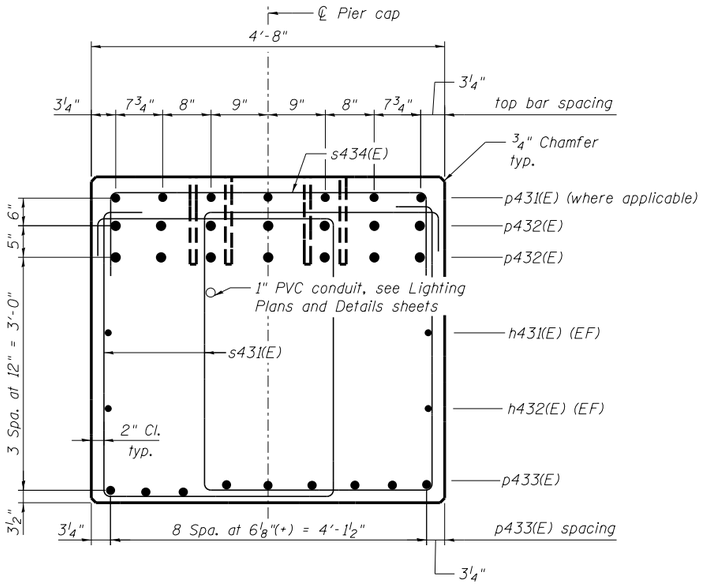
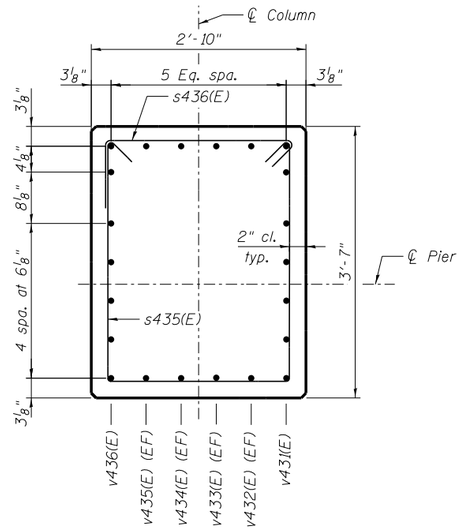


SECTION A-A



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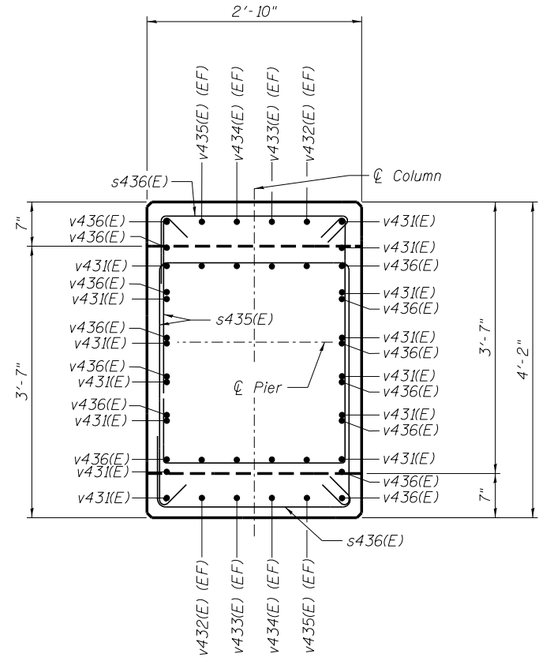

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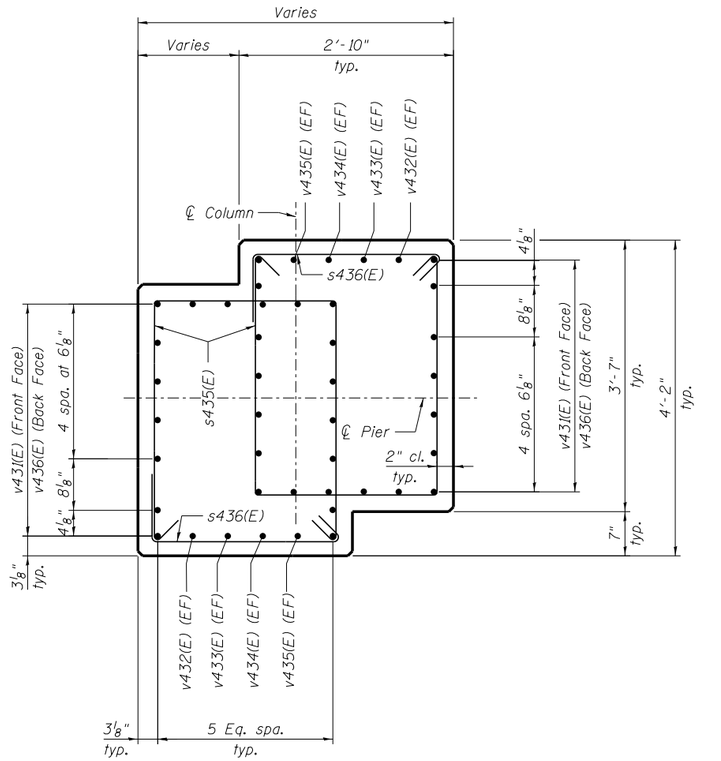
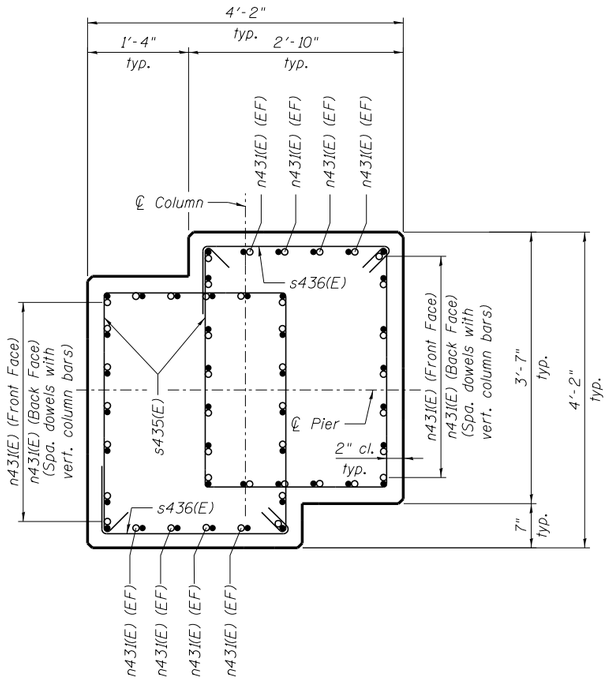
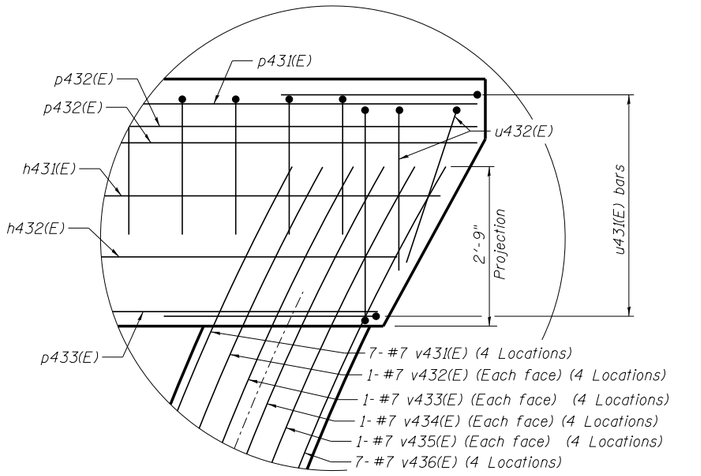


SECTION D-D



SECTION E-E

(Only dowels called out in this section for clarity. Main vertical bars same as called out and spaced in Section D-D)



DETAIL 1

NOTE:

"EF" abbreviation indicates each face or side of the indicated column reinforcement cage.

benesch
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

FILE NAME = 0810187-A0324-035-Pier_3D_Cross_Sections.dgn	USER NAME = ksnider	DESIGNED - RJT	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3D CROSS SECTIONS
STRUCTURE NO. 081-0187 RAMP 6TH-D
SHEET NO. SD35 OF SD44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HVBR	ROCK ISLAND	1504	1101
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

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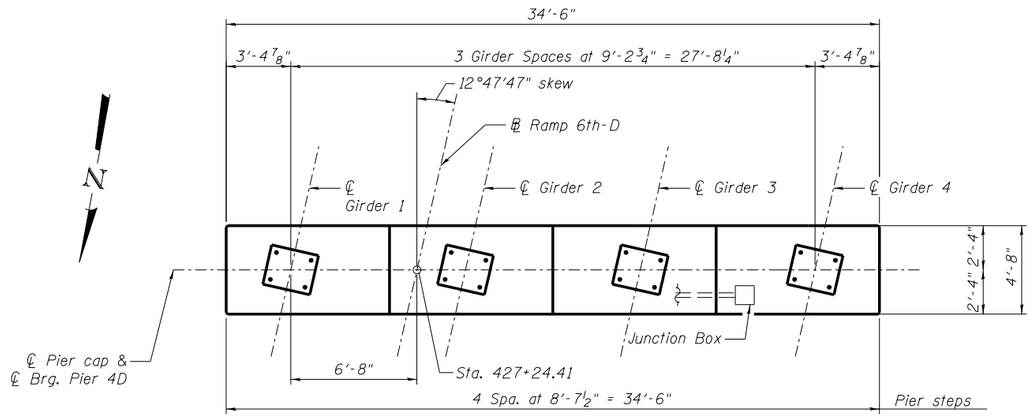
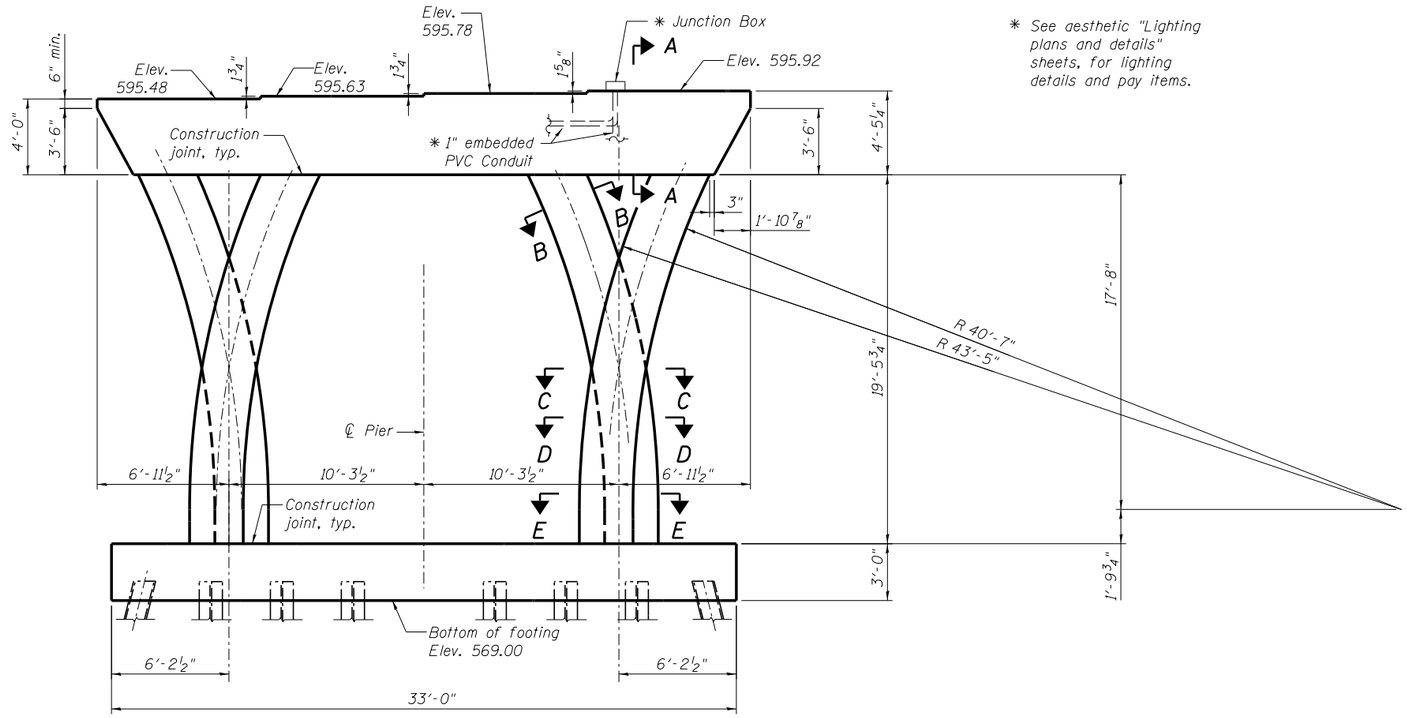


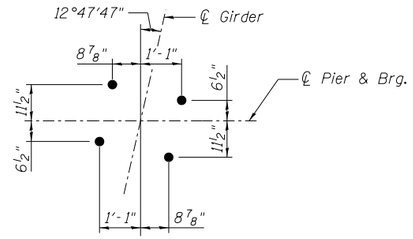
PLAN OF PIER CAP



PIER 4D ELEVATION

(Looking South)

* See aesthetic "Lighting plans and details" sheets, for lighting details and pay items.



ANCHOR BOLT LAYOUT

PILE DATA

Type: HP14x73 with pile shoes
Nominal Required Bearing: 695 kips
Factored Resistance Available: 486 kips
Est. Length: 15 feet
No. Production Piles: 15
No. Test Piles: 1

PIER NOTES:

1. See sheet SD39 for pier concrete finishing notes.
2. For sections A-A, B-B, C-C, D-D, & E-E, See sheet SD38.
3. The minimum clear distance from the face of concrete to near reinforcing bar is 2" unless noted otherwise or shown.
4. All exposed corners, 90 degrees or sharper shall be filleted with a $\frac{3}{4}$" dressed and beveled strip unless noted otherwise.
5. Space reinforcement in cap to miss anchor bolts.
6. The use of steel forms is required for the forming of all pier concrete surfaces from the tops of footings to the bottom of pier cap beams, including stem and pier columns. Use of medium-density overlaid (MDO) or high-density overlaid (HDO) plywood faced forms is allowed for forming of the pier cap beam. Plain plywood-faced forms will not be allowed for any portion of the pier column or cap surfaces.
7. The Contractor shall use self-consolidating concrete (SCC) in all the pier columns. The self-consolidating concrete shall conform to all requirements as specified in Section 1020 of the Standard Specifications. Cost of SCC shall be included with the cost of Concrete Structures.
8. The contractor shall provide adequate forms to contain the increased hydraulic pressure of the self consolidating concrete.
9. The tremie tube shall be in place prior to placing formwork.
10. See foundation layout on sheet SD3 for pier layout.

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	PLOT SCALE =	DRAWN - KMS	REVISED -
MODEL: Default	PLOT DATE = 1/18/2017	CHECKED - TJJ	REVISED -

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DEPARTMENT OF TRANSPORTATION

PIER 4D LAYOUT
STRUCTURE NO. 081-0187 RAMP 6TH-D
SHEET NO. SD36 OF SD44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HVBR	ROCK ISLAND	1504	1102
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

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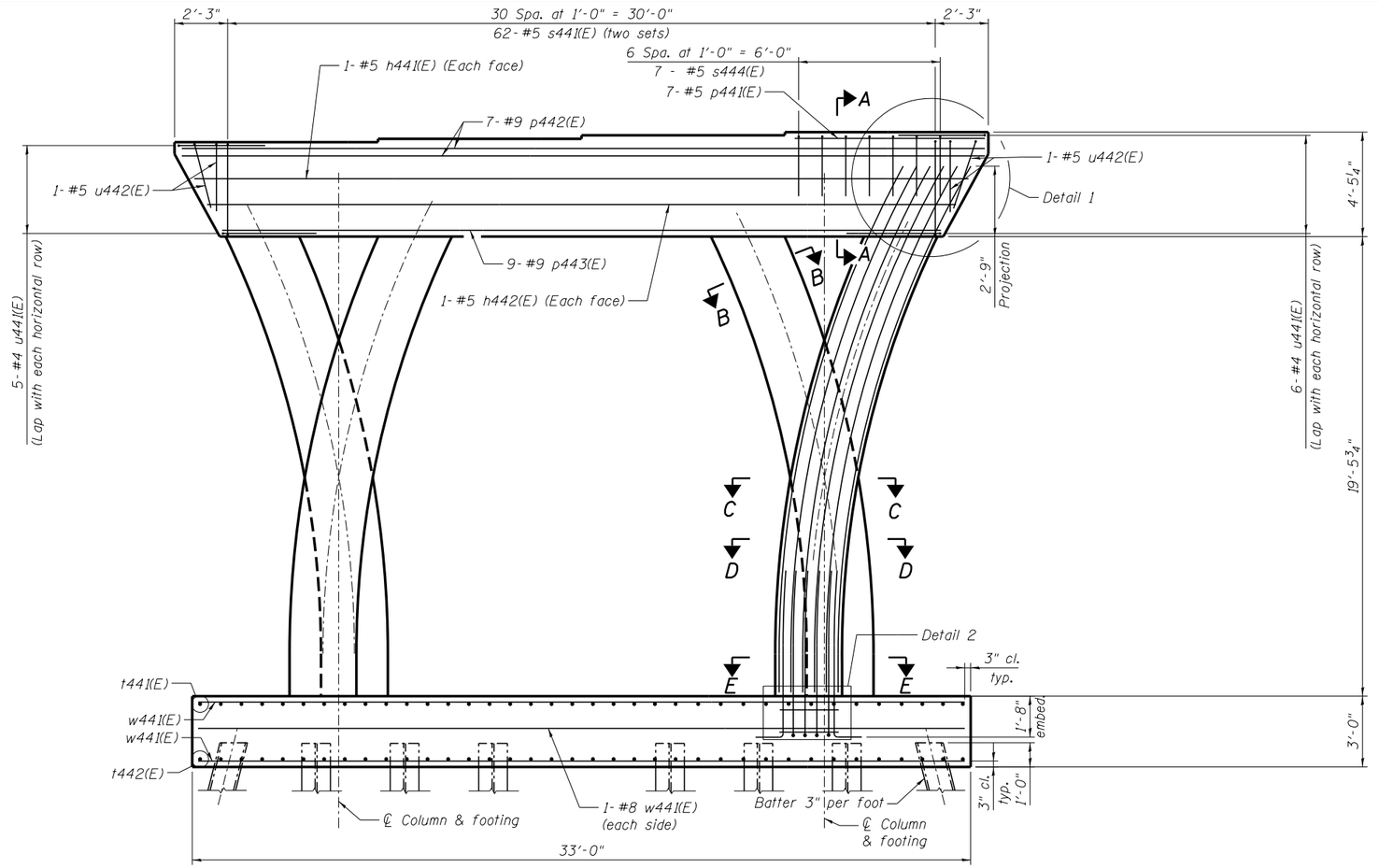
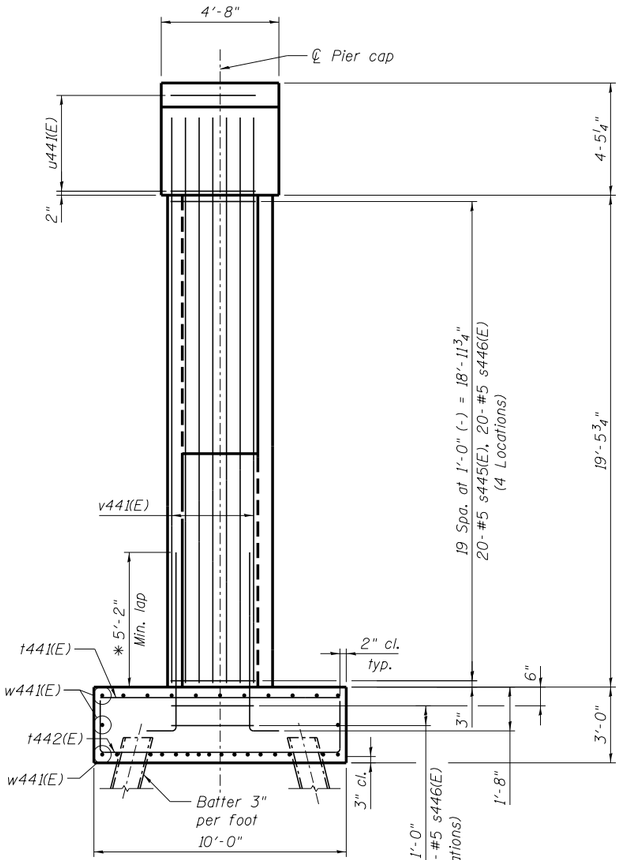


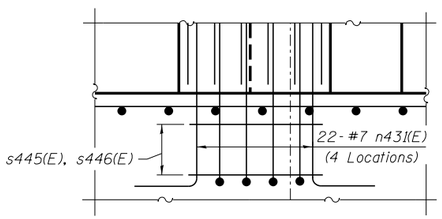
PIER 4D ELEVATION

(Looking South)

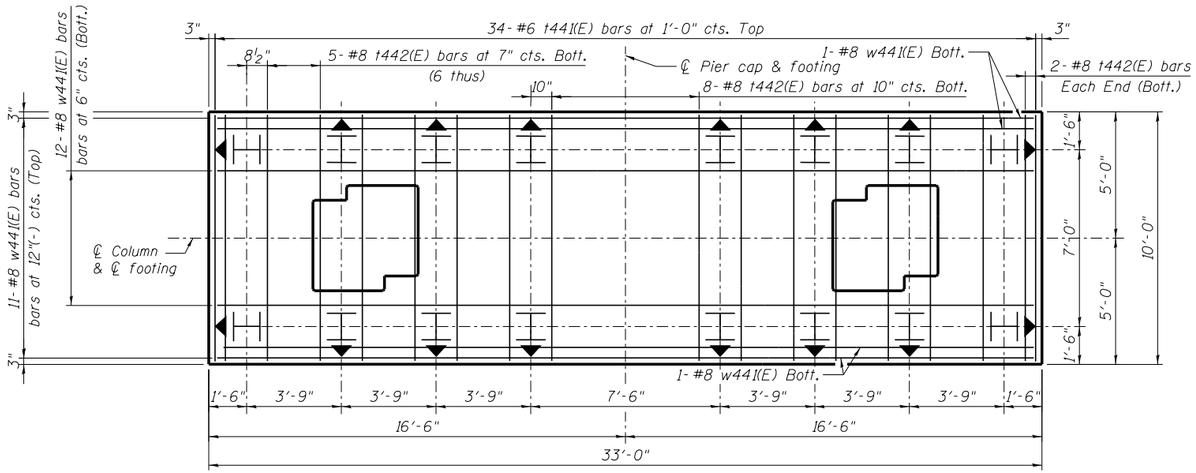


END VIEW

* Bend n431(E) bars in field to match radius of "v" bar



DETAIL 2



FOOTING PLAN

NOTES:

1. For Detail 1 and sections A-A, B-B, C-C, D-D, & E-E see sheet SD38.
2. For additional notes see sheet SD36.
3. See sheet SD39 for reinforcing details and bill of material.

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	PLOT DATE = 1/18/2017	CHECKED - TJJ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 4D DETAILS
STRUCTURE NO. 081-0187 RAMP 6TH-D
SHEET NO. SD37 OF SD44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HVBR	ROCK ISLAND	1504	1103
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

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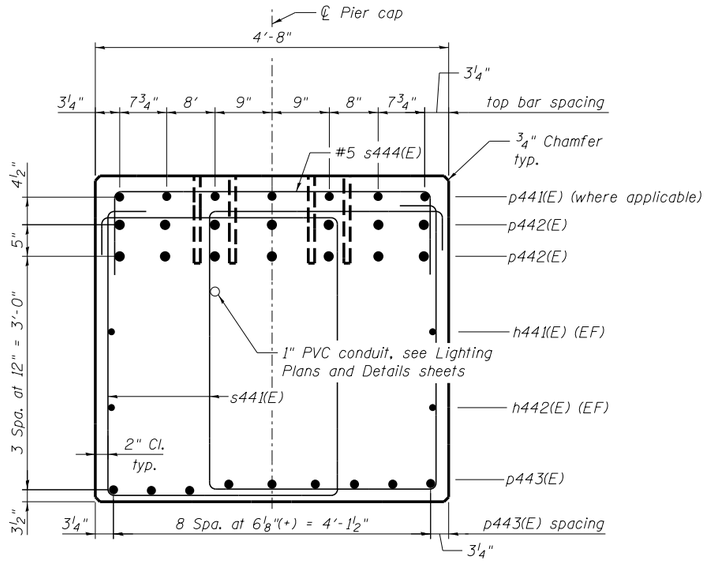
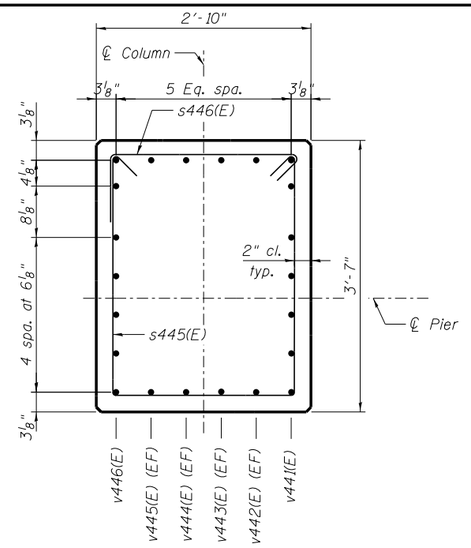


SECTION A-A



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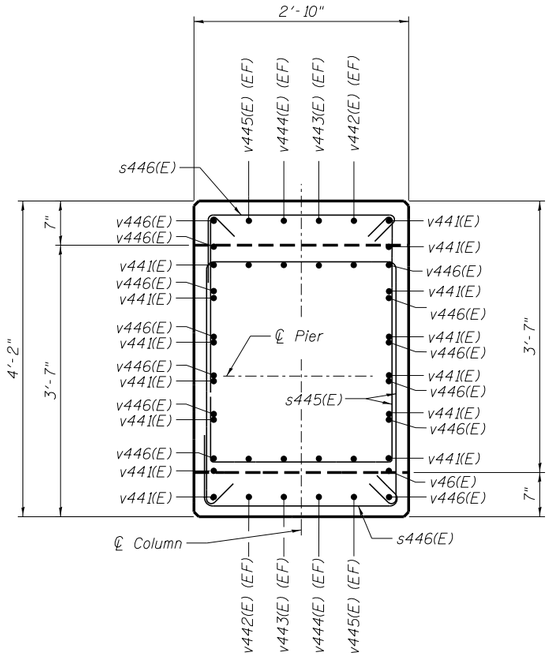

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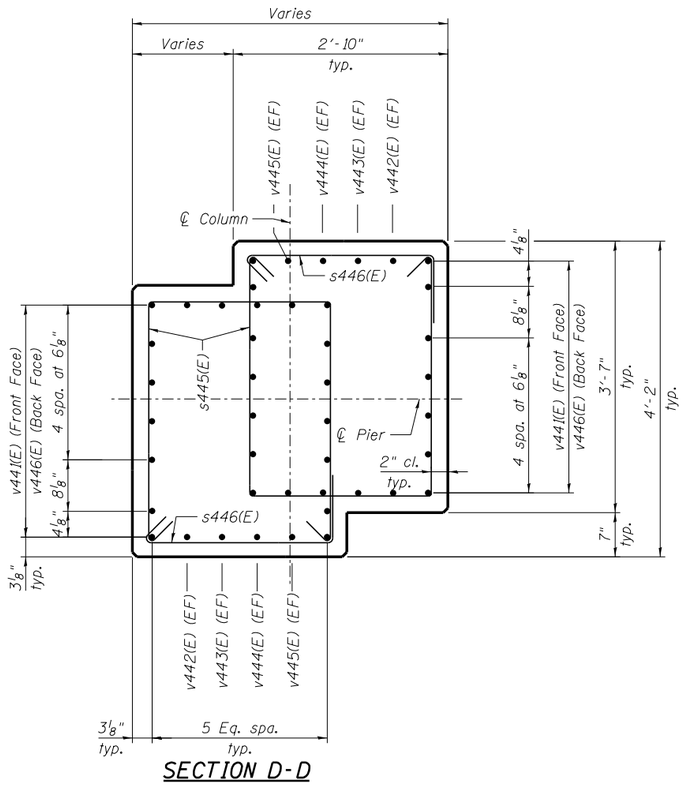

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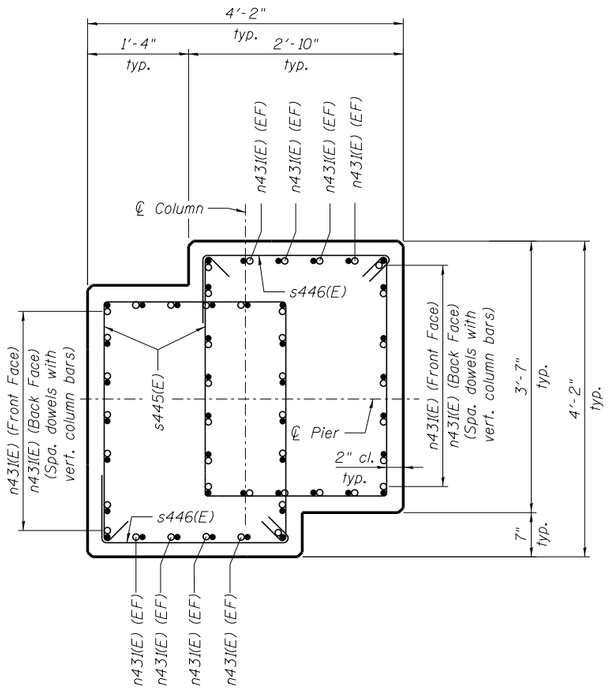
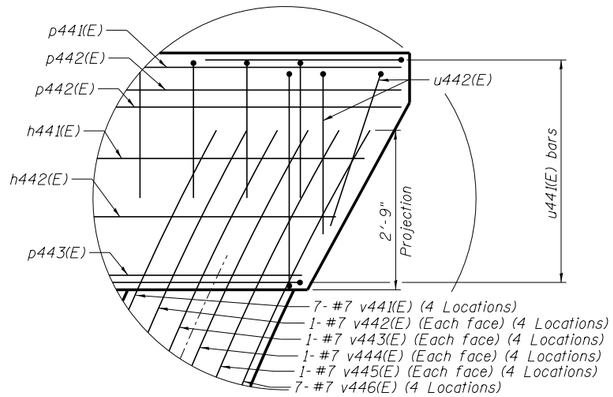


SECTION E-E

(Only dowels called out in this section for clarity. Main vertical bars same as called out and spaced in Section D-D)



DETAIL 1

NOTE:

"EF" abbreviation indicates each face or side of the indicated column reinforcement cage.

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Alfred Benesch & Company
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312-565-0450 Job No. 10061

FILE NAME = 0810187-A0324-038-Pier_4D_Cross_Sections.dgn	USER NAME = ksnider	DESIGNED - RJT	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 4D CROSS SECTIONS
STRUCTURE NO. 081-0187 RAMP 6TH-D
SHEET NO. SD38 OF SD44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HVBR	ROCK ISLAND	1504	1104
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PIER 3D
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h431(E)	2	#5	32'-10"	——
h432(E)	2	#5	31'-7'	——
n431(E)	88	#7	8'-0"	L
p431(E)	7	#5	16'-11"	——
p432(E)	14	#9	34'-1"	——
p433(E)	9	#9	30'-4"	——
s431(E)	62	#5	14'-6"	⊓
s434(E)	15	#5	8'-4"	⊔
s435(E)	84	#5	9'-11"	⊓
s436(E)	84	#5	3'-10"	⊔
t431(E)	34	#6	9'-8"	——
t432(E)	42	#8	14'-8"	⊔
u431(E)	11	#4	8'-4"	⊔
u432(E)	4	#5	10'-4"	⊔
v431(E)	28	#7	22'-4"	⌒
v432(E)	8	#7	22'-4"	⌒
v433(E)	8	#7	22'-5"	⌒
v434(E)	8	#7	22'-5"	⌒
v435(E)	8	#7	22'-5"	⌒
v436(E)	28	#7	22'-6"	⌒
w431(E)	29	#8	32'-6"	——

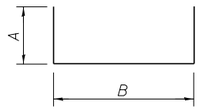
Concrete Structures	Cu. Yd.	84.5
Reinforcement Bars, Epoxy Coated	Pound	15,320
Structure Excavation	Cu. Yd.	20
Furn. Steel Piles HP14x73	Foot	270
Driving Piles	Foot	270
Test Pile Steel HP14x73	Each	1
Pile Shoes	Each	16

PIER 4D
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h441(E)	2	#5	32'-10"	——
h442(E)	2	#5	31'-7'	——
n431(E)	88	#7	8'-0"	L
p441(E)	7	#5	8'-3"	——
p442(E)	14	#9	34'-1"	——
p443(E)	9	#9	30'-4"	——
s441(E)	62	#5	14'-6"	⊓
s444(E)	7	#5	8'-4"	⊔
s445(E)	88	#5	9'-11"	⊓
s446(E)	88	#5	3'-10"	⊔
t441(E)	34	#6	9'-8"	——
t442(E)	42	#8	14'-8"	⊔
u441(E)	11	#4	8'-4"	⊔
u442(E)	4	#5	10'-4"	⊔
v441(E)	28	#7	23'-1"	⌒
v442(E)	8	#7	23'-1"	⌒
v443(E)	8	#7	23'-2"	⌒
v444(E)	8	#7	23'-2"	⌒
v445(E)	8	#7	23'-2"	⌒
v446(E)	28	#7	23'-3"	⌒
w441(E)	29	#8	32'-6"	——

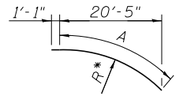
Concrete Structures	Cu. Yd.	84.9
Reinforcement Bars, Epoxy Coated	Pound	15,370
Structure Excavation	Cu. Yd.	96
Furn. Steel Piles HP14x73	Foot	225
Driving Piles	Foot	225
Test Pile Steel HP14x73	Each	1
Pile Shoes	Each	16

BENT BAR DETAILS



BARS s434(E), t432(E), u431(E), u432(E) s444(E), t442(E), u441(E) & u442(E)

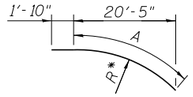
BAR	A	B	LENGTH
s434(E)	2'-0"	4'-4"	8'-4"
t432(E)	2'-6"	9'-8"	14'-8"
u431(E)	2'-0"	4'-4"	8'-4"
u432(E)	3'-0"	4'-4"	10'-4"
s444(E)	2'-0"	4'-4"	8'-4"
t442(E)	2'-6"	9'-8"	14'-8"
u441(E)	2'-0"	4'-4"	8'-4"
u442(E)	3'-0"	4'-4"	10'-4"



BARS v150(E)-v155(E)

BAR	A	R*
v431(E)	21'-3"	43'-1 3/8"
v432(E)	21'-3"	42'-7 7/8"
v433(E)	21'-4"	42'-2 3/8"
v434(E)	21'-4"	41'-8 3/4"
v435(E)	21'-4"	41'-3 1/4"
v436(E)	21'-5"	40'-9 5/8"

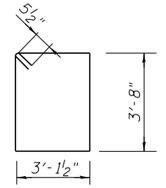
R* = Inside Radius.



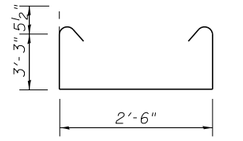
BARS v160(E)-v165(E)

BAR	A	R*
v441(E)	21'-3"	43'-1 3/8"
v442(E)	21'-3"	42'-7 7/8"
v443(E)	21'-4"	42'-2 3/8"
v444(E)	21'-4"	41'-8 3/4"
v445(E)	21'-4"	41'-3 1/4"
v446(E)	21'-5"	40'-9 5/8"

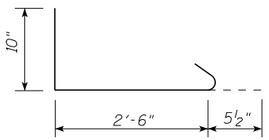
R* = Inside Radius.



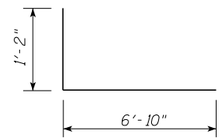
BARS s431(E) & s441(E)



BARS s435(E), s445(E)



BARS s436(E), s446(E)



BAR n431(E)

PIER CONCRETE FINISH NOTES

If form ties are used in forming the pier, arrange ties to be regularly spaced and in a consistent geometric grid pattern. Do not locate ties at edges of concrete rustucations.

Following form removal, a rubbed surface finish in accordance with Article 503.15 (b) of the Standard Specifications shall be required but with the following additional requirements:

1. Demonstrate hole and void patching operations in accordance with Article 503.15 (b) of the standard Specifications on a four foot section of vertical pier concrete located in an inconspicuous area. Begin patching demonstration by using a mortar mix comprised of 1 part white cement, 2 parts standard portland cement, 6 parts mortar sand, and water. The quantity of water used shall produce a mortar consistency as dry as possible to use effectively.

2. When patching test areas have set, saturate with water and rub with a fine carborundum stone until surfaces are smooth in texture. Remove loose powder and other contaminants by rubbing with burlap and rinsing with water. After surfaces have dried, patch color and texture of surfaces will be reviewed by the engineer. Patches should match or be slightly lighter than surrounding concrete. If results are unsatisfactory, adjust patching mortar mix proportions and perform another demonstration until results are deemed satisfactory by the engineer.

3. Use the patching mortar mix proportions that are approved by the engineer as a result of the satisfactory demonstration. Do not use patching mortar that is more than 1 hour old.

4. Finished pier concrete shall be smooth and show no wood grain or other texture from the face of the forms used. All costs for repair or covering wood grain or other textures on these surfaces shall be the responsibility of the Contractor.

NOTE:

All dimensions are out to out.

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	PLOT DATE = 1/18/2017	CHECKED - RJT	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER NOTES AND BILL OF MATERIAL
STRUCTURE NO. 081-0187 RAMP 6TH-D
SHEET NO. SD39 OF SD44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HVBR	ROCK ISLAND	1504	1105
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

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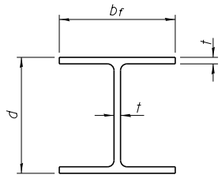
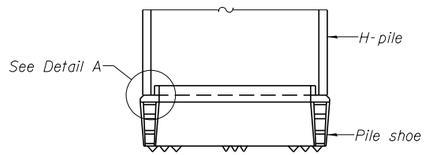
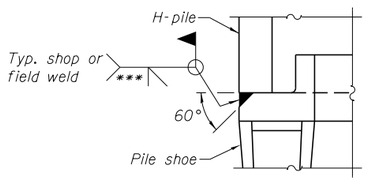


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4''	14 7/8''	13/16''	30''
x102	14''	14 3/4''	11/16''	30''
x89	13 7/8''	14 3/4''	5/8''	30''
x73	13 5/8''	14 5/8''	1/2''	30''
HP 12x84	12 1/4''	12 1/4''	11/16''	24''
x74	12 1/8''	12 1/4''	5/8''	24''
x63	12''	12 1/8''	1/2''	24''
x53	11 3/4''	12''	7/16''	24''
HP 10x57	10''	10 1/4''	9/16''	24''
x42	9 3/4''	10 1/8''	7/16''	24''
HP 8x36	8''	8 1/8''	7/16''	18''

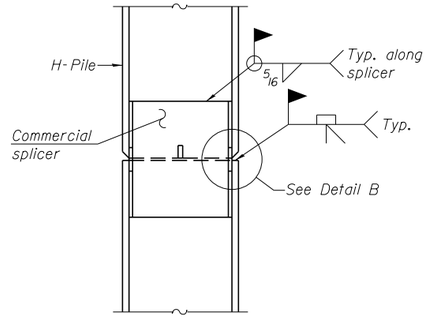


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



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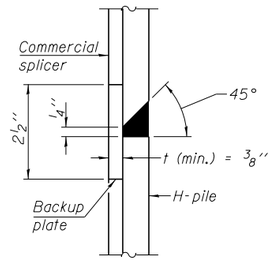
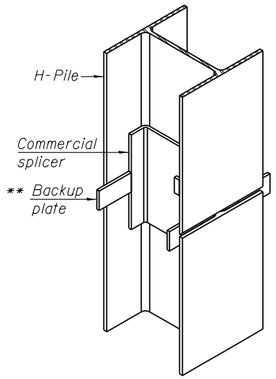
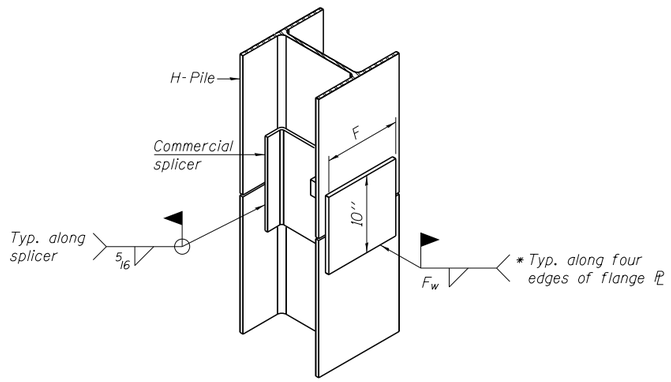


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



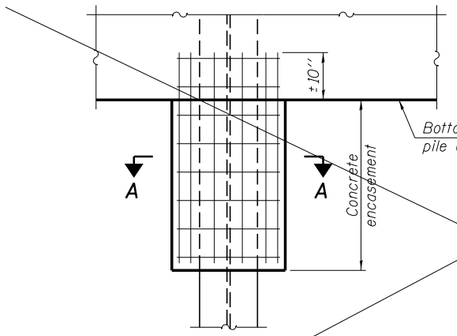
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds 1/4'' from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16'' min.).



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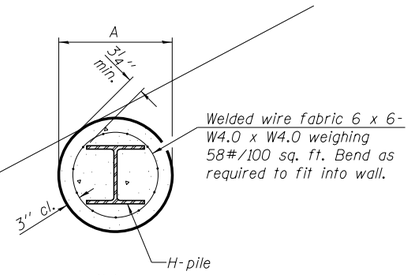
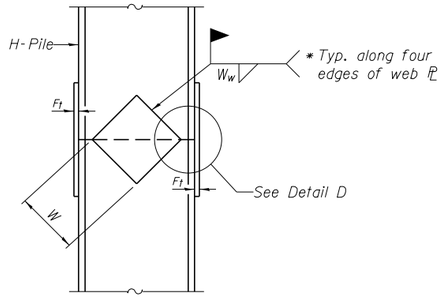


SECTION A-A

Note:
Forms for encasement may be omitted when soil conditions permit.

PILE ENCASEMENT



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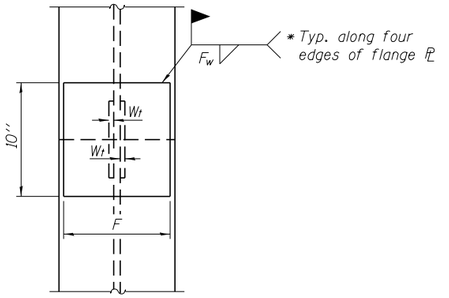
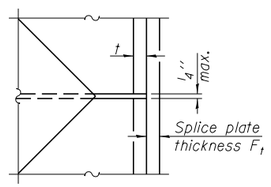


END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_f	W_w
HP 14x117	12 1/2''	1''	7/8''	7 3/4''	5/8''	1/2''
x102	12 1/2''	7/8''	3/4''	7 3/4''	5/8''	1/2''
x89	12 1/2''	3/4''	11/16''	7 3/4''	5/8''	1/2''
x73	12 1/2''	5/8''	9/16''	7 3/4''	5/8''	1/2''
HP 12x84	10''	7/8''	11/16''	6 1/2''	5/8''	1/2''
x74	10''	7/8''	11/16''	6 1/2''	5/8''	1/2''
x63	10''	5/8''	1/2''	6 1/2''	1/2''	3/8''
x53	10''	5/8''	1/2''	6 1/2''	1/2''	3/8''
HP 10x57	8''	3/4''	9/16''	5 1/4''	1/2''	3/8''
x42	8''	5/8''	9/16''	5 1/4''	1/2''	3/8''
HP 8x36	7''	5/8''	7/16''	4 1/4''	1/2''	3/8''

WELDED PLATE FIELD SPLICE

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

benesch
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

F-HP 1-27-12

FILE NAME = 0810187-A0324-040-HP_Pile_Details.dgn	USER NAME = ksnider	DESIGNED - RJT	REVISED -
		CHECKED - AJK	REVISED -
MODEL: Default	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 1/18/2017	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 081-0187 RAMP 6TH-D
SHEET NO. SD40 OF SD44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HVBR	ROCK ISLAND	1504	1106
		CONTRACT NO. 64C08		
		ILLINOIS	FED. AID PROJECT	

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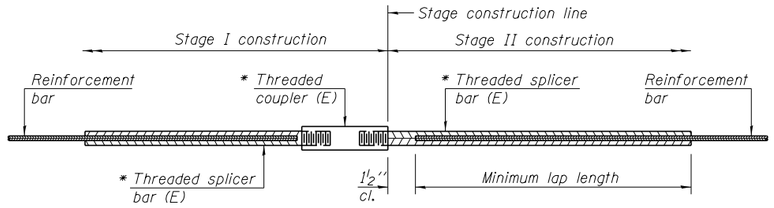


STANDARD BAR SPLICER ASSEMBLY

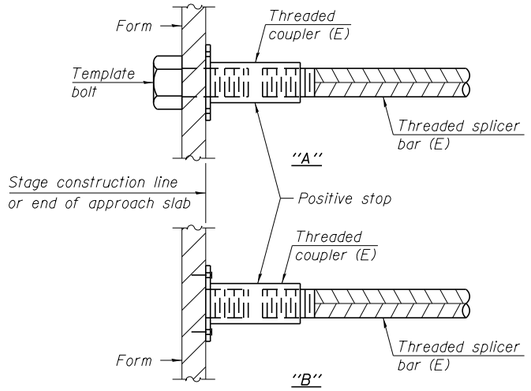
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Class C
Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1½" + thread length

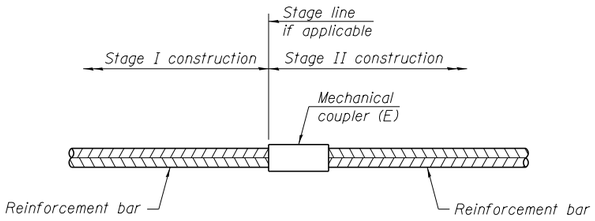
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



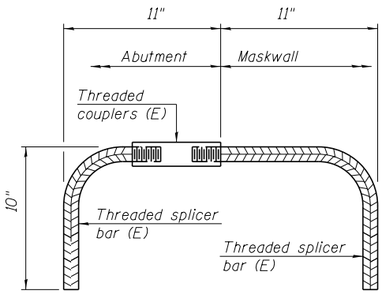
INSTALLATION AND SETTING METHODS

"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.



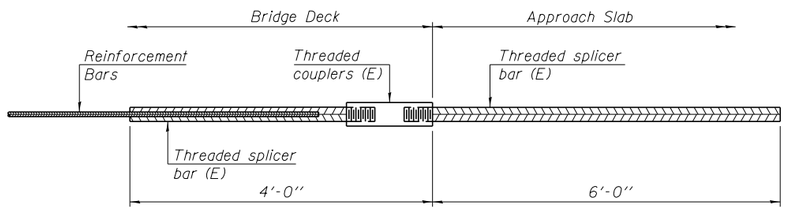
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



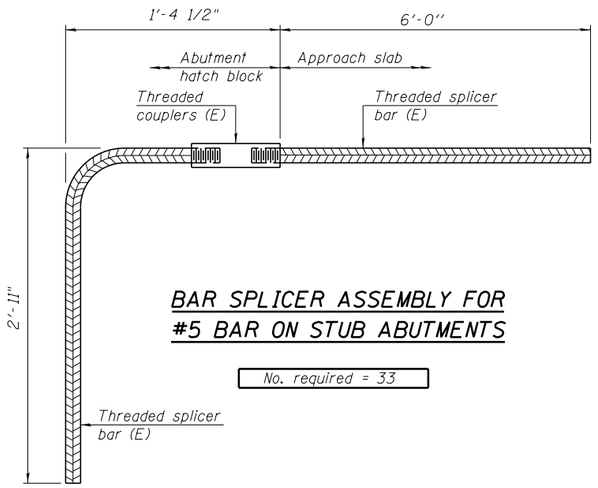
BAR SPLICER ASSEMBLY FOR #5 BAR ON MASKWALL

No. required = 17



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 33

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

benesch
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

BSD-1 1-27-12

FILE NAME = 0810187-A0324-041-Bar_Splicer_Assembly_Details.dgn	USER NAME = ksnider	DESIGNED - RJT	REVISED -
		CHECKED - AJK	REVISED -
	PLOT SCALE =	DRAWN - KMS	REVISED -
MODEL: Default	PLOT DATE = 1/18/2017	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 081-0187 RAMP 6TH-D
SHEET NO. SD41 OF SD44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HVBR	ROCK ISLAND	1504	1107
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

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Illinois Department of Transportation
Division of Highways
JCI

SOIL BORING LOG

Date 9/4/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION _____ LOCATION (N=564389.584, E=2459470.273), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 550X HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station [redacted]

BORING NO. PRMPD-04
Station _____
Offset _____
Ground Surface Elev. 570.50 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 559.5 ft
Upon Completion _____ ft
After ____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY - greenish gray to orange brown, some silt, some sand/gravel in matrix, slightly to medium plastic, medium stiff to stiff, moist	4		
	4 7	1.2 B	
	4		
- very stiff to stiff layer between 1'-5'	4 6	0.7 B	12.0
561.50	4		
	5 5	0.7 B	
CLAY - medium to dark gray, some sand, trace gravel, slightly to medium plastic, soft to medium stiff, moist	3 5	0.6 B	16.5
	2		
	2 5	0.4 B	
556.90			
WEATHERED SANDSTONE	50/4"		
554.70			
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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
JCI

ROCK CORE LOG

Date 9/4/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION _____ LOCATION (N=564389.584, E=2459470.273), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO. _____
Station [redacted]

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 556.90 ft
Begin Core Elev. 554.70 ft

BORING NO. PRMPD-04
Station _____
Offset _____
Ground Surface Elev. 570.50 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
SANDSTONE - light gray to light brownish gray, fine grained, with occasional to minor black banding, soft, moderately well to well cemented, thin to medium bedded, horizontal to very low angle planar to slightly irregular sandy rough fractures, fresh to slightly weathered -shale parting at 17.3' with smooth planar fracture	Run 1	99	73	0.8	
-clay-like shale seam at 21.5' with planar horizontal fracture at the seam, closely spaced black banding from 21.5' to 22.8', occasional rock-like shale clasts	Run 2	94	49	0.8	321.8
-clay-like partings/seams with smooth planar fractures at 26.5' and 29.2'	Run 3	85	78	1	
541.30 LIMESTONE - gray, fine to medium grained, hard, thin to medium bedded, occasional stylolites, minor pittings, some green shale clasts, partings and infilling, predominantly clay-like (possibly some healed to partially healed); fractures along shale partings are smooth and slightly irregular; limestone fractures are slightly irregular to irregular and jagged, slightly weathered to fresh except at vugs -vuggy with open and partially filled voids at 31.5'-32.4'	Run 4	100	100	0.8	

Color pictures of the cores Yes
Cores will be stored for examination until _____
The "Strength" column represents the unlaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
JCI

ROCK CORE LOG

Date 9/4/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION _____ LOCATION (N=564389.584, E=2459470.273), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO. _____
Station [redacted]

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 556.90 ft
Begin Core Elev. 554.70 ft

BORING NO. PRMPD-04
Station _____
Offset _____
Ground Surface Elev. 570.50 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
533.10	Run 5	100	96	2.5	
SHALE - medium to dark gray, soft, rock-like, thin bedded to laminated, smooth planar fractures at low to medium angles, with large limestone clasts					
531.20					
LIMESTONE - medium to dark gray, fine to coarse grained, clastic calcarenite at 39.3'-41.6', dense fine limestone at 41.6'-41.8', hard, thin bedded, fresh					
528.70					
End of Boring					

Color pictures of the cores Yes
Cores will be stored for examination until _____
The "Strength" column represents the unlaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

BORING NO. PRMPD-04
Station: 429+09.99
Offset: 13.14' Rt.

benesch
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

FILE NAME = 0810187-A0324-042-Soil_Boring_1.dgn	USER NAME = ksnider	DESIGNED - DTS	REVISED -
		CHECKED - AJK	REVISED -
MODEL: Default	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 1/18/2017	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (1 OF 3)
STRUCTURE NO. 081-0187 RAMP 6TH-D
SHEET NO. SD42 OF SD44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HVBR	ROCK ISLAND	1504	1108
		CONTRACT NO. 64C08		
	ILLINOIS	FED. AID PROJECT		

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Illinois Department of Transportation
Division of Highways
JCI

SOIL BORING LOG

Date 9/7/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION _____ LOCATION (N=564029.213, E=2459513.152), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 550X HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station [redacted]

BORING NO. PRMPD-05
Station _____
Offset _____
Ground Surface Elev. 575.10 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 564.1 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
PAVEMENT - asphalt and base course 574.10			
SILT - black, with rubble (FILL)	4		
	6		
	5		
571.60			
CLAY - medium gray to orange brown, slightly to medium plastic, medium stiff, moist	2		
-5	1	0.5	24.9
	2	B	
	1		
	2	0.7	38.9
[Attempted Shelby tube at 8.5'-10.5'; no recovery] 566.60	1	B	
SAND - red brown, fine grained, loose, wet			
-10 ▼			
[Attempted Shelby tube at 11'-13'; no recovery; followed up with SPT]	1		
	1		
	1		
561.10			
SHALE - green gray, clayey, severely weathered	1		
	3	1.4	23.6
-15	13	B	
	12		
558.40	41	1.4	
Borehole continued with rock coring.	50/1"	B	
-20			

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
JCI

ROCK CORE LOG

Date 9/7/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION _____ LOCATION (N=564029.213, E=2459513.152), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO. _____
Station [redacted]

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 561.60 ft
Begin Core Elev. 558.40 ft

BORING NO. PRMPD-05
Station _____
Offset _____
Ground Surface Elev. 575.10 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
SANDSTONE - medium gray, very fine grained, silt in matrix, abundant shale partings, conglomeratic at 17.5'-18.1' (TRANSITIONAL) 558.40	Run 1	82	23	1	
557.10					
LIMESTONE - gray, fine grained, with occasional to some thin green shale partings and seams, locally stylolitic, hard, thin to medium bedded, predominantly horizontal to very low angle fractures, planar to slightly irregular, smooth to slightly rough, fresh					
-20					
	Run 2	100	95	1.2	
-25					
	Run 3	97	87	1	1081.2
-slightly rough fractures across stylolites at 28.3'-30.6'					
-30					
-thick bedded, occasional stylolites at 30.6'-35.6'	Run 4	100	100	2.6	
-minor pitting with some "birdseye" texture from 32.1' to 35.6'					
-35					
	Run 5	100	84	1.3	

Color pictures of the cores Yes
Cores will be stored for examination until _____
The "Strength" column represents the unlaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
JCI

ROCK CORE LOG

Date 9/7/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION _____ LOCATION (N=564029.213, E=2459513.152), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO. _____
Station [redacted]

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 561.60 ft
Begin Core Elev. 558.40 ft

BORING NO. PRMPD-05
Station _____
Offset _____
Ground Surface Elev. 575.10 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
LIMESTONE - gray, fine grained, with occasional to some thin green shale partings and seams, locally stylolitic, hard, thin to medium bedded, predominantly horizontal to very low angle fractures, planar to slightly irregular, smooth to slightly rough, fresh *(continued)*					
-occasional soft rock-like green shale partings and clasts in limestone with fractures along shale, occasional pitting, at 38.9'-40.3'					
-40					
-green rock-like shale seam with 85° fracture at 40.3'-40.8'					
-medium gray, fine to medium grained, occasional shale partings					
532.50					
End of Boring					
-45					
-50					
-55					

Color pictures of the cores Yes
Cores will be stored for examination until _____
The "Strength" column represents the unlaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

BORING NO. PRMPD-05
Station: 425+50.54
Offset: 36.85' Lt.

benesch
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

FILE NAME = 0810187-A0324-043-Soil_Boring_2.dgn	USER NAME = ksnider	DESIGNED - RJT	REVISED -
		CHECKED - AJK	REVISED -
	PLOT SCALE =	DRAWN - KMS	REVISED -
MODEL: Default	PLOT DATE = 1/18/2017	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (2 OF 3)
STRUCTURE NO. 081-0187 RAMP 6TH-D
SHEET NO. SD43 OF SD44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HVBR	ROCK ISLAND	1504	1109
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

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Illinois Department of Transportation
Division of Highways
JCI

SOIL BORING LOG

Date 9/5/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION _____ LOCATION (N=564254.16, E=2459482.275), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 550X HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station [redacted]

BORING NO. PRMPD-06
Station _____
Offset _____
Ground Surface Elev. 573.40 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 559.9 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
PAVEMENT - asphalt, concrete, and base course (12" thick) 572.40			
SAND - light to medium brown, fine to medium grained, loose, moist	3 2 2		
569.40	2		
CLAY - orange brown to greenish gray, some sand and gravel, some silt, medium plastic, medium stiff, moist -5	1 2	0.5 B	19.1
	WOH		
	2 1	0.8 B	
-soft	WOH		
-10	1 1	0.4 B	34.4
- [Dry unit weight = 69.6 pcf]		0.6 B	48.3
- medium brown, fine grained sand, some clay, some silt, at 12.7' 559.60 ▼	12		
WEATHERED LIMESTONE - augered through -15	46 50/2"		
557.50			
Borehole continued with rock coring. -20			

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
JCI

ROCK CORE LOG

Date 9/5/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION _____ LOCATION (N=564254.16, E=2459482.275), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO. _____
Station [redacted]

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 559.60 ft
Begin Core Elev. 557.50 ft

BORING NO. PRMPD-06
Station _____
Offset _____
Ground Surface Elev. 573.40 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
LIMESTONE - gray, fine to medium grained, occasional to some stylolites, hard, pitted below 16', thin bedded, horizontal to low angle fractures, primarily planar to slightly irregular, smooth to slightly rough with occasional rough fractures, fresh 557.50	Run 1	87	38	5.8	
- "birdseye" texture at 18.2'-19.0'	Run 2	91	51	1.9	
-pitted, locally vuggy, few stylolites at 19'-20.7' -20					
	Run 3	100	72	2	792.6
-25					
	Run 4	100	83	2	
LIMESTONE - medium gray, fine to coarse, pitted, "birdseye" texture, stylolitic, thin to medium bedded, irregular rough/jagged horizontal to very low angle fractures, occasional rock-like shale clasts to 2" elongated, locally large clay-like to soft rock-like shale clasts, partings, and seams, fresh 544.00 -30					
-35	Run 5	90	79	1	

Color pictures of the cores _____Yes_____
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)

Illinois Department of Transportation
Division of Highways
JCI

ROCK CORE LOG

Date 9/5/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION _____ LOCATION (N=564254.16, E=2459482.275), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO. _____
Station [redacted]

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 559.60 ft
Begin Core Elev. 557.50 ft

BORING NO. PRMPD-06
Station _____
Offset _____
Ground Surface Elev. 573.40 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
LIMESTONE - medium gray, fine to coarse, pitted, "birdseye" texture, stylolitic, thin to medium bedded, irregular rough/jagged horizontal to very low angle fractures, occasional rock-like shale clasts to 2" elongated, locally large clay-like to soft rock-like shale clasts, partings, and seams, fresh *(continued)*	Run 6	99	83	0.7	
-abundant shale and sandstone clasts and occasional shale partings, localized deep angular pitting, locally vuggy					
533.40 -40					
LIMESTONE -gray, fine to medium grained, abundant green soft rock-like to clay-like shale partings and matrix infilling; fractures horizontal to 20° angle, fractures along shale partings is slight to moderately irregular, slightly rough					
-40.4' to 41.4' has brecciated appearance					
-41.4' to 42.7' appears to be shale partings deformed by limestone clasts 530.70					
End of Boring -45					
-50					
-55					

Color pictures of the cores _____Yes_____
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)

BORING NO. PRMPD-06
Station: 427+75.96
Offset: 9.61' Lt.

benesch
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

FILE NAME = 0810187-A0324-044-Soil_Boring_3.dgn	USER NAME = ksnider	DESIGNED - RJT	REVISED -
		CHECKED - AJK	REVISED -
MODEL: Default	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 1/18/2017	CHECKED - AJK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (3 OF 3)
STRUCTURE NO. 081-0187 RAMP 6TH-D
SHEET NO. SD44 OF SD44 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	81-1HVBR	ROCK ISLAND	1504	1110
		CONTRACT NO. 64C08		
		ILLINOIS FED. AID PROJECT		

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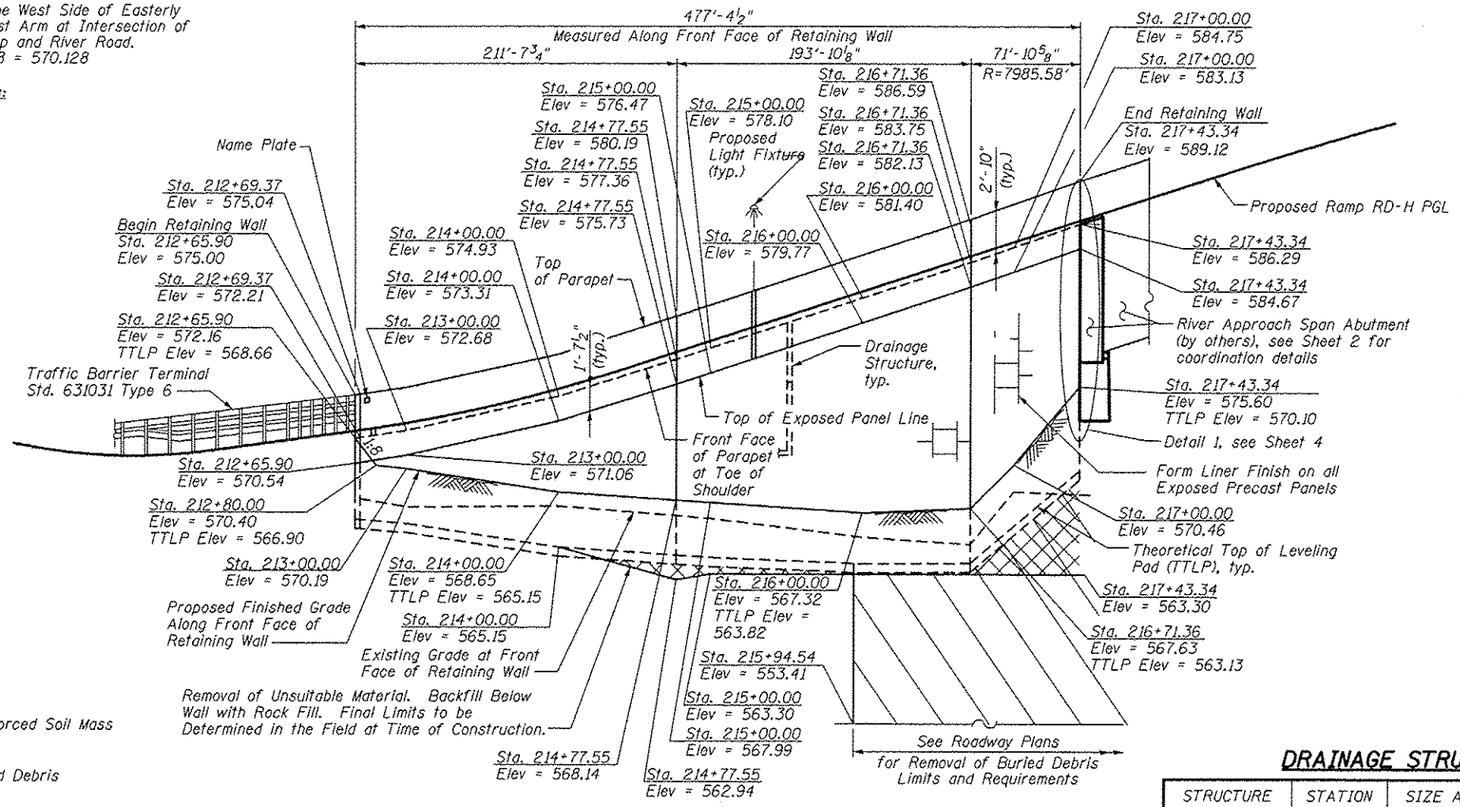
Benchmark No. 583:
Chiseled "X" on the West Side of Easterly Traffic Signal Mast Arm at Intersection of I-74 On/Off Ramp and River Road.
Elevation NAVD 88 = 570.128

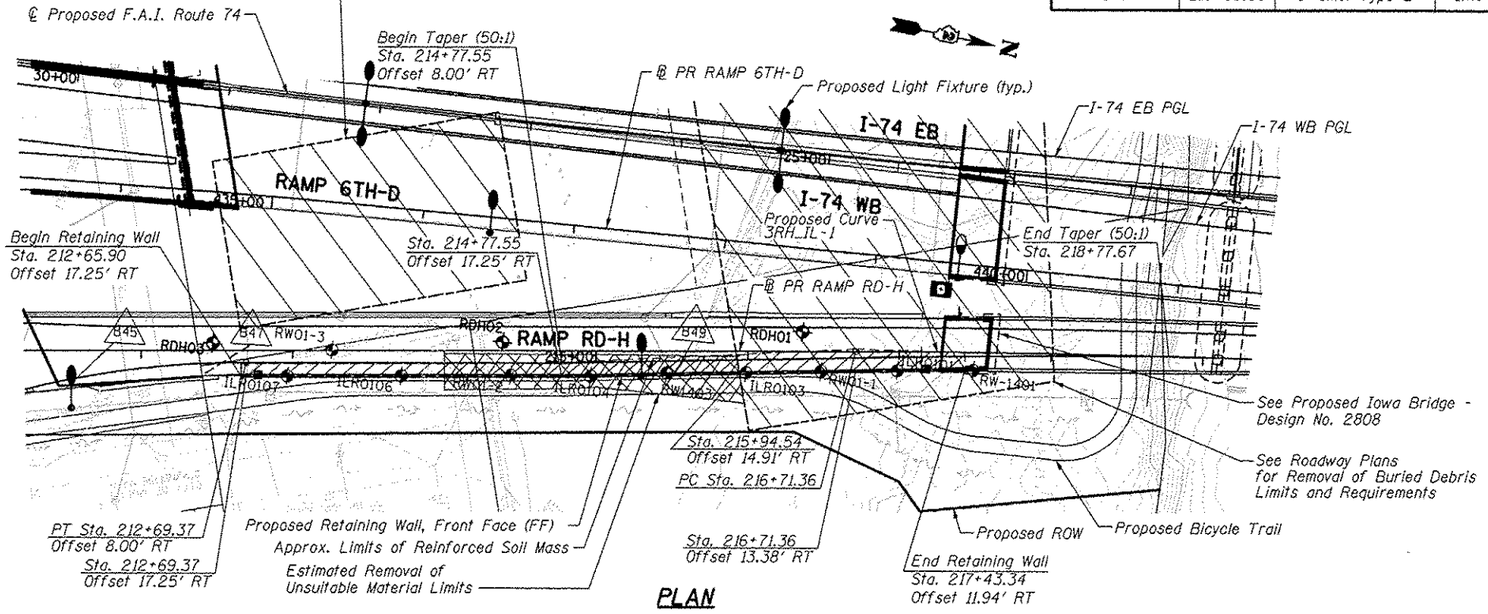
Existing Structure:
None



ELEVATION
(Looking West)

LEGEND

- Reinforced Soil Mass
- Buried Debris
- MSE Wall Panels
- Unsuitable Material and/or Rock Fill
- Soil Borings
- BXX Drainage Structure



PLAN

DRAINAGE STRUCTURE TABLE

STRUCTURE	STATION	SIZE AND TYPE	INVERT
B47	212+70.00	3' Inlet Type B	Inv. W. Elev. 567.32
B49	215+50.00	3' Inlet Type B	Inv. W. Elev. 575.17

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

JERILYN M. HASSARD
081-006521
LICENSED STRUCTURAL ENGINEER
OF
ILLINOIS
01-20-17

JERILYN M. HASSARD
EDWARDSVILLE, ILLINOIS
ILLINOIS LICENSED STRUCTURAL ENGINEER NO. 081-006521
EXPIRES 11/30/2018

DESIGN SPECIFICATIONS

2002 AASHTO
Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)

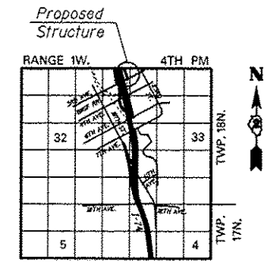
PRECAST UNITS
f'_c = 4,500 psi (Precast Face Panels)

INDEX OF SHEETS

CURVE DATA

Pr Curve 3RH_IL-1
PI Sta. = 220+64.68
Δ = 5° 37' 46" (RT)
D = 0° 42' 58"
R = 8,000.00'
T = 393.32'
L = 786.00'
E = 9.66'
e = R.C. (2.0%)
P.C. Sta. = 216+71.36
P.T. Sta. = 224+57.36

Notes:
Utilities shown will be relocated by others to avoid any conflicts during construction (see Utility Plans).
See Drainage and Utilities Plans for inlet details.
See Electrical Plans for lighting and conduit details.
See MSE Wall Aesthetic Plans for required form liner finish.



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
F.A.I. ROUTE 74 SEC. (81-1)R & 81-1HVBR
ROCK ISLAND COUNTY
RAMP RD-H Sta. 212+65.90 to Sta. 217+43.34
STRUCTURE NO. 081-6010 (RETAINING WALL 01)

USER NAME =	DESIGNED - YSS	REVISED	
	CHECKED - JMH	REVISED	
PLOT SCALE =	DRAWN - AEC	REVISED	
PLOT DATE = 1/28/2017	CHECKED - JMH	REVISED	

MODJESKI and MASTERS
Experience great bridges.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 1 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1111
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Wall stations and offsets are given to the front face (FF) of the wall and are measured from the Ramp RD-H baseline, except as noted. FF of the wall is to be considered edge of panel or form liner.
3. See Special Provision for Mechanically Stabilized Earth Retaining Walls for design and construction requirements.
4. Wall construction shall not begin until after ground improvement for the unsuitable material and debris has been completed in the area of the new walls.

MSE WALL SETTLEMENT

1. The Top of Exposed Panel Elevations shown on these plans are final elevations after any settlement. The MSE wall supplier is alerted to to the fact that 4.0 inches of settlement are anticipated from Sta. 212+65.90 to Sta. 217+43.34 and shall take appropriate measures to accommodate the settlement in the wall design.

CONTRACTOR COORDINATION REQUIREMENTS

"Contractor" (responsible for construction of SN 081-6010) shall coordinate with "Bridge Contractor" (responsible for construction of the River Approach Bridge in a separate contract). Construction of the wall near the bridge abutment shall follow the steps outlined below:

CONSTRUCTION SEQUENCE

1. Contractor shall construct complete Rock Fill ground improvement within the limits shown in the plans or as directed by the Engineer.
2. Contractor shall construct MSE wall and place backfill up to the elevation of the bottom of abutment and wingwalls. Note that the abutment and wingwalls are adjacent to, but outside the limits of the MSE wall.
3. Bridge Contractor shall drive piles and construct abutment, wingwalls, and maskwalls.
4. Contractor shall resume and complete construction of MSE Walls, placement of backfill, and construction of coping.

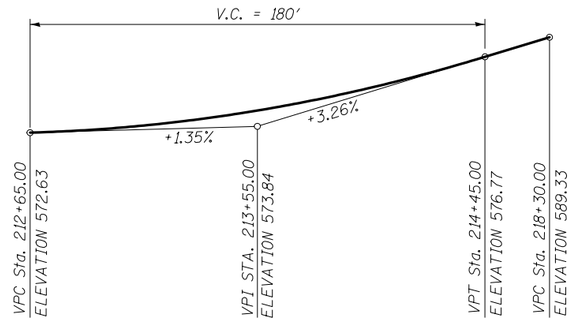
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	270
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	177
Concrete Superstructure	Cu. Yd.	263.7
Protective Coat	Sq. Yd.	603
Reinforcement Bars, Epoxy Coated	Pound	40,100
Name Plates	Each	1
Mechanically Stabilized Earth Retaining Wall	Sq. Ft.	5,612
Rock Fill	Cu. Yd.	243

STATION 212+65.90
BUILT 201_ BY
STATE OF ILLINOIS
F.A.I. RT. 74
SEC. (81-1)R & 81-1HVBR
LOADING HS-20
STR. NO. 081-6010

NAME PLATE

See Std. 515001



PROFILE GRADE

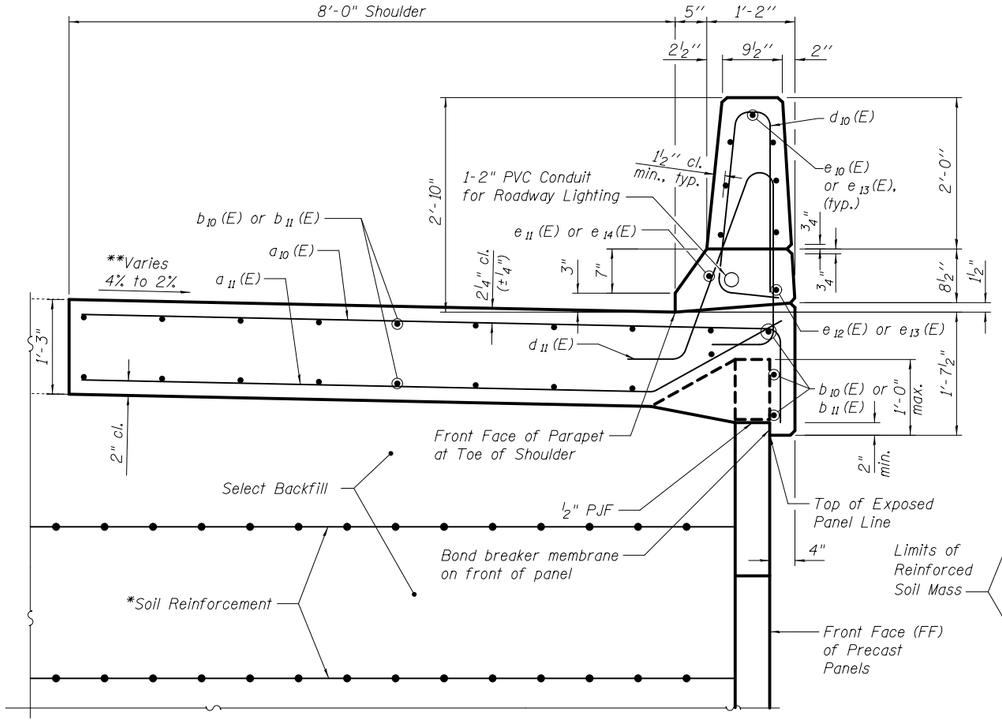
(Along ℄ Ramp RD-H)

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - YSS	REVISED	
		CHECKED - JMH	REVISED	
	PLOT SCALE =	DRAWN - MLA	REVISED	
	PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

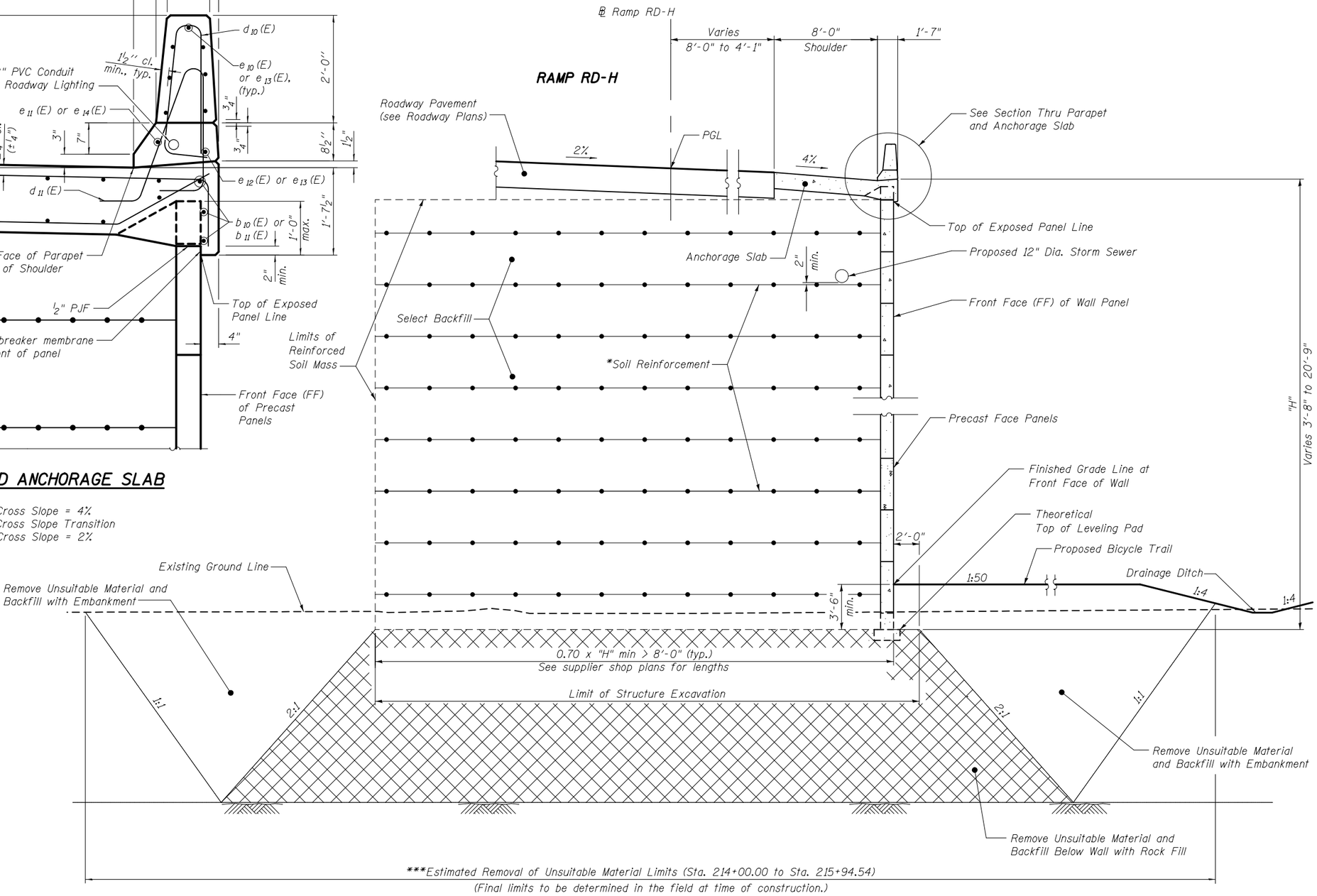
GENERAL NOTES
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 2 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1112
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



SECTION THRU PARAPET AND ANCHORAGE SLAB

** At ℄ Ramp RD-H,
Sta. 212+65.90 to Sta. 216+87.00 Cross Slope = 4%
Sta. 216+87.00 to Sta. 217+27.00 Cross Slope Transition
Sta. 217+27.00 to Sta. 217+43.34 Cross Slope = 2%



TYPICAL WALL SECTION

Sta. 212+65.90 to Sta. 216+71.36

*** See Roadway Plans for Estimated Removal of Buried Debris Limits from Sta. 215+94.54 to Sta. 216+71.36

Note:

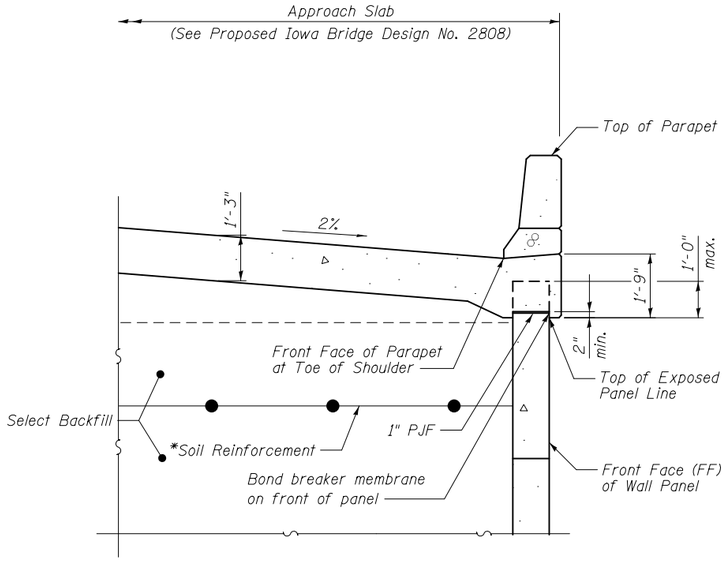
*The M.S.E. wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft. of wall.

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - YSS	REVISED
		CHECKED - ZJB	REVISED
	PLOT SCALE =	DRAWN - MLA	REVISED
	PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

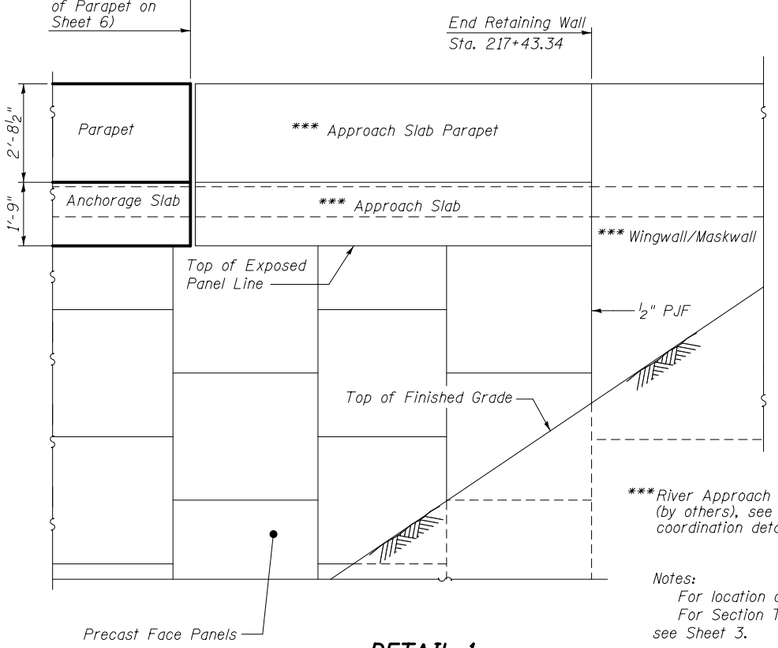
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MSE DETAILS 1
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 3 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1113
		CONTRACT NO. 64C08		
	ILLINOIS	FED. AID PROJECT		



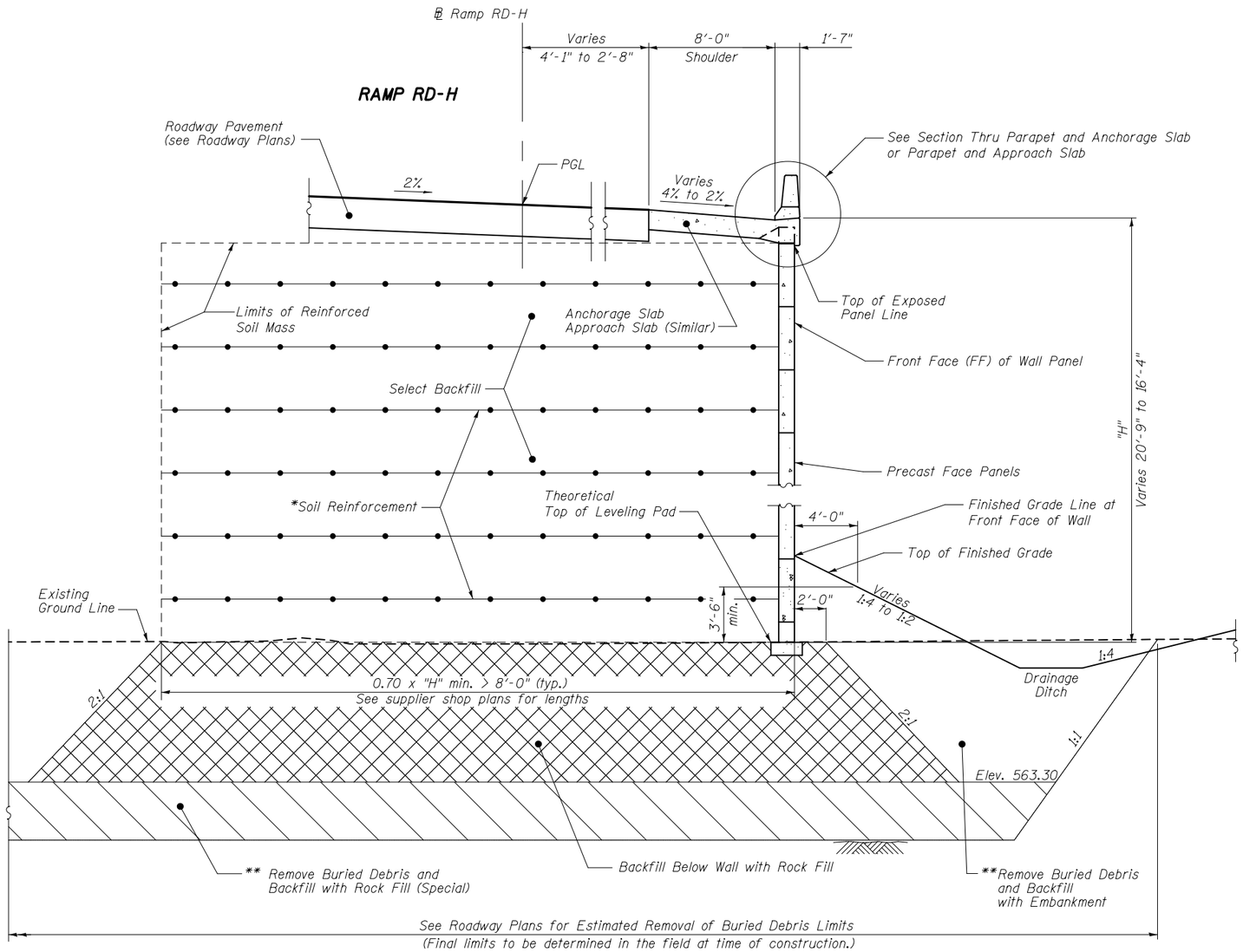
SECTION THRU PARAPET AND APPROACH SLAB



DETAIL 1

*** River Approach Span Abutment (by others), see Sheet 2 for coordination details

Notes:
For location of Detail 1, see Sheet 1.
For Section Thru Parapet and Anchorage Slab, see Sheet 3.



TYPICAL WALL SECTION

Sta. 216+71.36 to Sta. 217+43.34

Note:

* The M.S.E. wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft. of wall.

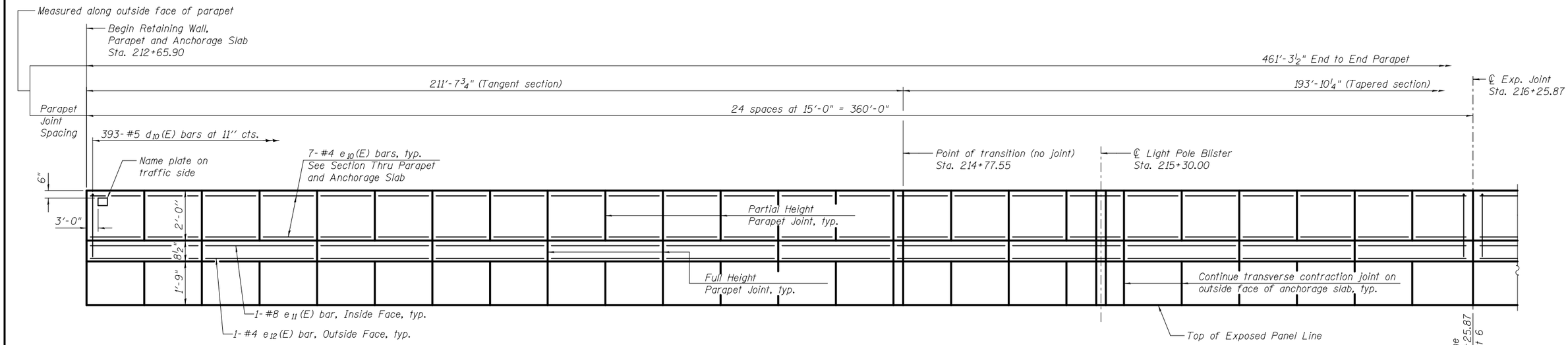
**See Roadway Plans for Estimated Removal of Buried Debris quantities and payment.

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - YSS	REVISED
		CHECKED - JMH	REVISED
	PLOT SCALE =	DRAWN - MLA	REVISED
	PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

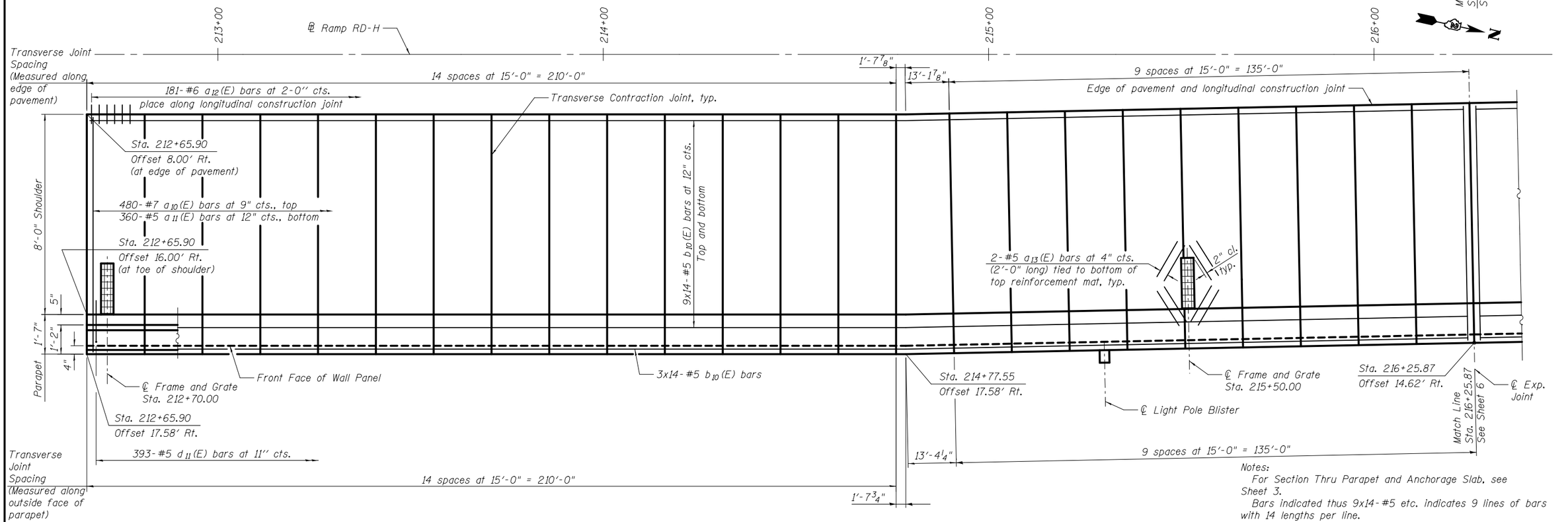
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MSE DETAILS 2
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 4 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1114
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



PARTIAL OUTSIDE ELEVATION OF PARAPET



PARTIAL PLAN - PARAPET AND ANCHORAGE SLAB

Notes:

For Section Thru Parapet and Anchorage Slab, see Sheet 3.

Bars indicated thus 9x14-#5 etc. indicates 9 lines of bars with 14 lengths per line.

Joints in the adjacent pavement shall be aligned with the anchorage slab joints.

Stations and offsets on this sheet are given to the outside face of the parapet and are measured from the Ramp RD-H baseline, except as noted.

See Sheet 7 for Light Pole Blister reinforcement.

Cut longitudinal reinforcement to clear drainage structure.

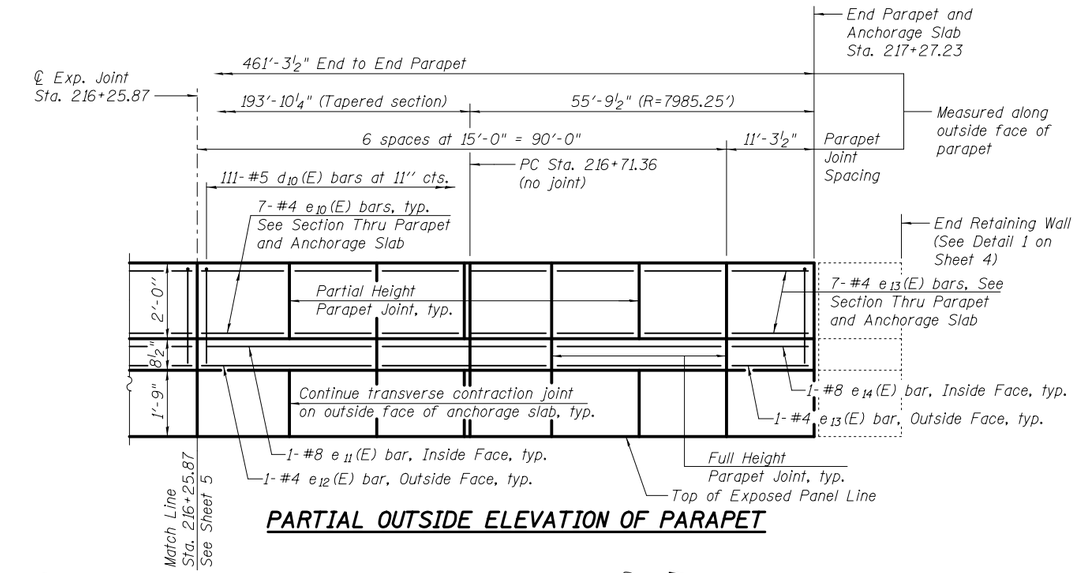
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

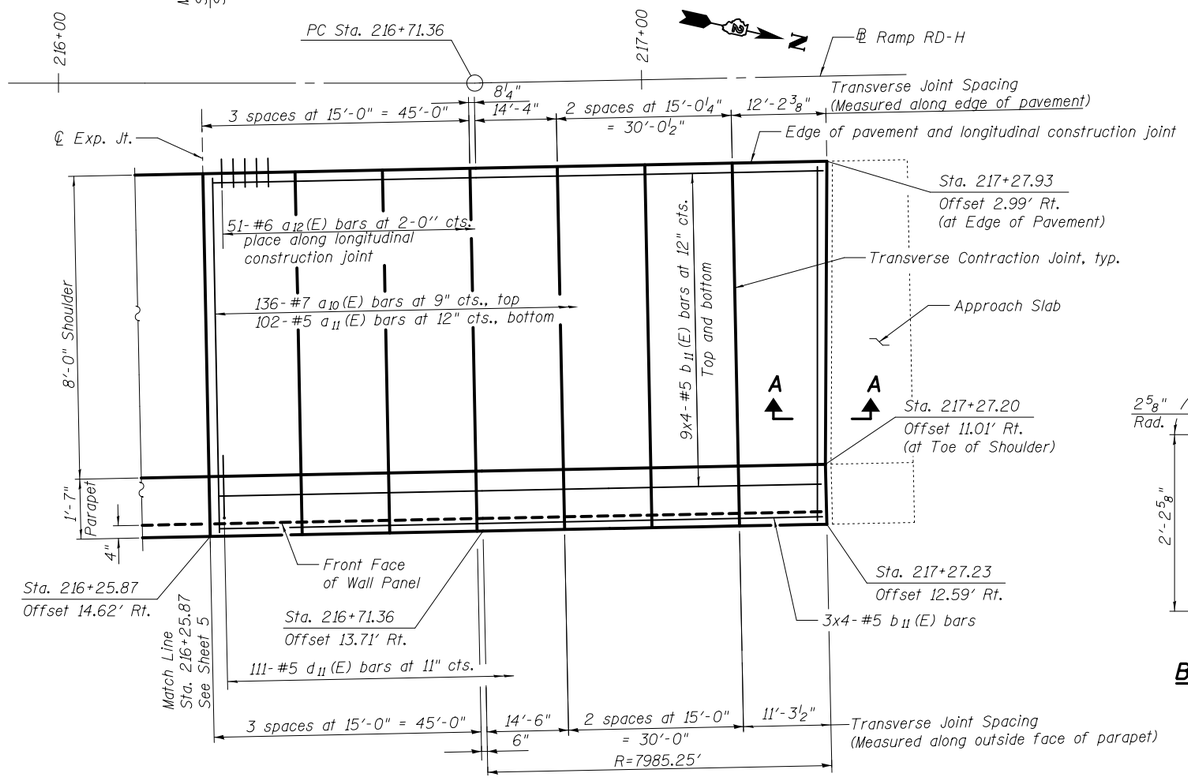
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET AND ANCHORAGE SLAB 1
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 5 OF 15 SHEETS

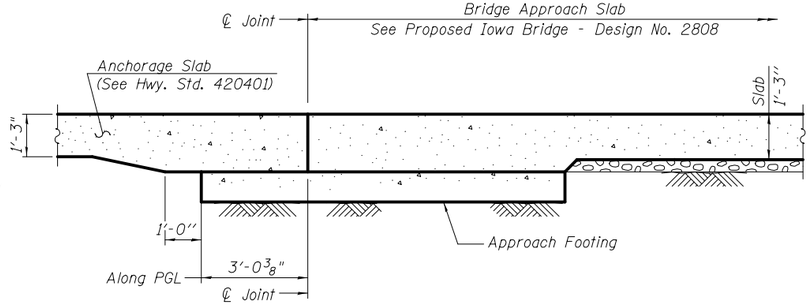
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1115
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



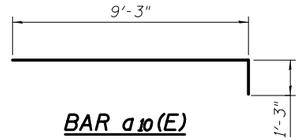
PARTIAL OUTSIDE ELEVATION OF PARAPET



PARTIAL PLAN - PARAPET AND ANCHORAGE SLAB



SECTION A-A



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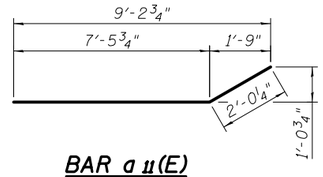

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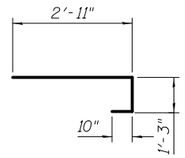

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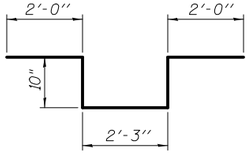

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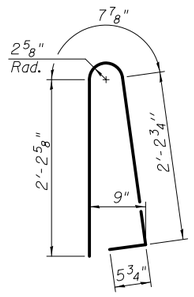
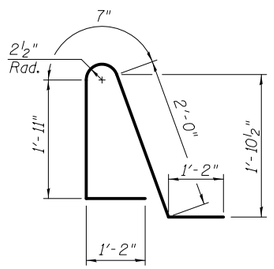


BAR d10(E)



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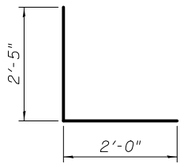
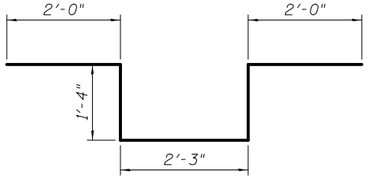


BAR d12(E)



BAR d13(E)

MIN. BAR LAP

#5 bars - 3'-3"

RETAINING WALL 01 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a 10(E)	616	#7	10'-6"	
a 11(E)	462	#5	9'-6"	
a 12(E)	232	#6	2'-0"	
a 13(E)	16	#5	2'-0"	
a 14(E)	3	#6	5'-0"	
a 15(E)	3	#6	7'-11"	
b 10(E)	294	#5	28'-9"	
b 11(E)	84	#5	27'-9"	
d 10(E)	504	#5	5'-7"	
d 11(E)	504	#5	6'-10"	
d 12(E)	3	#6	4'-5"	
d 13(E)	5	#6	8'-11"	
e 10(E)	210	#4	14'-9"	
e 11(E)	15	#8	29'-9"	
e 12(E)	15	#4	29'-9"	
e 13(E)	8	#4	11'-0"	
e 14(E)	1	#8	11'-0"	
Reinforcement Bars, Epoxy Coated			Pound	40,100
Concrete Superstructure			Cu. Yd.	263.7

Notes:

For Section Thru Parapet and Anchorage Slab, see Sheet 3.

Bars indicated thus 9x4-#5 etc. indicates 9 lines of bars with 4 lengths per line.

Joints in the adjacent pavement shall be aligned with the anchorage slab joints.

Stations and offsets on this sheet are given to the outside face of the parapet and are measured from the Ramp RD-H baseline, except as noted.

See Sheet 7 for Light Pole Blister reinforcement.

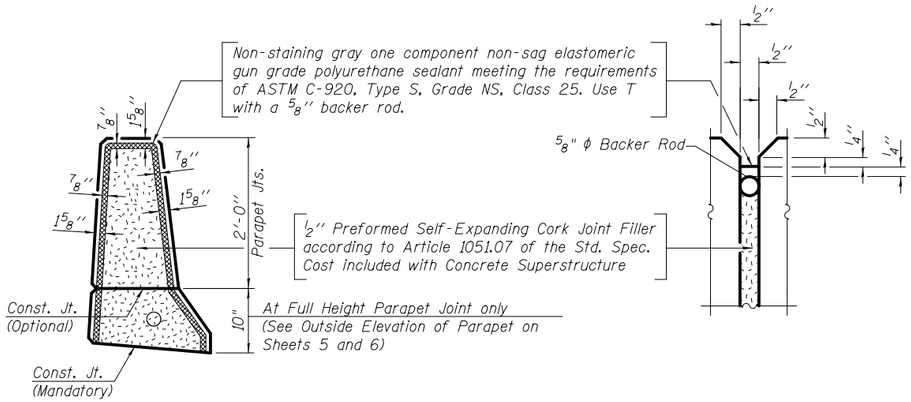
MODJESKI and MASTERS Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

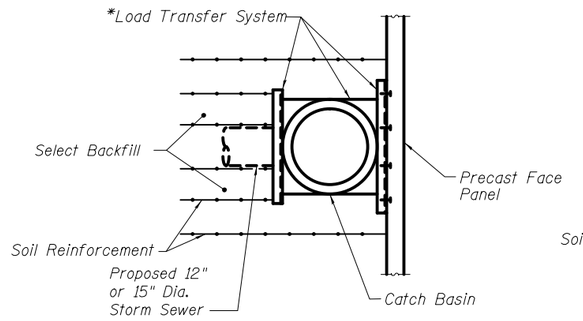
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET AND ANCHORAGE SLAB 2
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 6 OF 15 SHEETS

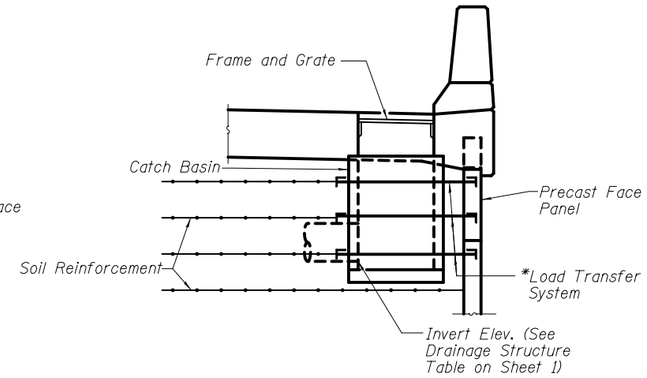
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1116
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



PARAPET JOINT DETAILS

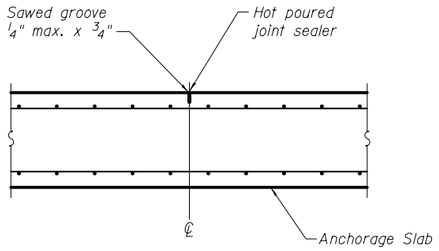


ANCHORAGE SLAB INLET PLAN

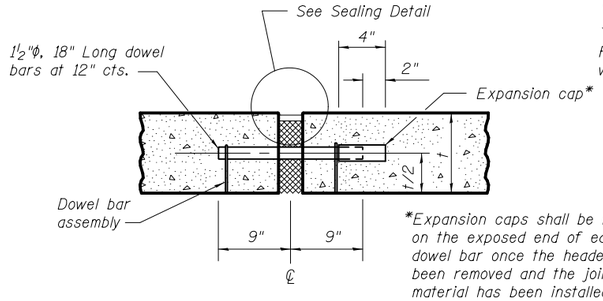


ANCHORAGE SLAB INLET SECTION

*M.S.E. supplier to design load transfer system to accommodate concrete pipe and catch basin. (See Drainage and Utilities Plans for inlet details.)



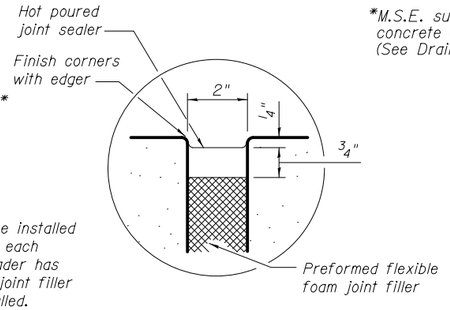
TRANSVERSE CONTRACTION JOINT



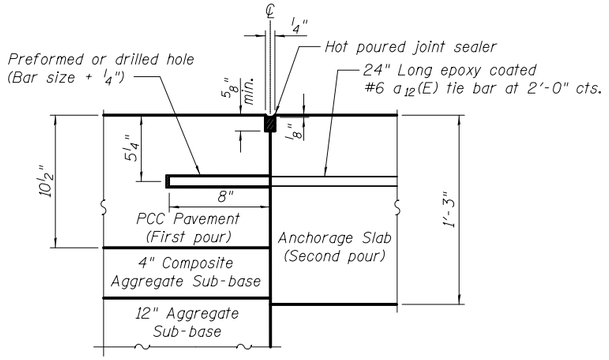
*Expansion caps shall be installed on the exposed end of each dowel bar once the header has been removed and the joint filler material has been installed.

ANCHORAGE SLAB EXPANSION JOINT

Expansion joint and dowel bars included in the cost of Concrete Superstructure.

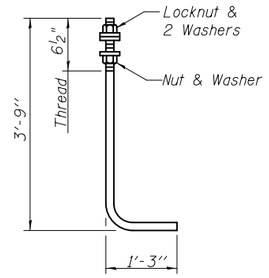


SEALING DETAIL



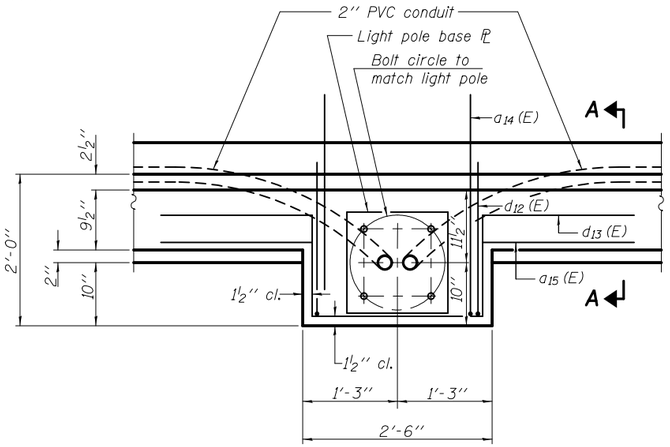
Notes:
The Contractor may substitute at his option, formed in place tie bars provided the bar length is increased to 30" and the tie bar is centered across the joint.
Preformed or drilled hole shall be in the first pour.

LONGITUDINAL CONSTRUCTION JOINT GROUTED-IN-PLACE TIE BAR



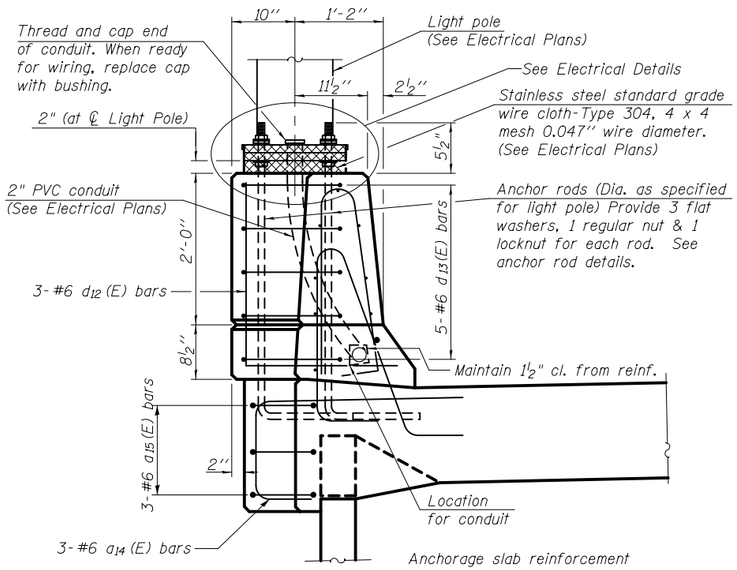
ANCHOR ROD

Diameter as specified for light poles (ASTM F 1554 Grade 105). Full length hot dipped galvanized.



Note:
Cost of anchor rods are included with Concrete Superstructure.

PLAN



SECTION A-A

LIGHT POLE BLISTER DETAILS

USER NAME =	DESIGNED - YSS	REVISED	
	CHECKED - JMH	REVISED	
PLOT SCALE =	DRAWN - MLA	REVISED	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED	

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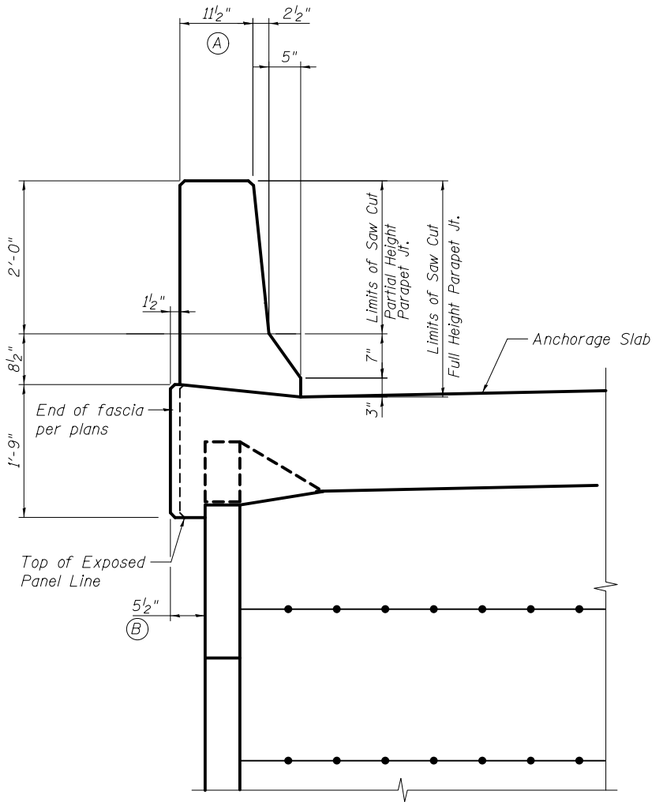
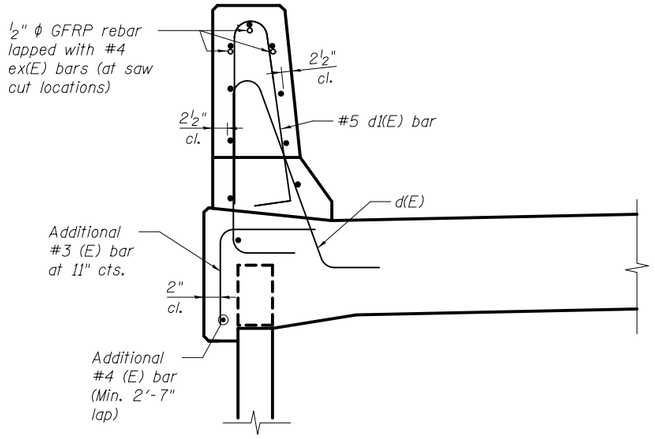
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 7 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1117
		CONTRACT NO. 64C08		
	ILLINOIS	FED. AID PROJECT		



SECTION THRU PARAPET AND ANCHORAGE SLAB



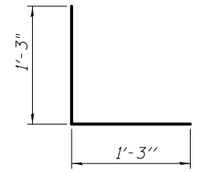
SECTION

(Showing reinforcement clearances for slip forming and additional reinforcement)

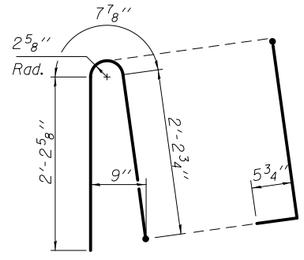
GENERAL NOTES

All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A equals 0.016 cu. yds./ft.

Full thickness saw cut at all joint locations in lieu of cork joint filler.

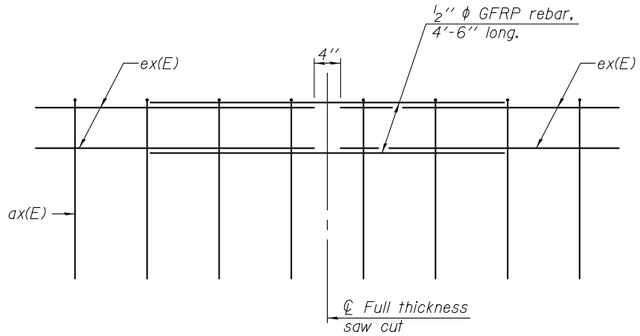


#3 (E) BAR



ALTERNATE BAR #5-d1(E)

(When conduit is present)



GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)

benesch
engineers · scientists · planners
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450

USER NAME =	DESIGNED - KMP	REVISED
	CHECKED - SLD	REVISED
PLOT SCALE =	DRAWN - KMP	REVISED
PLOT DATE = 1/20/2017	CHECKED - SLD	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RETAINING WALL PARAPET SLIPFORMING OPTION
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 8 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1118
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 9/20/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565384.43, E=2459285.013), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0101
Station 216+99
Offset 12' Rt.
Ground Surface Elev. 568.67 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 560.7 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Topsoil with gravel, brick and root 567.67			
Fill: Silty Sand With Gravel(SM) Dark gray, coarse to fine sand with silt and some coarse to fine subangular gravel with brick fragments, dry 565.67	5 6 14 18		
Fill: Silty Sand(SM) trace to little gravel, light gray, transitions to very dark brown to black, dense, very loose to dense, dry to wet, faint petroleum odor -5	14 23 14 15		17.0
few gravel-sized brick fragments	4		
Samples 2, 3: grain size analses performed ▼	4 2 2		
occasional wood matter	1		
	1 1 1 -10		50.0
557.67			
Silty Fine to Coarse Sand(SM) Trace gravel, very dark gray to black, wet, very loose	0 1 1 1		43.0
Sample 5: grain size analysis performed	1 1 1		90.0
553.67 -15	0		
Clayey Silt(ML, CL-ML) little sand, trace gravel, dark gray to black, soft wet	2 0 1 1		67.0
Sample 6: grain size analysis performed	1 1 1 -20		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
547.67			
Silty Clay With Gravel(CL-ML) dark gray, wet, trace sand, little gravel, hard thin wire strand embedded in tube		4.5 P	
545.67			
Silty Sand(SM) Light gray, moist, very dense, fine sands with silt, trace medium and coarse sand, trace fine gravel, possible completely weathered sandstone -25	50/4		
542.50			
Borehole continued with rock coring.			
-30			
-35			
-40			

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
CH2M HILL

ROCK CORE LOG

Date 9/20/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565384.43, E=2459285.013), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD Double tube, 10 ft core barrel, NQ wireline, diamond bit

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE _____

BORING NO. ILR0101
Station 216+99
Offset 12' Rt.
Ground Surface Elev. 568.67 ft

Core Diameter _____ in
Top of Rock Elev. 542.50 ft
Begin Core Elev. 542.50 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Sandstone Top 27": medium to fine grained, light brown, slightly weathered, weak to moderately strong 26.17' - Horizontal 10° fractures, rough and slightly irregular fracture surfaces, urdulating, little hard impermeable gray clay infilling 1/4" thick at 24" from top, surface stained greenish gray from 0-24" and dark gray from 24" to bottom, fractures at 0-20", slightly altered joint walls with little clay infilling at fractures, hard clay infilling at 20" to bcttom, tightly healed at joint walls and slightly altered joint walls Started preparing for rock coring at 1500 542.50	NQ-R1	95	53		1411.0
Limestone fine grained, light gray, slightly weathered to unweathered, moderately strong rock 540.22 -30					
537.50					
Sandstone Gray to light gray, medium to fine grained, smooth to rough texture, slight weathered to moderately weathered from 5" to 18" and 33" to 45", unweathered sandstone fragments that consolidated with infilling over time R2= CR=3/4 minute per foot average	NQ-R2	96	69		215.0
-35					
-40					
527.50					
End of Boring					
-45					

Color pictures of the cores _____
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)

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 9/20/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565290.255, E=2459318.646), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0103
Station 215+99
Offset 14' Rt.
Ground Surface Elev. 565.75 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 560.8 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Silty Sand and Gravel(GM) Hole offset 5 feet southwest of proposed boring location 564.75	12		
Silty Medium to Coarse Sand With Gravel(SM) Very dark gray with brown, dry, dense, faint petroleum odor 562.75	14 16 42		
Fill: Silty Fine to Medium Sand (SM) Very dark brown to black, loose, wet, faint petroleum odor, loose ▼ -5	3 3 2 2		
559.75			
Fill: Clayey Silt(CH) Very dark brown to black, moist, loose to very loose wood matter possible old railroad tie, no odor 557.75	0 1 2 1		106.0
Sample 3: Atterberg limits performed	1		
Very Silty Fine to Coarse Sand (SM) Little gravel, very dark brown to black, moist to wet, loose -10	1 1 4		50.0
with brick fragments Tried to obtain ST from 11 to 13 feet but encountered coarse material. Bag sample at 12 ft			28.0
Sample 4: grain size analysis performed 552.75 552.50	50/3		
Silty Fine Sand(SM) Light gray, wet, very dense, trace medium sand, possibly highly weathered sandstone -15			
End of Boring			
-20			

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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JAK	REVISED
	CHECKED - YSS	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 1
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 9 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1119
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 9/20/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565194.129, E=2459353.658), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0104
Station 214+97
Offset 17' Rt.
Ground Surface Elev. 566.99 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 562.0 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gravel (GM)				
565.99				
gray to dark gray mottled with yellowish orange, moist to dry, medium stiff, few coarse to fine subangular to subrounded gravel, little coarse to fine sands, loose		3 2 5 6		
563.99				
with cinder block fragments, Rough drilling and chattering 3.0' bgs		1 3 5		
Fine to Coarse Sand and Gravel (GP-GM) ▼	-5	20		
560.99				
With possible limestone rock and silty sand seams/layers, light gray, wet to loose to medium dense Sample 2: grain size analysis performed		6 6 10		
Fine to Coarse Silty Sand(SM)				
558.99				
little gravel, with silty clay layers, light gray, wet, medium dense Sample 3: grain size analysis performed		3 4 4	2.0 P	
Clay (CH)	-10			
Greenish gray, dry, non plastic, moderate to strong cementation, medium stiff to stiff, orange brown		4		
555.99				
stains, oxidized, possible native soil, trace fine sands, possible glacial till, weathered Sample 4: Atterberg limit test performed		50/4		
Silty Sand (SM)				
552.82				
Uniform light gray, wet, loose to medium dense, fine sands with silt, trace medium to fine subangular gravels, little medium sands, possible completely weathered sandstone	-15			
Borehole continued with rock coring.				
	-20			

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
CH2M HILL

ROCK CORE LOG

Date 9/20/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565194.129, E=2459353.658), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD Double tube, 10 ft core barrel, NQ wireline, diamond bit

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE _____

BORING NO. ILR0104
Station 214+97
Offset 17' Rt.
Ground Surface Elev. 566.99 ft

Core Diameter _____ in
Top of Rock Elev. 552.82 ft
Begin Core Elev. 545.74 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Silty Sand 552.82						
Top 24": Light gray, uniform, fine sands with silts, wet, Remainder: Sandstone, light grain, rough to smooth texture, slightly weathered to moderately weathered, weak to medium strong, crush rock zone from 29" to 32" from top of clayey sandy infilling 14.17' - Bottom 13": Vertical fractures from 29" to 32", remainder has horizontal fractures, rough to undulating fracture surfaces, little soft clayey sand infilling materials at first from 24" to 34", surface stained greenish gray, no rock wall contact due to silty sand seams at fractures, moderately to extremely fractured, extremely close to close discontinuities Started rock coring at 09:11 @ 13.5 hrs	-15					
550.82						
Sandstone						
Light gray, fine grained, slightly rough texture, weak to medium strong	-20					
		NQ-R2	92	45		203.0
	-25					
	-30					
Light brown to light gray, medium to fine grained, slightly weathered to unweathered, medium to strong rock 31.25' - Horizontal to 15° fractures, rough fracture surface, varying planar and undulating fracture surfaces, little hard clay infilling material <1/8" at 64" from top that has tightly healed and created an irregular surface at the fracture with greenish gray stains, remainder of sample has no infilling material and no surface stain, sound to slightly fractured with close to wide discontinuities 100% fluid loss 45 second per foot		NQ-R3	99	85		168.0

Color pictures of the cores _____
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)

Illinois Department of Transportation
Division of Highways
CH2M HILL

ROCK CORE LOG

Date 9/20/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565194.129, E=2459353.658), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD Double tube, 10 ft core barrel, NQ wireline, diamond bit

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE _____

BORING NO. ILR0104
Station 214+97
Offset 17' Rt.
Ground Surface Elev. 566.99 ft

Core Diameter _____ in
Top of Rock Elev. 552.82 ft
Begin Core Elev. 545.74 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Sandstone						
Light gray, fine grained, slightly rough texture, weak to medium strong *(continued)*	-35					
	-40					
525.74						
End of Boring	-45					
	-50					

Color pictures of the cores _____
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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JAK	REVISED	
	CHECKED - YSS	REVISED	
PLOT SCALE =	DRAWN - MLA	REVISED	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 2
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 10 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1120
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 9/19/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565075.678, E=2459393.588), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0106
Station 213+72
Offset 17' Rt.
Ground Surface Elev. 567.60 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 563.6 ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Fill Gravel (GM) Gravel followed by silty sand subbase	566.60 / 566.40			
Fill Silty Sand With Gravel (SM) Reddish brick-like brittle dry clay, followed by yellowish orange mottled with brown sandy silt (ML)	564.60	7		
		12 9 2		
Sandy Silt (ML) Stiff to very stiff, non plastic, dry, Remainder: Silty Sand with Gravel (SM), dark brown, dry coarse to fine sands with silt and few medium to fine subangular gravels	561.60	1 1 2	1.0 P	
Silty Clay (CL-ML) Dark gray, moist to wet, stiff, little fine sand, gumbo			3.5 P	
Sandy Lean Clay With Gravel (CL) Dark greenish gray, moist to dry, coarse to fine sand, coarse to fine gravel, very stiff, possible glacial till	559.60	1 3 2 3		
Sand and Silt (SM, ML) trace gravel, dark gray mottled with orange and greenish gray thereafter, moist, loose Sample 3: grain size analysis performed	556.60	3 4 13 22		
Very Sandy Lean Clay With Gravel (CL) Dark gray with greenish gray, moist, coarse to fine sands, coarse to fine gravel, and seams throughout, wet, medium dense, possible completely weathered sandstone, Driller notes rough drilling and heavy chattering 14' bgs, possible weathered rock	554.35	50/3		
End of Boring				

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
CH2M HILL

SOIL BORING LOG

Date 9/19/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565004.631, E=2459417.617), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0107
Station 212+97
Offset 17' Rt.
Ground Surface Elev. 567.70 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 563.7 ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Fill: Gravel (GM)	566.70			
Fill: Sandy Silt With Gravel (ML) Very dark brown, dry, loose, with occasional wood matter		5 4 2 3		
Sandy Silt With Clay (ML) gray, moist, very stiff	564.70	1 3 3 4	2.3 P	
Silty and Clayey Sand (SC) dark gray, moist, loose to very loose Sample 3: grain size analysis performed	561.70 / 559.70	1 1 2 2		21.0
Fine to Medium Sand With Silt (SP-SM, SM) pcssible old alluvium		1 1 2 2		
Silty Fine to Coarse Sand (SM) Little gravel, brown with gray, wet, loose, possible old alluvium Sample 5: grain size analysis performed	556.70 / 554.70	1 2 7 10		16.0
Silty Sand (SM) brown with olive gray, wet, medium dense		6 11 12 50/5		
Borehole continued with rock coring.	551.45			

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
CH2M HILL

ROCK CORE LOG

Date 9/19/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565004.631, E=2459417.617), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD Double tube, 10 ft core barrel, NQ wireline, diamond bit

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE _____
Core Diameter _____ in
Top of Rock Elev. 551.45 ft
Begin Core Elev. 551.45 ft

BORING NO. ILR0107
Station 212+97
Offset 17' Rt.
Ground Surface Elev. 567.70 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Sandstone Light brown with brown, fine to medium grained, rough texture, slightly weathered to unweathered, weak to medium strong rock 16.25' - Horizontal to 10° fractured, rough planar fracture surfaces, slightly altered joint walls, little or no infilling material, little or no brown and greenish gray surface stains, little greenish gray soft clay infilling material <1/8" thick at top 3" of sample, remainder no infilling, slightly to moderately fractured, very close to close discontinuities	551.45	NQ-R1	77	9		
Light brown with brown, medium to fine grained, trace coarse grained, rough surface, slightly weathered to unweathered, weak to medium strong 20.67' - Horizontal to 20° fractures, rough fracture surfaces, varying undulated and planar throughout, no infilling material, no surface stains, slightly altered joint surfaces and stray crushed zones preventing back wall contact at bottom half of sample at some fractures, slightly to moderately fractured, very close to close discontinuities, most fractures at top 45° of sample, likely mechanical fractures Start: 14:13-14:14 14:18-14:20		NQ-R2	98	6		228.0
Average 3/5 minutes per foot						
End of Boring	537.03					

Color pictures of the cores _____
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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JAK	REVISED
	CHECKED - YSS	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 3
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 11 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1121
		CONTRACT NO. 64C08		
	ILLINOIS	FED. AID PROJECT		

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/30/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81B LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. _____
Station _____
BORING NO. RDH 01
Station 216+36
Offset 13' Lt.
Ground Surface Elev. 565.7 ft

Surface Water Elev. _____
Stream Bed Elev. _____

Groundwater Elev.:
First Encounter _____ ft
Upon Completion 562.7 ft ▽
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
FILL - Dark to very dark brown, moist to wet, soft and loose, silt, fine- to coarse-grained sand and gravel, with degrading plywood, particle board, timber, lumber, bituminous materials, metal scraps, cinder blocks, and brick fragments, petroleum odor		4 5 5		16
	2			
	▽			
			1.50P	16
	4	18 5 2		18
	6			35
			0.30P	68
	8	3 2 1		44
	10			
	12			
	14	4 13 16	0.80P	17
551.20 Gray, fine- to medium-grained WEATHERED SANDSTONE				
549.70 Gray, fine-grained SANDSTONE / 549.60	16	50/1"		
End of Boring				

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)

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/28/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81B LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. _____
Station _____
BORING NO. RDH 02
Station 214+39
Offset 6' Lt.
Ground Surface Elev. 566.9 ft

Surface Water Elev. _____
Stream Bed Elev. _____

Groundwater Elev.:
First Encounter _____ ft
Upon Completion 561.4 ft ▽
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
GRAVEL 566.40				
FILL - Very dark brown, dry to moist, stiff, SILT with sand and gravel		10 8 6		15
	2			
	4		1.13S	99
561.90			0.44S	148
Very dark brown, moist, medium, silty, lean CLAY	▽		1.18S	25
	6			
559.40 Bluish gray, moist, very stiff, silty CLAY with sand	8	6 9 11	1.25B	26
	10			
	12			
554.40 Brown, fine-grained WEATHERED SANDSTONE				
553.20 End of Boring		50/3"		

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)

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/28/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81B LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. _____
Station _____
BORING NO. RDH 03
Station 212+49
Offset 5' Lt.
Ground Surface Elev. 569.1 ft

Surface Water Elev. _____
Stream Bed Elev. _____

Groundwater Elev.:
First Encounter _____ ft
Upon Completion 563.1 ft ▽
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL 568.85				
FILL - Brown and gray, moist, stiff, silty, sandy, lean CLAY with rock and brick fragments		10 6 5	1.55B	20
	2			
566.10 Dark brown, moist, soft, SILT with fine-grained sand and rock fragments, tree roots				
	4	5 10 8	3.50P	17
	▽			
	6		1.51S	33
				11
561.60 Grayish brown, wet, loose, well-graded, fine- to medium-grained SAND / 560.60	8			
		5 6 5		14
Grayish brown, wet, medium dense, well-graded, medium- to coarse-grained SAND 559.10	10			
End of Boring				

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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JAK	REVISED	
	CHECKED - YSS	REVISED	
PLOT SCALE =	DRAWN - MLA	REVISED	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 4
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 12 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1122
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/30/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1HVB LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6010
Station
BORING NO. RW 01-1
Station 216+48
Offset 13' Rt.
Ground Surface Elev. 565.3 ft

Surface Water Elev.
Stream Bed Elev.

Groundwater Elev.:
First Encounter ft
Upon Completion 562.3 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
FILL - Dark to very dark brown, moist to wet, soft and loose, silt, fine- to coarse-grained sand and gravel, with degrading plywood, particle board, timber, lumber, bituminous materials, metal scraps, cinder blocks, and brick fragments, petroleum odor	6 6 8	0.75P	36
2			
▽			
4	7 3 3	0.10P	16
6	1 1 1		85
8	3 2 2		26
10	2 2 5		131
12	6 3 4		108
14			
549.30 16	24		
Gray, fine-grained, WEATHERED SANDSTONE 548.80	50/1/2"		
End of Boring			

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)

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/28/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1HVB LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6010
Station
BORING NO. RW 01-2
Station 214+44
Offset 16' Rt.
Ground Surface Elev. 567.0 ft

Surface Water Elev.
Stream Bed Elev.

Groundwater Elev.:
First Encounter ft
Upon Completion 563.0 ft ▽
After 24 Hrs. 564.5 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
GRAVEL 566.50			
FILL - Very dark brown, wet, stiff, SILT with fine-grained sand with gravel	7 5 5	1.00P	28
2			
▽			
564.00			
FILL - Very dark brown, wet, silty CLAY with fine-grained sand and gravel		1.13P	26
4 ▽		1.13P	20
562.00			
Grayish brown, moist, stiff, silty CLAY with trace sand and gravel 6	4 5 5	1.60P	31
8			
558.50			
Brown, moist, stiff, silty CLAY with sand and gravel 558.00	5 8 10	2.00P	30
Brown, moist, medium dense, silty SAND 557.00 10			
Gray, fine-grained, WEATHERED SANDSTONE 556.00			
Brown and gray, poorly cemented, fine-grained, WEATHERED SANDSTONE with gravel and grayish green clay 12	5 8 10		23
553.50			
Brown, wet, poorly cemented, fine-grained, WEATHERED SANDSTONE 14			
	50/3"		19
551.00 16			
End of Boring	50/0"		

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)

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/28/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1HVB LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6010
Station
BORING NO. RW 01-3
Station 213+26
Offset CL
Ground Surface Elev. 567.4 ft

Surface Water Elev.
Stream Bed Elev.

Groundwater Elev.:
First Encounter ft
Upon Completion 563.4 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
GRAVEL 566.70			
FILL - Very dark brown, moist, stiff to very stiff, clayey SILT with sand and gravel, organic material	2 2 4	1.75P	17
2			
▽		2.50S	61
562.40			
Dark brown, moist, sandy CLAY with silt 6			24
			22
			22
559.40 8		0.34B	21
Very dark brown, wet, medium dense, silty, fine-grained SAND		0.36B	19
		0.40P	19
10			
556.40			
Brown, wet, medium dense, well graded, SAND and GRAVEL 12	8 10 12		15
553.90			
Brown, wet, medium dense, well graded, silty SAND and GRAVEL 14	6 9 9		16
551.90			
Gray, fine-grained, WEATHERED SANDSTONE 551.30 16			
End of Boring	50/2"		15

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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JAK	REVISED
	CHECKED - YSS	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 5
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 13 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1123
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 10/25/05

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY L. Hunt

SECTION I-74 Bridge over Mississippi River LOCATION (N=565431.726, E=2459268.813), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. RW1401
Station 217+49
Offset 12' Rt.
Ground Surface Elev. 568.53 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 559.5 ft ▼
Upon Completion _____ ft
After _____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Fill Gravel (GM) Gravel, sand, and silt, trace clay, gray brown, dry to moist, medium dense to dense	14		
	12		
	10		
	9		
	10		
	14		
	22		
	45		
	26		
-5	10		
	12		
562.53	8		
Sand (SP) Sand, little to some gravel, trace clay, brown, moist to 9.0', wet deeper, loose, contamination at 6 ft	1		
	1		
	2		
	4		
	1		
▼	3		
	3		
558.53 -10	3		
Clayey Sand (SC) Clayey sand, little gravel, dark brown and white, wet, loose	2		
	3		
556.53	6		
	5		
Sandy Clay (CL) Sandy clay and silt, dark brown, wet	2		21.4
	2		
	2		
554.53	2		
Poorly Graded Sand (SP) Sand and gravel, trace organics, dark brown to black, wet, loose -15	1		
	2		
	2		
	3		
548.53 -20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Clay (CL) Clay, dark brown to black, moist to wet, stratified, sand at top 4" of sample, limestone and sand for bottom 4"-5" of sample WOH = Weight of Hammer.	WOH		
	WOH	0.0	
	50	P	
-25			
542.53	50/3		
Borehole continued with rock coring.			
-30			
-35			
-40			

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
CH2M HILL

ROCK CORE LOG

Date 10/25/05

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY L. Hunt

SECTION I-74 Bridge over Mississippi River LOCATION (N=565431.726, E=2459268.813), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ DOUBLE BARREL DIAMOND TIP

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE _____
Core Diameter _____ in
Top of Rock Elev. 542.53 ft
Begin Core Elev. 542.53 ft

BORING NO. RW1401
Station 217+49
Offset 12' Rt.
Ground Surface Elev. 568.53 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
542.53					
Sandstone and Shale Interbedded Sandstone and Shale, gray, fine grained, weathering: barely consolidated, seems highly weathered, no discoloration; extremely weak strength, interbedded, hummocky bedding; Shale - laminated beds; Sandstone, nc apparent bedding (thick to massive), well sorted, well rounded. Auger refusal at 26' at 12:35, Begin rock core at 13:41. Horizontal fractures, extremely fractured to slightly fractured continuity, extremely close to close discontinuity, rough to smooth joints, joints do not seem altered, but shale is softened in joints, these could also be bedding planes. Drilling water was black then dark gray for about 20 seconds at the start of rock coring. Drilling water loss due to formation absorption.	R1	100	37		
540.03					
-30	R2	100	12		
Sandstone and Shale, gray, fine grained, see weathering above, extremely weak rock, interbedded, laminated to very thin beds, well sorted, well rounded. Horizontal fractures, extremely fractured to slightly fractured continuity, extremely close to close discontinuity, rough to smooth joints, joints not altered, softened shale at contact pcints. First 2.5' of coring R-1 occurred more rapidly than other rock coring with same rig(2.5' in 10-15 minutes).					
535.03					
Sandstone and Shale, gray, fine grained, see weathering above, interbedded, laminated to very thin beds, well sorted, well rounded; shale-extremely weak rock; sandstone-very weak rock; 33.5' to 35.66' highly shaley Drilling water turned black from shale at 33.5' for just a few seconds. Horizontal fractures, extremely fractured to sound continuity, extremely close to moderate discontinuity, rough to smooth joints, unaltered joint walls, but softened shale at contact points.	R3	92	42		
-35					
532.03					
Sandstone and Shale, black to dark gray, fine to medium grained, fine grained sandstone, fair amount of silt sized particles in shale, see above weathering, interbedded, laminated to very thin bedding, shale-extremely weak rock, sandstone-weak rock. Replaced drill bit at 3pm. Horizontal fractures, extremely fractured to slightly fractured continuity, extremely close to close discontinuity, rough to smooth joints, some altering of joint walls (could be due to coring processes and strength of shale).	R4	92	17		
530.03	R5	100	50		198.0
-40					
Sandstone, Shale, and Limestone, dark gray to light gray; sandstone, fine grained, see above weathering, medium strength, laminated to thin bedding, well sorted, well rounded; shale, see above weathering, laminated beds, extremely weak rock; limestone (at 42.83'), fine to medium grained, slightly to moderately weathered, no apparent bedding (thin to massive). Horizontal fractures, extremely fractured to slightly fractured continuity, extremely close to close discontinuity, rough to smooth joints, some altering of joint walls (could be due to coring processes and strength of shale), Limestone, firm clay mineral coatings and sandy/gravelly material in fractures with rock wall separation <1/4" thick.					
525.03					
Limestone Limestone, gray, fine to medium grained, unweathered to slightly weathered, strong rock, no apparent bedding (thin to massive). Horizontal fractures, sound continuity, wide discontinuity, rough to smooth joints, tightly healed joints with herd clay mineral in joints with no rock wall separation.	R6	100	100		294.0
-45					

Color pictures of the cores _____
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)

Illinois Department of Transportation
Division of Highways
CH2M HILL

ROCK CORE LOG

Date 10/25/05

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY L. Hunt

SECTION I-74 Bridge over Mississippi River LOCATION (N=565431.726, E=2459268.813), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ DOUBLE BARREL DIAMOND TIP

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE _____
Core Diameter _____ in
Top of Rock Elev. 542.53 ft
Begin Core Elev. 542.53 ft

BORING NO. RW1401
Station 217+49
Offset 12' Rt.
Ground Surface Elev. 568.53 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
522.03					
End of Rock Core. End of Boring					
-50					
-55					
-60					
-65					

Color pictures of the cores _____
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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - JAK	REVISED	
	CHECKED - YSS	REVISED	
PLOT SCALE =	DRAWN - MLA	REVISED	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 6
RAMP RD-H RETAINING WALL 01
STRUCTURE NO. 081-6010
SHEET NO. 14 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1124
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 10/27/05

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY L. Hunt

SECTION I-74 Bridge over Mississippi River LOCATION (N=565240.796, E=2459335.667), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. RW1403
Station 215+46
Offset 15' Rt.
Ground Surface Elev. 566.39 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 556.4 ft ▼
Upon Completion _____ ft
After _____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Silty Clay (CL-ML) Gravel and silty clay, light gray and brown, dry to moist, stratified, hard	16		
	7	6.8	
	6	P	
564.39	3		
Sandy Clay (CL) Sandy clay, some gravel, dark brown and black, moist, homogeneous.	2		
	6		
	5		
562.39	3		
Silty Clay (CL-ML) Silty clay, some fine sand, dark brown, moist to wet, homogeneous. WOH = Weight of Hammer, Shelby sample from 4'-6' obtained in adjacent hole on 11/10/05, See lab results for consolidation data	1		
-5	WOH	0.8 P	24.0
	WOH		
	WOH	0.8 P	
	Push		
	WOH	2.7 P	
	2		
	3		
	4		
	3		
	5		
▼ -10	6		
	7	0.7 P	
	6		
554.39	50/3		
Sandstone	50/0		
	50/1		
-15			
546.39 -20			

Bottom of Borehole at 20'. No auger refusal, but hit sandstone and couldn't sample with the split spoon
End of Boring

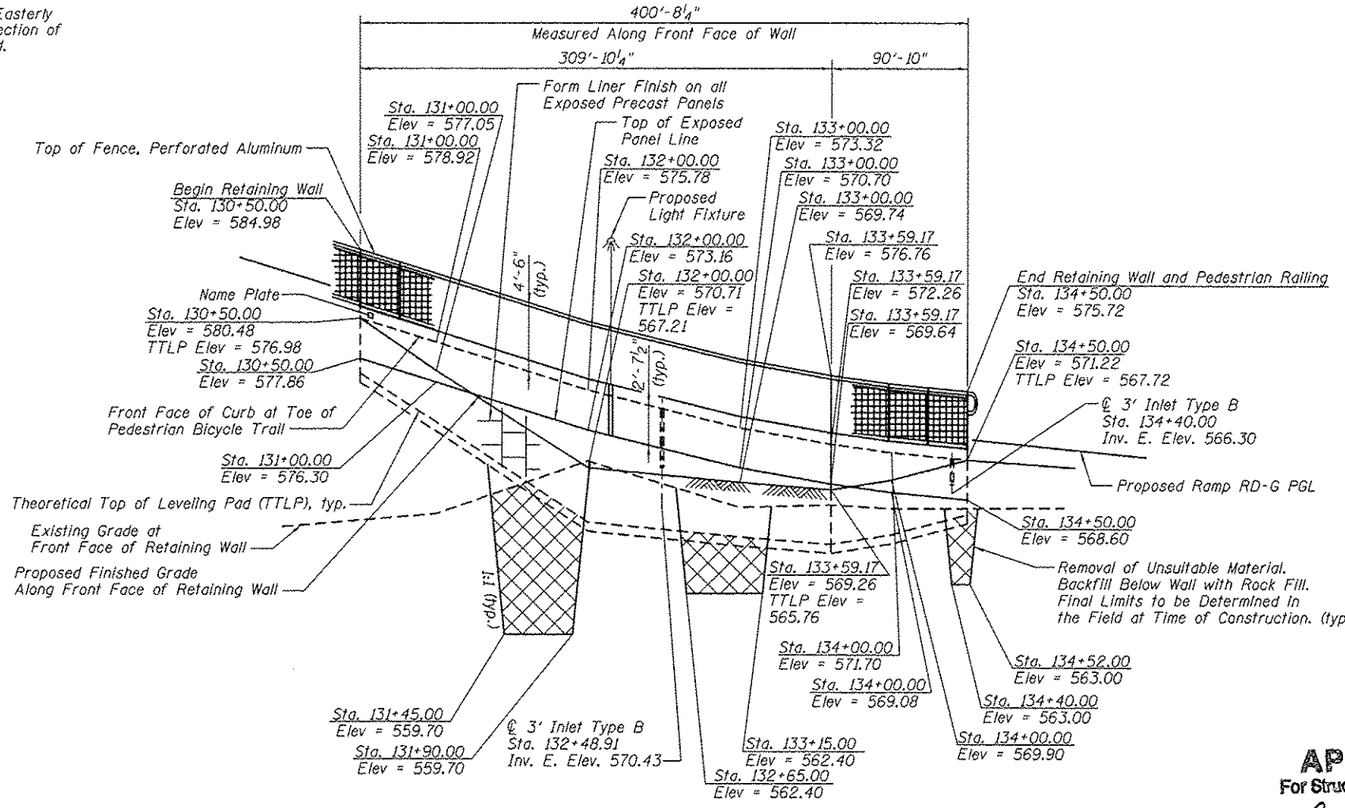
-25 -30 -35 -40

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)

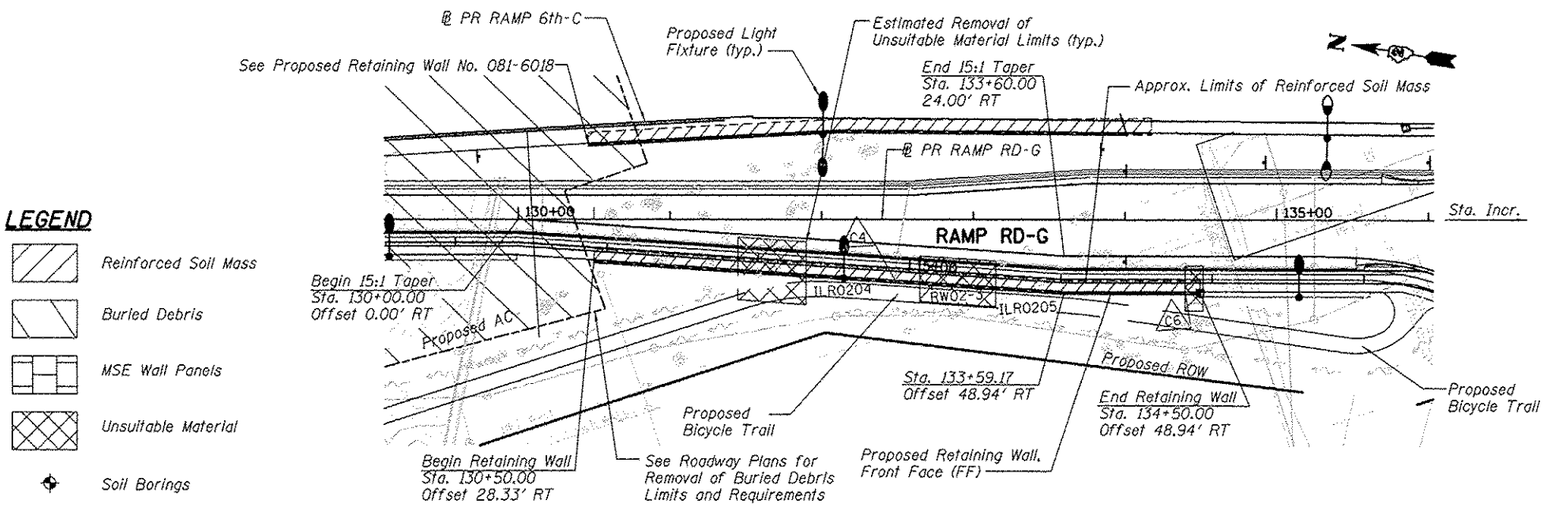
BBS, from 137 (Rev. 8-99)

Benchmark No. 583:
Chiseled "X" on the West Side of Easterly Traffic Signal Mast Arm at Intersection of I-74 On/Off Ramp and River Road.
Elevation NAVD 88 = 570.128

Existing Structure:
None



ELEVATION
(Looking East)



PLAN

LEGEND

- Reinforced Soil Mass
- Buried Debris
- MSE Wall Panels
- Unsuitable Material
- Soil Borings
- Cx Drainage Structure

DESIGN SPECIFICATIONS

2002 AASHTO
Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)

PRECAST UNITS
f'_c = 4,500 psi (Precast Face Panels)

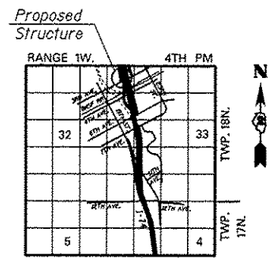
INDEX OF SHEETS

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

Notes:
Utilities shown will be relocated by others to avoid any conflicts during construction (See Utility Plans).
See Drainage and Utilities Plans for inlet details.
See Electrical Plans for lighting and conduit details.
See MSE Wall Aesthetic Plans for required form liner finish.
See Pedestrian Railing Aesthetic Plans for railing details.

JERILYN M. HASSARD
081-006521
LICENSED STRUCTURAL ENGINEER OF ILLINOIS
01-20-17

JERILYN M. HASSARD
EDWARDSVILLE, ILLINOIS
ILLINOIS LICENSED STRUCTURAL ENGINEER NO. 081-006521
EXPIRES 11/30/2018



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
F.A.I. ROUTE 74 SEC. (81-1)R & 81-1HVBR
ROCK ISLAND COUNTY
RAMP RD-G Sta. 130+50.00 to Sta. 134+50.00
STRUCTURE NO. 081-6011 (RETAINING WALL 02)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED	
	CHECKED - JMH	REVISED	
PLOT SCALE =	DRAWN - AEC	REVISED	
PLOT DATE = 1/20/2017	CHECKED - JMH	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
RAMP RD-G RETAINING WALL 02
STRUCTURE NO. 081-6011
SHEET NO. 1 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1126
		CONTRACT NO. 64C08		
		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Wall stations and offsets are given to the front face (FF) of the wall and are measured from the Ramp RD-G baseline, except as noted. FF of the wall is to be considered edge of panel or form liner.
3. See Special Provision for Mechanically Stabilized Earth Retaining Walls for design and construction requirements.
4. Wall construction shall not begin until after ground improvement for the unsuitable material has been completed in the area of the new wall.

MSE WALL SETTLEMENT

1. The Top of Exposed Panel Elevations shown on these plans are final elevations after any settlement. The wall system supplier shall take appropriate measures to accommodate the 0 to 4 inches of settlement that are anticipated from Sta. 130+50.00 to Sta. 134+50.00.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	252
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	1,726*
Concrete Superstructure	Cu. Yd.	188.8
Protective Coat	Sq. Yd.	412
Reinforcement Bars, Epoxy Coated	Pound	31,680
Name Plates	Each	1
Mechanically Stabilized Earth Retaining Wall	Sq. Ft.	1,517
Rock Fill	Cu. Yd.	825**

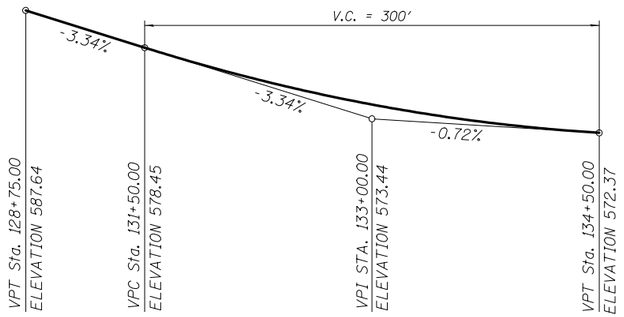
* Estimated quantity includes 900 cu. yds. for potential overage.

** Estimated quantity includes 400 cu. yds. for potential overage.

STATION 130+50.00
BUILT 201_ BY
STATE OF ILLINOIS
F.A.I. RT. 74
SEC. (81-1)R & 81-1HVBR
LOADING HS-20
STR. NO. 081-6011

NAME PLATE

See Std. 515001



PROFILE GRADE

(Along ℄ Ramp RD-G)

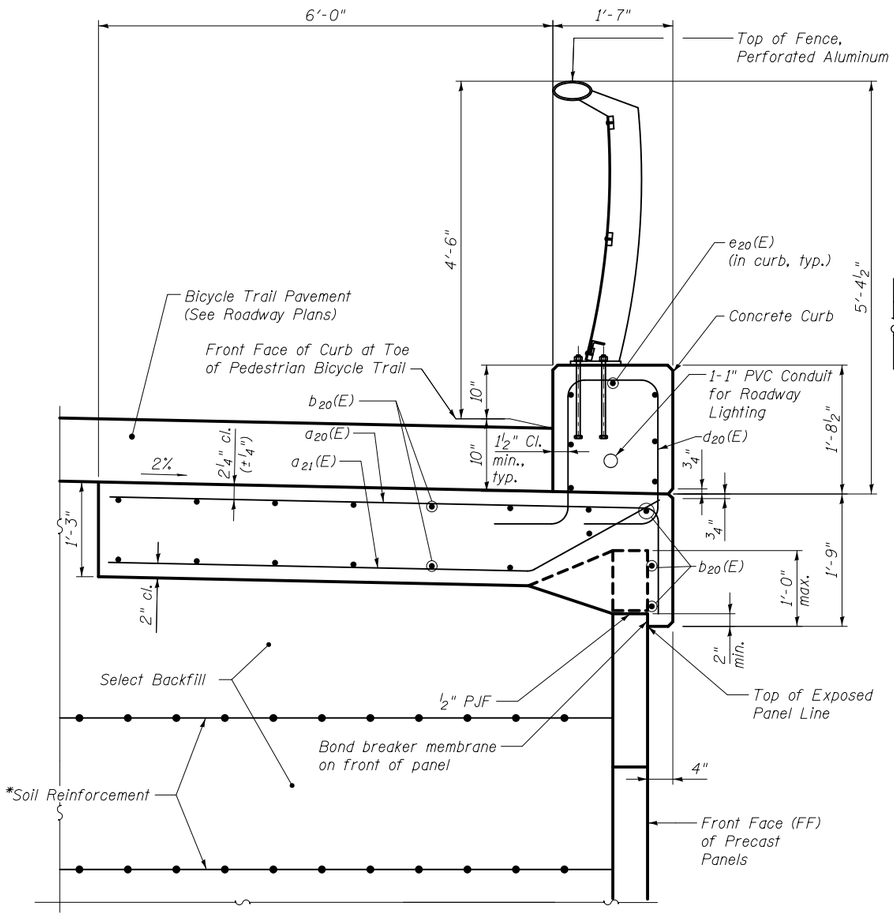
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

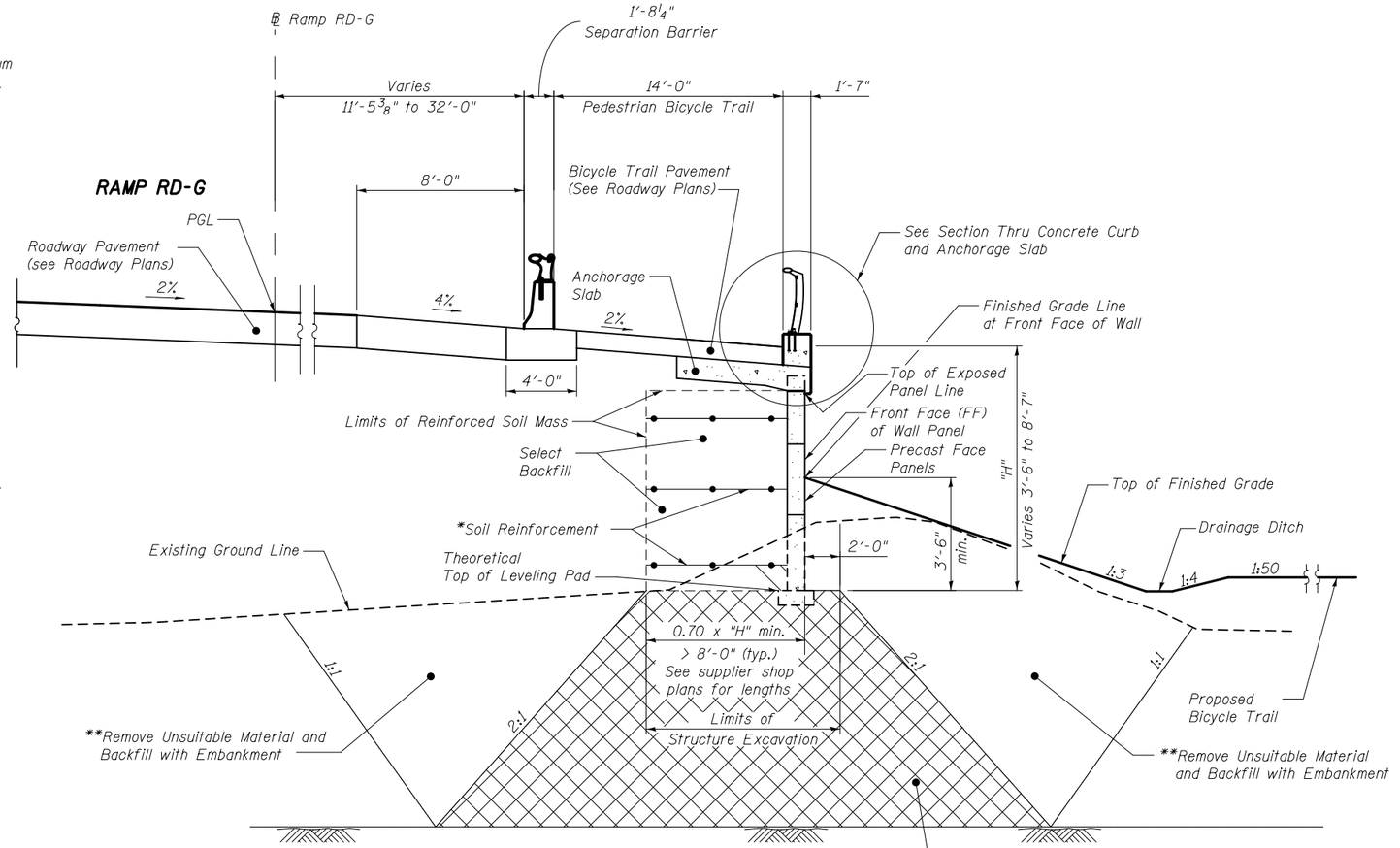
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES
RAMP RD-G RETAINING WALL 02
STRUCTURE NO. 081-6011
SHEET NO. 2 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1127
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



SECTION THRU CONCRETE CURB AND ANCHORAGE SLAB



TYPICAL WALL SECTION

(Horiz. dim. at right angles to Pedestrian Bicycle Trail)

Notes:

* The M.S.E. wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft. of wall.

** Removal of Unsuitable Material is required from:
Sta. 131+45.00 to Sta. 131+90.00
Sta. 132+65.00 to Sta. 133+15.00
Sta. 134+40.00 to Sta. 134+52.00
(See Sheet 1 for details.)

Note:
For fence, perforated aluminum, base plate and anchor bolt details, see Pedestrian Railing Aesthetic Plans.

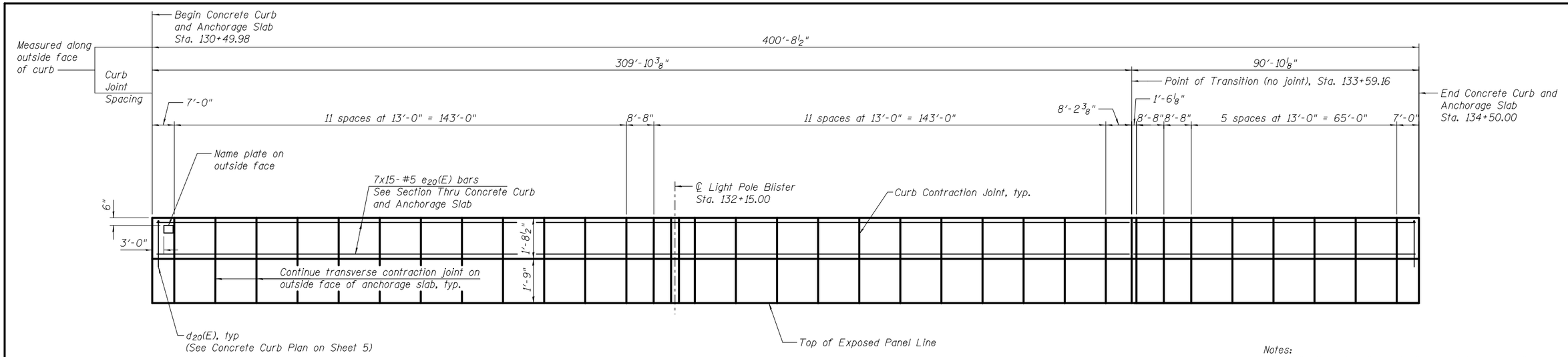
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

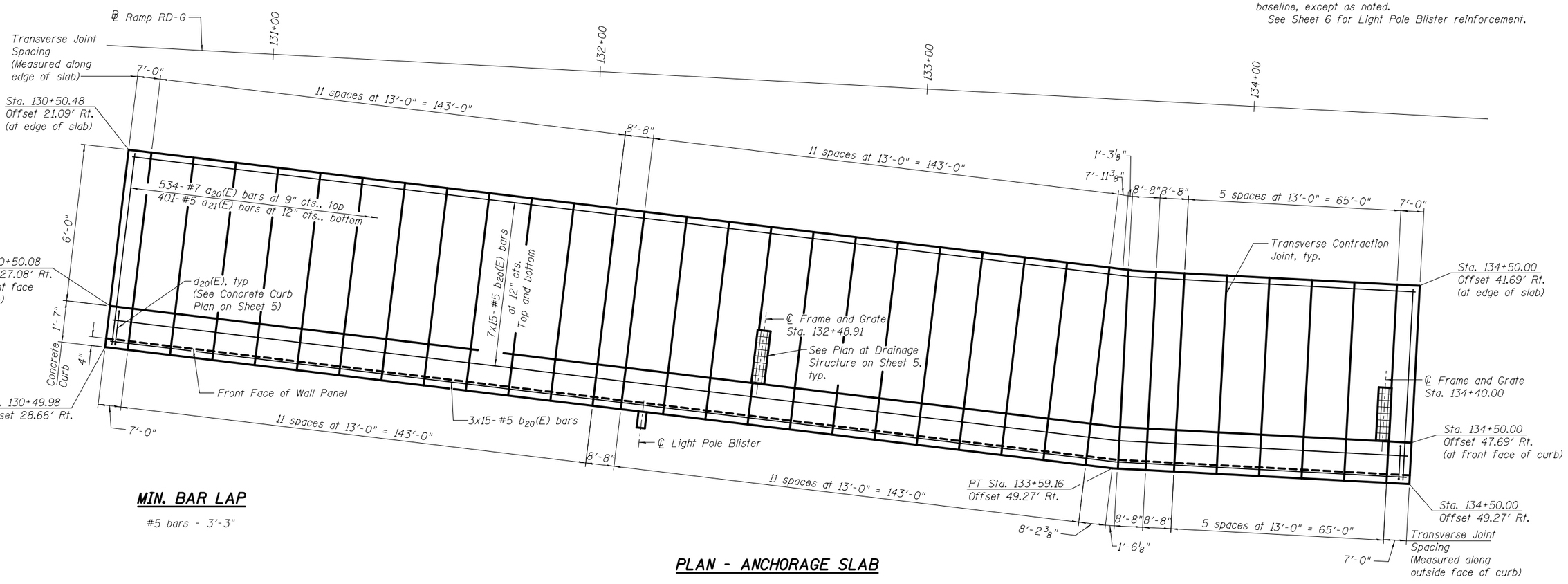
MSE DETAILS
RAMP RD-G RETAINING WALL 02
STRUCTURE NO. 081-6011
SHEET NO. 3 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1128
		CONTRACT NO. 64C08		
	ILLINOIS	FED. AID PROJECT		



OUTSIDE ELEVATION OF CONCRETE CURB

Notes:
For Section Thru Concrete Curb and Anchorage Slab, see Sheet 3.
For Bill of Material, see Sheet 5.
Bars indicated thus 7x15- #5 etc. indicates 7 lines of bars with 15 lengths per line.
Stations and offsets on this sheet are given to the outside face of the curb and are measured from the Ramp RD-G baseline, except as noted.
See Sheet 6 for Light Pole Blister reinforcement.



MIN. BAR LAP

#5 bars - 3'-3"

PLAN - ANCHORAGE SLAB

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - YSS	REVISED
		CHECKED - ZJB	REVISED
	PLOT SCALE =	DRAWN - MLA	REVISED
	PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

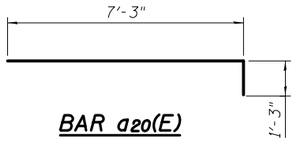
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE CURB AND ANCHORAGE SLAB 1
RAMP RD-G RETAINING WALL 02
STRUCTURE NO. 081-6011
SHEET NO. 4 OF 12 SHEETS

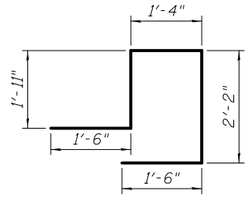
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1129
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

RETAINING WALL 02
BILL OF MATERIAL

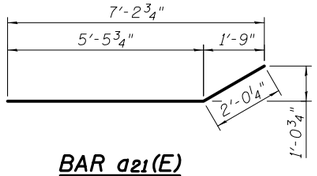
Bar	No.	Size	Length	Shape
$a_{20}(E)$	534	#7	8'-6"	
$a_{21}(E)$	401	#5	7'-6"	
$a_{22}(E)$	16	#5	2'-0"	
$a_{23}(E)$	376	#5	7'-3"	
$a_{24}(E)$	4	#7	10'-1"	
$a_{25}(E)$	4	#5	6'-4"	
$a_{26}(E)$	4	#7	7'-5"	
$b_{20}(E)$	255	#5	29'-9"	
$d_{20}(E)$	560	#5	8'-5"	
$d_{21}(E)$	4	#7	8'-0"	
$d_{22}(E)$	4	#4	6'-1"	
$d_{23}(E)$	1	#5	6'-1"	
$d_{24}(E)$	1	#5	6'-3"	
$d_{25}(E)$	1	#5	6'-7"	
$d_{26}(E)$	1	#5	7'-1"	
$d_{27}(E)$	2	#5	7'-11"	
$e_{20}(E)$	105	#5	29'-9"	
Reinforcement Bars, Epoxy Coated			Pound	31,680
Concrete Superstructure			Cu. Yd.	188.8



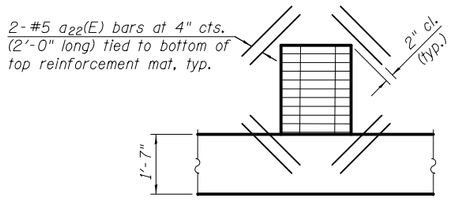
BAR $a_{20}(E)$



BAR $d_{20}(E)$

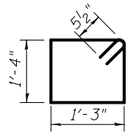


BAR $a_{21}(E)$

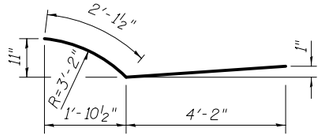


PLAN AT DRAINAGE STRUCTURE

(Cut longitudinal reinforcement to clear drainage structure.)

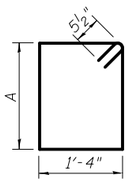


BAR $d_{22}(E)$

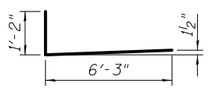


BAR $a_{25}(E)$

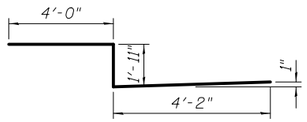
Bar	A
$d_{23}(E)$	1'-3"
$d_{24}(E)$	1'-4"
$d_{25}(E)$	1'-6"
$d_{26}(E)$	1'-9"
$d_{27}(E)$	2'-2"



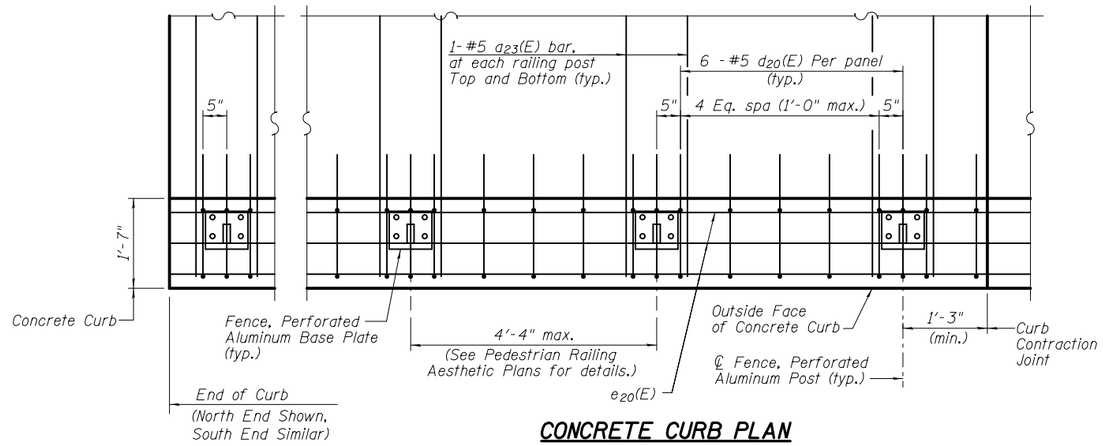
BARS $d_{23}(E)$ thru $d_{27}(E)$



BAR $a_{26}(E)$



BAR $a_{24}(E)$



CONCRETE CURB PLAN

(Slab reinforcing not shown)

Note:
Details and quantities shown assume Fence, Perforated Aluminum layout consists of 93 fence panels and 94 fence post throughout the limits of the retaining wall.

Notes:
For base plate details, see Pedestrian Railing Aesthetic Plans.

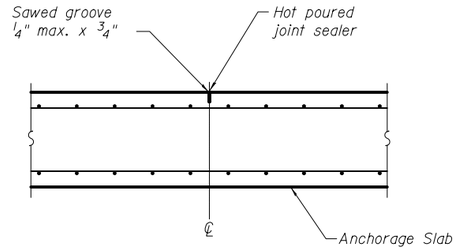
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

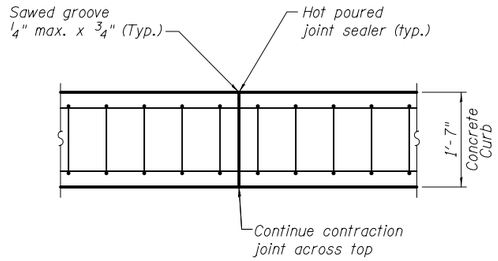
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE CURB AND ANCHORAGE SLAB 2
RAMP RD-G RETAINING WALL 02
STRUCTURE NO. 081-6011
SHEET NO. 5 OF 12 SHEETS

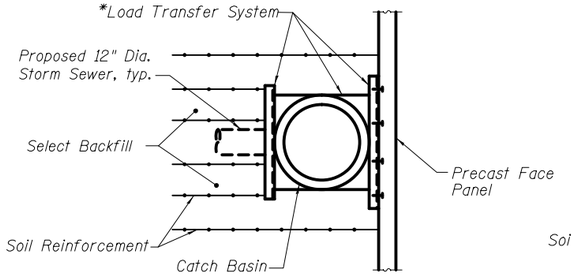
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1130
				CONTRACT NO. 64C08
	ILLINOIS	FED. AID PROJECT		



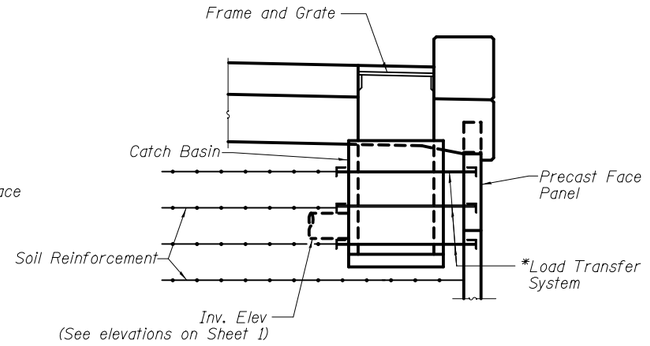
TRANSVERSE CONTRACTION JOINT



CURB CONTRACTION JOINT

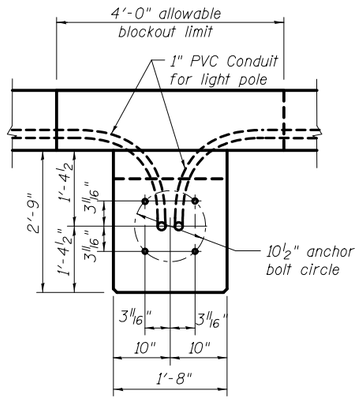


ANCHORAGE SLAB INLET PLAN

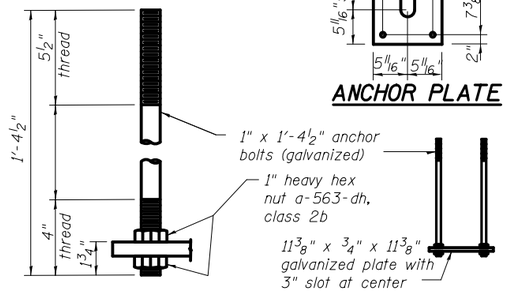


ANCHORAGE SLAB INLET SECTION

*M.S.E. supplier to design load transfer system to accommodate concrete pipe and catch basin.
(See Drainage and Utilities Plans for inlet details.)

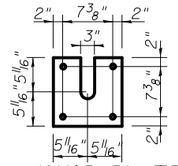


PLAN OF LIGHT POLE BLISTER

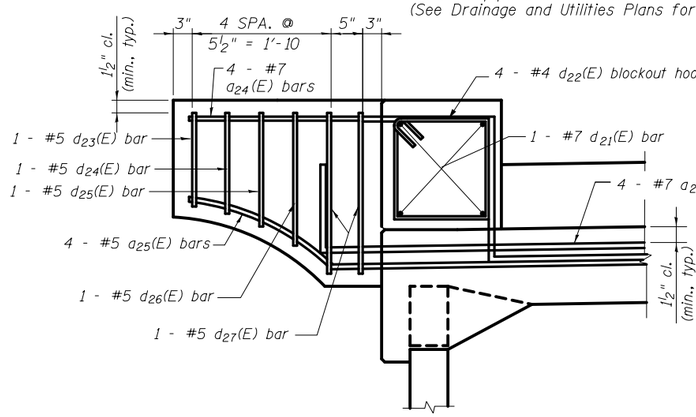


ANCHOR BOLTS

(ASTM F1554 Grade 105) Full Length Hot Dipped Galvanized.

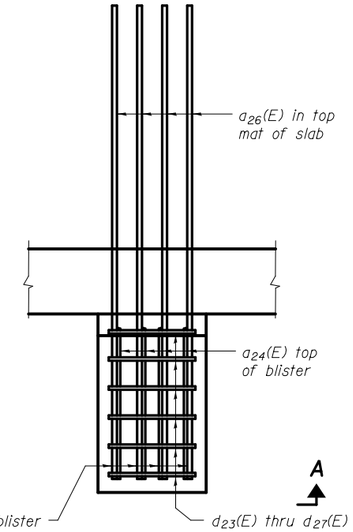


ANCHOR PLATE



SECTION THROUGH LIGHT POLE BLISTER SHOWING REINFORCING

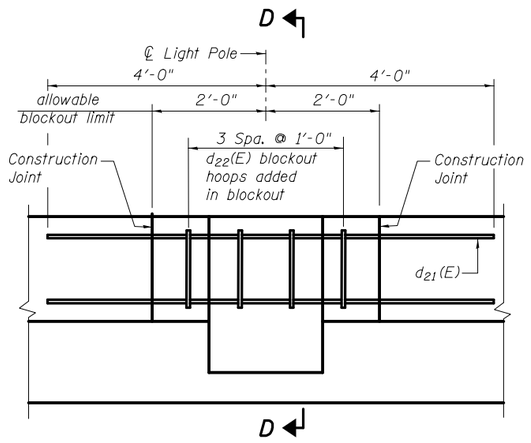
(Concrete curb and slab reinforcing not shown.)



PLAN OF LIGHT POLE BLISTER REINFORCING

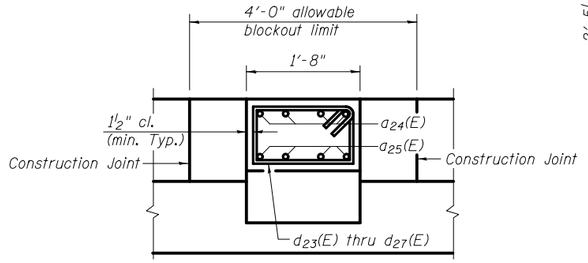
(Concrete curb and slab reinforcing not shown.)

Space railing posts on each side of light blister to miss reinforcement.

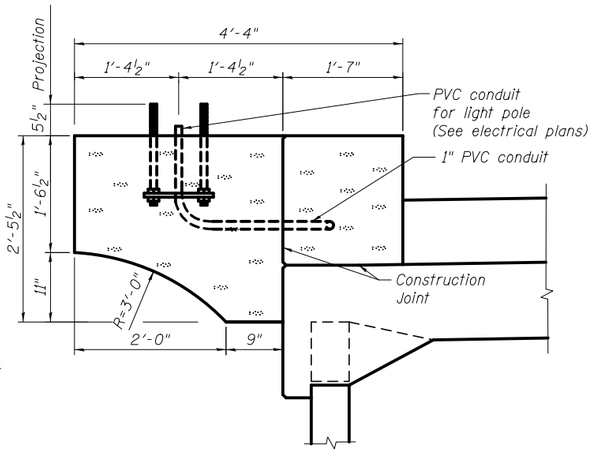


ELEVATION

(Anchor bolts not shown.)



VIEW A-A



SECTION D-D

(Cost of anchor bolts and anchor plate is included with Concrete Superstructure.)

Notes:
For anchorage slab reinforcing, see Sheet 4.
For concrete curb reinforcing and Bill of Material, see Sheet 5.
See Electrical Plans for lighting and conduit details.
Adjust reinforcement to miss anchor bolts.

USER NAME =	DESIGNED - YSS	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	CHECKED - JMH	REVISED	
PLOT SCALE =	DRAWN - MLA	REVISED	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED	

MODJESKI and MASTERS
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MISCELLANEOUS DETAILS
RAMP RD-G RETAINING WALL 02
STRUCTURE NO. 081-6011
SHEET NO. 6 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1131
			CONTRACT NO. 64C08	
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 9/19/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565232.456, E=2459065.732), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0201-S
Station 130 + 16
Offset 11' Lt.
Ground Surface Elev. 566.39 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 562.4 ft ▼
Upon Completion _____ ft
After _____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Concrete 7" slab with rebar 565.39			
Fill: Fine to Medium Sand With Silt (SP-SM) Very dark brown, dry to moist, medium dense, little gravel, fine to medium sands, trace coarse sands 563.39	4 8 5 4		
Fill: Sandy Lean Clay (CL) ▼ Very dark gray mottled with greenish gray, moist to wet, stiff, faint petroleum odor, trace medium to fine gravel, with sand seams	2 4 3 2	1.8 P	
Fill: wood matter with fine to coarse sand, strong petroleum odor, saturated, possible old railroad ties 558.39	2 1 2 2		
Fill: Silty Sand Trace Gravel (SM) Top 5": Brown, wet, root matter with petroleum odor and root matter throughout Remainder: Silty Sand trace gravel, dark to medium gray, wet, non plastic, medium to fine sands, trace subrounded fine gravels, loose, faint petroleum odor Encountered WT at 10' bgs 555.39	2 1 2 1		
Silty Fine to Coarse Sand (SM) trace gravel, brown, wet, very loose to medium dense, faint petroleum odor, occasional root, possible native soil, non odorous 553.39	2 1 2 15 30 50/2		
Sandy Silt With Clay And Gravel (CL) Top 2": Dark brown followed by yellowish orange and then light gray at bottom 2", wet, non plastic, very angular flat coarse to fine gravels (possible rock fragments), some medium to fine sands with silt and few clay, possible gumbo/residual soil Driller began to set up for rock coring at 0950 550.56			
End of Boring			

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
CH2M HILL

ROCK CORE LOG

Date 9/19/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565232.456, E=2459065.732), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD Double tube, 10 ft core barrel, NQ wireline, diamond bit

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE _____

BORING NO. ILR0201-R
Station 130 + 16
Offset 11' Lt.
Ground Surface Elev. 566.39 ft

Core Diameter _____ in
Top of Rock Elev. 550.56 ft
Begin Core Elev. 550.56 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Sandstone with Limestone and bands of coal towards bottom of sample, light brown with light gray, rough texture at top 32", remainder has smooth texture, medium to fine grained with little coares grains, slightly weathered to unweathered, medium to strong, top 32": Sandstone, remainder Limestone with coal bands 15.83' - Horizontal to 15° fractures, rough planar fractures at top 32" of sample, raminder fractures are irregular and undulated, little hard greenish gray impermeable clay infilling throughout top 13" of sample, remainder: no infilling, surface stains only, surfaces stained greenish gray at top 16", 16" to 30" no stains, 30" to bottom dark gray and brown coal stains, top 30": no rock wall contact due to crushed rock, remainder tightly healed with coal strands, sound to moderate fractures, very close to moderate discontinuities 23'-86" = top of run 1/2-1/2-1/4-3/4-3/4 light gray milky water, brown water 2.5' down and 7'-4' dark brown to dark green 23'-31.5" = end of run Medium to fine grained, smooth texture, slightly weathered to unweathered, medium strong 21.42' - 15° to 45° degree fractures, irregular, undulating, slickenslided at 11", 15", 51", 67" and 88" from top, hard impermeable clay infilling 1/8" to 1/2" thick that has tightly healed at most fractures except from 45° to 51° from top, dark gray surface stains, no infilling and surface stains from 45° to 51°, from 57° to bottom thinly bedded throughout, stiff to very stiff gray clay infilling that is 1/2" to 1/4" thick at fracure, sound to moderate fractures, close to wide discontinuities Average 1-1/4 minute per foot for top 5 feet, 10-20-30 (3/4-3/4')	NQ-R1	78	41		
	NQ-R2	95	67		
End of Boring 534.97					

Color pictures of the cores _____
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)

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 9/18/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KB

SECTION I-74 Bridge over Mississippi River LOCATION (N=565145.331, E=2459082.04), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0203
Station 131 + 05
Offset 13' Lt.
Ground Surface Elev. 567.93 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Concrete Surface: 3" of concrete 567.43			
Silty Sand (SM) dark brown and black, slightly moist, very loose, fine to medium grained, low plasticity	2 2 2		
	4		
	2 2	1.5 P	
561.93 **Sand Silt and Clay (ML)** Black, moist NOTE: Sample 3 grain size analysis performed 559.93	0 2 3		
Clay (CH) black, slightly moist, firm to stiff, trace fine sand, moderate plasticity Rimac: Pu = 94 lbs NOTE: Sample 4 Atterberg limits: LL=63, PI=46	2 3 3	1.8 P	25.0
	2 3 5	1.0 P	23.0
Rimac: Pu = 28 lbs	1 2 3	0.5 P	
brown, very dense, fine to medium grained, Same as above, sandy gravel in tip, brown, very dense, fine to medium angular gravel <1" diameter 551.93	5 15 22		
Sandy Gravel (GP) light gray, wet, very dense, fine to medium angular gravel, fine to coarse sand 549.93	50/3"		
End of Boring			

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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED	
	CHECKED - JMH	REVISED	
PLOT SCALE =	DRAWN - MLA	REVISED	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 1
RAMP RD-G RETAINING WALL 02
STRUCTURE NO. 081-6011
SHEET NO. 7 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1132
				CONTRACT NO. 64C08
		ILLINOIS	FED. AID PROJECT	

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 9/18/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565046.146, E=2459048.298), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0204
Station 131+97
Offset 37' Rt.
Ground Surface Elev. 569.92 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 557.9 ft ▼
Upon Completion _____ ft
After _____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
568.92				**Topsoil** light brown silt, hole offset 4.5' west of marked boring location
	3			
	4	4.3		**Fill Silt With Sand And Gravel (ML)** Yellowish orange transitioning to brown, dry to moist, non plastic, medium to fine sands, little angular flat coarse to fine gravels, possible fill, occasional root matter Possible underground obstruction (concrete) 4'6" bgs
	6	P		
-5	5			
	2			
	50/2			
563.92				**Poorly Graded Medium to Coarse Sand (SP)** Brown, dry to moist, loose to very loose, trace gravel NOTE: Sample 3 grain size analysis performed
	1			
	1			
	1			
561.92	2			
	1			**Very Silty Sand (SM, ML)** Brown, moist, very loose Sample 4: grain size analysis performed
	1			
	2			
-10	2			
559.92	2			**Very Clayey Fine to Medium Sand (SC)** trace coarse sand and gravel, greenish gray, moist to wet, stiff, with root matter, occasional fibers with "muck-like" appearance Sample 5: grain size anaylsis and Aterberg limit tests (LL=27, PI-12) performed
	1	1.3		
	1	P		
	4			
556.92	2			**Clay (CH)** Bluish gray mottled with orange brown, moist to wet, very stiff, little coarse-fine sands, trace gravels possible glacial till, reddish brick like gravel particles Sample 6: grain size analysis and Atterberg limit (LL=68, PI=12) tests performed
	2	2.0	29.0	
	4	P		
-15	5			
	38			
	50/1.5			
-20				

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
548.67				**Silty Clay (poss. weathered Shale) (CL-ML)** Gray with olive green, dry to moist, very stiff, trace coarse gravel, very brittle, shale-like clay, top of Rock 18'8" bgs *(continued)*
				Borehole continued with rock coring.
-25				
-30				
-35				
-40				

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
CH2M HILL

ROCK CORE LOG

Date 9/18/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565046.146, E=2459048.298), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD Double tube, 10 ft core barrel, NQ wireline, diamond bit

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE _____

Core Diameter _____ in
Top of Rock Elev. 548.67 ft
Begin Core Elev. 548.67 ft

BORING NO. ILR0204
Station 131+97
Offset 37' Rt.
Ground Surface Elev. 569.92 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	Description
548.67	NQ-R1	80	0			**Sandstone** Light gray to gray, coarse to fine grained top 22" of sample, ramainder medium to fine grained, rough texture, slightly weathered to unweathered, weak to medium stront rock, gravel-sized crushed rock fragments at 5", 18", and 37-39" from top□21.25' - Horizontal to 15° fractures, very rough surfaces at top 18" of sample, remainder rough to smooth fracture surfaces, undulated, little clay infilling material top 20", discontinous joints, greenish-gray to gray surface stains, rock wall contact, altered joint walls, tightly healed at 12", 18" and 39" from top, bands of sandy clay fractions at fractures, horizontal bedding throughout top 20" of sample, moderate to extremely fractured, extremely close to close discontinuities□Start 10:00 3/4-1-3/4-1-1/2/6 28'-81" = top of run Gray to light gray water 28'-26" - bottom of run
-25						
	NQ-R2	56	27			
541.92						Kill switch on rig broke, drilling dtopped at 10:05 am temporarily\ medium to fine grained□25.83' - Horizontal and vertical fractures at top 16" of sample, 60° fracture at 63" from top, remainder15° to 30° fracture, top 36", rough and irregular, undulating surfaces, remainder rough and planar fracture surfaces, residual soil, soft sandy clay infilling material at top 4" of sample, stiff to hard clay, impermeable gray clay infilling, 4" thick zone of clay infilling from 45° to 49° and at bottom 4" of sample, little or no surface stains at top 36", remainder stains dark gray, horizontal to 30° bedding throughout, thick continous zones of sand clay infilling , tightly healed hard impermeable filling from 25° to 67° from top, sound to moderately fractured, very close to medium discontinuities□Start 13:30 .75-2-1/4-2-2-1/4 70% fluid loss at 26'10" bgs Change to very dark gray fluid at 31'4" bgs 1-1/2-3/4-2-1-3/4-2-1/4 Bit pressure - 250 psi Hole plugging at 32'-33' bgs Some fluid loss
-30						
-35						
	NQ-R3	100	48			**Limestone** fine grained, smooth texture, residual soil at top 4", remainder slightly weathered, weak to medium strong rock, top 4" residual soil, brittle shale-like clay infilling 47" and 65" from top With strands of Dolostone and coal towards bottom of sample, gray with light gray, smooth texture, slightly weathered to unweathered, medium to strong, 1/8" thick coal band at 105" to 110" and 112" from top, pockets of dolomite at bottom 10" of sample Top 60" Limestone Bottom 60" Sandstone□35.83' - Horizontal to 30° fractures throughout, smooth undulated fractures and irregular undulated fractures from 90° to 120° from top, 1/8" to 1" thick bands of hard ____ impermeable clay infilling throughout, tightly healed at most fractures, bands of coal minerals at bottom 30" of sample, sound to medium
-40						

Color pictures of the cores _____
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)

Illinois Department of Transportation
Division of Highways
CH2M HILL

ROCK CORE LOG

Date 9/18/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565046.146, E=2459048.298), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD Double tube, 10 ft core barrel, NQ wireline, diamond bit

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE _____

Core Diameter _____ in
Top of Rock Elev. 548.67 ft
Begin Core Elev. 548.67 ft

BORING NO. ILR0204
Station 131+97
Offset 37' Rt.
Ground Surface Elev. 569.92 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	Description
						gractured, moderate to very close discontinuties, horizontal to 70° thick bedding, vertical fracture at 56" form top, stiff to very stiff clay infilling through fracture from 16" to 24" from top, teminated rock coring at 45' 10" bgs @! 14:17
						Limestone fine grained, smooth texture, residual soil at top 4", remainder slightly weathered, weak to medium strong rock, top 4" residual soil, brittle shale-like clay infilling 47" and 65" from top *(continued)*
-45						
524.09						End of Boring
-50						
-55						
-60						

Color pictures of the cores _____
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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED	
	CHECKED - JMH	REVISED	
PLOT SCALE =	DRAWN - MLA	REVISED	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 2
RAMP RD-G RETAINING WALL 02
STRUCTURE NO. 081-6011
SHEET NO. 8 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1133
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Page 1 of 1

Date 9/18/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KB

SECTION I-74 Bridge over Mississippi River LOCATION (N=564896.826, E=2459062.562), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0205
Station 133 + 47
Offset 47' Rt.
Ground Surface Elev. 567.92 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 559.9 ft ▼
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Concrete 3" of concrete	567.42			
Silty Fine to Medium Sand (SM) black, slightly moist, loose, black , slightly moist		1		
		2		
		3		
	563.92			
Sandy Silt (ML) black, slightly moist, very soft to stiff	-5	0		
		0	1.0 P	
		1		
		0		
		0		
		2		
	559.92 ▼			
Silt (ML) dark greenish and brown, loose to medium dense, moist, trace fine sand		3		
		3	1.5 P	
	-10			
sandstone in tip pale		5		
		12		
		16		
	555.92			
Shale pale olive brown, dense, moderate plasticity		4		
		9		
		30		
		50/2		
	-15		1.5 P	
	552.42			
End of Boring				
	-20			

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
CH2M HILL

SOIL BORING LOG

Page 1 of 2

Date 9/21/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=564822.636, E=2459073.618), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0206
Station 134 + 22
Offset 48' Rt.
Ground Surface Elev. 568.24 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 562.2 ft ▼
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Concrete 7" concrete underlain by dark brown silty clay with sand	567.24	2		
Fill Silty Clay With Sand (CL-ML) Dark brown, dry to moist, medium stiff to stiff, with reddish brick material top 1" of sample contained crushed concrete	565.24	3		
		3		
		2		
Fill Sandy Silt (ML) Brown to dark brown, dry to moist, non plastic, loose	564.49	2		
		2	1.8 P	
	-5	3		
Fill: Clayey Silt (ML) Very dark gray to black, moist, low plasticity, stiff, non odorous, trace fine sand	562.24 ▼			
Fill Silty Fine to Medium Sand (SM) Gray to brown, moist, trace coarse sand	560.24		1.0 P	
Medium to Coarse Sand Little Silt And Gravel (SM) dark brown mottled with orange brown, wet, loose Sample 3 (8'-10'): grain size analysis performed	559.64	2		
	559.44	36		
		47		
	-10	32		
Clayey Sand With Silt (SC) light gray with greenish gray, moist, very dense		50/2		
Silty Fine to Medium Sand (SM) light gray to white with yellowish orange streaks, moist to wet, very dense, possible completely weathered sandstone little coarse sands, trace fine gravels, possible completely weathered sandstone		32		
		15		
		50/4		
	-15			
Driller notes rough drilling and chatter 11.0' bgs, possible weathered rock	552.57			
Light gray, moist to wet, very dense, medium to fine sands with silt, trace coarse sands, strong cementation, coarse to fine angular flat gravels and sandstone fragments, little clay (possible infilling) throughout, possible completely weathered sandstone				
	-20			

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
CH2M HILL

ROCK CORE LOG

Page 2 of 2

Date 9/21/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=564822.636, E=2459073.618), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD Double tube, 10 ft core barrel, NQ wireline, diamond bit

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE _____

Core Diameter _____ in
Top of Rock Elev. 552.57 ft
Begin Core Elev. 552.57 ft

BORING NO. ILR0206
Station 134 + 22
Offset 48' Rt.
Ground Surface Elev. 568.24 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Sandstone Light brown, rough in texture, slightly weathered, weak to medium strong rock, brittle, crushed rock zone from 22" to 32" from top 15.67' - Horizontal fractures from 0"-24", remainder irregular fractures, rough to plannar fractured at top 16" of sample, remainder fractured surfaces are rough and irregular, undulating, top 16" no infilling material and no surface stains, unaltered uttered joints wells, Remainder: 1/8 little very stiff greenish gray clay infilling 1/8" to 1/4" in thickness at most fractures, greenish grey surface stains, tightly healed from 39" to 41", sandy clay material and crushed rock 2mm thick-enough to prevent rock wall contact at remaining fractures, discontinuous joints, extremely close to close discontinuities, moderate to fine fractured 23'-88"= top of run 188 CR: 1/2 min/foot 23'-28"=bottom of run 24 Top 14": Subangular to angular, Remainder: Sandstone, gray with dark gray, fine grained, slightly weathered to unweathered, medium strong, rock appears to be sandstone with shale-like clay that has hardened and formed a solid rock 20.67' - Top 14": Subangular to angular, Remainder: Horizontal to 20° fractures, rough to undulating, fine surfaces, slightly altered joint walls 14" to 24" from top, Remainder discontinuous joint with very stiff to hard shale-like clay breaks thick enough (<1/4" thick) to prevent rock wall contact, surfaces stained dark gray possibly do to infilling CR: 3/4 min/foot average Barrel jammed 6" from bottom of sample Light brown to light gray, smooth to slightly rough texture, blotchy appearance from 6" to 16", medium strong rock, Band <1.4" thick of shale tile hardened clay from 6" to 34" from top 25.67' - 10° to 30° fractures, rough and irregular undulating fracture surfaces, little or no infilling material, gray surface staining only, slightly altered to altered joint walls, blotches of greenish gray clay that has possibly filled veins in rock and hardened to make a continuous sample from 6" to 34" from top, tightly healed at 18" from top CR: 1 min/foot average	552.57	NQ-R1	90	7		
	-20					
		NQ-R2	83	18		
	-25					
		NQ-R3	100	57		
	-30					
	537.41					
End of Boring						
	-35					

Color pictures of the cores _____
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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 3
RAMP RD-G RETAINING WALL 02
STRUCTURE NO. 081-6011
SHEET NO. 9 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1134
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/29/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81B LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO.
Station
BORING NO. RDG 01
Station 132+53
Offset CL
Ground Surface Elev. 570.4 ft

Surface Water Elev.
Stream Bed Elev.

Groundwater Elev.:
First Encounter ft
Upon Completion 563.4 ft
After 24 Hrs. 563.4 ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown, moist, medium, sandy, lean CLAY	2	4 4 50/2"	1.60P	19
567.40				
CONCRETE 566.90				
Brown, moist, soft, sandy, lean CLAY 566.40	4	7 11 15	1.75P	25
Very dark brown, dry to moist, very stiff, sandy SILT	6			16
563.40 ▽			0.61S	21
Dark brown, moist to wet, stiff, sandy SILT 562.40	8			28
Very dark brown, wet, soft, sandy, clayey SILT	10			
559.40		3 5 6	1.15B	28
Gray, moist, stiff, lean CLAY with silt 556.90	12			
Gray, moist, stiff, lean CLAY with silt and fine-grained sand	14	3 5 7	1.10B	29
554.40	16	50/3"		
Gray, hard, fine-grained, WEATHERED SANDSTONE	18			
551.80		50/1"		
End of Boring				

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)

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/28/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81B LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO.
Station
BORING NO. RDG 02
Station 134+65
Offset 5' Lt.
Ground Surface Elev. 568.0 ft

Surface Water Elev.
Stream Bed Elev.

Groundwater Elev.:
First Encounter ft
Upon Completion 562.0 ft
After 24 Hrs. 563.5 ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL 567.60				
FILL - Very dark brown, moist, very stiff, silty, fine- to medium-grained SAND and GRAVEL	2	7 12 15	2.00P	13
565.00				
Creosote timber 564.00	4	5 4 3		24
Grayish green, moist, very stiff, fat CLAY	6			
560.50		5 8 8	0.81B	30
Dark brown, wet, well-graded, SAND with trace silt	8		0.30P	20
558.50				
Brown, wet, medium- to coarse-grained SAND 557.50	10			
Gray, hard, very fine-grained, WEATHERED SANDSTONE 556.80		50/2"		14
End of Boring				

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)

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/29/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1HVB LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6011
Station
BORING NO. RW 02-1
Station 130+12
Offset 25' Rt.
Ground Surface Elev. 566.2 ft

Surface Water Elev.
Stream Bed Elev.

Groundwater Elev.:
First Encounter ft
Upon Completion 562.2 ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CONCRETE 565.70				
FILL - Dark to very dark brown, moist to wet, soft and loose, silt, fine- to coarse-grained sand and gravel, with degrading plywood, particle board, timber, lumber, bituminous materials, metal scraps, cinder blocks, and brick fragments, petroleum odor	2	4 5 2		11
▽	4	2 2 5	0.50P	20
	6	4 5 6	1.75P	18
	8	2 3 3		196
555.70	10			
Brownish gray, wet, dense, clayey, silty, fine-grained SAND with trace gravel 554.70		10 12 14	0.75P	20
Gray, fine-grained, WEATHERED SANDSTONE	12			
552.20	14	50/5"		17
End of Boring				

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)

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/29/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1HVB LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6011
Station
BORING NO. RW 02-2
Station 131+83
Offset 32' Rt.
Ground Surface Elev. 568.3 ft

Surface Water Elev.
Stream Bed Elev.

Groundwater Elev.:
First Encounter ft
Upon Completion 557.3 ft ▽
After ____ Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CONCRETE 567.80				
Brown, slightly moist, very stiff, clayey SILT with sand	2	5 3 2	2.25P	15
564.80				
Dark brown, moist, soft, silty, lean CLAY with trace sand	4	2 2 4	0.44B	27
	6		0.49B	29
				33
559.70	8		1.80B	25
Grayish green, moist, stiff, silty, lean CLAY			2.75B	25
	10			
	▽	6	0.40B	32
556.30	12	8 8		
Brown, wet, medium dense, silty, medium-grained SAND with gravel 555.80				
Gray, fine-grained, WEATHERED SANDSTONE 554.20	14			
End of Boring		15 50/2"	1.76S	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)

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/29/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1HVB LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6011
Station
BORING NO. RW 02-3
Station 132+79
Offset 40' Rt.
Ground Surface Elev. 567.9 ft

Surface Water Elev.
Stream Bed Elev.

Groundwater Elev.:
First Encounter ft
Upon Completion 560.9 ft ▽
After ____ Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
FILL - Soil 567.40				
CONCRETE 566.90				
FILL - Gray, moist, loose, silty SAND, creosote wood pieces, metal scraps, brick and concrete fragments	2	50/1"		
	4	3 3 5	1.75P	30
562.40				
Dark brown and dark gray, moist, soft to stiff, lean CLAY with silt	6		1.41S	26
	▽		0.41B	28
560.40				
Grayish green, moist, stiff to very stiff, lean CLAY with trace silt	8		1.50S	25
			2.31B	26
	10			
556.40		4	1.25P	30
Gray, fine-grained, WEATHERED SANDSTONE	12	3 6		
554.90				
Dark gray, WEATHERED SHALE 554.20				
End of Boring		50/2"		8

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)

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/28/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1HVB LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6011
Station
BORING NO. RW 02-4
Station 134+57
Offset 48' Rt.
Ground Surface Elev. 568.0 ft

Surface Water Elev.
Stream Bed Elev.

Groundwater Elev.:
First Encounter NM ft
Upon Completion ft
After ____ Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CONCRETE 567.70				
Very dark brown, moist, soft, silty, lean CLAY with fine-grained sand	2	2 2 3	0.25P	28
565.00				
Very dark brown, moist, stiff, silty, lean CLAY with trace very fine-grained sand	4		0.26B	30
			0.53B	26
	6		1.79B	22
			1.27S	19
			2.50P	17
560.00	8			
Brown, wet, silty, fine- to medium-grained SAND 559.50		6		15
Brown, moist, medium dense, silty, fine-grained SAND with gravel 558.00	10	8 12		
Gray, WEATHERED SILTSTONE				
	12	50/5"		9
554.60				
Gray, fine-grained, WEATHERED SANDSTONE 554.50		50/0"		
End of Boring				

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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 5
RAMP RD-G RETAINING WALL 02
STRUCTURE NO. 081-6011
SHEET NO. 11 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1136
				CONTRACT NO. 64C08
		ILLINOIS	FED. AID PROJECT	

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Page 1 of 1

Date 12/30/99

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY L. Hunt

SECTION I-74 Bridge over Mississippi River LOCATION (N=565278.629, E=2459057.591), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station
BORING NO. RW1501
Station 129 + 69
Offset 10' Lt.
Ground Surface Elev. 570.72 ft

Surface Water Elev. ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter 562.7 ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
	9			**Clayey Gravel (GC)** Clayey gravel to fine grained sand, dark brown to brown, dry to moist, stratified. Borehole moved out of mounds of debris for safety reasons
	12			
	9			
568.72	8			
	3			**Silty Sand (SM)** Fine grained sand, brown, dry to moist, homogeneous.
	4			
	3			
	2			Petroleum odor from 4-6'.
	1			
-5	1			
	1			WOH = Weight of Hammer
	WOH			
	WOH			
	1		19.0	
562.72 ▼	WOH			
	2			**Clay (CH)** Clay, dark brown to black, moist, homogeneous. Shelby tube from 8ft-10ft obtained from adjacent boring. CD Triaxial test and Atterberg limit (LL=50, PI=23) test performed.
	WOH		56.0	
560.72 -10	WOH			
	2			
	2			
	Push			**Clayey Sand (SC)** Clayey sand, trace organics, dark brown to brown, moist to 12.0', wet deeper, homogeneous
	WOH			
	WOH			
	2			
	2		48.0	
	6			
	4			
556.72	3			
	4			**Sand and Clay (SP,SC)** Sand and clay, trace gravel, trace organics, dark brown, wet, homogeneous
-15	1			
	10			
	15			
	33			
550.72 -20				

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
550.22	50/5			**Clay to Silt (CL-ML)** Clay to silt, dark gray brown to light gray, wet, poss. wthrd shale Auger refusal at 20.5'
				Decontaminate equipment starting at 8:56 am.
				End of Boring
-25				
-30				
-35				
-40				

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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

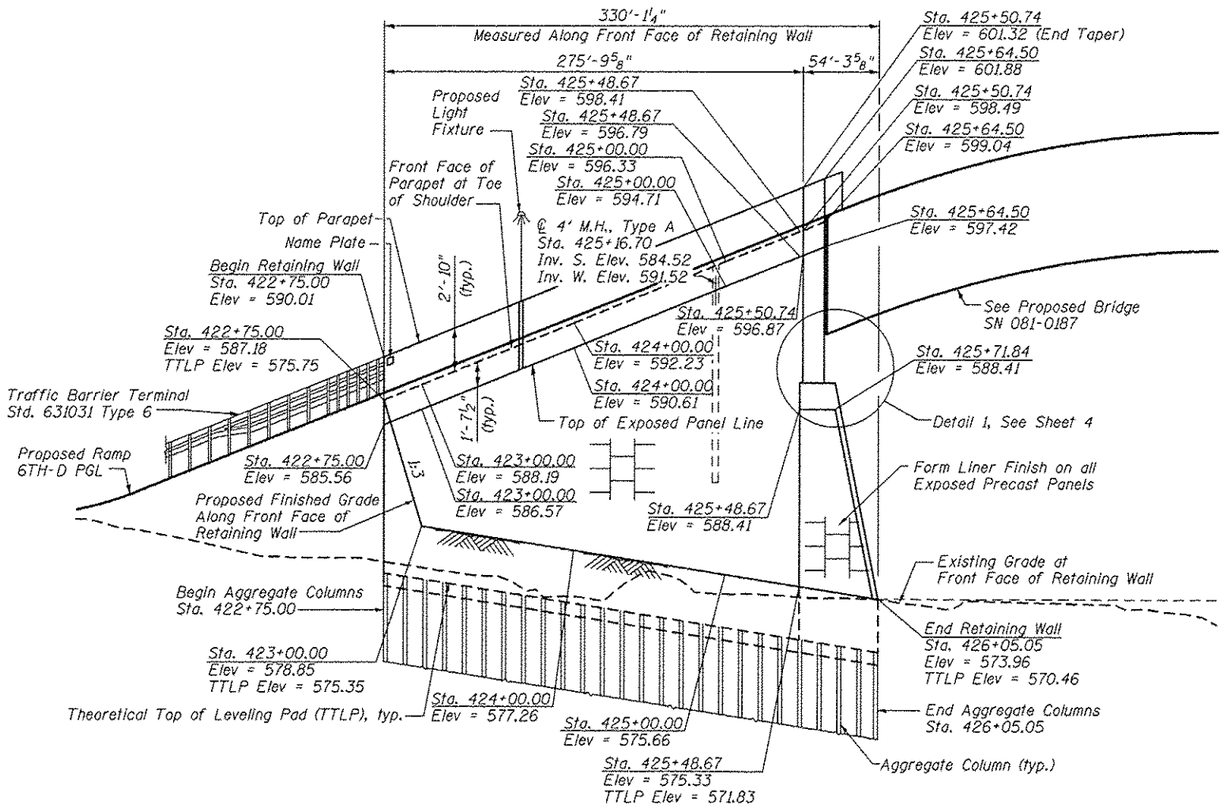
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 6
RAMP RD-G RETAINING WALL 02
STRUCTURE NO. 081-6011
SHEET NO. 12 OF 12 SHEETS

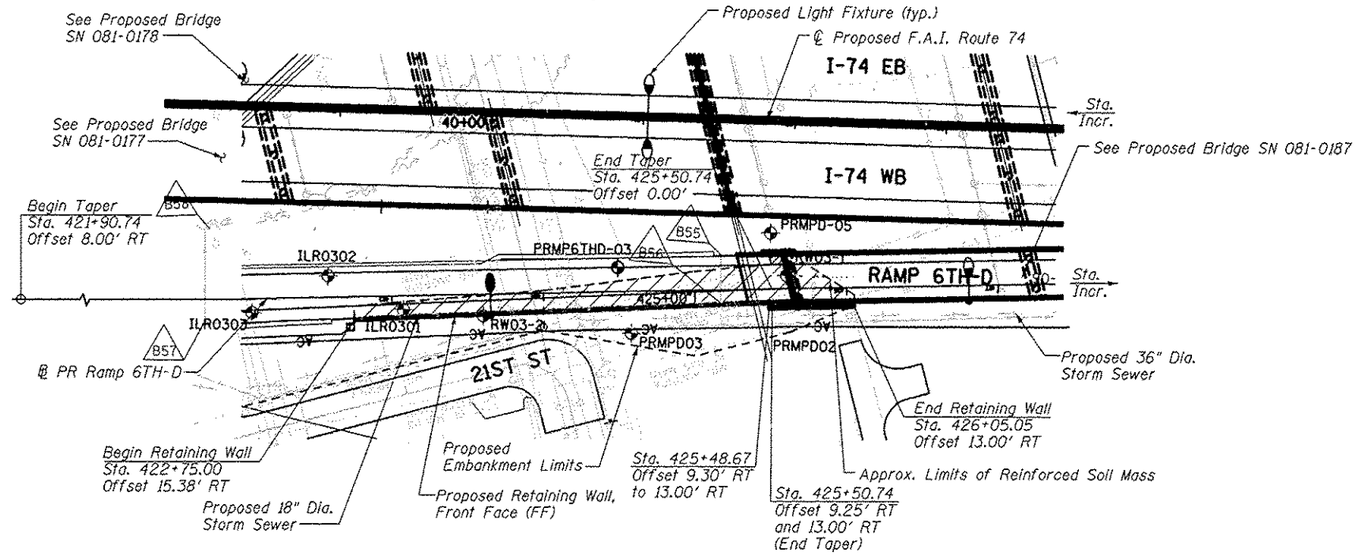
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1137
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

Benchmark No. 537:
Chiseled "X" in Base of Traffic Light at Southeast Corner of Intersection of 19th Street and 7th Avenue.
Elevation NAVD 88 = 589.227

Existing Structure:
None



ELEVATION
(Looking West)



PLAN

LEGEND

- Reinforced Soil Mass
- MSE Wall Panels
- Soil Borings
- Bxx Drainage Structure

DESIGN SPECIFICATIONS
2002 AASHTO
Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)

PRECAST UNITS
f'_c = 4,500 psi (Precast Face Panels)

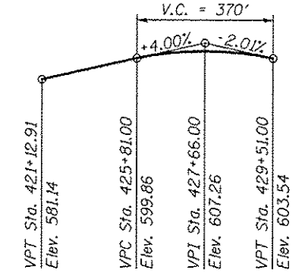
APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

JERILYN M. HASSARD
081-006521
LICENSED STRUCTURAL ENGINEER OF ILLINOIS

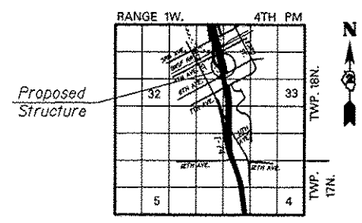
01-20-17

JERILYN M. HASSARD
EDWARDSVILLE, ILLINOIS
ILLINOIS LICENSED STRUCTURAL ENGINEER NO. 081-006521
EXPIRES 11/30/2018

INDEX OF SHEETS



PROFILE GRADE
(Along ℄ Ramp 6th-D)



LOCATION SKETCH

Notes:
Existing utilities shown will be relocated by others to avoid any conflicts during construction (see Utility Plans).
See Drainage and Utilities Plans for inlet details.
See Electrical Plans for lighting and conduit details.
See MSE Wall Aesthetic Plans for required form liner finish.
See Sheet 2 for Ground Improvement Performance Requirements.

GENERAL PLAN AND ELEVATION
F.A.I. ROUTE 74 SEC. (81-1)R & 81-1HVBR
ROCK ISLAND COUNTY
RAMP 6TH-D Sta. 422+75.00 to Sta. 426+05.05
STRUCTURE NO. 081-6012 (RETAINING WALL 03)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED -
	CHECKED - JMH	REVISED -
PLOT SCALE =	DRAWN - MLA	REVISED -
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
RAMP 6TH-D RETAINING WALL 03
STRUCTURE NO. 081-6012
SHEET NO. 1 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1138
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Wall stations and offsets are given to the front face (FF) of the wall and are measured from the Ramp 6TH-D baseline, except as noted. FF of the wall is to be considered edge of panel or form liner.
3. See Special Provision for Mechanically Stabilized Earth Retaining Walls and Aggregate Column Ground Improvement for design and construction requirements.
4. For existing soils laboratory data, see the Geotechnical Investigation Laboratory Data Special Provision.
5. The piles for SN 081-0187 are located within the reinforced soil mass. See SN 081-0187 plans for additional pile requirements.
6. Wall system supplier shall coordinate proposed wall configuration with Aggregate Column Ground Improvement subcontractor.
7. Wall construction shall not begin until after Aggregate Column Ground Improvement has been completed in the area of the new wall.
8. Obstructions such as old foundations, pavements, utilities, etc. that are within the area to be treated with Aggregate Column Ground Improvement shall be removed by others.
9. See SN 081-0187 plans for maskwall details.

GROUND IMPROVEMENT PERFORMANCE REQUIREMENTS

1. Minimum factor of safety for global slope stability shall be 1.5.
2. Allowable bearing pressure (with F.S.) shall be equal to or greater than the equivalent uniform service bearing pressure of 5000 psf.

   Minimum factor of safety against equivalent uniform service bearing pressure shall be 2.0 if a load test is performed.

   Minimum factor of safety against equivalent uniform service bearing pressure shall be 2.5 if a load test is not performed.
3. Total settlement measured at the theoretical top of leveling pad shall not exceed 4.0 inches.
4. Total settlement measured on the pavement shall not exceed 1.0 inch.
5. Differential settlement measured along the theoretical top of leveling pad shall not exceed 1/100.
6. The assumed structure life for settlement computations shall be 75 years.
7. Contractor's verification program shall include monitoring points or other instrumentation to demonstrate compliance with the stated performance requirements.
8. The Shop Drawings and construction procedures submittal shall indicate the sequence of construction within the limits of Aggregate Column Ground Improvement. The aggregate column installation shall be coordinated with utility removal, structure removals, proposed utility installation, and bridge pile driving.
9. Aggregate columns shall be installed before the bridge piles are driven; however, the piles shall not be driven through the aggregate of an installed column. The aggregate column layout shall provide clearance for the bridge piles.

MSE WALL SETTLEMENT

1. The Top of Exposed Panel Elevations shown on these plans are final elevations after any settlement. The wall settlement will be determined by the ground improvement design. The wall system supplier shall coordinate with Aggregate Column Ground Improvement subcontractor to accommodate this settlement in the wall design.

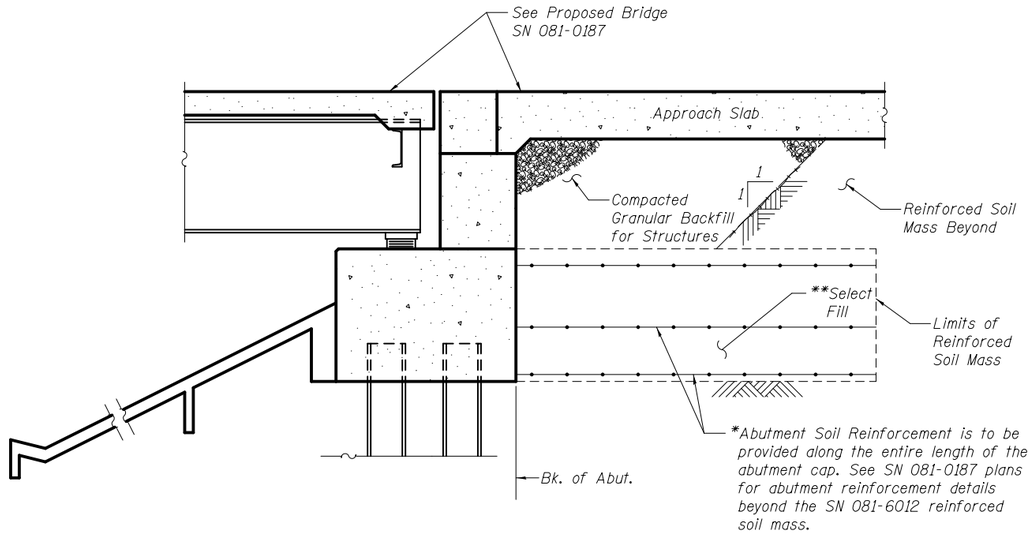
TOTAL BILL OF MATERIAL

	ITEM	UNIT	TOTAL
	Structure Excavation	Cu. Yd.	368
	Concrete Superstructure	Cu. Yd.	148.3
	Protective Coat	Sq. Yd.	339
	Reinforcement Bars, Epoxy Coated	Pound	22,630
	Name Plates	Each	1
*	Aggregate Column Ground Improvement	L. Sum	0.57
	Mechanically Stabilized Earth Retaining Wall	Sq. Ft.	5791

* See proposed retaining wall S.N. 081-6019 for remainder of L. Sum quantity.

STATION 422+75.00
BUILT 201_ BY
STATE OF ILLINOIS
F.A.I. RT. 74
SEC. (81-1)R & 81-1HVBR
LOADING HS-20
STR. NO. 081-6012

NAME PLATE
See Std. 515001



SECTION THRU PILE SUPPORTED STUB ABUTMENT

* The M.S.E. wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 3.0 kips/ft of abutment. Cost shall be included with the cost of "Mechanically Stabilized Earth Retaining Wall".

** Select fill shall be placed in all areas beneath the proposed abutments regardless of the limits of the reinforced soil mass.

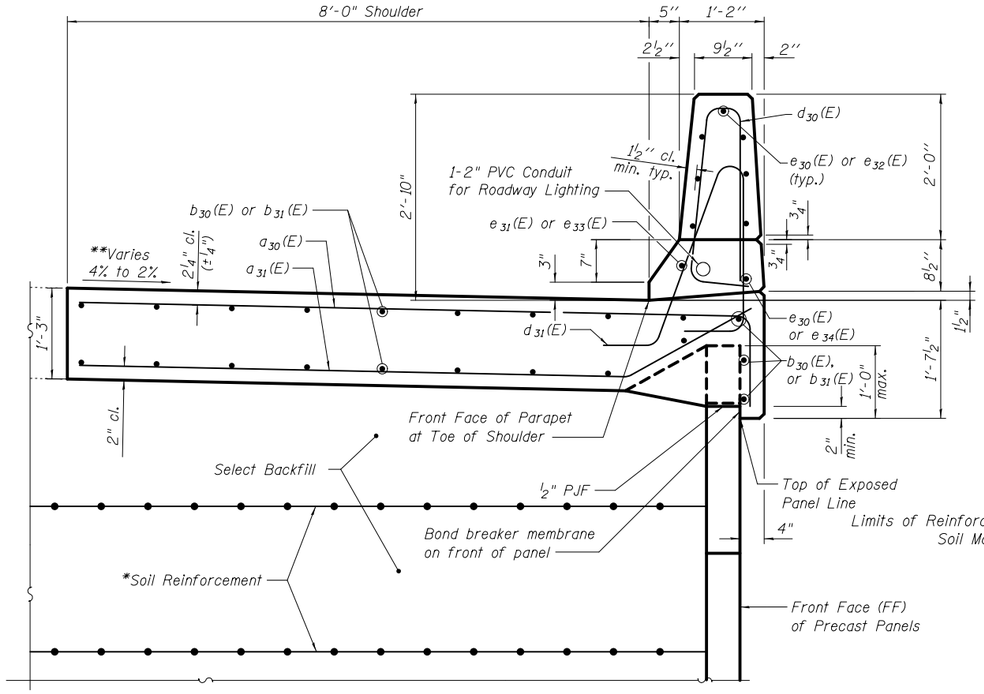
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED -	
	CHECKED - JMH	REVISED -	
PLOT SCALE =	DRAWN - MLA	REVISED -	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

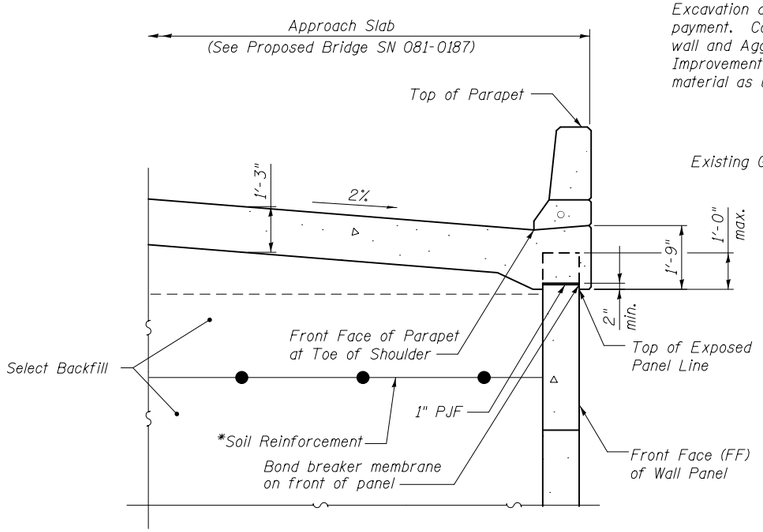
GENERAL NOTES
RAMP 6TH-D RETAINING WALL 03
STRUCTURE NO. 081-6012
SHEET NO. 2 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1139
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

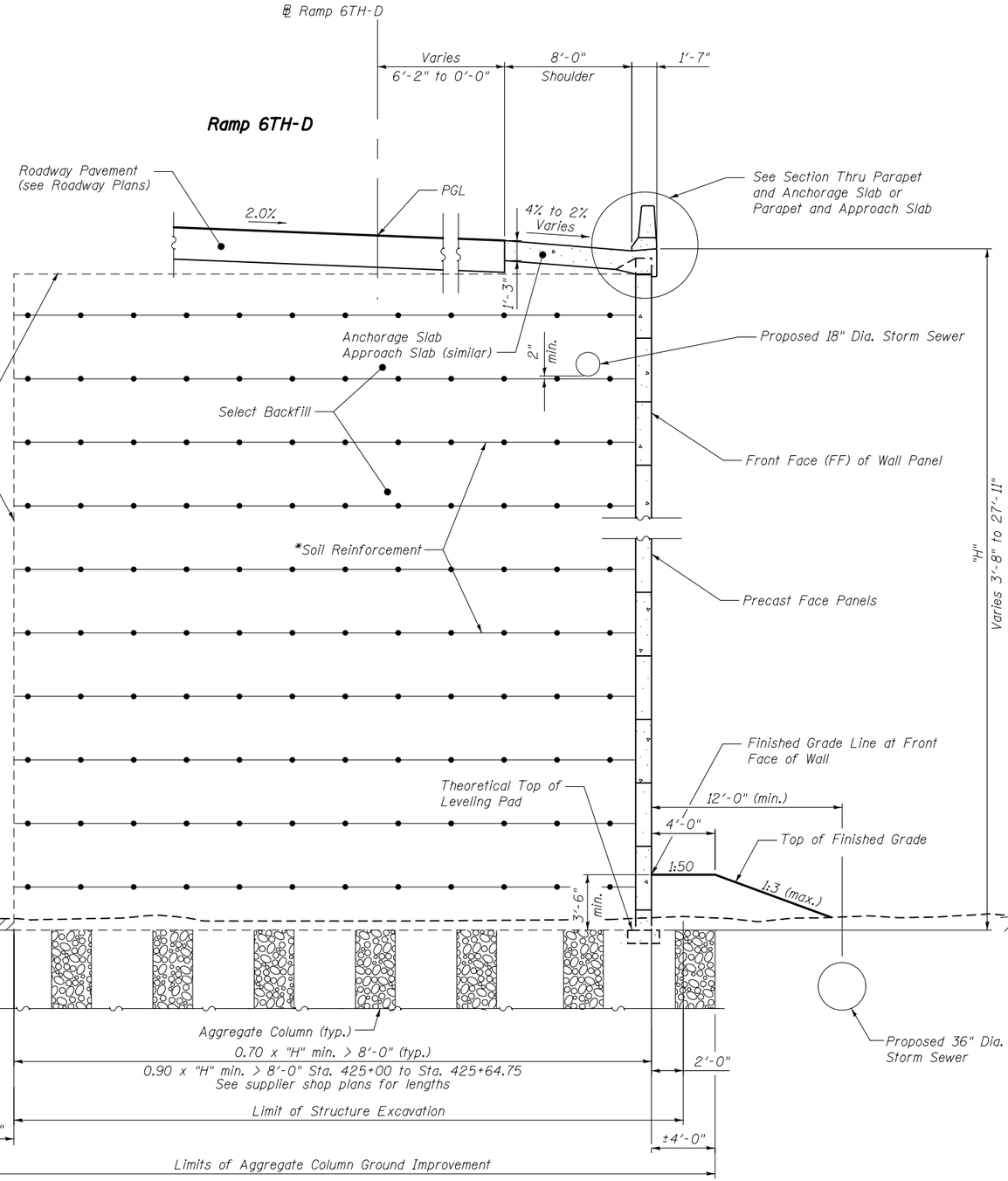


SECTION THRU PARAPET AND ANCHORAGE SLAB

** ℄ Ramp 6th-D,
Sta. 422+75.00 to Sta. 424+87.00 Cross Slope = 4%
Sta. 424+87.00 to Sta. 425+27.00 Cross Slope Transition
Sta. 425+27.00 to Sta. 426+05.05 Cross Slope = 2%



SECTION THRU PARAPET AND APPROACH SLAB



TYPICAL WALL SECTION

NOTE:

* The M.S.E. wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft. of wall.

Note:
See Sheet 2 for Ground Improvement Performance Requirements.

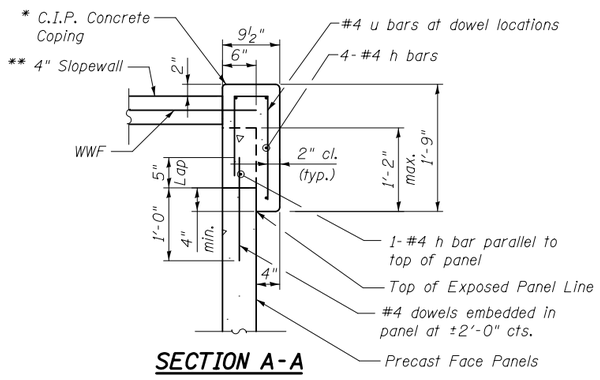
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED -
	CHECKED - JMH	REVISED -
PLOT SCALE =	DRAWN - MLA	REVISED -
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

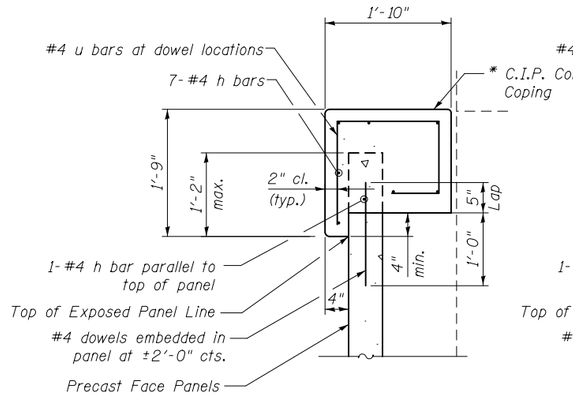
MSE DETAILS 1
RAMP 6TH-D RETAINING WALL 03
STRUCTURE NO. 081-6012
SHEET NO. 3 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1140
		CONTRACT NO. 64C08		
ILLINOIS	FED. AID PROJECT			

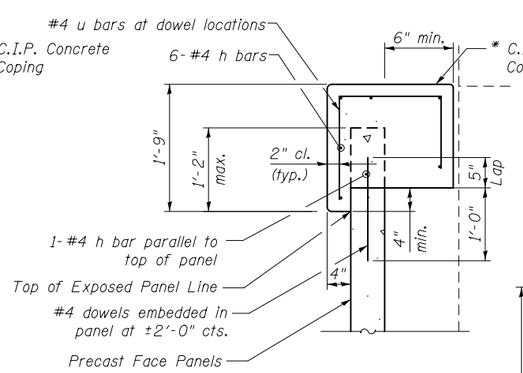


SECTION A-A

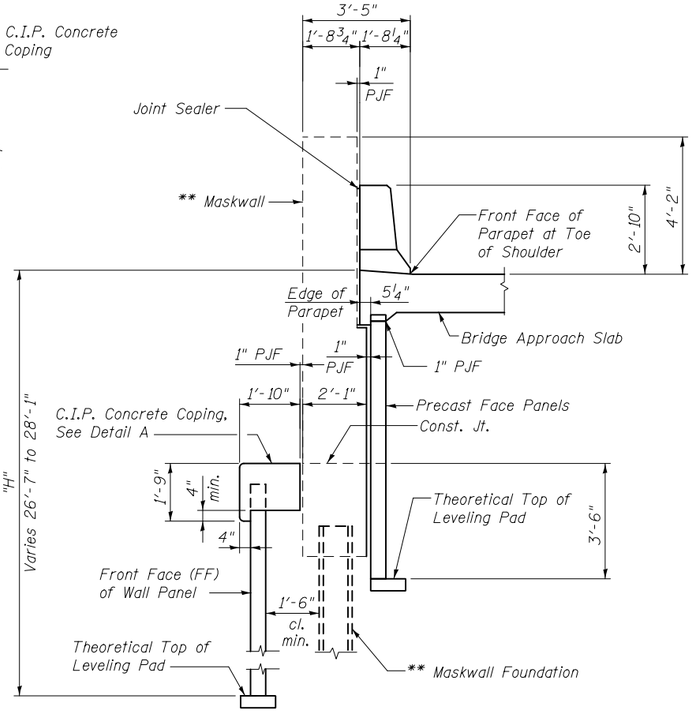
*Concrete and reinforcing steel for C.I.P. Concrete Coping are included in the cost of Mechanically Stabilized Earth Retaining Wall.



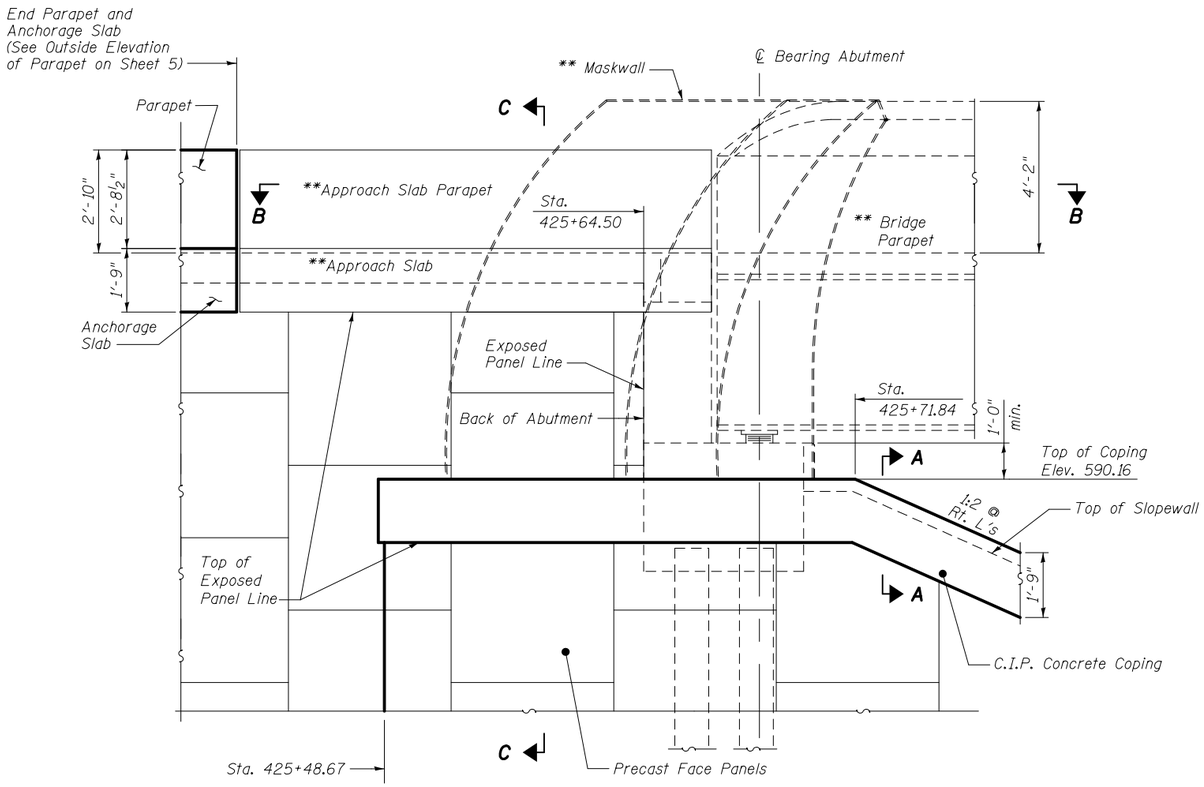
DETAIL A
C.I.P. CONCRETE COPING



SECTION D-D

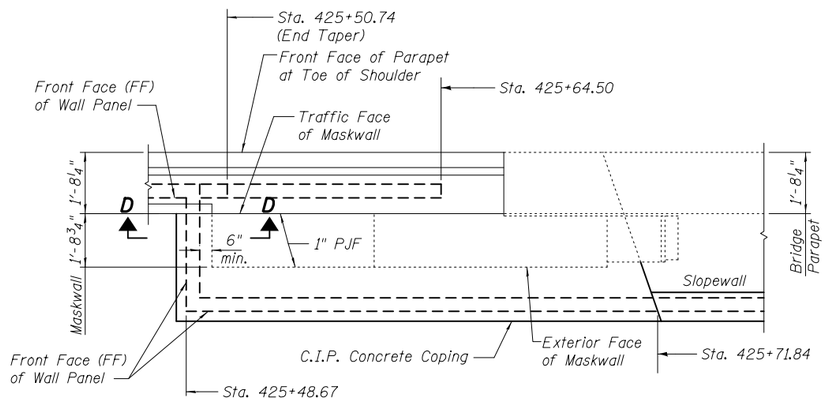


SECTION C-C



DETAIL 1

(Maskwall foundation not shown for clarity.)



SECTION B-B

** See Proposed Bridge SN 081-0187

Notes:
The soil reinforcement limits for the upper and lower MSE walls shall meet the design requirements provided within the Typical Sections. The width of the lower wall soil reinforcement shall be designed based on "H" as dimensioned in Section C-C. The width of the upper wall soil reinforcement shall be designed based on the height from the upper wall Theoretical Top of Leveling Pad to the Toe of Shoulder and shall be equal to or greater than the limit of soil reinforcement required for the lower MSE wall.
For location of Detail 1, see Sheet 1.

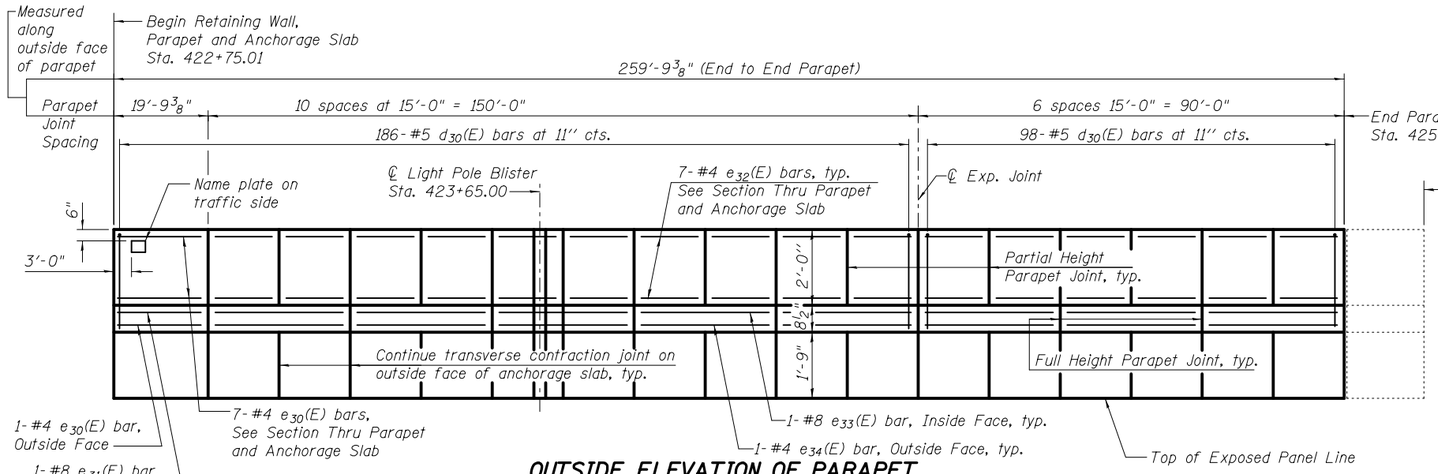
MODJESKI and MASTERS Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED -
	CHECKED - JMH	REVISED -
PLOT SCALE =	DRAWN - MLA	REVISED -
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED -

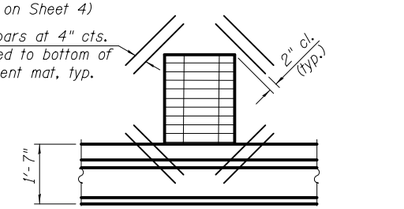
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MSE DETAILS 2
RAMP 6TH-D RETAINING WALL 03
STRUCTURE NO. 081-6012
SHEET NO. 4 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1141
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

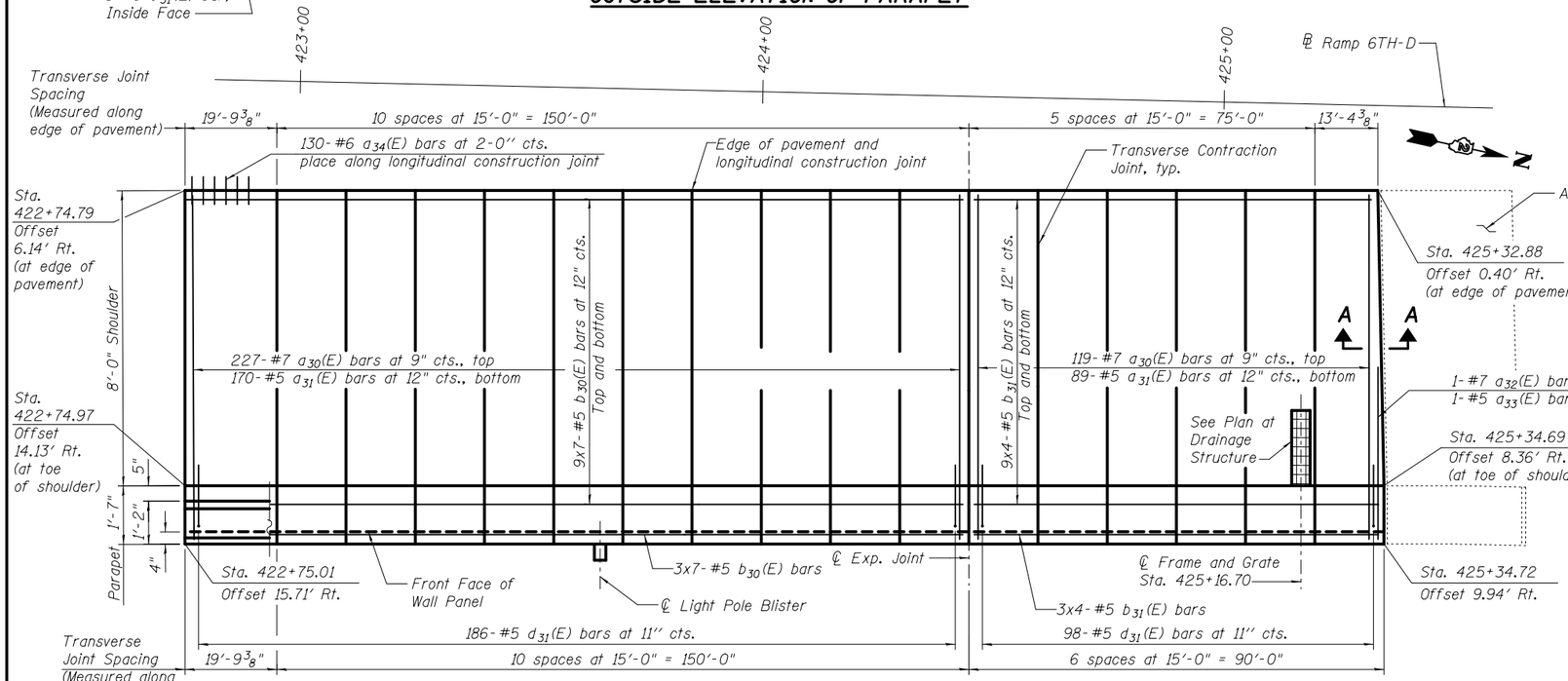


OUTSIDE ELEVATION OF PARAPET

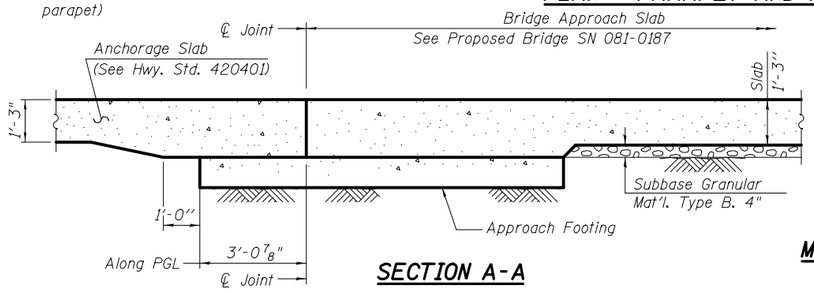


PLAN AT DRAINAGE STRUCTURE

(Cut longitudinal reinforcement to clear drainage structure)



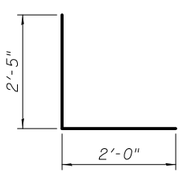
PLAN - PARAPET AND ANCHORAGE SLAB



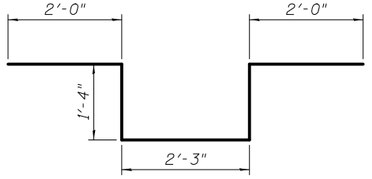
SECTION A-A

MIN. BAR LAP

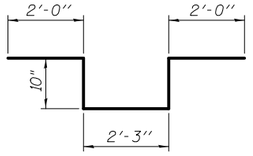
#5 bars - 3'-3"



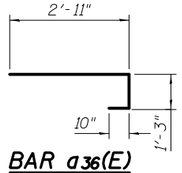
BAR d32(E)



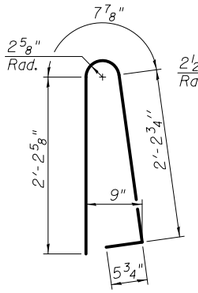
BAR d33(E)



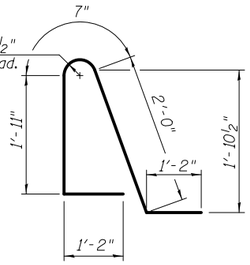
BAR d37(E)



BAR d36(E)



BAR d30(E)



BAR d31(E)

RETAINING WALL 03
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_{30}(E)$	346	#7	10'-6"	
$a_{31}(E)$	259	#5	9'-6"	
$a_{32}(E)$	1	#7	5'-0"	
$a_{33}(E)$	1	#5	4'-0"	
$a_{34}(E)$	130	#6	2'-0"	
$a_{35}(E)$	8	#5	2'-0"	
$a_{36}(E)$	3	#6	5'-0"	
$a_{37}(E)$	3	#6	7'-11"	
$b_{30}(E)$	147	#5	27'-0"	
$b_{31}(E)$	84	#5	25'-0"	
$d_{30}(E)$	284	#5	5'-7"	
$d_{31}(E)$	284	#5	6'-10"	
$d_{32}(E)$	3	#6	4'-5"	
$d_{33}(E)$	5	#6	8'-11"	
$e_{30}(E)$	8	#4	19'-6"	
$e_{31}(E)$	1	#8	19'-6"	
$e_{32}(E)$	112	#4	14'-9"	
$e_{33}(E)$	8	#8	29'-9"	
$e_{34}(E)$	8	#4	29'-9"	
Reinforcement Bars, Epoxy Coated			Pound	22,630
Concrete Superstructure			Cu. Yd.	148.3

Notes:

For Section Thru Parapet and Anchorage Slab, see Sheet 3.

Bars indicated thus 9x4-#5 etc. indicates 9 lines of bars with 4 lengths per line.

Joints in the adjacent pavement shall be aligned with the anchorage slab joints.

Stations and offsets on this sheet are given to the outside face of the parapet and are measured from the Ramp 6th-D baseline, except as noted.

See Sheet 6 for Light Pole Blister reinforcement.

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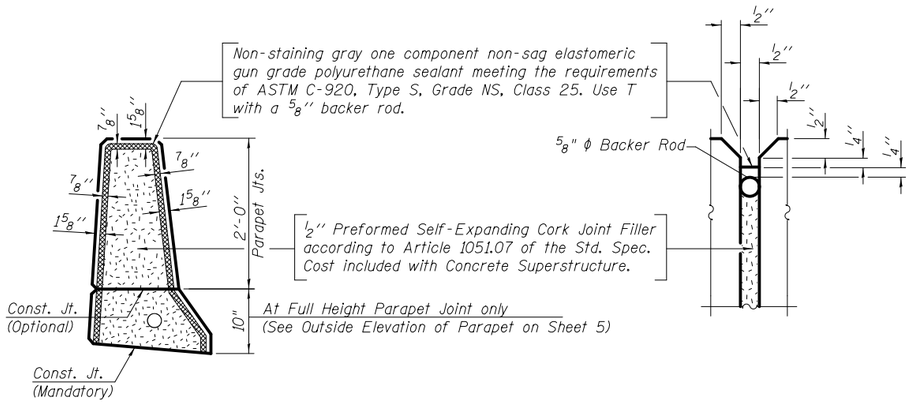
USER NAME =	DESIGNED - YSS	REVISED -
	CHECKED - ZJB	REVISED -
PLOT SCALE =	DRAWN - MLA	REVISED -
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED -

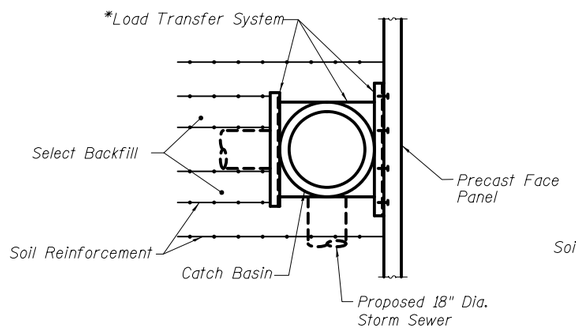
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET AND ANCHORAGE SLAB
RAMP 6TH-D RETAINING WALL 03
STRUCTURE NO. 081-6012
SHEET NO. 5 OF 11 SHEETS

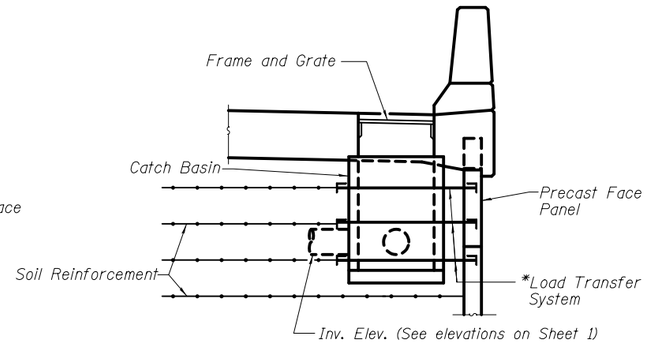
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1142
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



PARAPET JOINT DETAILS

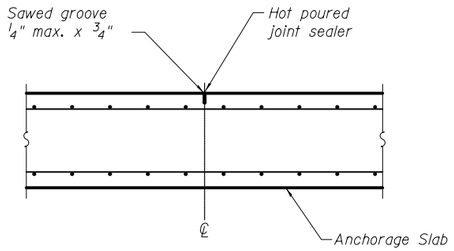


ANCHORAGE SLAB INLET PLAN

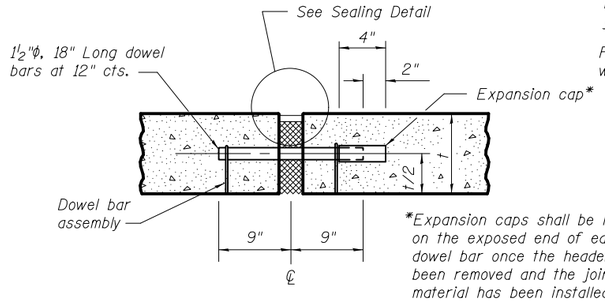


ANCHORAGE SLAB INLET SECTION

*M.S.E. supplier to design load transfer system to accommodate concrete pipe and catch basin. (See Drainage and Utilities Plans for inlet details.)



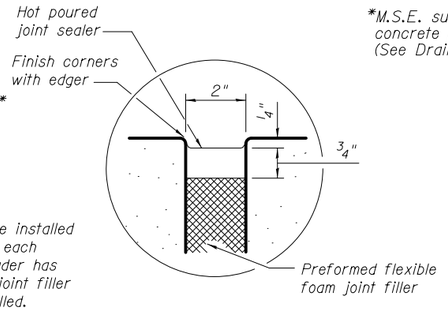
TRANSVERSE CONTRACTION JOINT



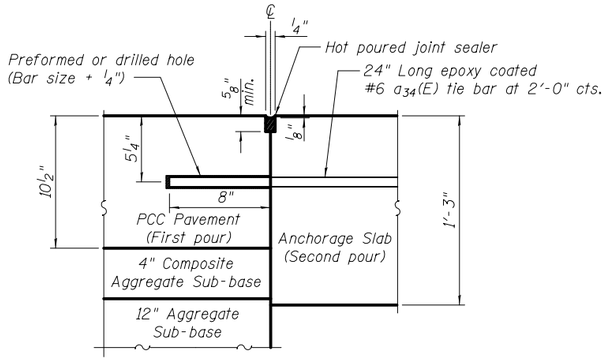
*Expansion caps shall be installed on the exposed end of each dowel bar once the header has been removed and the joint filler material has been installed.

ANCHORAGE SLAB EXPANSION JOINT

Expansion joint and dowel bars included in the cost of Concrete Superstructure.

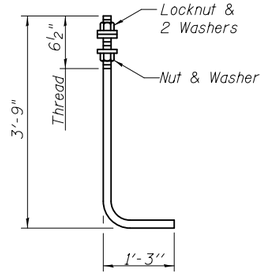


SEALING DETAIL



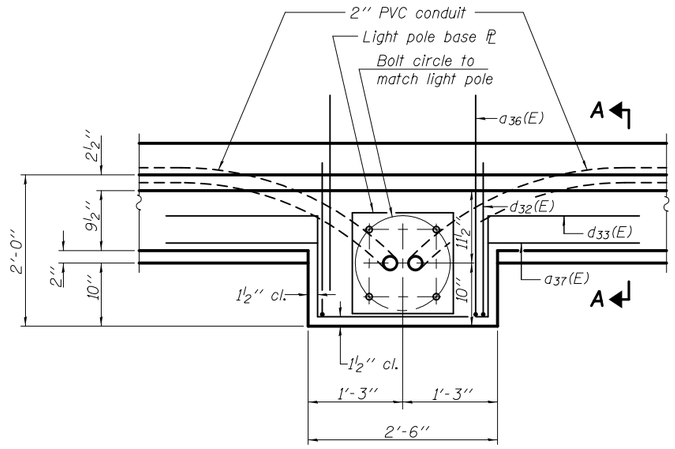
Notes:
The Contractor may substitute at his option, formed in place tie bars provided the bar length is increased to 30" and the tie bar is centered across the joint.
Preformed or drilled hole shall be in the first pour.

LONGITUDINAL CONSTRUCTION JOINT GROUTED-IN-PLACE TIE BAR



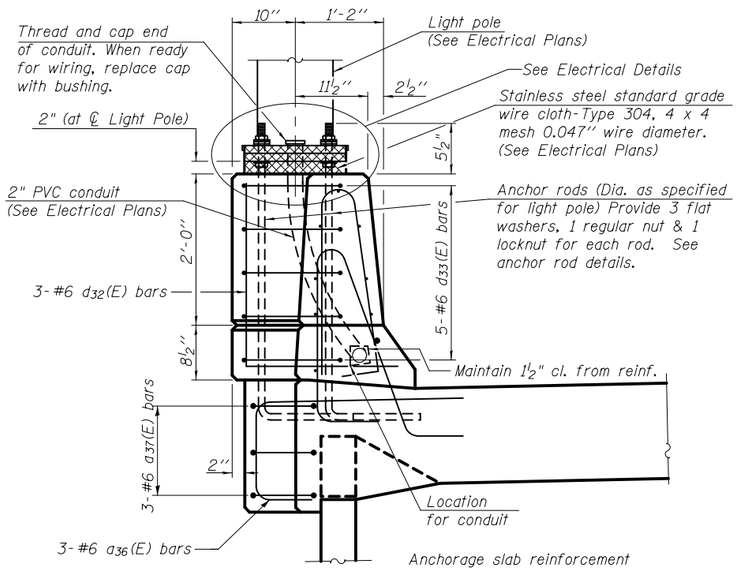
ANCHOR ROD

Diameter as specified for light poles (ASTM F 1554 Grade 105). Full length hot dipped galvanized.



Note:
Cost of anchor rods is included with Concrete Superstructure.

PLAN



SECTION A-A

LIGHT POLE BLISTER DETAILS

USER NAME =	DESIGNED - YSS	REVISED -	
	CHECKED - JMH	REVISED -	
PLOT SCALE =	DRAWN - MLA	REVISED -	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED -	

MODJESKI and MASTERS
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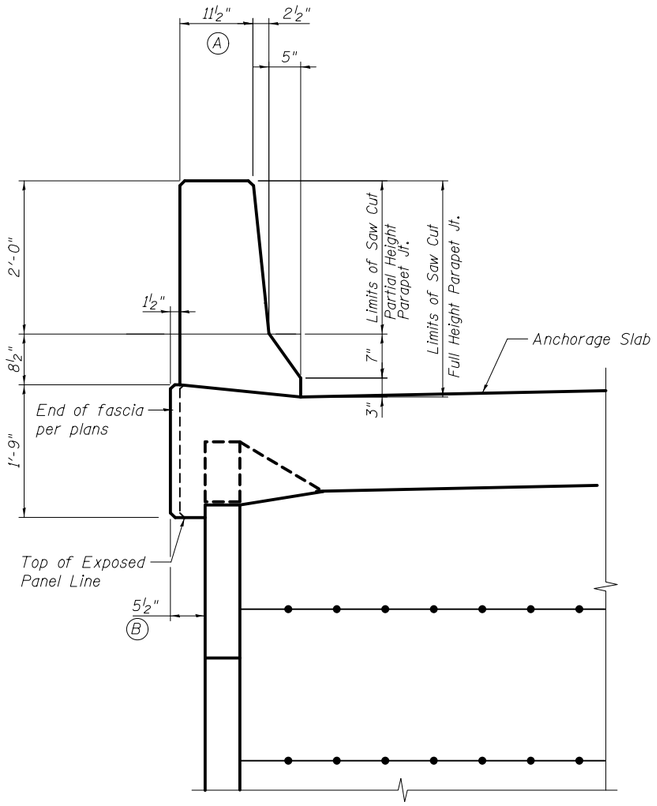
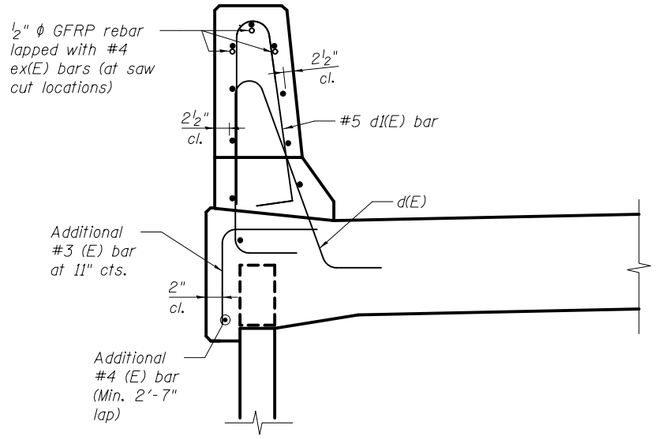
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS
RAMP 6TH-D RETAINING WALL 03
STRUCTURE NO. 081-6012
SHEET NO. 6 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1143
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



SECTION THRU PARAPET AND ANCHORAGE SLAB



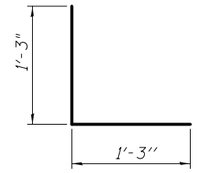
SECTION

(Showing reinforcement clearances for slip forming and additional reinforcement)

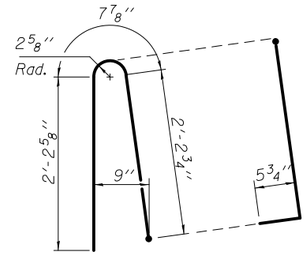
GENERAL NOTES

All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A equals 0.016 cu. yds./ft.

Full thickness saw cut at all joint locations in lieu of cork joint filler.

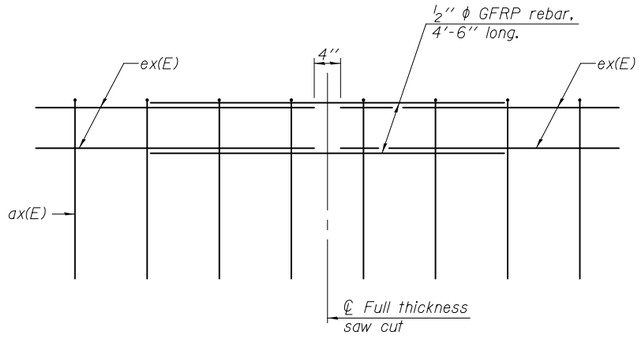


#3 (E) BAR



ALTERNATE BAR #5-d1(E)

(When conduit is present)



GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)

benesch
engineers · scientists · planners
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450

USER NAME =	DESIGNED - KMP	REVISED -
	CHECKED - SLD	REVISED -
PLOT SCALE =	DRAWN - KMP	REVISED -
PLOT DATE = 1/20/2017	CHECKED - SLD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RETAINING WALL PARAPET SLIPFORMING OPTION
RAMP 6TH-D RETAINING WALL 03
STRUCTURE NO. 081-6012
SHEET NO. 7 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1144
		CONTRACT NO. 64C08		
	ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Page 1 of 1

Date 9/19/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KB

SECTION I-74 Bridge over Mississippi River LOCATION (N=563805.847, E=2459619.415), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0301
Station 423 + 08
Offset 9' Rt.
Ground Surface Elev. 575.78 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 564.8 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Fill: Brick And Silty Sand				
		5		
		3		
		3		
		2		
	-5	3		
569.78		3		
Lean Clay (CL) yellowish brown, moist to 11.0', wet deeper, loose, moderate plasticity, trace sand		2		
		2		
		2		
Sample 4: Atterberg limit test performed (LL=31, PI=11)		2		
		3		
	-10	3		
▼				
563.78				
Fine to Coarse Silty Sand (SM) yellowish brown, little gravel, loose Sample 6 (12'13.5'): grain size analysis performed		3		
		4		
		4		
561.78				
Fine to Coarse Sand (SP) light brown, wet, dense to very dense, trace silt		30		
	-15	50/2"		
559.78				
End of Boring				
	-20			

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
CH2M HILL

SOIL BORING LOG

Page 1 of 1

Date 9/26/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=563752.136, E=2459609.413), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0302
Station 422 + 58
Offset 14' Lt.
Ground Surface Elev. 576.65 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 566.7 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Topsoil dark brown				
575.65		3		
Silt (ML) Dark brown to yellow orange, dry, loose, little medium to fine sand		3	4.5	
		4	P	
		4		
trace coarse sand		5		
		4	4.5	
		5	P	
	-5	5		
570.65				
Lean Clay<B>> (ML-CL) Little gravel, medium brown with yellowish orange streaks, dry to moist, very loose to loose		4		
		4	1.5	
		3	P	
		4		
Sample 4 (8'-10'): Atterberg limit test performed (LL=35, PI=20)		2		
		1	1.5	
		2	P	
▼	-10	2		
565.65				
Very Silty Fine to Coarse Sand (SM) Gray with mingled brown, little gravel, wet, possible gumbo, tried to obtain ST from 11' to 13' but coarse grained soil at 12' prevented from push a full sample		5		
562.65		7		
Shelby tube recovery collected in bag sample, coarse gravels and fine cobbles from 12' to 13' (heavy grinding)		4		
Sample 5 (13'-15'): grain size analysis performed	-15	14		
560.45				
Clayey Fine to Coarse Sand (SC) little gravel, greenish gray with gray streaks, dry, trace fine sands, medium dense, possible weathered rock		36		
		45	0.8	
		50/4		
Sample 6 (16'-18'): grain size analysis and Atterberg limit (LL=30, PI=19) tests performed		50/5		
	-20			

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Weathered Sandstone Top 2" medium to fine gravel sized very angular light gray rock fragments, possible lightly weathered rok with silt and clay, wet, some coarse to fine sands remainder: light gray with greenish gray streaks, dry, hard, impermeable, silt with fine sands, very strong cementation, possible completely weathered sandstone *(continued)*				
555.75				
~~Borehole continued with rock coring.~~	-25			
	-30			
	-35			
	-40			

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
CH2M HILL

SOIL BORING LOG

Page 1 of 1

Date 9/19/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KB

SECTION I-74 Bridge over Mississippi River LOCATION (N=563709.105, E=2459644.732), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0303
Station 422 + 08
Offset 9' Rt.
Ground Surface Elev. 576.78 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 565.8 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Concrete				
574.78		1		
Silty Sand (SM) grayish brown, slightly moist, very loose, fine to coarse grained, trace fines□Rimac: Pu = 30 lbs		1	0.6	
		1		
Sample 1: grain size analysis performed		0		
572.78	-5	0	1.0	
Lean Clay (CL) brown to dark brown, moist, very loose		2	P	
Sample 2: Atterberg limit (LL=36, PI=21) test performed		0		
Rimac: Pu = 48 lbs		1	0.9	
		1		
Sample 3: Atterberg limit (LL=45, PI=24) test performed		0		
		2		
566.78	-10	3		
Silty Sand (SM) dark gray, moist to wet, medium dense, trace gravel ▼		2		
		11		
		12		
		50/5"		
563.78				
End of Boring				
	-20			

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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED -	
	CHECKED - JMH	REVISED -	
PLOT SCALE =	DRAWN - MLA	REVISED -	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 1
RAMP 6TH–D RETAINING WALL 03
STRUCTURE NO. 081–6012
SHEET NO. 8 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1145
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Page 1 of 1

Date 11/1/05

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY L. Hunt

SECTION I-74 Bridge over Mississippi River LOCATION (N=564067.532, E=2459567.858), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station
BORING NO. PRMPD02
Station 425+74
Offset 26' Rt.
Ground Surface Elev. 574.20 ft

Surface Water Elev. ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
	6			**Clay (CL)** little gravel, trace sand, dark brown, dry to moist, firm to stiff
	4 4 4	1.3 P		
	WOH			
	1 1 2	0.9 P		
-5				
	1			
	1 1 2	0.6 P	13.0	
565.20	WOH			
	WOH 8 16			
	WOH			**Silty Clay (CL)** trace sand and gravel, gray mottled orange brown and dark brown, moist, soft to firm. Shelby tube sample T-1 from 9'-11' from adjacent location having mc: 28%, dry density: 84.5pcf and UC: 920psf
-10	WOH	0.3 P	37.0	
	WOH 1			
	WOH			
	50/3	0.8 P		
560.70	50/2			
				Borehole continued with rock coring.
-15				
-20				

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
CH2M HILL

SOIL BORING LOG

Page 1 of 1

Date 11/1/05

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY L. Hunt

SECTION I-74 Bridge over Mississippi River LOCATION (N=563955.586, E=2459599.114), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station
BORING NO. PRMPD03
Station 424+58
Offset 28' Rt.
Ground Surface Elev. 573.45 ft

Surface Water Elev. ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter 561.4 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
	5			**Fill Clay (CL)** trace gravel, sand, and brick, dark brown, dry to moist, homogeneous. 1' of concrete, pavement, and gravel on top of sediment.
	6 6 4	1.5 P		
	2			**Clay (CL)**trace to little silt, trace sand, dark brown, dry to moist, stiff
	2 3 4	1.6 P		
-5				
	1			
	2 3 3	1.0 P		
566.45				
	WOH			**Silty Clay (CL, CL-ML)** gray brown, mottled orange brown and dark brown, dry to moist, soft to firm
	2 2 3	0.6 P		
564.45				
	1			
-10	1 2 3	0.4 P		
	1			**Sandy Clay to Sand (SC)** Sandy Clay to Sand, gray, moist to wet
	2			
560.45	13 10			
	7			**Siltstone** Siltstone, little sand, gray, moist, homogeneous.
	9 16 30			
-15				
554.45				
	50/4			**Shale** Shale, gray, moist, homogeneous.
-20				

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Shale Shale, gray, moist, homogeneous. *(continued)*
				No Sample.
	50/0			
-25				
547.45				
544.95				Auger refusal at 28.5'; end of borehole. End of Boring
-30				
-35				
-40				

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
CH2M HILL

SOIL BORING LOG

Date 9/7/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION I-74 Bridge over Mississippi River LOCATION (N=564029.213, E=2459513.152), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station 437+80.7

BORING NO. PRMPD-05
Station 425 + 51
Offset 37' Lt.
Ground Surface Elev. 575.10 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 564.1 ft ▼
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
PAVEMENT - asphalt and base course	574.10			
SILT - black, with rubble (FILL)		4 6 5		
	571.60			
CLAY - medium gray to orange brown, slightly to medium plastic, medium stiff, moist	-5	2 1 2	0.5 B	24.9
		1		
[Attempted Shelby tube at 8.5'-10.5'; no recovery]	566.60	2 1	0.7 B	38.9
SAND - red brown, fine grained, loose, wet	-10			
[Attempted Shelby tube at 11'-13'; no recovery; followed up with SPT]	▼	1 1 1		
	561.10	1		
SHALE - green gray, clayey, severely weathered	-15	3 13 12	1.4 B	23.6
	558.40	41 50/1"	1.4 B	
Borehole continued with rock coring.	-20			

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
CH2M HILL

ROCK CORE LOG

Date 9/7/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION I-74 Bridge over Mississippi River LOCATION (N=564029.213, E=2459513.152), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO. _____
Station 437+80.7

CORING BARREL TYPE & SIZE NQ Wireline

BORING NO. PRMPD-05
Station 425 + 51
Offset 37' Lt.
Ground Surface Elev. 575.10 ft

Core Diameter 1.8 in
Top of Rock Elev. 561.60 ft
Begin Core Elev. 558.40 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
SANDSTONE - medium gray, very fine grained, silt in matrix, abundant shale partings, conglomeratic at 17.5'-18.1' (TRANSITIONAL)	558.40 557.10	Run 1	82	23	1	
LIMESTONE - gray, fine grained, with occasional to some thin green shale partings and seams, locally stylolitic, hard, thin to medium bedded, predominantly horizontal to very low angle fractures, planar to slightly irregular, smooth to slightly rough, fresh	-20					
		Run 2	100	95	1.2	
	-25					
		Run 3	97	87	1	1081.2
-slightly rough fractures across stylolites at 28.3'-30.6'	-30					
-thick bedded, occasional stylolites at 30.6'-35.6'		Run 4	100	100	2.6	
-minor pitting with some "birdseye" texture from 32.1' to 35.6'	-35					
		Run 5	100	84	1.3	

Color pictures of the cores Yes
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)

Illinois Department of Transportation
Division of Highways
CH2M HILL

ROCK CORE LOG

Date 9/7/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION I-74 Bridge over Mississippi River LOCATION (N=564029.213, E=2459513.152), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO. _____
Station 437+80.7

CORING BARREL TYPE & SIZE NQ Wireline

BORING NO. PRMPD-05
Station 425 + 51
Offset 37' Lt.
Ground Surface Elev. 575.10 ft

Core Diameter 1.8 in
Top of Rock Elev. 561.60 ft
Begin Core Elev. 558.40 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
LIMESTONE - gray, fine grained, with occasional to some thin green shale partings and seams, locally stylolitic, hard, thin to medium bedded, predominantly horizontal to very low angle fractures, planar to slightly irregular, smooth to slightly rough, fresh *(continued)* -occasional soft rock-like green shale partings and clasts in limestone with fractures along shale, occasional pitting, at 38.9'-40.3'	-40					
-green rock-like shale seam with 85° fracture at 40.3'-40.8'						
-medium gray, fine to medium grained, occasional shale partings	532.50					
End of Boring	-45					
	-50					
	-55					

Color pictures of the cores Yes
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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED -	
	CHECKED - JMH	REVISED -	
PLOT SCALE =	DRAWN - MLA	REVISED -	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 3
RAMP 6TH-D RETAINING WALL 03
STRUCTURE NO. 081-6012
SHEET NO. 10 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1147
			CONTRACT NO. 64C08	
		ILLINOIS	FED. AID PROJECT	

SOIL BORING LOG

Page 1 of 1

Date 7/1/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81B / 81-HVB LOCATION NE 1/4, SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. _____
Station _____
BORING NO. PRMP 6th D-03
Station 424+49
Offset 16 Lt
Ground Surface Elev. 576.4 ft

Surface Water Elev. _____
Stream Bed Elev. _____

Groundwater Elev.:
First Encounter _____ ft
Upon Completion 562.4 ft ▽
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
FILL - Very dark brown, moist to wet, medium to stiff, silty, lean CLAY	2	3 4 4	0.65B	39
572.90				
FILL - Brown, iron staining visible, moist, medium, sandy, clayey SILT with trace gravel, iron and metal debris	4	7 3 3		19
	6			
	8			
567.40		3		50
Brown, moist, medium, silty CLAY		3 3		
	10			
	12			
562.90				
Brown, wet, LIMESTONE fragments	14 ▽	7 13 10		
	16			
559.40				
Gray, weathered LIMESTONE, clayey shale filled voids	18	50/1"		
558.30				
End of Boring				

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)

SOIL BORING LOG

Page 1 of 1

Date 7/1/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1HVB LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6012
Station _____
BORING NO. RW 03-1
Station 425+60
Offset 9' Lt
Ground Surface Elev. 574.2 ft

Surface Water Elev. _____
Stream Bed Elev. _____

Groundwater Elev.:
First Encounter NE ft
Upon Completion _____ ft
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
ASPHALT				
573.70				
FILL - Dark brown, SILT with fine-grained sand and gravel	2	11 6 6		7
570.70				
FILL - Brown and gray, moist, loose, very-fine to medium-grained SAND and SILT with gravel	4	4 4 2	3.50P	19
	6		0.32S	19
567.20			0.60P	23
FILL - Gray, moist, loose, silty, medium-grained SAND with clay, wood debris			1.00P	22
566.20	8		0.37S	27
Gray with brown mottles, silty, lean CLAY with fine-grained sand			0.29S	31
			0.55S	33
	10			
563.20				
Gray, wet, very soft, clayey SILT	12	1 4 7		62
561.20				
INTACT ROCK				
560.70				
End of Boring		50/0"		

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)

SOIL BORING LOG

Page 1 of 1

Date 7/1/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1HVB LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6012
Station _____
BORING NO. RW 03-2
Station 423+60
Offset 14' Rt
Ground Surface Elev. 575.2 ft

Surface Water Elev. _____
Stream Bed Elev. _____

Groundwater Elev.:
First Encounter _____ ft
Upon Completion 566.7 ft ▽
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL				
574.95				
Very dark brown, moist, soft to medium stiff, silty, lean CLAY	2	3 2 3		26
571.70				
Dark gray, moist, soft to medium stiff, silty, lean CLAY with trace very-fine grained SAND	4	3 2 3	1.50P	21
569.70				
Gray, wet, stiff, silty CLAY	6		0.89S	22
				23
			0.90B	24
	8 ▽			24
				25
	10			26
563.70		7		9
Brown, wet, dense, silty, fine- to medium-grained SAND and gravel with limestone fragments	12	8 10		
	14	10 18 23		13
	16	20 23 24		
557.20				
Very dark gray, WEATHERED SHALE	18	25 50/5"	2.23S	17
555.70				
End of Boring				

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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED -
	CHECKED - JMH	REVISED -
PLOT SCALE =	DRAWN - MLA	REVISED -
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 4
RAMP 6TH-D RETAINING WALL 03
STRUCTURE NO. 081-6012
SHEET NO. 11 OF 11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1148
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

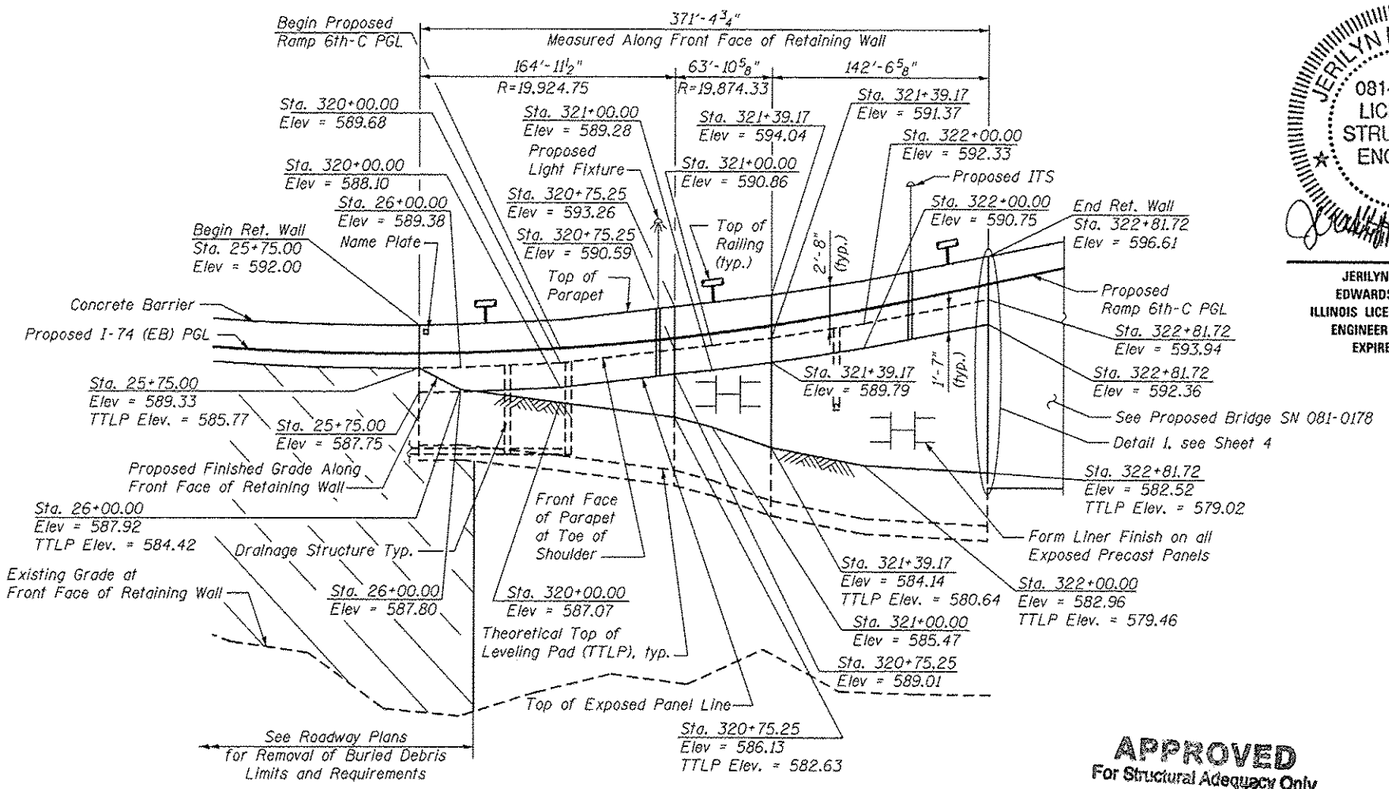
Benchmark No. 583:
Chiseled "X" on the West Side of Easterly Traffic Signal Mast Arm at Intersection of I-74 On/Off Ramp and River Road.
Elevation NAVD 88 = 570.128

Existing Structure:
None

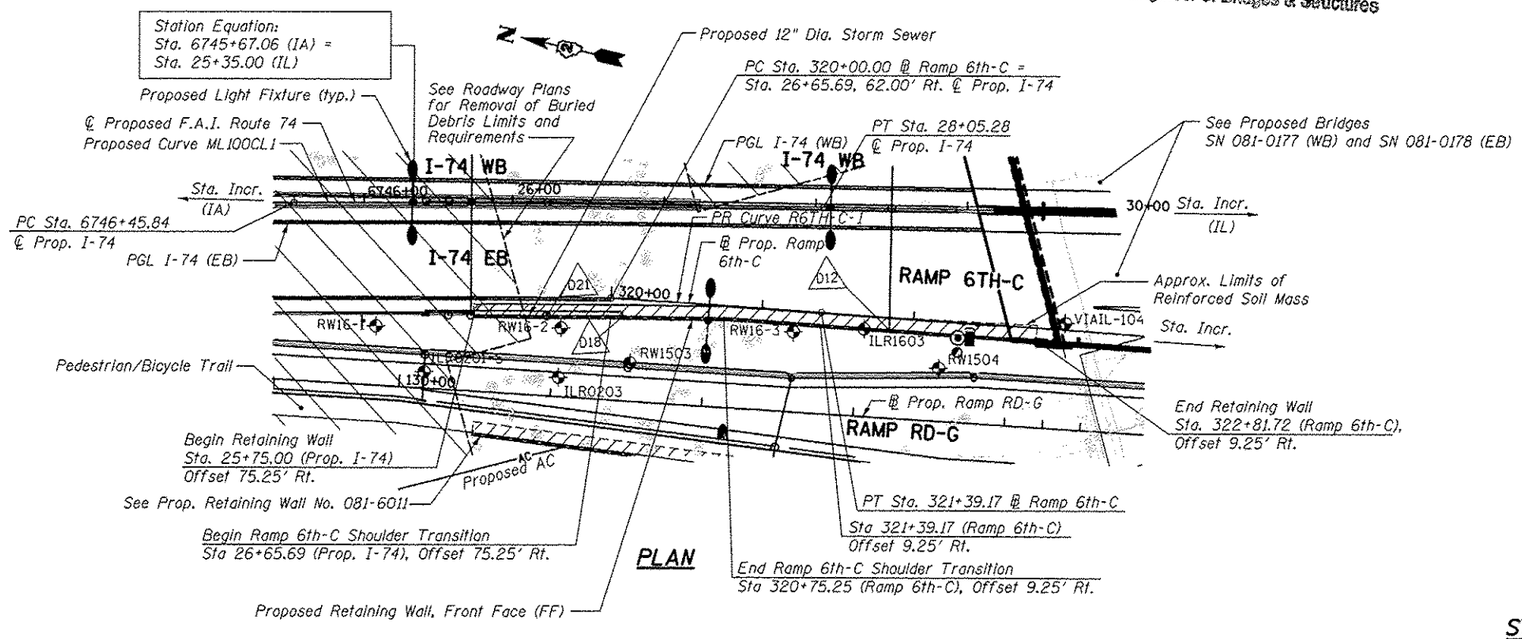
CURVE DATA

PR CURVE ML100CL1
PI Sta. = 26+30.75
Δ = 1° 00' 00" (RT)
D = 0° 17' 11"
R = 20,000.00'
T = 174.54'
L = 349.07'
E = 0.76'
e = N.C. (2.0%)
T.R. = N/A
S.E. RUN = N/A
PC Sta. = 24+56.21
(Sta. 6746+45.84 IA)
PT Sta. = 28+05.28

PR CURVE R6TH-C-1
PI Sta. = 320+69.58
Δ = 0° 24' 04" (RT)
D = 0° 17' 17"
R = 19,883.58'
T = 69.58'
L = 139.17'
E = 0.12'
e = N.C. (2.0%)
T.R. = N/A
S.E. RUN = N/A
PC Sta. = 320+00.00
PT Sta. = 321+39.17



ELEVATION
(Looking East)



PLAN

LEGEND

- Reinforced Soil Mass
- Buried Debris
- MSE Wall Panels
- Soil Borings
- Dx Drainage Structure

JERILYN M. HASSARD
081-006521
LICENSED STRUCTURAL ENGINEER OF
ILLINOIS
01-20-17

JERILYN M. HASSARD
EDWARDSVILLE, ILLINOIS
ILLINOIS LICENSED STRUCTURAL ENGINEER NO. 081-006521
EXPIRES 11/30/2018

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

DESIGN SPECIFICATIONS

2002 AASHTO
Standard Specifications for Highway Bridges

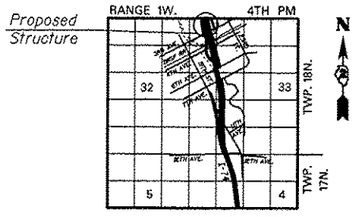
DESIGN STRESSES

FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
PRECAST UNITS
f'_c = 4,500 psi (Precast Face Panels)

INDEX OF SHEETS

DRAINAGE STRUCTURE TABLE

Structure	Station	Size and Type	Invert
D21	26+23.14	4' MH, Type A	Inv. N. Elev. 584.19 Inv. S. Elev. 584.29
D18	26+73.43	3' Inlet, Type B	Inv. N. Elev. 584.79
D12	28+50.00	3' Inlet, Type B	Inv. E. Elev. 587.00



LOCATION SKETCH

Notes:
Utilities shown will be relocated by others to avoid any conflicts during construction. (See Utility Plans)
See Drainage and Utilities Plans for inlets details.
See Electrical Plans for lighting and conduit details.
See MSE Wall Aesthetic Plans for required form liner finish.
See ITS Plans for ITS structure details.

GENERAL PLAN AND ELEVATION
F.A.I. ROUTE 74 SEC. (81-1)R & 81-1HVBR
ROCK ISLAND COUNTY
I-74 (EB) Sta. 25+75.00 to
RAMP 6TH-C Sta. 322+81.72
STRUCTURE NO. 081-6018 (RETAINING WALL 16)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED	
	CHECKED - JMH	REVISED	
PLOT SCALE =	DRAWN - PRC	REVISED	
PLOT DATE = 1/20/2017	CHECKED - JMH	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
I-74 (EB)/RAMP 6TH-C RETAINING WALL 16
STRUCTURE NO. 081-6018
SHEET NO. 1 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1149
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Wall stations and offsets are given to the front face (FF) of the wall and are measured from the Centerline F.A.I Route 74 and Ramp 6th-C baseline, except as noted. FF of the wall is to be considered edge of panel or form liner.
3. See Special Provision for Mechanically Stabilized Earth Retaining Walls for design and construction requirements.
4. Wall construction shall not begin until after ground improvement for the buried debris has been completed in the area of the new wall.
5. Slipforming of the aesthetic parapet is permitted.

MSE WALL SETTLEMENT

1. The Top of Exposed Panel Elevations shown on these plans are final elevations after any settlement. The wall system supplier shall take appropriate measures to accommodate the 0 to 5 inches of settlement that are anticipated from Sta. 25+75.00 to Sta. 322+81.72.

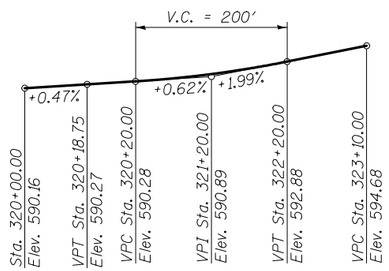
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Superstructure	Cu. Yd.	193.5
Protective Coat	Sq. Yd.	391
Reinforcement Bars, Epoxy Coated	Pound	40,390
Name Plates	Each	1
Steel Railing (Special)	Ft.	355
Mechanically Stabilized Earth Retaining Wall	Sq. Ft.	2,853

STATION 25+75.00
BUILT 201_ BY
STATE OF ILLINOIS
F.A.I. RT. 74
SEC. (81-1)R & 81-1HVBR
LOADING HS-20
STR. NO. 081-6018

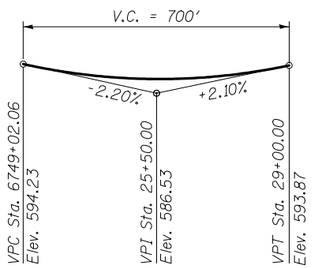
NAME PLATE

See Std. 515001



PROFILE GRADE

(Along ℄ Ramp 6th-C)



PROFILE GRADE

(Along ℄ Proposed F.A.I. Route 74)

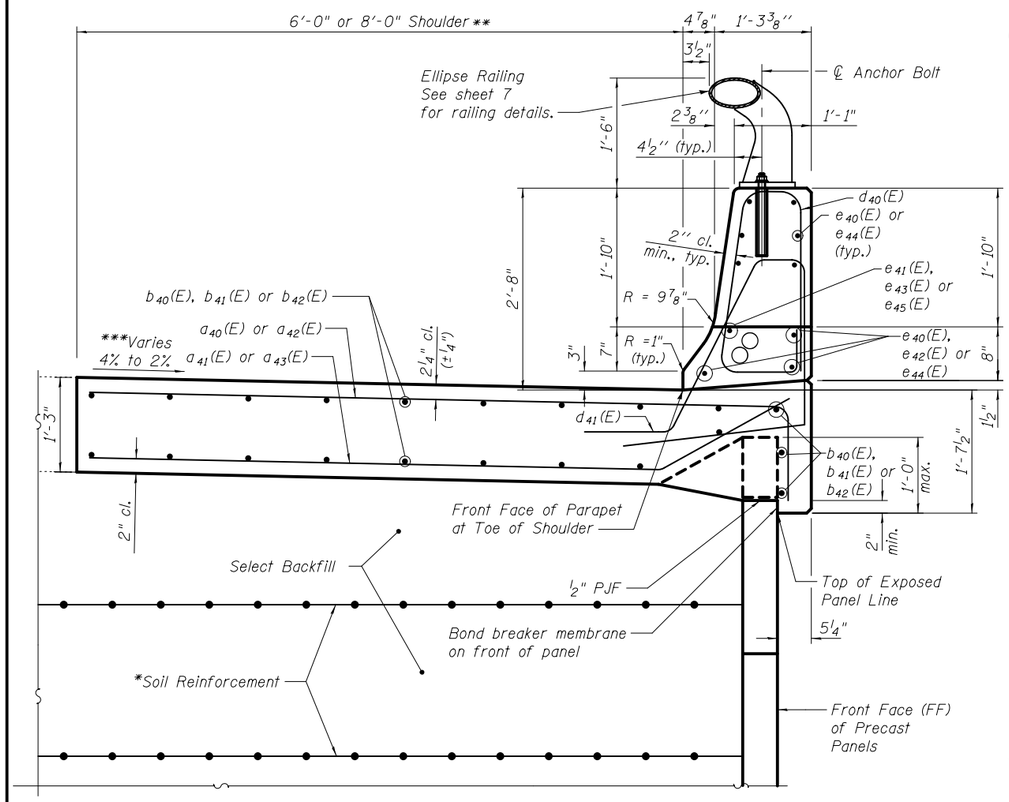
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES
I-74 (EB) / RAMP 6TH-C RETAINING WALL 16
STRUCTURE NO. 081-6018
SHEET NO. 2 OF 15 SHEETS

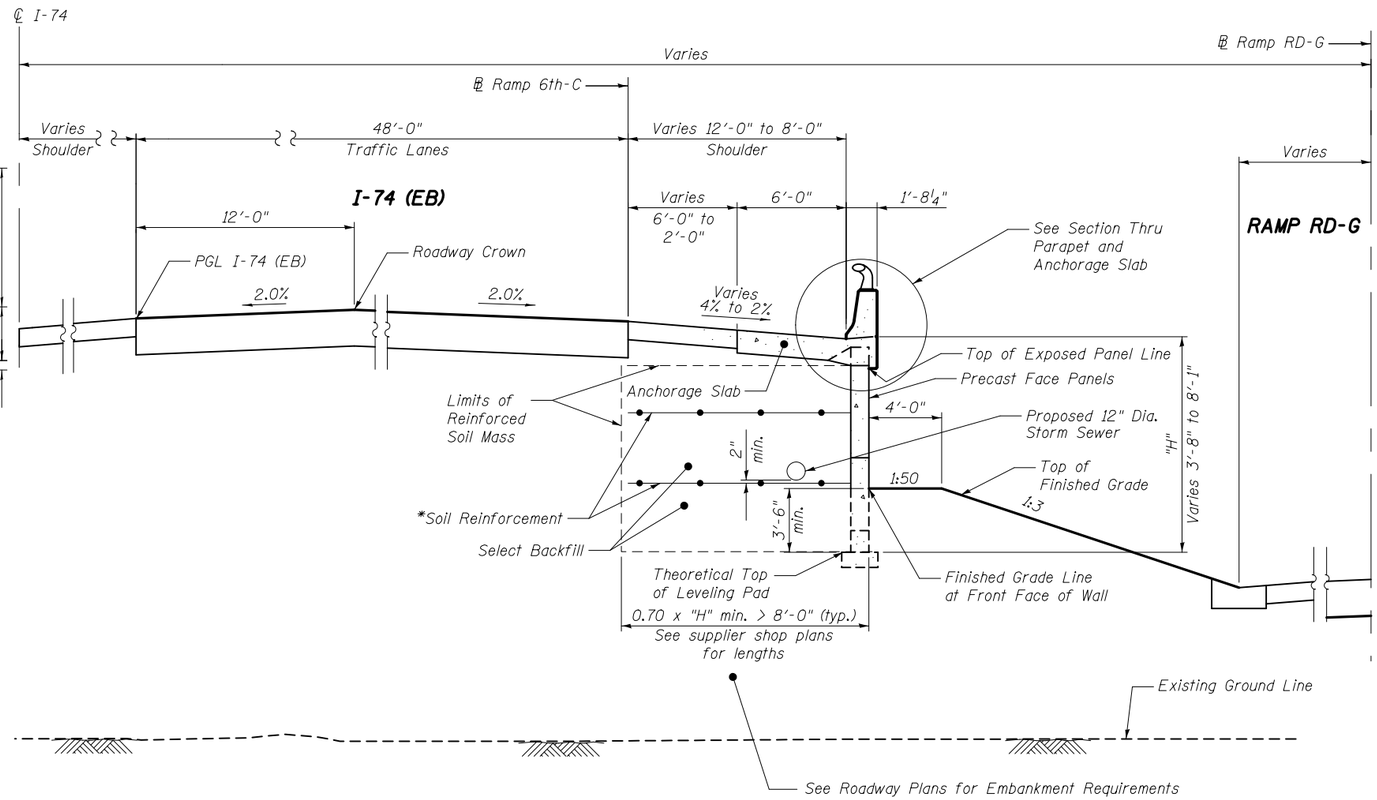
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1150
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



SECTION THRU PARAPET AND ANCHORAGE SLAB

** At Front Face of Wall,
Sta. 25+75.00 to Sta. 320+75.25, Anchor Slab Width = 6'-0"
Sta. 320+75.25 to Sta. 322+81.72, Anchor Slab Width = 8'-0"

*** At ℄ Ramp 6th-C,
Sta. 25+75.00 to Sta. 320+08.42 Cross Slope = 4%
Sta. 320+08.42 to Sta. 320+68.36 Cross Slope Transition
Sta. 320+68.36 to Sta. 322+81.72 Cross Slope = 2%



TYPICAL WALL SECTION

Sta. 25+75.00 (I-74) to Sta. 320+75.25 (Ramp 6th-C)

Note:

* The M.S.E. wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft. of wall.

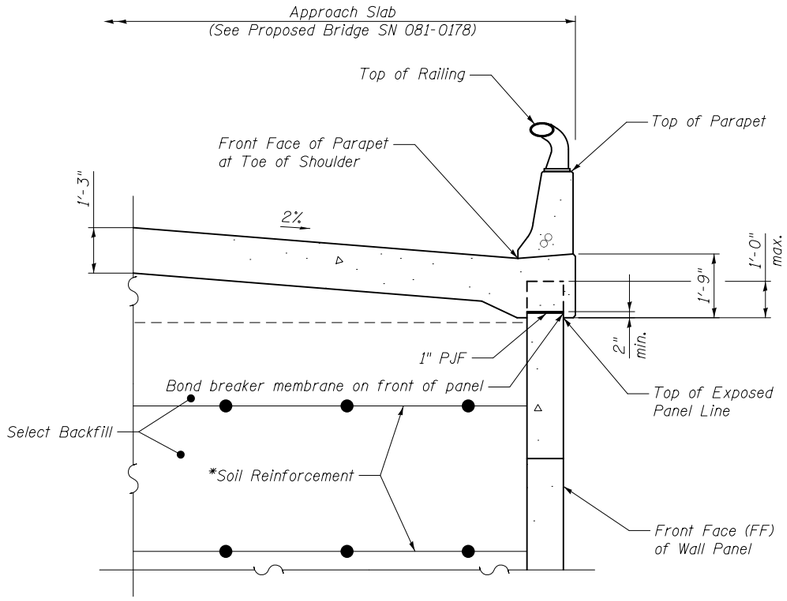
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - ZJB	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

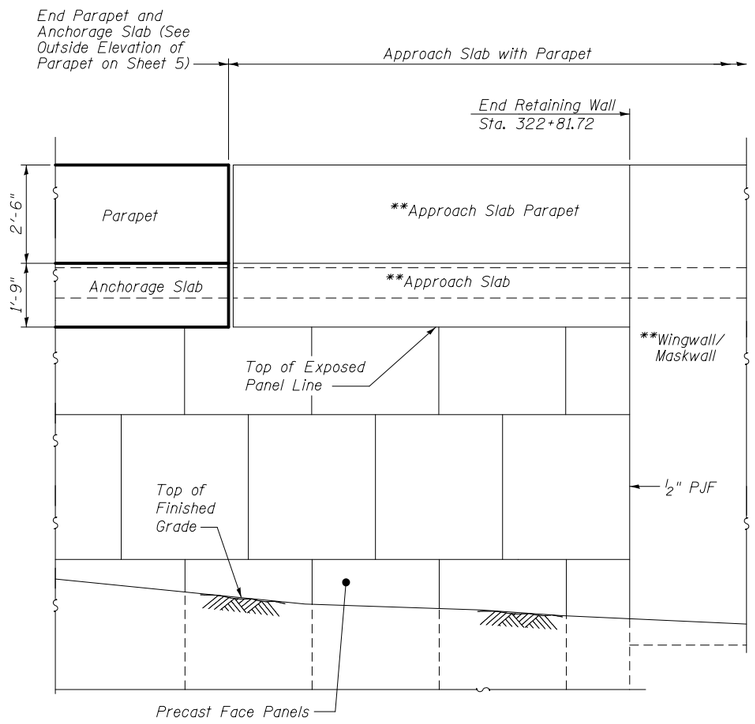
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MSE DETAILS 1
I-74 (EB) / RAMP 6TH-C RETAINING WALL 16
STRUCTURE NO. 081-6018
SHEET NO. 3 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1151
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

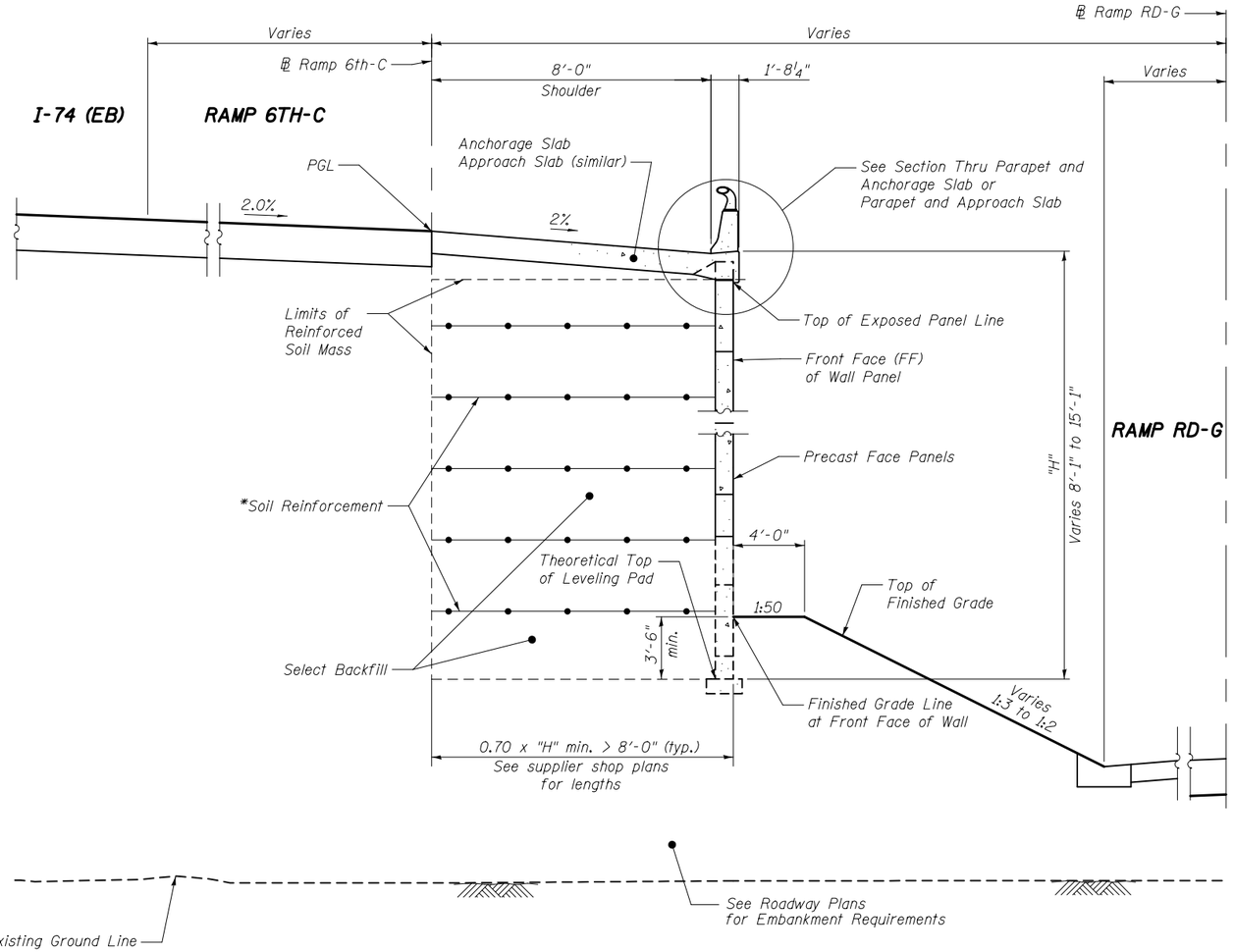


SECTION THRU PARAPET AND APPROACH SLAB



**See Proposed Bridge SN 081-0178

DETAIL 1



TYPICAL WALL SECTION

Sta. 320+75.25 to Sta. 322+81.72

Note:

*The M.S.E. wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft. of wall.

Notes:
For location of Detail 1, see Sheet 1.
For Section Thru Parapet and Anchorage Slab, see Sheet 3.

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - YSS	REVISED
		CHECKED - JMH	REVISED
	PLOT SCALE =	DRAWN - MLA	REVISED
	PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MSE DETAILS 2
I-74 (EB) / RAMP 6TH-C RETAINING WALL 16
STRUCTURE NO. 081-6018
SHEET NO. 4 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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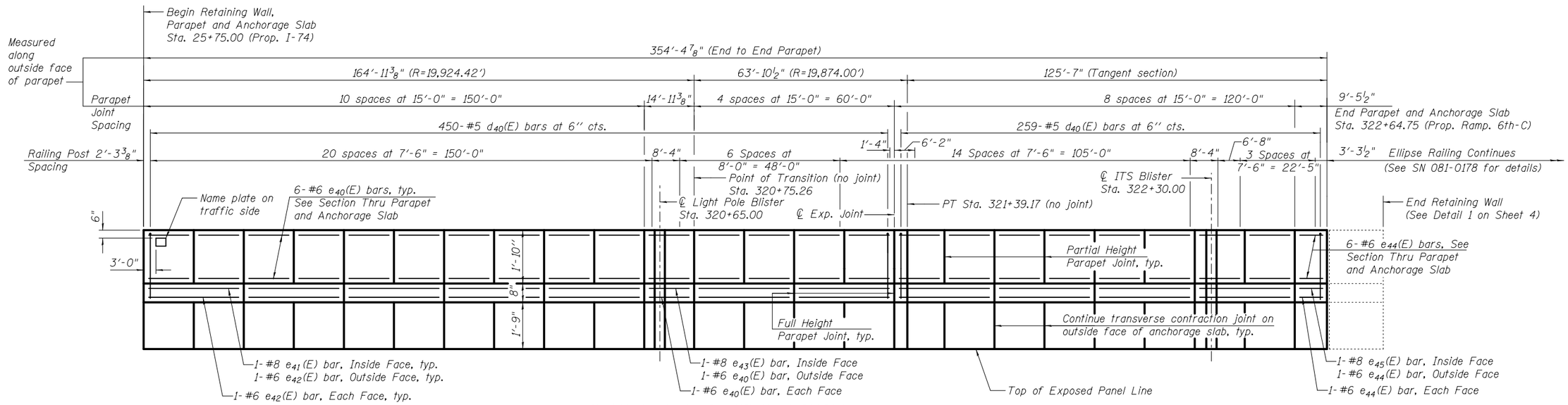
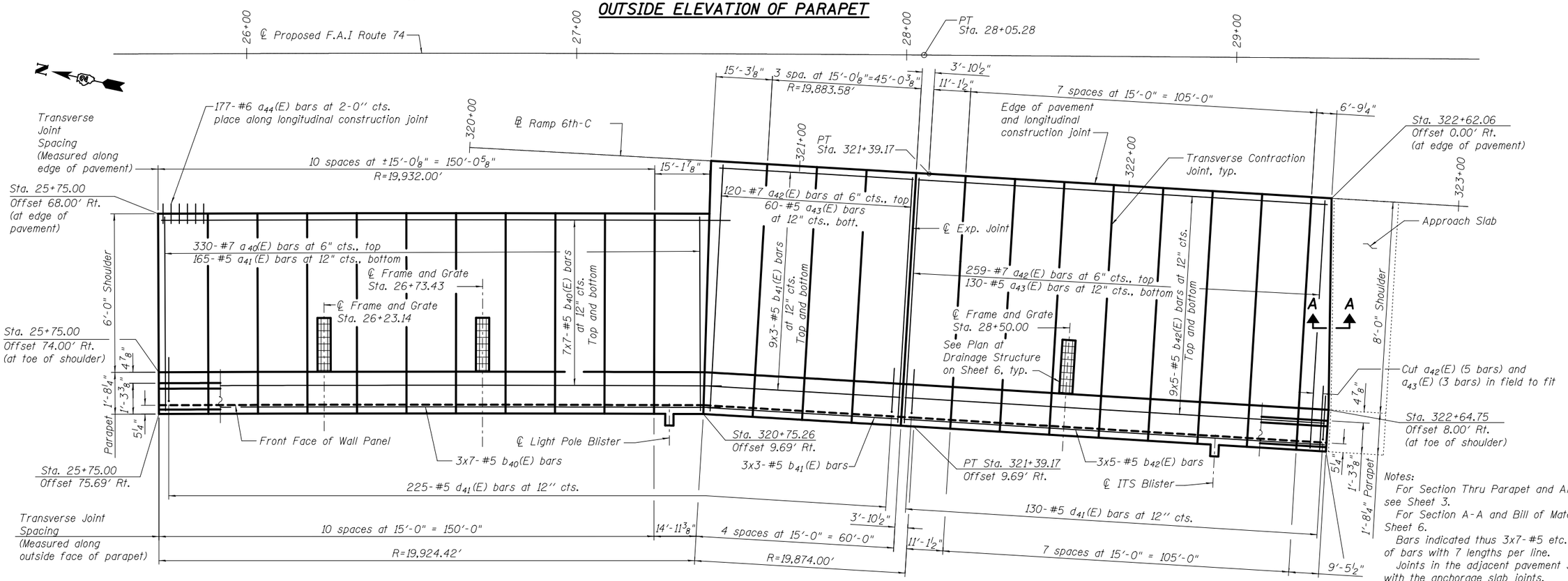
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



OUTSIDE ELEVATION OF PARAPET



PLAN - PARAPET AND ANCHORAGE SLAB

Notes:

For Section Thru Parapet and Anchorage Slab, see Sheet 3.

For Section A-A and Bill of Material, see Sheet 6.

Bars indicated thus 3x7-#5 etc. indicates 3 lines of bars with 7 lengths per line.

Joints in the adjacent pavement shall be aligned with the anchorage slab joints.

Stations and offsets on this sheet are given to the outside face of the parapet and are measured from the centerline F.A.I Route 74 and Ramp 6th-C baseline, except as noted.

See Sheet 9 for Blister reinforcement.

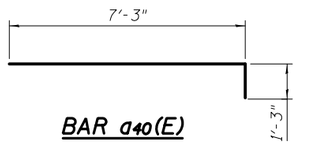
MODJESKI and MASTERS
Experience greet bridges.

USER NAME =	DESIGNED - YSS	REVISED	
	CHECKED - ZJB	REVISED	
PLOT SCALE =	DRAWN - MLA	REVISED	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED	

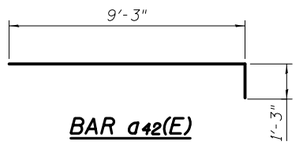
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET AND ANCHORAGE SLAB 1
I-74 (EB) / RAMP 6TH-C RETAINING WALL 16
STRUCTURE NO. 081-6018
SHEET NO. 5 OF 15 SHEETS

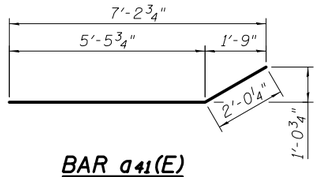
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1153
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



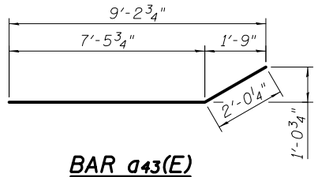
BAR a40(E)



BAR a42(E)



BAR a41(E)



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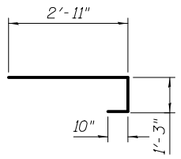

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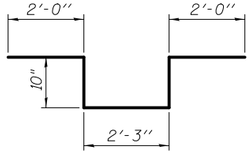

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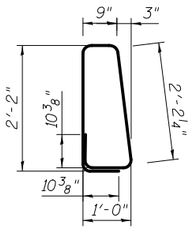

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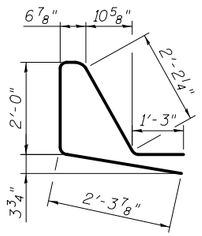
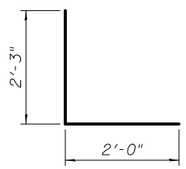


BAR d41(E)



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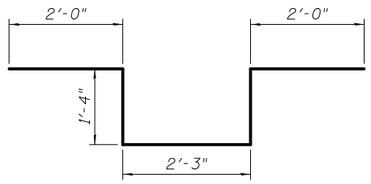
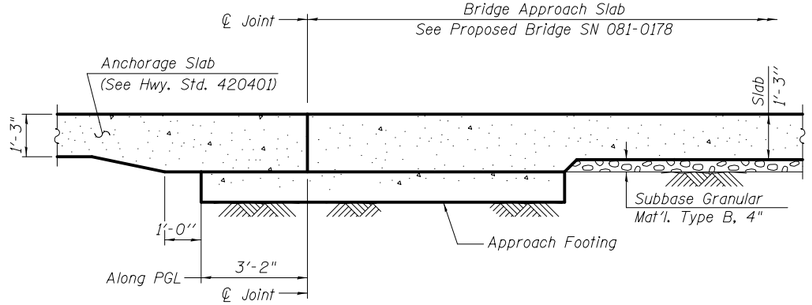
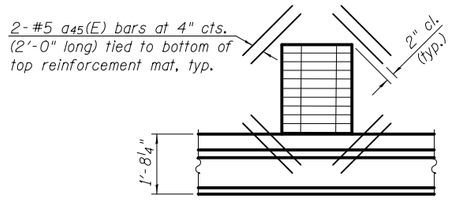


BAR d43(E)



SECTION A-A



PLAN AT DRAINAGE STRUCTURE

(Cut longitudinal reinforcement to clear drainage structure.)

RETAINING WALL 16
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a40(E)	330	#7	8'-6"	
a41(E)	165	#5	7'-6"	
a42(E)	379	#7	10'-6"	
a43(E)	190	#5	9'-6"	
a44(E)	177	#6	2'-0"	
a45(E)	24	#5	2'-0"	
a46(E)	6	#6	5'-0"	
a47(E)	6	#6	7'-11"	
b40(E)	119	#5	27'-0"	
b41(E)	63	#5	22'-3"	
b42(E)	105	#5	28'-6"	
d40(E)	709	#5	7'-10"	
d41(E)	355	#5	8'-4"	
d42(E)	6	#6	4'-3"	
d43(E)	10	#6	8'-11"	
e40(E)	141	#6	14'-9"	
e41(E)	11	#8	29'-9"	
e42(E)	33	#6	29'-9"	
e43(E)	1	#8	14'-9"	
e44(E)	9	#6	9'-2"	
e45(E)	1	#8	9'-2"	
Reinforcement Bars, Epoxy Coated			Pound	40,390
Concrete Superstructure			Cu. Yd.	193.5

MIN. BAR LAP

#5 bars - 3'-3"

Note:
For location of Section A-A, see Sheet 5.

USER NAME =	DESIGNED - YSS	REVISED	
	CHECKED - ZJB	REVISED	
PLOT SCALE =	DRAWN - MLA	REVISED	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED	

MODJESKI and MASTERS
Experience great bridges.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET AND ANCHORAGE SLAB 2
I-74 (EB) / RAMP 6TH-C RETAINING WALL 16
STRUCTURE NO. 081-6018
SHEET NO. 6 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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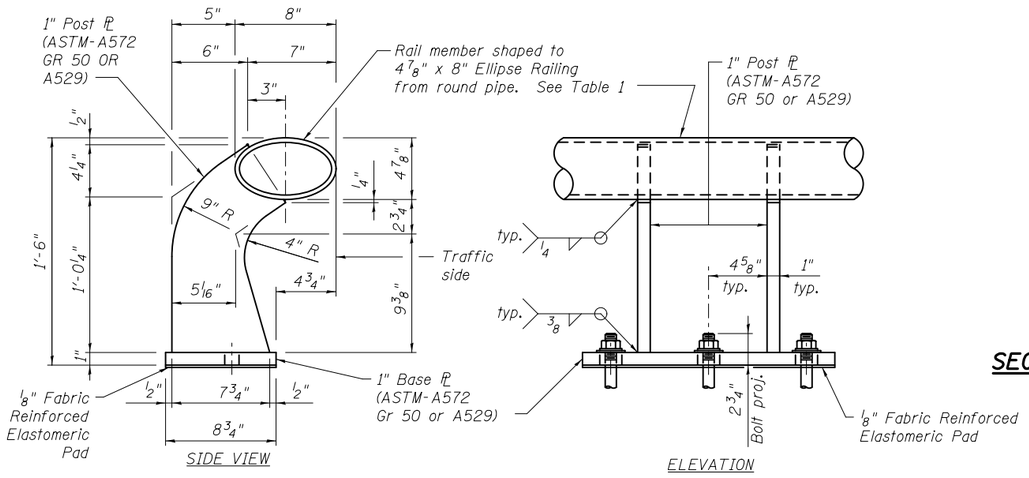
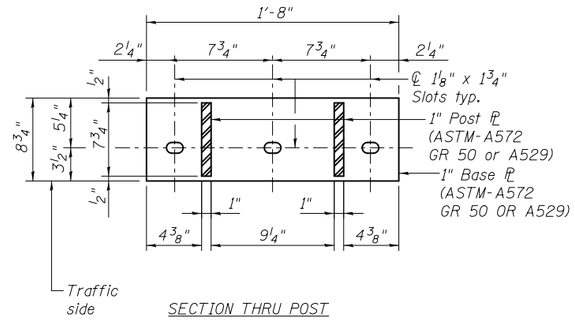
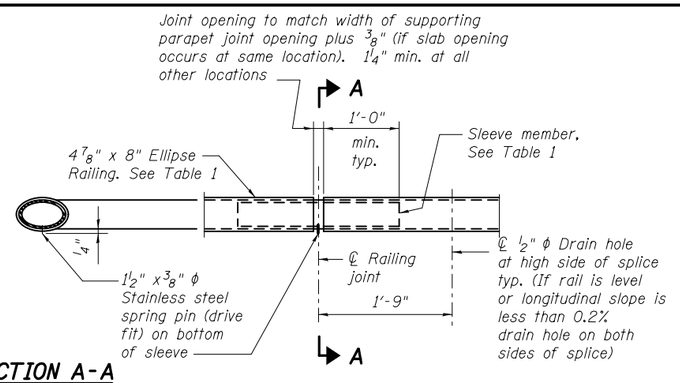
		CONTRACT NO. 64C08		
	ILLINOIS	FED. AID PROJECT		





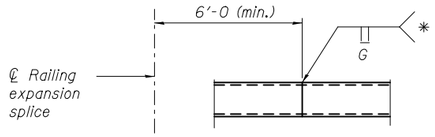
ELLIPTICAL TUBE WITH RAIL POST AND ANCHORAGE DETAILS



SECTION A-A

ELLIPSE RAILING SLEEVE DETAIL

Note:
The major and minor diameters of the rail member may vary +/- 3/16" from plan dimensions. However, the difference between the outside diameters of the sleeve and the inside diameters of the rail shall not exceed 1/8" along the major or minor axis. The maximum gap along the 45° axis of the sleeve may be 1/4" max.



RAILING SHOP SPLICE DETAIL

* Shop splice is permitted with minimum 85 percent penetration. The weld may be square groove, double vee groove, or single groove. Grind smooth.

NOTES:

See Sheet 5 of 14 for post spacing.

Steel Railing (Special) shall be fabricated and installed in accordance with Article 509 of the Standard Specifications, unless otherwise noted.

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

The Steel Railing (Special) is to be bid on a per linear foot basis measured from end to end of steel railing.

Payment for Steel Railing (Special) shall include full compensation for furnishing all material, and all the equipment and labor required to erect the rail in accordance with these plans and the Standard Specifications.

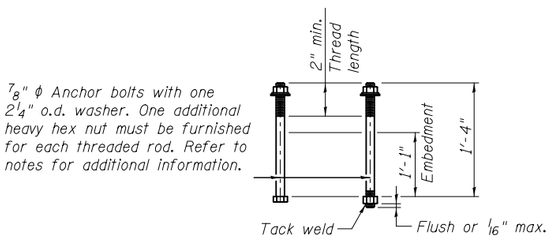
Anchor bolts shall be 7/8" ϕ, ASTM A-193 GR. B7, fully threaded with heavy hex nuts and one hardened washer and one 2 1/4" O.D. washer each. Embed threaded rods 10 1/2" min. into concrete parapet. Material for these items shall be in accordance with the adhesive manufacturer's requirements to be capable of obtaining an ultimate load per threaded rod of 36 kips in tension, considering spacing and edge distance. See Standard Specification 509.06 for further details on setting anchor bolts. Cost of anchor bolts included with Steel Railing (Special).

Optional cast-in-place anchor bolts to comply with ASTM F-1554 Grade 105. Hex nuts to comply with AASHTO M291, washers to comply with AASHTO M-293. Galvanizing in accordance with AASHTO M-232.

Provide one 1/8" and two 1/16" galvanized steel shims for 25% of rail posts, to be used as required. Shims shall be similar to base plates in size and holes. Cost included with Steel Railing (Special).

TABLE 1

APPROVED RAILING MATERIAL		
4 7/8"x 8" Ellipse Railing	Sleeve Member (at railing splice)	
Material	Material	Thickness
6" Dia. Std. Pipe ASTM-A53 E OR S GRADE B	ASTM-A53-B	0.353"
	A36 or A500 GR. B	0.339"
	API-5LX52	0.224"
6" dia. , 0.280" Wall thickness ASTM-A501	ASTM-A53-B	0.353"
	A36 or A500 GR. B	0.339"
	API-5LX52	0.224"
6 5/8" O.D. x 0.188" Tube API-5LX52	ASTM-A53-B	0.339"
	A36 or A500 GR. B	0.325"
	API-5LX52	0.216"



7/8" ϕ Anchor bolts with one 2 1/4" o.d. washer. One additional heavy hex nut must be furnished for each threaded rod. Refer to notes for additional information.

CAST-IN-PLACE ANCHOR BOLT OPTIONS

BILL OF MATERIAL

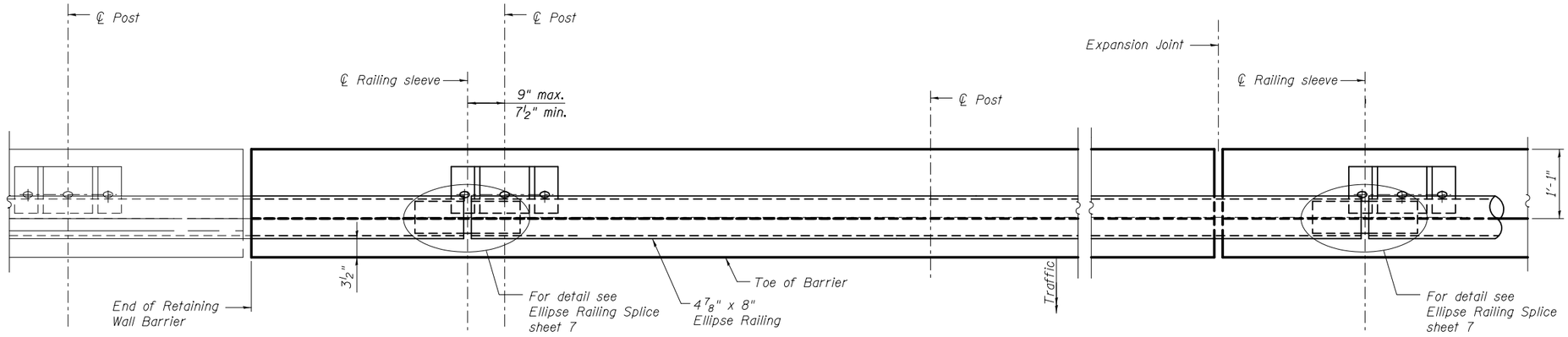
ITEM	UNIT	TOTAL
Steel Railing (Special)	Foot	355

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - YSS	REVISED
		CHECKED - JMH	REVISED
	PLOT SCALE =	DRAWN - MLA	REVISED
	PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

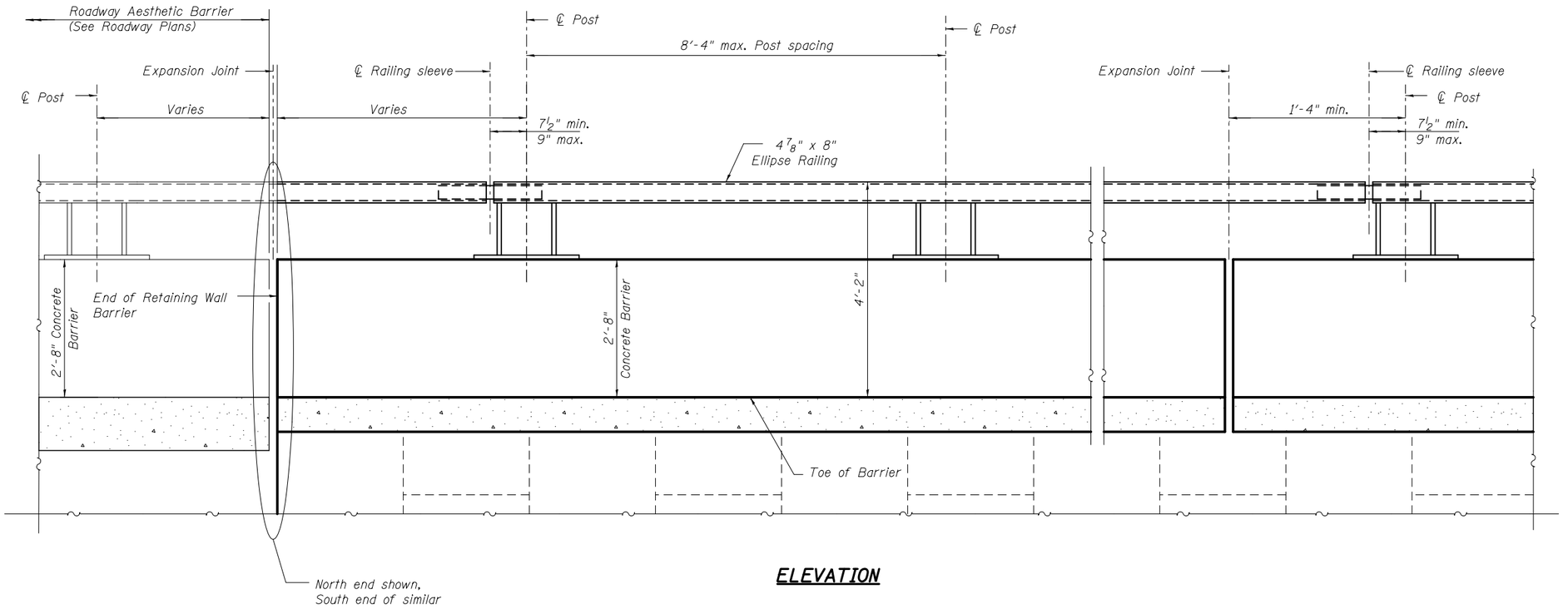
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL RAILING DETAILS 1
I-74 (EB)/RAMP 6TH-C RETAINING WALL 16
STRUCTURE NO. 081-6018
SHEET NO. 7 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1155
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



PLAN



ELEVATION

Notes:

Edge of base plate shall not be less than 6" from any cold joint or barrier discontinuity.

For post spacing, see Sheet 5.

South end of rail shall tie into railing on S.N. 081-0178.

North end of rail shall tie into roadway aesthetic barrier railing.

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL RAILING DETAILS 2
I-74 (EB)/RAMP 6TH-C RETAINING WALL 16
STRUCTURE NO. 081-6018
SHEET NO. 8 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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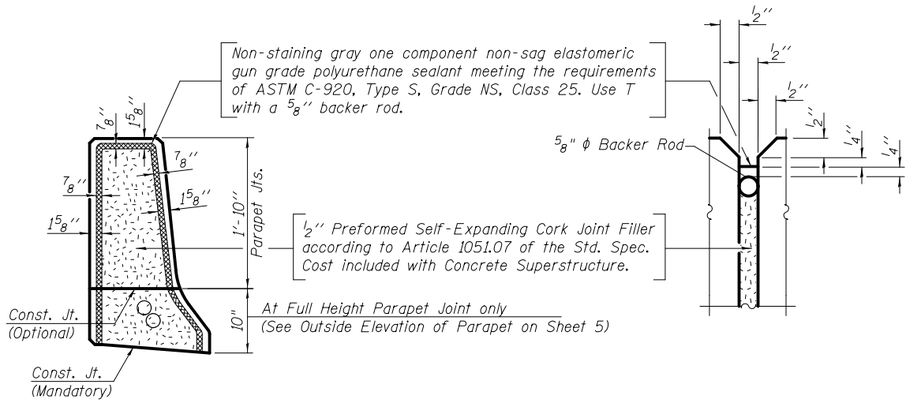
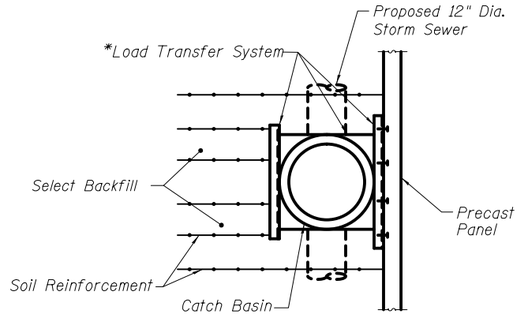
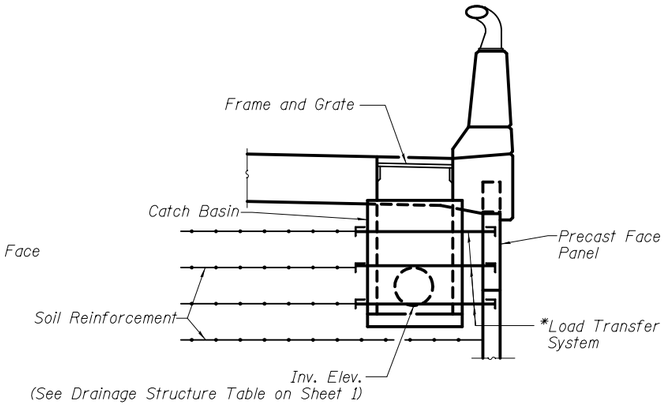
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



PARAPET JOINT DETAILS

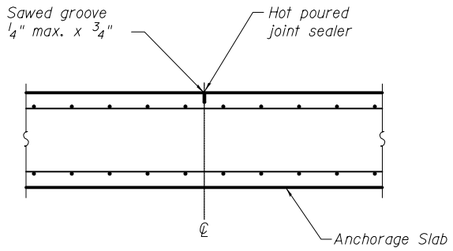


ANCHORAGE SLAB INLET PLAN

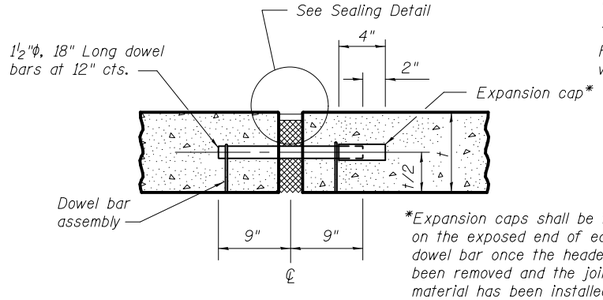


ANCHORAGE SLAB INLET SECTION

*M.S.E. supplier to design load transfer system to accommodate concrete pipe and catch basin.
(See Drainage and Utilities Plans for inlet details.)



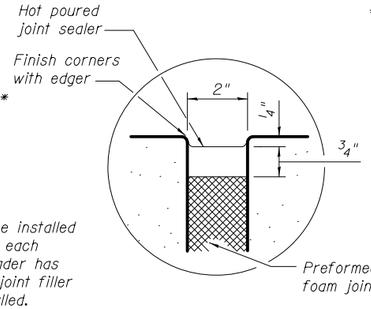
TRANSVERSE CONTRACTION JOINT



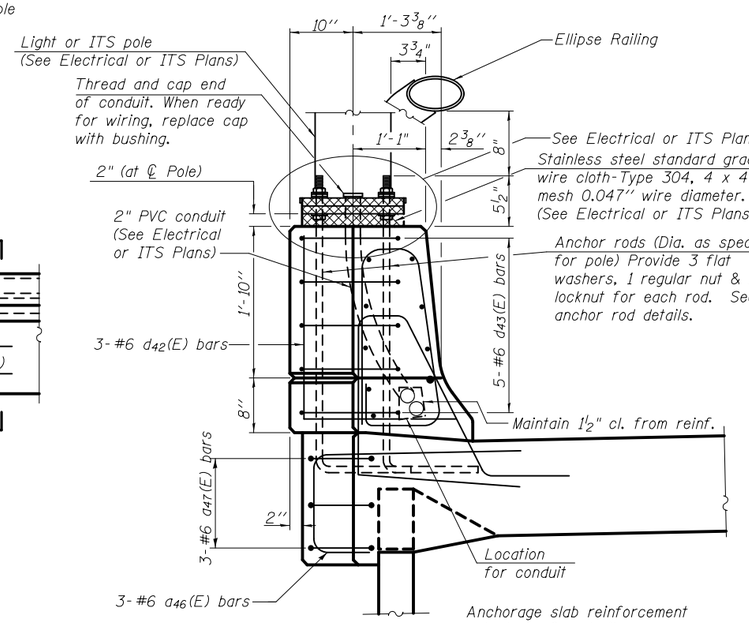
*Expansion caps shall be installed on the exposed end of each dowel bar once the header has been removed and the joint filler material has been installed.

ANCHORAGE SLAB EXPANSION JOINT

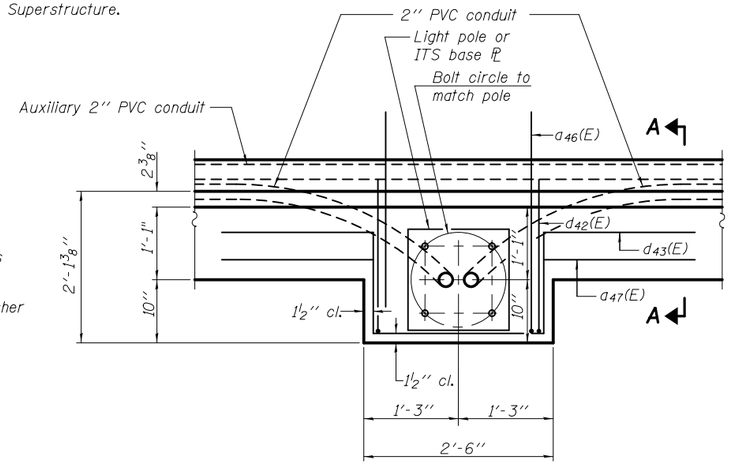
Expansion joint and dowel bars included in the cost of Concrete Superstructure.



SEALING DETAIL

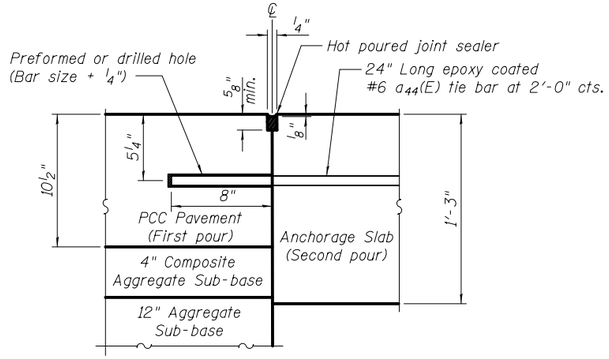


SECTION A-A



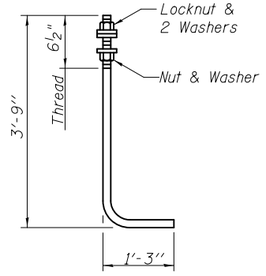
Note:
Cost of anchor rods is included with Concrete Superstructure.

PLAN



Notes:
The Contractor may substitute at his option, formed in place tie bars provided the bar length is increased to 30" and the tie bar is centered across the joint.
Preformed or drilled hole shall be in the first pour.

LONGITUDINAL CONSTRUCTION JOINT GROUTED-IN-PLACE TIE BAR



ANCHOR ROD

Diameter as specified for light or ITS poles (ASTM F 1554 Grade 105). Full length hot dipped galvanized.

LIGHT POLE OR ITS BLISTER DETAILS

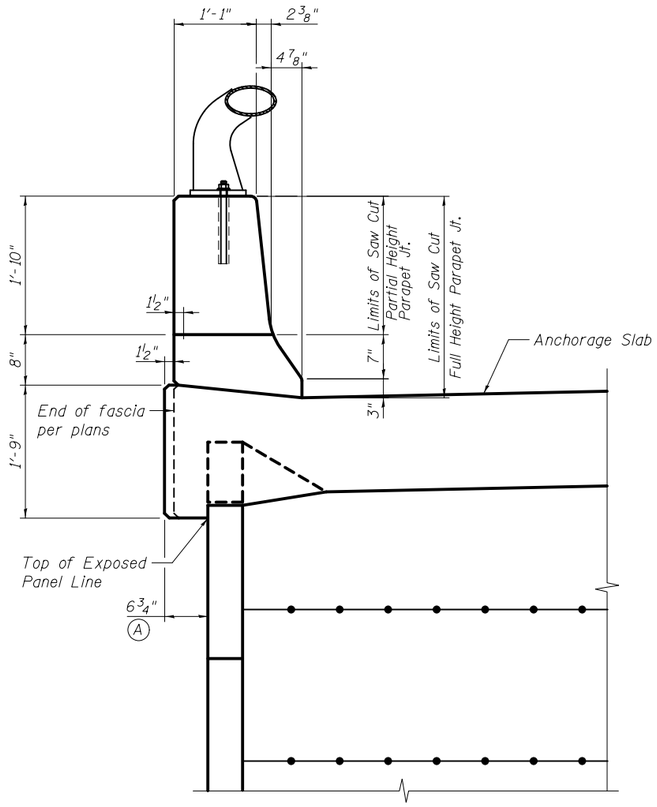
USER NAME =	DESIGNED - YSS	REVISED	
	CHECKED - JMH	REVISED	
PLOT SCALE =	DRAWN - MLA	REVISED	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED	

MODJESKI and MASTERS
Experience great bridges.

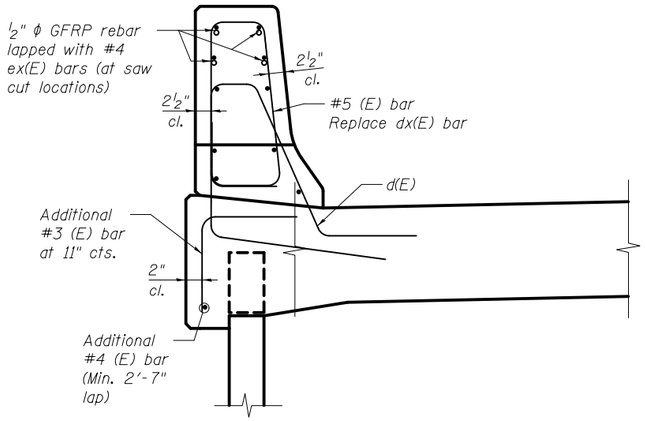
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS
I-74 (EB) / RAMP 6TH-C RETAINING WALL 16
STRUCTURE NO. 081-6018
SHEET NO. 9 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1157
		CONTRACT NO. 64C08		
	ILLINOIS	FED. AID PROJECT		

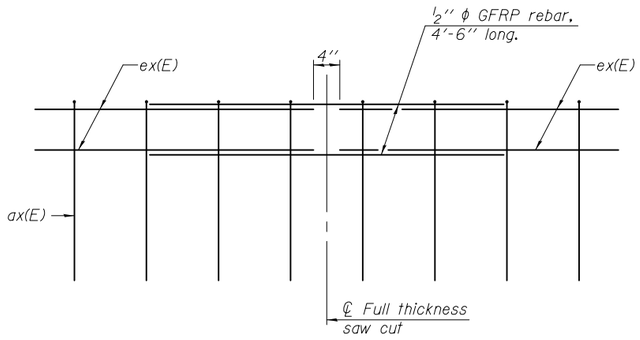


SECTION THRU PARAPET AND ANCHORAGE SLAB



SECTION

(Showing reinforcement clearances for slip forming and additional reinforcement)



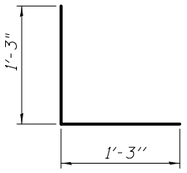
GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)

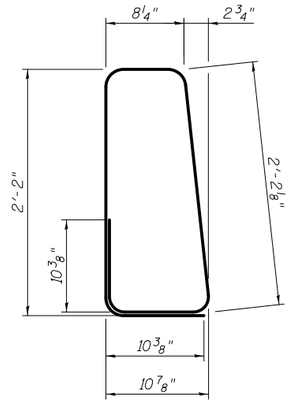
GENERAL NOTES

All dimensions shall remain the same as shown on superstructure details, except dimension A which is to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A equals 0.008 cu. yds./ft.

Full thickness saw cut at all joint locations in lieu of cork joint filler.



#3 (E) BAR



#5 (E) BAR

Replace dx(E) bar

benesch
engineers · scientists · planners
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

USER NAME =	DESIGNED - KMP	REVISED
	CHECKED - SLD	REVISED
PLOT SCALE =	DRAWN - RMG	REVISED
PLOT DATE = 1/20/2017	CHECKED - SLD	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB CONCRETE SLIPFORMING OPTION
I-74 (EB) / RAMP 6TH-C RETAINING WALL 16
STRUCTURE NO. 081-6018
SHEET NO. 10 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1158
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 9/19/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565232.456, E=2459065.732), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0201-S
Station 25+42
Offset 111' Rt.
Ground Surface Elev. 566.39 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 562.4 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Concrete 7" slab with rebar 565.39							
Fill: Fine to Medium Sand With Silt (SP-SM) Very dark brown, dry to moist, medium dense, little gravel, fine to medium sands, trace coarse sands 563.39	4 8 5 4						
	2						
Fill: Sandy Lean Clay(CL) Very dark gray mottled with greenish gray, moist to wet, stiff, faint petroleum odor, trace medium to fine gravel, with sand seams	4 3 2	1.8 P	30.0	-25			
Fill: wood matter with fine to coarse sand, strong petroleum odor, saturated, possible old railroad ties 558.39	2 1 2 2						
Fill: Silty Sand Trace Gravel(SM) Top 5": Brown, wet, root matter with petroleum odor and root matter throughout	2 1 2		40.0				
-10				-30			
Remainder: Silty Sand trace gravel, dark to medium gray, wet, non plastic, medium to fine sands, trace subrounded fine gravels, loose, faint petroleum odor Encountered WT at 10' bgs 555.39	1 2						
	1 2		11.0	End of Boring			
Silty Fine to Coarse Sand(SM) trace gravel, brown, wet, very loose to medium dense, faint petroleum odor, occasional root, possible native soil, non odorous 553.39	15 30 50/2						
Sandy Silt With Clay And Gravel (CL) Top 2": Dark brown followed by yellowish orange and then light gray at bottom 2", wet, non plastic, very angular flat coarse to fine gravels (possible rock fragments), some medium to fine sands with silt and few clay, possible gumbo/residual soil Driller began to set up for rock coring at 0950 550.56							
-15				-35			
-20				-40			

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
CH2M HILL

ROCK CORE LOG

Date 9/19/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=565232.456, E=2459065.732), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD Double tube, 10 ft core barrel, NQ wireline, diamond bit

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE _____

Core Diameter _____ in
Top of Rock Elev. 550.56 ft
Begin Core Elev. 550.56 ft

BORING NO. ILR0201-R
Station 25+42
Offset 111' Rt.
Ground Surface Elev. 566.39 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Sandstone with Limestone and bands of coal towards bottom of sample, light brown with light gray, rough texture at top 32", remainder has smooth texture, medium to fine grained with little coarse grains, slightly weathered to unweathered, medium to strong, top 32": Sandstone, remainder Limestone with coal bands 15.83' - Horizontal to 15° fractures, rough planar fractures at top 32" of sample, remainder fractures are irregular and undulated, little hard greenish gray impermeable clay infilling throughout top 13" of sample, remainder: no infilling, surface stains only, surfaces stained greenish gray at top 16", 16" to 30" no stains, 30" to bottom dark gray and brown coal stains, top 30": no rock wall contact due to crushed rock, remainder tightly healed with coal strands, sound to moderate fractures, very close to moderate discontinuities 23'-86" = top of run 1/2-1/2-1/4-3/4-3/4 light gray milky water, brown water 2.5' down and 7'-4' dark brown to dark green 23'-31.5" = end of run Medium to fine grained, smooth texture, slightly weathered to unweathered, medium strong 21.42' - 15° to 45° degree fractures, irregular, undulating, slickensided at 11", 15", 51", 67" and 88" from top, hard impermeable clay infilling 1/8" to 1/2" thick that has tightly healed at most fractures except from 45° to 51° from top, dark gray surface stains, no infilling and surface stains from 45° to 51°, from 57° to bottom thinly bedded throughout, stiff to very stiff gray clay infilling that is 1/2" to 1/4" thick at fracture, sound to moderate fractures, close to wide discontinuities Average 1-1/4 minute per foot for top 5 feet, 10-20-30 (3/4-3/4')	NQ-R1	78	41		
-20					
	NQ-R2	95	67		
-25					
-30					
534.97 End of Boring					
-35					

Color pictures of the cores _____
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)

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 9/18/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KB

SECTION I-74 Bridge over Mississippi River LOCATION (N=565145.331, E=2459082.04), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR0203
Station 26+32
Offset 114' Rt.
Ground Surface Elev. 567.93 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After ____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Concrete Surface: 3" of concrete 567.43			
Silty Sand (SM) dark brown and black, slightly moist, very loose, fine to medium grained, low plasticity	2		
	2 2		
	4		
-5	2 2	1.5 P	
561.93			
Sand Silt and Clay(ML) Black, moist NOTE: Sample 3 grain size analysis performed 559.93	0 2 3		27.0
Clay (CH)	2		
black, slightly moist, firm to stiff, trace fine sand, moderate plasticity Rimac: Pu = 94 lbs NOTE: Sample 4 Atterberg limits: LL=63, PI=46	3 3	1.8 P	25.0
-10	2		
	3 5	1.0 P	23.0
Rimac: Pu = 28 lbs	1		
	2 3	0.5 P	
brown, very dense, fine to medium grained, Same as above, sandy gravel in tip, brown, very dense, fine to medium angular gravel <1" diameter 551.93	5		
-15	15 22		
Sandy Gravel(GP) light gray, wet, very dense, fine to medium angular gravel, fine to coarse sand 549.93	50/3"		
End of Boring			
-20			

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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 1
I-74 (EB) / RAMP 6TH-C RETAINING WALL 16
STRUCTURE NO. 081-6018
SHEET NO. 11 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1159
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 9/24/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=564956.216, E=2459158.48), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. ILR1603
Station 321+68
Offset 9' Rt.
Ground Surface Elev. 568.27 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 562.3 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Fill Concrete underlain with 3" concrete, silt and gravel, dark gray to black, dry, hole offset 3 feet west of proposed boring location	568.02	13		
Fill Silty Fine to Coarse Sand With Gravel (SM) Very dark gray, dry, loose, occasional reddish brick fragments	565.27	5 3 3		
Silty to Clayey Fine Sand (SM, SC) Dark brown with dark gray, moist, stiff, possible fill, weak cementation	-5	2 1 1 2	1.0 P	24.0
Sample 2: grain size analysis and Atterberg limits (LL=26, PI=10) test performed	562.27 ▼			
Possible Fill Sandy Fat Clay (CH) dark gray to greenish gray, wet, stiff to very stiff, trace gravel			1.5	23.0
Sample 3 (8'-10'): Atterberg limits (LL=59, PI=28) test performed	-10	2 3 3 3	2.5 P	26.0
Weathered Sandstone Brown with gray, wet, coarse to fine sands with, coarse to fine gravels, some silt and clay, dense to very dense, Bottom 2": Sandy Silt, uniform gray, dry, nonplastic, silt with fine sands, possible complete weathered sandstone, Driller reports rough drilling and chatter 12.0' bgs, possible weathered rock	557.27	25 33 16 50/5		26.0
Completely weathered sandstone, dry, uniform gray, medium to fine sands with silt	-15	50/4		
Possible top of rock at 13'6" bgs	552.60			
Sample 4 (11'-13'): grain size analysis and Atterberg limits (LL=25, PI=7) tests performed				
Borehole continued with rock coring.	-20			

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
CH2M HILL

ROCK CORE LOG

Date 9/24/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=564956.216, E=2459158.48), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD Double tube, 10 ft core barrel, NQ wireline, diamond bit

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE _____

Core Diameter _____ in
Top of Rock Elev. 552.60 ft
Begin Core Elev. 552.60 ft

BORING NO. ILR1603
Station 321+68
Offset 9' Rt.
Ground Surface Elev. 568.27 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Sandstone Light brown and light gray, medium to fine grained, trace coarse grains at top 16" of sample, smooth to rough texture, slightly vuggy at top 24" of sample indicates little water action, slightly weathered, weak to medium to strong, light gray with greenish gray blotches at bottom 15" of sample 15.67' - Slightly to moderately fractured, very close to close discontinuities, horizontal to 30° fractures, varying rough and irregular fracture surfaces, undulated, greenish gray, stiff to very stiff clay infilling that is 1/8" to 1" thick at 80% of fractures surfaces, stained green and gray, possibly du to clay infilling, zones containing clay seam thick enough to prevent back wall contact at 80" and 86", other fractures tightly healed with impermeable infilling and varying discontinuous joints and slightly altered joint walls Started coring 11:00 AM.	552.60	NQ-R1	92	51		472.0
	-20					
	-25					
End of Boring	542.60					
	-30					
	-35					

Color pictures of the cores _____
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)

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 10/25/05

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY L. Hunt

SECTION I-74 Bridge over Mississippi River LOCATION (N=565101.511, E=2459102.047), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. RW1503
Station 320+15
Offset 42' Rt.
Ground Surface Elev. 567.80 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 554.3 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Fill (GC) Clayey gravel to clayey sand, trace brick, dark brown, dry to moist, stratified.		3 9 9 3		
Sandy to Silty Clay (CL, CL-ML) trace to little gravel and silt, trace organics, dark brown to brown, dry to moist, very stiff		3 3 3 4	2.3 P	
		3		
	-5	3 4 4	2.5 P	
	561.80			
Sandy Clay (CL) trace gravel, dark brown to gray brown, dry to moist, soft to firm, encountered hard material at 6', moved borehole 3' west and started sampling again at 6'	559.80	1 2 2 2	0.5 P	30.0
Silty Clay (CL-ML) Silty clay, trace gravel, gray brown, dry to moist to wet, homogeneous, stiff		2 3 4 5	1.5 P	
	-10	3 4 4 6	1.8 P	
		6 9 15 16	0.5 P	
Poorly Graded Sand with Silt (SP-SM) little gravel, light gray and brown, wet, homogeneous, dense	553.80 ▼			
	-15	10 9 33 36		
	-20	3 50/5		

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Auger refusal at 20'				
	546.80			
End of Boring				
	-25			
	-30			
	-35			
	-40			

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
CH2M HILL

SOIL BORING LOG

Page 1 of 1

Date 10/27/05

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY L. Hunt

SECTION I-74 Bridge over Mississippi River LOCATION (N=564902.45, E=2459144.517), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. RW1504
Station 322 + 19
Offset 31' Rt.
Ground Surface Elev. 567.96 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 558.0 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Concrete 1' of concrete and crushed rock. 566.96			
Clayey Sand (SC) Clayey Sand, few gravel, dark brown and brown, dry to moist, homogeneous. 564.96	5 5 5		
Sandy Clay (CL) Sandy Clay, some silt, few gravel, dark brown, dry to moist, homogeneous.	4 3 2	0.7 P	
-5	2 2		
Sandy Clay, some silt, trace gravel, black, dry to moist, homogeneous. 560.96	2 2 2 2	0.2 P	
Clayey Silt to Silty Clay (MH - CL) Clayey Silt to Silty Clay, trace gravel, gray brown, dry to moist, stratified. 558.96	2 3 4 4	1.1 P	
Sand to Shale (SC) Sand to Shale, gray, wet, stratified. ▼ -10	2 21		
Water at 10' while drilling 556.96	50/0		
Shale Poss. shale	50/0		
Auger refusal at 14'; end of borehole. 553.96			
End of Boring			
-15			
-20			

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)

HANSON

SOIL BORING LOG

Page 1 of 1

Date 6/29/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1HVB LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6018
Station _____

BORING NO. RW 16-1
Station 25+10
Offset 81' Rt.
Ground Surface Elev. 570.1 ft

Surface Water Elev. _____
Stream Bed Elev. _____

Groundwater Elev.:
First Encounter _____ ft
Upon Completion 559.1 ft ▽
After ____ Hrs. _____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
FILL - Dark to very dark brown, moist to wet, soft and loose, silt, fine- to coarse-grained sand and gravel, with degrading plywood, particle board, timber, lumber, bituminous materials, metal scraps, cinder blocks, and brick fragments, petroleum odor			
2	6 8 8		10
4	12 12 15		8
	woh woh		18
6	50/1"		
8	4 5 7	1.75P	17
10 ▽			
12			
14			
16	8 16		6
553.10 Gray, fine-grained, LIMESTONE	50/0"		
18			
551.60 End of Boring	50/0"		

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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 3
I-74 (EB) / RAMP 6TH-C RETAINING WALL 16
STRUCTURE NO. 081-6018
SHEET NO. 13 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1161
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

HANSON

SOIL BORING LOG

Date 6/29/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1HVB LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6018
Station
BORING NO. RW 16-2
Station 26+33
Offset 82' Rt.
Ground Surface Elev. 567.4 ft

Surface Water Elev.
Stream Bed Elev.

Groundwater Elev.:
First Encounter ft
Upon Completion 558.4 ft ▽
After ____ Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
TOPSOIL 567.15				
FILL - Very dark brown, wet, stiff to very stiff, sandy SILT with trace gravel, brick fragments	2	8 5 3	2.25P	19
	4	2 2 3	1.25P	22
561.90				
Dark brown, moist, lean CLAY with silt	6			16
				27
559.40	8		2.22B	27
Gray, moist, stiff, CLAY with silt	▽			24
556.90	10			
Gray, moist, medium stiff, CLAY with very fine-grained sand	12	5 7 9	0.92B	28
553.90				
Brown, wet, very dense, silty, coarse-grained SAND and GRAVEL 552.90	14	50/5"		30
Brown, WEATHERED LIMESTONE				
551.30	16	50/1"		23
End of Boring				

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)

HANSON

SOIL BORING LOG

Date 6/29/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1HVB LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6018
Station
BORING NO. RW 16-3
Station 27+87
Offset 82' Rt.
Ground Surface Elev. 569.8 ft

Surface Water Elev.
Stream Bed Elev.

Groundwater Elev.:
First Encounter ft
Upon Completion 562.8 ft ▽
After ____ Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
FILL - Dark brown, moist, medium, sandy SILT				
568.30		5	1.76B	12
CONCRETE 567.80	2	50/0"		
FILL - Dark brown, moist, silty SAND and GRAVEL				
	4	6 12 18	1.50P	23
563.80				
FILL - Very dark brown, moist, soft, SILT with metal scraps, brick and concrete fragments	6			
562.30	▽			
Gray, moist, stiff, CLAY with trace silt	8		1.55B	29
	10			
557.60	12	5 7 10	1.36B	23
Gray, moist, very stiff, CLAY with trace silt, sand and gravel				
556.30				
Gray, WEATHERED LIMESTONE 556.10		50/2"	1.25P	27
End of Boring				

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
CH2M HILL

SOIL BORING LOG

Date 8/28/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION I-74 Bridge over Mississippi River LOCATION (N=564827.741, E=2459192.07), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station 29+40

BORING NO. VIAIL-104
Station 323+00
Offset 4' Lt.
Ground Surface Elev. 568.20 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 559.7 ft ▼
Upon Completion _____ ft
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
ASPHALT + BASE COURSE - (3" to 6" thick) 567.70				
SILT - black, sandy, and gravel, moist (FILL)		3		
		11		
		12		
565.20				
CLAY - reddish brown to greenish brown, silty, medium plastic, medium stiff to soft, moist.		3		
	-5	3	1.0 P	17.0
		3		
561.10		3	0.3 B	18.9
SHALE - medium gray, with sand partings, friable, stiff.		4		
559.70 ▼				
SAND - medium brown, fine to medium, some silt, loose, saturated.		3		
	-10	2		
		2		
- moderately well consolidated in 2" seam at 10' 557.20				
SANDSTONE - moderate to severely weathered.		50/4"		
- augered through 11.3' to 14'				
554.20				
Borehole continued with rock coring.	-15			
	-20			

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
CH2M HILL

ROCK CORE LOG

Date 8/28/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION I-74 Bridge over Mississippi River LOCATION (N=564827.741, E=2459192.07), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO. _____
Station 29+40

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 557.20 ft
Begin Core Elev. 554.20 ft

BORING NO. VIAIL-104
Station 323+00
Offset 4' Lt.
Ground Surface Elev. 568.20 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
SANDSTONE - light to medium gray, with numerous shale partings with fracture at partings, soft to very soft, moderately well cemented, non-distinct bedding at thin to occasionally medium bedded spacing, fractures at partings are horizontal to 10° planar and smooth, fractures in sandstone are planar to slightly irregular and sandy rough, localized high angle to vertical fractures, fresh to slightly weathered. 554.20	-15	Run 1	100	51	2.7	
	-20	Run 2	85	21	1.2	305.0
- near-vertical fracture in sandstone at 19.7', sandy rough						
- thin beds of medium to dark gray shale with numerous sand partings at 20.3'-21.5'		Run 3	73	40	1.6	
	-25					
	-30	Run 4	98	38	1.2	
- medium to dark gray shale with numerous sand partings at 30.5'-32.5'		Run 5	90	07	1	
- occasional shale partings from 32.5' to 35.5'						

Color pictures of the cores Yes
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)

Illinois Department of Transportation
Division of Highways
CH2M HILL

ROCK CORE LOG

Date 8/28/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY SL

SECTION I-74 Bridge over Mississippi River LOCATION (N=564827.741, E=2459192.07), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO. _____
Station 29+40

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 557.20 ft
Begin Core Elev. 554.20 ft

BORING NO. VIAIL-104
Station 323+00
Offset 4' Lt.
Ground Surface Elev. 568.20 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
SANDSTONE - light to medium gray, with numerous shale partings with fracture at partings, soft to very soft, moderately well cemented, non-distinct bedding at thin to occasionally medium bedded spacing, fractures at partings are horizontal to 10° planar and smooth, fractures in sandstone are planar to slightly irregular and sandy rough, localized high angle to vertical fractures, fresh to slightly weathered. *(continued)*	-35					
		Run 6	98	62	0.6	
- brownish gray with occasional shale clasts, increasing to numerous clast at 40.0' - 40.3', rough horizontal fractures with localized 70° rough fracture at 39.9'	-40					
527.90 SHALE - medium to dark gray. 527.70						
End of Boring	-45					
	-50					

Color pictures of the cores Yes
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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

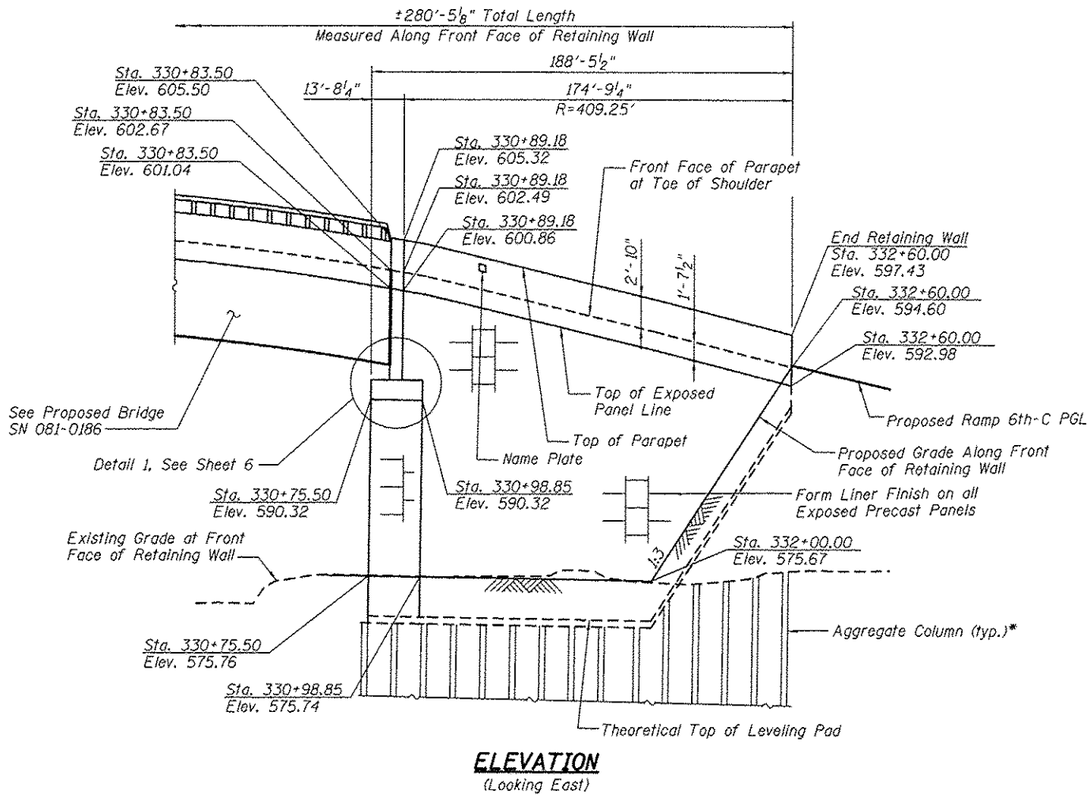
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 5
I-74 (EB) / RAMP 6TH-C RETAINING WALL 16
STRUCTURE NO. 081-6018
SHEET NO. 15 OF 15 SHEETS

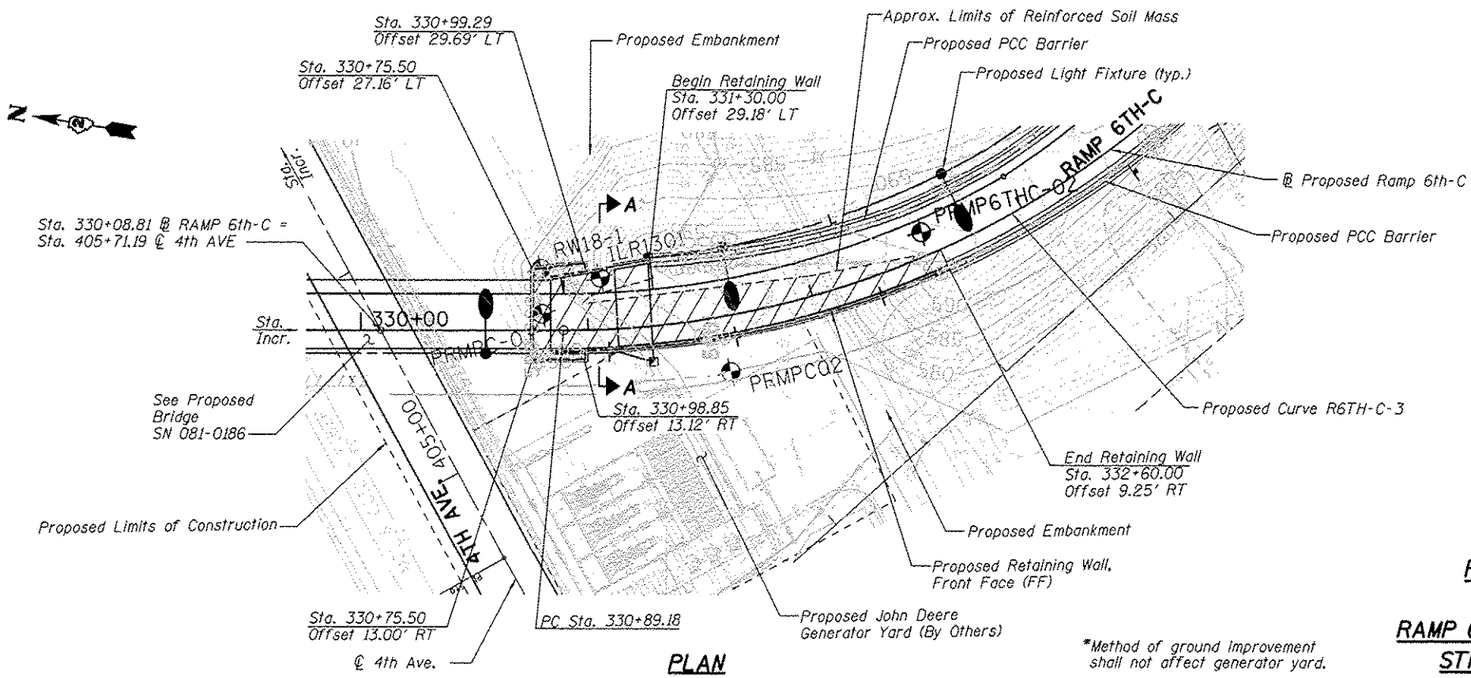
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1163
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

Benchmark No. 535:
Cut "X" in concrete base on North side of 2nd Avenue East of the 19th Street Intersection.
Elevation NAVD 88 = 570.053

Existing Structure:
None



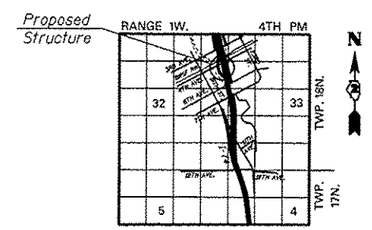
ELEVATION
(Looking East)



PLAN

*Method of ground improvement shall not affect generator yard.

Notes:
Existing utilities shown will be relocated by others to avoid any conflicts during construction (See Utility Plans).
See Sheet 4 for Section A-A.
See MSE Wall Aesthetic Plans for required form liner finish.
See MSE Wall Aesthetic Plans for required form liner finish.
See Sheet 2 for Ground Improvement Performance Requirements.



LOCATION SKETCH

LEGEND
- Reinforced Soil Mass
- MSE Wall Panels
- Soil Borings

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

JERILYN M. HASSARD
081-006521
LICENSED STRUCTURAL ENGINEER OF ILLINOIS

01-20-17

JERILYN M. HASSARD
EDWARDSVILLE, ILLINOIS
ILLINOIS LICENSED STRUCTURAL
ENGINEER NO. 081-006521
EXPIRES 11/30/2018

DESIGN SPECIFICATIONS
2002 AASHTO
Standard Specifications for Highway Bridges

DESIGN STRESSES
FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
PRECAST UNITS
f'_c = 4,500 psi (Precast Face Panels)

INDEX OF SHEETS

CURVE DATA
PR CURVE R6TH-C-3
PI STA = 332+90.05
Δ = 53° 19' 38" (LT)
D = 14° 19' 26"
R = 400.00'
T = 200.86'
L = 372.29'
E = 47.60'
e = 6.0%
T.R. = N/A
S.E. RUN = 202.57' (I), 195' (O)
PC STA = 330+89.18
PT STA = 334+61.48

GENERAL PLAN AND ELEVATION
F.A.I. ROUTE 74 SEC. (81-1)R & 81-1HVBR
ROCK ISLAND COUNTY
RAMP 6TH-C Sta. 331+30.00 LT to Sta. 332+60.00 RT
STRUCTURE NO. 081-6019 (RETAINING WALL 18)

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - YSS	REVISED
		CHECKED - JMH	REVISED
	PLOT SCALE =	DRAWN - AEC	REVISED
	PLOT DATE = 1/20/2017	CHECKED - JMH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
RAMP 6TH-C RETAINING WALL 18
STRUCTURE NO. 081-6019
SHEET NO. 1 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1164
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Wall stations and offsets are given to the front face (FF) of the wall and are measured from the Ramp 6TH-C baseline, except as noted. FF of the wall is to be considered edge of panel or form liner.
3. See Special Provision for Mechanically Stabilized Earth Retaining Walls and Aggregate Column Ground Improvement for design and construction requirements.
4. For existing soils laboratory data, see the Geotechnical Investigation Laboratory Data Special Provision.
5. The piles for SN 081-0186 are located within the reinforced soil mass. See SN 081-0186 plans for additional pile requirements.
6. Wall system supplier shall coordinate proposed wall configuration with Aggregate Column Ground Improvement subcontractor.
7. Wall construction shall not begin until after Aggregate Column Ground Improvement has been completed in the area of the new wall.
8. See SN 081-0186 plans for maskwall details.

GROUND IMPROVEMENT PERFORMANCE REQUIREMENTS

1. Minimum factor of safety for global slope stability shall be 1.5.
2. Allowable bearing pressure (with F.S.) shall be equal to or greater than the equivalent uniform service bearing pressure as shown on Sheet 3. Intermediate values may be defined by interpolating between the values shown.

   Minimum factor of safety against equivalent uniform service bearing pressure shall be 2.0 if a load test is performed.

   Minimum factor of safety against equivalent uniform service bearing pressure shall be 2.5 if a load test is not performed.
3. Total settlement measured at the theoretical top of leveling pad shall not exceed 4.0 inches.
4. Total settlement measured on the pavement shall not exceed 1.0 inch.
5. Differential settlement measured along the theoretical top of leveling pad shall not exceed 1/100.
6. The assumed structure life for settlement computations shall be 75 years.
7. Contractor's verification program shall include monitoring points or other instrumentation to demonstrate compliance with the stated performance requirements.
8. The Shop Drawings and construction procedures submittal shall indicate the sequence of construction within the limits of Aggregate Column Ground Improvement. The aggregate column installation shall be coordinated with utility removal, structure removals, proposed utility installation, and bridge pile driving.
9. Aggregate columns shall be installed before the bridge piles are driven; however, the piles shall not be driven through the aggregate of an installed column. The aggregate column layout shall provide clearance for the bridge piles.

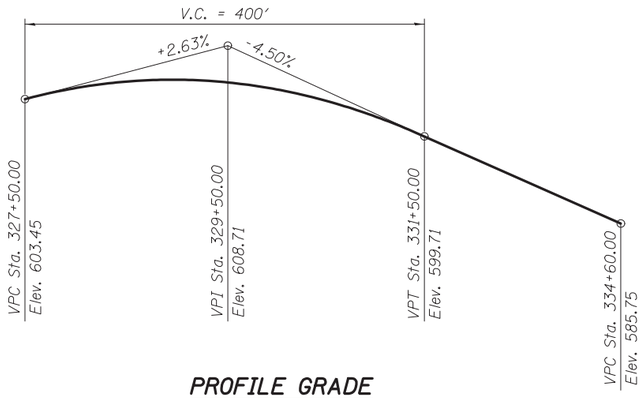
MSE WALL SETTLEMENT

1. The Top of Exposed Panel Elevations shown on these plans are final elevations after any settlement. The wall settlement will be determined by the ground improvement design. The wall system supplier shall coordinate with Aggregate Column Ground Improvement subcontractor to accommodate this settlement in the wall design.

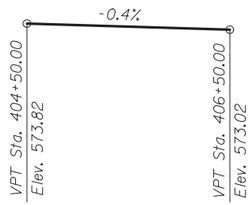
TOTAL BILL OF MATERIAL

	ITEM	UNIT	TOTAL
	Structure Excavation	Cu. Yd.	397
	Concrete Superstructure	Cu. Yd.	92.9
	Protective Coat	Sq. Yd.	212
	Reinforcement Bars, Epoxy Coated	Pound	14,140
	Name Plates	Each	1
*	Aggregate Column Ground Improvement	L. Sum	0.43
	Mechanically Stabilized Earth Retaining Wall	Sq. Ft.	5,419
	Rock Fill	Cu. Yd.	597

* See proposed retaining wall S.N. 081-6012 for remainder of L. Sum quantity.



PROFILE GRADE
(Along ℄ Ramp 6th-C)



PROFILE GRADE
(Along ℄ 4th Avenue)

STATION 331+30.00
BUILT 201_ BY
STATE OF ILLINOIS
F.A.I. RT. 74
SEC. (81-1)R & 81-1HVBR
LOADING HS-20
STR. NO. 081-6019

NAME PLATE
See Std. 515001

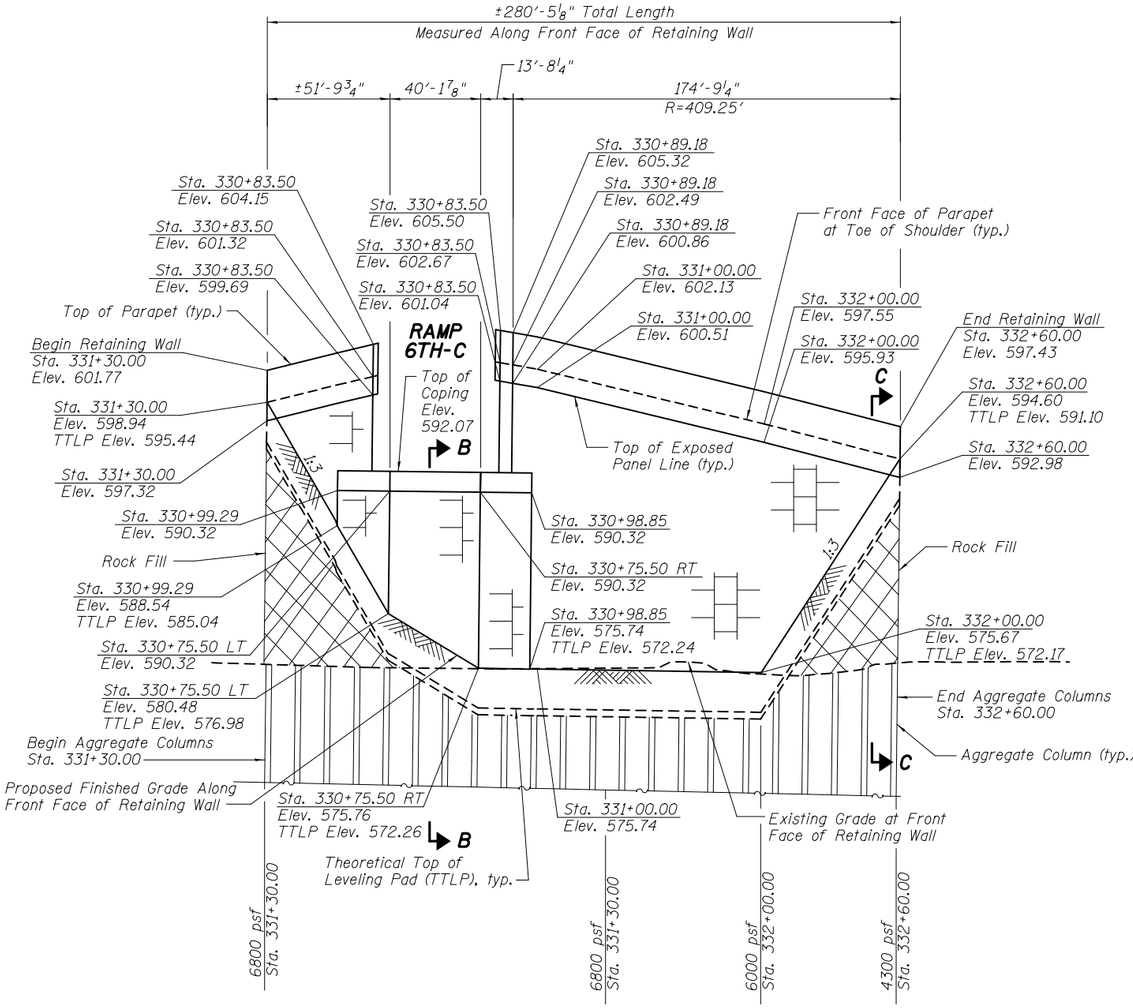
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES
RAMP 6TH-C RETAINING WALL 18
STRUCTURE NO. 081-6019
SHEET NO. 2 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1165
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



UNFOLDED WALL ELEVATION

LEGEND:

6800 psf Equivalent Uniform Service Bearing Pressure

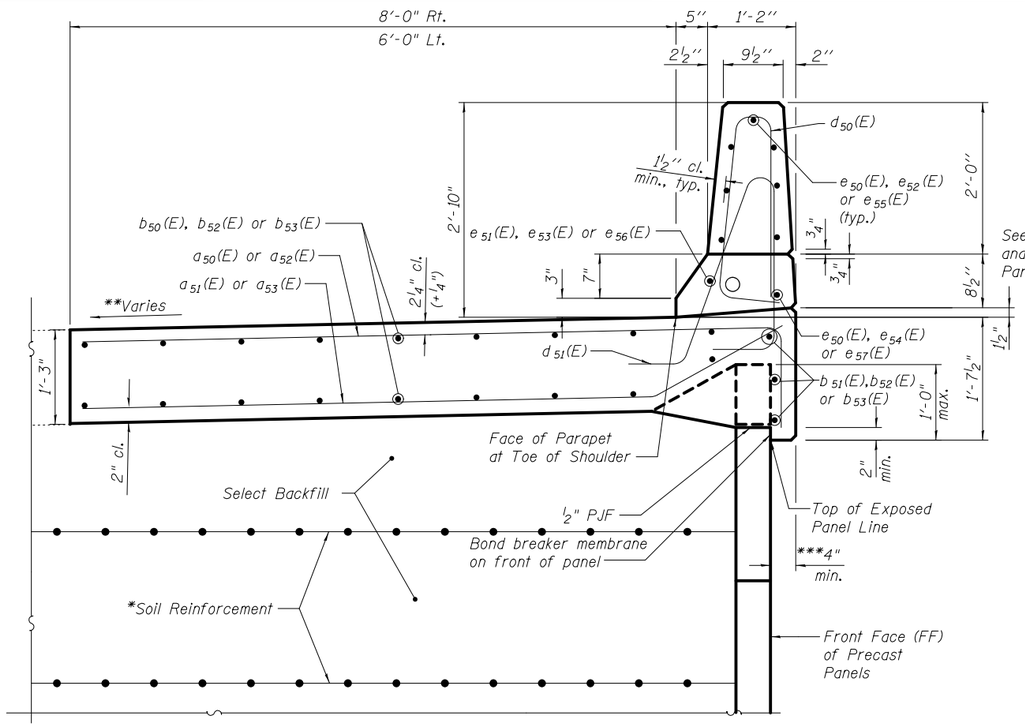
Notes:
See Sheet 5 for Sections B-B and C-C.
See Sheet 2 for Ground Improvement Performance Requirements.
See Electrical plans for junction box, conduit, and handhole details at Sta. 331+00.

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - YSS	REVISED
		CHECKED - JMH	REVISED
	PLOT SCALE =	DRAWN - AEC	REVISED
	PLOT DATE = 1/20/2017	CHECKED - JMH	REVISED

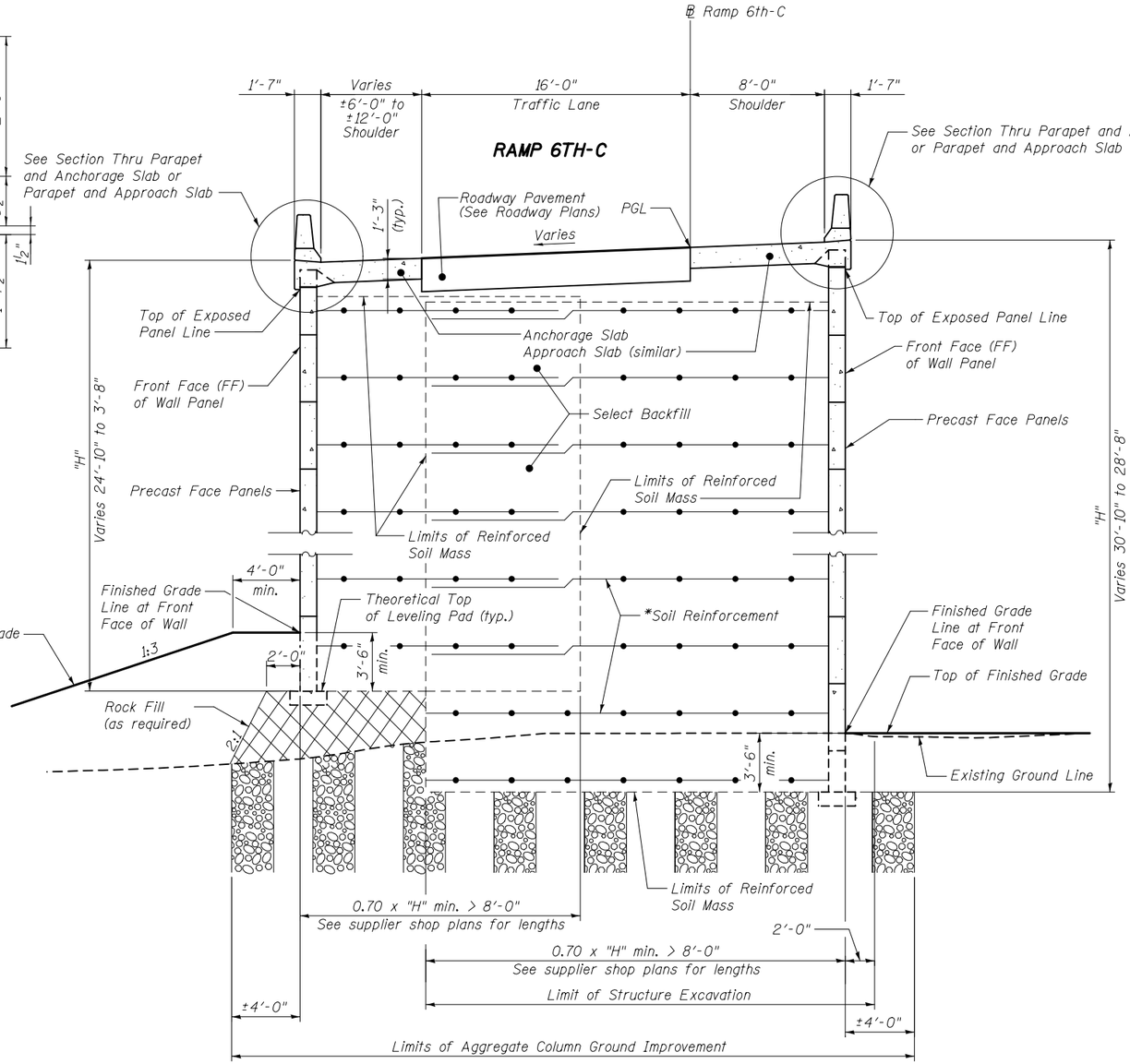
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

UNFOLDED WALL ELEVATION
RAMP 6TH-C RETAINING WALL 18
STRUCTURE NO. 081-6019
SHEET NO. 3 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1166
				CONTRACT NO. 64C08
		ILLINOIS	FED. AID PROJECT	

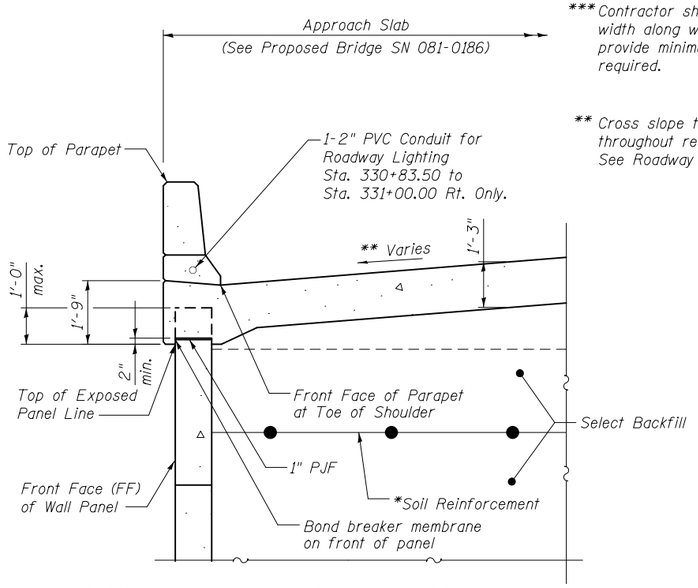


SECTION THRU PARAPET AND ANCHORAGE SLAB



TYPICAL WALL SECTION

(Section A-A)
Sta. 330+75.50 to Sta. 331+30.00



*** Contractor shall detail overhang width along wall radius to provide minimum dimension required.

** Cross slope transition varies throughout retaining wall limits. See Roadway Plans for details.

SECTION THRU PARAPET AND APPROACH SLAB

Note:

* The M.S.E. wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft. of wall.

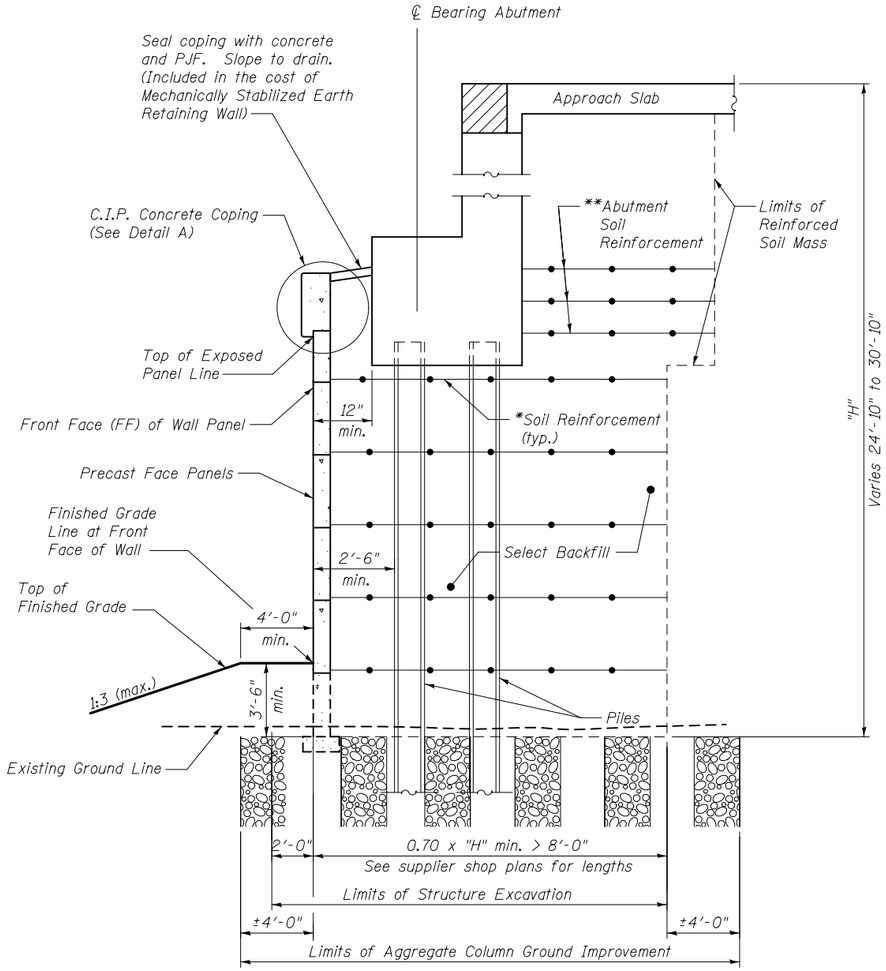
Note:
For location of Section A-A, see Sheet 1.
See Electrical plans for junction box, conduit, and handhole details at Sta. 331+00.

MODJESKI and MASTERS Experience great bridges.	USER NAME =	DESIGNED - YSS	REVISED
		CHECKED - ZJB	REVISED
	PLOT SCALE =	DRAWN - MLA	REVISED
	PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MSE DETAILS 1
RAMP 6H-C RETAINING WALL 18
STRUCTURE NO. 081-6019
SHEET NO. 4 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1167
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

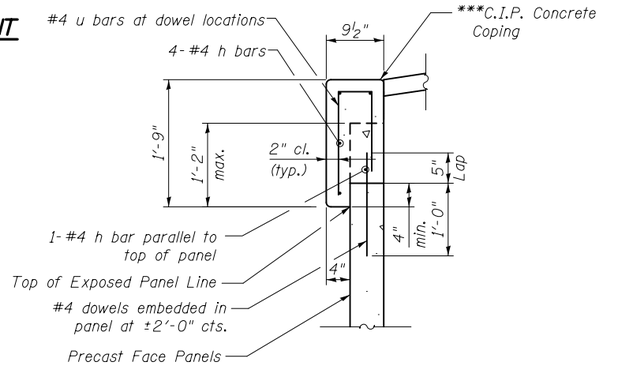


TYPICAL WALL SECTION THRU ABUTMENT

(Section B-B)

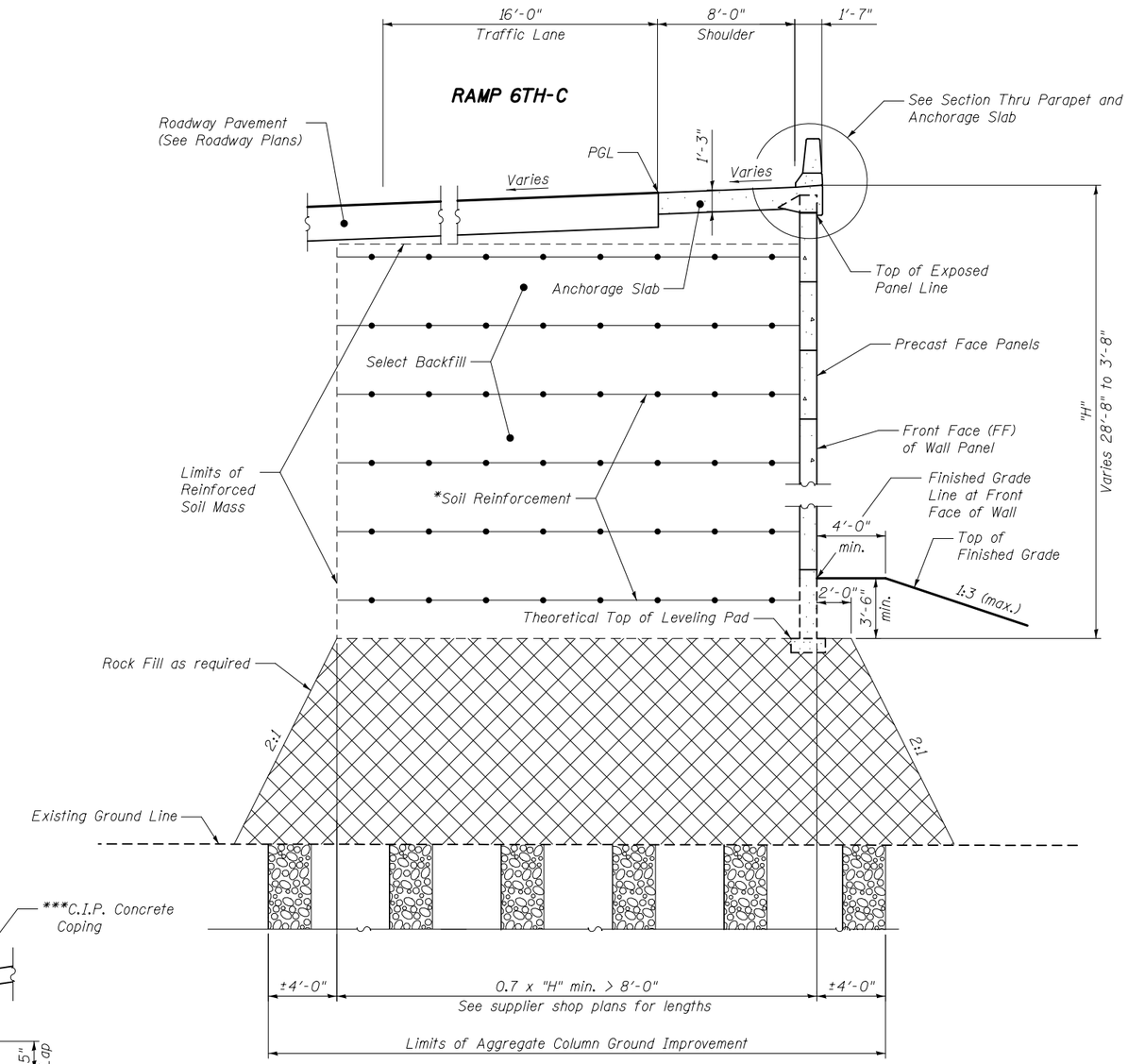
Note:

** The M.S.E. wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 3.0 kips/ft of abutment. Cost shall be included with the cost of "Mechanically Stabilized Earth Retaining Wall".



DETAIL A
C.I.P. CONCRETE COPING

*** Concrete and reinforcing steel for C.I.P. Concrete Coping are included in the cost of Mechanically Stabilized Earth Retaining Wall.



TYPICAL WALL SECTION

(Section C-C)

Sta. 331+30.00 to Sta. 332+60.00

Note:

*The M.S.E. wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.5 kips/ft. of wall.

Notes:
For Section Thru Parapet and Anchorage Slab, see Sheet 4.
For location of Section B-B and C-C, see Sheet 3.
See Proposed Bridge SN 081-0186 Plans for abutment details.

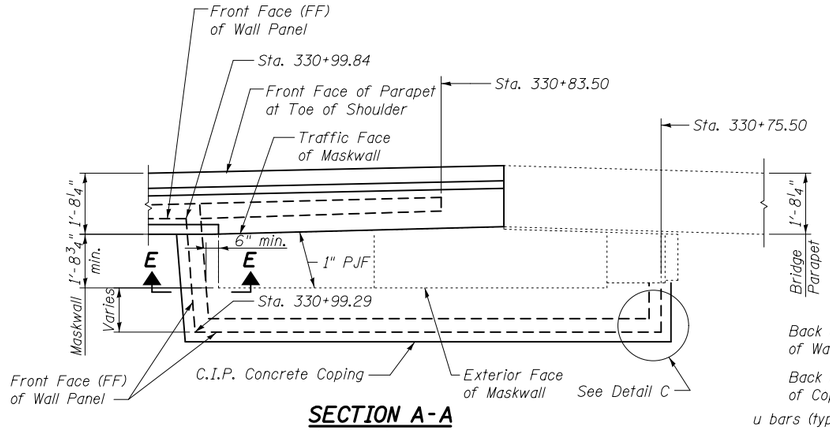
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

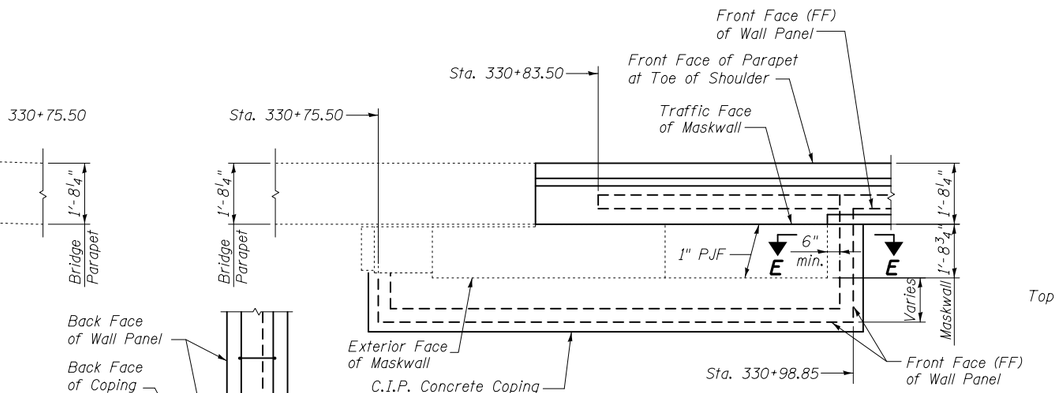
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MSE DETAILS 2
RAMP 6TH-C RETAINING WALL 18
STRUCTURE NO. 081-6019
SHEET NO. 5 OF 12 SHEETS

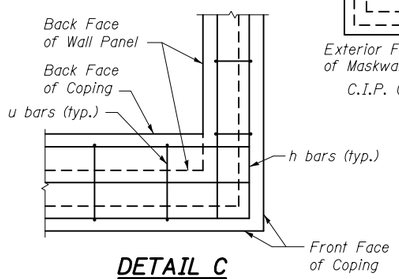
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1168
		CONTRACT NO. 64C08		
ILLINOIS	FED. AID PROJECT			



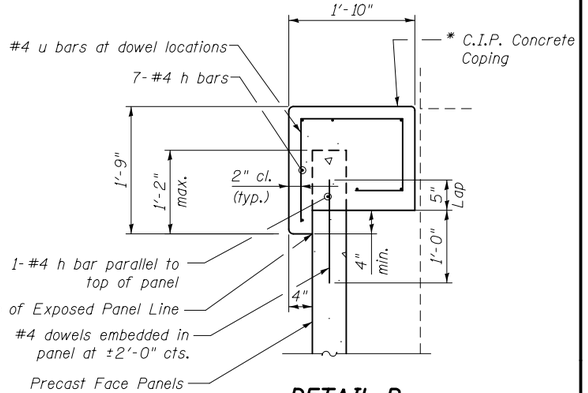
SECTION A-A
(at East Maskwall)



SECTION B-B
(at West Maskwall)

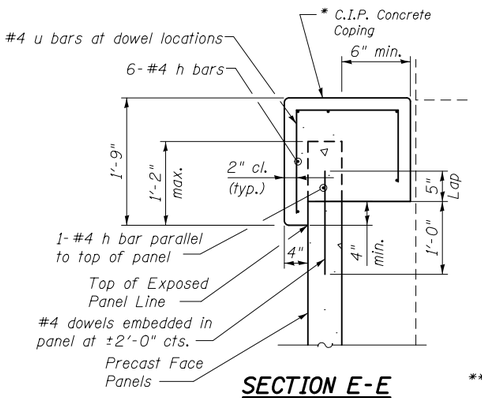


DETAIL C
(Bottom reinforcement not shown for clarity)

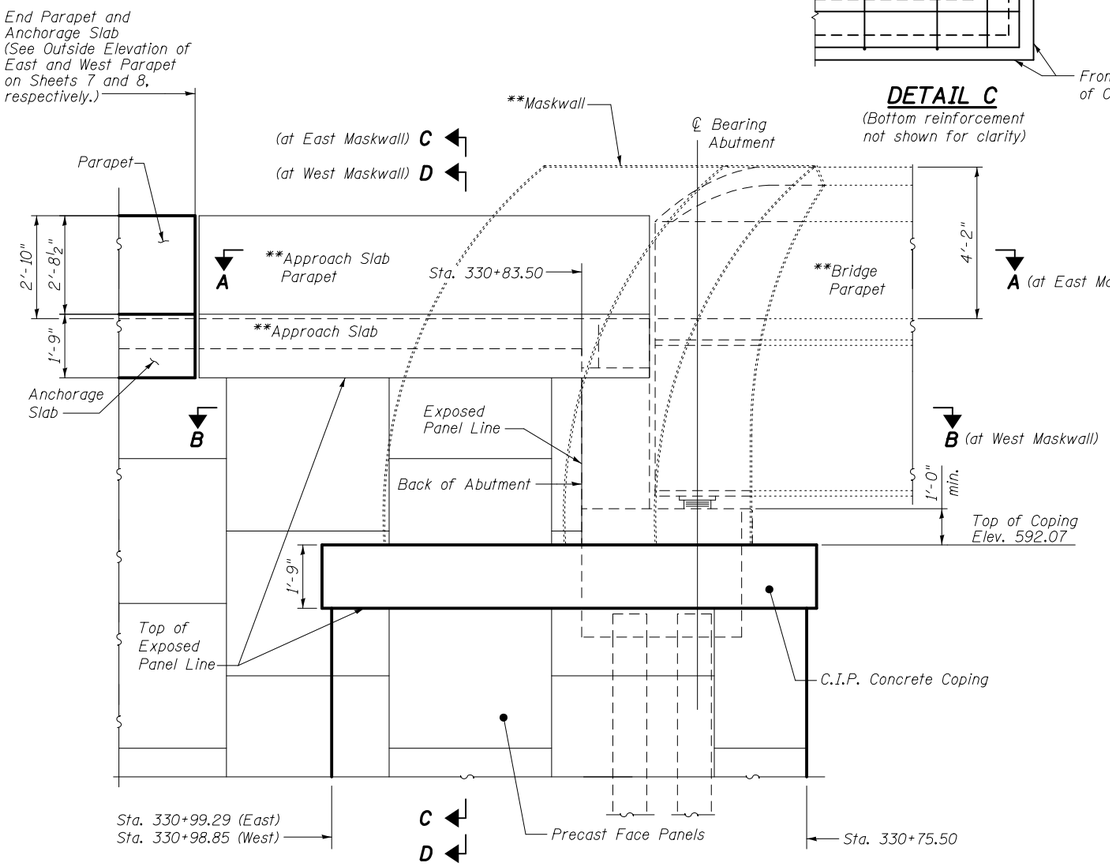


DETAIL B
C.I.P. CONCRETE COPING

* Concrete and reinforcing steel for C.I.P. Concrete Coping are included in the cost of Mechanically Stabilized Earth Retaining Wall.

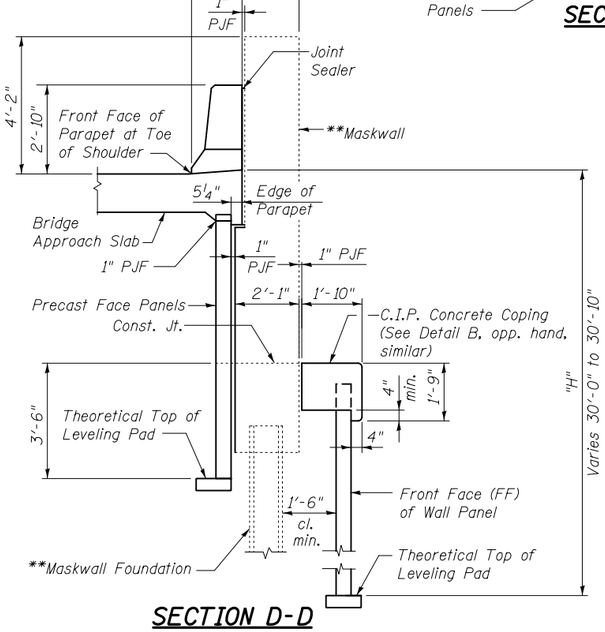


SECTION E-E

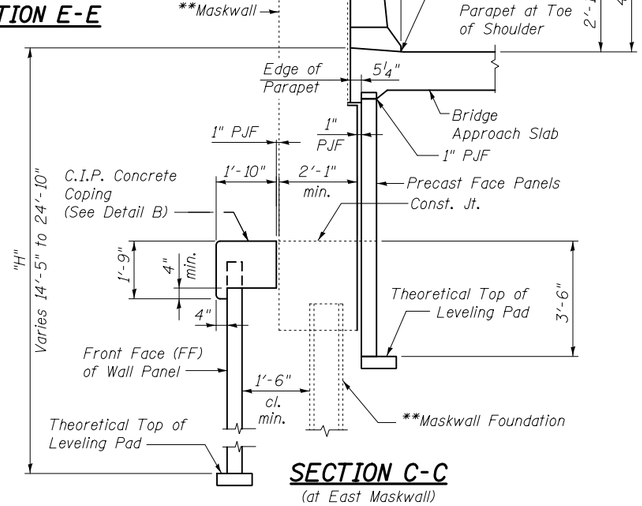


DETAIL 1
(Maskwall foundation not shown for clarity.)
East Maskwall shown, West Maskwall opposite hand

**See Proposed Bridge SN 081-0186



SECTION D-D
(at West Maskwall)



SECTION C-C
(at East Maskwall)

Notes:
The soil reinforcement limits for the upper and lower MSE walls shall meet the design requirements provided within the Typical Sections. The width of the lower wall soil reinforcement shall be designed based on "H" as dimensioned in Section C-C and D-D. The width of the upper wall soil reinforcement shall be designed based on the height from the upper wall Theoretical Top of Leveling Pad to the Toe of Shoulder and shall be equal to or greater than the limit of soil reinforcement required for the lower MSE wall.
For location of Detail 1, see Sheet 1.

MODJESKI and MASTERS
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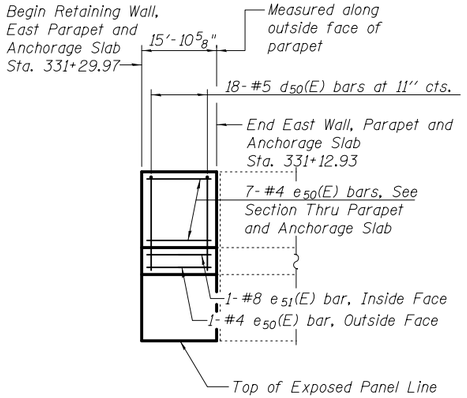
USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

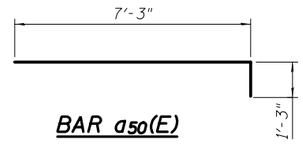
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MSE DETAILS 3
RAMP 6TH-C RETAINING WALL 18
STRUCTURE NO. 081-6019
SHEET NO. 6 OF 12 SHEETS

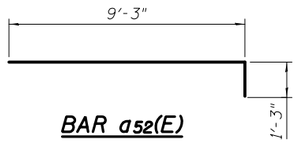
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1169
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



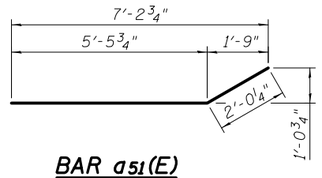
OUTSIDE ELEVATION OF EAST PARAPET



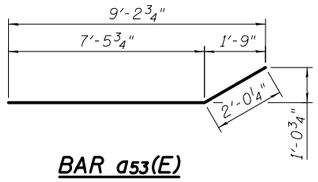
BAR a50(E)



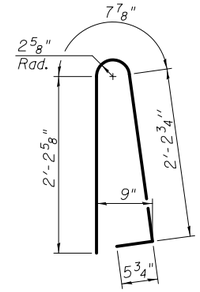
BAR a52(E)



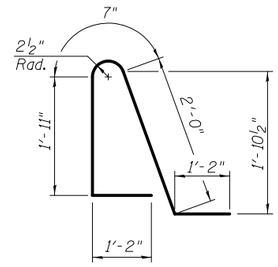
BAR a51(E)



BAR a53(E)



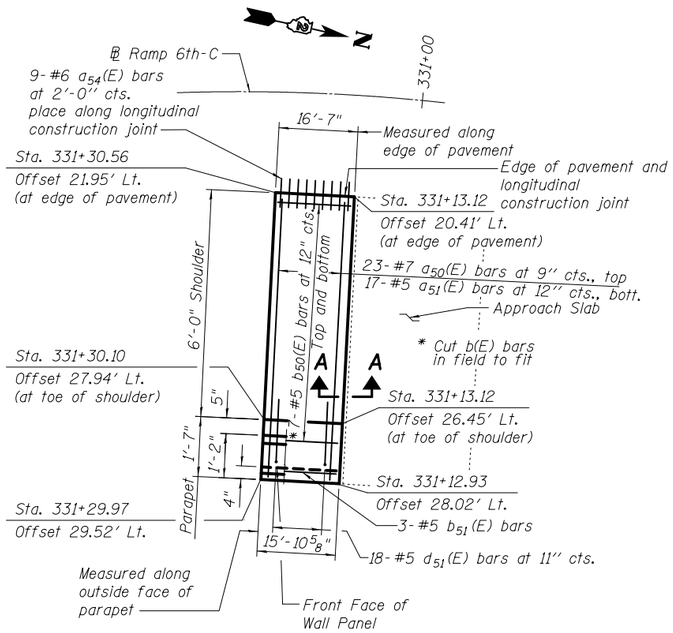
BAR d50(E)



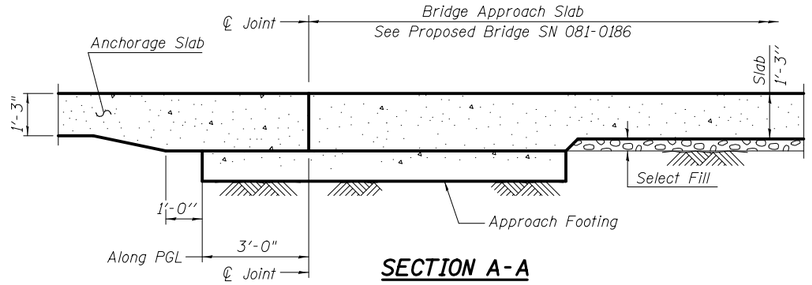
BAR d51(E)

RETAINING WALL 18
BILL OF MATERIAL

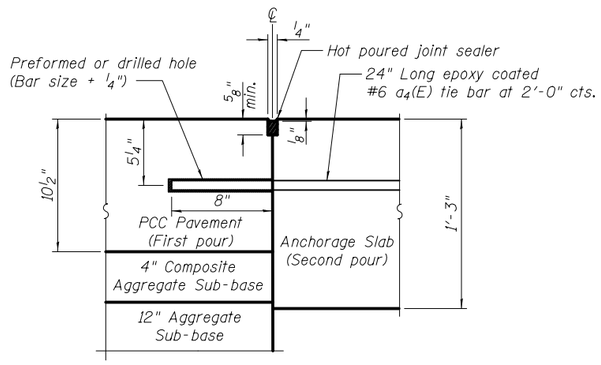
Bar	No.	Size	Length	Shape
a50(E)	23	#7	8'-6"	
a51(E)	17	#5	7'-6"	
a52(E)	201	#7	10'-6"	
a53(E)	151	#5	9'-6"	
a54(E)	83	#6	2'-0"	
b50(E)	14	#5	16'-3"	
b51(E)	3	#5	15'-9"	
b52(E)	84	#5	25'-0"	
b53(E)	42	#5	31'-6"	
d50(E)	183	#5	5'-7"	
d51(E)	183	#5	6'-10"	
e50(E)	8	#4	15'-6"	
e51(E)	1	#8	15'-6"	
e52(E)	7	#4	15'-0"	
e53(E)	1	#8	30'-0"	
e54(E)	1	#4	30'-0"	
e55(E)	63	#4	14'-9"	
e56(E)	4	#8	29'-9"	
e57(E)	4	#4	29'-9"	
Reinforcement Bars, Epoxy Coated			Pound	14,140
Concrete Superstructure			Cu. Yd.	92.9



PLAN - EAST PARAPET AND ANCHORAGE SLAB



SECTION A-A



Notes:
The contractor may substitute at his option, formed in place tie bars provided the bar length is increased to 30" and the tie bar is centered across the joint.
Preformed or drilled hole shall be in the first pour.

LONGITUDINAL CONSTRUCTION JOINT GROUTED-IN-PLACE TIE BAR

Notes:
For Section Thru Parapet and Anchorage Slab, see Sheet 4.
Joints in the adjacent pavement shall be aligned with the anchorage slab joints.
Stations and offsets on this sheet are given to the outside face of the parapet and are measured from Ramp 6th-C baseline, except as noted.

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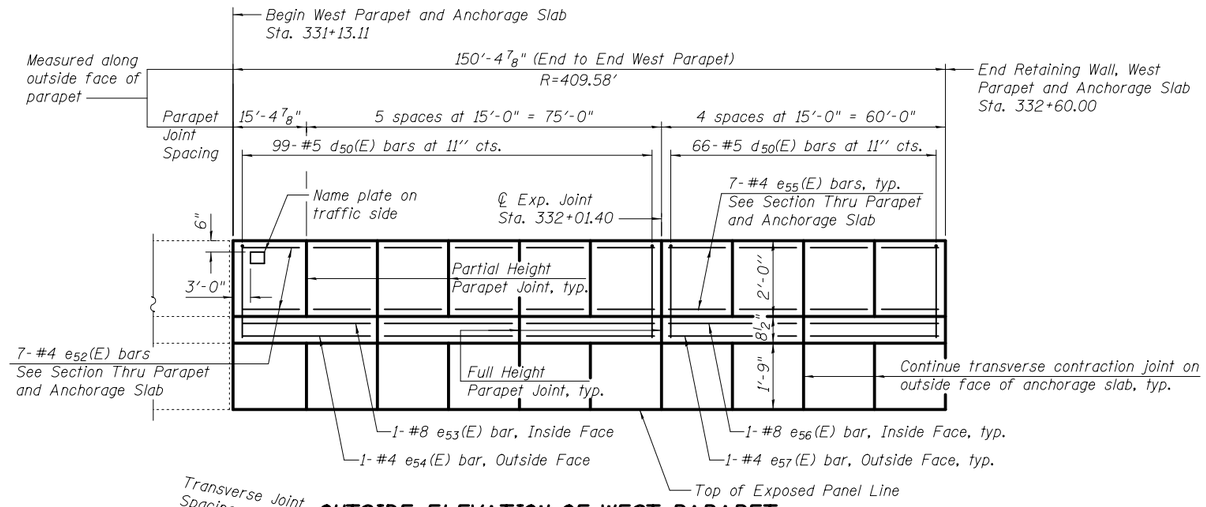
USER NAME =	DESIGNED - YSS	REVISED	
	CHECKED - ZJB	REVISED	
PLOT SCALE =	DRAWN - MLA	REVISED	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED	

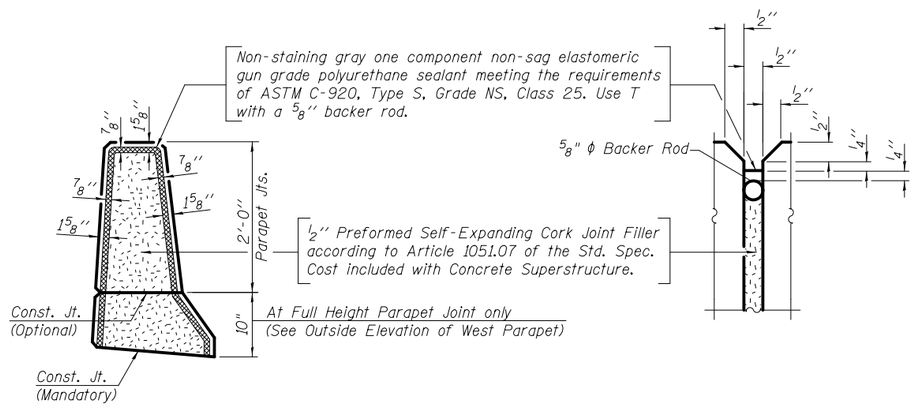
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET AND ANCHORAGE SLAB 1
RAMP 6TH-C RETAINING WALL 18
STRUCTURE NO. 081-6019
SHEET NO. 7 OF 12 SHEETS

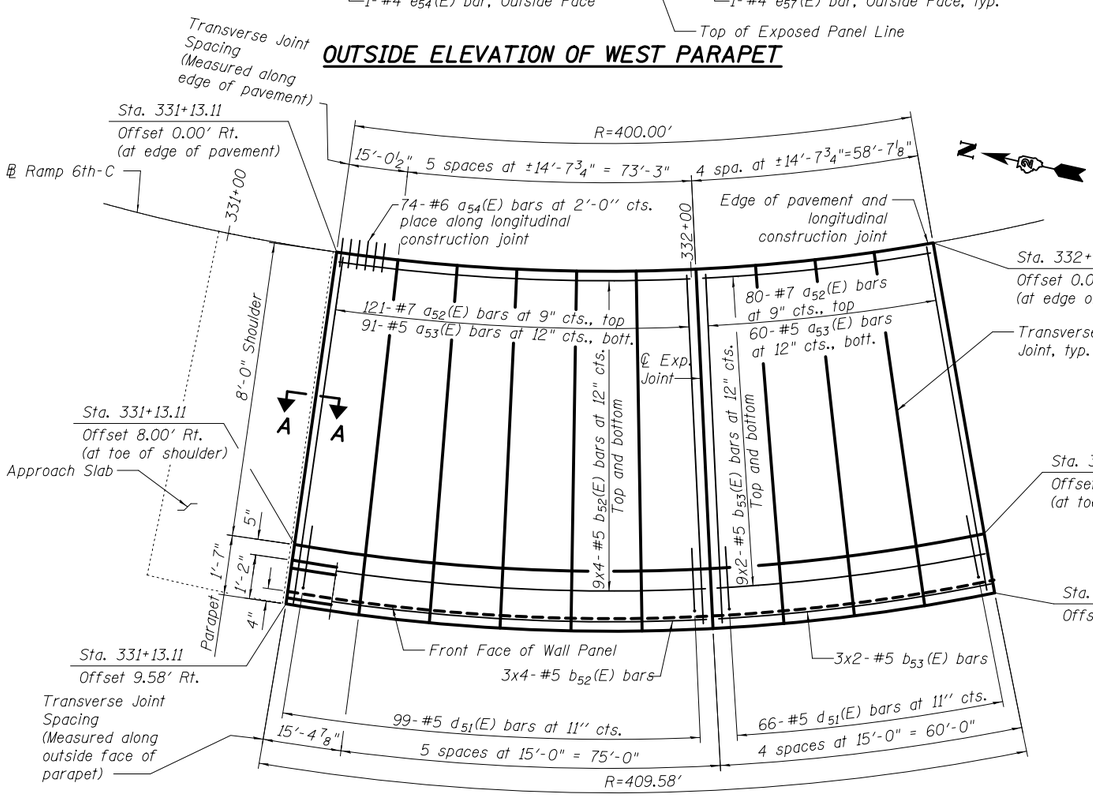
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1170
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



OUTSIDE ELEVATION OF WEST PARAPET



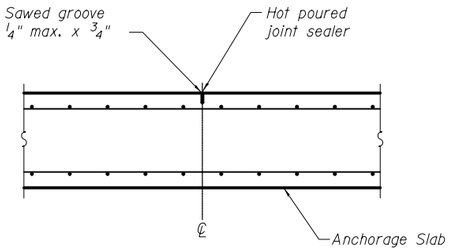
PARAPET JOINT DETAILS



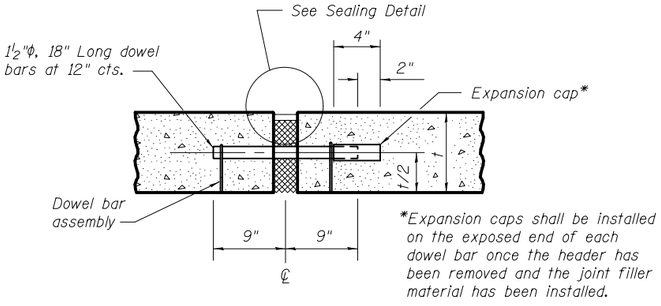
PLAN - WEST PARAPET AND ANCHORAGE SLAB

MIN. BAR LAP

#5 bars - 3'-3"

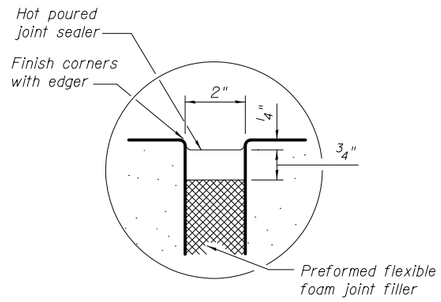


TRANSVERSE CONTRACTION JOINT



ANCHORAGE SLAB EXPANSION JOINT

Expansion joint and dowel bars included in the cost of Concrete Superstructure.



SEALING DETAIL

Notes:

For Section Thru Parapet and Anchorage Slab, see Sheet 4.

Bars indicated thus 9x4-#5 etc. indicates 9 lines of bars with 4 lengths per line.

Joints in the adjacent pavement shall be aligned with the anchorage slab joints.

Stations and offsets on this sheet are given to the outside face of the parapet and are measured from Ramp 6th-C baseline, except as noted.

For Section A-A and Bill of Material, see Sheet 7.

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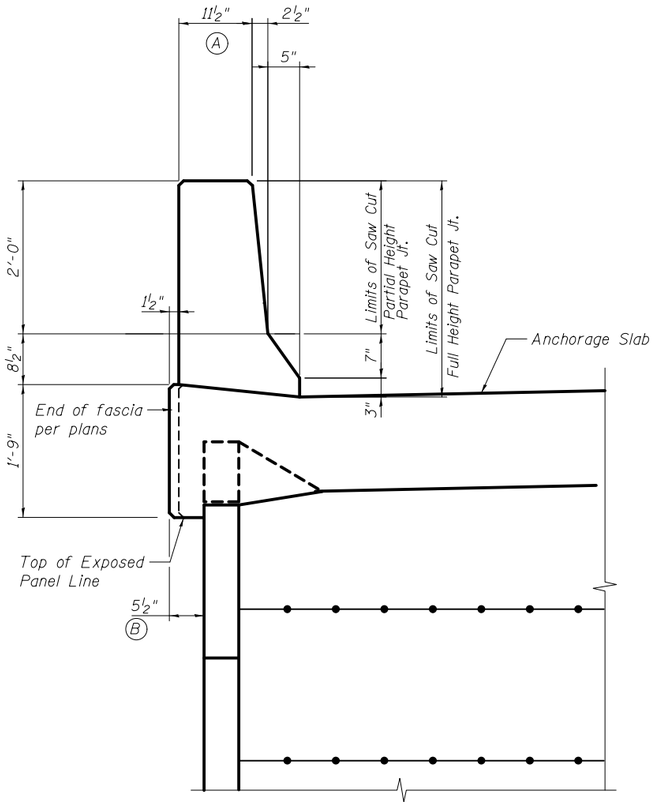
USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

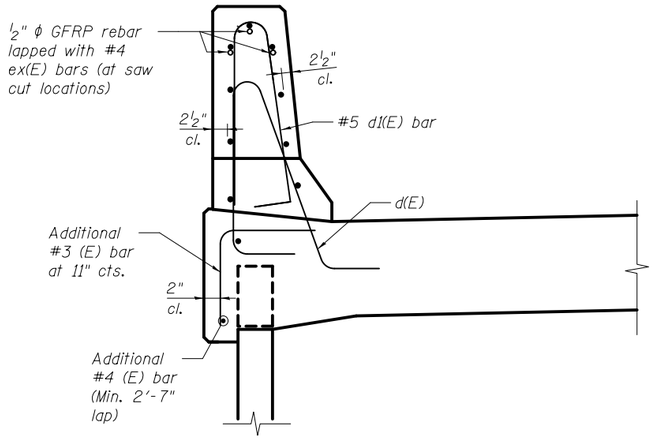
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET AND ANCHORAGE SLAB 2
RAMP 6TH-C RETAINING WALL 18
STRUCTURE NO. 081-6019
SHEET NO. 8 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1171
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



SECTION THRU PARAPET AND ANCHORAGE SLAB



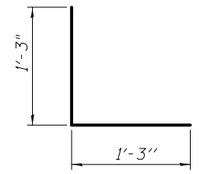
SECTION

(Showing reinforcement clearances for slip forming and additional reinforcement)

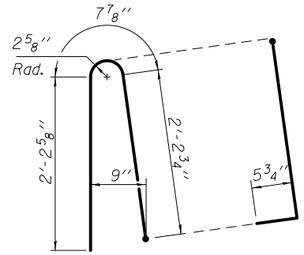
GENERAL NOTES

All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A equals 0.016 cu. yds./ft.

Full thickness saw cut at all joint locations in lieu of cork joint filler.

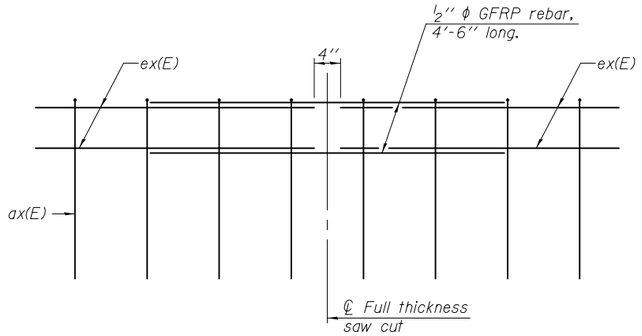


#3 (E) BAR



ALTERNATE BAR #5-d1(E)

(When conduit is present)



GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)

benesch
engineers · scientists · planners
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

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USER NAME =	DESIGNED - KMP	REVISED
	CHECKED - SLD	REVISED
PLOT SCALE =	DRAWN - RMG	REVISED
PLOT DATE = 1/20/2017	CHECKED - SLD	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RETAINING WALL PARAPET SLIPFORMING OPTION
RAMP 6TH-C RETAINING WALL 18
STRUCTURE NO. 081-6019
SHEET NO. 9 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1172
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Page 1 of 1

Date 9/19/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY F. Abreu

SECTION I-74 Bridge over Mississippi River LOCATION (N=564025.307, E=2459262.179), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO.
Station
BORING NO. ILR1301
Station 331+06
Offset 23' Lt.
Ground Surface Elev. 575.95 ft

Surface Water Elev. ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter ft
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
3" Of Asphalt Surface 3" Asphalt 575.45				**Sandstone** grayish brown, stiff, No recovery 1" of laminated silt stone/sand stone in the shoe *(continued)* No recovery 1 1/2' of laminated grey sandstone in tip			
Silty Sand (SM) grayish brown, slightly moist, medium dense, fine to coarse grained, non-plastic plasticity,	4						
Grayish brown, slightly moist, medium dense, fine to coarse, non plastic, fines	8 5						
dark gray, loose, low plasticity,	2						
Same as above, dark gray, loose, low plasticity fines -5	2 3			-25			
yellowish brown, very loose, Same as above very moist	0 1 1		23.0				
wet, loose, Same as above, more silt	2 2 2			546.95 End of Boring -30			
-10	1 2 2						
563.95 **Sandy Silt (SM)** Grayish brown, moist, medium to stiff, low plasticity, fine to medium grained	0 3 3		13.0				
grayish brown, moist, firm, fine to medium grained, Same as above, stiff, grey brown siltstone at tip (4' total count pocket pen) -15	0 5 8			-35			
559.95 **Sandstone** grayish brown, stiff, No recovery 1" of laminated silt stone/sand stone in the shoe	50/6						
	30 50/2						
-20				-40			

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)

HANSON

SOIL BORING LOG

Page 1 of 1

Date 7/1/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81B LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO.
Station
BORING NO. PRMP 6th C-02
Station 332+55
Offset 10' Lt.
Ground Surface Elev. 576.5 ft

Surface Water Elev.
Stream Bed Elev.
Groundwater Elev.:
First Encounter ft
Upon Completion 566.5 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
ASPHALT 576.10			
Very dark brown, moist, stiff, silty, sandy, lean CLAY	4	0.95B	18
2	5 6		
572.50			
Gray, moist, stiff, silty, sandy, lean CLAY 4		0.90B	15
570.00			
Gray with brown mottles, moist to wet, soft, silty, lean CLAY 6			
8	2	0.55B	32
10 ▽	2 2		
		0.43B	22
565.00			
Gray, moist, medium dense, silty, clayey, fine- to medium-grained SAND, petroleum odor 12			
562.50	7		13
14 Brown, wet, dense, medium- to coarse-grained SAND and GRAVEL	10 20		
561.00			
Weathered Rock 560.50	50/0"		
16 End of Boring			

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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 1
RAMP 6TH-C RETAINING WALL 18
STRUCTURE NO. 081-6019
SHEET NO. 10 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1173
				CONTRACT NO. 64C08
		ILLINOIS	FED. AID PROJECT	

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 12/15/05

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY B. Karnik

SECTION I-74 Bridge over Mississippi River LOCATION (N=563968.083, E=2459220.495), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station _____

BORING NO. PRMPC02
Station 331+59
Offset 24' Rt.
Ground Surface Elev. 575.95 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter _____ ft
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
3" asphalt concrete, underlain by 9" crushed gravel 574.95				
Miscellaneous Fill Poorly graded sand, brown, moist, fine to coarse, fill, underlain by 3" thick brick, clay, gravel mix		5 4		
Sand, gravel, silty clay mix		5 14 28		
Concrete pieces, gravel, sand	-5	24 18 8 3		
Bricks, concrete rubble, gravel, silty clay, gray, brown, moist, soft, low plasticity		11 10 5 6		
Reddish brown silty sandy clay, moist, soft/loose, fine sand seams with alternating silty clay seams	-10	6 4 3 4 4		
Gray sandy clay, moist/wet, soft, fine sand and fines with iron oxide streaks with poorly graded fine to medium sand seams		3 3 3 2		
Gray/black sandy clay, moist/wet, asphalt concrete with petroleum odor	-15	3 3 7 6 8		
556.45				
Sandstone Auger refusal and 555.95	-20	50/2		

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
CH2M HILL

ROCK CORE LOG

Date 12/15/05

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY B. Karnik

SECTION I-74 Bridge over Mississippi River LOCATION (N=563968.083, E=2459220.495), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ DOUBLE BARREL DIAMOND TIP

STRUCT. NO. _____
Station _____

CORING BARREL TYPE & SIZE _____
Core Diameter _____ in
Top of Rock Elev. 555.95 ft
Begin Core Elev. 555.95 ft

BORING NO. PRMPC02
Station 331+59
Offset 24' Rt.
Ground Surface Elev. 575.95 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Sandstone Light gray, fine grained, slightly weathered, weak to moderately strong, extremely to moderately fractured Horizontal fractures, no staining, extremely close to close spacing, vertical fracture at bottom 3", black sandstone striations throughout, smooth undulating joints, thin silty infilling at 9" from the top, no infilling elsewhere 555.95		R-1	50	17		
Light gray, fine grained, slightly weathered, weak to moderately strong, extremely fractured to sound, with shale seams throughout, Coring rate: 4 minutes for 2.5' Fractures are mostly horizontal, extremely close to moderate spacing, no staining, smooth undulating joint surfaces, highly fractured zones at 2' 3" and 4' 6" from the top, zones have silty infilling coating with fractured pieces	-25	R-2	100	45		
Light gray, fine grained, extremely fractured to sound, unweathered, moderately strong, shale seams scattered throughout Coring rate: 14 minutes for 5' Horizontal fractures, no staining, smooth undulating surfaces, discontinuities are extremely close to moderately spaced, shaley infilling (very thin) and coating at some joint surfaces, tightly healed joints	-30	R-3	93	83		
moderately fractured to sound, unweathered Coring rate: 6 minutes for 5' Horizontal joints, no staining, smooth undulating joints, some joints are at 20 degrees, no infilling except at 37' where 2" thick soft silty infilling is present preventing rock wall contact other joints are tightly healed, close to moderately spaced discontinuities	-35	R-4	97	85		447.0
Light gray, fine grained, no shale seams, extremely fractured to slightly fractured, moderately strong, slightly weathered Horizontal joints, no staining, no infilling, very close to close spacing, rough irregular surfaces, tightly healed joints 535.95	-40	R-5	77	23		

End of Boring
Color pictures of the cores _____
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)

Illinois Department of Transportation
Division of Highways
CH2M HILL

SOIL BORING LOG

Date 9/4/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION I-74 Bridge over Mississippi River LOCATION (N=564052.458, E=2459235.291), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island DRILLING METHOD HSA, CME 55 HAMMER TYPE CME AUTOMATIC

STRUCT. NO. _____
Station 330+80

BORING NO. PRMPC-03
Station 330+80
Offset 7' Lt.
Ground Surface Elev. 575.80 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter 562.3 ft ▼
Upon Completion _____ ft
After _____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
PAVEMENT - asphalt concrete (4" thick) 575.47				
SILT - yellowish brown to brown and orange-brown mottled to gray, little to some clay, powdery, slightly to medium plastic, medium stiff to stiff, moist		4 5 9	2.5 P	
- dark brown, little to some clay	-5	1 1 2	0.5 P	
- some clay, medium plastic 567.30		2 2 2	0.8 P	
CLAY - tan, brown and orange, little to some fine sand, soft to medium stiff, very moist to wet.	-10	2 1 2	0.5 P	
562.30 ▼		WOH		
SAND - black, fine to coarse, and dark gray medium to high plastic clay, very soft/loose, saturated.	-15	WOH 2 0		
[Note: strong petroleum odor and trace free product in saturated zone at 13.5'-15'; PID = 420 ppm] 559.80		20		
SHALE - light gray, sandy (hard clay), no laminations, dry.		34 60	>4.5 P	
557.40				
Borehole continued with rock coring.	-20			

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)

MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED	
	CHECKED - JMH	REVISED	
PLOT SCALE =	DRAWN - MLA	REVISED	
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 2
RAMP 6TH-C RETAINING WALL 18
STRUCTURE NO. 081-6019
SHEET NO. 11 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1174
		CONTRACT NO. 64C08		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
CH2M HILL

ROCK CORE LOG

Date 9/4/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION I-74 Bridge over Mississippi River LOCATION (N=564052.458, E=2459235.291), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO. _____
Station 330+80

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 559.80 ft
Begin Core Elev. 557.40 ft

BORING NO. PRMPC-03
Station 330 + 80
Offset 7' Lt.
Ground Surface Elev. 575.80 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
SANDSTONE - light brownish gray, fine grained, uniform grain size, well sorted, moderately well cemented, soft, localized black banding and light gray shale pod inclusions, primarily horizontal sandy rough fractures, non-distinct bedding with fractures at thin to thick bedded spacing, slightly weathered to fresh. 557.40	-20	Run 1	98	55	1.5	
-dark gray shale bed with numerous light gray sandstone partings and seams, soft, rock-like at 21' to 22.8'	-25	Run 2	100	69	0.8	
-4" thick dark gray to black sandy shale seam at 25.7' to 26.0'						
-brown spotted/speckled fine grained sandstone at 26' to 27.3'	-30	Run 3	98	83	0.6	
	-35	Run 4	100	85	0.6	
		Run 5	98	98	0.7	

Color pictures of the cores Yes
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)

Illinois Department of Transportation
Division of Highways
CH2M HILL

ROCK CORE LOG

Date 9/4/07

ROUTE I-74 DESCRIPTION New I-74 Bridge Over Mississippi River - Illinois Approach LOGGED BY KJB

SECTION I-74 Bridge over Mississippi River LOCATION (N=564052.458, E=2459235.291), SEC. 32, TWP. 18N, RNG. 1W, 4th PM

COUNTY Rock Island CORING METHOD NQ Core

STRUCT. NO. _____
Station 330+80

CORING BARREL TYPE & SIZE NQ Wireline
Core Diameter 1.8 in
Top of Rock Elev. 559.80 ft
Begin Core Elev. 557.40 ft

BORING NO. PRMPC-03
Station 330 + 80
Offset 7' Lt.
Ground Surface Elev. 575.80 ft

	DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
SANDSTONE - light brownish gray, fine grained, uniform grain size, well sorted, moderately well cemented, soft, localized black banding and light gray shale pod inclusions, primarily horizontal sandy rough fractures, non-distinct bedding with fractures at thin to thick bedded spacing, slightly weathered to fresh. *(continued)*	-40					
529.80	-45					
End of Boring	-50					
	-55					

Color pictures of the cores Yes
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)

HANSON

SOIL BORING LOG

Date 6/30/10

ROUTE F.A.I. 74 DESCRIPTION I-74 Over Mississippi River LOGGED BY JMB

SECTION 81-1HVB LOCATION NE¼ of SEC. 32, TWP. 18N, RNG. 1W, 4th P.M.

COUNTY Rock Island DRILLING METHOD Hollow Stem Auger HAMMER TYPE Auto

STRUCT. NO. 081-6019
Station _____
BORING NO. RW 18-1
Station 330+79
Offset 27' Lt.
Ground Surface Elev. 576.0 ft

Surface Water Elev. _____
Stream Bed Elev. _____
Groundwater Elev.:
First Encounter _____ ft
Upon Completion 564.0 ft ▽
After ____ Hrs. _____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
ASPHALT 575.80				
FILL - Very dark brown, moist, stiff, clayey SILT with fine-grained sand and gravel, coal and cinders	2	6 6 5		13
	4	2 3 3		25
569.50	6		1.10B	20
Brown and gray, moist, medium stiff, SILT with trace very fine-grained sand				21
	8			21 22 23 23
	10			
564.00 ▽	12	3 3 3		22
Brownish gray, wet, loose, silty, fine- to medium-grained SAND 562.50				
Gray, wet, soft, SILT with fine-grained sand, petroleum odor	14	2 2 2	0.30P	29
560.50				
Gray, WEATHERED SILTSTONE 559.50	16	50/5"	3.50P	7
End of Boring				

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)

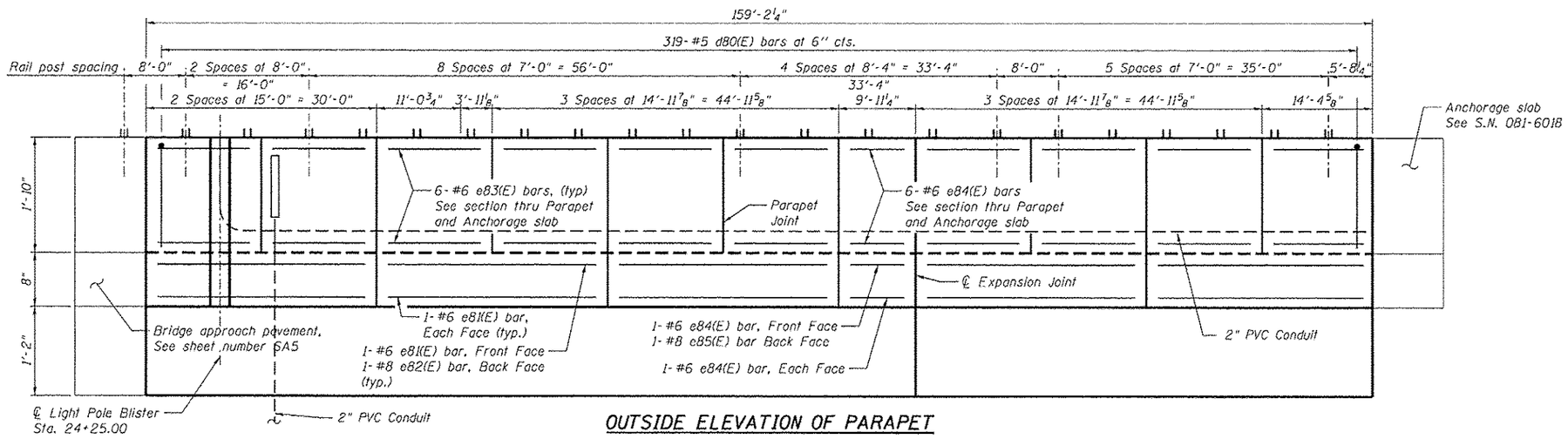
MODJESKI and MASTERS
Experience great bridges.

USER NAME =	DESIGNED - YSS	REVISED
	CHECKED - JMH	REVISED
PLOT SCALE =	DRAWN - MLA	REVISED
PLOT DATE = 1/20/2017	CHECKED - YSS	REVISED

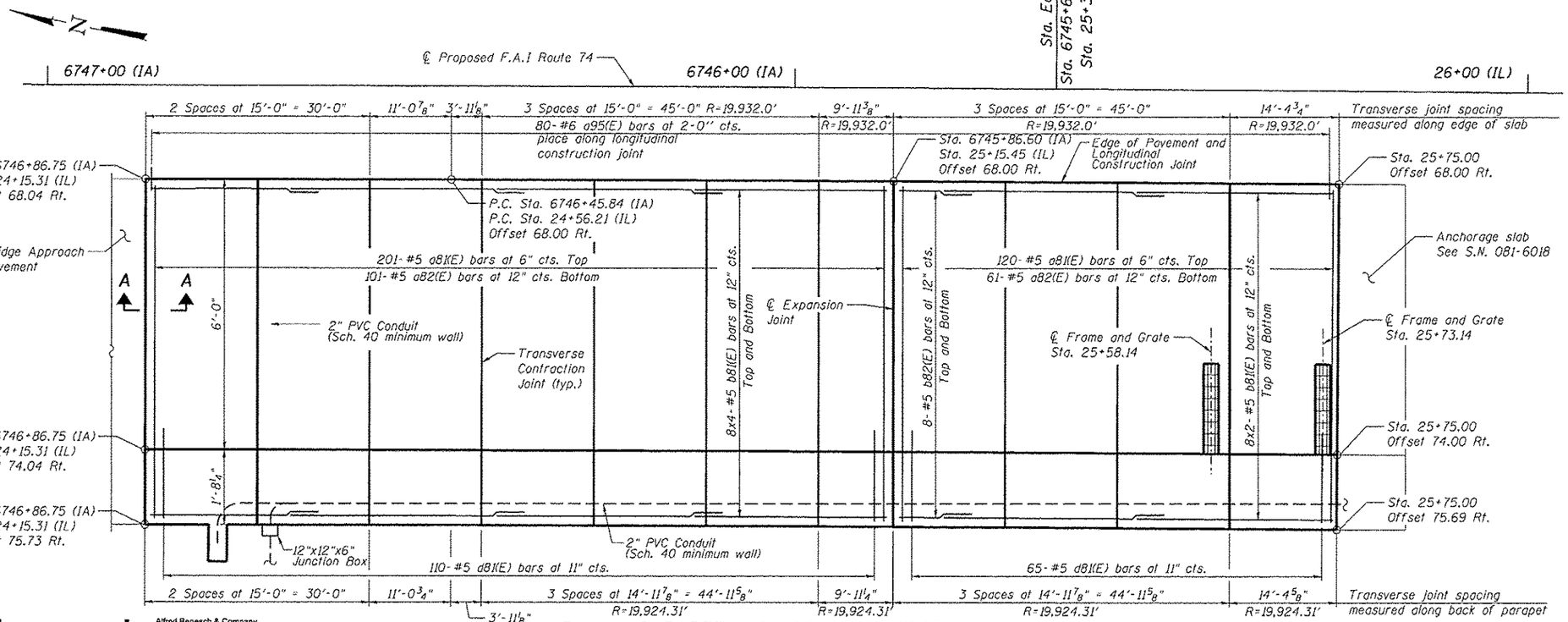
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 3
RAMP 6TH-C RETAINING WALL 18
STRUCTURE NO. 081-6019
SHEET NO. 12 OF 12 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1HVBR	ROCK ISLAND	1504	1175
		CONTRACT NO. 64C08		
	ILLINOIS	FED. AID PROJECT		



OUTSIDE ELEVATION OF PARAPET



PLAN - PARAPET AND ANCHORAGE SLAB

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

KEVIN M. PLACZEK
081-005460
LICENSED
STRUCTURAL
ENGINEER
STATE OF ILLINOIS

EXPIRATION DATE 11-30-2018
DATE: 1-20-2017

Min. Bar Lap #5 Bar = 2'-7"

Notes:
For Section Thru Parapet and Anchorage Slab, see Sheet AN2.
For Section A-A see Sheet AN2.
For Bill of Material, see Sheet AN3.
Bars indicated thus 3x7-#5 etc. indicates 3 lines of bars with 7 lengths per line.
Joints in the adjacent pavement shall be aligned with the anchorage slab joints.
Stations and offsets on this sheet are given to the outside face of the parapet and are measured from the centerline F.A.I Route 74, except as noted.
See Sheet AN3 for Light Pole Blister reinforcement.
For conduit and junction box details and pay items, see Lighting Plans.
For Frame and Grate Details, see Drainage Plans.

benesch
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

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MODEL = Default	PLOT SCALE =	REVISED -
	PLOT DATE = 1/18/2017	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB PLAN AND ELEVATION
I-74 EASTBOUND
SHEET NO. AN1 OF AN2O SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-)1R & 81-1(HVBR)	ROCK ISLAND	1504	1176
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

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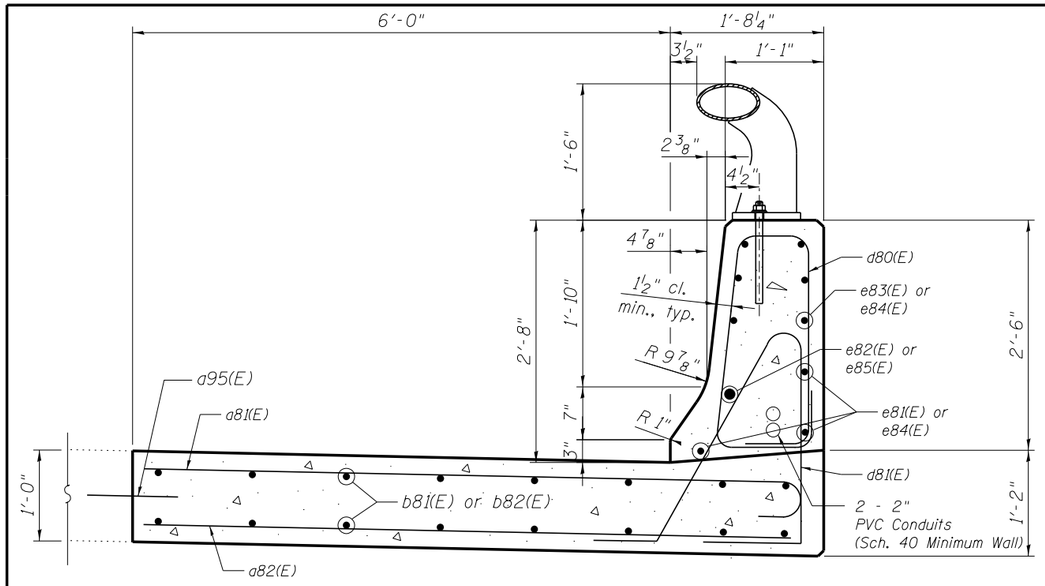
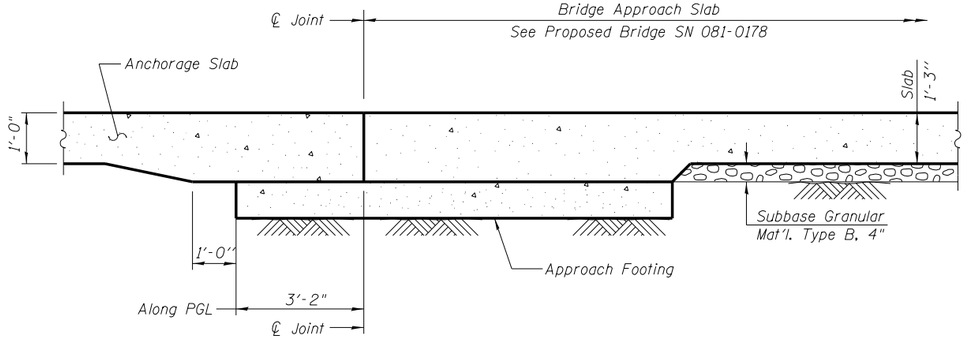
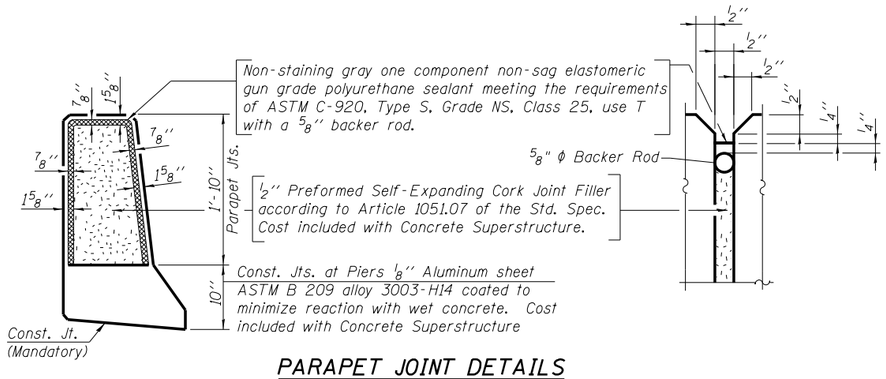


SECTION THRU PARAPET AND ANCHORAGE SLAB

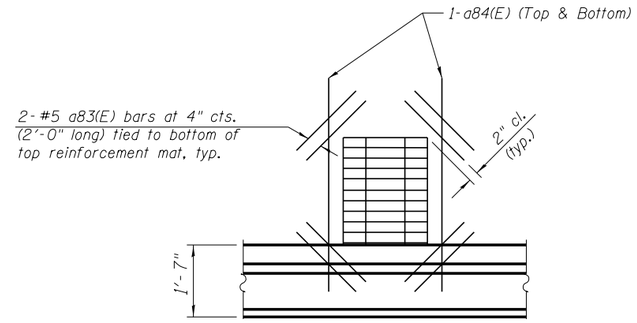


SECTION A-A



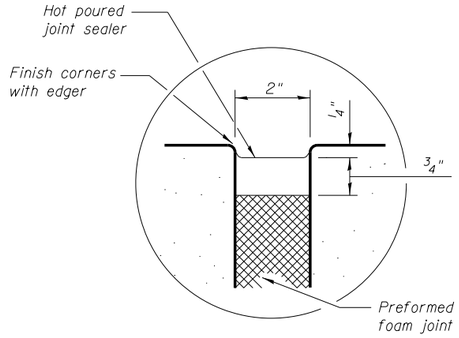
PARAPET JOINT DETAILS

(For Conventional Concrete Placement)

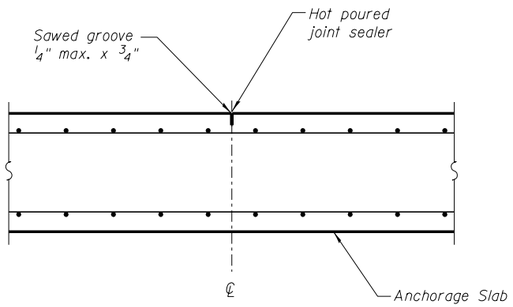


PLAN AT DRAINAGE STRUCTURE

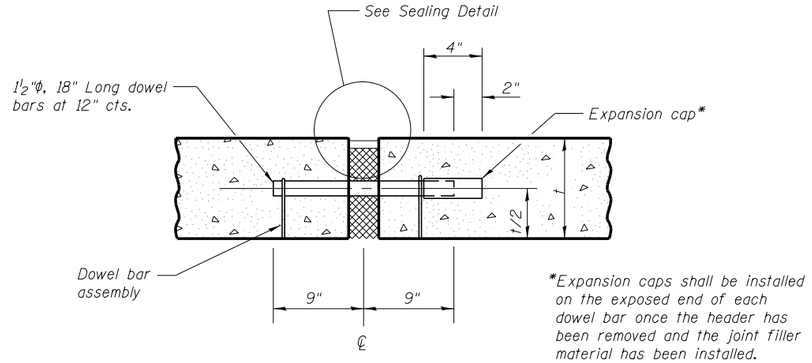
(Cut longitudinal reinforcement to clear drainage structure.)



SEALING DETAIL



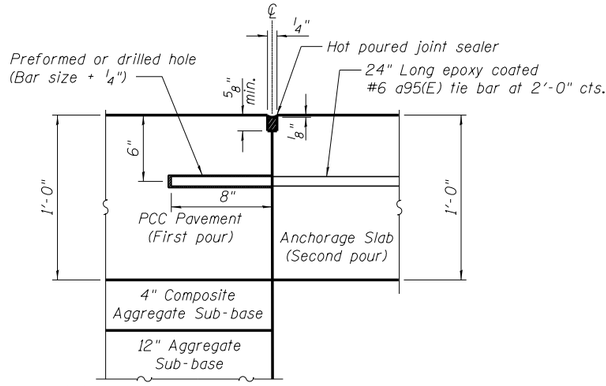
TRANSVERSE CONTRACTION JOINT



*Expansion caps shall be installed on the exposed end of each dowel bar once the header has been removed and the joint filler material has been installed.

ANCHORAGE SLAB EXPANSION JOINT

Expansion joint and dowel bars included in the cost of Concrete Superstructure.



Notes:
The Contractor may substitute at his option, formed in place tie bars provided the bar length is increased to 30" and the tie bar is centered across the joint.
Preformed or drilled hole shall be in the first pour.

LONGITUDINAL CONSTRUCTION JOINT GROUTED-IN-PLACE TIE BAR

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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

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	PLOT SCALE =	DRAWN - KMS	REVISED -
MODEL = EBAnchor_Det	PLOT DATE = 1/18/2017	CHECKED - KMP	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB DETAILS
I-74 EASTBOUND
SHEET NO. AN2 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1177
		CONTRACT NO. 64C08		
		ILLINOIS FED. AID PROJECT		

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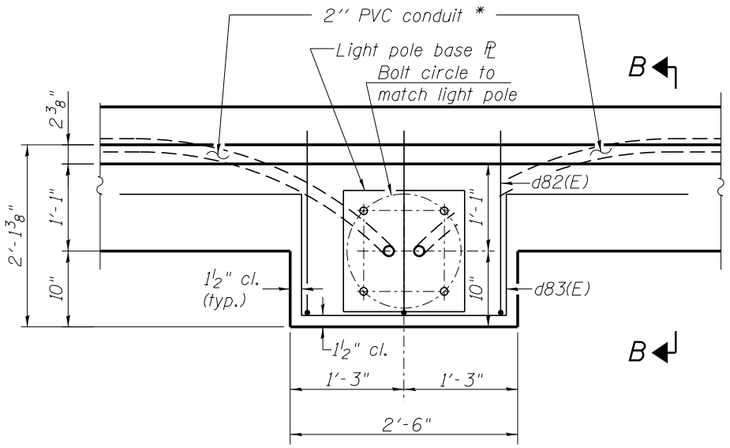
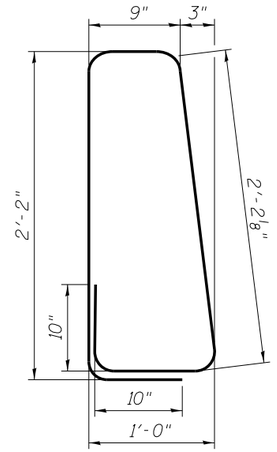
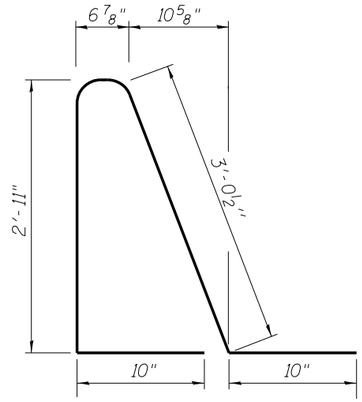


PLAN - LIGHT POLE BASE



BAR d80(E)

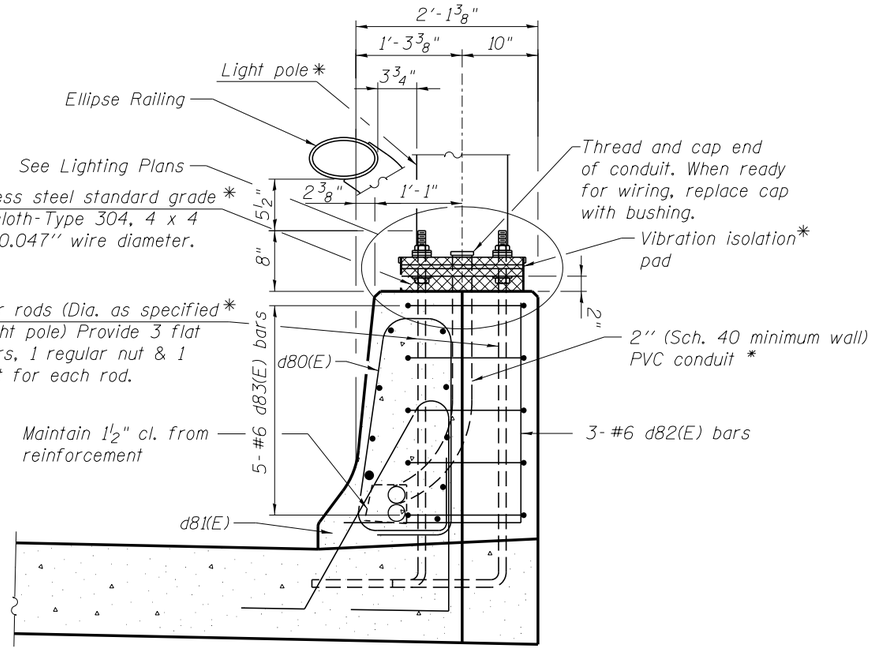


BAR d81(E)

BILL OF MATERIAL
EASTBOUND

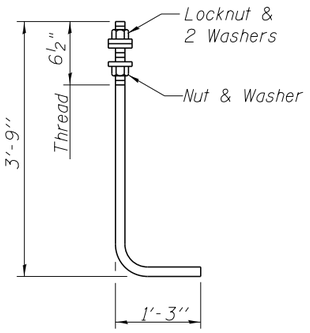
Bar	No.	Size	Length	Shape
a81(E)	321	#5	7'-10"	
a82(E)	162	#5	7'-3"	
a83(E)	16	#5	2'-0"	
a84(E)	8	#5	5'-0"	
a95(E)	80	#6	2'-0"	
b81(E)	96	#5	27'-0"	
b82(E)	16	#5	10'-9"	
d80(E)	319	#5	7'-10"	
d81(E)	175	#5	8'-3"	
d82(E)	3	#6	4'-5"	
d83(E)	5	#6	8'-11"	
e81(E)	15	#6	29'-8"	
e82(E)	5	#8	29'-8"	
e83(E)	60	#6	14'-8"	
e84(E)	9	#6	9'-7"	
e85(E)	1	#8	9'-7"	
Concrete Superstructure			Cu. Yd.	66.1
Reinforcement Bars, Epoxy Coated			Pound	13,790
Protective Coat			Sq. Yd.	182.1

Bars indicated thus 1 x 5 - #5 etc. indicates 1 line of bars with 5 lengths per line.



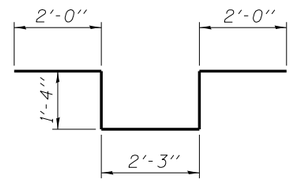
SECTION B-B

* See lighting plans for details and pay items

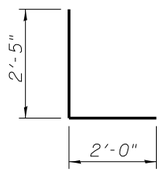


ANCHOR ROD

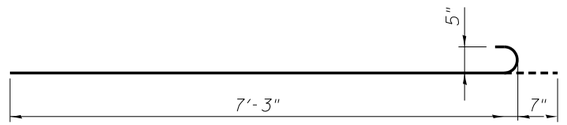
Diameter as specified for light poles (ASTM F 1554 Grade 105). Full length hot dipped galvanized. Anchor bolts included in the cost of Concrete Superstructure.



BAR d83(E)



BAR d82(E)



BAR d81(E)

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

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MODEL = EBAnchor_Det 2	PLOT DATE = 1/18/2017	CHECKED - KMP	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB DETAILS
I-74 EASTBOUND

SHEET NO. AN3 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1178
		CONTRACT NO. 64C08		
		ILLINOIS FED. AID PROJECT		

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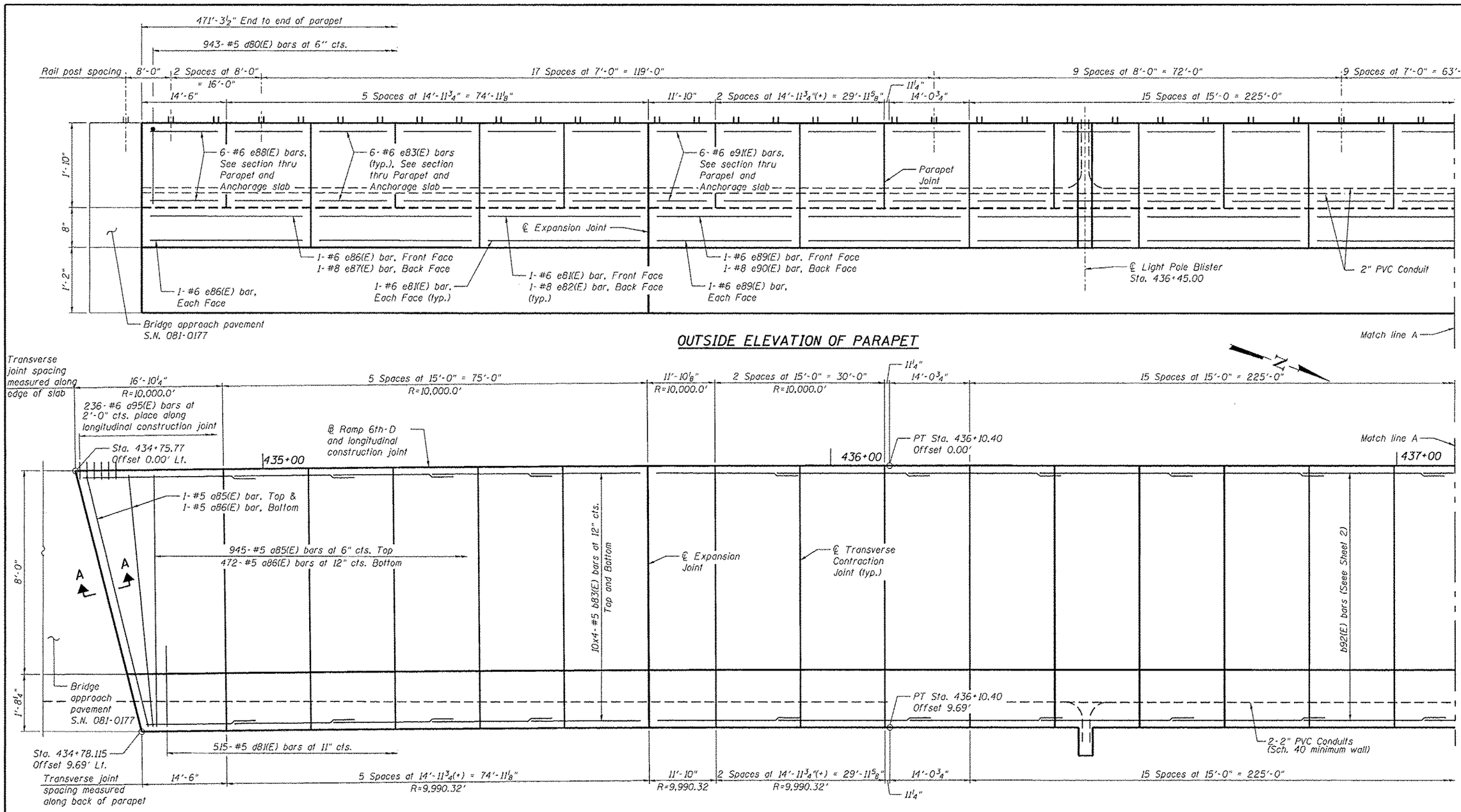

PLAN - PARAPET AND ANCHORAGE SLAB

Min. Bar Lap #5 Bar = 2'-7"

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

KEVIN M. PLACZEK
081-005460
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS
EXPIRATION DATE 11-30-2018
DATE: 1-20-2017

Notes:
For Section Thru Parapet and Anchorage Slab, see Sheet AN6.
For Section A-A and Bill of Material, see Sheet AN7.
Bars indicated thus 3x7-#5 etc. indicates 3 lines of bars with 7 lengths per line.
Joints in the adjacent pavement shall be aligned with the anchorage slab joints.
Stations and offsets on this sheet are given to the outside face of the parapet and are measured from the centerline F.A.I Route 74, except as noted.
See Sheet AN7 for Light Pole Blister reinforcement.
For lightpoles and conduit details, see Lighting plans.
For Frame and Grate Details, see Drainage Plans.

benesch
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

FILENAME = 000-0000-C00A-601-AnchorageSlabFinal.dgn	USER NAME = kplaczek	DESIGNED - SLD	REVISED -
		CHECKED - KMP	REVISED -
MODEL = WBAnchor1	PLOT SCALE =	DRAWN - KMS	REVISED -
	PLOT DATE = 1/18/2017	CHECKED - KMP	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB PLAN AND ELEVATION
I-74 WESTBOUND
SHEET NO. AN4 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1179
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

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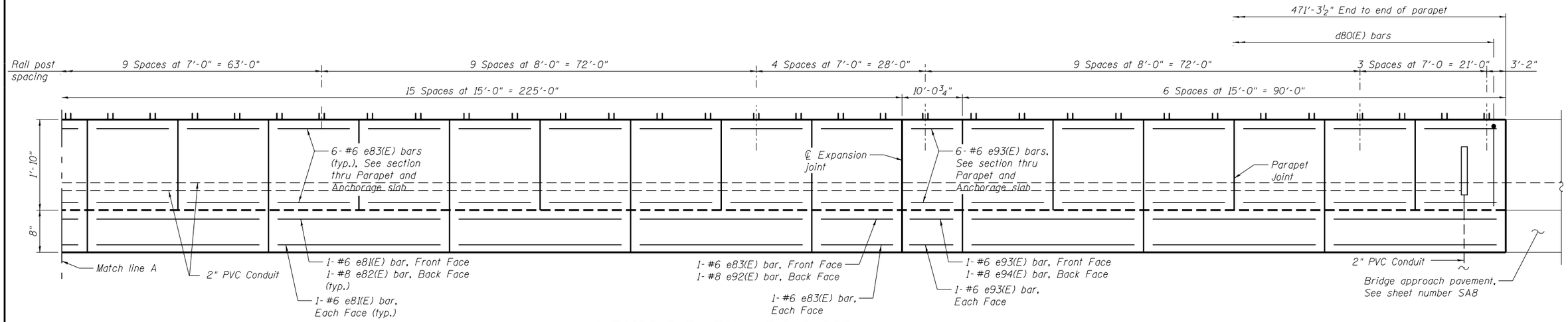
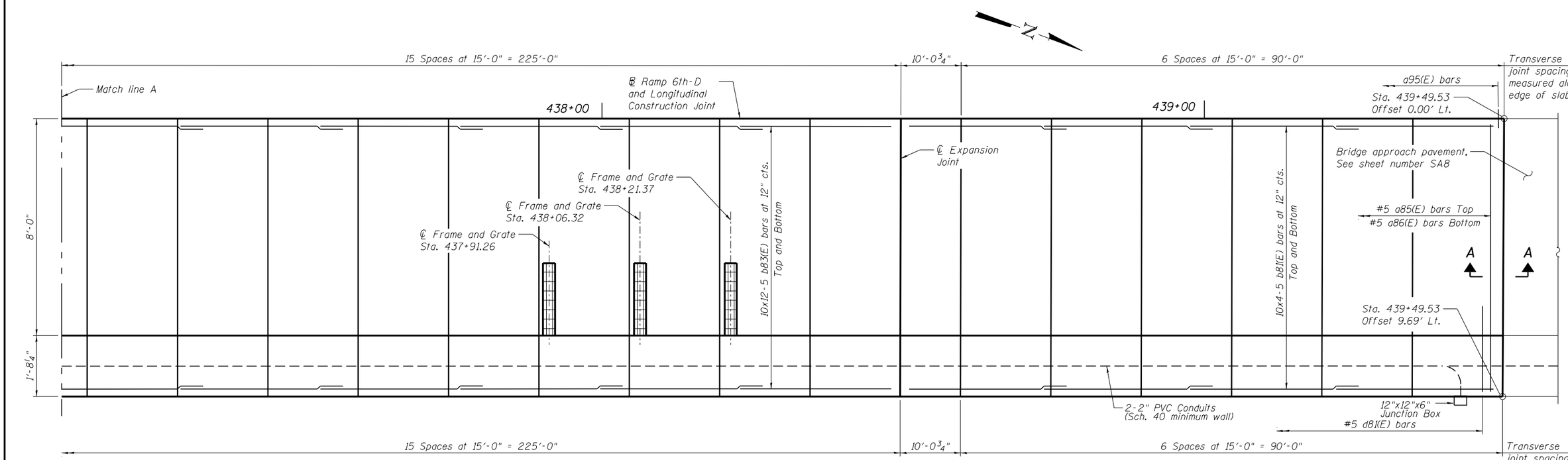


OUTSIDE ELEVATION OF PARAPET



PLAN - PARAPET AND ANCHORAGE SLAB

Min. Bar Lap #5 Bar = 2'-7"

benesch
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB PLAN AND ELEVATION
I-74 WESTBOUND
SHEET NO. AN5 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1180
		CONTRACT NO. 64C08		
		ILLINOIS FED. AID PROJECT		

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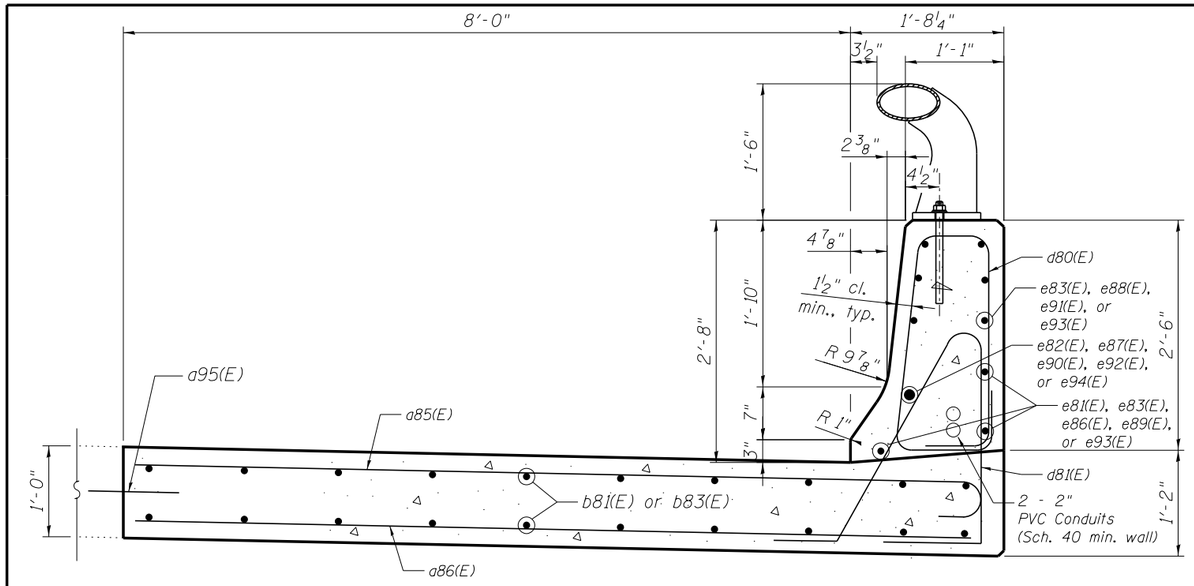
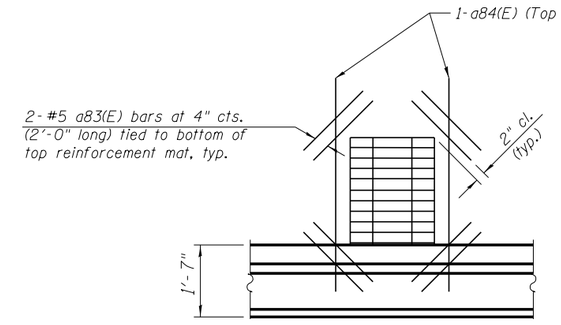
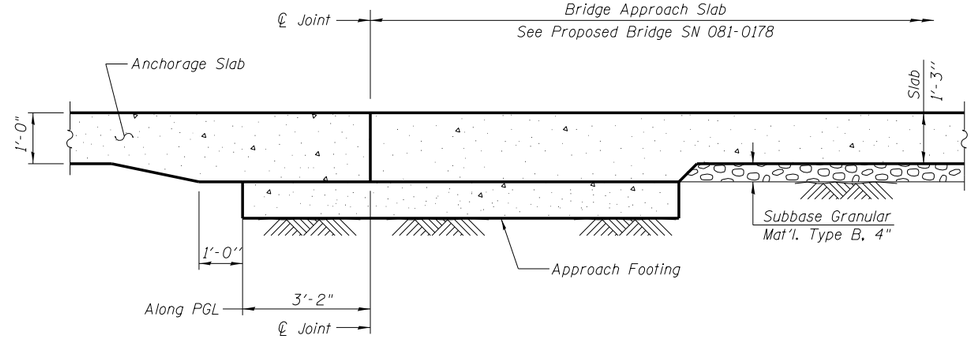


SECTION THRU PARAPET AND ANCHORAGE SLAB

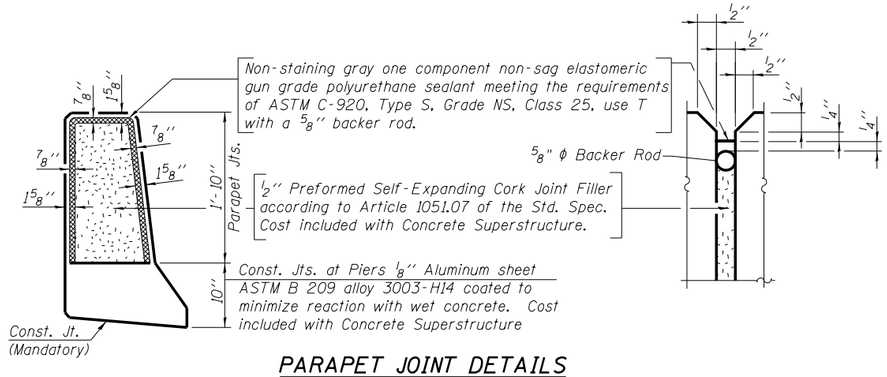


PLAN AT DRAINAGE STRUCTURE

(Cut longitudinal reinforcement to clear drainage structure.)

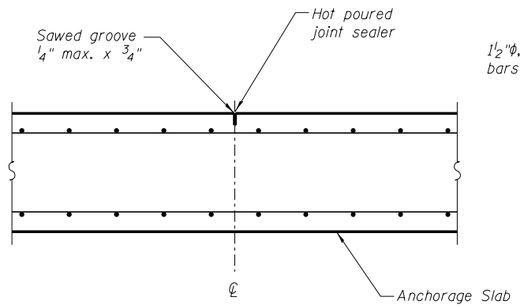


SECTION A-A

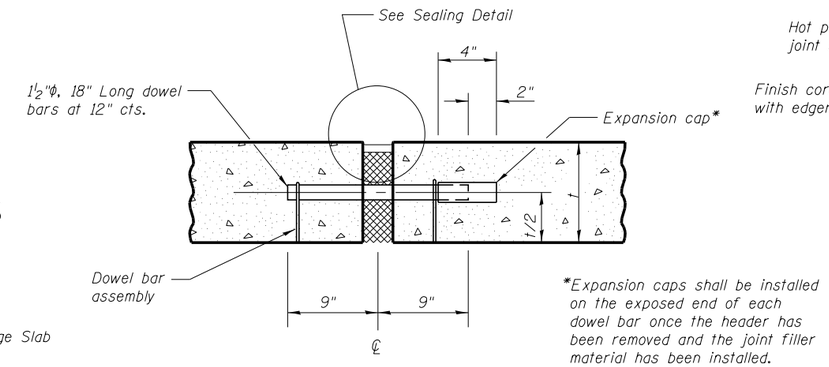


PARAPET JOINT DETAILS

(For Conventional Concrete Placement)



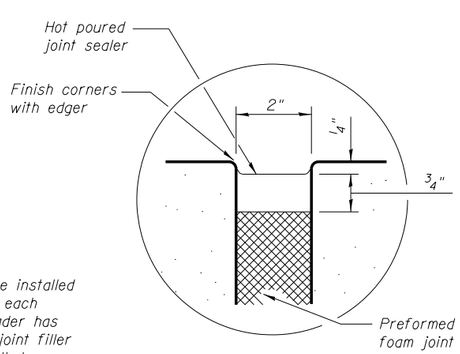
TRANSVERSE CONTRACTION JOINT



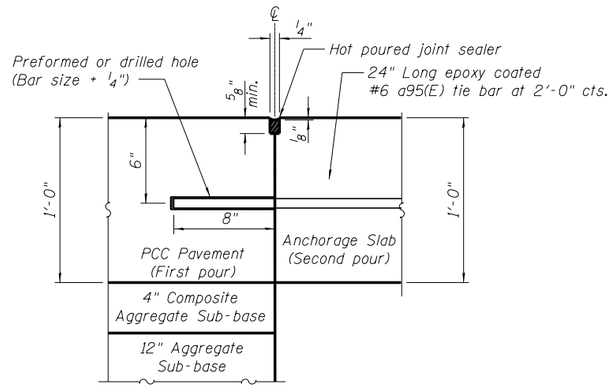
*Expansion caps shall be installed on the exposed end of each dowel bar once the header has been removed and the joint filler material has been installed.

ANCHORAGE SLAB EXPANSION JOINT

Expansion joint and dowel bars included in the cost of Concrete Superstructure.



SEALING DETAIL



Notes:
The Contractor may substitute at his option, formed in place tie bars provided the bar length is increased to 30" and the tie bar is centered across the joint.
Preformed or drilled hole shall be in the first pour.

LONGITUDINAL CONSTRUCTION JOINT GROUTED-IN-PLACE TIE BAR

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450
Job No. 10061

FILENAME = 000-0000-C00A-601-AnchorageSlabFinal.dgn	USER NAME = kplaczek	DESIGNED - SLD	REVISED -
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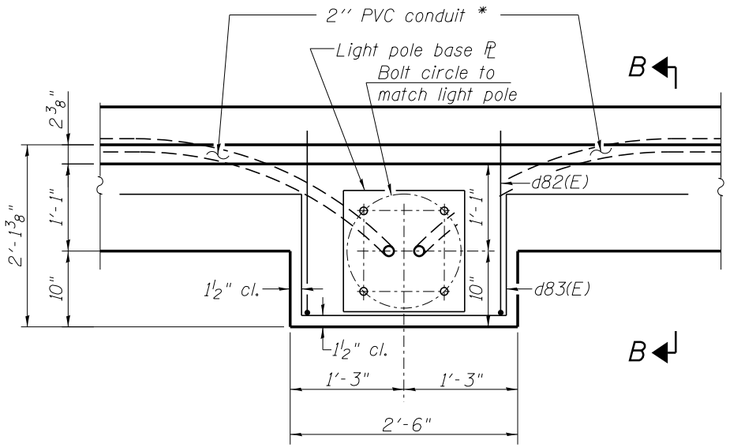
	PLOT DATE = 1/18/2017	CHECKED - KMP	REVISED -

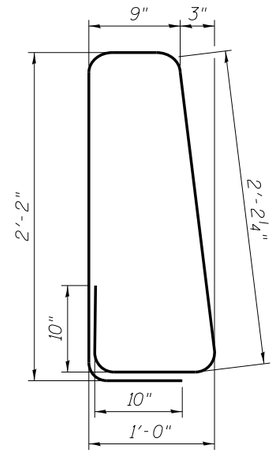
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB DETAILS
I-74 WESTBOUND
SHEET NO. AN6 OF AN20 SHEETS

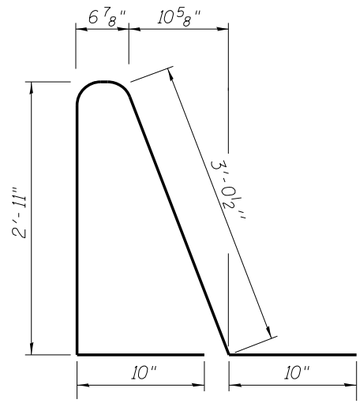
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1181
		CONTRACT NO. 64C08		
	ILLINOIS	FED. AID PROJECT		



PLAN - LIGHT POLE BASE



BAR d80(E)

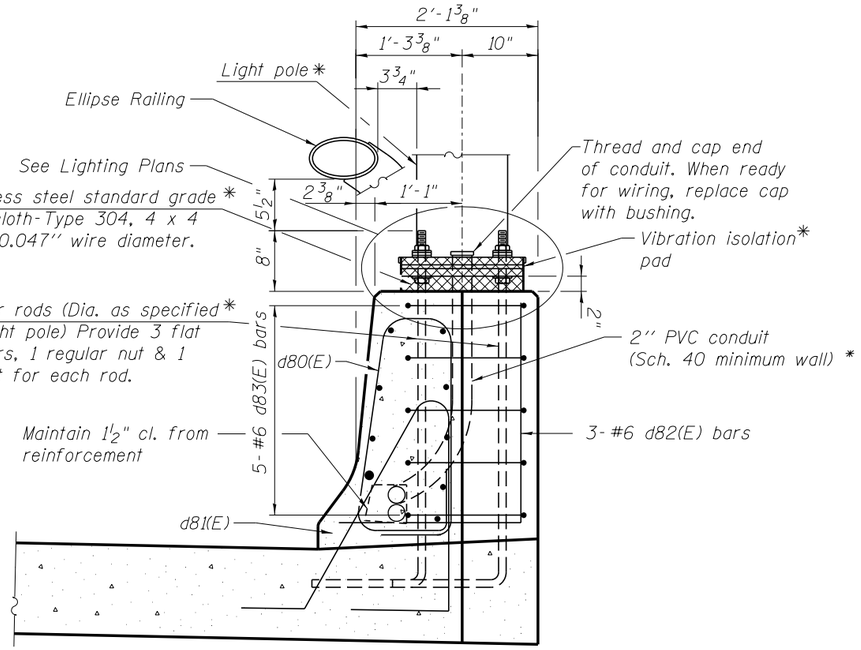


BAR d81(E)

BILL OF MATERIAL
WESTBOUND

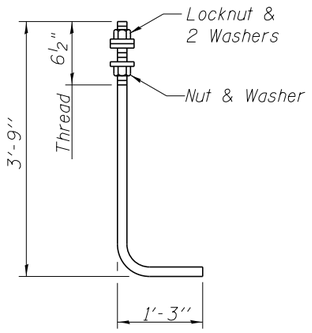
Bar	No.	Size	Length	Shape
a83(E)	24	#5	2'-0"	
a84(E)	12	#5	5'-0"	
a85(E)	947	#5	9'-10"	
a86(E)	474	#5	9'-3"	
a95(E)	236	#6	2'-0"	
b81(E)	80	#5	27'-0"	
b83(E)	320	#5	26'-0"	
d80(E)	945	#5	7'-10"	
d81(E)	515	#5	8'-3"	
d82(E)	3	#6	4'-5"	
d83(E)	5	#6	8'-11"	
e81(E)	39	#6	29'-8"	
e82(E)	13	#8	29'-8"	
e83(E)	177	#6	14'-8"	
e86(E)	3	#6	29'-0"	
e87(E)	1	#8	29'-0"	
e88(E)	6	#6	14'-2"	
e89(E)	3	#6	26'-6"	
e90(E)	1	#8	26'-6"	
e91(E)	6	#6	11'-6"	
e92(E)	1	#8	14'-8"	
e93(E)	9	#6	9'-8"	
e94(E)	1	#8	9'-8"	
Concrete Superstructure			Cu. Yd.	229.3
Reinforcement Bars, Epoxy Coated			Pound	45,770
Protective Coat			Sq. Yd.	619.7

Bars indicated thus 1 x 5-#5 etc. indicates 1 line of bars with 5 lengths per line.



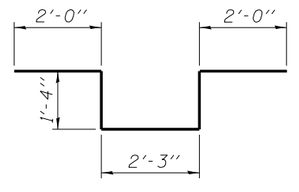
SECTION B-B

* See lighting plans for details and pay items

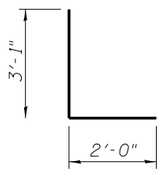


ANCHOR ROD

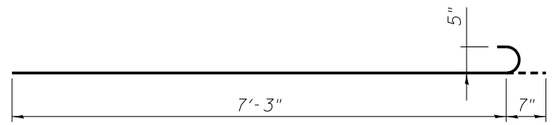
Diameter as specified for light poles (ASTM F 1554 Grade 105). Full length hot dipped galvanized. Anchor bolts included in the cost of Concrete Superstructure.



BAR d83(E)



BAR d82(E)



BAR d81(E)

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Chicago, Illinois 60601
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB DETAILS
I-74 WESTBOUND
SHEET NO. AN7 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1182
		CONTRACT NO. 64C08		
		ILLINOIS FED. AID PROJECT		

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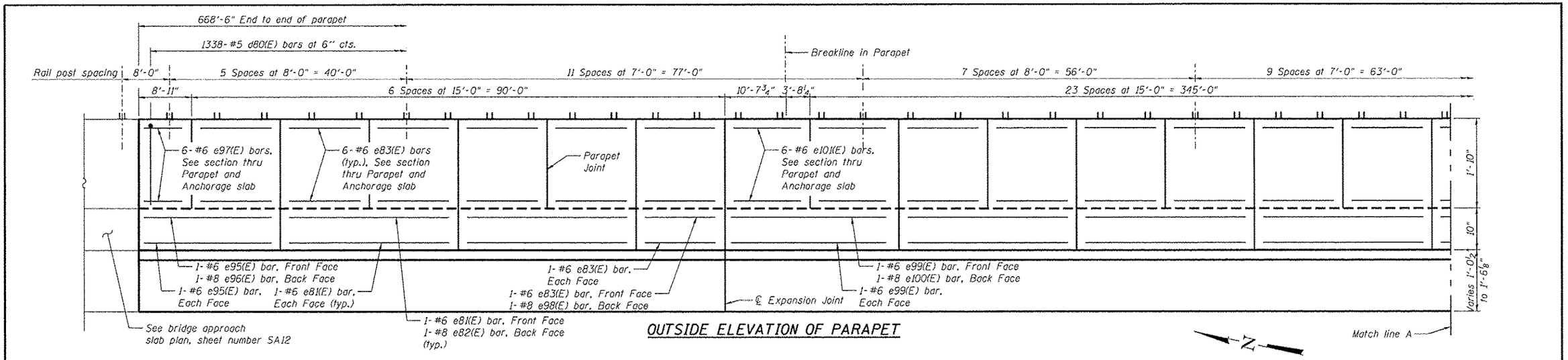

OUTSIDE ELEVATION OF PARAPET

PLAN - PARAPET AND ANCHORAGE SLAB

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

KEVIN M. PLACEK
081-005460
LICENSED
STRUCTURAL ENGINEER
STATE OF ILLINOIS
EXPIRATION DATE 11-30-2018
DATE: 1-20-2017

Min. Bar Lap #5 Bar = 2'-7"

Notes:
For Section Thru Parapet and Anchorage Slab and Section A-A, see Sheet AN11.
For Bill of Material, see Sheet AN12.
Bars indicated thus 3x7-#5 etc. Indicates 3 lines of bars with 7 lengths per line.
Joints in the adjacent pavement shall be aligned with the anchorage slab joints.
Stations and offsets on this sheet are given to the outside face of the parapet and are measured from the baseline Ramp RD-G, except as noted.
For Frame and Grate Details, see Drainage Plans.

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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

FILENAME = 000-0000-C00A-601-AnchorageSlabFinal.dgn	USER NAME = kplaczek	DESIGNED - SLD	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB PLAN AND ELEVATION
RAMP RD-G
SHEET NO. AN8 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1183
		CONTRACT NO. 64C08		
		ILLINOIS FED. AID PROJECT		

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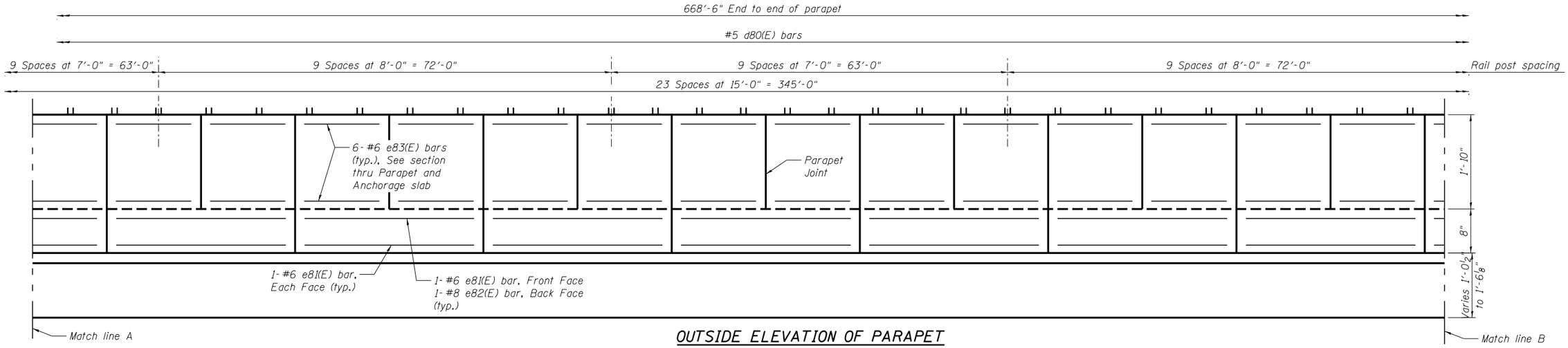
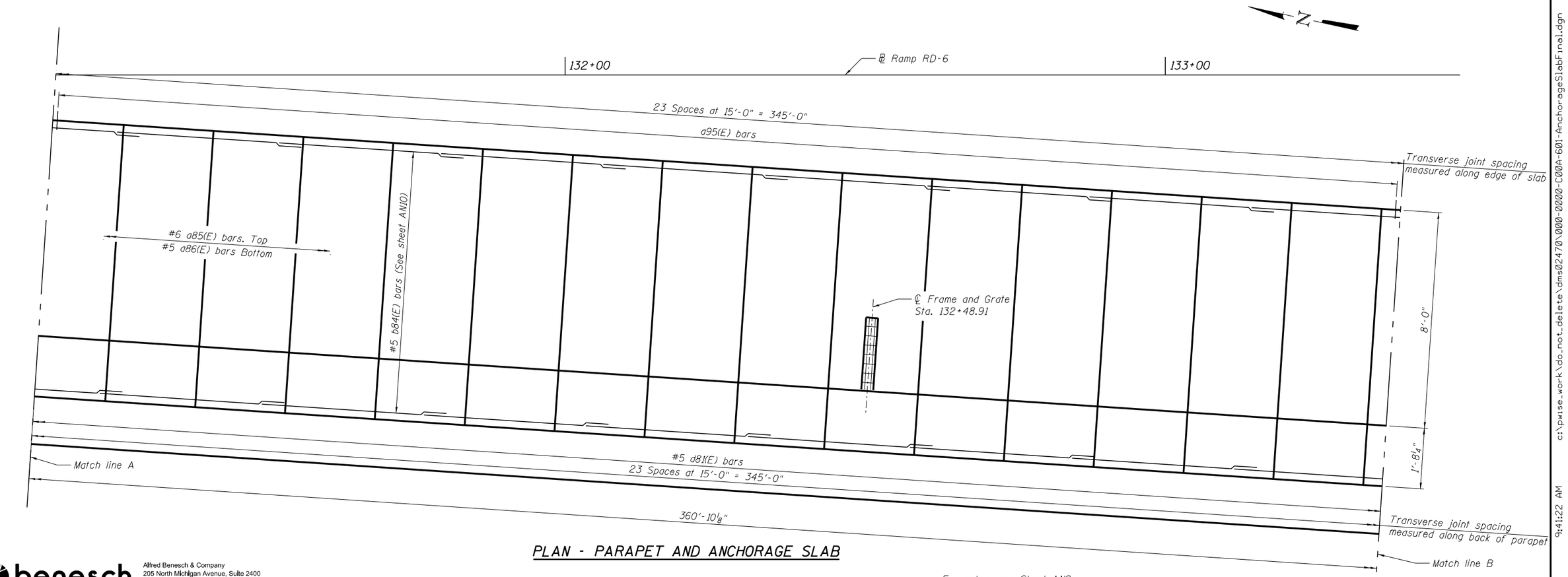


OUTSIDE ELEVATION OF PARAPET



PLAN - PARAPET AND ANCHORAGE SLAB

For notes, see Sheet AN8.

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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB PLAN AND ELEVATION
RAMP RD-G
SHEET NO. AN9 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1184
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

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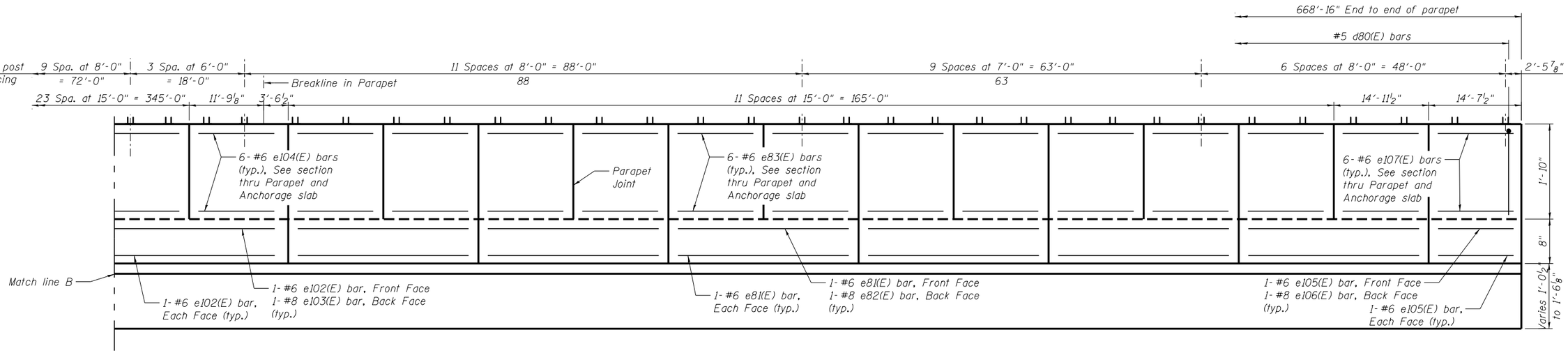
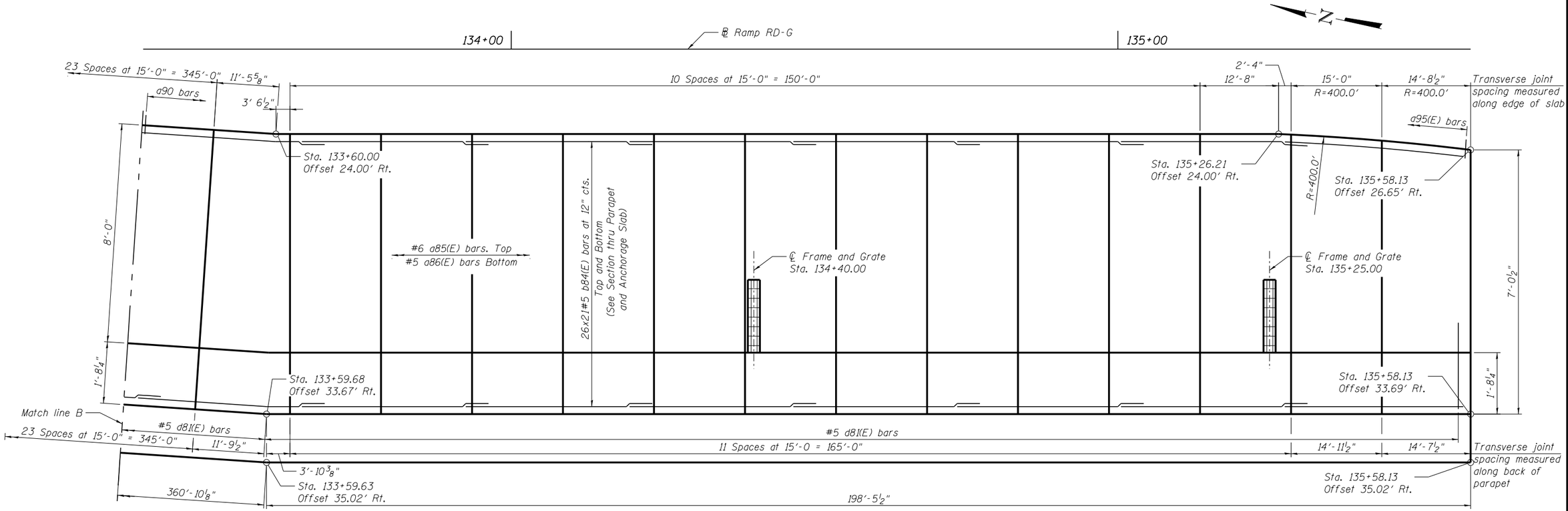


OUTSIDE ELEVATION OF PARAPET



PLAN - PARAPET AND ANCHORAGE SLAB

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB PLAN AND ELEVATION
RAMP RD-G
SHEET NO. AN10 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1185
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

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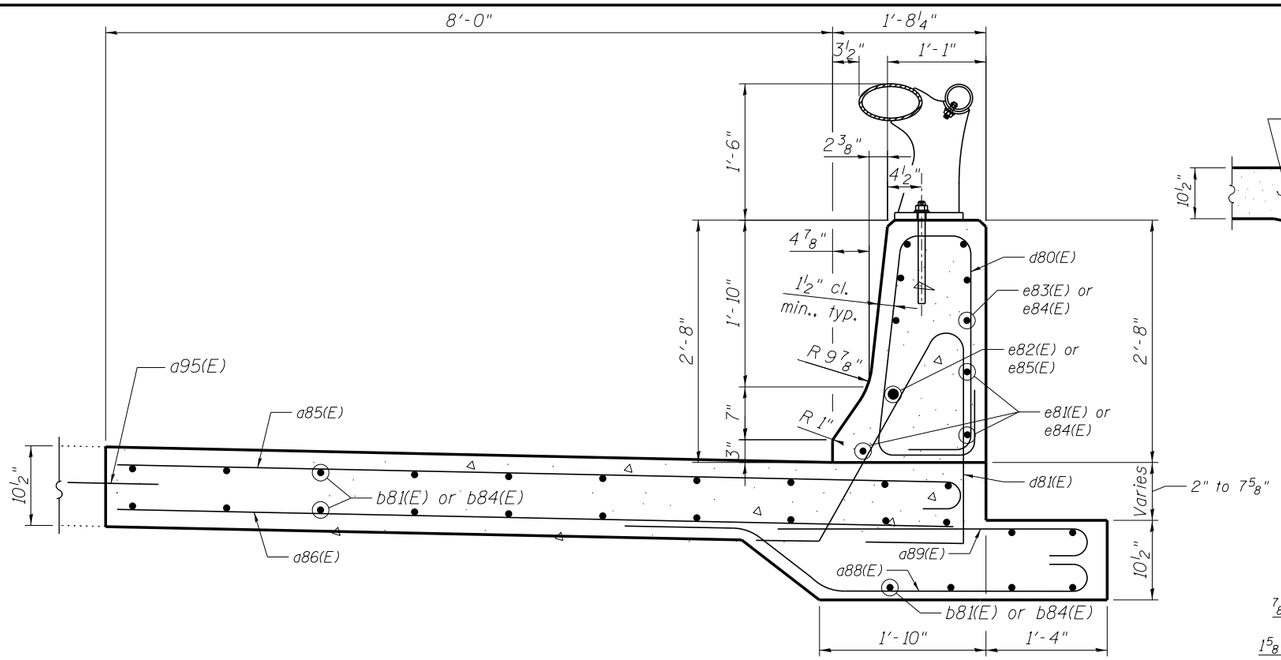
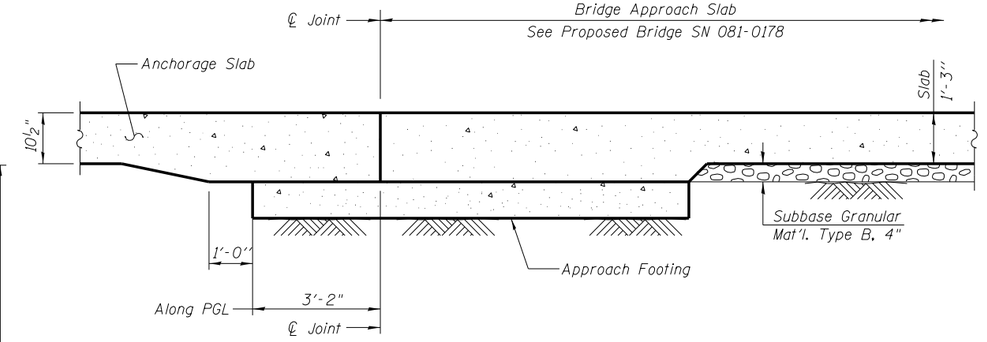
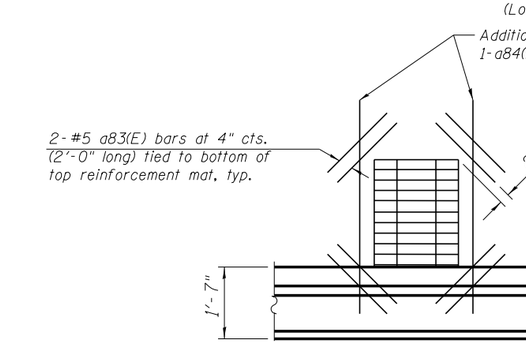


SECTION THRU PARAPET AND ANCHORAGE SLAB

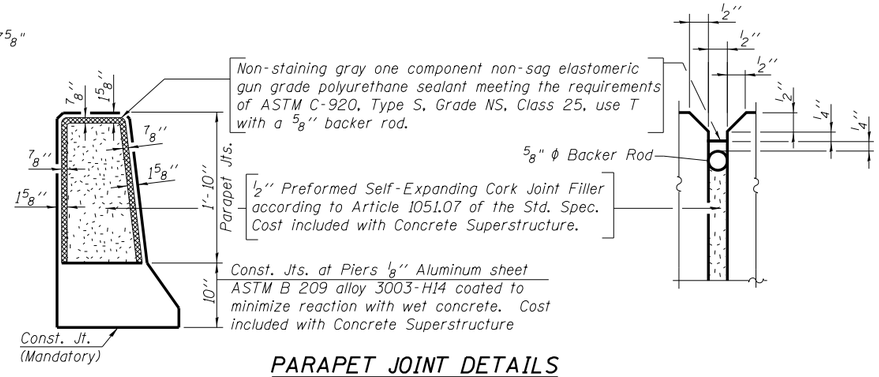


SECTION A-A



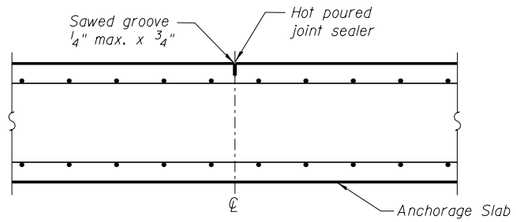
PLAN AT DRAINAGE STRUCTURE

(Cut longitudinal reinforcement to clear drainage structure.)

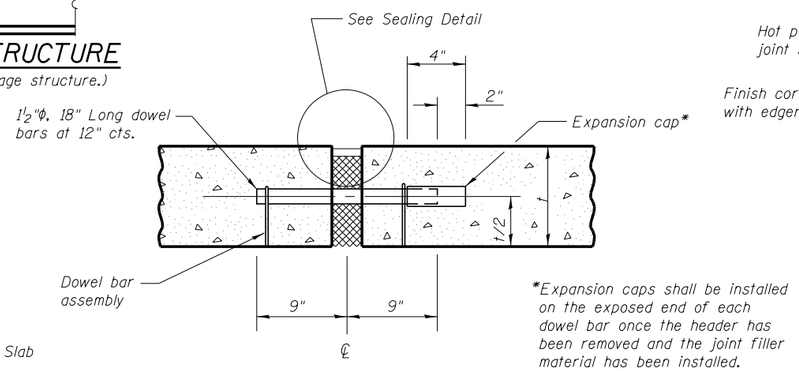


PARAPET JOINT DETAILS

(For Conventional Concrete Placement)



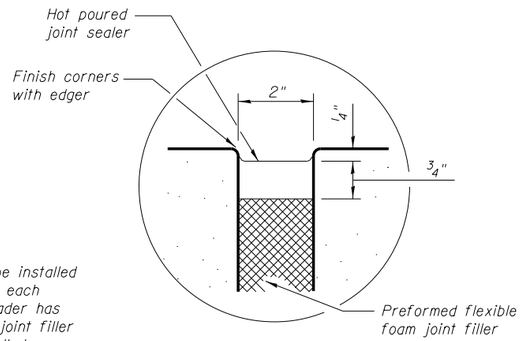
TRANSVERSE CONTRACTION JOINT



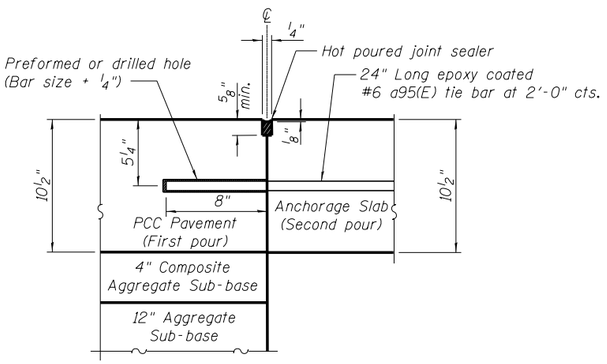
ANCHORAGE SLAB EXPANSION JOINT

Expansion joint and dowel bars included in the cost of Concrete Superstructure.

*Expansion caps shall be installed on the exposed end of each dowel bar once the header has been removed and the joint filler material has been installed.



SEALING DETAIL



Notes:

The Contractor may substitute at his option, formed in place tie bars provided the bar length is increased to 30" and the tie bar is centered across the joint.

Preformed or drilled hole shall be in the first pour.

LONGITUDINAL CONSTRUCTION JOINT GROUTED-IN-PLACE TIE BAR

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB DETAILS
RAMP RD-G

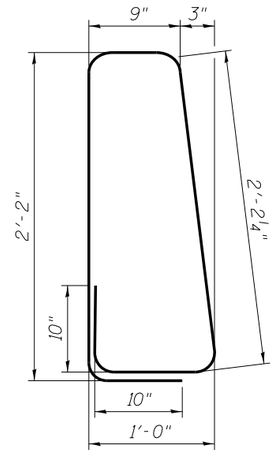
SHEET NO. AN11 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1186
		CONTRACT NO. 64C08		
		ILLINOIS FED. AID PROJECT		

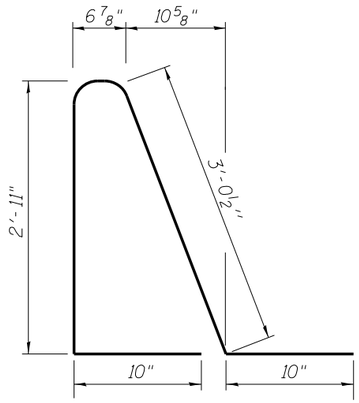
BILL OF MATERIAL
RAMP RD-G

Bar	No.	Size	Length	Shape
a83(E)	32	#5	2'-0"	
a84(E)	16	#5	5'-0"	
a85(E)	1339	#6	9'-11"	
a86(E)	670	#5	9'-3"	
a88(E)	669	#5	5'-5"	
a89(E)	669	#5	3'-9"	
a95(E)	334	#6	2'-0"	
b81(E)	104	#5	27'-0"	
b84(E)	546	#5	29'-0"	
d80(E)	1337	#5	7'-10"	
d81(E)	730	#5	8'-3"	
e81(E)	54	#6	29'-8"	
e82(E)	18	#8	29'-8"	
e83(E)	249	#6	14'-8"	
e95(E)	3	#6	23'-7"	
e96(E)	1	#8	23'-7"	
e97(E)	6	#6	8"-7"	
e98(E)	1	#8	14'-8"	
e99(E)	3	#6	29'-0"	
e100(E)	1	#8	29'-0"	
e101(E)	6	#6	14'-0"	
e102(E)	3	#6	30'-0"	
e103(E)	1	#8	30'-0"	
e104(E)	6	#6	14'-11"	
e105(E)	3	#6	14'-3"	
e106(E)	1	#8	14'-3"	
e107(E)	6	#6	14'-3"	
Concrete Superstructure			Cu. Yd.	334.9
Reinforcement Bars, Epoxy Coated			Pound	81,130
Protective Coat			Sq. Yd.	871.4

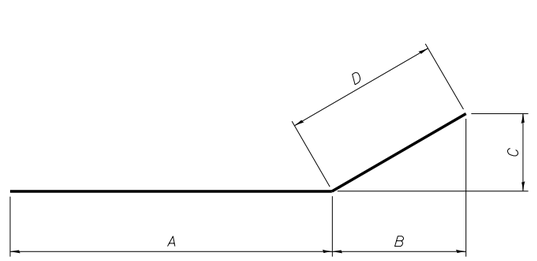
Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.



BAR d80(E)



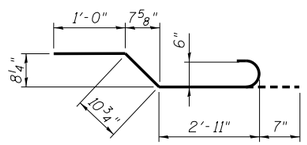
BAR d81(E)



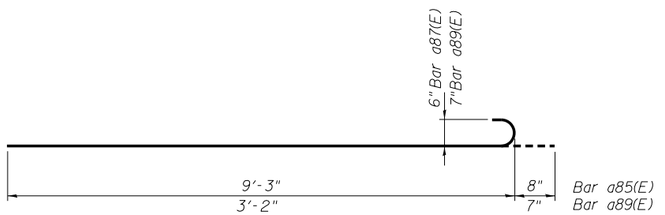
BARS e99(E) to e104(E)

BARS e99(E) to e104(E)

Bar	A	B	C	D	Length
e99(E)	18'-10"	10'-1 3/4"	8"	10'-2"	29'-0"
e100(E)	18'-10"	10'-1 3/4"	8"	10'-2"	29'-0"
e101(E)	10'-2"	3'-9 3/8"	3"	3'-10"	14'-0"
e102(E)	26'-4"	3'-7 7/8"	3'-7 7/8"	3'-8"	30'-0"
e103(E)	26'-4"	3'-7 7/8"	2 7/8"	3'-8"	30'-0"
e104(E)	11'-3"	3'-7 7/8"	2 7/8"	3'-8"	14'-11"



BAR a88(E)



BARS a85(E) and a89(E)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB DETAILS
RAMP RD-G
SHEET NO. AN12 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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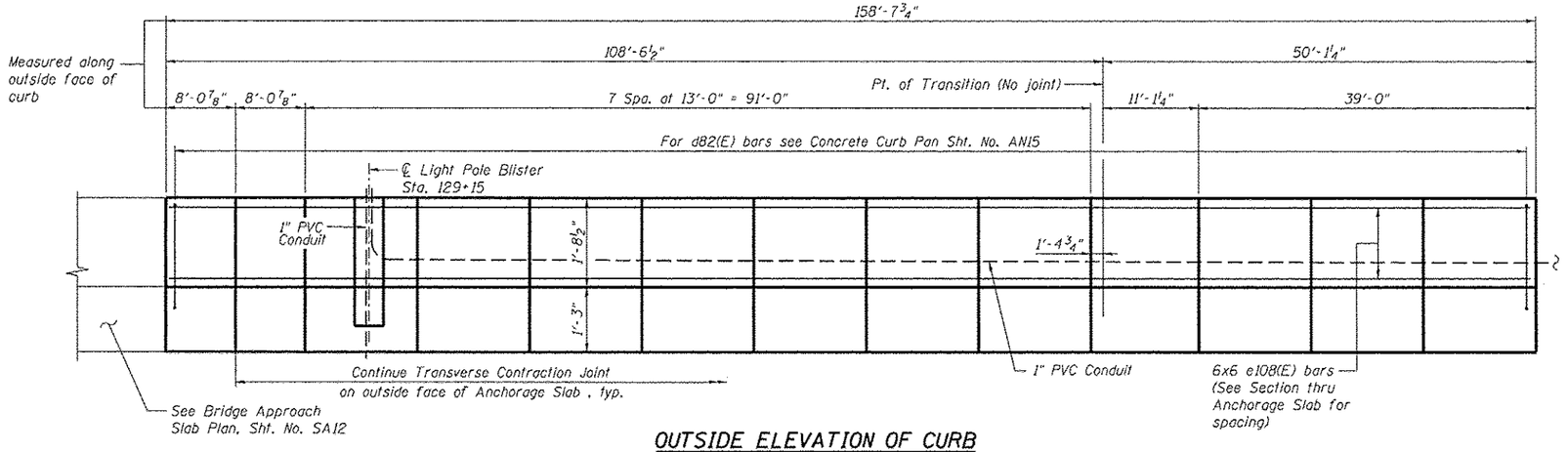
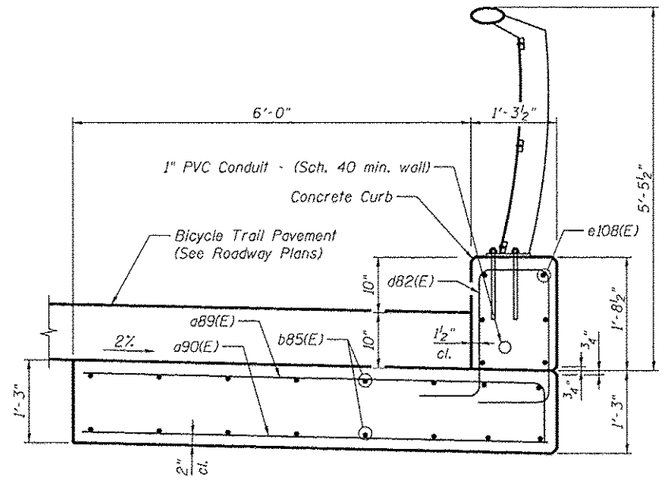
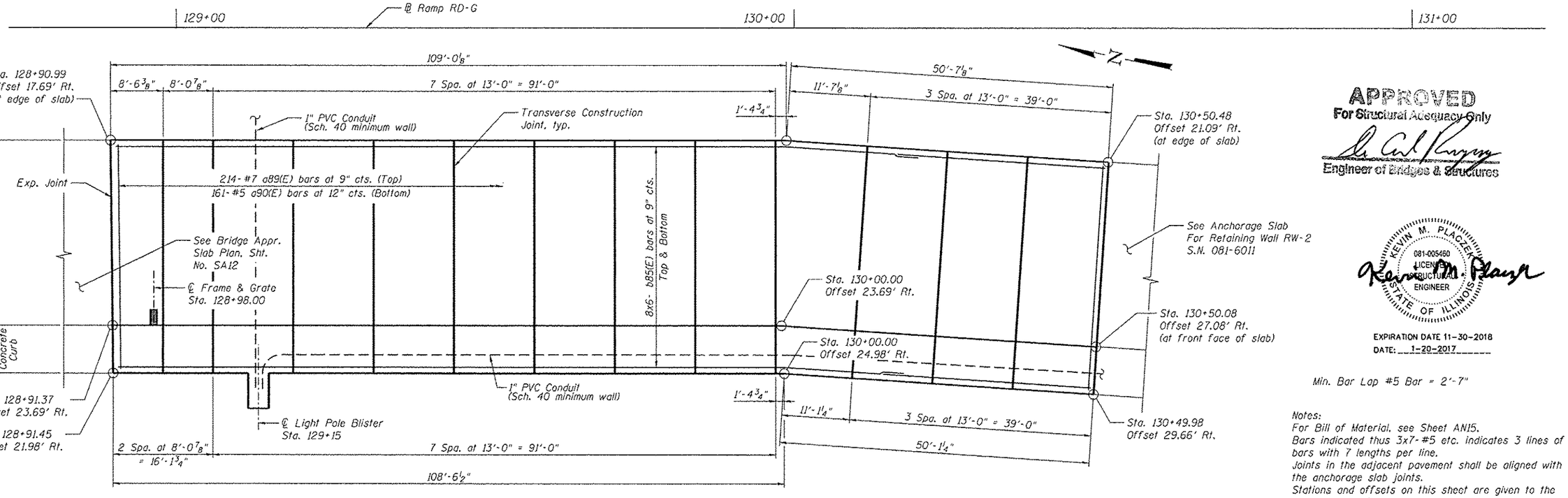
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			



OUTSIDE ELEVATION OF CURB



SECTION THRU ANCHORAGE SLAB



PLAN - ANCHORAGE SLAB

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

KEVIN M. PLACZEK
081-005460
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

EXPIRATION DATE 11-30-2018
DATE: 1-20-2017

Min. Bar Lap #5 Bar = 2'-7"

Notes:
For Bill of Material, see Sheet AN15.
Bars indicated thus 3x7-#5 etc. indicates 3 lines of bars with 7 lengths per line.
Joints in the adjacent pavement shall be aligned with the anchorage slab joints.
Stations and offsets on this sheet are given to the outside face of the parapet and are measured from the baseline Ramp RD-G, except as noted.
For Frame and Grate Details, see Drainage Plans.

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	PLOT DATE = 1/18/2017	CHECKED - KMP	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB PLAN AND ELEVATION
SHARED USE PATH
SHEET NO. AN13 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1188
		CONTRACT NO. 64C08		
		ILLINOIS FED. AID PROJECT		

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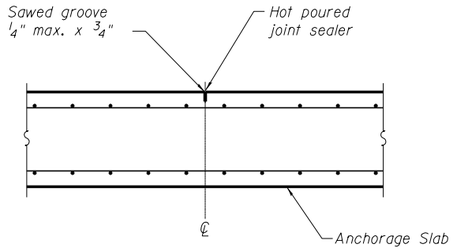
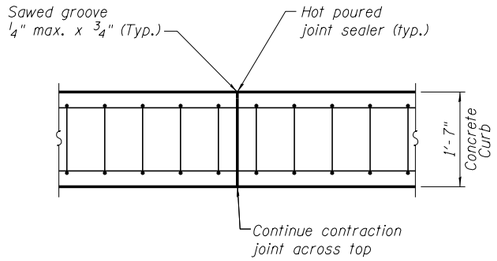
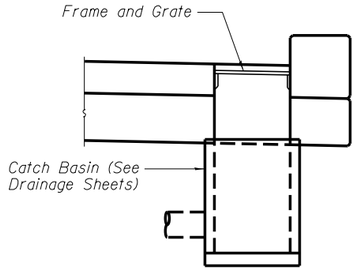


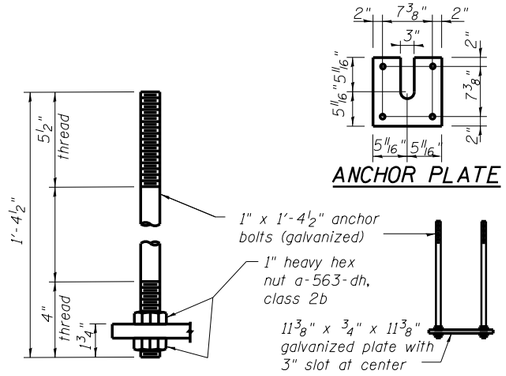
TRANSVERSE CONTRACTION JOINT



CURB CONTRACTION JOINT

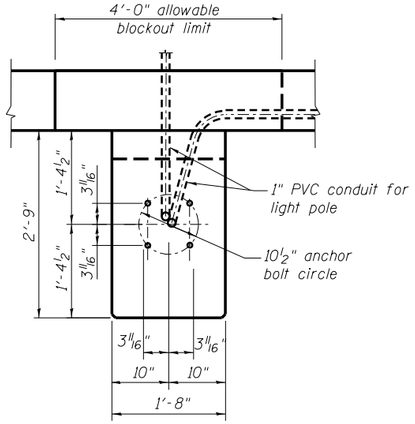


ANCHORAGE SLAB INLET SECTION

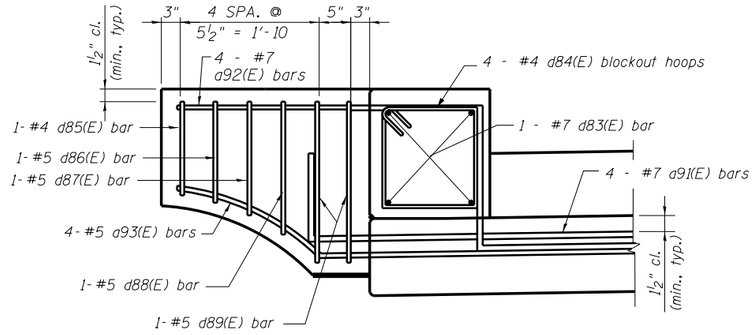


ANCHOR BOLTS

Anchor bolts and Anchor Plate are included in the cost of Concrete Superstructure.

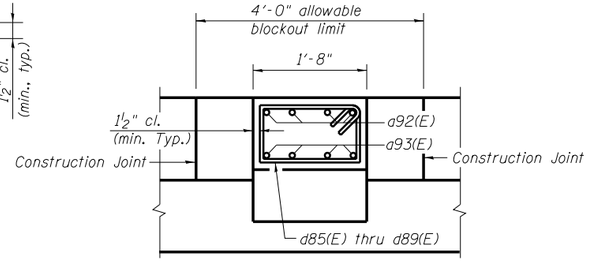


PLAN OF LIGHT POLE BLISTER

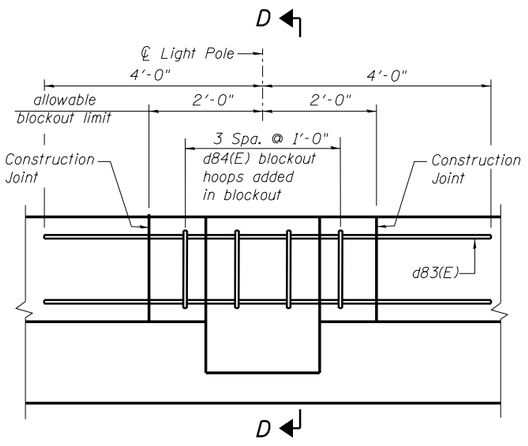


SECTION THROUGH LIGHT POLE BLISTER SHOWING REINFORCING

(Concrete curb and slab reinforcing not shown.)

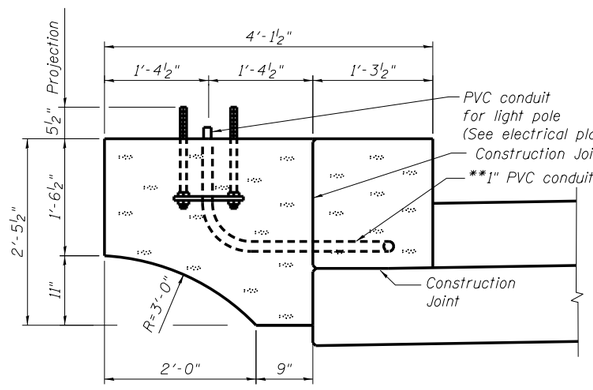


VIEW A-A



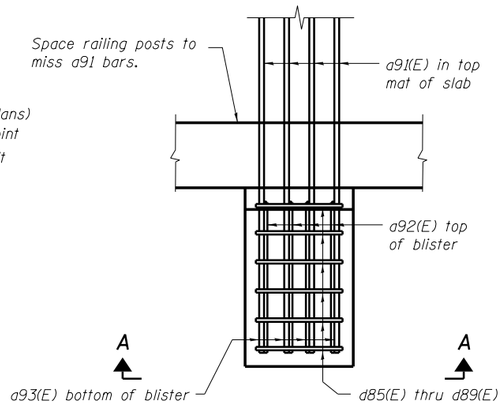
ELEVATION

(Anchor bolts not shown.)



SECTION D-D

(Cost of anchor bolts and anchor plate is included with Concrete Superstructure.)



PLAN OF LIGHT POLE BLISTER REINFORCING

(Concrete curb and slab reinforcing not shown.)

Notes:
For anchorage slab reinforcing, see Sheet AN13.
For concrete curb reinforcing and Bill of Material, see Sheet AN15.
See Electrical Plans for lighting and conduit details.
Space railing posts to miss a91 bars.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB DETAILS
SHARED USE PATH

SHEET NO. AN14 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1189
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

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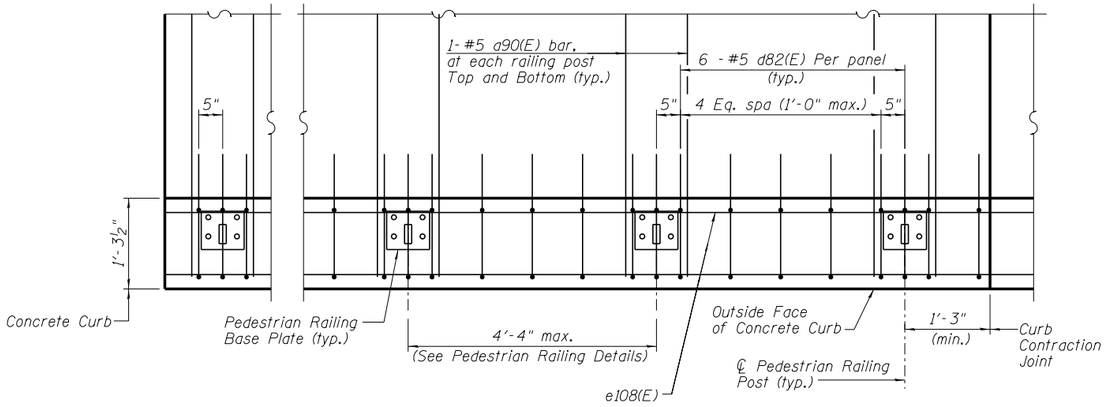
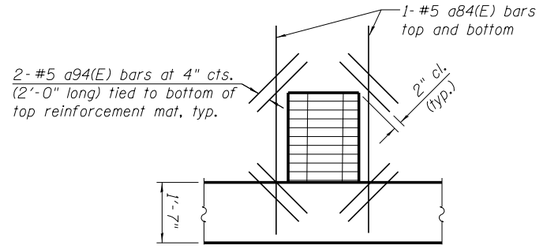


CONCRETE CURB PLAN

(Slab reinforcing not shown)

Note:
Details and quantities shown assume Pedestrian Railing layout consists of 37 railing panels and 38 railing post throughout the limits of the retaining wall.



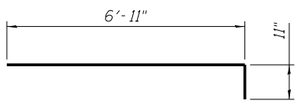
PLAN AT DRAINAGE STRUCTURE

(Cut longitudinal reinforcement to clear drainage structure.)

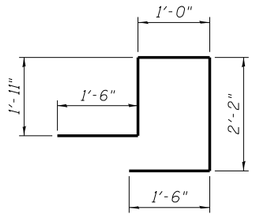
11,860

BILL OF MATERIAL

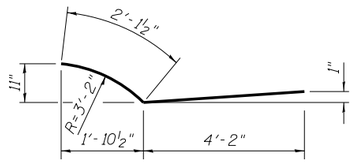
Bar	No.	Size	Length	Shape
a84(E)	4	#5	5'-0"	
a89(E)	214	#7	7'-10"	
a90(E)	313	#5	6'-11"	
a91(E)	4	#7	7'-5"	
a92(E)	4	#7	9'-9"	
a93(E)	4	#5	6'-4"	
a94(E)	8	#5	2'-0"	
b85(E)	96	#5	28'-10"	
d82(E)	222	#5	8'-1"	
d83(E)	4	#7	8'-0"	
d84(E)	4	#5	5'-5"	
d85(E)	1	#4	6'-1"	
d86(E)	1	#5	6'-3"	
d87(E)	1	#5	6'-7"	
d88(E)	1	#5	7'-1"	
d89(E)	2	#5	7'-11"	
e108(E)	36	#5	28'-10"	
Reinforcement Bars, Epoxy Coated			Pound	11,860
Concrete Superstructure			Cu. Yd.	68.7
Protective Coat			Sq. Yd.	159



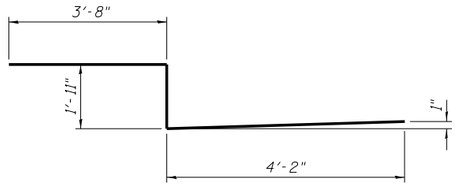
BAR a89(E)



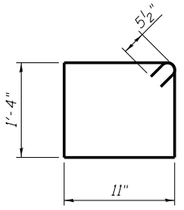
BAR d82(E)



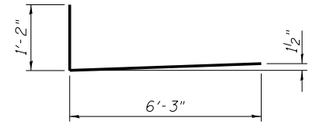
BAR a93(E)



BAR a92(E)

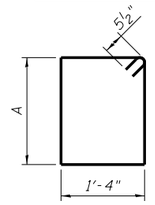


BAR d84(E)



BAR a91(E)

Bar	A
d85(E)	1'-3"
d86(E)	1'-4"
d87(E)	1'-6"
d88(E)	1'-9"
d89(E)	2'-2"



BARS d85(E) thru d89(E)

Notes:
For base plate details, see Pedestrian Railing Detail Plans.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB DETAILS
SHARED USE PATH
SHEET NO. AN15 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1190
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	ILLINOIS FED. AID PROJECT			

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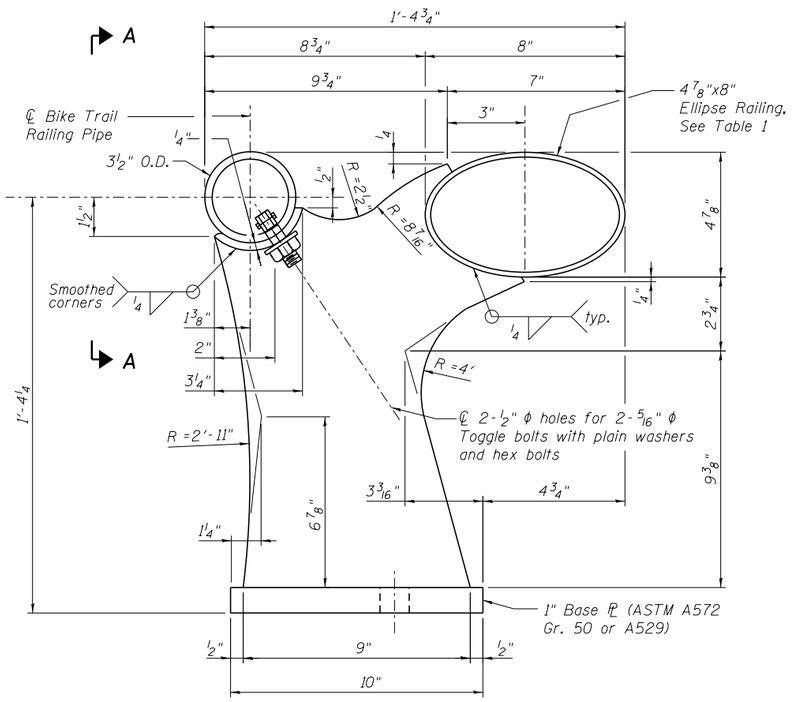
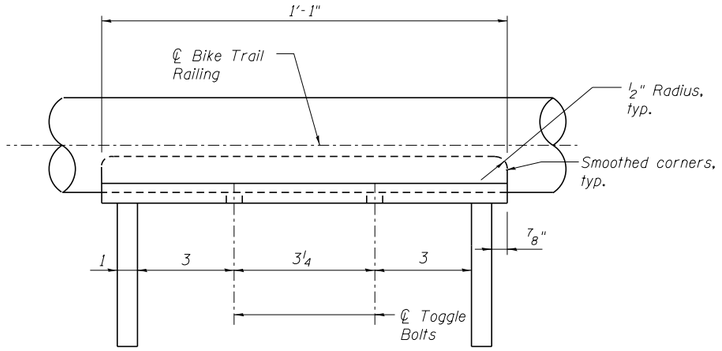
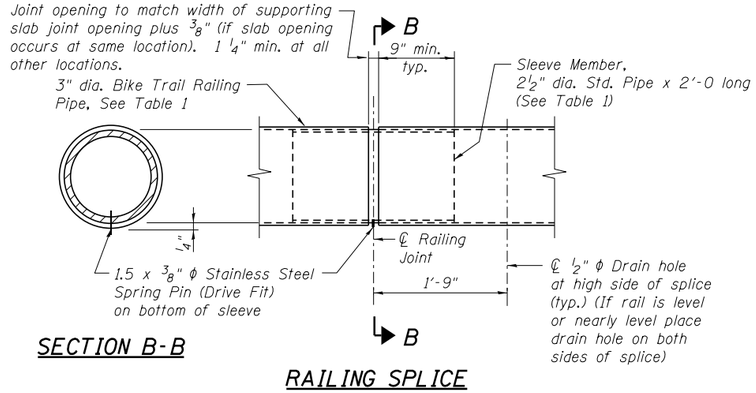


ELEVATION-RAISED TRAFFIC AND BICYCLE RAILING POST



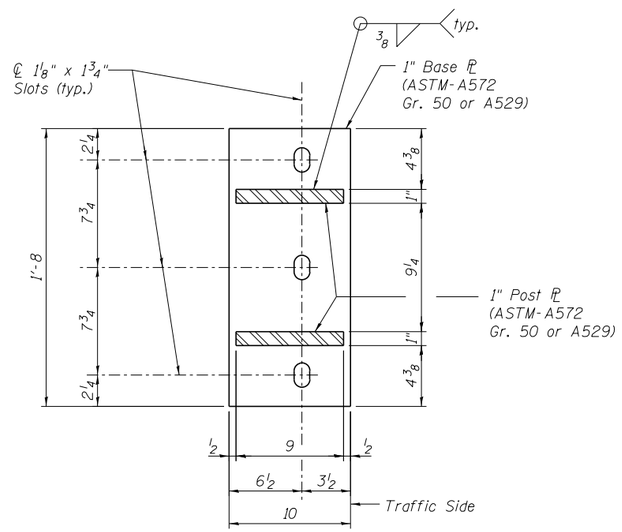
SECTION A-A



SECTION B-B

RAILING SPLICE

Note:
The major and minor diameters of the rail member may vary +/- 0.1875 inches from plan dimensions. However, the difference between the outside diameters of the sleeve and the inside diameters of the rail shall not exceed 0.125 inches along the major or minor axis. The maximum gap along the 45° axis of the sleeve may be 1/4" max.



BASE PLATE DETAIL

TABLE 1

APPROVED RAILING MATERIAL		
4 7/8" x 8" Ellipse Railing	Sleeve Member (at Railing Splice)	
Material	Material	Thickness
6" dia. Std. Pipe ASTM-A53 E or S Grade B	ASTM-A53-B	0.353"
	A36 or A500 Gr. B	0.339"
	API-5LX52	0.224"
6" dia. . 0.280" wall thickness ASTM-A501	ASTM-A53-B	0.353"
	A36 or A500 Gr. B	0.339"
	API-5LX52	0.224"
6 5/8" O.D. x 0.188" Tube API-5LX52	ASTM-A53-B	0.339"
	A36 or A500 Gr. B	0.325"
	API-5LX52	0.216"
3 1/2" dia. Bike Trail Railing Pipe	Sleeve Member (at Railing Splice)	
Material	Material	
3" dia. Std. Pipe ASTM-A53 E or S Grade B	2 1/2" dia. Std. Pipe ASTM-A53 E or S Grade B	

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structural Steel Railing, Traffic and Bicycle	Foot	703

Quantity includes railing on Ramp RD-G Bridge Approach Slab (Sht. SA3) and Ramp RD-G Anchorage Slab.

STRUCTURAL STEEL RAILING, TRAFFIC & BICYCLE NOTES:

Structural steel barrier joints are to be located as shown.

The structural steel railing is to be bid on a per linear foot basis measured from end to end of steel railing.

The number of linear foot of structural steel railing installed will be paid for at the contract unit price per foot based on plan quantities.

Price bid for "Structural Steel Railing, Traffic & Bicycle" shall be full compensation for furnishing all material, and all the equipment and labor required to erect the railing in accordance with these plans and current specifications.

All railings, posts, sleeves, base plates, and shims shall be galvanized after fabrication in accordance with the requirements of ASTM A123.

Optional cast-in-place anchor bolts to comply with astm F1554 Grade 105. hex nuts to comply with ASTM A563 Grade DH. Washers to comply with ASTM F436. Galvanizing in accordance with ASTM F2329.

Anchor bolts shall be 7/8" dia., A193 Gr. B7, be fully threaded with heavy hex nuts and one hardened washer and one 2 1/4" O.D. washer each. Embed threaded rods 10 1/2" min. into concrete parapet. Anchor bolts, nuts, and washers shall be galvanized in accordance with ASTM F2329. Adhesive bonding material system shall be in accordance with materials I.M. 491.11. Installed anchors shall be capable of obtaining an ultimate load per threaded rod of 36 kips in tension for the spacing and edge distance shown in the plans. Install and field test anchors in accordance with the developmental specification, "Installing Adhesive-Bonded Anchors and Dowels for Traffic Railings".

Toggle bolts shall be a type of stud and/or screw style capable of supporting a 1,000 pound load in tension when tested through a 1/2" round hole. Toggle bolts shall be galvanized in accordance with ASTM F2329. Toggle bolts may be cadmium-plated to meet the requirements of ASTM B766 "Electrodeposited Coatings of Cadmium" in place of galvanizing.

The testing of the toggle bolts shall follow the guidelines set forth in ASTM A370 with the following modifications. The bottom fixture used to grip the bolt shall allow the end pieces to spread prior to gripping it. The fixture at the top should allow centering of the bolt allowing the bolt to pulled axially. The speed of the test should be approximately 1/4" per minute. The results of the test shall be submitted as a certified test report to the central materials office in ames along with a certified mill test report. In addition, three sample toggle bolts shall also be submitted to the central materials office in ames for verification testing. The samples shall have the same heat number as the toggle bolts supplied.

See Sheet AN18 for Ellipse Railing Splice, Railing Shop Splice and cast in place anchor bolt options details.

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312-565-0450 Job No. 10061

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		CHECKED - KMP	REVISED -			74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1191
	PLOT SCALE =	DRAWN - RMG	REVISED -						CONTRACT NO. 64C08	
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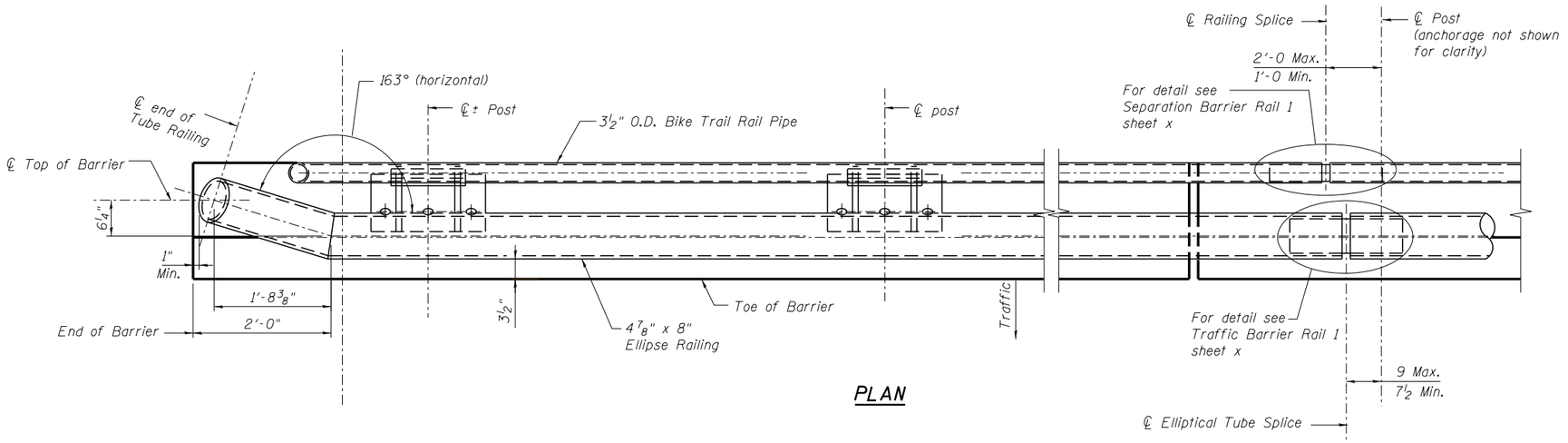

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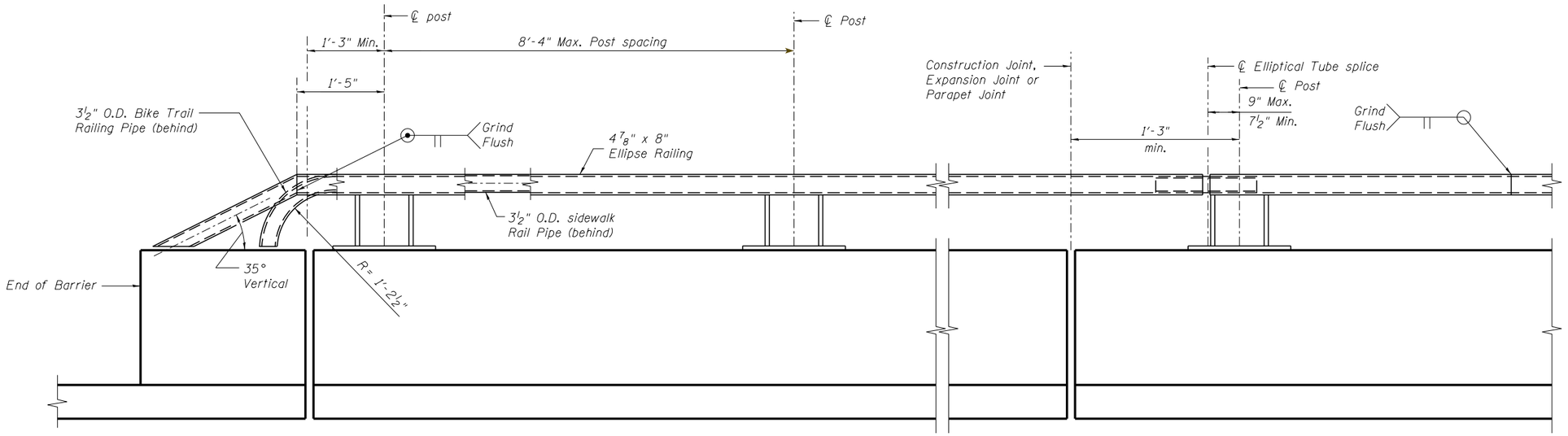

ELEVATION

NOTE:

Edge of base plate shall not be less than 6" from any cold joint or barrier discontinuity including expansion joint.

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FILENAME = 000-0000-C00A-601-AnchorageSlabFinal.dgn	USER NAME = kplaczek	DESIGNED - KMP	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC AND BICYCLE RAILING

SHEET NO. AN17 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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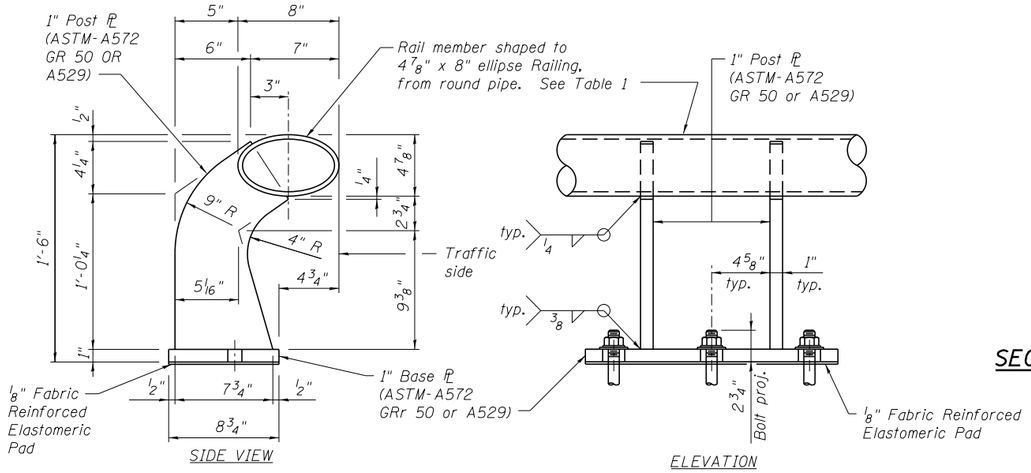
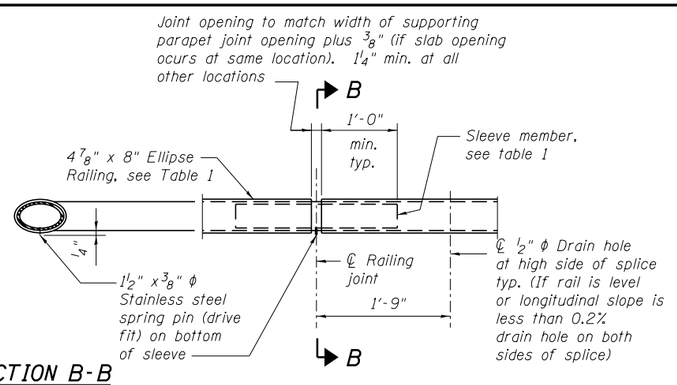
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

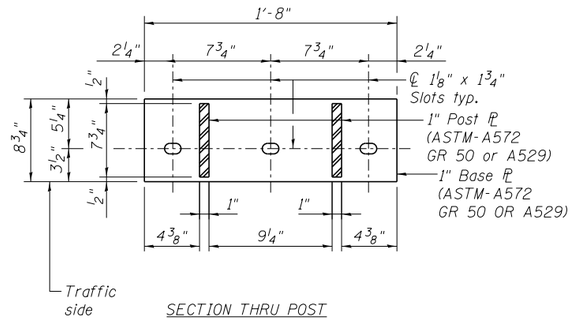




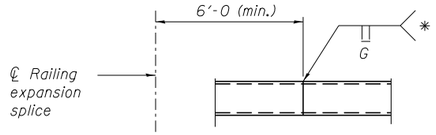
SECTION B-B

ELLIPSE RAILING SLEEVE DETAIL

Note:
The major and minor diameters of the rail member may vary +/- 3/16" from plan dimensions. However, the difference between the outside diameters of the sleeve and the inside diameters of the rail shall not exceed 1/8" along the major or minor axis. The maximum gap along the 45° axis of the sleeve may be 1/4" max.



ELLIPTICAL TUBE WITH RAIL POST AND ANCHORAGE DETAILS



RAILING SHOP SPLICE DETAIL

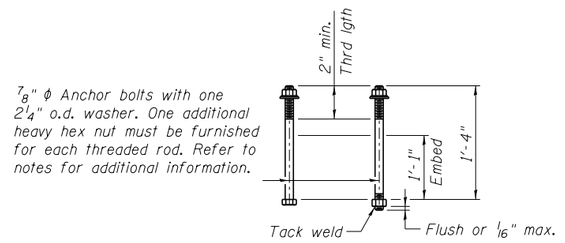
* Shop splice is permitted with minimum 85 percent penetration. The weld may be square groove, double vee groove, or single groove. Grind smooth.

NOTES:

1. Steel Railing (Special) shall be fabricated and installed in accordance with Article 509 of the Standard Specifications, unless otherwise noted.
2. All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
3. The Steel Railing (Special) is to be bid on a per linear foot basis measured from end to end of steel railing.
4. Payment for Steel Railing (Special) shall include full compensation for furnishing all material, and all the equipment and labor required to erect the rail in accordance with these plans and the Standard Specifications.
5. Anchor bolts shall be 7/8" ϕ, ASTM A-193 GR. B7, fully threaded with heavy hex nuts and one hardened washer and one 2 1/4" O.D. washer each. Embed threaded rods 10 1/2" min. into concrete parapet. Material for these items shall be in accordance with the adhesive manufacturer's requirements to be capable of obtaining an ultimate load per threaded rod of 36 kips in tension, considering spacing and edge distance. See Standard Specification 509.06 for further details on setting anchor bolts. Cost of anchor bolts included with Steel Railing (Special).
6. Optional cast-in-place anchor bolts to comply with ASTM F-1554 Grade 105. Hex nuts to comply with AASHTO M291, washers to comply with AASHTO M-293. Galvanizing in accordance with AASHTO M-232.
7. Provide one 1/8" and two 1/16" galvanized steel shims for 25% of rail posts, to be used as required. Shims shall be similar to base plates in size and holes. Cost included with Steel Railing (Special).

TABLE 1

APPROVED RAILING MATERIAL		
4 7/8"x 8" Ellipse Railing Material	Sleeve Member (at railing splice)	
	Material	Thickness
6" Dia. Std. Pipe ASTM-A53 E OR S GRADE B	ASTM-A53-B	0.353"
	A36 or A500 GR. B	0.339"
	API-5LX52	0.224"
6" dia. , 0.280" Wall thickness ASTM-A501	ASTM-A53-B	0.353"
	A36 or A500 GR. B	0.339"
	API-5LX52	0.224"
6 5/8" O.D. x 0.188" Tube API-5LX52	ASTM-A53-B	0.339"
	A36 or A500 GR. B	0.325"
	API-5LX52	0.216"



CAST-IN-PLACE ANCHOR BOLT OPTIONS

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Steel Railing (Special)	Foot	651

Quantity includes railing on I-74 WB and EB Bridge Approach Slabs (Shts. SA9 and SA6) and I-74 WB and EB Anchorage Slabs (Shts. AN4 an AN1).

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	PLOT DATE = 1/18/2017	CHECKED - KMP	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC RAILING
STRUCTURE NO. 081-0177 (WESTBOUND)
SHEET NO. AN18 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1193
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

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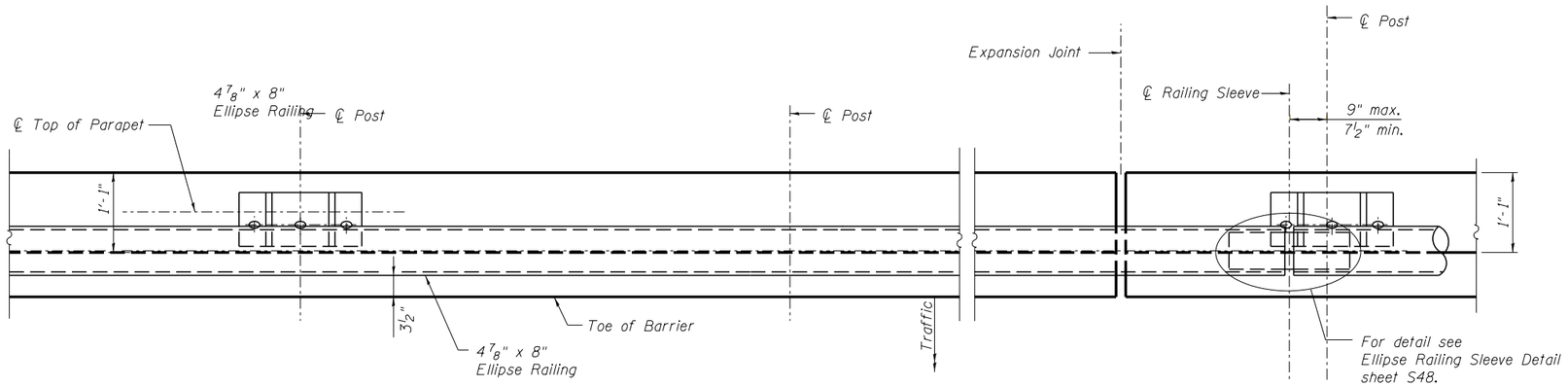

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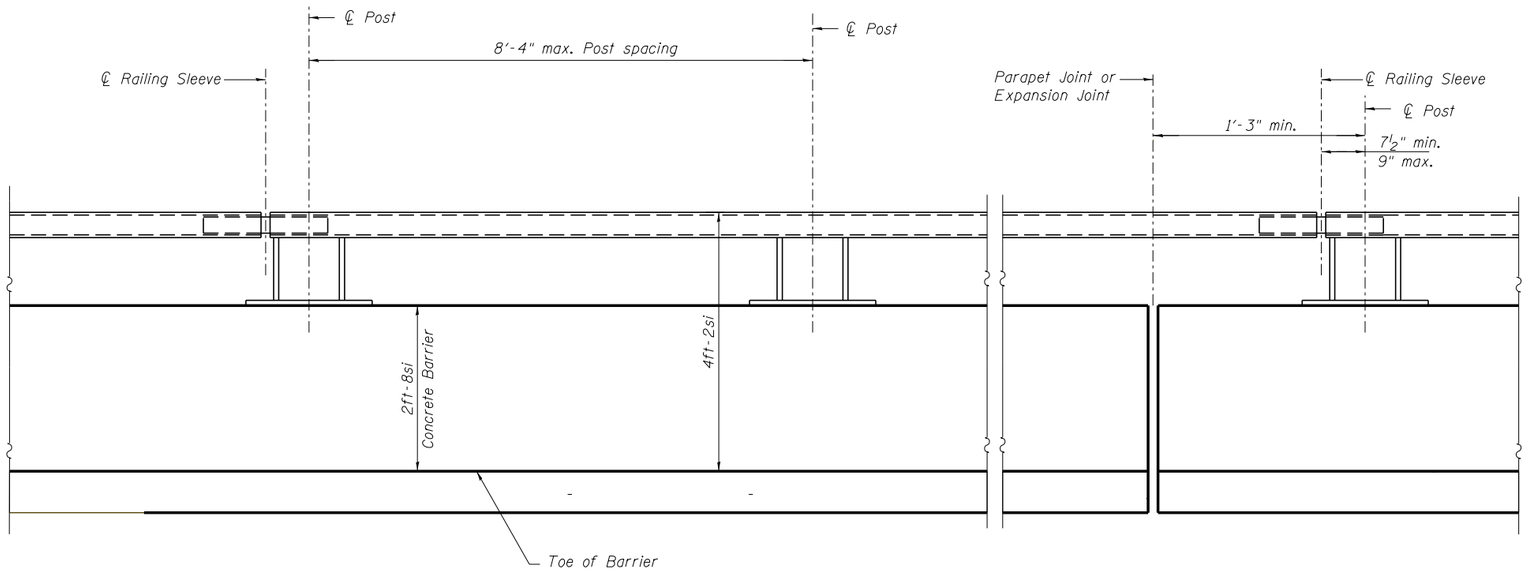

ELEVATION

NOTE:

Edge of base plate shall not be less than 6" from any cold joint or barrier discontinuity.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

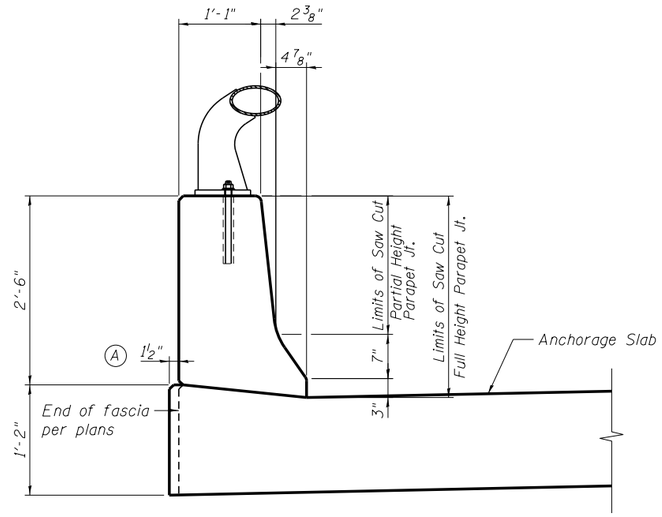
TRAFFIC RAILING
STRUCTURE NO. 081-0177 (WESTBOUND)
SHEET NO. AN19 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1194
		CONTRACT NO. 64C08		
	ILLINOIS	FED. AID PROJECT		

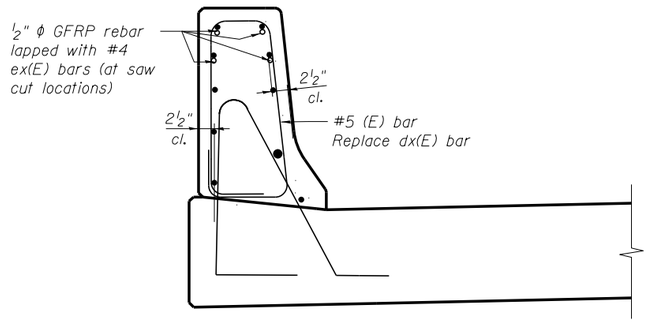
GENERAL NOTES

All dimensions shall remain the same as shown on anchorage slab details, except dimension A. Additional concrete needed to revise dimension A equals 0.005 cu. yds./ft. for I-74 WB and EB anchorage slabs and 0.02 cu. yds./ft. for Ramp RD-G anchorage slab.

Full thickness saw cut at all joint locations in lieu of cork joint filler.



SECTION THRU PARAPET AND ANCHORAGE SLAB



SECTION

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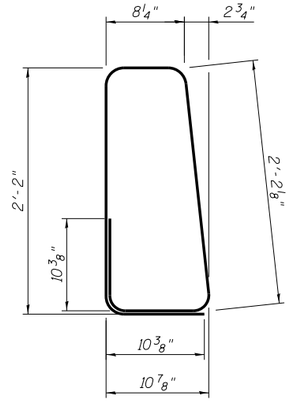
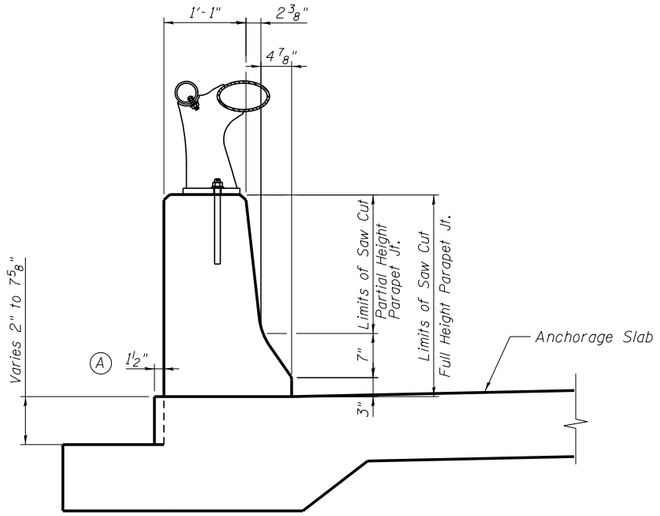


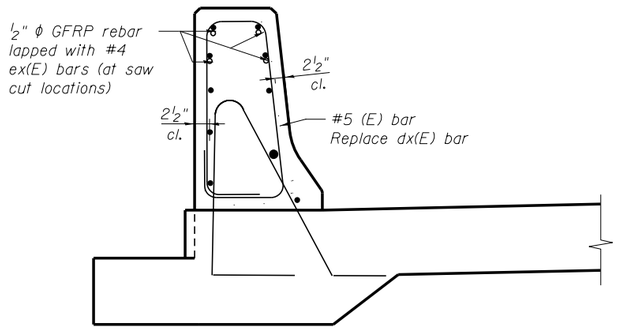
#5 (E) BAR

Replace dx(E) bar

I-74 WB & EB ANCHORAGE SLABS



SECTION THRU PARAPET AND ANCHORAGE SLAB



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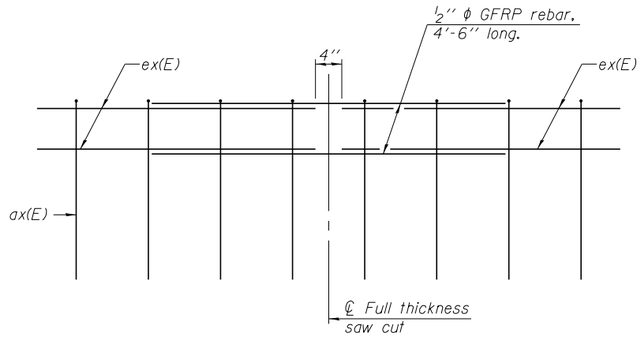

GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)

Ramp RD-G ANCHORAGE SLAB

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHORAGE SLAB CONCRETE SLIPFORMING OPTION

SHEET NO. AN20 OF AN20 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1195
		CONTRACT NO. 64C08		
	ILLINOIS FED. AID PROJECT			

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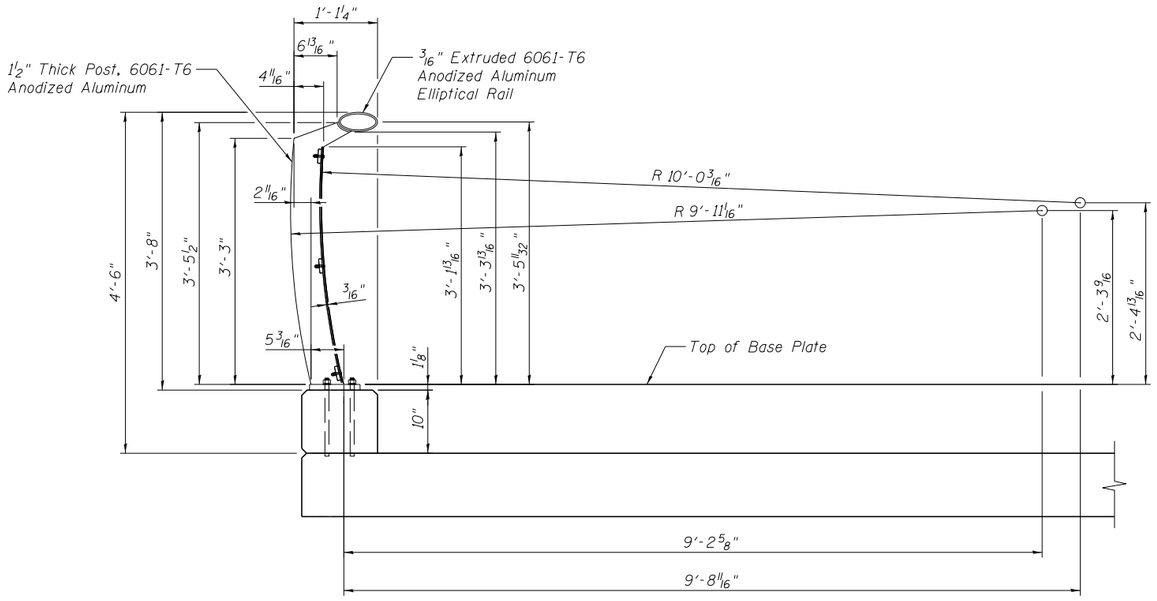
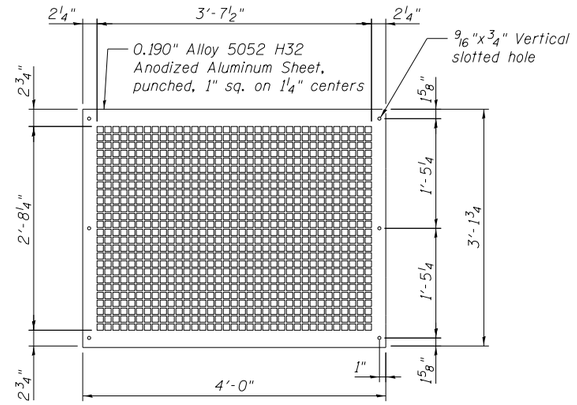
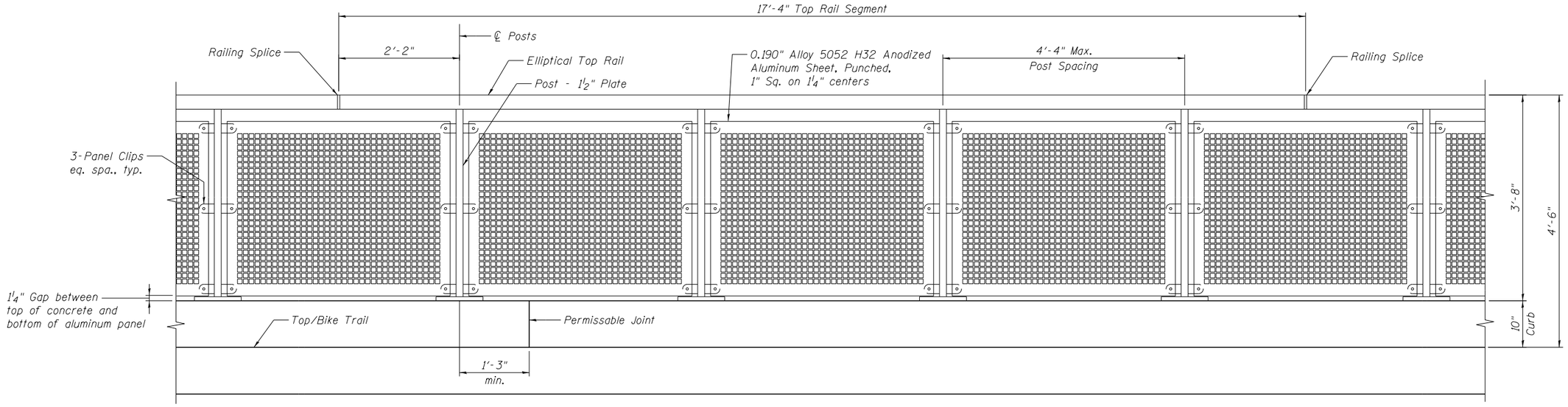


TYPICAL SECTION THRU RAILING



PANEL LAYOUT (FLATTENED)



RAILING TYPICAL ELEVATION

Note:
See Sheet 2 for notes.

SHIVE HATTERY

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PEDESTRIAN RAILING DETAILS 1

SHEET NO. 1 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R &81-1(HVBR)	ROCK ISLAND	1504	1196
PROJECT NO. 92-032-01		CONTRACT NO. 64C08		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

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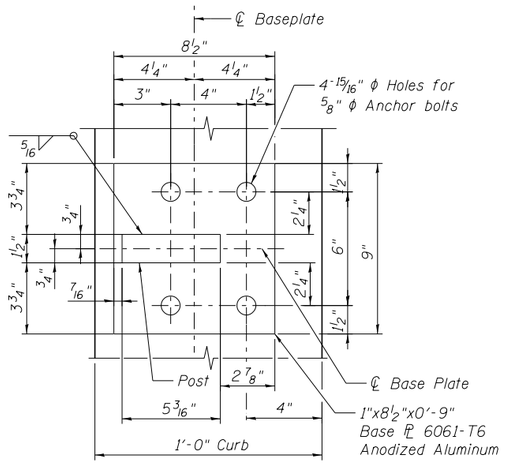
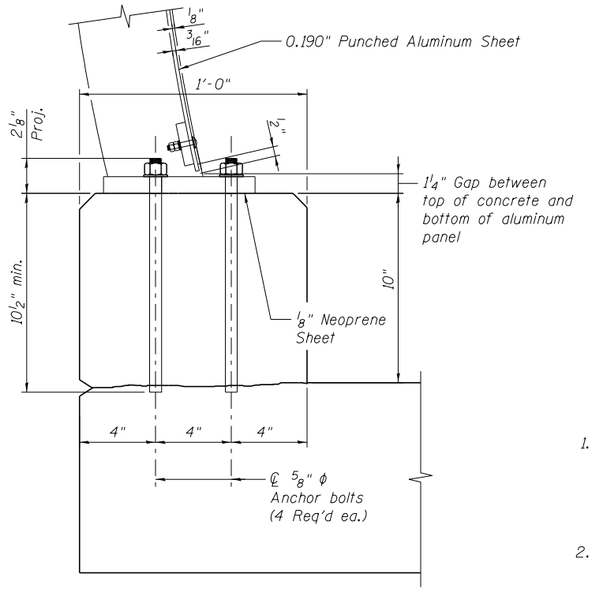


PLAN - TYPICAL BASE PLATE DETAIL



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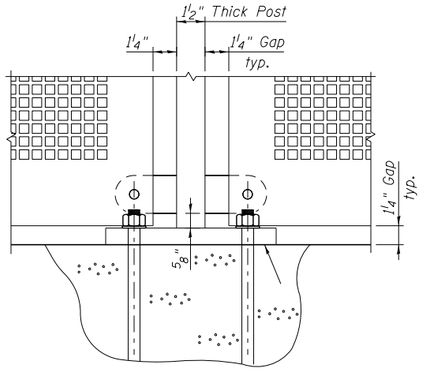
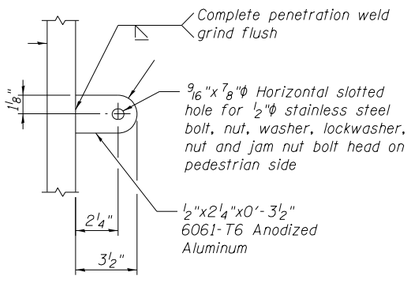
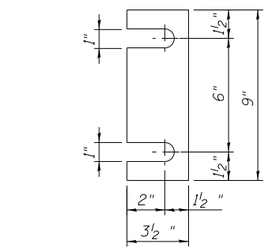
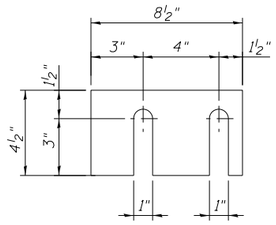


TYPICAL DETAIL AT
BOTTOM OF PANEL



RAILING PANEL CLIP
CONNECTION





SHIM DETAILS

PEDESTRIAN RAILING QUANTITIES

ITEM	UNITS	QUANTITY
Fence, Perforated Aluminum	Foot	570

Quantity includes railing on Retaining Wall RW-02 (S.N. 081-6011), Mixed Used Path Anchorage Slab and Ramp RD-G Bridge Approach Slab.

PEDESTRIAN RAILING NOTES

1. The Pedestrian Rail is to be bid on a lineal foot basis for each type, measured end to end of rail. The price bid for pedestrian rail of each type shall be full compensation for furnishing all material, including anchor bolts and shims, and all of the equipment and labor required to erect the rail in accordance with these plans and specifications.
2. All materials and workmanship shall be in accordance with Article 509 of the Standard Specifications.
3. Ends of rail sections are to be sawed or milled. All cut ends are to be true, smooth, and free of burrs or ragged edges.
4. No painting will be required.
5. Stainless steel bolts shall be according to ASTM A193-12b, Class 1 B8 (30 ksi minimum or 223 HB minimum) or Class 2 B8 (50 ksi minimum or 321 HB minimum). Stainless steel nuts shall be according to ASTM A194-12 Grade 8, 8M, or 8F with a UNC Series Class 2B fit. Stainless steel washers shall be plain flat, Type 304 or 304l, according to Federal Specification FF-W-92. Stainless steel bolts shall be snug tightened.
6. Anchor bolts shall be 5/8" dia., A193-12B Gr. B7, be fully threaded with heavy hex nuts and one hardened washer and one 1¾" O.D. washer each. Embed threaded rods 10½" min. into concrete parapet. Anchor bolts, nuts, and washers shall be galvanized in accordance with ASTM F2329. Adhesive bonding material system shall be in accordance with materials I.M. 491.11. Installed anchors shall be capable of obtaining an ultimate load per threaded rod of 8 kips in tension for the spacing and edge distance shown in the plans.
7. Aluminum post and framing members shall comply with the requirements of ASTM B221-12 and ASTM B429-10 and be of Grade 6061-T6 and meet American National Standard dimensional tolerances for Aluminum Mill products. Aluminum Alloy 5052 H32 sheet panels shall comply with the requirements of ASTM B209-10.
8. Any welds with burrs on the framing member shall be ground flush. Welding shall comply with the requirements of AWS D1.2, Structural Welding Code - Aluminum.
9. Aluminum filler alloy ER5356 or ER5556 shall be used in accordance with Article 1094.05 of the standard specifications. Only microscopically clean welding wire (those which have been shaved after drawing) should be used, and spools of wire remaining at the end of the day's production should be sealed in polyethylene bags. Welding wire in drive rolls and gun not so protected shall be discarded.
10. All areas to be welded shall be brushed with stainless steel brushes immediately prior to welding. All aluminum welding shall be performed by the Gas Metal Arc Welding (GMAW) process. Only the stringer bead technique shall be used. Interpass temperature shall not exceed 200 degrees fahrenheit. All initial root passes shall not exceed 5/16 inch and must penetrate the root. The convexity of a fillet weld shall not exceed 1/16 inch.
11. Post and framing members shall have a smooth, flush surface.
12. Anodize coating shall be per AAMA 611-98 - Voluntary specifications for Anodized Architectural Aluminum. Use a Class 1 clear anodized finish (requires minimum coating thickness of 0.7 mil). Surface preparation shall be in accordance with ASTM D 3933-10.
13. The installed orientation of the punched panels must be punched toward the inside, with the breakout side toward the outside in case of sharp edges and for consistent appearance. Punched panels shall exhibit no burrs. If raw aluminum stock exhibits different finishes on each face, the punching shall be performed on the brightest face, which shall then be mounted toward the pedestrian side.
14. Provide two 1/16 inch aluminum shims of each type for each railing post, to be used as required.
15. Provide an 1/8 inch thick neoprene sheet between concrete and shims under each rail post base plate. The neoprene sheet shall match the length and width of the masonry plate.
16. The neoprene sheets are to be 50, 60, or 70 Durometer hardness and shall meet the requirements of Iowa DOT Standard Specifications Section 4195.02.
17. Apply a neat caulk bead around plate edges. Do not contaminate surrounding concrete surfaces with caulk. Caulk shall be light grey non-slag latex marketed for outdoor use. No testing or certification is required.
18. Posts are to be set normal to grade.
19. Provide a railing mockup for review and approval. For the purposes of the mockup, one assembly including a single standard railing panel with 2 posts and a top rail will be required.
20. The Elliptical Rail shall be 6061-T6, 3/16" thick and shall conform to the requirements of ASTM B429-10. The heat treatment shall be in accordance with practice B918-09.
21. The 0.190" thick punched plate shall meet the requirements of ASTM B209-10 Alloy 5052-H32 with a minimum yield strength of 23 ksi and a minimum elongation of 9% in 2 inches. Punched plates shall have two sides standard mill finish.
22. The contractor shall furnish a certificate stating that each lot has been sampled, tested by a certified lab and inspected in accordance with the specification requirement of the corresponding ASTM standard.
23. Immediately following fabrication, protect all aluminum railing and panel surfaces from damage during shipping, handling, storage and installation. Protective measures shall remain in place until final assembly and installation. Repair or replacement of damaged components shall be at the contractor's cost and to the satisfaction of the engineer at no additional cost to the project.

SHIVE HATTERY

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		CHECKED -	REVISED -
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	PLOT DATE = $DATE	CHECKED -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PEDESTRIAN RAILING DETAILS 2

SHEET NO. 2 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R &81-1(HVBR)	ROCK ISLAND	1504	1197
PROJECT NO. 92-032-01		CONTRACT NO. 64C08		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

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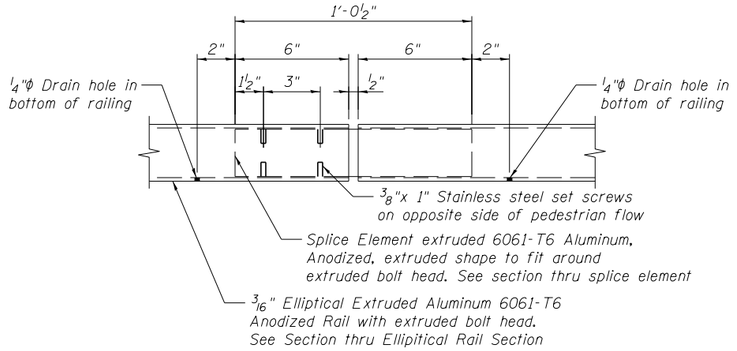
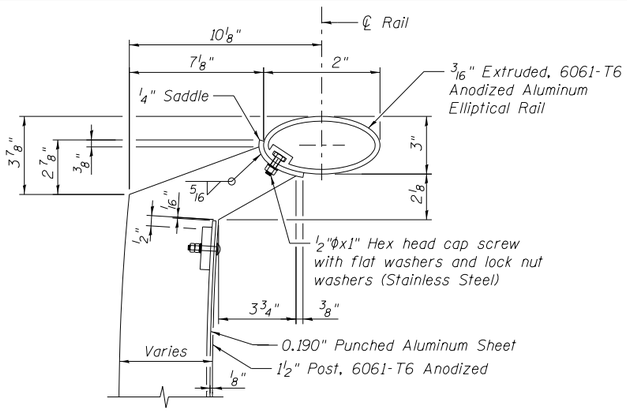
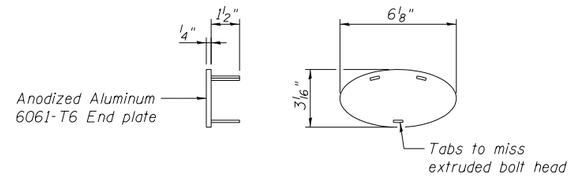


TYPICAL ELLIPTICAL RAILING SPLICE DETAIL

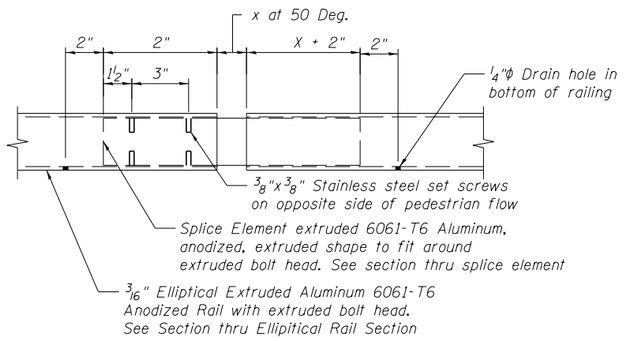


ELLIPTICAL RAILING POST CONNECTION DETAIL

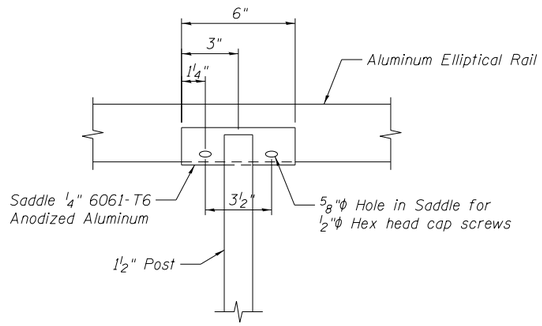


CAST END CAP FOR ELLIPTICAL RAIL

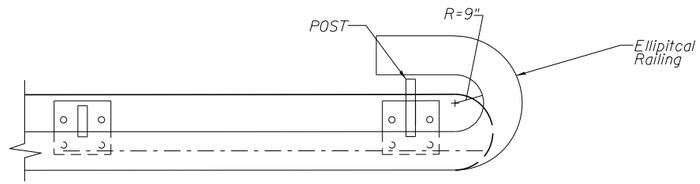
Drive Fit Type



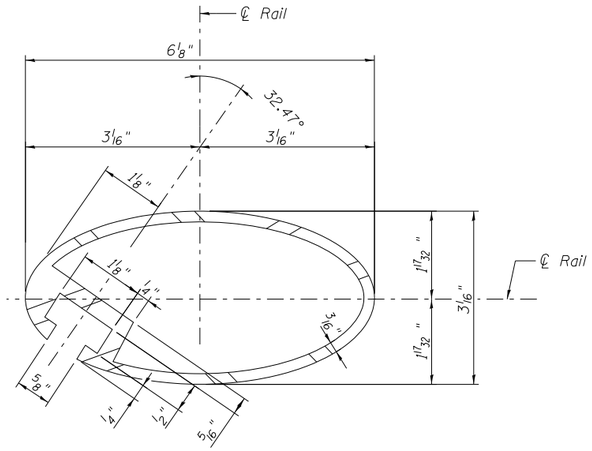
TYPICAL ELLIPTICAL RAILING EXPANSION JOINT SPLICE DETAIL



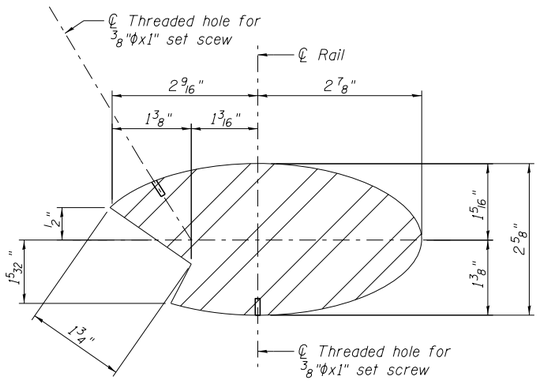
ELLIPTICAL RAILING POST CONNECTION DETAIL



PLAN VIEW SHORT RAILING TERMINATION DETAIL

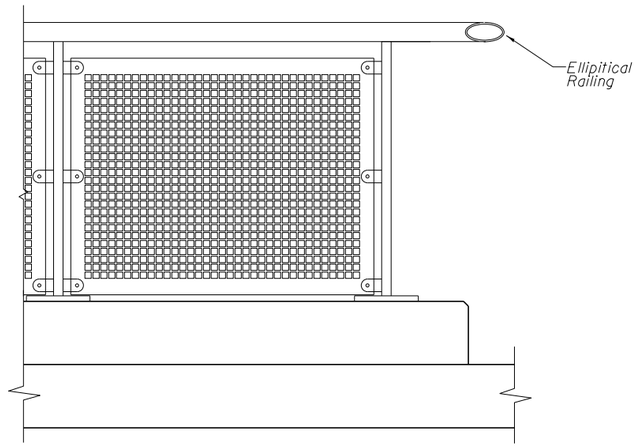


SECTION THRU ELLIPTICAL RAIL SECTION



SECTION THRU SPLICE ELEMENT

Note: Splice must be a sliding fit in rail section



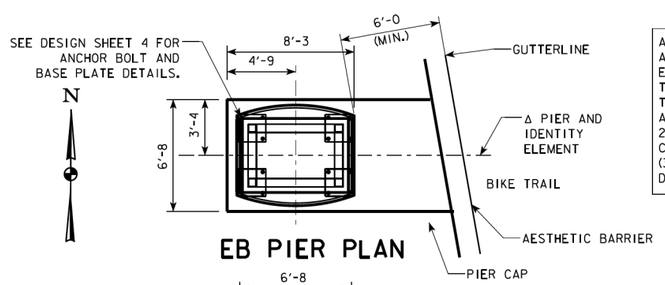
SHORT RAILING TERMINATION DETAIL

SHIVE HATTERY

FILE NAME: $FILEABBREV$	USER NAME = USERNAME	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PEDESTRIAN RAILING DETAIL 3
		CHECKED -	REVISED -		
MODEL: $MODEL	PLOT SCALE =	DRAWN -	REVISED -		SHEET NO. 3 OF 3 SHEETS
	PLOT DATE = $DATE	CHECKED -	REVISED -		

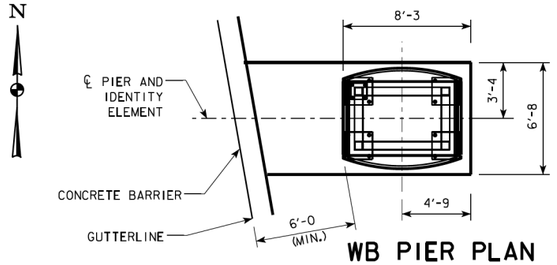
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R &81-1(HVBR)	ROCK ISLAND	1504	1198
PROJECT NO. 92-032-01		CONTRACT NO. 64C08		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SYSTEMDATE SYSTEMTIME DGNSPEC

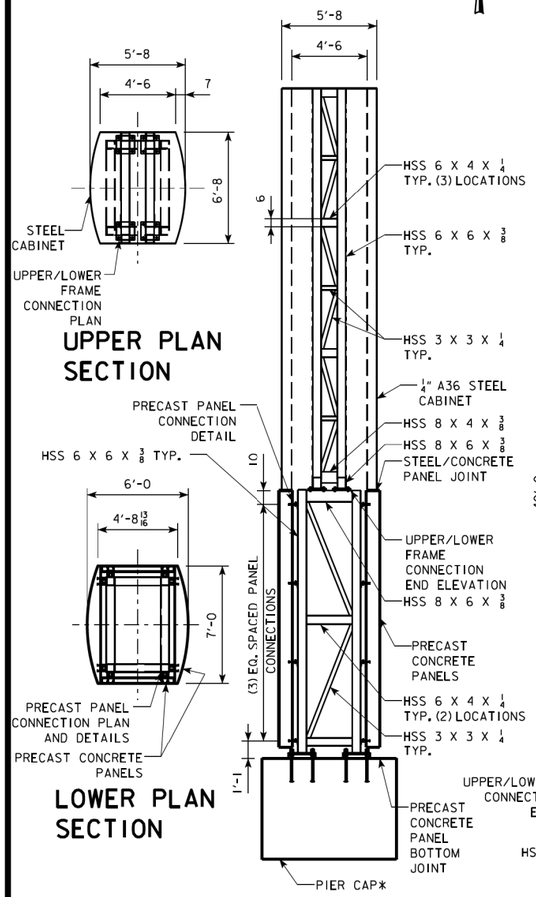


EB PIER PLAN

ALL WORKING DRAWINGS, INCLUDING SHOP DRAWINGS AND FALSEWORK DRAWINGS, SHALL BE SUBMITTED ELECTRONICALLY ACCORDING TO ARTICLE 1105.03 OF THE STANDARD SPECIFICATIONS.
THESE DRAWINGS SHALL BE SUBMITTED TO AND CHECKED BY:
ALFRED BENESCH & COMPANY
205 NORTH MICHIGAN AVENUE, SUITE 2400
CHICAGO, IL 60601
(312) 565-0450
DMORRILL@BENESCH.COM



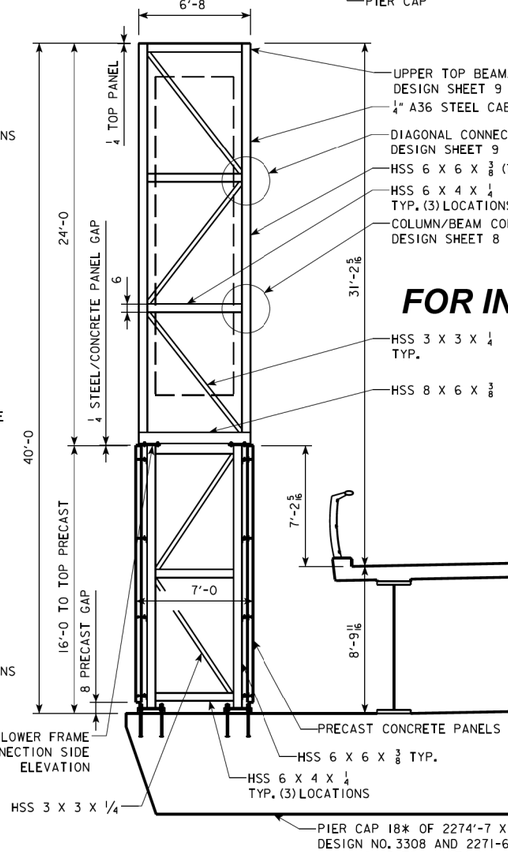
WB PIER PLAN



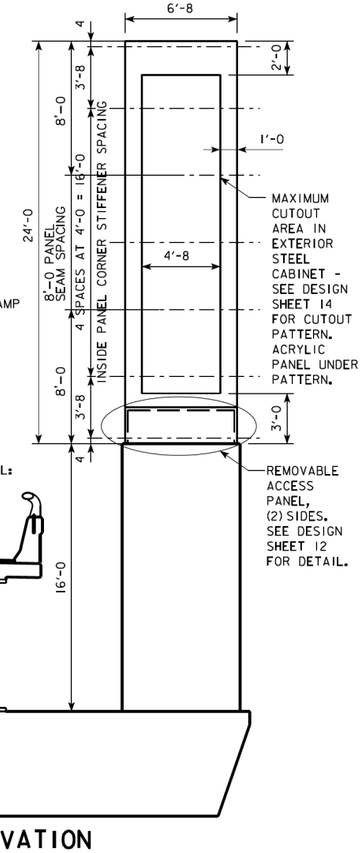
UPPER PLAN SECTION

LOWER PLAN SECTION

END FRAMING ELEVATION



SIDE FRAMING ELEVATION (LOOKING NORTH)



SIDE ELEVATION

PIER CAP 18* OF 2274'-7 X VARIABLE CONTINUOUS WELDED GIRDER BRIDGE - WBL
DESIGN NO. 3308 AND 2271-6 X VARIABLE CONTINUOUS WELDED GIRDER BRIDGE - EBL
W/ 14' BIKE TRAIL DESIGN NO. 3408

LOCATIONS

RIVER CROSSING IDENTITY ELEMENT LOCATIONS

IN IOWA: I-74 EB VIADUCT PIER 18 (AS SHOWN)
I-74 WB VIADUCT PIER 18 (AS SHOWN)

IN ILLINOIS: I-74 EB MAINLINE IN RAMP RD-G GORE
(I-74 CL STATION 24+20, OFFSET 83' RT ±)
I-74 WB MAINLINE IN RAMP RD-H GORE
(I-74 CL STATION 24+20, OFFSET 80' LT ±)

NEIGHBORHOOD IDENTITY ELEMENT LOCATIONS

IN IOWA: US 67 RAMP A STATION 1497+00.00, OFFSET 27.5' LT
US 67 RAMP B STATION 2594+25.00, OFFSET 66.0' RT

IN ILLINOIS: RAMP RD-G AT RIVER DRIVE
(RAMP RD-G STATION 136+38, OFFSET 85' RT)
RAMP 6TH-C AT EXISTING 5TH AVENUE, WEST SIDE OF RAMP
(RAMP 6TH-C STATION 334+00, OFFSET 21.5' RT)
RAMP 7TH-A AT 7TH AVENUE, SE OF INTERSECTION
(RAMP 7TH-A STATION 642+40, OFFSET 40.65' RT)
RAMP RAC-A (WB) AT AVENUE OF THE CITIES, IN GORE
(RAMP RAC-A STATION 1972+58, OFFSET 85' RT)
RAMP RAC-C (EB) AT AVENUE OF THE CITIES, IN GORE
(RAMP RAC-C STATION 2071+75, OFFSET 77.5' LT)

OVERLOOK IDENTITY ELEMENT LOCATIONS

THREE ON EASTBOUND BRIDGE OVER THE MISSISSIPPI RIVER, BIKE TRAIL:
I-74 CL STATION 6770+71.83, OFFSET 131.086' LT
I-74 CL STATION 6670+98.50, OFFSET 131.086' LT
I-74 CL STATION 6771+25.17, OFFSET 131.086' LT

FOR INFORMATION ONLY

* OR FOOTING IN ILLINOIS. PIER CAPS AND FOOTINGS ARE BY OTHERS.

IDENTITY ELEMENTS AT RIVER CROSSING

PROVIDE 4 - SEE LIST OF LOCATIONS.

NOTE: 2 CURVED SIDES ARE IDENTICAL.
2 FLAT SIDES ARE IDENTITCAL.

LICENSED PROFESSIONAL ENGINEER
JOSEPH D. APPEL
19355
IOWA

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

Signature: Date

Printed or typed name: JOSEPH D. APPEL
License Number: 19355
My License Renewal Date is: DECEMBER 31, 2016
PAGES, SHEETS OR DIVISIONS COVERED BY THIS SEAL:
V.13, V.14, V.15, V.16, V.17, V.18, V.19, V.20, V.21, V.22, V.23, V.24, V.25, V.26. V.27, V.28, V.29

DESIGN FOR

IDENTITY ELEMENT DETAILS

RIVER CROSSING ELEVATIONS

SCOTT COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 17 FILE NO. 30253

DESIGN TEAM SHIVE HATTERY	SCOTT COUNTY	PROJECT NUMBER IM-074-1(206)5--13-82	SHEET NUMBER V.13

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benesch engineers · scientists · planners
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

FILE NAME = 64C08AA-001-Identity Element Foundations (7 Sheets).dgn	USER NAME = ksnider	DESIGNED - SLD	REVISED -
		CHECKED - KMP	REVISED -
MODEL: Raster 1 of 3	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 1/18/2017	CHECKED - KMP	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIVER CROSSING IDENTITY ELEMENT

SHEET NO. 1 OF 13 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1199
		CONTRACT NO. 64C08		
	ILLINOIS	FED. AID PROJECT		

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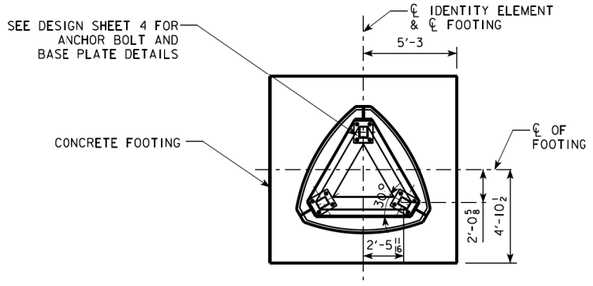
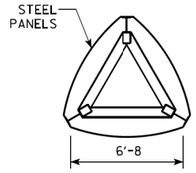
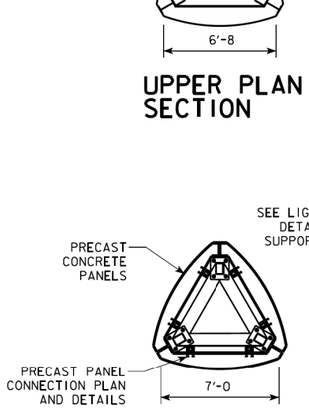


SEE SHEETS V.9-V.12 FOR FOOTING DETAILS AT US 67 RAMPS A AND B AND FOR ORIENTATION OF IDENTITY ELEMENTS WITH RESPECT TO ROADWAY ALIGNMENTS.

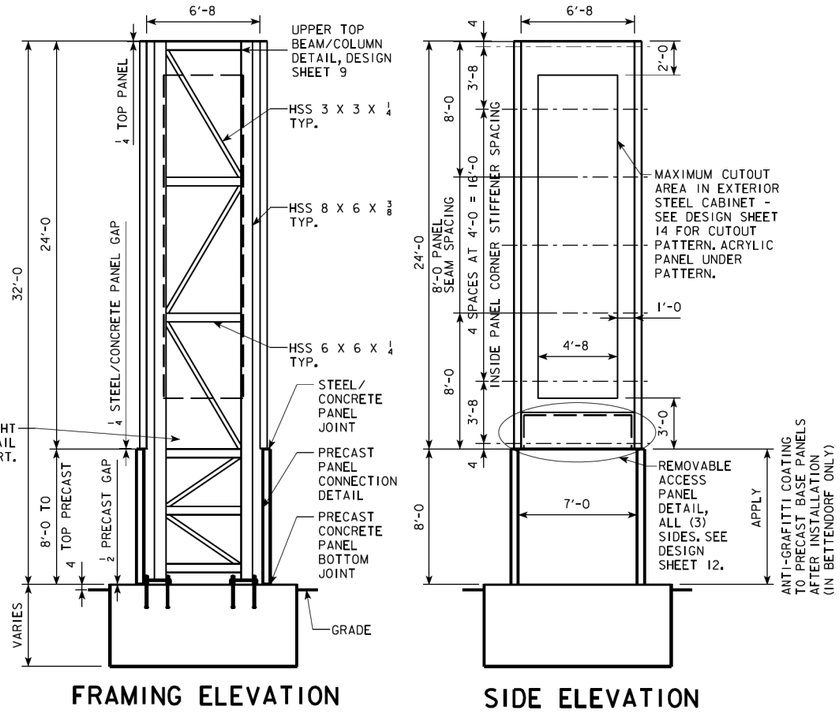
FOUNDATION PLAN
(FOR INFORMATION ONLY)



UPPER PLAN SECTION



LOWER PLAN SECTION



FRAMING ELEVATION

SIDE ELEVATION

3-SIDED IDENTITY ELEMENTS, NEIGHBORHOOD

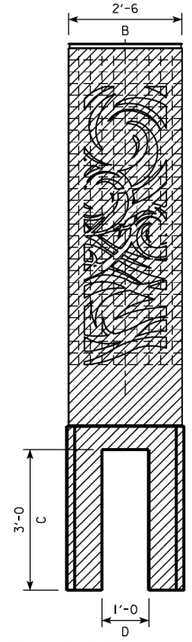
PROVIDE (7). SEE LIST OF LOCATIONS ON DESIGN SHEET 1.

NOTE: ALL 3 SIDES ARE IDENTICAL.

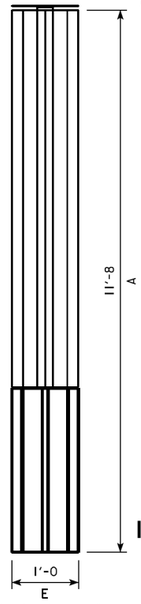
ANTI-GRAFFITI COATING SCHEDULE

SURFACE TYPE	LOCATION	DIMENSIONS**					REFERENCE DESIGN SHEET	QUANTITY
		A	B	C	D	E	NUMBER	
IDENTITY ELEMENT, NEIGHBORHOOD	RAMP B	8'-0	8'-0				2, 6	22
	RAMP A	8'-0	8'-0				2, 6	22
IDENTITY ELEMENT, OVERLOOK	OVERLOOK ON EB RIVER BRIDGE X (3)	11'-8	2'-6	3'-0	1'-0	1'-0	15-17	28
						TOTAL (SQ. YD.)		72

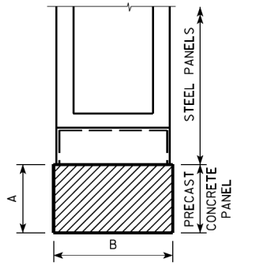
** TABULATED DIMENSIONS ARE APPROXIMATE. PLAN QUANTITIES ARE CALCULATED GRAPHICALLY IN CADD.



OVERLOOK DETAIL



END VIEW



IDENTITY ELEMENT, NEIGHBORHOOD ELEVATION
(3 SIDES SIMILAR)

ANTI-GRAFFITI COATING

ANTI-GRAFFITI COATING

NOTE:
NO ANTI-GRAFFITI COATING SHALL BE APPLIED TO THE CURVED ACRYLIC PANEL. CONTRACTOR IS RESPONSIBLE FOR PROTECTING THIS SURFACE DURING APPLICATION OF ANTI-GRAFFITI COATING TO THE REST OF THE IDENTITY ELEMENT'S VERTICAL SURFACES.

NOTE:
ANTI-GRAFFITI SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE "SPECIAL PROVISIONS FOR ANTI-GRAFFITI COATING". THE MATERIAL USED SHALL BE AN APPROVED TYPE IN ACCORDANCE WITH MATERIALS I.M. 491.23. ANTI-GRAFFITI COATING SHALL BE APPLIED TO SURFACES LISTED IN THE SCHEDULE AND TO THE LIMITS INDICATED IN THESE PLANS.

FOR INFORMATION ONLY

DESIGN FOR

IDENTITY ELEMENT DETAILS

NEIGHBORHOOD ELEVATIONS

SCOTT COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 2 OF 17 FILE NO. 30253

DESIGN TEAM **SHIVE HATTERY** | SCOTT COUNTY | PROJECT NUMBER IM-074-1(206)5--13-82 | SHEET NUMBER V.14

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benesch engineers · scientists · planners
Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 10061

FILE NAME = 64C08AA-001-Identity Element Foundations 17 Sheets.dgn	USER NAME = ksnider	DESIGNED - SLD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	NEIGHBORHOOD IDENTITY ELEMENT	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - KMP	REVISED -			74	(81-1)R & 81-1(HVBR)	ROCK ISLAND	1504	1200
	PLOT SCALE =	DRAWN - RMG	REVISED -						CONTRACT NO. 64C08	
MODEL: Raster 2 of 3	PLOT DATE = 1/18/2017	CHECKED - KMP	REVISED -		SHEET NO. 2 OF 13 SHEETS			ILLINOIS	FED. AID PROJECT	

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