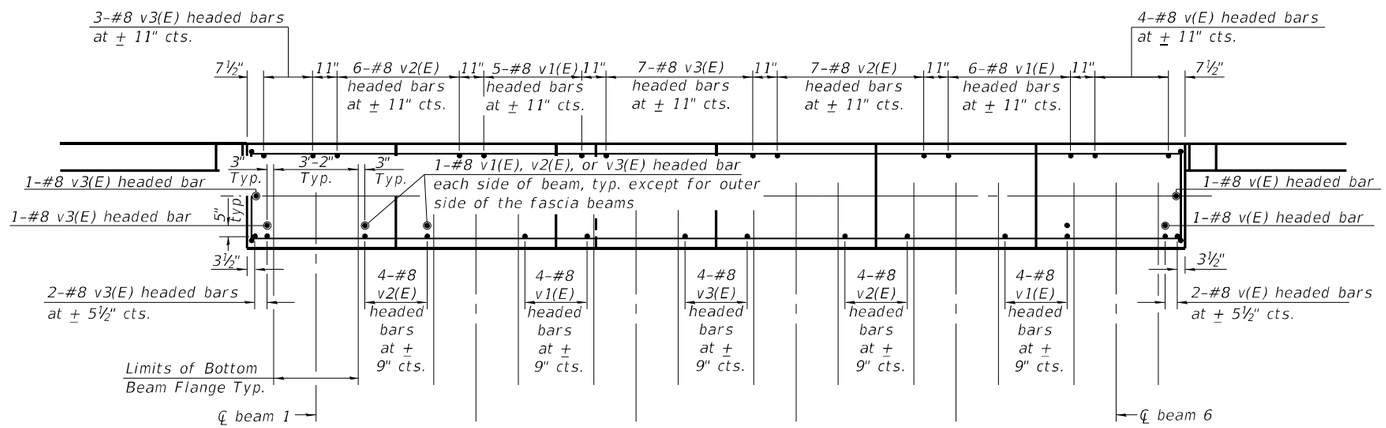
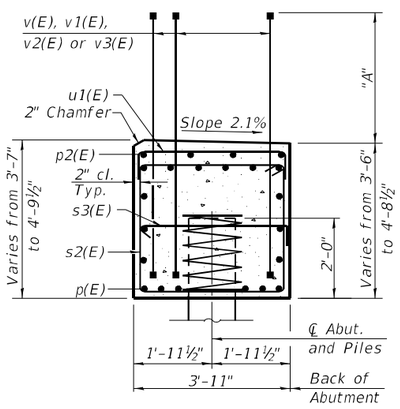


Layout of v(E), v1(E), v2(E) & v3(E) Bars

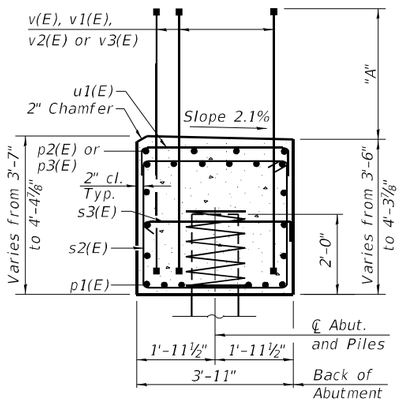
NORTH ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h4(E)	26	#6	12'-2"	
h5(E)	5	#6	18'-6"	
h6(E)	2	#5	9'-5"	
h7(E)	26	#6	9'-10"	
h8(E)	2	#5	6'-10"	
h9(E)	2	#6	17'-0"	
p(E)	18	#7	21'-10"	
p1(E)	18	#7	17'-4"	
p2(E)	12	#5	5'-10"	
p3(E)	4	#5	5'-4"	
s2(E)	47	#6	14'-10"	
s3(E)	16	#5	4'-7"	
sp(E)	8	#4	2'-0"	
u(E)	10	#6	12'-1"	
u1(E)	28	#5	8'-7"	
v(E)	8	#8	6'-11"	
v1(E)	23	#8	7'-2"	
v2(E)	25	#8	7'-7"	
v3(E)	20	#8	8'-0"	
v4(E)	4	#5	8'-10"	
v6(E)	4	#5	9'-10"	
v8(E)	8	#5	15'-3"	
v9(E)	5	#5	14'-8"	
Structure Excavation		Cu. Yd.	113	
Concrete Structures		Cu. Yd.	25.5	
Reinforcement Bars, Epoxy Coated		Pound	6350	
Furnishing Metal Shell Piles, 14" x 0.312"		Foot	637	
Driving Piles		Foot	637	
Test Pile, Metal Shells		Each	1	
Pile Shoes		Each	8	

* Length is height of spiral.



SEC. A-A



SEC. B-B

DIMENSIONS OF V-BARS ABOVE TOP OF ABUTMENT CAP ("A")

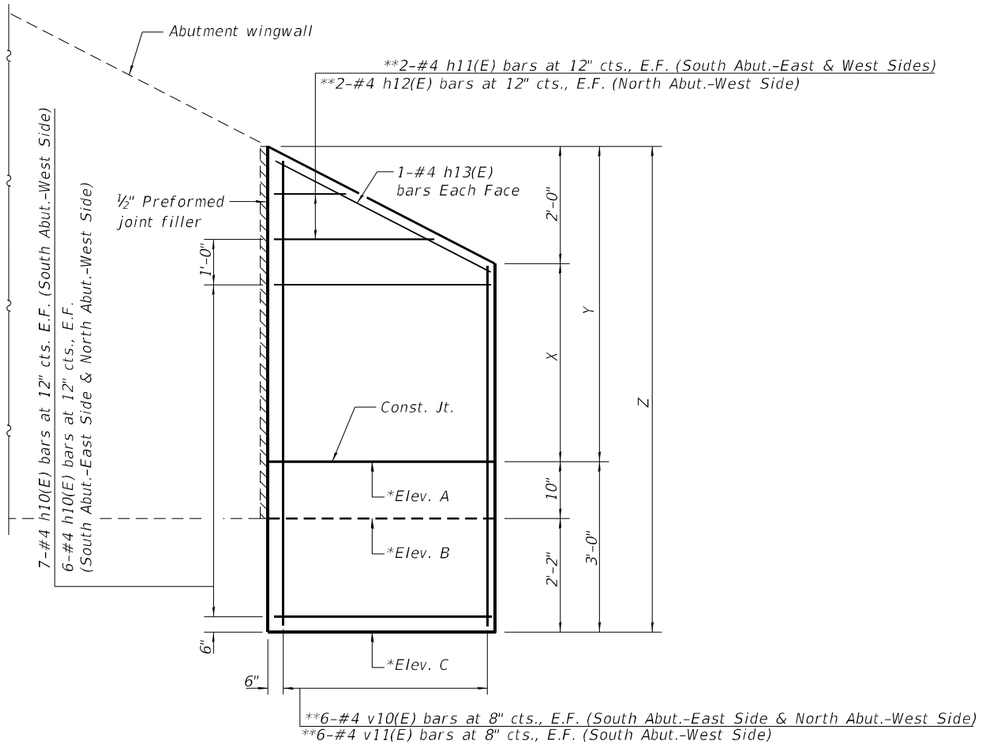
Bar	Minimum Length of "A"	Maximum Length of "A"
v(E)	3'-9"	3'-9"
v1(E)	3'-7"	4'-0"
v2(E)	3'-7⅛"	4'-0"
v3(E)	3'-7¼"	4'-0¼"

FILE NAME = 0101003-70B99-023-North Abutment Details.dgn	USER NAME =	DESIGNED - FAM	REVISED -
BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC. 403 NORTH COURT STREET MARION, ILLINOIS 62959 PHONE: (618)997-8190		CHECKED - PS	REVISED -
	PLOT SCALE =	DRAWN - BJV	REVISED -
	PLOT DATE = 3/11/2021	CHECKED - GBR	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

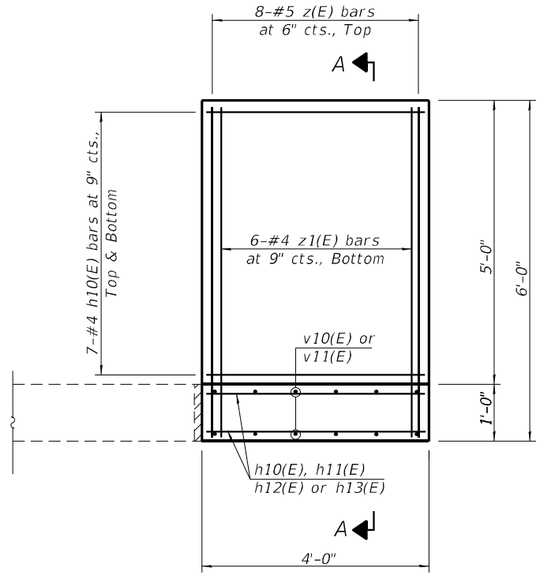
NORTH ABUTMENT
STRUCTURE NO. 010-1003
SHEET NO. 23 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/74	(10-34-1)HBK	CHAMPAIGN	1187	801
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

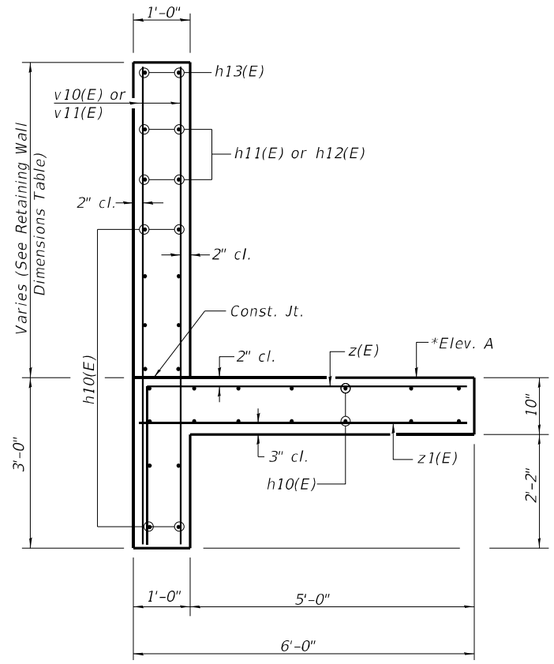


ELEVATION

* See Footing Elevation Table
** See Field Cutting Diagram

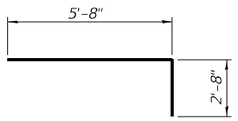


PLAN

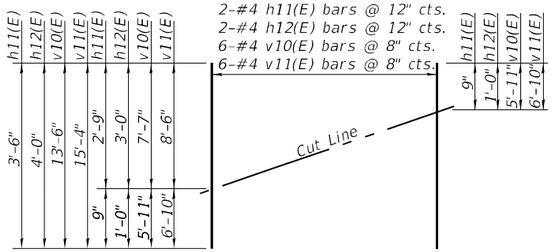


SECTION A-A

Maximum Applied Service Bearing Pressure, Qmax = 1453 psf

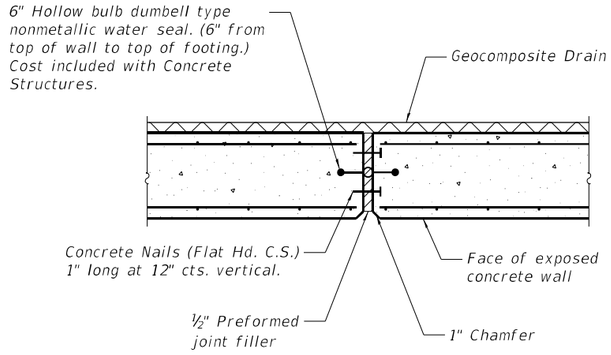


BAR z(E)



FIELD CUTTING DIAGRAM

Order h11(E), h12(E), v10(E) and v11(E) full length.
Cut as shown and use remainder of bars in opposite face.



EXPANSION JOINT DETAIL

RETAINING WALL DIMENSIONS

	South Abutment		North Abutment
Dimension	East	West	West
X	3'-2⅛"	4'-1½"	3'-4"
Y	5'-2⅛"	6'-1½"	5'-4"
Z	8'-2⅛"	9'-1½"	8'-4"

FOOTING ELEVATIONS

	South Abutment		North Abutment
Elevation	East	West	West
A	781.15	782.35	780.39
B	780.32	781.52	779.56
C	778.15	779.35	777.39

BILL OF MATERIAL
3 WINGWALL EXTENSIONS

Bar	No.	Size	Length	Shape
h10(E)	80	#4	3'-8"	
h11(E)	4	#4	3'-6"	
h12(E)	2	#4	4'-0"	
h13(E)	6	#4	4'-2"	
v10(E)	12	#4	13'-6"	
v11(E)	6	#4	15'-4"	
z(E)	24	#5	8'-4"	
z1(E)	18	#4	5'-8"	
Concrete Structures			Cu. Yd.	5.3
Reinforcement Bars, Epoxy Coated			Pound	670

FILE NAME = 0101003-70B99-024-Wingwall Extension .dgn | USER NAME = | PLOT SCALE = | PLOT DATE = 3/11/2021

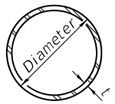
BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC.
403 NORTH COURT STREET MARION, ILLINOIS 62959 PHONE: (618)997-8190

DESIGNED - FAM | CHECKED - PS | DRAWN - BJV | CHECKED - GBR
REVISED - | REVISED - | REVISED - | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

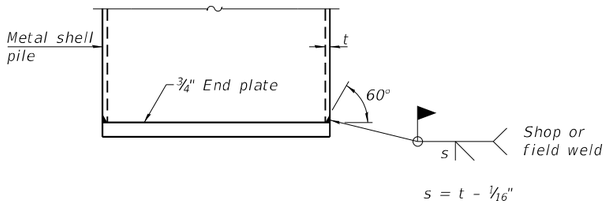
WINGWALL EXTENSIONS
STRUCTURE NO. 010-1003
SHEET NO. 24 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/74	(10-34-1)HBK	CHAMPAIGN	1187	802
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



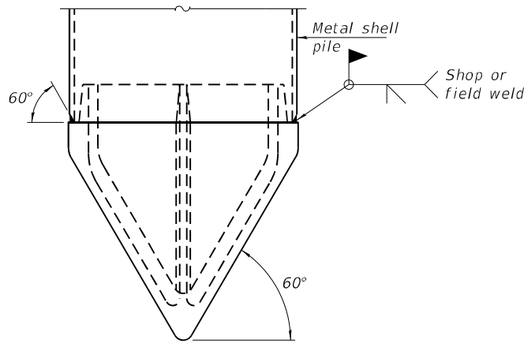
METAL SHELL PILE TABLE

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd.³/ft.)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



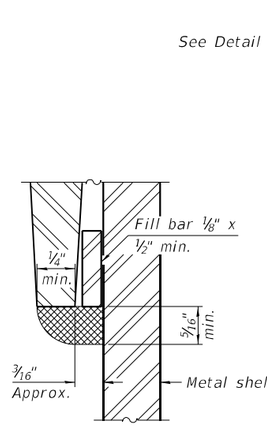
$s = t - \frac{1}{16}"$

END PLATE ATTACHMENT

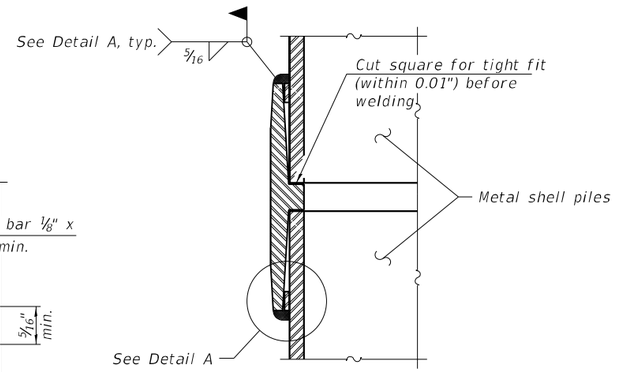


PILE SHOE ATTACHMENT

(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).

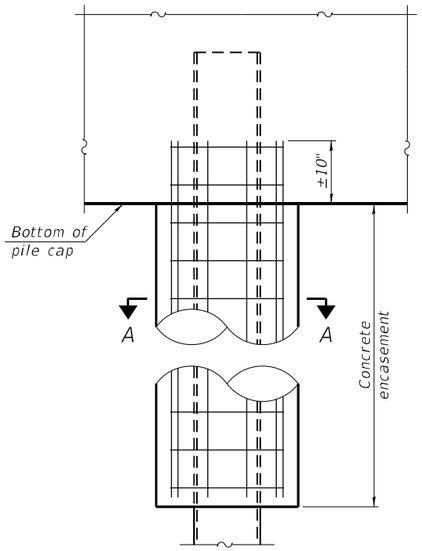


DETAIL A

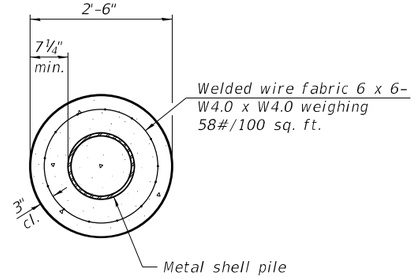


WELDED COMMERCIAL SPLICE

Notes:
The ⅛" x ½" min. fill bar may be constructed of 2 bars with a ⅛" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

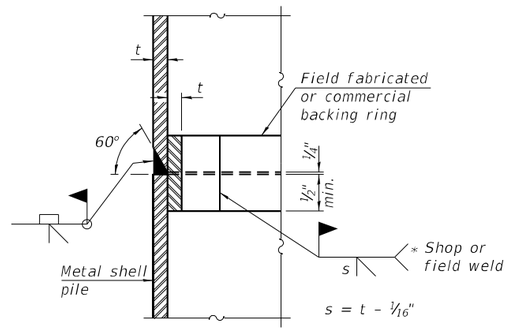


ELEVATION



SECTION A-A

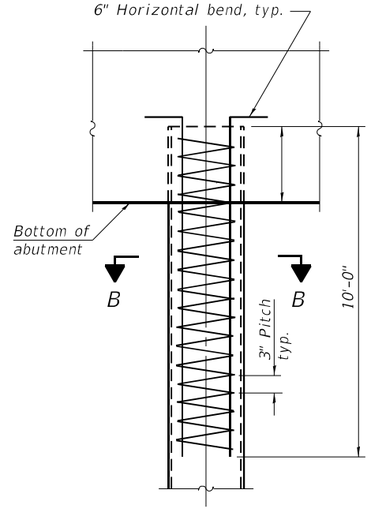
INDIVIDUAL PILE CONCRETE ENCASEMENT AT PIERS



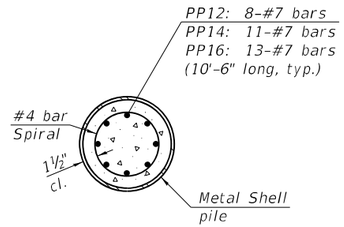
$s = t - \frac{1}{16}"$

COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION



SECTION B-B

REINFORCEMENT AT ABUTMENTS

Note:
The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

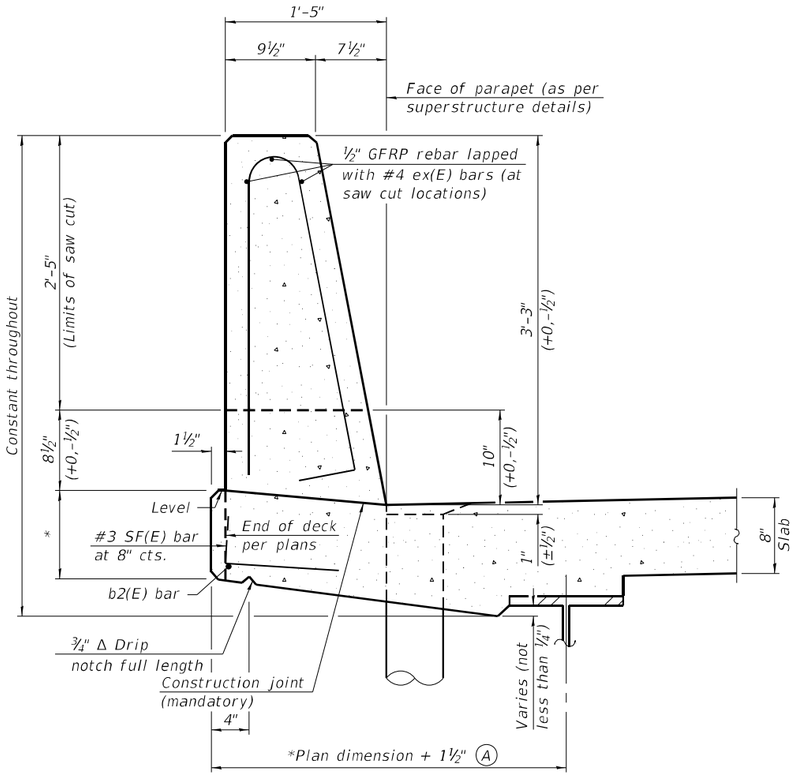
F-MS 8-11-2017

FILE NAME = 0101003-70B99-025- Pile Details.dgn	USER NAME =	DESIGNED - FAM	REVISED -
BFW BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC. 403 NORTH COURT STREET MARION, ILLINOIS 62959 PHONE - 618.967.9190		CHECKED - PS	REVISED -
	PLOT SCALE =	DRAWN - BJV	REVISED -
	PLOT DATE = 3/11/2021	CHECKED - GBR	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

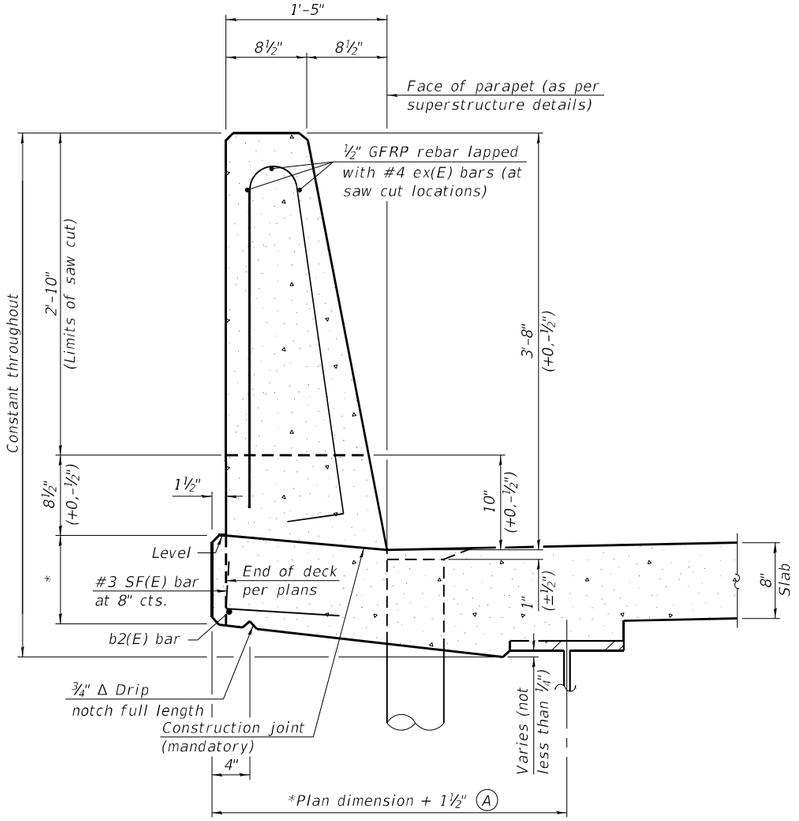
METAL SHELL PILE DETAILS
STRUCTURE NO. 010-1003
SHEET NO. 25 OF 30 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/74	(10-34-1)HBK	CHAMPAIGN	1187	803
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



39" CONSTANT-SLOPE PARAPET SECTION

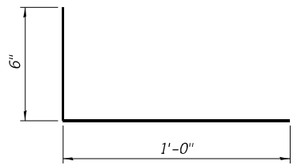
(Showing dimensions, d(E), and ½" Ø GFRP rebar)



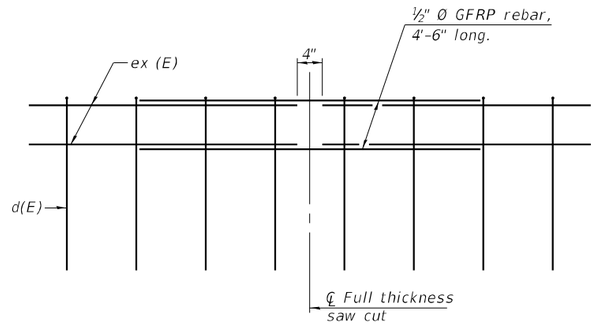
44" CONSTANT-SLOPE PARAPET SECTION

(Showing dimensions, d(E), and ½" Ø GFRP rebar)

*See Superstructure Details.



#3 (E) BAR



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. Additional concrete needed to revise dimension A = 0.00348 cu. yds./ft. for 39" and 44" parapets.

Place full depth aluminum sheets as shown on superstructure details.

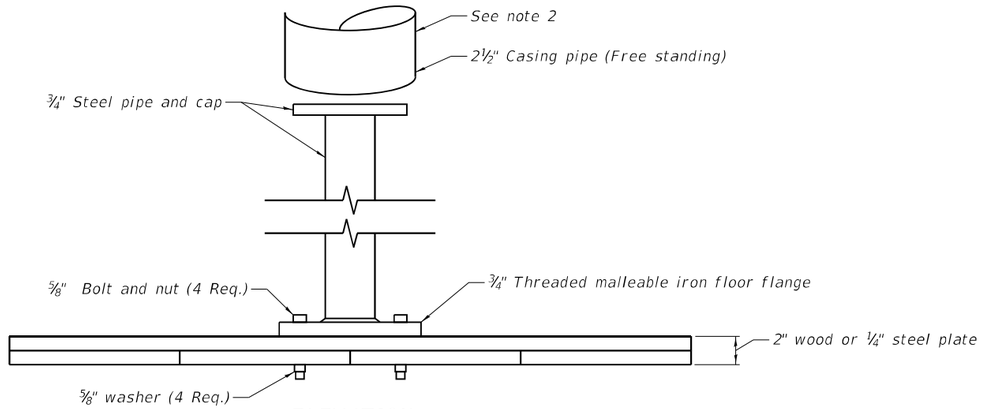
Replace all cork joint filler locations with a full thickness saw cut.

Steel superstructure shown. Other superstructure types similar.

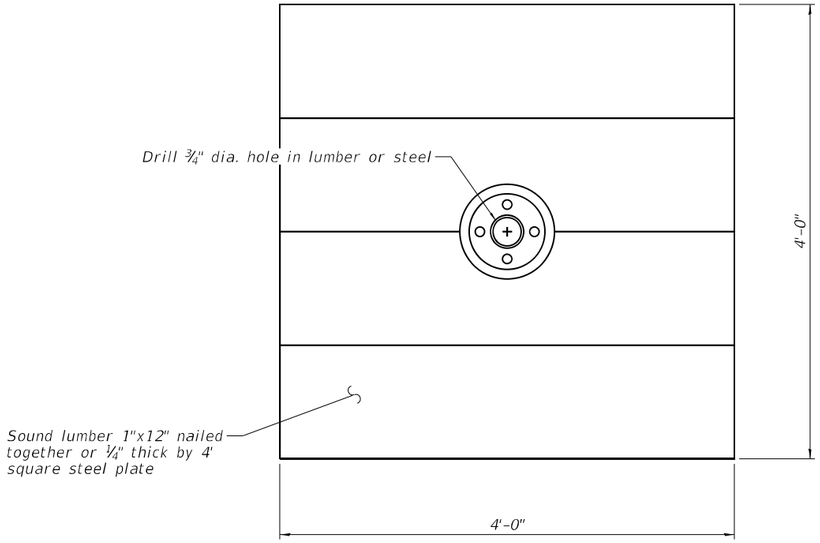
SFP 39-44 1-14-2019

FILE NAME = 0101003-70B99-026- Parapet Slipforming.dgn	USER NAME =	DESIGNED - FAM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CONCRETE PARAPET SLIPFORMING OPTION STRUCTURE NO. 010-1003
BFW BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC. 403 NORTH COURT STREET MARION, ILLINOIS 62959 PHONE: (618)672-9190		CHECKED - PS	REVISED -		SHEET NO. 26 OF 30 SHEETS
	PLOT SCALE =	DRAWN - BJV	REVISED -		
	PLOT DATE = 3/11/2021	CHECKED - GBR	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/74	(10-34-1)HBK	CHAMPAIGN	1187	804
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



ELEVATION



PLAN

NOTES:

1. Settlement platform shall be in accordance with the applicable portions of Article 204.06 of the Standard Specifications.
2. Do not install casing pipe until after one section of ¾" steel pipe has been covered with earth. The casing pipe should not rest on platform.

FILE NAME = 0101003-70B99-027-Settlement Platform.dgn	USER NAME =	DESIGNED - FAM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SETTLEMENT PLATFORM STRUCTURE NO. 010-1003	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC. 403 NORTH COURT STREET MARION, ILLINOIS 62959 PHONE -618/997-8190		CHECKED - PS	REVISED -			57/74	(10-34-1)HBK	CHAMPAIGN	1187	805
	PLOT SCALE =	DRAWN - BJV	REVISED -						CONTRACT NO. 70B99	
	PLOT DATE = 3/11/2021	CHECKED - GBR	REVISED -		SHEET NO. 27 OF 30 SHEETS		ILLINOIS	FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 1/30/15

ROUTE I-57/74 DESCRIPTION South Abut Ramp G North Structure LOGGED BY TLM

SECTION 10(5-1-RS-1, 14-1,6)R LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147194, Longitude -88.280463

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE Auto

STRUCT. NO.
Station

BORING NO. B-30
Station 732+43.65
Offset 5.2 ft LT
Ground Surface Elev. 756.36 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 751.9 ft ▼
Upon Completion 729.4 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				TOPSOIL: Silty Clay, dark brown
755.36				
	3			SILTY CLAY: Dark Brown, stiff
	3 4	1.5 P	19	
752.36	1			
-5	1 1		22	SAND AND GRAVEL WITH SILT AND CLAY: Brown, loose ▼
	1			
	3 6		21	
748.36				
	3			SILTY CLAY LOAM TILL: Gray, very stiff
-10	6 7	2.5 B	12	
	4			
	8 9	2.5 B	12	
	3			
-15	4 6	2.3 B	13	
	3			
	6 7	2.7 B	12	
	2			
-20	6 6	2.5 B	12	
-25	5 11	2.7 B	9	SILTY CLAY LOAM TILL: Gray, very stiff *(continued)*
729.36				
	4			SAND AND GRAVEL: Gray, medium dense
-30	8 8		14	
724.36				
	11			SILTY CLAY LOAM TILL: Gray, hard
-35	8 11	4.3 B	12	
719.36				
	6			SILTY CLAY LOAM TILL: Gray, very stiff
-40	8 14	3.5 B	12	

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 1/30/15

ROUTE I-57/74 DESCRIPTION South Abut Ramp G North Structure LOGGED BY TLM

SECTION 10(5-1-RS-1, 14-1,6)R LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147194, Longitude -88.280463

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE Auto

STRUCT. NO.
Station

BORING NO. B-30
Station 732+43.65
Offset 5.2 ft LT
Ground Surface Elev. 756.36 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 751.9 ft ▼
Upon Completion 729.4 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SILTY CLAY LOAM TILL: Gray, very stiff *(continued)*
	4			
-45	5 10	2.5 B	14	
709.36				
	4			SILTY CLAY LOAM TILL: Gray, stiff
-50	6 10	1.9 B	14	
	6			
-55	7 9	1.7 B	14	
	5			
-60	7 10	1.7 B	13	
	2			SILTY CLAY LOAM TILL: Gray, stiff *(continued)*
-65	4 14	1.9 B	13	
	6			
-70	9 14	2.3 B	12	
	5			
681.36 -75	7 11	2.1 B	12	
				End of Boring
-80				

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/2/15

ROUTE I-57/74 DESCRIPTION N. Abutment Ramp G North Structure LOGGED BY TLM, TC

SECTION 10(5-1-RS-1, 14-1,6)R LOCATION SEC. 34, TWP. 20N, RNG. 8E, 3rd PM, Latitude 40.147596, Longitude -88.280354

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO.
Station

BORING NO. B-31
Station 733+92.77
Offset 5.7 ft LT
Ground Surface Elev. 756.36 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 748.4 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
755.36				12" TOPSOIL: Silty Clay, dark brown
	2			
	2	0.9	17	SILTY CLAY: Brown, stiff
	3	B		
753.36				
	1			SAND: Loose, loamy, medium to coarse, wet but no free water
	2	0.2	19	
-5	2	B		
	2			
	4		17	
	4			
748.36 ▼				
	5			SAND AND GRAVEL: Brown, medium dense
	13		12	
-10	12			
	6			
744.36	12	1.3	14	
	13	P		SILTY CLAY LOAM TILL: Gray, stiff
	3			
	5	0.7	14	
-15	6	B		
740.86				
	2			SILTY CLAY TILL: Gray, stiff
	4	1.0	14	
	8	B		
	2			
	5	1.0	13	
-20	7	B		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SILTY CLAY TILL: Gray, stiff *(continued)*
734.36				
				SAND: Gray, medium dense, medium, trace gravel
	5			
	6		14	
-25	16			
	11			
	14		12	
-30	13			
724.36				
				SILTY CLAY LOAM TILL: Gray, stiff
	7			
	8	1.7	13	
-35	8	B		
719.36				
				SILTY CLAY LOAM TILL: Gray, very stiff
	6			
	9	2.4	13	
-40	13	B		

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/2/15

ROUTE I-57/74 DESCRIPTION N. Abutment Ramp G North Structure LOGGED BY TLM, TC

SECTION 10(5-1-RS-1, 14-1,6)R LOCATION SEC. 34, TWP. 20N, RNG. 8E, 3rd PM, Latitude 40.147596, Longitude -88.280354

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO.
Station

BORING NO. B-31
Station 733+92.77
Offset 5.7 ft LT
Ground Surface Elev. 756.36 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 748.4 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SILTY CLAY LOAM TILL: Gray, very stiff *(continued)*
714.36				
				SILTY CLAY TILL: Gray, stiff, trace sand
	2			
	5	1.6	13	
-45	11	B		
	4			
	7	1.5	12	
-50	11	B		
	4			
	7	1.6	13	
-55	11	B		
699.36				
				SILTY CLAY TILL: Gray, very stiff, trace sand
	4			
	8	2.3	13	
-60	13	B		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SILTY CLAY TILL: Gray, very stiff, trace sand *(continued)*
	6			
	10	1.5	14	
-65	11	B		
	6			
	9	1.7	13	
-70	12	B		
	7			
	14	3.1	12	
681.36 -75	18	B		
				End of Boring
-80				

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 1/30/15

ROUTE I-57/74 DESCRIPTION Pier Ramp G North Structure LOGGED BY TLM, TC

SECTION 10(5-1-RS-1, 14-1,6)R LOCATION SEC. 34, TWP. 20N, RNG. 8E, 3rd PM, Latitude 40.147318, Longitude -88.280435

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE Auto

STRUCT. NO.
Station
BORING NO. B-40/41
Station 732+89.34
Offset 5.7 ft LT
Ground Surface Elev. 756.16 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter 750.2 ft ▼
Upon Completion washed ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				TOPSOIL: Silty Clay, dark brown
755.16				
	2			SILTY CLAY: Brown, stiff
	3 4	1.2 B	19	
753.16				
	1			CLAYEY SAND: Very loose, coarse
-5	1 1		21	
750.66				
	2			SAND AND GRAVEL: Brown, loose, clean ▼
	2 2		21	
748.16				
	6			SILTY CLAY LOAM TILL: Gray, very stiff
	4 7	2.9 B	12	
-10				
	5			
	6 7	2.3 B	13	
	5			
-15	6 6	2.5 B	13	
	6			
	2 8	0.9 B	14	
	5			
-20	6 6	2.5 B	12	
				SILTY CLAY LOAM TILL: Gray, very stiff *(continued)*
	15			
	31			No recovery, cobble
-25	36			
729.16				
				SAND AND GRAVEL: Gray, medium dense
	6			washed sample, 3 ft. of sand flowed up into auger
	3		16	
-30	10			
724.16				
				SILTY CLAY TILL: Gray, very stiff, trace gravel
	13			
	10 14	3.5 B	12	
-35				
719.66				
				SILTY CLAY TILL: Gray, very stiff
	6			
	8 12	2.5 B	13	
-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, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 1/30/15

ROUTE I-57/74 DESCRIPTION Pier Ramp G North Structure LOGGED BY TLM, TC

SECTION 10(5-1-RS-1, 14-1,6)R LOCATION SEC. 34, TWP. 20N, RNG. 8E, 3rd PM, Latitude 40.147318, Longitude -88.280435

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE Auto

STRUCT. NO.
Station
BORING NO. B-40/41
Station 732+89.34
Offset 5.7 ft LT
Ground Surface Elev. 756.16 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter 750.2 ft ▼
Upon Completion washed ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SILTY CLAY TILL: Gray, very stiff *(continued)*
	4			
	7 12	2.3 B	13	
-45				
709.16				
	7			SILTY CLAY TILL: Gray, stiff
	8 12	1.4 B	13	
-50				
704.16				
	9			SILTY CLAY TILL: Gray, very stiff
	6 10	2.5 B	13	
-55				
	6			
	9 10	2.3 B	13	
-60				
				SILTY CLAY TILL: Gray, very stiff *(continued)*
694.16				
				SANDY CLAY LOAM: Gray, stiff
	11			
	8 9	1.3 B	16	
-65				
	7			
	8 14	0.9 B	12	2" Thick sand seam
-70				
684.16				
	7			SILTY CLAY LOAM TILL: Gray, very stiff
	9 35	2.3 B	12	
681.16 -75				
				End of Boring
-80				

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

BBS, form 137 (Rev. 8-99)

FILE NAME = 0101003-70B99-030-Soil Boring Logs.dgn	USER NAME =	DESIGNED - FAM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS STRUCTURE NO. 010-1003
BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC. 403 NORTH COURT STREET MARION, ILLINOIS 62959 PHONE - 618.997.8749		CHECKED - PS	REVISED -		
	PLOT SCALE =	DRAWN - BJV	REVISED -		SHEET NO. 30 OF 30 SHEETS
	PLOT DATE = 3/11/2021	CHECKED - GBR	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57/74	(10-34-1)HBK	CHAMPAIGN	1187	808
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

Benchmark:

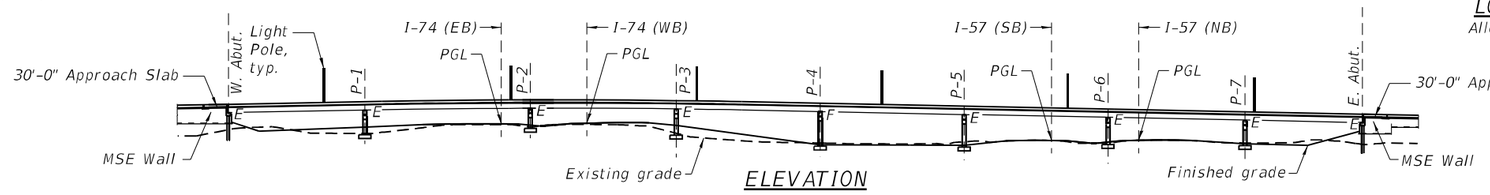
BM #4802-12, chiseled "□" on top of N.W. corner of light pole foundation #50-107 on Ramp G, Sta. 1068+46.46, 316+71' Lt. (I-74). Elev. 769.173

Existing Structure:

None

* Measured radially along ℄ Ramp D.

** Mainline route to be reconstructed in a future contract by others.



ELEVATION

DESIGN SPECIFICATIONS

2017 AASHTO LRFD 8th Edition, Bridge Design Specifications

LOADING HL-93

Allow 50 psf for future wearing surface

DESIGN STRESSES

FIELD UNITS

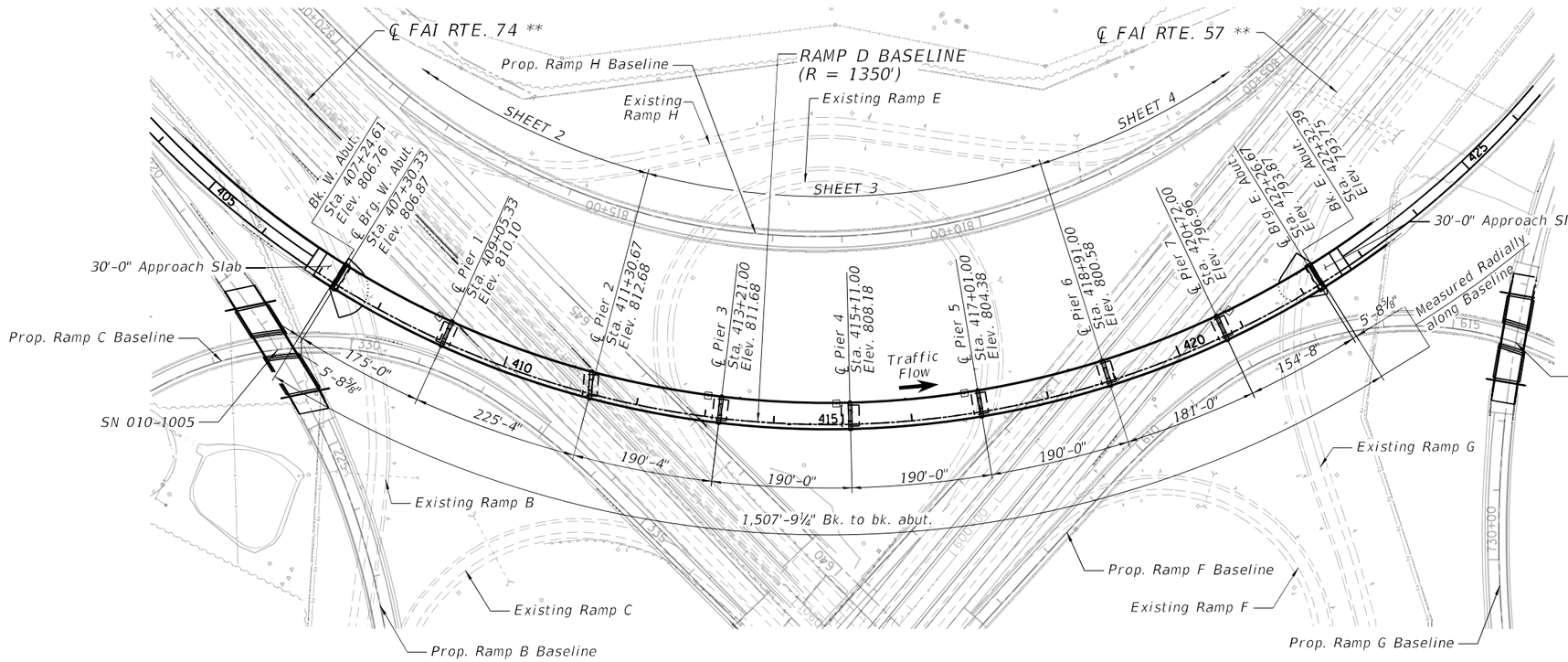
f'c = 3,500 psi
f'c = 4,000 psi (Superstructure Concrete)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

PRECAST UNITS

f'c = 5,000 psi (Precast Panels)
fy = 60,000 psi (Reinforcement)

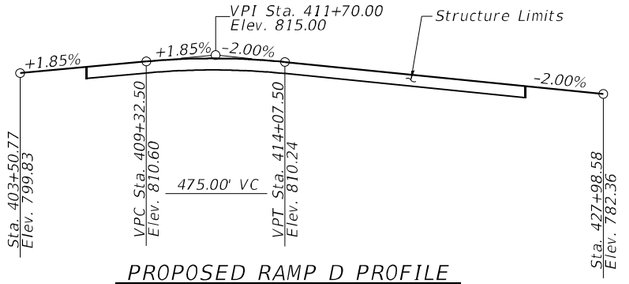
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design spectral Acceleration at 1.0 sec (SD1) = 0.135g
Design Spectral Acceleration at 0.2 sec (SDS) = 0.233g
Soil Site Class = D



PLAN

(See Sheets 2 thru 4 of 94 for enlarged plans)



PROPOSED RAMP D PROFILE

Note:
The profile grade shows the final elevations after grinding.

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

CURVE DATA

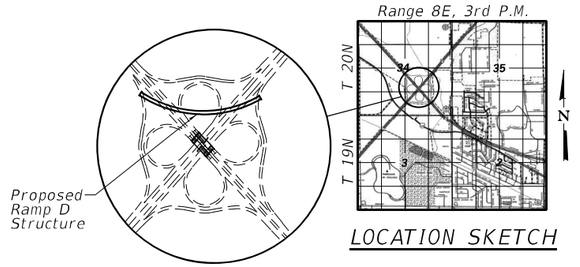
(RAMP D)
PI Sta. = 421+90.36
Δ = 109° 32' 31" (Lt.)
D = 4° 14' 39"
R = 1,350.00'
T = 1,911.69'
L = 2,581.02'
E = 990.32'
e = 7.4%
T.R. = N/A
S.E. RUN = 250'
P.C. Sta. = 402+78.67
P.T. Sta. = 428+59.69

LICENSED STRUCTURAL ENGINEER
JOSEPH T. HEGER
081-008156
STATE OF ILLINOIS

4-30-2021
Exp. Date 11/30/2022
Applies to Sheets 1 thru 52 and Sheets 63 thru 94

STATE OF ILLINOIS
JIA WANG
081-006586
LICENSED STRUCTURAL ENGINEER
CHICAGO

04/30/2021
JIA WANG
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS LIC. No. 081-006586
EXPIRES: 11-30-20
Applies to Sheets 53 thru 62



LOCATION SKETCH

GENERAL PLAN & ELEVATION
RAMP D OVER
FAI RTE. 74 AND FAI RTE. 57
SECTION (10-34-1) HBK
CHAMPAIGN COUNTY
STATION 414+78.50
STRUCTURE NO. 010-1004

USER NAME = Denise Herrera	DESIGNED - DH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	CHECKED - JTH	REVISED -	GENERAL PLAN AND ELEVATION STRUCTURE NO. 010-1004
PLOT SCALE = N/A	DRAWN - DH	REVISED -	SHEET NO. 1 OF 94 SHEETS
PLOT DATE = 4/29/2021 (3:56:16 PM)	CHECKED - JTH	REVISED -	

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	809
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

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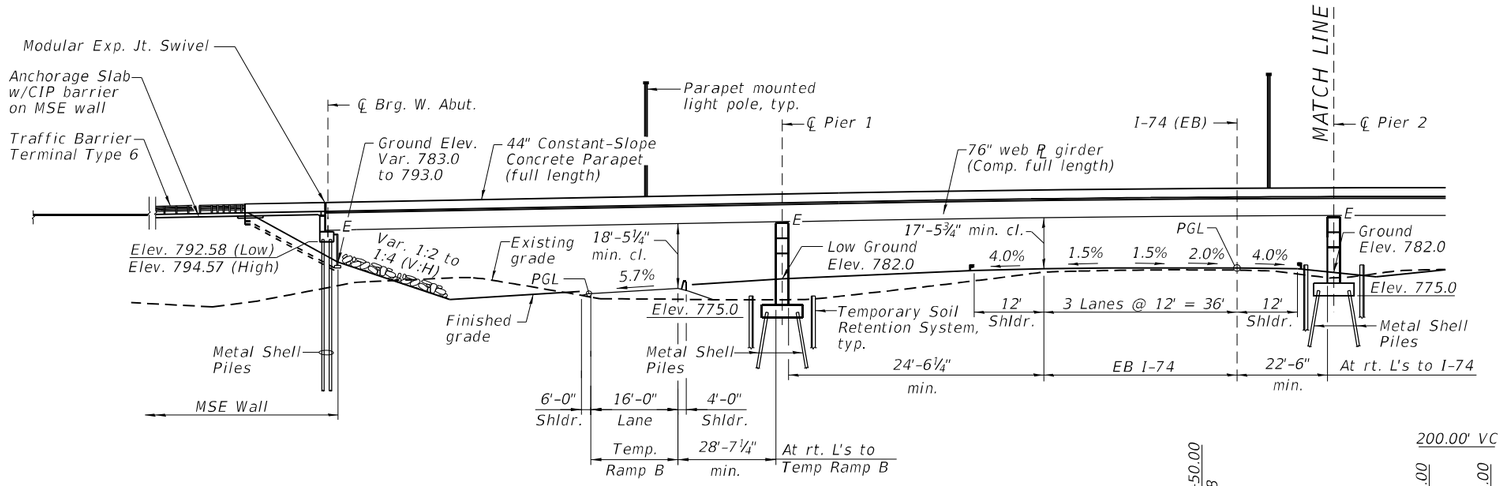
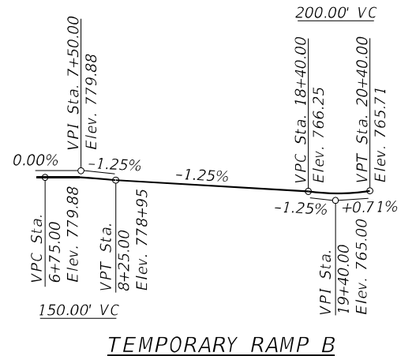
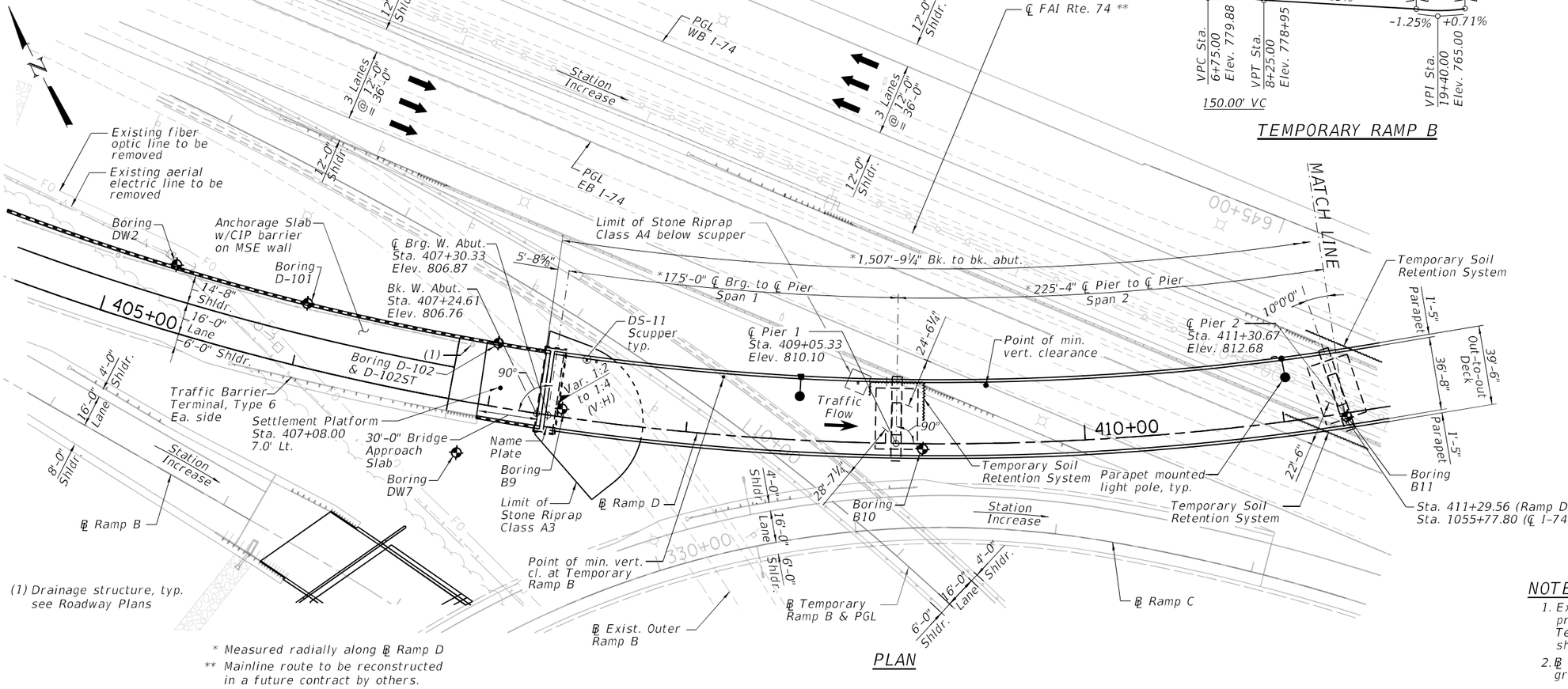


ELEVATION



TEMPORARY RAMP B



(1) Drainage structure, typ. see Roadway Plans

* Measured radially along ℄ Ramp D

** Mainline route to be reconstructed in a future contract by others.

PLAN

LIGHT POLE LOCATIONS

STATION	OFFSET
406+13.00	32.33' Lt.
408+56.07	32.33' Lt.
410+99.00	32.33' Lt.
413+48.41	32.33' Lt.
415+92.74	32.33' Lt.
418+38.60	32.33' Lt.
420+84.48	32.33' Lt.
423+22.00	32.33' Lt.

Note: Pole height is 50 ft. with an 8 ft. mast arm. Bolt circle diameter is 15 in.

SCUPPER LOCATIONS

STATION	OFFSET
407+46.00	30.67' Lt.
407+51.00	30.67' Lt.
408+85.33	30.67' Lt.
413+01.00	30.67' Lt.
414+91.00	30.67' Lt.
416+81.00	30.67' Lt.
420+92.00	30.67' Lt.
422+06.00	30.67' Lt.
422+11.00	30.67' Lt.

NOTES:

1. Existing Outer Ramp B will be out of service prior to construction of West Abutment. Temproary Ramp B will pass under Span 1 as shown.
2. ℄ Ramp D elevations shown are after grinding.

FILE NAME = pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\IDOT\15066-011\Draw\Structures\CADD_Sheets\RAMP_D\RAMPD-70B99-002-GP&E 1.dgn

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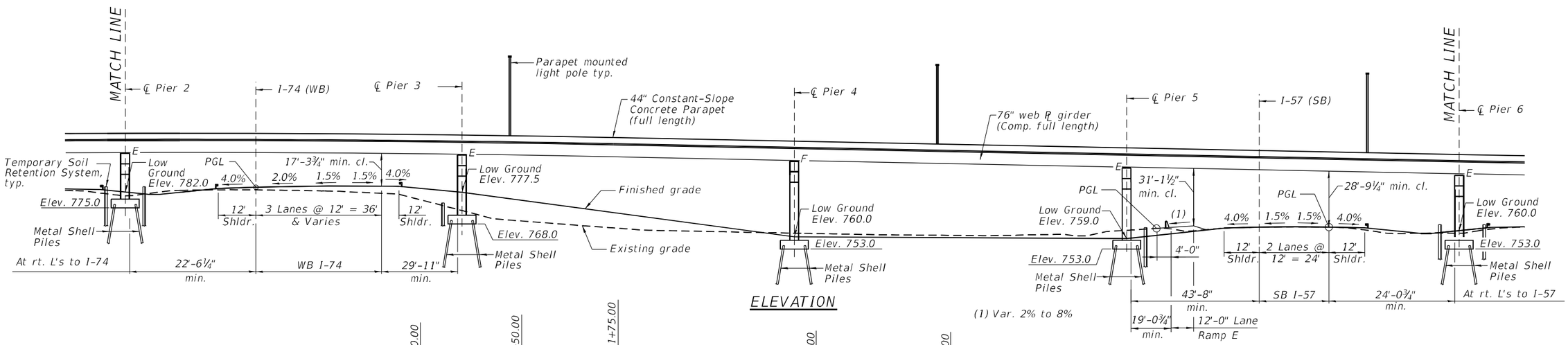
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

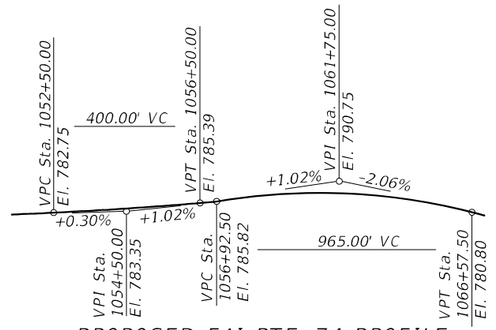
DETAILED PLAN AND ELEVATION – 1
STRUCTURE NO. 010-1004
SHEET NO. 2 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	810
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		



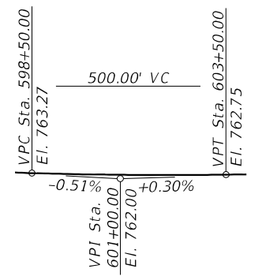
ELEVATION

(1) Var. 2% to 8%



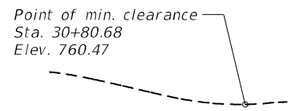
PROPOSED FAI RTE. 74 PROFILE

(Future work by others)

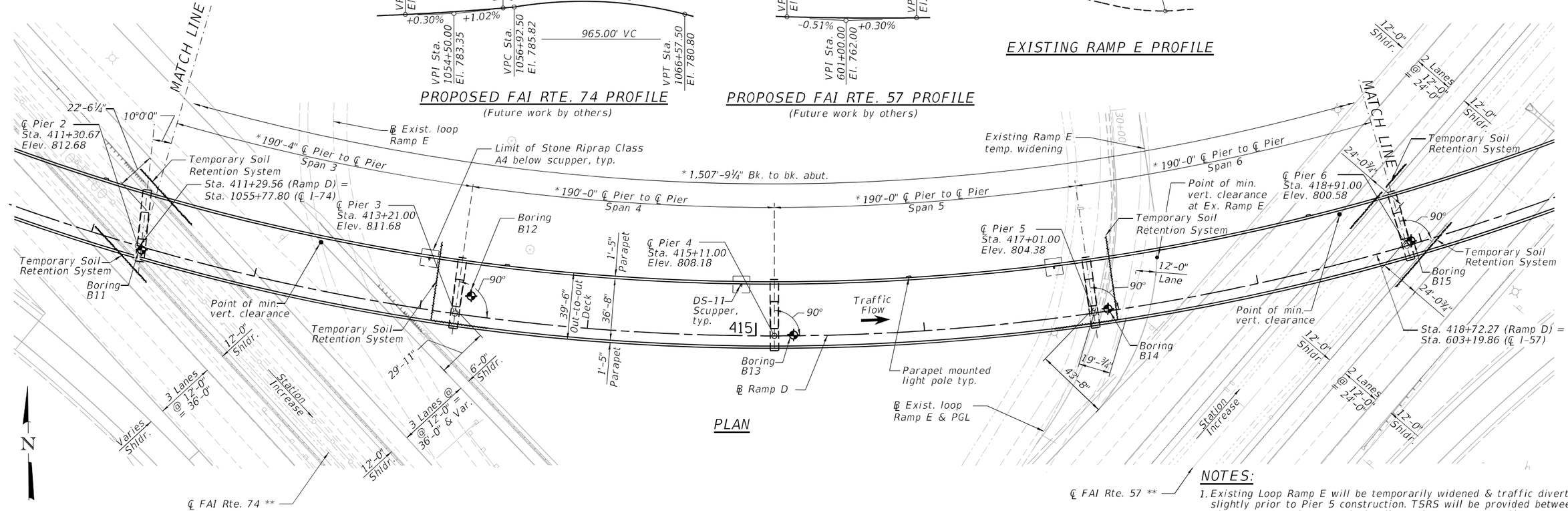


PROPOSED FAI RTE. 57 PROFILE

(Future work by others)



EXISTING RAMP E PROFILE



PLAN

* Measured radially along ℄ Ramp D

** Mainline route to be reconstructed in a future contract by others.

NOTES:

1. Existing Loop Ramp E will be temporarily widened & traffic diverted slightly prior to Pier 5 construction. TSRS will be provided between Pier 5 construction area & the diverted Loop Ramp E. Short term closures of Loop Ramp E may be allowed. See Special Provisions.
2. For light pole locations, see sheet 2 of 94.
3. For scupper locations, see sheet 2 of 94.
4. ℄ Ramp D elevations shown are after grinding.

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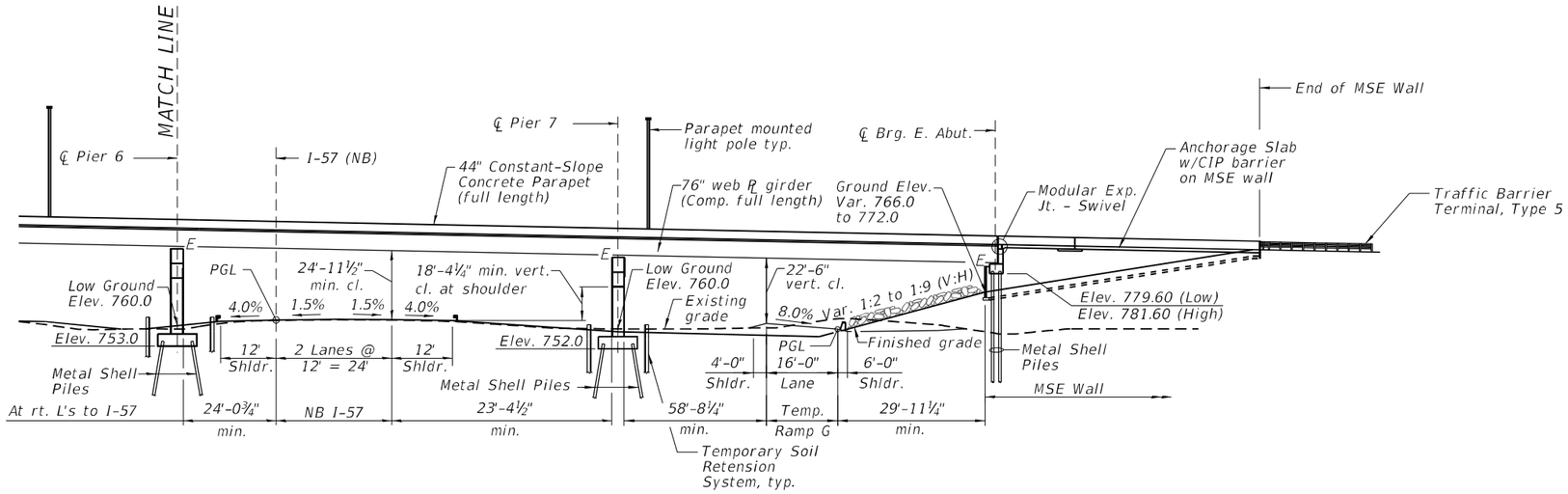
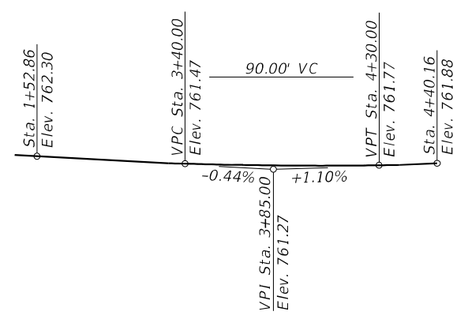
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILED PLAN AND ELEVATION – 2
STRUCTURE NO. 010-1004
SHEET NO. 3 OF 94 SHEETS

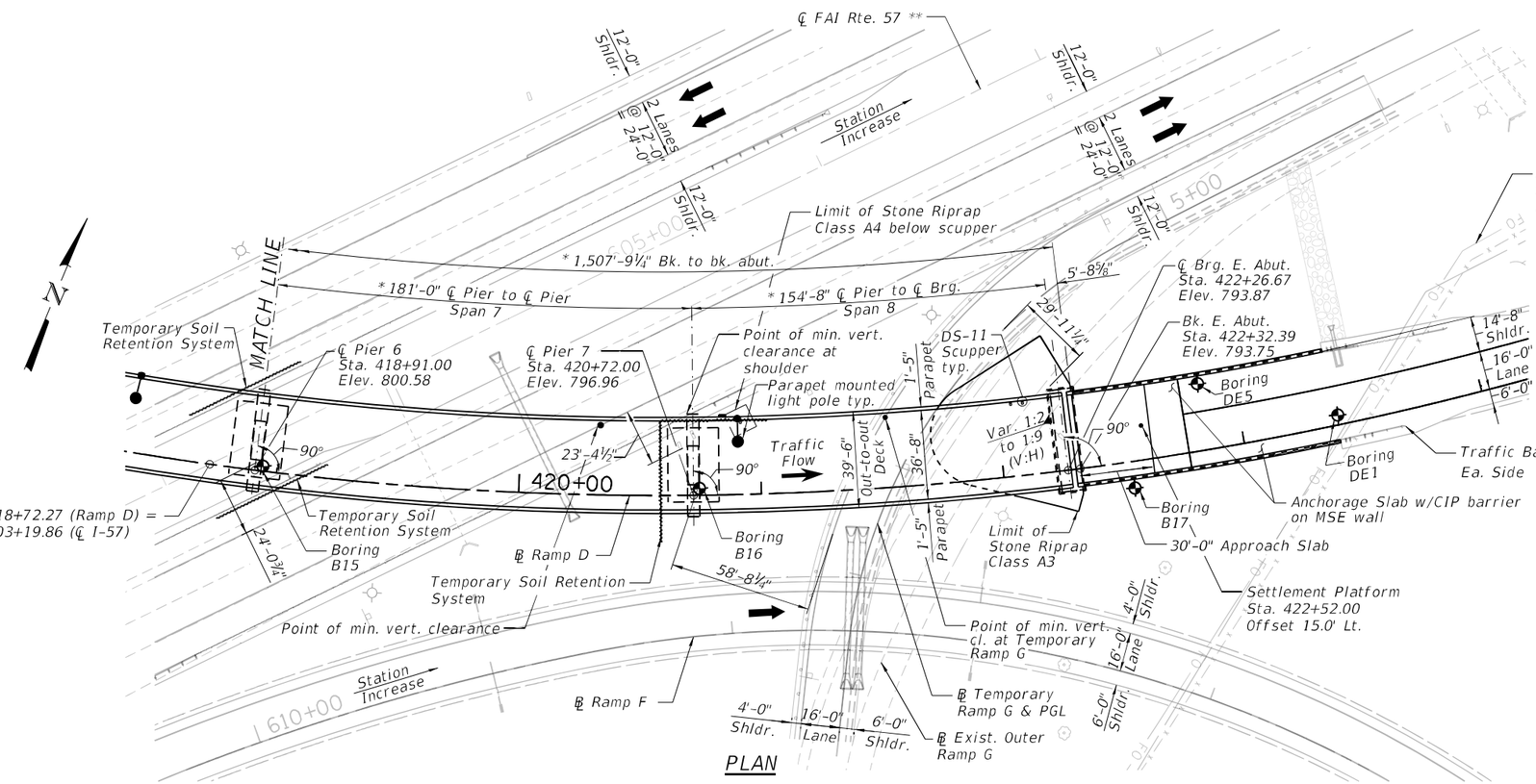
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	811
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



ELEVATION



TEMPORARY RAMP G



PLAN

* Measured radially along ℄ Ramp D

** Mainline route to be reconstructed in a future contract by others.

NOTES:

1. Existing Outer Ramp G will be out of service prior to construction of East Abutment. Temporary Ramp G will pass under Span 8 as shown.
2. For light pole locations, see sheet 2 of 94.
3. For scupper locations, see sheet 2 of 94.
4. ℄ Ramp D elevations shown are after grinding.

FILE NAME = pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\IDOT\15066-011\Draw\Structures\CADD_Sheets\RAMP_D\RAMPD-70B99-0004-GP&E 3.dgn

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILED PLAN AND ELEVATION – 3
STRUCTURE NO. 010-1004
SHEET NO. 4 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	812
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

INDEX OF SHEETS

GENERAL NOTES:

1. Fasteners shall be ASTM F3125, Grade A325 Type 1, hot dip galvanized bolts. Bolts $\frac{7}{8}$"Ø, holes $\frac{15}{16}$"Ø, unless otherwise noted.
2. Calculated weight of Structural Steel AASHTO M270 Gr. 50 = 3,858,360 lbs.
3. All structural steel shall be AASHTO M270 Grade 50.
4. All new structural steel shall be metallized according to the Special Provision for Metallizing of Structural Steel except for the End Cross Frames (Type 1) and the steel for fixed and expansion HLMR bearing assemblies which shall be hot dip galvanized according to the Special Provision for Hot Dip Galvanizing for Structural Steel. The metallizing and galvanizing shall meet a Class A AASHTO slip coefficient (0.30 or greater) for bolted connection faying surfaces. The metallized areas shall be painted with System 1. See Special Provisions for Metallizing of Structural Steel and for Hot Dip Galvanizing for Structural Steel.
5. Steel erection shall be accomplished by a steel erection contractor or sub-contractor certified as an Advanced Certified Steel Erector (ACSE) by the American Institute of Steel Construction (AISC). See Special Provision for "Erection of Curved Steel Structures".
6. No field welding is permitted except as specified in the contract documents.
7. Reinforcement bars designated (E) shall be epoxy coated, (S) shall be stainless steel.
8. All bearing anchor rods shall be set before permanently bolting diaphragms or cross frames over supports.
9. No construction joints except those shown on the plans will be allowed unless approved by the Engineer.
10. It shall be the Contractor's responsibility to verify the location of utilities prior to starting construction. Contact J.U.L.I.E., 800-892-0123.
11. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
12. Concrete Sealer shall be applied to all exposed surfaces of the abutments and piers 1, 2, 6 and 7.
13. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
14. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
15. Up to $\frac{1}{4}$" may be ground off the bridge deck and the bridge approach slabs.
16. The east and west abutment piles are located within the reinforced soil mass limits for SN 010-1004. Piles with pile sleeves shall be driven prior to the placement of the reinforced soil mass. See abutment and MSE wall sheets and Special Provisions.

STATION 414+78.50
BUILT BY
STATE OF ILLINOIS
RAMP D F.A.I. RTE. 74
SEC. (10-34-1) HBK
LOADING HL-93
STRUCTURE NO. 010-1004

NAME PLATE
See Std. 515001

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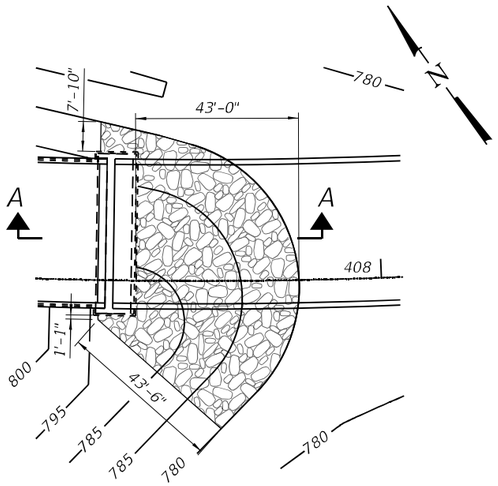
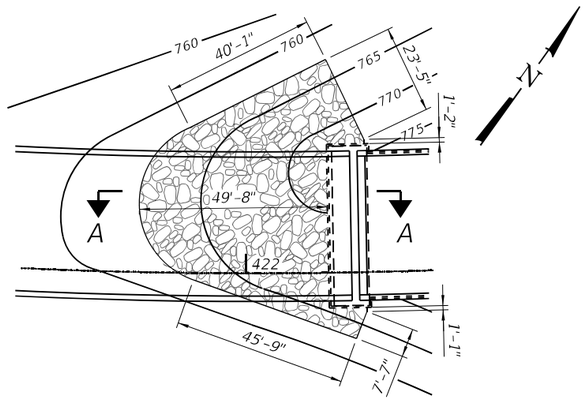
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 010-1004
SHEET NO. 5 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	813
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



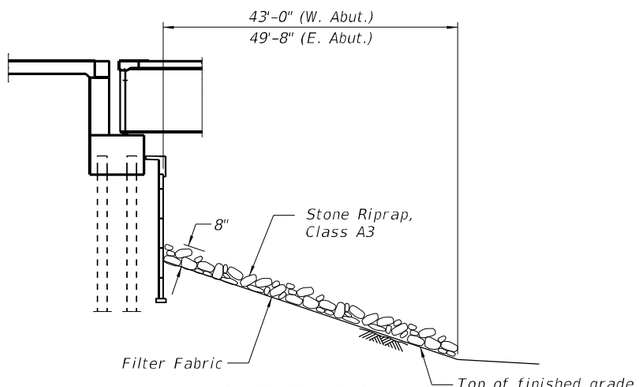
SLOPE PROTECTION AT WEST ABUTMENT



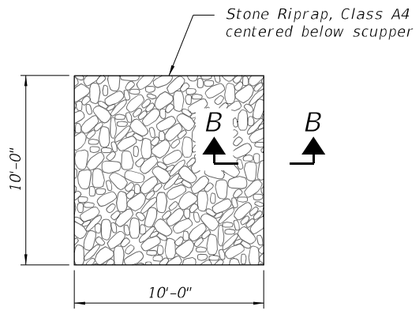
SLOPE PROTECTION AT EAST ABUTMENT

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	MSE WALLS	TOTAL
Stone Riprap, Class A3	Sq Yd		637		637
Stone Riprap, Class A4	Sq Yd		56		56
Filter Fabric	Sq Yd		693		693
Structure Excavation	Cu Yd		1,920	341	2,261
Removal and Disposal of Unsuitable Material for Structures	Cu Yd			495	495
Concrete Structures	Cu Yd		1,914.5		1,914.5
Concrete Superstructure	Cu Yd	2,094.2		205.8	2,300.0
Protective Coat	Sq Yd	7,841		475	8,316
Concrete Superstructure (Approach Slab)	Cu Yd	115.6			115.6
Furnishing and Erecting Structural Steel	L Sum	0.4			0.4
Stud Shear Connectors	Each	27,184			27,184
Reinforcement Bars, Epoxy Coated	Pound	48,230	373,400	32,210	453,840
Bar Splicers	Each		80		80
Furnishing Metal Shell Piles 12" X 0.250"	Foot		1,672		1,672
Driving Piles	Foot		12,888		12,888
Test Pile Metal Shells	Each		9		9
Pile Shoes	Each		240		240
Name Plates	Each	1			1
Anchor Bolts, 5/8"	Each		48		48
Anchor Bolts, 1"	Each		168		168
Temporary Soil Retention System	Sq Ft		2,502		2,502
Mechanically Stabilized Earth Retaining Wall	Sq Ft			7,386	7,386
Concrete Sealer	Sq Ft		7,930		7,930
Furnishing Metal Shell Piles 16" X 0.312"	Foot		11,216		11,216
Bridge Deck Grooving (Longitudinal)	Sq Yd	2,752			2,752
High Load Multi-Rotational Bearings, Guided Expansion, 250K	Each		12		12
High Load Multi-Rotational Bearings, Guided Expansion, 500K	Each		12		12
High Load Multi-Rotational Bearings, Guided Expansion, 550K	Each		18		18
High Load Multi-Rotational Bearings, Guided Expansion, 600K	Each		6		6
High Load Multi-Rotational Bearings, Fixed - 500K	Each		6		6
Drainage Scuppers, DS-11	Each	9			9
Diamond Grinding (Bridge Section)	Sq Yd	6,354			6,354
Modular Expansion Joint-Swivel 12"	Foot	73.5			73.5
Rock Fill	Cu Yd			2,045	2,045
Settlement Platforms	Each		2		2
Reinforcement Bars, Stainless Steel	Pound	544,600			544,600

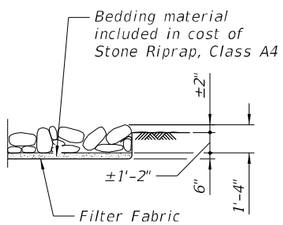


SECTION A-A



RIPRAP DETAIL BELOW SCUPPERS

(Not included below scupper pairs at abutments.)



SECTION B-B

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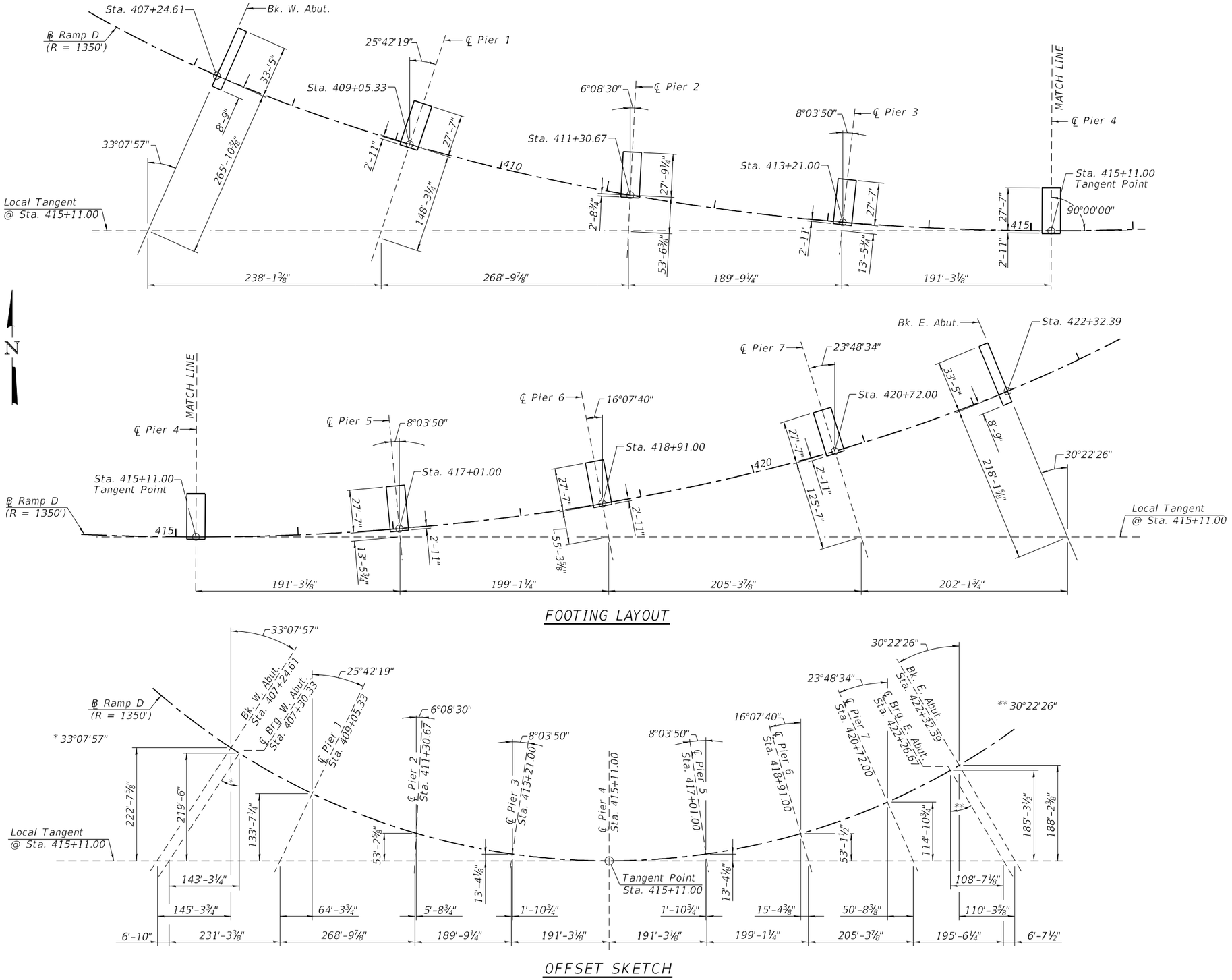
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIAL
STRUCTURE NO. 010-1004
SHEET NO. 6 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	814
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



FOOTING LAYOUT

OFFSET SKETCH

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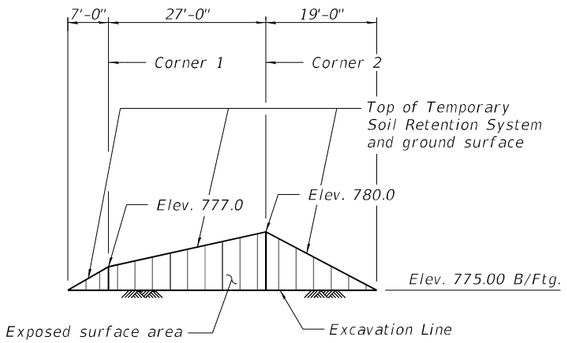
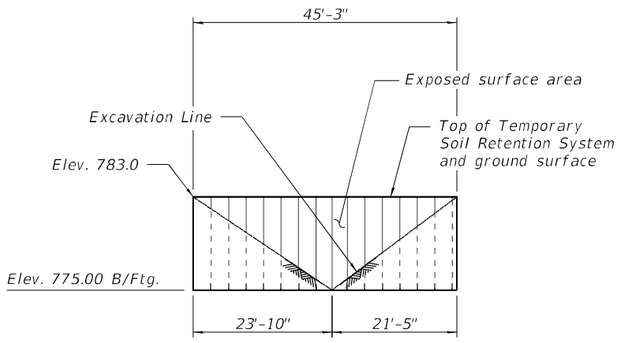
OFFSET SKETCH AND FOOTING LAYOUT
STRUCTURE NO. 010-1004
SHEET NO. 7 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	815
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		



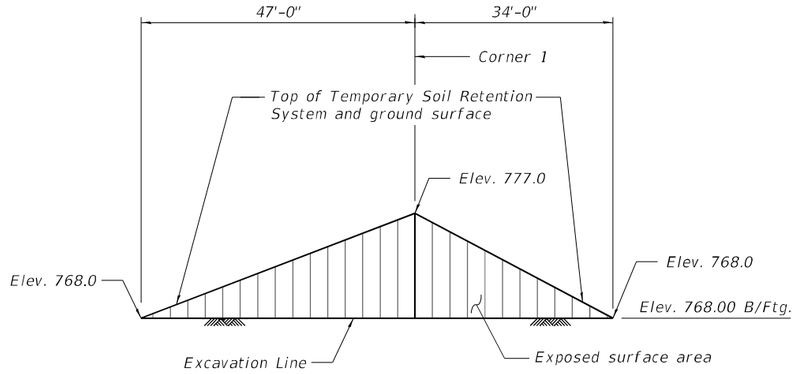
PIER 1 DEVELOPED ELEVATION

(Looking at front face of Temporary Soil Retention System)



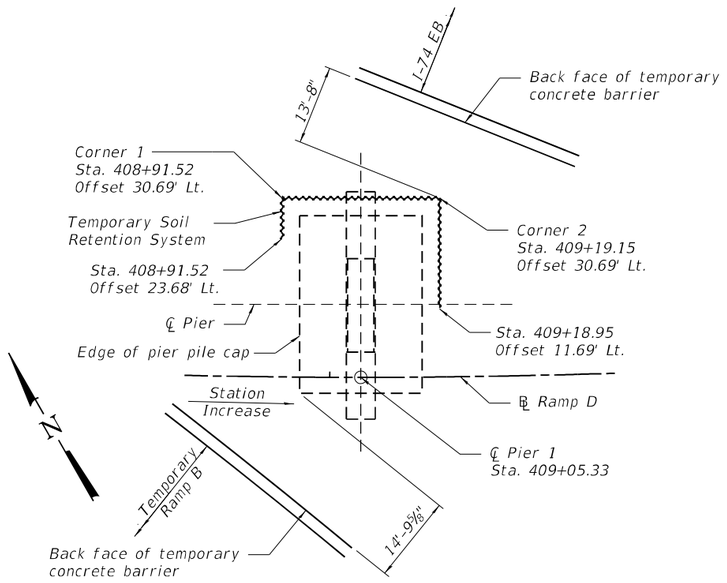
PIER 2 DEVELOPED ELEVATION

(Looking at front face of Temporary Soil Retention System. Two required, one for WB and one for EB I-74)

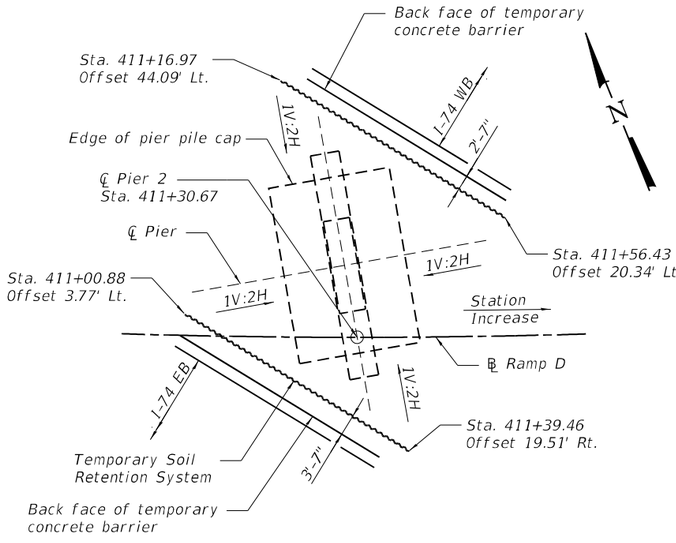


PIER 3 DEVELOPED ELEVATION

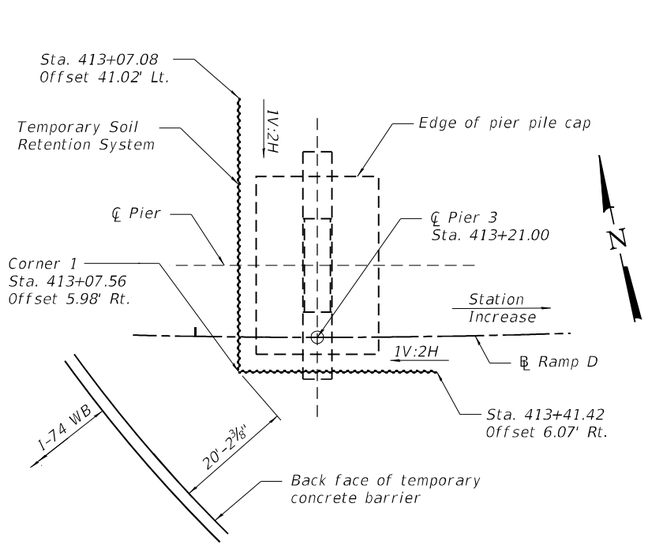
(Looking at front face of Temporary Soil Retention System)



PIER 1 PLAN



PIER 2 PLAN



PIER 3 PLAN

NOTES:

1. Stations and offsets shown on plan views are from ℄ Ramp D.
2. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

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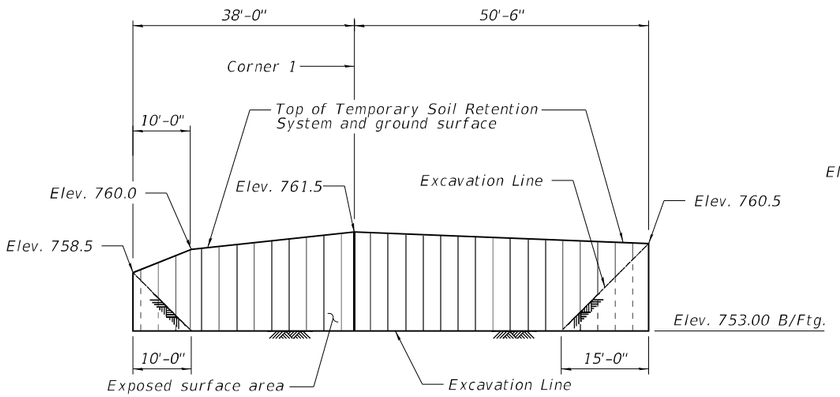
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

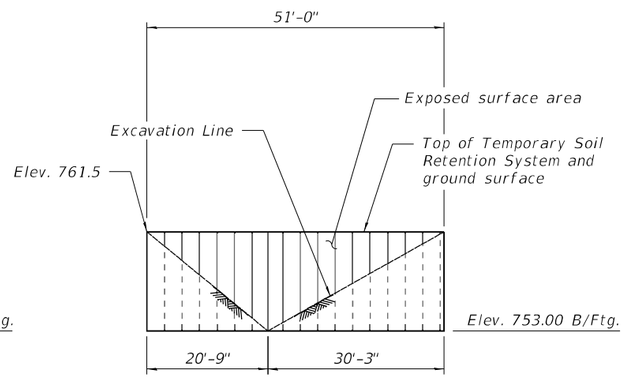
TEMPORARY SOIL RETENTION SYSTEM – 1
STRUCTURE NO. 010–1004
SHEET NO. 8 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	816
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



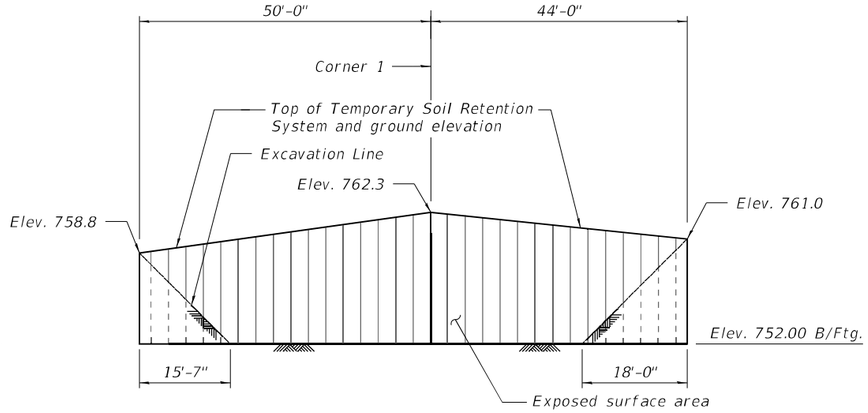
PIER 5 DEVELOPED ELEVATION

(Looking at front face of Temporary Soil Retention System)



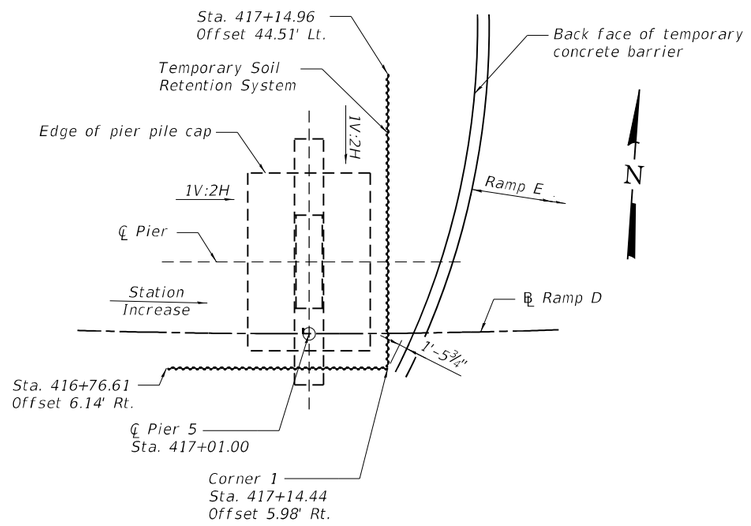
PIER 6 DEVELOPED ELEVATION

(Looking at front face of Temporary Soil Retention System. Two required, one for SB and one for NB I-57)

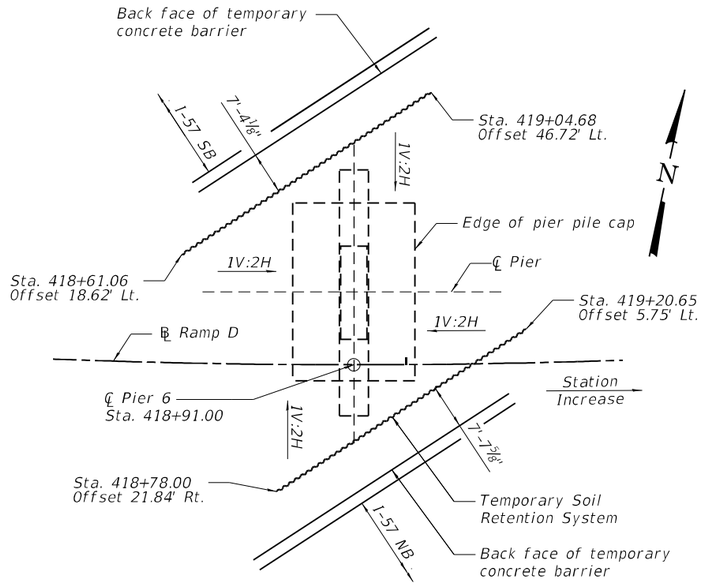


PIER 7 DEVELOPED ELEVATION

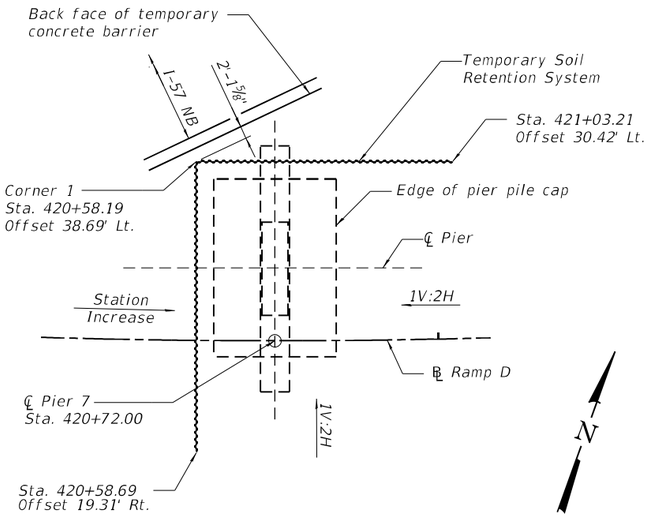
(Looking at front face of Temporary Soil Retention System)



PIER 5 PLAN



PIER 6 PLAN



PIER 7 PLAN

BILL OF MATERIAL

Item	Unit	Total
Temporary Soil Retention System	Sq. Ft.	2,502

NOTES:

1. Stations and offsets shown on plan views are from ℄ Ramp D.
2. A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

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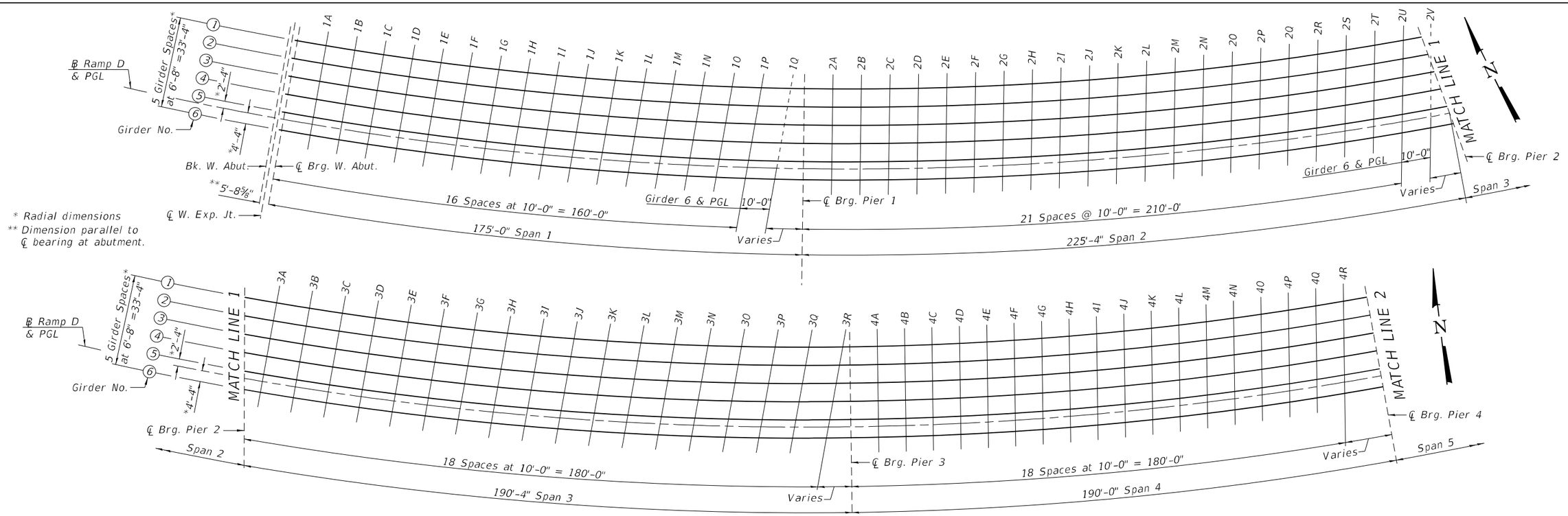
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY SOIL RETENTION SYSTEM – 2
STRUCTURE NO. 010-1004
SHEET NO. 9 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	817
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



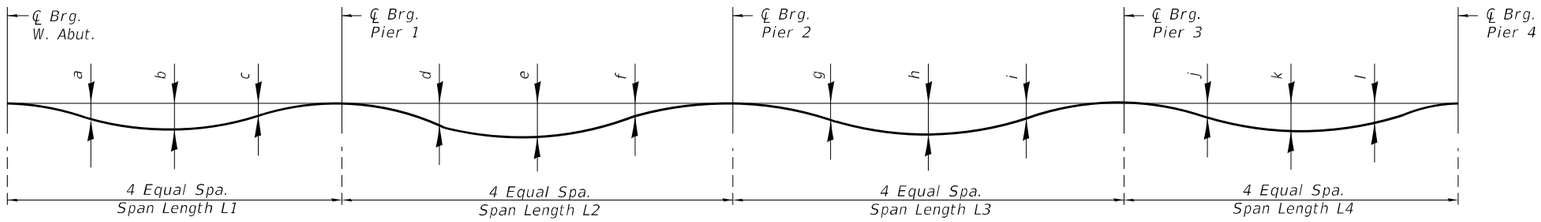
PLAN

(Elevation spaces are measured along each girder line. Span lengths are measured along the ℄)

Deflection / Girder No.	Span 1				Span 2				Span 3				Span 4			
	L1	a	b	c	L2	d	e	f	L3	g	h	i	L4	j	k	l
1	171'-2⅞"	1½"	1¾"	⅞"	215'-4½"	1"	2"	1⅜"	191'-4⅜"	½"	1½"	1¼"	185'-11"	½"	1⅜"	1¼"
2	172'-1¼"	1½"	1⅝"	⅞"	217'-8"	1¼"	2¼"	1½"	191'-1½"	½"	1½"	1"	186'-10¼"	⅝"	1½"	1¼"
3	172'-11⅝"	1⅝"	1¾"	⅞"	219'-11½"	1⅜"	2⅝"	1½"	190'-10⅝"	⅜"	1¼"	⅞"	187'-9½"	¾"	1⅝"	1⅛"
4	173'-10"	1⅝"	1⅞"	⅞"	222'-2⅞"	1½"	2¾"	1¾"	190'-7⅞"	⅜"	1¼"	⅞"	188'-8¾"	⅞"	1⅜"	1⅛"
5	174'-8⅜"	1¾"	2"	¾"	224'-6⅜"	1½"	3⅛"	1⅞"	190'-5"	⅜"	1⅛"	¾"	189'-8"	1"	1⅞"	1"
6	175'-6¾"	1⅞"	2⅛"	¾"	226'-9⅞"	1¾"	3⅜"	2"	190'-2⅛"	¼"	1⅛"	⅝"	190'-7⅜"	1¼"	2"	1⅛"

DEAD LOAD DEFLECTION TABLE

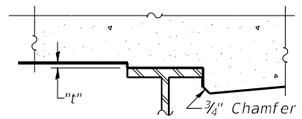
(Includes weight of concrete only)



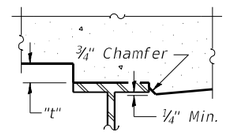
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown on Sheets 12 thru 18 of 94.



At Minimum Fillet



At Maximum Fillet

FILLET HEIGHTS

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown on Sheets 12 thru 18 of 94, minus 8¼" deck pour thickness, equals the fillet heights "t" above top flange of beams.

The slab is to be ground after curing to achieve smoothness but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on Sheets 12 thru 18 of 94. For grinding the deck, see Special Provisions.

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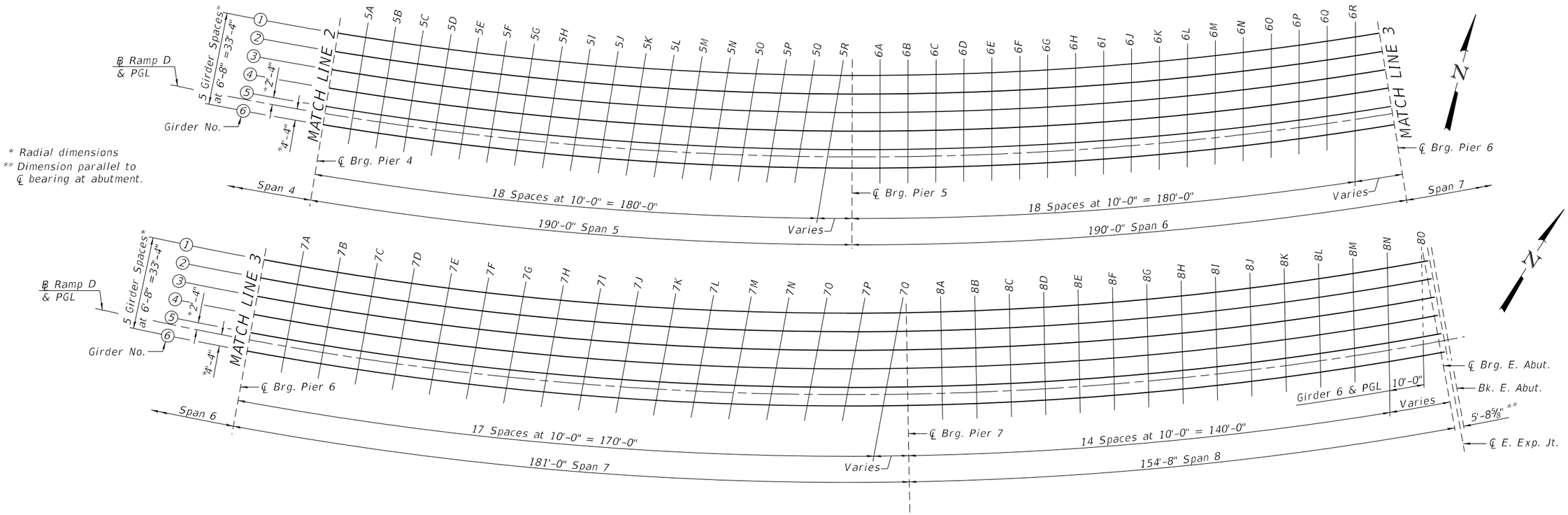
DEPARTMENT OF TRANSPORTATION

DECK ELEVATIONS – 1
STRUCTURE NO. 010–1004
SHEET NO. 10 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	818
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



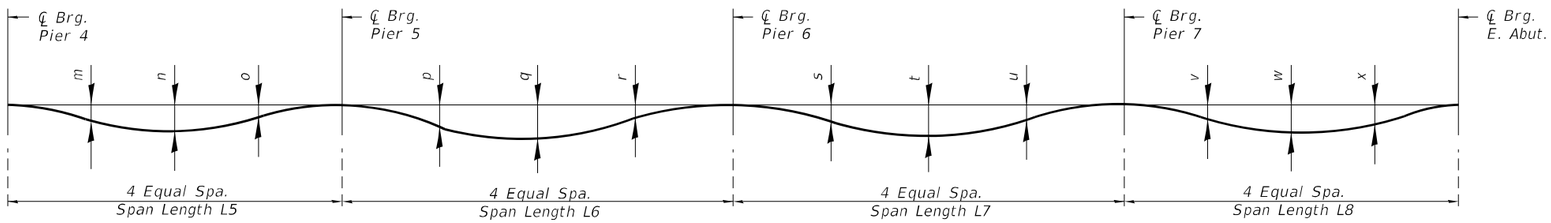
PLAN

(Elevation spaces are measured along each girder line. Span lengths are measured along the ℄)

Deflection / Girder No.	Span 5				Span 6				Span 7				Span 8			
	L5	m	n	o	L6	p	q	r	L7	s	t	u	L8	v	w	x
1	185'-11"	1/2"	1 3/8"	1 1/4"	185'-11"	3/8"	1 1/2"	1 1/2"	177'-1 3/8"	0"	3/4"	7/8"	151'-4 1/8"	1/8"	7/8"	1 1/2"
2	186'-10 1/4"	1/2"	1 3/8"	1 1/8"	186'-10 1/4"	1/2"	1 1/2"	1 1/2"	178'-0 1/8"	1/8"	3/4"	3/4"	152'-1 1/4"	1/4"	1 1/8"	1 1/2"
3	187'-9 1/2"	5/8"	1 1/2"	1"	187'-9 1/2"	3/4"	1 3/4"	1 1/2"	178'-10 3/4"	1/8"	7/8"	5/8"	152'-10 1/2"	3/8"	1 1/2"	1 5/8"
4	188'-8 3/4"	5/8"	1 1/2"	1/8"	188'-8 3/4"	7/8"	1 7/8"	1 1/2"	179'-9 1/2"	1/4"	7/8"	1/2"	153'-7 5/8"	5/8"	1 5/8"	1 5/8"
5	189'-8"	3/4"	1 1/2"	3/4"	189'-8"	1"	2"	1 1/4"	180'-8 1/4"	3/8"	7/8"	3/8"	154'-4 3/4"	7/8"	1 3/4"	1 5/8"
6	190'-7 3/8"	3/4"	1 1/2"	3/4"	190'-7 3/8"	1 1/4"	2 1/4"	1 3/8"	181'-7"	3/8"	7/8"	3/8"	155'-2"	1"	2 1/8"	1 5/8"

DEAD LOAD DEFLECTION TABLE

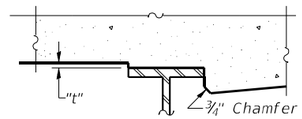
(Includes weight of concrete only)



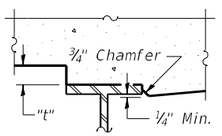
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown on Sheets 12 thru 18 of 94.



At Minimum Fillet



At Maximum Fillet

FILLET HEIGHTS

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown on Sheets 12 thru 18 of 94, minus 8 1/4" deck pour thickness, equals the fillet heights "t" above top flange of beams.

The slab is to be ground after curing to achieve smoothness but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on Sheets 12 thru 18 of 94. For grinding the deck, see Special Provisions.

FILE NAME = pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\IDOT\115096-01\Drawn\Structures\CADD_Sheets\RAMP_D\RAMP03-70B99-011-Deck Elev - 2.dgn

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PLOT SCALE = N/A	DRAWN - DH	REVISED -
PLOT DATE = 4/29/2021 (3:57:03 PM)	CHECKED - JTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK ELEVATIONS – 2
STRUCTURE NO. 010–1004
SHEET NO. 11 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	819
		CONTRACT NO. 70B99		
		ILLINOIS	FED. AID PROJECT	

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	407+24.49	-29.00	804.61	804.63
℄ Exp. Jt. W. Abut.	407+28.09	-29.00	804.68	804.70
℄ Brg. W. Abut.	407+30.33	-29.00	804.72	804.74
1A	407+40.55	-29.00	804.91	804.97
1B	407+50.77	-29.00	805.10	805.19
1C	407+60.99	-29.00	805.29	805.41
1D	407+71.21	-29.00	805.48	805.62
1E	407+81.43	-29.00	805.67	805.83
1F	407+91.65	-29.00	805.85	806.02
1G	408+01.87	-29.00	806.04	806.21
1H	408+12.09	-29.00	806.23	806.40
1I	408+22.31	-29.00	806.42	806.58
1J	408+32.53	-29.00	806.61	806.75
1K	408+42.75	-29.00	806.80	806.92
1L	408+52.97	-29.00	806.99	807.10
1M	408+63.19	-29.00	807.18	807.26
1N	408+73.41	-29.00	807.37	807.43
1O	408+83.63	-29.00	807.56	807.60
1P	408+93.85	-29.00	807.75	807.78
℄ Brg. Pier 1	409+05.33	-29.00	807.96	807.98
2A	409+15.55	-29.00	808.15	808.18
2B	409+25.77	-29.00	808.34	808.38
2C	409+35.99	-29.00	808.52	808.58
2D	409+46.21	-29.00	808.71	808.79
2E	409+56.43	-29.00	808.88	808.99
2F	409+66.65	-29.00	809.04	809.17
2G	409+76.87	-29.00	809.20	809.34
2H	409+87.09	-29.00	809.35	809.52
2I	409+97.31	-29.00	809.49	809.67
2J	410+07.53	-29.00	809.62	809.80
2K	410+17.75	-29.00	809.74	809.93
2L	410+27.97	-29.00	809.86	810.04
2M	410+38.19	-29.00	809.96	810.14
2N	410+48.41	-29.00	810.06	810.23
2O	410+58.63	-29.00	810.15	810.29
2P	410+68.85	-29.00	810.23	810.35
2Q	410+79.07	-29.00	810.30	810.40
2R	410+89.28	-29.00	810.36	810.44
2S	410+99.50	-29.00	810.42	810.48
2T	411+09.72	-29.00	810.47	810.50
2U	411+19.94	-29.00	810.50	810.52
℄ Brg. Pier 2	411+25.44	-29.00	810.52	810.54
3A	411+35.66	-29.00	810.55	810.57
3B	411+45.88	-29.00	810.56	810.59
3C	411+56.10	-29.00	810.57	810.62
3D	411+66.32	-29.00	810.57	810.64
3E	411+76.54	-29.00	810.56	810.64
3F	411+86.76	-29.00	810.54	810.65
3G	411+96.98	-29.00	810.52	810.64
3H	412+07.20	-29.00	810.48	810.62
3I	412+17.41	-29.00	810.44	810.58
3J	412+27.63	-29.00	810.39	810.54
3K	412+37.85	-29.00	810.33	810.47
3L	412+48.07	-29.00	810.26	810.39
3M	412+58.29	-29.00	810.19	810.31
3N	412+68.51	-29.00	810.10	810.20
3O	412+78.73	-29.00	810.01	810.09
3P	412+88.95	-29.00	809.91	809.97
3Q	412+99.17	-29.00	809.79	809.83
3R	413+09.39	-29.00	809.68	809.71

GIRDER 1 (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 3	413+21.00	-29.00	809.53	809.55
4A	413+31.22	-29.00	809.39	809.41
4B	413+41.44	-29.00	809.25	809.28
4C	413+51.66	-29.00	809.09	809.15
4D	413+61.88	-29.00	808.93	809.00
4E	413+72.10	-29.00	808.76	808.85
4F	413+82.32	-29.00	808.58	808.69
4G	413+92.54	-29.00	808.39	808.52
4H	414+02.76	-29.00	808.20	808.33
4I	414+12.98	-29.00	807.99	808.13
4J	414+23.20	-29.00	807.79	807.93
4K	414+33.41	-29.00	807.59	807.72
4L	414+43.63	-29.00	807.38	807.50
4M	414+53.85	-29.00	807.18	807.29
4N	414+64.07	-29.00	806.97	807.05
4O	414+74.29	-29.00	806.77	806.84
4P	414+84.51	-29.00	806.56	806.61
4Q	414+94.73	-29.00	806.36	806.39
4R	415+04.95	-29.00	806.15	806.17
℄ Brg. Pier 4	415+11.00	-29.00	806.03	806.05
5A	415+21.22	-29.00	805.83	805.85
5B	415+31.44	-29.00	805.63	805.66
5C	415+41.66	-29.00	805.42	805.48
5D	415+51.88	-29.00	805.22	805.29
5E	415+62.10	-29.00	805.01	805.10
5F	415+72.32	-29.00	804.81	804.92
5G	415+82.54	-29.00	804.60	804.72
5H	415+92.76	-29.00	804.40	804.53
5I	416+02.98	-29.00	804.19	804.33
5J	416+13.20	-29.00	803.99	804.12
5K	416+23.41	-29.00	803.79	803.92
5L	416+33.63	-29.00	803.58	803.70
5M	416+43.85	-29.00	803.38	803.48
5N	416+54.07	-29.00	803.17	803.25
5O	416+64.29	-29.00	802.97	803.03
5P	416+74.51	-29.00	802.76	802.81
5Q	416+84.73	-29.00	802.56	802.59
5R	416+94.95	-29.00	802.35	802.37
℄ Brg. Pier 5	417+01.00	-29.00	802.23	802.25
6A	417+11.22	-29.00	802.03	802.06
6B	417+21.44	-29.00	801.83	801.87
6C	417+31.66	-29.00	801.62	801.68
6D	417+41.88	-29.00	801.42	801.50
6E	417+52.10	-29.00	801.21	801.31
6F	417+62.32	-29.00	801.01	801.13
6G	417+72.54	-29.00	800.80	800.94
6H	417+82.76	-29.00	800.60	800.75
6I	417+92.98	-29.00	800.39	800.54
6J	418+03.20	-29.00	800.19	800.34
6K	418+13.41	-29.00	799.99	800.14
6L	418+23.63	-29.00	799.78	799.92
6M	418+33.85	-29.00	799.58	799.70
6N	418+44.07	-29.00	799.37	799.47
6O	418+54.29	-29.00	799.17	799.25
6P	418+64.51	-29.00	798.96	799.02
6Q	418+74.73	-29.00	798.76	798.80
6R	418+84.95	-29.00	798.55	798.57

GIRDER 1 (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 6	418+91.00	-29.00	798.43	798.45
7A	419+01.22	-29.00	798.23	798.25
7B	419+11.44	-29.00	798.03	798.05
7C	419+21.66	-29.00	797.82	797.85
7D	419+31.88	-29.00	797.62	797.67
7E	419+42.10	-29.00	797.41	797.47
7F	419+52.32	-29.00	797.21	797.29
7G	419+62.54	-29.00	797.00	797.08
7H	419+72.76	-29.00	796.80	796.89
7I	419+82.98	-29.00	796.59	796.68
7J	419+93.20	-29.00	796.39	796.48
7K	420+03.41	-29.00	796.19	796.27
7L	420+13.63	-29.00	795.98	796.05
7M	420+23.85	-29.00	795.78	795.84
7N	420+34.07	-29.00	795.57	795.62
7O	420+44.29	-29.00	795.37	795.40
7P	420+54.51	-29.00	795.16	795.18
7Q	420+64.73	-29.00	794.96	794.98
℄ Brg. Pier 7	420+72.00	-29.00	794.81	794.83
8A	420+82.22	-29.00	794.61	794.64
8B	420+92.44	-29.00	794.41	794.45
8C	421+02.66	-29.00	794.20	794.27
8D	421+12.88	-29.00	794.00	794.08
8E	421+23.10	-29.00	793.79	793.90
8F	421+33.32	-29.00	793.59	793.71
8G	421+43.54	-29.00	793.38	793.52
8H	421+53.76	-29.00	793.18	793.32
8I	421+63.98	-29.00	792.97	793.11
8J	421+74.20	-29.00	792.77	792.91
8K	421+84.41	-29.00	792.57	792.70
8L	421+94.63	-29.00	792.36	792.47
8M	422+04.85	-29.00	792.16	792.24
8N	422+15.07	-29.00	791.95	792.01
℄ Brg. E. Abut.	422+26.67	-29.00	791.72	791.74
℄ Exp. Jt. E. Abut.	422+28.91	-29.00	791.68	791.70
Bk. E. Abut.	422+32.51	-29.00	791.60	791.62

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PLOT SCALE = N/A	DRAWN - DH	REVISED -
PLOT DATE = 4/29/2021 (3:57:07 PM)	CHECKED - JTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK ELEVATIONS – 3
STRUCTURE NO. 010–1004
SHEET NO. 12 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	820
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	407+24.52	-22.33	805.11	805.13
℄ Exp. Jt. W. Abut.	407+28.10	-22.33	805.17	805.19
℄ Brg. W. Abut.	407+30.33	-22.33	805.21	805.23
1A	407+40.50	-22.33	805.40	805.46
1B	407+50.67	-22.33	805.59	805.68
1C	407+60.84	-22.33	805.78	805.91
1D	407+71.01	-22.33	805.97	806.12
1E	407+81.17	-22.33	806.15	806.31
1F	407+91.34	-22.33	806.34	806.52
1G	408+01.51	-22.33	806.53	806.71
1H	408+11.68	-22.33	806.72	806.90
1I	408+21.85	-22.33	806.91	807.07
1J	408+32.02	-22.33	807.09	807.24
1K	408+42.18	-22.33	807.28	807.41
1L	408+52.35	-22.33	807.47	807.57
1M	408+62.52	-22.33	807.66	807.74
1N	408+72.69	-22.33	807.85	807.91
1O	408+82.86	-22.33	808.04	808.08
1P	408+93.02	-22.33	808.22	808.25
℄ Brg. Pier 1	409+05.33	-22.33	808.45	808.47
2A	409+15.50	-22.33	808.64	808.67
2B	409+25.67	-22.33	808.83	808.87
2C	409+35.84	-22.33	809.01	809.07
2D	409+46.01	-22.33	809.20	809.28
2E	409+56.17	-22.33	809.37	809.48
2F	409+66.34	-22.33	809.53	809.67
2G	409+76.51	-22.33	809.69	809.85
2H	409+86.68	-22.33	809.84	810.02
2I	409+96.85	-22.33	809.98	810.18
2J	410+07.02	-22.33	810.11	810.31
2K	410+17.18	-22.33	810.23	810.44
2L	410+27.35	-22.33	810.34	810.55
2M	410+37.52	-22.33	810.45	810.65
2N	410+47.69	-22.33	810.55	810.74
2O	410+57.86	-22.33	810.64	810.80
2P	410+68.02	-22.33	810.72	810.86
2Q	410+78.19	-22.33	810.79	810.91
2R	410+88.36	-22.33	810.85	810.94
2S	410+98.53	-22.33	810.91	810.98
2T	411+08.70	-22.33	810.96	811.00
2U	411+18.87	-22.33	810.99	811.02
℄ Brg. Pier 2	411+26.66	-22.33	811.02	811.04
3A	411+36.83	-22.33	811.04	811.06
3B	411+47.00	-22.33	811.06	811.09
3C	411+57.17	-22.33	811.06	811.10
3D	411+67.33	-22.33	811.06	811.12
3E	411+77.50	-22.33	811.05	811.13
3F	411+87.67	-22.33	811.04	811.13
3G	411+97.84	-22.33	811.01	811.12
3H	412+08.01	-22.33	810.97	811.10
3I	412+18.18	-22.33	810.93	811.07
3J	412+28.34	-22.33	810.88	811.02
3K	412+38.51	-22.33	810.82	810.96
3L	412+48.68	-22.33	810.75	810.88
3M	412+58.85	-22.33	810.67	810.78
3N	412+69.02	-22.33	810.59	810.68
3O	412+79.18	-22.33	810.50	810.58
3P	412+89.35	-22.33	810.39	810.44
3Q	412+99.52	-22.33	810.28	810.31
3R	413+09.69	-22.33	810.17	810.20

GIRDER 2 (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 3	413+21.00	-22.33	810.02	810.04
4A	413+31.17	-22.33	809.89	809.91
4B	413+41.34	-22.33	809.74	809.77
4C	413+51.50	-22.33	809.59	809.65
4D	413+61.67	-22.33	809.43	809.50
4E	413+71.84	-22.33	809.26	809.35
4F	413+82.01	-22.33	809.08	809.20
4G	413+92.18	-22.33	808.89	809.02
4H	414+02.35	-22.33	808.70	808.84
4I	414+12.51	-22.33	808.50	808.65
4J	414+22.68	-22.33	808.29	808.44
4K	414+32.85	-22.33	808.09	808.23
4L	414+43.02	-22.33	807.89	808.02
4M	414+53.19	-22.33	807.68	807.79
4N	414+63.36	-22.33	807.48	807.57
4O	414+73.52	-22.33	807.28	807.35
4P	414+83.69	-22.33	807.07	807.12
4Q	414+93.86	-22.33	806.87	806.90
4R	415+04.03	-22.33	806.67	806.69
℄ Brg. Pier 4	415+11.00	-22.33	806.53	806.55
5A	415+21.17	-22.33	806.32	806.34
5B	415+31.34	-22.33	806.12	806.15
5C	415+41.50	-22.33	805.92	805.98
5D	415+51.67	-22.33	805.71	805.78
5E	415+61.84	-22.33	805.51	805.60
5F	415+72.01	-22.33	805.31	805.42
5G	415+82.18	-22.33	805.10	805.23
5H	415+92.35	-22.33	804.90	805.03
5I	416+02.51	-22.33	804.70	804.84
5J	416+12.68	-22.33	804.49	804.63
5K	416+22.85	-22.33	804.29	804.42
5L	416+33.02	-22.33	804.09	804.21
5M	416+43.19	-22.33	803.88	803.98
5N	416+53.36	-22.33	803.68	803.76
5O	416+63.52	-22.33	803.48	803.54
5P	416+73.69	-22.33	803.27	803.31
5Q	416+83.86	-22.33	803.07	803.10
5R	416+94.03	-22.33	802.87	802.89
℄ Brg. Pier 5	417+01.00	-22.33	802.73	802.75
6A	417+11.17	-22.33	802.52	802.55
6B	417+21.34	-22.33	802.32	802.36
6C	417+31.50	-22.33	802.12	802.18
6D	417+41.67	-22.33	801.91	801.99
6E	417+51.84	-22.33	801.71	801.81
6F	417+62.01	-22.33	801.51	801.64
6G	417+72.18	-22.33	801.30	801.45
6H	417+82.35	-22.33	801.10	801.26
6I	417+92.51	-22.33	800.90	801.06
6J	418+02.68	-22.33	800.69	800.85
6K	418+12.85	-22.33	800.49	800.65
6L	418+23.02	-22.33	800.29	800.44
6M	418+33.19	-22.33	800.08	800.21
6N	418+43.36	-22.33	799.88	799.98
6O	418+53.52	-22.33	799.68	799.76
6P	418+63.69	-22.33	799.47	799.53
6Q	418+73.86	-22.33	799.27	799.31
6R	418+84.03	-22.33	799.07	799.10

GIRDER 2 (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 6	418+91.00	-22.33	798.93	798.95
7A	419+01.17	-22.33	798.72	798.74
7B	419+11.34	-22.33	798.52	798.54
7C	419+21.50	-22.33	798.32	798.35
7D	419+31.67	-22.33	798.11	798.15
7E	419+41.84	-22.33	797.91	797.97
7F	419+52.01	-22.33	797.71	797.78
7G	419+62.18	-22.33	797.50	797.58
7H	419+72.35	-22.33	797.30	797.39
7I	419+82.51	-22.33	797.10	797.19
7J	419+92.68	-22.33	796.89	796.98
7K	420+02.85	-22.33	796.69	796.77
7L	420+13.02	-22.33	796.49	796.56
7M	420+23.19	-22.33	796.28	796.34
7N	420+33.36	-22.33	796.08	796.12
7O	420+43.52	-22.33	795.88	795.91
7P	420+53.69	-22.33	795.67	795.69
7Q	420+63.86	-22.33	795.47	795.49
℄ Brg. Pier 7	420+72.00	-22.33	795.31	795.33
8A	420+82.17	-22.33	795.10	795.13
8B	420+92.34	-22.33	794.90	794.94
8C	421+02.50	-22.33	794.70	794.77
8D	421+12.67	-22.33	794.49	794.58
8E	421+22.84	-22.33	794.29	794.40
8F	421+33.01	-22.33	794.09	794.22
8G	421+43.18	-22.33	793.88	794.02
8H	421+53.35	-22.33	793.68	793.83
8I	421+63.51	-22.33	793.48	793.63
8J	421+73.68	-22.33	793.27	793.42
8K	421+83.85	-22.33	793.07	793.21
8L	421+94.02	-22.33	792.87	792.98
8M	422+04.19	-22.33	792.66	792.75
8N	422+14.36	-22.33	792.46	792.52
℄ Brg. E. Abut.	422+26.67	-22.33	792.21	792.23
℄ Exp. Jt. E. Abut.	422+28.90	-22.33	792.17	792.19
Bk. E. Abut.	422+32.48	-22.33	792.10	792.12

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	CHECKED - DH	REVISED -
PLOT SCALE = N/A	DRAWN - DH	REVISED -
PLOT DATE = 4/29/2021 (3:57:10 PM)	CHECKED - JTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK ELEVATIONS – 4
STRUCTURE NO. 010–1004
SHEET NO. 13 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	821
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	407+24.55	-15.67	805.60	805.62
℄ Exp. Jt. W. Abut.	407+28.11	-15.67	805.67	805.69
℄ Brg. W. Abut.	407+30.33	-15.67	805.71	805.73
1A	407+40.45	-15.67	805.89	805.95
1B	407+50.57	-15.67	806.08	806.17
1C	407+60.69	-15.67	806.27	806.40
1D	407+70.80	-15.67	806.46	806.61
1E	407+80.92	-15.67	806.64	806.81
1F	407+91.04	-15.67	806.83	807.01
1G	408+01.16	-15.67	807.02	807.21
1H	408+11.27	-15.67	807.20	807.38
1I	408+21.39	-15.67	807.39	807.56
1J	408+31.51	-15.67	807.58	807.73
1K	408+41.62	-15.67	807.77	807.90
1L	408+51.74	-15.67	807.95	808.05
1M	408+61.86	-15.67	808.14	808.22
1N	408+71.98	-15.67	808.33	808.39
1O	408+82.09	-15.67	808.51	808.55
1P	408+92.21	-15.67	808.70	808.73
℄ Brg. Pier 1	409+05.33	-15.67	808.94	808.96
2A	409+15.45	-15.67	809.13	809.16
2B	409+25.57	-15.67	809.32	809.36
2C	409+35.69	-15.67	809.51	809.58
2D	409+45.80	-15.67	809.69	809.78
2E	409+55.92	-15.67	809.86	809.98
2F	409+66.04	-15.67	810.02	810.16
2G	409+76.16	-15.67	810.18	810.36
2H	409+86.27	-15.67	810.32	810.52
2I	409+96.39	-15.67	810.46	810.67
2J	410+06.51	-15.67	810.59	810.81
2K	410+16.62	-15.67	810.72	810.96
2L	410+26.74	-15.67	810.83	811.06
2M	410+36.86	-15.67	810.94	811.16
2N	410+46.98	-15.67	811.03	811.23
2O	410+57.09	-15.67	811.12	811.31
2P	410+67.21	-15.67	811.20	811.36
2Q	410+77.33	-15.67	811.28	811.41
2R	410+87.45	-15.67	811.34	811.44
2S	410+97.56	-15.67	811.40	811.48
2T	411+07.68	-15.67	811.44	811.50
2U	411+17.80	-15.67	811.48	811.51
℄ Brg. Pier 2	411+27.87	-15.67	811.51	811.53
3A	411+37.99	-15.67	811.54	811.56
3B	411+48.11	-15.67	811.55	811.57
3C	411+58.22	-15.67	811.56	811.59
3D	411+68.34	-15.67	811.56	811.61
3E	411+78.46	-15.67	811.55	811.62
3F	411+88.58	-15.67	811.53	811.62
3G	411+98.69	-15.67	811.50	811.60
3H	412+08.81	-15.67	811.46	811.57
3I	412+18.93	-15.67	811.42	811.54
3J	412+29.05	-15.67	811.37	811.51
3K	412+39.16	-15.67	811.31	811.43
3L	412+49.28	-15.67	811.24	811.36
3M	412+59.40	-15.67	811.16	811.26
3N	412+69.52	-15.67	811.08	811.17
3O	412+79.63	-15.67	810.99	811.06
3P	412+89.75	-15.67	810.88	810.93
3Q	412+99.87	-15.67	810.77	810.80
3R	413+09.98	-15.67	810.66	810.68

GIRDER 3 (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 3	413+21.00	-15.67	810.52	810.54
4A	413+31.12	-15.67	810.38	810.41
4B	413+41.23	-15.67	810.24	810.28
4C	413+51.35	-15.67	810.09	810.15
4D	413+61.47	-15.67	809.93	810.01
4E	413+71.59	-15.67	809.76	809.86
4F	413+81.70	-15.67	809.58	809.71
4G	413+91.82	-15.67	809.39	809.53
4H	414+01.94	-15.67	809.20	809.35
4I	414+12.06	-15.67	809.00	809.16
4J	414+22.17	-15.67	808.80	808.96
4K	414+32.29	-15.67	808.59	808.74
4L	414+42.41	-15.67	808.39	808.53
4M	414+52.53	-15.67	808.19	808.30
4N	414+62.64	-15.67	807.99	808.08
4O	414+72.76	-15.67	807.79	807.87
4P	414+82.88	-15.67	807.58	807.63
4Q	414+93.00	-15.67	807.38	807.41
4R	415+03.11	-15.67	807.18	807.20
℄ Brg. Pier 4	415+11.00	-15.67	807.02	807.04
5A	415+21.12	-15.67	806.82	806.84
5B	415+31.23	-15.67	806.62	806.65
5C	415+41.35	-15.67	806.41	806.46
5D	415+51.47	-15.67	806.21	806.28
5E	415+61.59	-15.67	806.01	806.10
5F	415+71.70	-15.67	805.81	805.91
5G	415+81.82	-15.67	805.60	805.73
5H	415+91.94	-15.67	805.40	805.54
5I	416+02.06	-15.67	805.20	805.34
5J	416+12.17	-15.67	805.00	805.14
5K	416+22.29	-15.67	804.79	804.92
5L	416+32.41	-15.67	804.59	804.71
5M	416+42.53	-15.67	804.39	804.49
5N	416+52.64	-15.67	804.19	804.27
5O	416+62.76	-15.67	803.99	804.06
5P	416+72.88	-15.67	803.78	803.82
5Q	416+83.00	-15.67	803.58	803.61
5R	416+93.11	-15.67	803.38	803.40
℄ Brg. Pier 5	417+01.00	-15.67	803.22	803.24
6A	417+11.12	-15.67	803.02	803.05
6B	417+21.23	-15.67	802.82	802.86
6C	417+31.35	-15.67	802.61	802.68
6D	417+41.47	-15.67	802.41	802.50
6E	417+51.59	-15.67	802.21	802.32
6F	417+61.70	-15.67	802.01	802.15
6G	417+71.82	-15.67	801.80	801.95
6H	417+81.94	-15.67	801.60	801.77
6I	417+92.06	-15.67	801.40	801.57
6J	418+02.17	-15.67	801.20	801.37
6K	418+12.29	-15.67	800.99	801.16
6L	418+22.41	-15.67	800.79	800.95
6M	418+32.53	-15.67	800.59	800.73
6N	418+42.64	-15.67	800.39	800.50
6O	418+52.76	-15.67	800.19	800.28
6P	418+62.88	-15.67	799.98	800.05
6Q	418+73.00	-15.67	799.78	799.82
6R	418+83.11	-15.67	799.58	799.61

GIRDER 3 (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 6	418+91.00	-15.67	799.42	799.44
7A	419+01.12	-15.67	799.22	799.24
7B	419+11.23	-15.67	799.02	799.04
7C	419+21.35	-15.67	798.81	798.84
7D	419+31.47	-15.67	798.61	798.65
7E	419+41.59	-15.67	798.41	798.47
7F	419+51.70	-15.67	798.21	798.28
7G	419+61.82	-15.67	798.00	798.08
7H	419+71.94	-15.67	797.80	797.89
7I	419+82.06	-15.67	797.60	797.69
7J	419+92.17	-15.67	797.40	797.49
7K	420+02.29	-15.67	797.19	797.27
7L	420+12.41	-15.67	796.99	797.06
7M	420+22.53	-15.67	796.79	796.85
7N	420+32.64	-15.67	796.59	796.63
7O	420+42.76	-15.67	796.39	796.42
7P	420+52.88	-15.67	796.18	796.20
7Q	420+63.00	-15.67	795.98	796.00
℄ Brg. Pier 7	420+72.00	-15.67	795.80	795.82
8A	420+82.12	-15.67	795.60	795.63
8B	420+92.23	-15.67	795.40	795.44
8C	421+02.35	-15.67	795.19	795.26
8D	421+12.47	-15.67	794.99	795.08
8E	421+22.59	-15.67	794.79	794.90
8F	421+32.70	-15.67	794.59	794.73
8G	421+42.82	-15.67	794.38	794.53
8H	421+52.94	-15.67	794.18	794.34
8I	421+63.06	-15.67	793.98	794.14
8J	421+73.17	-15.67	793.78	793.94
8K	421+83.29	-15.67	793.57	793.72
8L	421+93.41	-15.67	793.37	793.50
8M	422+03.53	-15.67	793.17	793.27
8N	422+13.64	-15.67	792.97	793.04
℄ Brg. E. Abut.	422+26.67	-15.67	792.71	792.73
℄ Exp. Jt. E. Abut.	422+28.89	-15.67	792.66	792.68
Bk. E. Abut.	422+32.45	-15.67	792.59	792.61

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PLOT SCALE = N/A	DRAWN - DH	REVISED -
PLOT DATE = 4/29/2021 (3:57:13 PM)	CHECKED - JTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK ELEVATIONS – 5
STRUCTURE NO. 010–1004
SHEET NO. 14 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	822
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	407+24.58	-9.00	806.09	806.11
℄ Exp. Jt. W. Abut.	407+28.12	-9.00	806.16	806.18
℄ Brg. W. Abut.	407+30.33	-9.00	806.20	806.22
1A	407+40.40	-9.00	806.39	806.45
1B	407+50.47	-9.00	806.57	806.67
1C	407+60.53	-9.00	806.76	806.89
1D	407+70.60	-9.00	806.95	807.11
1E	407+80.67	-9.00	807.13	807.30
1F	407+90.74	-9.00	807.32	807.51
1G	408+00.80	-9.00	807.50	807.70
1H	408+10.87	-9.00	807.69	807.88
1I	408+20.94	-9.00	807.88	808.05
1J	408+31.00	-9.00	808.06	808.22
1K	408+41.07	-9.00	808.25	808.39
1L	408+51.14	-9.00	808.44	808.55
1M	408+61.21	-9.00	808.62	808.70
1N	408+71.27	-9.00	808.81	808.87
1O	408+81.34	-9.00	808.99	809.03
1P	408+91.41	-9.00	809.18	809.21
℄ Brg. Pier 1	409+05.33	-9.00	809.44	809.46
2A	409+15.40	-9.00	809.62	809.65
2B	409+25.47	-9.00	809.81	809.85
2C	409+35.53	-9.00	810.00	810.07
2D	409+45.60	-9.00	810.18	810.27
2E	409+55.67	-9.00	810.35	810.48
2F	409+65.74	-9.00	810.51	810.66
2G	409+75.80	-9.00	810.67	810.86
2H	409+85.87	-9.00	810.81	811.02
2I	409+95.94	-9.00	810.95	811.19
2J	410+06.00	-9.00	811.08	811.33
2K	410+16.07	-9.00	811.20	811.45
2L	410+26.14	-9.00	811.32	811.57
2M	410+36.21	-9.00	811.42	811.67
2N	410+46.27	-9.00	811.52	811.75
2O	410+56.34	-9.00	811.61	811.82
2P	410+66.41	-9.00	811.69	811.87
2Q	410+76.47	-9.00	811.76	811.91
2R	410+86.54	-9.00	811.83	811.95
2S	410+96.61	-9.00	811.88	811.97
2T	411+06.68	-9.00	811.93	811.99
2U	411+16.74	-9.00	811.97	812.01
℄ Brg. Pier 2	411+29.07	-9.00	812.01	812.03
3A	411+39.14	-9.00	812.03	812.05
3B	411+49.20	-9.00	812.05	812.07
3C	411+59.27	-9.00	812.05	812.08
3D	411+69.34	-9.00	812.05	812.09
3E	411+79.40	-9.00	812.04	812.10
3F	411+89.47	-9.00	812.02	812.10
3G	411+99.54	-9.00	811.99	812.09
3H	412+09.61	-9.00	811.95	812.06
3I	412+19.67	-9.00	811.91	812.03
3J	412+29.74	-9.00	811.86	811.98
3K	412+39.81	-9.00	811.80	811.92
3L	412+49.87	-9.00	811.73	811.84
3M	412+59.94	-9.00	811.65	811.75
3N	412+70.01	-9.00	811.57	811.65
3O	412+80.08	-9.00	811.47	811.54
3P	412+90.14	-9.00	811.37	811.41
3Q	413+00.21	-9.00	811.26	811.29
3R	413+10.28	-9.00	811.15	811.17

GIRDER 4 (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 3	413+21.00	-9.00	811.01	811.03
4A	413+31.07	-9.00	810.88	810.91
4B	413+41.13	-9.00	810.73	810.77
4C	413+51.20	-9.00	810.58	810.64
4D	413+61.27	-9.00	810.42	810.50
4E	413+71.34	-9.00	810.25	810.35
4F	413+81.40	-9.00	810.08	810.21
4G	413+91.47	-9.00	809.89	810.04
4H	414+01.54	-9.00	809.70	809.86
4I	414+11.60	-9.00	809.50	809.66
4J	414+21.67	-9.00	809.30	809.46
4K	414+31.74	-9.00	809.10	809.26
4L	414+41.81	-9.00	808.90	809.05
4M	414+51.87	-9.00	808.70	808.83
4N	414+61.94	-9.00	808.50	808.60
4O	414+72.01	-9.00	808.29	808.37
4P	414+82.07	-9.00	808.09	808.15
4Q	414+92.14	-9.00	807.89	807.93
4R	415+02.21	-9.00	807.69	807.72
℄ Brg. Pier 4	415+11.00	-9.00	807.51	807.53
5A	415+21.07	-9.00	807.31	807.33
5B	415+31.13	-9.00	807.11	807.14
5C	415+41.20	-9.00	806.91	806.95
5D	415+51.27	-9.00	806.71	806.78
5E	415+61.34	-9.00	806.51	806.60
5F	415+71.40	-9.00	806.31	806.41
5G	415+81.47	-9.00	806.10	806.23
5H	415+91.54	-9.00	805.90	806.04
5I	416+01.60	-9.00	805.70	805.84
5J	416+11.67	-9.00	805.50	805.64
5K	416+21.74	-9.00	805.30	805.43
5L	416+31.81	-9.00	805.10	805.22
5M	416+41.87	-9.00	804.90	805.00
5N	416+51.94	-9.00	804.70	804.78
5O	416+62.01	-9.00	804.49	804.56
5P	416+72.07	-9.00	804.29	804.33
5Q	416+82.14	-9.00	804.09	804.12
5R	416+92.21	-9.00	803.89	803.91
℄ Brg. Pier 5	417+01.00	-9.00	803.71	803.73
6A	417+11.07	-9.00	803.51	803.54
6B	417+21.13	-9.00	803.31	803.35
6C	417+31.20	-9.00	803.11	803.18
6D	417+41.27	-9.00	802.91	803.00
6E	417+51.34	-9.00	802.71	802.82
6F	417+61.40	-9.00	802.51	802.65
6G	417+71.47	-9.00	802.30	802.46
6H	417+81.54	-9.00	802.10	802.27
6I	417+91.60	-9.00	801.90	802.08
6J	418+01.67	-9.00	801.70	801.88
6K	418+11.74	-9.00	801.50	801.68
6L	418+21.81	-9.00	801.30	801.46
6M	418+31.87	-9.00	801.10	801.25
6N	418+41.94	-9.00	800.90	801.02
6O	418+52.01	-9.00	800.69	800.78
6P	418+62.07	-9.00	800.49	800.56
6Q	418+72.14	-9.00	800.29	800.33
6R	418+82.21	-9.00	800.09	800.12

GIRDER 4 (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 6	418+91.00	-9.00	799.91	799.93
7A	419+01.07	-9.00	799.71	799.73
7B	419+11.13	-9.00	799.51	799.53
7C	419+21.20	-9.00	799.31	799.34
7D	419+31.27	-9.00	799.11	799.15
7E	419+41.34	-9.00	798.91	798.97
7F	419+51.40	-9.00	798.71	798.78
7G	419+61.47	-9.00	798.50	798.58
7H	419+71.54	-9.00	798.30	798.39
7I	419+81.60	-9.00	798.10	798.19
7J	419+91.67	-9.00	797.90	797.99
7K	420+01.74	-9.00	797.70	797.78
7L	420+11.81	-9.00	797.50	797.57
7M	420+21.87	-9.00	797.30	797.36
7N	420+31.94	-9.00	797.10	797.14
7O	420+42.01	-9.00	796.89	796.92
7P	420+52.07	-9.00	796.69	796.71
7Q	420+62.14	-9.00	796.49	796.51
℄ Brg. Pier 7	420+72.00	-9.00	796.29	796.31
8A	420+82.07	-9.00	796.09	796.12
8B	420+92.13	-9.00	795.89	795.94
8C	421+02.20	-9.00	795.69	795.77
8D	421+12.27	-9.00	795.49	795.59
8E	421+22.34	-9.00	795.29	795.41
8F	421+32.40	-9.00	795.09	795.24
8G	421+42.47	-9.00	794.88	795.04
8H	421+52.54	-9.00	794.68	794.85
8I	421+62.60	-9.00	794.48	794.65
8J	421+72.67	-9.00	794.28	794.45
8K	421+82.74	-9.00	794.08	794.24
8L	421+92.81	-9.00	793.88	794.02
8M	422+02.87	-9.00	793.68	793.78
8N	422+12.94	-9.00	793.48	793.55
℄ Brg. E. Abut.	422+26.67	-9.00	793.20	793.22
℄ Exp. Jt. E. Abut.	422+28.88	-9.00	793.16	793.18
Bk. E. Abut.	422+32.42	-9.00	793.09	793.11

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	CHECKED - DH	REVISED -
PLOT SCALE = N/A	DRAWN - DH	REVISED -
PLOT DATE = 4/29/2021 (3:57:16 PM)	CHECKED - JTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK ELEVATIONS – 6
STRUCTURE NO. 010–1004
SHEET NO. 15 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	823
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	407+24.60	-2.33	806.59	806.61
℄ Exp. Jt. W. Abut.	407+28.13	-2.33	806.65	806.67
℄ Brg. W. Abut.	407+30.33	-2.33	806.69	806.71
1A	407+40.35	-2.33	806.88	806.95
1B	407+50.37	-2.33	807.06	807.16
1C	407+60.39	-2.33	807.25	807.39
1D	407+70.40	-2.33	807.43	807.59
1E	407+80.42	-2.33	807.62	807.81
1F	407+90.44	-2.33	807.81	808.01
1G	408+00.45	-2.33	807.99	808.19
1H	408+10.47	-2.33	808.18	808.38
1I	408+20.49	-2.33	808.36	808.55
1J	408+30.51	-2.33	808.55	808.71
1K	408+40.52	-2.33	808.73	808.87
1L	408+50.54	-2.33	808.92	809.03
1M	408+60.56	-2.33	809.10	809.19
1N	408+70.58	-2.33	809.29	809.36
1O	408+80.59	-2.33	809.47	809.51
1P	408+90.61	-2.33	809.66	809.69
℄ Brg. Pier 1	409+05.33	-2.33	809.93	809.95
2A	409+15.35	-2.33	810.12	810.15
2B	409+25.37	-2.33	810.30	810.35
2C	409+35.39	-2.33	810.49	810.56
2D	409+45.40	-2.33	810.67	810.78
2E	409+55.42	-2.33	810.84	810.98
2F	409+65.44	-2.33	811.00	811.17
2G	409+75.45	-2.33	811.15	811.35
2H	409+85.47	-2.33	811.30	811.53
2I	409+95.49	-2.33	811.44	811.69
2J	410+05.51	-2.33	811.57	811.83
2K	410+15.52	-2.33	811.69	811.97
2L	410+25.54	-2.33	811.80	812.08
2M	410+35.56	-2.33	811.91	812.17
2N	410+45.58	-2.33	812.01	812.26
2O	410+55.59	-2.33	812.10	812.33
2P	410+65.61	-2.33	812.18	812.38
2Q	410+75.63	-2.33	812.25	812.42
2R	410+85.64	-2.33	812.32	812.46
2S	410+95.66	-2.33	812.37	812.48
2T	411+05.68	-2.33	812.42	812.49
2U	411+15.70	-2.33	812.46	812.51
℄ Brg. Pier 2	411+30.25	-2.33	812.51	812.53
3A	411+40.27	-2.33	812.53	812.55
3B	411+50.29	-2.33	812.54	812.56
3C	411+60.31	-2.33	812.54	812.57
3D	411+70.32	-2.33	812.54	812.58
3E	411+80.34	-2.33	812.53	812.58
3F	411+90.36	-2.33	812.51	812.59
3G	412+00.38	-2.33	812.48	812.57
3H	412+10.39	-2.33	812.44	812.54
3I	412+20.41	-2.33	812.40	812.51
3J	412+30.43	-2.33	812.35	812.46
3K	412+40.44	-2.33	812.29	812.40
3L	412+50.46	-2.33	812.22	812.33
3M	412+60.48	-2.33	812.14	812.23
3N	412+70.50	-2.33	812.06	812.14
3O	412+80.51	-2.33	811.96	812.02
3P	412+90.53	-2.33	811.86	811.90
3Q	413+00.55	-2.33	811.75	811.78
3R	413+10.57	-2.33	811.64	811.66

GIRDER 5 (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 3	413+21.00	-2.33	811.50	811.52
4A	413+31.02	-2.33	811.37	811.40
4B	413+41.03	-2.33	811.23	811.27
4C	413+51.05	-2.33	811.08	811.15
4D	413+61.07	-2.33	810.92	811.01
4E	413+71.09	-2.33	810.75	810.87
4F	413+81.10	-2.33	810.58	810.72
4G	413+91.12	-2.33	810.39	810.54
4H	414+01.14	-2.33	810.20	810.37
4I	414+11.16	-2.33	810.00	810.18
4J	414+21.17	-2.33	809.80	809.97
4K	414+31.19	-2.33	809.60	809.76
4L	414+41.21	-2.33	809.40	809.55
4M	414+51.23	-2.33	809.20	809.34
4N	414+61.24	-2.33	809.00	809.11
4O	414+71.26	-2.33	808.80	808.89
4P	414+81.28	-2.33	808.60	808.67
4Q	414+91.29	-2.33	808.40	808.44
4R	415+01.31	-2.33	808.20	808.23
℄ Brg. Pier 4	415+11.00	-2.33	808.01	808.03
5A	415+21.02	-2.33	807.81	807.83
5B	415+31.03	-2.33	807.61	807.64
5C	415+41.05	-2.33	807.41	807.46
5D	415+51.07	-2.33	807.21	807.28
5E	415+61.09	-2.33	807.01	807.10
5F	415+71.10	-2.33	806.81	806.92
5G	415+81.12	-2.33	806.60	806.73
5H	415+91.14	-2.33	806.40	806.54
5I	416+01.16	-2.33	806.20	806.34
5J	416+11.17	-2.33	806.00	806.14
5K	416+21.19	-2.33	805.80	805.93
5L	416+31.21	-2.33	805.60	805.72
5M	416+41.23	-2.33	805.40	805.50
5N	416+51.24	-2.33	805.20	805.28
5O	416+61.26	-2.33	805.00	805.07
5P	416+71.28	-2.33	804.80	804.84
5Q	416+81.29	-2.33	804.60	804.63
5R	416+91.31	-2.33	804.40	804.42
℄ Brg. Pier 5	417+01.00	-2.33	804.21	804.23
6A	417+11.02	-2.33	804.01	804.04
6B	417+21.03	-2.33	803.81	803.85
6C	417+31.05	-2.33	803.61	803.68
6D	417+41.07	-2.33	803.41	803.50
6E	417+51.09	-2.33	803.21	803.32
6F	417+61.10	-2.33	803.01	803.16
6G	417+71.12	-2.33	802.80	802.96
6H	417+81.14	-2.33	802.60	802.78
6I	417+91.16	-2.33	802.40	802.59
6J	418+01.17	-2.33	802.20	802.39
6K	418+11.19	-2.33	802.00	802.18
6L	418+21.21	-2.33	801.80	801.97
6M	418+31.23	-2.33	801.60	801.76
6N	418+41.24	-2.33	801.40	801.53
6O	418+51.26	-2.33	801.20	801.30
6P	418+61.28	-2.33	801.00	801.08
6Q	418+71.29	-2.33	800.80	800.85
6R	418+81.31	-2.33	800.60	800.63

GIRDER 5 (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 6	418+91.00	-2.33	800.41	800.43
7A	419+01.02	-2.33	800.21	800.23
7B	419+11.03	-2.33	800.01	800.03
7C	419+21.05	-2.33	799.81	799.84
7D	419+31.07	-2.33	799.61	799.66
7E	419+41.09	-2.33	799.41	799.47
7F	419+51.10	-2.33	799.21	799.28
7G	419+61.12	-2.33	799.00	799.08
7H	419+71.14	-2.33	798.80	798.88
7I	419+81.16	-2.33	798.60	798.69
7J	419+91.17	-2.33	798.40	798.48
7K	420+01.19	-2.33	798.20	798.28
7L	420+11.21	-2.33	798.00	798.07
7M	420+21.23	-2.33	797.80	797.86
7N	420+31.24	-2.33	797.60	797.64
7O	420+41.26	-2.33	797.40	797.43
7P	420+51.28	-2.33	797.20	797.22
7Q	420+61.29	-2.33	797.00	797.02
℄ Brg. Pier 7	420+72.00	-2.33	796.79	796.81
8A	420+82.02	-2.33	796.59	796.62
8B	420+92.03	-2.33	796.39	796.44
8C	421+02.05	-2.33	796.19	796.27
8D	421+12.07	-2.33	795.99	796.09
8E	421+22.09	-2.33	795.79	795.92
8F	421+32.10	-2.33	795.59	795.74
8G	421+42.12	-2.33	795.38	795.55
8H	421+52.14	-2.33	795.18	795.36
8I	421+62.16	-2.33	794.98	795.17
8J	421+72.17	-2.33	794.78	794.96
8K	421+82.19	-2.33	794.58	794.75
8L	421+92.21	-2.33	794.38	794.53
8M	422+02.23	-2.33	794.18	794.29
8N	422+12.24	-2.33	793.98	794.06
℄ Brg. E. Abut.	422+26.67	-2.33	793.69	793.71
℄ Exp. Jt. E. Abut.	422+28.87	-2.33	793.65	793.67
Bk. E. Abut.	422+32.40	-2.33	793.58	793.60

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PLOT SCALE = N/A	DRAWN - DH	REVISED -
PLOT DATE = 4/29/2021 (3:57:19 PM)	CHECKED - JTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK ELEVATIONS – 7
STRUCTURE NO. 010-1004
SHEET NO. 16 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	824
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

℄ Ramp D & PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	407+24.61	0.00	806.76	806.78
℄ Exp. Jt. W. Abut.	407+28.14	0.00	806.83	806.85
℄ Brg. W. Abut.	407+30.33	0.00	806.87	806.89
1A	407+40.33	0.00	807.05	807.12
1B	407+50.33	0.00	807.24	807.34
1C	407+60.33	0.00	807.42	807.56
1D	407+70.33	0.00	807.61	807.77
1E	407+80.33	0.00	807.79	807.98
1F	407+90.33	0.00	807.98	808.18
1G	408+00.33	0.00	808.16	808.36
1H	408+10.33	0.00	808.35	808.55
1I	408+20.33	0.00	808.53	808.72
1J	408+30.33	0.00	808.72	808.88
1K	408+40.33	0.00	808.90	809.04
1L	408+50.33	0.00	809.09	809.20
1M	408+60.33	0.00	809.27	809.36
1N	408+70.33	0.00	809.46	809.53
1O	408+80.33	0.00	809.64	809.68
1P	408+90.33	0.00	809.83	809.86
1Q	409+00.33	0.00	810.01	810.03
℄ Brg. Pier 1	409+05.33	0.00	810.10	810.12
2A	409+15.33	0.00	810.29	810.32
2B	409+25.33	0.00	810.47	810.52
2C	409+35.33	0.00	810.66	810.74
2D	409+45.33	0.00	810.84	810.95
2E	409+55.33	0.00	811.01	811.15
2F	409+65.33	0.00	811.17	811.35
2G	409+75.33	0.00	811.32	811.52
2H	409+85.33	0.00	811.47	811.71
2I	409+95.33	0.00	811.61	811.87
2J	410+05.33	0.00	811.74	812.02
2K	410+15.33	0.00	811.86	812.15
2L	410+25.33	0.00	811.97	812.26
2M	410+35.33	0.00	812.08	812.36
2N	410+45.33	0.00	812.18	812.44
2O	410+55.33	0.00	812.27	812.51
2P	410+65.33	0.00	812.35	812.57
2Q	410+75.33	0.00	812.42	812.60
2R	410+85.33	0.00	812.49	812.63
2S	410+95.33	0.00	812.54	812.65
2T	411+05.33	0.00	812.59	812.67
2U	411+15.33	0.00	812.63	812.69
2V	411+25.33	0.00	812.67	812.70
℄ Brg. Pier 2	411+30.67	0.00	812.68	812.70
3A	411+40.67	0.00	812.70	812.72
3B	411+50.67	0.00	812.71	812.73
3C	411+60.67	0.00	812.72	812.75
3D	411+70.67	0.00	812.71	812.75
3E	411+80.67	0.00	812.70	812.75
3F	411+90.67	0.00	812.68	812.75
3G	412+00.67	0.00	812.65	812.74
3H	412+10.67	0.00	812.62	812.72
3I	412+20.67	0.00	812.57	812.68
3J	412+30.67	0.00	812.52	812.63
3K	412+40.67	0.00	812.46	812.57
3L	412+50.67	0.00	812.39	812.49
3M	412+60.67	0.00	812.31	812.40
3N	412+70.67	0.00	812.23	812.31
3O	412+80.67	0.00	812.13	812.19
3P	412+90.67	0.00	812.03	812.07
3Q	413+00.67	0.00	811.92	811.95
3R	413+10.67	0.00	811.81	811.83

℄ Ramp D & PGL (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 3	413+21.00	0.00	811.68	811.70
4A	413+31.00	0.00	811.54	811.57
4B	413+41.00	0.00	811.40	811.44
4C	413+51.00	0.00	811.25	811.32
4D	413+61.00	0.00	811.09	811.18
4E	413+71.00	0.00	810.93	811.05
4F	413+81.00	0.00	810.75	810.89
4G	413+91.00	0.00	810.57	810.73
4H	414+01.00	0.00	810.38	810.56
4I	414+11.00	0.00	810.18	810.36
4J	414+21.00	0.00	809.98	810.16
4K	414+31.00	0.00	809.78	809.95
4L	414+41.00	0.00	809.58	809.73
4M	414+51.00	0.00	809.38	809.52
4N	414+61.00	0.00	809.18	809.30
4O	414+71.00	0.00	808.98	809.07
4P	414+81.00	0.00	808.78	808.85
4Q	414+91.00	0.00	808.58	808.62
4R	415+01.00	0.00	808.38	808.41
℄ Brg. Pier 4	415+11.00	0.00	808.18	808.20
5A	415+21.00	0.00	807.98	808.00
5B	415+31.00	0.00	807.78	807.81
5C	415+41.00	0.00	807.58	807.63
5D	415+51.00	0.00	807.38	807.45
5E	415+61.00	0.00	807.18	807.27
5F	415+71.00	0.00	806.98	807.09
5G	415+81.00	0.00	806.78	806.91
5H	415+91.00	0.00	806.58	806.72
5I	416+01.00	0.00	806.38	806.52
5J	416+11.00	0.00	806.18	806.32
5K	416+21.00	0.00	805.98	806.11
5L	416+31.00	0.00	805.78	805.90
5M	416+41.00	0.00	805.58	805.69
5N	416+51.00	0.00	805.38	805.46
5O	416+61.00	0.00	805.18	805.25
5P	416+71.00	0.00	804.98	805.03
5Q	416+81.00	0.00	804.78	804.81
5R	416+91.00	0.00	804.58	804.60
℄ Brg. Pier 5	417+01.00	0.00	804.38	804.40
6A	417+11.00	0.00	804.18	804.21
6B	417+21.00	0.00	803.98	804.02
6C	417+31.00	0.00	803.78	803.85
6D	417+41.00	0.00	803.58	803.67
6E	417+51.00	0.00	803.38	803.51
6F	417+61.00	0.00	803.18	803.33
6G	417+71.00	0.00	802.98	803.15
6H	417+81.00	0.00	802.78	802.96
6I	417+91.00	0.00	802.58	802.78
6J	418+01.00	0.00	802.38	802.58
6K	418+11.00	0.00	802.18	802.38
6L	418+21.00	0.00	801.98	802.15
6M	418+31.00	0.00	801.78	801.94
6N	418+41.00	0.00	801.58	801.72
6O	418+51.00	0.00	801.38	801.48
6P	418+61.00	0.00	801.18	801.26
6Q	418+71.00	0.00	800.98	801.03
6R	418+81.00	0.00	800.78	800.81

℄ Ramp D & PGL (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 6	418+91.00	0.00	800.58	800.60
7A	419+01.00	0.00	800.38	800.40
7B	419+11.00	0.00	800.18	800.20
7C	419+21.00	0.00	799.98	800.01
7D	419+31.00	0.00	799.78	799.83
7E	419+41.00	0.00	799.58	799.64
7F	419+51.00	0.00	799.38	799.45
7G	419+61.00	0.00	799.18	799.26
7H	419+71.00	0.00	798.98	799.06
7I	419+81.00	0.00	798.78	798.86
7J	419+91.00	0.00	798.58	798.66
7K	420+01.00	0.00	798.38	798.46
7L	420+11.00	0.00	798.18	798.25
7M	420+21.00	0.00	797.98	798.04
7N	420+31.00	0.00	797.78	797.83
7O	420+41.00	0.00	797.58	797.61
7P	420+51.00	0.00	797.38	797.40
7Q	420+61.00	0.00	797.18	797.20
℄ Brg. Pier 7	420+72.00	0.00	796.96	796.98
8A	420+82.00	0.00	796.76	796.79
8B	420+92.00	0.00	796.56	796.62
8C	421+02.00	0.00	796.36	796.44
8D	421+12.00	0.00	796.16	796.26
8E	421+22.00	0.00	795.96	796.10
8F	421+32.00	0.00	795.76	795.92
8G	421+42.00	0.00	795.56	795.73
8H	421+52.00	0.00	795.36	795.55
8I	421+62.00	0.00	795.16	795.35
8J	421+72.00	0.00	794.96	795.15
8K	421+82.00	0.00	794.76	794.93
8L	421+92.00	0.00	794.56	794.71
8M	422+02.00	0.00	794.36	794.48
8N	422+12.00	0.00	794.16	794.24
8O	422+22.00	0.00	793.96	794.00
℄ Brg. E. Abut.	422+26.67	0.00	793.87	793.89
℄ Exp. Jt. E. Abut.	422+28.86	0.00	793.82	793.84
Bk. E. Abut.	422+32.39	0.00	793.75	793.77

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK ELEVATIONS – 8
STRUCTURE NO. 010–1004
SHEET NO. 17 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	825
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	407+24.63	4.33	807.08	807.10
℄ Exp. Jt. W. Abut.	407+28.14	4.33	807.15	807.17
℄ Brg. W. Abut.	407+30.33	4.33	807.19	807.21
1A	407+40.30	4.33	807.37	807.44
1B	407+50.27	4.33	807.56	807.66
1C	407+60.24	4.33	807.74	807.88
1D	407+70.21	4.33	807.92	808.10
1E	407+80.17	4.33	808.11	808.30
1F	407+90.14	4.33	808.29	808.50
1G	408+00.11	4.33	808.48	808.69
1H	408+10.08	4.33	808.66	808.86
1I	408+20.05	4.33	808.85	809.04
1J	408+30.01	4.33	809.03	809.20
1K	408+39.98	4.33	809.22	809.37
1L	408+49.95	4.33	809.40	809.52
1M	408+59.92	4.33	809.58	809.67
1N	408+69.89	4.33	809.77	809.84
1O	408+79.85	4.33	809.95	809.99
1P	408+89.82	4.33	810.14	810.17
1Q	408+99.79	4.33	810.32	810.34
℄ Brg. Pier 1	409+05.33	4.33	810.42	810.44
2A	409+15.30	4.33	810.61	810.64
2B	409+25.27	4.33	810.79	810.85
2C	409+35.24	4.33	810.98	811.06
2D	409+45.21	4.33	811.16	811.27
2E	409+55.17	4.33	811.33	811.48
2F	409+65.14	4.33	811.49	811.67
2G	409+75.11	4.33	811.64	811.86
2H	409+85.08	4.33	811.79	812.03
2I	409+95.05	4.33	811.93	812.20
2J	410+05.01	4.33	812.06	812.35
2K	410+14.98	4.33	812.18	812.48
2L	410+24.95	4.33	812.29	812.59
2M	410+34.92	4.33	812.40	812.69
2N	410+44.89	4.33	812.49	812.77
2O	410+54.85	4.33	812.58	812.83
2P	410+64.82	4.33	812.67	812.90
2Q	410+74.79	4.33	812.74	812.93
2R	410+84.76	4.33	812.80	812.96
2S	410+94.73	4.33	812.86	812.98
2T	411+04.69	4.33	812.91	812.99
2U	411+14.66	4.33	812.95	813.01
2V	411+24.63	4.33	812.99	813.02
℄ Brg. Pier 2	411+31.43	4.33	813.00	813.02
3A	411+41.40	4.33	813.02	813.03
3B	411+51.36	4.33	813.03	813.05
3C	411+61.33	4.33	813.04	813.06
3D	411+71.30	4.33	813.03	813.06
3E	411+81.27	4.33	813.02	813.08
3F	411+91.24	4.33	813.00	813.07
3G	412+01.20	4.33	812.97	813.06
3H	412+11.17	4.33	812.94	813.04
3I	412+21.14	4.33	812.89	813.00
3J	412+31.11	4.33	812.84	812.95
3K	412+41.08	4.33	812.78	812.89
3L	412+51.04	4.33	812.71	812.81
3M	412+61.01	4.33	812.63	812.72
3N	412+70.98	4.33	812.55	812.63
3O	412+80.95	4.33	812.45	812.51
3P	412+90.92	4.33	812.35	812.39
3Q	413+00.88	4.33	812.24	812.27
3R	413+10.85	4.33	812.13	812.15

GIRDER 6 (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 3	413+21.00	4.33	812.00	812.02
4A	413+30.97	4.33	811.86	811.89
4B	413+40.94	4.33	811.72	811.77
4C	413+50.90	4.33	811.57	811.64
4D	413+60.87	4.33	811.42	811.51
4E	413+70.84	4.33	811.25	811.37
4F	413+80.81	4.33	811.08	811.22
4G	413+90.78	4.33	810.89	811.06
4H	414+00.74	4.33	810.70	810.88
4I	414+10.71	4.33	810.51	810.70
4J	414+20.68	4.33	810.31	810.50
4K	414+30.65	4.33	810.11	810.29
4L	414+40.62	4.33	809.91	810.07
4M	414+50.58	4.33	809.71	809.85
4N	414+60.55	4.33	809.51	809.63
4O	414+70.52	4.33	809.31	809.40
4P	414+80.49	4.33	809.11	809.18
4Q	414+90.46	4.33	808.91	808.95
4R	415+00.42	4.33	808.71	808.74
℄ Brg. Pier 4	415+11.00	4.33	808.50	808.52
5A	415+20.97	4.33	808.30	808.32
5B	415+30.94	4.33	808.10	808.13
5C	415+40.90	4.33	807.90	807.95
5D	415+50.87	4.33	807.70	807.77
5E	415+60.84	4.33	807.50	807.59
5F	415+70.81	4.33	807.30	807.41
5G	415+80.78	4.33	807.11	807.24
5H	415+90.74	4.33	806.91	807.05
5I	416+00.71	4.33	806.71	806.85
5J	416+10.68	4.33	806.51	806.65
5K	416+20.65	4.33	806.31	806.45
5L	416+30.62	4.33	806.11	806.23
5M	416+40.58	4.33	805.91	806.02
5N	416+50.55	4.33	805.71	805.79
5O	416+60.52	4.33	805.51	805.58
5P	416+70.49	4.33	805.31	805.36
5Q	416+80.46	4.33	805.11	805.14
5R	416+90.42	4.33	804.91	804.93
℄ Brg. Pier 5	417+01.00	4.33	804.70	804.72
6A	417+10.97	4.33	804.50	804.53
6B	417+20.94	4.33	804.30	804.34
6C	417+30.90	4.33	804.10	804.17
6D	417+40.87	4.33	803.90	803.99
6E	417+50.84	4.33	803.70	803.83
6F	417+60.81	4.33	803.50	803.65
6G	417+70.78	4.33	803.31	803.48
6H	417+80.74	4.33	803.11	803.31
6I	417+90.71	4.33	802.91	803.11
6J	418+00.68	4.33	802.71	802.92
6K	418+10.65	4.33	802.51	802.71
6L	418+20.62	4.33	802.31	802.49
6M	418+30.58	4.33	802.11	802.27
6N	418+40.55	4.33	801.91	802.05
6O	418+50.52	4.33	801.71	801.82
6P	418+60.49	4.33	801.51	801.59
6Q	418+70.46	4.33	801.31	801.37
6R	418+80.42	4.33	801.11	801.14

GIRDER 6 (CONT.)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
℄ Brg. Pier 6	418+91.00	4.33	800.90	800.92
7A	419+00.97	4.33	800.70	800.72
7B	419+10.94	4.33	800.50	800.52
7C	419+20.90	4.33	800.30	800.32
7D	419+30.87	4.33	800.10	800.14
7E	419+40.84	4.33	799.90	799.95
7F	419+50.81	4.33	799.70	799.77
7G	419+60.78	4.33	799.51	799.58
7H	419+70.74	4.33	799.31	799.40
7I	419+80.71	4.33	799.11	799.20
7J	419+90.68	4.33	798.91	799.00
7K	420+00.65	4.33	798.71	798.79
7L	420+10.62	4.33	798.51	798.58
7M	420+20.58	4.33	798.31	798.37
7N	420+30.55	4.33	798.11	798.16
7O	420+40.52	4.33	797.91	797.94
7P	420+50.49	4.33	797.71	797.73
7Q	420+60.46	4.33	797.51	797.53
℄ Brg. Pier 7	420+72.00	4.33	797.28	797.30
8A	420+81.97	4.33	797.08	797.11
8B	420+91.94	4.33	796.88	796.94
8C	421+01.90	4.33	796.68	796.76
8D	421+11.87	4.33	796.48	796.60
8E	421+21.84	4.33	796.28	796.42
8F	421+31.81	4.33	796.08	796.24
8G	421+41.78	4.33	795.89	796.08
8H	421+51.74	4.33	795.69	795.89
8I	421+61.71	4.33	795.49	795.69
8J	421+71.68	4.33	795.29	795.49
8K	421+81.65	4.33	795.09	795.27
8L	421+91.62	4.33	794.89	795.04
8M	422+01.58	4.33	794.69	794.82
8N	422+11.55	4.33	794.49	794.57
8O	422+21.52	4.33	794.29	794.33
℄ Brg. E. Abut.	422+26.67	4.33	794.19	794.21
℄ Exp. Jt. E. Abut.	422+28.86	4.33	794.14	794.16
Bk. E. Abut.	422+32.37	4.33	794.07	794.09

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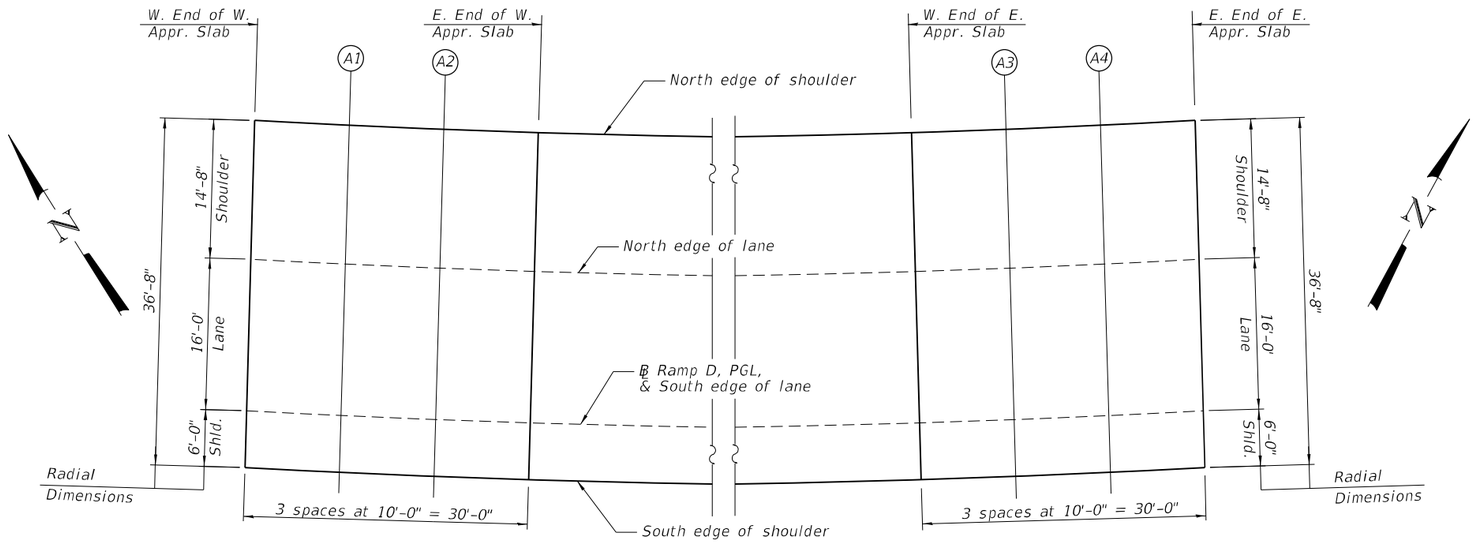
DEPARTMENT OF TRANSPORTATION

DECK ELEVATIONS – 9
STRUCTURE NO. 010–1004
SHEET NO. 18 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	826
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



WEST APPROACH SLAB

EAST APPROACH SLAB

PLAN

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of W. Appr.	406+94.29	-30.67	803.93	803.95
A1	407+04.53	-30.67	804.12	804.14
A2	407+14.76	-30.67	804.31	804.33
E. End of W. Appr.	407+24.99	-30.67	804.50	804.52

NORTH EDGE OF LANE

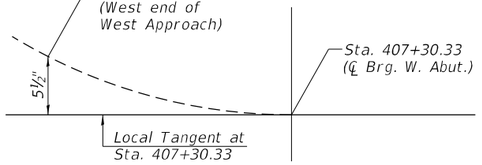
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of W. Appr.	406+94.69	-16.00	805.02	805.04
A1	407+04.81	-16.00	805.21	805.23
A2	407+14.93	-16.00	805.40	805.42
E. End of W. Appr.	407+25.05	-16.00	805.58	805.60

℄ RAMP D, PGL, & SOUTH EDGE OF LANE

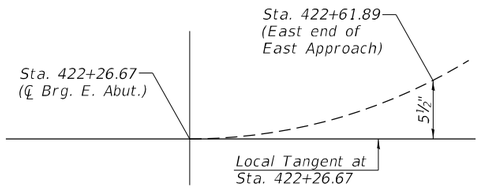
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of W. Appr.	406+95.11	0.00	806.21	806.23
A1	407+05.11	0.00	806.40	806.42
A2	407+15.11	0.00	806.58	806.60
E. End of W. Appr.	407+25.11	0.00	806.77	806.79

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of W. Appr.	406+95.27	6.00	806.66	806.68
A1	407+05.22	6.00	806.85	806.87
A2	407+15.18	6.00	807.03	807.05
E. End of W. Appr.	407+25.14	6.00	807.21	807.23



WEST APPROACH OFFSET SKETCH



EAST APPROACH OFFSET SKETCH

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of E. Appr.	422+32.01	-30.67	791.49	791.51
A3	422+42.24	-30.67	791.29	791.31
A4	422+52.47	-30.67	791.08	791.10
E. End of E. Appr.	422+62.71	-30.67	790.88	790.90

NORTH EDGE OF LANE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of E. Appr.	422+31.95	-16.00	792.58	792.60
A3	422+42.07	-16.00	792.37	792.39
A4	422+52.19	-16.00	792.17	792.19
E. End of E. Appr.	422+62.31	-16.00	791.97	791.99

℄ RAMP D, PGL, & SOUTH EDGE OF LANE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of E. Appr.	422+31.89	0.00	793.76	793.78
A3	422+41.89	0.00	793.56	793.58
A4	422+51.89	0.00	793.36	793.38
E. End of E. Appr.	422+61.89	0.00	793.16	793.18

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End of E. Appr.	422+31.86	6.00	794.21	794.23
A3	422+41.82	6.00	794.01	794.03
A4	422+51.78	6.00	793.81	793.83
E. End of E. Appr.	422+61.73	6.00	793.61	793.63

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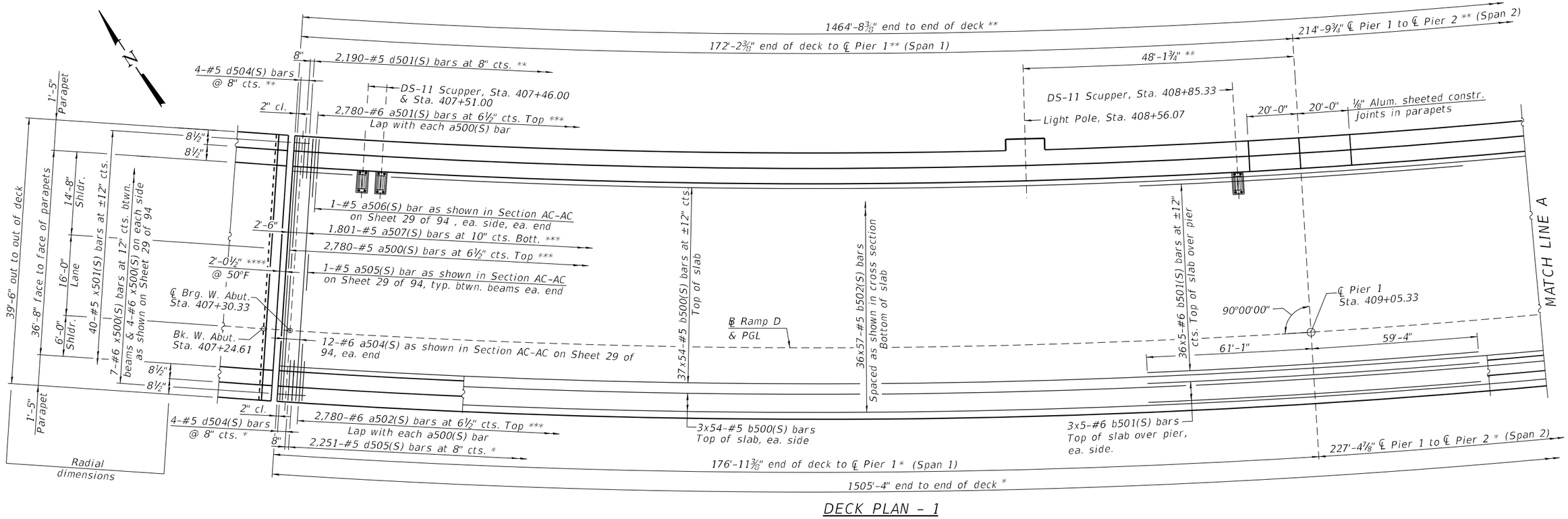
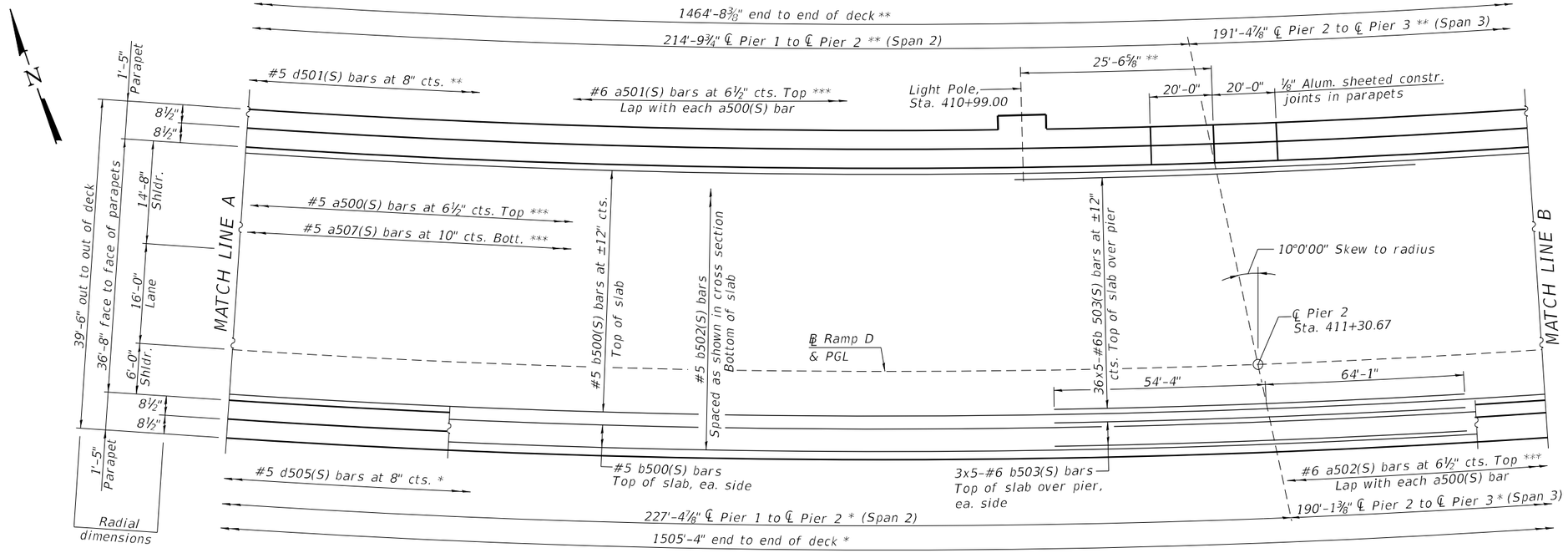
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF WEST & EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 010-1004
SHEET NO. 19 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	827
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



DECK PLAN - 1



DECK PLAN - 2

MINIMUM BAR LAP

#5 Bar = 2'-0"
#6 Bar = 2'-5"

NOTES:

1. Bend longitudinal reinforcement as required to fit in the field.
2. See sheets 24 thru 27 of 94 for superstructure details and Bill of Material.
3. Bars indicated thus 3x5-#6 etc. indicates 3 lines of bars with 5 lengths per line.

*Along inside face of South Parapet
**Along inside face of North Parapet
***Measured along south edge of deck, equally spaced along north edge
****Dimension showing concrete opening. For joint opening see sheet 29 of 94.

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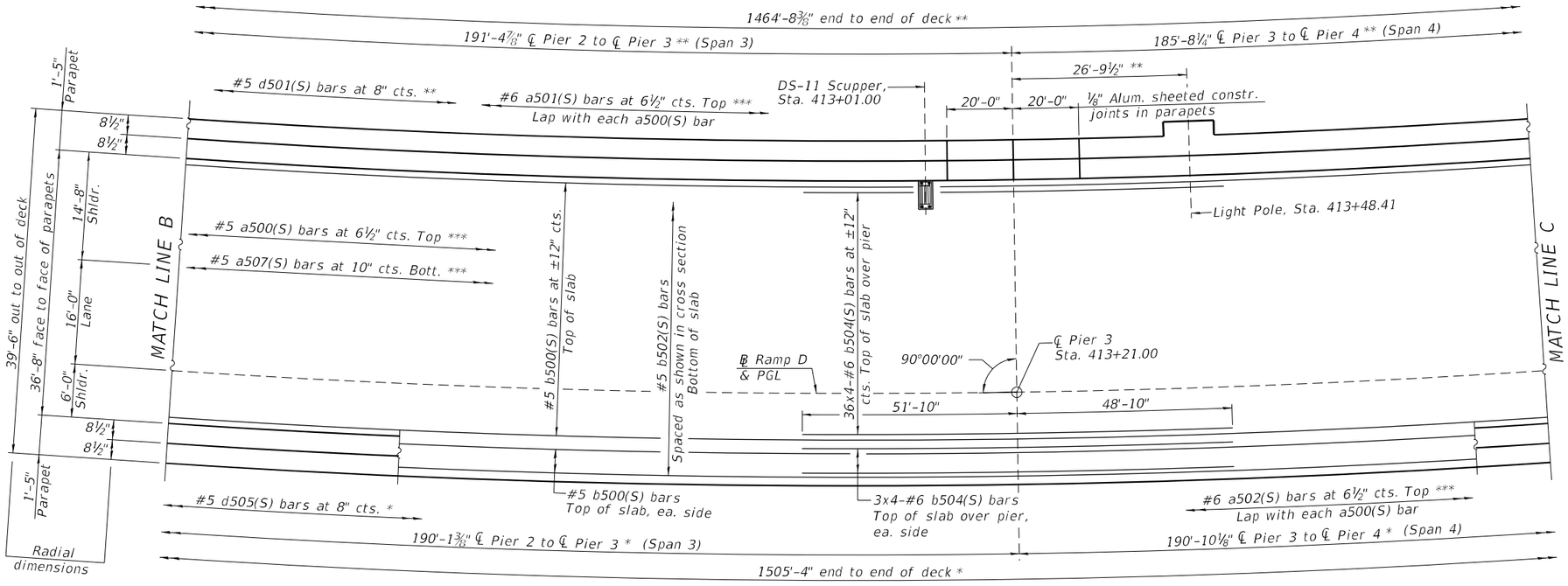
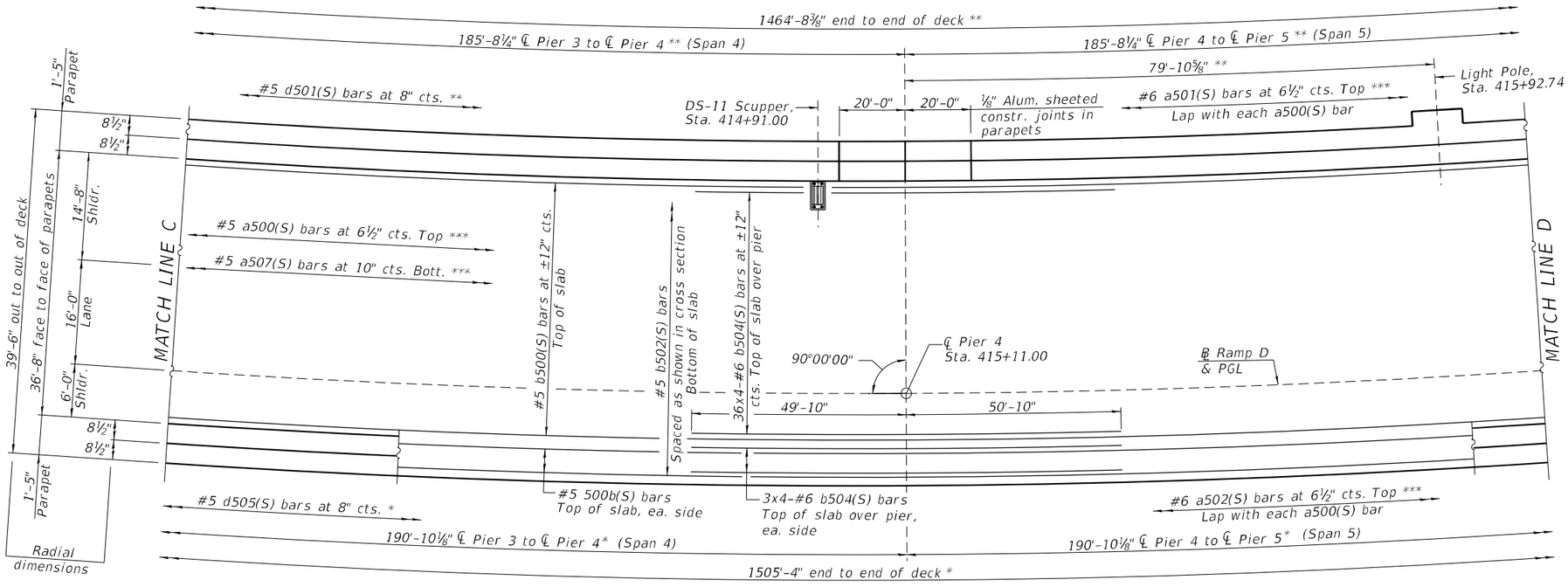
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE – 1
STRUCTURE NO. 010–1004
SHEET NO. 20 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	828
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



DECK PLAN - 3



DECK PLAN - 4

MINIMUM BAR LAP

#5 Bar = 2'-0"
#6 Bar = 2'-5"

NOTES:

1. Bend longitudinal reinforcement as required to fit in the field.
2. See sheets 24 thru 27 of 94 for superstructure details and Bill of Material.
3. Bars indicated thus 3x4-#6 etc. indicates 3 lines of bars with 4 lengths per line.

*Along inside face of South Parapet
**Along inside face of North Parapet
***Measured along south edge of deck, equally spaced along north edge

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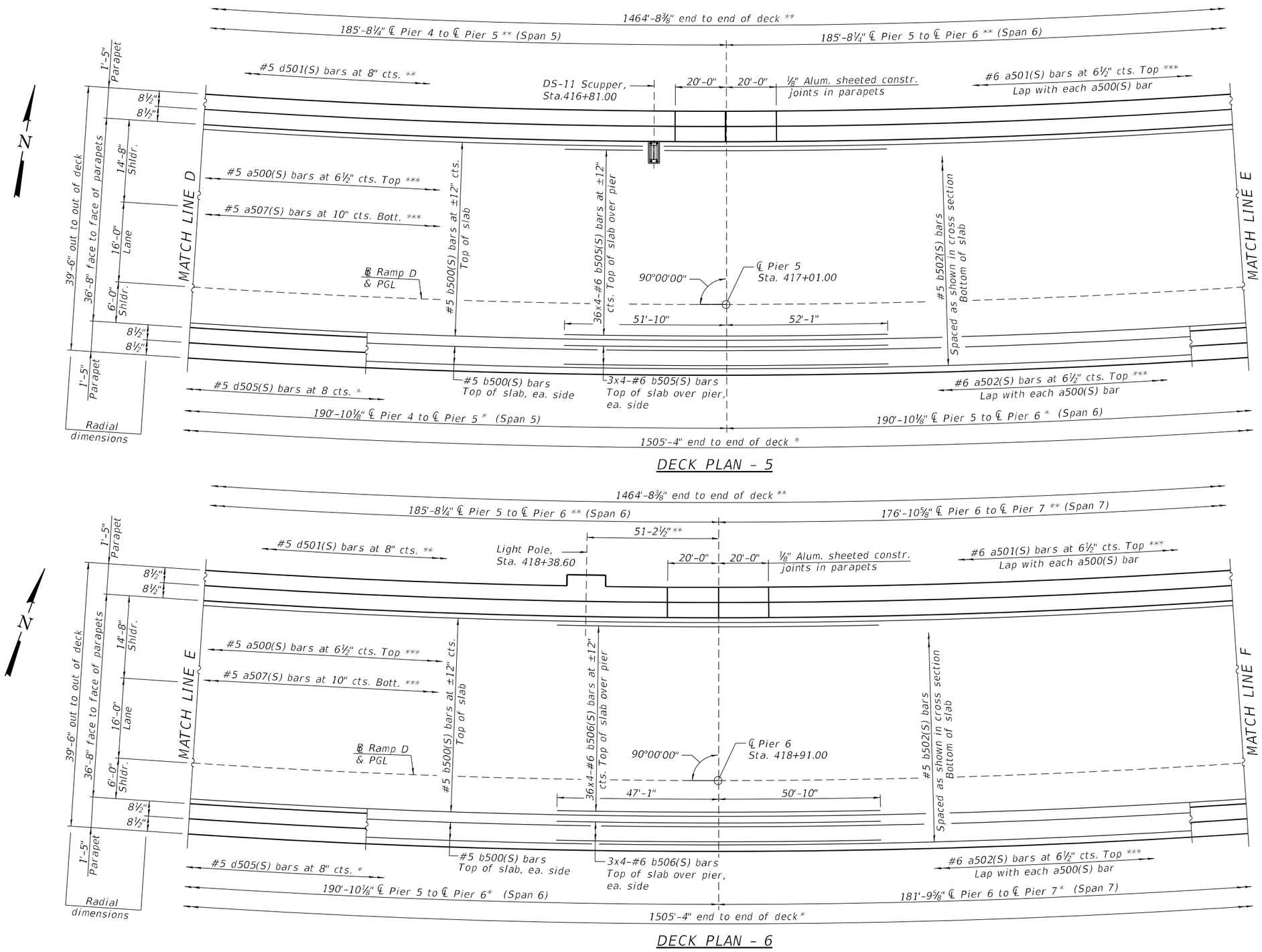
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE – 2
STRUCTURE NO. 010-1004
SHEET NO. 21 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	829
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



DECK PLAN - 5

DECK PLAN - 6

MINIMUM BAR LAP

#5 Bar = 2'-0"
#6 Bar = 2'-5"

NOTES:

1. Bend longitudinal reinforcement as required to fit in the field.
2. See sheets 24 thru 27 of 94 for superstructure details and Bill of Material.
3. Bars indicated thus 3x4-#6 etc. indicates 3 lines of bars with 4 lengths per line.

*Along inside face of South Parapet
**Along inside face of North Parapet
***Measured along south edge of deck, equally spaced along north edge

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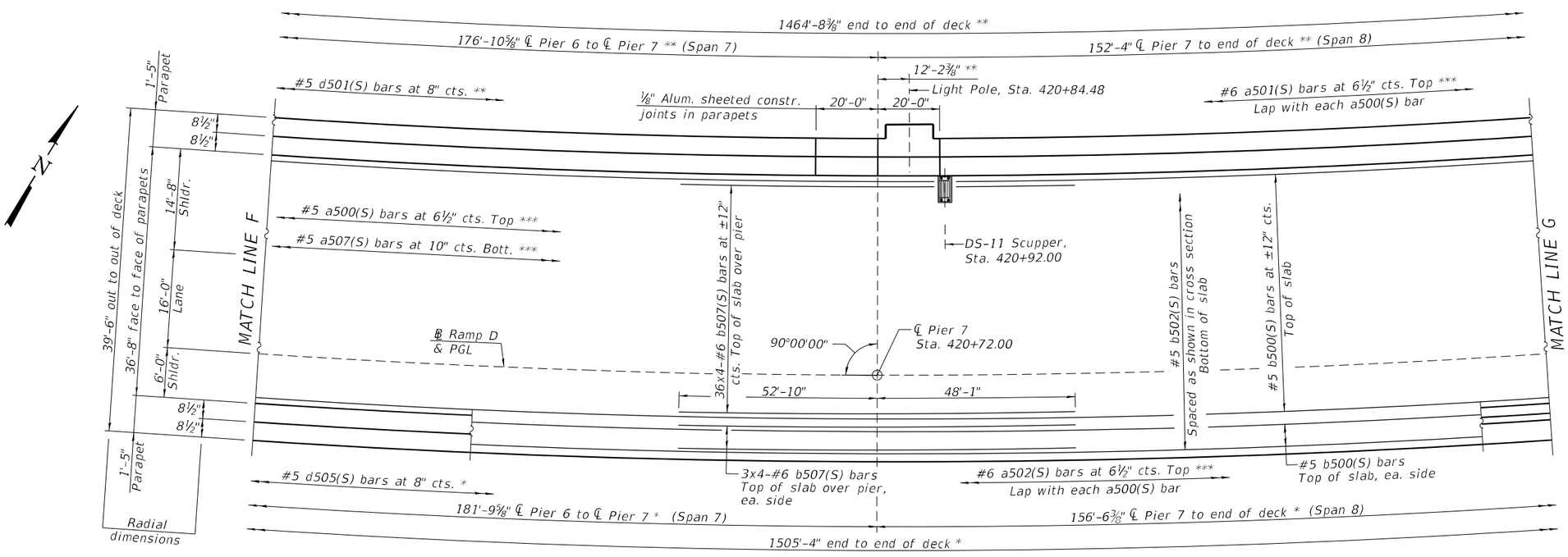
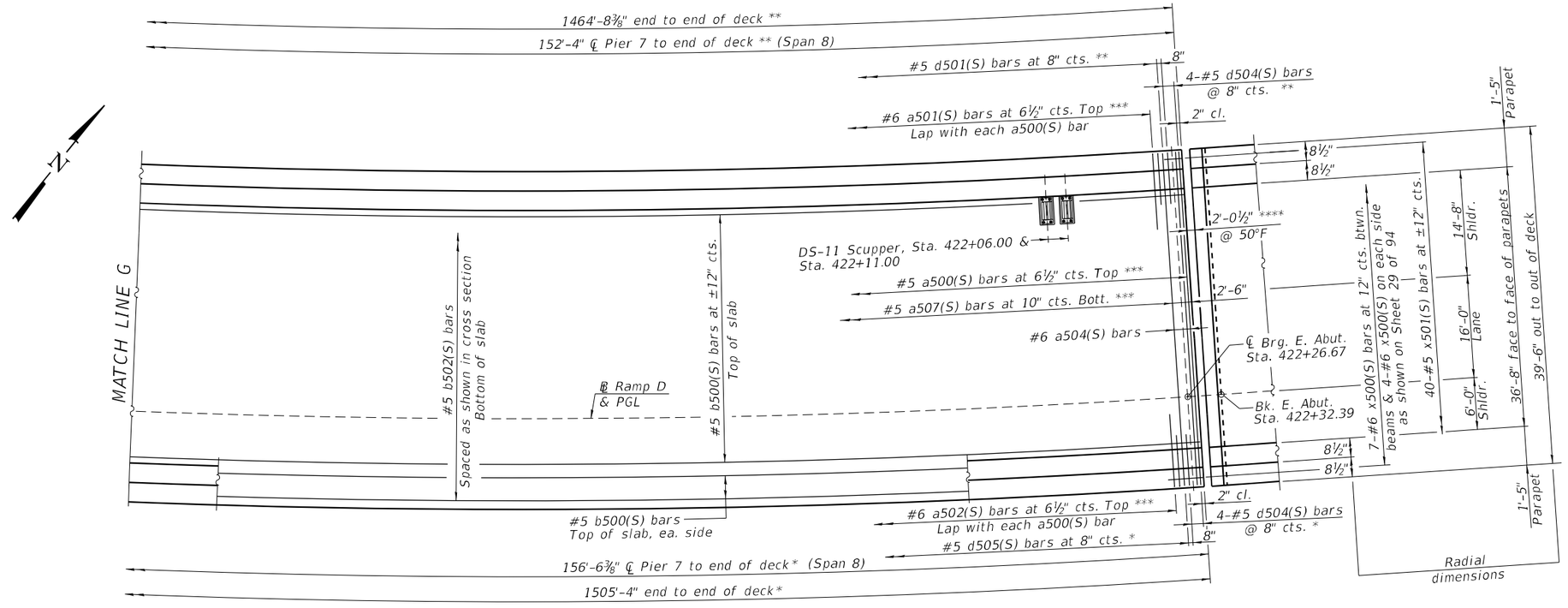
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE – 3
STRUCTURE NO. 010–1004
SHEET NO. 22 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	830
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



DECK PLAN - 7



DECK PLAN - 8

MINIMUM BAR LAP

#5 Bar = 2'-0"
#6 Bar = 2'-5"

NOTES:

1. Bend longitudinal reinforcement as required to fit in the field.
2. See sheets 24 thru 27 of 94 for superstructure details and Bill of Material.
3. Bars indicated thus 3x4-#6 etc. indicates 3 lines of bars with 4 lengths per line.

*Along inside face of South Parapet
**Along inside face of North Parapet
***Measured along south edge of deck, equally spaced along north edge
****Dimension showing concrete opening. For joint opening see sheet 29 of 94.

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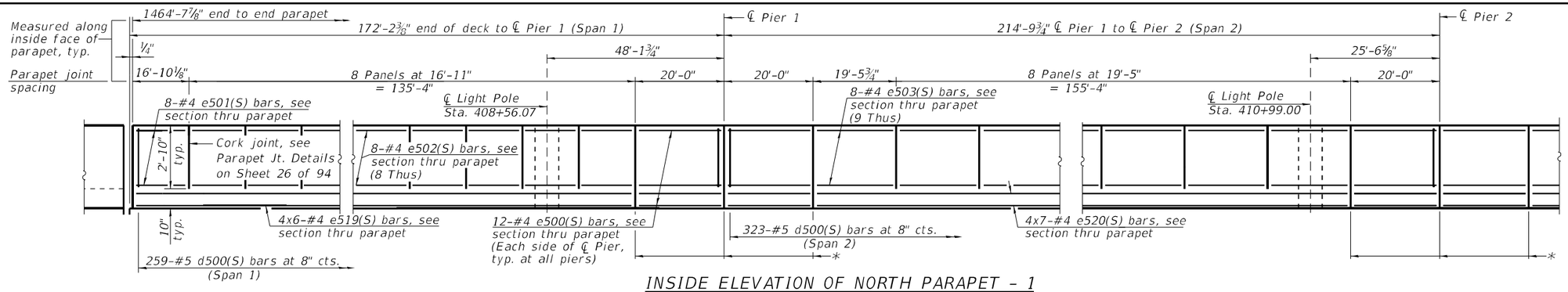
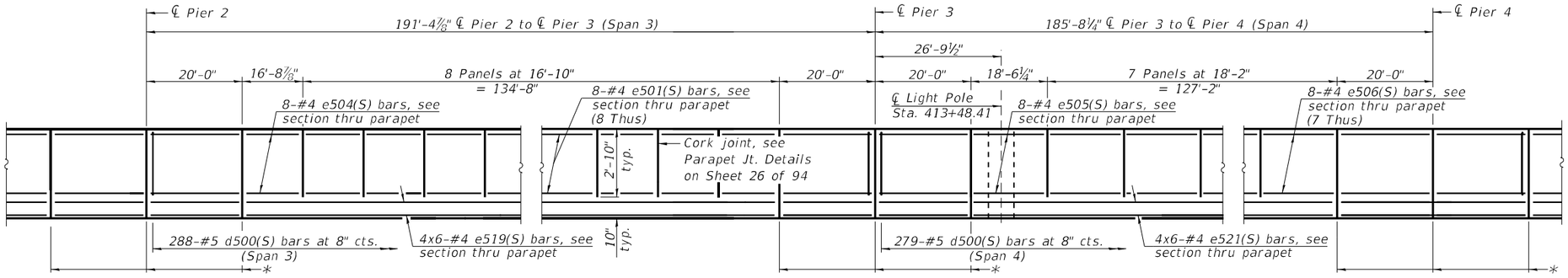
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE – 4
STRUCTURE NO. 010–1004
SHEET NO. 23 OF 94 SHEETS

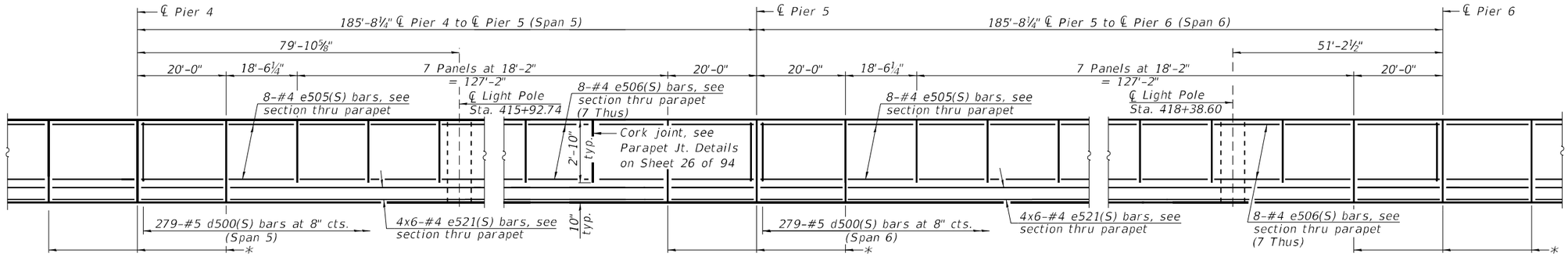
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	831
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		



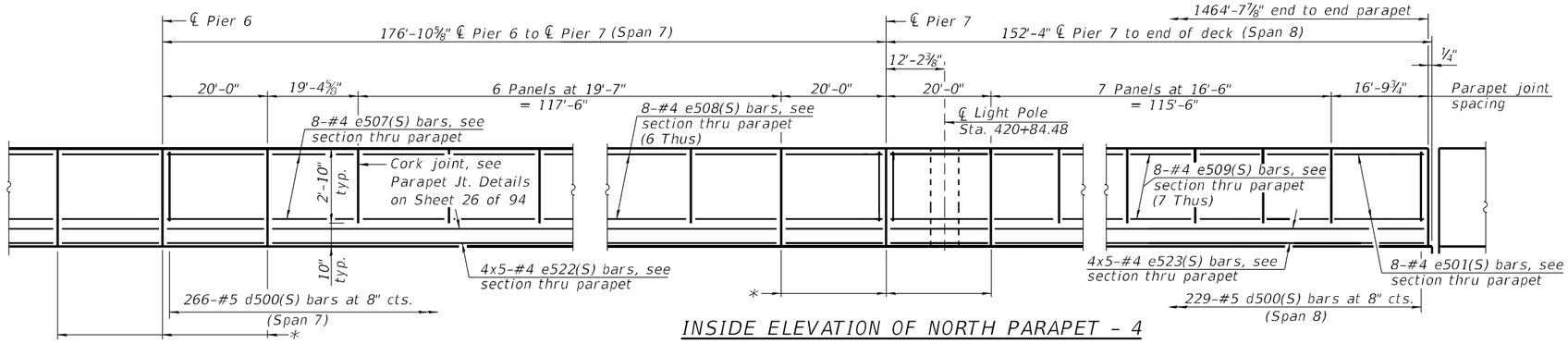
INSIDE ELEVATION OF NORTH PARAPET - 1



INSIDE ELEVATION OF NORTH PARAPET - 2



INSIDE ELEVATION OF NORTH PARAPET - 3



INSIDE ELEVATION OF NORTH PARAPET - 4

MINIMUM BAR LAP

#4 Bar = 1'-7"

NOTES:

1. Bend longitudinal reinforcement as required to fit in the field.
2. Bars indicated thus 3x40-#5 etc. indicates 3 lines of bars with 40 lengths per line.
3. See Sheet 26 of 94 for section thru parapet.

*⅛" Aluminum sheeted joints, full height.

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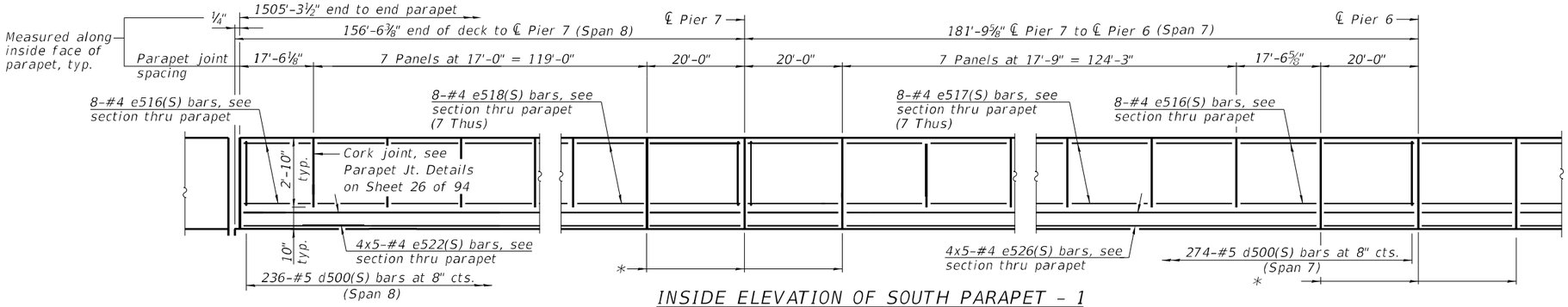
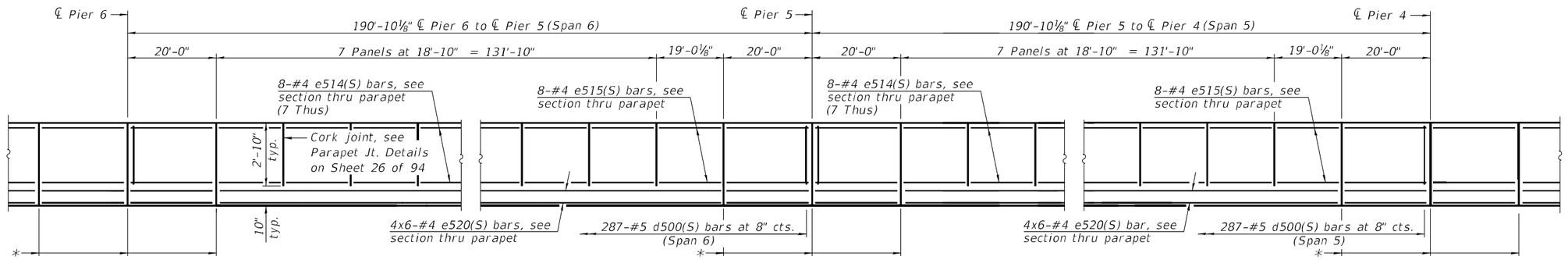
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS – 1
STRUCTURE NO. 010-1004
SHEET NO. 24 OF 94 SHEETS

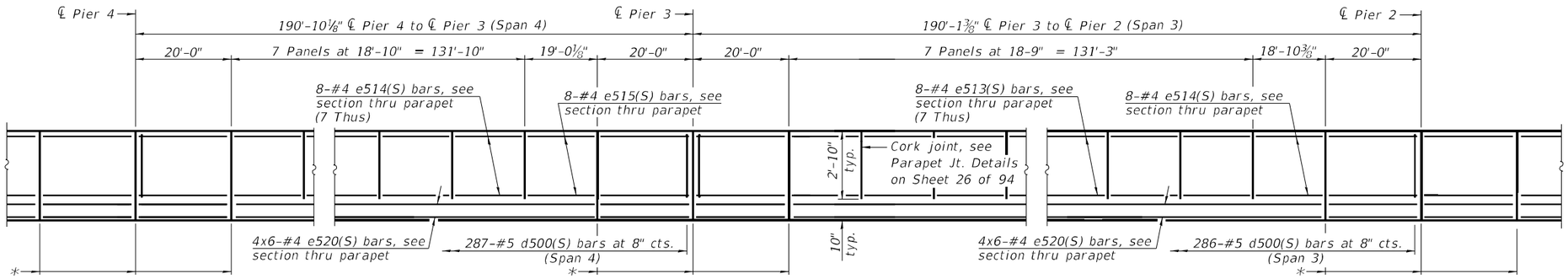
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	832
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		



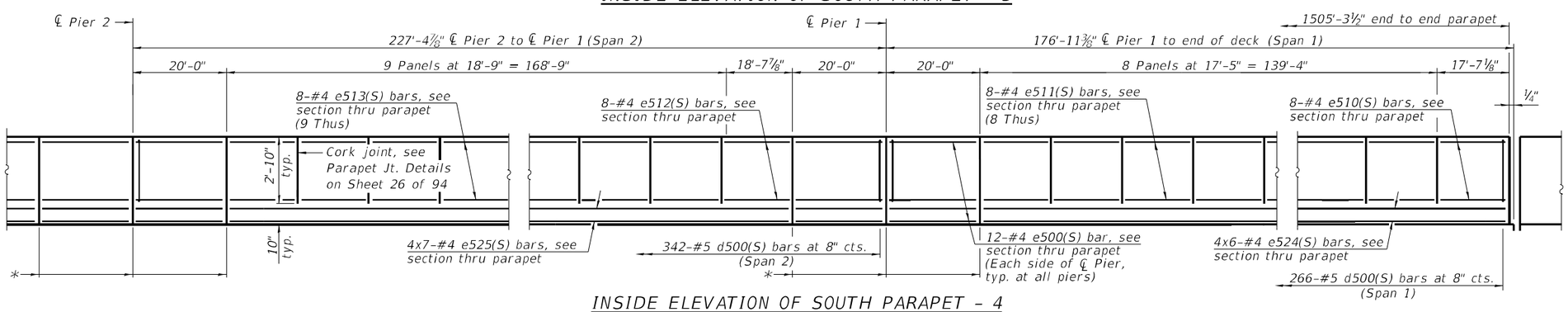
INSIDE ELEVATION OF SOUTH PARAPET - 1



INSIDE ELEVATION OF SOUTH PARAPET - 2



INSIDE ELEVATION OF SOUTH PARAPET - 3



INSIDE ELEVATION OF SOUTH PARAPET - 4

MINIMUM BAR LAP

#4 Bar = 1'-7"

NOTES:

1. Bend longitudinal reinforcement as required to fit in the field.
2. Bars indicated thus 3x40-#5 etc. indicates 3 lines of bars with 40 lengths per line.
3. See Sheet 26 of 94 for section thru parapet.

*⅛" Aluminum sheeted joints, full height.

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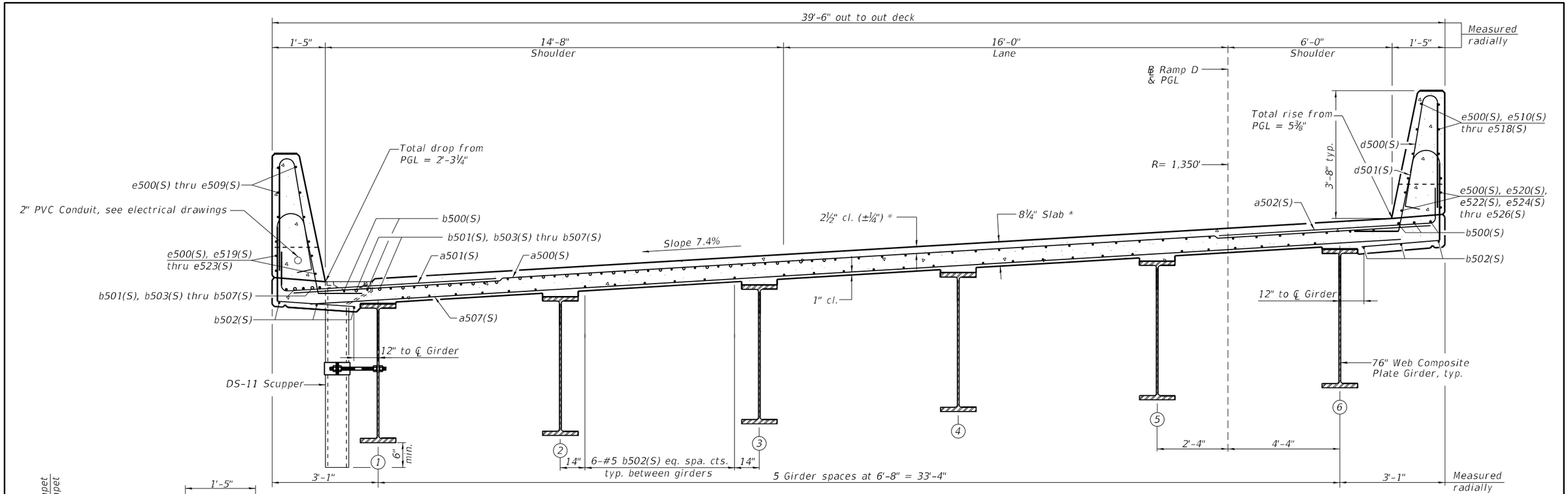
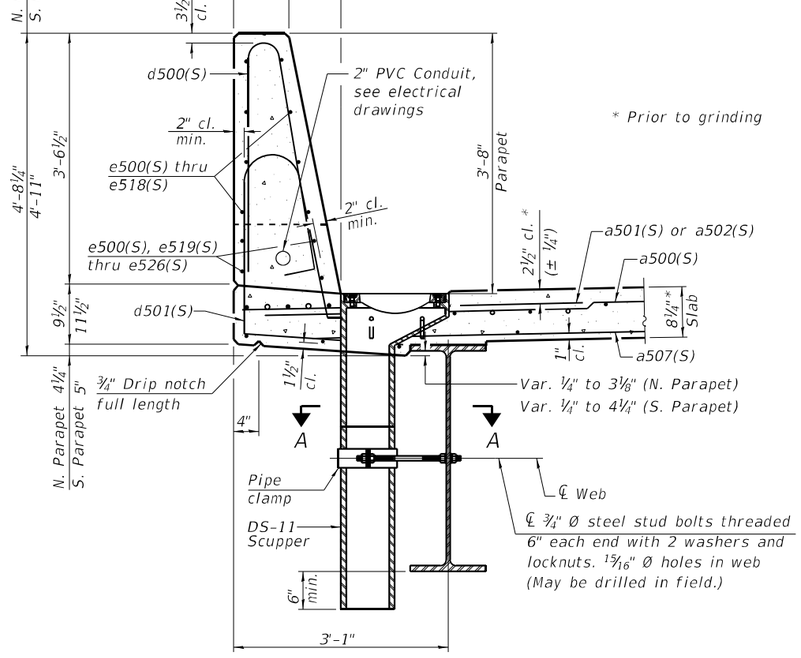
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS – 2
STRUCTURE NO. 010–1004
SHEET NO. 25 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	833
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



NEAR PIER



* Prior to grinding

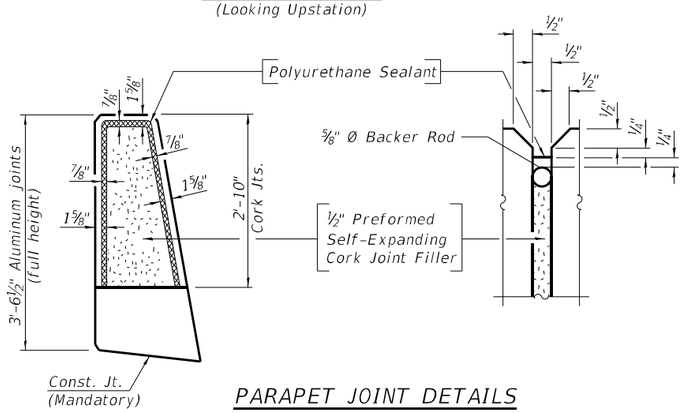
SECTION THRU PARAPET

(Scupper only at North Parapet)

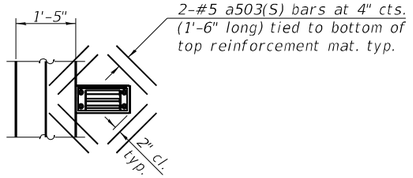
NEAR MIDSPAN

CROSS SECTION

(Looking Upstation)

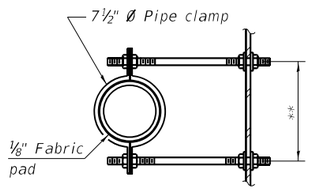


PARAPET JOINT DETAILS



PLAN

Note:
Cut longitudinal reinforcement to clear drainage scuppers.



SECTION A-A

**Dimension as required by pipe clamp

NOTES:

1. See Sheets 30 of 94 for Drainage Scupper Details.
2. The clamping device shall be galvanized according to AASHTO M232. Cost of clamping device included in Drainage Scuppers, DS-11.
3. The 1/8" aluminum sheet shall be ASTM B 209 alloy 3003-H14 and coated to minimize reaction with wet concrete. Cost included with Concrete Superstructures.
4. The Polyurethane Sealant shall be according to Article 1050.04 of the Standard Specifications and the color shall be gray.

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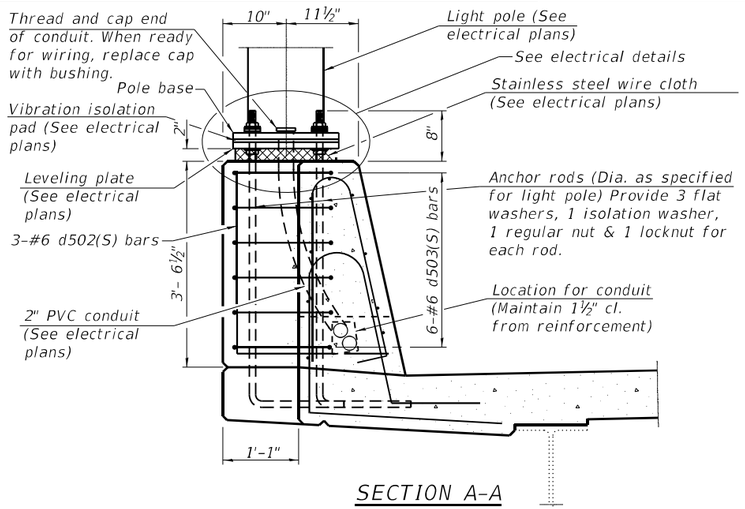
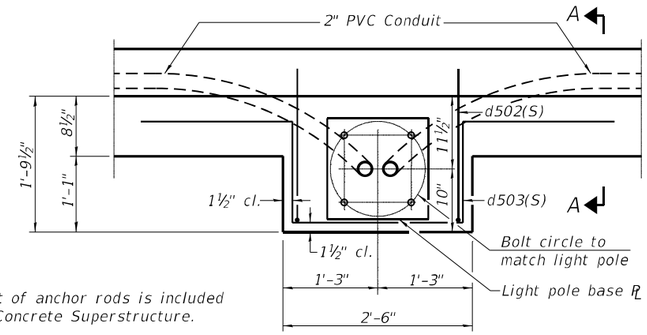
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS – 3
STRUCTURE NO. 010-1004
SHEET NO. 26 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	834
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



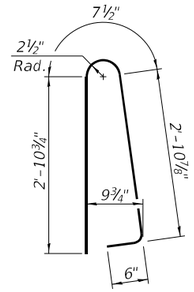
SECTION A-A



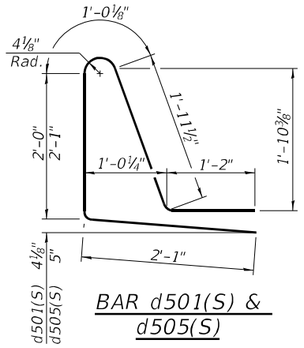
Note:
Cost of anchor rods is included with Concrete Superstructure.

PLAN

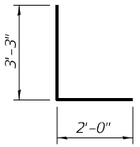
LIGHT POLE MOUNTED ON CONCRETE PARAPET



BAR d500(S)



BAR d501(S) & d505(S)



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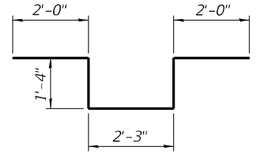
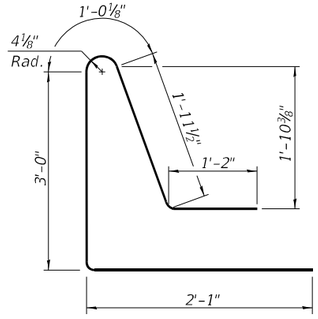


BAR d503(S)



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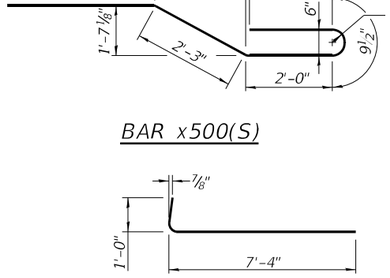
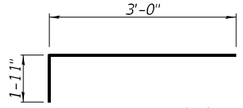
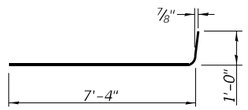


BAR x500(S)

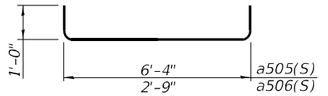
BAR a501(S)



BAR x501(S)



BAR a502(S)



BAR a505(S) & a506(S)

POURING SEQUENCE TABLE

℄ Length	Station
A = 115'-2⅛"	(1) = 408+44.33
B = 61'-0"	(2) = 409+60.33
C = 55'-0"	(3) = 410+75.67
D = 115'-4"	(4) = 411+91.67
E = 55'-0"	(5) = 412+73.00
F = 61'-0"	(6) = 413+66.00
G = 81'-4"	(7) = 414+65.00
H = 48'-0"	(8) = 415+58.00
I = 45'-0"	(9) = 416+53.00
J = 99'-0"	(10) = 417+49.00
K = 46'-0"	(11) = 418+48.00
L = 47'-0"	(12) = 419+38.00
M = 95'-0"	(13) = 420+23.00
N = 48'-0"	(14) = 421+16.00
O = 48'-0"	
P = 99'-0"	
Q = 43'-0"	
R = 47'-0"	
S = 85'-0"	
T = 49'-0"	
U = 44'-0"	
V = 110'-10"	

DECK POUR NOTES:

When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:

1) At least 72 hours shall have elapsed from the end of the previous pour.
2) The concrete strength shall have attained a minimum flexural strength of 675 psi or a minimum compressive strength of 4,000 psi.

DECK POURING SEQUENCE

(All distances measured along ℄ Ramp D)

NOTES:

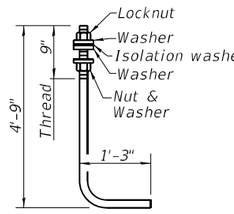
1. Stainless steel reinforcing bars shall be spaced to provide 1.5 times the bar diameter clear distance from any scupper.
2. Reinforcement bar bending dimensions are out to out.

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a500(S)	2,780	#5	39'-2"	
a501(S)	2,780	#6	8'-4"	
a502(S)	2,780	#6	8'-4"	
a503(S)	72	#5	1'-6"	
a504(S)	24	#6	39'-2"	
a505(S)	10	#5	8'-4"	
a506(S)	4	#5	4'-9"	
a507(S)	1,801	#5	38'-4"	
b500(S)	2,322	#5	29'-10"	
b501(S)	210	#6	26'-1"	
b502(S)	2,052	#5	28'-5"	
b503(S)	210	#6	25'-8"	
b504(S)	336	#6	27'-0"	
b505(S)	168	#6	27'-10"	
b506(S)	168	#6	26'-4"	
b507(S)	168	#6	27'-1"	
d500(S)	4,467	#5	7'-0"	
d501(S)	2,190	#5	8'-3"	
d502(S)	18	#6	5'-3"	
d503(S)	36	#6	8'-11"	
d504(S)	16	#5	9'-3"	
d505(S)	2,251	#5	8'-4"	
e500(S)	336	#4	19'-8"	
e501(S)	80	#4	16'-6"	
e502(S)	64	#4	16'-7"	
e503(S)	72	#4	19'-1"	
e504(S)	8	#4	16'-5"	
e505(S)	24	#4	18'-2"	
e506(S)	168	#4	17'-10"	
e507(S)	8	#4	19'-0"	
e508(S)	48	#4	19'-3"	
e509(S)	56	#4	16'-2"	
e510(S)	8	#4	17'-3"	
e511(S)	64	#4	17'-1"	
e512(S)	8	#4	18'-4"	
e513(S)	128	#4	18'-5"	
e514(S)	176	#4	18'-6"	
e515(S)	24	#4	18'-8"	
e516(S)	16	#4	17'-2"	
e517(S)	56	#4	17'-5"	

SUPERSTRUCTURE BILL OF MATERIAL (CONT.)

Bar	No.	Size	Length	Shape
e518(S)	56	#4	16'-8"	
e519(S)	48	#4	26'-9"	
e520(S)	124	#4	26'-6"	
e521(S)	72	#4	25'-9"	
e522(S)	40	#4	28'-9"	
e523(S)	20	#4	27'-9"	
e524(S)	24	#4	27'-6"	
e525(S)	28	#4	28'-3"	
e526(S)	20	#4	29'-9"	
x500(S)	86	#6	9'-6"	
x501(S)	80	#5	4'-11"	
Concrete Superstructure			Cu. Yd.	2,076.1
Protective Coat			Sq. Yd.	7,517
Reinforcement Bars, Stainless Steel			Pound	544,600



ANCHOR ROD

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

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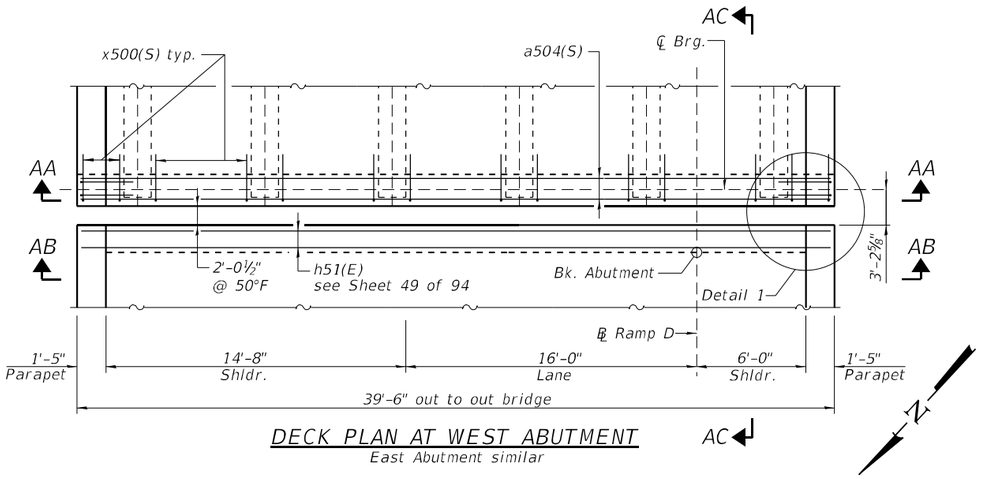
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

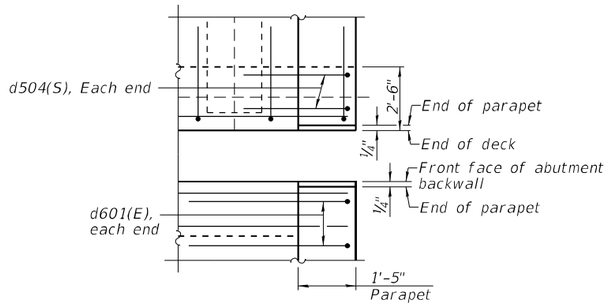
SUPERSTRUCTURE DETAILS – 4
STRUCTURE NO. 010-1004
SHEET NO. 27 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	835
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

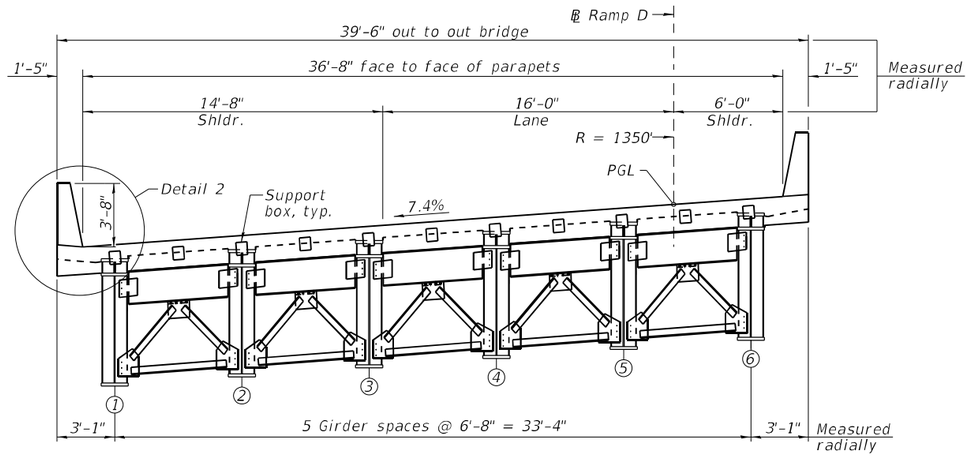


DECK PLAN AT WEST ABUTMENT

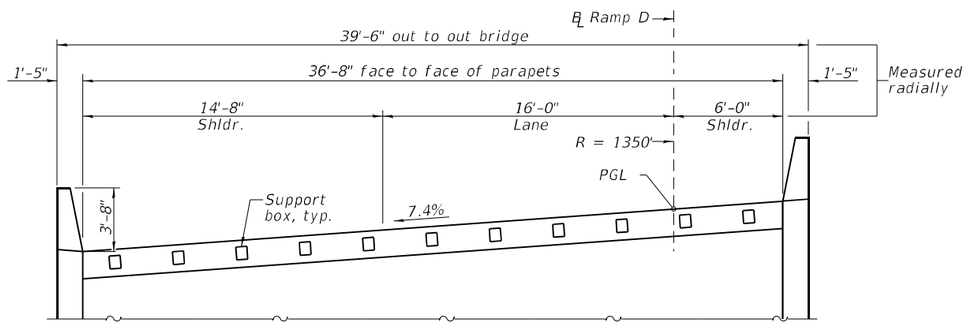
East Abutment similar



DETAIL 1



SECTION AA-AA



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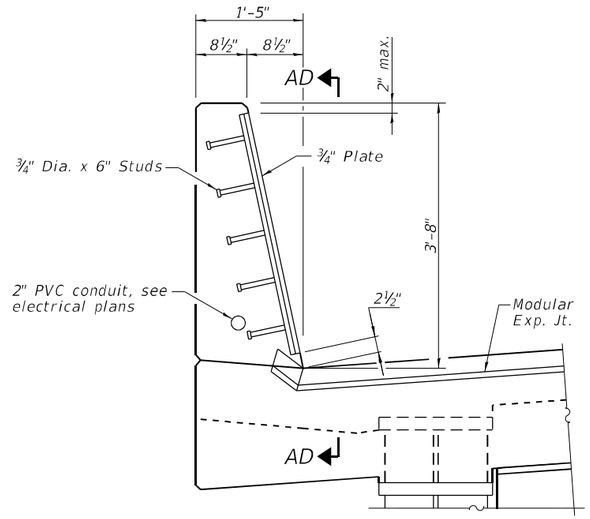

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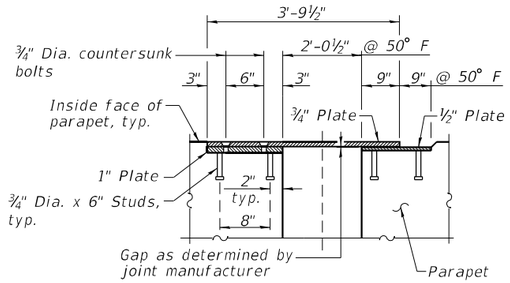
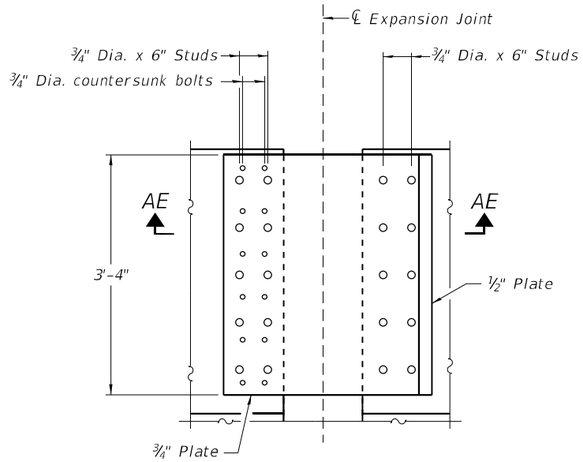


SECTION AE-AE



Direction of traffic

SECTION AD-AD

REQUIRED MOVEMENT

(AASHTO Load Combination Service I)

	W. Abut.	E. Abut.
Total longitudinal (open/close) movement	5.9"	5.4"
Total lateral movement	1.8"	1.4"

(Movements shown are the values of either expansion only or contraction only from 50° F and include a 1.2 safety factor.)

BILL OF MATERIAL

Item	Unit	Total
Modular Expansion Joint-Swivel 12"	Foot	73.5

NOTES:

1. For bar details, bar list, and the associated Bill of Material, see Sheet 27 of 94.
2. For Section AC-AC, see Sheet 29 of 94.
3. Cost of parapet sliding plates, embedded plates, and anchorage studs included with Modular Expansion Joint-Swivel 12".
4. Modular expansion joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.
5. Prior to placement of joints, the Contractor shall coordinate with the Modular Joint Manufacturer to ensure that the joint will be properly supported and that the reinforcement bars will not interfere with the joint components. Any necessary adjustments to the reinforcement layout shall be submitted to the Engineer for approval.
6. Parapet sliding plates, embedded plates, and anchorage studs shall be hot dip galvanized according to AASHTO M 111.
7. On steel surfaces of the modular expansion joint that are to be painted, the surfaces shall be shop painted with an inorganic zinc rich primer per AASHTO M 300, Type 1. No field painting required.

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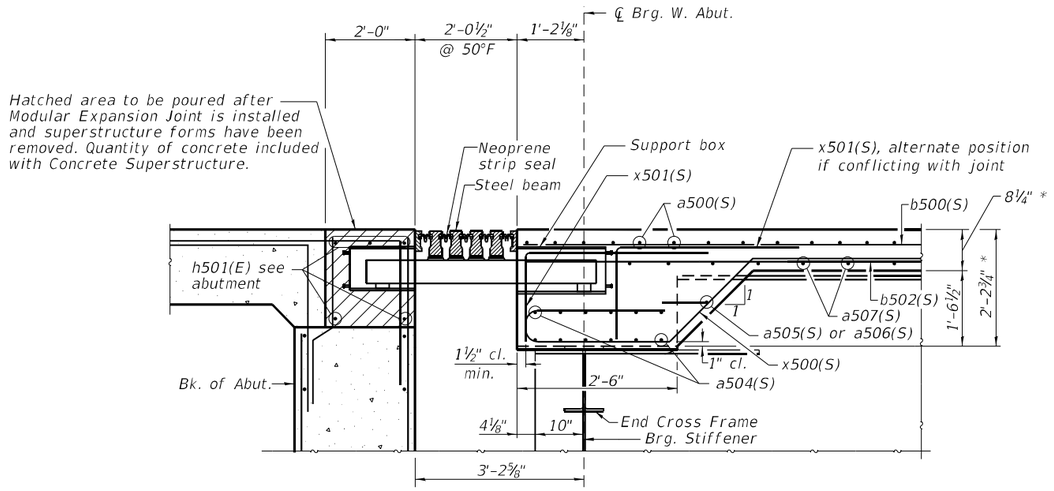
DEPARTMENT OF TRANSPORTATION

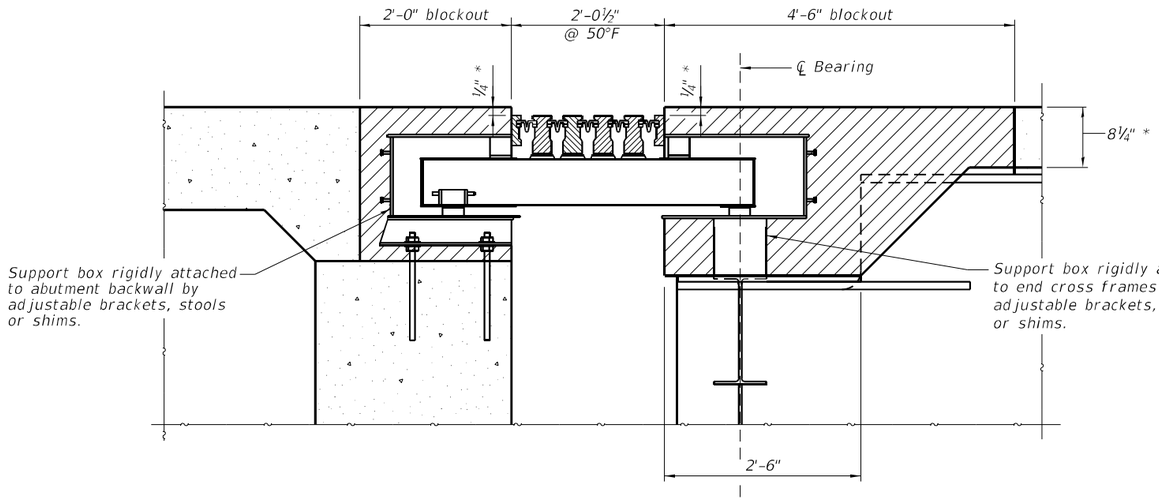
MODULAR EXPANSION SWIVEL JOINT
STRUCTURE NO. 010-1004
SHEET NO. 28 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	836
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		



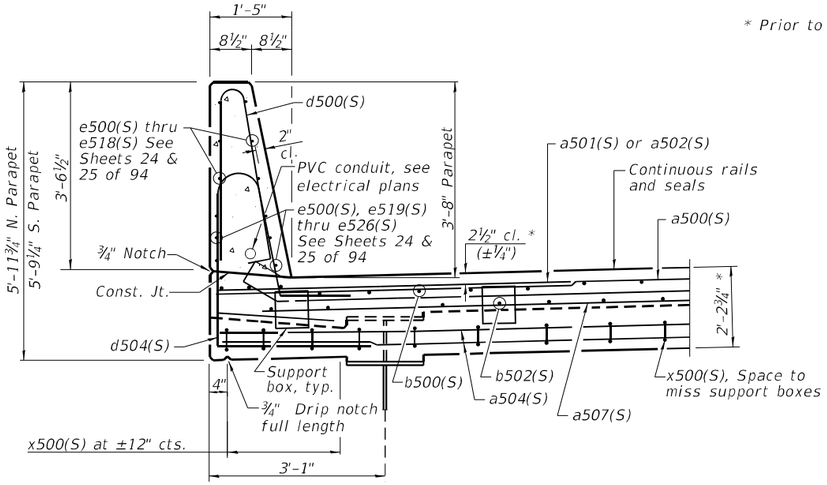
SECTION AC-AC

(Blockout on deck side of joint omitted to show bar details.)

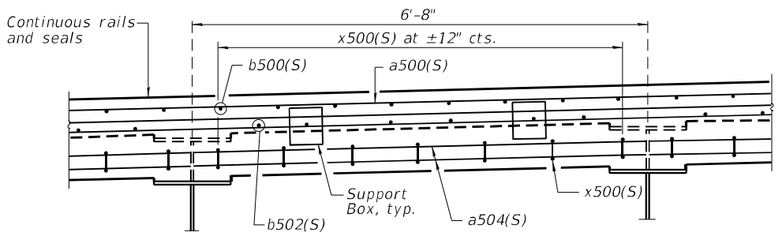


SUPPORT BOX DETAIL

* Prior to grinding



SECTION THRU PARAPET AT EXPANSION JOINT



SECTION THRU DECK AT EXPANSION JOINT

(Typ. between beams)

NOTES:

1. Modular joint assemblies shall be installed with forming and reinforcement bars in place prior to pouring the adjoining concrete deck span.
2. Modular joint assembly shall be adjusted for temperature prior to pouring blockout area.
3. Bars in blockout may be adjusted in the field if necessary to miss joint support boxes as approved by the Engineer. See shop drawings for Modular Expansion Joint. See Special Provisions.

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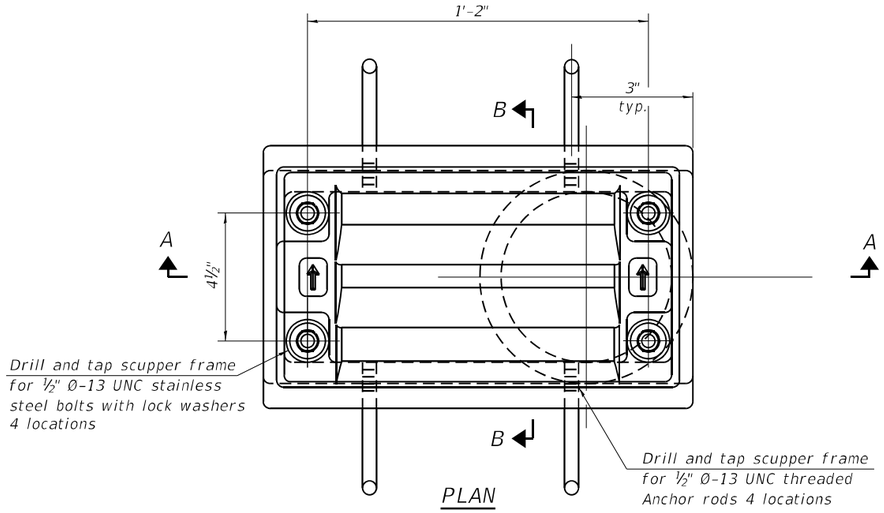
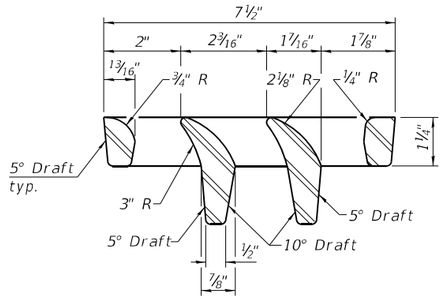
DEPARTMENT OF TRANSPORTATION

MODULAR EXPANSION SWIVEL JOINT DETAILS
STRUCTURE NO. 010-1004
SHEET NO. 29 OF 94 SHEETS

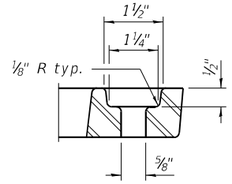
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	837
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



PLAN



VANE GRATE DETAIL



GRATE BOLT HOLE DETAIL

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 35B and AASHTO M306.

Bolts, anchor rods, nuts and washers shall be according to ASTM A307 and shall be galvanized according to AASHTO M232. As an alternate stainless steel may be used.

Stainless steel hardware shall be according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frames and downspouts; however, the scupper grates shall remain cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

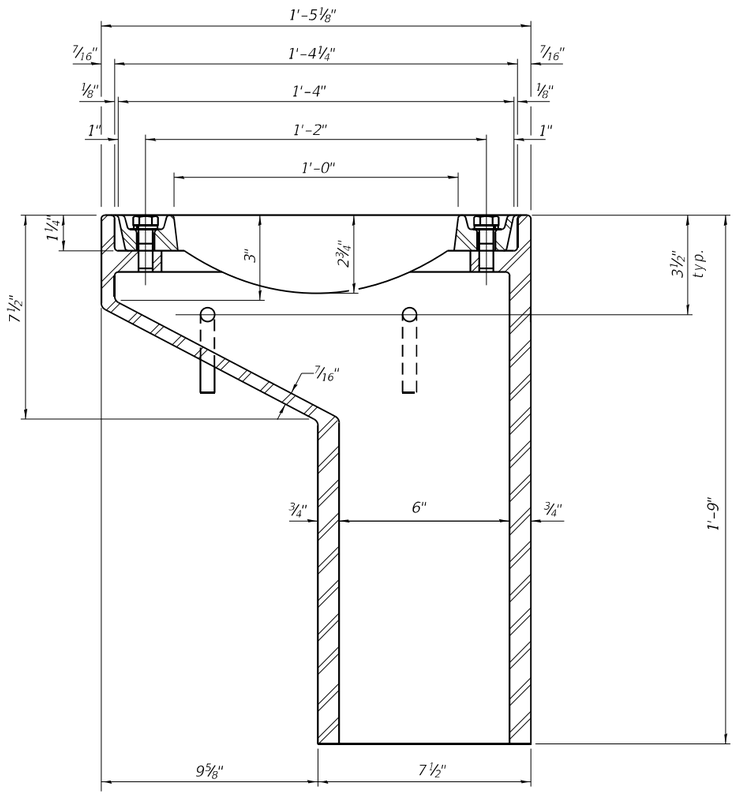
Structural steel scupper frames and downspouts, when utilized, shall be galvanized according to AASHTO M111.

As an alternate, fiberglass may be used for downspouts according to ASTM D2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. in lieu of the cast iron or structural steel.

Exterior surfaces of downspouts and exterior exposed surfaces of the scupper frame below deck shall be treated as specified on sheet 26 of 94.

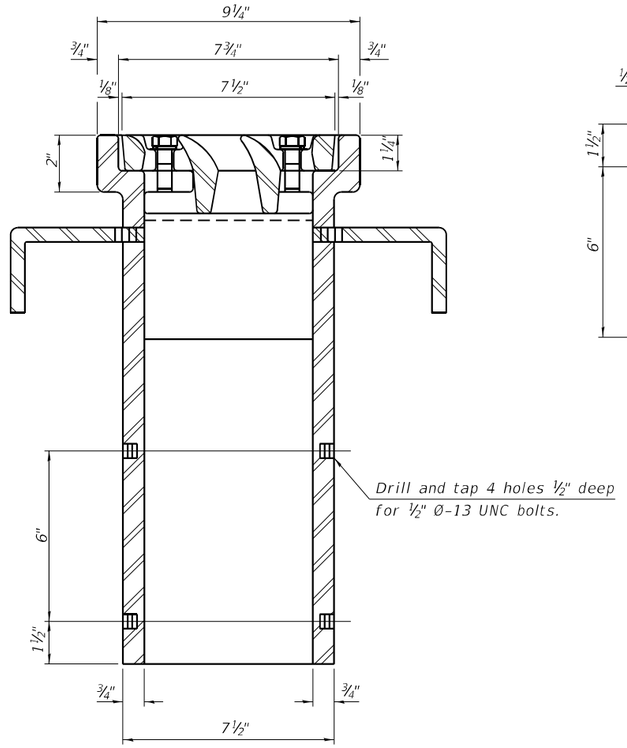
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

Cost of the grate, frame, downspout, anchor rods, nuts and washers including complete installation of the scupper shall be paid for at the contract unit price for Drainage Scupper, DS-11.

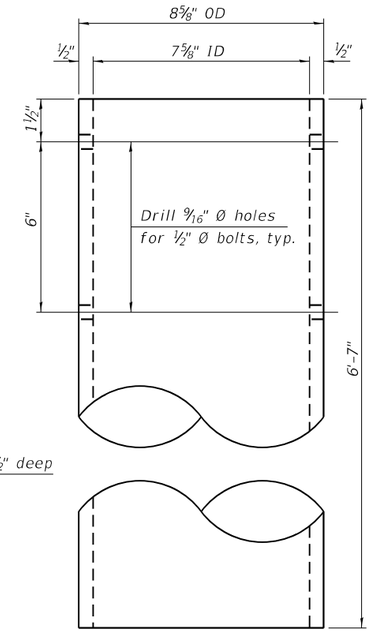


SECTION A-A

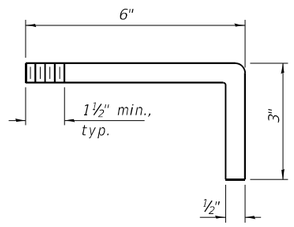
See sheet 26 of 94 for scupper location relative to parapet.



SECTION B-B



DOWNSPOUT



ANCHOR ROD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	9

DS-11 1-1-2020

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DRAINAGE SCUPPER DS-11
STRUCTURE NO. 010-1004
SHEET NO. 30 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	838
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		

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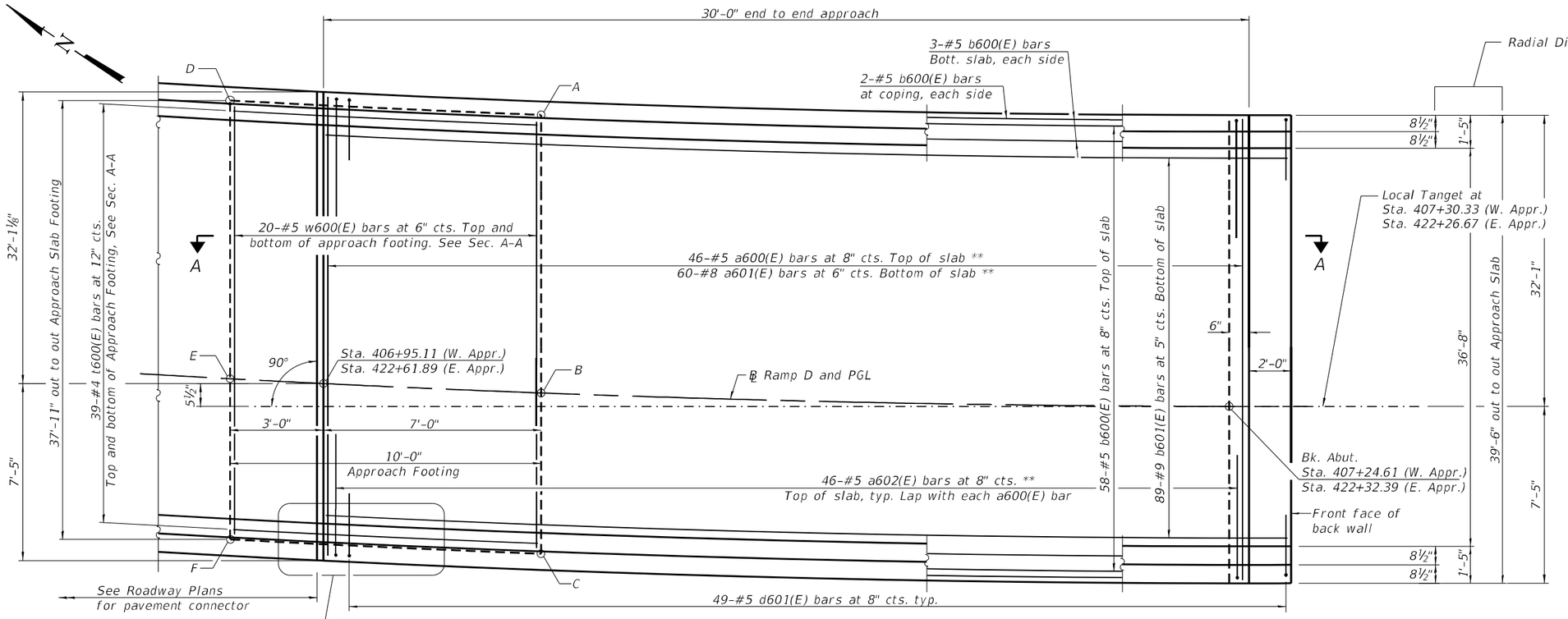


PLAN

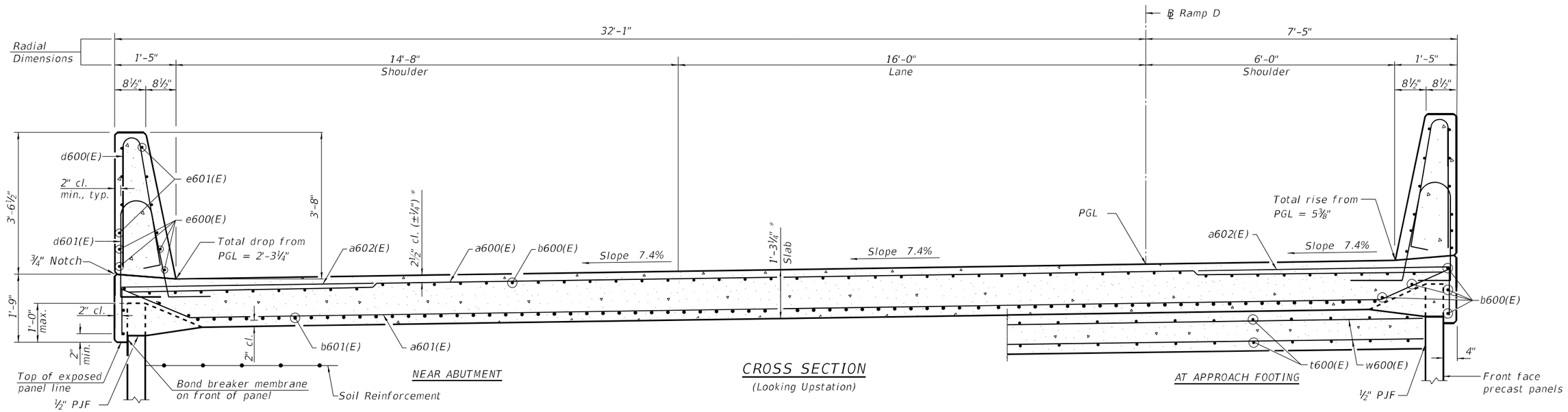
(W. Approach shown, E. Approach opposite)

APPROACH FOOTING STATIONS AND OFFSETS

	West Approach		East Approach	
Point	Station	Offset	Station	Offset
A	407+01.44	31.29' Lt.	422+55.56	31.29' Lt.
B	407+02.11	0'	422+54.89	0'
C	407+02.25	6.63' Rt.	422+54.75	6.63' Rt.
D	406+91.20	31.29' Lt.	422+65.80	31.29' Lt.
E	406+92.11	0'	422+64.89	0'
F	406+92.30	6.63' Rt.	422+64.70	6.63' Rt.

TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

	West Approach		East Approach	
Point	Top	Bottom	Top	Bottom
A	802.77	801.94	789.72	788.89
B	805.09	804.26	792.05	791.22
C	805.59	804.76	792.55	791.72
D	802.58	801.75	789.52	788.69
E	804.91	804.08	791.85	791.02
F	805.40	804.57	792.35	791.52



CROSS SECTION

(Looking Upstation)

* Prior to grinding

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DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS – 1
STRUCTURE NO. 010-1004
SHEET NO. 31 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	839
		CONTRACT NO. 70B99		
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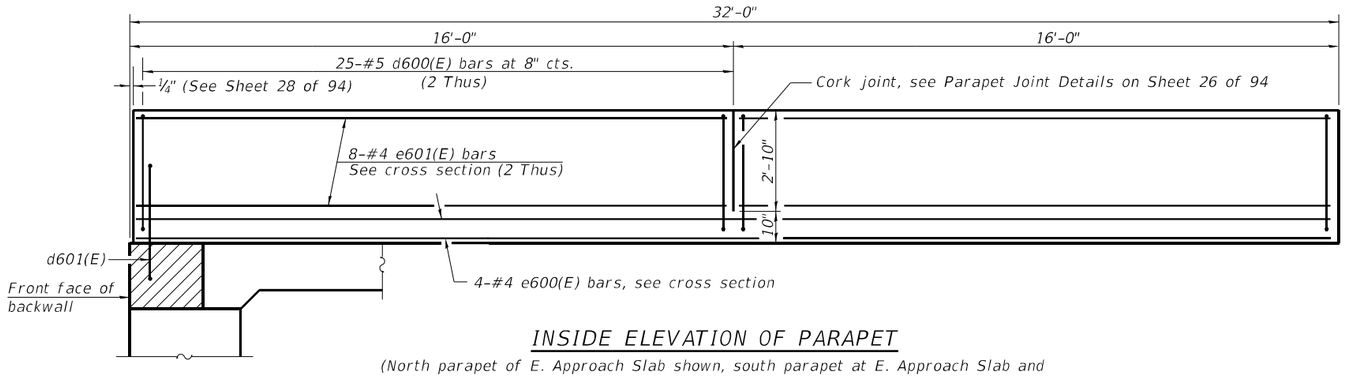
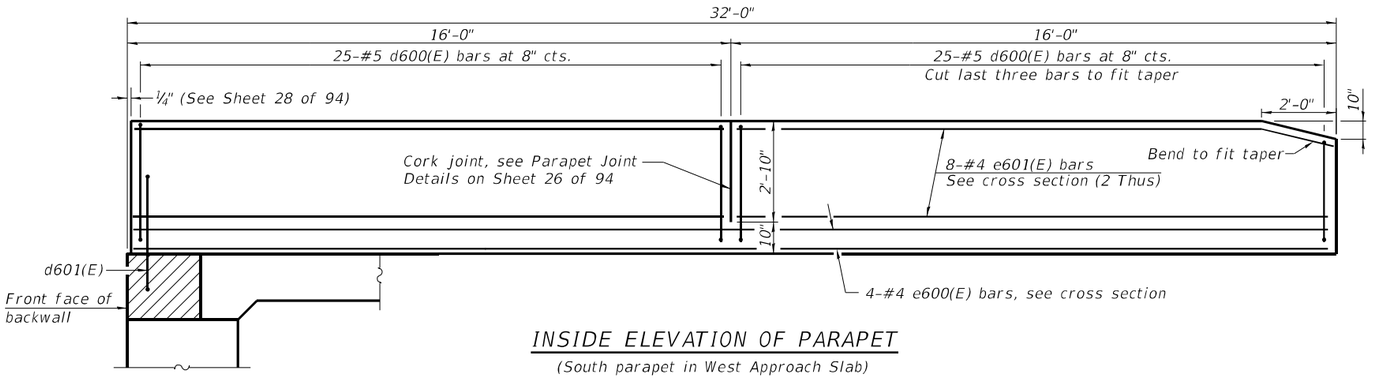


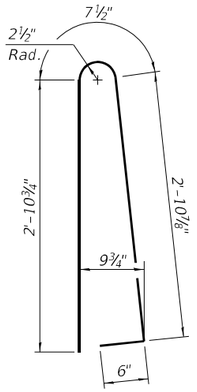
INSIDE ELEVATION OF PARAPET

(North parapet of E. Approach Slab shown, south parapet at E. Approach Slab and north parapet at W. Approach Slab similar by rotation)

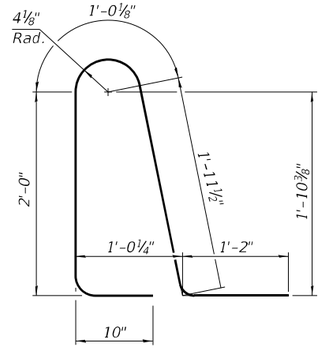


INSIDE ELEVATION OF PARAPET

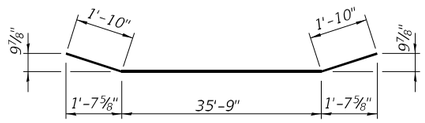
(South parapet in West Approach Slab)



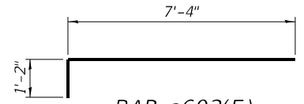
BAR d600(E)



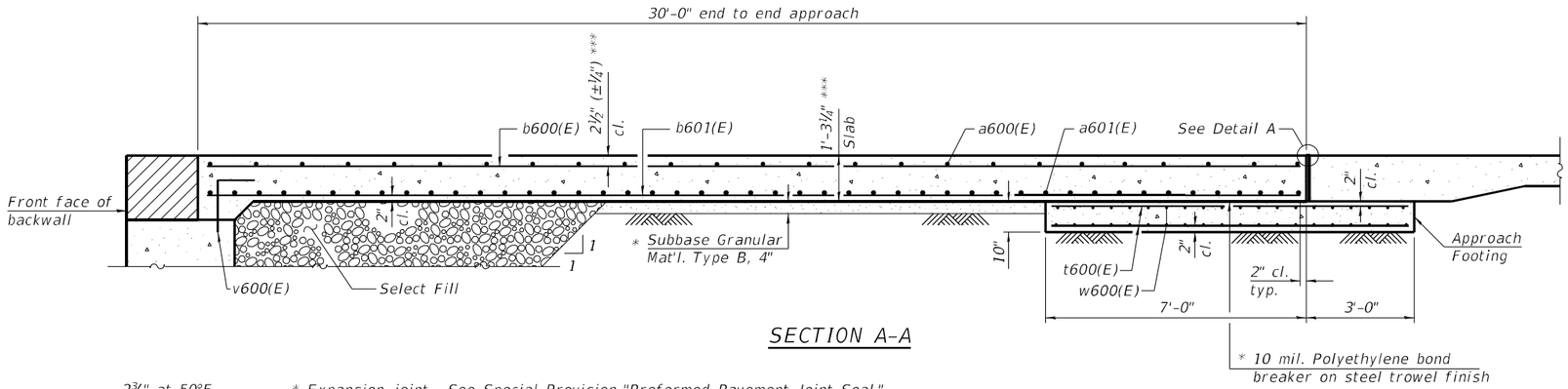
BAR d601(E)



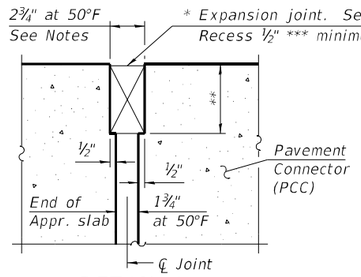
BAR a601(E)



BAR a602(E)



SECTION A-A



DETAIL A

* Cost included with Concrete Superstructure (Approach Slab).
** Per manufacturer recommendations
*** Prior to grinding

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a600(E)	92	#5	39'-2"	
a601(E)	120	#8	39'-5"	
a602(E)	184	#5	8'-6"	
b600(E)	136	#5	29'-8"	
b601(E)	178	#9	29'-8"	
d600(E)	200	#5	7'-0"	
d601(E)	196	#5	7'-0"	
e600(E)	16	#4	31'-8"	
e601(E)	64	#4	15'-8"	
t600(E)	156	#4	9'-8"	
w600(E)	80	#5	37'-7"	
Concrete Structures			Cu. Yd.	17.1
Concrete Superstructure			Cu. Yd.	18.1
Protective Coat			Sq. Yd.	324
Concrete Superstructure (Approach Slab)			Cu. Yd.	115.6
Reinforcement Bars, Epoxy Coated			Pound	48,230

NOTES:

1. Parapet concrete shall be paid for as Concrete Superstructure.
2. Approach slab shall be paid for as Concrete Superstructure (Approach Slab).
3. Approach footing concrete shall be paid for as Concrete Structures.
4. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
5. For Select Fill and MSE wall details, see Sheets 53 thru 62 of 94. Any quantity of Select Fill required beyond the limits of the MSE Wall reinforced soil mass will be included in the cost of Concrete Superstructure (Approach Slab).
6. For Type 6 terminal connections to south parapet of west approach slab see Highway Standard 631031.
7. Reinforcement bar bending dimensions are out to out.

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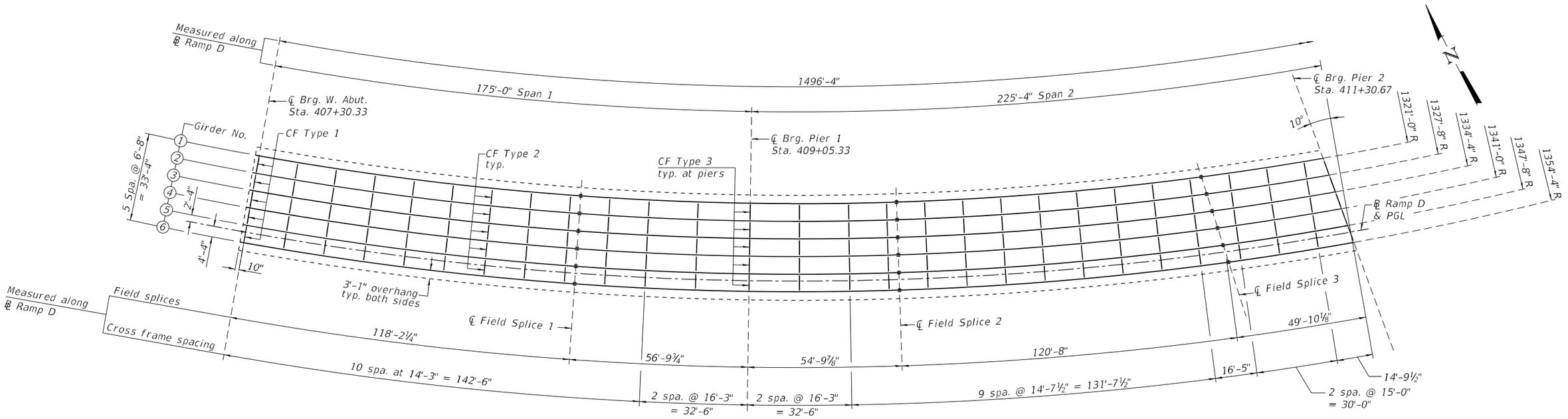
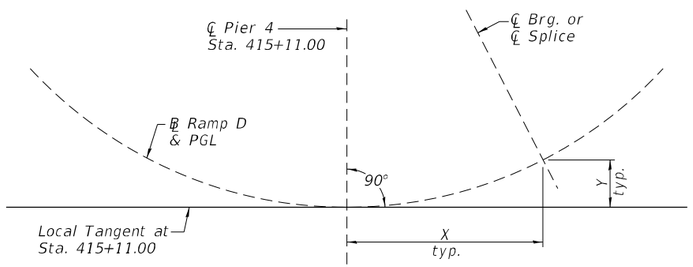
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS – 2
STRUCTURE NO. 010-1004
SHEET NO. 32 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	840
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



GIRDER FRAMING PLAN – 1



CURVED GIRDER LAYOUT

(X measured along local tangent)

GIRDER COORDINATES

(All dimensions in feet)

Girder	℄ Brg. W. Abut.		℄ Field Splice 1		℄ Brg. Pier 1		℄ Field Splice 2		℄ Field Splice 3		℄ Brg. Pier 2	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	-722.029	243.783	-622.546	184.892	-572.974	159.730	-524.177	137.449	-418.699	97.111	-372.170	82.510
2	-725.673	238.200	-625.688	179.012	-575.975	153.723	-526.822	131.330	-419.672	90.407	-372.895	75.776
3	-729.316	232.618	-628.830	173.132	-578.757	147.716	-529.468	125.211	-420.645	83.705	-373.620	69.042
4	-732.960	227.035	-631.972	167.252	-581.648	141.709	-532.113	119.091	-421.618	77.004	-374.344	62.309
5	-736.604	221.452	-635.114	161.372	-584.540	135.703	-534.759	112.972	-422.590	70.304	-375.069	55.578
6	-740.248	215.870	-638.255	155.492	-587.432	129.696	-537.404	106.852	-423.562	63.604	-375.793	48.847

NOTES:

1. See Sheets 37 and 38 of 94 for Girder Elevation.
2. See Sheet 44 of 94 for Camber and Top of Web Elevations.
3. See Sheets 41 thru 43 of 94 for Moment and Reaction Tables.
4. See Sheet 40 of 94 for bolted Field Splice Details.
5. See Sheet 39 of 94 for Cross Frame Details.
6. Girder spacing and cross frame orientations are radial to the ℄ of Ramp D.
7. CF denotes Cross Frame.

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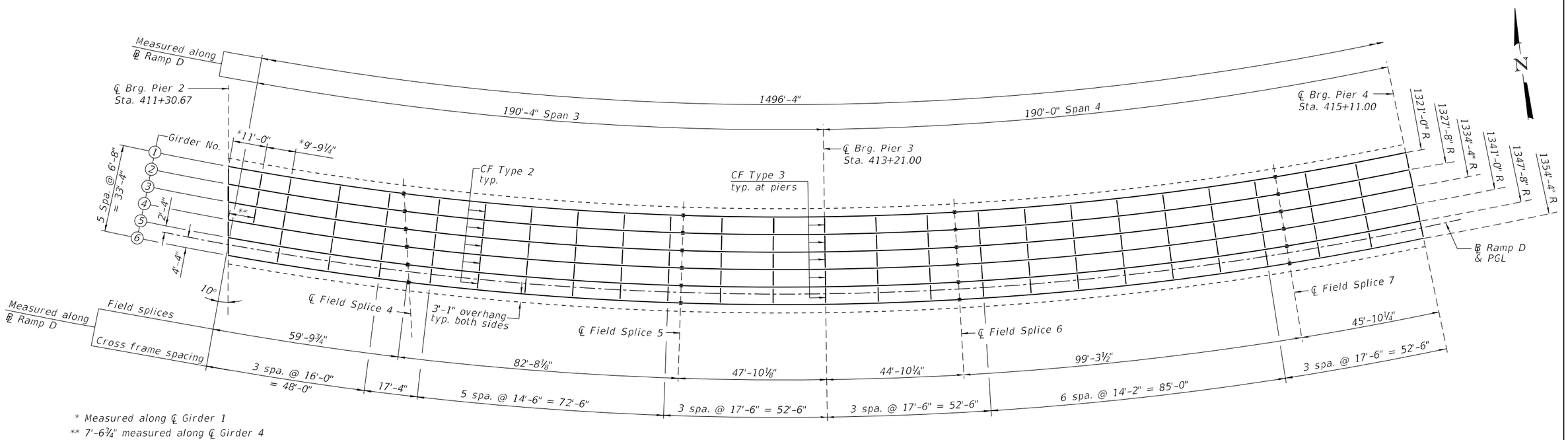
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN – 1
STRUCTURE NO. 010–1004
SHEET NO. 33 OF 94 SHEETS

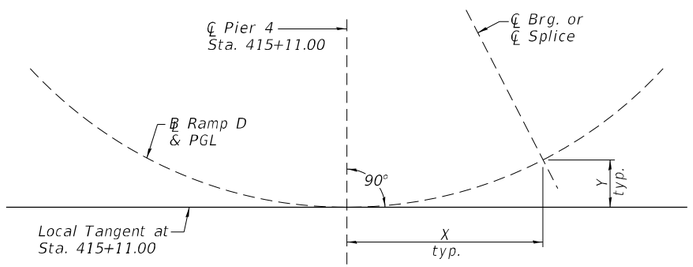
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	841
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



* Measured along ℄ Girder 1

** 7'-6¾" measured along ℄ Girder 4

GIRDER FRAMING PLAN - 2



CURVED GIRDER LAYOUT

(X measured along local tangent)

GIRDER COORDINATES

(All dimensions in feet)

Girder	℄ Field Splice 4		℄ Field Splice 5		℄ Brg. Pier 3		℄ Field Splice 6		℄ Field Splice 7		℄ Brg. Pier 4	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	-315.670	67.271	-231.535	49.446	-185.305	42.062	-141.752	36.628	-44.859	29.762	0.000	29.000
2	-316.096	60.511	-232.703	42.882	-186.240	35.461	-142.467	29.999	-45.086	23.099	0.000	22.333
3	-316.522	53.752	-233.872	36.319	-187.176	28.860	-143.183	23.371	-45.312	16.436	0.000	15.667
4	-316.948	46.994	-235.040	29.755	-188.111	22.259	-143.898	16.743	-45.538	9.773	0.000	9.000
5	-317.373	40.237	-236.209	23.192	-189.046	15.659	-144.614	10.115	-45.765	3.111	0.000	2.333
6	-317.799	33.481	-237.377	16.628	-189.981	9.058	-145.329	3.487	-45.991	-3.552	0.000	-4.333

NOTES:

1. See Sheets 37 and 38 of 94 for Girder Elevation.
2. See Sheet 44 of 94 for Camber and Top of Web Elevations.
3. See Sheets 41 thru 43 of 94 for Moment and Reaction Tables.
4. See Sheet 40 of 94 for bolted Field Splice Details.
5. See Sheet 39 of 94 for Cross Frame Details.
6. Girder spacing and cross frame orientations are radial to the ℄ of Ramp D.
7. CF denotes Cross Frame.
8. See Sheet 33 of 94 for Pier 2 girder coordinates.

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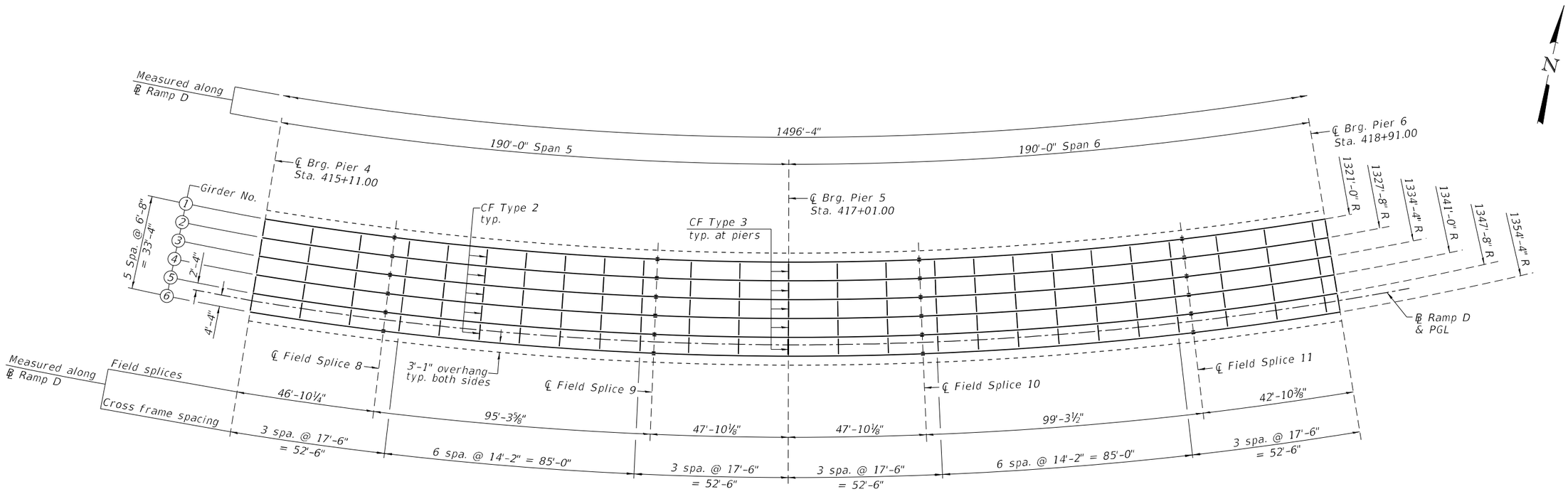
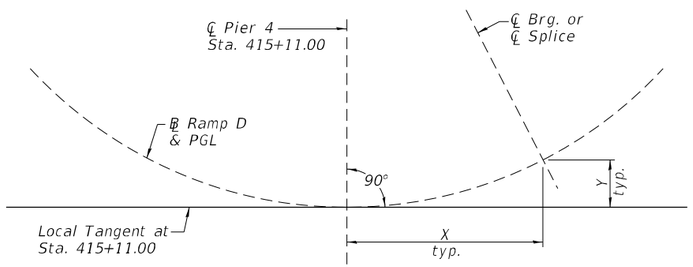
FRAMING PLAN – 2
STRUCTURE NO. 010–1004
SHEET NO. 34 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	842
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



GIRDER FRAMING PLAN - 3



CURVED GIRDER LAYOUT

(X measured along local tangent)

GIRDER COORDINATES

(All dimensions in feet)

Girder	℄ Field Splice 8		℄ Field Splice 9		℄ Brg. Pier 5		℄ Field Splice 10		℄ Field Splice 11		℄ Brg. Pier 6	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	45.834	29.795	138.843	36.317	185.305	42.062	231.535	49.449	326.477	69.979	366.946	80.988
2	46.066	23.133	139.544	29.687	186.240	35.461	232.703	42.886	328.125	63.519	368.798	74.584
3	46.297	16.470	140.244	23.057	187.176	28.860	233.872	36.322	329.772	57.059	370.650	68.179
4	46.528	9.807	140.945	16.428	188.111	22.259	235.040	29.759	331.420	50.599	372.502	61.775
5	46.759	3.145	141.646	9.798	189.046	15.659	236.209	23.195	333.067	44.140	374.354	55.371
6	46.991	-3.518	142.347	3.168	189.981	9.058	237.377	16.632	334.715	37.680	376.206	48.966

NOTES:

1. See Sheets 37 and 38 of 94 for Girder Elevation.
2. See Sheet 44 of 94 for Camber and Top of Web Elevations.
3. See Sheets 41 thru 43 of 94 for Moment and Reaction Tables.
4. See Sheet 40 of 94 for bolted Field Splice Details.
5. See Sheet 39 of 94 for Cross Frame Details.
6. Girder spacing and cross frame orientations are radial to the ℄ of Ramp D.
7. CF denotes Cross Frame.
8. See Sheet 34 of 94 for Pier 4 girder coordinates.

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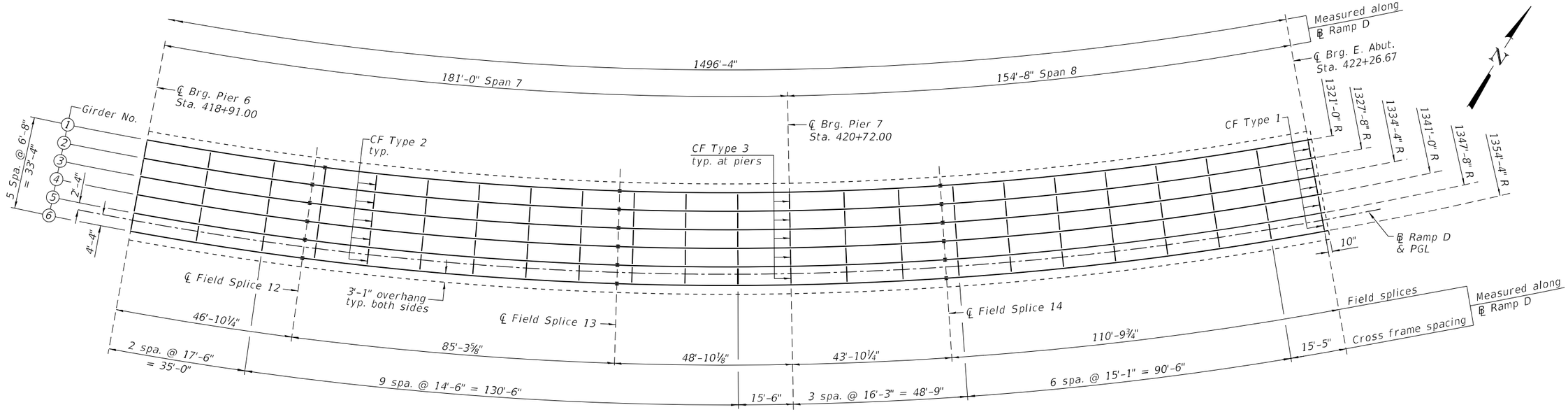
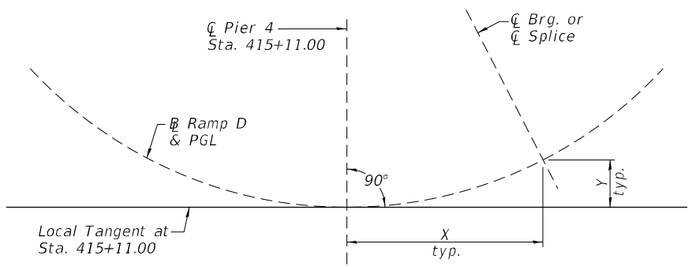
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN – 3
STRUCTURE NO. 010–1004
SHEET NO. 35 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	843
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



GIRDER FRAMING PLAN - 4



CURVED GIRDER LAYOUT

(X measured along local tangent)

GIRDER COORDINATES

(All dimensions in feet)

Girder	℄ Field Splice 12		℄ Field Splice 13		℄ Brg. Pier 7		℄ Field Splice 14		℄ Brg. E. Abut.	
	X	Y	X	Y	X	Y	X	Y	X	Y
1	410.756	94.484	489.220	122.929	533.285	141.427	572.262	159.388	667.950	210.314
2	412.828	88.148	491.689	116.736	535.977	135.328	575.150	153.379	671.321	204.563
3	414.901	81.811	494.157	110.544	538.668	129.229	578.038	147.371	674.692	198.811
4	416.974	75.475	496.626	104.351	541.359	123.130	580.926	141.362	678.063	193.059
5	419.047	69.139	499.095	98.159	544.051	117.030	583.814	135.353	681.434	187.308
6	421.120	62.803	501.564	91.966	546.742	110.931	586.702	129.345	684.805	181.556

NOTES:

1. See Sheets 37 and 38 of 94 for Girder Elevation.
2. See Sheet 44 of 94 for Camber and Top of Web Elevations.
3. See Sheets 41 thru 43 of 94 for Moment and Reaction Tables.
4. See Sheet 40 of 94 for bolted Field Splice Details.
5. See Sheet 39 of 94 for Cross Frame Details.
6. Girder spacing and cross frame orientations are radial to the ℄ of Ramp D.
7. CF denotes Cross Frame.
8. See Sheet 35 of 94 for Pier 6 girder coordinates.

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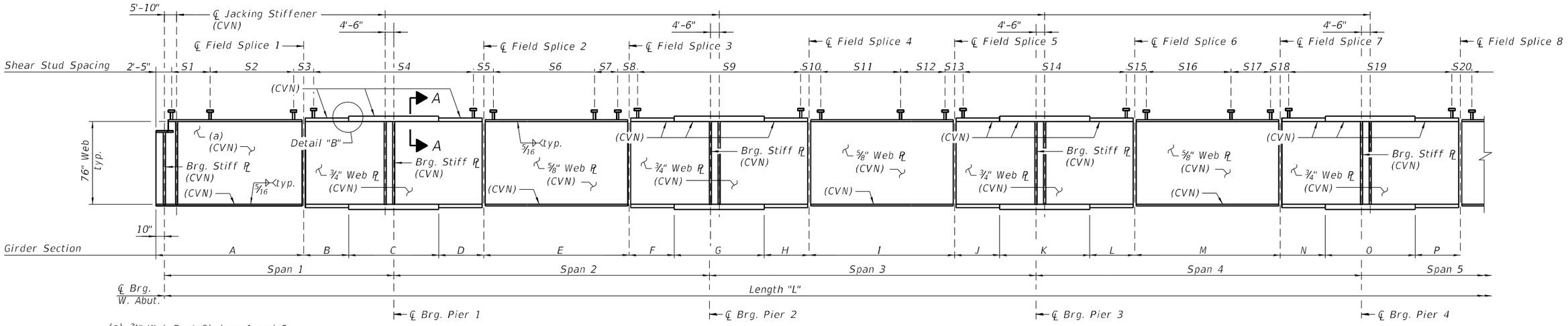
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN – 4
STRUCTURE NO. 010–1004
SHEET NO. 36 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	844
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

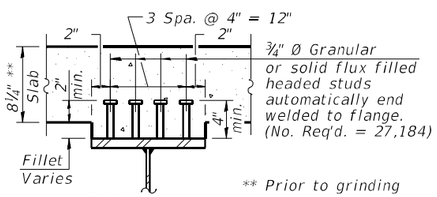


(a) 3/4" Web PL at Girders 1 and 6
5/8" Web PL at Girders 2 thru 5

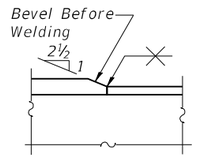
GIRDER ELEVATION

GIRDER DIMENSIONS

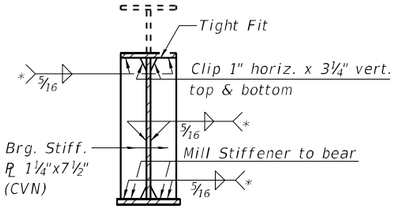
	Radius	Length "L"	Span 1	Span 2	Span 3	Span 4
Girder 1	1321'-0"	1464'-2 1/4"	171'-2 7/8"	215'-4 1/2"	191'-4 3/8"	185'-11"
Girder 2	1327'-8"	1471'-6 15/16"	172'-1 1/4"	217'-8 1/16"	191'-1 1/2"	186'-10 1/4"
Girder 3	1334'-4"	1478'-11 5/8"	172'-11 5/8"	219'-11 7/16"	190'-10 5/8"	187'-9 9/16"
Girder 4	1341'-0"	1486'-4 9/16"	173'-10"	222'-2 15/16"	190'-7 13/16"	188'-8 13/16"
Girder 5	1347'-8"	1493'-8 15/16"	174'-8 5/16"	224'-6 3/8"	190'-5"	189'-8 1/16"
Girder 6	1354'-4"	1501'-1 7/8"	175'-6 3/4"	226'-9 7/8"	190'-2 1/8"	190'-7 5/16"



SECTION A-A

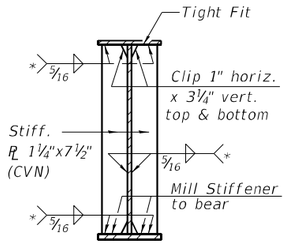


DETAIL "B"



END BEARING STIFFENER

* Terminate 1/4" (±1/8") from PL edges

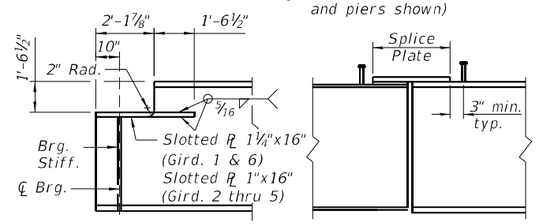


PIER BEARING STIFFENER & JACKING STIFFENER

* Terminate 1/4" (±1/8") from PL edges (Jacking stiffeners at the abutments and piers shown)

GIRDER SECTION DIMENSIONS

Section	Girder 1				Girder 2				Girder 3				Girder 4				Girder 5				Girder 6			
	Section Length	T/ Flange Width	T/ Flange Thick.	B/ Flange Width	B/ Flange Thick.	Section Length	T/ Flange Width	T/ Flange Thick.	B/ Flange Width	B/ Flange Thick.	Section Length	T/ Flange Width	T/ Flange Thick.	B/ Flange Width	B/ Flange Thick.	Section Length	T/ Flange Width	T/ Flange Thick.	B/ Flange Width	B/ Flange Thick.	Section Length	T/ Flange Width	T/ Flange Thick.	B/ Flange Width	B/ Flange Thick.
A	116'-5 3/4"	16"	1 1/4"	16"	2"	117'-0 3/4"	16"	1"	16"	2"	117'-7 3/4"	16"	1"	16"	2"	118'-2 3/4"	16"	1"	16"	2"	118'-9 3/4"	16"	1"	16"	2"	119'-4 3/4"	16"	1 1/4"	16"	2"
B	31'-2 9/16"	16"	2"	20"	2"	31'-4 7/16"	16"	2"	20"	2 1/4"	31'-6 5/16"	16"	2"	20"	2 1/4"	31'-8 1/16"	16"	2"	20"	2 1/4"	31'-10 1/16"	16"	2"	20"	2 1/4"	32'-0"	16"	2"	20"	2"
C	48'-9 1/4"	16"	3"	20"	3"	49'-0 3/16"	16"	2 3/4"	20"	3"	49'-3 1/8"	16"	2 3/4"	20"	3"	49'-6 1/16"	16"	2 3/4"	20"	3"	49'-9 1/16"	16"	2 3/4"	20"	3"	50'-0"	16"	3"	20"	3"
D	29'-3 1/8"	16"	2 1/4"	20"	2"	29'-4 15/16"	16"	2"	20"	2 1/4"	29'-6 1/16"	16"	2"	20"	2 1/4"	29'-8 7/16"	16"	2"	20"	2 1/4"	29'-10 1/4"	16"	2"	20"	2 1/4"	30'-0"	16"	2 1/4"	20"	2"
E	112'-11 9/16"	16"	2 1/4"	18"	2 3/4"	114'-8 13/16"	16"	1 1/4"	18"	1 1/2"	116'-6 1/16"	16"	1 1/4"	18"	1 1/2"	118'-3 5/16"	16"	1 1/4"	18"	1 1/2"	120'-0 5/8"	16"	1 1/4"	18"	1 1/2"	121'-9 1/8"	16"	2 1/4"	18"	2 3/4"
F	24'-4 5/8"	16"	2 1/4"	20"	2"	24'-6 1/16"	16"	1 3/4"	20"	2"	24'-7 9/16"	16"	1 3/4"	20"	2"	24'-9 1/16"	16"	1 3/4"	20"	2"	24'-10 1/2"	16"	1 3/4"	20"	2"	25'-0"	16"	2 1/4"	20"	2"
G	48'-9 1/4"	16"	2 1/2"	20"	2 3/4"	49'-0 3/16"	16"	2 1/2"	20"	2 3/4"	49'-3 1/8"	16"	2 1/2"	20"	2 3/4"	49'-6 1/16"	16"	2 1/2"	20"	2 3/4"	49'-9 1/16"	16"	2 1/2"	20"	2 3/4"	50'-0"	16"	2 1/2"	20"	2 3/4"
H	34'-1 11/16"	16"	1 3/4"	20"	2"	34'-3 3/4"	16"	1 3/4"	20"	1 3/4"	34'-5 13/16"	16"	1 3/4"	20"	1 3/4"	34'-7 7/8"	16"	1 3/4"	20"	1 3/4"	34'-9 15/16"	16"	1 3/4"	20"	1 3/4"	35'-0"	16"	1 3/4"	20"	2"
I	86'-0 3/16"	16"	1"	16"	1 1/4"	85'-3"	16"	3/4"	16"	1"	84'-5 3/4"	16"	3/4"	16"	1"	83'-8 9/16"	16"	3/4"	16"	1"	82'-11 3/8"	16"	3/4"	16"	1"	82'-2 1/8"	16"	1"	16"	1 3/8"
J	27'-3 3/4"	16"	2"	18"	2 1/4"	27'-5 5/8"	16"	1 1/2"	18"	2"	27'-7 1/16"	16"	1 1/2"	18"	2"	27'-8 1/16"	16"	1 1/2"	18"	2"	27'-10 7/8"	16"	1 1/2"	18"	2"	28'-0"	16"	2"	18"	2 1/4"
K	39'-0 3/16"	16"	2 3/4"	18"	3"	39'-2 9/16"	16"	2 1/4"	18"	2 3/4"	39'-4 15/16"	16"	2 1/4"	18"	2 3/4"	39'-7 1/4"	16"	2 1/4"	18"	2 3/4"	39'-9 5/8"	16"	2 1/4"	18"	2 3/4"	40'-0"	16"	2 3/4"	18"	3"
L	24'-4 5/8"	16"	2"	18"	2 1/4"	24'-6 1/16"	16"	1 1/2"	18"	2"	24'-7 9/16"	16"	1 1/2"	18"	2"	24'-9 1/16"	16"	1 1/2"	18"	2"	24'-10 1/2"	16"	1 1/2"	18"	2"	25'-0"	16"	2"	18"	2 1/4"
M	97'-1 7/8"	16"	1"	16"	1 1/4"	97'-7 13/16"	16"	3/4"	16"	1"	98'-1 11/16"	16"	3/4"	16"	1"	98'-7 9/16"	16"	3/4"	16"	1"	99'-1 7/16"	16"	3/4"	16"	1"	99'-7 5/16"	16"	1"	16"	1 1/2"
N	25'-4 5/16"	16"	1 3/4"	18"	2 1/4"	25'-5 1/16"	16"	1 1/2"	18"	1 3/4"	25'-7 7/8"	16"	1 1/2"	18"	1 3/4"	25'-8 15/16"	16"	1 1/2"	18"	1 3/4"	25'-10 7/16"	16"	1 1/2"	18"	1 3/4"	26'-0"	16"	1 3/4"	18"	2 1/4"
O	39'-0 3/16"	16"	2 1/2"	18"	3"	39'-2 9/16"	16"	2"	18"	2 1/2"	39'-4 15/16"	16"	2"	18"	2 1/2"	39'-7 1/4"	16"	2"	18"	2 1/2"	39'-9 5/8"	16"	2"	18"	2 1/2"	40'-0"	16"	2 1/2"	18"	3"
P	26'-4"	16"	1 3/4"	18"	2 1/4"	26'-5 5/8"	16"	1 1/2"	18"	1 3/4"	26'-7 3/16"	16"	1 1/2"	18"	1 3/4"	26'-8 13/16"	16"	1 1/2"	18"	1 3/4"	26'-10 3/8"	16"	1 1/2"	18"	1 3/4"	27'-0"	16"	1 3/4"	18"	2 1/4"



GIRDER END COPING DETAIL

TYP. AT ALL FIELD SPLICES

SHEAR STUD SPACING

Girder	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20
G1	29 spa. @ 14"	48 spa. @ 19 1/2"	4'-10 3/16"	83 spa. @ 15"	5'-7 3/16"	60 spa. @ 19"	10 spa. @ 15"	5'-3"	82 spa. @ 15"	4'-5 1/8"	34 spa. @ 19"	25 spa. @ 13 1/2"	3'-11 3/8"	77 spa. @ 13 1/2"	3'-10 7/16"	42 spa. @ 19"	24 spa. @ 13 1/2"	3'-10 7/16"	77 spa. @ 13 1/2"	4'-1 3/16"
G2	29 spa. @ 13 1/2"	50 spa. @ 19"	5'-2 1/4"	87 spa. @ 14 1/2"	4'-8 7/16"	70 spa. @ 16 1/2"	11 spa. @ 15"	4'-6 1/16"	83 spa. @ 15"	4'-2 3/4"	36 spa. @ 17 1/2"	27 spa. @ 12 1/2"	4'-1 3/4"	84 spa. @ 12 1/2"	4'-1 3/8"	44 spa. @ 18"	26 spa. @ 12 1/2"	4'-1 3/8"	84 spa. @ 12 1/2"	3'-9 5/8"
G3	30 spa. @ 13 1/2"	50 spa. @ 19"	4'-11 1/16"	87 spa. @ 14 1/2"	5'-2 1/8"	71 spa. @ 16 1/2"	11 spa. @ 15"	5'-0 1/16"	83 spa. @ 15"	4'-1 3/8"	36 spa. @ 17 1/2"	27 spa. @ 12 1/2"	3'-11 7/8"	84 spa. @ 12 1/2"	4'-0 13/16"	44 spa. @ 18"	27 spa. @ 12 1/2"	4'-0 13/16"	84 spa. @ 12 1/2"	4'-0 7/16"
G4	29 spa. @ 13 1/2"	51 spa. @ 19"	4'-8 1/16"	88 spa. @ 14 1/2"	4'-5 1/8"	72 spa. @ 16 1/2"	12 spa. @ 15"	4'-2 1/16"	84 spa. @ 15"	4'-1 5/16"	35 spa. @ 17 1/2"	27 spa. @ 12 1/2"	4'-6 13/16"	84 spa. @ 12 1/2"	4'-6 1/2"	44 spa. @ 18"	27 spa. @ 12 1/2"	4'-6 1/16"	84 spa. @ 12 1/2"	4'-5 15/16"
G5	29 spa. @ 13 1/2"	51 spa. @ 19"	5'-6 15/16"	88 spa. @ 14 1/2"	4'-10 3/4"	73 spa. @ 16 1/2"	12 spa. @ 15"	4'-8 1/4"	84 spa. @ 15"	3'-11 7/8"	35 spa. @ 17 1/2"	27 spa. @ 12 1/2"	3'-10 11/16"	85 spa. @ 12 1/2"	3'-11 1 1/16"	44 spa. @ 18"	28 spa. @ 12 1/2"	3'-11 1 1/16"	85 spa. @ 12 1/2"	3'-11 1/16"
G6	30 spa. @ 14"	49 spa. @ 19 1/2"	4'-5 3/4"	86 spa. @ 15"	5'-1 7/16"	64 spa. @ 19"	12 spa. @ 15"	5'-4 7/16"	84 spa. @ 15"	4'-6 5/16"	33 spa. @ 19"	23 spa. @ 13 1/2"	3'-11 9/16"	79 spa. @ 13 1/2"	4'-3 15/16"	43 spa. @ 19"	24 spa. @ 13 1/2"	4'-3 15/16"	79 spa. @ 13 1/2"	3'-11 1 1/16"

NOTES:

1. All steel flanges, webs, bearings, bearing stiffeners, cross frames and connection plates shall be M270, Grade 50.
2. "CVN" denotes Charpy-V-Notch impact energy requirements, zone 2.
3. All Girder dimensions and spacings shown are measured along the centerline of girder.

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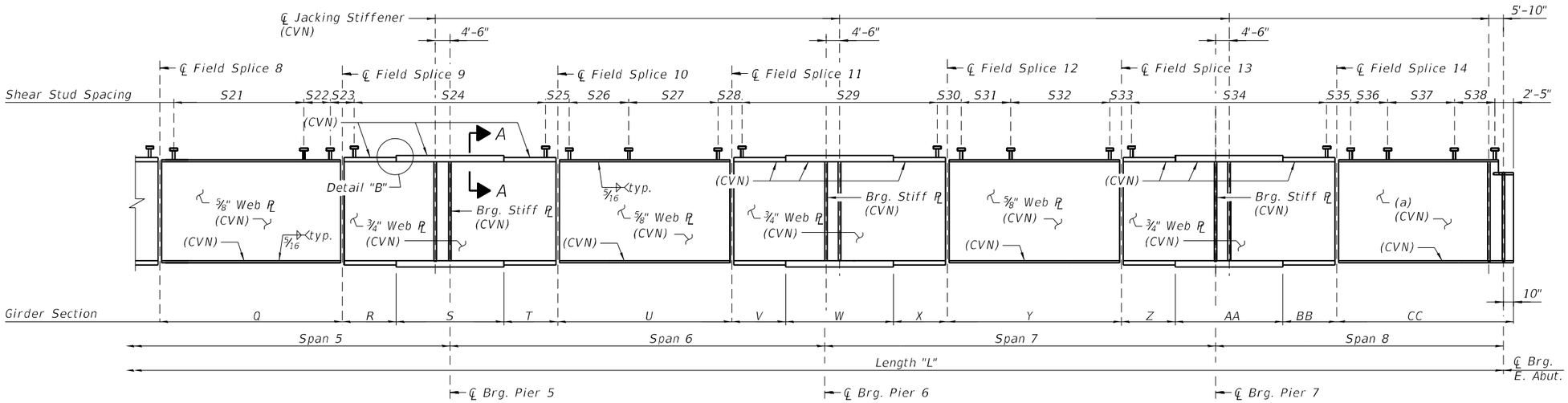
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER ELEVATION - 1
STRUCTURE NO. 010-1004
SHEET NO. 37 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	845
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



GIRDER ELEVATION

(a) 3/4" Web PL at Girders 1 and 6
5/8" Web PL at Girders 2 thru 5

GIRDER DIMENSIONS

	Radius	Length "L"	Span 5	Span 6	Span 7	Span 8
Girder 1	1321'-0"	1464'-2 1/4"	185'-11"	185'-11"	177'-1 3/8"	151'-4 1/8"
Girder 2	1327'-8"	1471'-6 13/16"	186'-10 1/4"	186'-10 1/4"	178'-0 1/8"	152'-1 5/16"
Girder 3	1334'-4"	1478'-11 5/8"	187'-9 9/16"	187'-9 9/16"	178'-10 13/16"	152'-10 7/16"
Girder 4	1341'-0"	1486'-4 5/16"	188'-8 13/16"	188'-8 13/16"	179'-9 1/2"	153'-7 3/8"
Girder 5	1347'-8"	1493'-8 15/16"	189'-8 1/16"	189'-8 1/16"	180'-8 1/4"	154'-4 13/16"
Girder 6	1354'-4"	1501'-1 5/8"	190'-7 5/16"	190'-7 5/16"	181'-7"	155'-1 11/16"

GIRDER SECTION DIMENSIONS

	Girder 1			Girder 2			Girder 3			Girder 4			Girder 5			Girder 6		
Section	Section Length	T/ Flange Width	T/ Flange Thick.	B/ Flange Width	B/ Flange Thick.	Section Length	T/ Flange Width	T/ Flange Thick.	B/ Flange Width	B/ Flange Thick.	Section Length	T/ Flange Width	T/ Flange Thick.	B/ Flange Width	B/ Flange Thick.	Section Length	T/ Flange Width	T/ Flange Thick.	B/ Flange Width	B/ Flange Thick.	Section Length	T/ Flange Width	T/ Flange Thick.	B/ Flange Width	B/ Flange Thick.
Q	93'-3 1/16"	16"	1"	16"	1 1/4"	93'-8 3/4"	16"	3/4"	16"	1"	94'-2 5/8"	16"	3/4"	16"	1"	94'-8"	16"	3/4"	16"	1"	95'-1 1/16"	16"	3/4"	16"	1"	95'-7 5/16"	16"	1"	16"	1 3/8"
R	27'-3 3/4"	16"	1 3/4"	18"	2 1/4"	27'-5 3/8"	16"	1 1/2"	18"	1 3/4"	27'-7 1/16"	16"	1 1/2"	18"	1 3/4"	27'-8 1/16"	16"	1 1/2"	18"	1 3/4"	27'-10 3/8"	16"	1 1/2"	18"	1 3/4"	28'-0"	16"	1 3/4"	18"	2 1/4"
S	39'-0 3/16"	16"	2 1/2"	18"	3"	39'-2 9/16"	16"	2"	18"	2 1/2"	39'-4 15/16"	16"	2"	18"	2 1/2"	39'-7 1/4"	16"	2"	18"	2 1/2"	39'-9 5/8"	16"	2"	18"	2 1/2"	40'-0"	16"	2 1/2"	18"	3"
T	27'-3 3/4"	16"	1 3/4"	18"	2 1/4"	27'-5 3/8"	16"	1 1/2"	18"	1 3/4"	27'-7 1/16"	16"	1 1/2"	18"	1 3/4"	27'-8 1/16"	16"	1 1/2"	18"	1 3/4"	27'-10 3/8"	16"	1 1/2"	18"	1 3/4"	28'-0"	16"	1 3/4"	18"	2 1/4"
U	97'-1 7/8"	16"	1 1/4"	16"	1 1/2"	97'-7 13/16"	16"	3/4"	16"	1"	98'-1 11/16"	16"	3/4"	16"	1"	98'-7 9/16"	16"	3/4"	16"	1"	99'-1 7/16"	16"	3/4"	16"	1"	99'-7 5/16"	16"	1 1/4"	16"	1 5/8"
V	22'-5 3/16"	16"	1 3/4"	18"	2 1/4"	22'-6 9/16"	16"	1 1/2"	18"	2"	22'-7 15/16"	16"	1 1/2"	18"	2"	22'-9 3/16"	16"	1 1/2"	18"	2"	22'-10 5/8"	16"	1 1/2"	18"	2"	23'-0"	16"	1 3/4"	18"	2 1/4"
W	39'-0 3/16"	16"	2 3/4"	18"	3"	39'-2 9/16"	16"	2 1/4"	18"	2 3/4"	39'-4 15/16"	16"	2 1/4"	18"	2 3/4"	39'-7 1/4"	16"	2 1/4"	18"	2 3/4"	39'-9 5/8"	16"	2 1/4"	18"	2 3/4"	40'-0"	16"	2 3/4"	18"	3"
X	26'-4"	16"	1 3/4"	18"	2 1/4"	26'-5 5/8"	16"	1 1/2"	18"	2"	26'-7 3/16"	16"	1 1/2"	18"	2"	26'-8 13/16"	16"	1 1/2"	18"	2"	26'-10 3/8"	16"	1 1/2"	18"	2"	27'-0"	16"	1 3/4"	18"	2 1/4"
Y	83'-5 1/16"	16"	1"	16"	1 1/4"	83'-10 3/4"	16"	3/4"	16"	1"	84'-3 1/16"	16"	3/4"	16"	1"	84'-8 7/8"	16"	3/4"	16"	1"	85'-1 11/16"	16"	3/4"	16"	1"	85'-7"	16"	1"	16"	1 1/4"
Z	28'-3 7/16"	16"	1 1/2"	18"	2"	28'-5 1/8"	16"	1 1/2"	18"	2"	28'-6 7/8"	16"	1 1/2"	18"	2"	28'-8 9/16"	16"	1 1/2"	18"	2"	28'-10 5/16"	16"	1 1/2"	18"	2"	29'-0"	16"	1 1/2"	18"	2"
AA	39'-0 3/16"	16"	2 1/2"	18"	2 3/4"	39'-2 9/16"	16"	2 1/4"	18"	2 3/4"	39'-4 15/16"	16"	2 1/4"	18"	2 3/4"	39'-7 1/4"	16"	2 1/4"	18"	2 3/4"	39'-9 5/8"	16"	2 1/4"	18"	2 3/4"	40'-0"	16"	2 1/2"	18"	2 3/4"
BB	23'-4 15/16"	16"	1 1/2"	18"	2"	23'-6 5/16"	16"	1 1/2"	18"	2"	23'-7 3/4"	16"	1 1/2"	18"	2"	23'-9 3/16"	16"	1 1/2"	18"	2"	23'-10 9/16"	16"	1 1/2"	18"	2"	24'-0"	16"	1 1/2"	18"	2"
CC	109'-3 1/8"	16"	1 1/4"	16"	1 3/4"	109'-9 1/16"	16"	1"	16"	1 1/4"	110'-4 1/4"	16"	1"	16"	1 1/4"	110'-10 13/16"	16"	1"	16"	1 1/4"	111'-5 3/8"	16"	1"	16"	1 1/4"	111'-11 5/16"	16"	1 1/4"	16"	1 3/4"

SHEAR STUD SPACING

Girder	S21	S22	S23	S24	S25	S26	S27	S28	S29	S30	S31	S32	S33	S34	S35	S36	S37	S38
G1	52 spa. @ 19"	6 spa @ 13 1/2"	3'-10 7/8"	80 spa @ 13 1/2"	4'-1"	23 spa @ 13 1/2"	42 spa. @ 19"	5'-2 3/8"	62 spa. @ 16"	4'-4 1/16"	17 spa. @ 16"	38 spa. @ 18"	4'-0 1/16"	69 spa. @ 15"	4'-5 5/16"	25 spa. @ 15"	28 spa. @ 19"	25 spa. @ 14"
G2	55 spa. @ 18"	7 spa. @ 12 1/2"	4'-2 3/4"	86 spa. @ 12 1/2"	4'-3"	26 spa. @ 12 1/2"	47 spa. @ 17"	4'-2 3/4"	67 spa. @ 15"	4'-0 3/4"	20 spa. @ 15"	39 spa. @ 17"	3'-10 7/8"	72 spa. @ 14 1/2"	4'-6 13/16"	26 spa. @ 14 1/2"	28 spa. @ 18 1/2"	28 spa. @ 13"
G3	56 spa. @ 18"	6 spa. @ 12 1/2"	3'-11 3/8"	87 spa. @ 12 1/2"	4'-0 1/4"	25 spa. @ 12 1/2"	48 spa. @ 17"	3'-10 9/16"	68 spa. @ 15"	3'-9 3/8"	19 spa. @ 15"	40 spa. @ 17"	4'-3 1/8"	72 spa. @ 14 1/2"	4'-3 3/8"	26 spa. @ 14 1/2"	28 spa. @ 18 1/2"	29 spa. @ 13"
G4	56 spa. @ 18"	6 spa. @ 12 1/2"	4'-5 1/8"	87 spa. @ 12 1/2"	4'-6 1/8"	25 spa. @ 12 1/2"	48 spa. @ 17"	4'-4 1/8"	68 spa. @ 15"	4'-2 9/16"	19 spa. @ 15"	40 spa. @ 17"	4'-1 3/16"	73 spa. @ 14 1/2"	3'-11 11/16"	26 spa. @ 14 1/2"	29 spa. @ 18 1/2"	28 spa. @ 13"
G5	56 spa. @ 18"	7 spa @ 12 1/2"	3'-10 1/4"	88 spa. @ 12 1/2"	3'-9 1/8"	25 spa. @ 12 1/2"	49 spa. @ 17"	4'-1 1/4"	68 spa. @ 15"	4'-7 3/4"	19 spa. @ 15"	40 spa. @ 17"	4'-6 7/16"	73 spa. @ 14 1/2"	4'-0 3/16"	27 spa. @ 14 1/2"	28 spa. @ 18 1/2"	29 spa. @ 13"
G6	53 spa. @ 19"	7 spa @ 13 1/2"	3'-9 7/16"	82 spa @ 13 1/2"	3'-9 7/16"	23 spa @ 13 1/2"	44 spa. @ 19"	4'-7 7/16"	64 spa. @ 16"	4'-6"	18 spa. @ 16"	38 spa. @ 18"	4'-3 1/2"	71 spa. @ 15"	4'-3 3/4"	25 spa. @ 15"	29 spa. @ 19"	26 spa. @ 14"

NOTES:

1. All steel flanges, webs, bearings, bearing stiffeners, cross frames and connection plates shall be M270, Grade 50.
2. "CVN" denotes Charpy-V-Notch impact energy requirements, zone 2.
3. All Girder dimensions and spacings shown are measured along the centerline of girder.
4. Work this sheet with Sheet 37 of 94.

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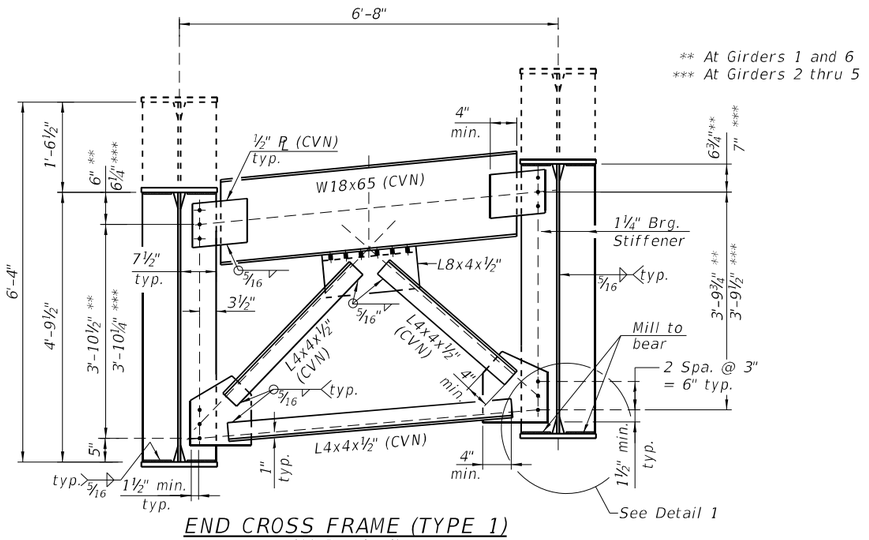
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

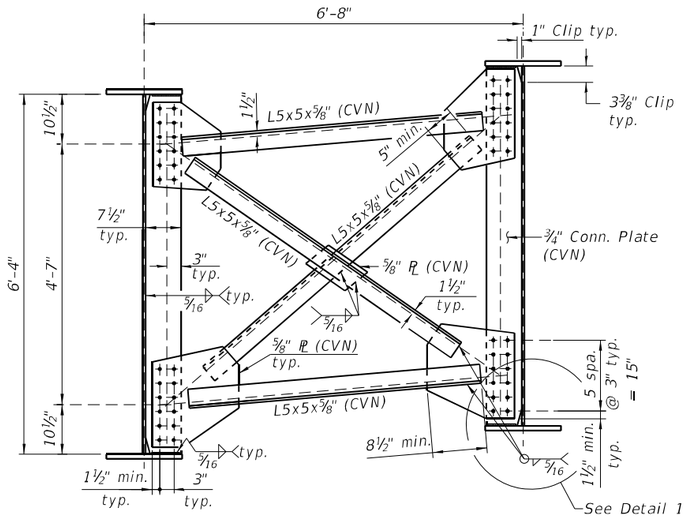
GIRDER ELEVATION – 2
STRUCTURE NO. 010–1004
SHEET NO. 38 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	846
		CONTRACT NO. 70B99		
		ILLINOIS	FED. AID PROJECT	



END CROSS FRAME (TYPE 1)

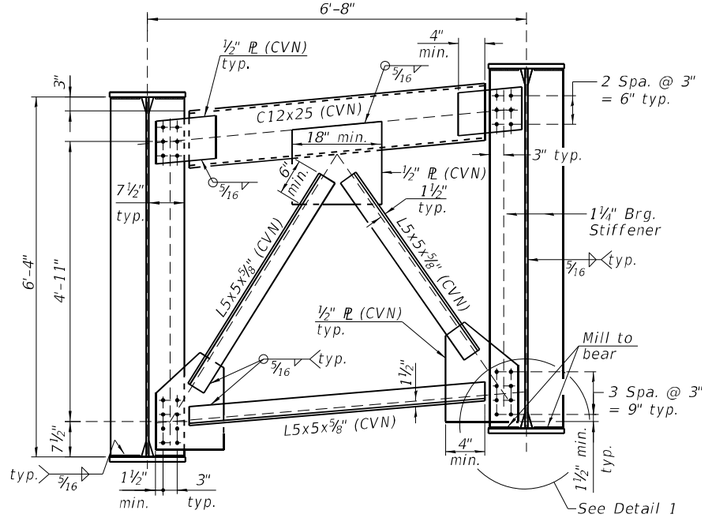
(10 Required)



INTERMEDIATE CROSS FRAME (TYPE 2)

(448 Required)

(Adjacent connection plates not shown.)

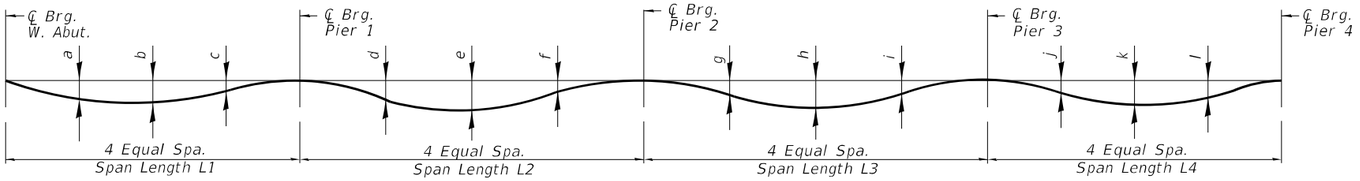


PIER CROSS FRAME (TYPE 3)

(35 Required)

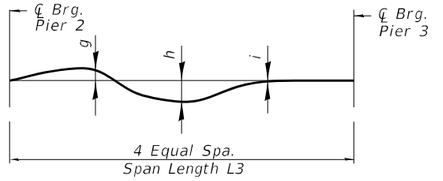
GIRDER DEFLECTION TABLE FOR CROSS FRAMES

Girder No.	Span 1				Span 2				Span 3				Span 4			
	L1	a	b	c	L2	d	e	f	L3	g	h	i	L4	j	k	l
1	171'-2⅞"	⅝"	¾"	⅜"	215'-4½"	½"	1⅛"	¾"	191'-4⅜"	⅛"	⅜"	⅜"	185'-11"	⅛"	½"	⅜"
2	172'-1¼"	⅝"	¾"	¼"	217'-8"	⅝"	1¼"	⅞"	191'-1½"	⅛"	⅜"	¼"	186'-10¼"	¼"	⅜"	½"
3	172'-11⅜"	¾"	¾"	¼"	219'-11½"	¾"	1½"	1"	190'-10⅜"	0"	¼"	¼"	187'-9½"	⅜"	⅜"	½"
4	173'-10"	¾"	¾"	¼"	222'-2⅞"	⅞"	1½"	1⅛"	190'-7⅞"	0"	¼"	⅛"	188'-8¾"	⅜"	¾"	½"
5	174'-8⅜"	¾"	¾"	¼"	224'-6⅜"	1"	1⅝"	1⅛"	190'-5"	0"	⅛"	⅛"	189'-8"	½"	¾"	½"
6	175'-6¾"	¾"	¾"	¼"	226'-9⅞"	1⅛"	1⅞"	1¼"	190'-2⅛"	⅛"	⅛"	0"	190'-7⅜"	½"	⅞"	½"



DEFLECTION DIAGRAM – GIRDERS 1 THRU 5

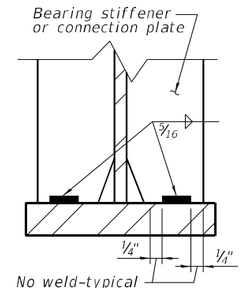
(Steel self weight only)



PARTIAL DEFLECTION DIAGRAM – GIRDER 6

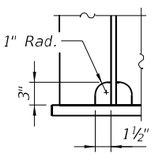
(Steel self weight only)

(Deflected shape in Span 3 only shown. For deflected shape in all other spans, see Deflection Diagram – Girders 1 Thru 5.)



DETAIL 1

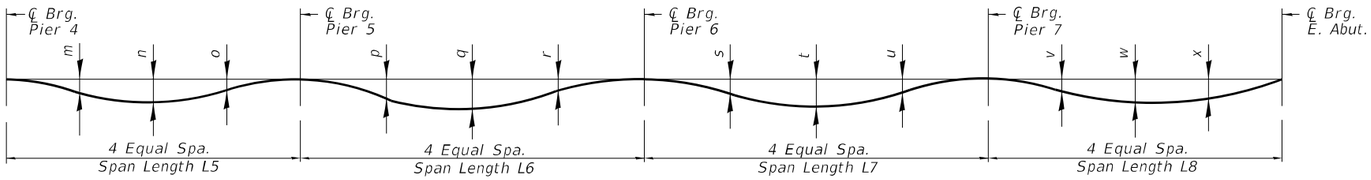
(applies to top & bott. flange)



ALTERNATE CLIP DETAIL

GIRDER DEFLECTION TABLE FOR CROSS FRAMES

Girder No.	Span 5				Span 6				Span 7				Span 8			
	L5	m	n	o	L6	p	q	r	L7	s	t	u	L8	v	w	x
1	185'-11"	⅛"	½"	½"	185'-11"	⅛"	½"	½"	177'-1⅜"	0"	¼"	⅜"	151'-4½"	0"	⅜"	⅝"
2	186'-10¼"	⅛"	½"	⅜"	186'-10¼"	⅛"	⅝"	½"	178'-0⅛"	0"	¼"	¼"	152'-1¼"	⅛"	½"	⅜"
3	187'-9½"	¼"	½"	⅜"	187'-9½"	¼"	⅝"	½"	178'-10¾"	⅛"	⅜"	¼"	152'-10½"	⅛"	⅝"	¾"
4	188'-8¾"	¼"	½"	⅜"	188'-8¾"	⅜"	¾"	½"	179'-9½"	⅛"	⅜"	¼"	153'-7⅝"	¼"	¾"	¾"
5	189'-8"	¼"	½"	¼"	189'-8"	⅜"	¾"	½"	180'-8¼"	⅛"	⅜"	⅛"	154'-4¾"	⅜"	¾"	¾"
6	190'-7⅜"	¼"	½"	¼"	190'-7⅜"	½"	⅞"	½"	181'-7"	⅛"	¼"	⅛"	155'-2"	½"	⅛"	¾"



DEFLECTION DIAGRAM – GIRDERS 1 THRU 5

(Steel self weight only)

NOTES:

1. 15/16"○ holes for ⅞" bolts.
2. See Sheets 33 thru 36 of 94 for location of girder cross frames.
3. AASHTO M270 Grade 50 steel shall be used for all cross frames, connection plates, bearing stiffeners, and jacking stiffeners unless otherwise noted.
4. "CVN" denotes Charpy-V-Notch impact energy requirements, zone 2.
5. Bolt spacing shall be 3" min. & edge distances shall be 1½" min.
6. All cross frames between girders shall be installed with erection pins and bolts in accordance with erection plan submitted to and approved by the Engineer. Individual cross frames at supports may be temporarily disconnected to install bearing anchor rods.
7. The Contractor shall either:
   a. Ream cross frame connection holes during shop assembly, or
   b. Provide detailing and fabrication controls acceptable to the Engineer which ensures accuracy such that field reaming will not exceed the amount permitted in Article 505.08(l) of the Standard Specifications.
8. The calculated deflections of the primary girders under steel self-weight shall be used to detail the cross frame connections and to erect the structural steel such that the girders will be plumb within a tolerance of ±⅛ in. per vertical ft. throughout when supporting their own weight.

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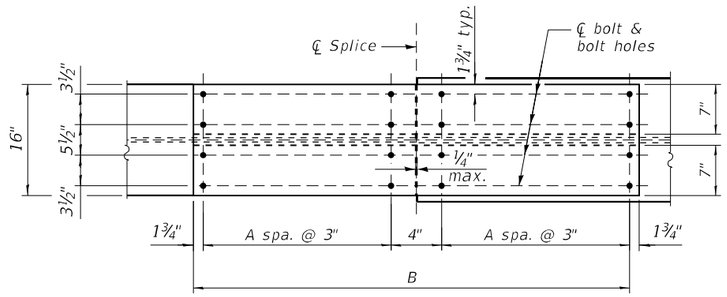
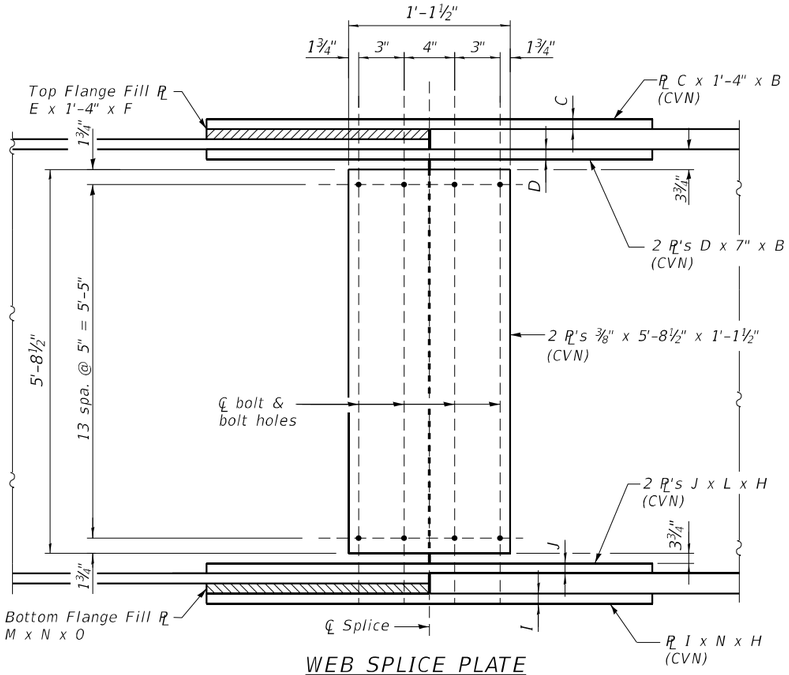
STRUCTURAL STEEL DETAILS – 1
STRUCTURE NO. 010-1004
SHEET NO. 39 OF 94 SHEETS

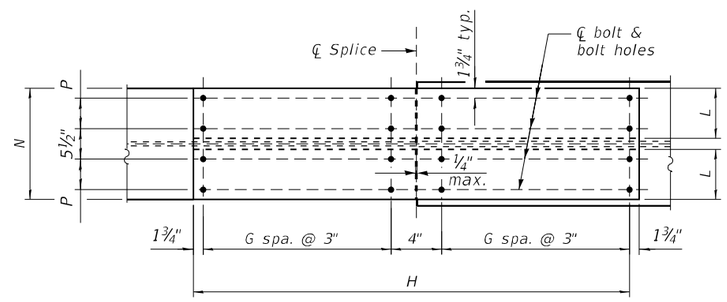
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	847
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



TOP FLANGE



WEB SPLICE PLATE



BOTTOM FLANGE

SPLICE DIMENSIONS

Splice	Girder	Top Flange						Bottom Flange								
		No. Bolt Spaces	Plate Length	Outside Plate Thickness	Inside Plate Thickness	Fill Plate Thickness	Fill Plate Length	No. Bolt Spaces	Plate Length	Outside Plate Thickness	Inside Plate Thickness	Inside Plate Width	Fill Plate Thickness	Outside Plate and Fill Plate Width	Fill Plate Length	Bolt Transverse Spacing
		A	B	C	D	E	F	G	H	I	J	L	M	N	O	P
1	1 & 6	6	3'-7½"	¾"	⅞"	¾"	1'-9⅜"	7	4'-1½"	1¼"	1½"	7"	0"	1'-4"	2'-0⅝"	3½"
	2 thru 5	6	3'-7½"	¾"	⅞"	1"	1'-9⅜"	7	4'-1½"	1¼"	1½"	7"	¼"	1'-4"	2'-0⅝"	3½"
2	1 & 6	7	4'-1½"	1½"	1⅝"	0"	2'-0⅝"	11	6'-1½"	1½"	1⅝"	8"	¾"	1'-6"	3'-0⅝"	4½"
	2 thru 5	6	3'-7½"	¾"	⅞"	¾"	1'-9⅜"	8	4'-7½"	1"	1⅛"	8"	¾"	1'-6"	2'-3⅝"	4½"
3	1 & 6	7	4'-1½"	1½"	1⅝"	0"	2'-0⅝"	11	6'-1½"	1½"	1⅝"	8"	¾"	1'-6"	3'-0⅝"	4½"
	2 thru 5	6	3'-7½"	¾"	⅞"	½"	1'-9⅜"	8	4'-7½"	1"	1⅛"	8"	½"	1'-6"	2'-3⅜"	4½"
4	1 & 6	6	3'-7½"	¾"	⅞"	¾"	1'-9⅜"	6	3'-7½"	⅞"	1"	7"	*	1'-4"	1'-9⅜"	3½"
	2 thru 5	5	3'-1½"	⅝"	¾"	1"	1'-6⅝"	5	3'-1½"	⅝"	¾"	7"	¾"	1'-4"	1'-6⅝"	3½"
5	1 & 6	5	3'-1½"	⅝"	¾"	1"	1'-6⅝"	6	3'-7½"	⅞"	1"	7"	*	1'-4"	1'-9⅜"	3½"
	2 thru 5	5	3'-1½"	⅝"	¾"	¾"	1'-6⅝"	5	3'-1½"	⅝"	¾"	7"	1"	1'-4"	1'-6⅝"	3½"
6	1 & 6	5	3'-1½"	⅝"	¾"	1"	1'-6⅝"	7	4'-1½"	1"	1¼"	7"	*	1'-4"	2'-0⅝"	3½"
	2 thru 5	5	3'-1½"	⅝"	¾"	¾"	1'-6⅝"	5	3'-1½"	⅝"	¾"	7"	1"	1'-4"	1'-6⅝"	3½"
7	1 & 6	5	3'-1½"	⅝"	¾"	¾"	1'-6⅝"	7	4'-1½"	1"	1¼"	7"	*	1'-4"	2'-0⅝"	3½"
	2 thru 5	5	3'-1½"	⅝"	¾"	¾"	1'-6⅝"	5	3'-1½"	⅝"	¾"	7"	¾"	1'-4"	1'-6⅝"	3½"
8	1 & 6	5	3'-1½"	⅝"	¾"	¾"	1'-6⅝"	6	3'-7½"	⅞"	1"	7"	*	1'-4"	1'-9⅜"	3½"
	2 thru 5	5	3'-1½"	⅝"	¾"	¾"	1'-6⅝"	5	3'-1½"	⅝"	¾"	7"	¾"	1'-4"	1'-6⅝"	3½"
9	1 & 6	5	3'-1½"	⅝"	¾"	¾"	1'-6⅝"	6	3'-7½"	⅞"	1"	7"	*	1'-4"	1'-9⅜"	3½"
	2 thru 5	5	3'-1½"	⅝"	¾"	¾"	1'-6⅝"	5	3'-1½"	⅝"	¾"	7"	¾"	1'-4"	1'-6⅝"	3½"
10	1 & 6	6	3'-7½"	¾"	⅞"	½"	1'-9⅜"	7	4'-1½"	1"	1¼"	7"	*	1'-4"	2'-0⅝"	3½"
	2 thru 5	5	3'-1½"	⅝"	¾"	¾"	1'-6⅝"	5	3'-1½"	⅝"	¾"	7"	¾"	1'-4"	1'-6⅝"	3½"
11	1 & 6	6	3'-7½"	¾"	⅞"	½"	1'-9⅜"	7	4'-1½"	1"	1¼"	7"	*	1'-4"	2'-0⅝"	3½"
	2 thru 5	5	3'-1½"	⅝"	¾"	¾"	1'-6⅝"	5	3'-1½"	⅝"	¾"	7"	1"	1'-4"	1'-6⅝"	3½"
12	1 & 6	5	3'-1½"	⅝"	¾"	¾"	1'-6⅝"	6	3'-7½"	¾"	⅞"	7"	1"	1'-4"	1'-9⅜"	3½"
	2 thru 5	5	3'-1½"	⅝"	¾"	¾"	1'-6⅝"	5	3'-1½"	⅝"	¾"	7"	1"	1'-4"	1'-6⅝"	3½"
13	1 & 6	5	3'-1½"	⅝"	¾"	½"	1'-6⅝"	6	3'-7½"	¾"	⅞"	7"	¾"	1'-4"	1'-9⅜"	3½"
	2 thru 5	5	3'-1½"	⅝"	¾"	¾"	1'-6⅝"	5	3'-1½"	⅝"	¾"	7"	1"	1'-4"	1'-6⅝"	3½"
14	1 & 6	6	3'-7½"	¾"	⅞"	¼"	1'-9⅜"	7	4'-1½"	1"	1¼"	7"	¼"	1'-4"	2'-0⅜"	3½"
	2 thru 5	5	3'-1½"	⅝"	¾"	½"	1'-6⅝"	6	3'-7½"	¾"	⅞"	7"	¾"	1'-4"	1'-9⅜"	3½"

* Fill plate thicknesses vary as shown in the table below.

Field Splice	G1	G6
4	¾"	⅝"
5	1"	⅞"
6	1"	¾"
7	1"	¾"
8	1"	⅞"
9	1"	⅞"
10	¾"	⅝"
11	¾"	⅝"

NOTES:

1. "CVN" denotes Charpy-V-Notch impact energy requirements, zone 2.
2. All bolts shall be ⅞" ○ and bolt holes shall be $^{15}/_{16}$" ∅.
3. All splice plates shall be AASHTO M270 Grade 50 steel.

CMT
License No. 184-002613

USER NAME = Denise Herrera	DESIGNED - DH	REVISED -
	CHECKED - JTH	REVISED -
PLOT SCALE = N/A	DRAWN - DH	REVISED -
PLOT DATE = 4/29/2021 (3:58:56 PM)	CHECKED - JTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS – 2
STRUCTURE NO. 010–1004
SHEET NO. 40 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	848
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

EXTERIOR GIRDER MOMENT TABLE (GIRDER 1)																
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.5 Sp. 5	Pier 5	0.5 Sp. 6	Pier 6	0.5 Sp. 7	Pier 7	0.6 Sp. 8
Is	(in^4)	103885	194662	152565	172051	76128	178940	76128	171274	76128	171274	88475	178940	76128	164874	98648
Ic(n)	(in^4)	203796	311704	263522	288692	155163	291126	155163	286751	155163	286751	171240	291126	155163	273856	191541
Ic(3n)	(in^4)	149459	243813	201108	221777	114455	226591	114455	220564	114455	220564	127749	226591	114455	211658	141370
Ic(cr)	(in^4)	–	210063	–	187750	–	193958	–	186846	–	186846	–	193958	–	179699	–
Ss	(in^3)	2915	5106	4159	3873	2037	4658	2037	4595	2037	4595	2342	4658	2037	4320	2685
Sc(n)	(in^3)	3714	–	4885	–	2656	–	2656	–	2656	–	2960	–	2656	–	3430
Sc(3n)	(in^3)	3365	5497	4546	5889	2405	5045	2405	5008	2405	5008	2700	5045	2405	4709	3105
Sc(cr)	(in^3)	–	5242	–	4440	–	4794	–	4742	–	4742	–	4794	–	4458	–
Sxc	(in^3)	3515	5209	4720	4283	2497	4758	2491	4712	2489	4711	2801	4760	2514	4433	3239
DC1	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDC1	('k)	2069	4108	2701	3563	1527	4139	1586	3122	1607	3157	1747	3924	1370	2681	1969
DC2	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDC2	('k)	334	934	364	735	217	789	211	781	233	806	245	744	176	697	298
DW	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDW	('k)	503	1225	579	968	346	991	346	984	346	1003	383	927	289	888	462
M_{L+IM}	('k)	3278	4107	3883	3328	2903	3970	2719	4156	2700	3920	2993	3806	2648	3461	3032
fℓ (Strength I)	(ksi)	4.6	4.5	3.2	0.0	6.0	5.8	5.8	4.8	5.9	5.4	5.4	4.8	5.4	4.2	4.9
Mu + ⅓fℓ Sxc	('k)	14898	23127	16544	12649	12810	23837	12379	21157	12407	21758	13323	21433	11561	17882	14128
Øf Mn	('k)	**	***	**	***	**	***	**	***	**	***	**	***	**	***	**
fs DC1	(ksi)	8.5	9.7	7.8	11.0	9.0	10.7	9.3	8.2	9.5	8.2	9.0	10.1	8.1	7.4	8.8
fs DC2	(ksi)	1.2	2.1	1.0	2.0	1.1	2.0	1.1	2.0	1.2	2.0	1.1	1.9	0.9	1.9	1.2
fs DW	(ksi)	1.8	2.8	1.5	2.6	1.7	2.5	1.7	2.5	1.7	2.5	1.7	2.3	1.4	2.4	1.8
fs (L+IM)	(ksi)	10.6	9.4	9.5	9.0	13.1	9.9	12.3	10.5	12.2	9.9	12.1	9.5	12.0	9.3	10.6
fℓ (Service II)	(ksi)	3.5	3.3	2.4	3.7	4.6	4.0	4.4	3.4	4.4	3.8	4.1	3.3	4.1	3.0	3.7
fs+ $f_f/_2$ (Service II)	(ksi)	27.0	28.5	23.9	29.2	31.1	30.0	30.3	28.0	30.4	27.6	29.5	28.3	28.0	25.3	27.4
0.95Rh Fyf	(ksi)	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
fs + $f_f/_3$ (Total)(Strength I)	(ksi)	34.9	36.9	31.0	35.9	40.2	38.9	39.0	36.4	39.2	35.8	38.1	36.7	36.1	33.0	35.3
Øf Fn	(ksi)	50.0	47.1	50.0	50.0	50.0	46.1	50.0	46.1	50.0	46.1	50.0	46.1	50.0	46.0	50.0
Vf	(k)	24.7	43.0	30.2	54.6	24.0	42.1	27.5	50.0	26.0	39.9	26.7	42.9	26.6	44.3	24.5

INTERIOR GIRDER MOMENT TABLE (GIRDER 2)																
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.5 Sp. 5	Pier 5	0.5 Sp. 6	Pier 6	0.5 Sp. 7	Pier 7	0.6 Sp. 8
Is	(in^4)	91081	186817	92458	172051	63933	157284	63933	143463	63933	143463	63933	157284	63933	157284	76128
Ic(n)	(in^4)	195942	310233	182754	291712	141326	272522	141326	255376	141326	255376	141326	272522	141326	272522	156771
Ic(3n)	(in^4)	140800	239242	135369	223435	102764	207392	102764	192729	102764	192729	102764	207392	102764	207392	115598
Ic(cr)	(in^4)	–	203337	–	188334	–	173267	–	159281	–	159281	–	173267	–	173267	–
Ss	(in^3)	2728	4178	2526	3873	1731	4256	1731	3916	1731	3916	1731	4256	1731	4256	2037
Sc(n)	(in^3)	3531	–	3191	–	2370	–	2370	–	2370	–	2370	–	2370	–	2664
Sc(3n)	(in^3)	3209	6292	2915	5968	2125	4684	2125	4349	2125	4349	2125	4684	2125	4684	2413
Sc(cr)	(in^3)	–	4772	–	4462	–	4410	–	4074	–	4074	–	4410	–	4410	–
Sxc	(in^3)	3327	4596	3012	4287	2197	4369	2184	4040	2183	4040	2191	4371	2211	4381	2484
DC1	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDC1	('k)	2002	4133	1971	3844	1386	3763	1491	2822	1496	2840	1419	3619	1279	2673	1691
DC2	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDC2	('k)	331	789	278	633	199	559	215	559	225	571	222	536	165	539	266
DW	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDW	('k)	498	1286	452	1039	305	944	326	932	319	944	327	900	266	913	409
M_{L+IM}	('k)	2686	3371	2482	2758	2290	3110	2194	3081	2166	2968	2166	2979	2084	2829	2151
fℓ (Strength I)	(ksi)	4.0	0.0	4.0	0.0	6.2	5.1	6.2	4.2	6.2	5.0	6.1	4.1	5.7	3.7	5.3
Mu + ⅓fℓ Sxc	('k)	12846	13981	11836	11981	11010	19629	11007	16738	10937	17603	10803	17755	10019	15701	11194
Øf Mn	('k)	**	***	**	***	**	***	**	***	**	***	**	***	**	***	**
fs DC1	(ksi)	8.8	11.9	9.4	11.9	9.6	10.6	10.3	8.6	10.4	8.7	9.8	10.2	8.9	7.5	10.0
fs DC2	(ksi)	1.2	2.0	1.1	1.7	1.1	1.5	1.2	1.6	1.3	1.7	1.3	1.5	0.9	1.5	1.3
fs DW	(ksi)	1.9	3.2	1.9	2.8	1.7	2.6	1.8	2.7	1.8	2.8	1.8	2.4	1.5	2.5	2.0
fs (L+IM)	(ksi)	9.1	8.5	9.3	7.4	11.6	8.5	11.1	9.1	11.0	8.7	11.0	8.1	10.6	7.7	9.7
fℓ (Service II)	(ksi)	3.1	3.7	3.0	3.5	4.7	3.6	4.7	3.0	4.7	3.5	4.6	2.9	4.3	2.7	4.0
fs+ $f_f/_2$ (Service II)	(ksi)	25.3	30.0	26.0	27.8	29.9	27.5	30.2	26.3	30.1	26.3	29.5	26.1	27.2	22.8	27.9
0.95Rh Fyf	(ksi)	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
fs + $f_f/_3$ (Total)(Strength I)	(ksi)	32.7	37.0	33.6	34.2	38.4	35.5	38.7	34.3	38.5	34.1	37.9	33.8	34.9	29.7	35.9
Øf Fn	(ksi)	50.0	50.0	50.0	50.0	50.0	46.0	50.0	45.9	50.0	45.9	50.0	46.0	50.0	46.0	50.0
Vf	(k)	19.7	32.3	21.2	29.8	19.2	31.2	25.4	33.1	20.2	29.9	21.3	32.9	23.3	33.8	17.7

EXTERIOR GIRDER REACTION TABLE (GIRDER 1)										
		W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	Pier 7	E. Abut.
RDC1	(k)	64.8	252.7	211.5	241.3	198.6	201.6	236.2	187.1	64.1
RDC2	(k)	19.7	75.4	67.7	70.5	69.5	69.8	68.2	67.0	19.8
RDW	(k)	16.6	68.2	59.3	57.4	58.0	58.4	55.8	54.8	16.8
R_L	(k)	70.3	168.8	169.0	159.2	163.9	157.9	156.7	150.6	68.2
R_{IM}	(k)	30.9	54.3	58.4	53.6	54.1	53.6	53.0	51.9	30.8
RTotal	(k)	202.2	619.5	566.0	581.9	544.2	541.2	569.8	511.3	199.7

INTERIOR GIRDER REACTION TABLE (GIRDER 2)										
		W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	Pier 7	E. Abut.
RDC1	(k)	63.4	216.3	218.3	205.1	169.0	170.2	201.1	171.5	56.5
RDC2	(k)	6.8	29.8	31.6	22.6	22.4	22.6	21.8	23.0	5.1
RDW	(k)	17.4	67.1	65.7	57.4	57.0	57.3	56.0	57.2	15.3
R_L	(k)	66.4	140.4	145.7	136.7	135.9	137.2	134.0	131.9	55.4
R_{IM}	(k)	32.1	50.0	51.7	49.7	49.2	49.8	49.3	49.3	27.8
RTotal	(k)	186.1	503.6	513.1	471.4	433.5	437.0	462.3	432.9	160.1

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total-Strength I, and Service II) due to non-composite dead loads (in.⁴ and in.³).

Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total-Strength I, and Service II) in uncracked sections due to short term composite live loads (in.⁴ and in.³).

Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total-Strength I, and Service II) in uncracked sections due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

Ic(cr), Sc(cr): Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing fs(Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).

Sxc: Section modulus about the major axis of section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange (in.³).

DC1: Un-factored non-composite dead load (kips/ft.).

MDC1: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact)(kip-ft.).

Mu (Strength I): Factored design moment (kip-ft.).
1.25 (MDC1+ MDC2) + 1.5 MDW + 1.75 M_{L+IM}

fℓ: Factored calculated normal stress at edge of flange for controlling flange plate due to lateral bending, Strength I or Service II as applicable (ksi).

Øf Mn: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).

fs DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
MDC1 / Snc

fs DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
MDC2 / Sc(3n) or MDC2 / Sc(cr) as applicable.

fs DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
MDW / Sc(3n) or MDW / Sc(cr) as applicable.

fs (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).

fs + $f_f/_2$ (Service II): M_{L+IM} / Sc(n) or M_{L+IM} / Sc(cr) as applicable.
Sum of stresses as computed below (ksi).
fsDC1 + fsDC2 + fsDW + 1.3 fs($L+IM$) + $f_f/_2$

0.95RhFyf: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

fs + $f_f/_3$ (Total) (Strength I): Sum of stresses as computed below on non-compact section (ksi).
1.25 (fsDC1 + fsDC2) + 1.5 fsDW + 1.75 fs($L+IM$) + $f_f/_3$

Øf Fn: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

Vf: Maximum factored shear range in span computed according to Article 6.10.10.
Note:
M_L and R_L include the effects of centrifugal force and superelevation.

* Finite Element analysis was performed to design the girders for this bridge. Explicitly defined loads were not applied to individual girders. The total DC1, DC2, and DW loads were generated within the design software. The unit weights of steel and reinforced concrete utilized are 490 pcf and 150 pcf accordingly.

** Per Article 6.10.6.2.2 Curved Sections in Positive flexure are evaluated as non-compact sections per Article 6.10.7.2.

*** Per Article 6.10.6.2.3 Curved Sections in Negative flexure are evaluated as non-compact sections per Article 6.10.8.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS – 3
STRUCTURE NO. 010-1004
SHEET NO. 41 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	849
		CONTRACT NO. 70B99		
	ILLINOIS	FED. AID PROJECT		

INTERIOR GIRDER MOMENT TABLE (GIRDER 3)																
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.5 Sp. 5	Pier 5	0.5 Sp. 6	Pier 6	0.5 Sp. 7	Pier 7	0.6 Sp. 8
Is	(in^4)	91081	186817	92458	172051	63933	157284	63933	143463	63933	143463	63933	157284	63933	157284	76128
Ic(n)	(in^4)	195942	310233	182754	291712	141326	272522	141326	255376	141326	255376	141326	272522	141326	272522	156771
Ic(3n)	(in^4)	140800	239242	135369	223435	102764	207392	102764	192729	102764	192729	102764	207392	102764	207392	115598
Ic(cr)	(in^4)	–	203337	–	188334	–	173267	–	159281	–	159281	–	173267	–	173267	–
Ss	(in^3)	2728	4178	2526	3873	1731	4256	1731	3916	1731	3916	1731	4256	1731	4256	2037
Sc(n)	(in^3)	3531	–	3191	–	2370	–	2370	–	2370	–	2370	–	2370	–	2664
Sc(3n)	(in^3)	3209	6292	2915	5968	2125	4684	2125	4349	2125	4349	2125	4684	2125	4684	2413
Sc(cr)	(in^3)	–	4772	–	4462	–	4410	–	4074	–	4074	–	4410	–	4410	–
Sxc	(in^3)	3309	4587	2989	4278	2187	4368	2166	4039	2168	4038	2175	4370	2199	4380	2468
DC1	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDC1	('k)	2193	4348	2237	4035	1482	3859	1641	2958	1635	2964	1557	3740	1392	2779	1856
DC2	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDC2	('k)	334	767	305	594	189	505	217	523	217	528	221	491	163	502	272
DW	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDW	('k)	525	1359	494	1075	300	958	342	969	328	976	343	926	270	946	437
M_{L+IM}	('k)	2497	3134	2341	2580	2120	2893	2116	2834	2087	2778	2015	2735	1907	2580	2004
fl (Strength I)	(ksi)	4.0	0.0	4.1	0.0	6.0	4.5	6.3	3.7	6.2	4.5	6.0	3.6	5.5	3.2	5.2
Mu + ⅓ fl Sxc	('k)	12727	13917	12060	11914	10629	18448	11080	15701	10948	16736	10632	16654	9694	14659	11140
Øf Mn	('k)	**	***	**	***	**	***	**	***	**	***	**	***	**	***	**
fs DC1	(ksi)	9.6	12.5	10.6	12.5	10.3	10.9	11.4	9.1	11.3	9.1	10.8	10.5	9.7	7.8	10.9
fs DC2	(ksi)	1.2	1.9	1.3	1.6	1.1	1.4	1.2	1.5	1.2	1.6	1.2	1.3	0.9	1.4	1.4
fs DW	(ksi)	2.0	3.4	2.0	2.9	1.7	2.6	1.9	2.9	1.9	2.9	1.9	2.5	1.5	2.6	2.2
fs (L+IM)	(ksi)	8.5	7.9	8.8	6.9	10.7	7.9	10.7	8.3	10.6	8.2	10.2	7.4	9.7	7.0	9.0
fl (Service II)	(ksi)	3.0	3.7	3.1	3.5	4.5	3.2	4.8	2.6	4.7	3.2	4.6	2.6	4.1	2.3	4.0
fs+ $f_f/_2$ (Service II)	(ksi)	25.4	29.9	26.9	27.8	29.3	26.7	30.8	25.6	30.5	25.7	29.5	25.4	26.7	22.1	28.2
0.95Rh Fyf	(ksi)	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
fs + $f_f/_3$ (Total)(Strength I)	(ksi)	32.7	36.9	34.7	34.1	37.5	34.5	39.5	33.4	39.0	33.4	37.8	32.8	34.2	28.7	36.2
Øf Fn	(ksi)	50.0	50.0	50.0	50.0	50.0	46.0	50.0	45.9	50.0	45.9	50.0	46.0	50.0	46.0	50.0
Vf	(k)	17.0	27.6	19.3	29.1	17.7	26.8	23.3	28.4	18.5	28.6	19.2	29.5	20.9	29.6	16.3

INTERIOR GIRDER MOMENT TABLE (GIRDER 4)																
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.5 Sp. 5	Pier 5	0.5 Sp. 6	Pier 6	0.5 Sp. 7	Pier 7	0.6 Sp. 8
Is	(in^4)	91081	186817	92458	172051	63933	157284	63933	143463	63933	143463	63933	157284	63933	157284	76128
Ic(n)	(in^4)	195943	310234	182755	291712	141326	272522	141326	255377	141326	255377	141326	272522	141326	272522	156771
Ic(3n)	(in^4)	140800	239243	135369	223435	102764	207392	102764	192729	102764	192729	102764	207392	102764	207392	115598
Ic(cr)	(in^4)	–	203337	–	188334	–	173267	–	159281	–	159281	–	173267	–	173267	–
Ss	(in^3)	2728	4178	2526	3873	1731	4256	1731	3916	1731	3916	1731	4256	1731	4256	2037
Sc(n)	(in^3)	3531	–	3191	–	2370	–	2370	–	2370	–	2370	–	2370	–	2664
Sc(3n)	(in^3)	3209	6292	2915	5968	2125	4684	2125	4349	2125	4349	2125	4684	2125	4684	2413
Sc(cr)	(in^3)	–	4772	–	4462	–	4410	–	4074	–	4074	–	4410	–	4410	–
Sxc	(in^3)	3291	4577	2968	4270	2177	4367	2150	4037	2153	4037	2161	4368	2187	4379	2452
DC1	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDC1	('k)	2375	4582	2473	4209	1571	3964	1784	3089	1767	3082	1683	3867	1497	2886	2009
DC2	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDC2	('k)	343	801	328	605	182	504	224	535	215	535	226	497	165	518	285
DW	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDW	('k)	551	1424	532	1102	294	964	357	997	338	1000	358	944	273	972	463
M_{L+IM}	('k)	2775	3442	2572	2792	2272	3089	2252	3061	2224	2973	2168	2937	2059	2774	2180
fl (Strength I)	(ksi)	4.3	0.0	4.4	0.0	6.3	4.2	6.7	3.7	6.6	4.3	6.4	3.5	5.8	3.0	5.6
Mu + ⅓ fl Sxc	('k)	13847	14888	13190	12557	11199	18562	11777	16375	11599	17010	11347	17135	10339	14951	11993
Øf Mn	('k)	**	***	**	***	**	***	**	***	**	***	**	***	**	***	**
fs DC1	(ksi)	10.4	13.2	11.7	13.0	10.9	11.2	12.4	9.5	12.3	9.4	11.7	10.9	10.4	8.1	11.8
fs DC2	(ksi)	1.3	2.0	1.4	1.6	1.0	1.4	1.3	1.6	1.2	1.6	1.3	1.4	0.9	1.4	1.4
fs DW	(ksi)	2.1	3.6	2.2	3.0	1.7	2.6	2.0	2.9	1.9	2.9	2.0	2.6	1.5	2.6	2.3
fs (L+IM)	(ksi)	9.4	8.7	9.7	7.5	11.5	8.4	11.4	9.0	11.3	8.8	11.0	8.0	10.4	7.5	9.8
fl (Service II)	(ksi)	3.3	3.9	3.4	3.7	4.8	3.0	5.1	2.6	5.0	3.0	4.9	2.5	4.4	2.2	4.3
fs+ $f_f/_2$ (Service II)	(ksi)	27.7	32.0	29.5	29.2	30.9	27.6	33.0	27.0	32.5	26.9	31.7	26.5	28.6	23.1	30.5
0.95Rh Fyf	(ksi)	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
fs + $f_f/_3$ (Total)(Strength I)	(ksi)	35.7	39.5	38.1	35.9	39.6	35.7	42.3	35.2	41.6	34.9	40.6	34.3	36.6	30.1	39.1
Øf Fn	(ksi)	50.0	50.0	50.0	50.0	50.0	46.0	50.0	45.9	50.0	45.9	50.0	46.0	50.0	46.0	50.0
Vf	(k)	18.5	29.7	19.7	29.3	19.5	28.7	37.3	29.8	18.5	35.1	19.5	36.8	21.3	47.6	15.2

INTERIOR GIRDER REACTION TABLE (GIRDER 3)									
		W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	Pier 7	E. Abut.
RDC1	(k)	67.9	222.3	220.5	208.1	174.5	175.4	205.2	175.3	60.4
RDC2	(k)	7.3	26.3	24.7	18.8	19.4	19.5	18.5	19.5	6.0
RDW	(k)	18.3	69.5	66.7	57.9	58.2	58.3	56.9	58.5	16.3
R_L	(k)	66.9	129.2	139.9	126.7	125.2	124.3	122.7	120.4	55.3
R_{IM}	(k)	33.4	47.5	51.2	47.4	46.9	46.9	46.7	46.5	28.6
RTotal	(k)	193.8	494.8	503.0	458.9	424.2	424.4	449.9	420.3	166.5

INTERIOR GIRDER REACTION TABLE (GIRDER 4)										
		W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	Pier 7	E. Abut.
RDC1	(k)	71.9	230.0	220.5	212.9	180.0	180.5	210.5	180.0	63.7
RDC2	(k)	7.6	27.3	23.3	18.9	19.9	19.9	18.8	20.2	6.3
RDW	(k)	19.0	71.5	65.6	58.4	59.3	59.4	57.7	59.6	16.8
R_L	(k)	67.9	134.4	135.9	131.3	130.0	129.0	127.2	125.6	56.0
R_{IM}	(k)	34.3	48.7	50.2	48.6	47.9	48.1	47.9	48.3	29.3
RTotal	(k)	200.7	511.9	495.5	470.0	437.1	436.9	462.1	433.7	172.2

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total-Strength I, and Service II) due to non-composite dead loads (in.⁴ and in.³).

Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total-Strength I, and Service II) in uncracked sections due to short term composite live loads (in.⁴ and in.³).

Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total-Strength I, and Service II) in uncracked sections due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

Ic(cr), Sc(cr): Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing fs(Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).

Sxc: Section modulus about the major axis of section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange (in.³).

DC1: Un-factored non-composite dead load (kips/ft.).

MDC1: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact)(kip-ft.).

Mu (Strength I): Factored design moment (kip-ft.).
1.25 (MDC1+ MDC2) + 1.5 MDW + 1.75 M_{L+IM}

fl: Factored calculated normal stress at edge of flange for controlling flange plate due to lateral bending, Strength I or Service II as applicable (ksi).

Øf Mn: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).

fs DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
MDC1 / Snc

fs DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
MDC2 / Sc(3n) or MDC2 / Sc(cr) as applicable.

fs DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
MDW / Sc(3n) or MDW / Sc(cr) as applicable.

fs (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
M_{L+IM} / Sc(n) or M_{L+IM} / Sc(cr) as applicable.

fs + $f_f/_2$ (Service II): Sum of stresses as computed below (ksi).
fsDC1 + fsDC2 + fsDW + 1.3 fs(L_{+IM}) + $f_f/_2$

0.95RhFyf: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

fs + $f_f/_3$ (Total) (Strength I): Sum of stresses as computed below on non-compact section (ksi).
1.25 (fsDC1 + fsDC2) + 1.5 fsDW + 1.75 fs(L_{+IM}) + $f_f/_3$

Øf Fn: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

Vf: Maximum factored shear range in span computed according to Article 6.10.10.
Note:
M_L and R_L include the effects of centrifugal force and superelevation.

* Finite Element analysis was performed to design the girders for this bridge. Explicitly defined loads were not applied to individual girders. The total DC1, DC2, and DW loads were generated within the design software. The unit weights of steel and reinforced concrete utilized are 490 pcf and 150 pcf accordingly.

** Per Article 6.10.6.2.2 Curved Sections in Positive flexure are evaluated as non-compact sections per Article 6.10.7.2.

*** Per Article 6.10.6.2.3 Curved Sections in Negative flexure are evaluated as non-compact sections per Article 6.10.8.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS – 4
STRUCTURE NO. 010-1004
SHEET NO. 42 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	850
		CONTRACT NO. 70B99		
	ILLINOIS	FED. AID PROJECT		

INTERIOR GIRDER MOMENT TABLE (GIRDER 5)																
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.5 Sp. 5	Pier 5	0.5 Sp. 6	Pier 6	0.5 Sp. 7	Pier 7	0.6 Sp. 8
Is	(in^4)	91081	186817	92458	172051	63933	157284	63933	143463	63933	143463	63933	157284	63933	157284	76128
Ic(n)	(in^4)	195942	310233	182754	291712	141326	272522	141326	255376	141326	255376	141326	272522	141326	272522	156771
Ic(3n)	(in^4)	140800	239242	135369	223435	102764	207392	102764	192729	102764	192729	102764	207392	102764	207392	115598
Ic(cr)	(in^4)	–	203337	–	188334	–	173267	–	159281	–	159281	–	173267	–	173267	–
Ss	(in^3)	2728	4178	2526	3873	1731	4256	1731	3916	1731	3916	1731	4256	1731	4256	2037
Sc(n)	(in^3)	3531	–	3191	–	2370	–	2370	–	2370	–	2370	–	2370	–	2664
Sc(3n)	(in^3)	3209	6292	2915	5968	2125	4684	2125	4349	2125	4349	2125	4684	2125	4684	2413
Sc(cr)	(in^3)	–	4772	–	4462	–	4410	–	4074	–	4074	–	4410	–	4410	–
Sxc	(in^3)	3274	4567	2949	4261	2169	4366	2133	4036	2138	4036	2147	4367	2176	4378	2437
DC1	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDC1	('k)	2553	4812	2687	4403	1651	4056	1922	3198	1896	3178	1797	3977	1595	2980	2154
DC2	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDC2	('k)	359	886	348	712	180	553	237	592	219	587	235	552	171	584	306
DW	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDW	('k)	578	1474	568	1197	288	960	372	1013	347	1012	371	952	277	988	487
M_{L+IM}	('k)	3336	4128	2981	3826	2616	3592	2510	3647	2491	3456	2504	3469	2419	3307	2562
fℓ (Strength I)	(ksi)	4.9	0.0	4.9	0.0	7.0	4.3	7.3	4.2	7.2	4.4	7.1	3.9	6.5	3.4	6.3
Mu + ⅓fℓ Sxc	('k)	15721	16558	14726	14885	12323	19740	12829	18321	12630	18134	12577	18882	11592	16679	13417
Øf Mn	('k)	**	***	**	***	**	***	**	***	**	***	**	***	**	***	**
fs DC1	(ksi)	11.2	13.8	12.8	13.6	11.4	11.4	13.3	9.8	13.1	9.7	12.5	11.2	11.1	8.4	12.7
fs DC2	(ksi)	1.3	2.2	1.4	1.9	1.0	1.5	1.3	1.7	1.2	1.7	1.3	1.5	1.0	1.6	1.5
fs DW	(ksi)	2.2	3.7	2.3	3.2	1.6	2.6	2.1	3.0	2.0	3.0	2.1	2.6	1.6	2.7	2.4
fs (L+IM)	(ksi)	11.3	10.4	11.2	10.3	13.2	9.8	12.7	10.7	12.6	10.2	12.7	9.4	12.2	9.0	11.5
fℓ (Service II)	(ksi)	3.7	4.3	3.8	4.3	5.3	3.0	5.5	2.9	5.4	3.0	5.4	2.7	4.9	2.4	4.8
fs+ $f_f/_2$ (Service II)	(ksi)	31.3	35.4	33.0	34.3	33.9	29.7	36.0	29.9	35.5	29.2	35.1	28.9	32.0	25.6	34.0
0.95Rh Fyf	(ksi)	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
fs + $f_f/_3$ (Total)(Strength I)	(ksi)	40.4	43.8	42.5	42.3	43.5	38.6	46.2	39.1	45.4	38.1	44.9	37.6	41.0	33.4	43.7
Øf Fn	(ksi)	50.0	50.0	50.0	50.0	50.0	46.0	50.0	45.9	50.0	45.9	50.0	46.0	50.0	46.0	50.0
Vf	(k)	20.2	32.3	21.7	34.5	22.4	33.6	25.3	35.0	20.4	30.8	21.9	34.3	24.1	35.6	18.2

EXTERIOR GIRDER MOMENT TABLE (GIRDER 6)																
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.5 Sp. 5	Pier 5	0.5 Sp. 6	Pier 6	0.5 Sp. 7	Pier 7	0.6 Sp. 8
Is	(in^4)	103885	194662	152565	172051	78865	178940	81496	171274	78865	171274	91277	178940	76128	164874	98648
Ic(n)	(in^4)	203796	311703	263521	288691	161919	291125	168537	286750	161919	286750	177870	291125	155162	273855	191541
Ic(3n)	(in^4)	149459	243813	201108	221777	118915	226591	123240	220564	118915	220564	132163	226591	114454	211657	141369
Ic(cr)	(in^4)	–	210063	–	187750	–	193958	–	186846	–	186846	–	193958	–	179699	–
Ss	(in^3)	2915	5106	4159	3873	2153	4658	2269	4595	2153	4595	2461	4658	2037	4320	2685
Sc(n)	(in^3)	3714	–	4885	–	2800	–	2945	–	2800	–	3105	–	2656	–	3430
Sc(3n)	(in^3)	3365	5497	4546	5889	2538	5045	2670	5008	2538	5008	2834	5045	2405	4709	3105
Sc(cr)	(in^3)	–	5242	–	4440	–	4794	–	4742	–	4742	–	4794	–	4458	–
Sxc	(in^3)	3420	5201	4607	4247	2591	4754	2686	4706	2553	4706	2867	4755	2455	4428	3146
DC1	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDC1	('k)	3135	5163	4639	4401	2127	4564	2615	3770	2490	3721	2702	4476	2004	3135	2980
DC2	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDC2	('k)	390	1083	547	848	187	762	274	836	235	825	287	763	193	758	383
DW	(k/')	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MDW	('k)	646	1521	860	1159	326	1005	463	1121	414	1115	490	1006	311	1001	623
M_{L+IM}	('k)	4359	5062	5067	4459	3677	4584	3531	4912	3396	4576	3813	4448	3266	4059	3825
fℓ (Strength I)	(ksi)	6.2	4.6	4.5	0.0	6.8	4.7	6.6	4.5	6.9	4.5	6.5	4.4	6.8	4.0	6.4
Mu + ⅓fℓ Sxc	('k)	20027	26948	23596	16103	15659	23627	16415	23111	15818	22441	17356	22860	14467	19400	18552
Øf Mn	('k)	**	***	**	***	**	***	**	***	**	***	**	***	**	***	**
fs DC1	(ksi)	12.9	12.1	13.4	13.6	11.9	11.8	13.8	9.8	13.9	9.7	13.2	11.5	11.8	8.7	13.3
fs DC2	(ksi)	1.4	2.5	1.4	2.3	0.9	1.9	1.2	2.1	1.1	2.1	1.2	1.9	1.0	2.0	1.5
fs DW	(ksi)	2.3	3.5	2.3	3.1	1.5	2.5	2.1	2.8	2.0	2.8	2.1	2.5	1.6	2.7	2.4
fs (L+IM)	(ksi)	14.1	11.6	12.4	12.1	15.8	11.5	14.4	12.4	14.6	11.6	14.7	11.1	14.8	10.9	13.4
fℓ (Service II)	(ksi)	4.7	3.2	3.4	4.6	5.1	3.2	5.0	3.0	5.2	3.1	4.9	3.0	5.1	2.8	4.9
fs+ $f_f/_2$ (Service II)	(ksi)	37.2	34.8	35.0	37.0	37.3	32.7	38.4	32.5	38.5	31.2	38.1	31.9	36.1	29.0	37.0
0.95Rh Fyf	(ksi)	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
fs + $f_f/_3$ (Total)(Strength I)	(ksi)	48.0	45.3	45.2	45.7	48.1	42.5	49.3	42.5	49.4	40.8	49.1	41.5	46.4	37.9	47.7
Øf Fn	(ksi)	50.0	47.1	50.0	50.0	50.0	46.1	50.0	46.1	50.0	46.1	50.0	46.1	50.0	46.0	50.0
Vf	(k)	27.8	43.7	33.8	49.4	29.5	44.4	29.4	48.9	29.1	41.2	30.1	43.5	29.8	43.5	26.2

INTERIOR GIRDER REACTION TABLE (GIRDER 5)										
		W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	Pier 7	E. Abut.
RDC1	(k)	75.6	236.5	236.2	217.5	183.9	183.9	214.9	184.3	66.6
RDC2	(k)	7.7	31.2	28.5	21.5	22.5	22.5	21.4	24.3	6.0
RDW	(k)	19.6	72.0	67.8	58.1	59.6	59.7	57.8	60.1	17.1
RL	(k)	74.4	152.4	157.8	147.3	147.7	146.3	144.7	143.4	60.4
R IM	(k)	33.8	52.3	54.0	51.8	51.1	51.9	51.5	51.9	29.3
RTotal	(k)	211.0	544.4	544.3	496.1	464.8	464.2	490.3	463.9	179.5

EXTERIOR GIRDER REACTION TABLE (GIRDER 6)										
		W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	Pier 7	E. Abut.
RDC1	(k)	89.4	240.6	204.2	215.5	189.8	191.5	215.8	181.4	87.1
RDC2	(k)	21.0	72.5	63.8	62.9	65.2	65.5	62.9	62.8	21.7
RDW	(k)	20.3	66.5	53.9	50.7	54.0	54.4	50.7	52.3	21.0
RL	(k)	91.4	180.8	171.5	161.5	171.9	163.6	162.3	158.4	85.0
R IM	(k)	38.5	58.9	61.0	56.4	57.5	57.3	56.4	56.0	37.4
RTotal	(k)	260.6	619.3	554.5	547.0	538.4	532.3	548.1	510.8	252.2

Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).

Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total-Strength I, and Service II) in uncracked sections due to short term composite live loads ($in.^4$ and $in.^3$).

Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total-Strength I, and Service II) in uncracked sections due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

Ic(cr), Sc(cr): Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing fs(Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).

Sxc: Section modulus about the major axis of section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange ($in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

MDC1: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact)(kip-ft.).

Mu (Strength I): Factored design moment (kip-ft.).
1.25 (MDC1+ MDC2) + 1.5 MDW + 1.75 M_{L+IM}

fℓ: Factored calculated normal stress at edge of flange for controlling flange plate due to lateral bending, Strength I or Service II as applicable (ksi).

Øf Mn: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).

fs DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
MDC1 / Snc

fs DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
MDC2 / Sc(3n) or MDC2 / Sc(cr) as applicable.

fs DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
MDW / Sc(3n) or MDW / Sc(cr) as applicable.

fs (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
M_{L+IM} / Sc(n) or M_{L+IM} / Sc(cr) as applicable.

fs + $f_f/_2$ (Service II): Sum of stresses as computed below (ksi).
fsDC1 + fsDC2 + fsDW + 1.3 fs(L_{+IM}) + $f_f/_2$

0.95RhFyf: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

fs + $f_f/_3$ (Total) (Strength I): Sum of stresses as computed below on non-compact section (ksi).
1.25 (fsDC1 + fsDC2) + 1.5 fsDW + 1.75 fs(L_{+IM}) + $f_f/_3$

Øf Fn: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

Vf: Maximum factored shear range in span computed according to Article 6.10.10.
Note:
M_L and R_L include the effects of centrifugal force and superelevation.

* Finite Element analysis was performed to design the girders for this bridge. Explicitly defined loads were not applied to individual girders. The total DC1, DC2, and DW loads were generated within the design software. The unit weights of steel and reinforced concrete utilized are 490 pcf and 150 pcf accordingly.

** Per Article 6.10.6.2.2 Curved Sections in Positive flexure are evaluated as non-compact sections per Article 6.10.7.2.

*** Per Article 6.10.6.2.3 Curved Sections in Negative flexure are evaluated as non-compact sections per Article 6.10.8.

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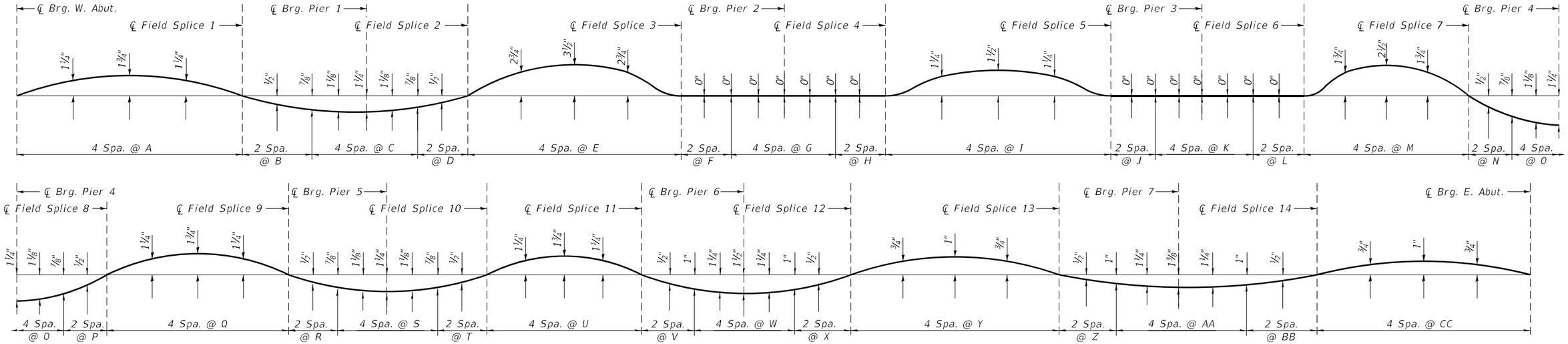
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS – 5
STRUCTURE NO. 010-1004
SHEET NO. 43 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	851
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



CAMBER DIAGRAM

CAMBER SPACES

Girder	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC
1	28'-11"	15'-7¼"	12'-2¼"	14'-7⅝"	28'-2⅞"	12'-2¼"	12'-2¼"	17'-0⅞"	21'-6"	13'-7⅞"	9'-9"	12'-2⅜"	24'-3½"	12'-8⅛"	9'-9"	13'-2"	23'-3¾"	13'-7⅞"	9'-9"	13'-7⅞"	24'-3½"	11'-2⅝"	9'-9"	13'-2"	20'-10⅜"	14'-1¾"	9'-9"	11'-8½"	27'-1¼"
2	29'-0¾"	15'-8¼"	12'-3"	14'-8½"	28'-8¼"	12'-3"	12'-3"	17'-1⅞"	21'-3¾"	13'-8¾"	9'-9⅝"	12'-3⅛"	24'-5"	12'-8⅞"	9'-9⅝"	13'-2¾"	23'-5⅛"	13'-8¾"	9'-9⅝"	13'-8¾"	24'-5"	11'-3¼"	9'-9⅝"	13'-2¾"	20'-11¾"	14'-2½"	9'-9⅝"	11'-9⅛"	27'-2⅞"
3	29'-2½"	15'-9⅛"	12'-3¾"	14'-9⅜"	29'-1½"	12'-3¾"	12'-3¾"	17'-2⅞"	21'-1⅜"	13'-9½"	9'-10¼"	12'-3¾"	24'-6⅜"	12'-9⅝"	9'-10¼"	13'-3⅝"	23'-6⅝"	13'-9½"	9'-10¼"	13'-9½"	24'-6⅜"	11'-4"	9'-10¼"	13'-3⅝"	21'-1"	14'-3⅜"	9'-10¼"	11'-9⅞"	27'-4½"
4	29'-4¼"	15'-10⅛"	12'-4½"	14'-10¼"	29'-6⅞"	12'-4½"	12'-4½"	17'-4"	20'-11⅛"	13'-10⅜"	9'-10⅞"	12'-4½"	24'-7⅛"	12'-10½"	9'-10⅞"	13'-4⅜"	23'-8"	13'-10⅜"	9'-10⅞"	13'-10⅜"	24'-7⅛"	11'-4⅝"	9'-10⅞"	13'-4⅜"	21'-2¼"	14'-4¼"	9'-10⅞"	11'-10⅝"	27'-6¼"
5	29'-6"	15'-11"	12'-5¼"	14'-11⅛"	30'-0⅛"	12'-5¼"	12'-5¼"	17'-5"	20'-8⅞"	13'-11¼"	9'-11⅜"	12'-5¼"	24'-9⅜"	12'-11¼"	9'-11⅜"	13'-5¼"	23'-9⅜"	13'-11¼"	9'-11⅜"	13'-11¼"	24'-9⅜"	11'-5¼"	9'-11⅜"	13'-5¼"	21'-3½"	14'-5⅛"	9'-11⅜"	11'-11¼"	27'-7⅞"
6	29'-7¾"	16'-0"	12'-6"	15'-0"	30'-5½"	12'-6"	12'-6"	17'-6"	20'-6½"	14'-0"	10'-0"	12'-6"	24'-10⅞"	13'-0"	10'-0"	13'-6"	23'-10⅞"	14'-0"	10'-0"	14'-0"	24'-10⅞"	11'-6"	10'-0"	13'-6"	21'-4¾"	14'-6"	10'-0"	12'-0"	27'-9½"

TOP OF WEB ELEVATIONS

Girder	℄ Brg. W. Abut	Field Splice 1	℄ Brg. Pier 1	Field Splice 2	Field Splice 3	℄ Brg. Pier 2	Field Splice 4	Field Splice 5	℄ Brg. Pier 3	Field Splice 6	Field Splice 7	℄ Brg. Pier 4	Field Splice 8	Field Splice 9	℄ Brg. Pier 5	Field Splice 10	Field Splice 11	℄ Brg. Pier 6	Field Splice 12	Field Splice 13	℄ Brg. Pier 7	Field Splice 14	℄ Brg E. Abut.
1	803.84	805.99	806.87	807.93	809.27	809.44	809.65	809.12	808.50	807.92	806.02	805.00	804.17	802.26	801.21	800.36	798.36	797.37	796.55	794.86	793.79	793.04	790.84
2	804.35	806.49	807.42	808.52	809.89	810.00	810.12	809.65	809.04	808.46	806.55	805.52	804.68	802.77	801.73	800.89	798.89	797.90	797.07	795.36	794.29	793.54	791.35
3	804.85	806.97	807.91	809.03	810.39	810.50	810.62	810.15	809.54	808.96	807.05	806.02	805.17	803.27	802.22	801.38	799.40	798.40	797.56	795.86	794.79	794.04	791.85
4	805.34	807.47	808.41	809.52	810.90	810.99	811.10	810.64	810.03	809.46	807.54	806.51	805.67	803.76	802.72	801.89	799.89	798.89	798.06	796.35	795.28	794.53	792.34
5	805.83	807.96	808.91	810.03	811.42	811.49	811.58	811.13	810.52	809.95	808.04	807.01	806.16	804.25	803.21	802.38	800.39	799.38	798.54	796.84	795.77	795.03	792.83
6	806.31	808.46	809.38	810.47	811.84	811.93	812.05	811.57	810.98	810.42	808.53	807.49	806.63	804.73	803.69	802.85	800.86	799.85	799.01	797.33	796.28	795.54	793.31

Note: For fabrication only.

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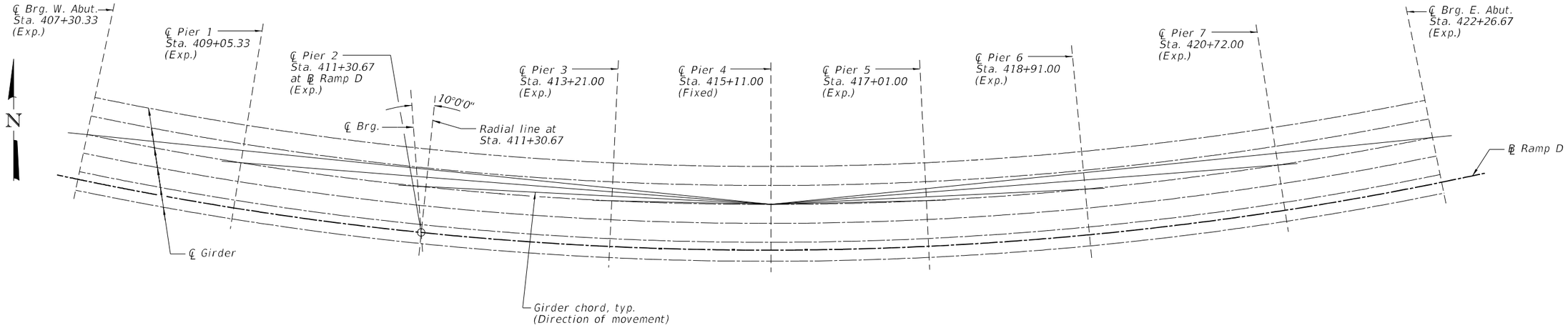
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

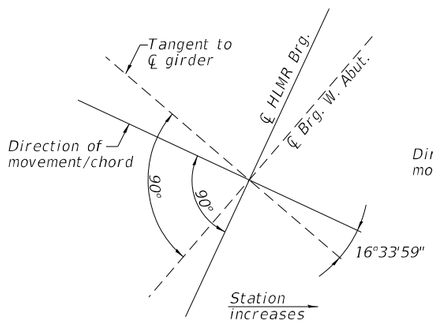
STRUCTURAL STEEL DETAILS – 6
STRUCTURE NO. 010–1004
SHEET NO. 44 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	852
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



BEARING LAYOUT

Girder	A	B
1	8°10'55"	100°13'19"
2	8°09'21"	100°10'12"
3	8°07'49"	100°07'07"
4	8°06'17"	100°04'04"
5	8°04'47"	100°01'03"
6	8°03'17"	99°58'04"



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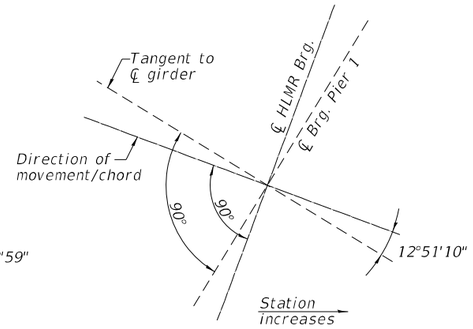

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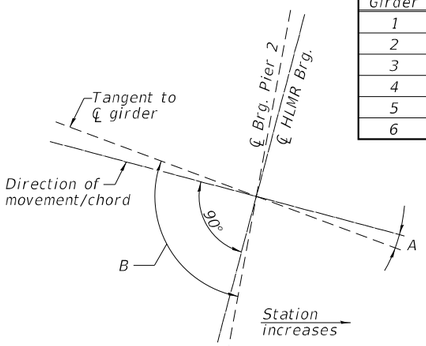

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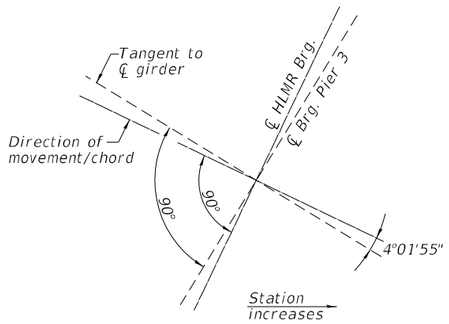

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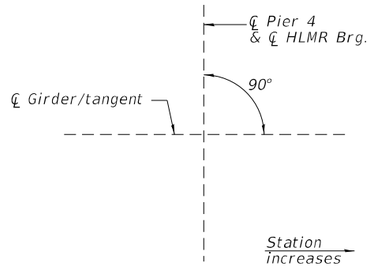

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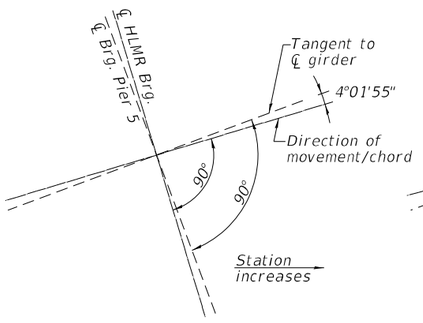

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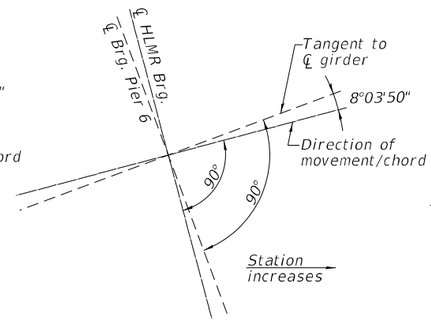
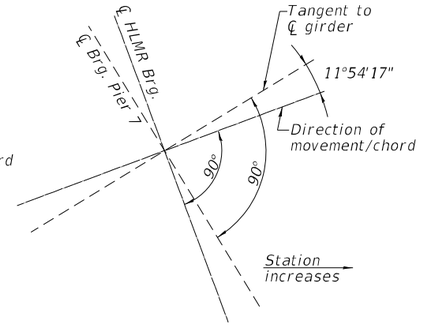
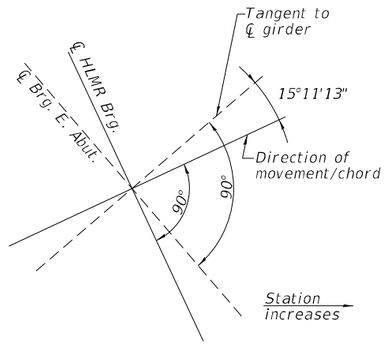


PIER 6 DETAIL



PIER 7 DETAIL



EAST ABUTMENT DETAIL

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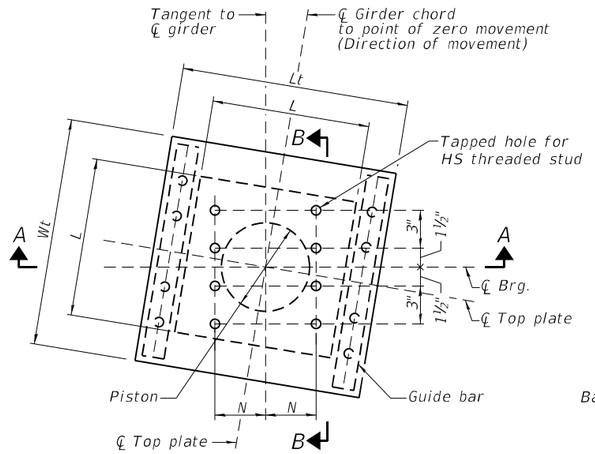
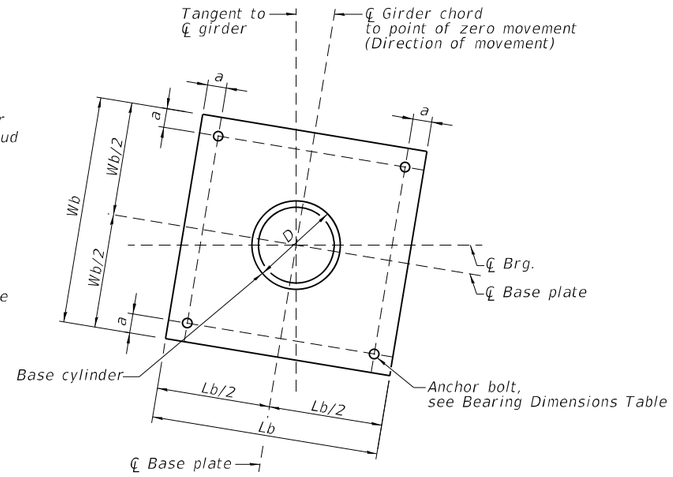
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING LAYOUT AND ORIENTATION
STRUCTURE NO. 010-1004
SHEET NO. 45 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	853
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



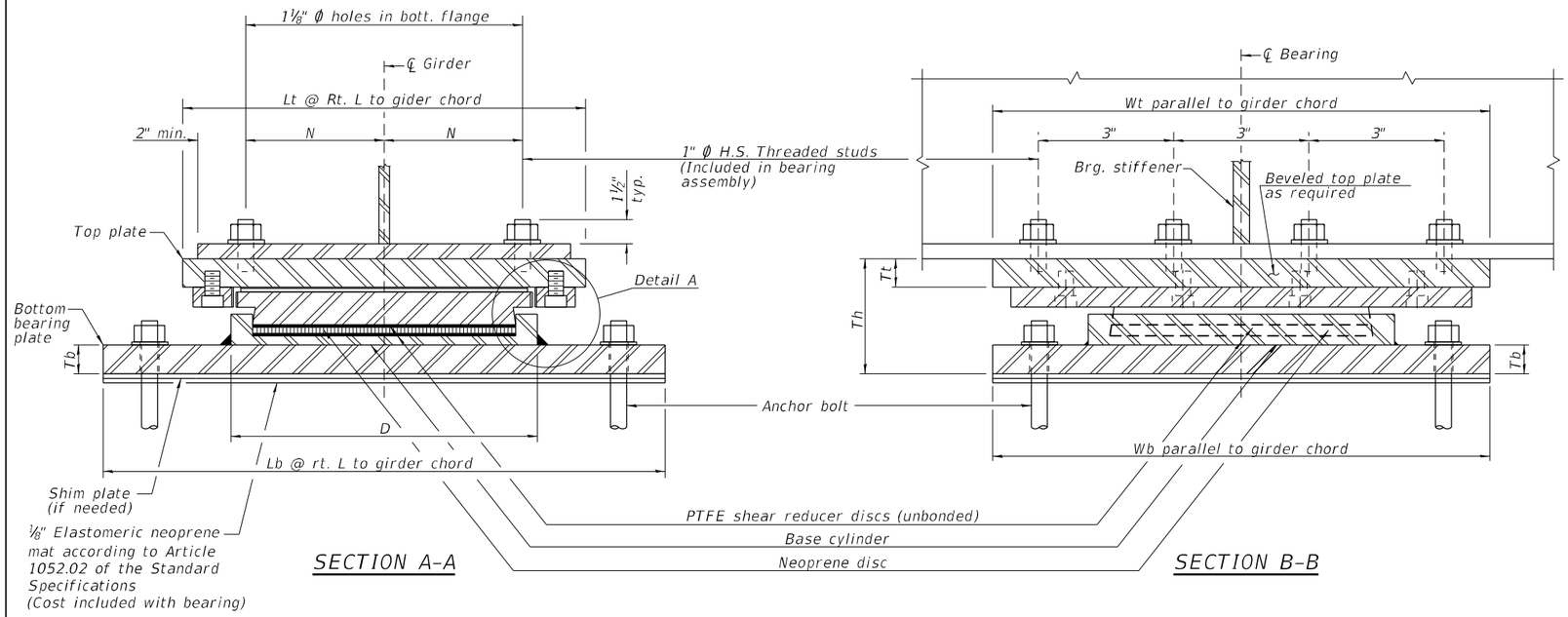
TOP BEARING PLATE AND PISTON PLAN



BOTTOM BEARING PLATE AND BASE CYLINDER PLAN

NOTES:

1. The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.
2. For anchor bolt location see Anchor Bolt Location Table on Sheet 47 of 94.
3. Top & bottom plates, threaded studs, washers, elastic neoprene mats, and shim plates are included in the cost of the bearings.
4. Anchor bolts for bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place.
5. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
6. Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
7. Work this sheet with Sheet 47 of 94.
8. All (embedded and separate) bearing plates, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.
9. If the base cylinder is recessed into the bottom bearing plate, the thickness of the bottom plate shall be Tb plus the depth of the recess.



SECTION A-A

SECTION B-B

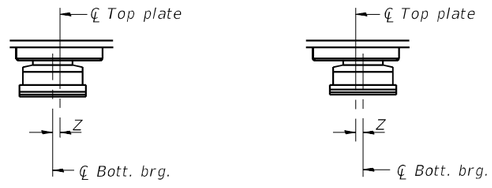
ANCHOR BOLT DETAILS

Bolt Dia. x Length **	Plate Washer
⅝" x 12"	1¾" x 1¾" x 5/16"
1" x 12"	2¼" x 2¼" x 5/16"

** Length shown is minimum required embedment length.

BASE PLATE HOLE TABLE

Anchor Bolt Ø	Max. Hole Ø
⅝"	1⅛"
1"	1½"

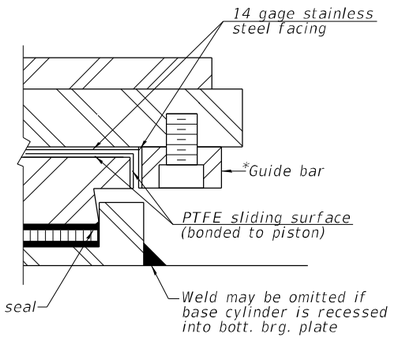


BELOW 50° F. ABOVE 50° F.

Z=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

EXPANSION BEARING ORIENTATION

The above diagrams are for informational purposes only to show the amount of expected offset "Z" for the current temperature in the field.



DETAIL A

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

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HLMR EXPANSION BEARING DETAILS – 1
STRUCTURE NO. 010-1004
SHEET NO. 46 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	854
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

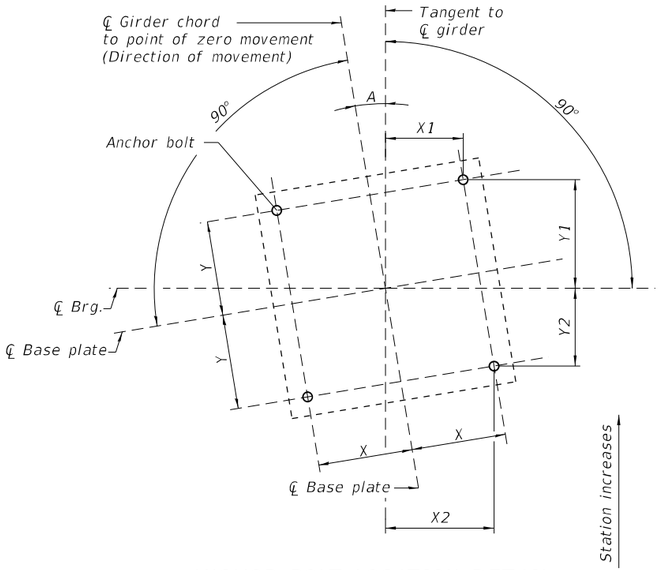
BEARING DATA TABLE

Brg. Location	Vertical Design Load (kips)	Pay Item Load (kips)	Lateral Design Load, Hu (kips)	* Total Factored Required Movement	Bottom Bearing Plate			Top Bearing Plate			Th	D	N	Anchor Bolt Dia.	Max. Anchor Bolt Hole Dia. in Bott. PL	a	Anchor Bolt Specification Grade	Factored Strength Design Rotation, θ_u (Rad.)
					Tb	Lb	Wb	Tt	Lt	Wt								
West Abutment	222	250	45	5 7/8"	2 1/2"	3'-1"	1'-4 3/4"	2 7/8"	2'-2 7/8"	1'-9 1/2"	1'-3 3/4"	1'-1 3/4"	6"	5/8"	1 1/8"	2 1/16"	F1554 Gr. 36	-0.01051
Pier 1	566	600	113	4 3/8"	3 3/8"	3'-7 1/8"	1'-9 3/4"	3 3/4"	2'-8 5/8"	2'-2 3/4"	1'-2 7/8"	1'-8 1/4"	8"	1"	1 1/2"	2 1/4"	F1554 Gr. 55	0.00705
Pier 2	508	550	102	2 7/8"	3 1/4"	3'-7"	1'-8 1/8"	3 3/4"	2'-8 1/2"	2'-0 1/4"	1'-2 1/2"	1'-7 3/8"	8"	1"	1 1/2"	2 1/4"	F1554 Gr. 55	0.00935
Pier 3	529	550	106	1 1/2"	3 1/4"	3'-3 1/4"	1'-8"	3 5/8"	2'-4 3/4"	1'-11 3/8"	1'-1 7/8"	1'-6 1/2"	7"	1"	1 1/2"	2 1/4"	F1554 Gr. 55	0.00975
Pier 5	488	500	98	1 1/2"	3 1/8"	3'-3 1/4"	1'-8"	3 1/2"	2'-4 3/4"	1'-11 3/8"	1'-1 5/8"	1'-6 1/2"	7"	1"	1 1/2"	2 1/4"	F1554 Gr. 55	0.00950
Pier 6	517	550	104	2 7/8"	3 1/4"	3'-3 3/4"	1'-8"	3 5/8"	2'-5 1/4"	1'-11 3/8"	1'-1 7/8"	1'-6 1/2"	7"	1"	1 1/2"	2 1/4"	F1554 Gr. 55	0.00830
Pier 7	460	500	92	4 1/4"	3 1/8"	3'-4 1/8"	1'-8"	3 3/8"	2'-5 5/8"	2'-0 3/4"	1'-1 1/2"	1'-6 1/2"	7"	1"	1 1/2"	2 1/4"	F1554 Gr. 55	0.00647
East Abutment	215	250	43	5 1/2"	2 3/8"	3'-1"	1'-4 3/4"	2 7/8"	2'-2 7/8"	1'-9 1/2"	1'-3 5/8"	1'-1 3/4"	6"	5/8"	1 1/8"	2 1/16"	F1554 Gr. 36	-0.01103

* Total Factored Required Movements shown are the values of either expansion only or contraction only from 50° F and include a 1.2 safety factor.

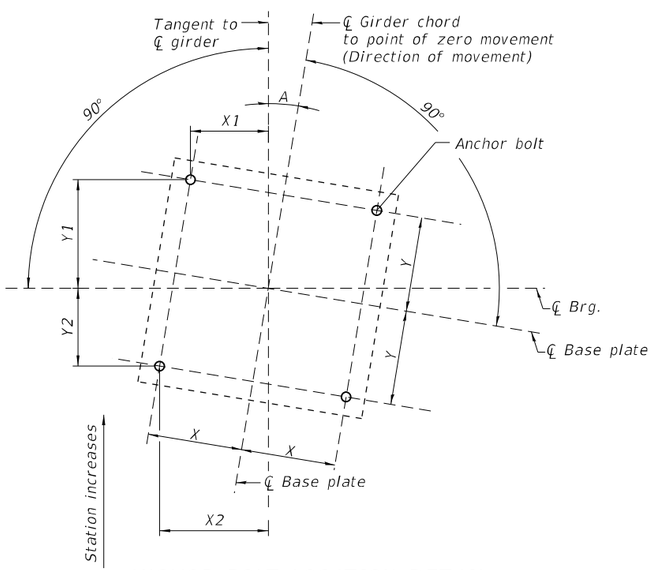
BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 5/8"	Each	48
Anchor Bolts, 1"	Each	144
High Load Multi-Rotational Bearings, Guided Expansion, 250K	Each	12
High Load Multi-Rotational Bearings, Guided Expansion, 500K	Each	12
High Load Multi-Rotational Bearings, Guided Expansion, 550K	Each	18
High Load Multi-Rotational Bearings, Guided Expansion, 600K	Each	6



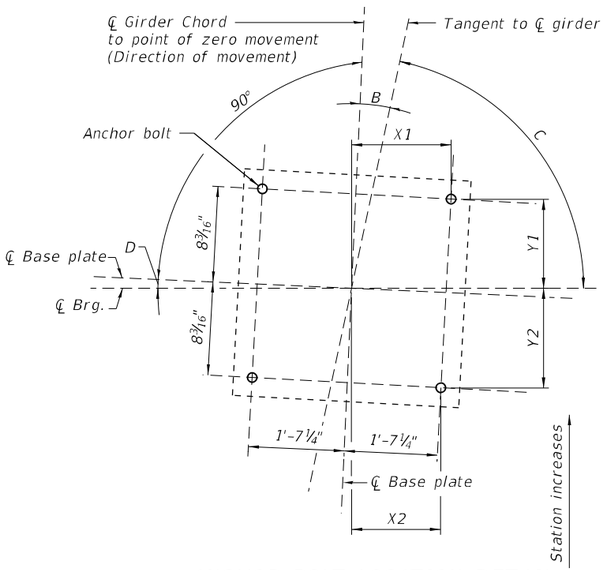
ANCHOR BOLT LOCATION DETAIL

(West Abutment, Pier 1, and Pier 3)



ANCHOR BOLT LOCATION DETAIL

(East Abutment, Pier 5, 6, and Pier 7)



ANCHOR BOLT LOCATION DETAIL

(Pier 2)

ANCHOR BOLT LOCATION TABLE

Brg. Location	A	X	X1	X2	Y	Y1	Y2
West Abutment	16°33'59"	1'-4 7/16"	1'-1 15/16"	1'-5 9/16"	6 5/16"	10 3/4"	1 3/8"
Pier 1	12°51'10"	1'-7 5/16"	1'-4 15/16"	1'-8 3/4"	8 5/8"	1'-0 1 1/16"	4 1/8"
Pier 3	4°01'55"	1'-5 3/8"	1'-4 13/16"	1'-5 7/8"	7 3/4"	8 15/16"	6 1/2"
Pier 5	4°01'55"	1'-5 3/8"	1'-4 13/16"	1'-5 7/8"	7 3/4"	8 15/16"	6 1/2"
Pier 6	8°03'50"	1'-5 5/8"	1'-4 1/8"	1'-6 5/16"	7 3/4"	10 1/8"	5 1/4"
Pier 7	11°54'17"	1'-5 13/16"	1'-3 13/16"	1'-7"	7 3/4"	11 1/4"	3 15/16"
East Abutment	15°11'13"	1'-4 7/16"	1'-2 3/16"	1'-5 1/2"	6 5/16"	10 3/8"	1 13/16"

ANCHOR BOLT LOCATION TABLE AT PIER 2

Girder	B	C	D	X1	X2	Y1	Y2
1	8°10'55"	79°46'41"	2°02'24"	1'-7 1/2"	1'-6 15/16"	7 1/2"	8 7/8"
2	8°09'21"	79°49'48"	2°00'51"	1'-7 1/2"	1'-6 15/16"	7 1/2"	8 7/8"
3	8°07'49"	79°52'53"	1°59'18"	1'-7 1/2"	1'-6 15/16"	7 1/2"	8 7/8"
4	8°06'17"	79°55'56"	1°57'47"	1'-7 1/2"	1'-6 15/16"	7 1/2"	8 13/16"
5	8°04'47"	79°58'57"	1°56'16"	1'-7 1/2"	1'-6 15/16"	7 9/16"	8 13/16"
6	8°03'17"	80°01'56"	1°54'47"	1'-7 1/2"	1'-6 15/16"	7 9/16"	8 13/16"

NOTES:

1. Factored strength design rotation is due to applied loads, camber, and profile slope.
2. Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
3. Work this sheet with Sheet 46 of 94.
4. See Sheet 45 of 94 for bearing layout & orientation.

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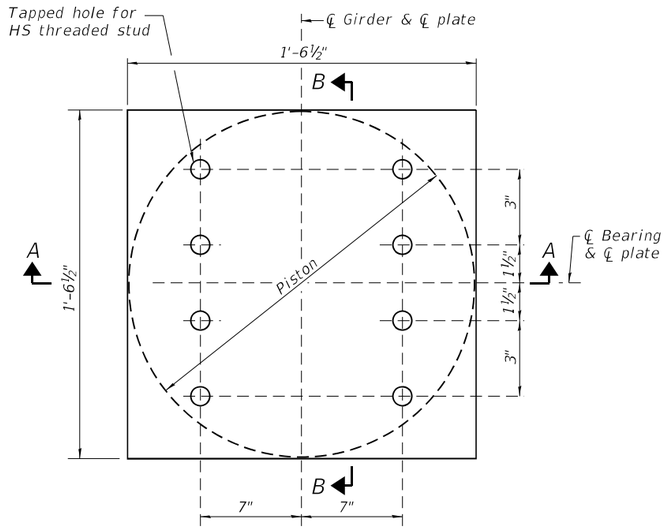
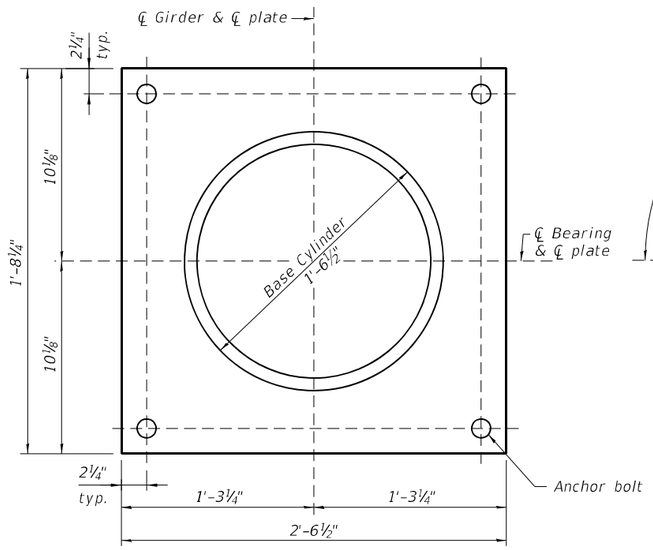
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HLMR EXPANSION BEARING DETAILS – 2
STRUCTURE NO. 010-1004
SHEET NO. 47 OF 94 SHEETS

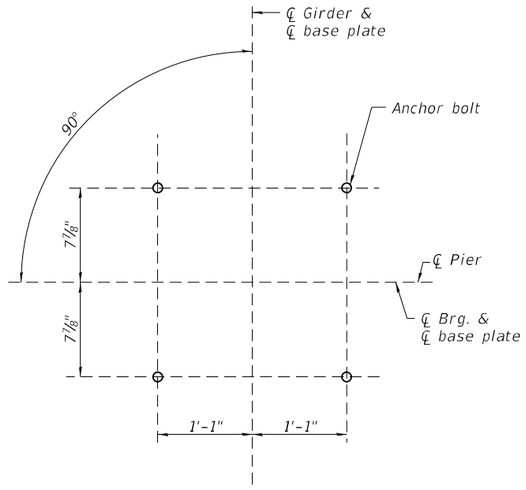
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	855
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



TOP BEARING PLATE AND PISTON PLAN



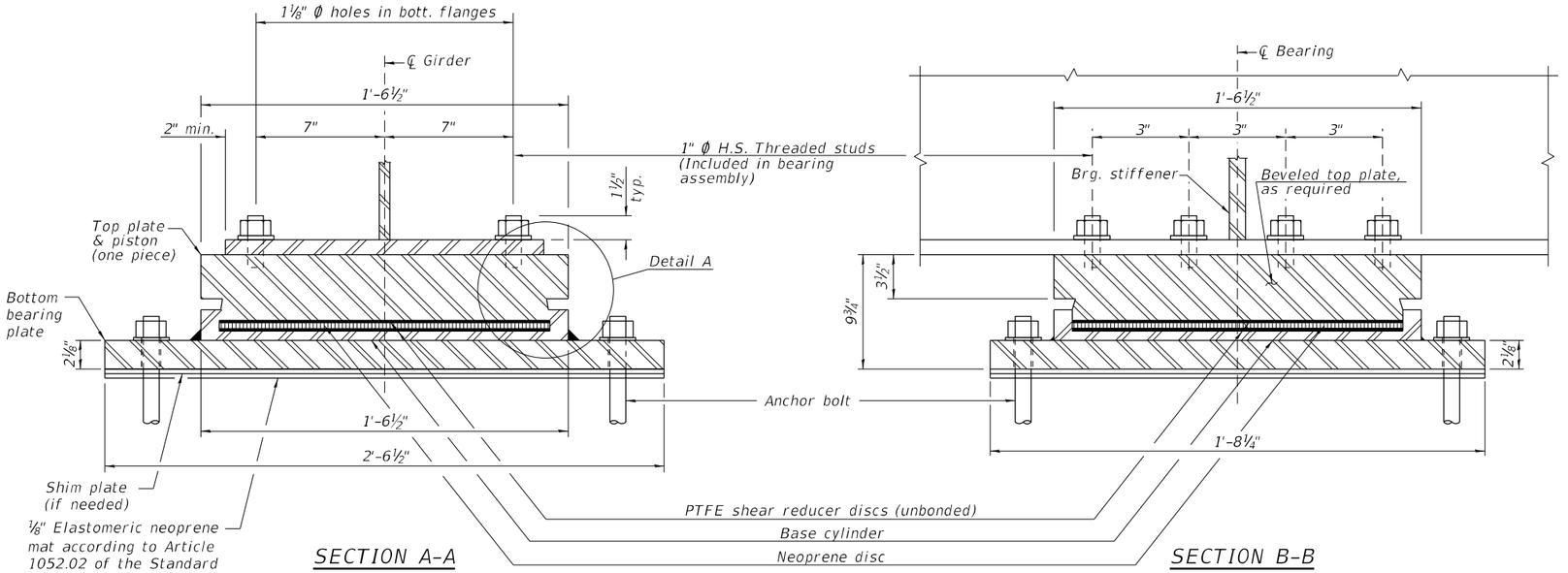
BOTTOM BEARING PLATE AND BASE CYLINDER PLAN



ANCHOR BOLT LOCATION DETAIL

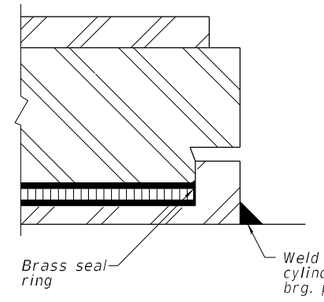
NOTES:

1. The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.
2. Top & bottom plates, threaded studs, washers, elastic neoprene mats and shim plates are included in the cost of the bearings.
3. Anchor bolts for bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place.
4. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
5. Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
6. All (embedded and separate) bearing plates, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.
7. If the base cylinder is recessed into the bottom bearing plate, the thickness of the bottom plate shall be 2⅛" plus the depth of the recess.
8. Factored strength design rotation is due to applied loads, camber, and profile slope.
9. Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
10. See Sheet 45 of 94 for bearing layout & orientation.



SECTION A-A

SECTION B-B



DETAIL A

PIER 4 BEARING DATA

Vertical Design Load (kips)	Lateral Design Load, Hu (kips)	Factored Strength Design Rotation, θu (Rad.)
490	98	0.00950

BASE PLATE HOLE TABLE

Anchor Bolt Ø	Max. Hole Ø
1"	1½"

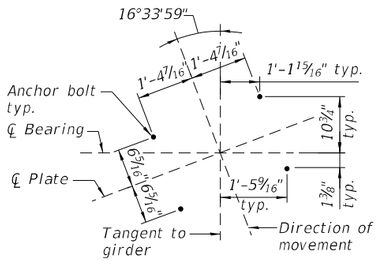
ANCHOR BOLT DETAILS

Bolt Dia. x Length **	Plate Washer	Anchor Bolt Specification Grade
1" x 12"	2¼" x 2¼" x 5/16"	F1554 Gr. 55

** Length shown is minimum required embedment length.

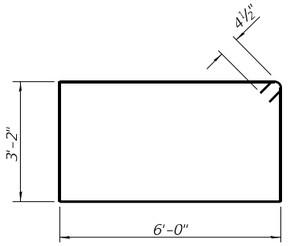
BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	24
High Load Multi-Rotational Bearings, Fixed- 500k	Each	6

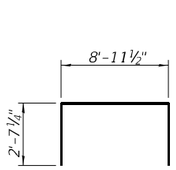


DETAIL 1

Bearing orientation
(typ. at each girder)



BAR s50(E)



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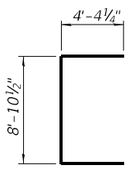
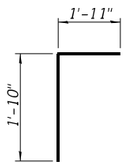


BAR u50(E)



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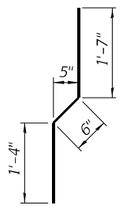

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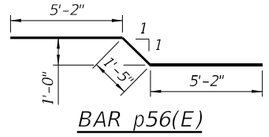
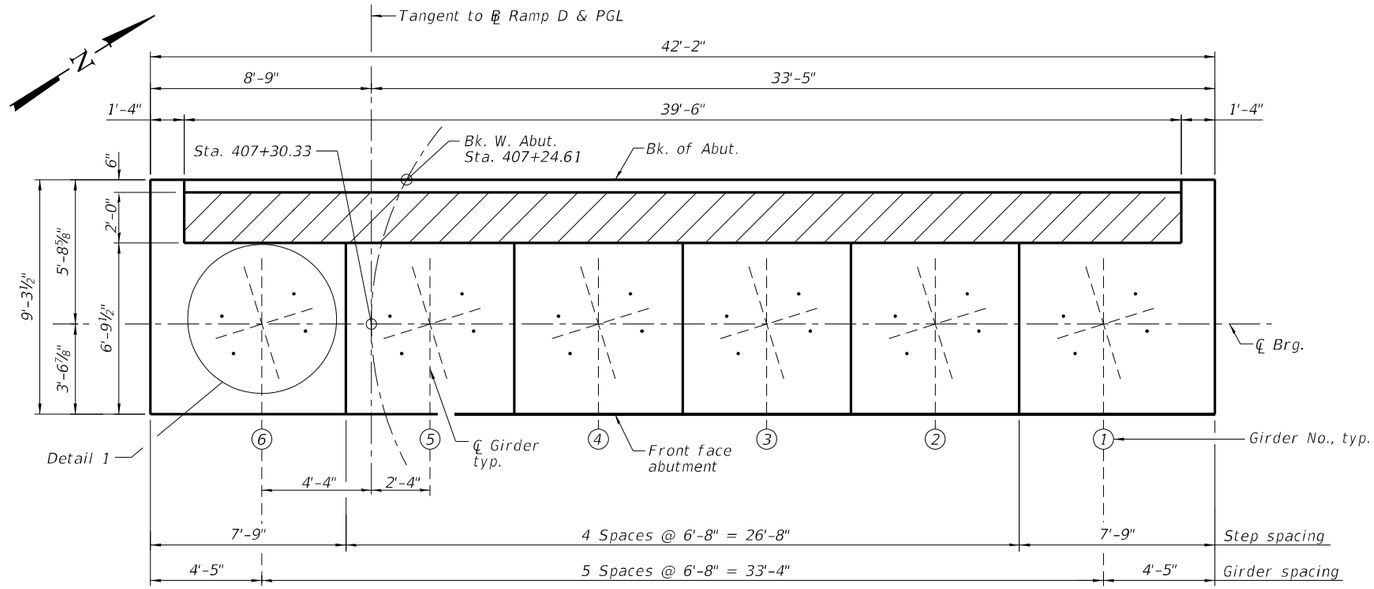
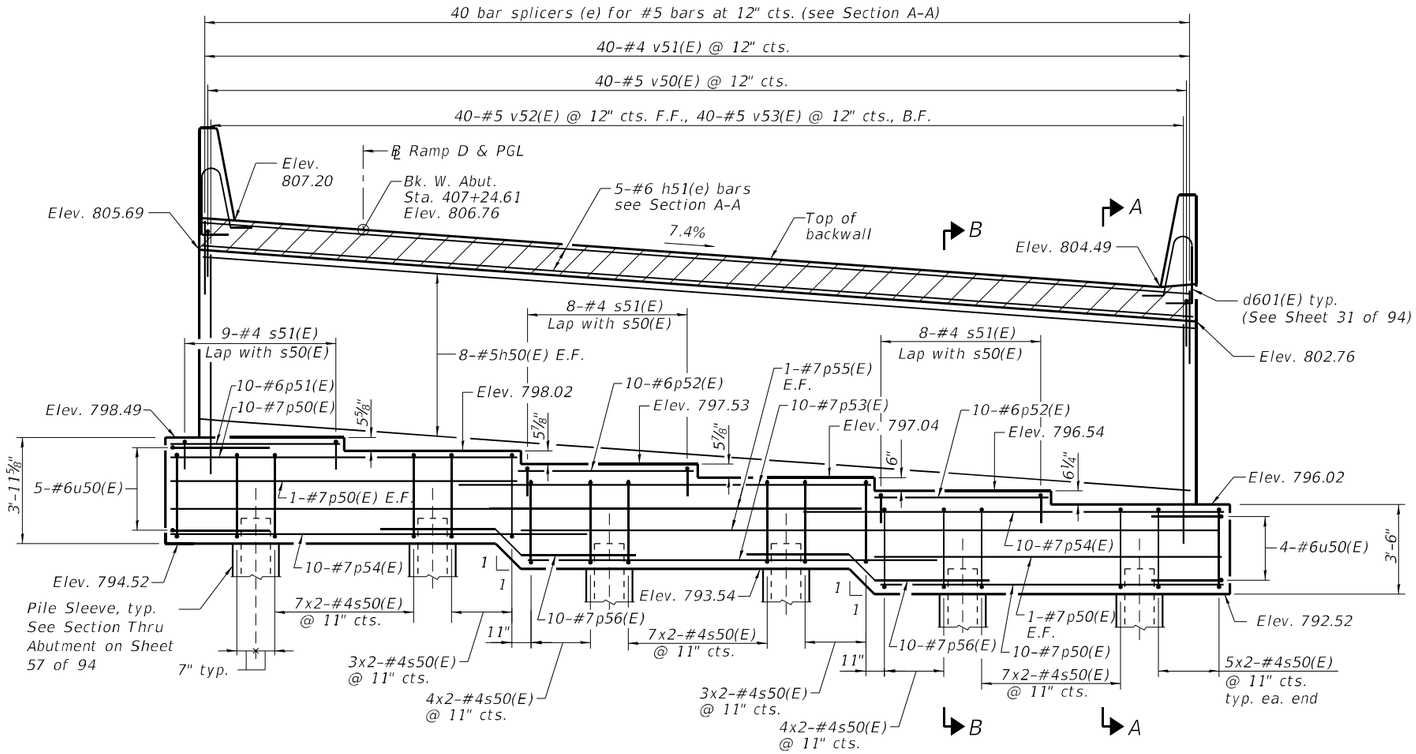


BAR p56(E)



TOP PLAN



ELEVATION

(Looking west)

PILE DATA

Type: Steel Metal Shell, 12"∅ w/.25" walls, with pile shoes
Nominal Required Bearing: 366 k
Factored Resistance Available: 201 k
Est. Length: 62'
No. Production Piles: 11
No. Test Piles: 1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h50(E)	16	#5	39'-3"	
h51(E)	5	#6	39'-3"	
p50(E)	24	#7	14'-1"	
p51(E)	10	#6	7'-5"	
p52(E)	20	#6	6'-8"	
p53(E)	10	#7	18'-4"	
p54(E)	20	#7	19'-3"	
p55(E)	4	#7	27'-7"	
p56(E)	20	#7	11'-9"	
s50(E)	90	#4	19'-1"	
s51(E)	25	#4	14'-2"	
u50(E)	9	#6	17'-7"	
v50(E)	40	#5	3'-9"	
v51(E)	40	#4	3'-5"	
v52(E)	40	#5	11'-9"	
v53(E)	40	#5	10'-2"	
Concrete Structures		Cu. Yd.	80.3	
Reinforcement Bars, Epoxy Coated		Pound	6,610	
Furnishing Metal Shell Piles, 12"x.25"		Foot	682	
Driving Piles		Foot	682	
Test Pile Metal Shells		Each	1	
Pile Shoes		Each	12	
Concrete Sealer		Sq. Ft.	745	

MIN. BAR LAP

#7 Bar = 5'-0"

NOTES:

1. See Sheet 50 of 94 for Section A-A and Section B-B.
2. Reinforcement bar bending dimensions are out to out.
3. Bars indicated thus 5x2-#4 etc. indicates 5 lines of bars with 2 lengths per line.

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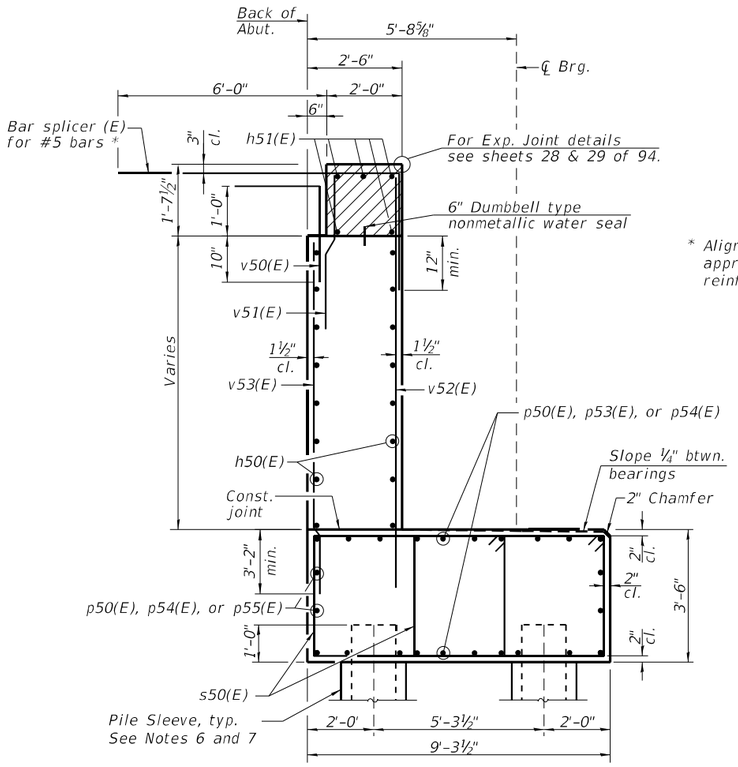
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

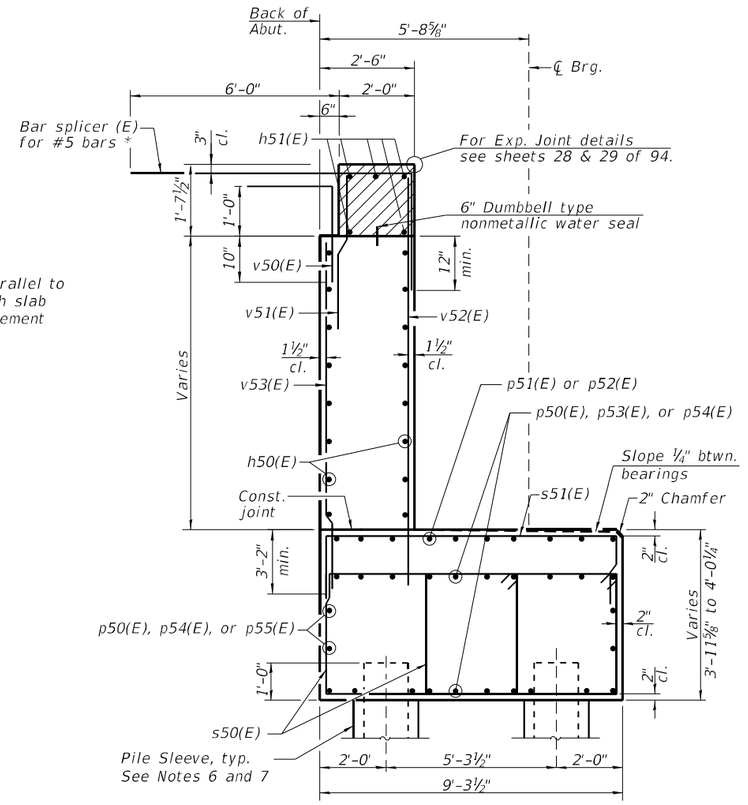
WEST ABUTMENT
STRUCTURE NO. 010-1004
SHEET NO. 49 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	857
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

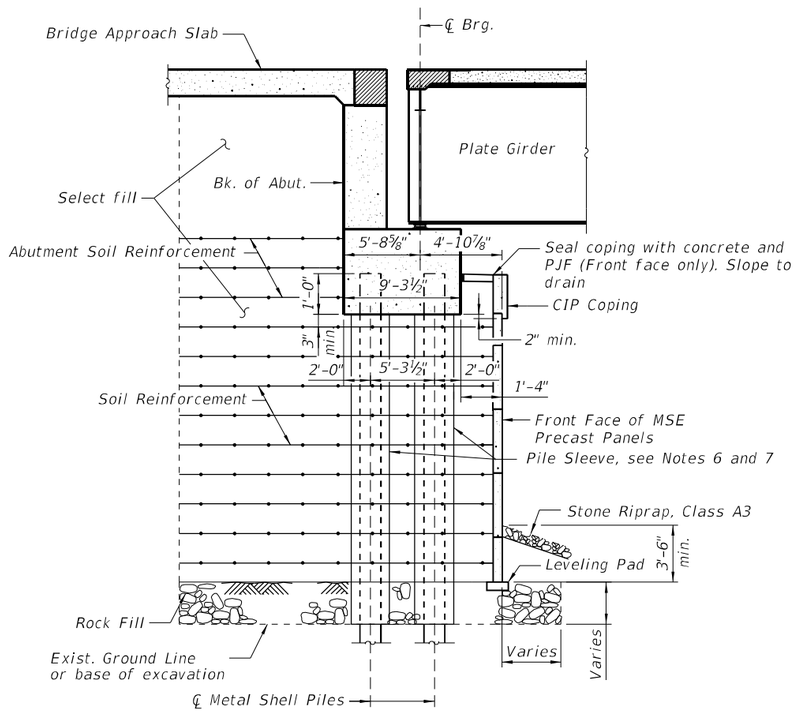


SECTION A-A

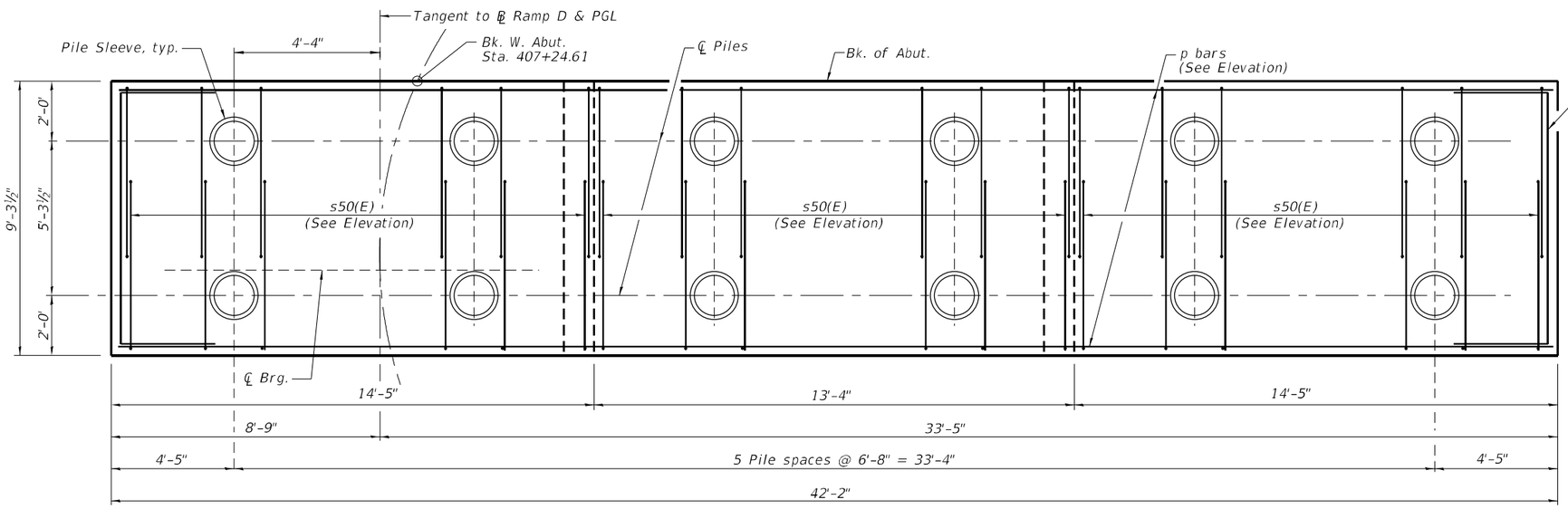
* Align parallel to approach slab reinforcement



SECTION B-B



SECTION THRU ABUTMENT



PILE CAP PLAN

NOTES:

1. Hatched area to be poured after superstructure falsework has been removed. Quantity of concrete included with Concrete Superstructure.
2. Space reinforcement in cap to miss anchor bolts.
3. See sheet 49 of 94 for location of Section A-A & B-B.
4. The MSE wall supplier shall design the abutment soil reinforcement to resist a horizontal service force of 3.4 k/ft. of abutment.
5. For details of piles see Sheet 78 of 94.
6. The bottom of the sleeve should extend at least 1' below the bottom of the leveling pad and to the bottom of the Rock Fill layer, whichever is deeper. The pile sleeve should extend the entire height of the select fill, up to the bottom of the concrete pile cap. The sleeve size must have at least 3" between the pile and the sleeve.
7. Cost of pile sleeves shall be included in the cost for Furnishing Metal Shell Piles 12"x.25".
8. Work this sheet with MSE Wall sheets 53 thru 62 of 94.
9. MSE wall settlement is expected and shall be accounted for and monitored during construction. See Special Provisions.
10. The abutment piles are located within MSE wall reinforced soil mass limits. Pile sleeves shall be installed and secured prior to the placement of the reinforced soil mass. See MSE wall sheets and Special Provisions.

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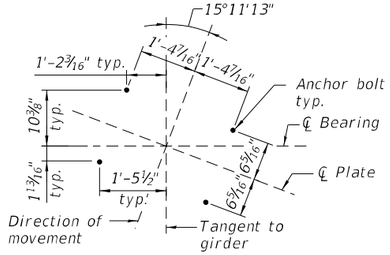
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

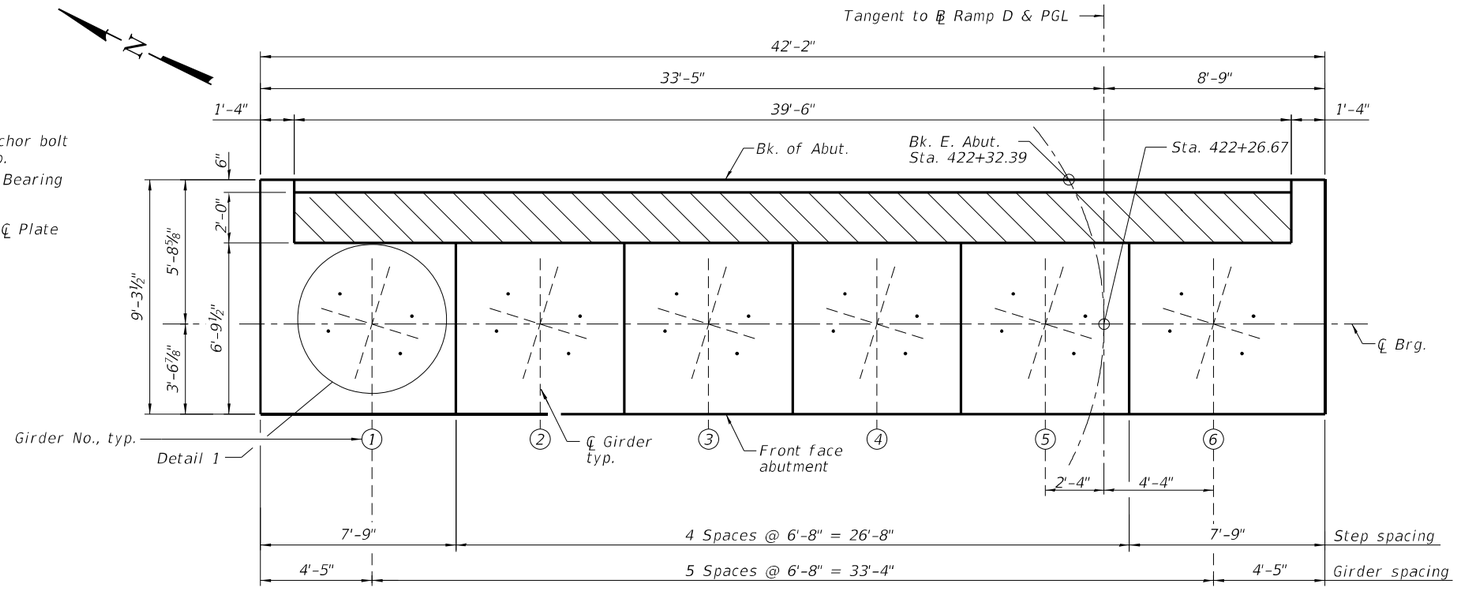
WEST ABUTMENT DETAILS
STRUCTURE NO. 010-1004
SHEET NO. 50 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	858
		CONTRACT NO. 70B99		
		ILLINOIS	FED. AID PROJECT	



DETAIL 1

Bearing orientation
(typ. at each girder)



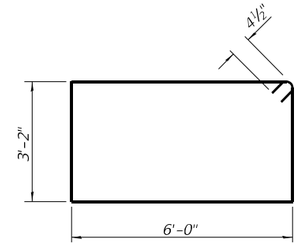
TOP PLAN

PILE DATA

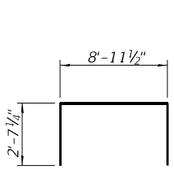
Type: Steel Metal Shell, 12"∅ w/.25" walls, with pile shoes
Nominal Required Bearing: 357 k
Factored Resistance Available: 196 k
Est. Length: 90'
No. Production Piles: 11
No. Test Piles: 1

BILL OF MATERIAL

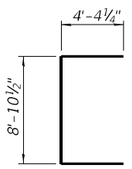
Bar	No.	Size	Length	Shape
h950(E)	16	#5	39'-3"	
h951(E)	5	#6	39'-3"	
p950(E)	24	#7	14'-1"	
p951(E)	10	#6	7'-5"	
p952(E)	20	#6	6'-8"	
p953(E)	10	#7	18'-4"	
p954(E)	20	#7	19'-3"	
p955(E)	4	#7	27'-7"	
p956(E)	20	#7	11'-9"	
s950(E)	90	#4	19'-1"	
s951(E)	25	#4	14'-2"	
u950(E)	9	#6	17'-7"	
v950(E)	40	#5	3'-9"	
v951(E)	40	#4	3'-5"	
v952(E)	40	#5	11'-9"	
v953(E)	40	#5	10'-2"	
Concrete Structures			Cu. Yd.	79.8
Reinforcement Bars, Epoxy Coated			Pound	6,990
Furnishing Metal Shell Piles, 12"x.25"			Foot	990
Driving Piles			Foot	990
Test Pile Metal Shells			Each	1
Pile Shoes			Each	12
Concrete Sealer			Sq. Ft.	742



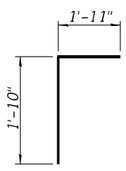
BAR s950E)



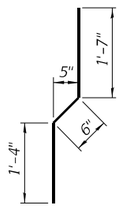
BAR s951(E)



BAR u950(E)



BAR v950(E)



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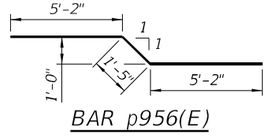
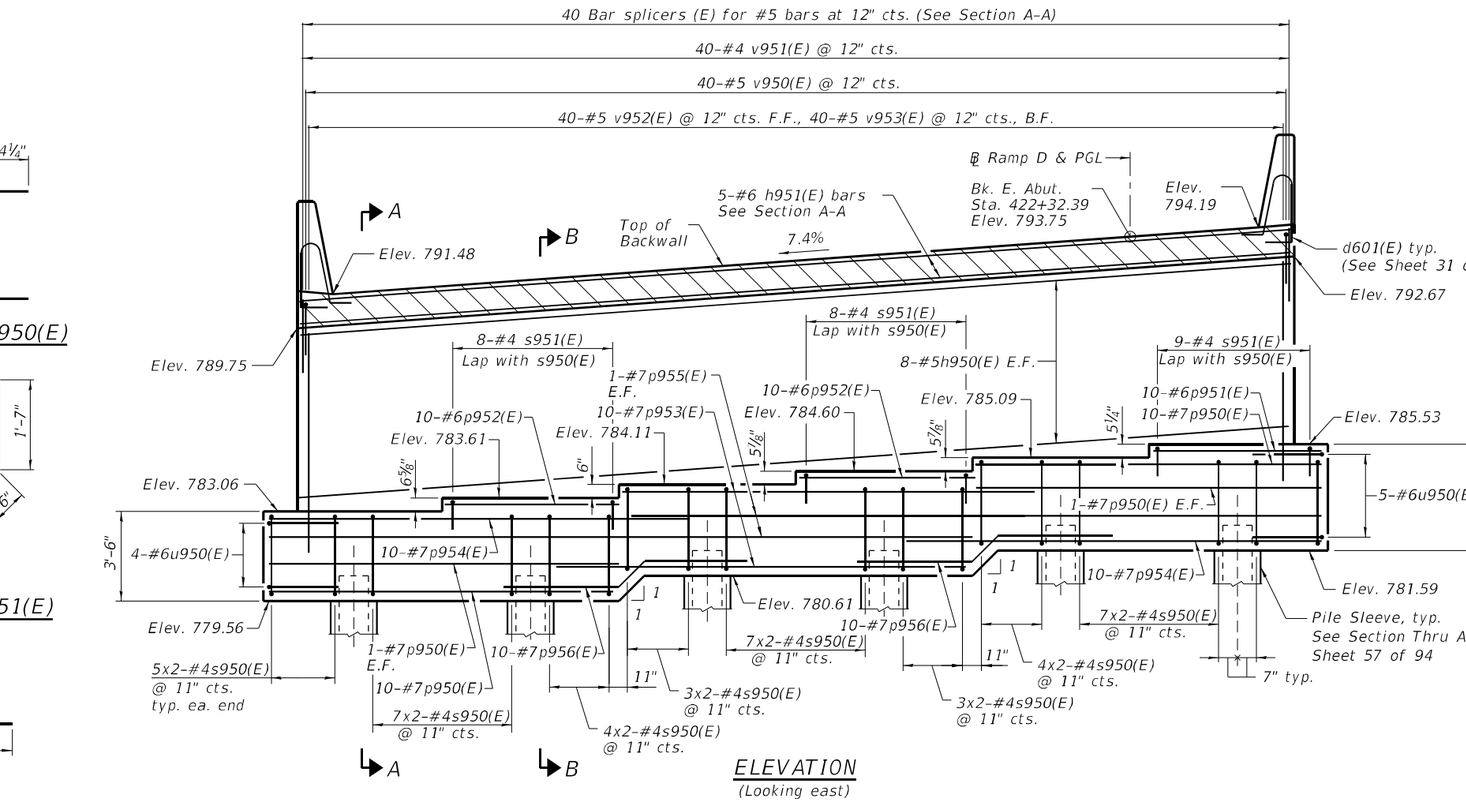


BAR p956(E)



ELEVATION

(Looking east)

MIN. BAR LAP

#7 Bar = 5'-0"

NOTES:

1. See Sheet 52 of 94 for Section A-A and Section B-B.
2. Reinforcement bar bending dimensions are out to out.
3. Bars indicated thus 5x2-#4 etc. indicates 5 lines of bars with 2 lengths per line.

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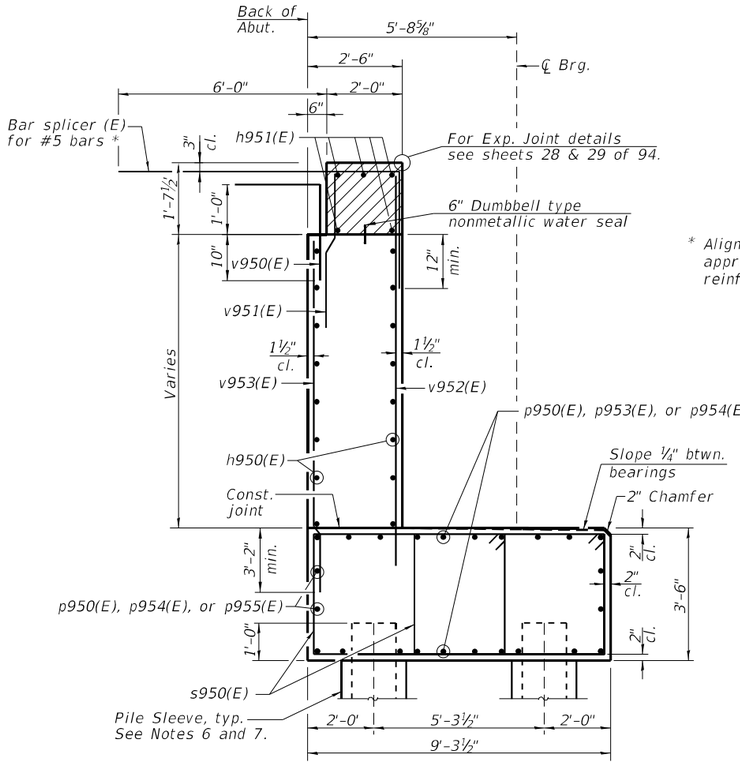
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

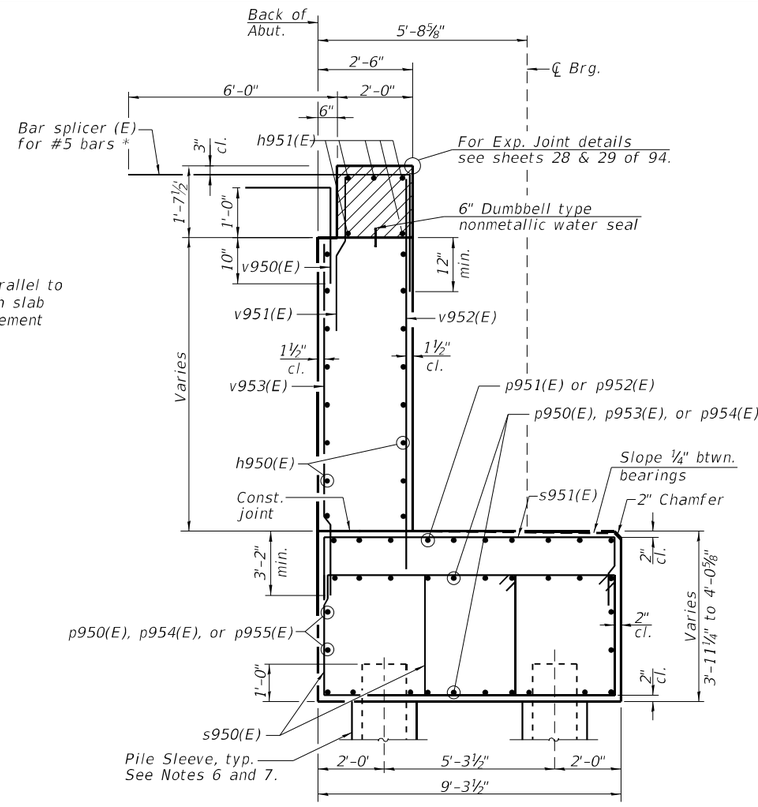
EAST ABUTMENT
STRUCTURE NO. 010-1004
SHEET NO. 51 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	859
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

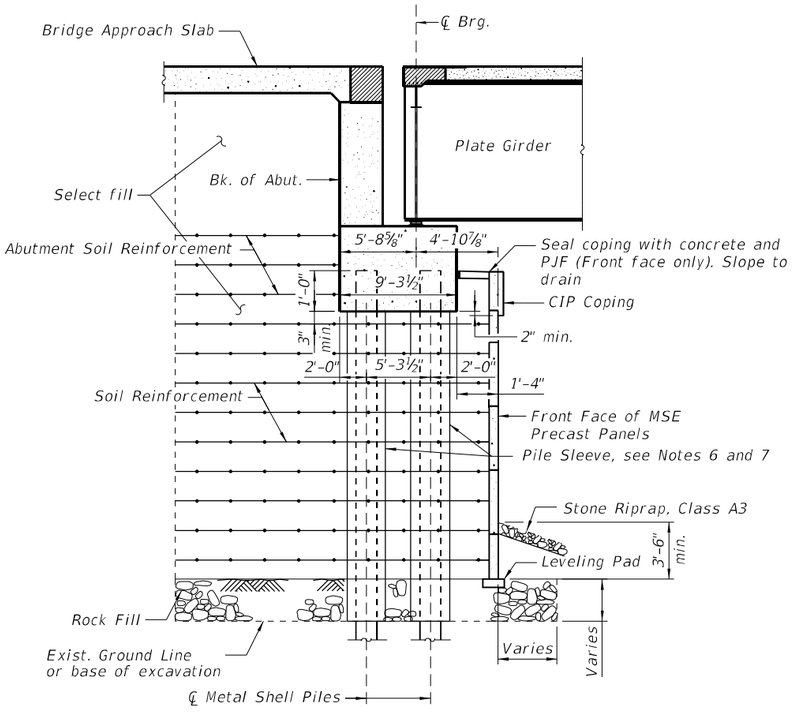


SECTION A-A

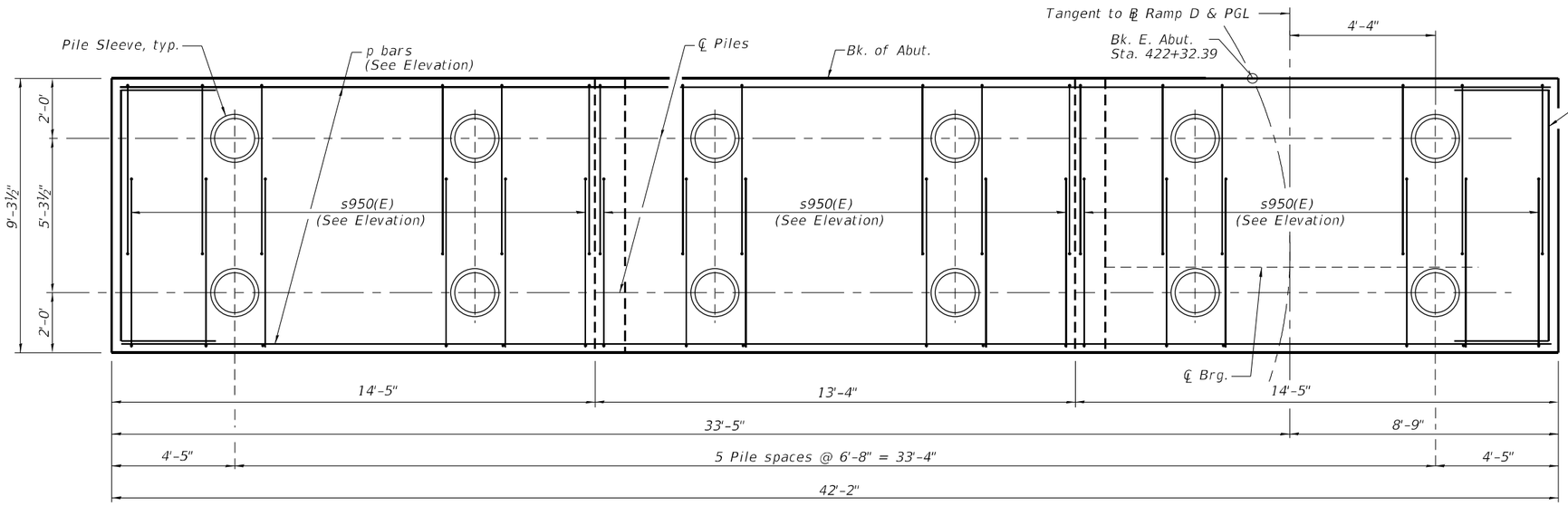
* Align parallel to approach slab reinforcement



SECTION B-B



SECTION THRU ABUTMENT



PILE CAP PLAN

NOTES:

1. Hatched area to be poured after superstructure falsework has been removed. Quantity of concrete included with Concrete Superstructure.
2. Space reinforcement in cap to miss anchor bolts.
3. See sheet 51 of 94 for location of Section A-A & B-B.
4. The MSE wall supplier shall design the abutment soil reinforcement to resist a horizontal service force of 3.4 k/ft. of abutment.
5. For details of piles see Sheet 78 of 94.
6. The bottom of the sleeve should extend at least 1' below the bottom of the leveling pad and to the bottom of the Rock Fill layer, whichever is deeper. The pile sleeve should extend the entire height of the select fill, up to the bottom of the concrete pile cap. The sleeve size must have at least 3" between the pile and the sleeve.
7. Cost of pile sleeves shall be included in the cost for Furnishing Metal Shell Piles 12"x.25".
8. Work this sheet with MSE Wall sheets 54 thru 62 of 94.
9. MSE wall settlement is expected and shall be accounted for and monitored during construction. See Special Provisions.
10. The abutment piles are located within MSE wall reinforced soil mass limits. Pile sleeves shall be installed and secured prior to the placement of the reinforced soil mass. See MSE wall sheets and Special Provisions.

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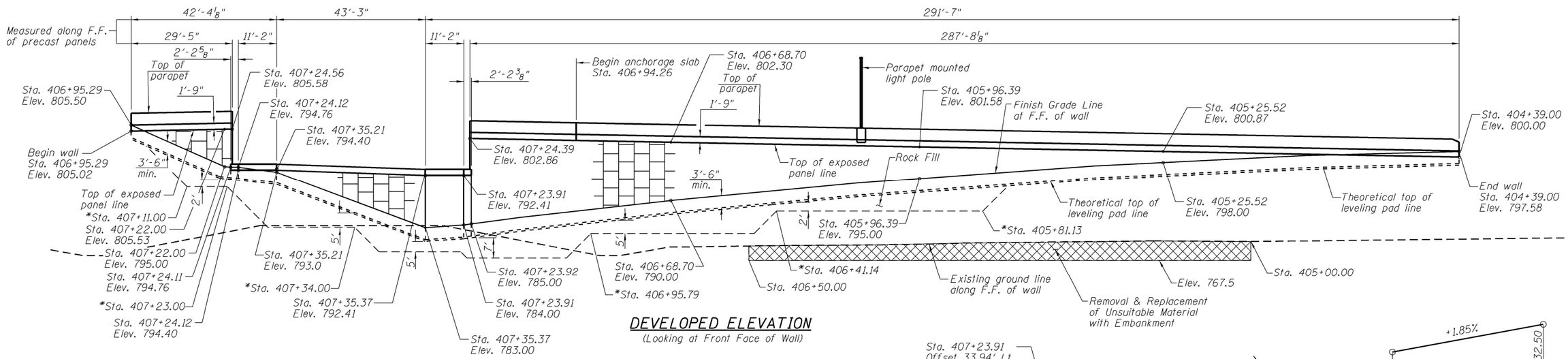
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT DETAILS
STRUCTURE NO. 010-1004
SHEET NO. 52 OF 94 SHEETS

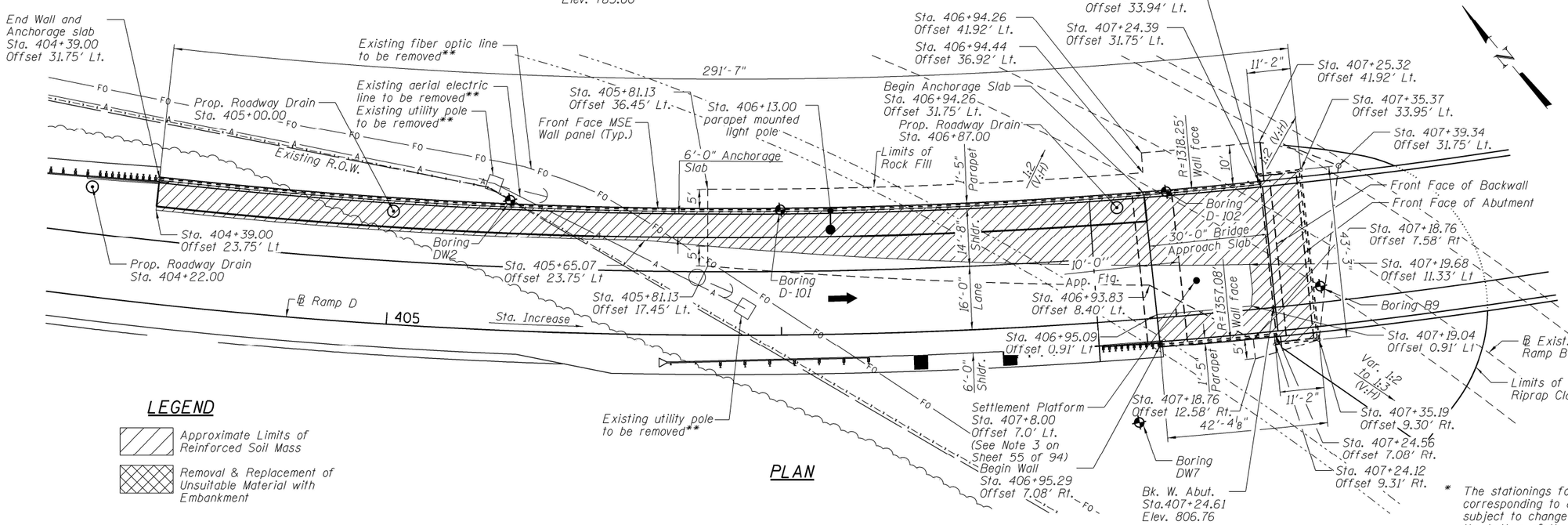
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	860
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

Benchmark:
BM #4802-12, Chiseled "□" on top of N.W. corner of light pole foundation #50-107 on exist. Ramp G, Sta. 1068+46.46, 316.71' Lt (I-74)
Elev. 769.173

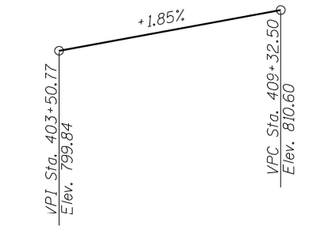
Existing Structure: None



DEVELOPED ELEVATION
(Looking at Front Face of Wall)



PLAN



PROPOSED RAMP D PROFILE
(Along Ramp D ℄)

Note:
The profile grade shows the final elevations after grinding

CURVE DATA
(RAMP D)

PI Sta. = 421+90.36
Δ = 109° 32' 31" (Lt.)
D = 4° 14' 39"
R = 1,350.00'
T = 1,911.69'
L = 2,581.02'
E = 990.32'
e = 7.4%
T.R. = N/A
S.E. RUN = 250'
P.C. Sta. = 402+78.67
P.T. Sta. = 428+59.69

LEGEND

- Approximate Limits of Reinforced Soil Mass
- Removal & Replacement of Unsuitable Material with Embankment

* The stationings for the different depths of Rock Fill corresponding to different MSE wall height intervals are subject to change during construction based on how the bottom of the MSE wall will be stepped in the field.

** See Roadway plans.

MSE Wall Height Interval (ft.)	Thickness of Rock Fill below Mse Reinforced Mass (ft.)
10-15	2
15-20	5
20-25	7
25-30	10
30-35	12

Kaskaskia Engineering Group, LLC
300 E. Main St., Suite 100, Belleville, Illinois 62220
618.233.5977 phone 618.233.5972 fax www.kaskaskiaeng.com
PROFESSIONAL REGISTRATIONS: Illinois Professional Design Firm 184.004773; Professional Engineering Group 20-580186
LICENSE NO.

USER NAME= Moshe Cohen	DESIGNED - MLC	REVISED -	
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT – MSE WALL – GENERAL PLAN & ELEVATION
STRUCTURE NO. 010-1004
SHEET 53 OF 94 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	861
		CONTRACT NO. 70B99		
	ILLINOIS	FED. AID PROJECT		

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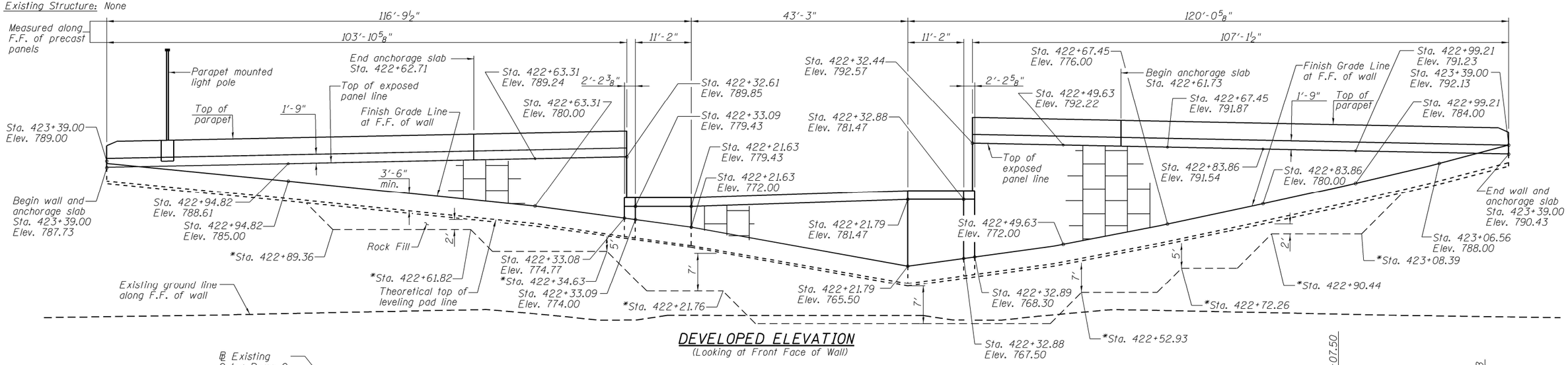
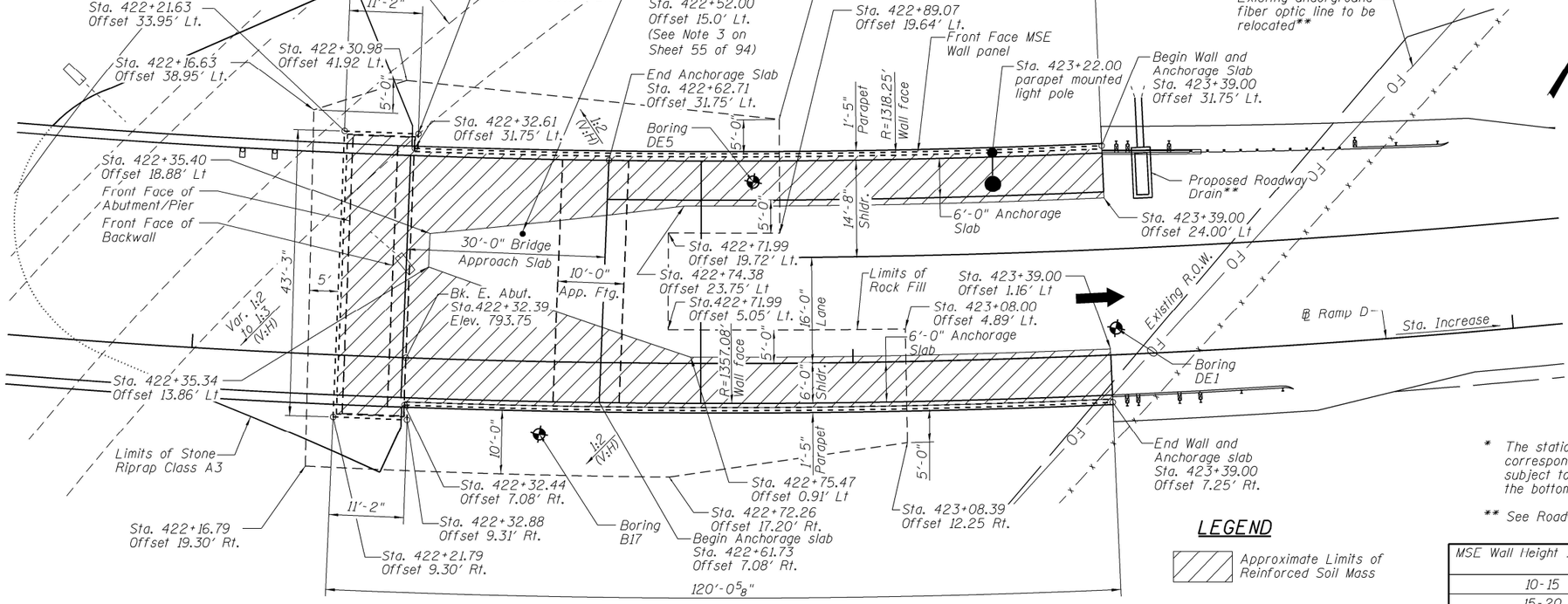
04/29/21 (8:11:47 AM) 8:11:48 AM

Benchmark:
BM #4802-12, Chiseled "□" on top of N.W. corner of light pole foundation #50-107 on exist. Ramp G, Sta. 1068+46.46, 316.71' Lt. (I-74)
Elev. 769.173

Existing Structure: None

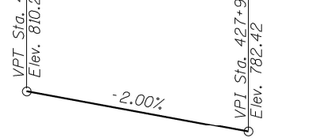


DEVELOPED ELEVATION
(Looking at Front Face of Wall)



PLAN

Existing underground fiber optic line to be relocated**



PROPOSED RAMP D PROFILE

Note:
The profile grade shows the final elevations after grinding.

CURVE DATA
(RAMP D)

PI Sta. = 421+90.36
Δ = 109° 32' 31" (Lt.)
D = 4° 14' 39"
R = 1,350.00'
T = 1,911.69'
L = 2,581.02'
E = 990.32'
e = 7.4%
T.R. = N/A
S.E. RUN = 250'
P.C. Sta. = 402+78.67
P.T. Sta. = 428+59.69

LEGEND

Approximate Limits of Reinforced Soil Mass

* The stationings for the different depths of Rock Fill corresponding to different MSE wall height intervals are subject to change during construction based on how the bottom of the MSE wall will be stepped in the field.

** See Roadway Plans

MSE Wall Height Interval (ft.)	Thickness of Rock Fill below Mse Reinforced Mass (ft.)
10-15	2
15-20	5
20-25	7
25-30	10
30-35	12

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04/29/21 (8:11:50 AM) 8:11:51 AM

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200 E. Main St., Suite 105, Belleville, Illinois 62220, 618.233.5077 phone, 618.233.5077 fax, www.kaskaskiaeng.com
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT – MSE WALL – GENERAL PLAN AND ELEVATION
STRUCTURE NO. 010-1004
SHEET 54 OF 94 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	862
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

DESIGN SPECIFICATIONS

2017 AASHTO LRFD 8th Ed.
Bridge Design Specifications

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
f'c = 4,000 psi (Superstructure Concrete)
fy = 60,000 psi (Reinforcement)

PRECAST UNITS
f'c = 5,000 psi (Precast Panels)
fy = 60,000 psi (Reinforcement)

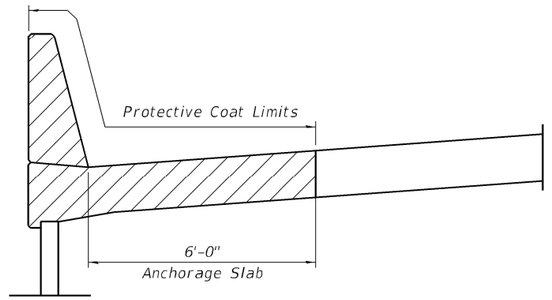
GENERAL NOTES:

1. Existing outer Ramp B and Ramp G will be relocated during during construction of MSE wall.
2. Wall Stations and Offsets are given to the F.F. (front face) of the MSE wall panels and are measured from Ramp D baseline.
3. Install Settlement Platforms according to the Special Provision and Art. 204.06 of the Standard Specifications.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the Engineer for variable subsurface conditions encountered in the field.
6. The gradations and capping of the Embankment used to replace the unsuitable material shall be approved by the Engineer.
7. The cost of the cast-in-place concrete coping, reinforcement bars, preformed joint filler, and dowel bars will be included with the bid pay item "Mechanically Stabilized Earth Wall." The Contractor may substitute a precast coping, the details of which must be included in the shop plans and approved by the Engineer, at no additional cost to the Department.
8. Conduit and electrical details shown in the MSE Wall Plans are for location and installation purposes only. Refer to Electrical and Lighting Plan for details, pay items, and quantities.
9. For borings, see Sheet No. 81-94 of 94 of the Bridge Plans.
10. Removal/relocation of utilities and roadway drains are included on the Roadway Bill of Materials.
11. The MSE wall supplier is alerted to the fact that 5.0 inches of settlement are anticipated from Stations 404+39 to 407+35 and 3.9 inches of settlement are anticipated from Stations 422+21 to 423+39 and shall take appropriate measures to accommodate this settlement in the wall design.
12. The MSE wall supplier shall design the abutment soil reinforcement at each abutment to resist a horizontal service force of 3.4 k/ft. of abutment.
13. See Special Provisions for Mechanically Stabilized Earth Retaining Wall.

INDEX OF SHEETS

MSE WALLS BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu Yd	341
Removal and Disposal of Unsuitable Material for Structures	Cu Yd	495
Concrete Superstructure	Cu Yd	205.8
Protective Coat	Sq Yd	475
Reinforcement Bars Epoxy Coated	Pound	32,210
Mechanically Stabilized Earth Retaining Wall	Sq Ft	7,386
Rock Fill	Cu Yd	2,045



ANCHORAGE SLAB PAY ITEM LEGEND

Paid as Concrete Superstructure

PROTECTIVE COAT LIMITS

Kaskaskia Engineering Group, LLC
200 E. Main St., Suite 110, Robinson, Illinois 62454
618.455.3077 phone
618.395.5977 fax
www.kaskaskiaeng.com
PROFESSIONAL REGISTRATIONS
Illinois Professional Design Firm 184.006753
Professional Engineering Group 20-5000186

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MSE WALL - GENERAL DATA
STRUCTURE NO. 010-1004
SHEET 55 OF 94 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	863
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

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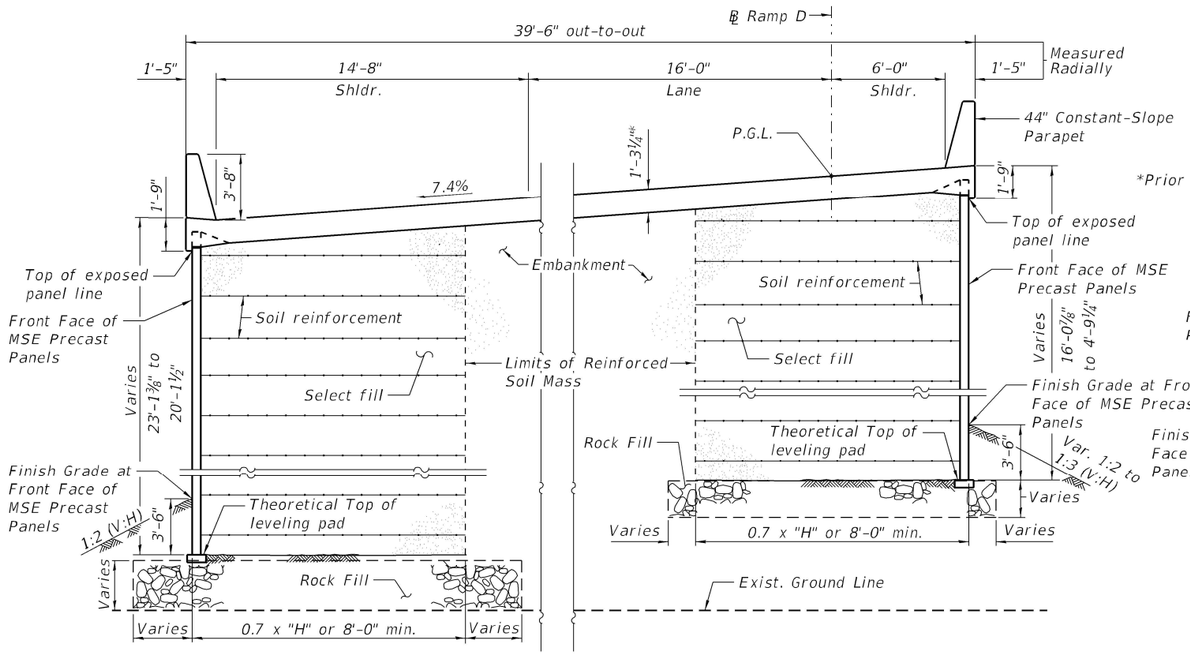
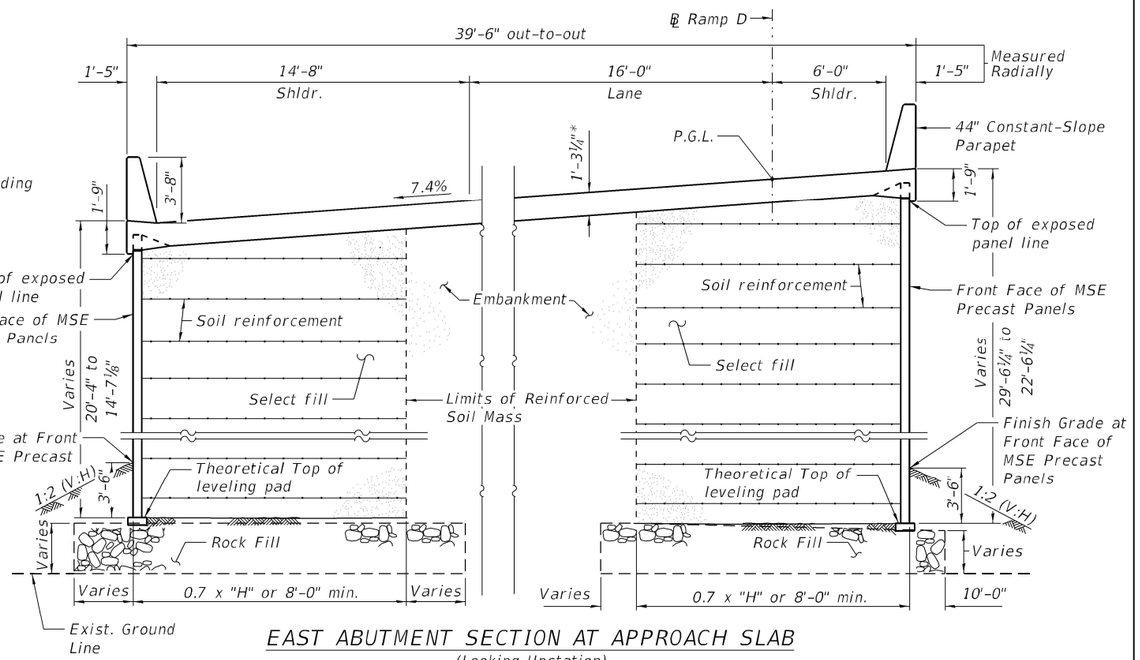
04/29/21 (8:11:53 AM) 8:11:54 AM



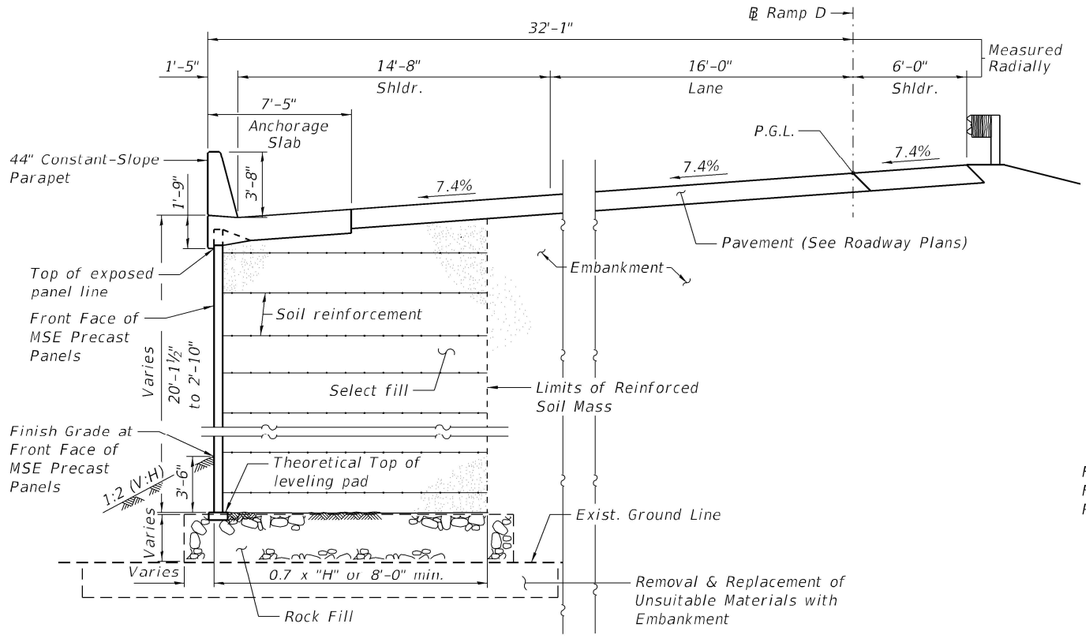
WEST ABUTMENT SECTION AT APPROACH SLAB

(Looking Upstation)



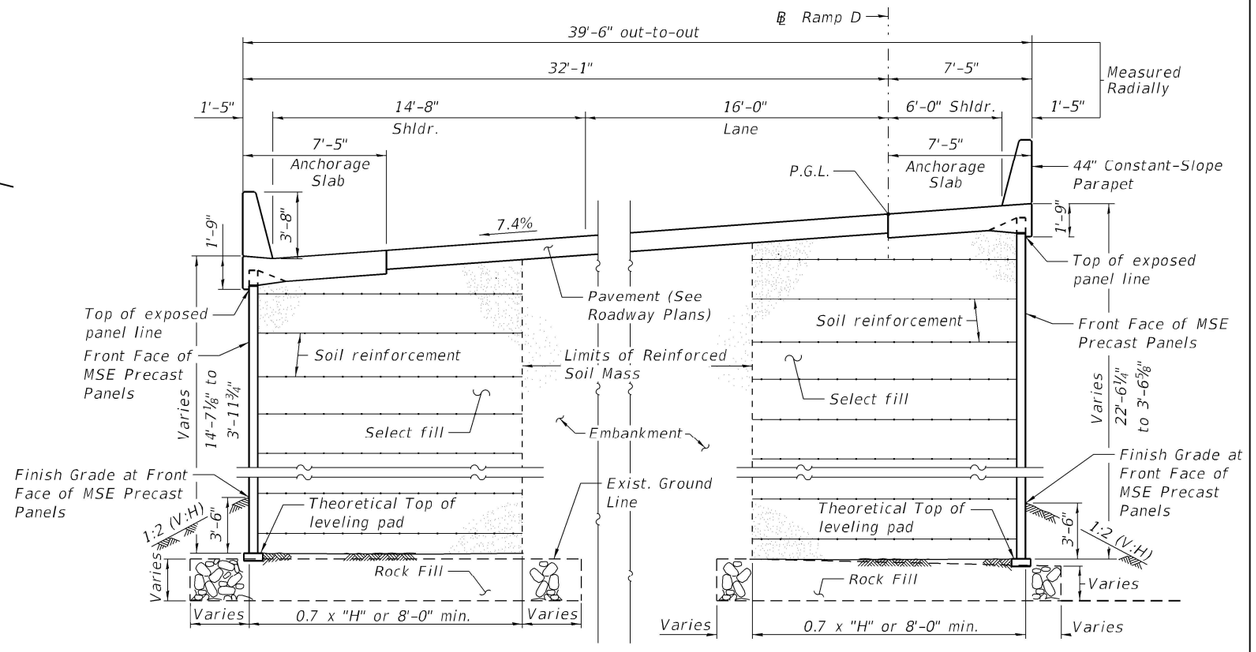
EAST ABUTMENT SECTION AT APPROACH SLAB

(Looking Upstation)



WEST ABUTMENT SECTION AT ROADWAY

(Looking Upstation)



EAST ABUTMENT SECTION AT ROADWAY

(Looking Upstation)

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04/29/21 (8:11:56 AM) 8:11:57 AM

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LICENSE NO.: 184.005773 20-5800161

USER NAME= Moshe Cohen	DESIGNED - MLC	REVISED -	
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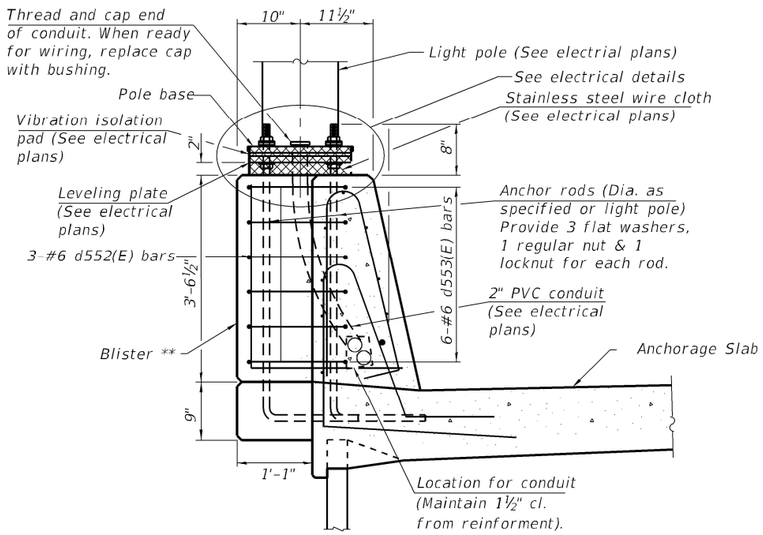
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

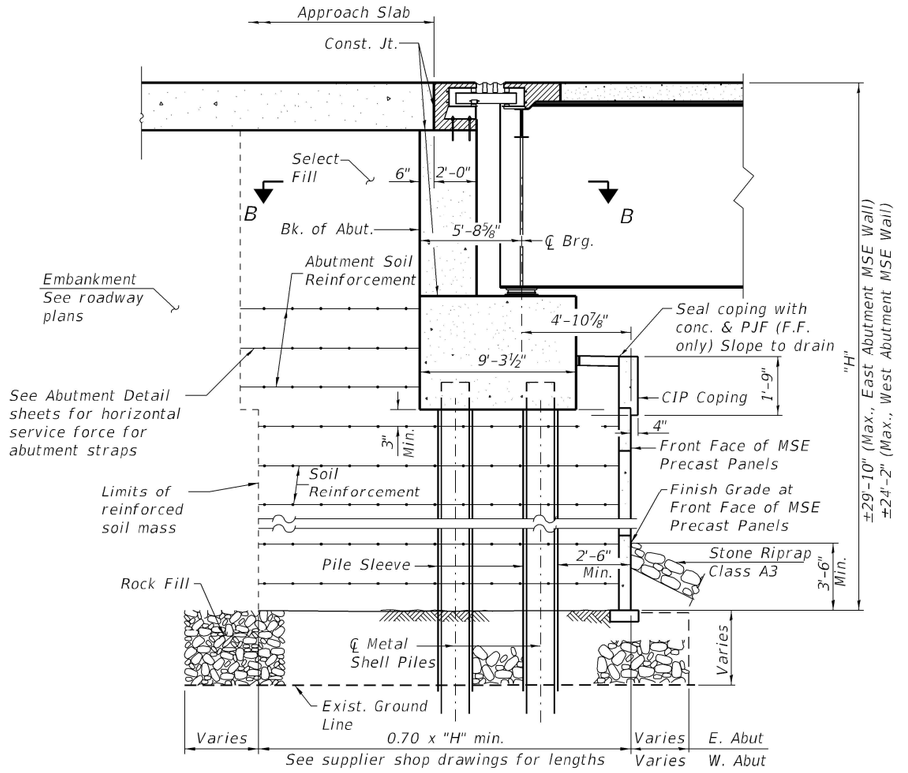
MSE WALL – TYPICAL SECTIONS 1
STRUCTURE NO. 010–1004
SHEET 56 OF 94 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	864
		CONTRACT NO. 70B99		
		ILLINOIS	FED. AID PROJECT	

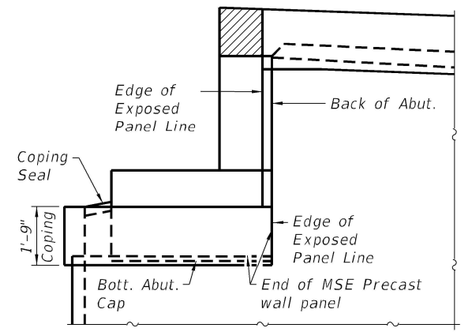


SECTION A-A

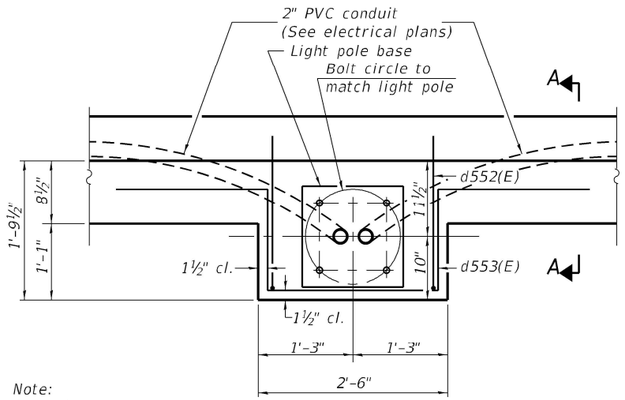
** MSE Wall supplier shall account for the anchorage slab's bearing pressure surcharge and horizontal sliding force to resists dead and live loads imposed by the light pole and blister.



SECTION THRU ABUTMENT



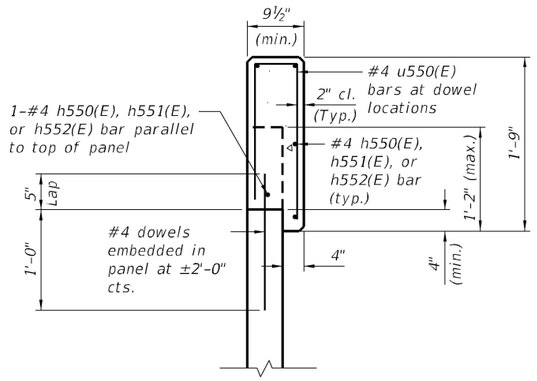
COPING AT SIDE OF ABUTMENT



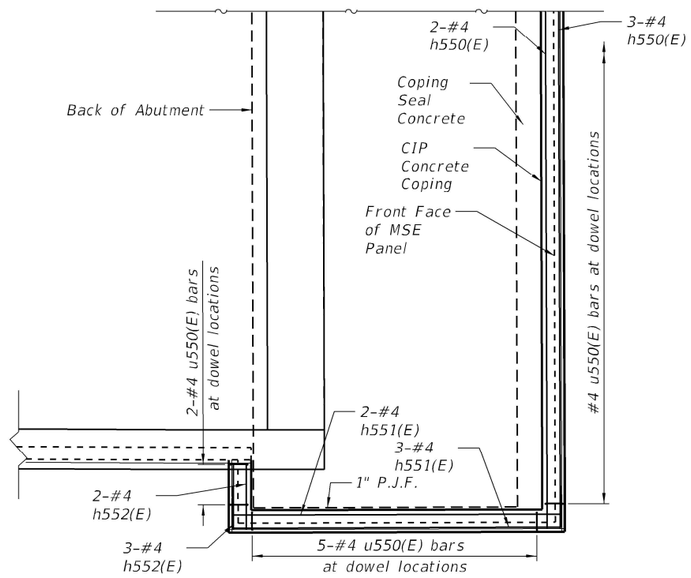
Note:
Cost of anchor rods is included with Concrete Superstructure.

PLAN

LIGHT POLE MOUNTED ON CONCRETE PARAPET



SECTION THRU CAST-IN-PLACE COPING



SECTION B-B

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04/29/21 (8:11:59 AM) 8:12:00 AM

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Professional Engineering Group

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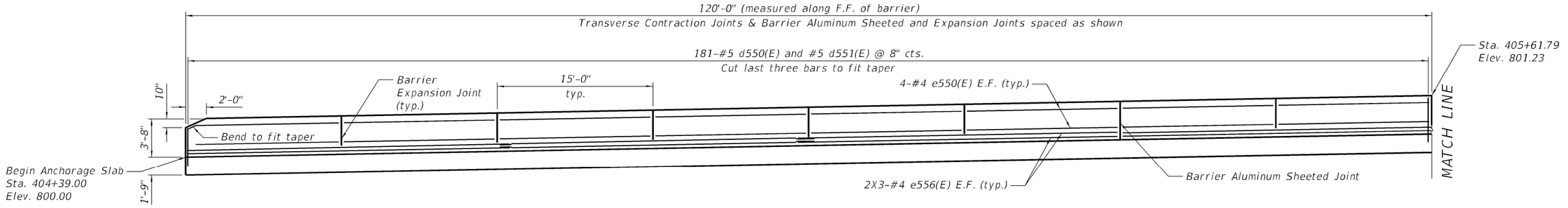
DEPARTMENT OF TRANSPORTATION

MSE WALL – TYPICAL SECTIONS 2
STRUCTURE NO. 010–1004
SHEET 57 OF 94 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	865
		CONTRACT NO. 70B99		
	ILLINOIS	FED. AID PROJECT		



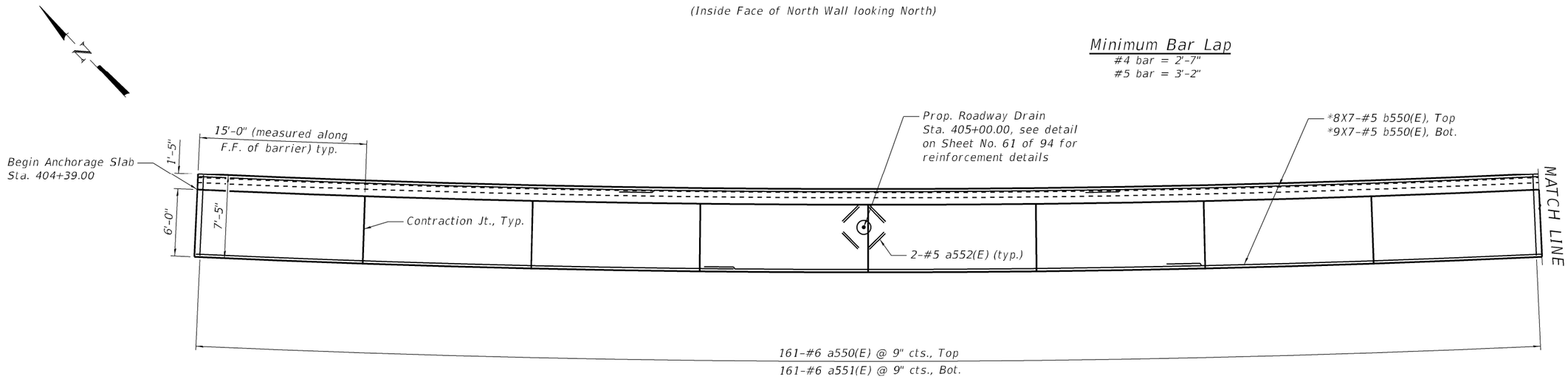
ELEVATION

(Inside Face of North Wall looking North)

N

Minimum Bar Lap

#4 bar = 2'-7"
#5 bar = 3'-2"



ANCHORAGE SLAB PLAN

* Spaces as shown in section on Sheet No. 61 of 94

NOTE:

Bars indicated thus 8X2-#5 etc. indicates 8 lines of bars with 2 lengths per line.

See Highway Standard 631031 for Type 6 terminal connections

MODEL: Default
FILE NAME: pw:\\mtengi-cpw.bentley.com:CivT-Projects\Documents\Projects\IDOT\15066-01\Draw\Structures\CADD_Sheets\RAMP_D\RAMPD-70B99-058-West anchorage slab.dgn

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184.004793
20-5860186

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04/29/21 (8:12:03 AM) 8:12:03 AM

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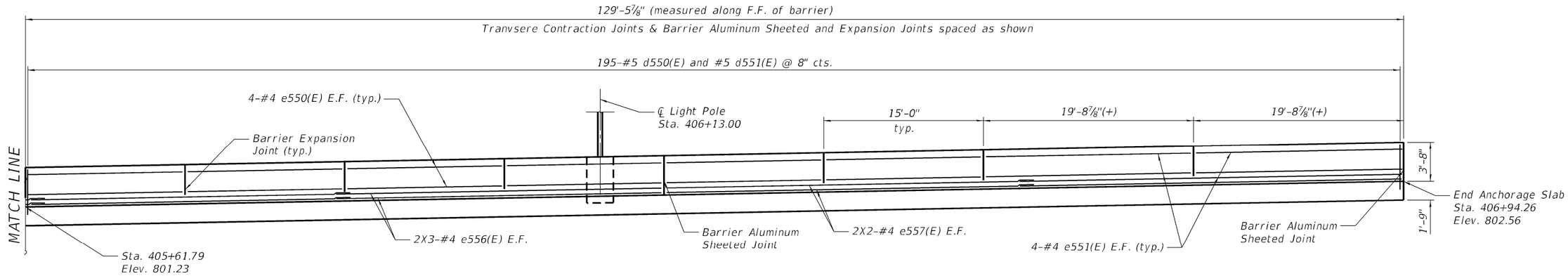
DEPARTMENT OF TRANSPORTATION

MSE WALL – WEST ANCHORAGE SLAB 1
STRUCTURE NO. 010-1004
SHEET 58 OF 94 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	866
		CONTRACT NO. 70B99		
	ILLINOIS	FED. AID PROJECT		

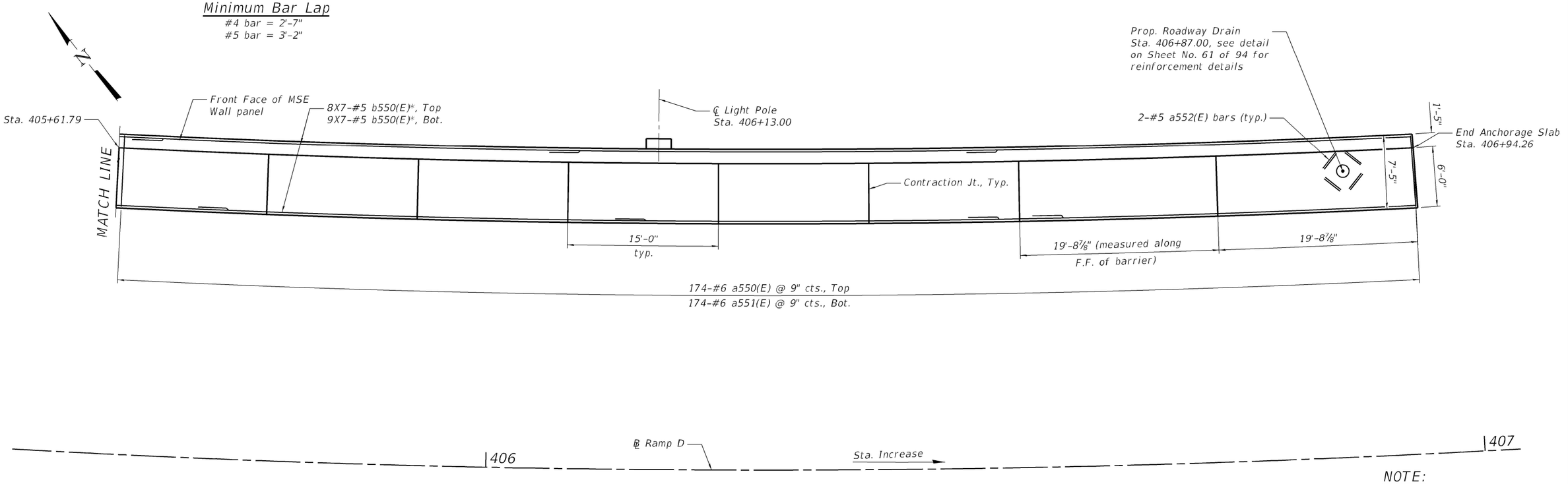


ELEVATION

(Inside Face of North Wall looking North)

Minimum Bar Lap

#4 bar = 2'-7"
#5 bar = 3'-2"



ANCHORAGE SLAB PLAN

* Spaces as shown in section on Sheet No. 61 of 94

NOTE:

Bars indicated thus 8X2-#5 etc. indicates 8 lines of bars with 2 lengths per line.

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MSE WALL – WEST ANCHORAGE SLAB 2
STRUCTURE NO. 010–1004

SHEET 59 OF 94 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	867
		CONTRACT NO. 70B99		
	ILLINOIS	FED. AID PROJECT		

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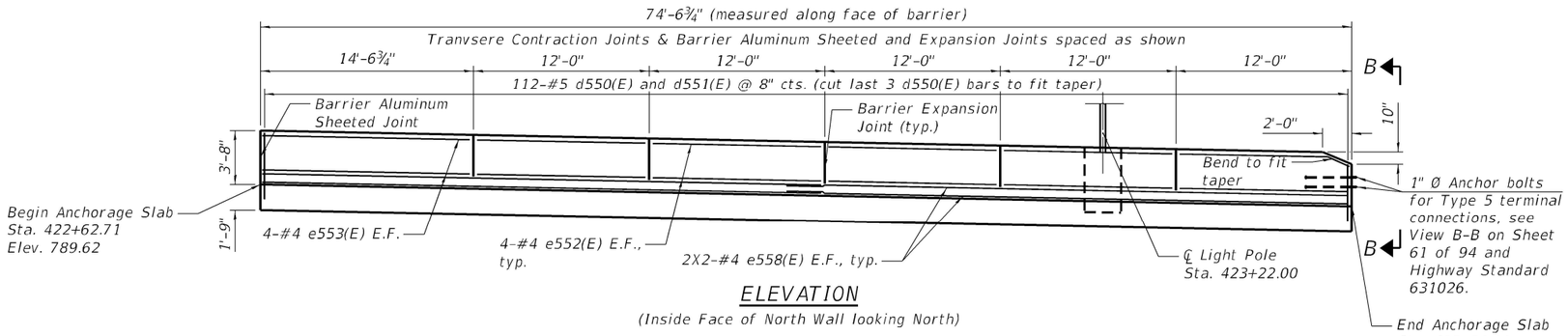
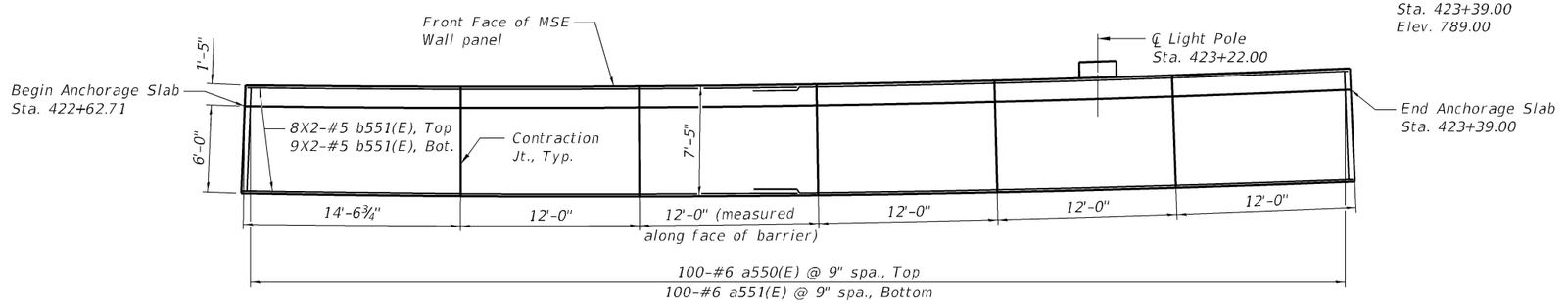
04/29/21 (8:12:06 AM) 8:12:06 AM



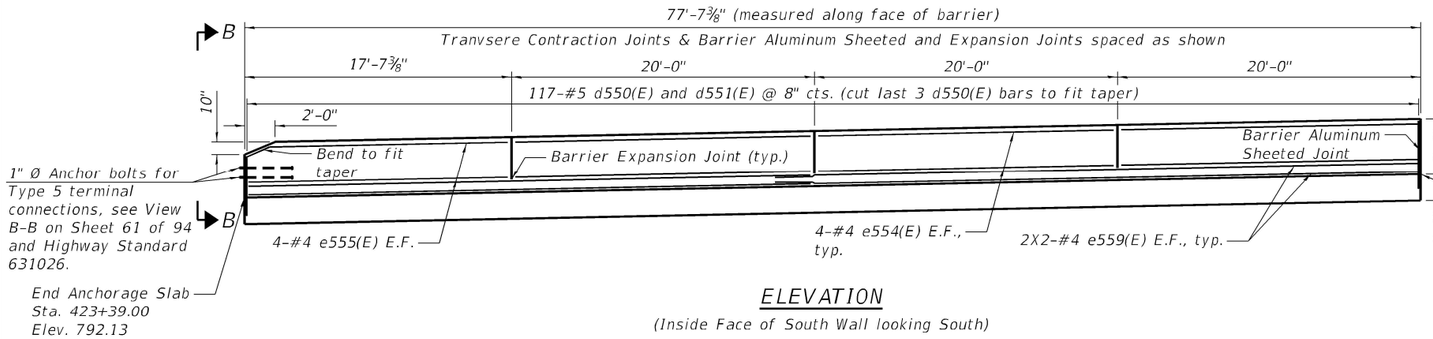
ELEVATION

(Inside Face of North Wall looking North)



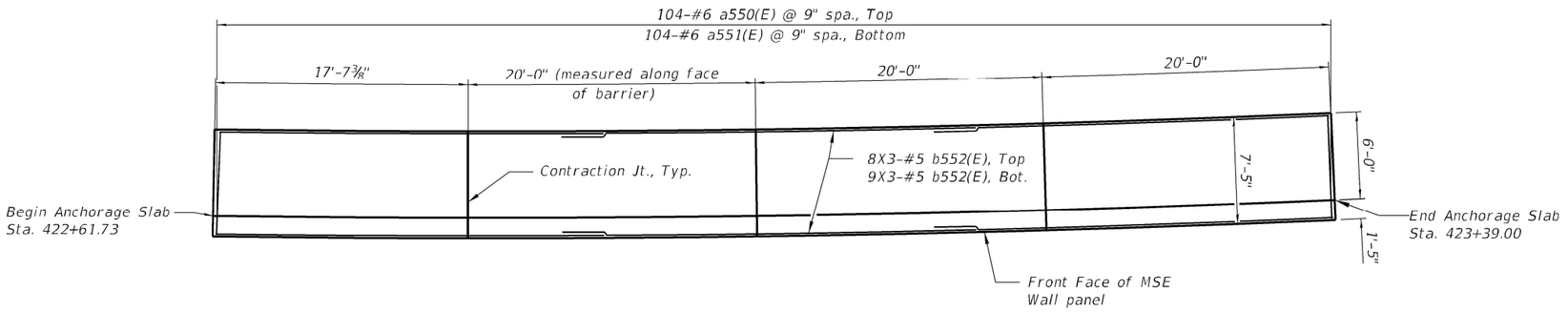
ANCHORAGE SLAB PLAN

(North Wall)



ELEVATION

(Inside Face of South Wall looking South)



ANCHORAGE SLAB PLAN

(South Wall)

Minimum Bar Lap

#4 bar = 2'-7"
#5 bar = 3'-2"

NOTES

1. See Sheet No. 61 of 94 for View B-B and typical section thru anchorage slab.
2. Bars indicated thus 8X2-#5 etc. indicates 8 lines of bars with 2 lengths per line.

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Professional Engineering Group: 26-5000540
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USER NAME= Moshe Cohen	DESIGNED - MLC	REVISED -
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MSE WALL – EAST ANCHORAGE SLABS
STRUCTURE NO. 010-1004

SHEET 60 OF 94 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	868
		CONTRACT NO. 70B99		
		ILLINOIS	FED. AID PROJECT	

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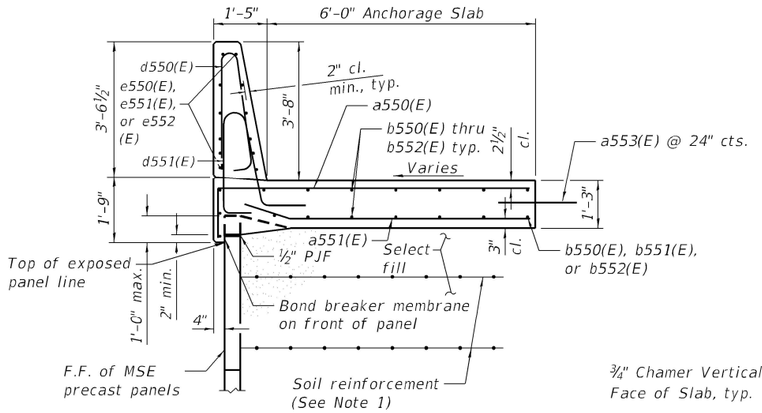
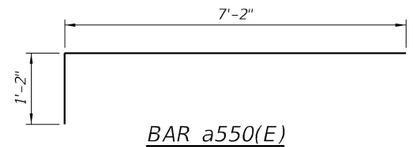
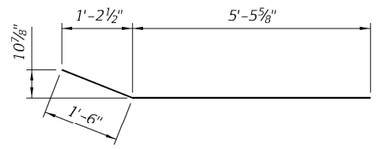
04/29/21 (8:12:08 AM) 8:12:09 AM



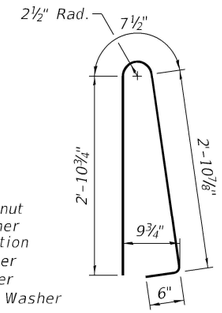
TYPICAL SECTION THRU ANCHORAGE SLAB



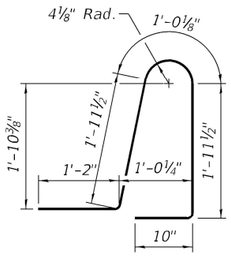
BAR a550(E)



BAR a551(E)



BAR d550(E)



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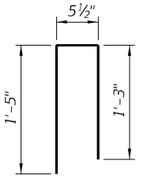
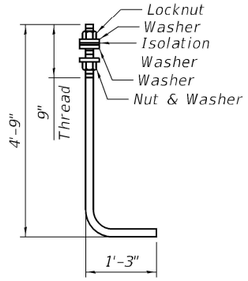
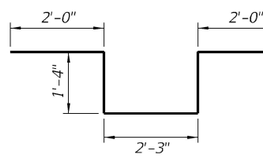


** BAR u550(E)

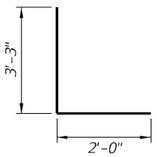


ANCHOR ROD

Diameter as specified for light poles. (ASTM F1554 Grade 105) Full length hot dipped galvanized



BAR d553(E)



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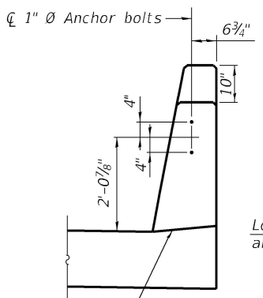
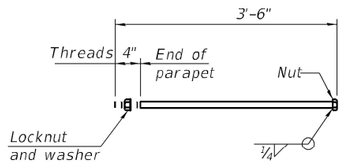


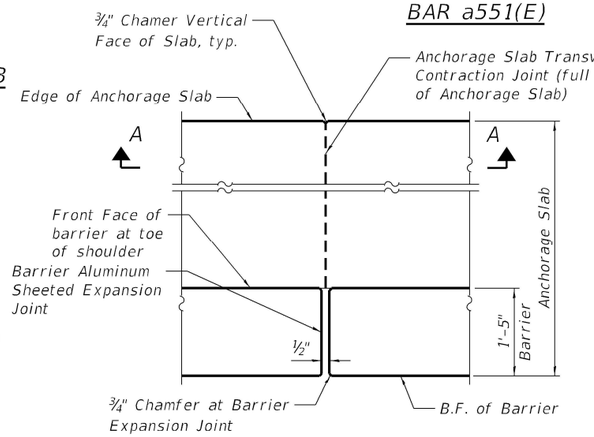
VIEW B-B



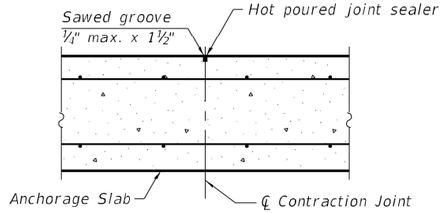
*1" Ø ANCHOR BOLT

(Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications)

* Cost included with Concrete Superstructure

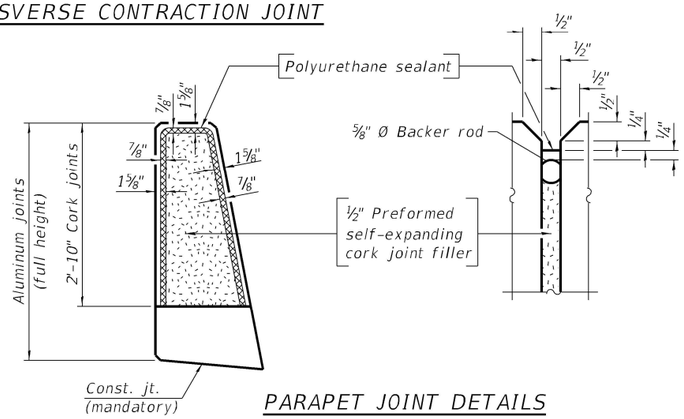


PLAN



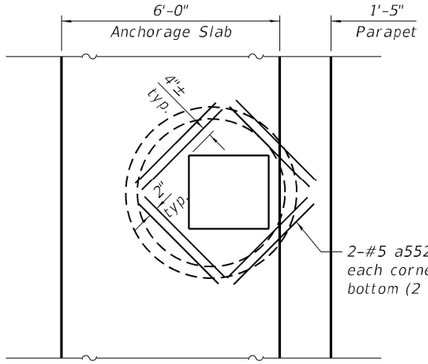
SECTION A-A

TRANSVERSE CONTRACTION JOINT

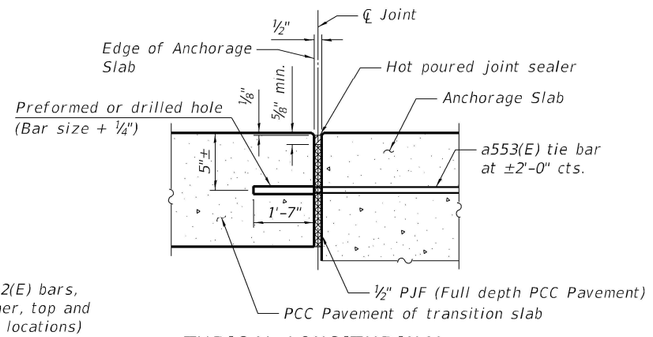


PARAPET JOINT DETAILS

Barrier Expansion Joints shall be Cork Joints and Barrier Aluminum Sheeted Joints shall be 1/8" Aluminum Sheet Joints, Full Height.



ANCHORAGE SLAB INLET PLAN



TYPICAL LONGITUDINAL CONSTRUCTION JOINT

ANCHORAGE SLABS BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	a550(E)	539	#6	8'-4"	
	a551(E)	539	#6	7'-0"	
	a552(E)	16	#5	2'-0"	
	a553(E)	201	#4	3'-3"	
	b550(E)	119	#5	38'-5"	
	b551(E)	34	#5	38'-9"	
	b552(E)	51	#5	28'-0"	
	d550(E)	605	#5	6'-4"	
	d551(E)	605	#5	6'-11"	
	d552(E)	6	#6	5'-3"	
	d553(E)	12	#6	8'-11"	
	e550(E)	112	#4	14'-9"	
	e551(E)	16	#4	19'-5"	
	e552(E)	40	#4	11'-9"	
	e553(E)	8	#4	14'-3"	
	e554(E)	16	#4	19'-9"	
	e555(E)	8	#4	17'-4"	
	e556(E)	24	#4	31'-8"	
	e557(E)	8	#4	35'-11"	
	e558(E)	8	#4	38'-5"	
	e559(E)	8	#4	40'-0"	
**	h550(E)	10	#4	43'-0"	
**	h551(E)	20	#4	10'-8"	
**	h552(E)	40	#4	1'-5"	
**	u550(E)	68	#4	3'-2"	

** For information only, not included with MSE Walls & Anchorage Slabs BOM.

NOTE:

1. 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.
2. See Sheet 62 of 94 for Load Transfer System around Drainage.

MODEL: Default
FILE NAME: pw:\\cmtengr-pw.bentley.com:CMT-Projects\Documents\Projects\IDOT\15066-01\Draw\Structures\CADD_Sheets\RAMP_D\RAMPD-70B99-061-MSE Wall Details and bar lists.dgn

04/29/21 (8:12:12 AM) 8:12:12 AM

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Professional Engineering Corporation of Illinois
Illinois Professional Design Firm
Professional Engineering Group

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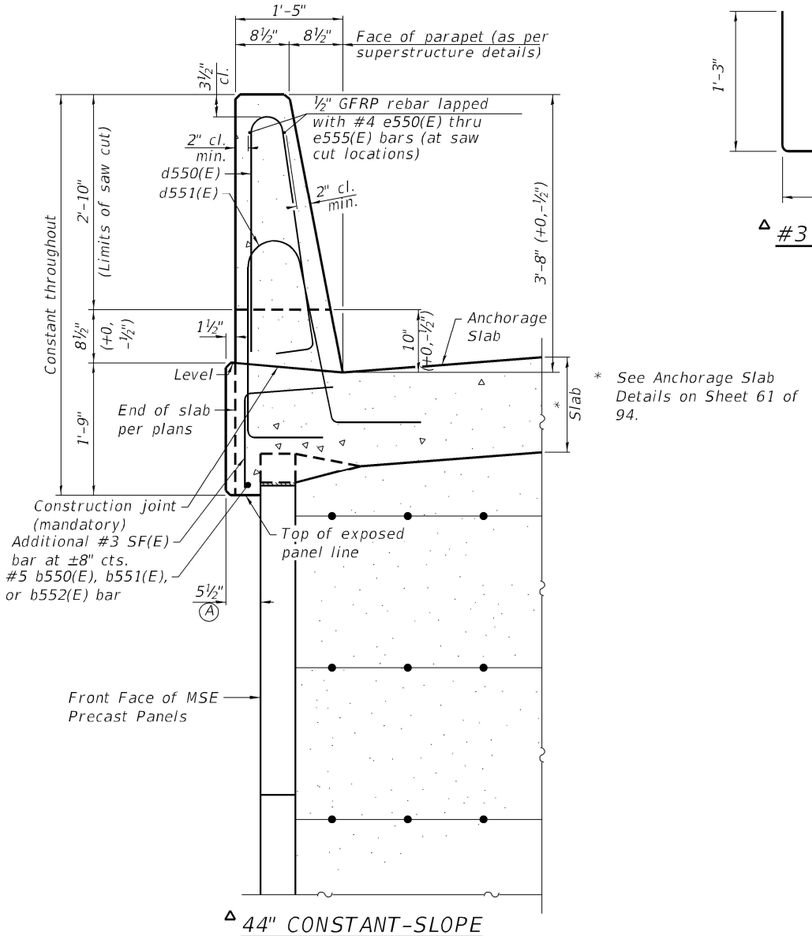
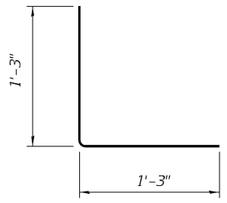
DEPARTMENT OF TRANSPORTATION

MSE WALL – MISCELLANEOUS DETAILS
STRUCTURE NO. 010-1004
SHEET 61 OF 94 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	869
		CONTRACT NO. 70B99		
	ILLINOIS	FED. AID PROJECT		



* See Anchorage Slab Details on Sheet 61 of 94.

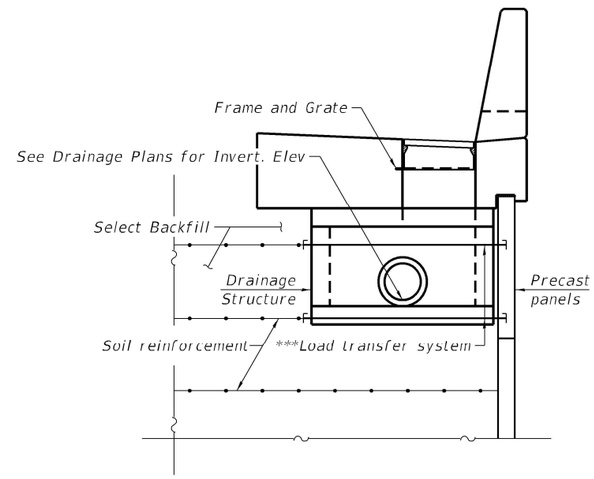


△ #3 SF(E) BAR

△ Items for the Slipforming Option. See Special Provisions.

△ NOTES

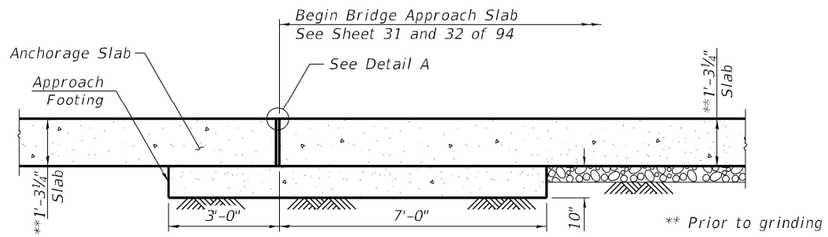
1. All dimensions shall remain the same as shown on superstructure details, except dimension A which is to be revised as shown. Additional concrete needed to revise dimension A = 0.008 cu. yds./ft.
2. Place full depth aluminum sheets as shown on superstructure details.
3. Replace all cork joint filler locations with a full thickness saw cut.



ANCHORAGE SLAB INLET SECTION

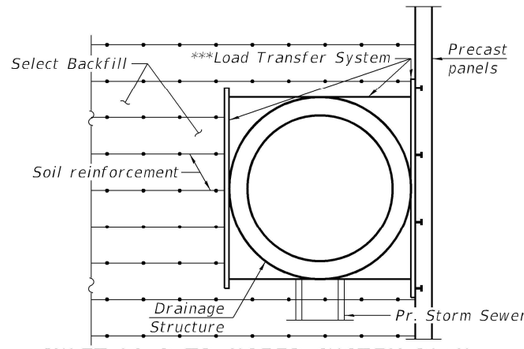
△ 44" CONSTANT-SLOPE PARAPET SECTION

(Showing dimensions, d550(E), d551(E) and ½" ø GFRP rebar)
(Showing reinforcement clearances for slip forming and additional reinforcement)



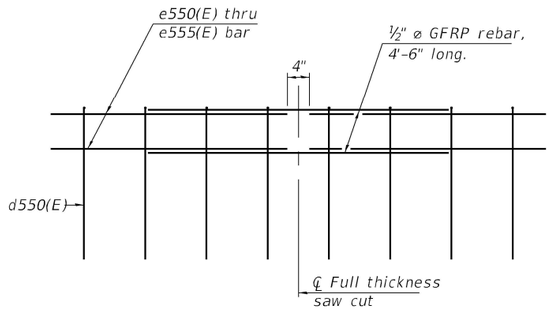
** Prior to grinding

TYPICAL SECTION THROUGH ANCHORAGE AND BRIDGE APPROACH SLAB



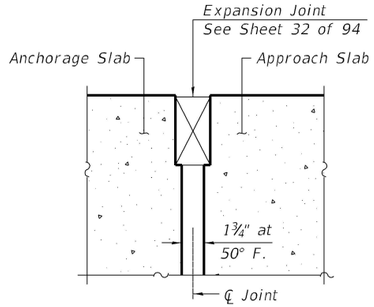
INLET LOAD TRANSFER SYSTEM PLAN

*** M.S.E. supplier to design load transfer system to accommodate concrete pipe and drainage structure.



△ GFRP REBAR STIFFENING DETAIL

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



DETAIL A

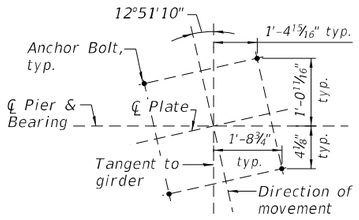
Kaskaskia Engineering Group, LLC
200 E. Main St., Suite 310, Belleville, Illinois 62220
618.233.5877 phone, 618.233.5972 fax, www.kaskaskiaeng.com
PROFESSIONAL ENGINEERING FIRM: Illinois Professional Design Firm: Professional Engineering Group
LICENSE NO.: 184.005773, 20-5880301

USER NAME= Moshe Cohen	DESIGNED - MLC	REVISED -	
	CHECKED - JW	REVISED -	
PLOT SCALE = N/A	DRAWN - MLC	REVISED -	
PLOT DATE = 04/29/21 (8:12:24 AM)	CHECKED - JW	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

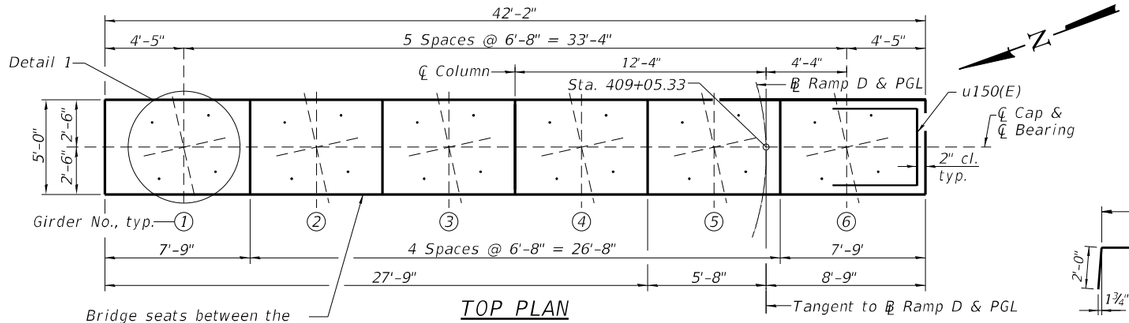
MSE WALL – PARAPET SLIPFORMING OPTION & MISCELLANEOUS DETAILS
STRUCTURE NO. 010–1004
SHEET 62 OF 94 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	870
		CONTRACT NO. 70B99		
	ILLINOIS	FED. AID PROJECT		

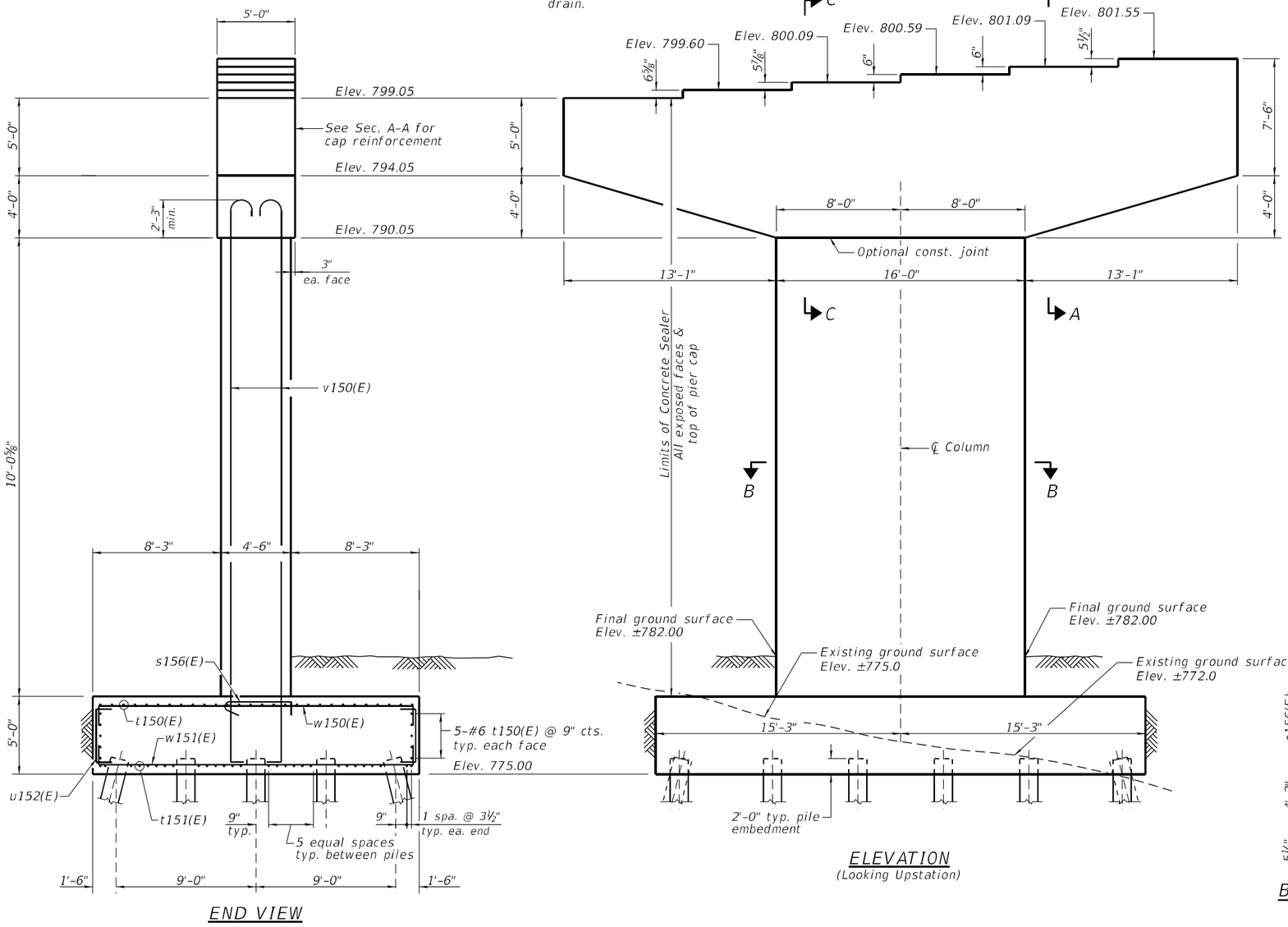


DETAIL 1

Bearing orientation
(typ. at each girder)



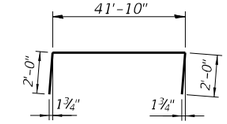
TOP PLAN



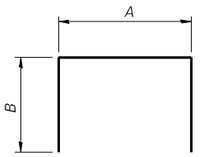
END VIEW

ELEVATION

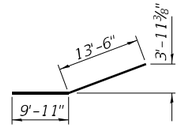
(Looking Upstation)



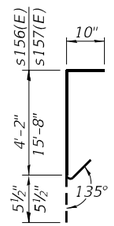
BAR p150(E)



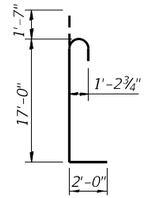
Bar	A	B
s150(E)	3'-1"	4'-10"
s151(E)	2'-0"	5'-9"
s152(E)	2'-0"	6'-5"
s153(E)	2'-0"	6'-11"
s154(E)	3'-1"	5'-10"
s155(E)	4'-6"	6'-11"
t150(E)	30'-2"	1'-0"
t151(E)	30'-2"	1'-10"
u150(E)	4'-6"	4'-4"
u151(E)	4'-8"	4'-4"
u152(E)	4'-5"	1'-0"
u153(E)	4'-2"	3'-9"
w150(E)	20'-8"	1'-0"
w151(E)	20'-8"	1'-10"



BAR p151(E)



BAR s156(E) & s157(E)



BAR v150(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h150(E)	12	#6	41'-10"	
h151(E)	2	#6	34'-11"	
h152(E)	2	#6	31'-4"	
h153(E)	2	#6	24'-10"	
h154(E)	2	#6	18'-3"	
h155(E)	24	#6	6'-8"	
h156(E)	12	#6	7'-5"	
h157(E)	100	#5	15'-8"	
p150(E)	18	#11	45'-10"	
p151(E)	12	#5	23'-5"	
s150(E)	20	#5	12'-9"	
s151(E)	60	#5	13'-6"	
s152(E)	102	#5	14'-10"	
s153(E)	54	#5	15'-10"	
s154(E)	20	#5	14'-9"	
s155(E)	32	#5	18'-4"	
s156(E)	612	#5	5'-6"	
s157(E)	102	#5	17'-0"	
t150(E)	38	#6	32'-2"	
t151(E)	28	#10	33'-10"	
u150(E)	22	#6	13'-2"	
u151(E)	43	#6	13'-4"	
u152(E)	106	#6	6'-5"	
u153(E)	100	#5	11'-8"	
v150(E)	56	#11	20'-7"	
w150(E)	51	#6	22'-8"	
w151(E)	44	#10	24'-4"	
Structure Excavation		Cu. Yd.	31	
Concrete Structures		Cu. Yd.	215.8	
Reinforcement Bars, Epoxy Coated		Pound	39,480	
Driving Piles		Foot	1,711	
Test Pile Metal Shells		Each	1	
Pile Shoes		Each	30	
Concrete Sealer		Sq. Ft.	1,359	
Furnishing Metal Shell Piles 16"x.312"		Foot	1,711	

MIN. LAP LENGTH

#5 bars: 3'-9"

NOTES:

1. Pour steps monolithically with cap.
2. For Anchor Bolts Details see Sheet 47 of 94.
3. See sheet 64 of 94 for Sections A-A, B-B, and C-C.
4. Reinforcement bar bending dimensions are out to out.

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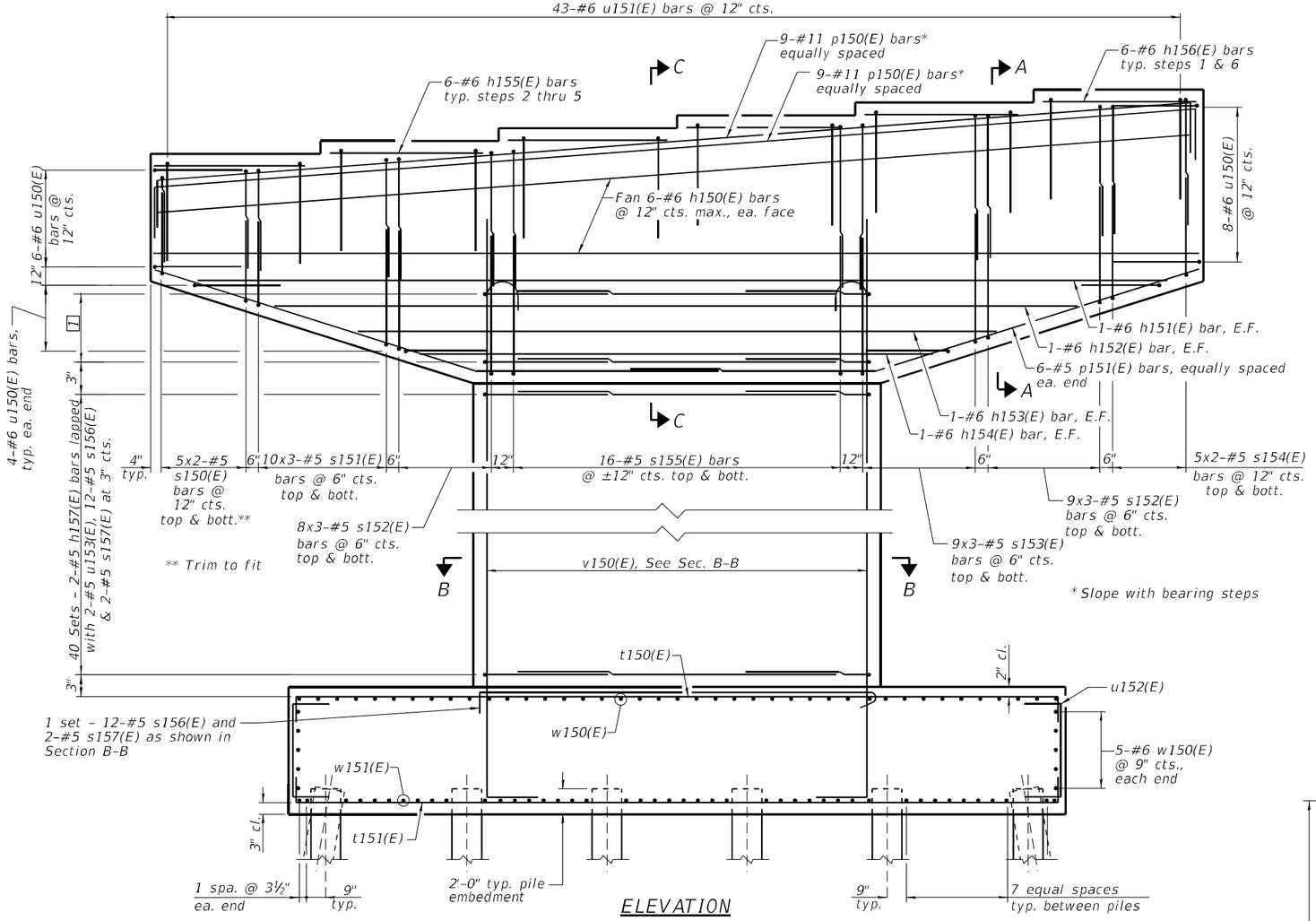
CMT
License No. 184-000613

USER NAME = Denise Herrera	DESIGNED - DH	REVISED -
	CHECKED - DRC	REVISED -
PLOT SCALE = N/A	DRAWN - DH	REVISED -
PLOT DATE = 4/29/2021 (3:59:41 PM)	CHECKED - JTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

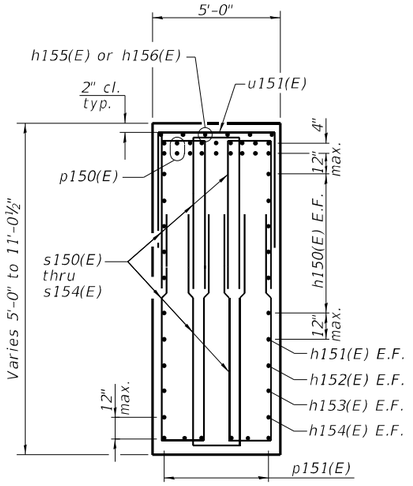
PIER 1 PLAN AND ELEVATION
STRUCTURE NO. 010-1004
SHEET NO. 63 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	871
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

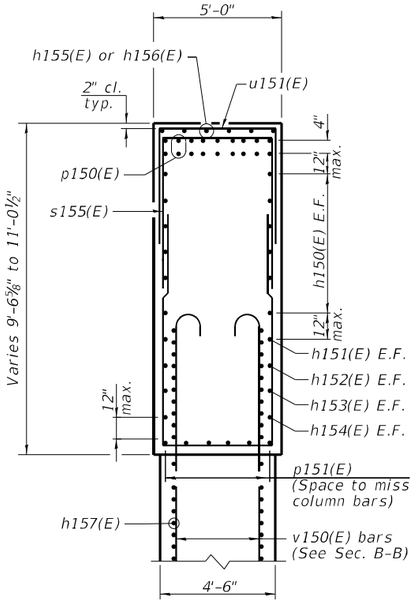


ELEVATION

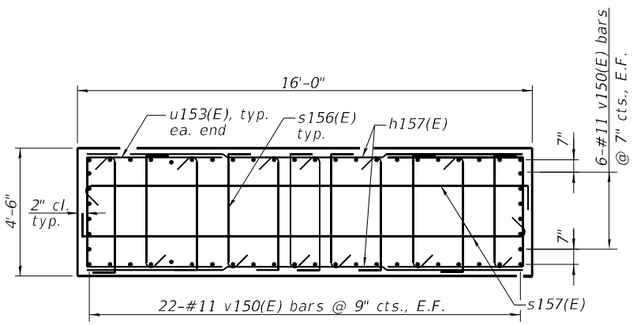
7 10 Sets - 2-#5 h157(E) bars lapped with 2-#5 u153(E), 12-#5 s156(E) & 2-#5 s157(E) at 3" cts.



SECTION A-A



SECTION C-C



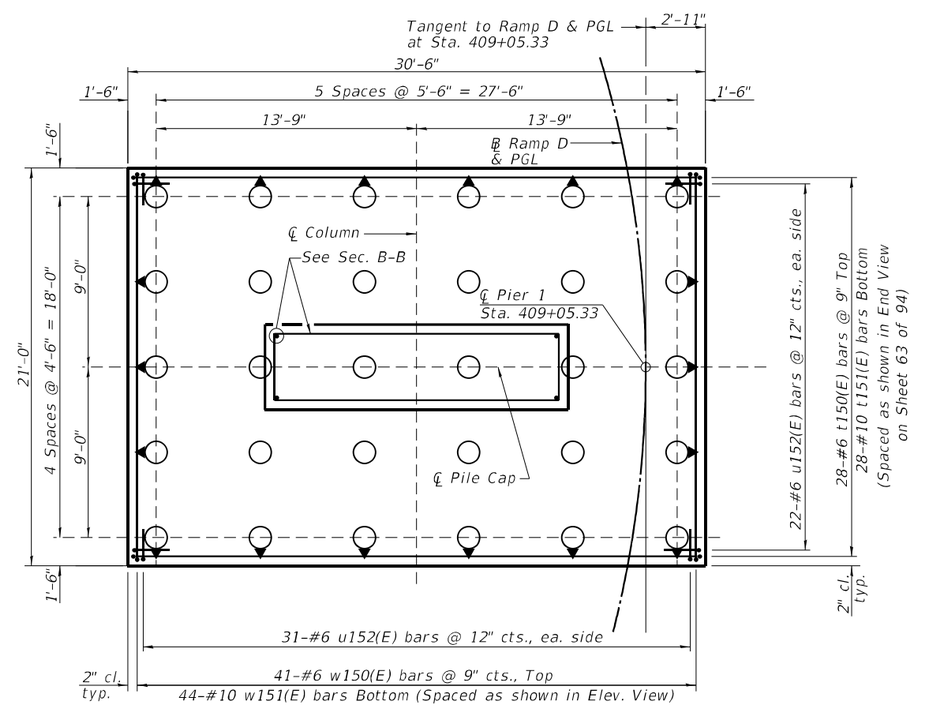
SECTION B-B

NOTES:

1. Space reinforcement in cap to miss anchor bolts.
2. 3:12 (H:V) batter in the direction indicated on outside piles.
3. For details of piles, see Sheet 78 of 94.

PILE DATA

Type: Steel Metal Shell, 16"○ w/.312" walls, with pile shoes
Nominal Required Bearing: 464 kips
Factored Resistance Available: 255 kips
Est. Length: 59'
No. Production Piles: 29
No. Test Piles: 1



PILE CAP PLAN

USER NAME = Denise Herrera	DESIGNED - DH	REVISED -	
	CHECKED - DRC	REVISED -	
PLOT SCALE = N/A	DRAWN - DH	REVISED -	
PLOT DATE = 4/29/2021 (3:59:43 PM)	CHECKED - JTH	REVISED -	

CMT
License No. 184-000613

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 DETAILS
STRUCTURE NO. 010-1004
SHEET NO. 64 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	872
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		

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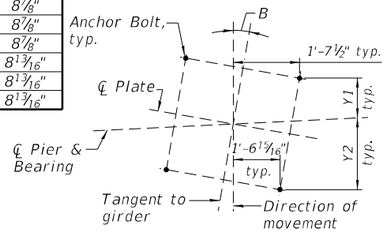
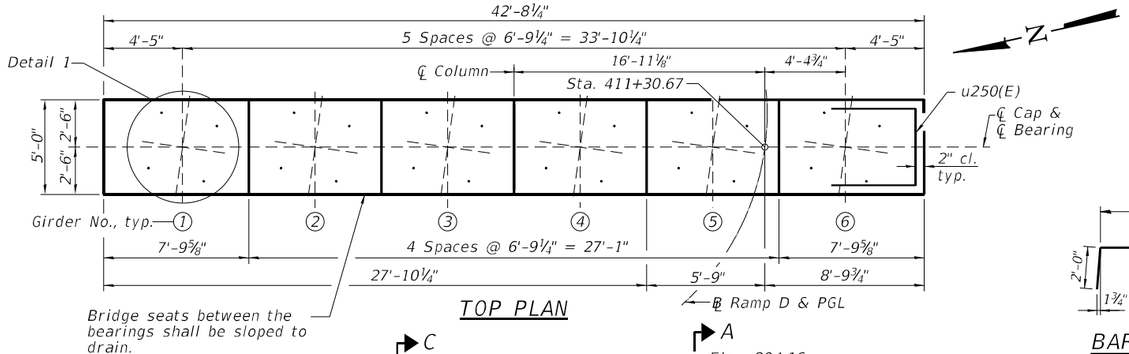
GIRDER	B	Y1	Y2
1	8°10'55"	7½"	8⅞"
2	8°09'21"	7½"	8⅞"
3	8°07'49"	7½"	8⅞"
4	8°06'17"	7½"	8 13/16"
5	8°04'47"	7 9/16"	8 13/16"
6	8°03'17"	7 9/16"	8 13/16"

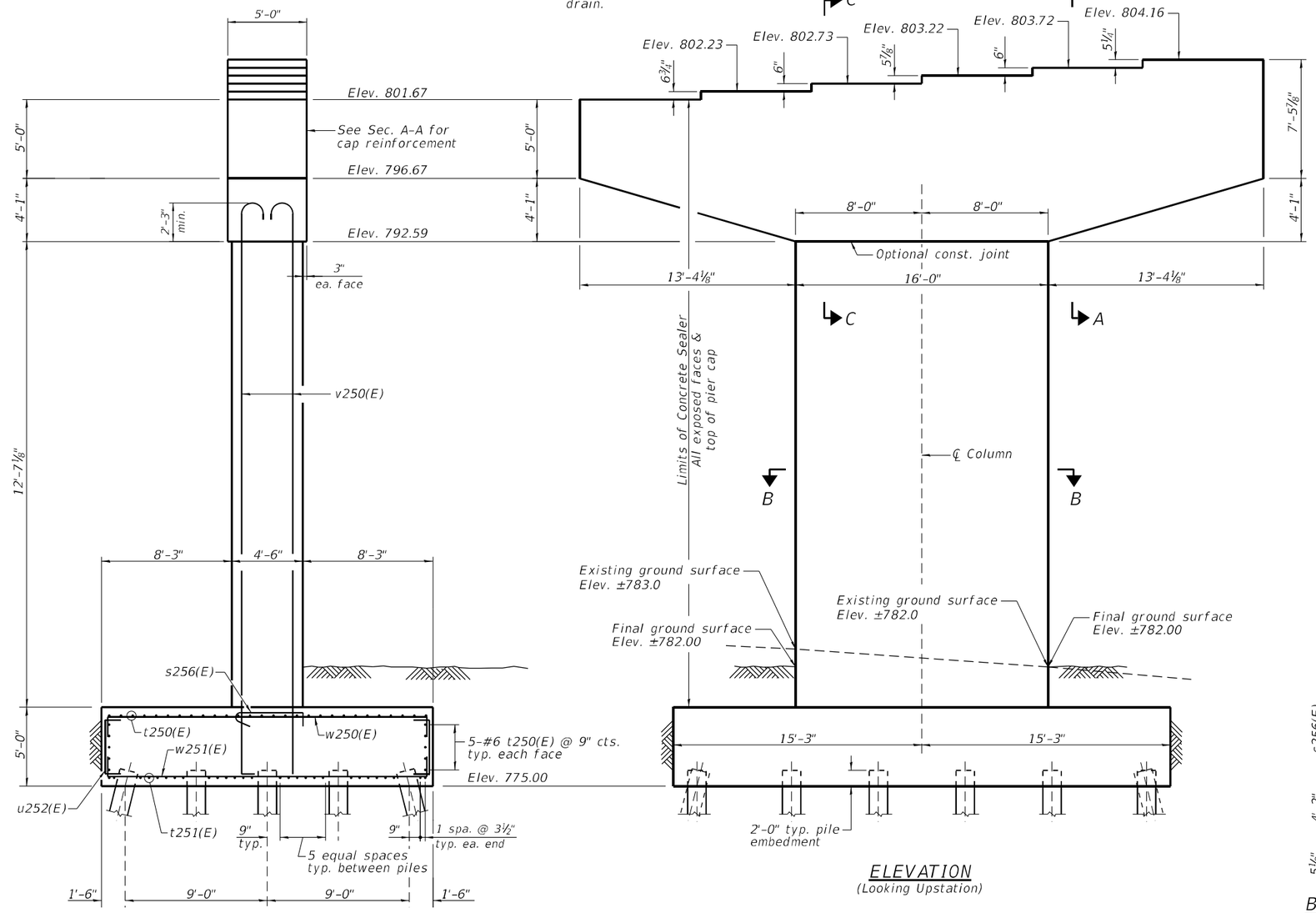


DETAIL 1

Bearing orientation
(typ. at each girder)



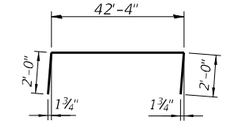
TOP PLAN



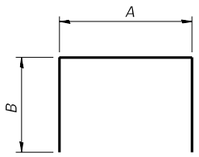
END VIEW

ELEVATION

(Looking Upstation)



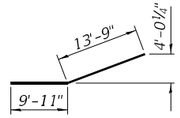
BAR p250(E)



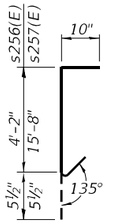
Bar	A	B
s250(E)	3'-1"	4'-10"
s251(E)	2'-0"	5'-10"
s252(E)	2'-0"	6'-8"
s253(E)	2'-0"	7'-1"
s254(E)	3'-1"	6'-1"
s255(E)	4'-6"	7'-1"
t250(E)	30'-2"	1'-0"
t251(E)	30'-2"	1'-10"
u250(E)	4'-6"	4'-4"
u251(E)	4'-8"	4'-4"
u252(E)	4'-5"	1'-0"
u253(E)	4'-2"	3'-9"
w250(E)	20'-8"	1'-0"
w251(E)	20'-8"	1'-10"

BILL OF MATERIAL

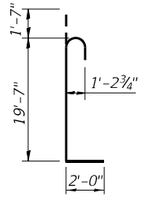
Bar	No.	Size	Length	Shape
h250(E)	12	#6	42'-4"	
h251(E)	2	#6	40'-1"	
h252(E)	2	#6	33'-7"	
h253(E)	2	#6	27'-0"	
h254(E)	2	#6	20'-6"	
h255(E)	24	#6	6'-8"	
h256(E)	12	#6	7'-6"	
h257(E)	108	#5	15'-8"	
p250(E)	18	#11	46'-4"	
p251(E)	12	#5	23'-8"	
s250(E)	20	#5	12'-9"	
s251(E)	60	#5	13'-8"	
s252(E)	102	#5	15'-4"	
s253(E)	54	#5	16'-2"	
s254(E)	20	#5	15'-3"	
s255(E)	32	#5	18'-8"	
s256(E)	660	#5	5'-6"	
s257(E)	110	#5	17'-0"	
t250(E)	38	#6	32'-2"	
t251(E)	28	#10	33'-10"	
u250(E)	22	#6	13'-2"	
u251(E)	44	#6	13'-4"	
u252(E)	106	#6	6'-5"	
u253(E)	108	#5	11'-8"	
v250(E)	56	#11	23'-2"	
w250(E)	51	#6	22'-8"	
w251(E)	44	#10	24'-4"	
Structure Excavation		Cu. Yd.	399	
Concrete Structures		Cu. Yd.	224.4	
Reinforcement Bars, Epoxy Coated		Pound	41,150	
Driving Piles		Foot	1,421	
Test Pile Metal Shells		Each	1	
Pile Shoes		Each	30	
Concrete Sealer		Sq. Ft.	1,484	
Furnishing Metal Shell Piles 16"x.312"		Foot	1,421	



BAR p251(E)



BAR s256(E) & s257(E)



BAR v250(E)

MIN. LAP LENGTH

#5 bars: 3'-9"

NOTES:

1. Pour steps monolithically with cap.
2. For Anchor Bolts Details see Sheet 47 of 94.
3. See sheet 66 of 94 for Sections A-A, B-B, and C-C.
4. Reinforcement bar bending dimensions are out to out.

FILE NAME = pw:\\cmteng-pw.bentley.com:cmt-projects\Documents\Projects\IDOT\150656-01\Draw\Structures\CADD_Sheets\RAMP_D\RAMPD-70B99-065-Pier 2.dgn

CMT

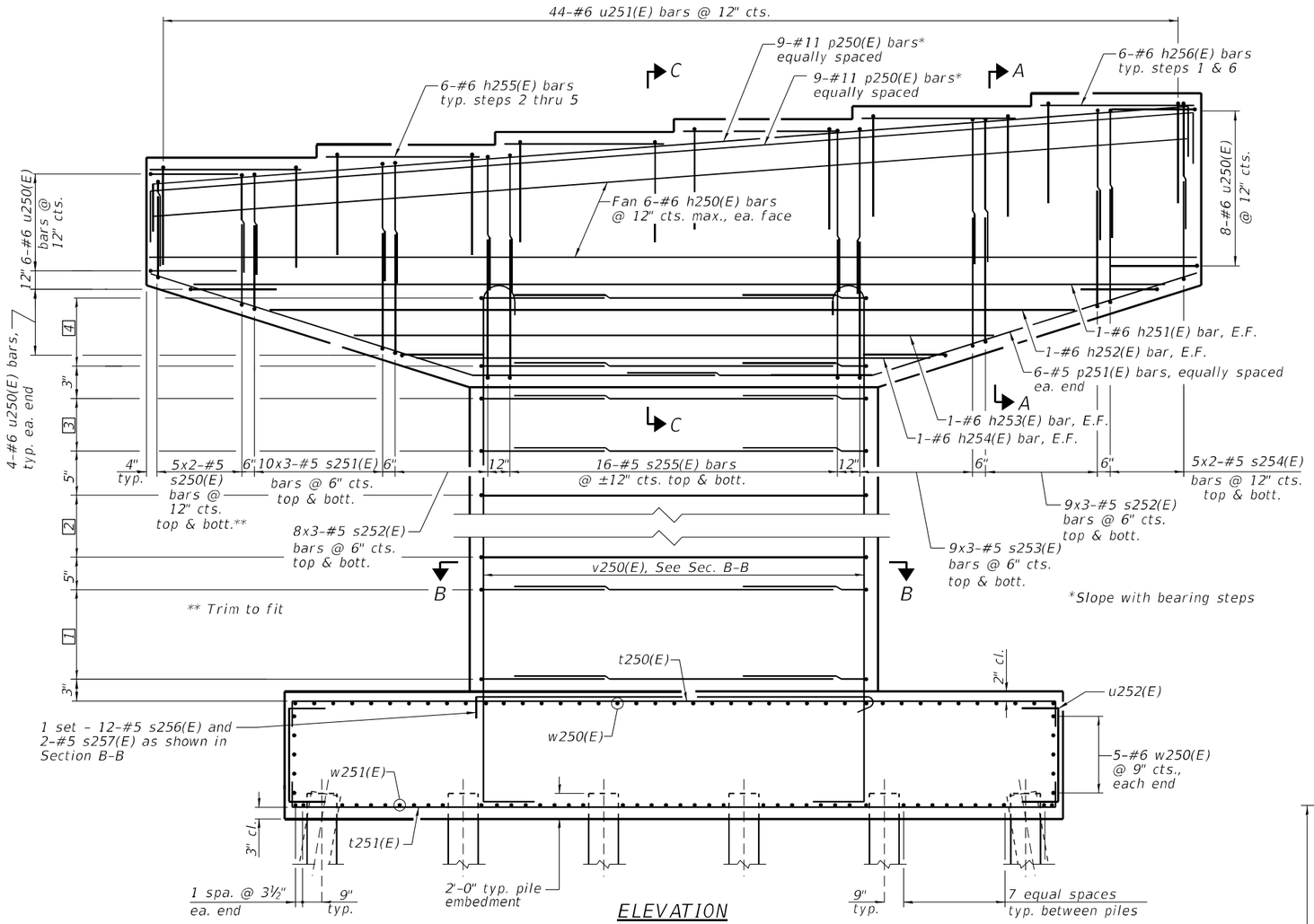
License No. 184-000613

USER NAME = Denise Herrera	DESIGNED - DH	REVISED -	
	CHECKED - DRC	REVISED -	
PLOT SCALE = N/A	DRAWN - DH	REVISED -	
PLOT DATE = 4/29/2021 (3:59:47 PM)	CHECKED - JTH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 PLAN AND ELEVATION
STRUCTURE NO. 010-1004
SHEET NO. 65 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	873
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



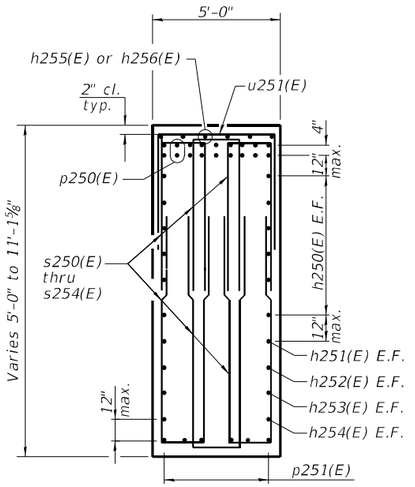
ELEVATION

1 19 Sets - 2-#5 h257(E) bars lapped with 2-#5 u253(E), 12-#5 s256(E) & 2-#5 s257(E) at 3" cts.

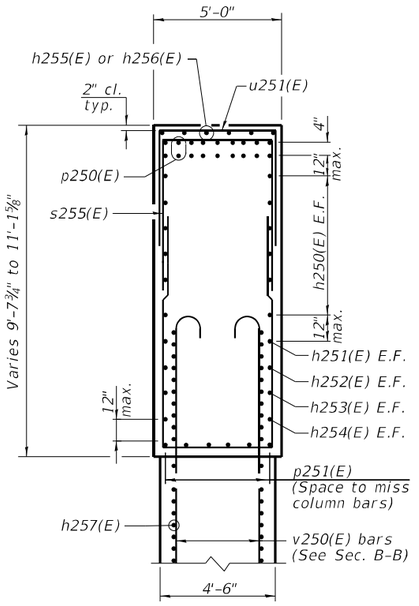
2 6 sets - 2-#5 h257(E) bars lapped with 2-#5 u253(E), 12-#5 s256(E) & 2-#5 s257(E) at 6" cts.

3 19 Sets - 2-#5 h257(E) bars lapped with 2-#5 u253(E), 12-#5 s256(E) & 2-#5 s257(E) at 3" cts.

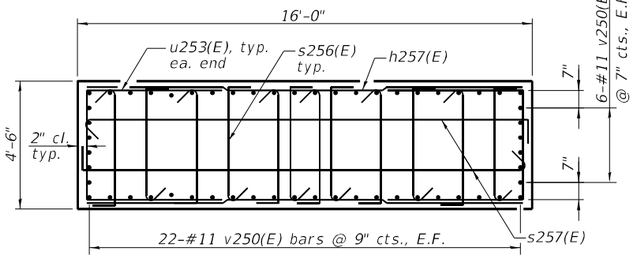
4 10 Sets - 2-#5 h257(E) bars lapped with 2-#5 u253(E), 12-#5 s256(E) & 2-#5 s257(E) at 3" cts.



SECTION A-A



SECTION C-C



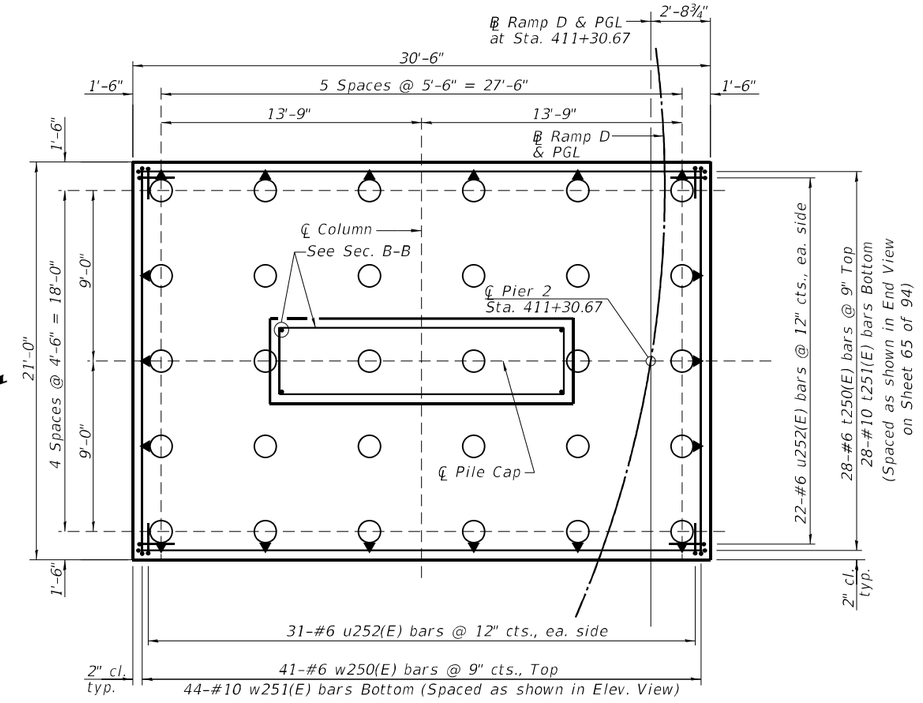
SECTION B-B

NOTES:

1. Space reinforcement in cap to miss anchor bolts.
2. 3:12 (H:V) batter in the direction indicated on outside piles.
3. For details of piles, see Sheet 78 of 94.

PILE DATA

Type: Steel Metal Shell, 16"∅ w/.312" walls, with pile shoes
Nominal Required Bearing: 438 kips
Factored Resistance Available: 241 kips
Est. Length: 49'
No. Production Piles: 29
No. Test Piles: 1



PILE CAP PLAN

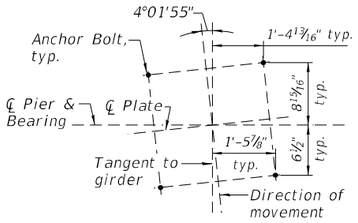
CMT

USER NAME = Denise Herrera	DESIGNED - DH	REVISED -
	CHECKED - DRC	REVISED -
PLOT SCALE = N/A	DRAWN - DH	REVISED -
PLOT DATE = 4/29/2021 (3:59:50 PM)	CHECKED - JTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

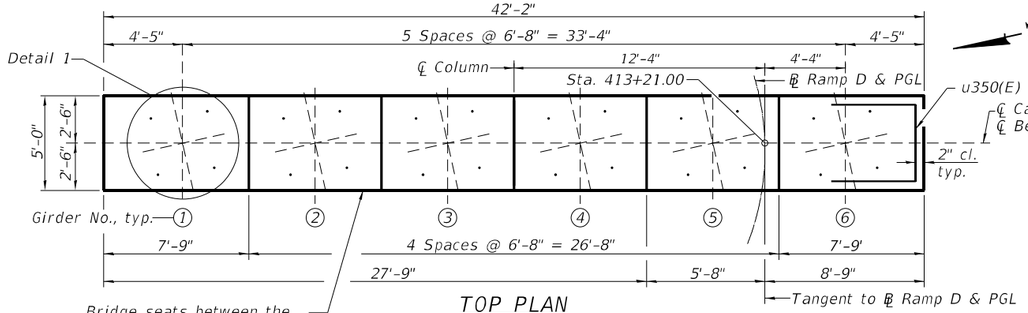
PIER 2 DETAILS
STRUCTURE NO. 010-1004
SHEET NO. 66 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	874
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		

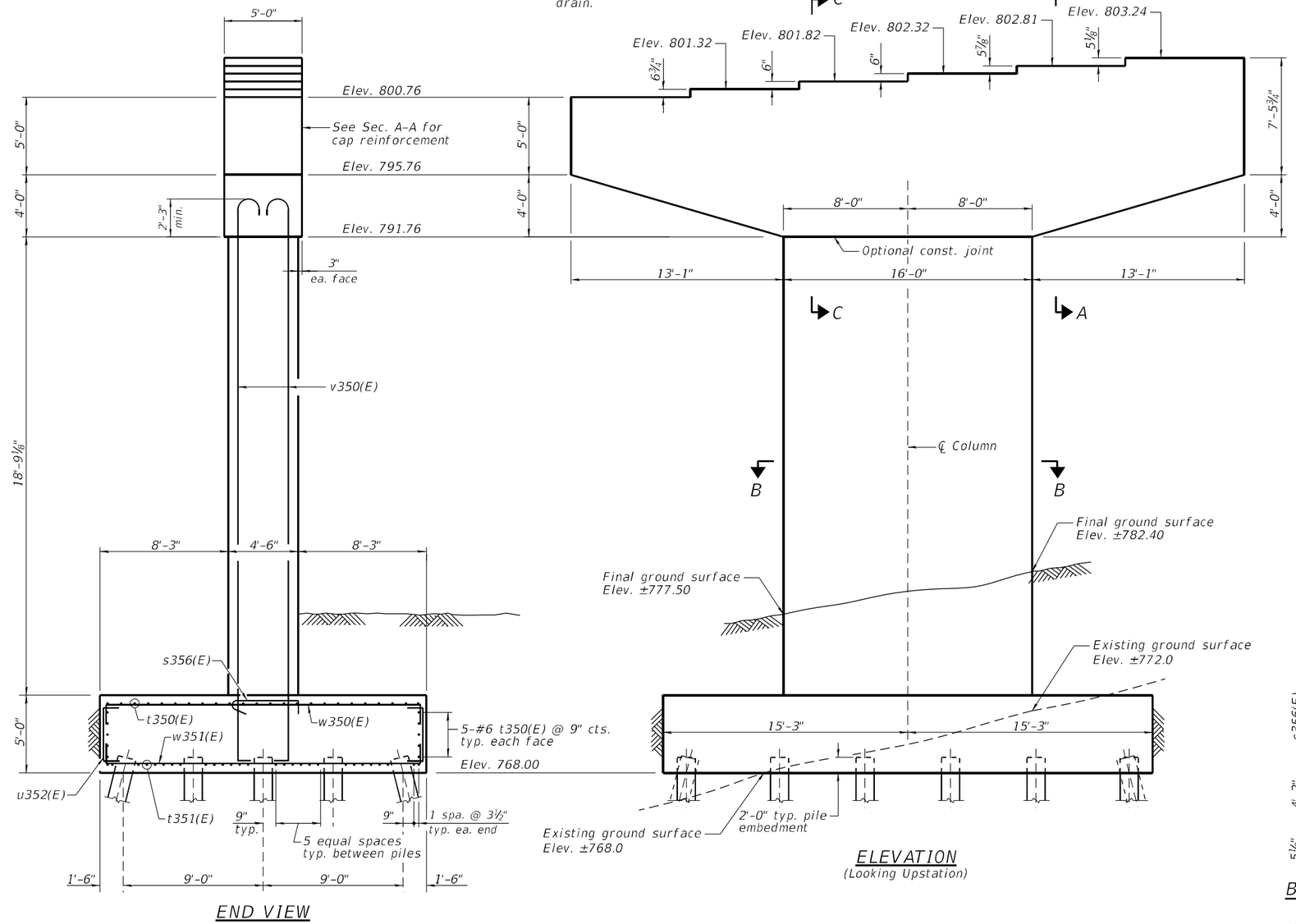


DETAIL 1

Bearing orientation
(typ. at each girder)



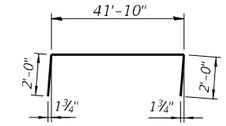
TOP PLAN



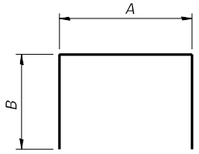
END VIEW

ELEVATION

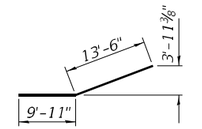
(Looking Upstation)



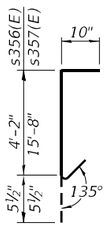
BAR p350(E)



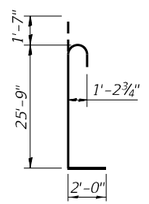
Bar	A	B
s350(E)	3'-1"	4'-10"
s351(E)	2'-0"	5'-9"
s352(E)	2'-0"	6'-5"
s353(E)	2'-0"	6'-11"
s354(E)	3'-1"	5'-10"
s355(E)	4'-6"	6'-11"
t350(E)	30'-2"	1'-0"
t351(E)	30'-2"	1'-10"
u350(E)	4'-6"	4'-4"
u351(E)	4'-8"	4'-4"
u352(E)	4'-5"	1'-0"
u353(E)	4'-2"	3'-9"
w350(E)	20'-8"	1'-0"
w351(E)	20'-8"	1'-10"



BAR p351(E)



BAR s356(E) & s357(E)



BAR v350(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h350(E)	12	#6	41'-10"	
h351(E)	2	#6	34'-11"	
h352(E)	2	#6	31'-4"	
h353(E)	2	#6	24'-10"	
h354(E)	2	#6	18'-3"	
h355(E)	24	#6	6'-8"	
h356(E)	12	#6	7'-5"	
h357(E)	132	#5	15'-8"	
p350(E)	18	#11	45'-10"	
p351(E)	12	#5	23'-5"	
s350(E)	20	#5	12'-9"	
s351(E)	60	#5	13'-6"	
s352(E)	102	#5	14'-10"	
s353(E)	54	#5	15'-10"	
s354(E)	20	#5	14'-9"	
s355(E)	32	#5	18'-4"	
s356(E)	804	#5	5'-6"	
s357(E)	134	#5	17'-0"	
t350(E)	38	#6	32'-2"	
t351(E)	28	#10	33'-10"	
u350(E)	22	#6	13'-2"	
u351(E)	43	#6	13'-4"	
u352(E)	106	#6	6'-5"	
u353(E)	132	#5	11'-8"	
v350(E)	88	#11	29'-4"	
w350(E)	51	#6	22'-8"	
w351(E)	44	#10	24'-4"	
Structure Excavation		Cu. Yd.	121	
Concrete Structures		Cu. Yd.	239.1	
Reinforcement Bars, Epoxy Coated		Pound	49,660	
Driving Piles		Foot	1,479	
Test Pile Metal Shells		Each	1	
Pile Shoes		Each	30	
Furnishing Metal Shell Piles 16"x.312"		Foot	1,479	

MIN. LAP LENGTH

#5 bars: 3'-9"

NOTES:

1. Pour steps monolithically with cap.
2. For Anchor Bolts Details see Sheet 47 of 94.
3. See sheet 68 of 94 for Sections A-A, B-B, and C-C.
4. Reinforcement bar bending dimensions are out to out.

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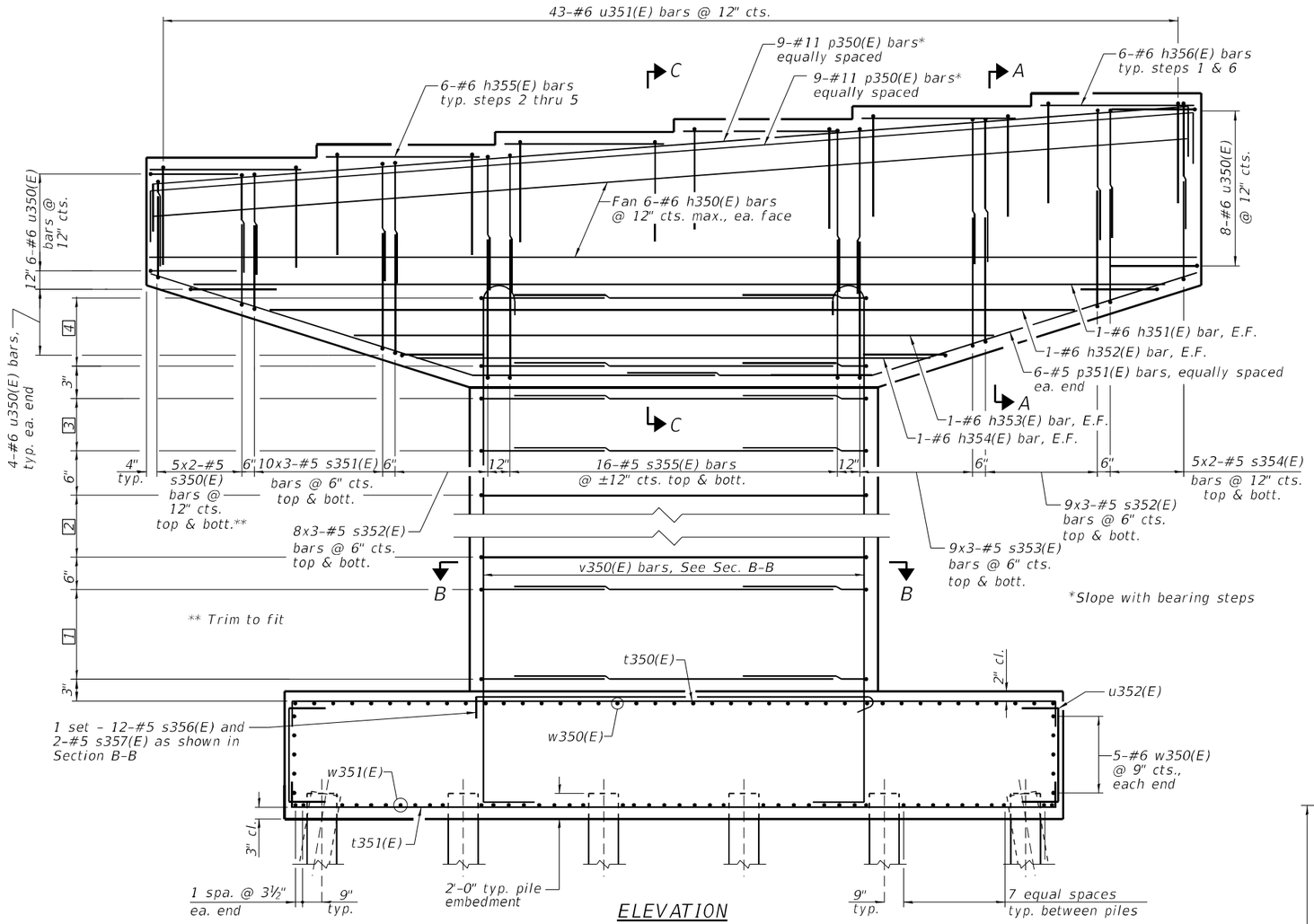
PLOT SCALE = N/A	DRAWN - DH	REVISED -
PLOT DATE = 4/29/2021 (3:59:53 PM)	CHECKED - JTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3 PLAN AND ELEVATION
STRUCTURE NO. 010-1004
SHEET NO. 67 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	875
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



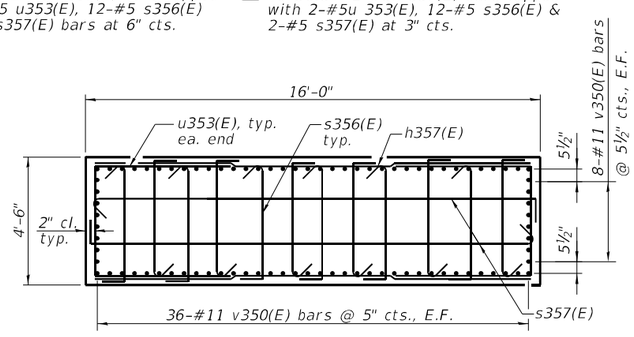
ELEVATION

1 20 Sets - 2-#5 h357(E) bars lapped with 2-#5 u353(E), 12-#5 s356(E) & 2-#5 s357(E) at 3" cts.

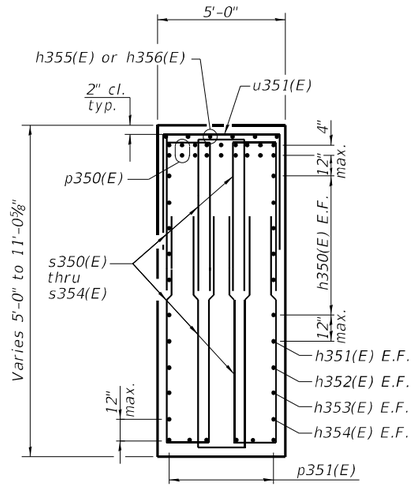
2 16 sets - 2-#5 h357(E) bars lapped with 2-#5 u353(E), 12-#5 s356(E) & 2-#5 s357(E) bars at 6" cts.

3 20 Sets - 2-#5 h357(E) bars lapped with 2-#5 u353(E), 12-#5 s356(E) & 2-#5 s357(E) at 3" cts.

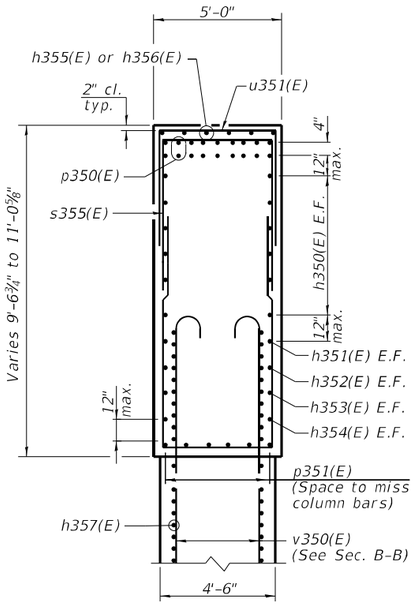
4 10 Sets - 2-#5h 357(E) bars lapped with 2-#5u 353(E), 12-#5 s356(E) & 2-#5 s357(E) at 3" cts.



SECTION B-B



SECTION A-A



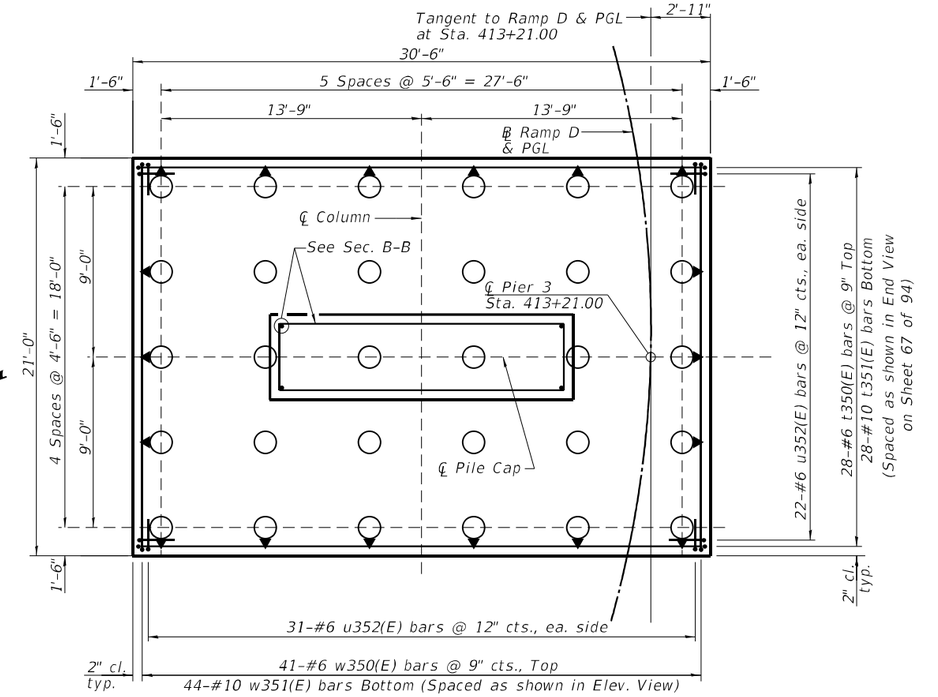
SECTION C-C

NOTES:

1. Space reinforcement in cap to miss anchor bolts.
2. 3:12 (H:V) batter in the direction indicated on outside piles.
3. For details of piles, see Sheet 78 of 94.

PILE DATA

Type: Steel Metal Shell, 16"∅ w/.312" walls, with pile shoes
Nominal Required Bearing: 496 kips
Factored Resistance Available: 273 kips
Est. Length: 51'
No. Production Piles: 29
No. Test Piles: 1



PILE CAP PLAN

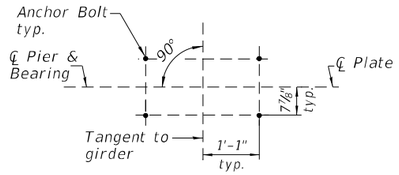
CMT

USER NAME = Denise Herrera	DESIGNED - DH	REVISED -
	CHECKED - DRC	REVISED -
PLOT SCALE = N/A	DRAWN - DH	REVISED -
PLOT DATE = 4/29/2021 (3:59:55 PM)	CHECKED - JTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

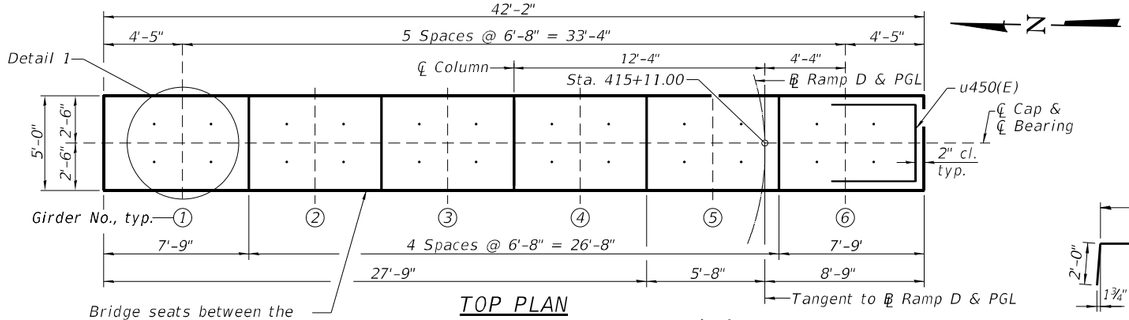
PIER 3 DETAILS
STRUCTURE NO. 010-1004
SHEET NO. 68 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	876
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		

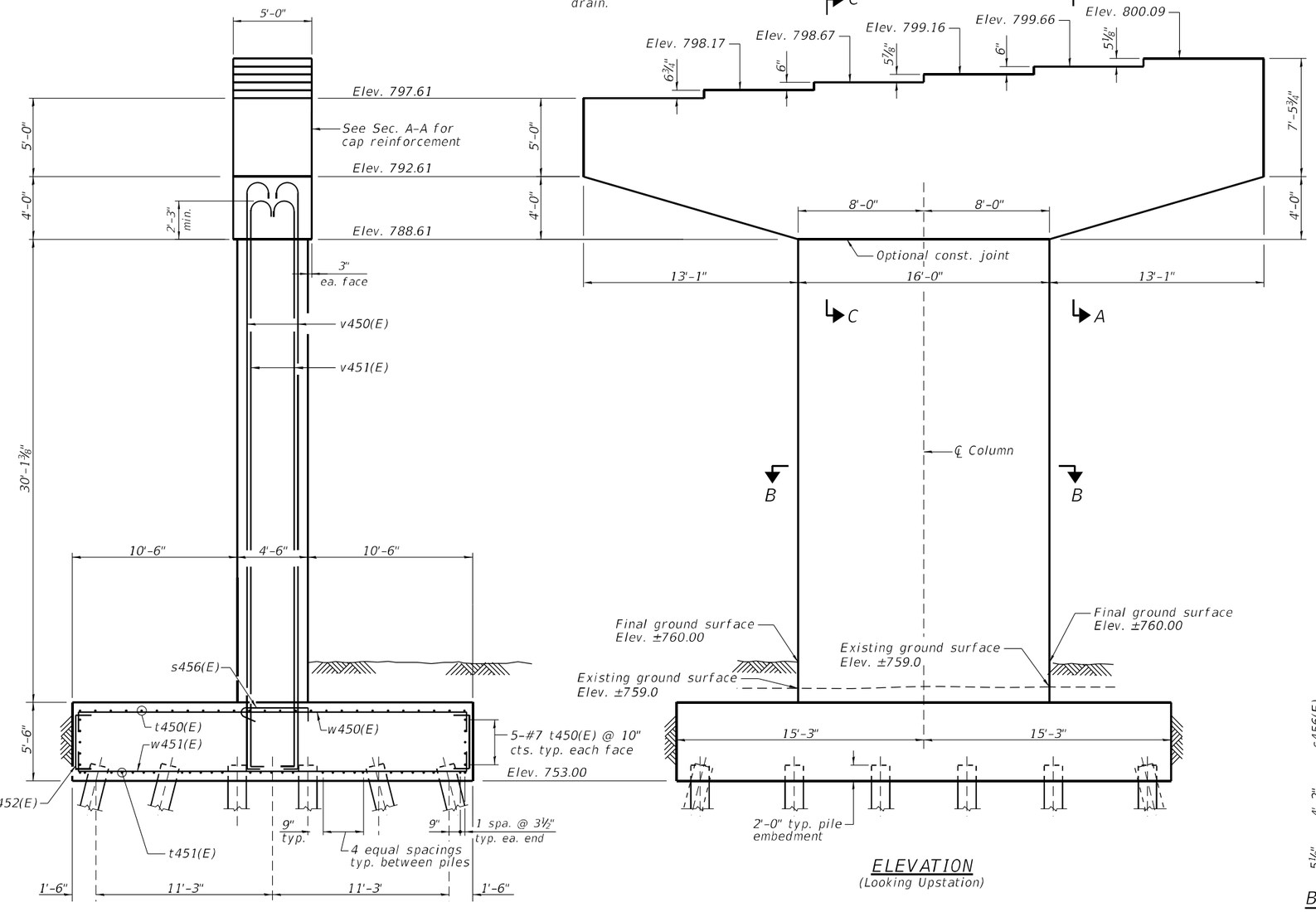


DETAIL 1

Bearing orientation
(typ. at each girder)



TOP PLAN

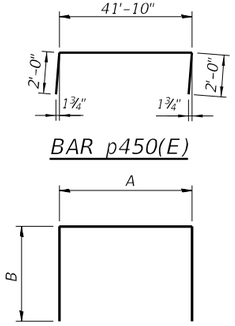


END VIEW

ELEVATION

(Looking Upstation)

BAR p450(E)

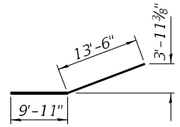


Bar	A	B
s450(E)	3'-1"	4'-10"
s451(E)	2'-0"	5'-9"
s452(E)	2'-0"	6'-5"
s453(E)	2'-0"	6'-11"
s454(E)	3'-1"	5'-10"
s455(E)	4'-6"	6'-11"
t450(E)	30'-2"	1'-2"
t451(E)	30'-2"	2'-0"
u450(E)	4'-6"	4'-4"
u451(E)	4'-8"	4'-4"
u452(E)	4'-11"	1'-0"
u453(E)	4'-2"	3'-9"
w450(E)	25'-2"	1'-2"
w451(E)	25'-2"	2'-0"

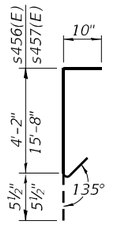
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h450(E)	12	#6	41'-10"	
h451(E)	2	#6	34'-11"	
h452(E)	2	#6	31'-4"	
h453(E)	2	#6	24'-10"	
h454(E)	2	#6	18'-3"	
h455(E)	24	#6	6'-8"	
h456(E)	12	#6	7'-5"	
h457(E)	194	#5	15'-8"	
p450(E)	18	#11	45'-10"	
p451(E)	12	#5	23'-5"	
s450(E)	20	#5	12'-9"	
s451(E)	60	#5	13'-6"	
s452(E)	102	#5	14'-10"	
s453(E)	54	#5	15'-10"	
s454(E)	20	#5	14'-9"	
s455(E)	32	#5	18'-4"	
s456(E)	1176	#5	5'-6"	
s457(E)	196	#5	17'-0"	
t450(E)	38	#7	32'-6"	
t451(E)	29	#11	34'-2"	
u450(E)	22	#6	13'-2"	
u451(E)	43	#6	13'-4"	
u452(E)	114	#6	6'-11"	
u453(E)	194	#5	11'-8"	
v450(E)	80	#11	42'-8"	
v451(E)	92	#11	41'-3"	
w450(E)	51	#7	27'-6"	
w451(E)	49	#11	29'-2"	
Structure Excavation		Cu. Yd.	275	
Concrete Structures		Cu. Yd.	309.2	
Reinforcement Bars, Epoxy Coated		Pound	85,380	
Driving Piles		Foot	1,820	
Test Pile Metal Shells		Each	1	
Pile Shoes		Each	36	
Furnishing Metal Shell Piles 16"x.312"		Foot	1,820	

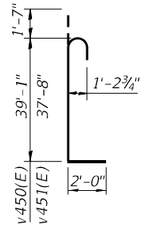
BAR p451(E)



BAR s456(E) & s457(E)



BARS v450(E) & v451(E)



MIN. LAP LENGTH

#5 bars: 3'-9"

NOTES:

1. Pour steps monolithically with cap.
2. For Anchor Bolts Details see Sheet 48 of 94.
3. See sheet 70 of 94 for Sections A-A, B-B, and C-C.
4. Reinforcement bar bending dimensions are out to out.

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USER NAME = Denise Herrera	DESIGNED - DH	REVISED -
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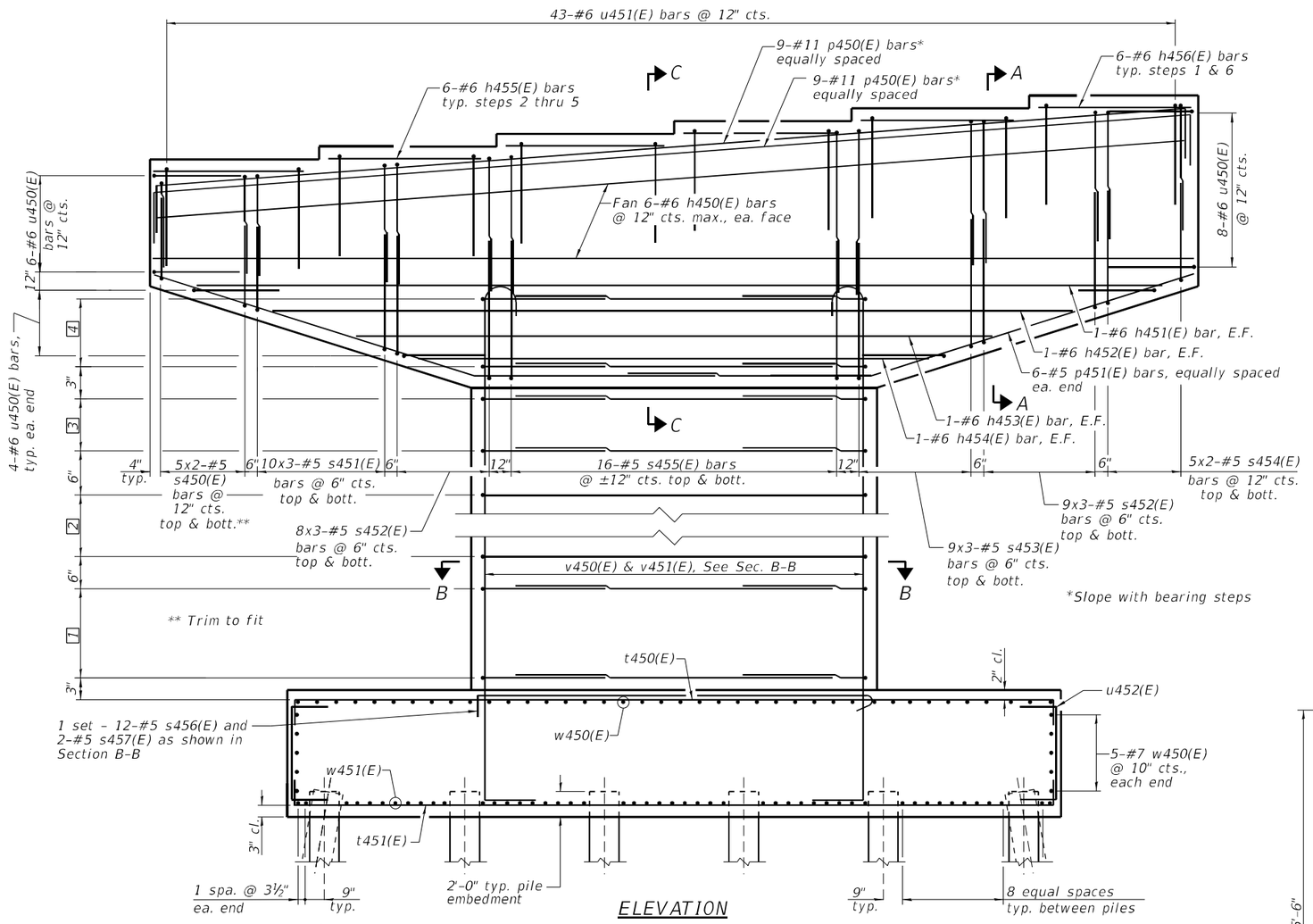
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 4 PLAN AND ELEVATION
STRUCTURE NO. 010-1004
SHEET NO. 69 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	877
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		



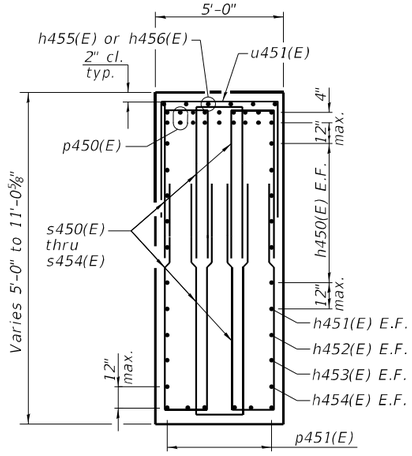
ELEVATION

1 28 Sets - 2-#5 h457(E) bars lapped with 2-#5 u453(E), 12-#5 s456(E) & 2-#5 s457(E) at 3" cts.

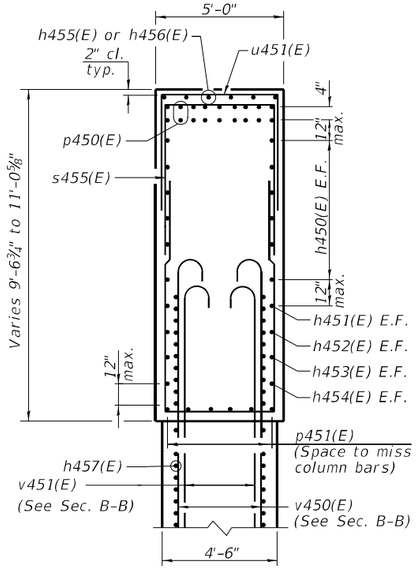
2 31 sets - 2-#5 h457(E) bars lapped with 2-#5 u453(E), 12-#5 s456(E) & 2-#5 s457(E) at 6" cts.

3 28 Sets - 2-#5 h457(E) bars lapped with 2-#5 u453(E), 12-#5 s456(E) & 2-#5 s457(E) at 3" cts.

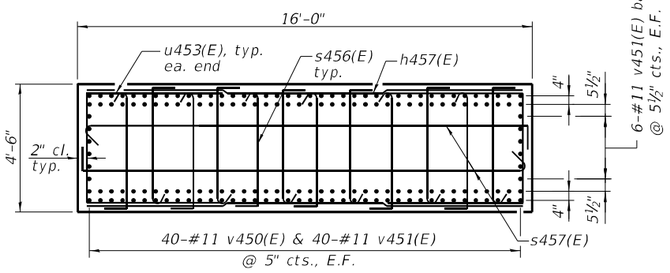
4 10 Sets - 2-#5 h457(E) bars lapped with 2-#5 u453(E), 12-#5 s456(E) & 2-#5 s457(E) at 3" cts.



SECTION A-A



SECTION C-C



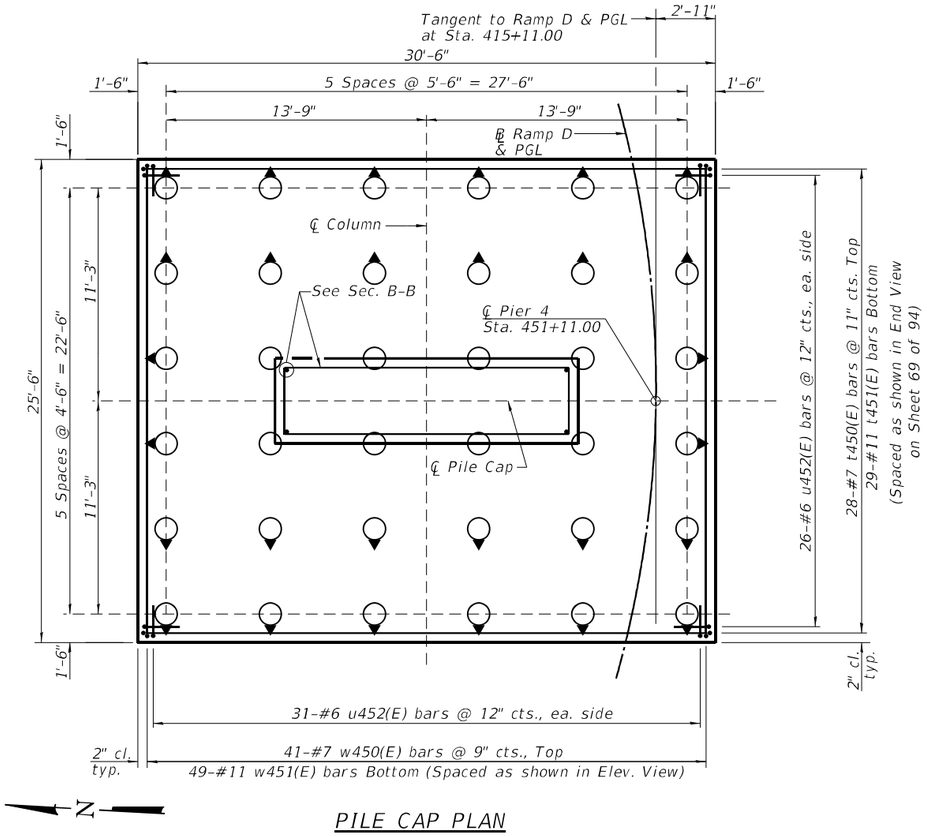
SECTION B-B

NOTES:

1. Space reinforcement cap to miss anchor bolts.
2. 3:12 (H:V) batter in the direction indicated on outside piles.
3. For details of piles, see Sheet 78 of 94.

PILE DATA

Type: Steel Metal Shell, 16"∅ w/.312" walls, with pile shoes
Nominal Required Bearing: 506 k
Factored Resistance Available: 278 k
Est. Length: 52'
No. Production Piles: 35
No. Test Piles: 1



PILE CAP PLAN

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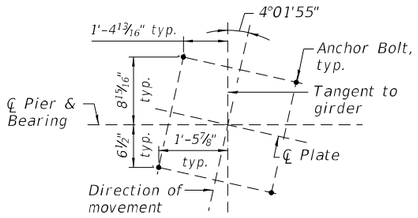
	CHECKED - DRC	REVISED -
PLOT SCALE =	DRAWN - DH	REVISED -
PLOT DATE = 4/29/2021 (4:00:00 PM)	CHECKED - JTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

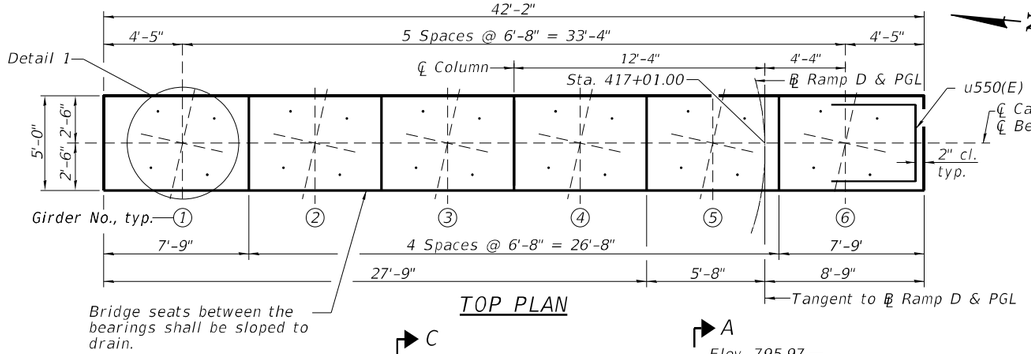
PIER 4 DETAILS
STRUCTURE NO. 010-1004
SHEET NO. 70 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	878
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		

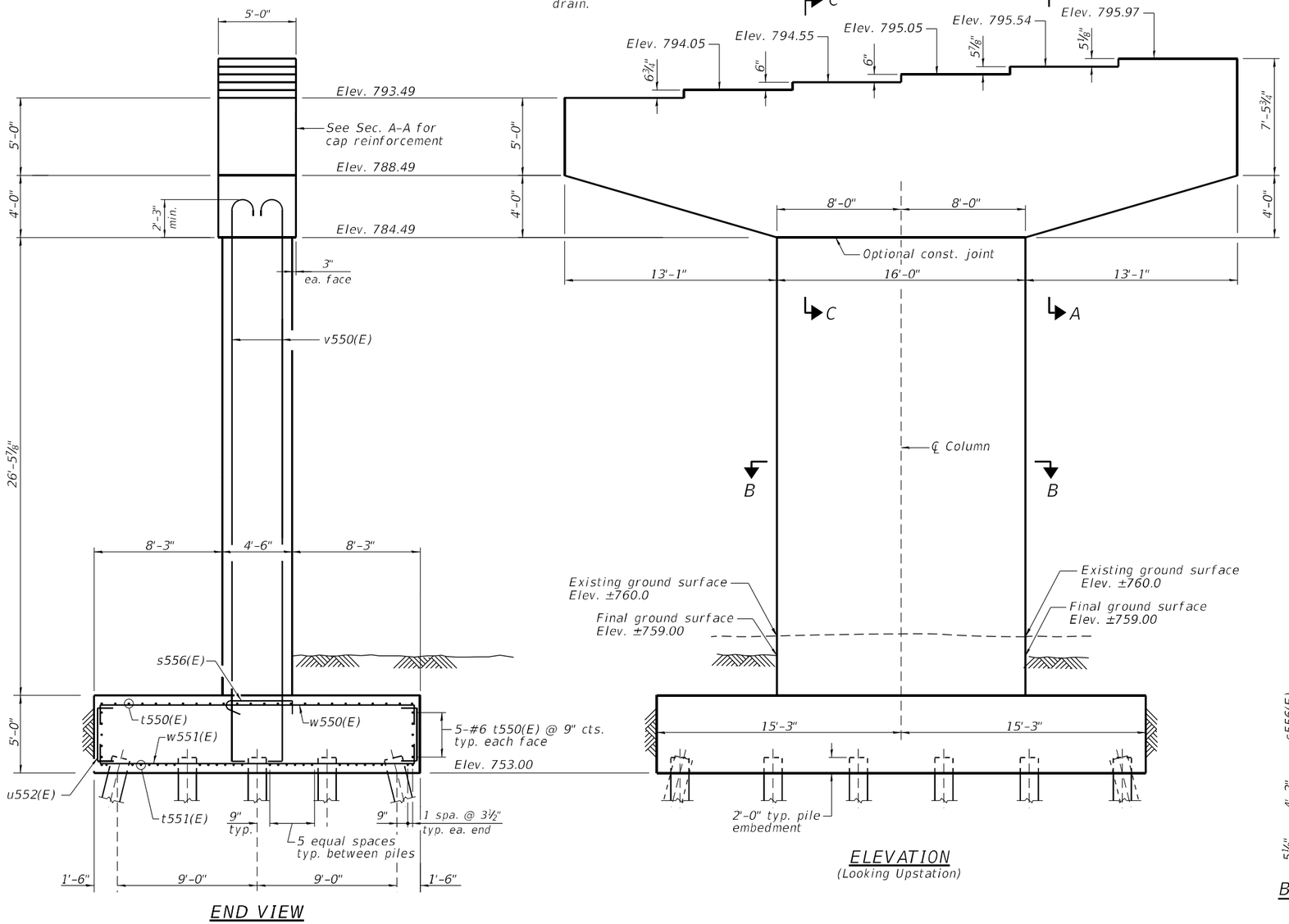


DETAIL 1

Bearing orientation
(typ. at each girder)



TOP PLAN

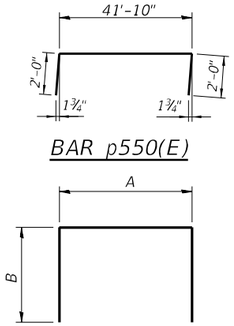


END VIEW

ELEVATION

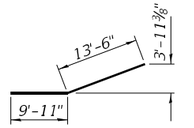
(Looking Upstation)

BAR p550(E)

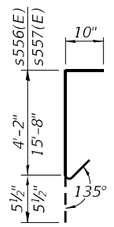


Bar	A	B
s550(E)	3'-1"	4'-10"
s551(E)	2'-0"	5'-9"
s552(E)	2'-0"	6'-5"
s553(E)	2'-0"	6'-11"
s554(E)	3'-1"	5'-10"
s555(E)	4'-6"	6'-11"
t550(E)	30'-2"	1'-0"
t551(E)	30'-2"	1'-10"
u550(E)	4'-6"	4'-4"
u551(E)	4'-8"	4'-4"
u552(E)	4'-5"	1'-0"
u553(E)	4'-2"	3'-9"
w550(E)	20'-8"	1'-0"
w551(E)	20'-8"	1'-10"

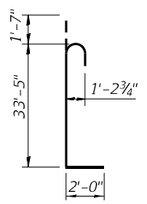
BAR p551(E)



BAR s556(E) & s557(E)



BAR v550(E)



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h550(E)	12	#6	41'-10"	
h551(E)	2	#6	34'-11"	
h552(E)	2	#6	31'-4"	
h553(E)	2	#6	24'-10"	
h554(E)	2	#6	18'-3"	
h555(E)	24	#6	6'-8"	
h556(E)	12	#6	7'-5"	
h557(E)	176	#5	15'-8"	
p550(E)	18	#11	45'-10"	
p551(E)	12	#5	23'-5"	
s550(E)	20	#5	12'-9"	
s551(E)	60	#5	13'-6"	
s552(E)	102	#5	14'-10"	
s553(E)	54	#5	15'-10"	
s554(E)	20	#5	14'-9"	
s555(E)	32	#5	18'-4"	
s556(E)	1068	#5	5'-6"	
s557(E)	178	#5	17'-0"	
t550(E)	38	#6	32'-2"	
t551(E)	28	#10	33'-10"	
u550(E)	22	#6	13'-2"	
u551(E)	43	#6	13'-4"	
u552(E)	106	#6	6'-5"	
u553(E)	176	#5	11'-8"	
v550(E)	56	#11	37'-0"	
w550(E)	51	#6	22'-8"	
w551(E)	44	#10	24'-4"	

Structure Excavation	Cu. Yd.	279
Concrete Structures	Cu. Yd.	259.7
Reinforcement Bars, Epoxy Coated	Pound	50,510
Driving Piles	Foot	1,479
Test Pile Metal Shells	Each	1
Pile Shoes	Each	30
Furnishing Metal Shell Piles 16"x.312"	Foot	1,479

MIN. LAP LENGTH

#5 bars: 3'-9"

NOTES:

1. Pour steps monolithically with cap.
2. For Anchor Bolts Details see Sheet 47 of 94.
3. See sheet 72 of 94 for Sections A-A, B-B, and C-C.
4. Reinforcement bar bending dimensions are out to out.

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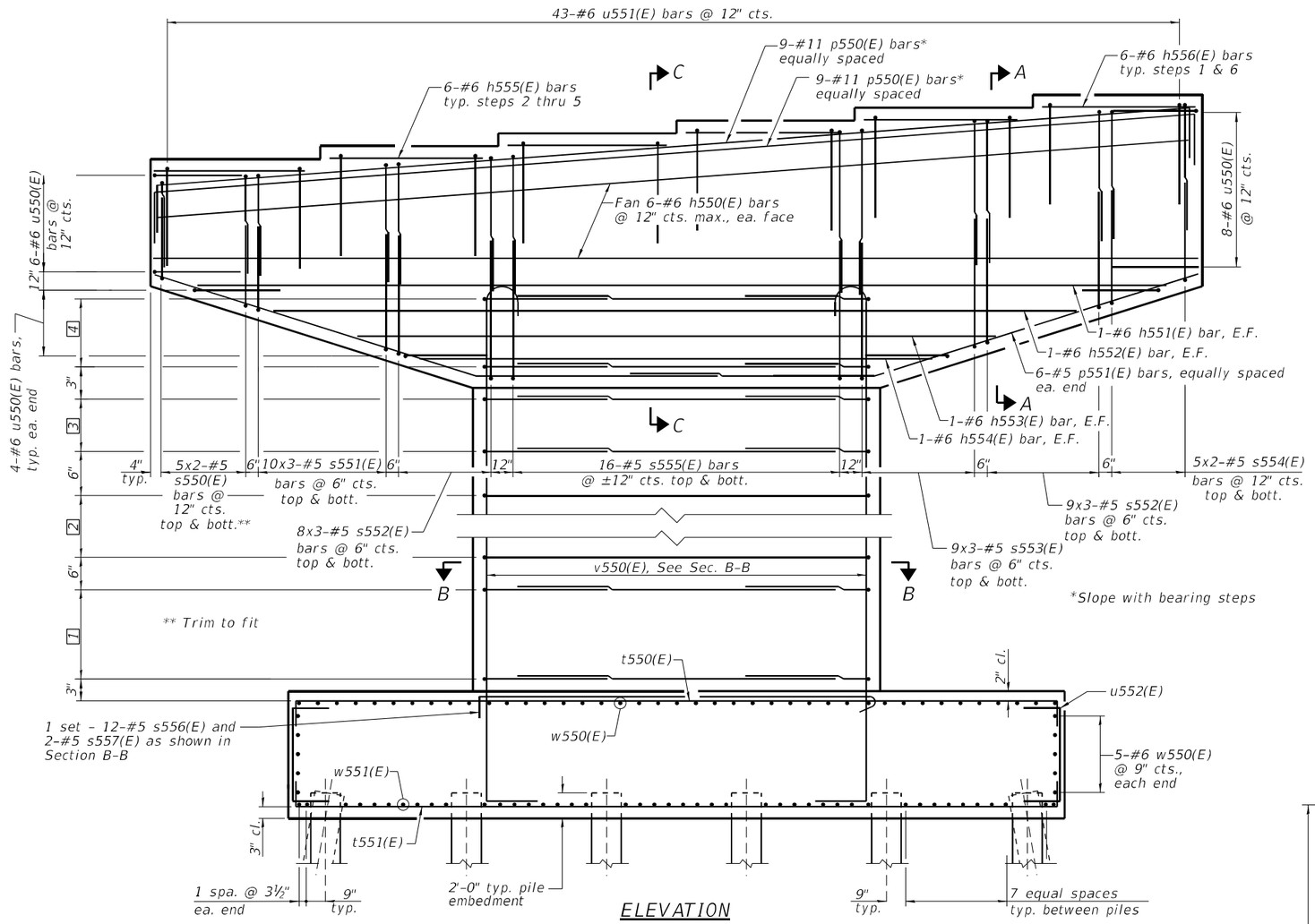
PLOT SCALE = N/A	DRAWN - DH	REVISED -
PLOT DATE = 4/29/2021 (4:00:04 PM)	CHECKED - JTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 5 PLAN AND ELEVATION
STRUCTURE NO. 010-1004
SHEET NO. 71 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	879
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



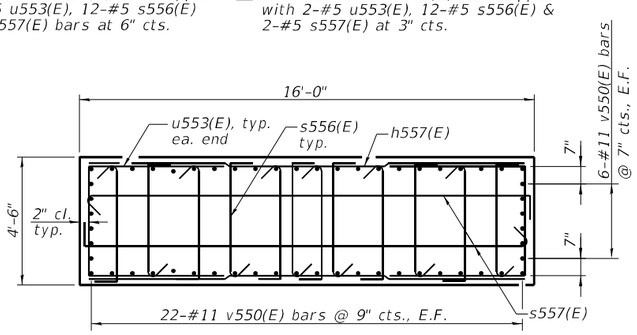
ELEVATION

1 26 Sets - 2-#5 h557(E) bars lapped with 2-#5 u553(E), 12-#5 s556(E) & 2-#5 s557(E) at 3" cts.

2 26 sets - 2-#5 h557(E) bars lapped with 2-#5 u553(E), 12-#5 s556(E) & 2-#5 s557(E) bars at 6" cts.

3 26 Sets - 2-#5 h557(E) bars lapped with 2-#5 u553(E), 12-#5 s556(E) & 2-#5 s557(E) at 3" cts.

4 10 Sets - 2-#5 h557(E) bars lapped with 2-#5 u553(E), 12-#5 s556(E) & 2-#5 s557(E) at 3" cts.



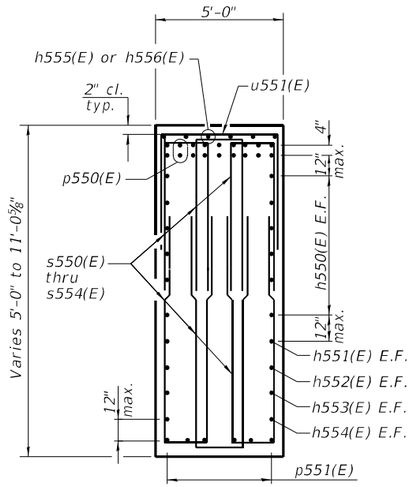
SECTION B-B

NOTES:

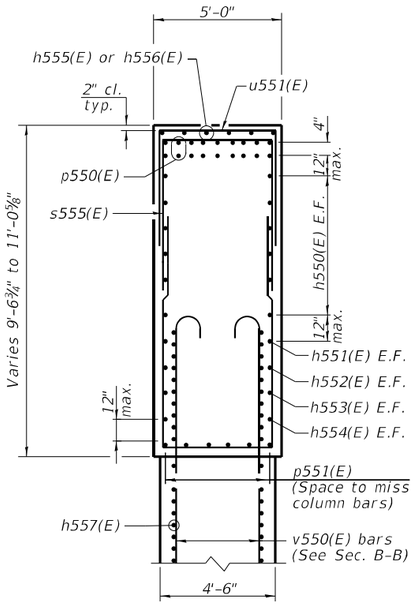
1. Space reinforcement in cap to miss anchor bolts.
2. 3:12 (H:V) batter in the direction indicated on outside piles.
3. For details of piles, see Sheet 78 of 94.

PILE DATA

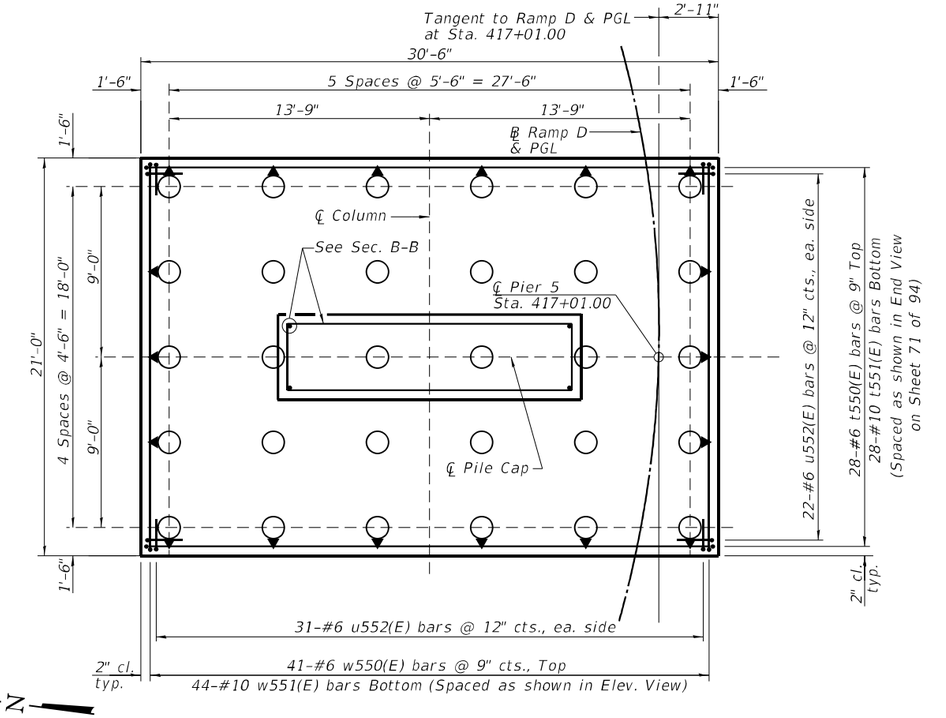
Type: Steel Metal Shell, 16"∅ w/.375" walls, with pile shoes
Nominal Required Bearing: 421 kips
Factored Resistance Available: 232 kips
Est. Length: 51'
No. Production Piles: 29
No. Test Piles: 1



SECTION A-A



SECTION C-C



PILE CAP PLAN

CMT	USER NAME = Denise Herrera	DESIGNED - DH	REVISED -
		CHECKED - DRC	REVISED -
	PLOT SCALE = N/A	DRAWN - DH	REVISED -
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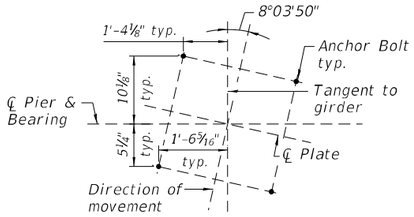
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

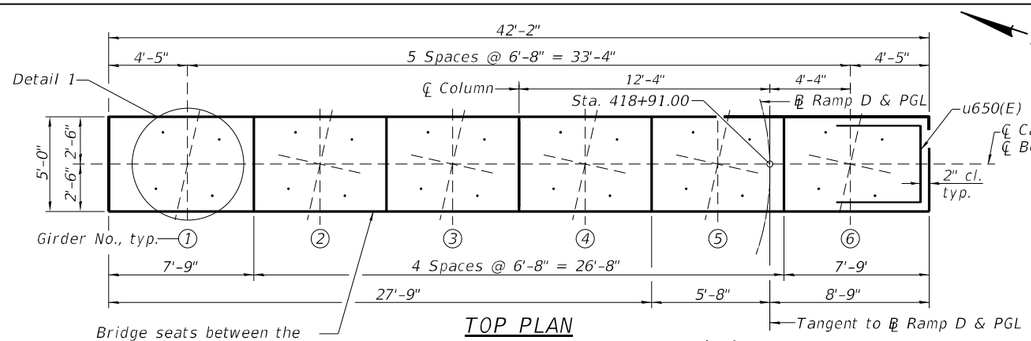
PIER 5 DETAILS
STRUCTURE NO. 010-1004
SHEET NO. 72 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	880
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		

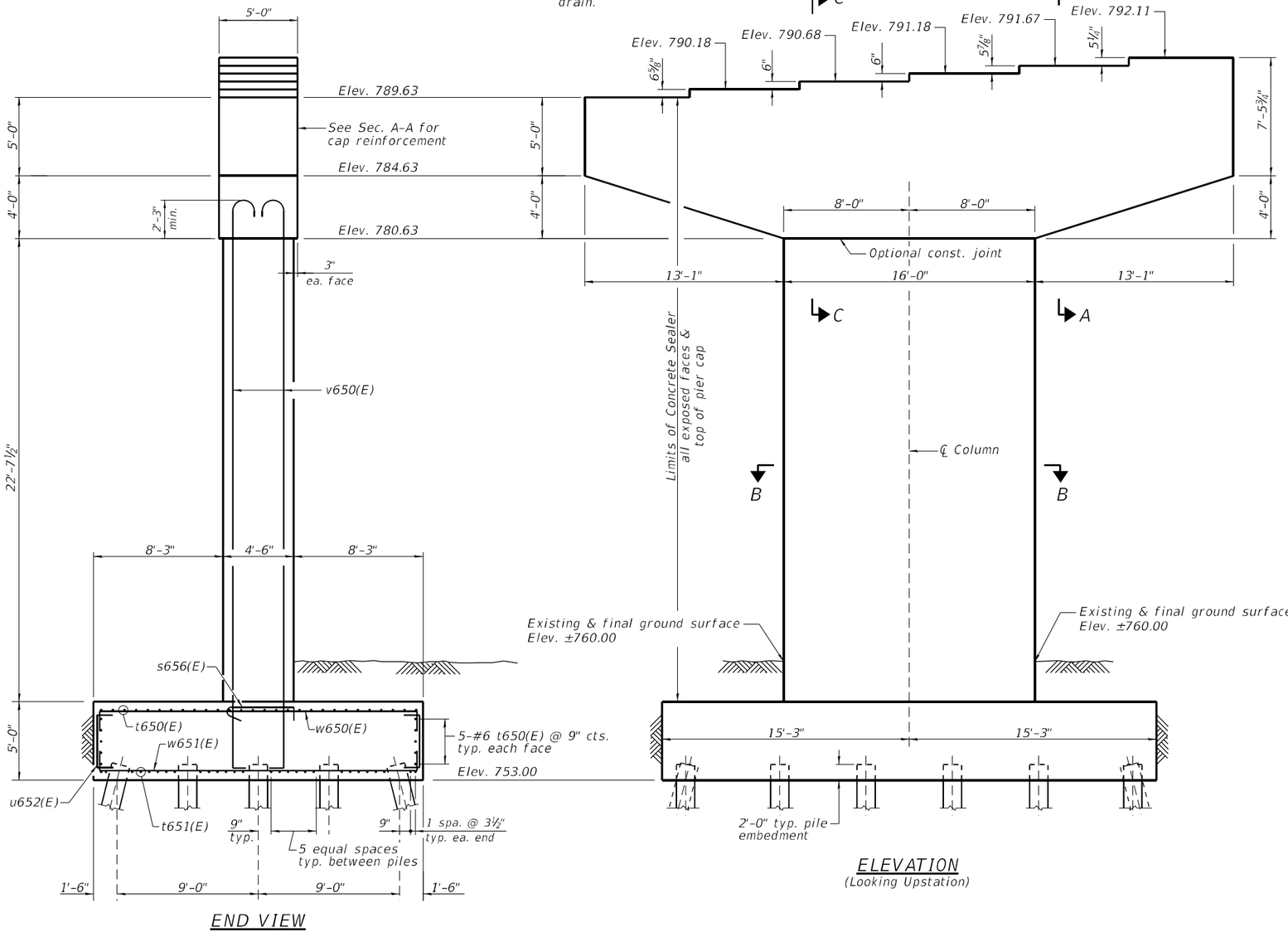


DETAIL 1

Bearing orientation
(typ. at each girder)



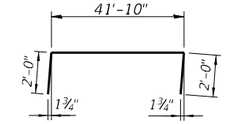
TOP PLAN



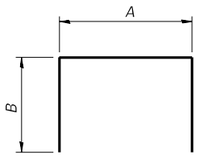
END VIEW

ELEVATION

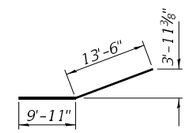
(Looking Upstation)



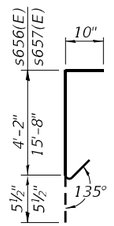
BAR p650(E)



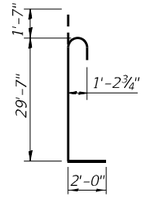
Bar	A	B
s650(E)	3'-1"	4'-10"
s651(E)	2'-0"	5'-9"
s652(E)	2'-0"	6'-5"
s653(E)	2'-0"	6'-11"
s654(E)	3'-1"	5'-10"
s655(E)	4'-6"	6'-11"
t650(E)	30'-2"	1'-0"
t651(E)	30'-2"	1'-10"
u650(E)	4'-6"	4'-4"
u651(E)	4'-8"	4'-4"
u652(E)	4'-5"	1'-0"
u653(E)	4'-2"	3'-9"
w650(E)	20'-8"	1'-0"
w651(E)	20'-8"	1'-10"



BAR p651(E)



BAR s656(E) & s657(E)



BAR v650(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h650(E)	12	#6	41'-10"	
h651(E)	2	#6	34'-11"	
h652(E)	2	#6	31'-4"	
h653(E)	2	#6	24'-10"	
h654(E)	2	#6	18'-3"	
h655(E)	24	#6	6'-8"	
h656(E)	12	#6	7'-5"	
h657(E)	156	#5	15'-8"	
p650(E)	18	#11	45'-10"	
p651(E)	12	#5	23'-5"	
s650(E)	20	#5	12'-9"	
s651(E)	60	#5	13'-6"	
s652(E)	102	#5	14'-10"	
s653(E)	54	#5	15'-10"	
s654(E)	20	#5	14'-9"	
s655(E)	32	#5	18'-4"	
s656(E)	948	#5	5'-6"	
s657(E)	158	#5	17'-0"	
t650(E)	38	#6	32'-2"	
t651(E)	28	#10	33'-10"	
u650(E)	22	#6	13'-2"	
u651(E)	43	#6	13'-4"	
u652(E)	106	#6	6'-5"	
u653(E)	156	#5	11'-8"	
v650(E)	56	#11	33'-2"	
w650(E)	51	#6	22'-8"	
w651(E)	44	#10	24'-4"	
Structure Excavation		Cu. Yd.	359	
Concrete Structures		Cu. Yd.	249.5	
Reinforcement Bars, Epoxy Coated		Pound	47,750	
Driving Piles		Foot	1,711	
Test Pile Metal Shells		Each	1	
Pile Shoes		Each	30	
Concrete Sealer		Sq. Ft.	1,876	
Furnishing Metal Shell Piles 16"x.312"		Foot	1,711	

MIN. LAP LENGTH

#5 bars: 3'-9"

NOTES:

1. Pour steps monolithically with cap.
2. For Anchor Bolts Details see Sheet 47 of 94.
3. See sheet 74 of 94 for Sections A-A, B-B, and C-C.
4. Reinforcement bar bending dimensions are out to out.

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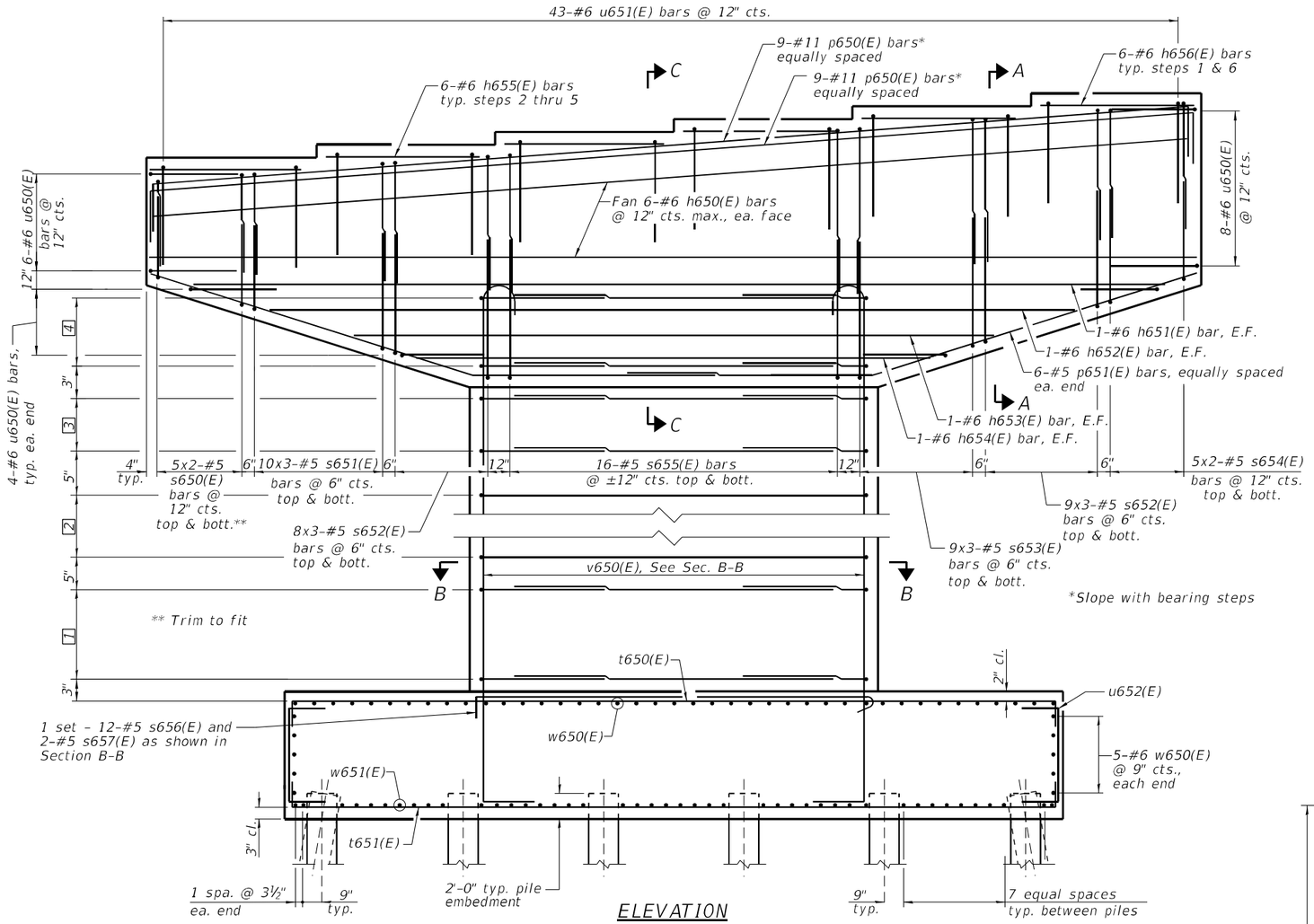
PLOT DATE = 4/29/2021 (4:00:09 PM)	CHECKED - JTH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 6 PLAN AND ELEVATION
STRUCTURE NO. 010-1004
SHEET NO. 73 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	881
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



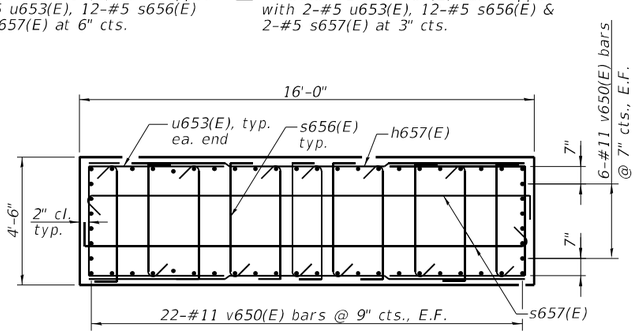
ELEVATION

1 23 Sets - 2-#5 h657(E) bars lapped with 2-#5 u653(E), 12-#5 s656(E) & 2-#5 s657(E) at 3" cts.

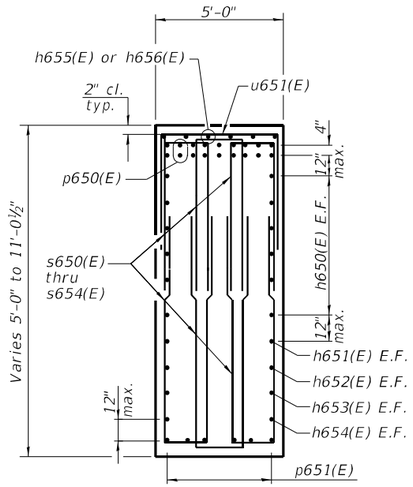
2 22 sets - 2-#5 h657(E) bars lapped with 2-#5 u653(E), 12-#5 s656(E) & 2-#5 s657(E) at 6" cts.

3 23 Sets - 2-#5 h657(E) bars lapped with 2-#5 u653(E), 12-#5 s656(E) & 2-#5 s657(E) at 3" cts.

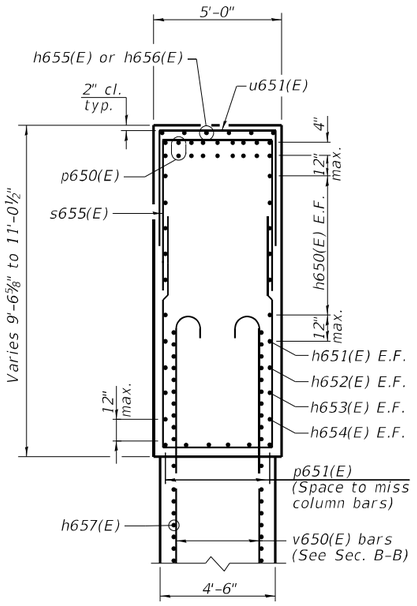
4 10 Sets - 2-#5 h657(E) bars lapped with 2-#5 u653(E), 12-#5 s656(E) & 2-#5 s657(E) at 3" cts.



SECTION B-B



SECTION A-A



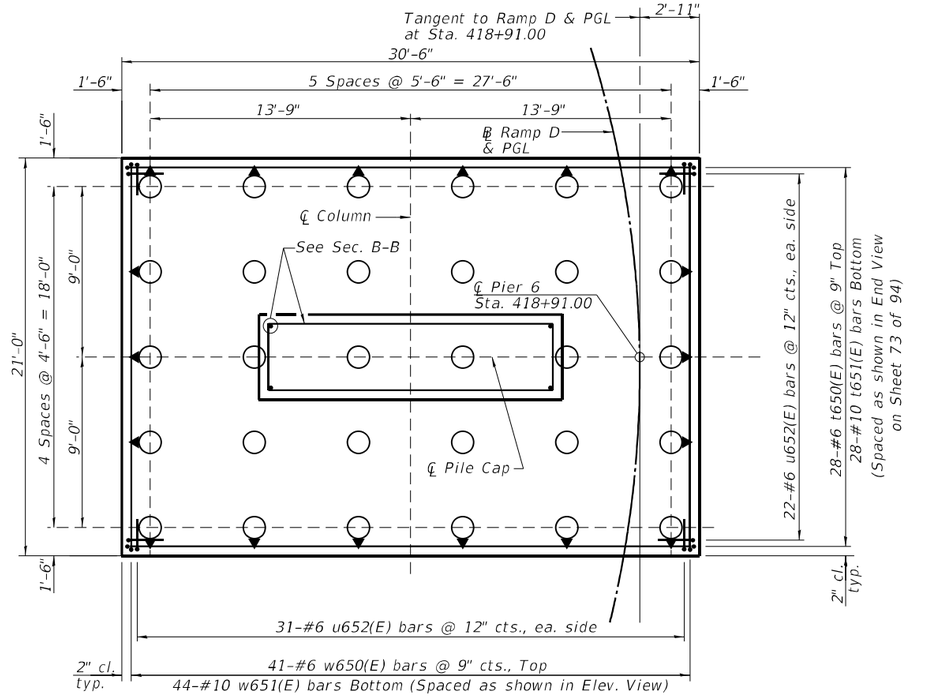
SECTION C-C

NOTES:

1. Space reinforcement in cap to miss anchor bolts.
2. 3:12 (H:V) batter in the direction indicated on outside piles.
3. For details of piles, see Sheet 78 of 94.

PILE DATA

Type: Steel Metal Shell, 16"∅ w/.312" walls, with pile shoes
Nominal Required Bearing: 396 kips
Factored Resistance Available: 218 kips
Est. Length: 59'
No. Production Piles: 29
No. Test Piles: 1



PILE CAP PLAN

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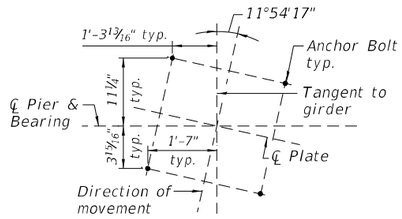
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

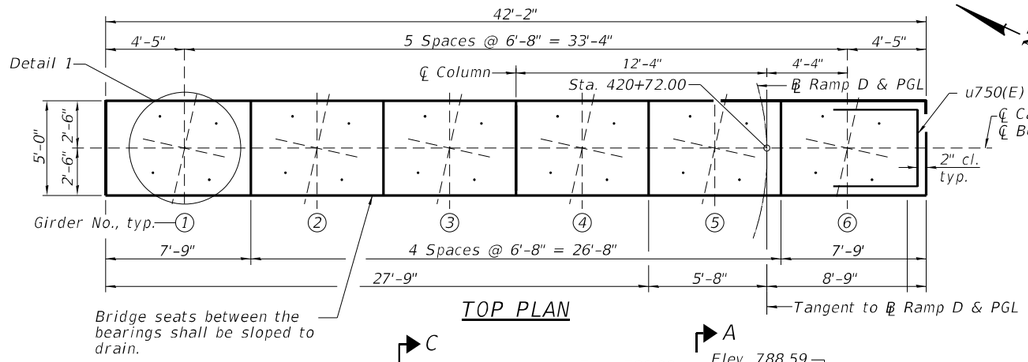
PIER 6 DETAILS
STRUCTURE NO. 010-1004
SHEET NO. 74 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	882
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		

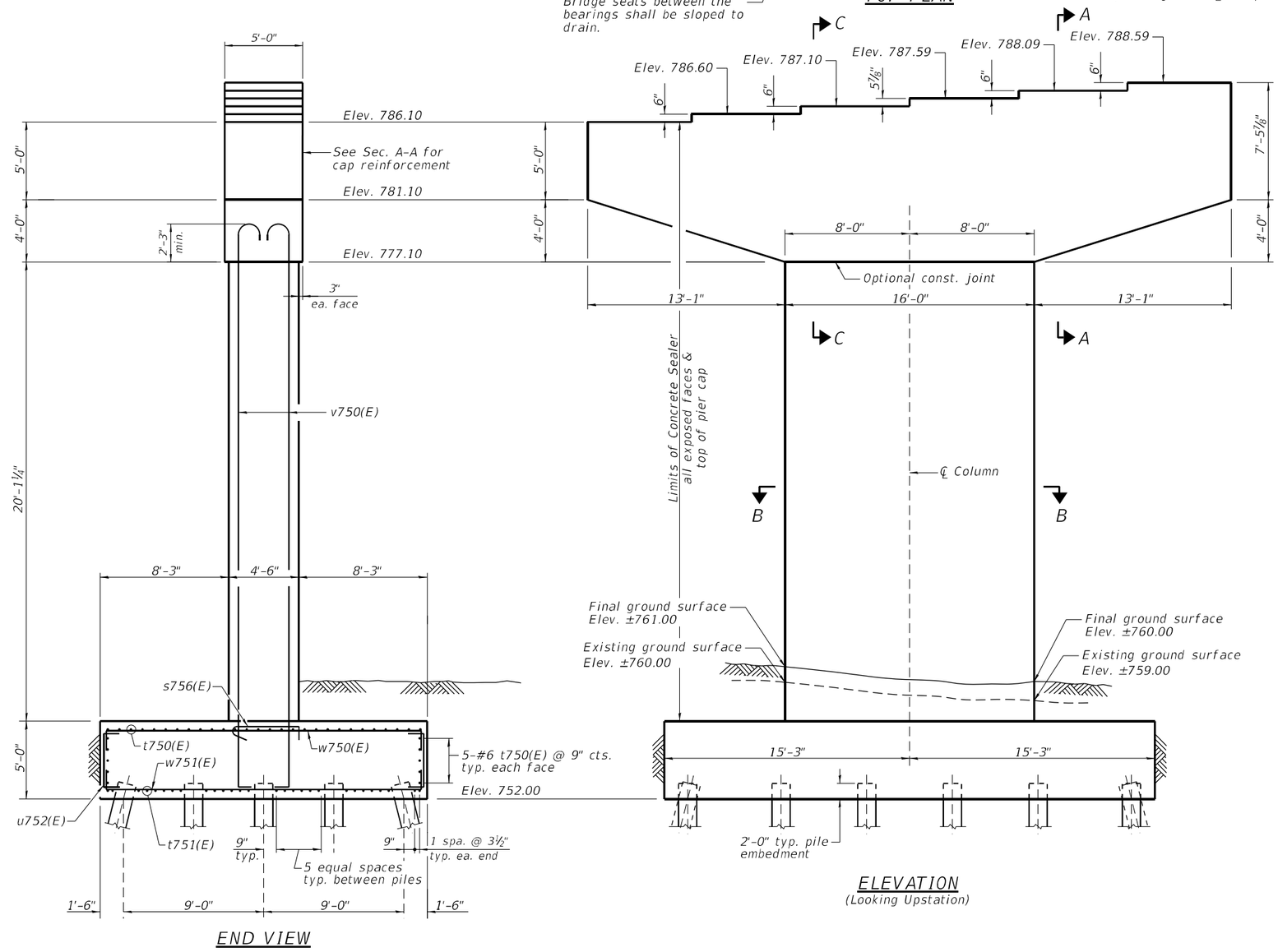


DETAIL 1

Bearing orientation
(typ. at each girder)



TOP PLAN



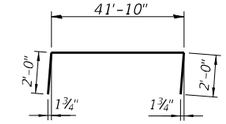
END VIEW

ELEVATION

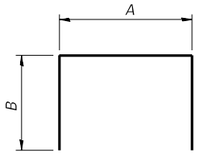
(Looking Upstation)

BILL OF MATERIAL

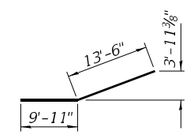
Bar	No.	Size	Length	Shape
h750(E)	12	#6	41'-10"	
h751(E)	2	#6	34'-11"	
h752(E)	2	#6	31'-4"	
h753(E)	2	#6	24'-10"	
h754(E)	2	#6	18'-3"	
h755(E)	24	#6	6'-8"	
h756(E)	12	#6	7'-5"	
h757(E)	142	#5	15'-8"	
p750(E)	18	#11	45'-10"	
p751(E)	12	#5	23'-5"	
s750(E)	20	#5	12'-9"	
s751(E)	60	#5	13'-6"	
s752(E)	102	#5	14'-10"	
s753(E)	54	#5	15'-10"	
s754(E)	20	#5	14'-9"	
s755(E)	32	#5	18'-4"	
s756(E)	864	#5	5'-6"	
s757(E)	144	#5	17'-0"	
t750(E)	38	#6	32'-2"	
t751(E)	28	#10	33'-10"	
u750(E)	22	#6	13'-2"	
u751(E)	43	#6	13'-4"	
u752(E)	106	#6	6'-5"	
u753(E)	142	#5	11'-8"	
v750(E)	56	#11	30'-8"	
w750(E)	51	#6	22'-8"	
w751(E)	44	#10	24'-4"	
Structure Excavation	Cu. Yd.	456		
Concrete Structures	Cu. Yd.	239.6		
Reinforcement Bars, Epoxy Coated	Pound	45,870		
Driving Piles	Foot	1,595		
Test Pile Metal Shells	Each	1		
Pile Shoes	Each	30		
Concrete Sealer	Sq. Ft.	1,724		
Furnishing Metal Shell Piles 16"x.312"	Foot	1,595		



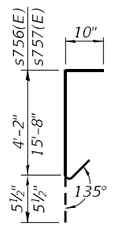
BAR p750(E)



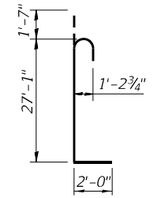
Bar	A	B
s750(E)	3'-1"	4'-10"
s751(E)	2'-0"	5'-9"
s752(E)	2'-0"	6'-5"
s753(E)	2'-0"	6'-11"
s754(E)	3'-1"	5'-10"
s755(E)	4'-6"	6'-11"
t750(E)	30'-2"	1'-0"
t751(E)	30'-2"	1'-10"
u750(E)	4'-6"	4'-4"
u751(E)	4'-8"	4'-4"
u752(E)	4'-5"	1'-0"
u753(E)	4'-2"	3'-9"
w750(E)	20'-8"	1'-0"
w751(E)	20'-8"	1'-10"



BAR p751(E)



BAR s756(E) & s757(E)



BAR v750(E)

MIN. LAP LENGTH

#5 bars: 3'-9"

NOTES:

1. Pour steps monolithically with cap.
2. For Anchor Bolts Details see Sheet 47 of 94.
3. See sheet 76 of 94 for Sections A-A, B-B, and C-C.
4. Reinforcement bar bending dimensions are out to out.

FILE NAME = pw:\\cmteng-pw.bentley.com:cmt-projects\Documents\Projects\IDOT\150656-01\Draw\Structures\CADD_Sheets\RAMP_D\RAMPD-70B99-075-Pier 7.dgn

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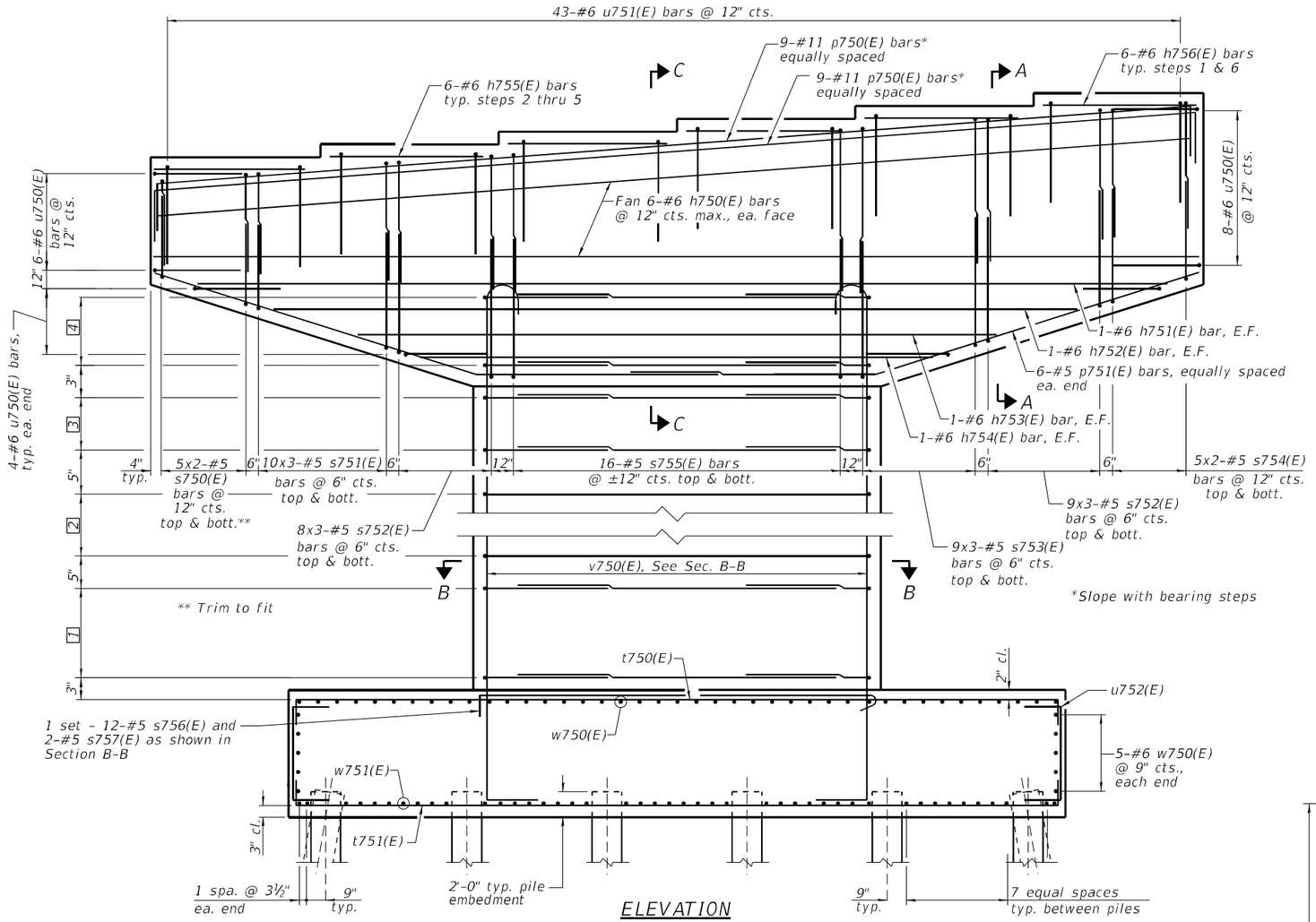
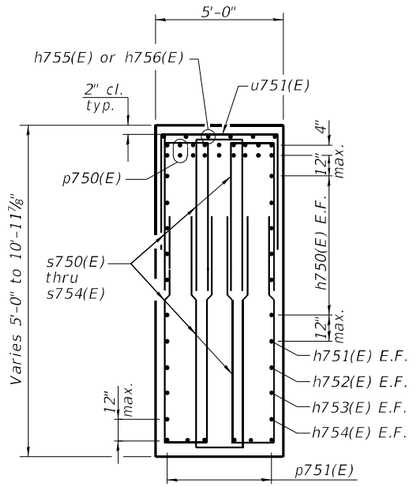
DEPARTMENT OF TRANSPORTATION

PIER 7 PLAN AND ELEVATION
STRUCTURE NO. 010-1004
SHEET NO. 75 OF 94 SHEETS

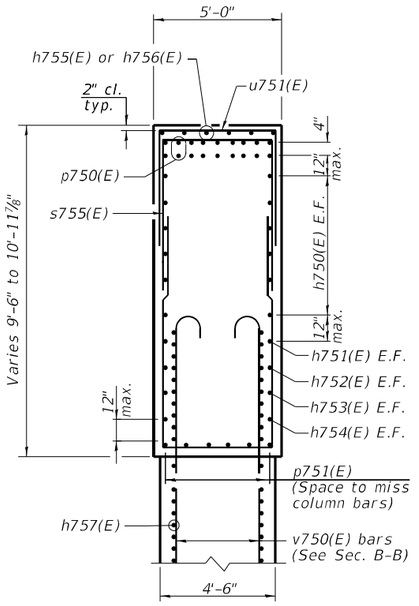
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	883
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



ELEVATION



SECTION A-A



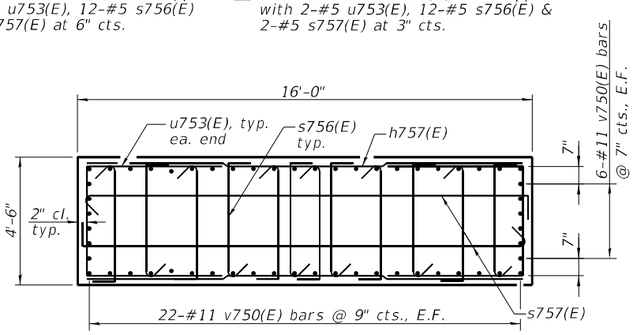
SECTION C-C

1 21 Sets - 2-#5 h757(E) bars lapped with 2-#5 u753(E), 12-#5 s756(E) & 2-#5 s757(E) at 3" cts.

2 19 sets - 2-#5 h757(E) bars lapped with 2-#5 u753(E), 12-#5 s756(E) & 2-#5 s757(E) at 6" cts.

3 21 Sets - 2-#5 h757(E) bars lapped with 2-#5 u753(E), 12-#5 s756(E) & 2-#5 s757(E) at 3" cts.

4 10 Sets - 2-#5 h757(E) bars lapped with 2-#5 u753(E), 12-#5 s756(E) & 2-#5 s757(E) at 3" cts.



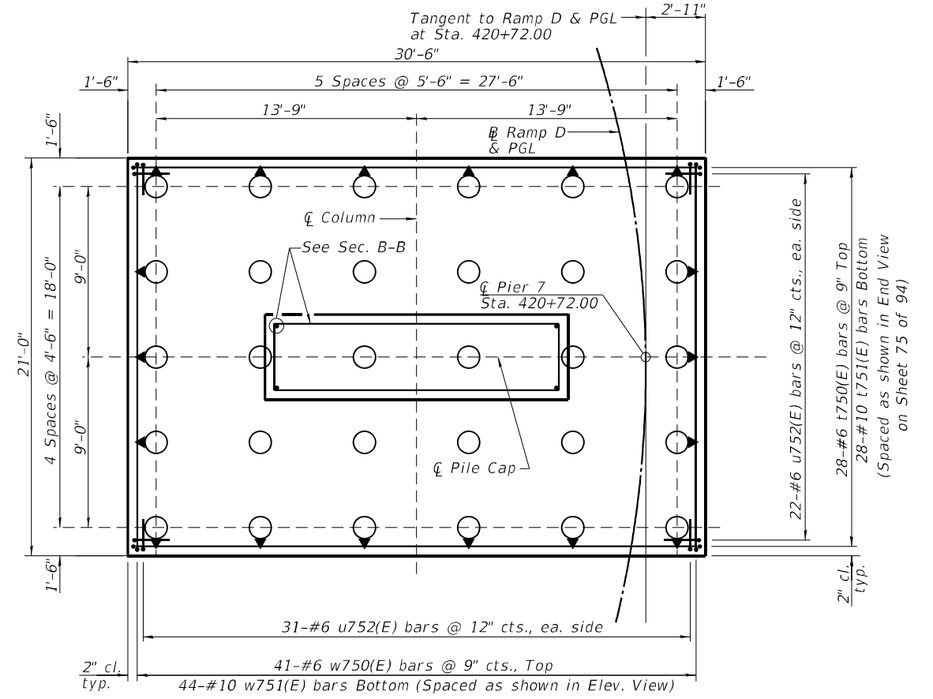
SECTION B-B

NOTES:

1. Space reinforcement in cap to miss anchor bolts.
2. 3:12 (H:V) batter in the direction indicated on outside piles.
3. For details of piles, see Sheet 78 of 94.

PILE DATA

Type: Steel Metal Shell, 16"∅ w/.312" walls, with pile shoes
Nominal Required Bearing: 527 kips
Factored Resistance Available: 290 kips
Est. Length: 55'
No. Production Piles: 29
No. Test Piles: 1



PILE CAP PLAN

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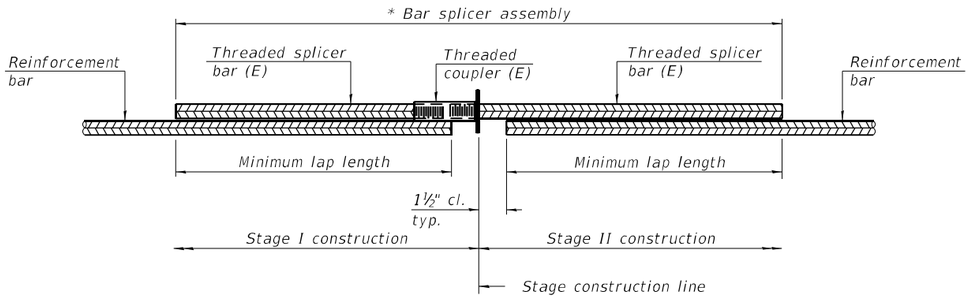
DEPARTMENT OF TRANSPORTATION

PIER 7 DETAILS
STRUCTURE NO. 010-1004
SHEET NO. 76 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	884
		CONTRACT NO. 70B99		
		ILLINOIS FED. AID PROJECT		



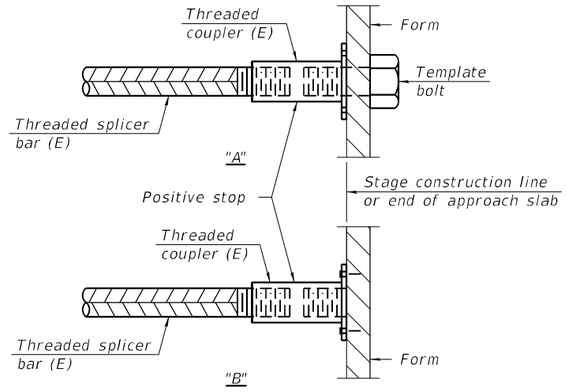
STANDARD BAR SPLICER ASSEMBLY PLAN

(All components shall be provided from one supplier)

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

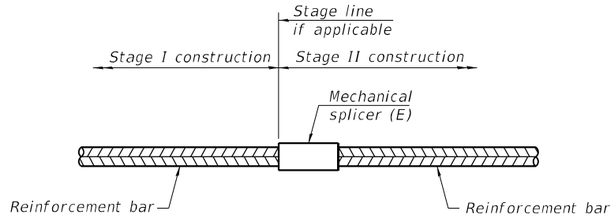
** Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.*

Location	Bar size	No. assemblies required	Minimum lap length



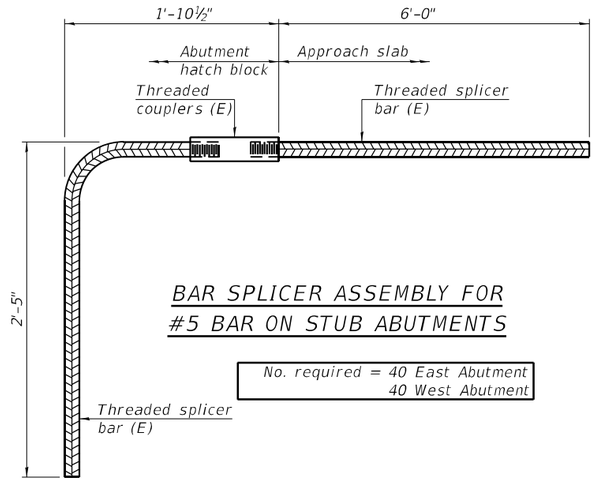
INSTALLATION AND SETTING METHODS

"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 STUB ABUTMENTS

No. required = 40 East Abutment
40 West Abutment

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.

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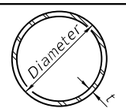
DEPARTMENT OF TRANSPORTATION

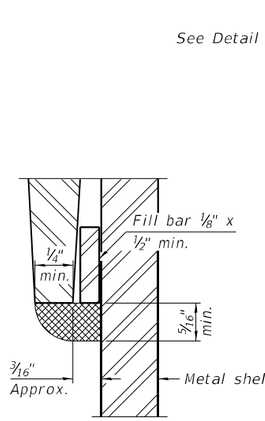
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 010-1004
SHEET NO. 77 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	885
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

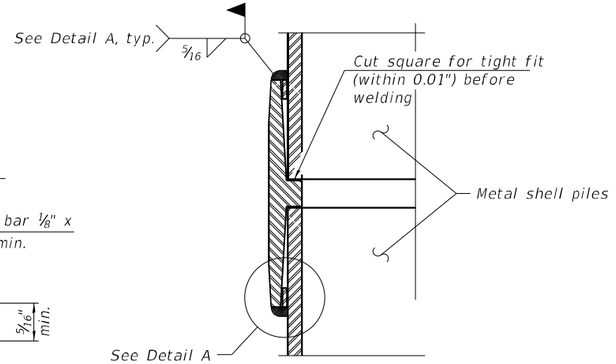


METAL SHELL PILE TABLE

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd.³/ft.)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470

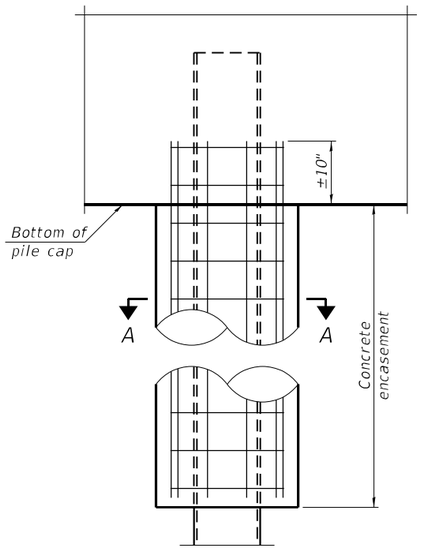


DETAIL A



WELDED COMMERCIAL SPLICE

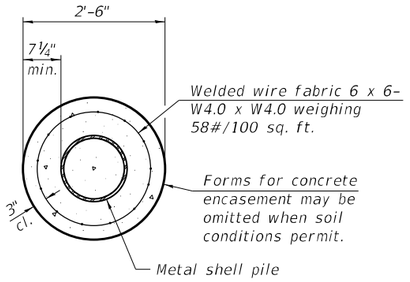
Notes:
The ⅛" x ½" min. fill bar may be constructed of 2 bars with a ⅛" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.



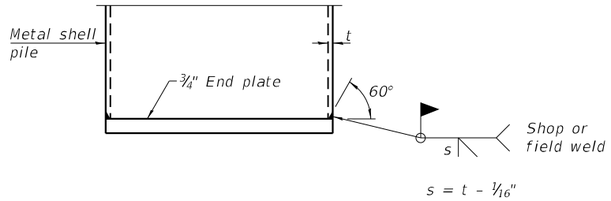
ELEVATION

INDIVIDUAL PILE CONCRETE ENCASEMENT

(When specified)

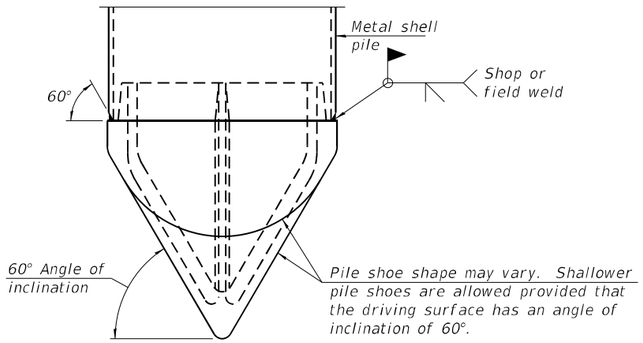


SECTION A-A



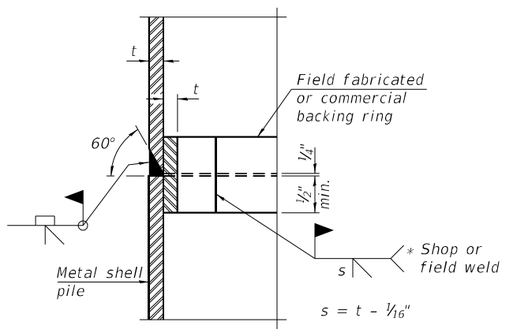
$s = t - \frac{1}{16}"$

END PLATE ATTACHMENT



PILE SHOE ATTACHMENT

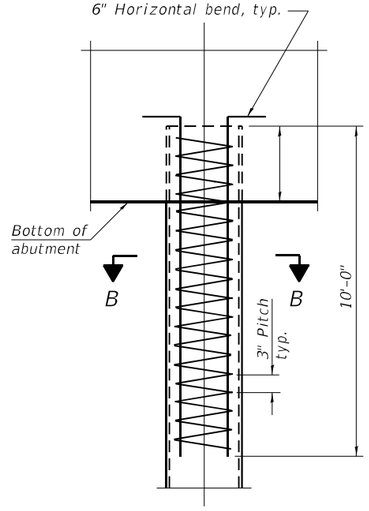
(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 80-50 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).



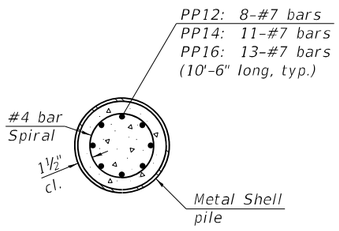
$s = t - \frac{1}{16}"$

COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION



SECTION B-B

REINFORCEMENT AT ABUTMENTS

(Omit when concrete encasement is specified)

Note:
The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

F-MS 1-1-2020

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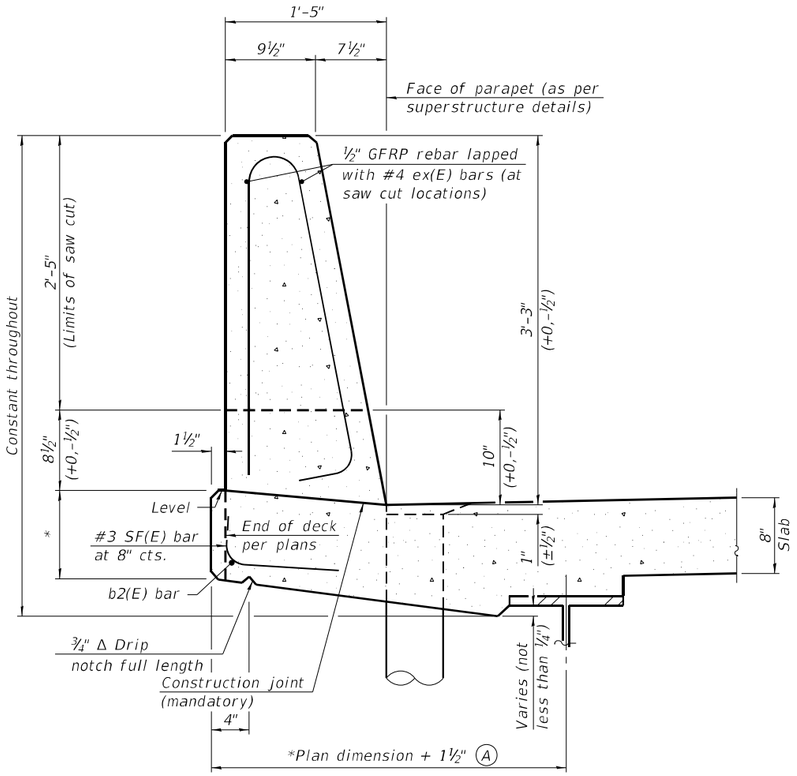
DEPARTMENT OF TRANSPORTATION

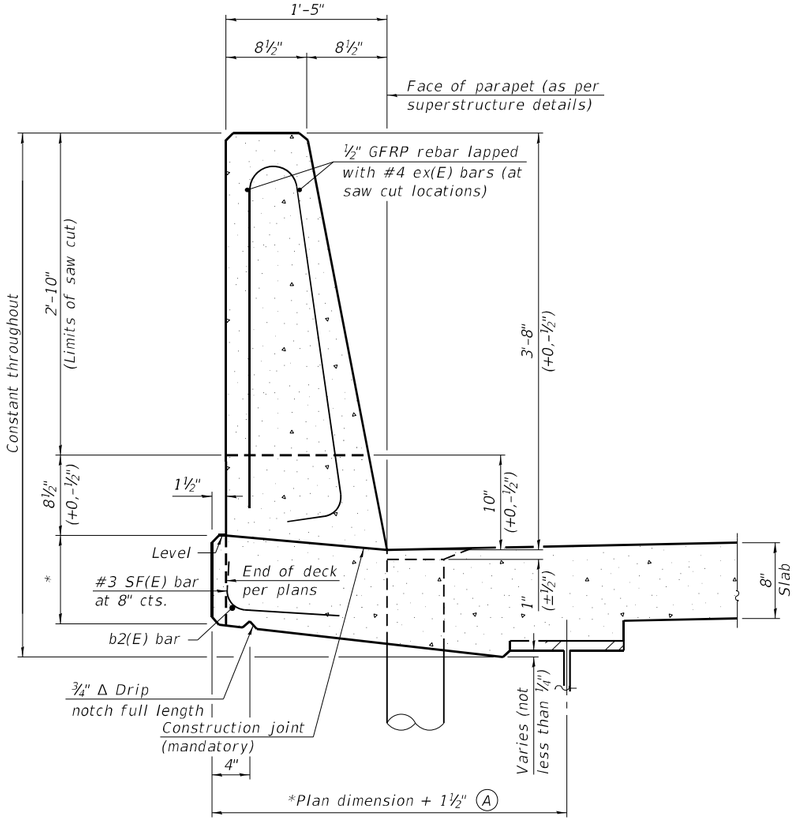
METAL SHELL PILE DETAILS
STRUCTURE NO. 010-1004
SHEET NO. 78 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	886
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



39" CONSTANT-SLOPE PARAPET SECTION

(Showing dimensions, d(E), and ½" Ø GFRP rebar)



44" CONSTANT-SLOPE PARAPET SECTION

(Showing dimensions, d(E), and ½" Ø GFRP rebar)

*See Superstructure Details.

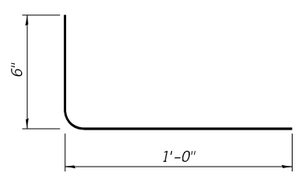
Notes:

All dimensions shall remain the same as shown on superstructure details, except dimension A which is to be revised as shown. Additional concrete needed to revise dimension A = 0.00348 cu. yds./ft. for 39" and 44" parapets.

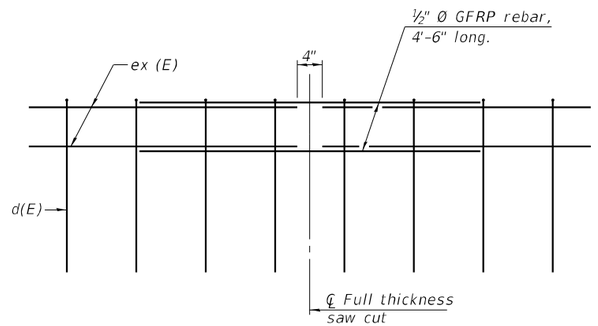
Place full depth aluminum sheets as shown on superstructure details.

Replace all cork joint filler locations with a full thickness saw cut.

Steel superstructure shown. Other superstructure types similar.



#3 SF(E) BAR



GFRP REBAR STIFFENING DETAIL

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

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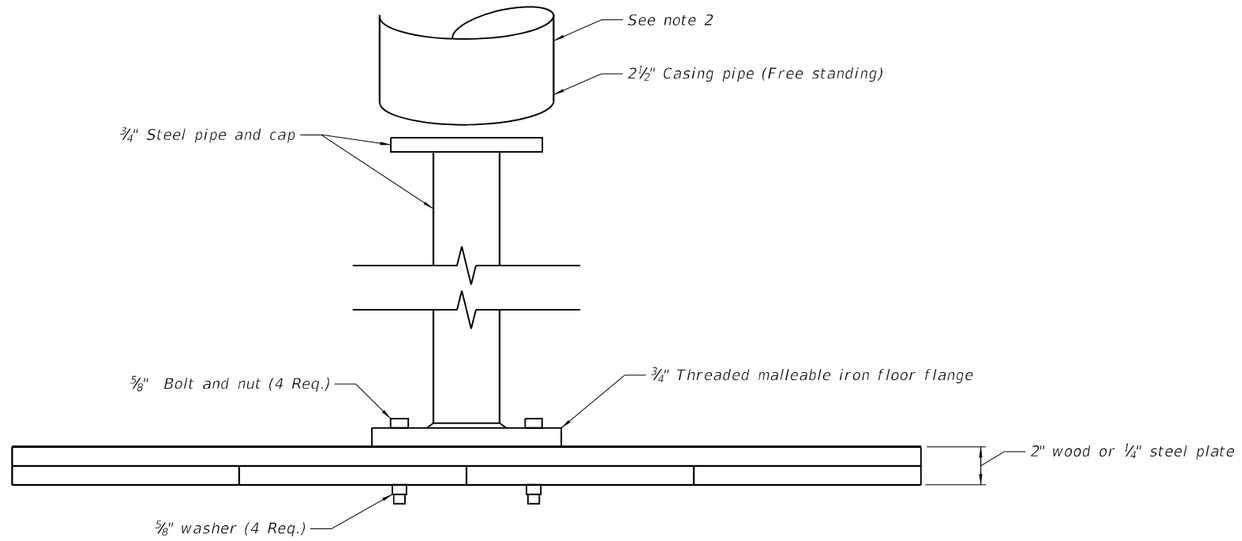
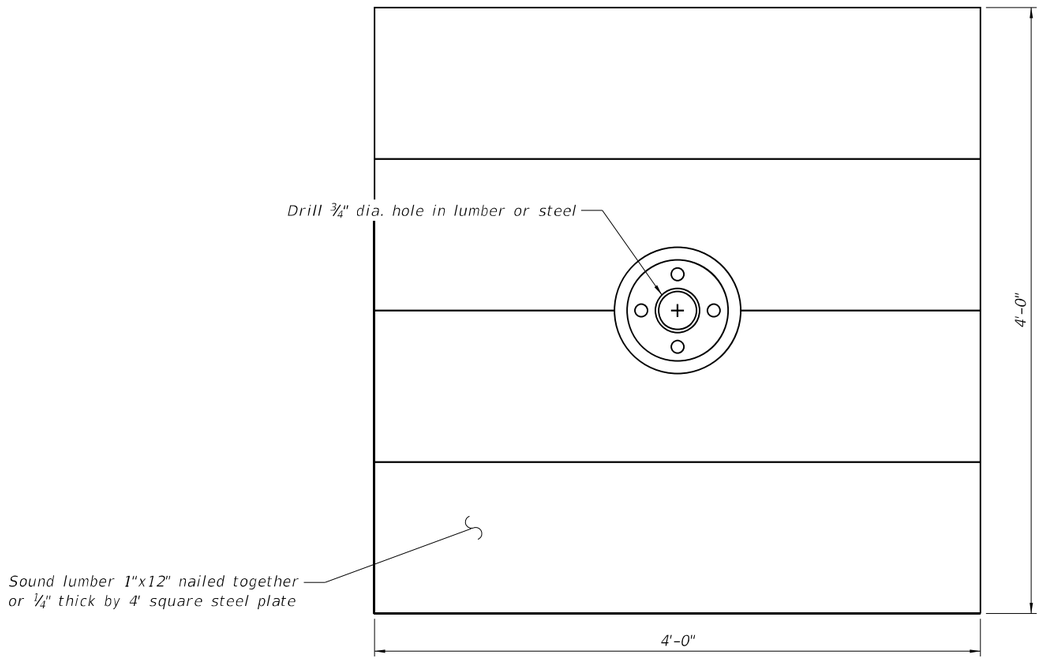
CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 010-1004
SHEET NO. 79 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	887
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			



ELEVATION



PLAN

NOTES:

1. Settlement platform shall be in accordance with the applicable portions of Article 204.06 of the Standard Specifications.
2. Do not install casing pipe until after one section of ¾" steel pipe has been covered with earth. The casing pipe should not rest on platform.

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DEPARTMENT OF TRANSPORTATION

SETTLEMENT PLATFORM
STRUCTURE NO. 010-1004
SHEET NO. 80 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	888
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/12/15

ROUTE I-57/74 DESCRIPTION West Abut - Ramp D LOGGED BY TLM

SECTION (10-34-1) HBK ~~10(5+1,RS+1,14+1,6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147763, Longitude -88.286452

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-9
Station 407+36.98
Offset 4.1 ft LT
Ground Surface Elev. 779.30 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 729.3 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
10" HMA SHOULDER 778.50			
SILTY LOAM: Brown, hard	10		
	5 7	4.5 P	10
776.30			
SILTY CLAY LOAM: Very stiff	7		
-5	5 6	2.3 B	15
773.80			
SILTY CLAY LOAM: Gray to Brown, very stiff	6		
	4 6	3.9 B	11
771.30			
SILTY CLAY LOAM: Gray, very stiff	6		
-10	5 8	2.9 B	11
768.80			
SILTY LOAM: Brown, stiff	5		
	2 3	1.5 B	24
	2		
-15	2 2	1.2 B	26
763.80			
SILTY CLAY LOAM: Brown, stiff 2" sand seam	2		
	2 4	1.1 B	15
761.30			
SILTY CLAY: Brown, very stiff	3		
-20	5 6	3.1 B	14
SILTY CLAY: Brown, very stiff *(continued)* 757.30			
SILTY CLAY TILL: Gray, very stiff	5		
-25	6 6	3.5 B	12
752.30			
SILTY CLAY TILL: Gray, stiff	4		
-30	4 6	1.9 B	12
747.80			
SILTY CLAY TILL: Gray, very stiff	3		
-35	5 5	2.7 B	13
742.30			
SILTY CLAY TILL: Gray, stiff	2		
-40	5 7	1.7 B	12

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/12/15

ROUTE I-57/74 DESCRIPTION West Abut - Ramp D LOGGED BY TLM

SECTION (10-34-1) HBK ~~10(5+1,RS+1,14+1,6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147763, Longitude -88.286452

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-9
Station 407+36.98
Offset 4.1 ft LT
Ground Surface Elev. 779.30 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 729.3 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY TILL: Gray, stiff *(continued)* 737.30			
SILTY CLAY TILL: Gray, very stiff	3		
-45	6 7	2.5 B	12
732.30			
SILTY CLAY TILL: Gray, medium, wet	3		
▼-50	4 6	0.9 B	12
727.30			
CLEAN SAND: Gray, medium, coarse grained	5		
-55	2 10		15
722.30			
No Recovery	4		
-60	4 7		
Gray sand and gravel 715.30	5		5
SILTY CLAY LOAM TILL: Gray to Brown, very stiff	5		
-65	8	2.5 B	12
712.30			
SILTY CLAY GRAVELLY TILL: Brown, stiff	6		
709.80	7	1.5	12
-70	10	P	
SILTY CLAY TILL: Gray 707.30			
CLAYEY TILL: Gray, very stiff	3		
704.30 -75	7 10	2.7 B	16
End of Boring			
-80			

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/12/15

ROUTE I-57/74 DESCRIPTION Pier 1 ~~Pier~~ Boring Ramp D LOGGED BY TLM

SECTION (10-34-1) HBK ~~10(5-1,RS-1,14-1,6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147502, Longitude -88.285899

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-10
Station 409+18.57
Offset 2.7 ft RT
Ground Surface Elev. 772.26 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 766.8 ft ▼
Upon Completion 759.3 ft ▽
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
8" TOPSOIL: Silty Clay, dark brown	771.66			
SILTY CLAY: Brown, very stiff		2		
		4 6	2.0 P	30
	769.26			
SANDY LOAM: Brown, loose		1		
	-5	2 2	0.2 B	22
	766.76 ▼			
SANDY CLAY LOAM: Brown, medium stiff, wet		3		
		3 4	0.7 B	18
		2		
	-10	6 7	1.7 B	17
	761.76			
SILTY FINE SAND: Brown, medium dense, wet		4		
		8 8		16
	759.26 ▽			
SILTY CLAY LOAM TILL: Gray, very stiff		4		
	-15	8 8	3.3 B	11
		4		
		8 10	2.1 B	12
	754.26			
SILTY CLAY TILL: Gray, very stiff		3		
	-20	5 7	2.1 B	13
SILTY CLAY TILL: Gray, very stiff *(continued)*				
	-25	4 5 9	2.1 B	12
<0.5" sand seam at 29.5 ft.		4		
	-30	4 8	2.1 B	13
	740.26			
SILTY CLAY LOAM TILL: Gray, stiff		3		
	-35	5 6	1.7 B	12
	735.26			
SILTY CLAY LOAM TILL: Gray, very stiff		3		
	-40	7 6	2.1 B	11

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/12/15

ROUTE I-57/74 DESCRIPTION Pier 1 ~~Pier~~ Boring Ramp D LOGGED BY TLM

SECTION (10-34-1) HBK ~~10(5-1,RS-1,14-1,6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147502, Longitude -88.285899

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-10
Station 409+18.57
Offset 2.7 ft RT
Ground Surface Elev. 772.26 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 766.8 ft ▼
Upon Completion 759.3 ft ▽
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY LOAM TILL: Gray, very stiff *(continued)*				
	730.26			
SAND: Gray, medium dense, medium, with trace fine gravel		3		
	-45	9 12		16
		12		
	-50	8 10		11
	720.26			
SAND: Gray, medium dense, gravel		13		
Washing sand out of augers.		7		
	-55	7		16
	714.76			
SILTY CLAY TILL: Gray, very stiff		5		
Silt seam at 59.5 ft.	-60	6 8	2.9 B	17
SILTY CLAY TILL: Gray, very stiff *(continued)*				
	-65	5 7 9	2.9 B	13
		5		
	-70	6 6	2.1 B	15
	702.76			
SILT: Gray, medium dense		4		
	-75	6 8	0.2 B	20
	697.26			
End of Boring				
	-80			

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

BBS, form 137 (Rev. 8-99)

FILE NAME = pw:\\cmteng-pw.bentley.com:cmt-projects\Documents\Projects\IDOT\115065-01\Draw\Structures\CADD_Sheets\RAMP_D\RAMPD-70B99-082-Boring log-2.dgn

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USER NAME = Denise Herrera	DESIGNED - DH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	CHECKED - JTH	REVISED -	
PLOT SCALE = N/A	DRAWN - DH	REVISED -	
PLOT DATE = 4/29/2021 (4:00:39 PM)	CHECKED - JTH	REVISED -	

SOIL BORING LOG – 2
STRUCTURE NO. 010–1004
SHEET NO. 82 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	890
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation

Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/9/15

ROUTE I-57/74 DESCRIPTION Pier 2 ~~Pier~~ Boring Ramp D LOGGED BY TC (from sample

SECTION (10-34-1) HBK ~~10/5-1-RS-1x14-1.6\R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147294, Longitude -88.285187

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-11
Station 411+31.42
Offset 1.8 ft RT
Ground Surface Elev. 782.24 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 762.2 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
781.54			
8" TOPSOIL			
	4		
SANDY SILTY CLAY: Black/Gray/Brown, stiff	3 4	1.0 B	17
778.24	6		
SILTY CLAY LOAM: Brown, stiff	6 7	4.0 P	12
-5			
	4		
	7 8	1.7 B	13
774.24			
SILTY CLAY LOAM w/ FINE GRAVEL: Brown, hard	6		
772.24 -10	9 11	4.1 B	18
SILTY CLAY LOAM: Brown, very stiff 2-10-2015 Begin Drilling After Repairs	5		
	7 8	2.5 B	22
769.24			
SILTY CLAY LOAM: Brown, stiff	3		
-15	5 7	1.2 B	18
	3		
	3 5	1.2 B	19
764.24			
SAND: Brown, medium, coarse, wet	3		
▼ -20	6 8		19

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SAND: Brown, medium, coarse, wet *(continued)*			
	4		
	8 11		19
-25			
755.74			
SILTY CLAY TILL: Gray, very stiff	4		
	7 8	2.1 B	12
-30			
750.24			
SILTY CLAY TILL: Gray, stiff	3		
	6 9	1.5 B	13
-35			
745.24			
SILTY CLAY TILL: Very stiff	3		
	7 11	2.1 B	12
-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, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/9/15

ROUTE I-57/74 DESCRIPTION Pier 2 ~~Pier~~ Boring Ramp D LOGGED BY TC (from sample

SECTION (10-34-1) HBK ~~10/5-1-RS-1x14-1.6\R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147294, Longitude -88.285187

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-11
Station 411+31.42
Offset 1.8 ft RT
Ground Surface Elev. 782.24 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 762.2 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY TILL: Very stiff *(continued)*			
740.24			
SILTY CLAY TILL: Gray, stiff	4		
	7 9	1.7 B	13
-45			
	4		
	7 8	1.3 B	12
-50			
730.74			
SAND: Gray, medium, coarse	1		
	1 12		16
-55			
725.74			
SAND: Gray, dense, coarse	12		
	14 21		13
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SAND: Gray, dense, coarse *(continued)*			
718.24	6		
SILTY CLAY LOAM TILL: Gray, stiff	12 13	1.7 B	17
-65			
	3		
	5 7	1.3 B	13
-70			
710.74			
SILTY CLAY TILL: Grey, stiff	5		
	7 11	1.4 B	12
707.24 -75			
End of Boring			
-80			

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/11/15

ROUTE I-57/74 DESCRIPTION Pier 3 ~~Pier~~ Boring Ramp D LOGGED BY TJTC (sample 13-20)

SECTION (10-34-1) HBK ~~10(5x1xRSx1x14x1x6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147178, Longitude -88.283806

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-12
Station 413+31.02
Offset 12.1 ft LT
Ground Surface Elev. 766.80 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 726.8 ft ▼
Upon Completion ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
8" TOPSOIL: Dark brown	766.20			
FILL: Clay loam, brown, stiff		3		
	764.80	8	1.5	16
FILL: Sand, brown, fine to medium, medium dense	763.80	13	P	15
FILL: Silty Clay Loam Till, gray, stiff to very stiff		5		
	-5	5 4	1.1 B	11
		3		
		6 6	2.5 B	15
	758.80			
SILTY CLAY TILL: Gray, very stiff		4		
	-10	6 7	2.1 B	18
		4		
		4 7	2.1 B	12
		3		
	-15	7 7	2.1 B	12
		3		
		6 8	2.1 B	11
		3		
	746.80 -20	6 8	2.1 B	12

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY LOAM TILL: Gray, stiff				
Cobbles/Gravel? Augers vibrated as they went through this layer between 21' to 23.5'. This is also shown in the first blowcount.		27		
Only 2" recovery	-25	10 13	1.5 P	13
		3		
	-30	6 7	1.7 B	12
		4		
	-35	5 7	1.1 B	11
		7		
	-40	10 18	1.7 B	21

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/11/15

ROUTE I-57/74 DESCRIPTION Pier 3 ~~Pier~~ Boring Ramp D LOGGED BY TJTC (sample 13-20)

SECTION (10-34-1) HBK ~~10(5x1xRSx1x14x1x6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147178, Longitude -88.283806

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-12
Station 413+31.02
Offset 12.1 ft LT
Ground Surface Elev. 766.80 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 726.8 ft ▼
Upon Completion ft
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY LOAM TILL: Gray, stiff *(continued)*	725.30			
CLAYEY SAND: Gray, dense		6		
	-45	10 23		18
	720.30			
SAND: Gray, medium, coarse		4		
	-50	1 11		19
		4		
	712.30	13		10
CLAYEY SAND: Gray, medium	-55	16		
		4		
	-60	6 7		20

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAYEY SAND: Gray, medium *(continued)*	704.80			
SILTY CLAY LOAM TILL: Gray, very stiff		4		
	-65	7 8	2.5 B	14
Gravelly	699.80			
SILTY CLAY TILL: Gray, very stiff		4		
	-70	8 12	2.1 B	13
		6		
	691.80 -75	12 17	2.8 B	13
End of Boring	-80			

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/11/15

ROUTE I-57/74 DESCRIPTION Pier 4 ~~Rick~~ Boring Ramp D LOGGED BY TC/TLM

SECTION (10-34-1) HBK ~~10(5-1xRS-1x14x1.6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147146, Longitude -88.283806

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-13
Station 415+22.40
Offset 0.5 ft LT
Ground Surface Elev. 758.60 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter 731.6 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
758.00			
8" TOPSOIL			
	8		
SILTY LOAM: Brown, hard	13	5.0	11
	11	B	
755.60			
SILTY CLAY LOAM: Gray, very stiff	3		
	7	3.3	11
-5	6	B	
	3		
	5	2.3	12
750.60	7	B	
SILTY CLAY TILL: Gray, very stiff	4		
	5	2.9	12
-10	6	B	
740.10			
SILTY CLAY TILL: Gray, stiff	3		
	5	2.0	12
	6	B	
	3		
	5	1.4	12
-15	6	B	
743.10			
SILTY CLAY TILL: Gray, very stiff	3		
	4	2.1	12
	7	B	
740.60			
SILTY CLAY TILL: Gray, stiff	2		
	5	1.4	12
-20	6	B	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY TILL: Gray, stiff *(continued)*			
736.10			
SILTY CLAY LOAM TILL: Gray, stiff	6		
	6	1.2	11
-25	7	B	
732.10			
SILTY CLAY LOAM TILL: Gray, very stiff ▼	7		
6" sand seam	8	2.3	14
-30	10	B	
726.60			
CLAYEY SAND: Gray, loose	2		
	2		14
-35	8		
	7		
719.10	9		12
SILTY CLAY TILL: Very stiff -40	14		

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/11/15

ROUTE I-57/74 DESCRIPTION Pier 4 ~~Rick~~ Boring Ramp D LOGGED BY TC/TLM

SECTION (10-34-1) HBK ~~10(5-1xRS-1x14x1.6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147146, Longitude -88.283806

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-13
Station 415+22.40
Offset 0.5 ft LT
Ground Surface Elev. 758.60 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter 731.6 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY TILL: Very stiff *(continued)*			
	4		
	11	4.1	13
-45	15	B	
	5		
	14	2.5	16
Begin drilling again on 2-11-15 708.60 -50	13	B	
SILTY CLAY TILL: Gray, very stiff	6		
	12	3.5	14
-55	15	B	
6" Gray silt seam, dense, at 54.5 ft.			
Cobbles? at 56.6 ft.			
SILTY CLAY TILL: Gray, very stiff	10		
	11	3.7	15
-60	15	B	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY TILL: Gray, very stiff *(continued)*			
	53		
Cobble was pushed aside by spoon. Retrieved 6" of SILTY CLAY TILL: Gray, hard.	48	4.0	14
-65	15	P	
691.60			
SAND: Gray, fine, very loose to medium dense	WR		
	WR		21
-70	10		
686.60			
SILTY CLAY LOAM TILL: Gray, very stiff	6		
	12	3.5	12
683.60 -75	16	P	
End of Boring			
-80			

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

BBS, form 137 (Rev. 8-99)

FILE NAME = pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\IDOT\15066-011\Draw\Structures\CADD_Sheets\RAMP_D\RAMPD-70B99-085-Boring log-5.dgn

CMT License No. 184-000613

USER NAME = Denise Herrera	DESIGNED - DH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	CHECKED - JTH	REVISED -	
PLOT SCALE = N/A	DRAWN - DH	REVISED -	
PLOT DATE = 4/29/2021 (4:01:04 PM)	CHECKED - JTH	REVISED -	

SOIL BORING LOG – 5
STRUCTURE NO. 010-1004
SHEET NO. 85 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	893
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmend Engineering & Testing, LLC

SOIL BORING LOG

Date 2/10/15

ROUTE I-57/74 DESCRIPTION Pier 5 ~~Pier~~ Boring Ramp D LOGGED BY TC

SECTION (10-34-1) HBK ~~10(5-1-RS-1 14-1.6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147184, Longitude -88.283139

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-14
Station 417+09.64
Offset 1.3 ft LT
Ground Surface Elev. 758.10 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 731.6 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
757.10				12" TOPSOIL
	6			
	12	7.0	10	SILTY CLAY LOAM: Brown, hard
	16	B		
755.10				
	3			SILTY CLAY LOAM: Gray, stiff
	4	1.7	14	
-5	7	B		
752.60				
	3			SILTY CLAY TILL: Gray, stiff
	5	1.6	13	
	7	B		
	3			
	6	1.7	12	
-10	9	B		
	4			
	5	1.6	12	
	6	B		
	3			
	4	1.3	12	
-15	8	B		
742.60				
	3			SILTY CLAY LOAM TILL: Gray, stiff
	5	1.5	11	2" sand seam @ 16 ft.
	6	B		
740.10				
	3			CLAYEY GRAVEL: Gray, medium
	14		12	
-20	10			
				CLAYEY GRAVEL: Gray, medium *(continued)*
736.10				
				SILTY CLAY LOAM TILL: Gray, soft
	2			
	9	0.3	10	
-25	14	B		
731.60 ▼				
				SAND: Coarse Drilled past sampling depth, tried to get blow counts, but sand kept filling the augers. After several attemptes to flush sand-continued to 35 ft.
			15	
-30				
726.10				
	8			SILTY CLAY TILL: Gray, stiff
	11	2.1	12	
-35	13	B		
721.10				
				No recovery
	13			
	30			
-40	27			

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmend Engineering & Testing, LLC

SOIL BORING LOG

Date 2/10/15

ROUTE I-57/74 DESCRIPTION Pier 5 ~~Pier~~ Boring Ramp D LOGGED BY TC

SECTION (10-34-1) HBK ~~10(5-1-RS-1 14-1.6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147184, Longitude -88.283139

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-14
Station 417+09.64
Offset 1.3 ft LT
Ground Surface Elev. 758.10 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 731.6 ft ▼
Upon Completion ft
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				No recovery *(continued)*
716.10				
				SILTY CLAY TILL: Gray, very stiff
	5			
	12	2.5	12	
-45	13	B		
	4			
	13	2.1	13	
-50	17	B		
	5			
	11	2.9	12	
-55	16	B		
701.60				
				No recovery
	6			
	12			
-60	15			
				No recovery *(continued)*
696.10				
				SILTY CLAY TILL: Gray, very stiff
	6			
	11	2.8	13	
-65	14	B		
	4			
	10	2.2	13	
-70	15	B		
686.60				
				SILTY CLAY TILL: Gray, stiff
	6			
	12	1.7	12	
683.10 -75	16	B		
				End of Boring
-80				

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

BBS, form 137 (Rev. 8-99)

FILE NAME = pw:\\cmtengr-pw.bentley.com:cmt-projects\Documents\Projects\IDOT\115066-01\Draw\Structures\CADD_Sheets\RAMP_D\RAMPD-70B99-086-Boring log-6.dgn

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	CHECKED - JTH	REVISED -	
PLOT SCALE = N/A	DRAWN - DH	REVISED -	SOIL BORING LOG – 6 STRUCTURE NO. 010–1004
PLOT DATE = 4/29/2021 (4:01:12 PM)	CHECKED - JTH	REVISED -	SHEET NO. 86 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	894
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation

Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/12/15

ROUTE I-57/74 DESCRIPTION Pier 6 ~~Rick~~ Boring Ramp D LOGGED BY GW

SECTION (10-34-1) HBK ~~10/5-1-RS-1 14-1 6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147290, Longitude -88.282495

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-15
Station 418+94.13
Offset 2.0 ft LT
Ground Surface Elev. 759.50 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 726.0 ft ▼
Upon Completion 729.5 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				7" TOPSOIL: Silty Clay, dark brown 758.90
	3			SILTY CLAY: Brown, stiff, moist, trace gravel, trace organics
	5 8	2.0 B	15	
				756.00
	5			SILTY CLAY: Brownish-Gray, very stiff, moist, trace pebbles
-5	7 9	3.1 B	12	
				753.50
	3			SILTY CLAY LOAM TILL: Gray, stiff, moist, trace pebbles
	6 8	1.7 S	12	
	3			trace gravel
-10	6 9	2.6 B	13	
	3			
	5 8	1.8 B	12	
	3			
-15	6 7	2.2 B	13	
	3			less sand
	5 7	2.0 B	13	
	3			
-20	5 8	1.8 B	12	
				SILTY CLAY LOAM TILL: Gray, stiff, moist, trace pebbles *(continued)*
	4			
-25	7 8	2.5 B	12	
				731.00
	3			SILTY CLAY LOAM: Gray, stiff, moist, trace gravel
-30 ▽	5 9	2.1 B	12	
				726.00 ▼
	7			SILTY CLAY: Grayish-Brown, very stiff, wet, trace gravel
-35	8 13	2.2 B	14	
	7			
-40	10 19	0.8 P	15	some fine-medium grain sand

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/12/15

ROUTE I-57/74 DESCRIPTION Pier 6 ~~Rick~~ Boring Ramp D LOGGED BY GW

SECTION (10-34-1) HBK ~~10/5-1-RS-1 14-1 6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147290, Longitude -88.282495

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-15
Station 418+94.13
Offset 2.0 ft LT
Ground Surface Elev. 759.50 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 726.0 ft ▼
Upon Completion 729.5 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SILTY CLAY: Grayish-Brown, very stiff, wet, trace gravel *(continued)*
				716.00
	3			SILTY CLAY: Gray, stiff, wet, trace gravel
	5 8	1.6 B	14	
-45				
	4			
	4 10	1.3 B	17	
-50				
				706.00
	6			SILTY CLAY: Very stiff, some fine-medium grain sand
	8 10	2.6 B	11	
-55				
	3			
	4 7	1.2 B	14	sand not visible
-60				
				SILTY CLAY: Very stiff some fine-medium grain sand *(continued)*
				696.00
		WOH		SILT: Gray, very soft, wet
		WOH	<0.25	17
-65		WOH	P	
				691.00
	6			SAND: Gray, fine, medium dense, wet
	7 7		11	
-70				
				686.00
	4			SILTY CLAY LOAM: Gray, very stiff, wet, trace gravel
	7 11	2.3 B	14	
				684.50
-75				End of Boring
-80				

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

BBS, form 137 (Rev. 8-99)

CMT	USER NAME = Denise Herrera	DESIGNED - DH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOG – 7 STRUCTURE NO. 010–1004
License No. 184-000613		CHECKED - JTH	REVISED -		
	PLOT SCALE = N/A	DRAWN - DH	REVISED -		SHEET NO. 87 OF 94 SHEETS
	PLOT DATE = 4/29/2021 (4:01:21 PM)	CHECKED - JTH	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	895
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

Date 2/12/15

ROUTE I-57/74 DESCRIPTION Pier 7 ~~Rxx~~ Boring Ramp D LOGGED BY GW

SECTION (10-34-1) HBK ~~10(5.1-RS-1x14-1.6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147458, Longitude -88.281890

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-16
Station 420+74.44
Offset 2.8 ft LT
Ground Surface Elev. 759.40 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 730.9 ft ▼
Upon Completion 731.4 ft ▽
After ____ Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
8" TOPSOIL: Silty Clay, dark brown 758.80				SILTY CLAY LOAM TILL: Gray, stiff, trace gravel *(continued)*			
SILTY CLAY: Brown, stiff, moist, trace pebbles	4						
	6 9	2.2 B	13				
	4						
trace organics	6 8	4.7 B	14		4 7 8	2.2 B	11
-5				-25			
752.90	3						
SILTY CLAY: Brown, medium stiff	2 6	1.2 B	13				
750.90	3			730.90 ▽▼			
SILTY CLAY LOAM TILL: Gray, stiff, trace gravel	6 8	3.1 B	12	SAND AND GRAVEL: Grayish-Brown, loose, wet	WOH 4 6		16
-10				-30			
	5						
	6 8	1.3 P	16				
	3			725.90	7		
	3 6	1.7 B	14	SILTY CLAY LOAM TILL: Gray, very stiff, wet, trace gravel	7 13	3.5 B	14
-15				-35			
	4						
	6 8	1.8 B	12				
	3			720.40	9		
20	6 9	3.2 B	15	SILTY CLAY LOAM TILL: Gray, hard, wet, trace gravel -40	13 21	5.4 S	11

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation — SOIL BORING LOG

Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

Date 2/12/15

ROUTE I-57/74 DESCRIPTION Pier 7 ~~Rxx~~ Boring Ramp D LOGGED BY GW

SECTION (10-34-1) HBK ~~10(5.1-RS-1x14-1.6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147458, Longitude -88.281890

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-16
Station 420+74.44
Offset 2.8 ft LT
Ground Surface Elev. 759.40 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 730.9 ft ▼
Upon Completion 731.4 ft ▽
After ____ Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY LOAM TILL: Gray, hard, wet, trace gravel *(continued)*				SILTY CLAY TILL: Gray, very stiff, wet, trace gravel *(continued)*			
715.90	5				6		
SILTY CLAY TILL: Gray, very stiff, wet, trace gravel	10 16	3.8 B	13		10 16	2.6 B	12
-45				-65			
711.90					5		
SILTY CLAY TILL: Gray, hard, wet, trace gravel	6						
	8 15	4.2 B	13		9 14	3.1 B	13
-50				-70			
707.40					8		
SILTY CLAY TILL: Gray, very stiff, wet, trace gravel	7						
	8 15	3.3 B	13		13 22	3.6 B	12
-55				684.40 -75			
				End of Boring			
	6						
	9 15	3.6 B	13				
-60				-80			

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

BBS, form 137 (Rev. 8-99)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG – 8
STRUCTURE NO. 010–1004
SHEET NO. 88 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	896
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/3/15

ROUTE I-57/74 DESCRIPTION East Abut - Ramp D LOGGED BY TC

SECTION (10-34-1) HBK ~~10/5x1xRS-1x14-1.6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147649, Longitude -88.281299

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-17
Station 422+52.79
Offset 10.9 ft Right
Ground Surface Elev. 760.16 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 720.2 ft ▼
Upon Completion 749.2 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				8" TOPSOIL
759.56				
	2			SILTY CLAY LOAM: Brown, very stiff
	4 6	2.2 B	22	
757.16				
	2			SANDY CLAY LOAM: Brown, very stiff
-5	3 6	2.3 P	17	
754.66				
	3			SILTY CLAY LOAM: Brown, stiff
	6 7	1.9 B	20	
752.16				
	3			SANDY CLAY LOAM: Brown, very stiff
-10	7 11	2.8 B	17	
749.66				
	4			SILTY CLAY TILL: Gray, very stiff ▽
	7 10	2.7 B	12	
	3			
-15	6 8	2.1 B	12	
744.66				
	4			SILTY CLAY LOAM: Gray, very stiff
	5 9	2.1 B	11	
742.16				
	3			SILTY CLAY LOAM: Gray, stiff
-20	7 7	1.9 B	13	
				SILTY CLAY LOAM: Gray, stiff *(continued)*
738.16				
	2			SILTY CLAY LOAM: Gray, medium
-25	5 7	0.9 B	12	
733.16				
	4			SILTY CLAY TILL: Gray, very stiff
-30	7 8	2.5 B	11	
	6			
-35	9 11	2.6 B	13	
723.66				
	11			SILTY CLAY TILL: Gray, stiff, wet, trace gravel
-40	19 21	2.0 P	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, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/3/15

ROUTE I-57/74 DESCRIPTION East Abut - Ramp D LOGGED BY TC

SECTION (10-34-1) HBK ~~10/5x1xRS-1x14-1.6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147649, Longitude -88.281299

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-17
Station 422+52.79
Offset 10.9 ft Right
Ground Surface Elev. 760.16 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 720.2 ft ▼
Upon Completion 749.2 ft ▽
After Hrs. ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				SILTY CLAY TILL: Gray, stiff, wet, trace gravel *(continued)*
	8			
	12 16	3.5 B	14	
-45				
713.66				
	3			SILTY CLAY LOAM TILL: Gray, stiff
	6 7	1.2 B	11	
				6" sand seam
-50				
	2			
-55	5 8	1.2 B	13	
	3			
-60	7 10	1.3 B	13	
				SILTY CLAY LOAM TILL: Gray, stiff *(continued)*
	4			
	10 21	1.7 B	13	
-65				
	5			
	10 13	1.7 B	14	
-70				
	4			
	8 12	1.6 B	13	
-75				
	5			
	11 16	2.2 B	12	
-80				

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

BBS, form 137 (Rev. 8-99)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG – 9
STRUCTURE NO. 010–1004
SHEET NO. 89 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	897
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
Bacone Farmer Workmand Engineering & Testing, LLC

SOIL BORING LOG

Date 2/3/15

ROUTE I-57/74 DESCRIPTION East Abut - Ramp D LOGGED BY TC

SECTION (10-34-1) HBK ~~10(5-1 RS-1 14-1 6)R~~ LOCATION , SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147649, Longitude -88.281299

COUNTY Champaign DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. B-17
Station 422+52.79
Offset 10.9 ft Right
Ground Surface Elev. 760.16 ft

Surface Water Elev. n/a ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 720.2 ft ▼
Upon Completion 749.2 ft ▽
After Hrs. ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
SILTY CLAY LOAM TILL: Gray, stiff *(continued)*				
676.16		36		
SILTY CLAY LOAM TILL: Gray, very hard, with limestone pieces	-85	50/3"		5
671.08		70		
End of Boring	-90	25/1"		12
	-95			
	-100			

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

BBS, form 137 (Rev. 8-99)

Mc Cleary Engineering
Solutions You Can Build On
3705 Progress Blvd, Ste 2
Peru, Illinois 61354
815-780-8486

SOIL BORING LOG

Date 2/13/19

ROUTE I-57/74 DESCRIPTION Ramp D MSE Retaining Wall W. Abut. LOGGED BY TLM

SECTION (10-34-1) HBK LOCATION SE 1/4, SEC. 34, TWP. 20N, RNG. 8E, 3rd PM,
Latitude 40.147882, Longitude 88.286505

COUNTY Champaign DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 010-1004
Station 414+78.50
D-102ST
BORING NO Shld. of Exist. Ramp
Station 407+00
Offset 31.7 ft Lt.
Ground Surface Elev. 779.05 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 (%)
	-5			
	-10			
765.05				
Soft brown Clay	-15		ST	
763.05				
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, form 137 (Rev. 8-99)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG – 10
STRUCTURE NO. 010-1004
SHEET NO. 90 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	898
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

Mc Cleary Engineering
3705 Progress Blvd, Ste 2
Peru, Illinois 61354
815-780-8486

SOIL BORING LOG

Solutions You Can Build On

Date 2/11/19

ROUTE I-57/74 DESCRIPTION Ramp D MSE Retaining Wall W. Abut. LOGGED BY TLM

SECTION (10-34-1) HBK LOCATION SE 1/4, **SEC.** 34, **TWP.** 20N, **RNG.** 8E, 3rd **PM**, **Latitude** 40.148073, **Longitude** 88.286803

COUNTY Champaign DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. D-101 Backslope of Ditch
Station 406+00
Offset 31.7 ft Lt.
Ground Surface Elev. 772.75 ft

Surface Water Elev. - ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 729.8 ft ▼
Upon Completion - ft
After 24 **Hrs.** 769.8 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff brown/gray Clay			
	3		
	4 5	1.5 P	29
769.75 ▽			
Soft brown Silty Clay			
	2		
-5	2 2	<0.25 P	27
766.75			
no sample, rock in shoe	1		
	2 3	-	
764.75			
Very stiff brown Clay Loam Till, moist	3		
-10	5 6	2.3 B	14
	3		
760.75	5 7	1.9 B	12
Stiff gray Clay Loam Till, moist			
	4		
-15	6 9	2.1 B	12
	4		
	7 9	2.5 B	12
	4		
-20	7 9	2.1 B	12
Stiff gray Clay Loam Till, moist *(continued)*			
	4		
	5 8	2.1 B	12
	7		
-25	5 7	2.3 B	13
747.25			
Very stiff to hard gray Clay Loam Till, moist	2		
	5 7	2.7 B	12
	3		
-30	5 7	2.5 B	12
	4		
-35	7 10	5.0 B	11
	5		
-40	6 10	3.7 B	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, form 137 (Rev. 8-99)

Mc Cleary Engineering
3705 Progress Blvd, Ste 2
Peru, Illinois 61354
815-780-8486

SOIL BORING LOG

Solutions You Can Build On

Date 2/11/19

ROUTE I-57/74 DESCRIPTION Ramp D MSE Retaining Wall W. Abut. LOGGED BY TLM

SECTION (10-34-1) HBK LOCATION SE 1/4, **SEC.** 34, **TWP.** 20N, **RNG.** 8E, 3rd **PM**, **Latitude** 40.148073, **Longitude** 88.286803

COUNTY Champaign DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. D-101 Backslope of Ditch
Station 406+00
Offset 31.7 ft Lt.
Ground Surface Elev. 772.75 ft

Surface Water Elev. - ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 729.8 ft ▼
Upon Completion - ft
After 24 **Hrs.** 769.8 ft ▽

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very stiff to hard gray Clay Loam Till, moist *(continued)*			
730.25			
Very loose gray Medium Coarse to Coarse Sand, wet ▼	2		
	WR 1	-	15
-45			
	4		
	6 9	-	12
-50			
720.25			
Medium dense Fine to Coarse Sand, wet	5		
	4 10	-	10
-55			
	4		
712.75	5 5	-	9
-60			
End of Boring			
-65			
-70			
-75			
-80			

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

BBS, form 137 (Rev. 8-99)

FILE NAME = pw:\\cmtengi-pw.bentley.com:cmt-projects\Documents\Projects\IDOT\115066-D1\Draw\Structures\CADD_Sheets\RAMP_D\RAMPD-70B99-2091-Boring log-11.dgn

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USER NAME = Denise Herrera	DESIGNED - DH	REVISED -	
	CHECKED - JTH	REVISED -	
PLOT SCALE = N/A	DRAWN - DH	REVISED -	
PLOT DATE = 4/29/2021 (4:01:55 PM)	CHECKED - JTH	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOG – 11
STRUCTURE NO. 010–1004
SHEET NO. 91 OF 94 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	899
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			

Mc Cleary Engineering
3705 Progress Blvd, Ste 2
Peru, Illinois 61354
815-780-8486

SOIL BORING LOG

Solutions You Can Build On

Date 2/13/19

ROUTE I-57/74 **DESCRIPTION** Ramp D MSE Retaining Wall W. Abut. **LOGGED BY** TLM

SECTION (10-34-1) HBK **LOCATION** SE 1/4, **SEC.** 34, **TWP.** 20N, **RNG.** 8E, 3rd **PM**, **Latitude** 40.147882, **Longitude** 88.286505

COUNTY Champaign **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME Automatic

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. D-102 Shld. of Exist. Ramp
Station 407+00
Offset 31.7 ft Lt.
Ground Surface Elev. 779.05 ft

Surface Water Elev. - ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 763.1 ft ▼
Upon Completion - ft
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Dark gray Silty Clay, fill
777.55	5			
	3 4	2.1 B	21	Frost down to 18 inches
776.05				
	6			Stiff brown Silty Clay, moist, fill
-5	5 3	1.4 B	22	
773.55				
	4			Very stiff to hard gray Clay Loam Till, moist, fill
	4 6	3.7 B	10	
769.55	5			
	5 5	4.1 B	11	
-10				Dark brown Silty Clay Topsoil
768.55				
	3			Stiff olive brown Clay
	3 3	1.6 B	28	
766.05				
	1			Soft brown Clay
-15	2 2	0.4 B	24	
763.05 ▼				
	2			No sample, rock in shoe
	3 3			
761.05				
	4			Very stiff brown Clay
759.05 -20	7 9	3.1 B	17	
				Very stiff to hard gray Clay Loam Till, moist
	6			
	9 12	2.3 B	12	
	6			
-25	9 11	3.3 B	10	
	6			
752.05	9 14	4.1 B	10	
				Dense gray Silt, wet
750.05	6			
-30	9 10	3.5 B	11	Very stiff gray Clay Loam Till, moist
	5			
-35	6 9	3.1 B	12	
	4			
-40	6 9	3.1 B	12	

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

BBS, form 137 (Rev. 8-99)

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Peru, Illinois 61354
815-780-8486

SOIL BORING LOG

Solutions You Can Build On

Date 2/13/19

ROUTE I-57/74 **DESCRIPTION** Ramp D MSE Retaining Wall W. Abut. **LOGGED BY** TLM

SECTION (10-34-1) HBK **LOCATION** SE 1/4, **SEC.** 34, **TWP.** 20N, **RNG.** 8E, 3rd **PM**, **Latitude** 40.147882, **Longitude** 88.286505

COUNTY Champaign **DRILLING METHOD** Hollow Stem Auger **HAMMER TYPE** CME Automatic

STRUCT. NO. 010-1004
Station 414+78.50

BORING NO. D-102 Shld. of Exist. Ramp
Station 407+00
Offset 31.7 ft Lt.
Ground Surface Elev. 779.05 ft

Surface Water Elev. - ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 763.1 ft ▼
Upon Completion - ft
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Very stiff gray Clay Loam Till, moist *(continued)*
	3			
-45	7 9	2.5 B	11	
730.05	6			
729.55	7	2.3	12	2" Silt Seam
729.05 -50	10	S		Med. dense gray Medium to Coarse Sand, wet
				End of Boring
-55				
-60				

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

BBS, form 137 (Rev. 8-99)

CMT	USER NAME = Denise Herrera	DESIGNED - DH	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOG – 12 STRUCTURE NO. 010–1004
License No. 184-000613 © Copyright CMT, Inc.		CHECKED - JTH	REVISED -		SHEET NO. 92 OF 94 SHEETS
	PLOT SCALE = N/A	DRAWN - DH	REVISED -		
	PLOT DATE = 4/29/2021 (4:02:03 PM)	CHECKED - JTH	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74 & 57	(10-34-1) HBK	CHAMPAIGN	1187	900
		CONTRACT NO. 70B99		
	ILLINOIS FED. AID PROJECT			