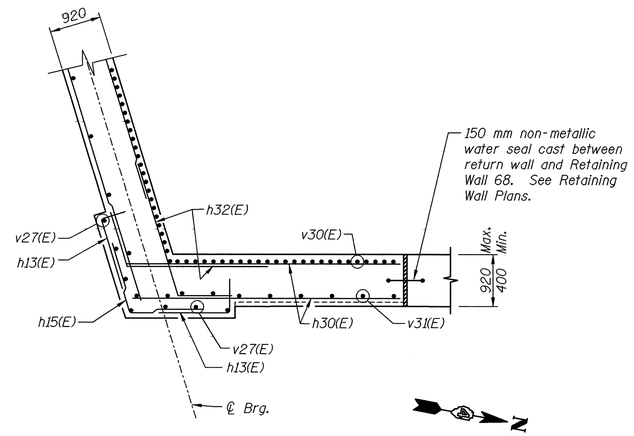
SECTION A-A

* Cost included with "Porous Granular Embankment"



EAST WINGWALL RUSTICATION LAYOUT

NTS



SECTION B-B

Notes:

1. For pile layout see sheet 56
2. F.F. denotes far face.
   N.F. denotes near face.
   E.F. denotes each face.
3. For 25 mm reveal detail see sheet 60
4. For limestone rustication detail see sheet 58

NOTE A:

* 150 mm ϕ Perforated Pipe Drain according to Section 601 of the Standard Specifications in 600 x 600 block of coarse aggregate wrapped in Geotechnical Filter Fabric for French Drains.

DESIGNED	WJZ
CHECKED	ADD
DRAWN	VH
CHECKED	WJZ

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
NORTH ABUTMENT
EAST WINGWALL
SN: 090-0001
PEORIA - TAZEWELL CO., IL.
STA. 150+475.243
DATE: 1-21-04

1 5/6/2004 WJZ REVISED 6-4-04

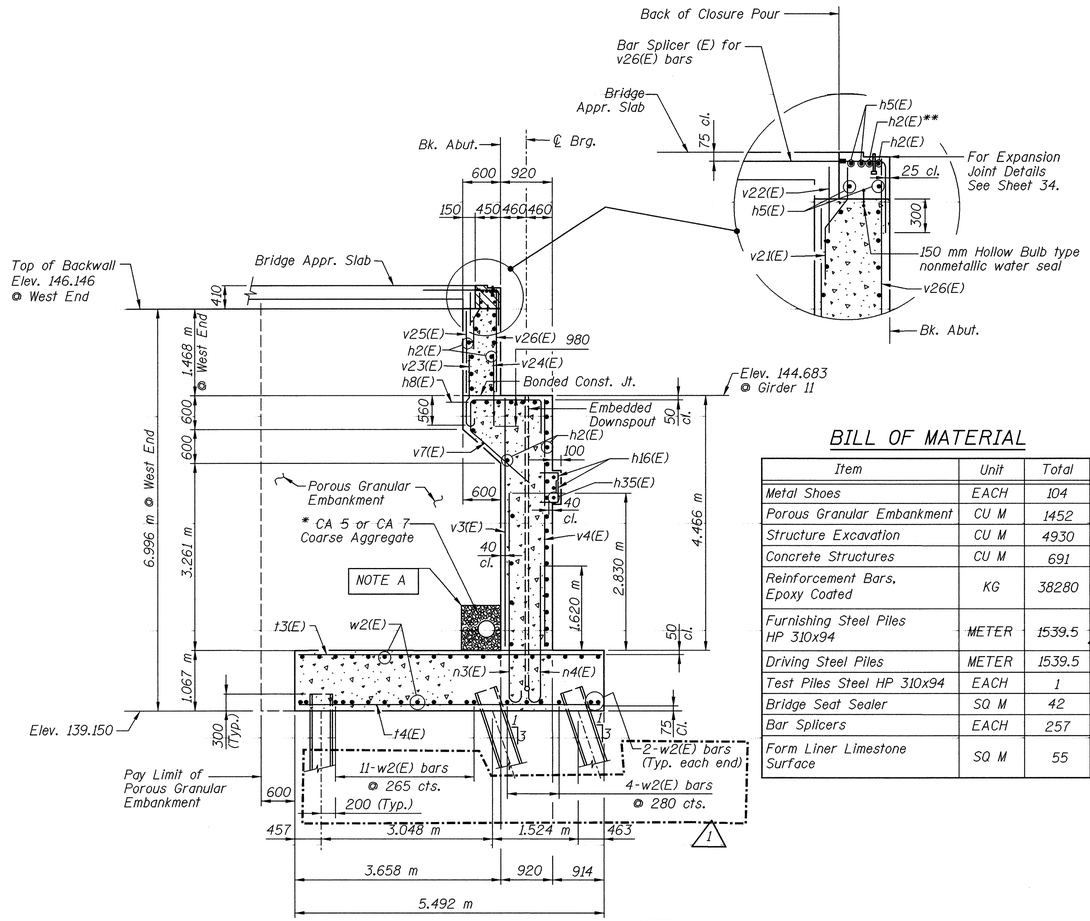
5/6/2004

M:\proj3573\Murray Baker\st05ww2-7a090001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	915
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 60 OF 160

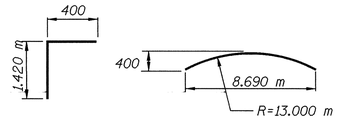


BILL OF MATERIAL

Item	Unit	Total
Metal Shoes	EACH	104
Porous Granular Embankment	CU M	1452
Structure Excavation	CU M	4930
Concrete Structures	CU M	691
Reinforcement Bars, Epoxy Coated	KG	38280
Furnishing Steel Piles HP 310x94	METER	1539.5
Driving Steel Piles	METER	1539.5
Test Piles Steel HP 310x94	EACH	1
Bridge Seat Sealer	SQ M	42
Bar Splicers	EACH	257
Form Liner Limestone Surface	SQ M	55

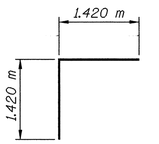
BAR SCHEDULE

Bar	No.	Size	Length (m)	Shape
h1(E)	40	#15	6.800	
h2(E)	45	#15	12.600	
h3(E)	100	#15	10.800	
h4(E)	55	#15	9.870	
h5(E)	4	#20	12.600	
h6(E)	8	#20	10.800	
h7(E)	4	#20	9.870	
h8(E)	70	#15	3.930	
h9(E)	14	#15	4.440	
h10(E)	7	#15	6.340	
h11(E)	7	#15	2.060	
h12(E)	8	#15	1.000	
h13(E)	192	#15	1.820	
h14(E)	16	#15	2.840	
h15(E)	22	#15	2.840	
h16(E)	216	#15	1.000	
h28(E)	32	#15	4.600	
h29(E)	12	#15	3.550	
h30(E)	44	#15	4.720	
h31(E)	12	#15	3.700	
h32(E)	22	#15	3.500	
h33(E)	18	#15	3.000	
h34(E)	8	#15	1.670	
h35(E)	12	#15	8.860	
n1(E)	87	#30	3.390	
n2(E)	17	#15	1.960	
n3(E)	230	#30	4.230	
n4(E)	41	#15	2.790	
s1(E)	2	#15	4.000	
t1(E)	50	#20	4.420	
t2(E)	26	#15	4.420	
t3(E)	333	#25	5.350	
t4(E)	192	#20	5.350	
v1(E)	39	#25	5.570	
v2(E)	7	#15	5.570	
v3(E)	106	#25	4.360	
v4(E)	21	#15	4.360	
v5(E)	124	#25	5.380	
v6(E)	20	#15	5.380	
v7(E)	8	#15	4.050	
v8(E)	11	#15	4.240	
v9(E)	11	#15	4.380	
v10(E)	13	#15	4.530	
v11(E)	19	#15	4.690	
v12(E)	10	#15	4.880	
v13(E)	9	#15	5.030	
v14(E)	10	#15	5.170	
v15(E)	10	#15	5.280	
v16(E)	12	#15	5.380	
v17(E)	8	#15	5.490	
v18(E)	10	#15	5.610	
v19(E)	10	#15	5.720	
v20(E)	8	#15	5.820	
v21(E)	137	#15	1.240	
v22(E)	137	#15	0.900	
v23(E)	137	#15	1.430	
v24(E)	137	#15	1.670	
v25(E)	137	#15	1.370	
v26(E)	137	#15	1.780	
v27(E)	52	#15	3.400	
v28(E)	22	#25	5.710	
v29(E)	5	#15	5.710	
v30(E)	26	#25	7.610	
v31(E)	5	#15	7.610	
w1(E)	32	#15	7.470	
w2(E)	228	#15	7.700	
w3(E)	38	#15	5.320	

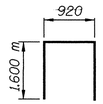


BAR h13(E)

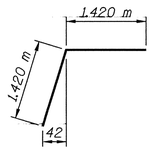
BAR h35(E)



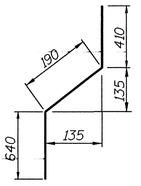
BAR h14(E)



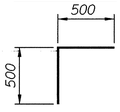
BAR s1(E)



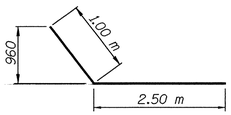
BAR h15(E)



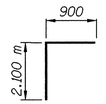
BAR v21(E)



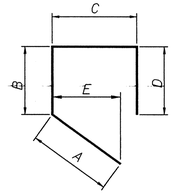
BAR h16(E)



BAR h32(E)

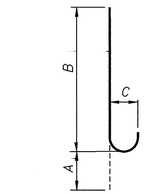


BAR h33(E)



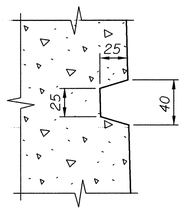
BAR	A	B	C	D	E
v7(E)	1.500 m	500	1.410 m	640	1.060 m
v8(E)	1.500 m	690	1.410 m	640	1.060 m
v9(E)	1.500 m	830	1.410 m	640	1.060 m
v10(E)	1.500 m	980	1.410 m	640	1.060 m
v11(E)	1.500 m	1.140 m	1.410 m	640	1.060 m
v12(E)	1.500 m	1.330 m	1.410 m	640	1.060 m
v13(E)	1.500 m	1.480 m	1.410 m	640	1.060 m
v14(E)	1.500 m	1.620 m	1.410 m	640	1.060 m
v15(E)	1.500 m	1.730 m	1.410 m	640	1.060 m
v16(E)	1.500 m	1.830 m	1.410 m	640	1.060 m
v17(E)	1.500 m	1.940 m	1.410 m	640	1.060 m
v18(E)	1.500 m	2.060 m	1.410 m	640	1.060 m
v19(E)	1.500 m	2.170 m	1.410 m	640	1.060 m
v20(E)	1.500 m	2.270 m	1.410 m	640	1.060 m

BARS v7 THROUGH v20(E)



BAR	A	B	C
n1(E)	400	2.990 m	300
n2(E)	180	1.780 m	130
n3(E)	400	3.830 m	300
n4(E)	180	2.610 m	130
v23(E)	180	1.250 m	130

BARS n1(E), n2(E), n3(E), n4(E), & v23(E)



SECTION A-T

* Cost included with "Porous Granular Embankment"

NOTE A:

* 150 mm ϕ Perforated Pipe Drain according to Section 601 of the Standard Specifications in 600 x 600 block of coarse aggregate wrapped in Geotechnical Filter Fabric for French Drains.

25 mm REVEAL DETAIL

N.T.S.

DESIGNED	ADD
CHECKED	WJZ
DRAWN	VH
CHECKED	ADD

Notes:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. ** Place h2(E) bar in back of anchor bolt as shown if required to maintain 25 mm cl. (to-3mm). Anchor bolts should be tied to h2(E) bar.
3. Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
4. Work this sheet with sheets 56-59.
5. For embeded drain pipe details see sheet 33.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
NORTH ABUTMENT DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

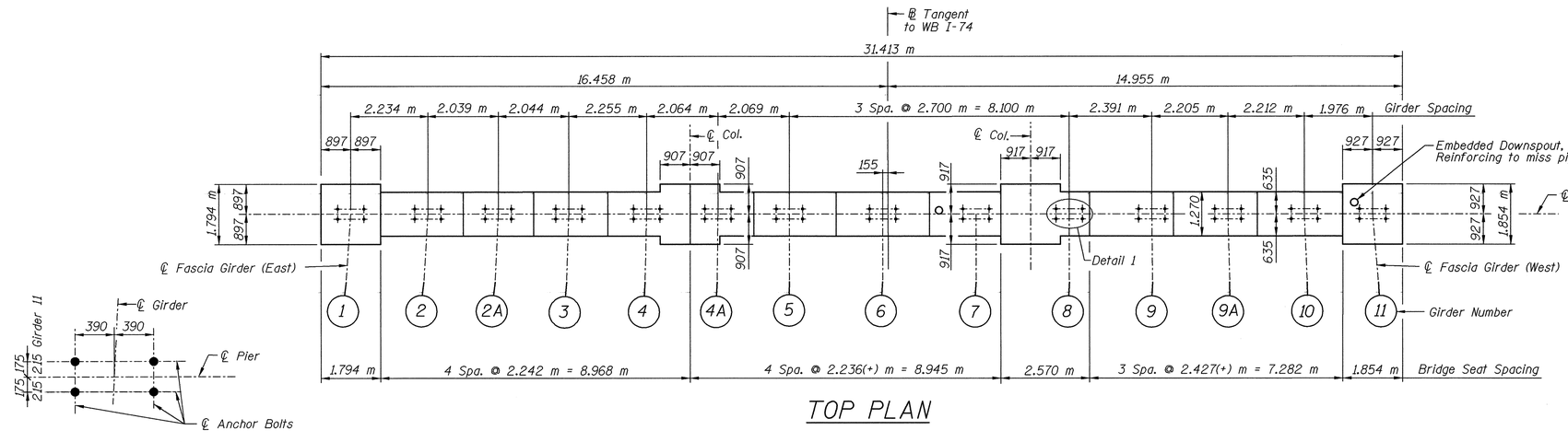
1 5/6/04 WJZ REVISED 6-4-04

5/6/2004
M:\proj3573\Murray Baker\st05ab2-7a0900001.dgn

68196

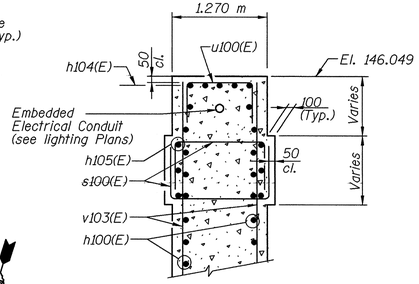
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	916
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 61 OF 160

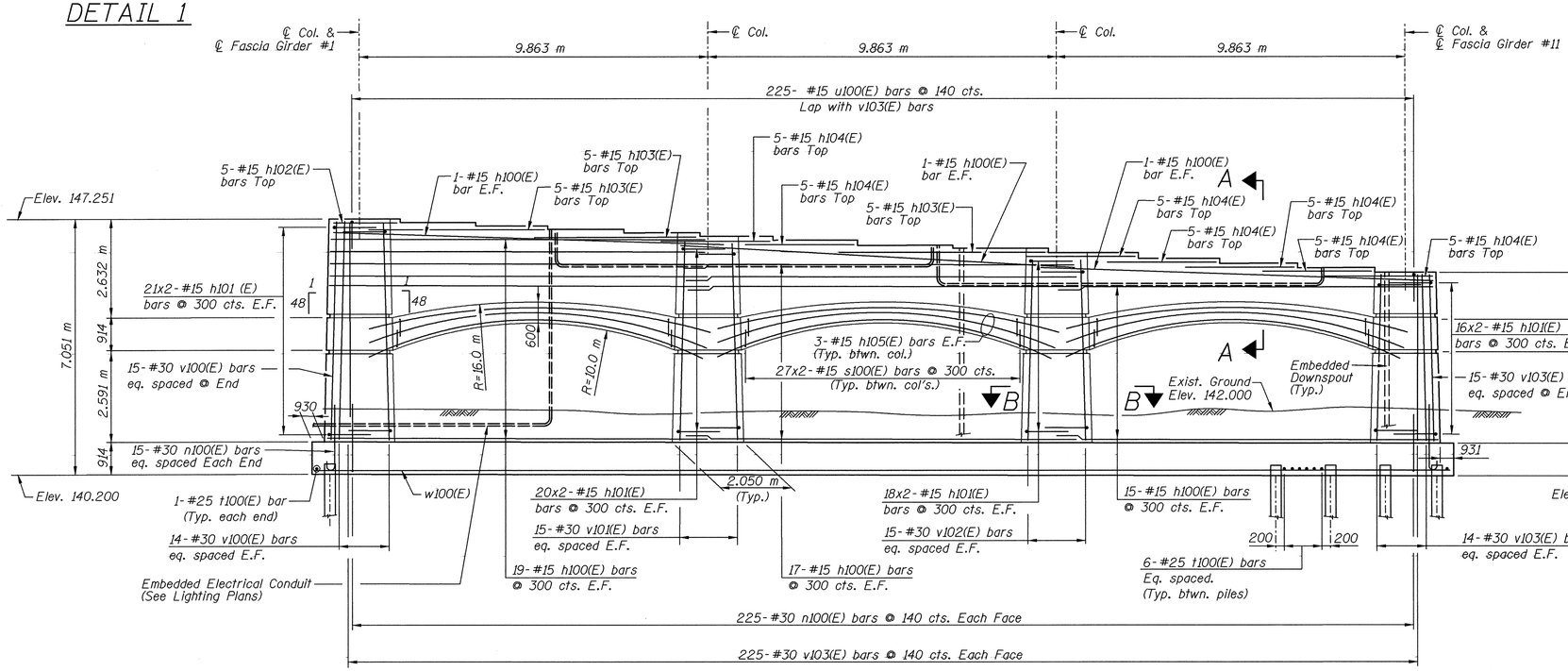


TOP PLAN

DETAIL 1



SECTION A-A



ELEVATION

END VIEW
(West End)

GIRDER SEAT TABLE

Girder No.	1	2	2A	3	4	4A	5	6	7	8	9	9A	10	11
Seat Elevation	147.301	147.209	147.125	147.040	146.953	146.839	146.728	146.571	146.507	146.354	146.214	146.099	145.956	145.798
Step (mm)	0	-92	-84	-85	-87	-114	-111	-157	-64	-154	-139	-115	-143	-158

DESIGNED	ADD
CHECKED	WJZ
DRAWN	VH
CHECKED	ADD

Note:
For Section B-B and Notes see sheet 62.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
PIER 1
PLAN & ELEVATION

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF REVISED 6-4-04

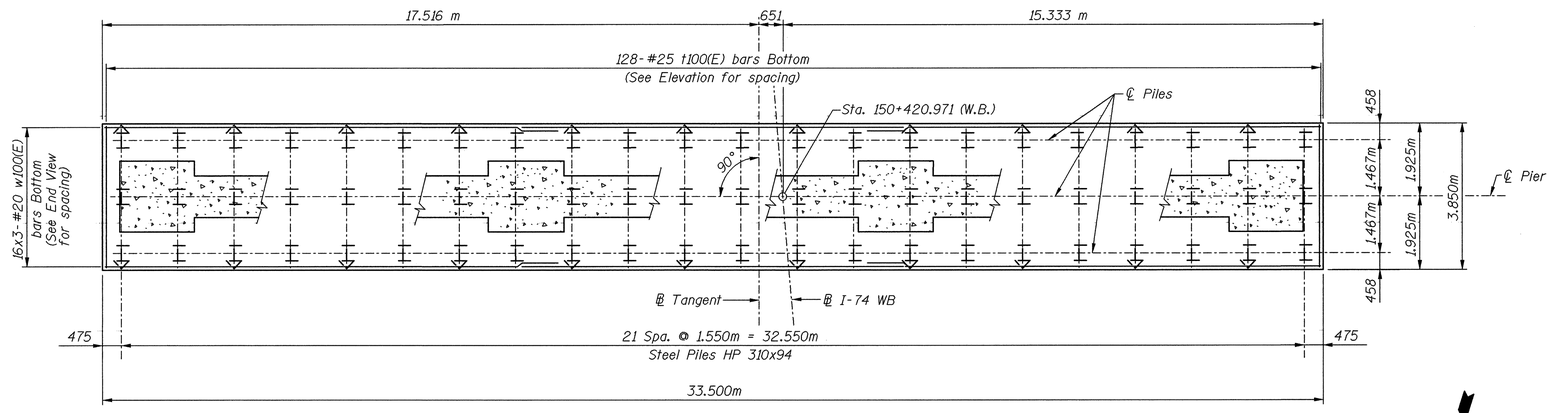
5/6/2004

M:\proj3573\Murray Baker\st05prl-7a0900001.dgn

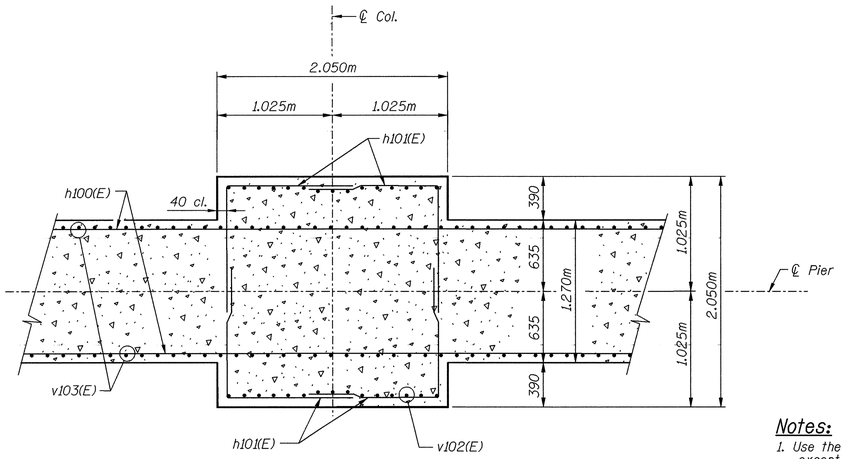
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	917
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 62 OF 160



FOOTING PLAN



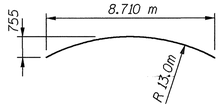
SECTION B-B

(Dimensions at top of footing)

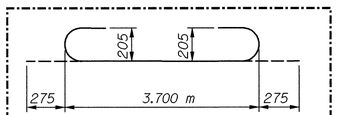
BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h100(E)	108	#15	11.110	
h101(E)	300	#15	2.840	
h102(E)	5	#15	1.690	
h103(E)	15	#15	5.060	
h104(E)	35	#15	3.000	
h105(E)	18	#15	8.880	
n100(E)	480	#30	4.540	
s100(E)	162	#15	2.355	
t100(E)	128	#25	4.250	
u100(E)	225	#15	2.450	
v100(E)	43	#30	6.060	
v101(E)	30	#30	5.600	
v102(E)	30	#30	5.110	
v103(E)	493	#30	4.620	
w100(E)	48	#20	11.640	
Test Piles Steel HP 310x94		EACH	1	
Furnishing Steel Piles HP 310x94		METER	1040.0	
Driving Steel Piles		METER	1040.0	
Metal Shoes		EACH	65	
Structure Excavation		CU. M	522	
Concrete Structures		CU. M	369	
Reinforcement Bars, Epoxy Coated		KG	36100	

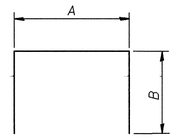
Reinforcement Bars designated (E) shall be epoxy coated.



BAR h105(E)

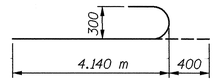


BAR t100 (E)

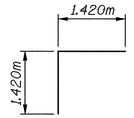


BAR	A	B
u100(E)	1.170 m	640
s100(E)	1.355 m	500

BARS u100(E) & s100(E)



BAR n100 (E)



BAR h101(E)

Notes:

1. Use the following minimum lap lengths except as noted:
   #15 - 890 #30 - 1.850 m
   #20 - 790
2. Bars indicated thus 2x3-#15 indicates 2 lines of bars with 3 lengths of bars per line.
3. Work this sheet with sheet 61.
4. All dimensions are in mm except as noted.
5. Space reinforcing in cap to miss anchor bolts.
6. EF denotes each face.
7. Pour steps monolithically with cap.

LEGEND

H --DENOTES VERTICAL PILES.

H▷ --DENOTES 1:4 BATTERED PILES.

PIER 1-PILE DATA

Type: HP 310x94

Capacity: Driven to Refusal /1

Est. Length: 16.2 m

Quantity: 65 + 1 Test Pile

DESIGNED	ADD
CHECKED	WJZ
DRAWN	VH
CHECKED	ADD

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
PIER 1 DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

/1 4/29/04 KMP

REVISED
6-4-04

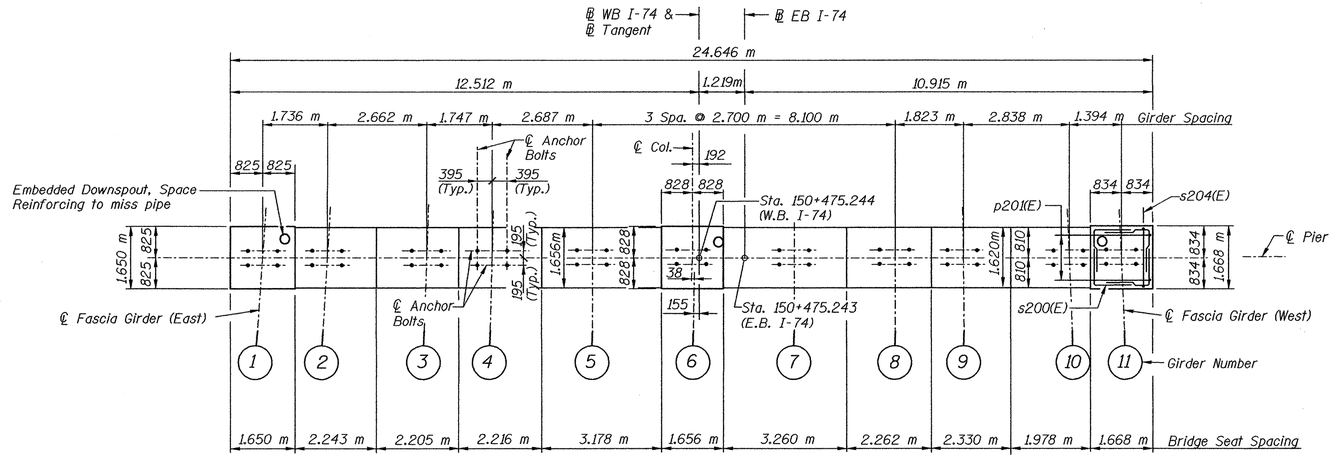
5/6/2004

M:\proj3573\Murray Baker\st05pr1a-7a0900001.dgn

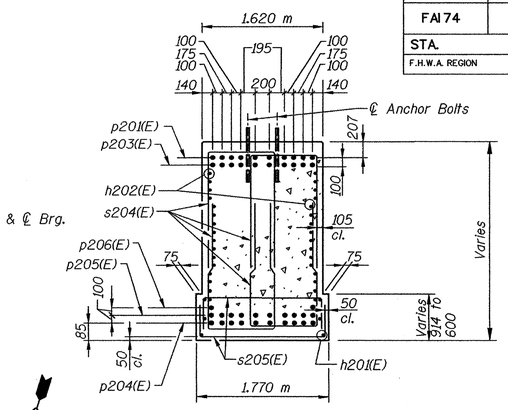
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI74	*	TAZEWELL	1559	918
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 63 OF 160

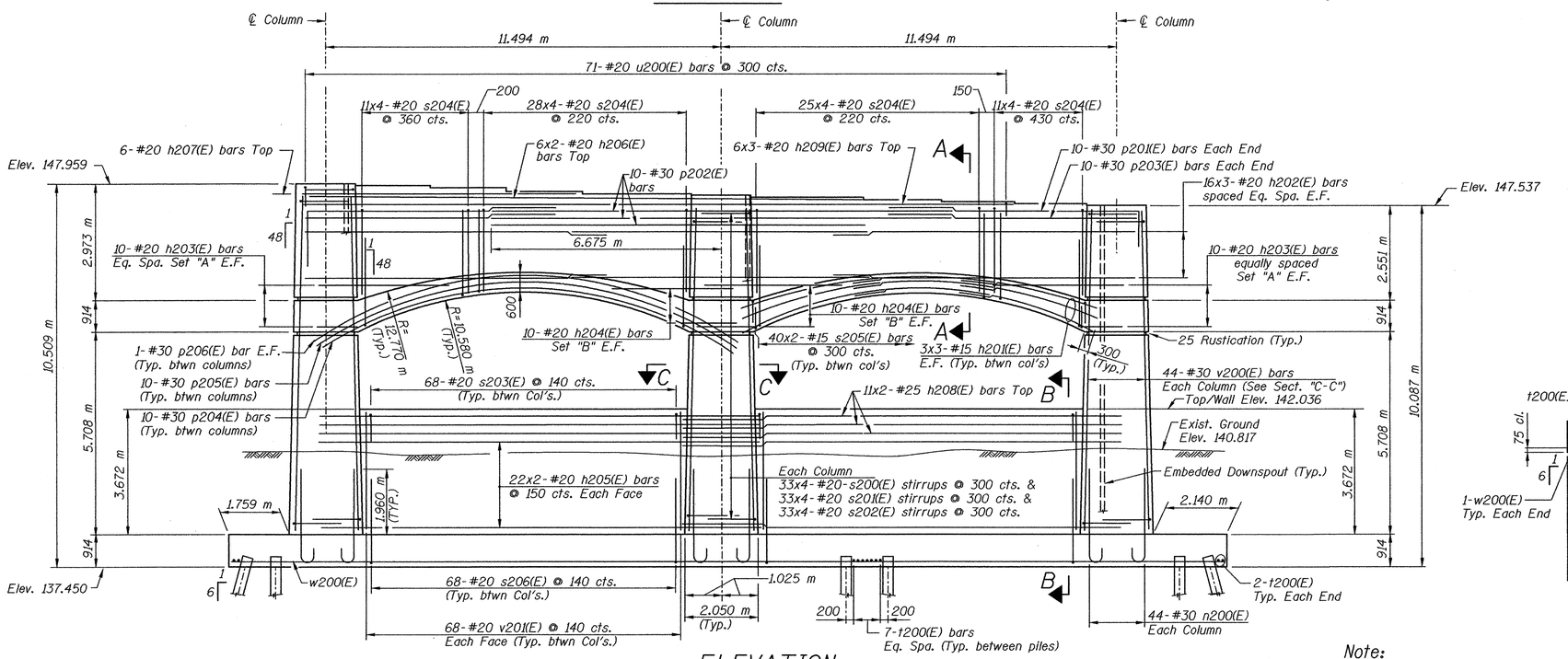
68196



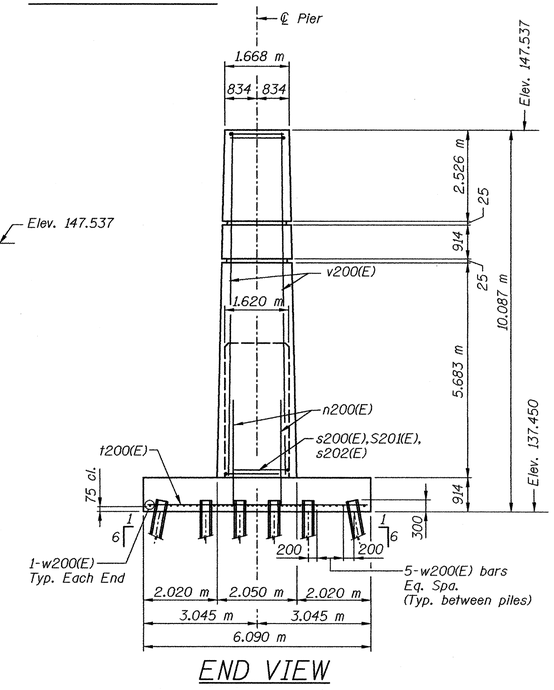
TOP PLAN



SECTION A-A



ELEVATION



END VIEW

GIRDER SEAT TABLE

Girder No.	1	2	3	4	5	6	7	8	9	10	11
Seat Elevation	147.959	147.936	147.902	147.882	147.832	147.798	147.766	147.694	147.659	147.603	147.537
Step (mm)	0	-23	-35	-19	-51	-34	-32	-72	-35	-56	-66

DESIGNED	KMP
CHECKED	ADD
DRAWN	VH
CHECKED	KMP

Note:
1. For Section B-B, C-C see sheet 64.
2. For additional notes see sheet 64.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

PIER 2
PLAN & ELEVATION

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

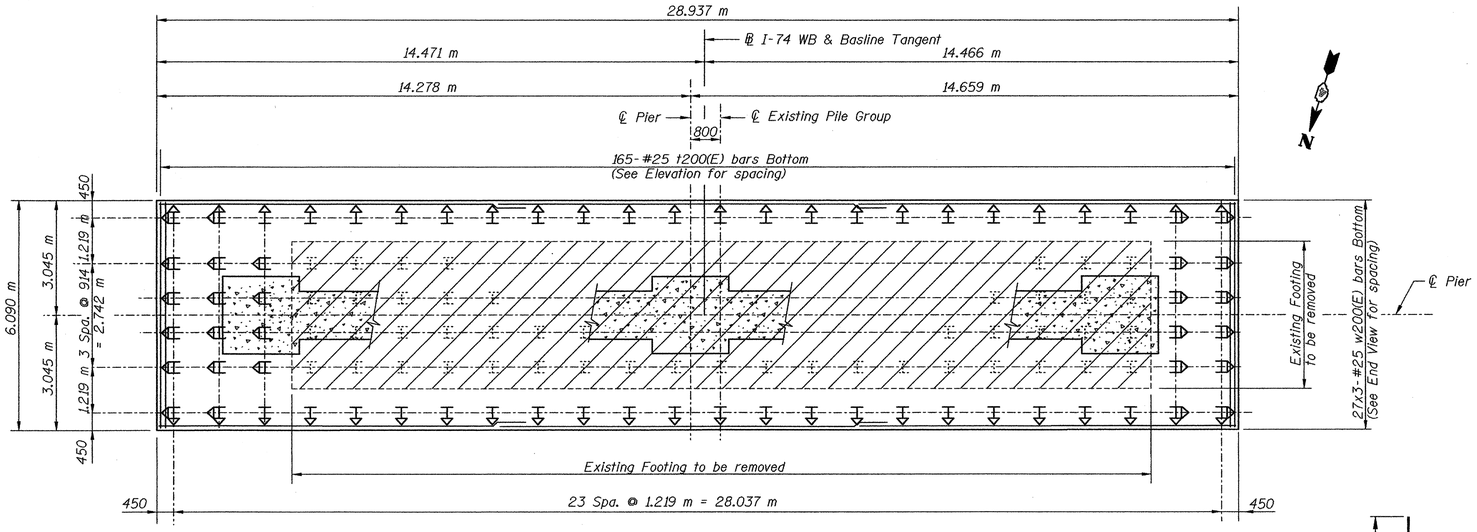
12/16/2003

m:\proj3573\murray baker\st05pr2-7a0900001.dgn

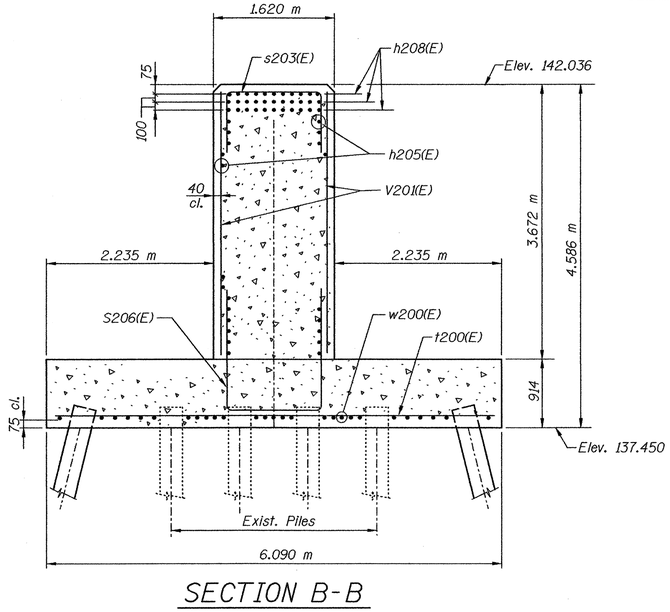
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	919
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

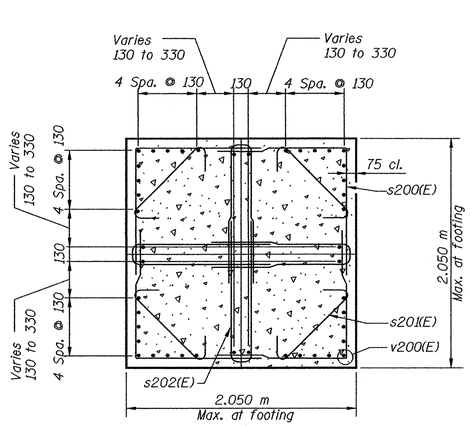
SHEET 64 OF 160



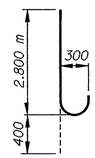
FOOTING PLAN



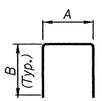
SECTION B-B



SECTION C-C

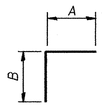


Bar n200(E)



BAR	A	B
s202(E)	200	1.2m
s203(E)	1.520m	800
s204(E)	840	2.080m
s205(E)	1.670m	500
s206(E)	1.520m	1.640m
u200(E)	1.420m	1.100m

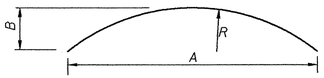
BARS s202(E), s203(E), s204(E), s205(E), s206(E)

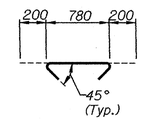


Bar s200(E)

BAR	A	B
s200(E)	1.42	1.42
p201(E)	7.74	500

BAR	A	B	R
p204(E)	13.293	2.330	10.645 m
p205(E)	13.314	2.274	10.880 m
p206(E)	13.333	2.221	11.115 m





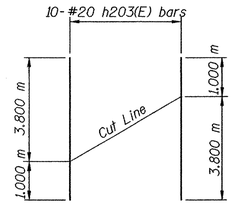
Bar s201(E)

BILL OF MATERIAL

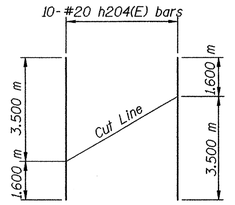
Bar	No.	Size	Length	Shape
h201(E)	36	#15	4.4	
h202(E)	96	#20	8.96	
h203(E)	20	#20	4.8	
h204(E)	20	#20	5.1	
h205(E)	88	#20	11.9	
h206(E)	12	#20	9.26	
h207(E)	6	#20	8.21	
h208(E)	66	#25	11.9	
h209(E)	18	#20	7.7	
n200(E)	132	#30	3.2	
p201(E)	20	#30	8.24	
p202(E)	30	#30	13.35	
p203(E)	20	#30	7.74	
p204(E)	20	#30	14.36	
p205(E)	20	#30	14.33	
p206(E)	4	#30	14.3	
s200(E)	396	#20	2.84	
s201(E)	396	#20	1.18	
s202(E)	396	#20	2.6	
s203(E)	136	#20	3.12	
s204(E)	300	#20	5	
s205(E)	160	#15	2.67	
s206(E)	136	#20	4.8	
t200(E)	165	#25	5.94	
u200(E)	71	#20	3.62	
v200(E)	132	#30	9.1	
v201(E)	272	#20	3.53	
w200(E)	81	#25	10.9	
Metal Shoes			EACH	67
Test Piles Steel HP 250x62			EACH	1
Furnishing Steel Piles HP 250x62			METER	717.0
Driving Steel Piles			METER	717.0
Structure Excavation			Cu. M.	1308
Concrete Structures			Cu. M.	469
Reinforcement Bars, Epoxy Coated			KG	48,120

NOTES:

1. Reinforcement Bars designated (E) shall be epoxy coated.
2. Space reinforcing in cap to miss anchor bolts.
3. Bars indicated thus 2 x 3-#25 etc. indicates 2 lines of bars with 3 lengths per line.
4. All dimensions are in mm except as noted.
5. Use the following lap lengths except as noted:
   #15 - 640 #25 - 1.850m
   #20 - 790 #30 - 2.590m
6. E.F. denotes Each Face.
7. Work this Sheet with Sheet 63.
8. Pour steps monolithically with cap.



BARS h203(E)



BARS h204(E)

DESIGNED	KMP
CHECKED	ADD
DRAWN	VH
CHECKED	KMP

PIER 2-PILE DATA

EXISTING PILES
Type: 10" BP 42#
Capacity: 311 kN
Est. Length: 10.4 m
QTY: 76

NEW PILES
Type: HP250x62
Capacity: Driven to refusal with metal pile shoes
Est. Length: 10.7 m
QTY: 67 + 1 Test Pile

LEGEND

-- Denotes Battered Piles

-- Denotes Piles Battered in 2 Directions

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
PIER 2 DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

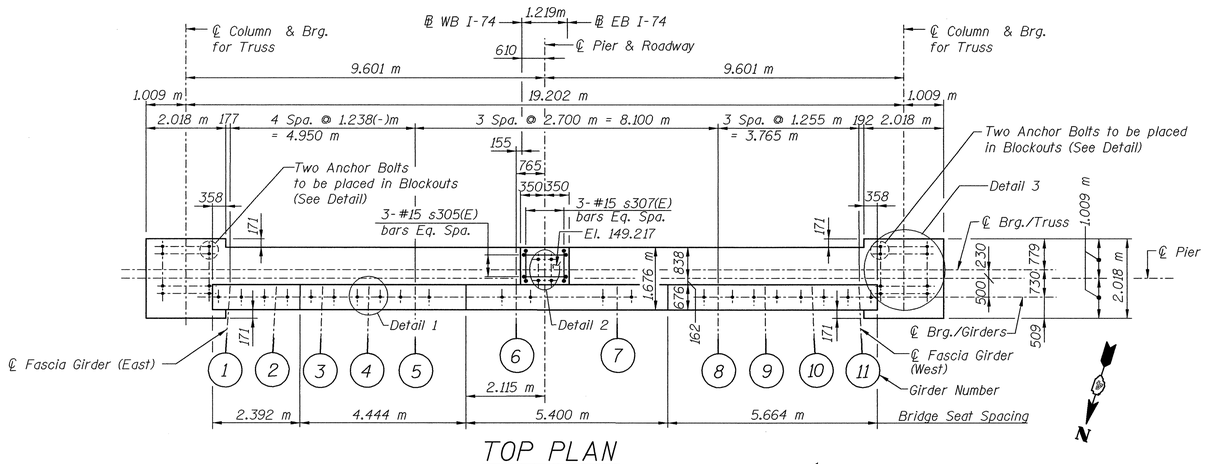
STA. 150+475.243
DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05pr2a-7a0900001.dgn

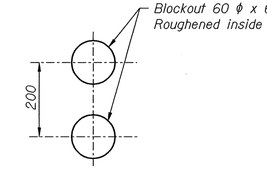
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	920
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

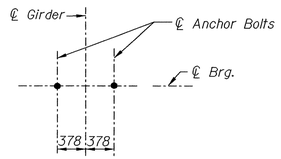
SHEET 65 OF 160



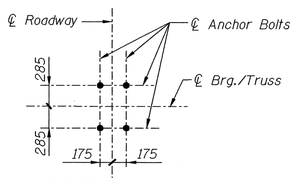
TOP PLAN



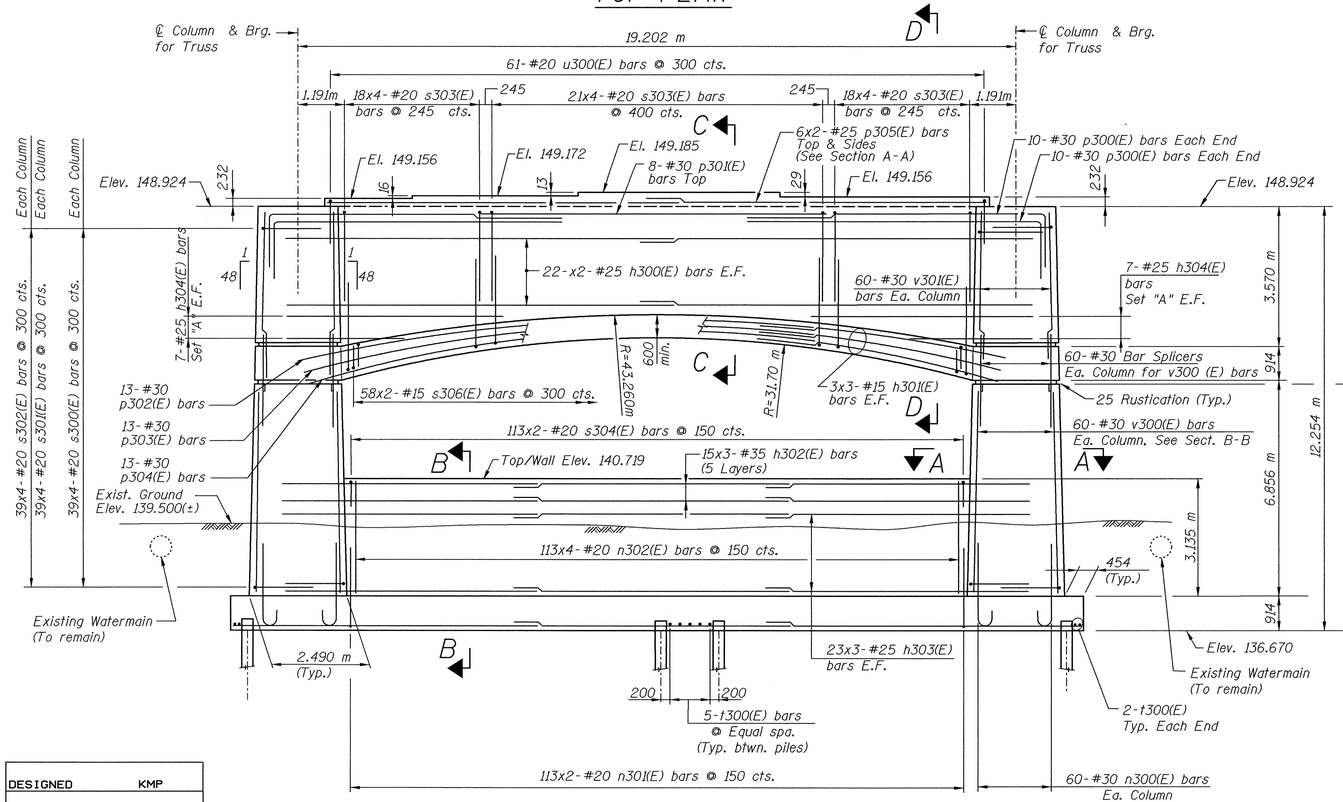
ANCHOR BOLT BLOCKOUT DETAIL



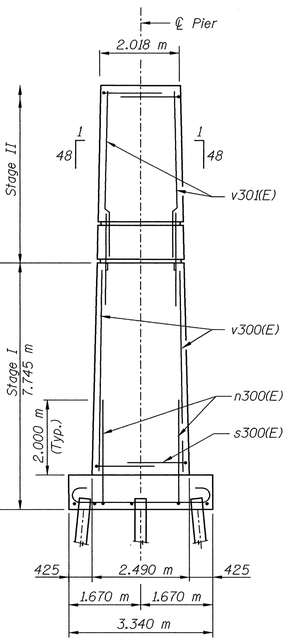
DETAIL 1



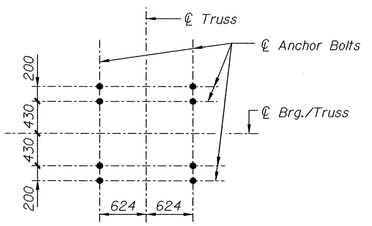
DETAIL 2



ELEVATION



END VIEW



DETAIL 3
(Typ. Each Side)

NOTE:
For Section A-A, B-B, C-C & D-D see sheet 66.

DESIGNED	KMP
CHECKED	ADD
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
PIER 3
PLAN & ELEVATION

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

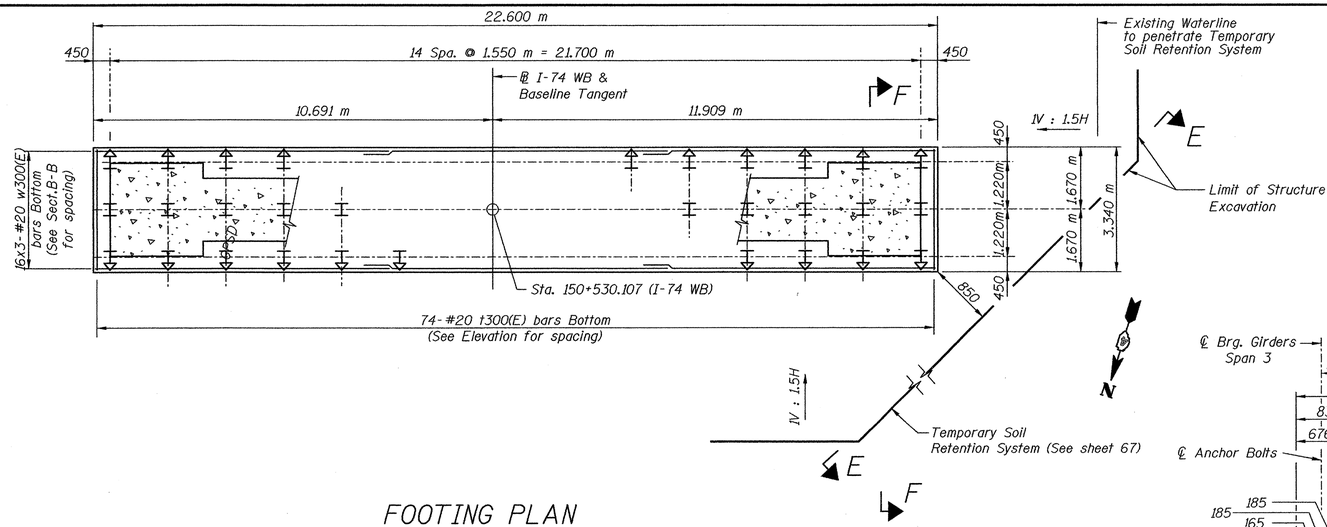
STA. 150+475.243
DATE: 1-14-04

01/14/2004
m:\proj3573\murray baker\st05pr3-7a0900001.dgn

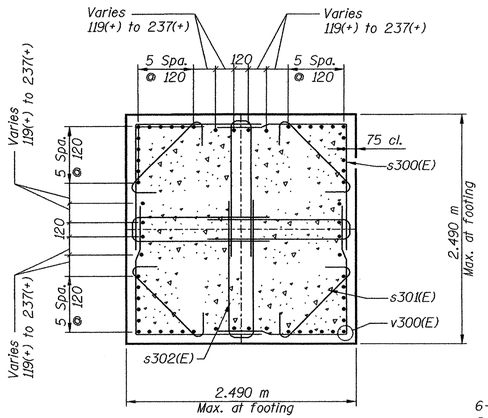
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI74	*	TAZEWELL	1559	321
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

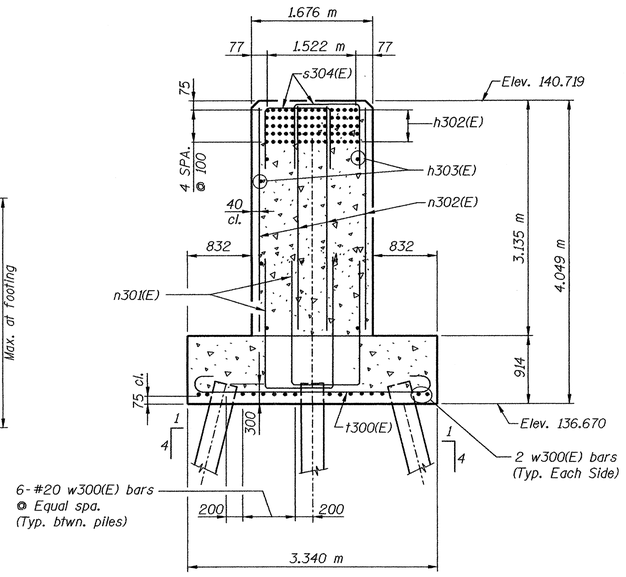
SHEET 66 OF 160



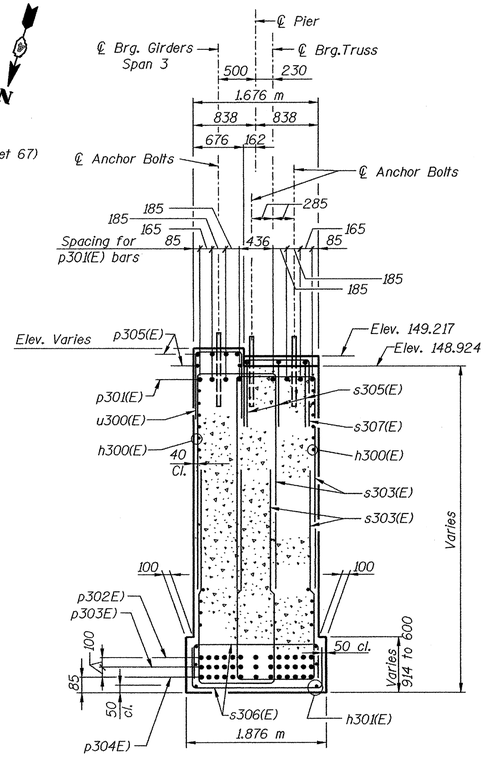
FOOTING PLAN



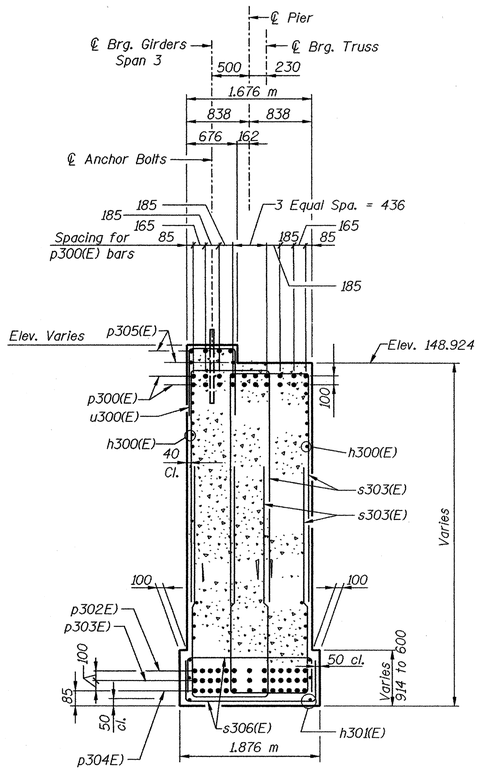
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

NOTES:

1. For Section E-E & F-F see sheet 67.
2. Work this sheet with Sheets 65 & 67
3. Due to low overhead clearance, a splice in the piles will be required. The pile splice shall meet the requirements of section 512.05 of the IDOT standard specifications for road and bridge construction.

PIER 3 - PILE DATA

Type: HP 310x94
Capacity: Driven to Refusal
Est. Length: 8.8 m
Quantity: 44 + 1 Test Pile

LEGEND

H -- Denotes Vertical Piles
H▷ -- Denotes 1:4 Battered Piles

DESIGNED	KMP
CHECKED	ADD
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

PIER 3
DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

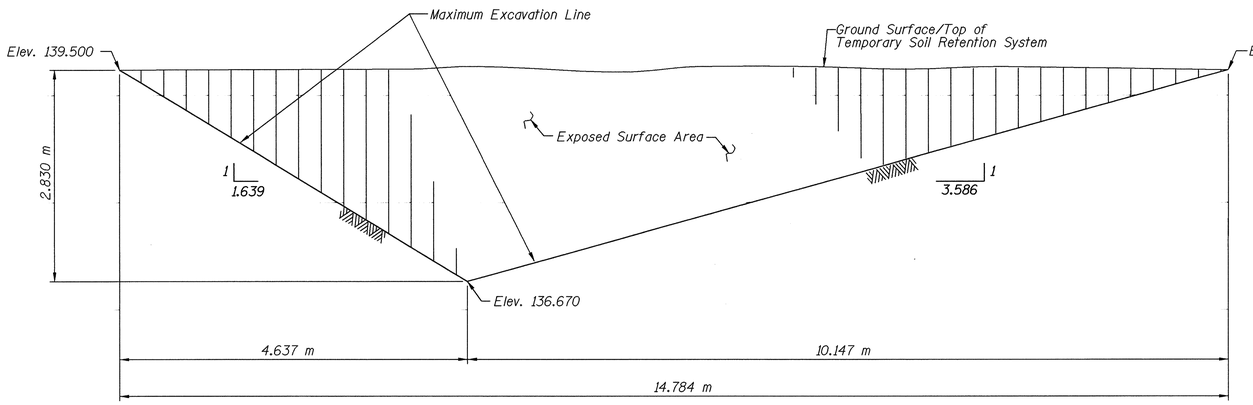
12/16/2003

m:\proj\3573\murray baker\st05pr3a-7a0900001.dgn

68196

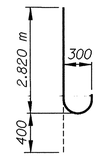
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	922
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 67 OF 160

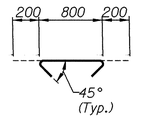


ELEVATION "E-E"

(Looking West)

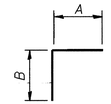


Bar n300(E)



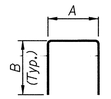
Bar s301(E)

BAR	A	B
p300(E)	8.770m	500
s300(E)	1.600m	1.600m



Bars s300(E) & p300(E)

BAR	A	B
n301(E)	1.050m	1.630m
s302(E)	190	1.60
s303(E)	1.050m	2.620m
s304(E)	1.050m	800
s305(E)	600	800
s306(E)	1.760m	480
s307(E)	800	800
u300(E)	600	790



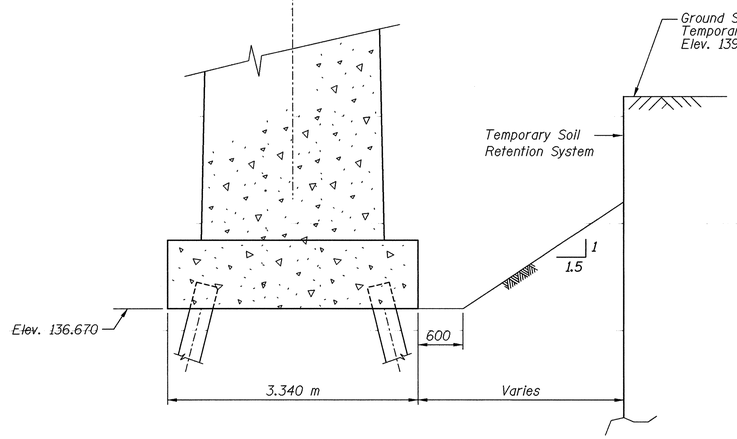
BARS n301(E), s302(E), s303(E), s304(E), s305(E), s306(E), s307(E) & u300(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h300(E)	88	#25	11.220	
h301(E)	18	#15	6.860	
h302(E)	225	#35	9.620	
h303(E)	138	#25	8.080	
h304(E)	14	#25	5.500	
n300(E)	120	#30	3.220	
n301(E)	226	#20	4.310	
n302(E)	452	#20	3.040	
p300(E)	40	#30	9.270	
p301(E)	8	#30	8.770	
p302(E)	13	#30	18.000	
p303(E)	13	#30	18.000	
p304(E)	13	#30	18.000	
p305(E)	12	#25	9.830	
s300(E)	312	#20	3.200	
s301(E)	312	#20	1.200	
s302(E)	312	#20	3.390	
s303(E)	228	#20	6.290	
s304(E)	226	#20	2.650	
s305(E)	3	#15	2.200	
s306(E)	116	#15	2.720	
s307(E)	3	#15	2.400	
t300(E)	74	#20	3.630	
u300(E)	61	#20	2.180	
v300(E)	120	#30	6.800	
v301(E)	120	#30	4.450	
w300(E)	48	#20	8.030	

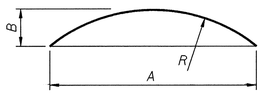
Metal Shoes	EACH	44
Test Piles Steel HP 310x94	EACH	1
Furnishing Steel Piles HP 310x94	METER	387.5
Driving Steel Piles	METER	387.5
Bridge Seat Sealer	CU. M	37
Structure Excavation	CU. M	652
Concrete Structures	CU. M	384
Reinforcement Bars, Epoxy Coated	KG	60,440
Temporary Soil Retention System.	SQ. M	21.0
Concrete Removal	CU. M	394.5

1

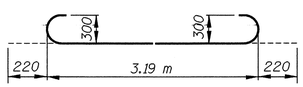


SECTION F-F

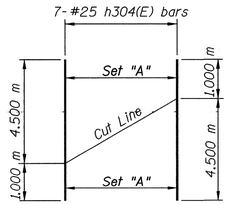
BAR	A	B	R
p302(E)	17.763m	1.257m	31.985m
p303(E)	17.762m	1.262m	31.885m
p304(E)	17.760m	1.266m	31.785m



BARS p302(E), p303(E) & p304(E)



BAR t300(E)



BARS h304(E)

NOTES:

1. Reinforcement Bars designated (E) shall be epoxy coated.
2. Space reinforcing in cap to miss anchor bolts.
3. Bars indicated thus 2 x 3-#25 etc. indicates 2 lines of bars with 3 lengths per line.
4. All dimensions are in mm except as noted.
5. Use the following lap lengths except as noted:
   #15 - 640 #30 - 2.590m
   #20 - 790 #35 - 3.690m
   #25 - 1.320m
6. E.F. denotes Each Face.
7. Work this Sheet with Sheets 65 & 66.
8. Pour steps monolithically with cap.
9. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

1

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

PIER 3 DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

1 4/21/04 CDF

REVISED
6-4-04

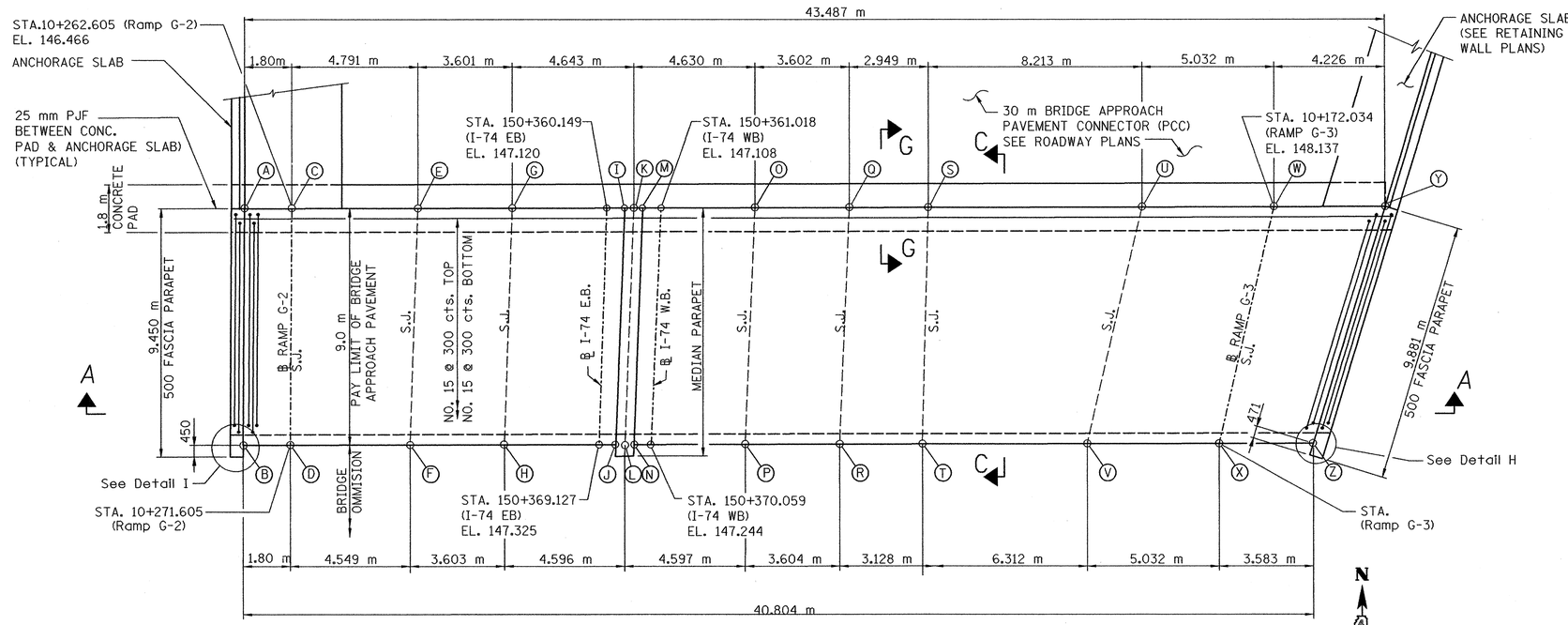
5/6/2004

M:\proj3573\Murray Baker\st05pr3b-7a0900001.dgn

68196

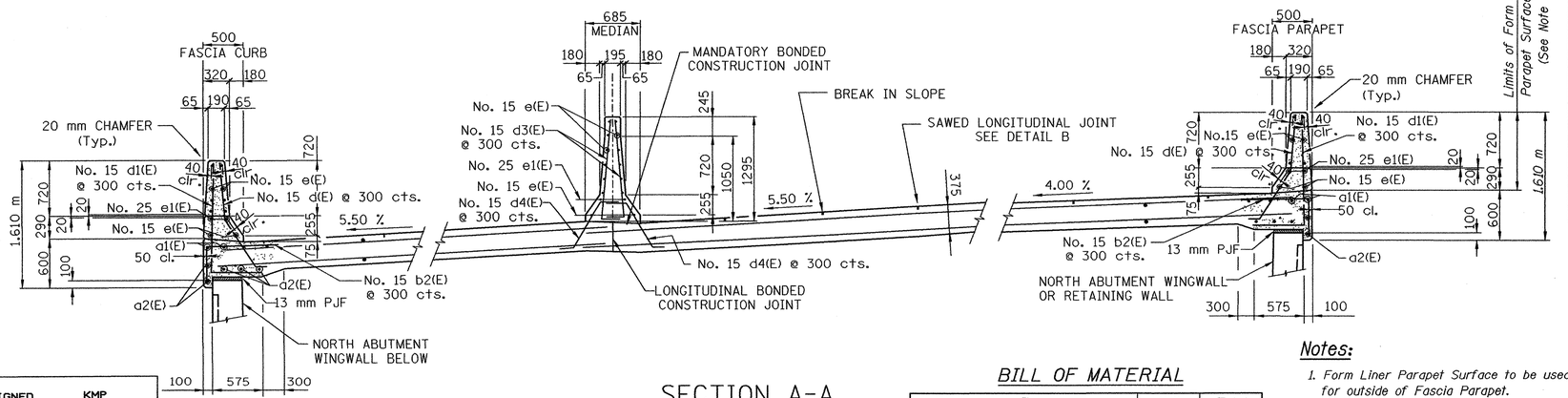
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	923
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 68 OF 160



APPROACH SLAB

Area = 389 SqM



SECTION A-A

DESIGNED	KMP
CHECKED	ADD
DRAWN	VH
CHECKED	KMP

PT.	STATION	OFFSET	ELEVATION
A	150+360.524 I-74 EB	13.788 RT	146.368
B	150+369.720 I-74 EB	13.543 RT	146.556
C	150+360.474 I-74 EB	11.989 RT	146.466
D	150+369.643 I-74 EB	11.745 RT	146.654
E	150+360.343 I-74 EB	7.200 RT	146.727
F	150+369.452 I-74 EB	7.200 RT	146.900
G	150+360.245 I-74 EB	3.600 RT	146.924
H	150+369.302 I-74 EB	3.600 RT	147.095
I	150+360.129 I-74 EB	0.699 LT	147.158
J	150+369.127 I-74 EB	0.650 LT	147.325
K	150+361.054 I-74 WB	1.028 RT	147.115
L	150+370.076 I-74 WB	0.991 RT	147.285
M	150+361.042 I-74 WB	0.685 RT	147.071
N	150+370.059 I-74 WB	0.649 RT	147.244
O	150+360.889 I-74 WB	3.600 LT	147.304
P	150+369.847 I-74 WB	3.600 LT	147.474
Q	150+360.761 I-74 WB	7.200 LT	147.500
R	150+369.669 I-74 WB	7.200 LT	147.668
S	150+360.657 I-74 WB	10.147 LT	147.616
T	150+369.515 I-74 WB	10.324 LT	147.790
U	150+360.374 I-74 WB	18.355 LT	147.939
V	150+369.212 I-74 WB	16.628 LT	148.036
W	150+360.204 I-74 WB	23.384 LT	148.137
X	150+368.974 I-74 WB	21.655 LT	148.233
Y	150+360.063 I-74 WB	27.607 LT	148.303
Z	150+368.806 I-74 WB	25.233 LT	148.373

BILL OF MATERIAL

Item	Unit	Total
Bridge Approach Pavement (Special)	SQ M	389
Form Liner - Parapet Surface	SQ M	20

Notes:

1. Form Liner Parapet Surface to be used for outside of Fascia Parapet.
2. Work this sheet with Sheet 69.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

BRIDGE APPROACH PAVEMENT (SPECIAL)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

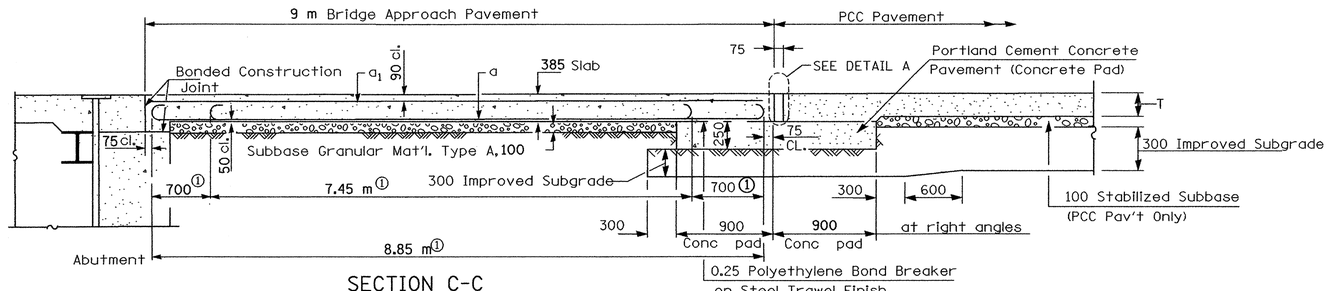
12/16/2003

m:\proj3573\murray baker\st05sp1-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	924
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

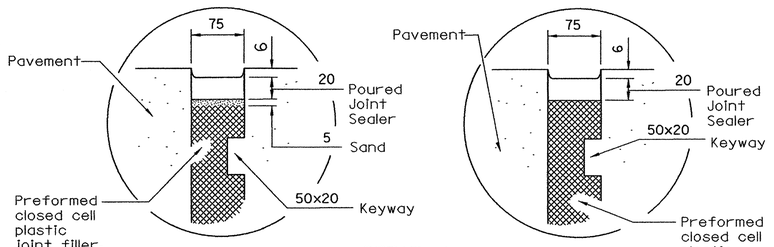
68196

SHEET 69 OF 160

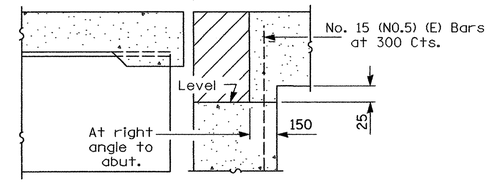


SECTION C-C

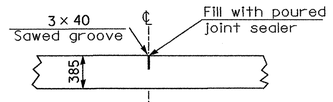
① Stagger No. 30 a bars as shown on plan - full width



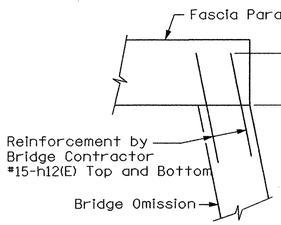
DETAIL A
EXPANSION JOINT SEALING DETAIL
(Route under state jurisdiction)



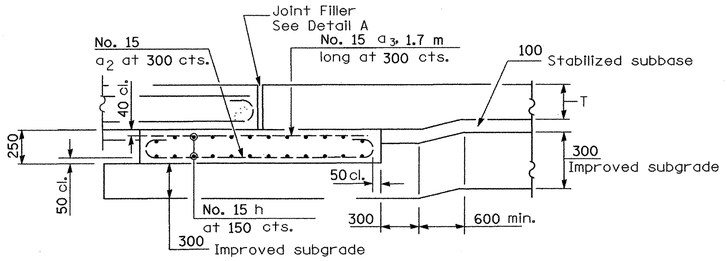
SECTION E-E
(BY BRIDGE CONTRACTOR)



DETAIL B*



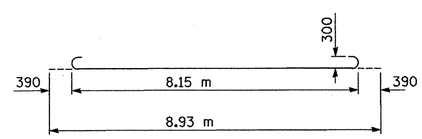
DETAIL H
(Detail I similar)



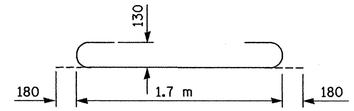
SECTION G-G - RIGID PAVEMENT
(Showing Pad reinforcement)

OPTIONAL LONGITUDINAL CONSTRUCTION JOINT

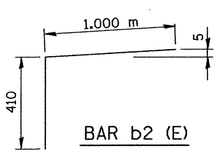
As approved by the Engineer, the Contractor may elect to reduce the widths of pour by use of the Optional Longitudinal Construction Joint shown. Joints shall be located at the edge of a traffic lane.



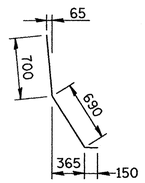
BAR a



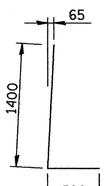
BAR a2



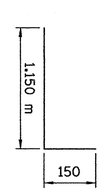
BAR b2 (E)



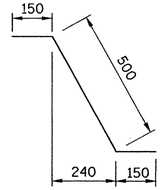
BAR d (E)



BAR d1 (E)



BAR d3 (E)



BAR d4 (E)

DESIGNED	KMP
CHECKED	ADD
DRAWN	VH
CHECKED	KMP

GENERAL NOTES

THICKNESS-"T"=THICKNESS OF PAVEMENT.

SEE STANDARD 421001 FOR REINFORCEMENT DETAILS NOT SHOWN.

SEE STANDARD 420001 FOR DETAILS OF JOINTS NOT SHOWN.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

ALL BARS ARE EPOXY COATED.

DESIGN STRESSES

fy = 400 MPa
f'c = 24 MPa
n = 8.5

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
BRIDGE APPROACH PAVEMENT (SPECIAL)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

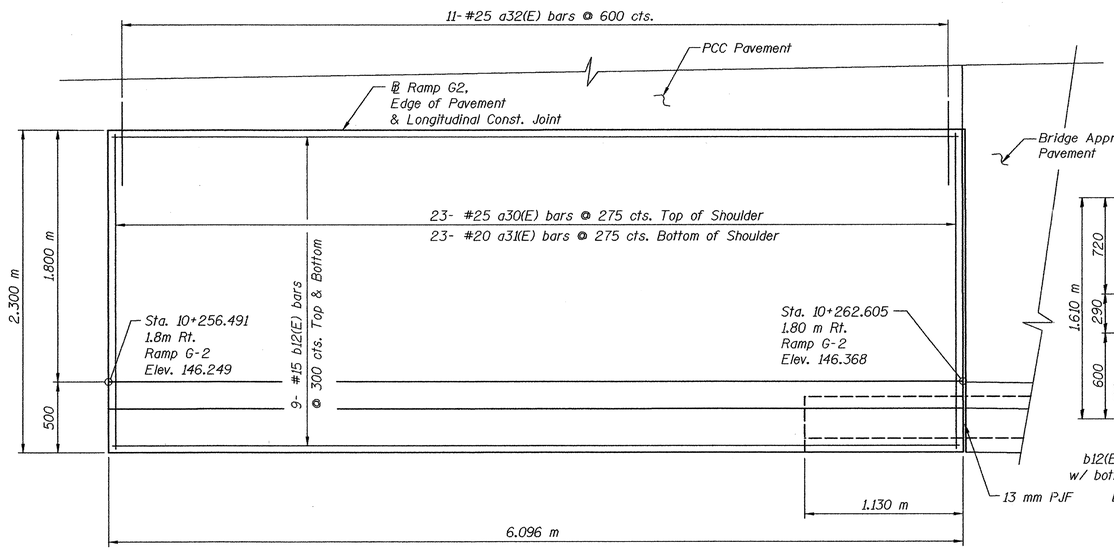
STA. 150+475.243
DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05sp2-7d0900001.dgn

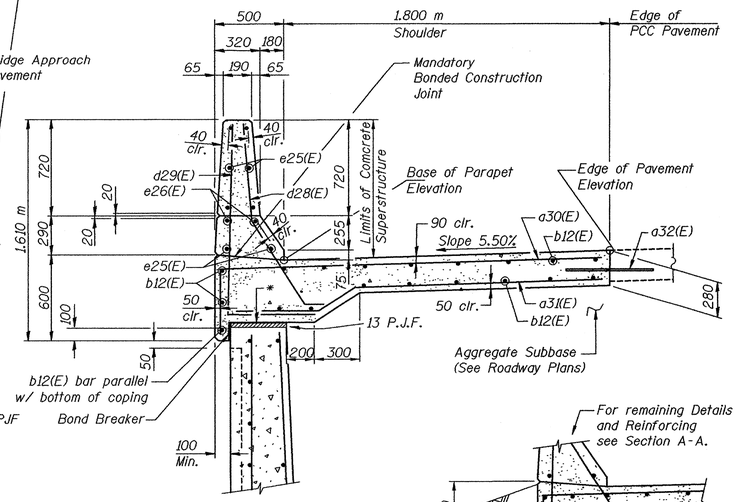
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	925
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 70 OF 160

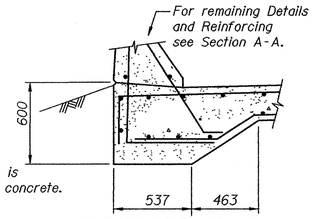


PLAN - PARAPET AND ANCHORAGE SLAB



SECTION A-A

* Contractor shall ensure that the top of P.J.F. is clear of debris before placing anchorage slab concrete.

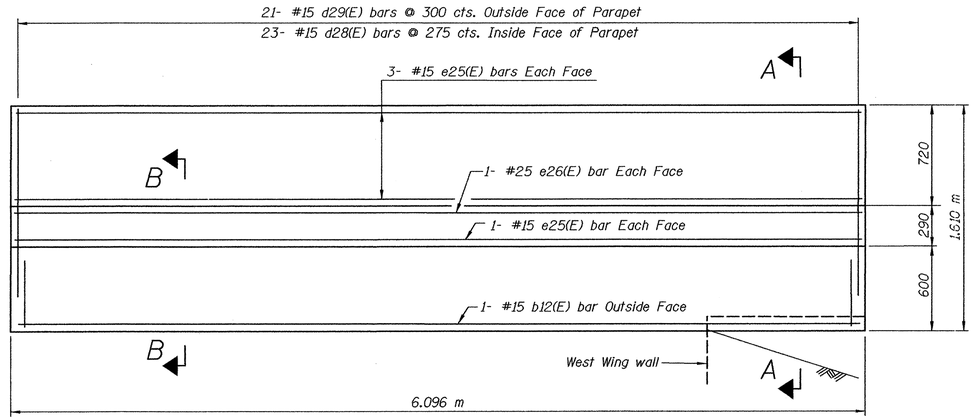


SECTION B-B

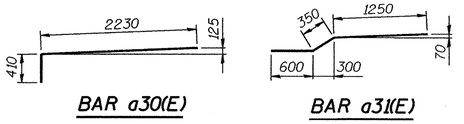
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a30(E)	23	#25	2.640	
a31(E)	23	#20	2.200	
a32(E)	11	#25	0.600	
b12(E)	19	#15	5.990	
d28(E)	23	#15	1.540	
d29(E)	21	#15	1.990	
e25(E)	8	#15	5.990	
e26(E)	2	#25	5.990	
e27(E)	1	#15	1.030	
Reinforcement Bars, Epoxy Coated			KG	810
Concrete Structures			CU M	6.0
Concrete Superstructure			CU M	1.9
Form Liner - Parapet Surface			SQ M	7

Reinforcement Bars designated (E) shall be epoxy coated.

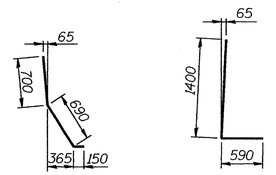


OUTSIDE ELEVATION OF PARAPET



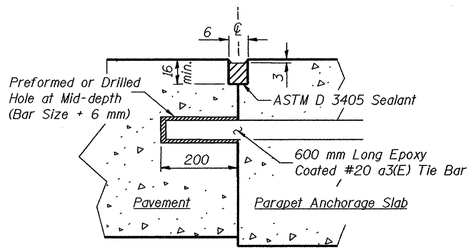
BAR a30(E)

BAR a31(E)



BAR d28(E)

BAR d29(E)



Note:
The Contractor may substitute, at his option, formed-in-place tie bars provided the bar length is increased to 750 mm and the tie bar is centered across the joint.

LONGITUDINAL CONSTRUCTION JOINT
GROUTED-IN-PLACE TIE BAR

(See Art. 420.10(b) of Standard Specifications.)

DESIGNED	KMP
CHECKED	ADD
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

ANCHORAGE SLAB DETAIL

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

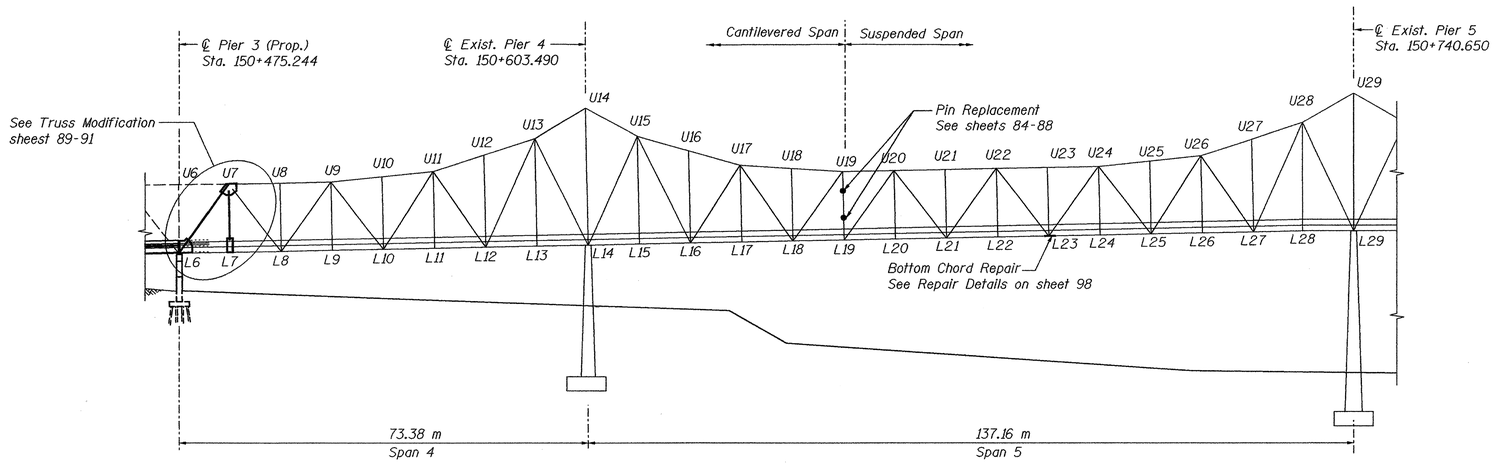
12/16/2003

m:\proj3573\murray baker\st05ast-7a0900001.dgn

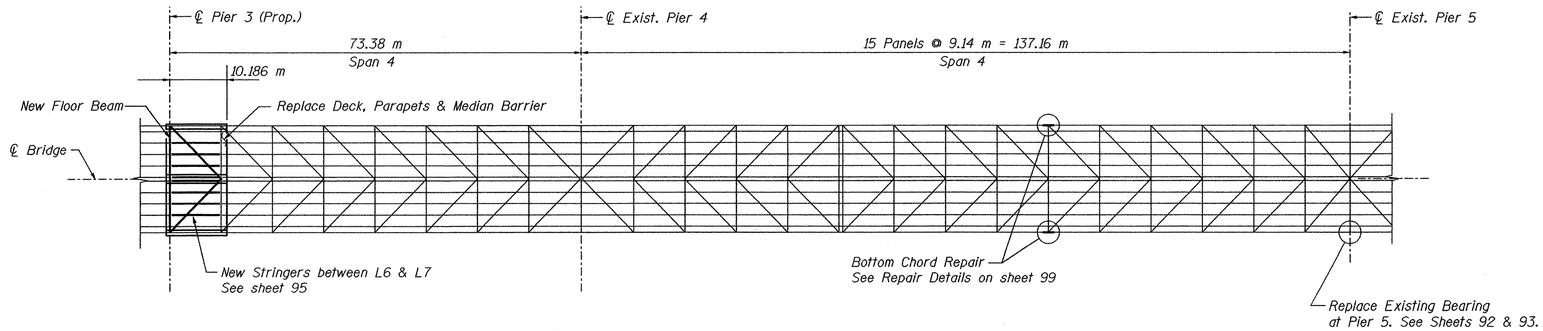
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	926
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 71 OF 160

68196



ELEVATION



PLAN

BILL OF MATERIAL

Item	Unit	Total
Rivet Removal and Replacement	Each	720

Notes:

1. For Concrete Repair Details, see Sheets 75-78.
2. For Truss Modification and Procedure and Details, see Sheets 79-83 and 89-91.
3. For Pin Replacement Details, see Sheets 84-88.
4. For Steel Repair Details, see Sheets 92-99.
5. UX & LX represent panel point numbers at upper and lower locations respectively.
6. All dimensions relating to the existing structure are for informational purposes only. Fabrication lengths shall be verified by dimensions taken in the field.
7. Rivet removal and replacement shall follow the requirements in the special provisions for "Rivet Removal and Replacement." 10 rivets per panel was assumed for removal and replacement.
8. Cleaning, straightening and incorporating existing reinforcement extending into the proposed slab shall be included in the cost of "Concrete Superstructure."

DESIGNED	KMP
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

EXISTING PLAN AND ELEVATION
(SPANS 4 & 5)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

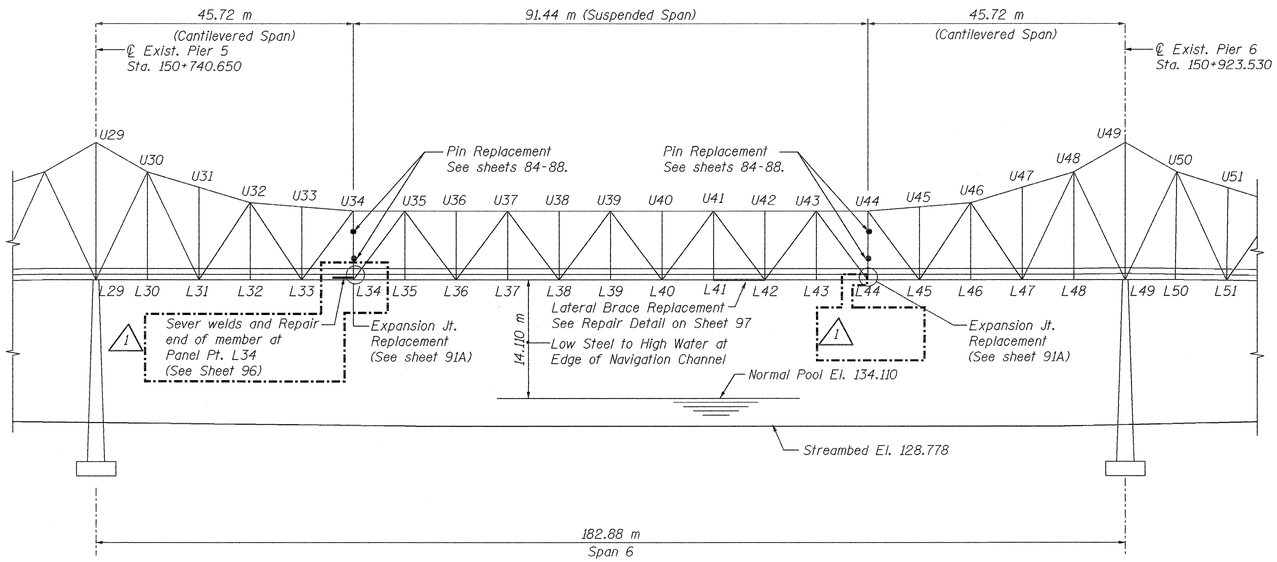
12/16/2003

m:\proj\3573\murray baker\st05ex1-7a0900001.dgn

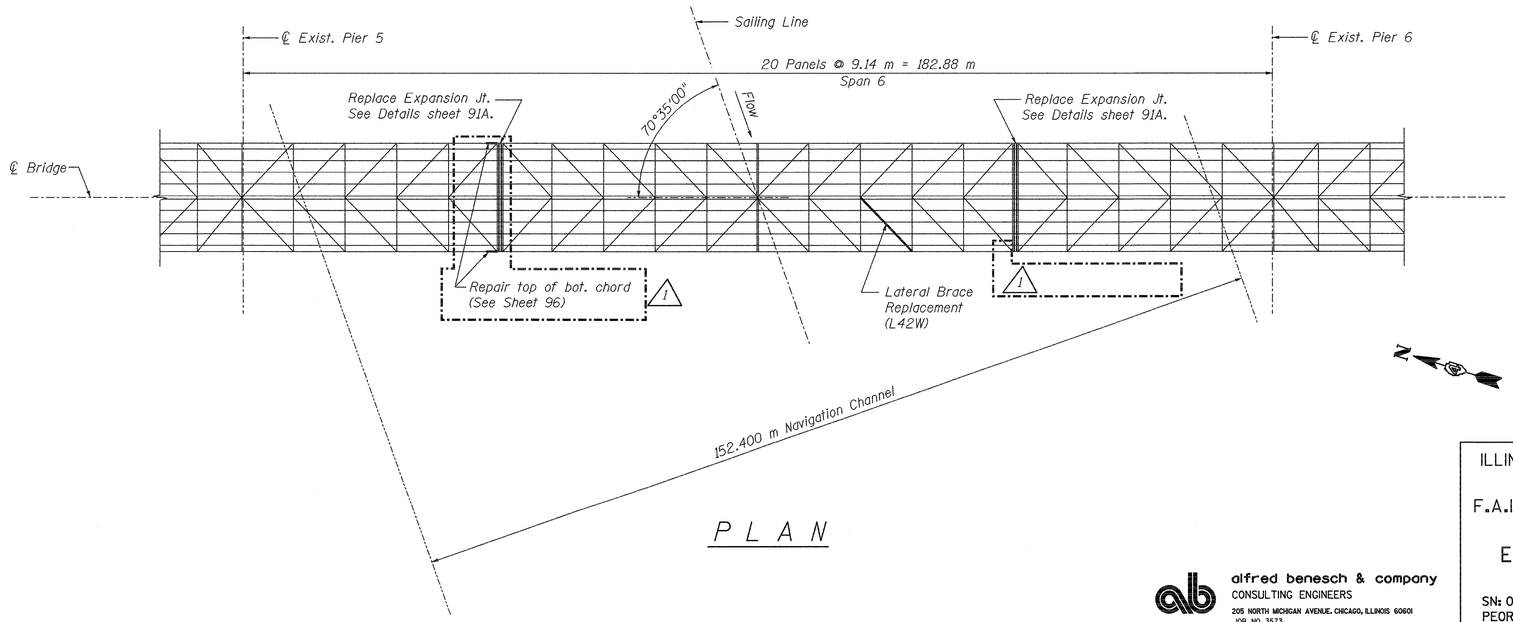
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	927
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 72 OF 160



ELEVATION



PLAN

For Notes, see Sheet 71.

DESIGNED	KMP
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

EXISTING PLAN AND ELEVATION (SPAN 6)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 5/13/04 CDF

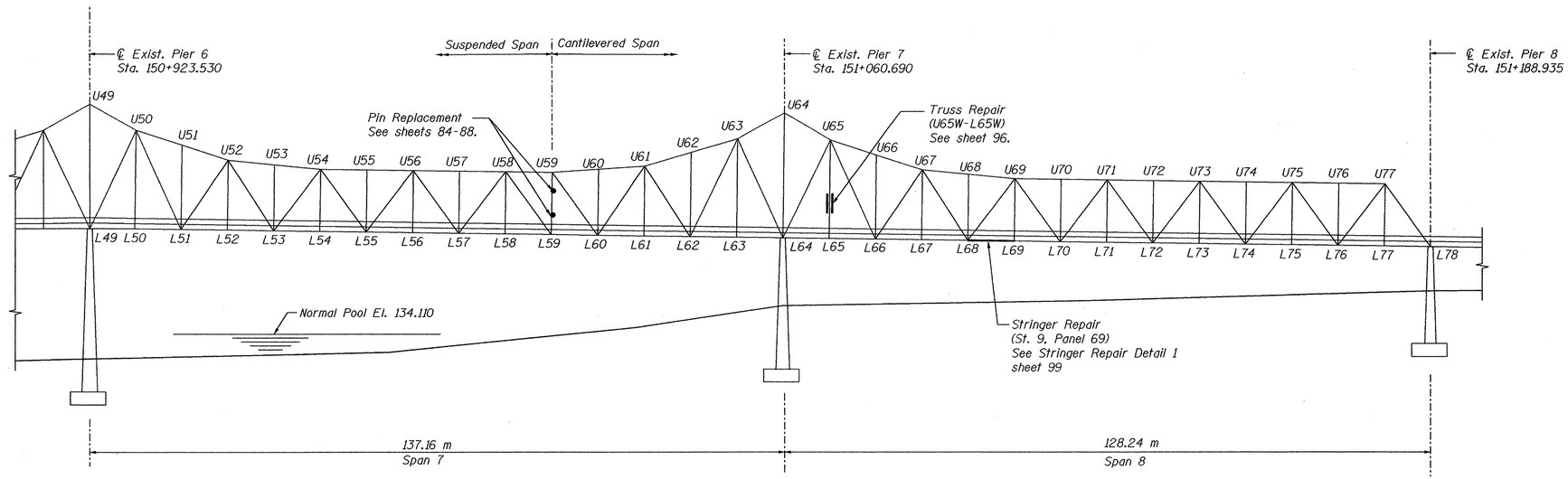
REVISED
6-4-04

$DATE$
$FILE$
...\KBMBSR\Rte074\2.dgn 05/4/04 01:43:54 PM

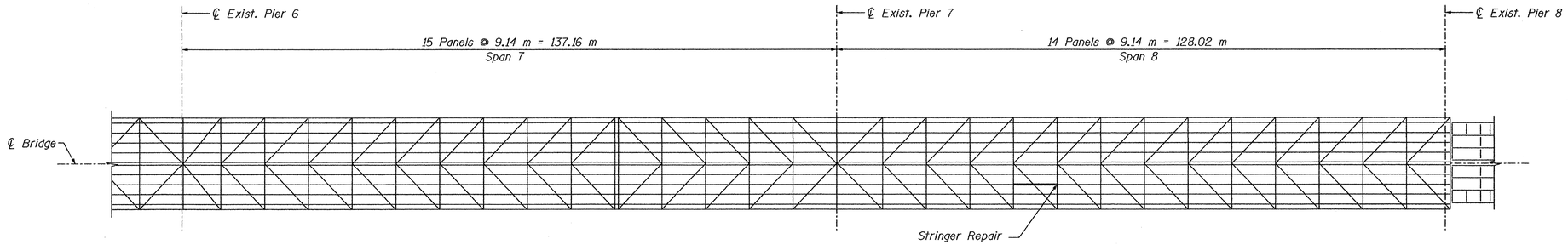
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	928
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 73 OF 160

68196



ELEVATION



PLAN

For Notes, see Sheet 71.

DESIGNED	KMP
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

EXISTING PLAN AND ELEVATION
(SPANS 7 & 8)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

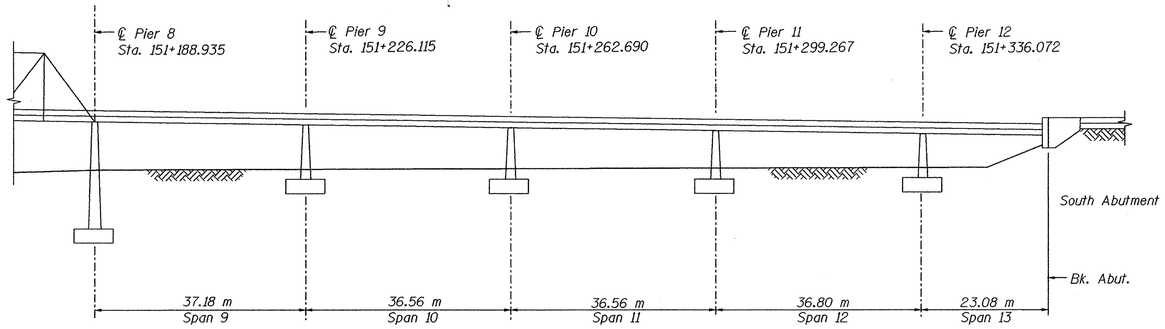
12/16/2003

m:\proj3573\murray baker\st05ex3-7a0900001.dgn

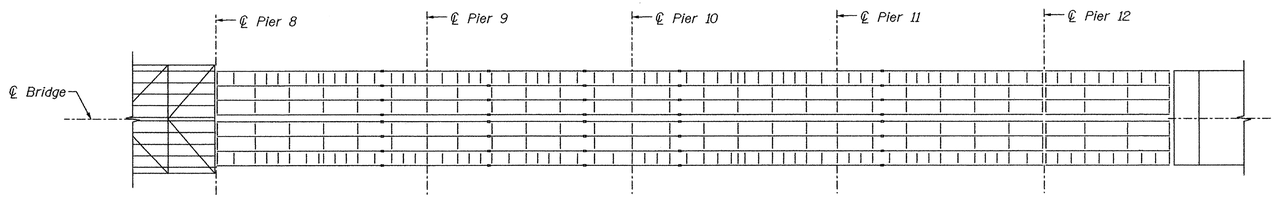
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	929
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 74 OF 160

68196



ELEVATION



For Notes, see Sheet 71.

PLAN

DESIGNED	KMP
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

EXISTING PLAN AND ELEVATION (SPANS 9 - 13)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003

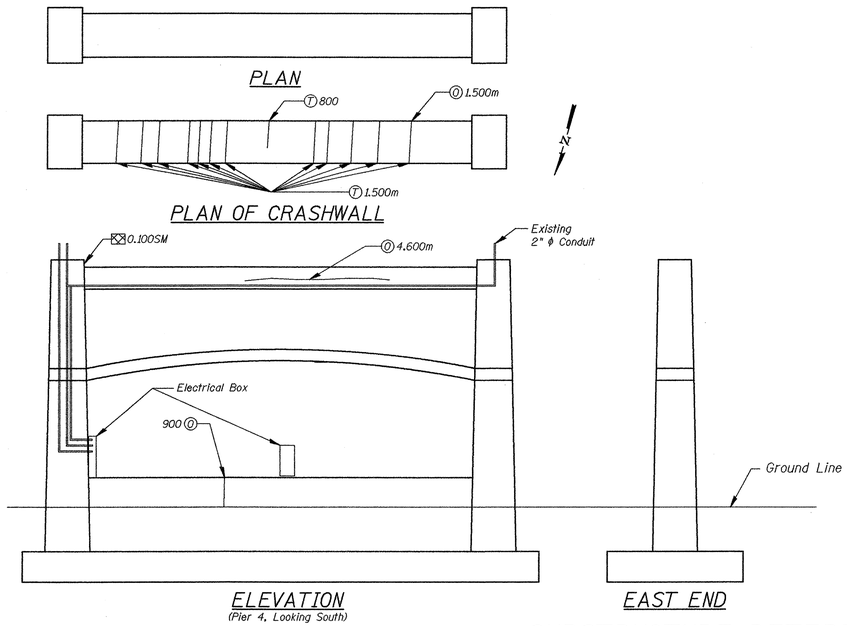
m:\proj3573\murray baker\st05ex4-7a0900001.dgn

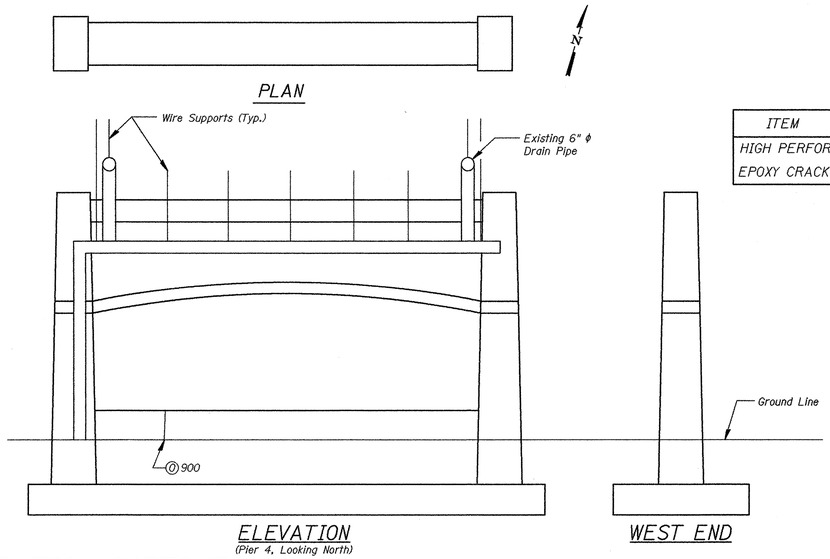
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	730
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 75 OF 160

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION





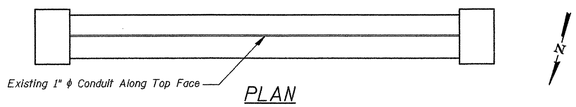
ITEM	UNITS	QUANTITIES
HIGH PERFORMANCE - ENHANCED SHOTCRETE	SQ M	13
EPOXY CRACK SEALING	METER	47

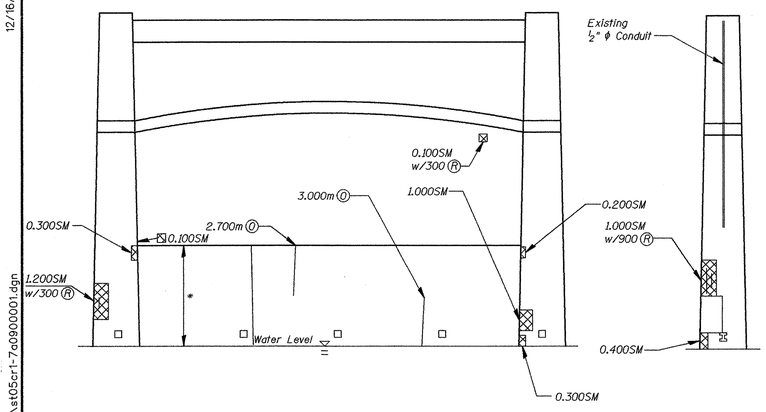
NOTES:

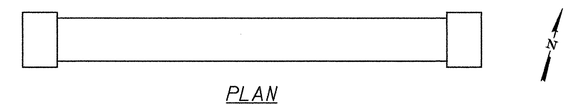
1. Open Cracks Have A Crack Width Of 3mm ± 1mm Unless Otherwise Noted.
2. Delaminated Concrete Is The Separation Of A Layer Of Concrete At Or Near The Reinforcement Bars Which Gives Off A Hollow Sound When Struck With A Hammer.
3. Spalled Concrete Is A Depression In The Concrete Surface Occurring Due To The Falling Off Of A Concrete Mass.
4. The Maximum Depth Of A Spall Is Less Than 127 Unless Otherwise Noted.
5. SM Indicates Square Meters.
6. All dimensions are in mm unless noted otherwise.
7. Quantities are based on an Inspection from 2000 and have been inflated by 20% to account for further deterioration.

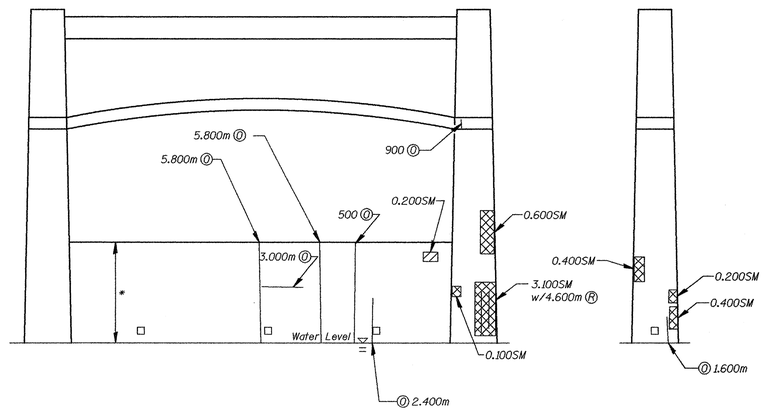
SUBSTRUCTURE DETERIORATION SKETCHES

PIER 4
S.N. 090-0001









LEGEND

- = Delaminated Concrete *1
- = Spalled Concrete *1
- R = Exposed Rebar *1
- 0 = Open Crack *2
- = Existing Patch

*1 = Repair w/High Performance - Enhanced Shotcrete
*2 = Repair w/Epoxy Crack Sealer

SUBSTRUCTURE DETERIORATION SKETCHES

PIER 5
S.N. 090-0001

DESIGNED	RJS
CHECKED	ADD
DRAWN	VH
CHECKED	ADD

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
CONCRETE REPAIRS
PIERS 4 AND 5
SN: 090-0001
PEORIA - TAZEWELL CO., IL.
STA. 150+475.243
DATE: 12-16-03

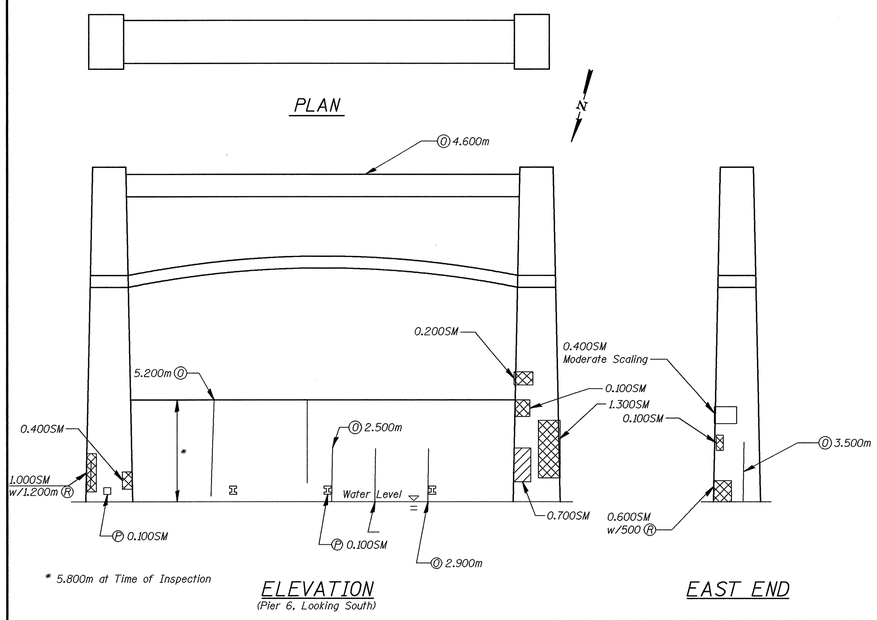
12/16/2003
m:\proj3573\murray baker\st05crl-7a090000l.dgn

68196

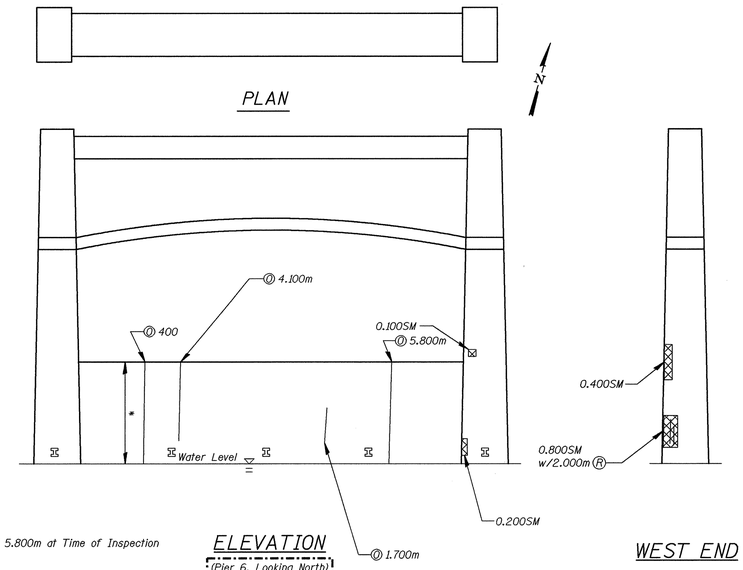
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	931
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 76 OF 160

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



EAST END



WEST END

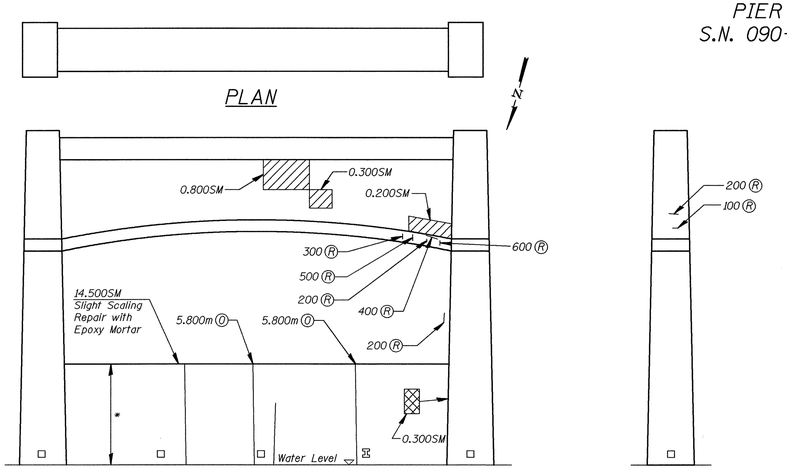
SUBSTRUCTURE DETERIORATION SKETCHES

PIER 6
S.N. 090-0001

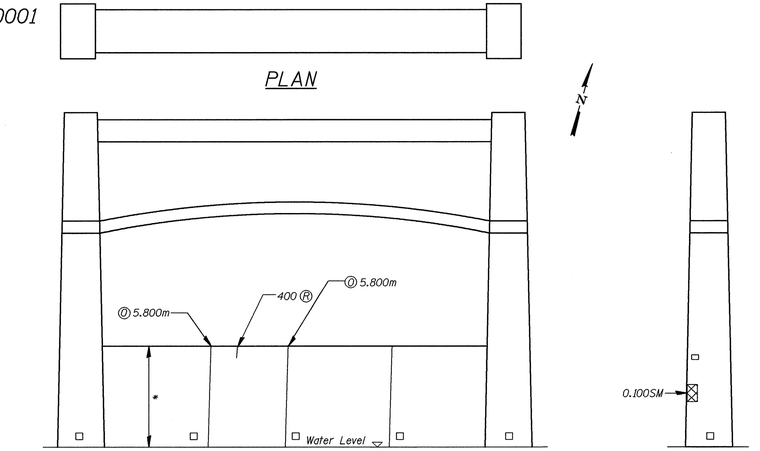
ITEM	UNITS	QUANTITIES
HIGH PERFORMANCE - ENHANCED SHOTCRETE	SQ M	28
EPOXY CRACK SEALING	METER	71

NOTES:

1. Open Cracks Have A Crack Width Of 3mm ± 1mm Unless Otherwise Noted.
2. Delaminated Concrete Is The Separation Of A Layer Of Concrete At Or Near The Reinforcement Bars Which Gives Off A Hollow Sound When Struck With A Hammer.
3. Spalled Concrete Is A Depression In The Concrete Surface Occurring Due To The Falling Off Of A Concrete Mass.
4. The Maximum Depth Of A Spall Is Less Than 127 Unless Otherwise Noted.
5. SM Indicates Square Meters.
6. All dimensions are in mm unless noted otherwise.
7. Quantities are based on an Inspection from 2000 and have been inflated by 20% to account for further deterioration.



EAST END



WEST END

SUBSTRUCTURE DETERIORATION SKETCHES

PIER 7
S.N. 090-0001

LEGEND

- = Delaminated Concrete *1
- = Spalled Concrete *1
- Ⓡ = Exposed Rebar *1
- Ⓞ = Open Crack *2
- E P = Existing Patch 1

*1 = Repair w/High Performance - Enhanced Shotcrete
*2 = Repair w/Epoxy Crack Sealer

DESIGNED	RJS
CHECKED	ADD
DRAWN	VH
CHECKED	ADD

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
CONCRETE REPAIRS
PIERS 6 AND 7
SN: 090-0001
PEORIA - TAZEWELL CO., IL.
STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF

REVISED
6-4-04

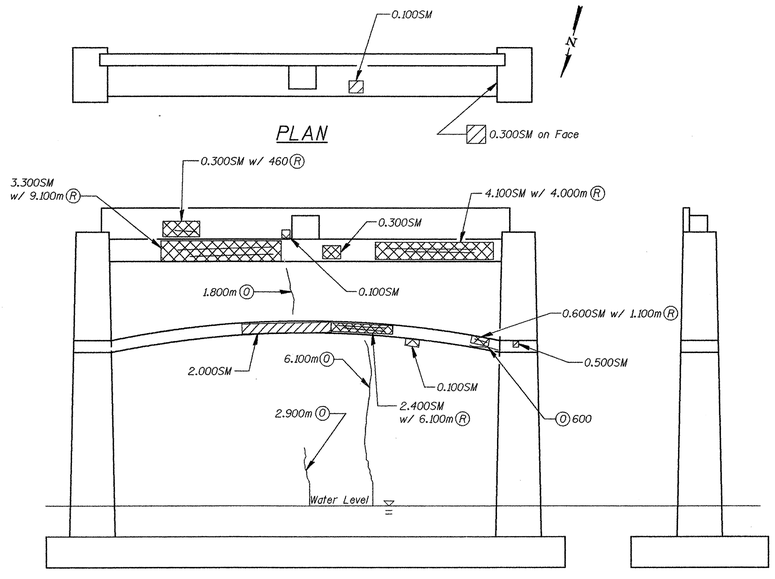
4/29/2004
m:\proj3573\murray baker\st05cr2-7a090001.dgn

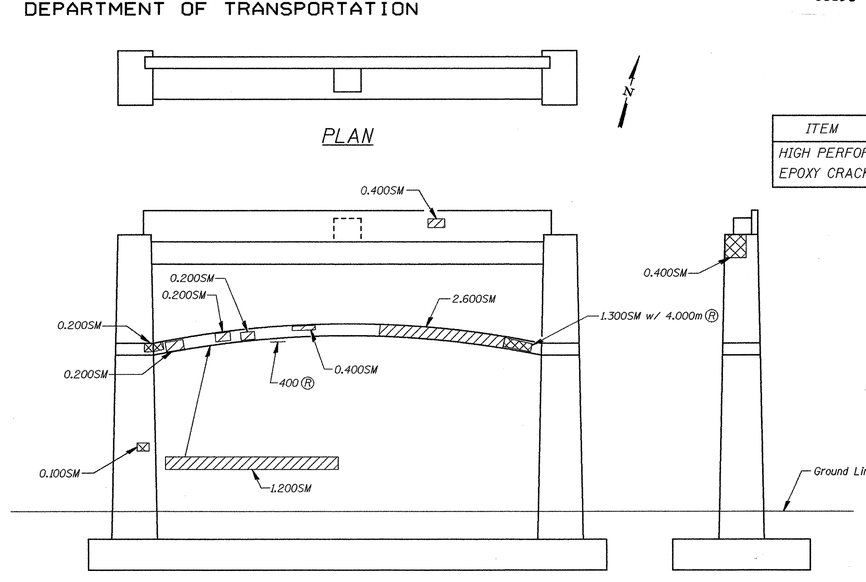
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI74	*	TAZEWELL	1559	932
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 77 OF 160





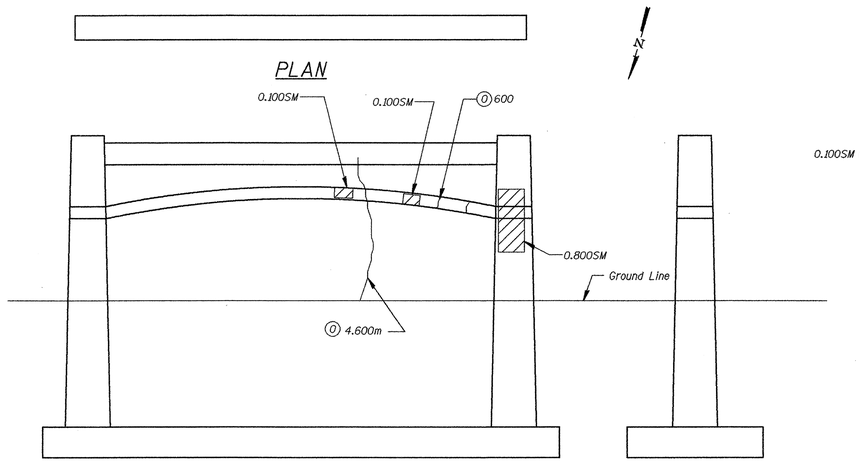
ITEM	UNITS	QUANTITIES
HIGH PERFORMANCE - ENHANCED SHOTCRETE	SQ M	31
EPOXY CRACK SEALING	METER	27

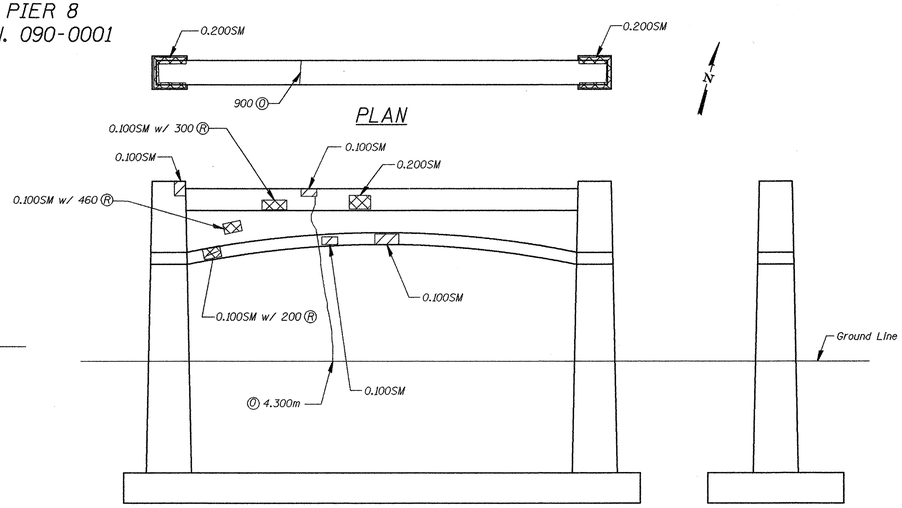
NOTES:

1. Open Cracks Have A Crack Width Of 3mm ± 1mm Unless Otherwise Noted.
2. Delaminated Concrete Is The Separation Of A Layer Of Concrete At Or Near The Reinforcement Bars Which Gives Off A Hollow Sound When Struck With A Hammer.
3. Spalled Concrete Is A Depression In The Concrete Surface Occurring Due To The Falling Off Of A Concrete Mass.
4. The Maximum Depth Of A Spall Is Less Than 127 Unless Otherwise Noted.
5. SM Indicates Square Meters.
6. All dimensions are in mm unless noted otherwise.
7. Quantities are based on an Inspection from 2000 and have been inflated by 20% to account for further deterioration.

SUBSTRUCTURE DETERIORATION SKETCHES

PIER 8
S.N. 090-0001





SUBSTRUCTURE DETERIORATION SKETCHES

PIER 9
S.N. 090-0001

LEGEND

- ▨ = Delaminated Concrete *1
- ▩ = Spalled Concrete *1
- (R) = Exposed Rebar *1
- (O) = Open Crack *2
- □ = Existing Patch

*1 = Repair w/High Performance - Enhanced Shotcrete
*2 = Repair w/Epoxy Crack Sealer

DESIGNED	RJS
CHECKED	ADD
DRAWN	VH
CHECKED	ADD

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

CONCRETE REPAIRS
PIERS 8 AND 9

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003
m:\proj\3573\murray baker\st05cr3-7a0900001.dgn

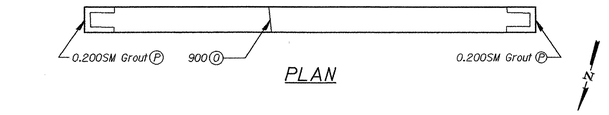
68196

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

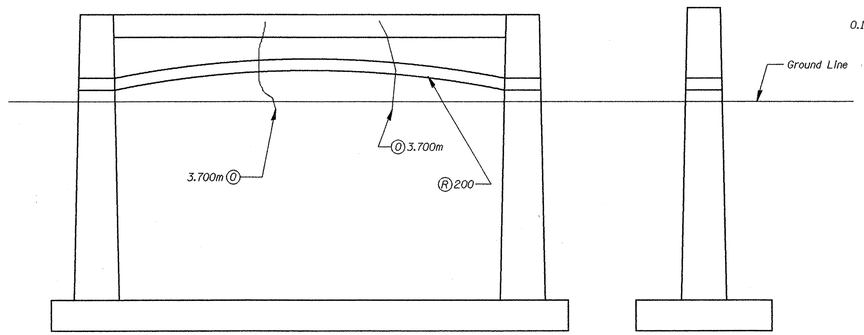
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI74	*	TAZEWELL	1559	933
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 78 OF 160

ITEM	UNITS	QUANTITIES
HIGH PERFORMANCE - ENHANCED SHOTCRETE	SQ M	3
EPOXY CRACK SEALING	METER	28

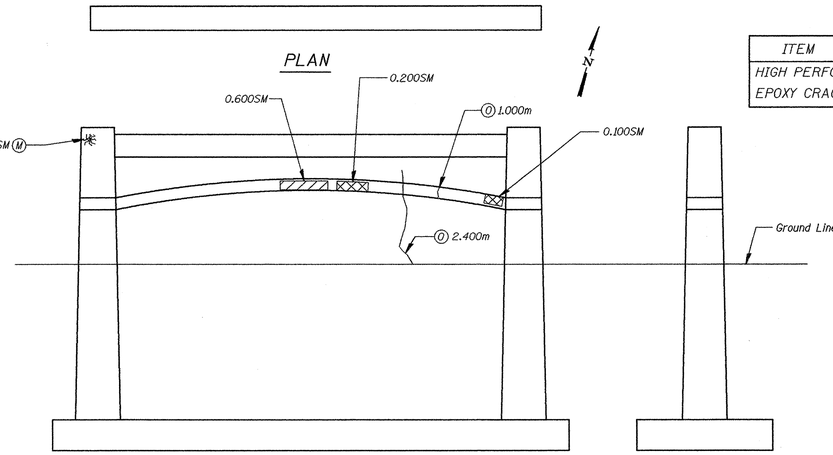


PLAN



ELEVATION
(Pier 10, Looking South)

WEST END



PLAN

ELEVATION
(Pier 10, Looking North)

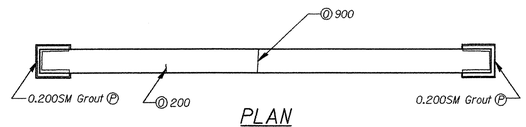
EAST END

NOTES:

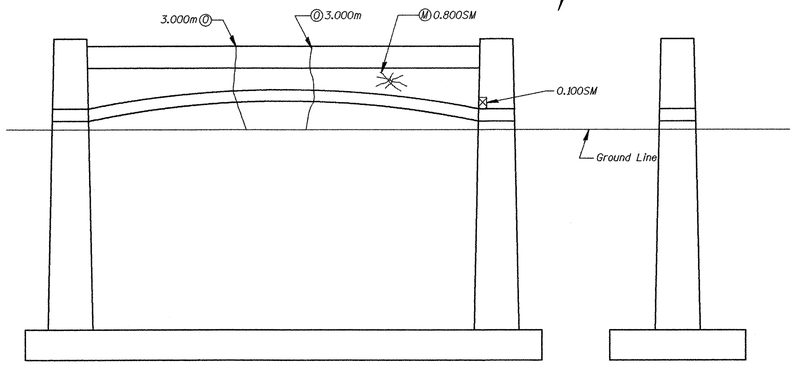
1. Open Cracks Have A Crack Width Of 3mm ± 1mm Unless Otherwise Noted.
2. Delaminated Concrete Is The Separation Of A Layer Of Concrete At Or Near The Reinforcement Bars Which Gives Off A Hollow Sound When Struck With A Hammer.
3. Spalled Concrete Is A Depression In The Concrete Surface Occurring Due To The Falling Off Of A Concrete Mass.
4. The Maximum Depth Of A Spall Is Less Than 127 Unless Otherwise Noted.
5. SM Indicates Square Meters.
6. All dimensions are in mm unless noted otherwise.
7. Quantities are based on an Inspection from 2000 and have been inflated by 20% to account for further deterioration.

SUBSTRUCTURE DETERIORATION SKETCHES

PIER 10
S.N. 090-0001

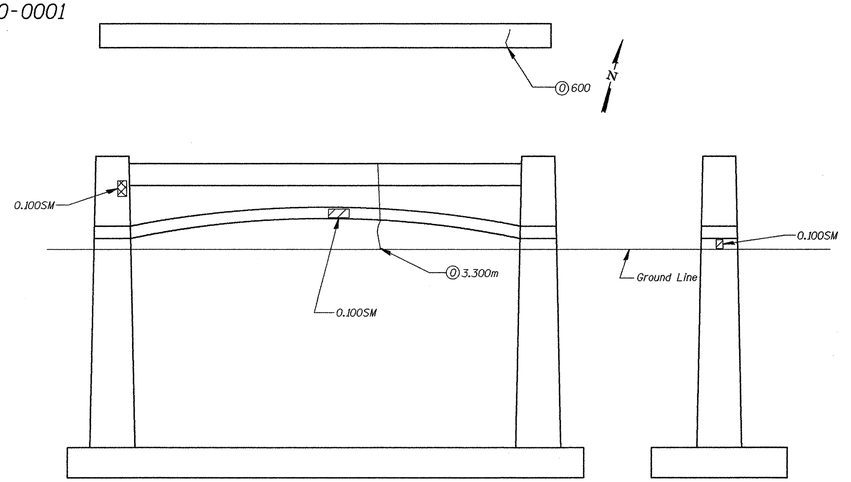


PLAN



ELEVATION
(Pier 11, Looking South)

WEST END



ELEVATION
(Pier 11, Looking North)

EAST END

SUBSTRUCTURE DETERIORATION SKETCHES

PIER 11
S.N. 090-0001

LEGEND

- = Delaminated Concrete *1
- = Spalled Concrete *1
- (R) = Exposed Rebar *1
- (O) = Open Crack *2
- = Existing Patch

*1 = Repair w/High Performance - Enhanced Shotcrete
*2 = Repair w/Epoxy Crack Sealer

DESIGNED	RJS
CHECKED	ADD
DRAWN	VH
CHECKED	ADD

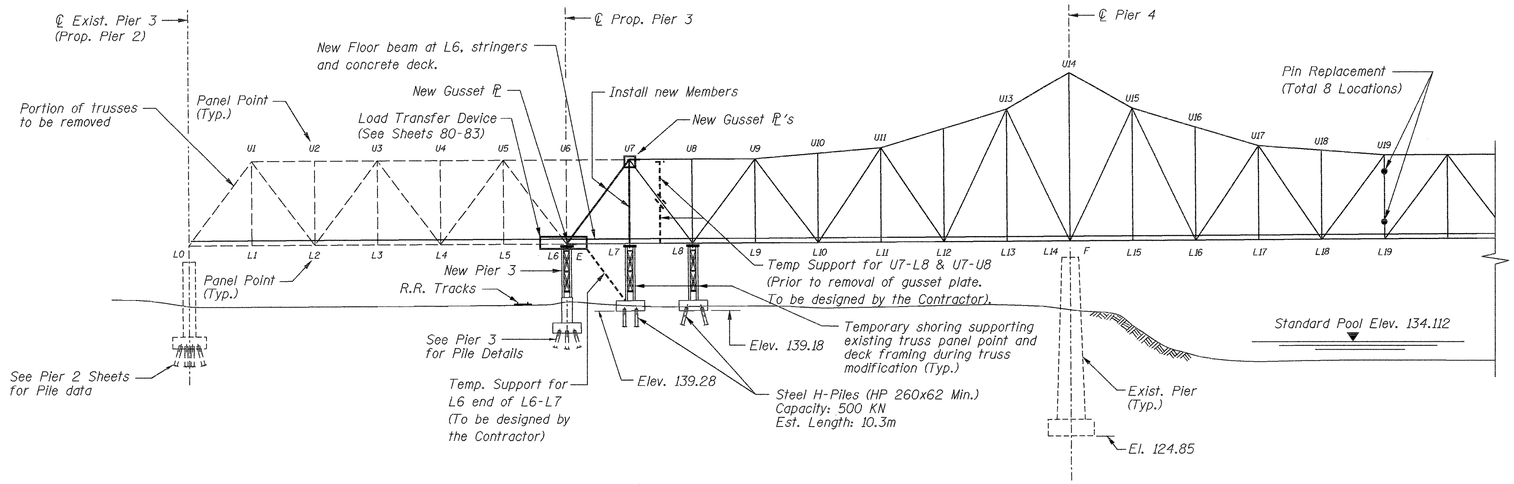
alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
CONCRETE REPAIRS
PIERS 10 AND 11
SN: 090-0001 STA. 150+475.243
PEORIA - TAZEWELL CO., IL. DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05cr4-7a090000l.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	934
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 79 OF 160



PARTIAL ELEVATION

(Looking East)

PROPOSED PROCEDURE FOR TRUSS MODIFICATIONS

1. Drive piles for the Proposed Pier 3 at panel point L6 and for shoring at panel points L7 and L8.
2. Construct Pier 3 to the limits shown on sheet 79A and the foundations for the shoring at panel points L7 and L8.
3. Remove and replace the 16 main pins in the truss. See Sheets 84-88 for Pin Replacement Details. Truss pin replacement shall not start prior to I-74 full road closures on the Murray Baker Bridge.
4. Construct Shoring on Proposed Pier 3 and support the truss at Panel Point L6 as shown on Sheet 79A.
5. Support stringers at L6 by blocking the ends of the stringer off the existing L6 floor beam. (See Detail A, Sheet 79A) .
6. Install the load transfer device to both trusses to the bottom chords as shown on Sht. 80.
7. After all 16 pins are replaced in Step 3, apply the jacking load to the truss as specified in "Proposed Truss Element Cutting Procedure" on Sheet 83.
8. After the specified jacking load is applied to the truss; support the truss at panel points L6 and L8. "Holding down" details at panel point L8 shall be installed at this time.
9. Support and protect the bottom chord member L6 to L7 at L6.
10. Cut the bottom chord of both trusses See "Proposed Truss Element Cutting Procedure" on Sheet 83 .
11. If necessary, adjust the temporary bearings at panel point L6 to provide tight contact.
12. Reduce the load in the jacks smoothly and evenly as stated in the "Proposed Truss Element Cutting Procedure" on Sheet 83 .
13. Temporarily support the diagonal U7-L8 and top chord from U7-U8 from member L7-L8 at its midpoint.
14. Cut the diagonal chord between panel points L6 & U7. (A nominal force of 490 kN is present in this member). The Contractor shall use a similar method as stated in the "Proposed Truss Element Cutting Procedure" on Sheet 83 to reduce the force in the member prior to cutting.
15. Similarly, cut the top chord between panel point U6 & U7.
16. Support the truss at panel point L7.
17. Remove the concrete deck and floor system north of L6 and the truss elements north of the gusset plates at U7 and L6. (1)
18. Remove the remainder of diagonal member L6-U7. See Special Provisions for Structure Removal.
19. Remove the top chord lateral bracing between U7-U8.
20. Remove the gusset plates at U7.
21. Remove the concrete deck between L6 & L7.
22. Remove the stringers between L6 & L7.
23. Remove the Existing Floor Beam at L6.
24. Remove Existing gusset plates at L6.
25. Remove the existing vertical L7-U7.
26. Remove shoring at Pier 3 and finish construction of Pier 3. Maintain support of L6-L7 at L6 end.
27. Install the new assembly at L6-U7-L7 as follows:
    a. Truss bearings and floor beam bearing at L6.
    b. Outside gusset plate at L6 & U7.
    c. Vertical L7-U7.
    d. Diagonal L6-U7.
    e. Inside gusset plate assembly at L6 & inside gusset at U7.
    f. Top chord bracing between U7 & U8.
    g. Portal between trusses at L6 & U7.
    h. Floor Beam at L6.
    i. Stringers between L6 & L7. (Remove shoring at L7 after Stringers are constructed).
    j. Bottom Lateral bracing between L6 & L7.
28. Remove support for members L6-L7, U7-L8, U7-U8 and shoring at L8. (1)
29. Replace concrete deck between L6 & L7. See Sheets 18 & 19.

(1)

DESIGNED	KMP
CHECKED	YS
DRAWN	VH
CHECKED	YS

NOTES:

1. A Proposed Procedure for Truss Modifications is listed on this sheet. The Contractor shall submit a Procedure for Truss Modifications. It shall be sealed by a Licensed Structural Engineer in the State of Illinois. See Special Provisions for "Truss Modifications."
2. The Contractor is responsible for the design of the temporary shoring including foundations at panel points L7 and L8 and temporary support of the members. The design shall be based on the loads and movements shown on the contract plans. The shoring at L7 is to support the floor beam and stringers loads as well as portions of the truss dead loads due to the truss modifications. Temporary bearings at the shoring and pier supports shall also be designed by the Contractor. Computations and Shop Drawings sealed by a Licensed Structural Engineer in the State of Illinois shall be submitted for approval.
3. The Contractor shall provide and implement two methods for "holding down" the vertical uplift load at L8 stated on the plans. Each method shall be sufficient to resist the uplift loads and shall be independent of each other. Methods can include, but are not limited to counterweights, deadmen and earth anchors. Shoring and bearings shall be designed accordingly to compliment the selected method. The Contractor shall submit both methods sealed by a Licensed Structural Engineer in the State of Illinois for approval prior to construction. (1)
4. The shoring at panel points L6 & L7 is only a depiction and may vary based on the Contractor 's approved design.
5. The Contractor shall locate all utilities prior to construction of driving piles for shoring or pier foundations. See General plan for utility locations.
6. For removal of rivets, see Special Provision for Rivet Removal and Replacement.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
TRUSS MODIFICATION PROCEDURE

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

(1) 5/14/04 YS

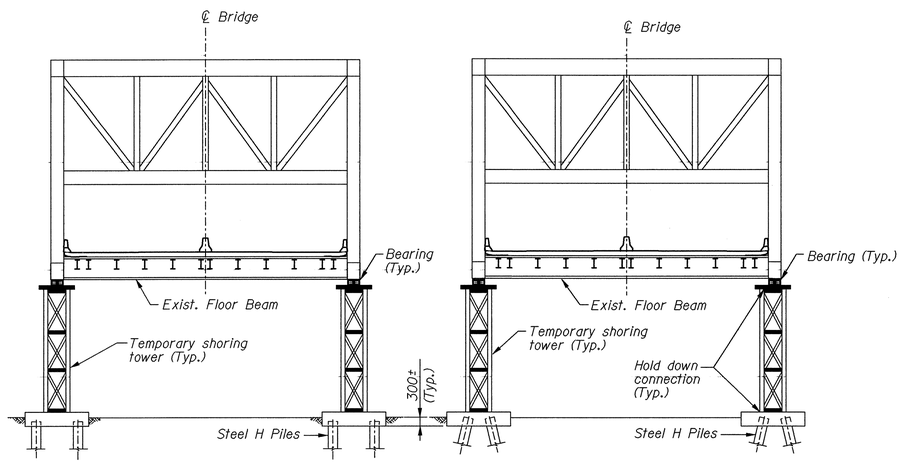
REVISED 6-4-04

$DATE$
$FILE$
...\DUPRIUM\sheet79.dgn 05/14/04 02:32 PM

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	935
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 79A OF 160

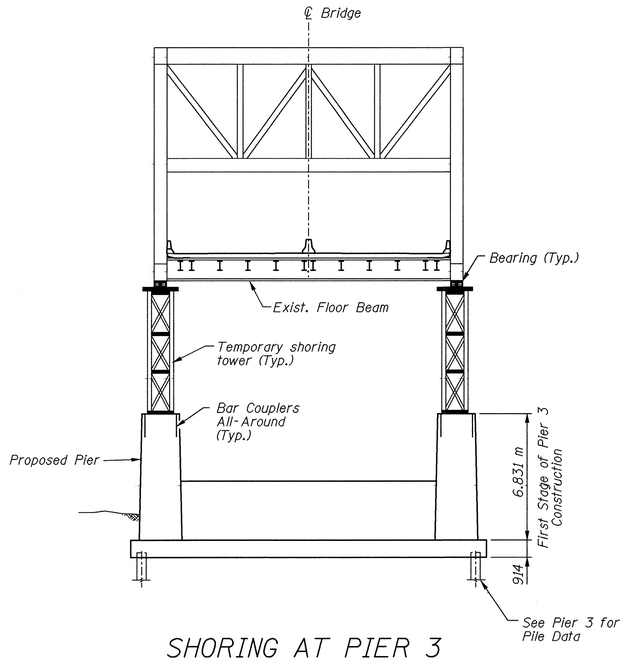


SHORING AT L7

(Looking South)

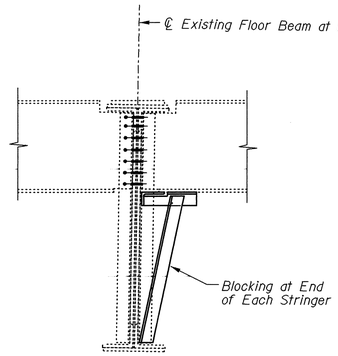
SHORING AT L8

(Looking South)



SHORING AT PIER 3

(Looking South)
(Panet Point L6)



DETAIL A

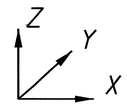
(Looking East)

SERVICE LOADS AND DISPLACEMENTS*

Reactions at each truss	at Panel Point L6 Fx (kN)	Fy (kN)	Fz (kN)	at Panel Point L7 Fy (kN)	Fz (kN)	at Panel Point L8 Fx (kN)	Fy (kN)	Fz (kN)
Dead Load (DL)			2940 (Max)		840 (Max)			1780 (Max) 490 (Min)
Live Load (LL+I)								758 (Max) -631 (Min)
Wind Load (W)							299 (Max) -299 (Min)	151 (Max) -151 (Min)

Displacements	at L6 delta x (mm)	at L7 delta x (mm)	at L8 delta x (mm)
Dead Load (DL) Live Load (LL)	-62 +/-5	-27 +/-5	-23 +/-3

Note: Negative Fz Reaction indicates uplift



SIGN CONVENTION

Note: "X" is parallel to Base Line

* Depicted loads and displacements reflect the proposed truss shortening method (see sheet 79). Reactions under the Dead Load, Live Load and Wind are applied at the Truss support nodes. ATTENTION: Support node at L8 is subject to uplift under the minimum Live Load with Impact and minimum Wind. The largest uplift force occures when the concrete deck, stringers and truss members between L6 and L7 are in place with the Dead Load reaction defined as 490 kN. The uplift force shall be fully resisted by means of the Contractor's choice (see Note 3, sheet 79). The maximum Dead Load, Live Load (w/Impact), and Wind shall be considered for shoring design, including Counterweight, if applicable (see Note 2).

Notes:

1. Shoring and bearings shall be designed for the Service Loads and Displacements shown on this sheet at panel points L6, L7 & L8. Shoring and bearings shall be designed based on the latest AASHTO Standard Specifications for Highway Bridges and AASHTO Guide Design Specifications for Bridge Temporary Works (See Special Provisions for Truss Modifications).
2. Hold dawn methods shall be designed for the potential uplift load using the load case:
   0.9*DL (Min) + 2*(LL+I) Min + W (Min).
   Two redundant designs shall be implemented for the uplift load case. If the Contractor elects to use a counterweight, the load from the counterweight shall be considered in the load combinations to determine the maximum vertical downward DL force for the shoring design.
3. Wind load is based on the exposed surface areas of the truss (75 PSF English). Additional loads due to containment for cleaning and painting shall be considered if cleaning and painting of span 4 takes place prior to shoring removal at panel point.
4. The maximum LL+Impact service load at Panel Point L8 shown on this sheet is based on the placement of four MS18 trucks (no reduction for four lanes) placed side by side in span 4. Similarly, the minimum LL+Impact service load is based on four trucks placed in span 5. Construction loads which result in uplift loads, reactions or member loads that exceed the effects of these designated live loads shall not be allowed unless accounted for in the uplift and shoring designs approved by the Engineer.

DESIGNED	KMP
CHECKED	YS
DRAWN	VH
CHECKED	YS

1

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

TEMPORARY SHORING
FOR TRUSS MODIFICATION

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 5/3/04 YS

REVISED
6-4-04

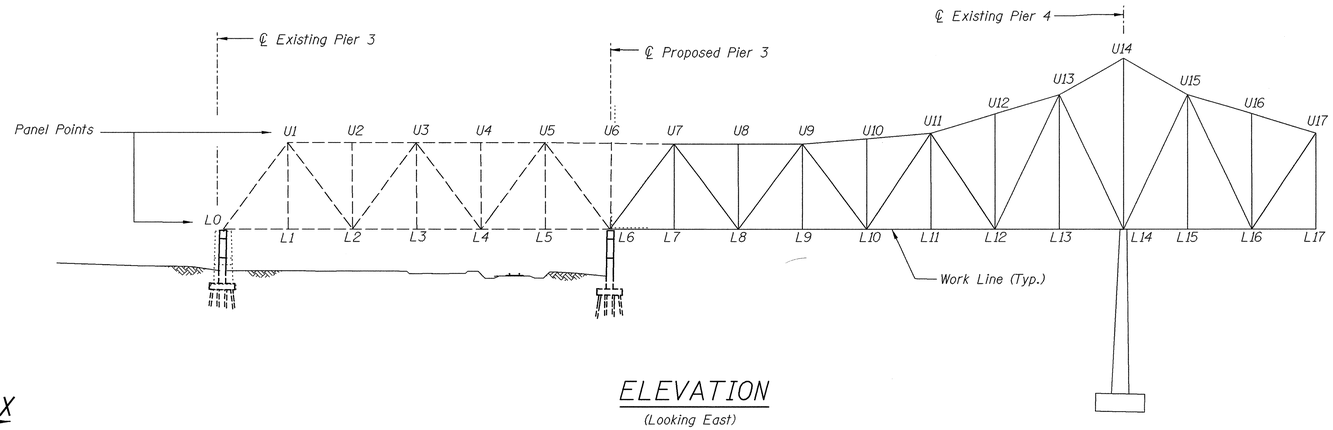
5/6/2004

M:\proj3573\Murray Baker\st05trib-7a0900001.dgn

68196

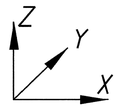
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	936
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 79B OF 160



ELEVATION

(Looking East)



SIGN CONVENTION

Note: "X" is parallel to Base Line

Incremental Panel Point Elevations

	L6		L7		L8		U7	
Condition	West Truss	East Truss	West Truss	East Truss	West Truss	East Truss	West Truss	East Truss
Existing Condition (Reference)	149.65	149.656	149.83	149.873	150.102	150.101	162.003	162.075
Apply Jacking Load of 9786 kN	149.656	149.662	149.836	149.836	150.107	150.107	162.008	162.008
Cut Member L6-L7	149.656	149.662	149.836	149.836	150.107	150.107	162.008	162.008
Release Jacking Load to 2224 kN	149.656	149.662	149.819	149.819	150.107	150.107	161.991	161.991
Release Jacking Load to 0 kN	149.656	149.662	149.804	149.804	150.107	150.107	161.977	161.977
Cut Member L6-U7	149.656	149.662	149.807	149.807	150.107	150.107	161.979	161.979
Replace Memebers L6-U7, L6-L7,L7-U7 Bracing, Floor beams and deck. Remove shoring at L8 and L7	149.656	149.662	149.794	149.794	150.095	150.095	161.970	161.970

Incremental Displacements (mm)

	L6		L7		L8		U7	
Condition	X	Z	X	Z	X	Z	X	Z
Existing Condition (Reference)	0	0	0	0	0	0	0	0
Apply Jacking Load of 9786 kN	1	6	0	6	0	5	1	6
Cut Member L6-L7	1	6	0	6	0	5	1	6
Release Jacking Load to 2224 kN	-33	6	15	-11	12	5	-11	-11
Release Jacking Load to 0 kN	-62	6	28	-26	23	5	-21	-26
Cut Member L6-U7	-62	6	27	-23	22	5	-20	-23
Replace Memebers L6-U7, L6-L7,L7-U7 Bracing, Floor beams and deck. Remove shoring at L8 and L7	-51	6	40	-36	35	-7	-5	-32

Incremental Member Forces (kN)

Condition	L5-L6	L6-L7	L7-L8	U5-U6	U6-U7	U7-U8	U5-L6	L6-U7	U7-L8
Existing Condition (Reference)	9956	9661	9661	-8595	-8595	-8595	281	769	-1773
Apply Jacking Load of 9786 kN	9960	-76	9665	-8597	-8597	-8597	278	767	-1775
Cut Member L6-L7	10004	0	9741	-8668	-8668	-8668	299	740	-1782
Release Jacking Load to 2224 kN	5532	0	4448	-3546	-3546	-3546	-1177	608	-1517
Release Jacking Load to 0 kN	1772	0	1	757	757	757	-2417	495	-1292
Cut Member L6-U7	1518	0	1	490	490	490	-2517	-	-842
Replace Memebers L6-U7, L6-L7,L7-U7 Bracing, Floor beams and deck. Remove shoring at L8 and L7	-	825	824	-	-	-1023 /1	-	-1374 /1	332

NOTES

1. Elevations show work line (i.e. ℄ of truss member.
2. Positive force indicates member is in tension. Negative force indicates member is in compression.
3. Displacements are taken from existing conditions (Reference)
4. Existing condition elevations taken from survey. Contractor to verify elevations prior to member fabrication.

DESIGNED	KMP
CHECKED	YS
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
TRUSS MODIFICATIONS
INCREMENTAL ELEVATIONS
AND DISPLACEMENTS

SN: 090-0001 STA. 150+475.243
PEORIA - TAZEWELL CO., IL. DATE: 1-21-04

/1 4/29/04 KMP

REVISED
6-4-04

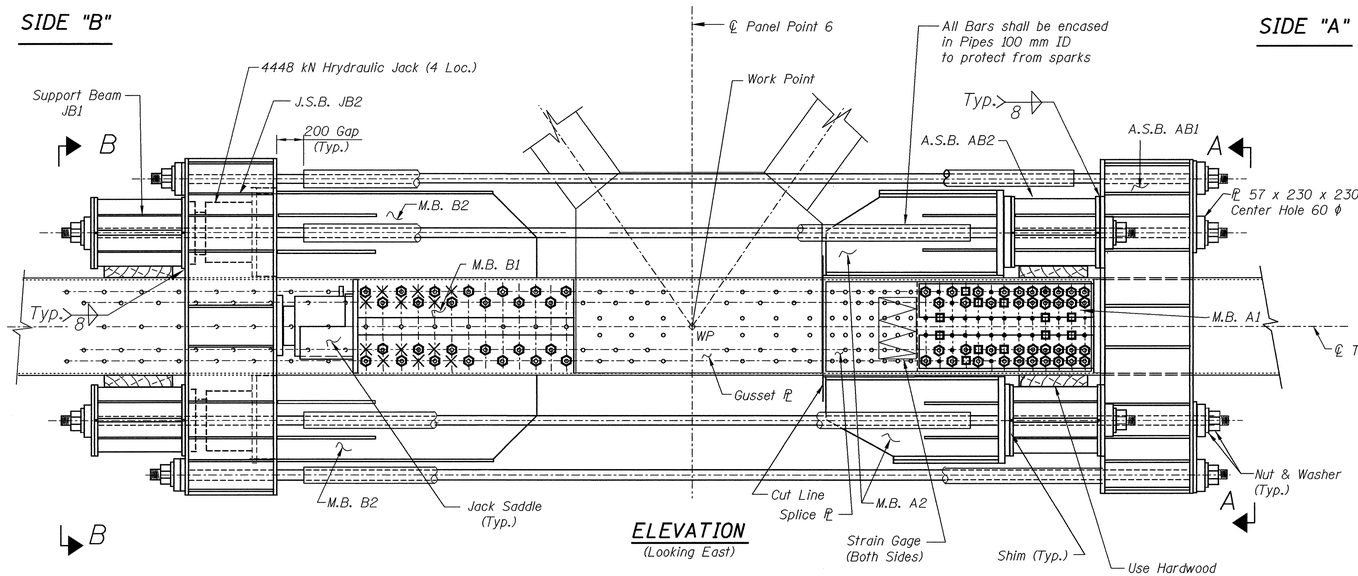
4/29/2004

m:\proj3573\murray baker\st05tr1c-7a0900001.dgn

68196

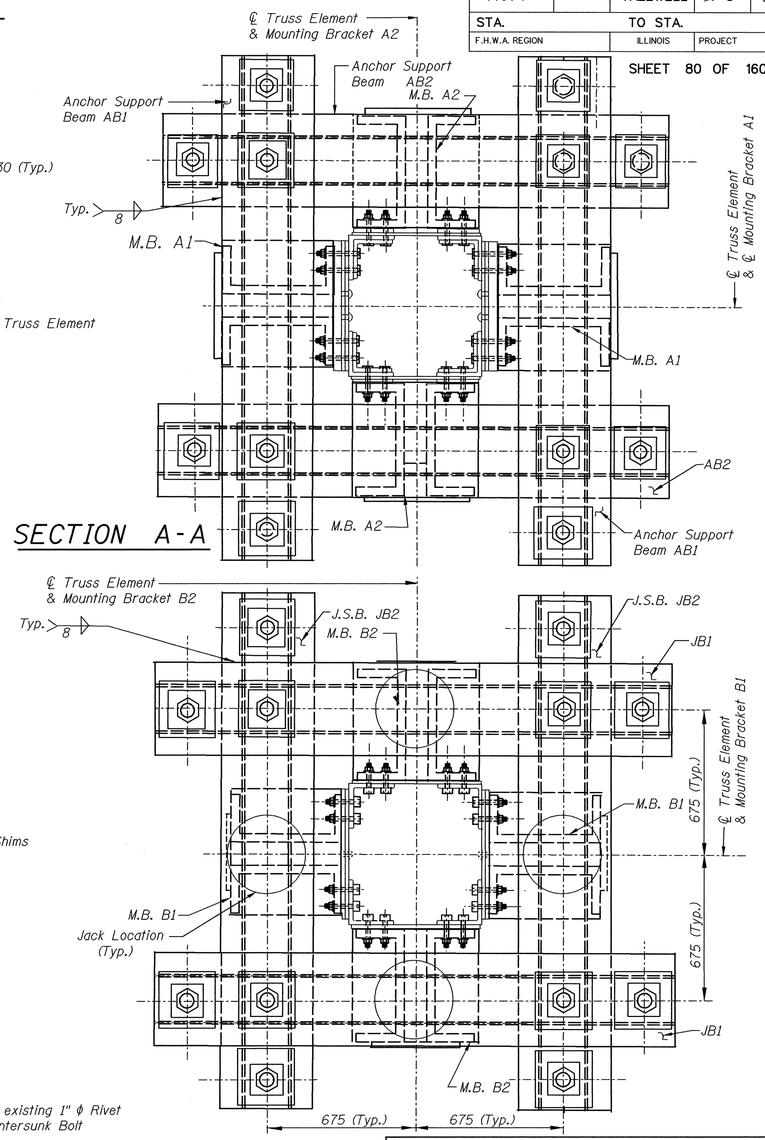
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	937
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 80 OF 160



PROPOSED LOAD TRANSFER DEVICE (SCHEME)

(2 Locations, West Truss & East Truss)
N. T. S.



NOTES:

1. Jacks shall be 4448 kN (500 Ton) capacity w/Lock Nuts connected hydraulically.
2. Saddles shall be welded to Jack Distribution Plates and jacks shall be placed in the saddles. (See details)
3. Jacks on both Trusses shall be jacked simultaneously and cut simultaneously.
4. High strength Rods (Bars) shall be 45 mm ϕ All-Thread-Bars, and shall conform to ASTM A722M with Fpu=1030 MPa (150 Ksi), working stress up to 0.5 Fpu.
5. High Strength Bolts shall be A-490M M24 for slip critical connection, standard holes, class "B" surface preparation of bolted parts.
6. See sheet 83 for Proposed Element Cutting Procedure.
7. See sheets 81-83 for Details.
8. Structural Steel shall conform to the requirements of AASHTO M 270M Grade 345, U.N.O.
9. See sheets 79 and 79A for Construction Scheme and Sequence.
10. "M.B." denotes Mounting Bracket
11. "J.S.B." denotes Jacking Support Beam.
12. "A.S.B." denotes Anchor Support Beam.
13. Bolts shall not be reused once tightened.

DESIGNATIONS:

- Denotes Replacement existing 1" ϕ Rivet with M24 A 307 Countersunk Bolt
- Denotes Replacement existing 1" ϕ Rivet with M24 A 490M H. S. Bolt for Mounting Bracket attachment
- Denotes existing Rivet Head removal
- Denotes Drill 27 mm ϕ Hole in Truss Member
- Denotes Strain Gage Location

DESIGNED	KMP/YS
CHECKED	KMP
DRAWN	YS/VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

CUTTING TRUSS ELEMENT
LOAD TRANSFER DEVICE
DETAILS 1

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-14-04

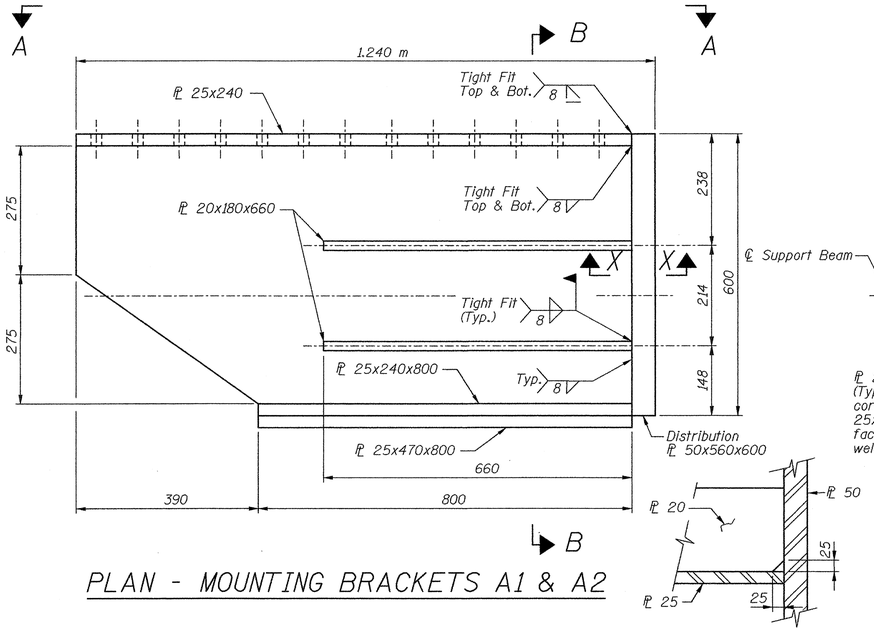
01/14/2004

m:\proj3573\Murray Baker\st105lt1-7a0900001.dgn

68196

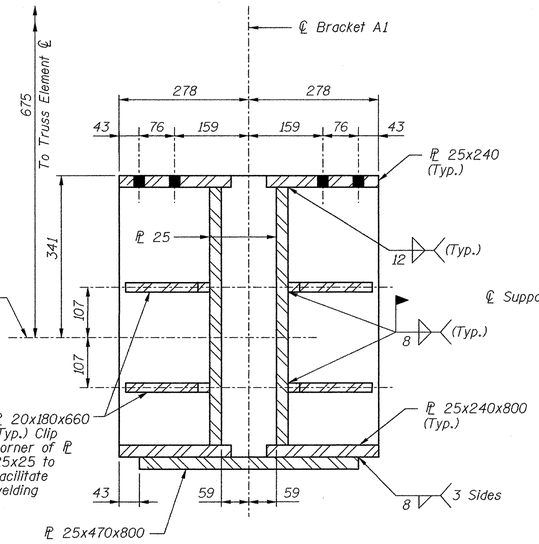
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	938
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 81 OF 160

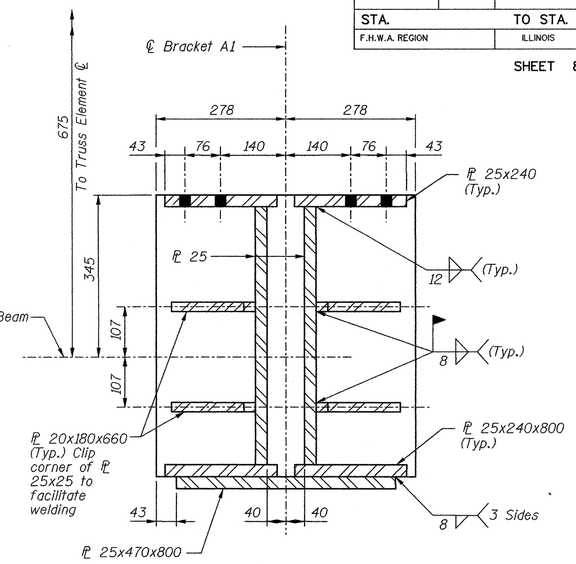


PLAN - MOUNTING BRACKETS A1 & A2

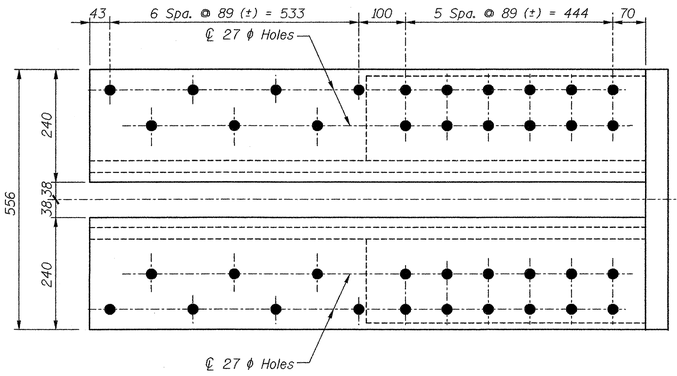
SECTION X-X



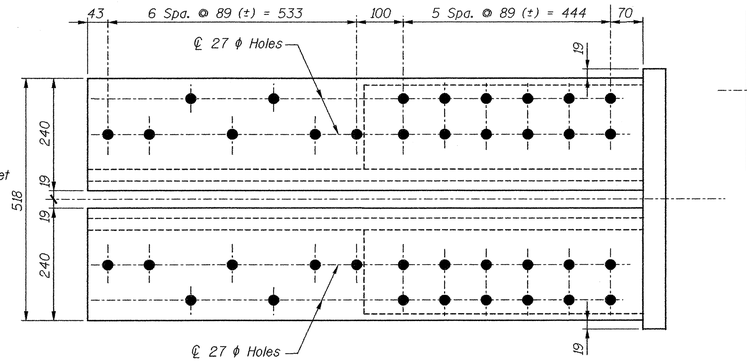
SECTION B-B - BRACKET A1



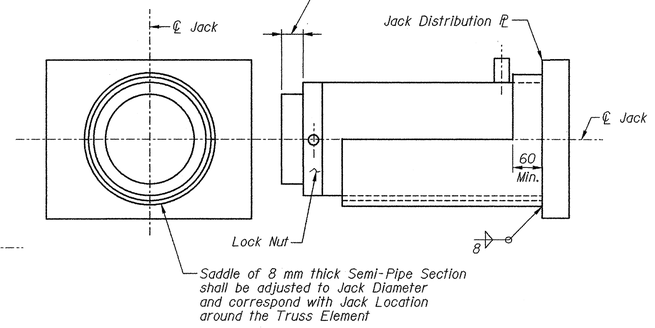
SECTION B-B - BRACKET A2



VIEW A-A - MOUNTING BRACKET A1



VIEW A-A - MOUNTING BRACKET A2



DETAIL OF JACK SADDLE

DESIGNED	KMP/YS
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

Notes:

1. See Sheet 79 for "Proposed Procedure for Truss Modofication."
2. See Sheet 83 for "Proposed Truss Cutting Procedure."
3. See Sheet 80 for "Proposed Load Transfer Device."
4. Work this sheet with Sheets 80, 82 & 83.
5. For additional notes, see Sheet 80.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

CUTTING TRUSS ELEMENT
LOAD TRANSFER DEVICE
DETAILS 2

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

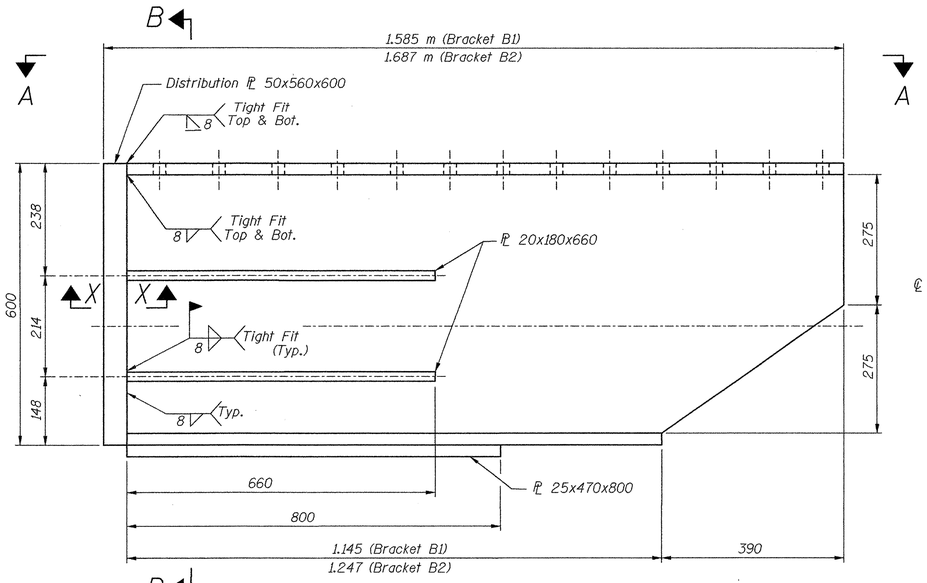
12/16/2003

m:\proj\3573\murray baker\st05t2-7a0900001.dgn

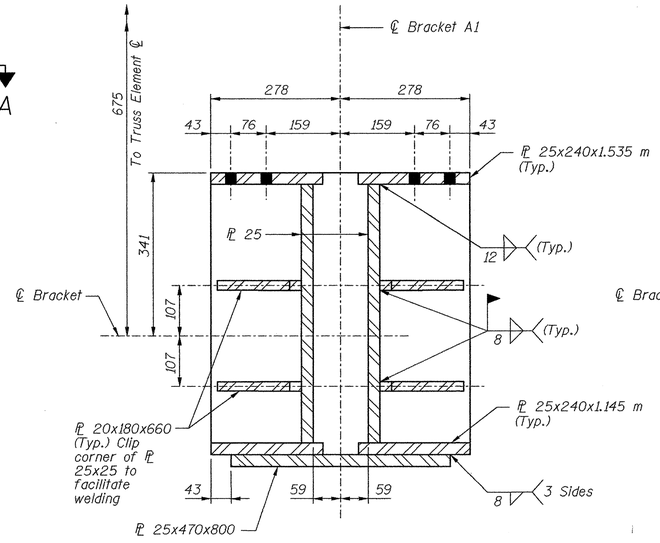
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	939
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

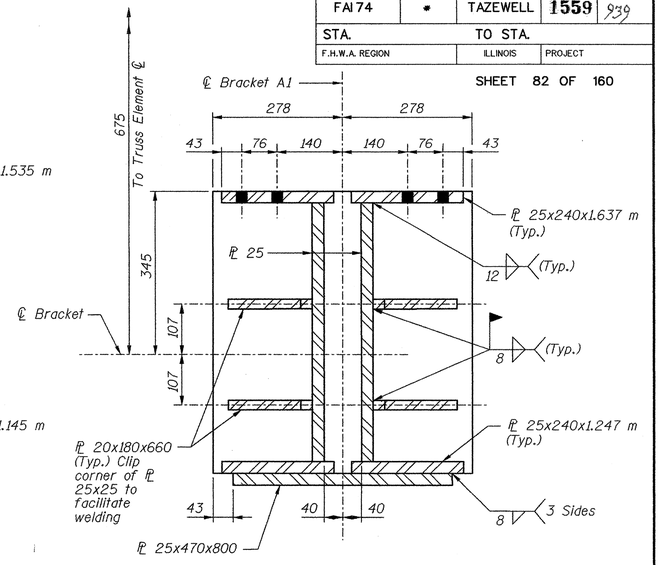
SHEET 82 OF 160



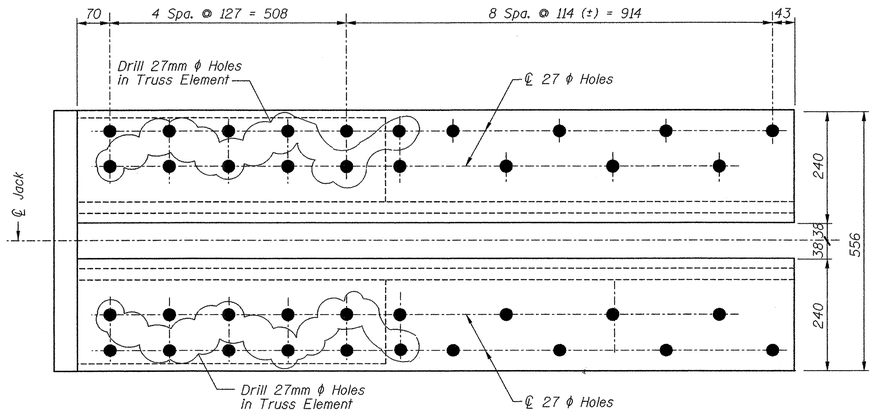
PLAN - MOUNTING BRACKETS B1 & B2



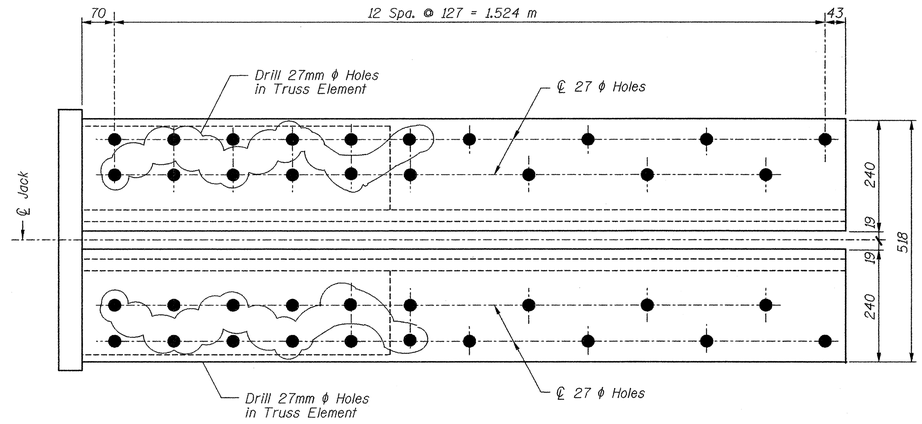
SECTION B-B - BRACKET B1



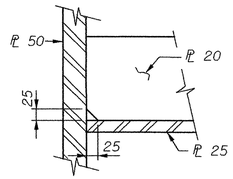
SECTION B-B - BRACKET B2



VIEW A-A - MOUNTING BRACKET B1



VIEW A-A - MOUNTING BRACKET B2



SECTION X-X

DESIGNED	YS
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

Notes:

1. See Sheet 79 for "Proposed Procedure for Truss Modofication."
2. See Sheet 83 for "Proposed Truss Cutting Procedure."
3. See Sheet 80 for "Proposed Load Transfer Device."
4. Work this sheet with Sheets 80, 81, 83 & 84.
5. For additional notes, see Sheet 80.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

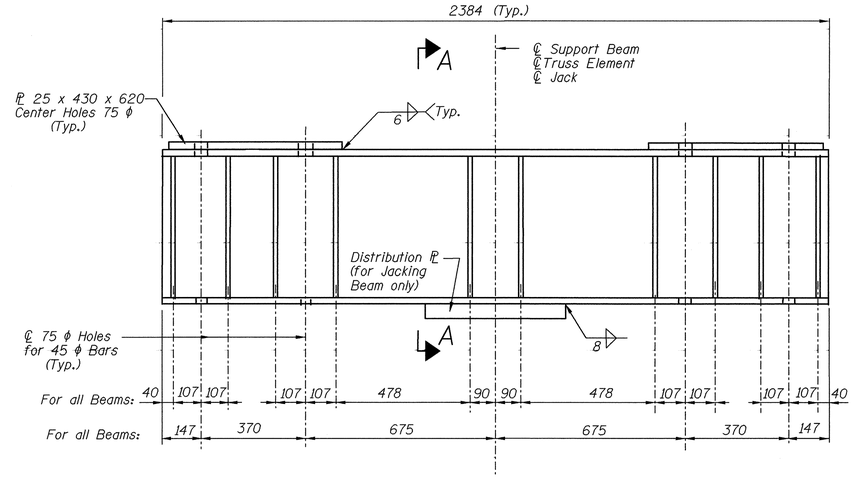
ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
CUTTING TRUSS ELEMENT
LOAD TRANSFER DEVICE
DETAILS 3
SN: 090-0001
PEORIA - TAZEWELL CO., IL.
STA. 150+475.243
DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05lt3-7a0900001.dgn

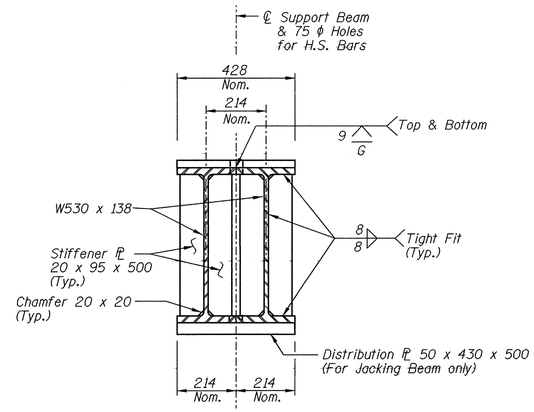
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	940
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 83 OF 160

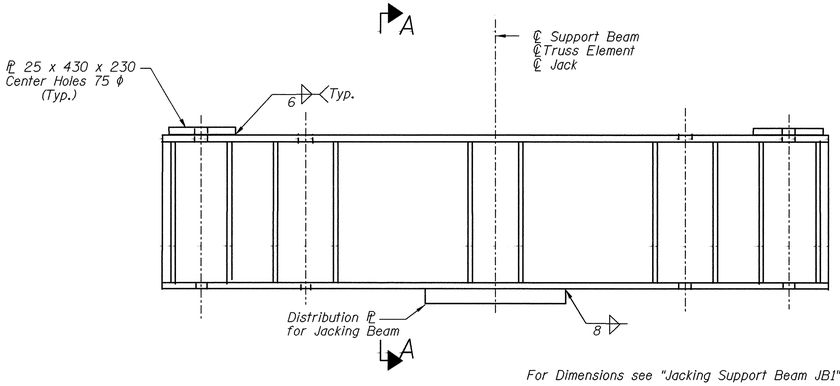


ELEVATION



SECTION A-A

JACKING SUPPORT BEAM JB1
ANCHOR SUPPORT BEAM AB1



For Dimensions see "Jacking Support Beam JB1"

ELEVATION

JACKING SUPPORT BEAM JB2
ANCHOR SUPPORT BEAM AB2

DESIGNED	YS
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

PROPOSED TRUSS CUTTING PROCEDURES

1. Field drill holes in Mounting Bracket using rivet holes in the existing chord member as a template.
2. Remove rivets and replace with A307 bolts with countersunk heads under Mounting Brackets A1 and A2 as denoted in the Plans. See "Proposed Load Transfer Device (Scheme)" on Sheet 80.
3. Install the Mounting Brackets to the truss one at a time. Rivets shall not be removed until previous bracket has been installed. Rivets shall be removed as stated in the special provision for "Rivet Removal and Replacement."
4. After each Mounting Bracket is installed, field weld stiffener plates to the Mounting Brackets as shown in the plans.

1 5. After all Mounting Brackets are attached install Support Beams, Jacking Beams, 4448 kN (500 Ton) jacks and 45 mm diameter threaded H.S. bars. Tighten bars. Use hardwood shims to align device horizontally and vertically and prevent rotation.
Anchorage Support and Jacking Beams shall be in tight contact and should be welded together as shown on the plans. Support Beams AB2 shall be welded to the brackets A2. All welding procedures shall be accomplished before H. S. bars are installed.

6. All jacks shall be identical and shall be connected to the same reservoir. Jacks shall be set with a 100 mm projection of the piston, prior to application of the load.

7. Strain gages shall be applied to the truss members as shown in the plans. Strain gages shall also be applied to the H.S. bars to assure an even distribution of the jacking force to each of the 12 bars.
8. Engage the jacks. Raise force smoothly, gradually and evenly to all jacks until a total load 2500 kN (550 kips) is applied to each truss. Stop pumping and hold the jacking load. Check hydraulic pumps, lines, fittings and jacks for leaks. Check assemblies for unintentional displacements, misalignments or rotations. Check strain gages to assure proper elongation of H.S. rods and proper shortening of the truss members.
9. If there are no misalignments and elongations are within anticipated values, then proceed to increase the jacking load smoothly, gradually and evenly to 5000 kN (1124 kips).
10. Repeat Step 9 increasing the load to 9780 kN (2200 kips). As jacking proceeds, locknuts shall be tightened.

1 11. Strain Gages should indicate a change in strain in the bottom chord truss members corresponding to 9780 kN (2200 kips) and member cross section area of 86800 mm2 (134.6 in2).

12. Cut member at the location shown on the plans. Member shall be cut evenly around member taking care not to overheat a corner of the member to a larger degree than the other corners of the member. To facilitate cutting, adjacent portions of the gusset plate and splice plate can be cut prior to cutting the truss member.
13. Release the jacks smoothly, gradually and evenly. Jack release devices and smooth release procedure is subject to the Engineer's approval.

NOTES:

1. All steel shall conform to the requirements of AASHTO M 270M, Grade 345, U.N.O.
2. See Sheet 80 for Jacking Assembly layout.
3. Eight Support Beams are required for each truss: four Jacking Beams (two JB1 and two JB2) and four Anchor Beams (two AB1 and two AB2).

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
CUTTING TRUSS ELEMENT
LOAD TRANSFER DEVICE-DETAILS 4

SN: 090-0001 STA. 150+475.243
PEORIA - TAZEWELL CO., IL. DATE: 1-21-04

1 5/3/04 YS

REVISED
6-4-04

5/6/2004

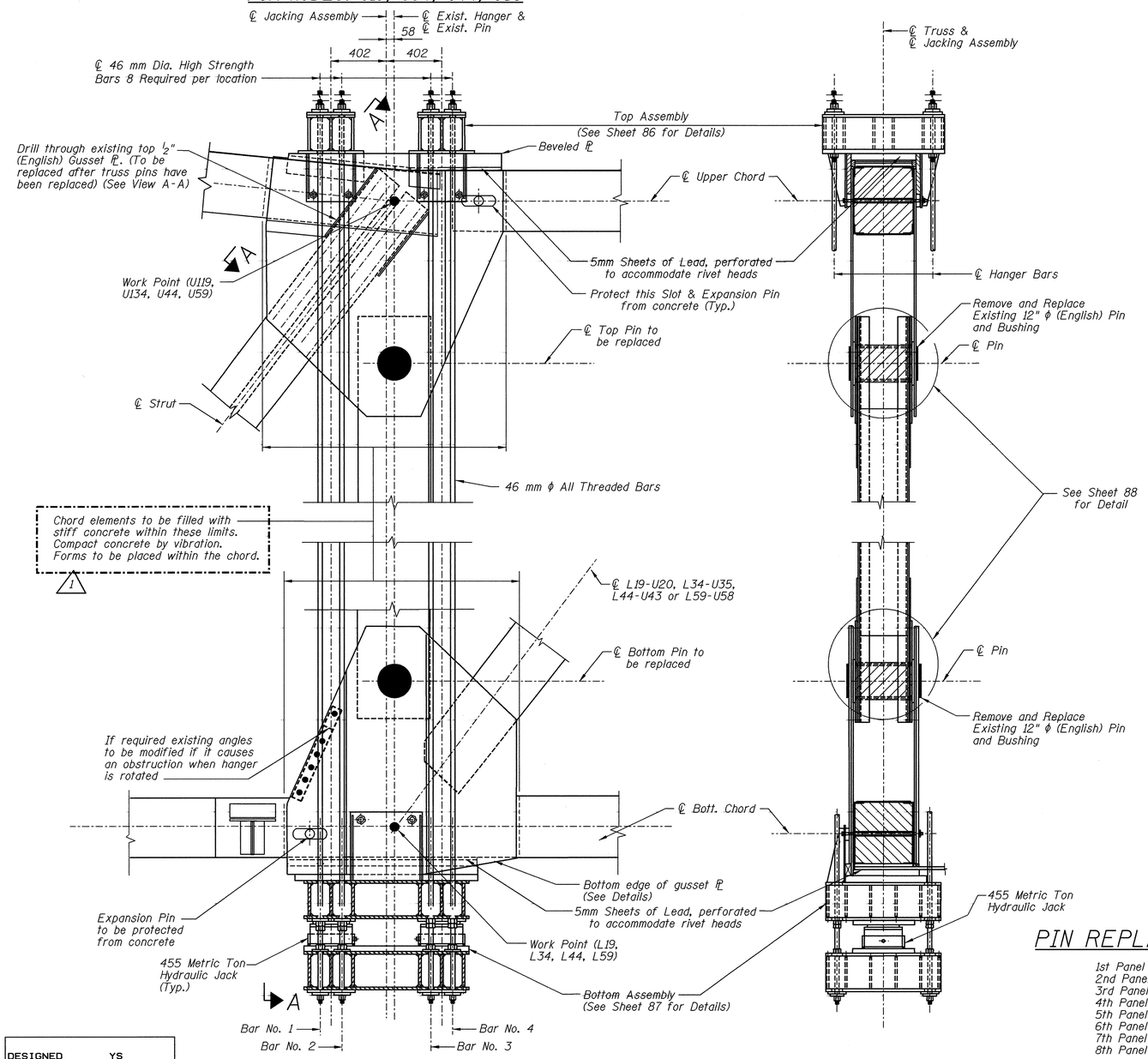
M:\proj3573\Murray Baker\st05it4-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	941
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 84 OF 160

FOR NODES: U19, U34, U44, U59



FOR NODES: L19, L34, L44, L59

ELEVATION
PIN REPLACEMENT JACKING DEVICE

SECTION A-A

DESIGNED	YS
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

SUSPENDED SPAN JACKING CONSTRUCTION SEQUENCE

1. Field measure existing members, controlling dimensions and locate existing rivets prior to fabricating jacking assemblies.
2. The pin replacement operation shall follow the "Pin Replacement Schedule" shown on this sheet.
3. Drill holes through existing top 1/2 in. gusset and top L8x4 (in.)(English) from the top chord attaching the horizontal and diagonal transverse braces to the truss (see "Typical Top Portal Node Detail" on Sheet 85).
4. Remove existing top 1/2 in. gusset plate from the top chord (see "Elevation of Top Assembly Support Beam" Sheet 86).
5. Remove existing channel C12x32.9 from bottom chord connected to the side node gusset plate (See "Bottom Assembly View from Panel" Sheet 86).
6. Fill in the end portions of the top and bottom chords with concrete as shown on the drawings. Block out horizontal slots at the expansion pin locations.
7. Remove portion of the concrete barrier and drill holes through the deck to accommodate interior hanger rods. Drill holes through the gusset plate of the suspended span bottom transverse bracing for hanger bars No. 3 and 4 (see detail).
8. Wire brush the top surface of the top chord and the bottom surface of the bottom chord. Surfaces should be free of corrosion, dirt and paint.
9. Place 5 mm lead sheets on the top of the top chord. Provide holes in the lead sheets to accommodate the rivet heads. Lead sheets should be of sufficient thickness so the lead plate is 5mm higher than the existing rivet heads. Place the beveled distribution plate on the lead plates of the top chord. Similarly, lead plates and distribution plates shall be installed between the bottom chord and the distribution plate for the bottom jacking assembly.
10. Assemble the jacking device as shown in the drawings; make sure the bearing rectangular bars are installed tightly between the distribution plates and node gusset plates at the top and bottom assemblies and fixed appropriately (see details). 455 M. TON Jacks shall be equipped with lock nuts and hydraulically connected to same reservoir. Hanger bars are to be uniformly tightened at the top and bottom assemblies by hand wrench. Hanger bars are not to be in contact with any truss or bracing elements. Load shall be applied equally and uniformly to both jacks.
11. Apply a trial force in the jacks of 500 kN at each; check positions of the assemblies and chord elements behavior; develop the force by increments of 250 kN watching the status of assembly, truss elements and jacks,- until the pin could be removed (see "Proposed Procedure for Truss Pin Replacement") on Sheet 88. Lock nuts shall be tightened during jacking operation and pin replacement. The estimated dead load force present in the hanger members are as follows: L19-U19, 1303kN, L34-U34, 4315kN, L44-U44,4315kN & L59-U59, 1303kN.
12. After both pins in the hanger have been replaced, release the jacks smoothly, decreasing the jacking force in the reverse order and disassemble the jacking device. Procedure for the Release of jacking force and release devices are subject to Engineer approval. Additional jacking load (above load required to loosen the the pin) for releasing the jack lock nuts is forbidden.
13. Replace the top chord bracing gusset plates and the bottom chanel. Use M24 A325M high strength bolts.
14. Replace the bottom chord bracing gusset plate. Use M24 A325M high strength bolts to connect the existing bracing and bottom chord to the gusset plate.
15. Fill Holes in Bridge Deck and replace portion of Fascia Barrier (see sheet 85 for details).

NOTES

1. See this Sheet for "Suspended Span Jacking Construction Sequence."
2. See Sheet 88 for Proposed Procedure of Truss Pin Replacement.
3. Work this sheet with Sheets 85-88.
4. Hanger Bars shall be 46 mm diameter All-Thread-Bars, Grade 1030 MPa, manufactured in strict compliance with ASTM A-722M and AASHTO M275M. Working stress is 0.5 Fpu. 8 Bars required per location. Bars shall be equipped with support plates, washers and nuts in accordance with standard inventory. Bars shall be protected from mechanical damages, sparks or hot slag during welding or burning, as well as from any lateral bending or shearing loads. Bars are subject to inspection after each hanger pin replacement and approval for the next application. Bar reuse more than four times is not acceptable in any case.
5. All structural steel shall conform to the requirements of AASHTO M 270M Grade 345, U.N.O.
6. Existing rivets or bolts, that need to be removed during truss hanger rotation and temporary truss element removal, shall be replaced with ASTM A325M high strength bolts M24 of slip critical connection type with Class A contact surface of bolted part.
7. Concrete used to fill the ends of the truss shall attain a compressive strength of 15 MPa before jacking sequence proceeds.
8. See Special Provisions for "Rivet Removal and Replacement."

PIN REPLACEMENT SCHEDULE

1st Panel Point 34 West Truss	✳
2nd Panel Point 59 East Truss	
3rd Panel Point 34 East Truss	✳
4th Panel Point 59 West Truss	
5th Panel Point 44 West Truss	✳
6th Panel Point 19 East Truss	
7th Panel Point 44 East Truss	✳
8th Panel Point 19 West Truss	

"✳" Denotes that pins can be replaced concurrently

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
PIN REPLACEMENT DETAILS
JACKING DEVICE

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF

REVISED 6-4-04

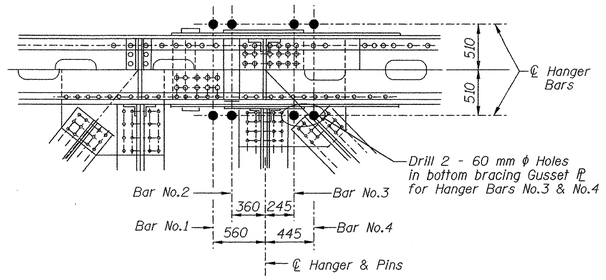
5/6/2004

M:\proj3573\Murray Baker\st05pli-7a0900001.dgn

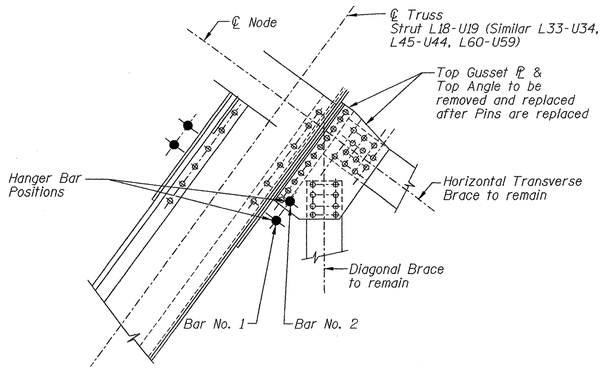
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	942
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 85 OF 160



PLAN-TYPICAL BOTTOM TRANSVERSE BRACING DETAIL AND HANGER BAR LOCATIONS



TYPICAL TOP PORTAL NODE DETAIL (VIEW A-A)

NOTES:

1. *See Sheet 84 for Pin Replacement Jacking Device and view A-A.*

DESIGNED	YS
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
PIN REPLACEMENT DETAILS
JACKING DEVICE DETAILS 2

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

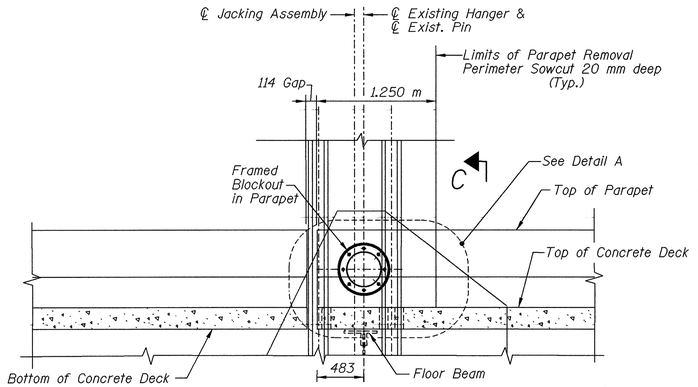
STA. 150+475.243
DATE: 12-16-03

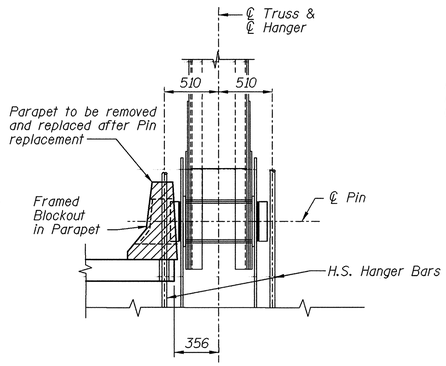
12/16/2003
m:\proj3573\murray baker\st05p1a-7a0900001.dgn

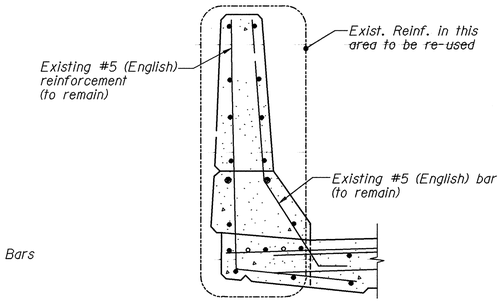
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	943
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 85A OF 160







SECTION THRU PARAPET

(For Information on Existing reinforcement)

BILL OF MATERIAL

Total for all 8 locations.

Bar	No.	Size	Length	Shape
B01(E)	64	#25	1.640 M	
S01(E)	8	#15	10.210 M	
Reinforcement Bars, Epoxy Coated			Kg	550*
Concrete Removal			Cu. M	2.5
Concrete Superstructures			Cu. M	1.9

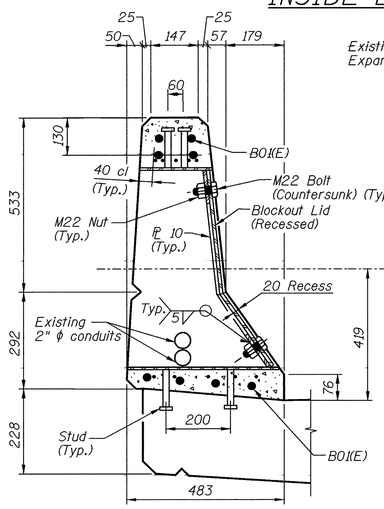
Reinforcement Bars designated (E) shall be epoxy coated.

* New reinforcement to be added at parapet modification.

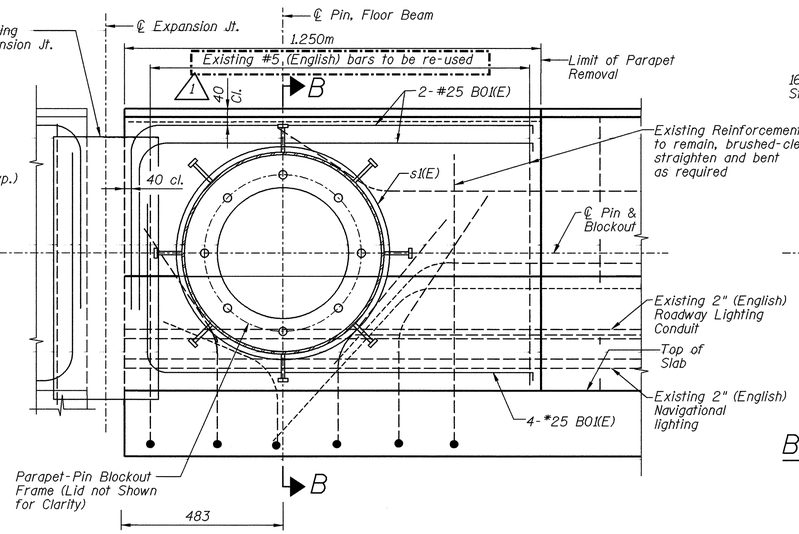
C

FOR NODES: L19, L34, L44, L59 (8 LOCATIONS)

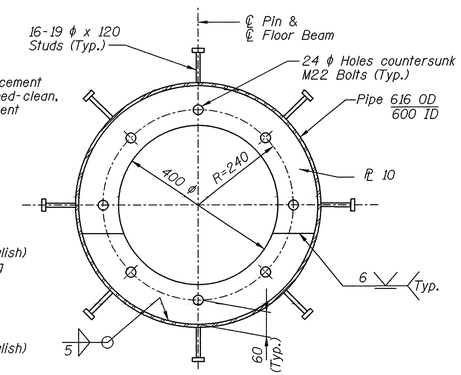
INSIDE ELEVATION



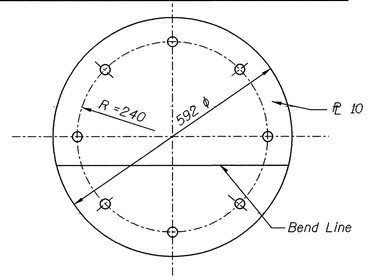
SECTION C-C



DETAIL A



BLOCKOUT FRAME DETAIL

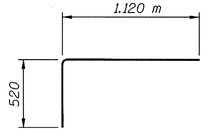


BLOCKOUT LID DETAIL

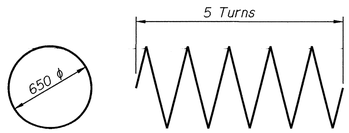
NOTES:

1. Parapet reinforcement to be kept, brush-cleaned, straightened and re-used for parapet restoration. Bend bars where required.
2. Use concrete for structures f'c = 24 MPa.
3. Fasteners shall be galvanized according to AASHTO M232. Plate, Pipes shall be galvanized according to AASHTO M111
4. Existing expansion joint to be removed and reinstalled if it interferes with cored holes for H.S. All-Threaded rods. Follow procedure on sheet 91A. Cost of removal and reinstallation of Neoprene Joint included in Remove and Replace Truss Pins.
5. Blockout Frame assembly and Lid shall be galvanized according to AASHTO M111.
6. Blockout Frame Assembly and Lid is included in the cost of "Furnishing and Erecting structural steel (Truss)."

PARAPET BLOCKOUT FOR PIN SECTION B-B



Bar b1(E)



Bar S01(E)

(Spiral)

DESIGNED	YS
CHECKED	KMP
DRAWN	CS
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

PIN REPLACEMENT DETAILS
PARAPET MODIFICATIONS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF

REVISED 6-4-04

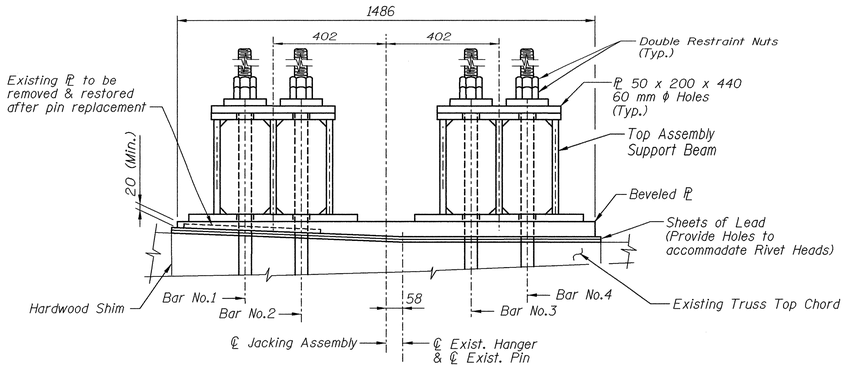
5/6/2004

M:\proj3573\Murray Baker\st05plb-7a0900001.dgn

68196

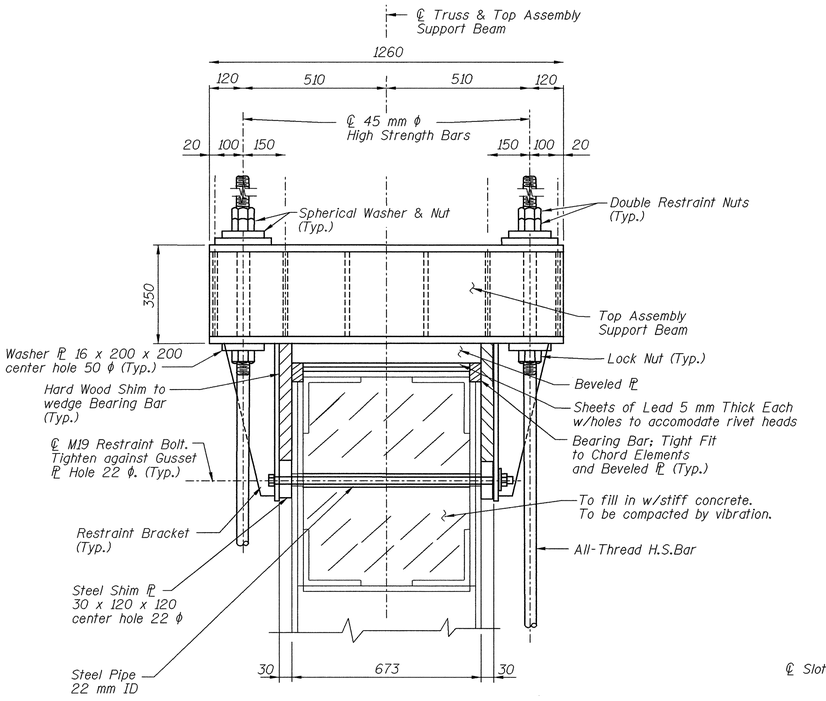
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	944
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 86 OF 160

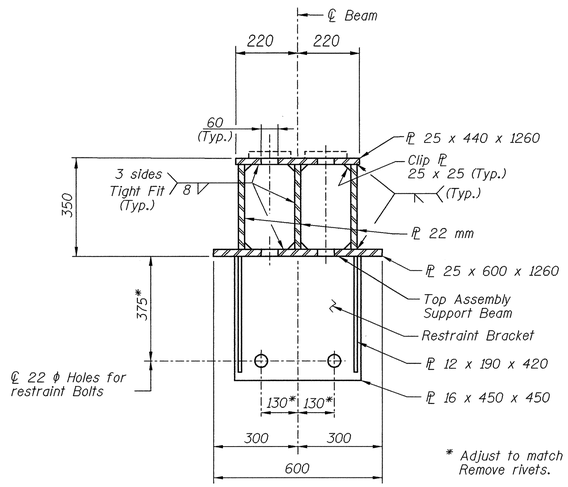


ELEVATION

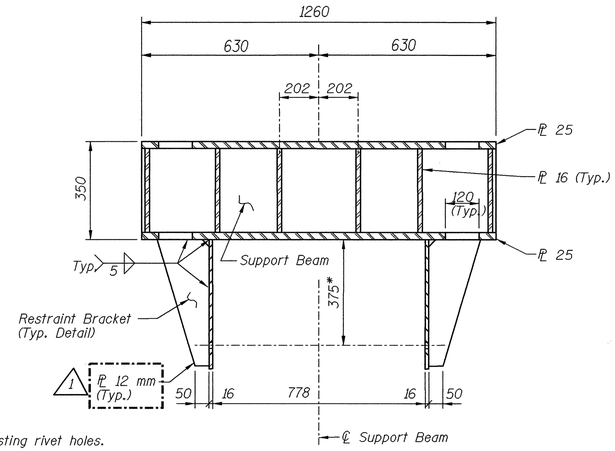
(Restraint brackets not shown for clarity)



VIEW FROM PANEL



SECTION A-A

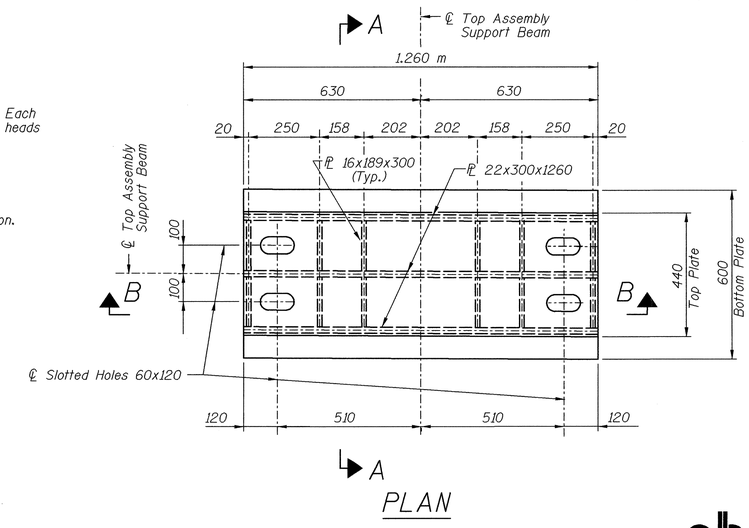


* Adjust to match existing rivet holes. Remove rivets.

SECTION B-B

TOP ASSEMBLY SUPPORT BEAM

(Two required per Pin location)



PLAN

NOTES:

1. Contractor to verify on site dimensions for distribution plate, shims, and bearing bar dimensions.
2. See Sheet 84 for Jacking Assembly layout.
3. See Sheet 88 for Proposed Pin Replacement Procedure.
4. Work this sheet with Sheets 84, 85, 87 & 88.

DESIGNED	YS
CHECKED	KMP
DRAWN	VH/YS
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

PIN REPLACEMENT DETAILS TOP ASSEMBLY

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF

REVISED 6-4-04

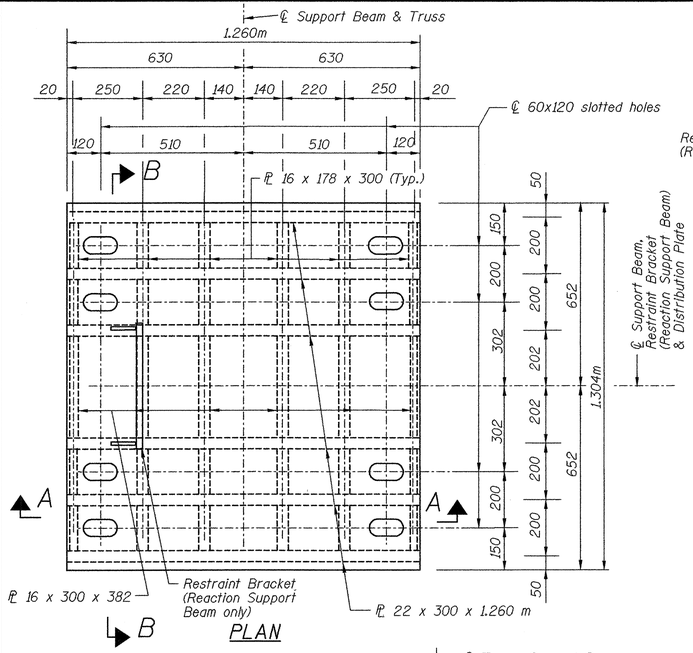
4/29/2004

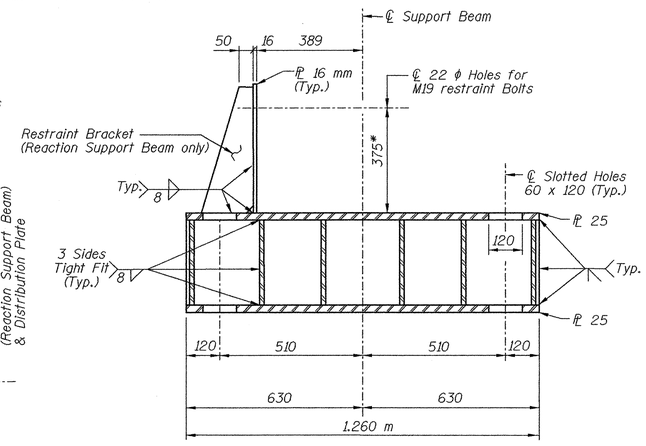
m:\proj3573\murray baker\st05pl2-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	945
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

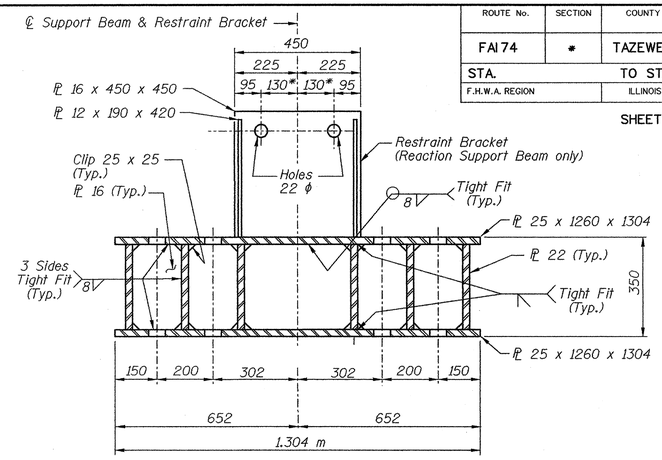
SHEET 87 OF 160

68196





SECTION A-A

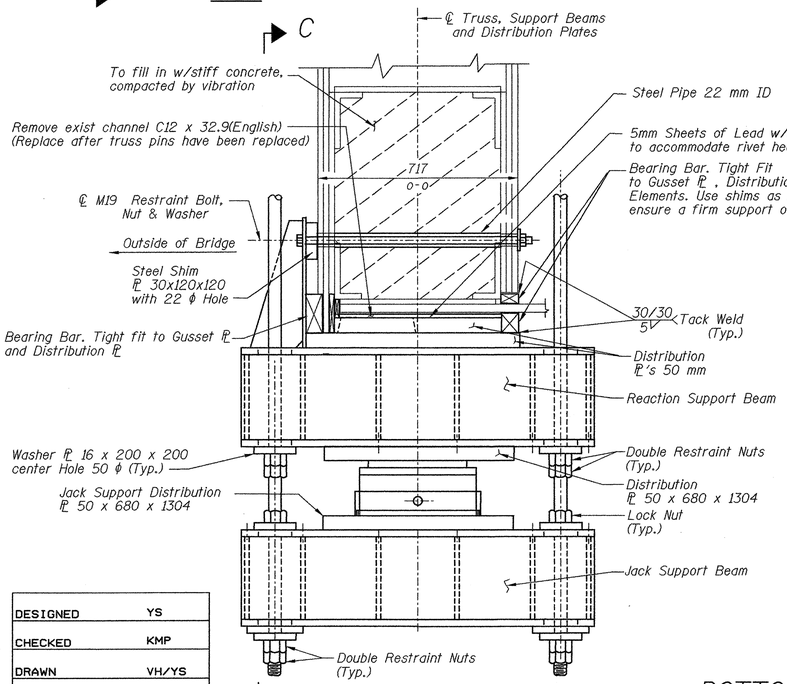


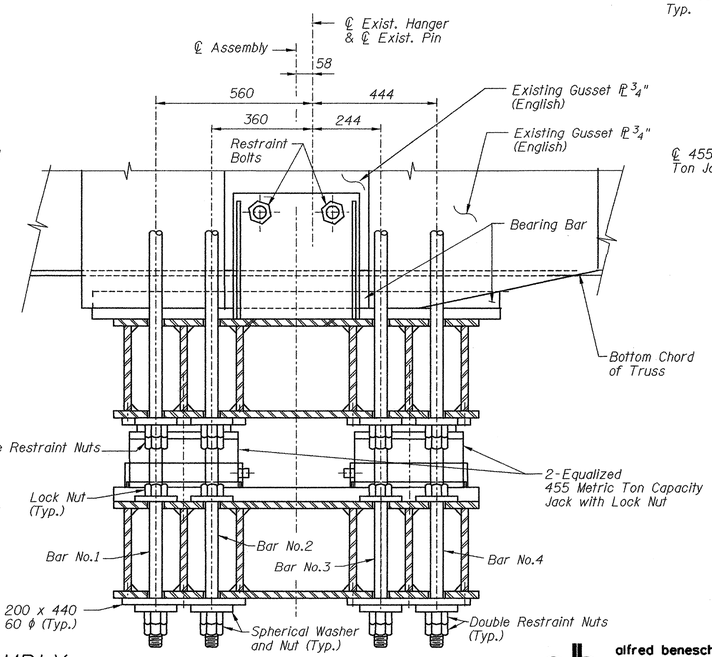
SECTION B-B

* Adjust to match existing rivet holes. Remove rivets.

JACK AND REACTION SUPPORT BEAMS

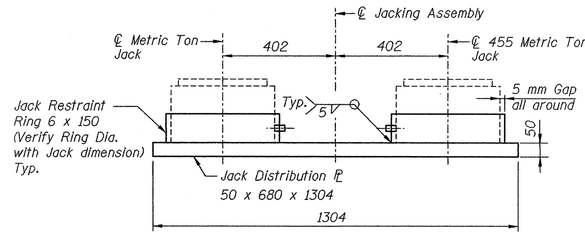
(Reaction Beam shown, Jack Beam similar, but no Restraint Bracket)



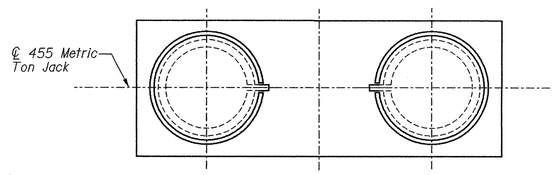


SECTION C-C
(Outside of Bridge)

BOTTOM ASSEMBLY



ELEVATION



PLAN

JACK SUPPORT DISTRIBUTION PLATE

NOTES:

1. Contractor to verify on site dimensions for distribution plate, shims, and bearing bar dimensions.
2. See Sheet 84 for Jacking Assembly layout.
3. See Sheet 88 for Proposed Pin replacement procedure.
4. See sheet 84 for Jacking Construction Sequence.
5. For additional notes see Sheet 84.
6. Work this sheet with Sheets 84-86 & 88.

DESIGNED	YS
CHECKED	KMP
DRAWN	VH/YS
CHECKED	KMP

12/16/2003

m:\proj3573\murray baker\st05pi3-7a0900001.dgn

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
PIN REPLACEMENT DETAILS
BOTTOM ASSEMBLY

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	946
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

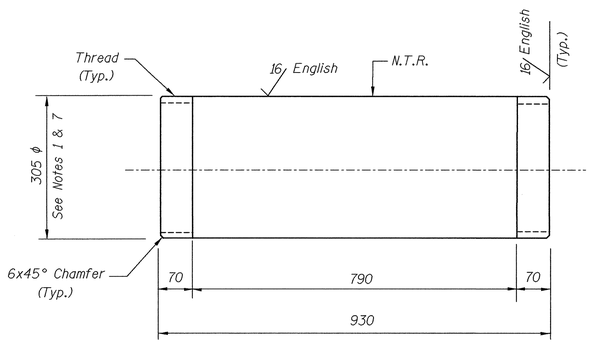
SHEET 88 OF 160

Proposed Procedure of Truss Pin Replacement

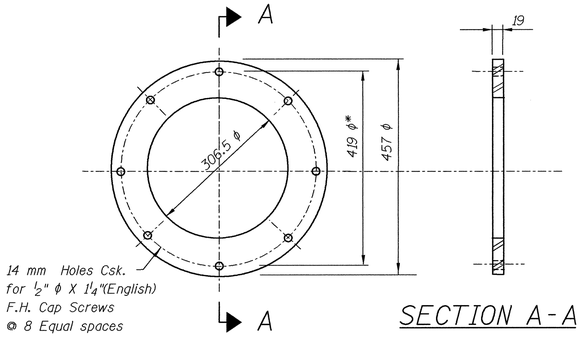
1. Follow the "Suspended Span Jacking Construction Sequence" (Sheet 84) to support the truss during Truss Pin Replacement.

Once Span is jacked and Pins are loose:

2. Verify Gusset Stiffener Angles from the bottom Gusset Plates will not interfere with the Hanger rotation. Modify or remove the gusset stiffener angles if required.
3. Remove top Pin and rotate Hanger toward the Suspended Span. Secure the position of the Hanger.
4. Remove cap screws connecting Collar to the Hanger. Remove Collars.
5. Remove the existing bushing.
6. Existing Pin Plates and Hanger, as well as existing welds, shall be inspected using liquid dye penetrant or magnetic particle testing. Any cracks that are found shall be identified and reported to the Bureau of Bridges and Structures for further disposition.
7. Clean and paint inside face of Pin Plates and inside and outside faces of Hanger.
8. Bore 344 mm hole through existing 13 ½ in. I.D. (English) Cast Steel Pipe.
9. Bore aligned holes in Pin Plates for 325 I.D. Bronze Bushing with LC2 fit on plates and install bronze bushing. Inside diameter of Bronze Bushing shall be adjusted to conform to Bushing manufacturers allowable tolerances for proper functioning. Hole diameter may be adjusted to allow use of stock bushings.
10. Install Woven Teflon Bushings inside the Bronze Bushings.
11. Grease inside existing 13 ½ in. I.D. (English) Pipe and install Bronze Bushing inside the pipe, then bolt two collars on the outside face of the hanger.
12. Rotate vertical member until upright and align holes for the new Pin.
13. Install new Pin. Install the Bronze Washers and Double Hex Nuts. Apply Silicone Rubber Sealant on contact surfaces of Washers and double Hex nuts.
14. Remove bottom Pin and rotate hanger toward diagonal member of the cantilever span.
15. Repeat steps 3 thru 13 for Bottom Hanger Pin.
16. Replace Stiffener Angles removed in Step 2.
17. Follow "Construction Sequence for Jacking the Suspended Span" on Sheet 84 for releasing the load from the jacks.
18. Payment of this item will be included with " Remove and Replace Truss Pins"

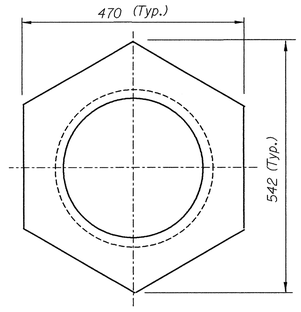


PIN DETAIL

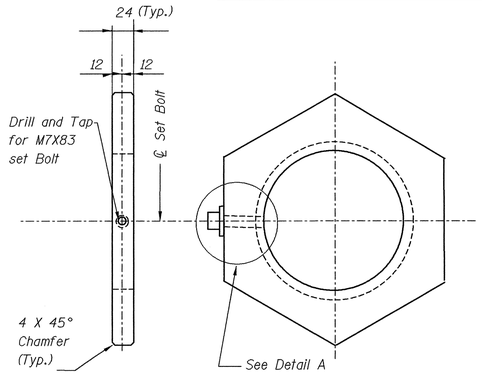


COLLAR DETAIL

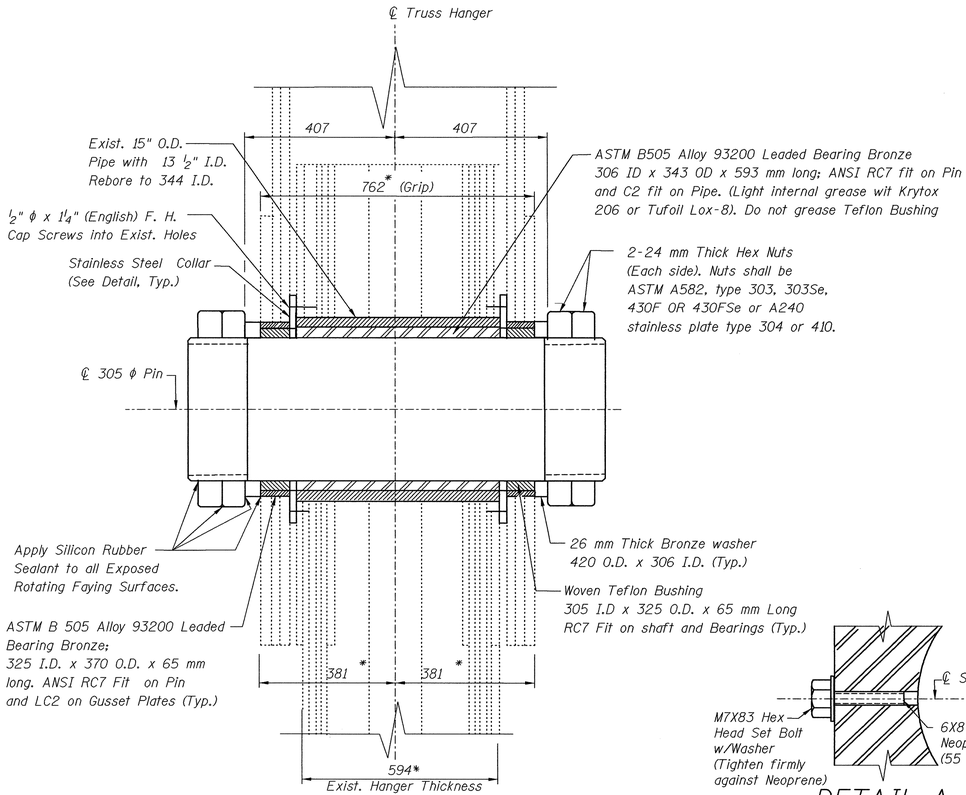
SECTION A-A



INSIDE NUT DETAIL

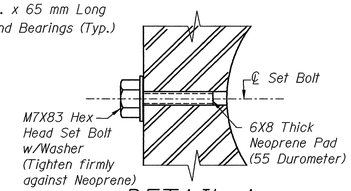


OUTSIDE NUT DETAIL



NEW PIN ASSEMBLY

* Contractor to verify dimensions on site for top and bottom Pin Assemblies, before Pin and Bushing Details to order. Existing dimension deviations could cause Pin Assembly design dimensions adjustment



DETAIL A

Set Bolt shall conform to the requirements of ASTM A 307 and shall be Galvanized according to AASHTO M 232

NEW PIN AND BUSHING DETAILS

Notes:

1. Nominal Pin diameter (Diameter tolerances are subject to Specifications of Bronze and Teflon Bushing Manufacturer and shall be approved by the Engineer). Pin shall be ASTM A 276, UNS 21800 (Nitronic 60 or equal). No step at threads, 12 threads per inch (English).
2. Sealant shall be suitable for prolonged exterior exposure without losing flexibility or adhesion to painted steel surfaces. Proposed products shall be subject to Department's acceptance based on documented testing or other evidence.
3. Teflon Bushing shall be a self lubricating filament wound epoxy matrix backed Duration Bearing, metal backed Fiber Glide Bearing or equivalent. No primer or grease shall be allowed on Teflon Bushings. Bushings shall be suitable for the dynamic loads of 138 MPa.
4. The Pin shall conform to the minimum Charpy V-Notch Toughness of 61 N-m at minus 18 deg. C (45 Ft-Lbs. at 0 deg. F), and shall be treated in accordance with AASHTO requirements
5. Partial depth holes may be drilled in the end of pin to facilitate machining and installation. Details of the holes shall be subject to the approval of the Engineer.
6. Pins, Bushings, Nuts, and Silicone Sealant, jacking etc. are the items included in "Remove and Replace Truss Pins". See Special Provisions for "Remove and Replace Truss Pins".
7. Bore appropriate diameter for Bushing in Pin plates and cast Pipe. Size of holes shall correspond to Bushing Manufacturer's allowable tolerances for proper functioning. Hole diameter may be adjusted to allow use of stock Bushings.
8. Tighten inside nuts to bring all Bushings into firm contact, then back off ¼ turn and tighten outer Nuts.
9. Work this sheet with Sheets 84-87.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Remove and replace Truss Pins	Each	16

DESIGNED	YS
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
PIN REPLACEMENT DETAILS
PIN DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

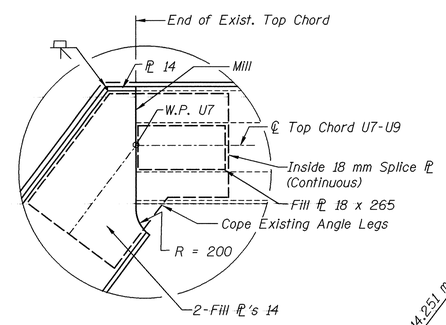
STA. 150+475.243
DATE: 1-14-04

01/14/2004
m:\proj3573\murray baker\st05pi4-7a0900001.dgn

63196

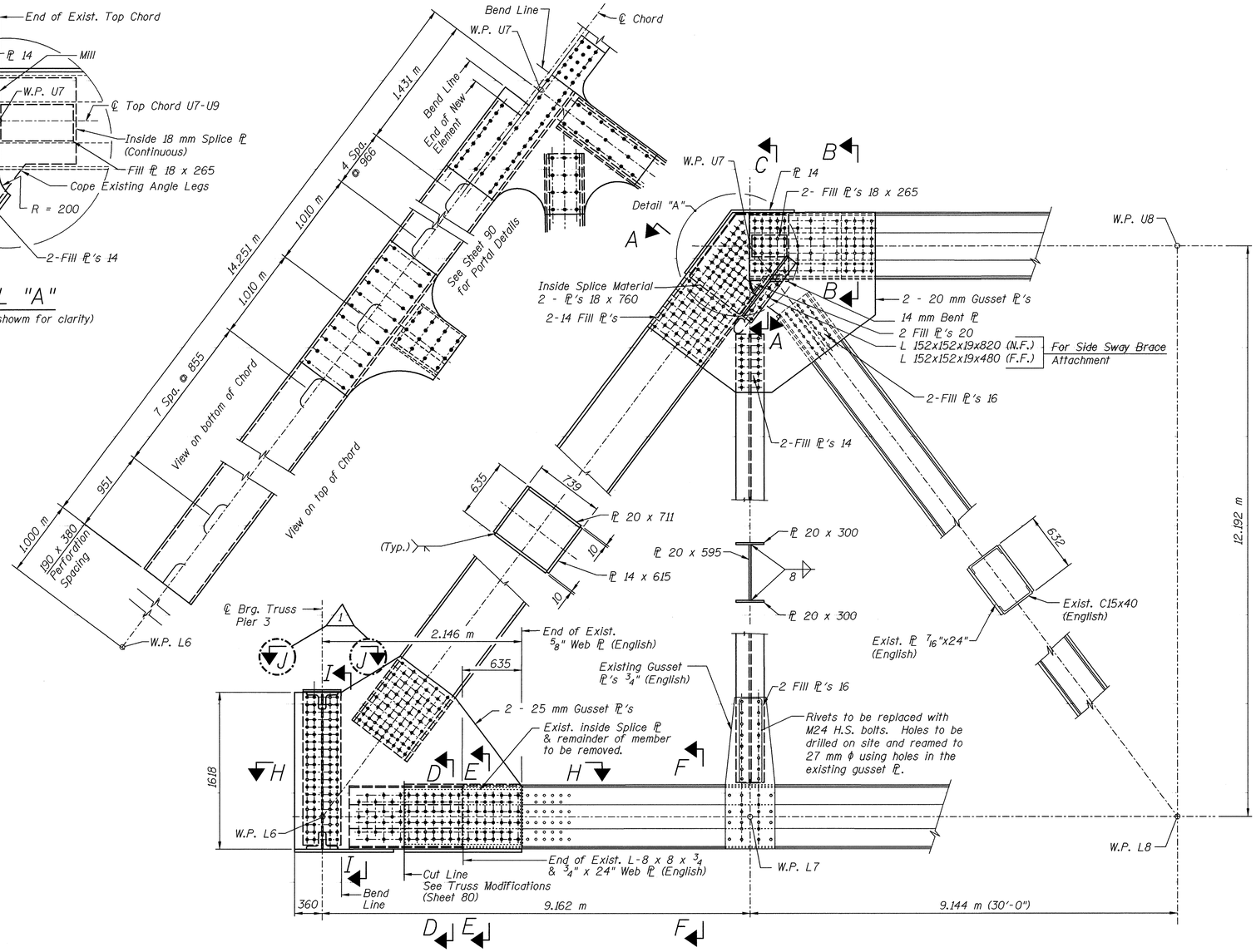
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	947
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

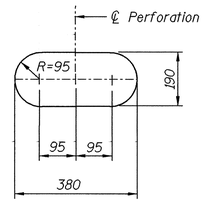
SHEET 89 OF 160



DETAIL "A"

(New Gusset ℄ not showm for clarity)





PERFORATION DETAIL

DESIGNED	KMP
CHECKED	YS
DRAWN	VH
CHECKED	KMP

Notes:

1. Work this sheet with Sheets 89A, 89B & 89C.
2. For notes see Sheet 89A.
3. For details of Panel Point L6 see sheet 89B.
4. For details of Panel Points L7 & U7 see sheet 89C.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

TRUSS MODIFICATIONS
MAIN CHORDS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF

REVISED
6-4-04

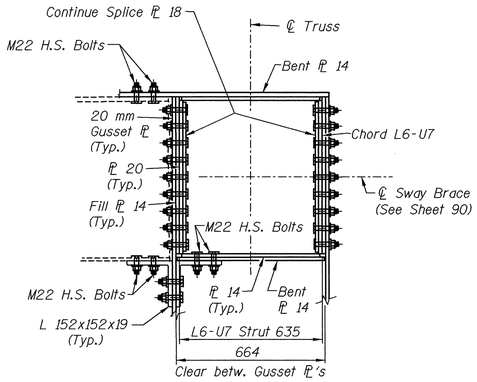
5/6/2004

M:\proj3573\Murray Baker\st05st2-7a0900001.dgn

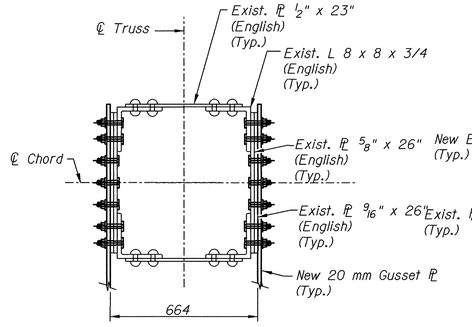
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	948
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

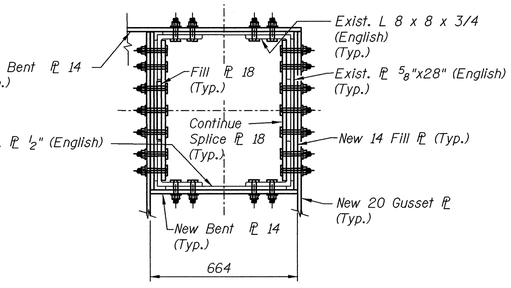
SHEET 89A OF 160



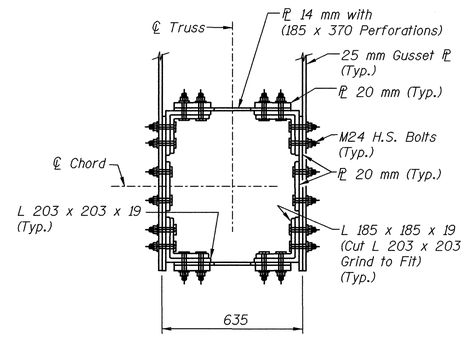
SECTION A-A



SECTION B-B

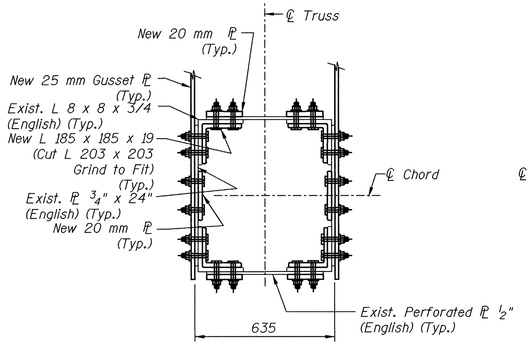


SECTION C-C

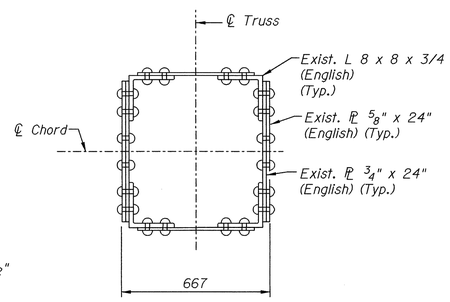


SECTION D-D

(All elements new)



SECTION E-E



SECTION F-F

Notes:
1. For the floor beam at L6, see Sheet 94.
2. For Truss Bearing at Pier 3, see Sheet 53.
3. For bottom bracing details, see Sheet 95.
4. Structural steel shall conform to AASHTO M270, Grade 345, N.T.R.
5. H.S. bolts shall be M24 AASHTO M 164M (ASTM A325M) and holes shall be 27 mm ℄ (U.N.O.) Connections shall be slip critical with Class A contact surface.
6. N.F. denotes near face.
7. F.F. denotes F.F.
8. Work this sheet with Sheets 89, 89A & 89B.
9. For member elevations see Sheet 79B

DESIGNED	KMP
CHECKED	YS
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

TRUSS MODIFICATIONS
MAIN CHORD DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-14-04

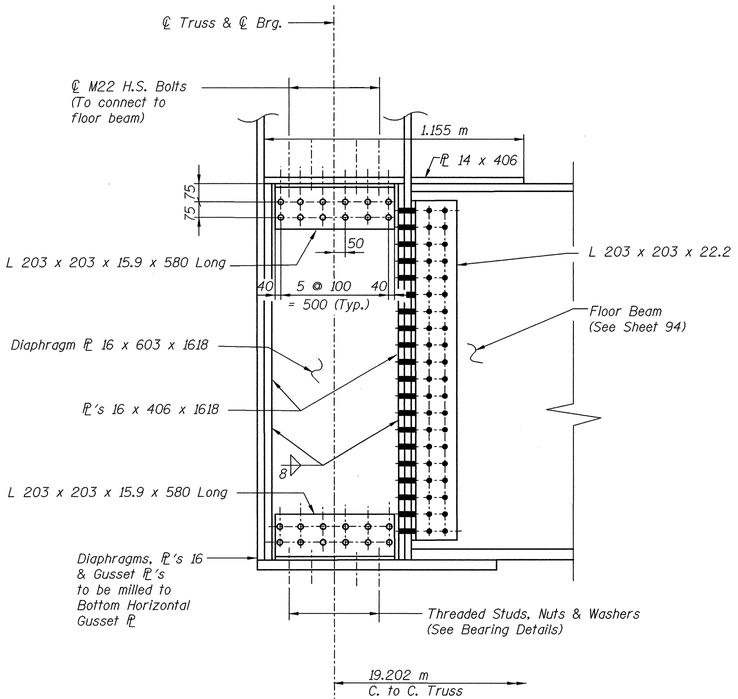
01/15/2004

m:\proj3573\murray baker\st05st2a-7a0900001.dgn

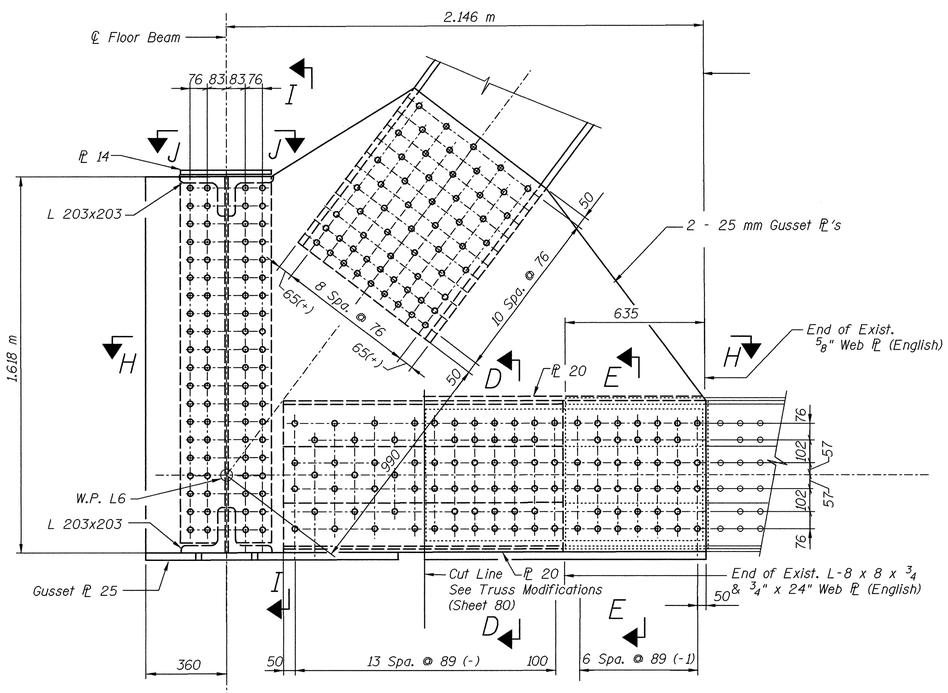
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	948A
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

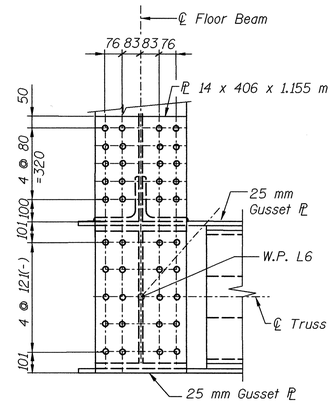
SHEET 89B OF 160



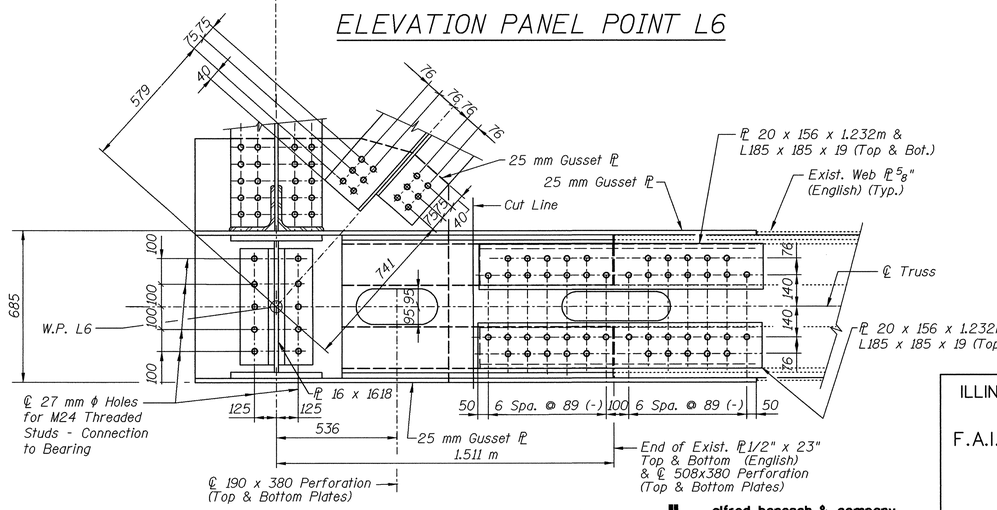
VIEW I-I



ELEVATION PANEL POINT L6



SECTION J-J



SECTION H-H

Notes:

1. Work this sheet with Sheets 89 & 89A.
2. For notes see Sheet 89A.

DESIGNED	KMP
CHECKED	YS
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
TRUSS MODIFICATIONS
PANEL POINT L6 DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-14-04

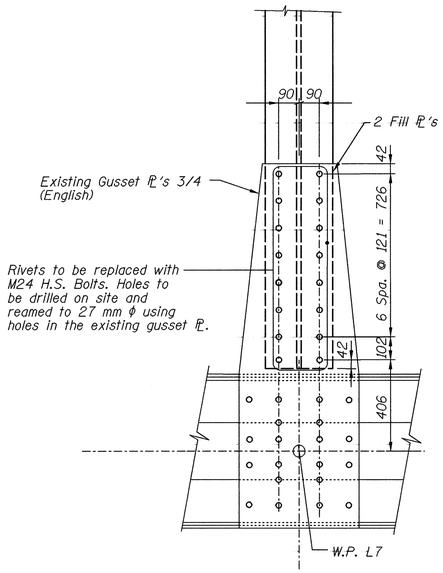
01/15/2004

m:\proj3573\Murray Baker\s105st2b-7a0900001.dgn

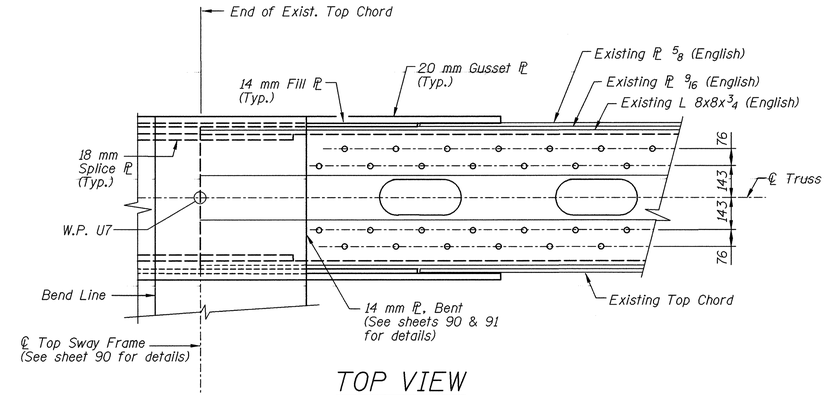
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	9488
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 89C OF 160

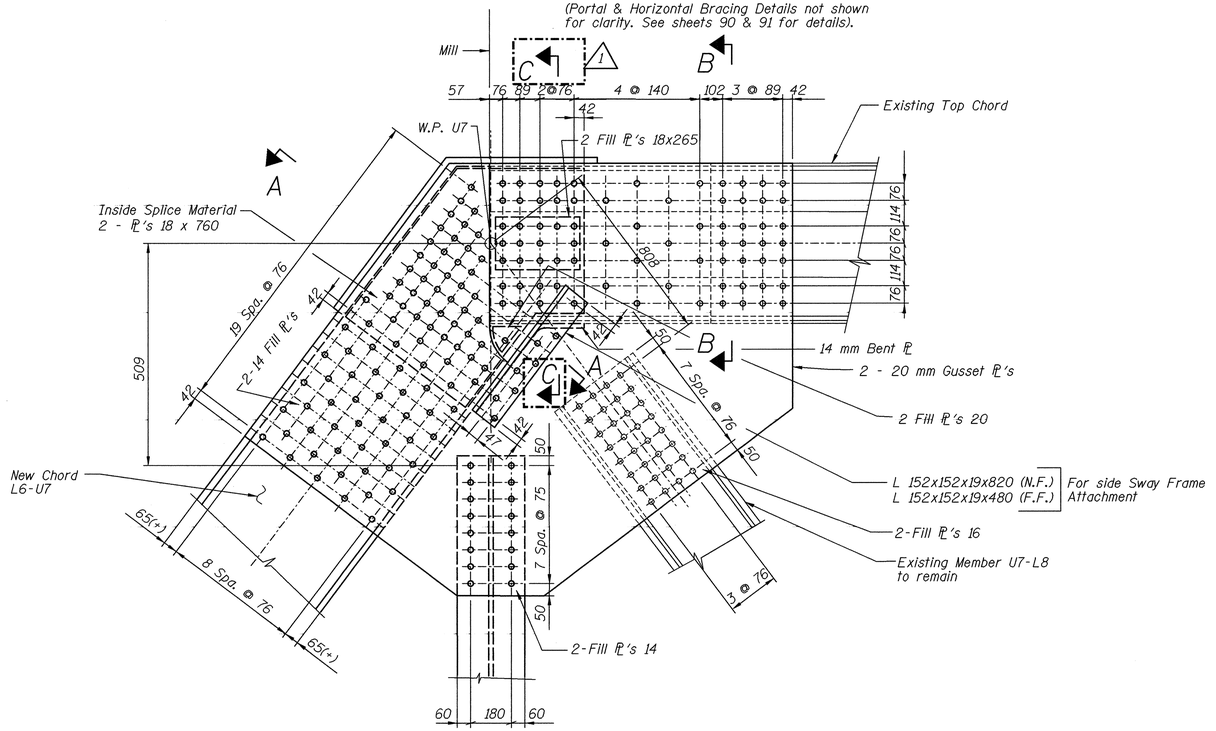


ELEVATION AT PANEL POINT L7



TOP VIEW

(Portal & Horizontal Bracing Details not shown for clarity. See sheets 90 & 91 for details).



ELEVATION AT PANEL POINT U7

DESIGNED	KMP
CHECKED	YS
DRAWN	VH
CHECKED	KMP

Notes:

1. Work this sheet with Sheet 89 & 89A.
2. For notes see Sheet 89A.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

TRUSS MODIFICATIONS
PANEL POINT L7 & U7 DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF

REVISED
6-4-04

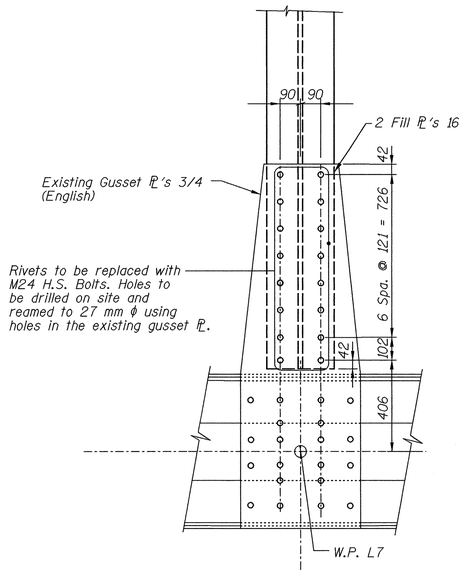
5/6/2004

M:\proj3573\Murray Baker\st0Sst2c-7a0900001.dgn

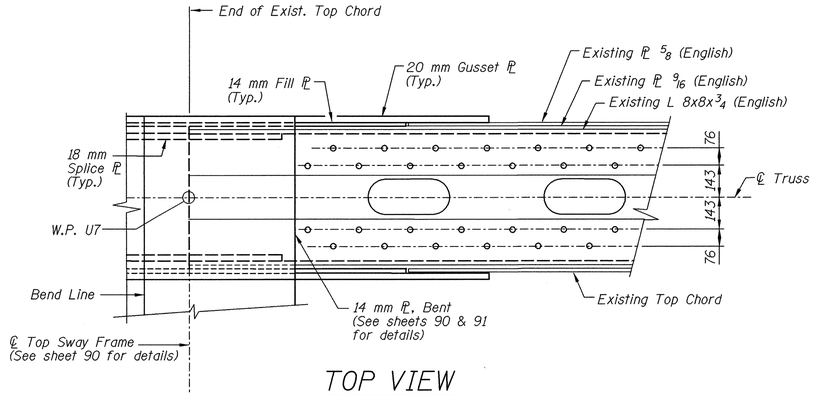
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	948 b
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 89C OF 160

68196

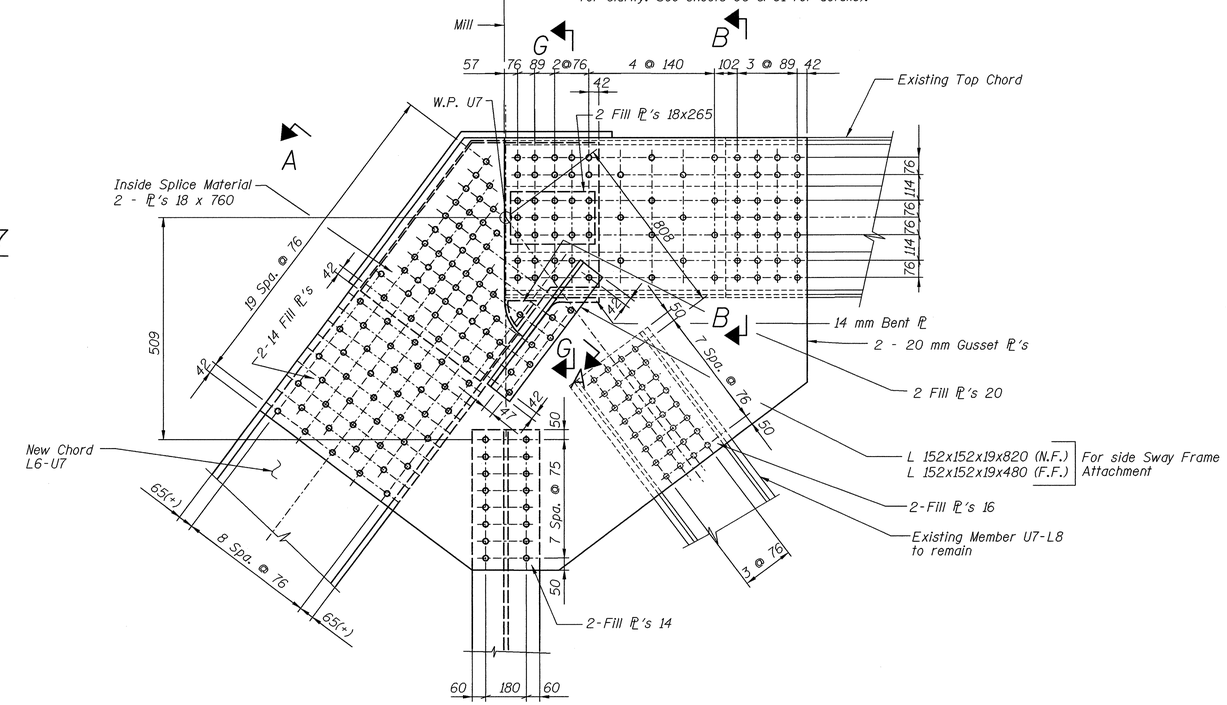


ELEVATION AT PANEL POINT L7



TOP VIEW

(Portal & Horizontal Bracing Details not shown for clarity. See sheets 90 & 91 for details).



ELEVATION AT PANEL POINT U7

Notes:

1. Work this sheet with Sheet 89 & 89A.
2. For notes see Sheet 89A.

DESIGNED	KMP
CHECKED	YS
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

TRUSS MODIFICATIONS
PANEL POINT L7 & U7 DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-14-04

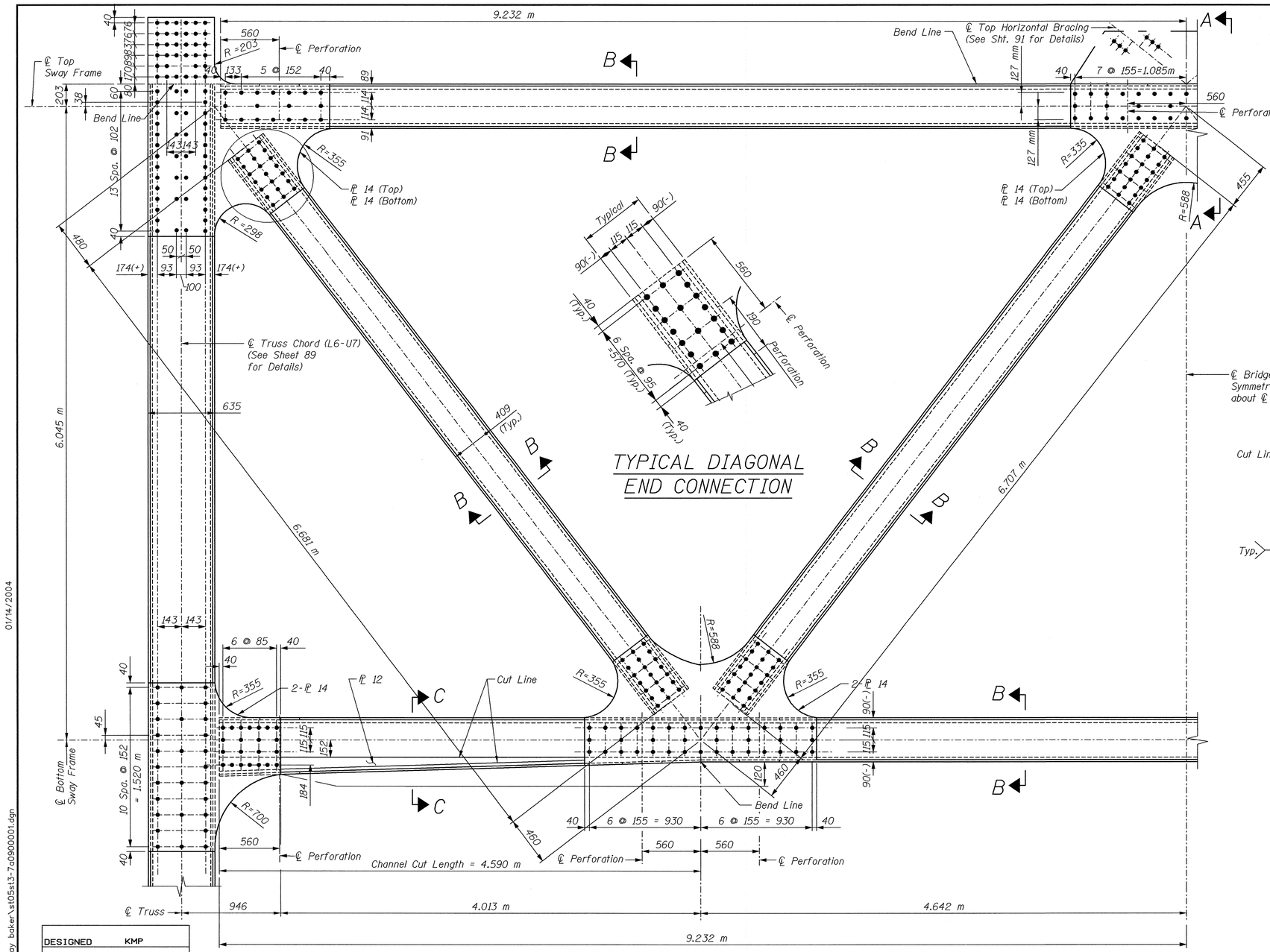
01/15/2004

m:\proj3573\murray baker\st05st12c-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	949
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

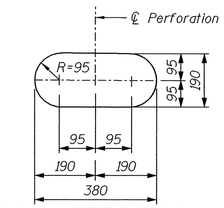
SHEET 90 OF 160



TYPICAL DIAGONAL END CONNECTION

SECTION B-B

SECTION C-C



PERFORATION DETAIL

PORTAL AT U7-L6

NOTES:

1. Steel shall conform to the requirements of AASHTO M 270M Grade 345 and conform to Notch Toughness Requirements.
2. Bolts shall be M22 High-Strength per ASTM A 325 M specifications.
3. For Section A-A See Sheet 91.

DESIGNED	KMP
CHECKED	YS
DRAWN	RMG
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

TRUSS MODIFICATIONS - PORTAL

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-14-04

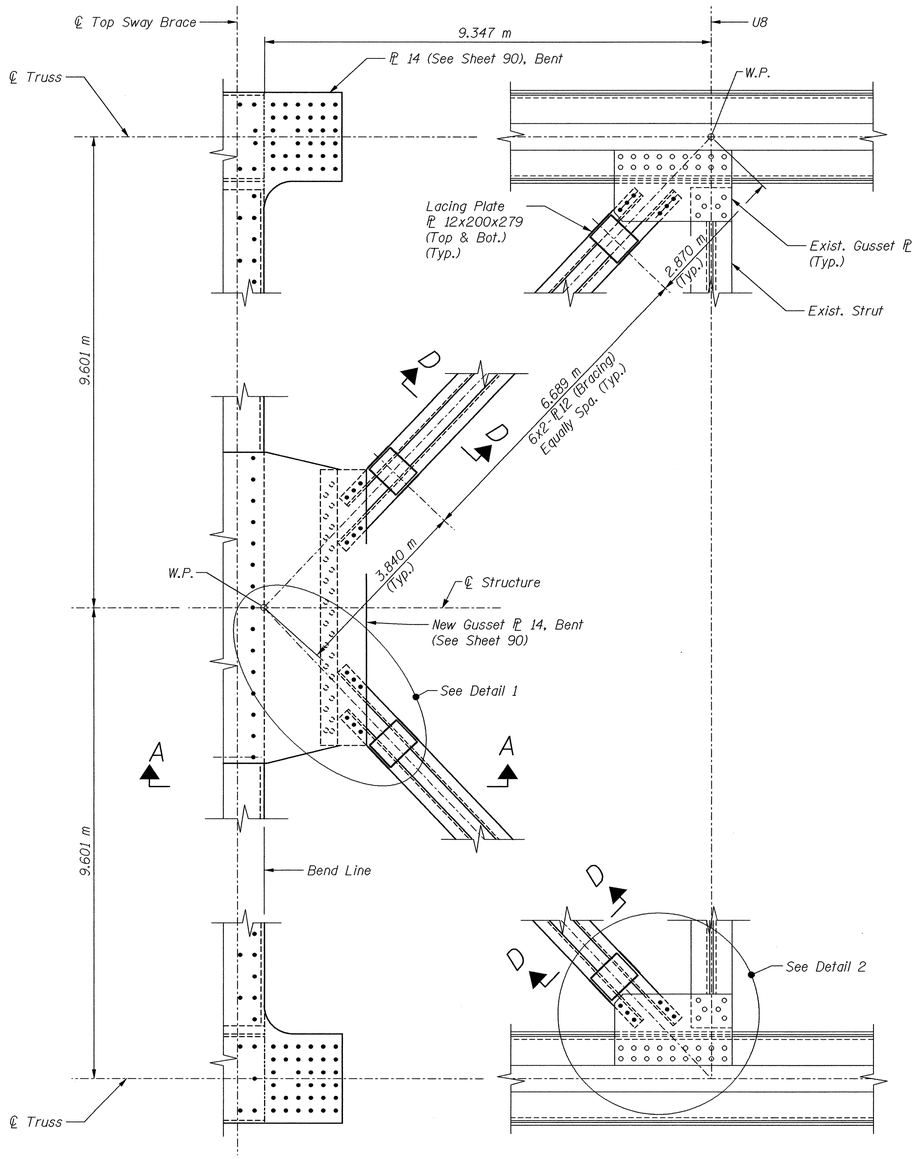
01/14/2004

m:\proj3573\murray baker\st05st3-7d0900001.dgn

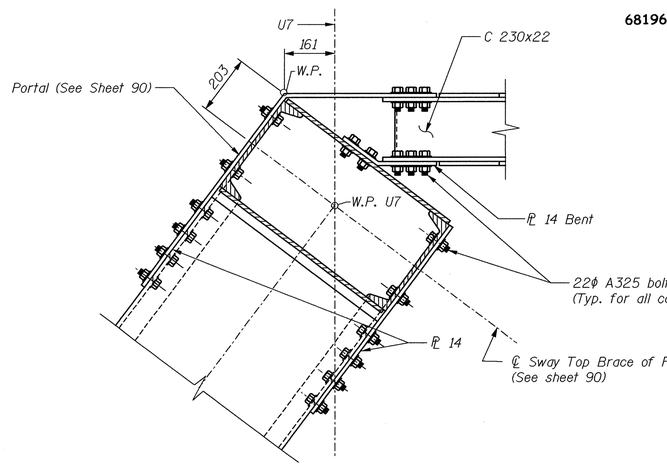
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	950
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

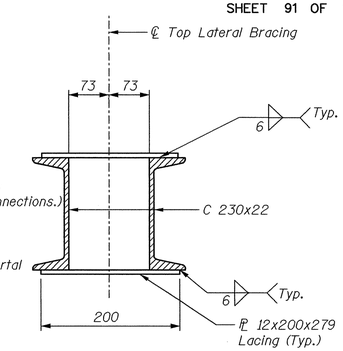
SHEET 91 OF 160



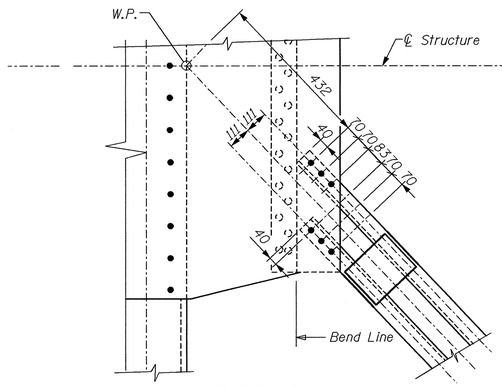
TOP CHORD BRACING



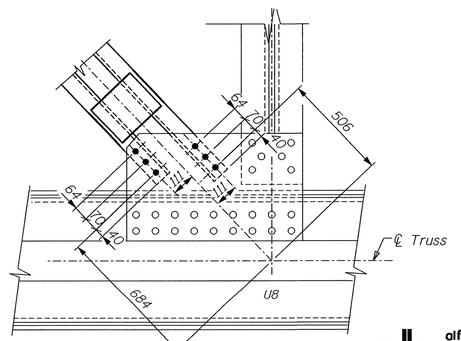
SECTION A-A



SECTION D-D



DETAIL 1



DETAIL 2

NOTES:

1. All Steel Shall Conform to AASHTO M270M Grade 345 specifications, and conform to Notch Thoughness Requirements.
2. Bolts shall be 22 ϕ High-Strength per ASTM A 325M specifications.
3. Location of bolt holes to be determined in field to match location of existing rivets where possible.
4. All existing holes, that are to be re-used, shall be reamed to 24 ϕ.
5. Work this sheet with Sheet 90.

DESIGNED	KMP
CHECKED	YS
DRAWN	RMG
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

TRUSS MODIFICATIONS - BRACING

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-14-04

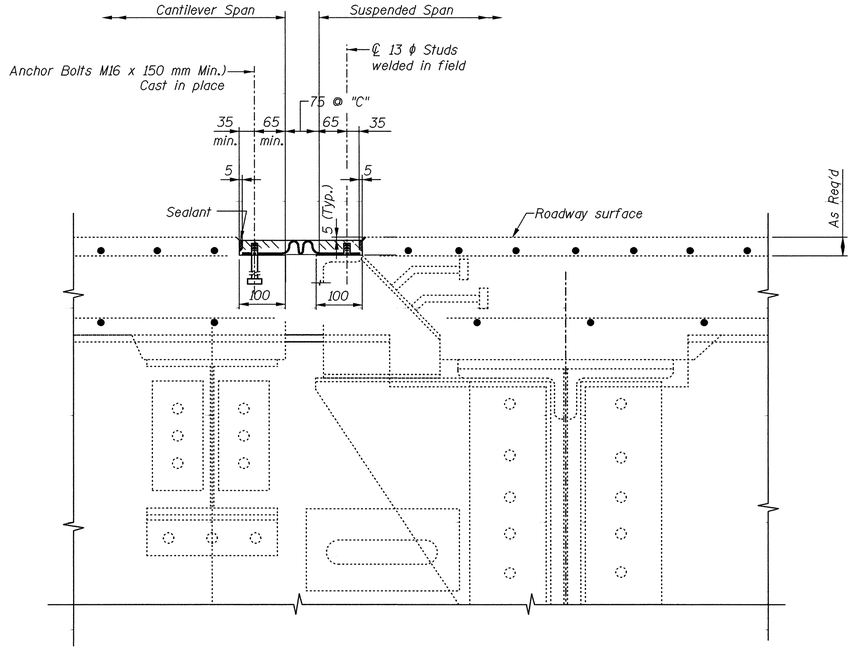
01/14/2004

m:\proj3573\murray baker\st05st4-7a0900001.dgn

68196

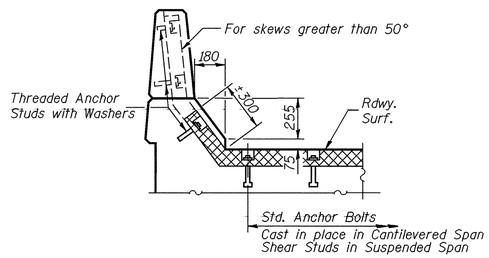
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	951
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 91A OF 160

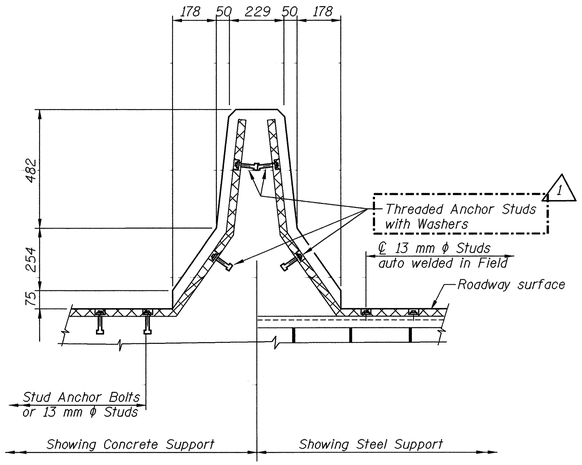


SECTION THRU EXPANSION JOINT AT L34 (Looking East)

SECTION THRU EXPANSION JOINT AT L44 (Looking West)



AT PARAPET



AT MEDIAN

NEOPRENE EXPANSION JOINT (100 mm) NOTES:

The existing expansion joint is a Transflex 650. The Wabo Transflex joint will fit the same blockout.

The cost for removal of existing 4" (English) Neoprene shall be considered included with the New Neoprene Expansion Joint 100 mm.

Carefully remove existing hold down nuts at existing expansion joints.

Studs and anchor bolts with good threads, solid connection, and proper location may be reused for new expansion joint. 1

Protect existing concrete and steel surfaces when removing existing expansion joint. Any damage to existing surfaces resulting from removal of expansion joint by the Contractor shall be corrected by the contractor at no additional cost to the contract.

Place studs at locations required for new expansion joint. Any studs with damaged threads, loose support, or improper location must be ground flush with the concrete or steel plate supporting them. All studs in the suspended spans must be automatic and welded to the structural steel. If anchor bolts are required to be replaced for the cantilevered spans they will be epoxy grouted through a drilled hole in the deck a minimum of 152 mm in accordance with the manufacturer's direction.

The cost of installing studs shall be considered included with the unit price for "Neoprene Expansion Joint 100 mm."

Prior to installation of new expansion joint, all surfaces, studs and anchor bolts must be inspected and approved by Engineer.

Install new Neoprene Expansion Joint (100 mm) on bedding sealant in accordance with manufacturer's directions.

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 10 °C.

The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.

All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Neoprene Expansion Joint, 100 mm	METER	39.0

DESIGNED	ADD
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
EXPANSION JOINT REPLACEMENT
AT PANEL POINTS L34 & L44

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF

REVISED 6-4-04

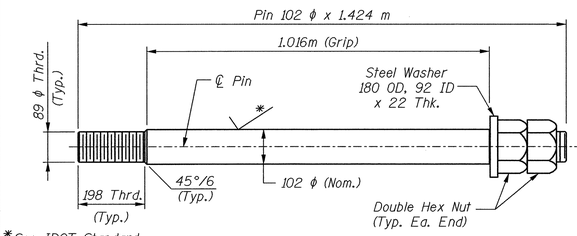
5/6/2004

M:\proj3573\Murray Baker\st05e13-7a0900001.dgn

68196

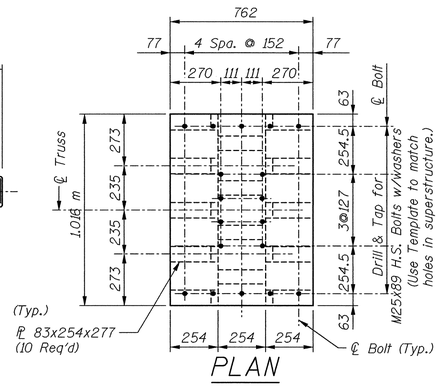
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	952
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 92 OF 160

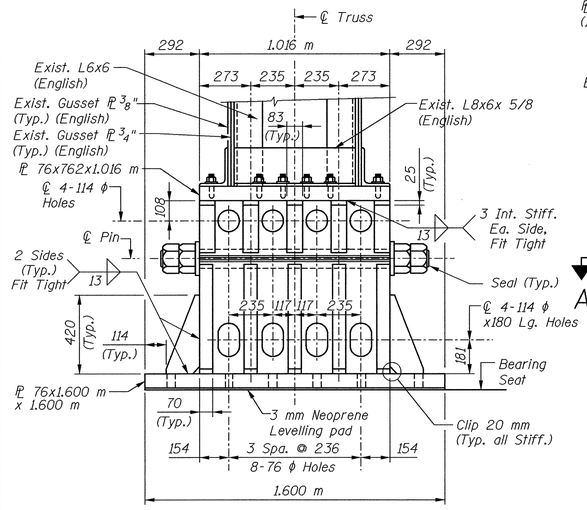


*See IDOT Standard Specifications for Road and Bridge Construction, Art 505.04

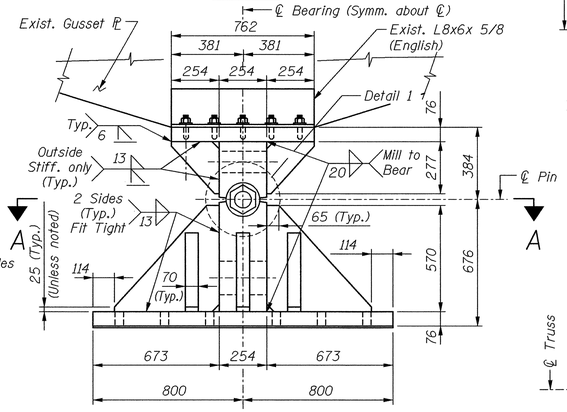
PIN DETAIL



PLAN

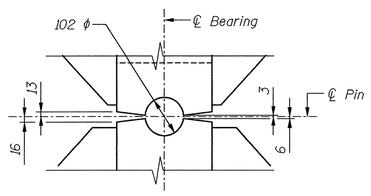


VIEW FROM SPAN



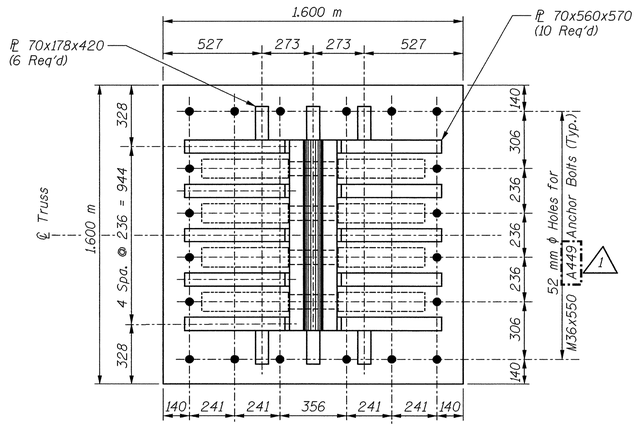
ELEVATION

(Blocks not shown for clarity)



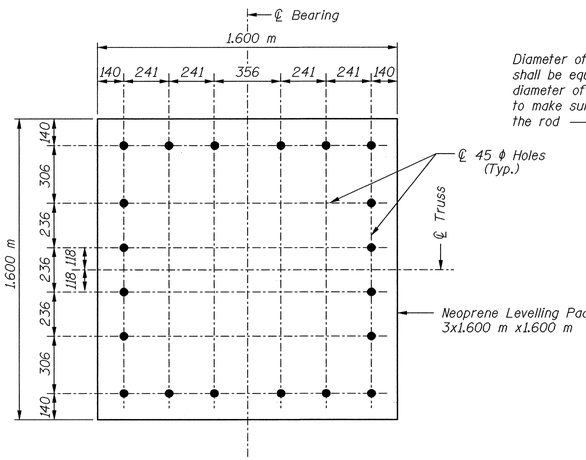
DETAIL 1

(Pin not shown)

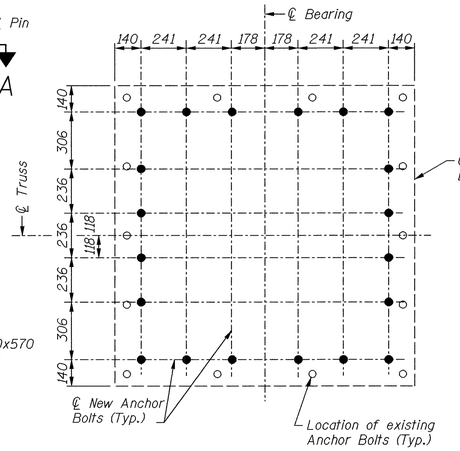


SECTION A-A

(Pin not shown for clarity)



3 mm NEOPRENE LEVELLING PAD DETAIL

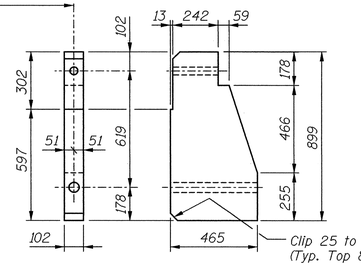


ANCHOR BOLT LAYOUT

DESIGN LOADS:

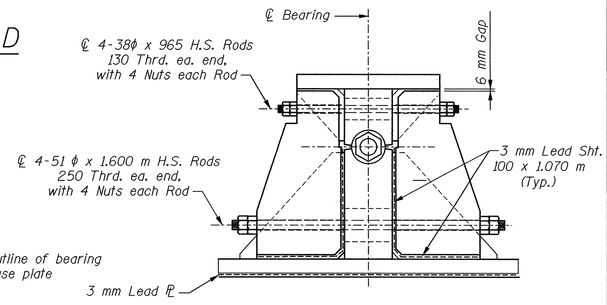
Design Vertical Load	= 20,000 kN
Design Horizontal Load	= 4,000 kN
Design Rotation	= ± 0.01 Rad.

Diameter of holes in block shall be equal to actual diameter of the rod plus 3 mm to make sure the hole fits the rod



RESTRICTION BLOCK DETAIL

(8 Ea. req'd.)



RESTRICTION BLOCKS INSTALLATION SCHEME

NOTES:

1. Nominal pin diameter tolerances are subject to specifications of Manufacturer and shall be approved by the Engineer. Pins shall conform to requirements of ASTM A 276, UNS 21800 (Nitronic 60 equal).
2. Anchor Bolts shall be ASTM A 449M or Illinois Coil-Lock Anchor bolts.
3. Calculated weight of Structural Steel = 5,340 kg.
4. The structural steel of the bearing assemblies shall conform to the requirements of AASHTO M 270M Grade 345 (AASHTO M 270M Grade 345W) Specification. H.S. rods shall conform to ASTM A 722/ A722M Specification (steel properties, phisical standards).
5. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of +/- 3 mm. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 3 mm adjusting shims, to the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
6. For bearing replacement procedure see sheet 93.
7. See Specifications and Special Provisions for corrosion protection requirements.
8. Shop drawings and weld procedures for Bearing fabrication are subject to the Engineer review and approval.

DESIGNED	AAY
CHECKED	YS
DRAWN	RMG
CHECKED	AAY/YS

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

FIXED BEARING DETAILS - PIER 5

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF

REVISED 6-4-04

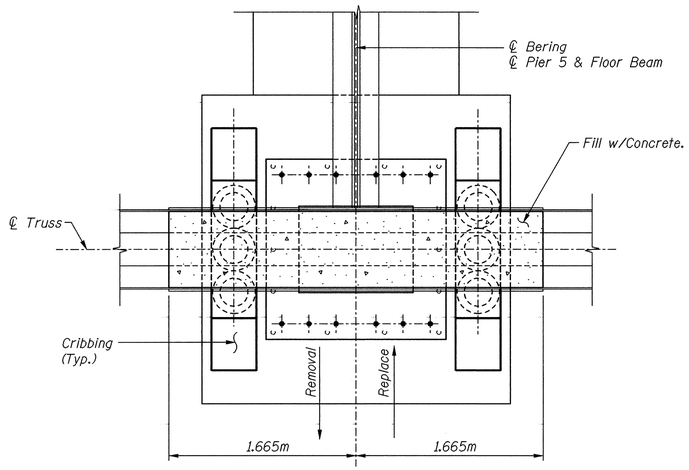
4/29/2004

m:\proj3573\murray baker\s105bd6-7a0900001.dgn

68196

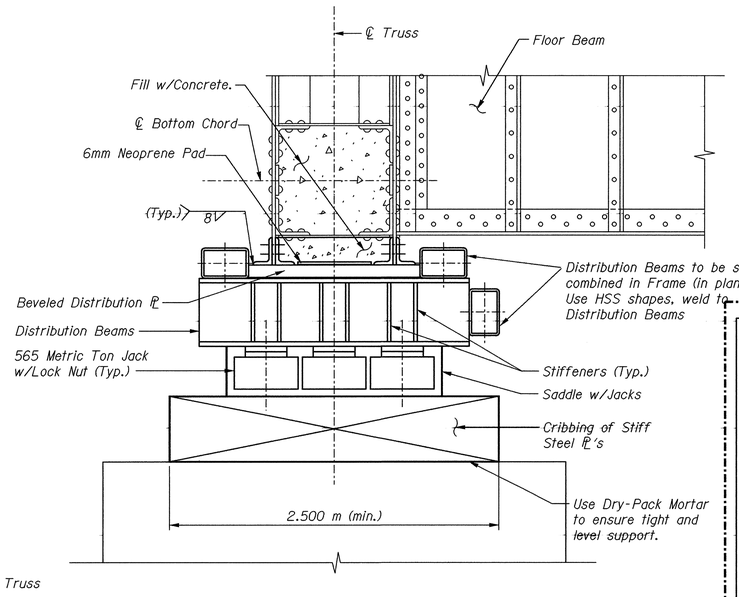
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	953
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 93 OF 160



PLAN @ WEST BEARING

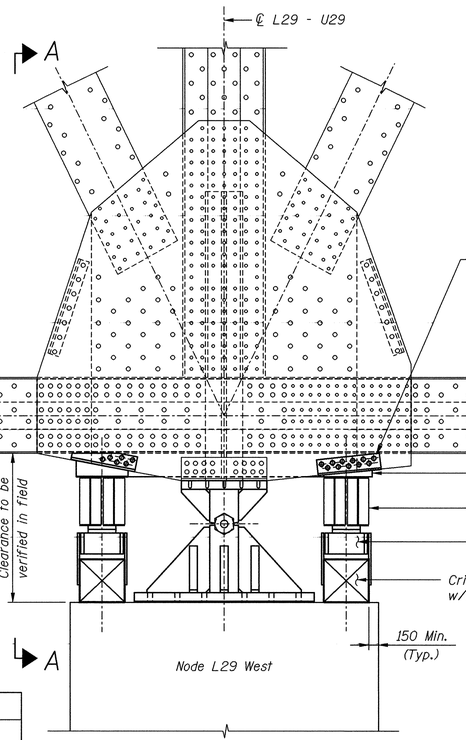
(Distribution Beams not shown for clarity)



DETAIL 1

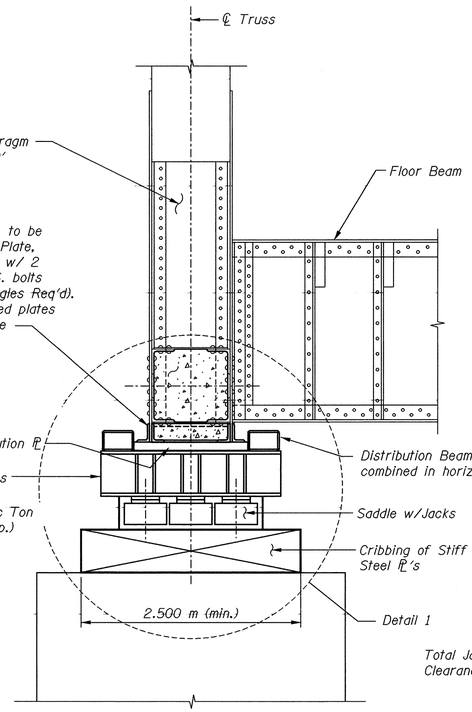
The purpose of this drawing is to provide a feasible scheme of the jacking assembly and applicable procedure for replacement of the existing West bearing at pier 5 of the Murray Baker Bridge.
The Contractor is responsible for detailed design of the procedure (Work Method) and shop drawings of shoring, devices, and equipment necessary for the bridge bearing replacement in accordance with the proposed scheme, provided data, and Special Provisions. Pier cap concrete shall be inspected. Actual concrete strength shall be used for design. Additional measures for concrete stabilization shall be taken if required by design. All materials, including design computations, shall be sealed by a licensed Structural Engineer in the State of Illinois and submitted for Engineer review and approval.

1



ELEVATION

(Distribution Beams not shown for clarity)



SECTION A-A

(Diagonal struts not shown)

BEARING REPLACEMENT PROCEDURE

1. Several days prior to Bearing replacement, apply release agent (such as WD40) to base assembly, where accessible.
2. Reinforce the Gusset Plates, fill the bottom truss chord with concrete as shown, and install Jacking assembly.
3. Jack truss with attachments to the specified height, secure truss w/Jack lock nuts.
4. Bearing assembly shall be carefully disassembled by first removing the existing pins and links.
5. Remove nuts from the existing anchor bolts.
6. Place shims under the bottom bearing plate to expose the existing anchor bolts.
7. Cut existing anchor bolts flush with the concrete substructure surface. *
8. Remove bottom bearing plate with attachments.
9. Remove remainder of bearing assembly including the top plate and attachments.
10. Install new bearing, make sure location of new anchor bolts is a minimum 75 mm away from the center of the existing anchor bolts. Drill holes in Pier cap for anchor bolts thru the holes in the bearing bottom ℄.

11. Bearing and additional steel included in the cost of Furnishing and Erecting Structural Steel (Truss).

* Grind existing anchor bolts smooth and seal with epoxy. Cost is included in the cost of "Jack and Remove Existing Bearings (Special)".

1

BILL OF MATERIAL

Item	Unit	Total
Jack and Remove Existing Bearings (Special)	Each	1

Total Jacking force to be developed: 16.000 KN
Clearance required for Bearing replacement: 3 mm (Max.)

NOTES:

1. For bearing details See Sheet 92.

DESIGNED	AAY
CHECKED	YS
DRAWN	RMG/CS
CHECKED	AAY/YS

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

FIXED BEARING DETAILS - PIER 5
REPLACEMENT DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF

REVISED
6-4-04

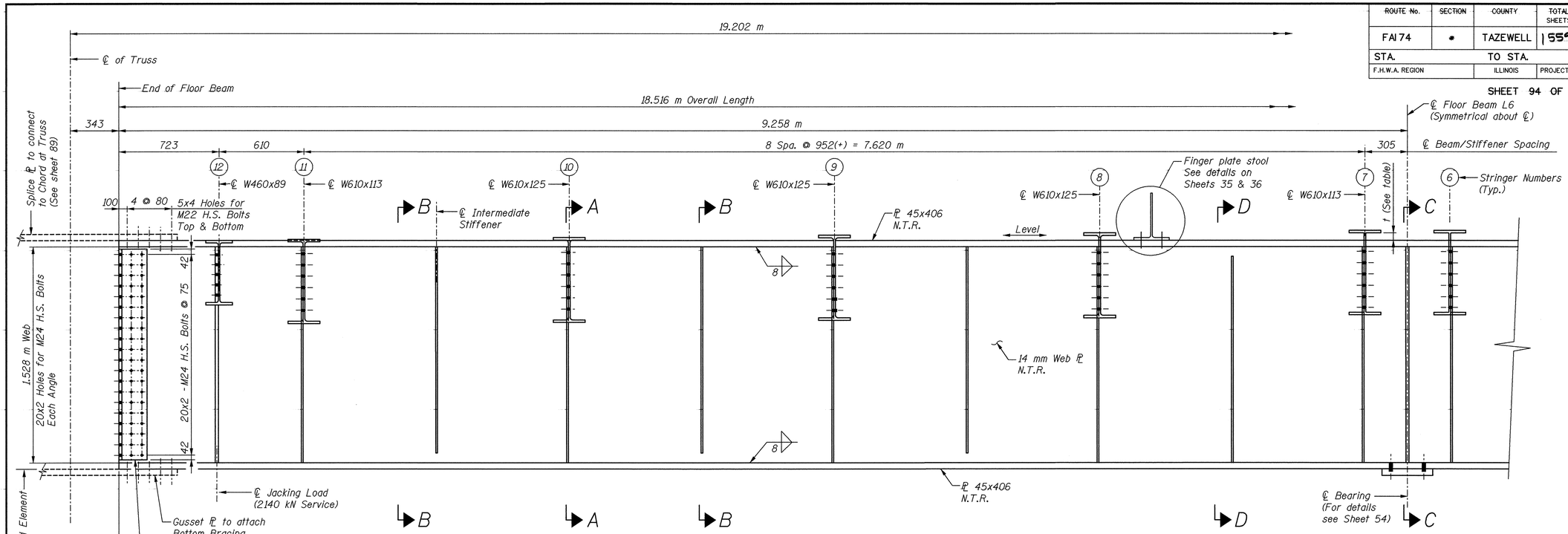
5/6/2004

M:\proj3573\Murray Baker\st05bd7-7a0900001.dgn

68196

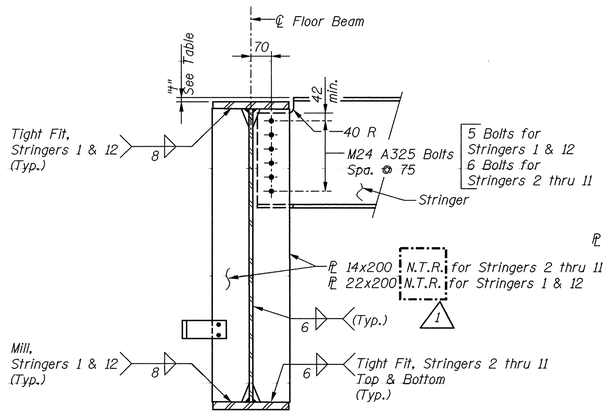
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	95A
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 94 OF 160



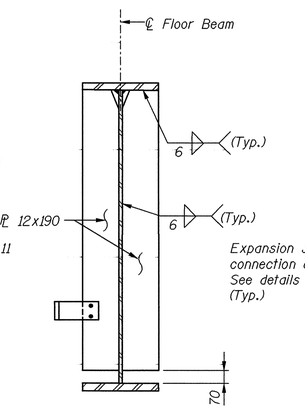
END FLOOR BEAM ELEVATION

(Looking North)



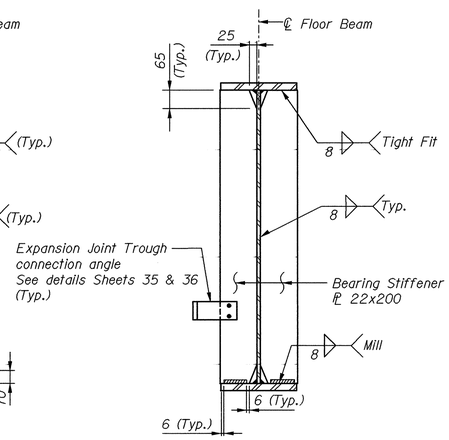
SECTION A-A

Stringers 1 thru 12



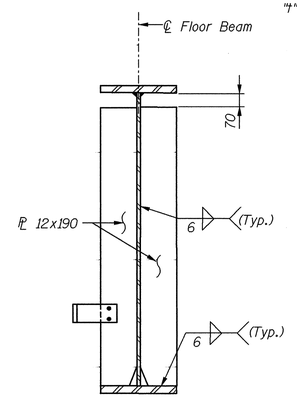
SECTION B-B

Intermediate Stiffeners



SECTION C-C

Center Bearing Stiffener



SECTION D-D

Intermediate Stiffeners

"t" DIMENSIONS

Stringer #	1 & 12	2 & 11	3 & 10	4 & 9	5 & 8	6 & 7
t (mm)	0	5	22	38	54	71

"t" - dimension is distance from top of floor beam to teoretical intersection point at the top of stringers at ℄ floor beam L6.

NOTES:

1. N.T.R denotes plates to which notch toughness requirements are applicable.
2. See sheets 89 & 89B for Details at Panel Point L6.
3. See sheet 35 for Expansion Joint Details.
4. Material: Steel in accordance with AASHTO M 270M, Grade 345.
5. Standard Holes for H.S. Bolts :
   24 ϕ for M22 Bolt
   27 ϕ for M24 Bolt

DESIGNED	WJZ/YS
CHECKED	YS
DRAWN	VH
CHECKED	YS

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

FLOOR BEAM DETAILS AT L6

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF

REVISED 6-4-04

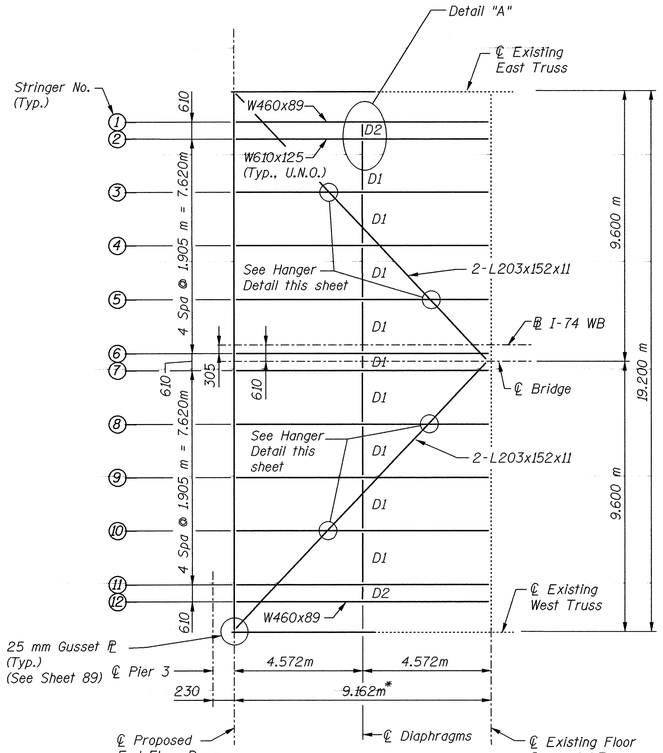
5/6/2004

M:\proj\3573\Murray Baker\st05fb1-7a0900001.dgn

68196

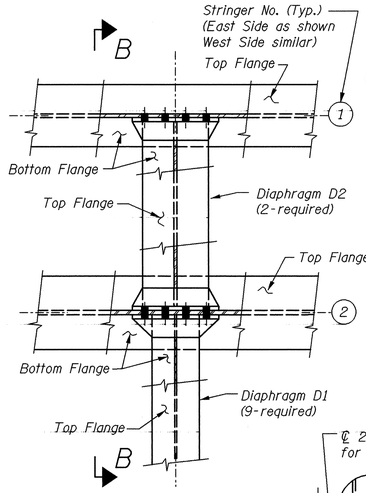
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	955
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 95 OF 160

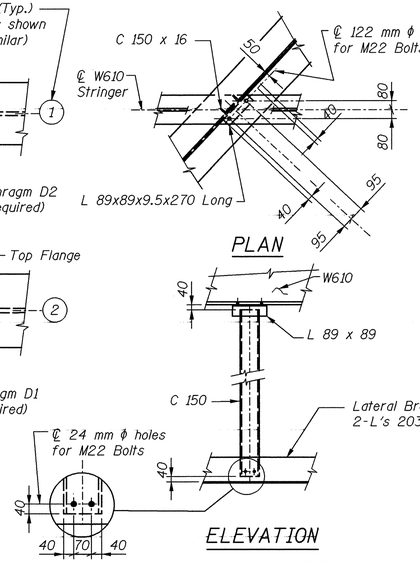


FRAMING PLAN

* Dimension from ℄ existing floor beam @ L7 to ℄ proposed floor beam @ L6 based on expected deformation of truss after truss shortening and an ambient temperature of 50° F.

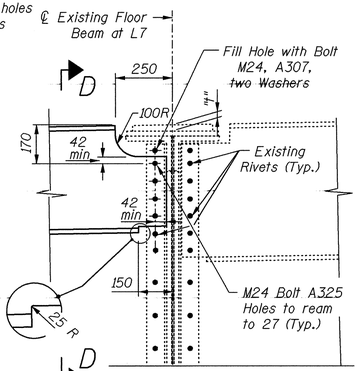


DETAIL "A"

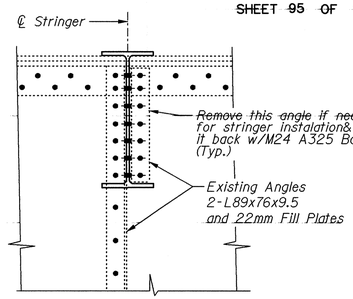


ELEVATION

HANGER DETAIL

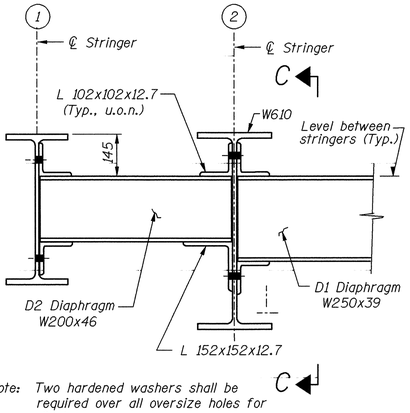


STRINGER ELEVATION



SECTION D-D

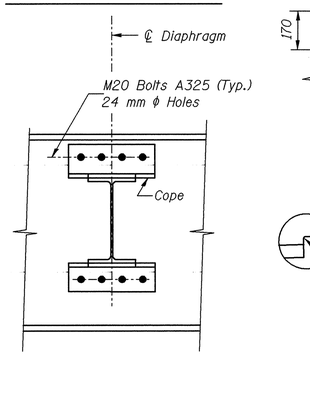
STRINGER W460

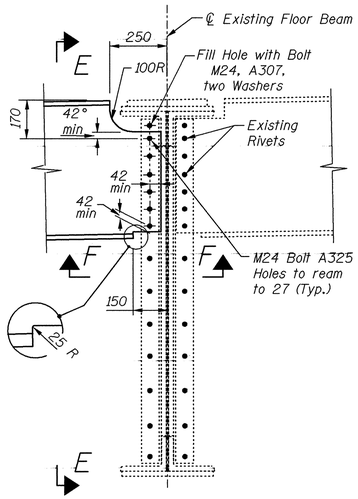


Note: Two hardened washers shall be required over all oversize holes for diaphragms.

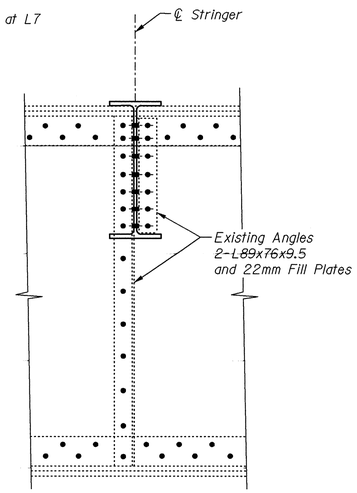
SECTION B-B

SECTION C-C





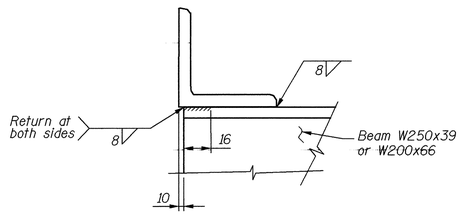
STRINGER ELEVATION



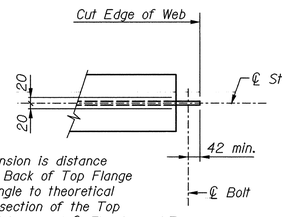
SECTION E-E

STRINGER W610

STRINGER CONNECTION DETAILS TO EXISTING FLOORBEAM AT L7



TYPICAL CONNECTION OF COPE ANGLE TO DIAPHRAM BEAM



"t" - Dimension is distance from Back of Top Flange of Angle to theoretical Intersection of the Top of Stringers at ℄ Floorbeam L7.

VIEW F-F

"t" DIMENSION TABLE

Stringer #	1 & 12	2 & 11	3 & 10	4 & 9	5 & 8	6 & 7
"t" mm	16	21	38	54	70	96

NOTES:
1. Contractor to verify locations of rivets and holes prior to fabricating new elements.
2. Existing elements to be utilized shall be inspected . Any signs of corosion, cracks or other loss of integrity shall be reported to the Engineer.
3. For bottom lateral bracing details see Detail 1 Sheet 97 & Section H-H Sheet 89B. 1
4. Stringers shall be N.T.R. members.

DESIGNED	WJZ/YS
CHECKED	YS
DRAWN	VH
CHECKED	YS

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

STRINGER REPLACEMENT (L6-L7)

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF

REVISED 6-4-04

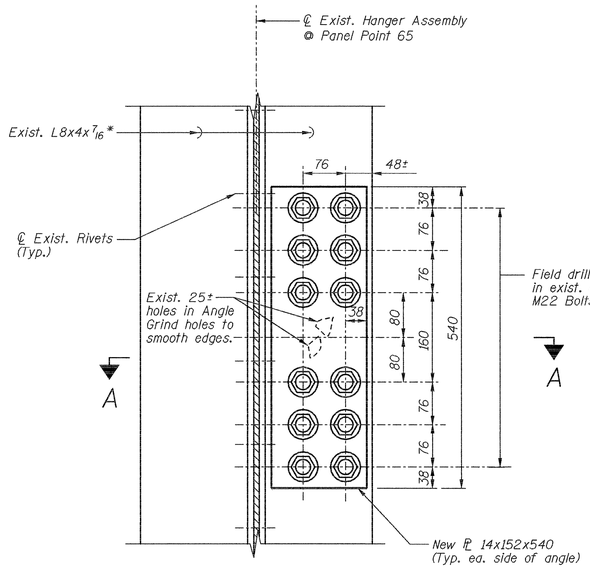
5/6/2004

m:\proj3573\murray baker\st05st1-7a0900001.dgn

68196

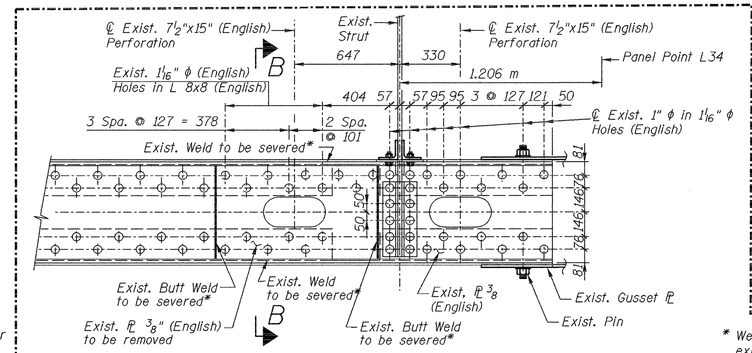
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	956
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 96 OF 160



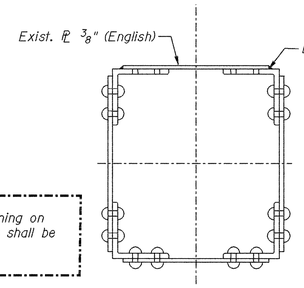
REPAIR DETAIL "XX"

(Truss Member U65W-L65W)
(Looking West)

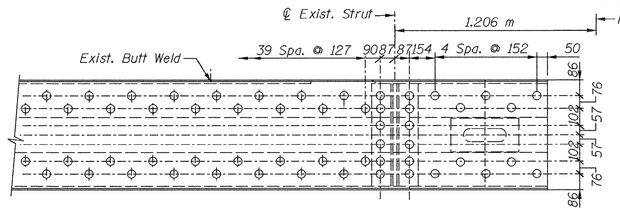


PLAN (TOP) PANEL POINT L34

1 * Weld metal remaining on existing members shall be ground smooth.

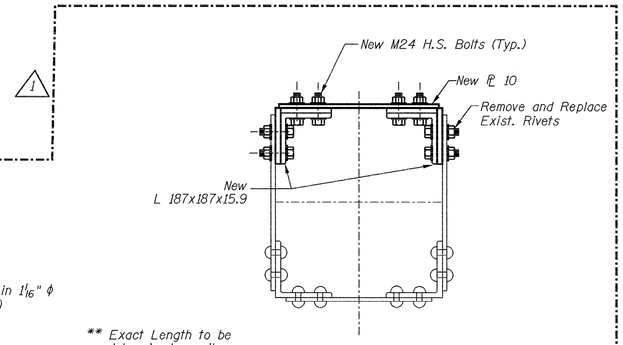


SECTION B-B

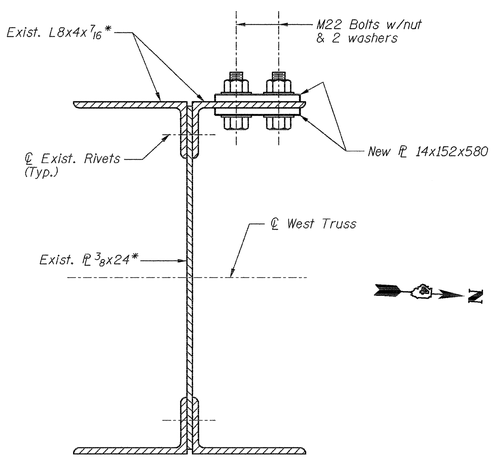


ELEVATION VIEW

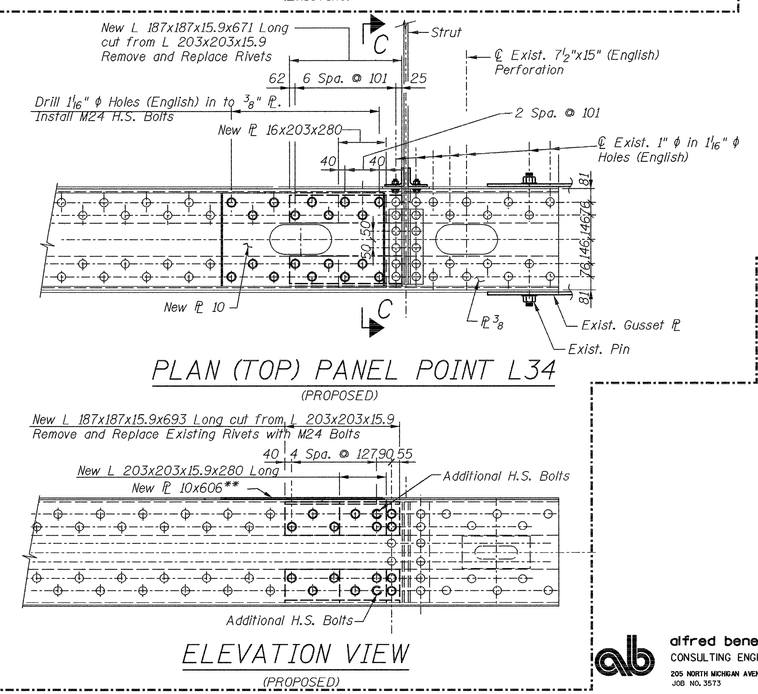
(EXISTING)



SECTION C-C



SECTION A-A



PLAN (TOP) PANEL POINT L34

(PROPOSED)

ELEVATION VIEW

(PROPOSED)

NOTES:

1. Steel plates shall be per M270M Grade 345 specifications, and conform to Notch Toughness Requirements.
2. Bolts shall be M22 or M24 (as noted) High-Strength per ASTM A325M specifications with 24mm ϕ or 27mm ϕ, respectively.
3. For location of repairs see Sheets 72 & 73.
4. For surface treatment of existing steel members, refer to General Notes, see Sheet 6.
5. Steel is paid for as "Furnishing and Erecting Structural Steel (Truss) L.Sum.

DESIGNED	EFS
CHECKED	YS
DRAWN	RMG/VH
CHECKED	EFS

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-100-1-BRY
TRUSS REPAIR DETAILS I

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

1 5/13/04 CDF

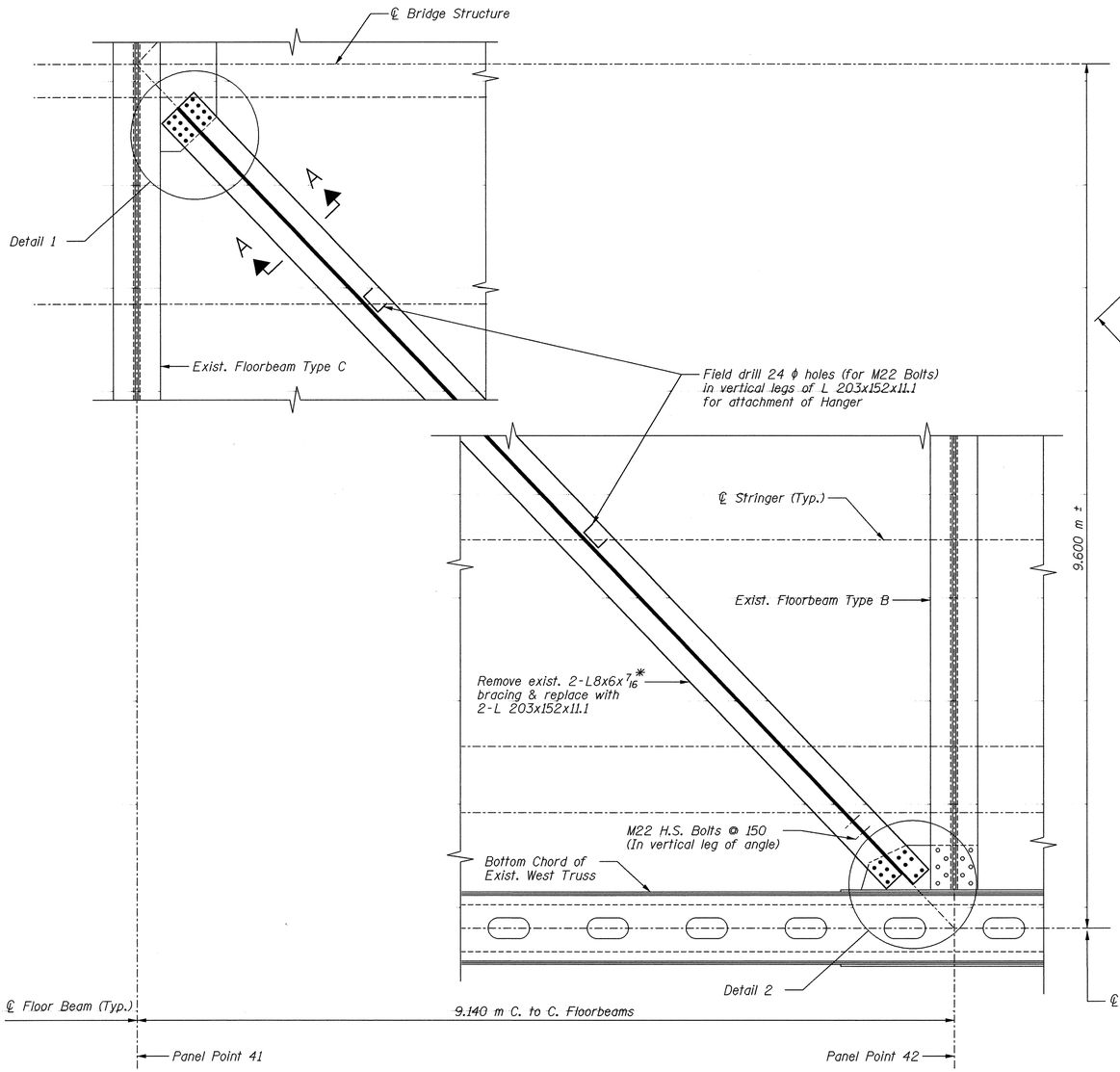
REVISED
6-4-09

$DATE$
$FILE$
...\DGNS\SHEETS\68196.dgn 05/4/04 01:44:32 PM

68196

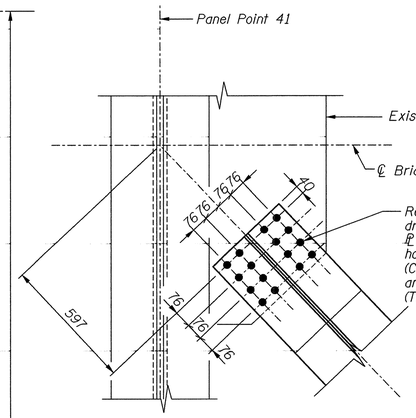
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	957
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 97 OF 160

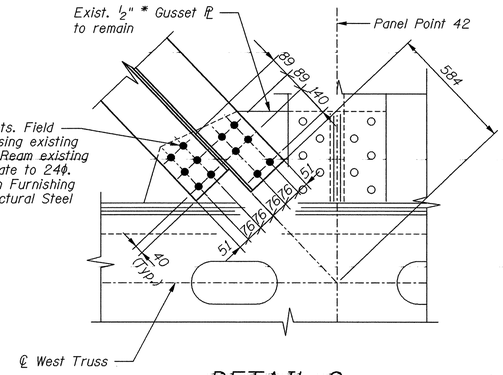


BOTTOM BRACING PARTIAL PLAN

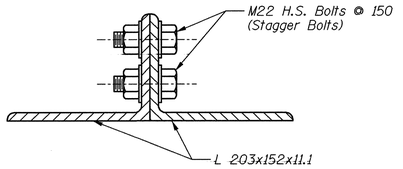
(Lateral Brace 42W)



DETAIL 1



DETAIL 2



SECTION A-A

NOTES:

1. Steel plates shall be per M270M Grade 345 specifications, and conform to Notch Thoughness Requirements.
2. Bolts shall be M22 High-Strength per ASTM A325M specifications. 1
3. Location of bolt holes to be determined in field to match location of existing rivets where possible.
4. All existing holes, that are to be re-used, shall be reamed to 24 ϕ.
5. For location of repair see Sheet 72.
6. Steel is paid for as "Furnishing and Erecting Structural Steel (Truss).

* English Units

DESIGNED	EFS
CHECKED	YS
DRAWN	RMG
CHECKED	EFS

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

TRUSS REPAIR DETAILS 2
LATERAL BRACING AT L42W

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-21-04

1 4/29/04 CDF

REVISED
6-4-04

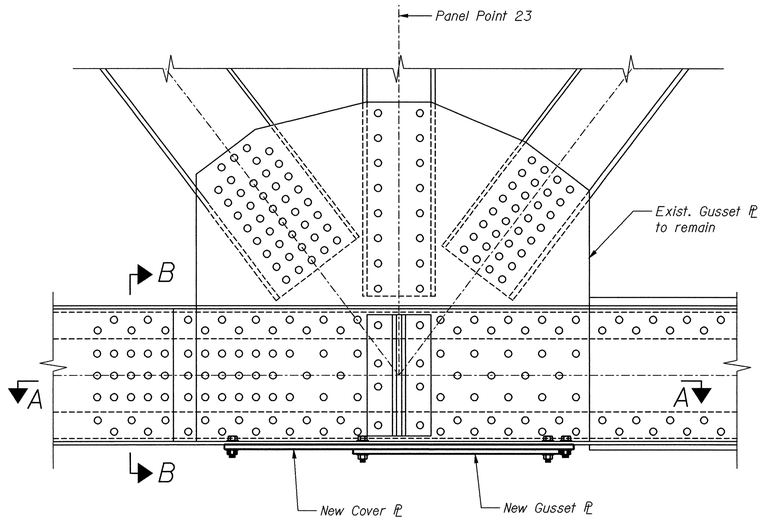
5/6/2004

m:\proj3573\murray baker\st05lr2-7a0900001.dgn

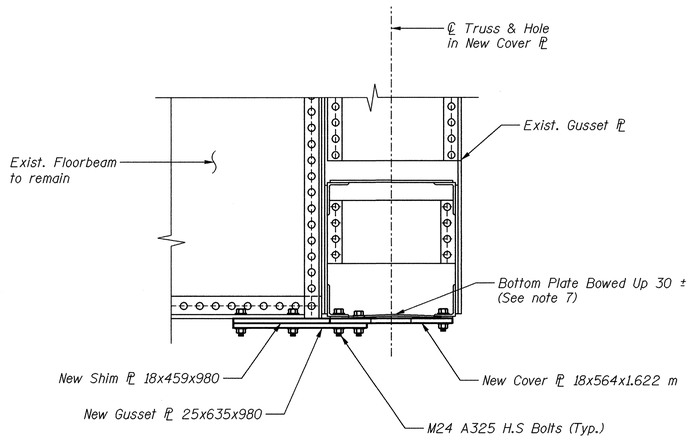
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	958
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

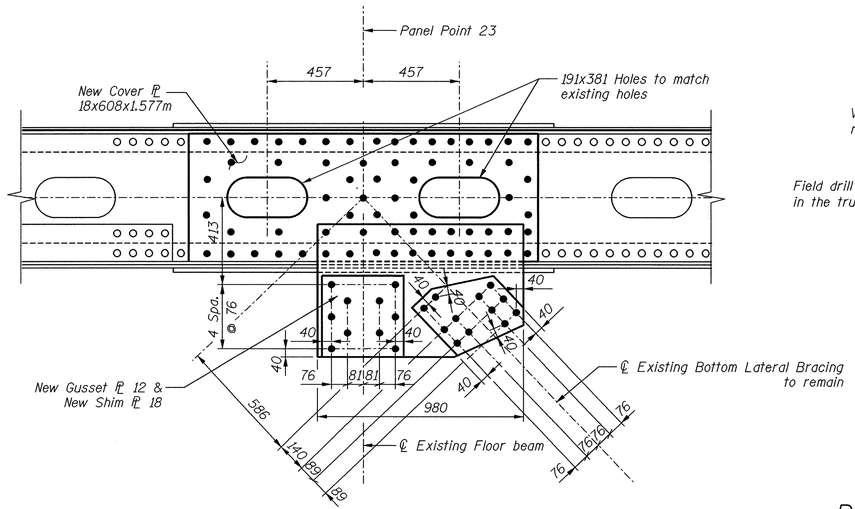
SHEET 98 OF 160



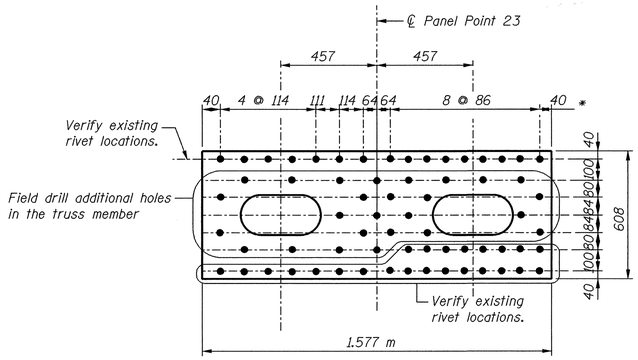
ELEVATION



SECTION B-B



VIEW A-A



DETAIL 1

* Field verify existing rivet locations.

BOTTOM TRUSS CHORD @ 23E & 23W

(2 locations)

NOTES:

1. Steel plates shall be per M270M Grade 345 specifications, and conform to Notch Thoughness Requirements.
2. Bolts shall be M24 High-Strength bolts.
3. Location of bolt holes to be determined in field to match location of existing rivets as noted.
4. All existing holes, that are to be re-used, shall be reamed to 27ϕ .
5. For location of repair see Sheet 71.
6. For surface treatment of existing steel members, refer to General Notes, see Sheet 6.
7. The members shall be straightened to "as-built" condition. Contractor shall straighten the bottom plate of the bottom chord utilizing jacking and pulling methods.
8. During straightening operations, the Contractor shall laterally support the members as necessary to prevent reverse bending or damage to the member or the conections.
9. The Contractor shall submit details of the prepared straightening methods for approval by the Engineer prior to ordering materials or straightening.
10. The cost of straightening the bottom plate and angle legs are included in One Cost of "Furnishing and Erecting Structural Steel (Truss)".

* English Units

DESIGNED	EFS
CHECKED	YS
DRAWN	RMG
CHECKED	YS

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
TRUSS REPAIR DETAILS 3

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 1-14-04

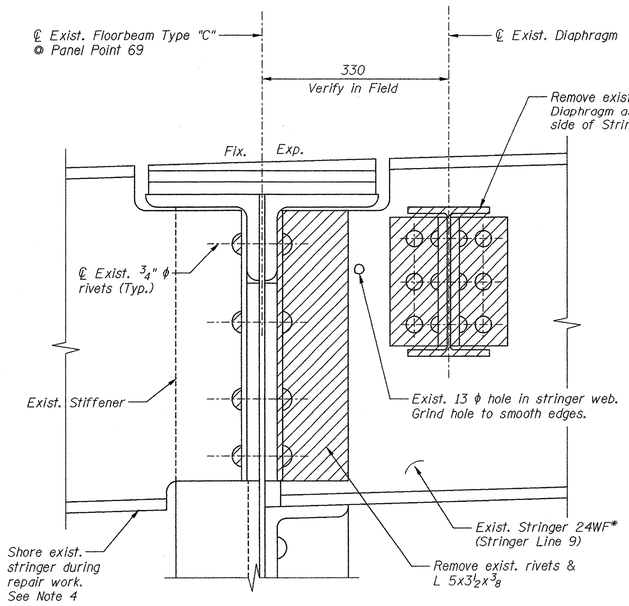
01/15/2004

m:\proj3573\murray baker\st05tr3-7a0900001.dgn

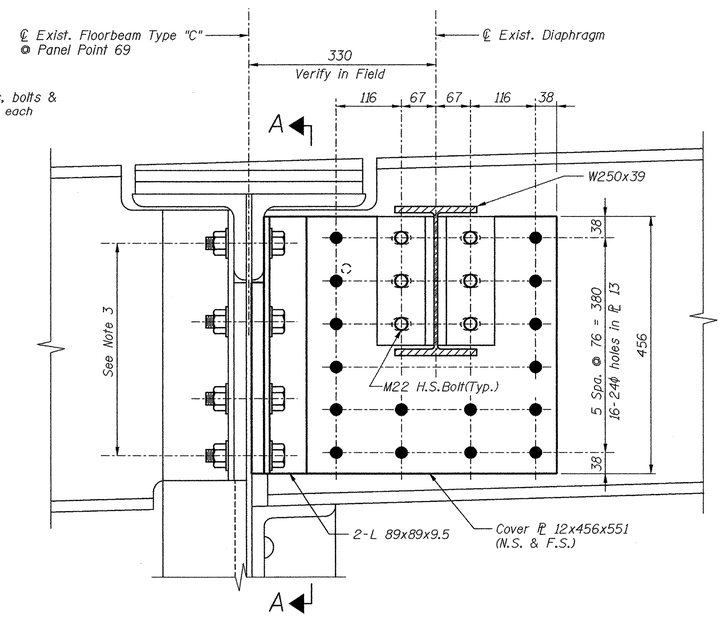
68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	159
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

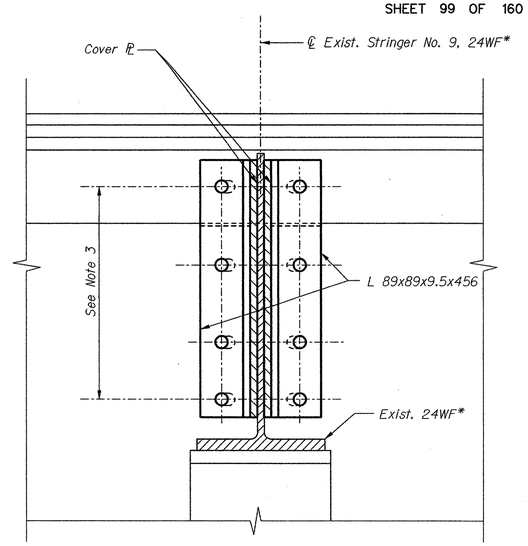
SHEET 99 OF 160



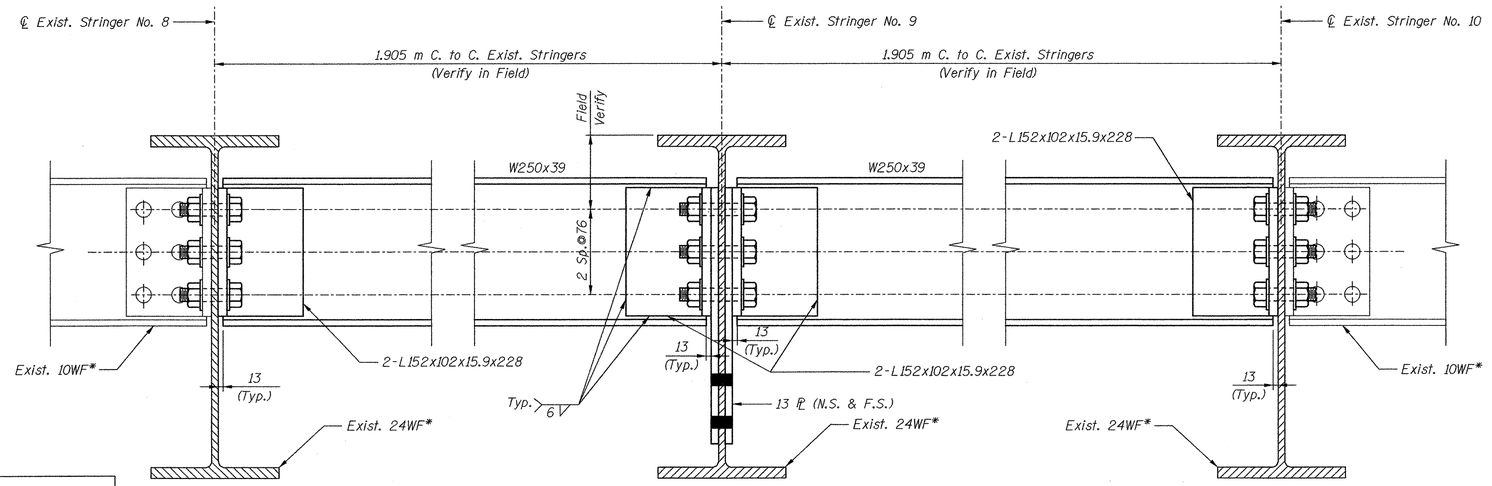
REMOVAL



NEW MATERIAL



SECTION A-A



DIAPHRAGM D2

LEGEND

- ● Shop drilled 24 ϕ holes
- ◌ Ream exist. holes to 24 ϕ slotted holes (Length of slot to allow for installation of M22 Bolts)
- * English Units

NOTES:

1. New Steel Elements shall be per M270M Grade 345 specifications, and conform to Notch Thoughness Requirements.
2. Bolts shall be M22 High-Strength per ASTM A325 specifications.
3. Location of bolt holes to be determined in field to match location of existing rivets where possible.
4. Existing stringers must be shored while removing and replacing existing rivets with H.S. Bolts.
5. All existing holes to be re-used shall be reamed to 24 ϕ.
6. For location of repairs see Sheet 73.
7. For surface treatment of existing steel members, refer to General Notes, Sheet 6.
8. Steel is paid for as "Furnishing and Erecting Structural Steel (Truss) L. Sum.

DESIGNED	EFS
CHECKED	YS
DRAWN	RMG
CHECKED	EFS

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
STRINGER REPAIR DETAILS
STRINGER 9 BETWEEN L68 & L69

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

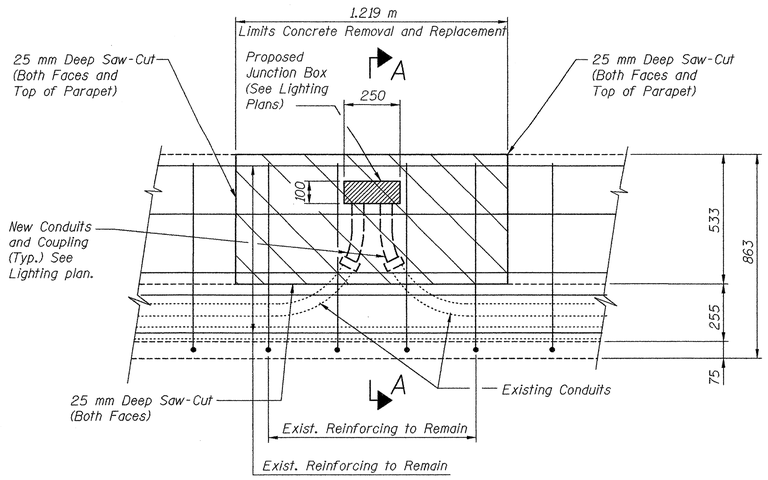
12/16/2003

m:\proj3573\murray baker\st05sr1-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	960
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

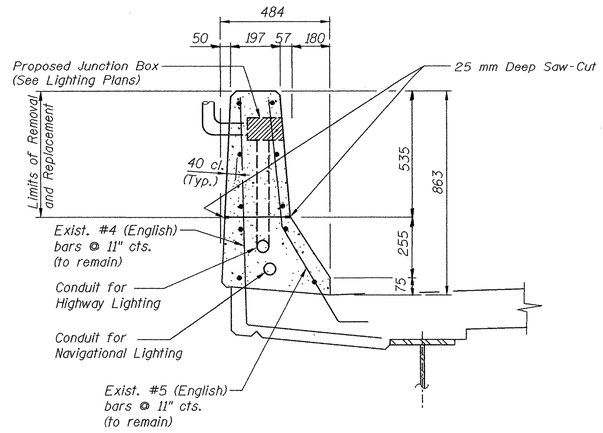
68196

SHEET 99A OF 160



INSIDE ELEVATION OF PARAPET

(35 Locations)



SECTION A-A

BILL OF MATERIAL

Item	Unit	Quantity
Concrete Removal	CU. M	5.7
Concrete Superstructure	CU. M	5.7

NOTES

1. Contractor shall repair any damaged reinforcement. Cost is included in the cost of "Concrete Removal".
2. Saw-Cutting is included in the cost of "Concrete Superstructures".
3. See Lighting Plans locations of Junction Boxes.
4. See Lighting Plans for Junction Box, Conduit and Couplings Details and Pay Items.

DESIGNED	KMP
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

PARAPET MODIFICATIONS FOR LIGHTING JUNCTION BOXES

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

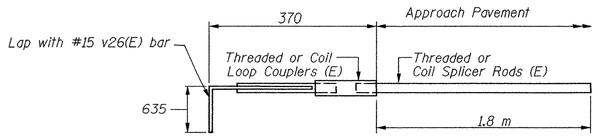
12/16/2003

m:\proj3573\murray baker\st05pd5-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	961
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

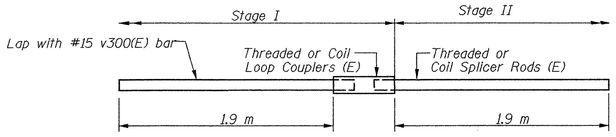
68196

SHEET 100 OF 160



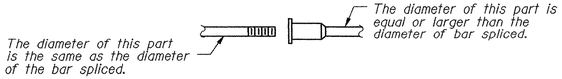
BAR SPLICER ASSEMBLY DETAIL AT N. ABUTMENT

Bar Size	No. Assemblies Required
#15	137



BAR SPLICER ASSEMBLY DETAIL AT PIER 3

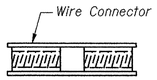
Bar Size	No. Assemblies Required
#15	88



ROLLED THREAD DOWEL BAR



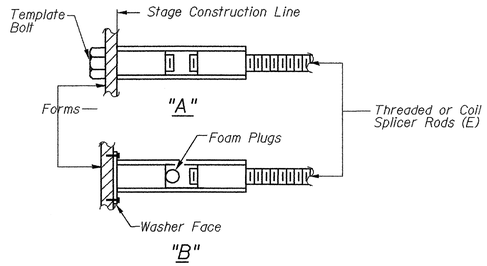
** ONE PIECE



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 400 MPa yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kN) $= 1.25 \times 10^{-3} \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kN) $= 1.25 \times 10^{-3} \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in MPa.

fs_{allow} = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)

A_t = Tensile stress area of lapped reinforcement bars (mm2).

* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements: Min. Capacity kN - tension	Strength Requirements: Min. Pull-Out Strength kN - tension
#15	640 mm	100	40
#20	790 mm	150	60
#25	1.32 m	250	100
#30	1.85 m	350	140

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

All dimensions are in millimeters (mm) except as noted.

DESIGNED	ADD
CHECKED	WJZ
DRAWN	VH
CHECKED	WJZ

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY

BAR SPLICER (COUPLER) DETAILS

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003

m:\proj3573\murray baker\st05bs-7a09000001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	962
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

SHEET 101 OF 160

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 — BORING NO. SB-143

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) EBI-74BL 150+383.5 (STATION) 17.3mR (OFFSET) — PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR WANG ENGINEERING, INC.

DATE OF DRILLING: STARTED 2-9-95 COMPLETED 2-9-95 SURFACE ELEVATION 142.94

DRILLED BY J. WHEELER — LOGGED BY M. DENAULT

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	2-9	1.5	-
		11.0	-
DC	2-9	8.2	0
DC	2-10	11.2	1d

DRILLING METHOD

RIG TYPE CME-55

AUGER TYPE-DEPTH 0.15m HSA-16.8m

CASING TYPE-DEPTH -

SAMPLER TYPE AU-SS

Elev	Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
		TOPSOIL FILL: BLK TO DK BR SILTY CLAY, A-7-6 TO SILTY LOAM, A-4	AU	-	17	-
142.64		FILL: DK BR SANDY LOAM, A-2-4 TO A-4 W/ BRICK PIECES	3 4 4	-	13	-
142.12	1	PCC				
		FILL: DK BR TO BR SANDY LOAM TO SAND, A-2-4 TO A-1-b	4 4 4	-	11	-
	2		5 7 8	-	12	-
		PCC				
140.45			3 4 4	-	6	-
	3	DK BR TO BR SAND, A-3 TO A-1-b				
			4 5 4	-	4	-
	4					
			3 6 9	-	4	-
	5					
			6 9 14	-	5	-
137.46						
		BR SANDY GRAVEL, A-1-a	8 11 13	-	7	-
	6					
			11 10 10	-	7	-
	7					
	8	BR SANDY GRAVEL, A-1-a	13 15 17	-	8	-
	9		13 13 15	-	5	-
			9 10 12	-	9	-
	10					
			11 11 13	-	7	-
	11					
			10 12 15	-	8	-
	12					
			15 20 22	-	7	-
	13					
			15 15 16	-	11	-

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 — BORING NO. SB-143 (CONT)

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) EBI-74BL 150+383.5 (STATION) 17.3mR (OFFSET) — PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR WANG ENGINEERING, INC.

DATE OF DRILLING: STARTED 2-9-95 COMPLETED 2-9-95 SURFACE ELEVATION 142.94

DRILLED BY J. WHEELER — LOGGED BY M. DENAULT

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	2-9	1.5	-
		11.0	-
DC	2-9	8.2	0
DC	2-10	11.2	1d

DRILLING METHOD

RIG TYPE CME-55

AUGER TYPE-DEPTH 0.15m HSA-16.8m

CASING TYPE-DEPTH -

SAMPLER TYPE AU-SS

Elev	Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
			10 12 20	-	13	-
	14					
			12 14 16	-	8	-
		BR SANDY GRAVEL, A-1-a				
	15		10 12 12	-	9	-
			10 18 21	-	9	-
	16					
			15 17 19	-	9	-
126.18		END OF BORING				
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 (and subgroups)	Engineering classifications of soil in accordance with AASHTO M 145 standard specification.
Silty Clay Loam	Textural classification of soil in accordance with IDOT Triangular Chart.
Laminated Coal Shale	Textural and engineering classification of bedrock in accordance with conventional practice.
N,Bp0.15m	N-value or standard penetration test value. Number of blows required to drive a standard split-spoon sampler 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.
γd, kgpm^3	Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.

GROUNDWATER DATA

DD	Water Level During Drilling
BAR	Water Level Before Auger Removal
AAR	Water Level After Auger Removal
DC	Dry Cave Level
WC	Wet Cave Level
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger

SAMPLE TYPE

AU	Auger
SS	Standard Split-barrel
ST	Thin-walled Tube
DB	Core Barrel

NOTES

1. The abbreviations, symbols and definitions in this Legend are commonly used and understood in the engineering and construction practices and are presented only for information and communication.

2. The Geotechnical Data presented in this Legend and on the Boring Logs are to be interpreted by personnel educated, trained, experienced and licensed to practice Geotechnical Engineering, and in direct communication with the Claude H. Hurley Company.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SOIL BORINGS I

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003

m:\proj3573\murray baker\st05sb01-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	963
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

SHEET 102 OF 160

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-144

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) WBI-74BL 150+372.7 (STATION) 15.5mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR WANG ENGINEERING, INC.

DATE OF DRILLING: STARTED 1-25-95 COMPLETED 1-25-95 SURFACE ELEVATION 146.97

DRILLED BY R. BELL LOGGED BY K. OLSON

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	1-25	13.2	-
DC	1-25	6.6	0
DC	1-26	6.6	1d

DRILLING METHOD

RIG TYPE CME-55
AUGER TYPE-DEPTH 0.15m HSA-14.5m
CASING TYPE-DEPTH -
SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	Yd Kgpm³
146.67 / 0	TOPSOIL FILL: BLK TO DK BR SILTY CLAY, A-7-6 TO SILTY LOAM, A-4	AU	-	11	-
		3 4 5	-	4	-
1					
		5 6 7	-	6	-
2	FILL: BR GRAVELLY SAND, A-1-b	4 4 13	-	6	-
		6 29 6	-	10	-
3					
143.77 / 4	DK BR SILTY CLAY, A-7-6	2 3 3	-	20	-
143.01 / 4		3 2 3	-	7	-
5	DK BR TO BR SAND, A-3 TO A-1-b	2 2 3	-	5	-
		6 6 7	-	4	-
6		6 9 10	-	3	-
7					
139.20 / 8	DK BR TO BR SAND, A-3 TO A-1-b	7 7 8	-	3	-
		14 20 11	-	4	-
9	BR SANDY GRAVEL, A-1-a	9 13 15	-	3	-
		20 27 19	-	5	-
10		12 12 10	-	6	-
11	COAL FRAGMENTS	9 9 10	-	4	-
		14 10 17	-	4	-
12		14 21 23	-	4	-
13					

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-144 (CONT)

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) WBI-74BL 150+372.7 (STATION) 15.5mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR WANG ENGINEERING, INC.

DATE OF DRILLING: STARTED 1-25-95 COMPLETED 1-25-95 SURFACE ELEVATION 146.97

DRILLED BY R. BELL LOGGED BY K. OLSON

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	1-25	13.2	-
DC	1-25	6.6	0
DC	1-26	6.6	1d

DRILLING METHOD

RIG TYPE CME-55
AUGER TYPE-DEPTH 0.15m HSA-14.5m
CASING TYPE-DEPTH -
SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	Yd Kgpm³
		15 13 10	-	9	-
14	BR SANDY GRAVEL, A-1-a	27 17 15	-	7	-
132.50 / 15	END OF BORING				
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 (and subgroups)	Engineering classifications of soil in accordance with AASHTO M 145 standard specification.
Silty Clay Loam	Textural classification of soil in accordance with IDOT Triangular Chart.
Laminated Coal Shale	Textural and engineering classification of bedrock in accordance with conventional practice.
N,Bp0.15m	N-value or standard penetration test value. Number of blows required to drive a standard split-spoon sampler 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.
Yd, kgpm³	Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.

GROUNDWATER DATA

DD	Water Level During Drilling
BAR	Water Level Before Auger Removal
AAR	Water Level After Auger Removal
DC	Dry Cave Level
WC	Wet Cave Level
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger

SAMPLE TYPE

AU	Auger
SS	Standard Split-barrel
ST	Thin-walled Tube
DB	Core Barrel

NOTES

1. The abbreviations, symbols and definitions in this Legend are commonly used and understood in the engineering and construction practices and are presented only for information and communication.

2. The Geotechnical Data presented in this Legend and on the Boring Logs are to be interpreted by personnel educated, trained, experienced and licensed to practice Geotechnical Engineering, and in direct communication with the Claude H. Hurley Company.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE. CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SOIL BORINGS II

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003

m:\proj3573\murray baker\st05sb02-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	964
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 103 OF 160

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-145

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 WB1-74BL 150+403.8 15.1mL (STRUCTURE / STATION / OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR WANG ENGINEERING, INC.

DATE OF DRILLING: STARTED 1-23-95 COMPLETED 1-23-95 SURFACE ELEVATION 141.31

DRILLED BY R. BELL LOGGED BY K. OLSON

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	1-23	7.6	-
DC	1-23	4.9	0
DC	1-24	4.6	1d

DRILLING METHOD: RIG TYPE CME-55; AUGER TYPE-DEPTH 0.15m HSA-17.1m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Q_u KPa	w %	γ_d Kgpm^3
141.00 / 0	TOPSOIL FILL: BLK TO DK BR SILTY CLAY, A-7-6 TO SILTY LOAM, A-4	AU	-	38	-
	FILL: DK BR SANDY LOAM, A-2-4 TO A-4 W/ BRICK PIECES	2 1 2	-	13	-
140.40 / 1	FILL: DK BR TO BR SANDY LOAM TO SAND, A-2-4 TO A-1-b	4 3 2	-	7	-
2		5 5 6	-	10	-
138.87	FILL: BR SAND, A-3 TO A-1-b	3 4 3	-	7	-
3					
138.11	COAL FRAGMENTS	4 3 3	-	9	-
4	FILL: DK BR & BR SANDY LOAM, A-2-4	2 2 3	-	8	-
5		4 4 4	-	7	-
135.82	BR SANDY GRAVEL, A-1-a	4 4 3	-	9	-
6		7 4 4	-	10	-
7					
8	BR SANDY GRAVEL, A-1-a	5 6 8	-	6	-
		4 6 3	-	7	-
9		5 7 7	-	10	-
10		4 5 7	-	8	-
11		3 4 5	-	9	-
12		4 4 6	-	9	-
13		17 11 12	-	9	-
		8 14 13	-	9	-

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-145 (CONT)

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 WB1-74BL 150+403.8 15.1mL (STRUCTURE / STATION / OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR WANG ENGINEERING, INC.

DATE OF DRILLING: STARTED 1-23-95 COMPLETED 1-23-95 SURFACE ELEVATION 141.31

DRILLED BY R. BELL LOGGED BY K. OLSON

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	1-23	7.6	-
DC	1-23	4.9	0
DC	1-24	4.6	1d

DRILLING METHOD: RIG TYPE CME-55; AUGER TYPE-DEPTH 0.15m HSA-17.1m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Q_u KPa	w %	γ_d Kgpm^3
		11 7 7	-	9	-
14	BR SANDY GRAVEL, A-1-a	8 6 21	-	7	-
15		5 9 75	-	14	-
126.16			-	10	-
		100/0.13m	-	15	-
16	DK GR & BR LAMINATED SILTY SHALE	100/0.09m	-	10	-
17		100/0.05m	-	14	-
124.18	END OF BORING				
18					
19					
20					
21					
22					
23					
24					
25					
26					

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 (and subgroups)	Engineering classifications of soil in accordance with AASHTO M 145 standard specification.
Silty Clay Loam	Textural classification of soil in accordance with IDOT Triangular Chart.
Laminated Coal Shale	Textural and engineering classification of bedrock in accordance with conventional practice.
N,Bp0.15m	N-value or standard penetration test value. Number of blows required to drive a standard split-spoon sampler 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.
γ_d, kgpm^3	Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.

GROUNDWATER DATA

DD	Water Level During Drilling
BAR	Water Level Before Auger Removal
AAR	Water Level After Auger Removal
DC	Dry Cave Level
WC	Wet Cave Level
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger

SAMPLE TYPE

AU	Auger
SS	Standard Split-barrel
ST	Thin-walled Tube
DB	Core Barrel

NOTES

1. The abbreviations, symbols and definitions in this Legend are commonly used and understood in the engineering and construction practices and are presented only for information and communication.

2. The Geotechnical Data presented in this Legend and on the Boring Logs are to be interpreted by personnel educated, trained, experienced and licensed to practice Geotechnical Engineering, and in direct communication with the Claude H. Hurley Company.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SOIL BORINGS III

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003

m:\proj3573\murroy baker\st05sb03-7d0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	965
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 104 OF 160

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-146

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) EB1-74BL 150+425.6 (STATION) 13.1mR (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR WANG ENGINEERING, INC.

DATE OF DRILLING: STARTED 1-24-95 COMPLETED 1-24-95 SURFACE ELEVATION 141.98

DRILLED BY R. BELL LOGGED BY K. OLSON

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	1-24	8.1	-
DC	1-24	7.0	0
DC	1-25	6.9	1d

DRILLING METHOD: RIG TYPE CME-55; AUGER TYPE-DEPTH 0.15m HSA-18.7m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev	Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
			AU	-	10	-
	1		3 2 3	-	5	-
		FILL: BR & DK BR SANDY LOAM, A-2-4 TO A-4 W/ OCC BRICK, CINDERS & PCC REMNANTS				
	2		1 3 4	-	12	-
139.54						
	3	DK BR TO BR SAND, A-3 TO A-1-b	9 6 5	-	12	-
			2 4 6	-	14	-
138.01	4					
		BR SANDY GRAVEL, A-1-a	3 2 3	-	8	-
	5		8 8 7	-	5	-
			5 4 5	-	7	-
	6		4 6 5	-	8	-
	7		15 16 15	-	5	-
	8	SHALE FRAGMENTS	15 20 16	-	11	-
			8 5 4	-	10	-
	9		2 3 7	-	11	-
	10		3 5 7	-	13	-
		BR SANDY GRAVEL, A-1-a	5 7 7	-	11	-
	11		6 7 7	-	9	-
	12		6 8 8	-	12	-
	13		24 14 10	-	7	-

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-146 (CONT)

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) EB1-74BL 150+425.6 (STATION) 13.1mR (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR WANG ENGINEERING, INC.

DATE OF DRILLING: STARTED 1-24-95 COMPLETED 1-24-95 SURFACE ELEVATION 141.98

DRILLED BY R. BELL LOGGED BY K. OLSON

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	1-24	8.1	-
DC	1-24	7.0	0
DC	1-25	6.9	1d

DRILLING METHOD: RIG TYPE CME-55; AUGER TYPE-DEPTH 0.15m HSA-18.7m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev	Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
	14		10 14 16	-	8	-
		BR SANDY GRAVEL, A-1-a	4 4 4	-	12	-
	15		7 7 9	-	6	-
			9 10 26	-	7	-
126.13		ORGANIC SEAM		-	15	-
	16		73 100/0.10m	-	14	-
	17	DK GR & BR LAMINATED SILTY SHALE	100/0.14m	-	12	-
	18		150/0.00m	-	11	-
123.26		END OF BORING	125/0.11m	-	16	-
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 (and subgroups)	*Engineering classifications of soil in accordance with AASHTO M 145 standard specification.*
Silty Clay Loam	*Textural classification of soil in accordance with IDOT Triangular Chart.*
Laminated Coal Shale	*Textural and engineering classification of bedrock in accordance with conventional practice.*
N,Bp0.15m	*N-value or standard penetration test value. Number of blows required to drive a standard split-spoon sampler 0.15 m as conducted in accordance with AASHTO T 206 standard specification.*
Q_u, kPa	*Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.*
w, %	*Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.*
γd, kgpm³	*Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.*

GROUNDWATER DATA

DD	*Water Level During Drilling*
BAR	*Water Level Before Auger Removal*
AAR	*Water Level After Auger Removal*
DC	*Dry Cave Level*
WC	*Wet Cave Level*
d	*Days*
h	*Hours*

DRILLING METHOD

FA	*Flight Auger*
RW	*Rotary Wash*
HSA	*Hollow Stem Auger*

SAMPLE TYPE

AU	*Auger*
SS	*Standard Split-barrel*
ST	*Thin-walled Tube*
DB	*Core Barrel*

NOTES

1. The abbreviations, symbols and definitions in this Legend are commonly used and understood in the engineering and construction practices and are presented only for information and communication.

2. The Geotechnical Data presented in this Legend and on the Boring Logs are to be interpreted by personnel educated, trained, experienced and licensed to practice Geotechnical Engineering, and in direct communication with the Claude H. Hurley Company.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SOIL BORINGS IV

SN: 090-0001 STA. 150+475.243
PEORIA - TAZEWELL CO., IL. DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05sb04-7d09000001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	966
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 105 OF 160

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-147

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) WBI-74BL 150+453.7 (STATION) 9.0mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR WANG ENGINEERING, INC.

DATE OF DRILLING: STARTED 1-23-95 COMPLETED 1-23-95 SURFACE ELEVATION 140.60

DRILLED BY R. BELL LOGGED BY K. OLSON

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	1-23	7.3	-
DC	1-23	3.1	0
DC	1-24	3.2	1d

DRILLING METHOD

RIG TYPE CME-55

AUGER TYPE-DEPTH 0.15m HSA-14.3m

CASING TYPE-DEPTH -

SAMPLER TYPE AU-SS

Elev	Depth	CLASSIFICATION	N Bp0.15m	Q_u KPa	w %	γ_d Kgpm^3
			AU	-	5	-
		FILL: BR & DK BR SANDY LOAM, A-2-4 TO A-4 W/ OCC BRICK, CINDERS & PCC REMNANTS	4 4 4	-	4	-
	1					
			2 1 2	-	7	-
138.93						
	2		4 5 6	-	4	-
		FILL: BR GRAVELLY SAND, A-1-b W/ CLAY LUMPS	12 12 9	-	4	-
	3					
			17 10 10	-	8	-
136.64	4					
			7 12 13	-	6	-
	5	BR SANDY GRAVEL, A-1-a	10 9 9	-	3	-
			10 11 13	-	4	-
	6					
			12 11 13	-	5	-
	7					
	8		5 5 6	-	9	-
	9		6 9 6	-	8	-
	10	BR SANDY GRAVEL, A-1-a	10 5 14	-	10	-
			5 7 6	-	12	-
	11		14 10 12	-	9	-
			5 6 18	-	9	-
128.47	12			-	17	-
		GR LAMINATED SILTY SHALE	105/0.15m	-	13	-
	13					

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-147 (CONT)

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) WBI-74BL 150+453.7 (STATION) 9.0mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR WANG ENGINEERING, INC.

DATE OF DRILLING: STARTED 1-23-95 COMPLETED 1-23-95 SURFACE ELEVATION 140.60

DRILLED BY R. BELL LOGGED BY K. OLSON

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	1-23	7.3	-
DC	1-23	3.1	0
DC	1-24	3.2	1d

DRILLING METHOD

RIG TYPE CME-55

AUGER TYPE-DEPTH 0.15m HSA-14.3m

CASING TYPE-DEPTH -

SAMPLER TYPE AU-SS

Elev	Depth	CLASSIFICATION	N Bp0.15m	Q_u KPa	w %	γ_d Kgpm^3
			52 100/0.10m	-	16	-
		GR LAMINATED SILTY SHALE				
	14		70 100/0.10m	-	15	-
126.34		END OF BORING				
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 (and subgroups)	Engineering classifications of soil in accordance with AASHTO M 145 standard specification.
Silty Clay Loam	Textural classification of soil in accordance with IDOT Triangular Chart.
Laminated Coal Shale	Textural and engineering classification of bedrock in accordance with conventional practice.
N,Bp0.15m	N-value or standard penetration test value. Number of blows required to drive a standard split-spoon sampler 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.
γ_d, kgpm^3	Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.

GROUNDWATER DATA

DD	Water Level During Drilling
BAR	Water Level Before Auger Removal
AAR	Water Level After Auger Removal
DC	Dry Cave Level
WC	Wet Cave Level
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger

SAMPLE TYPE

AU	Auger
SS	Standard Split-barrel
ST	Thin-walled Tube
DB	Core Barrel

NOTES

1. The abbreviations, symbols and definitions in this Legend are commonly used and understood in the engineering and construction practices and are presented only for information and communication.

2. The Geotechnical Data presented in this Legend and on the Boring Logs are to be interpreted by personnel educated, trained, experienced and licensed to practice Geotechnical Engineering, and in direct communication with the Claude H. Hurley Company.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SOIL BORINGS V

SN: 090-0001 STA. 150+475.243
PEORIA - TAZEWELL CO., IL. DATE: 12-16-03

12/16/2003

m:\proj3573\murray baker\st05sb05-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	967
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 106 OF 160

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 — BORING NO. SB-353

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) EBI-74BL 150+361.0 (STATION) 17.1mR (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-12-97 COMPLETED 12-12-97 SURFACE ELEVATION 146.00

DRILLED BY D. ROESEL — LOGGED BY R. HOEKSTRA

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	12-12	14.0	-
DC	12-12	5.5	0
	12-12	FILLED	0

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.10m FA-1.5m / HSA-21.7m; CASING TYPE-DEPTH -; SAMPLER TYPE SS

Elev	Depth	CLASSIFICATION	N Bp0.15m	Q_u KPa	w %	γ_d Kgpm^3
		PAVEMENT MATERIALS: 127mm AC, 178mm PCC				
145.70			6 7 8	-	6	-
	1		6 8 8	-	5	-
		FILL: BR GRAVELLY SAND, A-1-b				
	2		8 11 12	-	24	-
143.56						
	3		4 4 4	-	9	-
		FILL: BR GRAVELLY SAND, A-1-b w/ CLAY LUMPS				
	4		2 1 1	-	10	-
			1 1 1	-	10	-
141.28						
	5	DK BR TO BR SAND, A-3 TO A-1-b	4 5 8	-	5	-
			5 5 7	-	4	-
	6		5 6 7	-	6	-
	7					
		DK BR TO BR SAND, A-3 TO A-1-b	5 6 8	-	6	-
138.23						
	8	BR SANDY GRAVEL, A-1-a	9 16 17	-	4	-
	9		6 7 9	-	3	-
			11 13 17	-	4	-
	10		8 13 16	-	3	-
	11		9 13 15	-	6	-
	12		13 21 36	-	6	-
	13		20 22 24	-	5	-

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 — BORING NO. SB-353 (CONT)

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) EBI-74BL 150+361.0 (STATION) 17.1mR (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-12-97 COMPLETED 12-12-97 SURFACE ELEVATION 146.00

DRILLED BY D. ROESEL — LOGGED BY R. HOEKSTRA

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	12-12	14.0	-
DC	12-12	5.5	0
	12-12	FILLED	0

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.10m FA-1.5m / HSA-21.7m; CASING TYPE-DEPTH -; SAMPLER TYPE SS

Elev	Depth	CLASSIFICATION	N Bp0.15m	Q_u KPa	w %	γ_d Kgpm^3
			31 75 67	-	2	-
	14		11 9 8	-	4	-
	15		6 7 8	-	6	-
		BR SANDY GRAVEL, A-1-a	5 7 8	-	15	-
	16		8 5 7	-	3	-
	17		20 18 5	-	6	-
	18		32 23 9	-	6	-
	19		5 7 11	-	6	-
126.80			100/ 0.13m	-	14	-
		DK GR & GR LAMINATED SILTY SHALE				
	20		100/ 0.10m	-	15	-
		DK GR & GR LAMINATED SILTY SHALE	100/ 0.05m	-	16	-
	21		100/ 0.03m	-	-	-
124.33		END OF BORING				
	22					
	23					
	24					
	25					
	26					

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 (and subgroups)	Engineering classifications of soil in accordance with AASHTO M 145 standard specification.
Silty Clay Loam	Textural classification of soil in accordance with IDOT Triangular Chart.
Laminated Coal Shale	Textural and engineering classification of bedrock in accordance with conventional practice.
N,Bp0.15m	N-value or standard penetration test value. Number of blows required to drive a standard split-spoon sampler 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.
γ_d, kgpm^3	Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.

GROUNDWATER DATA

DD	Water Level During Drilling
BAR	Water Level Before Auger Removal
AAR	Water Level After Auger Removal
DC	Dry Cave Level
WC	Wet Cave Level
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger

SAMPLE TYPE

AU	Auger
SS	Standard Split-barrel
ST	Thin-walled Tube
DB	Core Barrel

NOTES

1. The abbreviations, symbols and definitions in this Legend are commonly used and understood in the engineering and construction practices and are presented only for information and communication.

2. The Geotechnical Data presented in this Legend and on the Boring Logs are to be interpreted by personnel educated, trained, experienced and licensed to practice Geotechnical Engineering, and in direct communication with the Claude H. Hurley Company.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SOIL BORINGS V1

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003

m:\proj3573\murray baker\st05sb06-7d0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	968
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 107 OF 160

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-354

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) EBI-74BL 150+366.8 (STATION) 1.0mR (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-11-97 COMPLETED 12-18-97 SURFACE ELEVATION 146.75

DRILLED BY D. ROESEL LOGGED BY R. HOEKSTRA

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	12-11	11.7	-
DC	12-18	6.4	0
	12-18	FILLED	0

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.10m FA-1.5m, HSA-23.3m; CASING TYPE-DEPTH -; SAMPLER TYPE SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
146.29	PAVEMENT MATERIALS 127mm AC 254mm PCC 76mm CA-6	AU	-	6	-
1		6 10 16	-	5	-
		9 12 8	-	5	-
2	FILL: BR GRAVELLY SAND, A-1-b	5 4 5	-	6	-
		7 8 11	-	-	-
143.70 3	PAVEMENT MATERIALS 305mm PCC				
143.40	DK BR SILTY CLAY, A-7-6	1 2 3	-	23	-
142.79 4		3 7 12	-	8	-
5	DK BR TO BR SAND, A-3 TO A-1-b	1 1 1	-	8	-
6		4 6 6	-	4	-
		5 6 8	-	6	-
7					

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
		5 8 10	-	4	-
8	DK BR TO BR SAND, A-3 TO A-1-b	7 7 11	-	5	-
9		8 9 14	-	5	-
137.45		11 19 10	-	5	-
10		13 17 19	-	5	-
11	BR SANDY GRAVEL, A-1-a	100/ 0.08m	-	-	-
12		100/ 0.08m	-	8	-
		10 13 14	-	4	-
13					

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-354 (CONT)

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) EBI-74BL 150+366.8 (STATION) 1.0mR (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-11-97 COMPLETED 12-18-97 SURFACE ELEVATION 146.75

DRILLED BY D. ROESEL LOGGED BY R. HOEKSTRA

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	12-11	11.7	-
DC	12-18	6.4	0
	12-18	FILLED	0

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.10m FA-1.5m, HSA-23.3m; CASING TYPE-DEPTH -; SAMPLER TYPE SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
14		12 18 21	-	5	-
15		20 21 23	-	5	-
132.27	END OF BORING 12-11-97				
		5 8 6	-	10	-
16		5 8 9	-	16	-
17	BR SANDY GRAVEL, A-1-a	11 10 14	-	6	-
18		10 8 9	-	6	-
		4 5 6	-	6	-
19		7 9 10	-	9	-
20		4 7 12	-	10	-
		8	-	-	-

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
		6	-	5	-
		100/ 0.10m	-	13	-
126.33 21		100/ 0.05m	-	11	-
	DK GR & GR LAMINATED SILTY SHALE	100/ 0.13m	-	17	-
22		100/ 0.08m	-	16	-
23		100/ 0.10m	-	18	-
123.49	END OF BORING 12-18-97				
24					
25					
26					

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 (and subgroups)	*Engineering classifications of soil in accordance with AASHTO M 145 standard specification.*
Silty Clay Loam	*Textural classification of soil in accordance with IDOT Triangular Chart.*
Laminated Coal Shale	*Textural and engineering classification of bedrock in accordance with conventional practice.*
N,Bp0.15m	*N-value or standard penetration test value. Number of blows required to drive a standard split-spoon sampler 0.15 m as conducted in accordance with AASHTO T 206 standard specification.*
Qu, kPa	*Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.*
w, %	*Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.*
γd, kgpm³	*Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.*

GROUNDWATER DATA

DD	*Water Level During Drilling*
BAR	*Water Level Before Auger Removal*
AAR	*Water Level After Auger Removal*
DC	*Dry Cave Level*
WC	*Wet Cave Level*
d	*Days*
h	*Hours*

DRILLING METHOD

FA	*Flight Auger*
RW	*Rotary Wash*
HSA	*Hollow Stem Auger*

SAMPLE TYPE

AU	*Auger*
SS	*Standard Split-barrel*
ST	*Thin-walled Tube*
DB	*Core Barrel*

NOTES

1. The abbreviations, symbols and definitions in this Legend are commonly used and understood in the engineering and construction practices and are presented only for information and communication.

2. The Geotechnical Data presented in this Legend and on the Boring Logs are to be interpreted by personnel educated, trained, experienced and licensed to practice Geotechnical Engineering, and in direct communication with the Claude H. Hurley Company.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SOIL BORINGS VII

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05sb07-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	969
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

SHEET 108 OF 160

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-355

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) WBI-74BL 150+427.2 (STATION) 11.2mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-11-97 COMPLETED 12-12-97 SURFACE ELEVATION 141.80

DRILLED BY D. ROESEL LOGGED BY R. HOEKSTRA

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	12-11	9.1	-
DC	12-12	7.0	0
	12-12	FILLED	0

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.10m FA-1.5m, RW-6.9m, HSA-15.8m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
141.50 / 0	FILL: BR & DK BR SANDY LOAM, A-2-4 TO A-4 W/ BRICK PIECES	AU	-	13	-
		3 4 6	-	7	-
1		3 5 7	-	4	-
2	DK BR TO BR SAND, A-3 TO A-1-b	4 6 7	-	11	-
3		5 8 8	-	13	-
		6 8 15	-	12	-
137.84 / 4		10 10 13	-	10	-
5	BR SANDY GRAVEL, A-1-a	8 9 10	-	14	-
6		9 12 14	-	9	-
		10 11 16	-	8	-
7		7 15 16	-	5	-
8	BR SANDY GRAVEL, A-1-a	10 15 17	-	5	-
9		16 20 16	-	6	-
10		10 12 11	-	6	-
		6 7 8	-	10	-
11		6 6 7	-	8	-
12		6 7 8	-	14	-
128.69 / 13	GR LAMINATED SILTY SHALE	9 7 7	-	7	-

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-355 (CONT)

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) WBI-74BL 150+427.2 (STATION) 11.2mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-11-97 COMPLETED 12-12-97 SURFACE ELEVATION 141.80

DRILLED BY D. ROESEL LOGGED BY R. HOEKSTRA

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	12-11	9.1	-
DC	12-12	7.0	0
	12-12	FILLED	0

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.10m FA-1.5m, RW-6.9m, HSA-15.8m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
	END OF BORING 12-11-97	20 43 100/ 0.25m	-	16	-
14		37 100/ 0.13m	-	15	-
	GR LAMINATED SILTY SHALE	40 65 100/ 0.25m	-	16	-
15		53 100/ 0.10m	-	18	-
126.01 / 16	END OF BORING 12-12-97				
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 (and subgroups)	Engineering classifications of soil in accordance with AASHTO M 145 standard specification.
Silty Clay Loam	Textural classification of soil in accordance with IDOT Triangular Chart.
Laminated Coal Shale	Textural and engineering classification of bedrock in accordance with conventional practice.
N,Bp0.15m	N-value or standard penetration test value. Number of blows required to drive a standard split-spoon sampler 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.
γd, kgpm^3	Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.

GROUNDWATER DATA

DD	Water Level During Drilling
BAR	Water Level Before Auger Removal
AAR	Water Level After Auger Removal
DC	Dry Cave Level
WC	Wet Cave Level
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger

SAMPLE TYPE

AU	Auger
SS	Standard Split-barrel
ST	Thin-walled Tube
DB	Core Barrel

NOTES

1. The abbreviations, symbols and definitions in this Legend are commonly used and understood in the engineering and construction practices and are presented only for information and communication.

2. The Geotechnical Data presented in this Legend and on the Boring Logs are to be interpreted by personnel educated, trained, experienced and licensed to practice Geotechnical Engineering, and in direct communication with the Claude H. Hurley Company.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION

MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SOIL BORINGS VIII

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003

m:\proj3573\murray baker\st05sb08-7a0900001.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	970
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

68196

SHEET 109 OF 160

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 — BORING NO. SB-356

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) EBI-74BL 150+475.2 (STATION) 13.2mR (OFFSET) — PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-4-97 COMPLETED 12-8-97 SURFACE ELEVATION 140.31

DRILLED BY D. ROESEL — LOGGED BY J. DALTON/R. HOEKSTRA

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	12-4	8.5	-
DC	12-8	4.7	0
	12-8	FILLED	0

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH HSA-15.0m; CASING TYPE-DEPTH -; SAMPLER TYPE SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	Yd Kgpm³
140.01 / 0	PAVEMENT MATERIALS 279mm PCC				
	FILL: BR GRAVELLY SAND TO SANDY GRAVEL, A-1-b TO A-1-a W/ OCC BRICK FRAGMENTS	6 8 4	-	8	-
139.40 / 1		1 2 3	-	19	-
2		1 2 2	-	16	-
	FILL: BR TO DK BR CLAY LOAM, A-4 TO A-6	2 2 2	-	21	-
3		3 3 3	1.1	15	-
4		4 6 3	-	14	-
135.59 / 5		2 3 3	-	13	-
	FILL: BR & DK BR SANDY CLAY LOAM, A-4	4 4 4	-	18	-
END OF BORING 12-4-97 / 6		2 2 2	-	26	-
7					
8	FILL: BR & DK BR SANDY CLAY LOAM, A-4	5 3 9	-	19	-
		2 2 3	-	18	-
131.56 / 9		3 13 14	-	20	-
10	BR SANDY GRAVEL, A-1-a	4 3 5	-	14	-
		8 8 8	-	-	-
11		4 6 10	-	7	-
128.73 / 12	BR TO BR & GR WEATHERED SILTY SHALE	12 35 74	-	16	-
128.43 / END OF BORING 12-5-97		24 63 100/0.25m	-	16	-
13	GR LAMINATED SILTY SHALE				

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 — BORING NO. SB-356 (CONT)

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) EBI-74BL 150+475.2 (STATION) 13.2mR (OFFSET) — PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-4-97 COMPLETED 12-8-97 SURFACE ELEVATION 140.31

DRILLED BY D. ROESEL — LOGGED BY J.DALTON/ R. HOEKSTRA

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	12-4	8.5	-
DC	12-8	4.7	0
	12-8	FILLED	0

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH HSA-15.0m; CASING TYPE-DEPTH -; SAMPLER TYPE SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	Yd Kgpm³
		33 56 100/0.25m	-	14	-
GR LAMINATED SILTY SHALE / 14		29 38 84	-	17	-
125.28 END OF BORING 12-8-97 / 15		80 100/0.08m	-	13	-
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 (and subgroups)	Engineering classifications of soil in accordance with AASHTO M 145 standard specification.
Silty Clay Loam	Textural classification of soil in accordance with IDOT Triangular Chart.
Laminated Coal Shale	Textural and engineering classification of bedrock in accordance with conventional practice.
N,Bp0.15m	N-value or standard penetration test value. Number of blows required to drive a standard split-spoon sampler 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.
Yd, kgpm³	Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.

GROUNDWATER DATA

DD	Water Level During Drilling
BAR	Water Level Before Auger Removal
AAR	Water Level After Auger Removal
DC	Dry Cave Level
WC	Wet Cave Level
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger

SAMPLE TYPE

AU	Auger
SS	Standard Split-barrel
ST	Thin-walled Tube
DB	Core Barrel

NOTES

1. The abbreviations, symbols and definitions in this Legend are commonly used and understood in the engineering and construction practices and are presented only for information and communication.

2. The Geotechnical Data presented in this Legend and on the Boring Logs are to be interpreted by personnel educated, trained, experienced and licensed to practice Geotechnical Engineering, and in direct communication with the Claude H. Hurley Company.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SOIL BORINGS IX

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003

m:\proj3573\murroy baker\st05sb09-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	97
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 110 OF 160

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-357

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) WBI-74BL 150+492.1 (STATION) 10.7mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-3-97 COMPLETED 12-3-97 SURFACE ELEVATION 139.72

DRILLED BY B. GROSE LOGGED BY J. DALTON

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
	SIDEWALK MATERIALS 203mm PCC				
139.52		12 17 6	-	6	-
1	FILL: BR GRAVELLY SAND TO SANDY GRAVEL, A-1-b TO A-1-a W/ OCC BRICK FRAGMENTS	9 11 6	-	25	-
138.04					
2		3 4 5	-	7	-
3		4 5 6	-	6	-
		6 7 12	-	5	-
4	BR SANDY GRAVEL, A-1-a				
		10 12 14	-	10	-
5		6 7 6	-	7	-
6		5 6 11	-	8	-
7		9 11 23	-	7	-
8	BR SANDY GRAVEL, A-1-a	6 5 4	-	9	-
		2 3 4	-	15	-
9		4 4 5	-	11	-
10		10 11 12	-	5	-
	129.51 BR TO BR & GR WEATHERED SILTY SHALE				
	129.36				
11	GR LAMINATED SILTY SHALE	20 22 100/ 0.13m	-	19	-
			-	14	-
		46 100/ 0.28m	-	16	-
12		44 100/ 0.15m	-	19	-
13		55 100/ 0.08m	-	15	-

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	12-3	7.2	-
DC	12-3	0.5	0
DC	12-4	1.5	24

DRILLING METHOD
RIG TYPE CME-55
AUGER TYPE-DEPTH 0.11m HSA-9.1m
CASING TYPE-DEPTH 0.08m NX-10.4m
SAMPLER TYPE SS

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-357 (CONT)

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) WBI-74BL 150+492.1 (STATION) 10.7mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-3-97 COMPLETED 12-3-97 SURFACE ELEVATION 139.72

DRILLED BY B. GROSE LOGGED BY J.DALTON

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
	GR LAMINATED SILTY SHALE	100/ 0.15m	-	13	-
126.19	END OF BORING				
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	12-3	7.2	-
DC	12-3	0.5	0
DC	12-4	1.5	24

DRILLING METHOD
RIG TYPE CME-55
AUGER TYPE-DEPTH 0.11m HSA-9.1m
CASING TYPE-DEPTH 0.08m NX-10.4m
SAMPLER TYPE SS

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 (and subgroups)	Engineering classifications of soil in accordance with AASHTO M 145 standard specification.
Silty Clay Loam	Textural classification of soil in accordance with IDOT Triangular Chart.
Laminated Coal Shale	Textural and engineering classification of bedrock in accordance with conventional practice.
N,Bp0.15m	N-value or standard penetration test value. Number of blows required to drive a standard split-spoon sampler 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.
γ_d, kgpm³	Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.

GROUNDWATER DATA

DD	Water Level During Drilling
BAR	Water Level Before Auger Removal
AAR	Water Level After Auger Removal
DC	Dry Cave Level
WC	Wet Cave Level
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger

SAMPLE TYPE

AU	Auger
SS	Standard Split-barrel
ST	Thin-walled Tube
DB	Core Barrel

NOTES

1. The abbreviations, symbols and definitions in this Legend are commonly used and understood in the engineering and construction practices and are presented only for information and communication.

2. The Geotechnical Data presented in this Legend and on the Boring Logs are to be interpreted by personnel educated, trained, experienced and licensed to practice Geotechnical Engineering, and in direct communication with the Claude H. Hurley Company.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SOIL BORINGS X

SN: 090-0001 STA. 150+475.243
PEORIA - TAZEWELL CO., IL. DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05sb10-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	972
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 111 OF 160

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-358

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) EB1-74BL 150+507.2 (STATION) 11.2mR (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-3-97 COMPLETED 12-3-97 SURFACE ELEVATION 139.64

DRILLED BY D. ROESEL LOGGED BY R. HOEKSTRA

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	12-3	7.2	-
DC	12-3	4.4	0
	12-3	FILLED	0

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH HSA-12.2m RW-13.5m; CASING TYPE-DEPTH 0.10m NX-2.1m; SAMPLER TYPE SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
139.36 / 0	PAVEMENT MATERIALS 279mm PCC	AU	-	7	-
		3 2 2	-	5	-
	FILL: BR GRAVELLY SAND TO SANDY GRAVEL, A-1-b TO A-1-a W/ OCC BRICK FRAGMENTS				
137.96 / 2		1 1 1	-	3	-
		3 4 5	-	4	-
	BR SANDY GRAVEL, A-1-a	5 5 6	-	4	-
		4 6 4	-	4	-
		6 7 9	-	5	-
		4 5 5	-	6	-
		6 8 9	-	9	-
		6 10 12	-	6	-
	BR SANDY GRAVEL, A-1-a	4 5 8	-	10	-
		5 7 8	-	8	-
		5 7 23	-	15	-
	GR SHALE	4 3 3	-	3	-
		4 6 24	-	6	-
129.12 / 10	BR TO BR & GR WEATHERED SILTY SHALE		-	18	-
128.82 / 11		74 100/ 0.06m	-	16	-
	GR LAMINATED SILTY SHALE	50 100/ 0.08m	-	15	-
		54 100/ 0.08m	-	16	-

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-358 (CONT)

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) EB1-74BL 150+507.2 (STATION) 11.2mR (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-3-97 COMPLETED 12-3-97 SURFACE ELEVATION 139.64

DRILLED BY D. ROESEL LOGGED BY R. HOEKSTRA

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	12-3	7.2	-
DC	12-3	4.4	0
	12-3	FILLED	0

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH HSA-12.2m RW-13.5m; CASING TYPE-DEPTH 0.10m NX-2.1m; SAMPLER TYPE SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
	GR LAMINATED SILTY SHALE				
126.14 / 14	END OF BORING	100/ 0.08m	-	17	-

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 (and subgroups)	Engineering classifications of soil in accordance with AASHTO M 145 standard specification.
Silty Clay Loam	Textural classification of soil in accordance with IDOT Triangular Chart.
Laminated Coal Shale	Textural and engineering classification of bedrock in accordance with conventional practice.
N,Bp0.15m	N-value or standard penetration test value. Number of blows required to drive a standard split-spoon sampler 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.
γd, kgpm^3	Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.

GROUNDWATER DATA

DD	Water Level During Drilling
BAR	Water Level Before Auger Removal
AAR	Water Level After Auger Removal
DC	Dry Cave Level
WC	Wet Cave Level
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger

SAMPLE TYPE

AU	Auger
SS	Standard Split-barrel
ST	Thin-walled Tube
DB	Core Barrel

NOTES

1. The abbreviations, symbols and definitions in this Legend are commonly used and understood in the engineering and construction practices and are presented only for information and communication.

2. The Geotechnical Data presented in this Legend and on the Boring Logs are to be interpreted by personnel educated, trained, experienced and licensed to practice Geotechnical Engineering, and in direct communication with the Claude H. Hurley Company.

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SOIL BORINGS XI

SN: 090-0001
PEORIA - TAZEWELL CO., IL.

STA. 150+475.243
DATE: 12-16-03

12/16/2003
m:\proj3573\murray baker\st05sb11-7a0900001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	972-A
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 112 OF 160

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-359

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) WBI-74BL 150+531.0 (STATION) 12.3mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-10-97 COMPLETED 12-10-97 SURFACE ELEVATION 139.60

DRILLED BY J. KODITEK LOGGED BY J. DALTON

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	12-10	7.3	-
DC	12-10	4.4	0
DC	12-19	8.0	9d

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH HSA-13.4m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev	Depth	CLASSIFICATION	N Bp0.15m	Q_u KPa	w %	γ_d Kgpm^3
		FILL: BR & BLK CLAY LOAM, A-4 TO A-6	AU	-	15	-
			8 5 5	-	12	-
138.69	1	FILL: BR GRAVELLY SAND TO SANDY GRAVEL, A-1-b TO A-1-a W/ OCC BRICK FRAGMENTS	3 4 6	-	17	-
	2		4 5 6	-	17	-
137.31	3	BR SANDY GRAVEL, A-1-a	5 8 11	-	6	-
	4		4 5 9	-	8	-
			5 6 7	-	6	-
	5		4 4 5	-	7	-
	6		7 7 7	-	6	-
			7 8 9	-	9	-
	7					
	8		6 7 7	-	11	-
			5 8 9	-	10	-
	9		7 7 9	-	14	-
			5 6 8	-	9	-
129.54	10	GR LAMINATED SILTY SHALE	29 100/ 0.13m	-	16	-
	11		100/ 0.15m	-	14	-
	12		28 100/ 0.13m	-	17	-
			40 100/ 0.10m	-	18	-
	13					

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-359 (CONT)

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 (STRUCTURE) WBI-74BL 150+531.0 (STATION) 12.3mL (OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-10-97 COMPLETED 12-10-97 SURFACE ELEVATION 139.60

DRILLED BY J. KODITEK LOGGED BY J. DALTON

GROUNDWATER DATA	DATE	DEPTH	HOUR
DD	12-10	7.3	-
DC	12-10	4.4	0
DC	12-19	8.0	9d

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH HSA-13.4m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev	Depth	CLASSIFICATION	N Bp0.15m	Q_u KPa	w %	γ_d Kgpm^3
		GR LAMINATED SILTY SHALE	100/ 0.15m	-	14	-
126.19	14	END OF BORING				
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 (and subgroups)	Engineering classifications of soil in accordance with AASHTO M 145 standard specification.
Silty Clay Loam	Textural classification of soil in accordance with IDOT Triangular Chart.
Laminated Coal Shale	Textural and engineering classification of bedrock in accordance with conventional practice.
N,Bp0.15m	N-value or standard penetration test value. Number of blows required to drive a standard split-spoon sampler 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.
γ_d, kgpm^3	Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.

GROUNDWATER DATA

DD	Water Level During Drilling
BAR	Water Level Before Auger Removal
AAR	Water Level After Auger Removal
DC	Dry Cave Level
WC	Wet Cave Level
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger

SAMPLE TYPE

AU	Auger
SS	Standard Split-barrel
ST	Thin-walled Tube
DB	Core Barrel

NOTES

1. The abbreviations, symbols and definitions in this Legend are commonly used and understood in the engineering and construction practices and are presented only for information and communication.

2. The Geotechnical Data presented in this Legend and on the Boring Logs are to be interpreted by personnel educated, trained, experienced and licensed to practice Geotechnical Engineering, and in direct communication with the Claude H. Hurley Company.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SOIL BORINGS XII

SN: 090-0001 PEORIA - TAZEWELL CO., IL.
STA. 150+475.243 DATE: 12-16-03

12/16/2003

m:\proj3573\murroy baker\st05sb12-7a09000001.dgn

68196

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1559	972-B
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

SHEET 113 OF 160

CLAUDE H. HURLEY COMPANY

BORING LOG

PROJECT NO. 3-380-D10 BORING NO. SB-360

PROJECT FAI-74 IMPROVEMENTS - ADAMS STREET CORRIDOR

LOCATION BRIDGE NO. 090-0001 EBI-74BL 150+548.5 12.8mR (STRUCTURE / STATION / OFFSET) PEORIA & TAZEWELL COUNTIES, ILLINOIS (STATE)

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 12-10-97 COMPLETED 12-10-97 SURFACE ELEVATION 139.22

DRILLED BY D. ROESEL LOGGED BY R. HOEKSTRA

GROUNDWATER DATA

	DATE	DEPTH	HOUR
DD	12-10	5.6	-
DC	12-10	5.6	0
DC	12-19	6.3	9d

DRILLING METHOD: RIG TYPE MOBILE B-57; AUGER TYPE-DEPTH 0.10m FA-1.5m HSA-12.7m; CASING TYPE-DEPTH -; SAMPLER TYPE AU-SS

Elev / Depth	CLASSIFICATION	N Bp0.15m	Qu KPa	w %	γd Kgpm³
139.16	PAVEMENT MATERIALS 64mm AC	AU	-	6	-
	FILL: BLK & BR GRAVELLY SAND, A-1-b	10 18 18	-	5	-
138.31		5 8 11	-	6	-
	FILL: BR GRAVELLY SAND TO SANDY GRAVEL, A-1-b TO A-1-a W/ OCC BRICK FRAGMENTS	3 3 3	-	5	-
	W/ WOOD PIECES	3 2 3	-	4	-
135.26		3 1 1	-	27	-
	FILL: BR & DK BR CLAY LOAM, A-4 TO A-6	2 2 1	-	20	-
	PCC	1 1 100/0.18m	-	17	-
133.73	BR SANDY GRAVEL, A-1-a	3 3 5	-	12	-
132.97	BR SANDY CLAY LOAM, A-4	4 4 5	-	17	-
132.21					
	BR SANDY GRAVEL, A-1-a	13 7 4	-	10	-
		23 8 7	-	18	-
		10 9 11	-	18	-
129.47		5 10 45	-	9	-
	GR LAMINATED SILTY SHALE	67/0.05m	-	16	-
		50/0.10m	-	15	-
		53/0.10m	-	17	-
126.51	END OF BORING	68/0.05m	-	16	-

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 (and subgroups)	Engineering classifications of soil in accordance with AASHTO M 145 standard specification.
Silty Clay Loam	Textural classification of soil in accordance with IDOT Triangular Chart.
Laminated Coal Shale	Textural and engineering classification of bedrock in accordance with conventional practice.
N,Bp0.15m	N-value or standard penetration test value. Number of blows required to drive a standard split-spoon sampler 0.15 m as conducted in accordance with AASHTO T 206 standard specification.
Q_u, kPa	Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.
w, %	Natural moisture content of soil and bedrock in percent determined in accordance with AASHTO T 265 standard specification and AASHTO T 265/ASTM D 2216 for bedrock.
Yd, kgpm³	Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.

GROUNDWATER DATA

DD	Water Level During Drilling
BAR	Water Level Before Auger Removal
AAR	Water Level After Auger Removal
DC	Dry Cave Level
WC	Wet Cave Level
d	Days
h	Hours

DRILLING METHOD

FA	Flight Auger
RW	Rotary Wash
HSA	Hollow Stem Auger

SAMPLE TYPE

AU	Auger
SS	Standard Split-barrel
ST	Thin-walled Tube
DB	Core Barrel

NOTES

1. The abbreviations, symbols and definitions in this Legend are commonly used and understood in the engineering and construction practices and are presented only for information and communication.

2. The Geotechnical Data presented in this Legend and on the Boring Logs are to be interpreted by personnel educated, trained, experienced and licensed to practice Geotechnical Engineering, and in direct communication with the Claude H. Hurley Company.

DESIGNED	ADD
CHECKED	KMP
DRAWN	ADD
CHECKED	KMP

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
MURRAY BAKER BRIDGE
F.A.I. RTE. 74 OVER THE ILLINOIS RIVER
SECTION 90-10D-1-BRY
SOIL BORINGS XIII

SN: 090-0001 STA. 150+475.243
PEORIA - TAZEWELL CO., IL. DATE: 12-16-03

12/16/2003

m:\proj3573\rMurray Baker\sst\Brb1378nb090001dgn

B.M. Concrete monument ℄ Sta.164+31.12 Elev. 440.37
B.M. Iron rod at Southwest corner Fayette and Washington Streets, Peoria Elev. 474.47
Existing Structure #090-0001

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

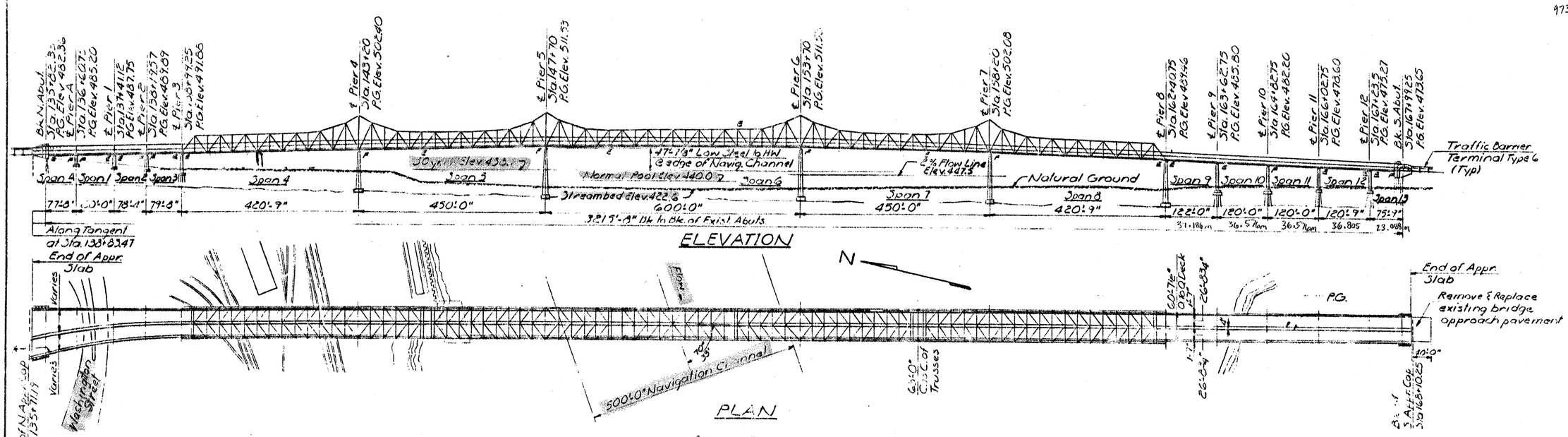
68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. / F.A.			136	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
75 SHEETS

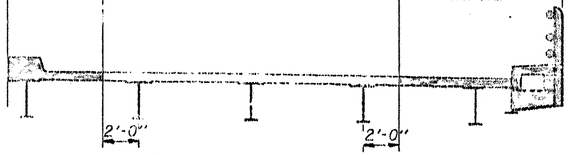
SHEET 114 OF 160

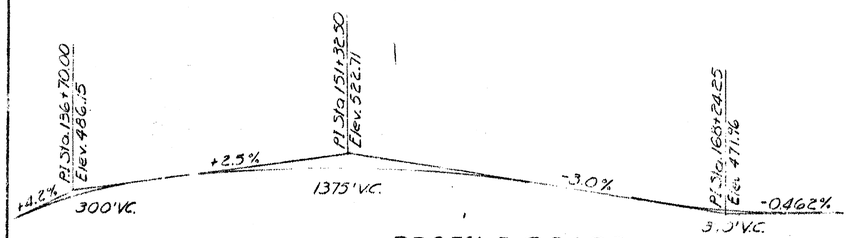
973 1559



ELEVATION

PLAN





PROFILE GRADE

STAGE I & II CONSTRUCTION SEQUENCE FOR REMOVAL AND REPLACEMENT OF EXISTING TRUSS DECK

1. Full width deck removal shall be limited to 180 ft. (6 consecutive panel lengths).
2. Partial width deck removal (as shown in sketch) shall be limited to six (6) additional panels in succession.
3. Any succeeding panel deck removal in excess of the limits set in ① & ② above shall be preceded by deck replacement (in equivalent load to existing deck) of a previous full width panel removed.
4. The six (6) consecutive full width deck removal limitations specified in ① above may be waived in the suspended portion of truss in Span 6 only.
5. Any deviations from the deck removal and replacement sequence indicated above shall be subject to written approval by the Engineer.

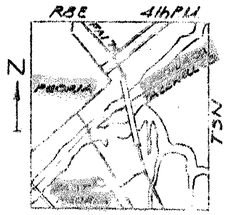
DESIGNED F. Lampert
CHECKED J. J. Richman
DRAWN
CHECKED A. J. B.

December 2 1981
EXAMINED Paul J. Ruben
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

DESIGN STRESSES

f'_c = 3500 psi
f_s = 36000 psi (Structural Steel)
f_y = 60,000 psi (Reinforcement)

Design Specifications: 1977 AASHTO, 1978 through 1982 interim specs.
DESIGN LOADING H20-44



LOCATION SKETCH

GENERAL PLAN
MURRAY BAKER BRIDGE
OVER ILLINOIS RIVER AT PEORIA
F.A. ROUTE 74
SECTION 100-1
PEORIA-TAZEWELL COUNTIES
STATION 151+85

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.			136	25
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
75 SHEETS

68196

SHEET 115 OF 160
974
1559

GENERAL NOTES

All new fasteners shall be high strength bolts. Bolts $\frac{3}{4}$" ϕ, open holes $\frac{13}{16}$" ϕ and bolts $\frac{7}{8}$" ϕ, open holes $\frac{15}{16}$" ϕ, except for bolts placed into existing holes.

The basic lead silica chromate paint system shall be used for shop and field painting of new structural steel, except the final field coat shall be burnt orange. See Special Provisions.

All contact surfaces of joints for the diaphragms shall be free of paint or lacquer.

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.

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

All remaining existing structural steel shall be cleaned by Method II. Areas cleaned by Method II shall be spot painted. All remaining existing structural steel shall receive two field coats of basic lead silica chromate paint, with the final field coat being burnt orange.

All new structural steel shall conform to the requirements of AASHTO M-183, unless otherwise noted.

Structural steel and concrete repairs were prepared in accordance with Volumes 1 & 2 of the inspection report prepared by the Bureau of Maintenance and the additional report dated September 16, 1982 furnished by District 4. The Engineer, during construction, may determine that modifications or additions to these repairs may be necessary. Any such modifications or additions shall be paid for at the same rate as the unit price bid for the particular item.

The contractor shall coordinate the concrete slab work with other repair work on the structure.

Remove and replace all bird screens. Additional screens are required. Cost incidental to "Cleaning and Painting Steel Bridge". See Special Provisions.

Any missing or deteriorated rivets, not in areas where structural steel removal and replacement are taking place shall be replaced with H.S. bolts of the same diameter, as directed by the Engineer. Cost to be billed as "Rivet Replacement".

STATION 151+85
REBUILT 19 BY
STATE OF ILLINOIS
F.A.I. RTE. 74 SEC. 100-1
F.A. PROJ.
LOADING HS20
STR. NO. 090-0001

NAME PLATE
See Std. 2113

FOR INFORMATION ONLY

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yds.		4.5	4.5
Removal of Existing Concrete Deck	L.S.			1
Floor Drains	Each	55		55
Protective Coat	Sq. Yds.			25,290
Class 'X' Concrete	Cu. Yds.	5,858.5	0.9	5,859.4
Structural Steel	Lbs.	987,680		987,680
Handrail Removal	Lin. Ft.	6,440		6,440
Cleaning and Painting Steel Bridge	L.S.			1
Reinforcement Bars	Lbs.	2,500	40	2,540
Reinforcement Bars (Epoxy Coated)	Lbs.	1,415,910		1,415,910
Name Plates	Each			1
Elastomeric Bearing Assembly, Type I	Each			62
Elastomeric Bearing Assembly, Type II	Each			16
Jacking and Cribbing	Each			78
Neoprene Expansion Joint (4")	Lin. Ft.			190
Neoprene Expansion Joint (6½")	Lin. Ft.			190
Neoprene Expansion Joint (9")	Lin. Ft.			64
Preformed Joint Seal (2½")	Lin. Ft.	1,534		1,534
Drainage Scuppers, Special	Each	149		149
Rivet Replacement	Each	100		100
Structual Steel Removal	Lbs.	1,021,560		1,021,560
Bearing Rehabilitation	Each			4
Drainage System	L.S.			1

DESIGNED	Patrick M Phipps
CHECKED	R. K. Brand
DRAWN	P.S.Mc.
CHECKED	R K B

December 20 1983
EXAMINED James J. Engelmann
APPROVED
DIRECTOR OF HIGHWAYS

GENERAL DATA
F.A.I. ROUTE 74 SECTION 100-1
PEORIA-TAZEWELL COUNTIES
STATION 151+85

B.M. Concrete Monument & Sta. 164+31.12 Elev. 440.87
B.M. Iron rod at Southwest corner Fayette and Washington Streets, Peoria. Elev. 474.47

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

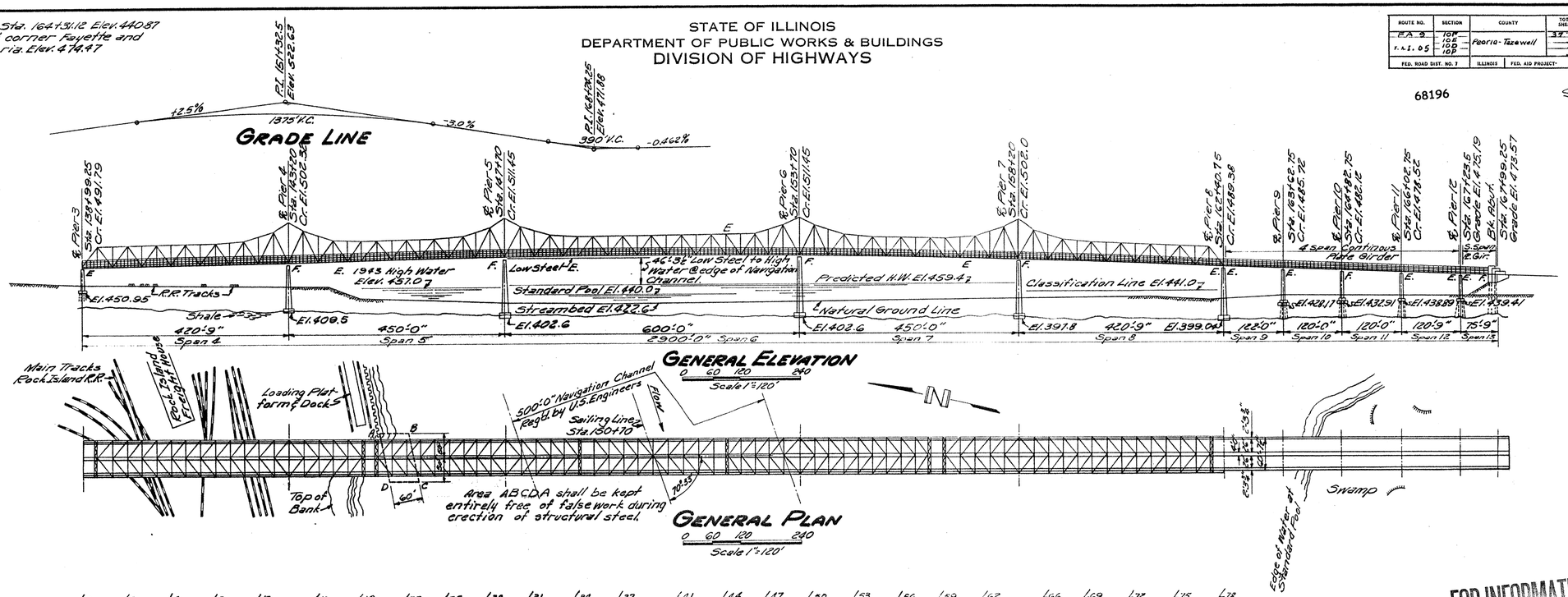
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 8	10F	Peoria - Tazewell	34	3
F.A.I. 05	10E		24	13
	10D		29	13
	10P		44	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
42 SHEETS

68196

SHEET 116 OF 160

975 1559



L0	L3	L6	L9	L12	L16	L19	L22	L25	L28	L31	L34	L37	L41	L44	L47	L50	L53	L56	L59	L62	L66	L69	L72	L75	L78
3	2	10	11	6	7	15	14	22	18	20				17'	21'	19'	16'	13'	5'	8'	9'	12'	4'	1'	
1	4	12	9	8	5	13	16	19	21	17				20'	18'	22'	14'	15'	7'	6'	11'	10'	2'	3'	

TRUSS FLOOR SLAB POURING SEQUENCE

Note: The floor slab between L34 and L44 may be poured in any sequence but shall not be poured until the floor slab from L0 to L34 and from L78 to L44 has been completed.
No deviation from the pouring sequence will be permitted without written permission from the Engineer.

STATION 151+90.79
BUILT 195 BY
STATE OF ILLINOIS
F.A.I. RT. 5 Sec. 10B-D-E-P
F.A. PROJECT I-05-4 (2)
LOADING H20-S16

LETTERING FOR NAME PLATE

See Std. 2113

DESIGN STRESSES

Structural Steel:	Carbon	Low Alloy
Axial Tension	18,000 #/□"	27,000 #/□"
Axial Compression	15,000 - .28(l/r)²	22,000 - .56(l/r)²

Reinforcement Bars ____ fs = 20,000 #/□"
Concrete ____ fc = 1400 #/□" ___ n = 10

GENERAL NOTES

Class X Concrete shall be used thruout except as noted.
Handrail Concrete shall be used in abutment posts & wings.
The concrete floor slab shall be poured in one continuous operation between construction joints.
The concrete floor slab shall be finished in accordance with Article 51.18(2) of the Standard Specifications.
Field connections riveted except as noted. High Tensile Steel Bolts may be used where it is impossible to drive field rivets. See Special Provisions.
All rollers, rockers, bearing plates, lead plates and anchor bolts shall be fabricated and set in accordance with Article 51.14 of the Standard Specifications.
Roadway expansion guards shall be assembled in the shop in their proper position with the adjacent ends in place and shall be left assembled for shop inspection.
Plates shall be flame cut in accordance with Article 55.4(1) of the Standard Specifications.
Structural Steel-Carbon shall conform to Article 124.3 of the Standard Specifications.
Structural Steel-Low Alloy (A242) shall conform to Article 124.4 of the Standard Specifications.
Cast Steel shall conform to Article 124.10 of the Standard Specifications.
Unless otherwise noted, Structural Steel and cast steel shall be given one shop coat of red lead paint and two field coats of aluminum paint.
All paint shall be furnished by the Contractor.
The bottom pipe of the handrail on each side of the bridge will be used to carry electrical cable for the lighting system. The inside of this pipe shall be free of burrs and rough edges for the entire length of the bridge.
Pipe railing and Lubrifa (or equal) bushings shall be included for payment as Structural Steel-Carbon.

SPANS 4-13 INCL.

TOTAL BILL OF MATERIAL

Item	Unit	Section 10D	Section 10E	Section 10F	Section 10P
Class X Concrete	Cu. Yds.	3723.3			
Handrail Concrete	Cu. Yds.	16.5			
Masonry Facing	Sq. Ft.	43			
Reinforcement Bars	Lbs.	761,760			
Structural Steel-Carbon	Lbs.	26,340	10,583,870	10,583,870	10,610,210
Structural Steel-Low Alloy	Lbs.		4,932,360	4,932,360	4,932,360
Cast Steel	Lbs.		130,290	130,290	130,290
Open Steel Floor	Sq. Ft.		9,030		9,030
Name Plates	Each	1			
Junction Boxes	Each			49	

DESIGNED	J.J. Raybuck	
CHECKED	E. Turnquist	J.T.R.
DRAWN	E. Rush	
CHECKED	J.J. Raybuck	

July 8 1955

EXAMINED W.M. Romine — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED R.R. Bartholomew — CHIEF HIGHWAY ENGINEER

LOADING H20-S16-44

SECTIONS 10E-D-P PROJ. I-05-4(2)
GENERAL PLAN & ELEVATION
PROJECT UI-48(11)
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A.I. RT. 05 - F. A. ROUTE 9 SECTION 10D-E-F-P
PEORIA - TAZEWELL COUNTIES

Rev. 7-19-55 - Sta. No. Pier 8 - R.B.M.
Rev. for Sec. E 8-20-56 R.B.M

Note. All longitudinal dimensions on grade except as noted.

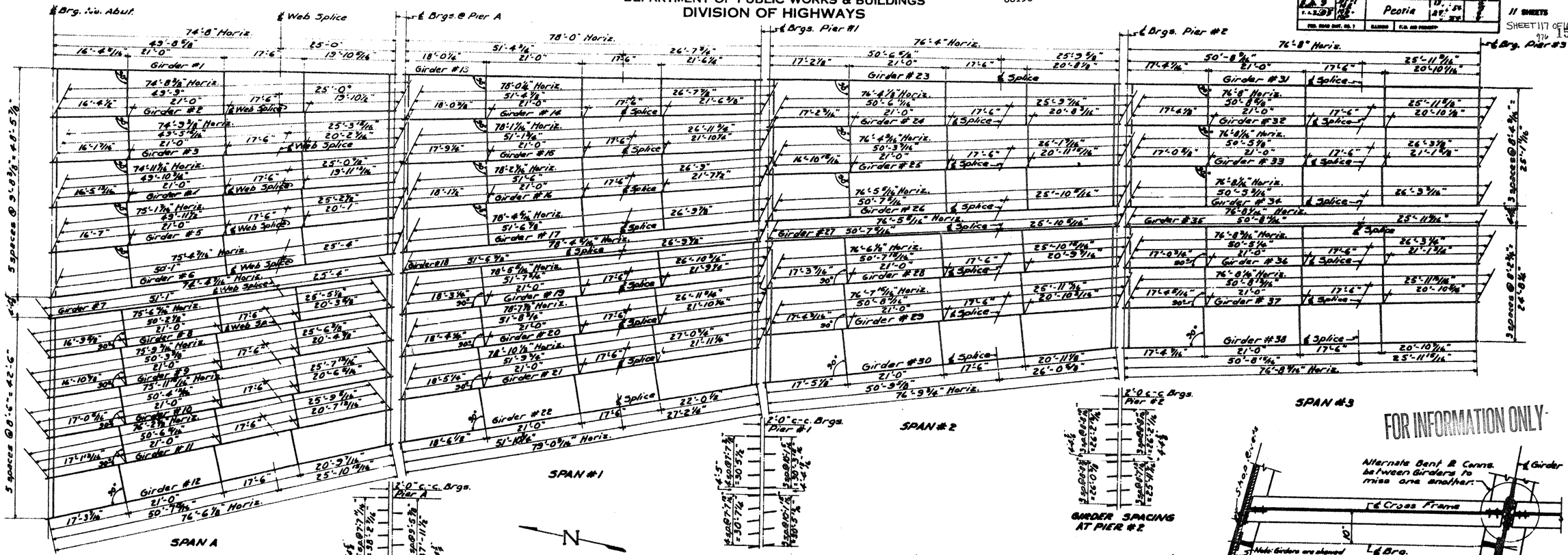
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 9	10 F1	Peoria	11	6

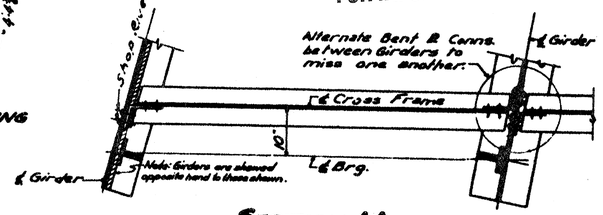
FED. ROAD DIST. NO. 7 | ILLINOIS | F.A. AID PROJECT

SHEET NO. 6
11 SHEETS
SHEET 117 OF 160
976 1559



FRAMING PLAN

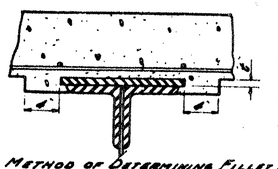
FOR INFORMATION ONLY



SECTION AA

ELEVATION
TOP OF GIRDERS AT ℄ BRGS.

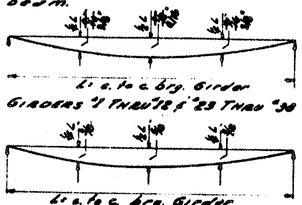
SPAN A				SPAN #1				SPAN #2				SPAN #3			
At Abut.		At Pier A		At Pier A		At Pier 1		At Pier 1		At Pier 2		At Pier 2		At Pier 3	
Gird.	Elevation	Gird.	Elevation	Gird.	Elevation	Gird.	Elevation	Gird.	Elevation	Gird.	Elevation	Gird.	Elevation	Gird.	Elevation
1	482.3581	1	485.1919	13	485.2627	13	487.8206	23	487.8810	23	489.7437	31	489.6048	31	491.3871
2	482.5132	2	485.3141	14	485.4145	14	487.8920	24	487.8558	24	489.6502	32	489.6948	32	491.3256
3	482.6684	3	485.3632	15	485.2857	15	487.6190	25	487.6335	25	489.4312	33	489.4768	33	491.2484
4	482.5346	4	485.0833	16	486.9349	16	487.3458	26	487.1310	26	489.2103	34	489.2512	34	491.1713
5	482.1550	5	484.7972	17	486.5808	17	487.0759	27	487.1135	27	489.1932	35	489.2433	35	491.1680
6	481.7866	6	484.5119	18	486.5631	18	487.0543	28	486.7535	28	488.9797	36	489.0341	36	491.0321
7	481.7605	7	484.4348	19	[illegible]		486.9872	29	488.7580	29	488.7580	37	488.8143	37	491.0462
8	481.4506	8	484.2369	20	486.8395	20	486.5[illegible]	30	[illegible]3	30	488.5405	38	488.6018	38	490.9460
9	481.1130	9	483.9642	21	486.5748	21	486.2324								
10	480.7770	10	483.6911	22	486.2919	22	486.8006								
11	480.4870	11	483.4452												
12	480.1957	12	483.2173												



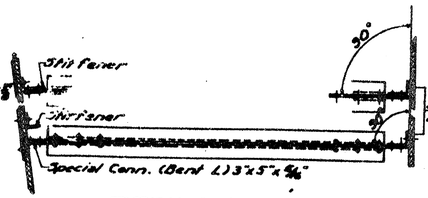
Connections to be used opposite right angle connections. Fill plates will may also be used when making connections to stiffeners opposite ℄ L Connections.

METHOD OF DETERMINING FILLET HEIGHTS ℄

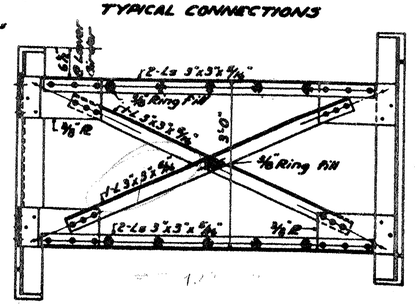
After all Structural Steel has been erected, elevations of the top flanges of the beams shall be taken at intervals not to exceed 10 ft. From these elevations subtract the increment of deflection for these points, determined from the D.L. deflection diagram. The elevations so obtained subtracted from the theoretical grade elevations, minus floor thickness, equals the fillet heights above top of beams.



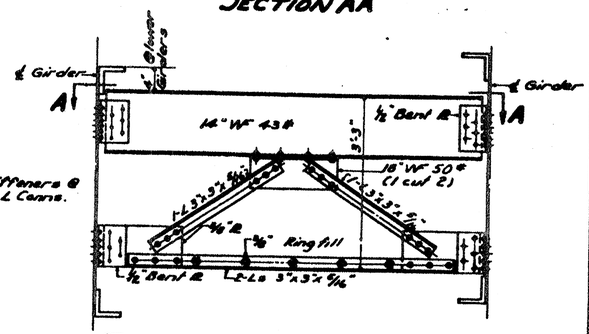
DEAD LOAD DEFLECTION DIAGRAMS



TYPICAL CONNECTIONS



INTERMEDIATE CROSS FRAMES



TYPICAL CROSS FRAME @ BEARINGS
Except @ Pier #3 for detail of Cross Frame @ Pier #3 See Sheet # 8

DESIGNED	K. Cichowski & J. McCoy
CHECKED	T. Dillon
DRAWN	K. Cichowski & J. Ganci
CHECKED	O.J.McC

Dec. 8 1955
EXAMINED V. M. Romine — BUREAU OF BRIDGES AND TRAFFIC STRUCTURES
PASSED E. S. Shaw — CHIEF ENGINEER
APPROVED B. M. Barton — DIRECTOR OF PUBLIC WORKS AND BUILDINGS

Revised - 4-8-58 - WJM - On DEAD LOAD DEFLECTION DIAGRAMS - GIRDERS #1 THRU #12 & #25 THRU #30, changed deflection at points ¼L from 9/16" to 5/8" and that at midspan (½L) from 3/8" to 9/16".

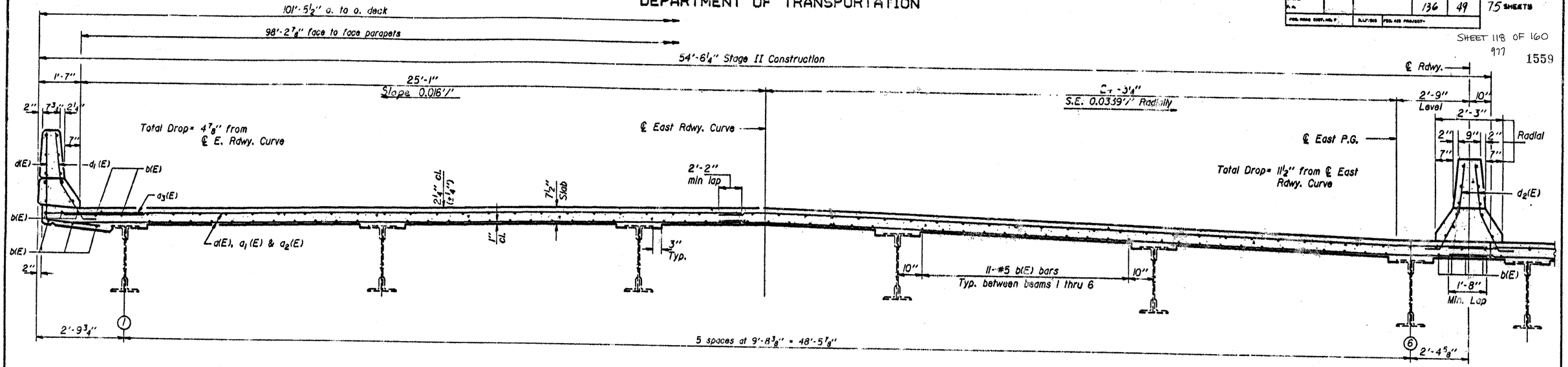
FRAMING PLAN
PROJECT UI-48-03
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE-JACKSON STREETS
F.A. ROUTE 9-SECTION 10 F1-E-D-P
PEORIA-TAZEWELL COUNTIES

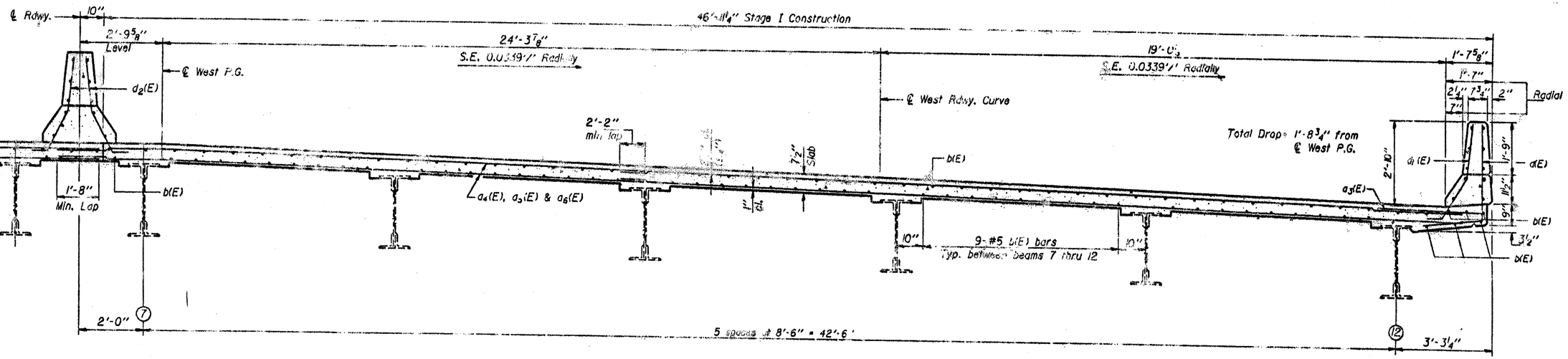
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			136	49
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 14
75 SHEETS
SHEET 118 OF 160
977 1559





CROSS SECTION
(Looking South)

All dimensions are along ℄ Brg. N Abut. unless otherwise noted

See Sht. #22 thru 24 for superstructure details and Bill of Material.

FOR INFORMATION ONLY

DESIGNED	Patrick McPetrie
CHECKED	A.L. Bond
DRAWN	RPS JRS
CHECKED	A.L.B.

Dec. 20 1983
EXAMINED James I. Ingham
BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

NORTH APPROACH
SUPERSTRUCTURE
CROSS SECTION SPAN A
F.A.I. RT. 74 SEC. 100-1
PEORIA-TAZEWELL COUNTIES
STATION 151+85

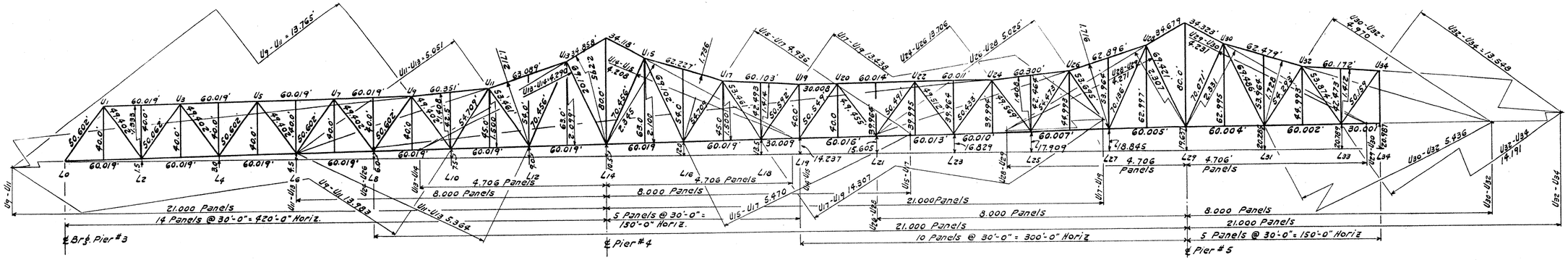
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

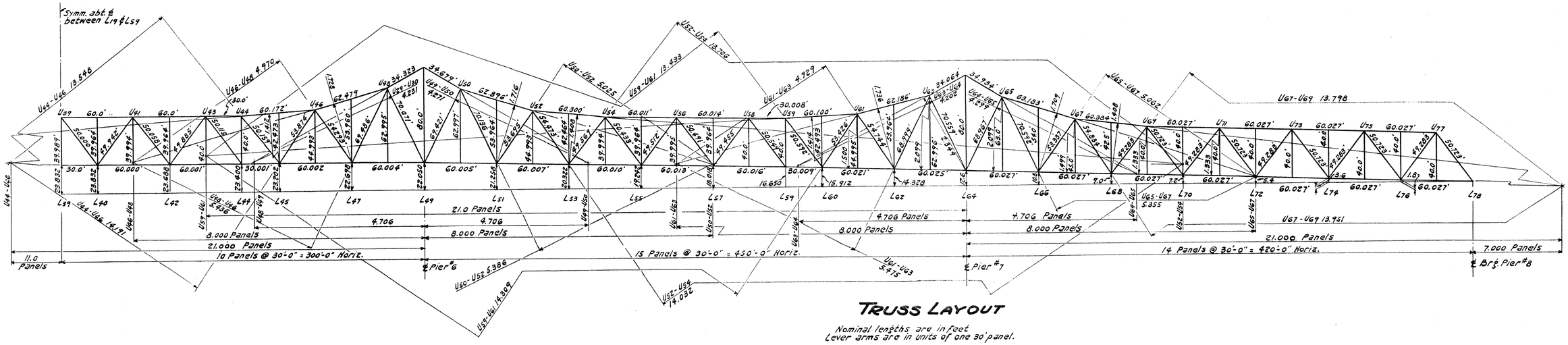
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 9	10F	Peoria-Tazewell	37	11
F.A.I. 05	10E		54	23
	10P		54	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9
42 SHEETS

68196

SHEET 119 OF 160
978 1559





TRUSS LAYOUT

Nominal lengths are in feet
Lever arms are in units of one 30' panel.

FOR INFORMATION ONLY

DESIGNED	W.L. Owen	
CHECKED	G.R.E. Thurman Jr.	
DRAWN	H.L.D	K.O.
CHECKED	J.T. Rayburn	C.E.T.

July 8 19 55

EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

LEVER ARMS & NOMINAL LENGTHS
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F. A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

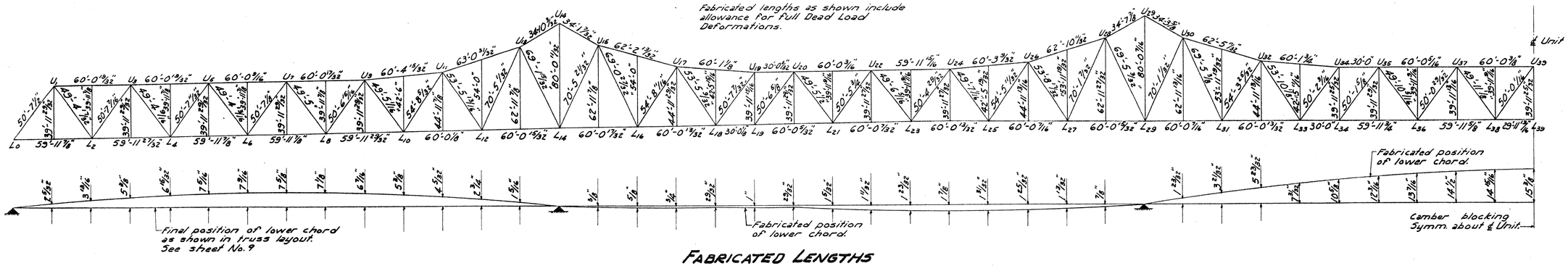
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10F	Peoria - Tazewell	37	12
F.A.I. 05	10E		54	24
	10D		54	29
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

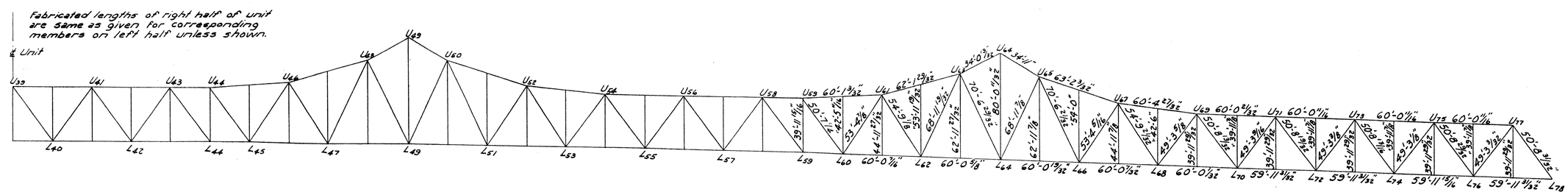
SHEET NO. 10
42 SHEETS

68196

SHEET 120 OF 160
979 1559



FABRICATED LENGTHS
CAMBER BLOCKING ORDINATES



FABRICATED LENGTHS

FOR INFORMATION ONLY

DESIGNED	C. E. Trummer Jr.
CHECKED	Harry P. Graham
DRAWN	K. E. J. Ganci
CHECKED	J. J. Rayburn

July 8 1955

EXAMINED W. M. Kamine, ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES

PASSED E. E. Stewart, ENGINEER OF DESIGN

APPROVED R. R. Bartelsmeyer, CHIEF HIGHWAY ENGINEER

FABRICATED LENGTHS & CAMBER
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

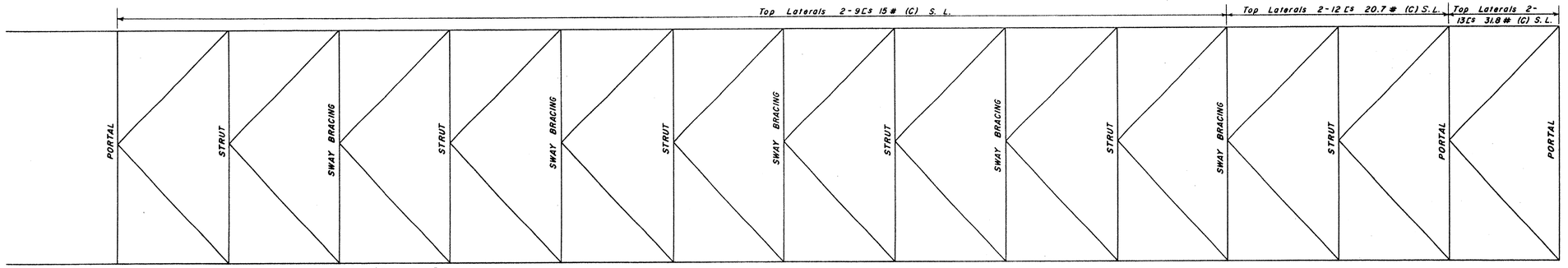
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10F	Peoria-Tazewell	37	13
F.A.I. 05	10E		54	25
	10P		54	25
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

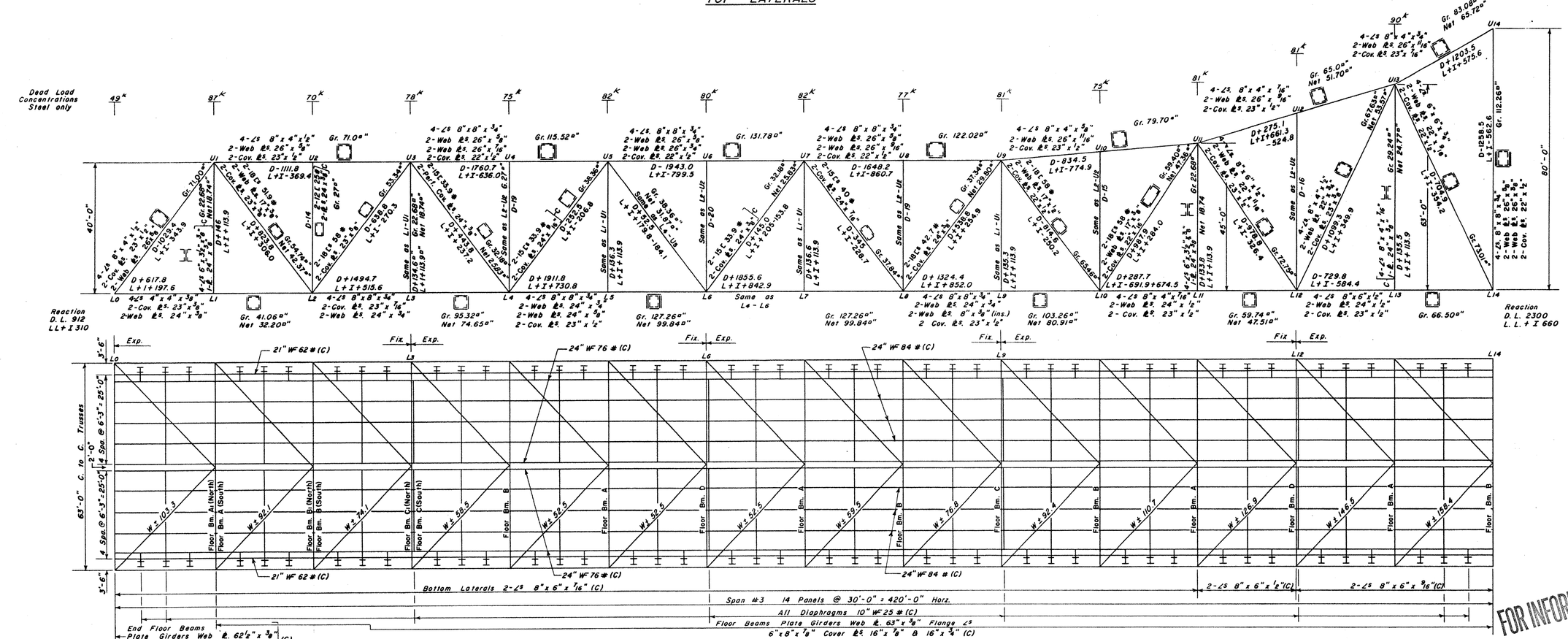
SHEET NO. 11
+2 SHEETS

SHEET 121 OF 160
900 1559



All Struts 3½" x 5" x 5/16" - 4 Cs (Double Laced) (C)

TOP LATERALS



ANCHOR ARM L0 TO L14 AND L78 TO L64

DESIGNED	W.L. Owen
CHECKED	Carl E. Thum
DRAWN	R.O. W.A. Swaseman Jr. CETh.
CHECKED	J.J. Rayburn

July 8 1955

EXAMINED J.M. Komine
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED R.R. Bartholomew
CHIEF HIGHWAY ENGINEER

NOTE: Wind stresses in bottom chord members were computed but not shown because in all cases the wind loads in combination with other loads did not produce unit stresses greater than 1.25 times the allowable.

NOTE: All steel shown on this sheet shall be Low-Alloy Steel except that noted (C). Material noted (C) shall be Carbon Steel.

FOR INFORMATION ONLY

STRESSES & MAKE UP L0-L14 & L78-L64
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

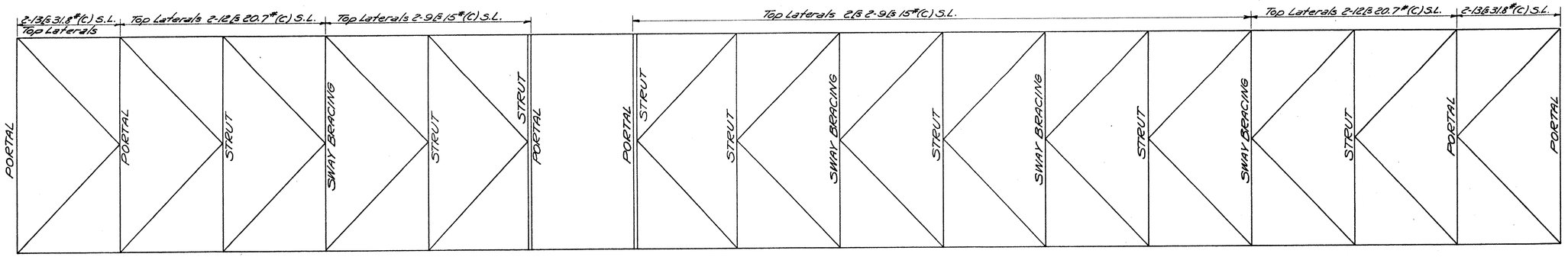
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10F	Peoria-Tazewell	39	14
F.A.I. 05	10E		54	26
	10P		54	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

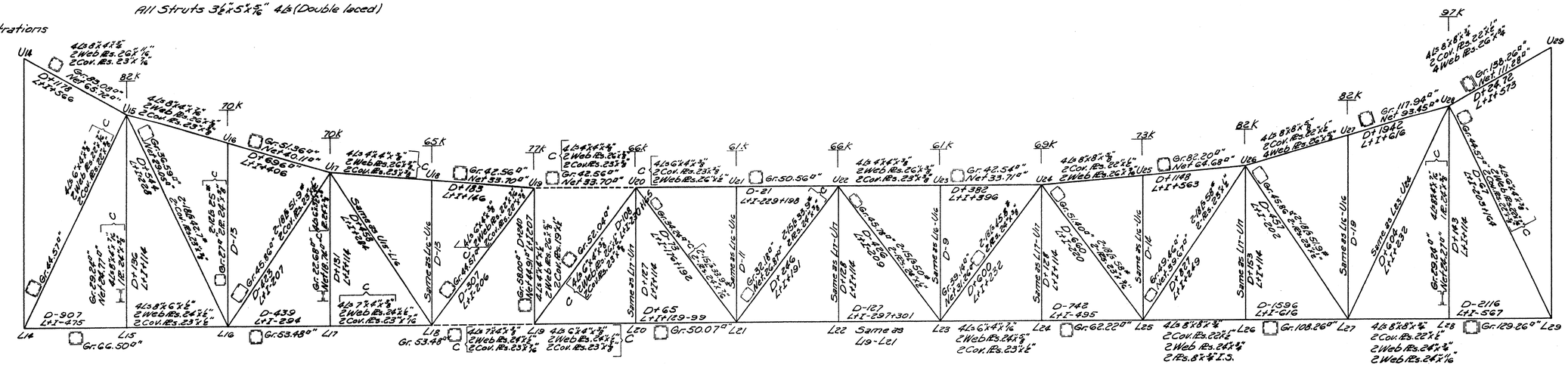
SHEET NO. 12
42 SHEETS

SHEET 122 OF 160
981 1559



All Struts 3½"x5"x⅝" 4Ls (Double laced)

D.L. Concentrations
Steel only.



CANTILEVER L14 TO L19 & L64 TO L59 - ANCHOR ARM L19 TO L29 & L59 TO L49

DESIGNED	H.K. Owens
CHECKED	Carl E. Thurman Jr.
DRAWN	K.O. E.R. Rush
CHECKED	J.J. Rayburn

July 8 1955

EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

Note: All steel shown on this sheet shall be Low-Alloy Steel except that noted (C). Material noted (C) shall be Carbon Steel.

FOR INFORMATION ONLY

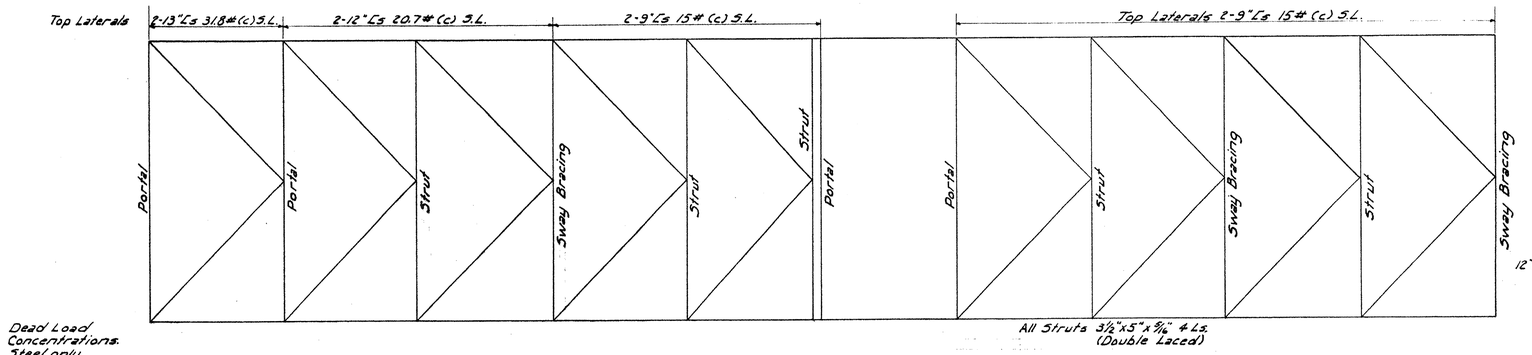
STRESSES & MAKE UP L14-L29 & L64-L49
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

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

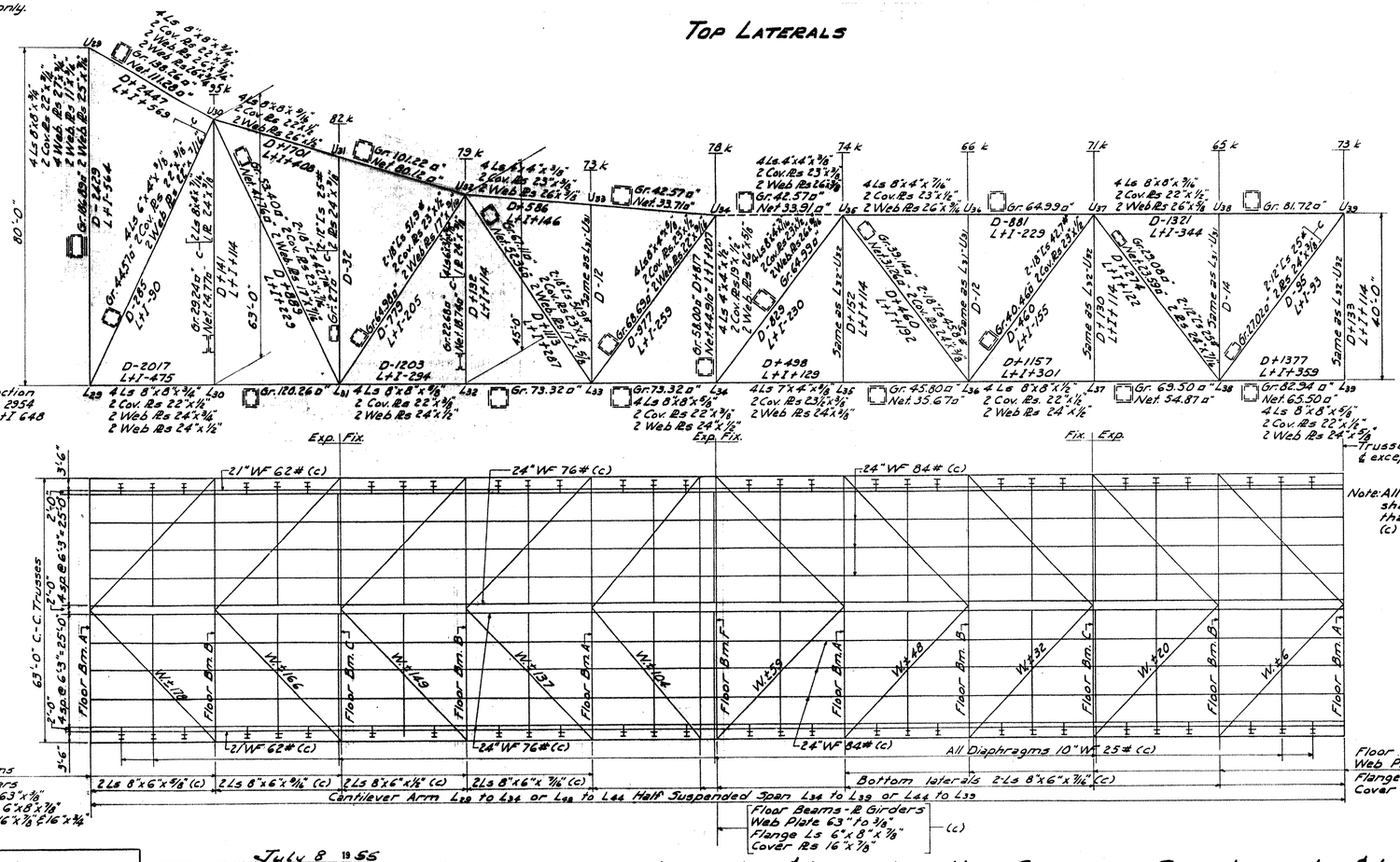
68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10F	Peoria-Tazewell	37	15
F.A.I. 05	10G		54	27
	10O		54	27
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

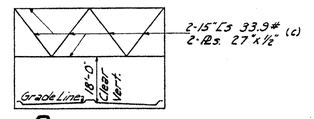
SHEET NO. 13
42 SHEETS
SHEET 123 OF 160
982 1559



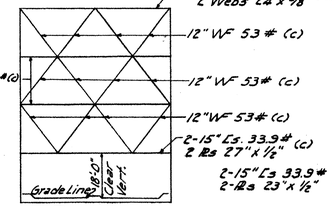
TOP LATERALS



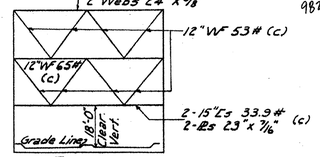
Note: All steel shown on this sheet shall be Low-Alloy Steel except that noted (c) Material noted (c) shall be Carbon Steel.



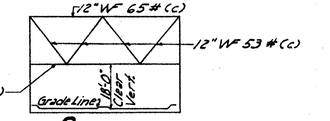
PORTAL
L0-U1 & U37-L38



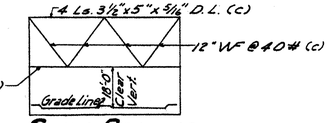
PORTAL
L14-U14; L29-U29; L49-U49 & L44-U44



PORTAL
U13-L13; L14-U15; U48-L23; L29-U30; U48-L49; L49-U50; U43-L44 & L44-U46.



PORTAL
U9-L13; U30-L13; U34-L23; U35-L26; U43-L44; U44-L45; U38-L39 & U38-L40



SWAY BRACING
L3-U3; L5-U5; L7-U7; L9-U9; L11-U11; L13-U13; L22-U22; L24-U24; L26-U26; L32-U32; L37-U37; L39-U39; L41-U41; L42-U42; L43-U43; L44-U44; L46-U46; L61-U61; L67-U67; L69-U69; L71-U71; L73-U73 & L75-U75

DESIGNED	J.R. Owen
CHECKED	C.E.T. Mumman Jr.
DRAWN	K.O. J. Ganci
CHECKED	C.E.T.Q. J.J. Rayborn

July 8 19 55

EXAMINED	T.M. Kennine, ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED	E.J. Finch, ENGINEER OF DESIGN
APPROVED	R.R. Bartelmeyer, CHIEF HIGHWAY ENGINEER

FOR INFORMATION ONLY

STRESSES & MAKE UP L29-L39 & L49-L39
PROJECT UT-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

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

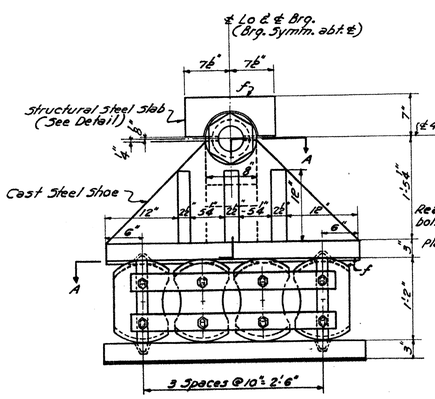
68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 9	10F	Peoria-Tazewell	37	16
F.A.I. 05	10E-10P		54	28
			54	29
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 14
42 SHEETS

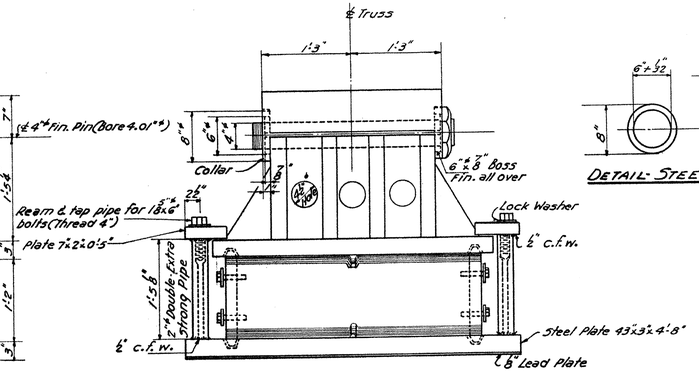
SHEET 124 OF 160

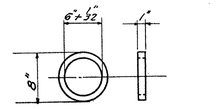
983 1559



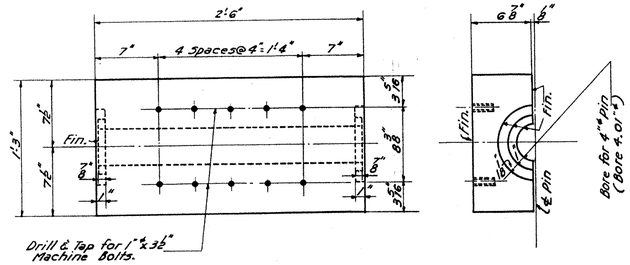
DETAIL OF EXPANSION BEARING

AT Lo & Lo' PIERS 3 & 8
4 Assemblies Req'd.

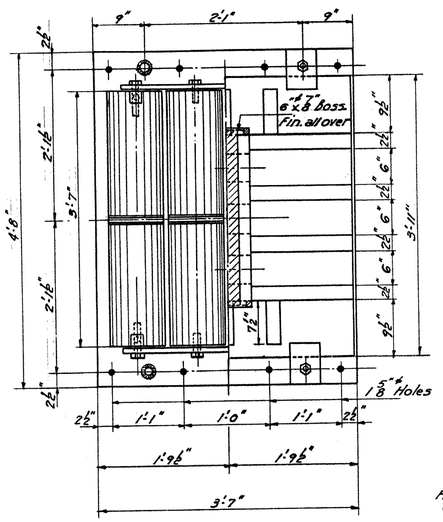




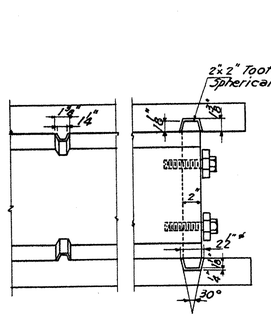
DETAIL - STEEL COLLAR

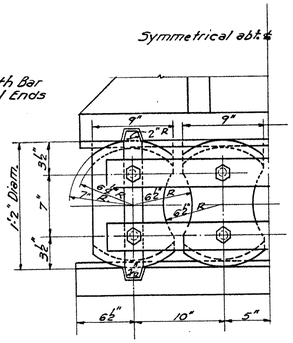


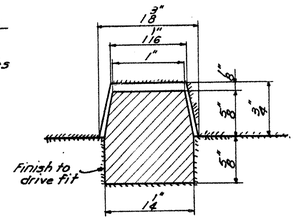
DETAIL OF STRUCTURAL STEEL SLAB



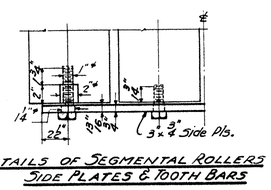
SECTION A-A



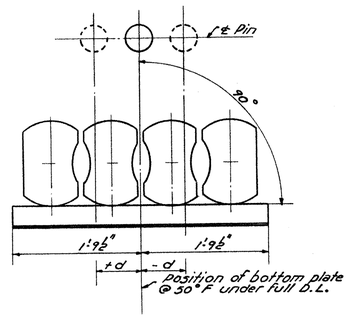




Full Size Section at Guide Bar
To be used in lower bearing plate at Rollers. Similar guide to be made in casting above rollers by making finished projection



DETAILS OF SEGMENTAL ROLLERS SIDE PLATES & TOOTH BARS



Temp at time of Erection °F	d inches under full D.L.
20	-1
30	-⅝
40	-⅜
* 50	0
60	+⅜
70	+⅝
80	+1
90	+1⅜
100	+1⅝

* Normal

FOR INFORMATION ONLY

DESIGNED	C. E. Thurmond
CHECKED	H. E. Fisher, C.E. Thurmond Jr., J. J. Rayburn
DRAWN	M. Miller
CHECKED	J. J. Rayburn

July 8 1955

EXAMINED W. M. Kramer, ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED E. E. Stewart, ENGINEER OF DESIGN
APPROVED B. H. Bartholomew, CHIEF HIGHWAY ENGINEER

QUANTITIES - TRUSS BEARINGS

Carbon Steel	50,720 Lbs.*
Cast Steel	108,120 Lbs.*

*Note: Includes weight of Exp. Brg. @ Pier #3 & 8 @ ℄ End Floor Bm.

BEARING DETAILS @ PIERS 3 & 8
PROJECT UI-48(.)
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F. A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

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

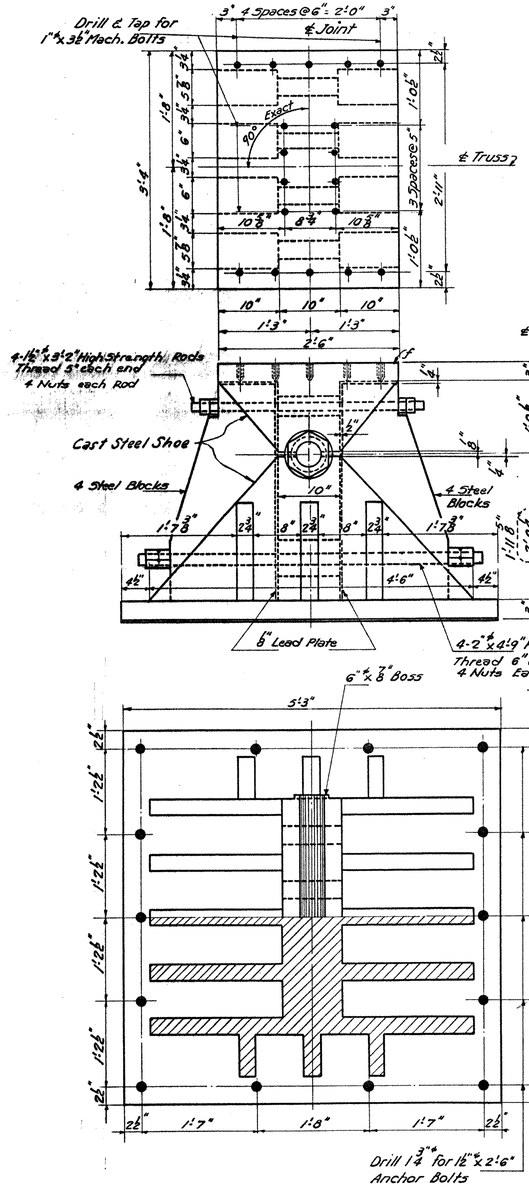
68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I.A. 9	10E	Peoria-Tazewell	37	17
F.A.I. 05	10F		54	29
	10P		54	29
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

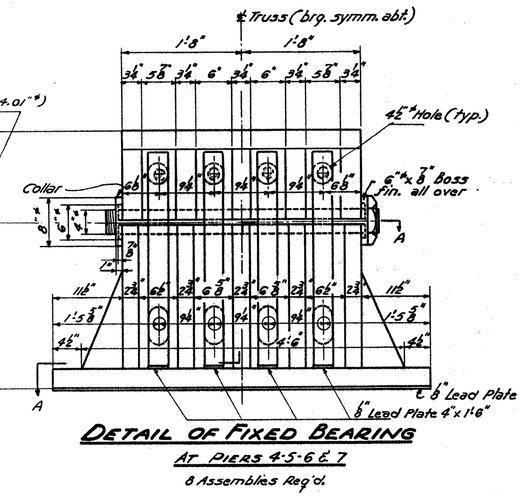
SHEET NO. 15 A
42 SHEETS

SHEET 125 OF 160

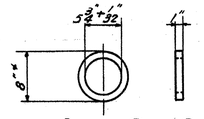
964 1559



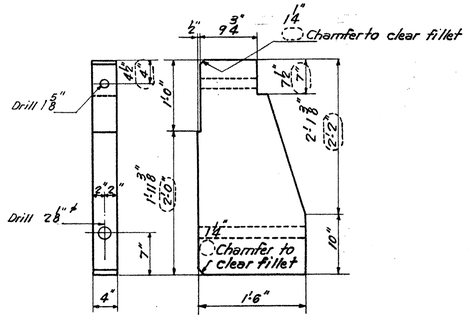
SECTION A-A



DETAIL OF FIXED BEARING
AT PIERS 4-5-6 & 7
8 Assemblies Req'd.



DETAIL STEEL COLLAR
16 Required for Piers 4, 5 & 7



STEEL BLOCK DETAILS

BILL OF MATERIAL

Item	No.	Size
Steel Blocks	8	As Shown
Lead Plates	8	4"x8"x1'-6"
High Strength Rods	4	2⅛"x4'-9"
Hex. Nuts	16	2"
Hex. Nuts	16	1½"
High Strength Rods	4	1½"x3'-2"
Lead Plates	8	4"x8"x2'-0"

1'-11⅜"

Steel Blocks added to Downstream Bearing at Pier 5
6-10-'59 M.L.O.
Revised: 6-12-59

1'-11⅜"
(2'-0") Indicates adjustment made after taking field measurements

These blocks were installed July 10, 1959

FOR INFORMATION ONLY

DESIGNED	C. E. Thurman
CHECKED	W. E. Fisher / J. J. Rayburn
DRAWN	W.E.F. M. Miller
CHECKED	J. J. Rayburn

June 10, 1959

EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

BEARING DETAILS @ PIERS 4-5-6 & 7
PROJECT UI-48(7)
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F. A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

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

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10F	Peoria-Tazewell	37	18
F.A.I. 05	10E		54	30
	10P		54	30
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 16
42 SHEETS
SHEET 126 OF 160 1559

SWAY BRACE AT U3-U5-U7 ETC.

END VIEW

L0

L1

L2

L3

U1

U2

U3

Lateral and Floor beam connection Same as at L5

FOR INFORMATION ONLY

DESIGNED	H.R. Crow
CHECKED	C.E.T.
DRAWN	C.E.T. M. Miller
CHECKED	C.E.T. J.T. Rayburn

EXAMINED July 8 1955
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

TRUSS DETAILS L0-L3
PROJECT UT-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

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

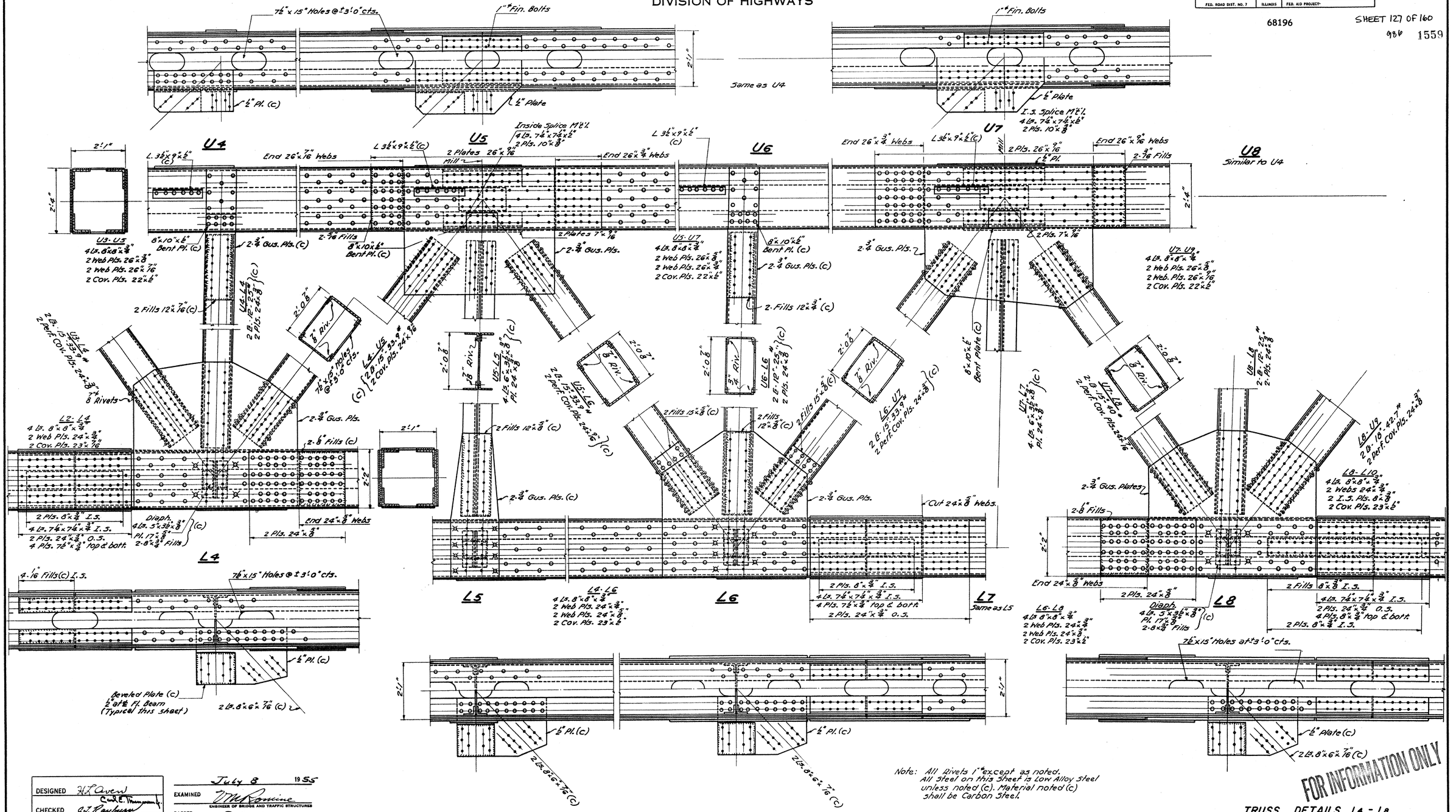
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10F	Peoria-Tazewell	37	19
F.A.I. 05	10E		54	31
	10P		54	31
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 17
42 SHEETS

68196

SHEET 127 OF 160

986 1559



DESIGNED	H.L. Avery	
CHECKED	J.T. Rayburn	
DRAWN	H.L.O.	W. Miller
CHECKED	J.T. Rayburn	

July 8 1955

EXAMINED W.M. Romine — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED E.E. Wendt — ENGINEER OF DESIGN
APPROVED R.R. Bartelmeyer — CHIEF HIGHWAY ENGINEER

Note: All Rivets ⅞" except as noted. All Steel on this Sheet is Low Alloy Steel unless noted (c). Material noted (c) shall be Carbon Steel.

FOR INFORMATION ONLY

TRUSS DETAILS L4 - L8
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON COUNTIES
F. A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

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

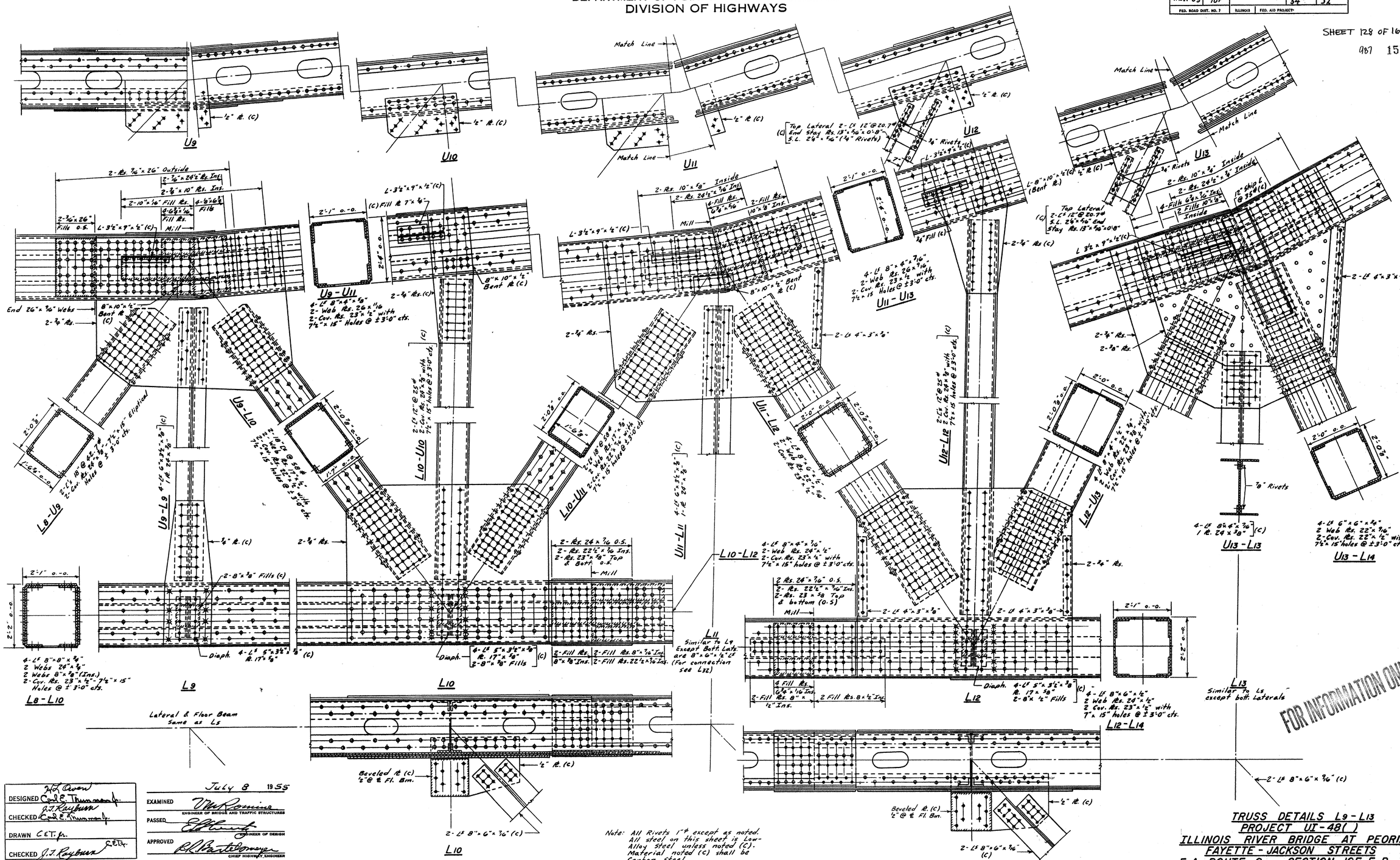
68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10E	Peoria - Tazewell	37	20
F.A.I. 05	10S		54	32
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 18
42 SHEETS

SHEET 128 OF 160

987 1559



DESIGNED	Carl E. Thunman Jr.
CHECKED	J.T. Rayburn
DRAWN	C.E.T. Jr.
CHECKED	J.T. Rayburn C.E.T.

July 8 1955

EXAMINED _____ ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES

PASSED _____ ENGINEER OF DESIGN

APPROVED _____ CHIEF HIGHWAY ENGINEER

Note: All Rivets 1" ϕ except as noted. All steel on this sheet is Low-Alloy steel unless noted (C). Material noted (C) shall be Carbon Steel.

FOR INFORMATION ONLY

TRUSS DETAILS L9 - L13
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F. A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

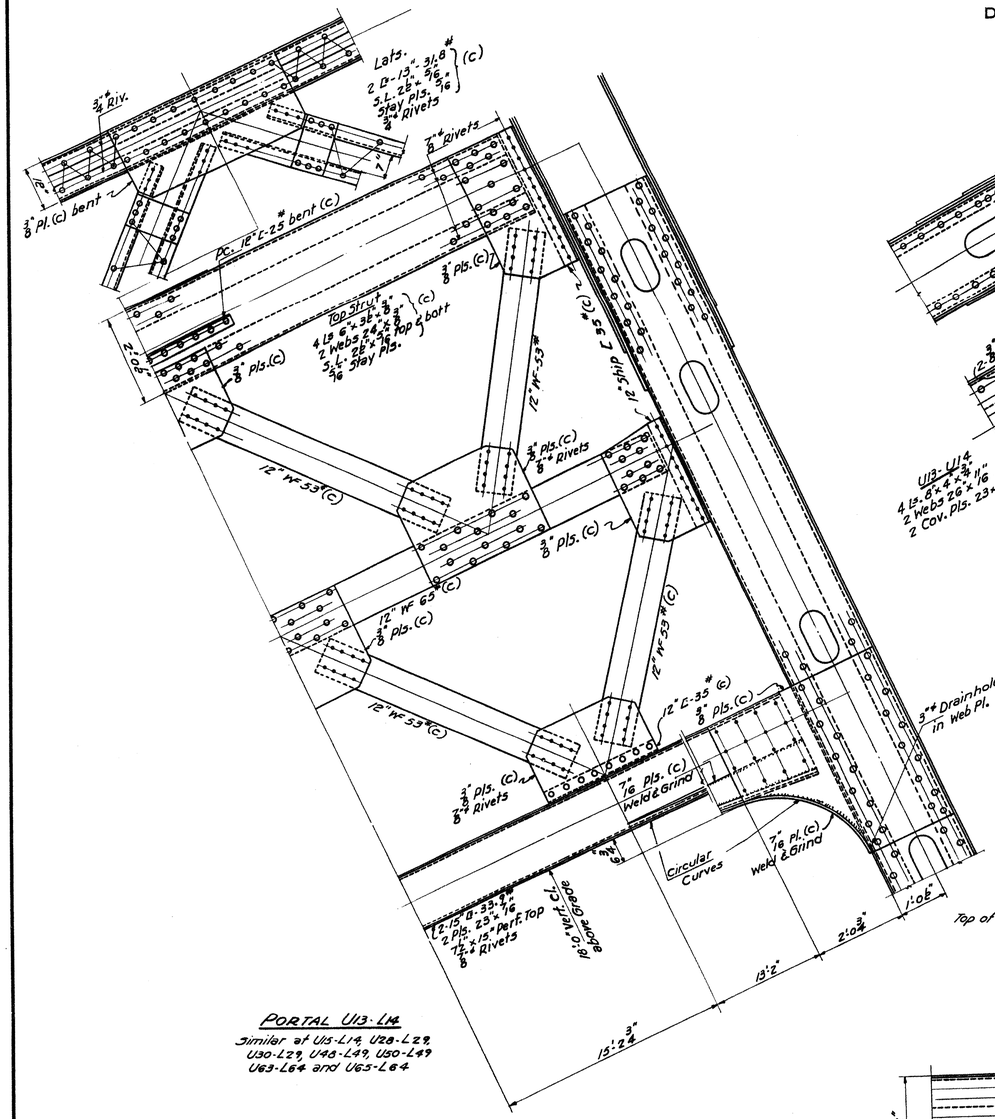
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

68196

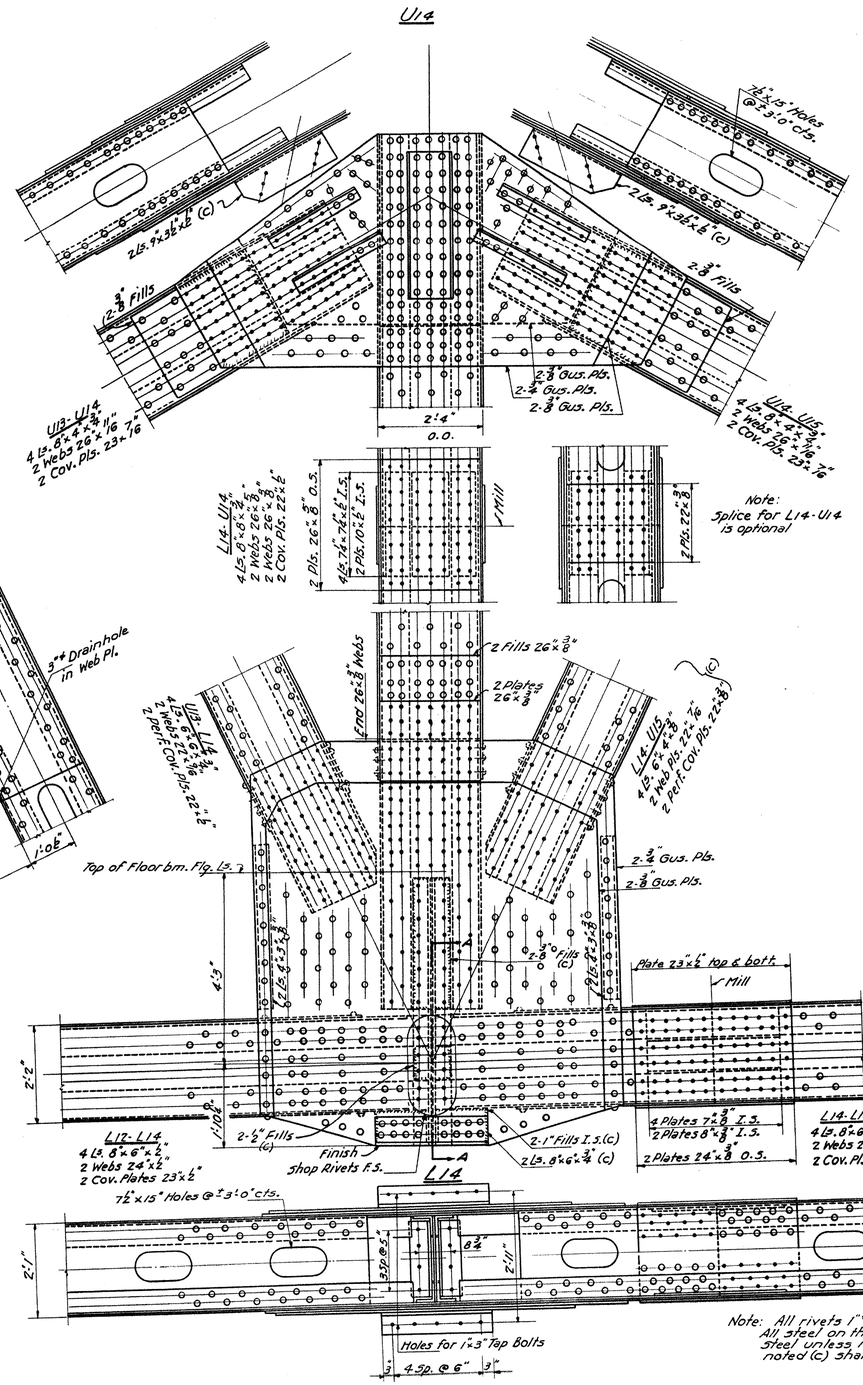
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10F	Peoria-Tazewell	31	21
F.A.P. 05	10E		34	33
	10P		54	33
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 19
42 SHEETS
SHEET 129 OF 160

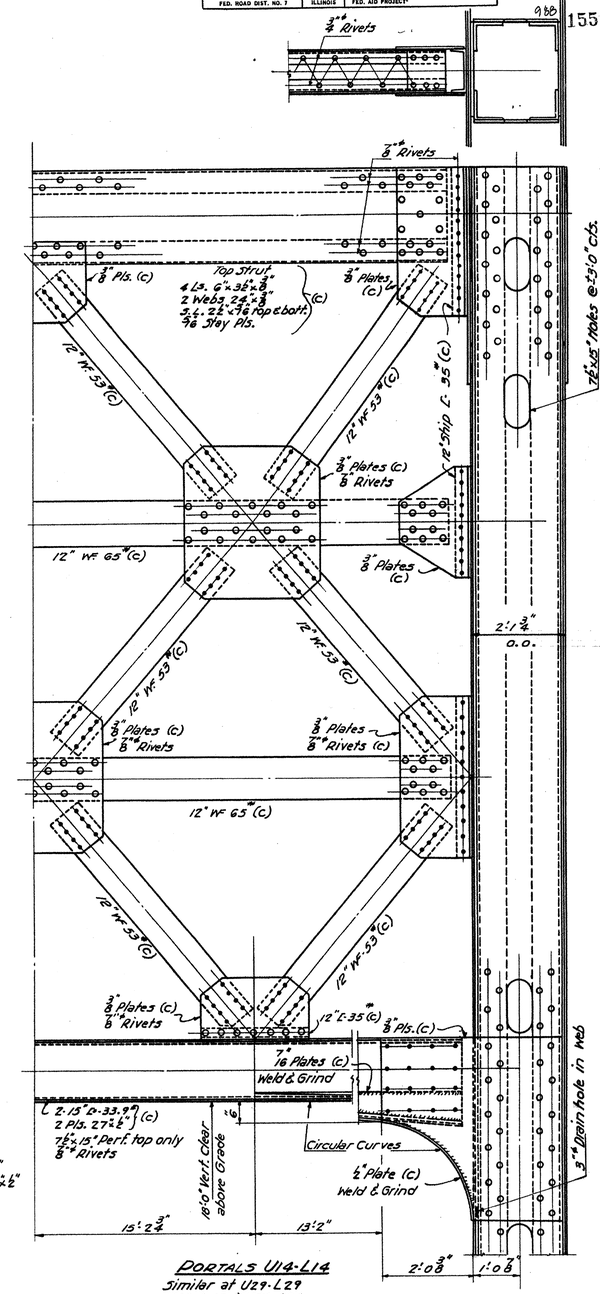
988 1559



PORTAL U13-L14
Similar at U15-L14, U28-L29, U30-L29, U48-L49, U50-L49, U63-L64 and U65-L64



Note: All rivets 1" except as noted. All steel on this sheet is Low Alloy Steel unless noted (C). Material noted (C) shall be Carbon Steel.



PORTALS U14-L14
Similar at U29-L29, U49-L49 & U64-L64

Diaph.
4 Ls. 5"x3½"x½" (C)
Pl. 21"x⅜"
2-½" Fills (C)
2 Ls. 8"x6"x¾" (C)
SECTION A-A

DESIGNED	H.L. Owen	
CHECKED	G.P.T. Thurnau Jr.	
DRAWN	H.L.O.	M. Miller
CHECKED	J.T. Rayburn	C.E.T.H.

July 8 1955

EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

FOR INFORMATION ONLY

TRUSS DETAILS L14
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

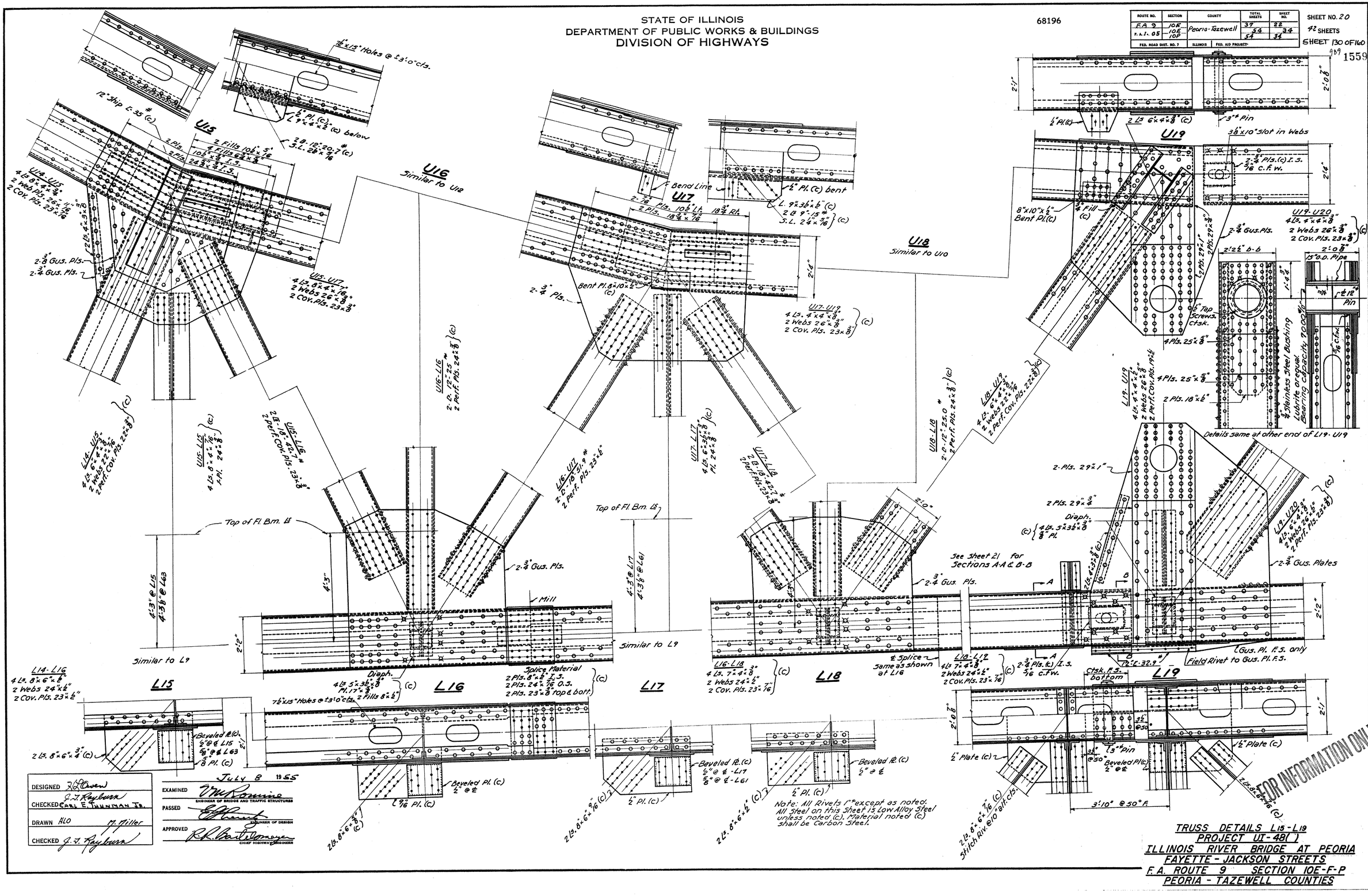
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10E	Peoria-Tazewell	37	22
F.A.I. 05	10E		54	34
	10P		54	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 20
42 SHEETS
SHEET 130 OF 160

989 1559



DESIGNED J.T. Raybourn
CHECKED CARL E. JUNNIMAN JR.
DRAWN H.L.O. M. Miller
CHECKED J.T. Raybourn

JULY 8 1955

EXAMINED O.M. Ronnie
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED E.E. Hauck
ENGINEER OF DESIGN
APPROVED R.R. Bartelsmeyer
CHIEF HIGHWAY ENGINEER

TRUSS DETAILS L15-L19
PROJECT UT-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

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

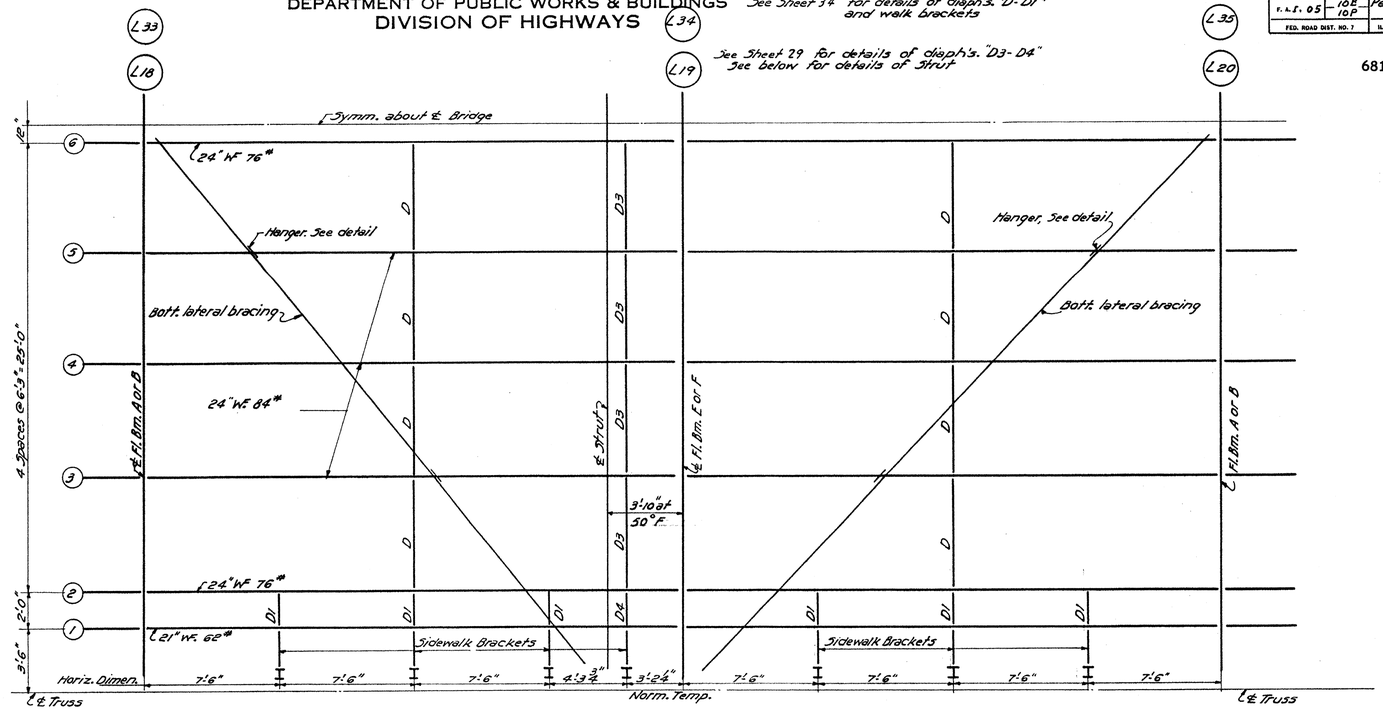
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10F	Peoria-Tazewell	37	23
F.A.I. 05	10E		54	35
	10P		54	35
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 21
42 SHEETS

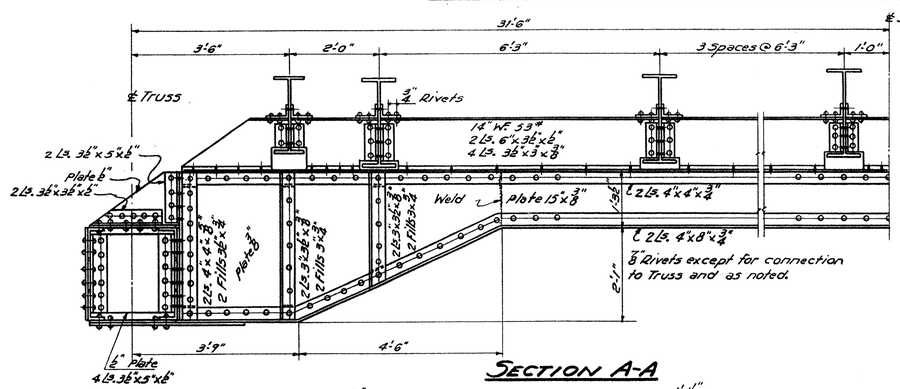
68196

SHEET 131 OF 160

990 1559



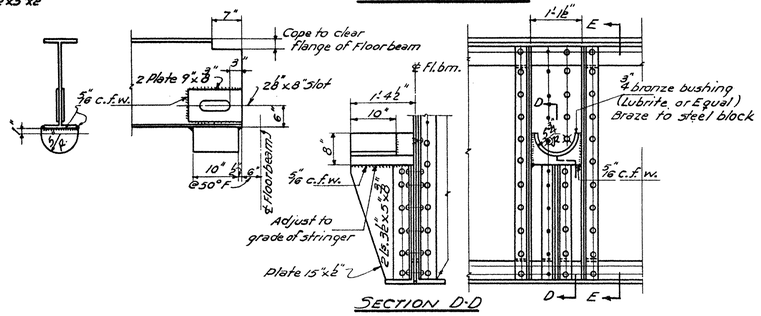
HALF PLAN FLOOR FRAMING AT L18 TO L20 & L33 TO L35



SECTION A-A

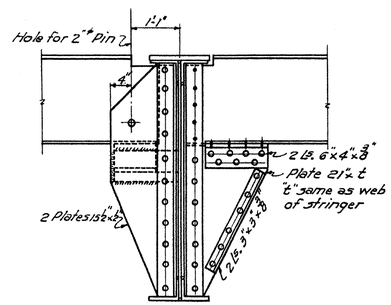
Note: All Steel on this Sheet shall be Carbon Steel unless otherwise noted.

Note: Sections A-A & B-B are from Sheet 20



SECTION B-B

SECTION D-D



SECTION E-E

STRINGER SEAT DETAILS FOR BEAMS AT L19-L34-L44 & L59

DESIGNED	W.L.Owen	
CHECKED	D.T. Kayburn	
CHECKED	Carl E. Thunman Jr.	
DRAWN	H.L.O.	M. Miller
CHECKED	D.T. Kayburn	

July 8 19 55

EXAMINED M.K. Ramsey — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES

PASSED C.E. Ramsey — ENGINEER OF DESIGN

APPROVED R.R. Bartelsmeyer — CHIEF HIGHWAY ENGINEER

FOR INFORMATION ONLY

TRUSS DETAILS L19
PROJECT UT-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F. A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

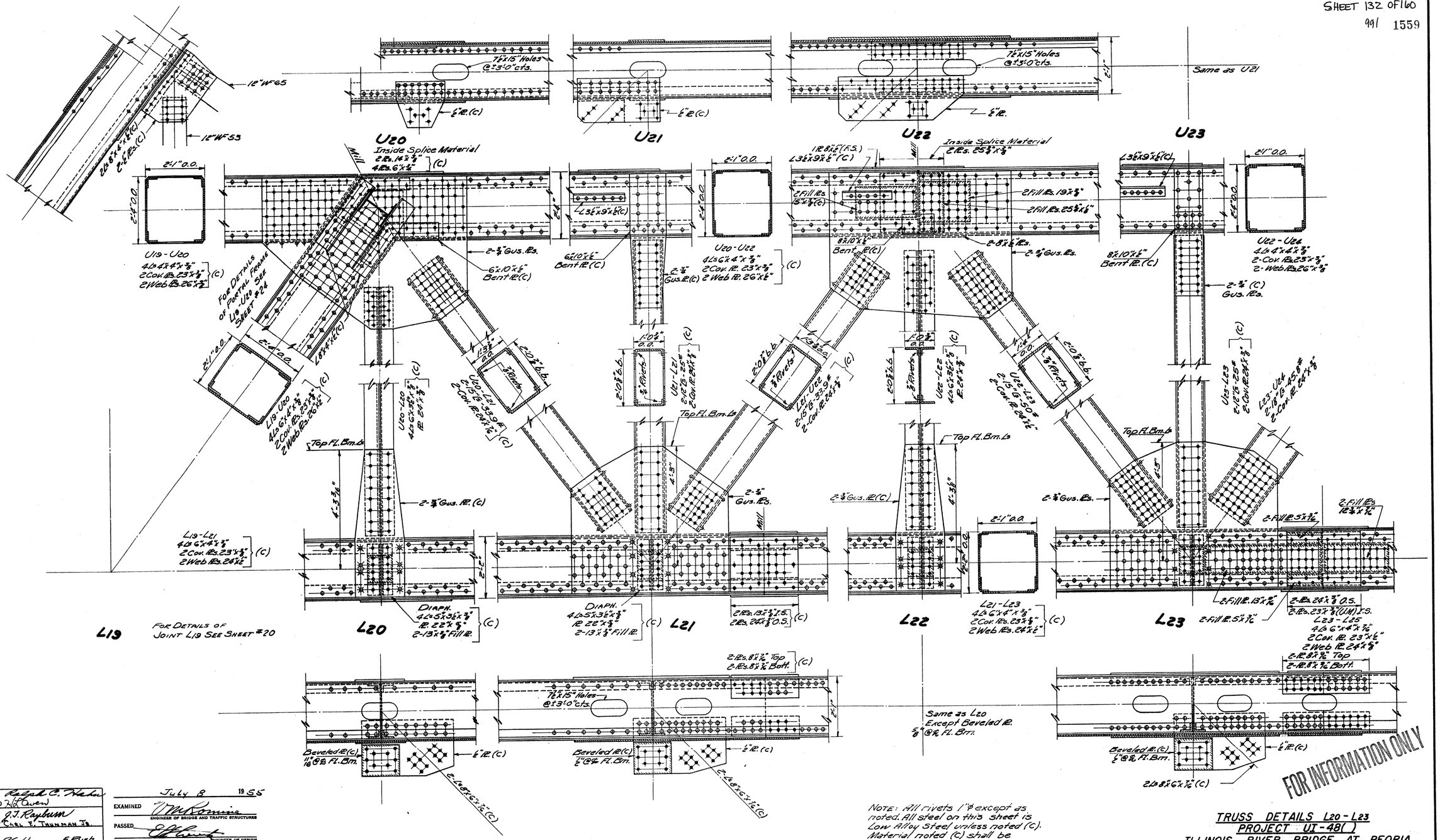
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 9	10F	Peoria-Tazewell	37	24
F.A.I. 05	10G		64	36
	10P		54	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 22
42 SHEETS

SHEET 132 OF 160
991 1559



DESIGNED	Richard C. Nelson / H. Owen
CHECKED	J.J. Rayburn / Carl T. Trunman Jr.
DRAWN	R.C.H. / E. Rush
CHECKED	J.J. Rayburn

July 8 1956

EXAMINED _____ ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES

PASSED _____ ENGINEER OF DESIGN

APPROVED _____ CHIEF HIGHWAY ENGINEER

NOTE: All rivets 1" ϕ except as noted. All steel on this sheet is Low Alloy Steel unless noted (C). Material noted (C) shall be Carbon Steel.

TRUSS DETAILS L20 - L23
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F. A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

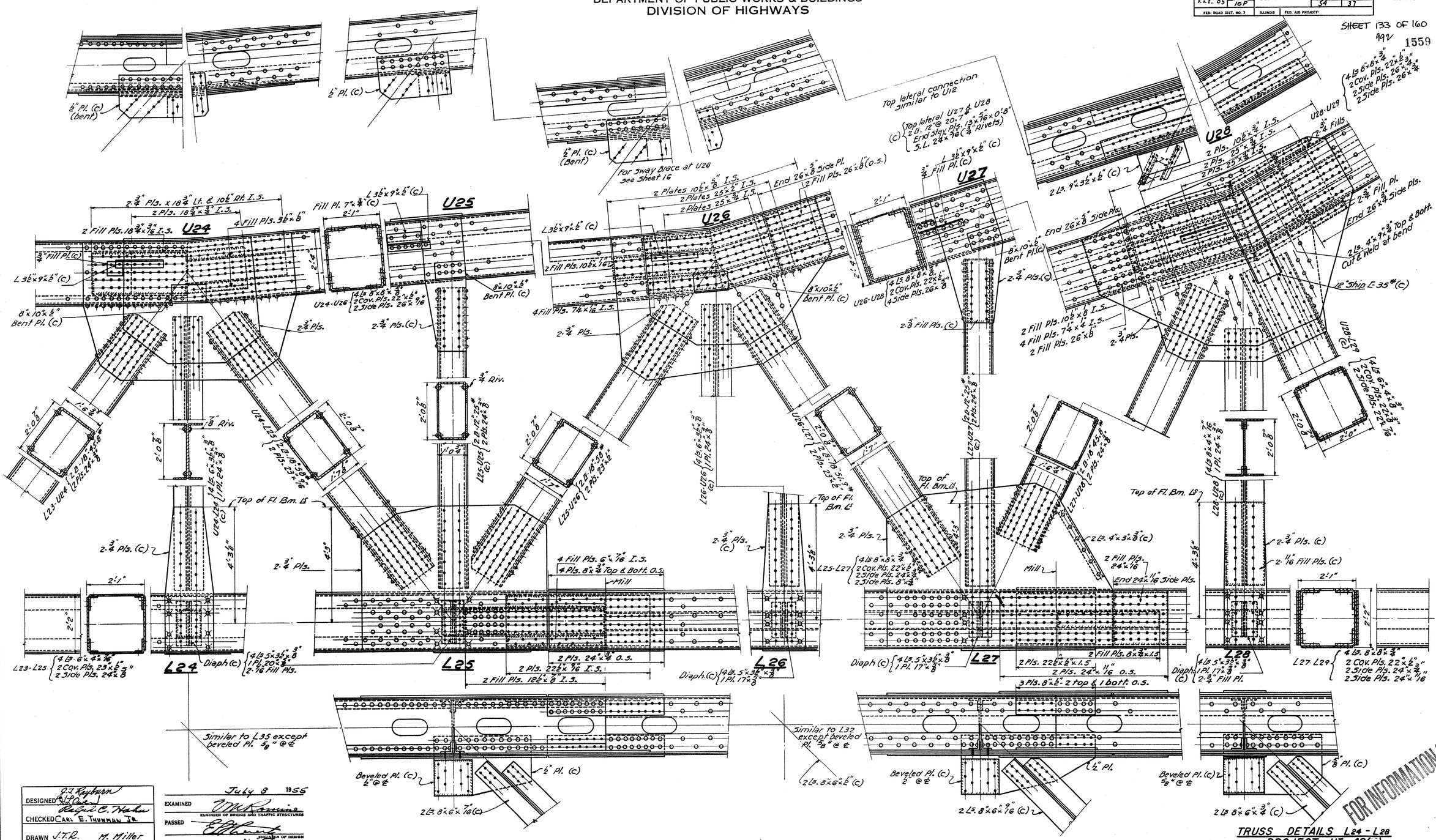
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10F	Peoria - Tazewell	37	28
F.A.I. 05	10E		54	37
	10P		54	37
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 23
42 SHEETS

SHEET 133 OF 160
1559



DESIGNED	O.J. Rayburn / W.D. Cox
CHECKED	Carl E. Thumman Jr. / Ralph C. Hahn
DRAWN	J.T.R. / M. Miller
CHECKED	R.C.H. / J.T.R.

July 8 1955

EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

Note: All Rivets 1" ⌀ except as noted. All Steel on this Sheet is Low Alloy Steel unless noted (c). Material Noted (c) shall be Carbon Steel.

FOR INFORMATION ONLY

TRUSS DETAILS L24 - L28
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

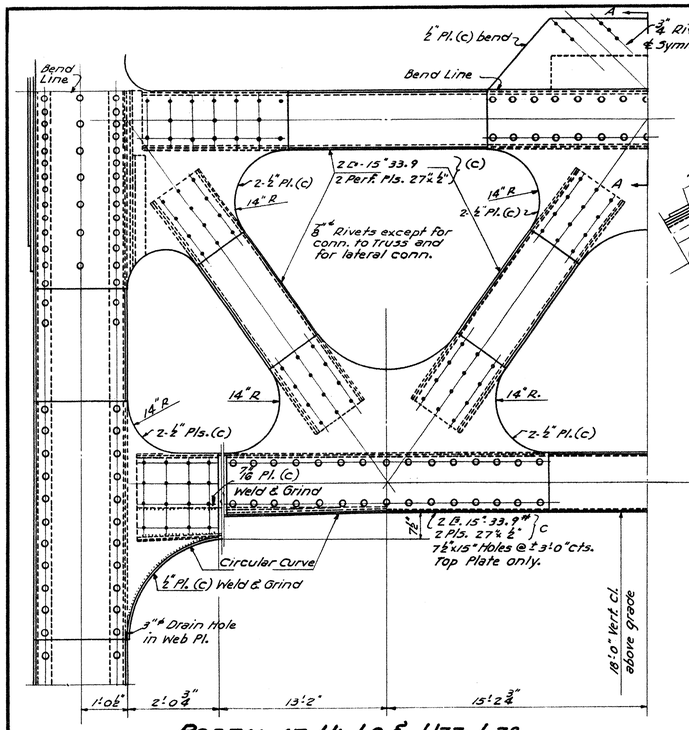
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10F	Peoria-Tazewell	37	36
F.A.I. 05	10E		54	38
	10P		54	38
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

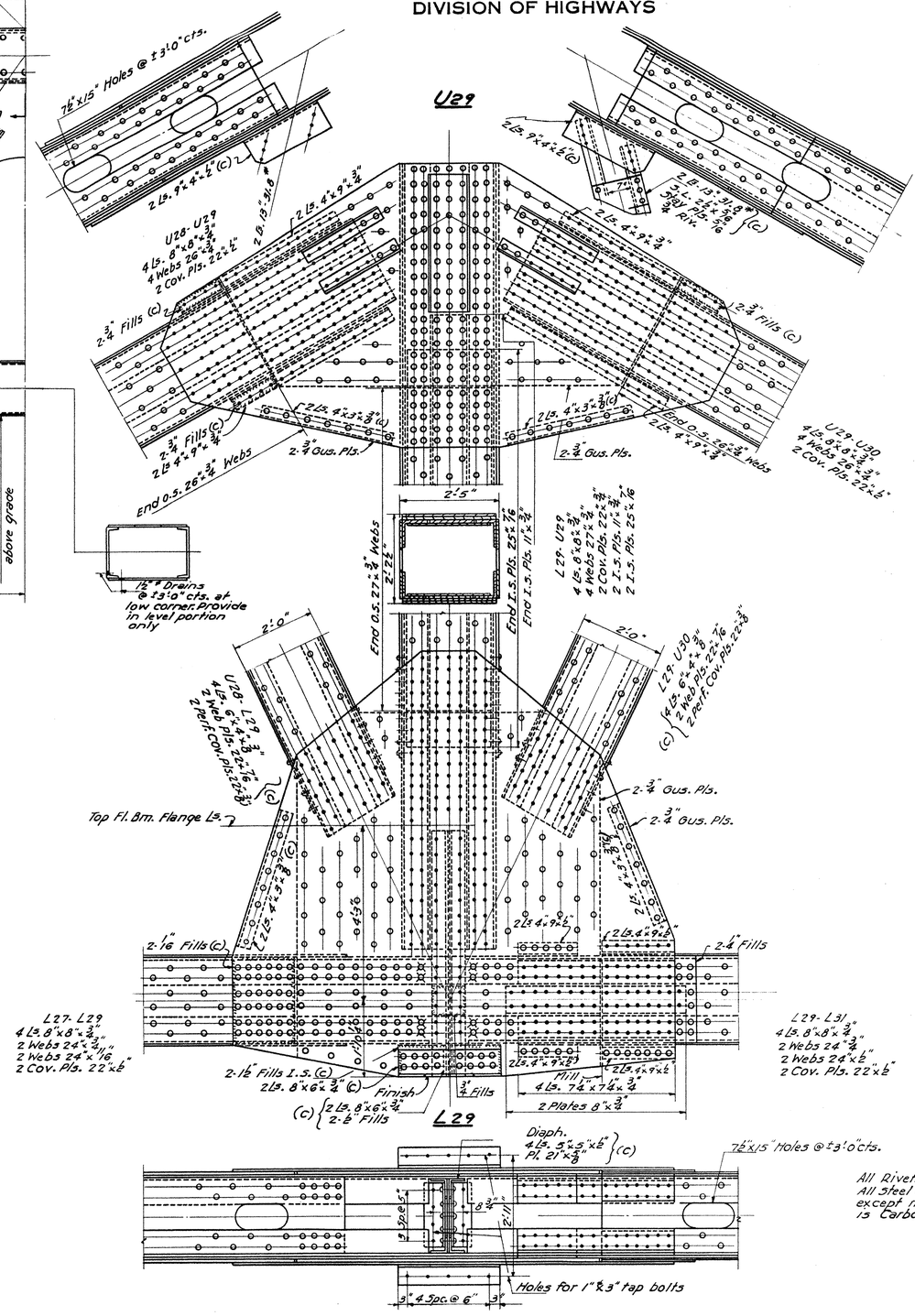
SHEET NO. 24
42 SHEETS

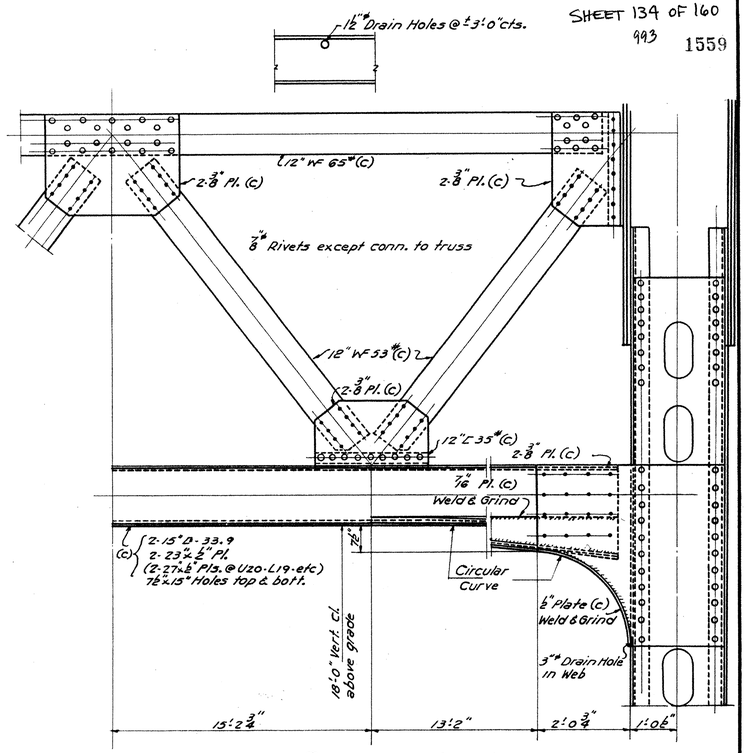
SHEET 134 OF 160
993 1559



PORTAL AT U1-L0 & U77-L78

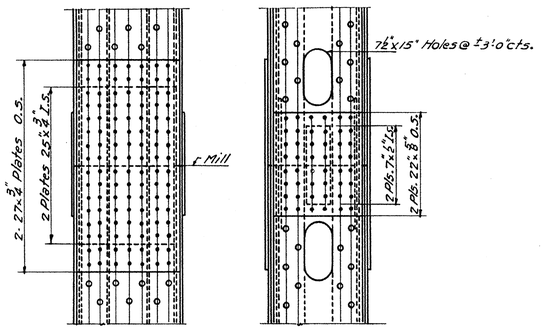
SECTION A-A





PORTAL AT U19-L18

Similar at U20-L19, U34-L33, U35-L34, U43-L44, U44-L45 U58-L59 and U59-L60



SPLICE FOR U29-L29
optional

Note
All Rivets 1" ø except as noted.
All Steel on this sheet is Low-Alloy Steel except material noted (c) which is Carbon Steel.

FOR INFORMATION ONLY

DESIGNED	W.L.Owen	July 8 1955
CHECKED	G.E.Trummel	EXAMINED M.M.Rosmiller, ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
DRAWN	H.L.O. M. Miller	PASSED E.E.Bauer, ENGINEER OF DESIGN
CHECKED	J.T.R. C.E.T.	APPROVED R.H.Bartelmeyer, CHIEF HIGHWAY ENGINEER

TRUSS DETAILS L29
PROJECT UT-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

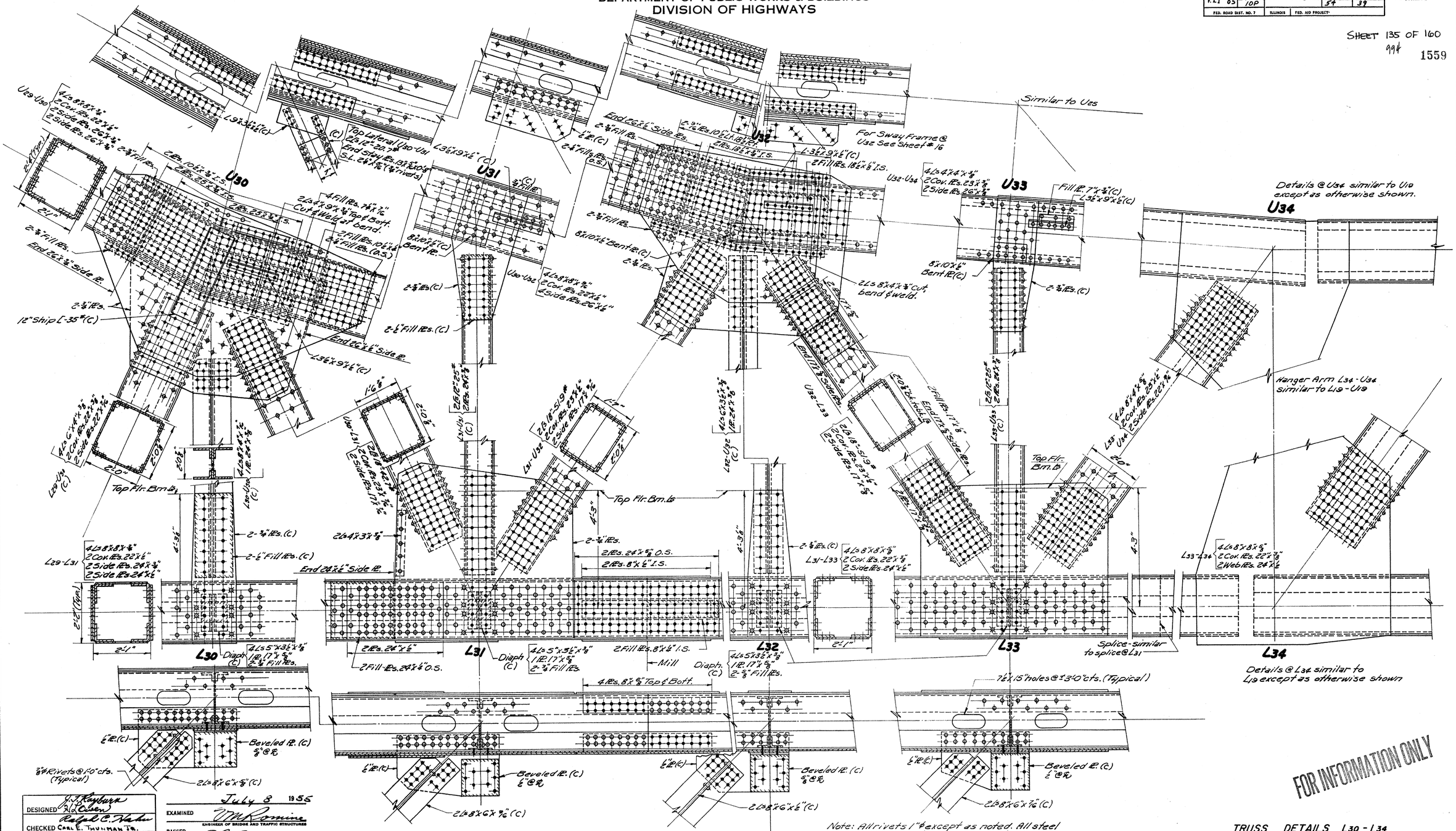
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 9	10F	Peoria-Tazewell	37	27
F.A.I. 05	10E		54	39
	10P		54	39
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 25
42 SHEETS

SHEET 135 OF 160
998
1559



DESIGNED	J.J. Rayburn A.D. Olsen	EXAMINED	July 8 1955 M.K. Romine ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
CHECKED	Ralph C. Nahm Carl E. Thuneman Jr.	PASSED	E.E. Cleary ENGINEER OF DESIGN
DRAWN	J.J. Rayburn E.R. Risch	APPROVED	R.R. Bartelsmeyer CHIEF HIGHWAY ENGINEER
CHECKED	R.C.H. J.T.R.		

Note: All rivets 1" ℄ except as noted. All steel on this sheet is Low Alloy Steel unless noted (C). Material noted (C) shall be Carbon steel.

FOR INFORMATION ONLY

TRUSS DETAILS L30 - L34
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F. A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

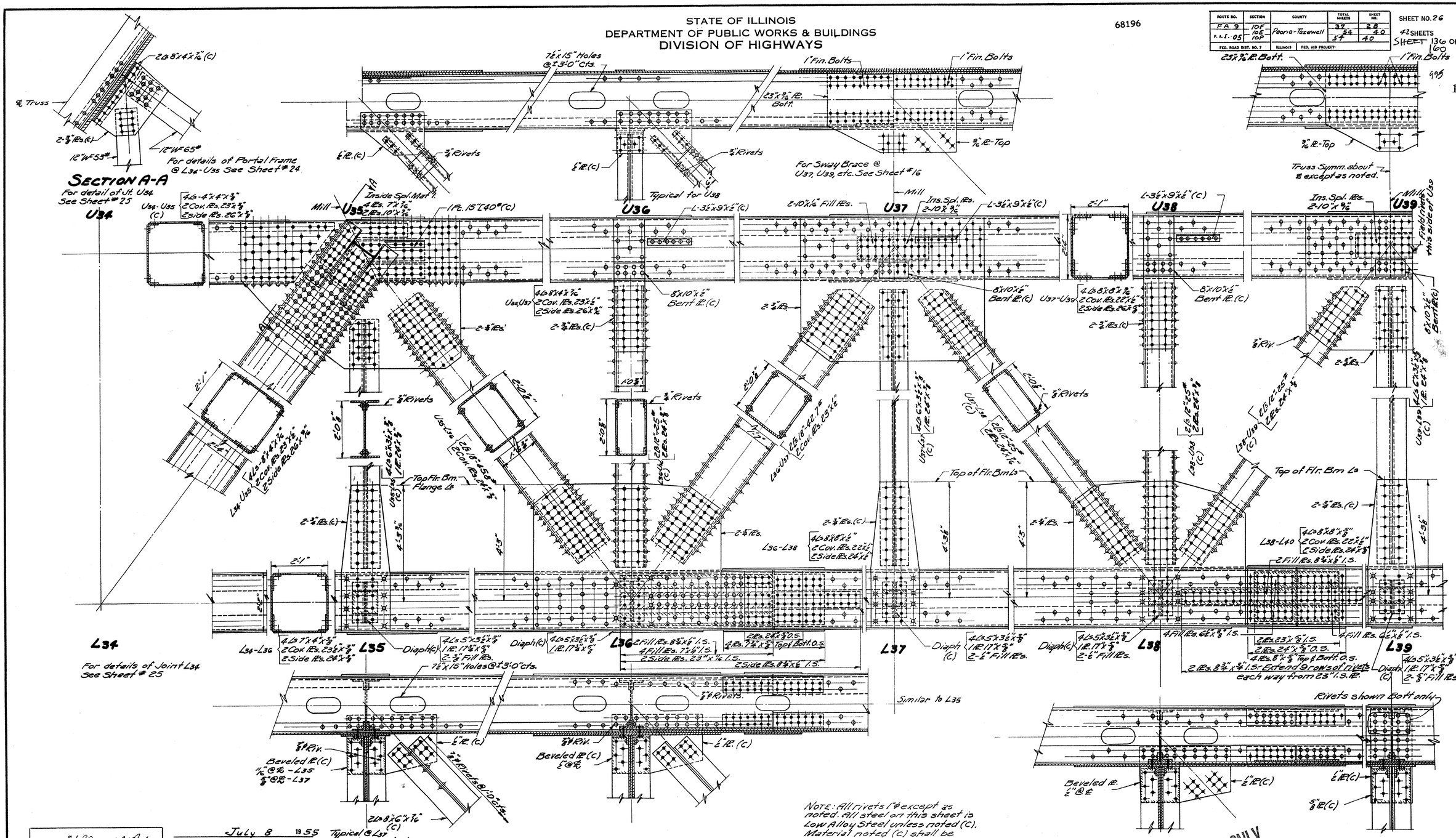
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10F	Peoria-Tazewell	37	28
F.A.I. 05	10E		54	40
	10P		54	40
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 26
42 SHEETS
SHEET 136 OF 160

1559



NOTE: All rivets 7/8" ø except as noted. All steel on this sheet is Low Alloy Steel unless noted (C). Material noted (C) shall be Carbon Steel.

DESIGNED	J.L.P. Owen	J.T. Rayburn
CHECKED	C. and E. Transportation Engr.	Chief of Bridges
DRAWN	J.J.R.	E. Rush
CHECKED	R.C.H.	J.J.R.

EXAMINED — July 8 1955
W.M. Bonnie, ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — E.E. Hunt, ENGINEER OF DESIGN
APPROVED — R.R. Bartelmay, CHIEF HIGHWAY ENGINEER

FOR INFORMATION ONLY

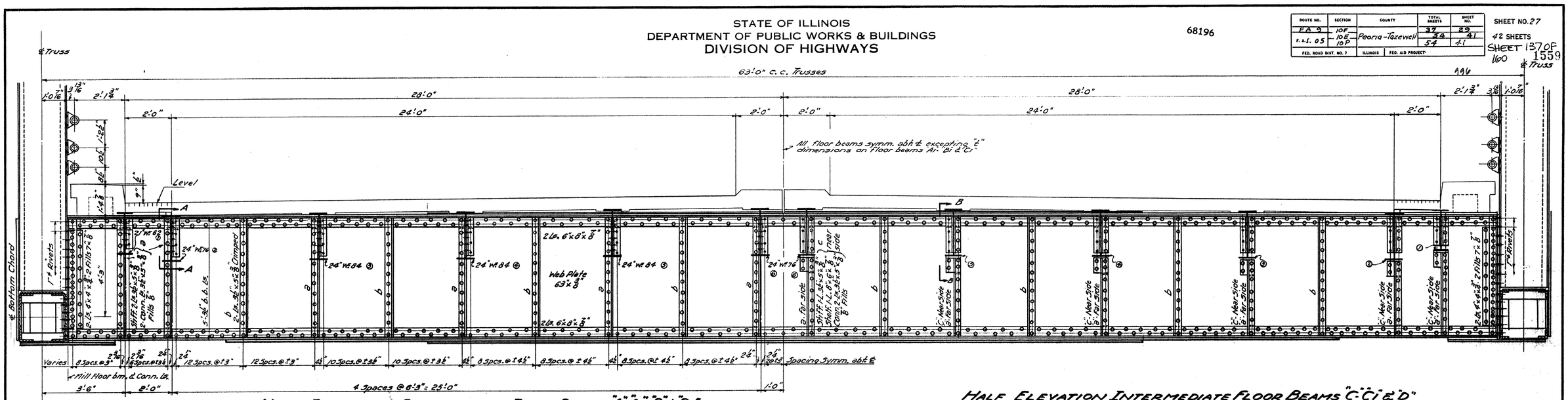
TRUSS DETAILS L35 - L39
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F. A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

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

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10F	Peoria-Tazewell	37	29
F.A.I. 05	10E		54	41
	10P		54	41
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 27
42 SHEETS
SHEET 137 OF 160 1559

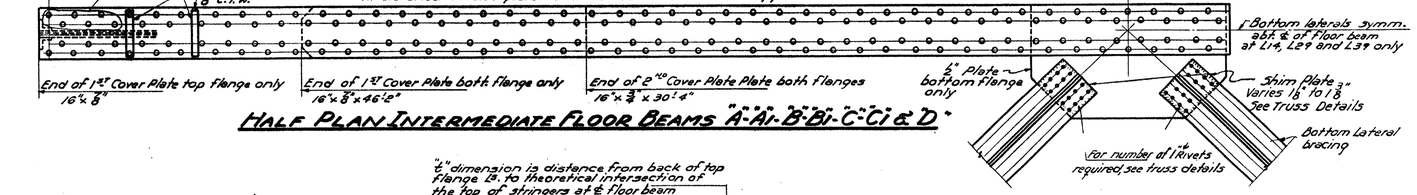


HALF ELEVATION INTERMEDIATE FLOOR BEAMS "A" "A1" "B" & "B1"

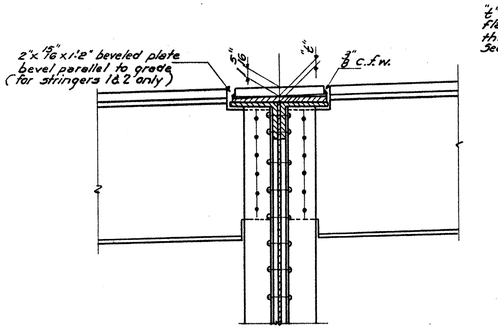
Floor beam "B" shown. Floor beam "B1" same as shown excepting "E" dimensions (See Table)
Floor beams "A" & "A1" similar to floor beams "B" & "B1" respectively with the following exception
All stiff. and conn. Lg. on floor beams "A" & "A1" opposite hand to detail shown.

HALF ELEVATION INTERMEDIATE FLOOR BEAMS "C" "C1" & "D"

Floor beam "D" shown. Floor beams "C" & "C1" similar to floor beam "D" with the following exceptions.
All stiff. and conn. Lg. on floor beams "C" & "C1" opposite hand to detail shown.

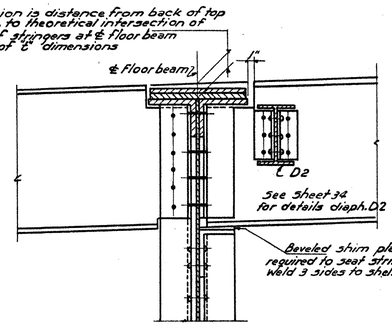


HALF PLAN INTERMEDIATE FLOOR BEAMS "A" "A1" "B" "B1" "C" "C1" & "D"

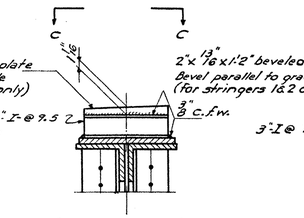


SECTION A-A

For Floor beam A-B-C-D both sides of bridge and west of the ℄ Bridge for Floor beam A1, B1, C1

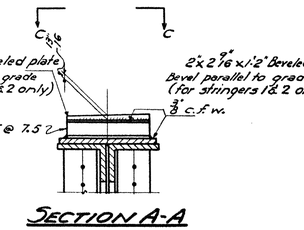


SECTION B-B



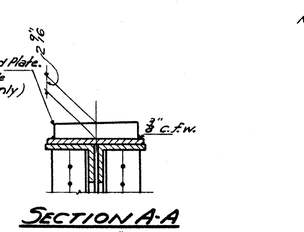
SECTION A-A

For Floor beam A1 east of ℄ Rdwy.



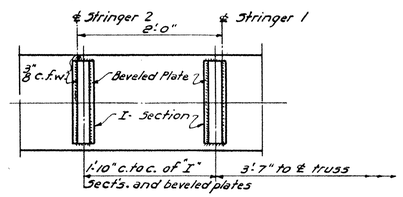
SECTION A-A

For Floor beam B1 east of ℄ Rdwy.



SECTION A-A

For Floor beam C1 east of ℄ Roadway



SECTION C-C

TABLE OF "E" DIMENSIONS

FLOOR BEAM	STRINGER 1	2	3	4	5	6
A-B-C and D	2 15/16"	⅞"	1⅛"	2⅝"	2 3/4"	3 3/8"
A1 (West of ℄ Bridge)	2 15/16"	⅞"	1⅛"	2⅝"	2 3/4"	3 3/8"
A1 (East of ℄ Bridge)	5 15/16"	4 5/8"	4 5/16"	4"	3 1/16"	3 3/8"
B1 (West of ℄ Bridge)	2 15/16"	⅞"	1⅛"	2⅝"	2 3/4"	3 3/8"
B1 (East of ℄ Bridge)	4 1/16"	3 3/8"	3 3/8"	3 3/8"	3 3/8"	3 3/8"
C1 (West of ℄ Bridge)	2 15/16"	⅞"	1⅛"	2⅝"	2 3/4"	3 3/8"
C1 (East of ℄ Bridge)	3 15/16"	2⅝"	2 15/16"	2 3/4"	3 1/16"	3 3/8"

Dimension "E" equals the distance from the back of the top flange angle to the theoretical intersection of the top of stringers at ℄ floor beam.

Note: Rivets ⅞" except as noted.

FOR INFORMATION ONLY

DESIGNED	Carl E. Thurman Jr.	July 8 1955
CHECKED	W. E. FISHER	EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
DRAWN	C.E.T. M. Miller	PASSED — ENGINEER OF DESIGN
CHECKED	C.E.T.	APPROVED — CHIEF HIGHWAY ENGINEER

INTERMEDIATE FLOOR BEAMS "A", "A1", "B", "B1", "C", "C1" & "D"
PROJECT UT-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F. A. ROUTE 9 SECTION 10E-F-P
PEORIA-TAZEWELL COUNTIES

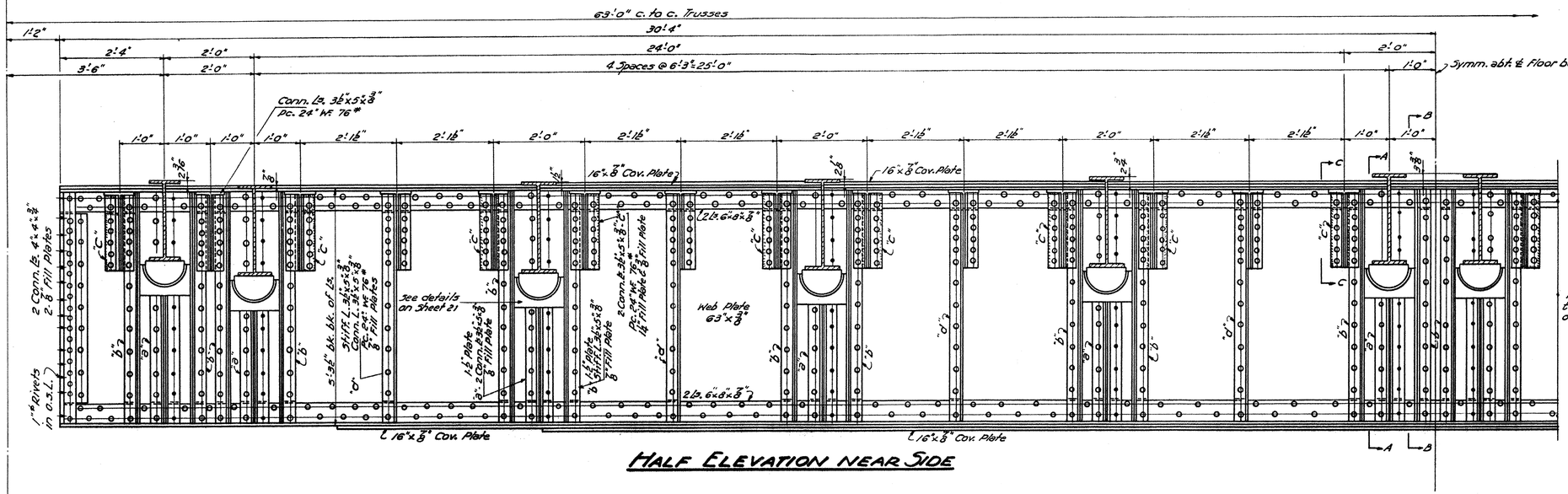
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

68196

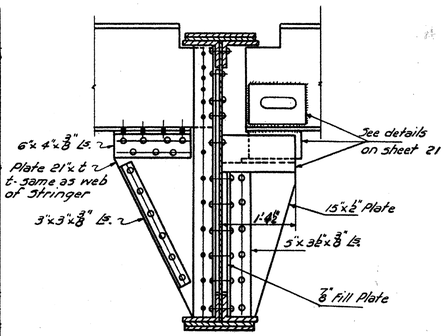
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10F	Peoria-Tazewell	37	30
F.A.S. 05	10E		54	42
	10P		54	42
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 28
42 SHEETS

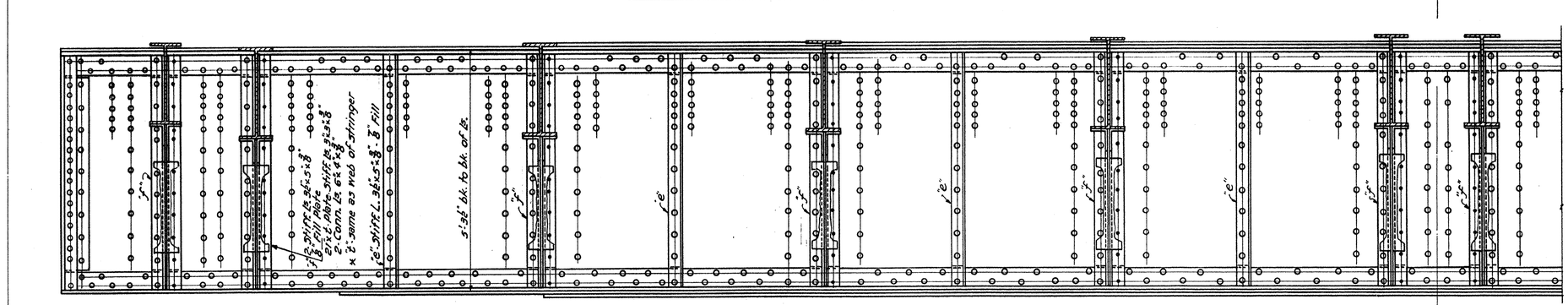
SHEET 138 OF 160
997 1559



HALF ELEVATION NEAR SIDE



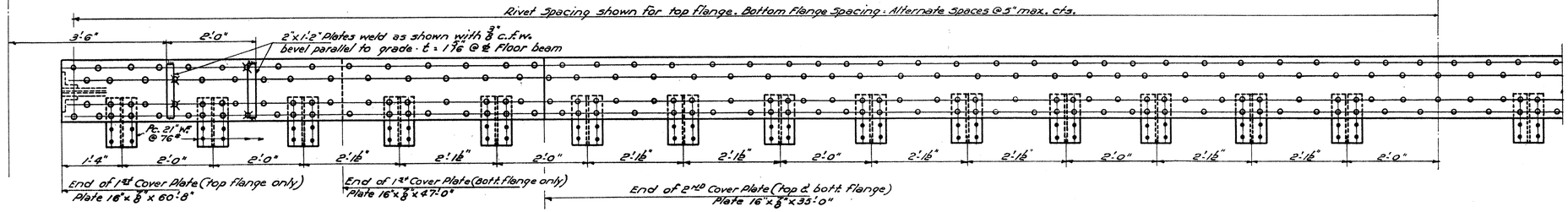
SECTION A-A



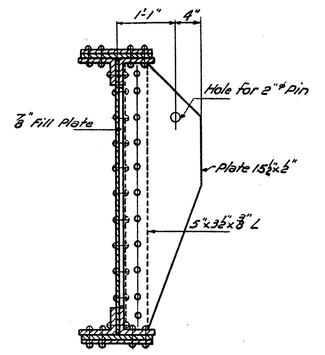
HALF ELEVATION FAR SIDE

HALF ELEVATION FLOOR BEAMS E OR F

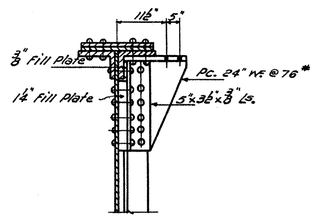
Floor beam "F" shown. Floor beam "E" same except field connections are on opposite side of Stringers.



HALF PLAN FLOOR BEAMS E OR F



SECTION B-B



SECTION C-C

FOR INFORMATION ONLY

DESIGNED	W.E. FISHER
CHECKED	C.E. Thurmond
DRAWN	W.E. FISHER M. Miller
CHECKED	C.E.T.

July 8 1955

EXAMINED W.M. Ramina — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED E.B. Hunt — ENGINEER OF DESIGN
APPROVED C.K. Baxter — CHIEF HIGHWAY ENGINEER

Note: All Rivets ⅞" except as noted.

INTERMEDIATE FLOOR BEAMS E & F
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

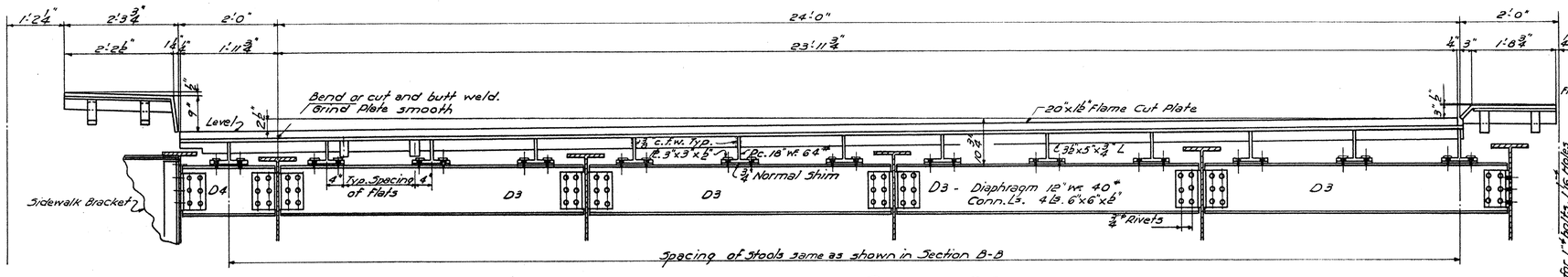
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

68196

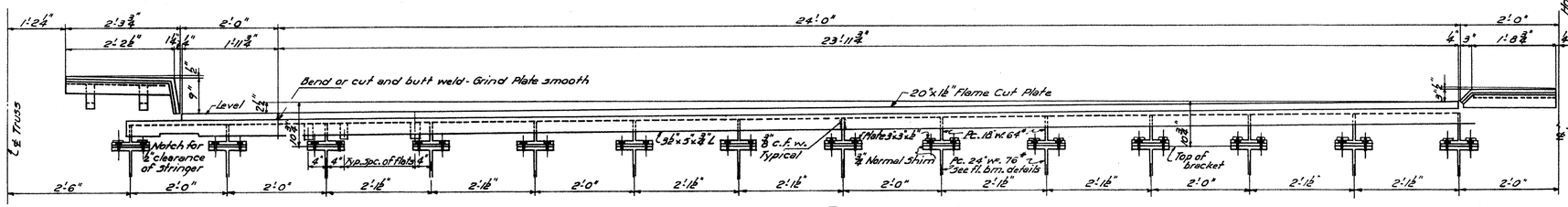
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10P- 10E- 10G- 10P-	Peoria - Tazewell	37 24 84 64	37 43 43
F.A.P. 05			29 84 64	14 43
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 29
42 SHEETS

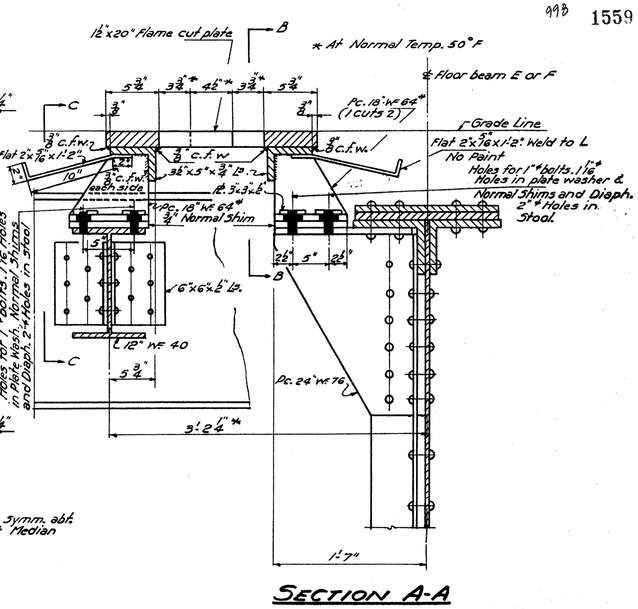
SHEET 139 OF 160
998 1559



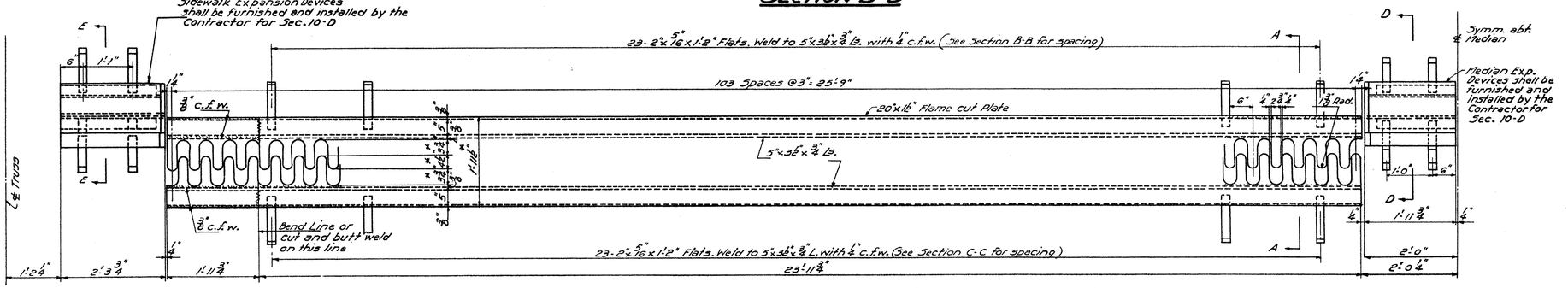
SECTION C-C



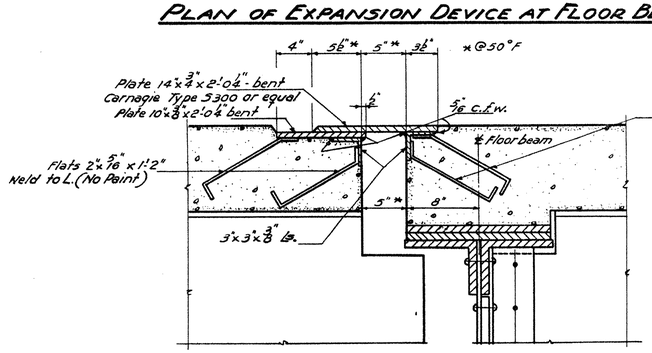
SECTION B-B



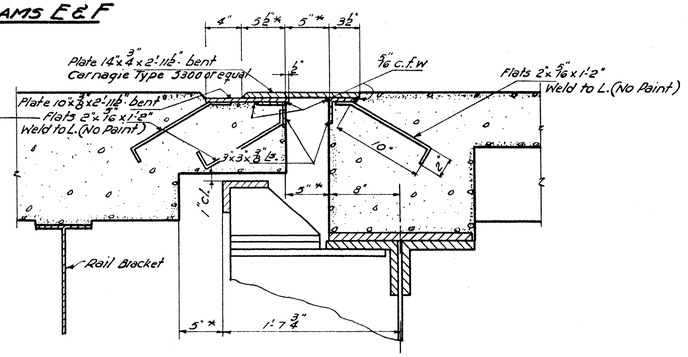
SECTION A-A



PLAN OF EXPANSION DEVICE AT FLOOR BEAMS E & F



SECTION D-D



SECTION E-E

Low Alloy steel shall be used in the following members of Expansion Devices:
20"x⅝" Expansion Plates
5"x3½"x¾" Angles
The Roadway Expansion Devices shall be assembled in the shop in their proper positions with the two adjacent spans in place, and shall be left assembled for shop inspection.
Roadway expansion plates shall be flame cut ¼" and all turns shall be 1½" radius.
The exposed surfaces of underside of roadway and sidewalk expansion plates and the inside vertical surface of angles shall be given two shop coats of red lead paint. Other surfaces shall be given one shop coat of red lead paint same as for Structural Steel.
¾" Normal Shims shall be made up of two ⅜ plates one ½" plate and one-¼" plate. Bevel ⅜" plate as required to erect finger plates parallel to grade.

QUANTITIES EXPANSION DEVICES @ L19-L34-L44 & L59

	SEC'S. 10 E & E	SEC. 10 D
Low-Alloy Steel	29990	
Carbon Steel	12000	2890

FOR INFORMATION ONLY

DESIGNED	Carl E. Thomas Jr.	
CHECKED	W. E. FISHER	
DRAWN	C.E.Th.	M. Miller
CHECKED	C.E.Th.	

July 8 19 55

EXAMINED — ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

EXPANSION DEVICE @ FLOOR BEAMS E & F
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F. A. ROUTE 9 SECTION 10D-E-F-P
PEORIA - TAZEWELL COUNTIES

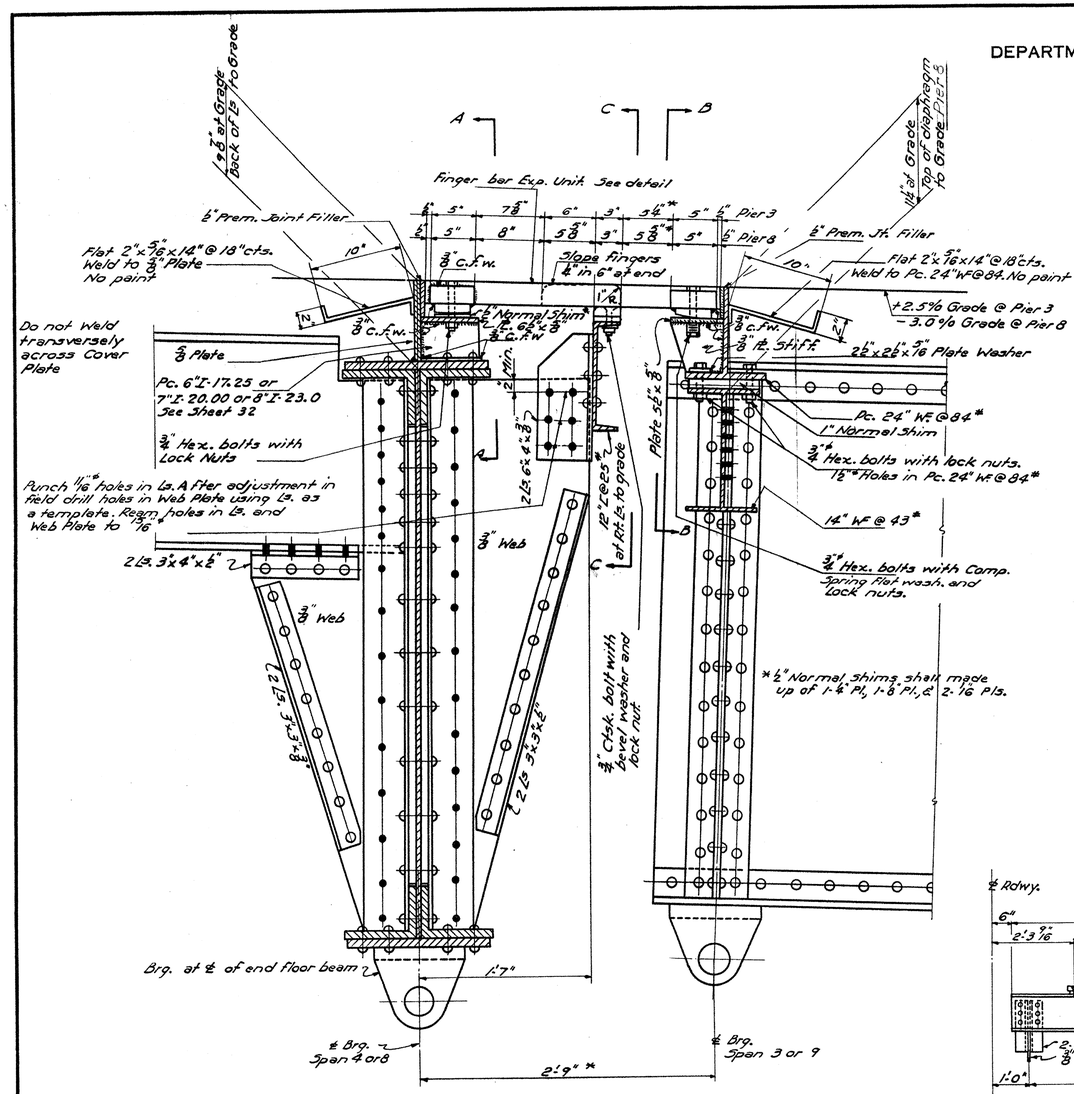
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 9	10R	Peoria-Tazewell	37	32
F.A.I. 105	10R		24	44
	10D		29	20
	10E		34	41
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 30
42 SHEETS

SHEET 140 OF 160
999 1559



EXPANSION GUARD DETAILS
Piers 3 and 8

*(Pier 3) At normal temperature 50°F. Decrease this dimension by 0.39" for each 10° rise in temperature above normal. Increase this dimension by 0.39" for each drop of 10° in temperature below normal.

See Sheet 32 for Sections A-A & B-B

(Pier 8) At normal temperature 50°F. Decrease this dimension by 0.52" for each 10° rise in temperature above normal. Increase this dimension by 0.52" for each drop of 10° in temperature below normal.

QUANTITIES EXPANSION DEVICE PIERS 3 & 8

	Sec. 10F	Sec. 10E	Sec. 10D
Low-Alloy Steel	23520	23,520	
Carbon Steel	16920	16,920	1590

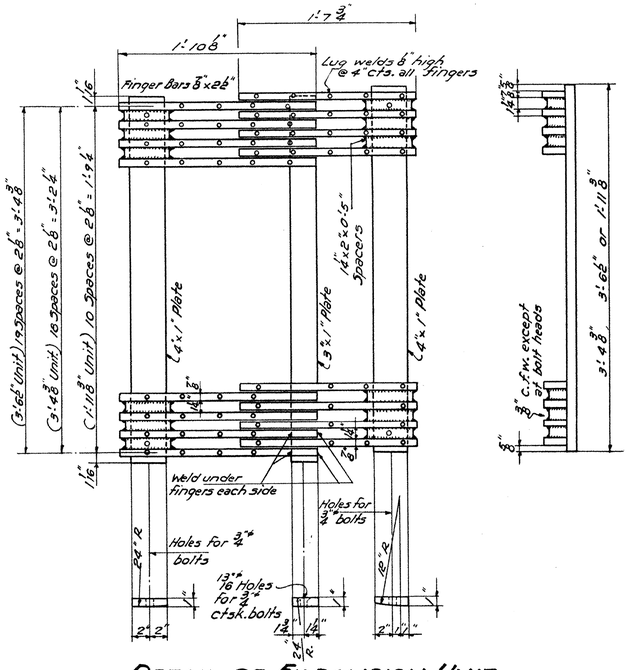
The above quantities consist of all steel above the top of the end floor beam above the diaphs. on the girder spans, and the 12"C and its connections to the web of the bracket.

DESIGNED	W.E. Fisher
CHECKED	Carl E. Thurmond
DRAWN	W.E.F. M. Miller
CHECKED	C.E.T.

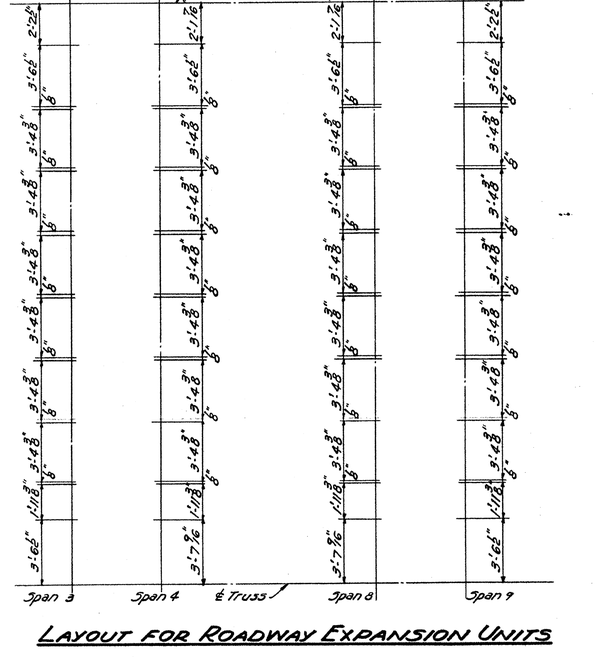
July 8 1955

EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

Revised 11-9-55 ~ O.J.M.C
Rev. for Sec. E 8-20-56 R.B.M.



DETAIL OF EXPANSION UNIT
All steel shown in Detail of Expansion Unit shall be Low Alloy Steel.


2'-9"
c. to c. Brgs. at Pins*
2'-9"
℄ Rdwy. Symm. abt.
2'-2⅛"
3'-6⅛"
3'-1⅜"
3'-1⅜"
3'-1⅜

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

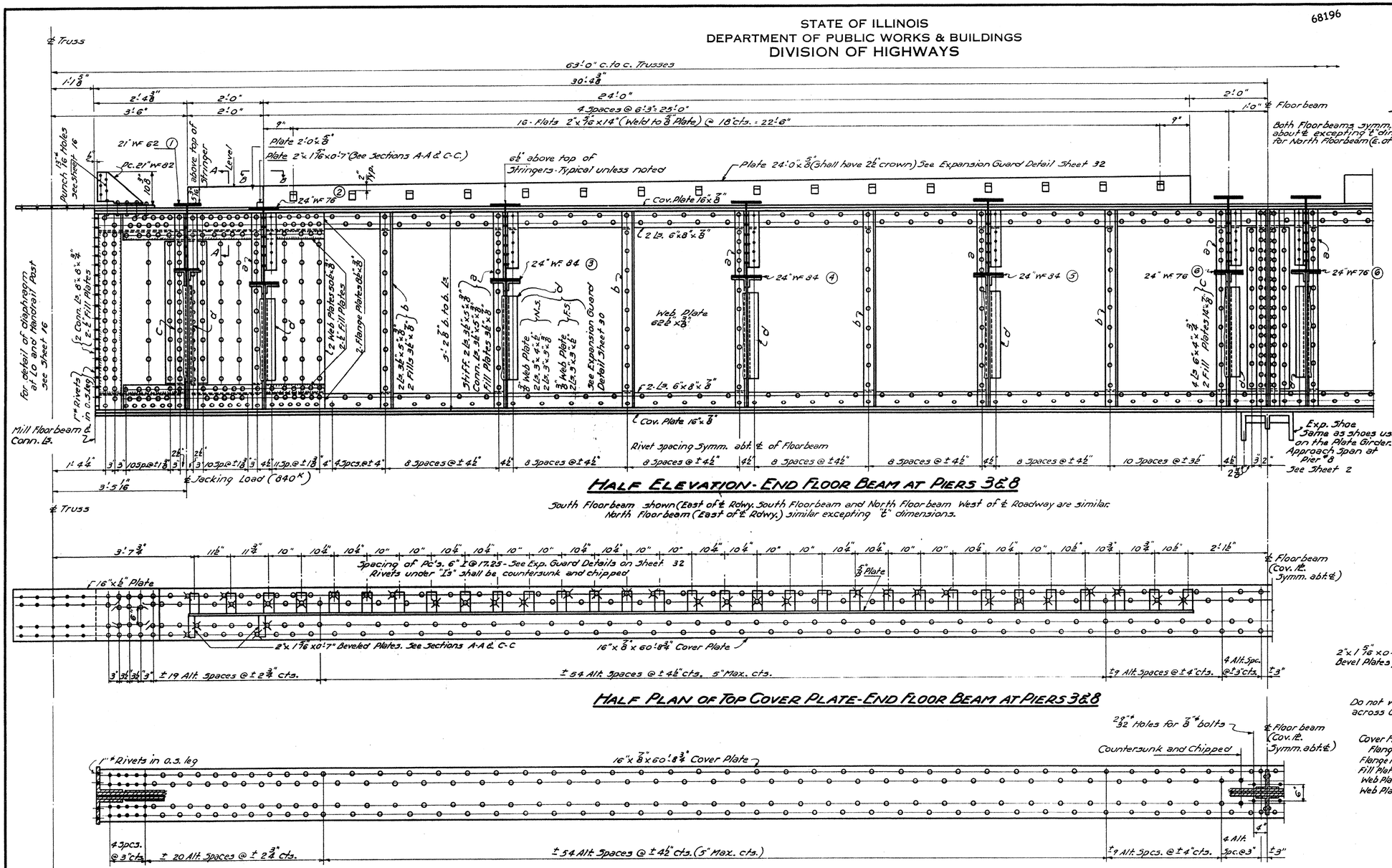
68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 9	10F	Peoria-Tazewell	37	33
I.A.I. 05	10E		24	42
	10P		37	43
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 31
42 SHEETS

SHEET 141 OF 160

1000 1559



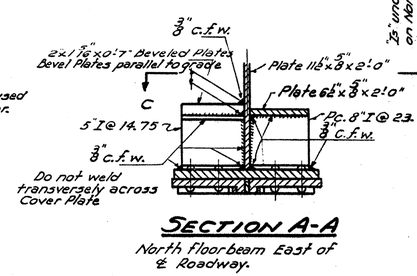
HALF ELEVATION - END FLOOR BEAM AT PIERS 3 & 8

South Floorbeam shown (East of ℄ Rdwy. South Floorbeam and North Floorbeam West of ℄ Roadway are similar.
North Floorbeam (East of ℄ Rdwy.) similar excepting "L" dimensions.

HALF PLAN OF TOP COVER PLATE - END FLOOR BEAM AT PIERS 3 & 8

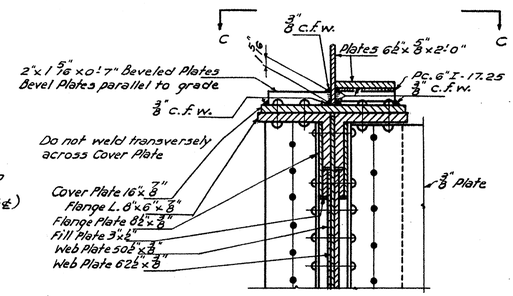
HALF CROSS SECTION OF BOTTOM COVER PLATE - END FLOOR BEAM AT PIERS 3 & 8

℄ Truss



SECTION A-A

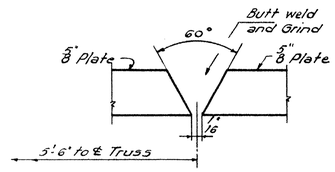
North Floorbeam East of ℄ Roadway.



SECTION A-A

South Floorbeam and West of ℄ Roadway on North Floorbeam

All Rivets ⅞" ⌀ except as noted.



SECTION B-B

TABLE OF "L" DIMENSIONS

Dimension "L" equals the distance from the back of the top flange angle to the theoretical intersection of the top of stringers at the ℄ of the Floorbeam

End Floorbeam	Stringer 1	2	3	4	5	6
South End of Truss	2 3/16"	7/8"	1⅛"	2⅝"	2¾"	3⅜"
North End of Truss West of ℄ Roadway	2 3/16"	7/8"	1⅛"	2⅝"	2¾"	3⅜"
North End of Truss East of ℄ Roadway	7/16"	5/8"	5/16"	4⅜"	4"	3⅜"

DESIGNED	Carl E. Thurman	
CHECKED	W. E. Fisher	
DRAWN	W.E.F.	M. Miller
CHECKED	W.E.F.	C.E.T.

July 8 1955

EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

FOR INFORMATION ONLY

END FLOOR BEAMS
PROJECT UT-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

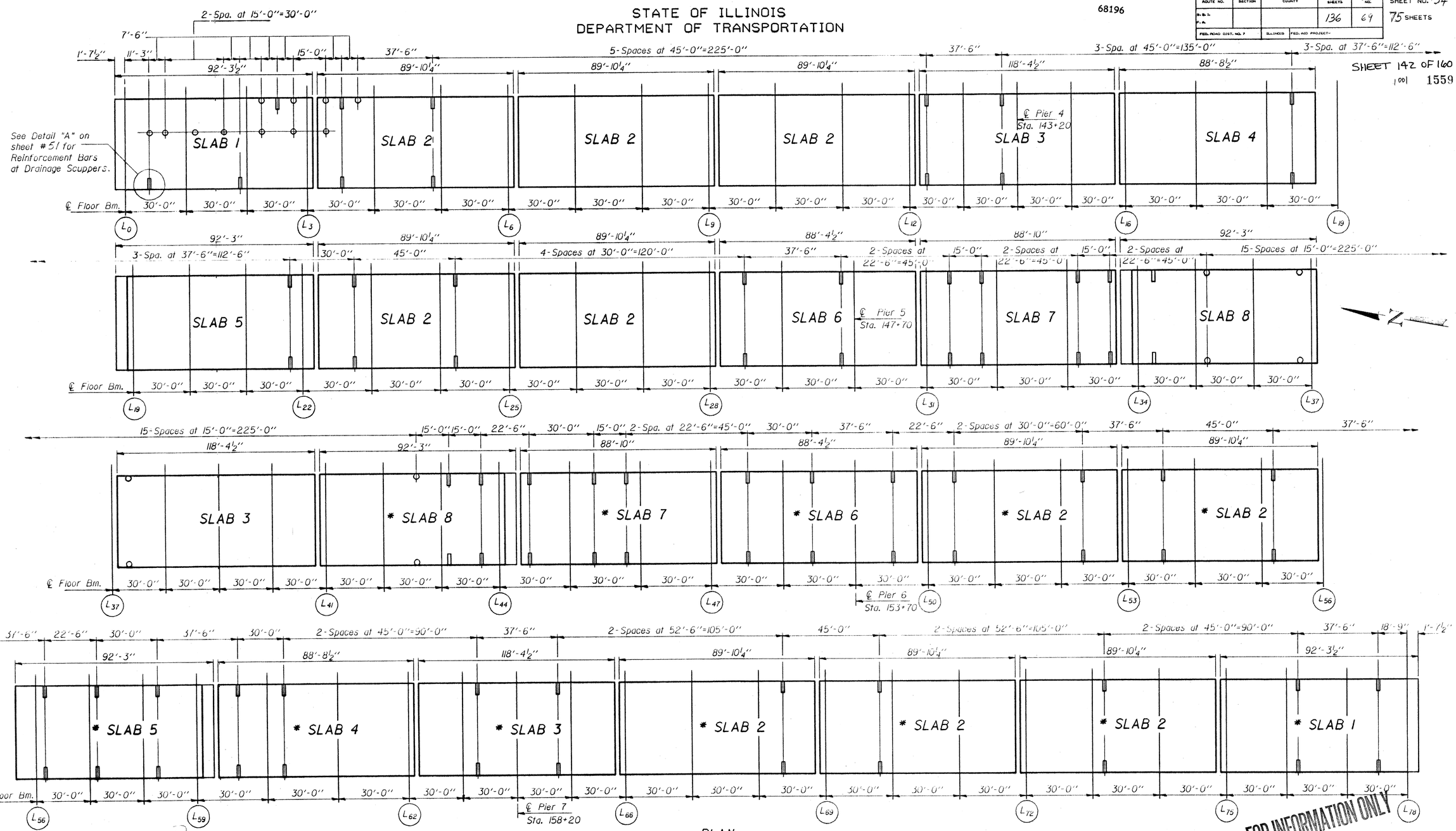
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.			136	69
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 34
75 SHEETS

SHEET 142 OF 160
1001 1559



PLAN

DESIGNED	[illegible]
CHECKED	[illegible]
DRAWN	R. Doty
CHECKED	[illegible]

EXAMINED Dec. 20 1933
James T. Rayburn
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

○ = 6" ϕ Floor Drains
□ = 6" x 2'-6" Drain [illegible], Special

LEGEND

* Except for Deck Drainage, reverse slab details to opposite hand.

FOR INFORMATION ONLY

SUPERSTRUCTURE LAYOUT-TRUSS
F.A.I. RT. 74 SEC. 10D-1
PEORIA-TAZEWELL COUNTIES
STATION 151+85

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

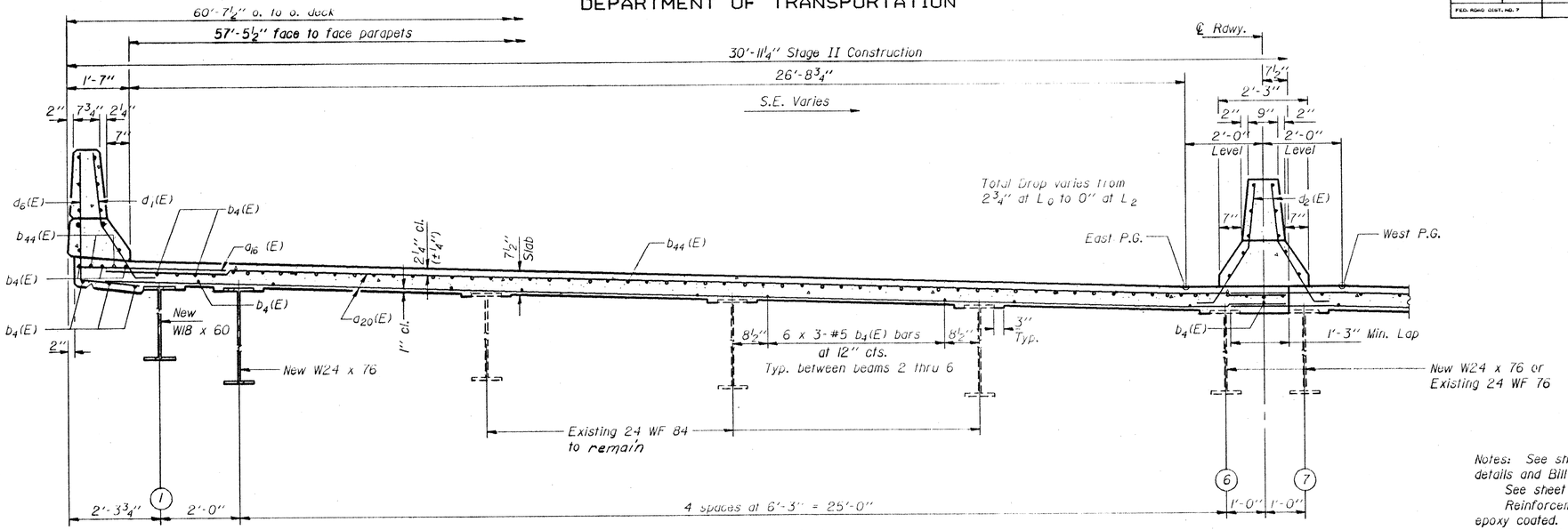
68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I.			136	70
FED. ROAD DIST. NO. 9				

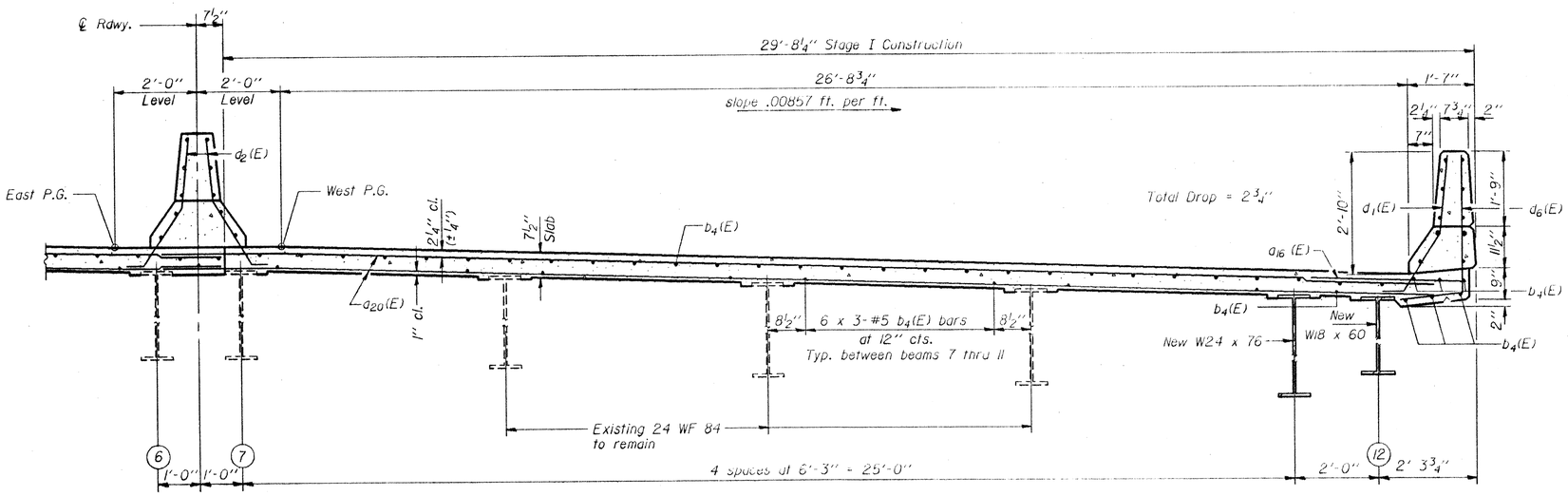
SHEET NO. 55
75 SHEETS

SHEET 143 OF 160

1002 1559



NEAR FLOORBEAM



NEAR MIDSPAN

CROSS SECTION
(Looking South)

Notes: See sheet #45 thru 51 for superstructure details and Bill of Material.
See sheet #37 for Plan Views.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus, 6 x 3-#5 etc. indicates 6 lines of bars with 3 lengths per line.

FOR INFORMATION ONLY

DESIGNED	
CHECKED	
DRAWN	R. Doty
CHECKED	

Dec 28 1982
EXAMINED James T. Rayburn
SOUTHERN BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

SUPERSTRUCTURE - TRUSS
CROSS SECTION PANELS 1 AND 2
F.A.I. RT. 74 SEC. 10D-1
PEORIA-TAZEWELL COUNTIES
STATION 151+85

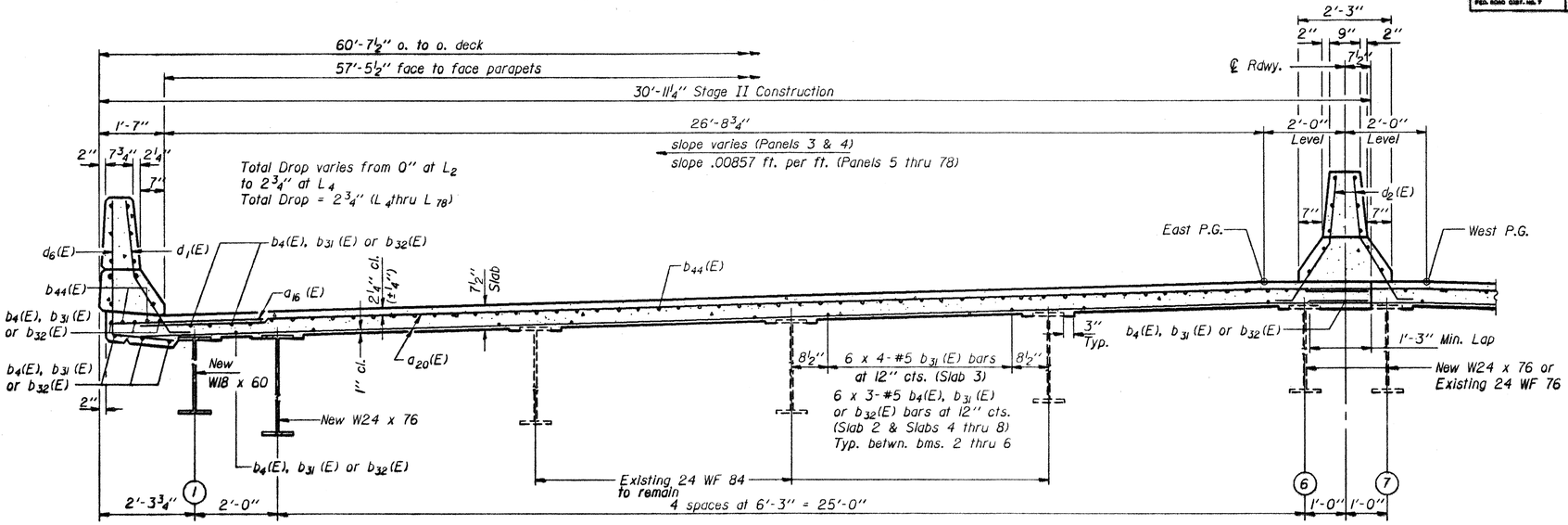
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

68196

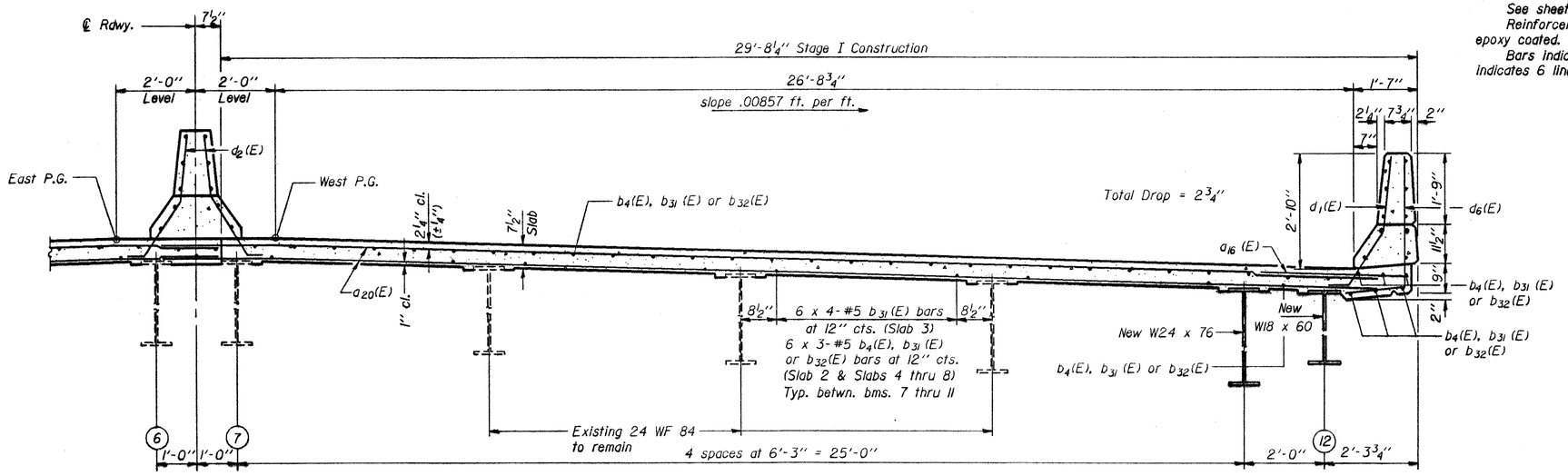
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. Rt.			136	71
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 56
75 SHEETS

SHEET 144 OF 160
1003 1559



NEAR FLOORBEAM



NEAR MIDSPAN

CROSS SECTION
(Looking South)

Notes: See sheet #45 thru 51 for superstructure details and Bill of Material.
See sheets #38 thru #44 for Plan Views.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus, 6 x 3-#5 etc. indicates 6 lines of bars with 3 lengths per line.

DESIGNED	Patrick M Peters
CHECKED	A. A. Brown
DRAWN	R. Doty
CHECKED	A. A. B.

Dec. 20 1983

EXAMINED James T. Rayburn
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

FOR INFORMATION ONLY

SUPERSTRUCTURE - TRUSS
CROSS SECTION PANELS 3 THRU 78
F.A.I. RT. 74 SEC. 10D-1
PEORIA-TAZEWELL COUNTIES
STATION 151+85

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U. S. & I. R. A.			136	116A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 67
75 SHEETS

SHEET 145 OF 160
1004 1559

Remove Exist. exp. device & supports.
See Sht. #65 for details.

Remove & replace the lower Ls 8 x 4 x 3/4 & lower 8" length of L 3½ x 3 x 3/8 stiffeners at strut.
Remove exist. 14 WF 53 between stringers.
Replace with W 14 x 53. (Typ. Ea. Side)

℄ Pier 4

Remove Exist. exp. device & supports.
See Sht. #62 thru #64 for details.

Remove Existing 10 WF 25 Betwn. Bms. 1 & 2
Replace with W 8 x 31 Typ. all panels.

Remove all existing 21 WF 62 stringers.
Replace with W 18 x 60 stringers. (Typ. Ea. Side)

Remove all existing 24 WF 76 stringers
Replace with W 24 x 76 stringers. (Typ. Ea. Side)

4 stringer spa. at 6'-3" = 25'-0"

Panel Pt. L0 | Panel Pt. L1 | Panel Pt. L2 | Panel Pt. L3 | Panel Pt. L4 | Panel Pt. L5 | Panel Pt. L6 | Panel Pt. L7 | Panel Pt. L8 | Panel Pt. L9 | Panel Pt. L10 | Panel Pt. L11 | Panel Pt. L12 | Panel Pt. L13 | Panel Pt. L14 | Panel Pt. L15 | Panel Pt. L16 | Panel Pt. L17 | Panel Pt. L18 | Panel Pt. L19

2'-0" | 2'-0" | 2'-0"

Remove approx. 39 existing 24 WF 76 stringers
Replace with W 24 x 76 stringers.

90°

℄ F.A.I. Route 74

℄ Pier 3

14 Panels at 30'-0" = 420'-0" (Span 4)

15 Panels at 30'-0" = 450'-0" (Span 5)

Remove approx. 20 existing 10 WF 25 diaphragms & replace with W 10 x 26.

Remove exist. 12 WF 40 diaphragms & replace with W 12 x 40. See Sht. #65 for details.

Remove exist. rail post & PC 21 WF 82
Cost incidental to "Handrail Removal"
(Typ. Ea. Side) See Sht. # 64

*Remove Existing 10 WF 25.
(Typ. all sidewalk brackets Ea. side,
Do not replace)

Remove existing sidewalk brackets & rail posts.
Cost incidental to "Handrail Removal"
(Typ. all panels Ea. side)

Remove & replace all stringer web gusset plates.
Remove & replace lower 8" length of the L 5 x 3 x 3/8 stiffeners.

Remove Existing 10 WF 25 Betwn. Bms. 11 & 12
Replace with W 8 x 31 Typ. all panels.

PLAN
L0 thru L19

Remove & replace the lower Ls 8 x 4 x 3/4 & lower 8" length of L 3½ x 3 x 3/8 stiffeners at strut.
Remove exist. 14 WF 3 between stringers.
Replace with W 14 x 53. (Typ. Ea. Side)

℄ Pier 5

4 stringer spa. at 6'-3" = 25'-0"

Panel Pt. L19 | Panel Pt. L20 | Panel Pt. L21 | Panel Pt. L22 | Panel Pt. L23 | Panel Pt. L24 | Panel Pt. L25 | Panel Pt. L26 | Panel Pt. L27 | Panel Pt. L28 | Panel Pt. L29 | Panel Pt. L30 | Panel Pt. L31 | Panel Pt. L32 | Panel Pt. L33 | Panel Pt. L34 | Panel Pt. L35 | Panel Pt. L36 | Panel Pt. L37 | Panel Pt. L38 | Panel Pt. L39

2'-0" | 2'-0" | 2'-0"

90°

℄ F.A.I. Route 74

Repairs are symm. about Panel Pt. 39

Remove approx. 20 existing 10 WF 25 diaphragms & replace with W 10 x 26.

20 Panels at 30'-0" = 600'-0" (Span 6)

Remove existing 12 WF 40 diaphragms & replace with W 12 x 40.
See Sht. # 65 for details.

Remove & replace all stringer web gusset plates.
Remove & replace lower 8" length of the L 5 x 3 x 3/8 stiffeners.

Remove Exist. exp. device & supports.
See Sht. # 65 for details.

PLAN
L19 thru L39

FOR INFORMATION ONLY

DESIGNED	Patricia M. Pt...
CHECKED	A. L. Brown
DRAWN	T.J. Downing
CHECKED	A.L.B.

Revised 2-17-84 ALB

Dec. 20 1983
EXAMINED James T. Barkhurst
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

Note: See Sht. #66 thru #70 for details of removal & replacement, unless otherwise noted.
* To be billed as "Structural Steel Removal."

STRUCTURAL STEEL - REPAIRS
TRUSS SPANS
F.A.I. RT. 74 SEC. 10D-1
PEORIA-TAZEWELL COUNTIES
STA. 151+85

Rev. 2-17-84

68196

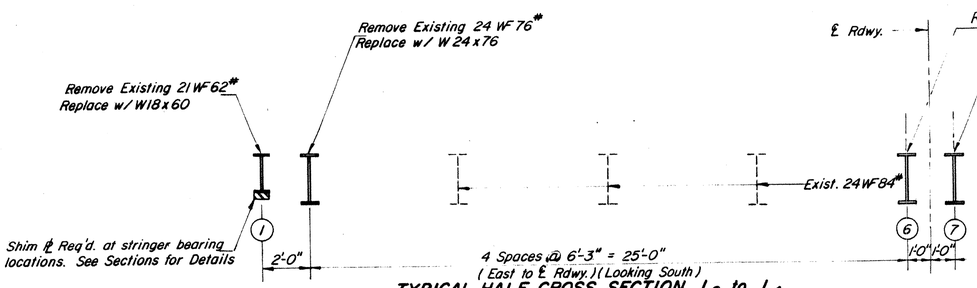
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
S.B.I. F.A.			136	116B
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 68
75 SHEETS

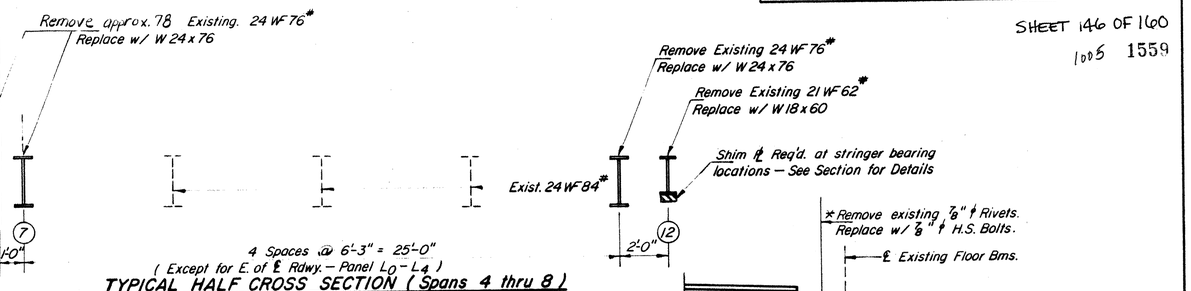
SHEET 146 OF 160

1005 1559

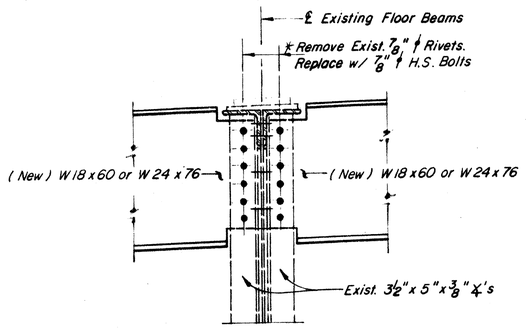
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



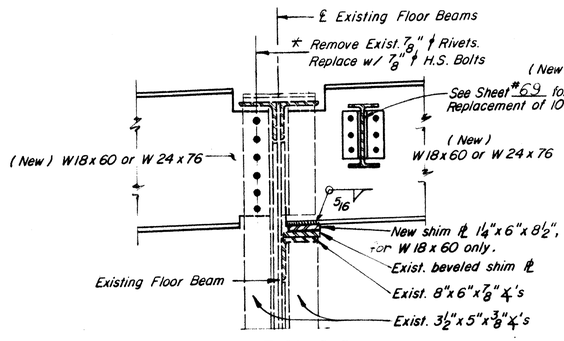
TYPICAL HALF CROSS SECTION L_0 to L_4



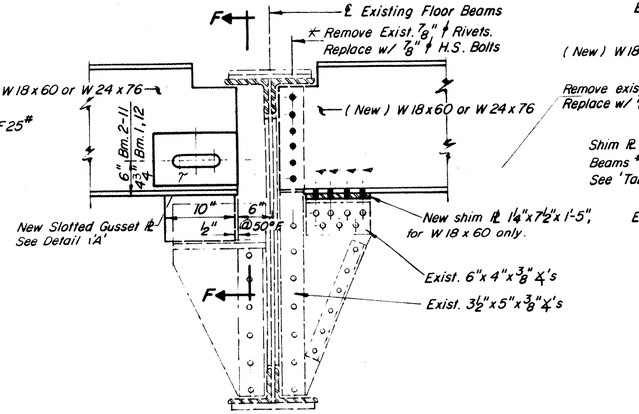
TYPICAL HALF CROSS SECTION (Spans 4 thru 8)



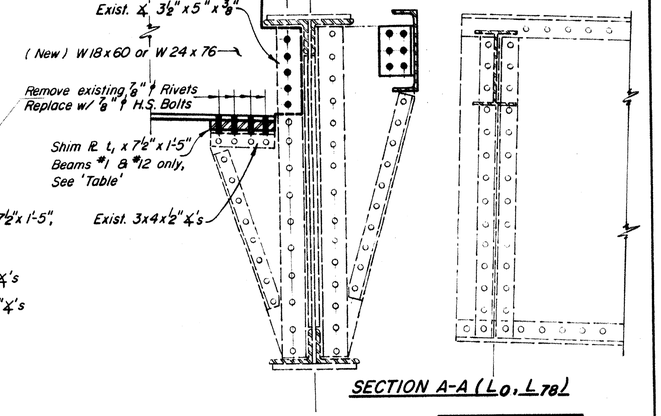
SECTION B-B



SECTION C-C

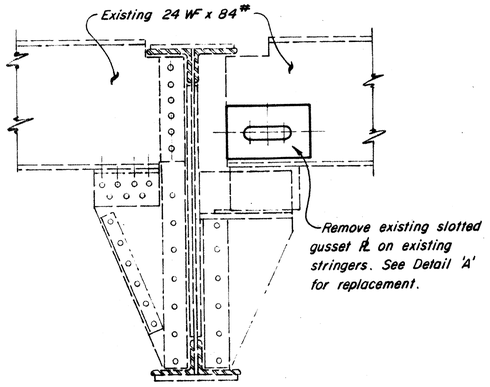


SECTION D-D (L_{19}, L_{34}, L_{44} & L_{59})

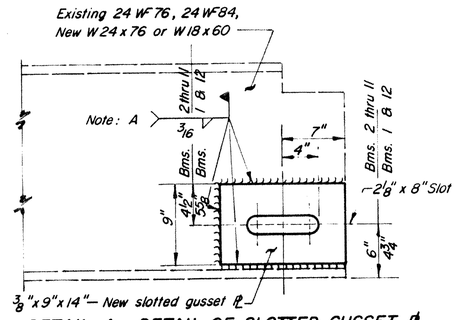


SECTION A-A (L_0, L_{78})

Note A: New stringers may have shop welding of slotted gusset plates.

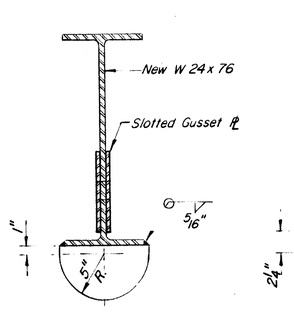


SECTION E-E (PANEL Pts. L_{19}, L_{34}, L_{44} & L_{59})



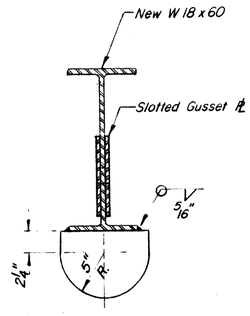
DETAIL A – DETAIL OF SLOTTED GUSSET ℔

(1 Req'd. on ea. side of stringers) (96 New slotted gusset ℔ Req'd.)



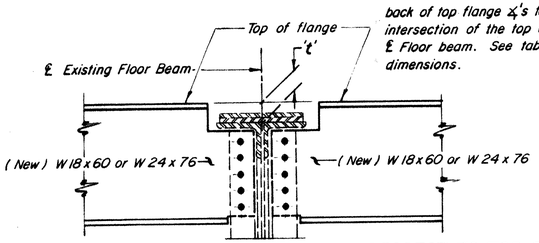
SECTION F-F

(Beams 2, 6, 7 & 11)



SECTION F-F

(Beams 1 & 12)



't' dimension is the distance from back of top flange ∠'s to the theoretical intersection of the top of stringers at ℄ Floor beam. See table for 't' dimensions.

TOP OF NEW STRINGERS WITH RESPECT TO TOP OF EXISTING FLOOR BEAMS

	New Stringers 't' Dimension					
Floor beam @	1	2	6	7	11	12
L_0	6 1/16"	5 7/8"	3 3/8"	3 3/8"	7/8"	11/16"
L_1	4 11/16"	4 5/8"	3 3/8"	3 3/8"	7/8"	11/16"
L_2	3 3/8"	3 3/8"	3 3/8"	3 3/8"	7/8"	11/16"
L_3	2"	2 1/8"	3 3/8"	3 3/8"	7/8"	11/16"
L_4 thru L_{78}	11/16"	7/8"	3 3/8"	3 3/8"	7/8"	11/16"

Panel Point	Beam No.	L_1
L_0	1	1 5/8"
	12	1 1/4"
L_{78}	1	1 1/4"
	12	1 1/4"

TABLE

NOTES:

See existing shop plans for locations of existing rivets & rivet holes, and details of existing stringers.

Sections are from Sheet # 67

* Field drill 15/16" ϕ holes in Stringer webs

FOR INFORMATION ONLY

DESIGNED	R.F. HILLIARD
CHECKED	A.L. BROWN
DRAWN	PVS
CHECKED	A.L.B.

Dec. 20 1963

EXAMINED James J. Rowan II
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

STRUCTURAL STEEL – REMOVAL & REPLACEMENT OF STRINGERS
SPANS 4 THRU 8
F.A.I. Rte. 74 SECTION 10-D-1
PEORIA-TAZEWELL COUNTIES
STA. 151+85

68196

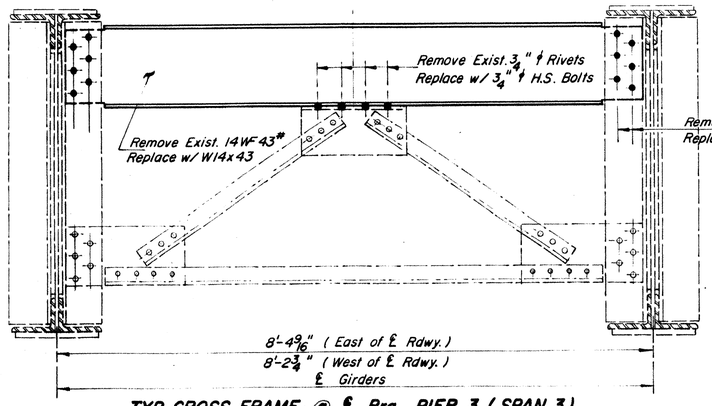
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.			136	116C
FED. ROAD DIST NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 69
75 SHEETS

SHEET 147 OF 160

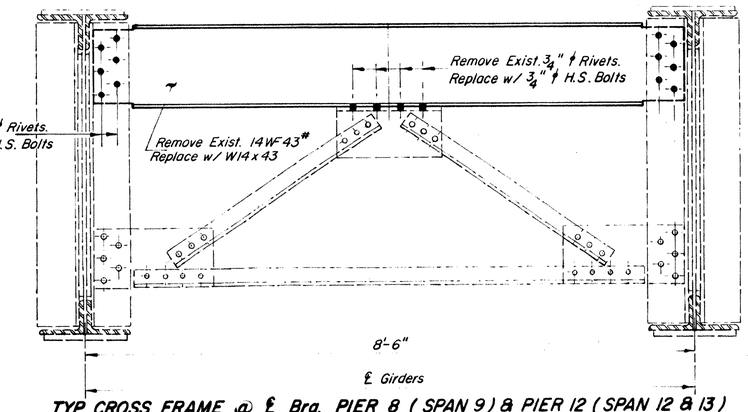
1006 1559

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

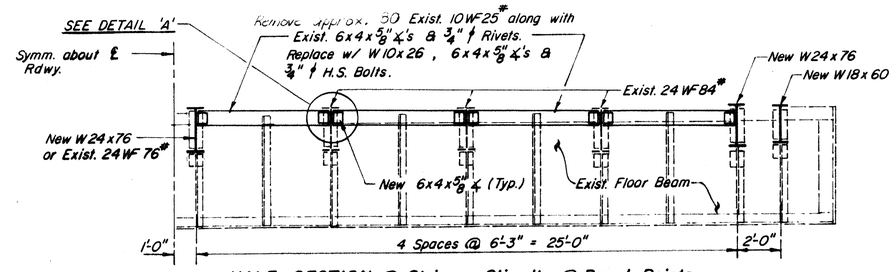


TYP. CROSS FRAME @ ℄ Brg. PIER 3 (SPAN 3)
(Looking North) (6 Diaph. Req'd.)

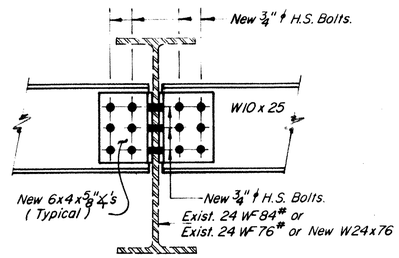
Remove Exist. 3/4" ϕ Rivets.
Replace w/ 3/4" ϕ H.S. Bolts
(Typical)



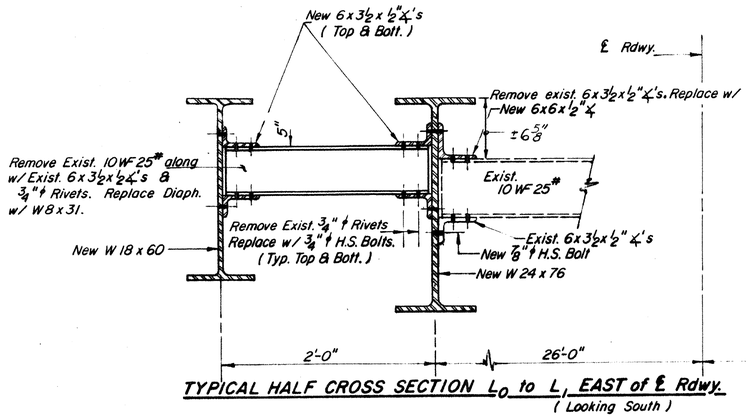
TYP. CROSS FRAME @ ℄ Brg. PIER 8 (SPAN 9) & PIER 12 (SPAN 12 & 13)
(18 Diaph. Req'd.)



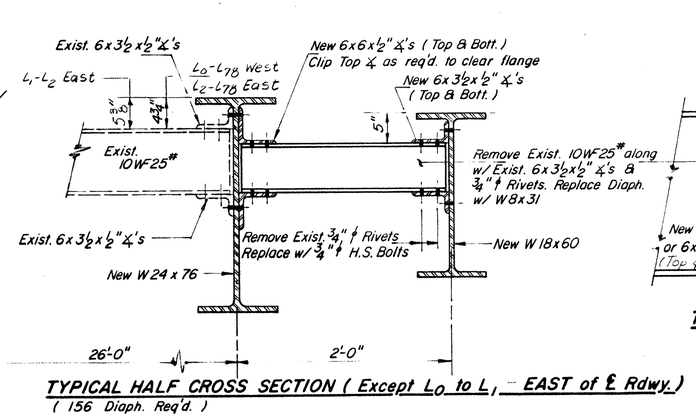
HALF-SECTION @ Stringer Slip Jts. @ Panel Points
L_3, L_6, L_9, L_{12}, L_{16}, L_{22}, L_{25}, L_{28}, L_{31}, L_{37}, L_{41}, L_{47}, L_{50}, L_{53}, L_{56}, L_{62}, L_{66}, L_{69}, L_{72} and L_{75}
(Approx. 80 Req'd. Total)



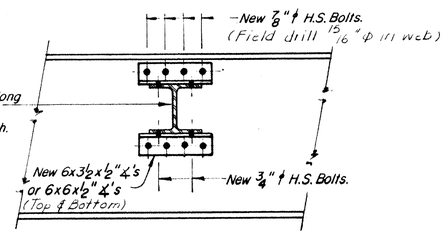
DETAIL 'A'



TYPICAL HALF CROSS SECTION L_0 to L_1 EAST of ℄ Rdwy.
(Looking South)



TYPICAL HALF CROSS SECTION (Except L_0 to L_1 EAST of ℄ Rdwy.)
(156 Diaph. Req'd.)



TYPICAL END VIEW

NOTES:

See existing shop plans for locations of existing rivets and rivet holes.

FOR INFORMATION ONLY

For details of new W-flange beams, See Sht. # 68

DESIGNED	M. L. M. H.
CHECKED	D. J. Brown
DRAWN	PWS
CHECKED	D. J. B.

Dec. 20 1983

EXAMINED James A. Rambusch
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED
DIRECTOR OF HIGHWAYS

STRUCTURAL STEEL - DIAPHRAGM REMOVAL & REPLACEMENT
F.A.I. Rte. 74 SECTION 10-D-1
PEORIA-TAZEWELL COUNTIES
STA. 151+85

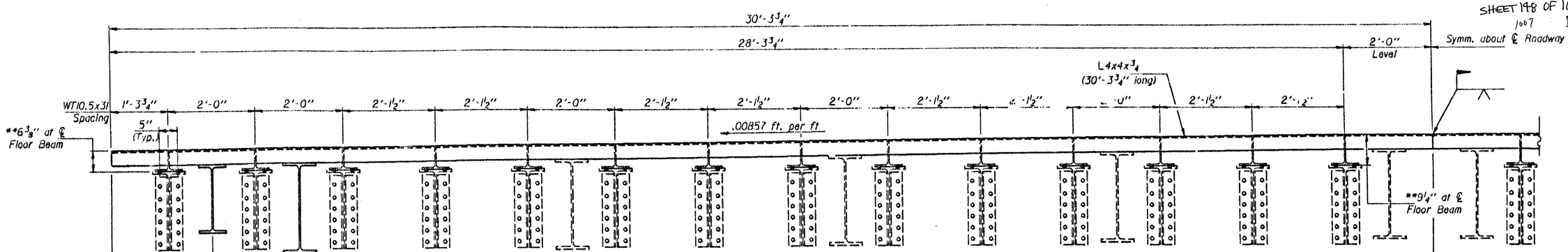
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

68196

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.			136	114
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

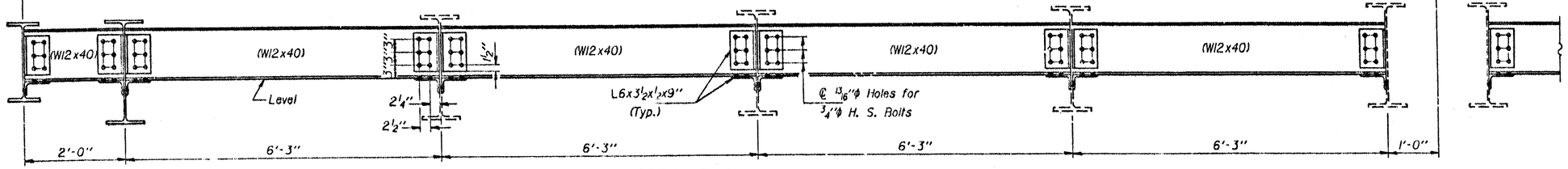
SHEET NO. 66
15 SHEETS

~~SHEET~~ 198 OF 160
Job 1559

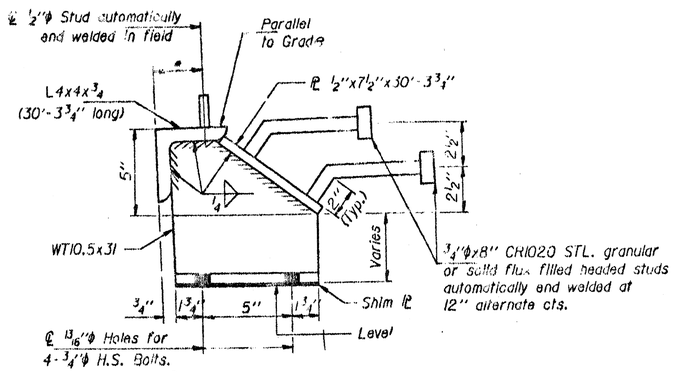


SECTION A-A

**This dimension is based on 2 1/4" thick neoprene. If other thickness is used, adjust height of support.



SECTION B-B



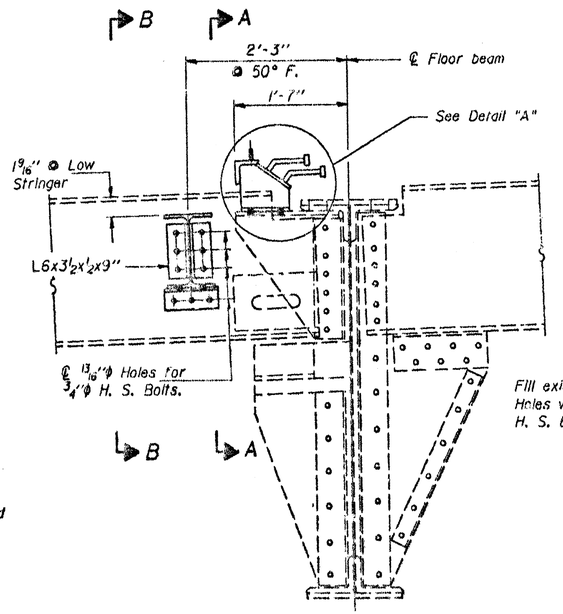
DETAIL "A"

*For Dimensions see Fabricator of Neoprene Expansion Joint (4").

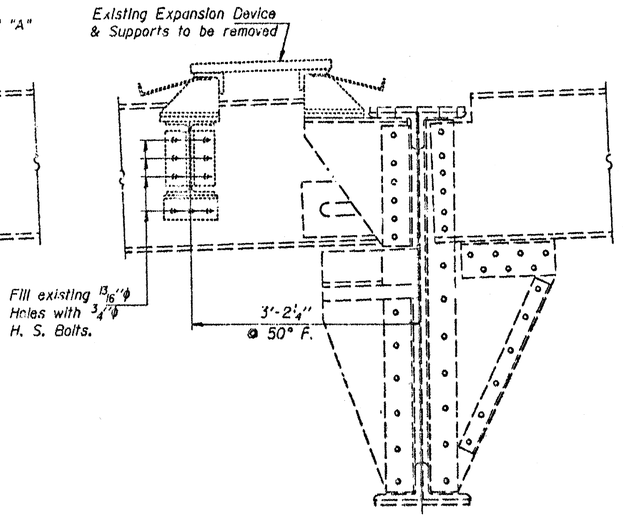
DESIGNED	Patrick M Stone
CHECKED	A L Brand
DRAWN	R. P. Summer
CHECKED	A L B.

December 20 1993
EXAMINED James J Rylund
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

Note: Provide 1-1/8" Shim ℄ and 2-1/16" Shim ℄'s per stool for height adjustment.



NEW SECTION



EXISTING SECTION

FOR INFORMATION ONLY

NEOPRENE EXPANSION JOINT SUPPORT DETAILS AT PANEL POINTS 34 & 44
F.A.I. RT. 74 SEC. 10D-1
PEORIA-TAZEWELL COUNTIES
STATION 151+85

68196

Note: Add 2'-0" to lamp pole spacing for spacing of junction boxes located in bottom rail of Handrail. See Sheet 41 for the proper side to locate box.

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

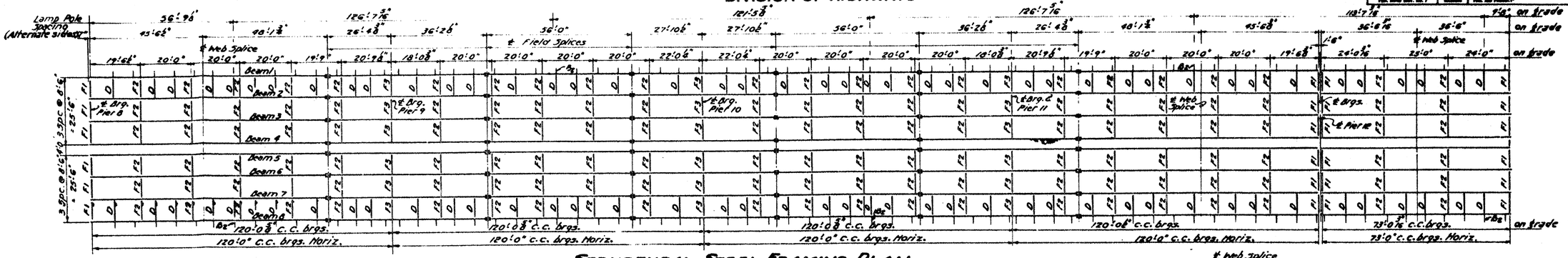
FAE-9

DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 9	10E-F-P	Peoria-Tazewell	37	3
F.A.I. 05	10E-F-P		16	14
FED. ROAD DIST. NO. 7	BRIDGES	FED. AID PROJECT	19	17

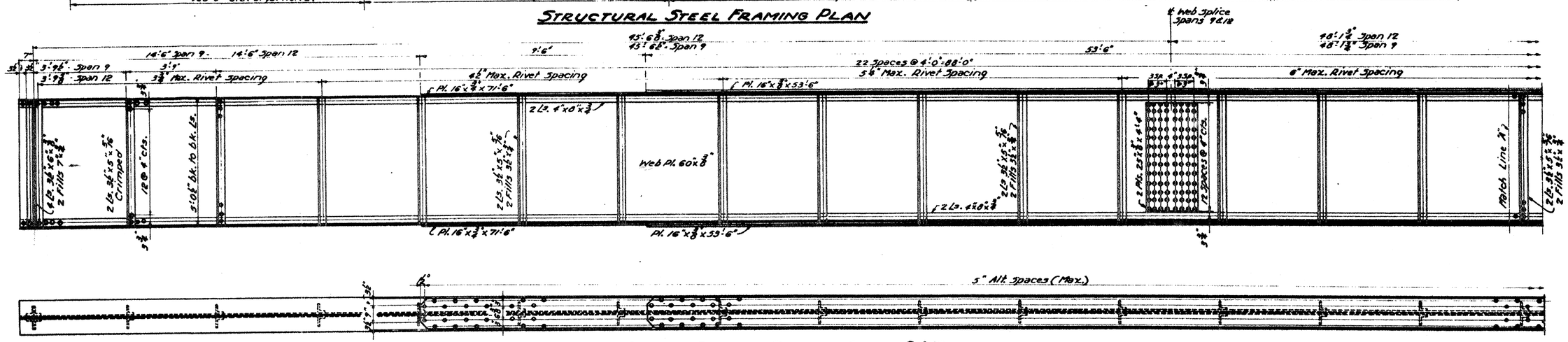
SHEET NO. 3
42 SHEETS

SHEET 149 OF 160 1559

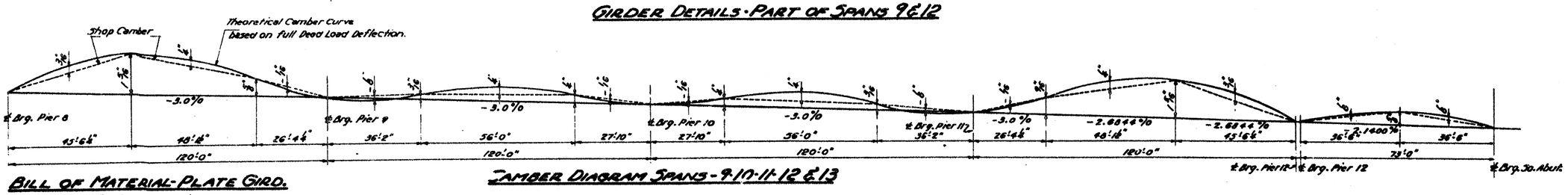
1008



STRUCTURAL STEEL FRAMING PLAN



GIRDER DETAILS - PART OF SPANS 9 & 12



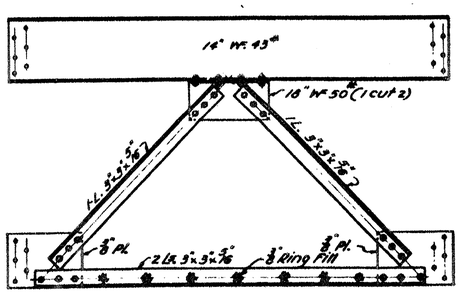
CAMBER DIAGRAM SPANS - 9-10-11-12 & 13

BILL OF MATERIAL - PLATE GIRD.

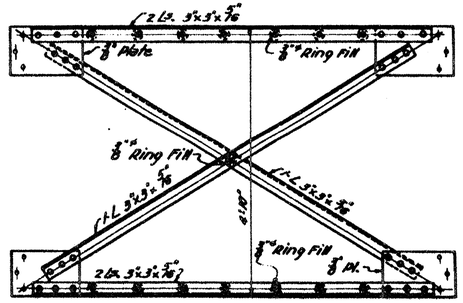
Section 10-E & F

ITEM		TOTAL
Carbon Steel	Lbs.	1,400,870

Note: Does not include Expansion Device ...



TYPICAL FRAME - F1



TYPICAL FRAME F2 & F3

FOR INFORMATION ONLY

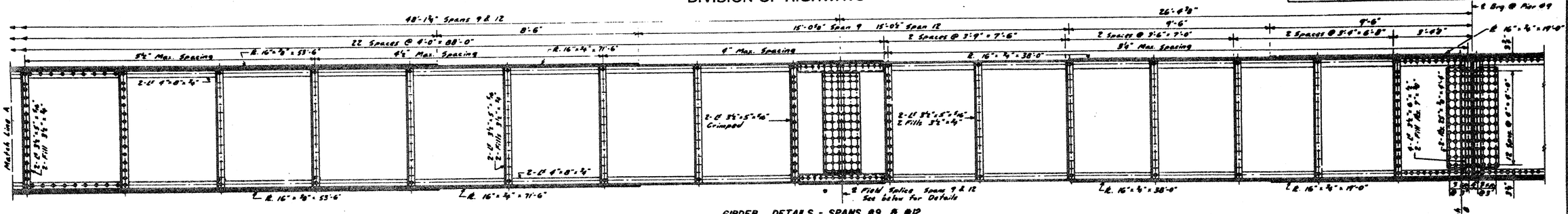
DESIGNED	C.R.E. Thurnwald / R. Rough	July 8 1955
CHECKED	James J. Rylaus	EXAMINED W.M. Rearnine
DRAWN	K. Oelmke M. Miller	PASSED [illegible]
CHECKED	J.J.R.	APPROVED R.R. Bartholomew

FRAMING & CAMBER - GIRDER SPANS
PROJECT UT-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10E-F-P
PEORIA - TAZEWELL COUNTIES

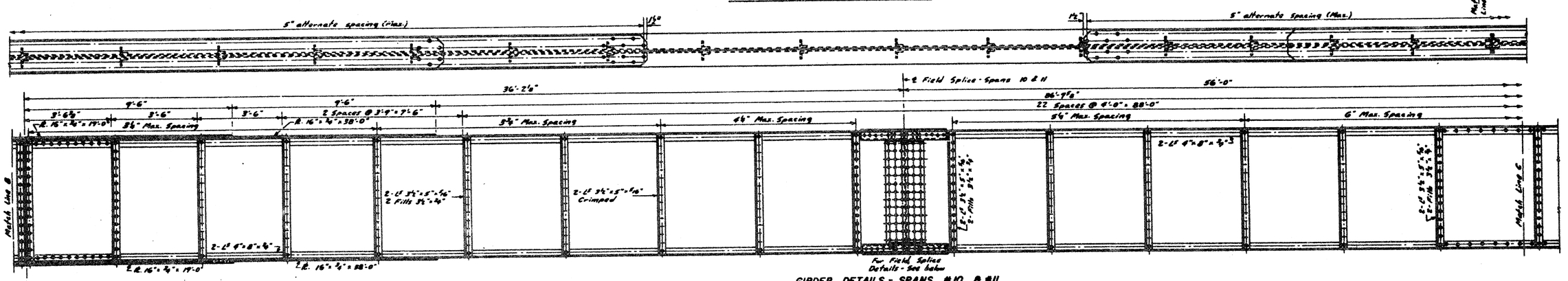
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 9	109B	Peoria-Tazewell	59	16
F.A.I. 55	109		59	16
FED. ROAD DIST. NO. 7				

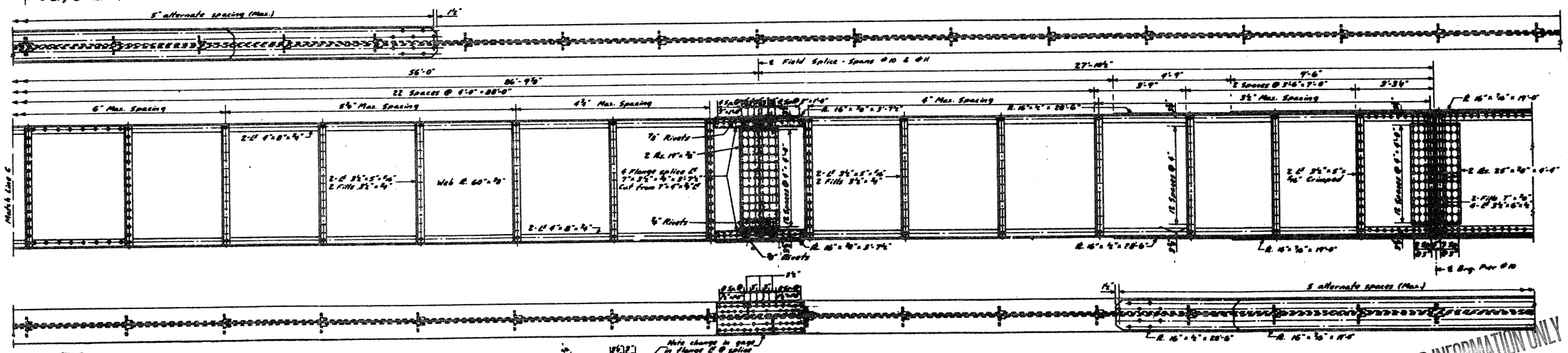
SHEET NO. 4
42 SHEETS



GIRDER DETAILS - SPANS #9 & #12



GIRDER DETAILS - SPANS #10 & #11



DESIGNED	G.J. Raybourn	July 8 1955
CHECKED	W.R. Hesselbath	EXAMINED W.M. Ramsine
DRAWN	R.O. W.A. Zimmerman Jr.	PASSED E.C. Curtis
CHECKED	G.J. Raybourn	APPROVED C.H. Bartholomew

Note: Splice detail shown above is typical for all points of field splice. Use Web splice only with shop rivets at points shown as framing shop. Crimp all intersecting stiffener ℄ except at cross frame connections. All rivets ⅞" ø except those in flange splices which are ⅝" ø. All holes shall be subpunched ¹³/₁₆" and reamed to ⅞" for ⅞" ø rivets and ¹¹/₁₆" for ⅝" ø rivets.

FOR INFORMATION ONLY

GIRDER DETAILS - 4 SPAN UNIT
PROJECT UR-4(1)
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 109-F-P
PEORIA - TAZEWELL COUNTIES

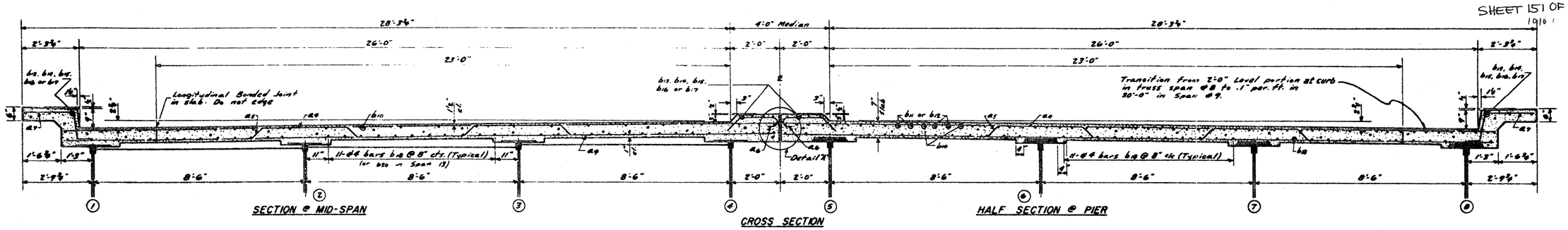
68196

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

STATE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
27 A	3W	Peoria-Tazewell	33	5
F.A.R. 85	4W		33	15
	5W		33	18
	10D		33	19
FOR ROAD DIST. NO. 1	ILLINOIS	FOR AID PROJECT		

SHEET NO. 5
42 SHEETS

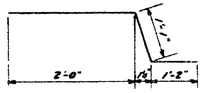
SHEET 151 OF 160
1010 1559



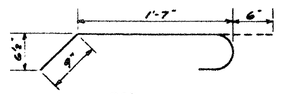
SECTION @ MID-SPAN

CROSS SECTION

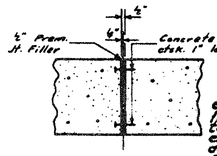
HALF SECTION @ PIER



BAR a7



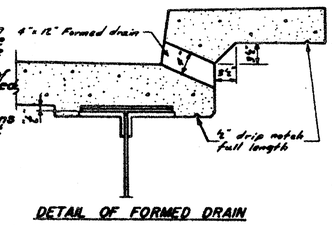
BAR a8



DETAIL "A"

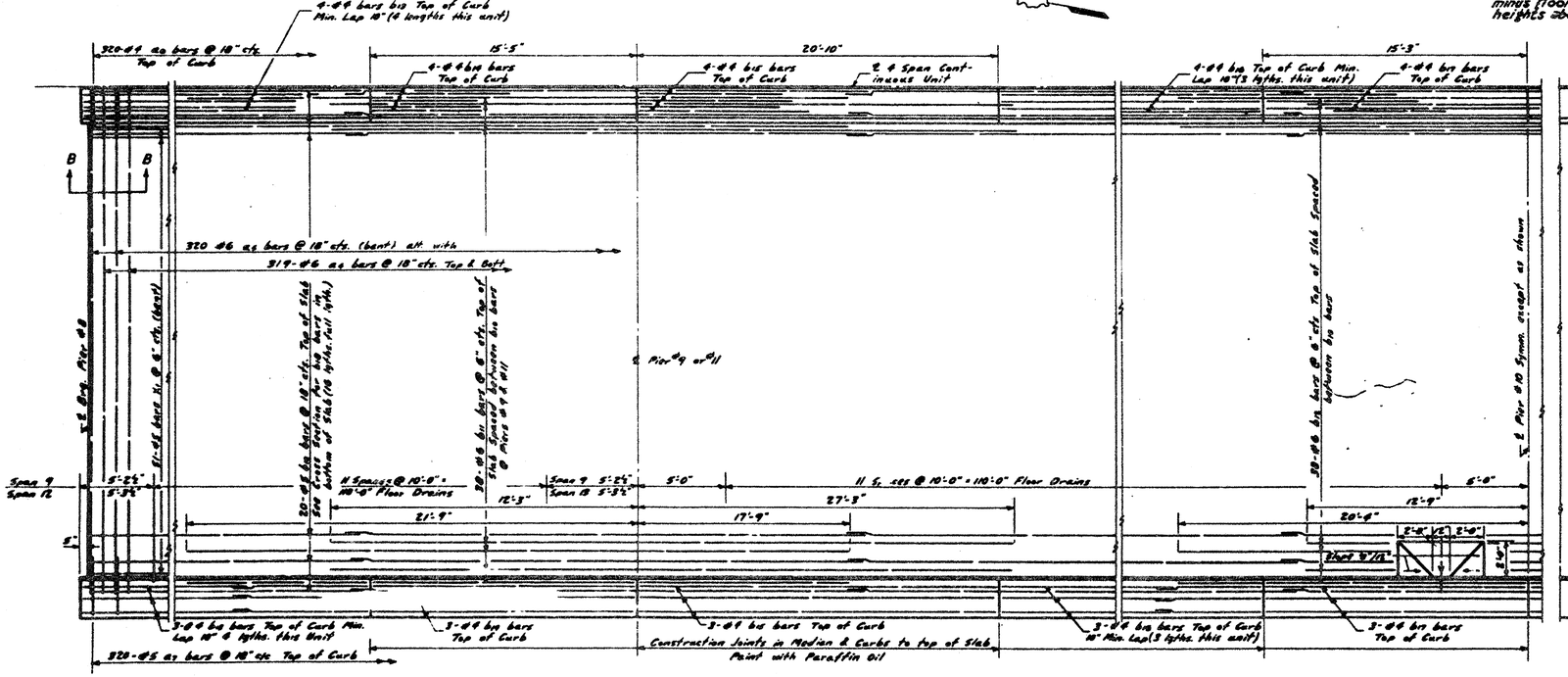
METHOD OF DETERMINING FILLET HEIGHTS "L"

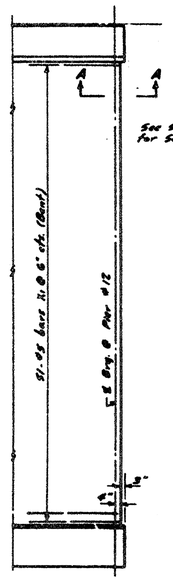
After all structural Steel has been erected, elevations of the top of the flange angles of the Girders shall be taken at 1/12 intervals. From these elevations subtract the increment of deflection for these points determined from the D.L. Deflection diagram. The elevations so attained subtracted from the theoretical grade elevations minus floor thickness equals the fillet heights above top of Girders.



DETAIL OF FORMED DRAIN

Note: Floor drains shall be spaced in the floor slab so as to miss Cross Frames & Piers.





BILL OF MATERIAL

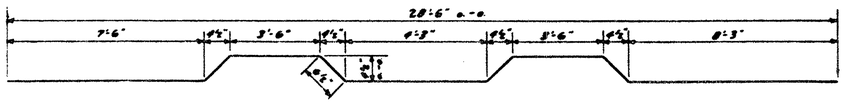
Bar	No.	Size	Length	Shape
a4	1276	#6	28'-5"	
a5	640	#6	29'-2"	
a6	640	#4	2'-10"	
a7	640	#5	4'-3"	
bto	640	#5	31'-0"	
bu	152	#6	39'-6"	
bis	76	#6	33'-1"	
bis	112	#4	26'-11"	
bis	28	#4	15'-1"	
bis	28	#4	20'-6"	
bis	84	#4	28'-10"	
bis	28	#4	15'-0"	
ba	1152	#4	31'-6"	
* X1	204	#5	5'-9"	
Sec. 10-D Class X Concrete			Cu. Yd.	670.4
Sec. 10-D Reinforcement Bars			Lb.	149,260

* For details of bar X1 see sheet # 6

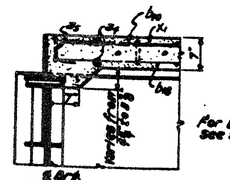
DESIGNED	C.O.E.	
CHECKED	A.J. Ryerson	
DRAWN	W.A. Swanson Jr.	
CHECKED	J.J. Ryerson	

July 8 1955

EXAMINED W.M. Kemmis, Engineer of Bridges and Highway Structures
PASSED E.E. Hurt, Engineer of Roads
APPROVED R.H. Babcock, State Highway Engineer



BAR a8



SECTION B-B

For Exp. device see sheet # 30

FOR INFORMATION ONLY

DECK - 4 SPAN UNIT
PROJECT UT-48(1)
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10D-E-F-P
PEORIA - TAZEWELL COUNTIES

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

FAI-74

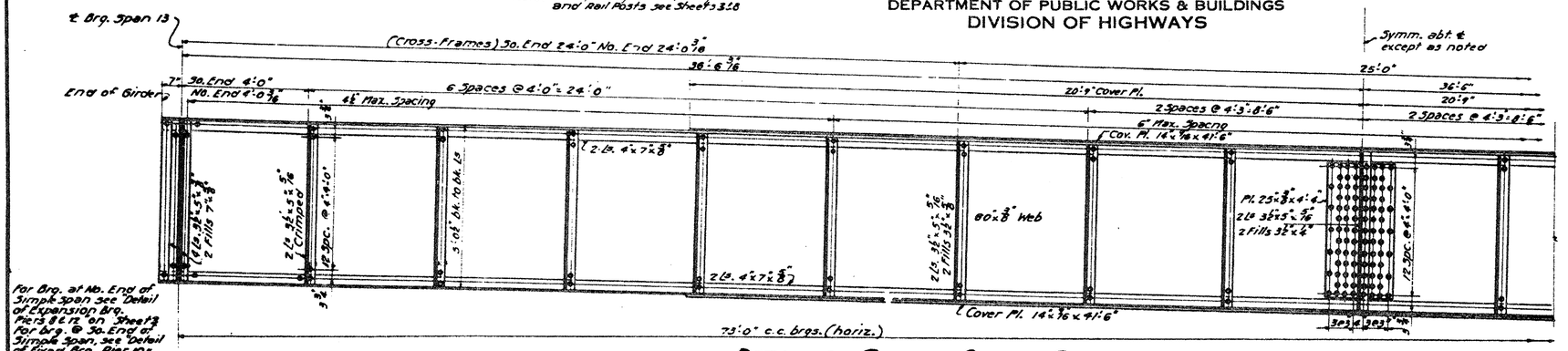
DISTR. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	100-E-F-P	Peoria-Tazewell	42	6
F.A.I. 80	100-E-F-P		42	10
F.A.I. 55	100-E-F-P		42	11
			42	20

FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT

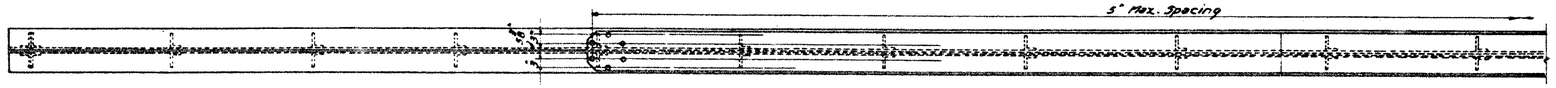
SHEET NO. 6
42 SHEETS

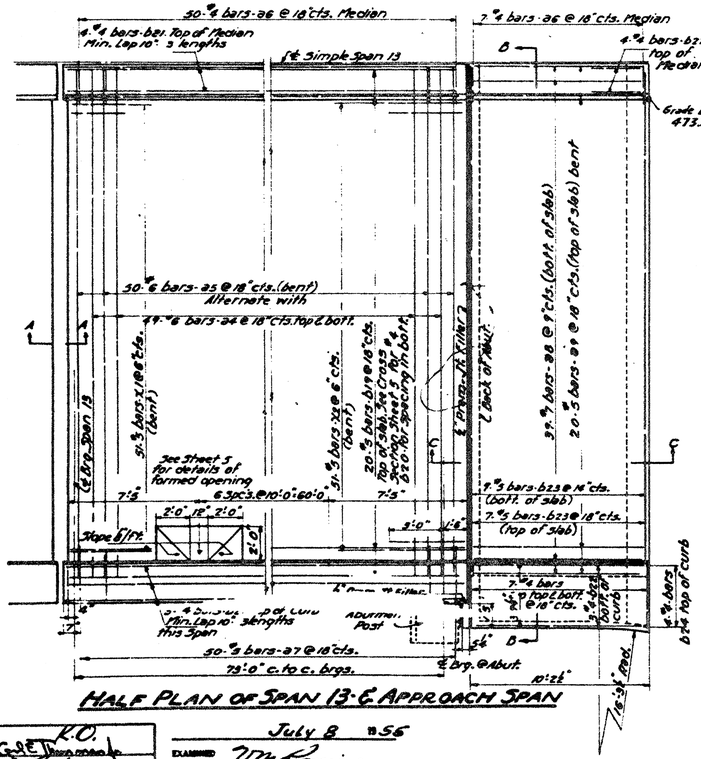
68196 SHEET 152 OF 160
Joll 1559

Note: For spacing of Diaphragms and Rail Posts see Sheet 3 & 8
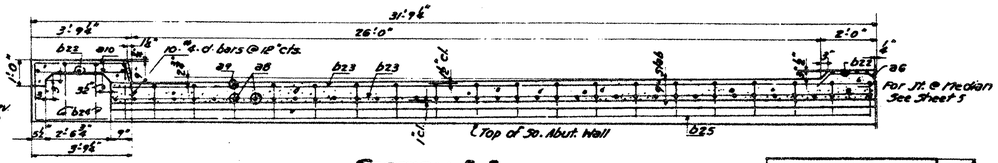


DETAIL OF GIRDER - SIMPLE SPAN

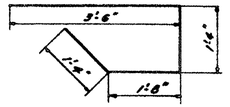




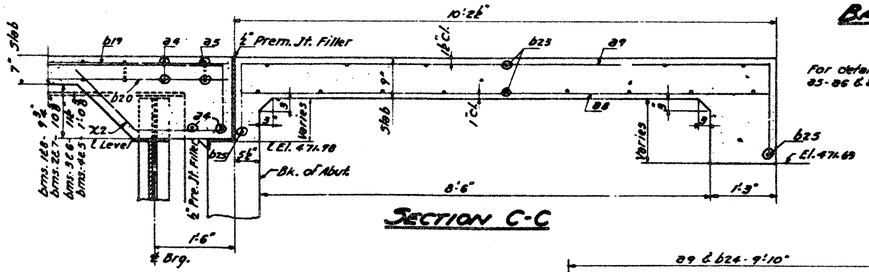
HALF PLAN OF SPAN 13-E APPROACH SPAN



SECTION B-B

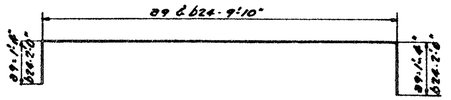


BAR X2

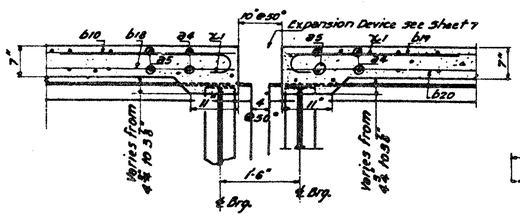


SECTION C-C

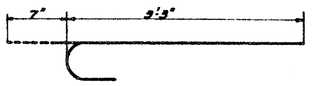
For details of bent bars a5-a6 & a7 see Sheet 5



BARS a9 & b24



SECTION A-A



BAR X1

BILL OF MATERIAL - SIMPLE SPAN

BAR	NO.	SIZE	LENGTH	SHAPE
a4	200	#6	28:5"	
a5	100	#6	29:2"	
a6	100	#4	2:10"	
a7	100	#5	4:3"	
b19	120	#5	25:5"	
b20	216	#4	25:5"	
b21	42	#4	25:7"	
X2	102	#5	7:10"	
X1	102	#5	3:9"	
Sec 10-D Class "X" Concrete			Cu. Yds.	115.7
Sec 10-D Reinforcement Bars			Lbs.	22350

BILL OF MATERIAL - APPROACH SPAN

BAR	NO.	SIZE	LENGTH	SHAPE
a6	14	#4	2:10"	
a8	78	#7	10:0"	
a9	40	#5	12:6"	
a10	28	#4	3:6"	
b22	14	#4	10:0"	
b23	92	#5	28:5"	
b24	8	#4	14:6"	
b25	4	#4	3:6"	
d	20	#4	1:3"	
Sec 10-D Class "X" Concrete			Cu. Yds.	23.2
Sec 10-D Reinforcement Bars			Lbs.	3450

FOR INFORMATION ONLY

DESIGNED	K.O.	July 8 1955
CHECKED	J.T. Ryburn	EXAMINED W.M. Kenning
DRAWN	K.O. W. Miller	PASSED
CHECKED	J.T. Ryburn	APPROVED R.R. Bartlett

GIRDER & DECK - SIMPLE SPAN UNIT
PROJECT UI-48( )
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 100-E-F-P
PEORIA - TAZEWELL COUNTIES

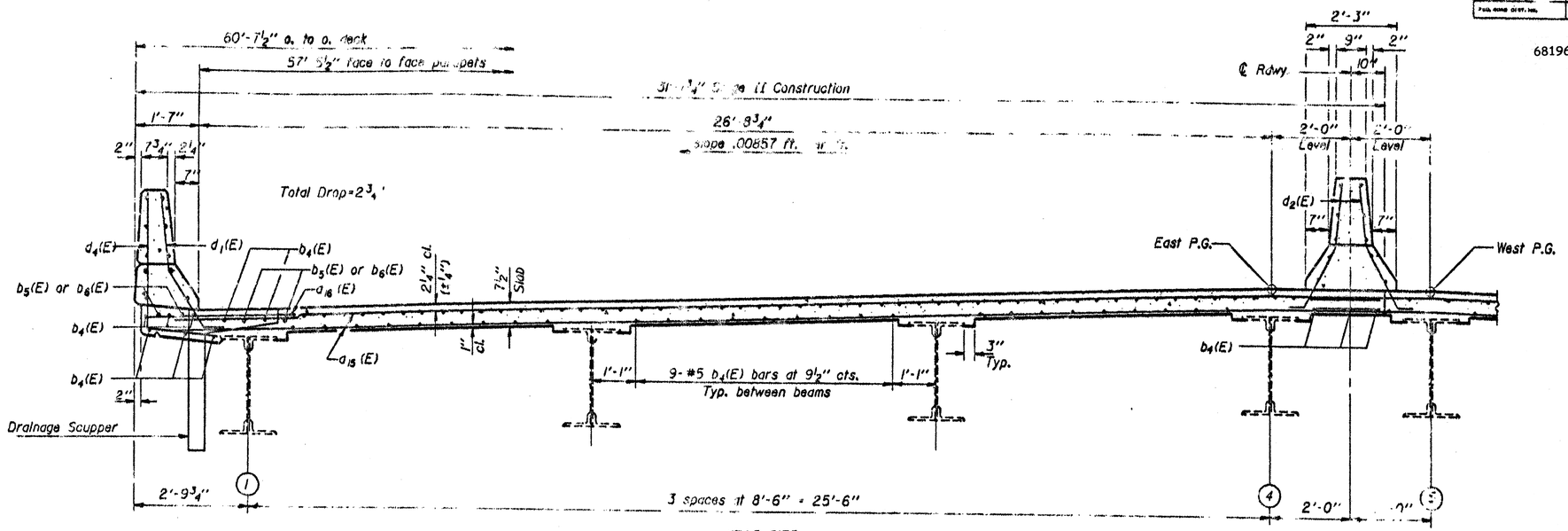
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

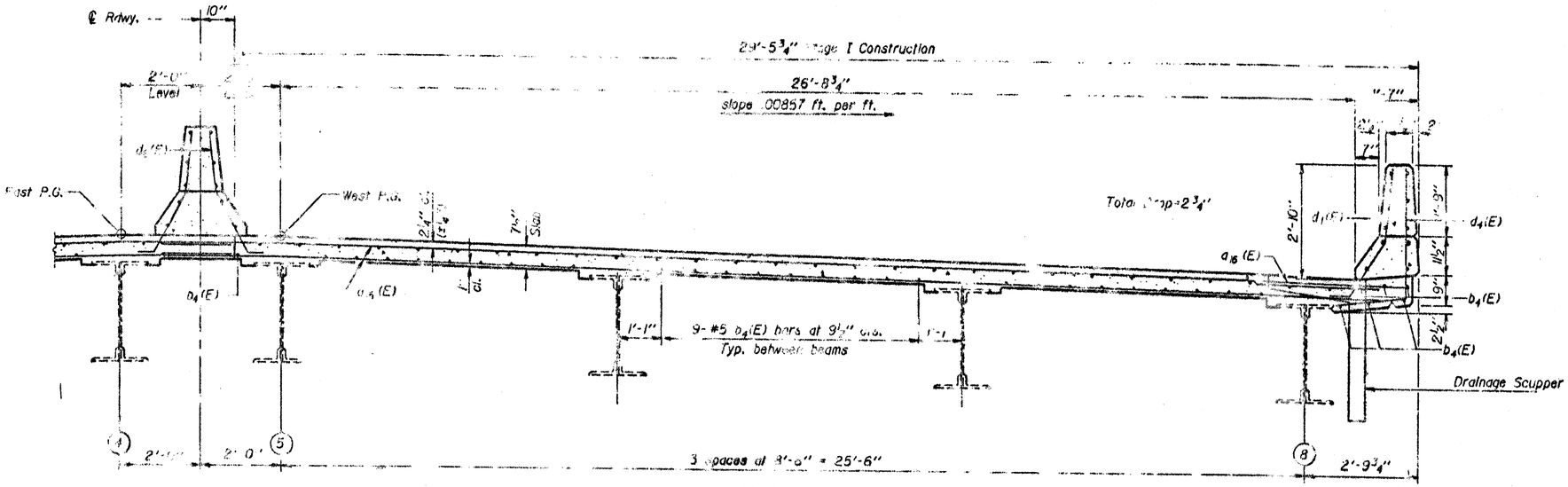
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.			136	60
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 25
75 SHEETS

68196

SHEET 153 OF 160
1012 1559





CROSS SECTION
looking South

Note: ... #29 thru 33 ... superstructure shall be ... print.

FOR INFORMATION ONLY

SOUTH APPROACH
SUPERSTRUCTURE
ROSS SECTION ... PAN 9,10,11 &
F.A.I. RT. 74 SEC. 10D-1
PEORIA-TAZEWELL COUNTIES
STATION 151+35

DESIGNED	H.F. Wade M. Peters
CHECKED	A.L.B.
DRAWN	RFS JRS
CHECKED	A.L.B.

Dec. 20 19[illegible]
COMPUTED
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

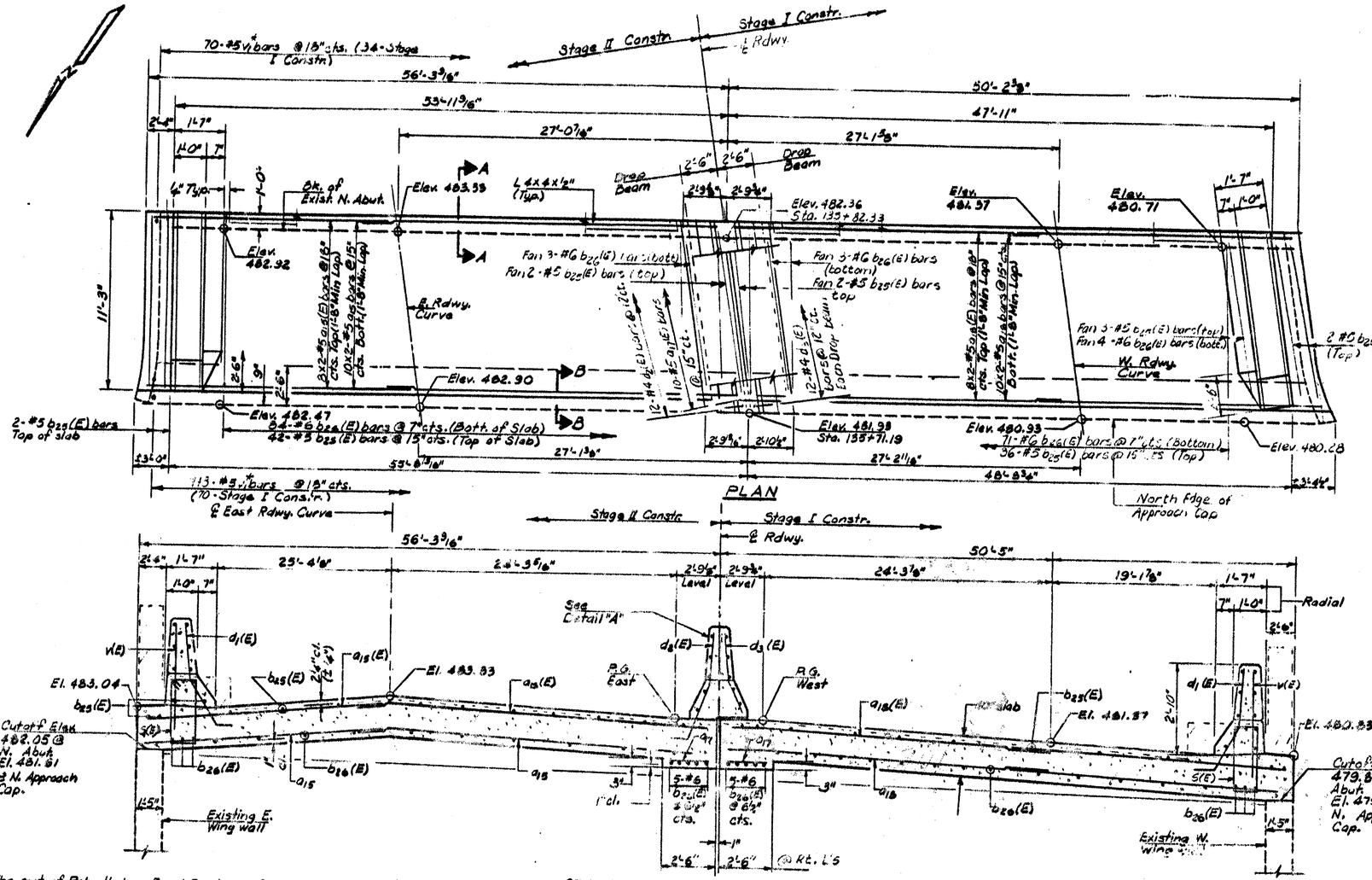
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

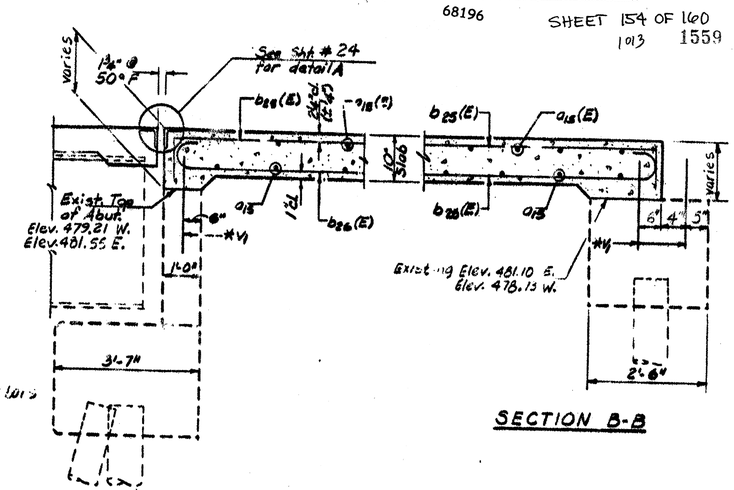
				136	47

SHEET NO. 12
75 SHEETS

68196

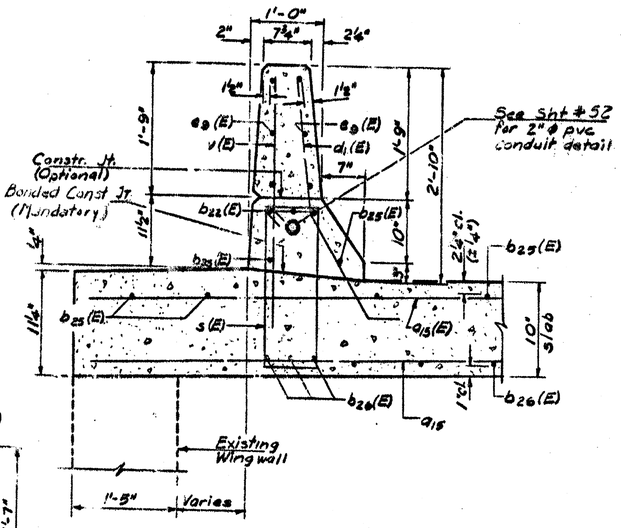
SHEET 154 OF 160
1013 1559





SECTION B-B

SECTION A-A



SECTION THRU PARAPET

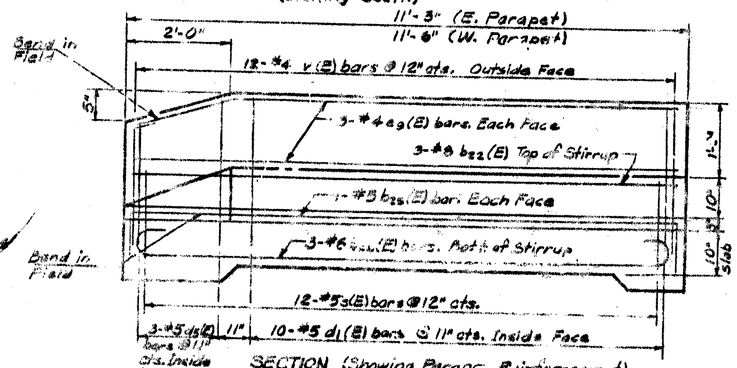
FOR INFORMATION ONLY

The cost of Polyethylene Bond Breaker, Conc. Jt. Sealer and 1 1/2" ø Compressible Rod under Median shall be incidental to "Class X Concrete."
Hatched areas indicate concrete removal, quantity to be billed with Removal of Existing Concrete Deck.
See Sht. #13 for bar details and Bill of Material.
Reinforcement Bars designated (E) shall be epoxy coated.
Bars indicated thus 46x2-#5 etc., indicates 46 lines of bars with 2 lengths per line.
* Drill 7/8" ø x 1'-0" hole and epoxy grout v1 bars. See Special Provisions for epoxy grout.

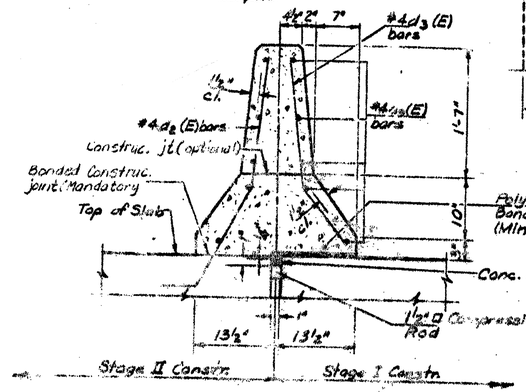
DESIGNED	Patrick M. Stone
CHECKED	L. K. Brown
DRAWN	E. V. Taylor
CHECKED	L. K. B.

Dec. 20 1963
EXAMINED
PASSED
APPROVED

CROSS-SECTION NORTH APPROACH SLAB
(View @ Back of N. Abutment)
(Looking South)



SECTION (Showing Parapet Reinforcement)



DETAIL "A"

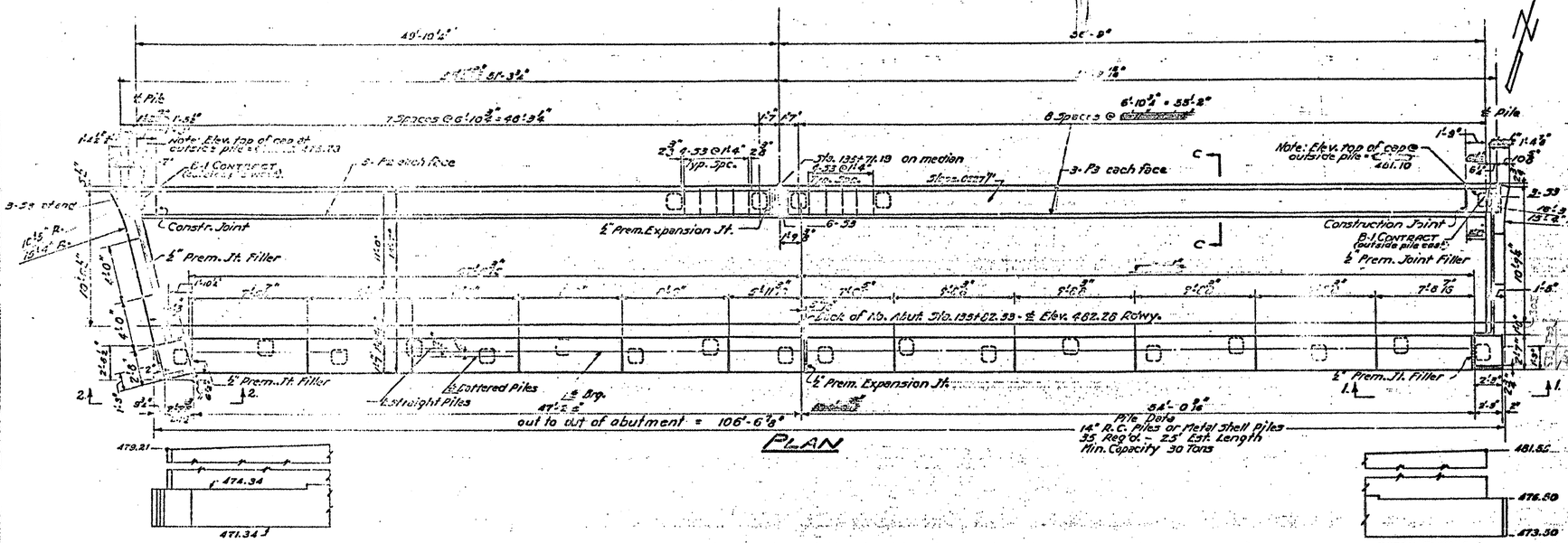
NORTH APPROACH SLAB
F.A.I. RT. 74 SEC. 10D-1
PEORIA-TAZEWELL COUNTIES
STATION 151+85

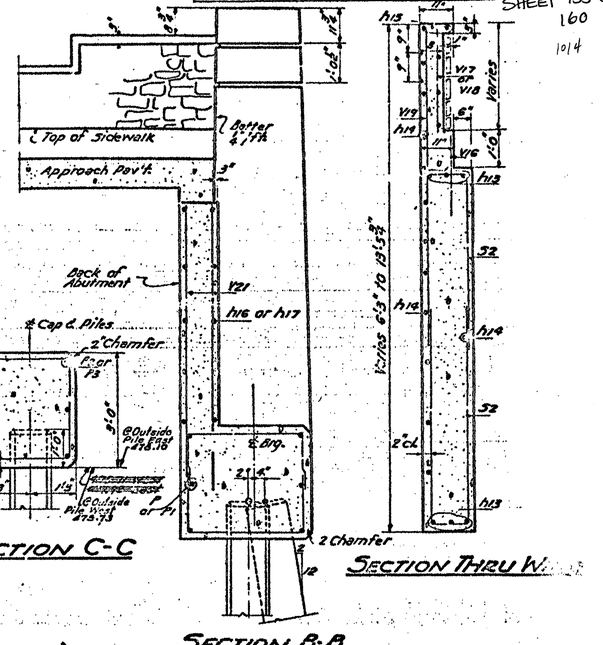
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

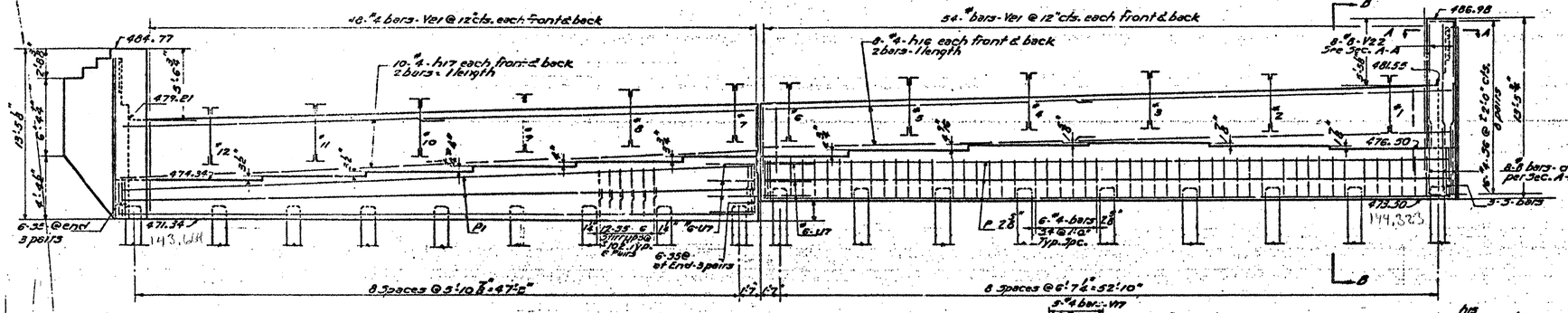
68196

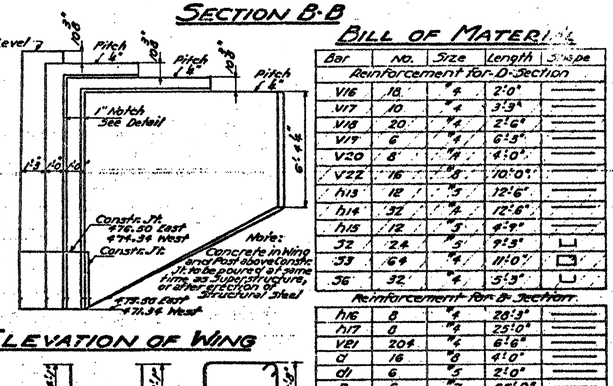
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.R. 9	108-1	Peoria	9	4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2
7 SHEETS
SHEET 155 OF 160
1014 1559



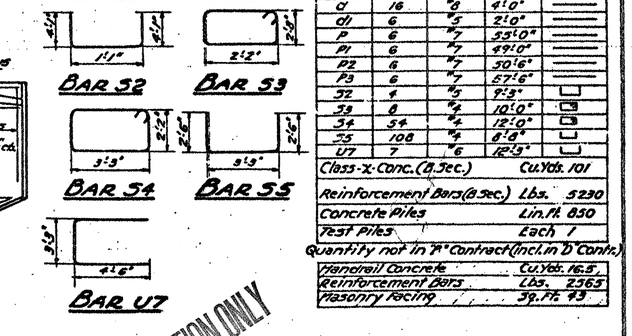


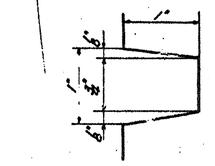


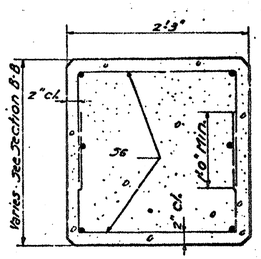


BILL OF MATERIAL

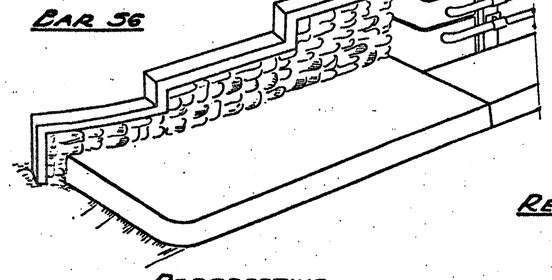
Bar	No.	Size	Length	Shape
Reinforcement for D-Section				
V16	18	#4	2'0"	
V17	10	#4	3'3"	
V18	20	#4	2'6"	
V19	6	#4	6'5"	
V20	8	#4	4'0"	
V22	16	#5	10'0"	
h13	12	#5	12'6"	
h14	32	#4	12'6"	
h15	12	#5	9'9"	
32	24	#5	9'3"	
33	64	#4	11'0"	
36	32	#4	5'3"	
Reinforcement for B-Section				
h16	8	#4	28'3"	
h17	8	#4	25'10"	
V21	204	#5	6'6"	
C	16	#5	4'0"	
D1	6	#5	2'0"	
P	6	#7	53'0"	
P1	6	#7	49'0"	
P2	6	#7	30'6"	
P3	6	#7	57'6"	
52	4	#5	9'3"	
53	8	#4	10'0"	
54	54	#4	12'0"	
55	108	#4	6'8"	
U7	7	#6	12'9"	
Class X Conc. (B Sec.)				Cu.Yds. 101
Reinforcement Bars (B Sec.)				Lbs. 5230
Concrete Piles				Lin.Ft. 850
Test Piles				Each 1
Quantity not in "A" contract (incl. in "D" Contr.)				
Handrail Concrete				Cu.Yds. 16.5
Reinforcement Bars				Lbs. 2565
Masonry Facing				Sq.Ft. 93

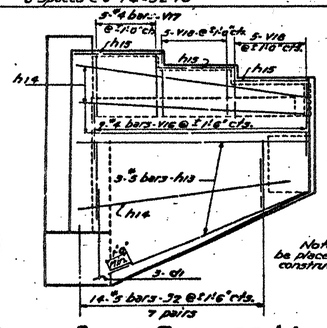




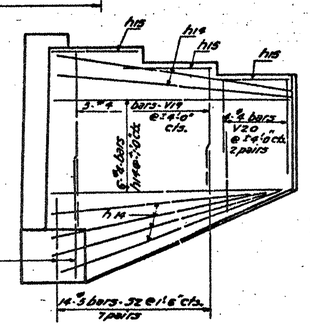








Note: 2-#5-32 to be placed in orig. construction.



Note: North Abutment to be constructed at right angles to the tangent at Sta. 136+83.47

DESIGNED	O.J. McCoy
CHECKED	J.T. Rayburn
DRAWN	O.J.Mc M. Miller
CHECKED	

EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF BRIDGES
APPROVED — CHIEF HIGHWAY ENGINEER

July 27 1955

Revised: 12-8-'55 - O.J.McCoy

FOR INFORMATION ONLY

NORTH ABUTMENT
PROJECT U1-48(10)
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 - SECTION 108.1
PEORIA COUNTY

68196

1016 1559

SHEET 156 OF 160

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 9	108-1	Peoria	9	5

FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT

SHEET NO. 3

82'-10-3/16"

PLAN - FIXED PIER A

ELEVATION - FIXED PIER A - LOOKING NORTH

PILE DATA
14" R.C. Piles or 12" dia. Metal Shell Piles
No. Req'd. = 56 Est. Length = 25 ft.
Min. Capacity = 30 Tons

PLAN OF FOOTING

Note: All Piers and Abutments to be constructed at Right Angles to the Tangent at Sta. 136+83.47

Note: See Sheet (6) for Pier Sections & Bill of Material

DESIGNED	O.J. McCoy
CHECKED	J.T. Reyburn
DRAWN	O.J. McCoy H. Brechbuhl
CHECKED	J.T. Reyburn

July 22 1955

EXAMINED W.M. Ramirez — ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES

PASSED C.E. Shindler — ENGINEER OF DESIGN

APPROVED R.B. Bartelsmeyer — CHIEF HIGHWAY ENGINEER

FOR INFORMATION ONLY

FIXED PIER A
PROJECT UI 48(10)
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 10 B-1
PEORIA COUNTY

68196

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.R. 9	108-1	Peoria	9	6
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
7 SHEETS

SHEET 157 OF 160
1016
1559

PLAN

SECTION A-A

ELEVATION - LOOKING NORTH

END VIEW

FOOTING PLAN

PILE DATA
16" R.C. Piles or 12" Dia. Metal Shell Piles.
No. Req'd. = 38 Est. Length = 30'
Min. Capacity = 30 Tons

Note: All piers and abutment to be constructed at right angles to the tangent at Sta. 138+83.47.

Note: See sheet 6 for Bill of Material and Bar details.

FOR INFORMATION ONLY

DESIGNED	O.J. McCoy
CHECKED	J.T. Reyburn
DRAWN	O.J.M. W.A. Sonnaman Jr.
CHECKED	J.T. Reyburn O.J.Mc

July 22 1955

EXAMINED _____ ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES

PASSED _____ ENGINEER OF BRIDGES

APPROVED _____ CHIEF HIGHWAY ENGINEER

EXPANSION PIER #1
PROJECT UI-4R(10)
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 108-1
PEORIA COUNTY

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

68196

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 9	108-I	Peoria	9	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5
7 SHEETS

SHEET 159 OF 160
1017 1559

Note: All piers and abutment to be constructed at right angles to the tangent at station 138+85.4

TOP PLAN

ELEVATION - LOOKING NORTH

END VIEW

SECTION A-A

FOOTING PLAN

Note: For Bill of Material and Bar details see sheet 6

FOR INFORMATION ONLY

DESIGNED	J.T. Royburn
CHECKED	O.J. McCoy
DRAWN	J.T. Royburn, W.A. Saulsman Jr.
CHECKED	O.J. McCoy

July 22 1955

EXAMINED — BUREAU OF BRIDGES AND TRAFFIC STRUCTURES

PASSED — ENGINEER OF BRIDGES

APPROVED — CHIEF HIGHWAY ENGINEER

PILE DATA

16" R.C. Piles or 12" dia. Metal Shell Piles
No. Req'd. = 41 Est. Length = 34'-0"
Min. Capacity = 34 Tons

FIXED PIER #2
PROJECT UI-48(10)
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 108-I
PEORIA COUNTY

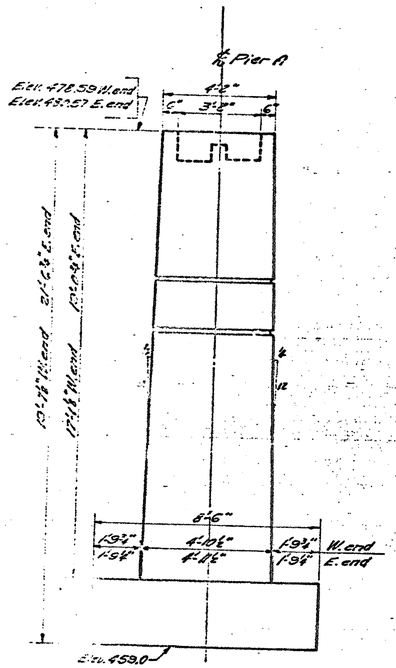
68196

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

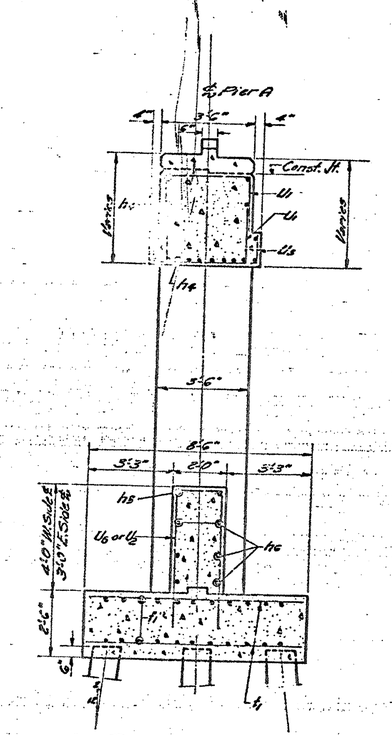
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 9	108-1	Peoria	9	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET 6 OF 7 SHEETS

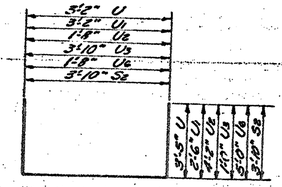
SHEET 159 OF 160
1018 1559



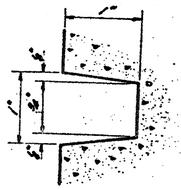
END VIEW - PIER A
See Sheet No.3 for Pier details



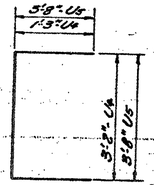
SECTION A-A
PIER A



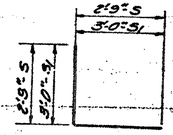
BARS U, U1, U2, U3, U6 & S2



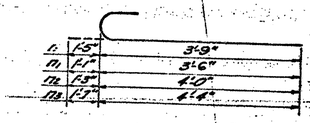
DETAIL OF NOTCH
PIERS A, 1 & 2



BARS U4 & U5



BARS S & S1



BARS M, M1, M2, & M3

BILL OF MATERIAL - PIER A

Bar	No.	Size	Length	Shape
V3	3	#10	19'-6"	
V6	36	#4	2'-6"	
V5	15	#10	18'-3"	
V7	29	#10	16'-11"	
V8	3	#10	15'-6"	
V9	56	#8	13'-0"	
S	135	#4	5'-6"	
U	24	#4	10'-0"	
U1	48	#4	8'-2"	
U2	18	#4	10'-0"	
U3	5	#4	5'-10"	
U5	2	#4	11'-0"	
U6	10	#4	11'-8"	
U4	96	#4	5'-8"	
h4	52	#9	41'-0"	
h5	4	#6	35'-0"	
h6	12	#6	42'-0"	
h7	4	#6	27'-0"	
h8	4	#6	32'-0"	
f1	39	#8	29'-10"	
f1	48	#10	5'-2"	
f1	56	#8	4'-7"	
f2	39	#8	29'-10"	
f2	176	#6	6'-6"	
Class A Concrete		Cu. Yds.	180.9	
Reinforcement Bars		Lbs.	30,570	
Class A Excav. for Struct.		Cu. Yds.	563	
Concrete Piles		Lin. Ft.	1375	
Test Piles		Each	1	

BILL OF MATERIAL - PIER 1

Bar	No.	Size	Length	Shape
V	13	#10	19'-6"	
V1	3	#10	18'-3"	
V2	56	#8	14'-0"	
V3	29	#10	17'-6"	
V4	3	#10	16'-4"	
V5	30	#4	2'-6"	
S	112	#4	5'-6"	
U	24	#4	10'-0"	
U1	36	#4	8'-2"	
U2	48	#4	10'-0"	
U3	20	#4	5'-10"	
U4	104	#4	5'-8"	
U5	2	#4	11'-0"	
h	28	#9	30'-0"	
h1	4	#9	32'-0"	
h2	4	#6	32'-0"	
h3	2	#6	22'-6"	
f	48	#10	5'-2"	
f1	56	#8	4'-7"	
f	36	#8	25'-0"	
f	176	#6	6'-6"	
Class A Concrete		Cu. Yds.	164.8	
Reinforcement Bars		Lbs.	18,310	
Class A Excav. for Struct.		Cu. Yds.	207	
Concrete Piles		Lin. Ft.	1110	
Test Piles		Each	1	

BILL OF MATERIAL - PIER 2

Bar	No.	Size	Length	Shape
h10	92	#9	23'-0"	
V11	13	#11	27'-9"	
V12	16	#11	26'-6"	
V13	16	#11	25'-10"	
V14	3	#11	25'-4"	
V15	92	#4	6'-3"	
S1	320	#4	6'-0"	
S2	2	#4	11'-6"	
U3	96	#3	3'-10"	
h9	100	#6	26'-6"	
h10	2	#6	33'-9"	
h11	2	#6	16'-0"	
h12	2	#6	7'-10"	
m2	92	#9	5'-3"	
m3	40	#11	5'-11"	
f1	64	#7	8'-2"	
f2	18	#6	32'-3"	
Class A Concrete		Cu. Yds.	277.9	
Reinforcement Bars		Lbs.	25280	
Class A Excav. for Struct.		Cu. Yds.	304	
Concrete Piles		Lin. Ft.	1564	
Test Piles		Each	1	

GENERAL NOTES

Class A Concrete shall be used ...
Class X Concrete shall be used ...
ment.
One test pile has been pro... location at which piling is to b... Contractor shall drive the test ... permanent location before pro... remainder of piles for that f...
Boring Cards are shown on t... as a guide to bidders in estim... conditions which may be en... the work.

BORING DATA

BORING #1
Station 132+19 on ℄

Elev.		Description
465		Surface of Ground
		Loose brown sand and debris fill.
460	4	
	5	
455	7	Very loose dark brown sandy silt.
	11	Loose brown silty clayey sand.
450	11	
	12	
445	13	
	14	
440	15	Medium brown angular well graded gravel.
	16	
435	17	
	18	
430	19	
	20	Dense brown angular well graded gravel.
425	21	Medium brown angular well graded gravel.
	22	Dense brown angular well graded gravel.
420	23	
417.5	100	Grey clay shale.

* Very dense brown angular well graded gravel.

BORING #2
Station 137+41, 51' Lt. ℄

Elev.		Description
467.7		Surface of Ground
465		Loose brown sand and debris fill.
460	11	
	12	Medium brown angular sand and gravel.
455	13	Dense brown angular well-graded gravel.
	14	
450	15	Medium brown angular well graded gravel.
	16	Dense brown angular well graded gravel.
445	17	Very dense brown sub-angular well rounded gravel.
	18	Medium brown angular well graded gravel.
440	19	
	20	
435	21	Dense brown angular well graded gravel.
	22	
430	23	
	24	
425	25	Medium brown angular well graded gravel.
	26	
420	27	
417.0	100	Grey clay shale.

* Dense brown angular well graded gravel.

BORING #3
Station 136+60 on ℄

Elev.		Description
472.4		Surface of Ground 473.8
470		Loose cinders, sand and debris fill.
465	6	
	12	Loose brown angular sand.
460	12	Dense brown angular sand and gravel.
	15	Medium brown angular well graded gravel.
455	8	
	13	
450	14	Medium brown angular well graded gravel.
	15	
445	100	Very dense brown angular gravel & cobbles
	22	
440	23	Dense brown angular well graded gravel.
	24	
435	25	
431.5	75	Medium brown angular well graded gravel.

BORING #4
Station 135+83 on ℄

Elev.		Description
		Surface of Ground
		Loose cinder, sand and debris fill.
	37	Dense brown angular sand and gravel.
	28	
	12	Medium brown angular sand and gravel.
	13	Very dense brown angular poorly graded gravel.
	14	
	15	Dense brown angular well graded gravel.
	16	
	17	Very dense brown angular well graded gravel.
	18	Dense brown angular well graded gravel.

Note: No free water noted in these four borings. All were dry for their full depth.

DESIGNED	O.J. McCoy
CHECKED	J.T. Rayburn
DRAWN	J.T. Rayburn E. Rush
CHECKED	O.J.Mc

EXAMINED July 22 1955
PASSED
APPROVED

FOR INFORMATION ONLY

PROJECT UI-48(10)
ILLINOIS RIVER BRIDGE AT PEORIA
FAYETTE - JACKSON STREETS
F.A. ROUTE 9 SECTION 108-1
PEORIA COUNTY

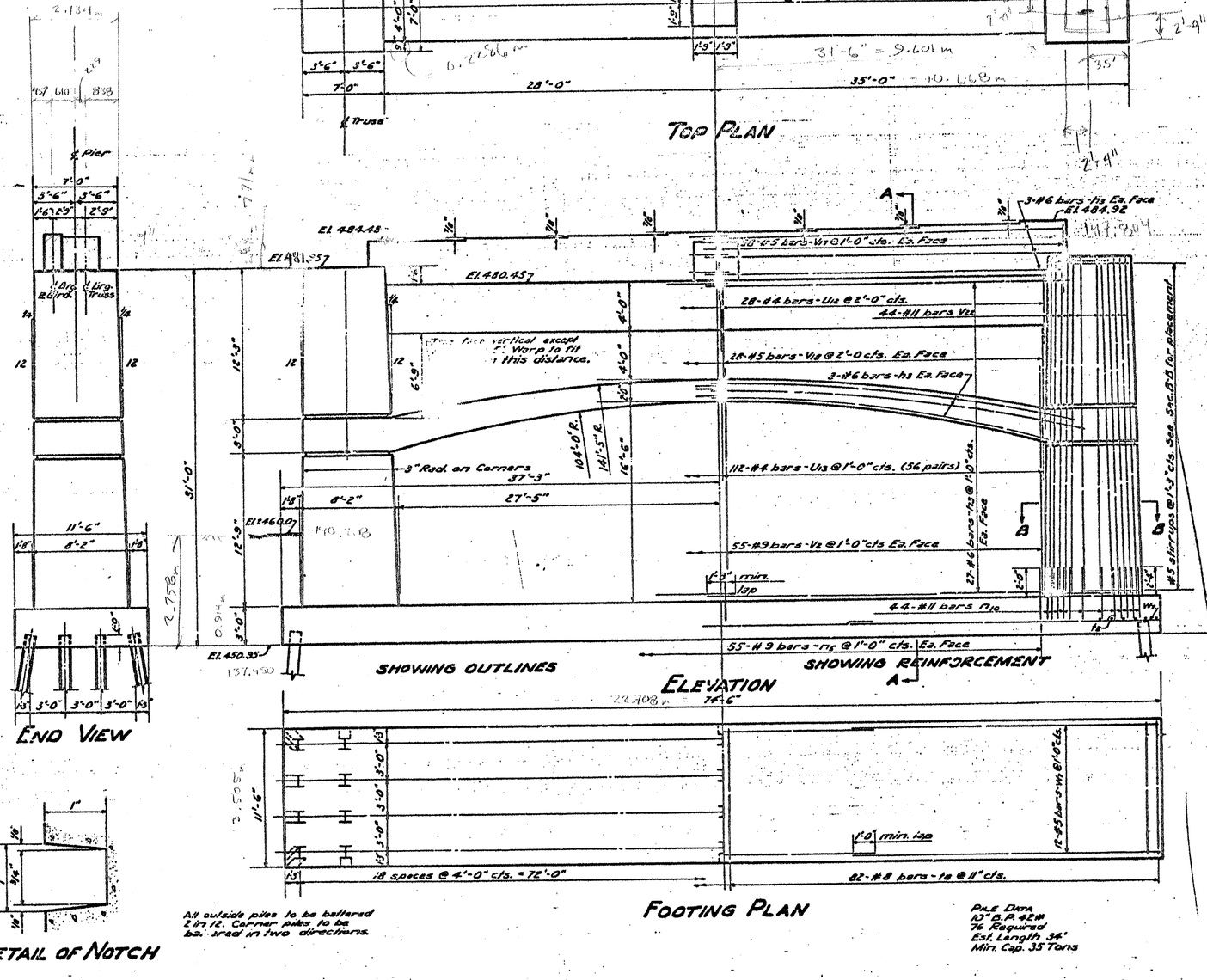
68196

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Sheet No. F.A. 9	10 B	PEORIA TAZEWELL	15	5
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT - UI-48(7)		

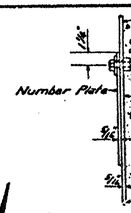
SHEET NO. 2
11 SHEETS

SHEET 160 OF 160
1019 1559



DETAIL OF NOTCH

All outside piles to be battered 2 in 12. Corner piles to be battered in two directions.

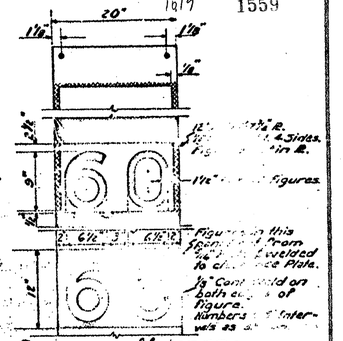


METHOD FOR ANCHORING CLEARANCE R. TO PIER

NOTES

All material for clearance gauges except insc-ns, and as otherwise noted, shall be wrought iron ASTM designation A-42-47. See Special Provisions for alternate material.

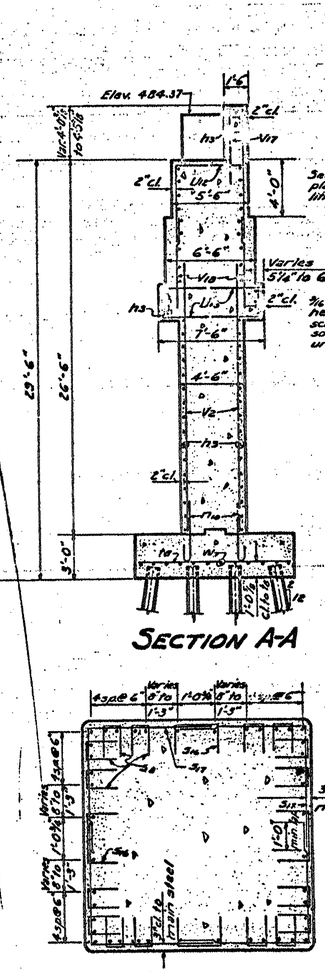
All metal in contact with concrete shall not be painted. Exterior surfaces to be thoroughly cleaned and painted as directed in the Special Provisions.



DETAIL OF NUMBERS

BILL OF MATERIAL PIER 3

BAR	No.	SIZE	LENGTH	SHAPE
Hs	66	#6	30'-0"	
N5	110	#9	5'-3"	
N10	88	#11	5'-11"	
S5	736	#5	2'-3"	
S16	184	#5	3'-4"	
S17	184	#5	8'-0"	
T8	82	#8	11'-3"	
U18	28	#4	15'-0"	
U13	112	#4	10'-6"	
V8	110	#9	20'-0"	
V17	116	#5	5'-0"	
V16	56	#5	9'-9"	
V12	88	#11	27'-9"	
W7	36	#5	25'-6"	
Class "A" Concrete			Cu. Yds.	516
Reinforcement Bars			Lbs.	38240
Class "A" Excav. for Struct.			Cu. Yds.	405
Steel Piles (10" B.P. 42#)			Lin. Ft.	2550
Test Piles			Each	One



SECTION A-A

4 spa @ 6" = 2'-0"
Varies 0" to 10"
1'-3"
#6
#5
V17
V16
U13
N10
W7
Varies 0" to 10"
1'-3"
#5
3'-0"
Varies 0" to 10"
1'-3"
#5
#5
#5