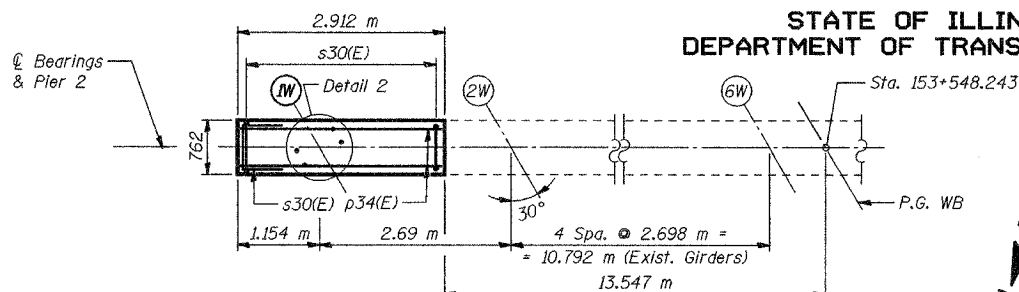


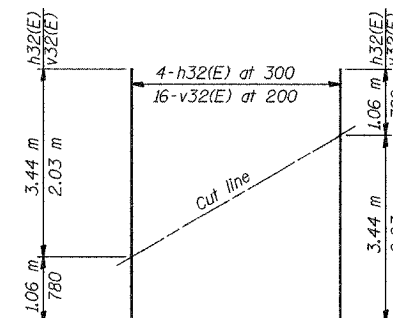
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB	TAZEWELL	1366	501
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 53
68 SHEETS

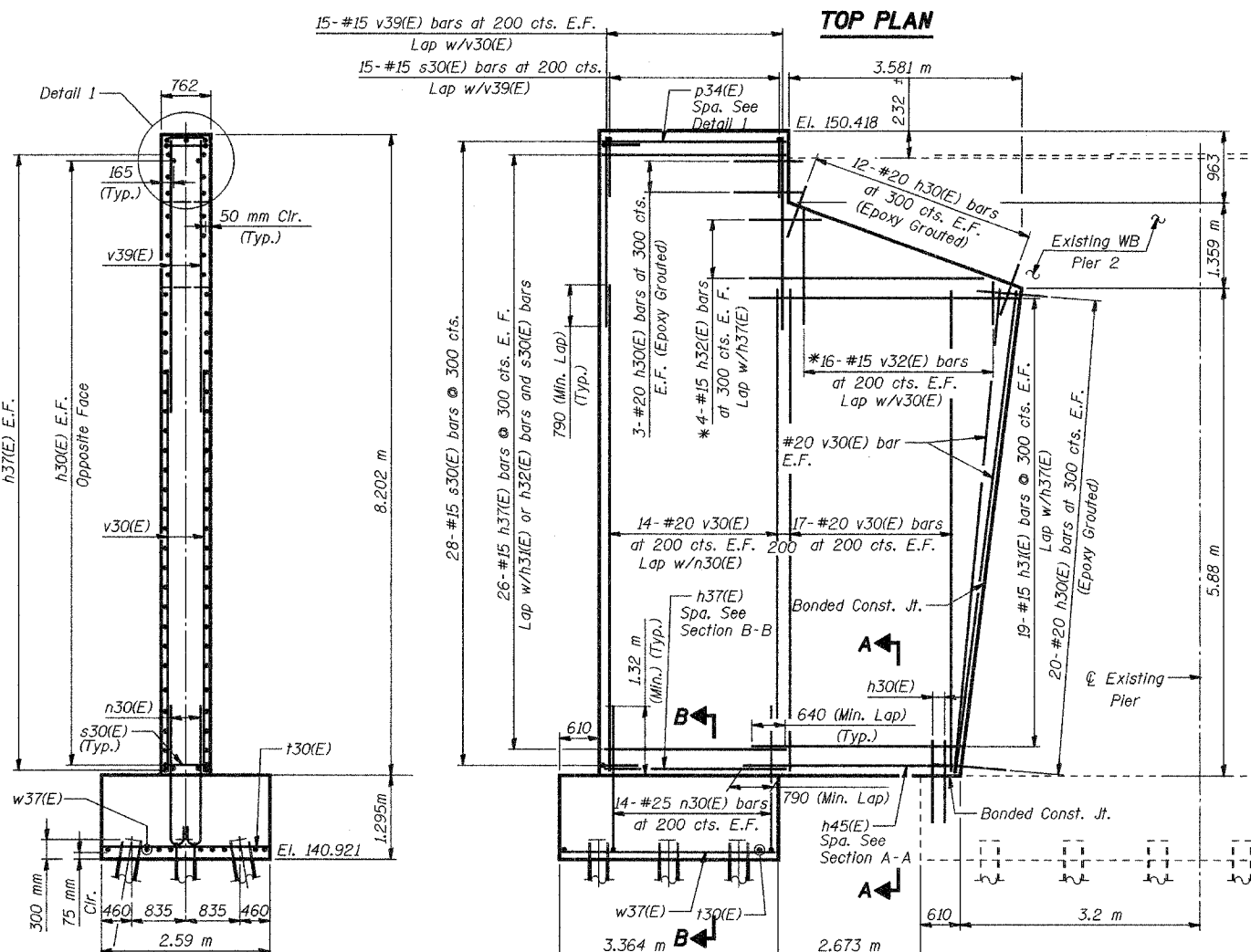


TOP PLAN

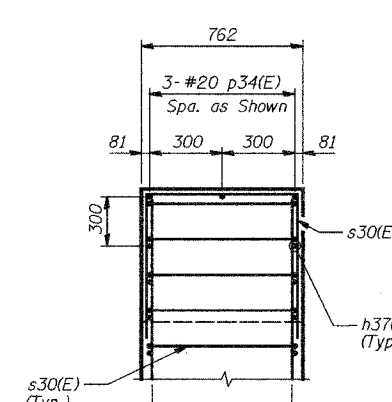


FIELD CUTTING DIAGRAM

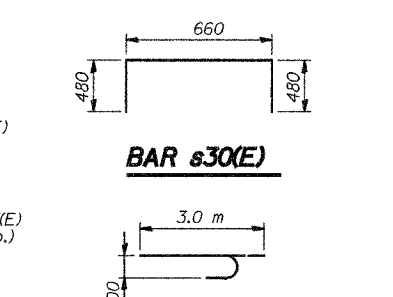
* Order h32(E) and v32(E) bars full length. Cut to fit and use the remainder of bars in opposite face.



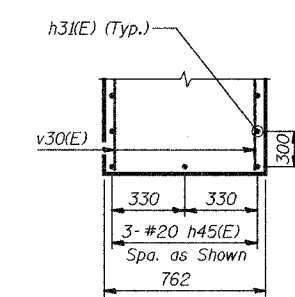
ELEVATION (LOOKING SOUTH)



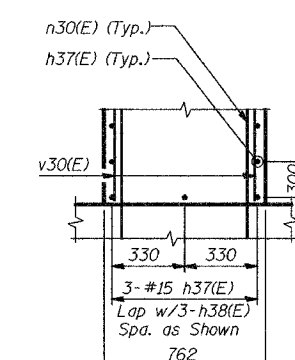
DETAIL 1



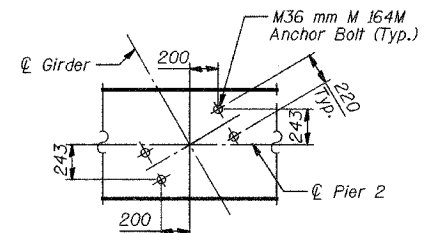
DETAIL 2



SECTION A-A



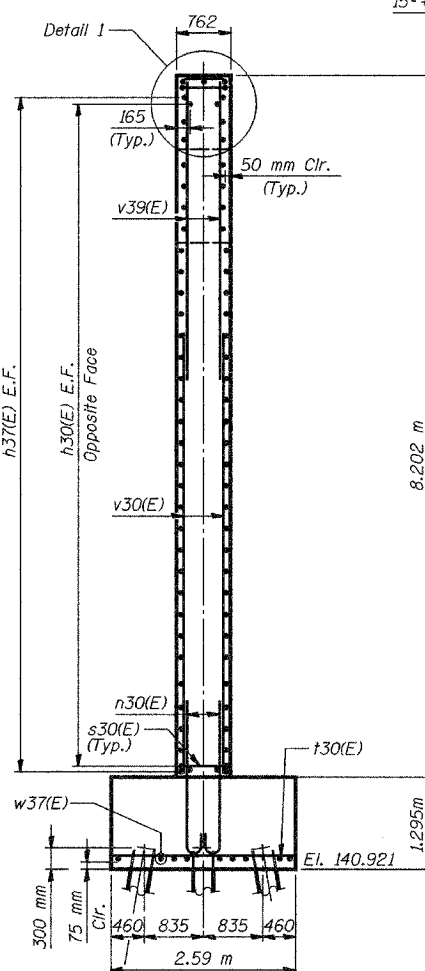
SECTION B-B



DETAIL 2

NOTES:

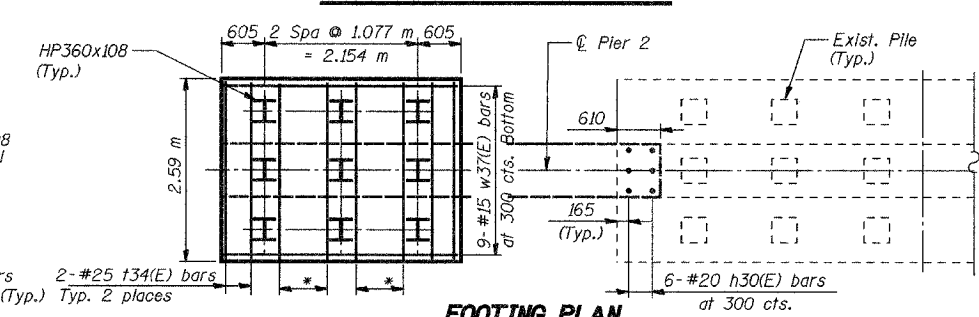
1. Reinforcement bars designated (E) shall be epoxy coated.
2. Concrete clear cover shall be 50 mm minimum unless noted otherwise.
3. Space Reinforcement in Cap to miss Anchor Bolts.
4. Epoxy Grout Bar h30(E) in minimum 230 mm deep drilled holes.
5. The material and installation shall be in accordance with IDOT Standard Specification Section 584.
6. Bonded Construction Joint at interface between existing concrete and proposed concrete shall be in accordance with Standard Specifications Article 503.09(a)(2).
7. For Anchor Bolt Details, see Sheet 41.
8. All edges shall have standard 20 mm chamfers except as noted.
9. Min. Lap for Bar #15=640 mm, #20=790 mm, #25=1.32 m.
10. Space h30(E) bar to miss existing reinforcement in Pier.
11. All dimensions are in millimeters (mm) except as noted.
12. Clean exist. WB Pier beam seats and apply Bridge Seat Sealer to new and the exist. beam seats.



END VIEW

PILE DATA

Type Steel HP 360x108
Capacity Driven to refusal
Est. Length 9.7 m
No. Required 9



FOOTING PLAN

BILL OF MATERIAL

Bar No.	No.	Size	Length (m)	Shape
h30(E)	76	#20	1.00	—
h3(E)	38	#15	4.3	—
h32(E)	4	#15	4.5	—
h37(E)	55	#15	2.81	—
h45(E)	3	#20	4.1	—
n30(E)	28	#25	3.0	U
p34(E)	3	#20	2.81	—
s30(E)	43	#15	1.62	┘
t30(E)	14	#25	2.49	—
v30(E)	66	#20	5.8	—
v32(E)	16	#15	2.81	—
v39(E)	30	#15	3.2	—
w37(E)	9	#15	3.26	—
Structure Excavation		m ³	71	
Concrete Structures		m ³	40	
Reinforcement Bars, Epoxy Coated		kg	2,500	
Furnishing Steel Piles HP360x108		m	87.3	
Driving Steel Piles		m	87.3	

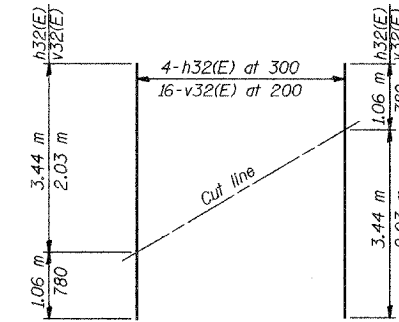
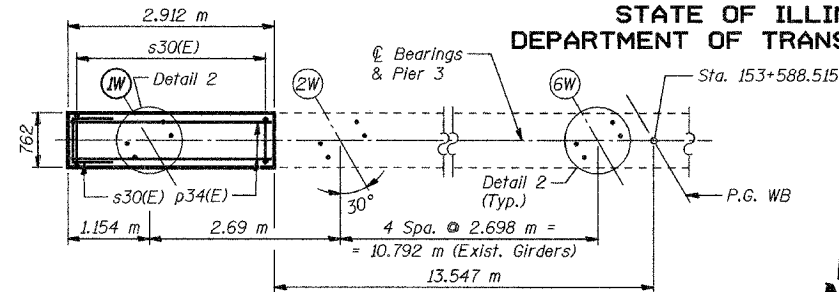
PIER 2 EXTENSION DETAILS

Date	Designed	EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No.	
Revisions	Drawn	EV		53	of 68
	Checked	NPP			
	Approved	NPP			
Prepared By:	BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 170-49-071	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

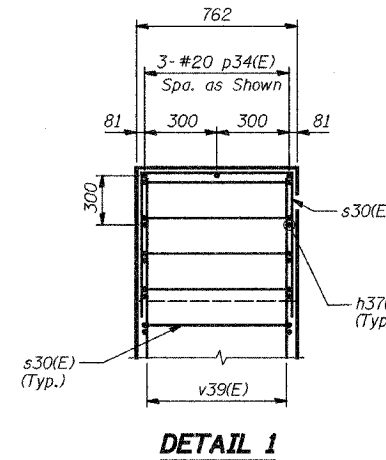
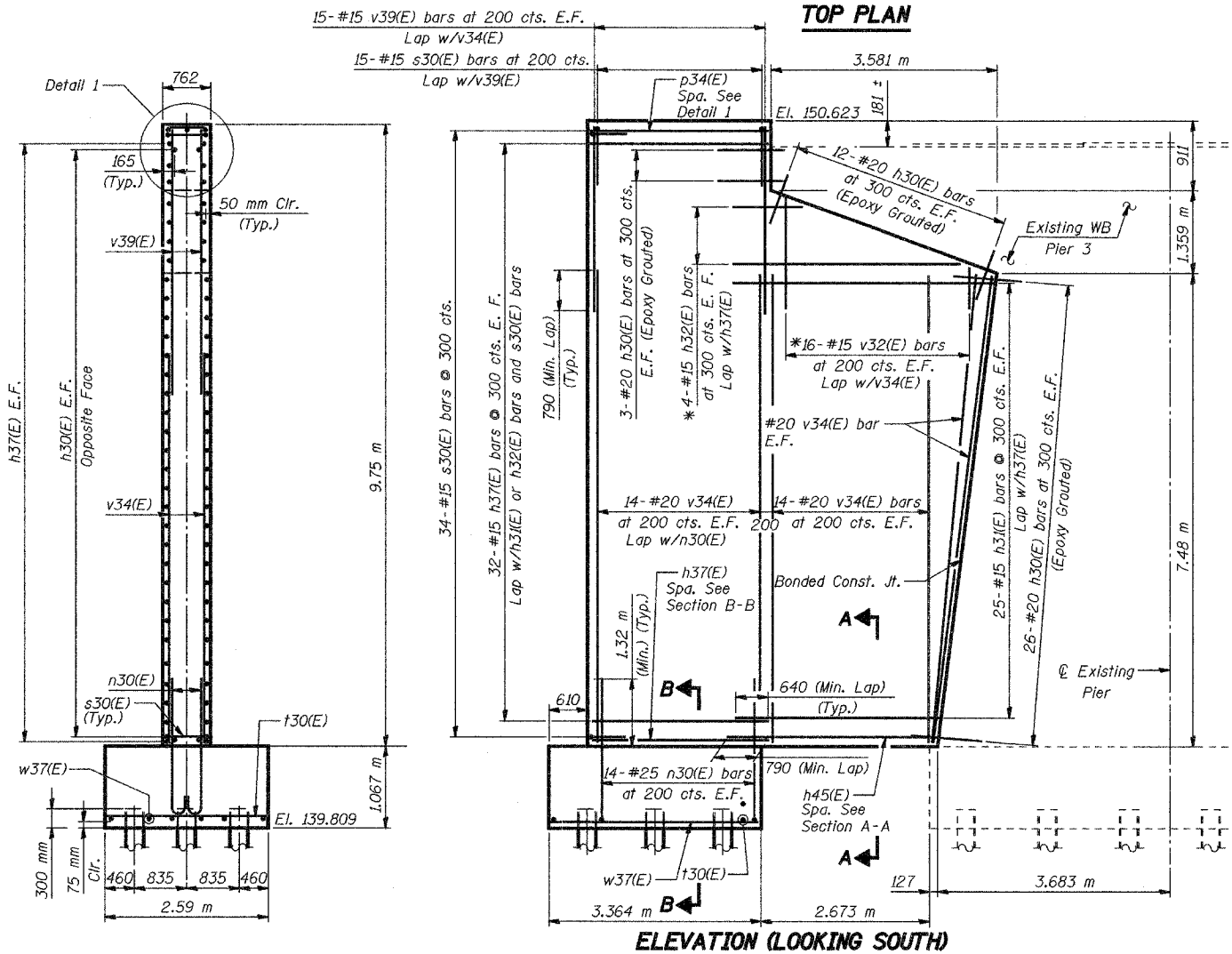
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB	TAZEWELL	136	502
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 54
68 SHEETS

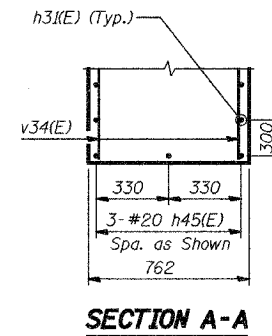


FIELD CUTTING DIAGRAM

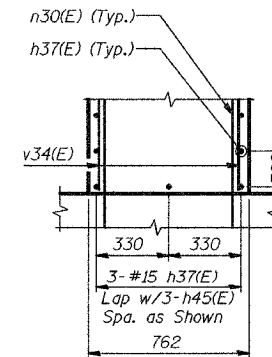
* Order h32(E) and v32(E) bars full length. Cut to fit and use the remainder of bars in opposite face.



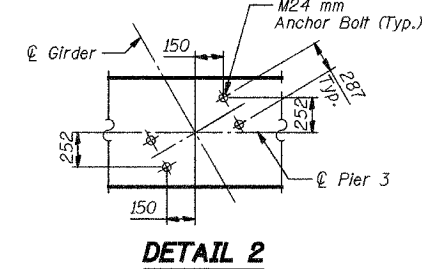
DETAIL 1



SECTION A-A



SECTION B-B



DETAIL 2

NOTES:

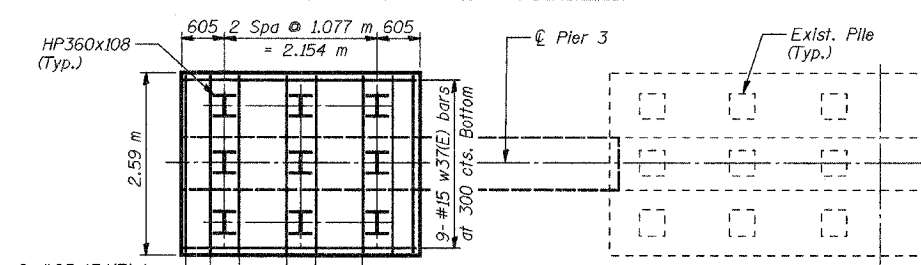
1. Reinforcement bars designated (E) shall be epoxy coated.
2. Concrete clear cover shall be 50 mm minimum unless noted otherwise.
3. Space Reinforcement in Cap to miss Anchor Bolts.
4. Epoxy Grout Bar h30(E) in minimum 230 mm deep drilled holes.
5. The material and installation shall be in accordance with IDOT Standard Specification Section 584.
6. Bonded Construction Joint at interface between existing concrete and proposed concrete shall be in accordance with Standard Specifications Article 503.09(a)(2).
7. For Anchor Bolt Details, see Sheet 41.
8. All edges shall have standard 20 mm chamfers except as noted.
9. Min. Lap for Bar #15=640 mm, #20=790 mm, #25=1.32 m.
10. Space h30(E) bar to miss existing reinforcement in Pier.
11. All dimensions are in millimeters (mm) except as noted.
12. Clean exist. WB Pier beam seats and apply Bridge Seat Sealer to new and the exist. beam seats.

END VIEW

PILE DATA

Type Steel HP 360x108
Capacity Driven to refusal
Est. Length 9.4 m
No. Required 9

* 4-#25 f34(E) bars at 250 cts. Bottom (Typ.)



FOOTING PLAN

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape	
h30(E)	82	#20	1.00	—	
h31(E)	50	#15	4.3	—	
h32(E)	4	#15	4.5	—	
h37(E)	67	#15	2.81	—	
h45(E)	3	#20	4.1	—	
n30(E)	28	#25	3.0	—	
p34(E)	3	#20	2.81	—	
s30(E)	49	#15	1.62	—	
f30(E)	14	#25	2.49	—	
v32(E)	16	#15	2.81	—	
v34(E)	60	#20	7.4	—	
v39(E)	30	#15	3.2	—	
w37(E)	9	#15	3.26	—	
Structure Excavation				m ³	73
Concrete Structures				m ³	43
Reinforcement Bars, Epoxy Coated				kg	2,810
Furnishing Steel Piles HP360x108				m	84.6
Driving Steel Piles				m	84.6

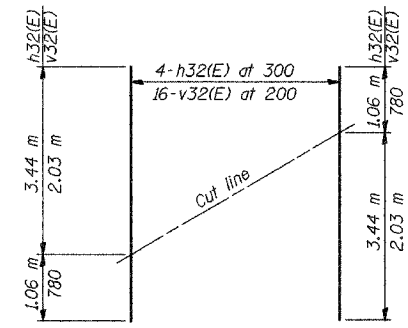
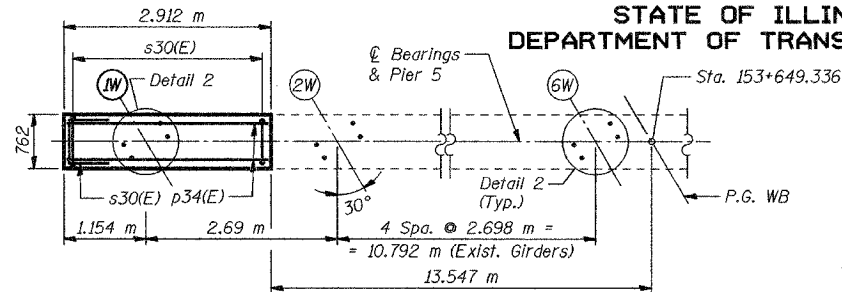
PIER 3 EXTENSION DETAILS

Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No.
Revisions	Drawn EV		54
	Checked NPP		of 68
	Approved NPP		BRW Job No.
			17049-071
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB19	TAZEWELL	1366	503
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-				

SHEET NO. 55
68 SHEETS

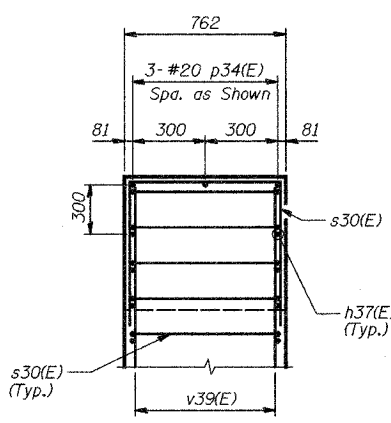
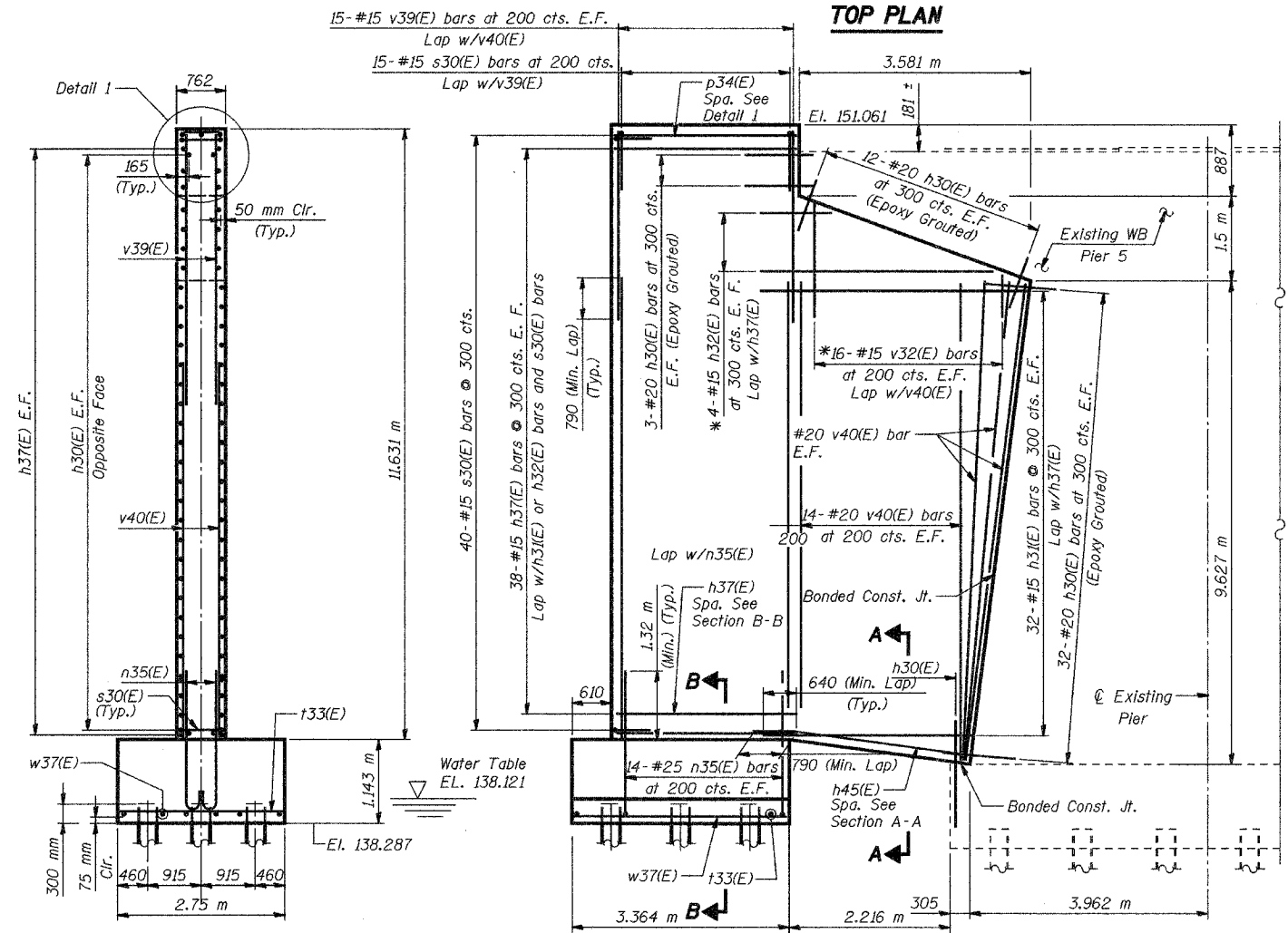


BILL OF MATERIAL

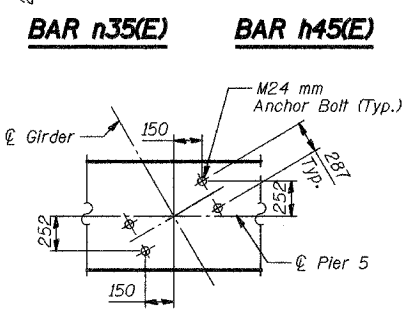
Bar	No.	Size	Length (m)	Shape	
h30(E)	97	#20	1.00	—	
h31(E)	64	#15	4.3	—	
h32(E)	4	#15	4.5	—	
h37(E)	79	#15	2.81	—	
h45(E)	3	#20	4.1	—	
n35(E)	28	#25	2.7	—	
p34(E)	3	#20	2.81	—	
s30(E)	55	#15	1.62	—	
t33(E)	14	#25	2.65	—	
v32(E)	16	#15	2.81	—	
v39(E)	30	#15	3.2	—	
v40(E)	62	#20	9.6	—	
w37(E)	10	#15	3.26	—	
Structure Excavation				m ³	117
Concrete Structures				m ³	53
Reinforcement Bars, Epoxy Coated				kg	3,370
Furnishing Steel Piles HP360x108				m	75.6
Driving Steel Piles				m	75.6
Slopedwall Removal				m ²	54
Slopedwall 150				m ²	54

FIELD CUTTING DIAGRAM

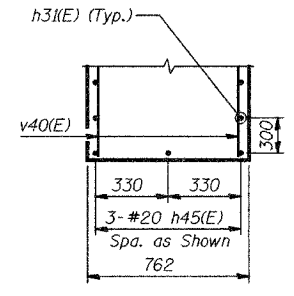
* Order h32(E) and v32(E) bars full length. Cut to fit and use the remainder of bars in opposite face.



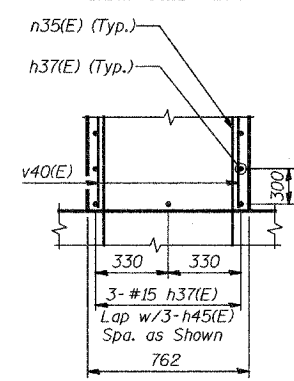
DETAIL 1



DETAIL 2



SECTION A-A

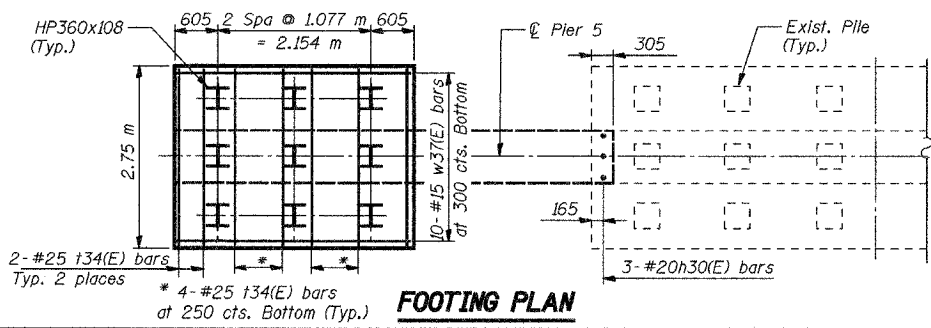


SECTION B-B

END VIEW

PILE DATA

Type Steel HP 360x108
Capacity Driven to refusal
Est. Length 8.4 m
No. Required 9



FOOTING PLAN

NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Concrete clear cover shall be 50 mm minimum unless noted otherwise.
3. Space Reinforcement in Cap to miss Anchor Bolts.
4. Epoxy Grout Bar h30(E) in minimum 230 mm deep drilled holes.
5. The material and installation shall be in accordance with IDOT Standard Specification Section 584.
6. Bonded Construction Joint at interface between existing concrete and proposed concrete shall be in accordance with Standard Specifications Article 503.09(a)(2).
7. For Anchor Bolt Details, see Sheet 41.
8. All edges shall have standard 20 mm chamfers except as noted.
9. Min. Lap for Bar #15=640 mm, #20=790 mm, #25=132 mm.
10. Space h30(E) bar to miss existing reinforcement in Pier.
11. All dimensions are in millimeters (mm) except as noted.
12. Clean exist. WB Pier beam seats and apply Bridge Seat Sealer to new and the exist. beam seats.
13. For Farm Creek Lining removal and replacement details see Sheet 56.

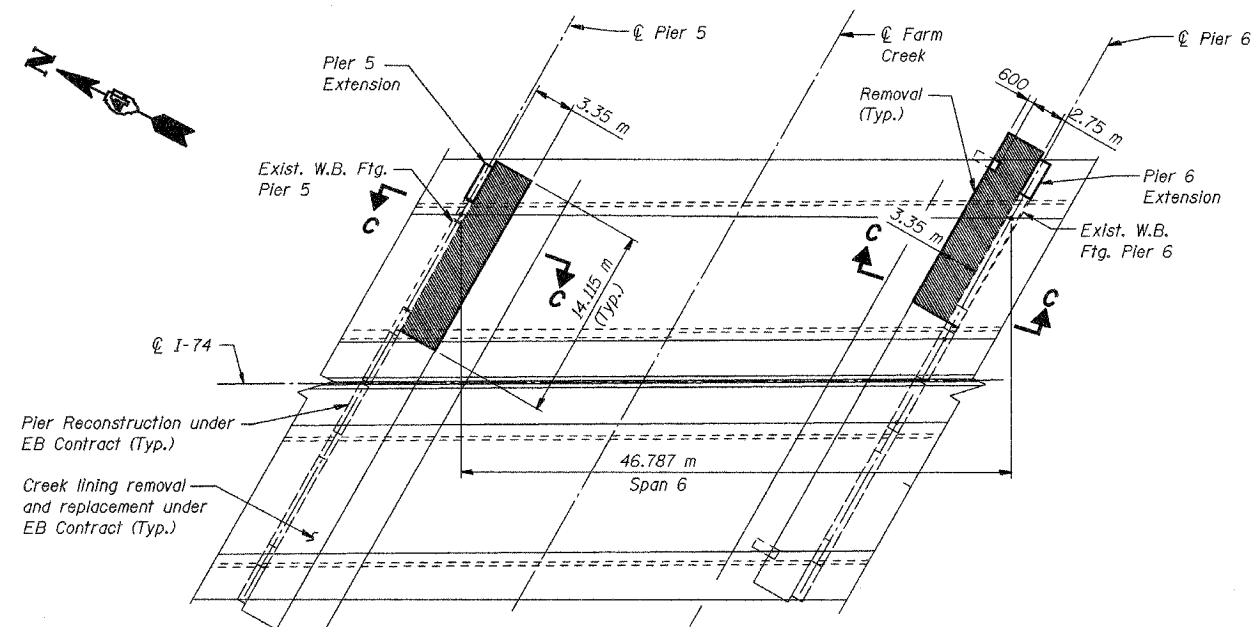
PIER 5 EXTENSION DETAILS

Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No.
Revisions	Drawn EV		55
	Checked NPP		of 68
	Approved NPP		BRW Job No. 17049-071
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB1BY	TAZEWELL	1310	504
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

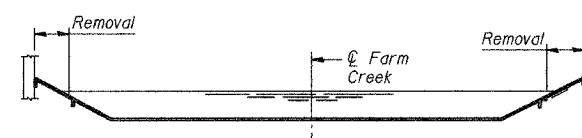
SHEET NO. 56
68 SHEETS



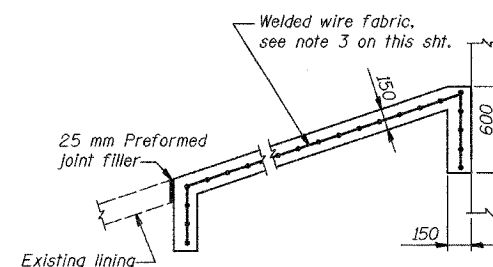
PLAN
FOR FARM CREEK LINING REMOVAL & REPLACEMENT

LEGEND

█ Creek lining removal



ELEVATION



SECTION C-C

NOTES:

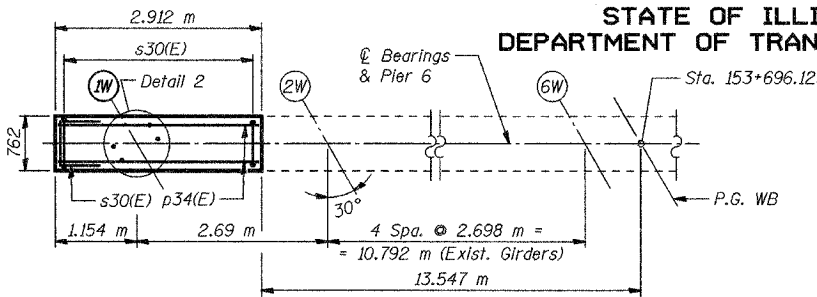
1. Work this Sheet with Sheets 55 and 57.
2. All dimensions are in millimeters (mm) except as noted.
3. The new lining at the Farm Creek shall be reinforced with two layers of welded wire fabric 152 x 152 - MW 25.8 x 152 x 152 - MW 25.8, with a mass of 2.91 kg/m. The cost of this work shall be included in the price of pay item "Slopewall 150".

PIER DETAILS				
Date	Designed	EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	
Revisions	Drawn	EV		
	Checked	NPP		
	Approved	NPP		
Prepared By:		BRW, Inc. A Division of URS	1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	Sheet No. 56 of 68 BRW Job No. 17049-071

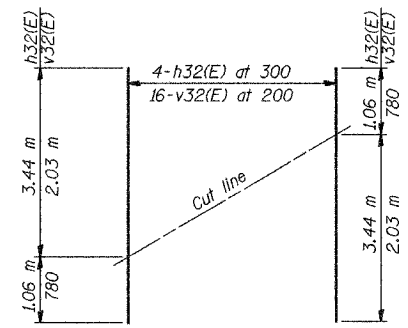
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB	TAZEWELL	1366	505
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 57
68 SHEETS

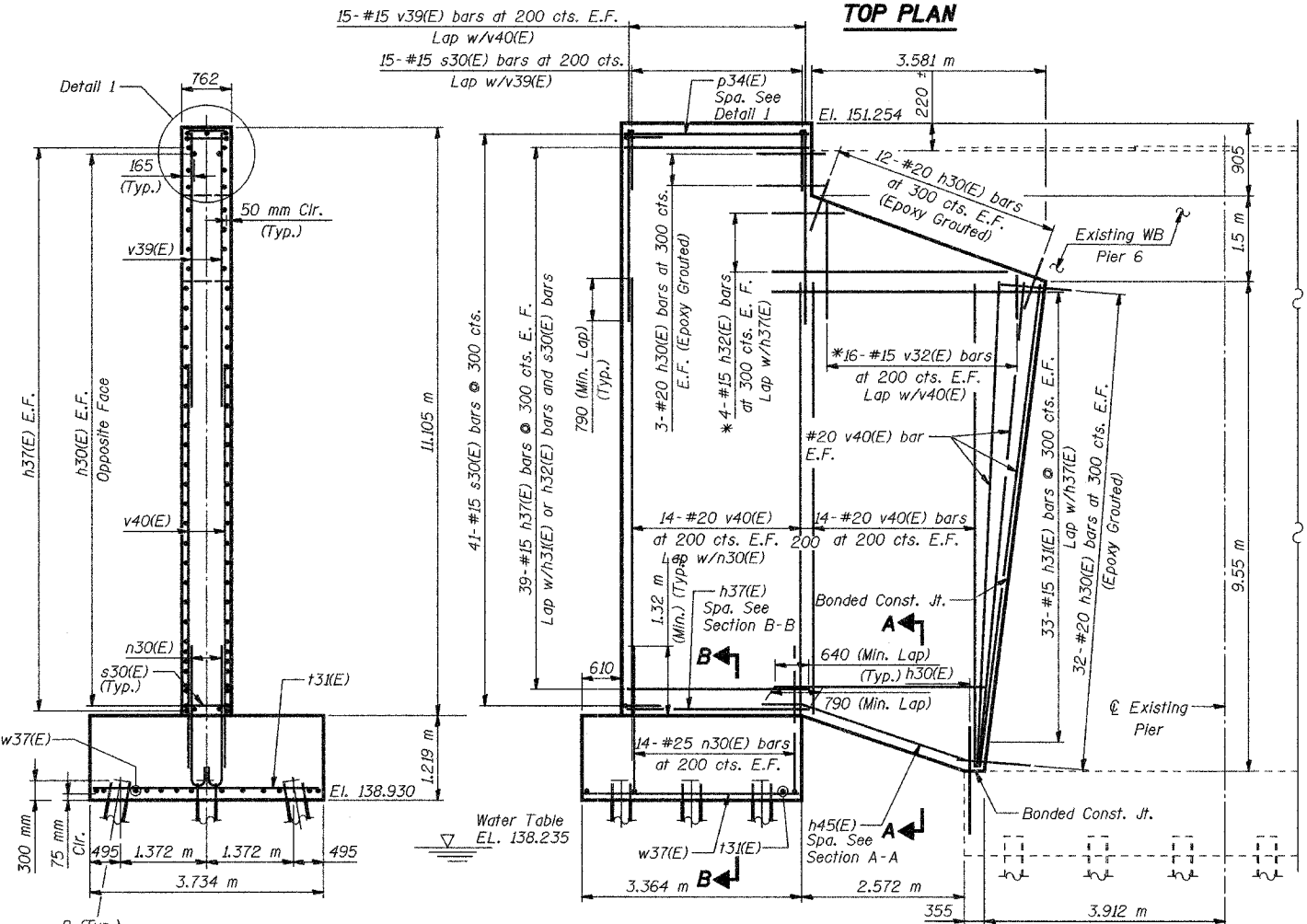


TOP PLAN

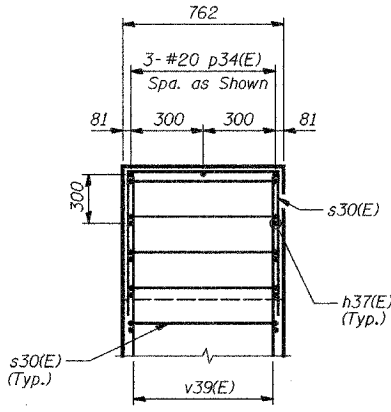


FIELD CUTTING DIAGRAM

* Order h32(E) and v32(E) bars full length. Cut to fit and use the remainder of bars in opposite face.



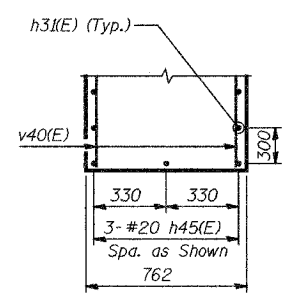
ELEVATION (LOOKING SOUTH)



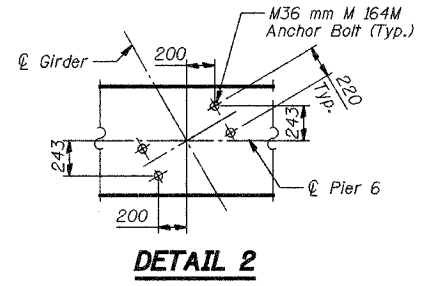
DETAIL 1

BAR s30(E)

BAR n30(E)



SECTION A-A



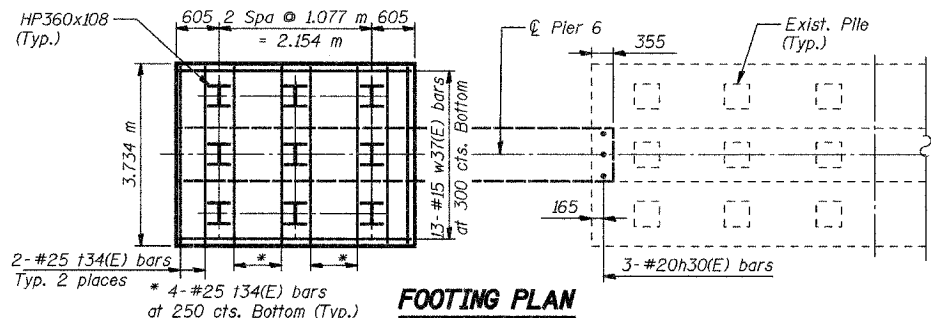
DETAIL 2

NOTES:

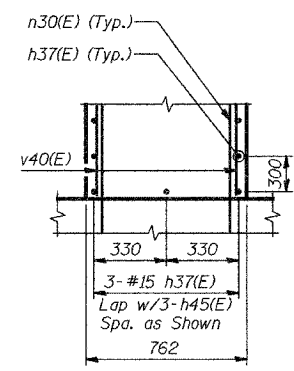
1. Reinforcement bars designated (E) shall be epoxy coated.
2. Concrete clear cover shall be 50 mm minimum unless noted otherwise.
3. Space Reinforcement in Cap to miss Anchor Bolts.
4. Epoxy Grout Bar h30(E) in minimum 230 mm deep drilled holes.
5. The material and installation shall be in accordance with IDOT Standard Specification Section 584.
6. Bonded Construction Joint at Interface between existing concrete and proposed concrete shall be in accordance with Standard Specifications Article 503.09(a)(2).
7. For Anchor Bolt Details, see Sheet 41.
8. All edges shall have standard 20 mm chamfers except as noted.
9. Min. Lap for Bar #15=640 mm, #20=790 mm, #25=1.32 m.
10. Space h30(E) bar to miss existing reinforcement in Pier.
11. All dimensions are in millimeters (mm) except as noted.
12. Clean exist. WB Pier beam seats and apply Bridge Seat Sealer to new and the exist. beam seats.
13. For Farm Creek Lining removal and replacement details see Sheet 56.

PILE DATA

Type	Steel HP 360x108
Capacity	Driven to refusal
Est. Length	8.9 m
No. Required	9



FOOTING PLAN



SECTION B-B

PIER 6 EXTENSION DETAILS

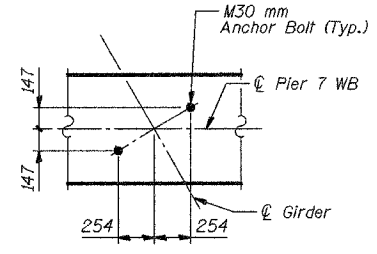
Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No.
Revisions	Drawn EV		57
	Checked NPP		of 68
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB	TAZEWELL	1366	506
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

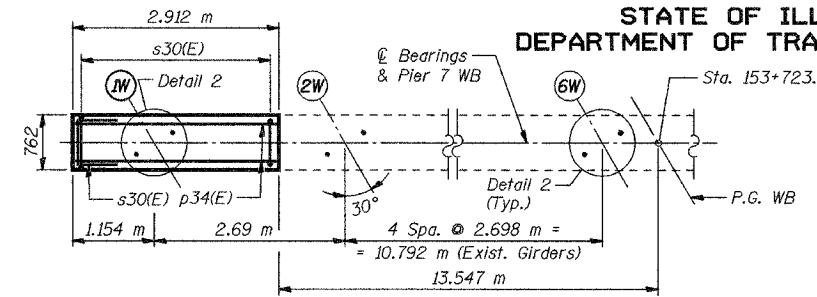
SHEET NO. 58
68 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

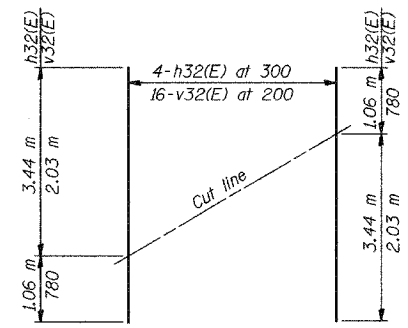
Sta. 153+723.860



DETAIL 2

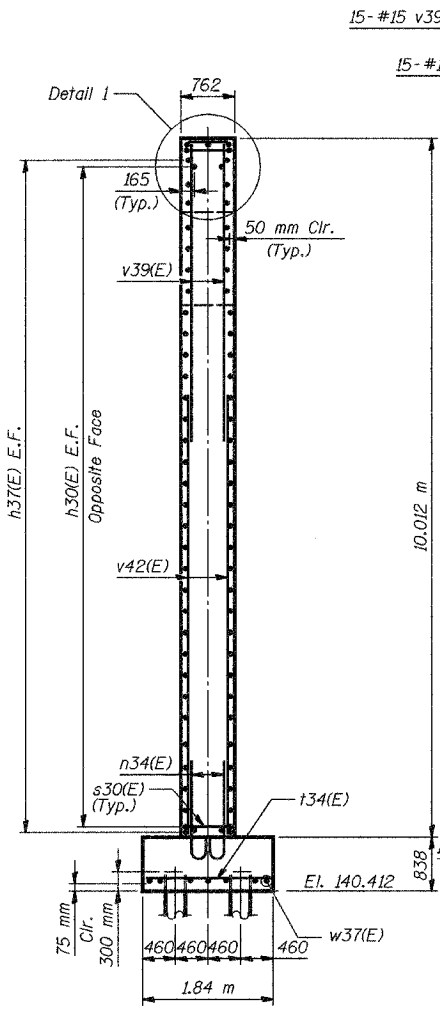


TOP PLAN

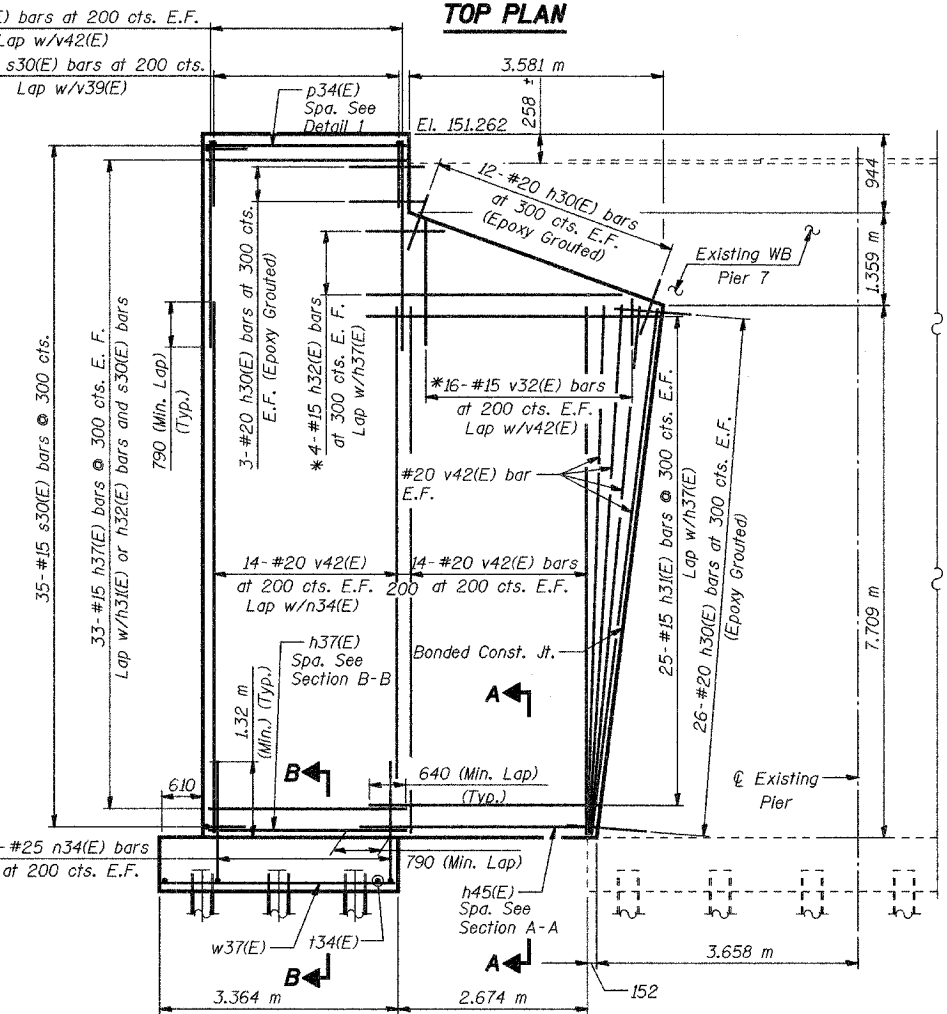


FIELD CUTTING DIAGRAM

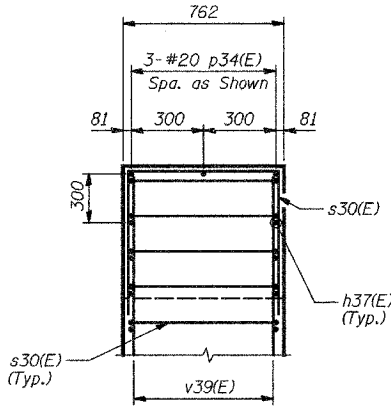
* Order h32(E) and v32(E) bars full length. Cut to fit and use the remainder of bars in opposite face.



END VIEW



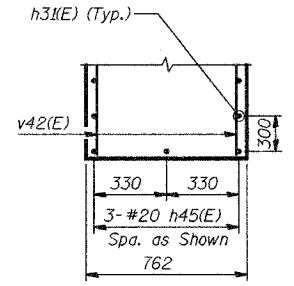
ELEVATION (LOOKING SOUTH)



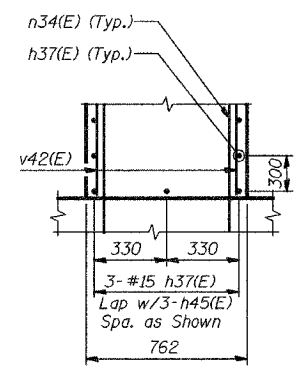
DETAIL 1

BAR s30(E)

BAR n34(E)



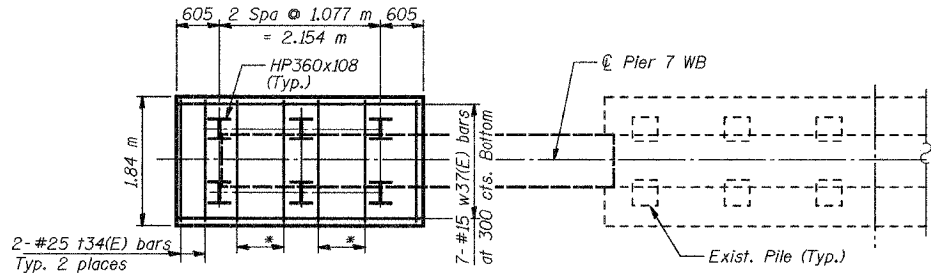
SECTION A-A



SECTION B-B

PILE DATA

Type Steel HP 360x108
Capacity Driven to refusal
Est. Length 11.5 m
No. Required 6



FOOTING PLAN

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h30(E)	82	#20	1.00	—
h31(E)	50	#15	4.3	—
h32(E)	4	#15	4.5	—
h37(E)	69	#15	2.81	—
h45(E)	3	#20	4.1	—
n34(E)	28	#25	2.33	—
p34(E)	3	#20	2.81	—
s30(E)	50	#15	1.62	—
t34(E)	14	#25	1.74	—
v32(E)	16	#15	2.81	—
v39(E)	30	#15	3.2	—
v42(E)	64	#20	7.66	—
w37(E)	7	#15	3.26	—
Structure Excavation		m ³	72	
Concrete Structures		m ³	40	
Reinforcement Bars, Epoxy Coated		kg	2,810	
Furnishing Steel Piles HP360x108		m	69	
Driving Steel Piles		m	69	
Bridge Seat Sealer		m ²	11.9	

NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Concrete clear cover shall be 50 mm minimum unless noted otherwise.
3. Space Reinforcement in Cap to miss Anchor Bolts.
4. Epoxy Grout Bar h30(E) in minimum 230 mm deep drilled holes.
5. The material and installation shall be in accordance with IDOT Standard Specification Section 584.
6. Bonded Construction Joint at Interface between existing concrete and proposed concrete shall be in accordance with Standard Specifications Article 503.09(a)(2).
7. For Anchor Bolt Details, see Sheet 41.
8. All edges shall have standard 20 mm chamfers except as noted.
9. Min. Lap for Bar #15=640 mm, #20=790 mm, #25=1.32 m.
10. Space h30(E) bar to miss existing reinforcement in Pier.
11. All dimensions are in millimeters (mm) except as noted.
12. Clean exist. WB Pier beam seats and apply Bridge Seat Sealer to new and the exist. beam seats.

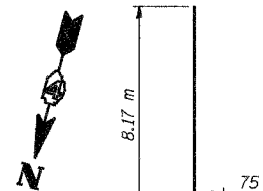
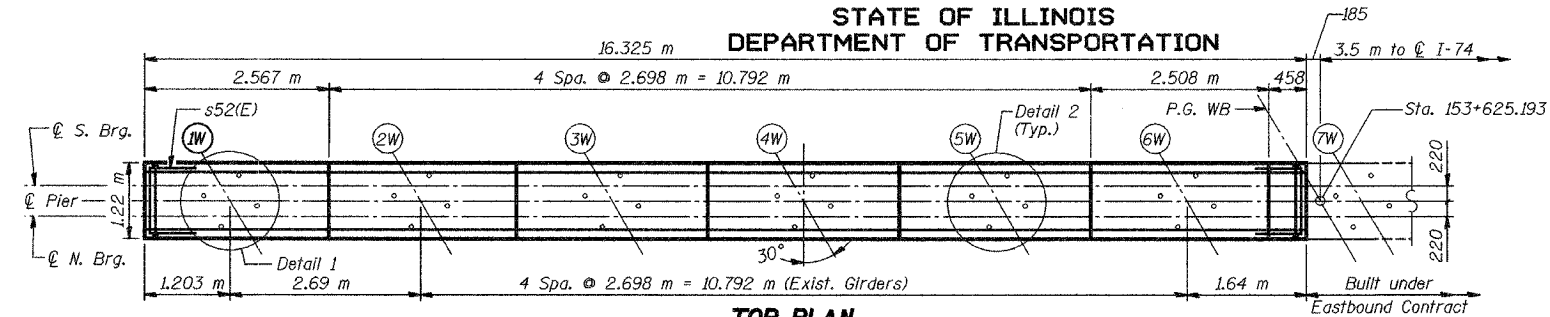
PIER 7 EXTENSION DETAILS

Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No.
Revisions	Drawn EV		58
	Checked NPP		of 68
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

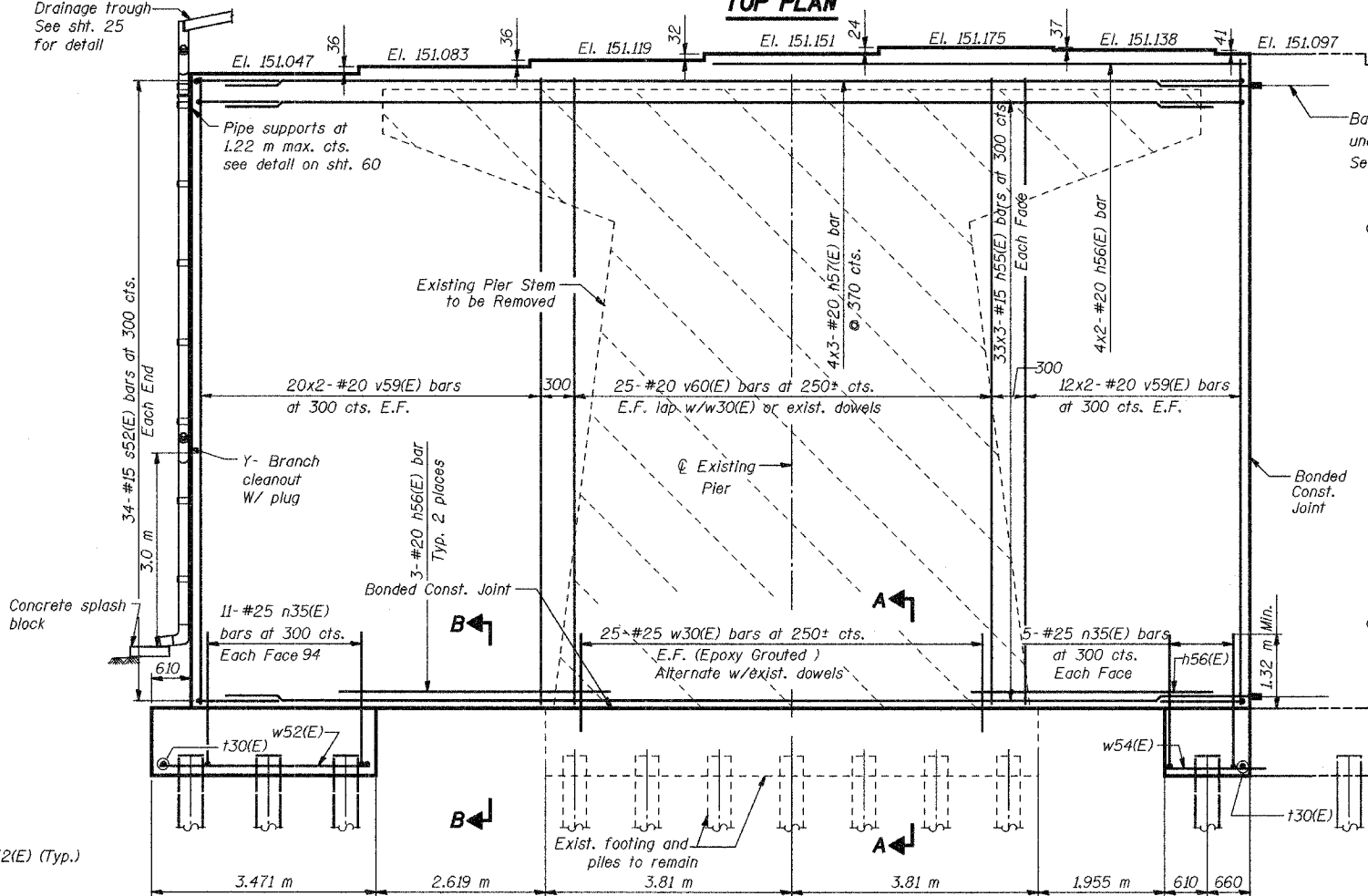
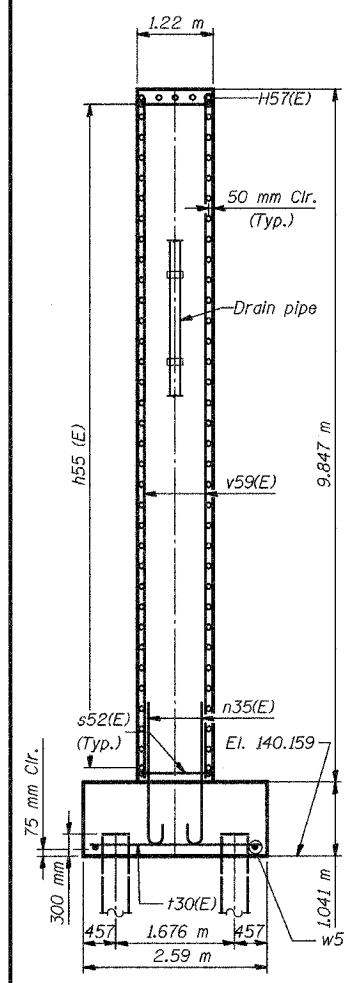
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB	TAZEWELL	1366	507
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 59
68 SHEETS



BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h55(E)	198	#15	5.89	—
h56(E)	14	#20	4.55	—
h57(E)	12	#20	6.0	—
n35(E)	32	#25	2.7	U
s52(E)	68	#15	2.4	□
t30(E)	16	#25	2.49	—
v59(E)	128	#20	5.43	—
v60(E)	100	#20	9.75	—
w30(E)	50	#20	1.6	—
w52(E)	10	#15	3.37	—
w54(E)	10	#15	1.45	—
Concrete Removal		m ³	74.1	
Braced Excavation		m ³	278	
Concrete Structures		m ³	2.10	
Reinforcement Bars, Epoxy Coated		kg	6,880	
Furnishing Steel Piles HP360x108		m	88	
Driving Steel Piles		m	88	
Bridge Seat Sealer		m ²	19.9	



BAR v60 (E)

BAR n35(E)

BAR s52(E)

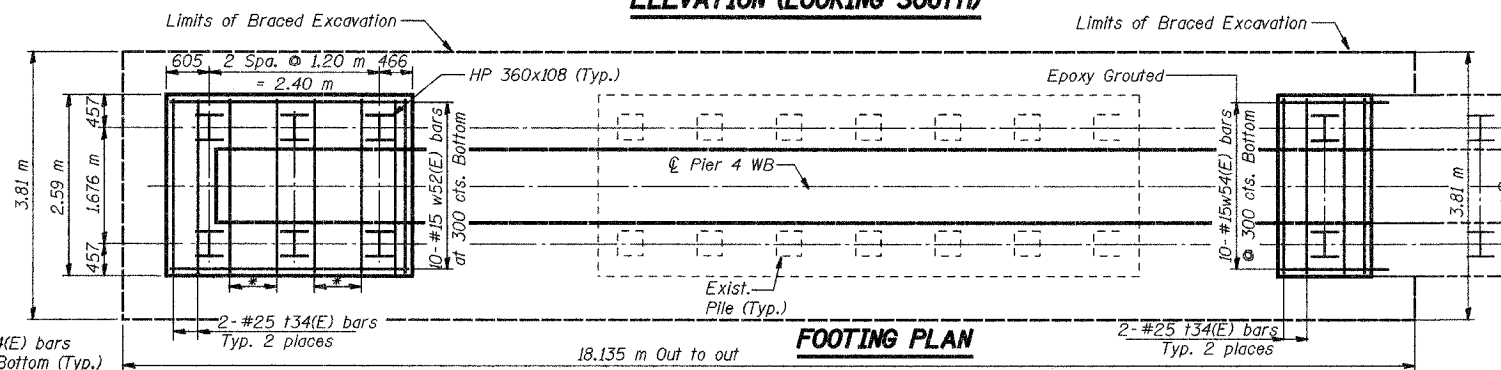
NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Concrete clear cover shall be 50 mm minimum unless noted otherwise.
3. Space Reinforcement in cap to miss Anchor Bolts.
4. Pour steps monolithically with cap.
5. Epoxy Grout Bars w30(E) & w54(E) in minimum 230 mm deep drilled holes. The material and installation shall be in accordance with IDOT Standard Specification Section 584.
6. Bonded Construction Joint at Interface between existing concrete and proposed concrete shall be in accordance with Standard Specifications Article 503.09(a)(2).
7. For Anchor Bolt Details, see Sheet 41.
8. All edges shall have standard 20 mm chamfers except as noted.
9. Min. Lap for Bar #15=640 mm, #20=790 mm, #25=1.32 m.
10. Space w30(E) bars to miss existing reinforcement in Pier.
11. All dimensions are in millimeters (mm) except as noted.
12. See Special Provision for Braced Excavation.
13. Space reinforcement in footing to miss the piles.
14. Work this sht. with sht. 60.
15. The remaining portions of the bar splicers provided for the WB portion of the Pier 4 under EB contract shall be obtained from the Engineer by the Contractor and shall be incorporated in the WB Pier 4.
16. See sht. 60 for Sections A-A and B-B.
17. See sht. 60 for drain pipe details.
18. See sht. 60 for Details 1 & 2.
19. Existing reinforcement extending into new concrete shall be straightened, cleaned, and incorporated into the new construction. Cost included in Concrete Removal.

LEGEND



PILE DATA
Type: Steel HP 360x108
Capacity: Driven to refusal
Est. Length: 11 m
No. Req'd: 8



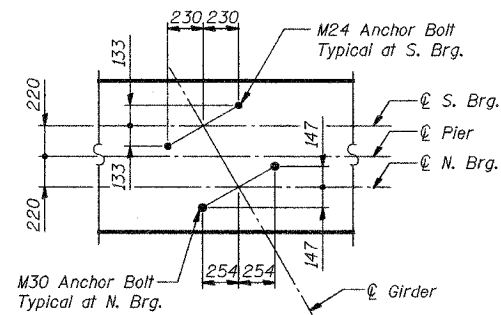
PIER 4 RECONSTRUCTION DETAILS

Date	Designed	EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB) BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No.
Revisions	Drawn	EV		59
	Checked	NPP		of 68
	Approved	NPP		BRW Job No. 17049-071
Prepared By: BRW, Inc. A Division of URS			1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

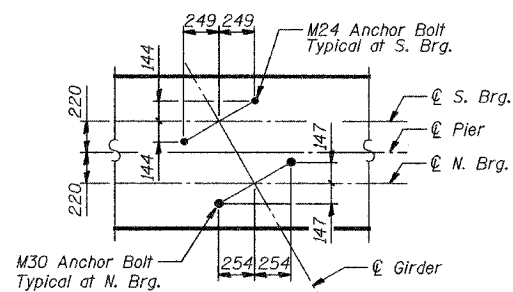
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB/BY	TAZEWELL	1366	508
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 60
68 SHEETS



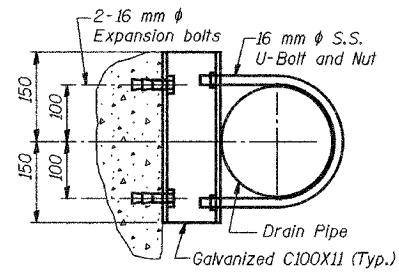
DETAIL 2

(Existing Girders 2W, 3W, 4W, 5W & 6W)

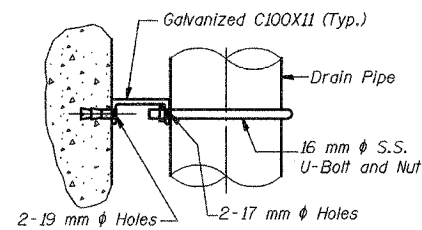


DETAIL 1

(New Girder 1W)

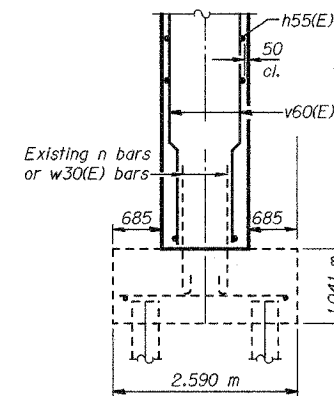


PLAN

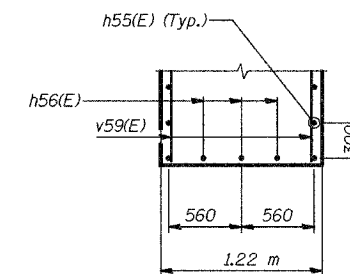


ELEVATION

TYPICAL PIPE SUPPORT DETAILS



SECTION A-A



SECTION B-B

NOTES:

1. Work this Sheet with Sheet 59.
2. See Sheet 59 for locations of Details 1 & 2.
3. Reinforcement bars designated (E) shall be Epoxy Coated.
4. For Anchor Bolt Details, see Sheet 41.
5. All edges shall have standard 20 mm chamfers except as noted.
6. Min. Lap for Bar #15=640 mm, #20=790 mm, #25=1.32 m.
7. All dimensions are in millimeters (mm) except as noted.
8. See sht. 59 for drainage pipe layout.

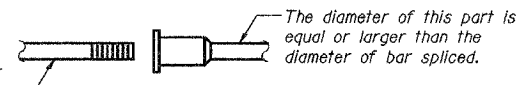
PIER 4 RECONSTRUCTION DETAILS			
Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No.
Revisions	Drawn EV		60
	Checked NPP		of 68
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB/BY	TAZEWELL	1306	509
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 61
68 SHEETS

The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



**** ONE PIECE**

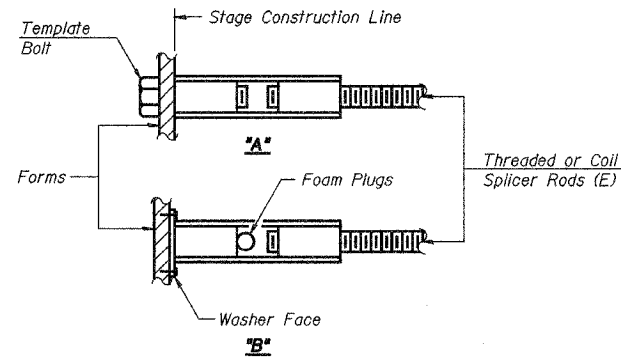
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, 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.

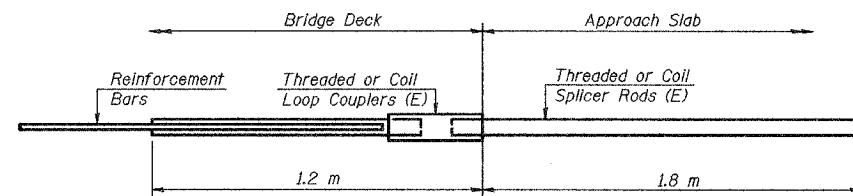
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- Minimum Capacity (Tension in kN) = $1.25 \times 10^{-3} \times f_y \times A_t$
- Minimum *Pull-out Strength (Tension in kN) = $1.25 \times 10^{-3} \times f_{s\text{allow}} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in MPa.
 $f_{s\text{allow}}$ = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars (mm²).
* = 28 day concrete

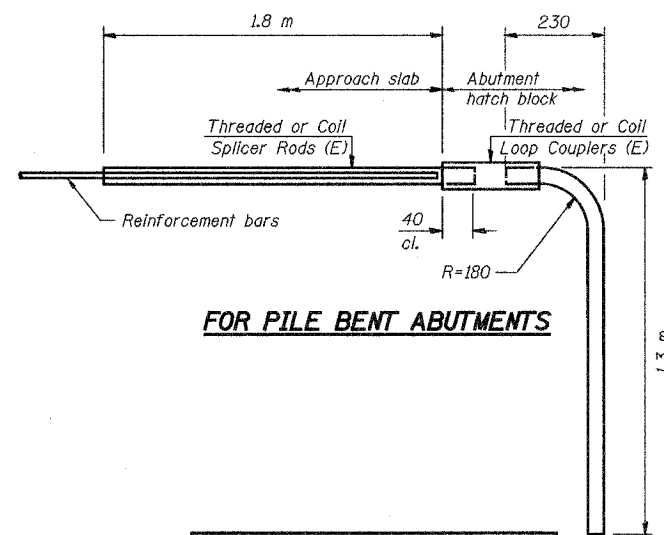
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	610 mm	100	40
#20	790 mm	150	60
#25	1.04 m	250	100
#30	1.37 m	350	140

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.



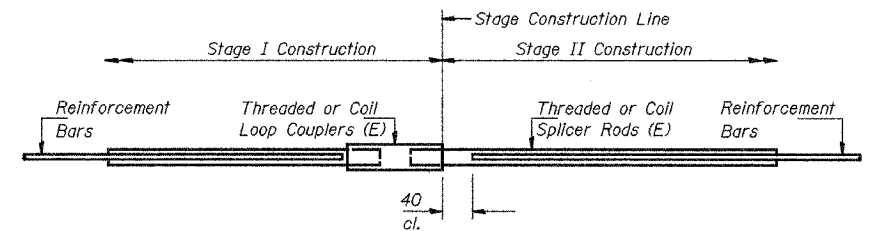
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #15 bar
Min. Capacity = 100 kN - tension
Min. Pull-out Strength = 40 kN - tension
No. Required =



FOR PILE BENT ABUTMENTS

Bar Splicer for #15 bar
Min. Capacity = 100 kN - tension
Min. Pull-out Strength = 40 kN - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location
#15	49	N. Abutment
#15	49	S. Abutment

BSD-1 10-31-02

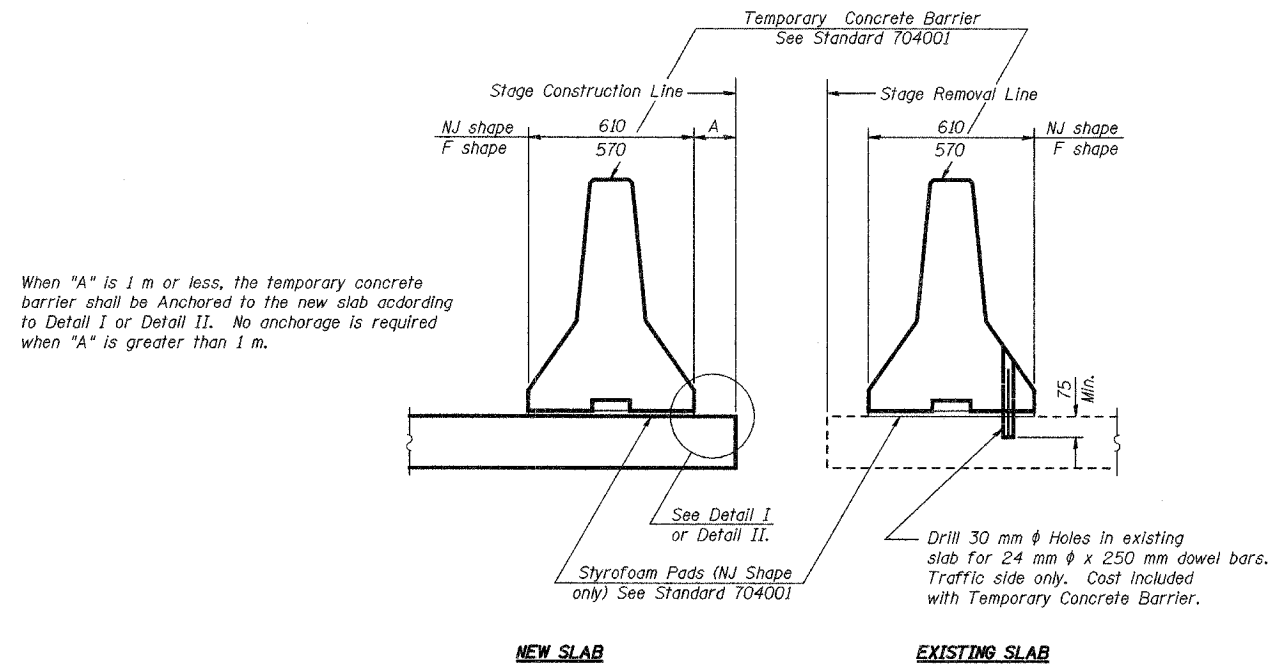
BAR SPLICER ASSEMBLY DETAILS

Date	Designed NPP	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No.
Revisions	Drawn NPP		61
	Checked MR		
	Approved NPP		
Prepared By:	BRW, Inc. A Division of URS		

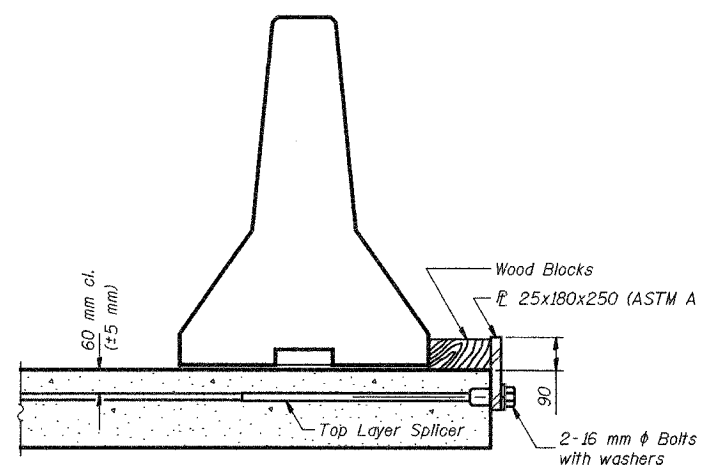
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB	TAZEWELL	1366	510
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 62
68 SHEETS

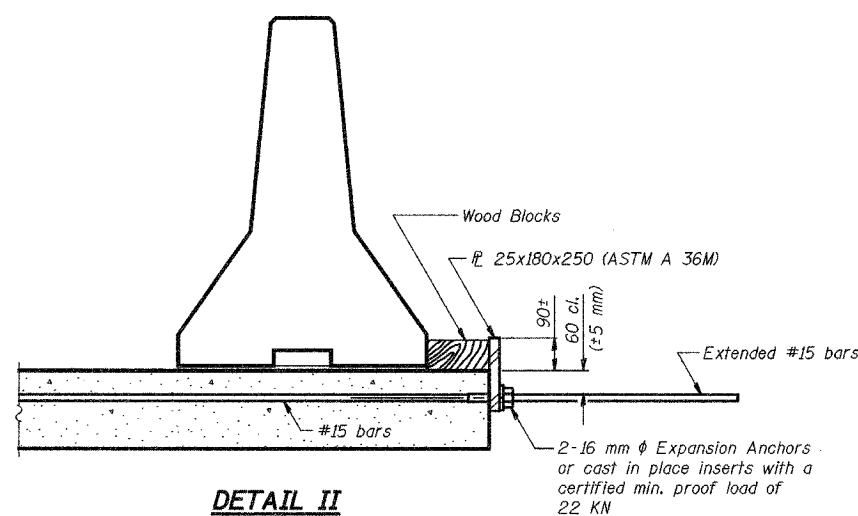


SECTIONS THRU SLAB



DETAIL I

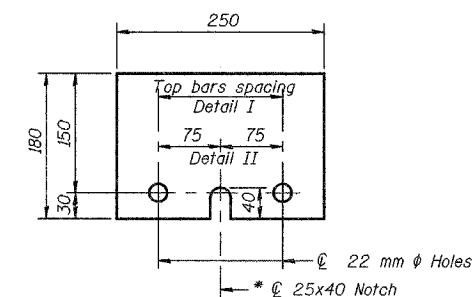
The 25x180x250 Plate shall not be removed until
Stage II Construction forms and reinforcement bars
are in place.



DETAIL II

The 25x180x250 Plate shall not be removed until
Stage II Construction forms and all reinforcement
bars are in place and the concrete is ready to be
placed.

- NOTES**
- Detail I - With Bar Splicer or Couplers:
Connect one (1) 25x180x250 steel \bar{r} to the
top layer of couplers with 2-16 mm ϕ bolts
screwed to coupler at approximate \bar{c} of
each 3 m barrier panel.
- Detail II - With Extended Reinforcement Bars:
Connect one (1) 25x180x250 steel \bar{r} to the
concrete slab with 2-16 mm ϕ Expansion Anchors
or cast in place Inserts spaced between the
top layer of reinforcement at approximate \bar{c} of
each 3 m barrier panel.
- Cost of anchorage included with Temporary Concrete Barrier.
All dimensions are in millimeters (mm) except as noted.



25x180x250

* Required only with Detail II

R-27 10-31-02

TEMPORARY CONCRETE BARRIER			
Date	Designed EV	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No.
Revisions	Drawn EV		62
	Checked NPP		of 68
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB	TAZEWELL	1366	511
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 63
68 SHEETS

CLAUDE H. HURLEY COMPANY																			
BORING LOG																			
PROJECT NO. 3-380-04					BORING NO. 58-272														
PROJECT FRI-74 IMPROVEMENTS - MAIN STREET CORRIDOR																			
LOCATION BRIDGE NO. 090-0009 WBI-74BL 153+491.4 10.8mL PEORIA & TAZEWELL COUNTIES, ILLINOIS																			
DRILLING CONTRACTOR WANG ENGINEERING, INC.																			
DATE OF DRILLING: STARTED 10-12-94 COMPLETED 10-12-94					SURFACE ELEVATION 152.03														
DRILLED BY R. BELL					LOGGED BY H. DOOLEY														
Elev	CLASSIFICATION	Depth	N Bp0.15m	Su KPa	W %	Td Kgpm ³	GROUNDWATER DATA			DRILLING METHOD									
							DATE	DEPTH	HOUR	RIG TYPE	DEPTH	DEPTH	DEPTH						
	SHOULDER MATERIALS: 203mm AC						DD	10-12	8.1		CBE-55								
152.01	FILL: DK GR BR LOAM, A-4		5	150	12		BAR	10-12	9.8										
			9				DC	10-13	2.9	10									
151.12	FILL: BR SANDY LOAM, A-2-4		6		9														
			9																
			6																
150.36	FILL: BR CLAY LOAM, A-6		5		190	11													
			3																
			3																
149.60	FILL: BR SILTY CLAY, A-7-6		2		170	25													
			4																
			4																
148.83	FILL: BR CLAY LOAM, A-6		0		285	13													
			4																
			6																
147.92	FILL: BR SILT, A-4		5			17													
			8																
			7																
147.31	FILL: BR SILTY LOAM, A-4		2		95	16													
			2																
			4																
			5																
			3		95	17													
			3																
			9		150	19													
			7																
			10		240	15													
145.33	FILL: DK BR & BR CLAY LOAM, A-6																		
145.02																			

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

GROUNDWATER DATA		DRILLING METHOD	
DD	Water Level During Drilling	FA	Flight Auger
BAR	Water Level Before Auger Removal	RW	Rotary Wash
AAR	Water Level After Auger Removal	HSA	Hollow Stem Auger
DC	Dry Cave Level	SAMPLE TYPE	
WC	Wet Cave Level	AU	Auger
d	Days	SS	Standard Split-barrel
h	Hours	ST	Thin-walled Tube
		DB	Core Barrel

BORING LOGS			
Date	Designed NPP	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No.
Revisions	Drawn NPP		63
	Checked AEU		of 68
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB	TAZEWELL	1366	573
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 65
68 SHEETS

CLAUDE H. HURLEY COMPANY BORING LOG

PROJECT NO. 3-380-D4 BORING NO. SB-274 (CON2)

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BRIDGE NO. 090-0009 NBI-74BL 153+641.6 13.3mL PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR D & G DRILLING, INC.

DATE OF DRILLING: STARTED 10-27-94 COMPLETED 10-27-94 SURFACE ELEVATION 144.11

DRILLED BY D. ROSEEL LOGGED BY J. DUDLER

Elev.	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD							
			N	Q _v	W	Y _d	DATE	DEPTH	HOUR	RIG TYPE				
			Bp0.15m	KPa	%	Kgpm ²								
143.90	GRN GR TO GR LAMINATED CLAY SHALE	10			16		DD	10-27	-	-	MOBILE B-57	0.10m FA-1.5m		
		21						10-28	5.5	1d		BR-1A-3m		
		30					WC	10-31	5.9	4d			AU-SS	
129.78	END OF BORING	50	100.0		15									

CLAUDE H. HURLEY COMPANY BORING LOG

PROJECT NO. 3-380-D4 BORING NO. SB-275

PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR

LOCATION BRIDGE NO. 090-0009 NBI-74BL 153+708.9 13.0mL PEORIA & TAZEWELL COUNTIES, ILLINOIS

DRILLING CONTRACTOR HAME ENGINEERING, INC.

DATE OF DRILLING: STARTED 10-13-94 COMPLETED 10-14-94 SURFACE ELEVATION 144.20

DRILLED BY B. BELL LOGGED BY M. DOOLEY/K. OLSON

Elev.	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD							
			N	Q _v	W	Y _d	DATE	DEPTH	HOUR	RIG TYPE				
			Bp0.15m	KPa	%	Kgpm ²								
143.90	TOPSOIL FILL: BLK SILTY LOAM, A-4	4			7		DD	10-14	5.6	-	CHE-55	0.15m HSA-14.0m		
		7			9			10-15	-	0h				
		7					DC	10-17	3.5	3d		AU-SS-RC		
142.52	BR SANDY LOAM, A-2-4	4			10									
		2			8									
		3			9									
		2			8									
		4			11									
140.24	BR GRAVELLY SAND, A-1-b	8			6									
		6			6									
		7			6									
		15			5									
		12			5									
		12			5									
		5			8									
		6			8									
		9			11									
		6			11									
		2			11									

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

GROUNDWATER DATA		DRILLING METHOD	
DD	Water Level During Drilling	FA	Flight Auger
BAR	Water Level Before Auger Removal	RW	Rotary Wash
AAR	Water Level After Auger Removal	HSA	Hollow Stem Auger
DC	Dry Cave Level	SAMPLE TYPE	
WC	Wet Cave Level	AU	Auger
d	Days	SS	Standard Split-barrel
h	Hours	ST	Thin-walled Tube
		DB	Core Barrel

BORING LOGS			
Date	Designed	NPP	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
Revisions	Drawn	NPP	
	Checked	AEU	
	Approved	NPP	
Prepared By:	BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.
			Sheet No. 65 of 68
			BRW Job No. 17049-071

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB	TAZEWELL	1366	514
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 66
68 SHEETS

CLAUDE H. HURLEY COMPANY BORING LOG										
PROJECT NO. 3-380-D4		BORING NO. SB-275 (CONT)								
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR										
LOCATION BRIDGE NO. 090-0009 NBI-74BL 153+708.9 13.0mL					PEORIA & TAZEWELL COUNTIES, ILLINOIS					
DRILLING CONTRACTOR MNG ENGINEERING, INC.										
DATE OF DRILLING: STARTED 10-13-94 COMPLETED 10-14-94 SURFACE ELEVATION 144.20										
DRILLED BY F. RELL LOGGED BY H. DOOLEY/K. OLSON										
CLASSIFICATION	Depth	N	Q _u	w	T _d	GROUNDWATER DATA			DRILLING METHOD	
						DATE	DEPTH	HOUR	RIG TYPE	CRE-55
BR SANDY GRAVEL, A-1-a	3			12		DD	10-14	5.6		AUGER TYPE-DEPTH 0.15m HSA-14.0m
	3						10-14	0h		CASING TYPE-DEPTH
	6					DC	10-17	3.5	3d	SAMPLER TYPE AU-SS-RC
130.46		REC		100%						
GRN GR TO GR		RQD		75%						
LAMINATED CLAY SHALE	14									
129.61		REC		100%						
BR GR DOLOMITIC LIMESTONE		RQD		100%						
129.77		REC		98%						
		RQD		37%						
GRN GR TO GR										
LAMINATED CLAY SHALE	16									
127.13						END OF BORING				

CLAUDE H. HURLEY COMPANY BORING LOG										
PROJECT NO. 3-380-D4		BORING NO. SB-276								
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR										
LOCATION BRIDGE NO. 090-0009 NBI-74BL 153+793.9 9.8mL					PEORIA & TAZEWELL COUNTIES, ILLINOIS					
DRILLING CONTRACTOR MNG ENGINEERING, INC.										
DATE OF DRILLING: STARTED 11-18-94 COMPLETED 11-18-94 SURFACE ELEVATION 153.07										
DRILLED BY J. WHEELER LOGGED BY H. DOOLEY										
CLASSIFICATION	Depth	N	Q _u	w	T _d	GROUNDWATER DATA			DRILLING METHOD	
						DATE	DEPTH	HOUR	RIG TYPE	CRE-55
SHOULDER MATERIALS: 152mm AC				2		DD	11-18	13.1		0.10m PA-1.5m
152.92							11-18	0h		AUGER TYPE-DEPTH BR-19.8m
FILL: BR & DK BR SANDY LOAM, A-2-4	3			12						CASING TYPE-DEPTH
	4									SAMPLER TYPE AU-SS
	6									
152.16										
	5		155	15						
	6									
	8									
	5		480	18						
	5									
	5									
	7		180	16						
	5									
	5									
FILL: BR & DK BR SILTY CLAY LOAM, A-6	3		190	15						
	5									
	5									
	4		240	14						
	5									
	5									
	7		315	17						
	3									
	6		240	16						
	8									
	3									
	6									
	8									
146.83										
FILL: DK GR SILTY CLAY LOAM, A-4	4			15						
	6									
	6									
140.88										
DK BR TO DK GR SILTY CLAY LOAM, A-7-6 W/ FIBERS	3			65	29					
	2									
	2									
139.97										
BR GRAVELLY SAND, A-1-b										
146.22										

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

GROUNDWATER DATA		DRILLING METHOD	
DD	Water Level During Drilling	FA	Flight Auger
BAR	Water Level Before Auger Removal	RW	Rotary Wash
AAR	Water Level After Auger Removal	HSA	Hollow Stem Auger
DC	Dry Cave Level	SAMPLE TYPE	
WC	Wet Cave Level	AU	Auger
d	Days	SS	Standard Split-barrel
h	Hours	ST	Thin-walled Tube
		DB	Core Barrel

BORING LOGS			
Date	Designed	NPP	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB)BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
Revisions	Drawn	NPP	
	Checked	AEU	
	Approved	NPP	
	Prepared By:	BRW, Inc. A Division of URS	
		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	Sheet No. 66 of 68
			BRW Job No. 17049-071

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVB	TAZEWELL	1366	515
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 67
68 SHEETS

CLAUDE H. HURLEY COMPANY					BORING LOG					BORING NO. SB-276 (CONT)				
PROJECT NO. 3-98-04														
PROJECT F.A.I. IMPROVEMENTS - MAIN STREET CORRIDOR														
LOCATION BRIDGE NO. 090-0009 NSI-74BL 153+753.9 9.2mL PEORIA & TAZEWELL COUNTIES, ILLINOIS														
DRILLING CONTRACTOR BRW ENGINEERING, INC.														
DATE OF DRILLING: STARTED 11-18-94 COMPLETED 11-18-94 SURFACE ELEVATION 153.07														
DRILLED BY J. WHEELER LOGGED BY N. DOOLEY														
Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD							
			N 3p0.15m	Qu KPa	w %	Tp Kgpm ³	DATE	DEPTH	HOUR	RIG TYPE				
	BR GRAVELLY SAND, A-1-b	8 8 5			19									
139.21		74												
	DK BR SILTY LOAM, A-4	2 2			32									
138.44		15												
		12 12 15			8									
		10 12 13			11									
	BR SANDY GRAVEL, A-1-a	13 17 18			16									
	COBBLES	15 19 21			10									
	COBBLES	24 20 25			11									
		16 15 12			10									
		15 15 18			11									
133.26	END OF BORING	20												

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

GROUNDWATER DATA		DRILLING METHOD	
DD	Water Level During Drilling	FA	Flight Auger
BAR	Water Level Before Auger Removal	RW	Rotary Wash
AAR	Water Level After Auger Removal	HSA	Hollow Stem Auger
DC	Dry Cave Level	SAMPLE TYPE	
WC	Wet Cave Level	AU	Auger
d	Days	SS	Standard Split-barrel
h	Hours	ST	Thin-walled Tube
		DB	Core Barrel

BORING LOGS			
Date	Designed	NPP	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVB) BY TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009
Revisions	Drawn	NPP	
	Checked	AEU	
	Approved	NPP	
	Prepared By:	BRW, Inc. A Division of URS	
		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	Sheet No. 67 of 68 BRW Job No. 17049-071

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVBY	TAZEWELL	1366	516
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 68
68 SHEETS

RSV ENGINEERING, INC.		BORING LOG		SCHAUMBURG, ILLINOIS				
JOB NO: 9890	CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING NO: CPT-1	STATION: 153+589EB					
PROJECT: Interstate Route 74 Improvements - Peoria, Illinois		LOCATION: I-74 Bridge over Camp Street SN 090-0009	OFFSET: 7.5m L4					
BORING RIG & METHOD: CME-55 w/Hollow Stem Augers			SURF ELEV: 143.27					
SOIL DESCRIPTION	ELEV.	DEPTH	SAMPLE FROM - TO	REC. mm	BLOWS 150mm	q _n kPa	STRAIN %	WATER CONTENT %
			0.00-0.30		Auger 3			18
			0.30-0.76	381	4-7	134	15	17
Stiff Br Silty Clay A-7-6			1.07-1.52	356	3-3	144 *		16
	140.55		1.83-2.29	76	4-5	144 *		23
Loose Br Sandy Loam A-2-4	140.07		2.59-3.05	406	2-2			9
Medium Dense Br Sand A-1-b			3.35-3.81	366	4-6			6
Very Soft Gr Clay A-7-6	138.95 138.54		4.11-4.57	432	6-1	19	15	36
Very Loose Gr Sandy Loam A-2-4	137.80	5	4.88-5.33	457	1-1			40
			5.64-6.10	406	8-6			11
			6.40-6.86	356	8-10			4
Medium Dense Gr & Br Sand A-1-b; random Cobbles noted			7.18-7.62	457	9-9			9
Sand under hydrostatic pressure			7.92-8.38	203	10-11			13
			8.68-9.14	330	13-12			7
	139.91	10	9.45-9.91	229	9-4			6
Dense Br & Gr Sand A-1-b			10.21-10.67	406	13-22			8
Hard Gr Silty Clay A-7-6; shale fragments noted	138.11 137.47		10.97-11.43	330	13-26	431 +*		18
Light Gr SHALE (thinly laminated)			11.73-12.19	254	23-100/ 100mm			9
REMARKS *Water introduced into boring at 6.4m due to blowing Sand. CME Automatic Hammer Used.						* Denotes Calibrated Penetrometer Estimate		
WATER	5.5 m ELEV.	137.78	DURING DRILLING	∇ CORE SIZE	mm	DATE: Jun 29, 00		
WATER	m ELEV.		AT COMPLETION	∇ CASING LENGTH	m	DRILLER: Winslow		
WATER	* m ELEV.		AFTER 14 HRS.	∇ CASING DIAMETER	mm	INSPECTOR: Reed		

RSV ENGINEERING, INC.		BORING LOG		SCHAUMBURG, ILLINOIS				
JOB NO: 9660	CLIENT: ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING NO: CPT-1	STATION: 153+589EB					
PROJECT: Interstate Route 74 Improvements - Peoria, Illinois		LOCATION: I-74 Bridge over Camp Street SN 090-0009	OFFSET: 7.5m L4					
BORING RIG & METHOD: CME-55 w/Hollow Stem Augers			SURF ELEV: 143.27					
SOIL DESCRIPTION	ELEV.	DEPTH	SAMPLE FROM - TO	REC. mm	BLOWS 150mm	q _n kPa	STRAIN %	WATER CONTENT %
			12.50-12.62	127	100/ 125mm			15
Light Gr SHALE (thinly laminated)			13.26-13.35	102	100mm			15
Boring terminated at 13.4m								
REMARKS *Water introduced into boring at 6.4m due to blowing Sand. CME Automatic Hammer Used.						* Denotes Calibrated Penetrometer Estimate		
WATER	5.5 m ELEV.	137.78	DURING DRILLING	∇ CORE SIZE	mm	DATE: Jun 29, 00		
WATER	m ELEV.		AT COMPLETION	∇ CASING LENGTH	m	DRILLER: Winslow		
WATER	* m ELEV.		AFTER 14 HRS.	∇ CASING DIAMETER	mm	INSPECTOR: Reed		

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

GROUNDWATER DATA	DRILLING METHOD
DD Water Level During Drilling	FA Flight Auger
BAR Water Level Before Auger Removal	RW Rotary Wash
AAR Water Level After Auger Removal	HSA Hollow Stem Auger
DC Dry Cave Level	SAMPLE TYPE
WC Wet Cave Level	AU Auger
d Days	SS Standard Split-barrel
h Hours	ST Thin-walled Tube
	DB Core Barrel

Date	Designed NPP	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVBY) TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No.
Revisions	Drawn NPP		68
	Checked AEU		of 68
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS	1701 Golf Rd., Suite 1000 Rolling Meadows, IL.		BRW Job No. 17049-071

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

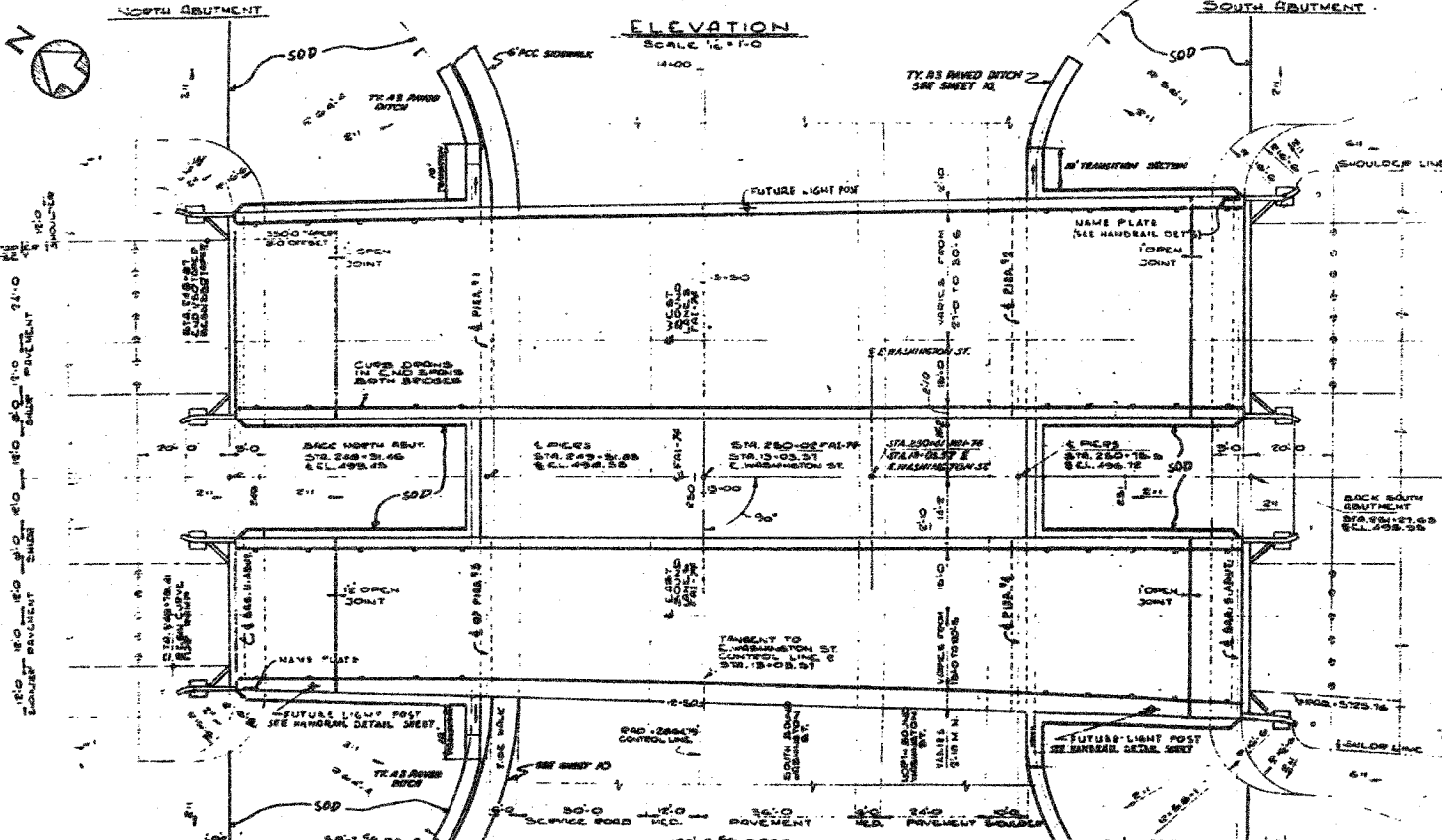
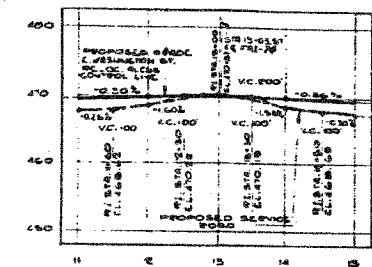
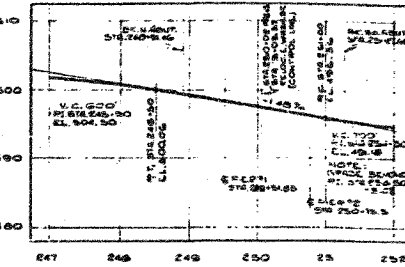
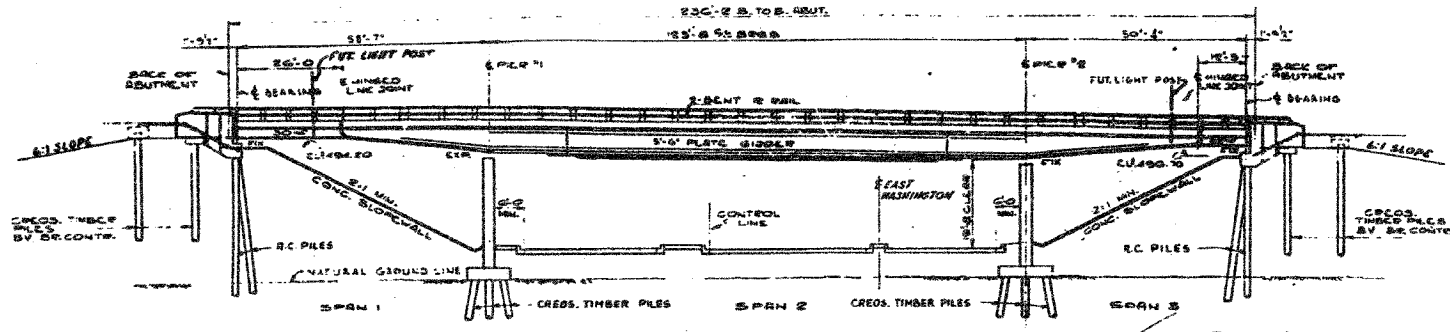
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-74	*	TAZEWELL	1366	517
FED. ROAD DIST. NO. 7			ILLINOIS FED. AID PROJECT-	

*90-IDR-2,90(13,14,14-IDR-1

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

DATE	BY	REVISION

S.W. CORNER S. HEADWALL: F.F. AT
STA. 240+30 ELEVATION 466.59



- GENERAL NOTES:
- ALL CONCRETE SHALL BE CLASS 'C' AND FINISH TO BE SMOOTH SURFACE 2000 PSI.
 - REINFORCING BARS SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 5.14 OF THE STANDARD SPECIFICATIONS FOR STRUCTURAL CONSTRUCTION.
 - JOINTS SURFACE ON CROSS SECTION SHALL BE MADE MONOTHICALLY.
 - NO TOLERANCE ON CONSTRUCTION JOINTS SHALL BE MADE EXCEPT BY WRITTEN PERMISSION OF THE ENGINEER.
 - ALL BOLTERS, FORKERS, BEARING PLATES, LEAD PLATES, PINTLES, WOOD PLATES AND BRIDGE BARS SHALL BE FABRICATED AND SET IN ACCORDANCE WITH ART. 5.15 OF THE STANDARD SPECIFICATIONS.
 - EXPANSION JOINTS SHALL BE PROVIDED IN ACCORDANCE WITH ART. 5.16 OF THE STANDARD SPECIFICATIONS.
 - ALL IRON SHALL BE FURNISHED AND APPLIED BY THE CONTRACTOR IN ACCORDANCE WITH ART. 5.17 OF THE STANDARD SPECIFICATIONS.
 - THE ROADWAY EXPANSION JOINTS SHALL BE FABRICATED AND CEMENTED IN ACCORDANCE WITH ART. 5.18 (1) OF THE STANDARD SPECIFICATIONS AND SHALL FIT THE CROWN OF THE ROADWAY.
 - HIGH STRENGTH STEEL BOLTS MAY BE SUBSTITUTED FOR FIELD BOLTS IN ACCORDANCE WITH ART. 5.19 OF THE STANDARD SPECIFICATIONS.
 - THE CONTRACTOR SHALL DRIVE TEST PILES IN PERMANENT LOCATIONS AS SHOWN ON PLANS BEFORE ORDERING THE REMAINDER OF PILES.
 - REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 30 BAR DIA. UNLESS OTHERWISE NOTED.
 - ALL REINFORCING BARS SHALL BE FINISHED IN ACCORDANCE WITH ART. 5.14 OF THE STANDARD SPECIFICATIONS FOR REINFORCING BARS.
 - LIVE LOADS: H20-S16-44 & M20-F10
 - DESIGN STRESSES:
S = 48000 PSI - STRUCTURAL STEEL
S = 40000 PSI - REINFORCING STEEL
C = 4000 PSI - SUPERSTRUCTURE SUBSTRUCTURE
F = 1/2 PSI - FOOTINGS

SUMMARY OF QUANTITIES

ITEM	UNIT	QUANTITY
CLASS A EXCAVATION FOR STRUCTURES	CU. YDS.	570
CLASS B CONCRETE	CU. YDS.	7928
ERECTING STRUCTURAL STEEL	LBS.	1054220
FURNISHING AND SETTING METAL HANDRAIL	LINE FT.	1,001
APPROXIMATE BARS	LBS.	153650
FURNISHING CHRODOTED PILLS (20" x 10")	LINE FT.	2,340
FURNISHING CHRODOTED PILLS OVER 20"	LINE FT.	1,700
DRIVING TIMBER PILES	LINE FT.	3,000
FURNISHING CONCRETE PILES	LINE FT.	1,515
DRIVING CONCRETE PILES	LINE FT.	1,515
TEST PILES (TIMBER)	PILES	1
TEST PILES (CONCRETE)	PILES	1
WALK PLATES	EACH	2
SLOPE WALL	SQ. YDS.	1,106
PAVED DITCH	LN. FT.	60

LIST OF DRAWINGS

NO.	TITLE
1	GENERAL PLAN & ELEVATION
2	SOIL BORINGS & FOUNDATION PLAN
3	STRUCTURAL STEEL FRAMING PLAN
4	STRUCTURAL STEEL DETAILS
5	BEARINGS & EXPANSION JOINT DETAILS
6	HANDRAIL DETAILS
7	BRIDGE FLOOR-WESTBOUND SLAB
8	BRIDGE FLOOR-EASTBOUND SLAB
9	PILES 12" x 12" - REINF. & DETAILS
10	PILES 18" x 18" - REINF. & DETAILS
11	ABUTMENTS - REINF. & DETAILS
12	ABUTMENTS - ELEVATIONS & DETAILS
13	MISC. CONCRETE DETAILS
14	ALTERNATE PILING DETAILS

DESIGNED: S.A. WOODS
CHECKED: S.M. MAY
DRAWN: V.V. MADOCKE
CHECKED: E.A. ANDREWS

EXAMINED: _____
PASSED: _____
APPROVED: _____

Notes: For Settling quantity of detail see 54.41.

FOR INFORMATION ONLY

JOHN F. [Signature]
[Title]

GENERAL PLAN & ELEVATION
FAI. ROUTE 74 SECTION 90-14-HB
EAST WASHINGTON STREET
GRADE SEPARATION
TAZEWELL COUNTY - STATION 250+41

FOR INFORMATION ONLY



TAZEWELL COUNTY
EXISTING STRUCTURE PLAN AT
PROPOSED STRUCTURE NO. 090-0163

Bench Mark: BM #19. Chisled 'L' on S.E. corner of N.W. crashwall of bridge W.B. I-74 over Washington St. in East Peoria. Elevation 143.777

Existing Structure: 090-0010 (EB) and 090-0011 (WB), built in 1961 are dual 3-span plate girder structures on pile bent abutments. The structures are 72 m long and vary in width. Both structures will be removed and replaced by the 2-span continuous PPC Bulb T-beam structures shown below.

Staging Note: Both Westbound and Eastbound traffic will be maintained on the existing Eastbound structure during the Westbound structure construction.

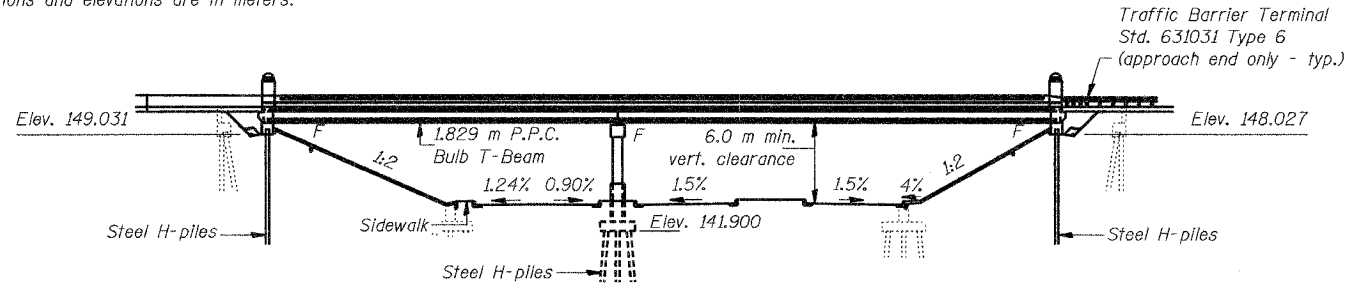
No salvage

Note: All dimensions are in millimeters except as noted.

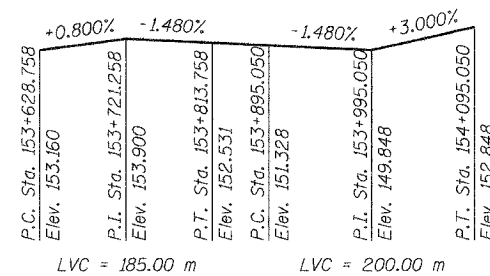
Note: All stations and elevations are in meters.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

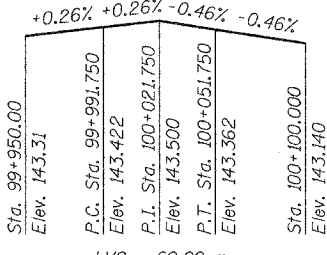
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	518
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT-	



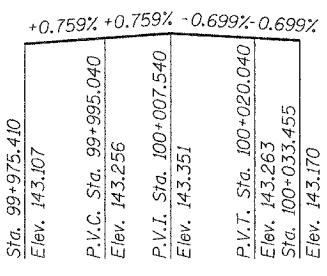
ELEVATION



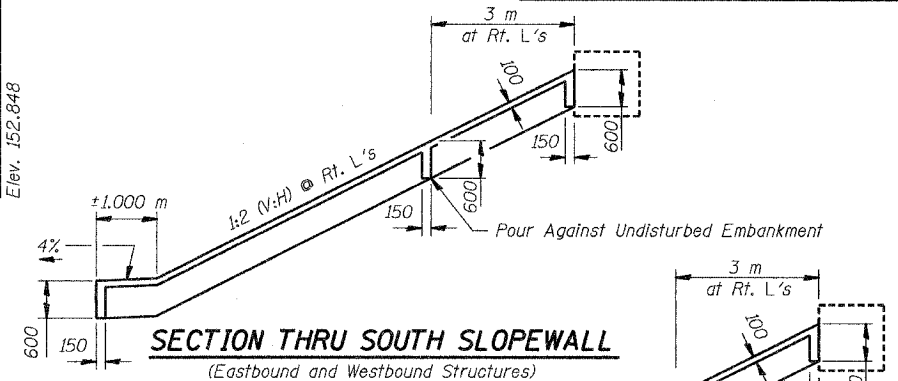
PROFILE GRADE
(EB & WB I-74)



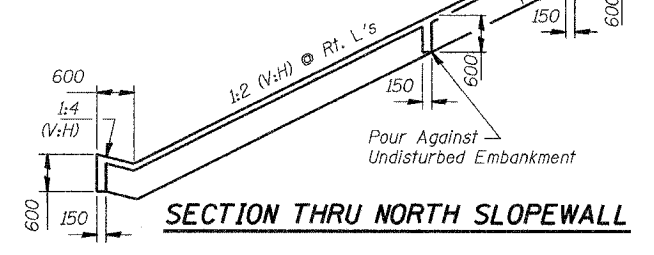
PROFILE GRADE
(Washington Street)



PROFILE GRADE
(Taylor Street)



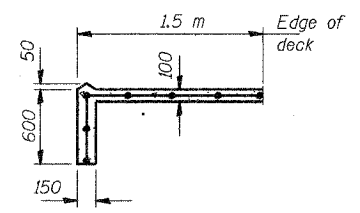
SECTION THRU SOUTH SLOPEWALL
(Eastbound and Westbound Structures)



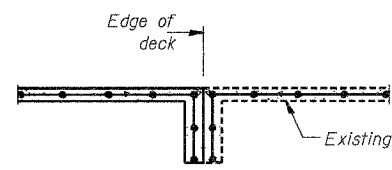
SECTION THRU NORTH SLOPEWALL

STATION 153+868.540
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. (90-14HB)BR
LOADING MS18 & ALT.
STR. NO. 090-0163

NAME PLATE
(See Std. 515001)



SECTION A-A



SECTION B-B

DESIGN SPECIFICATIONS

1996 AASHTO with 1997, 1998, 1999, 2000 and 2002 Interims

LOADING MS18 & ALT.

Allow 2.4 kN/m² for future wearing surface.

DESIGN STRESSES

FIELD UNITS

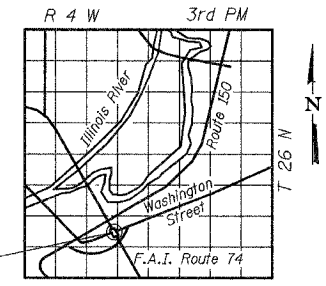
f'_c = 24 MPa
f_y = 400 MPa (reinforcement)

PRECAST PRESTRESSED UNITS

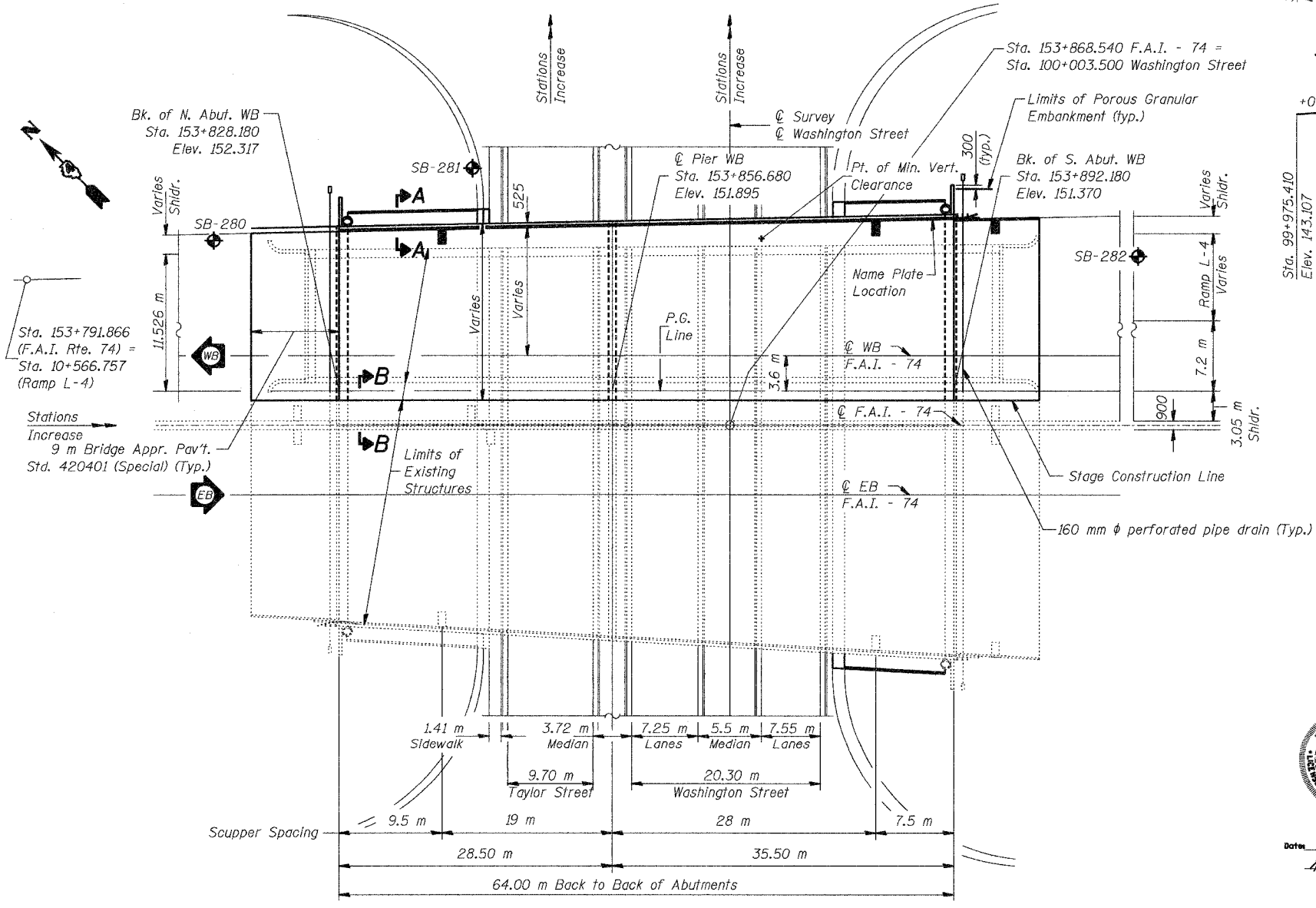
f'_c = 42 MPa
f'_{ci} = 35 MPa
f'_s = 1,860 MPa (12.7 mm φ low lax. strands)
f'_{si} = 1,395 MPa (12.7 mm φ low lax. strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.042g
Site Coefficient (S) = 1.2



LOCATION SKETCH



PLAN



Date: 12/30/04
Keith H. Smith
Professional Engineer
Ill. Structural No. 4177

GENERAL PLAN AND ELEVATION					Sheet No.
Date	Designed	ACW	INTERSTATE 74 AND RAMP L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	1	of 28
Revisions	Drawn	BKN			
	Checked	KWB			
	Approved	KWB			
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526			URS Job No. 2100001243.01	

12/17/2004 8:31:32 AM
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

60201

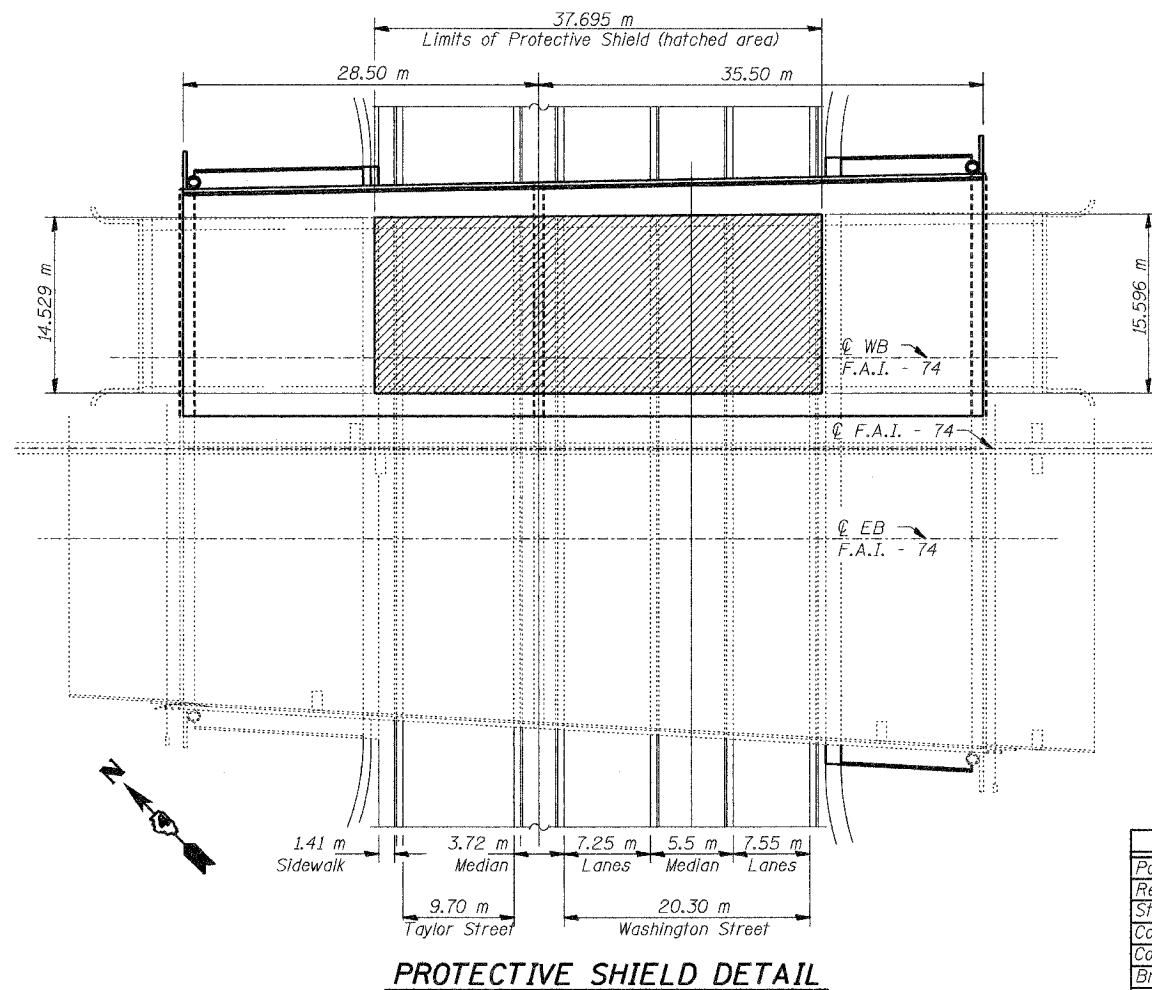
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	519
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of AASHTO M 31M, or M 322M, Grade 400.
- Slope wall shall be reinforced with welded wire fabric, 152 x 152 - MW25.8 x MW25.8 with a mass of 2.91 kg/m².
- The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
- Contractor shall contract IDOT regarding Test Pile results for Contract 9 prior to ordering Piles.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- All dimensions are in millimeters (mm) except as noted.
- All stations and elevations are in meters.
- All construction joints shall be bonded.

INDEX OF SHEETS

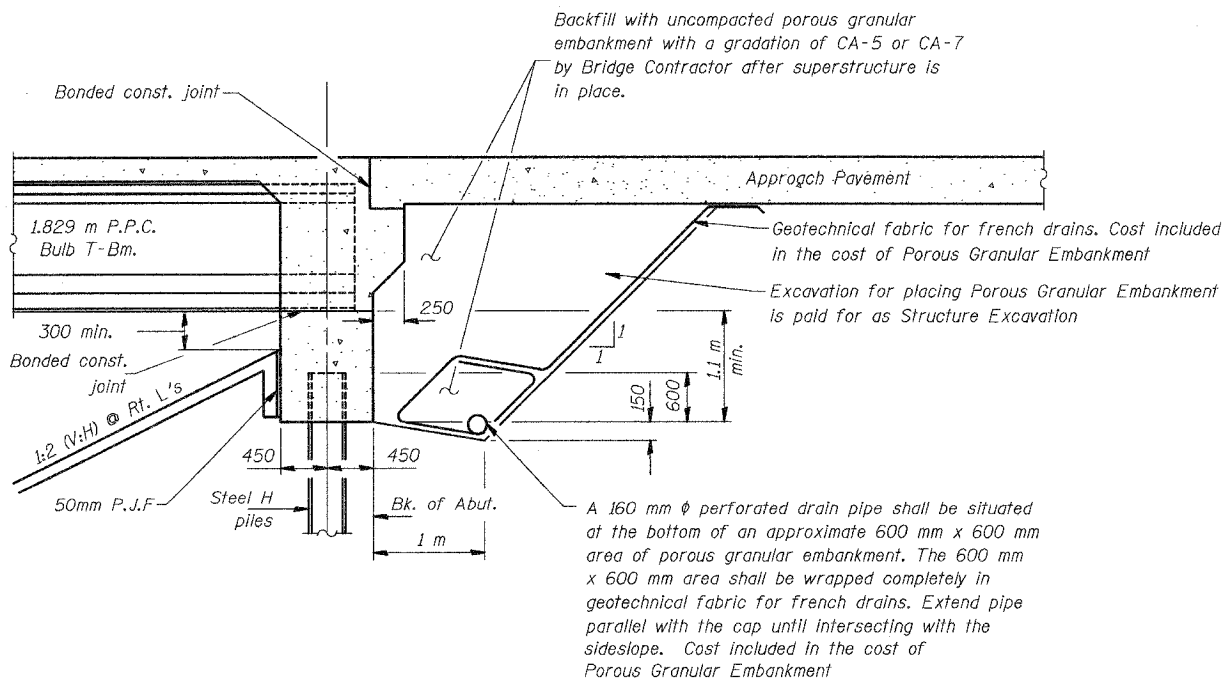
SHEET NO.	DESCRIPTION
1	GENERAL PLAN AND ELEVATION
2	GENERAL NOTES, TOTAL BILL OF MATERIAL, & DETAILS
3	SUBSTRUCTURE LAYOUT
4-6	TOP OF SLAB ELEVATIONS
7	SUPERSTRUCTURE
8-9	SUPERSTRUCTURE DETAILS
10	ALUMINUM RAILING, TYPE H (SPECIAL) DETAILS
11	DIAPHRAGM DETAILS AT ABUTMENTS
12	DIAPHRAGM DETAILS AT PIER
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14	FRAMING PLAN
15	BEAM DETAILS - SPAN 1
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17	NORTH ABUTMENT
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20	BOLLARD DETAILS AND APPLICATION
21	LUMINAIRE DETAILS ON BOLLARDS AND APPLICATION
22	ANCHOR BOLT DETAILS
23	BAR SPLICER ASSEMBLY DETAILS
24	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
25-28	SOIL BORINGS



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu. m		350	350
Removal of Existing Structures No. 3	Each	1		1
Structure Excavation	Cu. m		352	352
Concrete Structures	Cu. m		148.1	148.1
Concrete Superstructure	Cu. m	300.2		300.2
Bridge Deck Grooving	Sq. m	1066		1066
Protective Coat	Sq. m	1269		1269
Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams, 1829mm	m	380.2		380.2
Reinforcement Bars, Epoxy Coated	Kg	37410	11940	49350
Slopedwall 100mm	Sq. m		799	799
Furnishing Steel Piles HP310x110	m		504.0	504.0
Driving Steel Piles	m		504.0	504.0
Braced Excavation	Cu. m		102.3	102.3
Name Plates	Each	1		1
Bar Splicers	Each	103		103
Drainage Scuppers, Type 2	Each	2		2
Protective Shield	Sq. m	568		568
Aluminum Railing Type H (Special)	m	61.0		61.0
Install Bollards and Luminaire	Each	2		2
Permanent Survey Markers, Type 1	Each		1	1

* Quantity is for top and inside face of parapet, westbound face of median barrier and the deck.
** Quantity also includes South Slopedwall for Eastbound Structure.



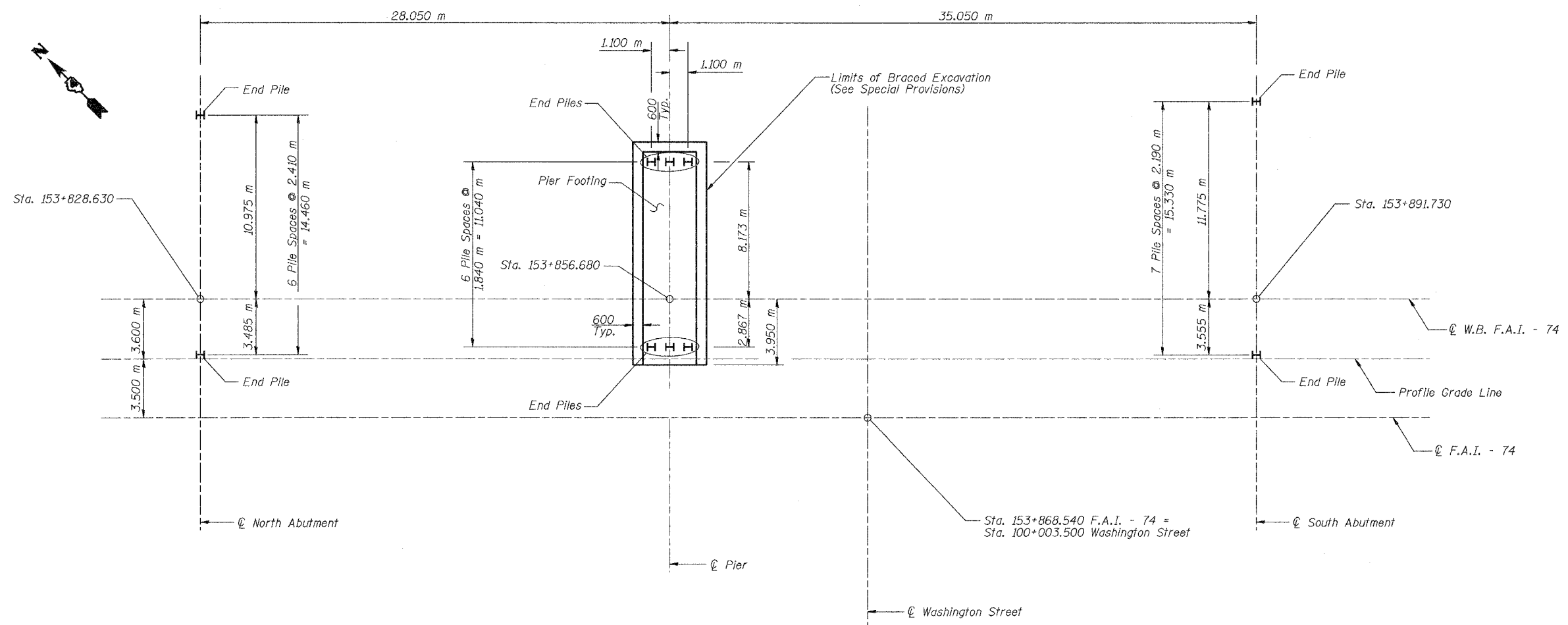
SECTION THRU INTEGRAL ABUTMENT

GENERAL NOTES, TOTAL BILL OF MATERIAL, & DETAILS

Date	Designed TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		2 of 28
	Checked DCS		
	Approved KWB		
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526		URS Job No. 2100001243.01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

83201				
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	520
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

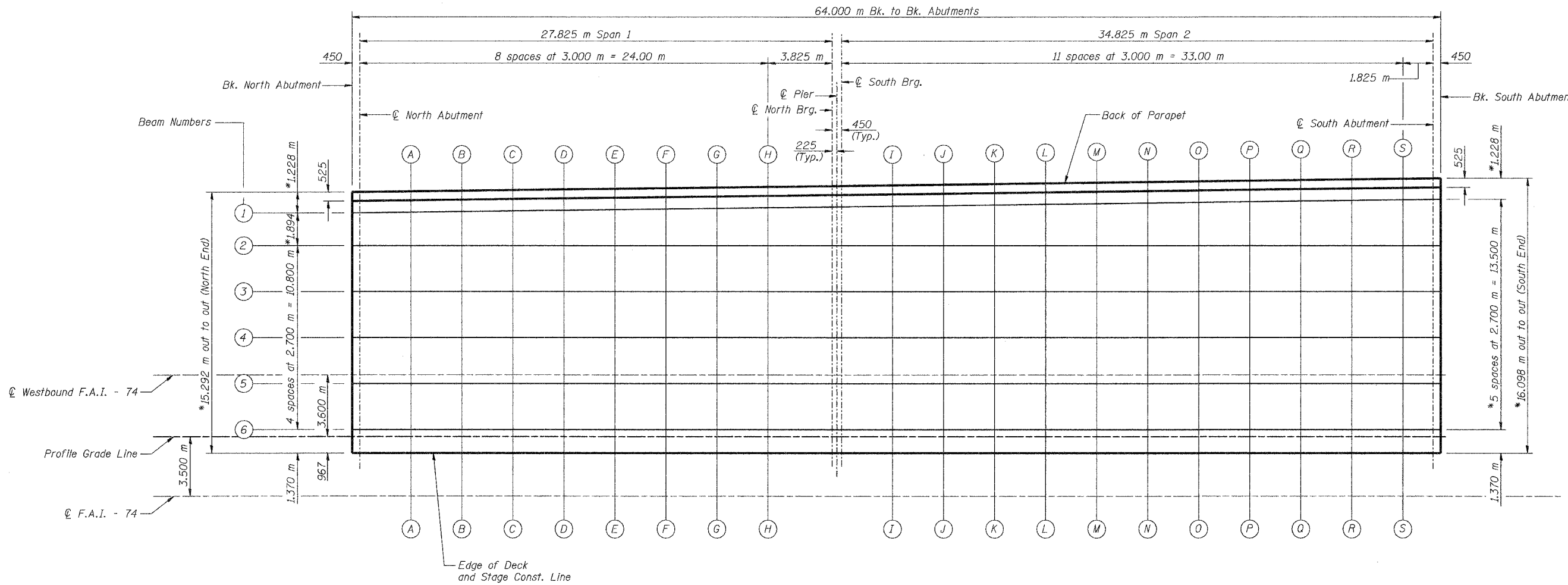


SUBSTRUCTURE LAYOUT

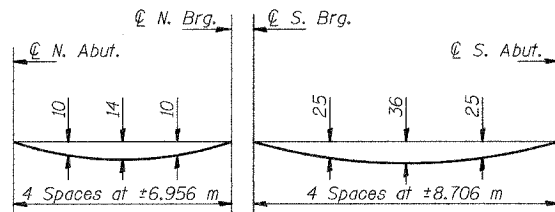
SUBSTRUCTURE LAYOUT			
Date	Designed TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		3 of 28
	Checked DCS		
	Approved KWB		
Prepared By: URS		3040 North University Avenue Decatur, IL 62526	URS Job No. 2100001243.01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	521
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



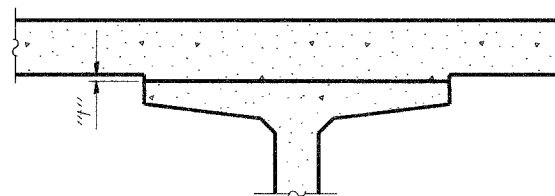
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete, excluding beams).

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 on sheets 5 and 6 of 28.



FILLET HEIGHTS

To determine "f": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" minus slab thickness, equals the fillet heights "f" above top flanges of beams.

* Dimensions measured at back of abutments
All dimensions are in millimeters except as noted.
All stations and elevations are in meters.

TOP OF SLAB ELEVATIONS				Sheet No.
Date	Designed	TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	4 of 28
Revisions	Drawn	BKN		
	Checked	DCS		
	Approved	KWB		
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526		URS Job No.	2100001243.01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

68201				
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	522
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

BEAM 1

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT	153 + 828.180	-13.097	152.199	152.199
CL N. ABUT	153 + 828.630	-13.106	152.192	152.192
A	153 + 831.629	-13.164	152.147	152.151
B	153 + 834.629	-13.222	152.101	152.109
C	153 + 837.628	-13.280	152.056	152.067
D	153 + 840.628	-13.338	152.010	152.023
E	153 + 843.627	-13.396	151.964	151.978
F	153 + 846.627	-13.454	151.919	151.931
G	153 + 849.626	-13.512	151.873	151.883
H	153 + 852.625	-13.570	151.828	151.833
CL N. BRG PIER	153 + 856.455	-13.644	151.770	151.770
CL PIER	153 + 856.680	-13.648	151.766	151.766
CL S. BRG PIER	153 + 856.905	-13.653	151.763	151.763
I	153 + 859.904	-13.711	151.717	151.726
J	153 + 862.904	-13.769	151.672	151.689
K	153 + 865.903	-13.827	151.626	151.650
L	153 + 868.903	-13.885	151.581	151.610
M	153 + 871.902	-13.943	151.535	151.568
N	153 + 874.902	-14.001	151.490	151.523
O	153 + 877.901	-14.059	151.444	151.476
P	153 + 880.900	-14.117	151.398	151.426
Q	153 + 883.900	-14.175	151.353	151.376
R	153 + 886.899	-14.233	151.307	151.321
S	153 + 889.899	-14.291	151.262	151.267
CL S. ABUT	153 + 891.730	-14.326	151.234	151.234
BK. OF S. ABUT	153 + 892.180	-14.335	151.227	151.227

BEAM 2

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT	153 + 828.180	-11.203	152.237	152.237
CL N. ABUT	153 + 828.630	-11.203	152.230	152.230
A	153 + 831.630	-11.203	152.186	152.190
B	153 + 834.630	-11.203	152.141	152.150
C	153 + 837.630	-11.203	152.097	152.109
D	153 + 840.630	-11.203	152.053	152.066
E	153 + 843.630	-11.203	152.008	152.022
F	153 + 846.630	-11.203	151.964	151.976
G	153 + 849.630	-11.203	151.919	151.929
H	153 + 852.630	-11.203	151.875	151.881
CL N. BRG PIER	153 + 856.455	-11.203	151.818	151.818
CL PIER	153 + 856.680	-11.203	151.815	151.815
CL S. BRG PIER	153 + 856.905	-11.203	151.812	151.812
I	153 + 859.905	-11.203	151.767	151.776
J	153 + 862.905	-11.203	151.723	151.740
K	153 + 865.905	-11.203	151.679	151.703
L	153 + 868.905	-11.203	151.634	151.664
M	153 + 871.905	-11.203	151.590	151.622
N	153 + 874.905	-11.203	151.545	151.579
O	153 + 877.905	-11.203	151.501	151.533
P	153 + 880.905	-11.203	151.457	151.485
Q	153 + 883.905	-11.203	151.412	151.435
R	153 + 886.905	-11.203	151.368	151.382
S	153 + 889.905	-11.203	151.323	151.329
CL S. ABUT	153 + 891.730	-11.203	151.296	151.296
BK. OF S. ABUT	153 + 892.180	-11.203	151.290	151.290

BEAM 3

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT	153 + 828.180	-8.503	152.291	152.291
CL N. ABUT	153 + 828.630	-8.503	152.284	152.284
A	153 + 831.630	-8.503	152.240	152.244
B	153 + 834.630	-8.503	152.195	152.204
C	153 + 837.630	-8.503	152.151	152.163
D	153 + 840.630	-8.503	152.107	152.120
E	153 + 843.630	-8.503	152.062	152.076
F	153 + 846.630	-8.503	152.018	152.030
G	153 + 849.630	-8.503	151.973	151.983
H	153 + 852.630	-8.503	151.929	151.935
CL N. BRG PIER	153 + 856.455	-8.503	151.872	151.872
CL PIER	153 + 856.680	-8.503	151.869	151.869
CL S. BRG PIER	153 + 856.905	-8.503	151.866	151.866
I	153 + 859.905	-8.503	151.821	151.830
J	153 + 862.905	-8.503	151.777	151.794
K	153 + 865.905	-8.503	151.733	151.757
L	153 + 868.905	-8.503	151.688	151.718
M	153 + 871.905	-8.503	151.644	151.676
N	153 + 874.905	-8.503	151.599	151.633
O	153 + 877.905	-8.503	151.555	151.587
P	153 + 880.905	-8.503	151.511	151.539
Q	153 + 883.905	-8.503	151.466	151.489
R	153 + 886.905	-8.503	151.422	151.436
S	153 + 889.905	-8.503	151.377	151.383
CL S. ABUT	153 + 891.730	-8.503	151.350	151.350
BK. OF S. ABUT	153 + 892.180	-8.503	151.344	151.344

BEAM 4

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT	153 + 828.180	-5.803	152.338	152.338
CL N. ABUT	153 + 828.630	-5.803	152.331	152.331
A	153 + 831.630	-5.803	152.287	152.291
B	153 + 834.630	-5.803	152.242	152.251
C	153 + 837.630	-5.803	152.198	152.210
D	153 + 840.630	-5.803	152.154	152.167
E	153 + 843.630	-5.803	152.109	152.123
F	153 + 846.630	-5.803	152.065	152.077
G	153 + 849.630	-5.803	152.020	152.030
H	153 + 852.630	-5.803	151.976	151.982
CL N. BRG PIER	153 + 856.455	-5.803	151.919	151.919
CL PIER	153 + 856.680	-5.803	151.916	151.916
CL S. BRG PIER	153 + 856.905	-5.803	151.913	151.913
I	153 + 859.905	-5.803	151.868	151.877
J	153 + 862.905	-5.803	151.824	151.841
K	153 + 865.905	-5.803	151.780	151.804
L	153 + 868.905	-5.803	151.735	151.765
M	153 + 871.905	-5.803	151.691	151.723
N	153 + 874.905	-5.803	151.646	151.680
O	153 + 877.905	-5.803	151.602	151.634
P	153 + 880.905	-5.803	151.558	151.586
Q	153 + 883.905	-5.803	151.513	151.536
R	153 + 886.905	-5.803	151.469	151.483
S	153 + 889.905	-5.803	151.424	151.430
CL S. ABUT	153 + 891.730	-5.803	151.397	151.397
BK. OF S. ABUT	153 + 892.180	-5.803	151.391	151.391

WESTBOUND F.A.I. - 74

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT	153 + 828.180	-3.600	152.371	152.371
CL N. ABUT	153 + 828.630	-3.600	152.364	152.364
A	153 + 831.630	-3.600	152.320	152.325
B	153 + 834.630	-3.600	152.276	152.284
C	153 + 837.630	-3.600	152.231	152.243
D	153 + 840.630	-3.600	152.187	152.200
E	153 + 843.630	-3.600	152.142	152.156
F	153 + 846.630	-3.600	152.098	152.110
G	153 + 849.630	-3.600	152.054	152.063
H	153 + 852.630	-3.600	152.009	152.015
CL N. BRG PIER	153 + 856.455	-3.600	151.953	151.953
CL PIER	153 + 856.680	-3.600	151.949	151.949
CL S. BRG PIER	153 + 856.905	-3.600	151.946	151.946
I	153 + 859.905	-3.600	151.901	151.910
J	153 + 862.905	-3.600	151.857	151.874
K	153 + 865.905	-3.600	151.813	151.837
L	153 + 868.905	-3.600	151.768	151.798
M	153 + 871.905	-3.600	151.724	151.756
N	153 + 874.905	-3.600	151.679	151.713
O	153 + 877.905	-3.600	151.635	151.667
P	153 + 880.905	-3.600	151.591	151.619
Q	153 + 883.905	-3.600	151.546	151.569
R	153 + 886.905	-3.600	151.502	151.516
S	153 + 889.905	-3.600	151.457	151.463
CL S. ABUT	153 + 891.730	-3.600	151.430	151.430
BK. OF S. ABUT	153 + 892.180	-3.600	151.424	151.424

All stations and elevations are in meters.

TOP OF SLAB ELEVATIONS

Date	Designed TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		5 of 28
	Checked DCS		
	Approved KWB		
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526	URS Job No. 2100001243.01	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	523
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

BEAM 5

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT	153 + 828.180	-3.103	152.364	152.364
CL N. ABUT	153 + 828.630	-3.103	152.357	152.357
A	153 + 831.630	-3.103	152.312	152.317
B	153 + 834.630	-3.103	152.268	152.276
C	153 + 837.630	-3.103	152.224	152.235
D	153 + 840.630	-3.103	152.179	152.192
E	153 + 843.630	-3.103	152.135	152.148
F	153 + 846.630	-3.103	152.090	152.102
G	153 + 849.630	-3.103	152.046	152.055
H	153 + 852.630	-3.103	152.002	152.007
CL N. BRG PIER	153 + 856.455	-3.103	151.945	151.945
CL PIER	153 + 856.680	-3.103	151.942	151.942
CL S. BRG PIER	153 + 856.905	-3.103	151.938	151.938
I	153 + 859.905	-3.103	151.894	151.903
J	153 + 862.905	-3.103	151.850	151.867
K	153 + 865.905	-3.103	151.805	151.829
L	153 + 868.905	-3.103	151.761	151.790
M	153 + 871.905	-3.103	151.716	151.749
N	153 + 874.905	-3.103	151.672	151.705
O	153 + 877.905	-3.103	151.628	151.660
P	153 + 880.905	-3.103	151.583	151.611
Q	153 + 883.905	-3.103	151.539	151.562
R	153 + 886.905	-3.103	151.494	151.509
S	153 + 889.905	-3.103	151.450	151.455
CL S. ABUT	153 + 891.730	-3.103	151.423	151.423
BK. OF S. ABUT	153 + 892.180	-3.103	151.416	151.416

BEAM 6

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT	153 + 828.180	-0.403	152.323	152.323
CL N. ABUT	153 + 828.630	-0.403	152.316	152.316
A	153 + 831.630	-0.403	152.272	152.277
B	153 + 834.630	-0.403	152.228	152.236
C	153 + 837.630	-0.403	152.183	152.195
D	153 + 840.630	-0.403	152.139	152.152
E	153 + 843.630	-0.403	152.094	152.108
F	153 + 846.630	-0.403	152.050	152.062
G	153 + 849.630	-0.403	152.006	152.015
H	153 + 852.630	-0.403	151.961	151.967
CL N. BRG PIER	153 + 856.455	-0.403	151.905	151.905
CL PIER	153 + 856.680	-0.403	151.901	151.901
CL S. BRG PIER	153 + 856.905	-0.403	151.898	151.898
I	153 + 859.905	-0.403	151.854	151.863
J	153 + 862.905	-0.403	151.809	151.826
K	153 + 865.905	-0.403	151.765	151.789
L	153 + 868.905	-0.403	151.720	151.750
M	153 + 871.905	-0.403	151.676	151.708
N	153 + 874.905	-0.403	151.632	151.665
O	153 + 877.905	-0.403	151.587	151.619
P	153 + 880.905	-0.403	151.543	151.571
Q	153 + 883.905	-0.403	151.498	151.521
R	153 + 886.905	-0.403	151.454	151.468
S	153 + 889.905	-0.403	151.410	151.415
CL S. ABUT	153 + 891.730	-0.403	151.383	151.383
BK. OF S. ABUT	153 + 892.180	-0.403	151.376	151.376

PROFILE GRADE LINE

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT	153 + 828.180	0.000	152.317	152.317
CL N. ABUT	153 + 828.630	0.000	152.310	152.310
A	153 + 831.630	0.000	152.266	152.271
B	153 + 834.630	0.000	152.222	152.230
C	153 + 837.630	0.000	152.177	152.189
D	153 + 840.630	0.000	152.133	152.146
E	153 + 843.630	0.000	152.088	152.102
F	153 + 846.630	0.000	152.044	152.056
G	153 + 849.630	0.000	152.000	152.009
H	153 + 852.630	0.000	151.955	151.961
CL N. BRG PIER	153 + 856.455	0.000	151.899	151.899
CL PIER	153 + 856.680	0.000	151.895	151.895
CL S. BRG PIER	153 + 856.905	0.000	151.892	151.892
I	153 + 859.905	0.000	151.847	151.856
J	153 + 862.905	0.000	151.803	151.820
K	153 + 865.905	0.000	151.759	151.783
L	153 + 868.905	0.000	151.714	151.744
M	153 + 871.905	0.000	151.670	151.702
N	153 + 874.905	0.000	151.625	151.659
O	153 + 877.905	0.000	151.581	151.613
P	153 + 880.905	0.000	151.537	151.565
Q	153 + 883.905	0.000	151.492	151.515
R	153 + 886.905	0.000	151.448	151.462
S	153 + 889.905	0.000	151.403	151.409
CL S. ABUT	153 + 891.730	0.000	151.376	151.376
BK. OF S. ABUT	153 + 892.180	0.000	151.370	151.370

STAGE CONSTRUCTION LINE

Location	Station	Offset (m)	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. OF N. ABUT	153 + 828.180	0.967	152.298	152.298
CL N. ABUT	153 + 828.630	0.967	152.291	152.291
A	153 + 831.630	0.967	152.247	152.251
B	153 + 834.630	0.967	152.202	152.211
C	153 + 837.630	0.967	152.158	152.169
D	153 + 840.630	0.967	152.113	152.127
E	153 + 843.630	0.967	152.069	152.082
F	153 + 846.630	0.967	152.025	152.037
G	153 + 849.630	0.967	151.980	151.990
H	153 + 852.630	0.967	151.936	151.941
CL N. BRG PIER	153 + 856.455	0.967	151.879	151.879
CL PIER	153 + 856.680	0.967	151.876	151.876
CL S. BRG PIER	153 + 856.905	0.967	151.873	151.873
I	153 + 859.905	0.967	151.828	151.837
J	153 + 862.905	0.967	151.784	151.801
K	153 + 865.905	0.967	151.739	151.763
L	153 + 868.905	0.967	151.695	151.724
M	153 + 871.905	0.967	151.651	151.683
N	153 + 874.905	0.967	151.606	151.640
O	153 + 877.905	0.967	151.562	151.594
P	153 + 880.905	0.967	151.517	151.545
Q	153 + 883.905	0.967	151.473	151.496
R	153 + 886.905	0.967	151.429	151.443
S	153 + 889.905	0.967	151.384	151.390
CL S. ABUT	153 + 891.730	0.967	151.357	151.357
BK. OF S. ABUT	153 + 892.180	0.967	151.350	151.350

All stations and elevations are in meters.

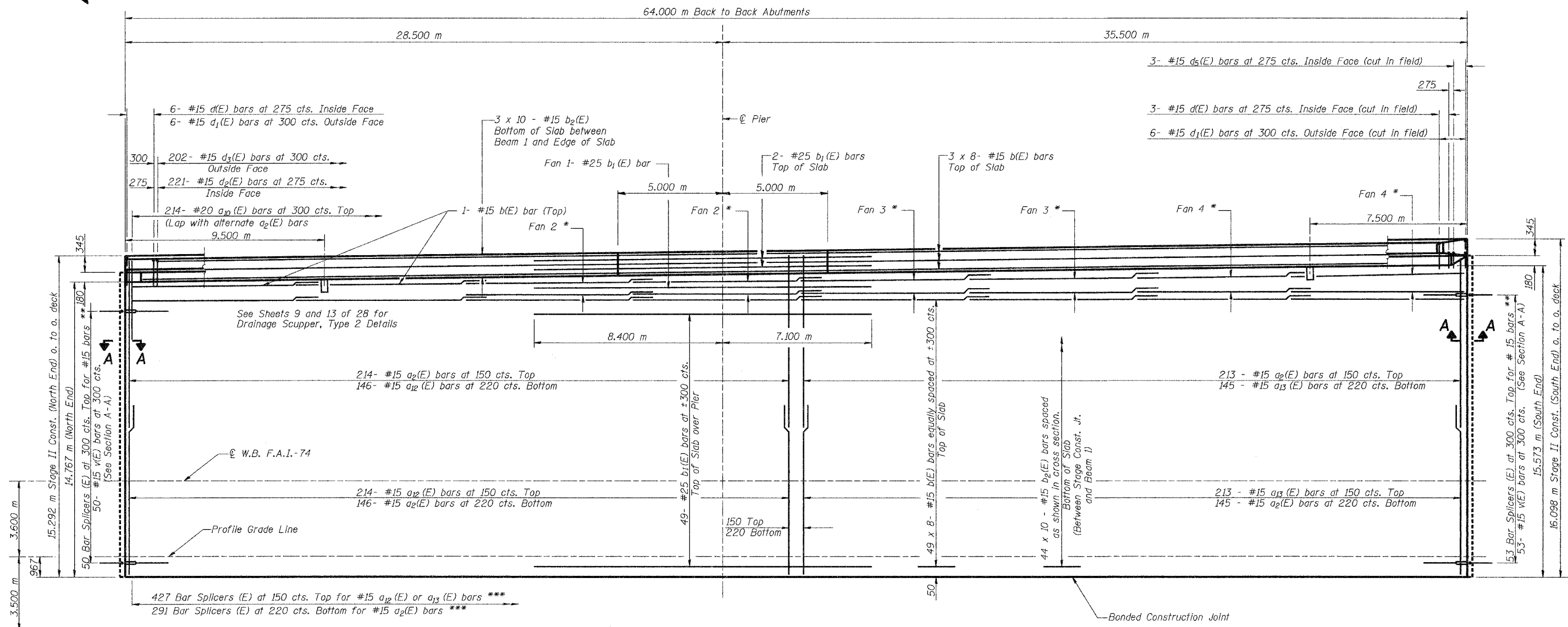
TOP OF SLAB ELEVATIONS

Date	Designed TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		6 of 28
	Checked DCS		
	Approved KWB		
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526	URS Job No. 2100001243.01	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

63201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	524
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



PLAN OF DECK - W.B. STRUCTURE

- * #15 b(E) bars (Top)
- ** See sheet 23 of 28 for Bar Splicer (E) Assembly Details
- *** This half of bar splicer was bundled together, labeled, and stored by IDOT during construction of SN 090-0162 (EB). The cost of installing these portions of the bar splicers (E) is included with Reinforcement Bars, Epoxy Coated.

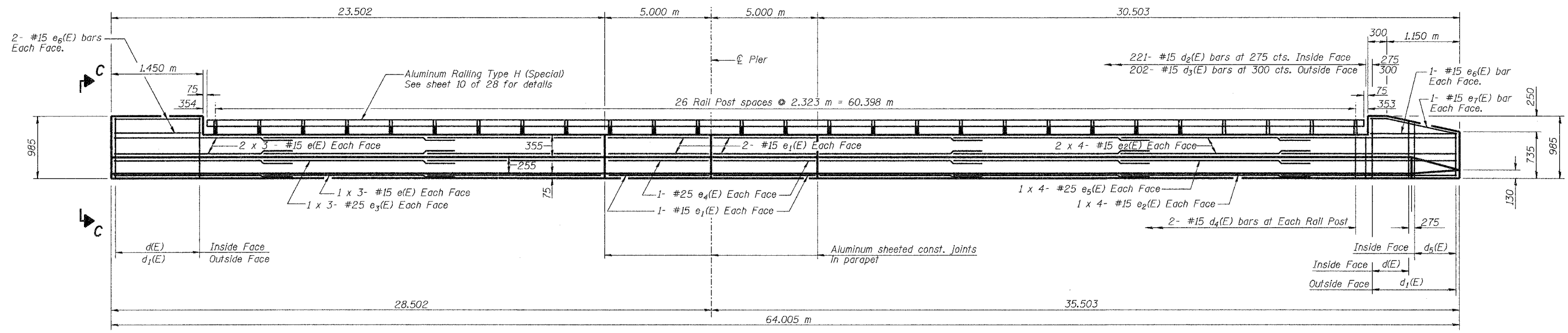
Notes: See sheet 8 & 9 of 28 for superstructure details and bill of material.
See sheet 11 of 28 for Section A-A.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 49 x 10-#15 etc. indicates 49 lines of bars with 10 lengths per line.
See sheet 9 of 28 for parapet reinforcement.
Cut longitudinal reinforcement to clear drainage scuppers.
All dimensions are in millimeters (mm) except as noted.

Min. Bar Lap
#15 - 510
#20 - 640

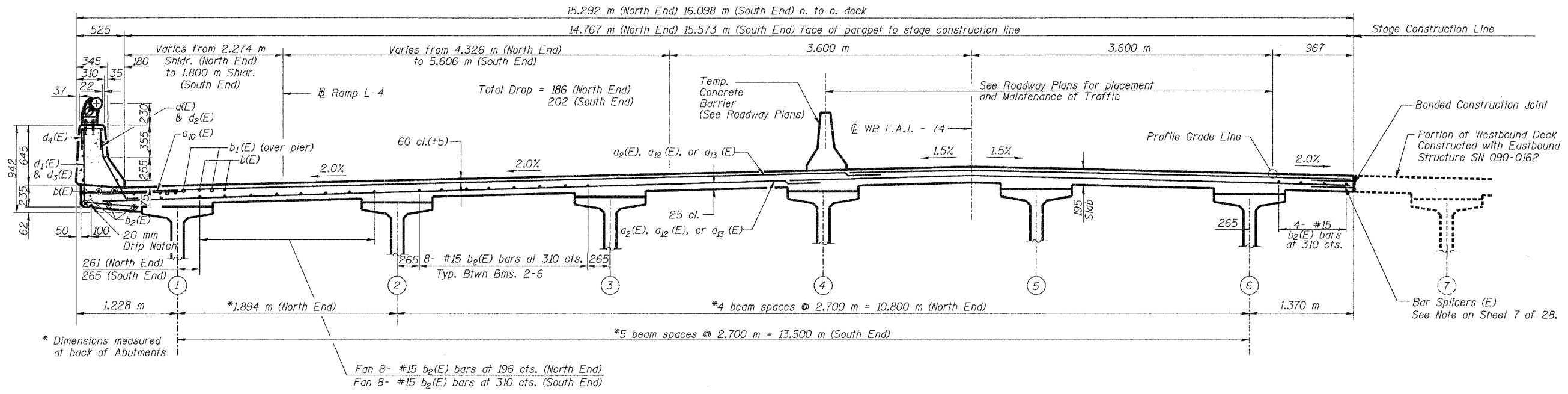
SUPERSTRUCTURE			
Date	Designed TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		7
	Checked DCS		of 28
	Approved KWB		
Prepared By:	URS		
	3040 North University Avenue Decatur, IL 62526		URS Job No. 2100001243.01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	13	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		



INSIDE ELEVATION OF EAST PARAPET
Looking East (All Dimensions along Inside Face of Parapet)



CROSS SECTION
(Looking Upstation)

Min. Bar Lap	
#15	490
#25	1.010 m

SUPERSTRUCTURE DETAILS

Date	Designed TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No. 8 of 28
Revisions	Drawn BKN		
	Checked DCS		
	Approved KWB		
Prepared By:	URS		
	3040 North University Avenue Decatur, IL 62526	URS Job No. 2100001243.01	

See Sheet 9 of 28 for View C-C

12/17/2004 8:42:17 AM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

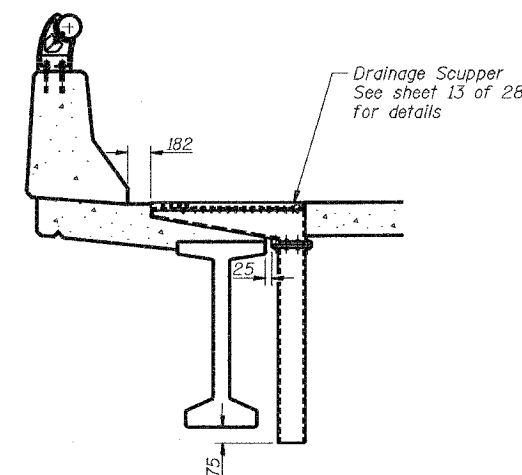
68203

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	136	526
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

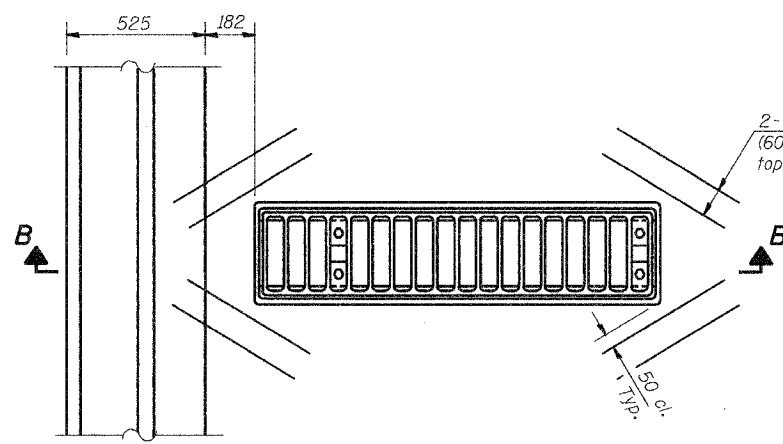
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
a ₂ (E)	718	#15	7.54	—
a ₁₀ (E)	214	#20	1.20	—
a ₁₁ (E)	16	#15	0.60	—
a ₁₂ (E)	360	#15	8.60	—
a ₁₃ (E)	358	#15	9.00	—
b(E)	436	#15	8.45	—
b ₁ (E)	52	#25	15.50	—
b ₂ (E)	470	#15	6.86	—
d(E)	9	#15	1.27	—
d ₁ (E)	12	#15	1.38	—
d ₂ (E)	221	#15	0.97	—
d ₃ (E)	202	#15	1.51	—
d ₄ (E)	54	#15	0.64	—
d ₅ (E)	3	#15	1.27	—
e(E)	18	#15	8.14	—
e ₁ (E)	12	#15	4.90	—
e ₂ (E)	24	#15	7.98	—
e ₃ (E)	6	#25	8.48	—
e ₄ (E)	4	#25	4.90	—
e ₅ (E)	8	#25	8.36	—
e ₆ (E)	6	#15	1.35	—
e ₇ (E)	4	#15	1.40	—
m(E)	4	#20	8.19	—
m ₁ (E)	4	#20	7.79	—
m ₂ (E)	8	#20	8.43	—
m ₃ (E)	8	#20	8.03	—
m ₄ (E)	3	#20	2.96	—
m ₅ (E)	3	#20	3.15	—
m ₆ (E)	21	#20	3.55	—
m ₇ (E)	6	#20	3.10	—
m ₈ (E)	3	#20	2.56	—
m ₉ (E)	2	#20	0.85	—
m ₁₀ (E)	1	#20	1.14	—
m ₁₁ (E)	17	#20	1.94	—
m ₁₂ (E)	4	#20	0.94	—
m ₁₃ (E)	2	#20	1.50	—
m ₁₄ (E)	6	#15	2.00	—
m ₁₅ (E)	24	#15	2.45	—
m ₁₆ (E)	6	#15	1.19	—
m ₁₇ (E)	6	#25	1.86	—
s(E)	105	#15	1.62	—
s ₁ (E)	71	#15	5.02	—
s ₂ (E)	31	#15	4.67	—
v(E)	103	#15	1.19	—

Reinforcement Bars Epoxy Coated	kg	37410
Concrete Superstructure	m ³	300.2
*Bridge Deck Grooving	m ²	1066
**Protective Coat	m ²	1269
Bar Splicers (E)	Each	103

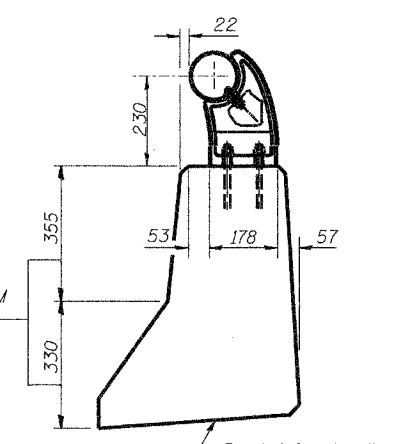


SECTION B-B THRU PARAPET

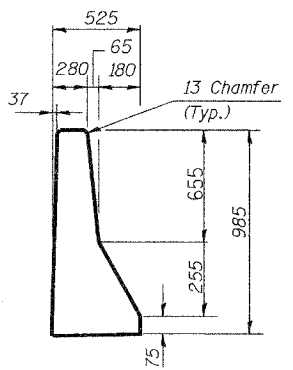


REINFORCEMENT AT DRAINAGE SCUPPER

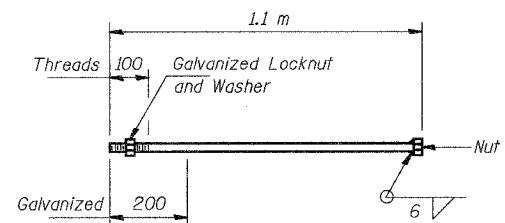
Const. Jts. at Piers
3 mm Aluminum sheet ASTM
B 209M alloy 3003-H14.
Cost Included with Concrete
Superstructure.



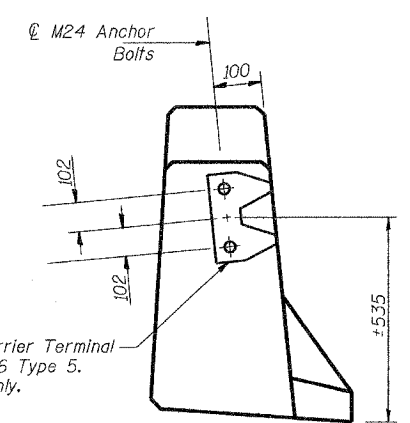
SECTION THRU PARAPET
(Showing Railing Dimensions & Joint Details)



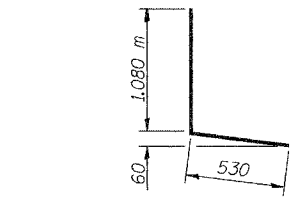
SECTION C-C
(Work this Section with
Approach Pavement Details)



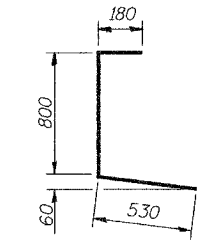
M24 ANCHOR BOLT



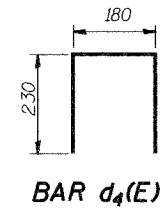
SECTION THRU PARAPET
(Showing Traffic Barrier System at exit end)



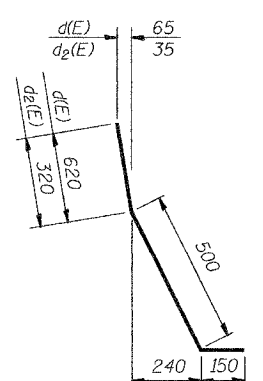
BAR d₁(E)



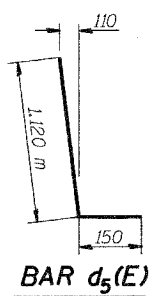
BAR d₃(E)



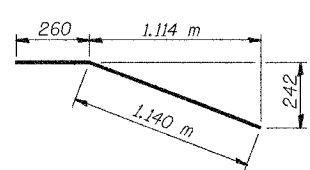
BAR d₄(E)



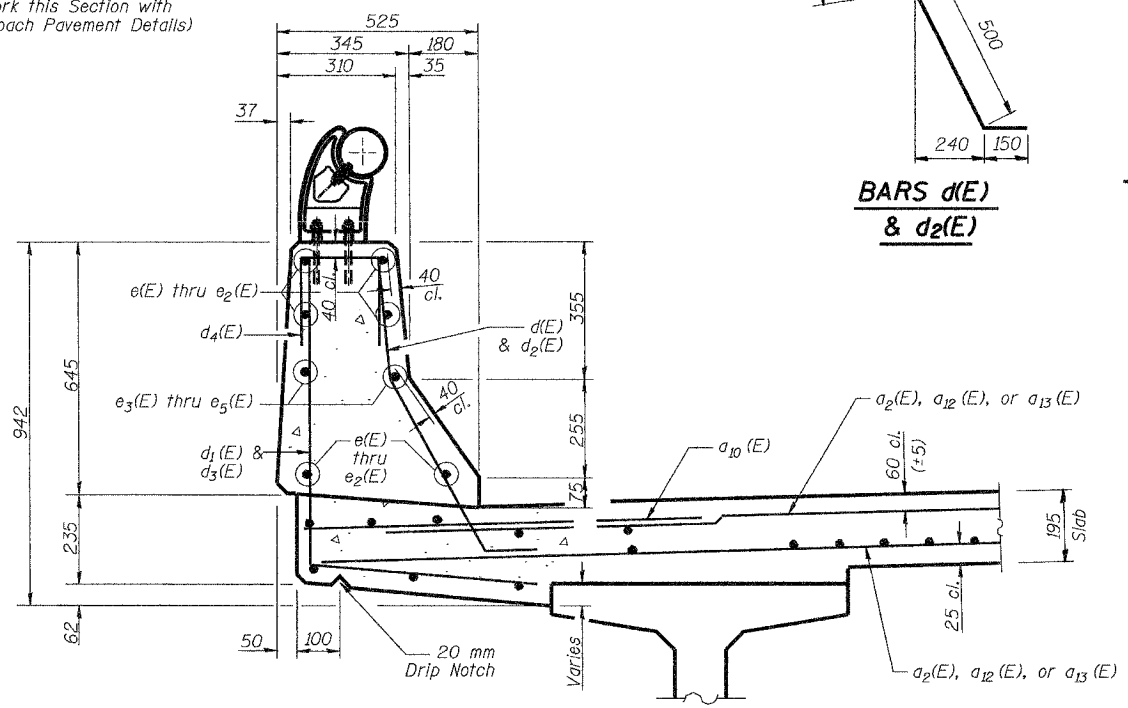
**BARS d(E)
& d₂(E)**



BAR d₅(E)



BAR e₇(E)

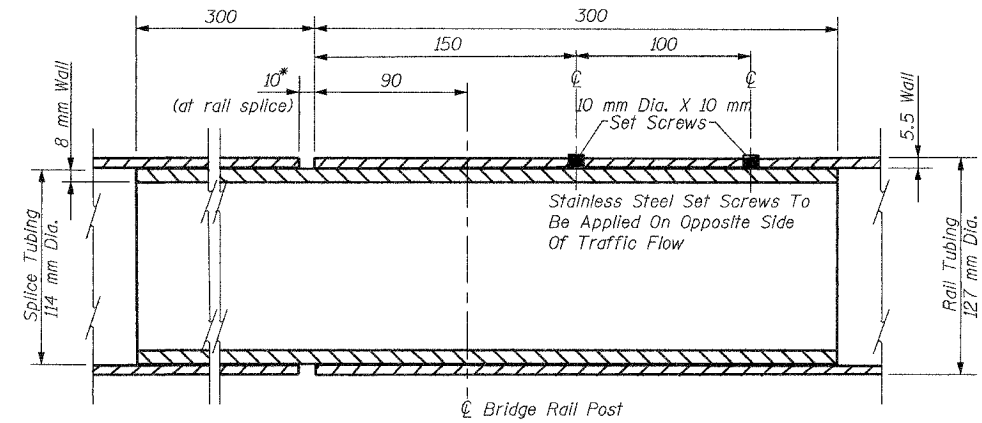
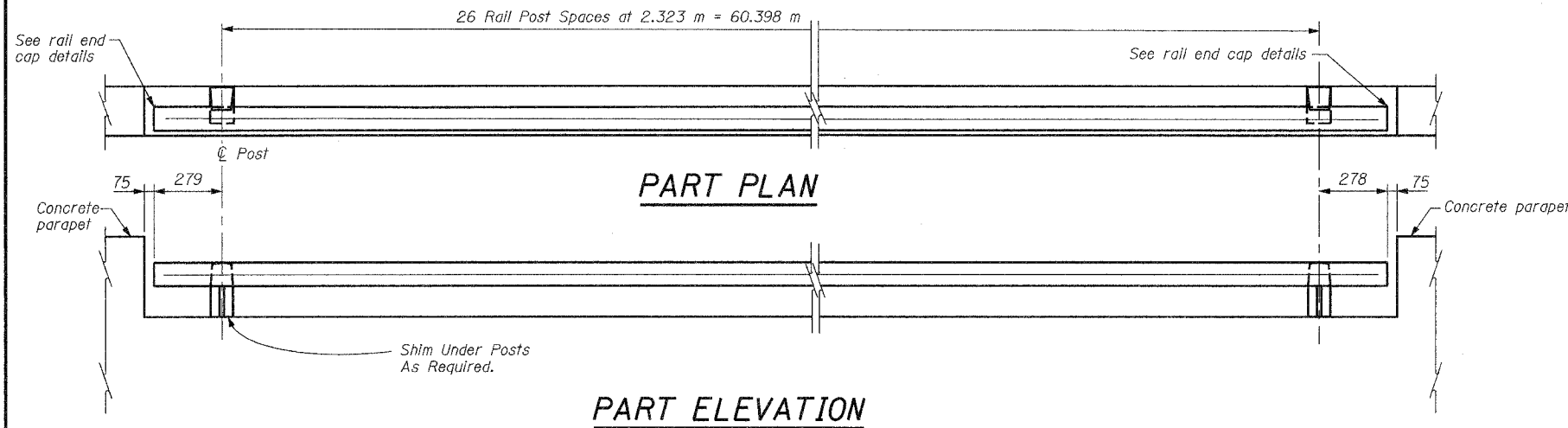


SECTION THRU PARAPET
(Showing Reinforcement)

Notes:
All dimensions are in millimeters (mm) except as noted.
Reinforcement bars designated (E) shall be epoxy coated.
*Quantity includes portion of Westbound Deck built under previous contract.
**Quantity includes deck, top and inside face of parapet, and inside face of median on westbound side.

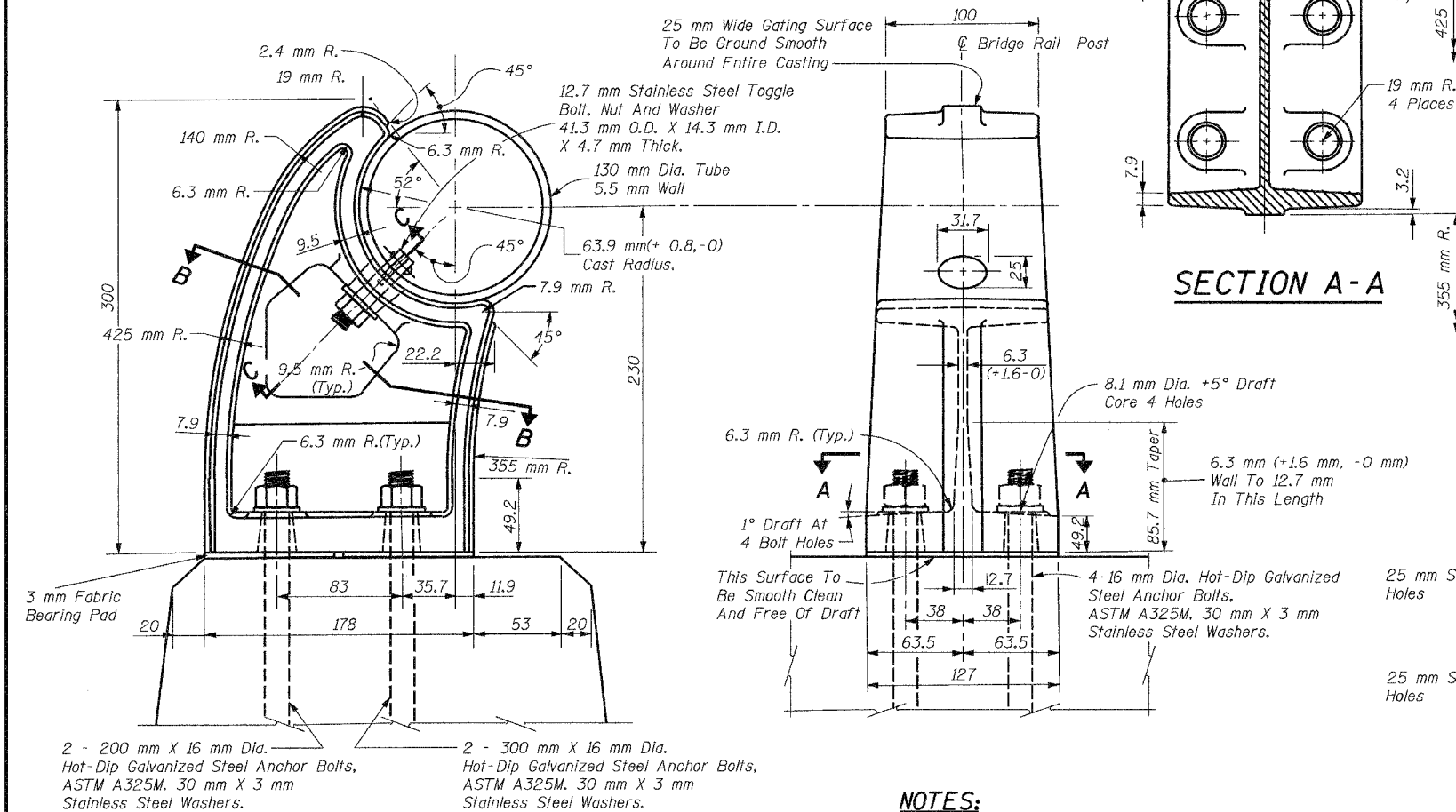
SUPERSTRUCTURE DETAILS			
Date	Designed TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No. 9 of 28
Revisions	Drawn BKN		
	Checked DCS		
	Approved KWB		
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526	URS Job No. 2100001243.01	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	527
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

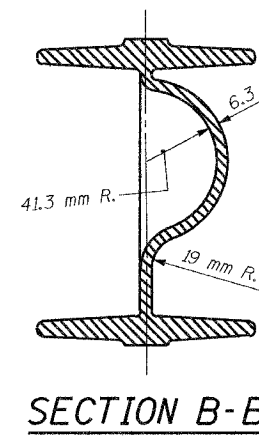


*At bridge expansion joints, match opening of joint in deck.

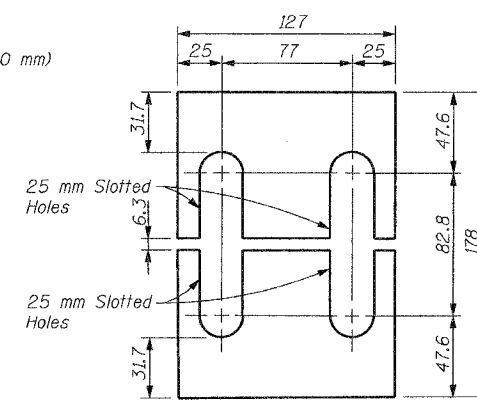
INSIDE SPLICE DETAIL



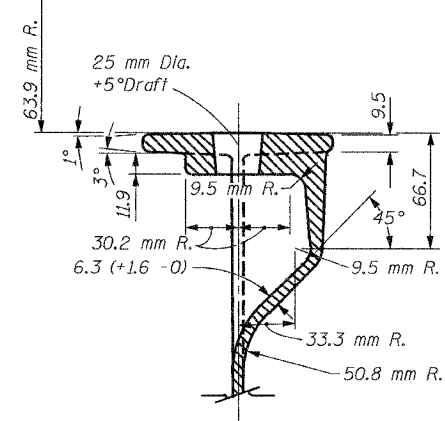
RAILING DETAILS



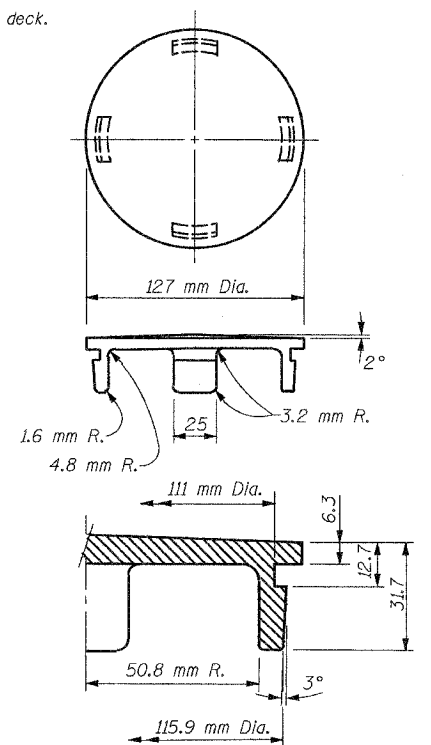
SECTION B-B



SHIM DETAIL



SECTION C-C



RAIL END CAP DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type H (Special)	m	61.0

NOTES:

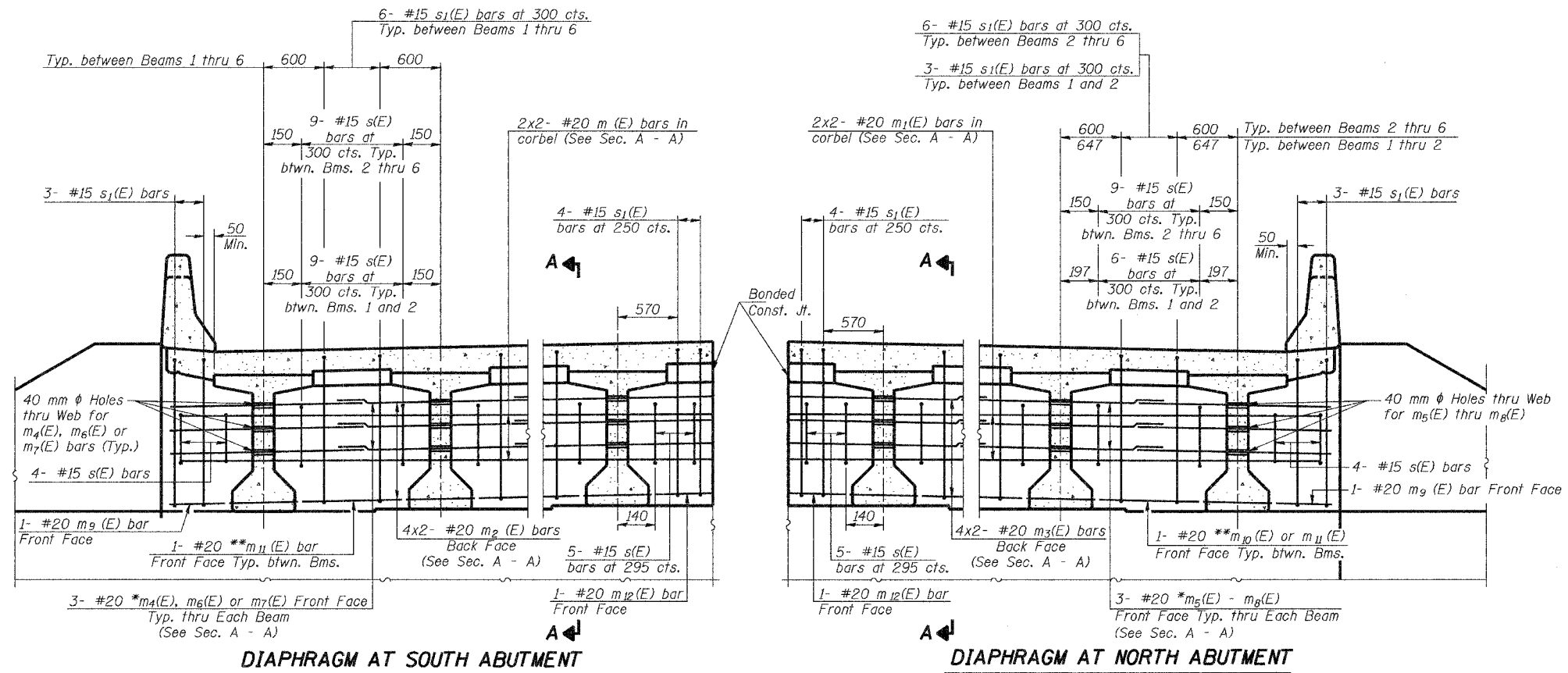
- Railing to conform to vertical and horizontal alignment.
- Joint to be placed 7500 mm center to center, max.
- Slip joint to be placed in panels to match expansion joints in deck.
- Design weight: 9.3 kg, per meter.
- Unless otherwise specified all draft to be 3°.
- All unmarked Radius to be 3 mm R.
- After fabrication, exposed surfaces of aluminum shall be given an anodic oxide coating, dyed black, conforming to the requirements of ASTM designation: B 580, Type B, Architectural Class I.

ALUMINUM RAILING, TYPE H (SPECIAL) DETAILS

Date	Designed	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No. 10 of 28
Revisions	Drawn BKN		
	Checked		
	Approved KWB		
Prepared By:	URS	3040 North University Avenue Decatur, IL 62526	URS Job No. 2100001243.01

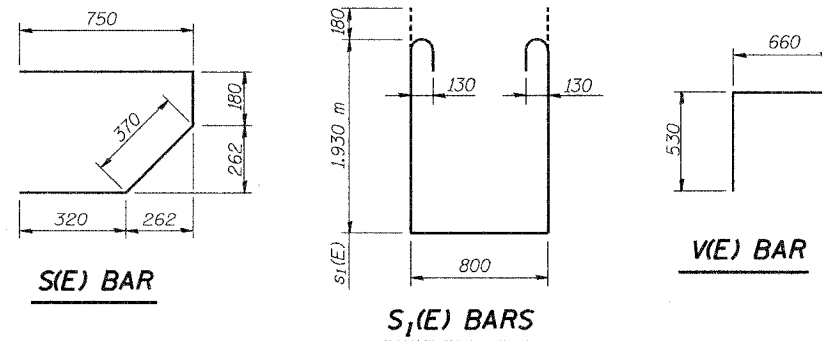
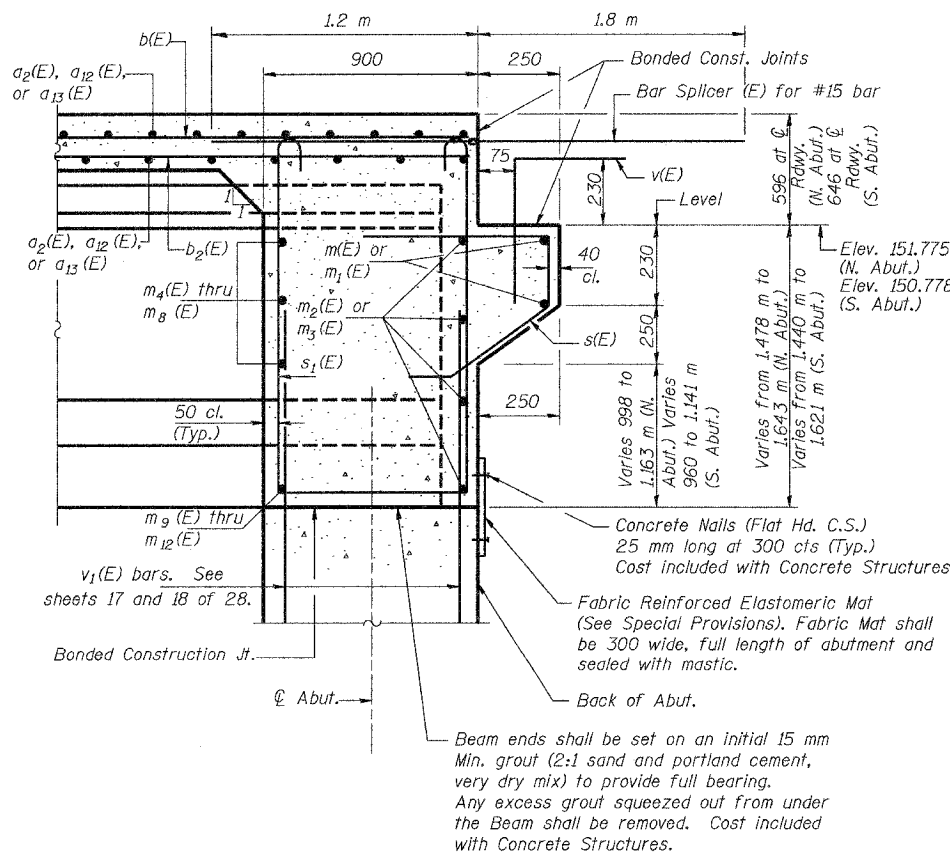
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	508
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		



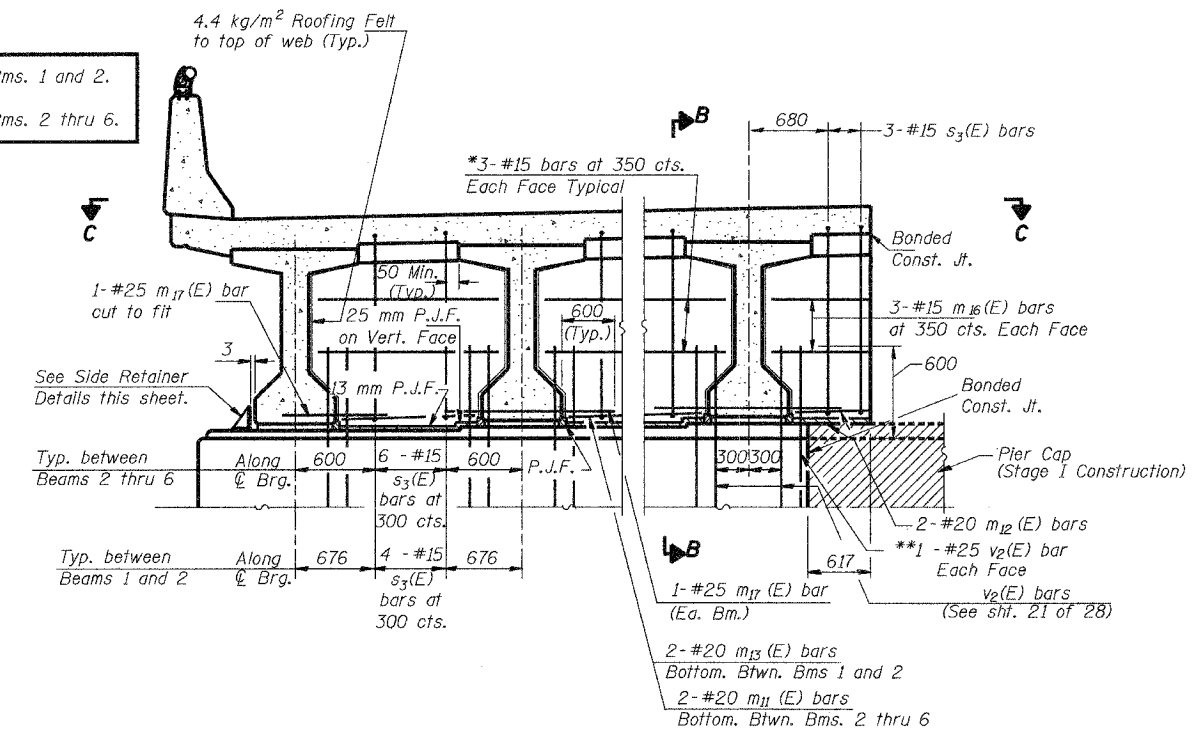
Location	South Abutment		North Abutment	
	Bar * thru Beams	Bar ** between Beams	Bar * thru Beams	Bar ** between Beams
Beam 1	$m_4(E)$	$m_{11}(E)$	$m_8(E)$	$m_{10}(E)$
Beam 2	$m_6(E)$	$m_{11}(E)$	$m_5(E)$	$m_{11}(E)$
Beam 3	$m_6(E)$	$m_{11}(E)$	$m_6(E)$	$m_{11}(E)$
Beam 4 thru 5	$m_6(E)$	$m_{11}(E)$	$m_6(E)$	$m_{11}(E)$
Beam 6	$m_7(E)$	$m_{11}(E)$	$m_7(E)$	$m_{11}(E)$

Notes: Reinforcement bars in diaphragm are billed with superstructure on sheet 9 of 28.
Concrete in diaphragm is included with Concrete Superstructure on sheet 9 of 28.
The $s(E)$ and $s_1(E)$ bars shall be placed parallel to the Beams. Spacing for these bars shall be at right angles to the Beams.
All dimensions are in millimeters (mm) except as noted.
Bars indicated thus 3 x 3-#20 etc. indicates 3 lines of bars with 3 lengths per line.

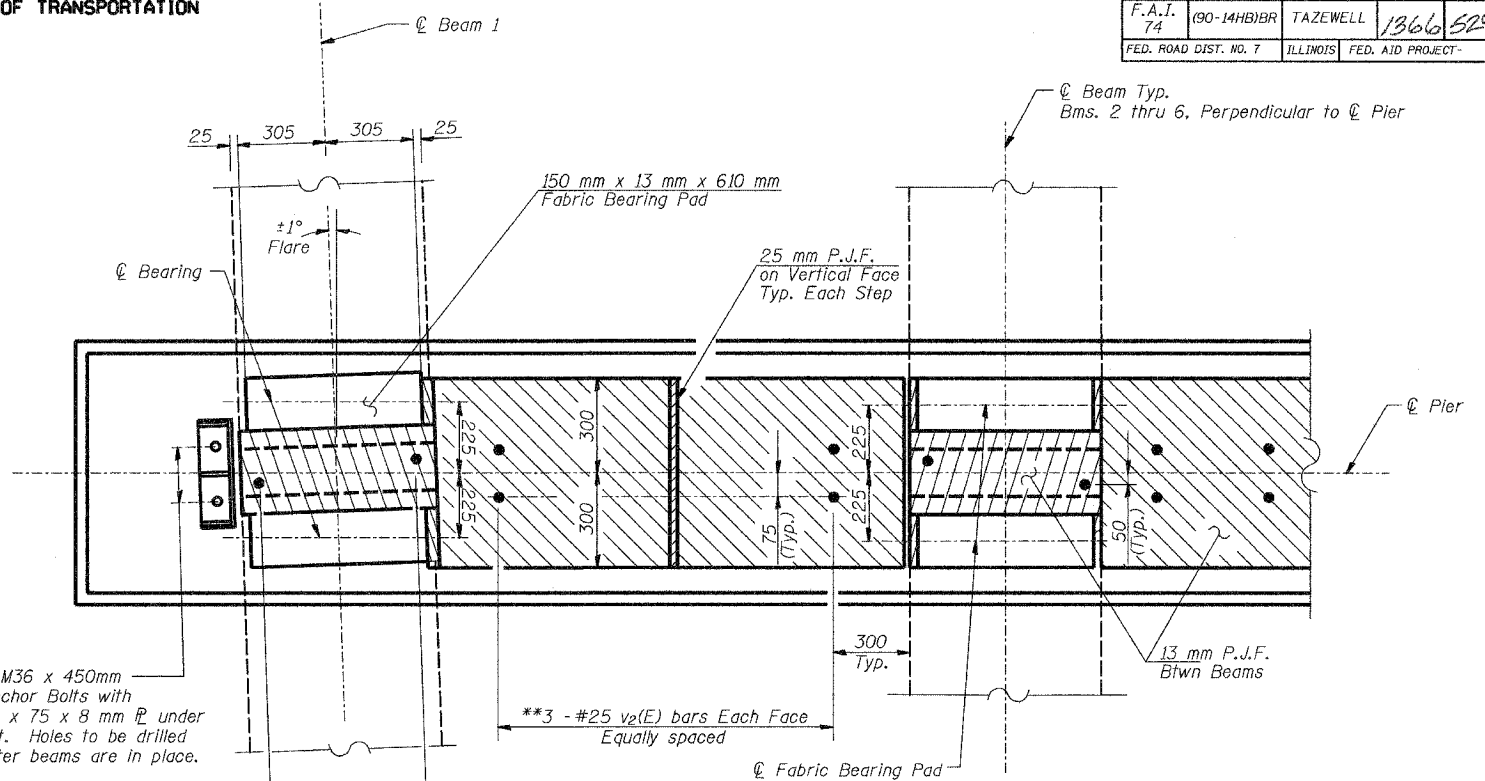


MIN. BAR LAP
#20 bar = 850

Date	Designed TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		11
	Checked DCS		
	Approved KWB		
Prepared By:	URS		
			URS Job No. 2100001243.01



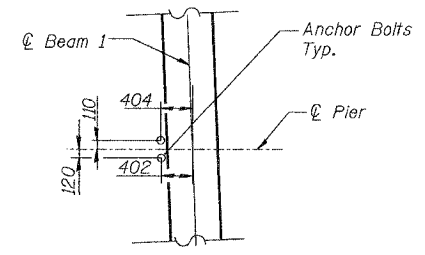
DIAPHRAGM AT PIER
(Fixed)



SECTION C-C AT PIER
(Fixed)

**Quantity and bar dimensions included with Pier Bill of Materials

**2 - #25 v₂(E) at 600 cts. Typ. at Beam Ends



ANCHOR BOLT LOCATION

Notes:

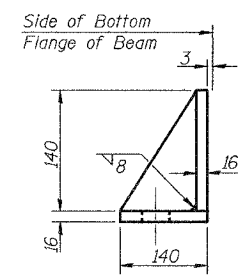
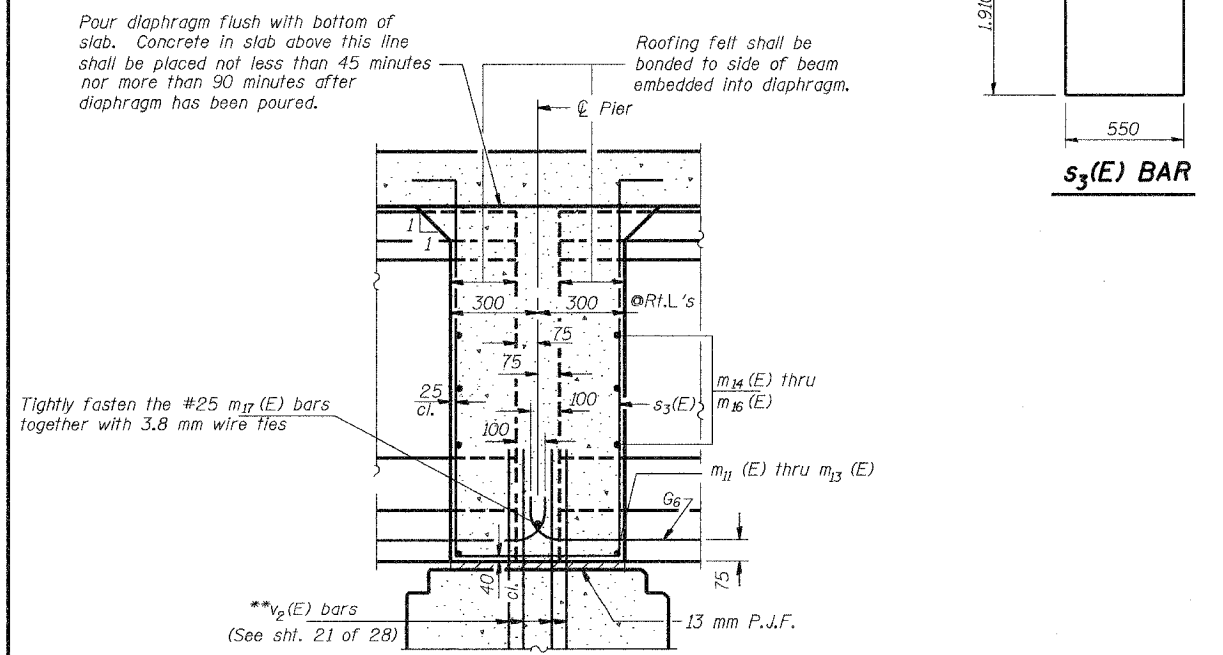
Reinforcement bars in diaphragm are billed with superstructure on sheet 9 of 28.

Concrete in diaphragm is included with Concrete Superstructure on sheet 9 of 28.

The s₃(E) bars shall be placed parallel to the Beams. Spacing for these bars shall be at right angles to the beams.

Cost of 4.4 kg/m² roofing felt is included with Concrete Superstructure. All dimensions are in millimeters (mm) except as noted.

The side retainer shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Cost of side retainer and anchor bolts shall be included with Concrete Structures. See Sheet 22 of 28 for anchor bolt details.



SIDE RETAINER

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

MIN. BAR LAP
#20 bar = 850

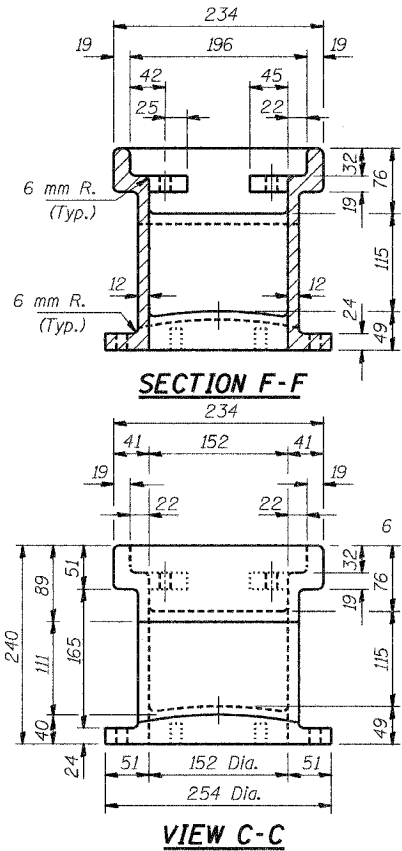
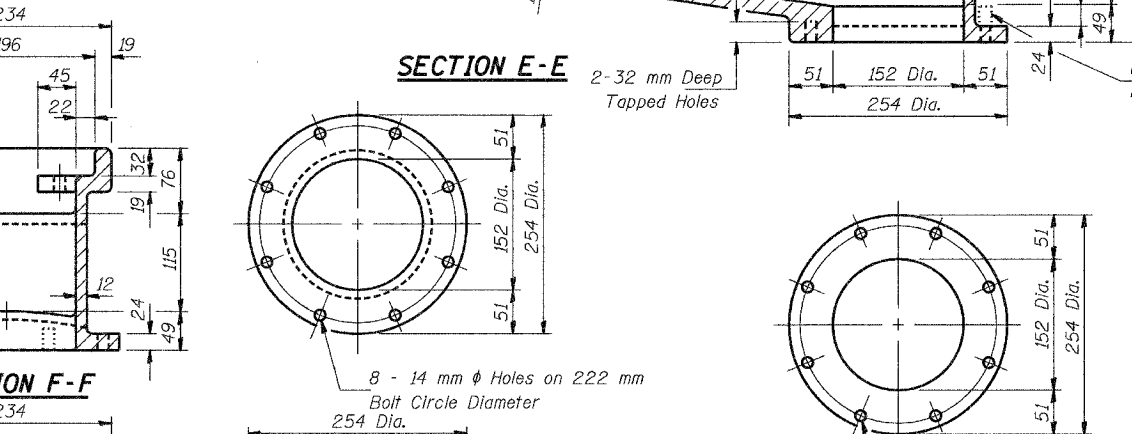
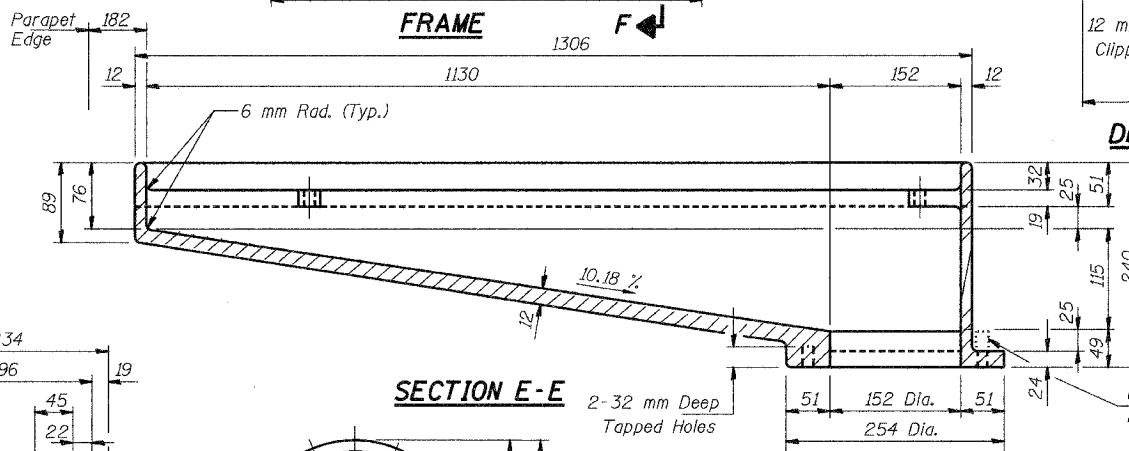
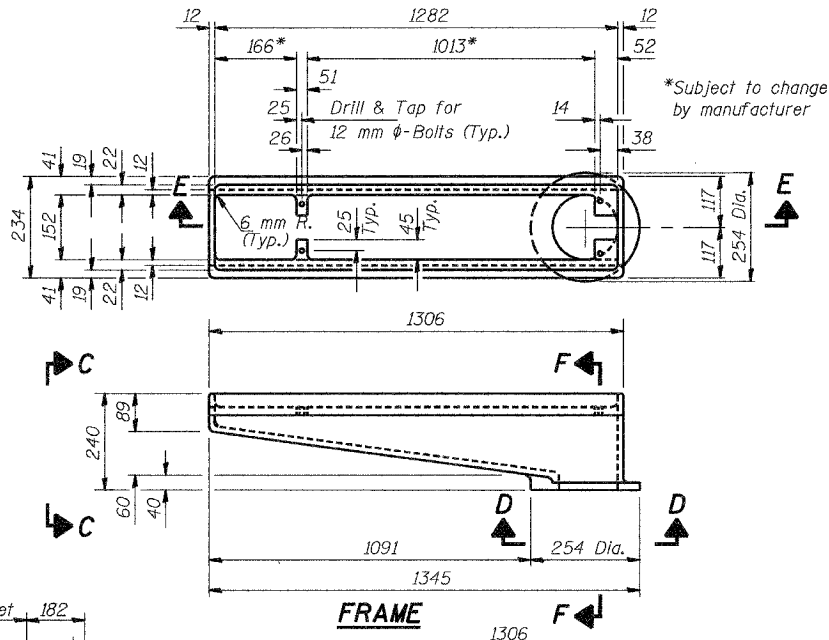
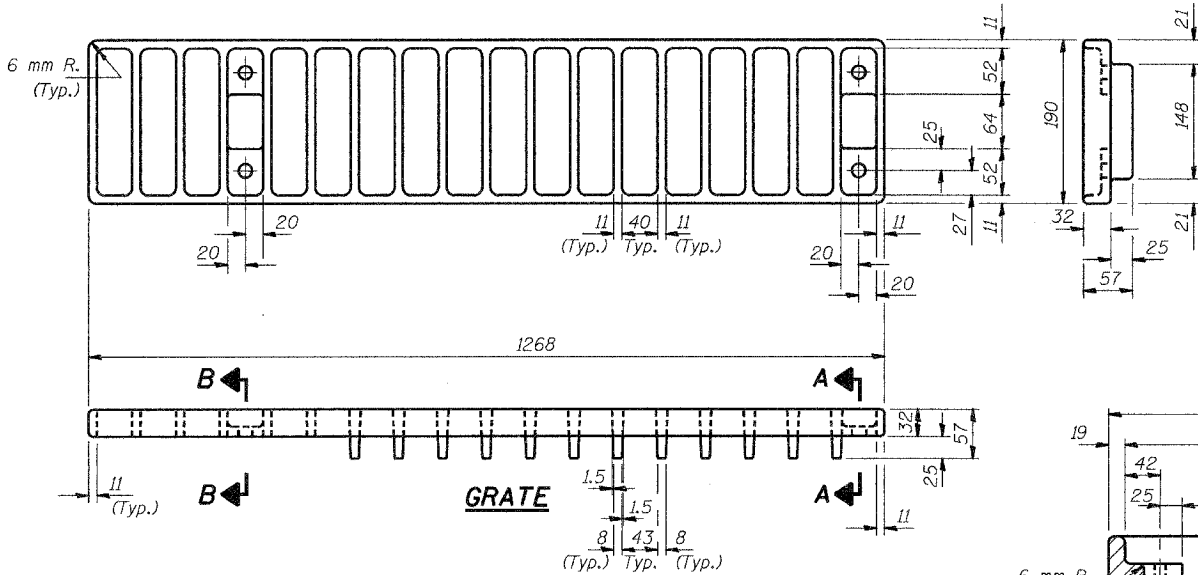
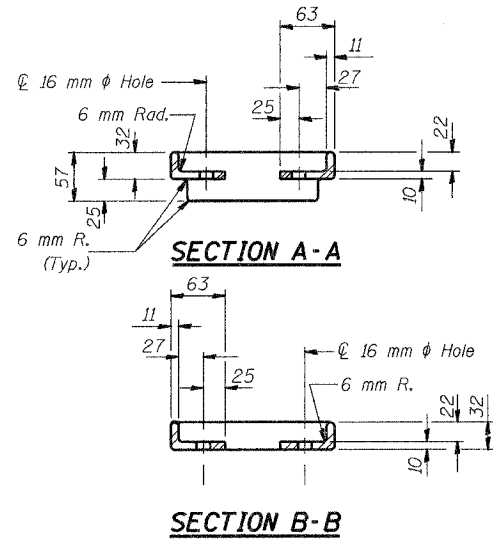
Note: Horizontal dimensions for Section B-B are along \bar{C} of Beam unless otherwise noted.

SECTION B-B AT PIER
(Fixed)

DIAPHRAGM DETAILS AT PIER			
Date	Designed TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		12
	Checked DCS		
	Approved KWB		
Prepared By: URS	3040 North University Avenue Decatur, IL 62526		URS Job No. 2100001243.01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	530
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	



Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 30. Bolts and washers shall conform to the requirements of ASTM A 307. All bolts and washers shall be galvanized according to AASHTO M 232. As an alternate bolts and washers may be stainless steel. 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 2. The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers. All dimensions are in millimeters (mm) except as noted.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers, Type 2	Each	2

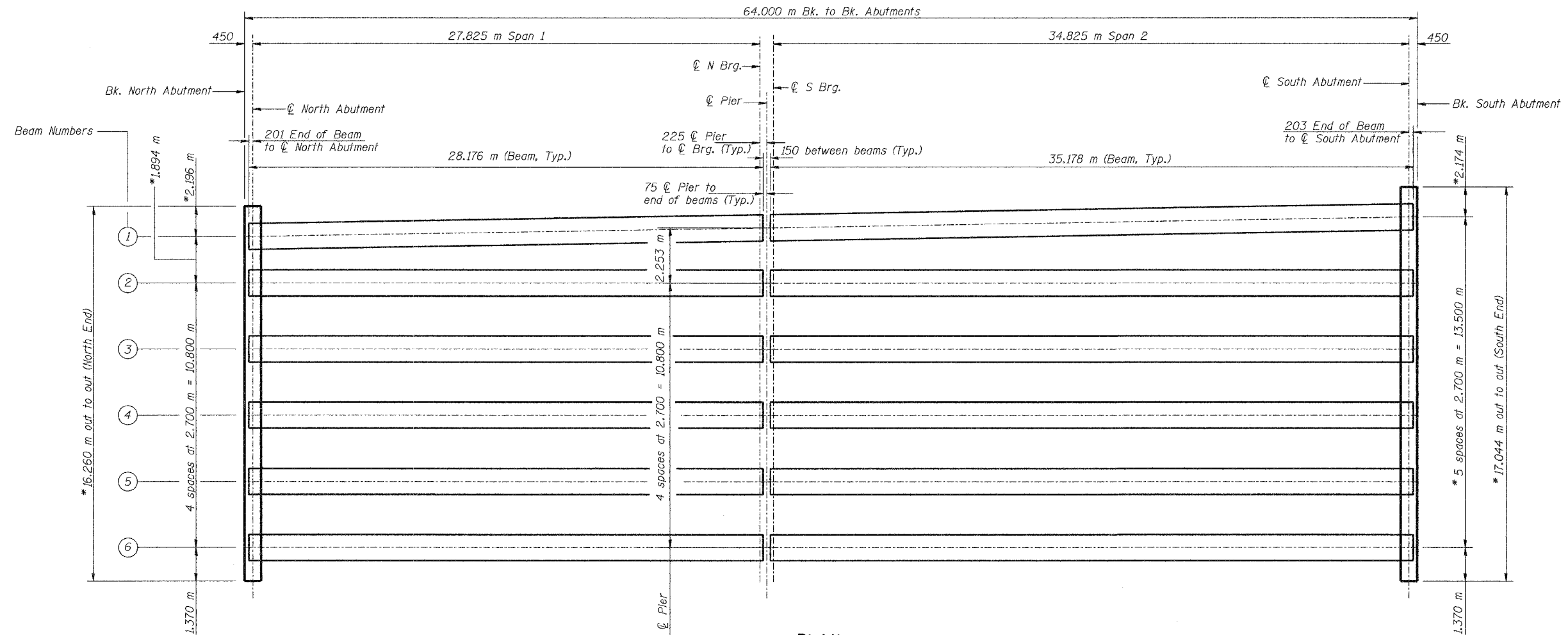
DESIGNED	
CHECKED	
DRAWN	VH
CHECKED	

DRAINAGE SCUPPER, TYPE 2 DETAILS

Date	Designed	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		13
	Checked		
	Approved KWB		
Prepared By: URS			
		URS Job No. 2100001243.01	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

68201				
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	136	53
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



PLAN

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

* Dimensions measured at back of Abutments

I and I' are the moment of Inertia and composite moment of inertia of the beam section.

S_b and S_b' are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.

S_t and S_t' are the non-composite and composite section modulus for the top fiber of the prestressed beam.

M_D is the moment due to dead loads on the non-composite prestressed beam. It is conservatively calculated at 0.5 of the span.

M_{DC} is the moment due to dead loads on the composite section.

M_L is the moment due to live load on the composite section.

M (Imp) is the moment due to live load impact on the composite section.

INTERIOR BEAM MOMENT TABLE

	0.4 Sp. #1	0.5 Sp. #1	Pier 1	0.5 Sp. #2	0.6 Sp. #2
I	227218	227218		227218	227218
I'	447601	447601		447601	447601
S_b	244426	244426		244426	244426
S_b'	325785	325785		325785	325785
S_t	252689	252689		252689	252689
S_t'	983988	983988		983988	983988
M_D	25.14	25.14		25.14	25.14
M_{DC}	2328	2425		3801	3649
M_L	7.71	7.71	7.71	7.71	7.71
M_{DC}	330	261	994	686	738
M_L	1244	1225	1363	1510	1551
M (Imp)	287	283	299	315	324

INTERIOR BEAM REACTION TABLE

	N. Abut.	Pier 1	S. Abut.
R_D	349	786	437
R_{DC}	73	307	107
R_L	232	393	231
Imp.	53	86	48
R (Total)	707	1572	823

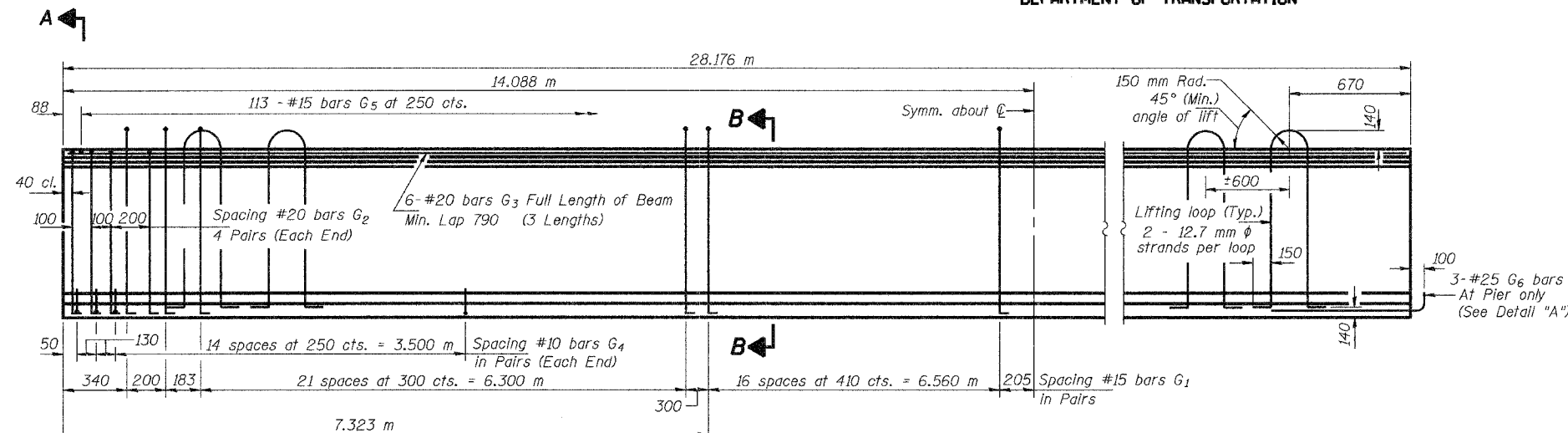
FRAMING PLAN

Date	Designed TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		14
	Checked DCS		of 28
	Approved KWB		
Prepared By:	URS		
	3040 North University Avenue	URS Job No.	
	Decatur, IL 62526	2100001243.01	

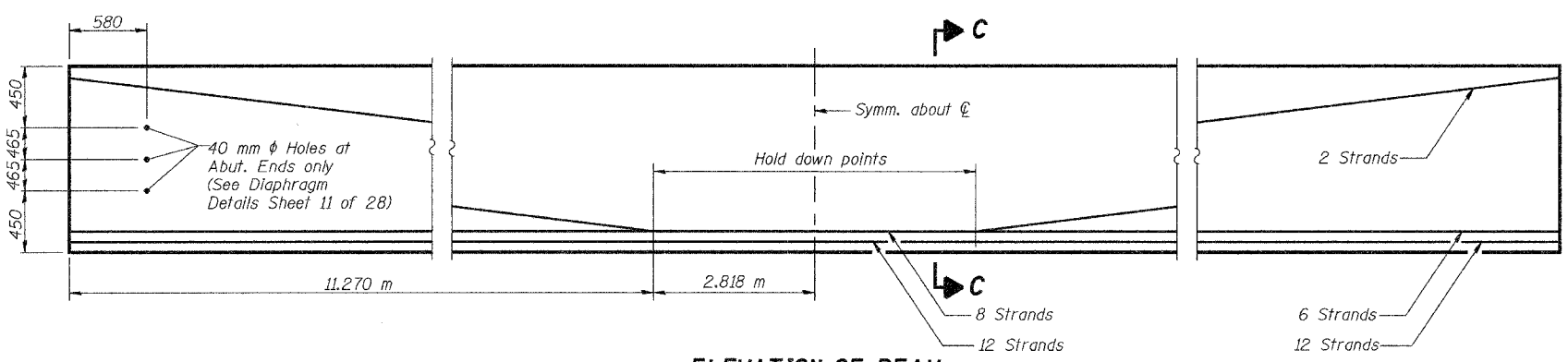
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

68201

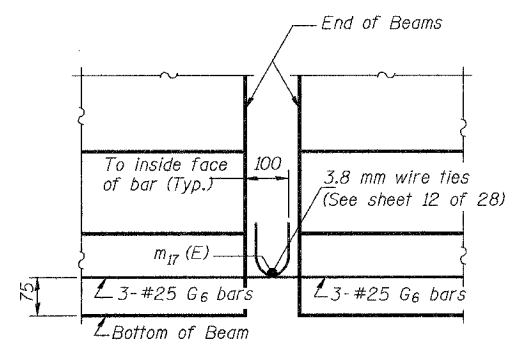
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	532
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)

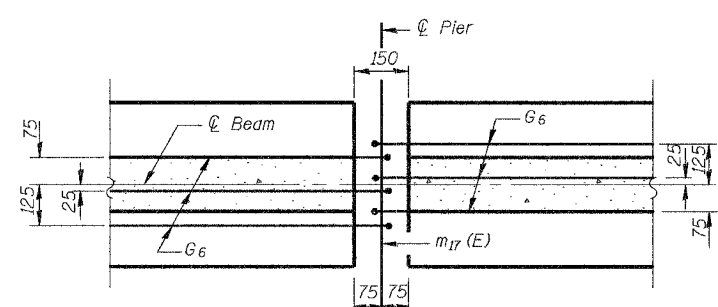


ELEVATION OF BEAM
(Showing Prestressing Steel)



ELEVATION

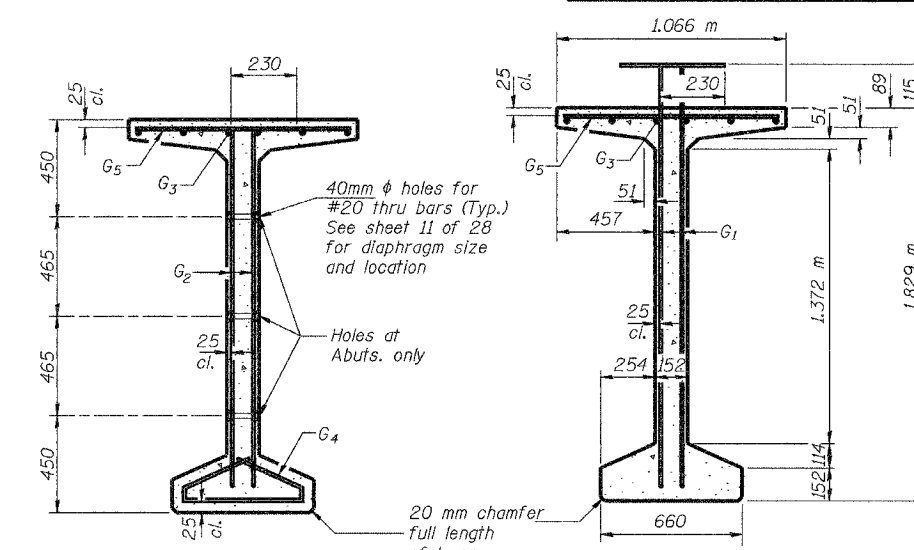
DETAIL "A"



PLAN

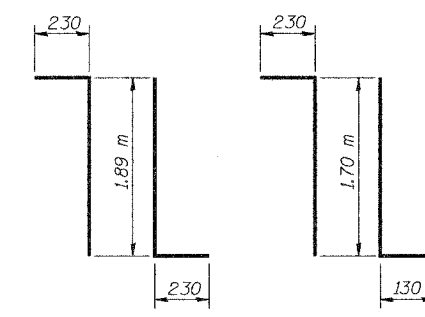
NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete Bulb T-Beams shall be included in the contract unit price per meter of Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams, 1829 mm.
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand ($F_u = 1860$ MPa).
The nominal diameter shall be 12.7 mm and the nominal cross-sectional area shall be 98.71 mm².
Non-prestressing steel shall conform to AASHTO designation M-31M or M-322M, Grade 400.
Lifting loops shall be 2 - 12.7 mm ϕ strands ($F_u = 1860$ MPa), as shown. Required release strength, f'_{ci} , shall be 35 MPa.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.



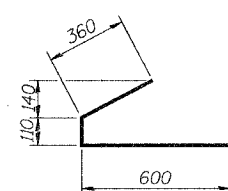
SECTION A-A

SECTION B-B

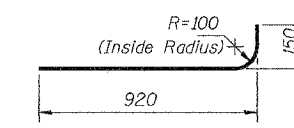


BAR G1

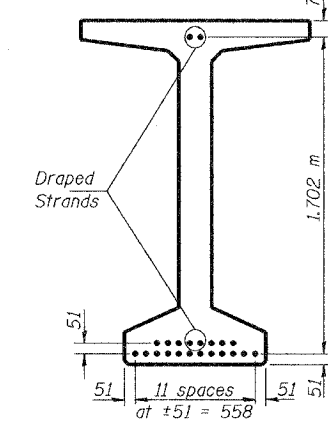
BAR G2



BAR G4



BAR G6



SECTION C-C

*** BAR LIST**

Bar	No.	Size	Length (m)	Shape
G1	164	#15	2.35	TL
G2	16	#20	2.06	TL
G3	18	#20	9.90	TL
G4	68	#10	1.07	TL
G5	113	#15	1.01	TL
G6	3	#25	1.07	TL

* For one beam only.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams, 1829 mm	m	169.1

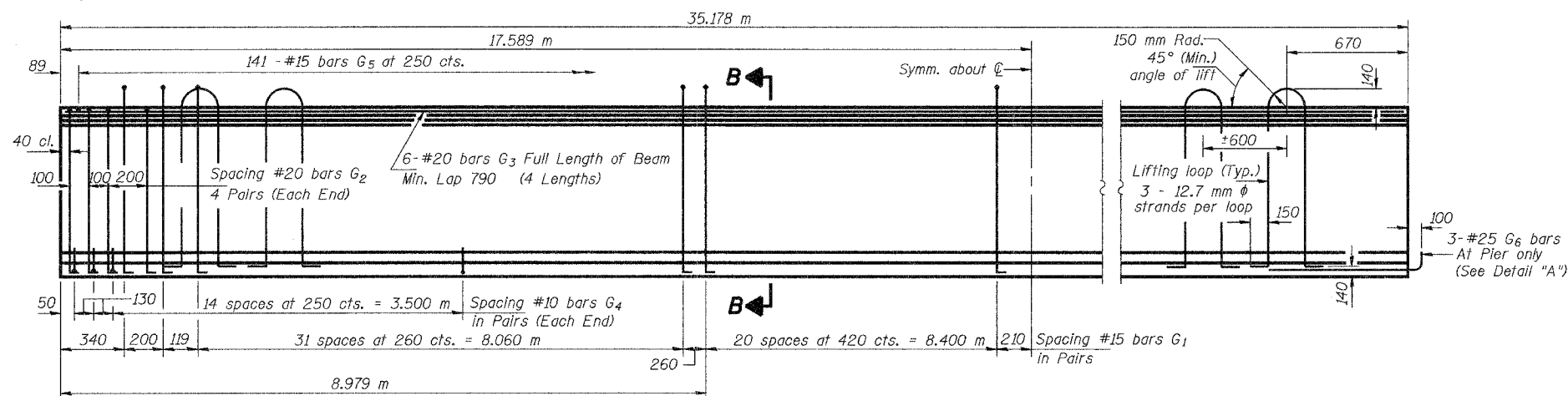
BEAM DETAILS - SPAN 1

Date	Designed ACW	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		15
	Checked ACW		
	Approved KWB		
Prepared By:	URS		

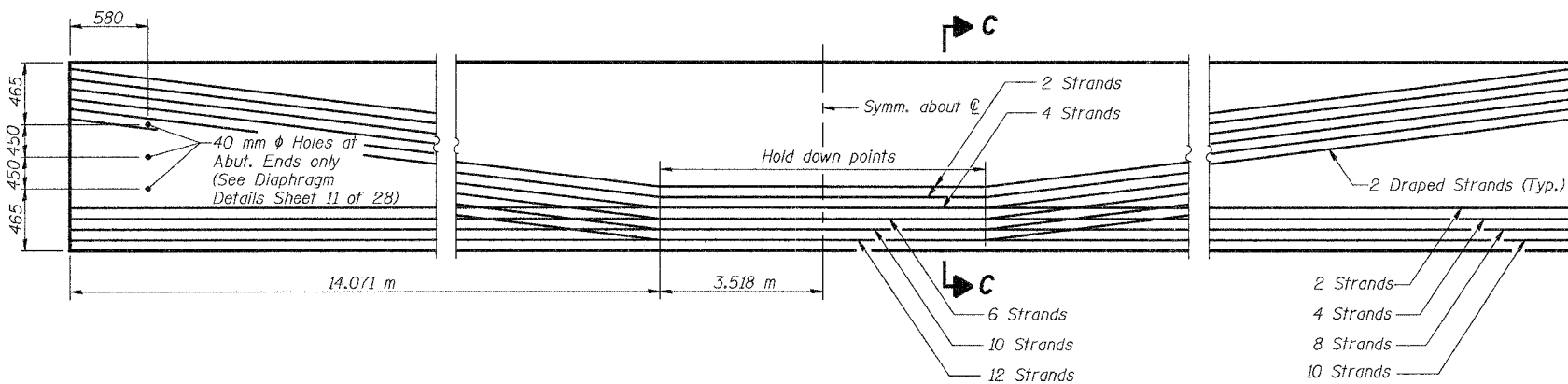
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

63201

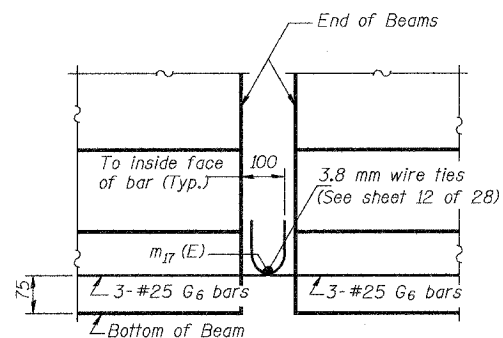
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	533
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	



ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)

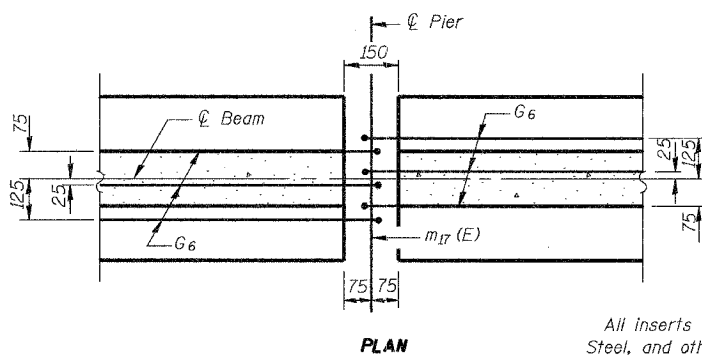


ELEVATION OF BEAM
(Showing Prestressing Steel)



ELEVATION

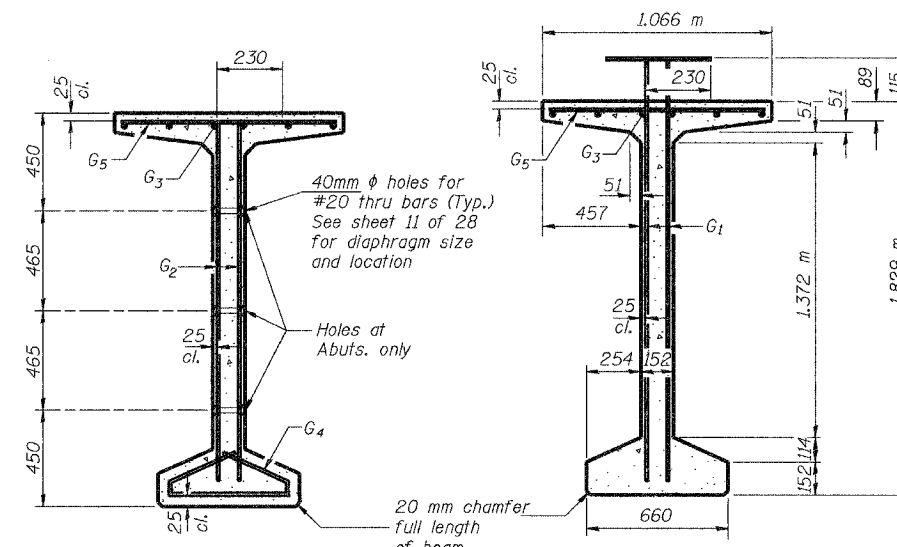
DETAIL "A"



PLAN

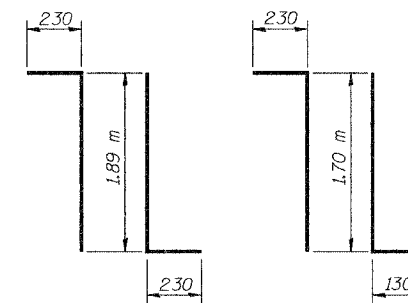
NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete Bulb T-Beams shall be included in the contract unit price per meter of Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams, 1829 mm.
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand ($F_u = 1860$ MPa).
The nominal diameter shall be 12.7 mm and the nominal cross-sectional area shall be 98.71 mm^2 .
Non-prestressing steel shall conform to AASHTO designation M-31M or M-322M, Grade 400.
Lifting loops shall be 3 - 12.7 mm ϕ strands ($F_u = 1860$ MPa), as shown. Required release strength, f'_{ci} , shall be 35 MPa.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.



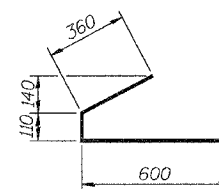
SECTION A-A

SECTION B-B

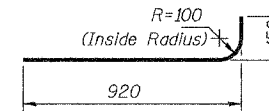


BAR G1

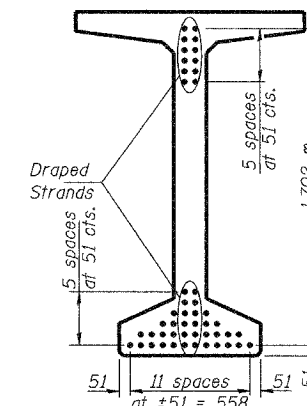
BAR G2



BAR G4



BAR G6



SECTION C-C

*** BAR LIST**

Bar	No.	Size	Length (m)	Shape
G1	220	#15	2.35	TL
G2	16	#20	2.06	TL
G3	24	#20	9.37	—
G4	68	#10	1.07	—
G5	141	#15	1.01	—
G6	3	#25	1.07	—

* For one beam only.

BILL OF MATERIAL

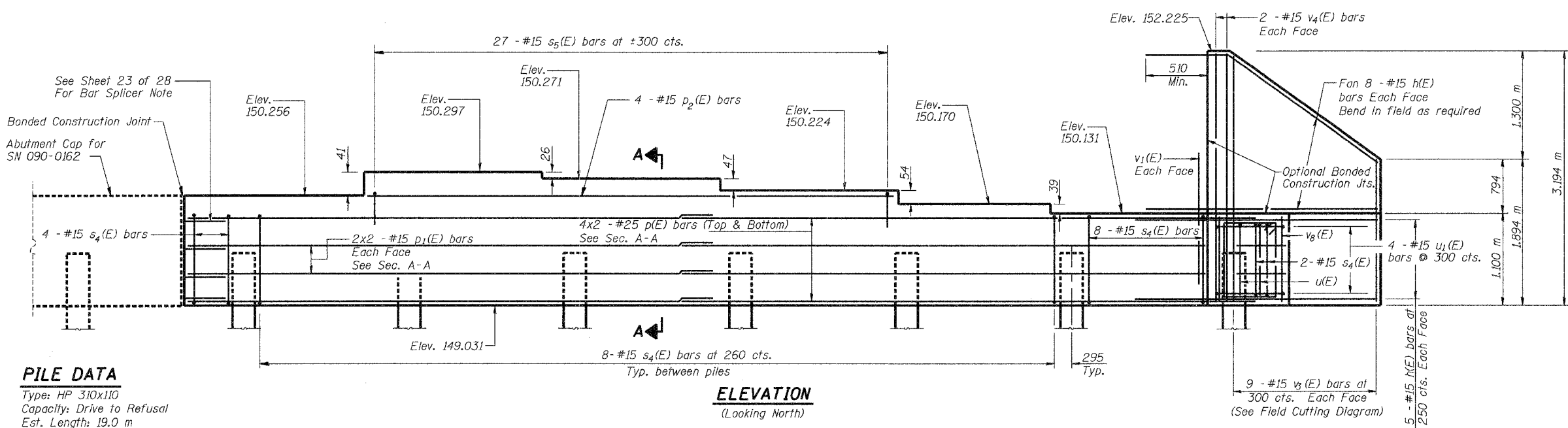
Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams, 1829 mm	m	211.1

BEAM DETAILS - SPAN 2

Date	Designed ACW	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No. 16 of 28
Revisions	Drawn BKN		
	Checked ACW		
	Approved KWB		
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526	URS Job No. 2100001243.01	

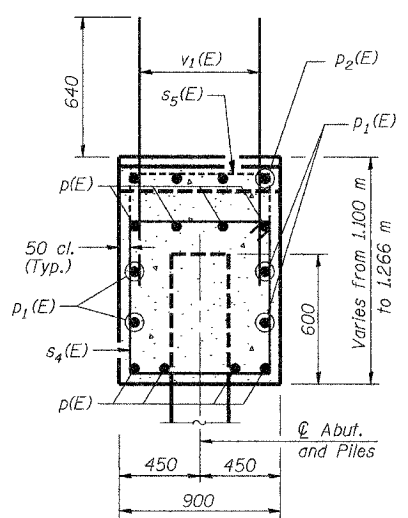
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

00201				
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	534
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	



PILE DATA
Type: HP 310x110
Capacity: Drive to Refusal
Est. Length: 19.0 m
No. Required: 7

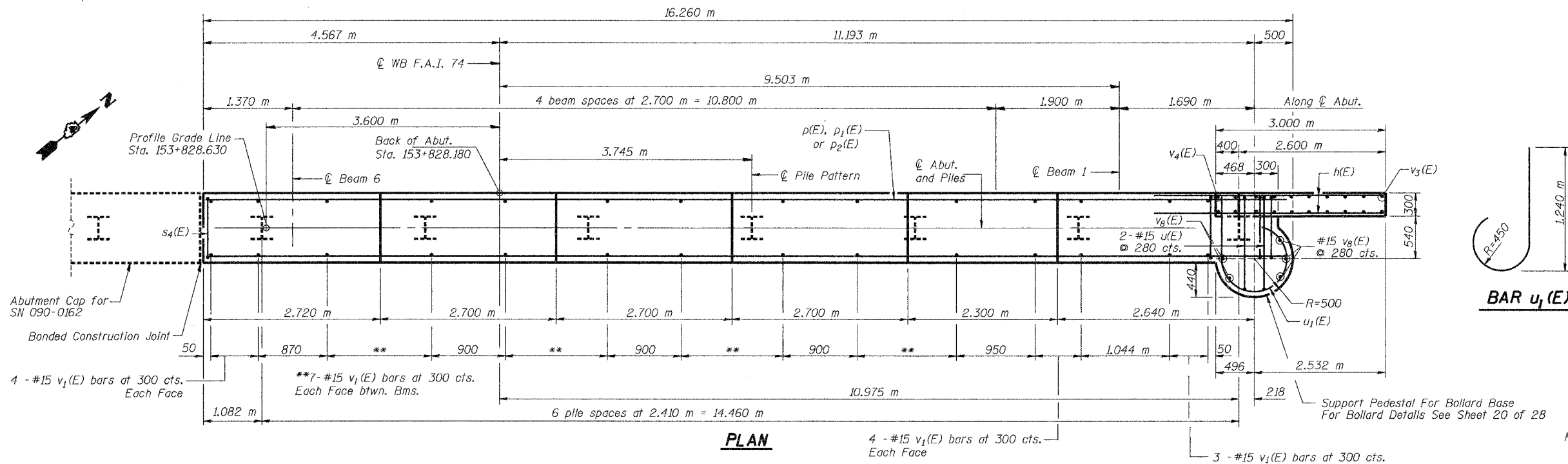
ELEVATION
(Looking North)



SEC. A-A

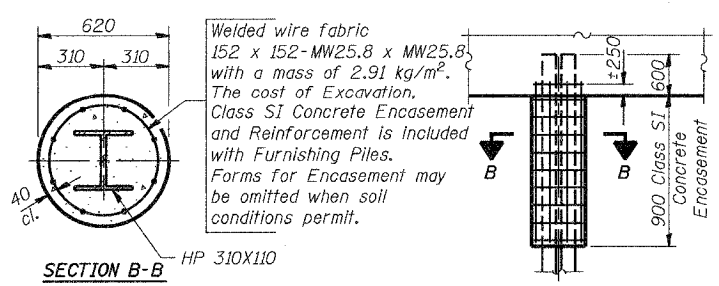
**NORTH ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length (m)	Shape
h(E)	26	#15	3.77	—
p(E)	16	#25	8.82	—
p1(E)	8	#15	8.36	—
p2(E)	4	#15	8.00	—
s4(E)	54	#15	3.88	□
s5(E)	27	#15	1.30	□
u(E)	2	#15	3.22	—
u1(E)	4	#15	2.77	—
v1(E)	78	#15	1.28	—
v3(E)	9	#15	4.88	—
v4(E)	4	#15	3.09	—
v8(E)	5	#15	1.00	—
Reinforcement Bars, Epoxy Coated			kg	1530
Concrete Structures			m ³	19.9
Steel Piles HP 310x110			m	133
Structure Excavation			m ³	170

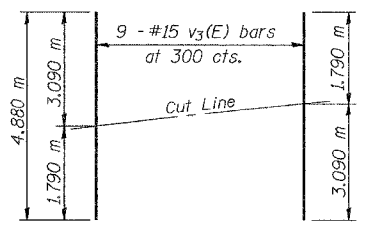


PLAN

BAR u1(E)

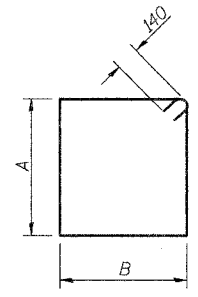


PILE ENCASEMENT DETAIL

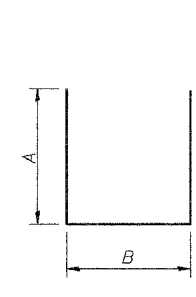


FIELD CUTTING DIAGRAM

Order v3(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s4(E)



BARS s5(E), u(E)

Bar	Dimension A	Dimension B
s4(E)	1.000 m	800
s5(E)	250	800
u(E)	1.000 m	1.220 m

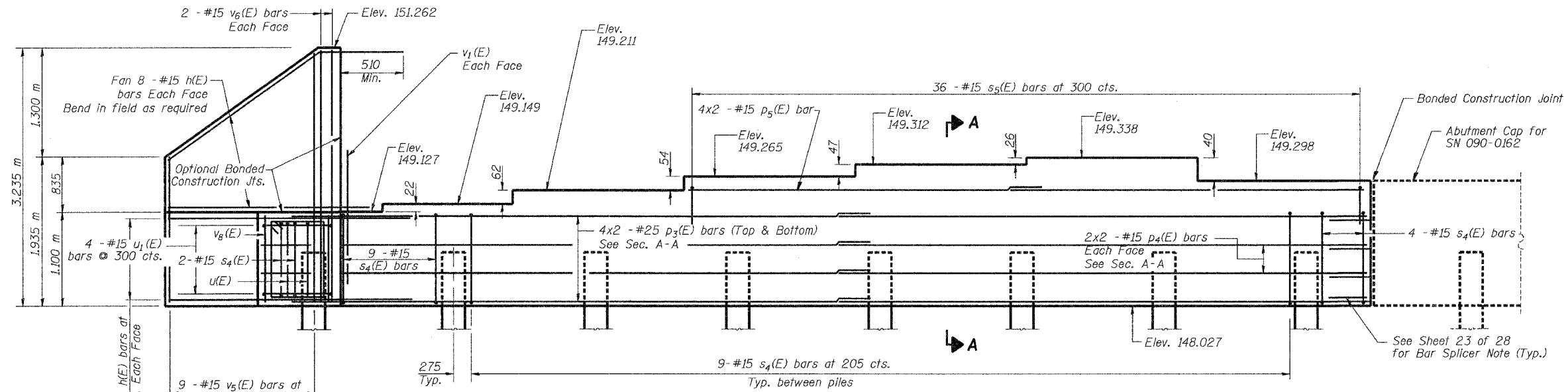
Min. Bar Lap	
#15	550
#25	1,480 m

Notes: Four steps monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated. Bars indicated thus 4x3 - #25 etc. indicates 4 lines of bars with 3 lengths per line. All dimensions are in millimeters (mm) except as noted. For Bollard Details See Sheet 20 of 28

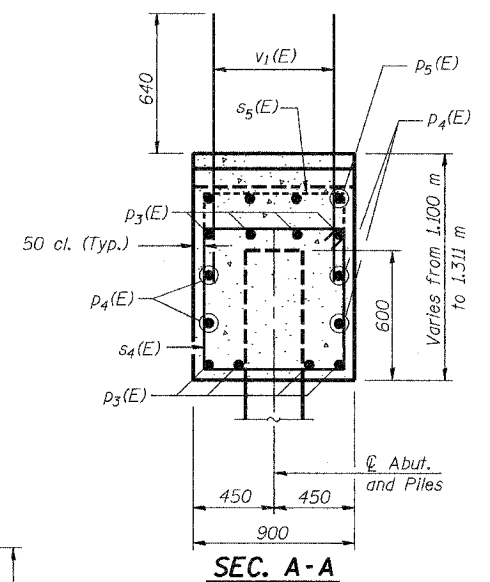
NORTH ABUTMENT				Sheet No.
Date	Designed	DCS	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	17 of 28
Revisions	Drawn	BKN		
	Checked	TDN		
	Approved	KWB		
Prepared By:	URS		3040 North University Avenue Decatur, IL 62526	URS Job No. 2100001243.01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	585
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	



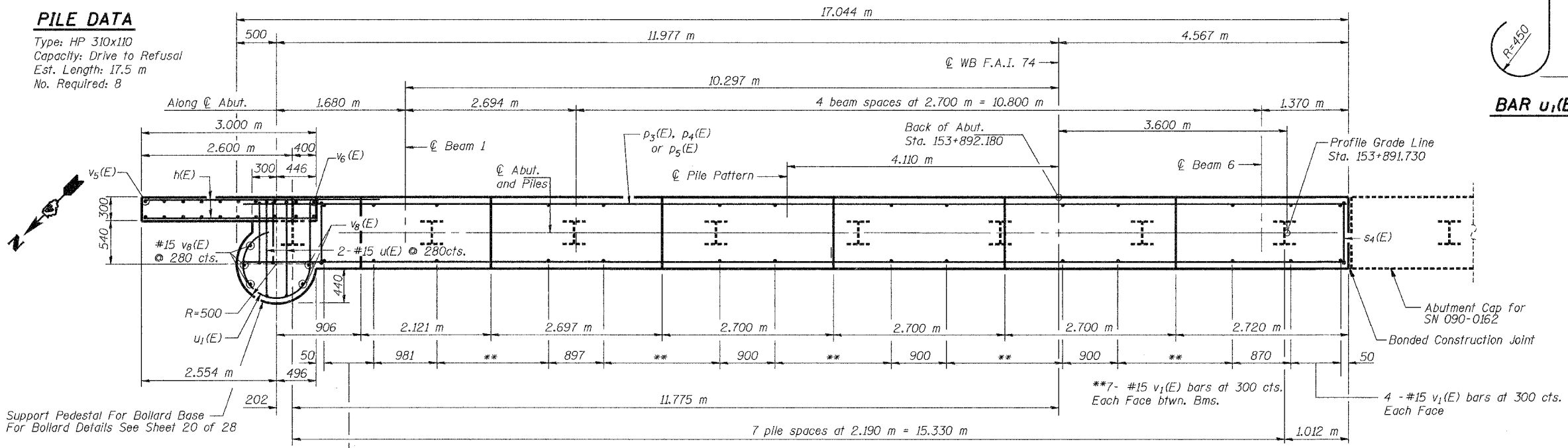
ELEVATION
(Looking South)



SEC. A-A

PILE DATA

Type: HP 310x110
Capacity: Drive to Refusal
Est. Length: 17.5 m
No. Required: 8



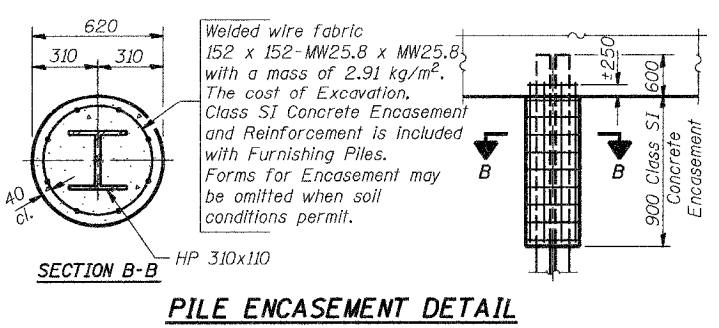
PLAN

BAR u1(E)

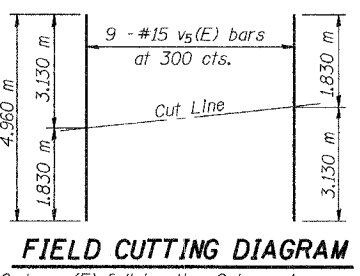
**SOUTH ABUTMENT
BILL OF MATERIAL**

Bar No.	Size	Length (m)	Shape
h(E)	#15	3.77	—
p3(E)	#25	9.21	—
p4(E)	#15	8.75	—
p5(E)	#15	5.67	—
s4(E)	#15	3.88	□
s5(E)	#15	1.30	□
u(E)	#15	3.22	—
u1(E)	#15	2.77	—
v1(E)	#15	1.28	—
v5(E)	#15	4.96	—
v6(E)	#15	3.13	—
v8(E)	#15	1.00	—
Reinforcement Bars, Epoxy Coated		kg	1710
Concrete Structures		m ³	21.4
Steel Piles HP 310x110		m	140.0
Structure Excavation		m ³	181

Notes: Four steps monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated. Bars indicated thus 4x3 - #25 etc. indicates 4 lines of bars with 3 lengths per line. All dimensions are in millimeters (mm) except as noted. For Bollard Details See Sheet 20 of 28

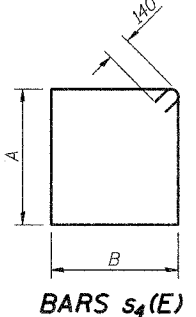


PILE ENCASEMENT DETAIL

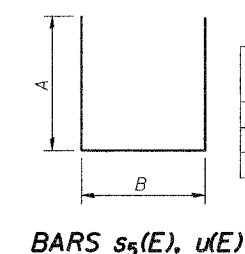


FIELD CUTTING DIAGRAM

Order v5(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s4(E)



BARS s5(E), u(E)

Bar	Dimension A	Dimension B
s4(E)	1,000 m	800
s5(E)	250	800
u(E)	1,000 m	1,220 m

Min. Bar Lap	
#15	550
#25	1,480 m

SOUTH ABUTMENT

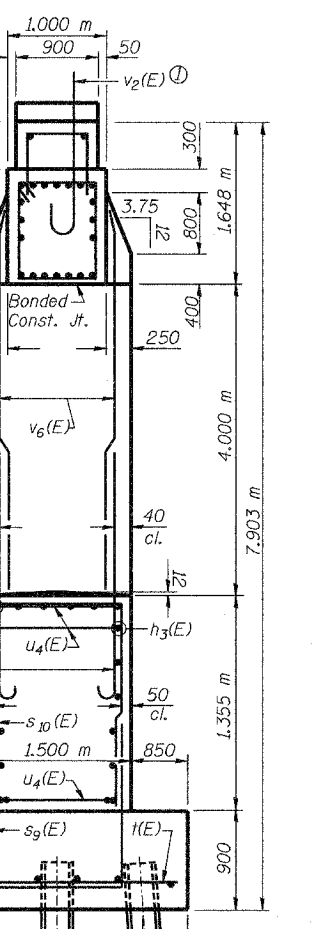
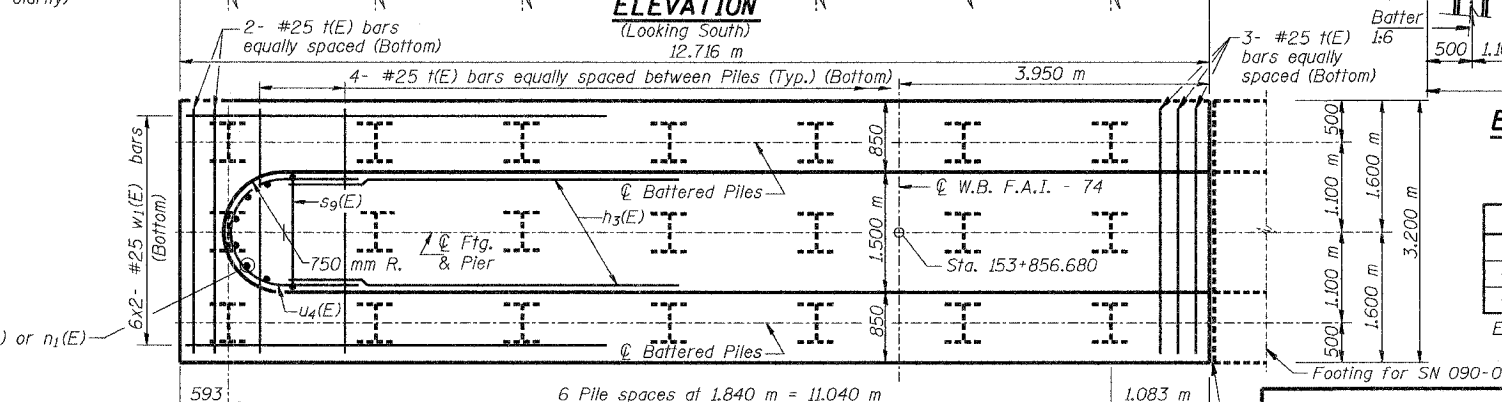
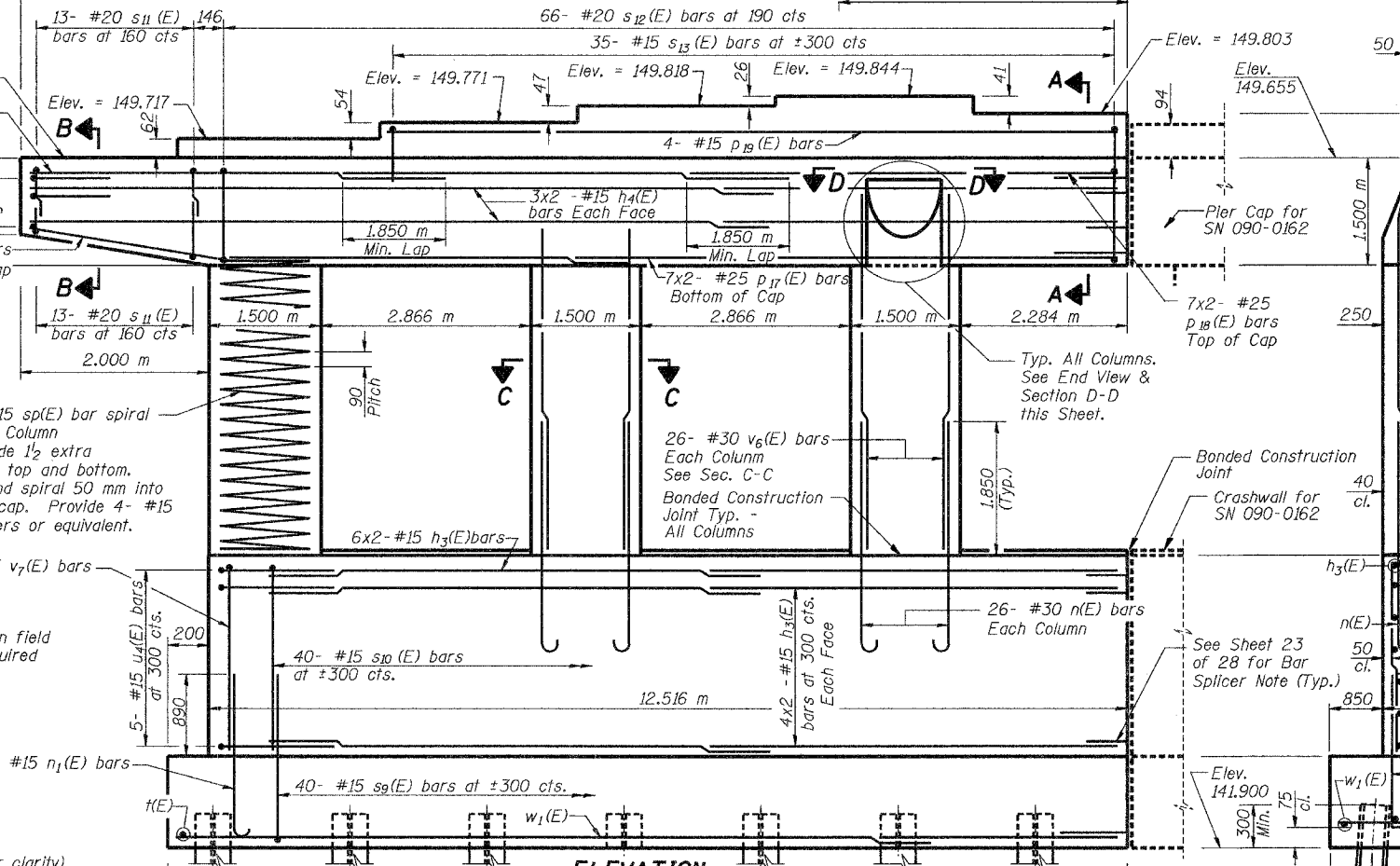
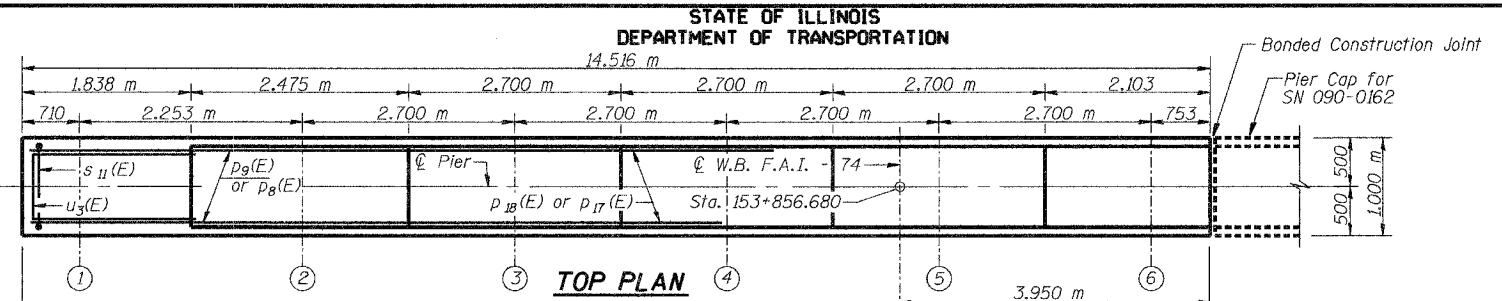
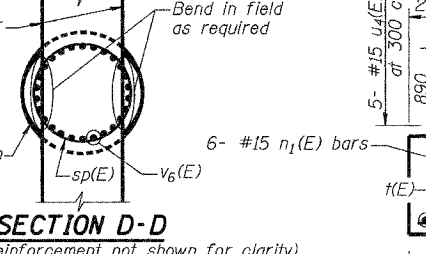
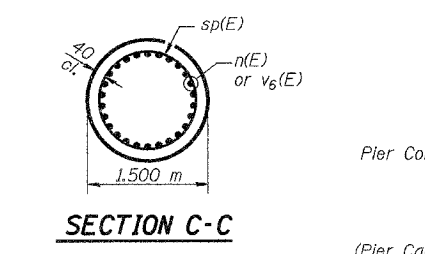
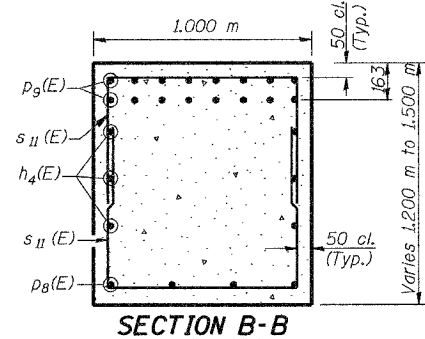
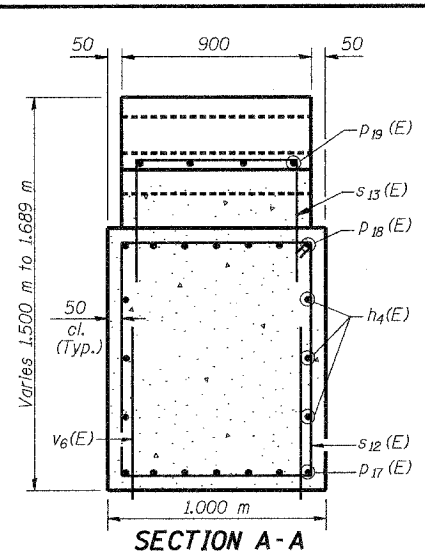
Date	Designed DCS	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		18
	Checked TDN		
	Approved KWB		
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526		
		URS Job No. 2100001243.01	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	536
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

PIER
BILL OF MATERIAL

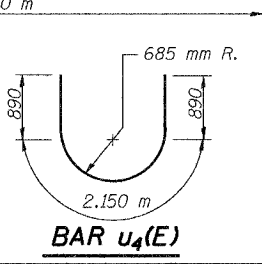
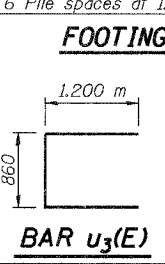
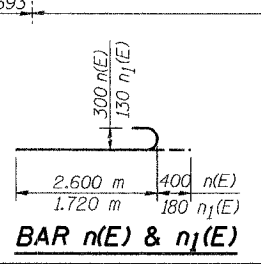
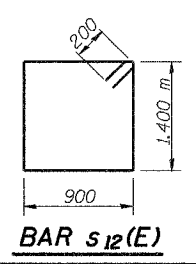
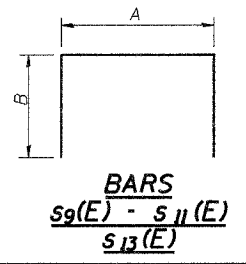
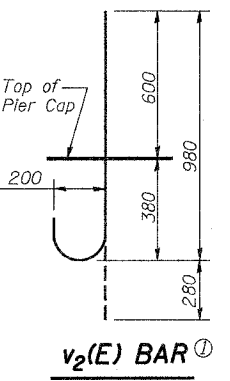
Bar	No.	Size	Length (m)	Shape
$h_3(E)$	28	#15	6.31	—
$h_4(E)$	12	#15	7.66	—
$n(E)$	78	#30	3.00	U
$n_1(E)$	6	#15	1.90	U
$p_8(E)$	4	#25	2.00	—
$p_9(E)$	16	#25	5.50	—
$p_{17}(E)$	14	#25	6.90	—
$p_{18}(E)$	14	#25	6.32	—
$p_{19}(E)$	4	#15	10.10	—
$s_9(E)$	40	#15	4.84	—
$s_{10}(E)$	40	#15	4.00	—
$s_{11}(E)$	26	#20	3.10	—
$s_{12}(E)$	66	#20	5.00	—
$s_{13}(E)$	35	#15	1.20	—
$sp(E)$	3	#15	4.05	WWW
$t(E)$	29	#25	3.10	—
$u_3(E)$	4	#20	3.26	—
$u_4(E)$	5	#15	3.93	—
$v_2(E)$	44	#25	1.26	—
$v_6(E)$	78	#30	5.20	—
$v_7(E)$	6	#15	1.30	—
$w_1(E)$	12	#25	6.98	—
Steel Piles		m	231.0	
HP 310x110				
Concrete Structures		m ³	106.8	
Reinforcement Bars, Epoxy Coated		kg	8700	
Braced Excavation		m ³	102.3	



PILE DATA
Type: HP 310x110
Capacity: Drive to Refusal
Est. Length: 11.0 m
No. Required: 21

A & B DIMENSIONS

Bar	A	B
$s_9(E)$	1.400 m	1.720 m
$s_{10}(E)$	1.400 m	1.300 m
$s_{11}(E)$	900	1.100 m
$s_{12}(E)$	800	200



Min. Bar Lap

#15	890
#20	780
#25	1.320 m

Except as Noted

Notes: Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. Bars indicated thus 7x2 - #25 etc. indicates 7 lines of bars with 2 lengths per line. All dimensions are in millimeters (mm) except as noted. Reinforcement bars designated (E) shall be epoxy coated. (1) See Sheet 12 of 28 for $v_2(E)$ bar spacing.

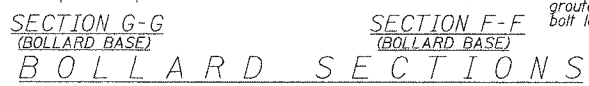
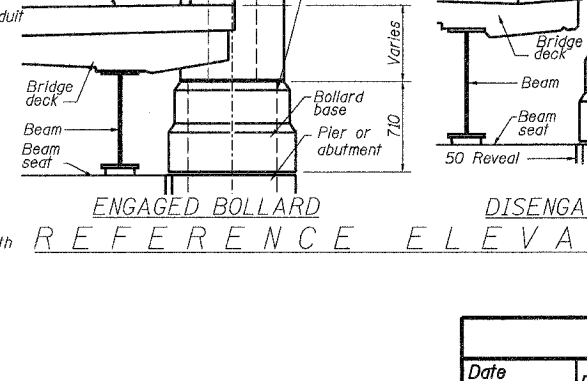
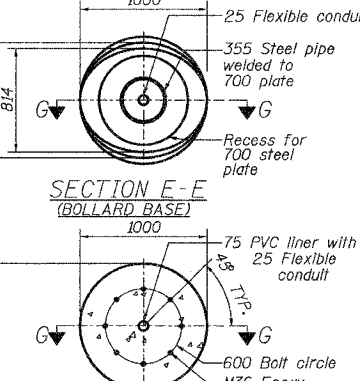
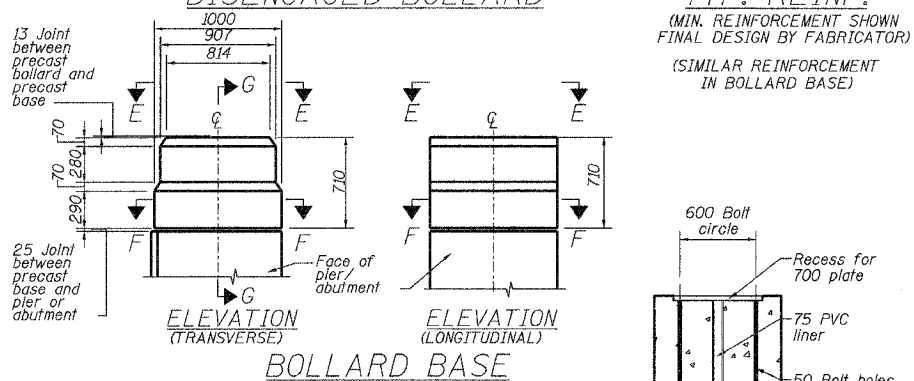
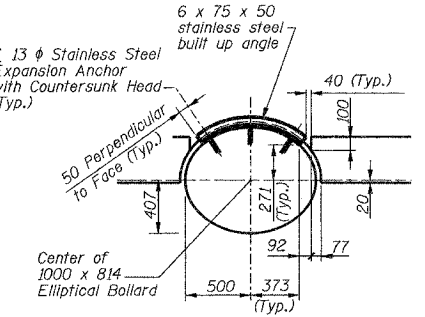
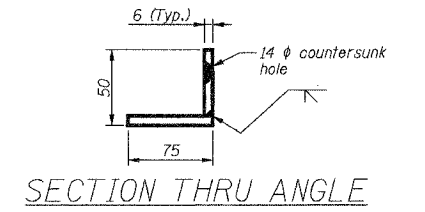
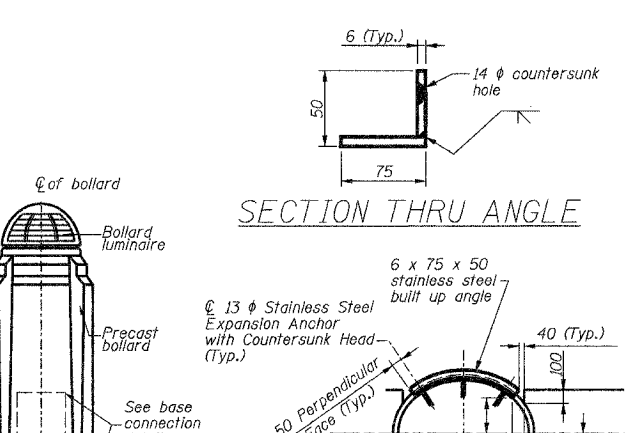
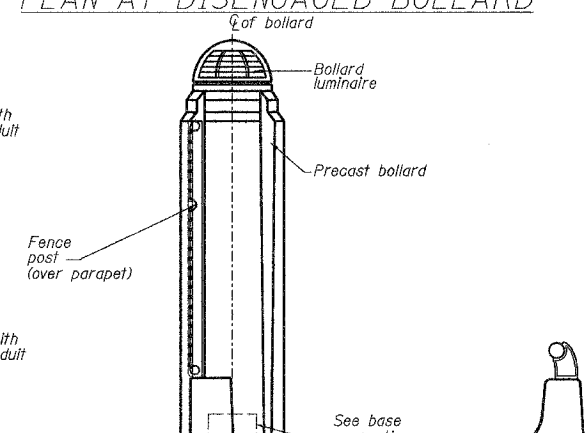
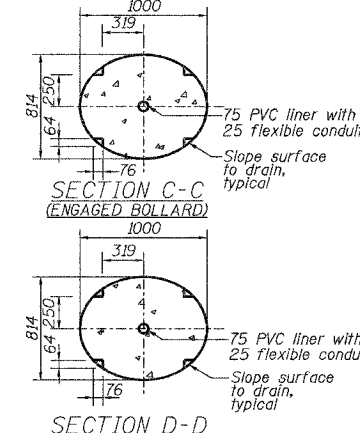
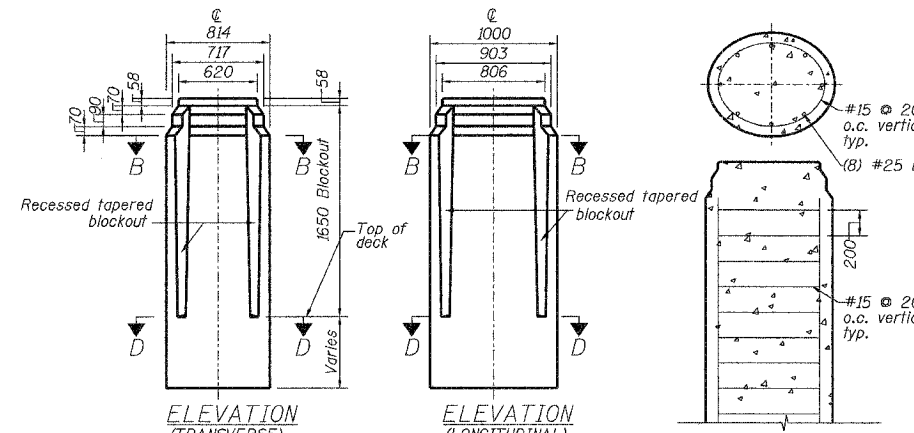
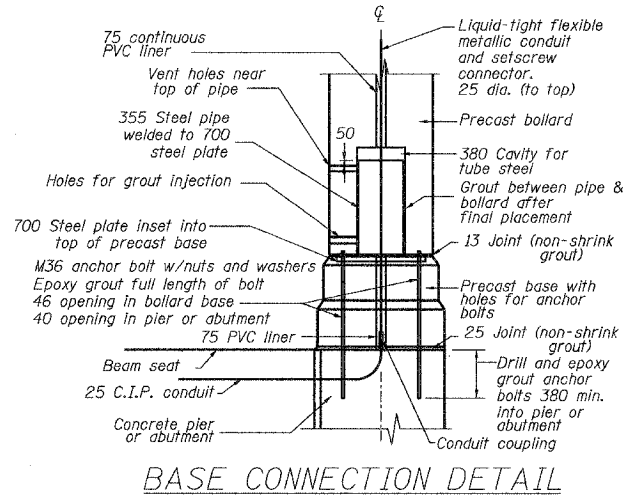
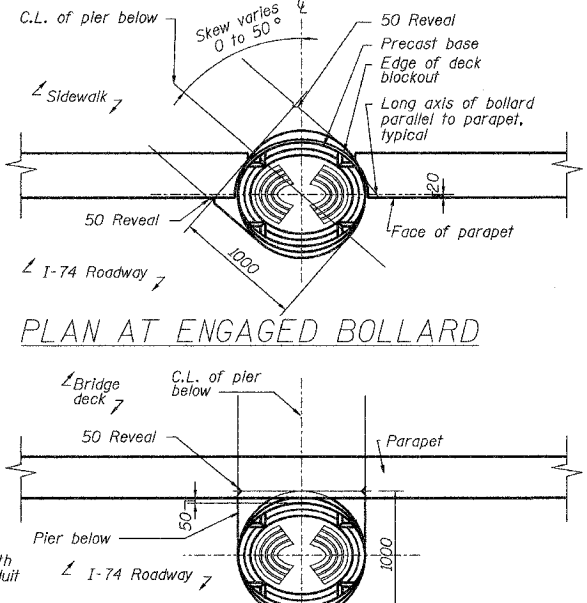
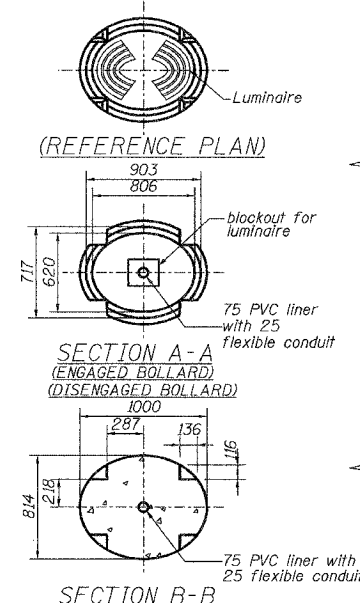
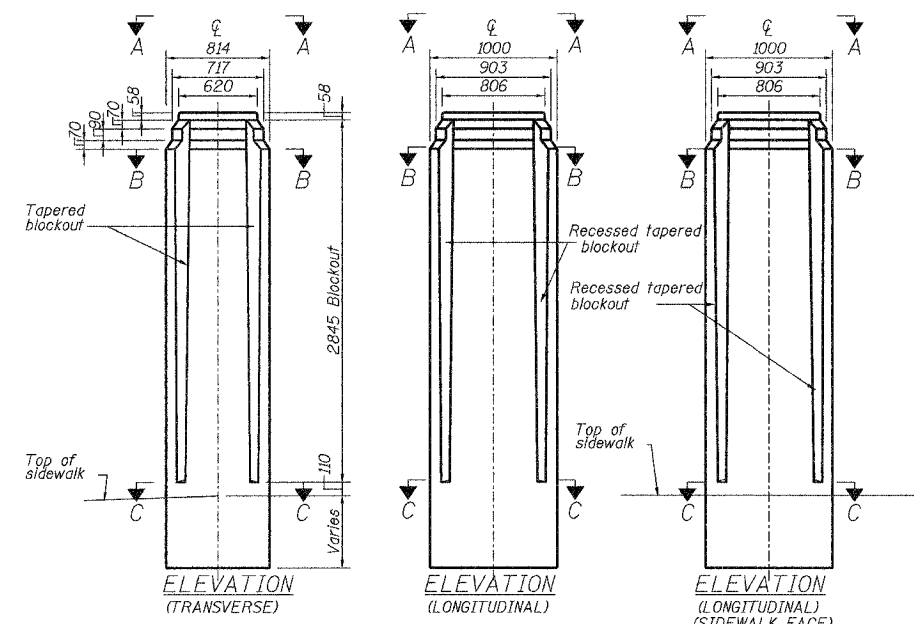
PIER

Date	Designed	TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.	
Revisions	Drawn	BKN		19	of 28
	Checked	DCS			
	Approved	KWB			
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526		URS Job No. 2100001243.01		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

68201				
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	537
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

- NOTES:**
- BOLLARDS, BOLLARD BASES, BOLLARD LUMINAIRES, AND CONNECTION COMPONENTS (UNLESS OTHERWISE NOTED) ARE SUPPLIED BY OTHERS. FABRICATION DETAILS AND DIMENSIONS ARE PRESENTED FOR INFORMATION ONLY. INSTALLATION IS INCLUDED IN THIS CONTRACT.
 - SOME BOLLARD BASE CONNECTION DETAILS NOT SHOWN. FINAL CONNECTION DESIGN AND DETAILING BY BOLLARD FABRICATOR.
 - NON-SHRINK GROUT, EPOXY GROUT, FLEXIBLE CONDUIT AND CONNECTOR, AND BUILT-UP ANGLES AND ANGLE ANCHORS TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.
 - FOR LUMINAIRE DETAILS, SEE SHEET 21 OF 28.

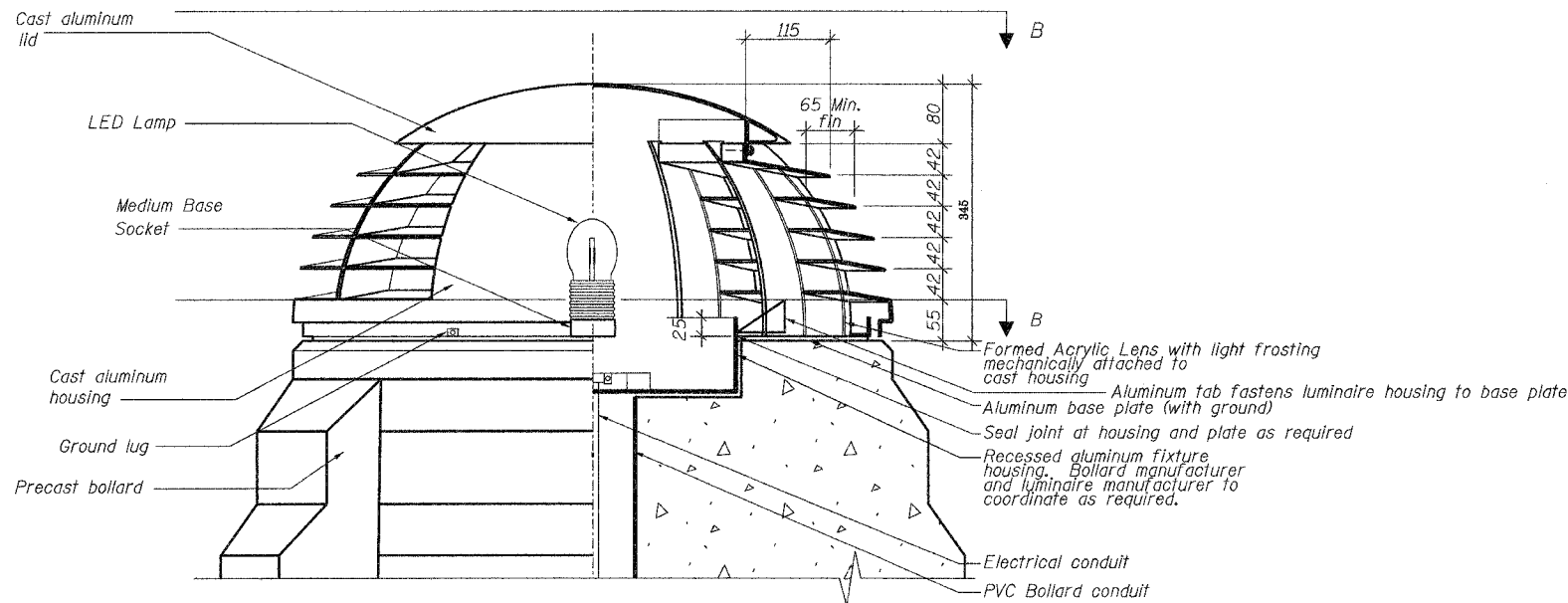


DESIGNED	WCJ
CHECKED	BRJ
DRAWN	AS, ZLA
CHECKED	BRJ

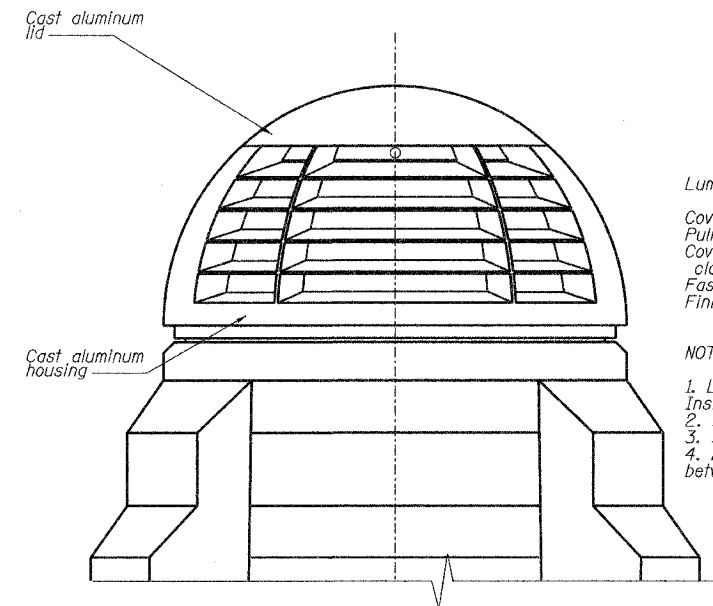
BOLLARD DETAILS AND APPLICATION			
Date	Designed	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn		20
	Checked		of 28
	Approved		
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526		URS Job No. 2100001243.01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

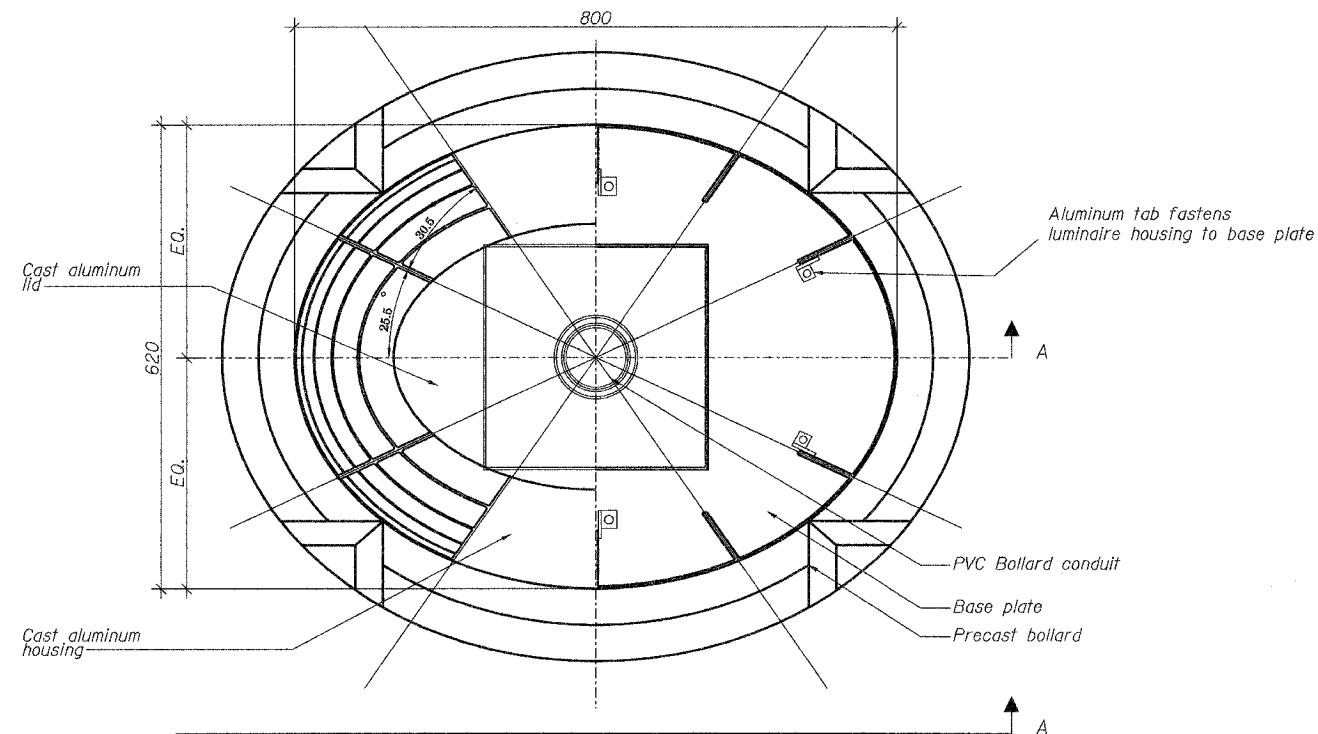
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	538
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		



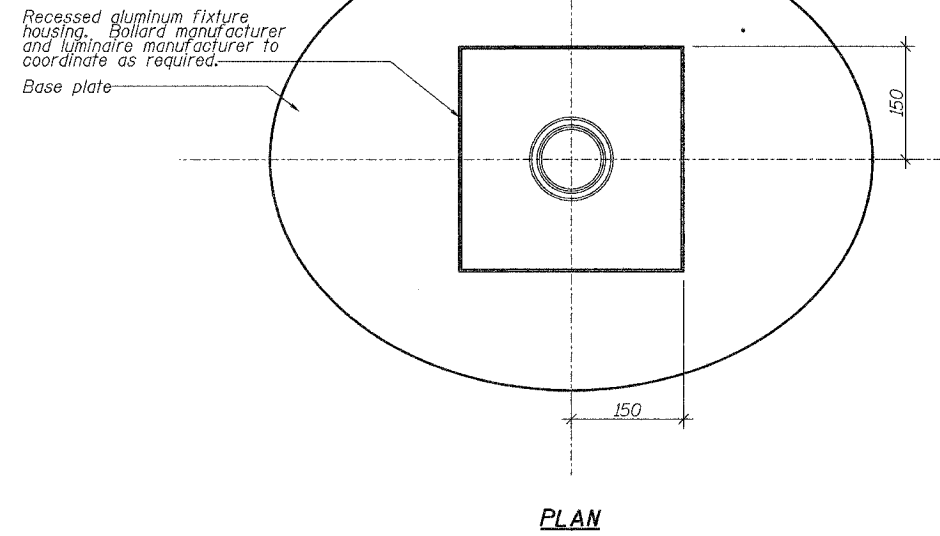
LONGITUDINAL ELEVATION/SECTION A-A



TRANSVERSE ELEVATION



PLAN/SECTION B-B



PLAN

Luminaire Specifications

Cover: 3 thick all aluminum construction
Pull-down catches and strikes: Stainless steel
Cover Gasket: 3 thick (die cut) high density closed-cell EPDM with P.S.A. backing
Fasteners: Stainless steel, cast-in-place Heli-Coil
Finish: Factory applied - silver metallic

NOTES:

1. Luminaire supplied by others. Installation in this contract.
2. Fixture to Bear "U.L." Label suitable for wet locations"
3. Socket to be supplied with disconnect plugs.
4. Fixture supplied with vinyl coated stainless steel safety cable between cast aluminum lid and baseplate.

DESIGNED	WCJ
CHECKED	BRJ
DRAWN	AS, ZLA
CHECKED	BRJ

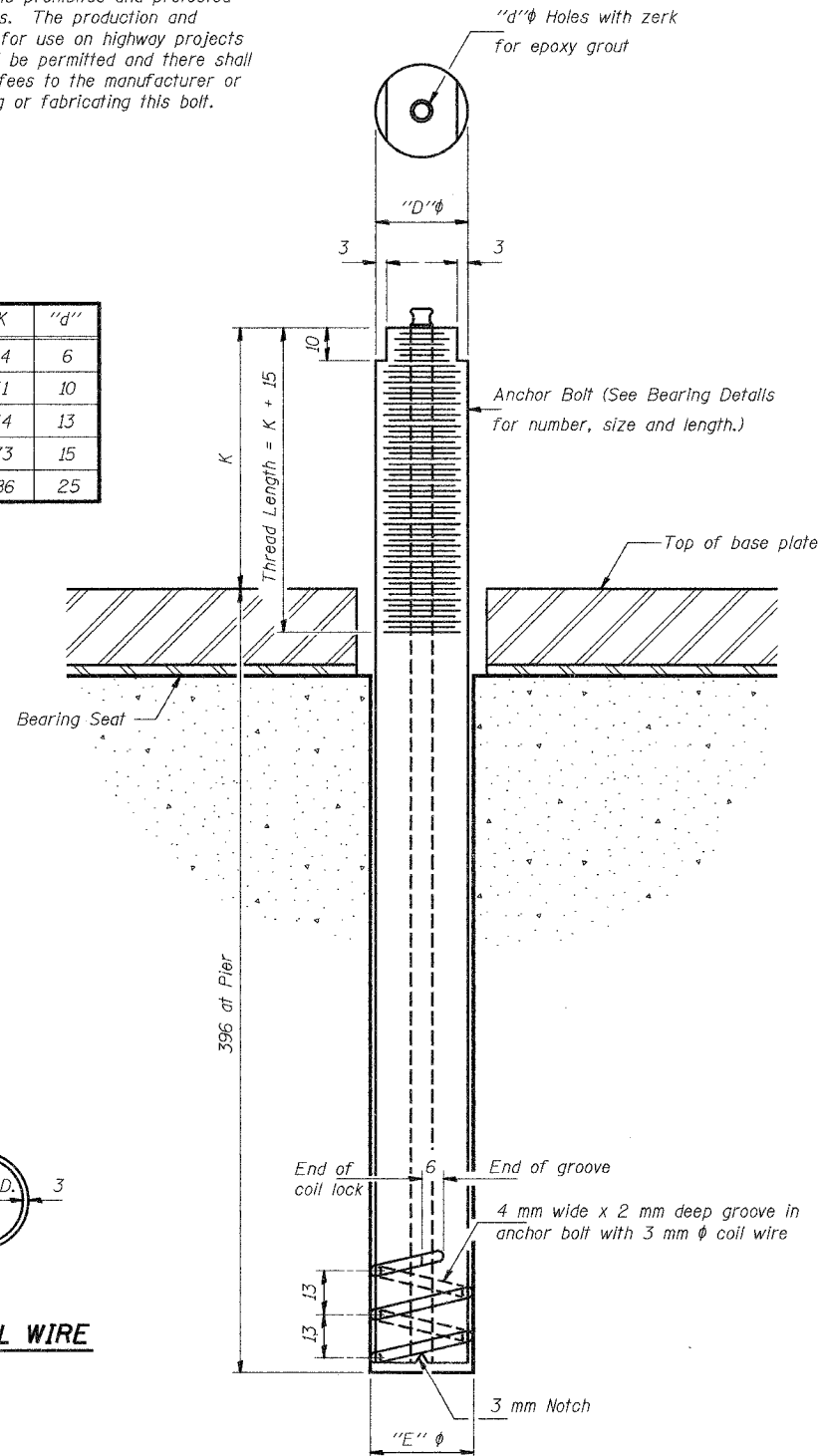
LUMINAIRE DETAILS ON BOLLARDS AND APPLICATION			
Date	Designed	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn		21
	Checked		of 28
	Approved		
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526		URS Job No. 2100001243.01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	539
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

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.

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



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 filling 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	Type
Pier	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.

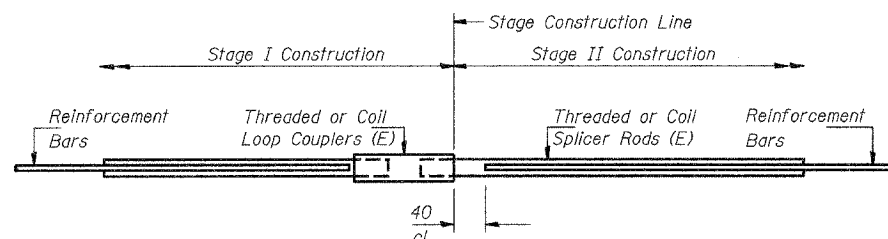
The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

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

ANCHOR BOLT DETAILS

Date	Designed TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		22
	Checked DCS		of 28
	Approved KWB		
Prepared By:	URS		3040 North University Avenue Decatur, IL 62526

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	540
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



BAR SPLICER ASSEMBLY DETAIL

The diameter of this part is the same as the diameter of the bar spliced.

The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



**** ONE PIECE**

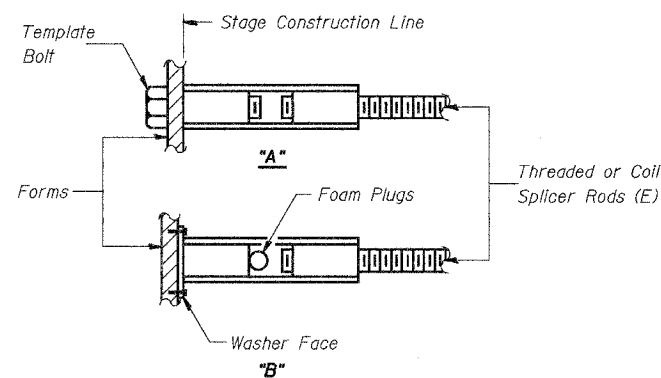
Wire Connector



WELDED SECTIONS

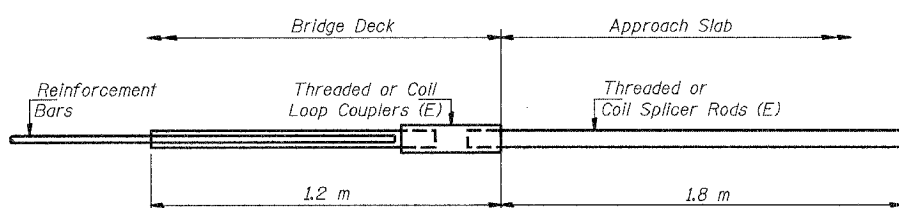
BAR SPLICER ASSEMBLY ALTERNATIVES

** 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.



**INTEGRAL ABUTMENT
BAR SPLICER ASSEMBLY DETAIL
FOR #15 BAR**

Min. Capacity = 100 kN - tension
Min. Pull-out Strength = 40 kN - tension
No. Required = 103

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 = $1.25 \times 10^{-3} \times f_y \times A_t$
(Tension in kN)
- ② Minimum *Pull-out Strength = $1.25 \times 10^{-3} \times f_{s\text{allow}} \times A_t$
(Tension in kN)

Where f_y = Yield strength of lapped reinforcement bars in MPa.
 $f_{s\text{allow}}$ = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars (mm^2).
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	610 mm	100	40
#20	790 mm	150	60
#25	1.32 m	250	100
#30	1.85 m	350	140

Bar splicer (E) 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.

The unused half of the bar splicers from the construction of SN 090-0162 were bundled together, clearly labeled with structure number, size, and location within the structure (for example: SN 090-0163 #15 bar splicers for deck) and stored by IDOT. These shall be supplied by IDOT and installed by the Contractor. Cost is included with Reinforcement Bars, Epoxy Coated.

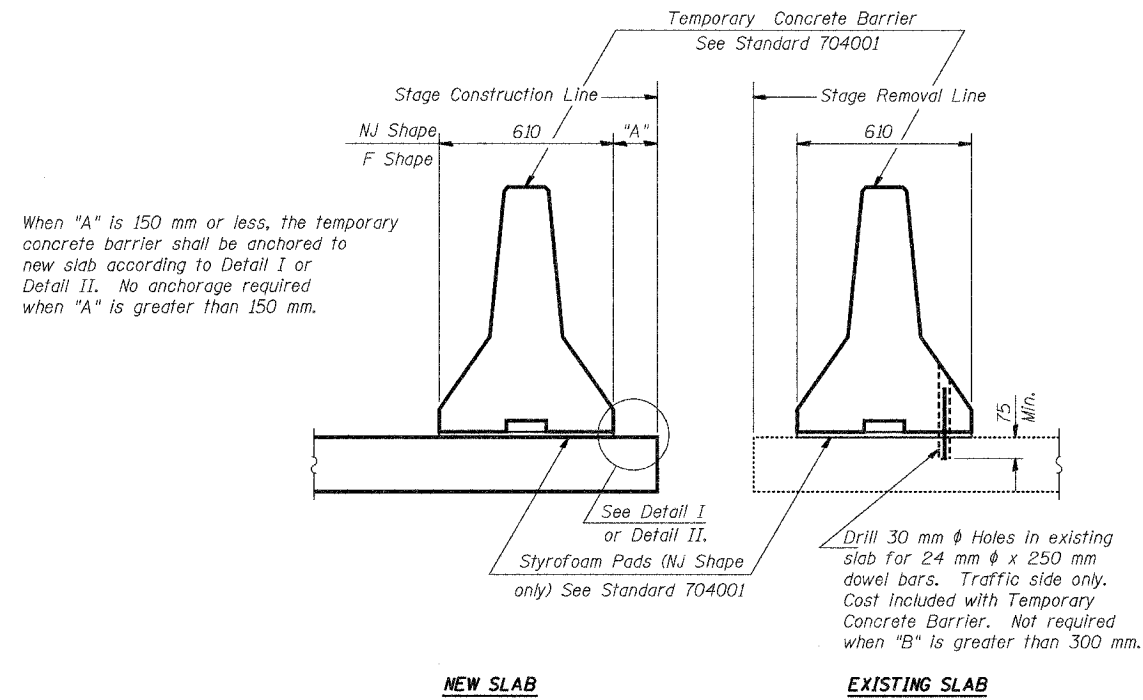
All dimensions are in millimeters (mm) except as noted.

BAR SPLICER ASSEMBLY DETAILS

Date	Designed TDN	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		23
	Checked DCS		
	Approved KWB		
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

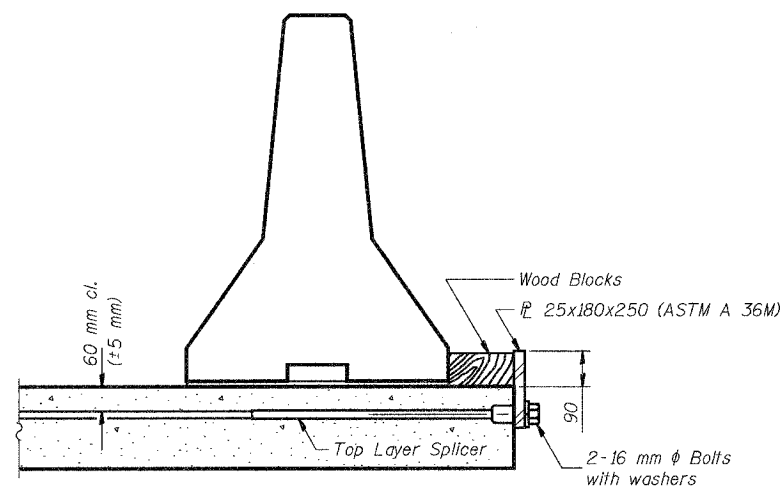
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	541
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



SECTIONS THRU SLAB

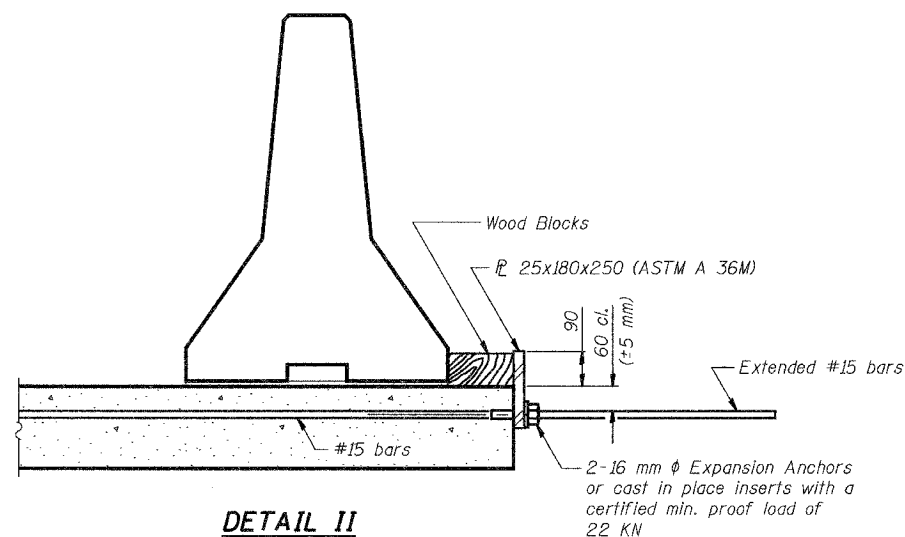
NOTES

- Detail I - With Bar Splicer or Couplers:
Connect one (1) 25x180x250 steel \bar{L} to the top layer of couplers with 2-16 mm ϕ bolts screwed to coupler at approximate \bar{C} of each 3 m barrier panel.
 - Detail II - With Extended Reinforcement Bars:
Connect one (1) 25x180x250 steel \bar{L} to the concrete slab with 2-16 mm ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each 3 m barrier panel.
- Cost of anchorage included with Temporary Concrete Barrier.
All dimensions are in millimeters (mm) except as noted.



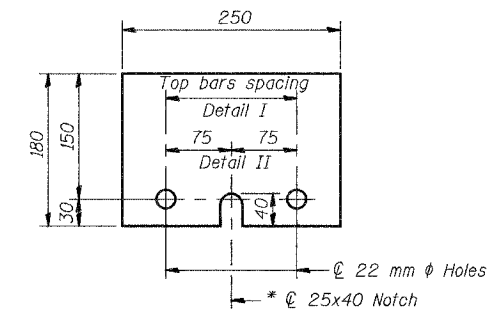
DETAIL I

The 25x180x250 Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 25x180x250 Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



\bar{L} 25x180x250

* Required only with Detail II

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

Date	Designed	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No. 24 of 28
Revisions	Drawn BKN		
	Checked		
	Approved KWB		
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526	URS Job No. 2100001243.01	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

68201

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-14HB/BR	TAZEWELL	136	64
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

CLAUDE H. HURLEY COMPANY
BORING LOG
PROJECT NO. 3-380-02 BORING NO. SB-277
PROJECT FAL-74 IMPROVEMENTS - WASHINGTON STREET CORRIDOR
LOCATION BRIDGE NO. 090-0010 EBI-74BL 153+807.4 10.0HR PEORIA & TAZEWELL COUNTIES, ILLINOIS
DRILLING CONTRACTOR WANG ENGINEERING, INC.
DATE OF DRILLING: STARTED 11-16-94 COMPLETED 11-17-94 SURFACE ELEVATION 152.53
DRILLED BY J. WHEELER LOGGED BY W. DOOLEY

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD						
			N	Q _u	w	γ _d	DATE	DEPTH	HOUR	RIG TYPE			
	SHOULDER MATERIALS: 152mm AC 762mm GRAVELLY SAND, A-1-b												
151.52													
144.76	FILL: BR GRAVELLY SAND, A-1-b												
	FILL: BK GR TO BR GR SILTY CLAY LOAM, A-6												
149.33	FILL: BLK CHINDERS												
148.72													
	FILL: BR SAND, A-2-4												
135.32													

CLAUDE H. HURLEY COMPANY
BORING LOG
PROJECT NO. 3-380-02 BORING NO. SB-277 (Cont.)
PROJECT FAL-74 IMPROVEMENTS - WASHINGTON STREET CORRIDOR
LOCATION BRIDGE NO. 090-0010 EBI-74BL 153+807.4 10.0HR PEORIA & TAZEWELL COUNTIES, ILLINOIS
DRILLING CONTRACTOR WANG ENGINEERING, INC.
DATE OF DRILLING: STARTED 11-16-94 COMPLETED 11-17-94 SURFACE ELEVATION 152.53
DRILLED BY J. WHEELER LOGGED BY M. DOOLEY

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD						
			N	Q _u	w	γ _d	DATE	DEPTH	HOUR	RIG TYPE			
	BR SANDY GRAVEL, A-1-a												
134.86	BR SANDY LOAM, A-2-4												
133.70	BR TO GR BR SILTY LOAM, A-5-9												
3.18	BR SAND, A-3												

CLAUDE H. HURLEY COMPANY
BORING LOG
PROJECT NO. 3-380-02 BORING NO. SB-278
PROJECT FAL-74 IMPROVEMENTS - WASHINGTON STREET CORRIDOR
LOCATION BRIDGE NO. 090-0010 EBI-74BL 153+808.3 21.9HR PEORIA & TAZEWELL COUNTIES, ILLINOIS
DRILLING CONTRACTOR WANG ENGINEERING, INC.
DATE OF DRILLING: STARTED 10-13-94 COMPLETED 10-13-94 SURFACE ELEVATION 143.63
DRILLED BY R. BELL LOGGED BY M. DOOLEY

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD						
			N	Q _u	w	γ _d	DATE	DEPTH	HOUR	RIG TYPE			
	FILL: BR TO BK BR SILTY LOAM, A-4												
143.15	FILL: BR TO BR GR SILTY CLAY, A-7-6												
142.54													
	FILL: BK GR, BR & BR GR SILTY CLAY, A-7-6												
134.92	BR SANDY GRAVEL, A-1-a												
140.25	BR SANDY LOAM, A-2-4												
	BR SANDY GRAVEL, A-1-a												
132.63	BR SAND, A-3												
131.87	GR LAMINATED CLAY SHALE												
131.37	END OF BORING												

SOIL BORINGS			
Date	Designed	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		25
	Checked		of 28
	Approved KWB		
Prepared By:	URS		3040 North University Avenue Decatur, IL 62526

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

68201				
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	54B
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

CLAUDE H. HURLEY COMPANY												
BORING LOG					BORING NO. SB-279							
PROJECT NO. 3-380-D2												
PROJECT FAI-74 IMPROVEMENTS - WASHINGTON STREET CORRIDOR												
LOCATION BRIDGE NO. 090-0010 EB1-74BL 153+809.2 12.36R PEORIA & TAZEWELL COUNTIES, ILLINOIS												
DRILLING CONTRACTOR HANG ENGINEERING, INC.												
DATE OF DRILLING: STARTED 10-10-94 COMPLETED 10-10-94 SURFACE ELEVATION 151.00												
DRILLED BY R. BELL LOGGED BY M. DOOLEY												
Elev	CLASSIFICATION	Depth	N	Q _u	w	γ _s	GROUNDWATER DATA			DRILLING METHOD		
							DATE	DEPTH	HOUR	RIG TYPE	CME-55	RC-22.50
150.78	SHOULDER MATERIALS: 205mm AC	2	-	-	-	-	DD	10-10	12.2	-	-	-
		4	240	14	-	-	RC	10-10	-	0	-	-
		10						10-11	7.5	1d		
	FILL: BR SILTY CLAY LOAM, A-3	2	200	15	-	-						
		4	305	15	-	-						
		5										
148.56		100	220	13	-	-						
		4	400	13	-	-						
		5										
		7	470	10	-	-						
		4	450	12	-	-						
		5										
		7										
145.51		5	335	14	-	-						
		10	325	11	-	-						
		6	515	12	-	-						
		8										

CLAUDE H. HURLEY COMPANY												
BORING LOG					BORING NO. SB-279 (Cont.)							
PROJECT NO. 3-380-D2												
PROJECT FAI-74 IMPROVEMENTS - WASHINGTON STREET CORRIDOR												
LOCATION BRIDGE NO. 090-0010 EB1-74BL 153+809.2 12.36R PEORIA & TAZEWELL COUNTIES, ILLINOIS												
DRILLING CONTRACTOR HANG ENGINEERING, INC.												
DATE OF DRILLING: STARTED 10-10-94 COMPLETED 10-10-94 SURFACE ELEVATION 151.00												
DRILLED BY R. BELL LOGGED BY M. DOOLEY												
Elev	CLASSIFICATION	Depth	N	Q _u	w	γ _s	GROUNDWATER DATA			DRILLING METHOD		
							DATE	DEPTH	HOUR	RIG TYPE	CME-55	RC-22.50
		3					DD	10-10	12.2	-	-	-
		5					RC	10-10	-	0	-	-
		6										
		10										
		11										
		15										
		16										
		17										
		19										
		21										
		22										
		23										
		24										
		25										
		26										
		27										
		28										
		29										
		30										

CLAUDE H. HURLEY COMPANY												
BORING LOG					BORING NO. SB-280							
PROJECT NO. 3-380-D2												
PROJECT FAI-74 IMPROVEMENTS - WASHINGTON STREET CORRIDOR												
LOCATION BRIDGE NO. 090-0011 EB1-74BL 153+816.6 11.86L PEORIA & TAZEWELL COUNTIES, ILLINOIS												
DRILLING CONTRACTOR D & G DRILLING, INC.												
DATE OF DRILLING: STARTED 11-17-94 COMPLETED 11-17-94 SURFACE ELEVATION 152.25												
DRILLED BY D. ROESEL LOGGED BY R. OLSON												
Elev	CLASSIFICATION	Depth	N	Q _u	w	γ _s	GROUNDWATER DATA			DRILLING METHOD		
							DATE	DEPTH	HOUR	RIG TYPE	CME-55	RC-22.50
		1					DD	11-17	12.3	-	-	-
		2					BR	11-17	-	0	-	-
		3										
		11										
		12										
		13										
		14										
		15										
		16										
		17										
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		23										
		24										
		25										
		26										
		27										
		28										
		29										
		30										

SOIL BORINGS			
Date	Designed	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		26
	Checked		of 28
	Approved KWB		
Prepared By:	URS	3040 North University Avenue Decatur, IL 62526	URS Job No. 2100001243.01

11/17/2004 8:01:53 AM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-14HB)BR	TAZEWELL	1366	544
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

CLAUDE H. HURLEY COMPANY
BORING LOG
PROJECT NO. 3-380-D2 BORING NO. SB-280 (Cont.)
PROJECT FAI-74 IMPROVEMENTS - WASHINGTON STREET CORRIDOR
LOCATION BRIDGE NO. 090-0011 WBI-74BL 153+816.6 11.86L PEORIA & TAZEWELL COUNTIES, ILLINOIS
DRILLING CONTRACTOR D & G DRILLING, INC.
DATE OF DRILLING: STARTED 11-17-94 COMPLETED 11-17-94 SURFACE ELEVATION 152.75
DRILLED BY D. ROESEL LOGGED BY K. OLSON

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD			
			N	Qu	w	Ts	DATE	DEPTH	HOUR	RIG TYPE
Sp0.15m	KPa	%	Kgpm ³							
152.75						DD	11-17	12.3		
149.28	51mm PVC SIDEWALK									
143.28	FILL: DK GR BR SANDY LOAM, A-6									
142.52	FILL: BR SILTY CLAY LOAM, A-3									
141.97	FILL: BR SAND, A-3									
141.66	FILL: BR GRAVELLY SAND, A-1-b									
140.90	BR LOAM, A-4									
140.14	BR SILTY LOAM, A-6									
133.28	BR SAND, A-3									
132.52	BR GRAVELLY SAND, A-1-b									
131.30	GR TO GRN GR LAMINATED CLAY SHALE									
134.58	BR SANDY LOAM, A-2-4									
134.06	BR TO GR BR SILTY LOAM, A-6									
133.42	BR SAND, A-3									

CLAUDE H. HURLEY COMPANY
BORING LOG
PROJECT NO. 3-380-D2 BORING NO. SB-281
PROJECT FAI-74 IMPROVEMENTS - WASHINGTON STREET CORRIDOR
LOCATION BRIDGE NO. 090-0011 WBI-74BL 153+843.1 19.26L PEORIA & TAZEWELL COUNTIES, ILLINOIS
DRILLING CONTRACTOR D & G DRILLING, INC.
DATE OF DRILLING: STARTED 11-17-94 COMPLETED 11-17-94 SURFACE ELEVATION 143.34
DRILLED BY D. ROESEL LOGGED BY K. OLSON

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD			
			N	Qu	w	Ts	DATE	DEPTH	HOUR	RIG TYPE
Sp0.15m	KPa	%	Kgpm ³							
143.28	51mm PVC SIDEWALK					DD	11-17	4.1		
143.28	FILL: DK GR BR SANDY LOAM, A-6									
142.52	FILL: BR SILTY CLAY LOAM, A-3									
141.97	FILL: BR SAND, A-3									
141.66	FILL: BR GRAVELLY SAND, A-1-b									
140.90	BR LOAM, A-4									
140.14	BR SILTY LOAM, A-6									
133.28	BR SAND, A-3									
132.52	BR GRAVELLY SAND, A-1-b									
131.30	GR TO GRN GR LAMINATED CLAY SHALE									

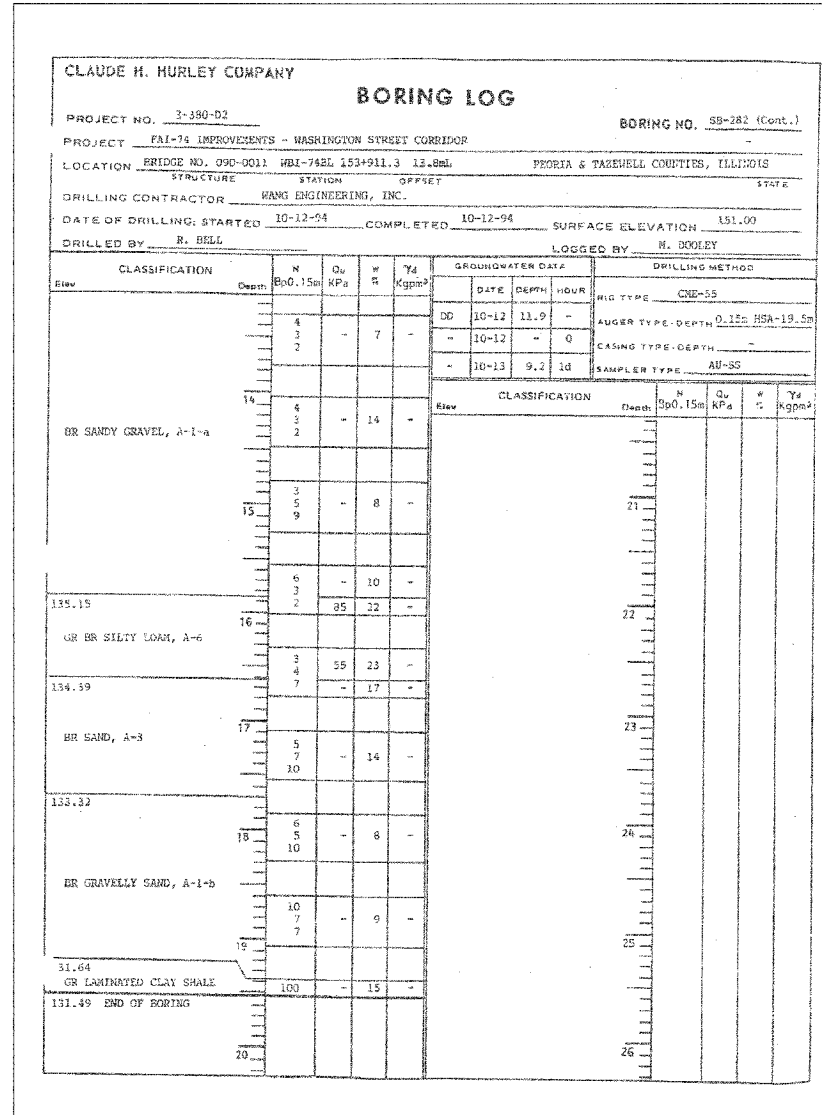
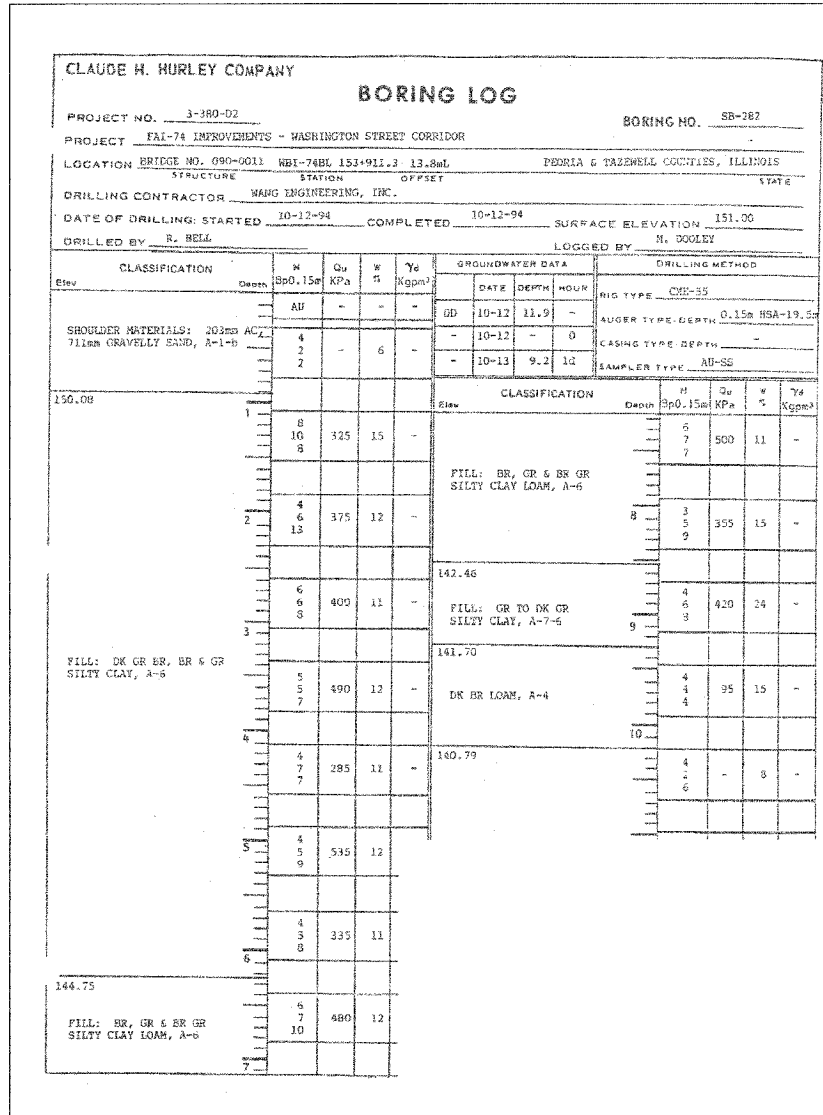
CLAUDE H. HURLEY COMPANY
BORING LOG
PROJECT NO. 3-380-D2 BORING NO. SB-281 (Cont.)
PROJECT FAI-74 IMPROVEMENTS - WASHINGTON STREET CORRIDOR
LOCATION BRIDGE NO. 090-0011 WBI-74BL 153+843.1 19.26L PEORIA & TAZEWELL COUNTIES, ILLINOIS
DRILLING CONTRACTOR D & G DRILLING, INC.
DATE OF DRILLING: STARTED 11-17-94 COMPLETED 11-17-94 SURFACE ELEVATION 143.34
DRILLED BY D. ROESEL LOGGED BY K. OLSON

Elev	CLASSIFICATION	Depth	GROUNDWATER DATA				DRILLING METHOD			
			N	Qu	w	Ts	DATE	DEPTH	HOUR	RIG TYPE
Sp0.15m	KPa	%	Kgpm ³							
143.28	51mm PVC SIDEWALK					DD	11-17	4.1		
143.28	FILL: DK GR BR SANDY LOAM, A-6									
142.52	FILL: BR SILTY CLAY LOAM, A-3									
141.97	FILL: BR SAND, A-3									
141.66	FILL: BR GRAVELLY SAND, A-1-b									
140.90	BR LOAM, A-4									
140.14	BR SILTY LOAM, A-6									
133.28	BR SAND, A-3									
132.52	BR GRAVELLY SAND, A-1-b									
131.30	GR TO GRN GR LAMINATED CLAY SHALE									

SOIL BORINGS			
Date	Designed	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No.
Revisions	Drawn BKN		27
	Checked		of 28
	Approved KWB		
Prepared By:	URS 3040 North University Avenue Decatur, IL 62526		URS Job No. 2100001243.01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

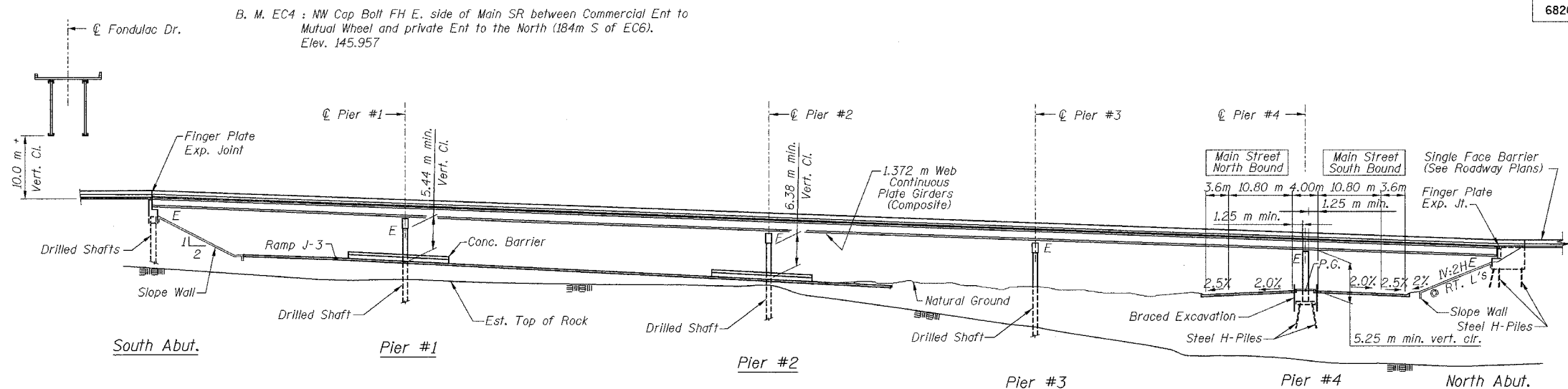
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F.A.I. 74	(90-14HB)BR	TAZEWELL	1366	545
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	



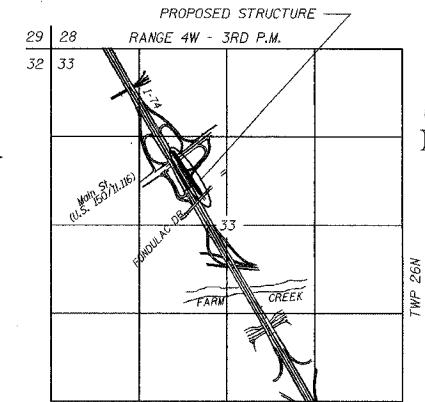
SOIL BORINGS			
Date	Designed	INTERSTATE 74 AND RAMPS L-1 AND L-4 OVER E. WASHINGTON STREET F.A.I. RTE. 74 SECTION (90-14HB)BR TAZEWELL COUNTY STATION 153+868.540 STRUCTURE NO. 090-0163 (WB)	Sheet No. 28 of 28
Revisions	Drawn BKN		
	Checked		
	Approved KWB		
Prepared By:	URS	3040 North University Avenue Decatur, IL 62526	URS Job No. 2100001243.01

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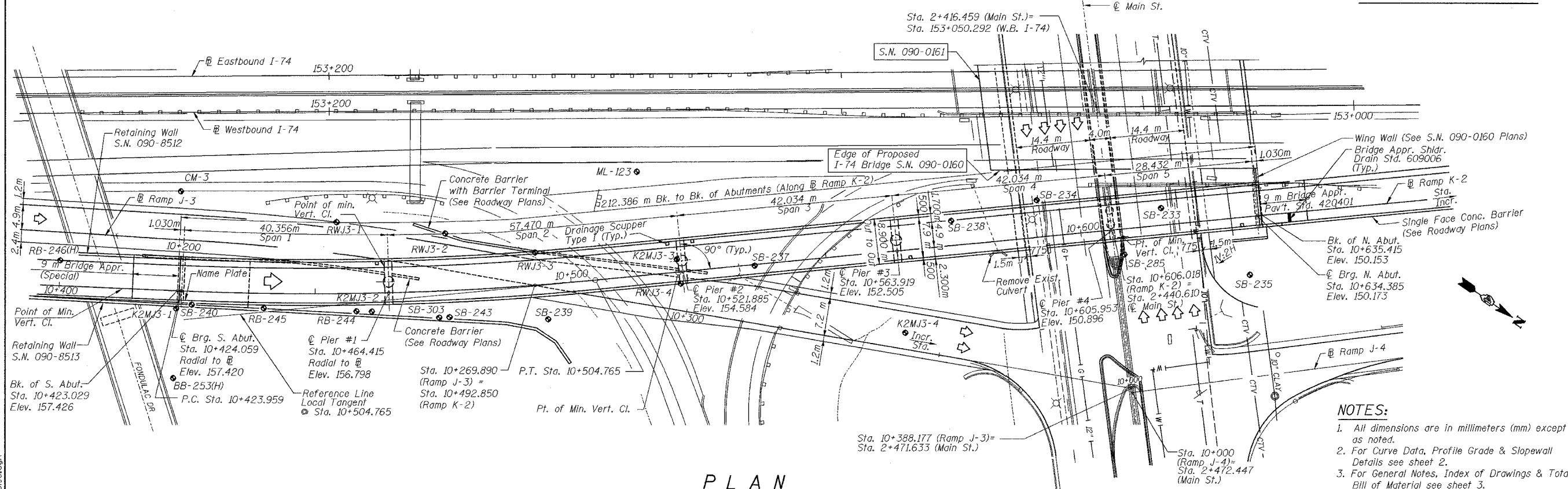
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FAI 74	*	TAZEWELL	1366	546	
STA.		TO STA.			
F.H.W.A. REGION		ILLINOIS		PROJECT	



ELEVATION



LOCATION SKETCH



PLAN

- NOTES:**
- All dimensions are in millimeters (mm) except as noted.
 - For Curve Data, Profile Grade & Slope Wall Details see sheet 2.
 - For General Notes, Index of Drawings & Total Bill of Material see sheet 3.

DESIGN SPECIFICATIONS

2002 AASHTO (17th Edition)
2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges

DESIGNED	KMP
CHECKED	KMP
DRAWN	VH
CHECKED	KMP

LOADING MS18

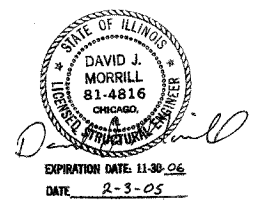
Allow 2.4 kN/m² for future wearing surface.

DESIGN STRESSES

FIELD UNITS
f'c = 24 MPa
fy = 400 MPa (Reinf.)
fy = 345 MPa (Struct.) (M270 Grade 345)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.043
Site Coefficient (S) = 1.0



ab **alfred benesch & company**
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60604
JOB NO. 3573

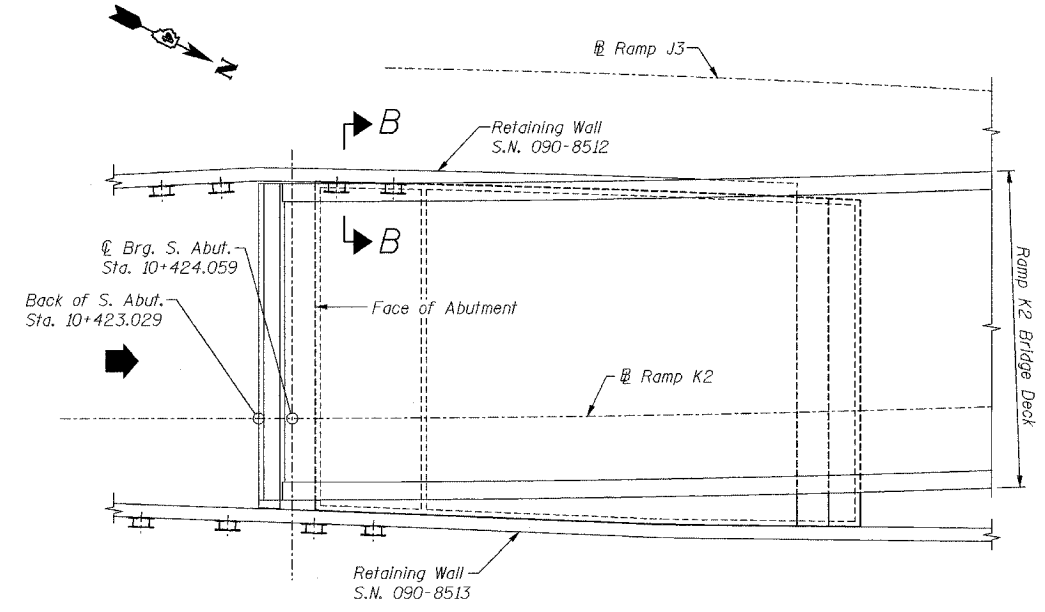
ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIHB-5

GENERAL PLAN AND ELEVATION

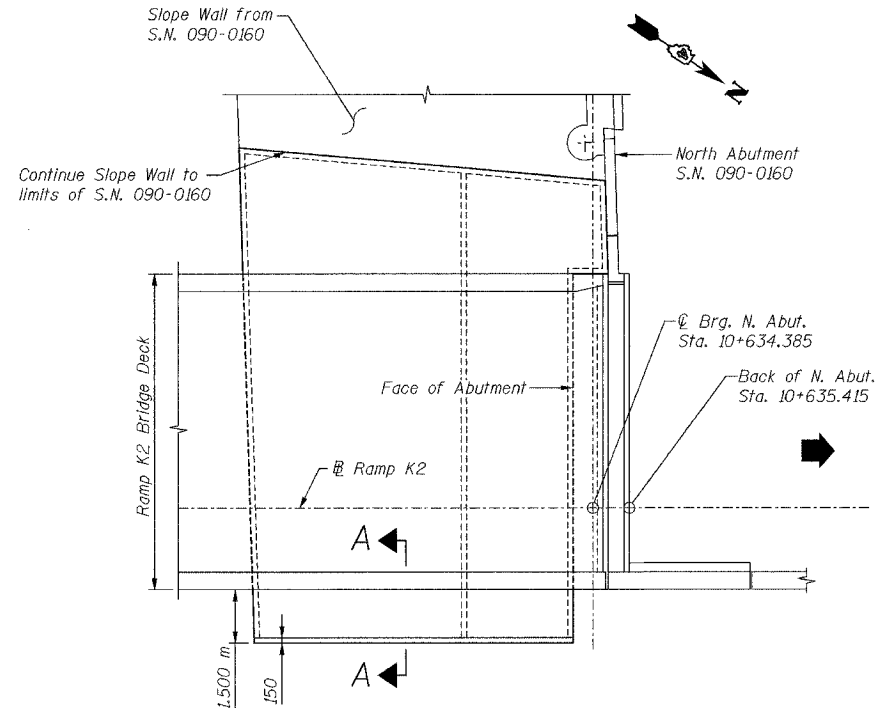
SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

2/3/2005
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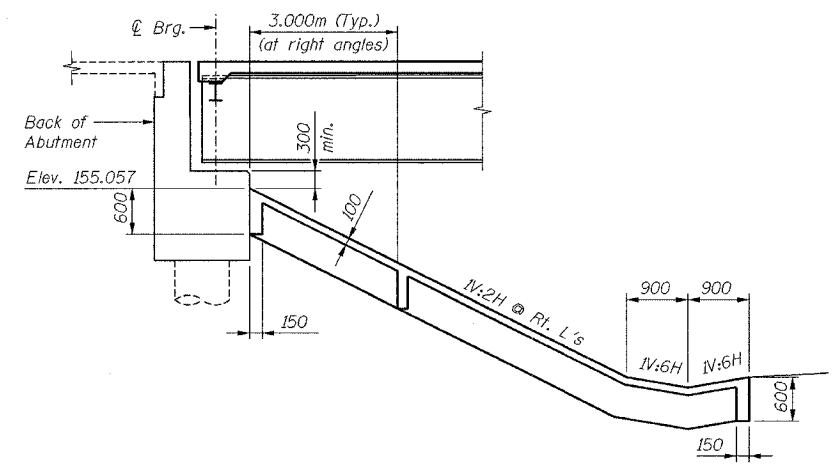
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STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		



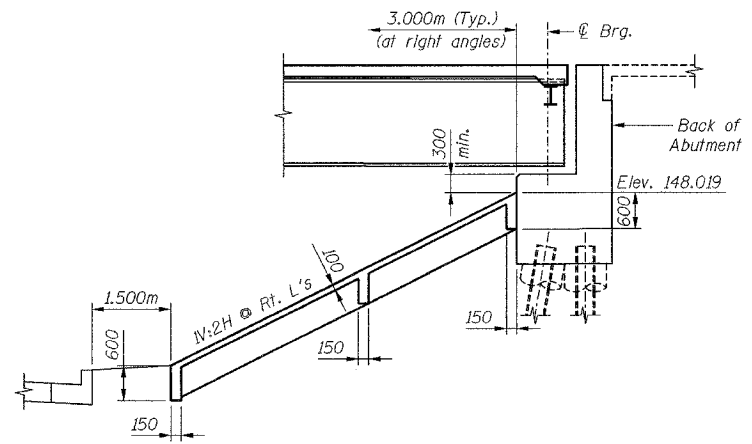
PLAN OF SLOPEWALL AT S. ABUTMENT



PLAN OF SLOPEWALL AT N. ABUTMENT



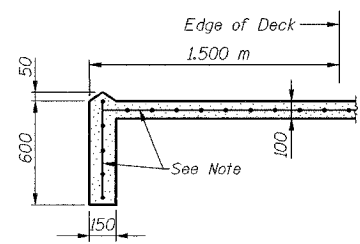
SECTION THRU SLOPEWALL AT S. ABUTMENT



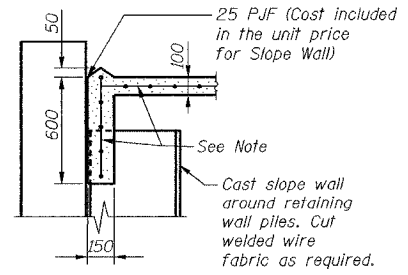
SECTION THRU SLOPEWALL AT N. ABUTMENT

CURVE DATA

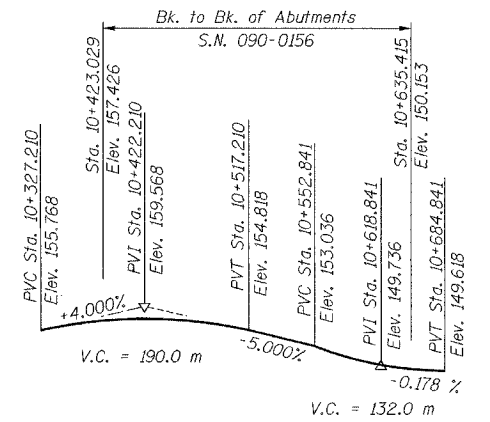
RAMP J-3	RAMP K-2
$\Delta = 6^{\circ}05'48.00''$	$\Delta = 7^{\circ}58'57.09''$
$R = 450.000 \text{ m}$	$R = 580.000 \text{ m}$
$T = 23.964 \text{ m}$	$T = 40.469 \text{ m}$
$L = 47.883 \text{ m}$	$L = 80.806 \text{ m}$
$E = 0.638 \text{ m}$	$E = 1.410 \text{ m}$
$PC = 10+204.232$	$PC = 10+423.959$
$PI = 10+228.196$	$PI = 10+464.428$
$PT = 10+252.115$	$PT = 10+504.765$
$SE = 6.2\%$	$SE = 4.4\%$
Transition in: 10+177 to 10+218	Transition in: 10+385 to 10+443
Transition out: 10+237 to 10+283	Transition out: 10+484 to 10+547



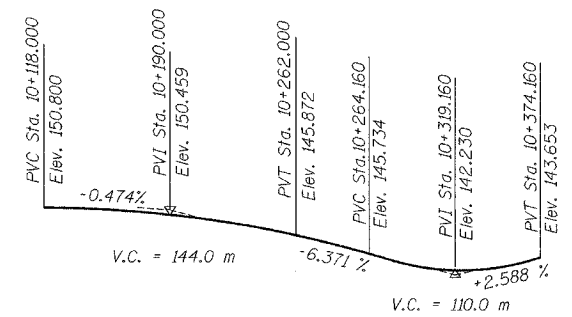
SECTION A-A



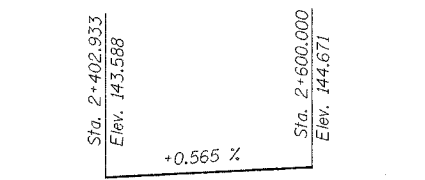
SECTION B-B



PROFILE GRADE RAMP K-2



PROFILE GRADE RAMP J-3



PROFILE MAIN STREET

Note:
Slope Wall shall be reinforced with welded wire fabric, 152 x 152 - MW25.8 x MW25.8 with a mass of 2.91 kg/m². (Cost included in The Unit Price for Slope Wall).

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IHIB-5
GENERAL PLAN II

SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

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

2/3/2005

m:\p\ro3573\c\mpk2\st11g2-7c0900056.dgn

DESIGNED	KMP
CHECKED	WJZ
DRAWN	VH
CHECKED	LRB

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	548
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS		PROJECT
SHEET 3 OF 56					

GENERAL NOTES

- Fasteners shall be high strength bolts. Bolts M20, open holes 22 mm dia., unless otherwise noted.
- Calculated mass of Structural Steel:
AASHTO M270M Grade 345 = 382,330 kg
AASHTO M270M Grade 250 = 600 kg
- Roadway expansion guards shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.
- The roadway expansion plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications.
- Field welding of construction accessories will not be permitted to beams or girders.
- Anchor bolts shall be set before bolting cross frames over supports.
- 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, and all splice plate material except fill plates.
- Reinforcement bars shall conform to the requirements of AASHTO M-31M or M322M, Grade 400.
- Slope wall shall be reinforced with welded wire fabric, 152 x 152 - MW25.8 x MW25.8 with a mass of 2.91 kg/m².
- The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
- 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, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
- The Contractor shall drive 1 test piles in permanent location at the North Abutment and Pier 4 as directed by the Engineer before ordering the remainder of the piles.
- Bridge Seat Sealer shall be applied to the seat area of both abutments.
- 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, the next pour shall not be made until both of the following requirements are met:
 - At least 72 hours shall have elapsed from the end of the previous pour.
 - The concrete strength shall have attained a minimum flexural strength of 4.5MPa or a minimum compressive strength of 24MPa.
- All dimensions are in millimeters (mm) except as noted.
- All construction joints shall be bonded.
- The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all interior steel surfaces shall be gray, Munshell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia girders shall be light gray, Munshell No. 10Y 7/1. See special provisions for "Cleaning and Painting New Metal Structures."

INDEX OF DRAWINGS

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3	General Notes, Drawing Index and Bill of Material
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5	Drilled Shaft Details
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7	Top of Slab Elevations II
8	Top of Slab Elevations III
9	Top of Slab Elevations IV
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36	North Abutment Details
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39	Pier 2 Plan and Elevation
40	Pier 2 Details
41	Pier 3 Plan and Elevation
42	Pier 3 Details
43	Pier 4 Plan and Elevation
44	Pier 4 Footing Plan and Details
45	Bar Splicer Details
46	Soil Boring Logs
47	Soil Boring Logs
48	Soil Boring Logs
49	Soil Boring Logs
50	Soil Boring Logs
51	Soil Boring Logs
52	Soil Boring Logs
53	Soil Boring Logs
54	Soil Boring Logs
55	Soil Boring Logs
56	Soil Boring Logs

TOTAL BILL OF MATERIAL

PAY ITEM	UNIT	SUPER	SUB	TOTAL
ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH		4	4
ELASTOMERIC BEARING ASSEMBLY, TYPE III	EACH		4	4
STUD SHEAR CONNECTORS	EACH	4,892		4,892
NAME PLATES	EACH	1		1
POROUS GRANULAR EMBANKMENT	CU M		111	111
STRUCTURE EXCAVATION	CU M		199	199
ROCK EXCAVATION FOR STRUCTURES	CU M		8	8
CONCRETE STRUCTURES	CU M		195.4	195.4
CONCRETE SUPERSTRUCTURE	CU M	538.9		538.9
BRIDGE DECK GROOVING	SQ M	1,538		1,538
PROTECTIVE COAT	SQ M	2,212		2,212
FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	0.7		0.7
REINFORCEMENT BARS, EPOXY COATED	KG	83,850	43,260	127,110
SLOPE WALL 100 MM	SQ M		311	311
FURNISHING STEEL PILES HP360x132	METER		186.0	186.0
DRIVING STEEL PILES	METER		186.0	186.0
TEST PILE STEEL HP360x132	EACH		2	2
BRIDGE SEAT SEALER	SQ M		42	42
BRACED EXCAVATION	CU M		63	63
FLOATING BEARINGS, FIXED - 1850KN	EACH		4	4
FLOATING BEARINGS, GUIDED EXPANSION, 1500KN	EACH		8	8
FLOATING BEARINGS, GUIDED EXPANSION, 2000KN	EACH		4	4
DRILLED SHAFT IN SOIL 915MM	METER		25.5	25.5
DRILLED SHAFT IN SOIL 1830MM	METER		1.0	1.0
DRILLED SHAFT IN SOIL 1980MM	METER		4.5	4.5
DRILLED SHAFT IN ROCK 760MM	METER		20.5	20.5
DRILLED SHAFT IN ROCK 1830MM	METER		16.5	16.5
FABRIC REINFORCED ELASTOMERIC TROUGH	METER	17.5		17.5
DRAINAGE SCUPPERS, TYPE 1	EACH		5	5
BAR SPLICERS	EACH		61	61
DRAINAGE SYSTEM	L SUM	0.67		0.67

STATION 10+529.222
BUILT 200_ BY
STATE OF ILLINOIS
F.A.I RT.74 SEC. 090-11HB-5
LOADING MS18
STR. NO. 090-0156

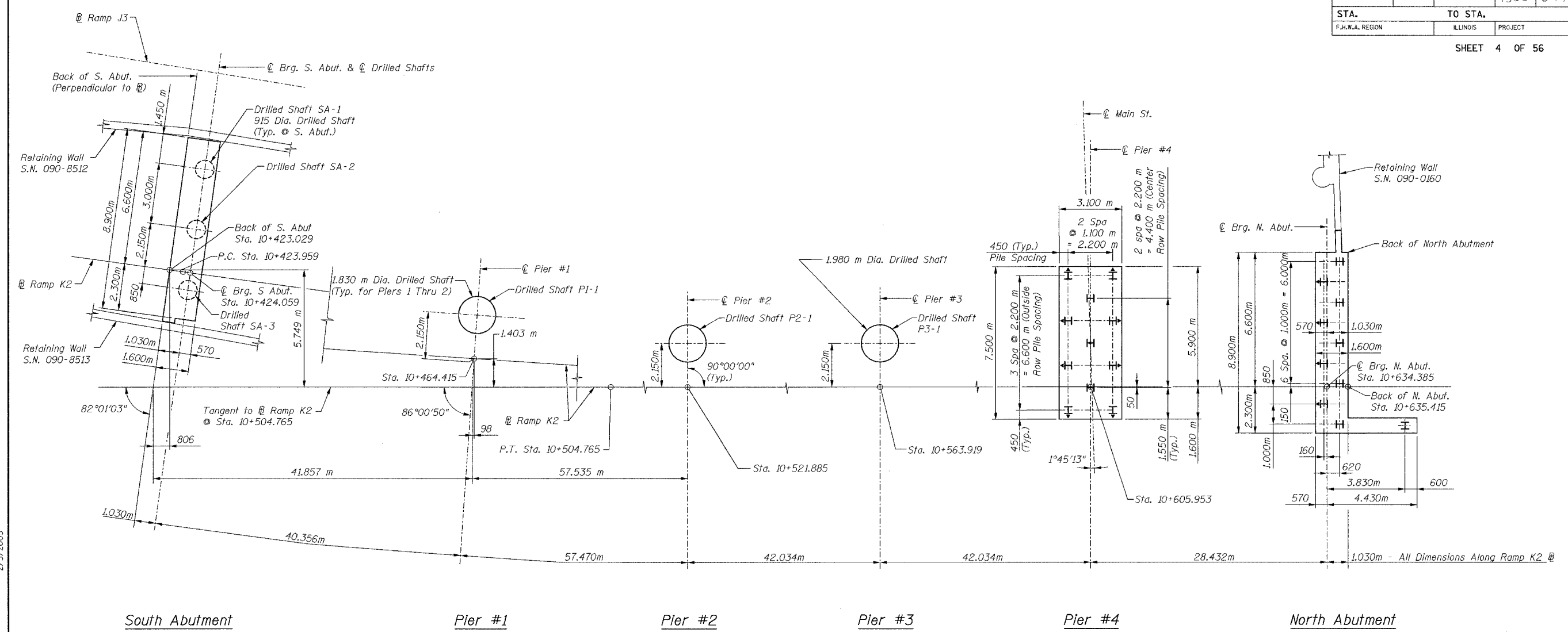
NAME PLATE
See Std. 515001

DESIGNED	HAA
CHECKED	KWS
DRAWN	VH
CHECKED	LRB

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205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3513

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-11HB-5
**GENERAL NOTES, DRAWING INDEX,
AND BILL OF MATERIALS**
SN: 090-0156 STA. 10+529.222
TAZEWELL CO., IL. DATE: 12-23-04

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI74	*	TAZEWELL	1316	549
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		



FOUNDATION PLAN

- Notes:**
- ▲ Indicates Direction of 1.7 (H) : 10 (V) Batter @ Pier 4 or 2.2 (H) : 10 (V) Batter @ N. Abut.
 - For Pier 4 Footing & Pile elevations, see Sheets 43 and 44.
 - For Abutment pile encasement detail, see Sheet 35.
 - For Drilled Shaft Details, see Sheet 5.
 - For South Abutment details, see Sheets 33 and 34.
 - For North Abutment details, see Sheets 35, and 36.

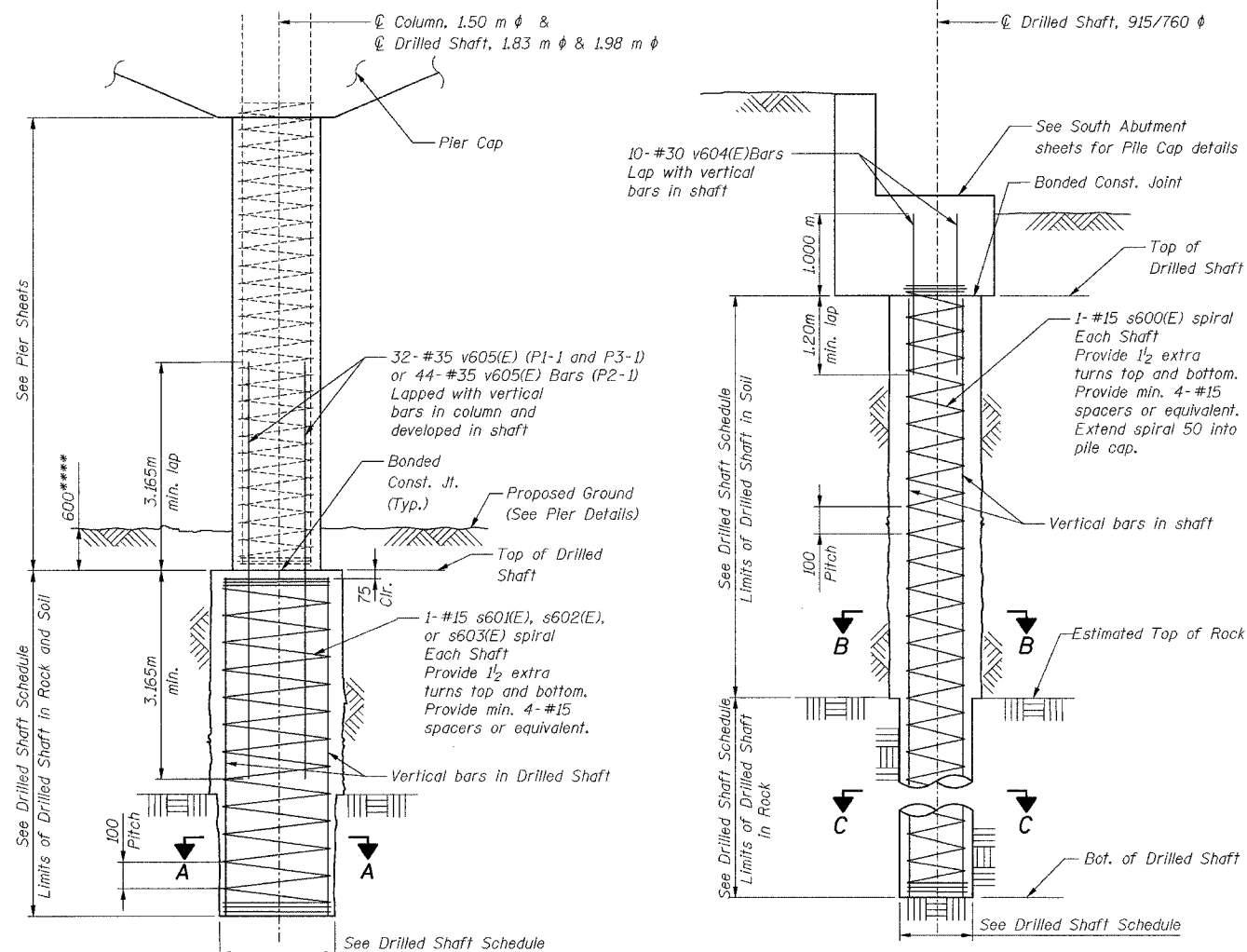
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CHECKED	SWS
DRAWN	VH
CHECKED	LRB

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIIB-5
FOUNDATION PLAN
 SN: 090-0156
 TAZEWELL CO., IL.
 STA. 10+529.222
 DATE: 12-23-04

2/3/2005 m:\p\proj\3573\campk2\stl\pl-7a0900156.dgn

68201	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	550
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		



ELEVATION
(Piers #1 thru #3)

**** Shown for concrete placement above the water table. Should be increased if tremie methods are required.

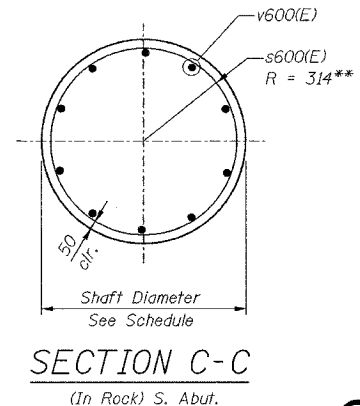
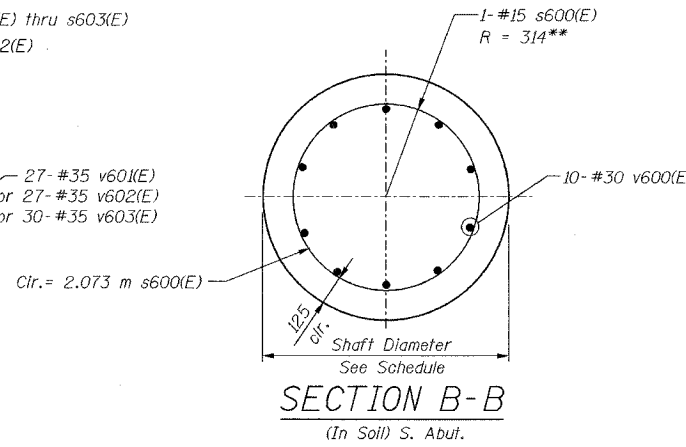
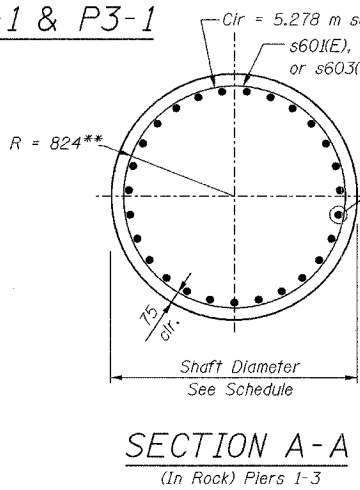
DRILLED SHAFTS
P1-1, P2-1 & P3-1

ELEVATION
(South Abutment)
DRILLED SHAFTS
SA-1 thru SA-3

Bar Designation Table

Shaft	Vertical Bars	Spiral
SA-1	v600(E)	v604(E) s600(E)
SA-2	v600(E)	v604(E) s600(E)
SA-3	v600(E)	v604(E) s600(E)
P1-1	v601(E)	v605(E) s601(E)
P2-1	v602(E)	v605(E) s602(E)
P3-1	v603(E)	v605(E) s603(E)

DESIGNED	AAY
CHECKED	ISD
DRAWN	VH
CHECKED	LRB



DRILLED SHAFT SCHEDULE

LOCATION	MARK	Drilled Shaft (m) (Dia. in Soil)	Drilled Shaft (m) (Dia. in Rock)	Estimated Top of Rock (m)	Shaft Length (m) (In Soil)	Shaft Length (m) (In Rock)	Top of Shaft Elevation (m)	Bottom of Shaft Elevation (m)
S. Abut.	SA-1	0.915	0.760	145.900	8.387	6.700	154.287	139.200
	SA-2	0.915	0.760	145.900	8.387	6.700	154.287	139.200
	SA-3	0.915	0.760	145.900	8.387	6.700	154.287	139.200
Pier 1	P1-1	1.830	1.830	145.200	1.000	7.200	146.200	138.000
Pier 2	P2-1	---	1.830	145.500	---	6.600	142.600	136.000
Pier 3	P3-1	1.980	1.830	139.100	4.400	2.300	143.500	136.800

NOTES:

- Construction to be performed in conformance with the Special Provision "Drilled Shafts". Contractor and field personnel qualification shall be approved by Engineer.
- Contractor to submit to Engineer for review and approval an installation plan for the construction of drilled shafts.
- The boring logs indicate a possibility that voids may be encountered during drilling. The Contractor shall be required to provide, as part of their installation procedure submittal, details and methods for placing concrete through the voids without the creation of a structural defect. If a void is encountered, its elevation and length shall be forwarded to the Bureau of Bridges and Structures for evaluation and to determine if any modifications will be required to the shaft or installation details. Any work and materials required to mitigate any encountered voids shall be paid according to Article 109.04.
- All steel centering devices shall be epoxy coated.
- For layout of drilled shafts see Sheet 4.

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
s600(E)	3	# 15	15.15	W
s601(E)	1	# 15	8.20	W
s602(E)	1	# 15	6.60	W
s603(E)	1	# 15	6.70	W
v600(E)	30	# 30	15.05	—
v601(E)	27	# 35	8.15	—
v602(E)	27	# 35	6.55	—
v603(E)	27	# 35	6.65	—
v604(E)	30	# 30	2.20	—
v605(E)	108	# 35	6.33	—
			Unit	Total
Drilled Shaft in Soil 1980mm Dia.			m	4.5
Drilled Shaft in Soil 1830mm Dia.			m	1.0
Drilled Shaft in Rock 1830mm Dia.			m	16.5
Drilled Shaft in Soil 915mm Dia.			m	25.5
Drilled Shaft in Rock 760mm Dia.			m	20.5
Reinforcement Bars, Epoxy Coated			kg	16,210

Reinforcement Bars designated (E) shall be Epoxy coated.
Minimum lap for spirals = 1/2 turns.
**Denotes inside radius.
***Length is height of spiral.
Cir. = circumference (using outside diameter).

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIB-5

DRILLED SHAFT DETAILS

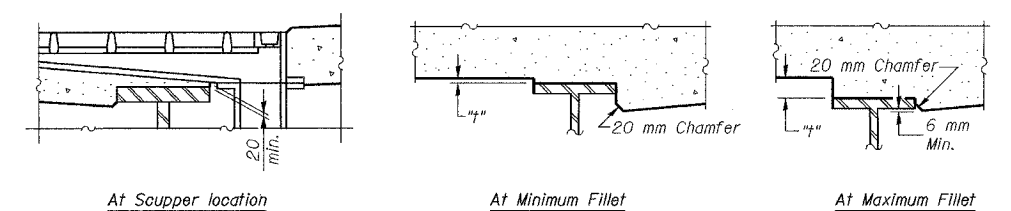
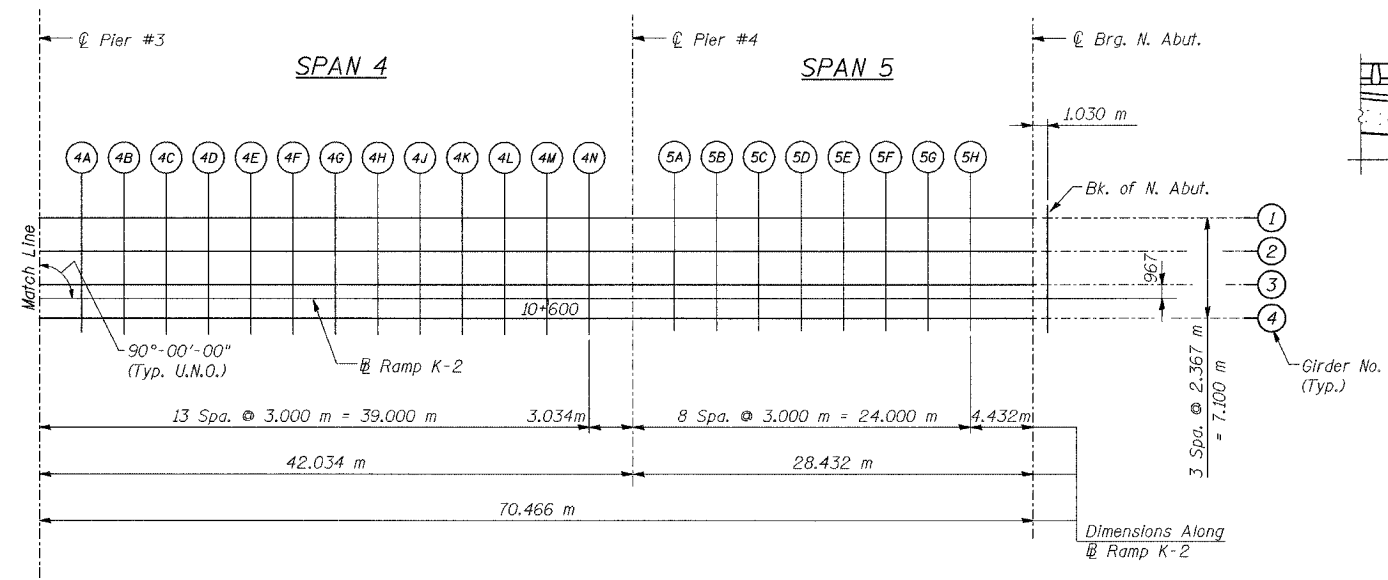
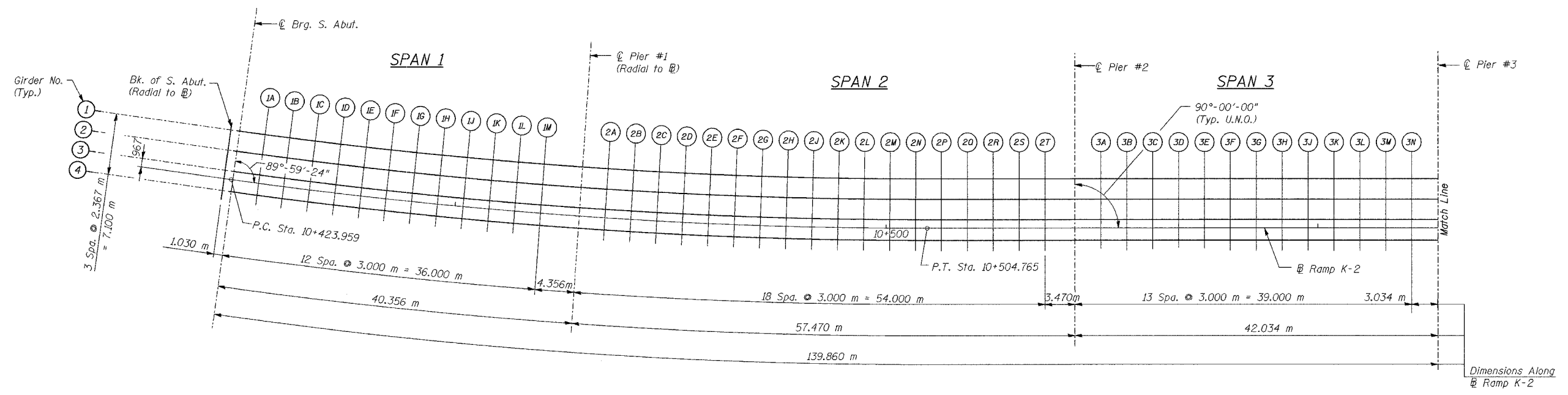
SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

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

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68201				
68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS
	FAI74	*	TAZEWELL	1366
				SHEET NO. 551
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS		PROJECT

SHEET 6 OF 56



To determine "t": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 6 & 7, minus slab thickness, equals the fillet heights "t" above top flange of girders.

FILLET HEIGHTS

NOTES:

- Screed points are located at 3 m intervals along each girder. (These points do not necessarily fall on the lettered screed lines. These lines are schematic only.)
- For top of slab elevations see sheets 7 thru 9.
- For Dead Load Deflection Diagram see sheet 9.

DESIGNED	KWS
CHECKED	ADD
DRAWN	VH
CHECKED	LRB

PLAN

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JOB NO. 3513

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIB-5
TOP OF SLAB ELEVATIONS I
SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

2/3/2005
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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI74	*	TAZEWELL	1366	552
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. S. ABUT.	10+423.029	-5.700	157.278	157.278
☉ BRG. S. ABUT.	10+424.060	-5.700	157.267	157.267
1A	10+427.031	-5.700	157.233	157.241
1B	10+430.002	-5.700	157.194	157.209
1C	10+432.972	-5.700	157.152	157.171
1D	10+435.943	-5.700	157.105	157.128
1E	10+438.914	-5.700	157.054	157.077
1F	10+441.885	-5.700	156.996	157.017
1G	10+444.856	-5.700	156.945	156.962
1H	10+447.826	-5.700	156.896	156.908
1J	10+450.797	-5.700	156.843	156.849
1K	10+453.768	-5.700	156.786	156.785
1L	10+456.739	-5.700	156.725	156.721
1M	10+459.710	-5.700	156.659	156.654
☉ BRG. PIER 1	10+464.415	-5.700	156.547	156.547
2A	10+467.386	-5.700	156.470	156.481
2B	10+470.357	-5.700	156.390	156.411
2C	10+473.327	-5.700	156.305	156.342
2D	10+476.298	-5.700	156.216	156.268
2E	10+479.269	-5.700	156.123	156.192
2F	10+482.240	-5.700	156.026	156.111
2G	10+485.211	-5.700	155.932	156.030
2H	10+488.181	-5.700	155.843	155.954
2J	10+491.152	-5.700	155.751	155.867
2K	10+494.123	-5.700	155.654	155.773
2L	10+497.094	-5.700	155.553	155.669
2M	10+500.065	-5.700	155.448	155.558
2N	10+503.035	-5.700	155.339	155.436
2P	10+506.018	-5.700	155.225	155.308
2Q	10+509.018	-5.700	155.106	155.172
2R	10+512.018	-5.700	154.983	155.031
2S	10+515.018	-5.700	154.855	154.886
2T	10+518.018	-5.700	154.724	154.740
☉ BRG. PIER 2	10+521.885	-5.700	154.553	154.553

GIRDER 1 CONT.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
3A	10+524.885	-5.700	154.420	154.415
3B	10+527.885	-5.700	154.288	154.279
3C	10+530.885	-5.700	154.155	154.145
3D	10+533.885	-5.700	154.022	154.015
3E	10+536.885	-5.700	153.890	153.886
3F	10+539.885	-5.700	153.757	153.756
3G	10+542.885	-5.700	153.624	153.626
3H	10+545.885	-5.700	153.492	153.495
3J	10+548.885	-5.700	153.348	153.351
3K	10+551.885	-5.700	153.198	153.200
3L	10+554.885	-5.700	153.049	153.049
3M	10+557.885	-5.700	152.902	152.901
3N	10+560.885	-5.700	152.760	152.758
☉ BRG. PIER 3	10+563.919	-5.700	152.619	152.619
4A	10+566.919	-5.700	152.482	152.489
4B	10+569.919	-5.700	152.349	152.365
4C	10+572.919	-5.700	152.220	152.246
4D	10+575.919	-5.700	152.093	152.130
4E	10+578.919	-5.700	151.970	152.014
4F	10+581.919	-5.700	151.851	151.900
4G	10+584.919	-5.700	151.734	151.786
4H	10+587.919	-5.700	151.621	151.670
4J	10+590.919	-5.700	151.511	151.555
4K	10+593.919	-5.700	151.404	151.441
4L	10+596.919	-5.700	151.301	151.328
4M	10+599.919	-5.700	151.201	151.217
4N	10+602.919	-5.700	151.111	151.111
☉ BRG. PIER 4	10+605.953	-5.700	151.010	151.010
5A	10+608.953	-5.700	150.919	150.919
5B	10+611.953	-5.700	150.833	150.833
5C	10+614.953	-5.700	150.749	150.753
5D	10+617.953	-5.700	150.669	150.675
5E	10+620.953	-5.700	150.592	150.601
5F	10+623.953	-5.700	150.518	150.529
5G	10+626.953	-5.700	150.448	150.458
5H	10+629.953	-5.700	150.380	150.388
☉ BRG. N. ABUT.	10+634.385	-5.700	150.287	150.287
BK. N. ABUT	10+635.415	-5.700	150.267	150.267

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. S. ABUT.	10+423.029	-3.334	157.347	157.347
☉ BRG. S. ABUT.	10+424.060	-3.334	157.338	157.338
1A	10+427.042	-3.334	157.308	157.316
1B	10+430.025	-3.334	157.274	157.290
1C	10+433.008	-3.334	157.236	157.257
1D	10+435.991	-3.334	157.194	157.218
1E	10+438.974	-3.334	157.147	157.170
1F	10+441.957	-3.334	157.096	157.117
1G	10+444.940	-3.334	157.048	157.065
1H	10+447.922	-3.334	156.999	157.010
1J	10+450.905	-3.334	156.945	156.950
1K	10+453.888	-3.334	156.888	156.887
1L	10+456.871	-3.334	156.826	156.822
1M	10+459.854	-3.334	156.760	156.755
☉ BRG. PIER 1	10+464.415	-3.334	156.651	156.651
2A	10+467.398	-3.334	156.574	156.585
2B	10+470.381	-3.334	156.493	156.515
2C	10+473.364	-3.334	156.408	156.446
2D	10+476.346	-3.334	156.319	156.373
2E	10+479.329	-3.334	156.225	156.298
2F	10+482.312	-3.334	156.128	156.217
2G	10+485.295	-3.334	156.030	156.133
2H	10+488.278	-3.334	155.934	156.049
2J	10+491.261	-3.334	155.834	155.955
2K	10+494.244	-3.334	155.729	155.853
2L	10+497.226	-3.334	155.621	155.741
2M	10+500.209	-3.334	155.508	155.621
2N	10+503.192	-3.334	155.391	155.491
2P	10+506.183	-3.334	155.269	155.355
2Q	10+509.183	-3.334	155.143	155.211
2R	10+512.183	-3.334	155.012	155.062
2S	10+515.183	-3.334	154.877	154.908
2T	10+518.183	-3.334	154.738	154.755
☉ BRG. PIER 2	10+521.885	-3.334	154.566	154.566

GIRDER 2 CONT.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
3A	10+524.885	-3.334	154.426	154.420
3B	10+527.885	-3.334	154.286	154.277
3C	10+530.885	-3.334	154.146	154.136
3D	10+533.885	-3.334	154.007	153.998
3E	10+536.885	-3.334	153.867	153.862
3F	10+539.885	-3.334	153.727	153.725
3G	10+542.885	-3.334	153.587	153.587
3H	10+545.885	-3.334	153.447	153.449
3J	10+548.885	-3.334	153.301	153.302
3K	10+551.885	-3.334	153.151	153.151
3L	10+554.885	-3.334	153.001	153.000
3M	10+557.885	-3.334	152.855	152.854
3N	10+560.885	-3.334	152.712	152.711
☉ BRG. PIER 3	10+563.919	-3.334	152.571	152.571
4A	10+566.919	-3.334	152.435	152.443
4B	10+569.919	-3.334	152.302	152.319
4C	10+572.919	-3.334	152.172	152.200
4D	10+575.919	-3.334	152.046	152.084
4E	10+578.919	-3.334	151.923	151.968
4F	10+581.919	-3.334	151.803	151.853
4G	10+584.919	-3.334	151.687	151.740
4H	10+587.919	-3.334	151.574	151.624
4J	10+590.919	-3.334	151.464	151.508
4K	10+593.919	-3.334	151.357	151.394
4L	10+596.919	-3.334	151.254	151.281
4M	10+599.919	-3.334	151.154	151.170
4N	10+602.919	-3.334	151.057	151.064
☉ BRG. PIER 4	10+605.953	-3.334	150.962	150.962
5A	10+608.953	-3.334	150.872	150.871
5B	10+611.953	-3.334	150.785	150.786
5C	10+614.953	-3.334	150.702	150.704
5D	10+617.953	-3.334	150.621	150.628
5E	10+620.953	-3.334	150.544	150.554
5F	10+623.953	-3.334	150.471	150.482
5G	10+626.953	-3.334	150.400	150.411
5H	10+629.953	-3.334	150.333	150.340
☉ BRG. N. ABUT.	10+634.385	-3.334	150.240	150.240
BK. N. ABUT	10+635.415	-3.334	150.219	150.219

SCREED TABLES - SPANS 1 THRU 5

DESIGNED	KWS
CHECKED	ADD
DRAWN	VH
CHECKED	LRB

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205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIB-5

TOP OF SLAB ELEVATIONS II

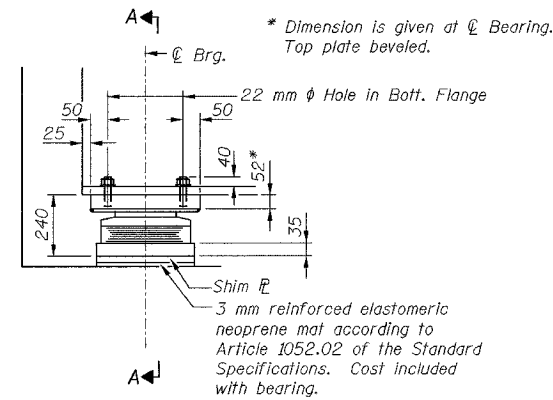
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TAZEWELL CO., IL.

STA. 10+529.222
DATE: 12-23-04

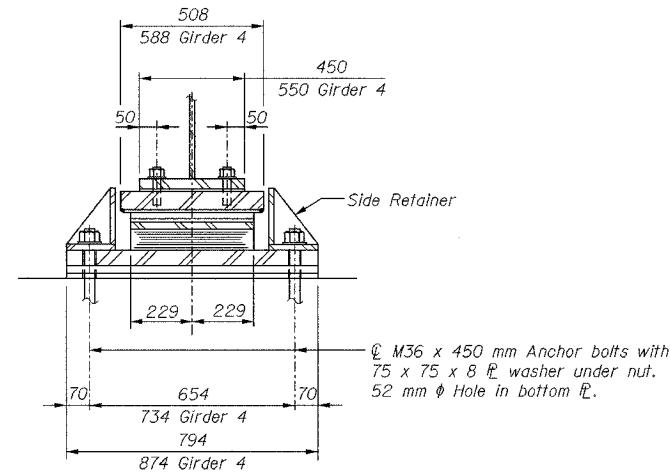
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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74		TAZEVELL	1366	553
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		

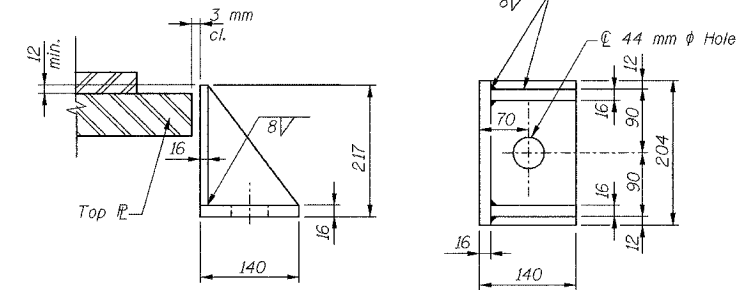


ELEVATION
Side retainer not shown for clarity

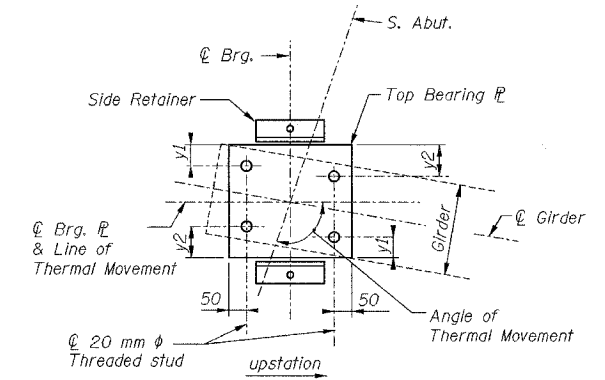


SECTION A-A
Girder 4

TYPE II ELASTOMERIC EXPANSION BEARING



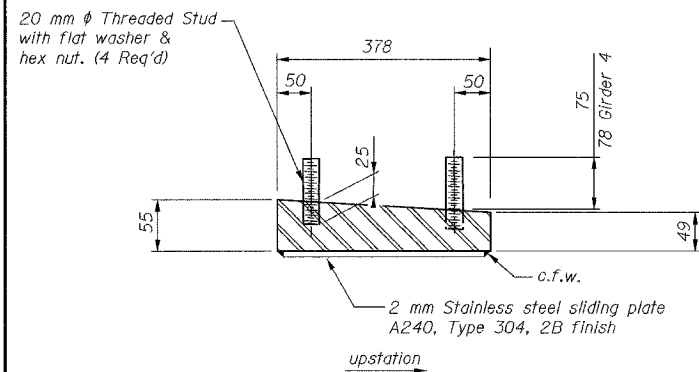
SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
Weight included with Structural Steel.



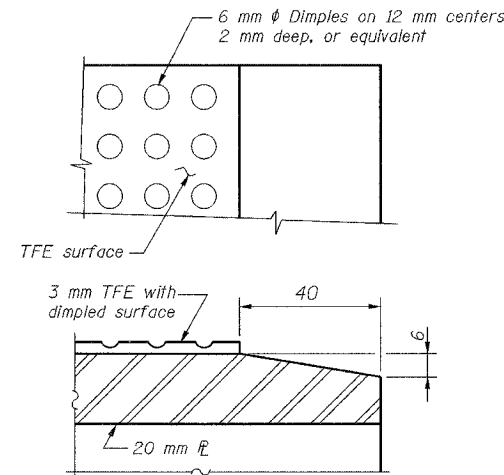
Bearing Location	Angle of Thermal Movement	y1	y2
Girder 1	94°-41'-59"	67	90
Girder 2	94°-41'-50"	67	90
Girder 3	94°-41'-42"	67	90
Girder 4	94°-41'-33"	57	80

BILL OF MATERIAL

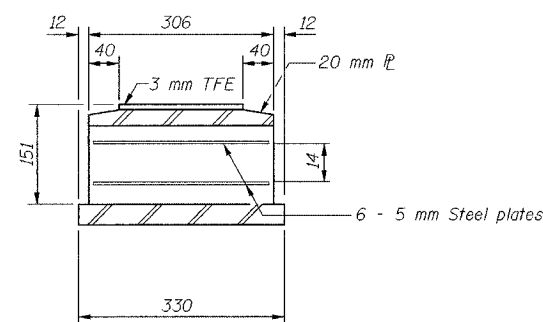
Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	4



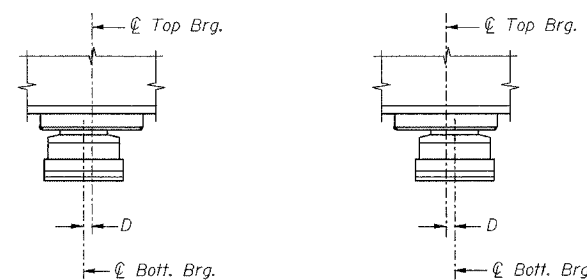
ELEVATION - TOP BEARING ASSEMBLY



SECTION THRU TFE



ELEVATION - BOTTOM BEARING ASSEMBLY



SETTING ANCHOR BOLTS AT EXP. BRG.

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

DESIGNED	HAA
CHECKED	KWS
DRAWN	VH
CHECKED	LRB

NOTES:

- The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270M Grade 345.
- 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.
- See sheet 30 for Anchor Bolt Details.
- See sheet 19 for Framing Plan.
- All dimensions are in millimeters (mm) except as noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIB-5
ELASTOMERIC BEARING DETAILS
SOUTH ABUTMENT

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

SN: 090-0156
TAZEVELL CO., IL.

STA. 10+529.222
DATE: 12-23-04

2/3/2005

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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	554
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		

GIRDER 3

GIRDER 3 CONT.

RAMP K-2 & P.G.

RAMP K-2 & P.G. CONT.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. S. ABUT.	10+423.029	-0.967	157.403	157.403
☉ BRG. S. ABUT.	10+424.059	-0.967	157.397	157.397
1A	10+427.054	-0.967	157.374	157.382
1B	10+430.049	-0.967	157.347	157.362
1C	10+433.044	-0.967	157.316	157.336
1D	10+436.039	-0.967	157.280	157.303
1E	10+439.034	-0.967	157.241	157.263
1F	10+442.029	-0.967	157.197	157.217
1G	10+445.024	-0.967	157.151	157.166
1H	10+448.019	-0.967	157.101	157.111
1J	10+451.014	-0.967	157.047	157.050
1K	10+454.009	-0.967	156.989	156.988
1L	10+457.004	-0.967	156.927	156.923
1M	10+459.999	-0.967	156.861	156.855
☉ BRG. PIER 1	10+464.415	-0.967	156.755	156.755
2A	10+467.410	-0.967	156.678	156.690
2B	10+470.405	-0.967	156.597	156.620
2C	10+473.400	-0.967	156.511	156.551
2D	10+476.395	-0.967	156.422	156.478
2E	10+479.390	-0.967	156.328	156.402
2F	10+482.385	-0.967	156.229	156.322
2G	10+485.380	-0.967	156.128	156.235
2H	10+488.375	-0.967	156.025	156.143
2J	10+491.370	-0.967	155.917	156.041
2K	10+494.365	-0.967	155.804	155.931
2L	10+497.360	-0.967	155.688	155.811
2M	10+500.355	-0.967	155.567	155.683
2N	10+503.350	-0.967	155.442	155.545
2P	10+506.348	-0.967	155.313	155.399
2Q	10+509.348	-0.967	155.179	155.247
2R	10+512.348	-0.967	155.041	155.090
2S	10+515.348	-0.967	154.899	154.929
2T	10+518.348	-0.967	154.752	154.768
☉ BRG. PIER 2	10+521.885	-0.967	154.579	154.579

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
3A	10+524.885	-0.967	154.432	154.426
3B	10+527.885	-0.967	154.285	154.275
3C	10+530.885	-0.967	154.138	154.126
3D	10+533.885	-0.967	153.991	153.981
3E	10+536.885	-0.967	153.844	153.837
3F	10+539.885	-0.967	153.697	153.692
3G	10+542.885	-0.967	153.550	153.548
3H	10+545.885	-0.967	153.402	153.402
3J	10+548.885	-0.967	153.254	153.253
3K	10+551.885	-0.967	153.104	153.102
3L	10+554.885	-0.967	152.954	152.952
3M	10+557.885	-0.967	152.808	152.806
3N	10+560.885	-0.967	152.665	152.664
☉ BRG. PIER 3	10+563.919	-0.967	152.524	152.524
4A	10+566.919	-0.967	152.388	152.395
4B	10+569.919	-0.967	152.255	152.272
4C	10+572.919	-0.967	152.125	152.152
4D	10+575.919	-0.967	151.999	152.037
4E	10+578.919	-0.967	151.876	151.921
4F	10+581.919	-0.967	151.756	151.807
4G	10+584.919	-0.967	151.639	151.692
4H	10+587.919	-0.967	151.526	151.577
4J	10+590.919	-0.967	151.416	151.462
4K	10+593.919	-0.967	151.310	151.348
4L	10+596.919	-0.967	151.206	151.234
4M	10+599.919	-0.967	151.106	151.123
4N	10+602.919	-0.967	151.009	151.017
☉ BRG. PIER 4	10+605.953	-0.967	150.915	150.915
5A	10+608.953	-0.967	150.825	150.824
5B	10+611.953	-0.967	150.738	150.738
5C	10+614.953	-0.967	150.654	150.657
5D	10+617.953	-0.967	150.574	150.581
5E	10+620.953	-0.967	150.497	150.507
5F	10+623.953	-0.967	150.423	150.434
5G	10+626.953	-0.967	150.353	150.363
5H	10+629.953	-0.967	150.286	150.293
☉ BRG. N. ABUT.	10+634.385	-0.967	150.193	150.193
BK. N. ABUT	10+635.415	-0.967	150.172	150.172

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. S. ABUT.	10+423.029	0.000	157.426	157.426
☉ BRG. S. ABUT.	10+424.059	0.000	157.420	157.420
1A	10+427.059	0.000	157.401	157.408
1B	10+430.059	0.000	157.377	157.391
1C	10+433.059	0.000	157.348	157.368
1D	10+436.059	0.000	157.316	157.338
1E	10+439.059	0.000	157.279	157.301
1F	10+442.059	0.000	157.238	157.257
1G	10+445.059	0.000	157.193	157.207
1H	10+448.059	0.000	157.143	157.152
1J	10+451.059	0.000	157.089	157.091
1K	10+454.059	0.000	157.031	157.029
1L	10+457.059	0.000	156.969	156.964
1M	10+460.059	0.000	156.902	156.896
☉ BRG. PIER 1	10+464.415	0.000	156.798	156.798
2A	10+467.415	0.000	156.720	156.732
2B	10+470.415	0.000	156.639	156.663
2C	10+473.415	0.000	156.553	156.594
2D	10+476.415	0.000	156.464	156.521
2E	10+479.415	0.000	156.369	156.446
2F	10+482.415	0.000	156.271	156.364
2G	10+485.415	0.000	156.168	156.276
2H	10+488.415	0.000	156.061	156.181
2J	10+491.415	0.000	155.950	156.076
2K	10+494.415	0.000	155.835	155.963
2L	10+497.415	0.000	155.715	155.840
2M	10+500.415	0.000	155.591	155.708
2N	10+503.415	0.000	155.463	155.567
2P	10+506.415	0.000	155.330	155.418
2Q	10+509.415	0.000	155.193	155.262
2R	10+512.415	0.000	155.052	155.102
2S	10+515.415	0.000	154.907	154.938
2T	10+518.415	0.000	154.758	154.774
☉ BRG. PIER 2	10+521.885	0.000	154.584	154.584

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
3A	10+524.885	0.000	154.434	154.428
3B	10+527.885	0.000	154.284	154.274
3C	10+530.885	0.000	154.134	154.122
3D	10+533.885	0.000	153.984	153.973
3E	10+536.885	0.000	153.834	153.826
3F	10+539.885	0.000	153.684	153.678
3G	10+542.885	0.000	153.534	153.531
3H	10+545.885	0.000	153.384	153.382
3J	10+548.885	0.000	153.234	153.233
3K	10+551.885	0.000	153.084	153.083
3L	10+554.885	0.000	152.935	152.933
3M	10+557.885	0.000	152.788	152.786
3N	10+560.885	0.000	152.646	152.644
☉ BRG. PIER 3	10+563.919	0.000	152.505	152.505
4A	10+566.919	0.000	152.368	152.376
4B	10+569.919	0.000	152.235	152.253
4C	10+572.919	0.000	152.106	152.133
4D	10+575.919	0.000	151.979	152.018
4E	10+578.919	0.000	151.856	151.903
4F	10+581.919	0.000	151.737	151.788
4G	10+584.919	0.000	151.620	151.674
4H	10+587.919	0.000	151.507	151.558
4J	10+590.919	0.000	151.397	151.443
4K	10+593.919	0.000	151.290	151.328
4L	10+596.919	0.000	151.187	151.215
4M	10+599.919	0.000	151.087	151.104
4N	10+602.919	0.000	150.990	150.997
☉ BRG. PIER 4	10+605.953	0.000	150.896	150.896
5A	10+608.953	0.000	150.805	150.805
5B	10+611.953	0.000	150.719	150.719
5C	10+614.953	0.000	150.635	150.638
5D	10+617.953	0.000	150.555	150.561
5E	10+620.953	0.000	150.478	150.487
5F	10+623.953	0.000	150.404	150.415
5G	10+626.953	0.000	150.334	150.343
5H	10+629.953	0.000	150.266	150.274
☉ BRG. N. ABUT.	10+634.385	0.000	150.173	150.173
BK. N. ABUT	10+635.415	0.000	150.153	150.153

2/3/2005

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DESIGNED	KWS
CHECKED	ADD
DRAWN	VH
CHECKED	LRB

SCREED TABLES - SPANS 1 THRU 5



ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIHB-5

TOP OF SLAB ELEVATIONS III

SN: 090-0156
 TAZEWELL CO., IL.

STA. 10+529.222
 DATE: 12-23-04

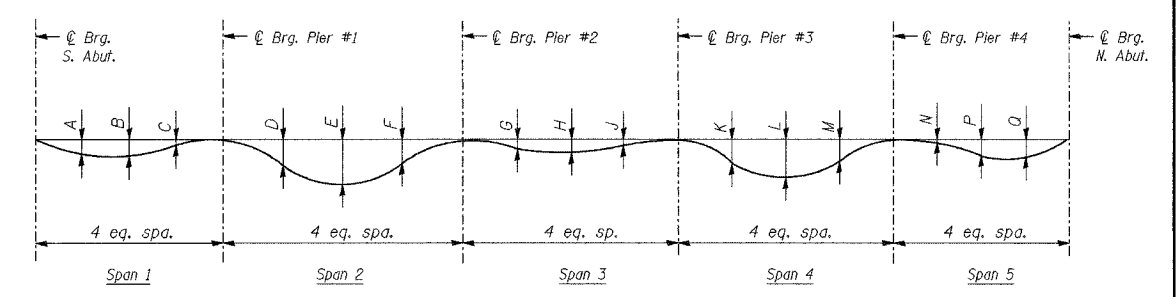
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	555
STA.		TO STA.		
F.I.L.W.A. REGION		ILLINOIS PROJECT		

GIRDER 4

GIRDER 4 CONT.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
BK. S. ABUT.	10+423.029	1.400	157.459	157.459
☉ BRG. S. ABUT.	10+424.059	1.400	157.455	157.455
1A	10+427.066	1.400	157.440	157.447
1B	10+430.073	1.400	157.420	157.434
1C	10+433.081	1.400	157.396	157.415
1D	10+436.088	1.400	157.367	157.389
1E	10+439.095	1.400	157.335	157.356
1F	10+442.102	1.400	157.298	157.316
1G	10+445.110	1.400	157.253	157.268
1H	10+448.117	1.400	157.204	157.212
1J	10+451.124	1.400	157.150	157.151
1K	10+454.131	1.400	157.091	157.089
1L	10+457.139	1.400	157.029	157.024
1M	10+460.146	1.400	156.962	156.956
☉ BRG. PIER 1	10+464.415	1.400	156.859	156.859
2A	10+467.422	1.400	156.782	156.794
2B	10+470.430	1.400	156.700	156.725
2C	10+473.437	1.400	156.614	156.656
2D	10+476.444	1.400	156.524	156.583
2E	10+479.451	1.400	156.430	156.507
2F	10+482.459	1.400	156.331	156.425
2G	10+485.466	1.400	156.226	156.335
2H	10+488.473	1.400	156.114	156.236
2J	10+491.480	1.400	155.999	156.126
2K	10+494.488	1.400	155.879	156.008
2L	10+497.495	1.400	155.754	155.880
2M	10+500.502	1.400	155.625	155.743
2N	10+503.509	1.400	155.492	155.597
2P	10+506.512	1.400	155.355	155.444
2Q	10+509.512	1.400	155.214	155.284
2R	10+512.512	1.400	155.069	155.119
2S	10+515.512	1.400	154.919	154.951
2T	10+518.512	1.400	154.765	154.782
☉ BRG. PIER 2	10+521.885	1.400	154.592	154.592

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
3A	10+524.885	1.400	154.438	154.431
3B	10+527.885	1.400	154.283	154.272
3C	10+530.885	1.400	154.129	154.116
3D	10+533.885	1.400	153.975	153.963
3E	10+536.885	1.400	153.821	153.811
3F	10+539.885	1.400	153.666	153.659
3G	10+542.885	1.400	153.512	153.508
3H	10+545.885	1.400	153.358	153.355
3J	10+548.885	1.400	153.206	153.204
3K	10+551.885	1.400	153.056	153.054
3L	10+554.885	1.400	152.907	152.905
3M	10+557.885	1.400	152.760	152.758
3N	10+560.885	1.400	152.618	152.615
☉ BRG. PIER 3	10+563.919	1.400	152.477	152.477
4A	10+566.919	1.400	152.340	152.348
4B	10+569.919	1.400	152.207	152.225
4C	10+572.919	1.400	152.078	152.106
4D	10+575.919	1.400	151.951	151.990
4E	10+578.919	1.400	151.828	151.875
4F	10+581.919	1.400	151.709	151.760
4G	10+584.919	1.400	151.592	151.646
4H	10+587.919	1.400	151.479	151.531
4J	10+590.919	1.400	151.369	151.415
4K	10+593.919	1.400	151.262	151.300
4L	10+596.919	1.400	151.159	151.187
4M	10+599.919	1.400	151.059	151.076
4N	10+602.919	1.400	150.962	150.969
☉ BRG. PIER 4	10+605.953	1.400	150.868	150.868
5A	10+608.953	1.400	150.777	150.777
5B	10+611.953	1.400	150.691	150.691
5C	10+614.953	1.400	150.607	150.610
5D	10+617.953	1.400	150.527	150.533
5E	10+620.953	1.400	150.450	150.459
5F	10+623.953	1.400	150.376	150.387
5G	10+626.953	1.400	150.306	150.315
5H	10+629.953	1.400	150.238	150.246
☉ BRG. N. ABUT.	10+634.385	1.400	150.145	150.145
BK. N. ABUT	10+635.415	1.400	150.125	150.125



DEAD LOAD DEFLECTION DIAGRAM

(Due to weight of concrete only)
(Deck and Parapet)

DEAD LOAD DEFLECTION TABLE

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
Girder 1	21	18	-1	67	120	75	-9	2	1	32	52	32	2	9	10
Girder 2	22	18	-2	69	125	78	-10	0	-1	33	53	32	1	9	10
Girder 3	21	17	-2	71	128	80	-11	-2	-2	33	53	33	1	9	10
Girder 4	20	16	-3	73	131	82	-13	-4	-2	34	54	33	1	9	10

"The above deflections are not for use in the field if the Engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflection."

SCREED TABLES - SPANS 1 THRU 5

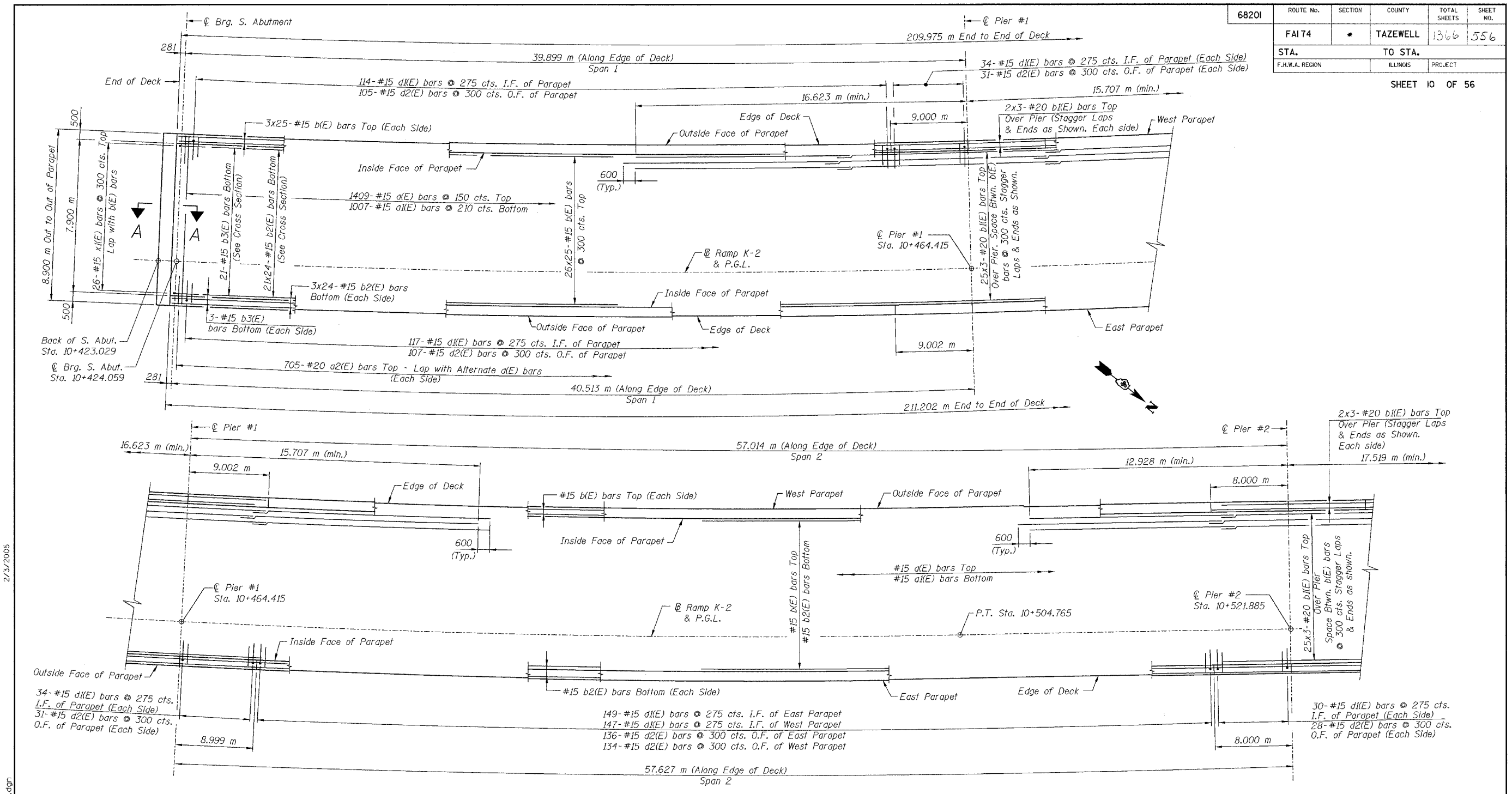
DESIGNED	KWS
CHECKED	ADD
DRAWN	VH
CHECKED	LRB

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIB-5
TOP OF SLAB ELEVATIONS IV
SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

2/3/2005
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ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	556
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS PROJECT		



PARTIAL PLAN
(Spans 1 and 2)

NOTES:

- All dimensions are in millimeters (mm) except as noted.
- Reinforcement bars designated "(E)" shall be epoxy coated.
- Bars indicated thus: 3x2-#15 etc. indicates 3 lines of bars with 2 lengths per line.
- Use the following minimum lap lengths unless otherwise noted:
#15 - 640 #25 - 1.32 m
#20 - 790
- For Parapet Elevation, Details, and Reinforcement, see sheet 14.
- For Drainage Scupper Locations see sheet 32.
- I.F. denotes Inside Face
O.F. denotes Outside Face
- Work this sheet with sheets 11 thru 13.

DESIGNED	HAA
CHECKED	KWS
DRAWN	VH
CHECKED	KJN

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3575

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IHB-5

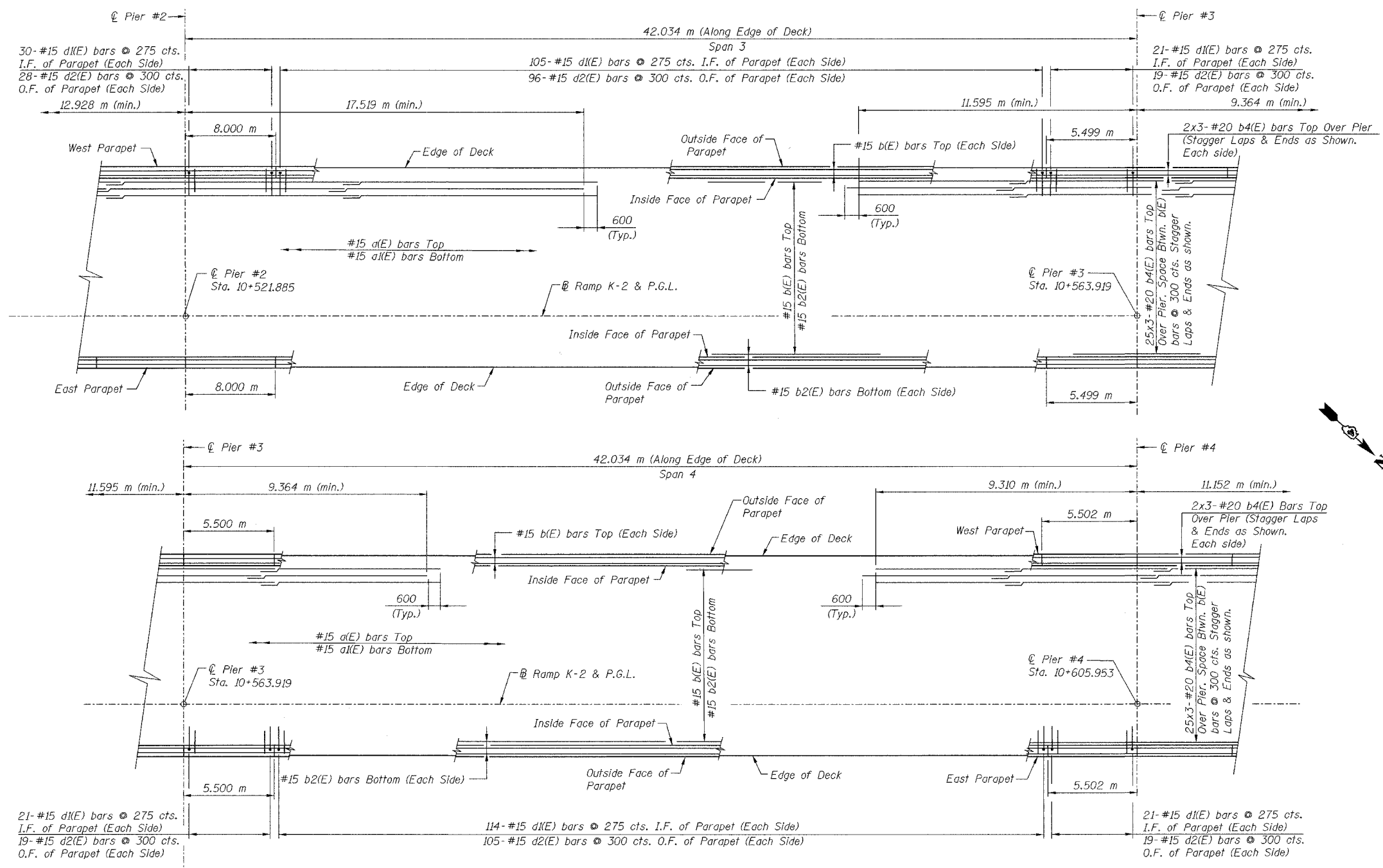
DECK PLAN
SPANS 1 AND 2

SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

2/3/2005

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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI74	*	TAZEWELL	1366	557
STA.		TO STA.			
F.H.W.A. REGION		ILLINOIS		PROJECT	



- NOTES:**
- All dimensions are in millimeters (mm) except as noted.
 - Reinforcement bars designated "E" shall be epoxy coated.
 - Bars indicated thus: 3x2-#15 etc. indicates 3 lines of bars with 2 lengths per line.
 - Use the following minimum lap lengths unless otherwise noted:
#15 - 640 #25 - 1.32 m
#20 - 790
 - For Parapet Elevation, Details, and Reinforcement, see sheet 14.
 - For Drainage Scupper Locations see sheet 32.
 - I.F. denotes Inside Face
O.F. denotes Outside Face
 - Work this sheet with sheets 10, 12 & 13.

PARTIAL PLAN
(Spans 3 and 4)

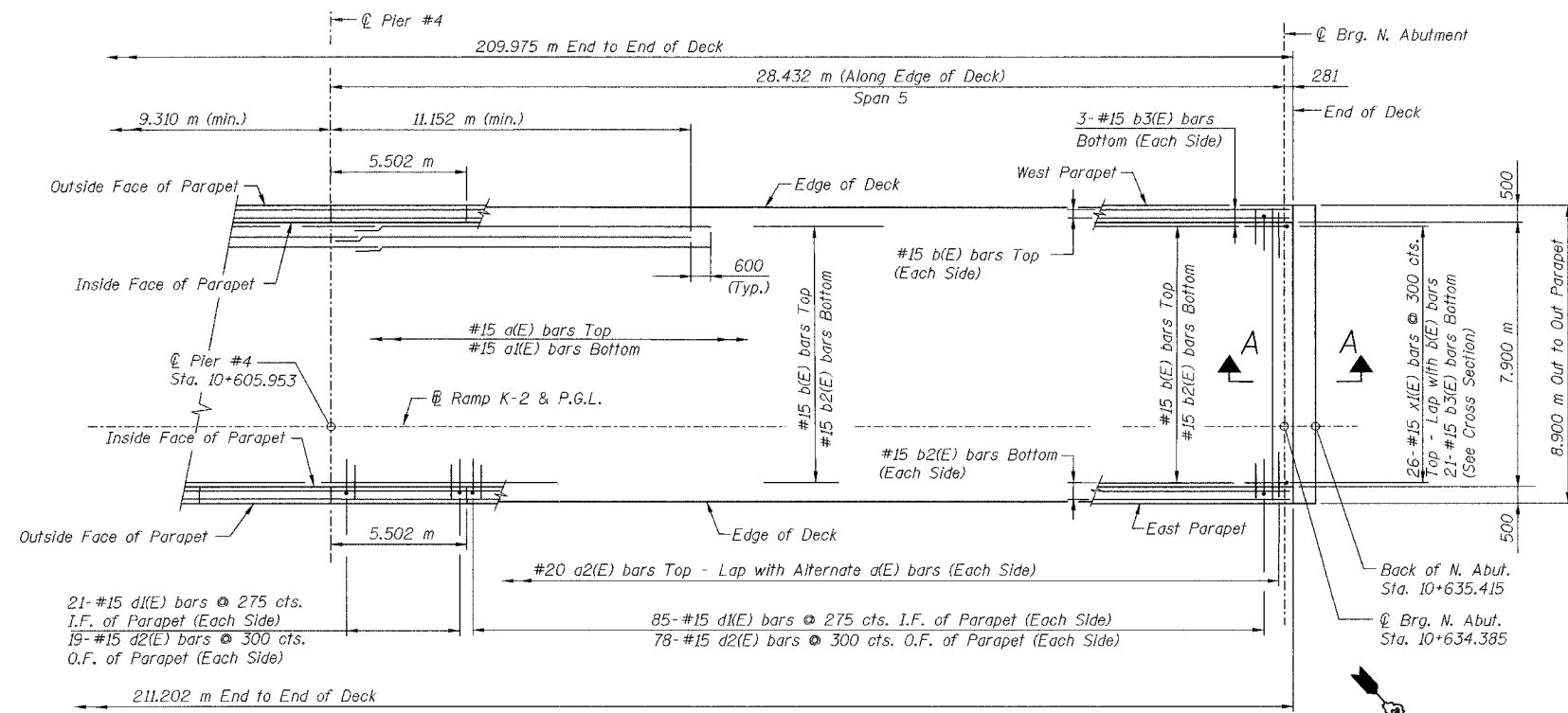
DESIGNED	HAA
CHECKED	KWS
DRAWN	VH
CHECKED	KJN

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

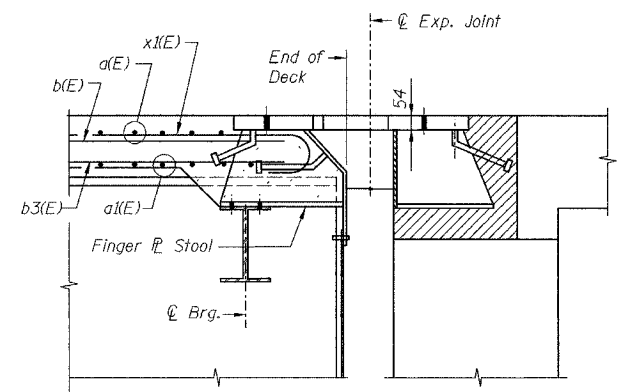
ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IHB-5
DECK PLAN
SPANS 3 AND 4
SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

2/3/2005
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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA174	*	TAZEWELL	1366	558	
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		

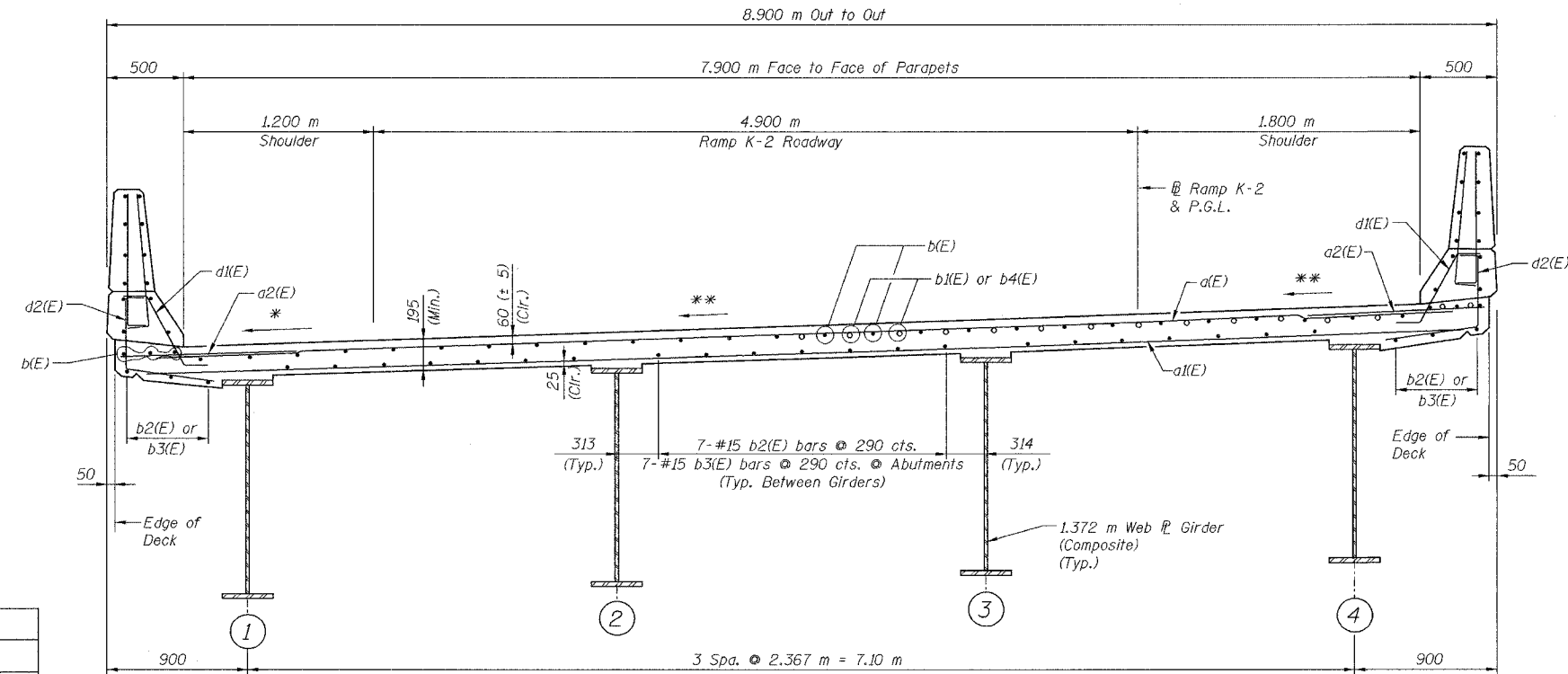


PARTIAL PLAN
(Span 5)



SECTION A-A

- NOTES:**
- All dimensions are in millimeters (mm) except as noted.
 - Reinforcement bars designated "E" shall be epoxy coated.
 - Bars indicated thus: 3x2-#15 etc. indicates 3 lines of bars with 2 lengths per line.
 - Use the following minimum lap lengths unless otherwise noted:
#15 - 640 #25 - 1,320 mm
#20 - 790
 - For Parapet Elevation, Details, and Reinforcement, see sheet 14.
 - For Drainage Scupper Locations see sheet 32.
 - I.F. denotes Inside Face
O.F. denotes Outside Face
 - Work this sheet with sheets 10, 11 & 13.



TYPICAL DECK CROSS SECTION
(Looking Upstation)

- * 4% up to Sta. 10+439.068
Linear Transition to 4.4% at Sta. 10+443
4.4% between Sta. 10+443 to Sta. 10+484
Linear Transition to -2% at Sta. 10+547
-2% beyond Sta. 10+547
- ** 2.38% at Sta. 10+423.179
Linear Transition to 4.4% at Sta. 10+443
4.4% between Sta. 10+443 to Sta. 10+484
Linear Transition to -2% at Sta. 10+547
-2% beyond Sta. 10+547

DESIGNED	HAA
CHECKED	KWS
DRAWN	VH
CHECKED	KJN

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIB-5
**DECK PLAN SPAN 5
AND CROSS SECTION**

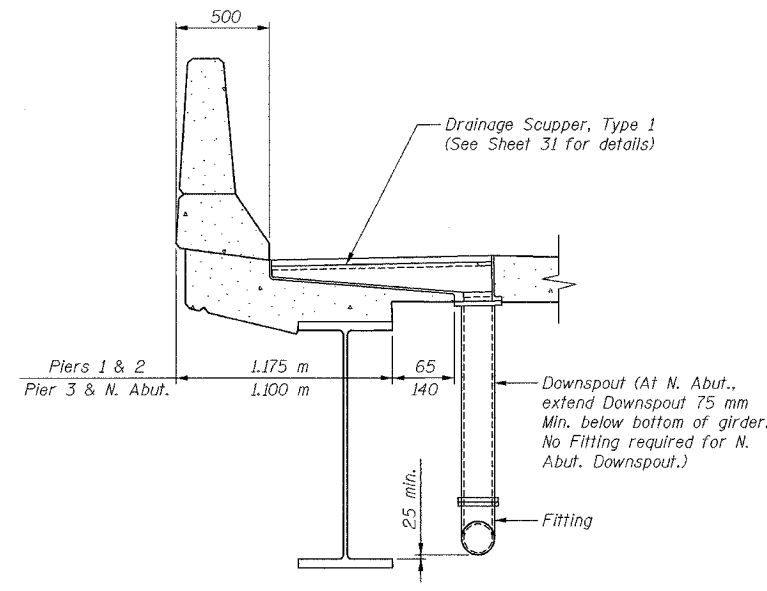
SN: 090-0156
TAZEWELL CO., IL.

STA. 10+529.222
DATE: 12-23-04

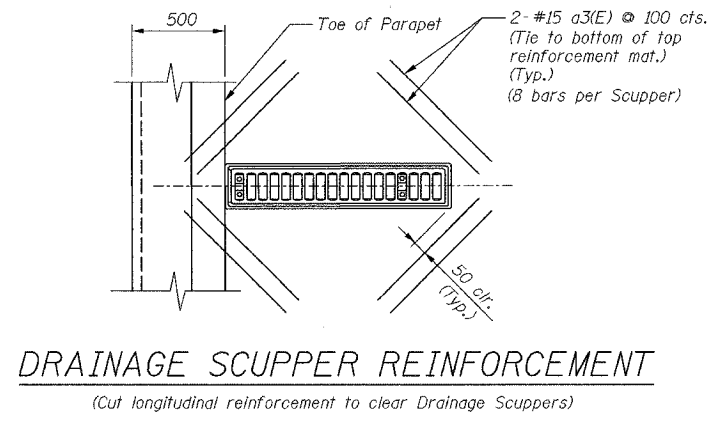
ab **alfred benesch & company**
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
308 NO. 3573

2/3/2005
m:\p\03573\vr\ampk2\etildp3-7a0900156.dgn

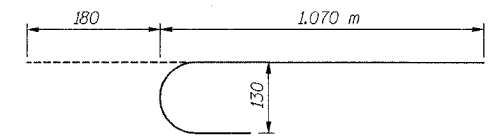
68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	559	
STA.		TO STA.			
F.H.W.A. REGION		ILLINOIS		PROJECT	
SHEET 13 OF 56					



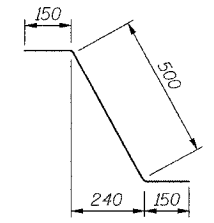
SECTION THRU SCUPPER



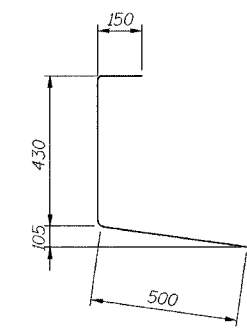
DRAINAGE SCUPPER REINFORCEMENT



BAR x1(E)



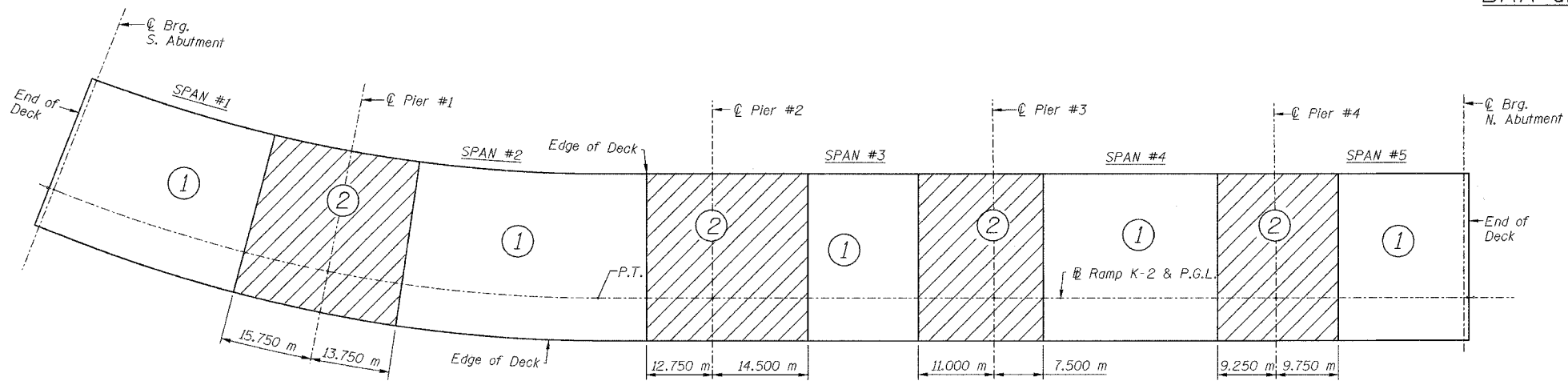
BAR d1(E)



BAR d2(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	1409	#15	8.20	—	
a1(E)	1007	#15	8.20	—	
a2(E)	1410	#20	1.20	—	
a3(E)	40	#15	0.60	—	
b(E)	800	#15	9.06	—	
b1(E)	174	#20	11.31	—	
b2(E)	648	#15	9.00	—	
b3(E)	54	#15	5.65	—	
b4(E)	174	#20	7.52	—	
d1(E)	1559	#15	0.80	┌	
d2(E)	1428	#15	1.08	└	
x1(E)	52	#15	1.25	└	
Protective Coat				SQ M	1,664
Bridge Deck Grooving				SQ M	1,538
Concrete Superstructure				CU M	408.4
Reinforcement Bars, Epoxy Coated				KG	68,350



DECK POUR SEQUENCE

Dimensions along Outside edge of deck. See General Note 14 on Sheet 3.
An alternate pour sequence may be used with the approval of the Engineer.

NOTES:

1. Work this sheet with sheets 10 thru 12.
2. For parapet details, see sheet 14.
3. For cross-section of deck, see sheet 12.
4. Reinforcement bars designated "E" shall be epoxy coated.
5. All dimensions are in millimeters (mm) except as noted.
6. For drainage scupper locations, see sheet 32.

DESIGNED	HAA
CHECKED	KWS
DRAWN	VH
CHECKED	KJN

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

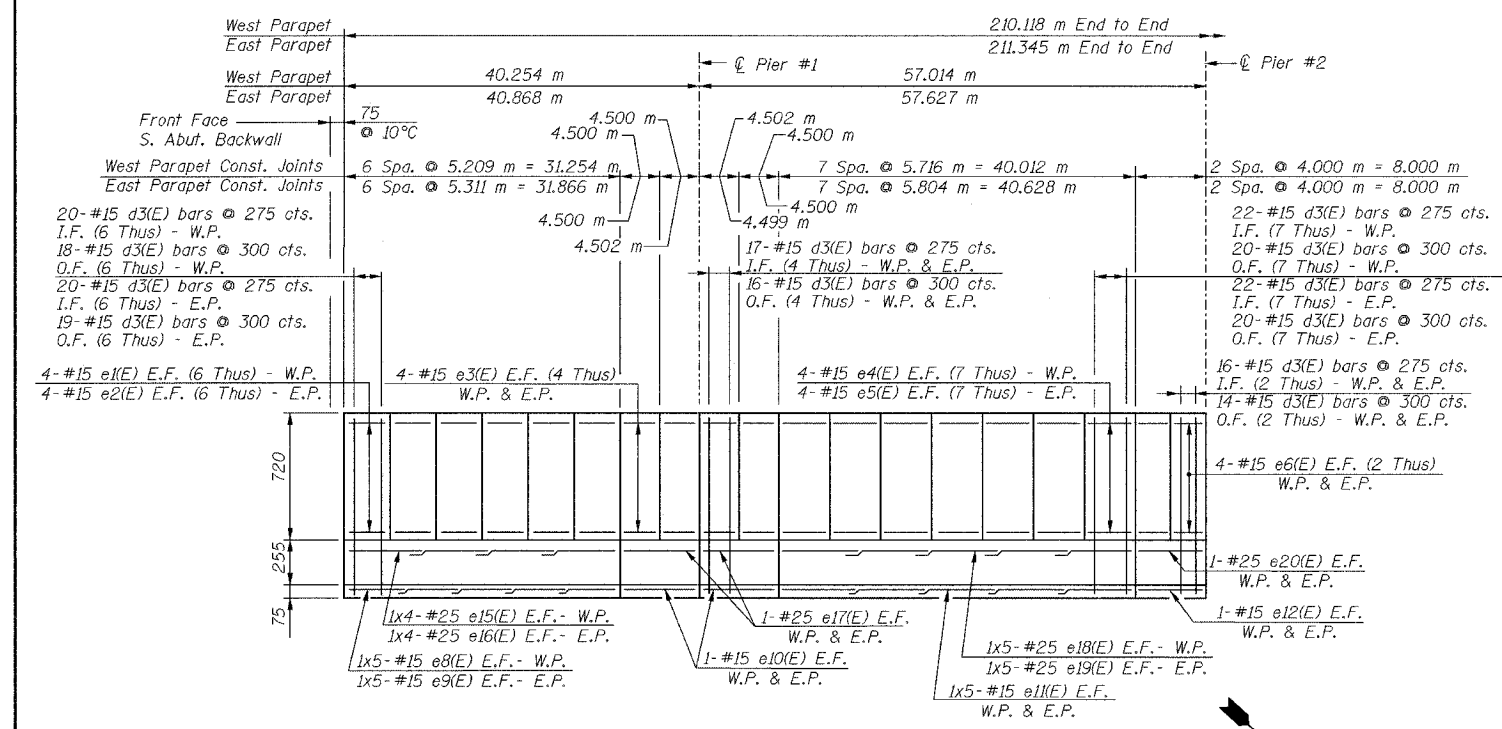
ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIB-5
DECK DETAILS
SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

2/3/2005
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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	560	
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		

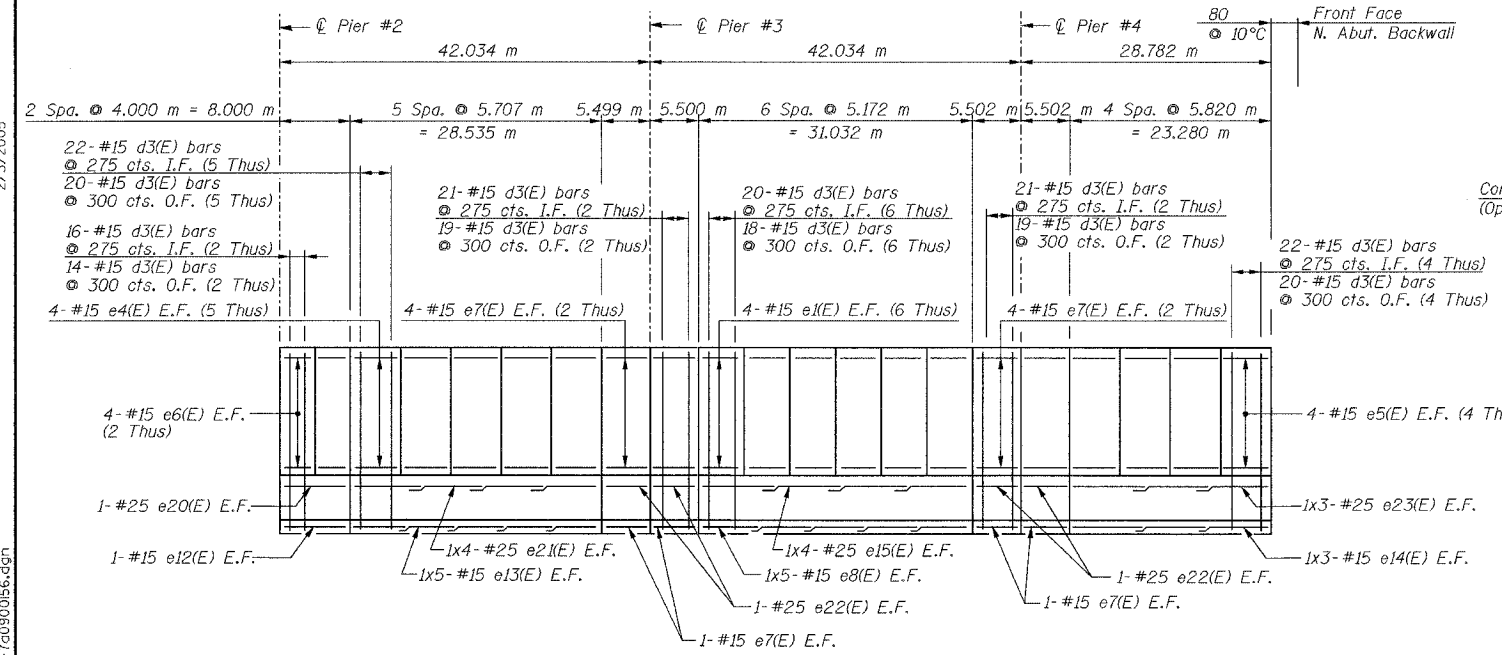
BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape	
d3(E)	3086	#15	1.09		
e1(E)	144	#15	5.10		
e2(E)	48	#15	5.20		
e3(E)	64	#15	4.40		
e4(E)	136	#15	5.62		
e5(E)	120	#15	5.72		
e6(E)	64	#15	3.90		
e7(E)	80	#15	5.40		
e8(E)	30	#15	6.75		
e9(E)	10	#15	6.90		
e10(E)	8	#15	8.90		
e11(E)	20	#15	8.65		
e12(E)	8	#15	7.90		
e13(E)	20	#15	6.20		
e14(E)	12	#15	8.20		
e15(E)	24	#25	8.80		
e16(E)	8	#25	8.95		
e17(E)	8	#25	8.90		
e18(E)	10	#25	9.05		
e19(E)	10	#25	9.20		
e20(E)	8	#25	7.90		
e21(E)	16	#25	8.10		
e22(E)	16	#25	5.40		
e23(E)	12	#25	8.65		
Protective Coat				SQ M	548
Concrete Superstructure				CU M	130.5
Reinforcement Bars, Epoxy Coated				KG	15,500



ELEVATION - SPANS 1 & 2

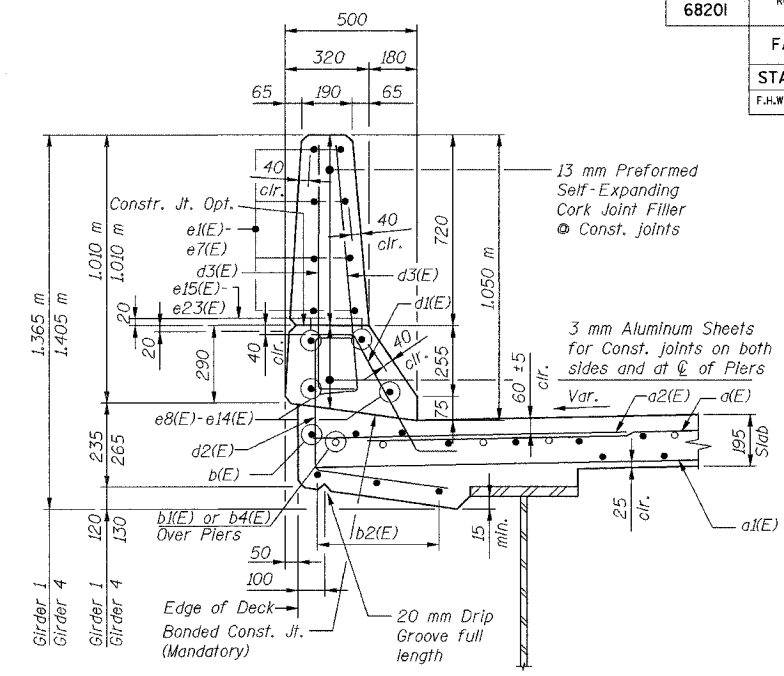
All dimensions are along Edge of Deck



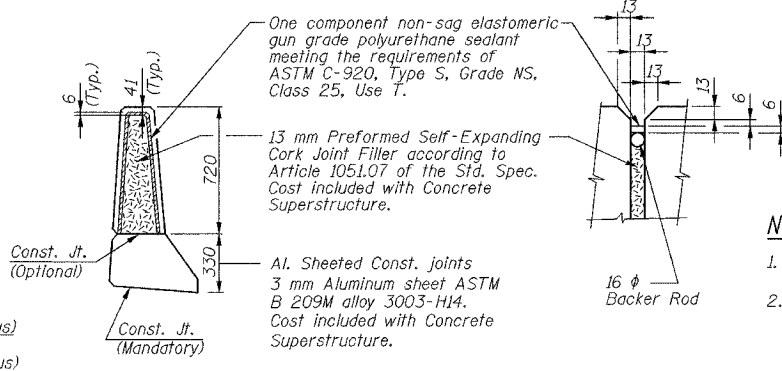
ELEVATION - SPANS 3-5

(West Elevation shown - East Elevation similar)
All dimensions are along Edge of Deck

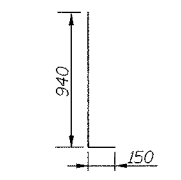
DESIGNED	HAA
CHECKED	KWS
DRAWN	VH
CHECKED	KJN



SECTION THRU PARAPET
(Spans 1-5) (Near Piers)



PARAPET JOINT DETAILS



BAR d3(E)

NOTES:

- Bars indicated thus: 3x2-#15 etc. indicates 3 lines of bars with 2 lengths per line.
- Use the following minimum lap lengths unless otherwise noted:
#15 - 640
#20 - 790
#25 - 1,320 m
- E.F. denotes each face
E.P. denotes east parapet
W.P. denotes west parapet
I.F. denotes inside face
O.F. denotes outside face
- Work this sheet with sheets 10 thru 13.
- All edges of Parapet Walls shall have 20 mm chamfer.
- All dimensions are in millimeters (mm) except as noted.
- Reinforcing bars designated (E) shall be epoxy coated.

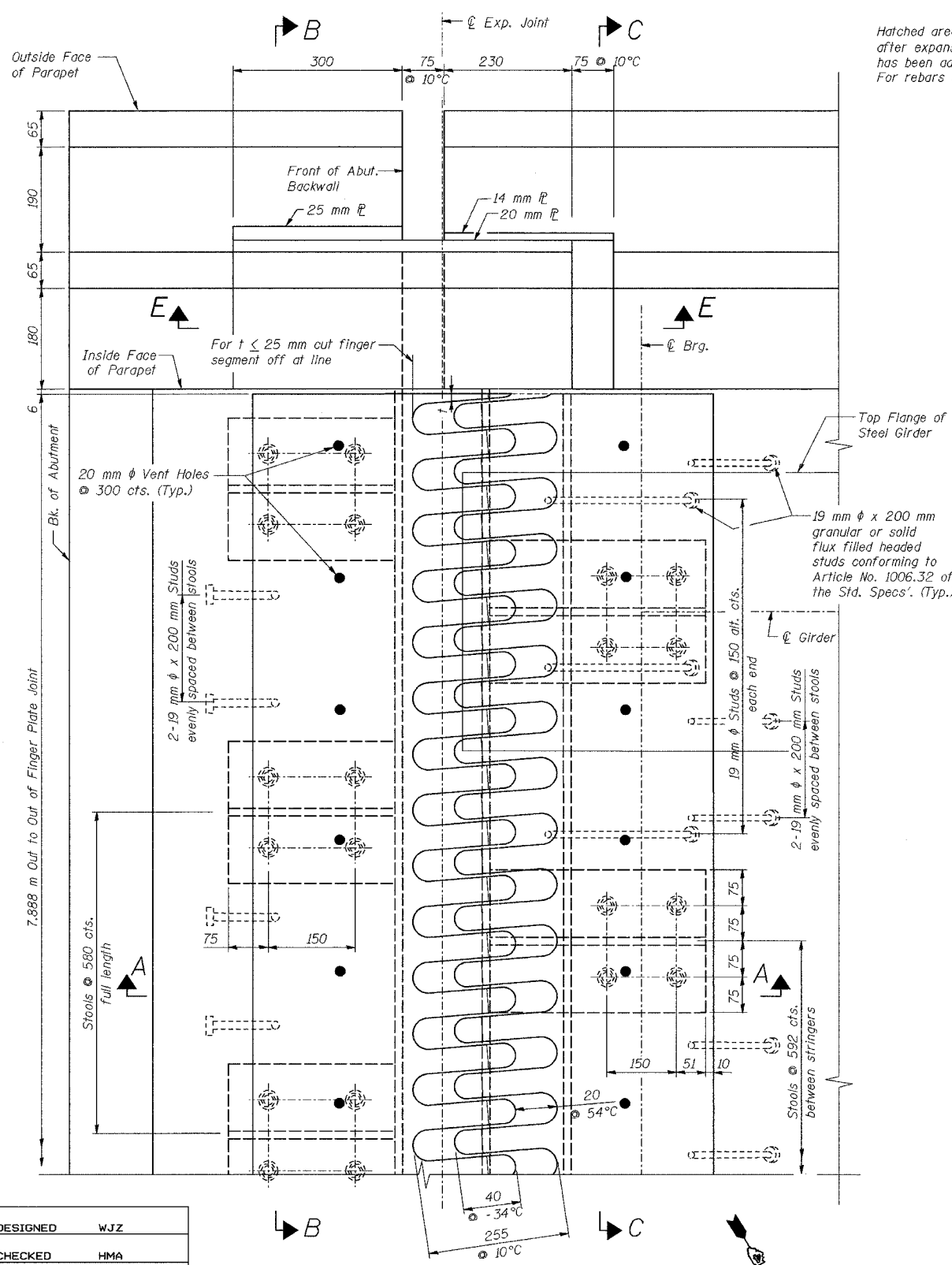
ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIB-5
**PARAPET ELEVATIONS
AND DETAILS**

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

SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

2/3/2005
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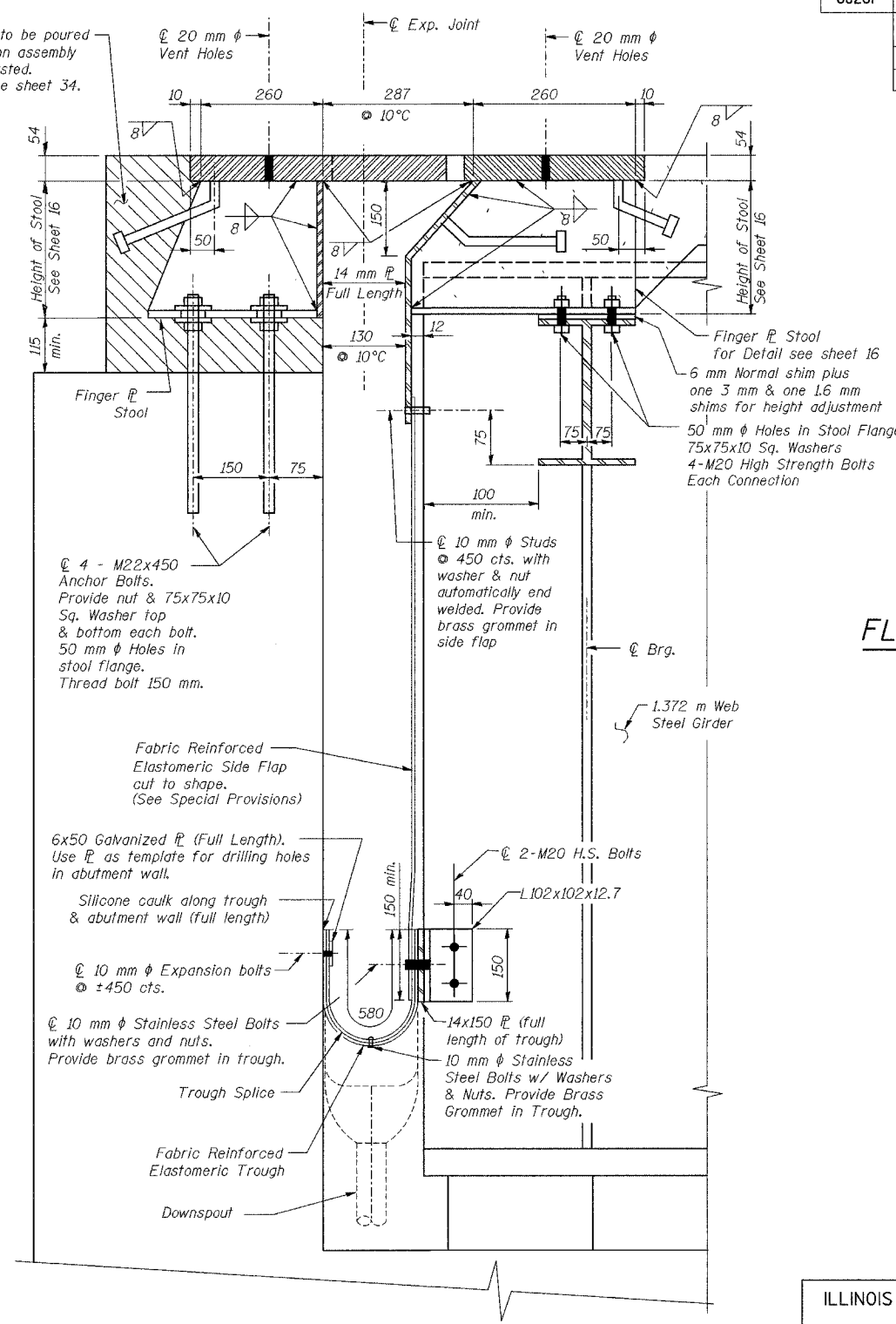
68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAIT4			TAZEVELL	13	56
STA.	TO STA.				
F.H.W.A. REGION	ILLINOIS		PROJECT		
SHEET 15 OF 56					



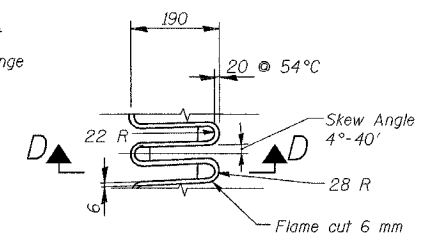
PLAN OF FINGER PLATE

DESIGNED	WJZ
CHECKED	HMA
DRAWN	VH
CHECKED	DAD

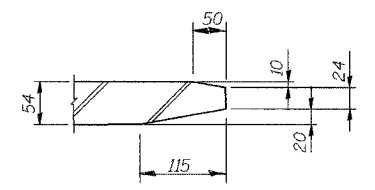
Hatched area to be poured after expansion assembly has been adjusted. For rebar see sheet 34.



SECTION A-A



FLAME CUTTING DIAGRAM



SECTION D-D

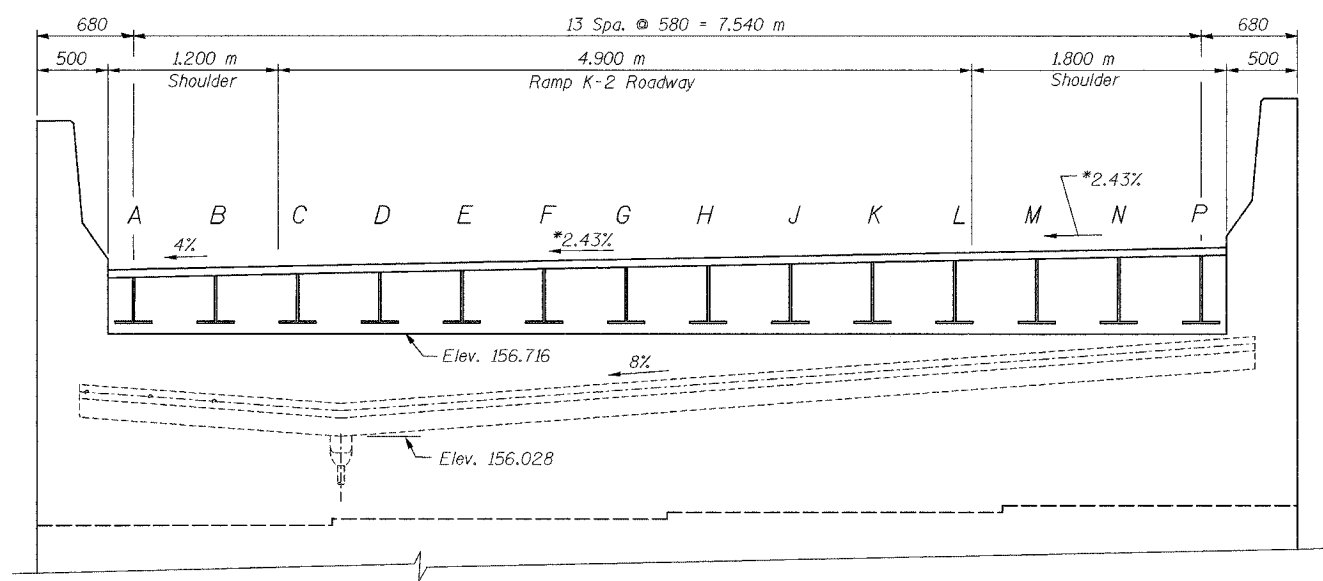
- NOTES:
- All steel for finger plate joints shall be AASHTO M270M Grade 50.
 - The cost of all steel required for finger plate assembly shall be paid under Furnishing and Erecting Structural Steel. The cost of all bolts (i.e. anchor, high strength, expansion, stainless steel, etc.) shall be included in the price for Furnishing and Erecting Structural Steel.
 - See sheet 16 for Trough Details.
 - Work this sheet with sheet 16.

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIIB-5
FINGER PLATE EXPANSION JOINT
SOUTH ABUTMENT
 SN: 090-0156
 TAZEVELL CO., IL.
 STA. 10+529.222
 DATE: 12-23-04

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

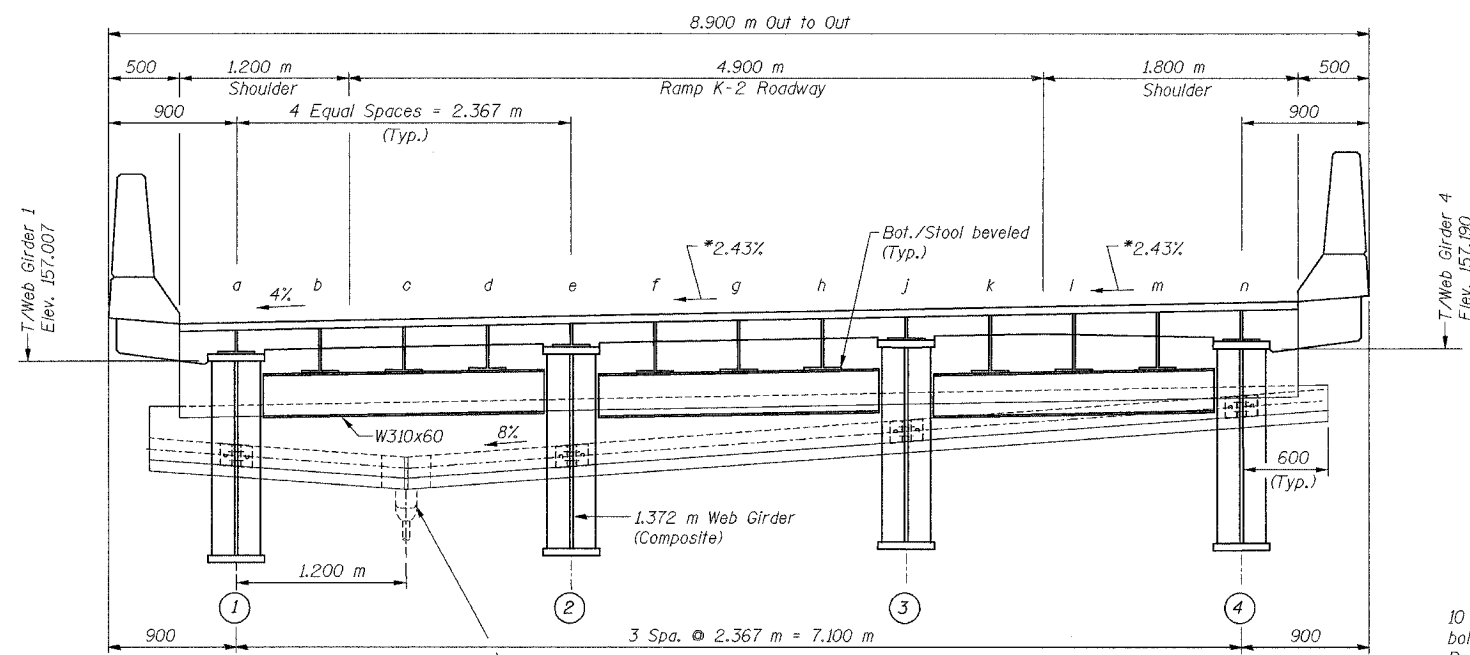
2/3/2005
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ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	562
STA.		TO STA.		
F.I.W.A. REGION		ILLINOIS	PROJECT	



SECTION B-B

* Slope @ C of Exp. Joint



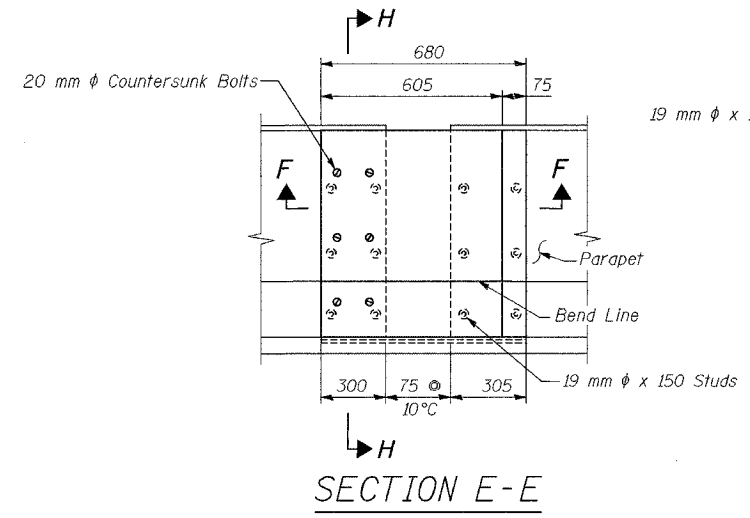
SECTION C-C

* Slope @ C of Exp. Joint

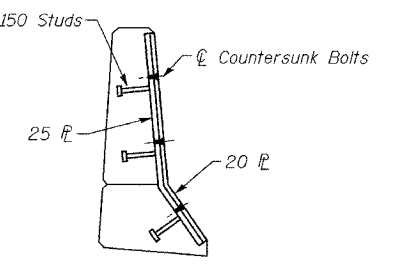
STOOL HEIGHTS

	A	B	C	D	E	F	G	H	J	K	L	M	N	P
SECTION B-B	378	401	422	436	450	464	478	492	506	520	534	549	563	577
	a	b	c	d	e	f	g	h	j	k	l	m	n	
SECTION C-C	174	285	285	282	173	278	278	278	172	278	279	280	171	

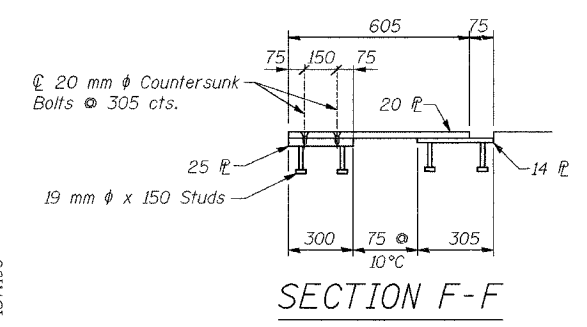
DESIGNED	WJZ
CHECKED	HMA
DRAWN	VH
CHECKED	DAD



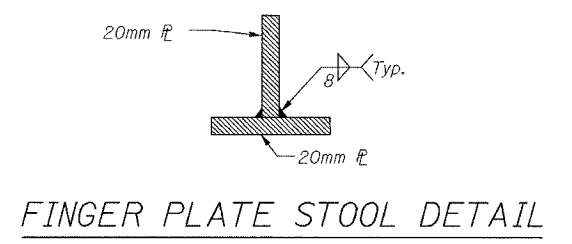
SECTION E-E



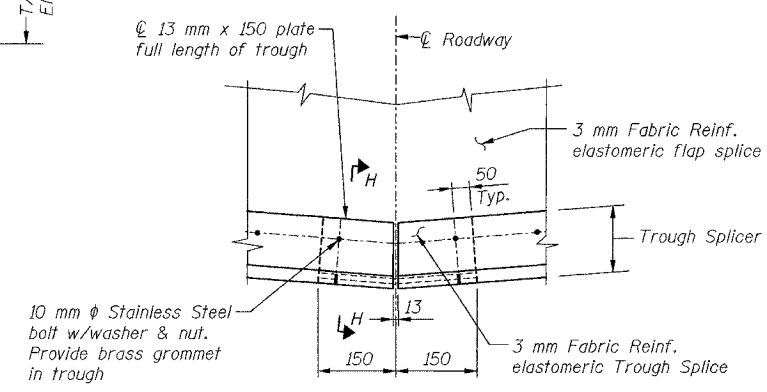
SECTION H-H



SECTION F-F



FINGER PLATE STOOL DETAIL



TROUGH SPLICE DETAIL

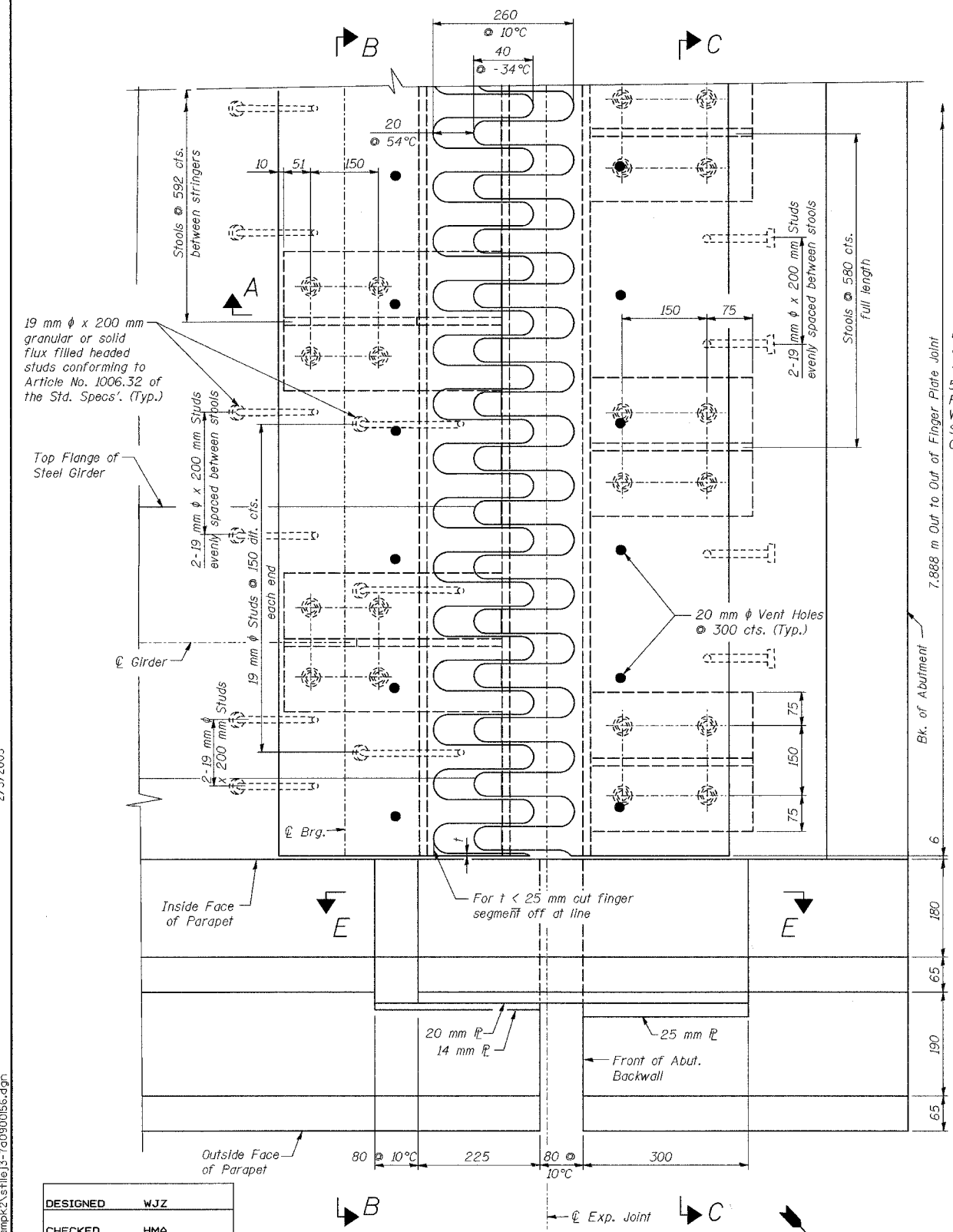
ITEM	UNIT	TOTAL
Fabric Reinforced Elastomeric Trough	Meter	8.4

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIIB-5
FINGER PLATE EXPANSION JOINT
SOUTH ABUTMENT
 SN: 090-0156
 TAZEWELL CO., IL.
 STA. 10+529.222
 DATE: 12-23-04

alfred benesch & company
 CONSULTING ENGINEERS
 205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
 JOB NO. 3513

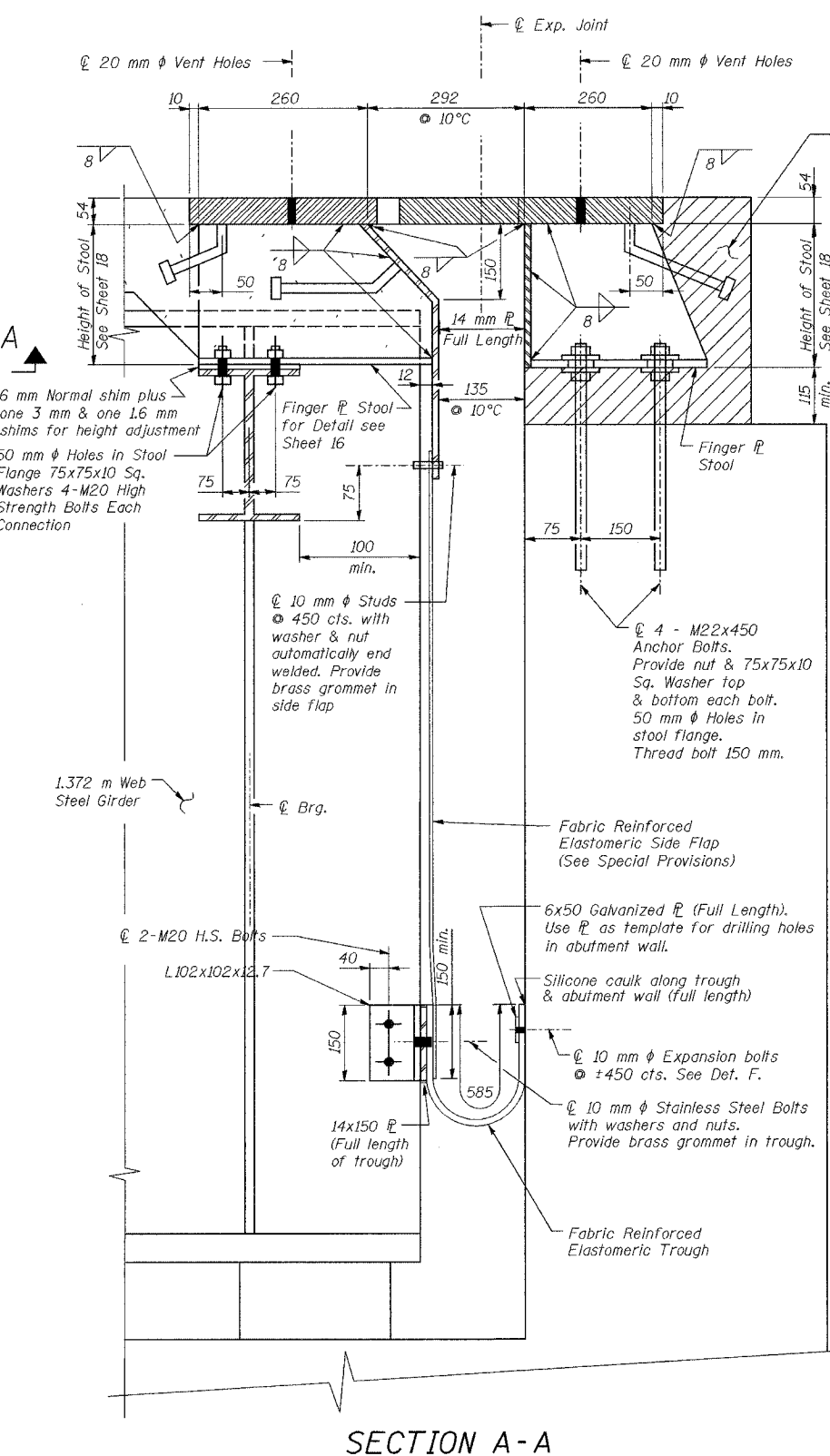
2/3/2005
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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	563
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		



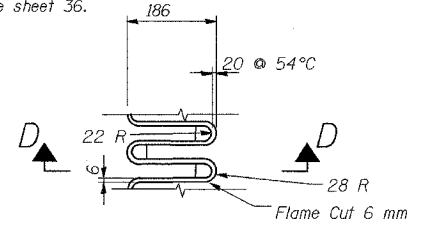
PLAN OF FINGER PLATE
(Showing East Parapet)

DESIGNED	WJZ
CHECKED	HMA
DRAWN	VH
CHECKED	DAD

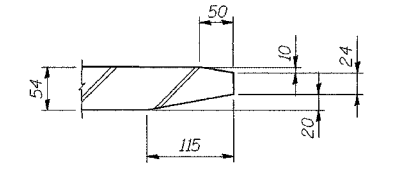


SECTION A-A

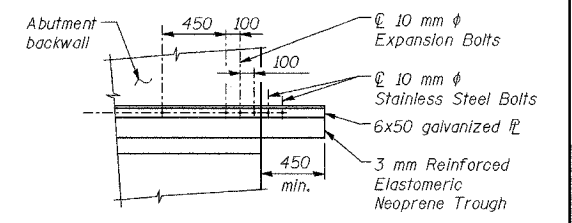
Hatched area to be poured after expansion assembly has been adjusted. For rebars see sheet 36.



FLAME CUTTING DIAGRAM



SECTION D-D



DETAIL F

NOTES:

1. All steel for finger plate joints shall be AASHTO M270M Grade 50.
2. The cost of all steel required for finger plate assembly shall be paid under Furnishing and Erecting Structural Steel. The cost of all bolts (i.e. anchor, high strength, expansion, stainless steel, etc.) shall be included in the price for Furnishing and Erecting Structural Steel.
3. See sheet 16 for Trough Details.
4. Work this sheet with sheet 18.

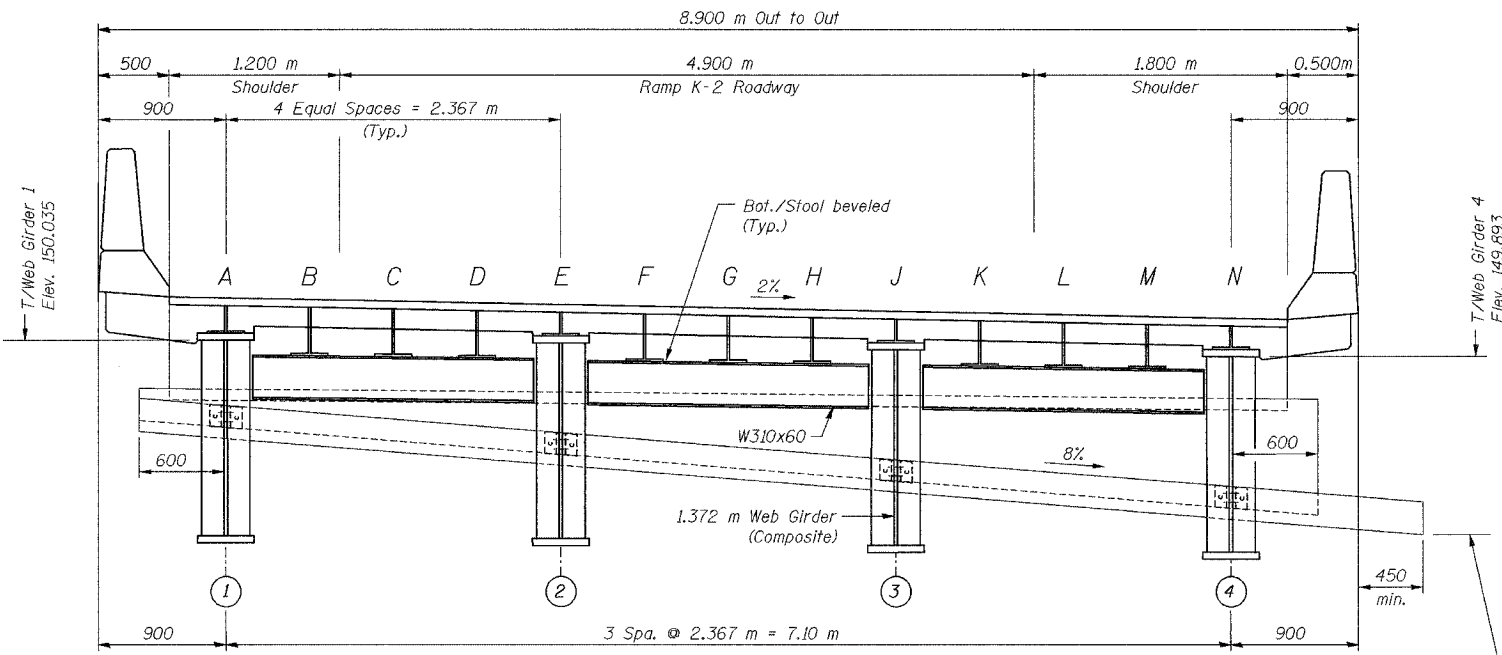
ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIB-5

FINGER PLATE EXPANSION JOINT
NORTH ABUTMENT
SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

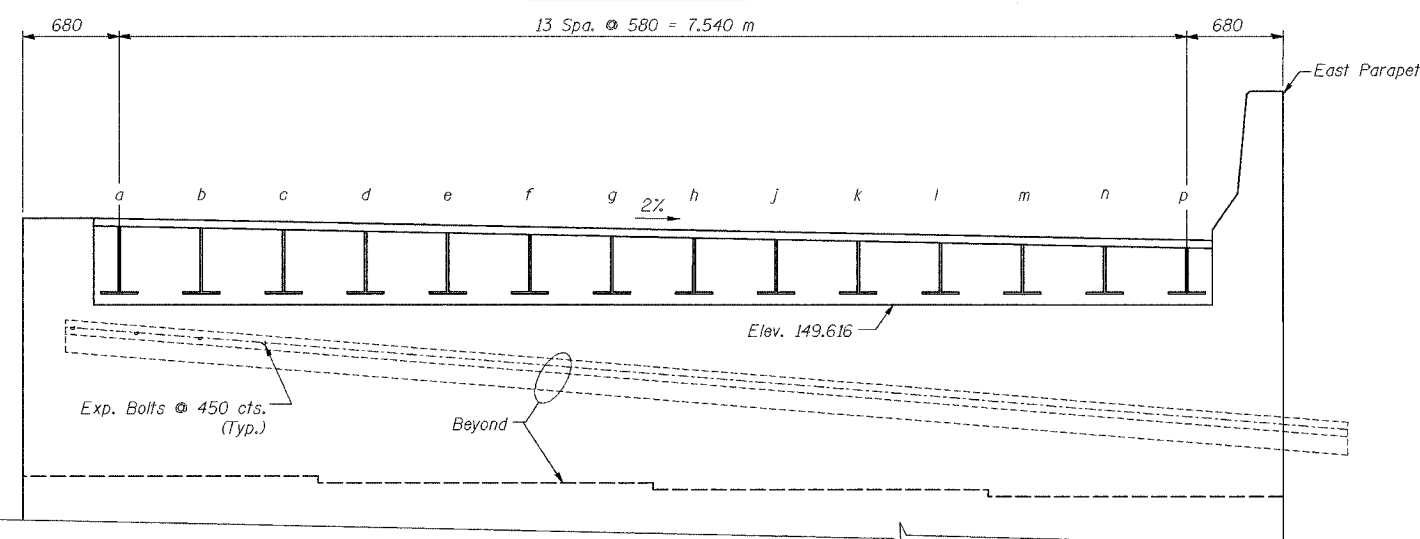
alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	564
STA.		TO STA.			
F.H.W.A. REGION		ILLINOIS		PROJECT	

SHEET 18 OF 56



SECTION B-B

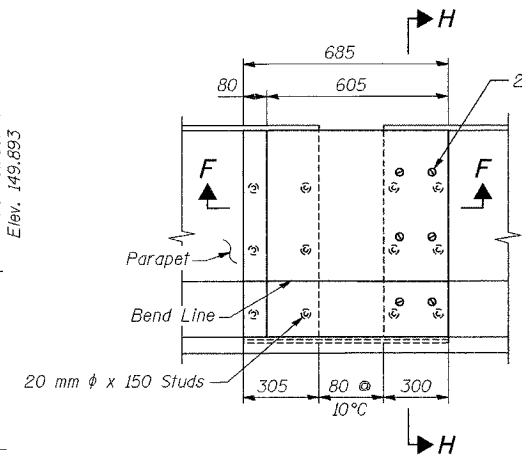


SECTION C-C

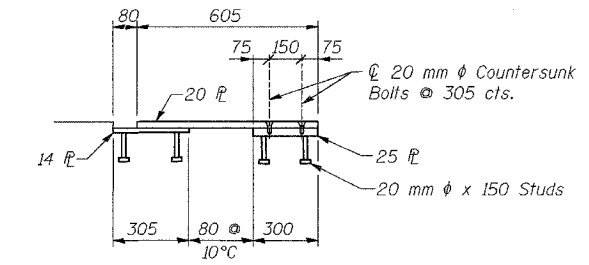
STOOL HEIGHTS

	A	B	C	D	E	F	G	H	J	K	L	M	N	
SECTION B-B	161	258	258	258	161	258	258	258	161	258	258	258	161	
	a	b	c	d	e	f	g	h	j	k	l	m	n	p
SECTION C-C	497	486	474	463	451	439	428	416	405	393	381	370	358	347

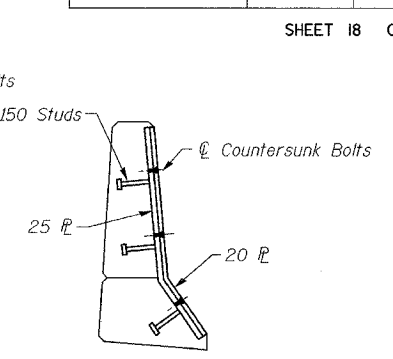
DESIGNED	WJZ
CHECKED	HMA
DRAWN	VH
CHECKED	DAD



SECTION E-E
(East Parapet only)



SECTION F-F
(East Parapet only)



SECTION H-H
(East Parapet only)

ITEM	UNIT	TOTAL
Fabric Reinforced Elastomeric Trough	Meter	9.1

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIIB-5
FINGER PLATE EXPANSION JOINT
NORTH ABUTMENT

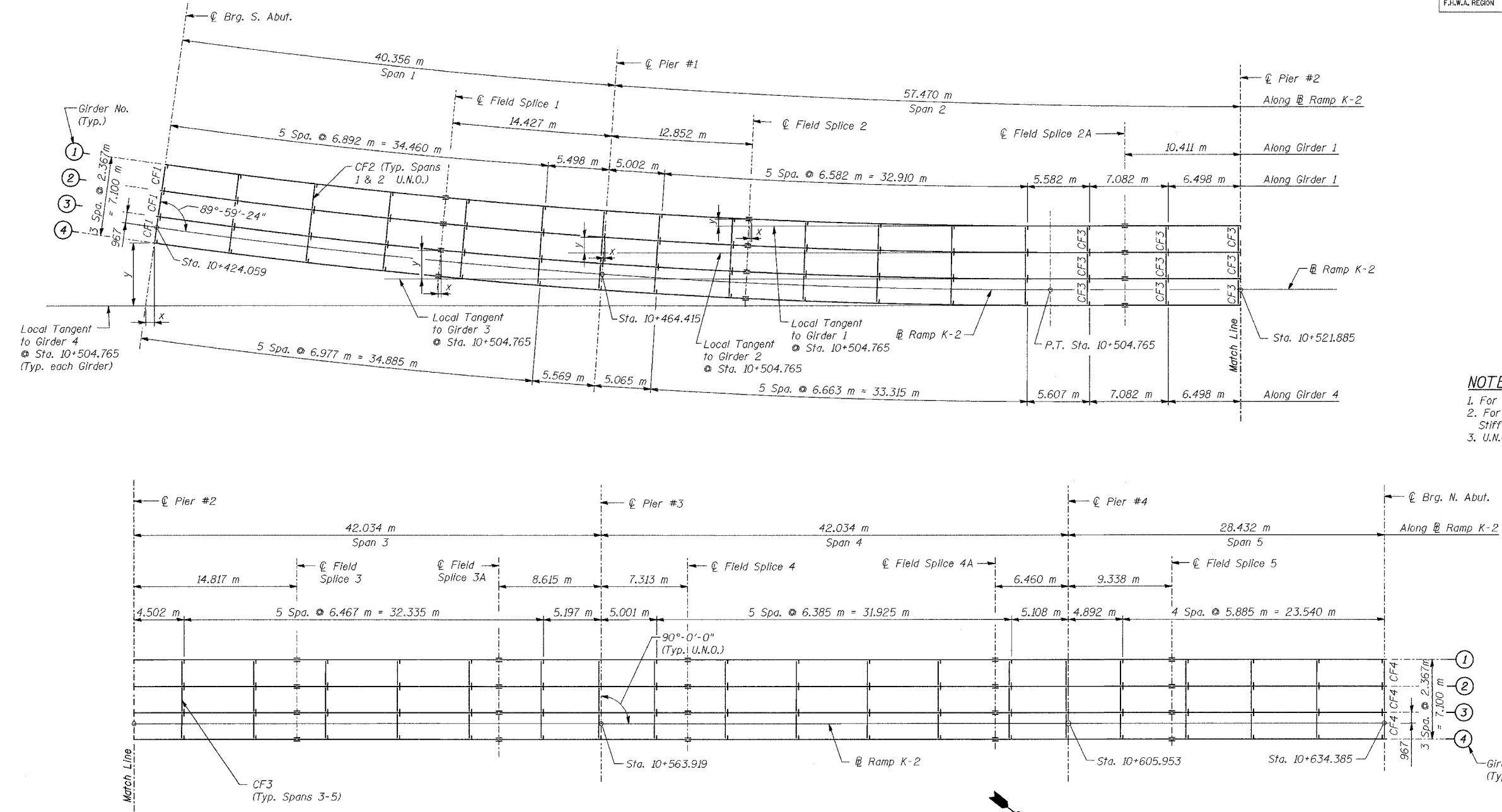
SN: 090-0156
TAZEWELL CO., IL.

STA. 10+529.222
DATE: 12-23-04

2/3/2005

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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI74	*	TAZEWELL	1366	565
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		



- NOTES:**
1. For Girder Elevation see sheet 20.
 2. For Cross Frame Details and Stiffener Details see sheet 22.
 3. U.N.O. denotes Unless Noted Otherwise.

PLAN

DESIGNED	JQZ
CHECKED	KWS
DRAWN	VH
CHECKED	LRB

Girder	S. Abutment		Field Splice 1		Pier #1		Field Splice 2	
	x	y	x	y	x	y	x	y
1	5.551	0.778	2.573	0.244	1.389	0.097	0.639	0.030
2	5.574	0.782	2.583	0.245	1.395	0.097	0.642	0.030
3	5.597	0.785	2.594	0.246	1.401	0.098	0.645	0.030
4	5.620	0.788	2.605	0.247	1.406	0.098	0.647	0.031

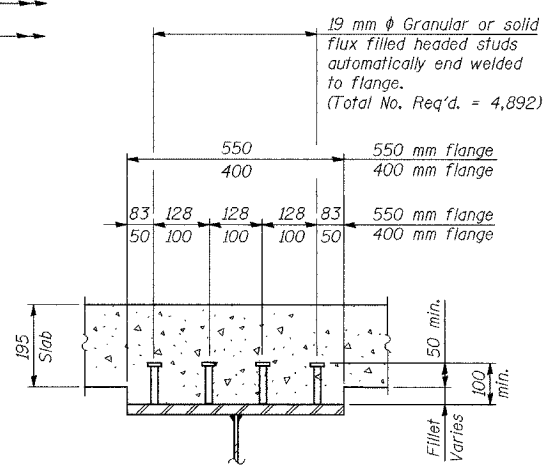
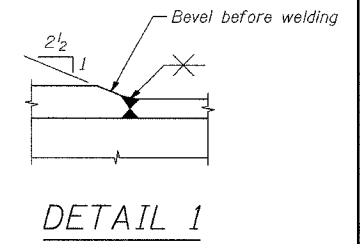
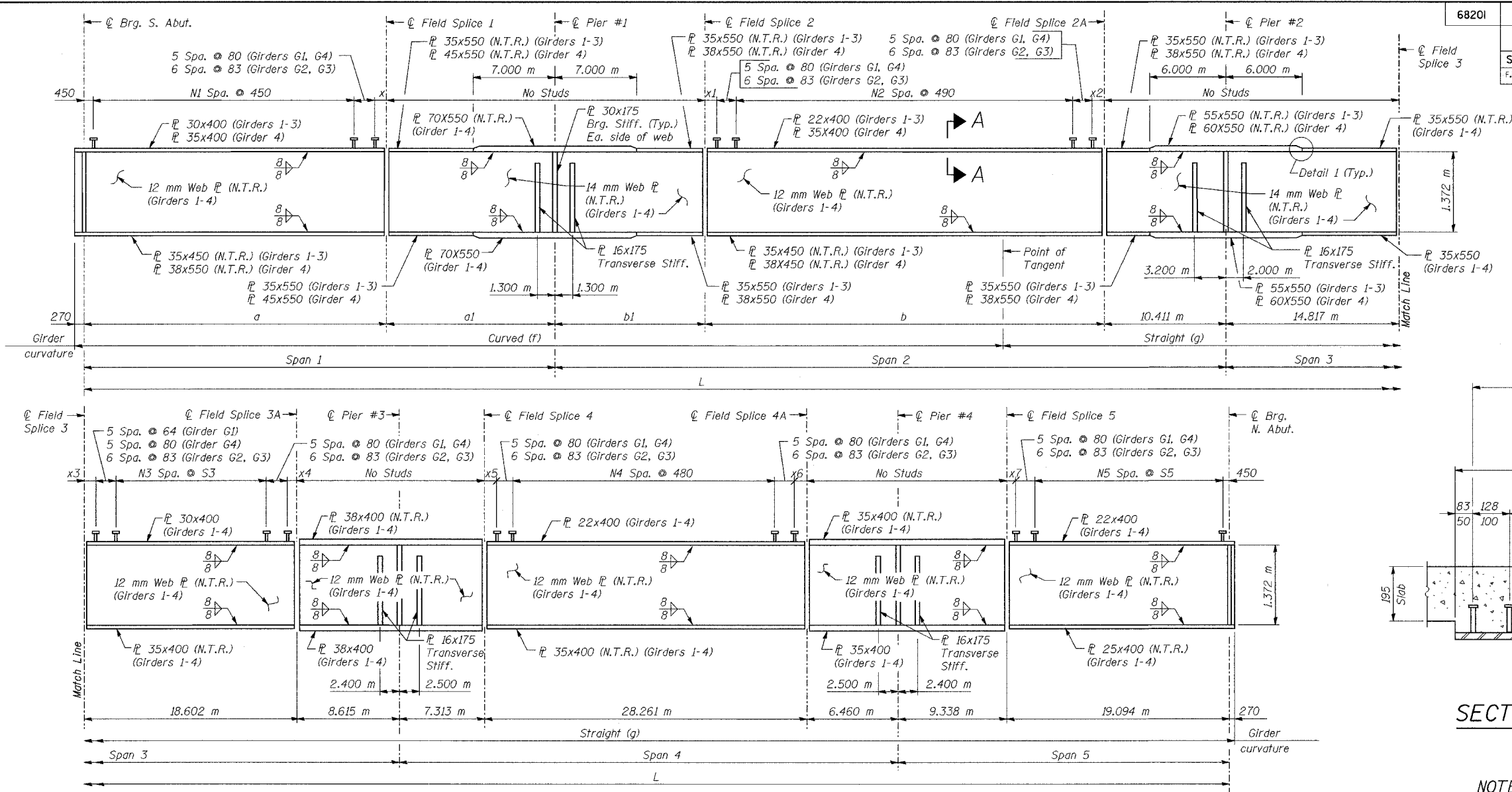
ab **alfred benesch & company**
 CONSULTING ENGINEERS
 205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
 JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIB-5
FRAMING PLAN

SN: 090-0156
 TAZEWELL CO., IL.
 STA. 10+529.222
 DATE: 12-23-04

2/3/2005
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ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI74	*	TAZEWELL	1366	566
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS PROJECT		



GIRDER ELEVATION

Girder No.	Girder Dimensions (m)														Shear Connector Layout													
	Radius	Span 1	Span 2	Span 3	Span 4	Span 5	L	a	a1	b	b1	f	g	x	x1	x2	x3	x4	x5	x6	x7	N1	N2	N3	N4	N5	S3	S5
1	574.300	39.958	57.074	42.034	42.034	28.432	209.532	25.531	14.427	33.811	12.852	80.182	129.889	0.831	1.314	1.317	0.531	1.071	0.851	1.650	0.614	53	62	40	52	43	407	410
2	576.666	40.123	57.238	42.034	42.034	28.432	209.862	25.637	14.486	33.922	12.905	80.512	129.889	0.837	1.502	1.040	0.572	1.190	0.631	1.190	0.513	53	62	46	53	46	344	383
3	579.033	40.289	57.403	42.034	42.034	28.432	210.192	25.743	14.546	34.034	12.958	80.842	129.889	0.493	1.323	0.841	0.591	1.171	0.530	1.291	0.513	54	63	46	53	46	344	383
4	581.400	40.454	57.567	42.034	42.034	28.432	210.522	25.848	14.605	34.146	13.011	81.172	129.889	0.698	0.846	0.650	1.502	1.780	0.491	1.530	0.613	54	65	40	53	43	363	410

DESIGNED	JQZ
CHECKED	KWS
DRAWN	VH
CHECKED	LRB

- NOTES:
- N.T.R. denotes plates which Notch Toughness Requirements are applicable.
 - All structural steel shown on this sheet shall be AASHSTO M270M Grade 345.
 - For Fascia Girders G1 & G4, provide Transverse Stiffeners on inside face.
 - Work this sheet with sheets: 19 & 21 thru 29.

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIB-5
 GIRDER ELEVATION

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

SN: 090-0156
 TAZEWELL CO., IL.
 STA. 10+529.222
 DATE: 12-23-04

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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	567
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		

GIRDER MOMENT TABLE (SPANS 1-5 - GIRDER 3)

	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.6 Sp. 5
Is (10 ⁶ mm ⁴)	16115	43072	14058	33827	15361	17695	13436	16443	11717
Ic (n) (10 ⁶ mm ⁴)	34517	--	33865	--	32335	--	31742	--	26436
Ic (3n) (10 ⁶ mm ⁴)	25465	--	24318	--	24072	--	23024	--	19640
Ss (10 ³ mm ³)	24380	56974	23430	45650	22360	24441	21463	22806	17055
Sc (n) (10 ³ mm ³)	30736	--	30564	--	28240	--	28090	--	22518
Sc (3n) (10 ³ mm ³)	28421	--	28146	--	26080	--	25841	--	20674
SI (10 ³ mm ³)	1181	3529	1181	--	--	--	--	--	--
Z (10 ³ mm ³)	--	--	--	--	--	--	--	--	--
Q (kN/m)	14.61	18.51	14.37	17.24	14.48	14.82	14.23	14.63	13.92
M Q (kN-m)	981	4872	1773	3778	420	1921	1201	2039	562
s Q (kN/m)	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72
Ms Q (kN-m)	609	2672	1177	2162	270	1135	753	1208	364
M L (kN-m)	1296	2290	1436	2092	1165	1427	1116	1250	954
M (Imp) (kN-m)	252	401	229	363	222	271	212	260	218
53 [M L + M (Imp)] (kN-m)	2581	4485	2775	4092	2312	2830	2213	2517	1953
Ma (kN-m)	5422	15638	7443	13041	3902	7652	5418	7493	3743
Mbi (kN-m)	7	43	15	--	--	--	--	--	--
* Mu (kN-m)	--	--	--	--	11486	--	10801	--	7956
fs Q (non-comp) (MPa)	40	133	76	130	19	124	56	141	33
fs Q (comp) (MPa)	21	--	42	--	10	--	29	--	18
fs 53 [M L + M (Imp)] (MPa)	84	79	91	90	82	116	79	110	87
fl (MPa)	6	12	12	--	--	--	--	--	--
fs (overload) (MPa)	146	212	208	220	111	240	164	251	137
** fs (Total) (MPa)	189	275	271	286	144	312	213	327	178
fcr (Overload) (MPa)	328	284	328	--	--	--	--	--	--
VR (kN)	255	--	259	--	246	--	255	--	242
Fcr (MPa)	343	315	341	--	--	--	--	--	--

Curved Curved Curved Straight Straight Straight Straight Straight Straight

GIRDER MOMENT TABLE (SPANS 1-5 - GIRDER 4)

	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.6 Sp. 5
Is (10 ⁶ mm ⁴)	19438	43072	17911	36868	15361	17695	13436	16443	11717
Ic (n) (10 ⁶ mm ⁴)	39480	--	35310	--	31202	--	30567	--	25540
Ic (3n) (10 ⁶ mm ⁴)	28930	--	26300	--	23211	--	22095	--	18893
Ss (10 ³ mm ³)	30903	56974	26417	49421	22360	24441	21463	22806	17055
Sc (n) (10 ³ mm ³)	37780	--	32424	--	27984	--	27839	--	22306
Sc (3n) (10 ³ mm ³)	35024	--	30023	--	25819	--	25543	--	20425
SI (10 ³ mm ³)	1916	3529	1283	--	--	--	--	--	--
Z (10 ³ mm ³)	--	--	--	--	--	--	--	--	--
Q (kN/m)	14.00	17.35	13.71	16.50	13.32	13.66	13.07	13.47	12.77
M Q (kN-m)	1132	5070	2263	4085	377	1884	1208	2041	556
s Q (kN/m)	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72
Ms Q (kN-m)	691	2733	1367	2269	243	1114	753	1206	360
M L (kN-m)	1632	2513	1806	2367	1228	1464	1149	1246	928
M (Imp) (kN-m)	317	440	288	410	233	279	218	259	213
53 [M L + M (Imp)] (kN-m)	3247	4922	3490	4628	2435	2905	2278	2508	1902
Ma (kN-m)	6591	16542	9256	14277	3972	7674	5510	7482	3662
Mbi (kN-m)	8	46	18	--	--	--	--	--	--
* Mu (kN-m)	--	--	--	--	11312	--	11248	--	7924
fs Q (non-comp) (MPa)	37	137	86	129	17	123	56	142	33
fs Q (comp) (MPa)	20	--	46	--	9	--	29	--	18
fs 53 [M L + M (Imp)] (MPa)	86	86	108	94	87	119	82	110	85
fl (MPa)	4	13	14	--	--	--	--	--	--
fs (overload) (MPa)	142	223	239	222	113	242	168	252	135
** fs (Total) (MPa)	185	290	310	289	147	314	218	328	176
fcr (Overload) (MPa)	328	284	328	--	--	--	--	--	--
VR (kN)	202	--	213	--	202	--	192	--	179
Fcr (MPa)	343	315	340	--	--	--	--	--	--

Curved Curved Curved Straight Straight Straight Straight Straight Straight

GIRDER REACTION TABLE GIRDER 1

	S.Abut	Pier 1	Pier 2	Pier 3	Pier 4	N.Abut.
R Q (kN)	283	1483	1225	923	931	213
R L (kN)	164	401	364	315	294	154
Imp. (kN)	29	70	69	66	61	35
R (Total) (kN)	476	1954	1659	1304	1286	401

GIRDER REACTION TABLE GIRDER 2

	S.Abut	Pier 1	Pier 2	Pier 3	Pier 4	N.Abut.
R Q (kN)	293	1347	1242	919	939	214
R L (kN)	216	437	439	367	352	205
Imp. (kN)	38	76	83	76	73	47
R (Total) (kN)	546	1859	1765	1362	1364	466

GIRDER REACTION TABLE GIRDER 3

	S.Abut	Pier 1	Pier 2	Pier 3	Pier 4	N.Abut.
R Q (kN)	287	1487	1242	913	937	214
R L (kN)	213	442	416	366	349	205
Imp. (kN)	37	77	79	76	73	47
R (Total) (kN)	537	2005	1737	1356	1359	465

GIRDER REACTION TABLE GIRDER 4

	S.Abut	Pier 1	Pier 2	Pier 3	Pier 4	N.Abut.
R Q (kN)	318	1380	1318	903	938	211
R L (kN)	192	371	392	317	296	154
Imp. (kN)	34	64	75	66	61	35
R (Total) (kN)	544	1815	1785	1286	1295	400

NOTES:

- * Compact, Braced section (for straight portion of the bridge)
- ** Non-Compact section (for straight portion of the bridge)

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 Q + Ms Q + 53(M L + M (Imp))].
 fs(overload) is the sum of the stress due to M Q + Ms Q + 53(M L + M (Imp))

fs (Total) is the sum of the stress due to 1.3[M Q + Ms Q + 53(M L + M (Imp))]
 fl is the calculated normal stress at the edge of flange due to lateral bending (factored)
 Sbi is the section modulus for one flange plate for lateral flange bending
 Mbi is the lateral bending moment for flange plate (factored)
 M L and R L include the effects of centrifugal force and superelevation
 Mu is the plastic moment capacity, computed according to AASHTO 10.48.1 & 10.50.1.1.
 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.
 Z - Plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.

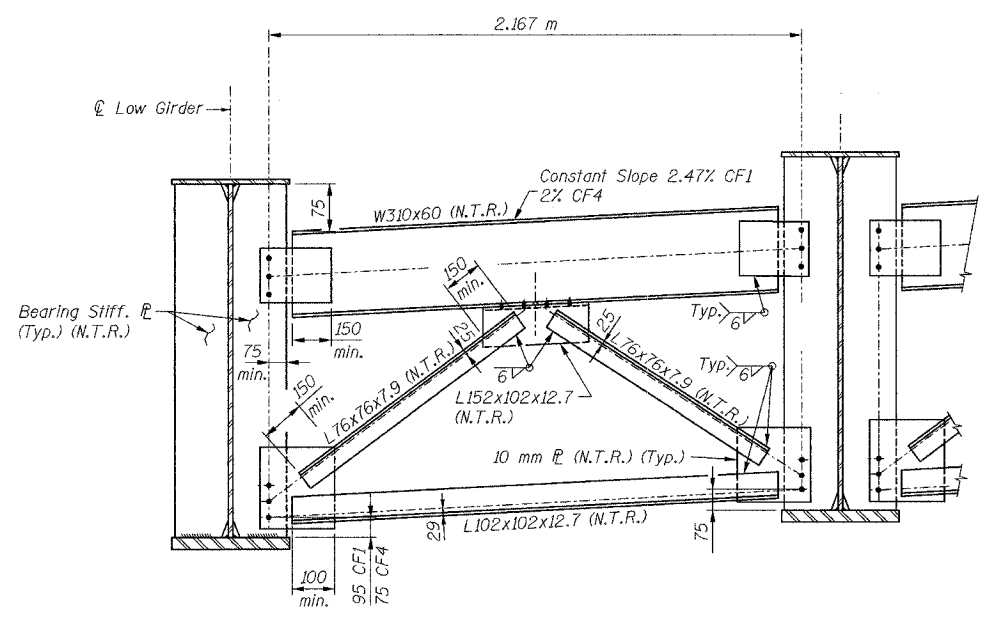
DESIGNED	JQZ
CHECKED	KWS
DRAWN	VH
CHECKED	LRB



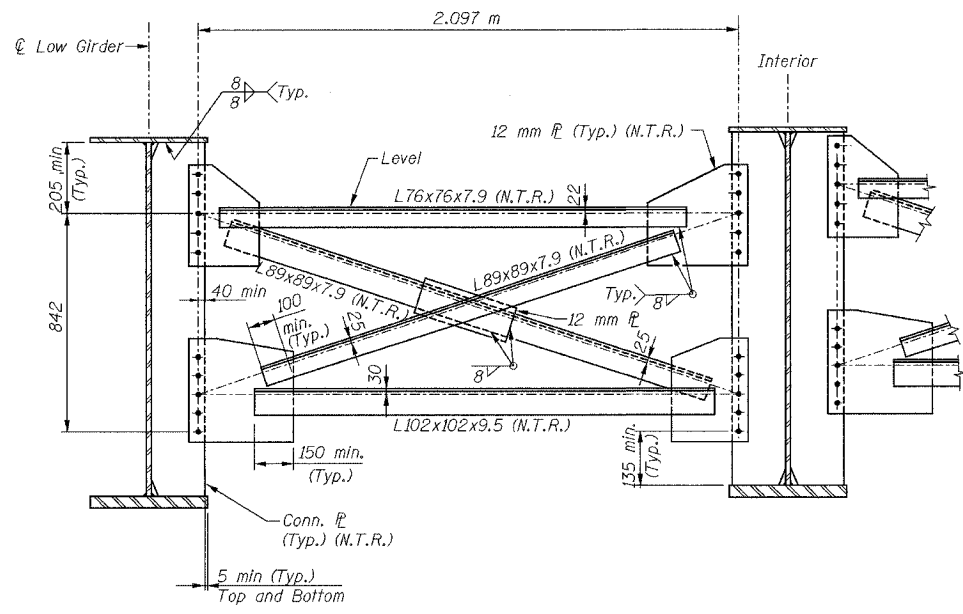
ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IHB-5
GIRDER MOMENT TABLES
 SN: 090-0156 TAZEWELL CO., IL. STA. 10+529.222 DATE: 12-23-04

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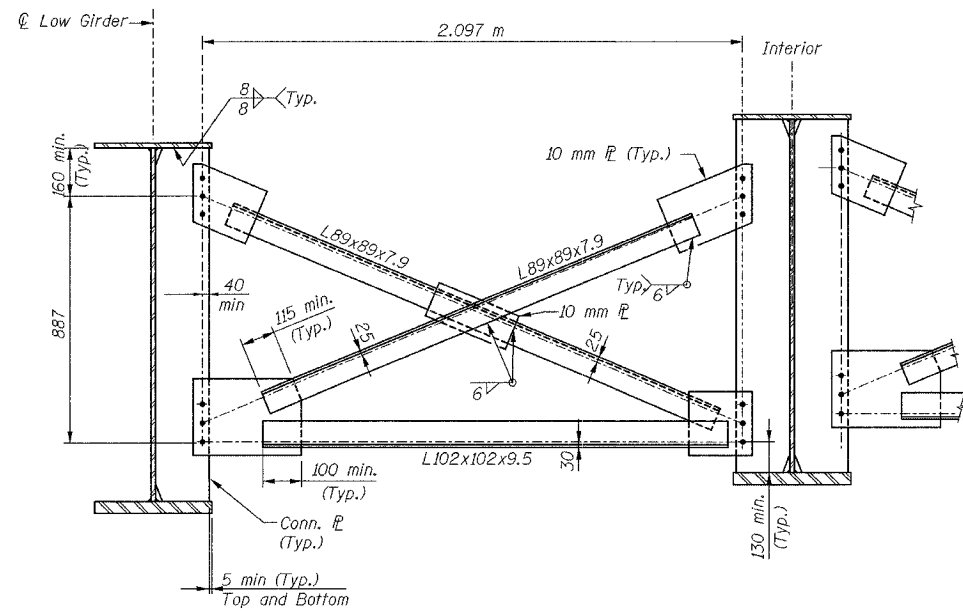
68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	568	
STA.			TO STA.		
F.I.L.W.A. REGION			ILLINOIS PROJECT		
SHEET 22 OF 56					



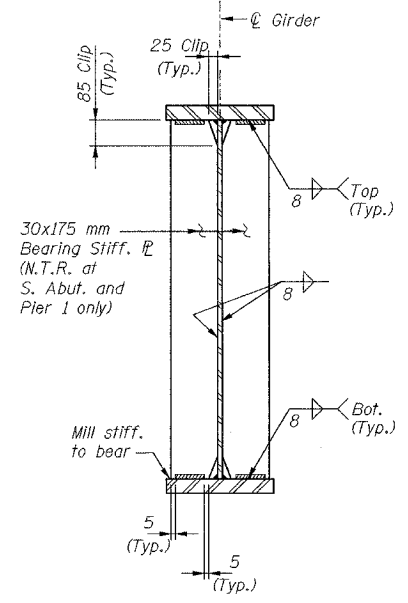
CROSS FRAME CF1 & CF4
(Looking Up Station)
(N.T.R. is applicable to CF1 only)



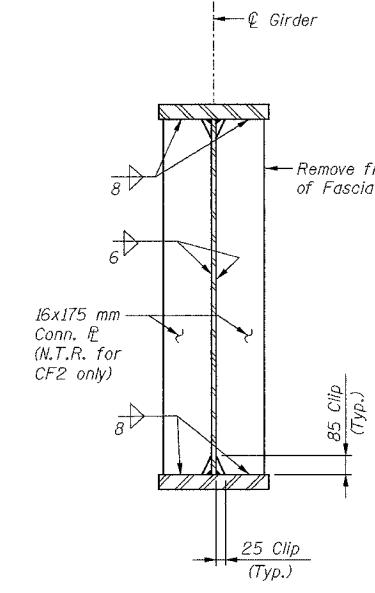
INTERIOR CROSS FRAME CF2
(Looking Up Station)



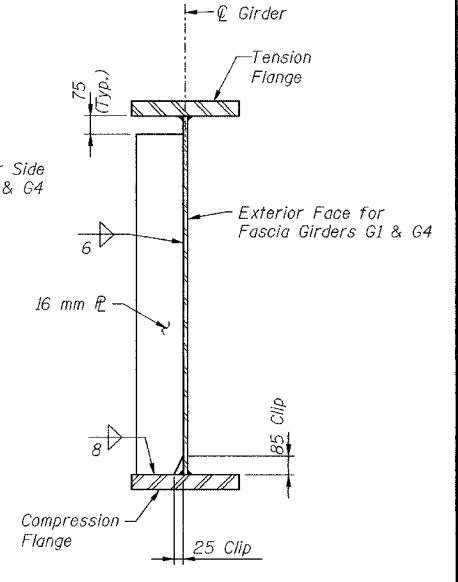
INTERIOR CROSS FRAME CF3
(Looking Up Station)



BEARING STIFFENER



CONNECTION PLATE



TRANSVERSE STIFFENER

NOTES:

- All bolts in cross frames shall be M22 H.S. bolts with 28 mm ϕ oversized holes unless noted otherwise.
- Two hardened washers are required for all oversized holes.
- All cross frames, connection plates and bearing stiffeners shall be M270M Grade 345 steel except fill plates.
- All Splice plate material, except fill plates, shall meet N.T.R. requirements.
- Work this sheet with sheets 19 & 20.

DESIGNED	JQZ
CHECKED	MRB
DRAWN	VH
CHECKED	LRB

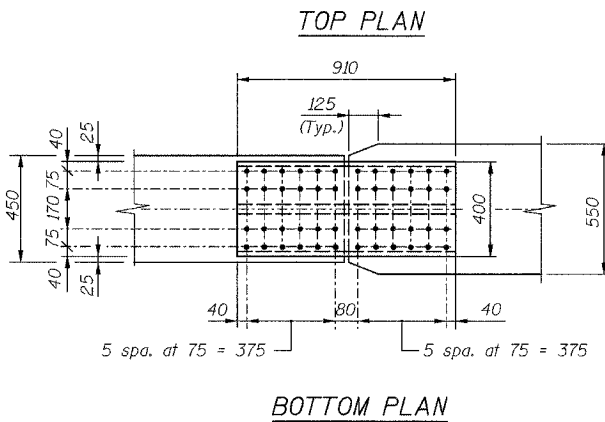
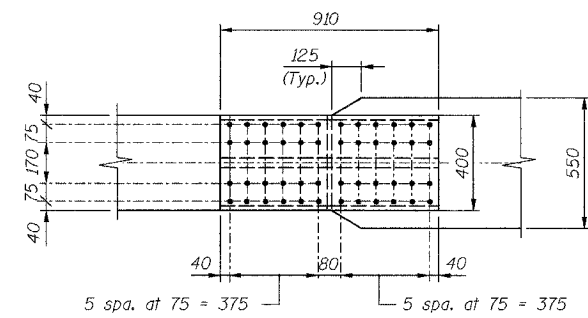
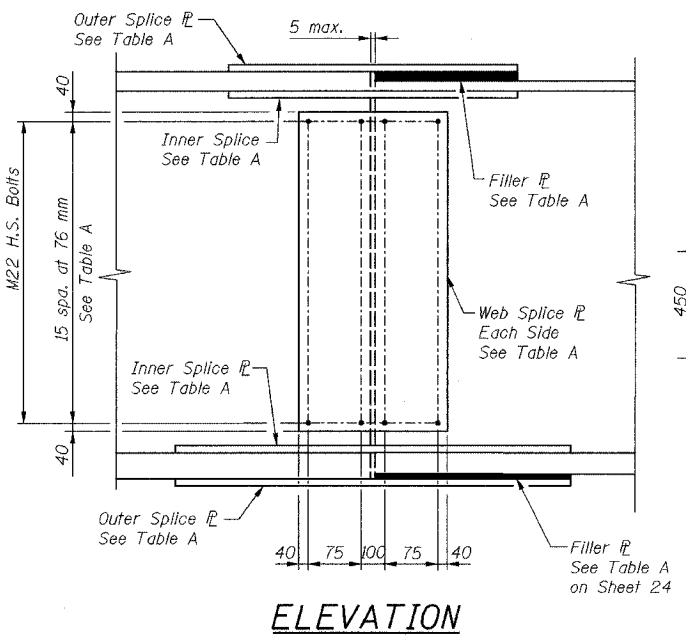
ab **alfred benesch & company**
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IHB-5
CROSS FRAME DETAILS
SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

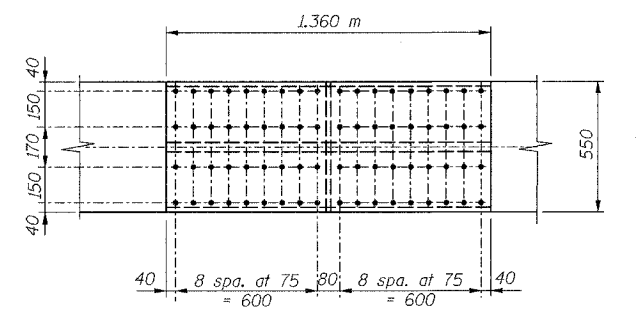
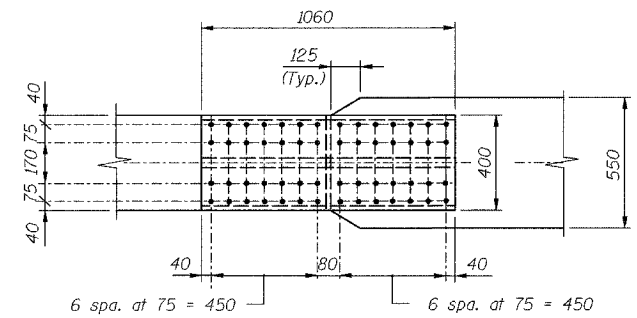
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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	569
STA.			TO STA.		
F.I.L.W.A. REGION			ILLINOIS PROJECT		

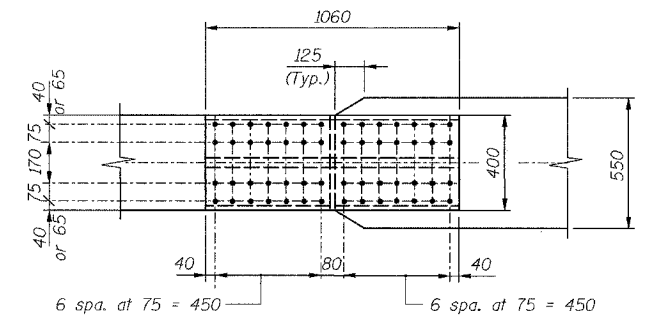
SHEET 23 OF 56



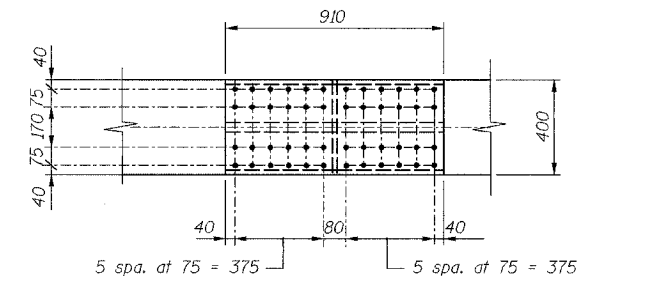
SPLICE TYPE I



SPLICE TYPE IIa



SPLICE TYPE IIb



SPLICE TYPE III

NOTES:

1. All bolts shall be M22 H.S. bolts with 24 mm ϕ holes and shall be fully tightened prior to the deck slab pouring.
2. All splice plates shall be AASHTO M270M Grade 345 Steel except fill plates.
3. Fill plates shall be AASHTO M270M Grade 250.
4. All Splice plate material, except fill plates, shall meet N.T.R. requirements.
5. Work this sheet with sheet 24.

DESIGNED	JQZ
CHECKED	KWS
DRAWN	VH
CHECKED	LRB

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIIB-5
SPLICE DETAILS

SN: 090-0156
TAZEWELL CO., IL.

STA. 10+529.222
DATE: 12-23-04

2/3/2005

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68201				
68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS
	FAI 74	*	TAZEWELL	1366
STA.			TO STA.	
F.H.W.A. REGION			ILLINOIS	PROJECT

SHEET 24 OF 56

TABLE A

Splice Designation	Girder	Splice Type	TOP FLANGE			WEB	BOTTOM FLANGE		
			Outer Splice ℓ	Filler ℓ	Inner Splice ℓ	Splice ℓ's	Outer Splice ℓ	Filler ℓ	Inner Splice ℓ
FS -1	G1	I	18 x 400 x 910	5 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -2	G1	I	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -2A	G1	I	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -3	G1	I	18 x 400 x 910	5 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -3A	G1	III	18 x 400 x 910	8 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	3 x 400 x 455	22 x 165 x 910
FS -4	G1	III	18 x 400 x 910	16 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	3 x 400 x 455	22 x 165 x 910
FS -4A	G1	III	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -5	G1	III	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	10 x 400 x 455	22 x 165 x 910
FS -1	G2	I	18 x 400 x 910	5 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -2	G2	I	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -2A	G2	I	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -3	G2	I	18 x 400 x 910	5 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -3A	G2	III	18 x 400 x 910	8 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	3 x 400 x 455	22 x 165 x 910
FS -4	G2	III	18 x 400 x 910	16 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	3 x 400 x 455	22 x 165 x 910
FS -4A	G2	III	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -5	G2	III	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	10 x 400 x 455	22 x 165 x 910
FS -1	G3	I	18 x 400 x 910	5 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -2	G3	I	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -2A	G3	I	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -3	G3	I	18 x 400 x 910	5 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -3A	G3	III	18 x 400 x 910	8 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	3 x 400 x 455	22 x 165 x 910
FS -4	G3	III	18 x 400 x 910	16 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	3 x 400 x 455	22 x 165 x 910
FS -4A	G3	III	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -5	G3	III	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	10 x 400 x 455	22 x 165 x 910
FS -1	G4	Iia	20 x 400 x 1060	10 x 400 x 530	22 x 165 x 1060	10 x 330 x 1220	22 x 550 x 1360	7 x 550 x 680	25 x 240 x 1360
FS -2	G4	Iib	20 x 400 x 1060	3 x 400 x 530	22 x 165 x 1060	10 x 330 x 1220	25 x 450 x 1060	n/a	25 x 190 x 1060
FS -2A	G4	Iib	20 x 400 x 1060	3 x 400 x 530	22 x 165 x 1060	10 x 330 x 1220	25 x 450 x 1060	n/a	25 x 190 x 1060
FS -3	G4	I	18 x 400 x 910	5 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -3A	G4	III	18 x 400 x 910	8 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	3 x 400 x 455	22 x 165 x 910
FS -4	G4	III	18 x 400 x 910	16 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	3 x 400 x 455	22 x 165 x 910
FS -4A	G4	III	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	n/a	22 x 165 x 910
FS -5	G4	III	18 x 400 x 910	13 x 400 x 455	22 x 165 x 910	10 x 330 x 1220	20 x 400 x 910	10 x 400 x 455	22 x 165 x 910

2/3/2005

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DESIGNED	JOZ
CHECKED	KWS
DRAWN	VH
CHECKED	LRB

- NOTES:**
- All splice plates shall be M270M Grade 345 Steel except fill plates and conform to Notch Toughness Requirements.
 - Work this sheet with sheet 23.

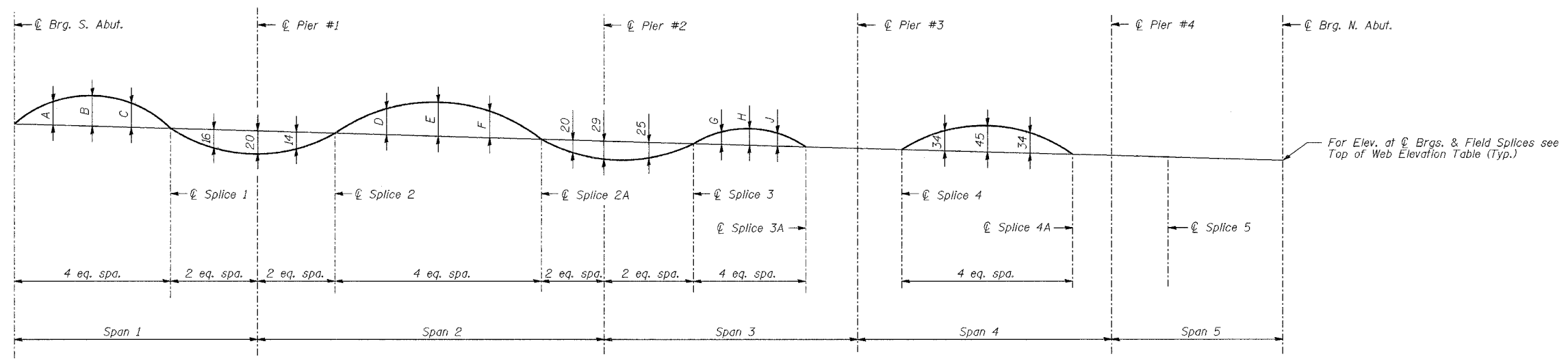


ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIIB-5
SPLICE DETAILS

SN: 090-0156
 TAZEWELL CO., IL.

STA. 10+529.222
 DATE: 12-23-04

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI74	*	TAZEWELL	1366	571
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS		PROJECT



CAMBER DIAGRAM

CAMBER ORDINATE TABLE

	A	B	C	D	E	F	G	H	J
Girder 1	45	60	45	113	150	113	45	60	45
Girder 2	53	70	53	128	170	128	38	50	38
Girder 3	53	70	53	139	185	139	30	40	30
Girder 4	60	80	60	143	190	143	23	30	23

TOP OF WEB ELEVATION*

	S. Abut.	F.S. - 1	Pier #1	F.S. - 2	F.S. - 2A	Pier #2	F.S. - 3	F.S. - 3A	Pier #3	F.S. - 4	F.S. - 4A	Pier #4	F.S. - 5	N. Abut.
Girder 1	157.007	156.584	156.243	155.976	154.787	154.273	153.611	152.743	152.358	152.031	150.952	150.752	150.459	150.035
Girder 2	157.078	156.688	156.348	156.083	154.828	154.287	153.586	152.694	152.310	151.985	150.904	150.705	150.411	149.988
Girder 3	157.137	156.790	156.453	156.190	154.868	154.300	153.562	152.645	152.263	151.938	150.857	150.657	150.364	149.941
Girder 4	157.190	156.882	156.550	156.292	154.905	154.310	153.535	152.598	152.216	151.892	150.811	150.611	150.317	149.893

* For fabrication use only.

2/3/2005
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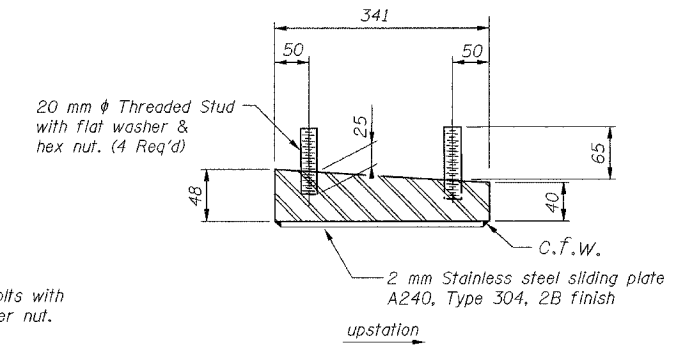
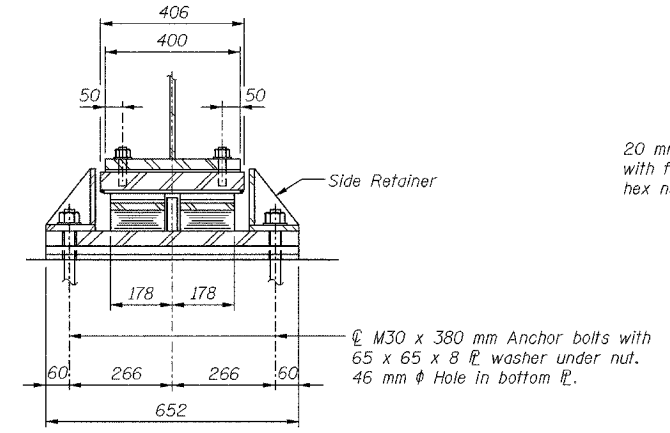
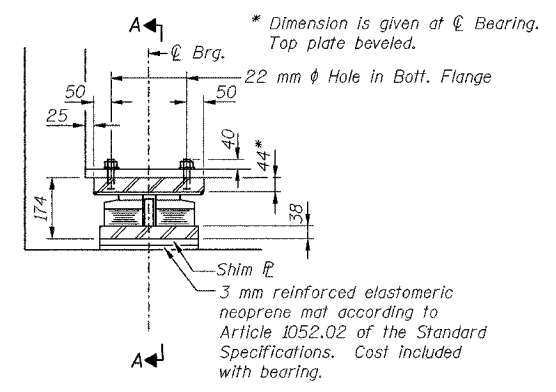
DESIGNED	KWS
CHECKED	ADD
DRAWN	VH
CHECKED	LRB

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIB-5
GIRDER CAMBER DIAGRAM

SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	572
STA.		TO STA.			
F.I.L.W.A. REGION		ILLINOIS		PROJECT	

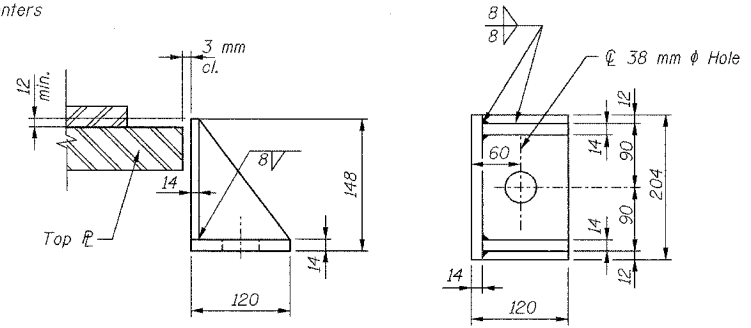
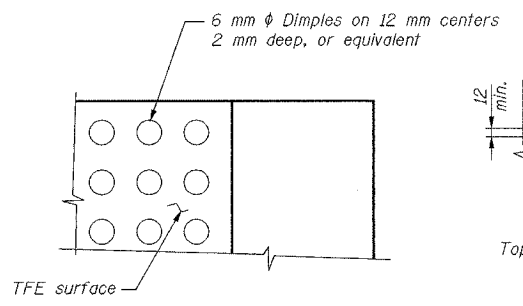


ELEVATION - TOP BEARING ASSEMBLY

ELEVATION

Side retainer not shown for clarity

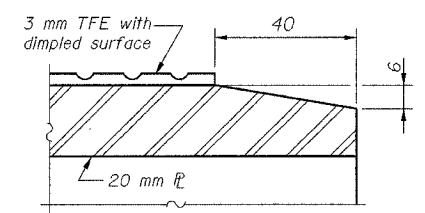
TYPE III ELASTOMERIC EXPANSION BEARING



SIDE RETAINER

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

Weight included with Structural Steel.



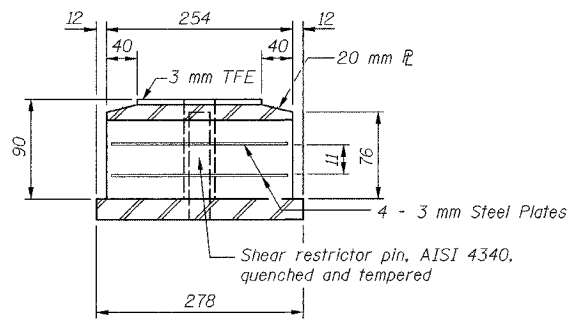
SECTION THRU TFE

BILL OF MATERIAL

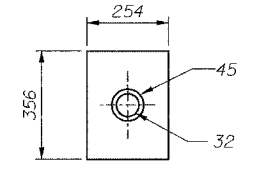
Item	Unit	Total
Elastomeric Bearing Assembly, Type III	Each	4

DESIGNED	HAA
CHECKED	KWS
DRAWN	VH
CHECKED	LRB

ELEVATION - BOTTOM BEARING ASSEMBLY

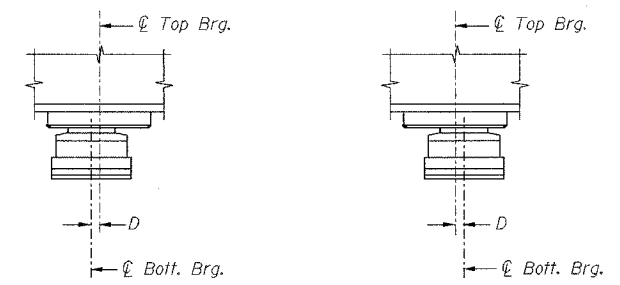


SLOT DETAIL



NOTES:

- The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270M Grade 345.
- 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.
- See sheet 30 for Anchor Bolt Details.
- See sheet 19 for Framing Plan.
- All dimensions are in millimeters (mm) except as noted.



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 (contraction) length for every 8 °C temperature change from the normal temperature of +10 °C.

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

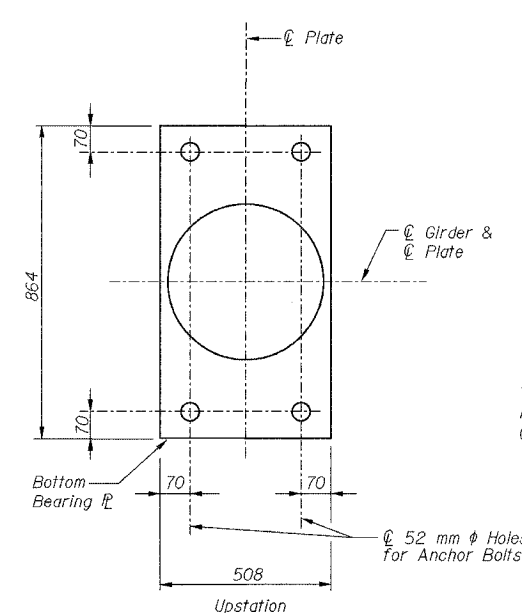
ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIIB-5
ELASTOMERIC BEARING DETAILS
NORTH ABUTMENT

SN: 090-0156
TAZEWELL CO., IL.

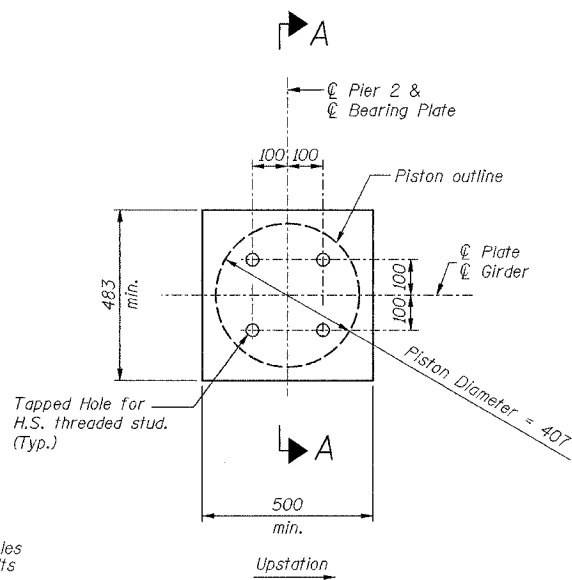
STA. 10+529.222
DATE: 12-23-04

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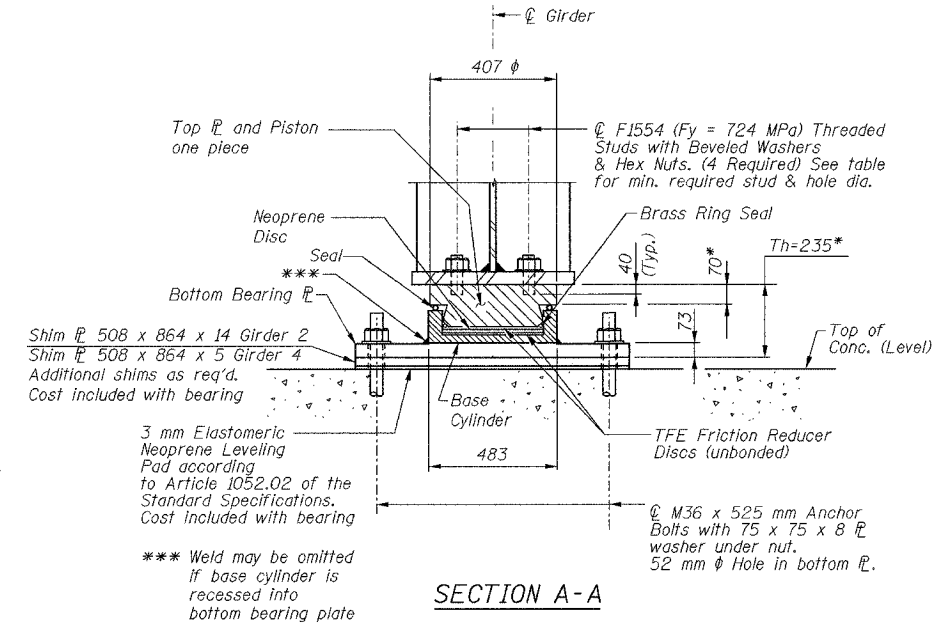
68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	573
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		



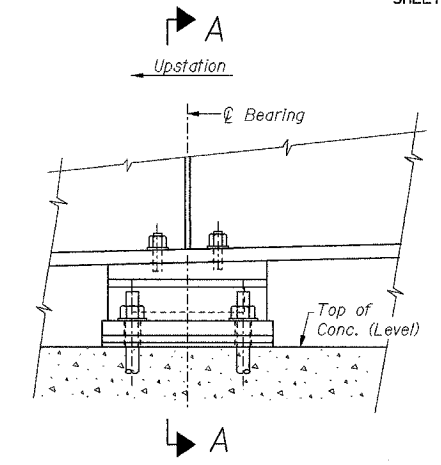
PLAN
BOT. BRG. PL &
BASE CYLINDER



PLAN
TOP PL - PISTON
Girder not shown for clarity.



SECTION A-A



ELEVATION

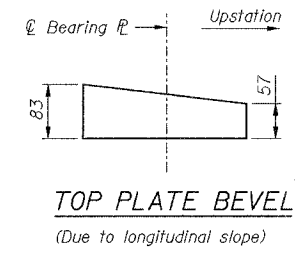
Note: Top of Top PL is sloped. Bottom of PL is to be level.

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

*Note: Dimensions are given at bearing. Top Plate Beveled.

NOTES:

- 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".
- See sheet 19 for girder layout.
- 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. If actual dimensions differ to those shown on the plans, then Contractor shall be responsible for meeting AASHTO edge distance requirements and for ensuring adequate clearance for installation of all Anchor Bolts and threaded studs.
- Bearing assemblies shall be designed and assembled to allow replacement by jacking the superstructure.
- Vertical Design Loads are the governing service loads; horizontal design loads shall be 20% of vertical load, unless otherwise noted.
- See sheet 30 for Anchor Bolt Details.



TOP PLATE BEVEL
(Due to longitudinal slope)

LOCATION	TYPE	PAY ITEM DESIGNATION KN	VERT. DESIGN LOAD ** KN	MIN. DIA. THREADED STUD	THREADED STUD HOLE DIA. AT GIRDER BOTTOM PL	LL ROTATION RANGE, RADIANS
Pier 2	Floating Bearings, Fixed	1850	1710	M22	24	-0.0045 to 0.0032

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Fixed - 1850KN	Each	4

FLOATING BEARING - FIXED
(N. T. S.)

DESIGNED	HAA
CHECKED	KWS
DRAWN	VH
CHECKED	LRB

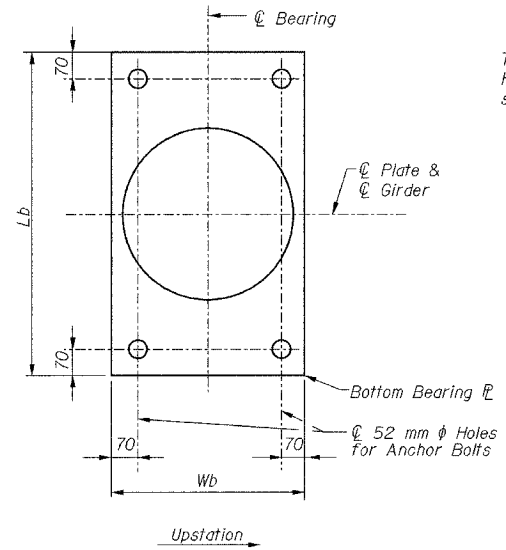
ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIB-5
FIXED FLOATING BEARING DETAILS
PIER 2

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CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

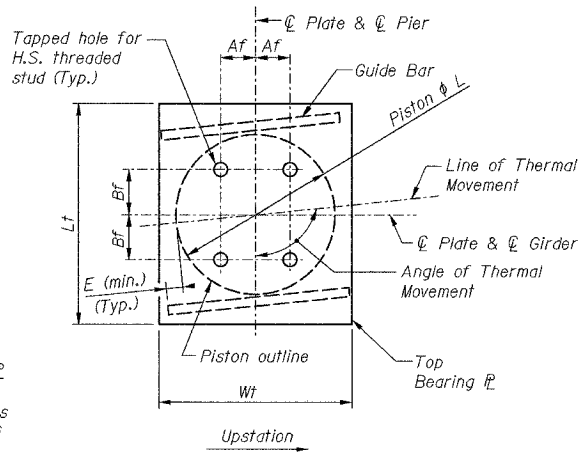
SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

2/3/2005
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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1306	574	
STA.		TO STA.			
F.H.W.A. REGION		ILLINOIS		PROJECT	



**PLAN
PIER BOT. BRG. &
BASE CYLINDER**

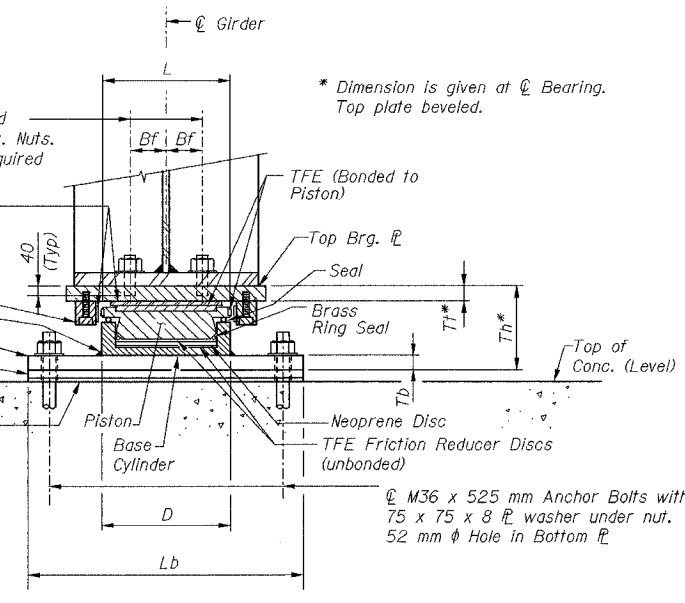


**PLAN
PIER TOP BRG. &
PISTON**

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

Ø F1554 (Fy = 724 MPa) Threaded Studs with Beveled Washers & Hex. Nuts. (4 Required) See table for min required stud & hole dia. Stainless Steel Facing with Mirror Finish

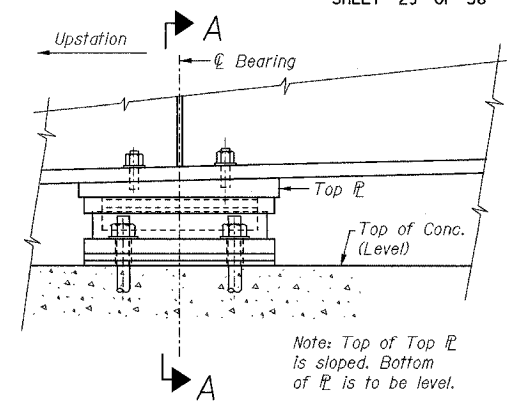
Guide Bar****
**** Weld may be omitted if base cylinder is recessed into bottom bearing plate (Optional)



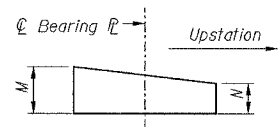
SECTION A-A

* Dimension is given at Ø Bearing. Top plate beveled.

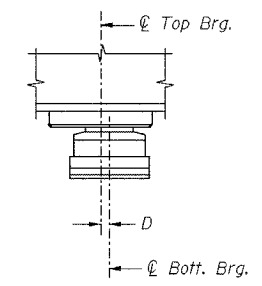
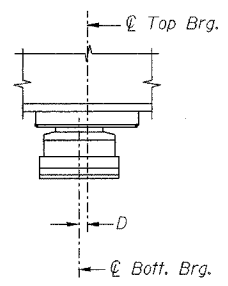
***As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.



ELEVATION



TOP PLATE BEVEL
(Due to longitudinal slope)



BELOW 10 °C (Move bott. brg. away from fixed brg.)
ABOVE 10 °C (Move bott. brg. toward fixed brg.)

**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 temperature of +10 °C.

ANGLE OF THERMAL MOVEMENT

	Pier #1	Pier #3	Pier #4
Girder 1	92°-35'-27"	90°-00'-00"	90°-00'-00"
Girder 2	92°-35'-21"	90°-00'-00"	90°-00'-00"
Girder 3	92°-35'-15"	90°-00'-00"	90°-00'-00"
Girder 4	92°-35'-09"	90°-00'-00"	90°-00'-00"

LOCATION	TYPE	PAY ITEM DESIGNATION KN	VERT. DESIGN LOAD** KN	LL ROTATION RANGE, RADIANS	MAX. THEORETICAL THERMAL MOVEMENT Ø D °C	MIN. DIA. THREADED STUD	THREADED STUD HOLE DIA. AT GIRDER BOTTOM Ø
Pier 1	Floating Bearings, Guided Expansion	2000	1929	-0.0032 to 0.0043	±30 mm	M22	24
Pier 3	Floating Bearings, Guided Expansion	1500	1286	-0.0027 to 0.0032	±22 mm	M22	24
Pier 4	Floating Bearings, Guided Expansion	1500	1291	-0.0026 to 0.0020	±44 mm	M22	24

LOCATION	BOT. FLANGE		TOP PLATE/BEARING ASSEMBLY								BOTTOM PLATE			TOTAL BEARING HEIGHT Th
	Af	Bf	E	Tf	L	D	Wt MIN.	Lt MIN.	M	N	Tb	Wb	Lb	
Pier 1	265	225	50	73	476	515	630	566	80	66	73	560	864	289
Pier 3	195	150	55	60	378	416	490	490	71	49	64	458	813	251
Pier 4	195	150	65	60	378	416	510	490	68	52	64	458	813	251

NOTES:

- 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".
- See sheet 19 for girder layout.
- 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. If actual dimensions differ to those shown on the plans, then Contractor shall be responsible for meeting AASHTO edge distance requirements and for ensuring adequate clearance for installation of all Anchor Bolts and threaded studs.
- Bearing assemblies shall be designed and assembled to allow its replacement by jacking the superstructure.
- ** 5. Vertical Design Loads are the governing service loads; horizontal design loads shall be 20% of vertical load, unless otherwise noted.

6. See sheet 30 for Anchor Bolt details.

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Guided Expansion 2000KN	Each	4
Floating Bearings, Guided Expansion 1500KN	Each	8

DESIGNED	HAA
CHECKED	KWS
DRAWN	VH
CHECKED	LRB

FLOATING BEARING - GUIDED EXPANSION
(N. T. S.)

alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3513

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIIB-5
GUIDED EXPANSION
FLOATING BEARING DETAILS
PIERS 1, 3 & 4
SN: 090-0156 TAZEWELL CO., IL. STA. 10+529.222
DATE: 12-23-04

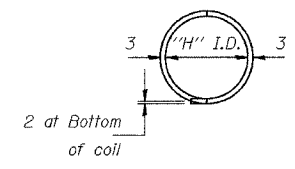
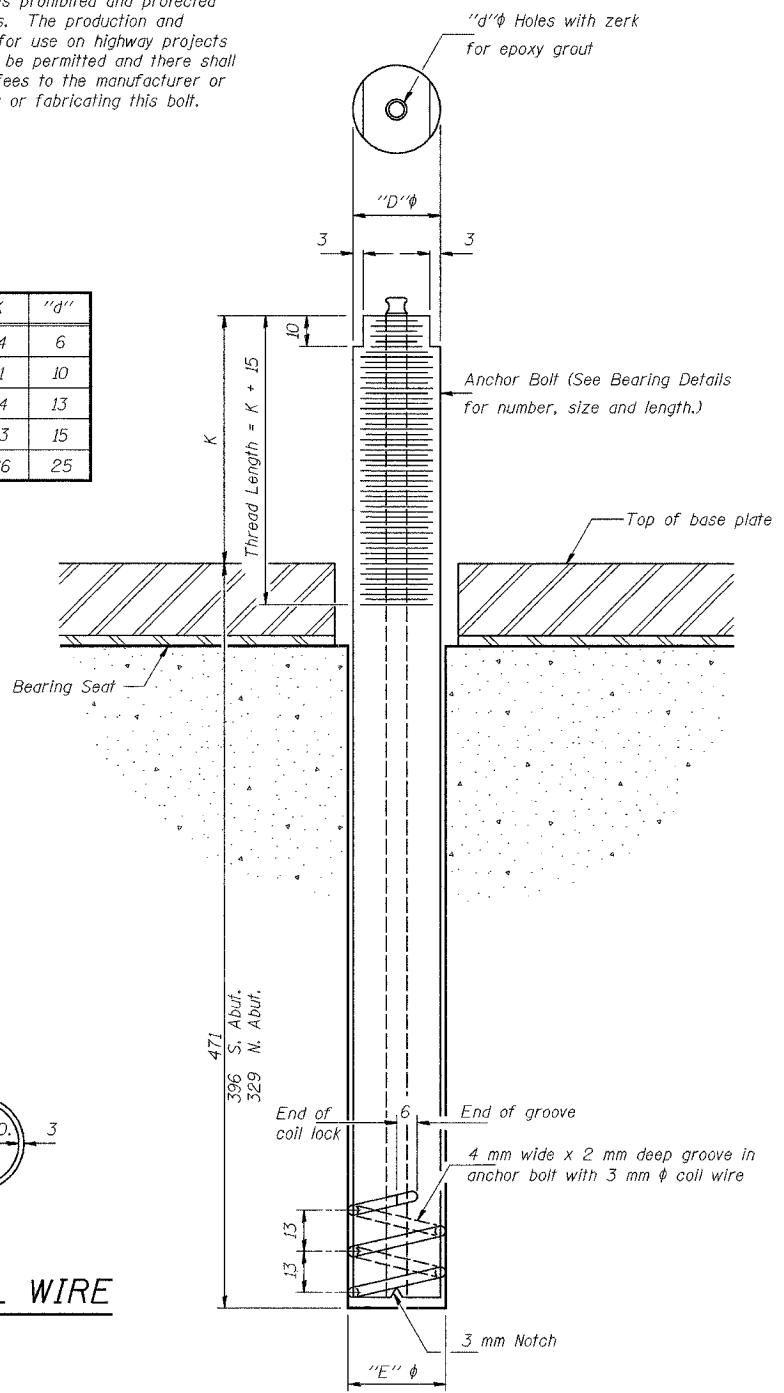
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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI74	*	TAZEWELL	1366	575
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		

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.

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

DESIGNED	HAA
CHECKED	KWS
DRAWN	VH
CHECKED	LRB

ABB 4-30-99

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	Type
S. Abut.	A307
Pier 1	A307
Pier 2	A307
Pier 3	A307
Pier 4	A307
N. Abut.	A307

ASTM F 1554 (Fy = 724 MPa) and AASHTO M 314 (Fy = 724 MPa) anchor bolts may be substituted for the A307 anchor bolts shown above.

GENERAL NOTES

1. 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.
2. 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.
3. The anchor bolts, furnished and installed 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.

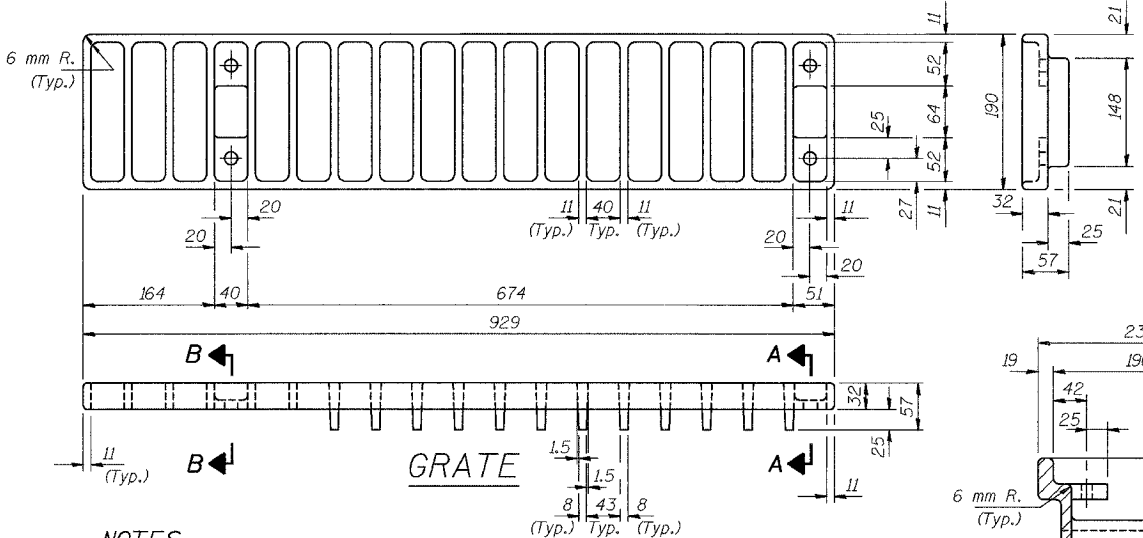
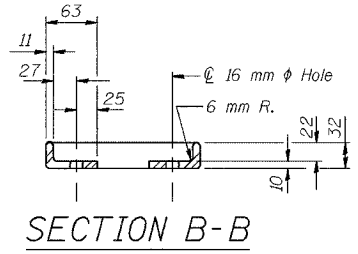
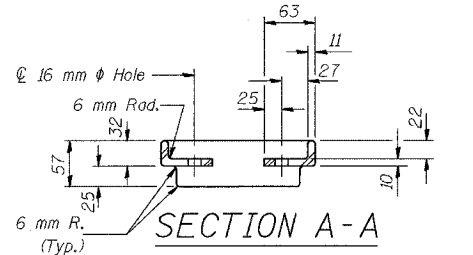
ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIB-5
 ANCHOR BOLT DETAILS

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

SN: 090-0156
 TAZEWELL CO., IL.
 STA. 10+529.222
 DATE: 12-23-04

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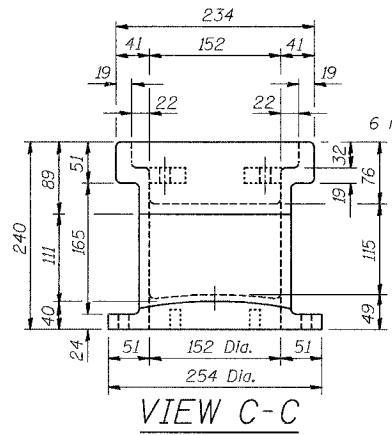
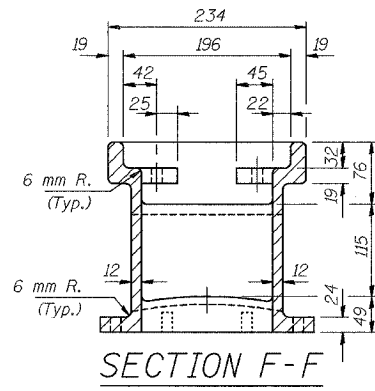
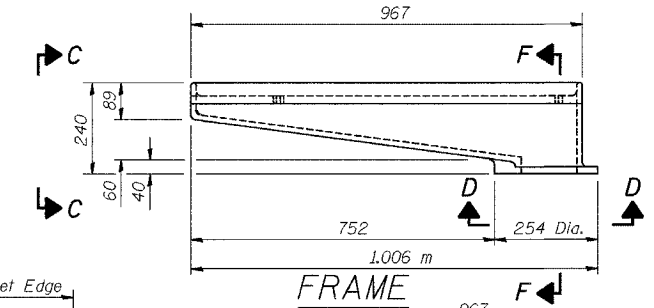
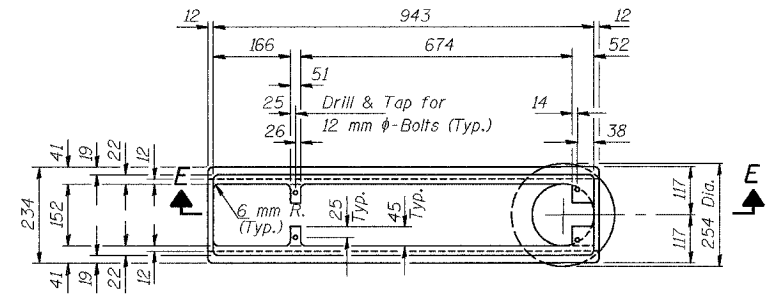
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	576
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	



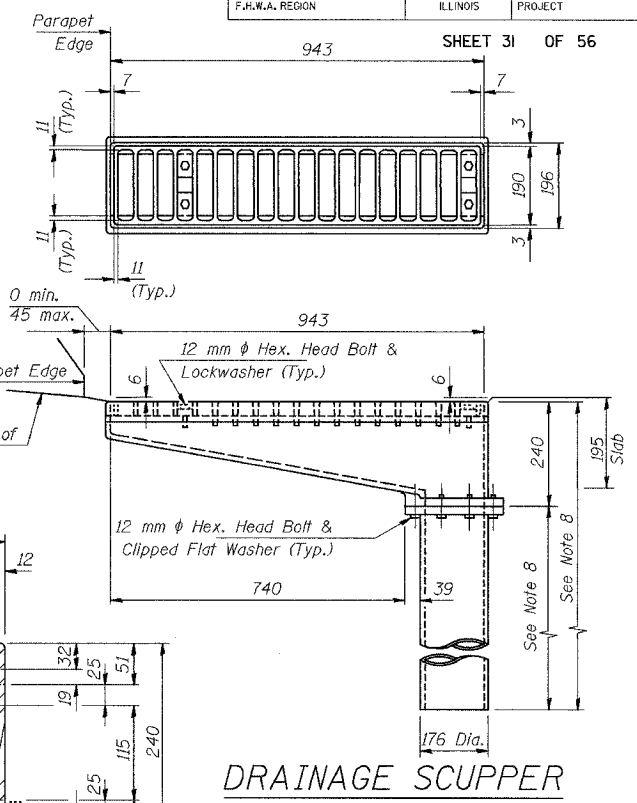
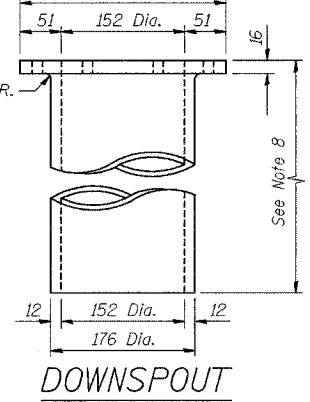
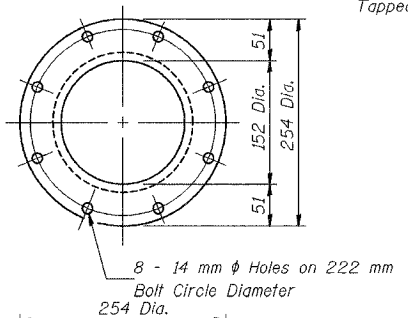
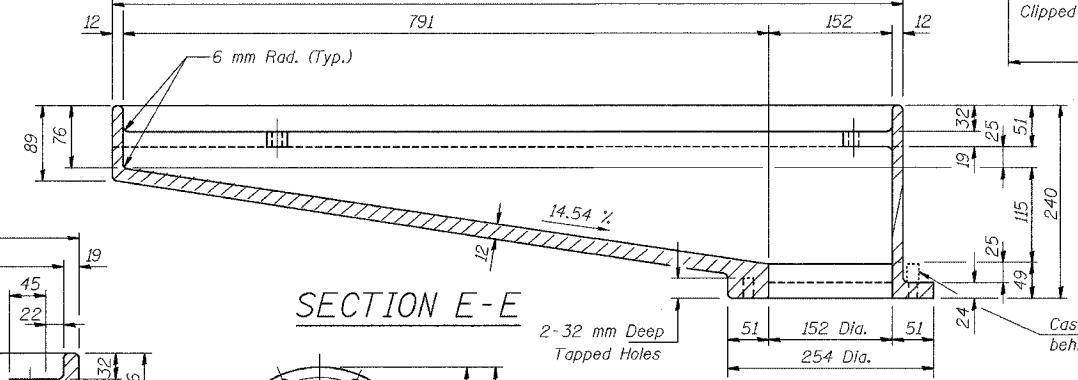
NOTES:

- All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 30.
- Bolts and washers shall conform to the requirements of ASTM A 307.
- All bolts and washers shall be galvanized according to AASHTO M 232. As an alternate bolts and washers may be stainless steel.
- 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."
- The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.
- All dimensions are in millimeters (mm) except as noted.
- Edge of scupper to be placed at edge of parapet except when prohibited by wide top flange of beam.
- Dimensions must be determined by the Contractor at each scupper location and must be set to accommodate 25mm min. clearance shown on sheet 13, including fittings. See sheet 32 for scupper locations and details.

DESIGNED	HAA
CHECKED	KWS
DRAWN	VH
CHECKED	KJN



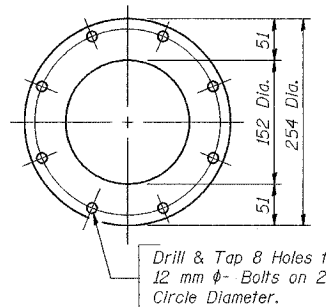
SECTION E-E



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers, Type 1	Each	5

VIEW D-D



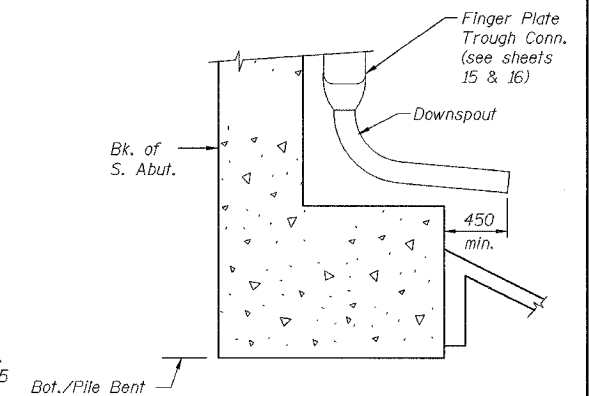
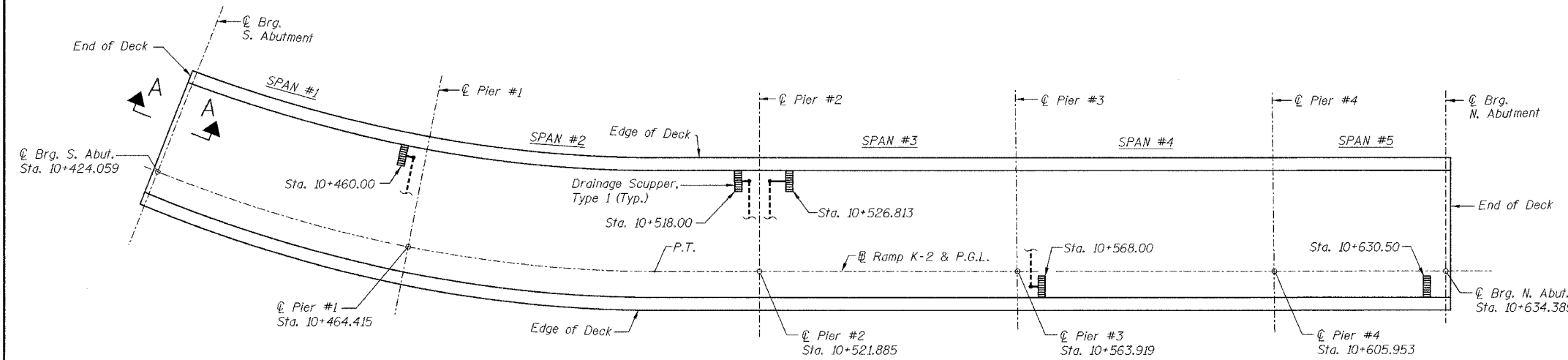
ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IHB-5
DRAINAGE SCUPPER, TYPE 1

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 CONSULTING ENGINEERS
 205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
 JOB NO. 3573

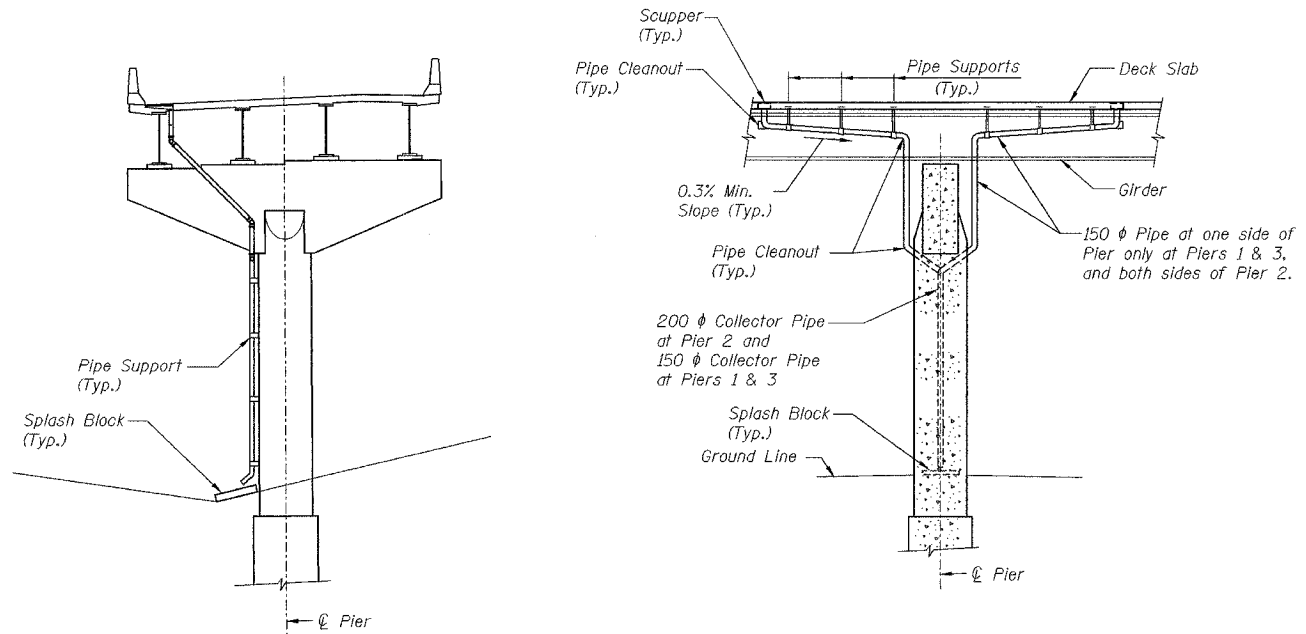
SN: 090-0156
 TAZEWELL CO., IL.
 STA. 10+529.222
 DATE: 12-23-04

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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI74	#	TAZEWELL	1366	577
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		



LOCATION PLAN



ELEVATION
(Looking Upstation)

END VIEW
(Looking at Inside Face of Girder)

DRAINAGE SYSTEM AT PIER #2
(Pier #1 and #3 similar)

DESIGNED	KWS
CHECKED	HMA
DRAWN	VH
CHECKED	KJN

NOTES:

1. All collector pipes, downspouts and fittings, for Drainage System, shall be reinforced fiberglass. See Special Provisions for "Drainage System".
2. All pipes, reducers and pipe supports shall be painted to match the concrete.
3. The surface of the fiberglass pipes shall be free of bond inhibiting agents.
4. Cost of all piping, reducers, flanges, fittings, supports, splash blocks and hardware, complete in place, shall be included in the lump sum price bid for "Drainage System".
5. Design, number and spacing of pipe supports as recommended by the manufacturer.
6. Pipes and supports shall be located clear of all cross frames.
7. All dimensions are in millimeters (mm) except as noted.
8. Work this sheet with sheets 13, 15, 16 and 31.

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIHB-5
DRAINAGE SYSTEM

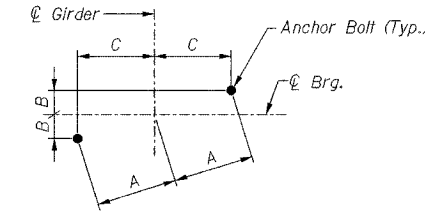
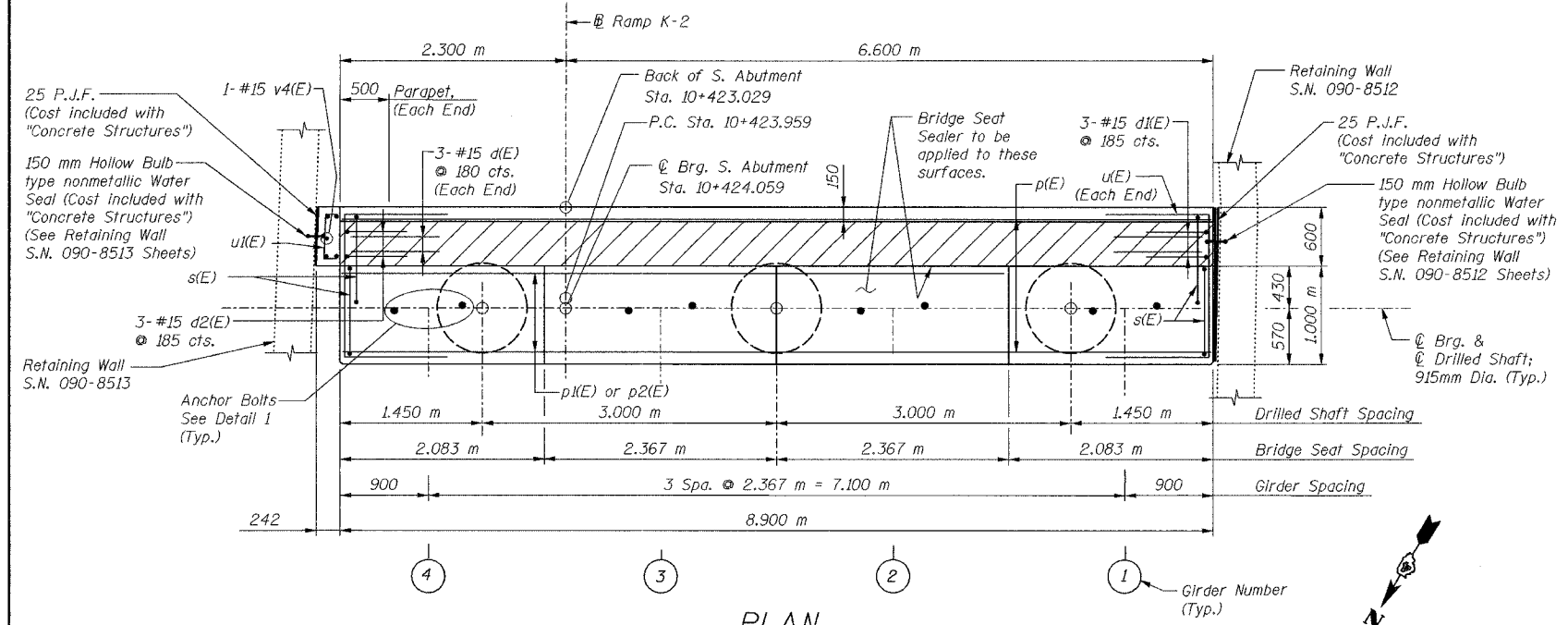
ab **alfred benesch & company**
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60604
JOB NO. 3573

SN: 090-0156
TAZEWELL CO., IL.

STA. 10+529.222
DATE: 12-23-04

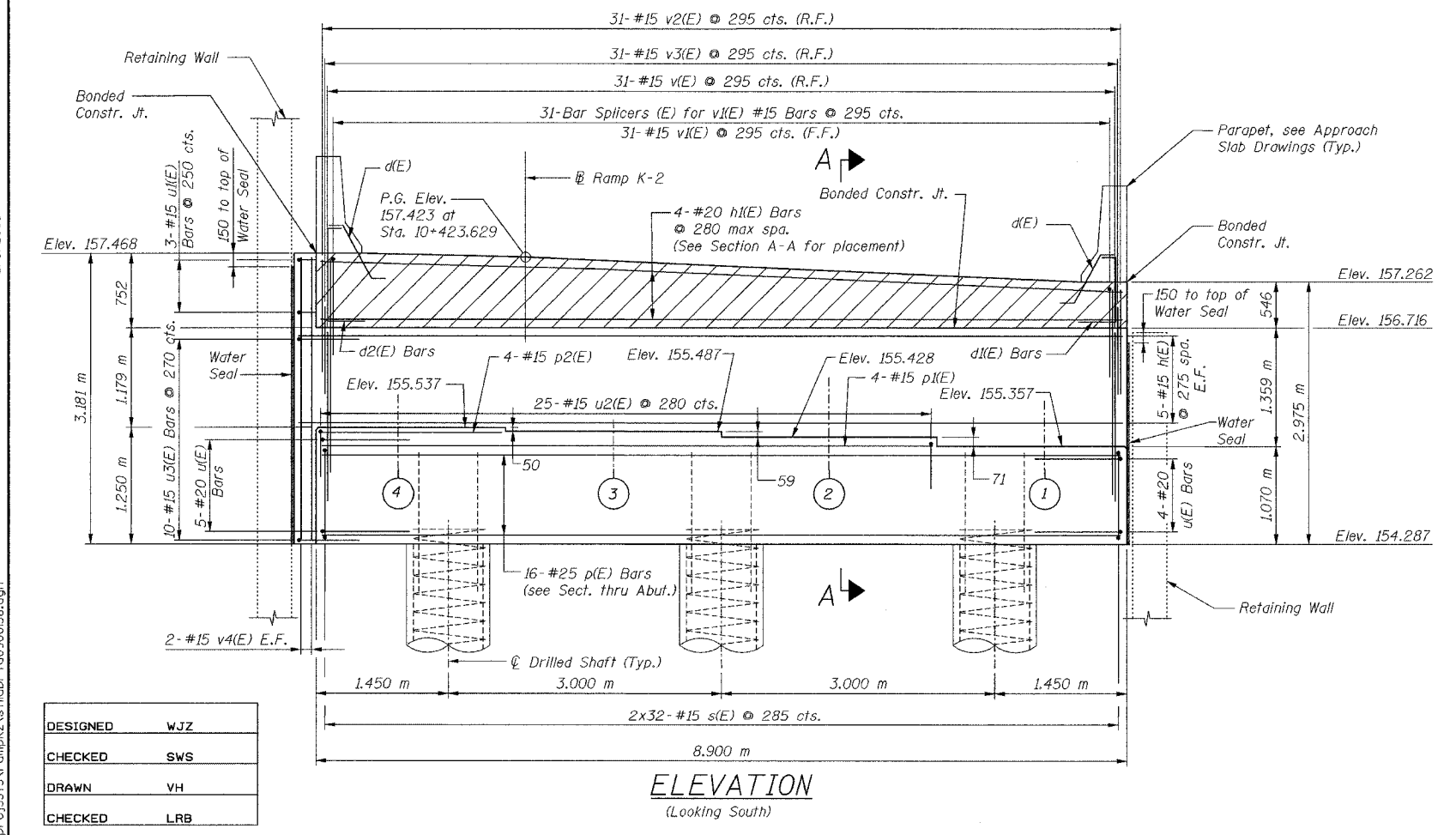
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ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	578
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	



	A	B	C
Girder 1	327	27	326
Girder 2	327	27	326
Girder 3	327	27	326
Girder 4	367	30	366

DETAIL 1



NOTES:

- Use the following minimum lap lengths unless otherwise noted:
 #15 - 640
 #20 - 790
 #25 - 1.32m
- Work this Sheet with Sheet 34.
- Pour steps monolithically with Pile Bent.
- E.F. denotes Each Face.
- F.F. denotes Front Face.
- I.F. denotes Inside Face.
- O.F. denotes Outside Face.
- R.F. denotes Rear Face.
- Space reinforcement in Pile Bent to miss anchor bolts.
- For Foundation Layout, see Sheet 4.
- For Bar Splicer Details, see Sheet 45.
- For Section A-A see Sheet 34.

DESIGNED	WJZ
CHECKED	SWS
DRAWN	VH
CHECKED	LRB

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIIB-5
 SOUTH ABUTMENT
 PLAN AND ELEVATION

SN: 090-0156
 TAZEWELL CO., IL.

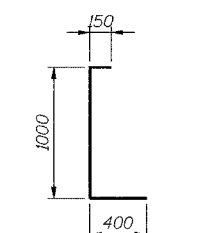
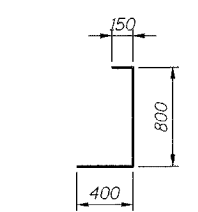
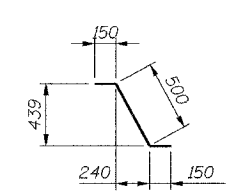
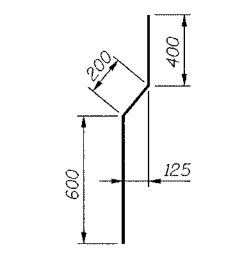
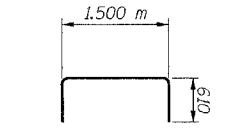
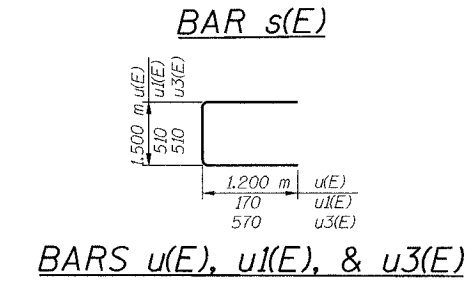
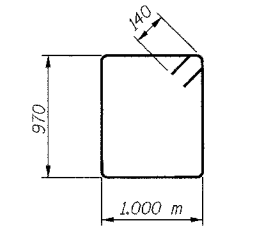
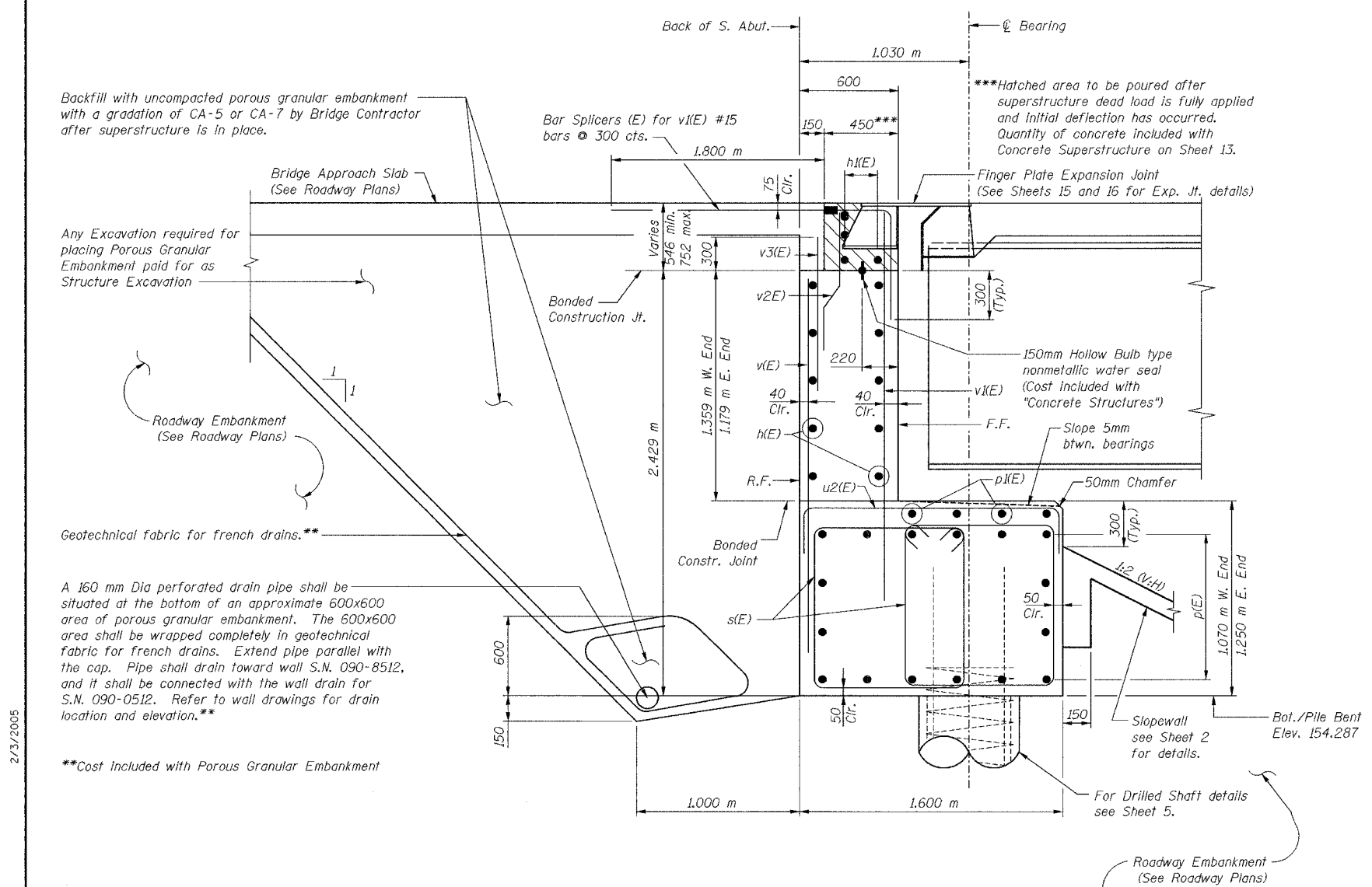
STA. 10+529.222
 DATE: 12-23-04

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

2/3/2005

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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	579
STA.		TO STA.			
F.A.I.W.A. REGION		ILLINOIS		PROJECT	



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	6	# 15	0.80	U
d1(E)	3	# 15	1.35	U
d2(E)	3	# 15	1.55	U
h(E)	10	# 15	9.04	—
h1(E)	4	# 20	8.80	—
p(E)	16	# 25	8.80	—
p1(E)	4	# 15	6.72	—
p2(E)	4	# 15	1.98	—
s(E)	64	# 15	4.22	□
u(E)	9	# 20	3.90	□
u1(E)	3	# 15	0.85	□
u2(E)	25	# 15	2.72	□
u3(E)	10	# 15	1.65	□
v(E)	31	# 15	2.15	—
v1(E)	31	# 15	2.35	—
v2(E)	31	# 15	1.20	—
v3(E)	31	# 15	0.95	—
v4(E)	5	# 15	3.00	—
Bar Splicer (E)	EACH		31	
Concrete Structures	CU M		23.9	
Porous Granular Embankment	CU M		57	
Reinforcement Bars, Epoxy Coated	KG		1,850	
Bridge Seat Sealer	SQ M		21	
Slope Wall 100 mm	SQ M		162	
Structure Excavation*	CU M		83	

*Structure Excavation quantity computed based on existing ground elevations.

Backfill with uncompacted porous granular embankment with a gradation of CA-5 or CA-7 by Bridge Contractor after superstructure is in place.

Any Excavation required for placing Porous Granular Embankment paid for as Structure Excavation

Roadway Embankment (See Roadway Plans)

Geotechnical fabric for french drains.**

A 160 mm Dia perforated drain pipe shall be situated at the bottom of an approximate 600x600 area of porous granular embankment. The 600x600 area shall be wrapped completely in geotechnical fabric for french drains. Extend pipe parallel with the cap. Pipe shall drain toward wall S.N. 090-8512, and it shall be connected with the wall drain for S.N. 090-0512. Refer to wall drawings for drain location and elevation.**

**Cost Included with Porous Granular Embankment

NOTES:

1. Work this Sheet with Sheet 33.
2. For Bearing Details, see Sheet 26.
3. For Bar Splicer Details, see Sheet 45.
4. E.F. denotes Each Face.
5. F.F. denotes Front Face.
6. I.F. denotes Inside Face.
7. O.F. denotes Outside Face.
8. R.F. denotes Rear Face.

DESIGNED	WJZ
CHECKED	SWS
DRAWN	VH
CHECKED	LRB

SECTION A-A THRU ABUTMENT

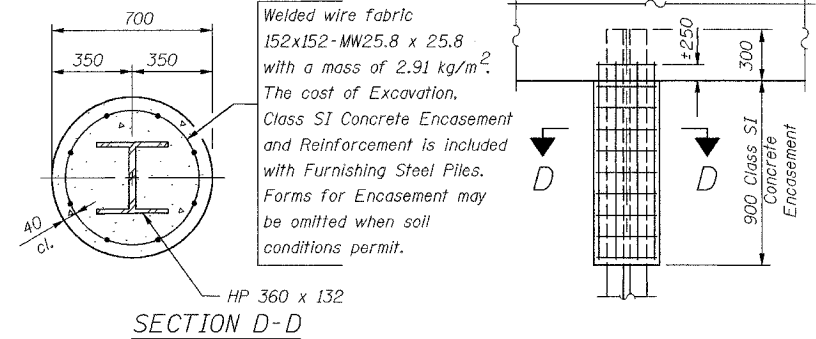
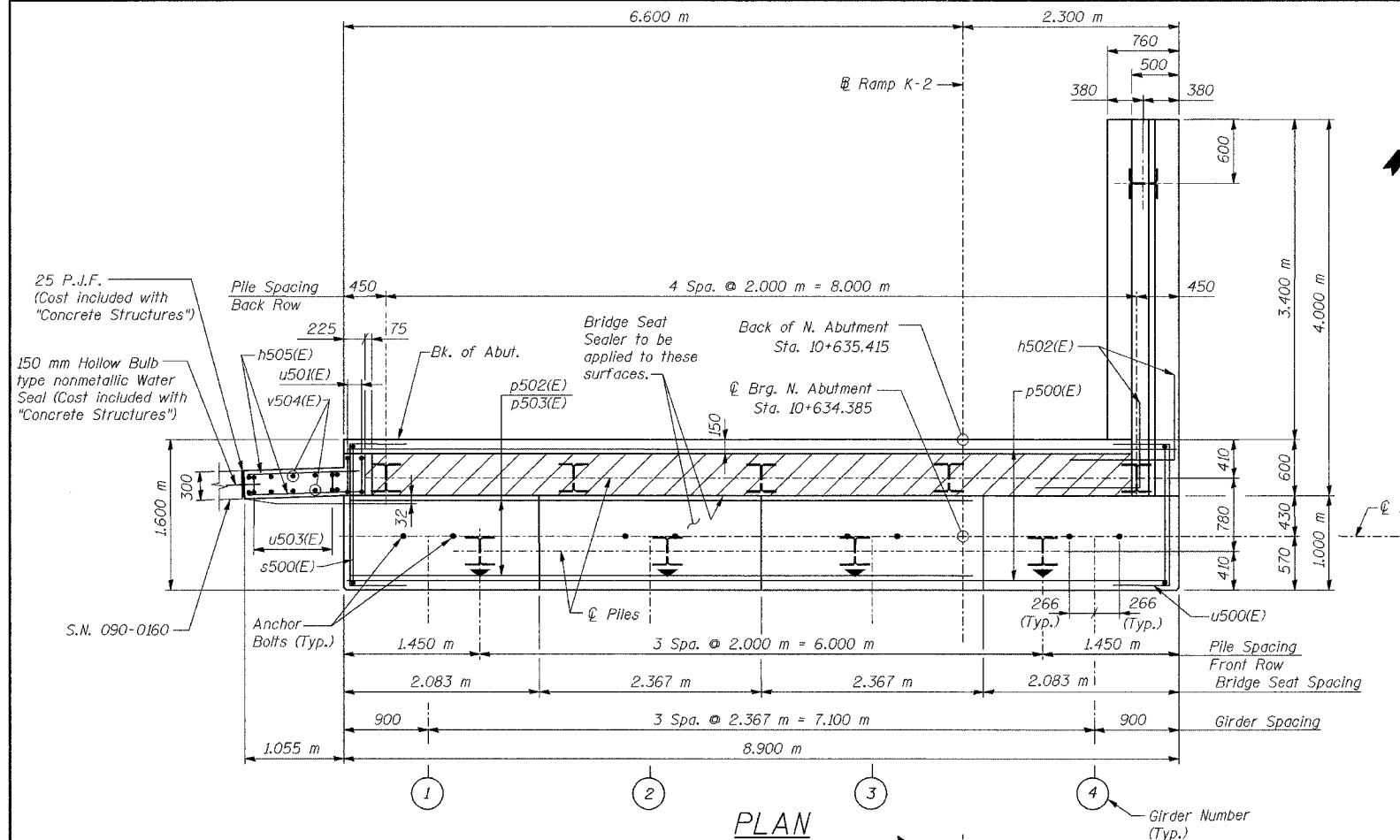
ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIB-5
 SOUTH ABUTMENT DETAILS

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

SN: 090-0156
 TAZEWELL CO., IL.
 STA. 10+529.222
 DATE: 12-23-04

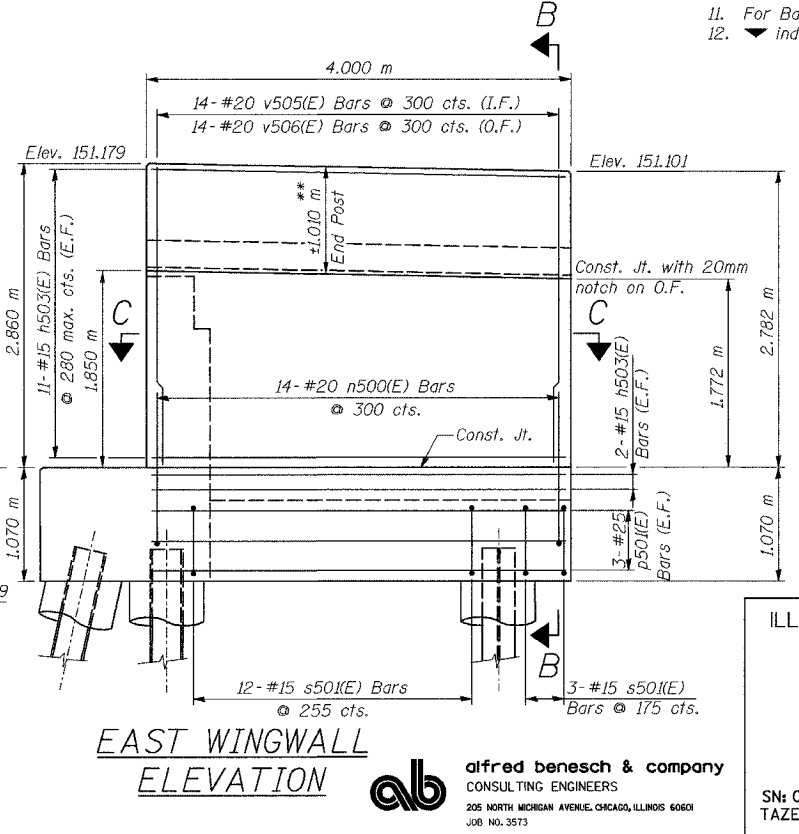
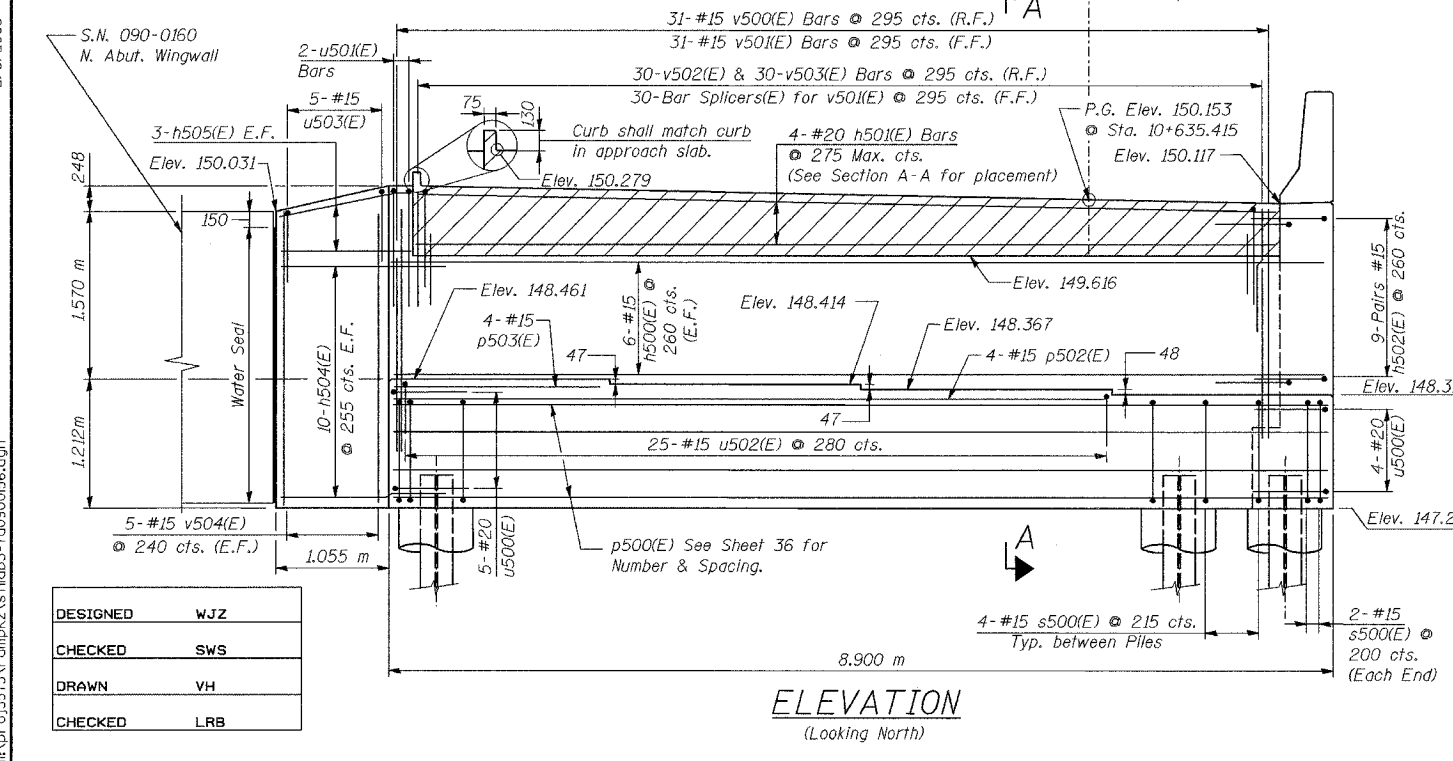
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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET No.
FAI 74	*	TAZEWELL	1366	580	
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		



PILE ENCASEMENT DETAIL

- NOTES:**
- Use the following minimum lap lengths unless otherwise noted:
 #15 - 640
 #20 - 790
 #25 - 132m
 - Work this sheet with Sheet 36.
 - Pour steps monolithically with Pile Bent.
 - E.F. denotes Each Face.
 - F.F. denotes Front Face.
 - I.F. denotes Inside Face.
 - O.F. denotes Outside Face.
 - R.F. denotes Rear Face.
 - Space reinforcement in Pile Bent to miss anchor bolts.
 - For Foundation Layout, see Sheet 4.
 - For Bar Splicer Details, see Sheet 45.
 - ▼ indicates direction of 2.2:10 (H:V) batter.



** End Post shall be cast after The Bridge Parapet is in place. Form Top Surface to match The Parapet Grade. Quantity of concrete in the end post is included with Concrete Superstructure on Sheet 13.

N. ABUT. - PILE DATA	
Type :	HP360x132
Required Bearing:	Driven to refusal
Est. Length :	13.9m
No. Req'd.	9 + 1 Test Pile
Design Capacity :	980kN/pile

DESIGNED	WJZ
CHECKED	SWS
DRAWN	VH
CHECKED	LRB

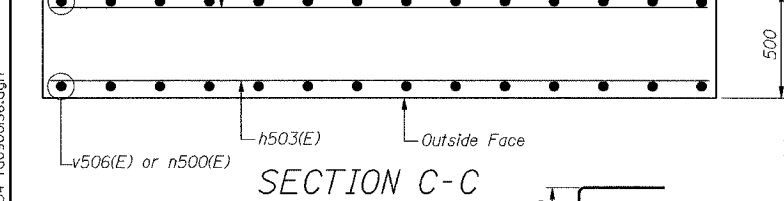
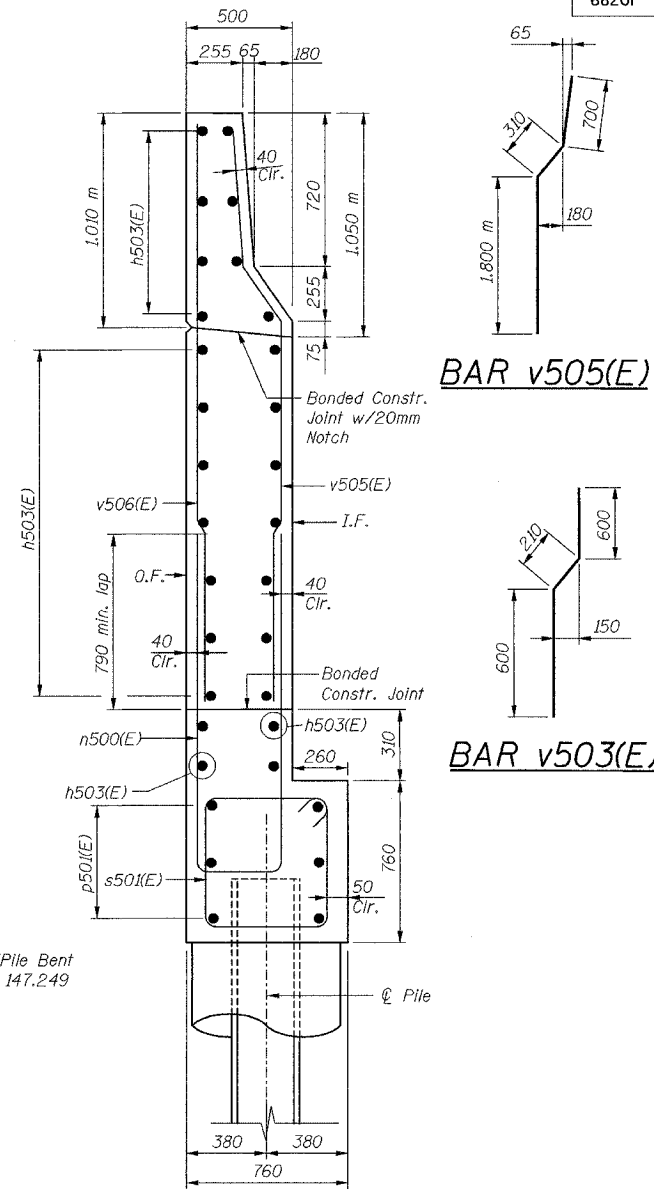
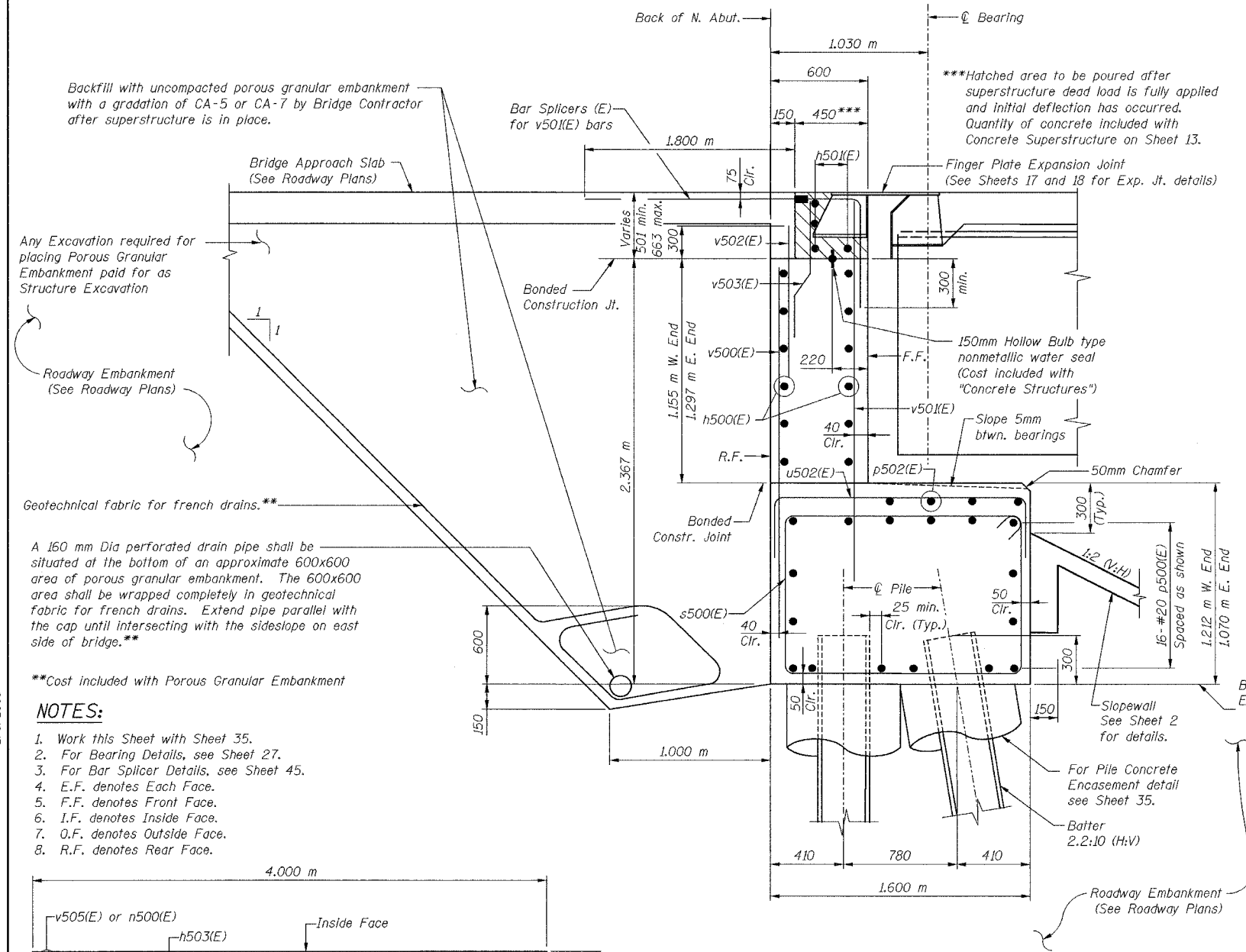
ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IHB-5
 NORTH ABUTMENT
 PLAN AND ELEVATION

SN: 090-0156 STA. 10+529.222
 TAZEWELL CO., IL. DATE: 12-23-04

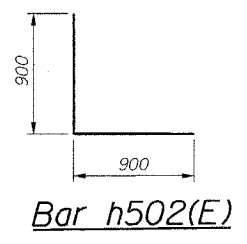
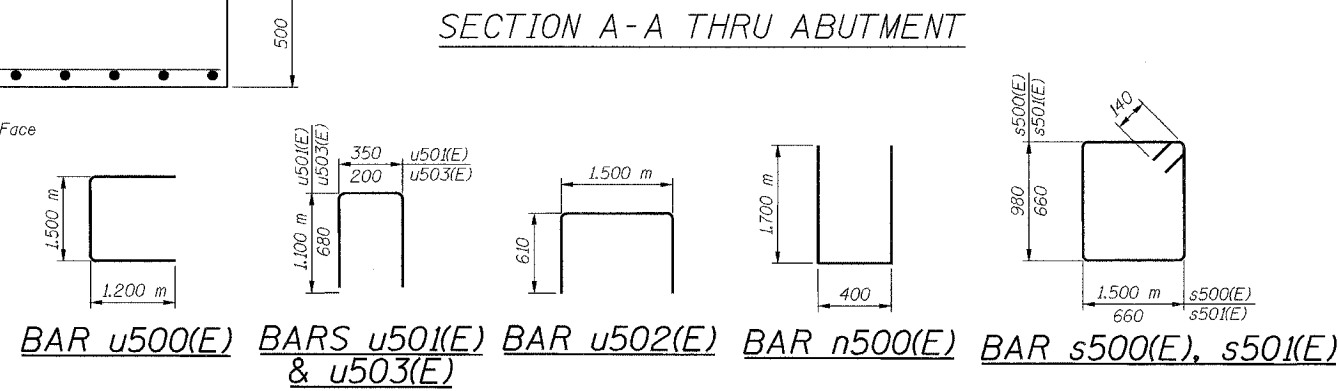
alfred benesch & company
 CONSULTING ENGINEERS
 205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
 JOB NO. 3573

2/3/2005
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ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	581
STA.		TO STA.		
F.I.W.A. REGION		ILLINOIS PROJECT		



DESIGNED	WJZ
CHECKED	SWS
DRAWN	VH
CHECKED	LRB



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h500(E)	12	# 15	8.80	—
h501(E)	4	# 20	8.10	—
h502(E)	18	# 15	1.80	J
h503(E)	26	# 15	3.90	—
h504(E)	20	# 15	1.60	—
h505(E)	6	# 15	1.18	—
h506(E)	14	# 20	3.80	U
p500(E)	16	# 20	8.80	—
p501(E)	6	# 25	3.90	—
p502(E)	4	# 15	6.72	—
p503(E)	4	# 15	1.98	—
s500(E)	36	# 15	5.24	□
s501(E)	15	# 15	2.92	□
u500(E)	9	# 20	3.90	U
u501(E)	2	# 15	2.55	U
u502(E)	25	# 15	2.72	U
u503(E)	5	# 15	1.56	U
v500(E)	31	# 15	2.10	—
v501(E)	31	# 15	2.50	—
v502(E)	30	# 15	0.95	—
v503(E)	30	# 15	1.41	—
v504(E)	10	# 15	2.78	—
v505(E)	14	# 20	2.81	—
v506(E)	14	# 20	2.74	—
Bar Splicers (E)	EACH		30	
Furnishing Steel Piles HP360x132	M		127.0	
Driving Steel Piles	M		127.0	
Concrete Structures	CU M		28.9	
Porous Granular Embankment	CU M		54	
Reinforcement Bars, Epoxy Coated	KG		2,260	
Bridge Seat Sealer	SQ M		21	
Slope Wall 100 mm	SQ M		149	
Test Pile Steel HP360x132	EACH		1	

- 2/3/2005
- NOTES:
1. Work this Sheet with Sheet 35.
 2. For Bearing Details, see Sheet 27.
 3. For Bar Splicer Details, see Sheet 45.
 4. E.F. denotes Each Face.
 5. F.F. denotes Front Face.
 6. I.F. denotes Inside Face.
 7. O.F. denotes Outside Face.
 8. R.F. denotes Rear Face.

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IHB-5

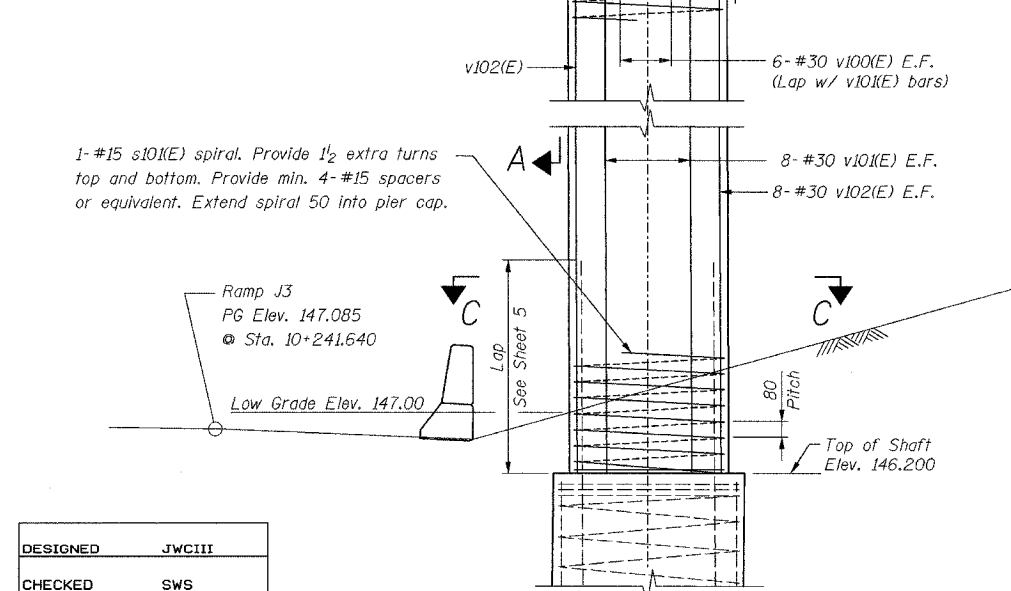
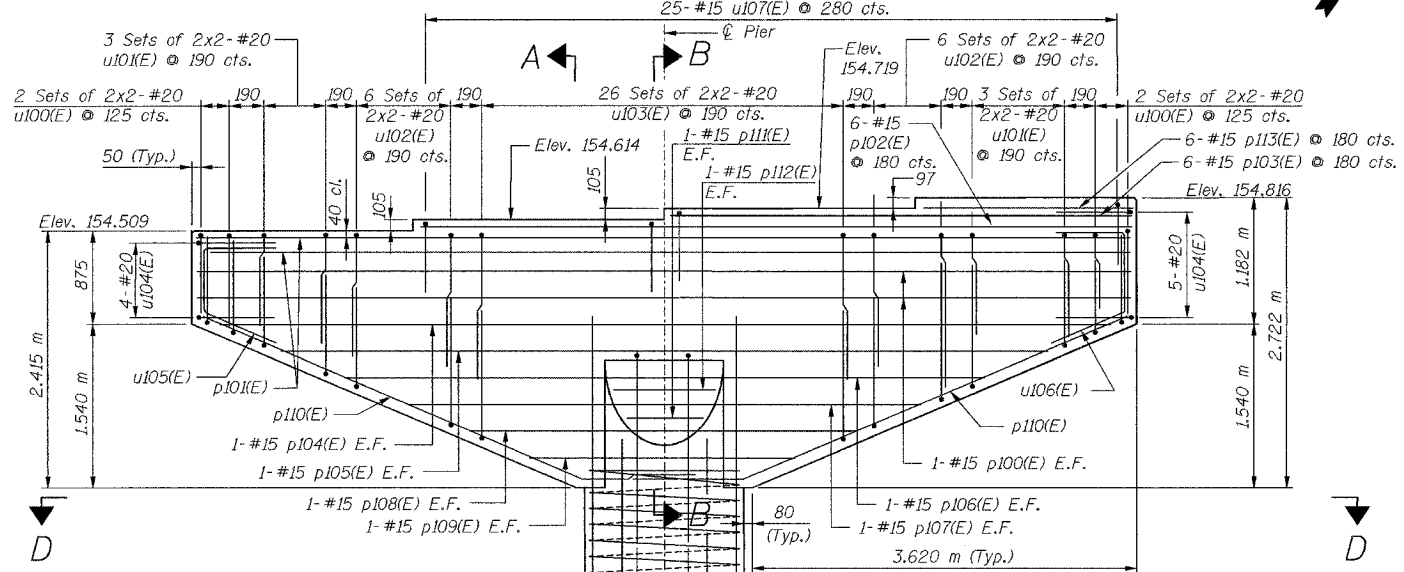
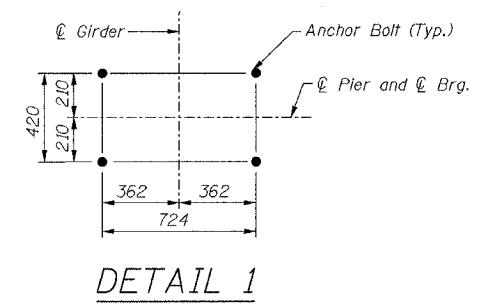
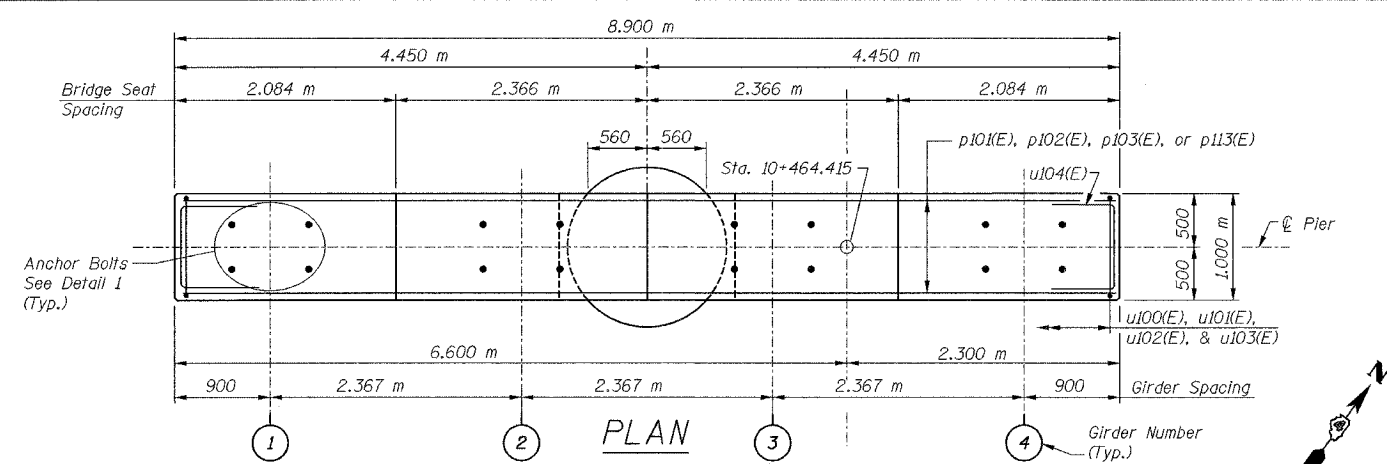
NORTH ABUTMENT DETAILS

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

SN: 090-0156
 TAZEWELL CO., IL.

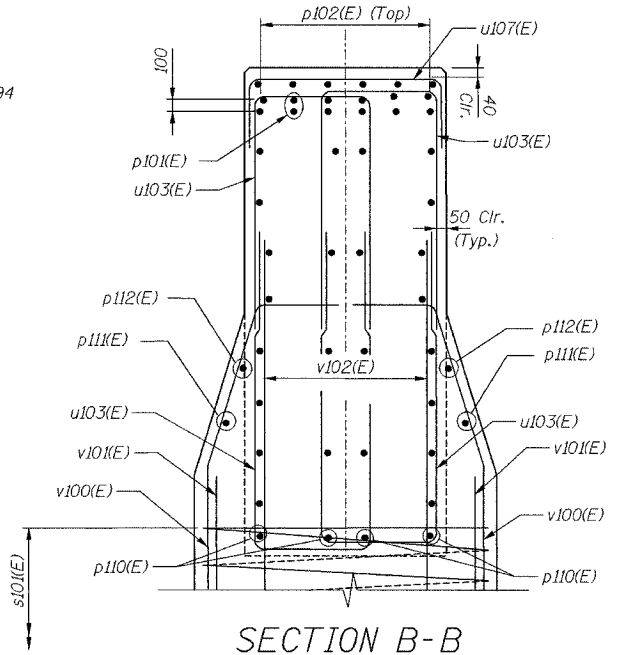
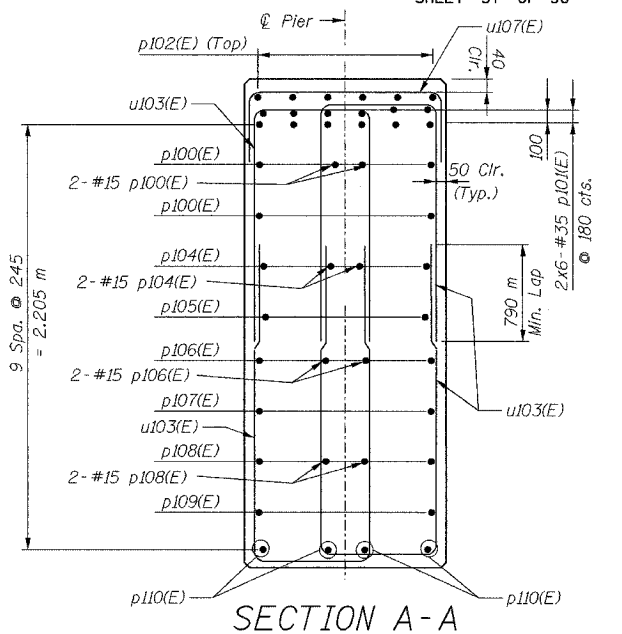
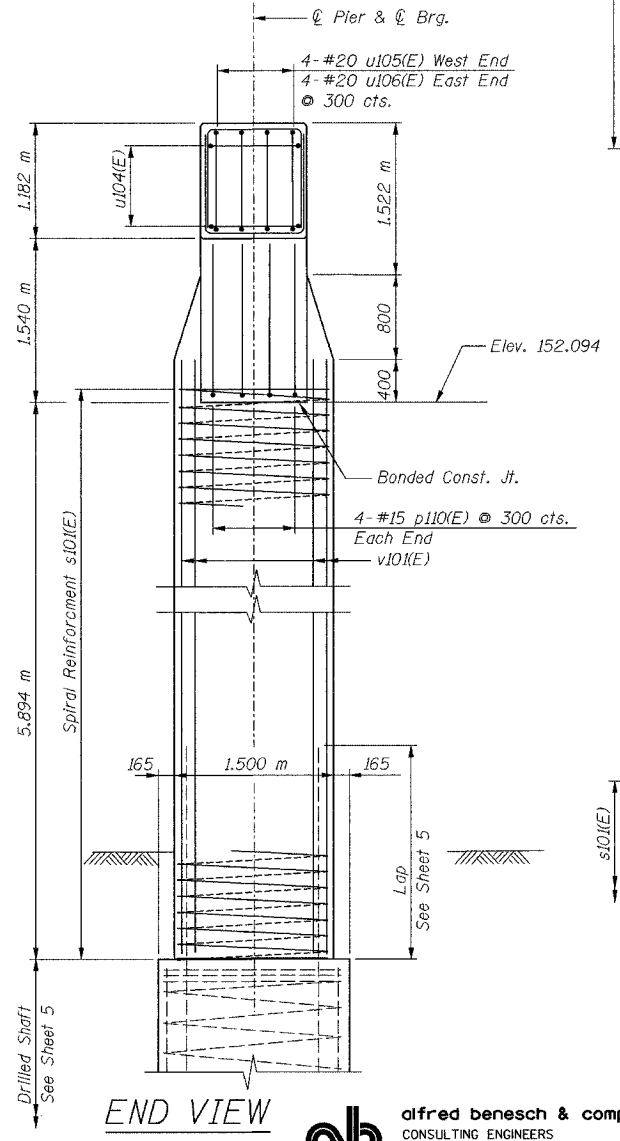
STA. 10+529.222
 DATE: 12-23-04

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	582	
STA.		TO STA.			
F.H.W.A. REGION		ILLINOIS		PROJECT	



DESIGNED	JWCIII
CHECKED	SWS
DRAWN	VH
CHECKED	LRB

- NOTES:**
1. Work this sheet with Sheet 38.
 2. For Anchor Bolt details, see Sheet 30.
 3. For Drilled Shaft details, see Sheet 5.
 4. Use the following minimum lap lengths unless otherwise noted:
 #15 - 640
 #20 - 790
 #25 - 1.32 m
 #30 - 1.85 m
 #35 - 2.64 m
 5. E.F. denotes Each Face.



ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IH-B-5

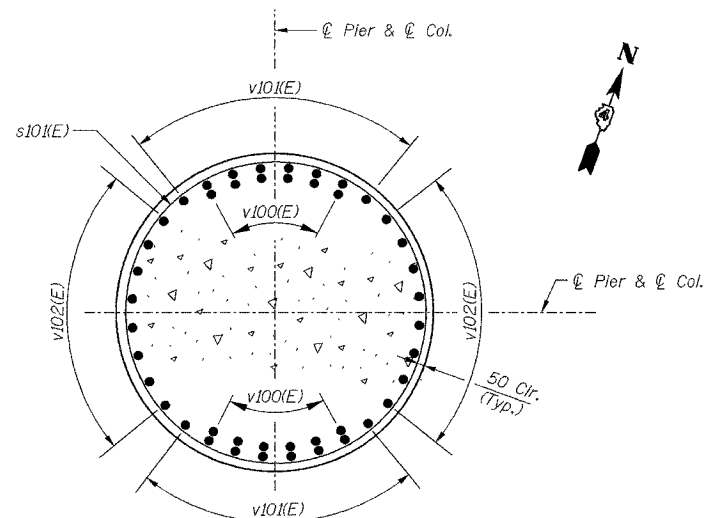
**PIER 1
 PLAN & ELEVATION**

SN: 090-0156
 TAZEWELL CO., IL.
 STA. 10+529.222
 DATE: 12-23-04

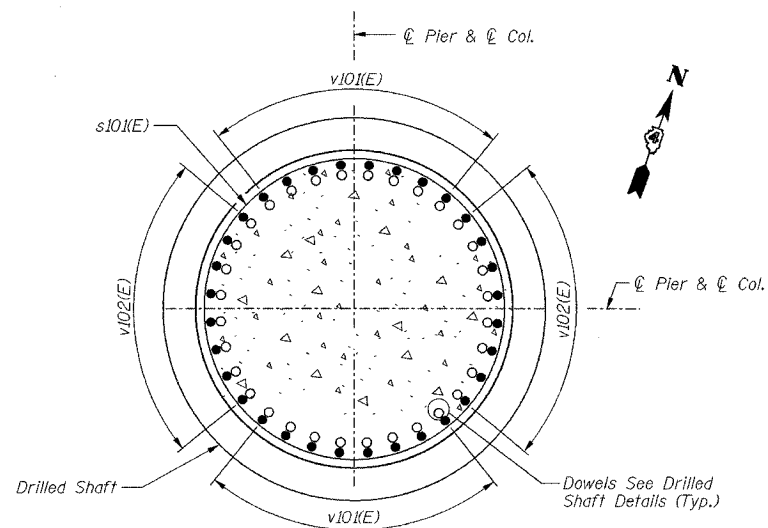
alfred benesch & company
 CONSULTING ENGINEERS
 205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
 312.573.3573

2/3/2005
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68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		



SECTION D-D

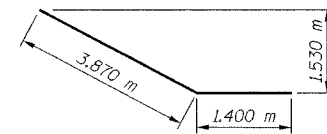


SECTION C-C

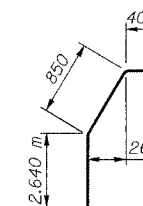
DESIGNED	JWCIII
CHECKED	SWS
DRAWN	VH
CHECKED	LRB

NOTES:

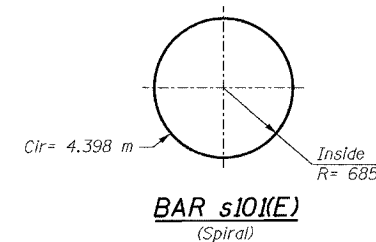
1. Dimensions are out to out unless noted otherwise.
2. Work this sheet with Sheet 37.



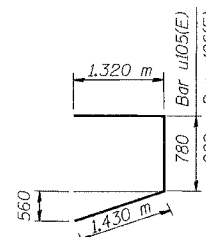
BAR p110(E)



BAR v100(E)



BAR s101(E)
(Spiral)



BARS u105(E) & u106(E)

BARS u100(E), u101(E), u102(E),
u103(E), u104(E) & u107(E)

Bar	a	b
u100(E)	560	800
u101(E)	560	930
u102(E)	560	1.170 m
u103(E)	560	1.550 m
u104(E)	870	1.320 m
u107(E)	900	610

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
p100(E)	6	# 15	8.80	—
p101(E)	12	# 35	8.80	—
p102(E)	6	# 15	6.72	—
p103(E)	6	# 15	4.35	—
p104(E)	4	# 15	8.58	—
p105(E)	2	# 15	7.45	—
p106(E)	4	# 15	6.27	—
p107(E)	2	# 15	5.11	—
p108(E)	4	# 15	3.96	—
p109(E)	2	# 15	2.80	—
p110(E)	8	# 15	5.27	—
p111(E)	2	# 15	0.72	—
p112(E)	2	# 15	0.96	—
p113(E)	6	# 15	1.98	—
s101(E)	1	# 15	5.96	WVV
u100(E)	16	# 20	2.16	U
u101(E)	24	# 20	2.42	U
u102(E)	48	# 20	2.90	U
u103(E)	104	# 20	3.65	U
u104(E)	9	# 20	3.51	U
u105(E)	4	# 20	3.53	U
u106(E)	4	# 20	3.73	U
u107(E)	25	# 15	2.12	U
v100(E)	12	# 30	3.89	—
v101(E)	16	# 30	6.38	—
v102(E)	16	# 30	7.44	—
Structure Excavation		CU M	66	
Concrete Structures		CU M	28.0	
Reinforcement Bars, Epoxy Coated		KG	4,120	

Reinforcement Bars designated (E) shall be epoxy coated.

***Length is height of spiral.

Cir. = circumference (using outside diameter).

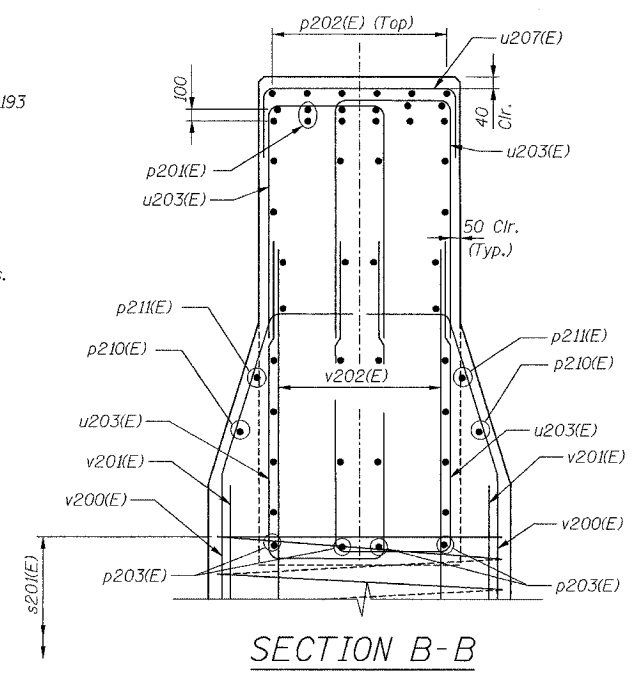
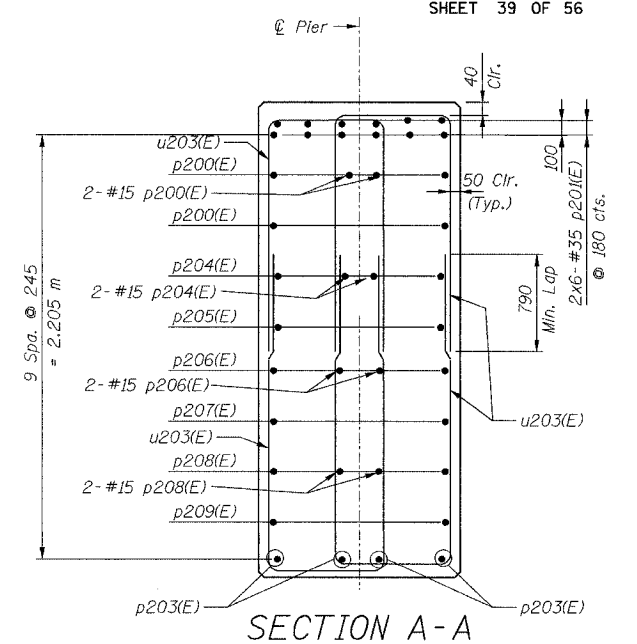
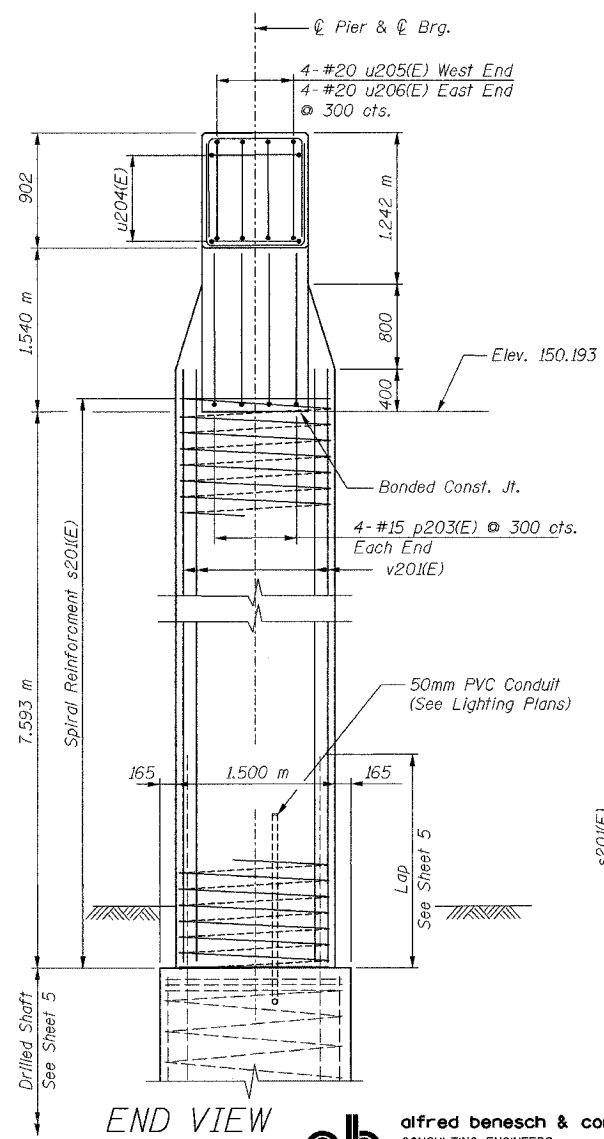
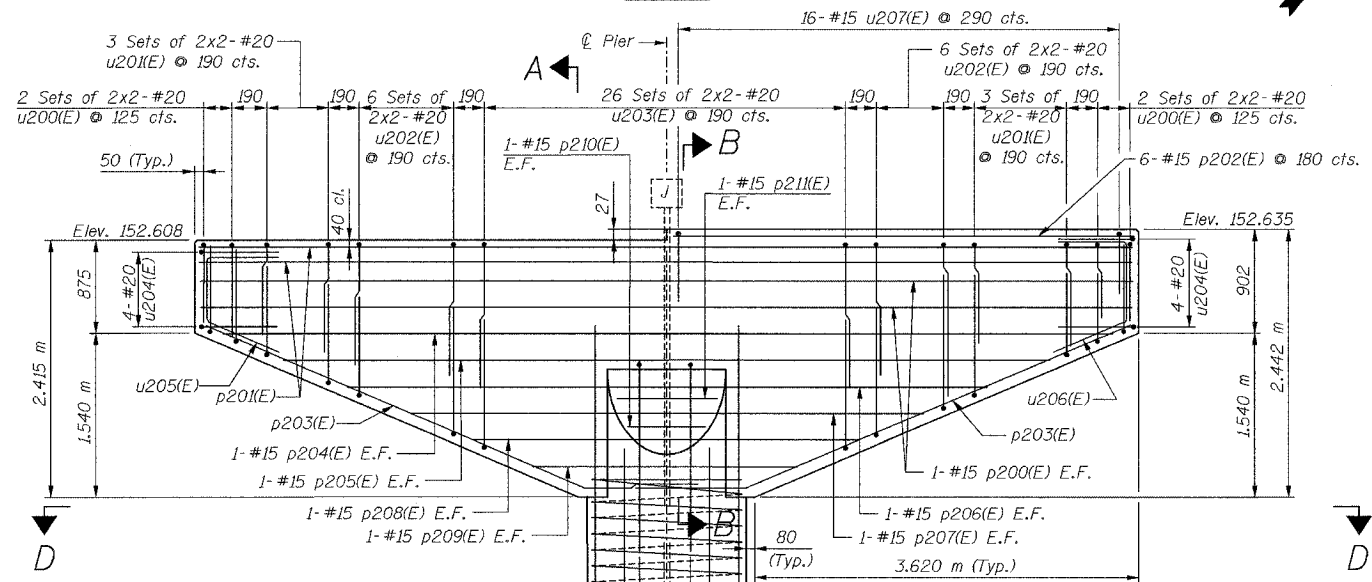
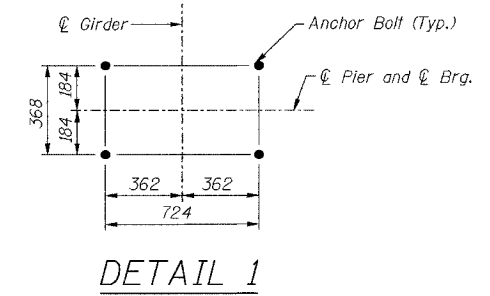
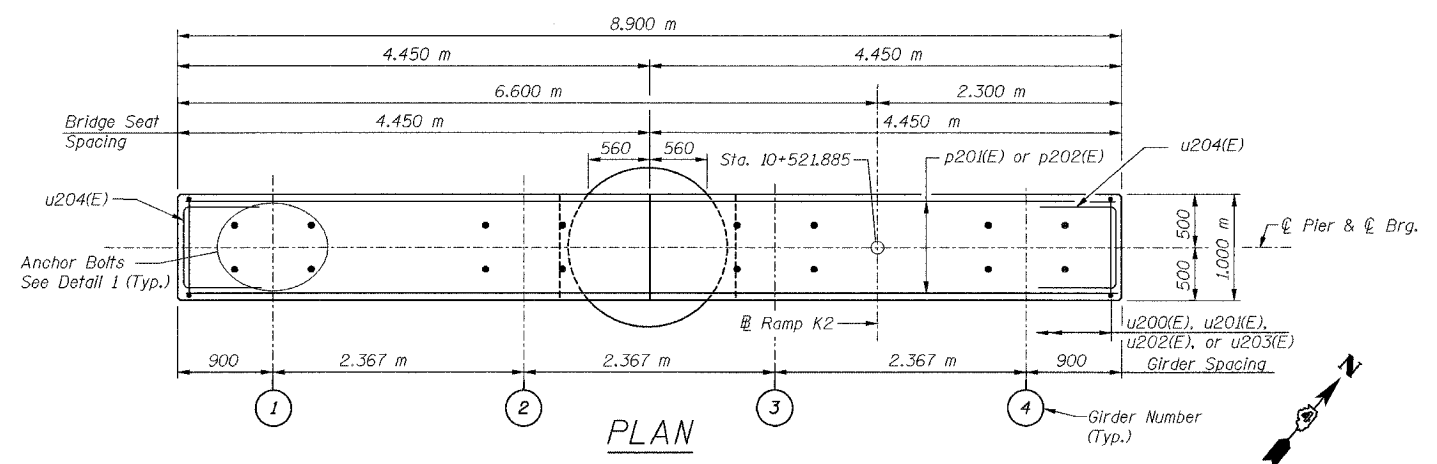
ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIB-5
PIER 1 DETAILS

SN: 090-0156
TAZEWELL CO., IL.

STA. 10+529.222
DATE: 12-23-04

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

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	584	
STA.		TO STA.			
F.H.W.A. REGION		ILLINOIS		PROJECT	



- NOTES:**
1. Work this sheet with Sheet 40.
 2. For Anchor Bolt details, see Sheet 30.
 3. For Drilled Shaft details, see Sheet 5.
 4. Use the following minimum lap lengths unless otherwise noted:
 - #15 - 640
 - #20 - 790
 - #25 - 1.32 m
 - #30 - 1.85 m
 - #35 - 2.64 m
 5. E.F. denotes Each Face.

DESIGNED	JWCIII
CHECKED	SWS
DRAWN	VH
CHECKED	LRB

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIB-5

**PIER 2
 PLAN & ELEVATION**

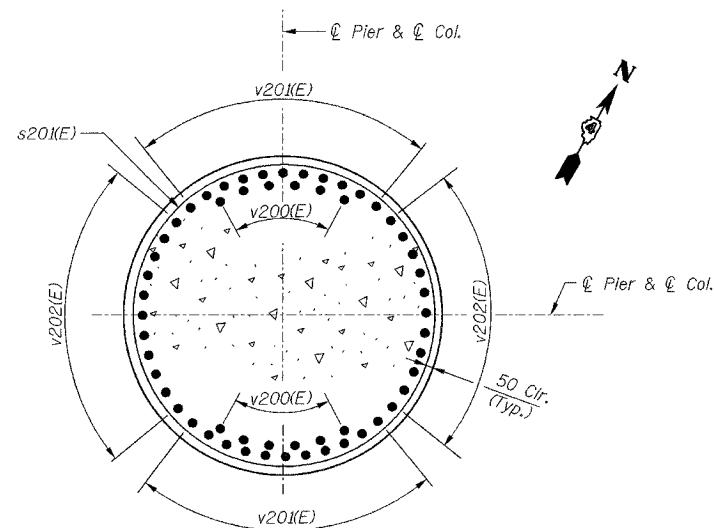
SN: 090-0156
 TAZEWELL CO., IL.

STA. 10+529.222
 DATE: 12-23-04

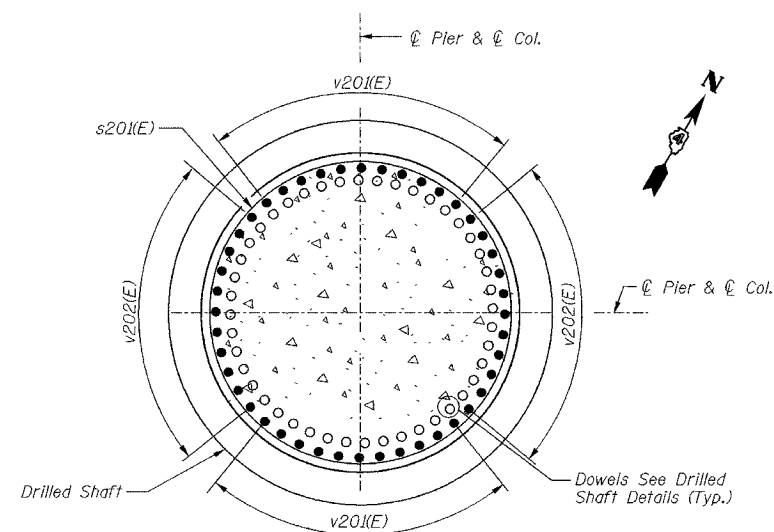
alfred benesch & company
 CONSULTING ENGINEERS
 205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
 JOB NO. 3573

2/3/2005 m:\p\013573\compk2\enl\p2-7\090056.dgn

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	585
STA.		TO STA.			
F.I.L.W.A. REGION		ILLINOIS		PROJECT	



SECTION D-D

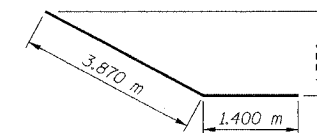


SECTION C-C

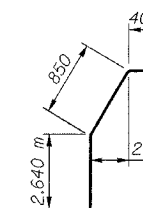
DESIGNED	JWCIII
CHECKED	SWS
DRAWN	VH
CHECKED	LRB

NOTES:

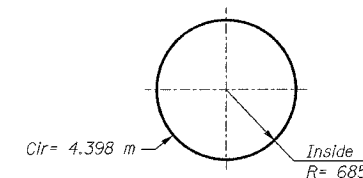
1. Dimensions are out to out unless noted otherwise.
2. Work this sheet with Sheet 39.



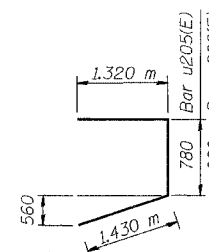
BAR p203(E)



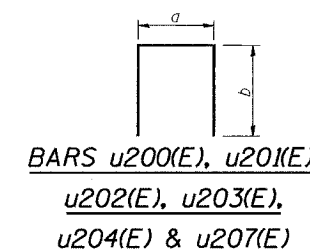
BAR v200(E)



BAR s201(E)
(Spiral)



BARS u205(E) & u206(E)



BARS u200(E), u201(E),
u202(E), u203(E),
u204(E) & u207(E)

Bar	a	b
u200(E)	560	800
u201(E)	560	930
u202(E)	560	1.170 m
u203(E)	560	1.550 m
u204(E)	870	1.320 m
u207(E)	900	610

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
p200(E)	6	# 15	8.80	—
p201(E)	12	# 35	8.80	—
p202(E)	6	# 15	4.35	—
p203(E)	8	# 15	5.27	—
p204(E)	4	# 15	8.58	—
p205(E)	2	# 15	7.45	—
p206(E)	4	# 15	6.27	—
p207(E)	2	# 15	5.11	—
p208(E)	4	# 15	3.96	—
p209(E)	2	# 15	2.80	—
p210(E)	2	# 15	0.72	—
p211(E)	2	# 15	0.96	—
s201(E)	1	# 15	7.64	W
u200(E)	16	# 20	2.16	U
u201(E)	24	# 20	2.42	U
u202(E)	48	# 20	2.90	U
u203(E)	104	# 20	3.65	U
u204(E)	8	# 20	3.51	U
u205(E)	4	# 20	3.53	U
u206(E)	4	# 20	3.65	U
u207(E)	16	# 15	2.12	U
v200(E)	12	# 35	3.89	—
v201(E)	22	# 35	7.99	—
v202(E)	22	# 35	9.20	—
Structure Excavation	CU M	22		
Rock Excavation for Structures	CU M	8		
Concrete Structures	CU M	29.8		
Reinforcement Bars, Epoxy Coated	KG	6,840		

Reinforcement Bars designated (E) shall be epoxy coated.

***Length is height of spiral.

Cir. = circumference (using outside diameter).

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIHB-5
PIER 2 DETAILS

SN: 090-0156
TAZEWELL CO., IL.

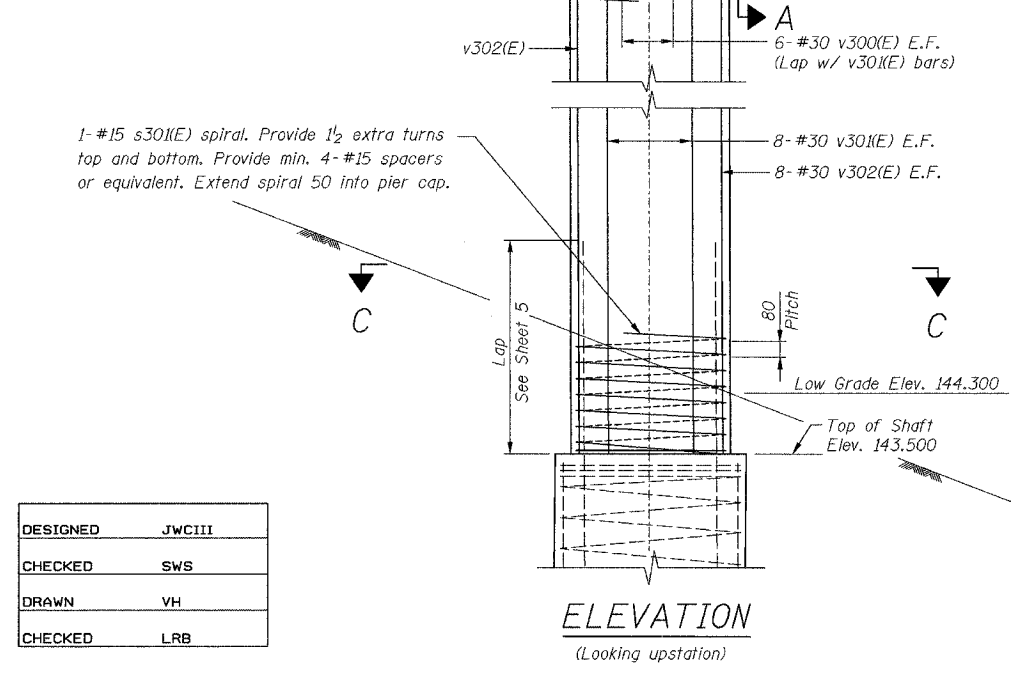
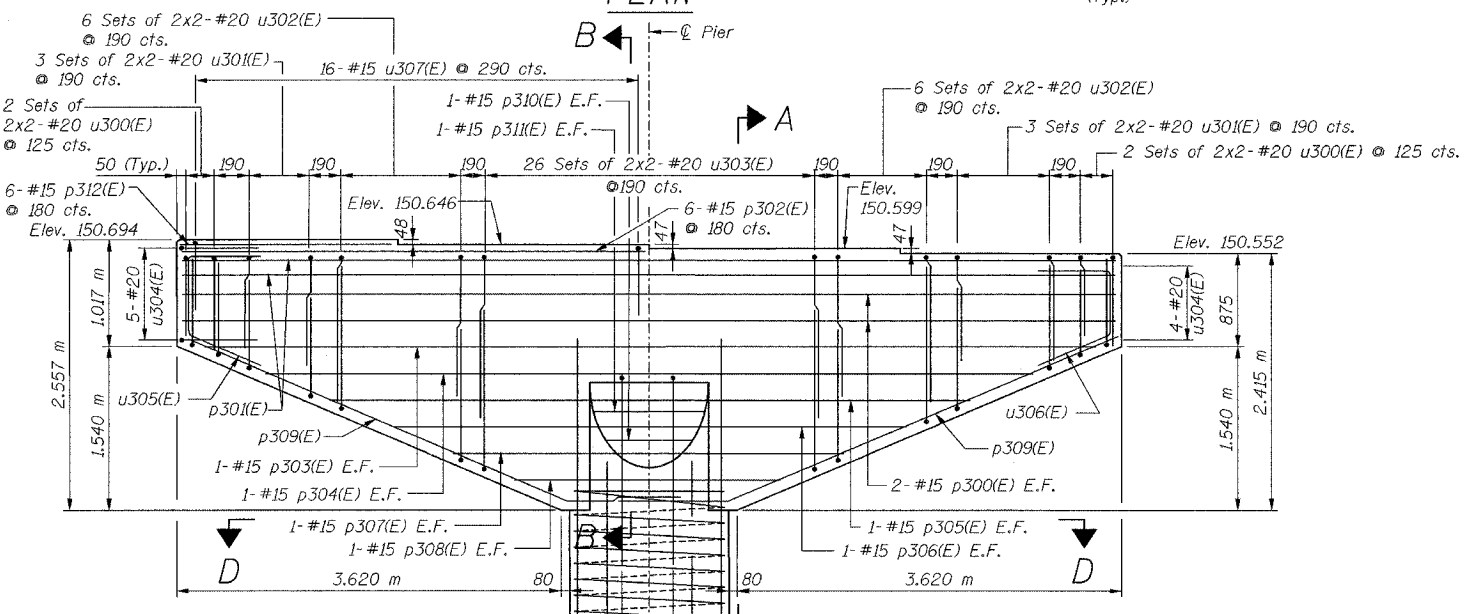
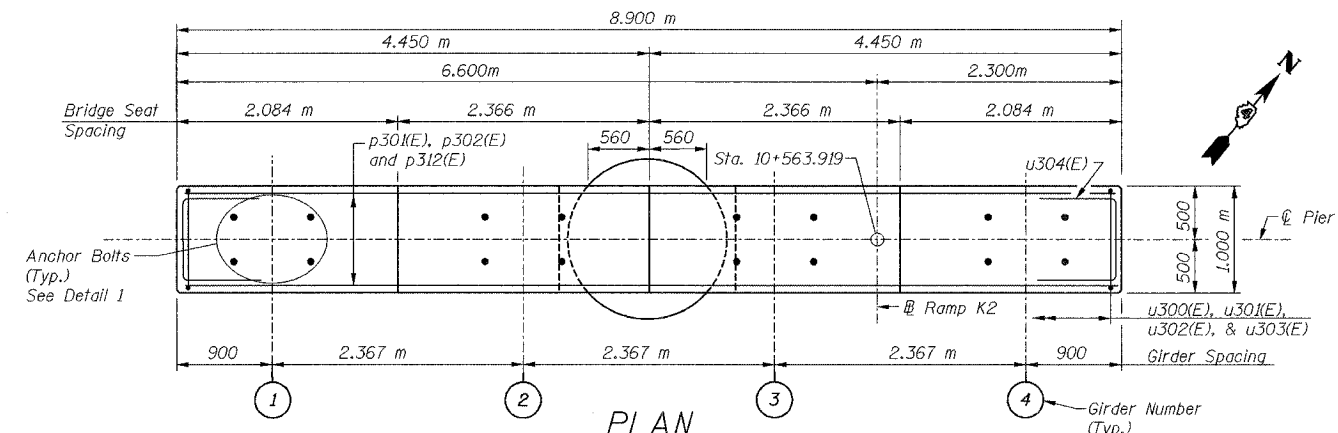
STA. 10+529.222
DATE: 12-23-04

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

2/3/2005

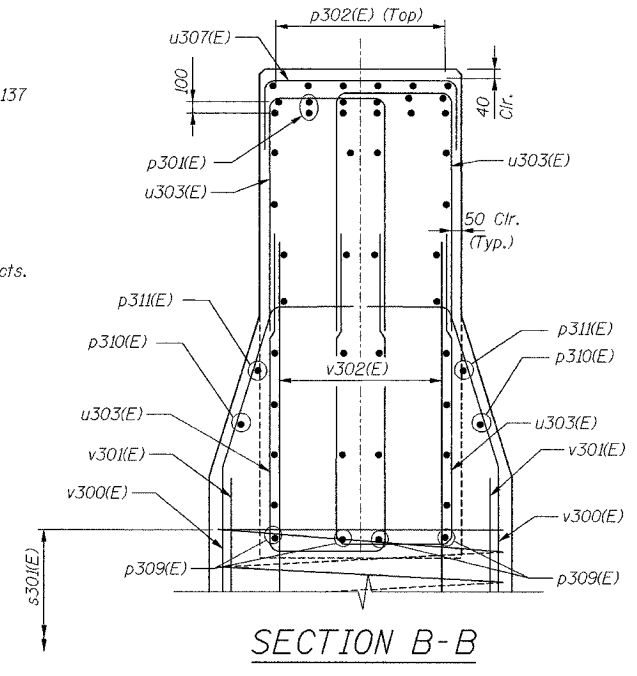
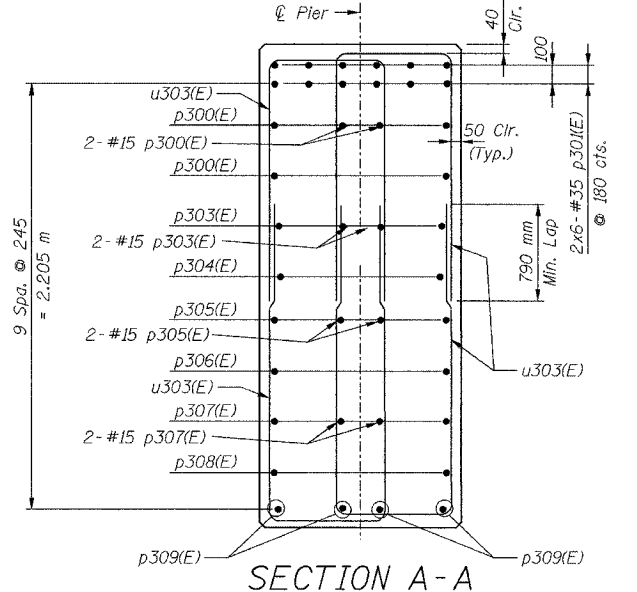
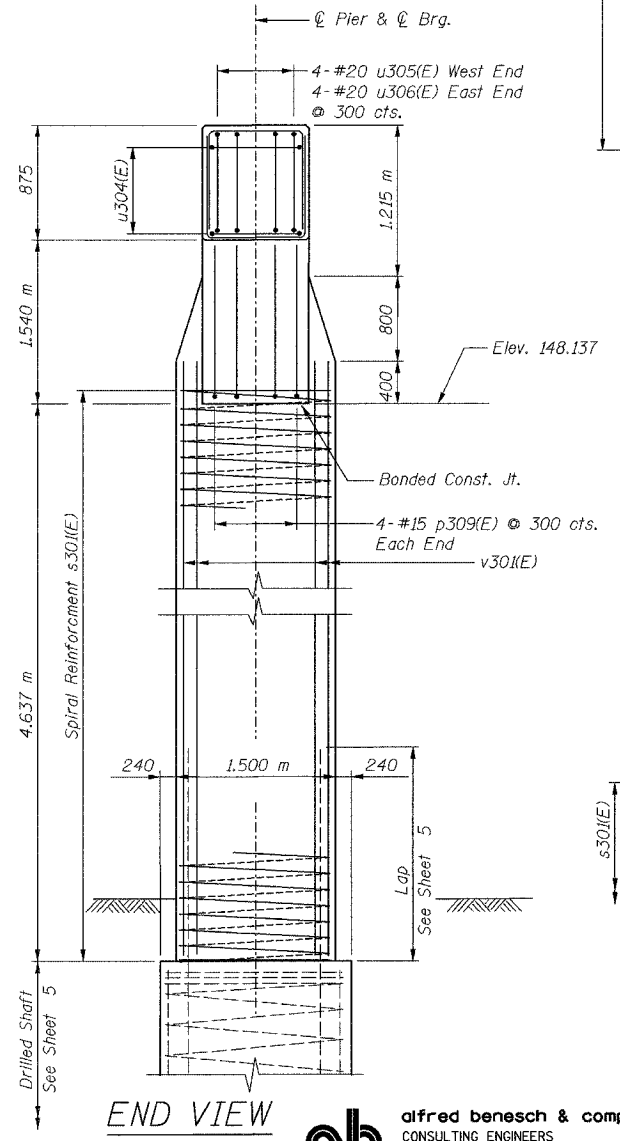
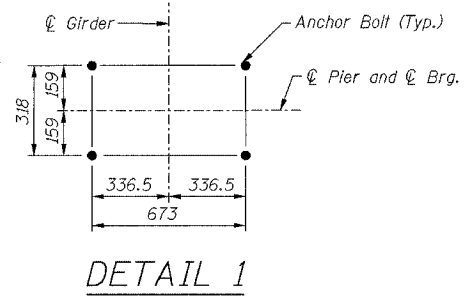
m:\p\o\3573\compk\2\reflpr\2a-Tad090166.dgn

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	586	
STA.		TO STA.			
F.H.W.A. REGION		ILLINOIS		PROJECT	



- NOTES:**
1. Work this sheet with Sheet 42.
 2. For Anchor Bolt details, see Sheet 30.
 3. For Drilled Shaft details, see Sheet 5.
 4. Use the following minimum lap lengths unless otherwise noted:
 #15 - 640
 #20 - 790
 #25 - 1.32 m
 #30 - 1.85 m
 #35 - 2.64 m
 5. E.F. denotes Each Face.

DESIGNED	JWCIII
CHECKED	SWS
DRAWN	VH
CHECKED	LRB



ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIB-5

**PIER 3
 PLAN & ELEVATION**

SN: 090-0156
 TAZEWELL CO., IL.

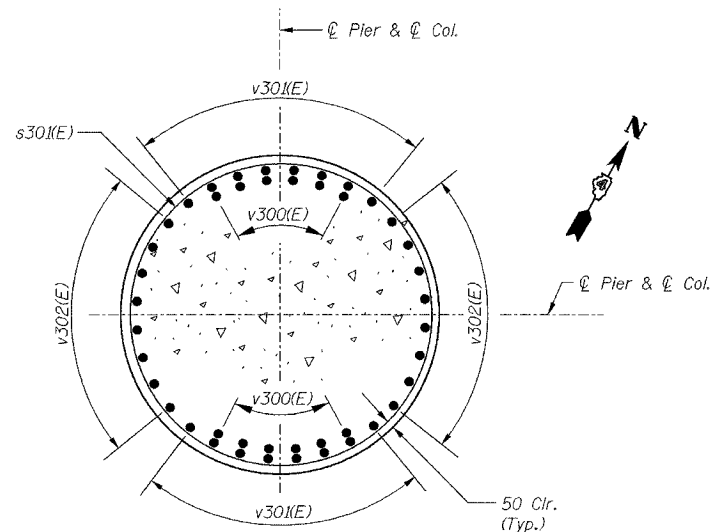
STA. 10+529.222
 DATE: 12-23-04

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

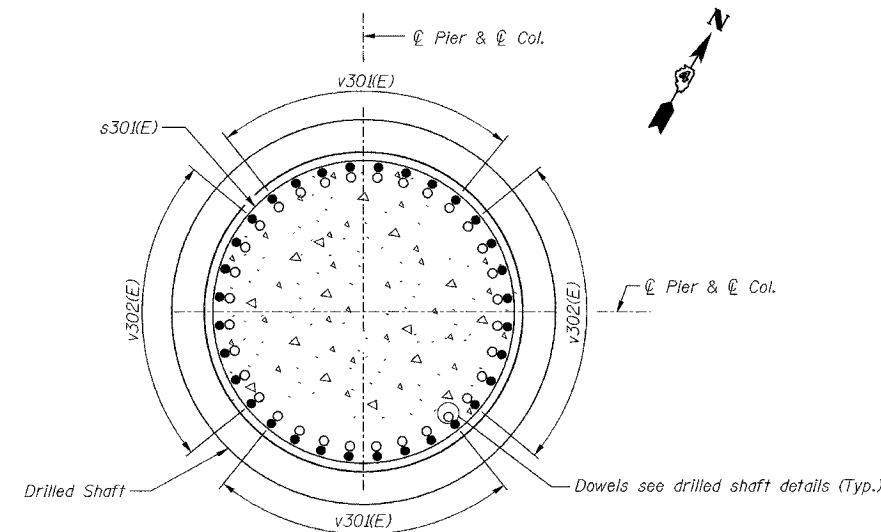
2/3/2005

mk:\p\o\13573\vr\ampk2\stl\br 3-7a0900056.dgn

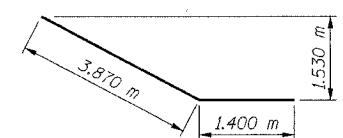
68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	587
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		



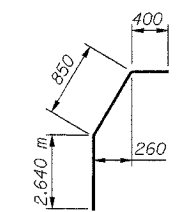
SECTION D-D



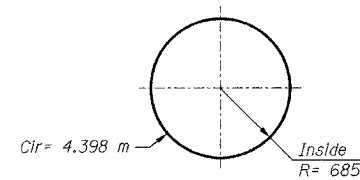
SECTION C-C



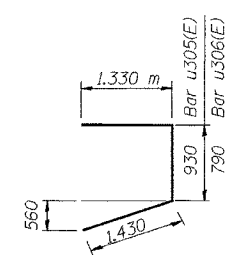
BAR p309(E)



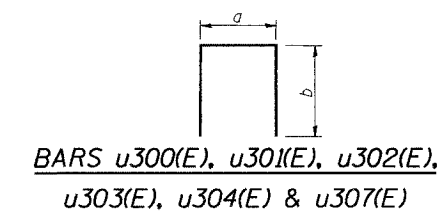
BAR v300(E)



BAR s301(E)
(Spiral)



BARS u305(E) & u306(E)



BARS u300(E), u301(E), u302(E),
u303(E), u304(E) & u307(E)

Bar	a	b
u300(E)	560	800
u301(E)	560	930
u302(E)	560	1.170 m
u303(E)	560	1.550 m
u304(E)	870	1.320 m
u307(E)	900	610

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
p300(E)	6	# 15	8.80	—
p301(E)	12	# 35	8.80	—
p302(E)	6	# 15	4.35	—
p303(E)	4	# 15	8.58	—
p304(E)	2	# 15	7.45	—
p305(E)	4	# 15	6.27	—
p306(E)	2	# 15	5.11	—
p307(E)	4	# 15	3.96	—
p308(E)	2	# 15	2.80	—
p309(E)	8	# 15	5.27	—
p310(E)	2	# 15	0.72	—
p311(E)	2	# 15	0.96	—
p312(E)	6	# 15	1.98	—
* s301(E)	1	# 15	4.69	W W
u300(E)	16	# 20	2.16	U
u301(E)	24	# 20	2.42	U
u302(E)	48	# 20	2.90	U
u303(E)	104	# 20	3.65	U
u304(E)	9	# 20	3.51	U
u305(E)	4	# 20	3.69	U
u306(E)	4	# 20	3.55	U
u307(E)	16	# 15	2.12	U
v300(E)	12	# 30	3.89	—
v301(E)	16	# 30	5.01	—
v302(E)	16	# 30	6.20	—
Structure Excavation	CU M		28	
Concrete Structures	CU M		25.1	
Reinforcement Bars, Epoxy Coated	KG		4,520	

Reinforcement Bars designated (E) shall be epoxy coated.
*Length is height of spiral.
Cir. = circumference (using outside diameter).

DESIGNED	JWCIII
CHECKED	SWS
DRAWN	VH
CHECKED	LRB

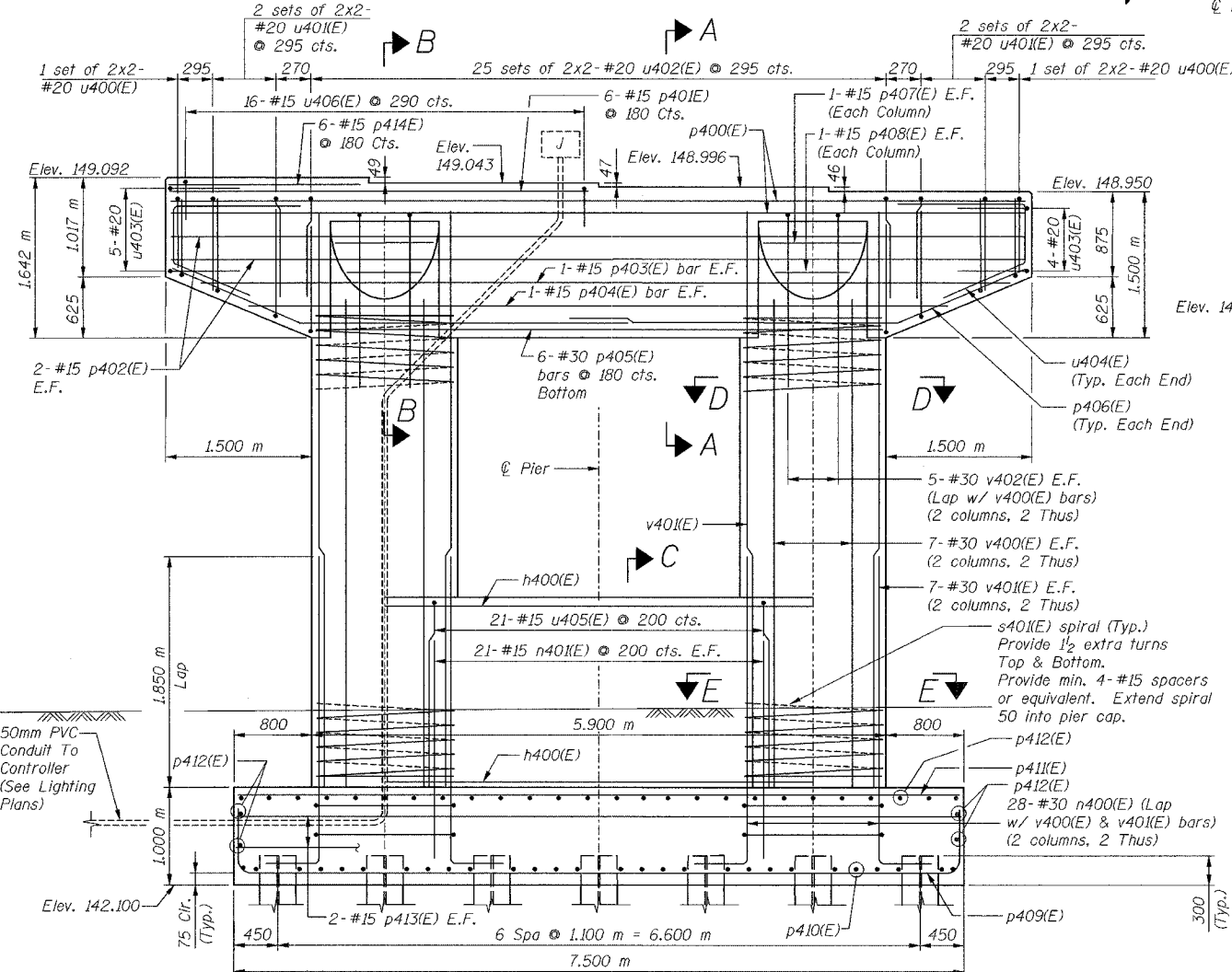
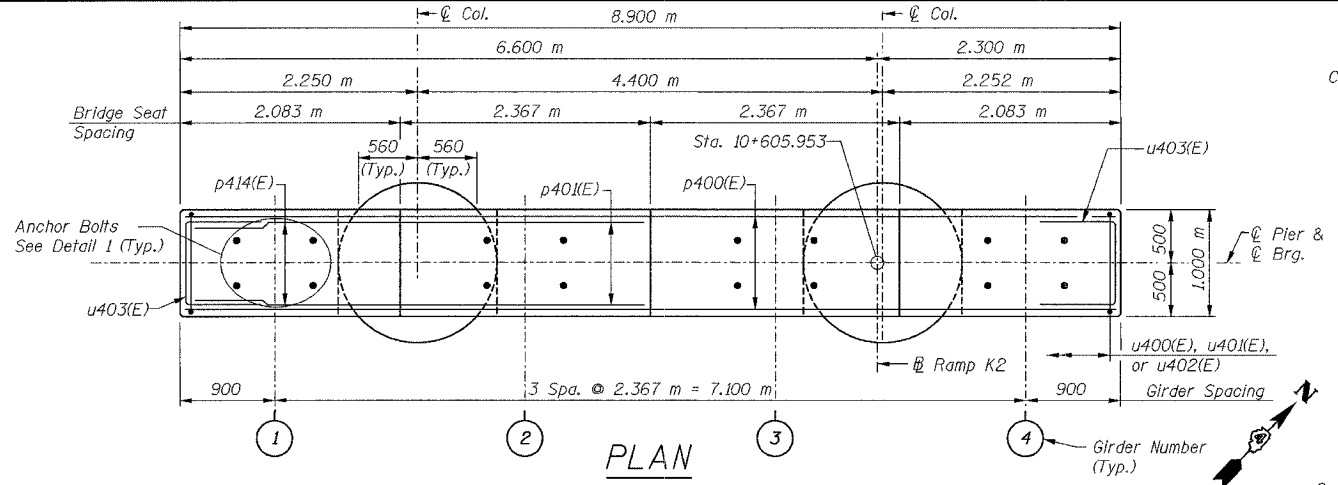
NOTES:
1. Dimensions are out to out unless noted otherwise.
2. Work this sheet with Sheet 41.

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIBZ-5
PIER 3 DETAILS
SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

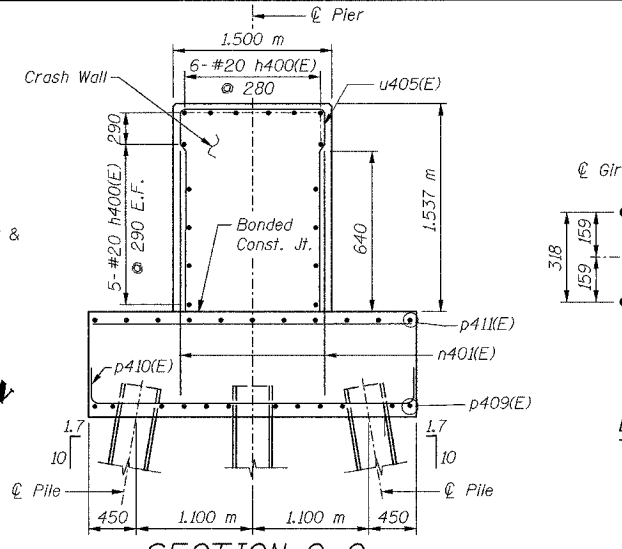
2/3/2005
m:\p\o\15173\vr\ompk2\astlbr 3a-7a0900156.dgn

ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAIT4	*	TAZEWELL	1366	588
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS PROJECT		

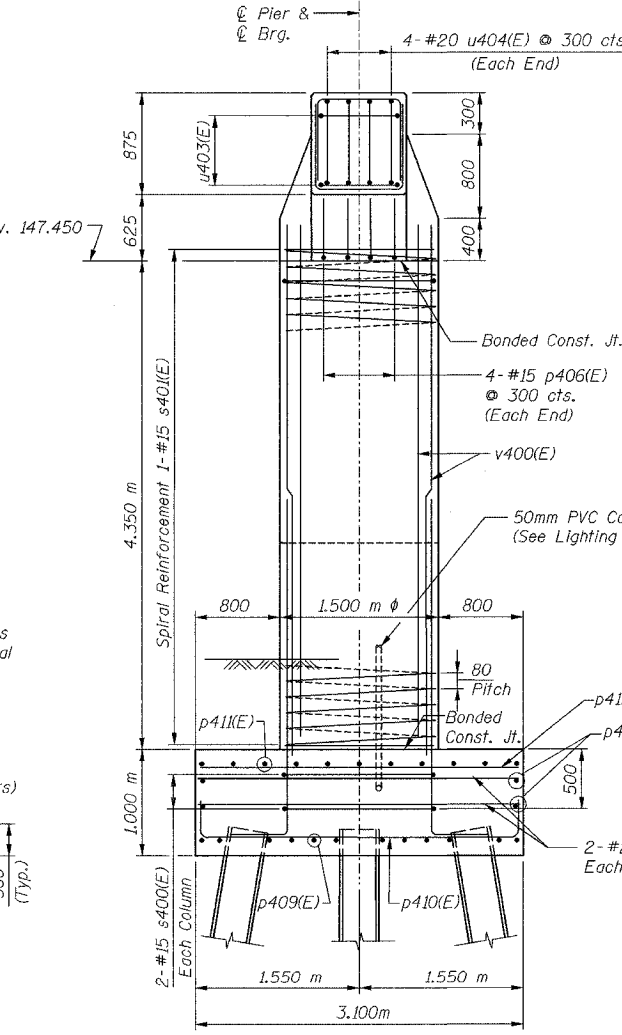


DESIGNED	SWS
CHECKED	JWCIII
DRAWN	VH
CHECKED	LRB

ELEVATION
Looking Upstation



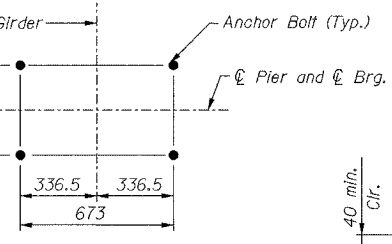
SECTION C-C



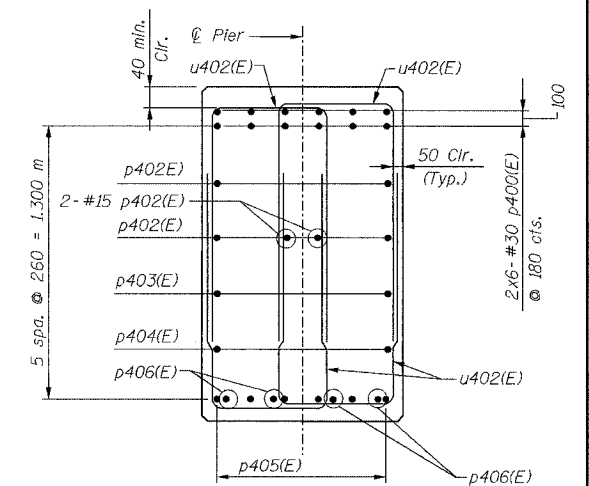
END VIEW
(Looking West)



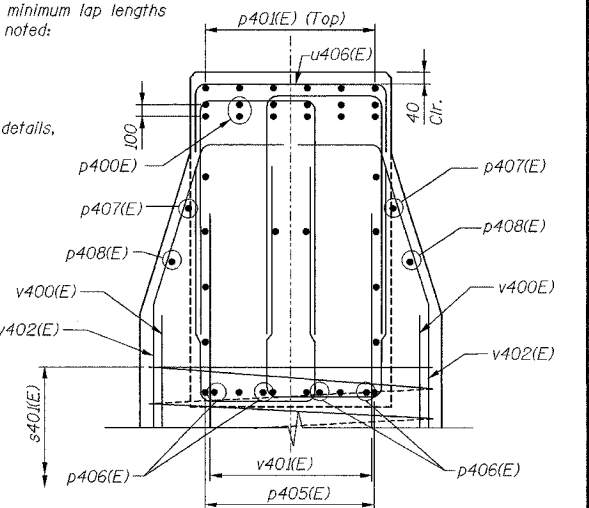
alfred benesch & company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573



DETAIL 1



SECTION A-A



SECTION B-B

NOTES:

1. Work this sheet with Sheet 44.
2. Space reinforcement in bottom of footing to miss piling as shown.
3. E.F. denotes Each Face
4. Use the following minimum lap lengths unless otherwise noted:
#15-640
#20-790
#25-1.32 m
#30-1.85 m
5. For Anchor Bolt details, see Sheet 30.

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IHB-5

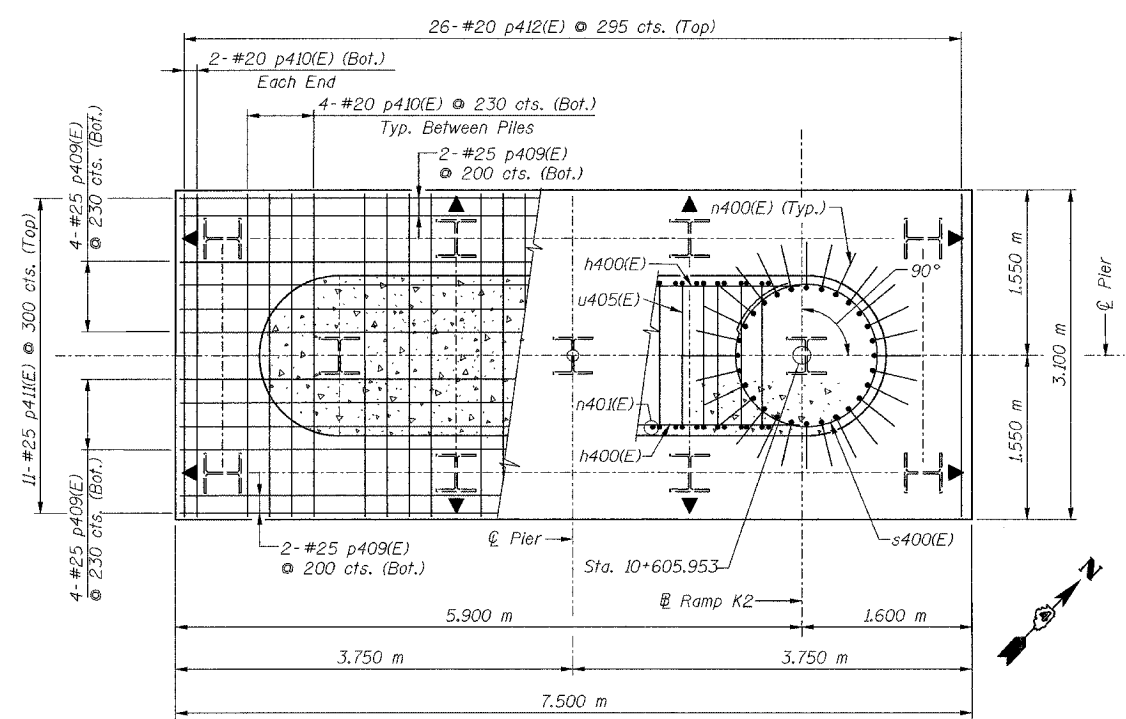
**PIER 4
PLAN & ELEVATION**

SN: 090-0156
TAZEWELL CO., IL.

STA. 10+529.222
DATE: 12-23-04

2/3/2005
m:\p\o\3573\ampmk2\stlpr4-7a090156.dgn

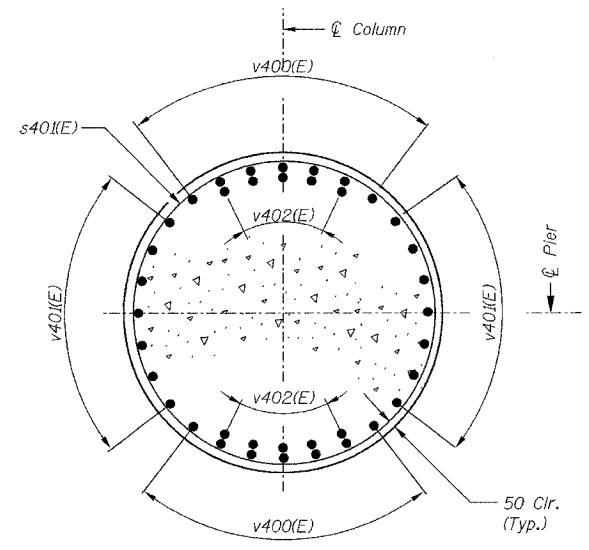
ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	589
STA.		TO STA.		
F.I.L.W.A. REGION		ILLINOIS		PROJECT



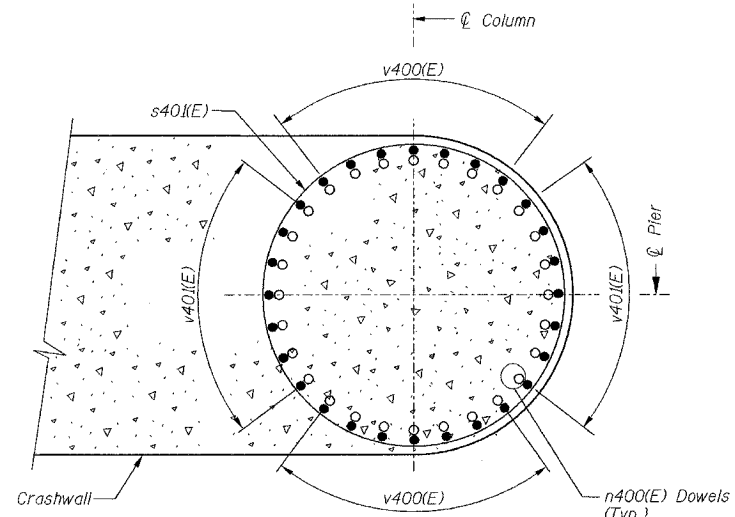
FOOTING PLAN

PIER 4 - PILE DATA

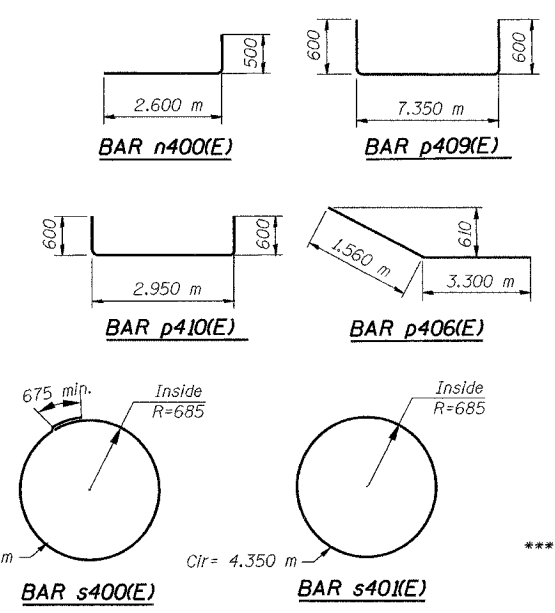
Type : HP360x132
 Required Bearing : Driven to refusal
 Est. Length : 5.8 m
 No. Req'd. 10 + 1 Test Pile
 Design Capacity = 980kN/pile



SECTION D-D



SECTION E-E
(Showing only col. reinforcement)



BAR u400(E), u40(E), u402(E), u403(E), u405(E) & u406(E)

Bar	a	b
u400(E)	560	800
u401(E)	560	915
u402(E)	560	1.100 m
u403(E)	870	1.320 m
u405(E)	1.400 m	1.460 m
u406(E)	900	610

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
n400(E)	16	# 20	4.40	—
n400(E)	56	# 30	3.10	—
n401(E)	42	# 15	1.60	—
p400(E)	12	# 30	8.80	—
p401(E)	6	# 15	4.35	—
p402(E)	6	# 15	8.80	—
p403(E)	2	# 15	8.38	—
p404(E)	2	# 15	7.13	—
p405(E)	6	# 30	5.80	—
p406(E)	8	# 15	4.86	—
p407(E)	4	# 15	0.96	—
p408(E)	4	# 15	0.72	—
p409(E)	12	# 25	8.55	—
p410(E)	28	# 20	4.15	—
p411(E)	11	# 25	7.40	—
p412(E)	30	# 20	2.95	—
p413(E)	4	# 15	7.40	—
p414(E)	6	# 15	1.98	—
s400(E)	4	# 15	5.03	○
s401(E)	2	# 15	4.40	W
u400(E)	8	# 20	2.16	U
u401(E)	16	# 20	2.39	U
u402(E)	100	# 20	2.76	U
u403(E)	9	# 20	3.51	U
u404(E)	8	# 20	3.53	U
u405(E)	21	# 15	4.32	U
u406(E)	16	# 15	2.12	U
v400(E)	28	# 30	4.61	—
v401(E)	28	# 30	5.57	—
v402(E)	20	# 30	3.89	—
Braced Excavation			CU M	63
Concrete Structures			CU M	59.7
Reinforcement Bars, Epoxy Coated			KG	7,460
Furnishing Steel Piles HP360x132			M	59.0
Driving Steel Piles HP360x132			M	59.0
Test Pile Steel HP360x132			EACH	1

Reinforcement Bars designated (E) shall be epoxy coated.

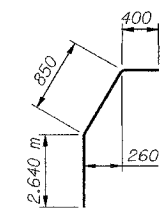
***Length is height of spiral.

Cir. = circumference (using outside diameter).

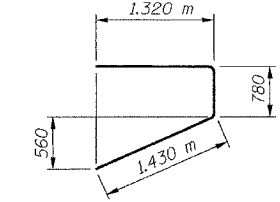
2/3/2005
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DESIGNED	SWS
CHECKED	JWCIII
DRAWN	VH
CHECKED	LRB

- NOTES:**
1. Dimensions are out to out unless noted otherwise.
 2. Work this sheet with Sheet 43.
 3. ▲ Indicates direction of 1.7 (H) : 10 (V) Batter
 4. For Pile Layout, see Sheet 4.



BAR v402(E)



BAR u404(E)

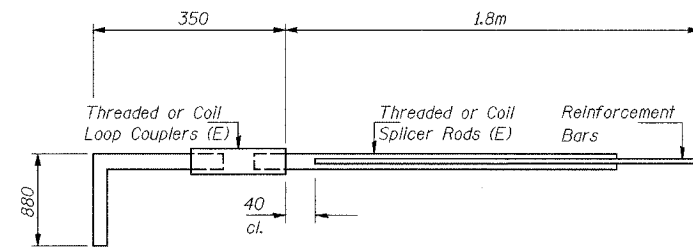
alfred benesch & company
 CONSULTING ENGINEERS
 205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
 JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IHB-5
PIER 4
FOOTING PLAN & DETAILS

SN: 090-0156
 TAZEWELL CO., IL.

STA. 10+529.222
 DATE: 12-23-04

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	590
STA.			TO STA.		
F.H.W.A. REGION		ILLINOIS		PROJECT	



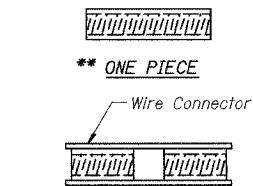
BAR SPLICER ASSEMBLY DETAIL AT ABUTMENT

Bar Size	No. Assemblies Required	Location
#15	31	S. Abutment
#15	30	N. Abutment

The diameter of this part is equal or larger than the diameter of bar spliced.

The diameter of this part is the same as the diameter of the bar spliced.

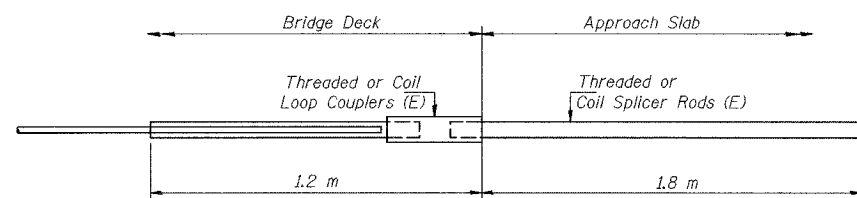
ROLLED THREAD DOWEL BAR



WELDED SECTIONS

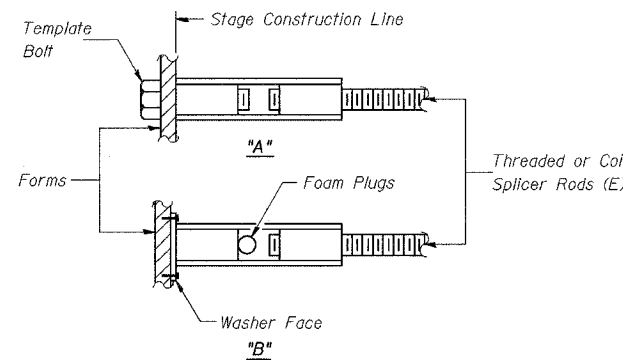
BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563M, Grade C, D or DH may be used.



**INTEGRAL ABUTMENT
BAR SPLICER ASSEMBLY DETAIL
FOR #15 BAR**

Min. Capacity = 100 kN - tension
Min. Pull-out Strength = 40 kN - tension
No. Required =



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:

- Minimum Capacity = $1.25 \times 10^{-3} \times f_y \times A_t$
(Tension in kN)
- Minimum *Pull-out Strength = $1.25 \times 10^{-3} \times f_{sallow} \times A_t$
(Tension in kN)

Where f_y = Yield strength of lapped reinforcement bars in MPa.
 f_{sallow} = 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 Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	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.

NOTES:

- For North Abutment Details, see Sheets 35 and 36.
- For South Abutment Details, see Sheets 33 and 34.

DESIGNED	WJZ
CHECKED	SWS
DRAWN	VH
CHECKED	LRB

BSD-1 (M) 4-30-97

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIB-5

BAR SPLICER DETAILS

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

SN: 090-0156
 TAZEWELL CO., IL.

STA. 10+529.222
 DATE: 12-23-04

2/3/2005

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LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 Engineering classifications of soil in accordance with AASHTO M 145 standard specification. Q_u , kPa Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.

Silty Clay Loam Textural classification of soil in accordance with IDOT Triangular Chart. 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.

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. 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.

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	591
STA.		TO STA.			
F.A.I.A. REGION		ILLINOIS		PROJECT	

CLAUDE H. HURLEY COMPANY												
BORING LOG						BORING NO. SB-233						
PROJECT NO. 3-380-04												
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET/CAMP STREET CORRIDOR												
LOCATION BRIDGE NO. 090-0156 RAMP K-2B 10+616.1 3.3m POKIA & TAZEWELL COUNTIES, ILLINOIS												
DRILLING CONTRACTOR D & G DRILLING, INC.												
DATE OF DRILLING: STARTED 12-28-94 COMPLETED 12-28-94 SURFACE ELEVATION 143.27												
DRILLED BY D. BOESSEL LOGGED BY H. DOOLEY												
Elev	CLASSIFICATION	Depth	N	Q _u	W	γ _d	GROUNDWATER DATA			DRILLING METHOD		
							DATE	DEPTH	HOUR	RIG TYPE	MOBILE	
145.00	PAVEMENT MATERIALS: 75mm AC	0					DD	12-28	DRY		MOBILE B-57	
143.00	FILL: DK GR & BR SILTY CLAY LOAM, A-6	1	3	305	11						0.10m FA-B	
141.59	DK GR & BR SILTY LOAM, A-7-5	2	3	180	16							
140.83	DK GR TO BR LOAM, A-6	3	3	180	20							
140.07	DK GR TO BR SILTY LOAM, A-5	4	4	270	22							
139.11	BR, GR & GSH GR SILTY CLAY, A-7-6	5	5	270	26							
137.78	DK GR & GSH GR MASSIVE CLAY SHALE	6	11		16							
137.02	LT GR GR MASSIVE CLAY SHALE	7	17									

CLAUDE H. HURLEY COMPANY												
BORING LOG						BORING NO. SB-234						
PROJECT NO. 3-380-04												
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET/CAMP STREET CORRIDOR												
LOCATION BRIDGE NO. 090-0156 RAMP K-2B 10+592.8 7.2m POKIA & TAZEWELL COUNTIES, ILLINOIS												
DRILLING CONTRACTOR D & G DRILLING, INC.												
DATE OF DRILLING: STARTED 11-1-94 COMPLETED 11-1-94 SURFACE ELEVATION 143.56												
DRILLED BY D. BOESSEL LOGGED BY J. DRZALICKI												
Elev	CLASSIFICATION	Depth	N	Q _u	W	γ _d	GROUNDWATER DATA			DRILLING METHOD		
							DATE	DEPTH	HOUR	RIG TYPE	MOBILE	
145.00	PAVEMENT MATERIALS: 75mm AC	0					DD	11-1	DRY		MOBILE B-57	
143.22	FILL: DP, DK GR & GSH GR SILTY CLAY LOAM, A-6	1	2	315	12						0.10m FA-1.5B	
142.65	FILL: BR, GSH GR & BR SILTY CLAY, A-7-6	2	2	270	29							
141.90	DK GR LAMINATED CLAY SHALE	3	3	335	22							
141.12	DK GR LAMINATED CLAY SHALE	4	4		15							
139.60	LT GR & GSH GR MASSIVE CLAY SHALE	5	6		18							
		6	10									
		7	17		13							
		8	34		15							
		9	75									
		10	100		14							
		11	100									
		12	39		15							

CLAUDE H. HURLEY COMPANY												
BORING LOG						BORING NO. SB-235						
PROJECT NO. 3-380-04												
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET/CAMP STREET CORRIDOR												
LOCATION BRIDGE NO. 090-0156 RAMP K-2B 10+652.2 11.3m POKIA & TAZEWELL COUNTIES, ILLINOIS												
DRILLING CONTRACTOR D & G DRILLING, INC.												
DATE OF DRILLING: STARTED 11-1-94 COMPLETED 11-1-94 SURFACE ELEVATION 143.62												
DRILLED BY D. BOESSEL LOGGED BY J. DRZALICKI												
Elev	CLASSIFICATION	Depth	N	Q _u	W	γ _d	GROUNDWATER DATA			DRILLING METHOD		
							DATE	DEPTH	HOUR	RIG TYPE	MOBILE	
145.00	PAVEMENT MATERIALS: 75mm AC	0					DD	11-1	DRY		MOBILE B-57	
143.22	FILL: DK GR & BR SILTY LOAM, A-6	1	3	315	12						0.10m FA-1.5B	
141.59	DK GR & BR SILTY LOAM, A-7-5	2	3	180	11							
140.83	DK GR TO BR LOAM, A-6	3	3	180	20							
140.07	DK GR TO BR SILTY LOAM, A-5	4	4	270	22							
139.11	BR, GR & GSH GR SILTY CLAY, A-7-6	5	5	270	26							
137.78	DK GR & GSH GR MASSIVE CLAY SHALE	6	6		14							
137.02	LT GR GR MASSIVE CLAY SHALE	7	7		14							
135.09	DK GR & GSH GR MASSIVE CLAY SHALE	8	7		19							
134.33	DK GR TO BR SILTY LOAM, A-6	9	6	410	14							
133.06	DK GR TO BR LOAM, A-6	10	6	270	17							
132.19	DK GR TO BR SILTY LOAM, A-6	11	5	260	28							
131.57	BR SILTY LOAM, A-6 W/ OCC COAL FRAGMENT	12	3	285	21							

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DESIGNED	WJZ
CHECKED	SWS
DRAWN	RMG
CHECKED	DJM

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIB-5
SOIL BORING LOGS
 SB-233, SB-234 & SB-235
 SN: 090-0156 STA. 10+529.222
 TAZEWELL CO., IL. DATE: 12-23-04

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 Engineering classifications of soil in accordance with AASHTO M 145 standard specification. Q_u , kPa Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.

Silty Clay Loam Textural classification of soil in accordance with IDOT Triangular Chart. 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.

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. 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.

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	592
STA.		TO STA.			
F.H.W.A. REGION		ILLINOIS	PROJECT		
SHEET 47 OF 56					

CLAUDE H. HURLEY COMPANY BORING LOG									
PROJECT NO. 3-380-04					BORING NO. SB-237				
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR									
LOCATION BRIDGE NO. 090-0155 RAMP K-202 10+535.8 0.2m					PEORIA & TAZEWELL COUNTIES, ILLINOIS				
STRUCTURE STATION OFFSET					DATE OF DRILLING: STARTED 3-25-96 COMPLETED 3-25-96 SURFACE ELEVATION 149.18				
DRILLING CONTRACTOR D. S. G. DRILLING, INC.					LOGGED BY S. ARNOLD				
DRILLED BY J. KIELTKE					DRILLING METHOD				
148.89	23	17	DB	3-25	DRY				
148.72	12	5		3-26	6.1	1d			
147.50	38	11		141.16	END OF BORING				
146.74	6	16							
145.96	23	10							
145.22	100/0.13m	10							
143.97	100/0.13m	7							

CLAUDE H. HURLEY COMPANY BORING LOG									
PROJECT NO. 3-380-04					BORING NO. SB-238				
PROJECT FAI-74 IMPROVEMENTS - MAIN STREET CORRIDOR									
LOCATION BRIDGE NO. 090-0155 RAMP K-202 10+575.9 4.3m					PEORIA & TAZEWELL COUNTIES, ILLINOIS				
STRUCTURE STATION OFFSET					DATE OF DRILLING: STARTED 4-9-96 COMPLETED 4-9-96 SURFACE ELEVATION 146.83				
DRILLING CONTRACTOR CENTRAL ILLINOIS DRILLING COMPANY					LOGGED BY S. ARNOLD				
DRILLED BY J. SCOTT					DRILLING METHOD				
146.32	6	17		4-9	5.7				
145.21	8	21		4-9	3.7	1d			
144.85	74	16		136.48	END OF BORING				
142.69	30	12							
140.82	100/0.13m	7							

2/3/2005

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DESIGNED	WJZ
CHECKED	SWS
DRAWN	RMG
CHECKED	DJM

alfred benesch & company
 CONSULTING ENGINEERS
 205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60604
 JOB NO. 3573

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IHB-5
SOIL BORING LOGS
SB-237 & SB-238
 SN: 090-0156
 TAZEWELL CO., IL.
 STA. 10+529.222
 DATE: 12-23-04

LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 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.
Yd, kgpm^3 Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.

GROUNDWATER DATA
DRILLING METHOD
SAMPLE TYPE
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
FA Flight Auger
RW Rotary Wash
HSA Hollow Stem Auger
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.

Table with columns: ROUTE No., SECTION, COUNTY, TOTAL SHEETS, SHEET NO. Values include: FA174, TAZEWELL, 1366, 593.

Table with columns: STA., TO STA., F.I.L.W.A. REGION, ILLINOIS, PROJECT. Values include: SHEET 48 OF 56.

BORING LOG table for Boring No. SB-239. Includes project info, logs with classifications (AU, AU, AU, AU, AU, AU, AU, AU, AU, AU), groundwater data, and drilling methods.

BORING LOG table for Boring No. SB-239 (CONT.). Continuation of log with classifications (AU, AU, AU, AU, AU, AU, AU, AU, AU, AU) and groundwater data.

DESIGNED WJZ, CHECKED SWS, DRAWN RMG, CHECKED DJM

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74) SECTION 90-IIIB-5
SOIL BORING LOG SB-239
SN: 090-0156 TAZEWELL CO., IL. STA. 10+529.222 DATE: 12-23-04

alfred benesch & company CONSULTING ENGINEERS 208 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601 JOB NO. 3573

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LEGEND - CLAUDE H. HURLEY COMPANY TEST BORING LOGS

A-1 to A-8 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.
Yd, kgpm^3 Dry unit weight of soil and bedrock in kilograms per cubic meter determined in accordance with standard practice.

GROUNDWATER DATA
DRILLING METHOD
SAMPLE TYPE
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
FA Flight Auger
RW Rotary Wash
HSA Hollow Stem Auger
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.

Table with project details: ROUTE No. FAI 74, SECTION *, COUNTY TAZEWELL, TOTAL SHEETS 1366, SHEET No. 594. Includes STA. and PROJECT information.

BORING LOG for SB-240. Includes project info, logs for silty loam, sand, and shale with groundwater data and drilling methods.

BORING LOG for SB-240 (CONT.). Continuation of log with silty loam, sand, and shale data.

BORING LOG for SB-243. Includes project info, logs for silty loam, sand, and shale with groundwater data and drilling methods.

2/3/2005

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DESIGNED WJZ
CHECKED SWS
DRAWN RMG
CHECKED DJM

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74) SECTION 90-IHB-5
SOIL BORING LOGS SB-240 & SB-243
SN: 090-0156 TAZEWELL CO., IL. STA. 10+529.222 DATE: 12-23-04

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, kgm^{-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

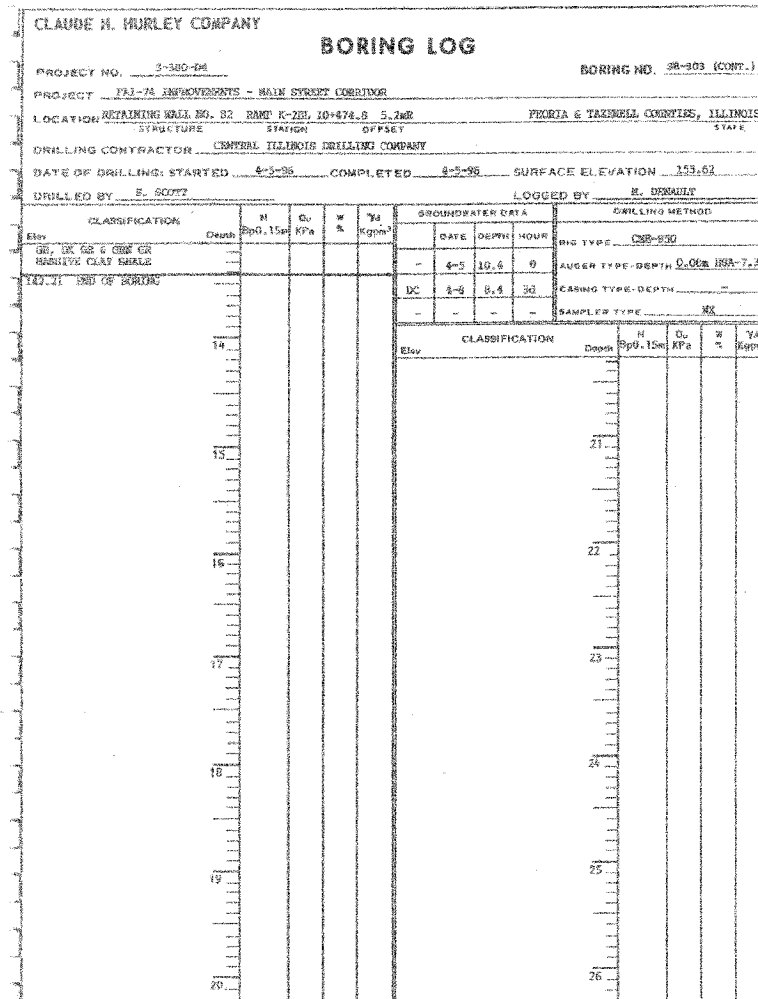
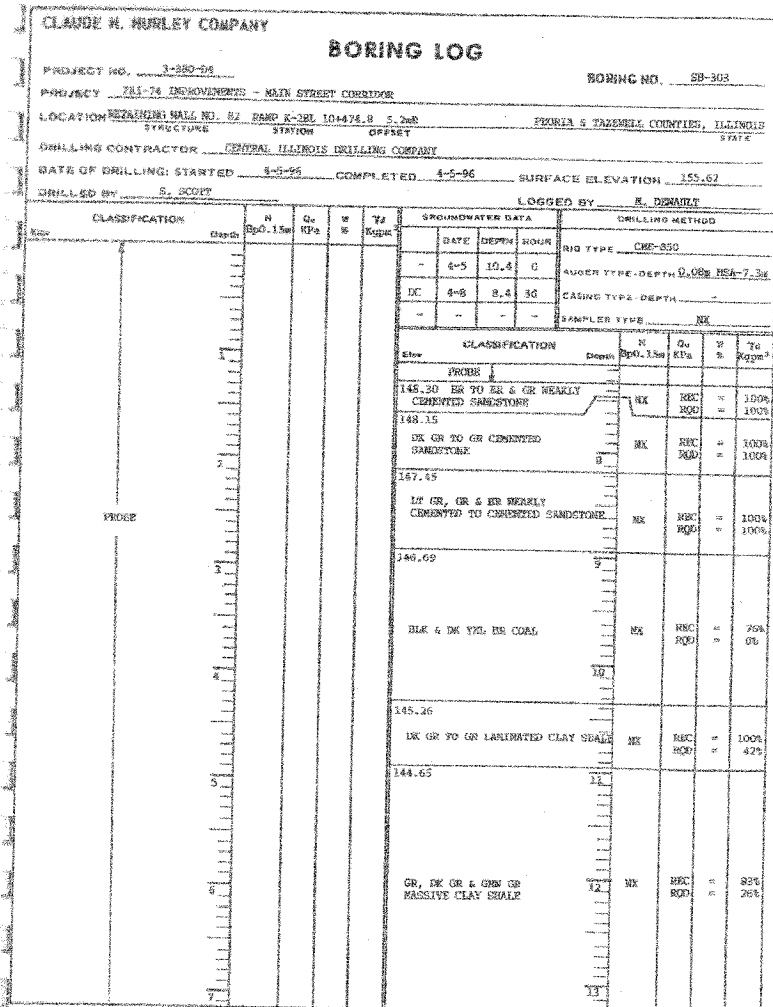
AU Auger
 SS Standard Split-barrel
 ST Thin-walled Tube
 DB Core Barrel

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.

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	595
STA.		TO STA.			
F.H.W.A. REGION		ILLINOIS		PROJECT	



2/3/2005

mt:\p\o\13573\vr-omp\k2\sr\lfb5-7a0900156.dgn

DESIGNED	WJZ
CHECKED	SWS
DRAWN	RMG
CHECKED	DJM

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.J. ROUTE 74 (I-74)
 SECTION 90-IIB-5
 SOIL BORING LOG
 SB-303


SN: 090-0156
 TAZEWELL CO., IL.

STA. 10+529.222
 DATE: 12-23-04

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI74	#	TAZEWELL	1366	596
STA.		TO STA.			
F.J.W.A. REGION		ILLINOIS		PROJECT	

LEGEND - IDOT TEST BORING LOGS

- Silty Clay Loam* Textural classification of soil in accordance with IDOT Triangular Chart.
- BLAWS/150mm* Number of blows required to drive a standard soil sampling device 150 mm 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.
- Moist. %* 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.



Illinois Department of Transportation
Division of Highways
DOT

SOIL BORING LOG

Page 1 of 4
Date 9/2/03

ROUTE FAI-74 DESCRIPTION Ramp K-2 & J-3 LOGGED BY DPS


SECTION 72-6,7,8,9-1,90-11,90-12,13,14 LOCATION , SEC., TWP., RNG.

COUNTY Peoria & Tazewell DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. Station	D E P T H	B L O W S	U C S	M O I S T %	Surface Water Elev.			Stream Bed Elev.			Groundwater Elev.:				
					m	(m)	mm	m	(m)	mm	(kPa)	(%)	(m)	mm	(kPa)
10+423	10	423	Q _u		190.64					none	none	none	none	none	none
					190.64					none	none	none	none	none	none
	4														
	6														
	8														
	9														
	16														
	18														
	19														
	20														
	14														
	5														
	11														
	13														
	18														
	7														
	9														
	9														
	11														
	15														
	13														
	6														
	8														
	12														
	7														
	12														
	10														

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



Illinois Department of Transportation
Division of Highways
DOT

SOIL BORING LOG

Page 2 of 4
Date 9/2/03

ROUTE FAI-74 DESCRIPTION Ramp K-2 & J-3 LOGGED BY DPS

SECTION 72-6,7,8,9-1,90-11,90-12,13,14 LOCATION , SEC., TWP., RNG.

COUNTY Peoria & Tazewell DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. Station	D E P T H	B L O W S	U C S	M O I S T %	Surface Water Elev.			Stream Bed Elev.			Groundwater Elev.:				
					m	(m)	mm	m	(m)	mm	(kPa)	(%)	(m)	mm	(kPa)
10+423	10	423	Q _u		190.64					none	none	none	none	none	none
					190.64					none	none	none	none	none	none
	3														
	6														
	6														
	16														
	12														
	10														
	10														
	2														
	5														
	2														
	5														
	13														
	12														
	12														
	9														
	12														
	9														
	7														
	9														
	12														
	4														
	4														
	4														
	4														
	5														
	4														

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

2/3/2005
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DESIGNED	WJZ
CHECKED	SWS
DRAWN	RMG
CHECKED	DJM

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIIB-5
SOIL BORING LOG
K2MJ3-1

SN: 090-0156
TAZEWELL CO., IL.


STA. 10+529.222
DATE: 12-23-04

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI 74	*	TAZEWELL	1366	597
STA.			TO STA.		
F.H.W.A. REGION			ILLINOIS PROJECT		

LEGEND - IDOT TEST BORING LOGS

Silty Clay Loam Textural classification of soil in accordance with IDOT Triangular Chart. Q_u , kPa Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.

BLOWS/150mm Number of blows required to drive a standard soil sampling device 150 mm as conducted in accordance with AASHTO T 206 standard specification. Moist. % 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.



ROCK CORE LOG

Page 3 of 4

Date 9/20/05

ROUTE FAI-74 DESCRIPTION Ramp K-2 & J-3 LOGGED BY DPS

SECTION 72-6, 7, 8, 9-1, 99-11, 99-12, 13, 14 LOCATION . SEC., TWP., RING.

COUNTY Peoria & Tazewell CORING METHOD Double Barrel

STRUCT. NO. _____ CORING BARREL TYPE & SIZE NWD4

Station _____ Core Diameter 52 mm

BORING NO. K2MJ3-1 Top of Rock Elev. 147.44 m

Station 10+423 Begin Core Elev. 145.86 m

Offset 3.50m Rt of CL _____ m

Ground Surface Elev. 160.64 m

DEPTH (m)	DEPTH (ft)	MOISTURE (%)	STRENGTH (min/0.3m)	STRENGTH (kPa)	REMARKS
145.86	48.84	18.0%	49	927	Gray SANDSTONE
145.91	48.85	18.9%		1501	
145.91	48.85	8.4%		3298	Gray SHALE
144.63	47.45	7.0%	2	6099	Gray SILTSTONE
143.57	47.09	10.1%		1751	
143.57	47.09	9.4%		1018	Gray SHALE
143.57	47.09	12.2%		347	
143.57	47.09	8.4%	3	605	
143.57	47.09	8.3%	50	785	
143.57	47.09	8.0%	10	1046	
143.57	47.09	8.0%	14	1701	
143.57	47.09	8.2%		695	
143.57	47.09	8.0%		785	
143.57	47.09	8.0%		1046	
143.57	47.09	8.0%		1701	
143.57	47.09	8.2%		695	


Color pictures of the cores No

Cores will be stored for examination until _____

The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BDS, form 138 (Rev. 8-99)

DESIGNED	WJZ
CHECKED	SWS
DRAWN	RMG
CHECKED	DJM



ROCK CORE LOG

Page 4 of 4

Date 9/20/05

ROUTE FAI-74 DESCRIPTION Ramp K-2 & J-3 LOGGED BY DPS

SECTION 72-6, 7, 8, 9-1, 99-11, 99-12, 13, 14 LOCATION . SEC., TWP., RING.

COUNTY Peoria & Tazewell CORING METHOD Double Barrel

STRUCT. NO. _____ CORING BARREL TYPE & SIZE NWD4

Station _____ Core Diameter 52 mm

BORING NO. K2MJ3-1 Top of Rock Elev. 147.44 m

Station 10+423 Begin Core Elev. 145.86 m

Offset 3.50m Rt of CL _____ m

Ground Surface Elev. 160.64 m

DEPTH (m)	DEPTH (ft)	MOISTURE (%)	STRENGTH (min/0.3m)	STRENGTH (kPa)	REMARKS
138.81	45.53	7.2%		1172	Gray SHALE (continued)
138.81	45.53	7.5%		282	
138.81	45.53	7.8%		1864	Gray SILTSTONE
138.81	45.53	7.4%		1655	
138.81	45.53	6.9%		2266	
138.81	45.53	6.7%		2377	
138.81	45.53	6.8%		3114	
138.81	45.53	5.3%		8921	
138.81	45.53	7.4%		5070	
138.81	45.53	7.4%		10516	

Color pictures of the cores No

Cores will be stored for examination until _____

The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BDS, form 138 (Rev. 8-99)

ILLINOIS DEPARTMENT OF TRANSPORTATION
 RAMP K-2 OVER
 MAIN ST & RAMP J-3
 F.A.I. ROUTE 74 (I-74)
 SECTION 90-IIB-5
ROCK CORE LOG
 K2MJ3-1

SN: 090-0156
 TAZEWELL CO., IL.

STA. 10+529.222
 DATE: 12-23-04

ab **alfred benesch & company**
 CONSULTING ENGINEERS
 205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
 JOB NO. 2513

2/3/2005 m:\pro\3573\rampk2\rtlib7-7-00300156.dgn

68201		ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		FAI 74	*	TAZEWELL	1366	598
STA.				TO STA.		
F.H.W.A. REGION		ILLINOIS		PROJECT		

SHEET 53 OF 56

LEGEND - IDOT TEST BORING LOGS

Silty Clay Loam Textural classification of soil in accordance with IDOT Triangular Chart. Q_u , kPa Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.

BLOWS/150mm Number of blows required to drive a standard soil sampling device 150 mm as conducted in accordance with AASHTO T 206 standard specification. Moist, % 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.

Page 1 of 4

Date 9/16/03

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

ROUTE FAI-74 DESCRIPTION Ramp K-2 and J-3 LOGGED BY DPS

SECTION 72-6, 7, 8, 9-1, 99-11, 99-12, 13, 14 LOCATION . SEC., TWP., RNG.

COUNTY Peoria & Tazewell DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. D B U M Surface Water Elev. m D B U M
Station E L C O Stream Bed Elev. m E L C O
P O S I T W S I H S Qu T P O S I H S Qu T

BORING NO. K2MJ3-2 T W S Groundwater Elev.: m
Station 10+461 H S Qu T First Encounter m
Offset 3.60m Rt. of CL (150) Upon Completion m
Ground Surface Elev. 158.89 m (m) mm (kPa) (%) After 24 Hrs. not taken m (m) mm (kPa) (%)

See Hurley Boring RB-244
(continued)

See Hurley Boring RB-244
(continued)

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

Page 2 of 4

Date 9/16/03

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

ROUTE FAI-74 DESCRIPTION Ramp K-2 and J-3 LOGGED BY DPS

SECTION 72-6, 7, 8, 9-1, 9, 9-11, 99-12, 13, 14 LOCATION . SEC., TWP., RNG.

COUNTY Peoria & Tazewell DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. D B U M Surface Water Elev. m
Station E L C O Stream Bed Elev. m
P O S I T W S I H S Qu T P O S I H S Qu T

BORING NO. K2MJ3-2 T W S Groundwater Elev.: m
Station 10+461 H S Qu T First Encounter m
Offset 3.60m Rt. of CL (150) Upon Completion m
Ground Surface Elev. 158.89 m (m) mm (kPa) (%) After 24 Hrs. not taken m (m) mm (kPa) (%)

See Hurley Boring RB-244
(continued)

165.19

Borehole continued with rock coring.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

DESIGNED	WJZ
CHECKED	SWS
DRAWN	RMG
CHECKED	DJM

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIIB-5
SOIL BORING LOG
K2MJ3-2

SN: 090-0156
TAZEWELL CO., IL.

STA. 10+529.222
DATE: 12-23-04




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ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	TAZEWELL	1366	599
STA.		TO STA.		
F.H.W.A. REGION		ILLINOIS	PROJECT	

LEGEND - IDOT TEST BORING LOGS

Silty Clay Loam Textural classification of soil in accordance with IDOT Triangular Chart. Q_u , kPa Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.

BLOWS/150mm Number of blows required to drive a standard soil sampling device 150 mm as conducted in accordance with AASHTO T 206 standard specification. Moist, % 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.



ROCK CORE LOG

Page 3 of 4

Date 9/19/03

ROUTE FAI-74 DESCRIPTION Ramp K-2 and J-3 LOGGED BY DPS

SECTION 72-6, 7, 8, 9-1, 90-11, 90-12, 13, 14 LOCATION SEC., TWP., RNG.

COUNTY Peoria & Tazewell CORING METHOD Double Barrel

STRUCT. NO. _____ CORING BARREL TYPE & SIZE NWD4

Station _____ Core Diameter 52 mm

BORING NO. K2MJ3-2 Top of Rock Elev. 144.60 m

Station 10+461 Begin Core Elev. 145.18 m

Offset 3.60m Rt. of CL

Ground Surface Elev. 158.89 m


DEPTH (m)	DEPTH (#)	MOISTURE (%)	STRENGTH (kPa)	REMARKS
146.18	1	100	15	Gray SHALE
144.82				Gray SILTSTONE w/Breaks
		8.8%		moisture
		9.2%		moisture
		5.9%		moisture
		-15.0		
143.65		7.1%		moisture
143.45	2	100	57	Broken pieces of SHALE w/TR of SANDSTONE
		9.8%		moisture
		9.1%		moisture
142.77		8.0%		moisture
		6.9%		moisture
		7.5%		moisture
		8.9%		moisture
142.13	3	70	8	Gray SHALE
		12.1%		moisture
		12.1%		moisture
		8.8%		moisture
		8.8%		moisture
		7.8%		moisture
		8.7%		moisture
		7.8%		moisture
		7.8%		moisture
		7.4%		moisture
		7.9%		moisture
		9.2%		moisture
		7.5%		moisture

Color pictures of the cores No

Cores will be stored for examination until _____

The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)



ROCK CORE LOG

Page 4 of 4

Date 9/19/03

ROUTE FAI-74 DESCRIPTION Ramp K-2 and J-3 LOGGED BY DPS

SECTION 72-6, 7, 8, 9-1, 90-11, 90-12, 13, 14 LOCATION SEC., TWP., RNG.

COUNTY Peoria & Tazewell CORING METHOD Double Barrel

STRUCT. NO. _____ CORING BARREL TYPE & SIZE NWD4

Station _____ Core Diameter 52 mm

BORING NO. K2MJ3-2 Top of Rock Elev. 144.60 m

Station 10+461 Begin Core Elev. 145.18 m

Offset 3.60m Rt. of CL

Ground Surface Elev. 158.89 m

DEPTH (m)	DEPTH (#)	MOISTURE (%)	STRENGTH (kPa)	REMARKS
146.18	1	100	15	Gray SHALE
144.82				Gray SILTSTONE w/Breaks
		7.0%		moisture
		7.3%		moisture
		7.0%		moisture
		-6.1%		moisture
		6.1%		moisture
143.65				Gray SILTSTONE
		7.1%		moisture
		6.8%		moisture
		7.3%		moisture
		7.2%		moisture
138.44		6.5%		Gray SANDSTONE
		9	92	57
		8.5%		moisture
		8.5%		moisture
		7.6%		moisture
		8.8%		moisture
		9.0%		moisture
		-14.9		
		7.3%		moisture

Color pictures of the cores No

Cores will be stored for examination until _____

The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

2/3/2005 m:\p\o\3573\vr\compk2\verifileb9-7a09000156.dgn

DESIGNED	WJZ
CHECKED	SWS
DRAWN	RMG
CHECKED	DJM

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


ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIHB-5
ROCK CORE LOG
K2MJ3-2
SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

LEGEND - IDOT TEST BORING LOGS

Silty Clay Loam Textural classification of soil in accordance with IDOT Triangular Chart. Q_u , kPa Unconfined compression strength of soil in kilopascals determined in accordance with AASHTO T 208 standard specification.

BLOWS/150mm Number of blows required to drive a standard soil sampling device 150 mm as conducted in accordance with AASHTO T 206 standard specification. Moist, % 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.

68201	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FAI74	*	TAZEWELL	1366	600
STA. TO STA.			F.H.W.A. REGION ILLINOIS PROJECT		
SHEET 55 OF 56					



Illinois Department of Transportation
Division of Highways
DOT

Page 1 of 3

SOIL BORING LOG

Date 9/29

ROUTE FAI-74 DESCRIPTION Ramp K-2 & J-3 LOGGED BY DPS

SECTION 72-6, 7, 8, 9-1, 90-11, 90-12, 13, 14 LOCATION SEC., TWP., RNG.

COUNTY Peoria & Tazewell DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO.	D	B	U	M	Surface Water Elev.	m
Station	E	L	C	O	Stream Bed Elev.	m
	P	O	S	I		
BORING NO. <u>K2MJ3-3</u>	T	W	S	T	Groundwater Elev.:	m
Station <u>10+521</u>	H	S	Qu		First Encounter	m
Offset <u>2.50m Lt. CL</u>	(#)	(mm)	(kPa)	(%)	Upon Completion	m
Ground Surface Elev. <u>148.25</u> m					After <u>24</u> hrs.	not taken


no sample taken 0-1.1m

147.59	2					
	4	144	13.5			
	6	P				
146.83	6					
	6	431	12.4			
	6	P				
145.66	11					
145.61	70					
	90@4"					

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetration)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

DESIGNED	WJZ
CHECKED	SWS
DRAWN	RMG
CHECKED	DJM



Illinois Department of Transportation
Division of Highways
DOT

Page 2 of 3

ROCK CORE LOG

Date 9/29

ROUTE FAI-74 DESCRIPTION Ramp K-2 & J-3 LOGGED BY DPS

SECTION 72-6, 7, 8, 9-1, 90-11, 90-12, 13, 14 LOCATION SEC., TWP., RNG.

COUNTY Peoria & Tazewell CORING METHOD Double Barrel

STRUCT. NO.	D	C	R	C	R	C	S	T
Station	E	O	O	V	E	Q	I	R
	P	R	E	D	E		N	E
BORING NO. <u>K2MJ3-3</u>	H	Y					G	T
Station <u>10+521</u>	(m)	(#)	(%)	(%)	(min/0.3m)	(MPa)		H
Offset <u>2.50m Lt. CL</u>								
Ground Surface Elev. <u>145.1</u> m								

CORING BARREL TYPE & SIZE NWD4


Core Diameter	52	mm
Top of Rock Elev.	145.66	m
Begin Core Elev.	145.51	m

Gray SHALE

145.51	1	97	58	8.5%	moisture	10595
				10.9%	moisture	2023
	2	150	44	7.9%	moisture	6066
	3	100	10	9.6%	moisture	734
	4	74	18			
				18.3%	moisture	1000
				14.6%	moisture	195

Color pictures of the cores No
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 9-99)



Illinois Department of Transportation
Division of Highways
DOT

Page 3 of 3

ROCK CORE LOG

Date 9/29

ROUTE FAI-74 DESCRIPTION Ramp K-2 & J-3 LOGGED BY DPS

SECTION 72-6, 7, 8, 9-1, 90-11, 90-12, 13, 14 LOCATION SEC., TWP., RNG.

COUNTY Peoria & Tazewell CORING METHOD Double Barrel

STRUCT. NO.	D	C	R	C	R	C	S	T
Station	E	O	O	V	E	Q	I	R
	P	R	E	D	E		N	E
BORING NO. <u>K2MJ3-3</u>	H	Y					G	T
Station <u>10+521</u>	(m)	(#)	(%)	(%)	(min/0.3m)	(MPa)		H
Offset <u>2.50m Lt. CL</u>								
Ground Surface Elev. <u>148.25</u> m								

CORING BARREL TYPE & SIZE NWD4

Core Diameter	52	mm
Top of Rock Elev.	145.66	m
Begin Core Elev.	145.51	m

Gray SHALE (continued)

				11.6%	moisture	427
	6	80	34			
				8.9%	moisture	1175
				7.9%	moisture	4736
	7	74	68			
				6.7%	moisture	3065
				7.0%	moisture	1934
	8	100	70			
				7.1%	moisture	3786
				9.0%	moisture	2629

End of Boring

Color pictures of the cores No
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 9-99)

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAMP K-2 OVER
MAIN ST & RAMP J-3
F.A.I. ROUTE 74 (I-74)
SECTION 90-IIB-5
SOIL BORING & ROCK CORE LOGS
K2MJ3-3

ab Alfred Benesch & Company
CONSULTING ENGINEERS
205 NORTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60601
JOB NO. 3573

SN: 090-0156
TAZEWELL CO., IL.
STA. 10+529.222
DATE: 12-23-04

2/3/2005

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