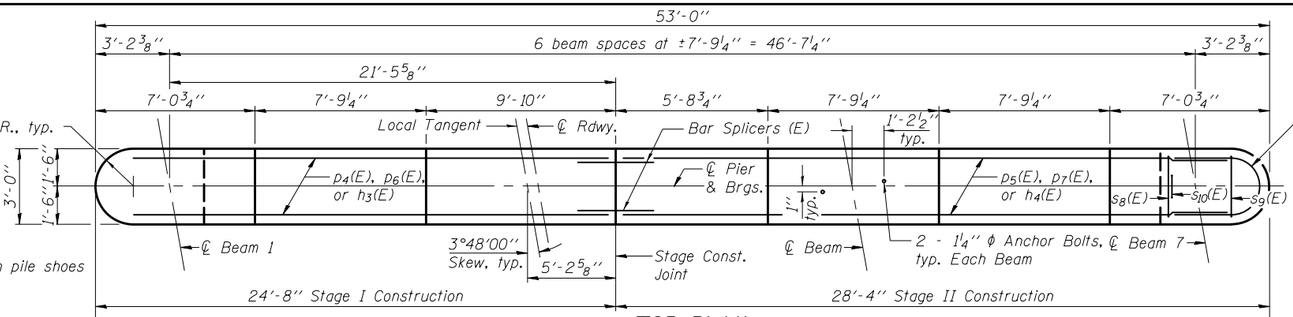
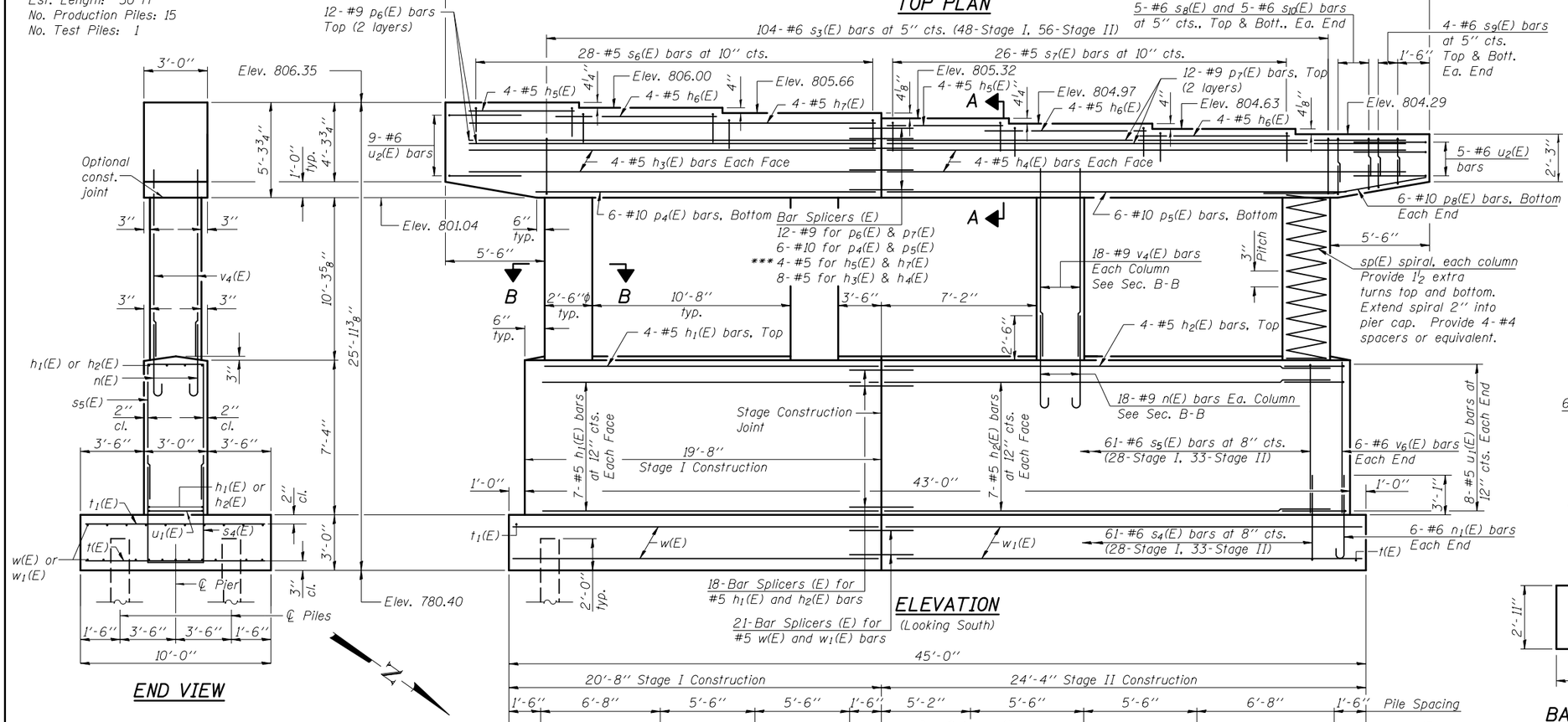
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 22 of 26.
For details of Bar Splicers, see sheet 23 of 26.

PILE DATA

Type: Metal Shell - 14 in. dia. x 0.312 in. walls with pile shoes
Nominal Required Bearing: 365 kips
Factored Resistance Available: 190 kips
Est. Length: 30 ft
No. Production Piles: 15
No. Test Piles: 1

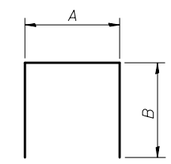


TOP PLAN



END VIEW

A & B DIMENSIONS



s4(E) thru s10(E) BARS

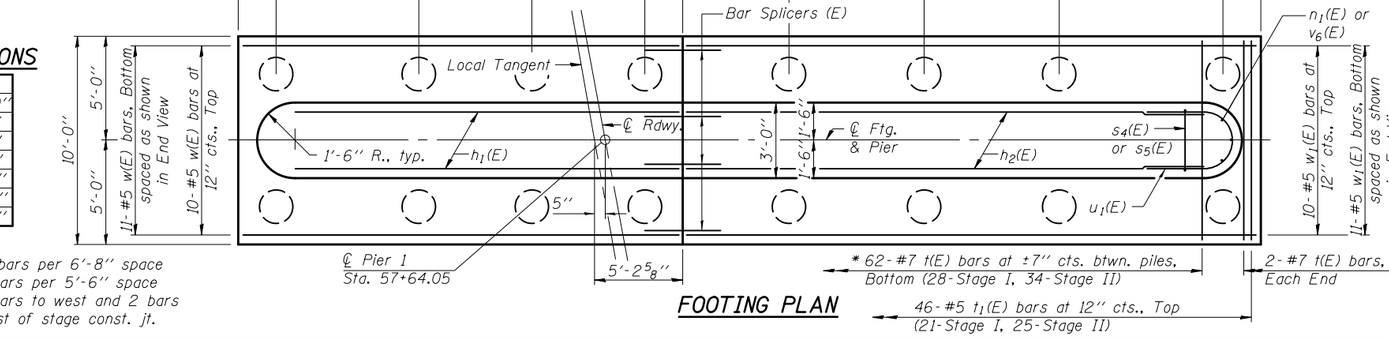
Bar	A	B
s4(E)	2'-8"	5'-10"
s5(E)	2'-8"	7'-1"
s6(E)	2'-8"	3'-1"
s7(E)	2'-8"	2'-1"
s8(E)	2'-8"	2'-6"
s9(E)	2'-8"	2'-2"
s10(E)	1'-0"	2'-6"

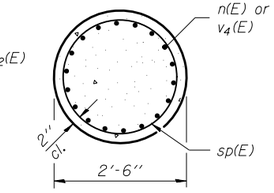
* 10 bars per 6'-8" space
8 bars per 5'-6" space
8 bars to west and 2 bars to east of stage const. jt.

ELEVATION

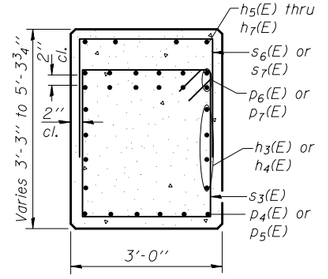
(Looking South)

FOOTING PLAN

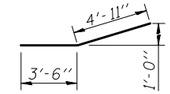




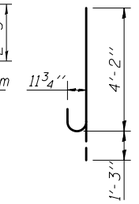
SEC. B-B



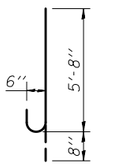
SEC. A-A



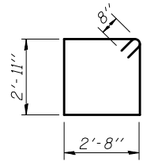
BAR p8(E)



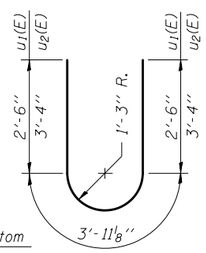
BAR n(E)



BAR n1(E)



BAR s3(E)



BARS u1(E) & u2(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1(E)	18	#5	18'-0"	—
h2(E)	18	#5	21'-8"	—
h3(E)	8	#5	23'-0"	—
h4(E)	8	#5	26'-8"	—
h5(E)	8	#5	5'-4"	—
h6(E)	12	#5	9'-3"	—
h7(E)	4	#5	23'-0"	—
n(E)	72	#9	5'-5"	⊃
n1(E)	12	#6	6'-4"	⊃
p4(E)	6	#10	19'-6"	—
p5(E)	6	#10	23'-2"	—
p6(E)	12	#9	23'-0"	—
p7(E)	12	#9	26'-8"	—
p8(E)	12	#10	8'-5"	⌒
s3(E)	104	#6	12'-6"	□
s4(E)	61	#6	14'-4"	⊔
s5(E)	61	#6	16'-10"	⊔
s6(E)	28	#5	8'-10"	⊔
s7(E)	26	#5	6'-10"	⊔
s8(E)	20	#6	7'-8"	⊔
s9(E)	16	#6	7'-0"	⊔
s10(E)	20	#6	6'-0"	⊔
** sp(E)	4	#4	10'-6"	⌇
t(E)	66	#7	9'-8"	—
t1(E)	46	#5	9'-8"	—
u1(E)	16	#5	9'-0"	⊃
u2(E)	14	#6	10'-8"	⊃
v4(E)	72	#9	12'-11"	—
v6(E)	12	#6	7'-1"	—
w(E)	21	#5	20'-4"	—
w1(E)	21	#5	24'-0"	—
Structure Excavation		Cu. Yd.	195	
Concrete Structures		Cu. Yd.	115.7	
Reinforcement Bars, Epoxy Coated		Pound	19470	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	450	
Driving Piles		Foot	450	
Test Pile Metal Shells		Each	1	
Concrete Sealer		Sq. Ft.	1634	
Pile Shoes		Each	16	

** Length is height of spiral.
*** Bar Splicers for h5(E) and h7(E) bars must be placed 4" below the h7(E) bars.

FILE NAME = $FILE$
USER NAME = piersonbr
PLOT SCALE =
PLOT DATE = 7/29/2013 $TIME$
DESIGNED - VPT
CHECKED - TF
DRAWN - JAE
CHECKED - BAS
REVISED -

FUHRMANN ENGINEERING INC. CIVIL ENGINEERS/LAND SURVEYORS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

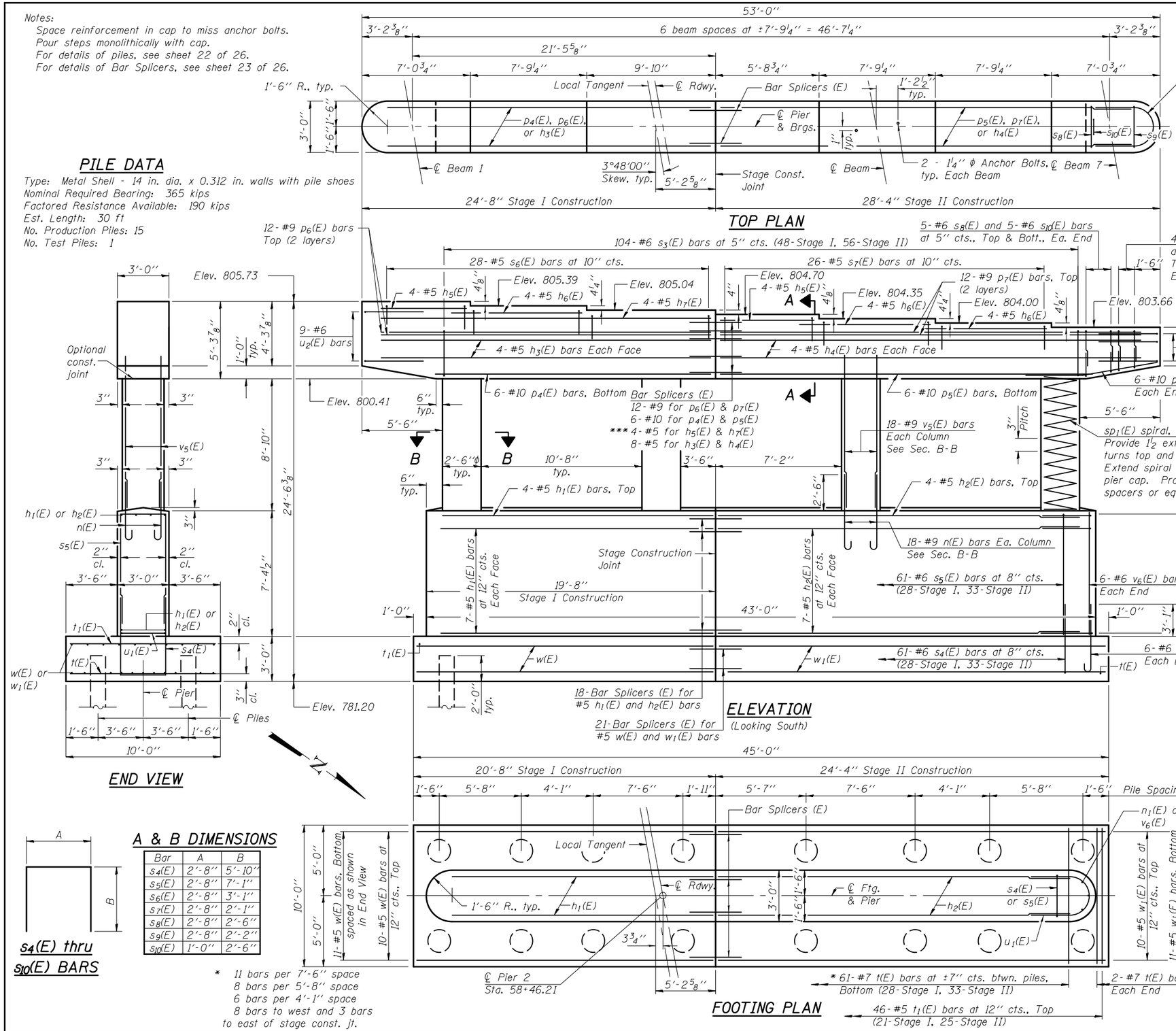
PIER 1
STRUCTURE NO. 057-0252
SHEET NO. 20 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB-1)BR-1	MCLEAN	440	201
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 22 of 26.
For details of Bar Splicers, see sheet 23 of 26.

PILE DATA

Type: Metal Shell - 14 in. dia. x 0.312 in. walls with pile shoes
Nominal Required Bearing: 365 kips
Factored Resistance Available: 190 kips
Est. Length: 30 ft
No. Production Piles: 15
No. Test Piles: 1



A & B DIMENSIONS

Bar	A	B
s4(E)	2'-8"	5'-10"
s5(E)	2'-8"	7'-1"
s6(E)	2'-8"	3'-1"
s7(E)	2'-8"	2'-1"
s8(E)	2'-8"	2'-6"
s9(E)	2'-8"	2'-2"
s10(E)	1'-0"	2'-6"

* 11 bars per 7'-6" space
8 bars per 5'-8" space
6 bars per 4'-1" space
8 bars to west and 3 bars to east of stage const. jt.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1(E)	18	#5	18'-0"	
h2(E)	18	#5	21'-8"	
h3(E)	8	#5	23'-0"	
h4(E)	8	#5	26'-8"	
h5(E)	8	#5	5'-4"	
h6(E)	12	#5	9'-3"	
h7(E)	4	#5	23'-0"	
n(E)	72	#9	5'-5"	U
n1(E)	12	#6	6'-4"	U
p4(E)	6	#10	19'-6"	
p5(E)	6	#10	23'-2"	
p6(E)	12	#9	23'-0"	
p7(E)	12	#9	26'-8"	
p8(E)	12	#10	8'-5"	
s3(E)	104	#6	12'-6"	
s4(E)	61	#6	14'-4"	U
s5(E)	61	#6	16'-10"	U
s6(E)	28	#5	8'-10"	U
s7(E)	26	#5	6'-10"	U
s8(E)	20	#6	7'-8"	U
s9(E)	16	#6	7'-0"	U
s10(E)	20	#6	6'-0"	U
** sp1(E)	4	#4	9'-0"	
t(E)	65	#7	9'-8"	
t1(E)	46	#5	9'-8"	
u1(E)	16	#5	9'-0"	U
u2(E)	14	#6	10'-8"	U
v5(E)	72	#9	11'-5"	
v6(E)	12	#6	7'-1"	
w(E)	21	#5	20'-4"	
w1(E)	21	#5	24'-0"	
Structure Excavation		Cu. Yd.	189	
Concrete Structures		Cu. Yd.	114.9	
Reinforcement Bars, Epoxy Coated		Pound	18970	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	450	
Driving Piles		Foot	450	
Test Pile Metal Shells		Each	1	
Concrete Sealer		Sq. Ft.	1589	
Pile Shoes		Each	16	

** Length is height of spiral.
*** Bar Splicers for h5(E) and h7(E) bars must be placed 4" below the h7(E) bars.

FILE NAME = $FILES$
USER NAME = piersonbr
PLOT SCALE =
PLOT DATE = 7/29/2013 $TIME$
DESIGNED - VPT
CHECKED - TF
DRAWN - JAE
CHECKED - BAS
REVISED -
REVISED -
REVISED -
REVISED -

FUHRMANN ENGINEERING INC. CIVIL ENGINEERS/LAND SURVEYORS

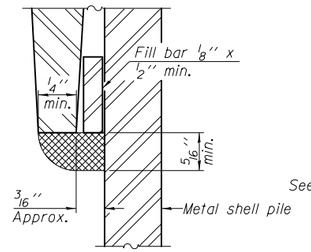
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2
STRUCTURE NO. 057-0252
SHEET NO. 21 OF 26 SHEETS

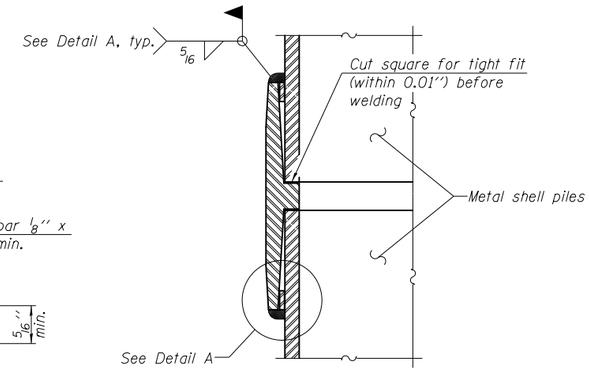
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-2OHB-1)BR-1	MCLEAN	440	202
		CONTRACT NO. 70570		
		ILLINOIS FED. AID PROJECT		

METAL SHELL PILE TABLE

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd.³ /ft.)
PP12	0.179''	22.60	0.0274
PP12	0.250''	31.37	0.0267
PP14	0.250''	36.71	0.0368
PP14	0.312''	45.61	0.0361

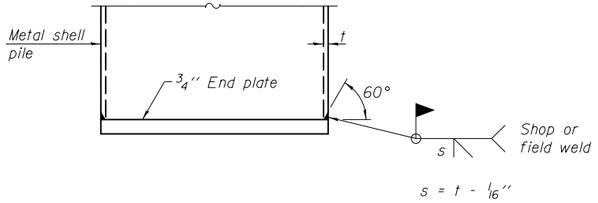


DETAIL A

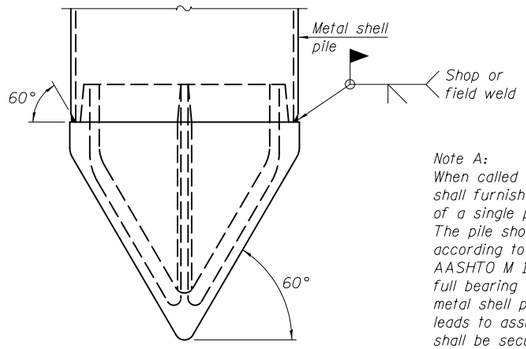


Notes:
The 1/8'' x 1/2'' min. fill bar may be constructed of 2 bars with a 1/8'' max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



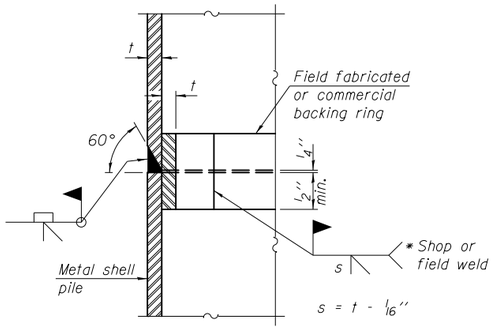
END PLATE ATTACHMENT



Note A:
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.

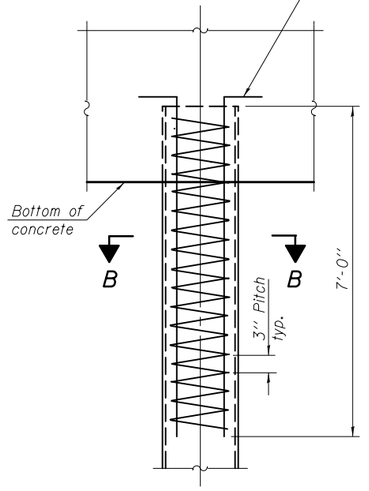
METAL SHELL PILE SHOE ATTACHMENT

(See Note A)

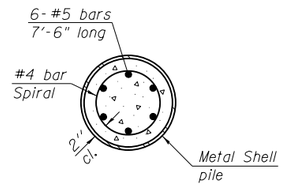


COMPLETE PENETRATION WELD SPLICE

* 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

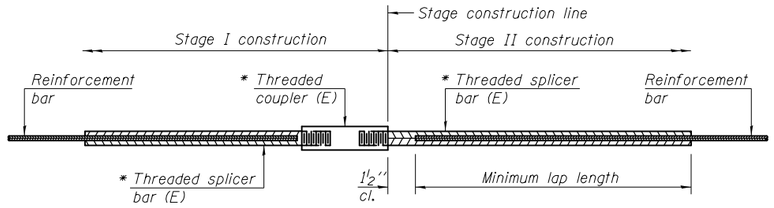


SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS AND PIERS

Note:
The metal shell piles shall be according to ASTM A 252 Grade 3.

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - VPT	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	METAL SHELL PILE DETAILS STRUCTURE NO. 057-0252	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FUHRMANN ENGINEERING INC. CIVIL ENGINEERS/LAND SURVEYORS		CHECKED - TF	REVISED -			74	(57-20HB-1)BR-1	MCLEAN	440	203
	PLOT SCALE =	DRAWN - JAE	REVISED -					CONTRACT NO. 70570		
	PLOT DATE = 7/29/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 22 OF 26 SHEETS		ILLINOIS FED. AID PROJECT			



STANDARD BAR SPLICER ASSEMBLY

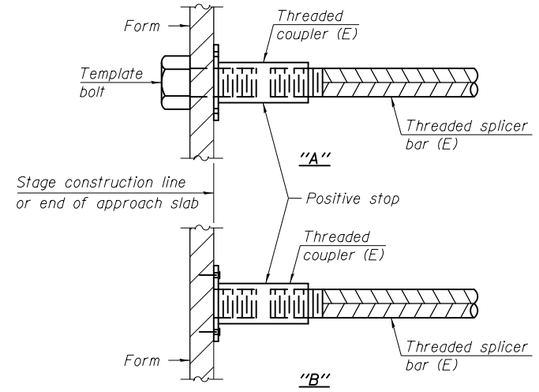
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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

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

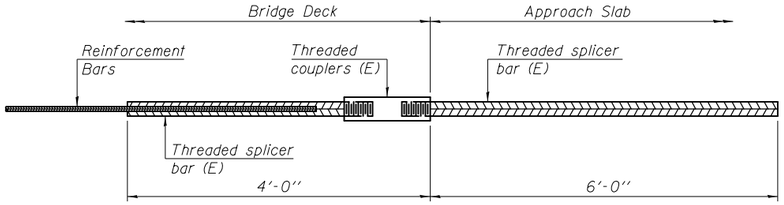
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck Slab (Top)	#5	402	5
Deck Slab (Bottom)	#5	246	3
Diaphragms	#6	16	4
Approach Slab	#4	50	4
Approach Slab	#5	92	3
Approach Footing	#5	80	3
Abutment	#7	16	6
Abutment	#5	20	6
Abutment (bottom)	#5	8	3
Pier Footing	#5	42	4
Pier Crashwall	#5	36	4
Pier Cap	#10	12	5
Pier Cap	#5	24	6
Pier Cap	#9	24	6



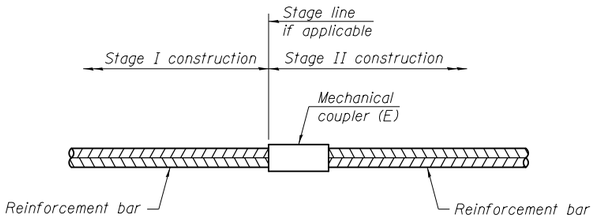
INSTALLATION AND SETTING METHODS

"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.



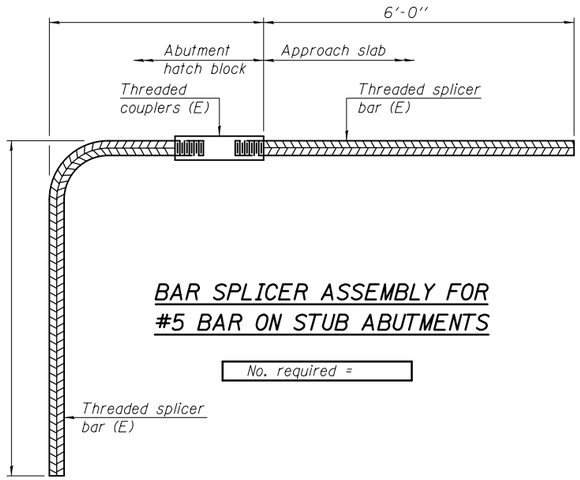
BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 104



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

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.

BSD-1 1-27-12

FILE NAME = $FILE$	USER NAME = piersonbr	DESIGNED - VPT	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 057-0252	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FUHRMANN ENGINEERING INC. CIVIL ENGINEERS/LAND SURVEYORS		CHECKED - TF	REVISED -			74	(57-20HB-1)BR-1	MCLEAN	440	204
	PLOT SCALE =	DRAWN - JAE	REVISED -		SHEET NO. 23 OF 26 SHEETS				CONTRACT NO. 70570	
	PLOT DATE = 7/29/2013 $TIME$	CHECKED - BAS	REVISED -					ILLINOIS	FED. AID PROJECT	

Illinois Department of Transportation
Division of Highways
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/10/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (SB) over FAI 74 (EB) **LOGGED BY** RJC

SECTION (57-20HB-1)BR-1 **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM**,
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0060 existing / 057-0252 proposed
Station 57+97.32

BORING NO. B-5 N. Abut
Station 57+13
Offset 8.70ft RT
Ground Surface Elev. 808.00 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 769.5 ft ▼
Upon Completion 753.0 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
			12	Brown, Moist SILTY LOAM (Fill), little organics
	2			
806.00	3	2.0	13	
	4	P		Brown, Moist SILTY LOAM (Fill), trace gravel
	1			
-5	1	1.3	15	
	2	P		
802.00				
	6			Brown and Gray, Moist SILTY LOAM (Fill), trace gravel
	5	5.0	19	
	7	P		
	3			
	4	3.1	23	
-10	8	B		
	3			
796.30				
	6	3.5	14	Brown, Moist SILTY LOAM (Fill), trace gravel
	8	B		
	2			
793.40	4	3.5	25	
-15	5	B		Dark Gray, Moist SILTY LOAM (Fill), trace gravel
	3			
791.00				
	5	2.9	23	Brown and Gray, Moist SILTY LOAM (Fill), trace gravel
	9	B		
	3			
	4	3.3	17	
-20	6	B		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Brown and Gray, Moist SILTY LOAM (Fill), trace gravel *(continued)*
786.80	3			
	6	3.5	25	Brown, Gray, and Dark Gray, Moist SILTY LOAM (Fill), trace gravel
786.00	9	B		
				Very Hard Dark Gray and Black, Moist SILTY LOAM, trace gravel
	3			
-25	4	3.3	23	
	7	P		
782.00				
	2			Stiff to Very Stiff Brown and Gray, Moist SILTY LOAM
	3	1.2	25	
	5	B		
	3			
	4	2.6	22	
-30	5	B		
	3			
774.50				
	5			Brown, Moist SILTY LOAM
774.00				
	2	1.6	14	Stiff to Very Stiff Gray, Moist, Wet at 38.5' SILTY LOAM, trace gravel
-35	6	B		
	▼			
	3			
	4	2.4	12	
-40	5	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
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/10/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (SB) over FAI 74 (EB) **LOGGED BY** RJC

SECTION (57-20HB-1)BR-1 **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM**,
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0060 existing / 057-0252 proposed
Station 57+97.32

BORING NO. B-5 N. Abut
Station 57+13
Offset 8.70ft RT
Ground Surface Elev. 808.00 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 769.5 ft ▼
Upon Completion 753.0 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Stiff to Very Stiff Gray, Moist, Wet at 38.5' SILTY LOAM, trace gravel *(continued)*
	3			
	4	1.8	13	
-45	6	B		
759.50				
	18			Hard Brown and Gray, Wet SILTY LOAM, trace gravel
	13	5.3	14	
-50	20	P		
754.20				
	12			Hard Gray, Wet SILTY LOAM, some gravel
	28	6.0	12	
▽-55	33	P		
749.50				
	33			Hard Brown and Gray, Wet
748.50				
	23	3.5	10	SILTY LOAM, some gravel
-60	28	P		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Material
				Very Stiff to Very Hard Gray, Wet SILTY LOAM, some gravel *(continued)*
	8			
	7	9.3	10	
743.00 -65	9	P		
				End of Boring
-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 = $FILE$	USER NAME = piersonbr	DESIGNED - VPT	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SOIL BORINGS STRUCTURE NO. 057-0252**
FUHRMANN ENGINEERING INC. CIVIL ENGINEERS/LAND SURVEYORS		CHECKED - TF	REVISED -		
	PLOT SCALE =	DRAWN - JAE	REVISED -		
	PLOT DATE = 7/29/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 24 OF 26 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB-1)BR-1	MCLEAN	440	205
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/11/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (SB) over FAI 74 (EB) **LOGGED BY** RJC

SECTION (57-20HB-1)BR-1 **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM,**
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0060 existing / 057-0252 proposed
Station 57+97.32

BORING NO. B-6 N. Pier
Station 57+32
Offset 142.0ft RT
Ground Surface Elev. 784.00 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 778.0 ft ▼
Upon Completion 734.5 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Dark Brown and Black, Moist SILTY LOAM, with organics
783.00			22	
	2			Stiff
	2	1.6	33	Brown and Gray, Moist
	3	B		SILTY LOAM, trace gravel
780.50				
	2			Stiff
	3	1.4	23	Brown and Light Brown, Moist
-5	4	B		SILTY LOAM
778.00 ▼				
	1			Very Soft
	1	0.3	23	Brown and Gray, Wet
	7	P		SILTY LOAM, some gravel
775.50				
	5			Medium Dense
	8		19	Brown, Fine to Medium grain, Wet
-10	9			SAND, some gravel
	2			
	5		19	
	7			
	2			
	3		13	
-15	5			
768.00				
	2			Very Stiff
	4	2.7	14	Gray, Wet
	5	B		SILTY LOAM, trace gravel
	3			
	6	3.3	13	
-20	8	B		
				Very Stiff Gray, Wet SILTY LOAM, trace gravel *(continued)*
	2			
	5	2.9	13	
	6	B		
	2			
	5	2.2	13	
-25	9	B		
758.00				
	7			Hard to Very Hard
	12	8.5	10	Bluish Gray, Wet
	14	P		SILTY LOAM
	9			
	19	8.0	10	
-30	22	P		
	8			
	16	7.0	15	
-35	18	P		
749.50				
	18			Gray, Medium to Coarse grain, Wet SAND
745.50				
	18			Hard to Very Hard
	18	5.0	14	Gray, Wet
-40	17	P		SILTY LOAM, trace gravel

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
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/11/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (SB) over FAI 74 (EB) **LOGGED BY** RJC

SECTION (57-20HB-1)BR-1 **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM,**
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0060 existing / 057-0252 proposed
Station 57+97.32

BORING NO. B-6 N. Pier
Station 57+32
Offset 142.0ft RT
Ground Surface Elev. 784.00 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 778.0 ft ▼
Upon Completion 734.5 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Hard to Very Hard Gray, Wet SILTY LOAM, trace gravel *(continued)*
	9			
	12	10.5	11	
-45	15	P		
	14			
	20	5.0	10	
734.00 -50	30	P		
				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)

Illinois Department of Transportation
Division of Highways
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/9/11

ROUTE FAI 74 DESCRIPTION FAI 55 Business (NB) over FAI 74 (EB) LOGGED BY RJC

SECTION (57-20HB-1)BR LOCATION South of Bloomington, SEC. 19, TWP. 23N, RNG. 2E, 3rd PM,
Latitude , Longitude

COUNTY McLean DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 057-0059 existing
057-0251 proposed
Station 57+97.32

BORING NO. B-8 S. Abut
Station 59+03
Offset 5.60ft LT
Ground Surface Elev. 806.00 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 772.5 ft ▼
Upon Completion 751.0 ft ▽
After - Hrs. - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Brown, Moist SILTY LOAM (Fill), little organics			
805.00			15
Brown and Dark Brown, Moist SILTY LOAM (Fill), trace gravel, organics	6		
	6 7	4.3 P	14
802.50			
Dark Brown, Moist SILTY LOAM (Fill), trace gravel	3		
-5	4 5	7.0 P	13
	2		
	7 8	8.0 P	11
797.50			
Dark Gray, Moist SILTY LOAM (Fill), trace gravel, organics	4		
-10	6 8	3.7 B	18
	4		
	7 8	4.1 B	13
	3		
-15	4 6	4.3 P	23
789.70	6		
Brown, Moist SILTY LOAM (Fill), trace gravel 789.20	7 9	4.3 B	19
Brown and Gray, Moist SILTY LOAM (Fill), trace gravel			
	2		
786.50			
-20	7 9	4.3 P	23
Brown, Moist SILTY LOAM (Fill), trace gravel (continued)			
784.50	2		
Brown and Gray, Moist SILTY LOAM (Fill), trace gravel	4 8	2.6 B	13
782.00	2		
Hard Black and Dark Gray, Moist SILTY LOAM, trace organics	5 7	5.5 B	29
-25			
780.00			
Stiff to Very Stiff Brown and Gray, Moist SILTY LOAM	3		
	4 6	2.0 B	21
772.50 ▼	2		
Very Stiff Brown, Wet SILTY LOAM	4 7	2.0 P	21
-35			
767.50	2		
Brown, Fine to Medium grain, Wet SAND, trace gravel 767.00	5 4	2.0 P	14
Very Stiff 766.70			
-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
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/9/11

ROUTE FAI 74 DESCRIPTION FAI 55 Business (NB) over FAI 74 (EB) LOGGED BY RJC

SECTION (57-20HB-1)BR LOCATION South of Bloomington, SEC. 19, TWP. 23N, RNG. 2E, 3rd PM,
Latitude , Longitude

COUNTY McLean DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 057-0059 existing
057-0251 proposed
Station 57+97.32

BORING NO. B-8 S. Abut
Station 59+03
Offset 5.60ft LT
Ground Surface Elev. 806.00 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 772.5 ft ▼
Upon Completion 751.0 ft ▽
After - Hrs. - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Gray, Wet SILTY LOAM, some gravel Gray, Wet SILTY LOAM, trace gravel (continued)			
	8		
	9 13		17
-45			
757.50	19		
Brown, Wet SILTY LOAM, some gravel 756.50	25	7.0	10
Dense Brown, Fine to Medium grain, Wet SAND, trace gravel -50	23	P	
	14		
▽ -55	20 23		12
	3		
746.50	7		11
-60	13		
Brown, Fine to Medium grain, Wet GRAVEL, trace sand (continued) 745.00			
Hard Brown and Gray, Wet SILTY LOAM, trace gravel	35		
	27 36	8.0 P	9
741.00 -65			
End of Boring			
-70			
-75			
-80			

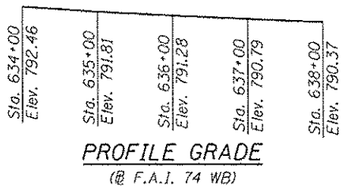
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

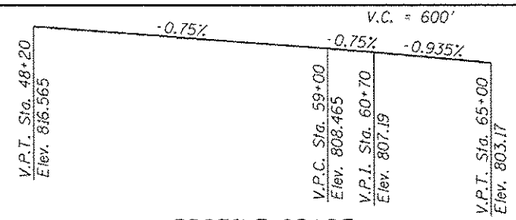
Benchmark: #4848-2 - Chiseled square on the Southwest wing of Structure No. 057-0061. Elev. 813.96.

Existing Structure: S.N. 057-0061 was constructed in 1963 as F.A.I. Rte. 74, Section 57-20HB, at Sta. 635+75.15. The bridge is three simple composite spans with concrete deck slab on steel beams located on a horizontal curve on the F.A.P. Rte. 704 northbound alignment and spans 156'-7" back to back abutments and varies up to 40'-0 7/16" in width. The bridge is skewed 31°11'24" left forward over a tangent section of the F.A.I. 74 WB alignment. The bridge was rehabilitated in 1993 as F.A.I. 74, Section 57-20HBR with a concrete overlay, new parapets and steel diaphragms, and substructure repairs.

The existing structure will be removed and replaced using staged construction to maintain one lane of traffic.
No salvage.



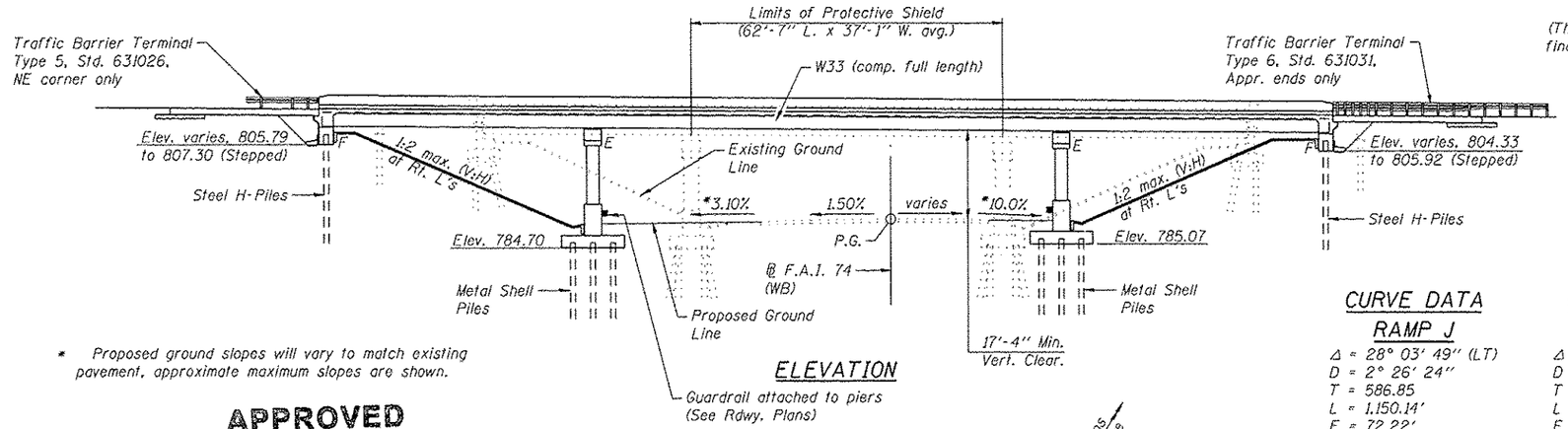
PROFILE GRADE
(℄ F.A.I. 74 WB)



PROFILE GRADE
(℄ F.A.P. 704 NB)
(The Profile Grade shows the final elevations after grinding)

Note:
Up to 1/4" will be ground off the bridge slab and the bridge approach slab.

INDEX OF SHEETS



ELEVATION

* Proposed ground slopes will vary to match existing pavement, approximate maximum slopes are shown.

APPROVED
For Structural Adequacy Only
D. Carl Pumey, P.E.
Engineer of Bridges & Structures

CURVE DATA
RAMP J

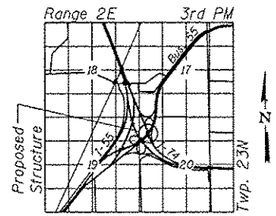
Δ = 28° 03' 49" (LT)
D = 2° 26' 24"
T = 586.85
L = 1,150.14'
E = 72.22'
R = 2,348.17
S.E. = --
P.C. = Sta. 1014+67.36
P.T. = Sta. 1026+17.51
P.I. = Sta. 1020+54.21

CURVE DATA
F.A.P. 704

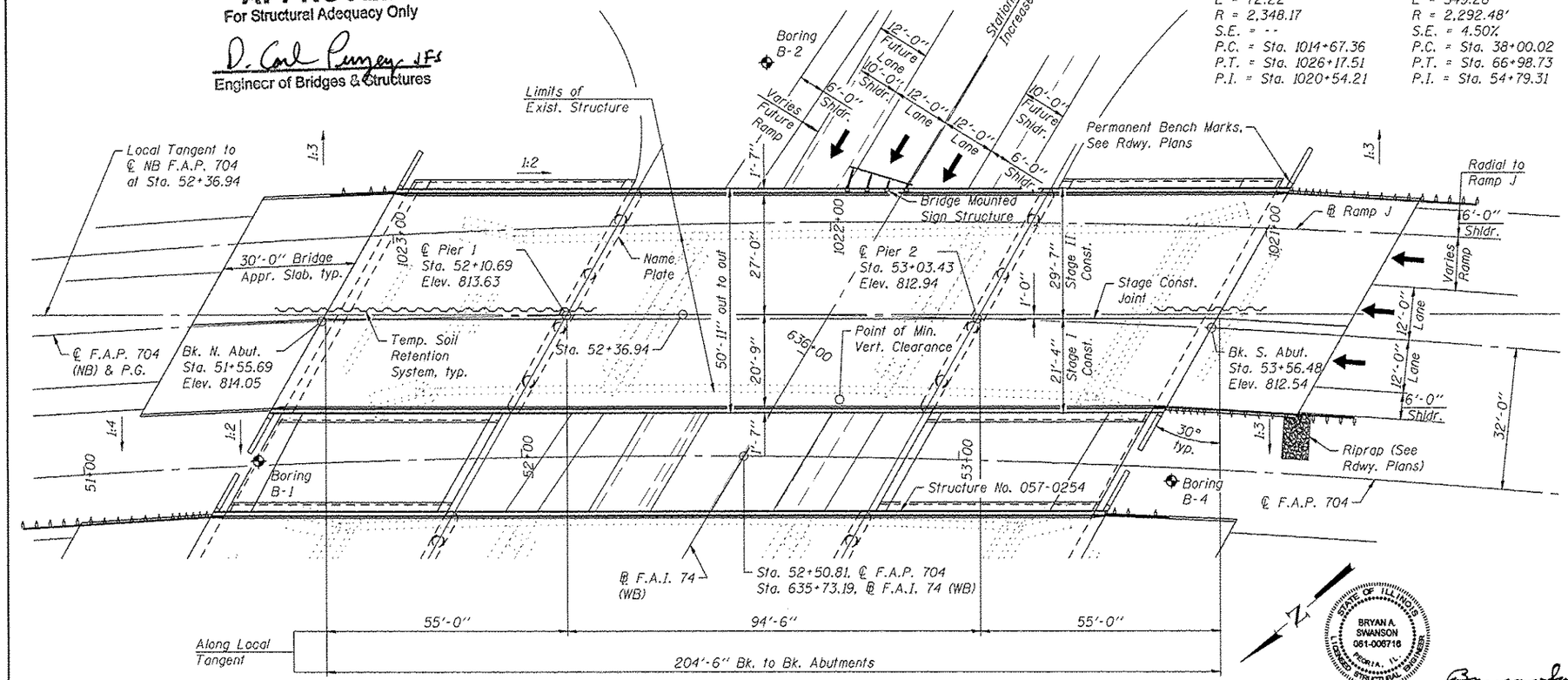
Δ = 72° 26' 50" (RT)
D = 2° 29' 57"
T = 1,679.29'
L = 2,898.71'
E = 549.26'
R = 2,292.48'
S.E. = 4.50%
P.C. = Sta. 38+00.02
P.T. = Sta. 66+98.73
P.I. = Sta. 54+79.31

STATION 635+73.19
BUILT BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. (57-20HB)BR
LOADING HL-93
STRUCTURE NO. 057-0253

NAME PLATE
See Std. 515001



LOCATION SKETCH



PLAN

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications
with 2010 Interims

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50) (Primary)
fy = 36,000 psi (M270 Grade 36)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.087
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.152
Soil Site Class = C

STATE OF ILLINOIS
BRYAN A. SWANSON
061-006716
REGISTERED STRUCTURAL ENGINEER
PEORIA, IL.

Bryan Swanson
Date Signed: 1/02/2013
Exp. Date: 11/30/2014

GENERAL PLAN AND ELEVATION
FAI 55 BUSINESS (NB) OVER I-74(WB)
F.A.I. 74 (WB) - SEC. (57-20HB)BR
MCLEAN COUNTY
STA. 635+73.19
STRUCTURE NO. 057-0253

FILE NAME = 0570253-70570-001-GPE.dgn	USER NAME = baswanson	DESIGNED - BAS	REVISED -	
MAURER-STUTZ ENGINEERS SURVEYORS	PLOT SCALE =	DRAWN - SGM	REVISED -	
	PLOT DATE = 11/7/2012 11:00:07 AM	CHECKED - BAS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	208
		CONTRACT NO. 70570		
		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts $\frac{7}{8}$ in. ϕ, holes $\frac{15}{16}$ in. ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 227,190 lbs. (Grade 50)
14,760 lbs. (Grade 36)

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

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.

Concrete Sealer shall be applied to the exposed surfaces of both piers.

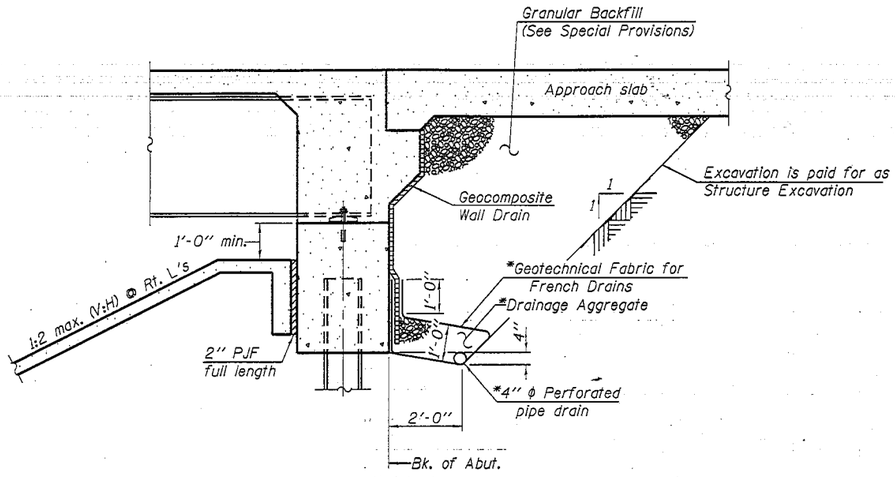
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that the exterior surfaces and bottom of the bottom flange of the fascia beams, masked off connection surfaces, and field installed fasteners, all of which shall be touched up and finish coated in the field. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5YR 3/4.

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

Slipforming of the parapets is not allowed.

The removal of existing concrete slope wall shall be paid for as Slope Wall Removal. The quantity shown extends midway between the adjacent structures. The Engineer may adjust the limits of removal in the field as needed to accommodate excavation of the proposed embankment between the bridges.



SECTION THRU INTEGRAL ABUTMENT

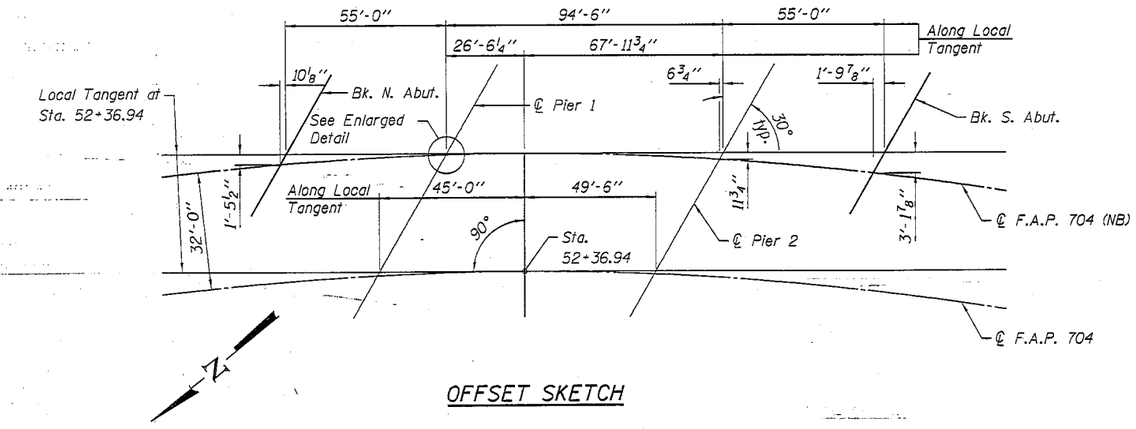
(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures 4".

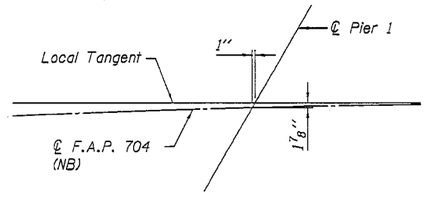
Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures No. 3	Each			1
Slope Wall Removal	Sq. Yd.		646	646
Protective Shield	Sq. Yd.	258		258
Structure Excavation	Cu. Yd.		872	872
Concrete Structures	Cu. Yd.		333.5	333.5
Concrete Superstructure	Cu. Yd.	504.6		504.6
Bridge Deck Grooving	Sq. Yd.	1351		1351
Concrete Encasement	Cu. Yd.		6.2	6.2
Protective Coat	Sq. Yd.	1591		1591
Stud Shear Connectors	Each	6972		6972
Reinforcement Bars, Epoxy Coated	Pound	122420	46350	168770
Bar Splicers	Each	967	226	1193
Slope Wall 4 Inch	Sq. Yd.		678	678
Furnishing Metal Shell Piles 14"x0.250"	Foot		1080	1080
Furnishing Steel Piles HP12x53	Foot		680	680
Driving Piles	Foot		1760	1760
Test Pile Metal Shells	Each		2	2
Test Pile Steel HP12x53	Each		2	2
Pile Shoes	Each		38	38
Name Plates	Each			1
Elastomeric Bearing Assembly, Type I	Each	14		14
Anchor Bolts, 1"	Each		28	28
Anchor Bolts, 1¼"	Each		28	28
Concrete Sealer	Sq. Ft.		3525	3525
Geocomposite Wall Drain	Sq. Yd.		100	100
Granular Backfill for Structures	Cu. Yd.		163	163
Furnishing and Erecting Structural Steel	L. Sum	0.26		0.26
Diamond Grinding (Bridge Section)	Sq. Yd.	1293		1293
Pipe Underdrains for Structures 4"	Foot		187	187
Temporary Soil Retention System	Sq. Ft.		1008	1008



OFFSET SKETCH



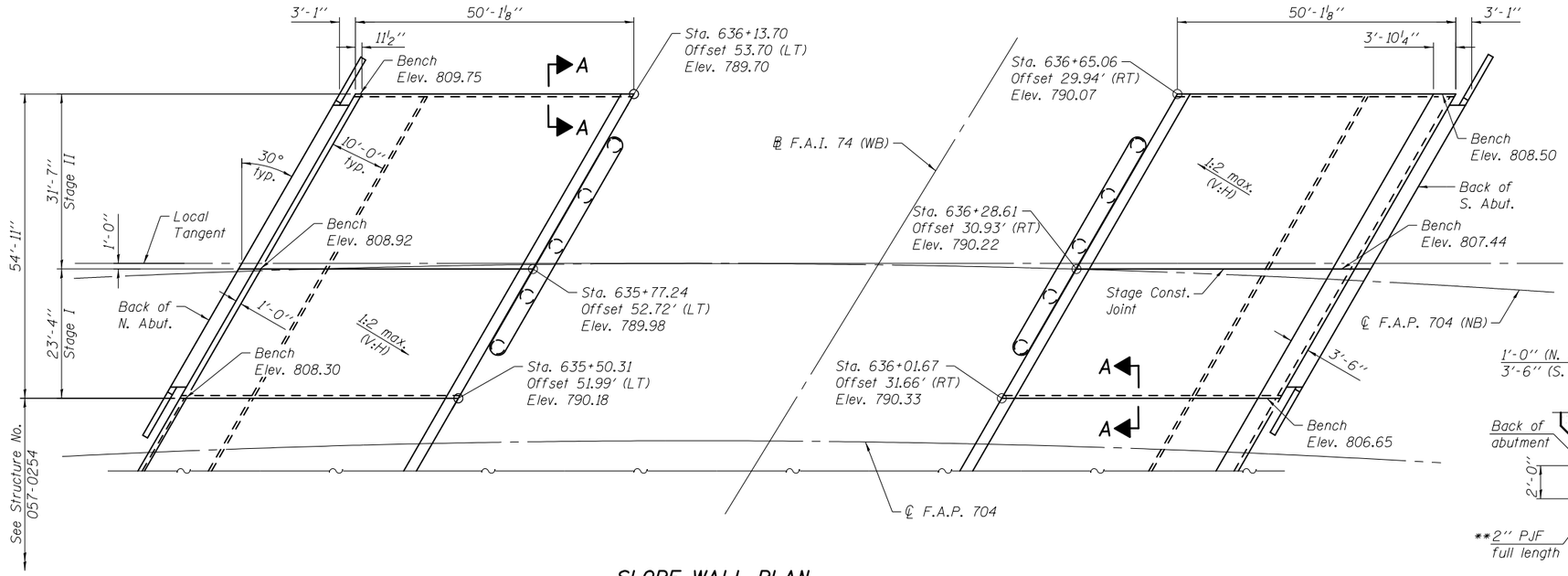
ENLARGED DETAIL

FILE NAME = 8570253-70570-201-GPE.dgn	USER NAME = beswanson	DESIGNED - BAS	REVISED -	
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -	
	PLOT SCALE =	DRAWN - SGM	REVISED -	
	PLOT DATE = 10/2/2013 4:56:59 PM	CHECKED - BAS	REVISED -	

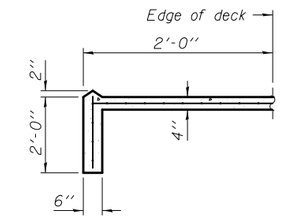
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 057-0253
SHEET NO. 2 OF 28 SHEETS

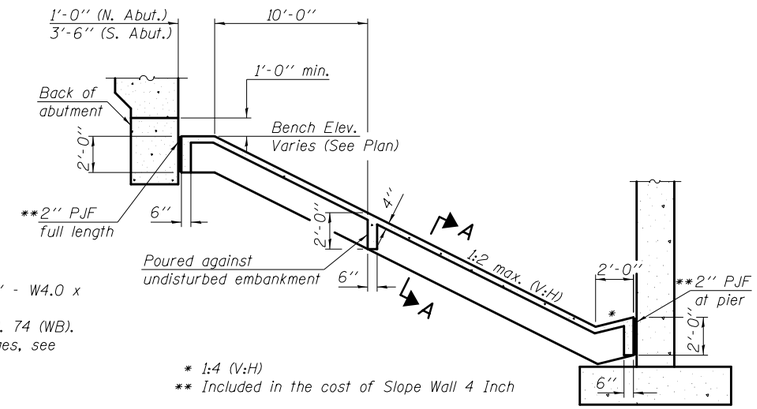
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	209
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



SLOPE WALL PLAN



SECTION A-A

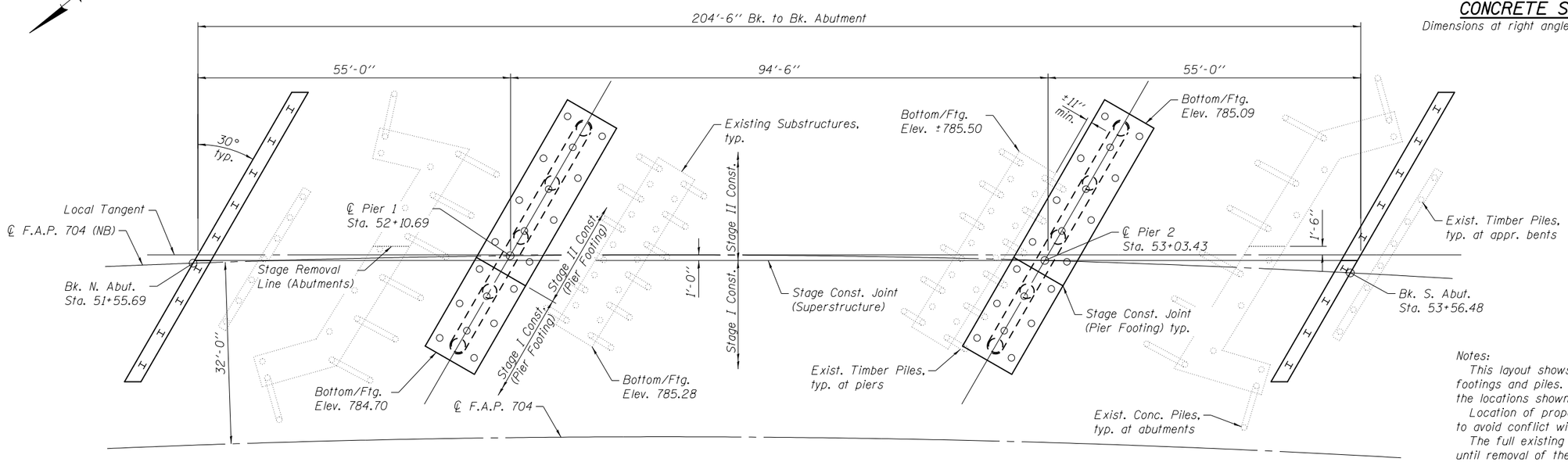


* 1:4 (V:H)
** Included in the cost of Slope Wall 4 Inch

SECTION THRU CONCRETE SLOPEWALL

Dimensions at right angles to substructures.

Notes:
Slopewall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.
Stations and offsets to slopewall are given relative to ℄ F.A.I. 74 (WB).
For slopewall details and quantities between the adjacent bridges, see plans for Str. No. 057-0254.



FOUNDATION LAYOUT

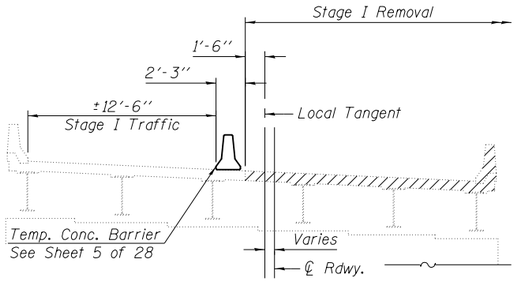
Notes:
This layout shows relative position of existing and proposed footings and piles. Existing foundations may vary slightly from the locations shown here and on the existing structure plans.
Location of proposed piles may be adjusted (up to ±1 foot) to avoid conflict with existing piles.
The full existing piers, including cap beams, shall remain intact until removal of the entire superstructure in Stage II. Limited removal of the edge of the footing may be necessary if it conflicts with the proposed footing.

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 7/29/2013 $TIME$	CHECKED - BAS	REVISED -

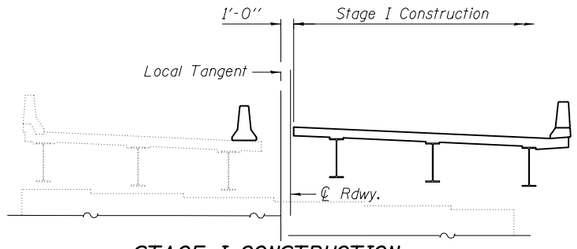
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE WALL AND FOUNDATION LAYOUT
STRUCTURE NO. 057-0253
SHEET NO. 3 OF 28 SHEETS

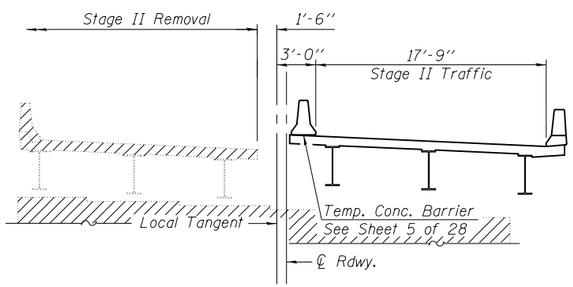
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	210
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



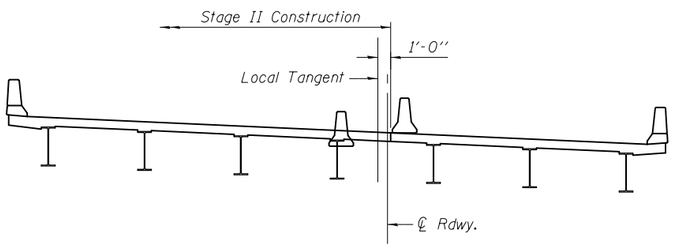
STAGE I REMOVAL



STAGE I CONSTRUCTION



STAGE II REMOVAL



STAGE II CONSTRUCTION

Staging Notes:

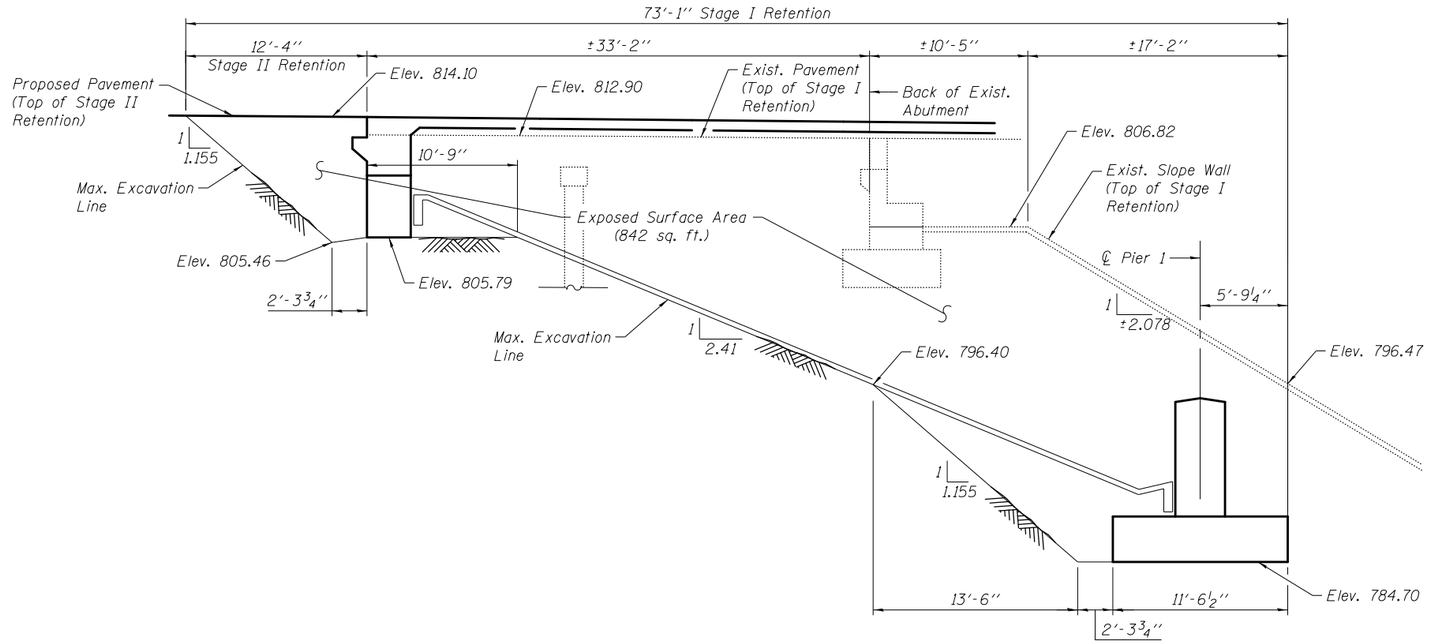
All staging cross sections are looking South.

Hatched areas indicate Removal of Existing Structures.

See Rdwy. plans for quantity of Temporary Concrete Barrier.

Stage construction joint location for the pier cap and footing will differ from those shown for the superstructure. See pier sheets for these locations.

Stage I Removal shall NOT include any portion of the existing piers below the steel beam bearings. Stage I Construction will be completed over the top of the existing piers.

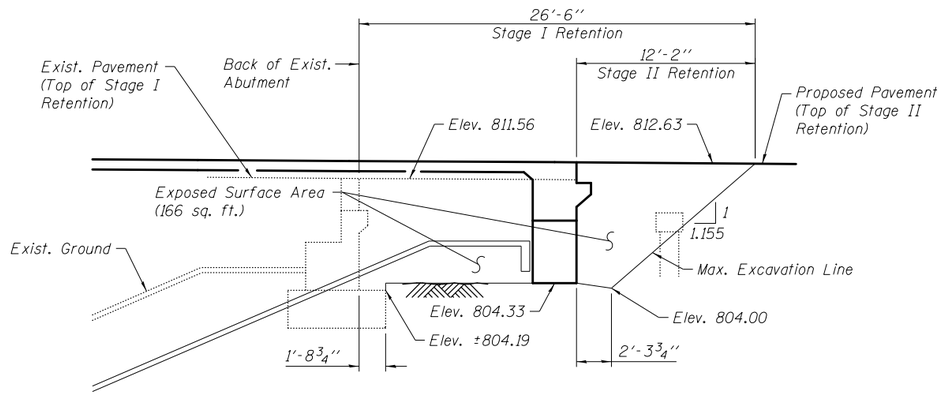


TEMPORARY SOIL RETENTION SYSTEM
NORTH ABUTMENT
(Looking East)

Notes:

Due to the potential for difficult driving conditions, 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.

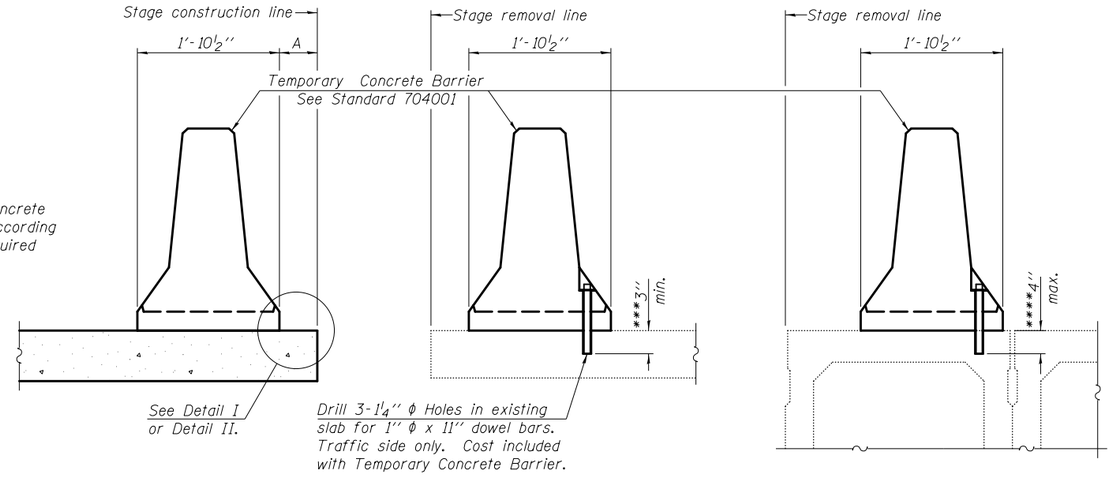
Dimensions and slopes are shown along the temporary soil retention unless noted otherwise.



TEMPORARY SOIL RETENTION SYSTEM
SOUTH ABUTMENT
(Looking East)

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**STAGE CONSTRUCTION DETAILS STRUCTURE NO. 057-0253**	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-20HB)BR	MCLEAN	440	211
	PLOT SCALE =	DRAWN - SGM	REVISED -					CONTRACT NO. 70570		
	PLOT DATE = 7/29/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 4 OF 28 SHEETS		ILLINOIS	FED. AID PROJECT		

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB | EXISTING SLAB | EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7¼" x "W" steel PL to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7¼" x "W" steel PL to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.

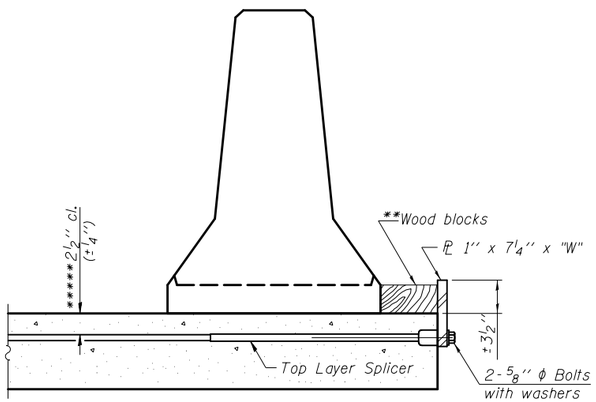
The 1" x 7¼" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

SECTIONS THRU SLAB OR DECK BEAM

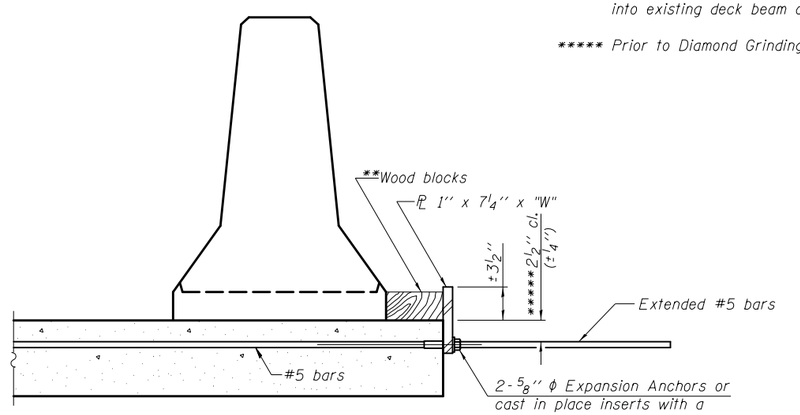
*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.

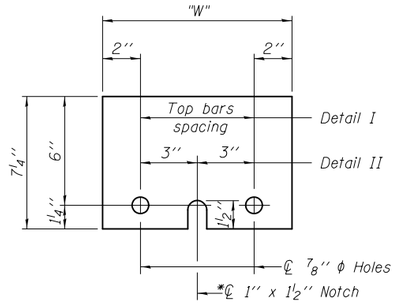
***** Prior to Diamond Grinding of Bridge Section



DETAIL I



DETAIL II



STEEL RETAINER PL 1" x 7¼" x "W"

* Required only with Detail II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

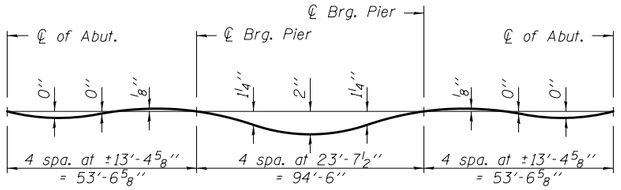
"W" = Top bars spacing + 4"

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 7/29/2013 $TIME$	CHECKED - BAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MODIFIED TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 057-0253
SHEET NO. 5 OF 28 SHEETS

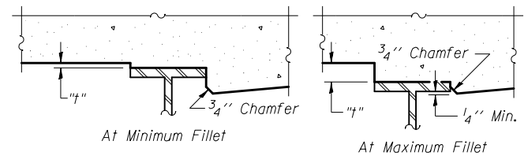
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	212
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

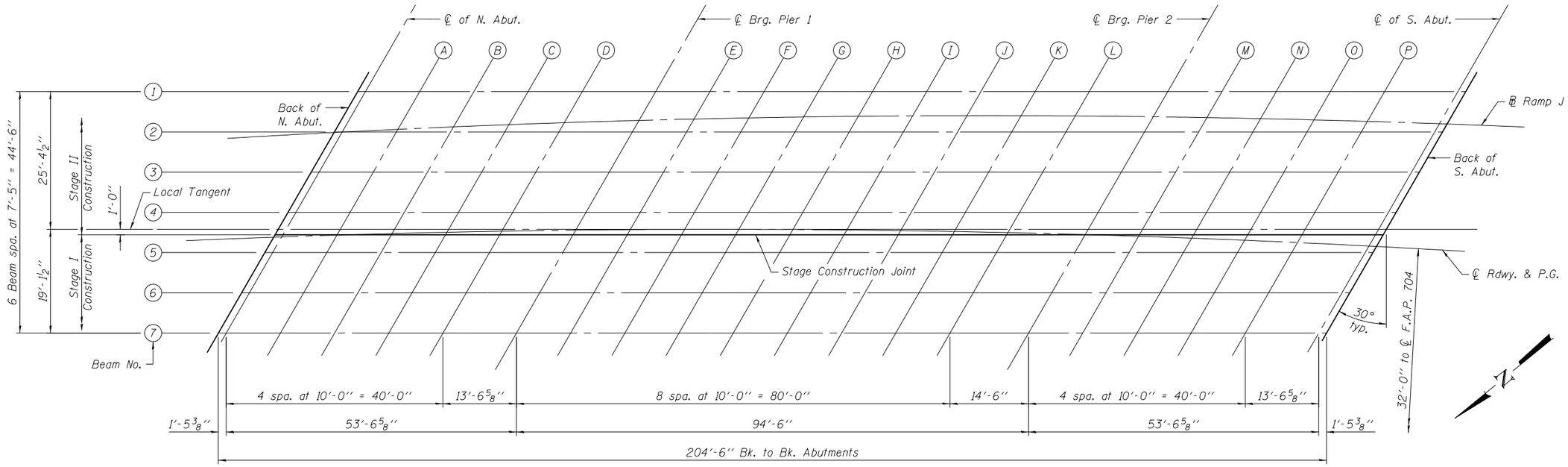
Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown on sheets 7 and 8 of 28.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown on sheets 7 and 8 of 28, minus the 8 1/4'' slab 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 7 and 8 of 28. For grinding the deck, see Special Provisions.

FILLET HEIGHTS



PLAN

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NO. 057-0253
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -		
	PLOT SCALE =	DRAWN - SGM	REVISED -		SHEET NO. 6 OF 28 SHEETS
	PLOT DATE = 7/29/2013 $TIME$	CHECKED - BAS	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	213
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

BEAM 1

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of N. Abut.	51+71.72	-58.33	815.11	815.13
℄ of N. Abut.	51+73.12	-58.29	815.10	815.12
A	51+82.87	-58.03	815.01	815.04
B	51+92.62	-57.81	814.93	814.95
C	52+02.38	-57.64	814.85	814.87
D	52+12.13	-57.51	814.77	814.78
℄ Brg. Pier 1	52+25.36	-57.41	814.67	814.69
E	52+35.11	-57.38	814.59	814.65
F	52+44.87	-57.39	814.52	814.63
G	52+54.62	-57.44	814.45	814.61
H	52+64.38	-57.54	814.38	814.57
I	52+74.13	-57.68	814.31	814.51
J	52+83.88	-57.87	814.25	814.42
K	52+93.63	-58.09	814.19	814.32
L	53+03.38	-58.36	814.13	814.21
℄ Brg. Pier 2	53+17.51	-58.83	814.04	814.06
M	53+27.26	-59.20	813.98	813.99
N	53+37.00	-59.61	813.93	813.94
O	53+46.73	-60.07	813.88	813.90
P	53+56.46	-60.57	813.83	813.85
℄ of. S. Abut.	53+69.65	-61.32	813.76	813.78
Bk. of S. Abut.	53+71.05	-61.40	813.76	813.78

℄ RAMP J

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of N. Abut.	51+67.26	-50.94	814.81	814.83
℄ of N. Abut.	51+68.72	-50.97	814.80	814.82
A	51+78.79	-51.19	814.74	814.76
B	51+88.84	-51.40	814.67	814.69
C	51+98.85	-51.62	814.61	814.62
D	52+08.84	-51.83	814.54	814.55
℄ Brg. Pier 1	52+22.33	-52.11	814.45	814.47
E	52+32.26	-52.33	814.39	814.45
F	52+42.15	-52.54	814.32	814.43
G	52+52.02	-52.76	814.26	814.41
H	52+61.87	-52.97	814.19	814.38
I	52+71.68	-53.18	814.13	814.32
J	52+81.47	-53.39	814.07	814.23
K	52+91.24	-53.60	814.00	814.13
L	53+00.96	-53.77	813.94	814.02
℄ Brg. Pier 2	53+15.06	-54.11	813.85	813.87
M	53+24.75	-54.32	813.78	813.79
N	53+34.41	-54.52	813.72	813.73
O	53+44.04	-54.72	813.66	813.68
P	53+53.64	-54.90	813.59	813.62
℄ of. S. Abut.	53+66.65	-55.20	813.51	813.53
Bk. of S. Abut.	53+68.03	-55.25	813.50	813.52

BEAM 2

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of N. Abut.	51+67.32	-51.04	814.82	814.84
℄ of N. Abut.	51+68.73	-51.00	814.80	814.83
A	51+78.51	-50.72	814.72	814.74
B	51+88.29	-50.49	814.63	814.66
C	51+98.08	-50.29	814.55	814.57
D	52+07.86	-50.15	814.47	814.48
℄ Brg. Pier 1	52+21.13	-50.01	814.37	814.39
E	52+30.91	-49.97	814.29	814.35
F	52+40.70	-49.96	814.22	814.33
G	52+50.49	-50.00	814.15	814.30
H	52+60.27	-50.08	814.08	814.26
I	52+70.06	-50.20	814.01	814.20
J	52+79.84	-50.37	813.94	814.11
K	52+89.63	-50.58	813.88	814.01
L	52+99.41	-50.83	813.82	813.90
℄ Brg. Pier 2	53+13.58	-51.27	813.73	813.75
M	53+23.36	-51.62	813.67	813.68
N	53+33.13	-52.02	813.62	813.63
O	53+42.90	-52.46	813.56	813.58
P	53+52.66	-52.95	813.51	813.54
℄ of. S. Abut.	53+65.89	-53.67	813.45	813.47
Bk. of S. Abut.	53+67.30	-53.75	813.44	813.46

* From ℄ F.A.P. 704

BEAM 3

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of N. Abut.	51+62.90	-43.76	814.52	814.54
℄ of N. Abut.	51+64.32	-43.71	814.51	814.53
A	51+74.13	-43.42	814.42	814.45
B	51+83.94	-43.17	814.34	814.36
C	51+93.75	-42.96	814.25	814.27
D	52+03.57	-42.79	814.17	814.18
℄ Brg. Pier 1	52+16.87	-42.63	814.07	814.09
E	52+26.69	-42.57	813.99	814.05
F	52+36.51	-42.54	813.92	814.02
G	52+46.33	-42.56	813.84	814.00
H	52+56.14	-42.62	813.77	813.95
I	52+65.96	-42.73	813.70	813.89
J	52+75.78	-42.88	813.64	813.80
K	52+85.59	-43.07	813.57	813.70
L	52+95.40	-43.30	813.51	813.59
℄ Brg. Pier 2	53+09.63	-43.72	813.42	813.44
M	53+19.43	-44.05	813.36	813.37
N	53+29.24	-44.44	813.31	813.32
O	53+39.04	-44.86	813.25	813.27
P	53+48.83	-45.33	813.20	813.22
℄ of. S. Abut.	53+62.11	-46.03	813.13	813.15
Bk. of S. Abut.	53+63.52	-46.11	813.12	813.14

BEAM 4

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of N. Abut.	51+58.45	-36.49	814.23	814.25
℄ of N. Abut.	51+59.87	-36.44	814.22	814.24
A	51+69.71	-36.13	814.13	814.15
B	51+79.55	-35.85	814.04	814.06
C	51+89.40	-35.63	813.96	813.97
D	51+99.24	-35.44	813.88	813.88
℄ Brg. Pier 1	52+12.59	-35.26	813.77	813.79
E	52+22.44	-35.17	813.69	813.75
F	52+32.29	-35.13	813.61	813.72
G	52+42.14	-35.13	813.54	813.69
H	52+51.99	-35.18	813.47	813.65
I	52+61.84	-35.26	813.40	813.58
J	52+71.68	-35.39	813.33	813.50
K	52+81.53	-35.57	813.26	813.39
L	52+91.37	-35.78	813.20	813.28
℄ Brg. Pier 2	53+05.65	-36.17	813.11	813.13
M	53+15.48	-36.49	813.05	813.06
N	53+25.32	-36.86	812.99	813.01
O	53+35.15	-37.26	812.94	812.96
P	53+44.98	-37.71	812.88	812.91
℄ of. S. Abut.	53+58.30	-38.39	812.82	812.84
Bk. of S. Abut.	53+59.72	-38.47	812.81	812.83

℄ ROADWAY AND PROFILE GRADE

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of N. Abut.	51+55.69	-32.00	814.05	814.07
℄ of N. Abut.	51+57.14	-32.00	814.04	814.06
A	51+67.20	-32.00	813.96	813.98
B	51+77.23	-32.00	813.89	813.91
C	51+87.23	-32.00	813.81	813.83
D	51+97.21	-32.00	813.74	813.74
℄ Brg. Pier 1	52+10.69	-32.00	813.63	813.66
E	52+20.61	-32.00	813.56	813.62
F	52+30.50	-32.00	813.49	813.59
G	52+40.37	-32.00	813.41	813.57
H	52+50.21	-32.00	813.34	813.52
I	52+60.03	-32.00	813.26	813.45
J	52+69.82	-32.00	813.19	813.36
K	52+79.59	-32.00	813.12	813.25
L	52+89.34	-32.00	813.04	813.13
℄ Brg. Pier 2	53+03.43	-32.00	812.94	812.96
M	53+13.12	-32.00	812.87	812.88
N	53+22.80	-32.00	812.79	812.81
O	53+32.45	-32.00	812.72	812.74
P	53+42.07	-32.00	812.65	812.67
℄ of. S. Abut.	53+55.09	-32.00	812.55	812.57
Bk. of S. Abut.	53+56.48	-32.00	812.54	812.56

FILE NAME = $FILES$
MAURER-STUTZ ENGINEERS SURVEYORS
USER NAME = piersonbr | PLOT SCALE = | PLOT DATE = 7/29/2013 $TIME$
DESIGNED - BAS | CHECKED - JAE | DRAWN - SGM | CHECKED - BAS
REVISED - | REVISED - | REVISED - | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 057-0253
SHEET NO. 7 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	214
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

STAGE CONSTRUCTION JOINT

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of N. Abut.	51+55.97	-32.45	814.07	814.09
℄ of N. Abut.	51+57.39	-32.40	814.05	814.07
A	51+67.25	-32.07	813.96	813.99
B	51+77.10	-31.79	813.88	813.90
C	51+86.97	-31.55	813.79	813.81
D	51+96.83	-31.36	813.71	813.72
℄ Brg. Pier 1	52+10.20	-31.16	813.60	813.62
E	52+20.07	-31.06	813.52	813.58
F	52+29.93	-31.01	813.45	813.55
G	52+39.80	-31.00	813.37	813.52
H	52+49.67	-31.04	813.30	813.47
I	52+59.53	-31.11	813.23	813.41
J	52+69.40	-31.23	813.16	813.32
K	52+79.26	-31.40	813.09	813.22
L	52+89.12	-31.60	813.03	813.11
℄ Brg. Pier 2	53+03.42	-31.98	812.94	812.96
M	53+13.28	-32.29	812.88	812.89
N	53+23.13	-32.64	812.82	812.83
O	53+32.98	-33.04	812.76	812.78
P	53+42.83	-33.48	812.71	812.73
℄ of. S. Abut.	53+56.17	-34.15	812.64	812.66
Bk. of S. Abut.	53+57.59	-34.22	812.63	812.65

BEAM 5

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of N. Abut.	51+53.98	-29.23	813.94	813.96
℄ of N. Abut.	51+55.40	-29.18	813.92	813.94
A	51+65.27	-28.84	813.83	813.86
B	51+75.14	-28.55	813.75	813.77
C	51+85.02	-28.30	813.66	813.68
D	51+94.89	-28.10	813.58	813.59
℄ Brg. Pier 1	52+08.29	-27.89	813.47	813.49
E	52+18.16	-27.79	813.39	813.45
F	52+28.04	-27.73	813.31	813.42
G	52+37.93	-27.71	813.24	813.38
H	52+47.81	-27.73	813.16	813.34
I	52+57.69	-27.80	813.09	813.27
J	52+67.57	-27.92	813.02	813.19
K	52+77.44	-28.07	812.96	813.08
L	52+87.32	-28.27	812.89	812.97
℄ Brg. Pier 2	53+01.64	-28.63	812.80	812.82
M	53+11.51	-28.94	812.74	812.75
N	53+21.38	-29.28	812.68	812.69
O	53+31.24	-29.67	812.63	812.65
P	53+41.11	-30.11	812.57	812.59
℄ of. S. Abut.	53+54.47	-30.76	812.50	812.52
Bk. of S. Abut.	53+55.89	-30.84	812.49	812.51

BEAM 6

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of N. Abut.	51+49.47	-21.98	813.64	813.66
℄ of N. Abut.	51+50.90	-21.92	813.63	813.65
A	51+60.80	-21.57	813.54	813.56
B	51+70.70	-21.26	813.45	813.47
C	51+80.61	-20.99	813.36	813.38
D	51+90.52	-20.77	813.28	813.29
℄ Brg. Pier 1	52+03.95	-20.53	813.17	813.19
E	52+13.86	-20.41	813.09	813.15
F	52+23.77	-20.33	813.01	813.12
G	52+33.68	-20.29	812.94	813.09
H	52+43.60	-20.30	812.86	813.04
I	52+53.51	-20.35	812.79	812.98
J	52+63.42	-20.45	812.72	812.89
K	52+73.33	-20.58	812.65	812.78
L	52+83.24	-20.76	812.59	812.67
℄ Brg. Pier 2	52+97.60	-21.10	812.49	812.51
M	53+07.51	-21.39	812.43	812.44
N	53+17.41	-21.72	812.37	812.38
O	53+27.31	-22.09	812.31	812.33
P	53+37.20	-22.51	812.26	812.28
℄ of. S. Abut.	53+50.61	-23.14	812.19	812.21
Bk. of S. Abut.	53+52.04	-23.21	812.18	812.20

* From ℄ F.A.P. 704

BEAM 7

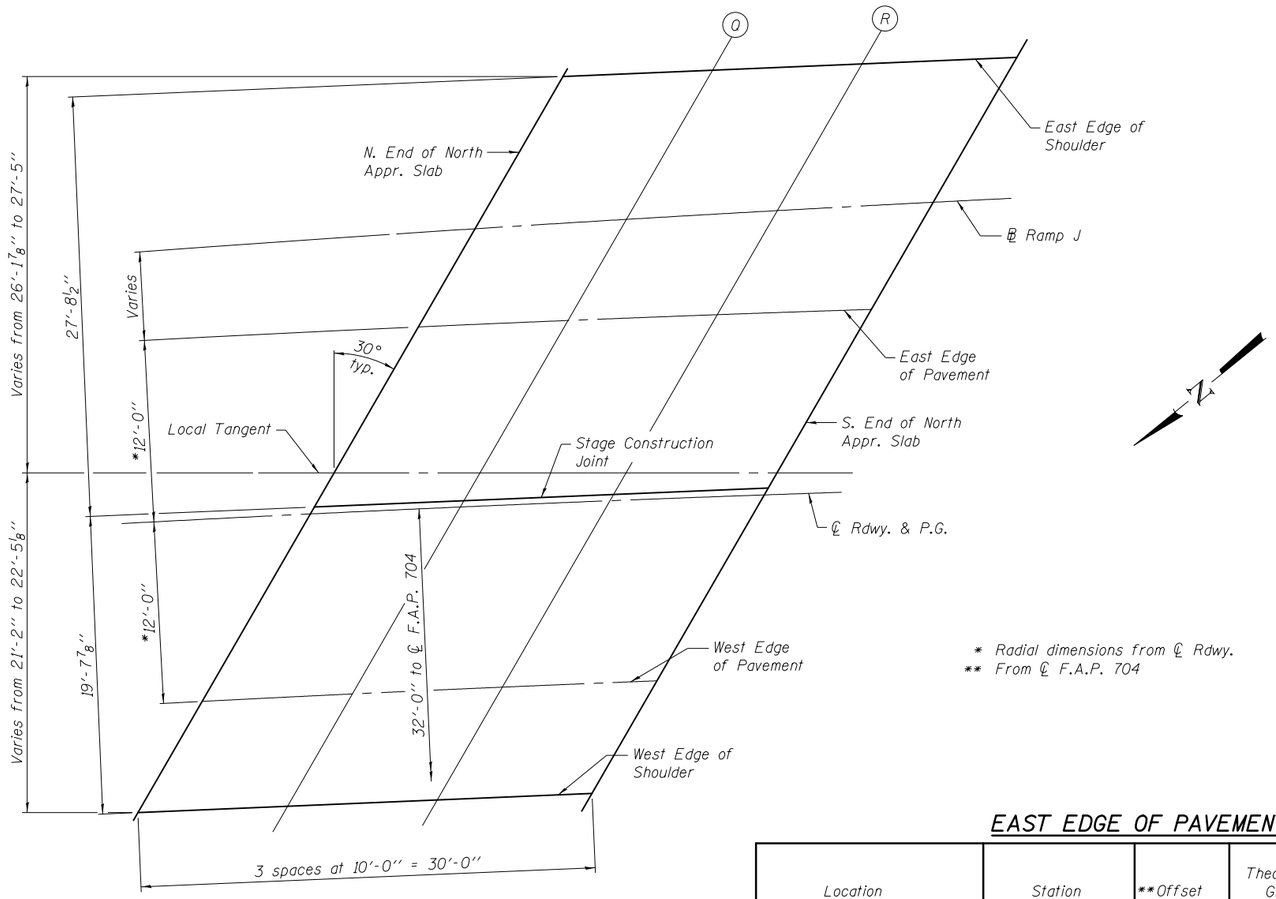
Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. of N. Abut.	51+44.94	-14.73	813.35	813.37
℄ of N. Abut.	51+46.37	-14.68	813.34	813.36
A	51+56.30	-14.30	813.25	813.27
B	51+66.24	-13.97	813.16	813.18
C	51+76.17	-13.69	813.07	813.08
D	51+86.11	-13.44	812.98	812.99
℄ Brg. Pier 1	51+99.59	-13.18	812.87	812.89
E	52+09.53	-13.04	812.79	812.85
F	52+19.47	-12.94	812.71	812.82
G	52+29.42	-12.89	812.63	812.79
H	52+39.36	-12.88	812.56	812.74
I	52+49.30	-12.91	812.49	812.67
J	52+59.25	-12.98	812.41	812.58
K	52+69.19	-13.10	812.35	812.48
L	52+79.13	-13.27	812.28	812.36
℄ Brg. Pier 2	52+93.54	-13.58	812.18	812.21
M	53+03.48	-13.85	812.12	812.13
N	53+13.42	-14.16	812.06	812.07
O	53+23.35	-14.51	812.00	812.02
P	53+33.28	-14.91	811.95	811.97
℄ of. S. Abut.	53+46.73	-15.52	811.87	811.89
Bk. of S. Abut.	53+48.16	-15.59	811.87	811.89

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 7/29/2013 $TIME$	CHECKED - BAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 057-0253
SHEET NO. 8 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	215
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



* Radial dimensions from ℄ Rdwy.
** From ℄ F.A.P. 704

PLAN

EAST EDGE OF SHOULDER

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	51+43.69	-60.11	815.40	815.42
Q	51+53.43	-60.14	815.33	815.35
R	51+63.18	-60.22	815.26	815.28
S. End North Appr.	51+72.92	-60.33	815.19	815.21

℄ RAMP J

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	51+37.61	-50.31	815.01	815.03
Q	51+47.53	-50.52	814.94	814.96
R	51+57.37	-50.66	814.87	814.90
S. End North Appr.	51+67.26	-50.94	814.81	814.83

EAST EDGE OF PAVEMENT

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	51+33.67	-44.00	814.75	814.77
Q	51+43.49	-44.00	814.68	814.70
R	51+53.28	-44.00	814.61	814.63
S. End North Appr.	51+63.05	-44.00	814.53	814.55

STAGE CONSTRUCTION JOINT

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	51+26.39	-32.45	814.29	814.31
Q	51+36.25	-32.40	814.21	814.23
R	51+46.11	-32.41	814.14	814.16
S. End North Appr.	51+55.97	-32.45	814.07	814.09

℄ ROADWAY & PROFILE GRADE

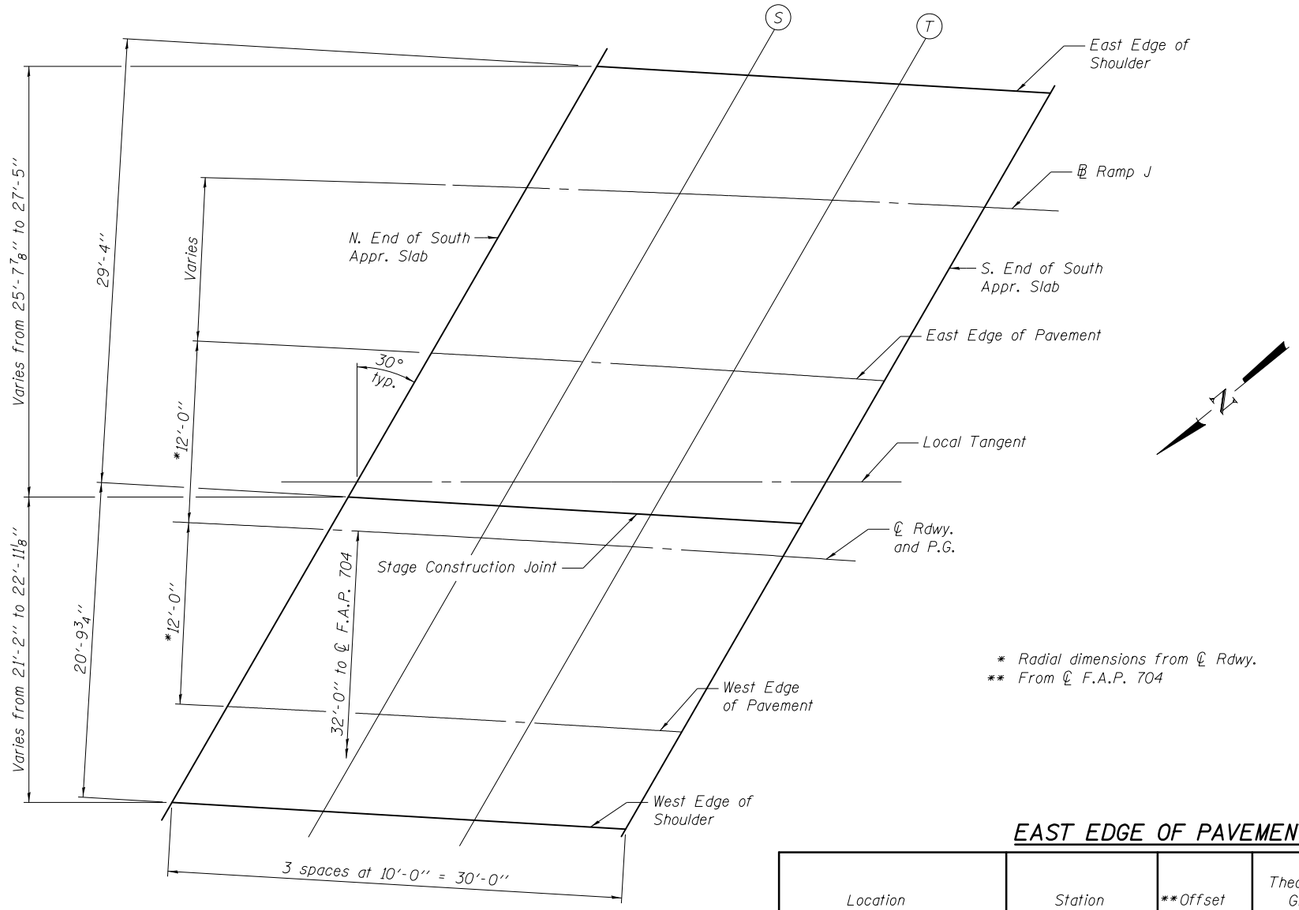
Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	51+26.10	-32.00	814.27	814.29
Q	51+35.99	-32.00	814.20	814.22
R	51+45.85	-32.00	814.12	814.14
S. End North Appr.	51+55.69	-32.00	814.05	814.07

WEST EDGE OF PAVEMENT

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	51+18.44	-20.00	813.79	813.81
Q	51+28.40	-20.00	813.71	813.73
R	51+38.33	-20.00	813.64	813.66
S. End North Appr.	51+48.24	-20.00	813.56	813.58

WEST EDGE OF SHOULDER

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	51+13.85	-12.90	813.50	813.52
Q	51+23.80	-12.80	813.42	813.44
R	51+33.74	-12.75	813.35	813.37
S. End North Appr.	51+43.69	-12.74	813.27	813.29



* Radial dimensions from ℄ Rdwy.
** From ℄ F.A.P. 704

PLAN

EAST EDGE OF SHOULDER

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+72.08	-63.51	813.84	813.86
S	53+81.81	-63.53	813.77	813.79
T	53+91.54	-63.60	813.70	813.72
S. End South Appr.	54+01.27	-63.71	813.63	813.65

℄ RAMP J

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+68.04	-55.25	813.50	813.52
S	53+77.89	-55.45	813.44	813.46
T	53+87.74	-55.67	813.37	813.39
S. End South Appr.	53+97.55	-55.86	813.31	813.33

EAST EDGE OF PAVEMENT

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+62.48	-44.00	813.04	813.06
S	53+72.30	-44.00	812.96	812.98
T	53+82.10	-44.00	812.89	812.91
S. End South Appr.	53+91.87	-44.00	812.82	812.84

STAGE CONSTRUCTION JOINT

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+57.59	-34.22	812.63	812.65
S	53+67.45	-34.18	812.56	812.58
T	53+77.30	-34.19	812.48	812.50
S. End South Appr.	53+87.15	-34.24	812.41	812.43

℄ ROADWAY & PROFILE GRADE

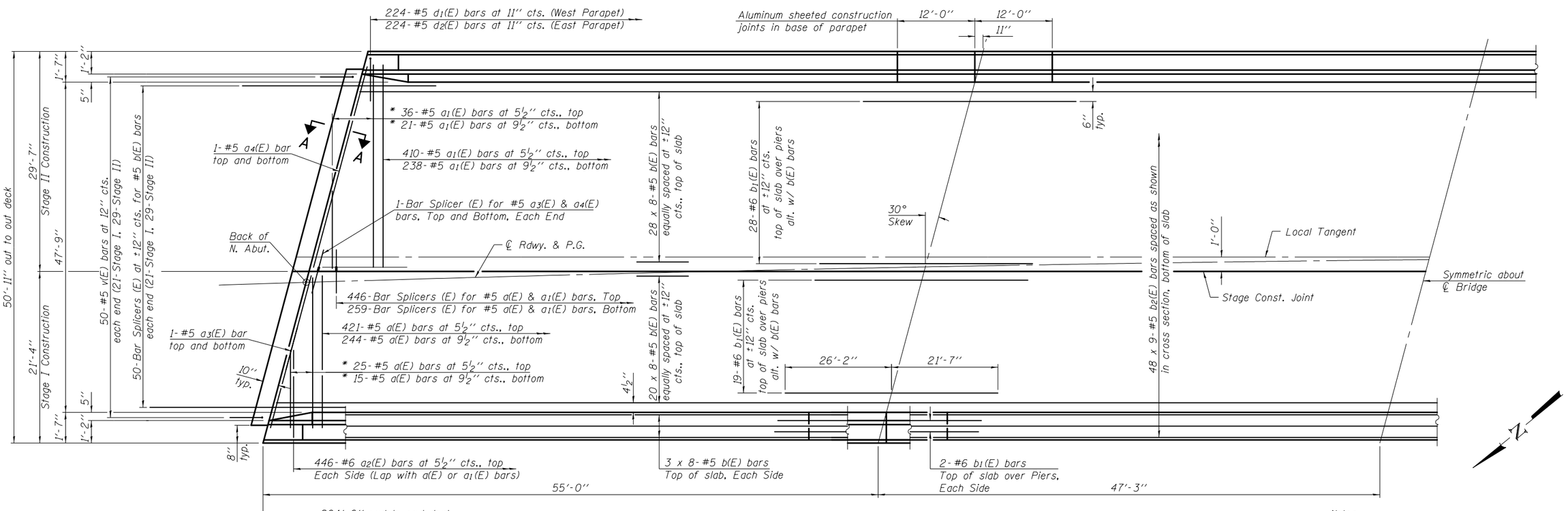
Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+56.48	-32.00	812.54	812.56
S	53+66.36	-32.00	812.47	812.49
T	53+76.22	-32.00	812.39	812.41
S. End South Appr.	53+86.06	-32.00	812.32	812.34

WEST EDGE OF PAVEMENT

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+50.41	-20.00	812.05	812.07
S	53+60.36	-20.00	811.97	811.99
T	53+70.28	-20.00	811.90	811.92
S. End South Appr.	53+80.19	-20.00	811.82	811.84

WEST EDGE OF SHOULDER

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+47.09	-13.49	811.78	811.80
S	53+57.03	-13.41	811.70	811.72
T	53+66.97	-13.37	811.62	811.65
S. End South Appr.	53+76.91	-13.37	811.55	811.57



* Order a(E) and a_1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

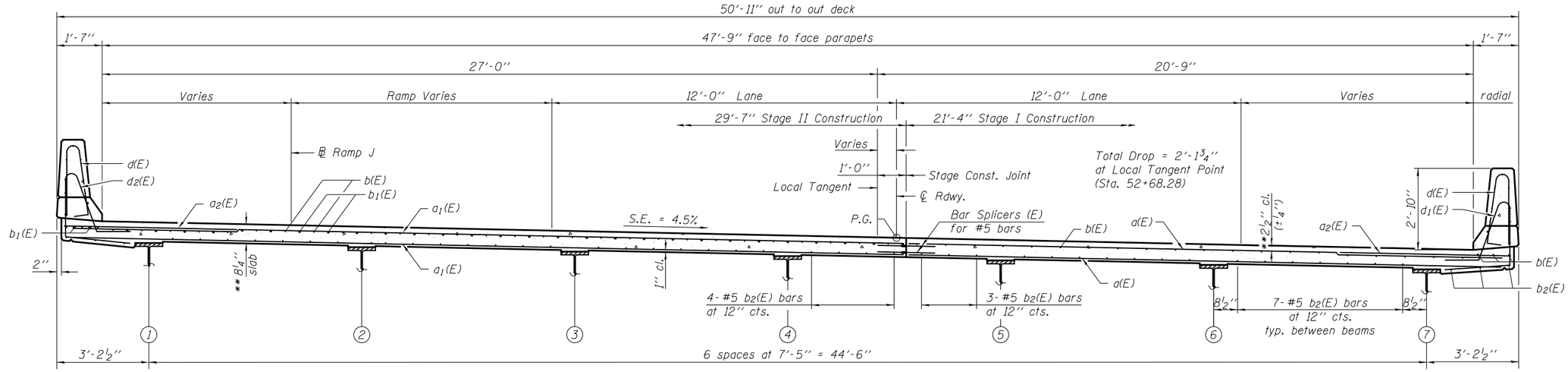
** Prior to Diamond Grinding of Bridge Section

PARTIAL PLAN

MINIMUM BAR LAP

#5 bar = 2'-7"

Notes:
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See sheet 12 of 28 for superstructure details, parapet reinforcement, and Bill of Material.
See sheet 13 of 28 for Section A-A.
For details of Bar Splicers, see sheet 25 of 28.



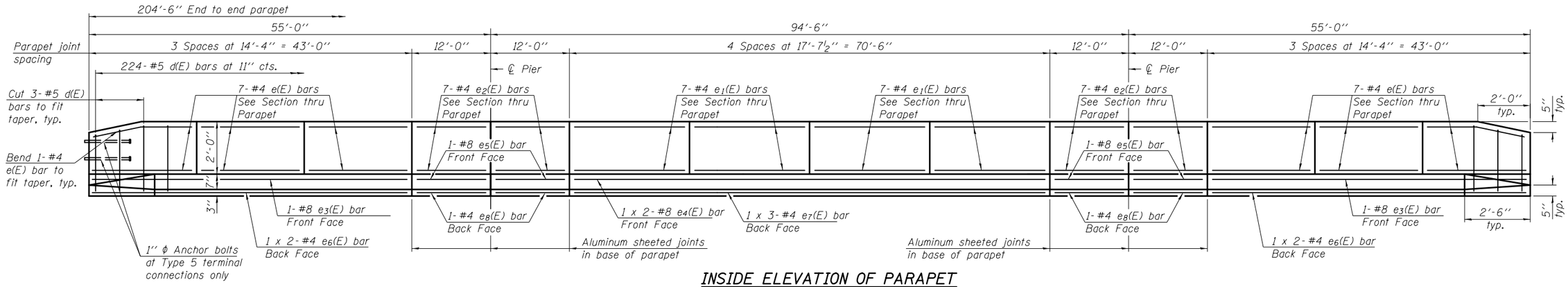
NEAR PIER

NEAR MIDSPAN

CROSS SECTION

(Looking South)

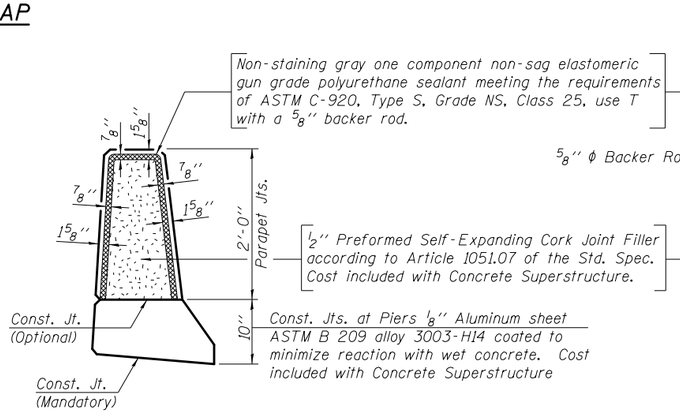
FILE NAME = $FILE$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STRUCTURE NO. 057-0253	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			T4	(57-20HB)BR	MCLEAN	440	218
	PLOT SCALE =	DRAWN - SGM	REVISED -					CONTRACT NO. 70570		
	PLOT DATE = 7/29/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 11 OF 28 SHEETS		ILLINOIS FED. AID PROJECT			



INSIDE ELEVATION OF PARAPET

MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"



PARAPET JOINT DETAILS

SECTION THRU PARAPET

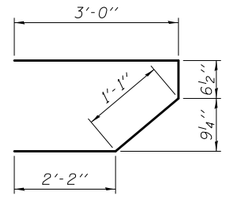
* Prior to Diamond Grinding of Bridge Section

1"ϕ ANCHOR BOLT

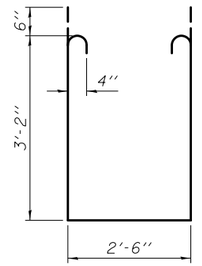
(Cost included with Concrete Superstructure)

BAR d(E)

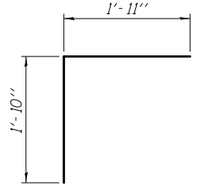
BARS d1(E) & d2(E)



BAR s(E)



BAR s1(E)

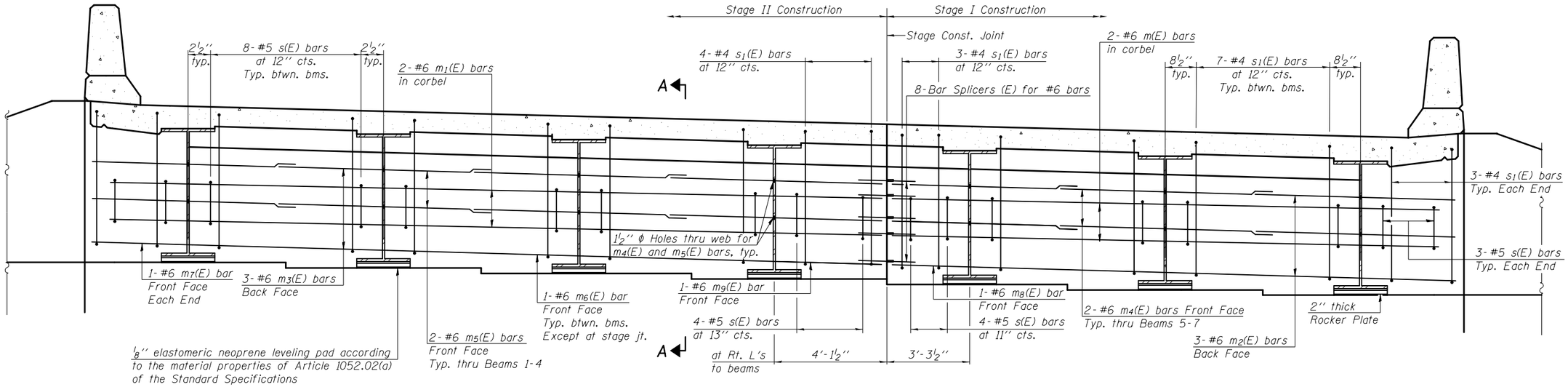


BAR v(E)

SUPERSTRUCTURE BILL OF MATERIAL

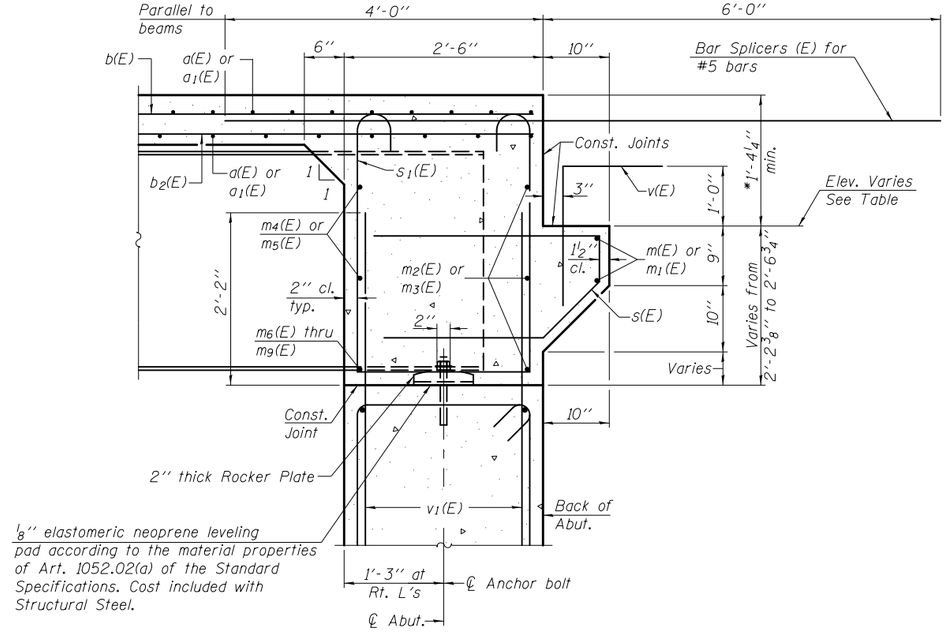
Bar	No.	Size	Length	Shape
d(E)	705	#5	20'-7"	
a1(E)	705	#5	28'-10"	
a2(E)	892	#6	6'-6"	
a3(E)	4	#5	24'-2"	
a4(E)	4	#5	33'-9"	
b(E)	432	#5	27'-10"	
b1(E)	102	#6	47'-9"	
b2(E)	432	#5	25'-0"	
d(E)	448	#5	5'-7"	
d1(E)	224	#5	7'-11"	
d2(E)	224	#5	8'-0"	
e(E)	84	#4	14'-0"	
e1(E)	56	#4	17'-4"	
e2(E)	56	#4	11'-8"	
e3(E)	4	#8	42'-8"	
e4(E)	4	#8	37'-9"	
e5(E)	8	#8	11'-8"	
e6(E)	8	#4	22'-5"	
e7(E)	6	#4	24'-9"	
e8(E)	8	#4	11'-8"	
m(E)	4	#6	23'-5"	
m1(E)	4	#6	33'-0"	
m2(E)	6	#6	24'-2"	
m3(E)	6	#6	33'-9"	
m4(E)	12	#6	10'-5"	
m5(E)	16	#6	11'-0"	
m6(E)	10	#6	8'-2"	
m7(E)	4	#6	3'-3"	
m8(E)	2	#6	3'-4"	
m9(E)	2	#6	4'-4"	
s(E)	108	#5	6'-10"	
s1(E)	96	#4	9'-10"	
v(E)	100	#5	3'-9"	
Reinforcement Bars, Epoxy Coated		Pound	89260	
Concrete Superstructure		Cu. Yd.	362.3	

Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.
See View B-B on sheet 14 of 28 for placement of 1" ϕ Anchor bolts in end of parapet.



DIAPHRAGM ELEVATION AT ABUTMENT

(Looking South)



Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 12 of 28.

Concrete in diaphragm is included with Concrete Superstructure on sheet 12 of 28.

For details of bars s(E) & s_1(E) see sheet 12 of 28.

The s(E) and s_1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

MIN. BAR LAP

#6 bar = 3'-4"

TOP OF CORBEL ELEVATIONS

	N. Abut.	S. Abut.
West End	811.91	810.42
Stage Const. Jt.	812.73	811.30
East End	813.87	812.52

* Prior to Diamond Grinding of Bridge Section

SECTION A-A

Dimensions at right angles to abutment, except as shown.

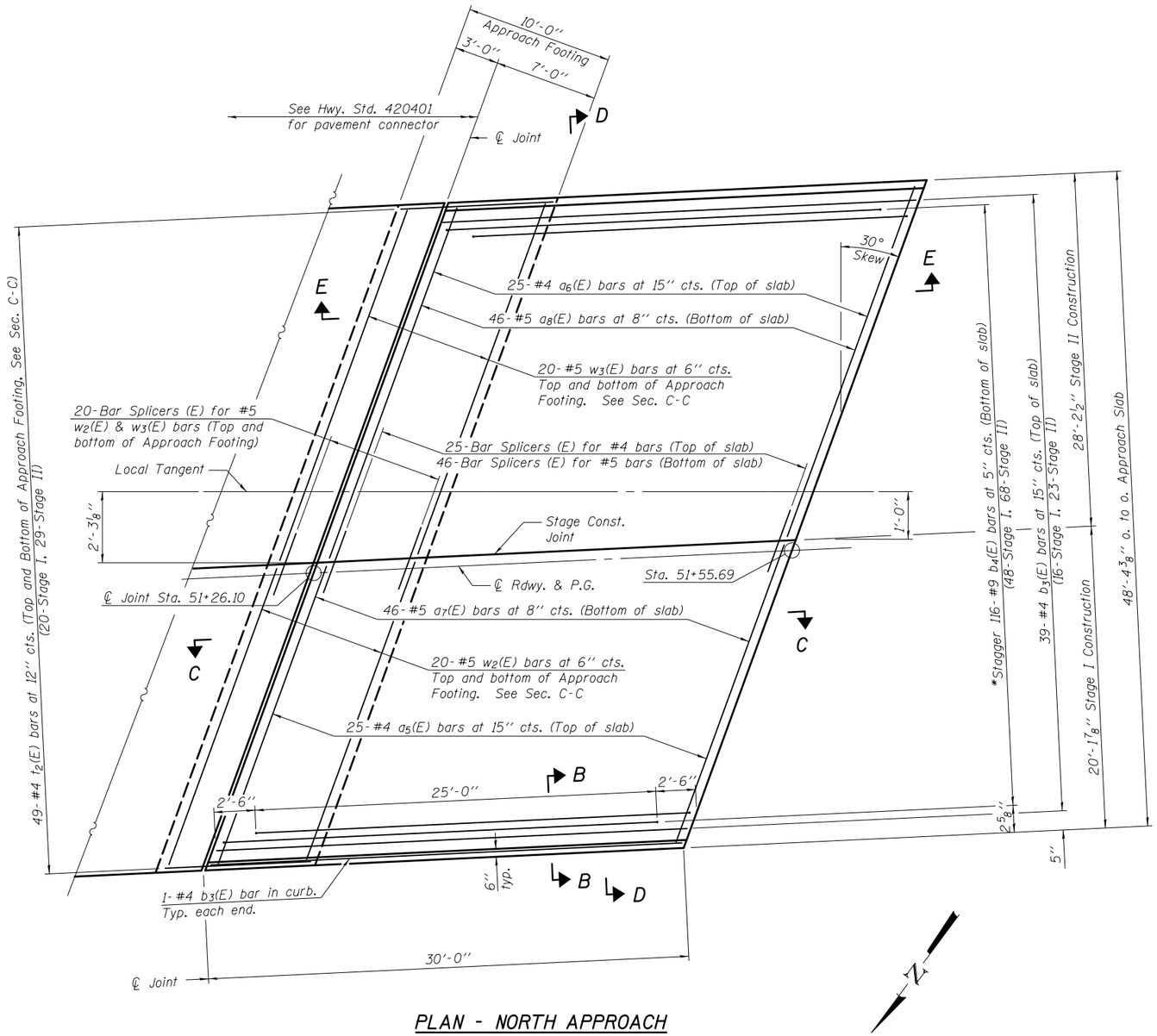
FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS	PLOT DATE = 7/29/2013 $TIME$	CHECKED - BAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 057-0253
SHEET NO. 13 OF 28 SHEETS

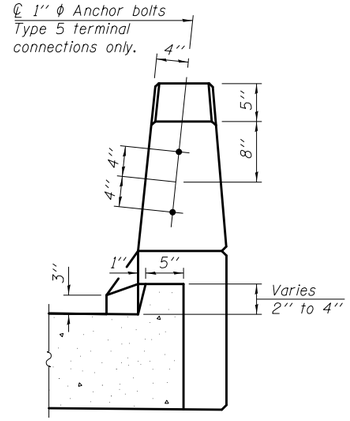
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	220
		CONTRACT NO. 70570		
	ILLINOIS	FED. AID PROJECT		

Notes:
See sheet 16 of 28 for Sections C-C & D-D and View E-E.
a_5(E) thru a_8(E) bar spacings measured along ℄ Rdwy.



PLAN - NORTH APPROACH

* Tilt #9 b_4(E) bars as required to maintain clearance.

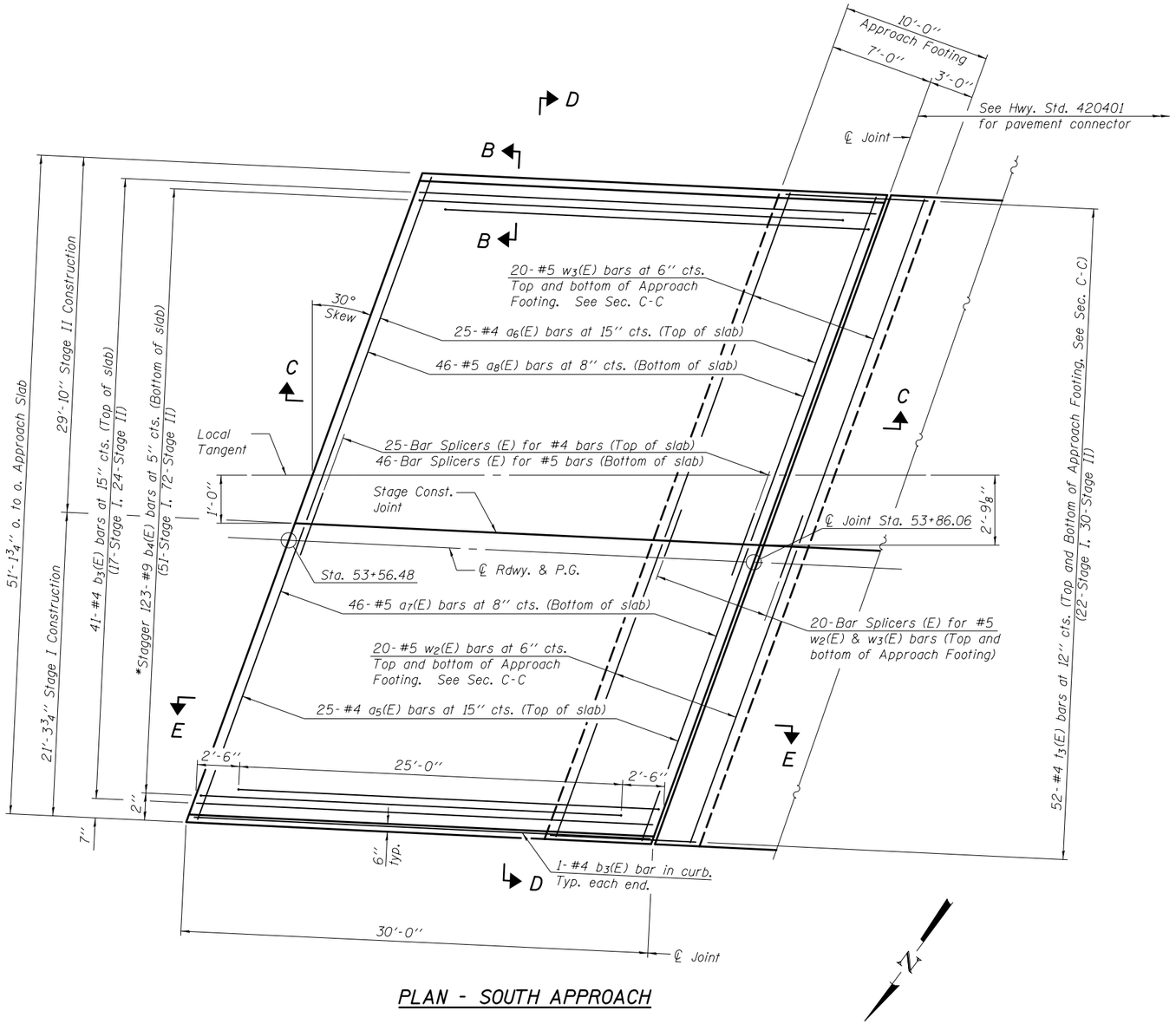


VIEW B-B

(Sheet 1 of 3)

FILE NAME = $FILE$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 057-0253	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-20HB)BR	MCLEAN	440	221
	PLOT SCALE =	DRAWN - SGM	REVISED -						CONTRACT NO. 70570	
	PLOT DATE = 7/29/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 14 OF 28 SHEETS			ILLINOIS FED. AID PROJECT		

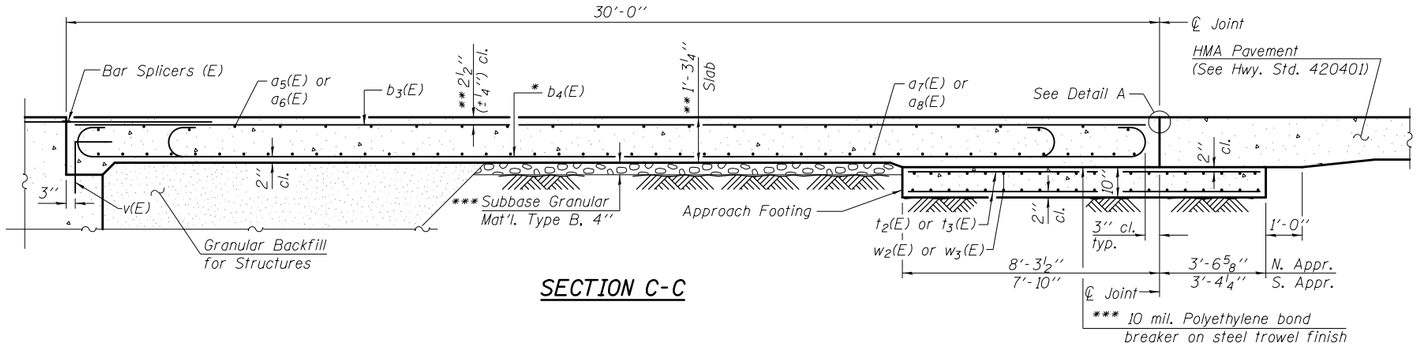
Notes:
See sheet 16 of 28 for Sections C-C & D-D and View E-E.
See sheet 14 of 28 for View B-B.
a_5(E) thru a_8(E) bar spacings measured along ℄ Rdwy.



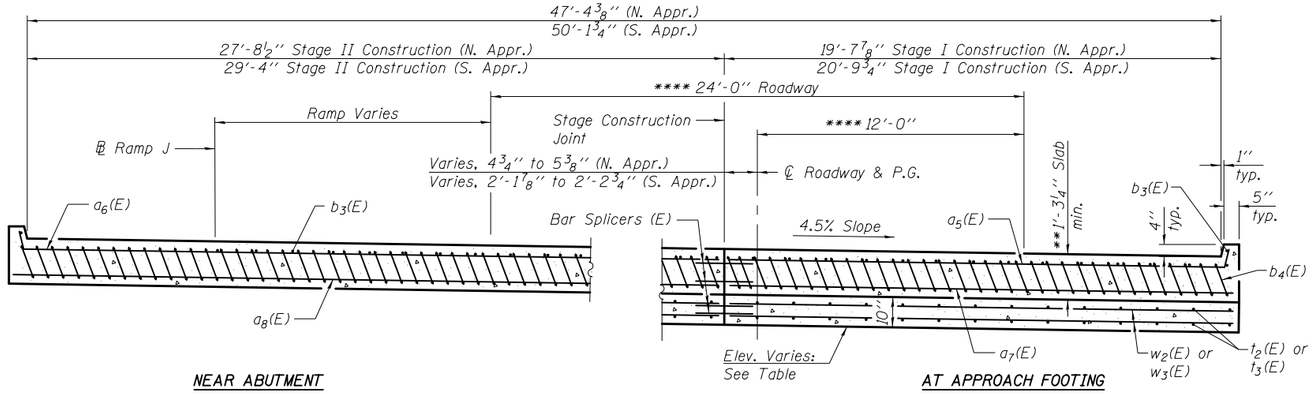
PLAN - SOUTH APPROACH

* Tilt #9 b_4(E) bars as required to maintain clearance.

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 057-0253	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-20HB)BR	MCLEAN	440	222
	PLOT SCALE =	DRAWN - SGM	REVISED -						CONTRACT NO. 70570	
	PLOT DATE = 7/29/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 15 OF 28 SHEETS			ILLINOIS	FED. AID PROJECT	



SECTION C-C

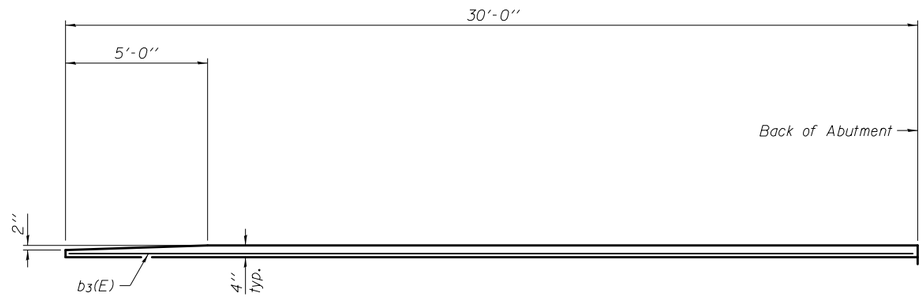


NEAR ABUTMENT

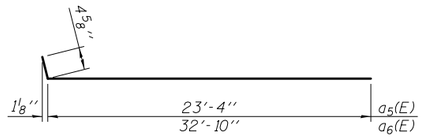
AT APPROACH FOOTING

SECTION D-D

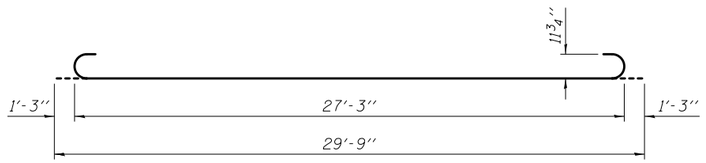
(See Plan for dimensions not shown)



VIEW E-E



BARS a5(E) & a6(E)



BAR b4(E)

Notes:

Approach slab concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheets 12 and 13 of 28.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 25 of 28.
Cost of excavation for approach footing included with Concrete Structures.
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 28.
Dimensions are shown parallel and perpendicular to the Stage Construction Joint, unless noted otherwise.

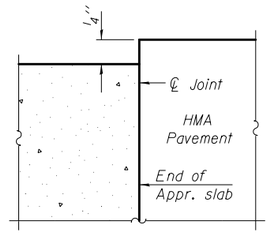
TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a5(E)	50	#4	23'-9"	
a6(E)	50	#4	33'-3"	
a7(E)	92	#5	23'-5"	
a8(E)	92	#5	33'-0"	
b3(E)	84	#4	29'-8"	
b4(E)	239	#9	29'-9"	
t2(E)	98	#4	11'-5"	
t3(E)	104	#4	10'-9"	
w2(E)	80	#5	23'-5"	
w3(E)	80	#5	33'-0"	
Concrete Superstructure			Cu. Yd.	142.3
Concrete Structures			Cu. Yd.	35.4
Reinforcement Bars, Epoxy Coated			Pound	39360

APPROACH FOOTING ELEVATIONS

	N. Appr.	S. Appr.
West Edge	811.33	809.44
Stage Const. Jt.	812.18	810.32
East Edge	813.27	811.56

* Tilt #9 b4(E) bars as required to maintain clearance.
** Prior to Diamond Grinding of the Bridge Section.
*** Cost included with Concrete Superstructure.
**** Measured radially.



FLEXIBLE PAVEMENT

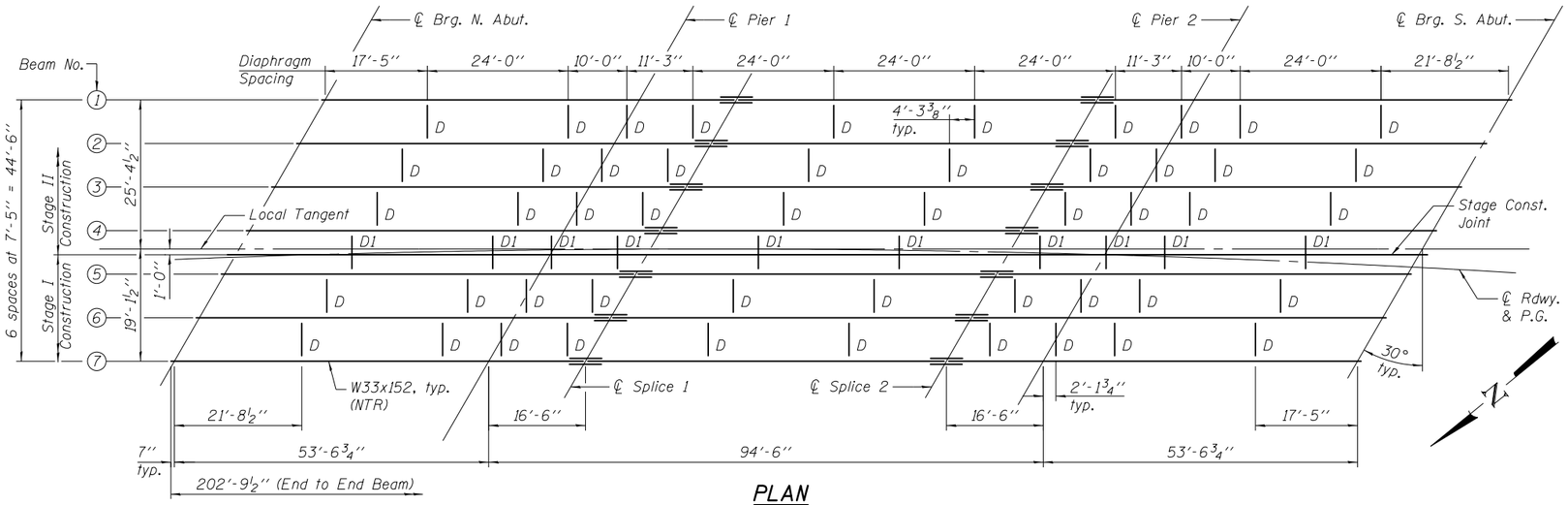
DETAIL A

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 7/29/2013 $TIME$	CHECKED - BAS	REVISED -

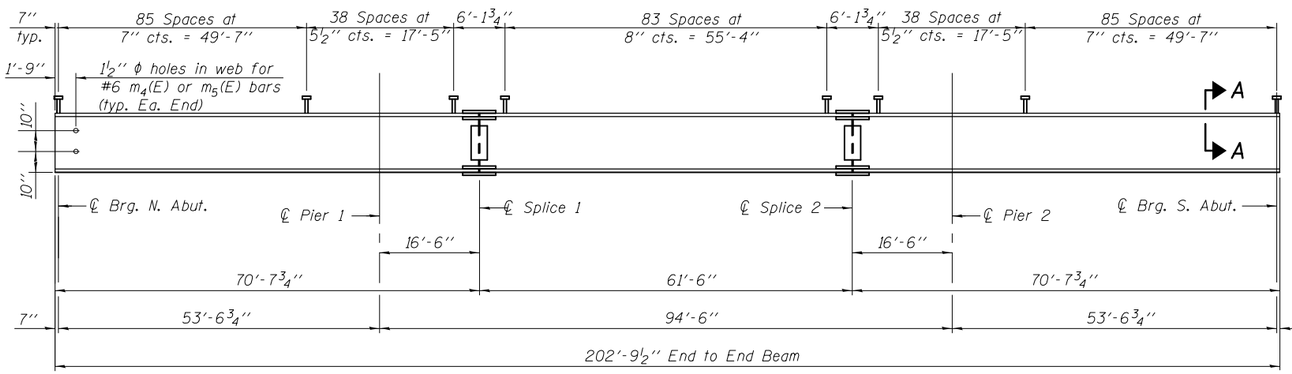
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 057-0253
SHEET NO. 16 OF 28 SHEETS

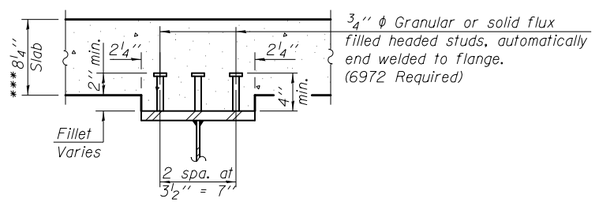
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	223
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



PLAN



ELEVATION



SECTION A-A

*** Prior to Diamond Grinding of Bridge Section

TOP OF BEAM ELEVATIONS

(For Fabrication Only)

	℄ Brg. N. Abut.	℄ Pier 1	℄ Splice 1	℄ Splice 2	℄ Pier 2	℄ Brg. S. Abut.
Beam 1	814.359	813.922	813.788	813.377	813.292	813.019
Beam 2	814.059	813.623	813.489	813.070	812.982	812.699
Beam 3	813.769	813.322	813.185	812.761	812.673	812.389
Beam 4	813.469	813.022	812.885	812.454	812.363	812.069
Beam 5	813.179	812.722	812.582	812.143	812.052	811.759
Beam 6	812.889	812.422	812.279	811.837	811.743	811.439
Beam 7	812.589	812.122	811.979	811.527	811.433	811.129

Notes:

All structural steel beams and splice plates shall conform to the requirements of AASHTO M 270, Grade 50.

Load carying components designated "NTR" shall conform to the Impact Testing Requirements, Zone 2.

All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

Diaphragm Notes:

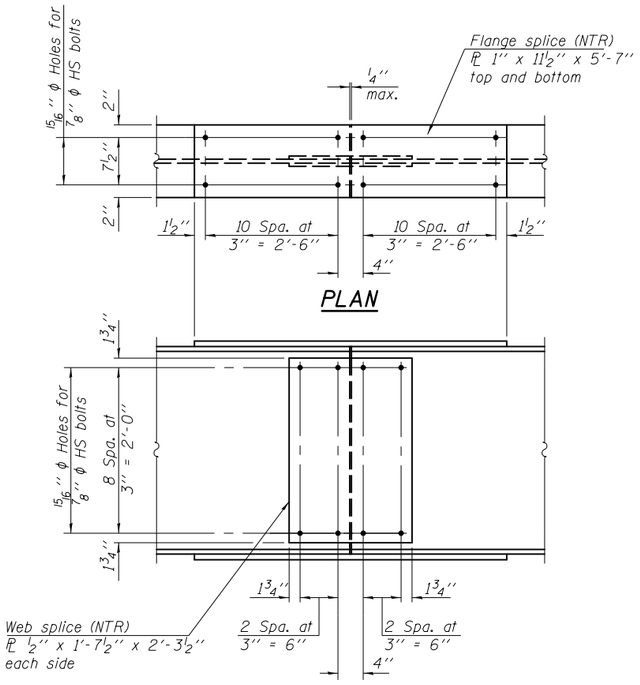
¾" ϕ HS bolts, 15/16" ϕ Holes, unless otherwise noted.

Two hardened washers required over each oversized hole, and 3" x 3" x 5/16" plate washers over slotted holes.

**Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.*

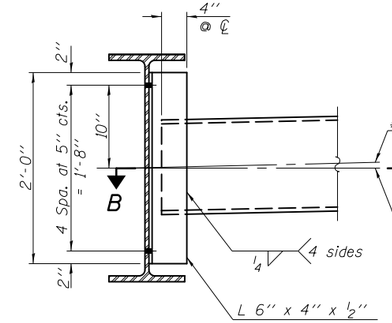
The alternate, if utilized, shall be provided at no additional cost to the Department.

*** Slotted holes (at Beam 4 only) shall extend above the final bolt positions as indicated in the diaphragm detail. Bolts shall be installed finger tight in the slots to permit the maximum deflection downward within the slots due to the applied concrete load, then fully tightened immediately after Stage II deck pour.*



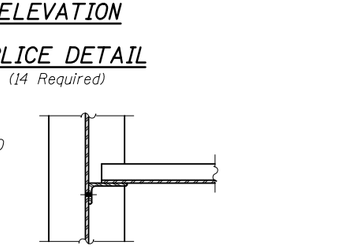
SPLICE DETAIL

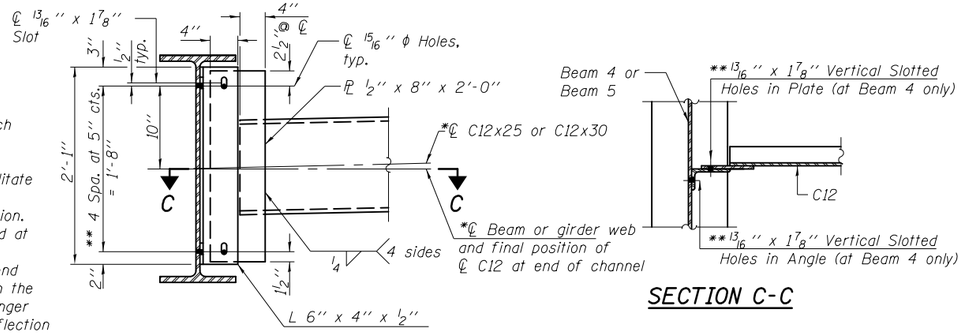
(14 Required)



INTERIOR DIAPHRAGM D

(50 Required)





INTERIOR DIAPHRAGM D1

(10 Required)

(Final position shown - after Stage II deck pour)

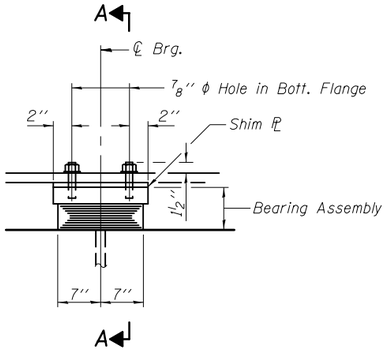
SECTION C-C

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -	
	PLOT SCALE =	DRAWN - SGM	REVISED -	
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -	

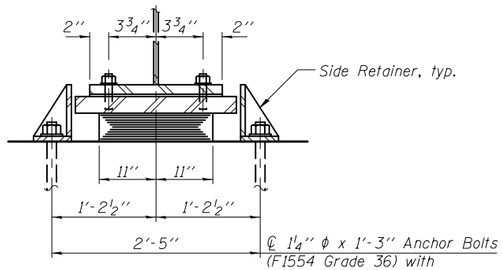
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL
STRUCTURE NO. 057-0253
SHEET NO. 17 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	224
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

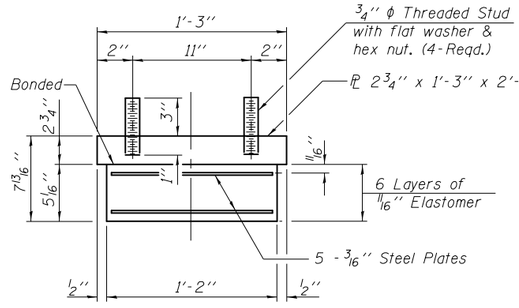


ELEVATION AT PIER



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

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

Notes:
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.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Span 2
I_s	(in^4)	8160	8160	8160
$I_c(n)$	(in^4)	20897	--	20897
$I_c(3n)$	(in^4)	15448	--	15448
$I_c(cr)$	(in^4)	--	10954	--
S_s	(in^3)	487	487	487
$S_c(n)$	(in^3)	697	--	697
$S_c(3n)$	(in^3)	632	--	632
$S_c(cr)$	(in^3)	--	554	--
DC1	(k/')	0.958	0.958	0.958
M_{DC1}	('k)	85.1	-612	458
DC2	(k/')	0.150	0.150	0.150
* M_{DC2}	('k)	13.3	-109	86.7
DW	(k/')	0.341	0.341	0.341
M_{DW}	('k)	30.3	-218	163
* M_{L+IM}	('k)	615	-821	817
M_u (Strength I)	('k)	1244	-2664	2355
$\phi_f M_n$	('k)	3686	-2891	3409
f_s DC1	(ksi)	2.1	-15.1	11.3
f_s DC2	(ksi)	0.3	-2.4	1.6
f_s DW	(ksi)	0.6	-4.7	3.1
f_s (L+IM)	(ksi)	10.6	-17.8	14.1
f_s (Service II)	(ksi)	16.8	-45.3	34.3
$0.95R_hF_{yf}$	(ksi)	47.5	-47.5	47.5
f_s (Total)(Strength I)	(ksi)	--	--	--
$\phi_f F_n$	(ksi)	--	--	--
V_f	(k)	28.9	29.2	23.6

* Includes effect from Bridge Mounted Sign

INTERIOR GIRDER REACTION TABLE			
		Abuts.	Piers
R_{DC1}	(k)	14.2	82.3
R_{DC2}	(k)	2.2	14.0
R_{DW}	(k)	5.1	29.3
R_{L+IM}	(k)	79.4	121.7
R_{Total}	(k)	100.9	247.3

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

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

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

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

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

M_{DC1}: 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.).

M_{DC2}: 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.).

M_{DW}: 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.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: 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.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (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).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

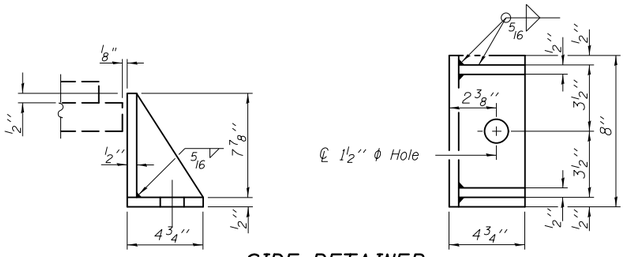
f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

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

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_{s\,L+IM}$

$\phi_r F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7.2 or 6.10.8 (ksi).

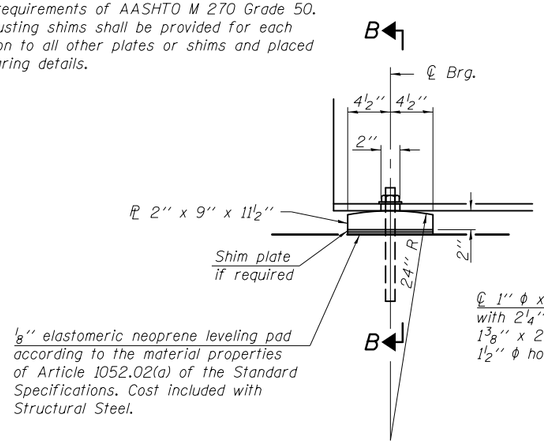
V_f: Maximum factored shear range in span computed according to Article 6.10.10.



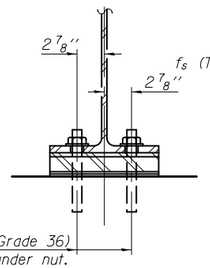
SIDE RETAINER

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

℄ 1 1/2'' ϕ Hole



ELEVATION AT ABUTMENT



SECTION B-B

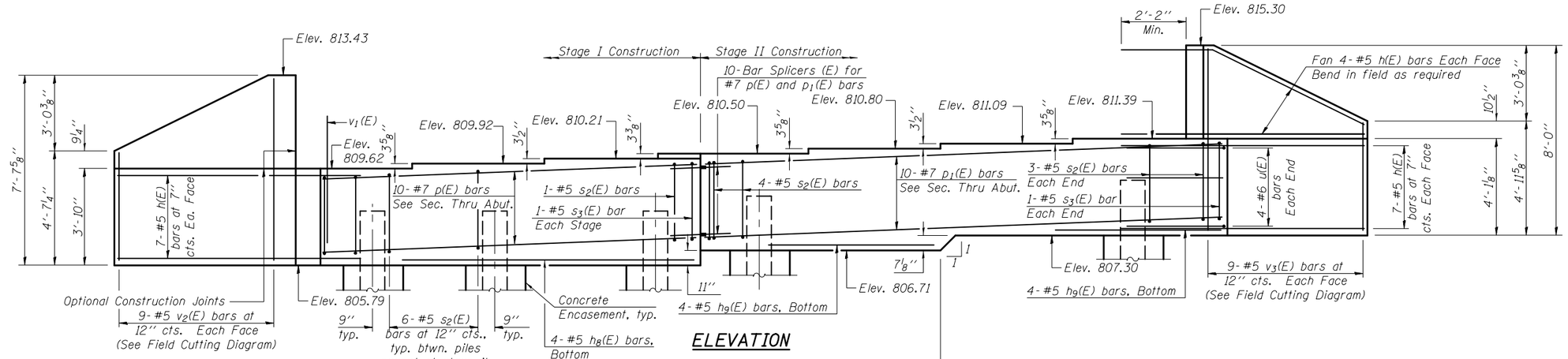
FIXED BEARING

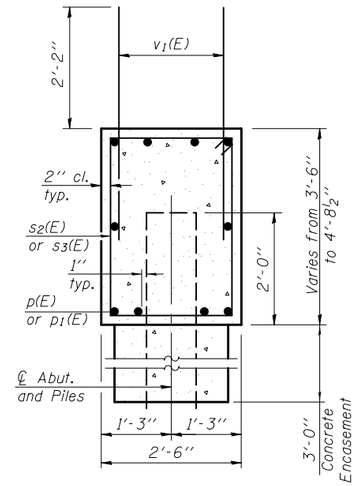
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	14
Anchor Bolts, 1''	Each	28
Anchor Bolts, 1 1/4''	Each	28

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING DETAILS STRUCTURE NO. 057-0253	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-20HB)BR	MCLEAN	440	225
	PLOT SCALE =	DRAWN - SGM	REVISED -							CONTRACT NO. 70570
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 18 OF 28 SHEETS		ILLINOIS	FED. AID PROJECT		

Notes:
Pour steps monolithically with cap.
Space reinforcement bars to miss anchor bolts. See sheet 18 of 28 for details of anchor bolts.


Elev. 813.43
Stage I Construction
Stage II Construction
10-Bar Splicers (E) for #7 p(E) and p1(E) bars
Elev. 810.50
Elev. 810.80
Elev. 811.09
Elev. 811.39
Elev. 815.30
2'-2" Min.
Fan 4-#5 h(E) bars Each Face
Bend in field as required
v1(E)
Elev. 809.62
Elev. 809.92
Elev. 810.21
7'-7 5/8"
4'-7 1/4"
3'-10"
3'-0 3/8"
9 1/4"
7-#5 h(E) bars at 7" cts. Ea. Face
10-#7 p(E) bars See Sec. Thru Abut.
1-#5 s2(E) bars
1-#5 s3(E) bar Each Stage
4-#5 s2(E) bars
10-#7 p1(E) bars See Sec. Thru Abut.
3-#5 s2(E) bars Each End
1-#5 s3(E) bar Each End
4-#6 u(E) bars Each End
7-#5 h(E) bars at 7" cts. Each Face
10 1/2"
4'-1 1/8"
4'-11 5/8"
8'-0"
Optional Construction Joints
9-#5 v2(E) bars at 12" cts. Each Face (See Field Cutting Diagram)
Elev. 805.79
9" typ.
6-#5 s2(E) bars at 12" cts., typ. btwn. piles except at stage jt.
Concrete Encasement, typ.
4-#5 h8(E) bars, Bottom
11"
4-#5 h9(E) bars, Bottom
Elev. 806.71
7 1/8"
1
1
Elev. 807.30
9-#5 v3(E) bars at 12" cts. Each Face (See Field Cutting Diagram)
ELEVATION
58'-9 1/2"
24'-7 5/8"
34'-1 7/8"
59-#5 v1(E) bars at 12" cts. (25-Stage I, 34-Stage II)
20'-2 1/2"
4'-5 1/8"
6 beam spaces at ±8'-6 3/4" = 51'-4 5/8"
2'-11 3/4"
Bearing Seat Spacing
8'-8 1/2"
8'-6 3/4"
7'-4 3/8"
9'-9 1/8"
8'-6 3/4"
8'-6 3/4"
7'-3 1/4"
Stage Const. Joint
Back of N. Abut. Sta. 51+55.69
30° Skew
1'-1 7/8"
℄ Beam 7
℄ Abut. and Piles
℄ Beam 1
℄ Beam, typ.
v2(E)
h(E)
v3(E)
2" cl. typ.
1'-0"
7'-0"
1'-0"
8'-0"
p(E)
s2(E)
s3(E)
p1(E)
2'-6"
1'-3"
1'-3"
2 1/2" typ.
1 3/8" typ.
u(E)
Bar Splicers (E)
Local Tangent
℄ Rdwy.
2 - 1" ϕ Anchor Bolts, typ. Each Beam
3" typ.
1'-6 3/4"
* 8-#5 v1(E) bars at 12" cts., typ. btwn. bms.
1'-5 3/8"
4-#5 v1(E) bars at ±11" cts. Each End
20'-6 1/4"
8 pile spaces at 6'-6" = 52'-0"
N
PLAN

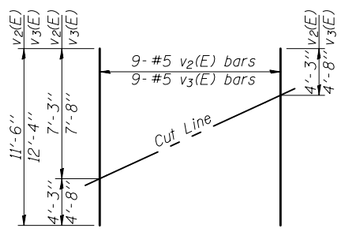


SEC. THRU ABUT.

* Includes 4 bars at 13" cts. btwn. Beam 4 and Stage Const. Jt. and 4 bars at 11" cts. btwn. Beam 5 and Stage Const. Jt.

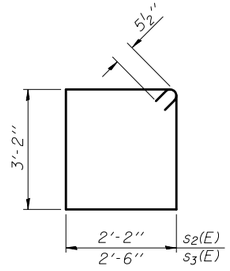
PILE DATA

Type: Steel - HP12x53
Nominal Required Bearing: 239 kips
Factored Resistance Available: 131 kips
Est. Length: 38 ft. (all piles)
No. Production Piles: 8
No. Test Piles: 1

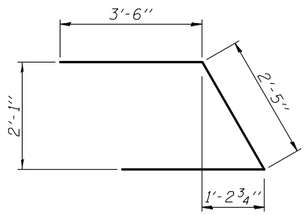


FIELD CUTTING DIAGRAM

Order v2(E) and v3(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)



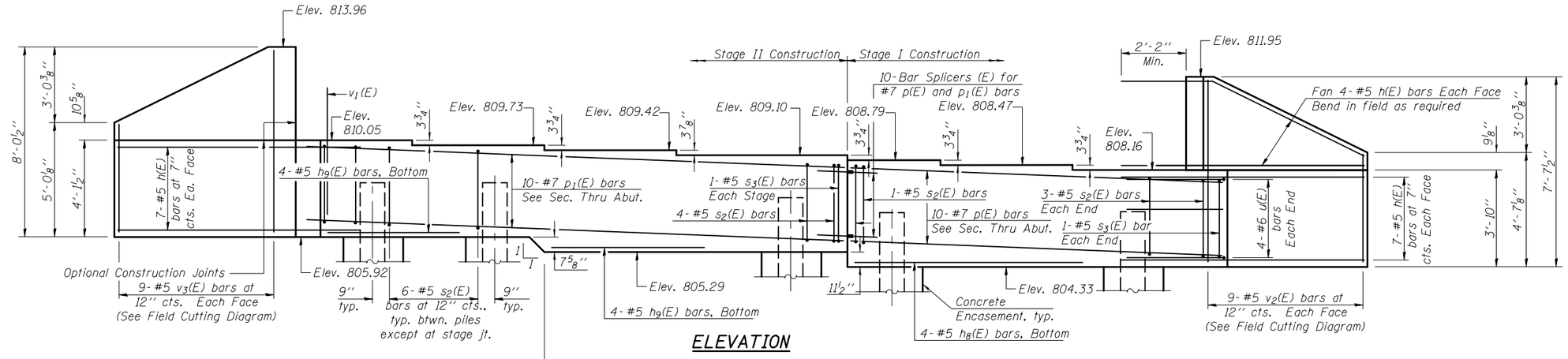
BAR u(E)

BILL OF MATERIAL

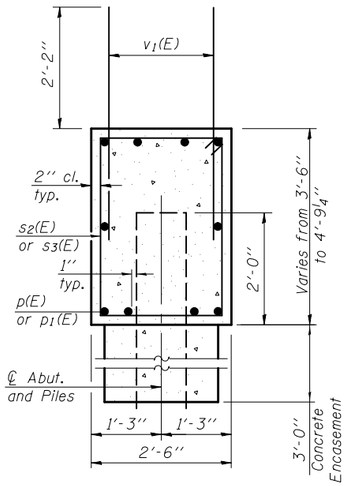
Bar	No.	Size	Length	Shape
h(E)	44	#5	10'-8"	
h8(E)	4	#5	18'-0"	
h9(E)	8	#5	10'-0"	
p(E)	10	#7	24'-2"	
p1(E)	10	#7	33'-9"	
s2(E)	53	#5	11'-7"	
s3(E)	4	#5	12'-3"	
u(E)	8	#6	9'-5"	
v1(E)	115	#5	4'-4"	
v2(E)	9	#5	11'-6"	
v3(E)	9	#5	12'-4"	
Structure Excavation		Cu. Yd.	135	
Concrete Structures		Cu. Yd.	25.6	
Reinforcement Bars, Epoxy Coated		Pound	3380	
Furnishing Steel Piles HP12x53		Foot	304	
Driving Piles		Foot	304	
Test Pile Steel HP12x53		Each	1	
Concrete Encasement		Cu. Yd.	3.1	

For details of Bar Splicers, see sheet 25 of 28.
For details of piles and Concrete Encasement, see sheet 24 of 28.

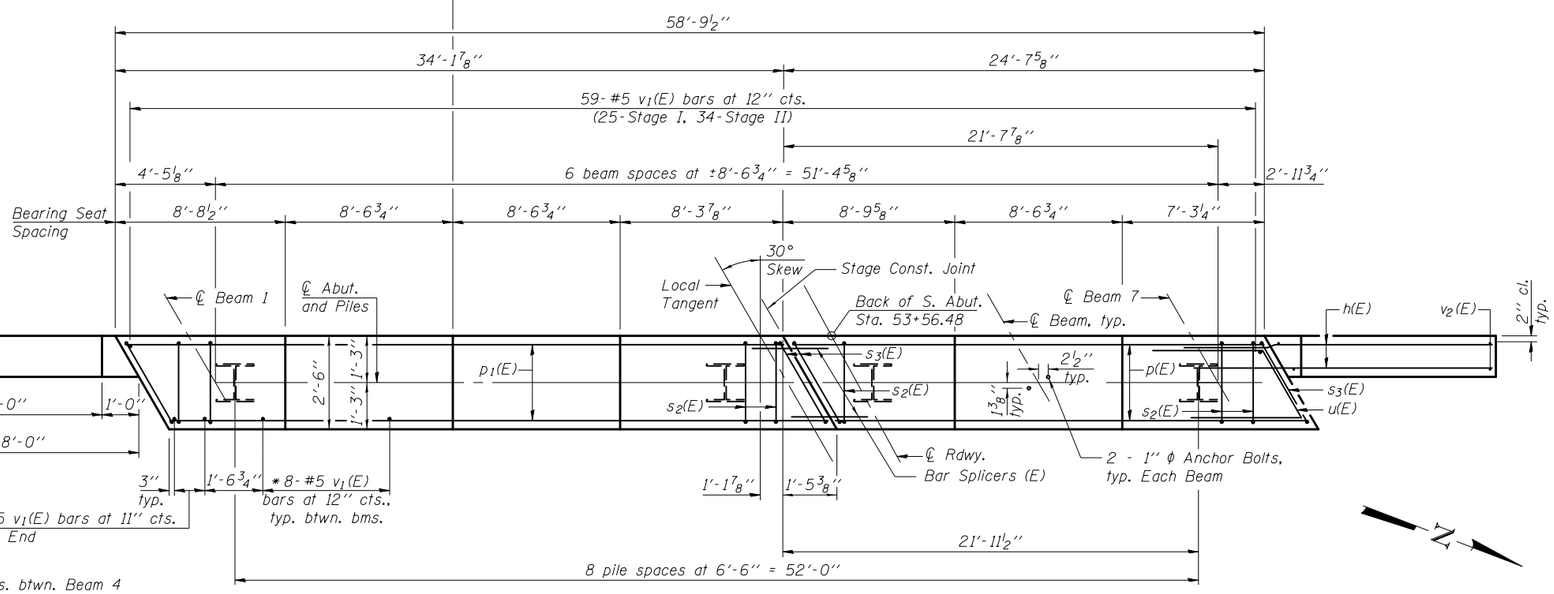
Notes:
Pour steps monolithically with cap.
Space reinforcement bars to miss anchor bolts. See sheet 18 of 28 for details of anchor bolts.



ELEVATION



SEC. THRU ABUT.



PLAN

* Includes 4 bars at 13" cts. btwn. Beam 4 and Stage Const. Jt. and 4 bars at 11" cts. btwn. Beam 5 and Stage Const. Jt.

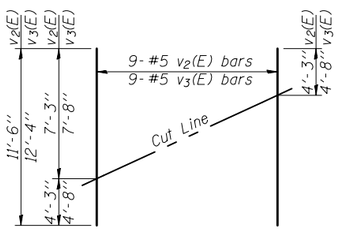
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	44	#5	10'-8"	
h8(E)	4	#5	18'-0"	
h9(E)	8	#5	10'-0"	
p(E)	10	#7	24'-2"	
p1(E)	10	#7	33'-9"	
s2(E)	53	#5	11'-7"	
s3(E)	4	#5	12'-3"	
u(E)	8	#6	9'-5"	
v1(E)	115	#5	4'-4"	
v2(E)	9	#5	11'-6"	
v3(E)	9	#5	12'-4"	
Structure Excavation		Cu. Yd.	135	
Concrete Structures		Cu. Yd.	25.7	
Reinforcement Bars, Epoxy Coated		Pound	3380	
Furnishing Steel Piles HP12x53		Foot	376	
Driving Piles		Foot	376	
Test Pile Steel HP12x53		Each	1	
Concrete Encasement		Cu. Yd.	3.1	

For details of Bar Splicers, see sheet 25 of 28.
For details of piles and Concrete Encasement, see sheet 24 of 28.

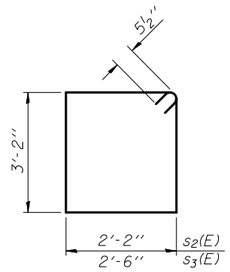
PILE DATA

Type: Steel - HP12x53
Nominal Required Bearing: 239 kips
Factored Resistance Available: 131 kips
Est. Length: 47 ft. (all piles)
No. Production Piles: 8
No. Test Piles: 1

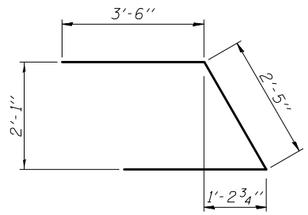


FIELD CUTTING DIAGRAM

Order v2(E) and v3(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)



BAR u(E)

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -	
	PLOT SCALE =	DRAWN - SGM	REVISED -	
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

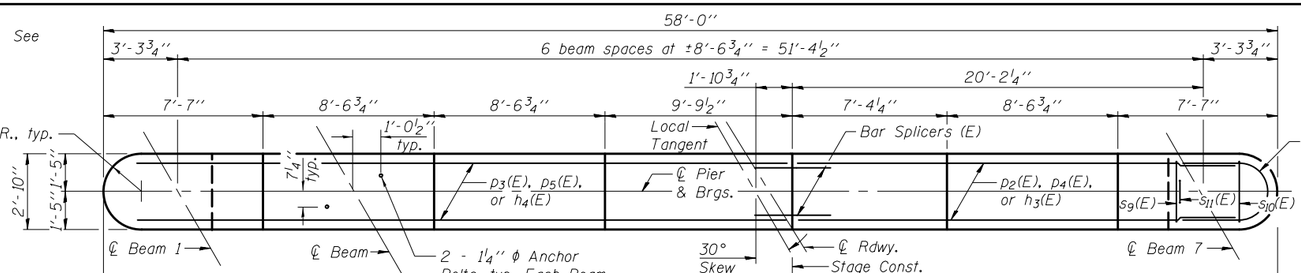
SOUTH ABUTMENT
STRUCTURE NO. 057-0253
SHEET NO. 20 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	227
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

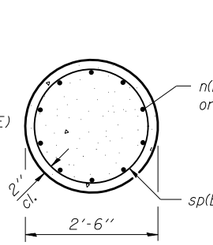
Notes:
Space reinforcement in cap to miss anchor bolts. See sheet 18 of 28 for details of anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 23 of 28.
For details of Bar Splicers, see sheet 25 of 28.

PILE DATA

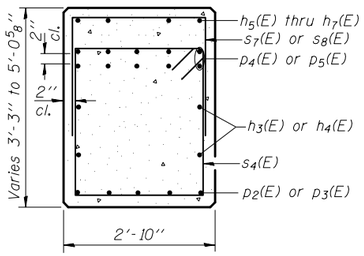
Type: Metal Shell - 14 in. dia. x 0.25 in. walls with pile shoes
Nominal Required Bearing: 249 kips
Factored Resistance Available: 137 kips
Est. Length: 30 ft.
No. Production Piles: 18
No. Test Piles: 1



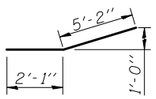
TOP PLAN



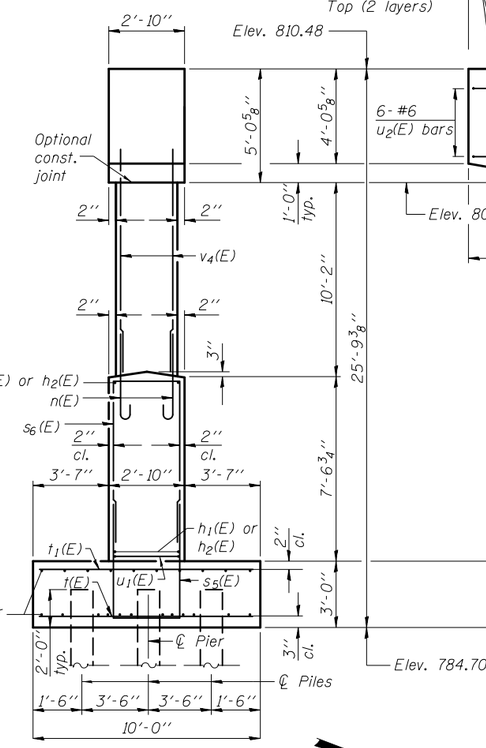
SEC. B-B



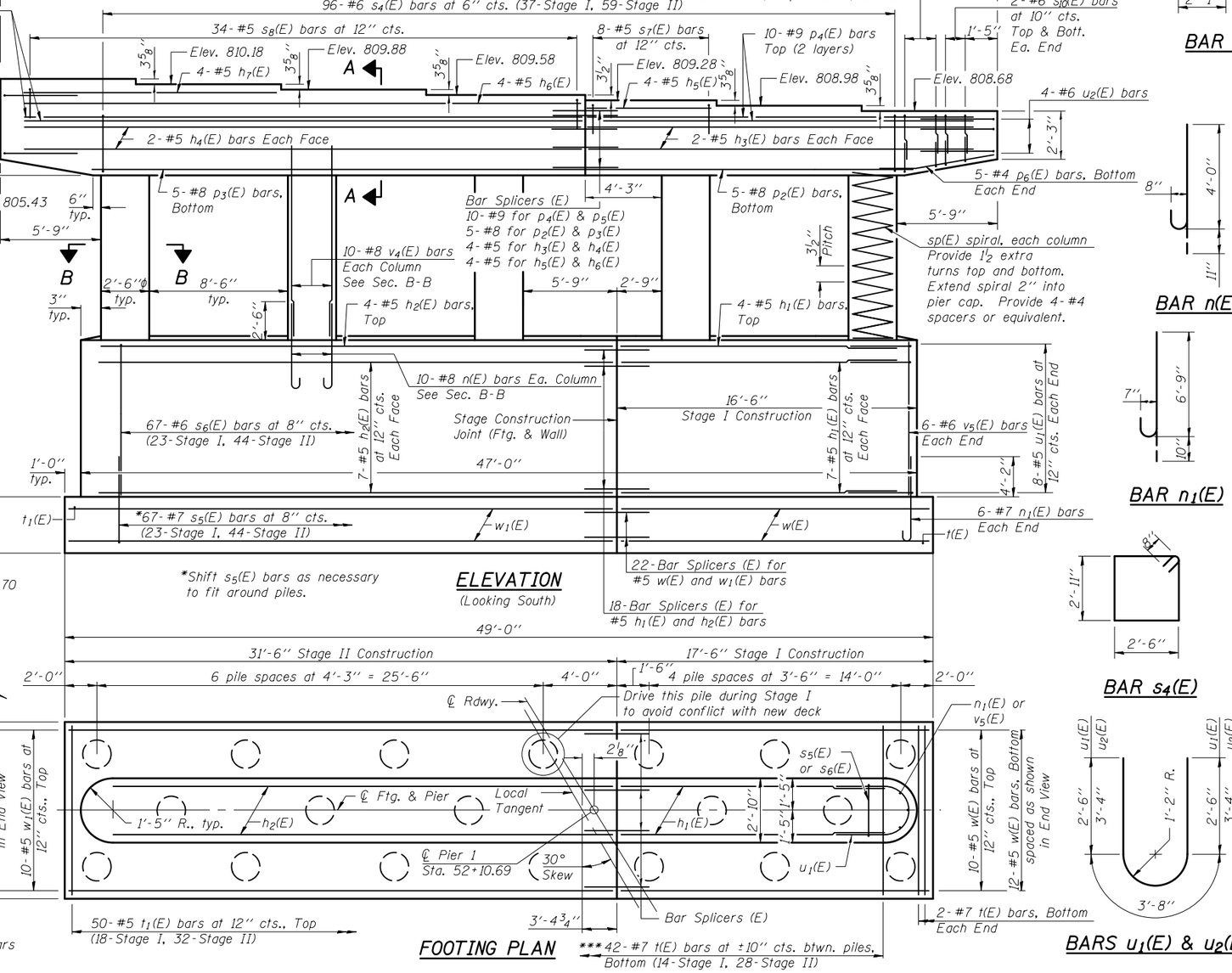
SEC. A-A



BAR p6(E)

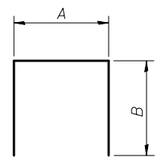


END VIEW



ELEVATION (Looking South)

FOOTING PLAN



BARS

A & B DIMENSIONS

Bar	A	B
$s_5(E)$	2'-6"	6'-11"
$s_6(E)$	2'-6"	7'-3"
$s_7(E)$	2'-6"	1'-7"
$s_8(E)$	2'-6"	2'-10"
$s_9(E)$	2'-6"	2'-6"
$s_{10}(E)$	2'-6"	2'-2"
$s_{11}(E)$	10"	2'-6"

*** 3 bars per 3'-6" space
4 bars per 4'-3" space
2 bars to west and 4 bars to east of stage const. jt.

BAR n(E)

BAR n_1(E)

BAR s_4(E)

BARS u_1(E) & u_2(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_1(E)$	18	#5	14'-11"	
$h_2(E)$	18	#5	28'-11"	
$h_3(E)$	4	#5	21'-11"	
$h_4(E)$	4	#5	32'-11"	
$h_5(E)$	4	#5	7'-0"	
$h_6(E)$	4	#5	32'-11"	
$h_7(E)$	4	#5	14'-7"	
$n(E)$	50	#8	4'-11"	
$n_1(E)$	12	#7	7'-7"	
$p_2(E)$	5	#8	18'-1"	
$p_3(E)$	5	#8	29'-1"	
$p_4(E)$	10	#9	21'-11"	
$p_5(E)$	10	#9	32'-11"	
$p_6(E)$	10	#4	7'-3"	
$s_4(E)$	96	#6	12'-2"	
$s_5(E)$	67	#7	16'-4"	
$s_6(E)$	67	#6	17'-0"	
$s_7(E)$	8	#5	5'-8"	
$s_8(E)$	34	#5	8'-2"	
$s_9(E)$	24	#6	7'-6"	
$s_{10}(E)$	8	#6	6'-10"	
$s_{11}(E)$	24	#6	5'-10"	
** $sp(E)$	5	#4	10'-4"	
$t(E)$	46	#7	9'-8"	
$t_1(E)$	50	#5	9'-8"	
$u_1(E)$	16	#5	8'-8"	
$u_2(E)$	10	#6	10'-4"	
$v_4(E)$	50	#8	12'-9"	
$v_5(E)$	12	#6	7'-3"	
$w(E)$	22	#5	17'-2"	
$w_1(E)$	22	#5	31'-2"	
Structure Excavation		Cu. Yd.	408	
Concrete Structures		Cu. Yd.	124.0	
Reinforcement Bars, Epoxy Coated		Pound	16790	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	540	
Driving Piles		Foot	540	
Test Pile Metal Shells		Each	1	
Pile Shoes		Each	19	
Concrete Sealer		Sq. Ft.	1779	

** Length is height of spiral.

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

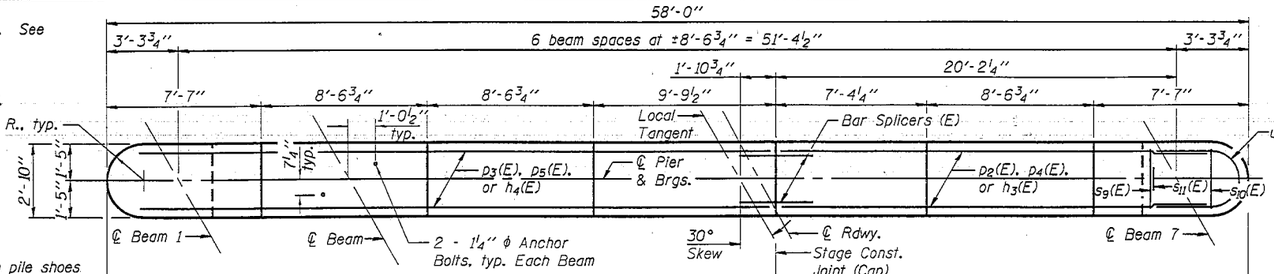
PIER 1
STRUCTURE NO. 057-0253
SHEET NO. 21 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	228
		CONTRACT NO. 70570		
		ILLINOIS FED. AID PROJECT		

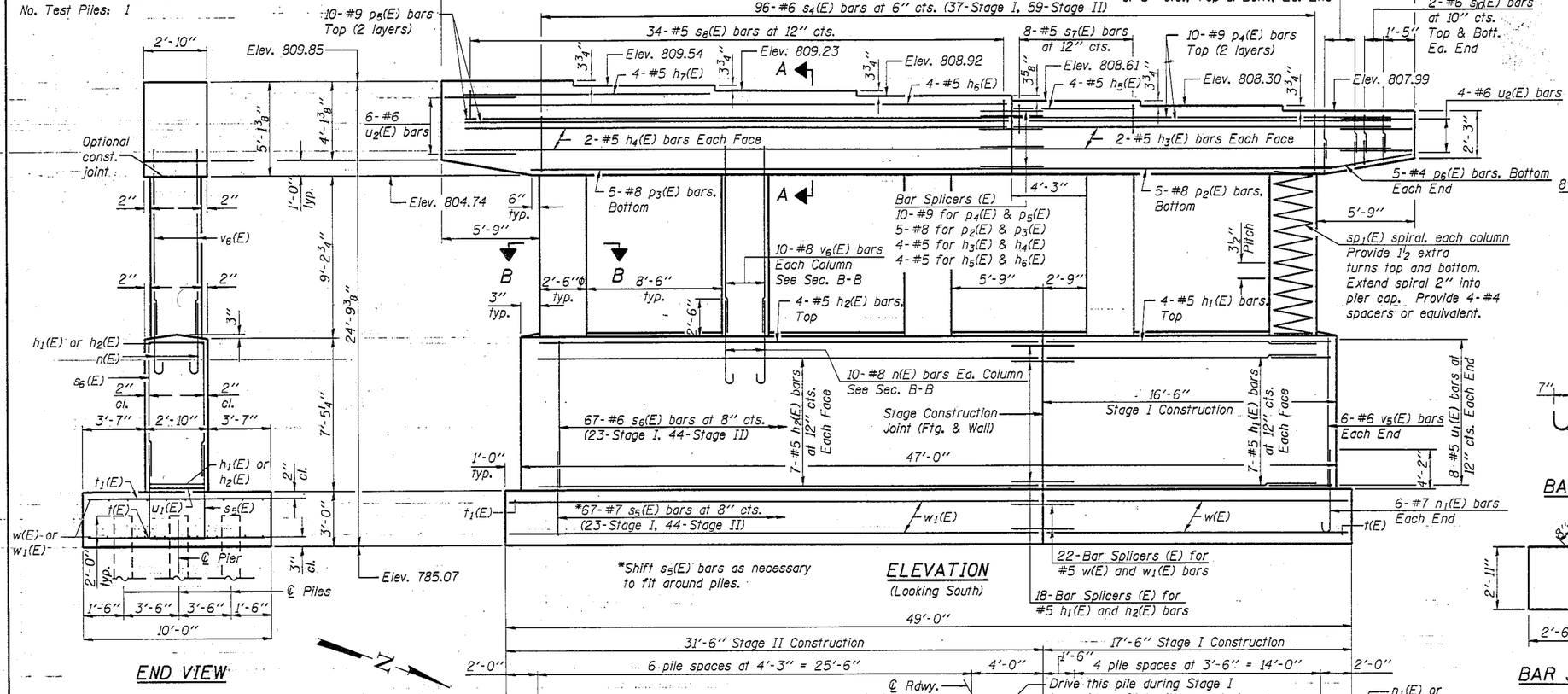
Notes:
Space reinforcement in cap to miss anchor bolts. See sheet 18 of 28 for details of anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 23 of 28.
For details of Bar Splicers, see sheet 25 of 28.

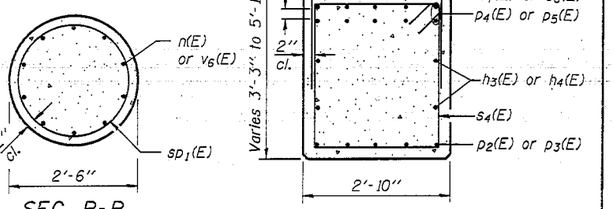
PILE DATA

Type: Metal Shell - 14 in. dia. x 0.25 in. walls with pile shoes
Nominal Required Bearing: 249 kips
Factored Resistance Available: 137 kips
Est. Length: 30 ft.
No. Production Piles: 18
No. Test Piles: 1



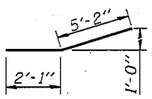
TOP PLAN



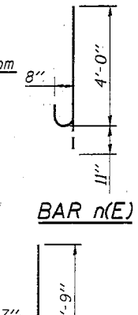


SEC. B-B

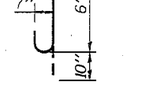
SEC. A-A



BAR p6(E)

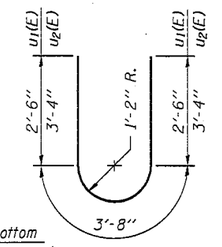


BAR n(E)



BAR n1(E)

BAR s4(E)



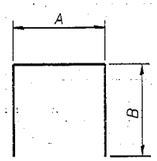
BARS u1(E) & u2(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1(E)	18	#5	14'-11"	—
h2(E)	18	#5	28'-11"	—
h3(E)	4	#5	21'-11"	—
h4(E)	4	#5	32'-11"	—
h5(E)	4	#5	7'-0"	—
h6(E)	4	#5	32'-11"	—
h7(E)	4	#5	14'-7"	—
n(E)	50	#8	4'-11"	U
n1(E)	12	#7	7'-7"	U
p2(E)	5	#8	18'-1"	—
p3(E)	5	#8	29'-1"	—
p4(E)	10	#9	21'-11"	—
p5(E)	10	#9	32'-11"	—
p6(E)	10	#4	7'-3"	⌒
s4(E)	96	#6	12'-2"	□
s5(E)	67	#7	16'-4"	⊔
s6(E)	67	#6	17'-0"	⊔
s7(E)	8	#5	5'-8"	⊔
s8(E)	34	#5	8'-2"	⊔
s9(E)	24	#6	7'-6"	⊔
s10(E)	8	#6	6'-10"	⊔
s11(E)	24	#6	5'-10"	⊔
** sp1(E)	5	#4	9'-5"	∿
t(E)	46	#7	9'-8"	—
t1(E)	50	#5	9'-8"	—
u1(E)	16	#5	8'-8"	⊃
u2(E)	10	#6	10'-4"	⊃
v5(E)	12	#6	7'-3"	—
v6(E)	50	#8	11'-10"	—
w(E)	22	#5	17'-2"	—
w1(E)	22	#5	31'-2"	—
Structure Excavation		Cu. Yd.	194	
Concrete Structures		Cu. Yd.	122.8	
Reinforcement Bars, Epoxy Coated		Pound	16600	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	540	
Driving Piles		Foot	540	
Test Pile Metal Shells		Each	1	
Pile Shoes		Each	19	
Concrete Sealer		Sq. Ft.	1746	

** Length is height of spiral.

A & B DIMENSIONS



BARS

Bar	A	B
s5(E)	2'-6"	6'-11"
s6(E)	2'-6"	7'-3"
s7(E)	2'-6"	1'-7"
s8(E)	2'-6"	2'-10"
s9(E)	2'-6"	2'-6"
s10(E)	2'-6"	2'-2"
s11(E)	10"	2'-6"

*** 3 bars per 3'-6" space
4 bars per 4'-3" space
2 bars to west and 4 bars to east of stage const. jt.

FILE NAME = 0570253-70570-021-Pier.dgn	USER NAME = baswenson	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 10/2/2013 4:38:28 PM	CHECKED - BAS	REVISED -

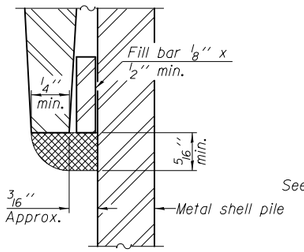
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2
STRUCTURE NO. 057-0253
SHEET NO. 22 OF 28 SHEETS

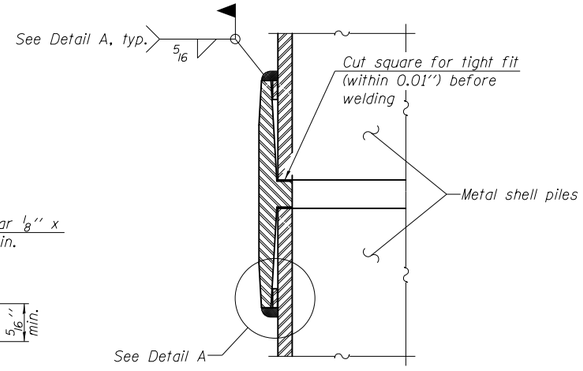
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-2OHB)BR	MCLEAN	440	229
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

METAL SHELL PILE TABLE

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd.³ /ft.)
PP12	0.179″	22.60	0.0274
PP12	0.250″	31.37	0.0267
PP14	0.250″	36.71	0.0368
PP14	0.312″	45.61	0.0361

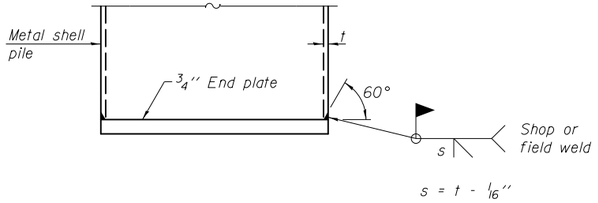


DETAIL A

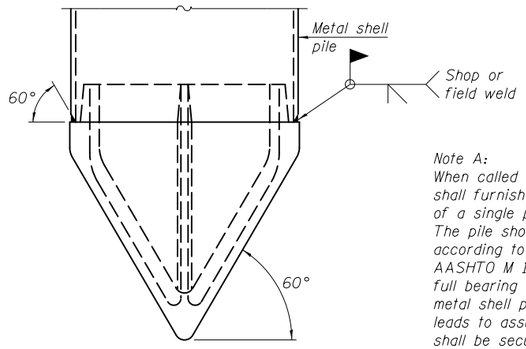


Notes:
The 1/8″ x 1/2″ min. fill bar may be constructed of 2 bars with a 1/8″ max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



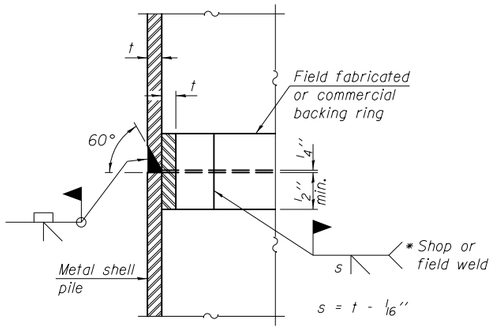
END PLATE ATTACHMENT



Note A:
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.

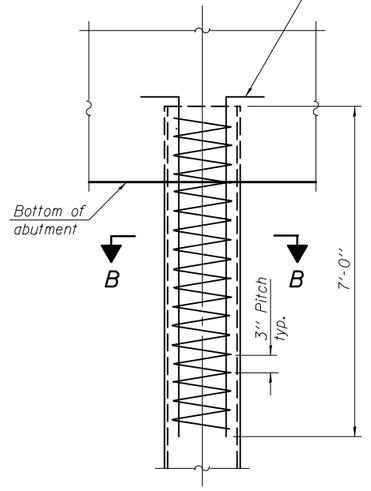
METAL SHELL PILE SHOE ATTACHMENT

(See Note A)

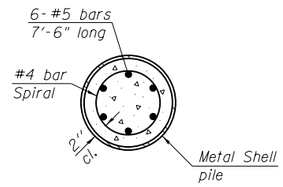


COMPLETE PENETRATION WELD SPLICE

* 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

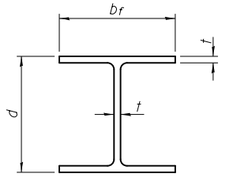


SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS AND FOOTINGS

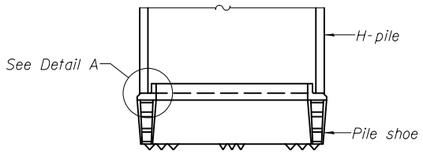
Note:
The metal shell piles shall be according to ASTM A 252 Grade 3.

FILE NAME = $FILE$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	METAL SHELL PILE DETAILS STRUCTURE NO. 057–0253	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-20HB)BR	MCLEAN	440	230
	PLOT SCALE =	DRAWN - SGM	REVISED -					CONTRACT NO. 70570		
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 23 OF 28 SHEETS		ILLINOIS FED. AID PROJECT			

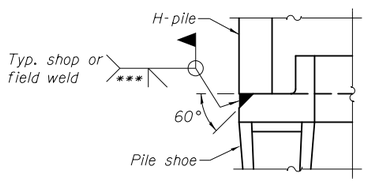


STEEL PILE TABLE

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

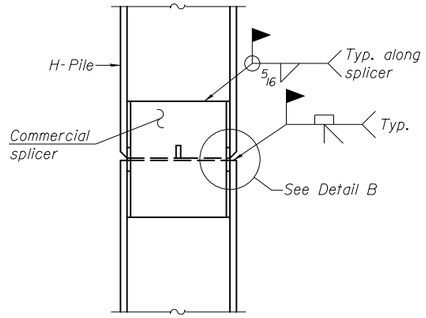


ELEVATION

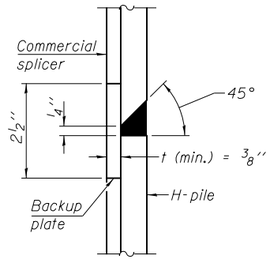


DETAIL A

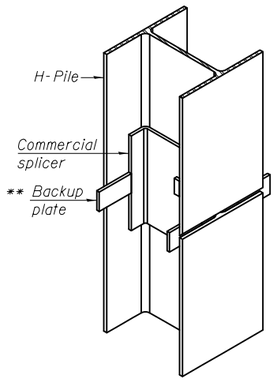
H-PILE SHOE ATTACHMENT



ELEVATION

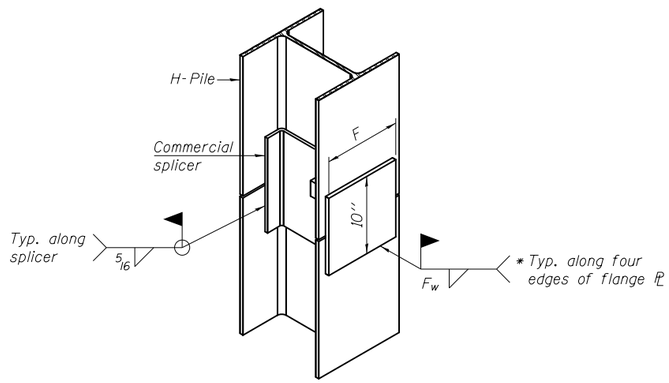


DETAIL "B"

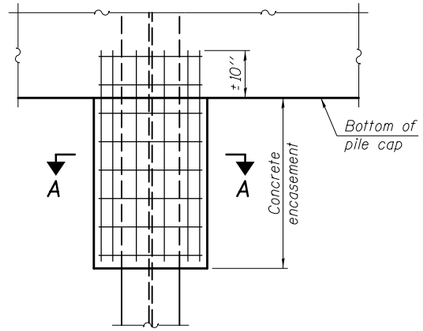


ISOMETRIC VIEW

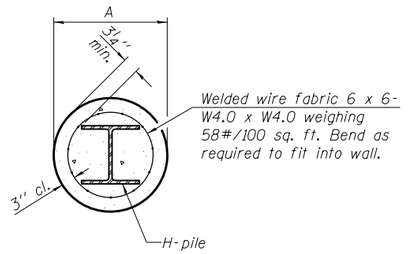
WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW



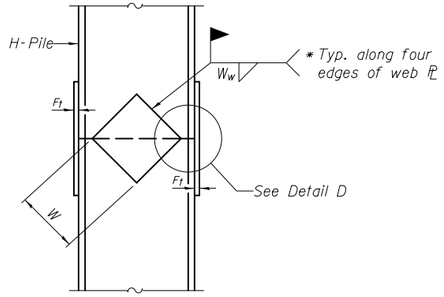
ELEVATION



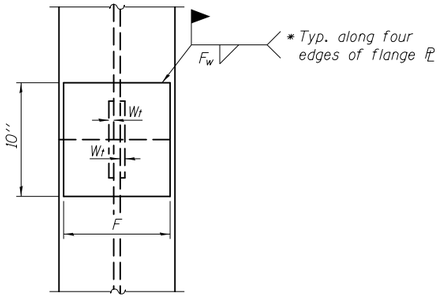
SECTION A-A

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

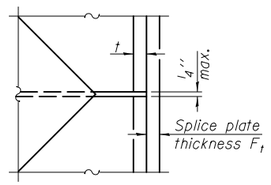
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

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

WELDED PLATE FIELD SPLICE

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds ¼'' from end of web and/or each flange.

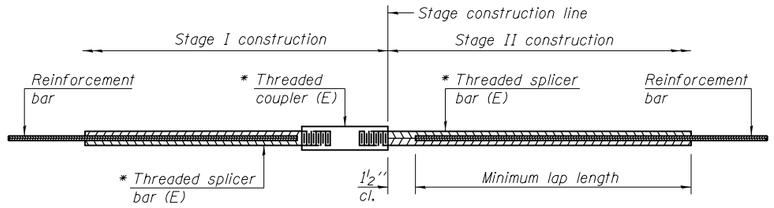
** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer ($\frac{5}{16}''$ min.).

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

F-HP 1-27-12

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HP PILE DETAILS STRUCTURE NO. 057-0253	F.A.I. RTE. 74	SECTION (57-20HB)BR	COUNTY MCLEAN	TOTAL SHEETS 440	SHEET NO. 231
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -						CONTRACT NO. 70570	
	PLOT SCALE =	DRAWN - SGM	REVISED -		SHEET NO. 24 OF 28 SHEETS			ILLINOIS	FED. AID PROJECT	
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -							



STANDARD BAR SPLICER ASSEMBLY

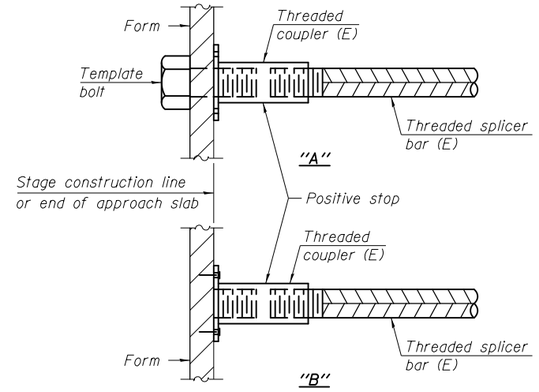
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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

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

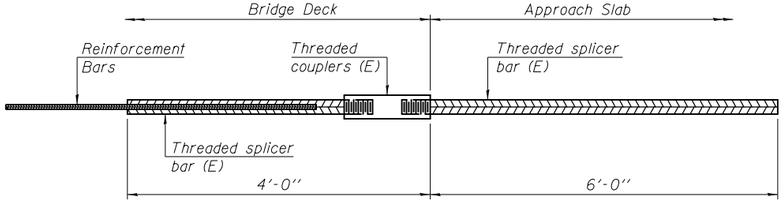
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck Slab (Top)	#5	448	5
Deck Slab (Bottom)	#5	261	3
Diaphragms	#6	16	4
Approach Slab	#4	50	4
Approach Slab	#5	92	3
Approach Footing	#5	80	3
Abutment	#7	20	6
Pier Footing	#5	44	4
Pier Crashwall	#5	36	4
Pier Cap	#8	10	5
Pier Cap	#5	16	6
Pier Cap	#9	20	6



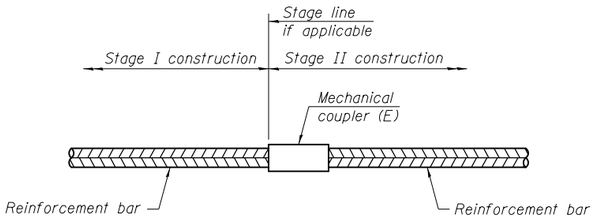
INSTALLATION AND SETTING METHODS

"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.



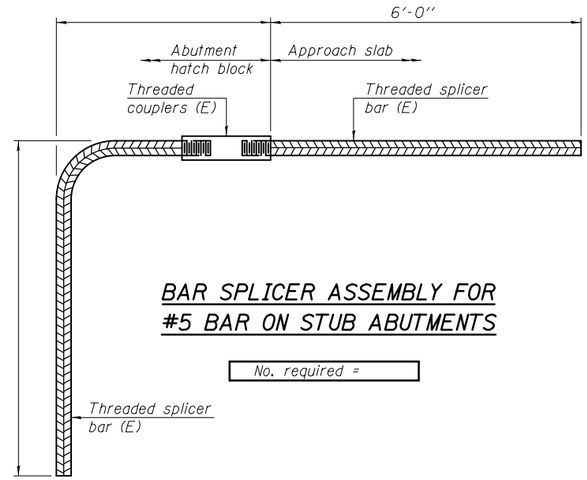
BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 100



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

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.

BSD-1 1-27-12

FILE NAME = $FILE$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 057-0253
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -		
	PLOT SCALE =	DRAWN - SGM	REVISED -		
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 25 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	232
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/9/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (NB) over FAI 74 (WB) **LOGGED BY** RJC

SECTION (57-20HB)BR **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM**,
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0061 existing / 057-0253 proposed
Station 52+51.02

BORING NO. B-1 N. Abut
Station 51+40
Offset 1.00ft LT
Ground Surface Elev. 812.30 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 778.8 ft ▼
Upon Completion 757.6 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Dark Brown, Moist
			14	SILTY CLAY LOAM (Fill), little
	7			organics, trace gravel
	7	5.0	17	
	6	P		
808.80				
	6			Brown, Moist
808.00	7	6.1	9	SILTY CLAY LOAM (Fill), little
-5	8	S		organics, trace gravel
				Gray, trace Brown, Moist
				SILTY LOAM (Fill), trace gravel
806.30				
	5			Brown and Dark Brown, Moist
805.80	6	2.9	26	SILTY LOAM (Fill), trace gravel
	8	B		Brown, Gray, and Dark Gray, Moist
				SILTY LOAM (Fill), trace gravel
	3			
802.80	6	3.9	23	
-10	7	B		Dark Gray, Moist
				SILTY LOAM (Fill), trace gravel
801.30				
	3			Brown, Moist
800.50	4	3.5	24	SILTY LOAM
	7	B		Brown, Gray, and Dark Gray, Moist
				SILTY LOAM (Fill)
798.80				
	2			Brown, trace Gray, Moist
	4	5.0	19	SILTY LOAM (Fill)
-15	6	P		
796.30				
	4			Gray and Dark Gray, Moist
795.40	6	4.7	21	SILTY LOAM (Fill)
	8	B		Stiff to Hard
				Dark Gray, Moist
				SILTY LOAM, trace organics
	2			
	3	1.8	22	
-20	7	B		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Stiff to Hard
				Dark Gray, Moist
				SILTY LOAM, trace organics
790.80				*(continued)*
	2			
	5	2.7	25	Very Stiff
	6	S		Brown and Gray, Moist
				SILTY LOAM, trace gravel
788.80				
	1			Very Soft
	2	0.3	28	Greenish Brown, Moist
787.80	2	P		SILTY LOAM
-25				Very Soft
				Brown, Moist
786.30				CLAY LOAM
	1			Medium Stiff to Stiff
	2	0.8	17	Brown, Moist
	3	B		SILTY LOAM, trace gravel
	5			
	3	1.0	17	
-30	7	B		
778.80 ▼				
	2			Very Stiff
	3	2.3	14	Gray, Wet
-35	5	P		SILTY LOAM, trace gravel
772.80				
772.30	12	1.6	14	Gray, Fine to Medium grain, Wet
-40	16	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
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/9/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (NB) over FAI 74 (WB) **LOGGED BY** RJC

SECTION (57-20HB)BR **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM**,
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0061 existing / 057-0253 proposed
Station 52+51.02

BORING NO. B-1 N. Abut
Station 51+40
Offset 1.00ft LT
Ground Surface Elev. 812.30 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 778.8 ft ▼
Upon Completion 757.6 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SAND, trace gravel
				Hard
				Gray, Wet
				SILTY LOAM, trace gravel
	5			
	8	5.1	13	
-45	12	B		
	7			
	10	4.1	12	
-50	15	B		
	6			
	14	6.3	11	
▽ -55	28	B		
753.80				
	35			Hard
	20	6.3	11	Bluish Gray, Wet
-60	23	P		SILTY LOAM, with gravel

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Hard
				Bluish Gray, Wet
				SILTY LOAM, with gravel
				(continued)
	100			
747.80				
	35	13.0	14	
-65	40	P		Very Dense
				Gray, Fine to Medium grain, Wet
				SAND, trace gravel
743.30				
	14			
	21	10.3	10	Very Hard
-70	27	P		Gray, Wet
742.30				SILTY LOAM, trace gravel
				End of Boring
-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 = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SOIL BORINGS STRUCTURE NO. 057-0253**
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -		
	PLOT SCALE =	DRAWN - SGM	REVISED -		SHEET NO. 26 OF 28 SHEETS
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	233
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/11/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (NB) over FAI 74 (WB) **LOGGED BY** RJC

SECTION (57-20HB)BR **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM,**
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0061 existing / 057-0253 proposed
Station 52+51.02

BORING NO. B-2 N. Pier
Station 52+56
Offset 89.1ft LT
Ground Surface Elev. 789.90 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 778.7 ft ▼
Upon Completion 735.4 ft ▽
After - **Hrs.** - ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dark Brown, trace Gray, Moist SILTY LOAM, little organics, trace gravel				
788.50		2		19
Stiff Brown, Moist SILTY LOAM, trace gravel		3	1.8	26
		5	B	
		2		
	-5	2	1.0	26
		2	B	
2-inch lens of Brown SAND, Fine to Medium Grain at -6.0'		1		
		1	1.8	19
		2	B	
		1		
	-10	1	1.0	16
		3	B	
778.70 ▼		4		
Medium Dense Brown, Fine to Medium grain, Wet SAND, trace gravel		6		18
		8		
		4		
	-15	6		20
		9		
773.90		1		
Stiff Gray, Wet SILTY LOAM, trace gravel		2	1.2	14
		5	B	
771.40		8		
Medium Dense Brown, Fine to Medium grain, Wet SAND		10		25
	-20	13		
768.90		4		
Gray, Wet SILTY LOAM, trace gravel		5		18
768.40		2		
Gray, Coarse grain, Wet SAND, trace gravel				
767.90		5		
Gray, Fine grain, Wet SAND, trace gravel				
766.40		7	2.5	15
Very Stiff Gray, Wet SILTY LOAM, trace gravel	-25	7	P	
		3		
		6	2.7	13
		6	B	
		3		
	-30	4	2.6	13
		7	B	
756.40		8		
Very Stiff Brown and Gray, Moist SILTY LOAM, trace gravel		11	3.3	14
	-35	20	P	
751.40		13		
Hard Gray, Moist SILTY LOAM, trace gravel		19	5.5	10
	-40	18	P	

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
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/11/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (NB) over FAI 74 (WB) **LOGGED BY** RJC

SECTION (57-20HB)BR **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM,**
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0061 existing / 057-0253 proposed
Station 52+51.02

BORING NO. B-2 N. Pier
Station 52+56
Offset 89.1ft LT
Ground Surface Elev. 789.90 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 778.7 ft ▼
Upon Completion 735.4 ft ▽
After - **Hrs.** - ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Hard Gray, Moist SILTY LOAM, trace gravel *(continued)*				
		50		
		50	5.0	11
	-45	20	P	
		9		
		10	8.5	9
		13	P	
		12		
		13	10.0	11
734.90 ▽	-55	18	P	
End of Boring				
	-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)

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORINGS STRUCTURE NO. 057-0253	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-20HB)BR	MCLEAN	440	234
	PLOT SCALE =	DRAWN - SGM	REVISED -						CONTRACT NO. 70570	
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 27 OF 28 SHEETS			ILLINOIS	FED. AID PROJECT	

Illinois Department of Transportation
Division of Highways
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/10/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (SB) over FAI 74 (WB) **LOGGED BY** RJC

SECTION (57-20HB)BR-1 **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM,**
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0062 existing / 057-0254 proposed
Station 52+51.02

BORING NO. B-4 S. Abut
Station 53+49
Offset 3.00ft RT
Ground Surface Elev. 810.90 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 777.4 ft ▼
Upon Completion 752.9 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Brown, Moist
			13	SILTY LOAM (Fill), little organics
809.90				
	3			Brown, Moist
	3	3.5	19	SILTY LOAM (Fill), trace gravel
	5	P		
806.90	2			
	3	3.5	18	Brown and Gray, Moist
-5	5	P		SILTY LOAM (Fill), trace gravel
804.90				
	2			Brown, Gray, and Dark Gray, Moist
	4	2.9	59	SILTY LOAM (Fill), trace gravel
	6	B		
	2			
	5	2.9	21	
-10	7	B		
	3			
	5	3.7	20	
	7	B		
796.90	2			
796.40	6	4.5	24	Dark Gray to Black, Moist
-15	6	P		SILTY LOAM, trace organics
				Hard
				Brown and Gray, Moist
794.90				SILTY LOAM, trace gravel
	2			Very Stiff
	4	2.2	22	Dark Gray to Black, Moist
	6	B		SILTY LOAM, trace organics
792.40				
791.90	3			Dark Gray and Brown, Moist
	6	4.1	21	SILTY LOAM
-20	8	B		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Hard
789.90				Dark Gray to Black, Moist
	2			SILTY LOAM, trace organics
				(continued)
	3	2.0	24	Very Stiff
	4	B		Greenish Brown and Gray, Moist
786.90				SILTY LOAM, trace gravel
	2			
	3		19	Loose
-25	5			Brown, Fine to Coarse Grain, Moist
				SAND, trace gravel
784.40	8			
783.90	8	4.0	15	Brownish Gray, Fine to Medium
	5	P		Grain, Moist
				SAND, trace gravel
	2			Hard
				Brown, Moist
				SILTY LOAM, trace gravel
781.40				
	5	2.9	13	
-30	5	B		Very Stiff
				Gray, Moist
				SILTY LOAM, trace gravel
	3			
776.40				
	5	1.6	14	
-35	15	B		Stiff
				Brown, Moist
				SILTY LOAM, trace gravel
772.40				
	3			Medium Stiff to Hard
	5	0.8	12	Gray, Moist
-40	5	B		SILTY LOAM, trace gravel

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
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/10/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (SB) over FAI 74 (WB) **LOGGED BY** RJC

SECTION (57-20HB)BR-1 **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM,**
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0062 existing / 057-0254 proposed
Station 52+51.02

BORING NO. B-4 S. Abut
Station 53+49
Offset 3.00ft RT
Ground Surface Elev. 810.90 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 777.4 ft ▼
Upon Completion 752.9 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Medium Stiff to Hard
				Gray, Moist
				SILTY LOAM, trace gravel
				(continued)
	6			
	8			
-45	15			
	11			
	9	3.1	12	
-50	12	B		
	6			
	9	4.1	16	
-55	12	B		
▽				
	6			
	19	6.8	11	
-60	23	P		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Medium Stiff to Hard
				Gray, Moist
				SILTY LOAM, trace gravel
				(continued)
	19			
	23	7.8	10	
-65	43	P		
	14			
	20	7.8	11	
740.90 -70	23	P		
				End of Boring
-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)

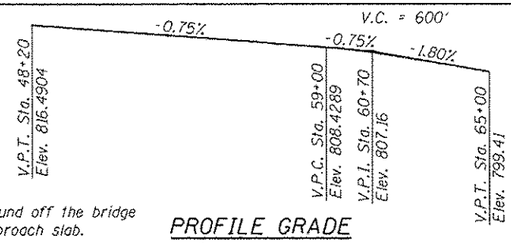
BBS, form 137 (Rev. 8-99)

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SOIL BORINGS STRUCTURE NO. 057–0253**	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-20HB)BR	MCLEAN	440	235
	PLOT SCALE =	DRAWN - SGM	REVISED -						CONTRACT NO. 70570	
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 28 OF 28 SHEETS			ILLINOIS FED. AID PROJECT		

Benchmark: #4848-2 - Chiseled square on the Southwest wing of Structure No. 057-0061. Elev. 813.96.

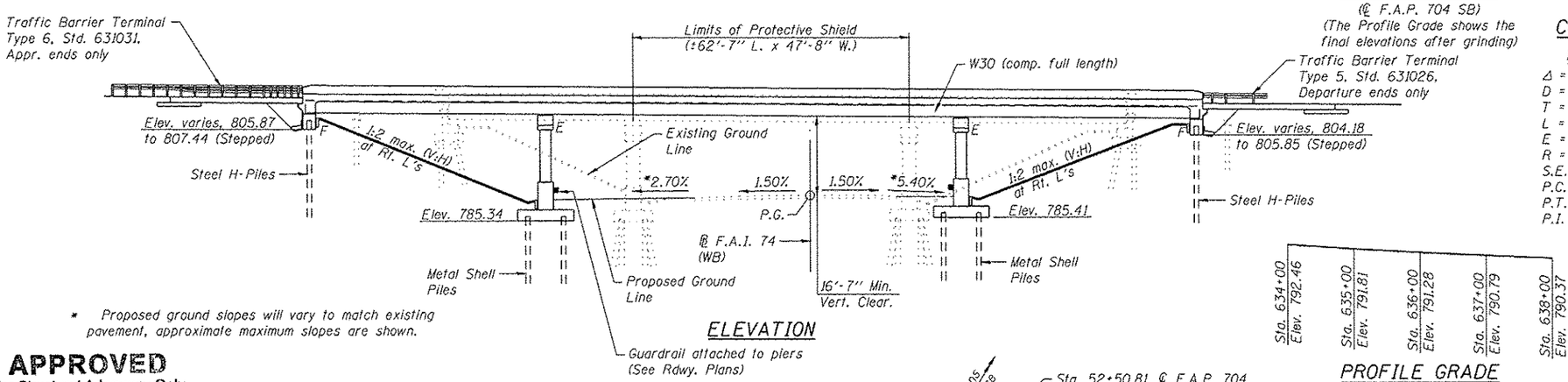
Existing Structure: S.N. 057-0062 was constructed in 1963 as F.A.I. Rte. 74, Section 57-20HB, at Sta. 635+75.15. The bridge is three simple composite spans with concrete deck slab on steel beams located on a horizontal curve on the F.A.P. Rte. 704 southbound alignment and spans 156'-7" back to back abutments and measures 47'-8" in width. The bridge is skewed 31°11'24" left forward over a tangent section of the F.A.I. 74 WB alignment. The bridge was rehabilitated in 1993 as F.A.I. 74, Section 57-20HBR with a concrete overlay, new parapets and steel diaphragms, and substructure repairs.

The existing structure shall be removed and replaced using staged construction to maintain one lane of traffic. Ramps E and F will be closed during Stage II.
No salvage.



Note:
Up to 1/4" will be ground off the bridge slab and the bridge approach slab.

PROFILE GRADE
(℄ F.A.P. 704 SB)
(The Profile Grade shows the final elevations after grinding)



* Proposed ground slopes will vary to match existing pavement, approximate maximum slopes are shown.

ELEVATION

PROFILE GRADE
(℄ F.A.I. 74 WB)

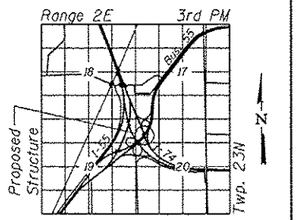
CURVE DATA
F.A.P. 704

Δ = 72° 26' 50" (RT)
D = 2° 29' 57"
T = 1,679.29'
L = 2,898.71'
E = 549.26'
R = 2,292.48'
S.E. = 4.50%
P.C. = Sta. 38+00.02
P.T. = Sta. 66+98.73
P.I. = Sta. 54+79.31

INDEX OF SHEETS

STATION 635+73.19
BUILT BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. (57-20HB)BR-1
LOADING HL-93
STRUCTURE NO. 057-0254

NAME PLATE
See Std. 515001



LOCATION SKETCH

DESIGN SPECIFICATIONS
2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

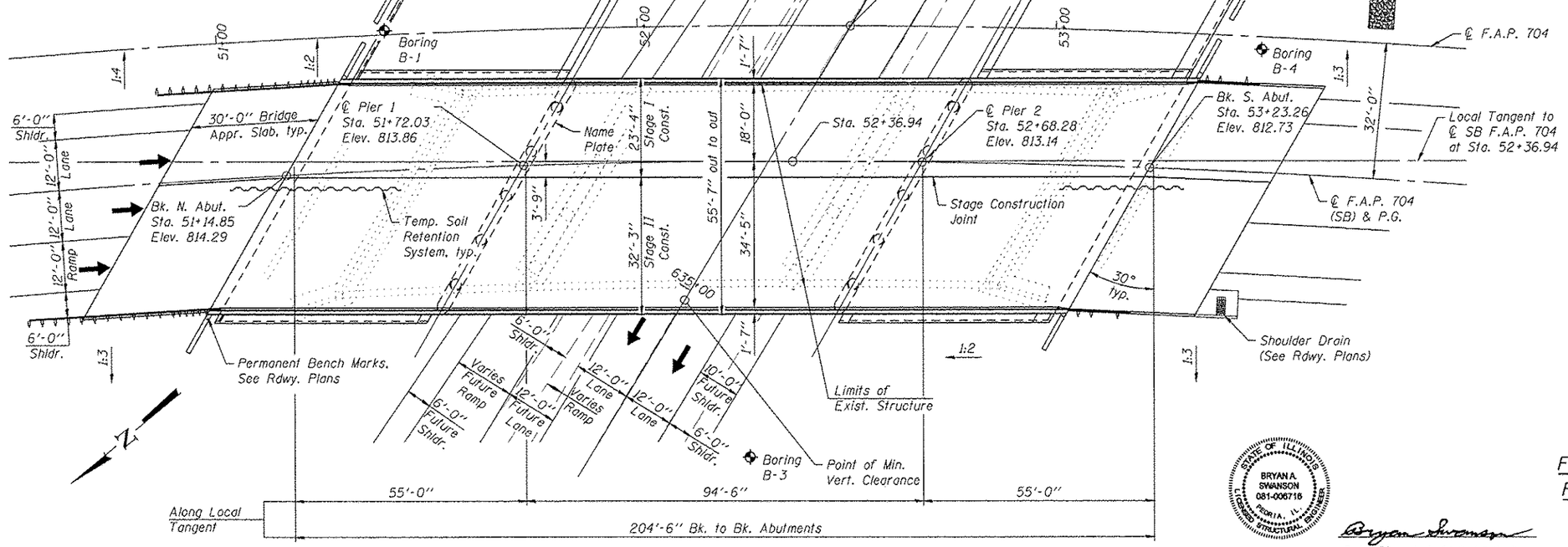
LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES
FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50) (Primary)
fy = 36,000 psi (M270 Grade 36)

SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.087
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.152
Soil Site Class = C

APPROVED
For Structural Adequacy Only
R. Carl Lenzen, JES
Engineer of Bridges &Structures



BRYAN A. SWANSON
081-006716
PEORIA, IL
REGISTERED STRUCTURAL ENGINEER

Bryan Swanson
Date Signed: 1/02/2013
Exp. Date: 11/30/2014

GENERAL PLAN AND ELEVATION
FAI 55 BUSINESS (SB) OVER I-74(WB)
F.A.I. 74 (WB) - SEC. (57-20HB)BR-1
MCLEAN COUNTY
STA. 635+73.19
STRUCTURE NO. 057-0254

FILE NAME = 0570254-70570-001-GPE.dgn	USER NAME = baswanson	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION			
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -				
	PLOT SCALE =	DRAWN - SGM	REVISED -				
	PLOT DATE = 11/7/2012 11:08:13 AM	CHECKED - BAS	REVISED -		SHEET NO. 1 OF 28 SHEETS		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR-1	MCLEAN	440	236
		CONTRACT NO. 70570		
		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts $\frac{7}{8}$ in. ϕ, holes $\frac{15}{16}$ in. ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 254,470 lbs. (Grade 50)
15,760 lbs. (Grade 36)

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

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.

Concrete Sealer shall be applied to the exposed surfaces of both piers.

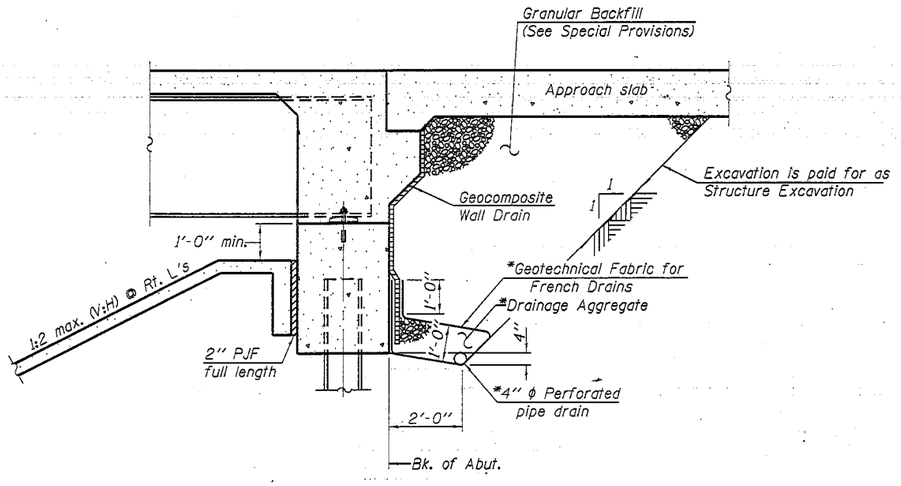
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that the exterior surfaces and bottom of the bottom flange of the fascia beams, masked off connection surfaces, and field installed fasteners, all of which shall be touched up and finish coated in the field. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown, Munsell No. 2.5YR 3/4.

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

Slipforming of the parapets is not allowed.

The removal of existing concrete slope wall shall be paid for as Slope Wall Removal. The quantity shown extends midway between the adjacent structures. The Engineer may adjust the limits of removal in the field as needed to accommodate excavation of the proposed embankment between the bridges.



SECTION THRU INTEGRAL ABUTMENT

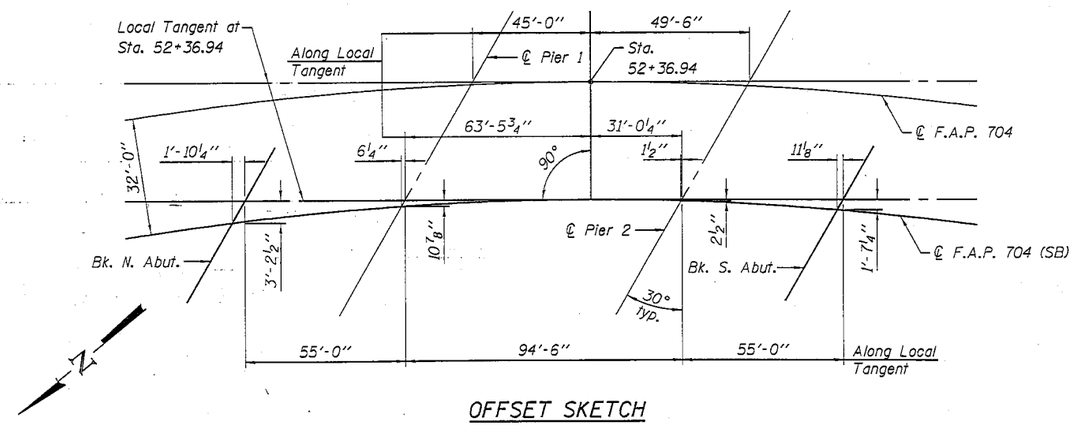
(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures 4".

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

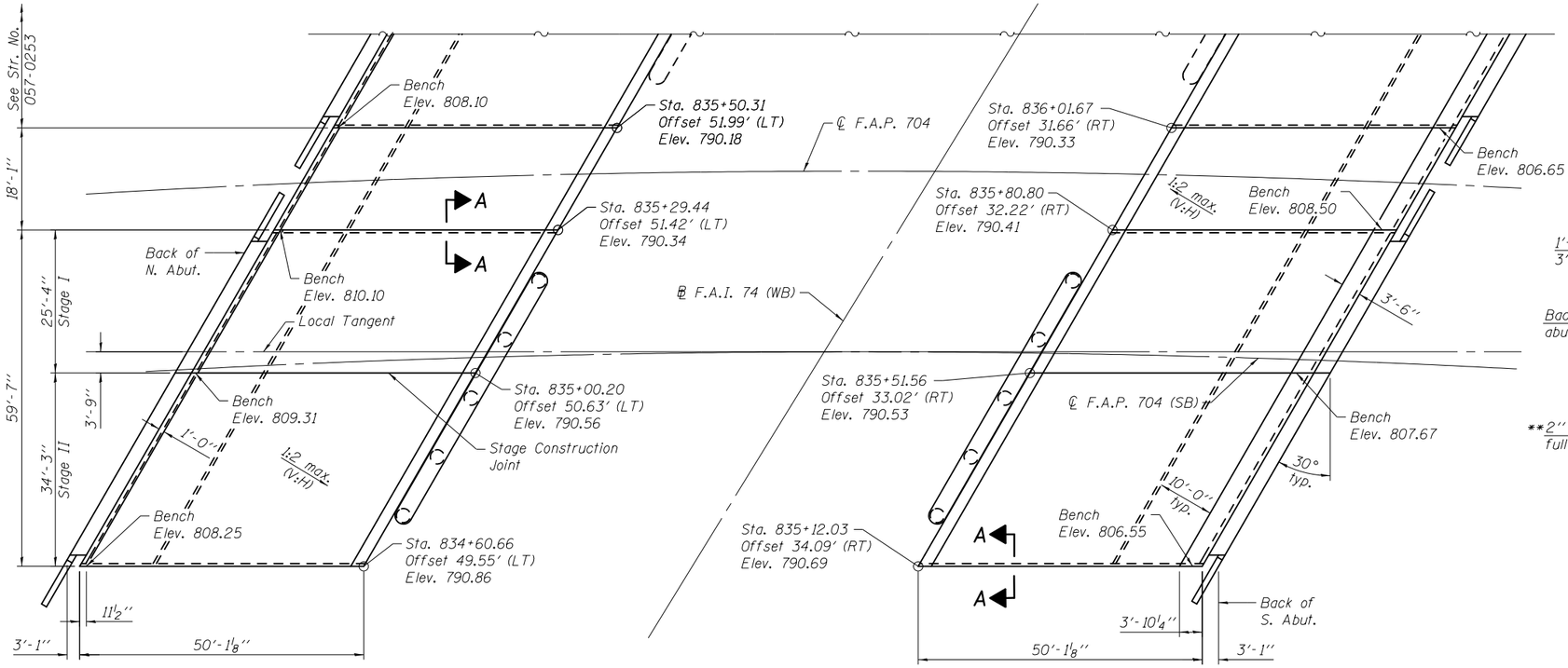
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures No. 4	Each			1
Slope Wall Removal	Sq. Yd.		770	770
Protective Shield	Sq. Yd.	332		332
Structure Excavation	Cu. Yd.		914	914
Concrete Structures	Cu. Yd.		361.1	361.1
Concrete Superstructure	Cu. Yd.	545.0		545.0
Bridge Deck Grooving	Sq. Yd.	1485		1485
Concrete Encasement	Cu. Yd.		6.2	6.2
Protective Coat	Sq. Yd.	1725		1725
Stud Shear Connectors	Each	8232		8232
Reinforcement Bars, Epoxy Coated	Pound	131610	50030	181640
Bar Splicers	Each	991	238	1229
Slope Wall 4 Inch	Sq. Yd.		958	958
Furnishing Metal Shell Piles 14"x0.312"	Foot		1054	1054
Furnishing Steel Piles HP12x53	Foot		672	672
Driving Piles	Foot		1726	1726
Test Pile Metal Shells	Each		2	2
Test Pile Steel HP12x53	Each		2	2
Pile Shoes	Each		36	36
Name Plates	Each			1
Elastomeric Bearing Assembly, Type I	Each	14		14
Anchor Bolts, 1"	Each		28	28
Anchor Bolts, 1¼"	Each		28	28
Concrete Sealer	Sq. Ft.		3754	3754
Geocomposite Wall Drain	Sq. Yd.		105	105
Granular Backfill for Structures	Cu. Yd.		164	164
Furnishing and Erecting Structural Steel	L. Sum	0.29		0.29
Diamond Grinding (Bridge Section)	Sq. Yd.	1426		1426
Pipe Underdrains for Structures 4"	Foot		193	193
Temporary Soil Retention System	Sq. Ft.		485	485

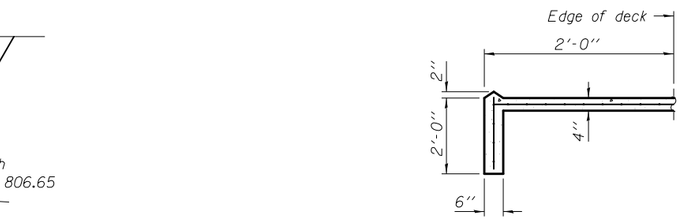


OFFSET SKETCH

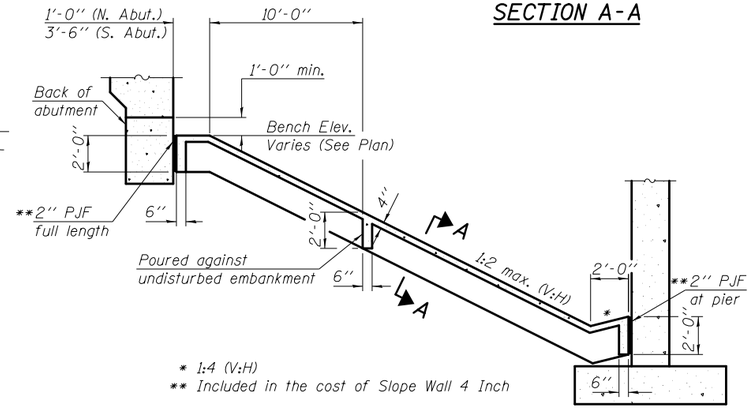
FILE NAME = 0570254-70570-201-GPE.dgn	USER NAME = baswanson	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL DATA STRUCTURE NO. 057-0254	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS	PLOT SCALE =	CHECKED - JAE	REVISED -			74	(57-20HB)BR-1	MCLEAN	440	237
	PLOT DATE = 10/2/2013 4:58:02 PM	DRAWN - SGM	REVISED -		SHEET NO. 2 OF 28 SHEETS			CONTRACT NO. 70570		
		CHECKED - BAS	REVISED -					ILLINOIS FED. AID PROJECT		



SLOPE WALL PLAN



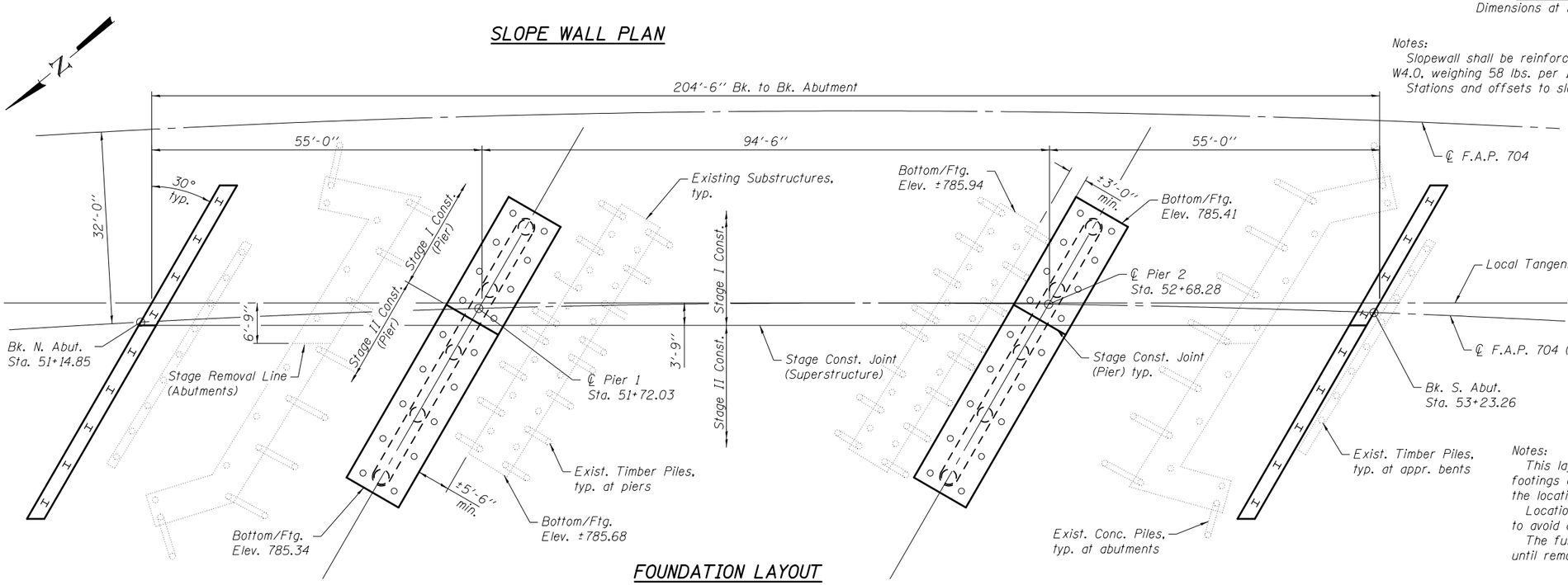
SECTION A-A



* 1:4 (V:H)
** Included in the cost of Slope Wall 4 Inch

SECTION THRU CONCRETE SLOPEWALL

Dimensions at right angles to substructures.



FOUNDATION LAYOUT

Notes:

Slopewall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

Stations and offsets to slopewall are given relative to ℄ F.A.I. 74 (WB).

Notes:

This layout shows relative position of existing and proposed footings and piles. Existing foundations may vary slightly from the locations shown here and on the existing structure plans.

Location of proposed piles may be adjusted (up to ±1 foot) to avoid conflict with existing piles.

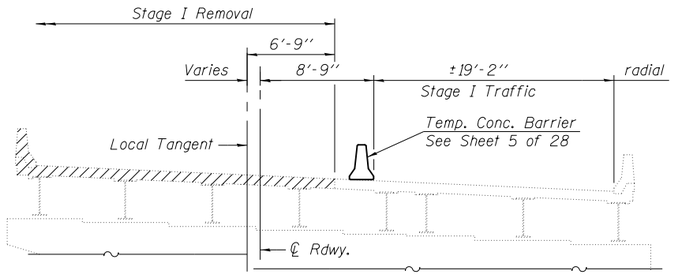
The full existing piers, including cap beams, shall remain intact until removal of the entire superstructure in Stage II.

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -

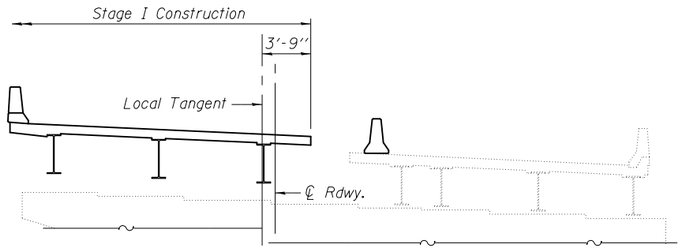
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE WALL AND FOUNDATION LAYOUT
STRUCTURE NO. 057-0254
SHEET NO. 3 OF 28 SHEETS

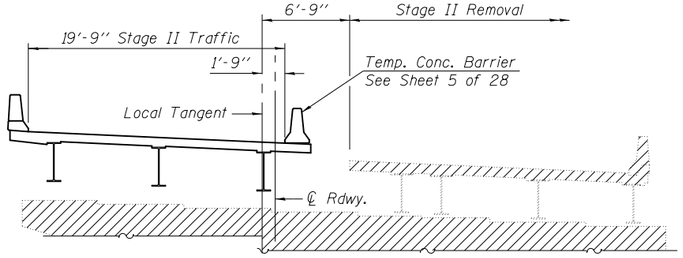
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR-1	MCLEAN	440	238
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



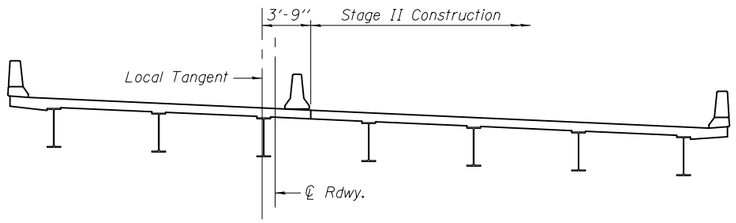
STAGE I REMOVAL



STAGE I CONSTRUCTION



STAGE II REMOVAL



STAGE II CONSTRUCTION

Staging Notes:

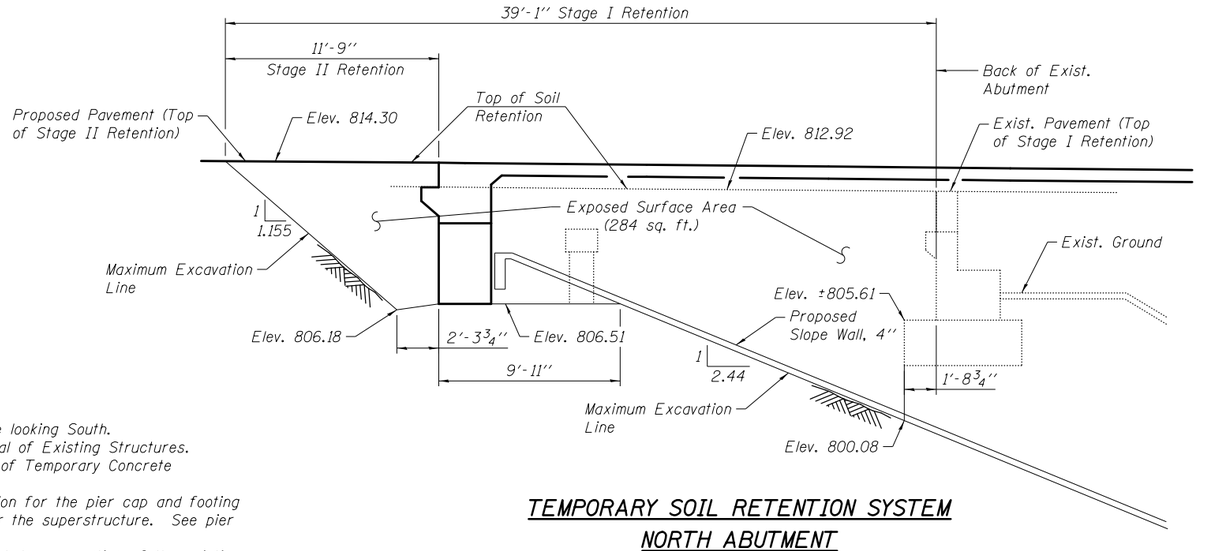
All staging cross sections are looking South.

Hatched areas indicate Removal of Existing Structures.

See Rdwy. plans for quantity of Temporary Concrete Barrier.

Stage construction joint location for the pier cap and footing will differ from those shown for the superstructure. See pier sheets for these locations.

Stage I Removal shall NOT include any portion of the existing piers below the steel beam bearings. Stage I Construction will be completed over the top of the existing piers.

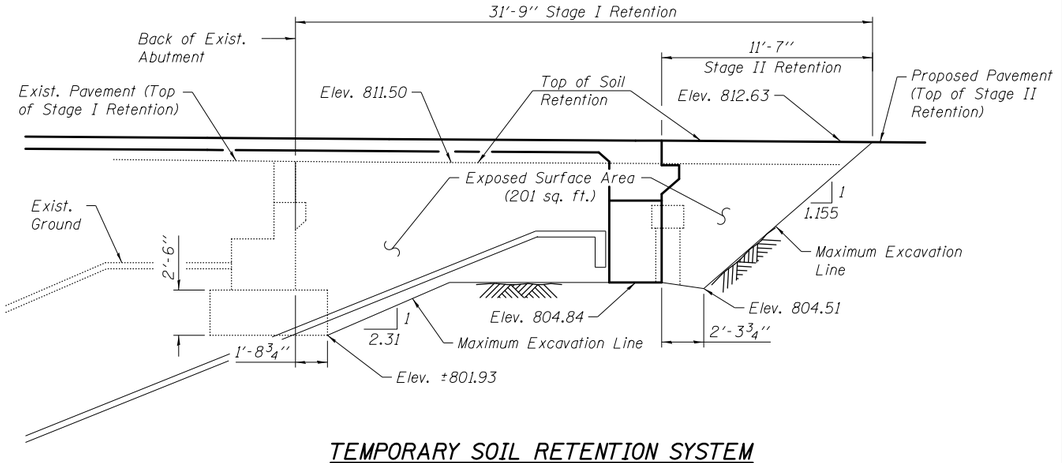


TEMPORARY SOIL RETENTION SYSTEM
NORTH ABUTMENT
(Looking East)

Notes:

Due to the potential for difficult driving conditions, 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.

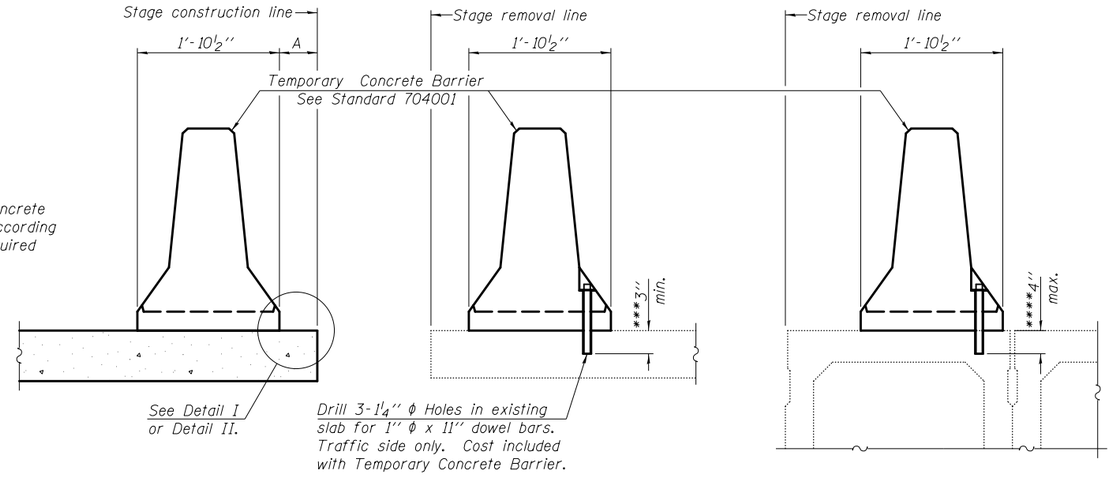
All dimensions and slopes are shown along the temporary soil retention unless noted otherwise.



TEMPORARY SOIL RETENTION SYSTEM
SOUTH ABUTMENT
(Looking East)

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STAGE CONSTRUCTION DETAILS STRUCTURE NO. 057-0254	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-20HB)BR-1	MCLEAN	440	239
	PLOT SCALE =	DRAWN - SGM	REVISED -					CONTRACT NO. 70570		
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 4 OF 28 SHEETS			ILLINOIS FED. AID PROJECT		

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB | EXISTING SLAB | EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7¼" x "W" steel PL to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7¼" x "W" steel PL to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.

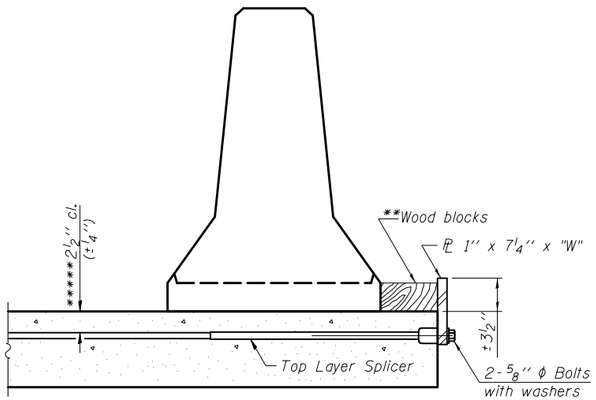
The 1" x 7¼" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

SECTIONS THRU SLAB OR DECK BEAM

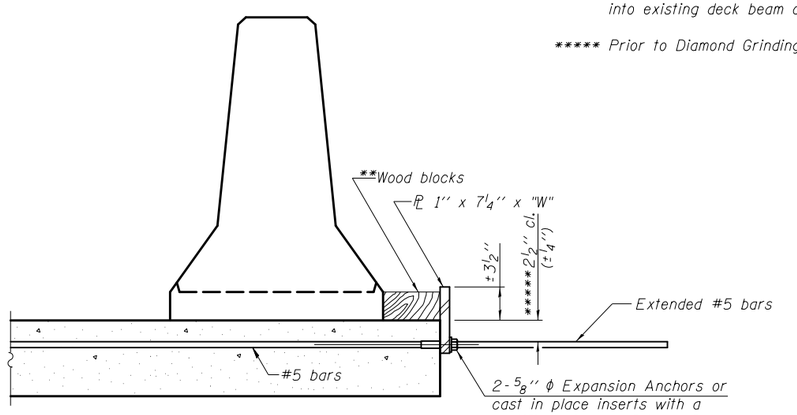
*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.

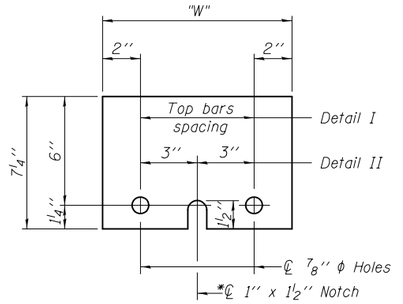
***** Prior to Diamond Grinding of Bridge Section



DETAIL I



DETAIL II



STEEL RETAINER PL 1" x 7¼" x "W"

* Required only with Detail II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

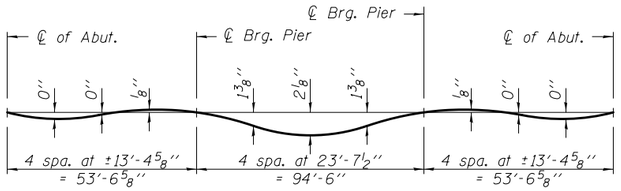
"W" = Top bars spacing + 4"

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MODIFIED TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 057-0254
SHEET NO. 5 OF 28 SHEETS

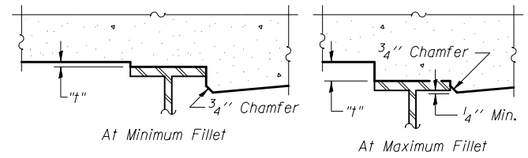
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR-1	MCLEAN	440	240
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



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 7 and 8 of 28.



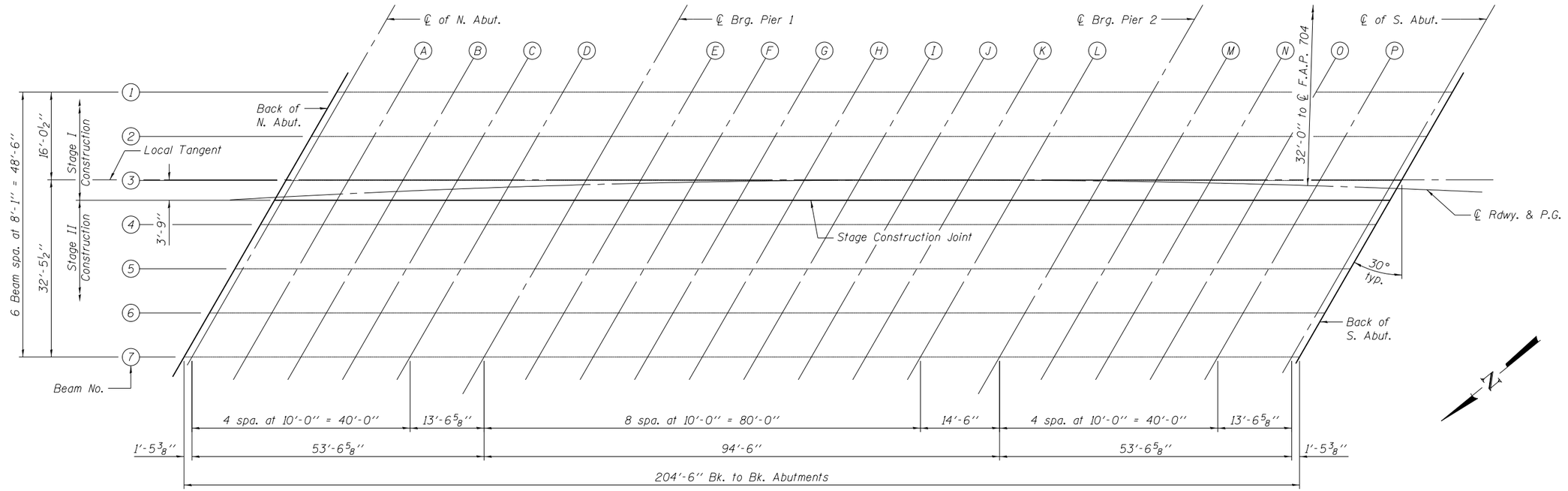
At Minimum Fillet

At Maximum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown on sheets 7 and 8 of 28, minus the 8 1/4'' slab 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 7 and 8 of 28. For grinding the deck, see Special Provisions.

FILLET HEIGHTS



PLAN

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NO. 057-0254	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-20HB)BR-1	MCLEAN	440	241
	PLOT SCALE =	DRAWN - SGM	REVISED -					CONTRACT NO. 70570		
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 6 OF 28 SHEETS		ILLINOIS	FED. AID PROJECT		

BEAM 1

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back of N. Abut.	51+27.05	13.34	815.04	815.06
℄ of N. Abut.	51+28.50	13.41	815.02	815.05
A	51+38.54	13.86	814.93	814.95
B	51+48.60	14.27	814.84	814.86
C	51+58.66	14.63	814.74	814.76
D	51+68.71	14.95	814.65	814.66
℄ Brg. Pier 1	51+82.36	15.31	814.54	814.56
E	51+92.42	15.53	814.45	814.52
F	52+02.49	15.70	814.37	814.49
G	52+12.56	15.83	814.29	814.46
H	52+22.63	15.91	814.21	814.41
I	52+32.70	15.95	814.13	814.34
J	52+42.77	15.95	814.06	814.25
K	52+52.84	15.90	813.98	814.13
L	52+62.91	15.81	813.91	814.00
℄ Brg. Pier 2	52+77.50	15.60	813.81	813.83
M	52+87.57	15.40	813.75	813.75
N	52+97.63	15.16	813.68	813.69
O	53+07.70	14.87	813.62	813.64
P	53+17.76	14.54	813.56	813.58
℄ of. S. Abut.	53+31.39	14.02	813.48	813.50
Back of S. Abut.	53+32.84	13.97	813.47	813.49

BEAM 2

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back of N. Abut.	51+21.95	21.18	814.72	814.74
℄ of N. Abut.	51+23.40	21.26	814.71	814.73
A	51+33.49	21.73	814.61	814.64
B	51+43.57	22.16	814.52	814.54
C	51+53.67	22.54	814.43	814.44
D	51+63.76	22.89	814.33	814.34
℄ Brg. Pier 1	51+77.45	23.28	814.21	814.24
E	51+87.55	23.52	814.13	814.19
F	51+97.65	23.71	814.04	814.16
G	52+07.76	23.86	813.96	814.13
H	52+17.86	23.96	813.88	814.08
I	52+27.97	24.02	813.80	814.00
J	52+38.07	24.04	813.73	813.91
K	52+48.18	24.01	813.65	813.79
L	52+58.28	23.94	813.58	813.67
℄ Brg. Pier 2	52+72.93	23.76	813.48	813.50
M	52+83.04	23.58	813.41	813.42
N	52+93.14	23.36	813.35	813.36
O	53+03.24	23.09	813.28	813.30
P	53+13.33	22.78	813.22	813.25
℄ of S. Abut.	53+27.01	22.29	813.14	813.16
Back of S. Abut.	53+28.47	22.23	813.13	813.16

BEAM 3

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back of N. Abut.	51+16.82	29.02	814.41	814.43
℄ of N. Abut.	51+18.28	29.09	814.39	814.42
A	51+28.40	29.59	814.30	814.32
B	51+38.52	30.04	814.20	814.22
C	51+48.64	30.45	814.11	814.12
D	51+58.77	30.81	814.02	814.02
℄ Brg. Pier 1	51+72.51	31.23	813.89	813.91
E	51+82.64	31.49	813.81	813.87
F	51+92.78	31.71	813.72	813.83
G	52+02.92	31.88	813.64	813.80
H	52+13.06	32.00	813.56	813.74
I	52+23.20	32.08	813.48	813.67
J	52+33.34	32.12	813.40	813.57
K	52+43.48	32.12	813.32	813.46
L	52+53.63	32.07	813.25	813.33
℄ Brg. Pier 2	52+68.33	31.91	813.15	813.17
M	52+78.47	31.75	813.08	813.09
N	52+88.61	31.55	813.01	813.02
O	52+98.74	31.30	812.95	812.97
P	53+08.88	31.01	812.89	812.91
℄ of S. Abut.	53+22.61	30.55	812.80	812.83
Back of S. Abut.	53+24.07	30.49	812.80	812.82

* From ℄ F.A.P. 704

℄ ROADWAY AND PROFILE GRADE

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back of N. Abut.	51+14.85	32.00	814.29	814.31
℄ of N. Abut.	51+16.37	32.00	814.28	814.30
A	51+26.82	32.00	814.20	814.22
B	51+37.25	32.00	814.12	814.14
C	51+47.65	32.00	814.04	814.06
D	51+58.02	32.00	813.97	813.98
℄ Brg. Pier 1	51+72.03	32.00	813.86	813.88
E	51+82.33	32.00	813.79	813.85
F	51+92.60	32.00	813.71	813.82
G	52+02.84	32.00	813.63	813.79
H	52+13.06	32.00	813.56	813.74
I	52+23.25	32.00	813.48	813.67
J	52+33.41	32.00	813.40	813.58
K	52+43.55	32.00	813.33	813.46
L	52+53.66	32.00	813.25	813.34
℄ Brg. Pier 2	52+68.28	32.00	813.14	813.17
M	52+78.33	32.00	813.07	813.08
N	52+88.36	32.00	812.99	813.01
O	52+98.36	32.00	812.92	812.94
P	53+08.34	32.00	812.85	812.87
℄ of S. Abut.	53+21.83	32.00	812.74	812.77
Back of S. Abut.	53+23.26	32.00	812.73	812.75

STAGE CONSTRUCTION JOINT

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back of N. Abut.	51+14.51	32.53	814.27	814.29
℄ of N. Abut.	51+15.97	32.60	814.25	814.27
A	51+26.10	33.11	814.16	814.18
B	51+36.24	33.57	814.06	814.08
C	51+46.38	33.99	813.96	813.98
D	51+56.52	34.36	813.87	813.88
℄ Brg. Pier 1	51+70.28	34.80	813.75	813.77
E	51+80.43	35.06	813.66	813.72
F	51+90.58	35.29	813.58	813.69
G	52+00.74	35.47	813.49	813.65
H	52+10.89	35.60	813.41	813.60
I	52+21.05	35.70	813.33	813.52
J	52+31.21	35.74	813.25	813.43
K	52+41.37	35.75	813.18	813.31
L	52+51.53	35.70	813.10	813.19
℄ Brg. Pier 2	52+66.26	35.57	813.00	813.02
M	52+76.41	35.42	812.93	812.94
N	52+86.57	35.22	812.86	812.87
O	52+96.72	34.98	812.80	812.82
P	53+06.87	34.70	812.73	812.76
℄ of S. Abut.	53+20.62	34.25	812.65	812.67
Back of S. Abut.	53+22.09	34.19	812.64	812.66

BEAM 4

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back of N. Abut.	51+11.65	36.84	814.10	814.12
℄ of N. Abut.	51+13.12	36.92	814.08	814.10
A	51+23.27	37.44	813.98	814.01
B	51+33.42	37.91	813.88	813.91
C	51+43.58	38.34	813.79	813.80
D	51+53.75	38.72	813.70	813.70
℄ Brg. Pier 1	51+67.53	39.18	813.57	813.59
E	51+77.70	39.46	813.48	813.55
F	51+87.87	39.69	813.40	813.51
G	51+98.05	39.88	813.31	813.48
H	52+08.22	40.03	813.23	813.43
I	52+18.40	40.13	813.15	813.35
J	52+28.58	40.19	813.07	813.25
K	52+38.76	40.21	813.00	813.13
L	52+48.94	40.18	812.92	813.01
℄ Brg. Pier 2	52+63.69	40.05	812.82	812.84
M	52+73.87	39.92	812.75	812.75
N	52+84.05	39.73	812.68	812.69
O	52+94.22	39.50	812.61	812.63
P	53+04.39	39.23	812.55	812.57
℄ of S. Abut.	53+18.17	38.79	812.47	812.49
Back of S. Abut.	53+19.64	38.74	812.46	812.48

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 057-0254
SHEET NO. 7 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-2OHB)BR-1	MCLEAN	440	242
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

* From ℄ F.A.P. 704

BEAM 5

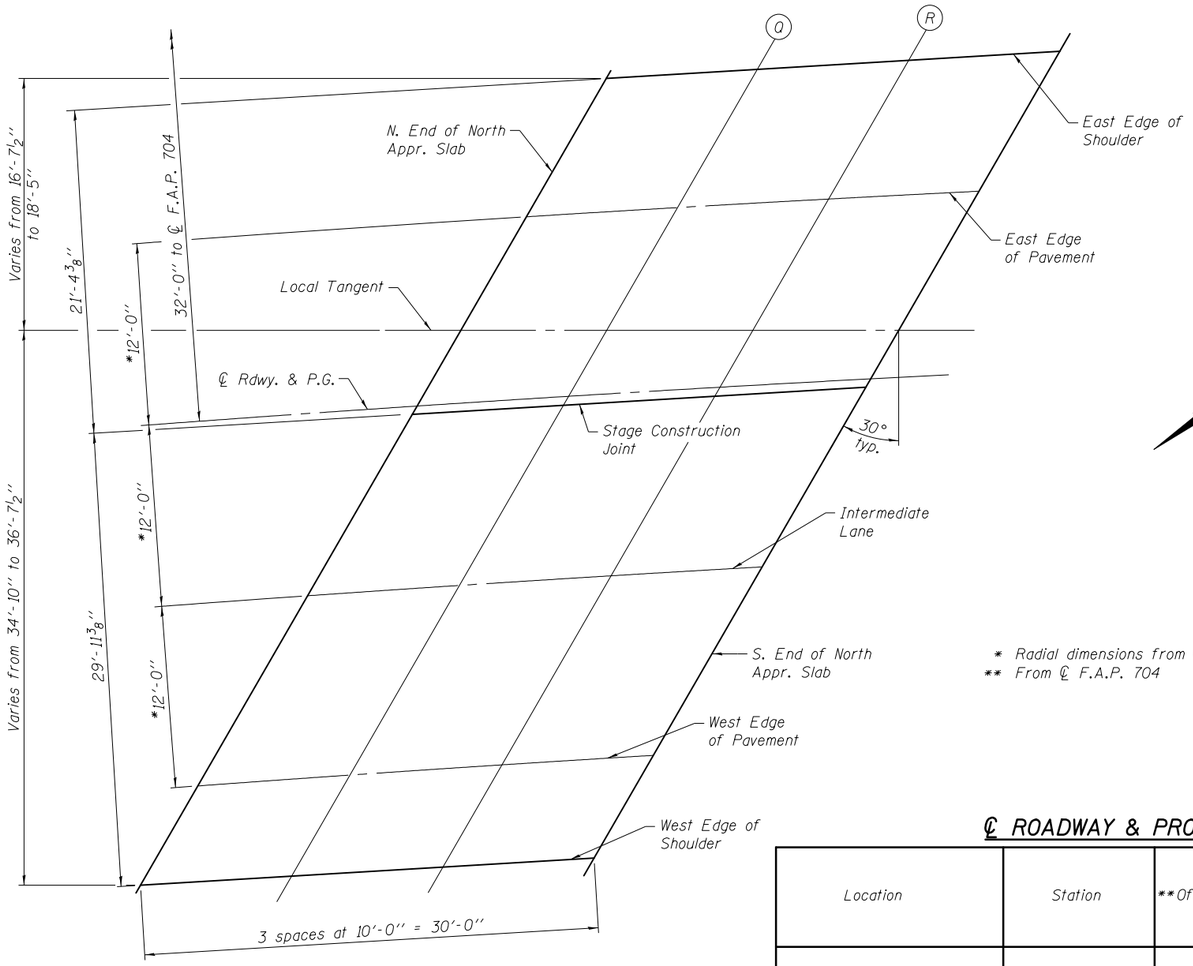
Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back of N. Abut.	51+06.45	44.65	813.78	813.80
℄ of N. Abut.	51+07.92	44.73	813.77	813.79
A	51+18.10	45.27	813.67	813.69
B	51+28.29	45.77	813.57	813.59
C	51+38.49	46.22	813.47	813.49
D	51+48.69	46.63	813.38	813.39
℄ Brg. Pier 1	51+62.52	47.11	813.25	813.27
E	51+72.72	47.41	813.16	813.23
F	51+82.93	47.67	813.08	813.19
G	51+93.14	47.88	812.99	813.15
H	52+03.35	48.05	812.91	813.10
I	52+13.57	48.17	812.82	813.03
J	52+23.78	48.25	812.74	812.93
K	52+34.00	48.29	812.67	812.81
L	52+44.21	48.28	812.59	812.68
℄ Brg. Pier 2	52+59.02	48.19	812.48	812.51
M	52+69.24	48.07	812.41	812.42
N	52+79.45	47.91	812.35	812.36
O	52+89.66	47.70	812.28	812.30
P	52+99.87	47.45	812.21	812.24
℄ of S. Abut.	53+13.70	47.03	812.13	812.15
Back of S. Abut.	53+15.18	46.98	812.12	812.14

BEAM 6

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back of N. Abut.	51+01.21	52.45	813.47	813.49
℄ of N. Abut.	51+02.68	52.53	813.46	813.48
A	51+12.90	53.10	813.35	813.38
B	51+23.13	53.62	813.26	813.28
C	51+33.36	54.09	813.16	813.17
D	51+43.59	54.52	813.06	813.07
℄ Brg. Pier 1	51+57.47	55.03	812.94	812.96
E	51+67.71	55.35	812.84	812.91
F	51+77.95	55.63	812.75	812.87
G	51+88.20	55.87	812.67	812.83
H	51+98.45	56.06	812.58	812.78
I	52+08.70	56.21	812.50	812.70
J	52+18.95	56.31	812.42	812.60
K	52+29.20	56.36	812.34	812.48
L	52+39.45	56.37	812.26	812.35
℄ Brg. Pier 2	52+54.32	56.31	812.15	812.18
M	52+64.57	56.21	812.08	812.09
N	52+74.82	56.07	812.01	812.02
O	52+85.07	55.88	811.94	811.96
P	52+95.32	55.65	811.88	811.90
℄ of S. Abut.	53+09.20	55.26	811.79	811.81
Back of S. Abut.	53+10.68	55.22	811.78	811.80

BEAM 7

Location	Station	*Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Back of N. Abut.	50+95.93	60.24	813.16	813.18
℄ of N. Abut.	50+97.41	60.33	813.15	813.17
A	51+07.67	60.91	813.04	813.07
B	51+17.93	61.45	812.94	812.96
C	51+28.19	61.95	812.84	812.86
D	51+38.46	62.40	812.75	812.75
℄ Brg. Pier 1	51+52.38	62.94	812.62	812.64
E	51+62.66	63.29	812.52	812.59
F	51+72.94	63.59	812.43	812.55
G	51+83.22	63.85	812.35	812.51
H	51+93.51	64.06	812.26	812.46
I	52+03.80	64.23	812.18	812.38
J	52+14.08	64.35	812.09	812.28
K	52+24.37	64.42	812.01	812.15
L	52+34.66	64.46	811.93	812.02
℄ Brg. Pier 2	52+49.58	64.42	811.82	811.85
M	52+59.87	64.35	811.75	811.76
N	52+70.16	64.22	811.68	811.69
O	52+80.44	64.06	811.61	811.63
P	52+90.73	63.84	811.54	811.57
℄ of S. Abut.	53+04.67	63.49	811.46	811.48
Back of S. Abut.	53+06.15	63.44	811.45	811.47



PLAN

* Radial dimensions from ℄ Rdwy.
** From ℄ F.A.P. 704

EAST EDGE OF SHOULDER

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	50+98.39	11.21	815.35	815.37
Q	51+08.44	11.20	815.27	815.29
R	51+18.49	11.14	815.20	815.22
S. End North Appr.	51+28.54	11.03	815.13	815.15

EAST EDGE OF PAVEMENT

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	50+92.53	20.00	815.00	815.02
Q	51+02.62	20.00	814.92	814.94
R	51+12.69	20.00	814.85	814.87
S. End North Appr.	51+22.72	20.00	814.77	814.79

℄ ROADWAY & PROFILE GRADE

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	50+84.43	32.00	814.52	814.54
Q	50+94.60	32.00	814.44	814.46
R	51+04.74	32.00	814.37	814.39
S. End North Appr.	51+14.85	32.00	814.29	814.31

STAGE CONSTRUCTION JOINT

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	50+84.07	32.52	814.50	814.52
Q	50+94.22	32.57	814.42	814.44
R	51+04.36	32.57	814.34	814.36
S. End North Appr.	51+14.51	32.53	814.27	814.29

INTERMEDIATE LANE

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	50+76.22	44.00	814.04	814.06
Q	50+86.47	44.00	813.96	813.98
R	50+96.69	44.00	813.89	813.91
S. End North Appr.	51+06.88	44.00	813.81	813.83

WEST EDGE OF PAVEMENT

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	50+67.91	56.00	813.56	813.58
Q	50+78.24	56.00	813.48	813.50
R	50+88.54	56.00	813.41	813.43
S. End North Appr.	50+98.81	56.00	813.33	813.35

WEST EDGE OF SHOULDER

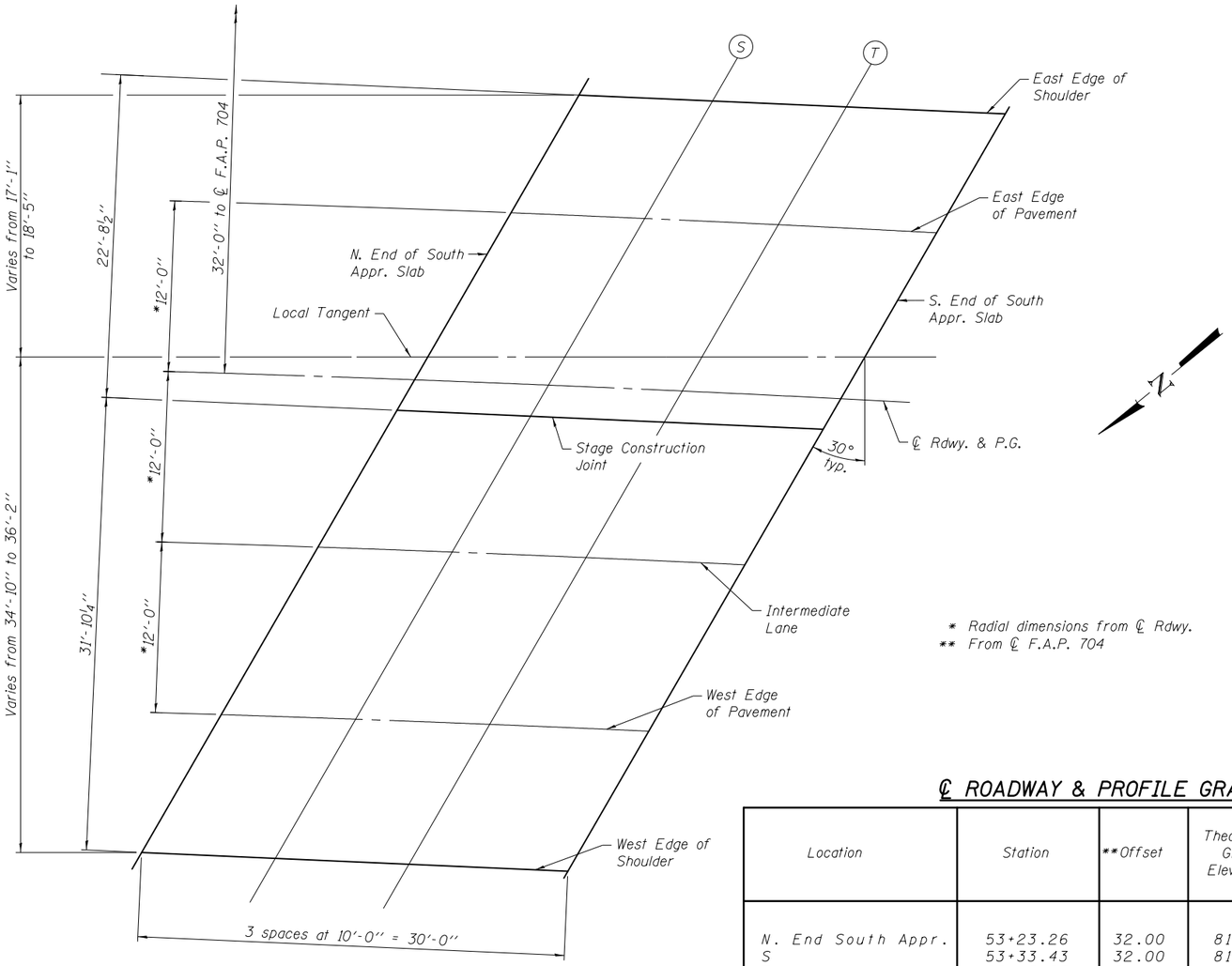
Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End North Appr.	50+63.54	62.25	813.31	813.33
Q	50+73.82	62.39	813.23	813.25
R	50+84.10	62.48	813.15	813.17
S. End North Appr.	50+94.38	62.52	813.07	813.09

FILE NAME = $FILES$
MAURER-STUTZ ENGINEERS SURVEYORS
USER NAME = piersonbr
PLOT SCALE =
PLOT DATE = 7/30/2013 $TIME$
DESIGNED - BAS
CHECKED - JAE
DRAWN - SGM
CHECKED - BAS
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 057-0254
SHEET NO. 9 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR-1	MCLEAN	440	244
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



* Radial dimensions from ℄ Rdwy.
** From ℄ F.A.P. 704

PLAN

EAST EDGE OF SHOULDER

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+34.12	11.53	813.57	813.59
S	53+44.17	11.53	813.50	813.52
T	53+54.22	11.48	813.43	813.45
S. End South Appr.	53+64.27	11.39	813.36	813.38

EAST EDGE OF PAVEMENT

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+29.65	20.00	813.23	813.25
S	53+39.75	20.00	813.15	813.17
T	53+49.82	20.00	813.08	813.10
S. End South Appr.	53+59.88	20.00	813.00	813.02

℄ ROADWAY & PROFILE GRADE

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+23.26	32.00	812.73	812.75
S	53+33.43	32.00	812.66	812.68
T	53+43.57	32.00	812.58	812.60
S. End South Appr.	53+53.69	32.00	812.51	812.53

STAGE CONSTRUCTION JOINT

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+22.09	34.19	812.64	812.66
S	53+32.24	34.24	812.57	812.59
T	53+42.39	34.25	812.49	812.51
S. End South Appr.	53+52.54	34.21	812.42	812.44

INTERMEDIATE LANE

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+16.80	44.00	812.24	812.26
S	53+27.03	44.00	812.17	812.19
T	53+37.24	44.00	812.09	812.11
S. End South Appr.	53+47.43	44.00	812.01	812.03

WEST EDGE OF PAVEMENT

Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+10.25	56.00	811.75	811.77
S	53+20.56	56.00	811.67	811.69
T	53+30.84	56.00	811.60	811.62
S. End South Appr.	53+41.09	56.00	811.52	811.54

WEST EDGE OF SHOULDER

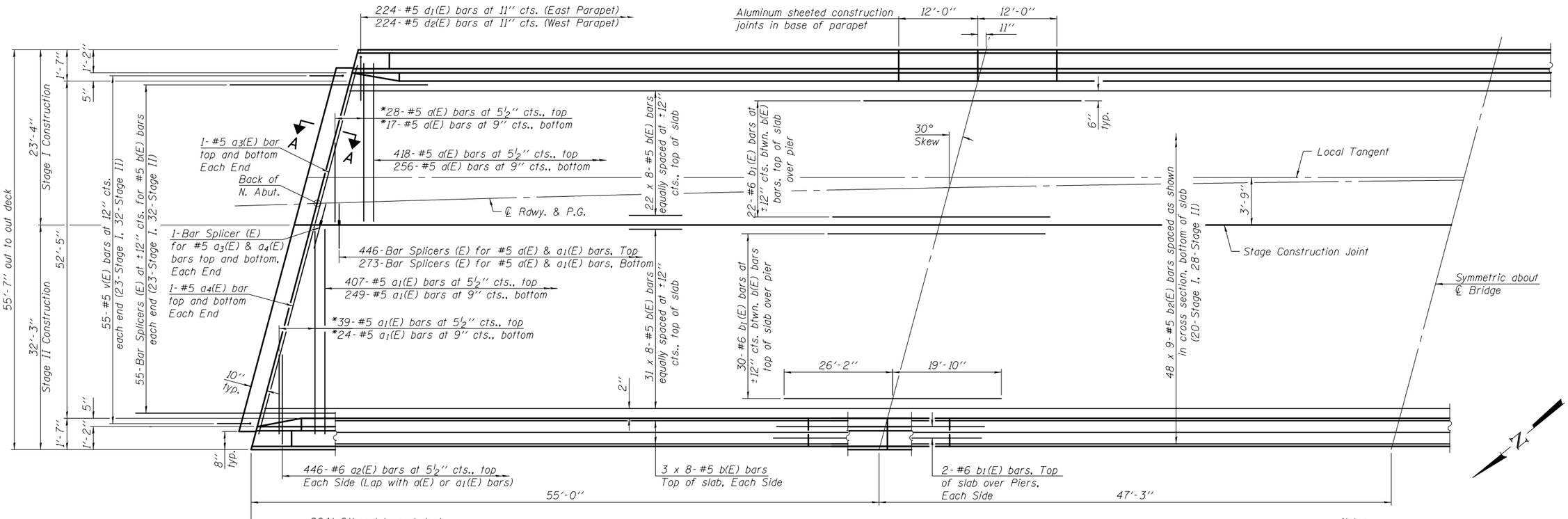
Location	Station	**Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
N. End South Appr.	53+04.81	65.86	811.35	811.37
S	53+15.11	65.98	811.27	811.29
T	53+25.40	66.06	811.19	811.21
S. End South Appr.	53+35.70	66.10	811.11	811.13

FILE NAME = $FILES$
MAURER-STUTZ ENGINEERS SURVEYORS
USER NAME = piersonbr | PLOT SCALE = | PLOT DATE = 7/30/2013 $TIME$
DESIGNED - BAS | CHECKED - JAE | DRAWN - SGM | CHECKED - BAS
REVISED - | REVISED - | REVISED - | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 057-0254
SHEET NO. 10 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-2OHB)BR-1	MCLEAN	440	245
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



PARTIAL PLAN

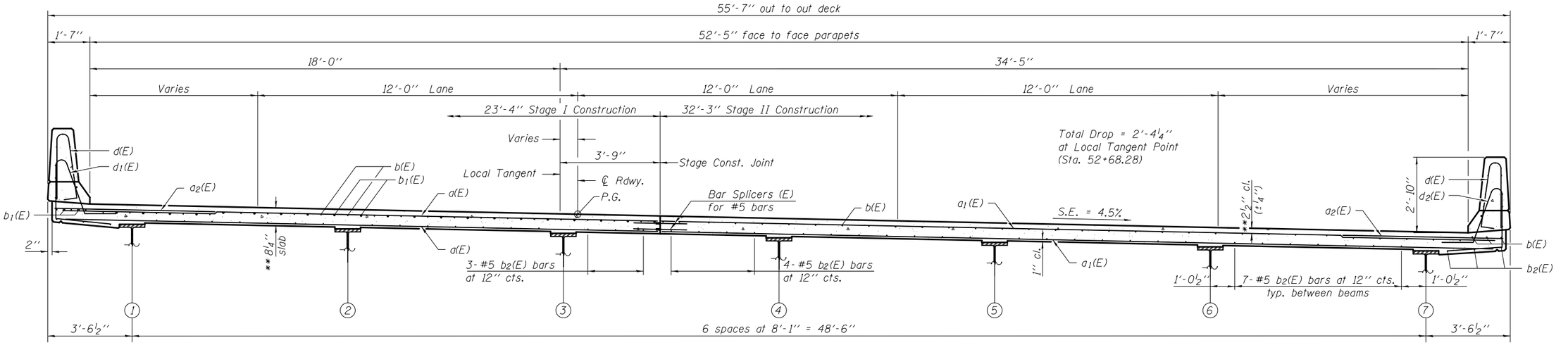
* Order a(E) and a_1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

** Prior to Diamond Grinding of Bridge Section

Notes:
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See sheet 12 of 28 for superstructure details, parapet reinforcement, and Bill of Material.
See sheet 13 of 28 for Section A-A.
For details of Bar Splicers, see sheet 25 of 28.

MINIMUM BAR LAP

#5 bar = 2'-7"

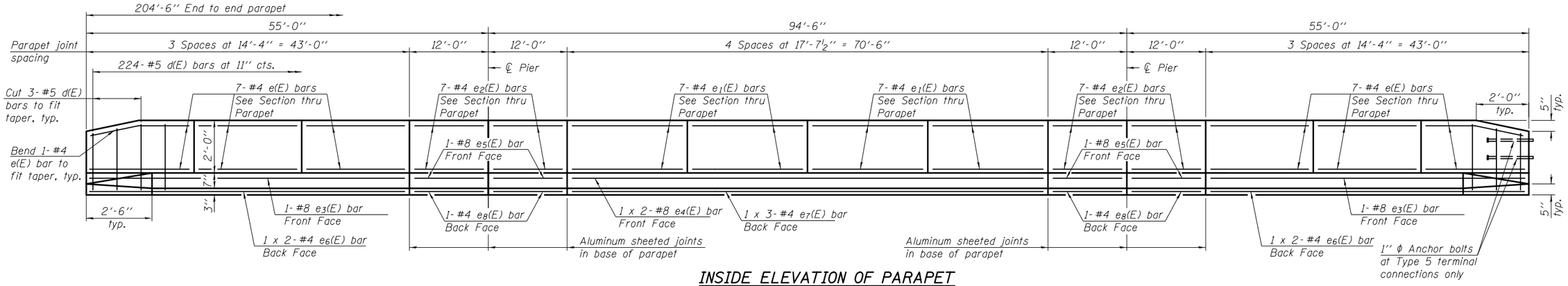


NEAR PIER NEAR MIDSPAN

CROSS SECTION

(Looking South)

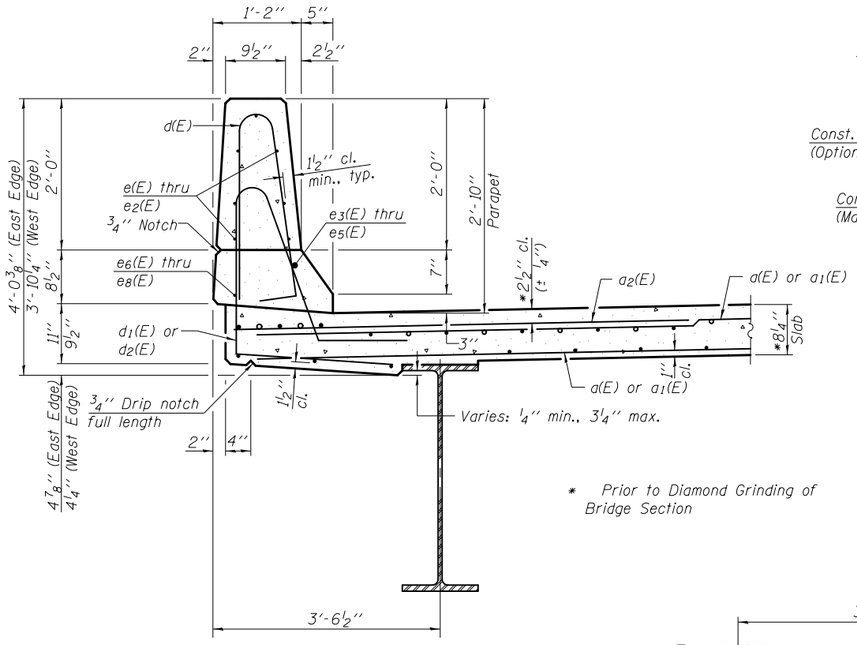
FILE NAME = $FILE$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STRUCTURE NO. 057-0254	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			T4	(57-2OHB)BR-1	MCLEAN	440	246
	PLOT SCALE =	DRAWN - SGM	REVISED -						CONTRACT NO. 70570	
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 11 OF 28 SHEETS			ILLINOIS	FED. AID PROJECT	



INSIDE ELEVATION OF PARAPET

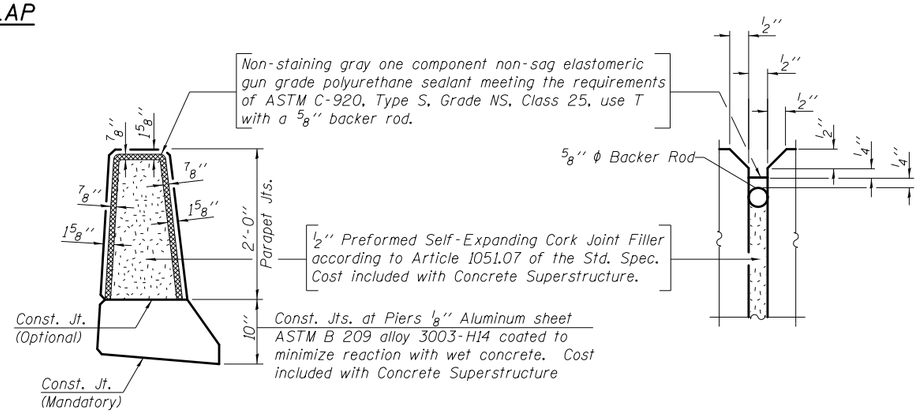
MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-0''
#8 bar = 5'-2''

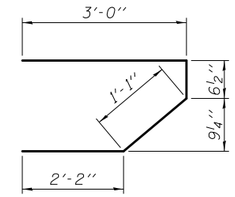


SECTION THRU PARAPET

* Prior to Diamond Grinding of Bridge Section



PARAPET JOINT DETAILS

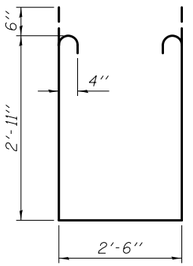


BAR s(E)

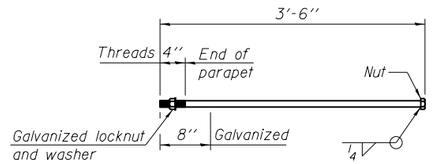
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	719	#5	22'-7''	
a_1(E)	719	#5	31'-6''	
a_2(E)	892	#6	6'-6''	
a_3(E)	4	#5	26'-6''	
a_4(E)	4	#5	36'-10''	
b(E)	472	#5	27'-10''	
b_1(E)	112	#6	46'-0''	
b_2(E)	432	#5	25'-0''	
d(E)	448	#5	5'-7''	
d_1(E)	224	#5	8'-2''	
d_2(E)	224	#5	8'-1''	
e(E)	84	#4	14'-0''	
e_1(E)	56	#4	17'-4''	
e_2(E)	56	#4	11'-8''	
e_3(E)	4	#8	42'-8''	
e_4(E)	4	#8	37'-9''	
e_5(E)	8	#8	11'-8''	
e_6(E)	8	#4	22'-5''	
e_7(E)	6	#4	24'-9''	
e_8(E)	8	#4	11'-8''	
m(E)	4	#6	25'-9''	
m_1(E)	4	#6	36'-1''	
m_2(E)	6	#6	26'-6''	
m_3(E)	6	#6	36'-10''	
m_4(E)	12	#6	11'-2''	
m_5(E)	16	#6	11'-9''	
m_6(E)	10	#6	8'-11''	
m_7(E)	4	#6	3'-8''	
m_8(E)	2	#6	3'-9''	
m_9(E)	2	#6	4'-9''	
s(E)	120	#5	6'-10''	
s_1(E)	108	#4	9'-4''	
v(E)	110	#5	3'-9''	
Reinforcement Bars, Epoxy Coated		Pound	95470	
Concrete Superstructure		Cu. Yd.	390.8	

Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.
See View B-B on sheet 14 of 28 for placement of 1'' ϕ anchor bolts in end of parapet.

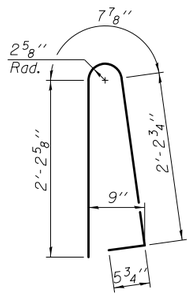


BAR s_1(E)

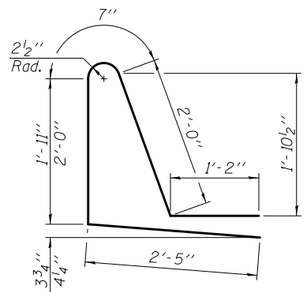


1''ϕ ANCHOR BOLT

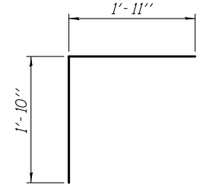
(Cost included with Concrete Superstructure)



BAR d(E)



BARS d_1(E) & d_2(E)



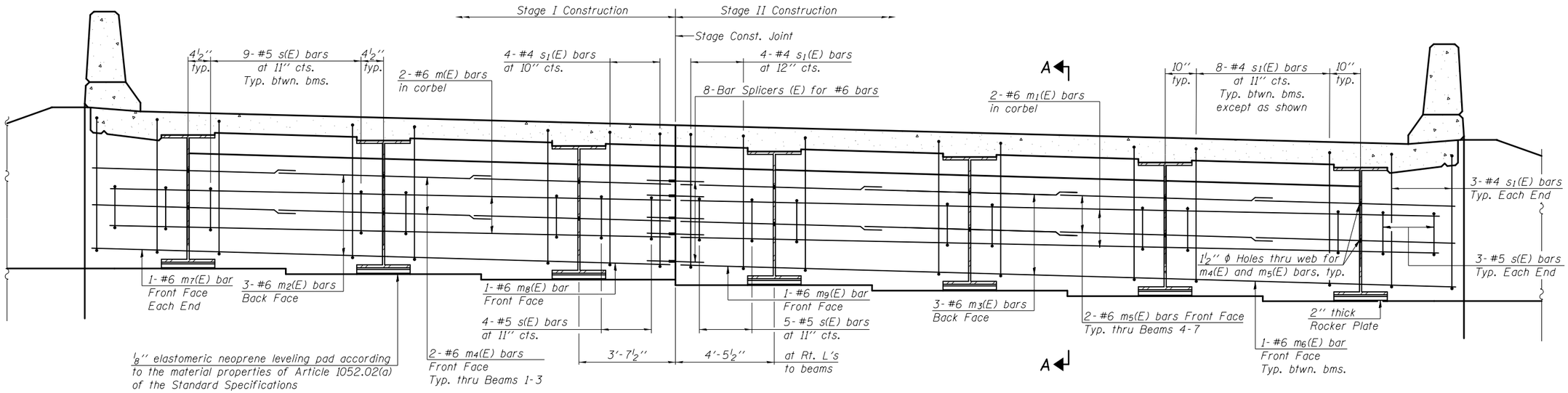
BAR v(E)

FILE NAME = $FILE$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 057-0254
SHEET NO. 12 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR-1	MCLEAN	440	247
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



DIAPHRAGM ELEVATION AT ABUTMENT

(Looking South)

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 12 of 28.

Concrete in diaphragm is included with Concrete Superstructure on sheet 12 of 28.

For details of bars s(E) & s_1(E) see sheet 12 of 28.

The s(E) and s_1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

MIN. BAR LAP

#6 bar = 3'-4"

TOP OF CORBEL ELEVATIONS

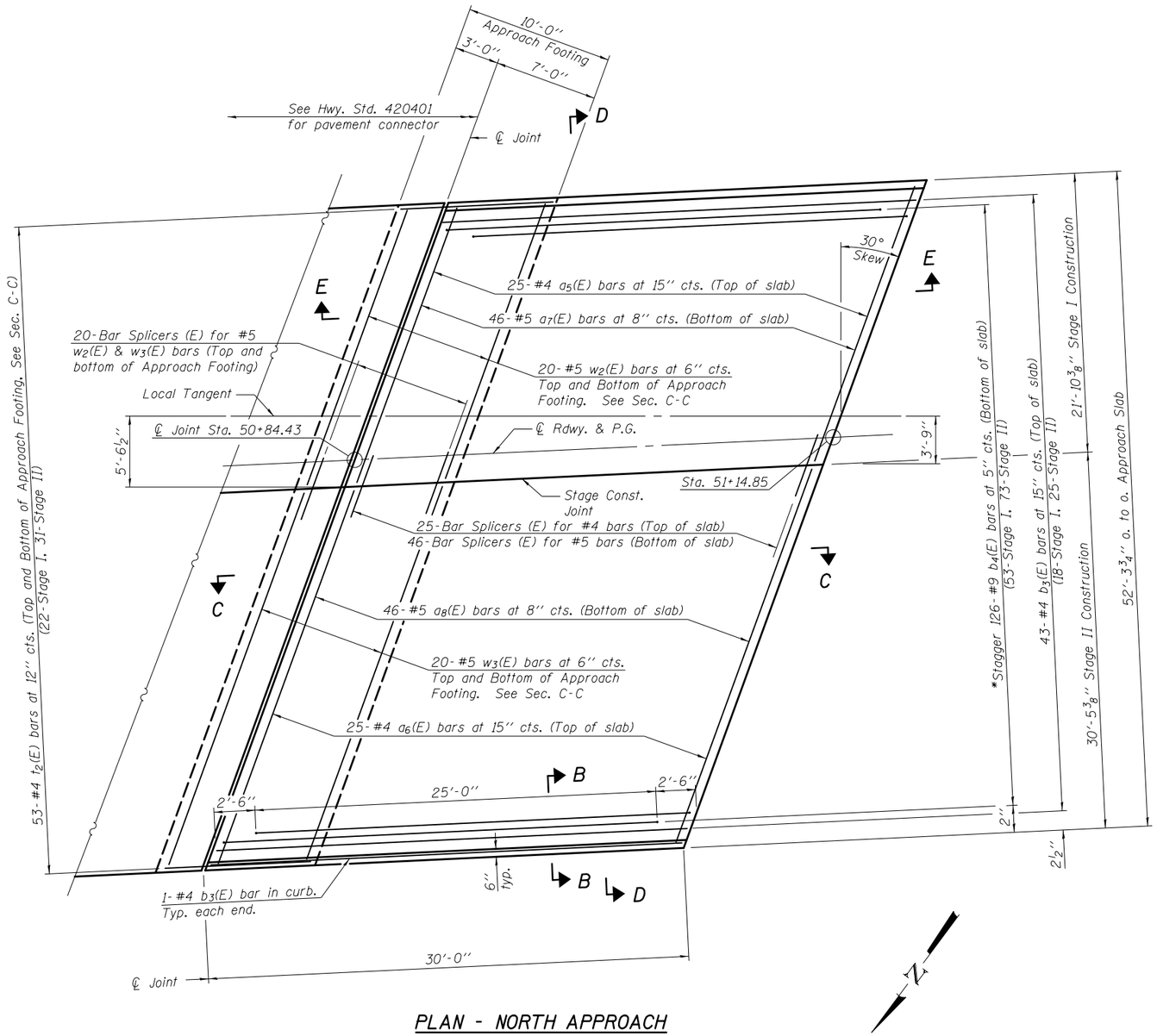
	N. Abut.	S. Abut.
West End	811.71	809.99
Stage Const. Jt.	812.93	811.31
East End	813.81	812.25

* Prior to Diamond Grinding of Bridge Section

SECTION A-A

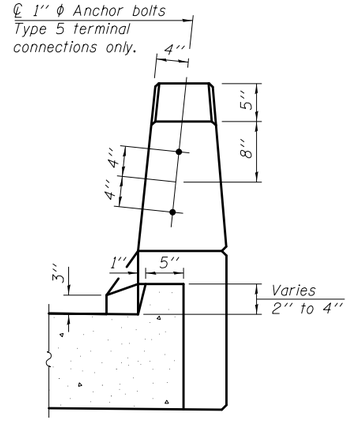
Dimensions at right angles to abutment, except as shown.

Notes:
See sheet 16 of 28 for Sections C-C & D-D and View E-E.
a_5(E) thru a_8(E) bar spacings measured along ℄ Rdwy.



PLAN - NORTH APPROACH

* Tilt #9 b_4(E) bars as required to maintain clearance.

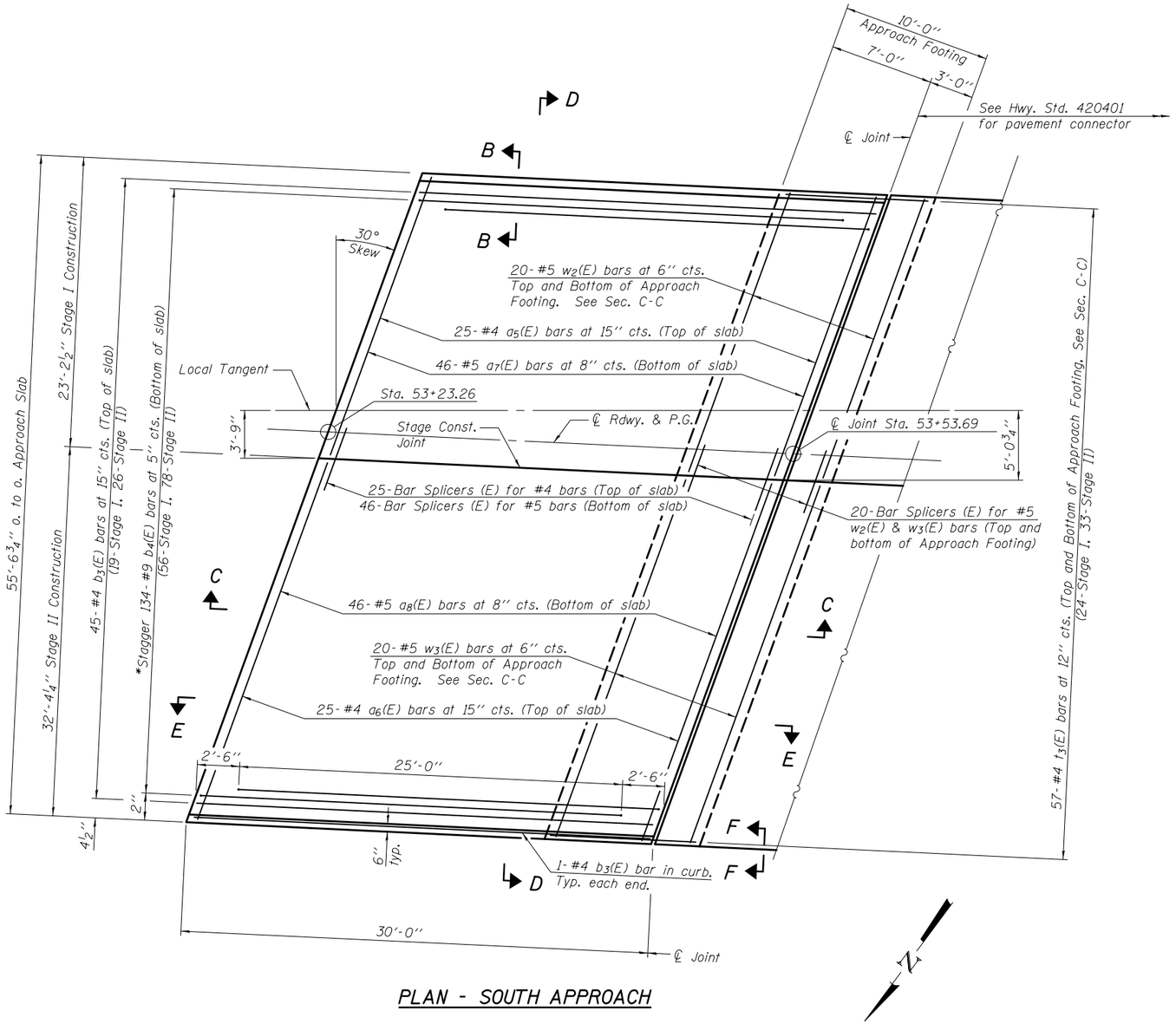


VIEW B-B

(Sheet 1 of 3)

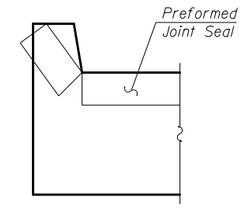
FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 057-0254	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-20HB)BR-1	MCLEAN	440	249
	PLOT SCALE =	DRAWN - SGM	REVISED -						CONTRACT NO. 70570	
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 14 OF 28 SHEETS			ILLINOIS FED. AID PROJECT		

Notes:
See sheet 16 of 28 for Sections C-C & D-D and View E-E.
See sheet 14 of 28 for View B-B.
a_5(E) thru a_8(E) bar spacings measured along ℄ Rdwy.



PLAN - SOUTH APPROACH

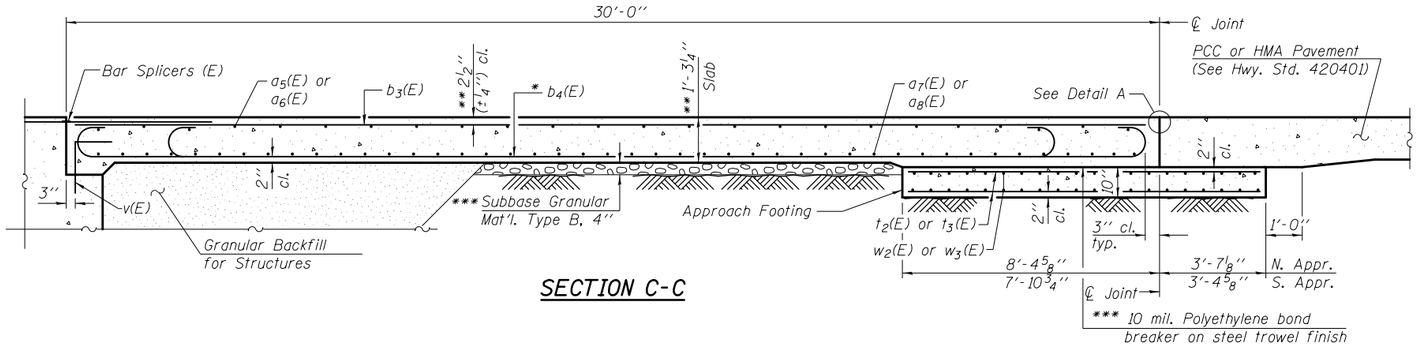
* Tilt #9 b_4(E) bars as required to maintain clearance.



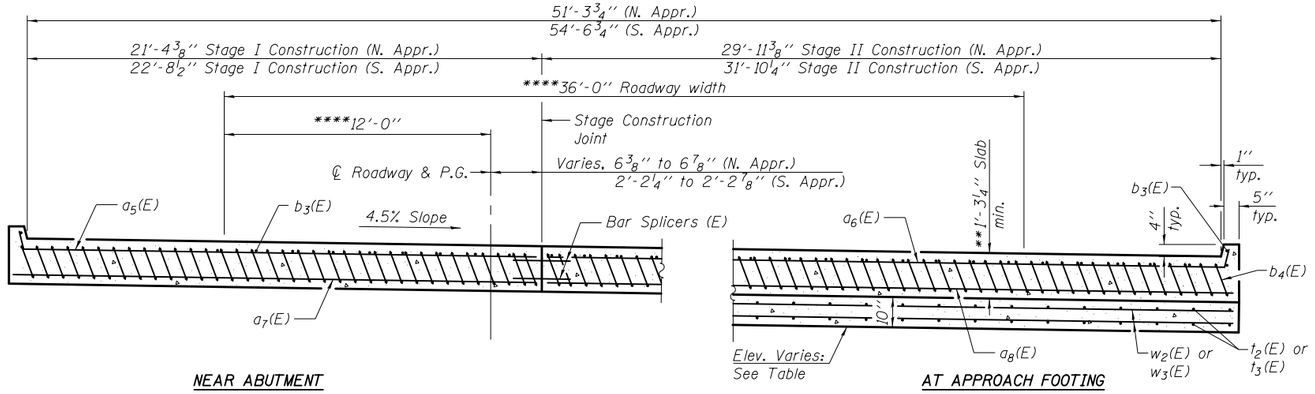
VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 057-0254	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-2OHB)BR-1	MCLEAN	440	250
	PLOT SCALE =	DRAWN - SGM	REVISED -					CONTRACT NO. 70570		
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 15 OF 28 SHEETS			ILLINOIS FED. AID PROJECT		



SECTION C-C

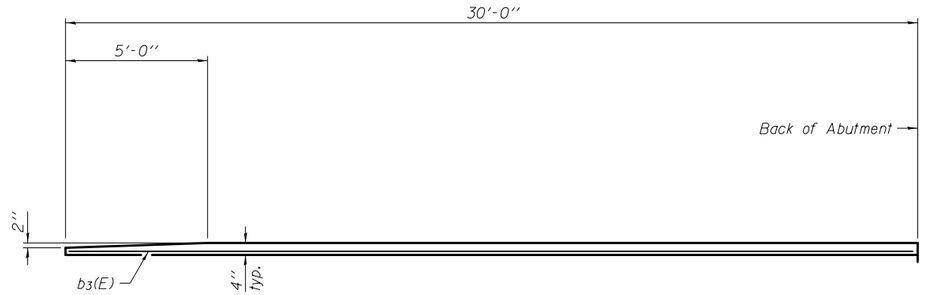


NEAR ABUTMENT

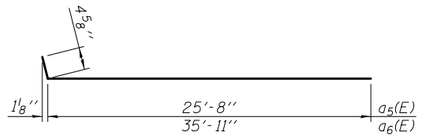
AT APPROACH FOOTING

SECTION D-D

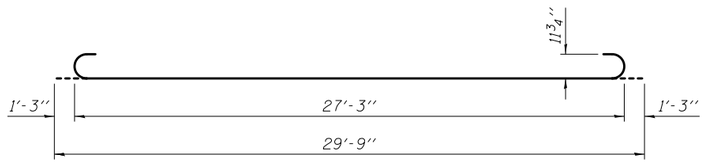
(See Plan for dimensions not shown)



VIEW E-E



BARS $a_5(E)$ & $a_6(E)$



BAR $b_4(E)$

Notes:

Approach slab concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheets 12 and 13 of 28.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 25 of 28.
Cost of excavation for approach footing included with Concrete Structures.
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 28.
Dimensions are shown parallel and perpendicular to the Stage Construction Joint, unless noted otherwise.

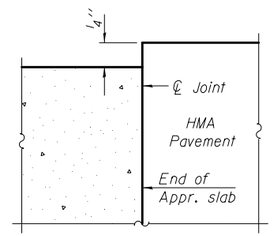
TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_5(E)$	50	#4	26'-1"	
$a_6(E)$	50	#4	36'-4"	
$a_7(E)$	92	#5	25'-9"	
$a_8(E)$	92	#5	36'-1"	
$b_3(E)$	92	#4	29'-8"	
$b_4(E)$	260	#9	29'-9"	
$t_2(E)$	106	#4	11'-7"	
$t_3(E)$	114	#4	10'-10"	
$w_2(E)$	80	#5	25'-9"	
$w_3(E)$	80	#5	36'-1"	
Concrete Superstructure			Cu. Yd.	154.2
Concrete Structures			Cu. Yd.	38.7
Reinforcement Bars, Epoxy Coated			Pound	42940

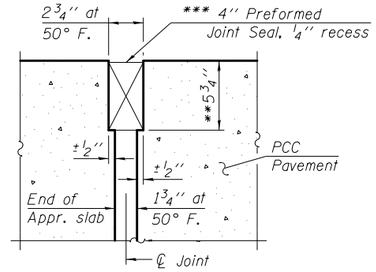
APPROACH FOOTING ELEVATIONS

	N. Appr.	S. Appr.
West Edge	811.13	809.00
Stage Const. Jt.	812.35	810.33
East Edge	813.22	811.29

* Tilt #9 $b_4(E)$ bars as required to maintain clearance.
** Prior to Diamond Grinding of the Bridge Section.
*** Cost included with Concrete Superstructure.
**** Measured radially.

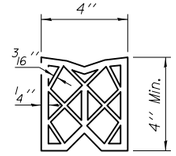


FLEXIBLE PAVEMENT



RIGID PAVEMENT

DETAIL A



PREFORMED JOINT SEAL

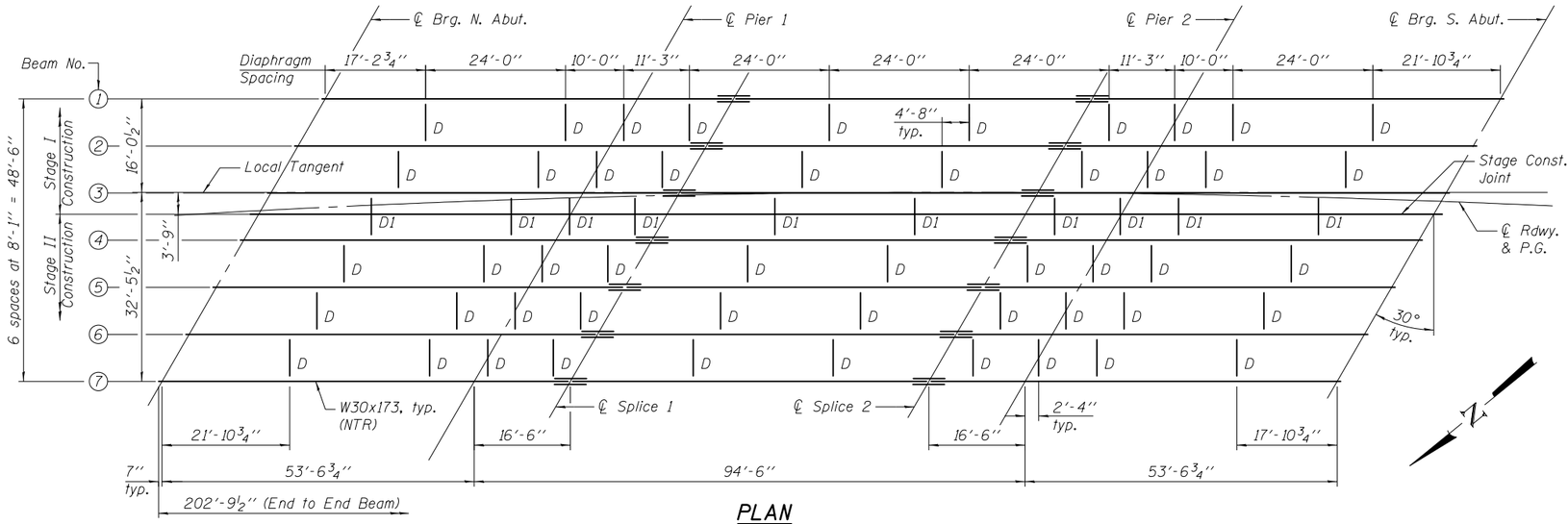
(Sheet 3 of 3)

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -

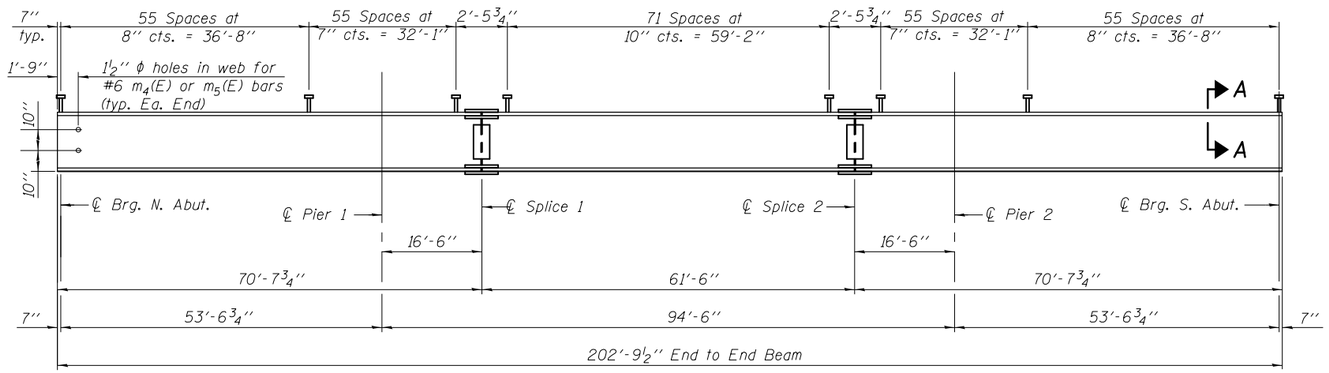
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 057-0254
SHEET NO. 16 OF 28 SHEETS

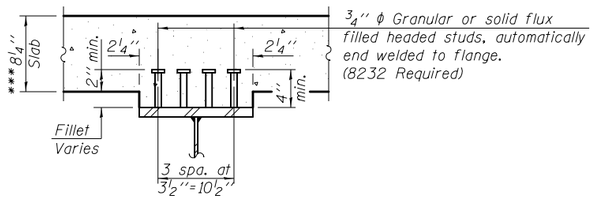
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-2OHB)BR-1	MCLEAN	440	251
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



PLAN



ELEVATION



3/4" ϕ Granular or solid flux filled headed studs, automatically end welded to flange. (8232 Required)

SECTION A-A

*** Prior to Diamond Grinding of Bridge Section

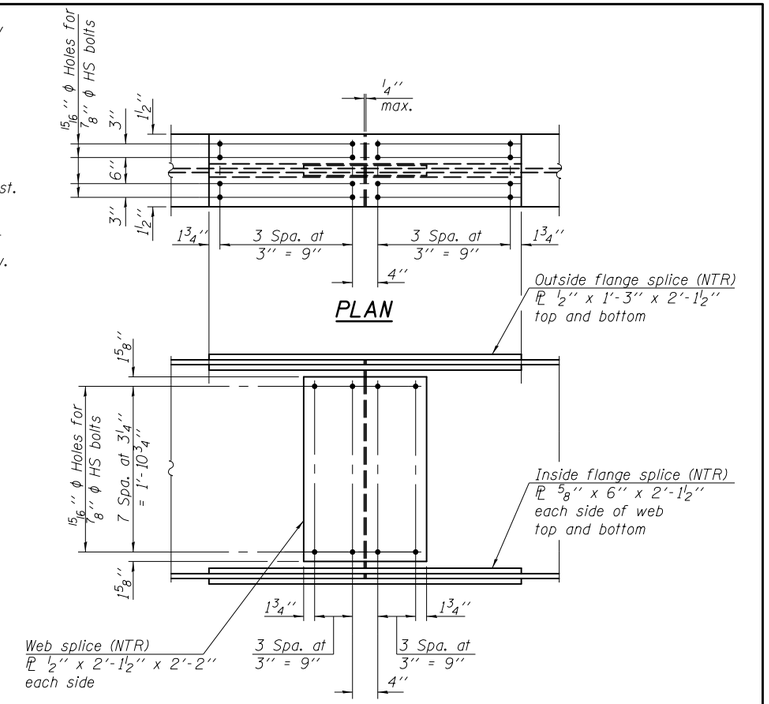
TOP OF BEAM ELEVATIONS

(For Fabrication Only)

	℄ Brg. N. Abut.	℄ Pier 1	℄ Splice 1	℄ Splice 2	℄ Pier 2	℄ Brg. S. Abut.
Beam 1	814.280	813.784	813.632	813.165	813.065	812.740
Beam 2	813.970	813.465	813.309	812.838	812.735	812.400
Beam 3	813.650	813.145	812.989	812.511	812.405	812.060
Beam 4	813.340	812.825	812.666	812.168	812.065	811.730
Beam 5	813.030	812.505	812.343	811.841	811.735	811.390
Beam 6	812.720	812.185	812.020	811.514	811.405	811.050
Beam 7	812.410	811.865	811.697	811.184	811.075	810.720

Notes:
All structural steel beams and splice plates shall conform to the requirements of AASHTO M 270, Grade 50.
Load carrying components designated "NTR" shall conform to the Impact Testing Requirements, Zone 2.
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

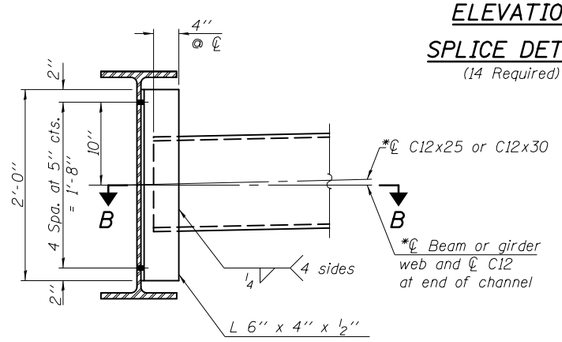
Diaphragm Notes:
3/4" ϕ HS bolts. 15/16" ϕ Holes, unless otherwise noted.
Two hardened washers required over each oversized hole, and 3" x 3" x 5/16" plate washers over slotted holes.
*Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.
The alternate, if utilized, shall be provided at no additional cost to the Department.
** Slotted holes (at Beam 4 only) shall extend above the final bolt positions as indicated in the diaphragm detail. Bolts shall be installed finger tight in the slots to permit the maximum deflection downward within the slots due to the applied concrete load, then fully tightened immediately after Stage II deck pour.



ELEVATION

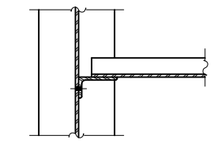
SPLICE DETAIL

(14 Required)

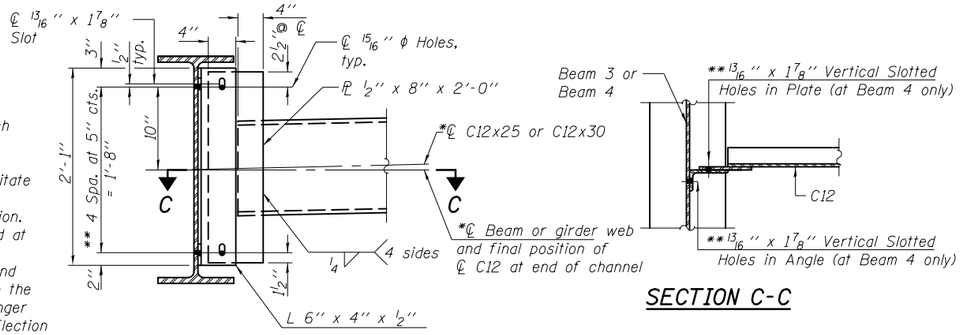


INTERIOR DIAPHRAGM D

(50 Required)



SECTION B-B



INTERIOR DIAPHRAGM D1

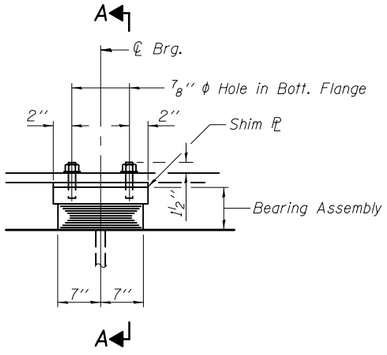
(10 Required)
(Final position shown - after Stage II deck pour)

SECTION C-C

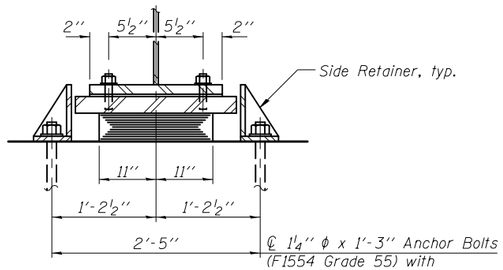
FILE NAME = $FILE$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
MAURER-STUTZ ENGINEERS SURVEYORS	PLOT SCALE =	CHECKED - JAE	REVISED -	
	PLOT DATE = 7/30/2013 $TIME$	DRAWN - SGM	REVISED -	
		CHECKED - BAS	REVISED -	

STRUCTURAL STEEL
STRUCTURE NO. 057-0254
SHEET NO. 17 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR-1	MCLEAN	440	252
		CONTRACT NO. 70570		
	ILLINOIS	FED. AID PROJECT		

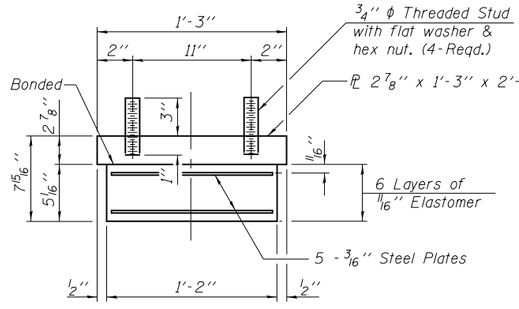


ELEVATION AT PIER



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

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

Notes:

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.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

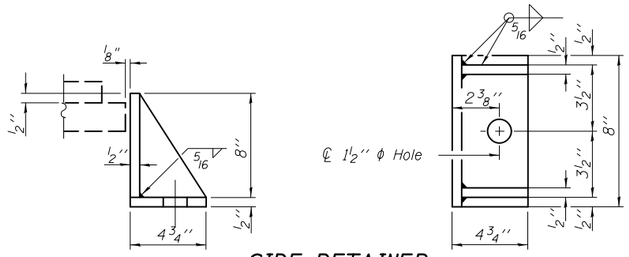
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

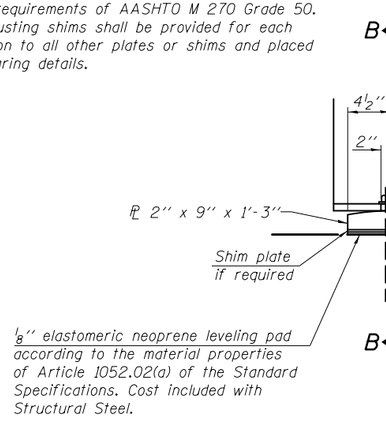
The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

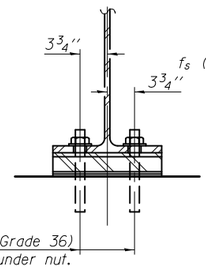


SIDE RETAINER

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



ELEVATION AT ABUTMENT



SECTION B-B

FIXED BEARING

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Span 2
I_s	(in^4)	8230	8230	8230
$I_c(n)$	(in^4)	20503	--	20503
$I_c(3n)$	(in^4)	15160	--	15160
$I_c(cr)$	(in^4)	-	10831	-
S_s	(in^3)	541	541	541
$S_c(n)$	(in^3)	752	--	752
$S_c(3n)$	(in^3)	685	--	685
$S_c(cr)$	(in^3)	-	606.5	-
DC1	(k/')	1.058	1.058	1.058
M_{DC1}	('k)	94.0	-675	506
DC2	(k/')	0.150	0.150	0.150
M_{DC2}	('k)	13.3	-95.8	71.7
DW	(k/')	0.374	0.374	0.374
M_{DW}	('k)	33.2	-239	179
M_{L+IM}	('k)	652	-869	863
M_u (Strength I)	('k)	1325	-2843	2500
$\phi_f M_n$	('k)	3782	-3145	3708
f_s DC1	(ksi)	2.1	-15.0	11.2
f_s DC2	(ksi)	0.2	-1.9	1.3
f_s DW	(ksi)	0.6	-4.7	3.1
f_s (L+IM)	(ksi)	10.4	-17.2	13.8
f_s (Service II)	(ksi)	16.4	-44.0	33.5
$0.95R_hF_{yf}$	(ksi)	47.5	-47.5	47.5
f_s (Total)(Strength I)	(ksi)	--	--	--
$\phi_f F_n$	(ksi)	--	--	--
V_f	(k)	30.1	29.1	24.5

INTERIOR GIRDER REACTION TABLE			
		Abuts.	Piers
R_{DC1}	(k)	15.7	90.9
R_{DC2}	(k)	2.2	12.9
R_{DW}	(k)	5.6	32.1
R_{L+IM}	(k)	84.2	129.1
R_{Total}	(k)	107.7	265.0

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

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

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

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

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

M_{DC1}: 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.).

M_{DC2}: 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.).

M_{DW}: 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.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: 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.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (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).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

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

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_{sL+IM}$

$\phi_r F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7.2 or 6.10.8 (ksi).

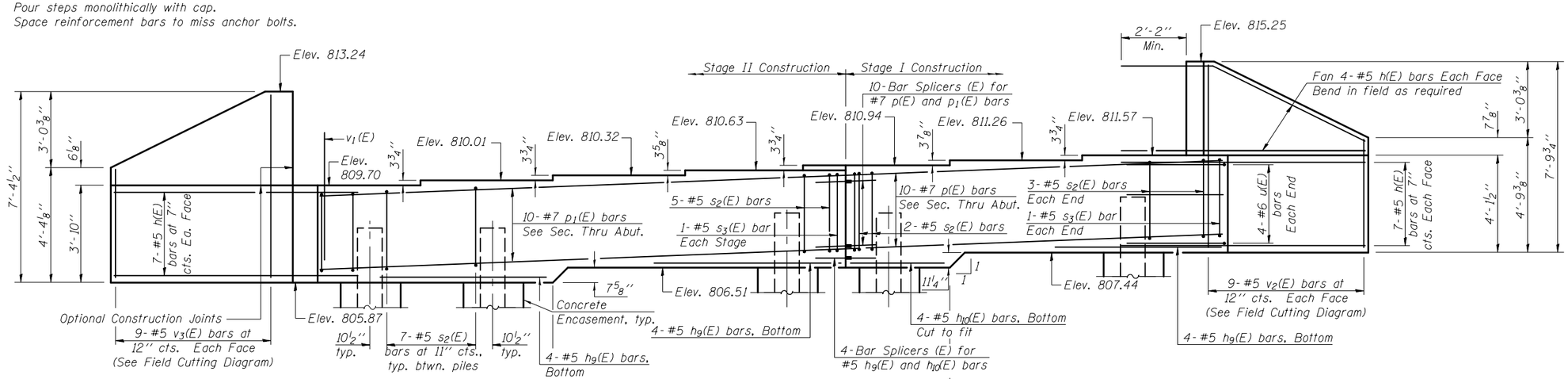
V_f: Maximum factored shear range in span computed according to Article 6.10.10.

BILL OF MATERIAL

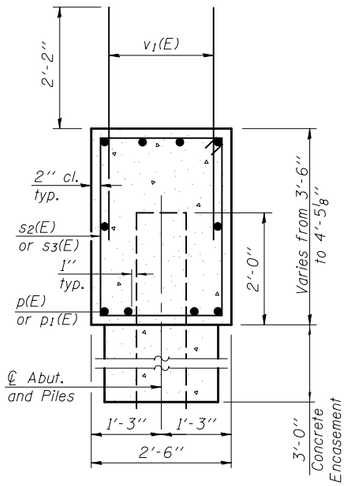
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	14
Anchor Bolts, 1"	Each	28
Anchor Bolts, 1 1/4"	Each	28

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING DETAILS STRUCTURE NO. 057-0254	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-20HB)BR-1	MCLEAN	440	253
	PLOT SCALE =	DRAWN - SGM	REVISED -						CONTRACT NO. 70570	
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 18 OF 28 SHEETS			ILLINOIS FED. AID PROJECT		

Notes:
Pour steps monolithically with cap.
Space reinforcement bars to miss anchor bolts.



ELEVATION



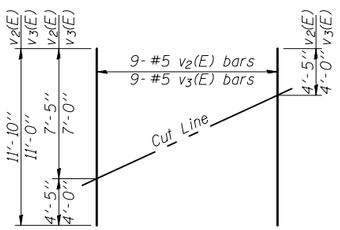
SEC. THRU ABUT.

* Includes 4 bars at 11" cts. btwn. Beam 3 and Stage Const. Jt. and 4 bars at 13" cts. btwn. Beam 4 and Stage Const. Jt.

PLAN

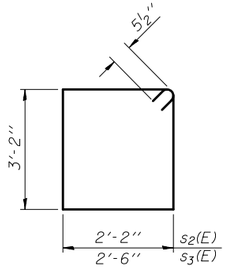
PILE DATA

Type: Steel - HP12x53
Nominal Required Bearing: 227 kips
Factored Resistance Available: 125 kips
Est. Length: 38 ft (all piles)
No. Production Piles: 8
No. Test Piles: 1

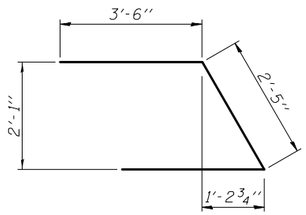


FIELD CUTTING DIAGRAM

Order $v_2(E)$ and $v_3(E)$ full length. Cut as shown and use remainder of bars in opposite face.



BARS $s_2(E)$ & $s_3(E)$



BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	44	#5	10'-8"	
$h_9(E)$	12	#5	11'-0"	
$h_{10}(E)$	4	#5	9'-2"	
p(E)	10	#7	26'-6"	
$p_1(E)$	10	#7	36'-10"	
$s_2(E)$	62	#5	11'-7"	
$s_3(E)$	4	#5	12'-3"	
u(E)	8	#6	9'-5"	
$v_1(E)$	121	#5	4'-4"	
$v_2(E)$	9	#5	11'-10"	
$v_3(E)$	9	#5	11'-0"	
Structure Excavation		Cu. Yd.	146	
Concrete Structures		Cu. Yd.	27.6	
Reinforcement Bars, Epoxy Coated		Pound	3630	
Furnishing Steel Piles HP12x53		Foot	304	
Driving Piles		Foot	304	
Test Pile Steel HP12x53		Each	1	
Concrete Encasement		Cu. Yd.	3.1	

For details of Bar Splicers, see sheet 25 of 28.
For details of piles and Concrete Encasement, see sheet 24 of 28.

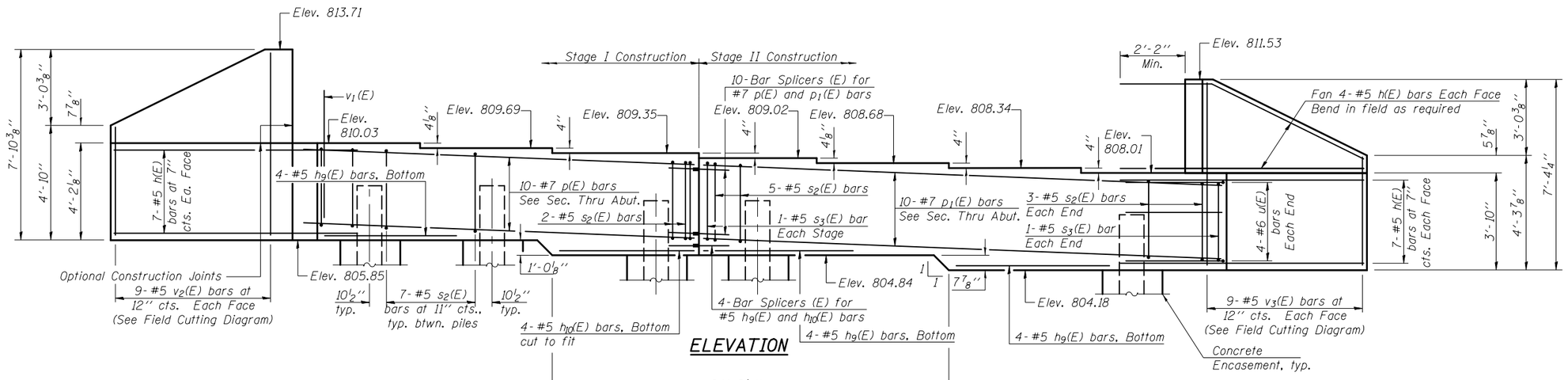
FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

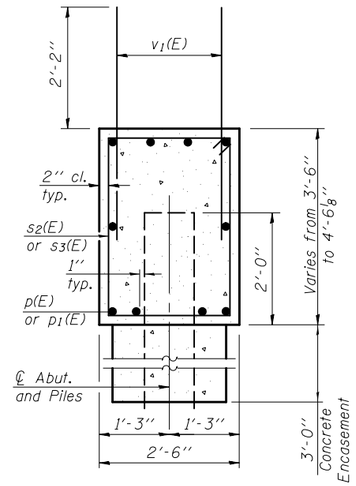
NORTH ABUTMENT
STRUCTURE NO. 057-0254
SHEET NO. 19 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR-1	MCLEAN	440	254
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

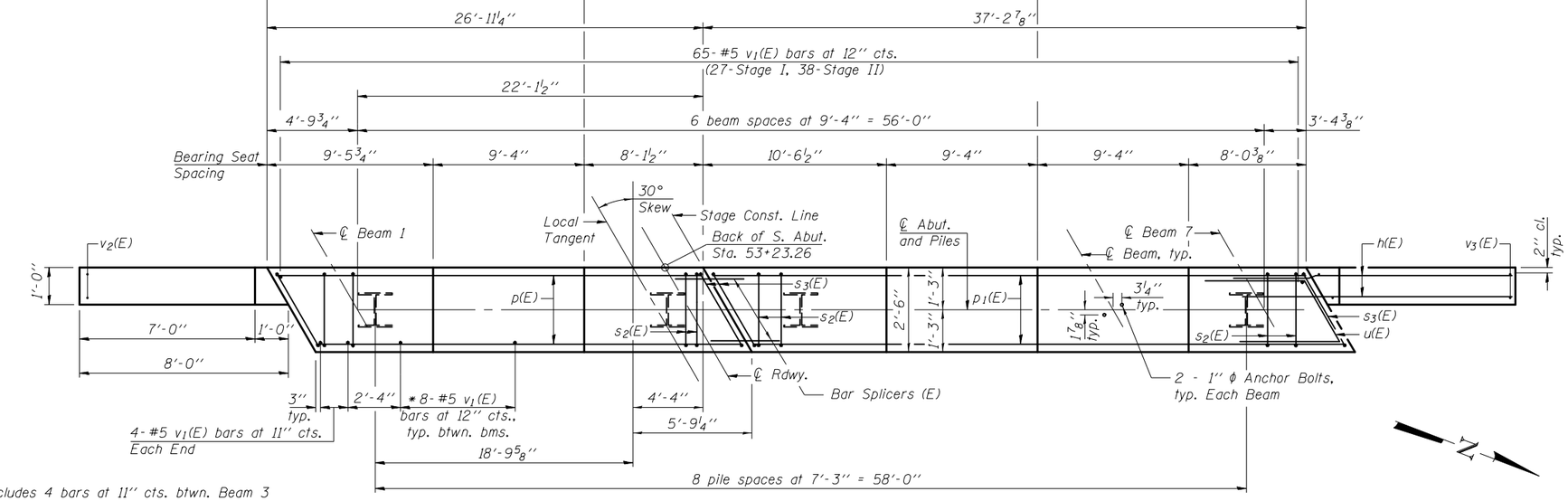
Notes:
Pour steps monolithically with cap.
Space reinforcement bars to miss anchor bolts.



ELEVATION



SEC. THRU ABUT.

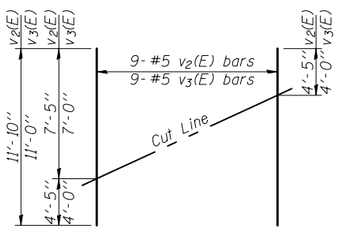


* Includes 4 bars at 11" cts. btwn. Beam 3 and Stage Const. Jt. and 4 bars at 13" cts. btwn. Beam 4 and Stage Const. Jt.

PLAN

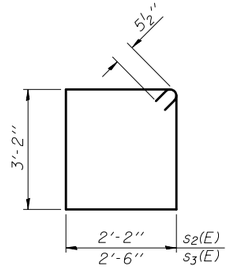
PILE DATA

Type: Steel - HP12x53
Nominal Required Bearing: 227 kips
Factored Resistance Available: 125 kips
Est. Length: 46 ft (all piles)
No. Production Piles: 8
No. Test Piles: 1

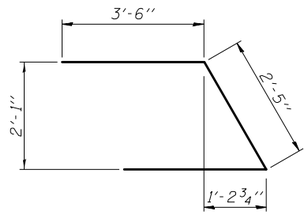


FIELD CUTTING DIAGRAM

Order $v_2(E)$ and $v_3(E)$ full length. Cut as shown and use remainder of bars in opposite face.



BARS $s_2(E)$ & $s_3(E)$



BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	44	#5	10'-8"	
h9(E)	12	#5	11'-0"	
h10(E)	4	#5	9'-2"	
p(E)	10	#7	26'-6"	
p1(E)	10	#7	36'-10"	
s2(E)	62	#5	11'-7"	
s3(E)	4	#5	12'-3"	
u(E)	8	#6	9'-5"	
v1(E)	121	#5	4'-4"	
v2(E)	9	#5	11'-10"	
v3(E)	9	#5	11'-0"	
Structure Excavation		Cu. Yd.	154	
Concrete Structures		Cu. Yd.	27.8	
Reinforcement Bars, Epoxy Coated		Pound	3630	
Furnishing Steel Piles HP12x53		Foot	368	
Driving Piles		Foot	368	
Test Pile Steel HP12x53		Each	1	
Concrete Encasement		Cu. Yd.	3.1	

For details of Bar Splicers, see sheet 25 of 28.
For details of piles and Concrete Encasement, see sheet 24 of 28.

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

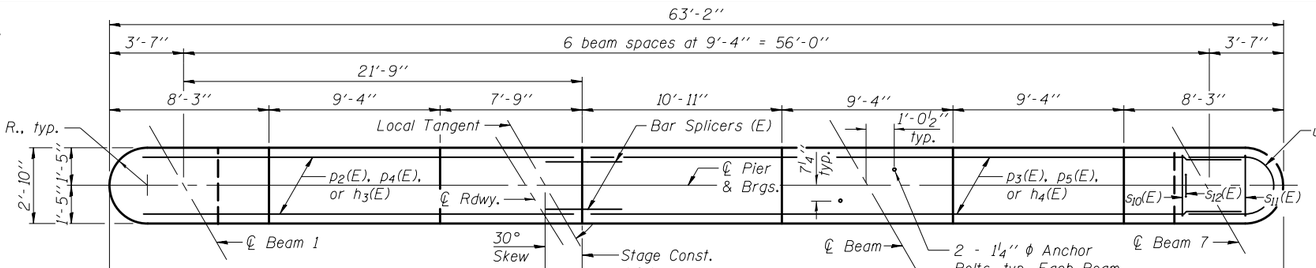
SOUTH ABUTMENT
STRUCTURE NO. 057-0254
SHEET NO. 20 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR-1	MCLEAN	440	255
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

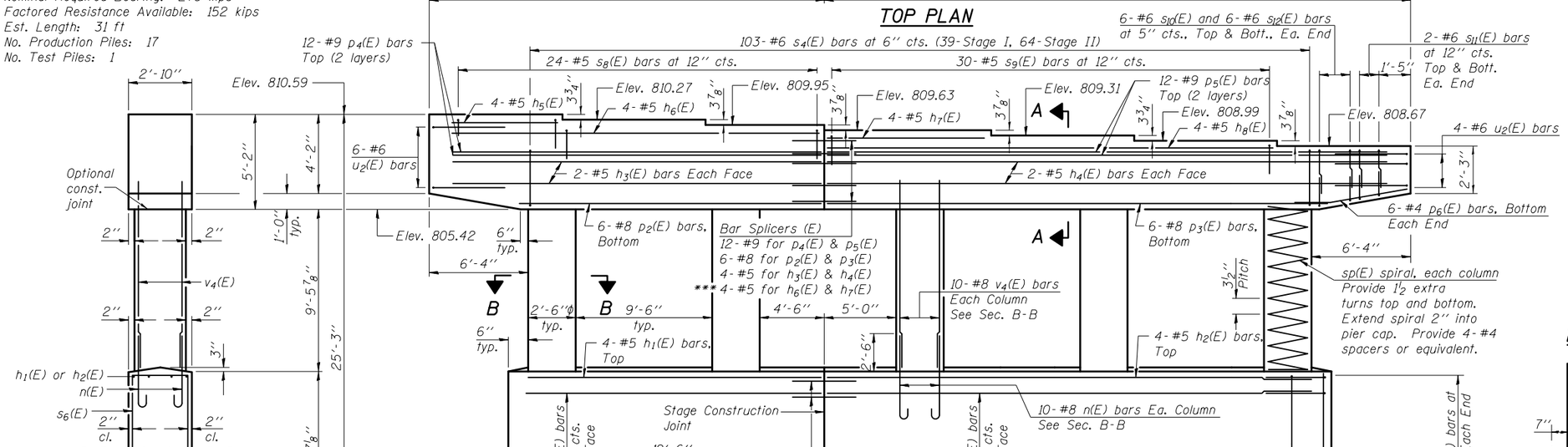
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 23 of 28.

PILE DATA

Type: Metal Shell - 14 in. dia. x 0.312 in. walls with pile shoes
Nominal Required Bearing: 276 kips
Factored Resistance Available: 152 kips
Est. Length: 31 ft
No. Production Piles: 17
No. Test Piles: 1



TOP PLAN



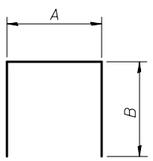
ELEVATION
(Looking South)

FOOTING PLAN

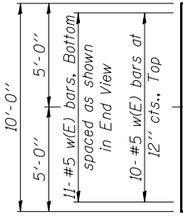
END VIEW

A & B DIMENSIONS

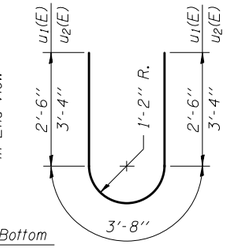
Bar	A	B
s5(E)	2'-6"	6'-11"
s6(E)	2'-6"	7'-5"
s8(E)	2'-6"	2'-11"
s9(E)	2'-6"	1'-11"
s10(E)	2'-6"	2'-6"
s11(E)	2'-6"	2'-2"
s12(E)	10"	2'-6"

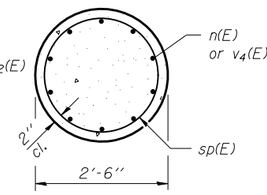


BARS

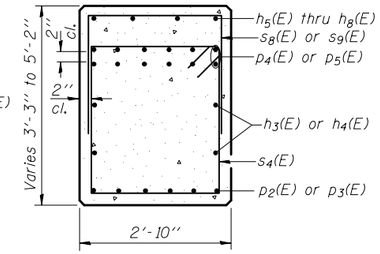


* 7 bars per 6'-8" space
6 bars per 5'-7" space
5 bars to west and 2 bars to east of stage const. jt.

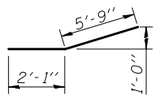




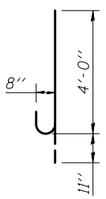
SEC. B-B



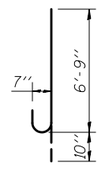
SEC. A-A



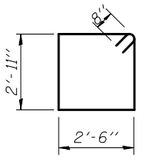
BAR p6(E)



BAR n(E)



BAR n1(E)



BAR s4(E)

BARS u1(E) & u2(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1(E)	18	#5	17'-11"	
h2(E)	18	#5	30'-5"	
h3(E)	4	#5	23'-9"	
h4(E)	4	#5	36'-3"	
h5(E)	4	#5	6'-8"	
h6(E)	4	#5	23'-9"	
h7(E)	4	#5	10'-7"	
h8(E)	4	#5	29'-3"	
n(E)	50	#8	4'-11"	
n1(E)	12	#7	7'-7"	
p2(E)	6	#8	19'-4"	
p3(E)	6	#8	31'-10"	
p4(E)	12	#9	23'-9"	
p5(E)	12	#9	36'-3"	
p6(E)	12	#4	7'-10"	
s4(E)	103	#6	12'-2"	
s5(E)	66	#7	16'-4"	
s6(E)	66	#6	17'-4"	
s8(E)	24	#5	8'-4"	
s9(E)	30	#5	6'-4"	
s10(E)	24	#6	7'-6"	
s11(E)	8	#6	6'-10"	
s12(E)	24	#6	5'-10"	
** sp(E)	5	#4	9'-8"	
t(E)	57	#7	9'-8"	
t1(E)	54	#5	9'-8"	
u1(E)	16	#5	8'-8"	
u2(E)	10	#6	10'-4"	
v4(E)	50	#8	12'-1"	
v5(E)	12	#6	7'-5"	
w(E)	21	#5	19'-11"	
w1(E)	21	#5	32'-5"	
Structure Excavation		Cu. Yd.	330	
Concrete Structures		Cu. Yd.	134.2	
Reinforcement Bars, Epoxy Coated		Pound	18080	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	527	
Driving Piles		Foot	527	
Test Pile Metal Shells		Each	1	
Pile Shoes		Each	18	
Concrete Sealer		Sq. Ft.	1888	

** Length is height of spiral.
*** Bar Splicers for h6(E) and h7(E) bars must be placed 4" below the h6(E) bars.

FILE NAME = $FILES$
MAURER-STUTZ ENGINEERS SURVEYORS
USER NAME = piersonbr | PLOT SCALE = | PLOT DATE = 7/30/2013 $TIME$
DESIGNED - BAS | CHECKED - JAE | DRAWN - SGM | CHECKED - BAS
REVISED - | REVISED - | REVISED - | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

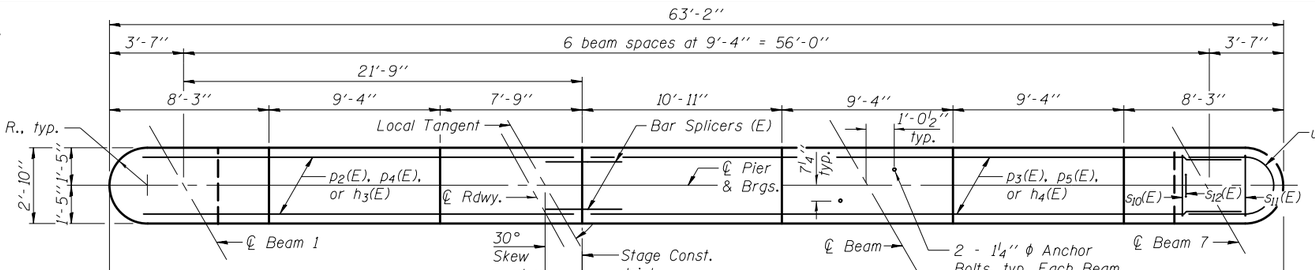
PIER 1
STRUCTURE NO. 057-0254
SHEET NO. 21 OF 28 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR-1	MCLEAN	440	256
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

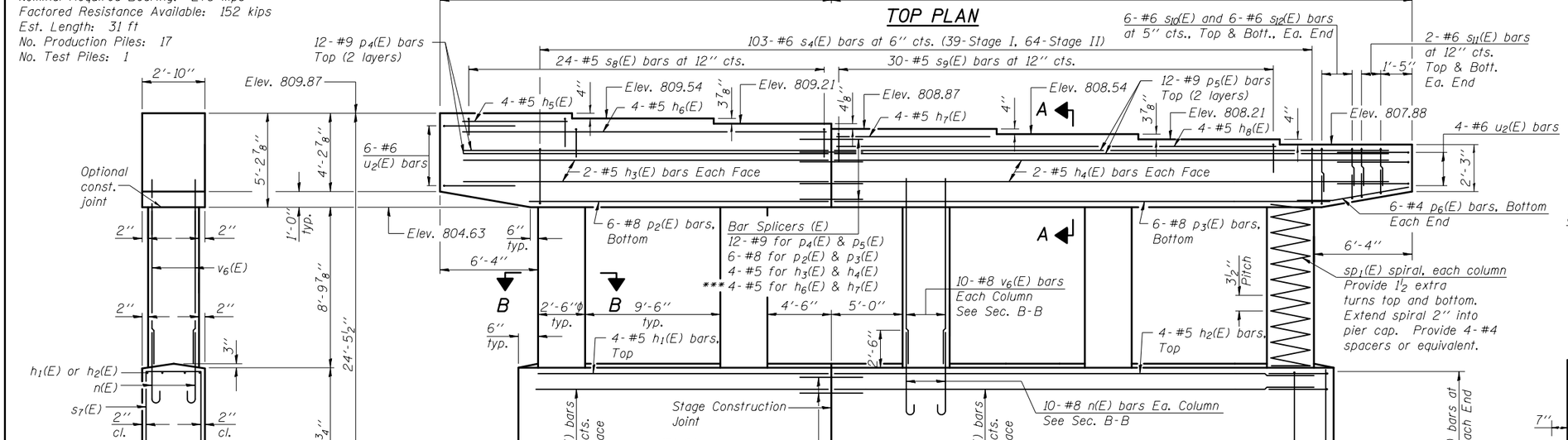
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 23 of 28.

PILE DATA

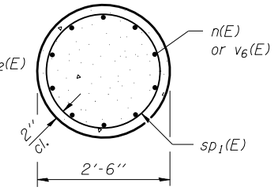
Type: Metal Shell - 14 in. dia. x 0.312 in. walls with pile shoes
Nominal Required Bearing: 276 kips
Factored Resistance Available: 152 kips
Est. Length: 31 ft
No. Production Piles: 17
No. Test Piles: 1



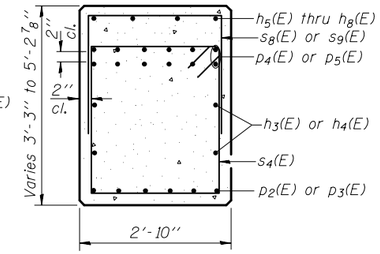
TOP PLAN



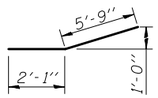
SEC. B-B



SEC. A-A



BAR $p_6(E)$

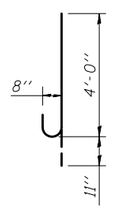


BILL OF MATERIAL

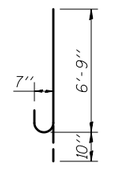
Bar	No.	Size	Length	Shape
$h_1(E)$	18	#5	17'-11"	
$h_2(E)$	18	#5	30'-5"	
$h_3(E)$	4	#5	23'-9"	
$h_4(E)$	4	#5	36'-3"	
$h_5(E)$	4	#5	6'-8"	
$h_6(E)$	4	#5	23'-9"	
$h_7(E)$	4	#5	10'-7"	
$h_8(E)$	4	#5	29'-3"	
$n(E)$	50	#8	4'-11"	
$n_1(E)$	12	#7	7'-7"	
$p_2(E)$	6	#8	19'-4"	
$p_3(E)$	6	#8	31'-10"	
$p_4(E)$	12	#9	23'-9"	
$p_5(E)$	12	#9	36'-3"	
$p_6(E)$	12	#4	7'-10"	
$s_4(E)$	103	#6	12'-2"	
$s_5(E)$	66	#7	16'-4"	
$s_7(E)$	66	#6	16'-10"	
$s_8(E)$	24	#5	8'-4"	
$s_9(E)$	30	#5	6'-4"	
$s_{10}(E)$	24	#6	7'-6"	
$s_{11}(E)$	8	#6	6'-10"	
$s_{12}(E)$	24	#6	5'-10"	
** $sp_1(E)$	5	#4	9'-0"	
$t(E)$	57	#7	9'-8"	
$t_1(E)$	54	#5	9'-8"	
$u_1(E)$	16	#5	8'-8"	
$u_2(E)$	10	#6	10'-4"	
$v_6(E)$	50	#8	11'-5"	
$v_7(E)$	12	#6	7'-2"	
$w(E)$	21	#5	19'-11"	
$w_1(E)$	21	#5	32'-5"	
Structure Excavation		Cu. Yd.	284	
Concrete Structures		Cu. Yd.	132.8	
Reinforcement Bars, Epoxy Coated		Pound	17890	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	527	
Driving Piles		Foot	527	
Test Pile Metal Shells		Each	1	
Pile Shoes		Each	18	
Concrete Sealer		Sq. Ft.	1866	

** Length is height of spiral.
*** Bar Splicers for $h_6(E)$ and $h_7(E)$ bars must be placed $4\frac{1}{4}$" below the $h_6(E)$ bars.

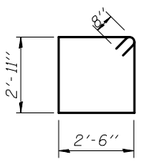
BAR $n(E)$



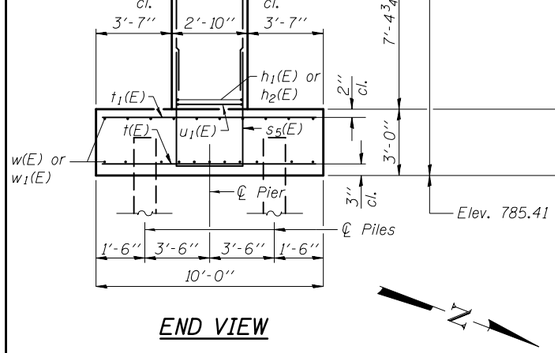
BAR $n_1(E)$



BAR $s_4(E)$



END VIEW

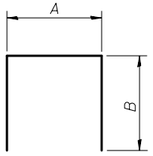


ELEVATION

(Looking South)

FOOTING PLAN

A & B DIMENSIONS

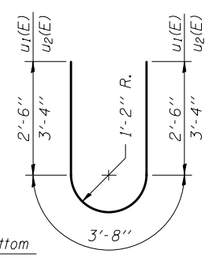


Bar	A	B
$s_5(E)$	2'-6"	6'-11"
$s_7(E)$	2'-6"	7'-2"
$s_8(E)$	2'-6"	2'-11"
$s_9(E)$	2'-6"	1'-11"
$s_{10}(E)$	2'-6"	2'-6"
$s_{11}(E)$	2'-6"	2'-2"
$s_{12}(E)$	10"	2'-6"

BARS

* 7 bars per 6'-8" space
6 bars per 5'-7" space
5 bars to west and 2 bars to east of stage const. jt.

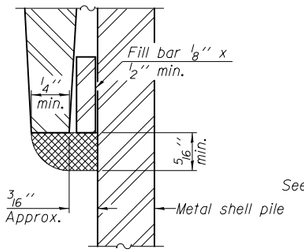
BARS $u_1(E)$ & $u_2(E)$



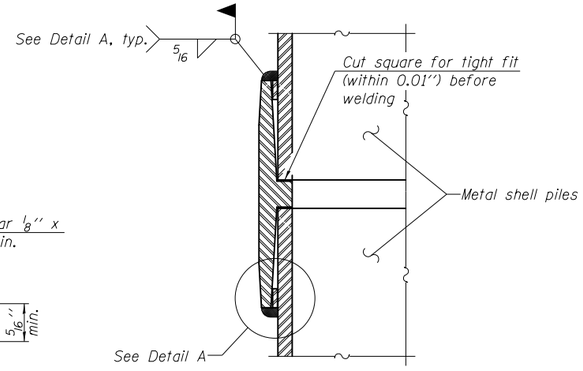
FILE NAME = $FILES$
MAURER-STUTZ ENGINEERS SURVEYORS
USER NAME = piersonbr
PLOT SCALE =
PLOT DATE = 7/30/2013 $TIME$
DESIGNED - BAS
CHECKED - JAE
DRAWN - SGM
CHECKED - BAS
REVISED -
REVISED -
REVISED -
REVISED -
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PIER 2
STRUCTURE NO. 057-0254
SHEET NO. 22 OF 28 SHEETS
F.A.I. RTE. 74
SECTION (57-20HB)BR-1
COUNTY MCLEAN
TOTAL SHEETS 440
SHEET NO. 257
CONTRACT NO. 70570
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	0.179″	22.60	0.0274
PP12	0.250″	31.37	0.0267
PP14	0.250″	36.71	0.0368
PP14	0.312″	45.61	0.0361

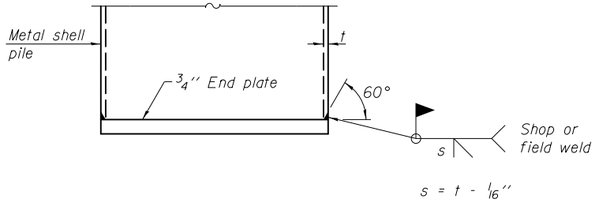


DETAIL A

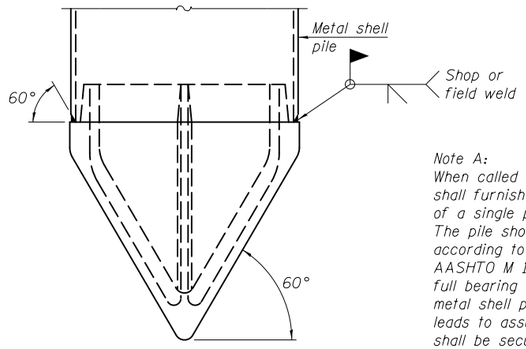


Notes:
The 1/8″ x 1/2″ min. fill bar may be constructed of 2 bars with a 1/8″ max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



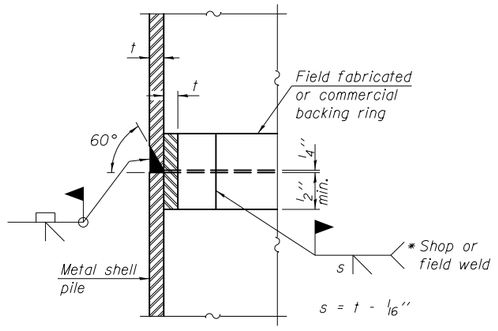
END PLATE ATTACHMENT



Note A:
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.

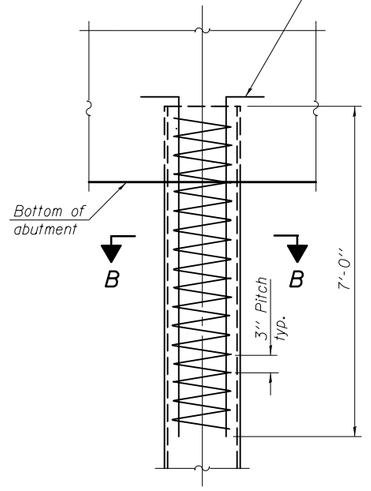
METAL SHELL PILE SHOE ATTACHMENT

(See Note A)

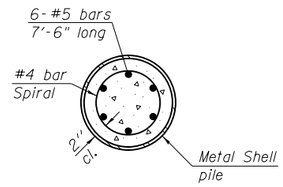


COMPLETE PENETRATION WELD SPLICE

* 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

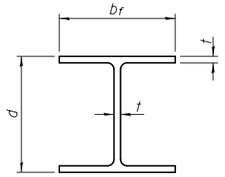


SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS AND FOOTINGS

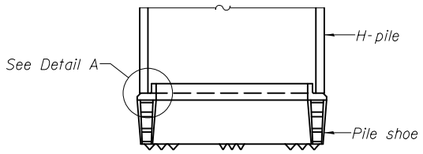
Note:
The metal shell piles shall be according to ASTM A 252 Grade 3.

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	METAL SHELL PILE DETAILS STRUCTURE NO. 057-0254	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-20HB)BR-1	MCLEAN	440	258
	PLOT SCALE =	DRAWN - SGM	REVISED -						CONTRACT NO. 70570	
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 23 OF 28 SHEETS			ILLINOIS	FED. AID PROJECT	

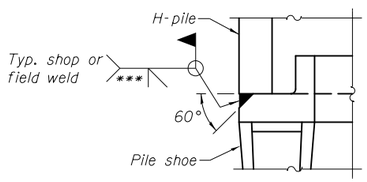


STEEL PILE TABLE

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

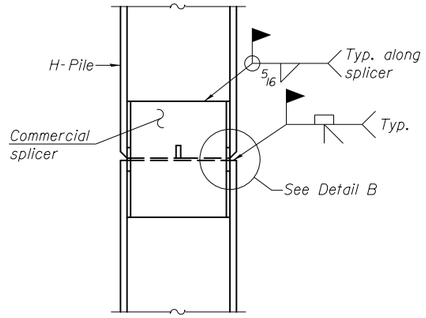


ELEVATION

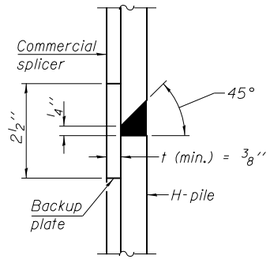


DETAIL A

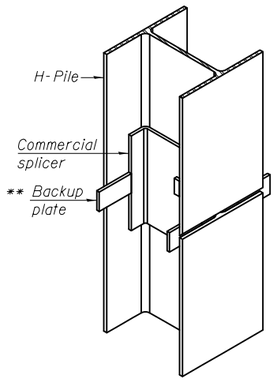
H-PILE SHOE ATTACHMENT



ELEVATION

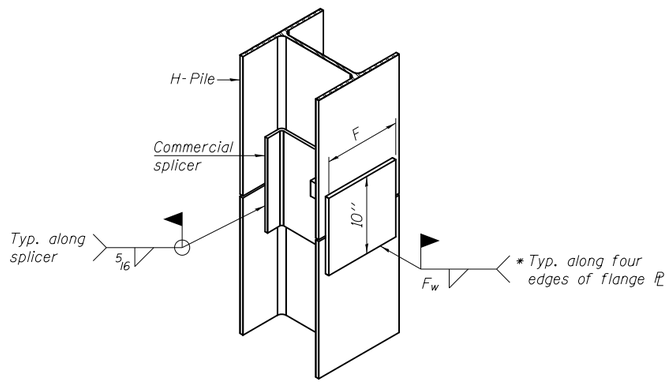


DETAIL "B"

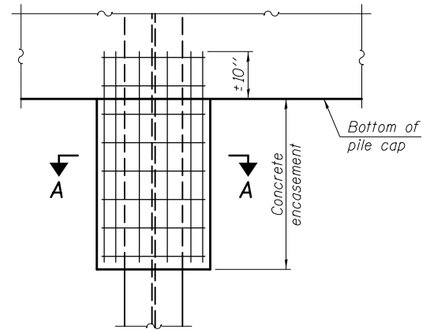


ISOMETRIC VIEW

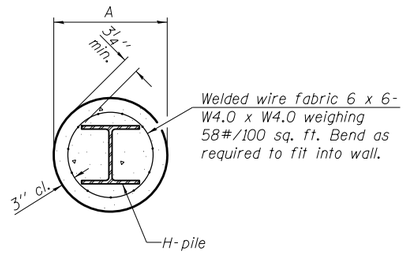
WELDED COMMERCIAL SPLICE



ISOMETRIC VIEW



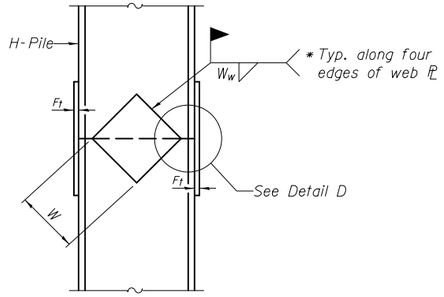
ELEVATION



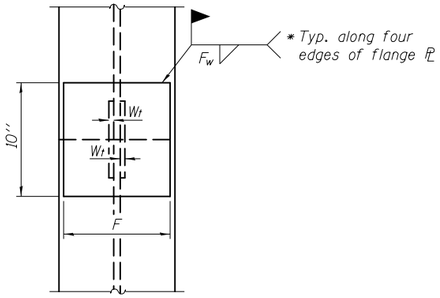
SECTION A-A

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

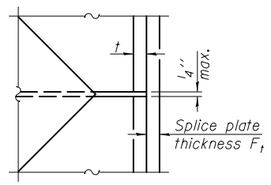
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

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

WELDED PLATE FIELD SPLICE

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds ¼'' from end of web and/or each flange.

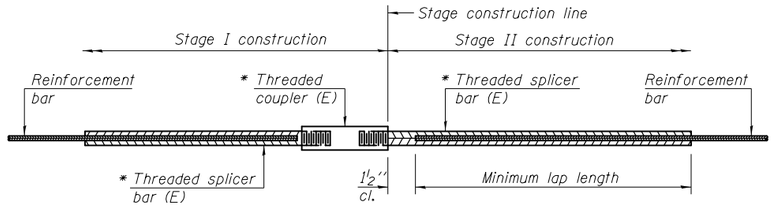
** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer ($\frac{5}{16}''$ min.).

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

F-HP 1-27-12

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HP PILE DETAILS STRUCTURE NO. 057-0254	F.A.I. RTE. 74	SECTION (57-2OHB)BR-1	COUNTY MCLEAN	TOTAL SHEETS 440	SHEET NO. 259
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -						CONTRACT NO. 70570	
	PLOT SCALE =	DRAWN - SGM	REVISED -		SHEET NO. 24 OF 28 SHEETS			ILLINOIS	FED. AID PROJECT	
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -							



STANDARD BAR SPLICER ASSEMBLY

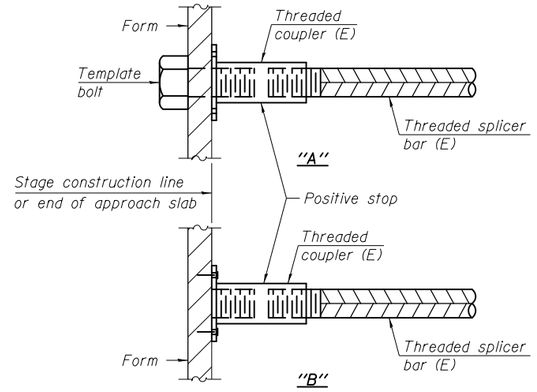
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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

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

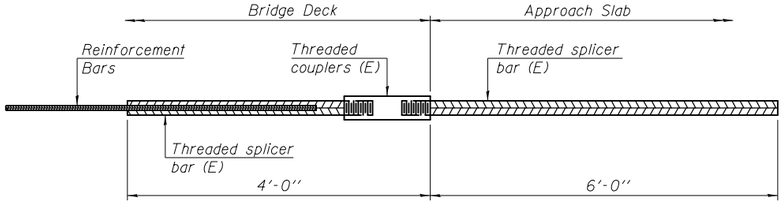
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck Slab (Top)	#5	448	5
Deck Slab (Bottom)	#5	275	3
Diaphragms	#6	16	4
Approach Slab	#4	50	4
Approach Slab	#5	92	3
Approach Footing	#5	80	3
Abutment	#7	20	6
Abutment	#5	8	3
Pier Footing	#5	42	4
Pier Crashwall	#5	36	4
Pier Cap	#8	12	5
Pier Cap	#5	16	6
Pier Cap	#9	24	6



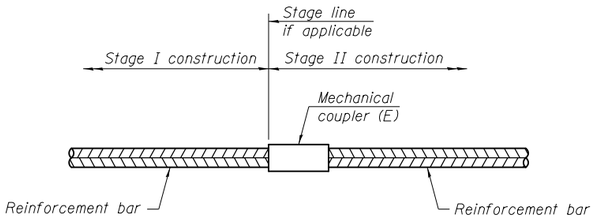
INSTALLATION AND SETTING METHODS

"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.



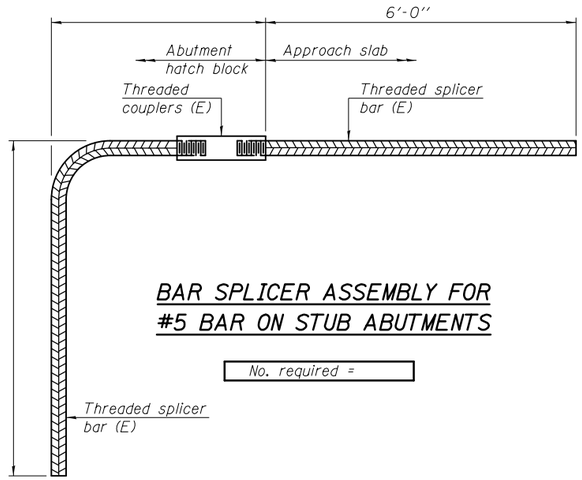
BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 110



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

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.

BSD-1 1-27-12

FILE NAME = $FILE$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 057-0254	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -			74	(57-20HB)BR-1	MCLEAN	440	260
	PLOT SCALE =	DRAWN - SGM	REVISED -						CONTRACT NO. 70570	
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		SHEET NO. 25 OF 28 SHEETS			ILLINOIS	FED. AID PROJECT	

Illinois Department of Transportation
Division of Highways
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/9/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (NB) over FAI 74 (WB) **LOGGED BY** RJC

SECTION (57-20HB)BR **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM**,
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0061 existing / 057-0253 proposed
Station 52+51.02

BORING NO. B-1 N. Abut
Station 51+40
Offset 1.00ft LT
Ground Surface Elev. 812.30 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 778.8 ft ▼
Upon Completion 757.6 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Dark Brown, Moist
			14	SILTY CLAY LOAM (Fill), little organics, trace gravel
	7			
	7	5.0	17	
	6	P		
808.80				
	6			Brown, Moist
808.00	7	6.1	9	SILTY CLAY LOAM (Fill), little organics, trace gravel
-5	8	S		
				Gray, trace Brown, Moist
806.30				SILTY LOAM (Fill), trace gravel
805.80	5			Brown and Dark Brown, Moist
	6	2.9	26	SILTY LOAM (Fill), trace gravel
	8	B		Brown, Gray, and Dark Gray, Moist
				SILTY LOAM (Fill), trace gravel
	3			
802.80	6	3.9	23	
-10	7	B		Dark Gray, Moist
				SILTY LOAM (Fill), trace gravel
801.30				
	3			Brown, Moist
800.50	4	3.5	24	SILTY LOAM
	7	B		Brown, Gray, and Dark Gray, Moist
				SILTY LOAM (Fill)
798.80				
	2			Brown, trace Gray, Moist
	4	5.0	19	SILTY LOAM (Fill)
-15	6	P		
796.30				
	4			Gray and Dark Gray, Moist
795.40	6	4.7	21	SILTY LOAM (Fill)
	8	B		Stiff to Hard
				Dark Gray, Moist
				SILTY LOAM, trace organics
	2			
	3	1.8	22	
-20	7	B		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Stiff to Hard
				Dark Gray, Moist
				SILTY LOAM, trace organics
790.80				*(continued)*
	2			
	5	2.7	25	Very Stiff
	6	S		Brown and Gray, Moist
				SILTY LOAM, trace gravel
788.80				
	1			Very Soft
	2	0.3	28	Greenish Brown, Moist
787.80	2	P		SILTY LOAM
-25				Very Soft
				Brown, Moist
786.30				CLAY LOAM
	1			Medium Stiff to Stiff
	2	0.8	17	Brown, Moist
	3	B		SILTY LOAM, trace gravel
	5			
	3	1.0	17	
-30	7	B		
778.80 ▼				
	2			Very Stiff
	3	2.3	14	Gray, Wet
-35	5	P		SILTY LOAM, trace gravel
	3			
772.80	12	1.6	14	
772.30 -40	16	B		Gray, Fine to Medium grain, Wet

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
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/9/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (NB) over FAI 74 (WB) **LOGGED BY** RJC

SECTION (57-20HB)BR **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM**,
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0061 existing / 057-0253 proposed
Station 52+51.02

BORING NO. B-1 N. Abut
Station 51+40
Offset 1.00ft LT
Ground Surface Elev. 812.30 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 778.8 ft ▼
Upon Completion 757.6 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				SAND, trace gravel
				Hard
				Gray, Wet
				SILTY LOAM, trace gravel
	5			
	8	5.1	13	
-45	12	B		
	7			
	10	4.1	12	
-50	15	B		
	6			
	14	6.3	11	
▽ -55	28	B		
753.80				
	35			Hard
	20	6.3	11	Bluish Gray, Wet
-60	23	P		SILTY LOAM, with gravel

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Hard
				Bluish Gray, Wet
				SILTY LOAM, with gravel
				(continued)
	100			
747.80	35	13.0	14	
-65	40	P		Very Dense
				Gray, Fine to Medium grain, Wet
				SAND, trace gravel
743.30	14			
	21	10.3	10	Very Hard
	27	P		Gray, Wet
742.30 -70				SILTY LOAM, trace gravel
				End of Boring
-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 = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SOIL BORINGS STRUCTURE NO. 057-0254**
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -		
	PLOT SCALE =	DRAWN - SGM	REVISED -		SHEET NO. 26 OF 28 SHEETS
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR-1	MCLEAN	440	261
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

Illinois Department of Transportation
Division of Highways
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/12/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (SB) over FAI 74 (WB) **LOGGED BY** RJC

SECTION (57-20HB)BR-1 **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM,**
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0062 existing / 057-0254 proposed
Station 52+51.02

BORING NO. B-3 S. Pier
Station 52+26
Offset 101.6ft RT
Ground Surface Elev. 789.00 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 784.5 ft ▼
Upon Completion 741.0 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown, Moist SILTY LOAM, little organics			
788.00			16
Stiff	4		
Brown, Moist SILTY LOAM, trace gravel	2 4	1.2 B	28
	1		
784.50 ▼	2		18
-5 Brown, Fine to Medium grain, Wet SAND	3		
	3		
782.00	6		18
Stiff Brown, Moist SILTY LOAM, trace gravel	4		
	3		
-10	2 3	1.6 B	16
778.00			
Stiff Gray, Wet SILTY LOAM, trace gravel	2		
	3 4	1.6 B	13
	3		
-15	3 3	1.4 B	14
	3		
	3 4	1.6 B	13
	2		
-20	7 6	1.6 B	13
768.00			
Gray, Fine to Medium grain, Wet SAND, trace gravel	3		
	7 8		13
765.50			
Very Stiff to Hard Gray, Wet SILTY LOAM, trace gravel	5		
	9 12	3.5 B	13
-25			
	5		
	9 13	4.3 B	12
	3		
-30	7 8	3.9 B	13
	7		
-35	14 15	10.0 P	17
	24		
-40	22 21	11.0 P	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)

Illinois Department of Transportation
Division of Highways
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/12/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (SB) over FAI 74 (WB) **LOGGED BY** RJC

SECTION (57-20HB)BR-1 **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM,**
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0062 existing / 057-0254 proposed
Station 52+51.02

BORING NO. B-3 S. Pier
Station 52+26
Offset 101.6ft RT
Ground Surface Elev. 789.00 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 784.5 ft ▼
Upon Completion 741.0 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Stiff to Hard Gray, Wet SILTY LOAM, trace gravel *(continued)*			
	19		
	20 23	10.3 P	11
-45			
▽			
	19		
739.00 -50	30 30	10.0 P	10
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)

Illinois Department of Transportation
Division of Highways
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/10/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (SB) over FAI 74 (WB) **LOGGED BY** RJC

SECTION (57-20HB)BR-1 **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM,**
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0062 existing / 057-0254 proposed
Station 52+51.02

BORING NO. B-4 S. Abut
Station 53+49
Offset 3.00ft RT
Ground Surface Elev. 810.90 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 777.4 ft ▼
Upon Completion 752.9 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Brown, Moist
			13	SILTY LOAM (Fill), little organics
809.90				
	3			Brown, Moist
	3	3.5	19	SILTY LOAM (Fill), trace gravel
	5	P		
806.90				
	2			
	3	3.5	18	Brown and Gray, Moist
-5	5	P		SILTY LOAM (Fill), trace gravel
804.90				
	2			
	4	2.9	59	Brown, Gray, and Dark Gray, Moist
	6	B		SILTY LOAM (Fill), trace gravel
	2			
	5	2.9	21	
-10	7	B		
	3			
	5	3.7	20	
	7	B		
796.90				
	2			
	6	4.5	24	Dark Gray to Black, Moist
-15	6	P		SILTY LOAM, trace organics
796.40				Hard
	2			Brown and Gray, Moist
794.90				SILTY LOAM, trace gravel
	4	2.2	22	Very Stiff
	6	B		Dark Gray to Black, Moist
792.40				SILTY LOAM, trace organics
	3			Dark Gray and Brown, Moist
791.90				SILTY LOAM
	6	4.1	21	
-20	8	B		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Hard
789.90				Dark Gray to Black, Moist
	2			SILTY LOAM, trace organics
				(continued)
	3	2.0	24	Very Stiff
	4	B		Greenish Brown and Gray, Moist
				SILTY LOAM, trace gravel
786.90				
	2			
	3		19	Loose
-25	5			Brown, Fine to Coarse Grain, Moist
				SAND, trace gravel
784.40				
	8			
783.90	8	4.0	15	Brownish Gray, Fine to Medium
	5	P		Grain, Moist
				SAND, trace gravel
	2			Hard
				Brown, Moist
				SILTY LOAM, trace gravel
781.40				
	5	2.9	13	
-30	5	B		Very Stiff
				Gray, Moist
				SILTY LOAM, trace gravel
▼				
776.40				
	5	1.6	14	
-35	15	B		Stiff
				Brown, Moist
				SILTY LOAM, trace gravel
772.40				
	3			Medium Stiff to Hard
	5	0.8	12	Gray, Moist
-40	5	B		SILTY LOAM, trace gravel

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
GSG CONSULTANTS INC.

SOIL BORING LOG

Date 5/10/11

ROUTE FAI 74 **DESCRIPTION** FAI 55 Business (SB) over FAI 74 (WB) **LOGGED BY** RJC

SECTION (57-20HB)BR-1 **LOCATION** South of Bloomington, **SEC.** 19, **TWP.** 23N, **RNG.** 2E, 3rd **PM,**
Latitude , Longitude

COUNTY McLean **DRILLING METHOD** HSA **HAMMER TYPE** AUTO

STRUCT. NO. 057-0062 existing / 057-0254 proposed
Station 52+51.02

BORING NO. B-4 S. Abut
Station 53+49
Offset 3.00ft RT
Ground Surface Elev. 810.90 ft

Surface Water Elev. NA ft
Stream Bed Elev. NA ft

Groundwater Elev.:
First Encounter 777.4 ft ▼
Upon Completion 752.9 ft ▽
After - **Hrs.** - ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Medium Stiff to Hard
				Gray, Moist
				SILTY LOAM, trace gravel
				(continued)
	6			
	8			
-45	15			
	11			
	9	3.1	12	
-50	12	B		
	6			
	9	4.1	16	
-55	12	B		
▽				
	6			
	19	6.8	11	
-60	23	P		

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				Medium Stiff to Hard
				Gray, Moist
				SILTY LOAM, trace gravel
				(continued)
	19			
	23	7.8	10	
-65	43	P		
	14			
	20	7.8	11	
740.90 -70	23	P		
				End of Boring
-75				
-80				

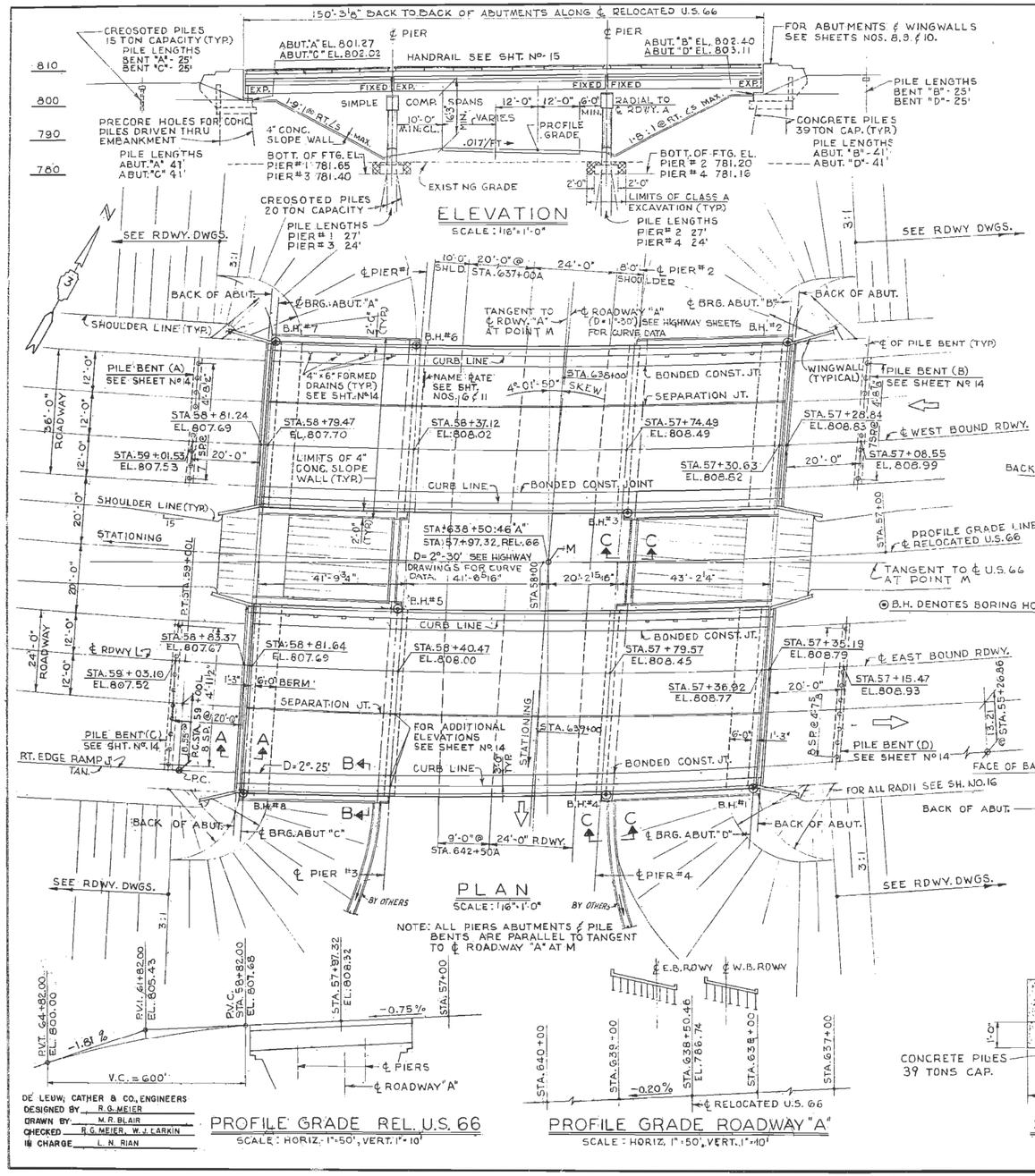
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SOIL BORINGS STRUCTURE NO. 057-0254**
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -		
	PLOT SCALE =	DRAWN - SGM	REVISED -		SHEET NO. 28 OF 28 SHEETS
	PLOT DATE = 7/30/2013 $TIME$	CHECKED - BAS	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR-1	MCLEAN	440	263
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

THIS DETAIL IS INCLUDED FOR INFORMATION ONLY



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	57-20 HB-1	MC LEAN	253	62
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	I-74-5(51)34	

SHEET NO. 1
16 SHEETS

HP 20

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

S.N. 057-0059 & S.N. 057-0060
EXISTING GP&E BRIDGE PLANS (1963)

SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	264
		CONTRACT NO. 70570		
		ILLINOIS	FED. AID PROJECT	

THIS DETAIL IS INCLUDED FOR INFORMATION ONLY

* 57-7(1) HBR-1;HBR-2
57-20(1) HBR,HBR-1,HBR-3

SHEET NO. 2 OF 17 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55&74	*	McLEAN		CO.
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

D-93-048-86

BENCH MARK: TOP OF CONCRETE HEADWALL FOR SLOPE DRAIN AT N.W. QUARTER AT STRUCTURE 0060. ELEV.=784.49.

EXISTING STRUCTURES: TWIN BRIDGES AT STA 638+50.46, VETERANS PARKWAY OVER S.B. - F.A.I. ROUTE 74 SECTION 57-20HBR-1, BUILT IN 1963 AND 1964, STRUCTURE NO. 057-0059 AND 057-0060, SUPERSTRUCTURE-3 SIMPLE COMPOSITE SPANS W/R.C. SLAB ON STL. BEAMS, SUBSTRUCTURE - STANDARD PILE BENT ABUTMENTS; PIERS - MULTIPLE COLUMNS (3) ON PILES.

SALVAGE: METAL RAILING AND EXPANSION JOINT MATERIAL TO IDOT MAINTENANCE.

SUPERSTRUCTURE: TO BE RETROFITTED WITH NEW CONCRETE PARAPETS, DECK SCARIFICATION, 2½" CONCRETE OVERLAY, NEW DRAINAGE SCUPPERS, REPLACE NEOPRENE EXPANSION JOINTS WITH 2½" PREFORMED JOINT SEALS, REMOVE EXISTING LONGITUDINAL SEPARATION JOINT, ADD NEW DIAPHRAGMS FOR BEAMS AT SEPARATION JOINT, PARTIAL AND FULL DEPTH DECK REPAIRS, CLEAN AND PAINT BRIDGES, REPOSITION BEARINGS, AND REPLACE NUTS AND WASHERS ON EXISTING ANCHOR BOLTS.

SUBSTRUCTURE: REP.CONC.STRUCT., EPOXY CRACK SEALING AND FORM. CONC. REP FOR PIERS & ABUT'S. SEE SHEETS #13 AND #14 OF 17 FOR DETAILS. REPAIR AND EXTEND SLOPE WALLS TO 5' BEYOND FACE OF PARAPETS AND PLACE SLOPE WALL BETWEEN STRUCTURES 0059 AND 0060, SEE SHEET #16 OF 17 FOR DETAILS.

STAGE CONSTRUCTION: TRAFFIC TO BE MAINTAINED USING STAGE CONSTRUCTION. CLOSE HALF OF EACH STRUCTURE AT A TIME WITH TEMPORARY CONCRETE BARRIER AS INDICATED ON SHEET #3.

All top surfaces of Abutments & Piers Scarified for Bridge Deck Bonding. Estimated Quantity = 1000 sq. ft

GENERAL NOTES

FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 3/4"Ø, OPEN HOLES 15/16"Ø, UNLESS OTHERWISE NOTED.

CALCULATED WEIGHT OF STRUCTURAL STEEL= 19,980 LBS. (M 183)

THE THREE COAT LEAD AND CHROMATE FREE ALKYD PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL AND FOR PAINTING OF EXISTING STRUCTURAL STEEL. THE COLOR OF THE FINAL FINISH COAT SHALL BE MUNSELL STANDARD 7.5G4/8 INTERSTATE GREEN.

ALL CONTACT SURFACES OF EXISTING STRUCTURAL STEEL TO WHICH NEW STRUCTURAL STEEL IS TO BE CONNECTED SHALL BE FREE OF PAINT OR LACQUER.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.

SLOPE WALLS SHALL BE REINFORCED WITH WELDED WIRE FABRIC, 6" X 6" -W4.0 X W4.0, WEIGHING 58 LBS. PER 100 SQ. FT.

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS., AND 3/4" Ø X 12" HOOKED BOLTS.

THE CONTRACTOR WILL BE REQUIRED TO MARK ON TOP OF THE CONCRETE DECK THE LOCATIONS OF THE TOP FLANGE OF ALL THE STEEL BEAMS OR GIRDERS, PRIOR TO ANY REMOVAL OF THE BRIDGE CONCRETE DECK. SAW CUTTING DIRECTLY OVER THE TOP OF THE BEAM OR GIRDER FLANGES IS NOT PERMITTED.

THE MAXIMUM HEIGHT THAT A BEAM CAN BE RAISED FOR REPOSITIONING A BEARING IS 1/8". THE COST OF JACKING AND CRIBBING IS INCIDENTAL TO "BEARING REPOSITIONING". SEE SPECIAL PROVISIONS FOR "BEARING REPOSITIONING".

CLEAN AND PAINT ALL STRUCTURAL STEEL. ALL EXISTING STRUCTURAL STEEL SHALL BE CLEANED USING METHOD II, WITH THE EXCEPTION OF THE FOLLOWING WHICH SHALL BE CLEANED BY METHOD I: THE END 10 FEET OF EACH BEAM AT THE ABUTMENTS AND AT THE PIERS; AND THE BEARINGS. FOLLOWING THE REMOVAL OF THE CONCRETE DECK IN THE DESIGNATED AREAS, THE TOP FLANGES OF THE BEAMS AND THE END DIAPHRAGMS SHALL BE CLEANED USING METHOD II. THE STEEL THUS EXPOSED SHALL BE FIELD PRIMED PRIOR TO FORMING THE NEW DECK. SEE SPECIAL PROVISIONS FOR CLEANING AND PAINTING STEEL STRUCTURES.

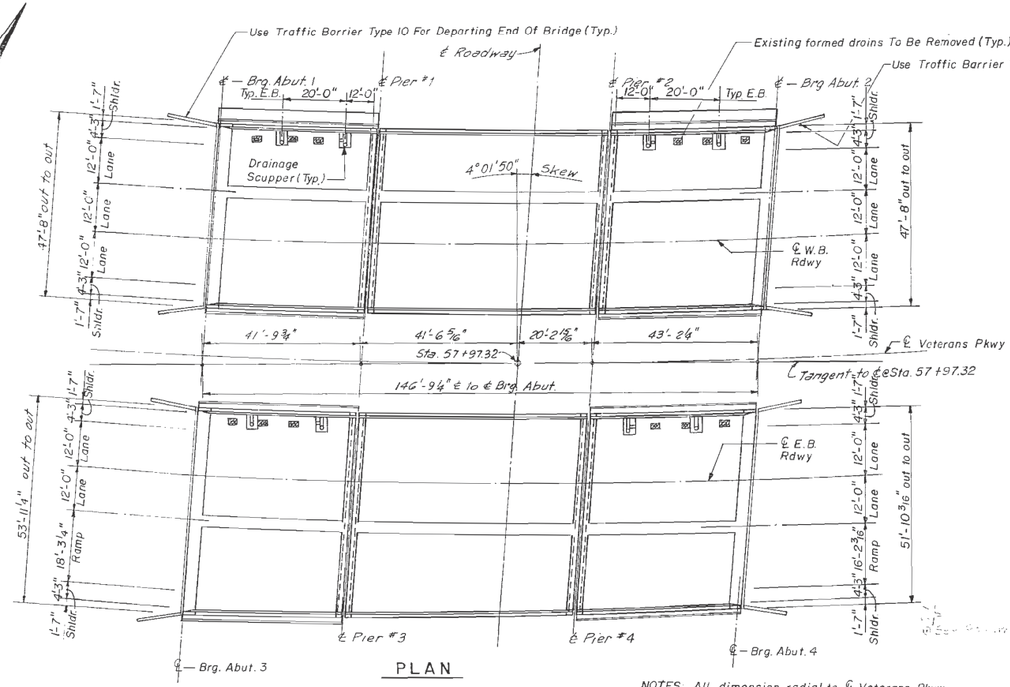
CURVE DATA

CURVE NO.12

P.I. STA.= 49+30.21
Δ= 52°-30'-00"
D = 2°-30'
R = 2291.83'
T = 1130.21'
L = 2100.00'
E = 263.53'
S = 0.045'/FT.

RAMP CURVE FOR 0059

P.I. STA. = 17+47.06
Δ = 9°-15'-14.3"
D = 2°-25'
R = 2370.86'
T = 191.88'
L = 382.92'
L.C.=382.51'
P.C. STA. = 15+55.18 = P.T. STA. 59+00



PLAN

NOTES: All dimension radial to ℄ Veterans Pkwy (Curve 2°30' unless noted)

TOTAL BILL OF MATERIALS

ITEM	UNIT	SUPER	SUB.	TOTAL
FURNISHING & ERECTING STRUCTURAL STEEL	LB.	19,980	-	19,980
REINFORCEMENT BARS (EPOXY COATED)	LB.	29470	2000	31470
CONCRETE REMOVAL (SPECIAL)	CU.YD.	58.4	-	58.4
CLASS X CONCRETE, SUPERSTRUCTURE	SQ.YD.	147.9	-	147.9
BRIDGE DECK CONCRETE OVERLAY OPTION	SQ.YD.	1550	-	1550
BRIDGE DECK CONCRETE SCARIFICATION 1/4"	SQ.YD.	1550	-	1550
BITUMINOUS CONCRETE SURFACE REMOVAL	SQ.YD.	1289	-	1289
PROTECTIVE COAT	SQ.YD.	1792	-	1792
EXPANSION BOLTS 3/4 INCH	EACH	-	24	24
DRAINAGE SCUPPERS	EACH	8	-	8
PREFORMED JOINT SEAL 2 ½"	LIN.FT.	404	-	404
CONCRETE REMOVAL	CU.YD.	814	18.1	99.5
EPOXY CRACK SEALING	LIN.FT.	-	192	192
FORM CONC REP > 1.5	SQ. FT.	-	406.4	406.4
BEARING REPOSITIONING	EACH	20	-	20
SLOPE WALL REMOVAL	SQ.YD.	-	281	281
SLOPE WALL, 4"	SQ.YD.	-	571	571
CLEANING AND PAINTING STEEL BRIDGE NO. 3	LUMP SUM	1	-	1
BRIDGE HANDRAIL REMOVAL	LIN.FT.	600	-	600
EXPANSION DEVICE REMOVAL	LIN.FT.	370	-	370
TEMPORARY CONCRETE BARRIER	LIN.FT.	300	-	300
DECK SLAB REPAIR (PARTIAL DEPTH)	SQ.YD.	377	-	377
DECK SLAB REPAIR (FULL DEPTH, TYPE 1)	SQ.YD.	41	-	41
CLEANING & PAINTING STEEL BRIDGE NO.4	LUMP SUM	1	-	1
1"ANCHOR BOLTS			116	116
Bridge Deck Scarification	Sq. Ft.		426	426
CONTROLLED LOW STRENGTH MATERIAL	CU. YD		24	24

Baker Engineers
Baker Engineering Inc.

DESIGNED	Rel
CHECKED	M.J.H.
DRAWN	E.D.
CHECKED	Rel

DESIGN STRESSES (NEW CONSTRUCTION)

Concrete f'c. = 3,500 psi
Reinforcement fy = 60,000 psi
Design Loading: H-20-S16-44 and Alternate
Design Specifications: 1983 A.A.S.H.T.O. and 1984 thru 1988 Interim Specifications.
Structural Steel: fy=36,000 psi A.A.S.H.T.O. M-183 Existing and Proposed Structural Steel.

REVISIONS	
NAME	DATE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA

VETERANS PARKWAY OVER E.B.-F.A.I. RT. 74
SECTION 57-20 HBR-1
McLEAN COUNTY
STATION 638+50.46
STRUCTURE NO. 057-0059(E.B.)
STRUCTURE NO. 057-0060(W.B.)

D C B A 0 A B C D
TAMERAN

FILE NAME =	USER NAME = detersbj	DESIGNED -	REVISED -
c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	DRAWN -	REVISED -	
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

S.N. 057-0059 & S.N. 057-0060
EXISTING GP&E BRIDGE PLANS (1990)

SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	McLEAN	440	265
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

THIS DETAIL IS INCLUDED FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI. 74	57-20 HB	McLEAN	253	46
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT I-74-5(13)136	

SHEET NO. 1
16 SHEETS

ELEVATION
SCALE: 1" = 1'-0"

PLAN (SEE KEY PLAN - SHEET N°-4)
SCALE: 1" = 1'-0"

DECK SECTIONS C-C
SCALE: 1" = 1'-0"

SECTION A-A
SCALE: 1" = 1'-0"

ELEVATION PIERS 1 & 2
SCALE 1" = 1'-0"

SECTION G-G
SCALE: 1" = 1'-0"

ELEVATION OF PIERS 3 & 4
SCALE: 1" = 1'-0"

SECTION F-F
SCALE: 1" = 1'-0"

SECTION B-B
SCALE: 1" = 1'-0"

SECTION H-H
SCALE 1" = 1'-0"

SECTION D-D
SCALE: 1" = 1'-0"

SECTION E-E
SCALE: 1" = 1'-0"

SUPERELEVATION TRANSITION DIAGRAM FOR ROADWAY "D"

PROFILE GRADE RELOCATED U.S. 66
SCALES: HORIZ. 1" = 100'-0" VERT. 1" = 10'-0"

PROFILE GRADE ROADWAY "D"
SCALES: HORIZ. 1" = 50'-0" VERT. 1" = 10'-0"

SLOPEWALL GUTTER AT BACKFACE OF PIERS 2 & 4
SCALE: 1" = 1'-0"

LOCATION PLAN

GENERAL PLAN AND ELEVATION
F.A.I. 74 SECTION 57-20HB
F.A.I. 74 (RDWY "D") UNDER US 66 RELOC.
McLEAN COUNTY
STATION 635+75.15
SCALE: AS NOTED DATE:

DESIGN LOADING A.A.S.H.O. H20-S16-44 AND ALTERNATE

FOR KEY PLAN SEE SHEET NO. 4

DE LEUW, CATHER & CO., ENGINEERS
DESIGNED BY R. THEODOSIADIS
DRAWN BY F. SHANNON
CHECKED R.G. MEIER, A.F., D.M.
IN CHARGE L.N. RIAN, A.F. MOREL

861-HB-21

FILE NAME =	USER NAME = detersbj	DESIGNED -	REVISED -
c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

S.N. 057-0061 & S.N. 057-0062
EXISTING GP&E BRIDGE PLANS (1963)

SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	266
		CONTRACT NO. 70570		
		ILLINOIS FED. AID PROJECT		

THIS DETAIL IS INCLUDED FOR INFORMATION ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55874	*	McLEAN		77.
STA		TO STA		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2 OF 18 SHEETS

* 57-7(1) HBR-1;HBR-2] D-93-048-84
57-20(1) HBR,HBR-1,HBR-3]

BENCH MARK: TOP OF CONCRETE HEADWALL FOR SLOPE DRAIN AT N.W. QUARTER AT STRUCTURE NO. 0060. ELEV.=784.49.

EXISTING STRUCTURES: TWIN BRIDGES AT STA 635+75.15, VETERANS PARKWAY OVER N.B. - F.A.I. ROUTE 74 SECTION 57-20HBR, BUILT IN 1963 AND 1964, STRUCTURE NO. 057-0061 AND 057-0062, SUPERSTRUCTURE-3 SIMPLE COMPOSITE SPANS W/R.C. SLAB ON STEEL BEAMS, SUBSTRUCTURE - STANDARD PILE BENT ABUTMENTS; PIERS - MULTIPLE COLUMNS (3,4) ON PILES.

SALVAGE: METAL RAILING AND EXPANSION JOINT MATERIAL TO IDOT MAINTENANCE.

SUPERSTRUCTURE: TO BE RETROFITTED WITH NEW CONCRETE PARAPETS, DECK SCARIFICATION, 2" CONCRETE OVERLAY, NEW DRAINAGE SCUPPERS, REPLACE NEOPRENE EXPANSION JOINTS, REMOVE EXISTING LONGITUDINAL SEPARATION JOINT, ADD NEW DIAPHRAGMS FOR BEAMS AT SEPARATION JOINT, PARTIAL AND FULL DEPTH DECK REPAIRS, CLEAN AND PAINT BRIDGES, REPOSITION BEARINGS, AND REPLACE NUTS AND WASHERS ON EXISTING ANCHOR BOLTS, AND REMOVE AND REPLACE FIVE DIAPHRAGMS.

SUBSTRUCTURE: REP. CONC. STRUCT., EPOXY CRACK SEALING AND FORM. CONC. REP. FOR PIERS & ABUT'S. SEE SHEET #14 AND #15 OF 18 FOR DETAILS. REPAIR AND EXTEND SLOPE WALLS TO 5' BEYOND FACE OF PARAPETS AND PLACE SLOPE WALL BETWEEN STRUCTURES 0061 AND 0062, SEE SHEET #17 OF 18 FOR DETAILS.

STAGE CONSTRUCTION: TRAFFIC TO BE MAINTAINED USING STAGE CONSTRUCTION. CLOSE HALF OF EACH STRUCTURE AT A TIME WITH TEMPORARY CONCRETE BARRIER AS INDICATED ON SHEET #3 OF 18.

GENERAL NOTES

FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 3/4"Ø, OPEN HOLES 15/16"Ø, UNLESS OTHERWISE NOTED.

CALCULATED WEIGHT OF STRUCTURAL STEEL= 3180 LBS. (M-183)

THE THREE COAT LEAD AND CHROMATE FREE ALKYD PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL AND FOR PAINTING OF EXISTING STRUCTURAL STEEL. THE COLOR OF THE FINAL FINISH COAT SHALL BE MUNSELL STANDARD 7.5G4/8 INTERSTATE GREEN.

ALL CONTACT SURFACES OF EXISTING STRUCTURAL STEEL TO WHICH NEW STRUCTURAL STEEL IS TO BE CONNECTED SHALL BE FREE OF PAINT OR LACQUER.

FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.

SLOPE WALLS SHALL BE REINFORCED WITH WELDED WIRE FABRIC, 6" X 6" -W4.0 X W4.0, WEIGHING 58 LBS. PER 100 SQ. FT.

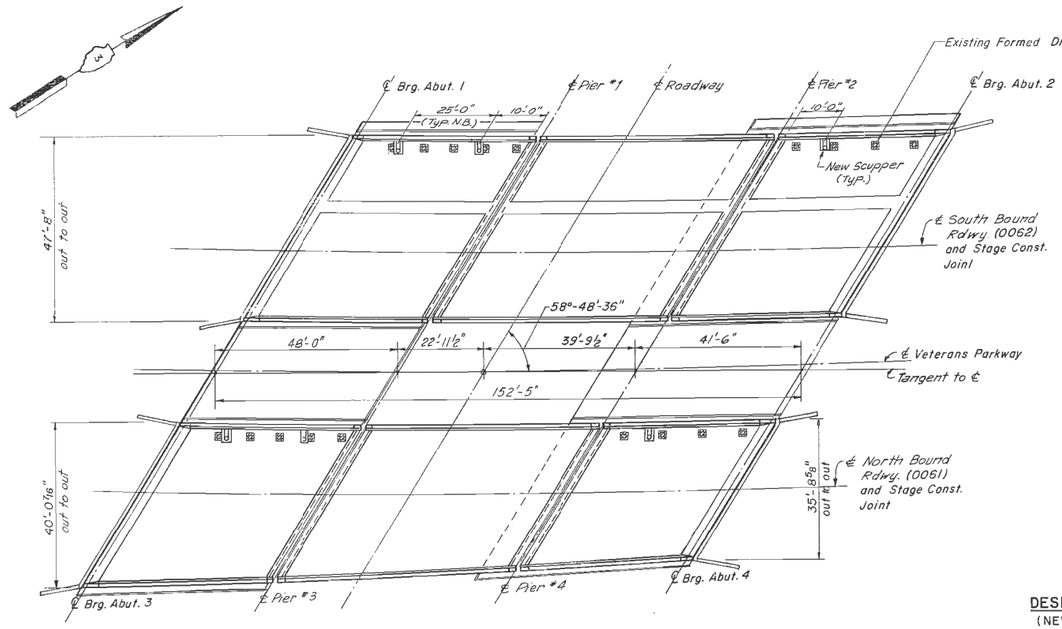
PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS ANG DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS., AND 3/4" Ø X 12" HOOKED BOLTS.

THE CONTRACTOR WILL BE REQUIRED TO MARK ON TOP OF THE CONCRETE DECK THE LOCATIONS OF THE TOP FLANGE OF ALL THE STEEL BEAMS OR GIRDERS, PRIOR TO ANY REMOVAL OF THE BRIDGE CONCRETE DECK. SAW CUTTING DIRECTLY OVER THE TOP OF THE BEAM OR GIRDER FLANGES IS NOT PERMITTED.

THE MAXIMUM HEIGHT THAT A BEAM CAN BE RAISED FOR REPOSITIONING A BEARING IS 1/8". THE COST OF JACKING AND CRIBBING IS INCIDENTAL TO "BEARING REPOSITIONING". SEE SPECIAL PROVISIONS FOR "BEARING REPOSITIONING".

CLEAN AND PAINT ALL STRUCTURAL STEEL. ALL EXISTING STRUCTURAL STEEL SHALL BE CLEANED USING METHOD II, WITH THE EXCEPTION OF THE FOLLOWING WHICH SHALL BE CLEANED BY METHOD I: THE END 10 FEET OF EACH BEAM AT THE ABUTMENTS AND AT THE PIERS; AND THE BEARINGS. FOLLOWING THE REMOVAL OF THE CONCRETE DECK IN THE DESIGNATED AREAS, THE TOP FLANGES OF THE BEAMS AND THE END DIAPHRAGMS SHALL BE CLEANED USING METHOD II. THE STEEL THUS EXPOSED SHALL BE FIELD PRIMED PRIOR TO FORMING THE NEW DECK. SEE SPECIAL PROVISIONS FOR CLEANING AND PAINTING STEEL STRUCTURES.



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
FURNISHING & ERECTING STRUCTURAL STEEL	LB.	3180	-	3180
REINFORCEMENT BARS (EPOXY COATED)	LB.	28,000	1,995	29,995
CONCRETE REMOVAL (SPECIAL)	CU.YD.	70	-	70
CLASS X CONCRETE, SUPERSTRUCTURE	CU.YD.	135.1	-	135.1
BRIDGE DECK CONCRETE OVERLAY OPTION	SQ.YD.	1363	-	1363
BRIDGE DECK CONCRETE SCARIFICATION 1/4"	SQ.YD.	1363	-	1363
BITUMINOIS CONCRETE SURFACE REMOVAL	SQ.YD.	1103	-	1103
PROTECTIVE COAT	SQ.YD.	1,770	-	1,770
EXPANSION BOLTS 3/4 INCH	EACH	-	24	24
DRAINAGE SCUPPERS	EACH	6	-	6
NEOPRENE EXPANSION JOINT 2"	LIN.FT.	392	-	392
CONCRETE REMOVAL	CU.YD.	646	18.2	82.8
EPOXY CRACK SEALING	LIN.FT.	-	239	239
FORM CONC REP > 15	SQ.FT.	-	628	628
BEARING REPOSITIONING	EACH	12	-	12
SLOPE WALL REMOVAL	SQ.YD.	-	363	363
SLOPE WALL, 4"	SQ.YD.	-	661	661
CLEANING AND PAINTING STEEL BRIDGE NO. 5	LUMP SUM	1	-	1
BRIDGE HANDRAIL REMOVAL	LIN.FT.	620	-	620
EXPANSION DEVICE REMOVAL	LIN.FT.	372	-	372
TEMPORARY CONCRETE BARRIER	LIN.FT.	310	-	310
DECK SLAB REPAIR (PARTIAL DEPTH)	SQ.YD.	162	-	162
DECK SLAB REPAIR (FULL DEPTH, TYPE 1)	SQ.YD.	18	-	18
CLEANING AND PAINTING STEEL BRIDGE NO. 6	LUMP SUM	1	-	1
1" ANCHOR BOLTS			83	83
[illegible]	[illegible]	[illegible]	18	18
CONTROLLED LOW STRENGTH MATERIAL	SQ.YD.		14	14

DESIGN STRESSES
(NEW CONSTRUCTION)

Concrete: f'c = 3,500 p.s.i.

Reinforcement: fy = 60,000 p.s.i.

Structural Steel: fy = 36,000 p.s.i.
AASHTO M-183
Existing and Proposed Structural Steel

Design Loading: H20-S16-44 and Alternate

Design Specifications: AASHTO (1983) plus 1984 thru 1988 Interims

Baker Engineers
Baker Engineering, Inc.

DESIGNED	R.w.l
CHECKED	M.J.H.
DRAWN	R.w.l.
CHECKED	R.w.l

REGISTERED STRUCTURAL ENGINEER — ILLINOIS

Richard P. Armin
11/20/89

REVISIONS	
NAME	DATE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA

VETERANS PARKWAY OVER W.B.-F.A.I. RT. 74
SECTION 57-20HBR
McLEAN COUNTY
STATION 635+75.15
STRUCTURE NO. 057-0061
STRUCTURE NO. 057-0062

D C B A 0 A B C D
TAMERAN

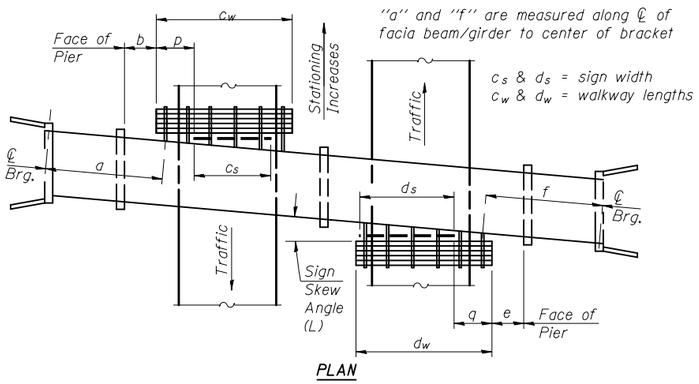
FILE NAME =	USER NAME = detersbj	DESIGNED -	REVISED -
c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

S.N. 057-0061 & S.N. 057-0062
EXISTING GP&E BRIDGE PLANS (1990)

SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	267
		CONTRACT NO. 70570		
	ILLINOIS	FED. AID PROJECT		

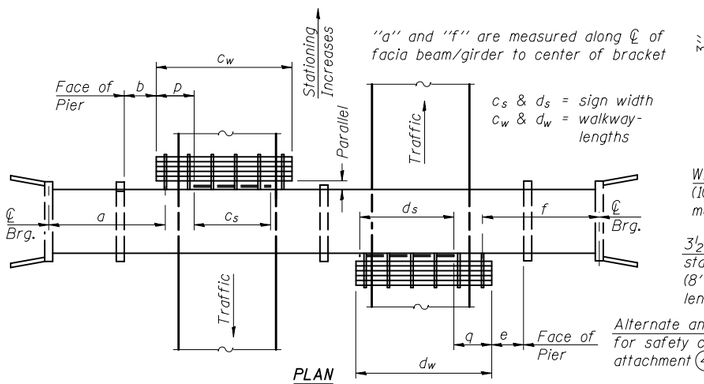


PLAN

(Left Sign Skew > 15°)

WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)

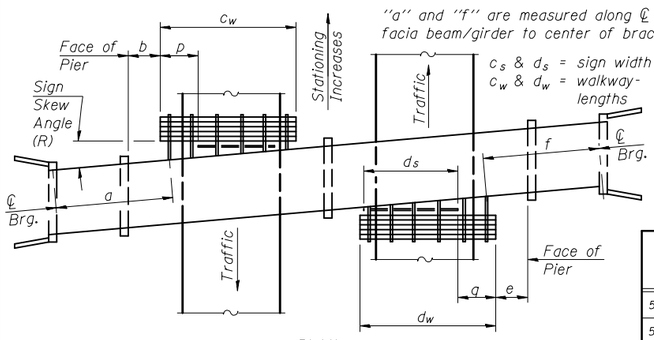


PLAN

(For Sign Skew ≤ 15°, all brackets constant)

WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)

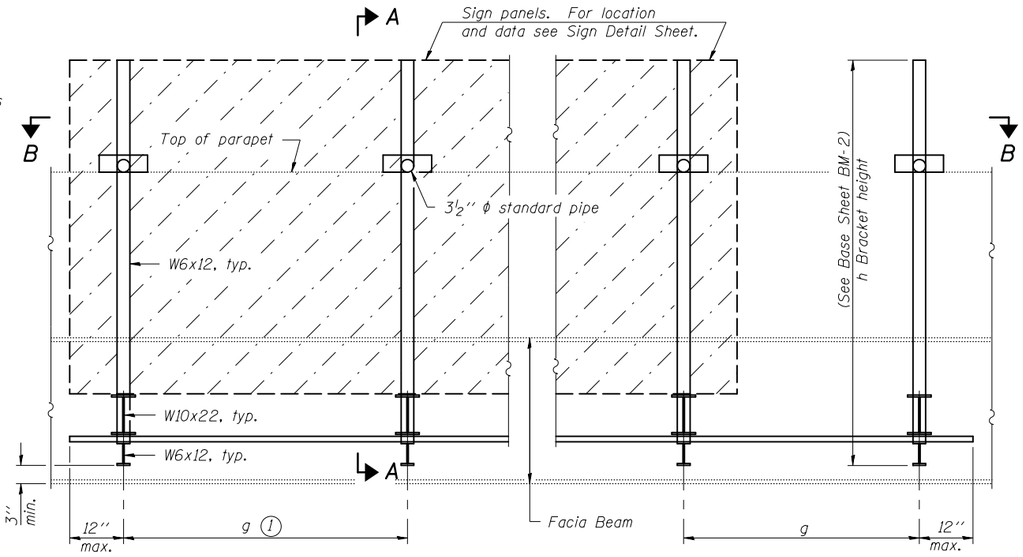


PLAN

(Right Sign Skew > 15°)

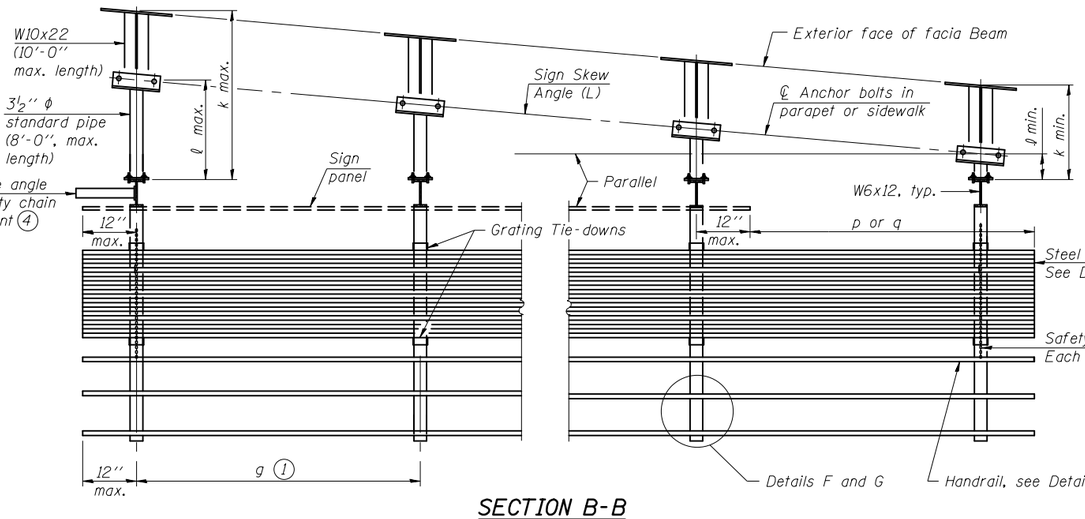
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)



TYPICAL FRONT ELEVATION

(With lights, safety chain and handrail omitted for clarity.)



SECTION B-B

(Shown: Left Sign Skew > 15°) * Bracket spacing varies, see bridge structure plans

Structure Number	Sign Skew Angle (L) or (R)	Bridge Station	Bridge Structure Number	Contract Route Designation	a	b	c_s	c_w	d_s	d_w	e	f	g	No. of Brackets (Total)	p	q	Total Grating/ Hndrl. Lengths (c_w + d_w)
5B0571074L133.90	16°33'11" (R)	635+73.19	057-0253	F.A.I. 74	100'-7"		15'-0"	15'-0"					4'-4"	4			15'-0"
5B0571074R133.90	0°	638+48.84	057-0252	F.A.I. 74					45'-3"	45'-3"		74'-9"	*5'-0"	11			45'-3"

Dimensions a, b, e, f & g may vary as approved by the Engineer, see (1).
When $c_w < c_s$ and/or $d_w < d_s$, use alternate brackets without walkway supports where applicable, see (3).

GENERAL NOTES

SPECIFICATIONS:

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications") (2)

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

MINIMUM CLEARANCE: 3" greater than bridge members at all locations. (All Obstructions)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code (Steel) and the Standard Specificiations.

MATERIALS: All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.
All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 (M183, M223 Gr. 50,).

HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise specified.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: All-threaded rod shall conform to ASTM F1554 Grade 105, $\frac{3}{4}$" ϕ x 12" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be either cast into the concrete or epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment in concrete shall be 9".

(1) Bracket spacing g ≤ 6'-0", max. Spacing shall be uniform if possible but may vary ±6" to miss existing obstruction (rail post, light poles, web stiffeners, splice plates, etc.). Adjust bracket lengths accordingly on skewed structures.

(2) Any design modifications shall be based on the current version of applicable specifications and submitted for the Engineer's approval.

(3) Unit price includes grating, handrail, brackets, supports, anchor bolts, fasteners, fabrication, delivery, erection, field drilling and other necessary items. Limits of payment are based on grating length (cw, dw) unless otherwise specified. For Safety Chain Details and Details D, F and G, see Base Sheet BM-4.

(4) If walkway bracket at safety chain location is behind sign, add angle to bracket. See detail on Base Sheet BM-4.

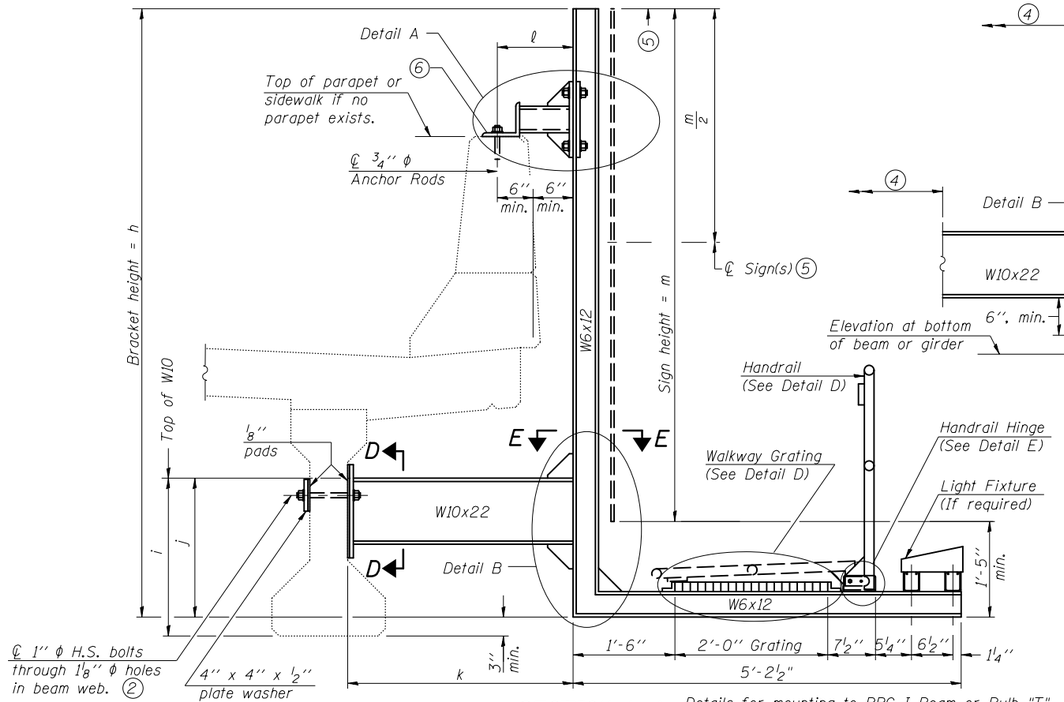
TOTAL BILL OF MATERIAL

(3) OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED	Foot	60.5

BM-1 1-20-11

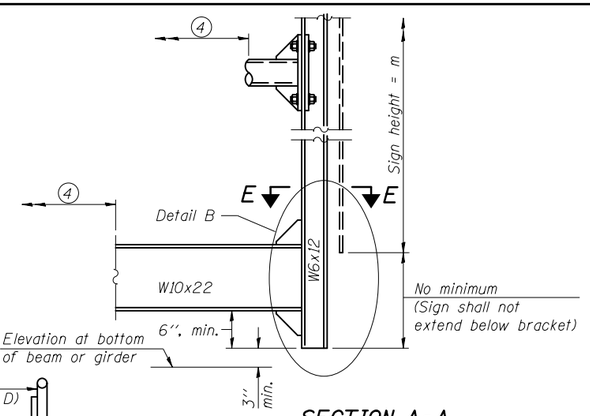
FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE MOUNT SIGN STRUCTURES GENERAL PLAN AND ELEVATION
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -		
	PLOT SCALE =	DRAWN - SGM	REVISED -		SHEET NO. 1 OF 4 SHEETS
	PLOT DATE = 8/6/2013 $TIME$	CHECKED - BAS	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	268
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



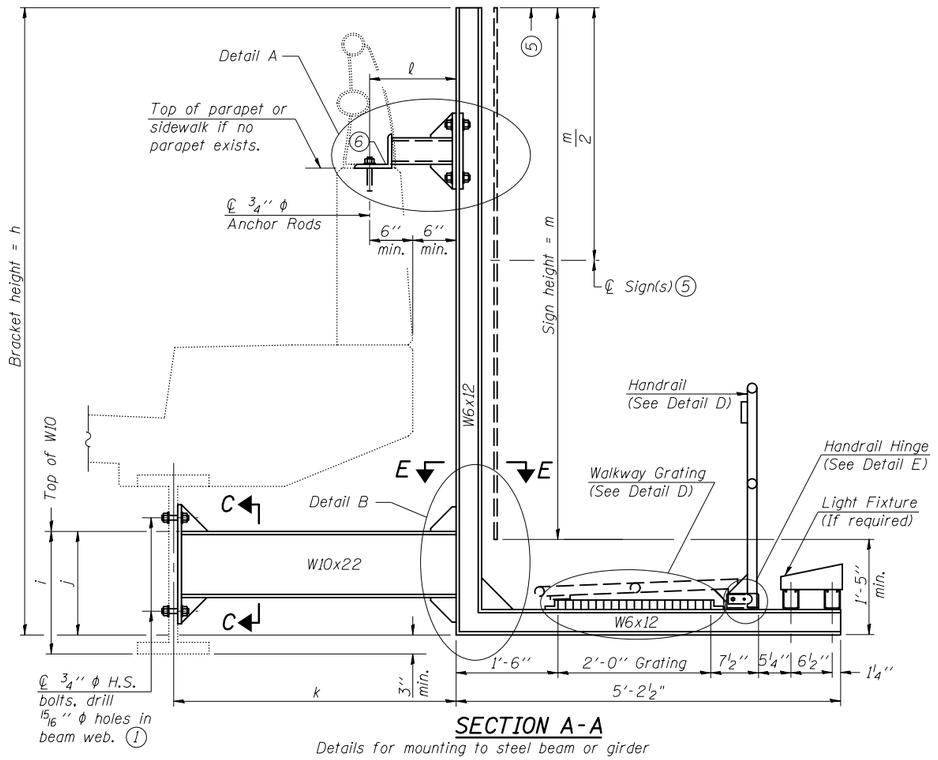
SECTION A-A

Details for mounting to PPC I Beam or Bulb "T" & Details for mounting to parapet w/o rail



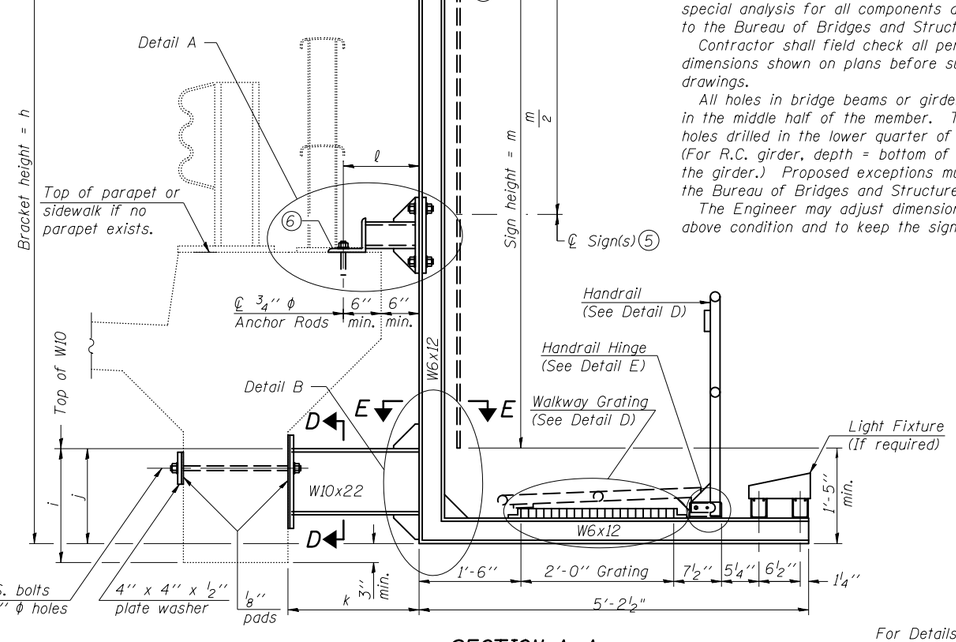
SECTION A-A

Alternate with no lights or walkways



SECTION A-A

Details for mounting to steel beam or girder & Details for mounting with existing parapet mounted rail



SECTION A-A

Details for mounting to integral reinforced concrete girder & Details for mounting on safety curb with surface-mount bridge rail

Notes:

Installations not within dimensional limits shown require special analysis for all components and must be submitted to the Bureau of Bridges and Structures for approval.

Contractor shall field check all pertinent existing bridge dimensions shown on plans before submitting shop drawings.

All holes in bridge beams or girders should be located in the middle half of the member. There shall be no holes drilled in the lower quarter of the member's depth. (For R.C. girder, depth = bottom of deck to bottom of the girder.) Proposed exceptions must be approved by the Bureau of Bridges and Structures.

The Engineer may adjust dimension "i" to meet the above condition and to keep the sign level.

(1) *Holes in new steel members may be drilled in the fabrication shop or in the field. Field drill existing members.*

(2) *For new PPC I beams, holes shall be formed during casting. For existing PPC I beams, prestressing strand locations shall be determined and spaced to miss strands by 6'', min. Minimize spalling during field drilling of existing beams.*

(3) *For new construction, form holes. For existing RC beams, locate primary reinforcement and space holes to miss by 6'', min. Minimize spalling and concrete fracturing/damage during field drilling of existing concrete. Spalls over 1/4'' deep or beyond the coverage of the 4x4 plate washer shall be repaired with epoxy mortar before installing washer.*

(4) *For attachment details of 3 1/2'' pipe and W10x22, see other sections as applicable.*

(5) *Sign shall not extend more than 6'' above top of bracket, and this dimension may vary to keep sign level if bridge is on grade or vertical curve. Multiple signs of various heights shall share a common horizontal centerline and use equal bracket heights. If no sign is attached to a W6x12 vertical (bracket only supporting walkway), dimension h shall be the same as an adjacent bracket with a sign attached, unless Engineer specifically directs shorter brackets due to locational restraints on future uses. (See Detail A for minimum bracket height.)*

(6) *For bridge mounted sign structures installed on new bridges with railing, during design, bracket spacing must be coordinated with railing post spacing and the Contractor must install upper brackets prior to railing installation. For bridge mounted sign structures installed on existing bridges with railing, during design, brackets spacing must be coordinated with railing post spacing and the Contractor must temporarily remove sections of railing to facilitate upper bracket installation. If it is determined during design that existing railings can't be removed, alternate upper connection details must be developed for the contract plans and approved by the Bureau of Bridges and Structures.*

Structure Number	Station	h	i	j	k max. (10'-0'' max.)	ℓ max. (8'-0'' max.)	m (15'-0'' max.)
5B057I074L133.90	635+73.19	11'-5''	1'-10''	1'-4''	7'-7 1/2''	4'-10 3/8''	10'-0''
5B057I074R133.90	638+48.84	13'-11''	1'-8''	1'-4''	2'-10 1/2''	1'-0''	12'-6''

For Details A & B, Sections C-C, D-D and E-E, see Base Sheet BM-3.
For Details D & E, see Base Sheet BM-4.

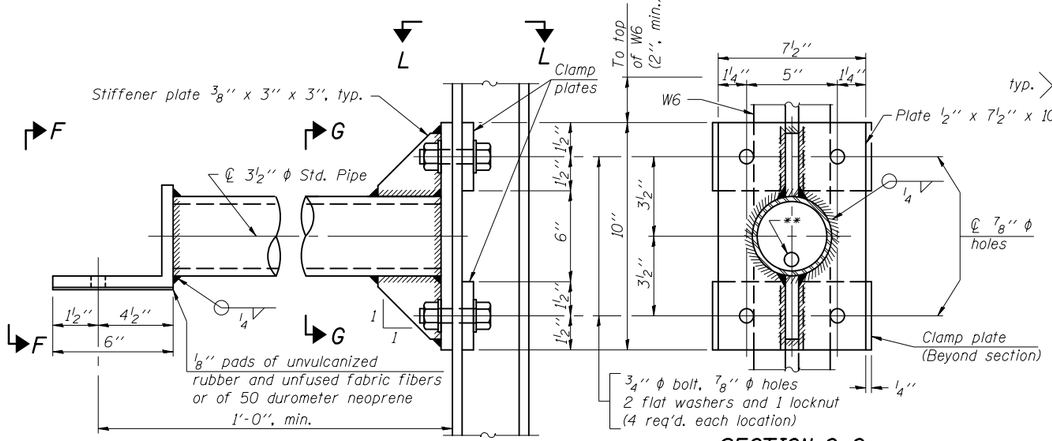
BM-2 1-20-11

FILE NAME = $FILE$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 8/6/2013 $TIME$	CHECKED - BAS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

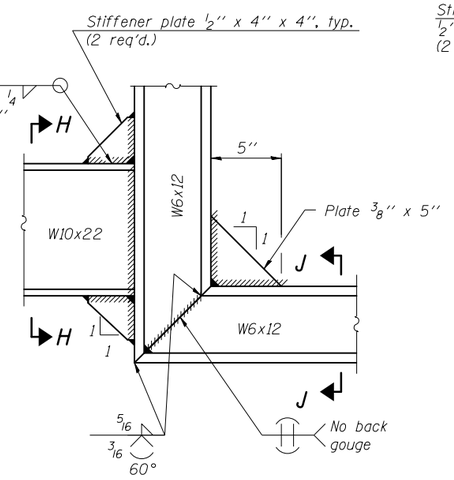
BRIDGE MOUNT SIGN STRUCTURES
WALKWAY AND CONNECTION DETAILS
SHEET NO. 2 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	269
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

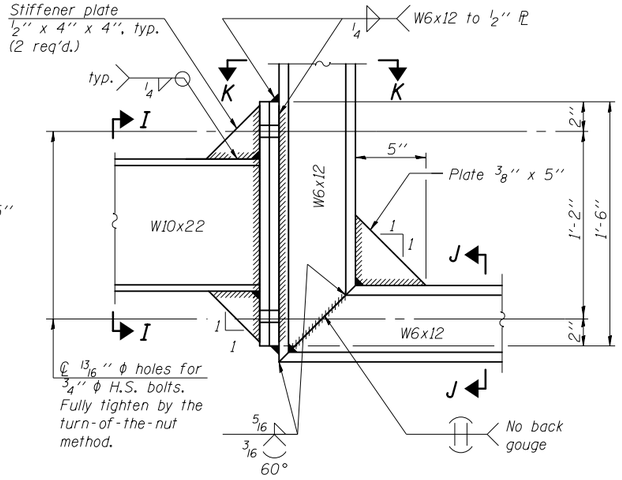


DETAIL A

SECTION G-G

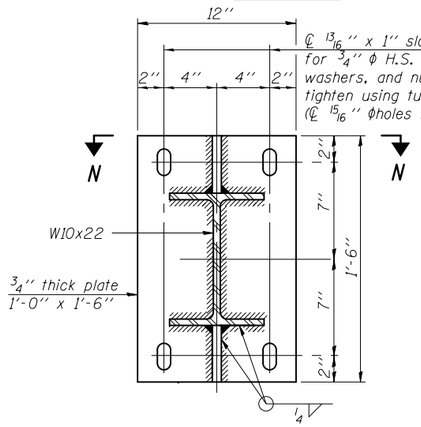


DETAIL B - WELDED W10x22 TO W6x12 CONNECTION



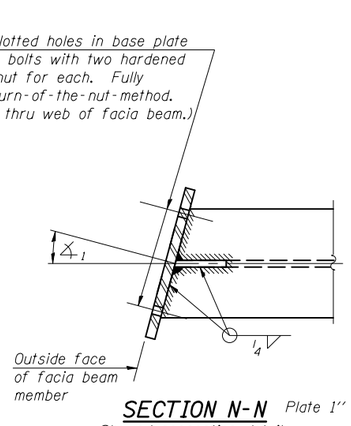
DETAIL B - ALTERNATE BOLTED W10x22 TO W6x12 CONNECTION

Alternate may be substituted by contractor to facilitate construction or galvanizing, especially on long struts for skewed bridges.



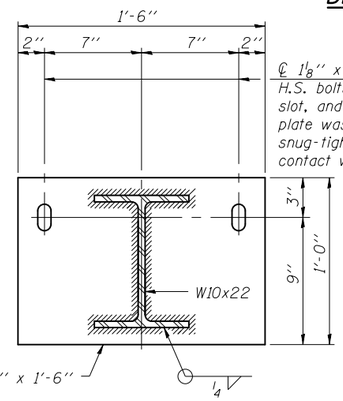
SECTION C-C

Steel beam or girder connection plate details



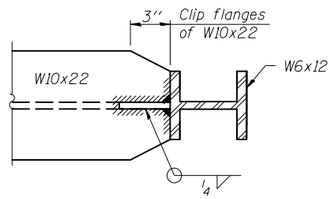
SECTION N-N

Skewed connection detail for W10x22 to facia beam.

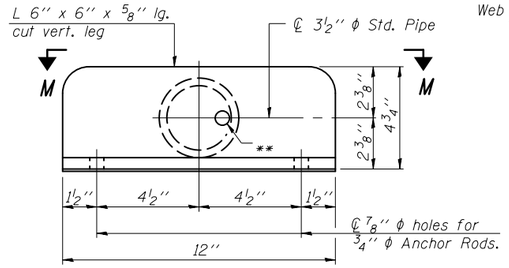


SECTION D-D

Concrete beam or girder connection plate details.

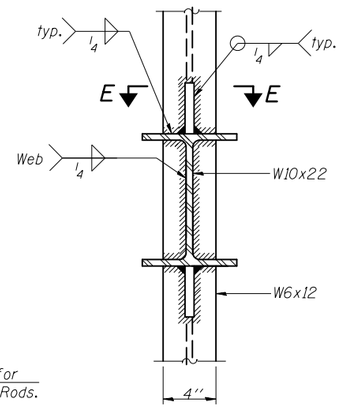


SECTION E-E

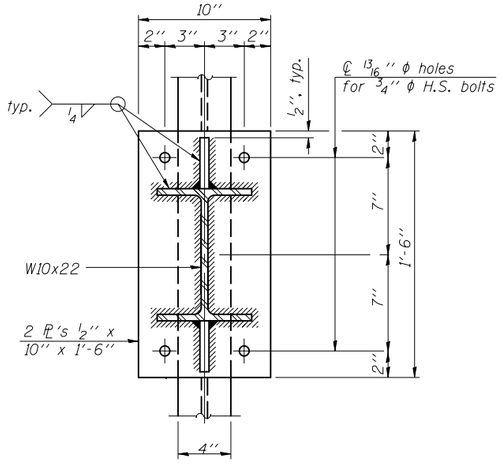


VIEW F-F

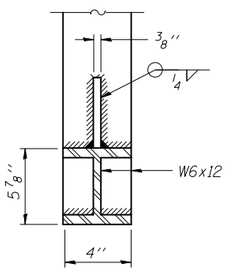
** 13/16" ϕ holes for galvanizing. After galvanizing, install 7/8" ϕ A307 hot-dip galvanized bolt to close hole in angle. (No bolt required in 1/2" plate.)



SECTION H-H

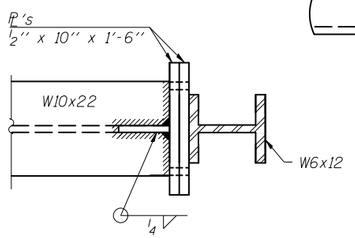


SECTION I-I

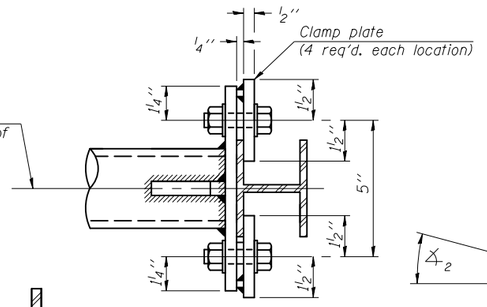


SECTION J-J

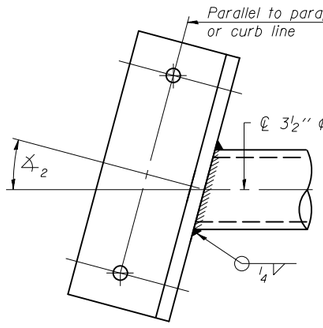
Note: For constant slab overhang at facia beam, ∠1 = ∠2 = sign angle. For flared beams or other special cases where ∠1 ≠ ∠2, ∠1 = sign angle.



SECTION K-K

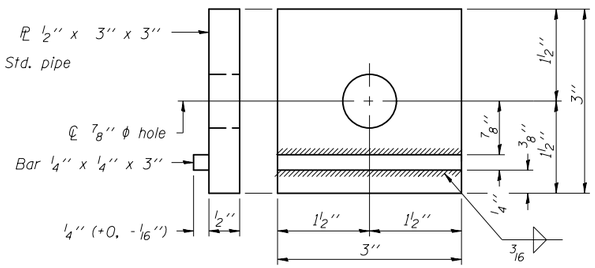


SECTION L-L



SECTION M-M

Skewed connection detail for 3 1/2" ϕ pipe to parapet.



CLAMP PLATE DETAILS

BM-3

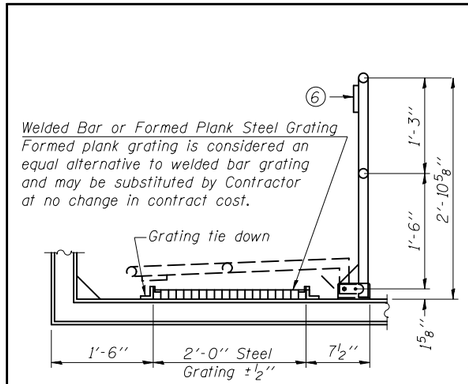
1-20-11

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 8/6/2013 $TIME$	CHECKED - BAS	REVISED -

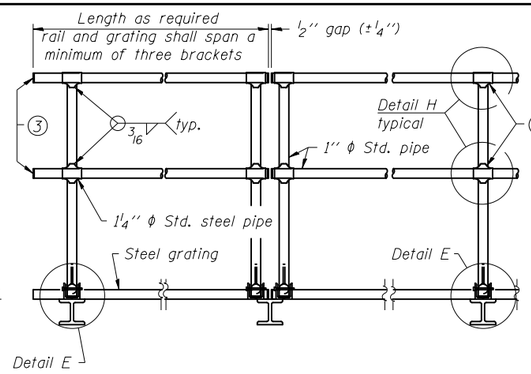
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES
CONNECTION DETAILS
SHEET NO. 3 OF 4 SHEETS

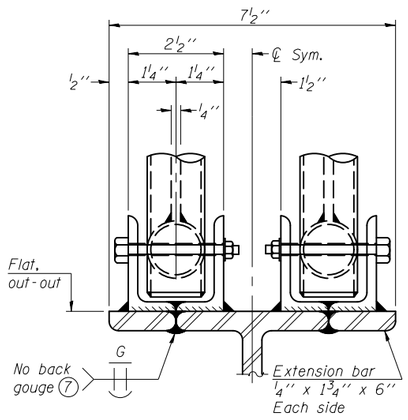
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	270
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



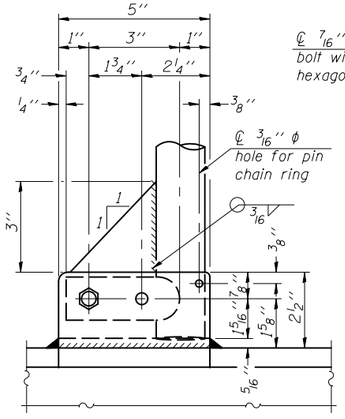
SIDE ELEVATION



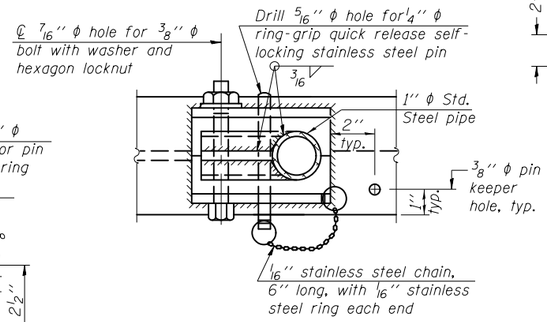
FRONT ELEVATION



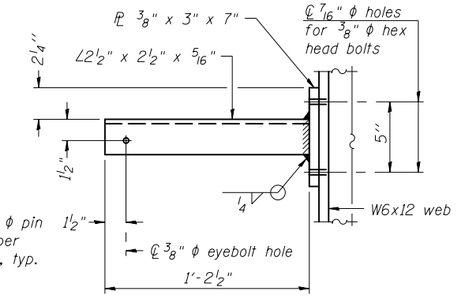
ELEVATION AT HANDRAIL JOINT
(Details not shown same as "FRONT ELEVATION")



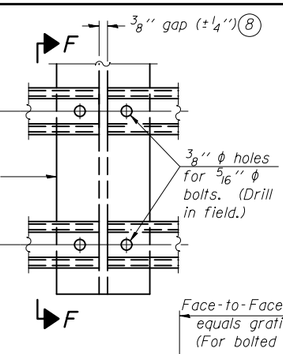
SIDE ELEVATION



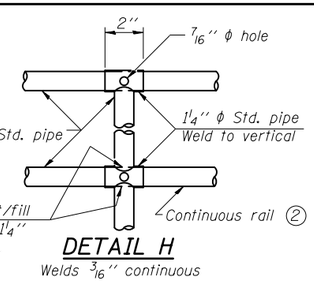
PLAN AT SINGLE HANDRAIL HINGE



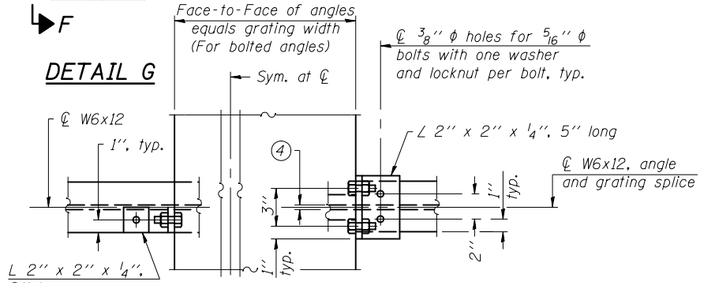
SECTION P-P



DETAIL F



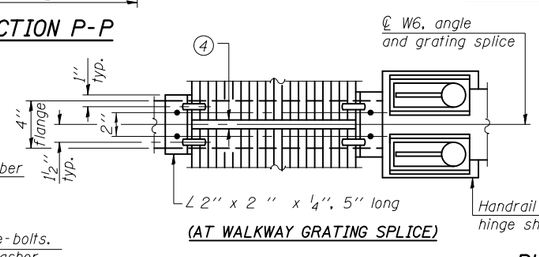
DETAIL H
Welds 3/16" continuous



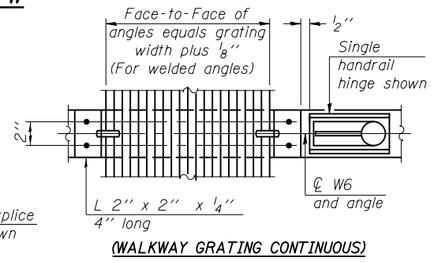
DETAIL G

GRATING CONTINUOUS AT GRATING SPLICE

VIEW W-W

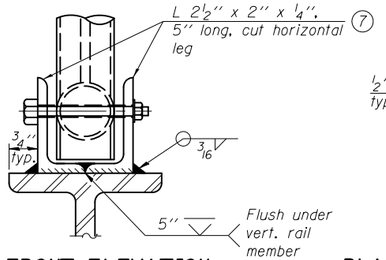


(AT WALKWAY GRATING SPLICE)

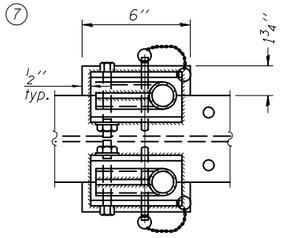


(WALKWAY GRATING CONTINUOUS)

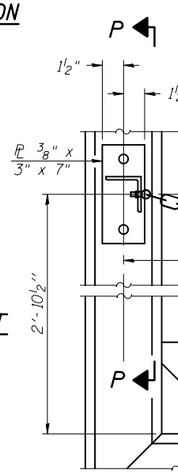
PLAN



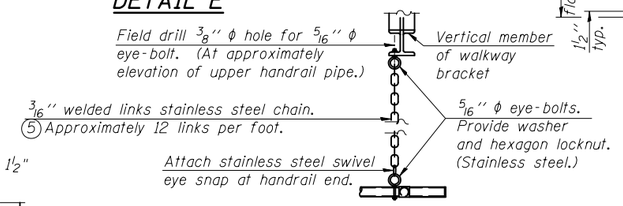
FRONT ELEVATION
(See above Elevations for dimensions.)



PLAN AT HANDRAIL JOINT
(For Details, see Elevations.)

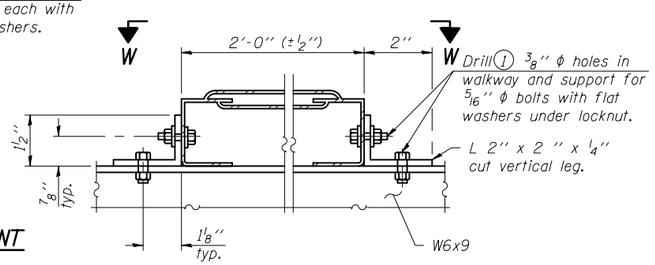


SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "SIDE ELEVATION" and "SAFETY CHAIN"

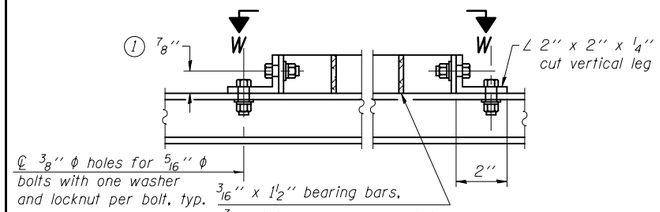


No Sign at Bracket

SAFETY CHAIN
One (1) required for each end of each walkway.



ALTERNATE FORMED PLANK GRATING DETAILS
Plank Grating: nominal depth = 2 1/2" (±1/2"); perforated or expanded steel sheet with a non-skid surface (non-serrated) concentrated load capacity = 500 lbs. with 6'-0" clear span.



WELDED BAR GRATING DETAILS

NOTES

1. Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment. Field drilled holes must be touched up with galvanized paint.
2. Horizontal rail member shall be continuous thru 1 1/4" ϕ pipe. Provide 7/16" ϕ hole in 1 1/4"ϕ pipe for 3/8" ϕ bolt. Field drill 7/16" ϕ hole in horizontal rail member. Provide washer and locknut for bolt. (Use 5/16" eyebolts in 7/16" ϕ holes on top rail at ends only.)
3. Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends.)
4. 3/8" (±1/4") gap between grating panels at splice.
5. Chain to be type 304L stainless steel suitable for prolonged exterior exposure. Approximately 3'-6" long chain per location. Maximum sag with handrail erected = 4".
6. PL 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.
7. Extrusions may be used in lieu of details shown, with approval by Engineer.
8. Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

BM-4

1-20-11

FILE NAME = $FILES$	USER NAME = piersonbr	DESIGNED - BAS	REVISED -
MAURER-STUTZ ENGINEERS SURVEYORS		CHECKED - JAE	REVISED -
	PLOT SCALE =	DRAWN - SGM	REVISED -
	PLOT DATE = 8/6/2013 $TIME$	CHECKED - BAS	REVISED -

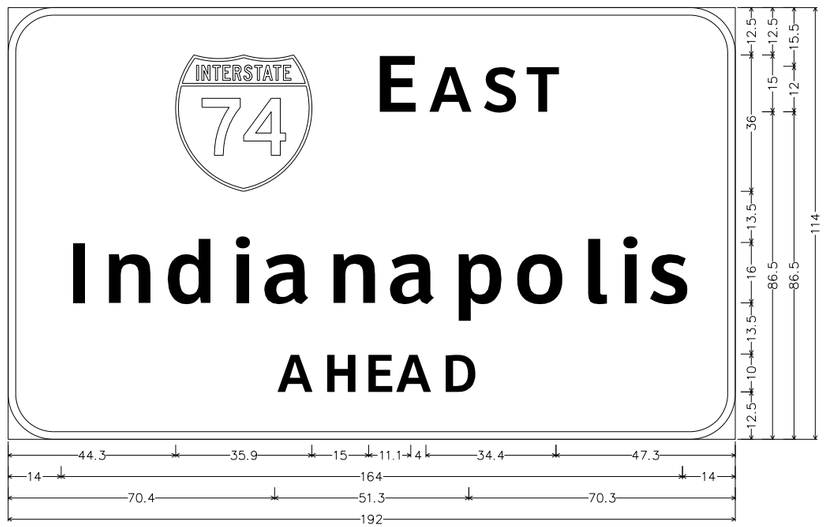
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNT SIGN STRUCTURES
WALKWAY DETAILS
SHEET NO. 4 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(57-20HB)BR	MCLEAN	440	271
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

SIGN A

MOUNTED ON SIGN STRUCTURE NUMBER
5 B 057 I074 R133.90

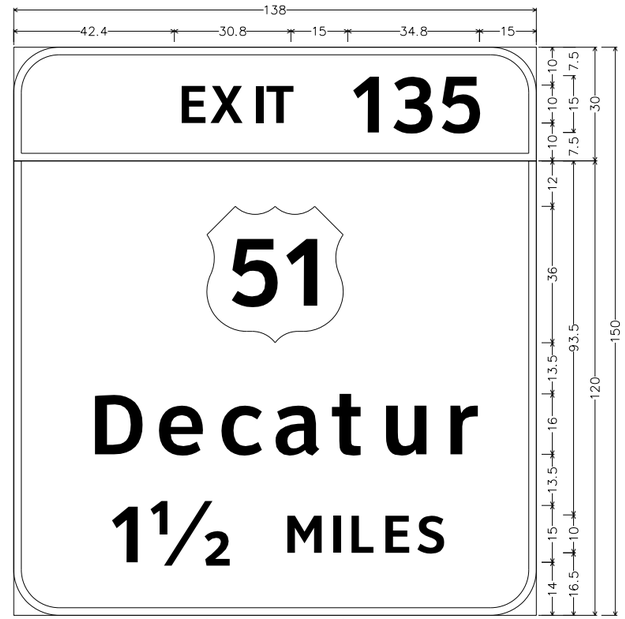


12.0" Radius, 2.0" Border, White on Green;
[E AST] E Mod 2K [ ] ClearviewHwy-5-W; [Indianapolis] ClearviewHwy-5-W; [AHEAD] E Mod 2K;
Table of letter and object lefts.

44.3	E 95.3	A 110.3	S 124.3	T 135.8
I 14.0	n 23.5	d 39.9	i 57.3	a 65.8	n 82.8	a 99.0	p 115.9	o 132.3	l 150.0	i 159.6	s 167.8
A 70.4	H 82.3	E 93.1	A 101.6	D 113.5

SIGN B

MOUNTED ON SIGN STRUCTURE NUMBER
5 B 057 I074 R133.90



12.0" Radius, 2.0" Border, White on Green;
[EXIT 135] E Mod 2K;
12.0" Radius, 2.0" Border, White on Green;
[Decatur] ClearviewHwy-5-W; [1½ MILES] E Mod 2K;
Table of letter and object lefts.

E 42.4	X 51.3	I 62.0	T 65.8	1 88.3	3 95.5	5 110.9
51 51.0						
D 18.4	e 36.1	c 52.6	a 67.3	t 82.5	u 95.1	r 112.1
1 24.5	½ 34.4	M 70.4	I 82.4	L 87.3	E 96.3	S 105.4

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
$MODELNAME$	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

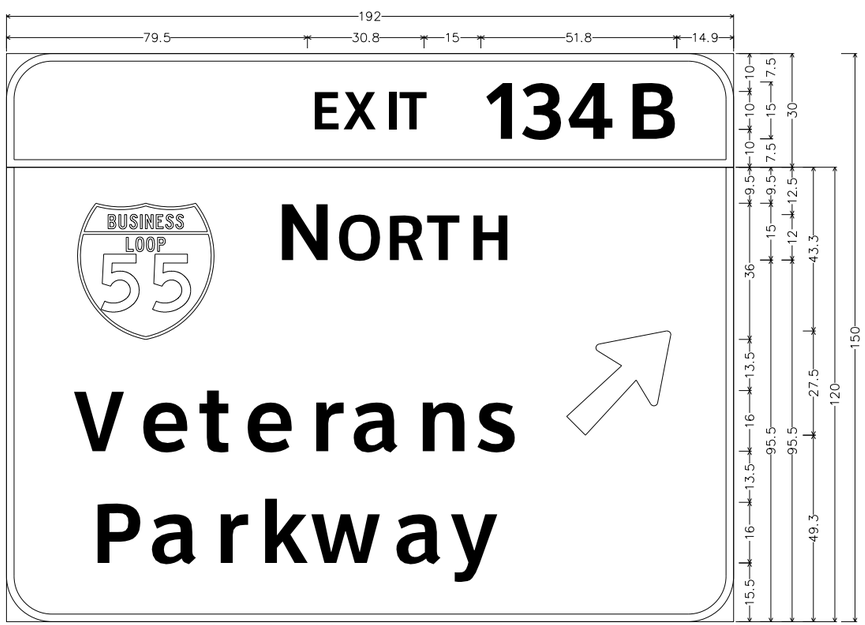
SIGN DETAILS

SCALE: | SHEET 1 OF 2 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	57-20(HB,HB-1)BR-1	MCLEAN	440	272
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

SIGN C

MOUNTED ON SIGN STRUCTURE NUMBER
5 B 057 I074 R133.90

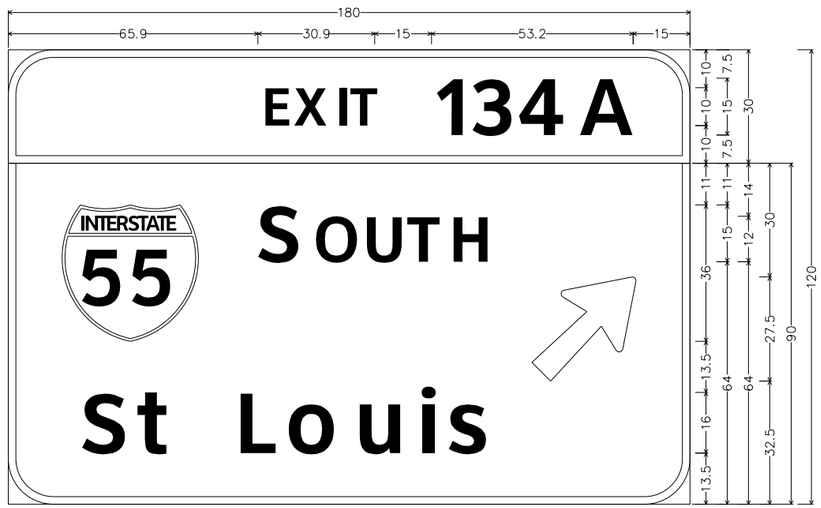


12.0" Radius, 2.0" Border, White on Green;
[EXIT 134B] E Mod 2K;
12.0" Radius, 2.0" Border, White on Green;
[N ORTH] E Mod 2K; [Veterans] ClearviewHwy-5-W; [Parkway] ClearviewHwy-5-W; Arrow 160 - 35.0" 45°
Table of letter and object lefts.

E 79.5	X 88.3	I 99.0	T 102.9	1 125.3	3 132.6	4 146.8	B 164.9
18.8	N 69.8	O 85.9	R 98.9	T 109.9	H 121.0	147.9	
V 16.6	e 33.9	t 49.5	e 61.5	r 78.6	a 89.8	n 106.8	s 122.6
P 20.9	a 36.5	r 53.5	k 65.5	w 79.3	a 101.1	y 116.1	

SIGN D

MOUNTED ON SIGN STRUCTURE NUMBER
5 B 057 I074 L133.90

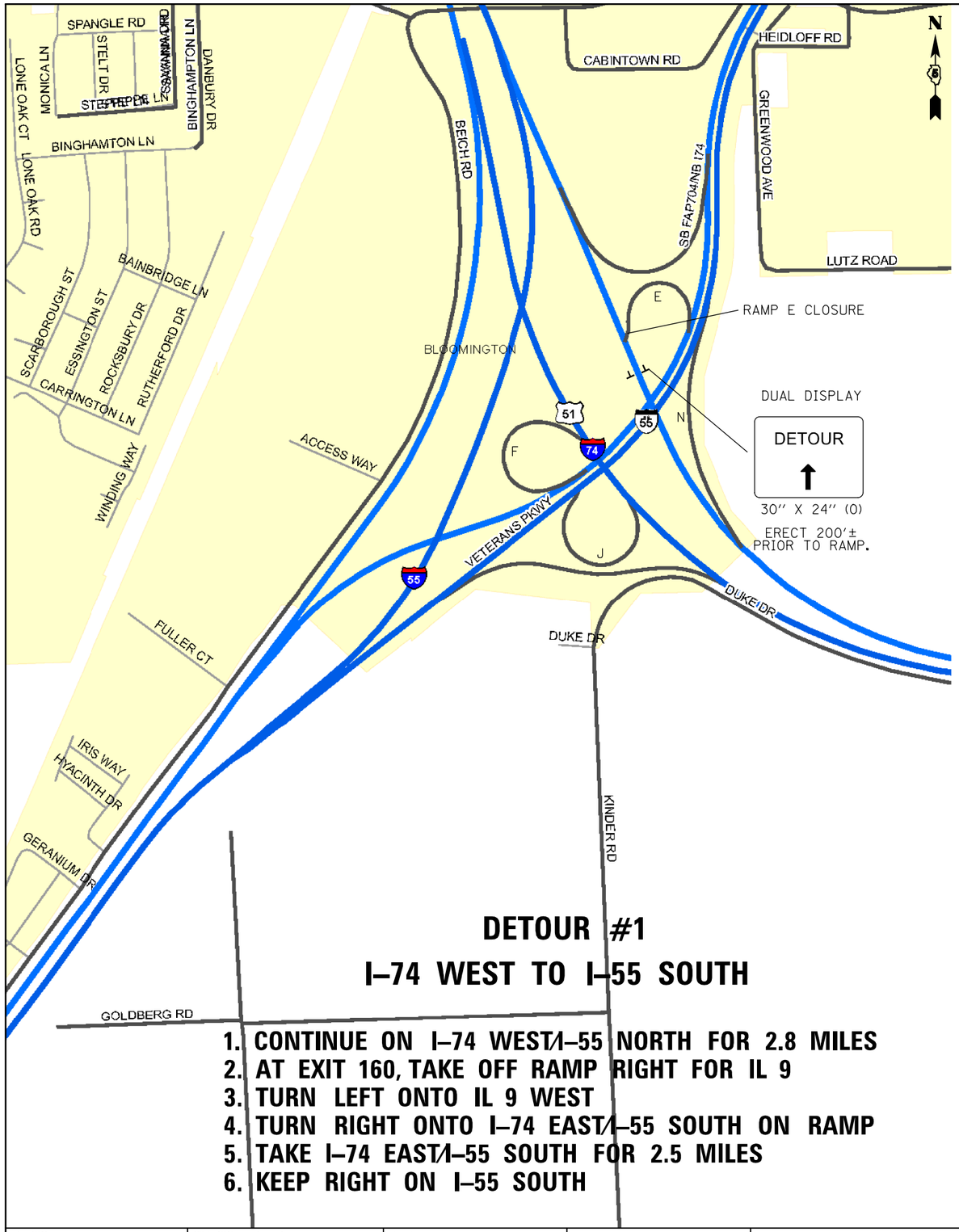


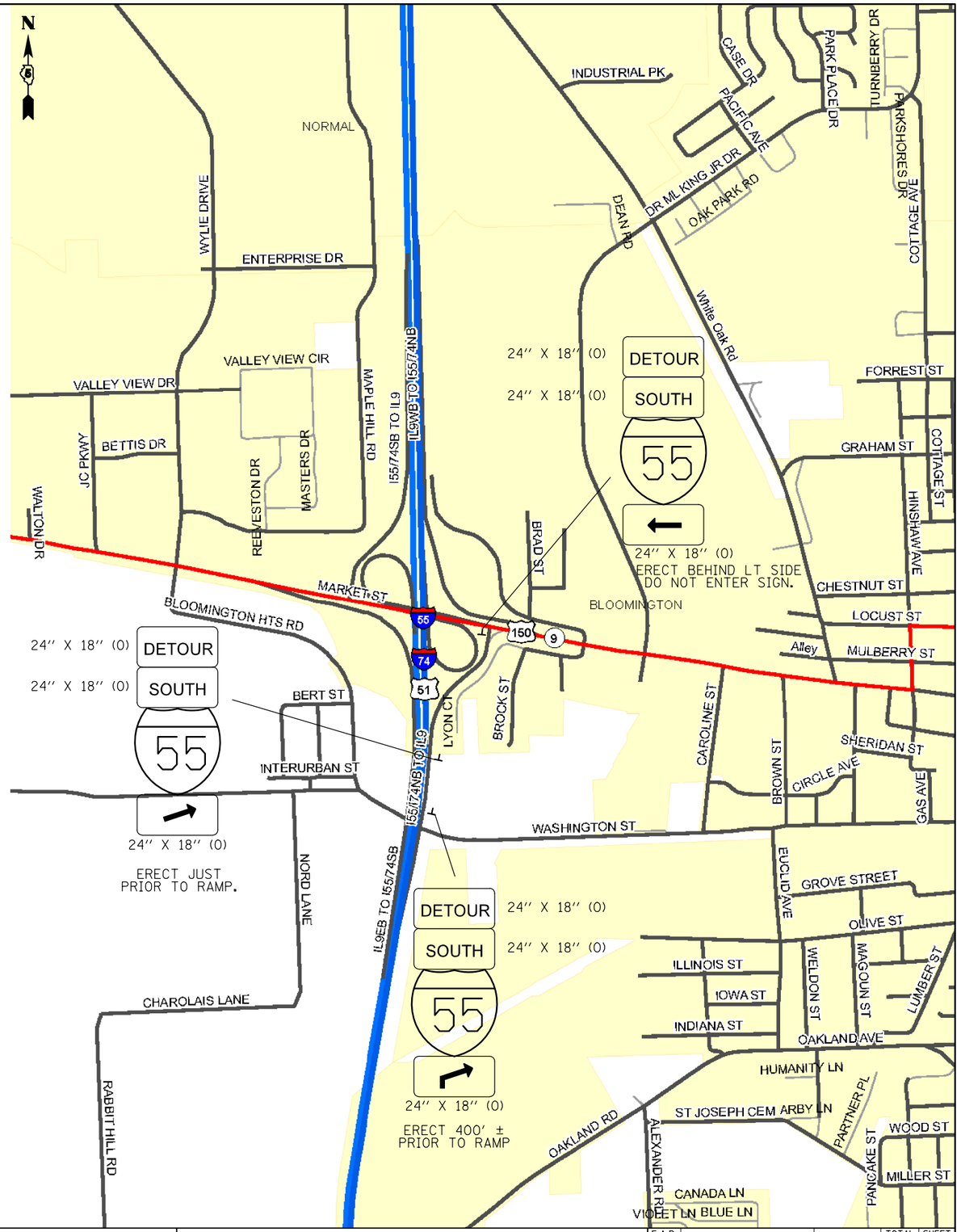
12.0" Radius, 2.0" Border, White on Green;
[EXIT 134A] E Mod 2K;
12.0" Radius, 2.0" Border, White on Green;
[S OUTH] E Mod 2K [ ] ClearviewHwy-5-W; [St Louis] ClearviewHwy-5-W; Arrow 160 - 35.0" 45°
Table of letter and object lefts.

E 65.9	X 74.8	I 85.6	T 89.3	1 111.8	3 119.1	4 133.2	A 149.9
14.2	S 64.2	O 79.4	U 92.3	T 104.2	H 115.3	138.3	
S 17.6	t 32.6	L 58.2	o 71.9	u 89.7	i 106.3	s 114.5	

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SIGN DETAILS			
		DRAWN -	REVISED -					
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -		SCALE:	SHEET 2 OF 2 SHEETS	STA.	TO STA.
$MODELNAME$	PLOT DATE = 8/13/2013	DATE -	REVISED -					

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	57-20(HB,HB-1)BR-1	MCLEAN	440	273
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			





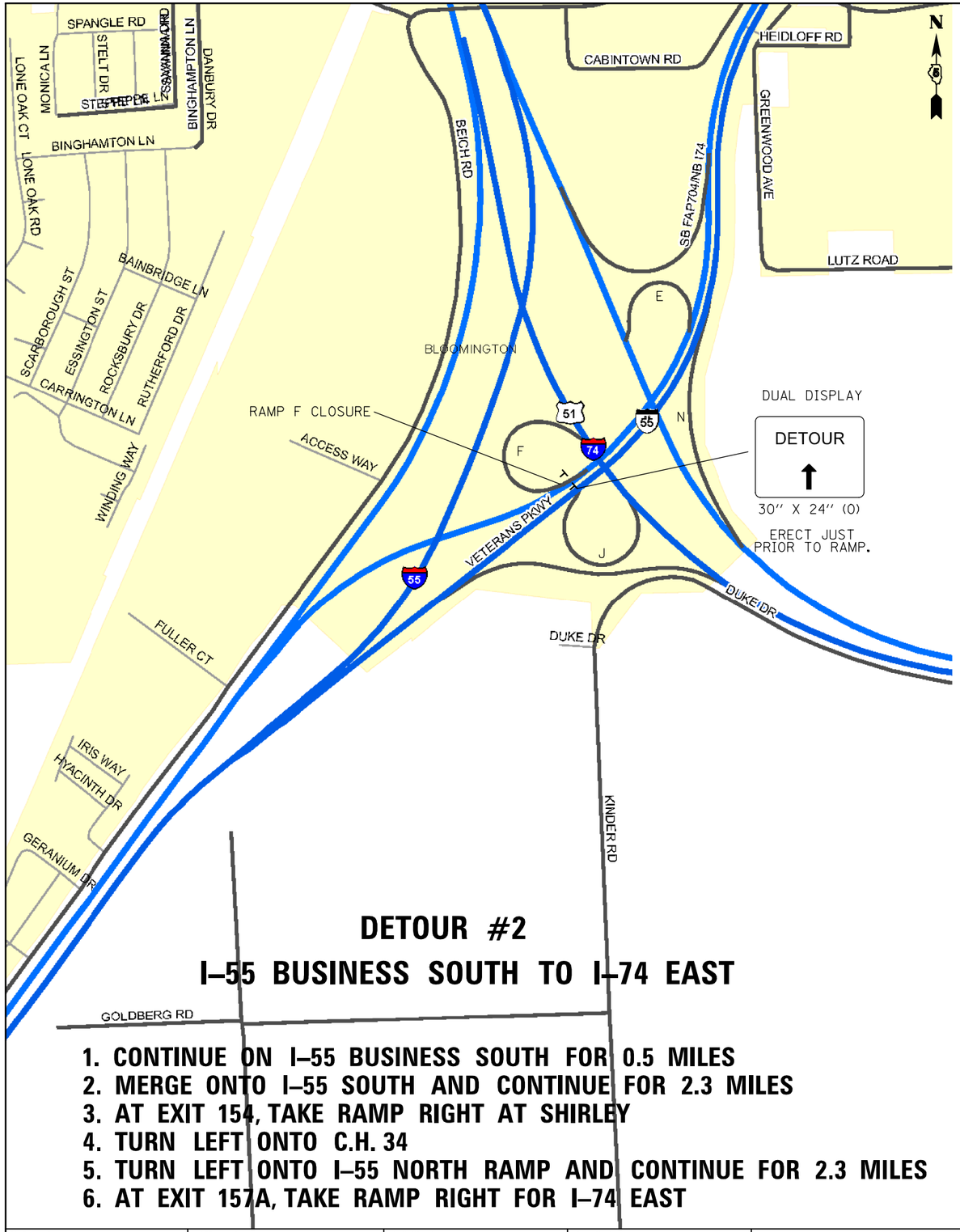
FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR #1 SIGNING
(RAMP E CLOSURE)

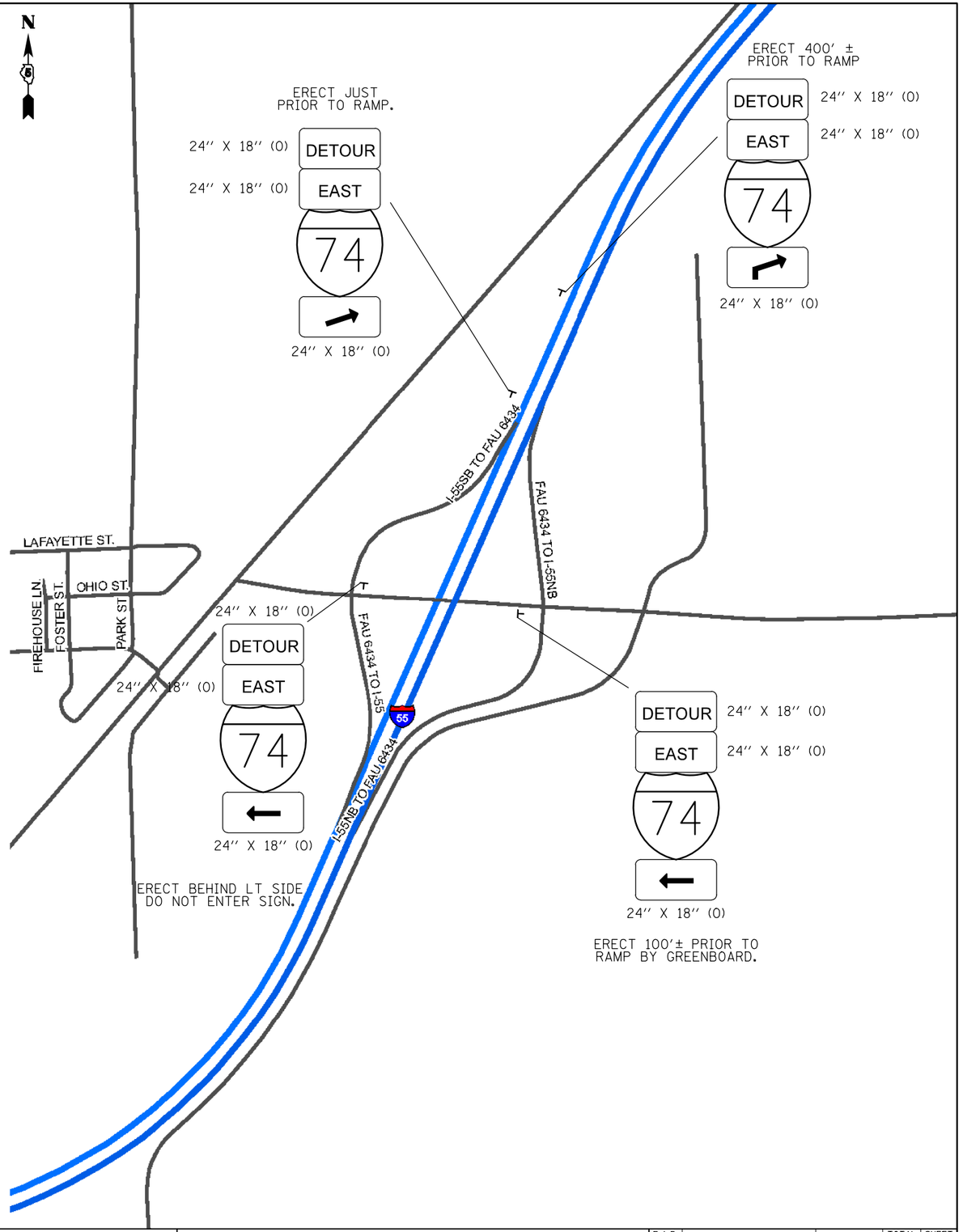
SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	274
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

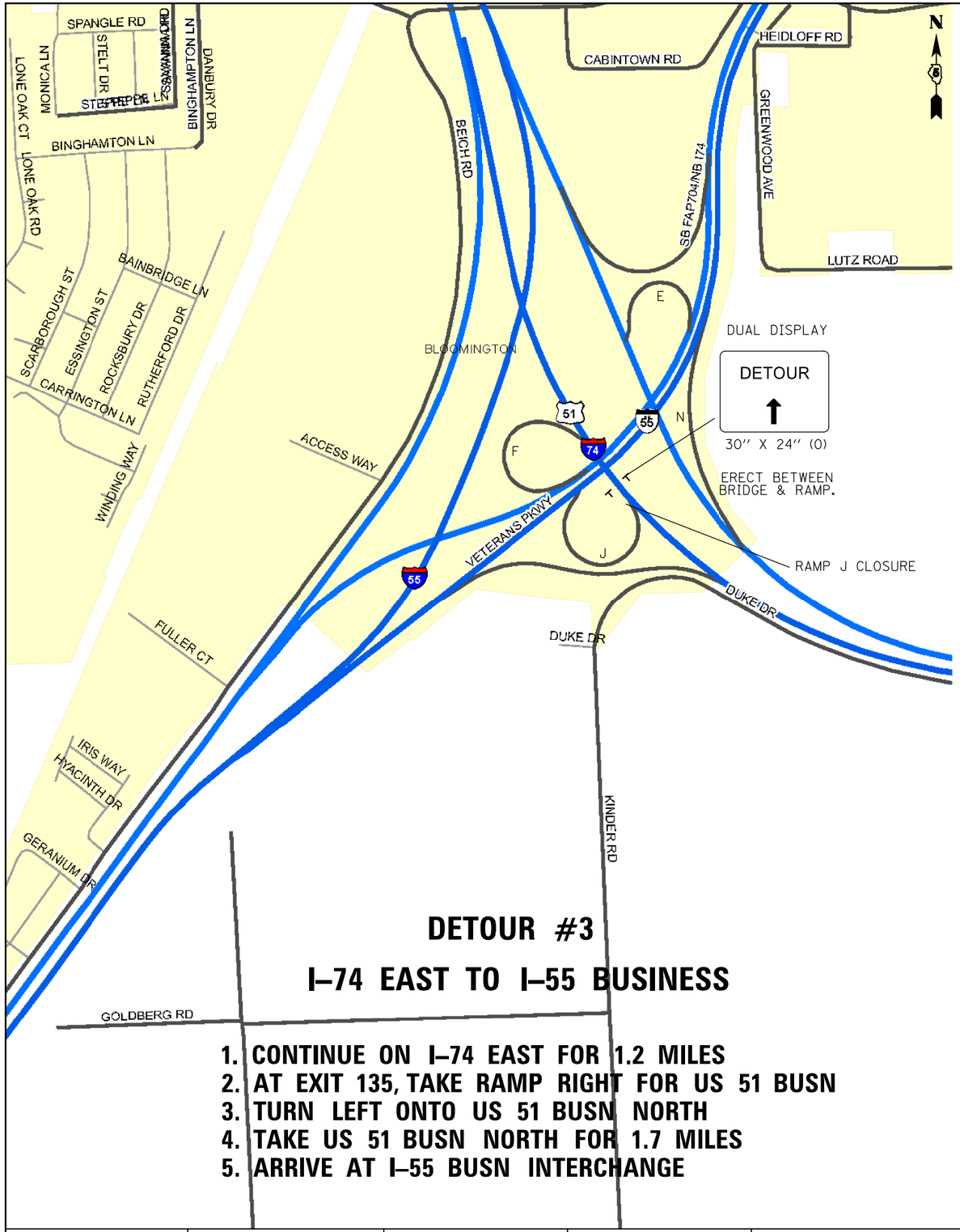


DETOUR #2
I–55 BUSINESS SOUTH TO I–74 EAST

1. CONTINUE ON I–55 BUSINESS SOUTH FOR 0.5 MILES
2. MERGE ONTO I–55 SOUTH AND CONTINUE FOR 2.3 MILES
3. AT EXIT 154, TAKE RAMP RIGHT AT SHIRLEY
4. TURN LEFT ONTO C.H. 34
5. TURN LEFT ONTO I–55 NORTH RAMP AND CONTINUE FOR 2.3 MILES
6. AT EXIT 157A, TAKE RAMP RIGHT FOR I–74 EAST



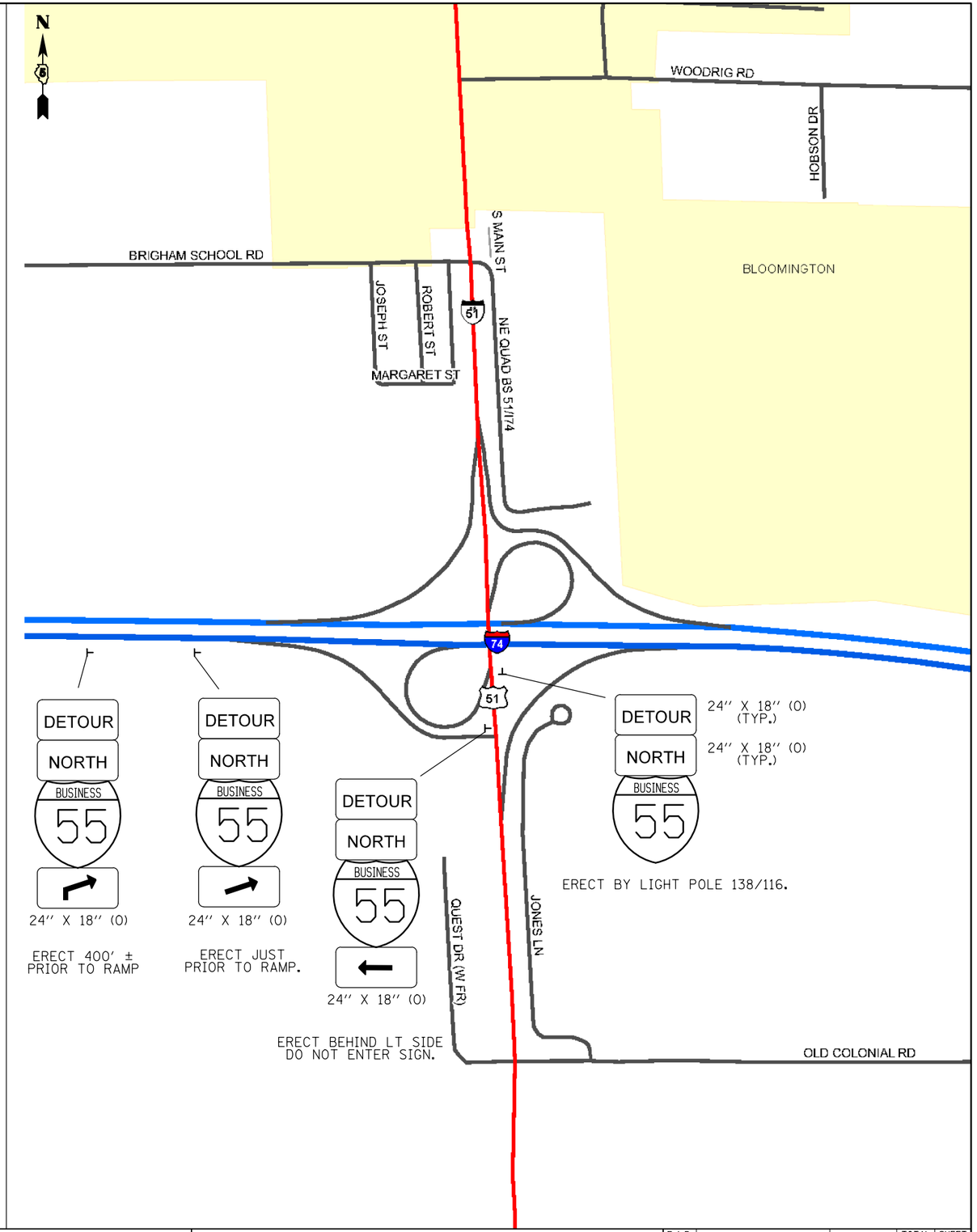
FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR #2 SIGNING (RAMP F CLOSURE)	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 40.0000 ' / in.	DRAWN -	REVISED -			704	57-20(HB,HB-1)BR-1	MCLEAN	440	275
	PLOT DATE = 8/13/2013	CHECKED -	REVISED -					CONTRACT NO. 70570		
		DATE -	REVISED -		SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		



DETOUR #3

I–74 EAST TO I–55 BUSINESS

1. CONTINUE ON I–74 EAST FOR 1.2 MILES
2. AT EXIT 135, TAKE RAMP RIGHT FOR US 51 BUSN
3. TURN LEFT ONTO US 51 BUSN NORTH
4. TAKE US 51 BUSN NORTH FOR 1.7 MILES
5. ARRIVE AT I–55 BUSN INTERCHANGE



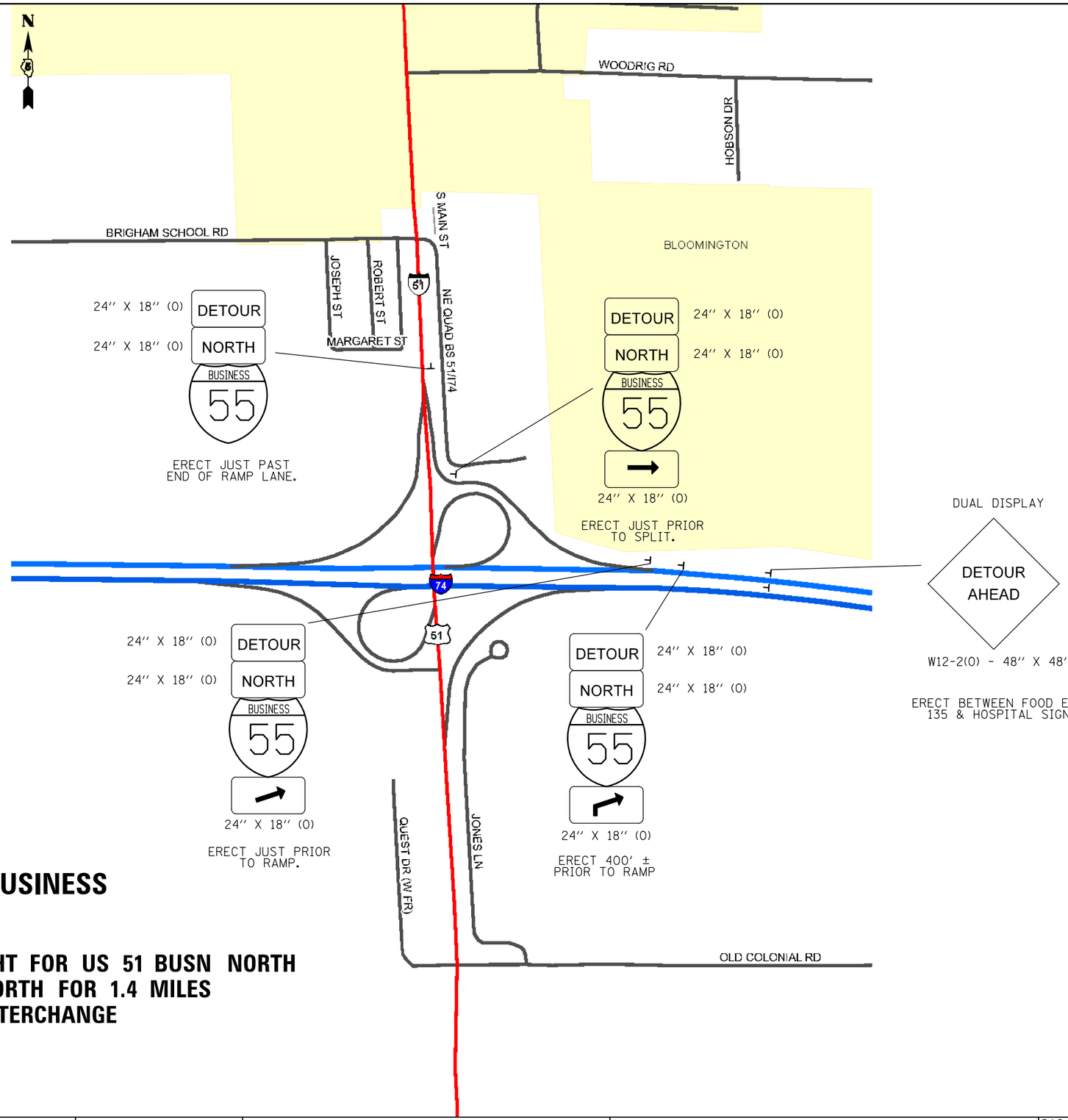
FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR #3 SIGNING
(RAMP J CLOSURE)

SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	276
		CONTRACT NO. 70570		
	ILLINOIS	FED. AID PROJECT		



DETOUR #4
I–74 WEST TO I–55 BUSINESS

1. AT EXIT 135, TAKE RAMP RIGHT FOR US 51 BUSN NORTH
2. CONTINE ON US 51 BUSN NORTH FOR 1.4 MILES
3. ARRIVE AT I–55 BUSINESS INTERCHANGE

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

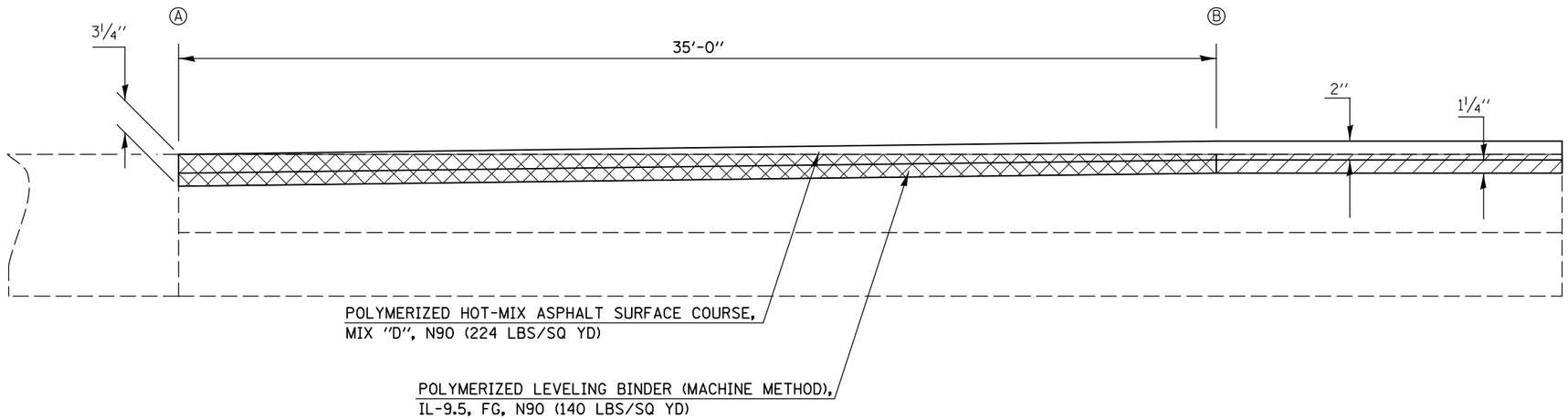
DETOUR #4 SIGNING
(RAMP N CLOSURE)

SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-2O(HB,HB-1)BR-1	MCLEAN	440	277
		CONTRACT NO. 70570		
	ILLINOIS	FED. AID PROJECT		

DETAIL FOR MAINLINE MILLING AND PAVING TRANSITIONS AT BUTT JOINT LOCATIONS

	Ⓐ STATION	TO	Ⓑ STATION	
F.A.P. 704 NORTHBOUND	32+60.00		32+95.00	EAST END OF JOB
F.A.P. 704 SOUTHBOUND	29+00.00		29+35.00	EAST END OF JOB
RAMP M	37+79.28		37+44.28	



HOT-MIX ASPHALT SURFACE REMOVAL, 1½''

HOT-MIX ASPHALT SURFACE REMOVAL, BUTT JOINT

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

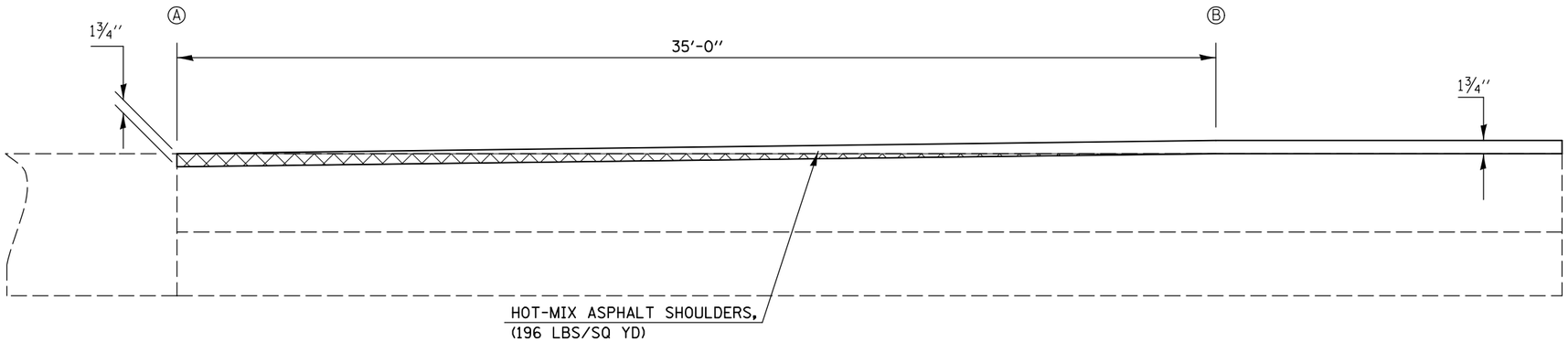
MILLING AND PAVING TRANSITION DETAILS

SCALE: | SHEET NO. 1 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	278
		CONTRACT NO. 70570		
	ILLINOIS	FED. AID PROJECT		

DETAIL FOR SHOULDER MILLING AND PAVING TRANSITIONS AT BUTT JOINT LOCATIONS

	Ⓐ STATION	TO	Ⓑ STATION	
F.A.P. 704 NORTHBOUND	32+60.00		32+95.00	EAST END OF JOB
F.A.P. 704 SOUTHBOUND	29+00.00		29+35.00	EAST END OF JOB
RAMP M	37+79.28		37+44.28	



HOT-MIX ASPHALT SURFACE REMOVAL, BUTT JOINT

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

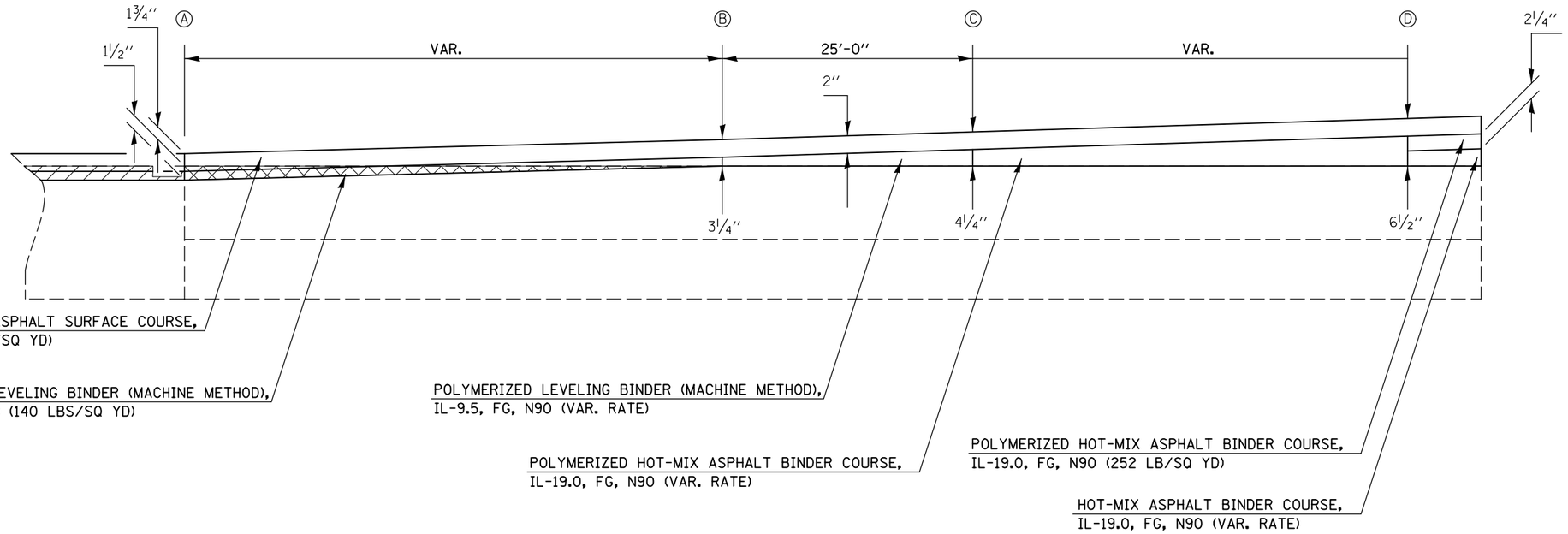
MILLING AND PAVING TRANSITION DETAILS

SCALE: | SHEET NO. 2 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	279
		CONTRACT NO. 70570		
	ILLINOIS	FED. AID PROJECT		

DETAIL FOR MAINLINE MILLING AND PAVING TRANSITIONS

	Ⓐ STATION	TO	Ⓑ STATION	TO	Ⓒ STATION	TO	Ⓓ STATION
F.A.P. 704 NORTHBOUND	42+20.00		43+37.00		43+62.00		44+10.60
F.A.P. 704 SOUTHBOUND	42+20.00		43+82.00		44+07.00		44+63.00
RAMP N	24+62.00		21+24.00		20+88.00		20+44.00



HOT-MIX ASPHALT SURFACE REMOVAL, 1½''

HOT-MIX ASPHALT SURFACE REMOVAL, BUTT JOINT

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

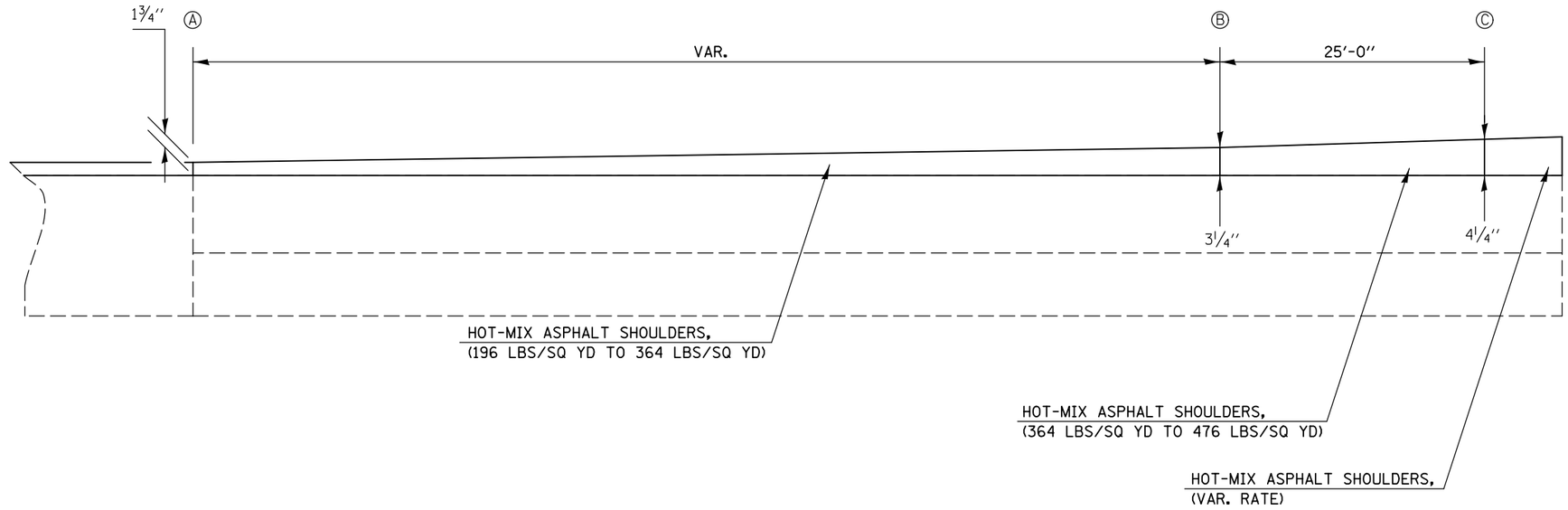
MILLING AND PAVING TRANSITION DETAILS

SCALE: | SHEET NO. 3 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	280
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

DETAIL FOR SHOULDER MILLING AND PAVING TRANSITIONS

	Ⓐ STATION	TO	Ⓑ STATION	TO	Ⓒ STATION
F.A.P. 704 NORTHBOUND	42+20.00		43+37.00		43+62.00
F.A.P. 704 SOUTHBOUND	42+20.00		43+82.00		44+07.00
RAMP N*	24+62.00		21+24.00		20+88.00



* HOT-MIX ASPHALT SURFACE REMOVAL, BUTT JOINT WILL BE REQUIRED FOR RAMP N FROM STA. 24+62.00 TO STA. 21+24.00 (VAR. DEPTH)

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

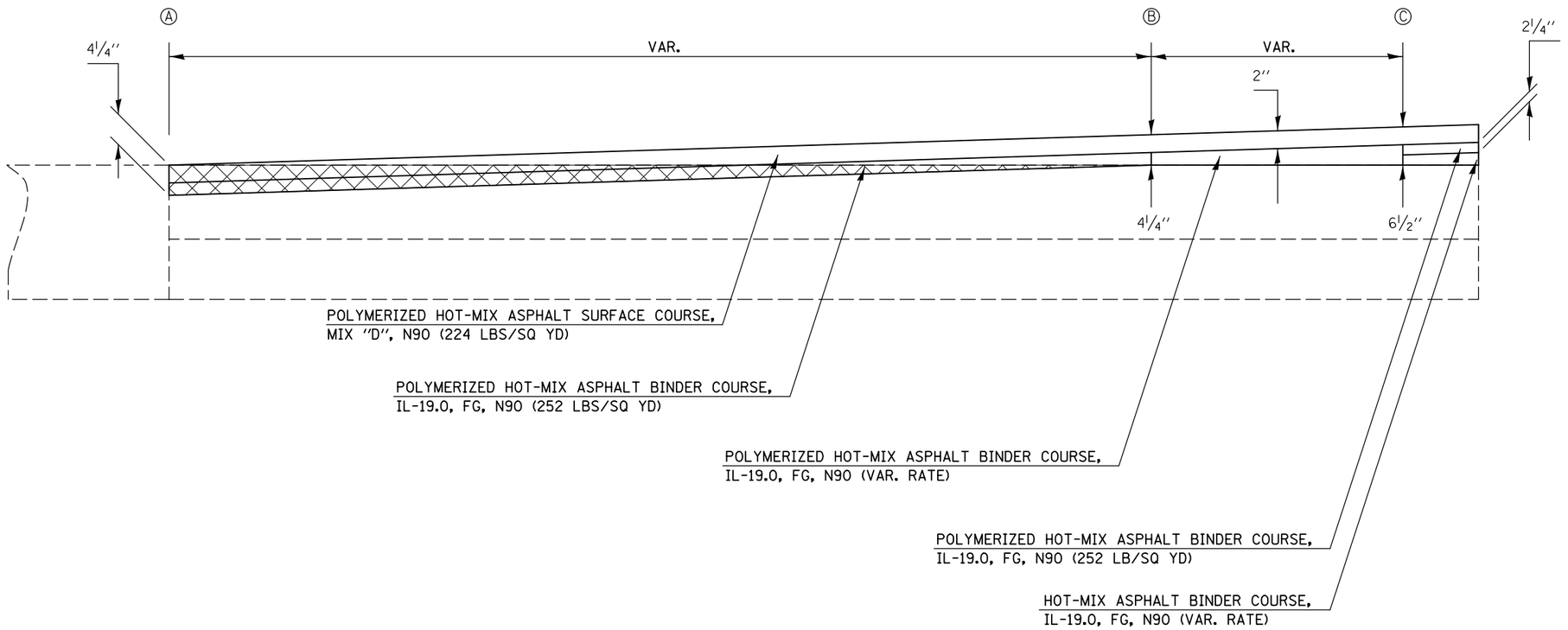
MILLING AND PAVING TRANSITION DETAILS

SCALE: | SHEET NO. 4 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	281
		CONTRACT NO. 70570		
	ILLINOIS	FED. AID PROJECT		

DETAIL FOR MAINLINE MILLING AND PAVING TRANSITIONS AT BUTT JOINT LOCATIONS

	Ⓐ STATION	TO	Ⓑ STATION	TO	Ⓒ STATION	
F.A.P. 704 NORTHBOUND	65+00.00		63+76.00		63+09.60	WEST END OF JOB
F.A.P. 704 SOUTHBOUND	65+00.00		62+58.00		62+00.65	WEST END OF JOB
RAMP E	26+00.00		24+72.00		24+53.50	
RAMP F	23+00.00		17+19.00		16+74.80	
RAMP J	1007+00.00		1009+62.00		1010+75.50	
RAMP N	6+00.00		7+42.00		8+02.72	



HOT-MIX ASPHALT SURFACE REMOVAL, BUTT JOINT

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

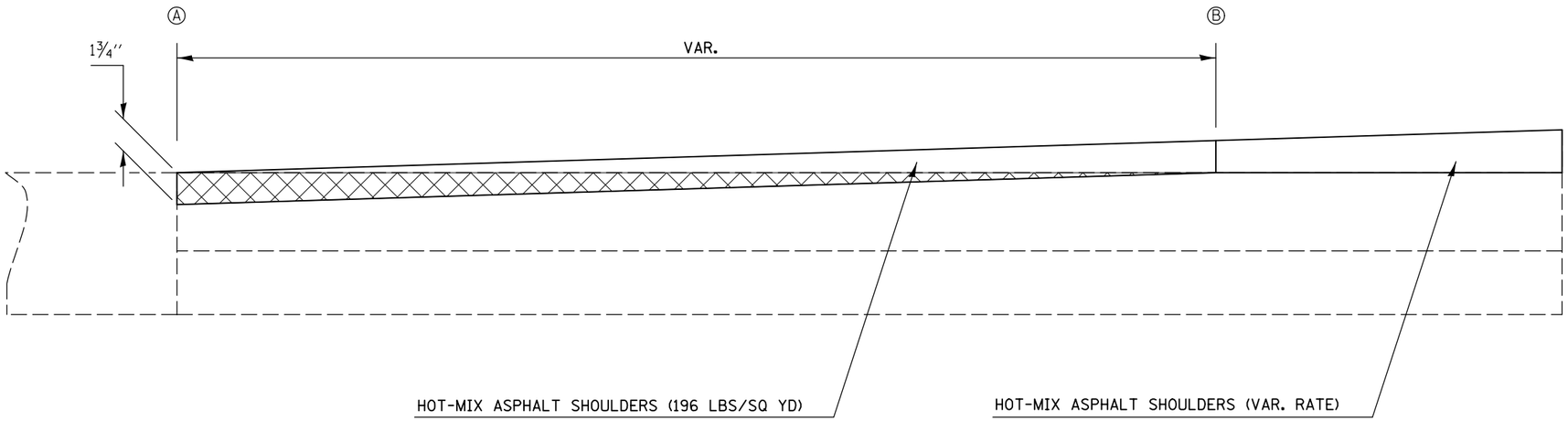
MILLING AND PAVING TRANSITION DETAILS

SCALE: | SHEET NO. 5 OF 6 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	282
		CONTRACT NO. 70570		
	ILLINOIS	FED. AID PROJECT		

DETAIL FOR SHOULDER MILLING AND PAVING TRANSITIONS AT BUTT JOINT LOCATIONS

	Ⓐ STATION	TO	Ⓑ STATION	
F.A.P. 704 NORTHBOUND	65+00.00		64+48.00	WEST END OF JOB
F.A.P. 704 SOUTHBOUND	65+00.00		63+52.00	WEST END OF JOB
RAMP E	26+00.00		25+20.00	
RAMP F	23+00.00		17+72.00	
RAMP J	1007+00.00		1008+46.00	
LT. RAMP N	6+00.00		6+65.00	
RT. RAMP N	6+77.00		7+42.00	



HOT-MIX ASPHALT SURFACE REMOVAL, BUTT JOINT

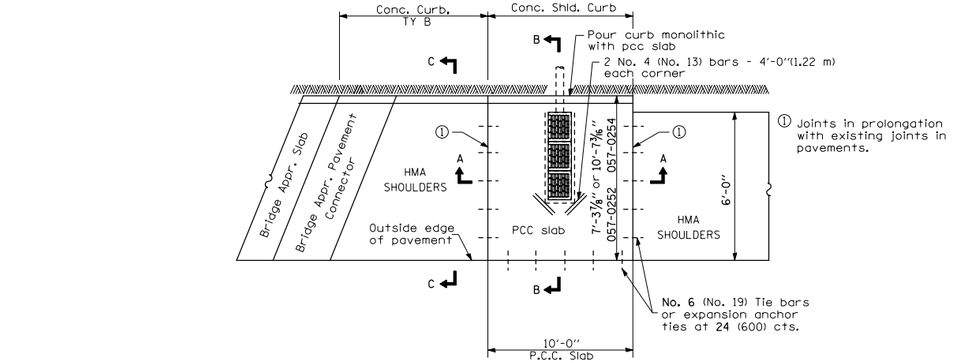
FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

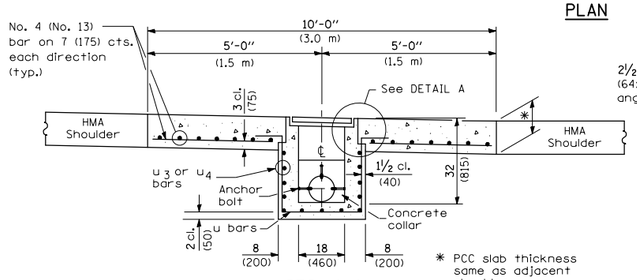
MILLING AND PAVING TRANSITION DETAILS

SCALE: | SHEET NO. 6 OF 6 SHEETS | STA. | TO STA.

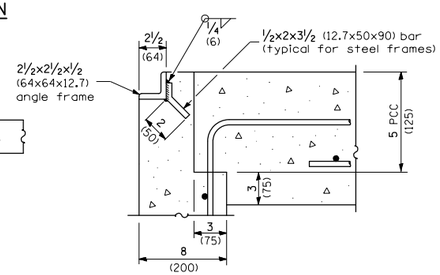
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-2O(HB,HB-1)BR-1	MCLEAN	440	283
		CONTRACT NO. 70570		
	ILLINOIS	FED. AID PROJECT		



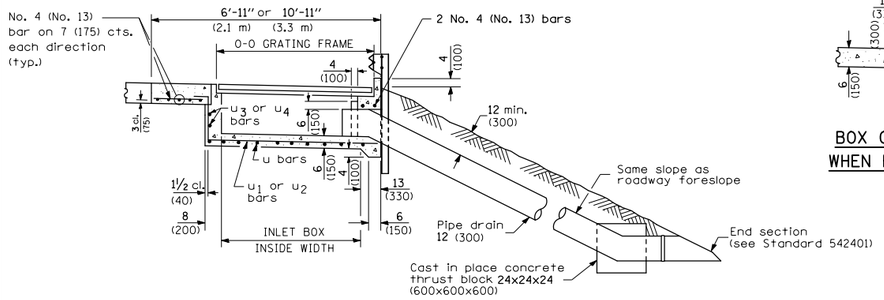
PLAN



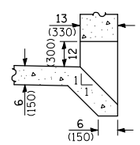
SEC. A-A



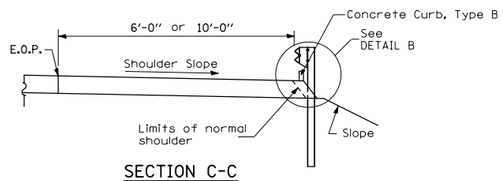
DETAIL A



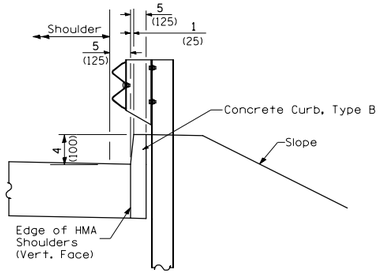
SEC. B-B



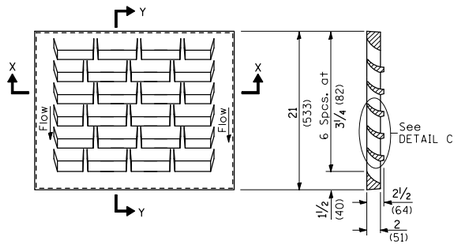
BOX OUTLET WHEN PRECAST



SECTION C-C



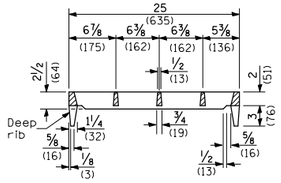
DETAIL B



DETAIL OF CAST GRATE

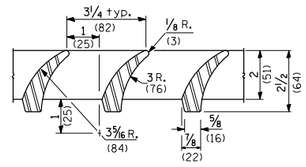
Type E requires 2 grates
Type F requires 3 grates

SECTION Y-Y

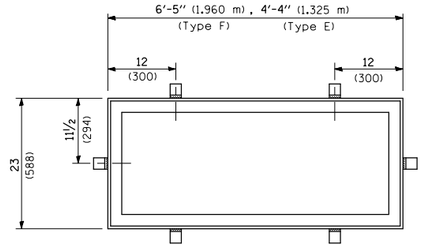


SECTION X-X

(Deep rib shall be omitted for end(s) resting on frame perimeter)

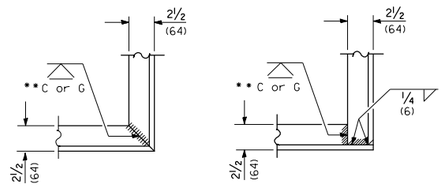


DETAIL C



DETAIL OF STEEL FRAME

Cast frame to have same basic dimensions.



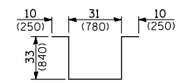
TYPICAL CORNER of STEEL GRATING FRAME

** Cut or Grind flush

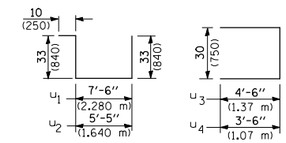
INLET BOX

REQUIRED MATERIAL							
TYPE E				TYPE F			
Bar	Qty.	Size	Length	Bar	Qty.	Size	Length
u	6	No. 4 (No. 13)	9'-9" (2.96 m)	u	8	No. 4 (No. 13)	9'-9" (2.96 m)
u_2	3	No. 4 (No. 13)	11'-9" (3.57 m)	u_1	3	No. 4 (No. 13)	13'-10" (4.21 m)
u_4	6	No. 4 (No. 13)	9'-6" (2.89 m)	u_3	6	No. 4 (No. 13)	11'-6" (3.49 m)
Concrete		cu. yds. (m^3)	1.3 (1.0)	Concrete		cu. yds. (m^3)	1.7 (1.3)
Reinf. bars		lbs. (kg)	101 (45.8)	Reinf. bars		lbs. (kg)	126 (57.2)
Grating		sq. ft. (m^2)	7.3 (0.68)	Grating		sq. ft. (m^2)	10.9 (1.02)

INLET TYPE	SHOULDER WIDTH	O-O GRATING FRAME	INLET BOX INSIDE WIDTH	INLET BOX INSIDE LENGTH
Type E	6' (1.8 m)	4'-4" (1.325 m)	3'-11" (1.195 m)	18 (460)
Type F	10' (3.0 m)	6'-5" (1.960 m)	6'-0" (1.830 m)	18 (460)

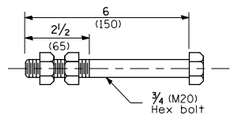


BAR u



BARS u_1, u_2

BARS u_3, u_4



ANCHOR BOLT

(Used to tie pipe to concrete collar)

GENERAL NOTES

See Standard 420001 for joint details not shown.

All exposed edges of the inlet, except the upper perimeter, shall be beveled 3/4 (20).

For placement of drainage elements on existing construction with existing rigid pavement, substitute expansion anchor ties for the tie bars. For non-rigid pavements or monolithic construction of pcc slab and shoulder, omit tie bars.

The cost of PCC slab shall be included in the cost of Type E or F Inlet Box, Standard 610001 (SPECIAL).

The cost of the Concrete Curb, Type B shall be paid for at the contract unit price per foot (meter) for Concrete Curb, Type B.

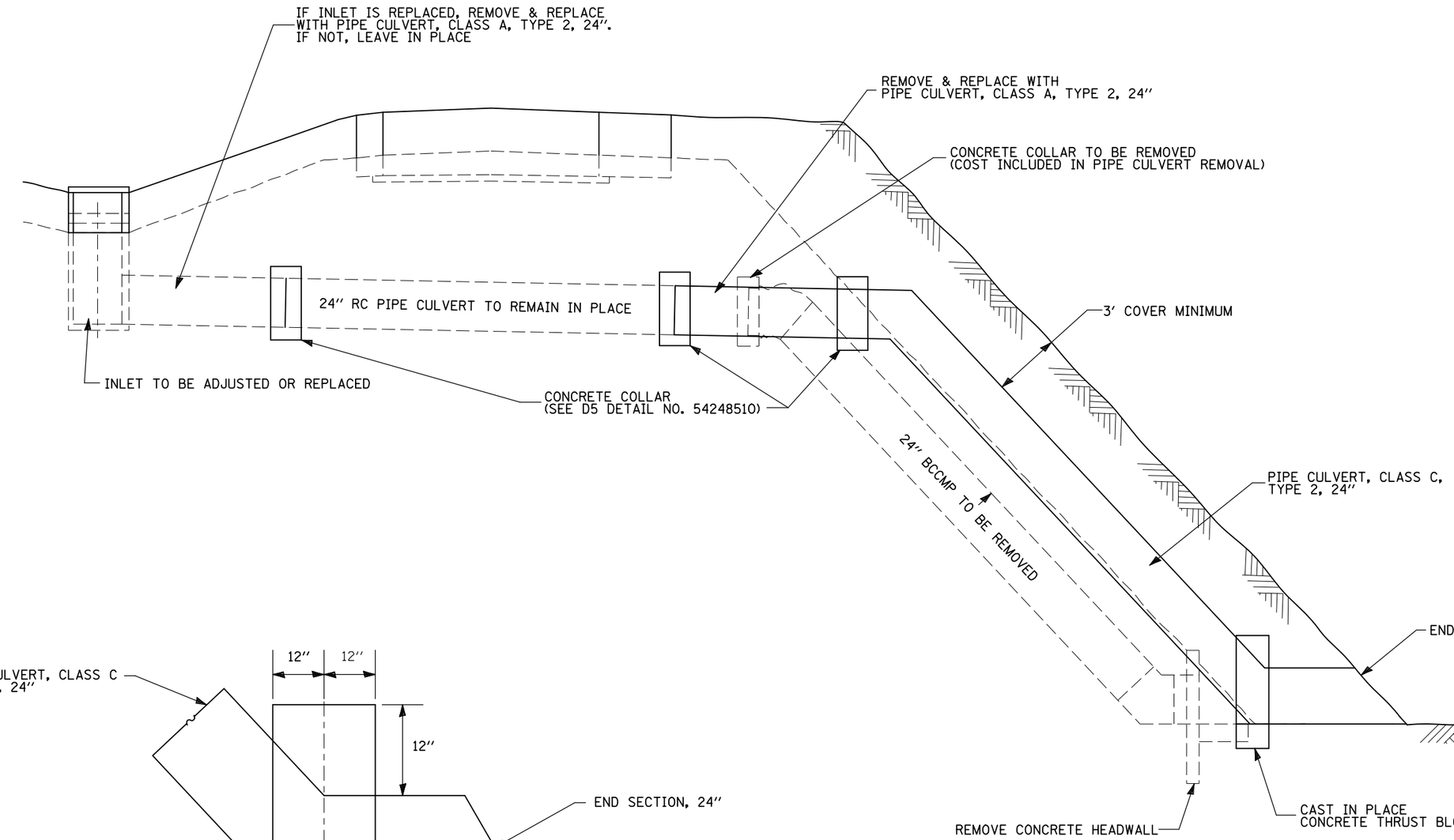
The cost of concrete shoulder curb shall be paid for at the contract unit price per foot (meter) for Concrete Shoulder Curb.

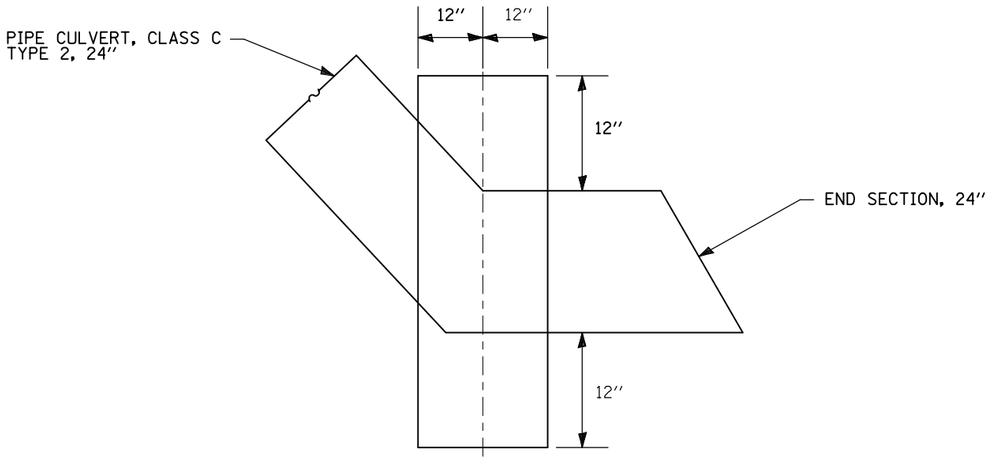
The lengths of reinforcement bars used in the portland cement concrete slab shall be such as to accommodate the lengths, widths, and spacing shown on the plans.

All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED - BJH 07/24/2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHOULDER INLET W/CURB DETAIL		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				704	57-20(HB,HB-1)BR-1	MCLEAN	440	284
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -						CONTRACT NO. 70570		
	PLOT DATE = 8/13/2013	DATE -	REVISED -		SCALE:	SHEET NO. 1 OF 1 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

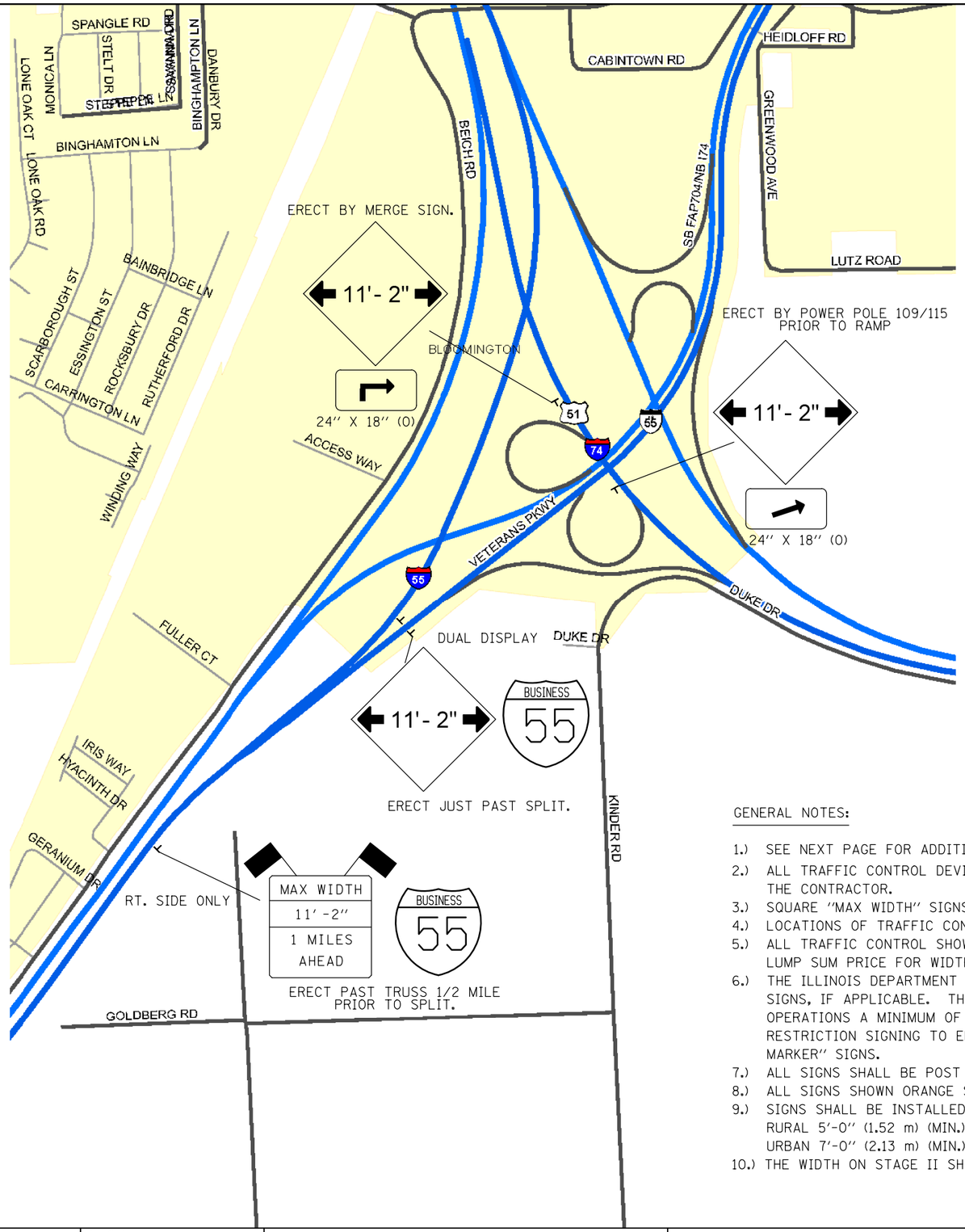
TYPICAL LAYOUT MEDIAN DRAIN





THRUST BLOCK DETAIL

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED - BJH 07/24/2012	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MEDIAN DRAIN DETAIL			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					704	57-20(HB,HB-1)BR-1	MCLEAN	440	285
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -							CONTRACT NO. 70570		
	PLOT DATE = 8/13/2013	DATE -	REVISED -		SCALE:	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.			ILLINOIS FED. AID PROJECT		



GENERAL NOTES:

1.) SEE NEXT PAGE FOR ADDITIONAL DETAILS.
2.) ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
3.) SQUARE "MAX WIDTH" SIGNS SHALL HAVE FLAGS INSTALLED UNLESS OTHERWISE DIRECTED.
4.) LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
5.) ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.
6.) THE ILLINOIS DEPARTMENT OF TRANSPORTATION WILL SUPPLY ALL "ROUTE MARKER" SIGNS, IF APPLICABLE. THE CONTRACTOR SHALL NOTIFY THE DISTRICT BUREAU OF OPERATIONS A MINIMUM OF 21 WORKING DAYS PRIOR TO PLACEMENT OF WIDTH RESTRICTION SIGNING TO ENSURE AVAILABILITY OF FABRICATION OF THE "ROUTE MARKER" SIGNS.
7.) ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE DIRECTED.
8.) ALL SIGNS SHOWN ORANGE SHALL BE FLUORESCENT ORANGE.
9.) SIGNS SHALL BE INSTALLED AT THE FOLLOWING MINIMUM HEIGHTS:
RURAL 5'-0" (1.52 m) (MIN.)
URBAN 7'-0" (2.13 m) (MIN.)
10.) THE WIDTH ON STAGE II SHALL BE POSTED AT 14'-0"

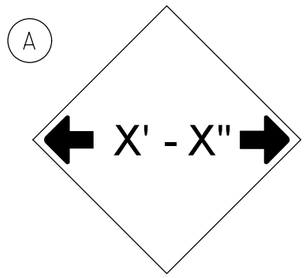
FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

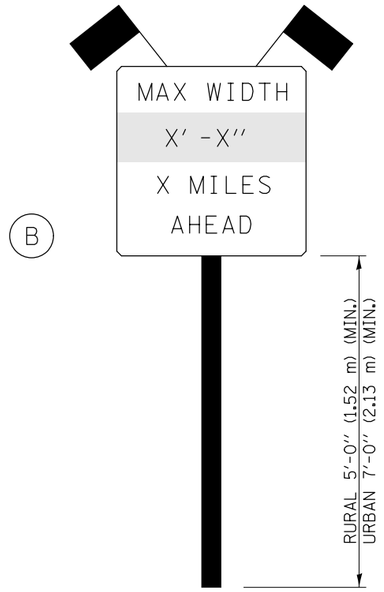
WIDTH RESTRICTION SIGNING DETAIL

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

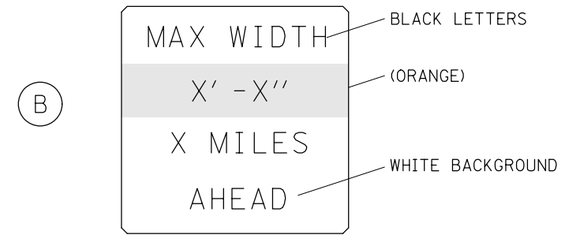
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	286
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



W12-2(0)-48"x48"(1200x1200)



SIGN PANEL, TYPE II



W12-I103(0)-48"x48"(1200x1200)
"D" LETTERS/NUMBERS

SIGN (A) 2 SIGNS - W12-2(0)-48"x48"(1200x1200) ARE TO BE PLACED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

SIGN (B) 2 SIGNS - (SIGN PANEL, TYPE II) AS SHOWN ARE TO BE PLACED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
2. ALL (B) SIGNS SHALL HAVE FLAGS INSTALLED UNLESS OTHERWISE DIRECTED.
3. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
4. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.
5. ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE DIRECTED.
6. ALL SIGNS SHOWN ORANGE (O) SHALL BE FLUORESCENT ORANGE.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. X7200201

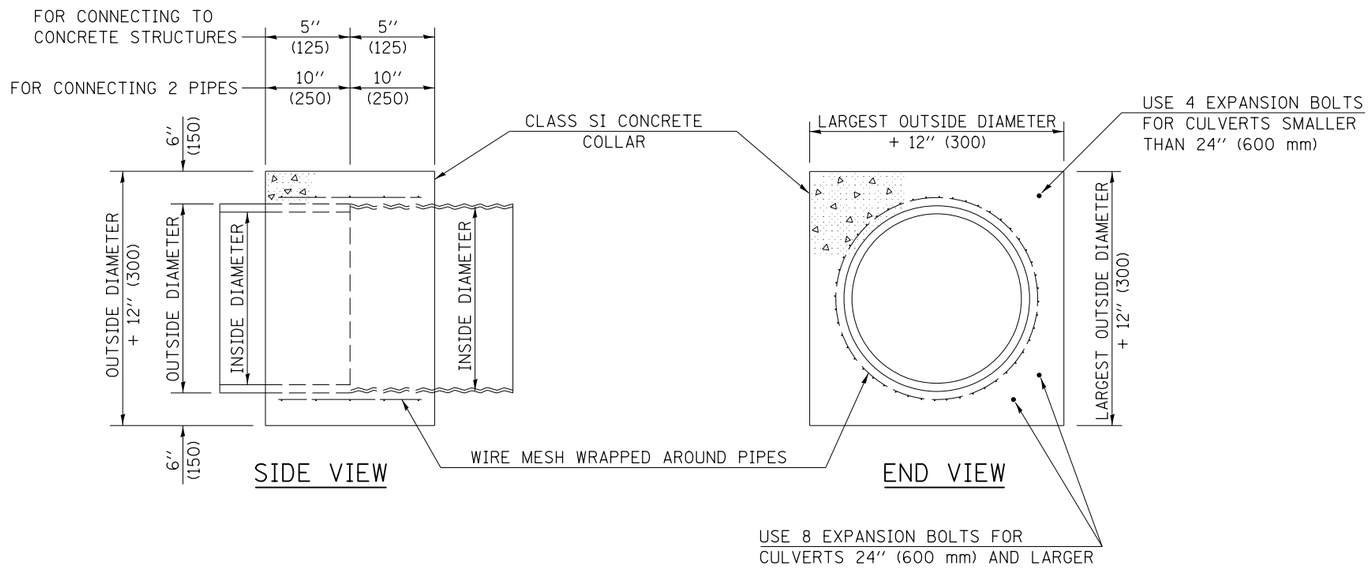
FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WIDTH RESTRICTION SIGNING DETAIL

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	287
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



QUANTITIES FOR CONCRETE PIPES	
INSIDE DIAMETER OF PIPE INCH (mm)	ESTIMATED CLASS SI CONCRETE REQUIRED 20'' (500 mm) WIDTH CU. YD. (m^3)
4'' (100)	0.14 (0.11)
6'' (150)	0.16 (0.12)
8'' (200)	0.19 (0.14)
10'' (250)	0.22 (0.17)
12'' (300)	0.25 (0.19)
15'' (375)	0.30 (0.23)
18'' (450)	0.35 (0.27)
24'' (600)	0.45 (0.35)
30'' (750)	0.57 (0.43)
36'' (900)	0.69 (0.53)
42'' (1050)	0.83 (0.63)
48'' (1200)	0.97 (0.74)
54'' (1350)	1.12 (0.86)
60'' (1500)	1.28 (0.98)

QUANTITIES FOR METAL PIPES	
INSIDE DIAMETER OF PIPE INCH (mm)	ESTIMATED CLASS SI CONCRETE REQUIRED 20'' (500 mm) WIDTH CU. YD. (m^3)
4'' (100)	0.12 (0.09)
6'' (150)	0.14 (0.11)
8'' (200)	0.16 (0.12)
10'' (250)	0.19 (0.14)
12'' (300)	0.21 (0.16)
15'' (375)	0.25 (0.19)
18'' (450)	0.29 (0.22)
24'' (600)	0.38 (0.29)
30'' (750)	0.47 (0.36)
36'' (900)	0.59 (0.45)
42'' (1050)	0.69 (0.53)
48'' (1200)	0.81 (0.62)
54'' (1350)	0.93 (0.71)
60'' (1500)	1.05 (0.81)

GENERAL NOTES

1. CLASS SI CONCRETE SHALL BE USED THROUGHOUT.
2. WHEN CONCRETE COLLARS ARE USED TO CONNECT PIPES OF DIFFERENT OUTSIDE DIAMETERS, THE CONCRETE COLLAR SHALL BE FORMED USING THE LARGEST OUTSIDE DIAMETER (SEE END VIEW).
3. THE WIRE MESH SHALL WEIGH NOT LESS THAN 54#/100 SQ. FT. (2.63 kg/m^2).
4. WHEN CONCRETE COLLARS ARE CONSTRUCTED ADJACENT TO AN EXISTING CONCRETE STRUCTURE (HEADWALLS, ETC.) EXPANSION BOLTS, SHALL BE USED AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE, EACH, FOR EXPANSION BOLTS OF THE SIZE SPECIFIED IN THE PLANS.
5. CONCRETE COLLARS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE, PER CUBIC YARD (CUBIC METER), FOR CONCRETE COLLARS INCLUDING ALL MATERIAL AND LABOR SPECIFIED TO COMPLETE THE WORK IN PLACE.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 54248510

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED - 12/06
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

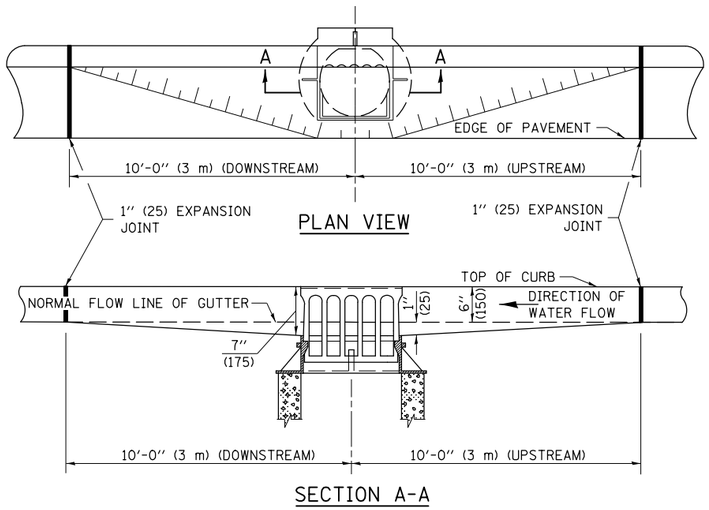
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE COLLAR

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

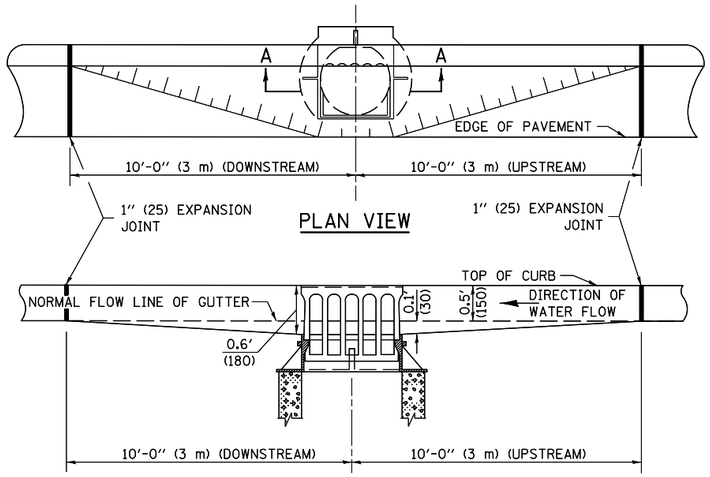
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	288
		CONTRACT NO. 70570		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

GUTTER DEPRESSION 1" (25mm)



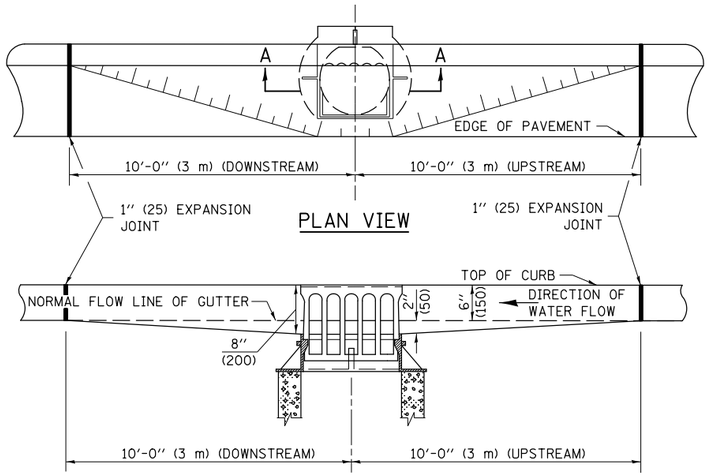
SECTION A-A

GUTTER DEPRESSION 0.1 FOOT (30mm)



SECTION A-A

GUTTER DEPRESSION 2" (50mm)

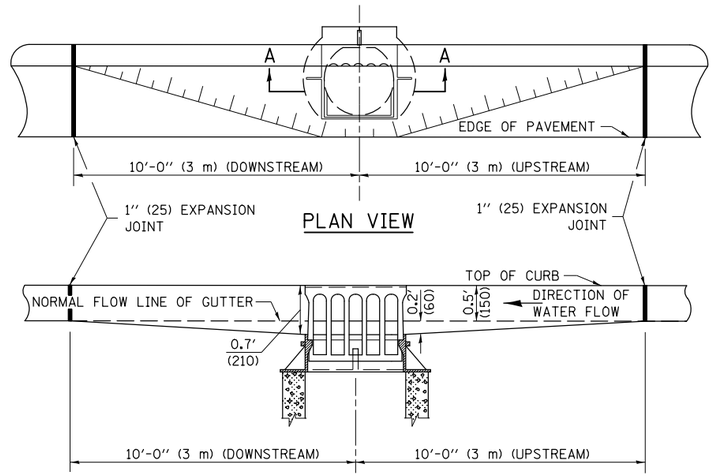


SECTION A-A

GENERAL NOTES

1. THE TWO EXPANSION JOINTS SHALL BE PLACED AS SHOWN IN STANDARD 606001.
2. THE GUTTER GRADE SHALL BE DEPRESSED AT ALL INLETS, CATCH BASINS AND MANHOLES UNLESS OTHERWISE SPECIFIED IN THE PLANS.
3. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF THE VARIOUS PAY ITEMS OF WORK INVOLVED.

GUTTER DEPRESSION 0.2 FOOT (60mm)



SECTION A-A

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 606AAAAA

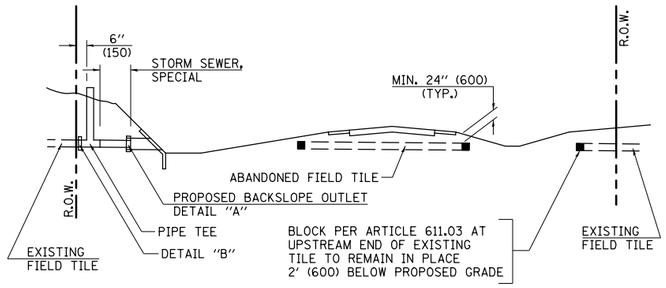
FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED - 11/06	
		DRAWN -	REVISED -	
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
	PLOT DATE = 8/13/2013	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUTTER DEPRESSION AT INLETS, CATCH BASINS AND MANHOLES

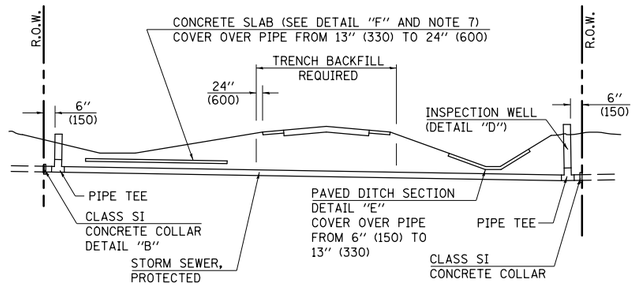
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-2O(HB,HB-1)BR-1	MCLEAN	440	289
		CONTRACT NO. 70570		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



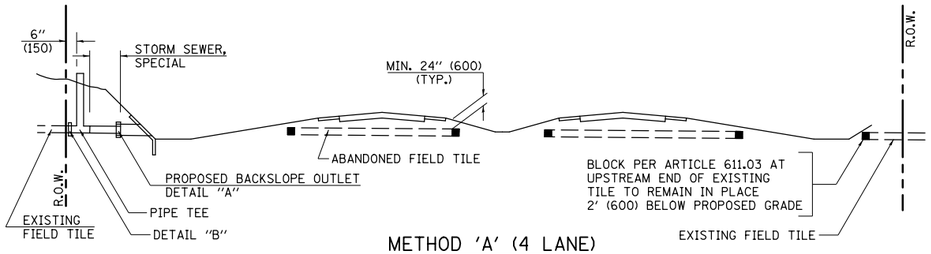
METHOD 'A' (2 LANE)

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



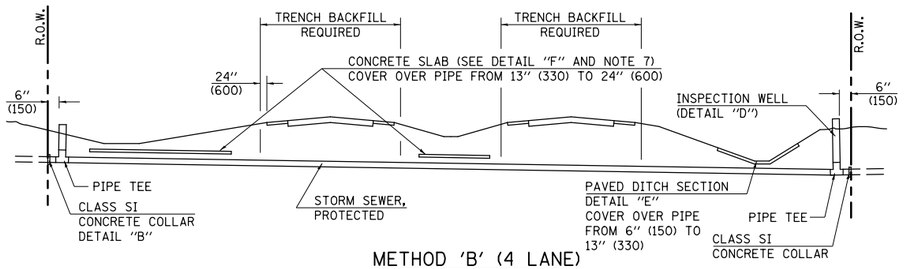
METHOD 'B' (2 LANE)

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENT AND PAVED DITCH



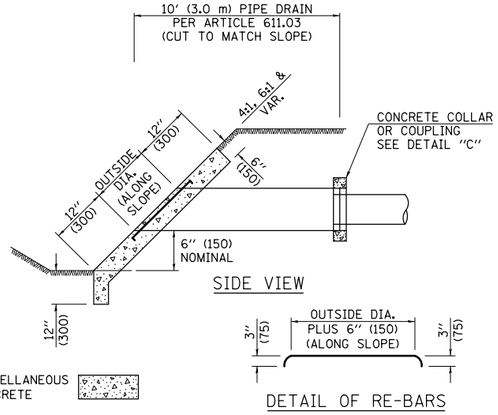
METHOD 'A' (4 LANE)

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE

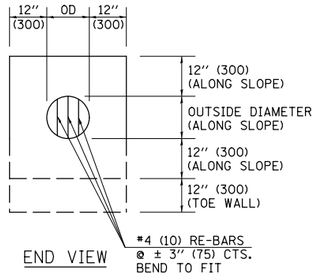


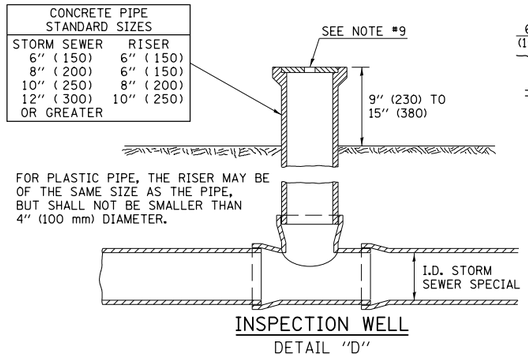
METHOD 'B' (4 LANE)

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENTS AND PAVED DITCHES



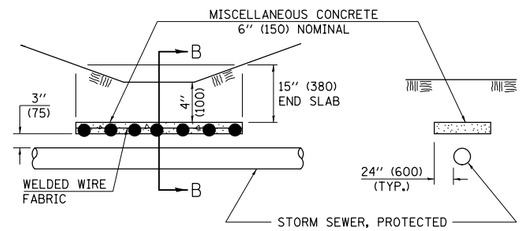
DETAIL OF RE-BARS





INSPECTION WELL

DETAIL "D"

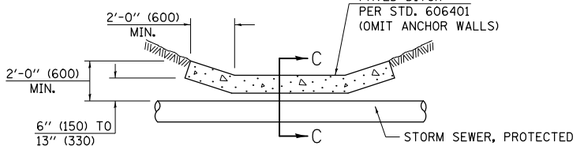


SLAB ELEVATION

SECTION B-B

CONCRETE SLAB

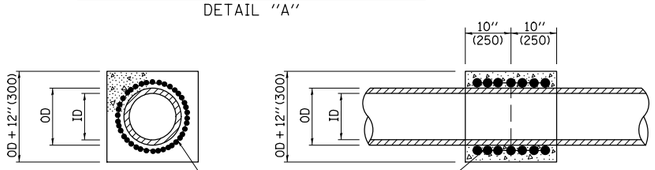
DETAIL "F"



PAVED DITCH ELEVATION

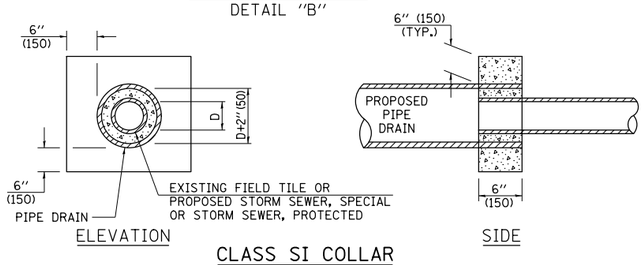
HEADWALL FOR BACKSLOPE OUTLET

DETAIL "A"



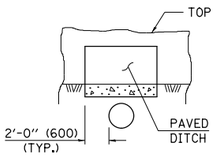
CONCRETE COLLAR

DETAIL "B"



CLASS SI COLLAR

DETAIL "C"



SECTION C-C

PAVED DITCH

DETAIL "E"

GENERAL NOTES

1. EXISTING FIELD TILE ENCOUNTERED BY EXPLORATION TRENCH SHALL BE INSPECTED BY THE ENGINEER FOR UNOBSTRUCTED FLOW WITHIN THE LIMITS OF THE RIGHT-OF-WAY.
2. ONLY FIELD TILE THAT DOES NOT HAVE SATISFACTORY FLOW AND OR HAS VISIBLE SIGNS OF DETERIORATION (SINK HOLES, ETC.) SHALL BE REPLACED WITHIN THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH METHOD "B".
3. INSPECTION WELLS SHALL BE CONSTRUCTED APPROXIMATELY 6" (150 mm) INSIDE OF BOTH RIGHT-OF-WAY LINES AT ALL FIELD TILE LOCATIONS.
4. EXISTING FIELD TILE ABANDONED UNDER EXISTING PAVEMENTS OR PAVED SHOULDERS SHALL BE FILLED WITH FLOWABLE GROUT AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.
5. NON-CIRCULAR FIELD TILE SHALL BE REPLACED WITH STORM SEWER, SPECIAL OF AT LEAST THE SAME CROSS SECTIONAL AREA. ALL EXISTING FIELD TILE SHALL BE REPLACED WITH STORM SEWER OF THE TYPE REQUIRED FOR THE MINIMUM DEPTH OF COVER.
6. THE 6" (150 mm) CONCRETE SLAB OR DITCH LINING SHALL BE POURED THE LENGTH OF THE TRENCH AT ALL DITCH FLOW LINE LOCATIONS WITHIN THE RIGHT-OF-WAY WITH LESS THAN 2' (600 mm) OF EARTH COVER. MISCELLANEOUS CONCRETE SHALL BE USED ACCORDING TO SECTION 611.
7. ALL MISCELLANEOUS SLABS, APRONS AND DITCH LININGS SHALL BE REINFORCED WITH WELDED WIRE FABRIC AS SHOWN FOR PAVED DITCH IN STANDARD 606401.
8. HEADWALL FOR BACKSLOPE OUTLET MAY BE USED FOR PIPE DRAIN DIAMETERS UP TO 10" (250 mm). SPECIAL DESIGNS WILL BE REQUIRED FOR LARGER SIZES.
9. THE INSPECTION WELL LID FOR P.C.C. PIPE SHALL BE CONSTRUCTED OF 3/8" (10 mm) CAST IRON AND PROVIDED WITH A 1" (25 mm) DIAMETER HOLE IN CENTER. THE LID FOR THE OTHER PIPE MATERIALS SHALL BE A GRATE ASSEMBLY PREFABRICATED FOR AND COMPATIBLE WITH THE PIPE SYSTEM.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 61101011A

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED - 11/06
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

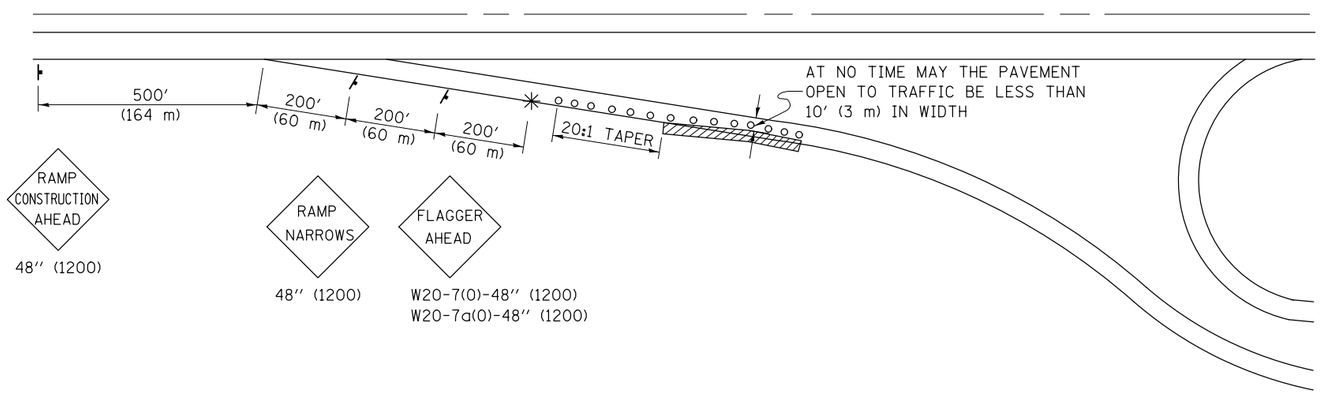
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FIELD TILE SYSTEMS (TREATMENT OF EXISTING)

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	290
		CONTRACT NO. 70570		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

APPLICATION NO. 1
DAY OPERATION ONLY
PARTIAL RAMP CLOSURE



GENERAL NOTES

CONSTRUCTION OPERATIONS SHALL BE CONFINED TO AN AREA NARROW ENOUGH THAT A MINIMUM OF 10′ (3 m) OF PAVEMENT SHALL BE OPEN TO TRAFFIC AT ALL TIMES.

FULL WIDTH PAVEMENT ON THE RAMPS SHALL BE OPEN TO TRAFFIC AT NIGHT.

WHEN NO WORK IS BEING PERFORMED, THE FLAGGER WILL NOT BE REQUIRED. IF THE FLAGGER IS NOT PRESENT, THE FLAGGER SIGNS SHALL BE REMOVED OR COVERED.

ALL SIGNS SHALL BE POST MOUNTED IF WORK IN THE AREA EXCEEDS FOUR DAYS OF DAYTIME OPERATIONS.

LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.

ALL VEHICLES, EQUIPMENT, WORKERS (EXCEPT FLAGGER) AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO ONE SIDE OF THE PAVEMENT UNLESS OTHERWISE AUTHORIZED BY THE DISTRICT ENGINEER.

SYMBOLS

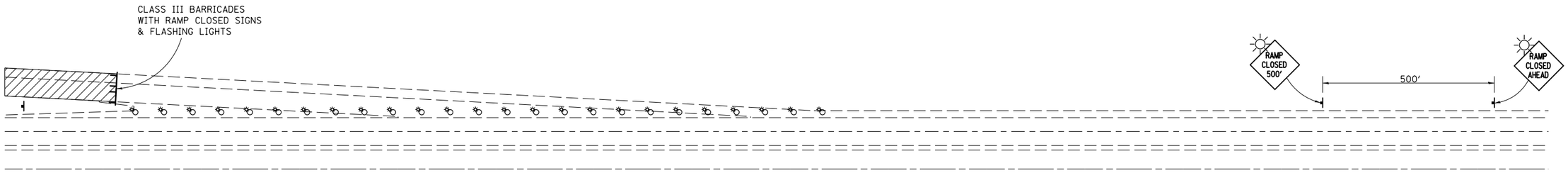
- ○ (APPLICATION NO. 1) TYPE I OR II BARRICADES OR DRUMS @ 50′ (15 m) CTS.
- ⊙ (APPLICATION NO. 2) TYPE I OR II BARRICADES OR DRUMS @ 25′ (7.5 m) CTS. W/STEADY BURNING LIGHTS
- ✳ (APPLICATION NO. 1) FLAGGER PLACED AS DIRECTED BY THE ENGINEER
- ⊢ SIGN ON PORTABLE OR PERMANENT SUPPORT
- ▨ WORK AREA

TYPICAL APPLICATIONS

PAVEMENT PATCHING
PIPE UNDERDRAINS
HMA RESURFACING

Traffic Control for all ramps shall be in accordance with the appropriate application of plan detail TRAFFIC CONTROL FOR RAMPS and will not be paid for separately, but shall be included in the contract lump sum prices for Traffic Control and Protection, Standard 701401 and Traffic Control and Protection, Standard 701406.

APPLICATION NO. 2
RAMP CLOSURE



GENERAL NOTES

STEADY BURN LIGHTS ARE NOT REQUIRED FOR DAYTIME OPERATIONS.

CONTACT THE DISTRICT TRAFFIC OPERATIONS ENGINEER AT 217-465-4181, ONE WEEK PRIOR TO CLOSING THE RAMP.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 70103710

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED - 11/06
	PLOT SCALE = 40.0000 ′ / in.	DRAWN -	REVISED -
	PLOT DATE = 8/13/2013	CHECKED -	REVISED -
		DATE -	REVISED -

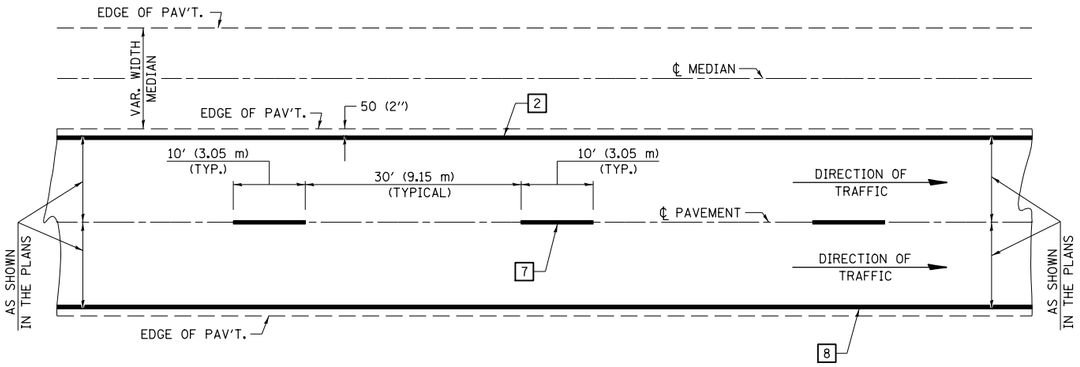
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL FOR RAMPS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	291
		CONTRACT NO. 70570		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

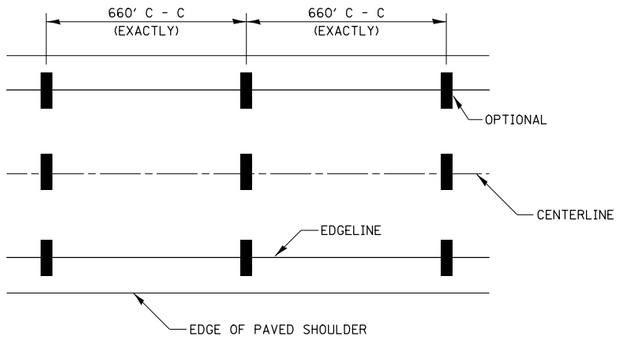
CENTERLINE INTERSTATE OR MULTI-LANE TWO WAY DIVIDED HIGHWAY



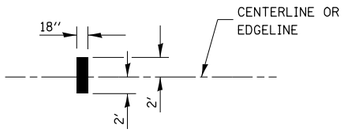
NOTE: PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.

NOTE: SEE ARTICLES 780.04 & 781.03 FOR LOCATION OF STRIPES AND MARKERS RELATIVE TO EDGES OR JOINTS.

FOR RAISED REFLECTIVE PAVEMENT MARKERS, REFER TO STANDARD 781001.



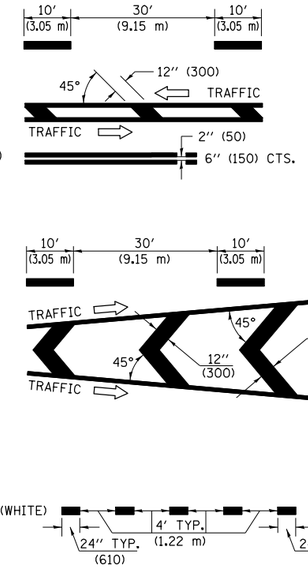
IT WILL BE NECESSARY TO HAVE A REPRESENTATIVE OF THE STATE POLICE PRESENT SO THAT THE ACCURACY OF MEASUREMENT CAN BE ATTESTED TO IN COURT.

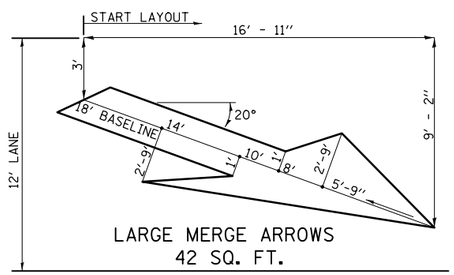


AERIAL SPEED CHECK ZONES

TYPICAL PAVEMENT MARKING LEGEND

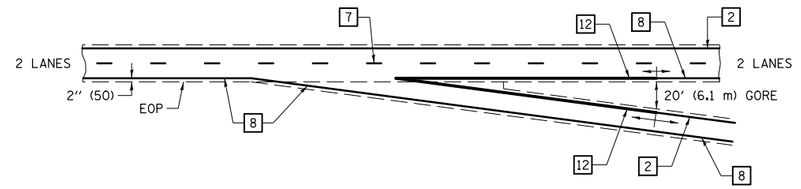
1. 4" (100) SKIP-DASH (YELLOW)
2. 4" (100) SOLID (YELLOW)
3. 12" (300) DIAGONAL (YELLOW)
4. 4" (100) DOUBLE YELLOW (NARROW)
5. RESERVED
6. RESERVED
7. 4" (100) SKIP-DASH (WHITE)
8. 4" (100) SOLID (WHITE)
9. 12" (300) DIAGONAL (WHITE)
10. 6" (150) SOLID (WHITE)
11. 24" (600) STOP BAR (WHITE)
12. 8" (200) SOLID (WHITE)
13. 4" (100) LANE LINE EXTENSIONS (WHITE)



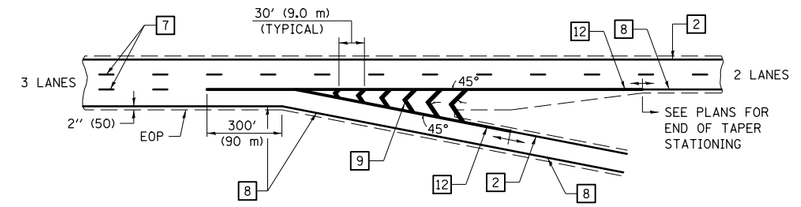


LARGE MERGE ARROWS
42 SQ. FT.

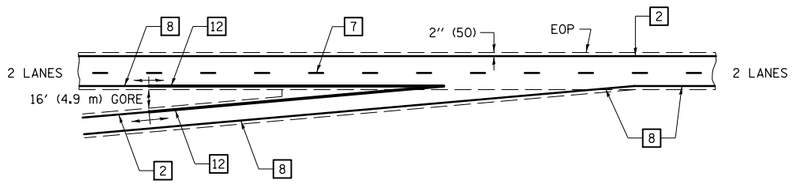
TYPICAL EXIT RAMP TERMINAL



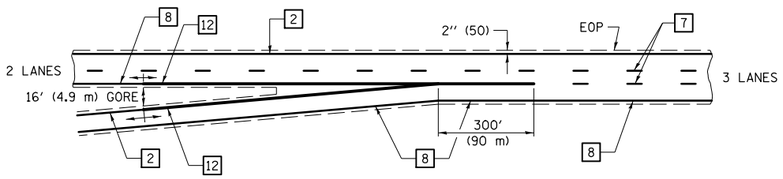
EXIT RAMP TERMINAL with EXCLUSIVE (auxiliary) LANE



TYPICAL ENTRANCE RAMP TERMINAL



ENTRANCE RAMP TERMINAL with EXCLUSIVE LANE



Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. 7800BBBB

FILE NAME =	USER NAME = detersbj	DESIGNED -	REVISED - 11/06
c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

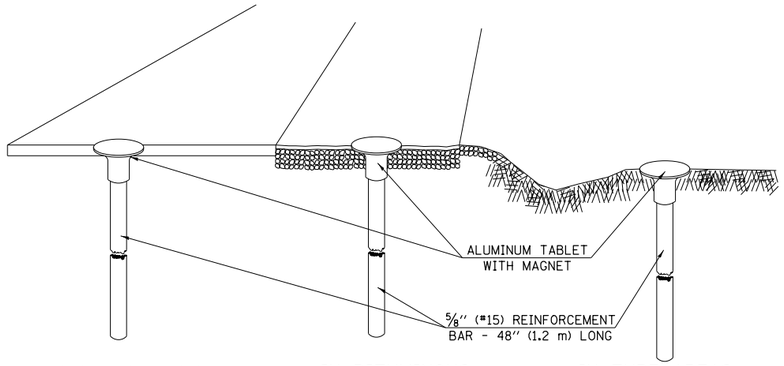
PAVEMENT MARKING (INTERSTATE & MULTI-LANE APPLICATIONS)

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-2O(HB,HB-1)BR-1	MCLEAN	440	292
		CONTRACT NO. 70570		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

XZ193300 – SURVEY MARKER, TYPE 1 (SPECIAL)

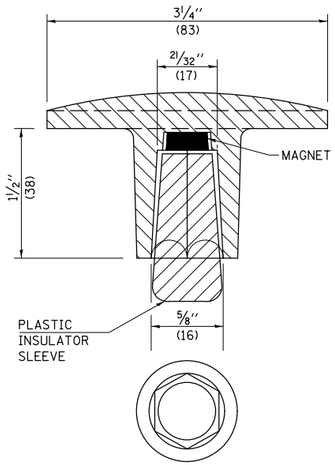
TO BE INSTALLED IN FLEXIBLE PAVEMENT OR SHOULDER, BITUMINOUS TREATED SURFACE AND TURF AREAS WITHIN THE RIGHT-OF-WAY FOR PRESERVING PERMANENT SURVEY MARKERS (PI'S, PT'S, PC'S, POC'S, & POT'S)

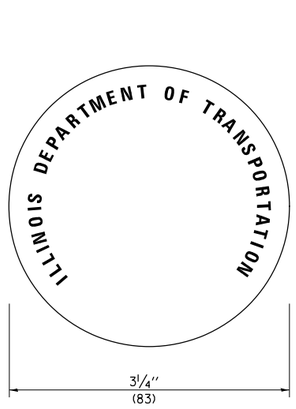


IN FLEXIBLE PAVEMENT OR SHOULDER

IN BITUMINOUS TREATED SURFACE

IN TURF AREAS WITHIN R.O.W.





THE DIMENSIONS SHOWN SHALL BE EXACT, OTHERS MAY VARY, BUT SHALL BE SHOWN ON SHOP DRAWINGS.

GENERAL NOTES

1. THE CONTRACT UNIT PRICE, EACH, FOR SURVEY MARKER, TYPE 1 (SPECIAL) SHALL BE PAYMENT IN FULL FOR FURNISHING THE REINFORCEMENT BAR AND ALUMINUM TABLET AND FOR ALL LABOR AND MATERIAL REQUIRED TO SET THE MARKER IN PLACE.
2. ALL SURVEY MARKERS, TYPE 1 (SPECIAL) SHALL BE PLACED ± 1/4" (6 mm) BELOW THE FINAL SURFACE.
3. WHEN THE TABLET AND REBAR ARE PLACED AS PART OF A SURVEY MARKER VAULT, THEY SHALL BE CONSIDERED AS INCLUDED IN THAT PAY ITEM AND THERE WILL BE NO PAYMENT FOR THE SURVEY MARKER, TYPE 1 (SPECIAL).

SPECIFICATIONS FOR ALUMINUM TABLET

SURVEY CAP FOR REBAR. 3¼" (83 mm) CONVEX SURVEY CAP FOR ⅝" (15 mm) REBAR WITH ILLINOIS DEPARTMENT OF TRANSPORTATION LOGO. THIS LOGO SHALL PROVIDE LETTERS RECESSED INTO THE SURFACE A MINIMUM OF 1/32" (0.8 mm) FOR EASY AND LONG-TERM LEGIBILITY. THE ALUMINUM CAP FOR REBAR SHALL BE PRODUCED BY THE PROCESS OF ORBITAL FORGING TO PRODUCE A HIGH-STRENGTH AND DURABLE MARKER CAP WHICH WILL NOT CHIP OR BREAK AND PROVIDE A SMOOTH FINISH FOR STAMPING OF DATA IN THE FIELD. THE ALUMINUM CAP FOR REBAR SHALL BE TAPERED FOR A PERFECT COMPRESSION FIT. A SPECIAL PLASTIC INSULATOR SHALL BE INSTALLED TO PREVENT DISSIMILAR METAL CONTACT AND CORROSION. THE PLASTIC INSULATOR SHALL FORM READILY TO THE OUTER SHAPE OF THE REBAR AND TO THE INNER SHAPE OF THE ALUMINUM CAP SOCKET. THE PLASTIC INSULATOR SHALL BE LOW DENSITY POLYETHYLENE, A MINIMUM 1½" (38 mm) LONG AND CONFORM TO FEDERAL SPECIFICATION L-P 390.

COMPOSITION: ALUMINUM 98.3-98.7%; OTHER 1.3-1.7%; STRENGTH: YIELD 28 KSI (193 MPa), ULTIMATE 32 KSI (221 MPa). ELONGATION 15% [IN 2" (50 mm)]. SPECIFICATIONS: ALUMINUM ALLOY 6101-0; ASTM B317-83 (EXCEPT TEMPER) AS FORGED. NO EXCEPTIONS.

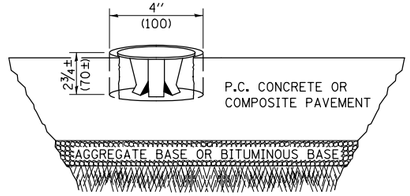
SPECIFICATIONS FOR REBAR

REBAR FOR ALUMINUM TABLET. REINFORCEMENT BAR SHALL BE ⅝" (#15) X 48" (1.2 m) (DEFORMED).

INSPECTION OF REINFORCEMENT BAR ⅝" (#15) SHALL BE DONE BY DISTRICT PERSONNEL OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS.

XZ193400 – SURVEY MARKER, TYPE 2 (SPECIAL)

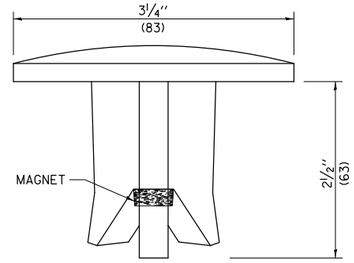
TO BE INSTALLED IN RIGID OR COMPOSITE PAVEMENT FOR PRESERVING PERMANENT SURVEY MARKERS (PI'S, PT'S, PC'S, POC'S, & POT'S)



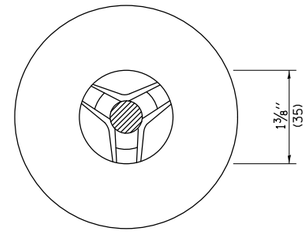
SPECIFICATIONS FOR ALUMINUM TABLET (FORKED)

ALUMINUM TABLET (FORKED) FOR USE WITH "SURVEY MARKER, TYPE 2, (SPECIAL)" SHALL BE AS SHOWN ON THE DETAIL FOR THE 3¼" (83 mm) CONVEX SURVEY TABLET WITH ILLINOIS DEPARTMENT OF TRANSPORTATION LOGO. THIS LOGO SHALL PROVIDE FOR LETTERS RECESSED INTO THE SURFACE A MINIMUM OF 1/32" (0.8 mm) FOR EASY AND LONG-TERM LEGIBILITY. THE ALUMINUM TABLET SHALL BE PRODUCED BY THE PROCESS OF ORBITAL FORGING TO PRODUCE A HIGH-STRENGTH AND DURABLE MARKER CAP WHICH WILL NOT CHIP OR BREAK AND PROVIDE A SMOOTH FINISH FOR STAMPING OF DATA IN THE FIELD. THE ALUMINUM TABLET SHALL BE DESIGNED NOT TO TURN OR ROTATE. THREE PRONGS ON A 2½" (63 mm) STEM SHALL BE SUCH THAT THE ALUMINUM TABLET CANNOT BE EASILY REMOVED.

COMPOSITION: ALUMINUM 92-93%; MAGNESIUM 6.5-7.5%. STRENGTH: YIELD 19,000-21,000 PSI (131-145 MPa); TENSILE 38,000-44,000 PSI (262-303 MPa); ELONGATION 10-15% [IN 2" (50 mm)]. SPECIFICATIONS: ALLOY 535.0; QQ-A-601ES. NO EXCEPTIONS.



SIDE VIEW



BOTTOM VIEW

THE DIMENSIONS SHOWN SHALL BE EXACT, OTHERS MAY VARY, BUT SHALL BE SHOWN ON SHOP DRAWINGS.

GENERAL NOTES

1. WORK ON THIS ITEM SHALL NOT START UNTIL THE FINAL SURFACE IS COMPLETED.
2. THE ALUMINUM TABLET (FORKED) SHALL REST UPON THE BOTTOM OF THE 4" (100 mm) CORE HOLE. IF THE HOLE IS TOO DEEP, EPOXY GROUT MUST BE USED TO DECREASE THE DEPTH AND ALLOWED TO HARDEN BEFORE PROCEEDING.
3. THE ALUMINUM TABLET SHALL BE ANCHORED IN THE 4" (100 mm) DIAMETER HOLE IN THE NEW PAVEMENT WITH TWO-COMPONENT EPOXY CONFORMING TO APPLICABLE PORTIONS OF ARTICLE 1025.01 OF THE STANDARD SPECIFICATIONS.
4. THE 4" (100 mm) CORE HOLE SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
5. THE CONTRACT PRICE, EACH, FOR SURVEY MARKER, TYPE 2 (SPECIAL) SHALL BE PAYMENT IN FULL FOR FURNISHING THE ALUMINUM TABLET AND FOR ALL LABOR AND MATERIAL REQUIRED TO SET THE MARKER IN PLACE, AS SPECIFIED, INCLUDING CORING THE NEW PAVEMENT.
6. ALL SURVEY MARKERS, TYPE 2 (SPECIAL) SHALL BE PLACED ± 1/4" (6 mm) BELOW THE FINAL SURFACE.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 5 DETAIL NO. XZ193AAA

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-details.dgn	USER NAME = detersbj	DESIGNED -	REVISED - 11/06
		DRAWN -	REVISED - 11/10
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

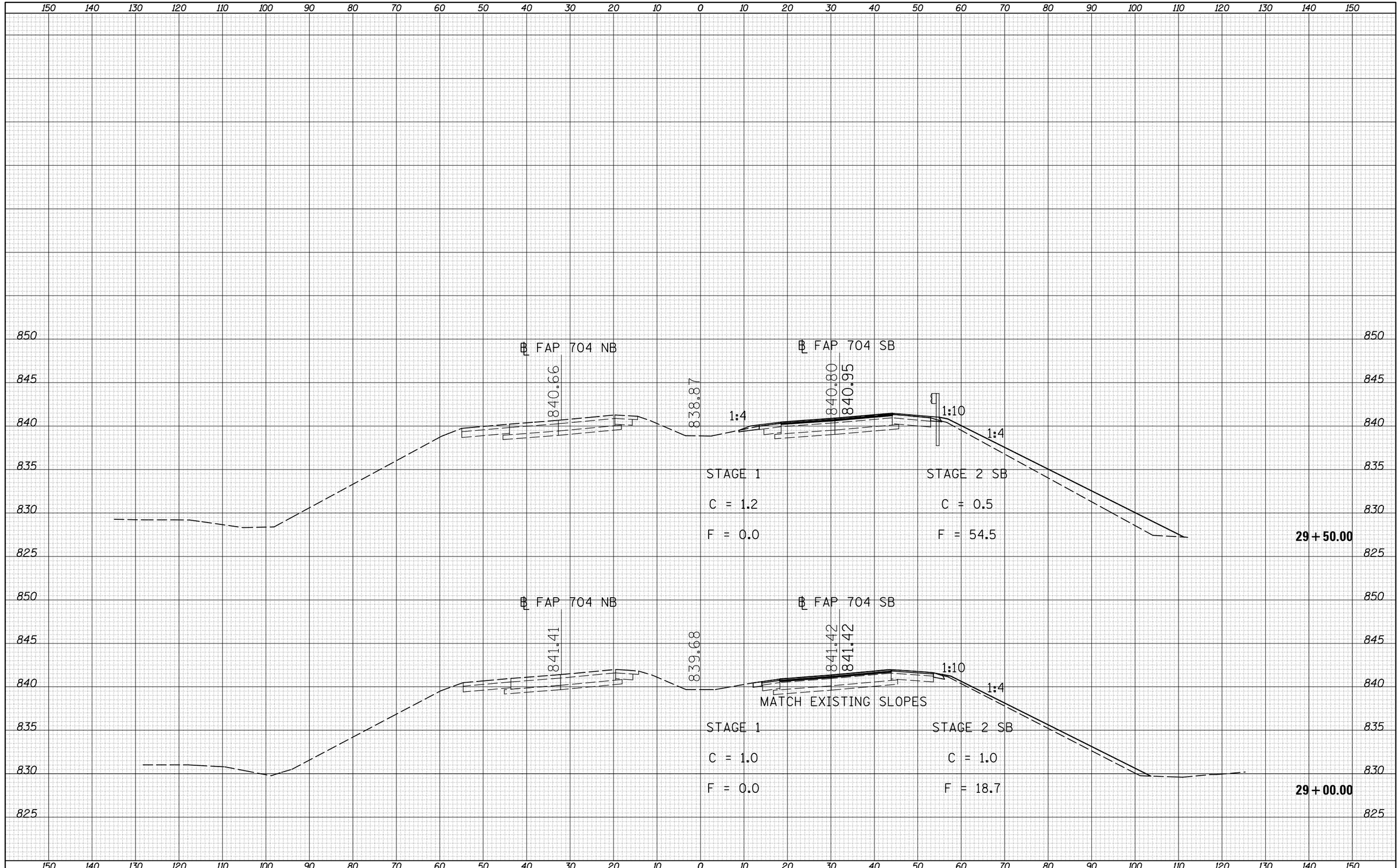
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SURVEY MARKERS TYPE 1 & 2 (SPECIAL)

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	293
		CONTRACT NO. 70570		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED	BY	DATE
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		



ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED	BY	DATE
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-XS-155a.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

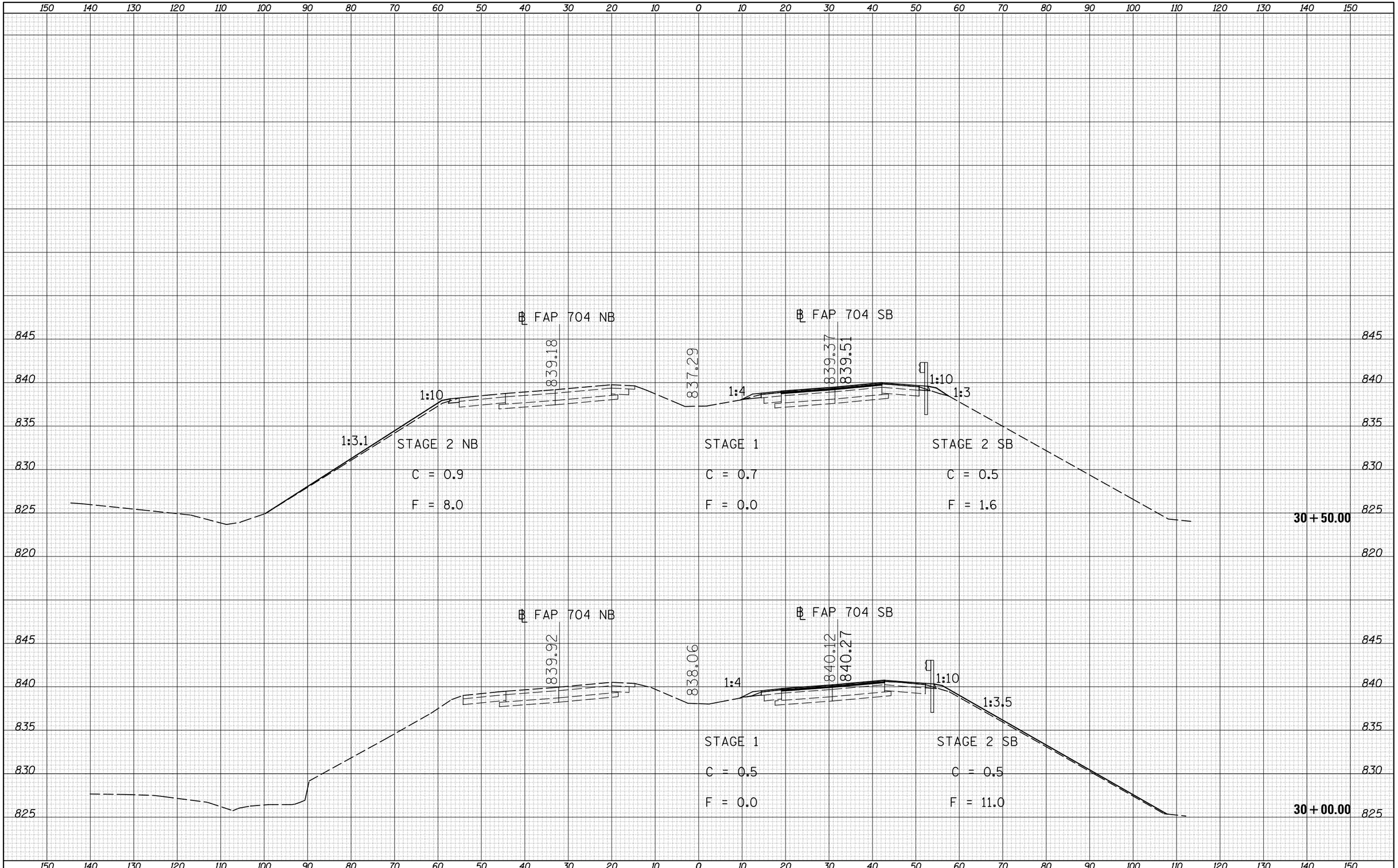
F.A.P. 704 CROSS SECTION SHEET

SCALE: | SHEET 1 OF 46 SHEETS | STA. 29+00.00 | TO STA. 29+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-2O(HB,HB-1)BR-1	MCLEAN	440	294
		CONTRACT NO. 70570		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

BY	DATE



ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

BY	DATE

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-XS-155a.dgn	USER NAME = detersbj	DESIGNED -
		DRAWN -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -
	PLOT DATE = 8/13/2013	DATE -

REVISED -	REVISED -	REVISED -
REVISED -	REVISED -	REVISED -
REVISED -	REVISED -	REVISED -

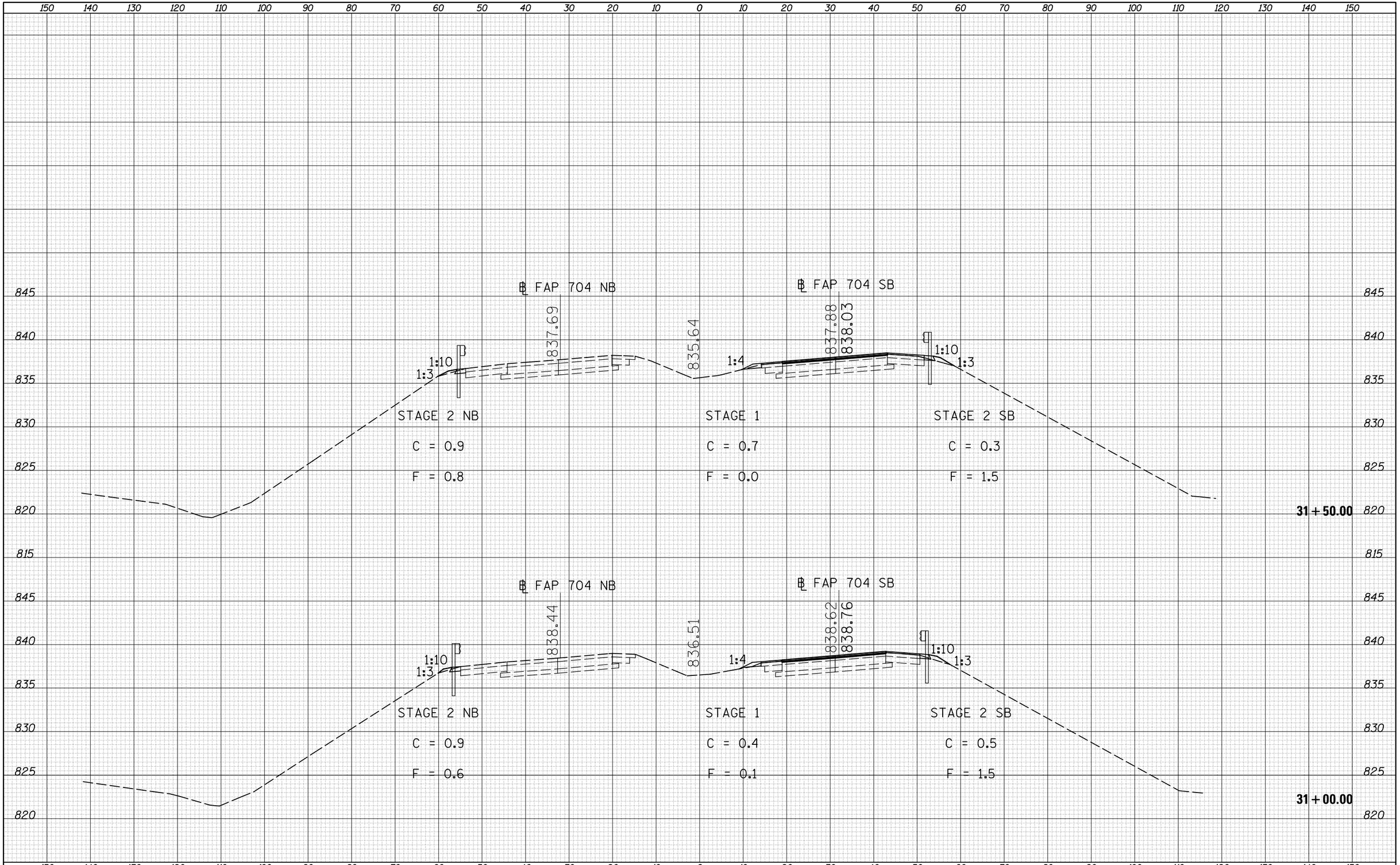
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. 704 CROSS SECTION SHEET

SCALE: | SHEET 2 OF 46 SHEETS | STA. 30+00.00 | TO STA. 30+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-2O(HB,HB-1)BR-1	MCLEAN	440	295
		CONTRACT NO. 70570		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	NOTE BOOK	NO.
SURVEYED		BY
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		DATE



ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED		BY
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		DATE

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-XS-155a.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

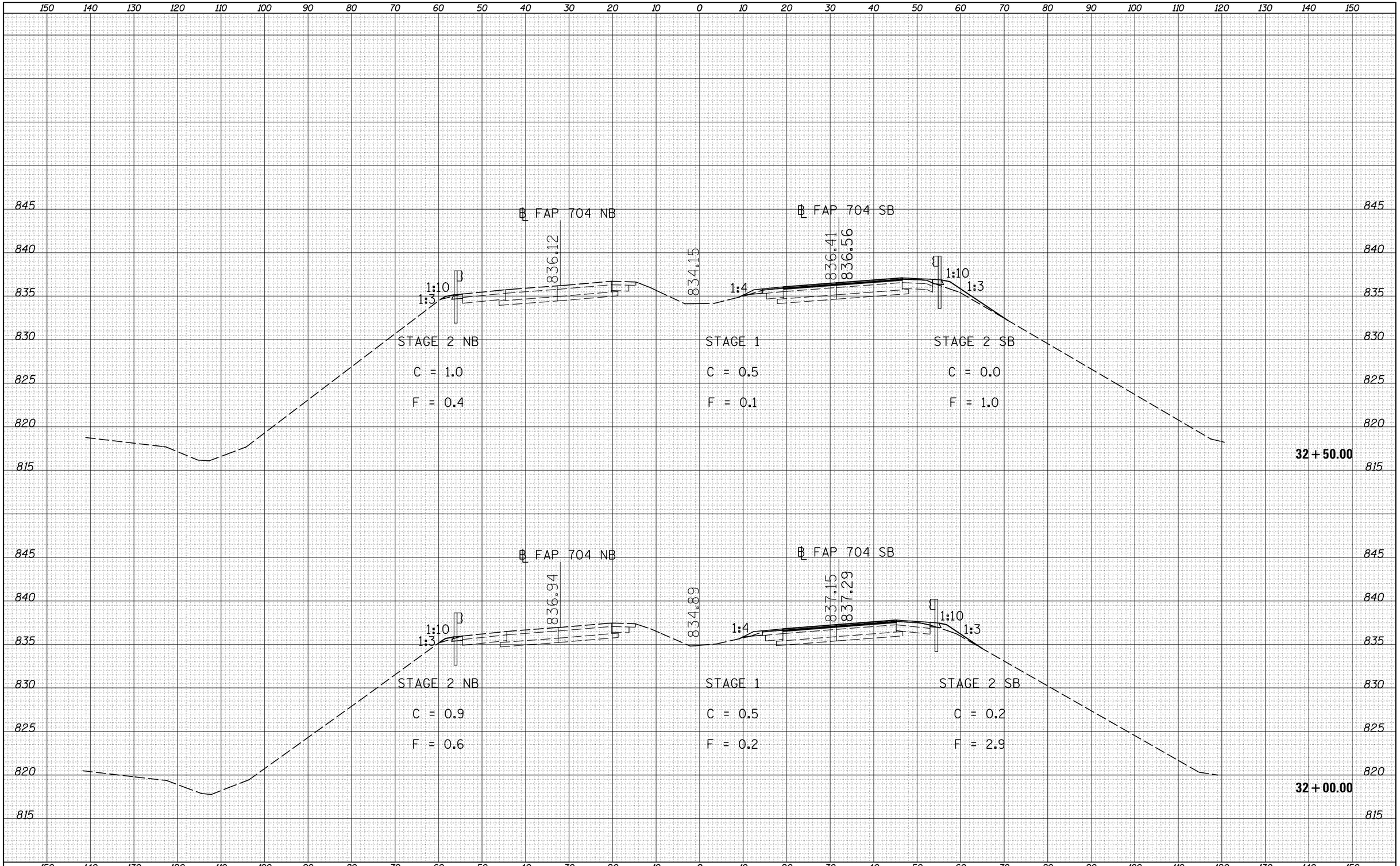
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. 704 CROSS SECTION SHEET

SCALE: | SHEET 3 OF 46 SHEETS | STA. 31+00.00 | TO STA. 31+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	296
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TEMPLATE				
AREAS				
AREAS CHECKED				



ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TEMPLATE				
AREAS				
AREAS CHECKED				

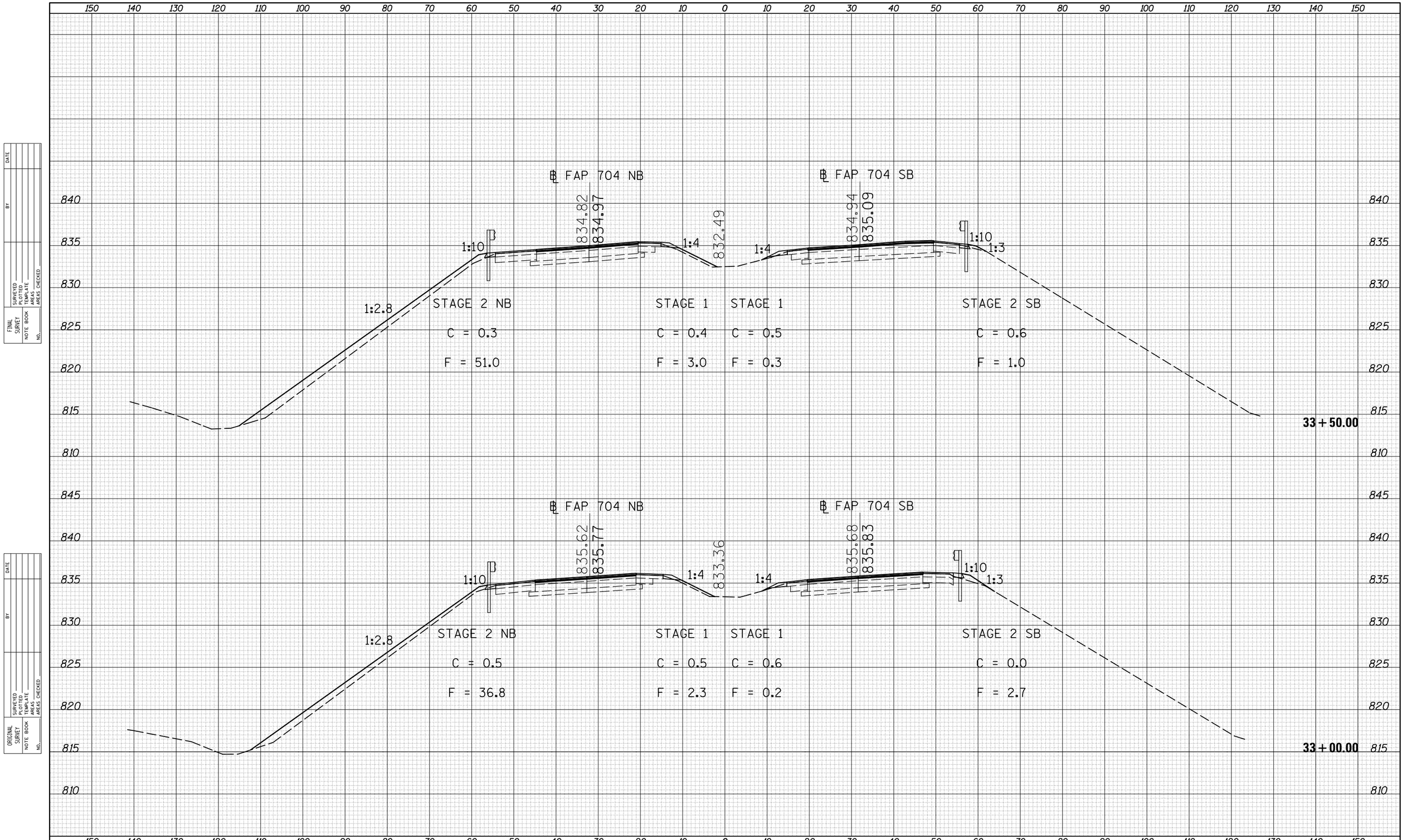
FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-XS-155a.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. 704 CROSS SECTION SHEET

SCALE: | SHEET 4 OF 46 SHEETS | STA. 32+00.00 | TO STA. 32+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	297
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			



FINAL SURVEY	NOTE BOOK	NO.
	SURVEYED	
	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

BY	DATE

ORIGINAL SURVEY	NOTE BOOK	NO.
	SURVEYED	
	PLOTTED	
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

BY	DATE

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-XS-155a.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

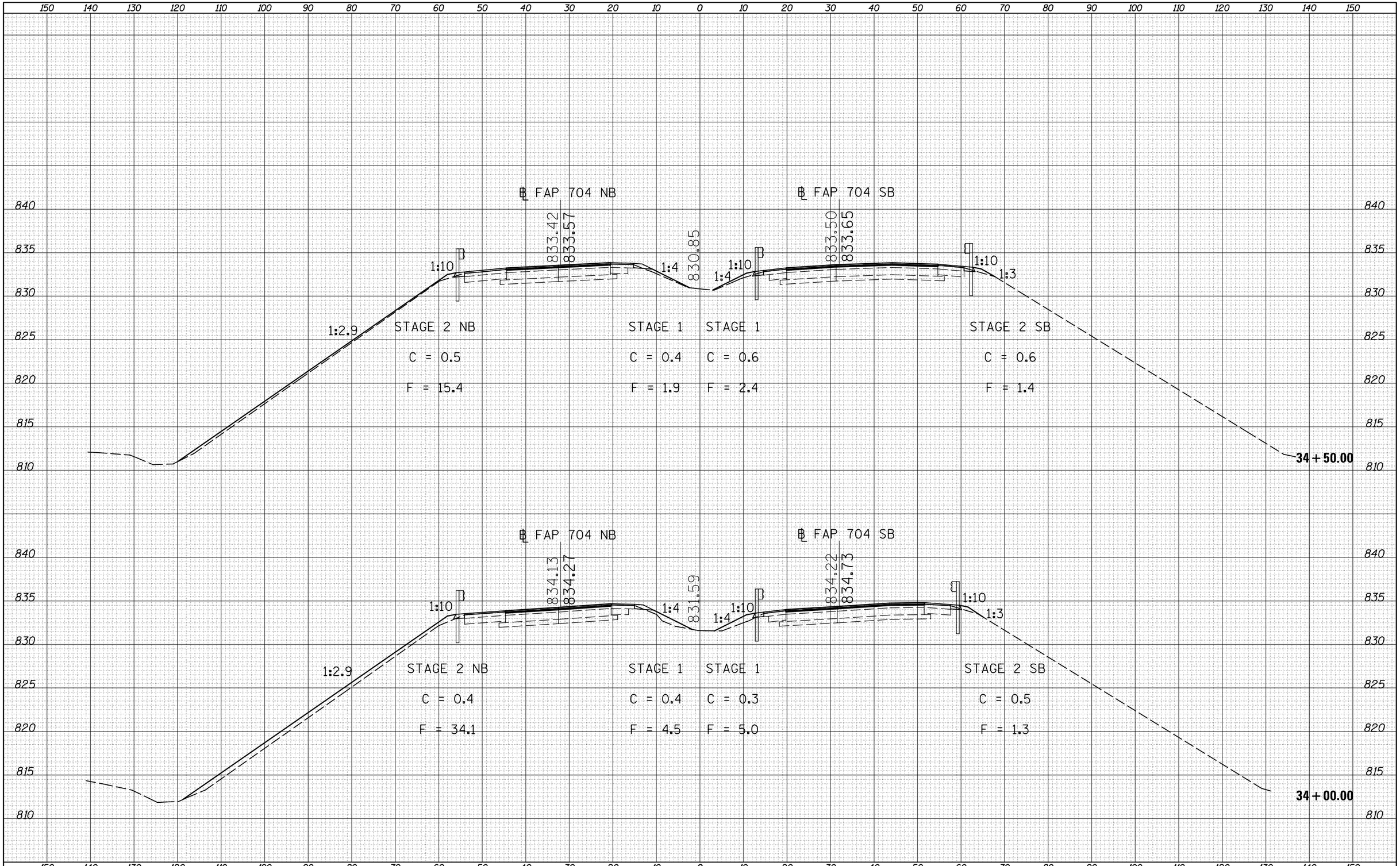
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. 704 CROSS SECTION SHEET

SCALE: | SHEET 5 OF 46 SHEETS | STA. 33+00.00 | TO STA. 33+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	298
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	NOTE BOOK	SURVEYED	BY	DATE
		PLOTTED		
		TEMPLATE		
		AREAS		
NO.		AREAS CHECKED		



ORIGINAL SURVEY	NOTE BOOK	SURVEYED	BY	DATE
		PLOTTED		
		TEMPLATE		
		AREAS		
NO.		AREAS CHECKED		

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-XS-155a.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

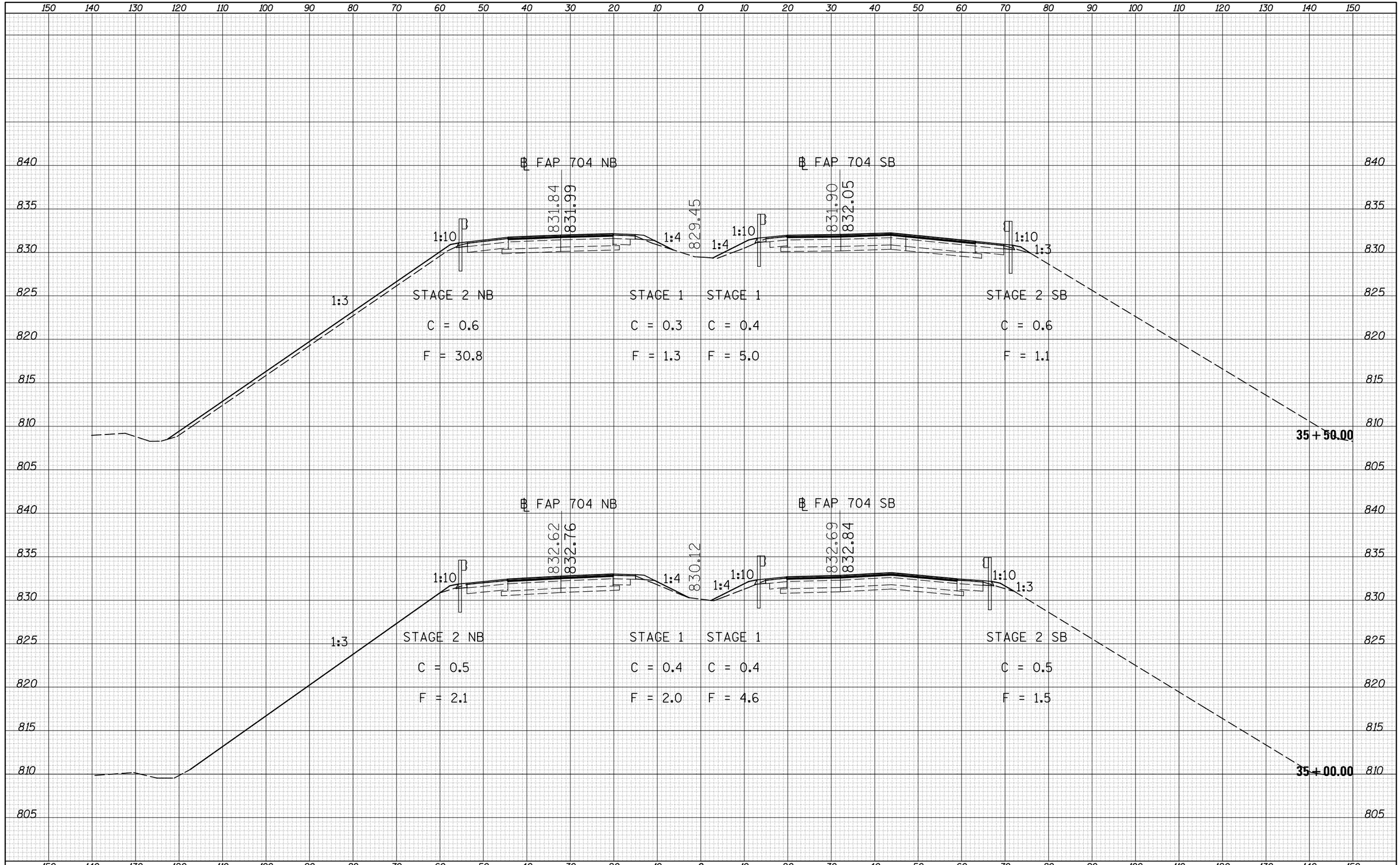
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. 704 CROSS SECTION SHEET

SCALE: | SHEET 6 OF 46 SHEETS | STA. 34+00.00 | TO STA. 34+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	299
		CONTRACT NO. 70570		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	NOTE BOOK	NO.
	SURVEYED	BY
	PLOTTED	DATE
	TEMPLATE	
	AREAS	
	AREAS CHECKED	



ORIGINAL SURVEY	NOTE BOOK	NO.
	SURVEYED	BY
	PLOTTED	DATE
	TEMPLATE	
	AREAS	
	AREAS CHECKED	

FILE NAME = c:\pw_work\pwidot\detersbj\d0157116\D570570-sht-XS-155a.dgn	USER NAME = detersbj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/13/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. 704 CROSS SECTION SHEET

SCALE: | SHEET 7 OF 46 SHEETS | STA. 35+00.00 | TO STA. 35+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
704	57-20(HB,HB-1)BR-1	MCLEAN	440	300
		CONTRACT NO. 70570		
	ILLINOIS	FED. AID PROJECT		