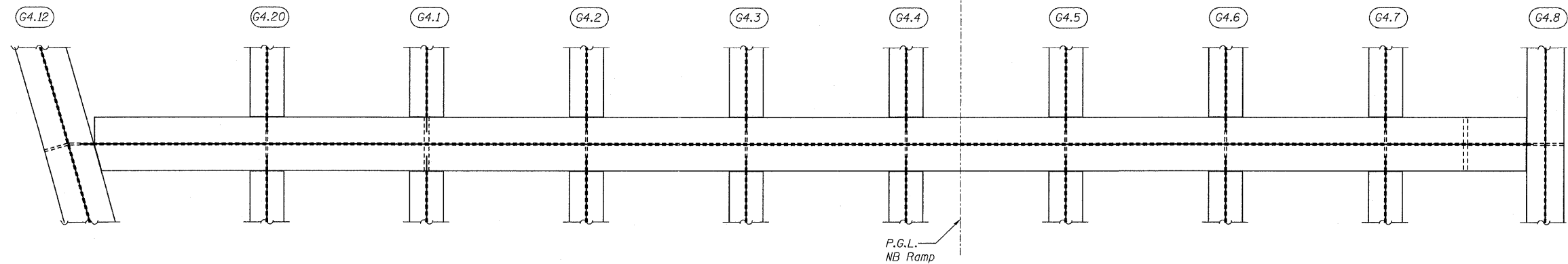
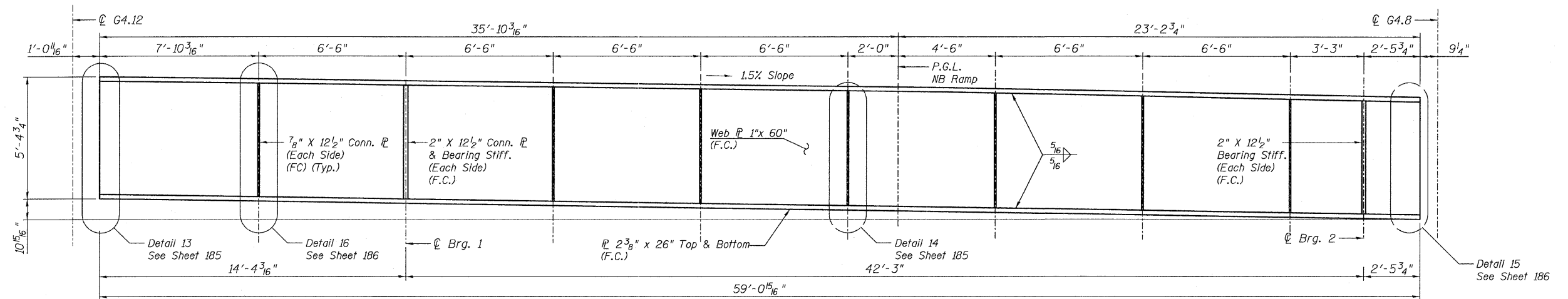


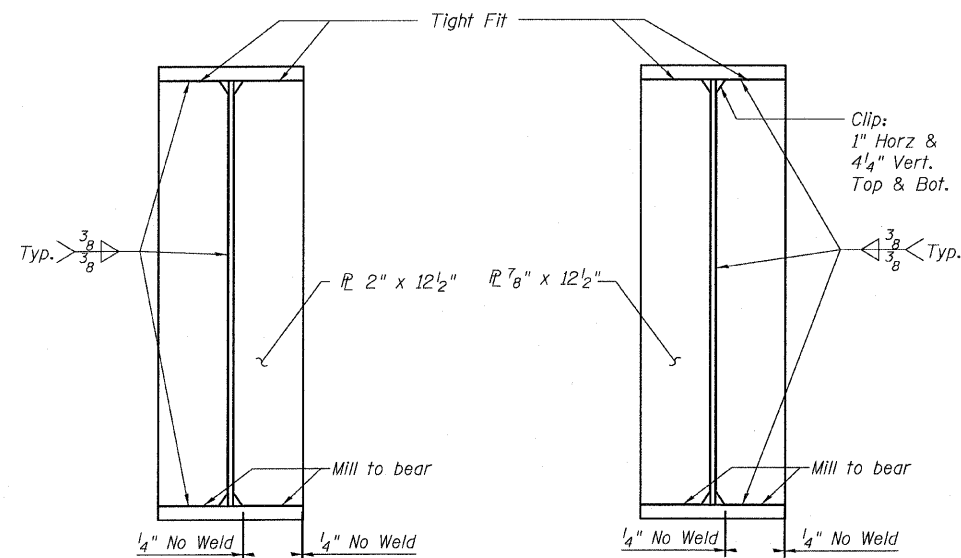
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**CROSSHEAD PLAN - AT R4 PIER**  
(Top Connection Plates Not Shown for Clarity)



**CROSSHEAD ELEVATION - AT R4 PIER (F.C.M.)**  
(Looking West)



**Bearing Stiffener Details**

**Conn. Pl Details**

**TOP OF WEB ELEVATIONS**  
(For Fabrication Only)

LOCATION	ELEVATION
℄ Brg. 1	626.63
℄ Brg. 2	626.00

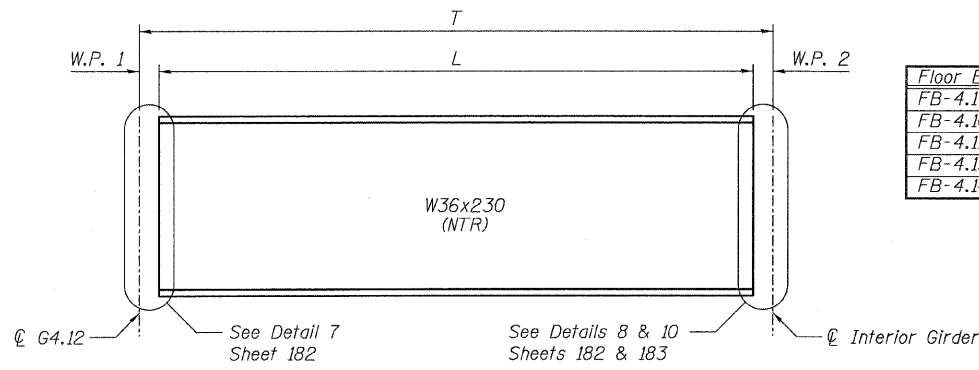
**NOTES:**

- All steel shown on this sheet shall conform to the requirements of AASHTO M270 GR 50.
- Load carrying components designated "NTR" shall conform to the supplemental requirements for Notch Toughness, Zone 2.
- F.C.M. denotes Fracture Critical Member.
- F.C. denotes Fracture Critical Material, AASHTO Zone II.
- Crosshead shall not be cambered.

**CROSSHEAD GIRDER DETAILS**  
**RAMP 4 FLARE**  
**STRUCTURE NO. 016-0724**

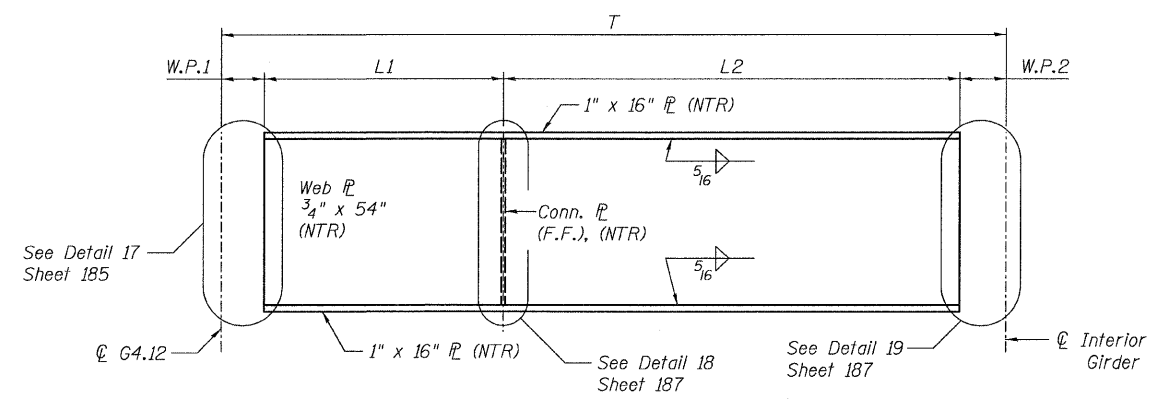
<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH, JMA, PK	REVISIONS		SHEET NO. 177	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	501	
	DRAWN - EKH, JMA, PK				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011			239 SHEETS						

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



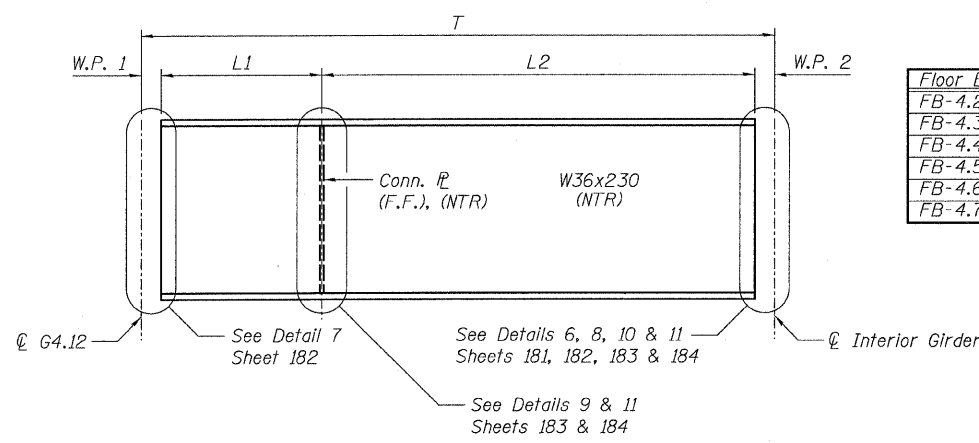
Floor Beam	W.P. 1	W.P. 2	L	T
FB-4.1	1'-2 <sup>5</sup> / <sub>16</sub> "	6 <sup>1</sup> / <sub>4</sub> "	7'-11 <sup>1</sup> / <sub>16</sub> "	9'-8"
FB-4.10	1'-0 <sup>1</sup> / <sub>2</sub> "	8 <sup>1</sup> / <sub>4</sub> "	6'-6 <sup>5</sup> / <sub>16</sub> "	8'-3 <sup>3</sup> / <sub>16</sub> "
FB-4.11	1'-0 <sup>1</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>4</sub> "	3'-9 <sup>5</sup> / <sub>8</sub> "	5'-6 <sup>5</sup> / <sub>16</sub> "
FB-4.13	1'-0 <sup>9</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>4</sub> "	6'-5 <sup>5</sup> / <sub>16</sub> "	8'-1 <sup>1</sup> / <sub>8</sub> "
FB-4.14	1'-0 <sup>1</sup> / <sub>4</sub> "	8 <sup>1</sup> / <sub>4</sub> "	5'-4 <sup>5</sup> / <sub>16</sub> "	7'-0 <sup>13</sup> / <sub>16</sub> "

**FLOOR BEAM ELEVATION**  
(FB-4.1, FB-4.10, FB-4.11, FB-4.13, FB-4.14)



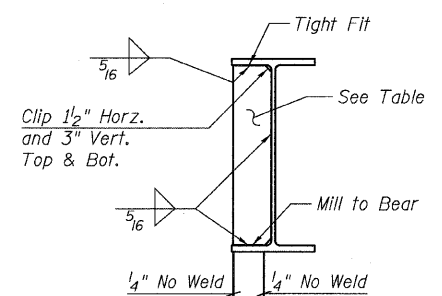
**FLOOR BEAM ELEVATION**  
(FB-4.8, FB-4.9, FB-4.12)  
(Looking West)

Floor Beam	W.P. 1	W.P. 2	L1	L2	T	Conn. P
FB-4.8	1'-0 <sup>13</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>4</sub> "	4'-10"	5'-9 <sup>3</sup> / <sub>4</sub> "	12'-4 <sup>13</sup> / <sub>16</sub> "	5 <sup>8</sup> / <sub>16</sub> " x 7 <sup>3</sup> / <sub>4</sub> "
FB-4.9	1'-0 <sup>9</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>4</sub> "	4'-0 <sup>1</sup> / <sub>16</sub> "	5'-9 <sup>3</sup> / <sub>4</sub> "	11'-6 <sup>5</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>16</sub> " x 7 <sup>3</sup> / <sub>4</sub> "
FB-4.12	1'-0 <sup>3</sup> / <sub>8</sub> "	8 <sup>1</sup> / <sub>4</sub> "	2'-3 <sup>1</sup> / <sub>2</sub> "	5'-9 <sup>3</sup> / <sub>4</sub> "	9'-9 <sup>1</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>16</sub> " x 7 <sup>3</sup> / <sub>4</sub> "

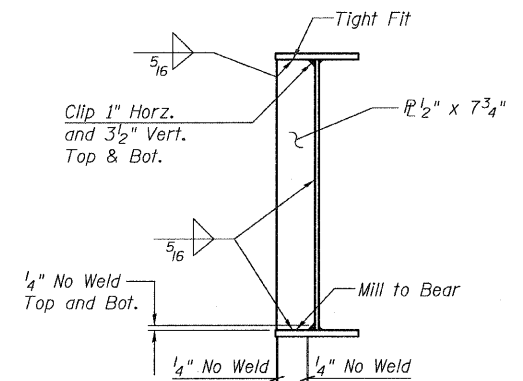


Floor Beam	W.P. 1	W.P. 2	L1	L2	T	Conn. P
FB-4.2	1'-2 <sup>1</sup> / <sub>16</sub> "	6 <sup>1</sup> / <sub>4</sub> "	3'-2 <sup>5</sup> / <sub>16</sub> "	5'-11 <sup>3</sup> / <sub>4</sub> "	10'-11"	5 <sup>8</sup> / <sub>16</sub> " x 7 <sup>3</sup> / <sub>4</sub> "
FB-4.3	1'-1 <sup>1</sup> / <sub>8</sub> "	6 <sup>1</sup> / <sub>4</sub> "	3'-2 <sup>3</sup> / <sub>8</sub> "	5'-11 <sup>3</sup> / <sub>4</sub> "	10'-10 <sup>1</sup> / <sub>4</sub> "	5 <sup>8</sup> / <sub>16</sub> " x 7 <sup>3</sup> / <sub>4</sub> "
FB-4.4	1'-1 <sup>1</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>2</sub> "	2'-2 <sup>1</sup> / <sub>4</sub> "	5'-9 <sup>1</sup> / <sub>2</sub> "	9'-9 <sup>15</sup> / <sub>16</sub> "	5 <sup>8</sup> / <sub>16</sub> " x 7 <sup>3</sup> / <sub>4</sub> "
FB-4.5	1'-1 <sup>3</sup> / <sub>8</sub> "	8 <sup>1</sup> / <sub>2</sub> "	1'-10 <sup>1</sup> / <sub>2</sub> "	5'-9 <sup>1</sup> / <sub>2</sub> "	9'-5 <sup>8</sup> / <sub>16</sub> "	5 <sup>8</sup> / <sub>16</sub> " x 7 <sup>3</sup> / <sub>4</sub> "
FB-4.6	1'-1 <sup>1</sup> / <sub>8</sub> "	8 <sup>1</sup> / <sub>2</sub> "	2'-2 <sup>1</sup> / <sub>16</sub> "	5'-9 <sup>1</sup> / <sub>2</sub> "	9'-9 <sup>15</sup> / <sub>16</sub> "	5 <sup>8</sup> / <sub>16</sub> " x 7 <sup>3</sup> / <sub>4</sub> "
FB-4.7	1'-1"	8 <sup>1</sup> / <sub>4</sub> "	3'-2 <sup>1</sup> / <sub>16</sub> "	5'-9 <sup>3</sup> / <sub>4</sub> "	10'-9 <sup>1</sup> / <sub>16</sub> "	5 <sup>8</sup> / <sub>16</sub> " x 7 <sup>3</sup> / <sub>4</sub> "

**FLOOR BEAM ELEVATION**  
(FB-4.2 thru FB-4.7)  
(Looking West)



**CONN. P DETAILS**  
(FB-4.2 to FB-4.7)



**CONN. P DETAILS**  
(FB-4.8, FB-4.9, FB-4.12)

- NOTES:**
- All steel shown on this sheet shall conform to the requirements of AASHTO M270 GR 50.
  - Load carrying components designated "NTR" shall conform to the supplemental requirements for Notch Toughness, Zone 2.
  - F.F. denotes Far Face.

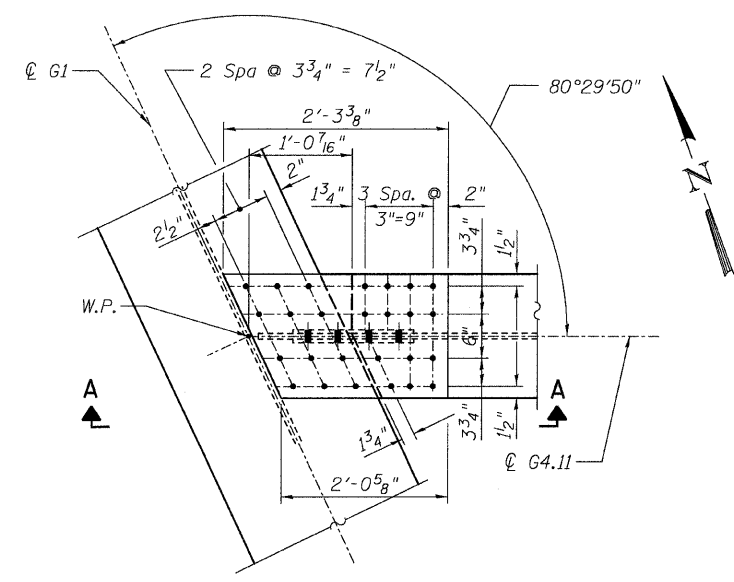
**FLOOR BEAM DETAILS**  
**RAMP 4 FLARE**  
**STRUCTURE NO. 016-0724**

<p><b>TYLIN INTERNATIONAL</b></p>	DESIGNED - EKH, JMA	REVISIONS		<p>SHEET NO. 178</p> <p>239 SHEETS</p>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	502	
	DRAWN - EKH, JMA				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

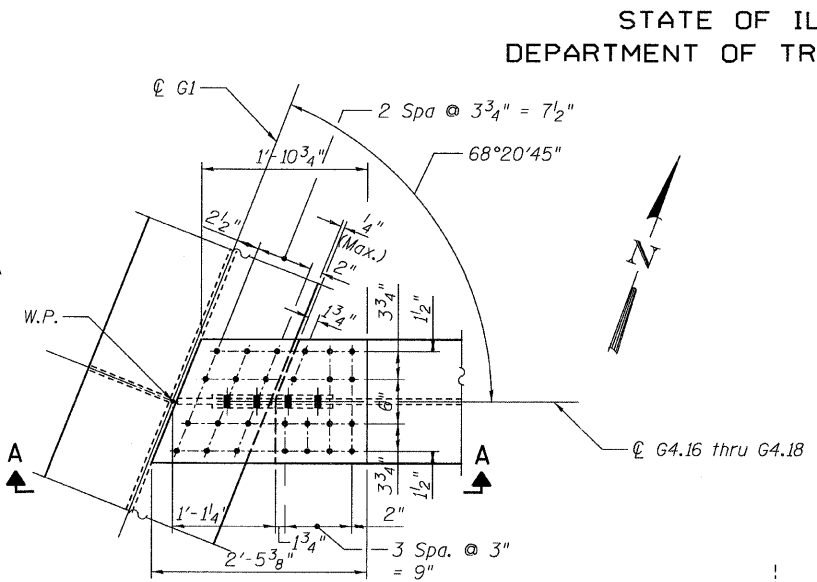
5/10/2011 5:58:54 PM p:\01345\structure\2 Central Ave. 016-0724\5574 Framed\10.dgn



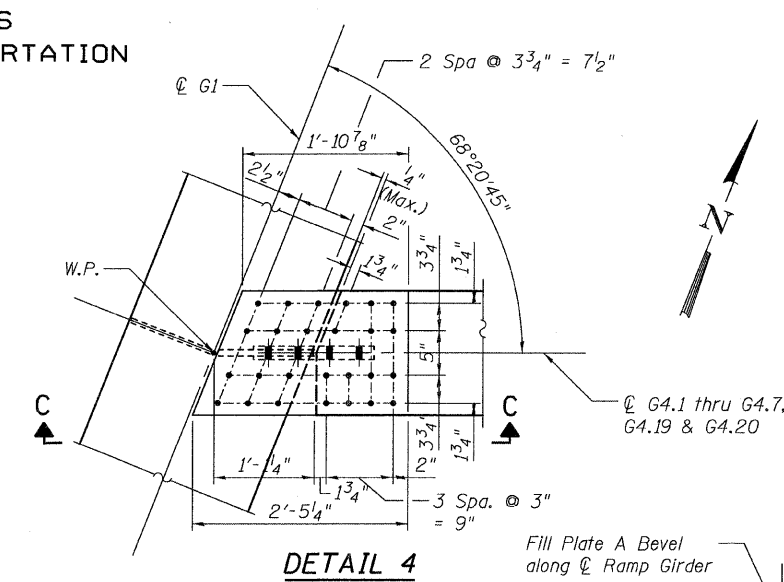
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



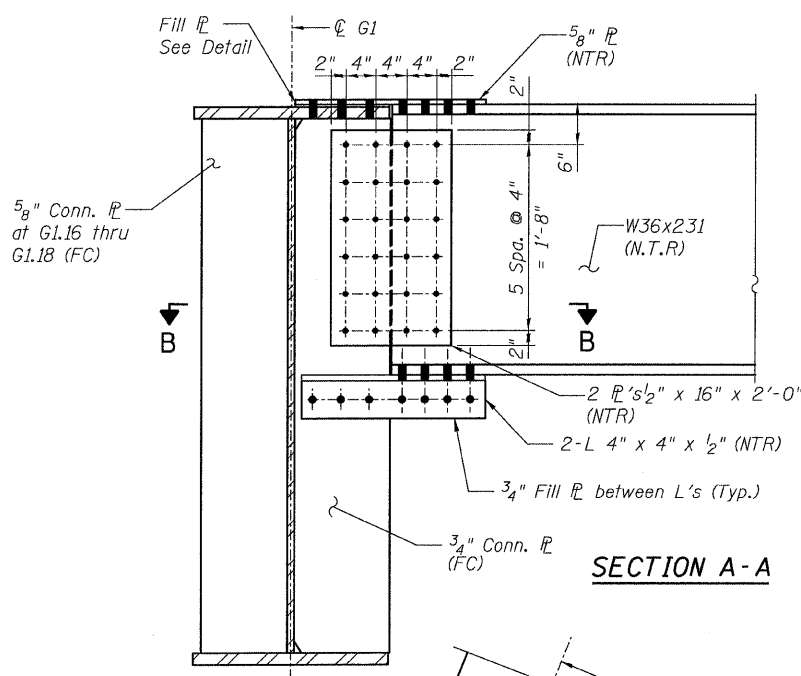
**DETAIL 3**  
(Top Flange @ G4.11)



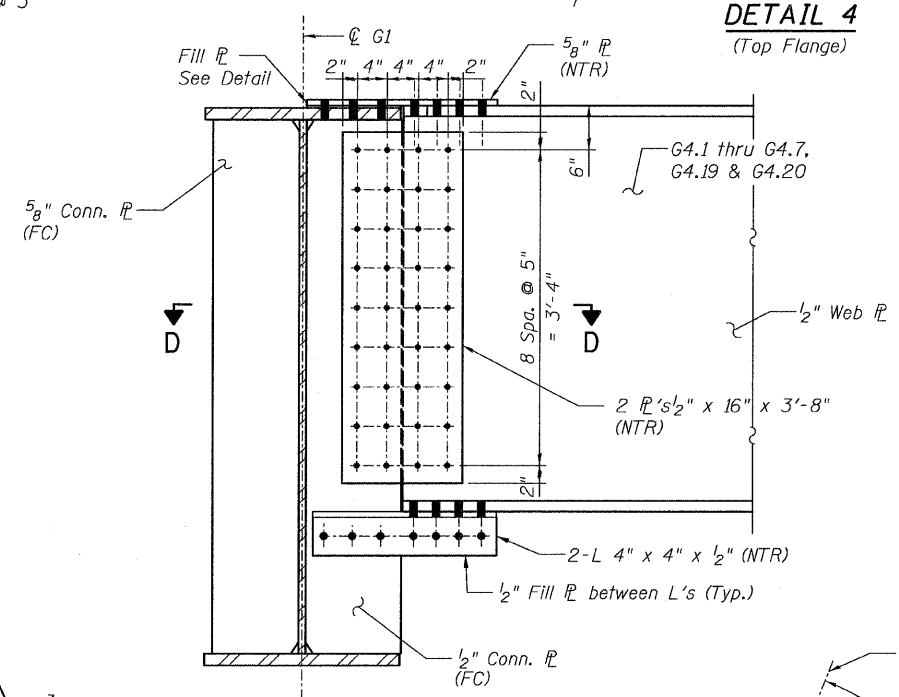
**DETAIL 3**  
(Top Flange @ G4.16 thru G4.18)



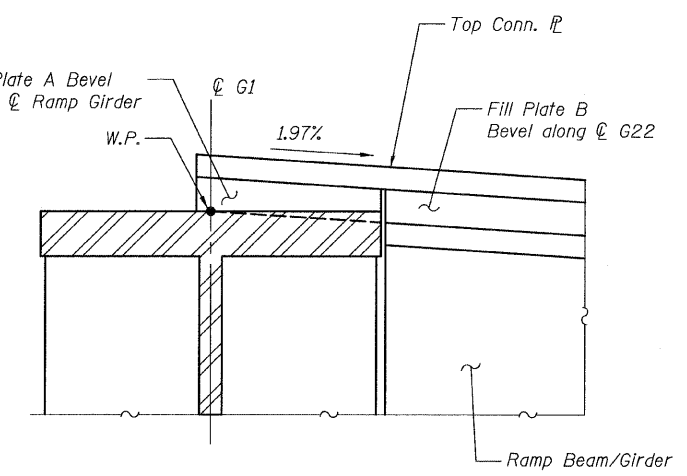
**DETAIL 4**  
(Top Flange)



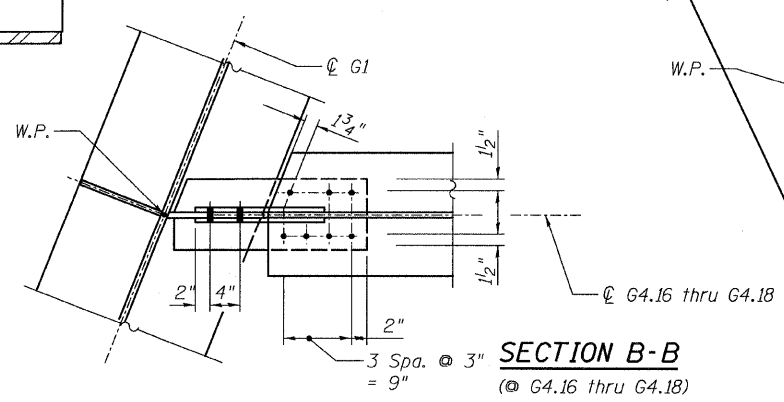
**SECTION A-A**



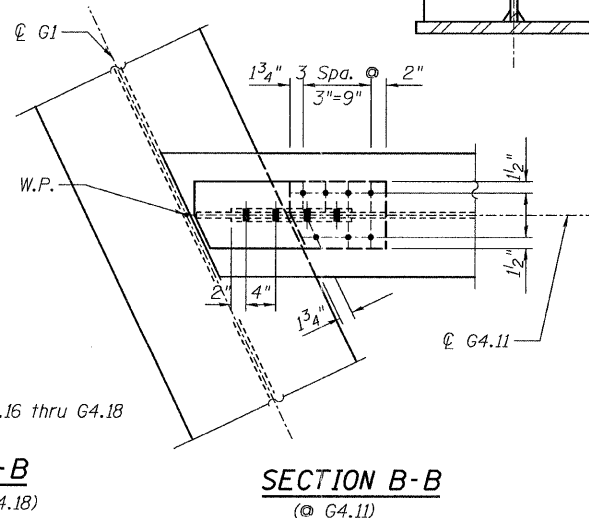
**SECTION C-C**



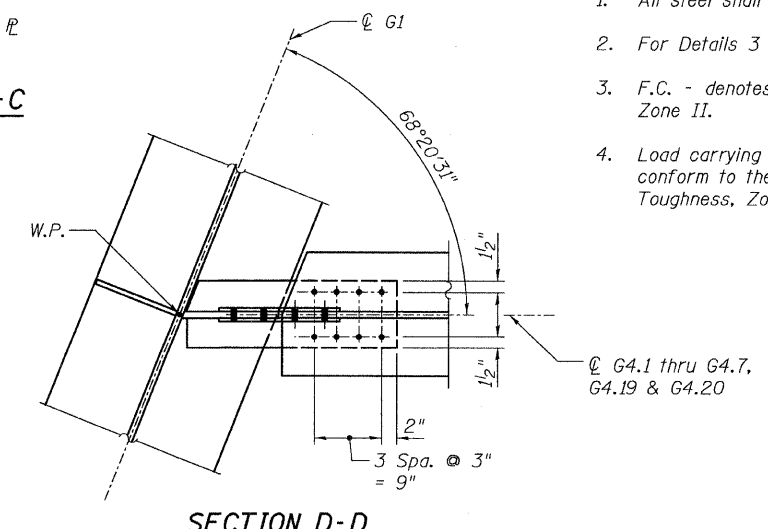
**FILL @ DETAIL**



**SECTION B-B**  
(@ G4.16 thru G4.18)



**SECTION B-B**  
(@ G4.11)



**SECTION D-D**

**NOTES:**

- All steel shall be AASHTO M270 Grade 50
- For Details 3 and 4 locations, see Sheet 97.
- F.C. - denotes Fracture Critical Material, AASHTO Zone II.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

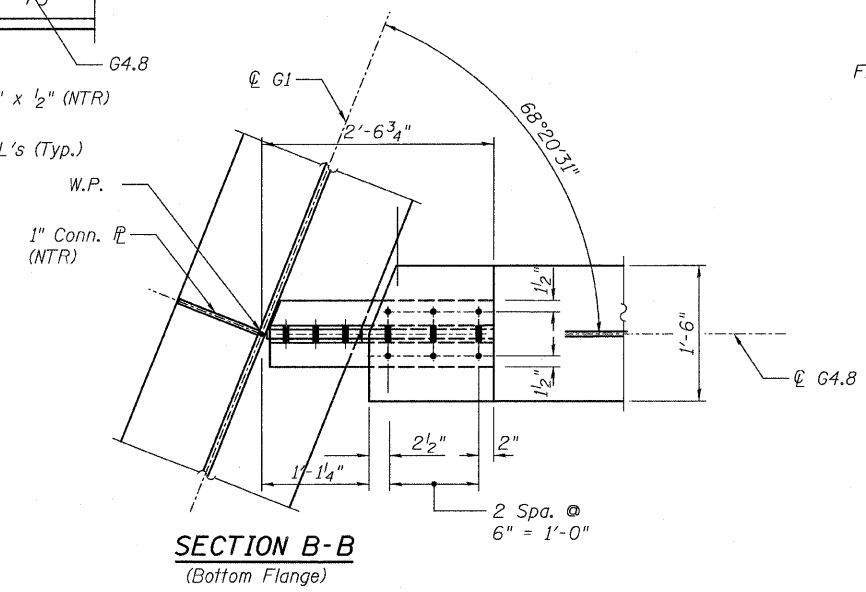
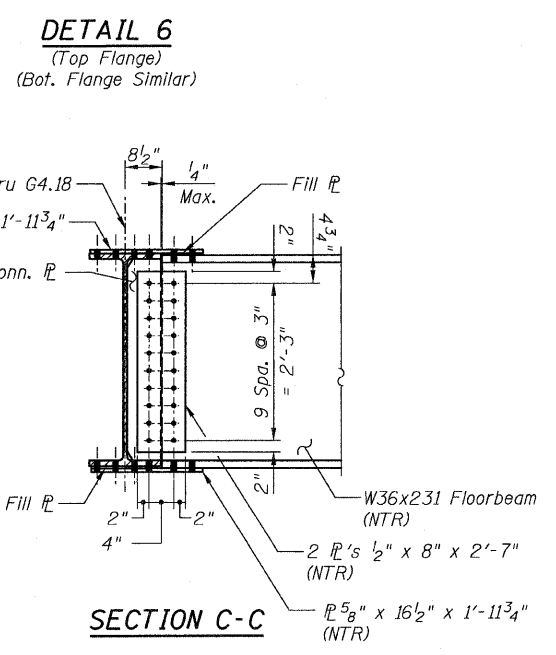
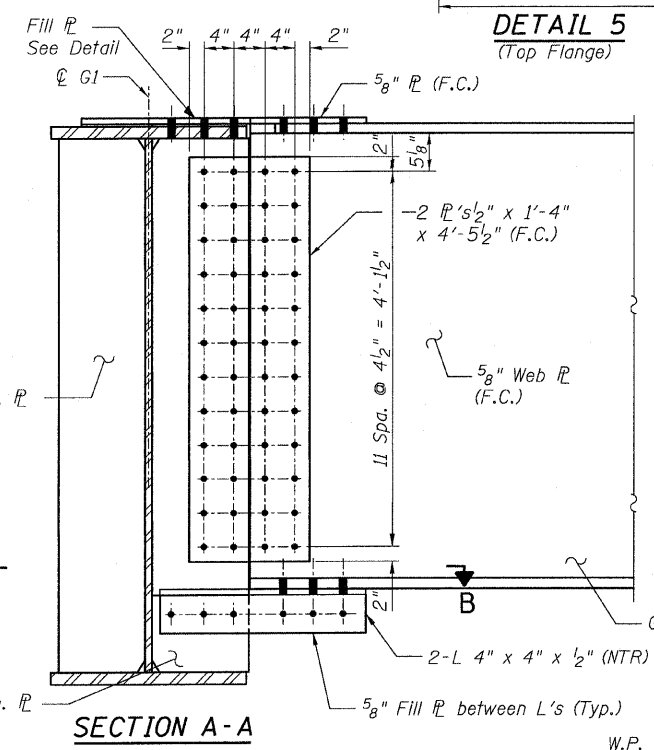
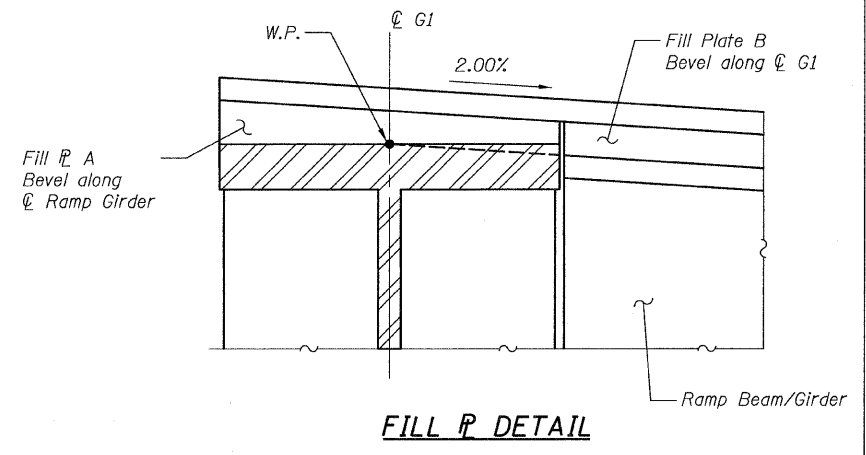
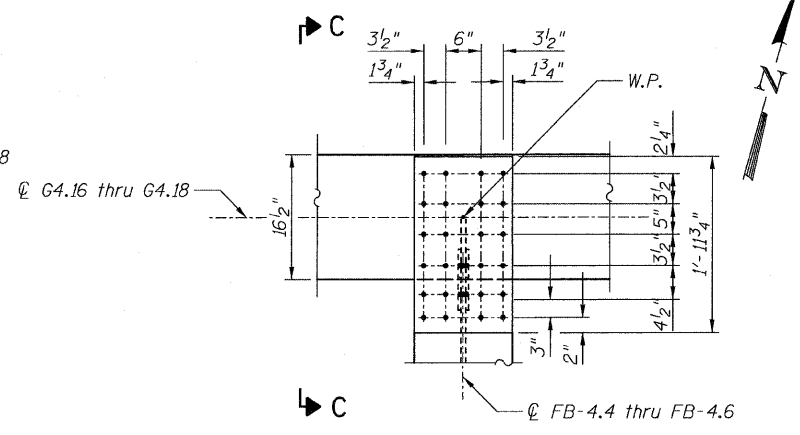
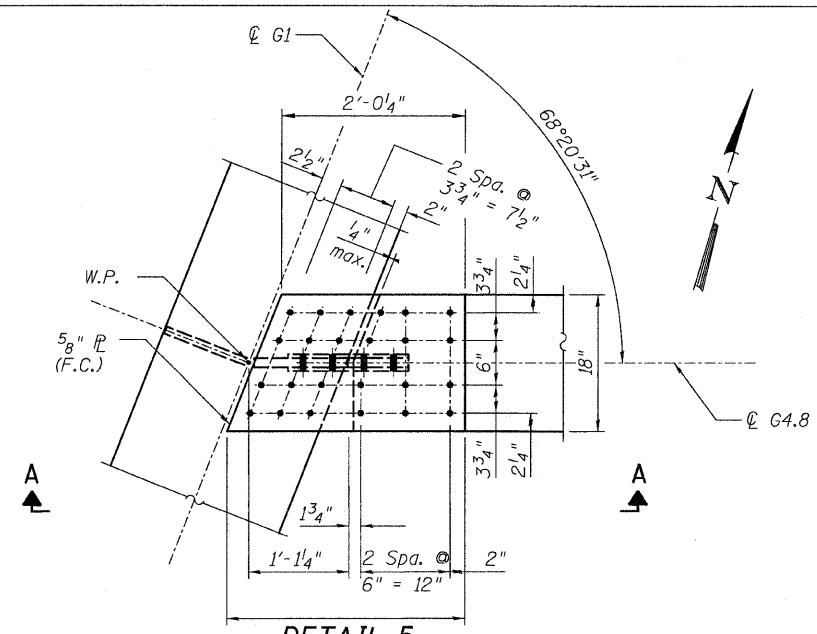
**CONNECTION DETAILS 3&4**  
**RAMP 4 FLARE**  
**STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH, JMA	REVISIONS		SHEET NO. 180	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		239 SHEETS	55	0711.2R & 1011.1BR	COOK	741	504
	DRAWN - EKH, JMA					CONTRACT NO. 60999				
	CHECKED - AMD,					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011									

5/9/2011 9:09:13 AM p:\01345\structure\02 Central Ave. 016-0724\5514\Framed112.dgn



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



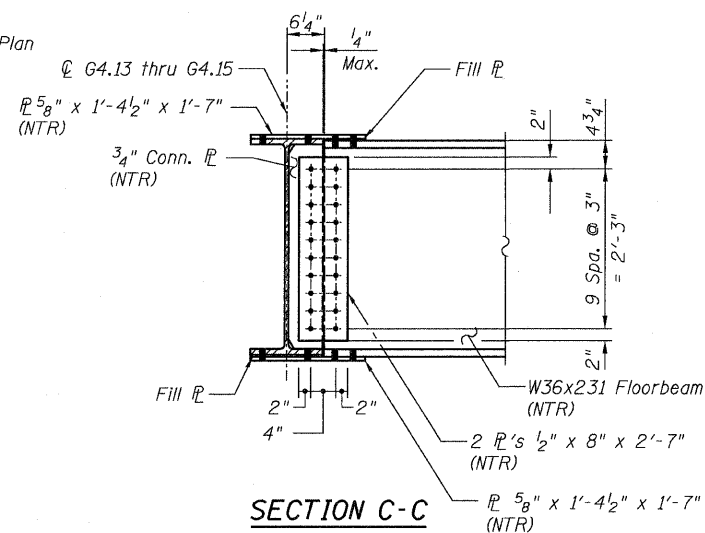
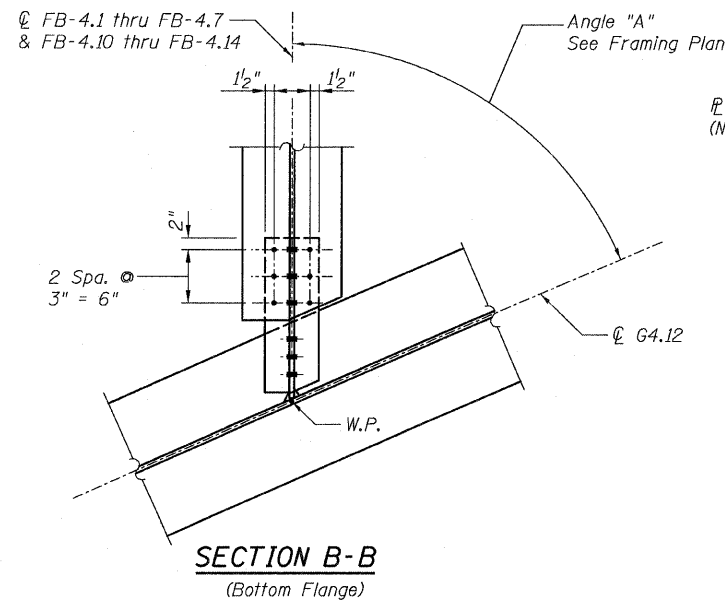
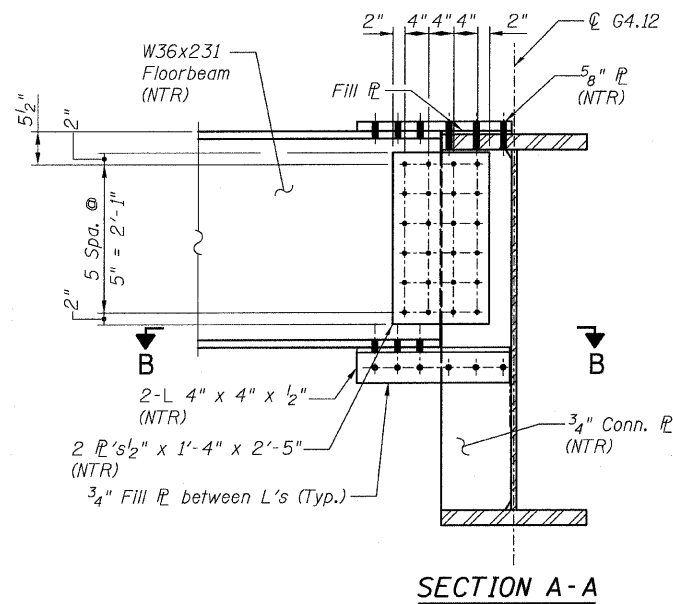
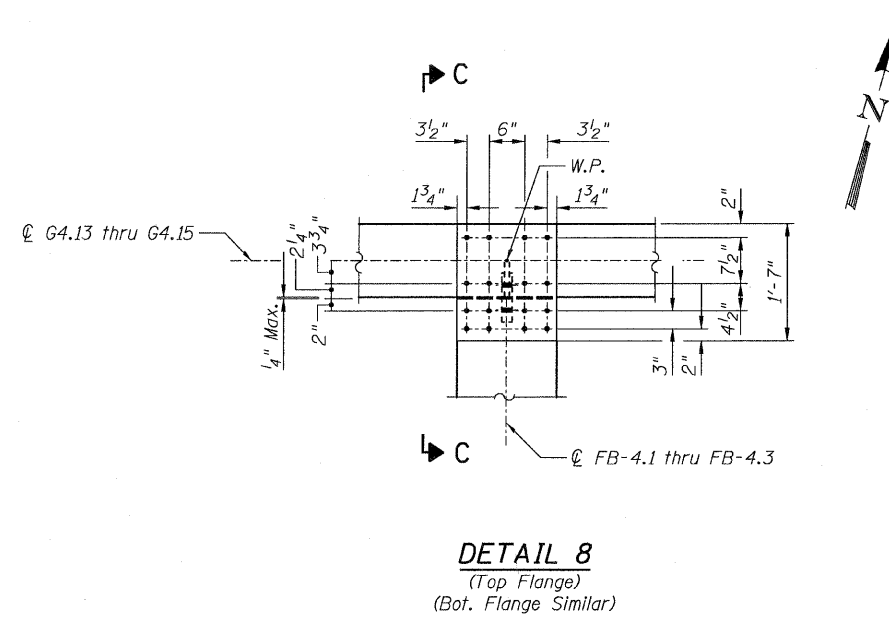
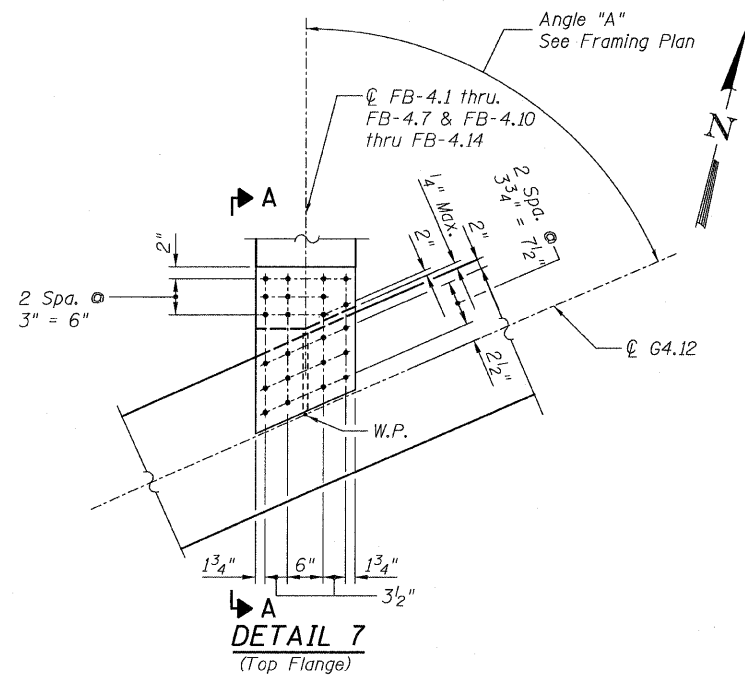
- NOTES:**
- All steel shall be AASHTO M270 Grade 50.
  - For Details 5 and 6 locations, see Sheet 97.
  - F.C. - denotes Fracture Critical Material, AASHTO Zone II.
  - Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

**CONNECTION DETAILS 5&6  
RAMP 4 FLARE  
STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH, JMA	REVISIONS		SHEET NO. 181	F.A.I RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 505
	CHECKED - AMD,	NAME	DATE						
	DRAWN - EKH, JMA								
	CHECKED - AMD,								
DATE - 03/25/2011				239 SHEETS	CONTRACT NO. 60999				
					FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT				

pi:\01345\structure\VC2\_Central\_Ave\_016-0724\_155744\amedt113.dgn 4/28/2011 12:58:14 PM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



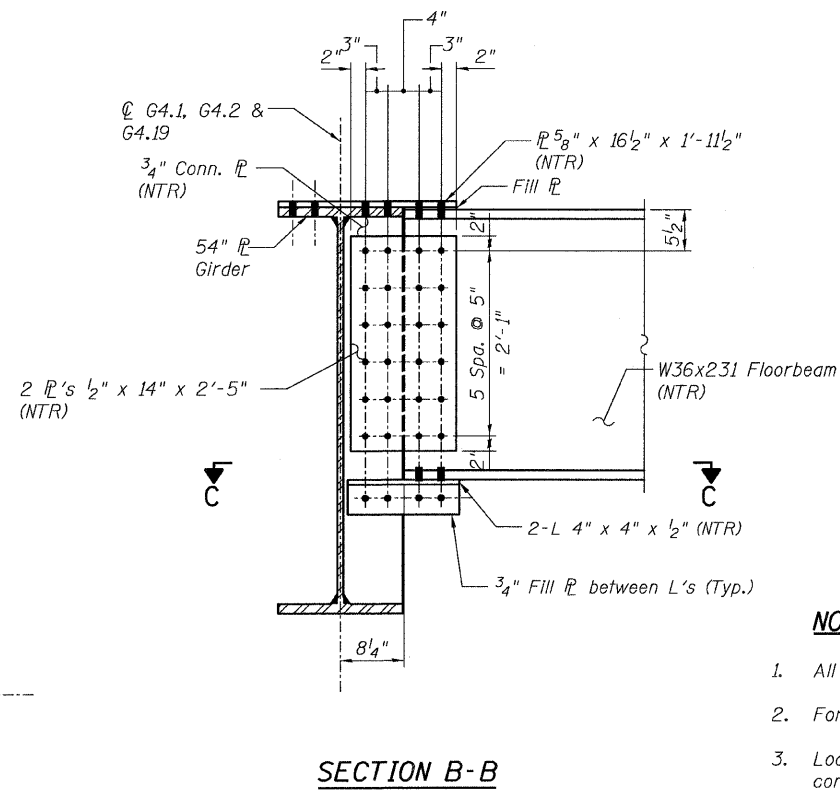
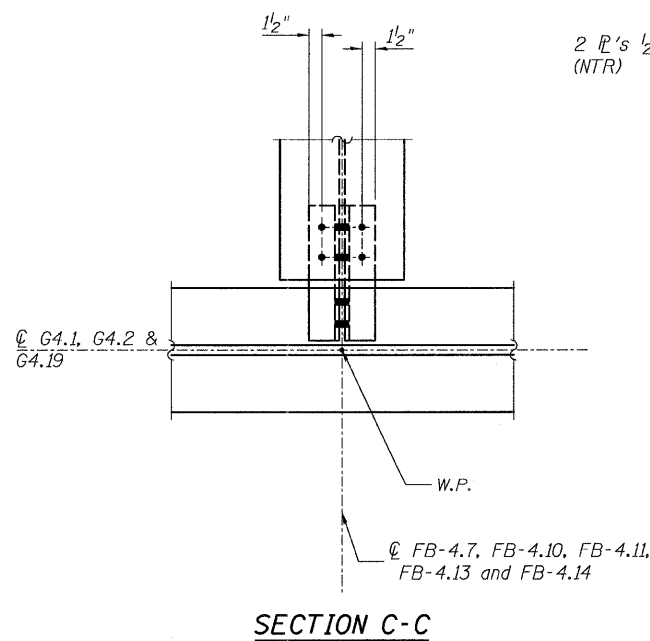
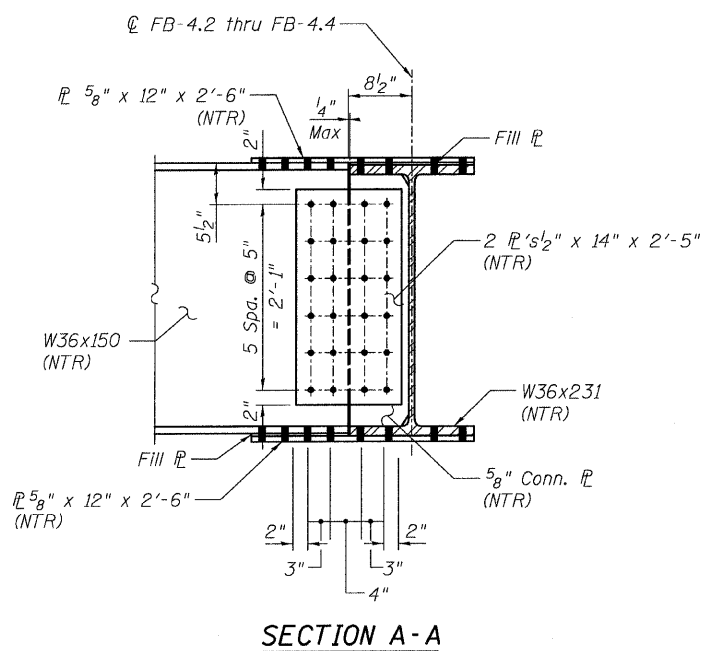
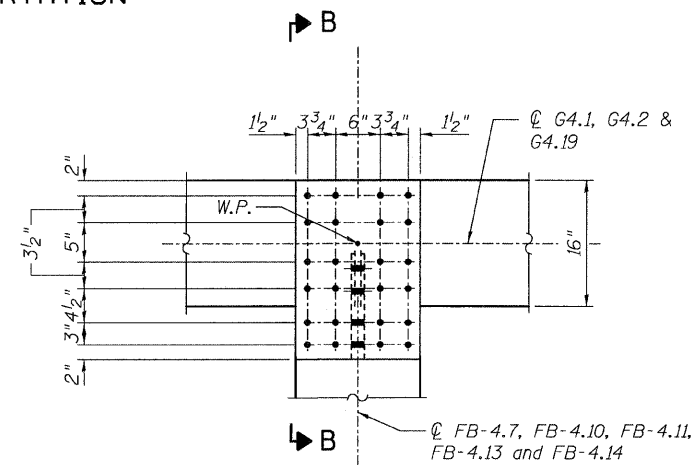
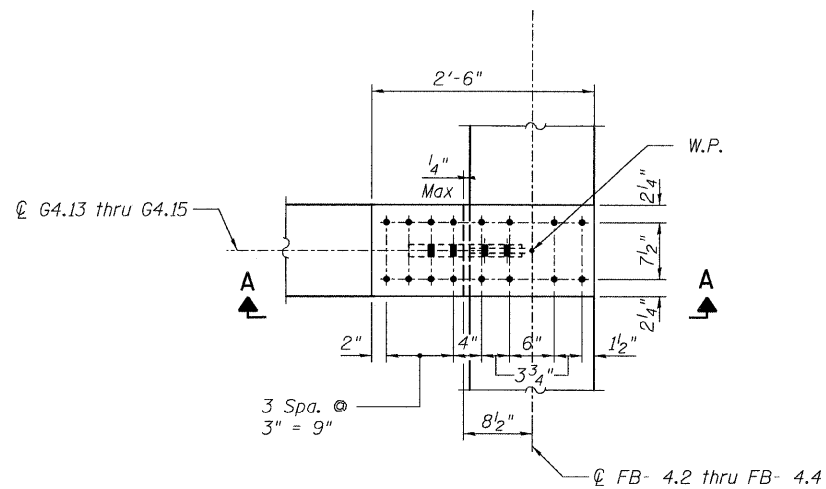
- NOTES:**
- All steel shall be AASHTO M270 Grade 50.
  - For Details 7 and 8 locations, see Sheet 97.
  - Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

**CONNECTION DETAILS 7&8**  
**RAMP 4 FLARE**  
**STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH, JMA	REVISIONS		SHEET NO. 182	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	506	
	DRAWN - EKH, JMA				239 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

12:58:15 PM  
pi:\01345\structure\02 Central Ave. 016-0724\5574framedt11.dgn  
4/28/2011

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**NOTES:**

- All steel shall be AASHTO M270 Grade 50.
- For Details 9 and 10 locations, see Sheet 97.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

**CONNECTION DETAILS 9&10  
RAMP 4 FLARE  
STRUCTURE NO. 016-0724**

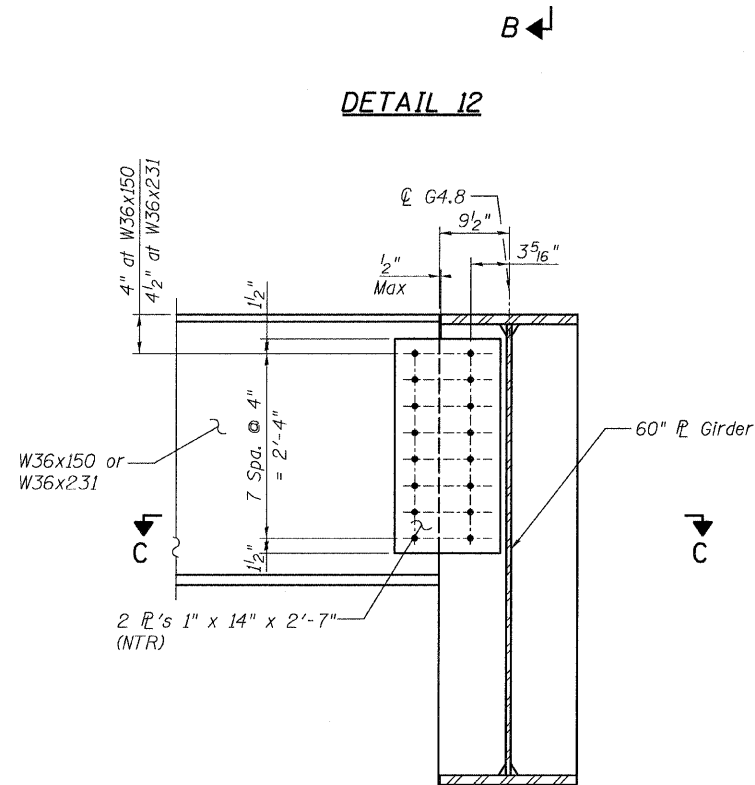
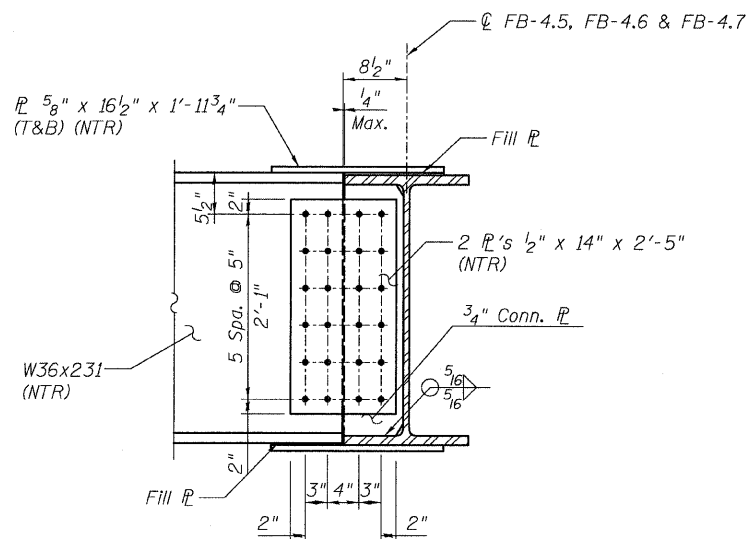
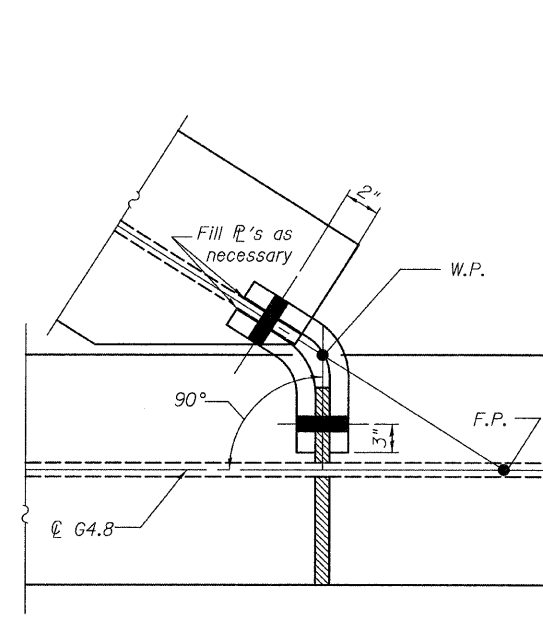
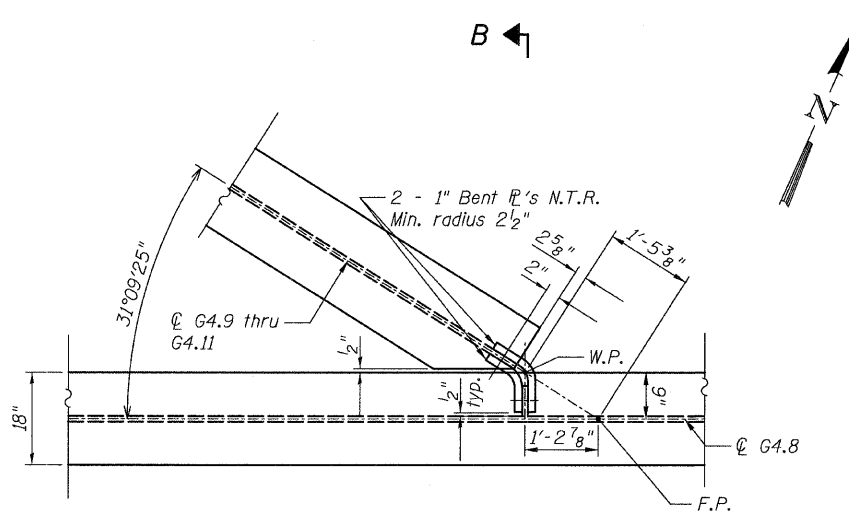
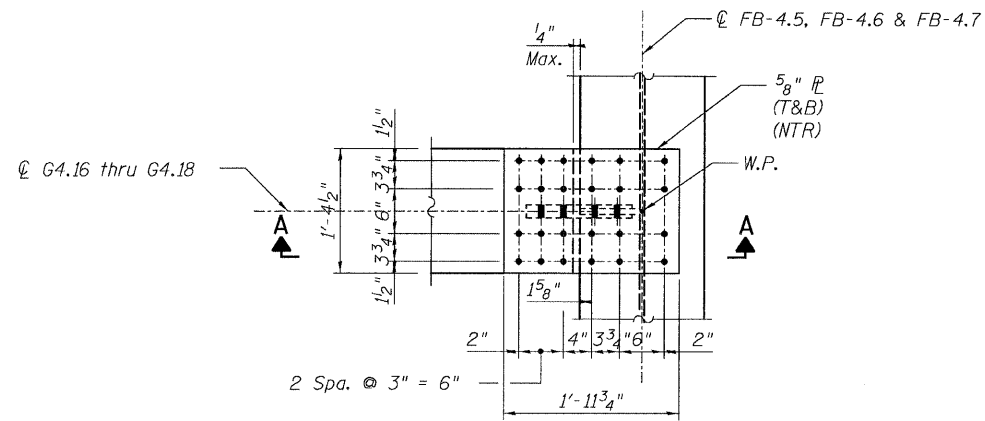
**TYLIN** INTERNATIONAL

DESIGNED	REVISIONS
- EKH, JMA	NAME
CHECKED - AMD,	DATE
DRAWN - EKH, JMA	
CHECKED - AMD,	
DATE - 03/25/2011	

SHEET NO. 183	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
239 SHEETS	55	0711.2R & 1011.1BR	COOK	741	507
			CONTRACT NO. 60999		
			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

5/9/2011 9:09:14 AM p:\01345\structure\C2\_Central\_Ave\_016-0724\155644\Framed115.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



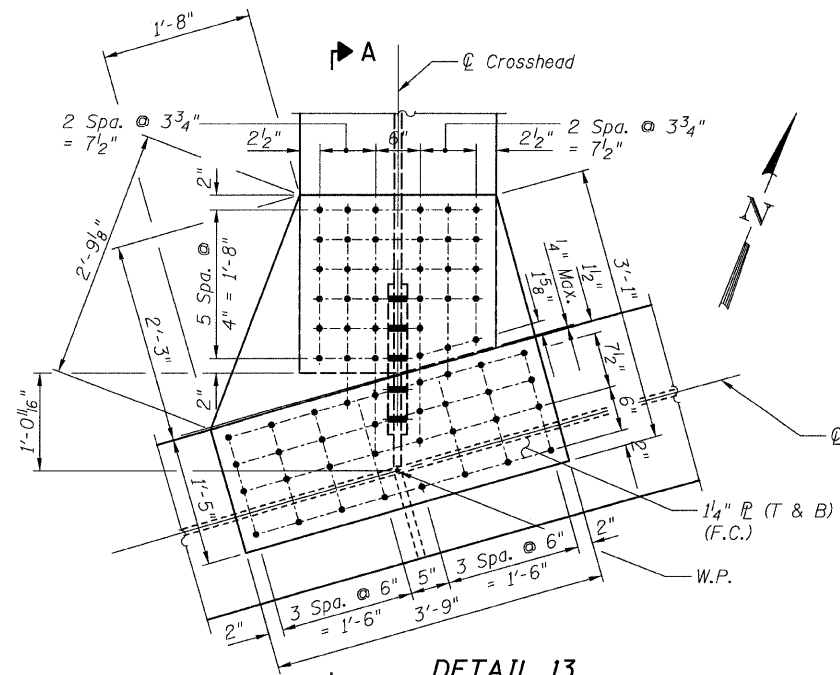
- NOTES:**
- All steel shall be AASHTO M270 Grade 50.
  - For Details 11 and 12 locations, see Sheet 97.
  - F.C. - denotes Fracture Critical Material, AASHTO Zone II.
  - Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

**CONNECTION DETAILS 11&12  
RAMP 4 FLARE  
STRUCTURE NO. 106-0724**

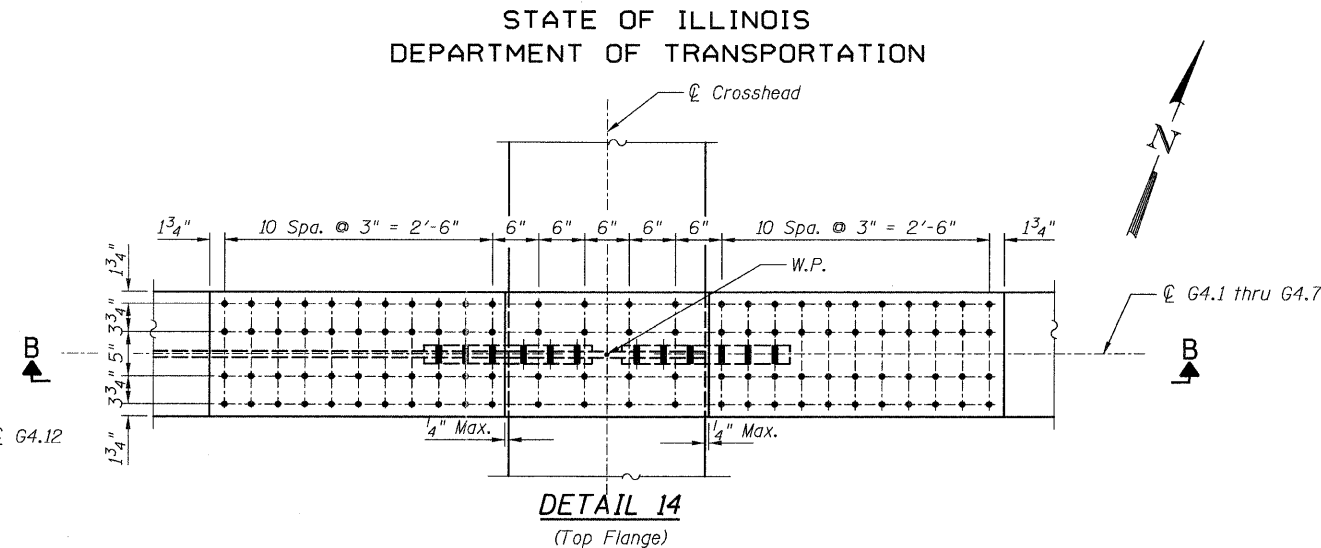
<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH, JMA	REVISIONS	
	CHECKED - AMD,	NAME	DATE
	DRAWN - EKH, JMA		
	CHECKED - AMD,		
	DATE - 03/25/2011		

SHEET NO. 184	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	239 SHEETS	55	0711.2R & 1011.1BR	COOK	741
			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1			ILLINOIS	FED. AID PROJECT	

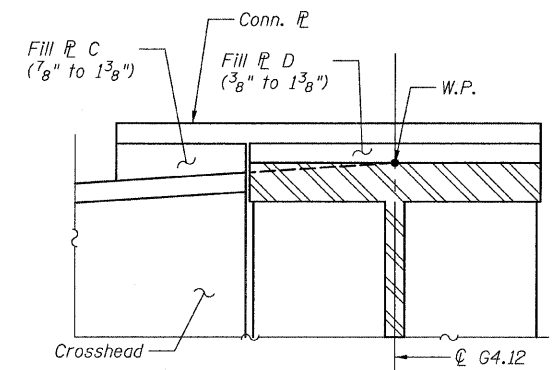
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



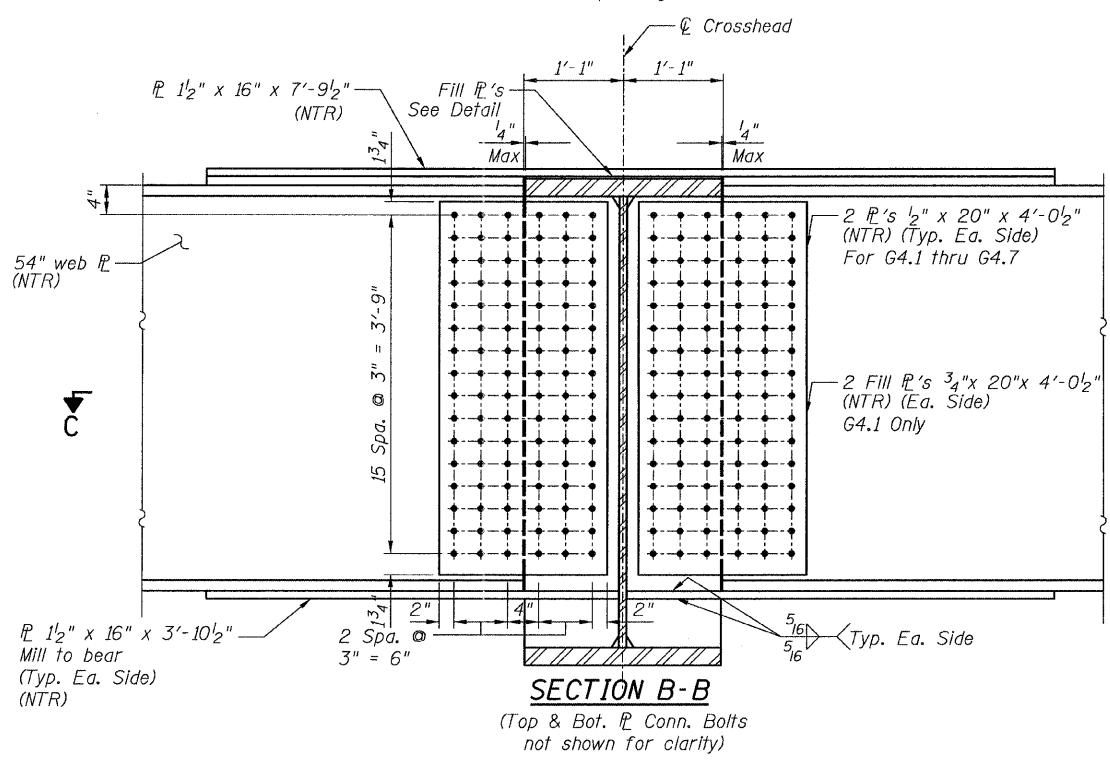
**DETAIL 13**  
(Top Flange)  
(Bottom Flange Similar)



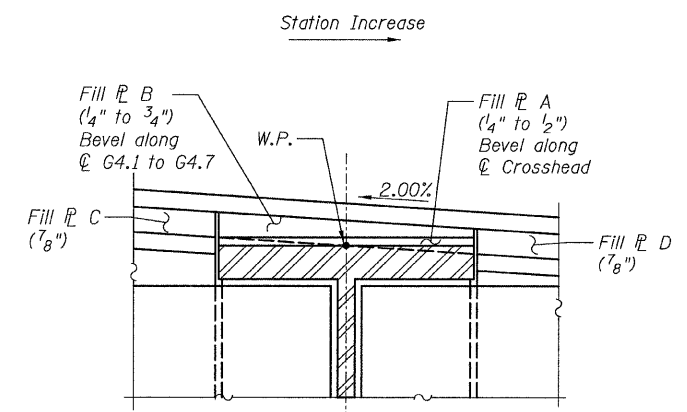
**DETAIL 14**  
(Top Flange)



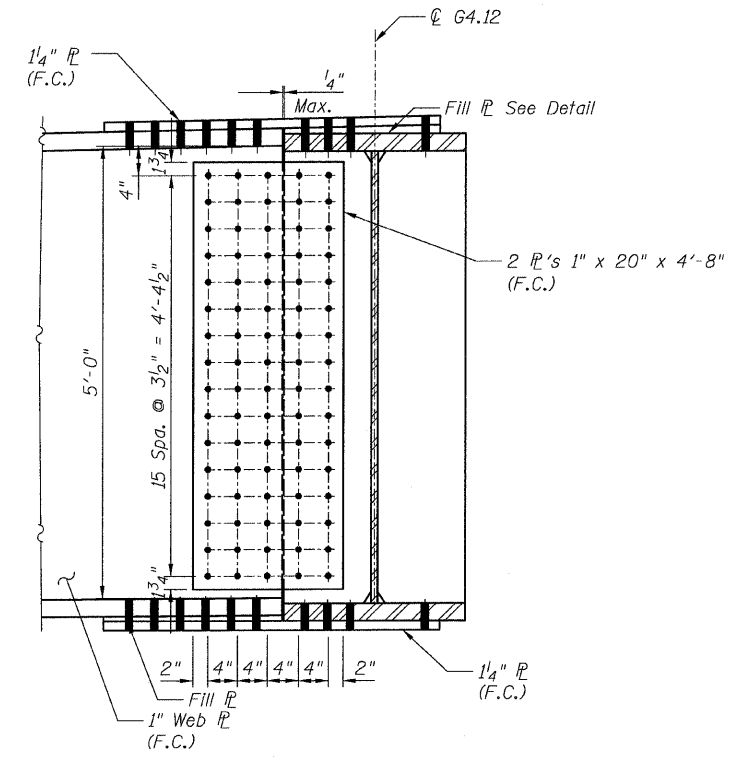
**FILL P DETAIL G 4.12**



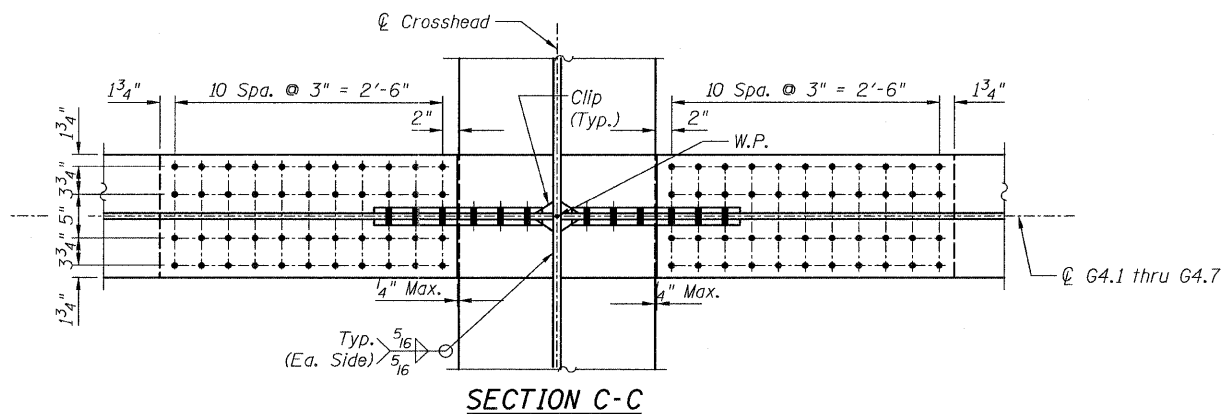
**SECTION B-B**  
(Top & Bot. R Conn. Bolts not shown for clarity)



**FILL P DETAIL**



**SECTION A-A**



**SECTION C-C**

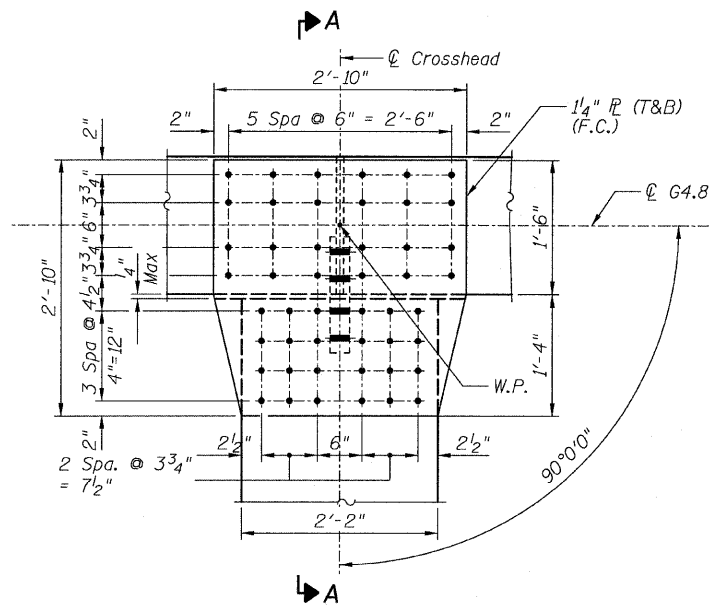
- NOTES:**
- All steel shall be AASHTO M270 Grade 50.
  - For Details 13 and 14 locations, see Sheet 97.
  - F.C. - denotes Fracture Critical Material, AASHTO Zone II.
  - Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

**CONNECTION DETAILS 13&14**  
**RAMP 4 FLARE**  
**STRUCTURE NO. 016-0724**

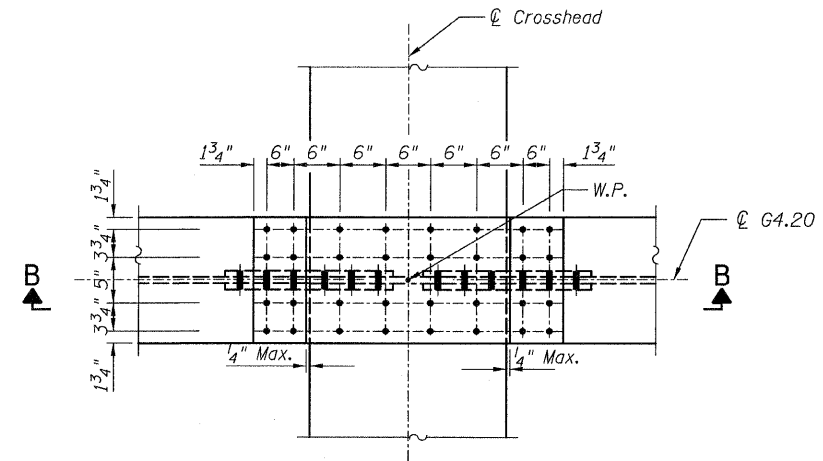
<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH, JMA	REVISIONS		SHEET NO. 185	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	509	
	DRAWN - EKH, JMA				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

9:09:16 AM  
p:\01345\structure\2 Central Ave. 016-0724\15554\Framed117.dwg  
5/9/2011

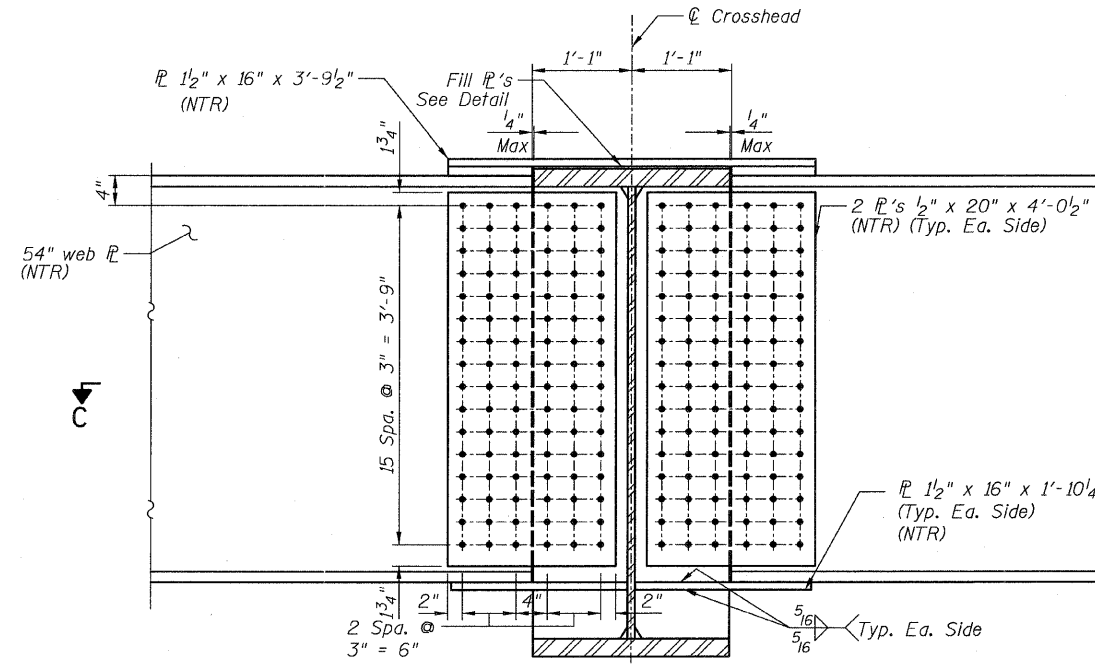
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**DETAIL 15**  
(Top Flange)  
(Bot. Flange Similar)

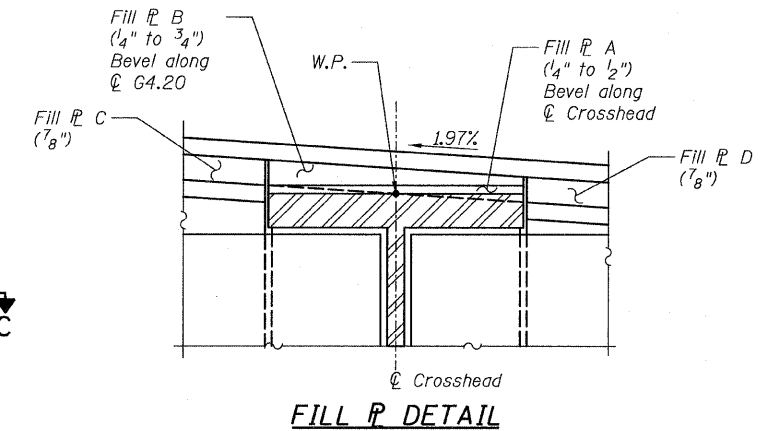


**DETAIL 16**  
(Top Flange)



**SECTION B-B**

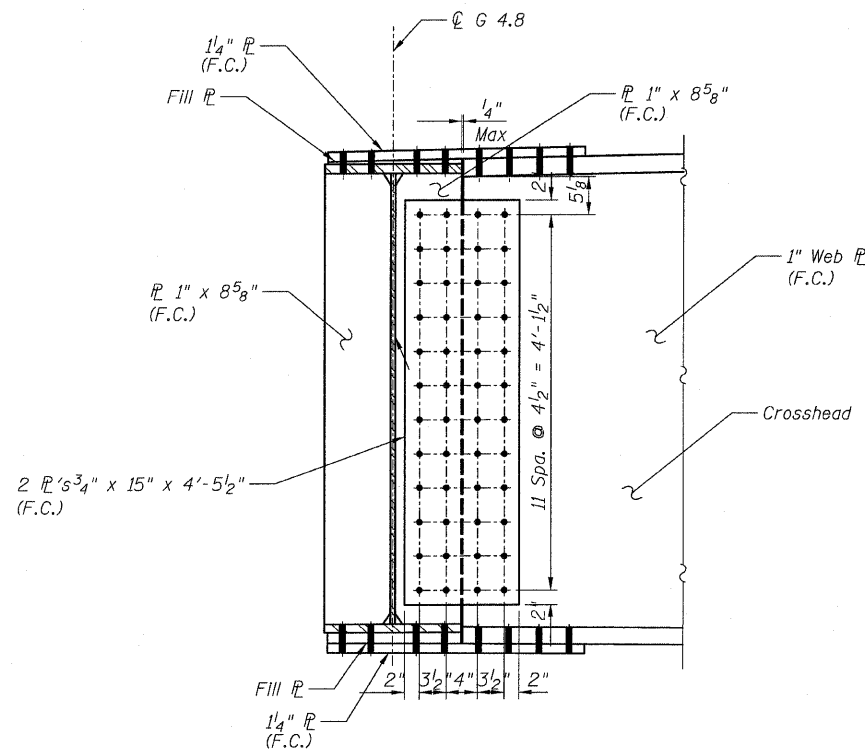
(Top & bottom connection bolts not shown for clarity)



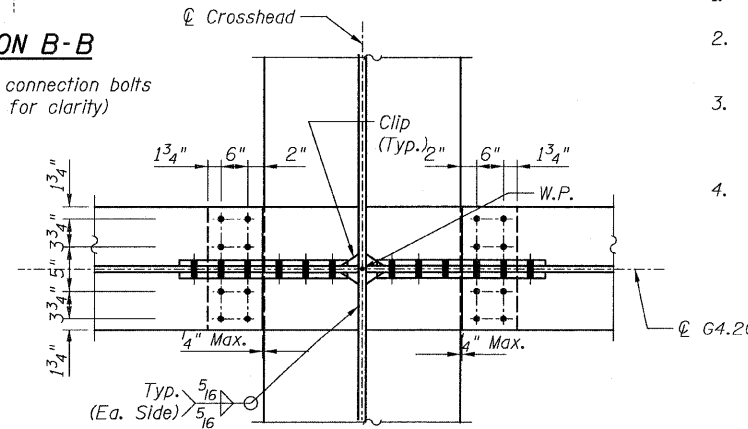
**FILL P DETAIL**

**NOTES:**

- For Details 15 and 16 locations, see Sheet 97.
- F.C. - denotes Fracture Critical Material, AASHTO Zone II.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
- Bolts for connection detail 15 shall be 1" φ with 1/16" holes.



**SECTION A-A**



**SECTION C-C**

**CONNECTION DETAILS 15&16**  
**RAMP 4 FLARE**  
**STRUCTURE NO. 016-0724**

**TYLIN INTERNATIONAL**

DESIGNED	EKH, JMA	REVISIONS	
CHECKED	AMD,	NAME	DATE
DRAWN	EKH, JMA		
CHECKED	AMD,		
DATE	03/25/2011		

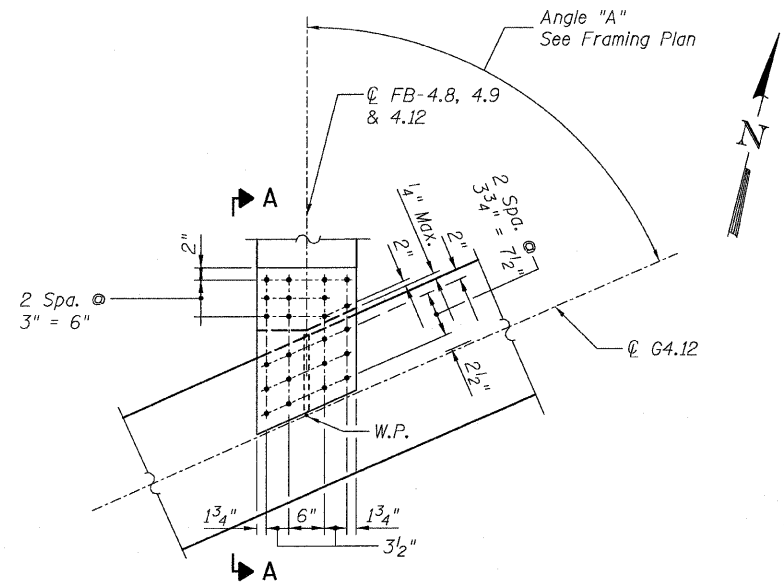
SHEET NO. 186	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	510
239 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

4/28/2011

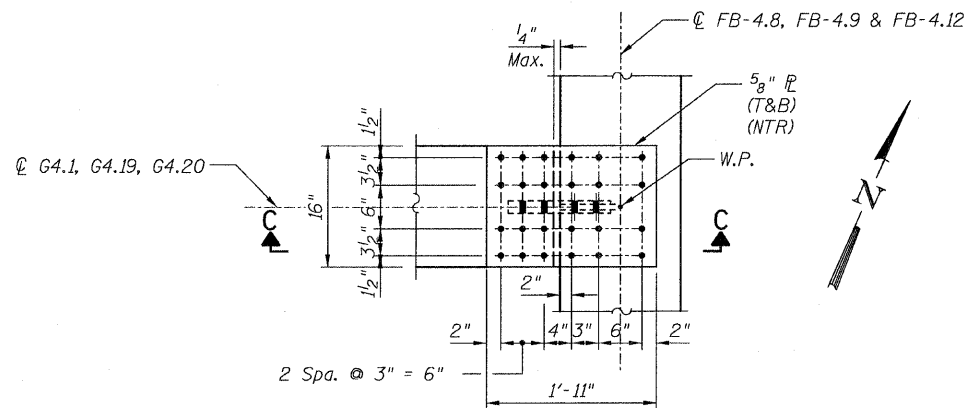
pi:01345\structur\C2 Central Ave. 016-0724\15514framed\118.dgn

12:58:21 PM

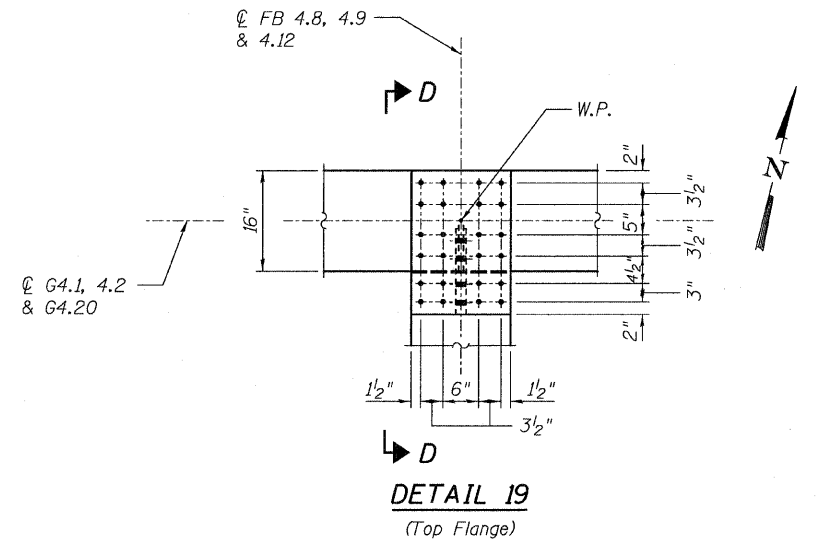
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



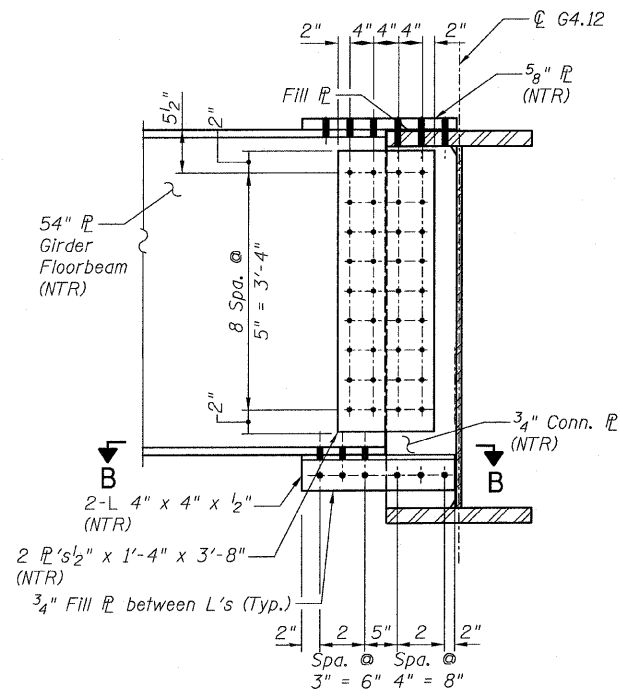
**DETAIL 17**  
(Top Flange)



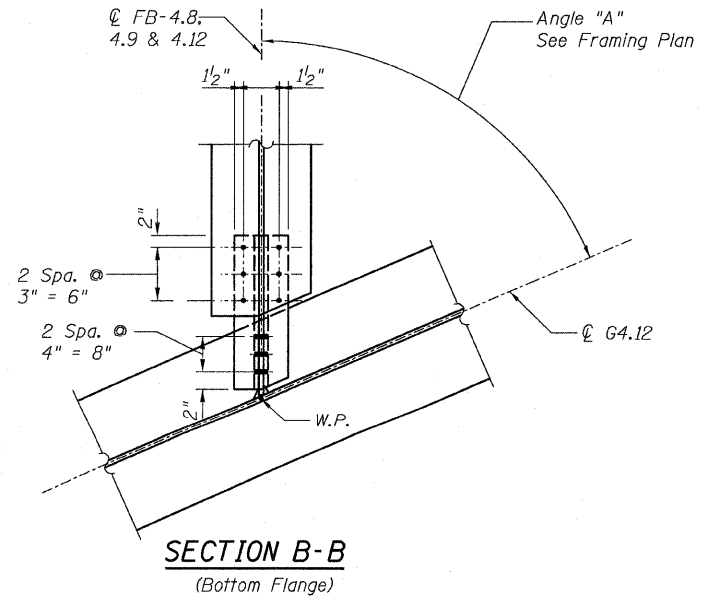
**DETAIL 18**  
(Top Flange)  
(Bottom flange is similar.)



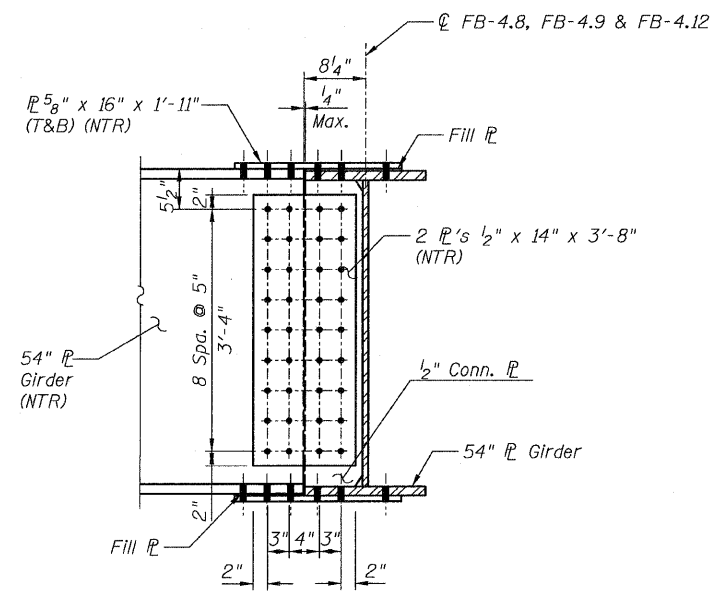
**DETAIL 19**  
(Top Flange)



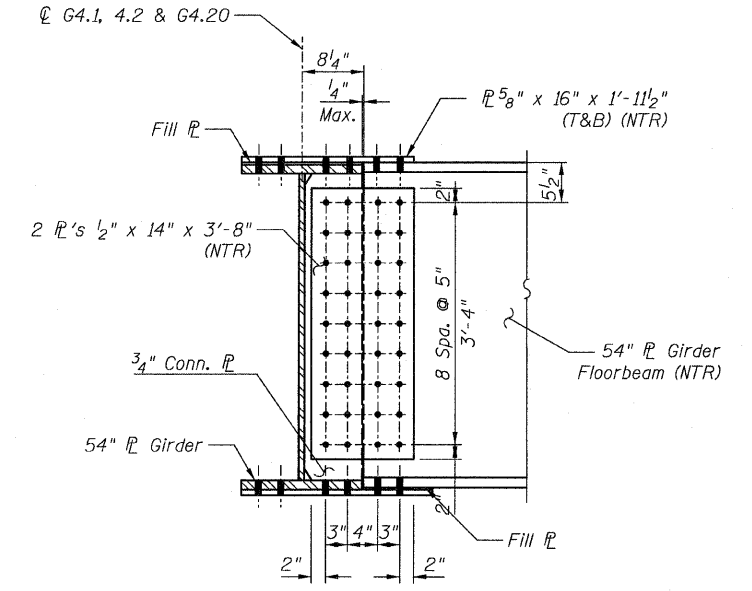
**SECTION A-A**



**SECTION B-B**  
(Bottom Flange)



**SECTION C-C**



**SECTION D-D**

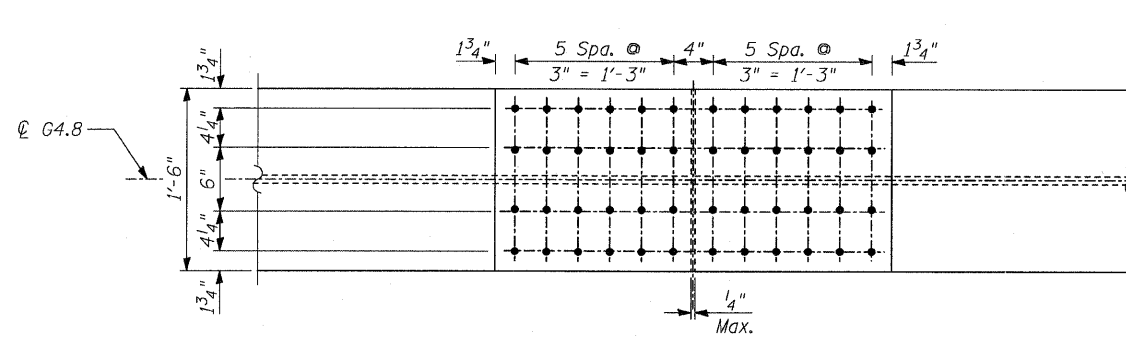
- NOTES:**
- All steel shall be AASHTO M270 Grade 50.
  - For Details 17 and 18 locations, see Sheet 97.
  - Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

**CONNECTION DETAILS 17, 18 & 19**  
**RAMP 4 FLARE**  
**STRUCTURE NO. 016-0724**

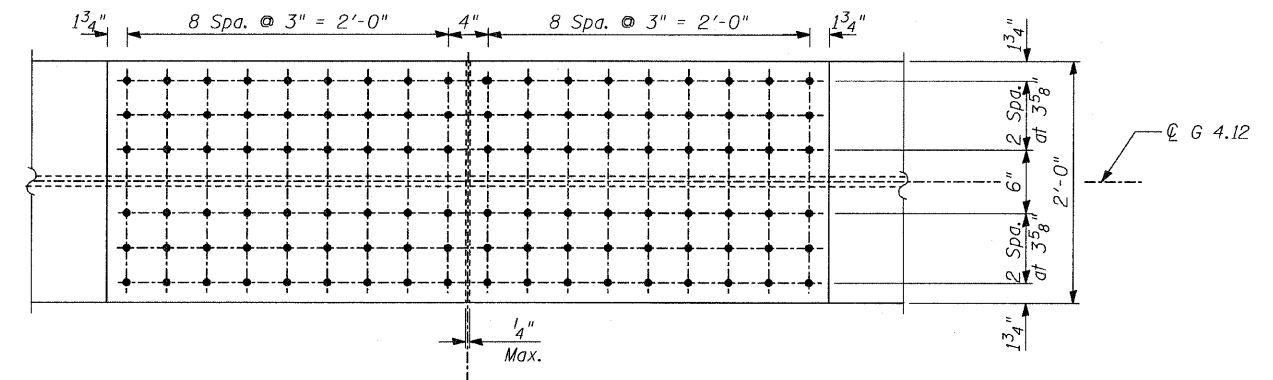
<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH, JMA	REVISIONS		SHEET NO. 187	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		239 SHEETS	55	0711.2R & 1011.1BR	COOK	741	511
	DRAWN - EKH, JMA				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

pi:\01345\structur\02\_Central\_Ave\_016-0724\15514\Framed118.dgn 4/28/2011 12:58:22 PM

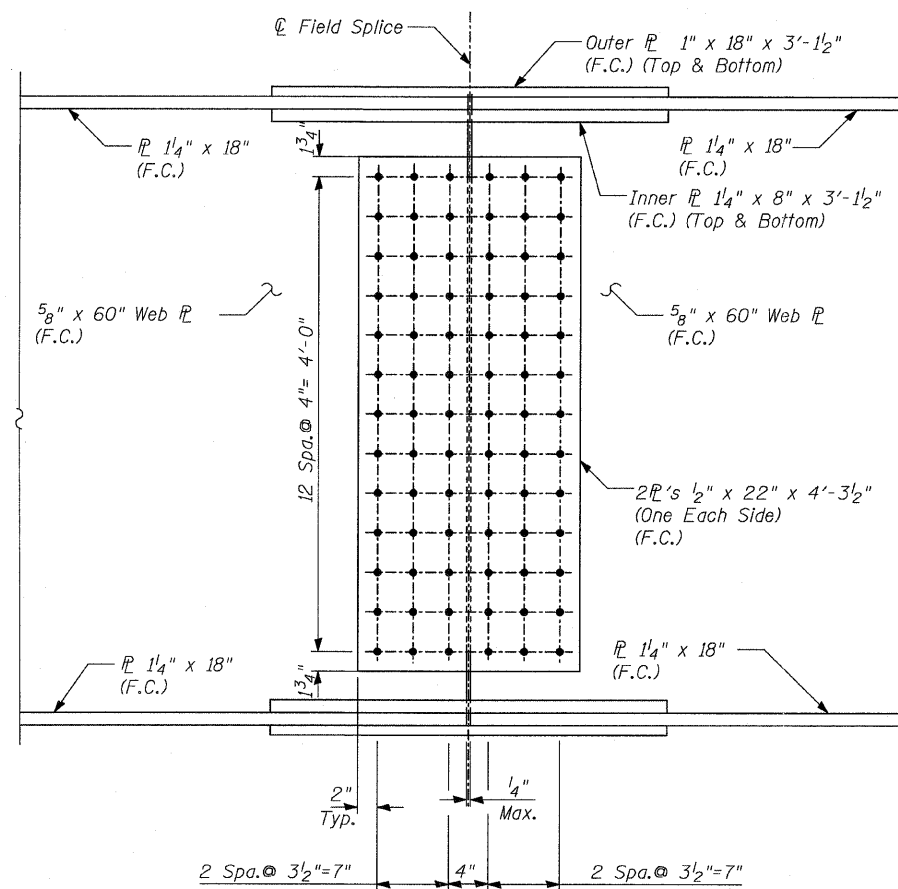
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



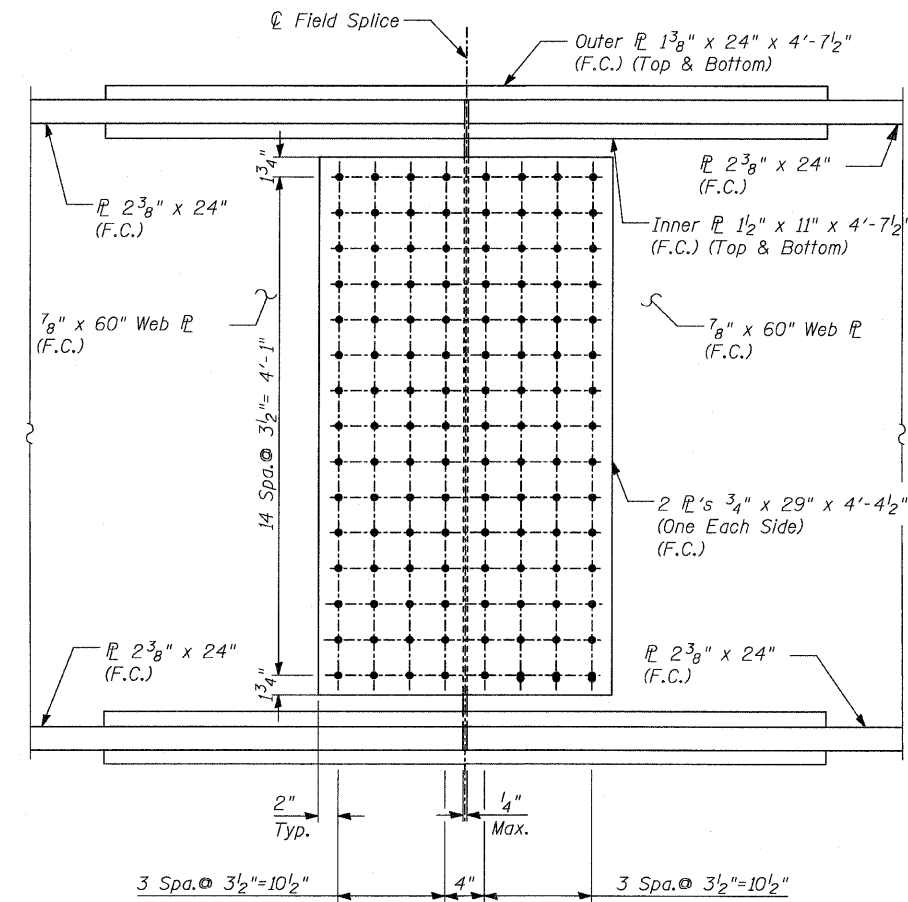
PLAN - TOP & BOTTOM FLANGE  
FIELD SPLICE FS-4.1



PLAN - TOP & BOTTOM FLANGE  
FIELD SPLICE FS-4.2 & 4.3



ELEVATION



ELEVATION

NOTES:

- All steel shall be AASHTO M270 Grade 50.
- F.C. denotes Fracture Critical Material, AASHTO Zone 2.

FIELD SPLICES  
RAMP 4  
STRUCTURE NO. 016-0724

TYLIN INTERNATIONAL

DESIGNED - EKH, JMA	REVISIONS	
	NAME	DATE
CHECKED - AMD,		
DRAWN - EKH, JMA		
CHECKED - AMD,		
DATE - 03/25/2011		

SHEET NO. 188	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	239 SHEETS	55	0711.2R & 1011.1BR	COOK	741
			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1			ILLINOIS	FED. AID PROJECT	

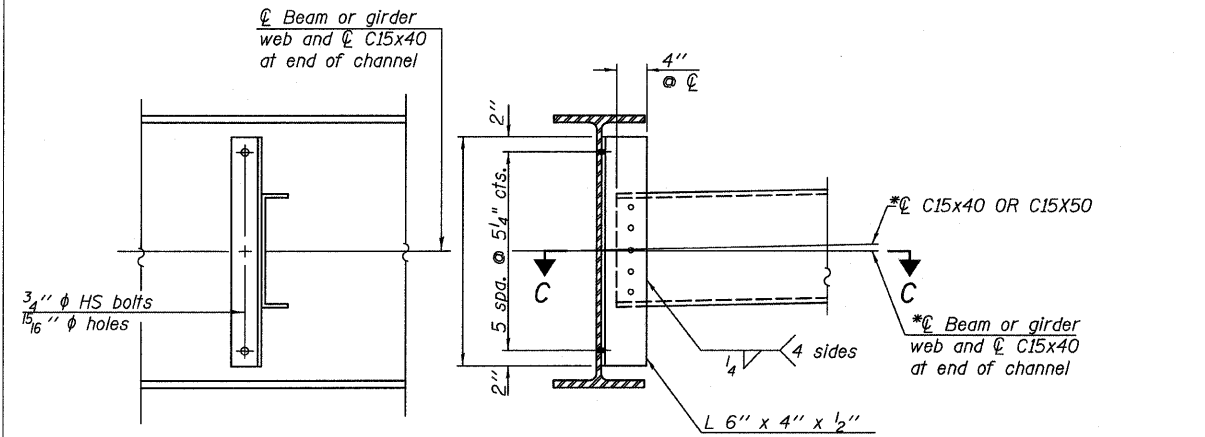
4/28/2011

ex:\01345\structure\2\_Central\_Ave\_016-0724\55F4Framed119.dgn

12:58:23 PM



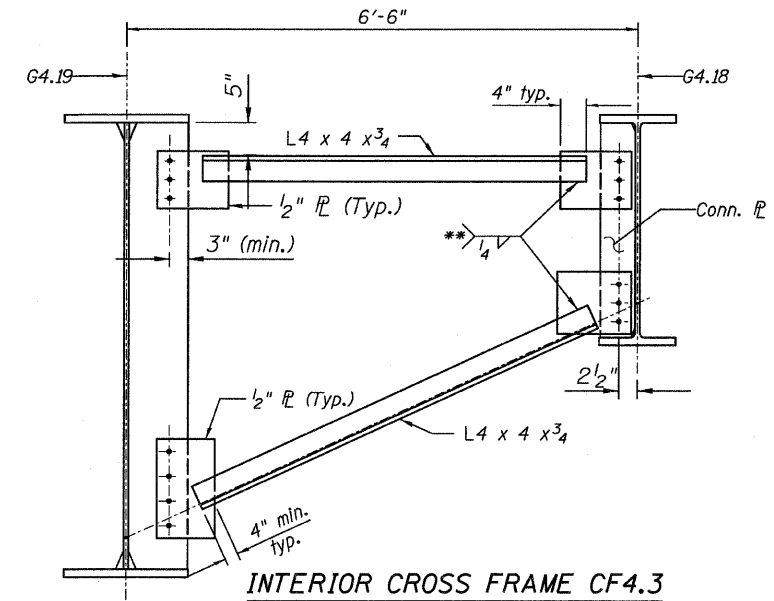
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



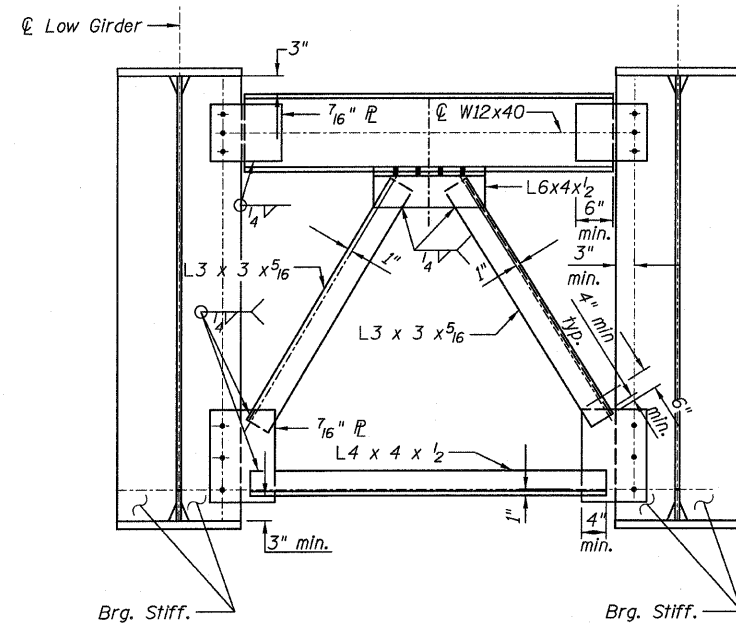
**INTERIOR DIAPHRAGM D4.2**  
(12 Required)

\*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.

**SECTION C-C**

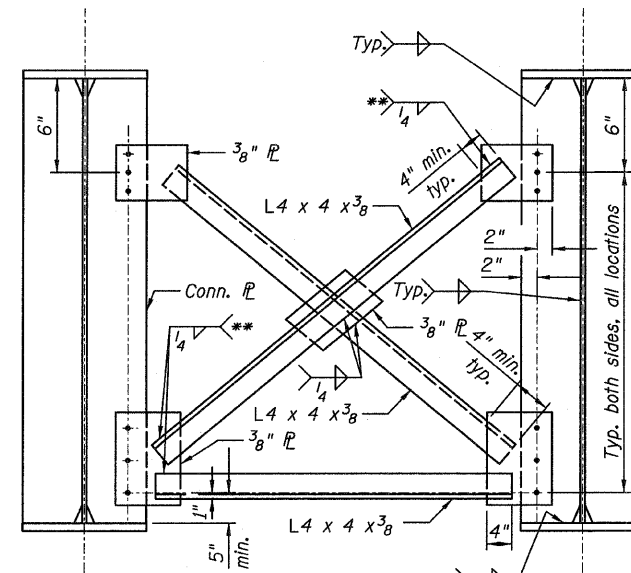


**INTERIOR CROSS FRAME CF4.3**  
(4 Required)



**END CROSS FRAME CF4.1**  
(7 Required)

Note:  
Place CrossFrame with channel Flanges and outstanding angle legs outward from abutment backwall. Weld on near side for 7/16" plate.



**INTERIOR CROSS FRAME CF4.2**  
(85 Required)

\*\* Fillet weld angle along 3 sides on one face of gusset plate.

**NOTES:**

- All bolts shall be 3/4" φ with 5/16" φ holes unless otherwise noted.
- Two hardened washers shall be required over all oversize holes for diaphragms.
- 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.

**DIAPHRAGMS & DETAILS  
RAMP 4 FLARE  
STRUCTURE NO. 016-0724**

**TYLIN** INTERNATIONAL

DESIGNED - EKH, JMA		REVISIONS	
CHECKED - AMD,		NAME	DATE
DRAWN - EKH, JMA			
CHECKED - AMD,			
DATE - 03/25/2011			

SHEET NO. 189	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	513
239 SHEETS		CONTRACT NO. 60999			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

4/28/2011

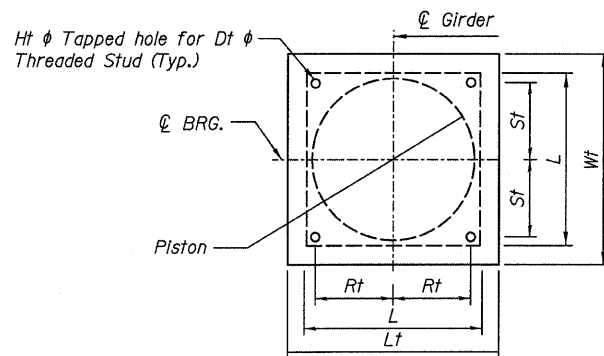
pi:\01345\structur\02\_Central\_Ave\_016-0724\155141\_ramedti20.dwg

12:58:25 PM

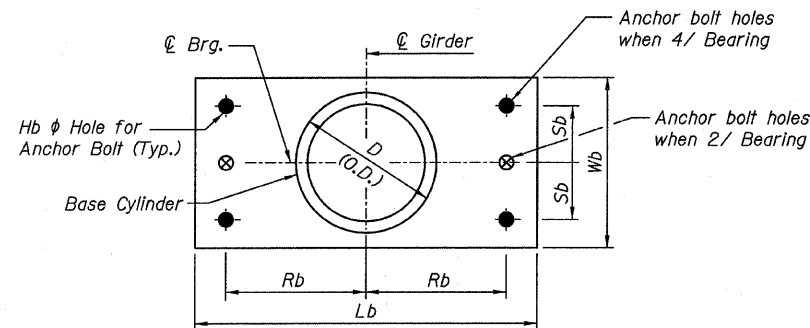
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NOTES:

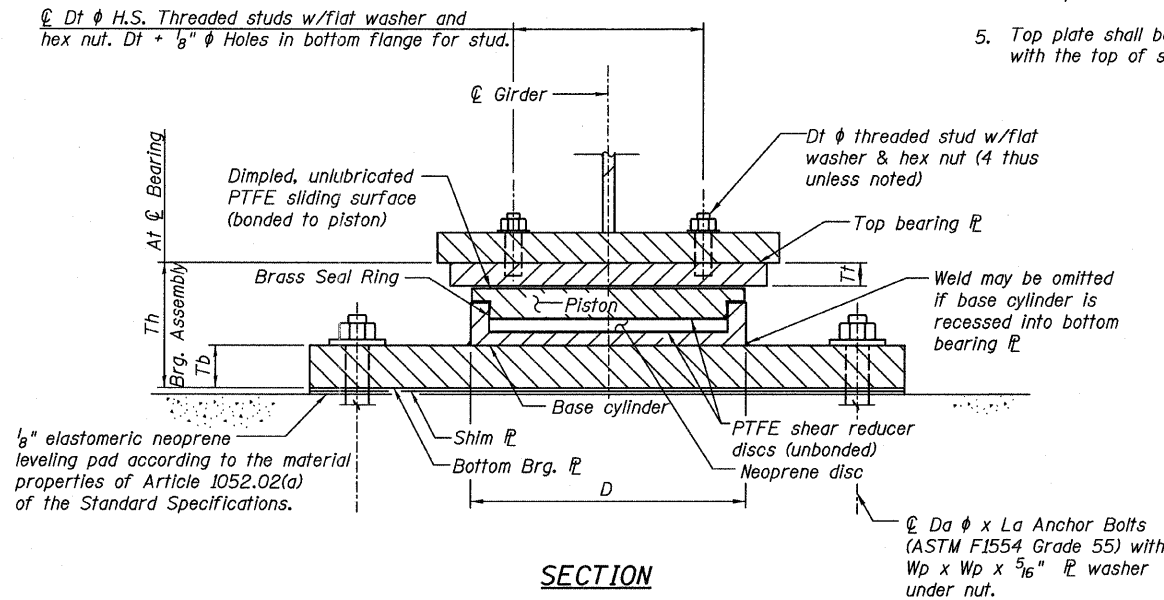
- All structural steel for the top and bottom bearing plates shall conform to the requirements of AASHTO M 270 Grade 50, unless otherwise noted.
- Anchor bolts shall be F1554, Gr. 55.
- The top and bottom bearing plates, 1/8" elastomeric neoprene leveling pad, adjusting shims, threaded studs with washers, and other items required for the bearing are furnished under a separate contract. Installation of these items is included in the cost of Erecting HLMR Bearings of the type specified.
- 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.
- Top plate shall be beveled to match the slope of the girder flanges. Work this sheet with the top of steel elevation sheets.



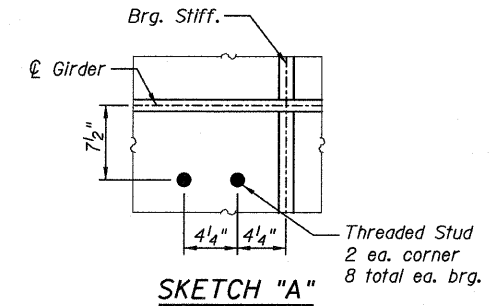
TOP BEARING P - PISTON PLAN



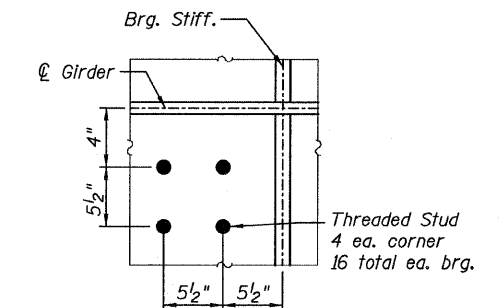
BOTTOM BEARING P AND  
BASE CYLINDER PLAN



SECTION



SKETCH "A"



SKETCH "B"

BILL OF MATERIAL

ITEM	UNIT	TOTAL
High Load Multi-Rotational Bearings, Non-guided Expansion, 150 kips (Erect Only)	EACH	34
High Load Multi-Rotational Bearings, Non-guided Expansion, 800 kips (Erect Only)	EACH	4
High Load Multi-Rotational Bearings, Non-guided Expansion, 1500 kips (Erect Only)	EACH	4
Anchor Bolts, 1"	EACH	68
Anchor Bolts, 1 1/2"	EACH	16
Anchor Bolts, 2"	EACH	16

BEARING SCHEDULE

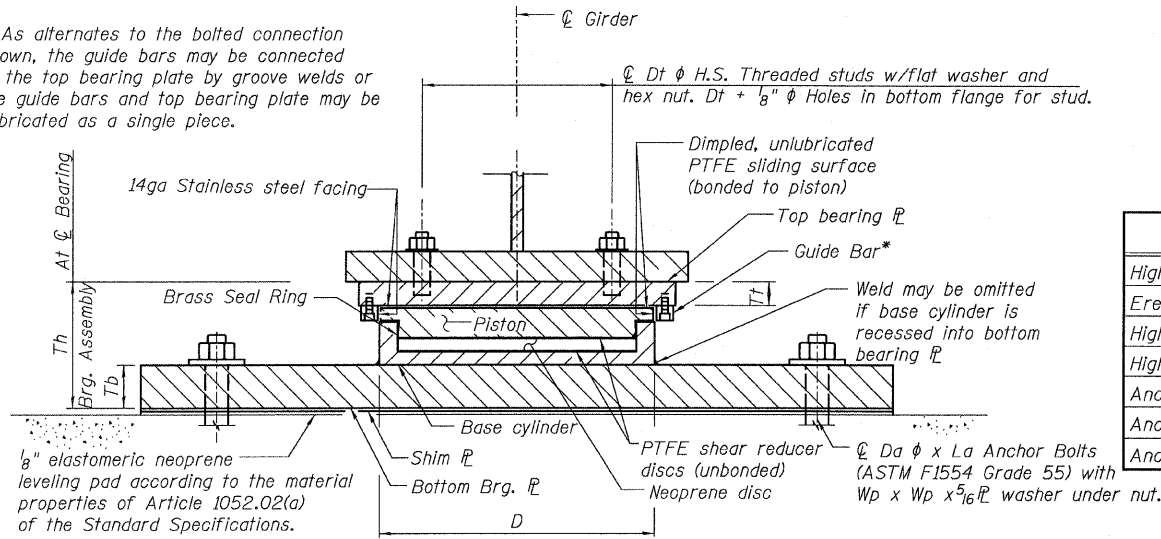
Type	Vertical Capacity (kips)	Lateral Capacity (kips)	Quantity Each	Pier (R= Ramp)	Girders	Total Required Movement		D	L	Th	Top Plate / Bearing Assembly								Masonry Plate					Anchor Bolts			
						Longitudinal	Transverse				Wf	Lt	Tt	Dt	Ht	Rt	St	Wb	Lb	Tb	Rb	Sb	Hb	Qty per Brg.	Da	La	Wp
HLMR, Non-Guided Expansion	150	-	12	R1 & R4 Abut.	2-7	3"	2"	9 1/4"	9 1/4"	5 1/2"	11 3/4"	11 3/4"	1 1/2"	3 1/4"	7 1/8"	3 1/2"	4"	13"	24"	1 1/4"	10 1/4"	-	1 1/2"	2	1"	12"	2 1/4"
HLMR, Non-Guided Expansion	150	-	14	R2 & R3 Abut.	2-8	3"	2"	9 1/4"	9 1/4"	5 1/2"	11 3/4"	11 3/4"	1 1/2"	3 1/4"	7 1/8"	3 1/2"	4"	13"	24"	1 1/4"	10 1/4"	-	1 1/2"	2	1"	12"	2 1/4"
HLMR, Non-Guided Expansion	150	-	2	R1 & R4 Abut.	8	3"	2"	9 1/4"	9 1/4"	5 1/2"	11 3/4"	11 3/4"	1 1/2"	3 1/4"	7 1/8"	3 1/2"	4"	13"	26"	1 1/4"	11 1/4"	-	1 1/2"	2	1"	12"	2 1/4"
HLMR, Non-Guided Expansion	150	-	4	R1 thru R4 Abut.	12	3"	2"	9 1/4"	9 1/4"	6"	11 3/4"	11 3/4"	1 1/2"	3 1/4"	7 1/8"	3 1/2"	4"	13"	32"	1 1/4"	14"	-	1 1/2"	2	1"	12"	2 1/4"
HLMR, Non-Guided Expansion	150	-	2	R2 & R3	11	2"	2"	9 1/4"	9 1/4"	5 1/2"	11 3/4"	11 3/4"	1 1/2"	3 1/4"	7 1/8"	3 1/2"	4"	13"	24"	1 1/4"	10 1/4"	-	1 1/2"	2	1"	12"	2 1/4"
HLMR, Non-Guided Expansion	800	-	4	R1 thru R4 Brg. 2	Crosshead	3"	2"	19 1/2"	19 1/2"	10.205"	21 1/2"	21 1/2"	3"	1"	1 1/8"	Sketch A	Sketch A	22"	38"	2 1/2"	16 1/4"	8 1/4"	2"	4	1 1/2"	18"	3"
HLMR, Non-Guided Expansion	1500	-	4	R1 thru R4 Brg. 1	Crosshead	3"	2"	26 1/2"	26 1/2"	12.685"	28 1/4"	28 1/4"	4"	1"	1 1/8"	Sketch B	Sketch B	30"	42"	2 1/2"	17 1/2"	11 1/2"	2 1/2"	4	2"	24"	3 1/2"

HIGH LOAD MULTI-ROTATIONAL  
BEARINGS NON-GUIDED EXPANSION  
STRUCTURE NO. 016-0724

TYLIN INTERNATIONAL	DESIGNED - EKH, PK	REVISIONS		SHEET NO. 190	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.				
	CHECKED - AMD,	NAME	DATE		55					0711.2R & 1011.1BR	COOK	741	514
	DRAWN - EKH, PK				239 SHEETS					CONTRACT NO. 60999			
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT								
	DATE - 03/25/2011												

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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



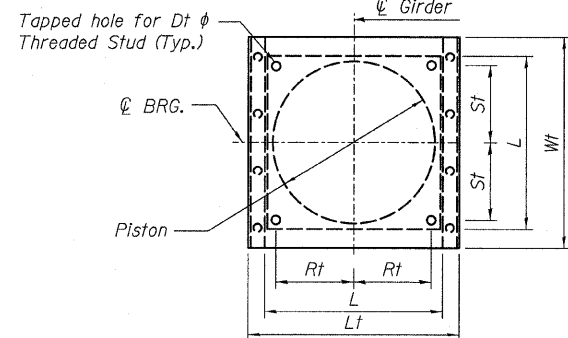
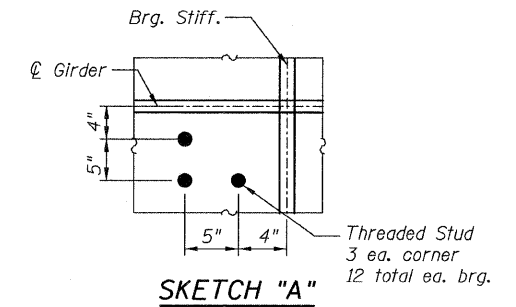
**GUIDED EXPANSION HLMR BEARING**

**BILL OF MATERIAL**

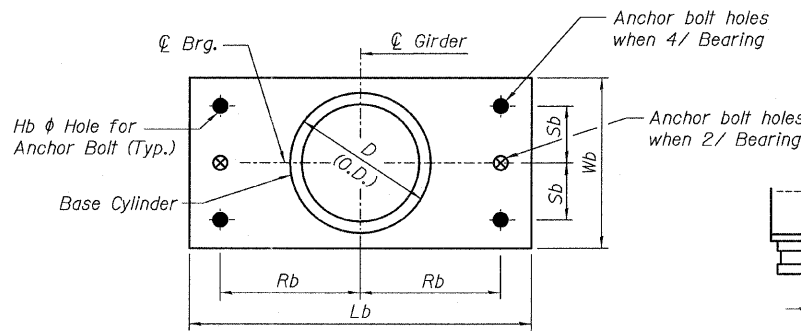
ITEM	UNIT	TOTAL
High Load Multi-Rotational Bearings, Guided Expansion, 150 kips (Erect Only)	EACH	40
Erecting High Load Multi-Rotational Bearings, Guided Expansion, 250 kips	EACH	40
High Load Multi-Rotational Bearings, Guided Expansion, 350 kips (Erect Only)	EACH	4
High Load Multi-Rotational Bearings, Guided Expansion, 900 kips (Erect Only)	EACH	4
Anchor Bolts, 1"	EACH	160
Anchor Bolts, 1 1/4"	EACH	8
Anchor Bolts, 1 1/2"	EACH	16

**NOTES:**

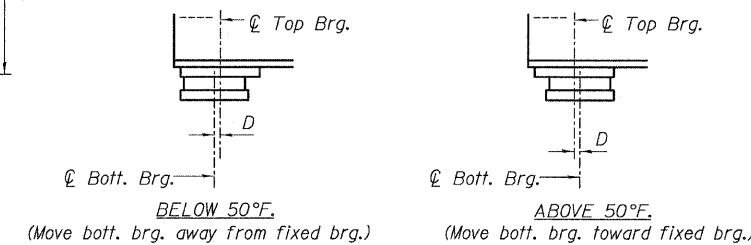
- All structural steel for the top and bottom bearing plates shall conform to the requirements of AASHTO M 270 Grade 50, unless otherwise noted.
- Anchor bolts shall be F1554, Gr. 55.
- Top and bottom bearing plates, 1/8" elastomeric neoprene leveling pad, adjusting shims, threaded studs with washers and other items required for the bearing are furnished under a separate contract. Installation of these items is included in the cost of Erecting HLMR Bearings of the type specified.
- Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- Top plate shall be beveled to match the slope of girder flanges. Work this sheet with top of steel elevation sheets.



**TOP BEARING PLATE - PISTON PLAN**



**BOTTOM BEARING PLATE AND BASE CYLINDER PLAN**



**SETTING ANCHOR BOLTS AT EXP. BRG.**

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

**BEARING SCHEDULE**

Type	Vertical Capacity (kips)	Lateral Capacity (kips)	Quantity Each	Location	Girders	Total Required Movement (in)	D (in)	L (in)	Th (in)	Top Plate / Bearing Assembly						Masonry Plate					Anchor Bolts			
										Wt (in)	Lt (in)	Tt (in)	Dt (in)	Rt (in)	St (in)	Wb (in)	Lb (in)	Tb (in)	Rb (in)	Sb (in)	Hb (in)	Qty per Brg.	Da (in)	La (in)
HLMR Guided Expansion	150	15	36	C. Abut. 1 & 4	G3 - G20	3	9"	9"	5.796"	14"	13 1/2"	1 1/2"	3/4"	4"	4"	12"	21"	1"	8 3/4"	1 1/2"	2	1"	12"	2 1/4"
HLMR Guided Expansion	250	25	36	C. Abut. 2 & 3	G3 - G20	2	11 1/4"	11 1/4"	6.7897"	16 1/4"	16"	1 1/2"	3/4"	4"	4"	15"	24"	1 1/4"	10 1/4"	1 1/2"	2	1"	12"	2 1/4"
HLMR Guided Expansion	150	15	4	C. Abut. 1 & 4	G2 and G21	3	9"	9"	6.296"	14"	13 1/2"	1 1/2"	3/4"	4 1/2"	4 1/2"	12"	28"	1 1/2"	12 1/4"	1 1/2"	2	1"	12"	2 1/4"
HLMR Guided Expansion	250	25	4	C. Abut. 2 & 3	G2 and G21	2	11 1/4"	11 1/4"	7.2897"	16 1/4"	16 1/2"	1 1/2"	3/4"	4 1/2"	4 1/2"	15"	28"	1 3/4"	12 1/4"	1 1/2"	2	1"	12"	2 1/4"
HLMR Guided Expansion	350	50	4	C. Abut. 1 & 4	G1 and G22	3	13"	13"	8.593"	18"	19 1/2"	1 3/4"	1"	4 1/2"	4 1/2"	16"	34"	2 1/4"	14 3/4"	1 3/4"	2	1 1/4"	12"	2 3/4"
HLMR Guided Expansion	900	150	4	C. Abut. 2 & 3	G1 and G22	2	20 1/4"	20 1/4"	12.1582"	25 1/4"	28 1/2"	3"	1"	Sketch A	24"	36"	2 1/4"	15 1/4"	9 1/4"	2"	4	1 1/2"	18"	3"

**SHIM PLATE THICKNESS TABLE**

(Provided in addition to 1/8" adjusting shims)

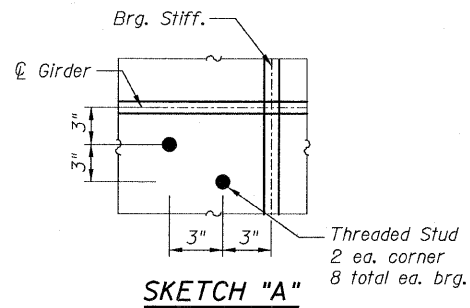
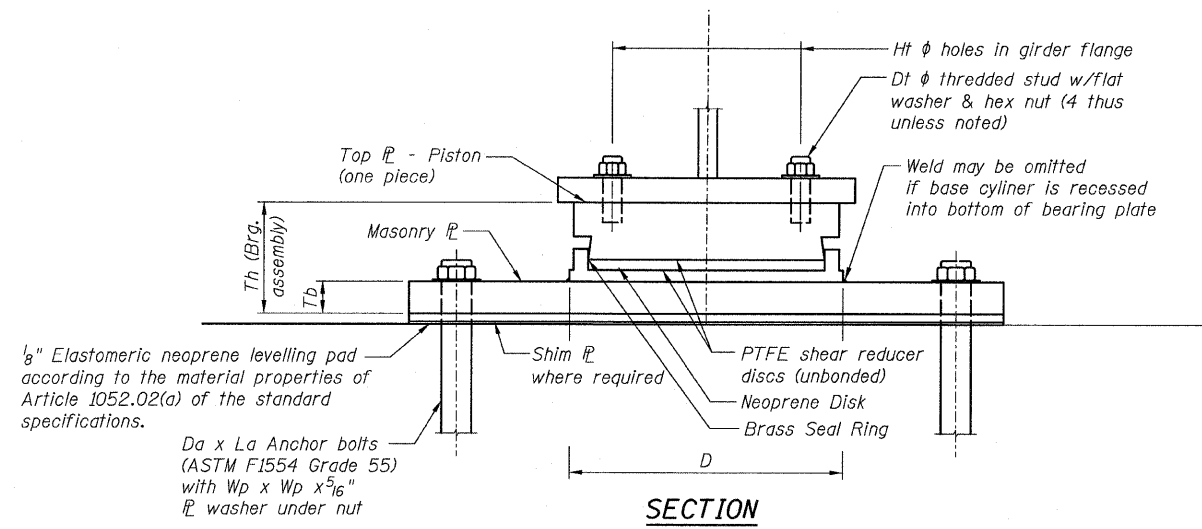
Bearing Location	Beam		
	G9	G11	G17
C. Abutment 1, N. Brg.	5/8"	1/2"	--
C. Abutment 4, S. Brg.	--	--	1/8"

**HIGH LOAD  
MULTI-ROTATIONAL  
BEARINGS GUIDED EXPANSION  
STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH, PK	REVISIONS		SHEET NO. 191	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	515	
	DRAWN - EKH, PK				239 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
DATE - 03/25/2011										

12:58:27 PM  
p:\01345\structure\c2 Central Ave. 016-0724\155c2audeadan

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



BEARING SCHEDULE

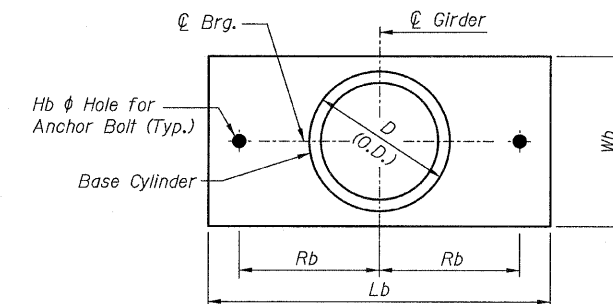
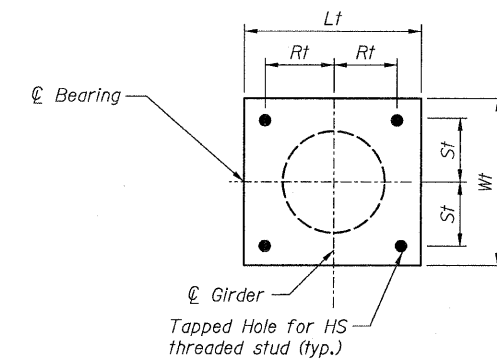
Type	Vertical Capacity (kips)	Lateral Capacity (kips)	Quantity Each	Pier	Girders	D	Th	Top Plate / Bearing Assembly					Masonry Plate								
								Wt	Lt	Dt	Ht	Rt	St	Wb	Lb	Tb	Da	Hb	La	Wp	Rb
HLMR, Fixed	250	25	18	6	3-20	11.50"	6.25"	11.50"	11.50"	.75"	0.875"	4.0"	4.0"	15.0"	20.0"	1.0"	1.0"	1.5"	12"	2.25"	8.25"
HLMR, Fixed	250	25	2	6	2, 21	11.50"	6.50"	11.50"	11.50"	.75"	0.875"	4.0"	4.0"	15.0"	28.0"	1.50"	1.0"	1.5"	12"	2.25"	12.25"
HLMR, Fixed	500	75	2	6	1, 22	16.25"	9.25"	16.25"	16.25"	1"	1.125"	Sketch A		20.0"	36.0"	2.25"	1.5"	12"	18"	3.0"	15.25"

BILL OF MATERIAL

ITEM	UNIT	TOTAL
High Load Multi-Rotational Bearings, Fixed, 250 kips (Erect Only)	EACH	20
High Load Multi-Rotational Bearings, Fixed, 500 kips (Erect Only)	EACH	2
Anchor Bolts, 1"	EACH	40
Anchor Bolts, 1/2"	EACH	4

NOTES:

- All structural steel for the top and bottom bearing plates shall conform to the requirements of AASHTO M 270 Grade 50.
- Anchor bolts shall be F1554, Gr. 55.
- Top and bottom bearing plates, 1/8" elastomeric neoprene leveling pad, adjusting shims, threaded studs and other items required for the bearing are furnished under a separate contract. Installation of these items is included in the cost of Erecting HLMR Bearings of the type specified.
- 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.
- Top plate shall be beveled to match the slope of the girder flanges. Work this sheet with the top of steel elevation sheets.



HIGH LOAD MULTI-ROTATIONAL  
BEARINGS FIXED  
STRUCTURE NO. 016-0724

TYLIN INTERNATIONAL	DESIGNED - EKH, PK	REVISIONS		SHEET NO. 192	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	516	
	DRAWN - EKH, PK				239 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

12:55:28 PM

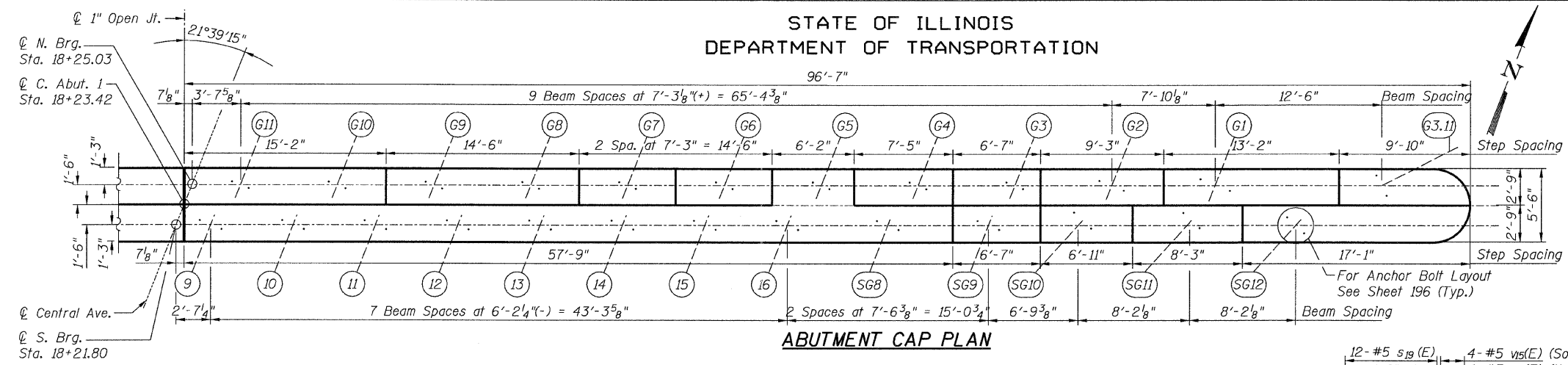
es:\01345\structure\C2\_Centrol\_Ave\_016-0724\155c2Fixed.dwg

4/28/2011

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NOTES

1. Work this sheet with sheets 194 to 196.
2. For notes see sheet 194.
3. For step reinforcement see sheet 195.



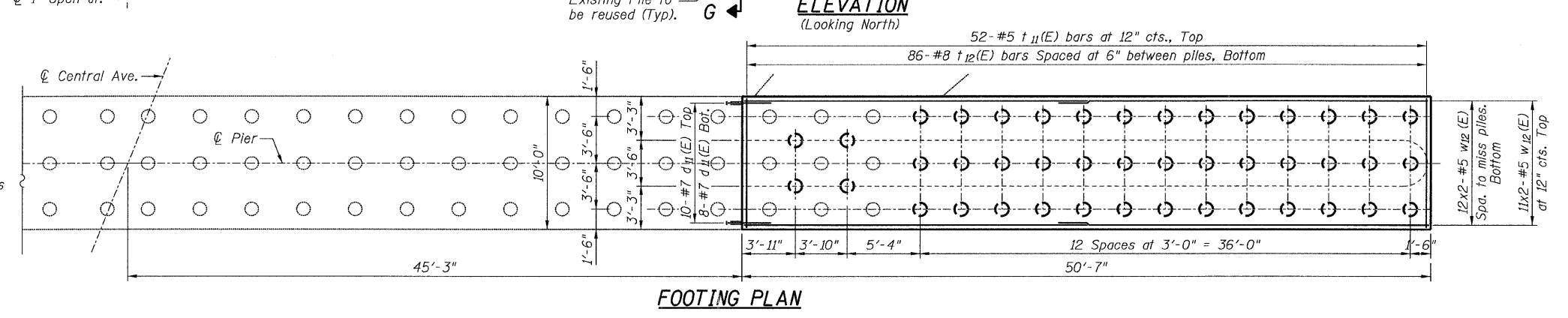
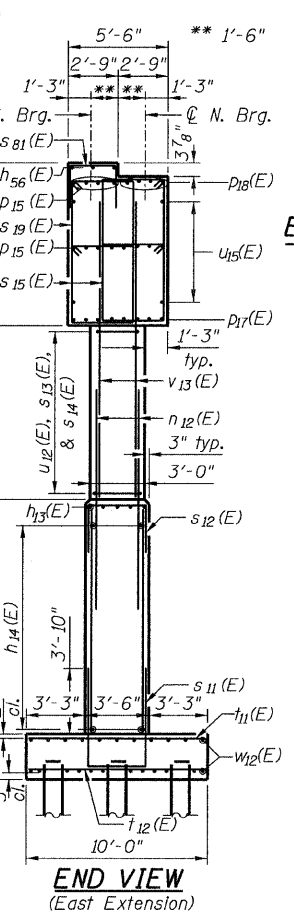
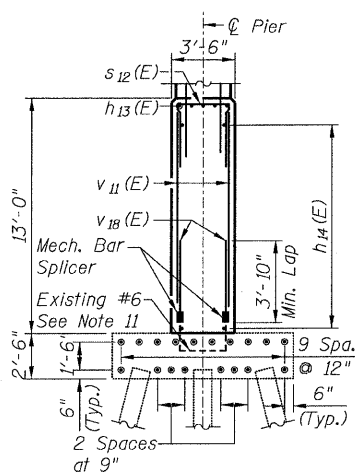
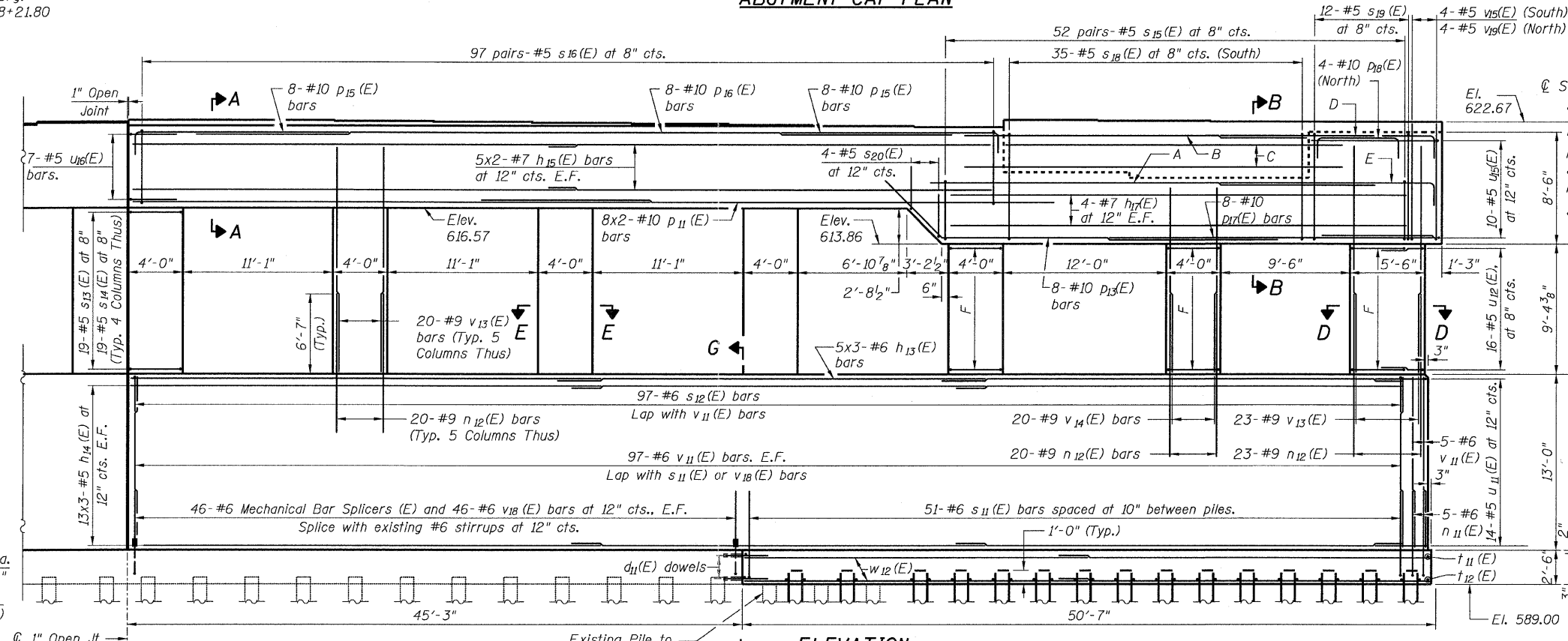
- \* Cut to fit in field.
- A: 8- #10 p<sub>11</sub> (E) bars
  - B: 4- #10 p<sub>11</sub> (E) bars (South)
  - C: 3- #7 h<sub>17</sub> (E) bars at 12", E.F. (South)
  - D: 4- #10 p<sub>15</sub> (E) bars (South)
  - E: 8- #10 p<sub>15</sub> (E) bars
  - F: 16- #5 s<sub>13</sub> (E) bars at 8" 16- #5 s<sub>14</sub> (E) bars at 8"

NORTH BRG.  
BRIDGE SEAT  
ELEVATIONS

Girder Line	Seat Elevation
G11	623.25
G10	623.25
G9	623.14
G8	623.14
G7	623.08
G6	623.00
G5	622.91
G4	622.83
G3	622.75
G2	619.52
G1	619.11
G3.11	622.35

SOUTH BRG.  
BRIDGE SEAT  
ELEVATIONS

Girder Line	Seat Elevation
9	622.91
10	622.91
11	622.91
12	622.91
13	622.91
14	622.91
15	622.91
16	622.91
SG8	622.91
SG9	622.85
SG10	622.93
SG11	622.85
SG12	622.67



PILE DATA

Type: 12" φ x 0.25" Wall  
Nominal Required Bearing: 270 kips  
Allowable Resistance Available: 90 kips  
Estimated Length: 48 ft  
No. Production Piles: 42  
No. Test Piles: 1

- Proposed Pile
- Existing Pile

C. ABUT. 1 REPL. & WID.-EAST  
CENTRAL/I-55  
STRUCTURE NO. 016-0724

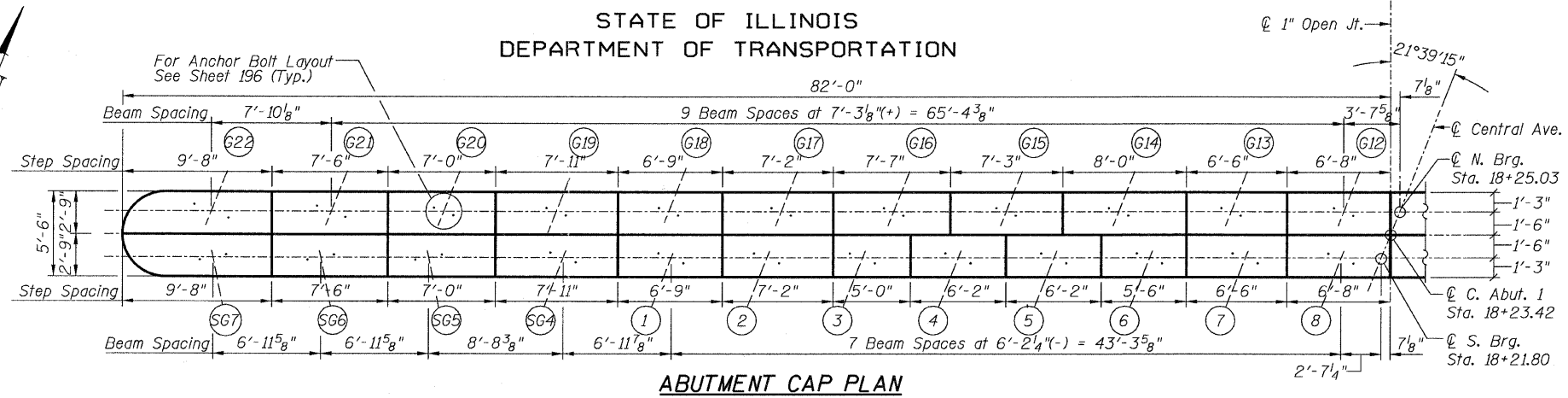
TYLIN INTERNATIONAL	DESIGNED - MB	REVISIONS		SHEET NO. 193	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	517	
	DRAWN - MB				239 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD,					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011									

5/9/2011  
 P:\01345\structure\2\_Central\_Ave\_016-0724\5502abut1.ead

**NOTES**

- Bars indicated thus 8x2-#10 indicates 8 lines of bars with two lengths per line.
- Space reinforcement in cap to miss anchor bolts.
- Space reinforcement in footing to miss piles.
- Pour steps monolithically with cap.
- Pile capacity of existing 12"  $\phi$  timber piles is 20 tons.
- For Bill of Materials, see sheet 196.
- Work this sheet with sheets 193, 195 & 196.
- E.F - denotes Each Face.
- Sand blast clean existing reinforcing bars to be incorporated into new construction. After cleaning, bars shall be evaluated to determine if additional reinforcing bars are required. Damaged or cut bars, or bars that have lost 25% or more of their original cross sectional area shall be supplemented by drilling and grouting into existing concrete. Cost included with "Concrete Removal".
- Epoxy grout  $d_{11}(E)$  bars according to Section 584 of the Standard Specifications. Drill to miss existing reinforcement. The cost shall be included in "Reinforcement Bars, Epoxy Coated."
- Cut existing #6 stirrups as shown in Section G-G with allowance of mechanical bar splicers.
- See Sheet 195 for step reinforcement.

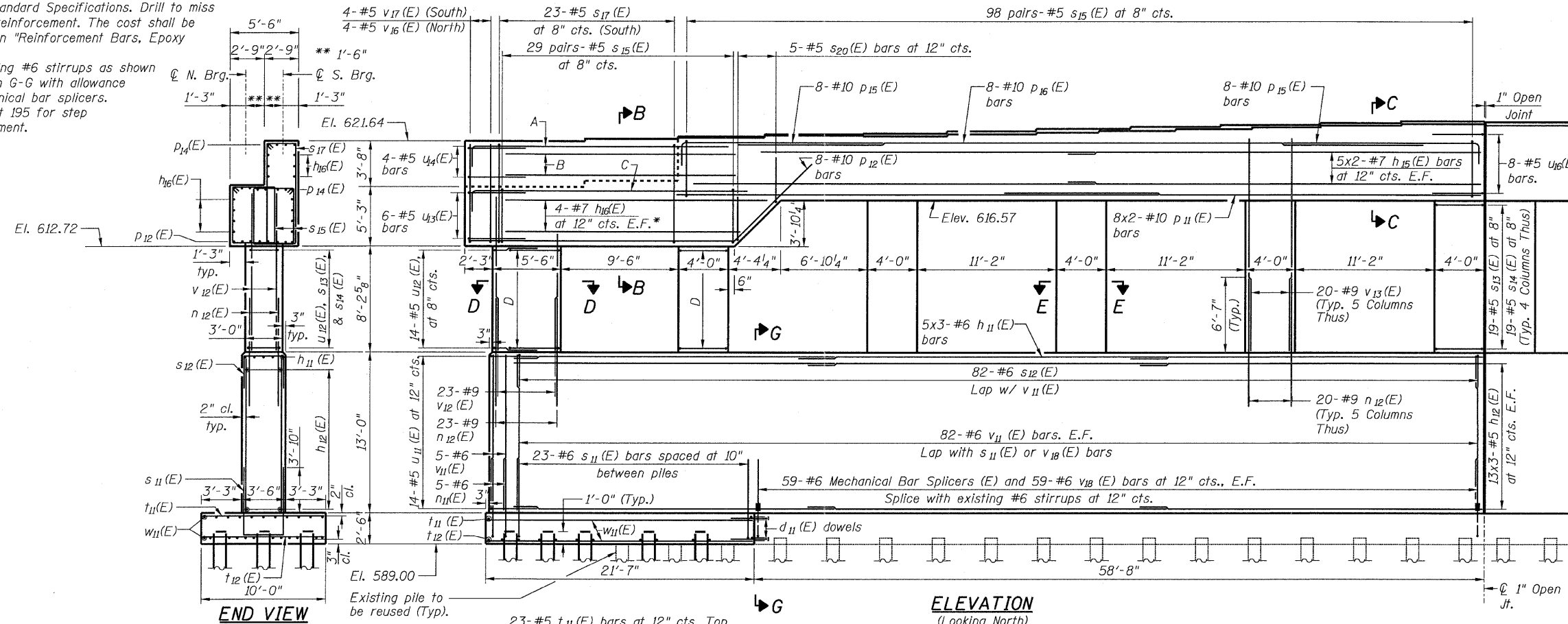
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



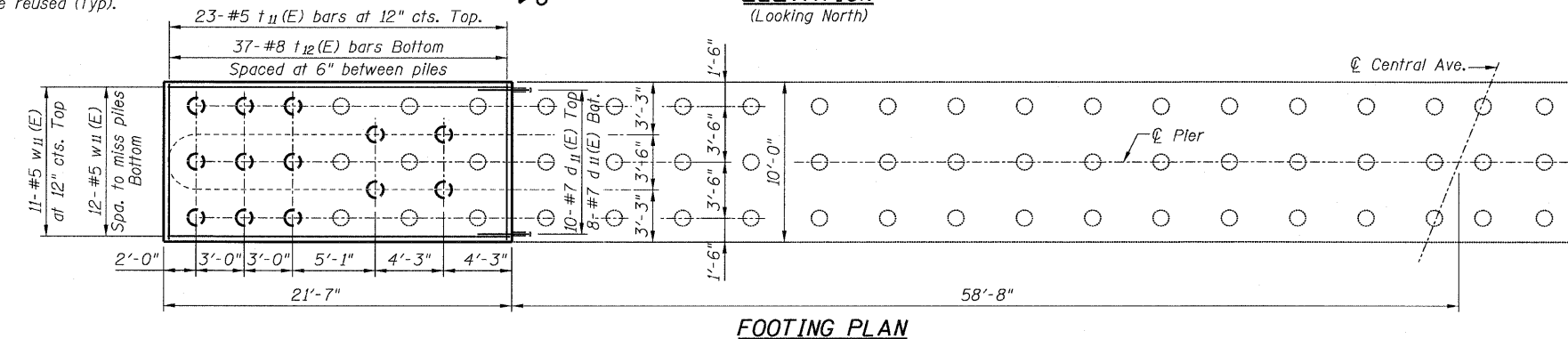
**ABUTMENT CAP PLAN**

**BRIDGE SEAT ELEVATIONS**

South Bearings		North Bearings	
Girder Line	Seat Elevation	Girder Line	Seat Elevation
SG7	621.64	G22	617.97
SG6	621.89	G21	618.49
SG5	622.08	G20	621.82
SG4	622.14	G19	622.01
1	622.06	G18	622.21
2	622.20	G17	622.40
3	622.35	G16	622.60
4	622.49	G15	622.77
5	622.64	G14	622.93
6	622.79	G13	623.08
7	622.92	G12	623.24
8	623.07		



**ELEVATION**  
(Looking North)



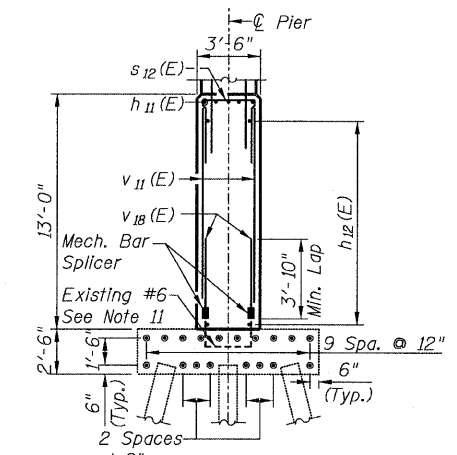
**FOOTING PLAN**

**PILE DATA**

Type: 12"  $\phi$  x 0.25" Wall  
Nominal Required Bearing: 270 kips  
Allowable Resistance Available: 90 kips  
Estimated Length: 44 ft  
No. Production Piles: 12  
No. Test Piles: 1

- Proposed Pile
- Existing Pile

- \* Cut to fit in field.
- A: 4- #10  $p_{14}(E)$  bars (South)
- B: 3- #7  $h_{16}(E)$  bars at 12" E.F. cts. (South)
- C: 8- #10  $p_{14}(E)$  bars
- D: 14- #5  $s_{13}(E)$  bars at 8" cts.  
14- #5  $s_{14}(E)$  bars at 8" cts.



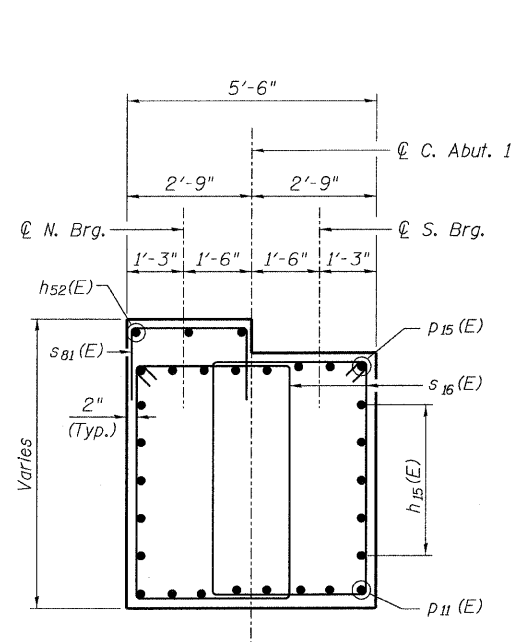
**SECTION G-G**  
(West Extension)

**C. ABUT. I REP. & WID. - WEST  
CENTAL/I-55  
STRUCTURE NO. 016-0724**

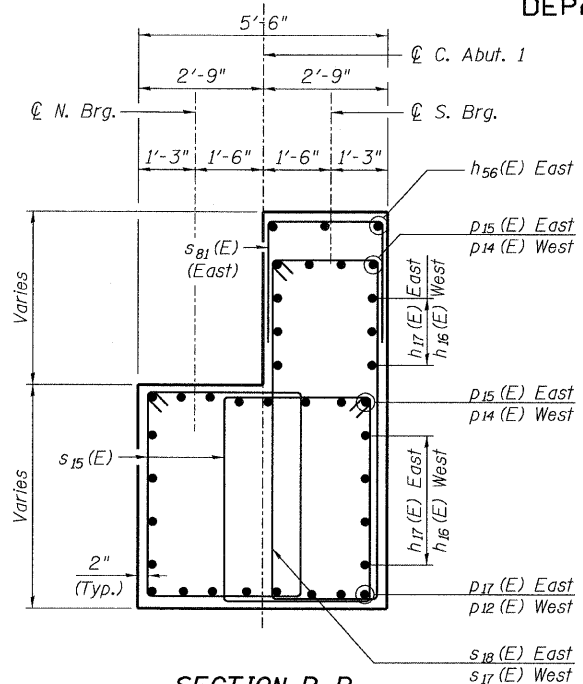
<b>TYLIN INTERNATIONAL</b>	DESIGNED - MB	REVISIONS		SHEET NO. 194 239 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	518	
	DRAWN - MB				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									



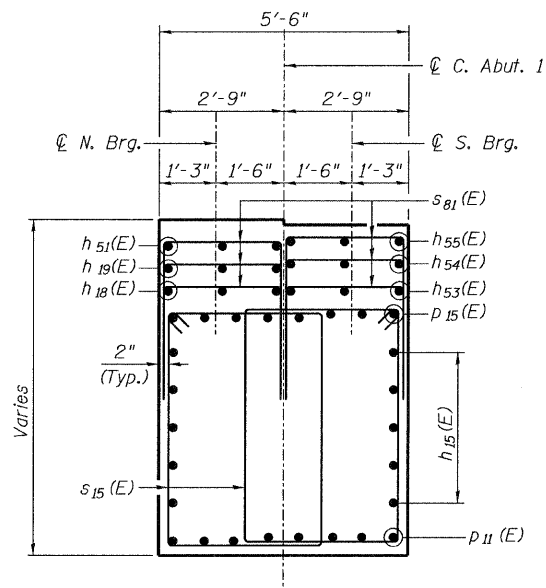
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



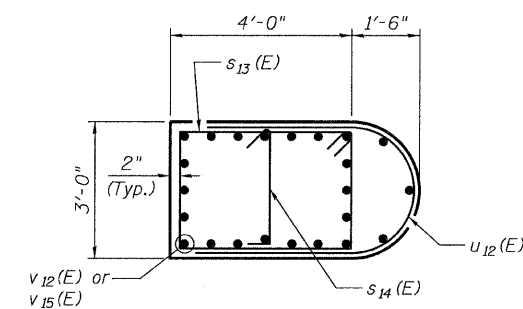
SECTION A-A



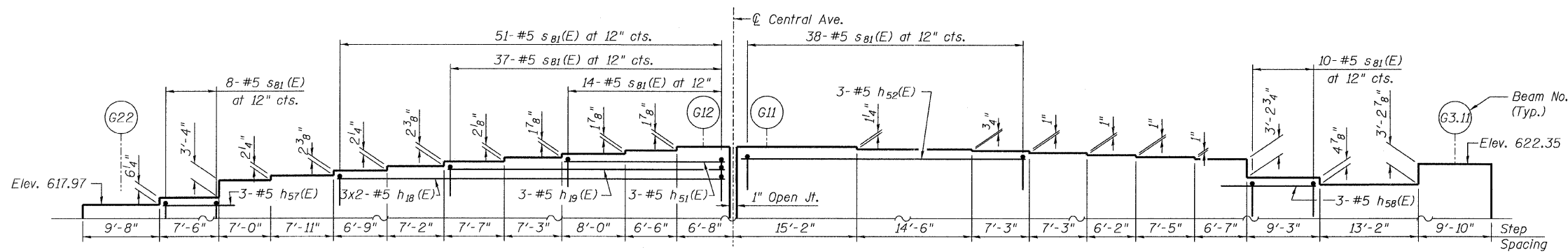
SECTION B-B



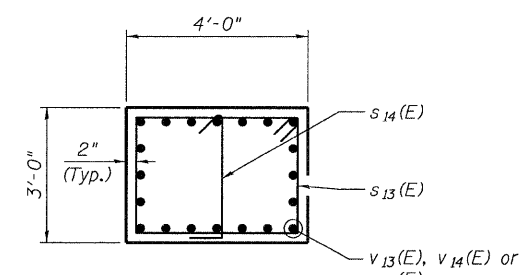
SECTION C-C



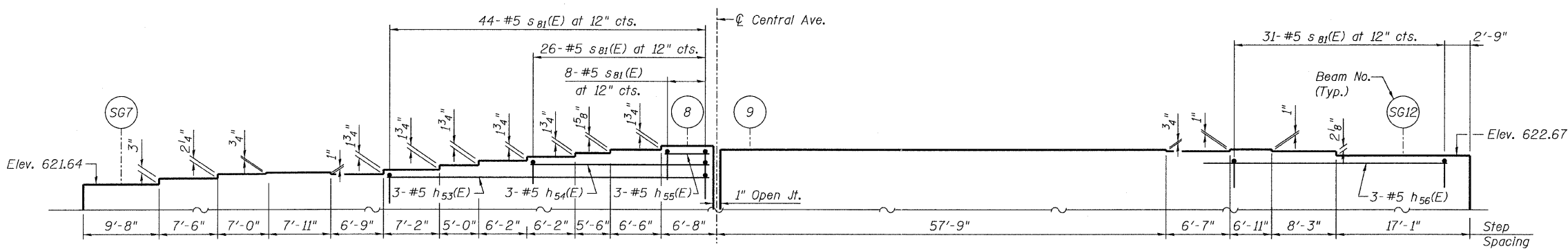
SECTION D-D



NORTH CAP PARTIAL ELEVATION: STEP REINFORCEMENT  
(Looking North)



SECTION E-E



SOUTH CAP PARTIAL ELEVATION: STEP REINFORCEMENT  
(Looking North)

NOTES

1. Work this sheet with sheets 193, 194 & 196.

C. ABUT. 1 - DETAILS  
CENTRAL/I-55  
STRUCTURE NO. 016-0724

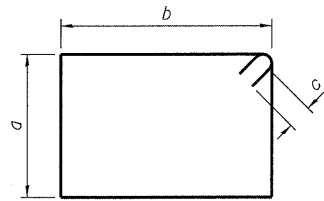
TYLIN INTERNATIONAL	DESIGNED - MB	REVISIONS		SHEET NO. 195	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	519	
	DRAWN - MB				239 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD,					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011									

p:\01345\structure\c2 Central Ave. 016-0724\55c2abut.dwg 5/9/2011 9:09:18 AM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

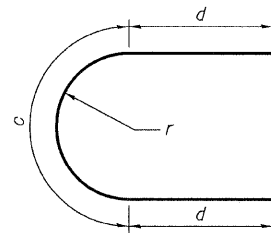
**NOTES**

1. Work this sheet with sheets 193 to 195.



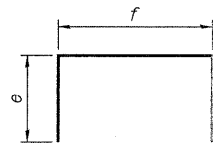
Bar	a	b	c
s <sub>13</sub> (E)	2'-8"	3'-8"	5 1/2"
s <sub>15</sub> (E)	4'-11"	3'-6"	5 1/2"
s <sub>16</sub> (E)	5'-10"	3'-6"	5 1/2"
s <sub>17</sub> (E)	8'-7"	2'-5"	5 1/2"
s <sub>18</sub> (E)	8'-2"	2'-5"	5 1/2"
s <sub>19</sub> (E)	8'-2"	5'-2"	5 1/2"

**BARS s<sub>13</sub>(E), s<sub>15</sub>(E), s<sub>16</sub>(E), s<sub>17</sub>(E), s<sub>18</sub>(E) & s<sub>19</sub>(E)**



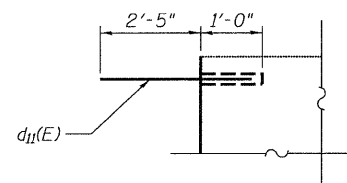
Bar	c	d	r
u <sub>11</sub> (E)	5'-0"	3'-8"	1'-7"
u <sub>12</sub> (E)	4'-2"	3'-8"	1'-4"
u <sub>13</sub> (E)	8'-1"	3'-8"	2'-7"
u <sub>15</sub> (E)	8'-1"	6'-11"	2'-7"

**BARS u<sub>11</sub>(E), u<sub>12</sub>(E), u<sub>13</sub>(E) & u<sub>15</sub>(E)**

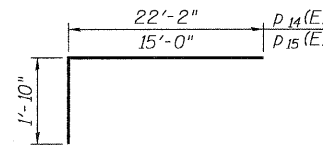


Bar	e	f
p <sub>18</sub> (E)	1'-10"	7'-0"
s <sub>11</sub> (E)	6'-1"	3'-2"
s <sub>12</sub> (E)	3'-10"	3'-2"
s <sub>20</sub> (E)	5'-3"	5'-2"
s <sub>81</sub> (E)	3'-6"	2'-5"
u <sub>16</sub> (E)	3'-8"	5'-2"
v <sub>15</sub> (E)	10"	8'-2"
v <sub>16</sub> (E)	10"	4'-11"
v <sub>17</sub> (E)	10"	8'-7"
v <sub>19</sub> (E)	10"	7'-10"

**BARS p<sub>18</sub>(E), s<sub>11</sub>(E), s<sub>12</sub>(E), s<sub>20</sub>(E), s<sub>81</sub>(E), u<sub>16</sub>(E), v<sub>15</sub>(E) thru v<sub>17</sub>(E) & v<sub>19</sub>(E)**



**EMBEDMENT DETAIL**



**BARS p<sub>14</sub>(E) & p<sub>15</sub>(E)**

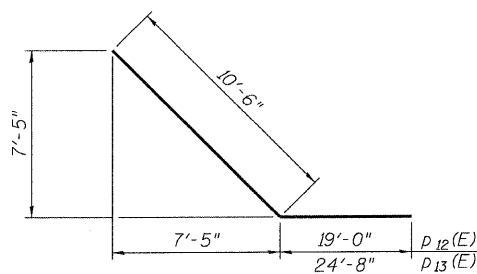
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d <sub>11</sub> (E)	36	#7	3'-5"	—
h <sub>11</sub> (E)	15	#6	29'-0"	—
h <sub>12</sub> (E)	78	#5	28'-6"	—
h <sub>13</sub> (E)	15	#6	34'-1"	—
h <sub>14</sub> (E)	78	#5	33'-7"	—
h <sub>15</sub> (E)	40	#7	35'-2"	—
h <sub>16</sub> (E)	14	#7	22'-6"	—
h <sub>17</sub> (E)	14	#7	33'-2"	—
h <sub>18</sub> (E)	6	#5	26'-8"	—
h <sub>19</sub> (E)	3	#5	35'-8"	—
h <sub>51</sub> (E)	3	#5	20'-10"	—
h <sub>52</sub> (E)	3	#5	36'-7"	—
h <sub>53</sub> (E)	3	#5	42'-10"	—
h <sub>54</sub> (E)	3	#5	24'-6"	—
h <sub>55</sub> (E)	3	#5	6'-4"	—
h <sub>56</sub> (E)	3	#5	32'-2"	—
h <sub>57</sub> (E)	3	#5	9'-6"	—
h <sub>58</sub> (E)	3	#5	11'-3"	—
n <sub>11</sub> (E)	10	#6	6'-9"	C
n <sub>12</sub> (E)	266	#9	10'-8"	—
p <sub>11</sub> (E)	44	#10	38'-5"	—
p <sub>12</sub> (E)	8	#10	29'-6"	—
p <sub>13</sub> (E)	8	#10	35'-2"	—
p <sub>14</sub> (E)	12	#10	24'-0"	—
p <sub>15</sub> (E)	44	#10	16'-10"	—
p <sub>16</sub> (E)	16	#10	59'-2"	—
p <sub>17</sub> (E)	8	#10	24'-1"	—
p <sub>18</sub> (E)	4	#10	10'-8"	□
s <sub>11</sub> (E)	74	#6	15'-4"	□
s <sub>12</sub> (E)	179	#6	10'-10"	□
s <sub>13</sub> (E)	228	#5	13'-8"	□
s <sub>14</sub> (E)	228	#5	3'-8"	□
s <sub>15</sub> (E)	358	#5	17'-9"	□
s <sub>16</sub> (E)	194	#5	19'-7"	□
s <sub>17</sub> (E)	23	#5	22'-11"	□
s <sub>18</sub> (E)	35	#5	22'-1"	□
s <sub>19</sub> (E)	12	#5	27'-7"	□
s <sub>20</sub> (E)	9	#5	15'-8"	□
s <sub>81</sub> (E)	267	#5	9'-5"	□
t <sub>11</sub> (E)	75	#5	9'-8"	—
t <sub>12</sub> (E)	123	#8	9'-8"	—
u <sub>11</sub> (E)	28	#5	12'-4"	U
u <sub>12</sub> (E)	30	#5	11'-6"	U
u <sub>13</sub> (E)	6	#5	15'-5"	U
u <sub>14</sub> (E)	4	#5	14'-0"	U
u <sub>15</sub> (E)	10	#5	21'-11"	U
u <sub>16</sub> (E)	15	#5	12'-6"	U

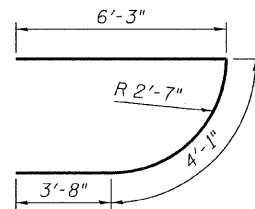
Bar	No.	Size	Length	Shape
v <sub>11</sub> (E)	368	#6	12'-8"	—
v <sub>12</sub> (E)	23	#9	12'-3"	—
v <sub>13</sub> (E)	223	#9	16'-3"	—
v <sub>14</sub> (E)	20	#9	13'-7"	—
v <sub>15</sub> (E)	4	#5	9'-10"	□
v <sub>16</sub> (E)	4	#5	6'-7"	□
v <sub>17</sub> (E)	4	#5	10'-3"	□
v <sub>18</sub> (E)	210	#6	3'-10"	—
v <sub>19</sub> (E)	4	#5	9'-6"	□
w <sub>11</sub> (E)	23	#5	21'-3"	—
w <sub>12</sub> (E)	46	#5	26'-11"	—
Test Pile Metal Shells		Each		2
Concrete Structures		Cu Yd		672.6
Reinforcement Bars, Epoxy Coated		Pound		94,140
Concrete Sealer		Sq Ft		8,065
Furnishing Metal Shell Piles 12" x 0.250"		Foot		2,544
Driving Piles		Foot		2,544
Mechanical Splicers		Each		210

**MIN. LAP LENGTH**  
(Unless noted otherwise)

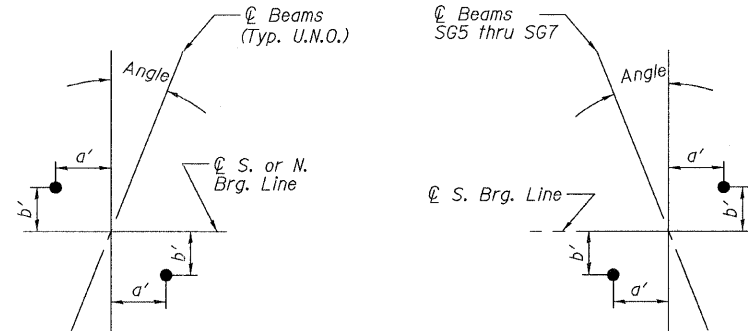
#5	3'-8"
#6	4'-5"
#7	5'-10"
#10	12'-4"



**BARS p<sub>12</sub>(E) & p<sub>13</sub>(E)**

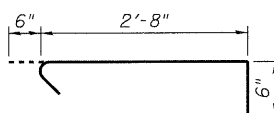


**BARS u<sub>14</sub>(E)**

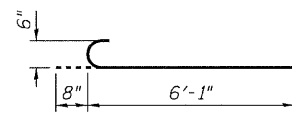


**ANCHOR BOLT LAYOUT**

Beam	Bearing Line	Angle	a'	b'
1 thru 16	South	21°39'15"	8 5/8"	3 3/8"
SG4	South	20°58'38"	9 5/8"	3 5/8"
SG5, SG6, SG7	South	11°21'9"	9 1/8"	1 7/8"
SG8, SG9	South	21°39'15"	9 1/2"	3 3/4"
SG10, SG11, SG12	South	42°48'34"	6 3/4"	6 1/4"
G1, G22	North	21°39'15"	13 3/4"	5 3/8"
G2, G21	North	21°39'15"	11 3/8"	4 1/2"
G3 thru G20	North	21°39'15"	8 1/8"	3 1/4"
G3.11	North	63°18'33"	4 5/8"	9 1/8"



**BAR s<sub>14</sub>(E)**



**BAR n<sub>11</sub>(E)**

**C. ABUT. 1 - DETAILS**  
**CENTRAL/I-55**  
**STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - MB	REVISIONS		SHEET NO. 196	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 520
	CHECKED - AMD,	NAME	DATE						
	DRAWN - MB								
	CHECKED - AMD,								
	DATE - 03/25/2011			239 SHEETS	CONTRACT NO. 60999				
					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

pi:\01345\structure\02\_Central\_Ave\_016-0724\155c2abur\dt12.dgn 5/9/2011 9:09:19 AM



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

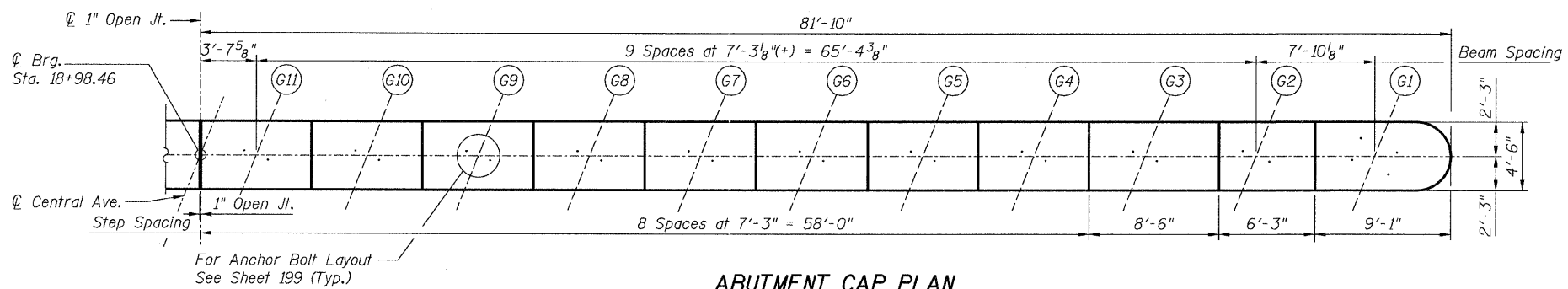
BRIDGE SEAT  
ELEVATIONS

NOTES

1. Bars indicated thus 8x2-#10 indicates 8 lines of bars with two lengths per line.
2. Space reinforcement in cap to miss anchor bolts.
3. Space reinforcement in footing to miss piles.
4. Pour steps monolithically with cap.
5. Pile capacity of existing 12"φ timber piles is 20 tons.
6. For Sections A-A, B-B, C-C, D-D & E-E, see sheet 199.
7. For Bill of Materials, see sheet 199.
8. Work this sheet with sheets 198 & 199.
9. E.F. - denotes Each Face.

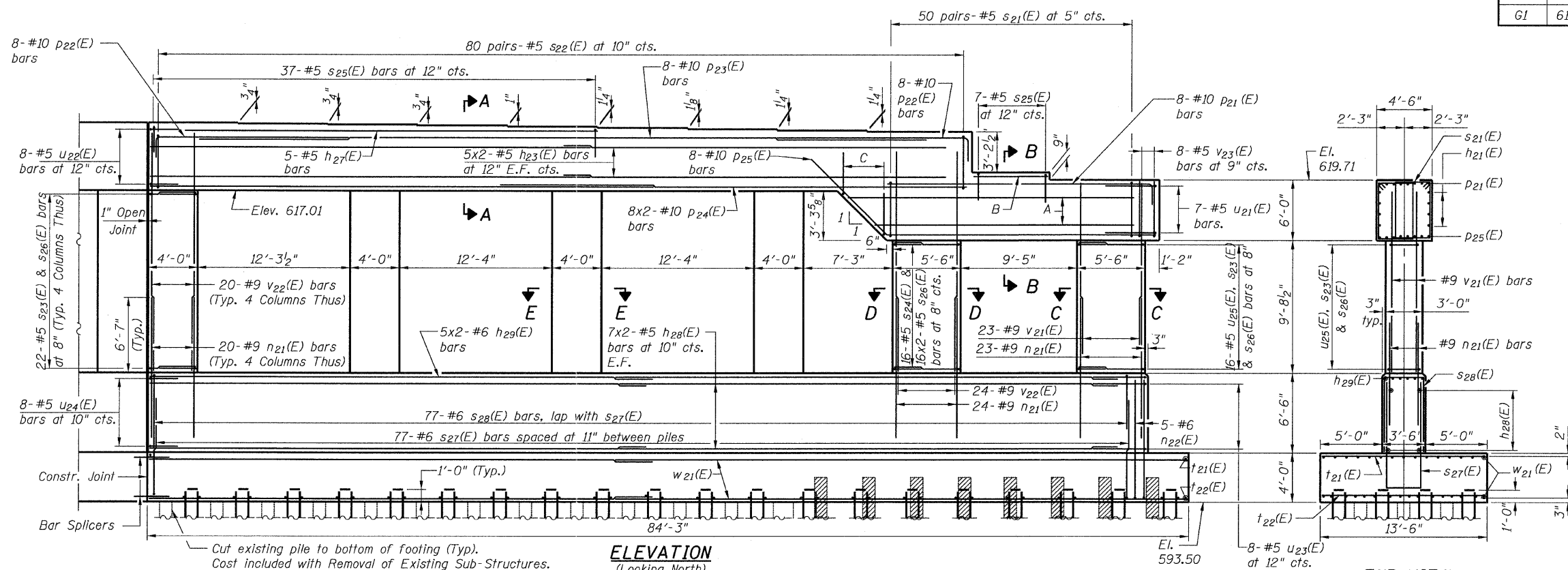
\* Cut to fit in field.

- A: 5-#5 h<sub>21</sub>(E) bars at 12" cts. E.F.\*  
 B: 5-#5 h<sub>22</sub>(E) bars  
 C: 4-#5 s<sub>29</sub>(E) at 12" cts.



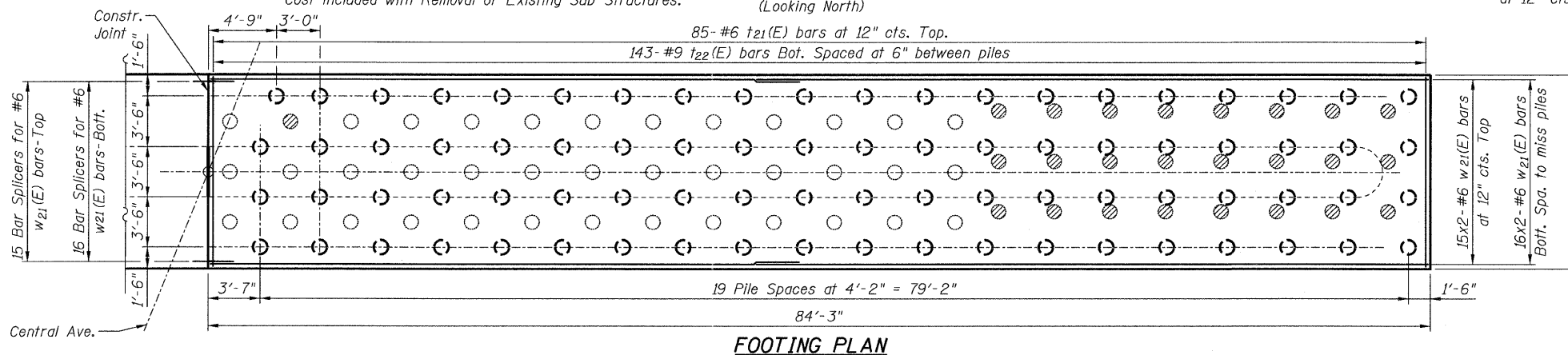
ABUTMENT CAP PLAN

Girder Line	Seat Elevation
G11	624.35
G10	624.28
G9	624.22
G8	624.16
G7	624.07
G6	623.97
G5	623.88
G4	623.77
G3	623.67
G2	620.46
G1	619.71



ELEVATION  
(Looking North)

END VIEW  
(East End)



FOOTING PLAN

PILE DATA

Type: 12" φ x 0.25" Wall  
 Nominal Required Bearing: 270 kips  
 Allowable Resistance Available: 90 kips  
 Estimated Length: 42 ft  
 No. Production Piles: 79  
 No. Test Piles: 1

- Proposed Pile
- Existing Pile to remain (Cut to bottom of footing)
- ⊗ Existing Pile to be extracted

C. ABUT. 2 REPL. & WID. - EAST  
 CENTRAL/I-55  
 STRUCTURE NO. 016-0724

TYLIN INTERNATIONAL	DESIGNED - MB	REVISIONS		SHEET NO. 197	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	521
	DRAWN - MB				239 SHEETS	CONTRACT NO. 60999			
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011								

p:\01345\structure\2 Central Ave. 016-0724\155c2abut2.ead 5/9/2011 9:09:20 AM

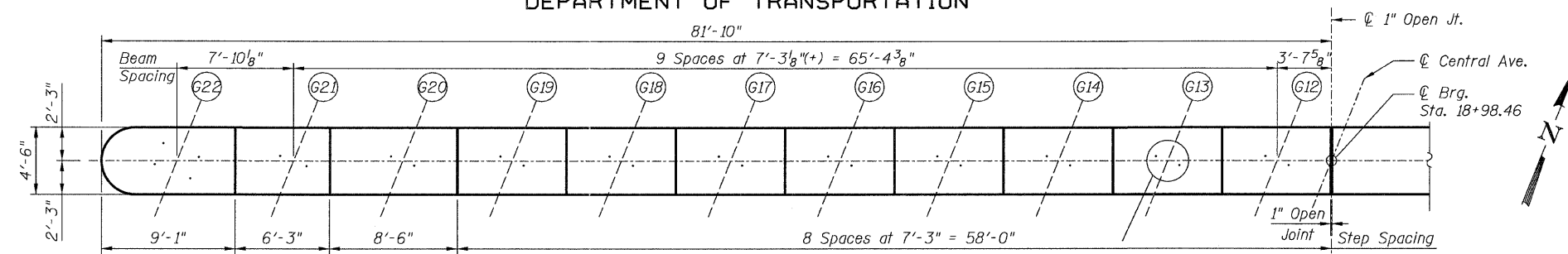
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BRIDGE SEAT  
ELEVATIONS

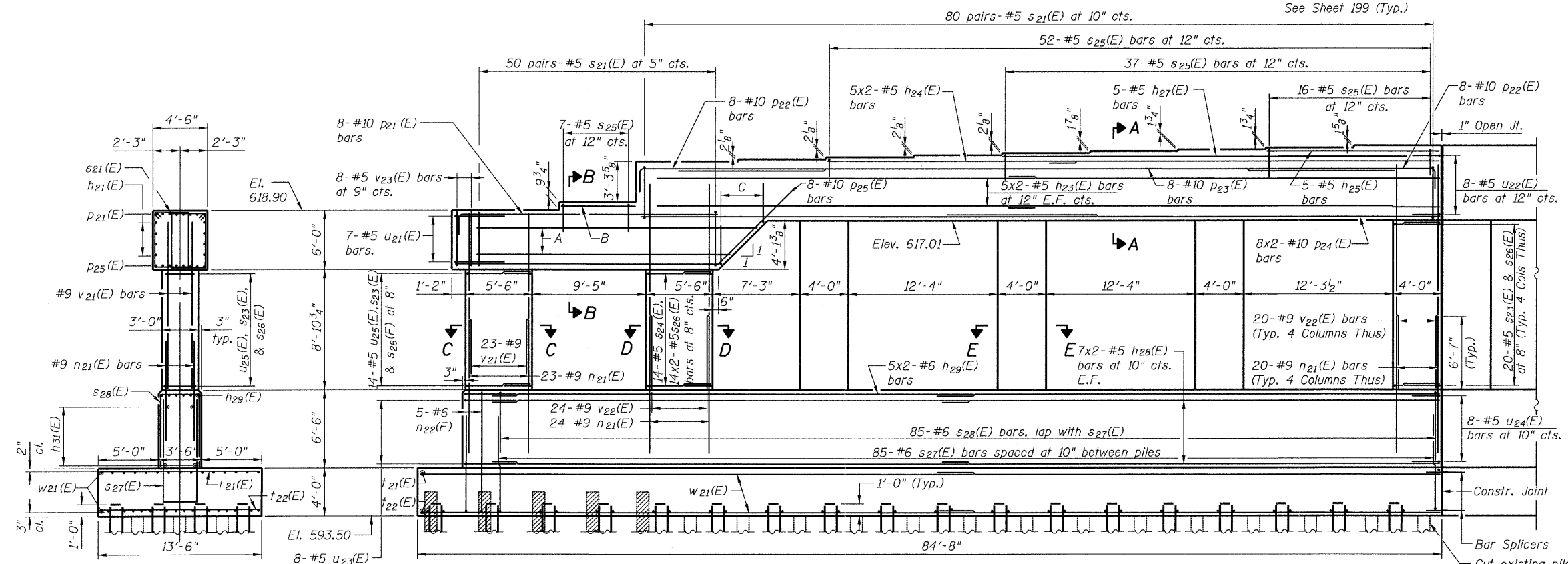
NOTES

- For sections A-A, B-B, C-C, D-D & E-E see sheet 199.
- For notes see sheet 197.

\* Cut to fit in field.



ABUTMENT CAP PLAN



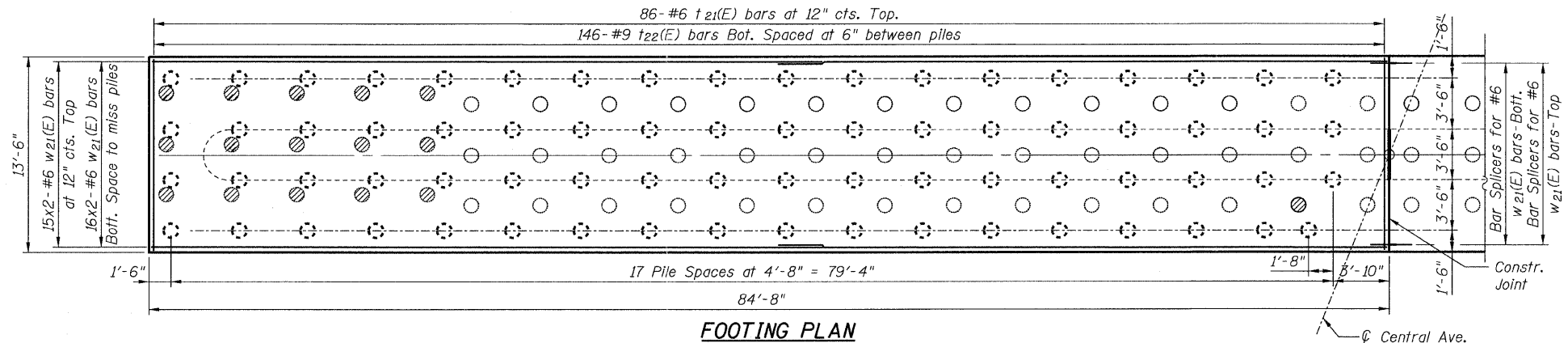
ELEVATION  
(Looking North)

- A: 5-#5 h<sub>21</sub>(E) bars at 12" cts. E.F.\*
- B: 5-#5 h<sub>22</sub>(E) bars
- C: 5-#5 s<sub>29</sub>(E) bars at 12" cts.

END VIEW  
(West End)

PILE DATA

- Type: 12"  $\phi$  x 0.25" Wall  
Nominal Required Bearing: 270 kips  
Allowable Resistance Available: 90 kips  
Estimated Length: 42 ft  
No. Production Piles: 71  
No. Test Piles: 1
- ⊙ Proposed Pile
  - Existing Pile to remain (Cut to bottom of footing)
  - ⊗ Existing Pile to be extracted



FOOTING PLAN

C. ABUT. 2 REPL. & WID.-WEST  
CENTRAL/I-55  
STRUCTURE NO. 016-0724

Girder Line	Seat Elevation
G22	618.90
G21	619.71
G20	623.01
G19	623.19
G18	623.37
G17	623.55
G16	623.72
G15	623.88
G14	624.03
G13	624.17
G12	624.31

TYLIN INTERNATIONAL	DESIGNED - MB	REVISIONS		SHEET NO. 198	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	522
	DRAWN - MB				239 SHEETS	CONTRACT NO. 60999			
	CHECKED - AMD,					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			
	DATE - 03/25/2011								

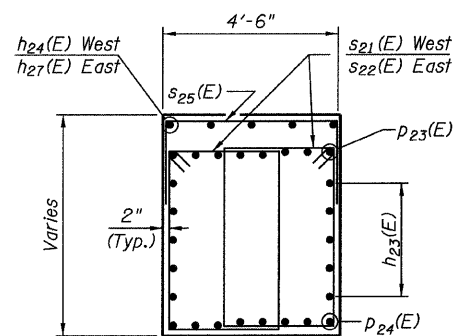
9/29/2011 9:09:22 AM p:\01345\structure\2 Central Ave. 016-0724\155c2abut2w.dgn 5/9/2011

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

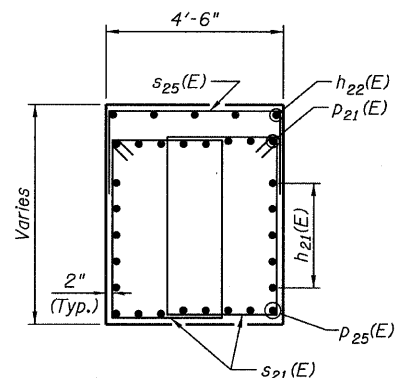
NOTES

1. Work this sheet with sheets 197 and 198.

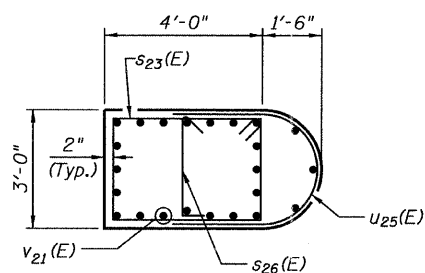
BILL OF MATERIAL



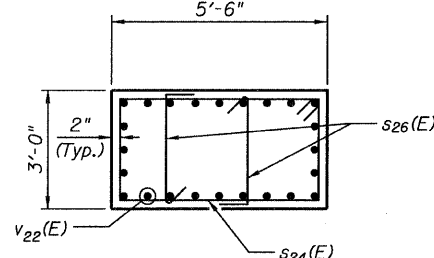
SECTION A-A



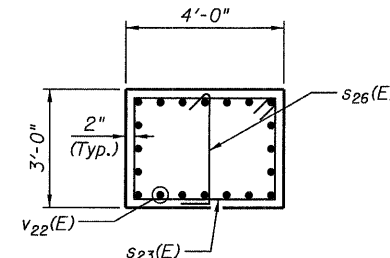
SECTION B-B



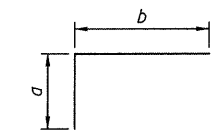
SECTION C-C



SECTION D-D

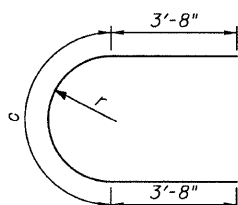


SECTION E-E



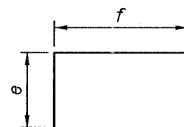
Bar	a	b
p21(E)	1'-10"	26'-7"
p22(E)	1'-10"	16'-2"
v23(E)	10"	5'-10"

BARS p21(E), p22(E) & v23(E)



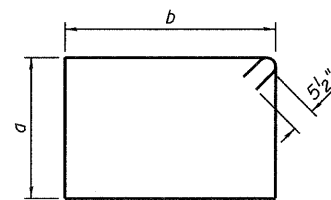
Bar	c	r
u21(E)	6'-7"	2'-1"
u23(E)	5'-0"	1'-7"
u25(E)	4'-2"	1'-4"

BARS u21(E), u23(E) & u25(E)



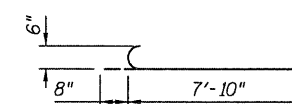
Bar	e	f
s25(E)	3'-6"	4'-2"
s27(E)	7'-7"	3'-2"
s28(E)	6'-4"	3'-2"
s29(E)	5'-3"	5'-2"
u22(E)	3'-8"	4'-2"
u24(E)	3'-8"	3'-2"

BARS s25(E), s27(E), s28(E), s29(E), u22(E) & u24(E)

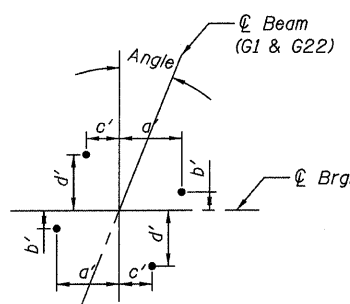


Bar	a	b
s21(E)	5'-8"	2'-9"
s22(E)	6'-4"	2'-9"
s23(E)	2'-8"	3'-8"
s24(E)	2'-8"	5'-2"

BARS s21(E) thru s24(E)

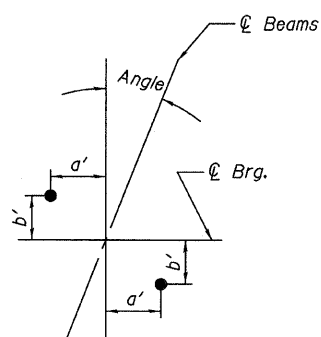


BAR n22(E)



ANCHOR BOLT LAYOUT

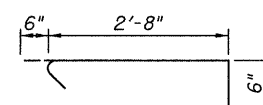
Beam	Angle	a'	b'	c'	d'
G1 & G22	21°39'15"	1'-5 5/8"	3"	10 3/4"	1'-2 1/4"



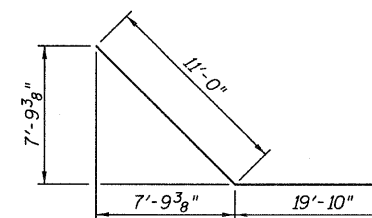
ANCHOR BOLT LAYOUT

Beam	Angle	a'	b'
G2 & G21	21°39'15"	11 3/8"	4 1/2"
G3 thru G20	21°39'15"	9 1/2"	3 3/4"

MINIMUM LAP	
#5	3'-8"
#6	4'-5"
#10	12'-4"



BARS s26(E)



BARS p25(E)

Bar	No.	Size	Length	Shape
h21(E)	20	#5	23'-8"	
h22(E)	10	#5	8'-3"	
h23(E)	40	#5	35'-0"	
h24(E)	10	#5	27'-1"	
h25(E)	5	#5	14'-2"	
h27(E)	10	#5	35'-11"	
h28(E)	56	#5	41'-4"	
h29(E)	20	#6	41'-7"	
n21(E)	254	#9	10'-8"	
n22(E)	10	#6	8'-6"	
p21(E)	16	#10	28'-5"	
p22(E)	32	#10	18'-0"	
p23(E)	16	#10	58'-10"	
p24(E)	32	#10	39'-0"	
p25(E)	16	#10	30'-10"	
s21(E)	360	#5	17'-9"	
s22(E)	160	#5	19'-1"	
s23(E)	198	#5	13'-7"	
s24(E)	30	#5	16'-7"	
s25(E)	156	#5	11'-2"	
s26(E)	258	#5	3'-8"	
s27(E)	162	#6	18'-4"	
s28(E)	162	#6	15'-10"	
s29(E)	9	#5	15'-8"	
t21(E)	171	#6	13'-2"	
t22(E)	289	#9	13'-2"	
u21(E)	14	#5	13'-11"	
u22(E)	16	#5	11'-6"	
u23(E)	16	#5	12'-4"	
u24(E)	16	#5	10'-6"	
u25(E)	30	#5	11'-6"	
v21(E)	46	#9	13'-9"	
v22(E)	208	#9	17'-1"	
v23(E)	16	#5	6'-8"	
w21(E)	124	#6	44'-5"	
Test Pile Metal Shells	Each		2	
Structure Excavation	Cu Yd		728	
Concrete Structures	Cu Yd		737.2	
Reinforcement Bars, Epoxy Coated	Pound		96,270	
Furnishing Metal Pile Shells 12"x0.25"	Foot		6,300	
Driving Piles	Foot		6,300	
Concrete Sealer	Sq Ft		7,796	
Pile Extraction	Each		41	
Bar Splitters	Each		31	

C. ABUT. 2 - DETAILS  
CENTRAL/I-55  
STRUCTURE NO. 016-0724

TYLIN INTERNATIONAL	DESIGNED - MB	REVISIONS		SHEET NO. 199	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	523
	DRAWN - MB				239 SHEETS	CONTRACT NO. 60999			
	CHECKED - AMD,					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			
	DATE - 03/25/2011								

5/9/2011 9:23 AM p:\01345\structure\02\_Central\_Ave\_016-0724\155c2abur24t1.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

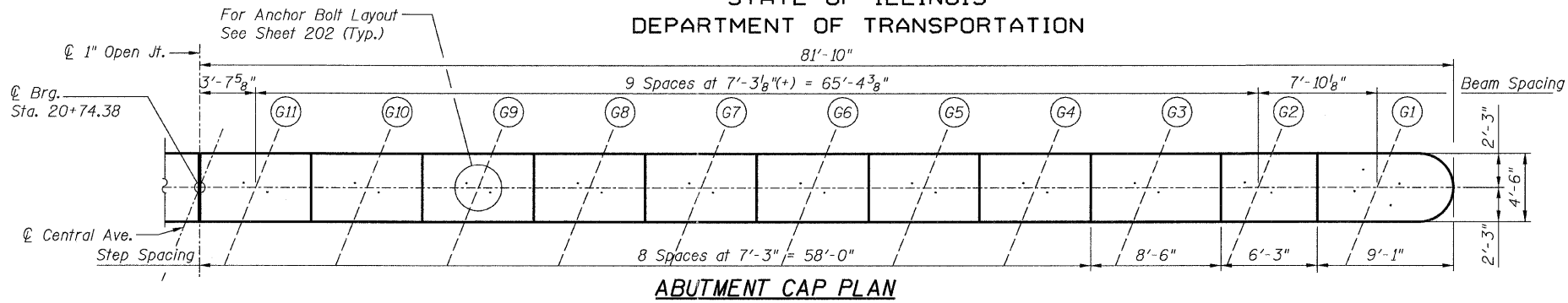
BRIDGE SEAT  
ELEVATIONS

NOTES

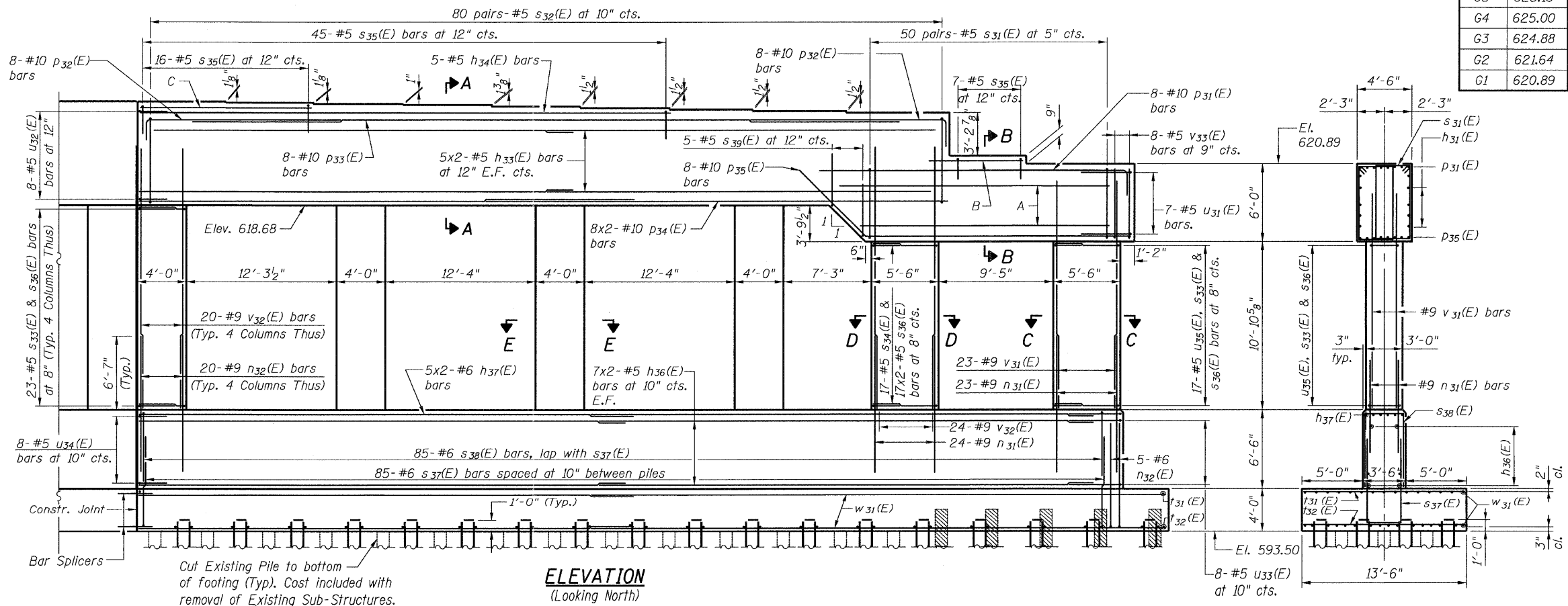
1. Bars indicated thus 8x2-#10 indicates 8 lines of bars with two lengths per line.
2. Space reinforcement in cap to miss anchor bolts.
3. Space reinforcement in footing to miss piles.
4. Pour steps monolithically with cap.
5. Pile capacity of existing 12"φ timber piles is 20 tons.
6. For Sections A-A, B-B, C-C, D-D & E-E, see sheet 202.
7. For Bill of Materials, see sheet 202.
8. Work this sheet with sheets 201 & 202.
9. E.F. - denotes Each Face.

\* Cut to fit in field.

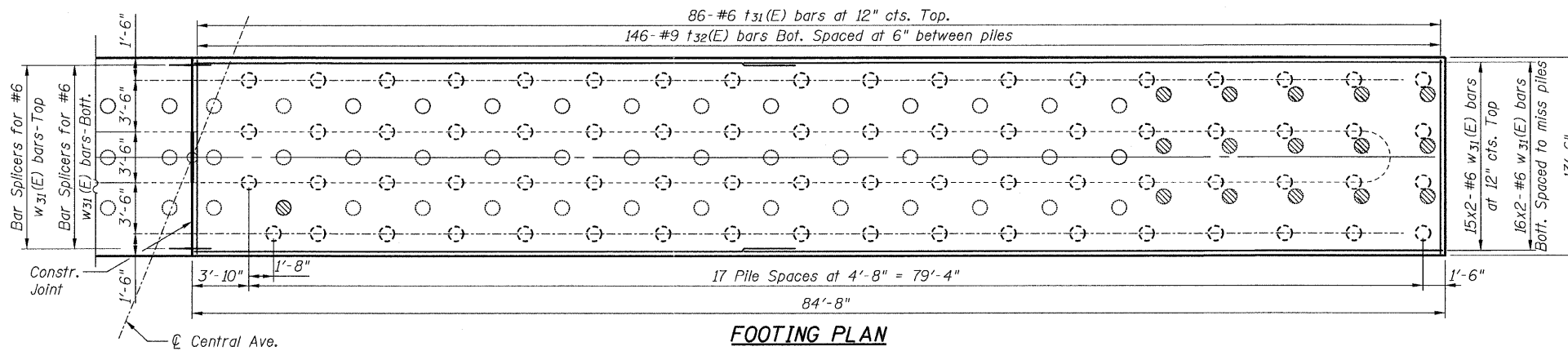
- A: 5-#5 h<sub>31</sub>(E) bars at 12" cts., E.F.\*  
 B: 5-#5 h<sub>32</sub>(E) bars  
 C: 5-#5 h<sub>38</sub>(E) bars



Girder Line	Seat Elevation
G11	625.77
G10	625.67
G9	625.58
G8	625.49
G7	625.38
G6	625.25
G5	625.13
G4	625.00
G3	624.88
G2	621.64
G1	620.89



END VIEW  
(East End)



PILE DATA

Type: 12" φ x 0.25" Wall  
 Nominal Required Bearing: 270 kips  
 Allowable Resistance Available: 90 kips  
 Estimated Length: 40 ft  
 No. Production Piles: 71  
 No. Test Piles: 1

Proposed Pile

Existing Pile to remain  
(Cut to bottom of footing)

Existing Pile to be extracted

C. ABUT. 3 REPL. & WID.-EAST  
CENTRAL/I-55  
STRUCTURE NO. 016-0724

TYLIN INTERNATIONAL

DESIGNED	MB	REVISIONS	
CHECKED	AMD,	NAME	DATE
DRAWN	MB		
CHECKED	AMD,		
DATE	03/25/2011		

SHEET NO. 200	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	524
239 SHEETS	CONTRACT NO. 60999				
	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

9/9/2011 9:09:24 AM p:\01345\structure\C2 Central Ave. 016-0724\55c2abut3e.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

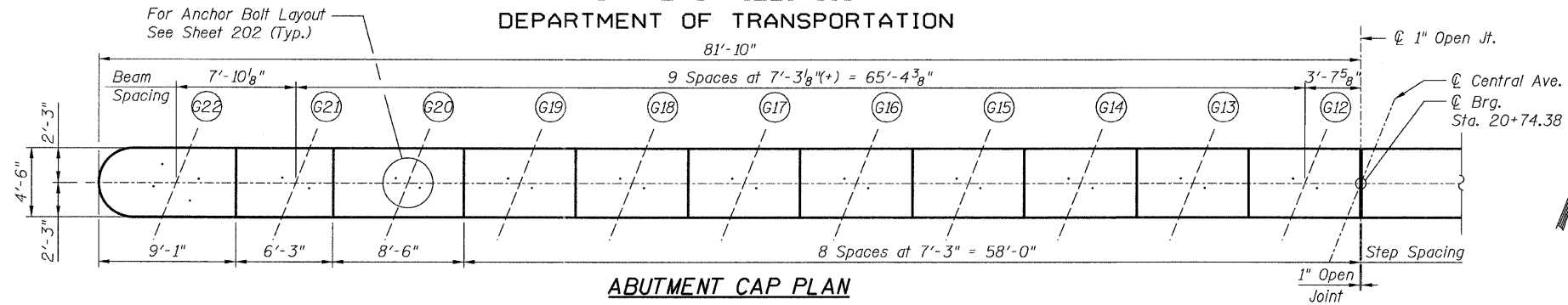
BRIDGE SEAT  
ELEVATIONS

Girder Line	Seat Elevation
G22	620.68
G21	621.45
G20	624.71
G19	624.86
G18	625.00
G17	625.15
G16	625.29
G15	625.42
G14	625.53
G13	625.65
G12	625.75

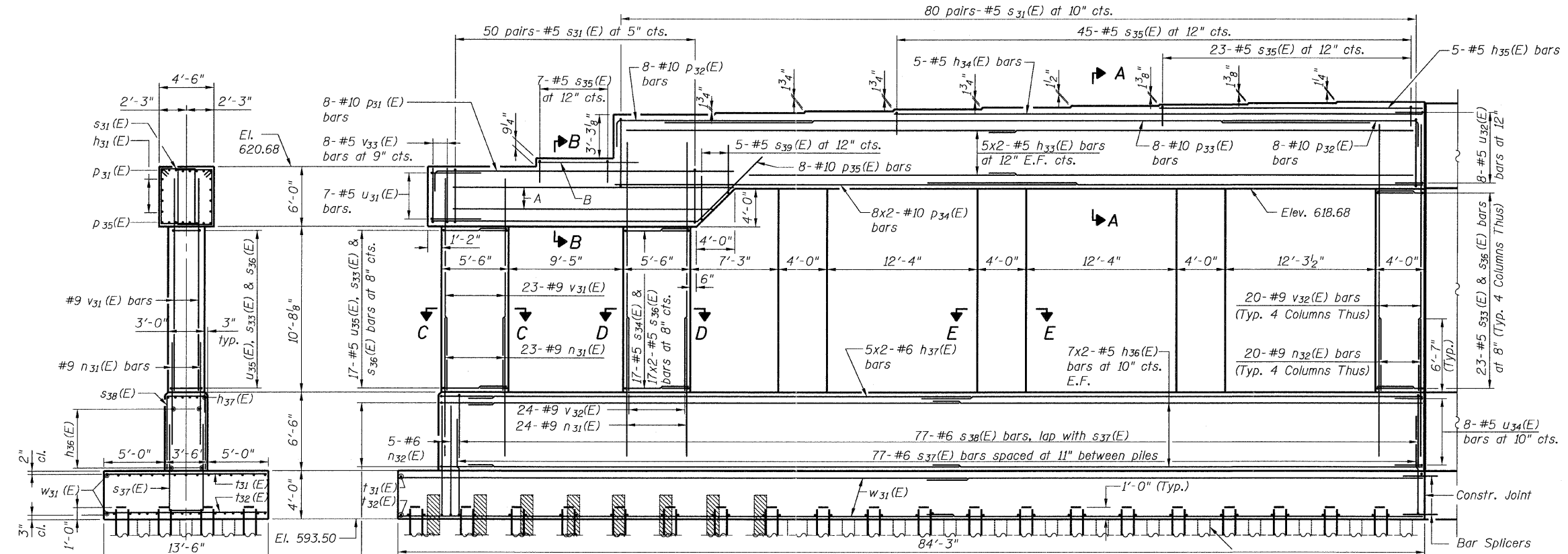
NOTES

- For sections A-A, B-B, C-C, D-D & E-E see sheet 202.
- For notes see sheet 200.

\* Cut to fit in field.

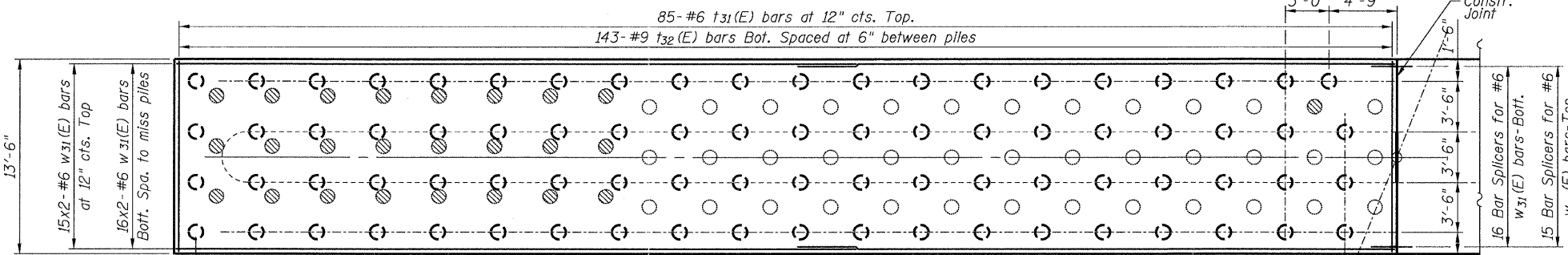


ABUTMENT CAP PLAN



ELEVATION  
(Looking North)

END VIEW  
(West End)



FOOTING PLAN

PILE DATA

Type: 12"  $\phi$  x 0.25" Wall  
Nominal Required Bearing: 270 kips  
Allowable Resistance Available: 90 kips  
Estimated Length: 44 ft  
No. Production Piles: 79  
No. Test Piles: 1

- Proposed Pile
- Existing Pile to remain  
(Cut to bottom of footing)
- ⊗ Existing Pile to be extracted

A: 5-#5 h31(E) bars at 12" cts. E.F.\*  
B: 5-#5 h32(E) bars

C. ABUT. 3 REPL. & WID.-WEST  
CENTRAL/I-55  
STRUCTURE NO. 016-0724

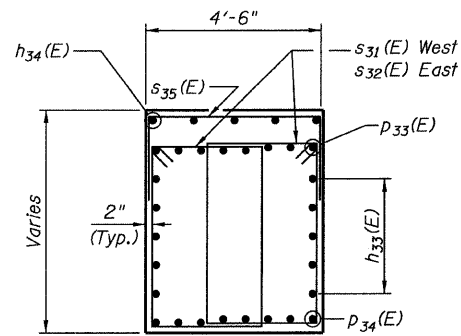
TYLIN INTERNATIONAL	DESIGNED - MB	REVISIONS		SHEET NO. 201	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	525	
	DRAWN - MB				239 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD,					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011									

9/9/2011 9:09:25 AM p:\01345\structure\02\_Central\_Ave\_016-0724\155c2abut3.dwg

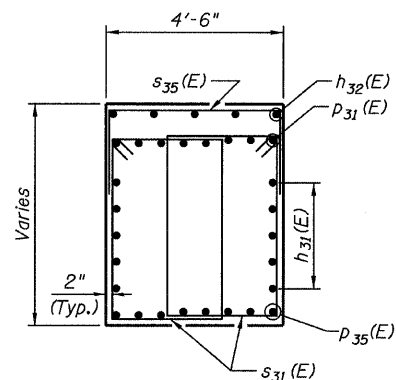
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NOTES

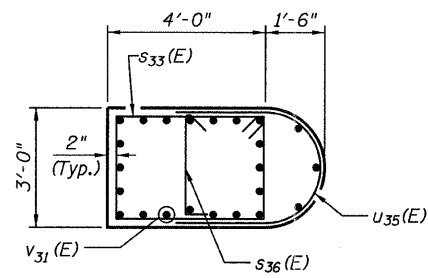
1. Work this sheet with sheets 200 and 201.



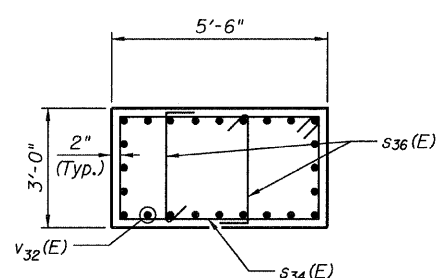
SECTION A-A



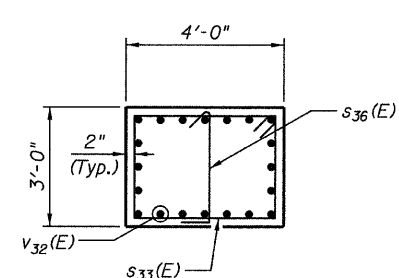
SECTION B-B



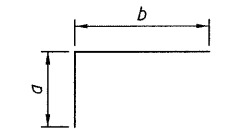
SECTION C-C



SECTION D-D

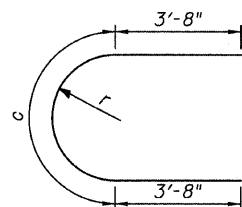


SECTION E-E



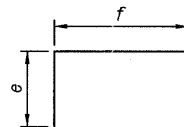
Bar	a	b
p31(E)	1'-10"	26'-7"
p32(E)	1'-10"	16'-2"
v33(E)	10"	5'-10"

BARS p31(E), p32(E) & v33(E)



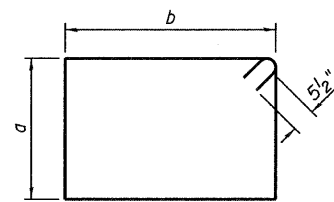
Bar	c	r
u31(E)	6'-7"	2'-1"
u33(E)	5'-0"	1'-7"
u35(E)	4'-2"	1'-4"

BARS u31(E), u33(E) & u35(E)



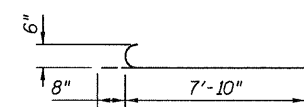
Bar	e	f
s35(E)	3'-6"	4'-2"
s37(E)	7'-7"	3'-2"
s38(E)	6'-4"	3'-2"
s39(E)	5'-3"	5'-2"
u32(E)	3'-8"	4'-2"
u34(E)	3'-8"	3'-2"

BARS s35(E), s37(E), s38(E),  
s39(E), u32(E) & u34(E)

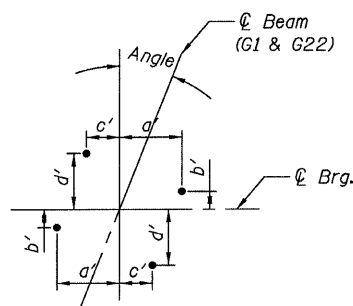


Bar	a	b
s31(E)	5'-8"	2'-9"
s32(E)	5'-11"	2'-9"
s33(E)	2'-8"	3'-8"
s34(E)	2'-8"	5'-2"

BARS s31(E) thru s34(E)

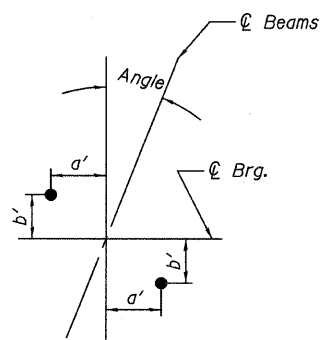


BAR n32(E)



ANCHOR BOLT LAYOUT

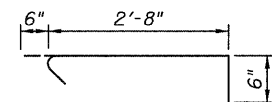
Beam	Angle	a'	b'	c'	d'
G1 & G22	21°39'15"	1'-5 5/8"	3"	10 3/4"	1'-2 1/4"



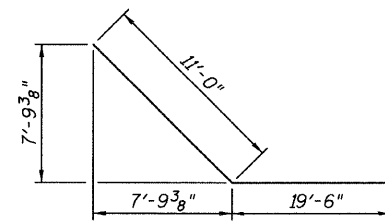
ANCHOR BOLT LAYOUT

Beam	Angle	a'	b'
G2 & G21	21°39'15"	11 3/8"	4 1/2"
G3 thru G20	21°39'15"	9 1/2"	3 3/4"

MINIMUM LAP	
#5	3'-8"
#6	4'-5"
#10	12'-4"



BARS s36(E)



BARS p35(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h31(E)	20	#5	23'-8"	—
h32(E)	10	#5	8'-3"	—
h33(E)	40	#5	35'-0"	—
h34(E)	10	#5	43'-2"	—
h35(E)	5	#5	21'-5"	—
h36(E)	56	#5	41'-4"	—
h37(E)	20	#6	41'-7"	—
h38(E)	5	#5	14'-2"	—
n31(E)	254	#9	10'-8"	—
n32(E)	10	#6	8'-6"	—
p31(E)	16	#10	28'-5"	—
p32(E)	32	#10	18'-0"	—
p33(E)	16	#10	58'-10"	—
p34(E)	32	#10	39'-0"	—
p35(E)	16	#10	30'-6"	—
s31(E)	360	#5	17'-9"	—
s32(E)	160	#5	18'-3"	—
s33(E)	218	#5	13'-7"	—
s34(E)	34	#5	16'-7"	—
s35(E)	143	#5	11'-2"	—
s36(E)	286	#5	3'-8"	—
s37(E)	162	#6	18'-4"	—
s38(E)	162	#6	15'-10"	—
s39(E)	10	#5	15'-8"	—
t31(E)	171	#6	13'-2"	—
t32(E)	289	#9	13'-2"	—
u31(E)	14	#5	13'-11"	—
u32(E)	16	#5	11'-6"	—
u33(E)	16	#5	12'-4"	—
u34(E)	16	#5	10'-6"	—
u35(E)	34	#5	11'-6"	—
v31(E)	46	#9	14'-10"	—
v32(E)	208	#9	18'-8"	—
v33(E)	16	#5	6'-8"	—
w31(E)	124	#6	44'-5"	—
Test Pile Metal Shells	Each		2	
Structure Excavation	Cu Yd		728	
Concrete Structures	Cu Yd		742.3	
Reinforcement Bars, Epoxy Coated	Pound		97,700	
Furnishing Metal Pile Shells 12"x0.25"	Foot		6,316	
Driving Piles	Foot		6,316	
Concrete Sealer	Sq Ft		8,012	
Pile Extraction	Each		41	
Bar Splicers	Each		31	

C. ABUT. 3 - DETAILS  
CENTRAL/I-55  
STRUCTURE NO. 016-0724

TYLIN INTERNATIONAL	DESIGNED - MB	REVISIONS		SHEET NO. 202	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.					
	CHECKED - AMD,	NAME	DATE							55	0711.2R & 1011.1BR	COOK	741	526
	DRAWN - MB									CONTRACT NO. 60999				
	CHECKED - AMD,									FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011			239 SHEETS										

p:\01345\structure\02\_Central\_Ave\_016-0724\55c2abut3dt1.dwg 5/9/2011 9:09:26 AM

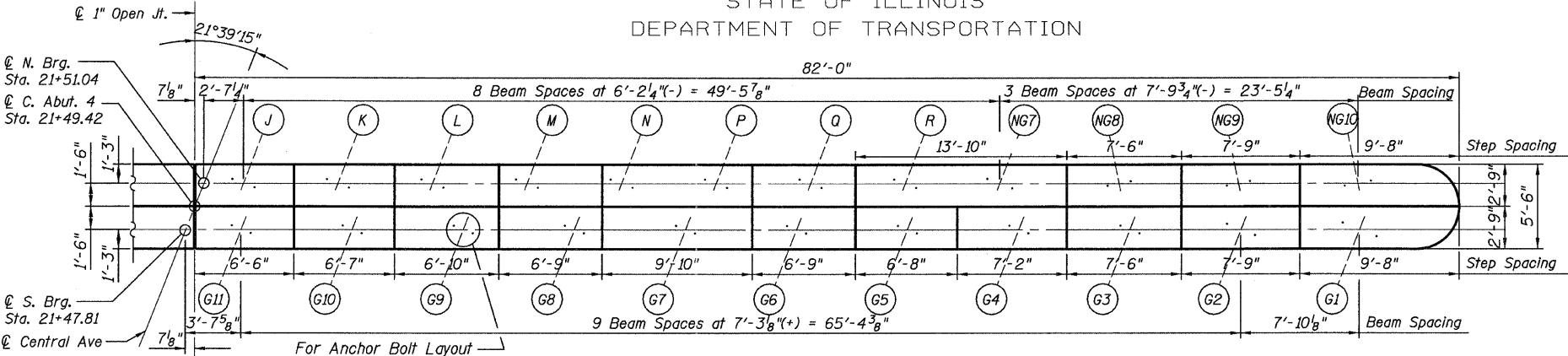


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BRIDGE SEAT ELEVATIONS

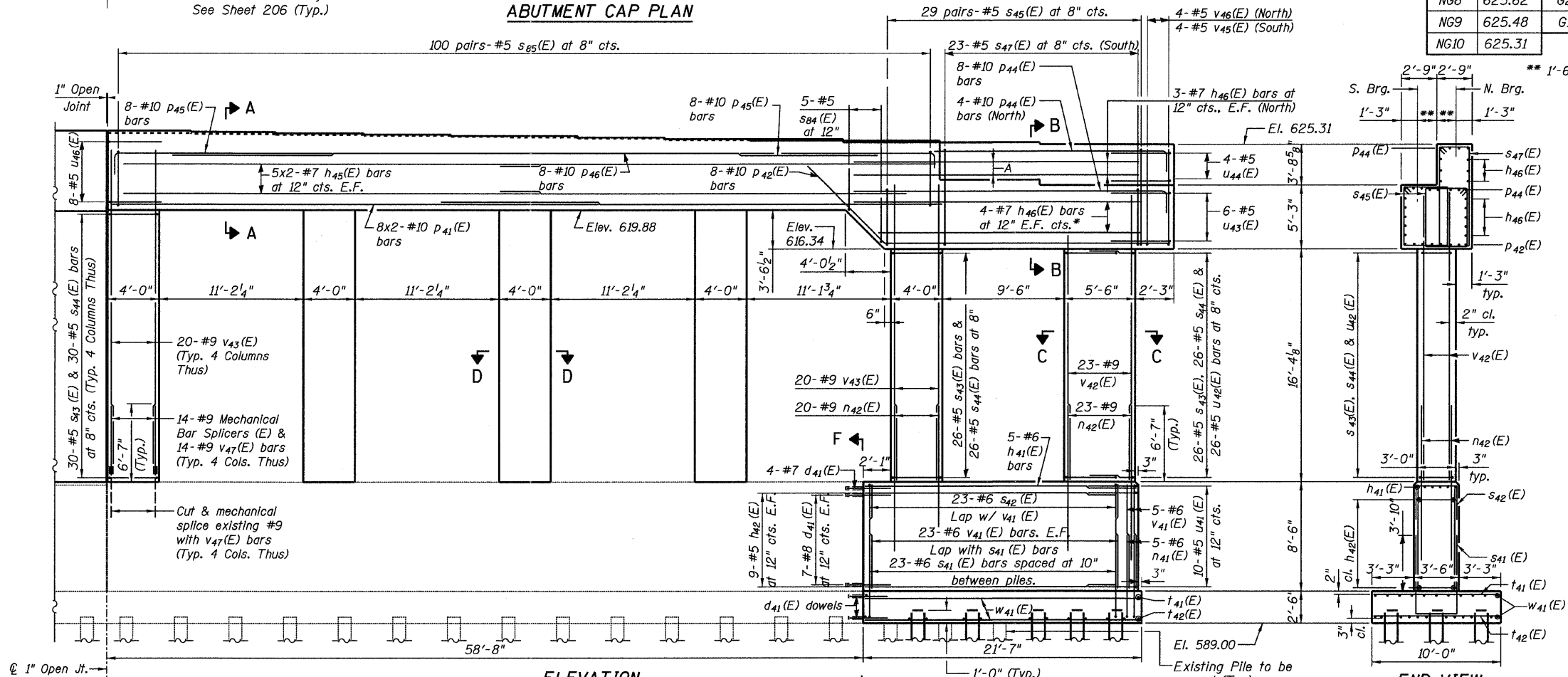
NOTES

- Bars indicated thus 8x2-#10 indicates 8 lines of bars with two lengths per line.
- Space reinforcement in cap to miss anchor bolts.
- Space reinforcement in footing to miss piles.
- Four steps monolithically with cap.
- Pile capacity of existing 12" φ timber piles is 20 tons.
- For Bill of Materials, see sheet 206.
- Work this sheet with sheets 204, 205 & 206.
- Sand blast clean existing reinforcing bars to be incorporated into new construction. After cleaning, bars shall be evaluated to determine if additional reinforcing bars are required. Damaged or cut bars, or bars that have lost 25% or more of their original cross sectional area shall be supplemented by drilling and grouting into existing concrete. Cost included with "Concrete Removal".
- Epoxy grout d<sub>41</sub>(E) bars according to Section 584 of the Standard Specifications. Drill to miss existing reinforcement. The epoxy grout and the method application shall be approved by the Engineer. The cost shall be included in "Reinforcement Bars, Epoxy Coated."
- E.F. - denotes Each Face.
- See sheet 205 for step reinforcement.



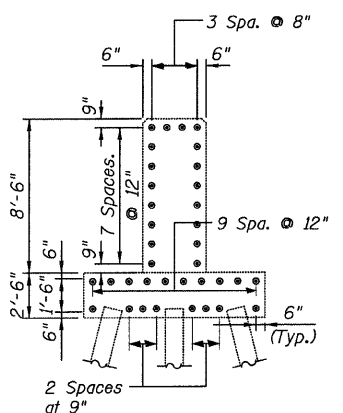
ABUTMENT CAP PLAN

North Bearings		South Bearings	
Girder Line	Seat Elevation	Girder Line	Seat Elevation
J	626.05	G11	626.18
K	625.98	G10	626.10
L	625.92	G9	626.01
M	625.83	G8	625.91
N	625.73	G7	625.81
P	625.73	G6	625.68
Q	625.62	G5	625.56
R	625.50	G4	625.43
NG7	625.50	G3	625.31
NG8	625.62	G2	622.05
NG9	625.48	G1	621.59
NG10	625.31		

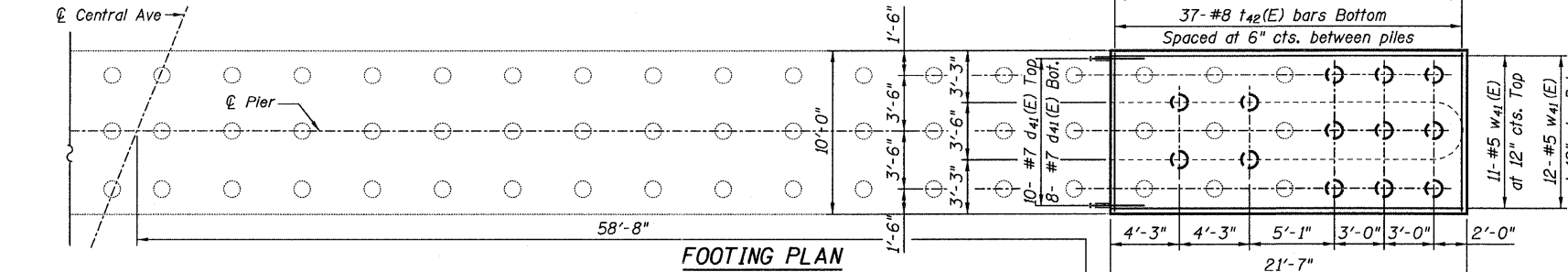


ELEVATION  
(Looking North)

END VIEW  
(East Extension)



SECTION F-F  
(East Extension)



FOOTING PLAN

PILE DATA

Type: 12" φ x 0.25" Wall  
Nominal Required Bearing: 270 kips  
Allowable Resistance Available: 90 kips  
Estimated Length: 42 ft  
No. Production Piles: 12  
No. Test Piles: 1

- (C) Proposed Pile
- (O) Existing Pile

C. ABUT. 4 REPL. & WID.-EAST  
CENTRAL/I-55  
STRUCTURE NO. 016-0724

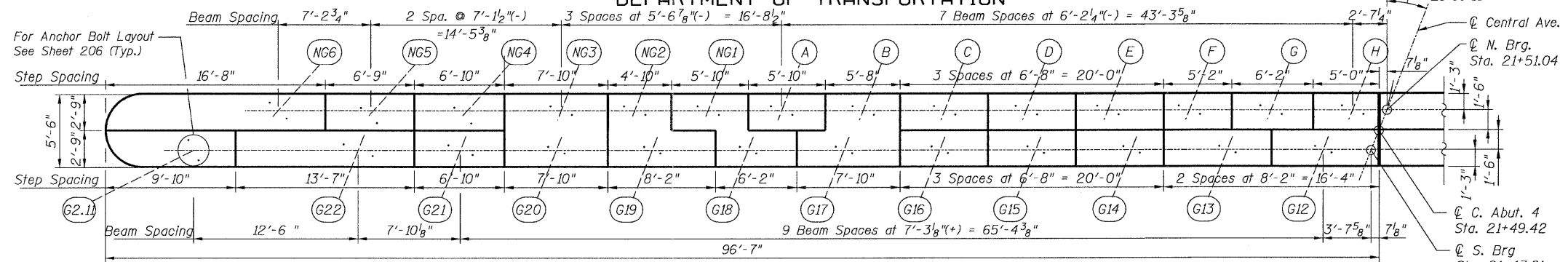
<b>TYLIN INTERNATIONAL</b>	DESIGNED - MB	REVISIONS		SHEET NO. 203	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.								
	CHECKED - AMD,	NAME	DATE							55	0711.2R & 1011.1BR	COOK	741	527			
	DRAWN - MB																
	CHECKED - AMD,														CONTRACT NO. 60999		
	DATE - 03/25/2011																
				239 SHEETS	FED. ROAD DIST. NO. 1 ILLINOIS		FED. AID PROJECT										

4/25/23 PM  
410345\structure\2\_Central\_Ave\_016-0724\1562abut4a.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NOTES

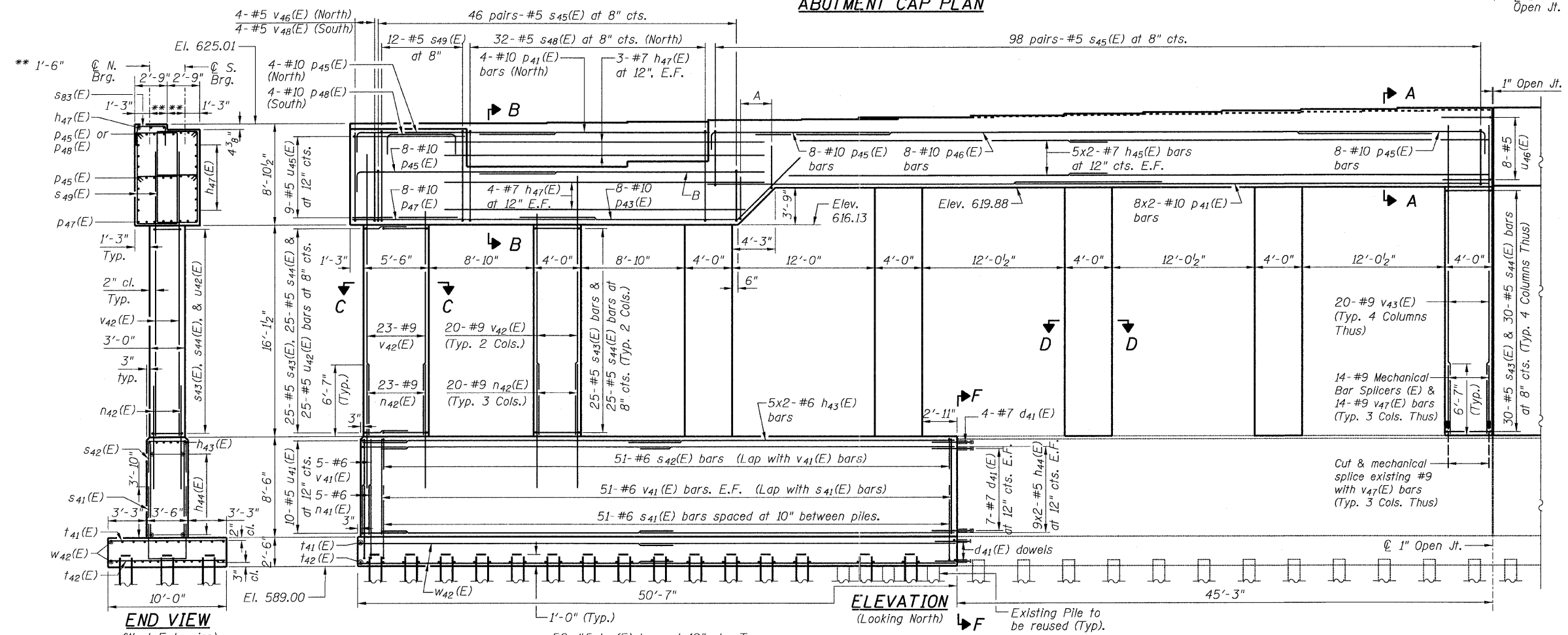
1. Work this sheet with sheets sheet 203 thru 206.
2. For notes see sheet 203.
3. See sheet 205 for step reinforcement.



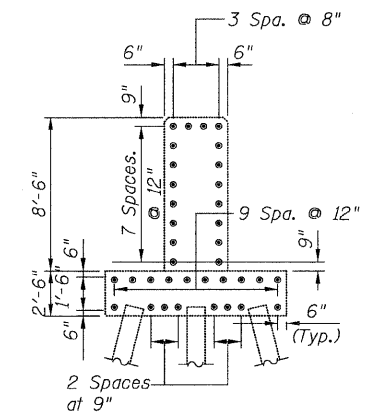
BRIDGE SEAT ELEVATIONS

North Bearings		South Bearings	
Girder Line	Seat Elevation	Girder Line	Seat Elevation
NG6	625.01	G2.11	624.43
NG5	625.12	G22	621.38
NG4	625.27	G21	621.86
NG3	625.13	G20	625.13
NG2	625.28	G19	625.28
NG1	625.38	G18	625.38
A	625.48	G17	625.56
B	625.56	G16	625.71
C	625.64	G15	625.85
D	625.72	G14	625.95
E	625.80	G13	626.07
F	625.88	G12	626.18
G	625.96		
H	626.04		

ABUTMENT CAP PLAN



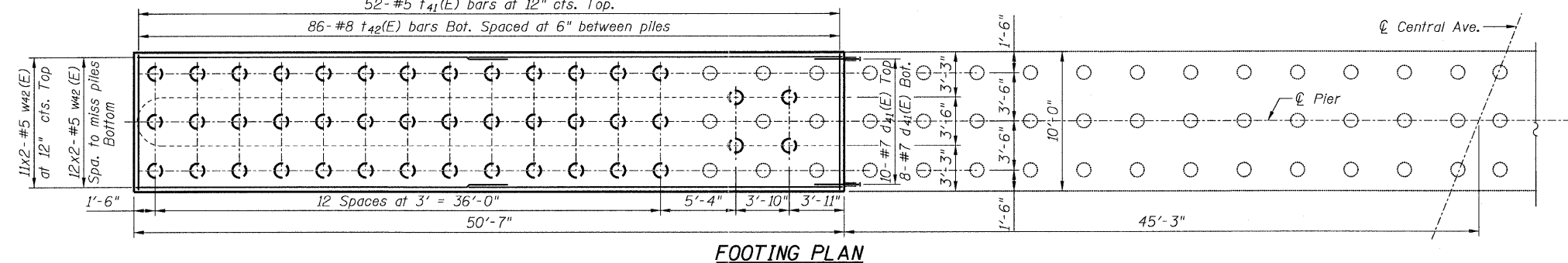
- A: 4-#5 s<sub>B4</sub>(E) at 12" cts.
- B: 8-#10 p<sub>A1</sub>(E) bars
- \* Cut to fit in field.



PILE DATA

Type: 12" φ x 0.25" Wall  
Nominal Required Bearing: 270 kips  
Allowable Resistance Available: 90 kips  
Estimated Length: 47 ft  
No. Production Piles: 42  
No. Test Piles: 1

- ⊙ Proposed Pile
- Existing Pile



C. ABUT. 4 REPL. & WID.-WEST  
CENTRAL/I-55  
STRUCTURE NO. 016-0724

TYLIN INTERNATIONAL

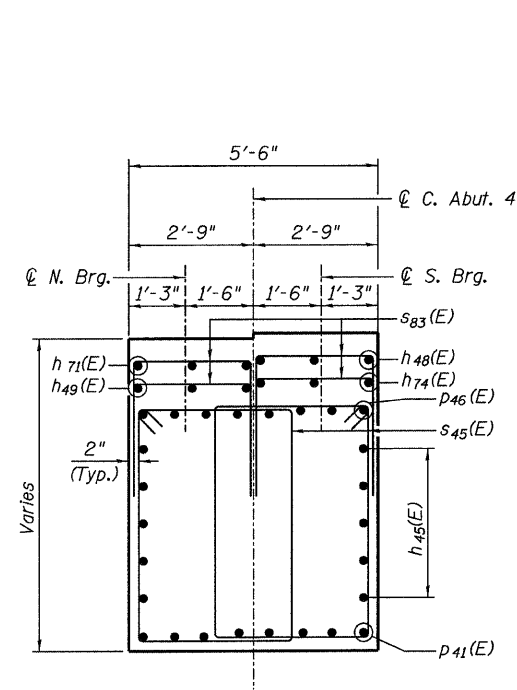
DESIGNED	MB	REVISIONS	
CHECKED	AMD,	NAME	DATE
DRAWN	MB		
CHECKED	AMD,		
DATE	03/25/2011		

SHEET NO. 204	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	239 SHEETS	55	0711.2R & 1011.1BR	COOK	741 528
			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

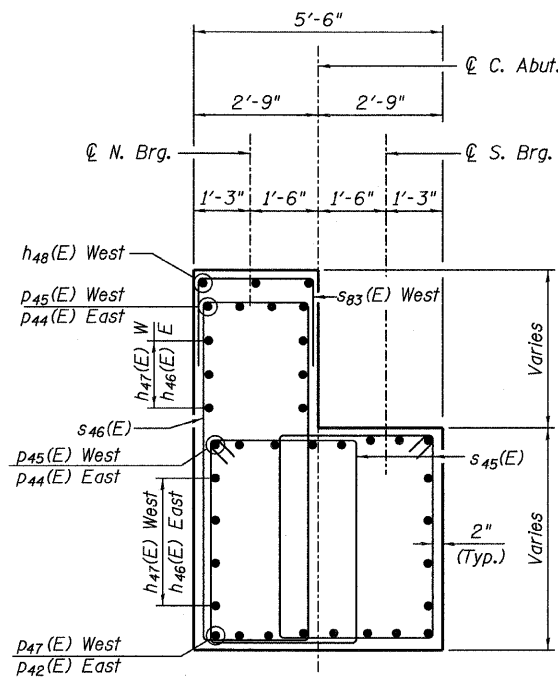
4/25/25 PM  
016-0724-155e2abut4.dgn  
5/10/2011



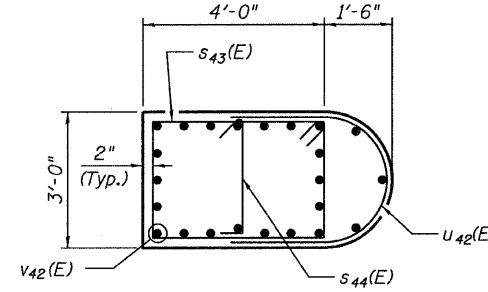
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



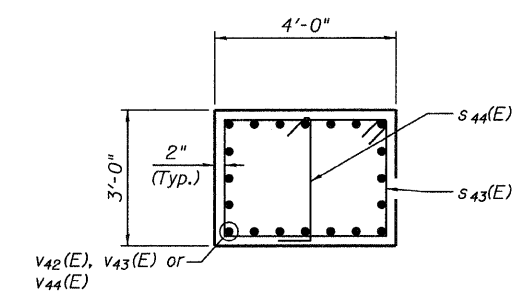
**SECTION A-A**  
(West shown, East similar)



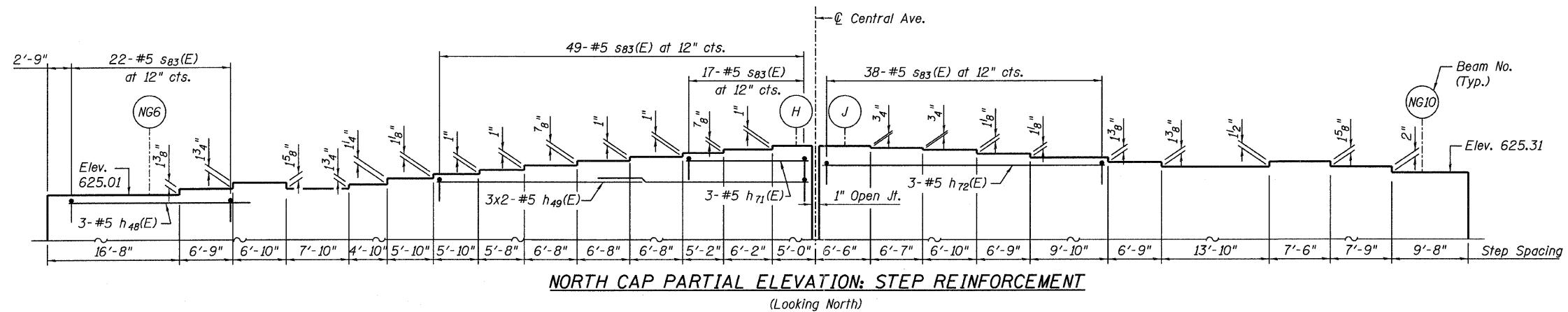
**SECTION B-B**  
(West shown, East similar)



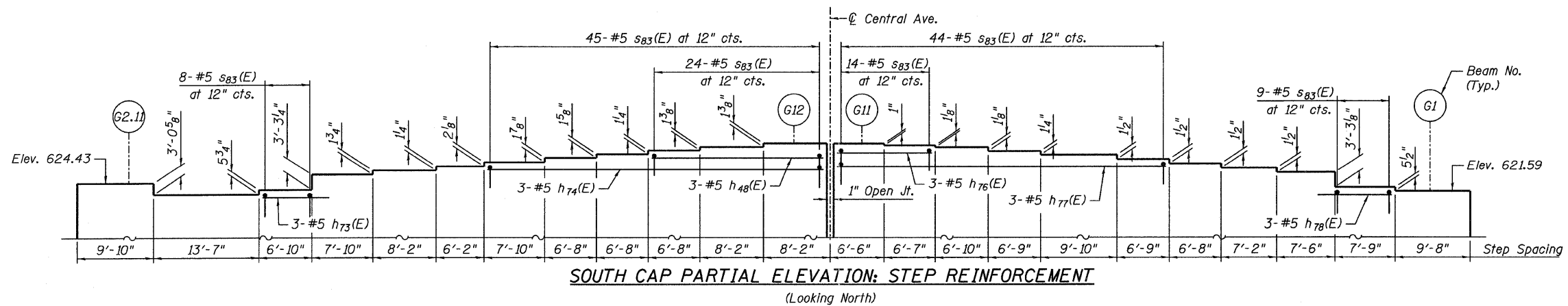
**SECTION C-C**



**SECTION D-D**



**NORTH CAP PARTIAL ELEVATION: STEP REINFORCEMENT**  
(Looking North)



**SOUTH CAP PARTIAL ELEVATION: STEP REINFORCEMENT**  
(Looking North)

**NOTES**

1. Work this sheet with sheets 203, 204 & 206.

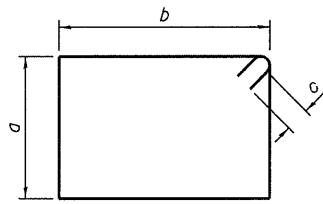
**C. ABUT. 4 - DETAILS**  
**CENTRAL/I-55**  
**STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - MB	REVISIONS		SHEET NO. 205	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	529
	DRAWN - MB				239 SHEETS	CONTRACT NO. 60999			
	CHECKED - AMD,					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			
	DATE - 03/25/2011								

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

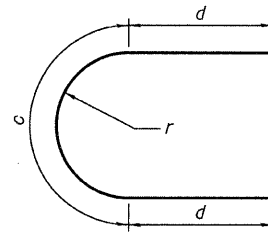
NOTES

1. Work this sheet with sheets 203 to 205.



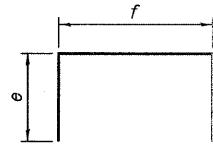
Bar	a	b	c
S43(E)	2'-8"	3'-8"	5 1/2"
S45(E)	4'-11"	3'-6"	5 1/2"
S47(E)	8'-6"	2'-5"	5 1/2"
S48(E)	8'-0"	2'-5"	5 1/2"
S49(E)	8'-0"	5'-2"	5 1/2"
S85(E)	5'-1"	3'-6"	5 1/2"

BARS S43(E), S45(E), S47(E),  
S48(E), S49(E) & S85(E)



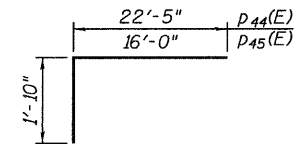
Bar	c	d	r
U41(E)	5'-0"	3'-8"	1'-7"
U42(E)	4'-2"	3'-8"	1'-4"
U43(E)	8'-1"	3'-8"	2'-7"
U45(E)	8'-1"	6'-11"	2'-7"

BARS U41(E), U42(E), U43(E)  
& U45(E)

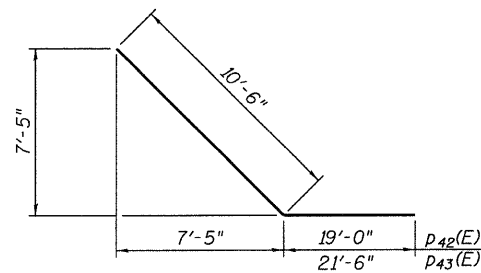


Bar	e	f
D48(E)	1'-10"	6'-10"
S41(E)	6'-1"	3'-2"
S42(E)	3'-10"	3'-2"
S83(E)	3'-6"	2'-5"
S84(E)	5'-3"	5'-2"
U46(E)	3'-8"	5'-2"
V45(E)	10"	4'-11"
V46(E)	10"	8'-4"
V48(E)	10"	8'-0"

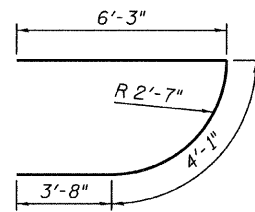
BARS D48(E), S41(E), S42(E),  
S83(E), S84(E), U46(E),  
V45(E), V46(E) & V48(E)



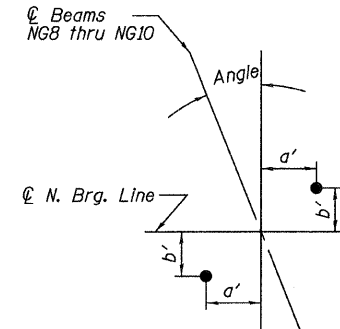
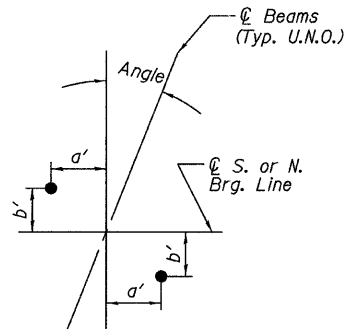
BARS D44(E) & D45(E)



BARS D42(E) & D43(E)

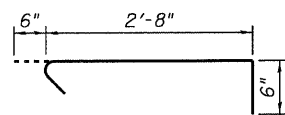


BARS U44(E)

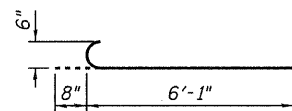


ANCHOR BOLT LAYOUT

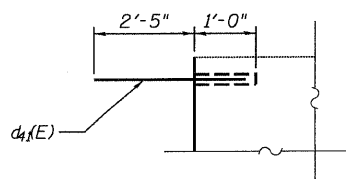
Beam	Bearing Line	Angle	a'	b'
A thru R	North	21°39'15"	8 5/8"	3 3/8"
NG1, NG2, NG3	North	21°39'15"	9 3/4"	3 7/8"
NG4, NG5	North	43°3'32"	6 3/4"	6 3/8"
NG6	North	43°3'32"	7 5/8"	7 1/8"
NG7	North	20°57'48"	9 3/4"	3 3/4"
NG8, NG9	North	11°20'36"	9 1/8"	1 7/8"
NG10	North	11°20'36"	10 1/4"	2 1/8"
G1, G22	South	21°39'15"	13 3/4"	5 3/8"
G2, G21	South	21°39'15"	11 3/8"	4 1/2"
G3 thru G20	South	21°39'15"	8 1/8"	3 1/4"
G2.11	South	63°18'33"	4 5/8"	9 1/8"



BAR S44(E)



BAR N41(E)



EMBEDMENT DETAIL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d41(E)	72	#7	3'-5"	—
h41(E)	5	#6	19'-8"	—
h42(E)	18	#5	19'-8"	—
h43(E)	10	#6	26'-7"	—
h44(E)	36	#5	26'-3"	—
h45(E)	40	#7	35'-11"	—
h46(E)	14	#7	22'-4"	—
h47(E)	14	#7	33'-7"	—
h48(E)	6	#5	22'-8"	—
h49(E)	6	#5	25'-7"	—
h71(E)	3	#5	16'-0"	—
h72(E)	3	#5	36'-2"	—
h73(E)	3	#5	9'-0"	—
h74(E)	3	#5	43'-10"	—
h76(E)	3	#5	12'-9"	—
h77(E)	3	#5	42'-11"	—
h78(E)	3	#5	9'-11"	—
n41(E)	10	#6	6'-9"	C
n42(E)	126	#9	10'-8"	—
d41(E)	44	#10	39'-2"	—
d42(E)	8	#10	29'-6"	—
d43(E)	8	#10	32'-0"	—
d44(E)	12	#10	24'-3"	—
d45(E)	44	#10	17'-10"	—
d46(E)	16	#10	59'-8"	—
d47(E)	8	#10	23'-9"	—
d48(E)	4	#10	10'-6"	□
s41(E)	74	#6	15'-4"	□
s42(E)	74	#6	10'-10"	□
s43(E)	367	#5	13'-8"	□
s44(E)	367	#5	3'-8"	□
s45(E)	346	#5	17'-9"	□
s47(E)	23	#5	22'-9"	□
s48(E)	32	#5	21'-9"	□
s49(E)	12	#5	27'-3"	□
s83(E)	270	#5	9'-5"	□
s84(E)	9	#5	15'-8"	□
s85(E)	200	#5	18'-1"	□
t41(E)	75	#5	9'-8"	—
t42(E)	123	#8	9'-8"	—

Bar	No.	Size	Length	Shape
u41(E)	20	#5	12'-4"	C
u42(E)	51	#5	11'-6"	C
u43(E)	6	#5	15'-5"	C
u44(E)	4	#5	14'-0"	C
u45(E)	9	#5	21'-11"	C
u46(E)	16	#5	12'-6"	□
v41(E)	158	#6	8'-2"	—
v42(E)	86	#9	20'-5"	—
v43(E)	180	#9	24'-0"	—
v45(E)	4	#5	6'-7"	□
v46(E)	8	#5	10'-0"	□
v47(E)	98	#9	6'-9"	—
v48(E)	4	#5	9'-8"	□
w41(E)	23	#5	21'-3"	—
w42(E)	46	#5	27'-0"	—
Test Pile Metal Shells		Each		2
Structure Excavation		Cu Yd		356
Concrete Structures		Cu Yd		512.7
Reinforcement Bars, Epoxy Coated		Pound		88,020
Concrete Sealer		Sq Ft		8,474
Furnishing Metal Shell Piles 12" x 0.250"		Foot		2,478
Driving Piles		Foot		2,478
Mechanical Splicers		Each		98

MIN. LAP LENGTH  
(Unless noted otherwise)

#5	3'-8"
#6	4'-5"
#7	5'-10"
#10	12'-4"

C. ABUT. 4 - DETAILS 2 OF 2  
CENTRAL/I-55  
STRUCTURE NO. 016-0724

TYLIN INTERNATIONAL	DESIGNED - MB	REVISIONS		SHEET NO. 206	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.					
	CHECKED - AMD,	NAME	DATE							55	0711.2R & 1011.1BR	COOK	741	530
	DRAWN - MB									239 SHEETS	CONTRACT NO. 60999			
	CHECKED - AMD,										FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			
	DATE - 03/25/2011													

pi:\01345\structure\02\_Central\_Ave\_016-0724\155e2abu4d12.dwg 4:25:28 PM 5/10/2011



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

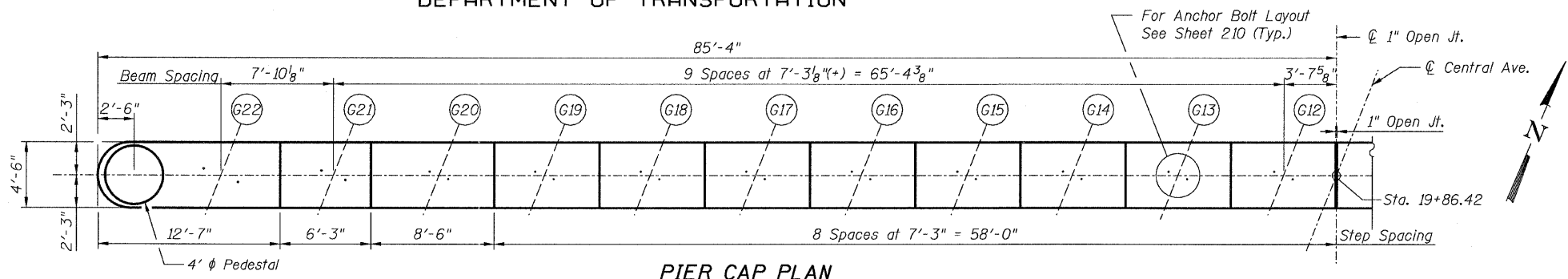
BRIDGE SEAT  
ELEVATIONS

NOTES

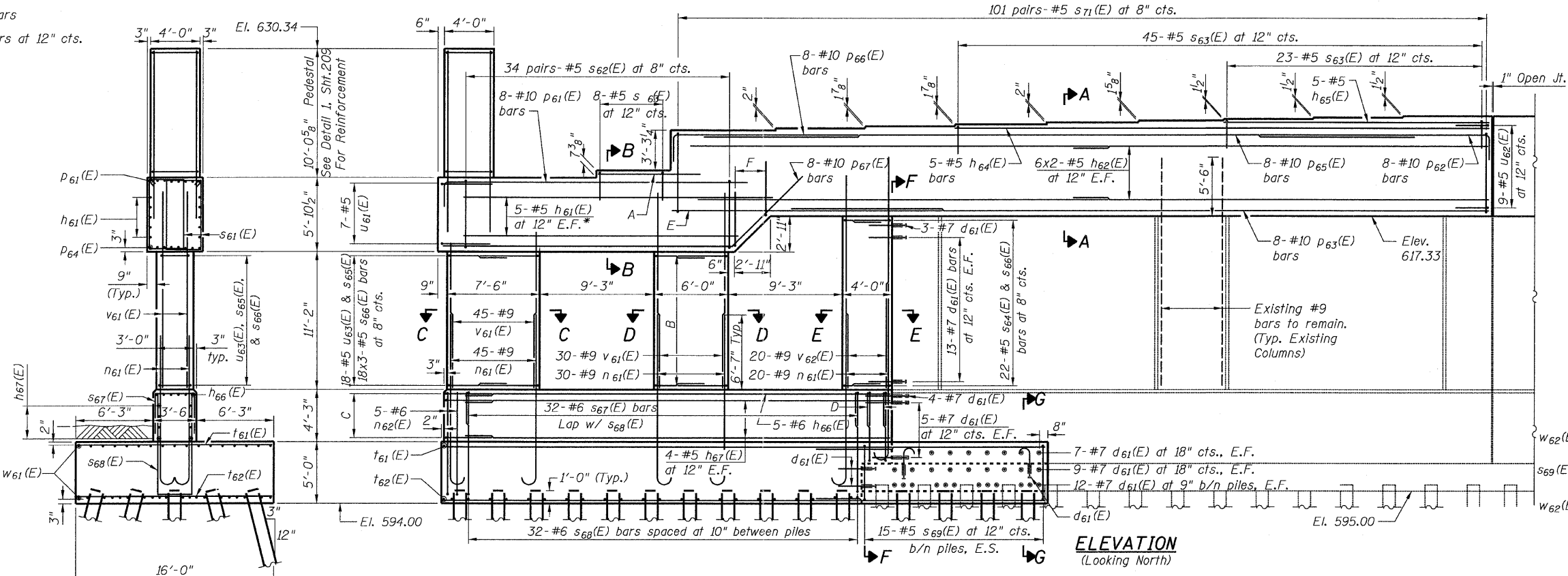
1. Work this sheet with sheets 207, 209 & 210.
2. For notes see sheet 207.

\* Cut to fit in field

- A: 5-#5 h<sub>63</sub>(E) at 12"  
 B: 18-#5 s<sub>65</sub>(E) bars at 8"  
 18x2-#5 s<sub>66</sub>(E) bars at 8" cts.  
 C: 5-#5 u<sub>64</sub>(E) at 12" cts.  
 D: 3-#6 s<sub>67</sub>(E) pairs at 12" cts.  
 E: 8-#10 p<sub>64</sub>(E) bars  
 F: 4-#5 s<sub>72</sub>(E) bars at 12" cts.

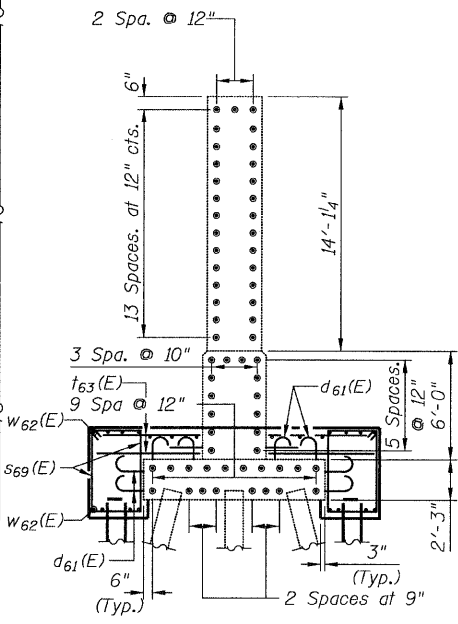


PIER CAP PLAN

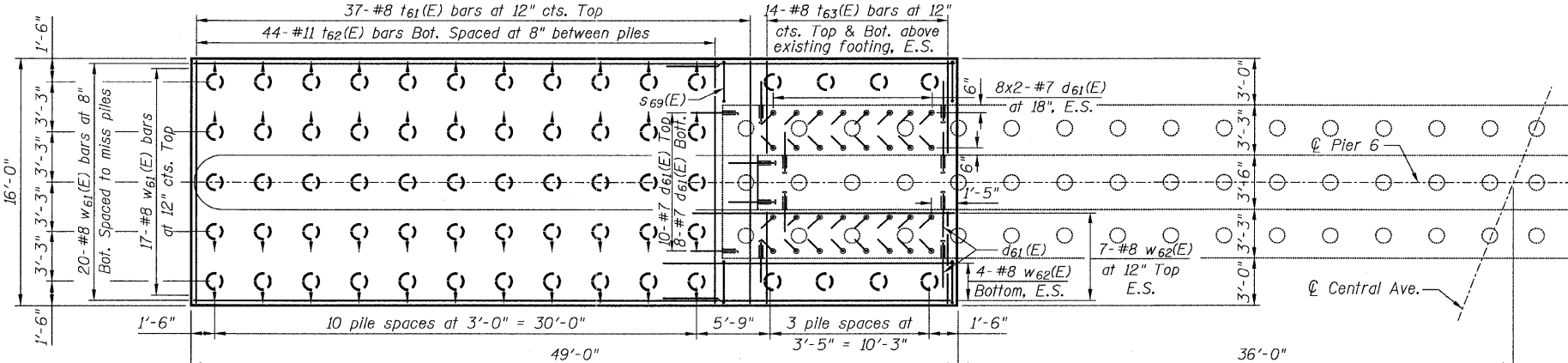


ELEVATION  
(Looking North)

END VIEW  
(East Extension)



SECTION F-F  
(West Extension)



FOOTING PLAN

PIER 6 WIDENING - WEST  
CENTRAL/I-55  
STRUCTURE NO. 016-0724

Girder Line	Seat Elevation
G22	620.29
G21	620.90
G20	624.18
G19	624.34
G18	624.50
G17	624.65
G16	624.82
G15	624.96
G14	625.08
G13	625.21
G12	625.33

PILE DATA

Type: 12" φ x 0.25" Wall  
 Nominal Required Bearing: 270 kips  
 Allowable Resistance Available: 90 kips  
 Estimated Length: 52 ft  
 No. Production Piles: 62  
 No. Test Piles: 1

- Proposed Pile
- Proposed Battered Pile
- Existing Pile

TYLIN INTERNATIONAL

DESIGNED	REVISIONS
- MB	NAME
CHECKED - AMD,	DATE
DRAWN - MB	
CHECKED - AMD,	
DATE - 03/25/2011	

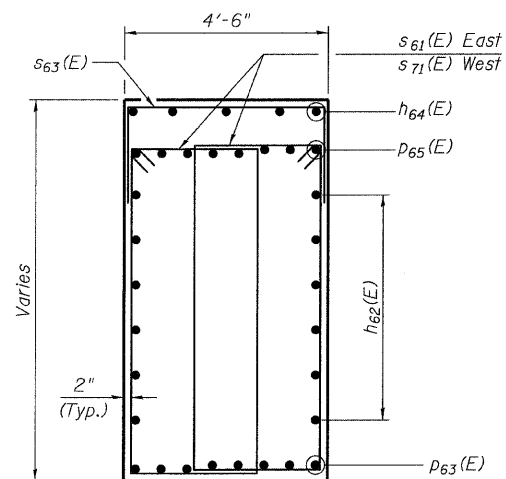
SHEET NO. 208	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
239 SHEETS	55	0711.2R & 1011.1BR	COOK	741	532
FED. ROAD DIST. NO. 1			ILLINOIS FED. AID PROJECT		

pi:\01345\structure\2 Central Ave. 016-0724\155221er6w.dgn 5/9/2011 9:15:07 AM

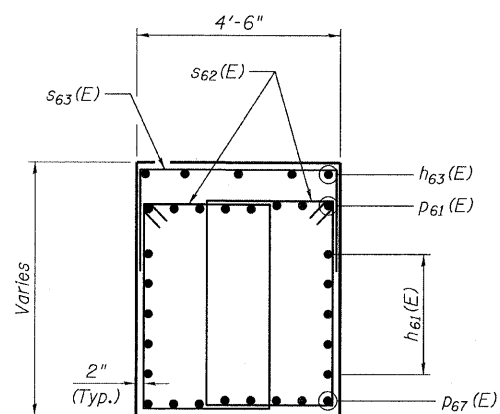
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**NOTES**

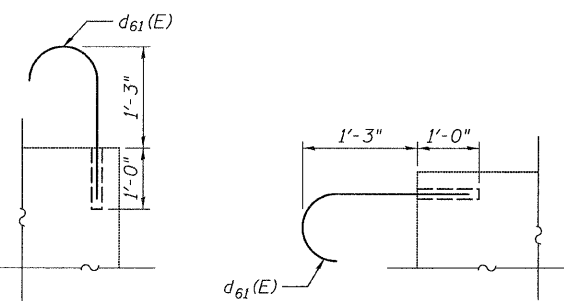
1. Work this sheet with sheets 207, 208 & 210.



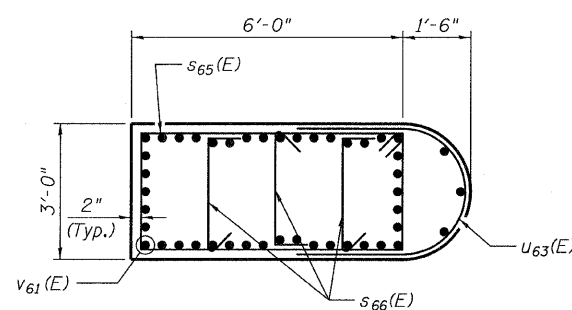
**SECTION A-A**



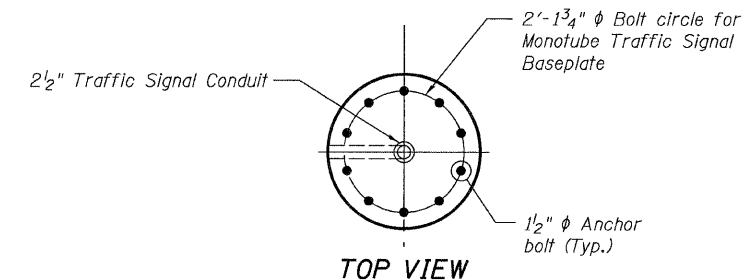
**SECTION B-B**



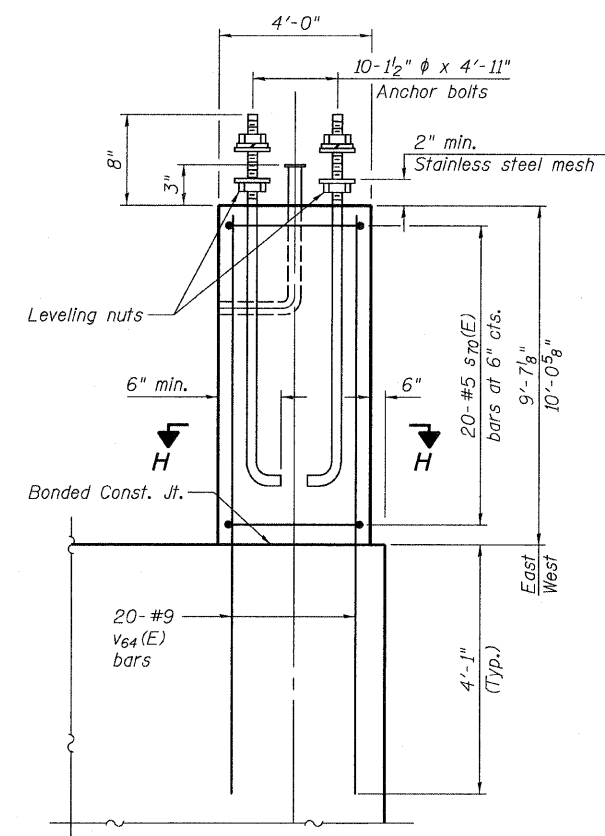
**DOWEL BAR  
EMBEDMENT DETAIL**



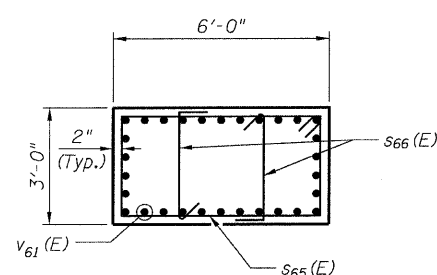
**SECTION C-C**



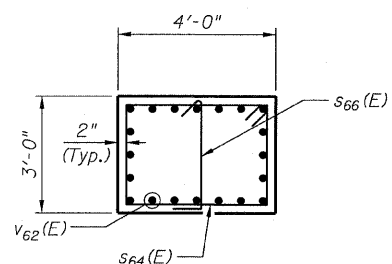
**TOP VIEW**



**DETAIL 1**

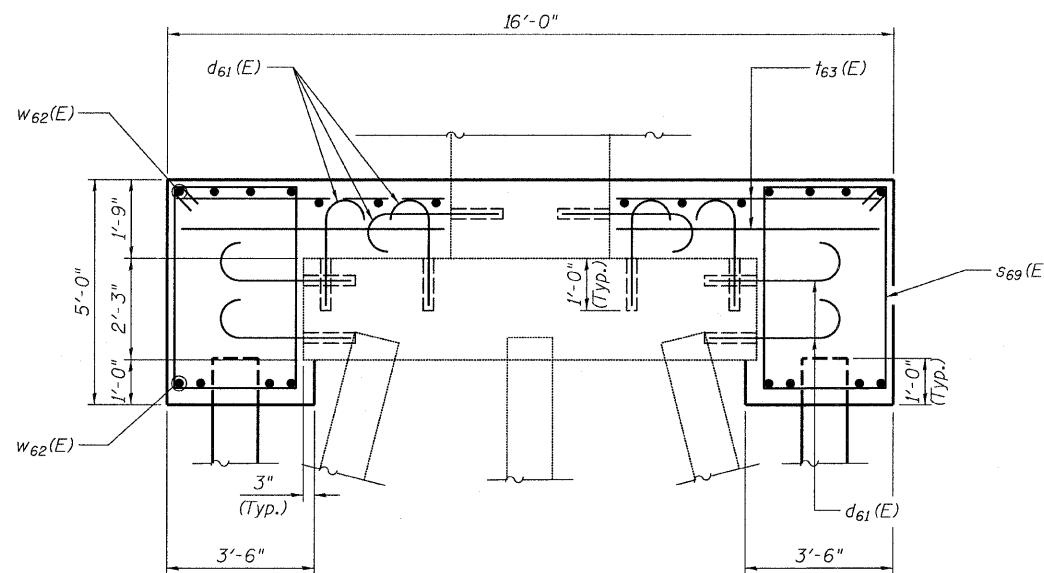


**SECTION D-D**

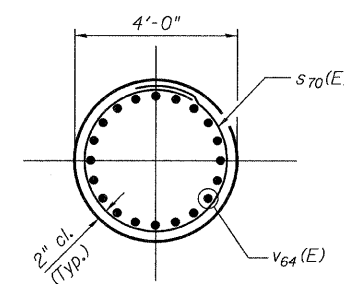


**SECTION E-E**

(Existing Column not shown)



**SECTION G-G**



**SECTION H-H**

**PIER 6 - DETAILS 1  
CENTRAL/I-55  
STRUCTURE NO. 016-0724**

**TYLIN INTERNATIONAL**

DESIGNED - MB		REVISIONS	
CHECKED - AMD,		NAME	DATE
DRAWN - MB			
CHECKED - AMD,			
DATE - 03/25/2011			

SHEET NO. 209	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	533
239 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

5/9/2011

pi\01345\structure\C2 Central Ave. 016-0724\55c2pser6dt1.dgn

9:15:08 AM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NOTES

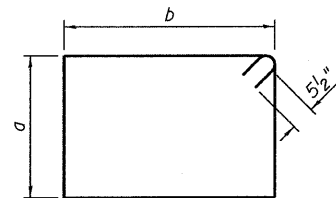
1. Work this sheet with sheets 207 thru 209.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d <sub>61</sub> (E)	298	#7	3'-1"	┌───┐
h <sub>61</sub> (E)	20	#5	24'-6"	┌───┐
h <sub>62</sub> (E)	48	#5	35'-0"	┌───┐
h <sub>63</sub> (E)	10	#5	8'-3"	┌───┐
h <sub>64</sub> (E)	10	#5	43'-2"	┌───┐
h <sub>65</sub> (E)	5	#5	21'-5"	┌───┐
h <sub>66</sub> (E)	10	#6	34'-4"	┌───┐
h <sub>67</sub> (E)	16	#5	34'-4"	┌───┐
h <sub>68</sub> (E)	5	#5	14'-2"	┌───┐
n <sub>61</sub> (E)	190	#9	14'-3"	┌───┐
n <sub>62</sub> (E)	10	#6	9'-3"	┌───┐
p <sub>61</sub> (E)	16	#10	25'-8"	┌───┐
p <sub>62</sub> (E)	16	#10	20'-5"	┌───┐
p <sub>63</sub> (E)	16	#10	55'-7"	┌───┐
p <sub>64</sub> (E)	16	#10	25'-11"	┌───┐
p <sub>65</sub> (E)	16	#10	56'-10"	┌───┐
p <sub>66</sub> (E)	16	#10	17'-1"	┌───┐
p <sub>67</sub> (E)	16	#10	31'-9"	┌───┐
s <sub>61</sub> (E)	202	#5	20'-7"	┌───┐
s <sub>62</sub> (E)	136	#5	18'-1"	┌───┐
s <sub>63</sub> (E)	145	#5	11'-2"	┌───┐
s <sub>64</sub> (E)	44	#5	13'-7"	┌───┐
s <sub>65</sub> (E)	72	#5	17'-7"	┌───┐
s <sub>66</sub> (E)	224	#5	3'-8"	┌───┐
s <sub>67</sub> (E)	76	#6	11'-4"	┌───┐
s <sub>68</sub> (E)	64	#6	20'-2"	┌───┐
s <sub>69</sub> (E)	60	#5	15'-9"	┌───┐
s <sub>70</sub> (E)	40	#5	15'-2"	┌───┐
s <sub>71</sub> (E)	202	#5	19'-11"	┌───┐
s <sub>72</sub> (E)	8	#5	14'-8"	┌───┐
t <sub>61</sub> (E)	74	#8	15'-8"	┌───┐
t <sub>62</sub> (E)	88	#11	15'-8"	┌───┐
t <sub>63</sub> (E)	112	#8	5'-11"	┌───┐
u <sub>61</sub> (E)	14	#5	13'-11"	┌───┐
u <sub>62</sub> (E)	18	#5	11'-6"	┌───┐
u <sub>63</sub> (E)	36	#5	11'-6"	┌───┐
u <sub>64</sub> (E)	10	#5	12'-4"	┌───┐
v <sub>61</sub> (E)	150	#9	15'-7"	┌───┐
v <sub>62</sub> (E)	40	#9	18'-1"	┌───┐
v <sub>64</sub> (E)	40	#9	13'-11"	┌───┐
w <sub>61</sub> (E)	74	#8	33'-9"	┌───┐
w <sub>62</sub> (E)	44	#8	22'-8"	┌───┐
Test Pile Metal Shells	Each		2	
Structure Excavation	Cu Yd		346	
Concrete Structures	Cu Yd		587.0	
Reinforcement Bars, Epoxy Coated	Pounds		86,720	
Furnishing Metal Shell Piles 12" x 0.25"	Foot		6,200	
Driving Piles	Foot		6,200	
Concrete Sealer	Sq Ft		6,351	

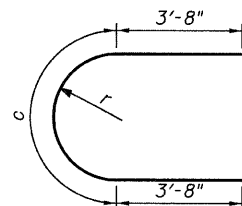
MIN. LAP LENGTH  
(Unless noted otherwise)

#5	3'-8"
#8	7'-8"
#10	12'-4"



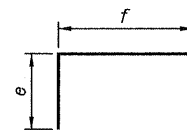
Bar	a	b
s <sub>61</sub> (E)	6'-10"	3'-0"
s <sub>62</sub> (E)	5'-7"	3'-0"
s <sub>64</sub> (E)	2'-8"	3'-8"
s <sub>65</sub> (E)	2'-8"	5'-8"
s <sub>69</sub> (E)	4'-6"	2'-11"
s <sub>71</sub> (E)	6'-6"	3'-0"

BARS s<sub>61</sub>(E), s<sub>62</sub>(E), s<sub>64</sub>(E), s<sub>65</sub>(E), s<sub>69</sub>(E) & s<sub>71</sub>(E)



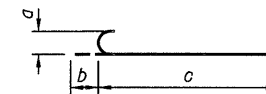
Bar	c	r
u <sub>61</sub> (E)	6'-7"	2'-1"
u <sub>63</sub> (E)	4'-2"	1'-4"
u <sub>64</sub> (E)	5'-0"	1'-7"

BARS u<sub>61</sub>(E), u<sub>63</sub>(E) & u<sub>64</sub>(E)



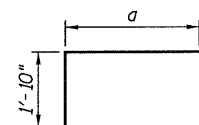
Bar	e	f
s <sub>63</sub> (E)	3'-6"	4'-2"
s <sub>67</sub> (E)	4'-1"	3'-2"
s <sub>68</sub> (E)	8'-6"	3'-2"
s <sub>72</sub> (E)	5'-3"	4'-2"
u <sub>62</sub> (E)	3'-8"	4'-2"

BARS s<sub>63</sub>(E), s<sub>67</sub>(E), s<sub>68</sub>(E), s<sub>72</sub>(E) & u<sub>62</sub>(E)



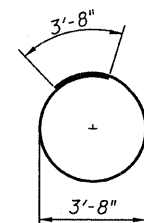
Bar	a	b	c
d <sub>61</sub> (E)	7"	10"	2'-3"
n <sub>61</sub> (E)	1'-1 1/4"	1'-5"	12'-10"
n <sub>62</sub> (E)	6"	8"	8'-7"

BARS d<sub>61</sub>(E), n<sub>61</sub>(E) & n<sub>62</sub>(E)

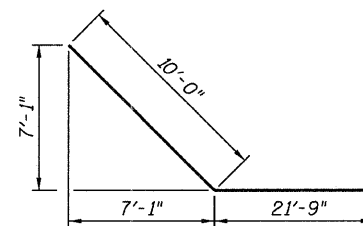


Bar	a
p <sub>61</sub> (E)	23'-10"
p <sub>62</sub> (E)	18'-7"
p <sub>66</sub> (E)	15'-4"

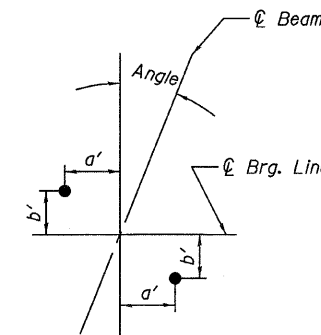
BARS p<sub>61</sub>(E), p<sub>62</sub>(E) & p<sub>66</sub>(E)



BAR s<sub>70</sub>(E)

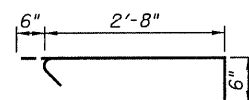


BARS p<sub>67</sub>(E)



ANCHOR BOLT LAYOUT

Beam	Angle	a'	b'
G1 & G22	21°39'15"	14 1/8"	5 5/8"
G2 & G21	21°39'15"	11 3/8"	4 1/2"
G3 thru G20	21°39'15"	7 5/8"	3"



BARS s<sub>66</sub>(E)

PIER 6 - DETAILS 2  
CENTRAL/I-55  
STRUCTURE NO. 016-0724

TYLIN INTERNATIONAL	DESIGNED - MB	REVISIONS		SHEET NO. 210	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	534	
	DRAWN - MB				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011			261 SHEETS						

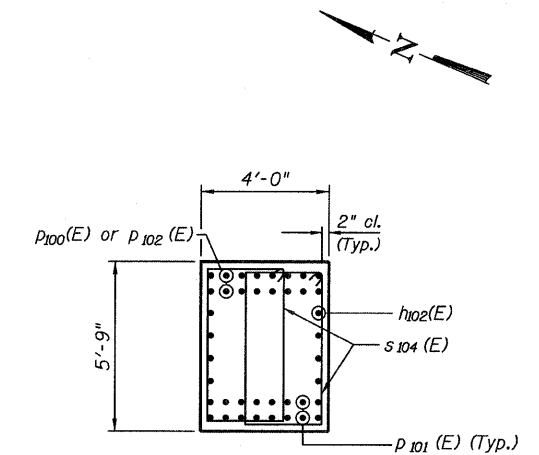
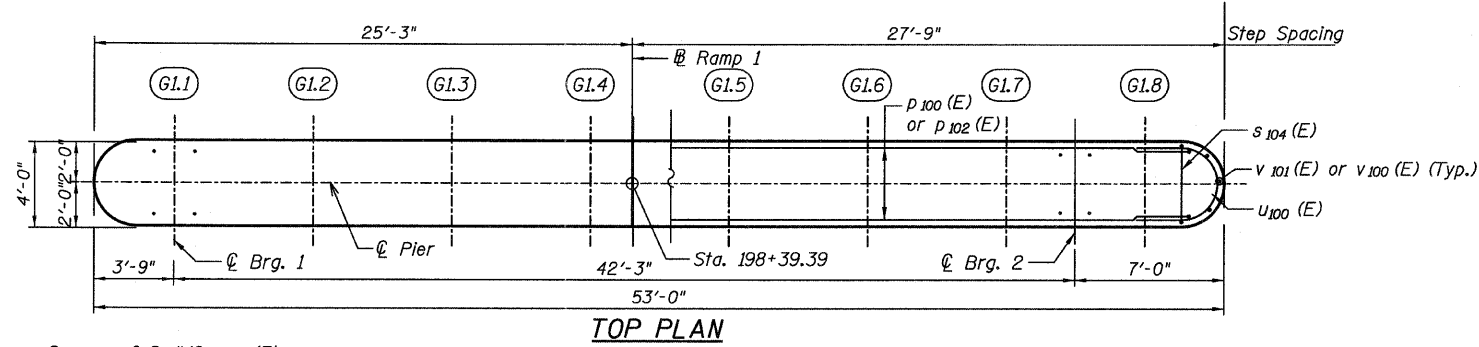




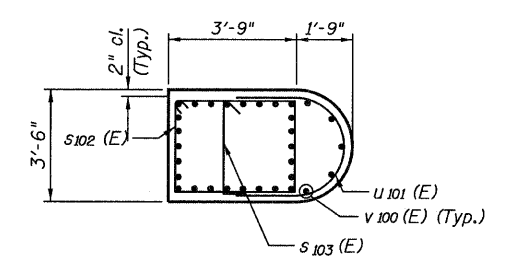
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**NOTES**

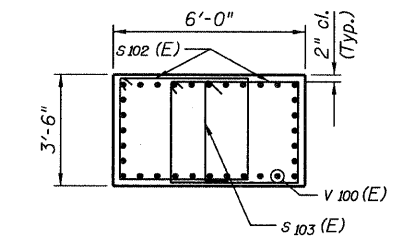
1. Bars indicated thus 5x2-#11 indicates 5 lines of bars with two lengths per line.
2. Space reinforcement in cap to miss anchor bolts.
3. Space reinforcement in footing to miss piles.
4. Pour steps monolithically with cap.
5. For Bill of Materials, see sheet 213.
6. E.F. - denotes Each Face.



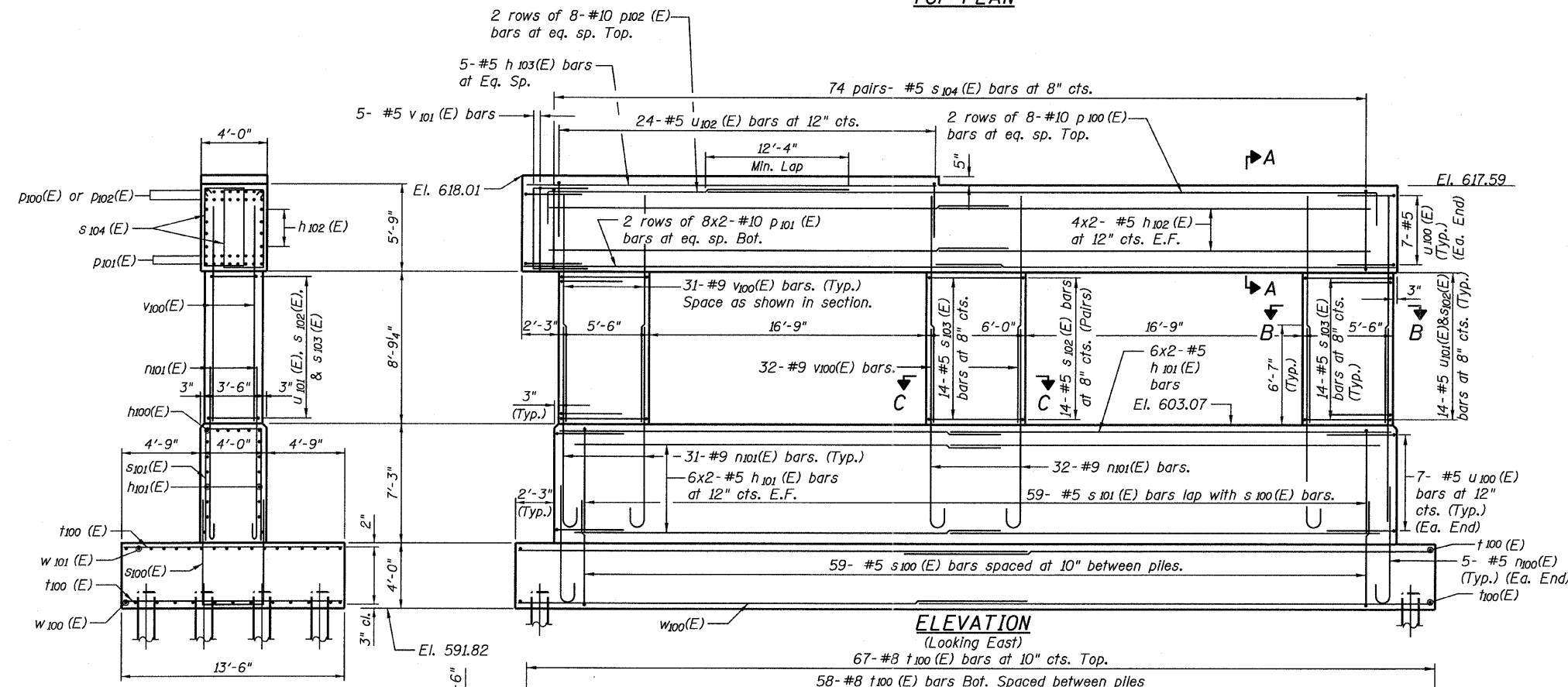
**SECTION A-A**



**SECTION B-B**



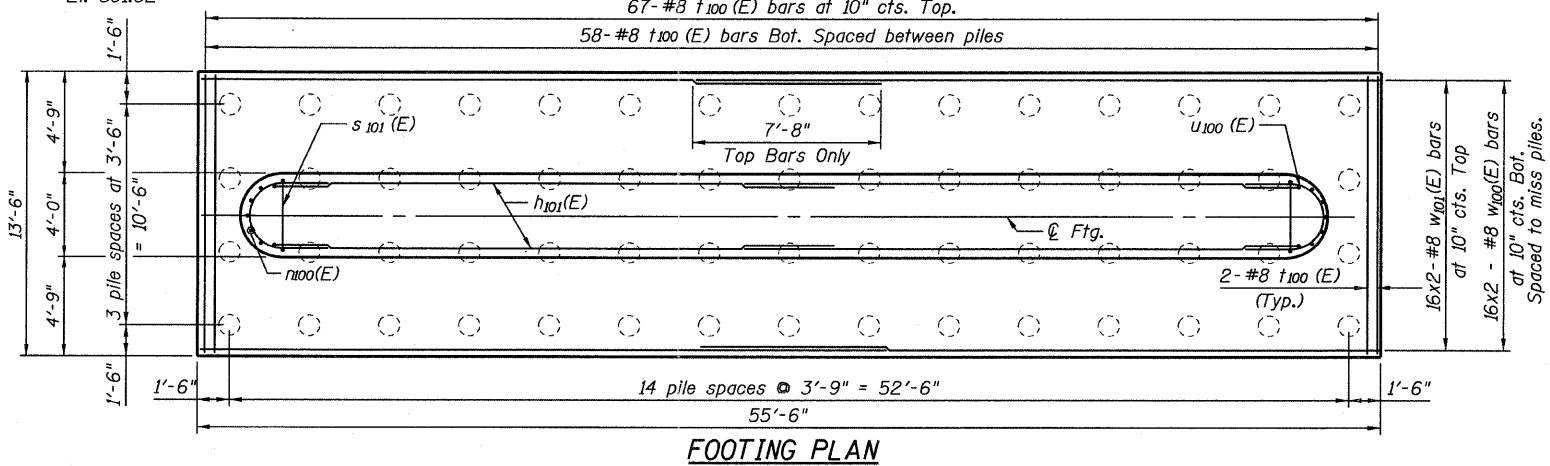
**SECTION C-C**



**ELEVATION**  
(Looking East)



**END VIEW**



**FOOTING PLAN**

**PILE DATA**

Type: 12"  $\phi$  x 0.25" wall.  
Nominal Required Bearings: 270 kips  
Allowable Resistance Available: 90 kips  
Estimated Length: 40'  
No. Production Piles: 59  
No. Test Piles: 1

**MINIMUM BAR LAPS**  
(Unless Noted Otherwise)

Bar Size	Min. Lap
#5	3'-3"
#7	5'-2"
#8	6'-9"
#10	10'-10"

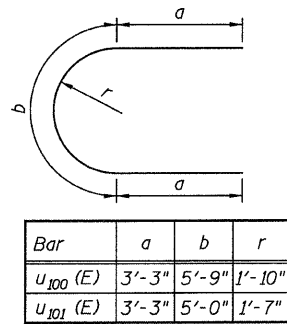
**RAMP 1 PIER  
STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH	REVISIONS		SHEET NO. 212	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	536
	DRAWN - EKH				239 SHEETS	CONTRACT NO. 60999			
	CHECKED - AMD,					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			
	DATE - 03/25/2011								

pi:\01345\structur\c2 Central Ave. 016-0724\155-1.pierm4.dgn 11/7/2011 11:28:00 PM

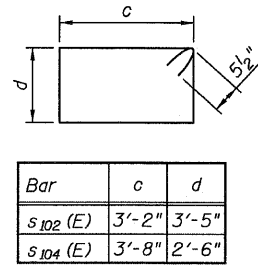


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



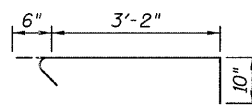
Bar	a	b	r
u <sub>100</sub> (E)	3'-3"	5'-9"	1'-10"
u <sub>101</sub> (E)	3'-3"	5'-0"	1'-7"

**BARS u<sub>100</sub> (E) & u<sub>101</sub> (E)**

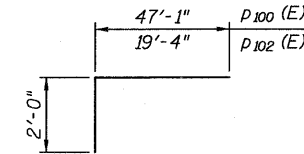


Bar	c	d
s <sub>102</sub> (E)	3'-2"	3'-5"
s <sub>104</sub> (E)	3'-8"	2'-6"

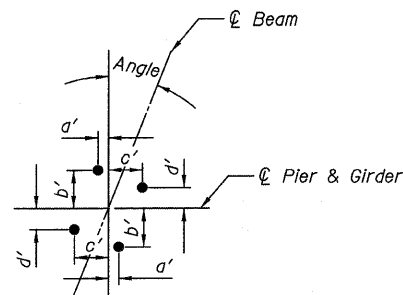
**BARS s<sub>102</sub> (E) & s<sub>104</sub> (E)**



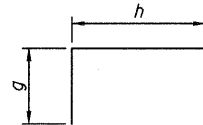
**BAR s<sub>103</sub> (E)**



**BARS p<sub>100</sub> (E) & p<sub>102</sub> (E)**

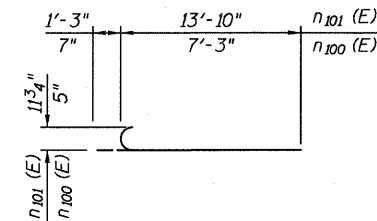


**ANCHOR BOLT LAYOUT**



Bar	g	h
s <sub>100</sub> (E)	7'-3"	3'-8"
s <sub>101</sub> (E)	6'-11"	3'-8"
u <sub>102</sub> (E)	2'-0"	3'-4"
v <sub>101</sub> (E)	10"	5'-5"

**BARS s<sub>100</sub> (E), s<sub>101</sub> (E),  
u<sub>102</sub> (E) & v<sub>101</sub> (E)**



**BARS n<sub>100</sub> (E) & n<sub>101</sub> (E)**

Floating Bearing at Cross-head Beam					
Location	Angle	a'	b'	c'	d'
BRG. 1	00°00'00"	11 1/2"	1'-5 1/2"	11 1/2"	1'-5 1/2"
BRG. 2	00°00'00"	8 1/4"	1'-4 1/4"	8 1/4"	1'-4 1/4"

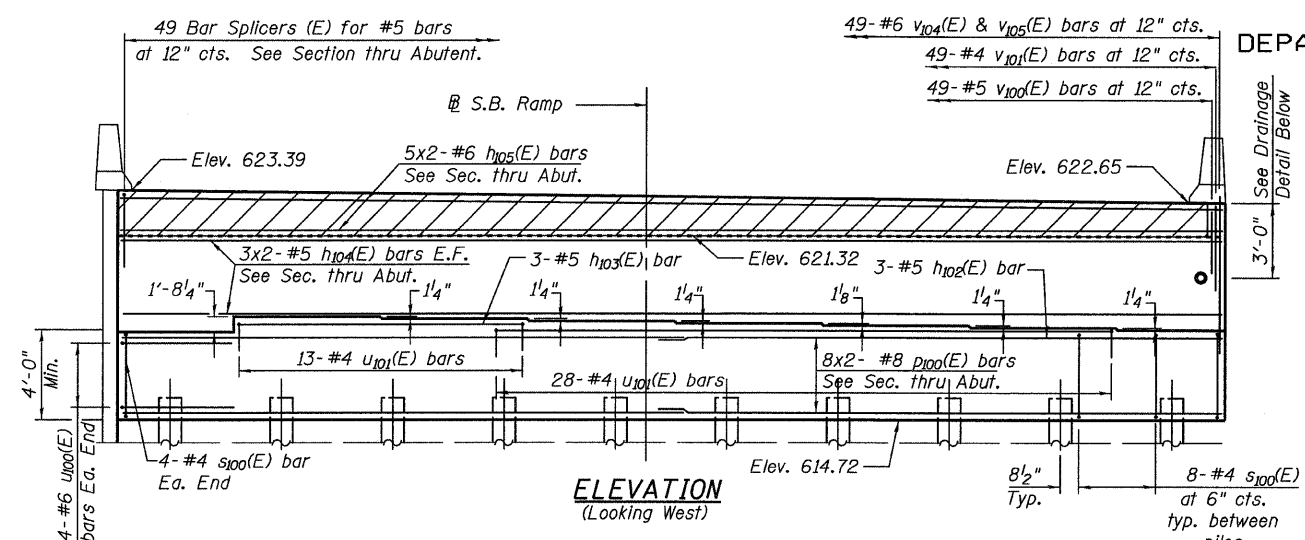
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h <sub>101</sub> (E)	36	#5	27'-0"	—
h <sub>102</sub> (E)	16	#5	28'-0"	—
h <sub>103</sub> (E)	5	#5	24'-11"	—
n <sub>100</sub> (E)	10	#5	7'-10"	⌋
n <sub>101</sub> (E)	94	#9	15'-1"	⌋
p <sub>100</sub> (E)	16	#10	49'-1"	⌋
p <sub>101</sub> (E)	32	#10	33'-0"	⌋
p <sub>102</sub> (E)	16	#10	21'-4"	⌋
s <sub>100</sub> (E)	59	#5	18'-2"	⌋
s <sub>101</sub> (E)	59	#5	17'-6"	⌋
s <sub>102</sub> (E)	56	#5	14'-1"	⌋
s <sub>103</sub> (E)	42	#5	4'-6"	⌋
s <sub>104</sub> (E)	148	#5	13'-3"	⌋
t <sub>100</sub> (E)	129	#8	13'-2"	—
u <sub>100</sub> (E)	28	#5	12'-3"	⌋
u <sub>101</sub> (E)	28	#5	11'-6"	⌋
u <sub>102</sub> (E)	24	#5	7'-4"	⌋
v <sub>100</sub> (E)	94	#9	14'-2"	⌋
v <sub>101</sub> (E)	5	#5	7'-1"	⌋
w <sub>100</sub> (E)	32	#8	31'-0"	—
w <sub>101</sub> (E)	32	#8	31'-5"	—
Test Pile Metal Shells	Each		1	
Structure Excavation	Cu Yd		327	
Concrete Structures	Cu Yd		226.7	
Reinforcement Bars, Epoxy Coated	Pound		36,490	
Furnishing Metal Shell Piles 12" x 0.25"	Foot		2,360	
Driving Piles	Foot		2,360	

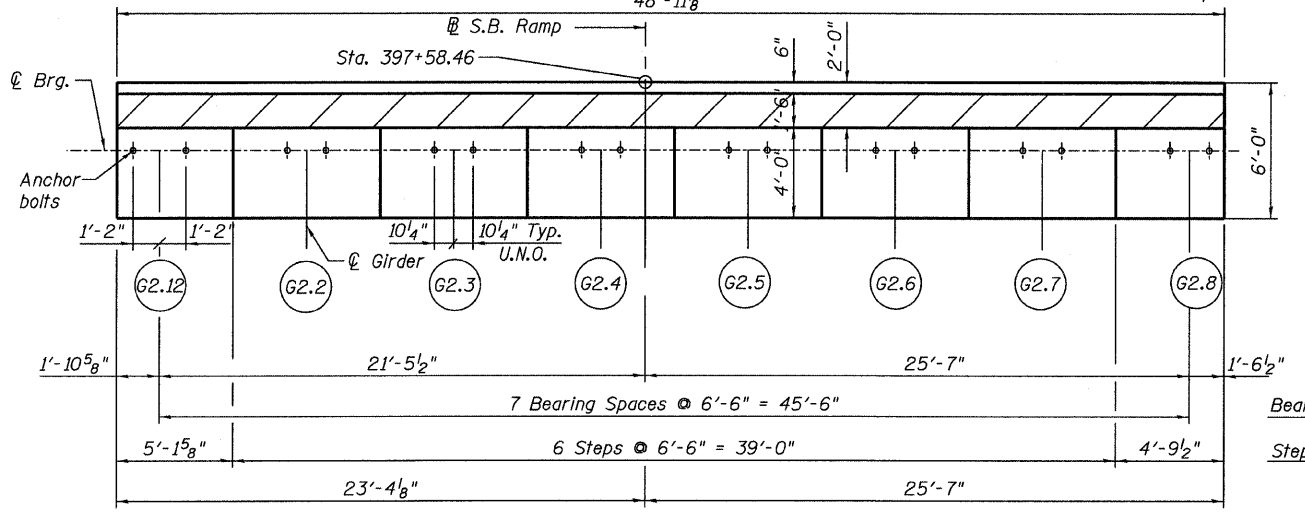
**RAMP 1 PIER DETAILS  
STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH	REVISIONS		SHEET NO. 213	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	537
	DRAWN - EKH				239 SHEETS	CONTRACT NO. 60999			
	CHECKED - AMD,					FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	
	DATE - 03/25/2011								

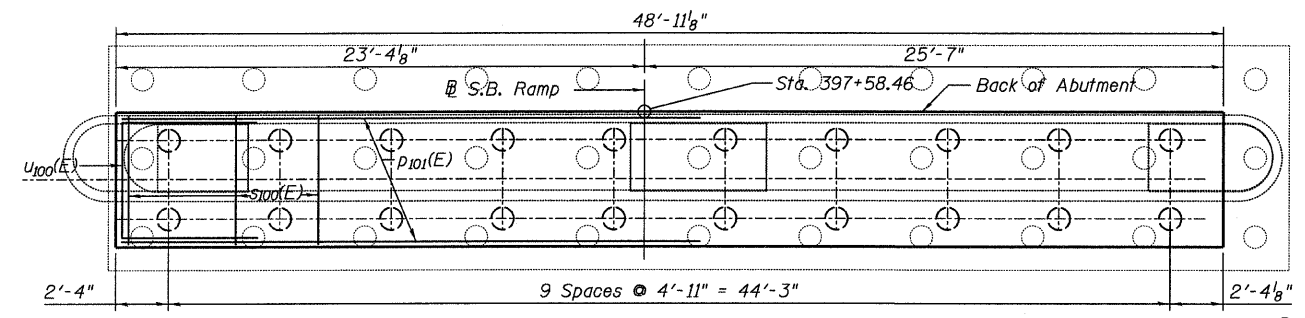
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



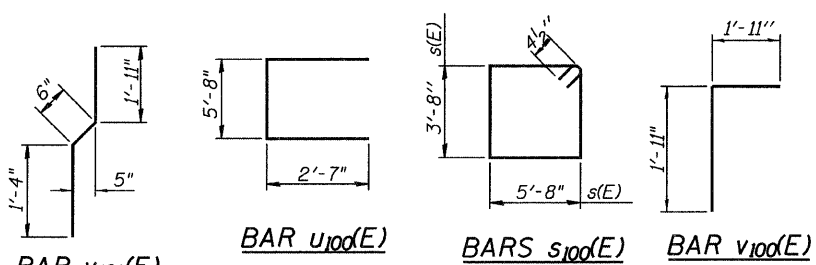
**ELEVATION**  
(Looking West)



**TOP VIEW**



**PLAN-PILE CAP**



**BAR v101(E)**

**BAR u100(E)**

**BARS s100(E)**

**BAR v100(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BAR u101(E)**

**BRIDGE SEAT  
ELEVATIONS**

Beam	Elevation
G2.12	618.73
G2.2	620.42
G2.3	620.32
G2.4	620.22
G2.5	620.12
G2.6	620.03
G2.7	619.93
G2.8	619.83

**MINIMUM BAR LAPS**

Bar	Lap
#4	1'-9"
#5	2'-2"
#6	2'-7"
#6	3'-7" (Top)
#7	3'-5"
#7	4'-10" (Top)
#8	4'-6"

**RAMP 2 ABUTMENT  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h102(E)	3	#5	28'-0"	
h103(E)	3	#5	12'-8"	
h104(E)	12	#5	25'-5"	
h105(E)	8	#6	25'-7"	
p101(E)	16	#8	26'-7"	
s100(E)	80	#4	19'-5"	
u100(E)	8	#6	10'-10"	
u101(E)	41	#5	9'-8"	
v100(E)	49	#5	3'-10"	
v101(E)	49	#4	3'-9"	
v104(E)	49	#6	5'-8"	
v105(E)	49	#6	3'-7"	
Structure Excavation	Cu. Yd.		166.0	
Concrete Structures	Cu. Yd.		61.4	
Reinforcement Bars, Epoxy Coated	Pound		4320	
Furnishing Metal Shell Piles 12"x 0.25"	Foot		1,235	
Driving Piles	Foot		1,235	
Test Pile Metal Shells	Each		1	
Concrete Sealer	Sq. Ft.		586	

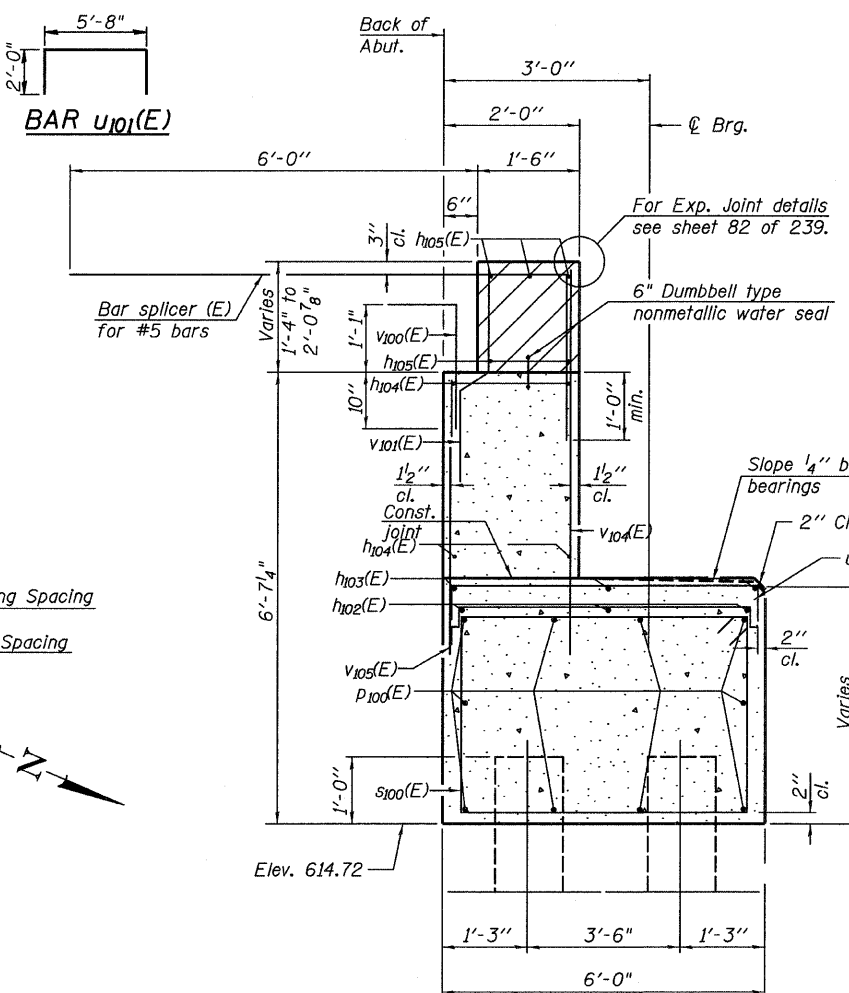
For details of Bar Splicers, see sheet 224 of 239.

**PILE DATA**

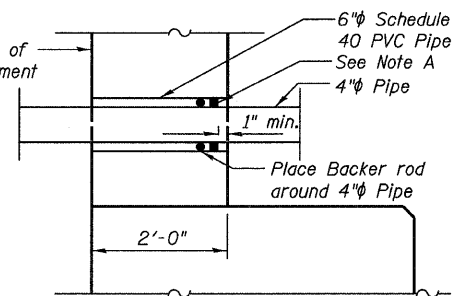
Type:	Metal Shell 12" φ x 0.25" wall.
Nominal Required Bearing:	270 kips
Factored Resistance Available:	90 kips
Est. Length:	65'
No. Production Piles:	19
No. Test Piles:	1

**NOTES:**

- Space reinforcement in cap to miss anchor bolts.
- Pour steps monolithically with cap.
- Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
- Bars indicated thus 20 x 3- #7 etc. indicates 20 lines of bars with three lengths per line.
- Piles shall be driven prior to placement of the reinforced select fill and coated with coal tar epoxy from the bottom of the select fill to 1" above the base of the abutment. The cost of the coal tar epoxy coating shall be included with the cost of the Furnishing Piles.
- Align bar splicer to be parallel to approach slab reinforcement.



**SEC. THRU ABUT.**



**DRAINAGE DETAIL**

Note A:  
Non-staining gray one component non-sag elastomeric gun grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25 prod.

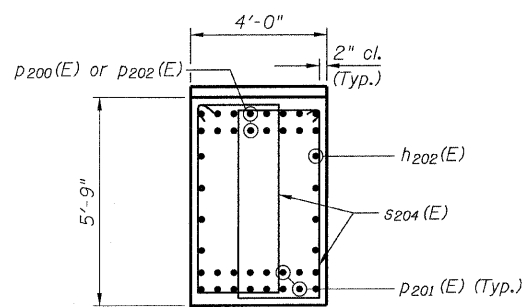
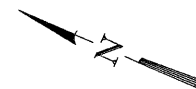
Shown for 6" pipe.  
Use 10" Schedule 40 PVC pipe for 8" drainage pipe.

Note: Backer Rod, 6" PVC Pipe & sealant shall be included in the cost of Concrete Structures.

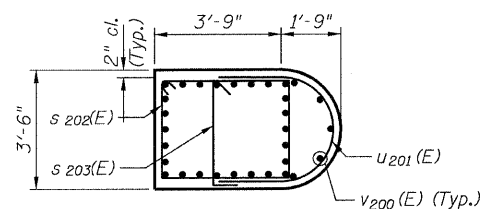
**RAMP 2 ABUTMENT  
STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - JMA	REVISIONS		SHEET NO. 214	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	538
	DRAWN - JMA				CONTRACT NO. 60999				
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011			239 SHEETS					

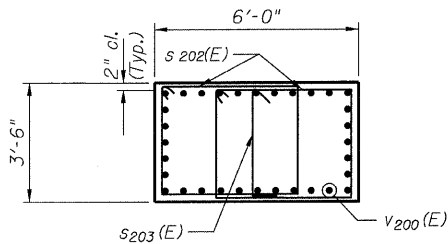
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



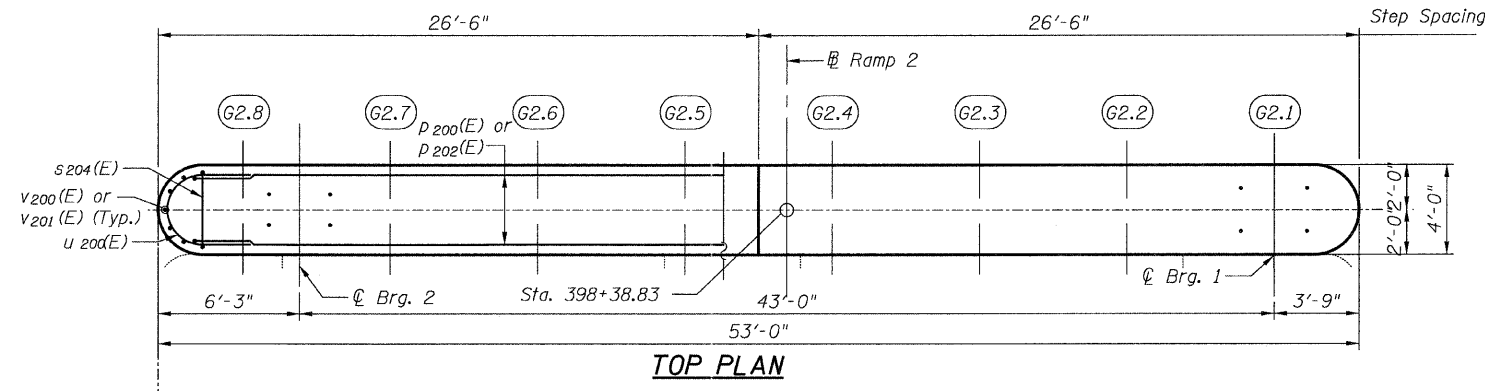
SECTION A-A



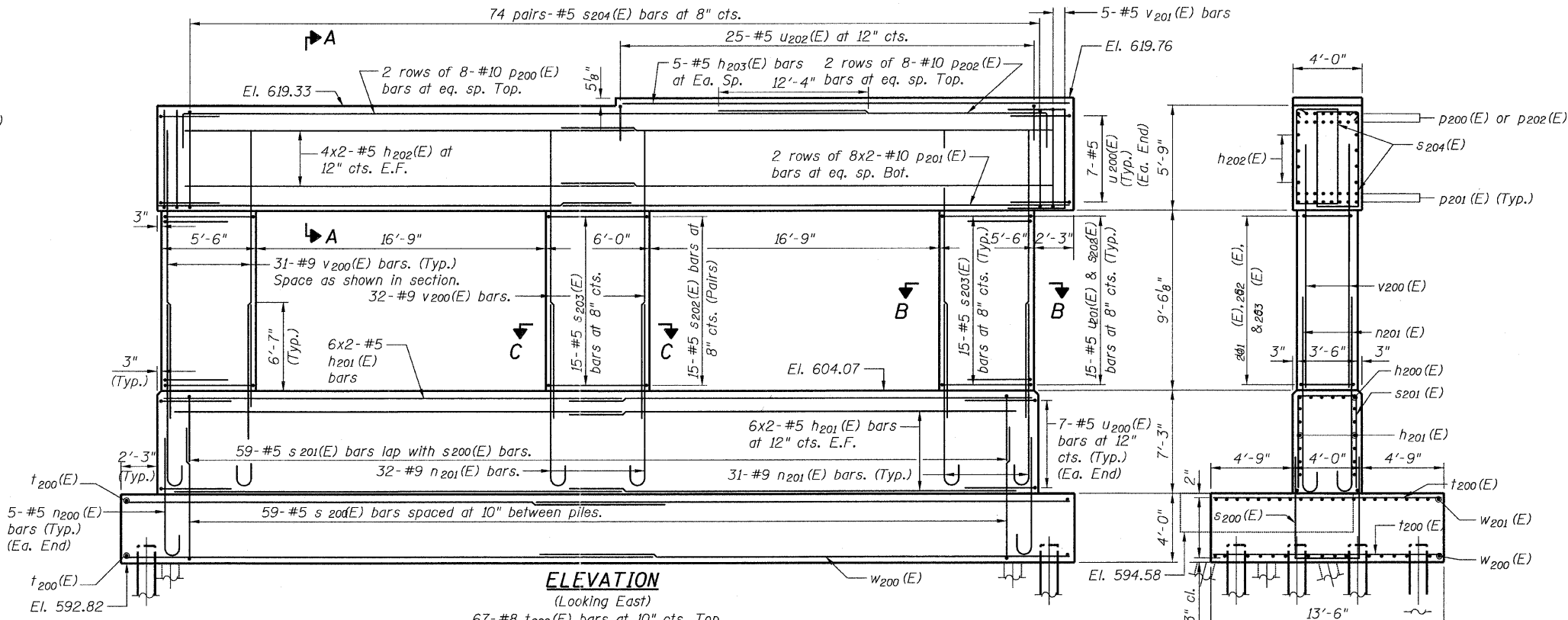
SECTION B-B



SECTION C-C



TOP PLAN



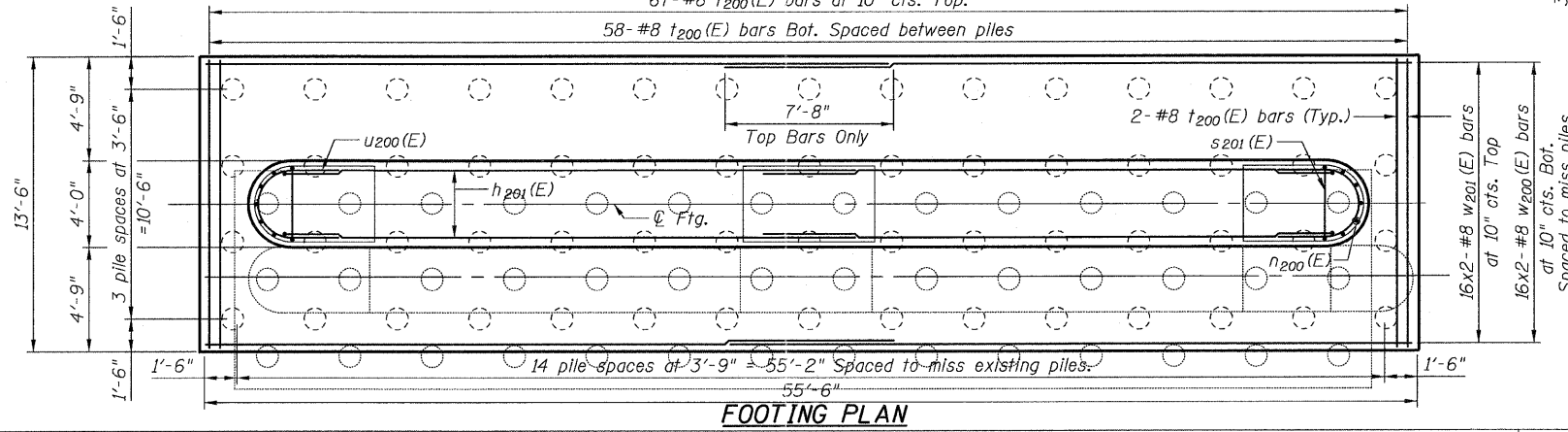
ELEVATION  
(Looking East)

END VIEW

MINIMUM BAR LAPS

(Unless Noted Otherwise)

Bar Size	Min. Lap
#5	3'-3"
#7	5'-2"
#8	6'-9"
#10	10'-10"



FOOTING PLAN

NOTES

1. Bars indicated thus 5x2-#11 indicates 5 lines of bars with two lengths per line.
2. Space reinforcement in cap to miss anchor bolts.
3. Space reinforcement in footing to miss piles.
4. Pour steps monolithically with cap.
5. For Bill of Materials, see sheet 216.
6. E.F. - denotes Each Face.

PILE DATA

Type:	12" $\phi$ x 0.25" wall
Nominal Required Bearings:	270 kips
Allowable Resistance Available:	90 kips
Estimated Length:	43'
No. Production Piles:	59
No. Test Piles:	1

RAMP 2 PIER  
STRUCTURE NO. 016-0724

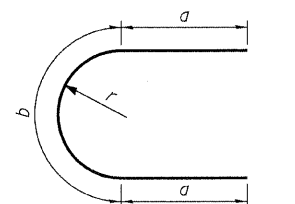
TYLIN INTERNATIONAL

DESIGNED	EKH	REVISIONS	
CHECKED	AMD,	NAME	DATE
DRAWN	EKH		
CHECKED	AMD,		
DATE	03/25/2011		

SHEET NO. 215	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	539
239 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

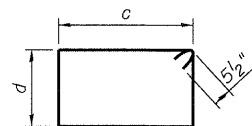
4/28/2011 11:32:42 AM p:\01345\structure\c2\central\_ave\_016-0724\_155-2piern4.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



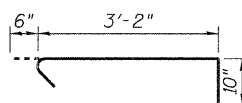
Bar	a	b	r
u <sub>200</sub> (E)	3'-3"	5'-9"	1'-10"
u <sub>201</sub> (E)	3'-3"	5'-0"	1'-7"

BARS u<sub>200</sub>(E) & u<sub>201</sub>(E)

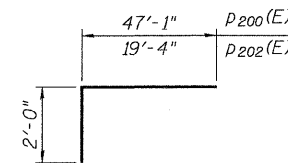


Bar	c	d
s <sub>202</sub> (E)	3'-2"	3'-5"
s <sub>204</sub> (E)	3'-8"	2'-6"

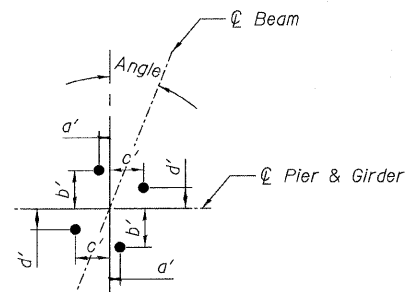
BARS s<sub>202</sub>(E) & s<sub>204</sub>(E)



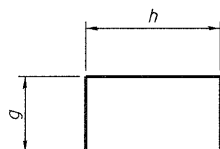
BAR s<sub>203</sub>(E)



BARS p<sub>200</sub>(E) & p<sub>202</sub>(E)

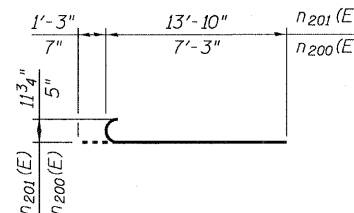


ANCHOR BOLT LAYOUT



Bar	g	h
s <sub>200</sub> (E)	7'-3"	3'-8"
s <sub>201</sub> (E)	6'-11"	3'-8"
u <sub>202</sub> (E)	2'-0"	3'-4"
v <sub>201</sub> (E)	10"	5'-5"

BARS s<sub>200</sub>(E), s<sub>201</sub>(E),  
u<sub>202</sub>(E) & v<sub>201</sub>(E)



BARS n<sub>200</sub>(E) & n<sub>201</sub>(E)

BILL OF MATERIAL

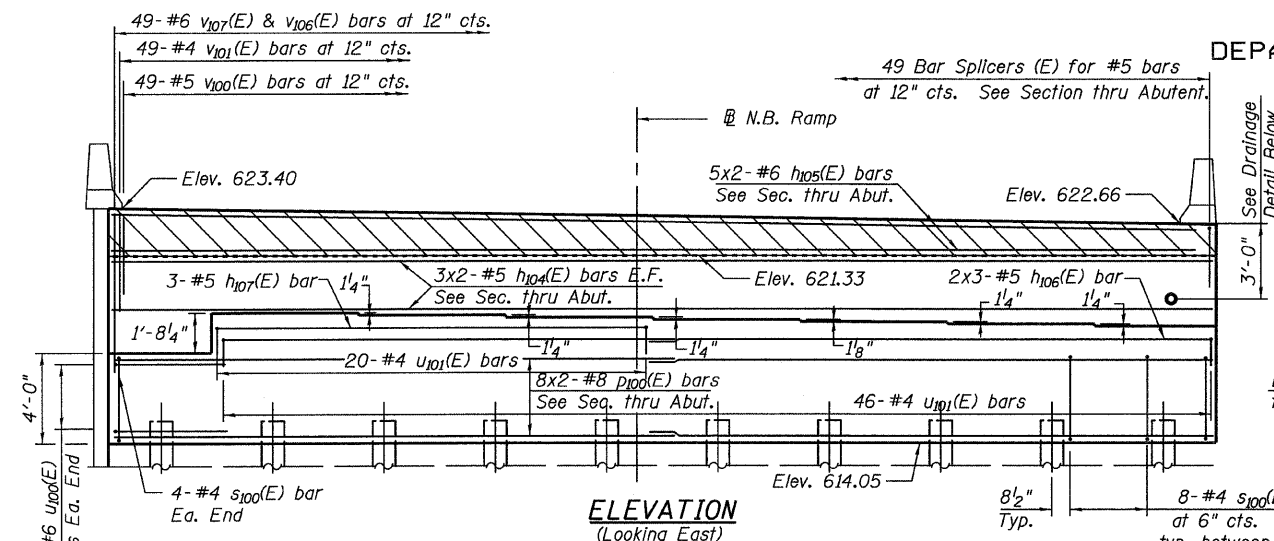
Bar	No.	Size	Length	Shape
n <sub>201</sub> (E)	36	#5	27'-0"	—
n <sub>202</sub> (E)	16	#5	28'-0"	—
n <sub>203</sub> (E)	5	#5	26'-2"	—
n <sub>200</sub> (E)	10	#5	7'-10"	—
n <sub>201</sub> (E)	94	#9	15'-1"	—
p <sub>200</sub> (E)	16	#10	49'-1"	—
p <sub>201</sub> (E)	32	#10	33'-0"	—
p <sub>202</sub> (E)	16	#10	21'-4"	—
s <sub>200</sub> (E)	59	#5	18'-2"	—
s <sub>201</sub> (E)	59	#5	17'-6"	—
s <sub>202</sub> (E)	60	#5	14'-1"	—
s <sub>203</sub> (E)	45	#5	4'-6"	—
s <sub>204</sub> (E)	148	#5	13'-3"	—
t <sub>200</sub> (E)	129	#8	13'-2"	—
u <sub>200</sub> (E)	28	#5	12'-3"	—
u <sub>201</sub> (E)	30	#5	11'-6"	—
u <sub>202</sub> (E)	25	#5	7'-4"	—
v <sub>200</sub> (E)	94	#9	14'-11"	—
v <sub>201</sub> (E)	5	#5	7'-1"	—
w <sub>200</sub> (E)	32	#8	31'-0"	—
w <sub>201</sub> (E)	32	#8	31'-5"	—
Test Pile Metal Shells	Each		1	
Structure Excavation	Cu Yd		277	
Concrete Structures	Cu Yd		228.0	
Reinforcement Bars, Epoxy Coated	Pound		36,830	
Furnishing Metal Shell Piles 12" x 0.25"	Foot		2,537	
Driving Piles	Foot		2,537	

RAMP 2 PIER DETAILS  
STRUCTURE NO. 016-0724

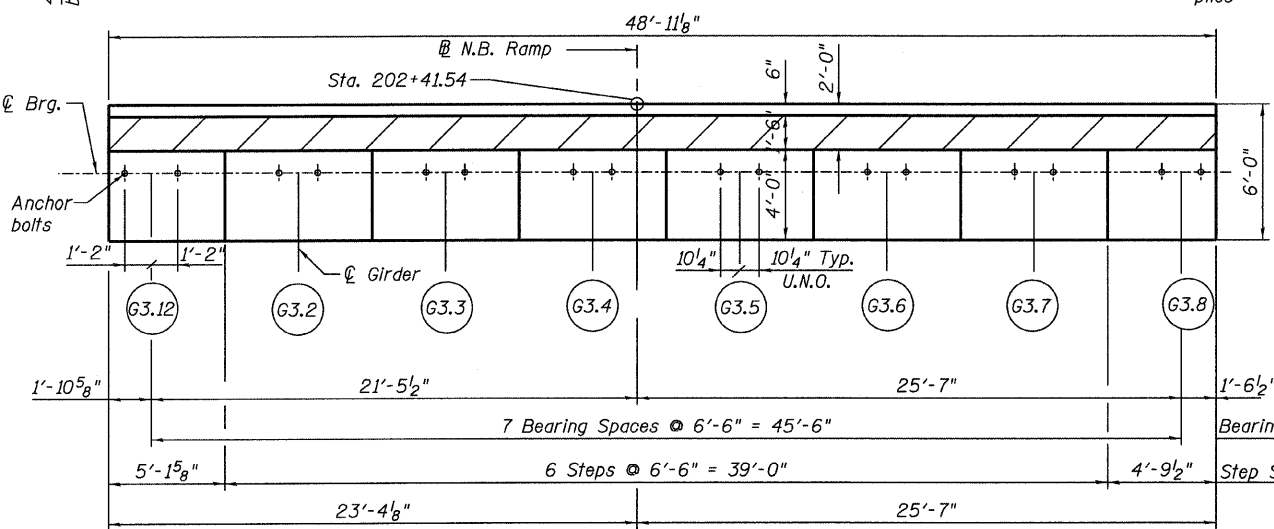
Location	Angle	a'	b'	c'	d'
BRG. 1	00°00'00"	11 1/2"	1'-5 1/2"	11 1/2"	1'-5 1/2"
BRG. 2	00°00'00"	8 1/4"	1'-4 1/4"	8 1/4"	1'-4 1/4"

<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH	REVISIONS		SHEET NO. 216	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	540
	DRAWN - EKH				CONTRACT NO. 60999				
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011			239 SHEETS					

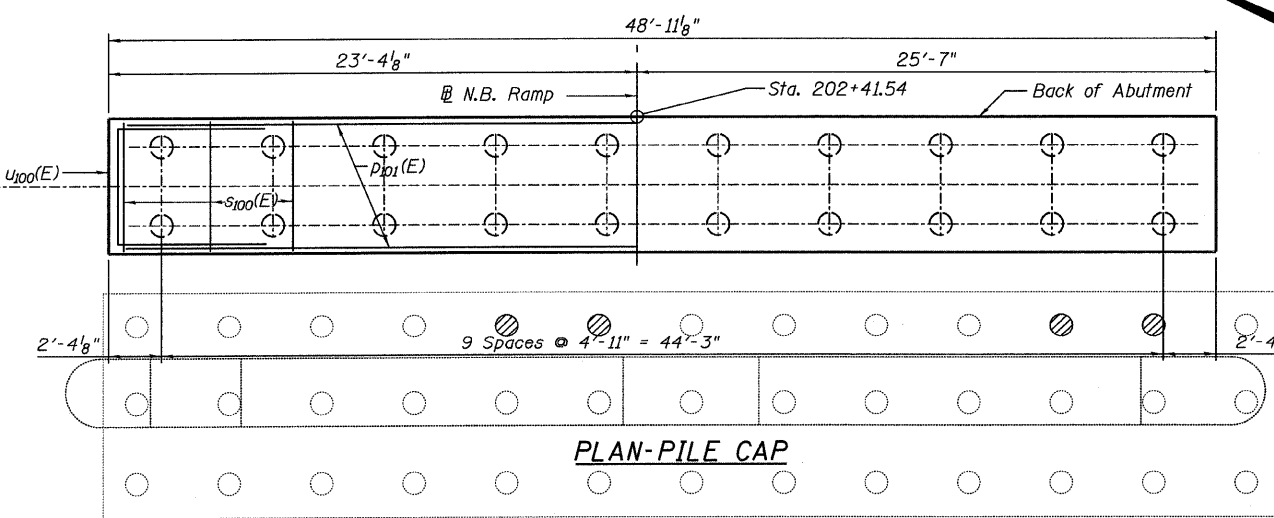
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



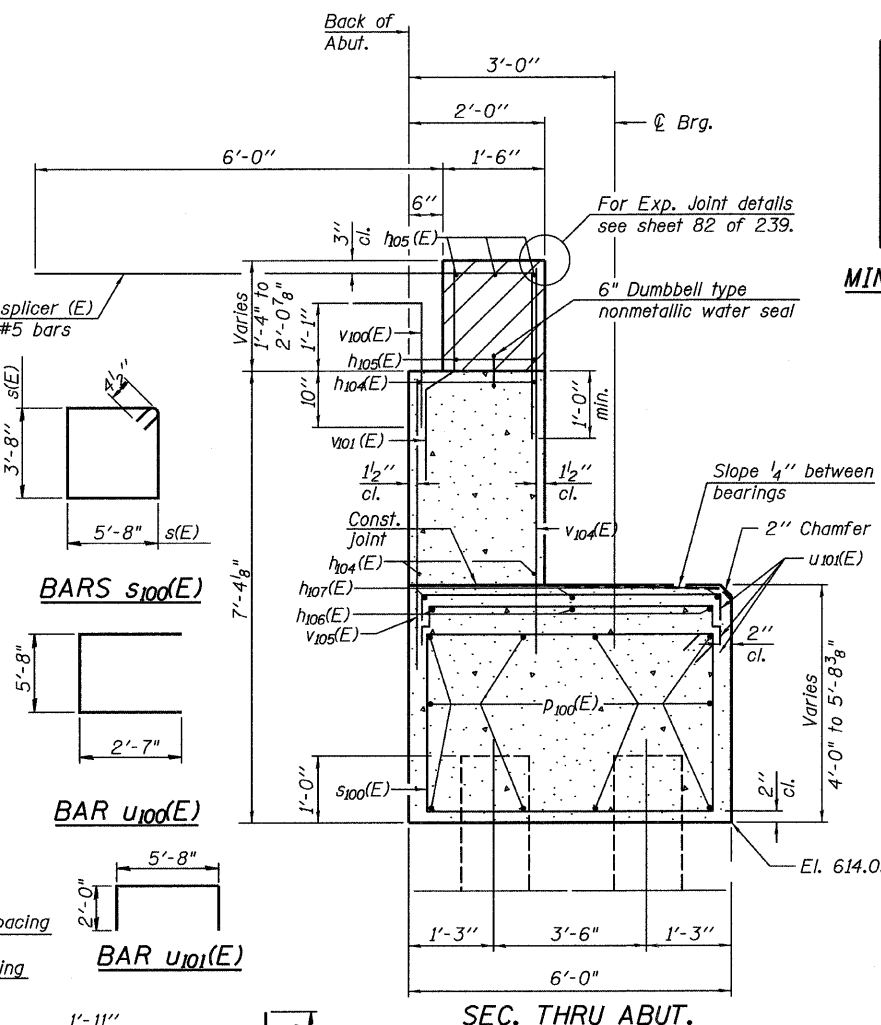
ELEVATION  
(Looking East)



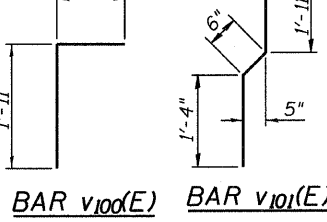
TOP VIEW



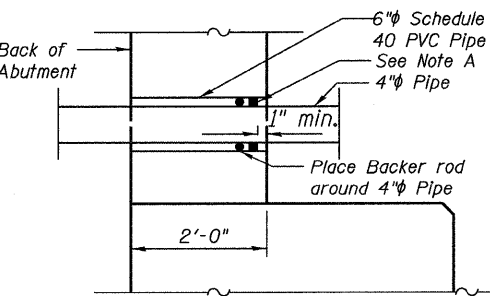
PLAN-PILE CAP



SEC. THRU ABUT.



BAR s100(E)  
BAR u101(E)  
BAR v100(E) BAR v101(E)



DRAINAGE DETAIL

BRIDGE SEAT  
ELEVATIONS

Beam	Elevation
G3.12	618.06
G3.2	619.75
G3.3	619.65
G3.4	619.55
G3.5	619.45
G3.6	619.36
G3.7	619.26
G3.8	619.16

MINIMUM BAR LAPS

Bar	Lap
#4	1'-9"
#5	2'-2"
#6	2'-7"
#6	3'-7" (Top)
#7	3'-5"
#7	4'-10" (Top)
#8	4'-6"

RAMP 3 ABUTMENT  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h104(E)	12	#5	25'-5"	
h105(E)	10	#6	25'-7"	
h106(E)	6	#5	22'-10"	
h107(E)	3	#5	19'-2"	
p100(E)	16	#8	26'-7"	
s100(E)	80	#4	19'-5"	
u100(E)	8	#6	10'-10"	
u101(E)	66	#5	9'-8"	
v100(E)	49	#5	3'-10"	
v101(E)	49	#4	3'-9"	
v106(E)	49	#6	5'-10"	
v107(E)	49	#6	7'-10"	

Structure Excavation	Cu. Yd.	123.7
Concrete Structures	Cu. Yd.	69.2
Reinforcement Bars, Epoxy Coated	Pound	4860
Furnishing Metal Shell Piles 12"x 0.25"	Foot	1,197
Driving Piles	Foot	1,197
Test Pile Metal Shells	Each	1
Concrete Sealer	Sq. Ft.	701
Pile Extraction	Each	4

For details of Bar Splicers, see sheet 224 of 239.

PILE DATA

Type: Metal Shell 12"  $\phi$  x 0.25" wall.  
Nominal Required Bearing: 270 kips  
Factored Resistance Available: 90 kips  
Est. Length: 63'  
No. Production Piles: 19  
No. Test Piles: 1

NOTES:

- Space reinforcement in cap to miss anchor bolts.
- Pour steps monolithically with cap.
- Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
- Bars indicated thus 20 x 3- #7 etc. indicates 20 lines of bars with three lengths per line.
- Piles shall be driven prior to placement of the reinforced select fill and coated with coal tar epoxy from the bottom of the select fill to 1" above the base of the abutment. The cost of the coal tar epoxy coating shall be included with the cost of the Furnishing Piles.
- Align bar splicer to be parallel to approach slab reinforcement.

RAMP 3 ABUTMENT  
STRUCTURE NO. 016-0724

TYLIN INTERNATIONAL

DESIGNED	JMA	REVISIONS	
CHECKED	AMD,	NAME	DATE
DRAWN	JMA		
CHECKED	AMD,		
DATE	03/25/2011		

SHEET NO. 217  
239 SHEETS

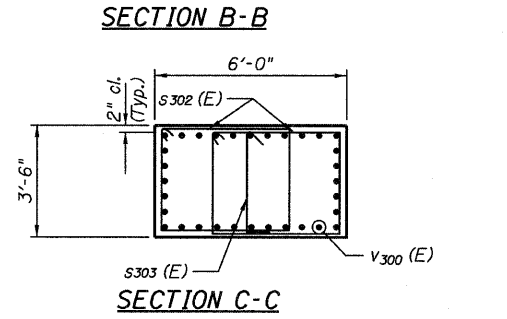
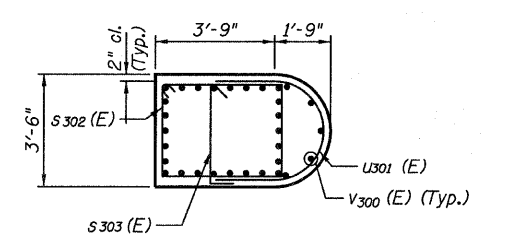
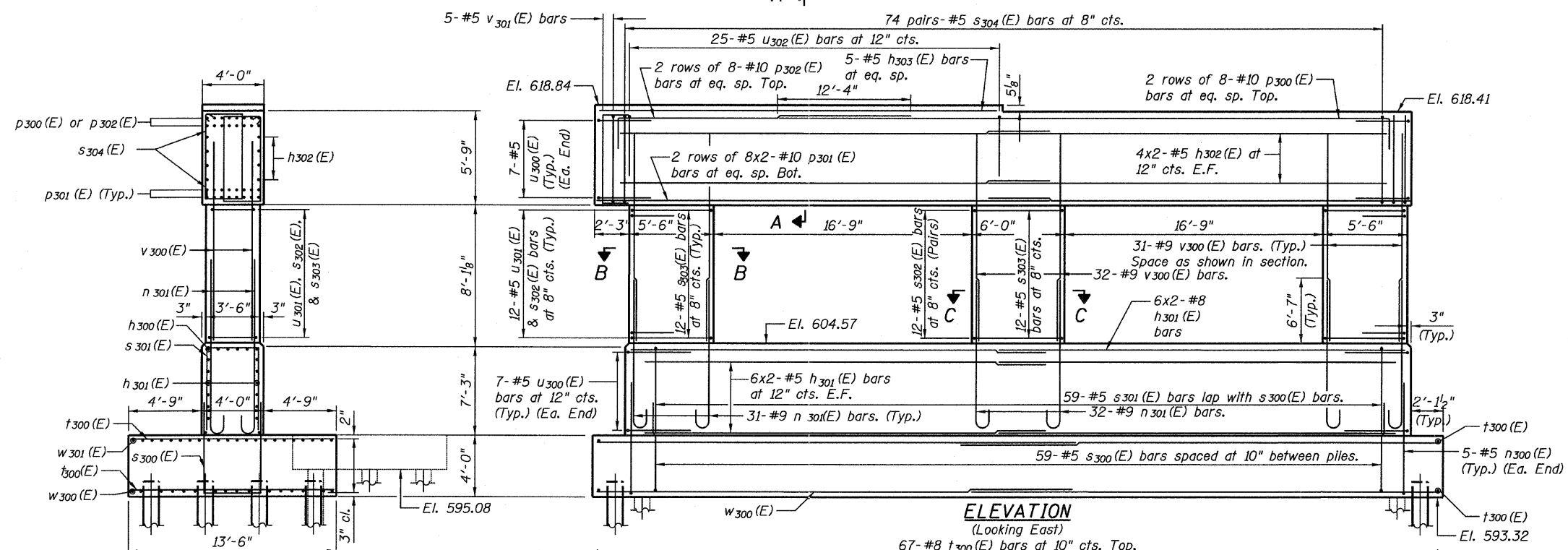
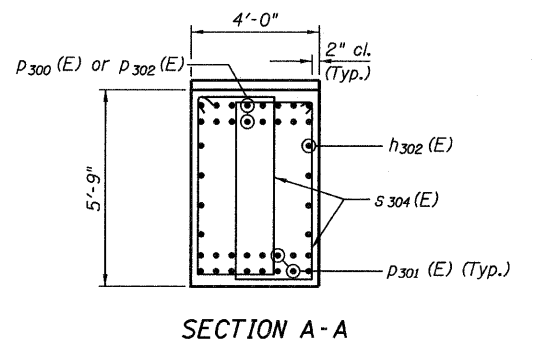
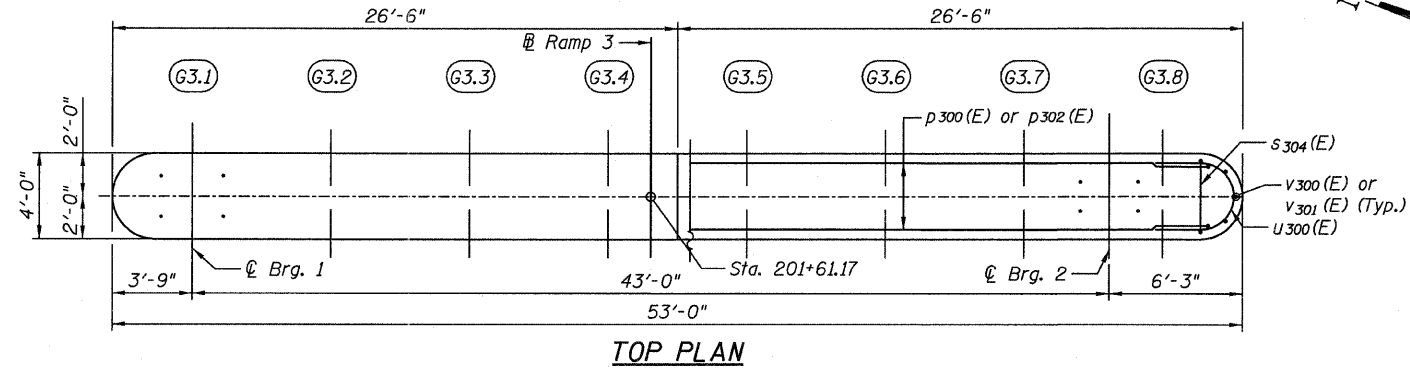
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	0711.2R & 1011.1BR	COOK	741	541
CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

4/25/12 PM  
e:\01345\structure\2\_central\_ave\_016-0724\_155-3eburden

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

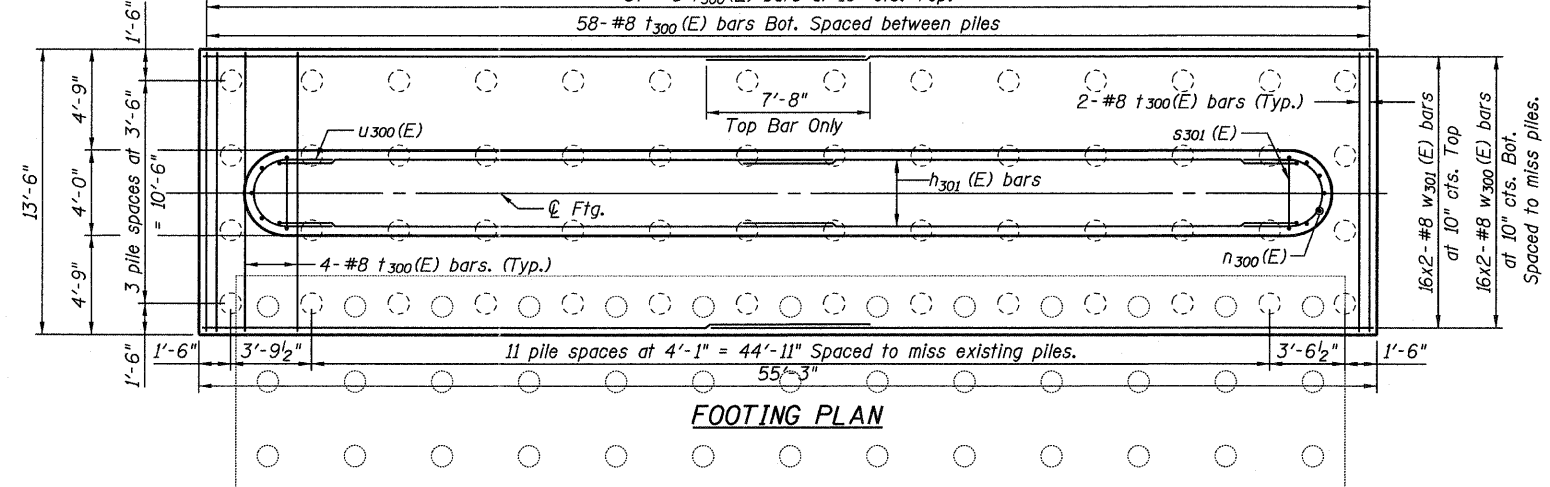
**NOTES**

1. Bars indicated thus 7x2-#11 indicates 7 lines of bars with two lengths per line.
2. Space reinforcement in cap to miss anchor bolts.
3. Space reinforcement in footing to miss piles.
4. Pour steps monolithically with cap.
5. For Bill of Materials, see sheet 219.
6. E.F - denotes Each Face.



**PILE DATA**

Type: 12"  $\phi$  x 0.25" wall  
 Nominal Required Bearings: 270 kips  
 Allowable Resistance Available: 90 kips  
 Estimated Length: 42'  
 No. Production Piles: 55  
 No. Test Piles: 1



**MINIMUM BAR LAPS**

(Unless Noted Otherwise)

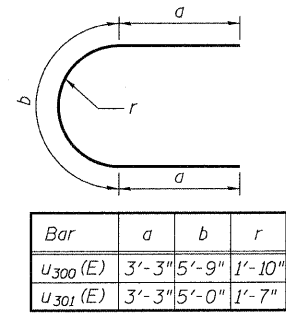
Bar Size	Min. Lap
#5	3'-3"
#7	5'-2"
#8	6'-9"
#10	10'-10"

**RAMP 3 PIER  
STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH	REVISIONS		SHEET NO. 218  239 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	542	
	DRAWN - EKH				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

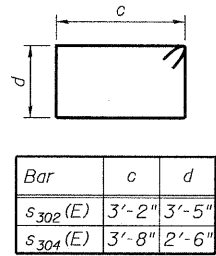
11:17:28 PM  
 pi:\01345\structure\2 Central Ave. 016-0724\155-3piern2.dwg

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



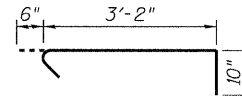
Bar	a	b	r
u <sub>300</sub> (E)	3'-3"	5'-9"	1'-10"
u <sub>301</sub> (E)	3'-3"	5'-0"	1'-7"

**BARS u<sub>300</sub>(E) & u<sub>301</sub>(E)**

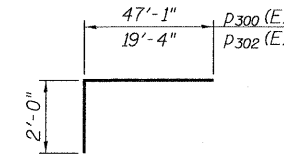


Bar	c	d
s <sub>302</sub> (E)	3'-2"	3'-5"
s <sub>304</sub> (E)	3'-8"	2'-6"

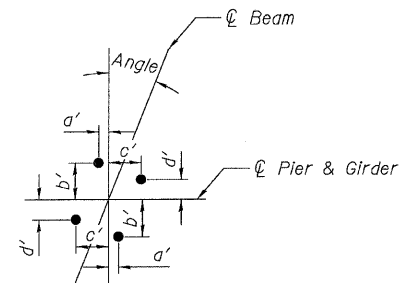
**BARS s<sub>302</sub>(E) & s<sub>304</sub>(E)**



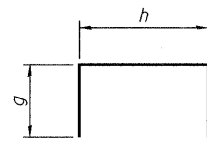
**BAR s<sub>303</sub>(E)**



**BARS p<sub>300</sub>(E) & p<sub>302</sub>(E)**

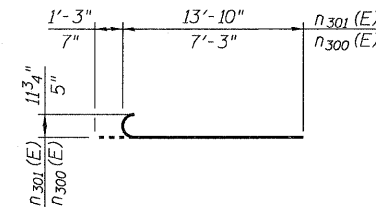


**ANCHOR BOLT LAYOUT**



Bar	g	h
s <sub>300</sub> (E)	7'-3"	3'-8"
s <sub>301</sub> (E)	6'-11"	3'-8"
u <sub>302</sub> (E)	2'-0"	3'-4"
v <sub>301</sub> (E)	10"	5'-5"

**BARS s<sub>300</sub>(E), s<sub>301</sub>(E),  
u<sub>302</sub>(E) & v<sub>301</sub>(E)**



**BARS n<sub>300</sub>(E) & n<sub>301</sub>(E)**

Floating Bearing at Cross-head Beam					
Location	Angle	a'	b'	c'	d'
BRG. 1	00°00'00"	11 1/2"	1'-5 1/2"	11 1/2"	1'-5 1/2"
BRG. 2	00°00'00"	8 1/4"	1'-4 1/4"	8 1/4"	1'-4 1/4"

**BILL OF MATERIAL**

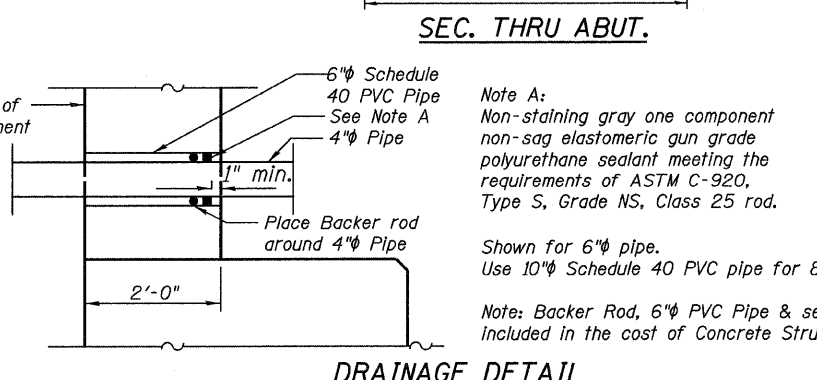
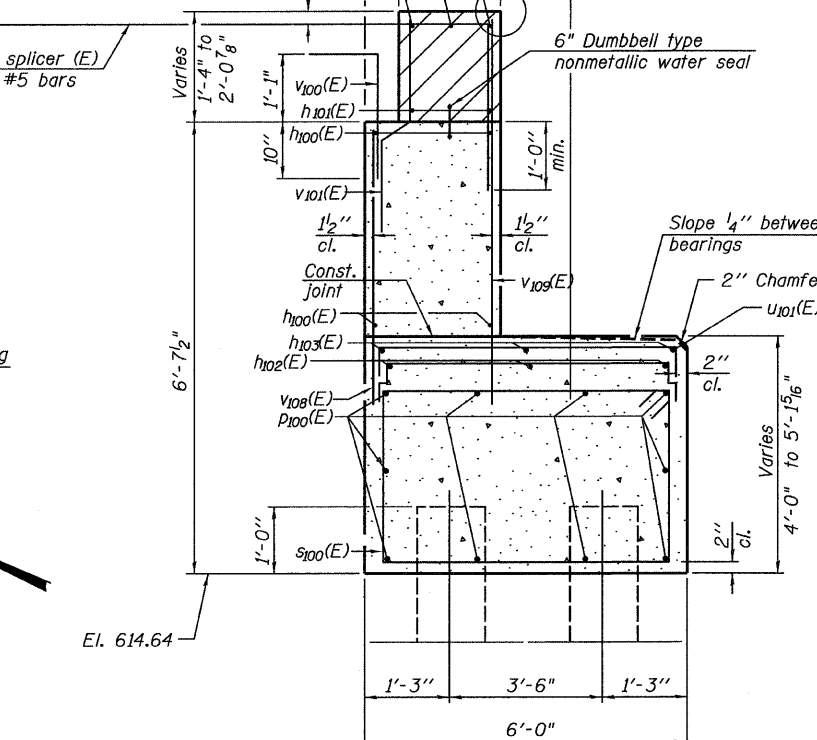
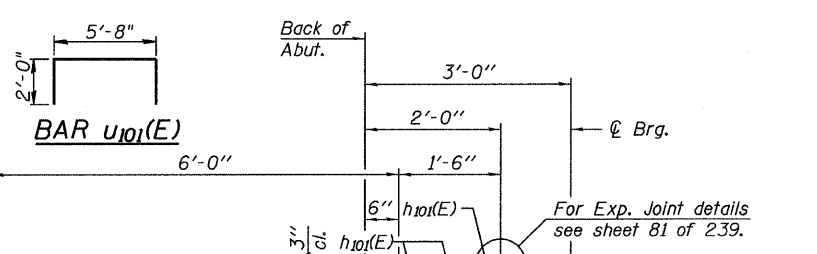
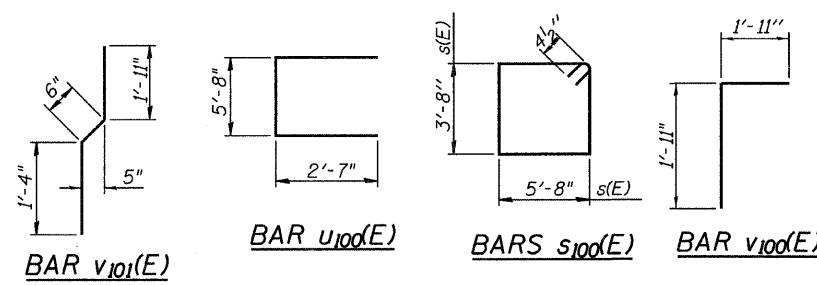
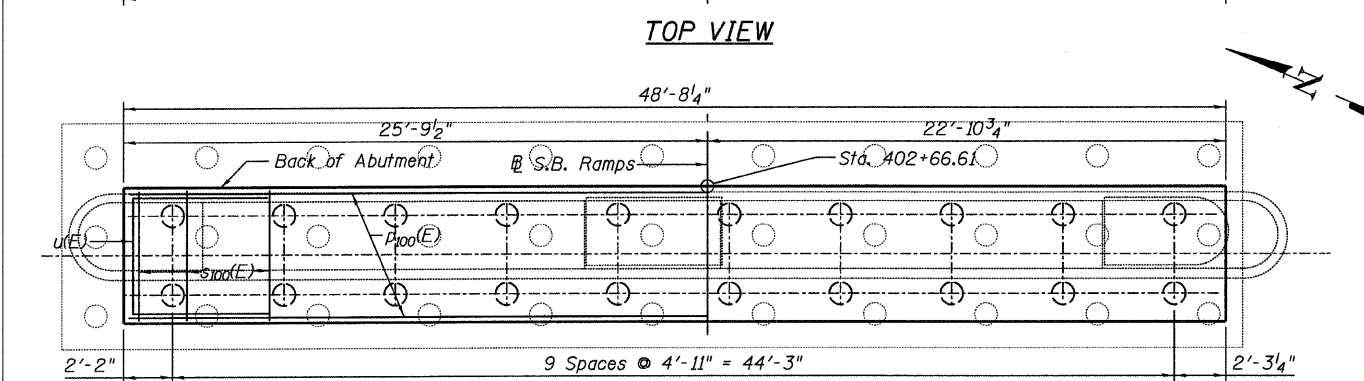
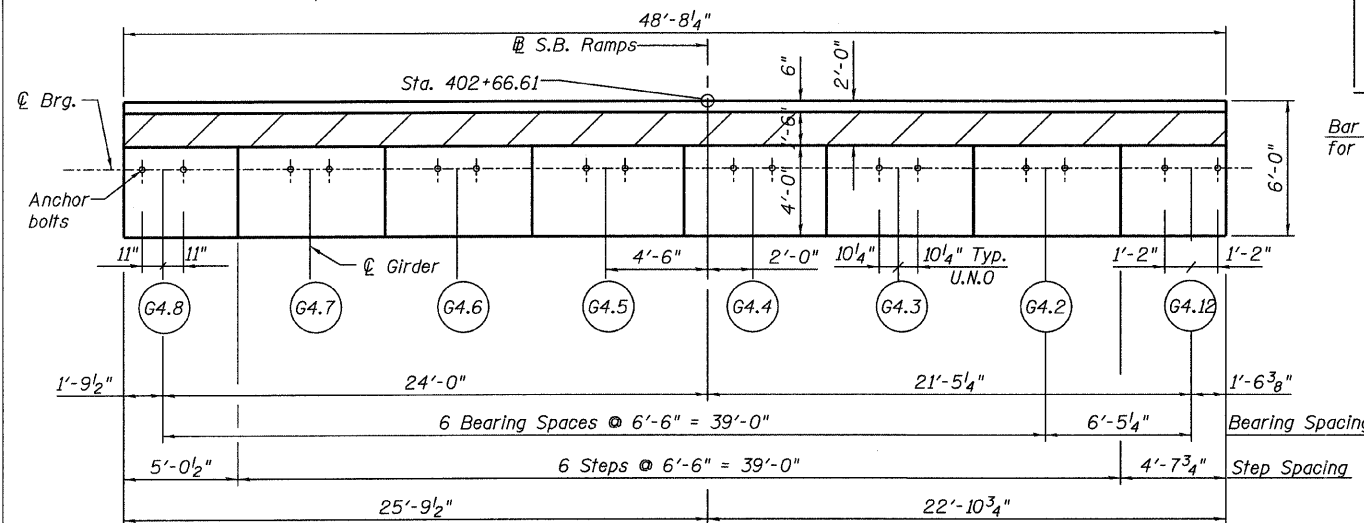
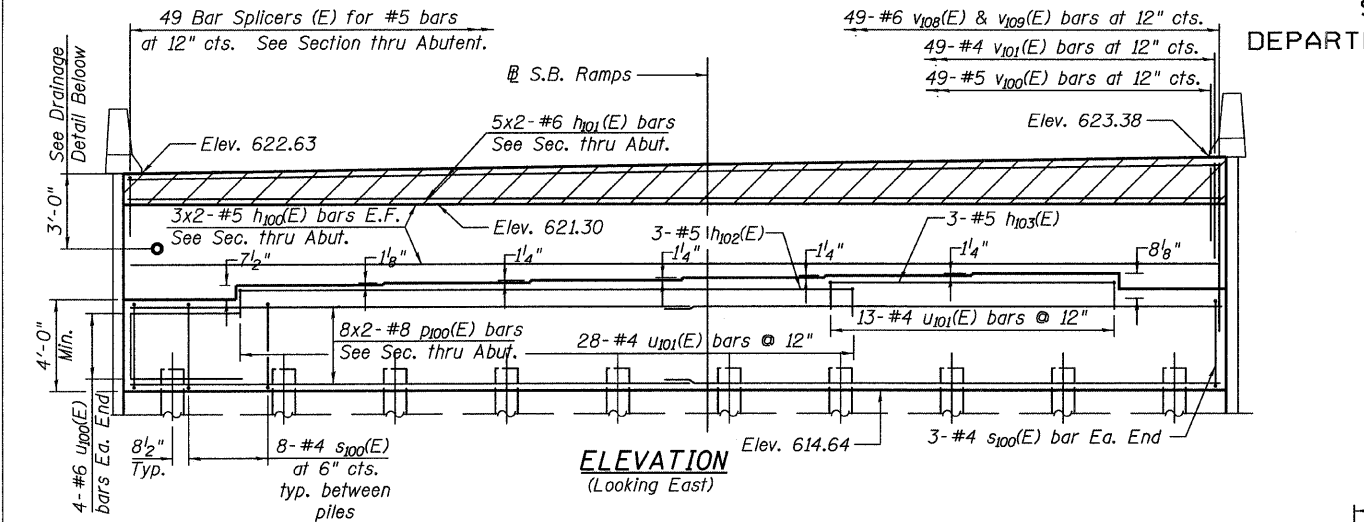
Bar	No.	Size	Length	Shape
h <sub>301</sub> (E)	36	#5	27'-0"	—
h <sub>302</sub> (E)	16	#5	28'-0"	—
h <sub>303</sub> (E)	5	#5	26'-2"	—
n <sub>300</sub> (E)	10	#5	7'-10"	⌋
n <sub>301</sub> (E)	94	#9	15'-1"	⌋
p <sub>300</sub> (E)	16	#10	49'-1"	⌋
p <sub>301</sub> (E)	32	#10	33'-0"	⌋
p <sub>302</sub> (E)	16	#10	21'-4"	⌋
s <sub>300</sub> (E)	59	#5	18'-2"	⌋
s <sub>301</sub> (E)	59	#5	17'-6"	⌋
s <sub>302</sub> (E)	48	#5	14'-1"	⌋
s <sub>303</sub> (E)	36	#5	4'-6"	⌋
s <sub>304</sub> (E)	148	#5	13'-3"	⌋
t <sub>300</sub> (E)	137	#8	13'-2"	—
u <sub>300</sub> (E)	28	#5	12'-3"	⌋
u <sub>301</sub> (E)	24	#5	11'-6"	⌋
u <sub>301</sub> (E)	25	#5	7'-4"	⌋
v <sub>300</sub> (E)	94	#9	13'-6"	⌋
v <sub>301</sub> (E)	5	#5	7'-1"	⌋
w <sub>300</sub> (E)	32	#8	30'-10"	—
w <sub>301</sub> (E)	32	#8	31'-4"	—
Test Pile Metal Shells	Each		1	
Structure Excavation	Cu Yd		257	
Concrete Structures	Cu Yd		225.0	
Reinforcement Bars, Epoxy Coated	Pound		36,360	
Furnishing Metal Shell Piles 12" x 0.25"	Foot		2,310	
Driving Piles	Foot		2,310	

**RAMP 3 PIER DETAILS  
STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH	REVISIONS		SHEET NO. 219	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	543
	DRAWN - EKH				CONTRACT NO. 60999				
	CHECKED - AMD, DATE - 03/25/2011				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



BRIDGE SEAT  
ELEVATIONS

Beam	Elevation
G4.12	619.06
G4.2	619.74
G4.3	619.65
G4.4	619.55
G4.5	619.45
G4.6	619.35
G4.7	619.26
G4.8	618.64

MINIMUM BAR LAPS

Bar	Lap
#4	1'-9"
#5	2'-2"
#6	2'-7"
#6	3'-7" (Top)
#7	3'-5"
#7	4'-10" (Top)
#8	4'-6"

RAMP 4 ABUTMENT  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h100(E)	12	#5	25'-3"	
h101(E)	10	#6	25'-6"	
h102(E)	3	#5	28'-0"	
h103(E)	3	#5	12'-8"	
p100(E)	16	#8	26'-7"	
s100(E)	78	#4	19'-5"	
u100(E)	8	#6	10'-10"	
u101(E)	41	#5	9'-8"	
v100(E)	49	#5	3'-10"	
v101(E)	49	#4	3'-9"	
v102(E)	49	#6	4'-1"	
v103(E)	49	#6	6'-2"	
Structure Excavation	Cu. Yd.		202.4	
Concrete Structures	Cu. Yd.		59.0	
Reinforcement Bars, Epoxy Coated	Pound		4490	
Furnishing Metal Shell Piles 12"x 0.25"	Foot		1,159	
Driving Piles	Foot		1,159	
Test Pile Metal Shells	Each		1	
Concrete Sealer	Sq. Ft.		605.0	

For details of Bar Splicers, see sheet 224 of 239.

PILE DATA

Type: Metal Shell 12"  $\phi$  x 0.25" wall.  
Nominal Required Bearing: 270 kips  
Factored Resistance Available: 90 kips  
Est. Length: 61'  
No. Production Piles: 19  
No. Test Piles: 1

NOTES:

- Space reinforcement in cap to miss anchor bolts.
- Pour steps monolithically with cap.
- Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.
- Bars indicated thus 20 x 3- #7 etc. indicates 20 lines of bars with three lengths per line.
- Piles shall be driven prior to placement of the reinforced select fill and coated with coal tar epoxy from the bottom of the select fill to 1" above the base of the abutment. The cost of the coal tar epoxy coating shall be included with the cost of the Furnishing Piles.
- Align bar splicer to be parallel to approach slab reinforcement.

RAMP 4 ABUTMENT  
STRUCTURE NO. 016-0724

TYLIN INTERNATIONAL	DESIGNED - JMA	REVISIONS	
	CHECKED - AMD,	NAME	DATE
	DRAWN - JMA		
	CHECKED - AMD,		
	DATE - 03/25/2011		

SHEET NO. 220	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	544
239 SHEETS		CONTRACT NO. 60999			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

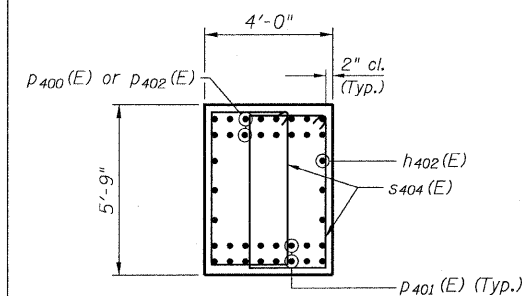
4:25:33 PM

pi:01345\structure\2\_central\_ave\_016-0724\155-4abut.dwg

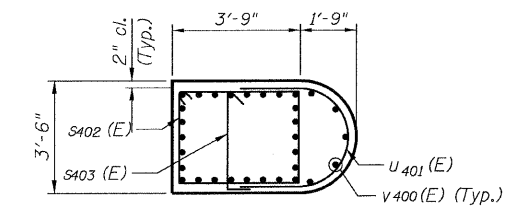
5/10/2011



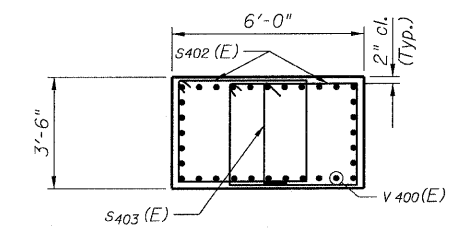
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



SECTION A-A



SECTION B-B

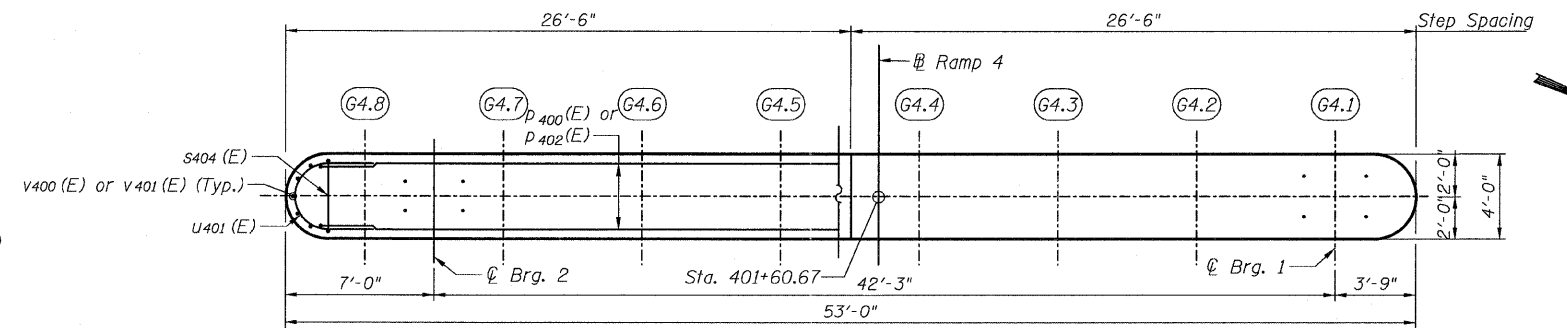


SECTION C-C

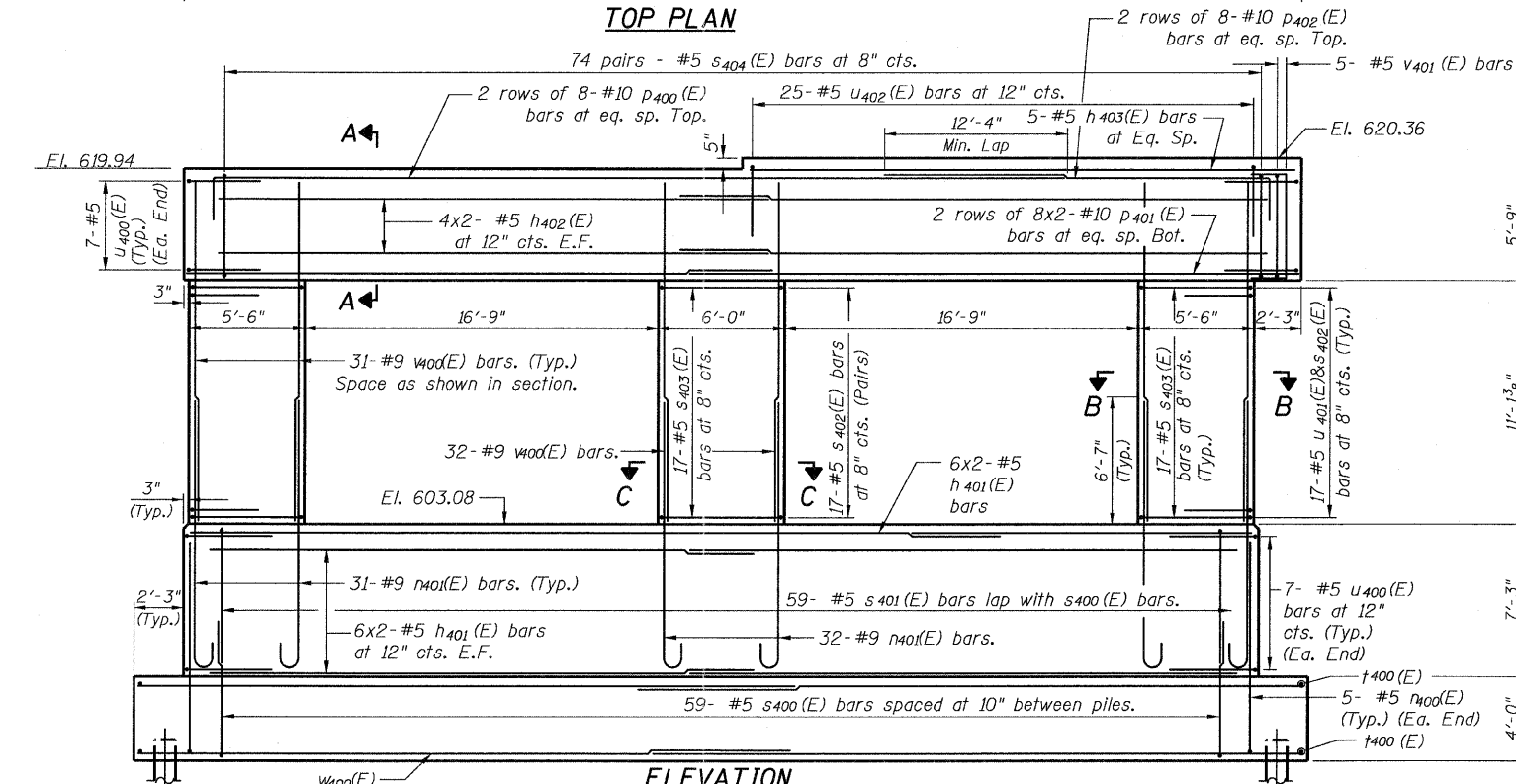
MINIMUM BAR LAPS

(Unless Noted Otherwise)

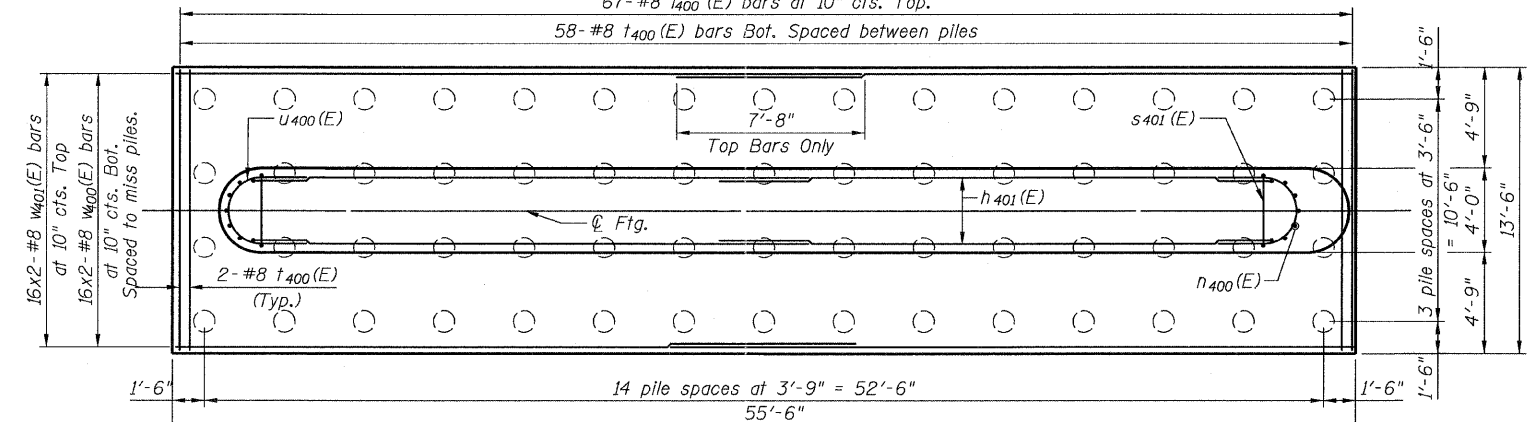
Bar Size	Min. Lap
#5	3'-3"
#7	5'-2"
#8	6'-9"
#10	10'-10"



TOP PLAN



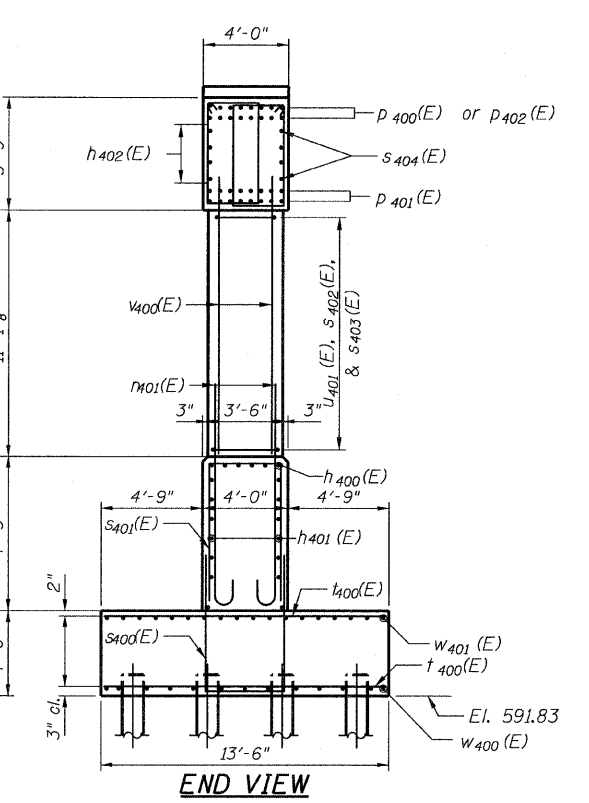
ELEVATION



FOOTING PLAN

NOTES

1. Bars indicated thus 5x2-#10 indicates 5 lines of bars with two lengths per line.
2. Space reinforcement in cap to miss anchor bolts.
3. Space reinforcement in footing to miss piles.
4. Pour steps monolithically with cap.
5. For Bill of Materials, see sheet 222.
6. E.F. - denotes Each Face.



END VIEW

PILE DATA

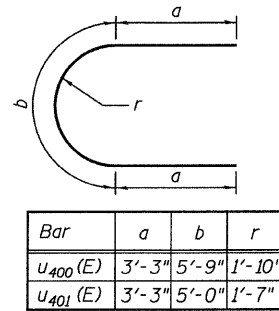
Type:	12" $\phi$ x 0.25" wall
Nominal Required Bearing:	270 kips
Allowable Resistance Available:	90 kips
Estimated Length:	38'
No. Production Piles:	59
No. Test Piles:	1

RAMP 4 PIER  
STRUCTURE NO. 016-0724

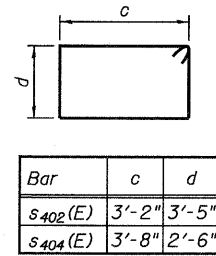
TYLIN INTERNATIONAL	DESIGNED - EKH	REVISIONS		SHEET NO. 221	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	545	
	DRAWN - EKH				239 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD,					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011									

pi:\01345\structure\016-0724\155-4piern2.dgn 4/28/2011 1:17:31 PM

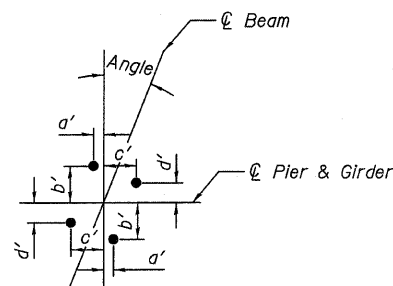
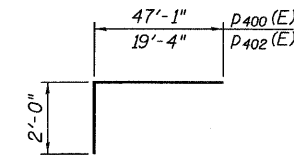
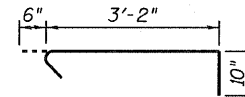
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



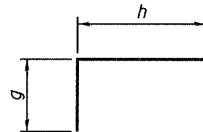
BARS u<sub>400</sub>(E) & u<sub>401</sub>(E)



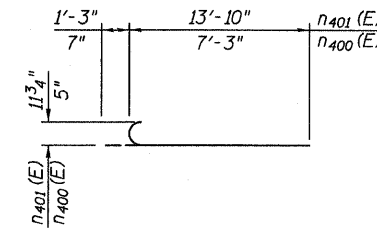
BARS s<sub>402</sub>(E) & s<sub>404</sub>(E)



Floating Bearing at Cross-head Beam					
Location	Angle	a'	b'	c'	d'
BRG. 1	00°00'00"	11½"	1'-5½"	11½"	1'-5½"
BRG. 2	00°00'00"	8¼"	1'-4¼"	8¼"	1'-4¼"



BARS s<sub>400</sub>(E), s<sub>401</sub>(E),  
u<sub>402</sub>(E) & v<sub>401</sub>(E)



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h <sub>401</sub> (E)	36	#5	27'-0"	—
h <sub>402</sub> (E)	16	#5	28'-0"	—
h <sub>403</sub> (E)	5	#5	26'-2"	—
n <sub>400</sub> (E)	10	#5	7'-10"	—
n <sub>401</sub> (E)	94	#9	15'-1"	—
p <sub>400</sub> (E)	16	#10	49'-1"	—
p <sub>401</sub> (E)	32	#10	33'-0"	—
p <sub>402</sub> (E)	16	#10	21'-4"	—
s <sub>400</sub> (E)	59	#5	18'-2"	□
s <sub>401</sub> (E)	59	#5	17'-6"	□
s <sub>402</sub> (E)	68	#5	14'-1"	□
s <sub>403</sub> (E)	51	#5	4'-6"	—
s <sub>404</sub> (E)	148	#5	13'-3"	□
f <sub>400</sub> (E)	129	#8	13'-2"	—
u <sub>400</sub> (E)	28	#5	12'-3"	—
u <sub>401</sub> (E)	34	#5	11'-6"	—
u <sub>402</sub> (E)	25	#5	7'-4"	—
v <sub>400</sub> (E)	94	#9	16'-6"	—
v <sub>401</sub> (E)	5	#5	7'-1"	—
w <sub>400</sub> (E)	32	#8	31'-0"	—
w <sub>401</sub> (E)	32	#8	31'-5"	—
Test Pile Metal Shells	Each		1	
Structure Excavation	Cu Yd		315	
Concrete Structures	Cu Yd		230.8	
Reinforcement Bars, Epoxy Coated	Pound		34,850	
Furnishing Metal Shell Piles 12" x 0.25"	Foot		2,242	
Driving Piles	Foot		2,242	

RAMP 4 PIER DETAILS  
STRUCTURE NO. 016-0724

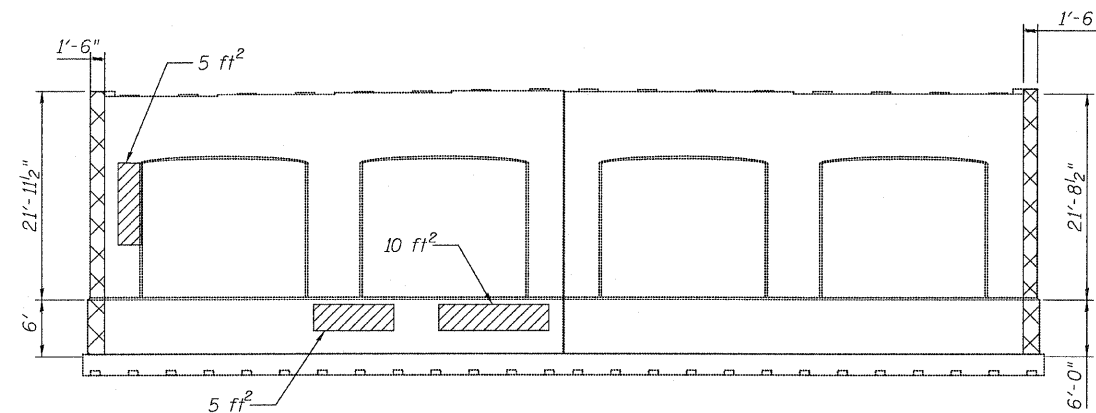
TYLIN INTERNATIONAL	DESIGNED - EKH	REVISIONS		SHEET NO. 222	F.A.I RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 546
	CHECKED - AMD,	NAME	DATE						
	DRAWN - EKH								
	CHECKED - AMD,								
	DATE - 03/25/2011			239 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT									

pi:\01345\structure\02 Central Ave. 016-0724\155-4piern2.dgn 4/28/2011 11:17:32 PM

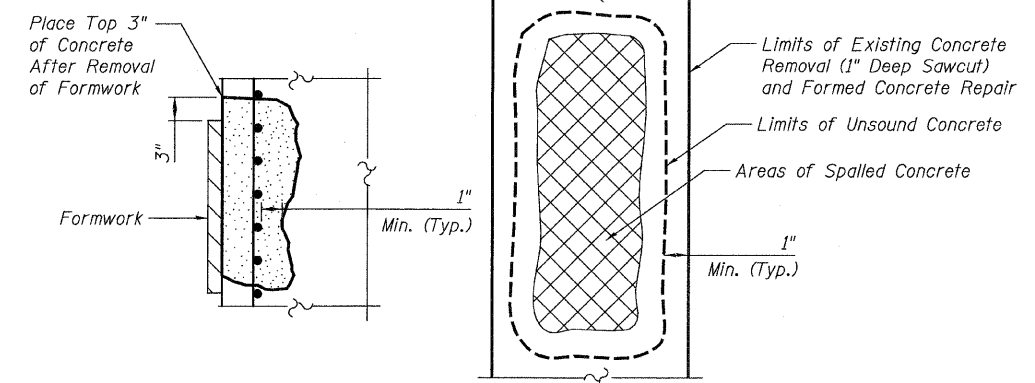
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**BILL OF MATERIAL**

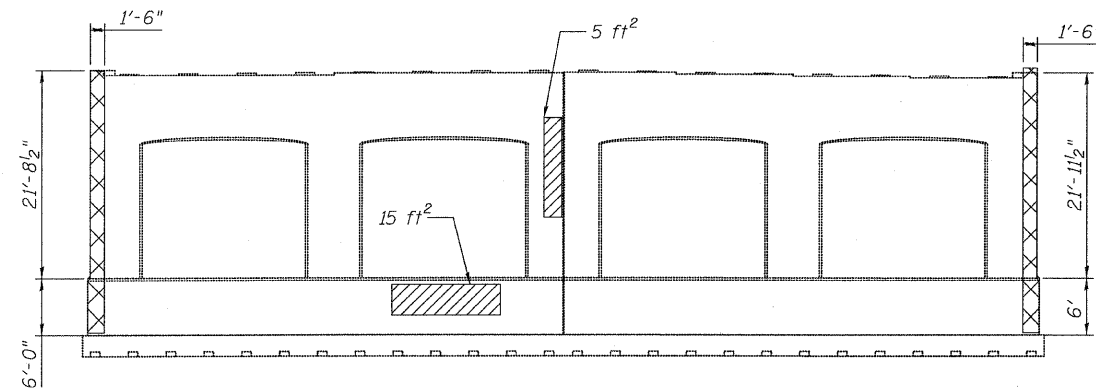
ITEM	UNIT	TOTAL
Structural Repair of Concrete (Depth Greater than 5 inches)	SQ FT	40



**PIER 6 SOUTH ELEVATION**  
(Looking North)



**STRUCTURAL REPAIR OF CONCRETE DESCRIPTION**



**PIER 6 NORTH ELEVATION**  
(Looking South)

**LEGEND**

- Concrete Removal
- Structural Repair of Concrete
- Exposed Rebar

**SUBSTRUCTURE REPAIRS**  
**CENTRAL/I-55**  
**STRUCTURE NO. 016-0724**

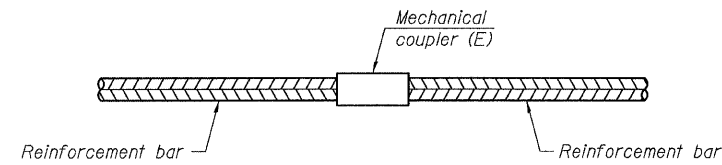
<b>TYLIN INTERNATIONAL</b>	DESIGNED - MB	REVISIONS		SHEET NO. 223	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	547	
	DRAWN - MB				239 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD,				DATE - 03/25/2011	FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT				

11:17:34 PM

p:\013415\structure\02\_Central\_Ave\_016-0724\155a2subrepl.dgn

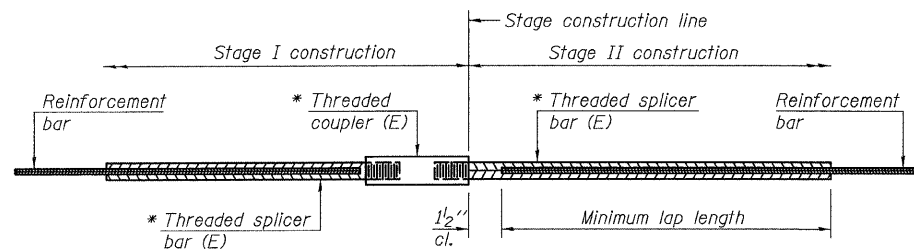
4/28/2011

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required
Abutment 1C footing	#6	210
Abutment 4C footing	#6	98



**STANDARD BAR SPLICER ASSEMBLY**

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

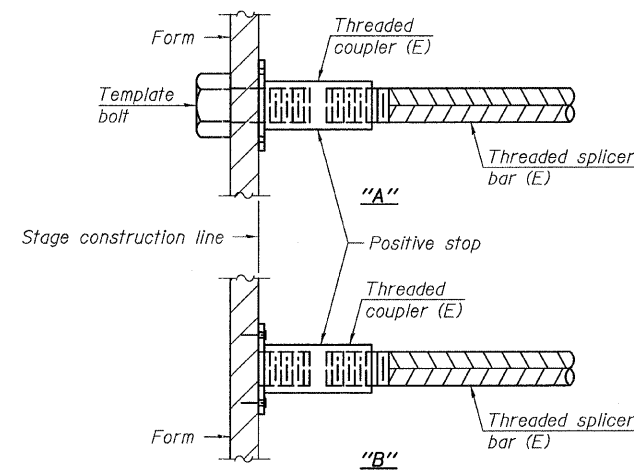
Table 1: Black bar, 0.8 Class C  
Table 2: Black bar, Top bar lap, 0.8 Class C  
Table 3: Epoxy bar, 0.8 Class C  
Table 4: Epoxy bar, Top bar lap, 0.8 Class C  
Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

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

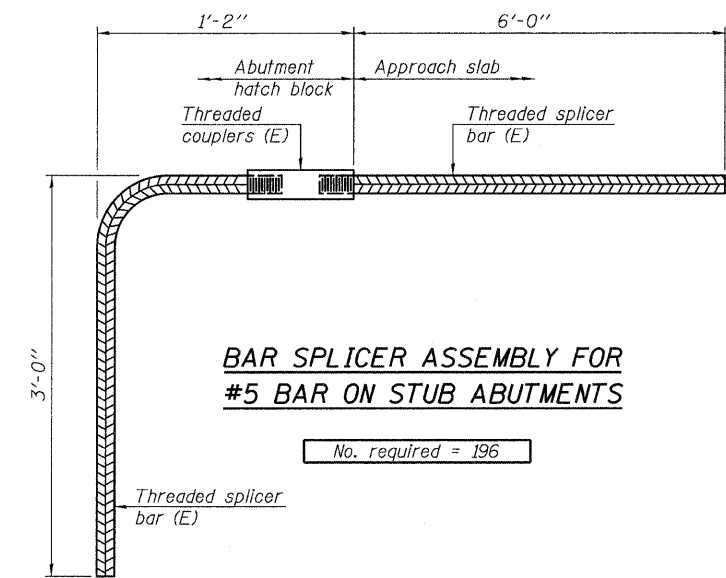
Location	Bar size	No. assemblies required	Table for minimum lap length
(1)	#5	493	4
(2)	#5	346	4
(3)	#5	959	4
(4)	#5	493	4
(5)	#5	346	4
(6)	#6	31	4
(7)	#6	31	4

- (1) Central Avenue bridge (West longitudinal joint) top
- (2) Central Avenue bridge (West longitudinal joint) bot.
- (3) Central Avenue bridge longitudinal joint (top & bot.)
- (4) Central Avenue bridge (East longitudinal joint) top
- (5) Central Avenue bridge (East longitudinal joint) bot.
- (6) Central Avenue bridge Abutment 2C footing
- (7) Central Avenue bridge Abutment 3C footing



**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 STUB ABUTMENTS**

No. required = 196

**NOTES**

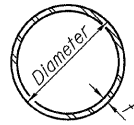
- Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
- All reinforcement shall be lapped and tied to the splicer bars.
- Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See section 508 of the Standard Specifications.
- See special provision for Mechanical Splicers.
- See approved list of bar splicer assemblies and mechanical splicers for alternatives.

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
CENTRAL AVENUE OVER I-55  
STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - MB	REVISIONS		SHEET NO. 224	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55					0711.2R & 1011.1BR
	DRAWN - MB				239 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD,				DATE - 03/25/2011	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

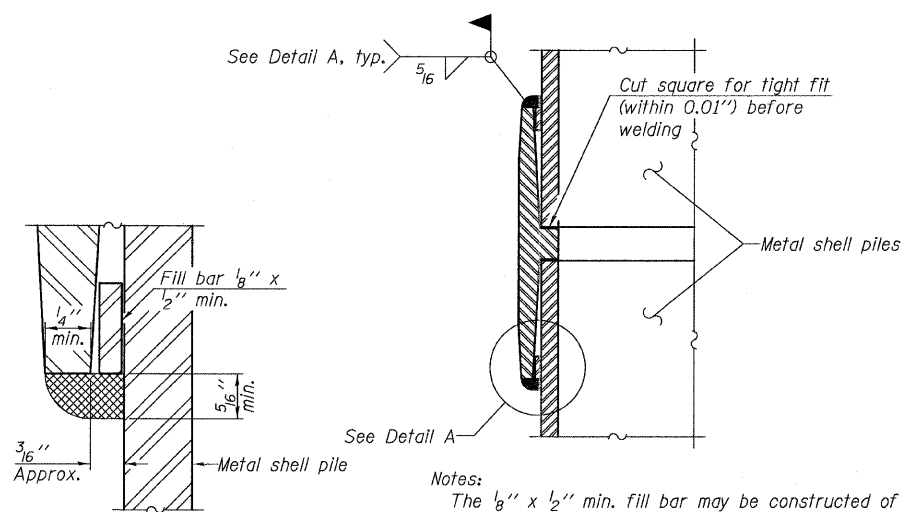
4:25:34 PM  
p:\01345\structure\c2\_central\_ave\_016-0724\155c2splicer.dgn  
5/10/2011

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**METAL SHELL PILE TABLE**

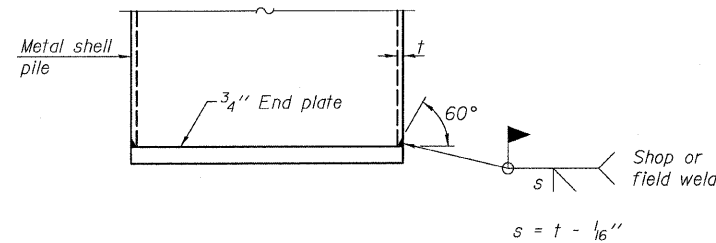
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. <sup>3</sup> /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



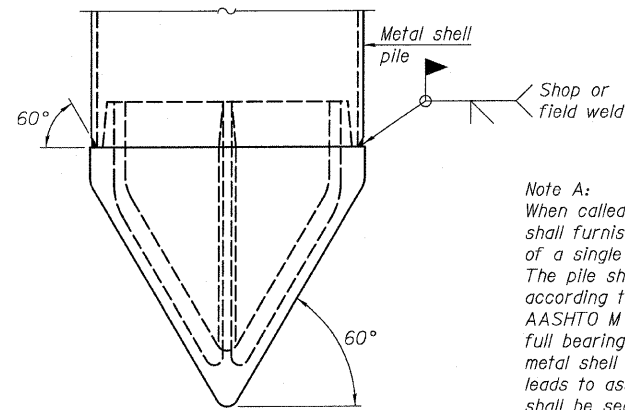
**DETAIL A**

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**



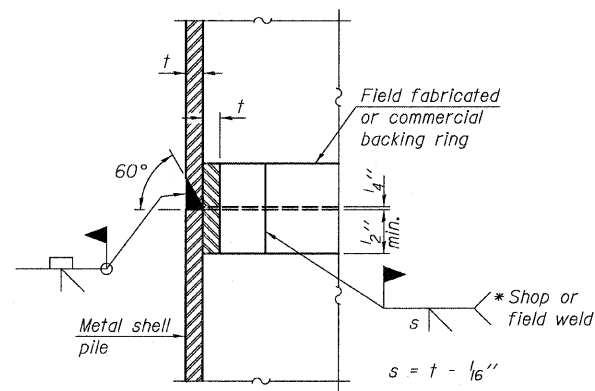
**END PLATE ATTACHMENT**



**METAL SHELL PILE SHOE ATTACHMENT**

(See Note A)

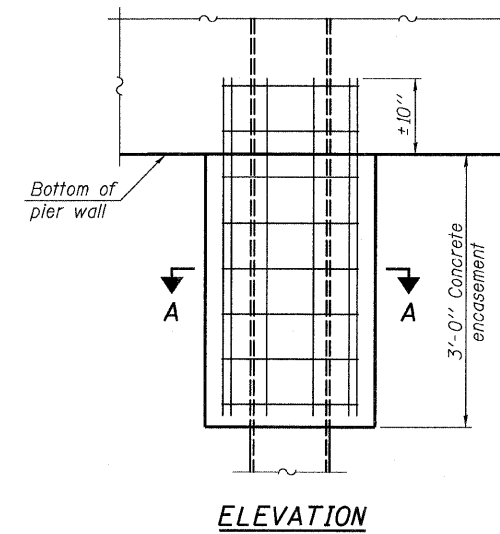
Note A:  
When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over 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.



**COMPLETE PENETRATION WELD SPLICE**

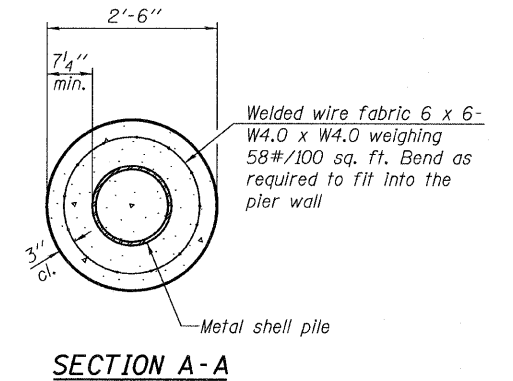
\* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.

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

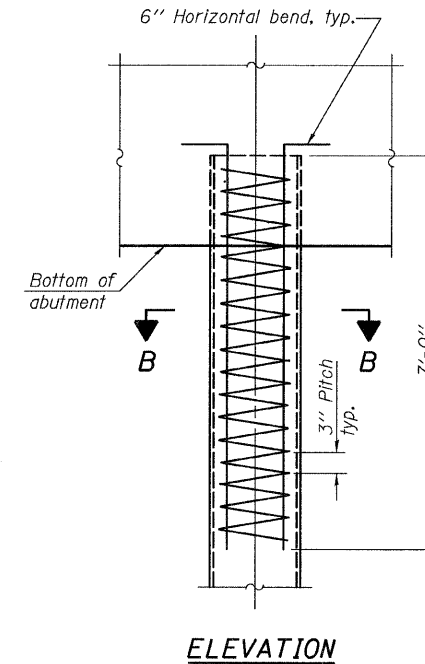


**CONCRETE ENCASEMENT AT PIERS**

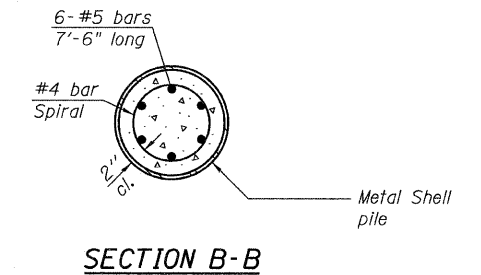
Note:  
Forms for encasement may be omitted when soil conditions permit.



**SECTION A-A**



**METAL SHELL REINFORCEMENT AT ABUTMENTS**



**METAL SHELL PILE DETAILS  
CENTRAL AVENUE OVER I-55  
STRUCTURE NO. 016-0724**

F-MS 11-1-09

<b>TYLIN INTERNATIONAL</b>	DESIGNED - MB	REVISIONS		SHEET NO. 225	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	549
	DRAWN - JMA				239 SHEETS	CONTRACT NO. 60999			
	CHECKED - AMD,					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			
	DATE - 03/25/2011								

pi:\01345\structure\02 Central Ave. 016-0724\5562pile.dgn 4/28/2011 11:17:36 PM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT)	RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
0.0	1.0	2.0	3.0						
0.0	1.0	1.0	3.0		SILT & GRAVEL	AU-1 0-1.0		5	w=5%
1.0	2.0	2.0	6.0		181.84 (596.45)	SS-2 1.0-2.5 12" R		7	w=19.6%
2.0	3.0	3.0	9.0		BLACK & BROWN SILT & CINDERS (FILL)			4	
3.0	4.0	4.0	12.0		BLACK & BROWN SILT & CINDERS (FILL)	SS-3 3.5-5.0 6" R		2	w=17%
4.0	5.0	5.0	15.0		180.47 (591.95)			2	
5.0	6.0	6.0	18.0		GRAY BROWN SILTY CLAY SOFT, MOIST, LITTLE FINE SAND	SS-4 6.0-7.5 12" R		1	QU=80 B w=23.7%
6.0	7.0	7.0	21.0					2	
7.0	8.0	8.0	24.0					2	
8.0	9.0	9.0	27.0					3	
9.0	10.0	10.0	30.0					5	
10.0	11.0	11.0	33.0					2	
11.0	12.0	12.0	36.0					3	
12.0	13.0	13.0	39.0					6	
13.0	14.0	14.0	42.0					2	
14.0	15.0	15.0	45.0					3	
15.0	16.0	16.0	48.0					5	
16.0	17.0	17.0	51.0					1	
17.0	18.0	18.0	54.0					3	
18.0	19.0	19.0	57.0					2	
19.0	20.0	20.0	60.0					3	
20.0								5	

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT)	RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
20.0	21.0	22.0	23.0						
20.0	21.0	21.0	69.0					1	
21.0	22.0	22.0	72.0		GRAY SILTY CLAY, MED STIFF MOIST, TRACE FINE-COARSE SAND	SS-10 21.0-22.5 18" R		3	QU=183 B w=20.0%
22.0	23.0	23.0	75.0					4	
23.0	24.0	24.0	78.0					2	
24.0	25.0	25.0	81.0					3	
25.0	26.0	26.0	84.0					4	
26.0	27.0	27.0	87.0					2	
27.0	28.0	28.0	90.0					3	
28.0	29.0	29.0	93.0					5	
29.0	30.0	30.0	96.0					2	
30.0	31.0	31.0	99.0					3	
31.0	32.0	32.0	102.0					5	
32.0	33.0	33.0	105.0					2	
33.0	34.0	34.0	108.0					3	
34.0	35.0	35.0	111.0					5	
35.0	36.0	36.0	114.0					1	
36.0	37.0	37.0	117.0					3	
37.0	38.0	38.0	120.0					5	
38.0	39.0	39.0	123.0					14	
39.0	40.0	40.0	126.0					20	
40.0								24	

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT)	RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
40.0	41.0	42.0	43.0						
40.0	41.0	41.0	134.0					10	
41.0	42.0	42.0	137.0					12	
42.0	43.0	43.0	140.0					13	
43.0	44.0	44.0	143.0					7	
44.0	45.0	45.0	146.0					9	
45.0	46.0	46.0	149.0					13	
46.0	47.0	47.0	152.0					7	
47.0	48.0	48.0	155.0					9	
48.0	49.0	49.0	158.0					13	
49.0	50.0	50.0	161.0					7	
50.0	51.0	51.0	164.0					14	
51.0	52.0	52.0	167.0					18	
52.0	53.0	53.0	170.0					7	
53.0	54.0	54.0	173.0					14	
54.0	55.0	55.0	176.0					18	
55.0	56.0	56.0	179.0					20	
56.0	57.0	57.0	182.0					21	
57.0	58.0	58.0	185.0					35	
58.0	59.0	59.0	188.0					20	
59.0	60.0	60.0	191.0					21	
60.0								35	

**NOTE:**

1. To convert from kPa to psi:  
1 kPa = 0.14504 psi

**BORING LOGS 1**  
**STRUCTURE NO. 016-0724**

TYLIN INTERNATIONAL	DESIGNED -	REVISIONS		SHEET NO. 226	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.				
	CHECKED - AMD,	NAME	DATE							741	550		
	DRAWN -											CONTRACT NO. 60999	
	CHECKED - AMD,												
DATE - 03/25/2011			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT										

11:17:37 PM

p:\01345\structure\02 Central Ave. 016-0724\15522br3.dgn





STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS		
20.0	21.0	21.0	22.0						GRAY SILTY CLAY, MOIST TRACE FINE SAND, MEDIUM STIFF	SS-10 21.0-22.5 18" R
23.0	24.0	24.0	25.0	SS-11 23.5-25.0 18" R	1 4	QU=113 B w=19.6%				
26.0	27.0	27.0	28.0				SS-12 26.0-27.5 18" R	1 4		
29.0	30.0	30.0	31.0	SS-13 28.5-30.0 18" R	2 5	QU=72 B w=27.5%				
32.0	33.0	33.0	34.0				SS-14 33.5-35.0 18" R	2 5		QU=121 B N=15 NP w=12.5%
35.0	36.0	36.0	37.0	SS-15 38.5-40.0 18" R	10 19	N=43 NP w=16.7%				
38.0	39.0	39.0	40.0							
172.07 (564.39)					GRAY SILTY CLAY LOAM MOIST, STIFF					
171.23 (561.64)					GRAY SILT, MOIST DENSE					

DRILLING CONTRACTOR	PATRICK DRILLING	REMARKS	WATER LEVEL (ft.)
DRILLING METHOD	3 1/4" ID HSA		▽ DRY
DRILLING EQUIPMENT	CME		▽ DRY
DRILLING STARTED	7/5/01 ENDED 7/5/01		▽ N.A.

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS		
40.0	41.0	42.0	43.0						GRAY SILT, TRACE FINE COARSE SAND, MOIST, MED. DENSE	SS-16 43.5-45.0 18" R
44.0	45.0	46.0	47.0	SS-17 48.5-50.0 18" R	14 18	QU=724 B w=14.3%				
48.0	49.0	50.0	51.0				SS-18 53.5-55.0 18" R	8 10		
54.0	55.0	56.0	57.0	SS-19 58.5-60.0 18" R	25 30	EOB AT 60' N=65 NP w=8.1%				
58.0	59.0	60.0								
167.49 (549.39)					GRAY SILTY CLAY LOAM, SL MOIST, HARD, TRACE FINE SAND					
164.45 (539.39)					GRAY SILT, VERY DENSE DRY SOME FINE TO COARSE SAND					

DRILLING CONTRACTOR	PATRICK DRILLING	REMARKS	WATER LEVEL (ft.)
DRILLING METHOD	3 1/4" ID HSA		▽ DRY
DRILLING EQUIPMENT	CME		▽ DRY
DRILLING STARTED	7/5/01 ENDED 7/5/01		▽ N.A.

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS		
0.0	1.0	2.0	3.0						BROWN SILTY LOAM & GRAVEL FILL GRAVEL BLACK GRADING TO BROWN SILTY CLAY SOFT, MOIST GRAY SILTY CLAY, LITTLE SAND, SOFT, WET GRAY SILTY CLAY LOAM & BRICK DEBRIS, SOME FINE SAND GRAY-BROWN SILTY CLAY SOME FINE SAND, MEDIUM STIFF, MOIST	AU-1 0-1.0
4.0	5.0	6.0	7.0	SS-3 3.5-5.0 10" R	2 2	SAMPLE IN PIECES w=23.8%				
8.0	9.0	10.0	11.0				SS-4 6.0-7.5 10" R	1 1		
12.0	13.0	14.0	15.0	SS-5 8.5-10.0 10" R	2 4	SAMPLE IN PIECES w=82.2%				
18.0	19.0	20.0					SS-6 11.0-12.5 14" R	3 5		QU=273 B
22.0	23.0	24.0	25.0	SS-7 13.5-15.0 18" R	2 4	QU=280 B w=20.9%				
28.0	29.0	30.0	31.0				SS-8 16.0-17.5 18" R	1 2		QU=104 B w=22.2%
32.0	33.0	34.0	35.0	SS-9 18.5-20.0 18" R	1 3	QU=169 B w=21.8%				
38.0	39.0	40.0								
179.26 (587.99)					GRAY-BROWN SILTY CLAY SOME FINE SAND, MEDIUM STIFF, MOIST					

DRILLING CONTRACTOR	PATRICK DRILLING	REMARKS	WATER LEVEL (ft.)
DRILLING METHOD	HSA		▽ 4.0'
DRILLING EQUIPMENT	CME		▽ 4.0'
DRILLING STARTED	7/5/01 ENDED 7/5/01		▽ N.A.

**NOTE:**

1. To convert from kPa to psi:  
1 kPa = 0.14504 psi

**BORING LOGS 3  
STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED -	REVISIONS							
	CHECKED - AMD,	NAME	DATE						
	DRAWN -								
	CHECKED - AMD,								
DATE - 03/25/2011									

SHEET NO. 228	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	552
239 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

pi:\01345\structure\016-0724\562br4-5.dgn 4/28/2011 11:17:40 PM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
20.0	21.0	21.0	22.0					
23.0	24.0	23.5	25.0			SS-11 23.5-25.0 18" R	3 4 7	QU=113 B w=20.0%
26.0	27.0	26.0	27.5			SS-12 26.0-27.5 18" R	2 4 6	QU=201 B w=23.6%
28.0	29.0	28.5	30.0			SS-13 28.5-30.0 18" R	2 4 4	QU=153 B w=25.5%
31.0	32.0	33.5	35.0			SS-14 33.5-35.0 18" R	3 3 7	QU=80 B w=19.9%
37.0	38.0	171.41	562.24		GRAY SILT, DENSE SL. MOIST			
39.0	40.0	38.5	40.0			SS-15 38.5-40.0 18" R	17 23 25	N=48 NP w=16.7%

DRILLING CONTRACTOR	PATRICK DRILLING	REMARKS	WATER LEVEL (ft.)
DRILLING METHOD	3 1/4" ID HSA		4.0'
DRILLING EQUIPMENT	CME		4.0'
DRILLING STARTED	7/5/01 ENDED 7/5/01		N.A.

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
40.0	41.0	42.0	43.0					
44.0	45.0	46.0	47.0			SS-17 46.5-50.0 18" R	10 16 21	N=37 QU=715 B w=17.6%
48.0	49.0	50.0	51.0			SS-18 53.5-55.0 18" R	12 26 30	
54.0	55.0	56.0	57.0			SS-19 58.5-60.0 18" R	17 25 26	w=9.8% N=51 NP EOB AT 60'

DRILLING CONTRACTOR	PATRICK DRILLING	REMARKS	WATER LEVEL (ft.)
DRILLING METHOD	3 1/4" ID HSA		4.0
DRILLING EQUIPMENT	CME		4.0
DRILLING STARTED	7/5/01 ENDED 7/5/01		N.A.

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
0.0	1.0	1.0	2.0					
2.0	3.0	2.0	3.0		GRAY SILT & GRAVEL GRAVEL FILL	SS-2 1.0-2.5 8" R	7 6 3	w=2.3%
4.0	5.0	4.0	5.0		BROWN SILTY CLAY LOAM, LITTLE FINE SAND STIFF MOIST	SS-3 3.5-5.0 8" R	4 3 4	w=15.2%
6.0	7.0	6.0	7.0		GRAY BROWN SILTY CLAY SOME FINE - COARSE SAND MEDIUM STIFF, MOIST	SS-4 6.0-7.5 8" R	4 2 4	
8.0	9.0	8.0	9.0		BROWN SILTY CLAY, MED STIFF MOIST, SOME FINE SAND	SS-5 8.5-10.0 16" R	2 3 4	QU=72 B w=19.2%
11.0	12.0	11.0	12.0		DARK GRAY-BROWN SILTY CLAY, MOIST VERY SOFT	SS-6 11.0-12.5 18" R	1 1 1	SAMPLE BROKE APART w=25%
13.0	14.0	13.0	14.0		GRAY, BROWN, SILTY CLAY MEDIUM, STIFF SL. MOIST LITTLE FINE SAND	SS-7 13.5-15.0 18" R	1 3 5	QU=104 B
16.0	17.0	16.0	17.0			SS-8 16.0-17.5 18" R	2 3 5	QU=160 B w=22.2%
19.0	20.0	19.0	20.0			SS-9 18.5-20.0 18" R	1 3 5	QU=145 B w=10.7%

DRILLING CONTRACTOR	PATRICK DRILLING	REMARKS	WATER LEVEL (ft.)
DRILLING METHOD	HSA		4.0
DRILLING EQUIPMENT	CME		4.0
DRILLING STARTED	7/5/01 ENDED 7/5/01		N.A.

**NOTE:**

1. To convert from kPa to psi:  
1 kPa = 0.14504 psi

**BORING LOGS 4  
STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED -	REVISIONS						
	CHECKED - AMD,	NAME	DATE					
	DRAWN -							
	CHECKED - AMD,							
DATE - 03/25/2011								

SHEET NO. 229	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	553
239 SHEETS		CONTRACT NO. 60999			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

4/28/2011 1:47:42 PM



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
0.0	0.0	1.0	1.0					
2.0	2.0	3.0	3.0	BROWN LOAM, MED. DENSE, SL. MOIST	SS-2 1.0-2.5 14" R	8	w=6.7%	
3.0	3.0	4.0	4.0			6		
4.0	4.0	5.0	5.0		SS-3 3.5-5.0 14" R	5	w=17.8%	
5.0	5.0	6.0	6.0			3		
6.0	6.0	7.0	7.0	NO RECOVERY	SS-4 6.0-7.5 14" R	3		
7.0	7.0	8.0	8.0			2		
8.0	8.0	9.0	9.0		SS-5 8.5-10.0 12" R	0	w=22.3%	
9.0	9.0	10.0	10.0			1		
10.0	10.0	11.0	11.0		SS-6 11.0-12.5 8" R	1	w=20.1%	
11.0	11.0	12.0	12.0			1		
12.0	12.0	13.0	13.0		SS-7 13.5-15.0 6" R	1	w=20.0%	
13.0	13.0	14.0	14.0			1		
14.0	14.0	15.0	15.0		SS-8 16.0-17.5 6" R	1	w=22.0%	
15.0	15.0	16.0	16.0			1		
16.0	16.0	17.0	17.0		SS-9 18.5-20.0 14" R	1	w=19.0%	
17.0	17.0	18.0	18.0			1		
18.0	18.0	19.0	19.0			3		
19.0	19.0	20.0	20.0			3		

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
20.0	20.0	21.0	21.0					
21.0	21.0	22.0	22.0			4		
22.0	22.0	23.0	23.0			3		
23.0	23.0	24.0	24.0		SS-11 23.5-25.0 3" R	4		
24.0	24.0	25.0	25.0			5		
25.0	25.0	26.0	26.0		SS-12 26.0-27.5 12" R	7	N=12 NP w=19.6%	
26.0	26.0	27.0	27.0			2		
27.0	27.0	28.0	28.0		SS-13 28.5-30.0 12" R	2	N=6 NP w=19.6%	
28.0	28.0	29.0	29.0			4		
29.0	29.0	30.0	30.0		SS-14 33.5-35.0 18" R	2	QU=145 B w=24.1%	
30.0	30.0	31.0	31.0			3		
31.0	31.0	32.0	32.0			4		
32.0	32.0	33.0	33.0			2		
33.0	33.0	34.0	34.0			3		
34.0	34.0	35.0	35.0			4		
35.0	35.0	36.0	36.0			2		
36.0	36.0	37.0	37.0			3		
37.0	37.0	38.0	38.0			4		
38.0	38.0	39.0	39.0			2		
39.0	39.0	40.0	40.0			3		
40.0	40.0					11		
						11		
						24		

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
40.0	40.0	41.0	41.0					
41.0	41.0	42.0	42.0					
42.0	42.0	43.0	43.0					
43.0	43.0	44.0	44.0					
44.0	44.0	45.0	45.0					
45.0	45.0	46.0	46.0					
46.0	46.0	47.0	47.0					
47.0	47.0	48.0	48.0					
48.0	48.0	49.0	49.0					
49.0	49.0	50.0	50.0					
50.0	50.0	51.0	51.0					
51.0	51.0	52.0	52.0					
52.0	52.0	53.0	53.0					
53.0	53.0	54.0	54.0					
54.0	54.0	55.0	55.0					
55.0	55.0	56.0	56.0					
56.0	56.0	57.0	57.0					
57.0	57.0	58.0	58.0					
58.0	58.0	59.0	59.0					
59.0	59.0	60.0	60.0					
60.0	60.0							

**NOTE:**

1. To convert from kPa to psi:  
1 kPa = 0.14504 psi

**BORING LOGS 6**  
**STRUCTURE NO. 016-0724**

TYLIN INTERNATIONAL	DESIGNED -	REVISIONS		SHEET NO. 231	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	555	
	DRAWN -				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

1:17:45 PM

pi:\01345\structure\02 Central Ave. 016-0724\155c2br7.dgn

4/28/2011

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
60.0	61.0	62.0	63.0					
64.0	65.0	66.0	67.0		GRAY SILT, SOME FINE-MEDIUM SAND, VERY DENSE, SL. MOIST	SS-20 63.5-65.0 16" R	22 23 29	N=52 NP w=11.2%
68.0	69.0	70.0	71.0			SS-21 68.5-70.0 " R	38 72 73	N=145 NP EOB AT 70' w=8.9%
72.0	73.0	74.0	75.0					
76.0	77.0	78.0	79.0					
80.0								

DRILLING CONTRACTOR	PATRICK DRILLING	REMARKS		WATER LEVEL (ft.)	
DRILLING METHOD	3 1/4" ID HSA			▽	DRY
DRILLING EQUIPMENT	CME			▽	DRY
DRILLING STARTED	7/5/01 ENDED 7/5/01			▽	N.A.

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
0.0	1.0	2.0	3.0					
4.0	5.0	6.0	7.0					
8.0	9.0	10.0	11.0					
12.0	13.0	14.0	15.0					
16.0	17.0	18.0	19.0					
20.0								

DRILLING CONTRACTOR	PATRICK DRILLING	REMARKS		WATER LEVEL (ft.)	
DRILLING METHOD	HSA			▽	DRY
DRILLING EQUIPMENT	CME			▽	DRY
DRILLING STARTED	6/27/01 ENDED 6/27/01			▽	N.A.

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
20.0	21.0	22.0	23.0					
24.0	25.0	26.0	27.0					
28.0	29.0	30.0	31.0					
32.0	33.0	34.0	35.0					
36.0	37.0	38.0	39.0					
40.0								

DRILLING CONTRACTOR	PATRICK DRILLING	REMARKS		WATER LEVEL (ft.)	
DRILLING METHOD	3 1/4" ID HSA			▽	21.0
DRILLING EQUIPMENT	CME			▽	21.0
DRILLING STARTED	6/27/01 ENDED 6/27/01			▽	N.A.

**NOTE:**

1. To convert from kPa to psi:  
1 kPa = 0.14504 psi

**BORING LOGS 7  
STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED -	REVISIONS						
	CHECKED - AMD,	NAME	DATE					
	DRAWN -							
	CHECKED - AMD,							
DATE - 03/25/2011								

SHEET NO. 232	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	556
239 SHEETS		CONTRACT NO. 60999			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

4/28/2011 11:17:46 PM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
40.0	41.0	42.0	43.0					
		169.97 (557.49)			GRAY SILT, VERY DENSE MOIST	SS-16 43.5-45.0 18" R	21 23 30	N=53 NP w=17.4%
13.5	45.0							
	46.0							
	47.0							
	48.0							
	49.0					SS-17 48.5-50.0 18" R	10 13 20	N=33 NP
15.0	50.0							
	51.0							
	52.0	166.92 (547.49)			GRAY SILTY, CLAY LOAM HARD, MOIST			
	53.0							
	54.0					SS-18 53.5-55.0 18" R	11 13 21	N=34 QU=482 B w=20.8%
16.5	55.0							
	56.0							
	57.0	165.39 (542.49)						
	58.0							
	59.0				GRAY SILT, SOME FINE - COARSE SAND, DENSE, SL. MOIST	SS-19 58.5-60.0 18" R	14 20 21	N=41 NP w=12.1%
18.0	60.0							
DRILLING CONTRACTOR		PATRICK DRILLING		REMARKS		WATER LEVEL (ft.)		
DRILLING METHOD		3 1/4" ID HSA				21.0		
DRILLING EQUIPMENT		CME				21.0		
DRILLING STARTED		6/27/01 ENDED 6/27/01				N.A.		

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
60.0	61.0	62.0	63.0					
					GRAY SILT, SOME FINE-COARSE SAND, DENSE, SL. MOIST			
19.5	64.0				ROCK IN BARREL HIT BEDROCK 162.95 (534.49)	SS-20 63.5-65.0 " R	42 105	N=105 EOB AT 65'
	65.0							
	66.0							
	67.0							
	68.0							
	69.0							
21.0	70.0							
	71.0							
	72.0							
	73.0							
	74.0							
	75.0							
	76.0							
	77.0							
	78.0							
	79.0							
	80.0							
DRILLING CONTRACTOR		PATRICK DRILLING		REMARKS		WATER LEVEL (ft.)		
DRILLING METHOD		3 1/4" ID HSA				21.0		
DRILLING EQUIPMENT		CME				21.0		
DRILLING STARTED		6/27/01 ENDED 6/27/01				N.A.		

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
0.0	1.0	2.0	3.0					
					ASPHALT, GRAVEL, BROWN SILT 182.38 (598.19)	AU-1 0-1.0		w=1.9%
	1.0						9	
	2.0				BROWN SILTY CLAY LOAM, MOIST, MED STIFF LITTLE FINE SAND	SS-2 1.0-2.5 12" R	4	w=16.0%
	3.0						4	
	4.0						4	
	5.0						2	w=19.7%
1.5	5.0						3	
	6.0				BROWN SILT, SOME FINE - COARSE, SAND LOOSE, SL. MOIST LITTLE FINE SAND	SS-4 6.0-7.5 6" R	4	w=11.1%
	7.0						2	
	8.0						3	
	9.0						2	
	10.0				BROWN LOAM, WET, LITTLE FINE SAND	SS-5 8.5-10.0 12" R	2	w=20.8%
3.0	10.0						1	
	11.0						2	
	12.0				BROWN SILTY CLAY MEDIUM STIFF, SLIGHT MOIST TRACE FINE SAND	SS-6 11.0-12.5 14" R	3	QU=193 B w=22.9%
	13.0						5	
	14.0						1	
	15.0						4	QU=153 B w=21.8%
4.5	15.0						6	
	16.0						2	
	17.0						3	QU=169 B w=21.5%
	18.0						5	
	19.0						2	
	20.0						3	QU=129 B w=21.2%
6.0	20.0						4	
DRILLING CONTRACTOR		PATRICK DRILLING		REMARKS		WATER LEVEL (ft.)		
DRILLING METHOD		HSA				21.0		
DRILLING EQUIPMENT		CME				21.0		
DRILLING STARTED		7/2/01 ENDED 7/2/01				N.A.		

**NOTE:**

1. To convert from kPa to psi:  
1 kPa = 0.14504 psi

**BORING LOGS 8**  
**STRUCTURE NO. 016-0724**

TYLIN INTERNATIONAL	DESIGNED -	REVISIONS		SHEET NO. 233	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	557
	DRAWN -				239 SHEETS		CONTRACT NO. 60999		
	CHECKED - AMD,				FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	
	DATE - 03/25/2011								

4/28/2011 11:17:48 PM p:\01345\structure\02 Central Ave. 016-0724\15562br8-9.dwg

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
20.0	21.0	22.0	23.0					
24.0	25.0	26.0	27.0	9.0		SS-11 23.5-25.0 18" R	2 5 7	QU=305 B w=20.7 %
28.0	29.0	30.0	31.0	10.5		SS-12 26.0-27.5 18" R	2 4 5	QU=161 B w=20.6 %
32.0	33.0	34.0	35.0			SS-13 28.5-30.0 18" R	3 4 6	QU=201 B w=24.4 %
36.0	37.0	38.0	39.0			SS-14 33.5-35.0 18" R	2 3 5	QU=161 B w=26.3 %
40.0					GRAY SILT, MOIST, DENSE	SS-15 38.5-40.0 18" R	20 22 27	N=49 NP w=12.1 %

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
40.0	41.0	42.0	43.0					
44.0	45.0	46.0	47.0	15.0		SS-17 48.5-50.0 18" R	10 15 16	QU=828 B w=14.8 %
48.0	49.0	50.0	51.0	16.5		SS-18 53.5-55.0 18" R	8 11 15	QU=450 B w=19.8 %
52.0	53.0	54.0	55.0			SS-19 58.5-60.0	20 25 31	w=11.7 % N=56 NP EOB AT 60'

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
0.0	1.0	2.0	3.0					
4.0	5.0	6.0	7.0	3.0	DARK GRAY SILTY CLAY LOAM, LITTLE FINE- COARSE SAND	SS-2 1.0-2.5 14" R	8 5 5	w=14.6 %
8.0	9.0	10.0	11.0	4.5	DARK GRAY SILTY CLAY, LITTLE FINE-COARSE SAND, STIFF, MOIST	SS-3 3.5-5.0 12" R	3 4 5	BRICK DEBRIS IN SAMPLE w=22.2 %
12.0	13.0	14.0	15.0			SS-4 6.0-7.5 10" R	3 2 3	N=5 NP w=17.9 %
16.0	17.0	18.0	19.0			SS-5 8.5-10.0 10" R	1 1 1	N=2 NP w=21.1 %
20.0						SS-6 11.0-12.5 12" R	1 2 3	QU=88 B w=17.1 %
24.0	25.0	26.0	27.0			SS-7 13.5-15.0 18" R	1 2 5	QU=241 B w=22.6 %
28.0	29.0	30.0	31.0			SS-8 16.0-17.5 18" R	1 3 4	QU=153 B w=22.0 %
32.0	33.0	34.0	35.0			SS-9 18.5-20.0 18" R	1 3 4	QU=153 B w=20.3 %

**NOTE:**

1. To convert from kPa to psi:  
1 kPa = 0.14504 psi

**BORING LOGS 9  
STRUCTURE NO. 016-0724**

TYLIN INTERNATIONAL	DESIGNED -	REVISIONS		SHEET NO. 234	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	558	
	DRAWN -				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

pi:\01345\structure\2 Central Ave. 016-0724\5502br9-10.dwg 4/28/2011 11:17:50 PM



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS		
20.0	21.0	21.0	22.0						GRAY SILTY CLAY MOIST MEDIUM STIFF	SS-10 21.0-22.5 18" R
23.0	24.0	23.5	25.0	SS-11 23.5-25.0 18" R	3 5	QU=177 B w=18.6%				
26.0	27.0	26.0	27.5				SS-12 26.0-27.5 18" R	3 6		
28.0	29.0	28.5	30.0	SS-13 28.5-30.0 18" R	3 5	QU=185 B w=23.9%				
31.0	32.0	33.5	35.0				SS-14 33.5-35.0 18" R	3 5		QU=217 B w=14.8%
36.0	37.0	37.0	38.0	SS-15 38.5-40.0 18" R	10 15	N=45 NP w=3.3%				
39.0	40.0									
DRILLING CONTRACTOR PATRICK DRILLING DRILLING METHOD 3 1/2" ID HSA DRILLING EQUIPMENT CME DRILLING STARTED 7/2/01 ENDED 7/2/01					REMARKS		WATER LEVEL (ft.)			

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS		
40.0	41.0	42.0	43.0						GRAY SANDY LOAM VERY DENSE, DRY	SS-16 43.5-45.0 18" R
44.0	45.0	46.0	47.0	SS-17 48.5-50.0 18" R	20 24	N=48 NP w=9.8%				
48.0	49.0	50.0	51.0				SS-18 53.5-55.0 18" R	14 17		
52.0	53.0	54.0	55.0	SS-19 58.5-60.0	15 37	N=77 NP w=18.1% EDH AT 60'				
56.0	57.0	58.0	59.0							
60.0										
DRILLING CONTRACTOR PATRICK DRILLING DRILLING METHOD 3 1/2" ID HSA DRILLING EQUIPMENT CME DRILLING STARTED 7/2/01 ENDED 7/2/01					REMARKS		WATER LEVEL (ft.)			

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS	
0.0	1.0	1.0	2.0						MEDIUM GRAVEL BROWN SILTY CLAY LOAM TRACE FINE SAND MEDIUM STIFF MOIST NO RECOVERY SANDY CLAY LOAM WET GRAY BROWN SILTY CLAY, MOIST
2.0	3.0	3.0	4.0	SS-2 1.0-2.5 6" R	4 4	w=20.9%			
4.0	5.0	5.0	6.0				SS-3 3.5-5.0 R	4 4	
6.0	7.0	7.0	8.0	SS-4 6.0-7.5 12" R	1 1	w=20.9%			
8.0	9.0	9.0	10.0				SS-5 8.5-10.0 10" R	1 1	
11.0	12.0	12.0	13.0	SS-6 11.0-12.5 18" R	2 3	QU=224 B w=22.0%			
14.0	15.0	15.0	16.0				SS-7 13.5-15.0 18" R	3 5	
17.0	18.0	18.0	19.0	SS-8 16.0-17.5 18" R	1 3	QU=161 B w=21.0%			
19.0	20.0	20.0					SS-9 18.5-20.0 18" R	3 4	
DRILLING CONTRACTOR PATRICK DRILLING DRILLING METHOD HSA DRILLING EQUIPMENT CME DRILLING STARTED 6/26/01 ENDED 6/26/01					REMARKS		WATER LEVEL (ft.)		

**NOTE:**

1. To convert from kPa to psi:  
1 kPa = 0.14504 psi

**BORING LOGS 10  
STRUCTURE NO. 016-0724**

TYLIN INTERNATIONAL	DESIGNED -	REVISIONS		SHEET NO. 235	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	559	
	DRAWN -				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

4/28/2011 11:17:51 PM pi:\01345\structure\016-0724\55c2br10-11.dwg

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
20.0	21.0	21.0	22.0					
22.0	23.0	23.0	24.0					
24.0	25.0	25.0	26.0					
26.0	27.0	27.0	28.0	SS-11 23.5-25.0 18" R	3 3	QU=201 B w=24.3 %		
28.0	29.0	29.0	30.0					
30.0	31.0	31.0	32.0	SS-12 26.0-27.5 18" R	2 3	QU=153 B w=25.6 %		
32.0	33.0	33.0	34.0					
34.0	35.0	35.0	36.0	SS-13 28.5-30.0 18" R	4 4	QU=129 B w=23.3 %		
36.0	37.0	37.0	38.0					
38.0	39.0	39.0	40.0	SS-14 33.5-35.0 " R	2 4	QU=161 B w=15.9 %		
40.0								
171.00 (560.90)					SS-15 38.5-40.0 " R	5 7	N=14 NP w=13.5 %	
GRAY SILTY LOAM MOIST MEDIUM DENSE								

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
40.0	41.0	41.0	42.0					
42.0	43.0	43.0	44.0					
44.0	45.0	45.0	46.0					
46.0	47.0	47.0	48.0	SS-17 48.5-50.0 " R	9 10	N=26 QU=571 B w=14.9 %		
48.0	49.0	49.0	50.0					
50.0	51.0	51.0	52.0	SS-18 53.5-55.0 " R	6 8	QU=474 B w=18.1 %		
52.0	53.0	53.0	54.0					
54.0	55.0	55.0	56.0	SS-19 58.5-60.0 " R	8 16	w=20.8 % N=38 NP		
56.0	57.0	57.0	58.0					
58.0	59.0	59.0	60.0	GRAY SILTY LOAM, DENSE, MOIST TRACE FINE SAND	16 22			
60.0								
169.7 (556.65)					SS-17 48.5-50.0 " R	9 10	N=26 QU=571 B w=14.9 %	
168.11 (551.40)								
166.58 (546.40)					SS-18 53.5-55.0 " R	6 8	QU=474 B w=18.1 %	
165.06 (541.40)								
165.06 (541.40)					SS-19 58.5-60.0 " R	8 16	w=20.8 % N=38 NP	
GRAY SILTY CLAY, TRACE FINE SAND SLIGHT MOIST, VERY STIFF								
165.06 (541.40)					SS-19 58.5-60.0 " R	8 16	w=20.8 % N=38 NP	
GRAY SILT DENSE WET, SOME FINE GRAVEL								

DEPTH (m)		DEPTH (FT)		STRATA	SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
60.0	61.0	61.0	62.0					
62.0	63.0	63.0	64.0					
64.0	65.0	65.0	66.0					
66.0	67.0	67.0	68.0	SS-21 68.5-70.0 " R				
68.0	69.0	69.0	70.0					
70.0	71.0	71.0	72.0	SS-21 68.5-70.0 " R				
72.0	73.0	73.0	74.0					
74.0	75.0	75.0	76.0	SS-21 68.5-70.0 " R				
76.0	77.0	77.0	78.0					
78.0	79.0	79.0	80.0	SS-21 68.5-70.0 " R				
80.0								
162.62 (533.40)					SS-21 68.5-70.0 " R			
GRAY SILT VERY DENSE SLIGHT MOIST								

**NOTE:**

1. To convert from kPa to psi:  
1 kPa = 0.14504 psi

**BORING LOGS II  
STRUCTURE NO. 016-0724**

TYLIN INTERNATIONAL	DESIGNED -	REVISIONS		SHEET NO. 236	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.BR	COOK	741	560	
	DRAWN -				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011			239 SHEETS						

4/28/2011 11:17:53 PM p:\01345\structure\016-0724\5602br11-12.dgn



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
STRA TA							
	60.0			GRAY SILT. SL. MOIST. VERY DENSE	SS-20 63.5-65.0 14" R	20 100	N=100 NP w=10%
	61.0						
	62.0						
	63.0						
	64.0						
19.5	65.0						
	66.0						
	67.0						
	68.0						
	69.0						
21.0	70.0			SS-21 68.5-70.0 " R	43 100	N=100 NP w=7.9%	
	71.0			HARD CLAY UNTIL CORE BARREL WENT TO 81' BEFORE HITTING ROCK	SS-22 73.5-75.0 " R	42 100	N=100 NP w=14.2%
22.5	72.0						
	73.0						
	74.0						
	75.0						
	76.0						
	77.0						
	78.0						
	79.0						
24.0	80.0						

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
STRA TA							
	80.0			TOP OF BEDROCK AT 81'			
	81.0			157.75 (517.44)			
	82.0			WHITE-LIGHT GRAY LIMESTONE-DOLMITE, FINE GRAINED FREQUENT HORIZONTAL FRACTURE VERTICAL FRACTURE@ 83.5'-84.0'	NX-24 81.0-86.0 60" R		REC=100% ROD=21%
	83.0						
	84.0						
25.5	85.0			156.23 (512.44)			
	86.0			END OF BORING AT 86'			
	87.0						
	88.0						
	89.0						
27.0	90.0						
	91.0						
	92.0						
	93.0						
	94.0						
	95.0						
	96.0						
	97.0						
	98.0						
	99.0						
	100.0						

DEPTH (m)		DEPTH (FT)		SOIL / ROCK DESCRIPTION	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS
STRA TA							
	0.0			BROWN SILTY LOAM	AU-1 0-1.0		w=17.3 %
	1.0			BROWN SILTY CLAY LOAM STIFF, TRACE FINE SAND	SS-2 1.0-2.5 14" R	6 5 5	w=19.2 %
	2.0						
	3.0			181.73 (596.72)			
	4.0			BROWN CLAY LOAM MEDIUM STIFF MOIST	SS-3 3.5-5.0 18" R	4 4 4	w=19.3 %
1.5	5.0			181.16 (594.22)			
	6.0			BROWN SILTY CLAY, MOIST MEDIUM STIFF, LITTLE FINE SAND	SS-4 6.0-7.5 12" R	2 2 4	QU=161 B w=21.4 %
	7.0						
	8.0						
	9.0				SS-5 8.5-10.0 12" R	1 2 2	QU=161 B w=20.9 %
3.0	10.0						
	11.0			GRAY-BROWN SILTY CLAY LOAM MEDIUM STIFF, SL MOIST, LITTLE FINE SAND	SS-6 11.0-12.5 18" R	4 6 8	QU=402 B w=19.2 %
	12.0						
	13.0			178.88 (586.72)			
	14.0			GRAY-BROWN SILTY CLAY MOIST, LITTLE FINE SAND STIFF	SS-7 13.5-15.0 18" R	3 4 6	QU=145 B w=19.0 %
4.5	15.0						
	16.0						
	17.0				SS-8 16.0-17.5 18" R	3 4 5	QU=145 B w=17.2 %
	18.0						
	19.0				SS-9 18.5-20.0 18" R	2 3 3	QU=201 B w=19.1 %
6.0	20.0						

**NOTE:**

1. To convert from kPa to psi:  
1 kPa = 0.14504 psi

**BORING LOGS 13**  
**STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED -	REVISIONS		SHEET NO. 238	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.				
	CHECKED - AMD,	NAME	DATE							741	562		
	DRAWN -												
	CHECKED - AMD,											CONTRACT NO. 60999	
	DATE - 03/25/2011												
			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT										

4/28/2011 1:29:17 PM p:\01345\structure\02\_Central\_Ave\_016-0724\5562br12-sbl.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

<b>EIDI</b> ENVIRONMENTAL DESIGN INTERNATIONAL Inc.		BORING NUMBER SB-1	SHEET 2 OF 2			
LOGGED BY JOE CORNS		CLIENT T.Y. Lin Assoc				
GROUND ELEVATION 182.82 m (599.72 ft)		PROJECT & NO. 1236.001				
STATION AND OFFSET (m) 5+252.1		LOCATION WESTBOUND I-55				
570.2 R (ft) 28+10.4						
1870.9 R						
DEPTH (m)	DEPTH (FT)	SOIL / ROCK	SAMPLE TYPE & NO. DEPTH (FT) RECOVERY (IN)	BLOW COUNTS	NOTES & TEST RESULTS	
20.0	21.0	BROWN SILTY CLAY, STIFF SLIGHTLY MOIST, LITTLE FINE SAND	SS-10 21.0-22.5 18" R	3 6 7	QU=201 B w=34.1%	
22.0	23.0		SS-11 23.5-25.0 18" R	3 5 6	QU=225 B w=19.1	
24.0	25.0		SS-12 26.0-27.5 18" R	3 4 7	QU=241 B w=19.1%	
26.0	27.0		SS-13 28.5-30.0 18" R	3 4 7	QU=273 EOB AT 30' w=19.9%	
28.0	29.0					
29.0	30.0		173.69 (569.72)			
30.0	31.0					
31.0	32.0					
32.0	33.0					
33.0	34.0					
34.0	35.0					
35.0	36.0					
36.0	37.0					
37.0	38.0					
38.0	39.0					
39.0	40.0					
DRILLING CONTRACTOR PATRICK DRILLING		REMARKS	WATER LEVEL (ft.)			
DRILLING METHOD 3 1/2" ID HSA			∇ DRY			
DRILLING EQUIPMENT CME			∇ DRY			
DRILLING STARTED 7/2/01 ENDED 7/2/01			∇ N.A.			

**NOTE:**

1. To convert from kPa to psi:  
1 kPa = 0.14504 psi

**BORING LOGS 14**  
**STRUCTURE NO. 016-0724**

<b>TYLIN INTERNATIONAL</b>	DESIGNED -	REVISIONS		SHEET NO. 239	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	563	
	DRAWN -				239 SHEETS					
	CHECKED - AMD,				CONTRACT NO. 60999					
	DATE - 03/25/2011				FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT					

4/28/2011 1:29:19 PM p:\01345\structure\2 Central Ave. 016-0724\15562brsb1.dwg

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

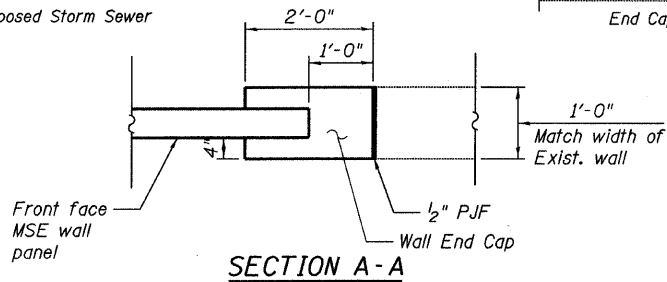
LEGEND

- Boring Location
- Removal of Existing Sub-Structures
- Proposed Catch Basin
- Proposed Manhole
- Existing Manhole
- Existing Catch Basin
- Existing Underdrain
- Existing Storm Sewer
- Proposed Underdrain
- Proposed Storm Sewer

BORING LOCATIONS

No.	Station	*Offset
RW-01	195+15.00	38.0 L
RW-02	195+74.00	38.0 L
RW-03	196+24.00	38.0 L
RW-04	196+76.00	38.5 L
RW-05	197+26.00	38.5 L

\* Offset from PGL Ramp 1



SECTION A-A

Notes:

- Wall stations and offsets are given to the front face of the precast concrete wall panels, and are measured from the NB Ramps Baseline.
- For sections through Ramp and Abutment, refer to Sheet 2.
- Slipforming of the parapets is not allowed.
- Contractor Designed Ground Improvement: Bearing Capacity = 4700 psf, Maximum Allowable Settlement = 0.4"
- For existing structure removal details see Sheet 335. Cost of removals is included with S.N. 016-0724
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60.

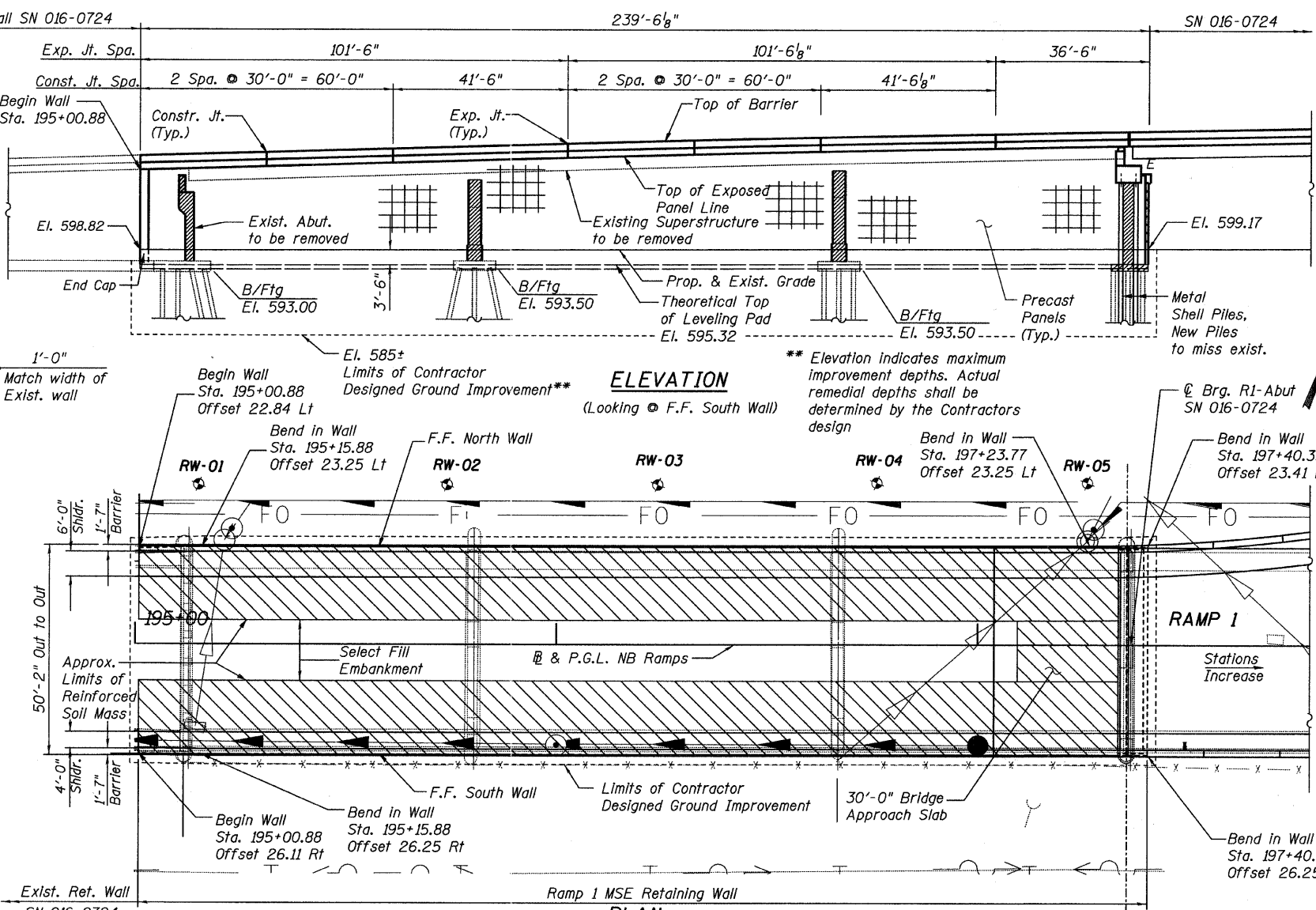


Signed *Anna M. Dukes*  
Anna M. Dukes, S.E. Il. Lic. No. 081-005598  
Expires 11-30-2012

Date **March 25, 2011**

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY

*Dr. Carl Perry*  
ENGINEER OF BRIDGES AND STRUCTURES



ELEVATION

(Looking @ F.F. South Wall)

PLAN

RAMP 1 PROFILE GRADE

SCOPE OF WORK

- Spans 1 to 3  
- Remove and replace the existing structure with Mechanically Stabilized Earth Retaining Walls.

TOTAL BILL OF MATERIALS

ITEM	UNIT	TOTAL
Structure Excavation	CU YD	1305
Concrete Structures	CU YD	2.9
Reinforcement Bars, Epoxy Coated	POUND	23,290
Mechanically Stabilized Earth Retaining Wall	SQ FT	11,796
Protective Coat	SQ YD	1661
Contractor Designed Ground Improvement	L SUM	0.25
Concrete Superstructure	CU YD	183.8

INDEX OF SHEETS

- General Plan And Elevation - Ramp 1 Retaining Wall
- Ramp 1 MSE Abutment Wall Sections
- Ramp 1 MSE Abutment Wall & End Cap Details
- Ramp 1 Moment Slab Plan & Elevation 1 of 2
- Ramp 1 Moment Slab Plan & Elevation 2 of 2
- Ramp 1 Moment Slab Sections & Bar List
- Ramp 1 Moment Slab Details
- Boring Logs 1
- Boring Logs 2
- Boring Logs 3

GENERAL PLAN AND ELEVATION  
RAMP 1 RETAINING WALL  
CENTRAL AVE. OVER I-55  
COOK COUNTY  
STATION 195+00.88 TO 197+40.39  
STRUCTURE NO. 016-1304

RAMP 1 WALL ELEVATION

Developed elevation along front face

TYLIN INTERNATIONAL

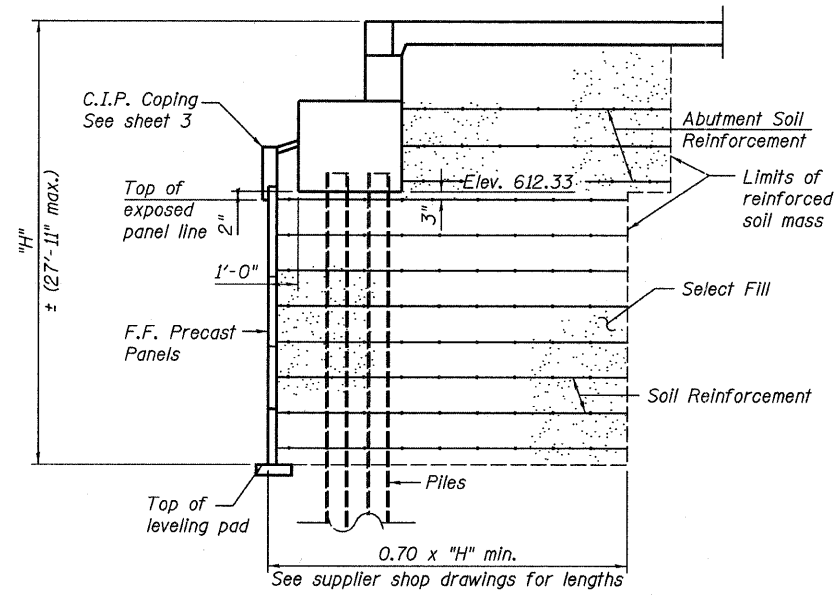
DESIGNED	CHKD	DATE
EKH	AMD,MMB	03/25/2011

REVISIONS	
NAME	DATE

SHEET NO. 1	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 564
10 SHEETS					
CONTRACT NO. 60999					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

5/18/14 PM 5/10/2011

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

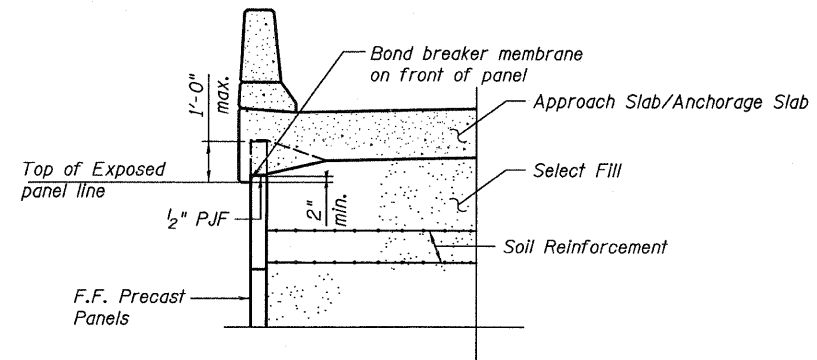


**SECTION THRU ABUTMENT**

**NOTES**

The MSE wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 1.83 kips/ft of abutment.

Piles shall be driven prior to placement of the reinforced select fill and coated with coal tar epoxy from the bottom of the select fill to 1" above the base of abutment. The cost of the coal tar epoxy shall be included with the cost of furnishing piles. Cost of furnishing and driving piles is included with S.N. 016-0724.



**SECTION THRU RETAINING WALLS**

**NOTES**

Offsets are to Front Face of precast panels.

For coping details see sheet 3.

For anchorage slab details, see sheets 6 & 7.

**RAMP 1 MSE ABUTMENT WALL SECTIONS  
STRUCTURE NO. 016-1304**

**TYLIN** INTERNATIONAL

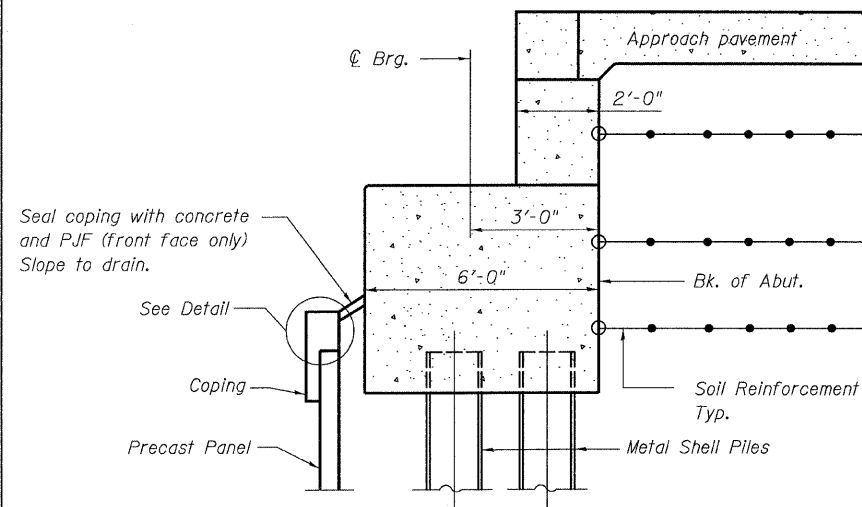
	DESIGNED - JMA	REVISIONS	
		NAME	DATE
CHECKED - AMD, MMB			
DRAWN - JMA			
CHECKED - AMD, MMB			
DATE - 03/25/2011			

SHEET NO. 2	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	565
10 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

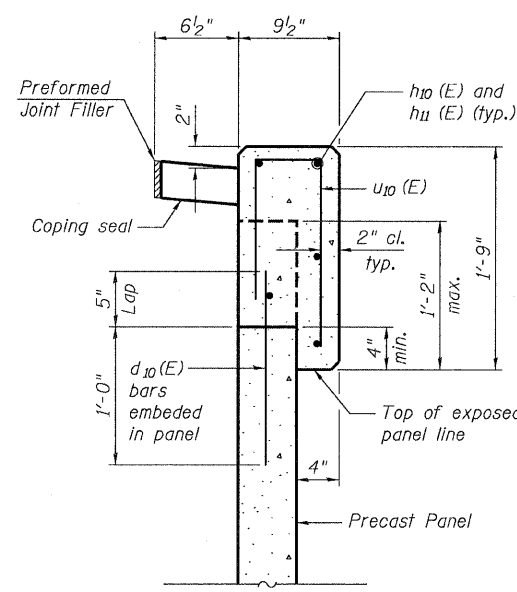
4/28/2011 1:29:22 PM p:\01345\structure\C2 Central Ave. 016-0724\55-1.mse.dgn



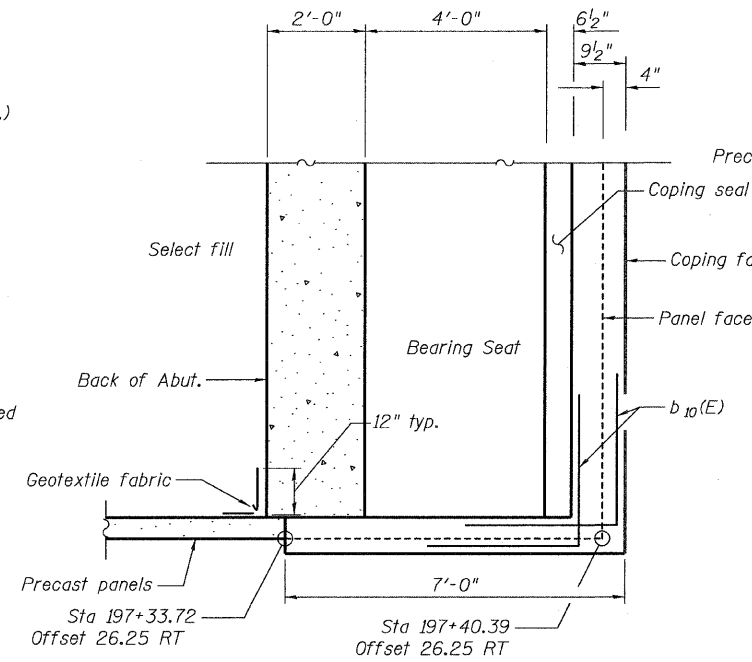
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



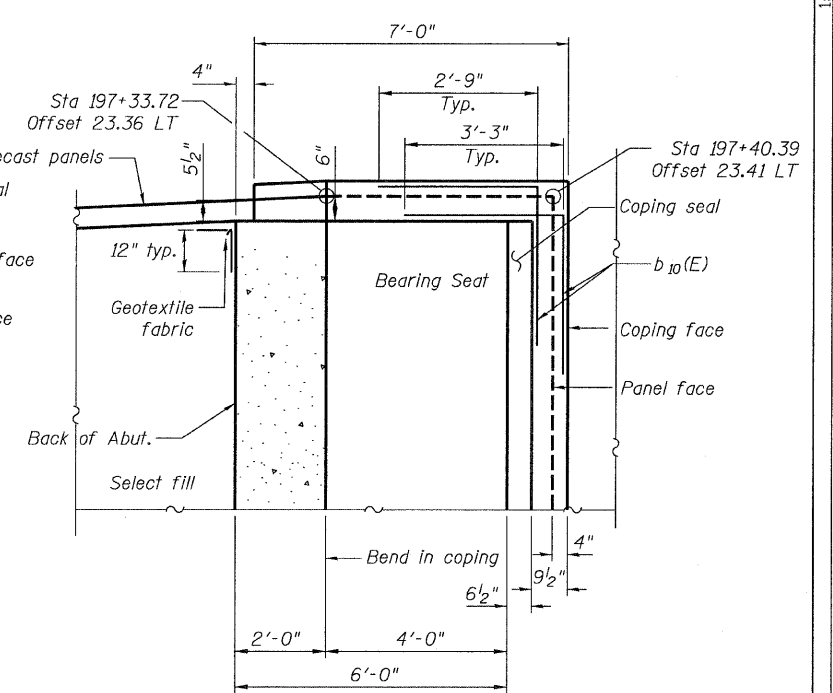
**SECTION THRU ABUTMENT**  
(Horiz. dim. @ Rt. L's)



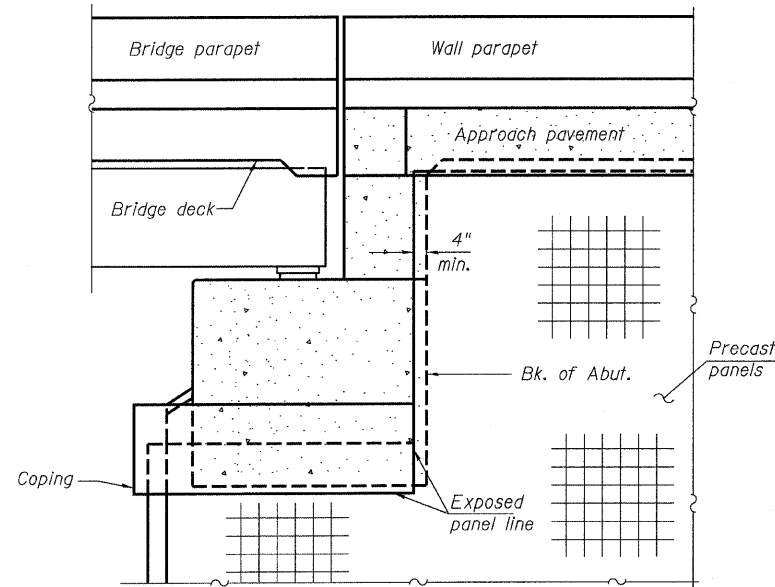
**DETAIL**



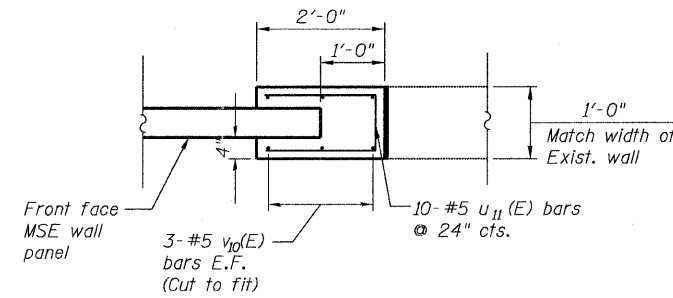
**PLAN AT ABUT. - S. END**



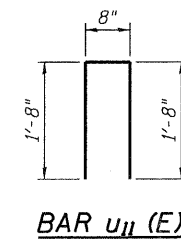
**PLAN AT ABUT. - N. END**



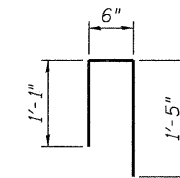
**END VIEW**



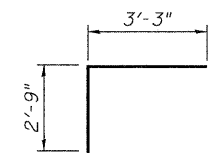
**SECTION A-A  
WALL END CAP DETAIL**



**BAR u11(E)**



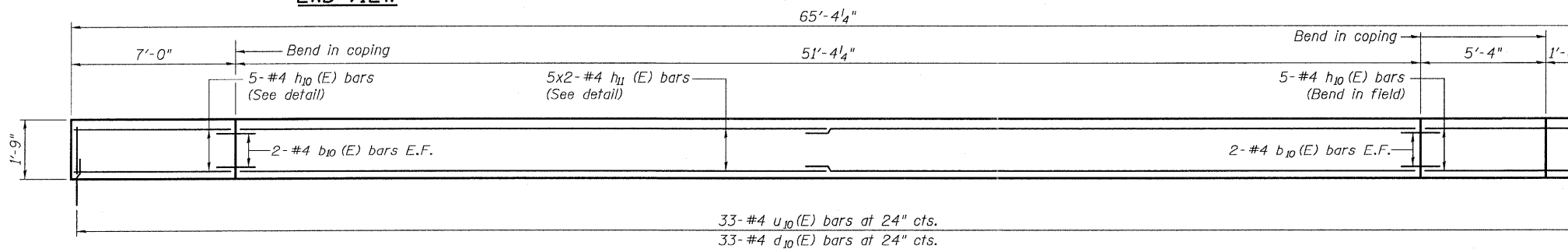
**BAR u10(E)**



**BAR b10(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d10(E)	33	#4	1'-5"	—
b10(E)	8	#4	6'-0"	⌋
h10(E)	10	#4	6'-8"	—
h11(E)	10	#4	26'-10"	—
u10(E)	33	#4	3'-0"	⌋
u11(E)	20	#5	4'-0"	⌋
v10(E)	12	#5	19'-0"	—
Concrete Structures		Cu. Yd.	2.9	
Reinforcement Bars, Epoxy Coated		Pound	640	



**COPING ELEVATION**

**MINIMUM BAR LAP**  
#4 bar - 2'-7"

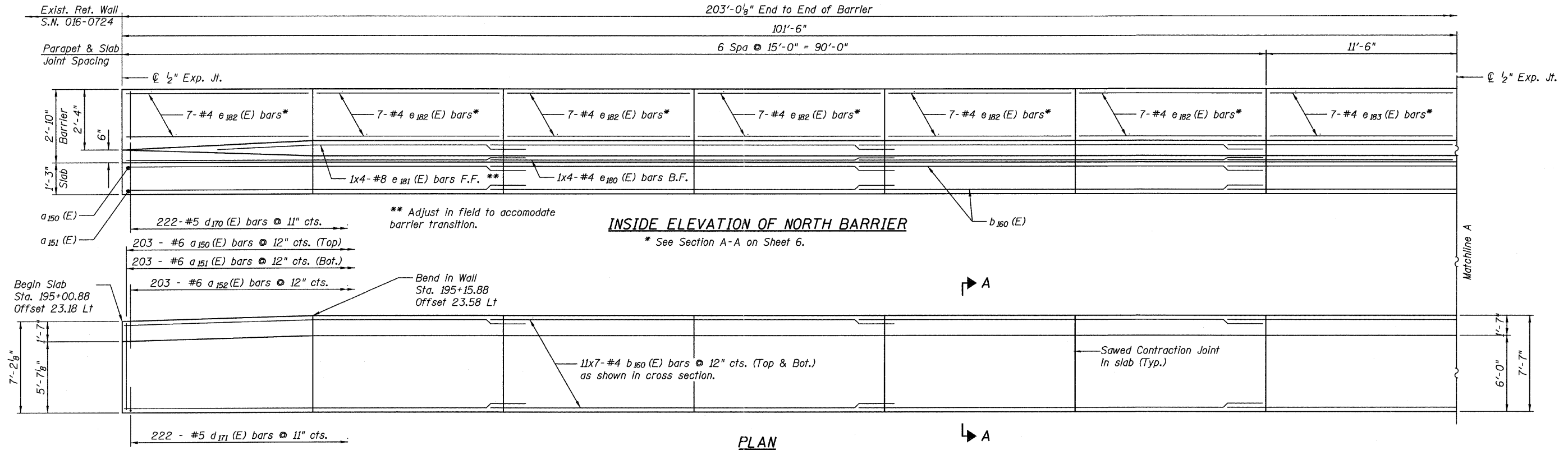
**RAMP 1 MSE ABUTMENT WALL  
& END CAP DETAILS  
STRUCTURE NO. 016-1304**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - JMA	REVISIONS		SHEET NO. 3	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, MMB	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	566	
	DRAWN - JMA				10 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD, MMB				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

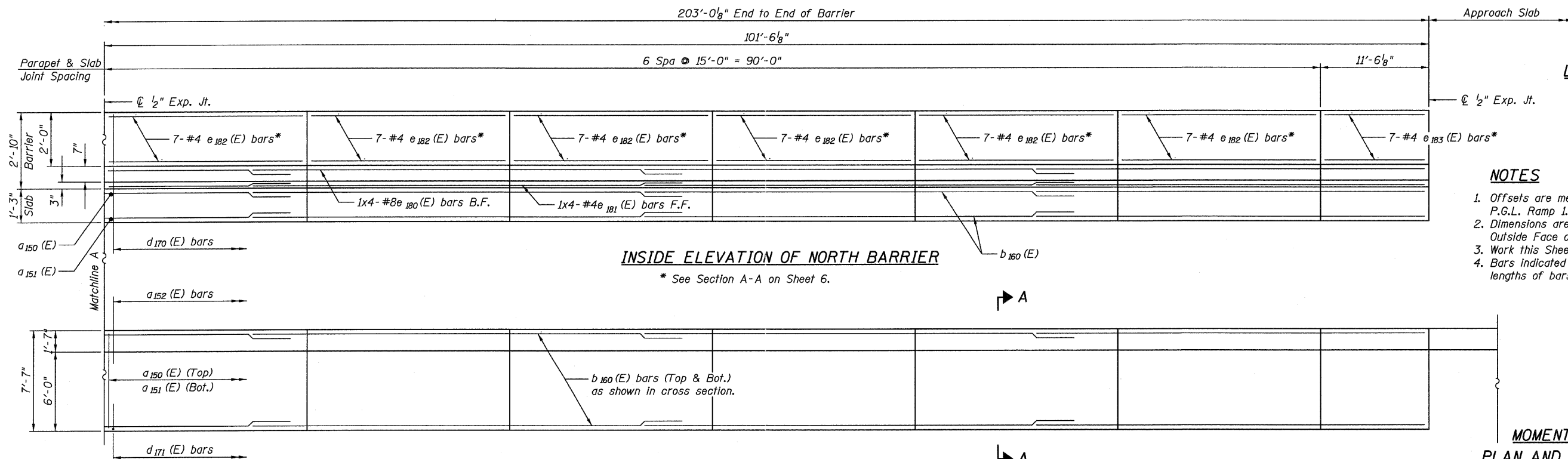
4/28/2011 1:29:23 PM p:\01345\structure\2 Central Ave. 016-0724\155-Insedt.dwg

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

203'-0 1/2" End to End of Barrier



PLAN



PLAN

LAP SLICES

Bar	Lap
#4	2'-7"
#8	6'-9"

NOTES

- Offsets are measured from @ & P.G.L. Ramp 1.
- Dimensions are measured along Outside Face of Slab/Barrier.
- Work this Sheet with Sheets 5 to 7.
- Bars indicated 20x3 indicates 20 lengths of bars with 3 lengths per line.

MOMENT SLAB RAMP 1  
PLAN AND ELEVATION 1 OF 2  
STRUCTURE NO. 016-1304

TYLIN INTERNATIONAL

DESIGNED - EKH	REVISIONS	
	NAME	DATE
CHECKED - AMD, MMB		
DRAWN - EKH		
CHECKED - AMD, MMB		
DATE - 03/25/2011		

SHEET NO. 4  
10 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	0711.2R & 1011.1BR	COOK	741	567
CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

p:\01345\structure\2 Central Ave. 016-0724\155-1nomslab1.dgn 4/28/2011 1:29:24 PM

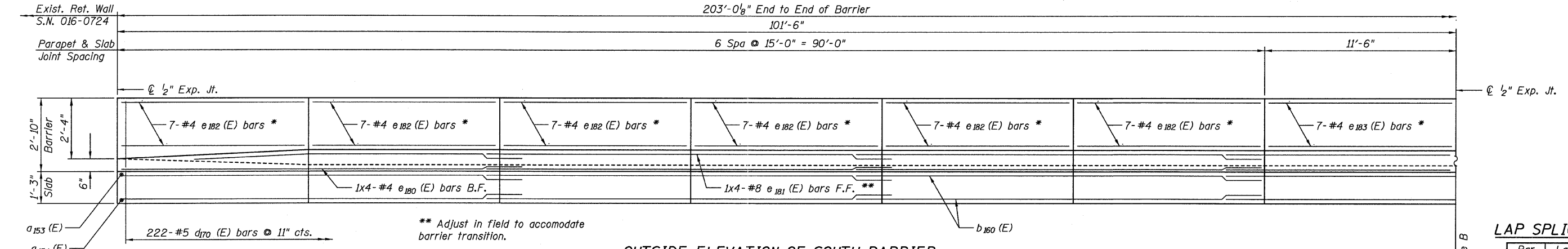
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

203'-0 1/8" End to End of Barrier

101'-6"

6 Spa @ 15'-0" = 90'-0"

11'-6"

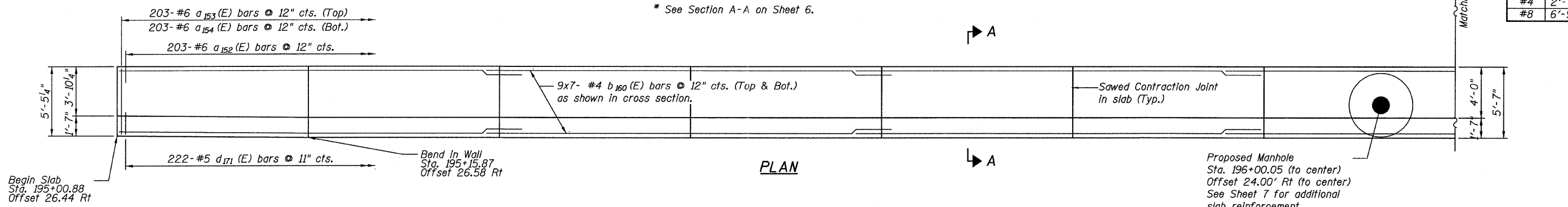


OUTSIDE ELEVATION OF SOUTH BARRIER

\* See Section A-A on Sheet 6.

LAP SPLICES

Bar	Lap
#4	2'-7"
#8	6'-9"

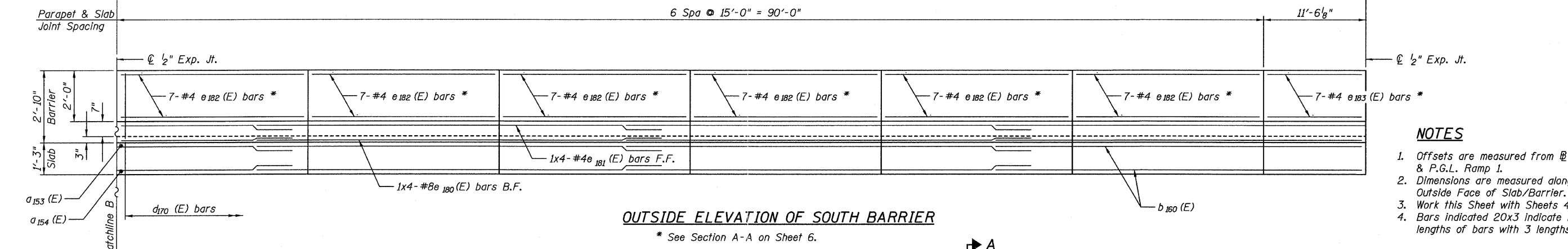


203'-0 1/8" End to End of Barrier

101'-6 1/8"

6 Spa @ 15'-0" = 90'-0"

11'-6 1/8"

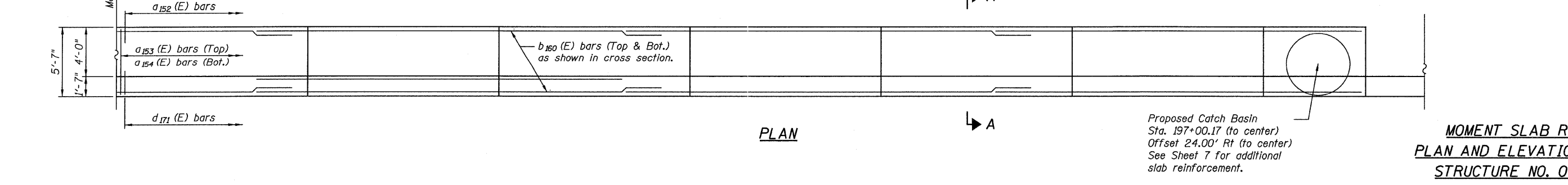


OUTSIDE ELEVATION OF SOUTH BARRIER

\* See Section A-A on Sheet 6.

NOTES

- Offsets are measured from @ & P.G.L. Ramp 1.
- Dimensions are measured along Outside Face of Slab/Barrier.
- Work this Sheet with Sheets 4 to 7.
- Bars indicated 20x3 indicate 20 lengths of bars with 3 lengths per line.



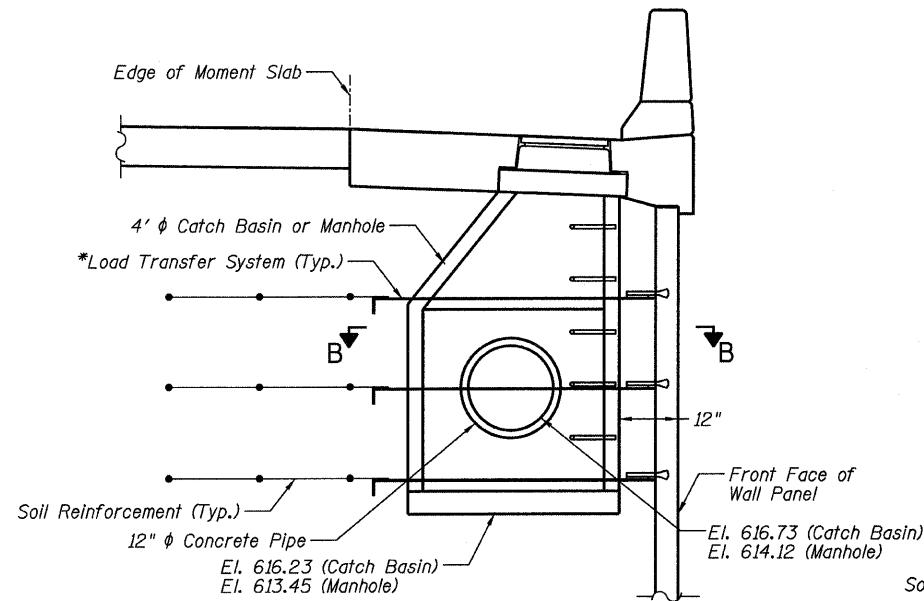
MOMENT SLAB RAMP 1  
PLAN AND ELEVATION 2 OF 2  
STRUCTURE NO. 016-1304

<p><b>TYLIN</b> INTERNATIONAL</p>	DESIGNED - EKH	REVISIONS		<p>SHEET NO. 5</p> <p>10 SHEETS</p>	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,MMB	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	568
	DRAWN - EKH								
	CHECKED - AMD,MMB					CONTRACT NO. 60999			
	DATE - 03/25/2011					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

4/28/2011 1:29:25 PM  
 p:\01345\structure\02 Central Ave. 016-0724\155-1moms\lab2.dgn

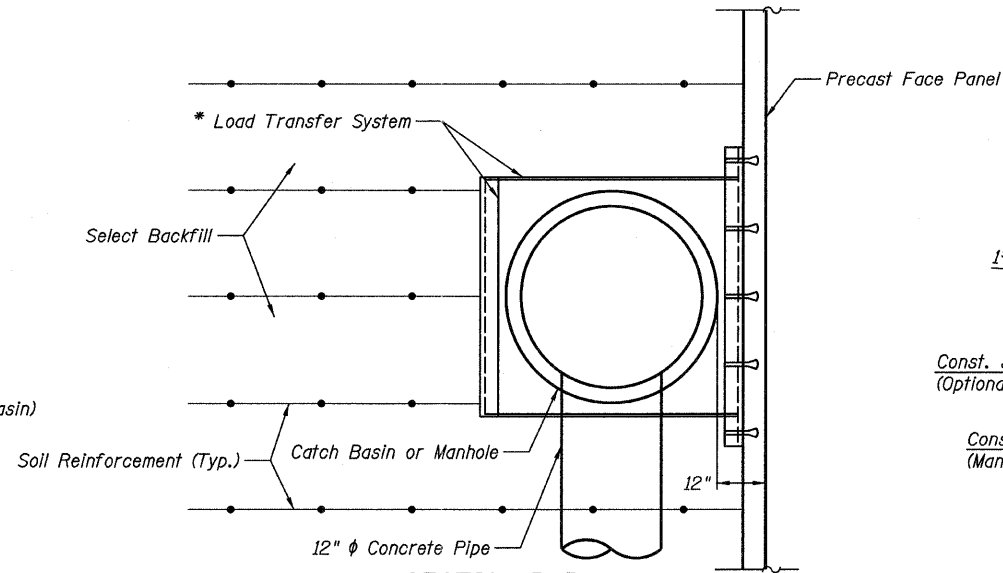


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

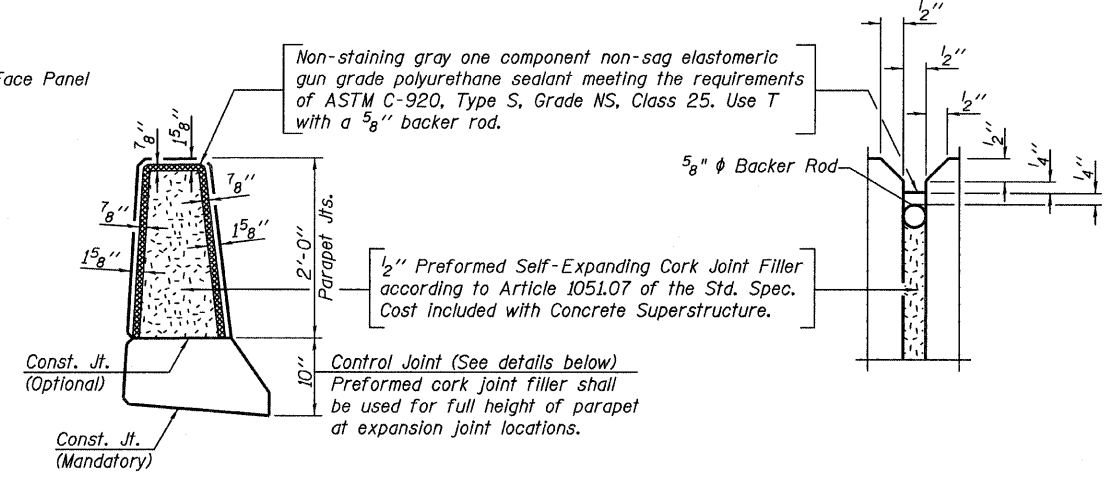


SECTION A-A

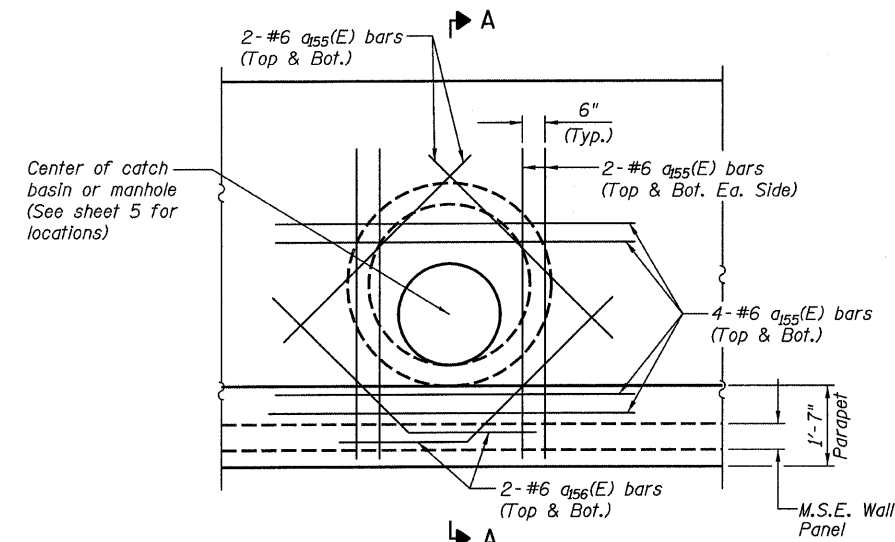
Note:  
\*M.S.E. supplier to design load transfer system to accommodate concrete pipe and catch basin/manhole.



SECTION B-B

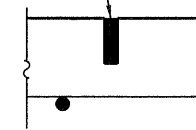


PARAPET JOINT DETAILS

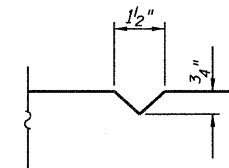


PLAN AT CATCH BASIN OR MANHOLE

1/4" wide x 1/2" deep sawed joint filled with hot poured sealant in accordance with Article 1050 of Standard Specifications.



SAWED CONTRACTION JOINT DETAIL - SLAB  
(Cost Included with Concrete Structures)



CONTROL JOINT DETAIL - PARAPET

RAMP 1 MOMENT SLAB  
DETAILS  
STRUCTURE NO. 016-1304

TYLIN INTERNATIONAL

DESIGNED - EKH	REVISIONS	
CHECKED - AMD, MMB	NAME	DATE
DRAWN - EKH		
CHECKED - AMD, MMB		
DATE - 03/25/2011		

SHEET NO. 7	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	570
10 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

4/28/2011 1:29:27 PM p:\01345\structure\2 Central Ave. 016-0724\155-inomslabtbl.dgn



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 1  
DATE 7/13/2010  
LOGGED BY RJ  
GSI JOB No. 10098

**Geo Services, Inc.**  
Geotechnical, Environmental, Civil Engineering  
806 Washington Court, Suite 204  
Naperville, Illinois 60563  
630-255-1234

**SOIL BORING LOG**

ROUTE F.A.I. RTE. 55 DESCRIPTION Central Avenue Over Interstate 55 Ramp Reconstruction  
SECTION 9(H, HB & SB)R-1 LOCATION SEC. 4 & 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township  
COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1304  
Station 195+01 to 197+40  
BORING NO. RW-03  
Station 196+24  
Offset 38.0' Left  
Ground Surface Elev. 598.4

Description	Elev.	D (ft)	B (6")	U (tsf)	M (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After _____ Hrs.	D (ft)	B (6")	U (tsf)	M (%)
6.0" ASPHALT, 8.0" CONCRETE, 3.0" CRUSHED STONE	597.0		4		108	n/a	n/a								
CLAY-brown & gray- very stiff (A-6) Fill	595.4		3	3.0B	18										
CLAY LOAM with Cinders- black-loose (Fill)	592.9		5		103										
SILTY CLAY-dark brown & gray- stiff (A-6) Wet	590.4		2	1.4B	28										
SILTY CLAY-gray-soft (A-6) Wet	585.4		2	1.0P	28										
CLAY-gray-stiff to very stiff (A-6)	563.4		4	1.5P	22										
CLAY-gray-stiff to very stiff (A-6)			2		105										
CLAY-gray-stiff to very stiff (A-6)			6		118										
CLAY-gray-stiff to very stiff (A-6)			15	2.0B	22										
CLAY-gray-stiff to very stiff (A-6)			5		107										
CLAY-gray-stiff to very stiff (A-6)			7												
CLAY-gray-stiff to very stiff (A-6)			9	2.4B	21										
CLAY-gray-stiff to very stiff (A-6)			3		106										
CLAY-gray-stiff to very stiff (A-6)			3												
CLAY-gray-stiff to very stiff (A-6)			20	1.6B	22										

End Of Boring @ -35.0  
Hollow Stem Augers To -10.0'  
Rotary Drilling To Completion  
CME Automatic Hammer

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

PAGE 1 of 1  
DATE 7/13/2010  
LOGGED BY RJ  
GSI JOB No. 10098

**Geo Services, Inc.**  
Geotechnical, Environmental, Civil Engineering  
806 Washington Court, Suite 204  
Naperville, Illinois 60563  
630-255-1234

**SOIL BORING LOG**

ROUTE F.A.I. RTE. 55 DESCRIPTION Central Avenue Over Interstate 55 Ramp Reconstruction  
SECTION 9(H, HB & SB)R-1 LOCATION SEC. 4 & 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township  
COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1304  
Station 195+01 to 197+40  
BORING NO. RW-04  
Station 196+76  
Offset 38.5' Left  
Ground Surface Elev. 598.6

Description	Elev.	D (ft)	B (6")	U (tsf)	M (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After _____ Hrs.	D (ft)	B (6")	U (tsf)	M (%)
6.0" ASPHALT, 8.0" CONCRETE, 3.0" CRUSHED STONE	597.2		6		96	n/a	n/a								
SILTY CLAY-brown & gray- very stiff (A-6) Fill	595.6		4	1.3B	18										
SANDY CLAY LOAM with Cinders- dark gray & black-medium dense (Fill)	593.1		5		95										
CLAY to CLAY LOAM-brown & gray- soft to medium stiff (A-6) Fill, Wet	588.1		2	0.4B	25										
SILTY LOAM-gray-loose (A-4)	585.6		3	NP	21										
CLAY-brown & gray-stiff (A-6)	563.6		3		101										
CLAY-brown & gray-stiff (A-6)			4	1.75P	23										
CLAY-gray-very stiff (A-6)			4												
CLAY-gray-very stiff (A-6)			6												
CLAY-gray-very stiff (A-6)			8	1.5P	32										
CLAY-gray-very stiff (A-6)			20	ST 2.25P	19										

End Of Boring @ -35.0  
Hollow Stem Augers To -10.0'  
Rotary Drilling To Completion  
CME Automatic Hammer

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

**BORING LOGS 2**  
**STRUCTURE NO. 016-1304**

<b>TYLIN INTERNATIONAL</b>	DESIGNED -	REVISIONS		SHEET NO. 9  10 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	572	
	DRAWN -				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

4/28/2011 1:29:29 PM p:\01345\structure\02 Central Ave. 016-0724\55-1br2.dgn





**TOTAL BILL OF MATERIALS**

ITEM	UNIT	TOTAL
Structure Excavation	CU YD	1391
Concrete Superstructure	CU YD	183.8
Reinforcement Bars, Epoxy Coated	POUND	23,390
Mechanically Stabilized Earth Retaining Wall	SQ FT	12,749
Protective Coat	SQ YD	1749
Contractor Designed Ground Improvement	L SUM	0.25
Concrete Structures	CU YD	3.1

**INDEX OF SHEETS**

1. General Plan And Elevation - Ramp 2 Retaining Wall
2. Ramp 2 MSE Abutment Wall Sections
3. Ramp 2 MSE Abutment Wall & End Cap Details
4. Ramp 2 Moment Slab Plan & Elevation 1 of 2
5. Ramp 2 Moment Slab Plan & Elevation 2 of 2
6. Ramp 2 Moment Slab Sections & Bar List
7. Ramp 2 Moment Slab Details
8. Boring Logs 1
9. Boring Logs 2
10. Boring Logs 3

**Notes:**

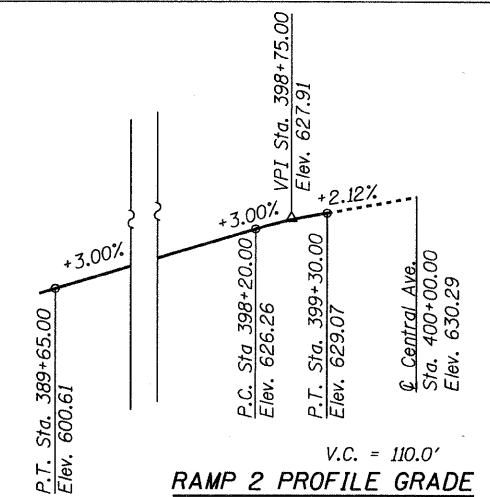
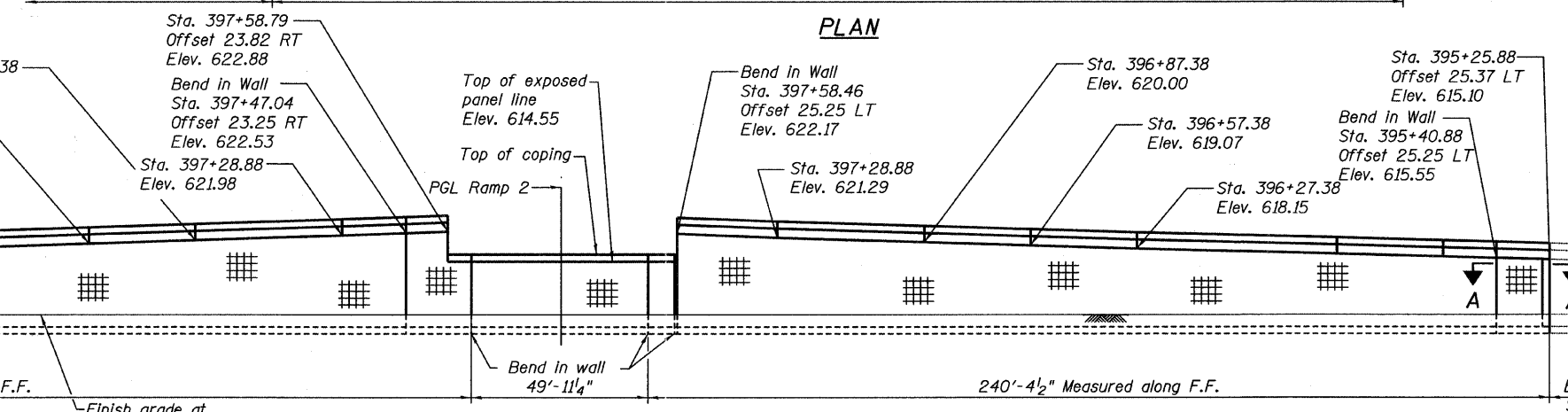
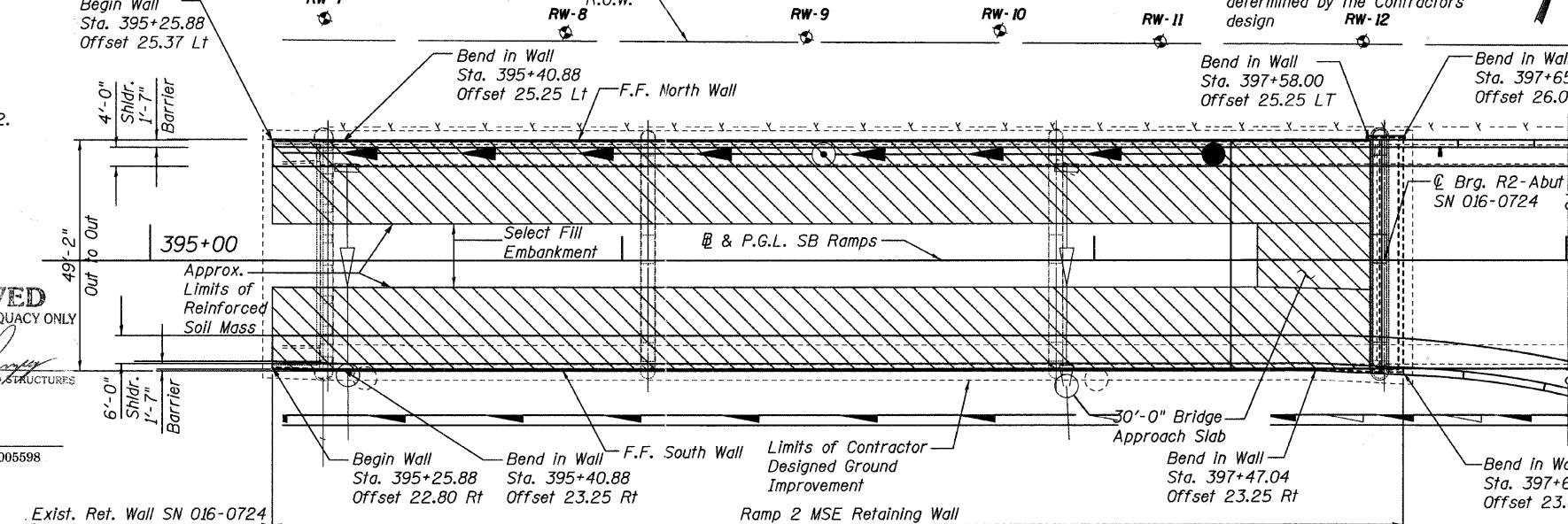
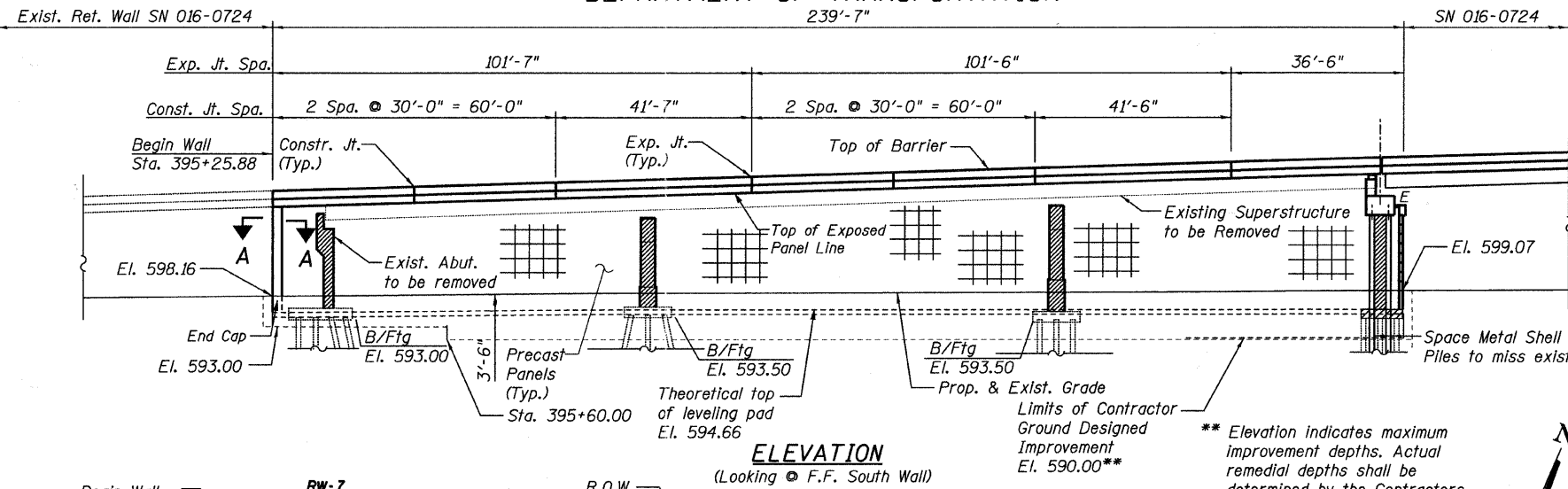
1. Wall stations and offsets are given to the front face of the precast concrete wall panels, and are measured from the SB Ramps Baseline.
2. For sections thru Ramp and Abutment, refer to Sheet 2.
3. For existing structure removal details see Sheet 335. Cost of removals is included with S.N. 016-0724.
4. Contractor Designed Ground Improvement: Bearing Capacity = 4500 psf Maximum Allowable Settlement = 0.4"
5. For Section A-A see Sheet 3.
6. Slipforming of the parapets is not allowed.
7. Reinforcement bars shall conform to the requirements of ASTM A706 Gr. 60.

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY  
*Anna M. Dukes*  
ENGINEER OF BRIDGES AND STRUCTURES



Signed *Anna M. Dukes*  
Anna M. Dukes, S.E. II Lic. No. 081-005598  
Expires 11-30-2012.  
Date March 25, 2011

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**SCOPE OF WORK**

Spans 1 to 3  
- Remove and replace the existing structure with Mechanically Stabilized Earth Retaining Walls.

**BORING LOCATIONS**

No.	Station	*Offset
RW-07	395+37.00	51.5 L
RW-08	395+88.00	48.5 L
RW-09	396+39.00	47.5 L
RW-10	396+80.00	48.9 L
RW-11	397+14.00	46.5 L
RW-12	397+57.00	46.5 L

\* Offset from PGL Ramp 2

**LEGEND**

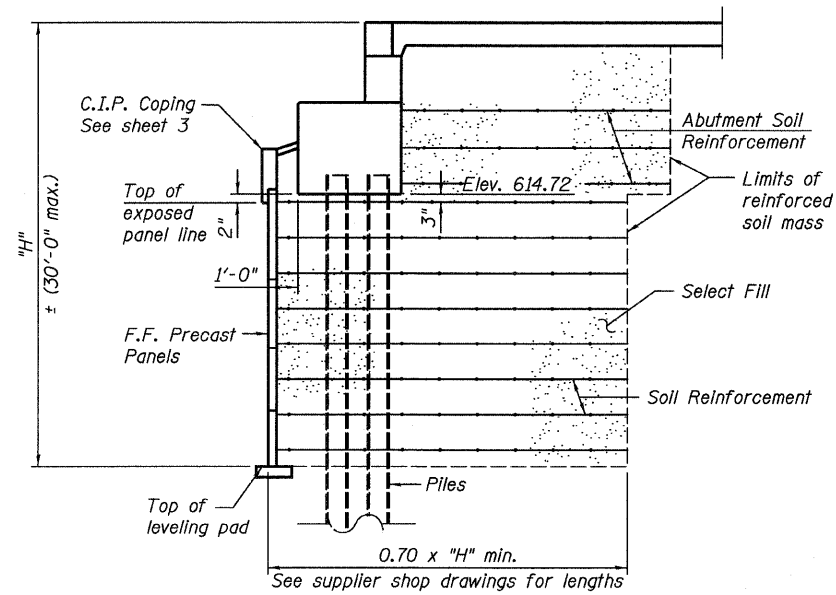
- Boring Location
- Proposed Catch Basin
- Proposed Manhole
- Existing Catch Basin
- Existing Underdrain
- Existing Storm Sewer
- ▨ Removal of Existing Sub-Structures
- Proposed Underdrain
- Proposed Storm Sewer

**GENERAL PLAN AND ELEVATION**  
**RAMP 2 RETAINING WALL**  
**CENTRAL AVE. OVER I-55**  
**COOK COUNTY**  
**STATION 395+25.88 TO 397+65.46**  
**STRUCTURE NO. 016-1305**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH	REVISIONS		SHEET NO. 1	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 574
	CHECKED - AMD, MMB	NAME	DATE						
	DRAWN - EKH								
	CHECKED - AMD, MMB								
	DATE - 03/25/2011								
				10 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT									

5/10/2011 5:18:46 PM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

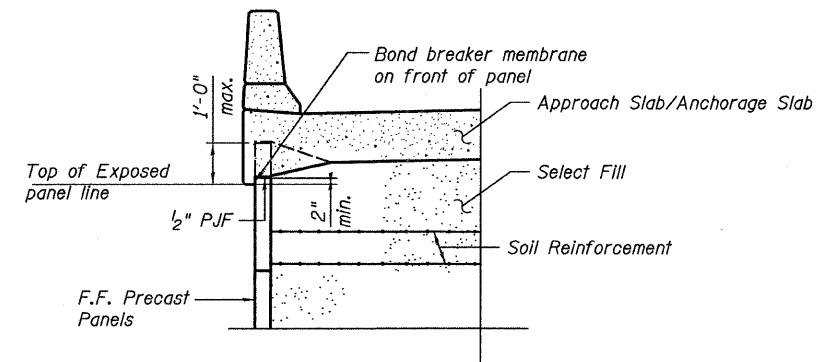


**SECTION THRU ABUTMENT**

**NOTES**

The MSE wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 1.83 kips/ft of abutment.

Piles shall be driven prior to placement of the reinforced select fill and coated with coal tar epoxy from the bottom of the select fill to 1" above the base of abutment. The cost of the coal tar epoxy shall be included with the cost of furnishing piles. Cost of furnishing and driving piles is included with S.N. 016-0724.



**SECTION THRU RETAINING WALLS**

**NOTES**

Offsets are to Front Face of precast panels.

For coping details see sheet 3.

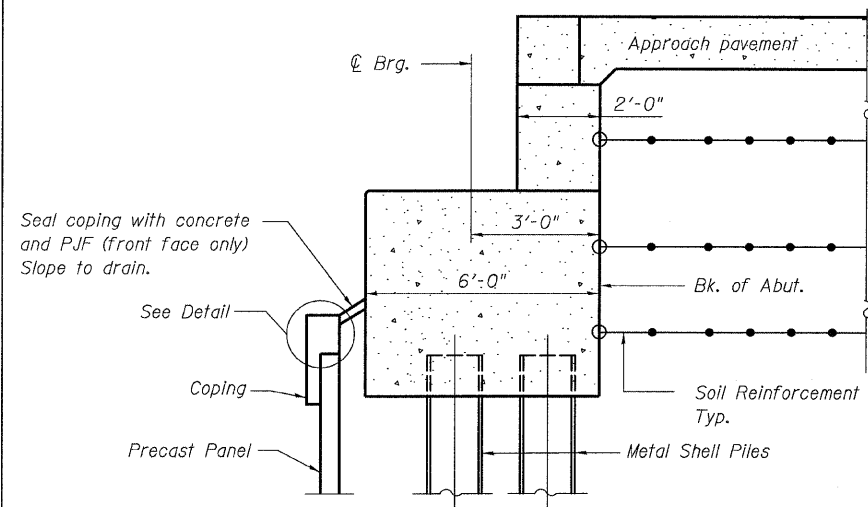
For anchorage slab details, see sheets 6 & 7.

**RAMP 2 MSE ABUTMENT WALL SECTIONS  
STRUCTURE NO. 016-1305**

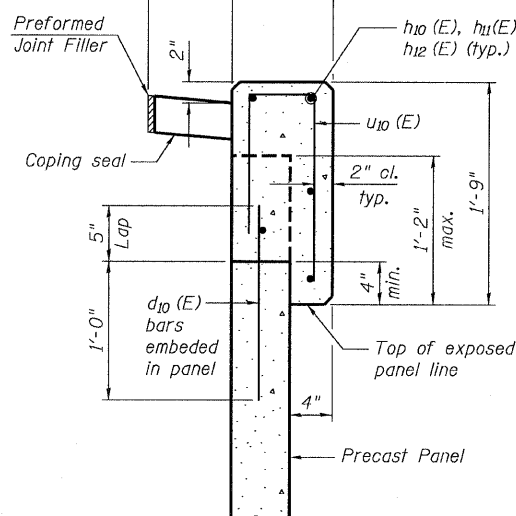
<b>TYLIN INTERNATIONAL</b>	DESIGNED - JMA	REVISIONS		SHEET NO. 2	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, MMB	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	575	
	DRAWN - JMA				CONTRACT NO. 60999					
	CHECKED - AMD, MMB				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

4/28/2011 1:29:33 PM p:\01345\structure\C2\_Central Ave. 016-0724\155-2mse.dgn

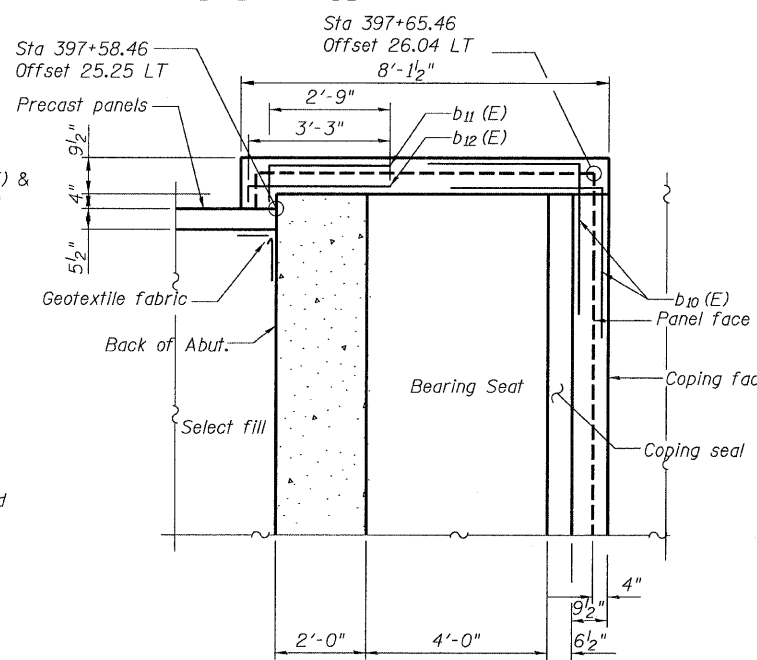
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



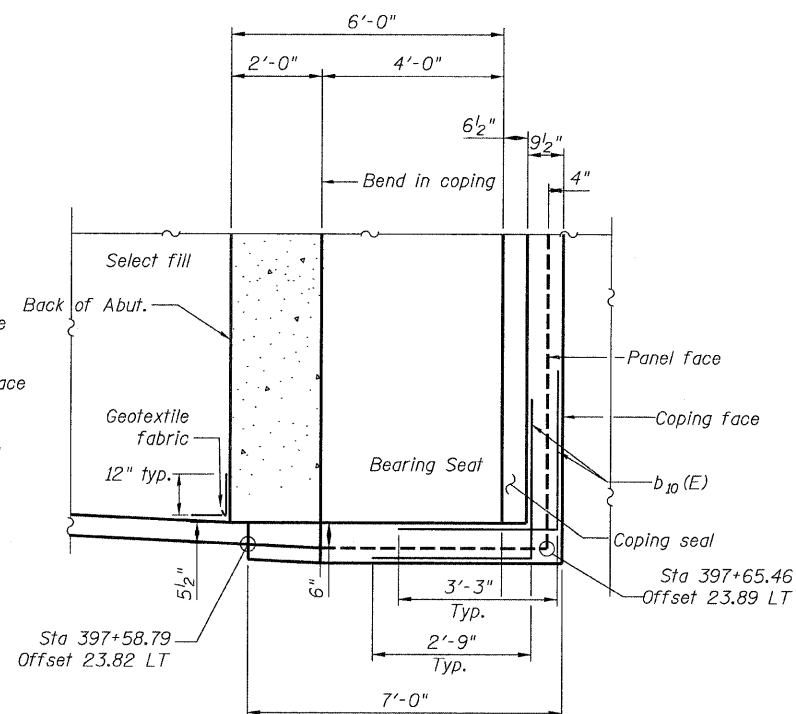
**SECTION THRU ABUTMENT**  
(Horiz. dim. @ Rt. L's)



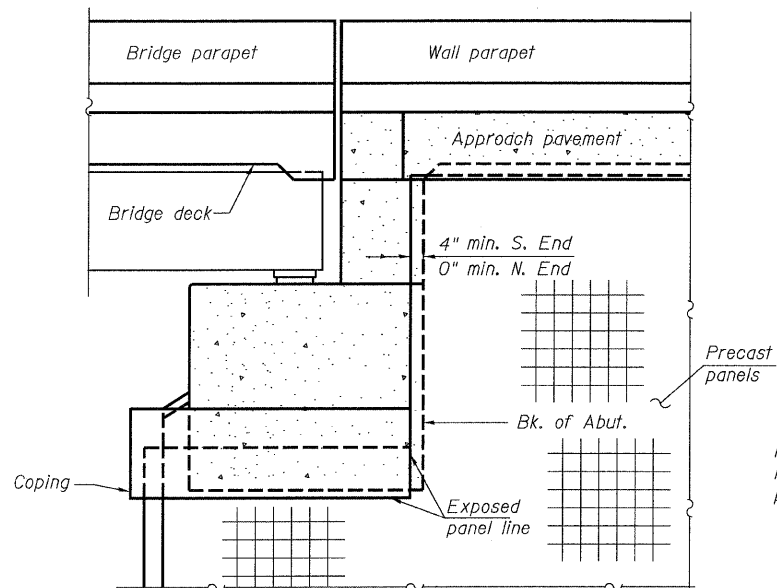
**DETAIL**



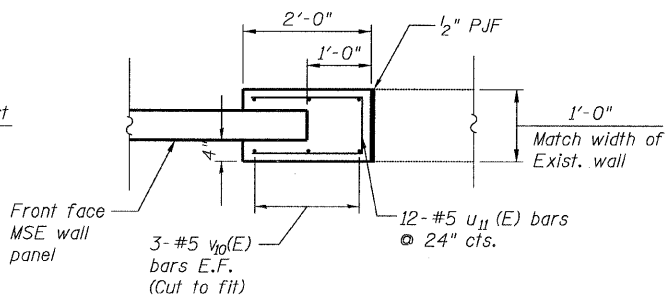
**PLAN AT ABUT. - N. END**



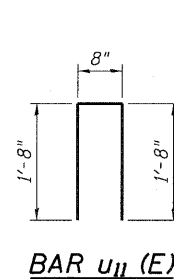
**PLAN AT ABUT. - S. END**



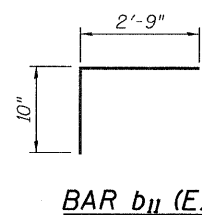
**END VIEW**



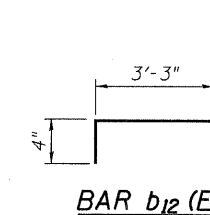
**SECTION A-A  
WALL END CAP DETAIL**



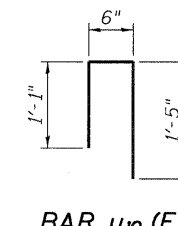
**BAR u11(E)**



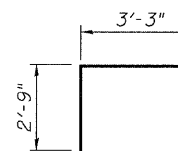
**BAR b11(E)**



**BAR b12(E)**



**BAR u10(E)**



**BAR b10(E)**

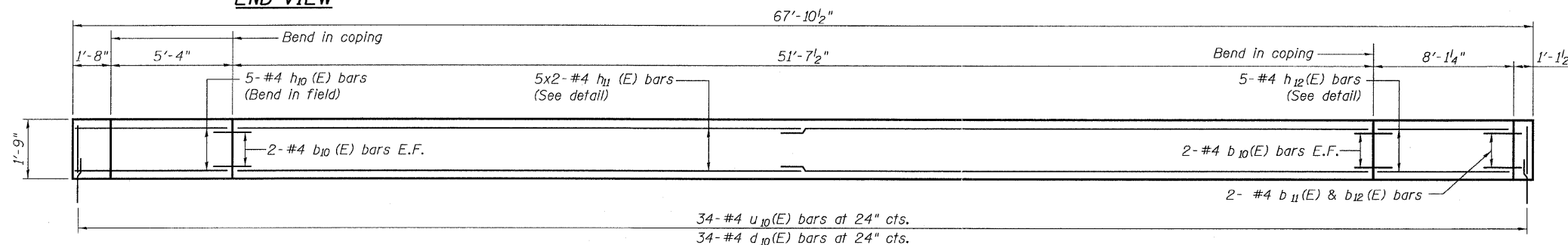
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d10(E)	34	#4	1'-5"	—
b10(E)	4	#8	6'-0"	┌
b11(E)	2	#4	3'-7"	┌
b12(E)	2	#4	3'-7"	┌
h10(E)	5	#4	6'-8"	—
h11(E)	10	#4	26'-11"	—
h12(E)	5	#4	7'-9"	—
u10(E)	34	#4	3'-0"	└
u11(E)	24	#5	4'-0"	└
v10(E)	12	#5	20'-7"	—
Concrete Structures			Cu. Yd.	3.1
Reinforcement Bars, Epoxy Coated			Pound	740

**RAMP 2 MSE ABUTMENT WALL  
& END CAP DETAILS  
STRUCTURE NO. 016-1305**

**MINIMUM BAR LAP**  
#4 bar - 2'-7"

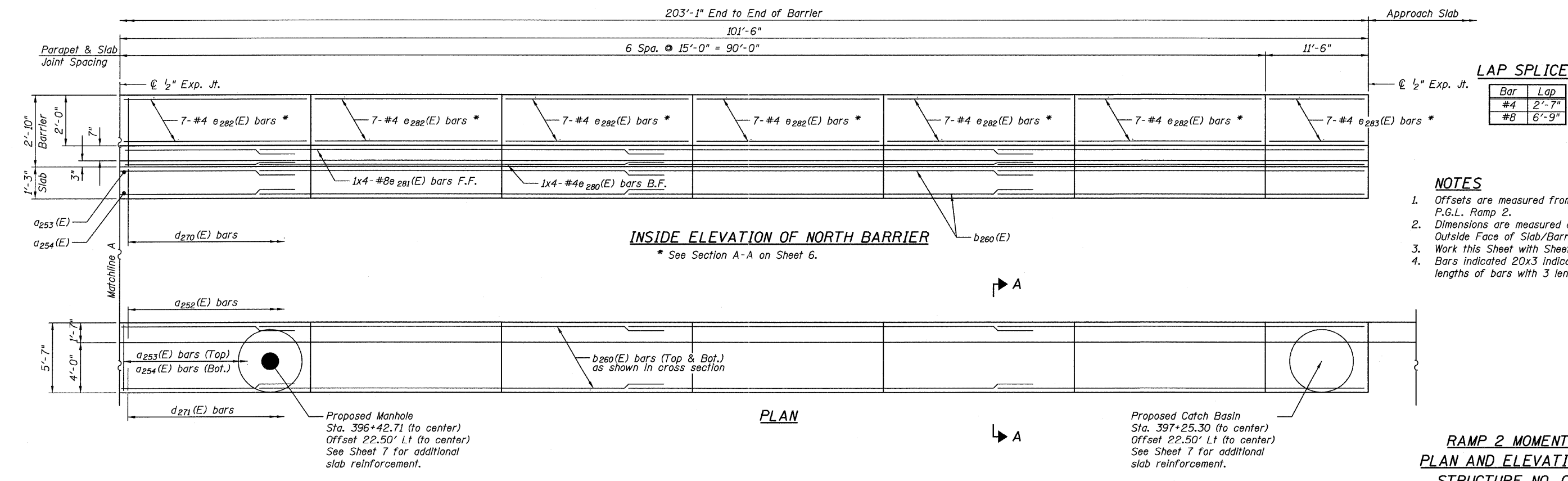
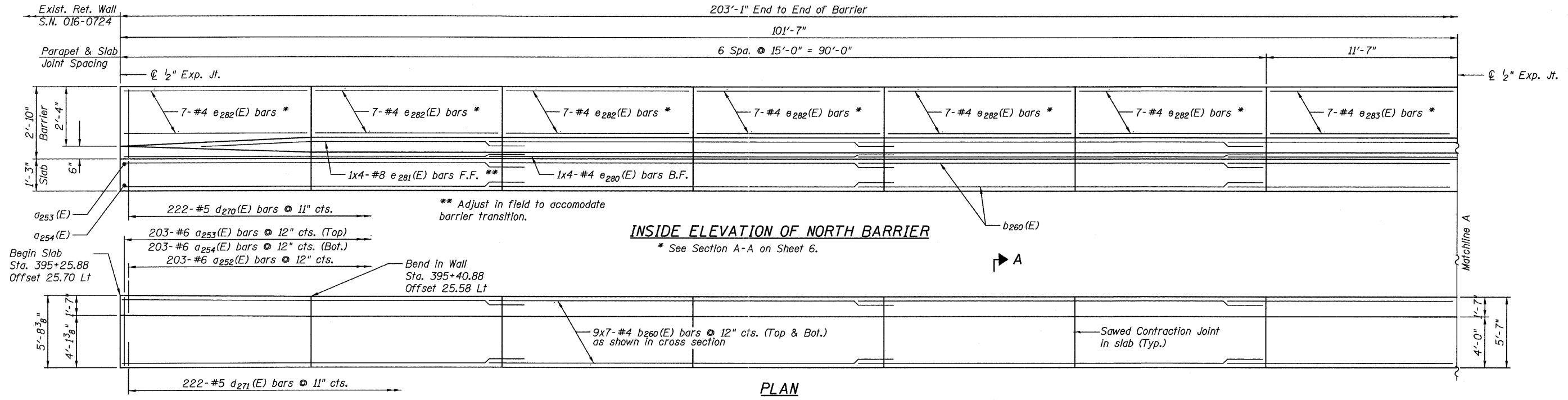
**COPING ELEVATION**



<b>TYLIN INTERNATIONAL</b>	DESIGNED - JMA	REVISIONS		SHEET NO. 3	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD, MMB	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	576
	DRAWN - JMA				10 SHEETS	CONTRACT NO. 60999			
	CHECKED - AMD, MMB				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011								

4/28/2011 1:29:35 PM p:\01345\structur\02 Central Ave. 016-072\155-2\sect1.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**LAP SPLICES**

Bar	Lap
#4	2'-7"
#8	6'-9"

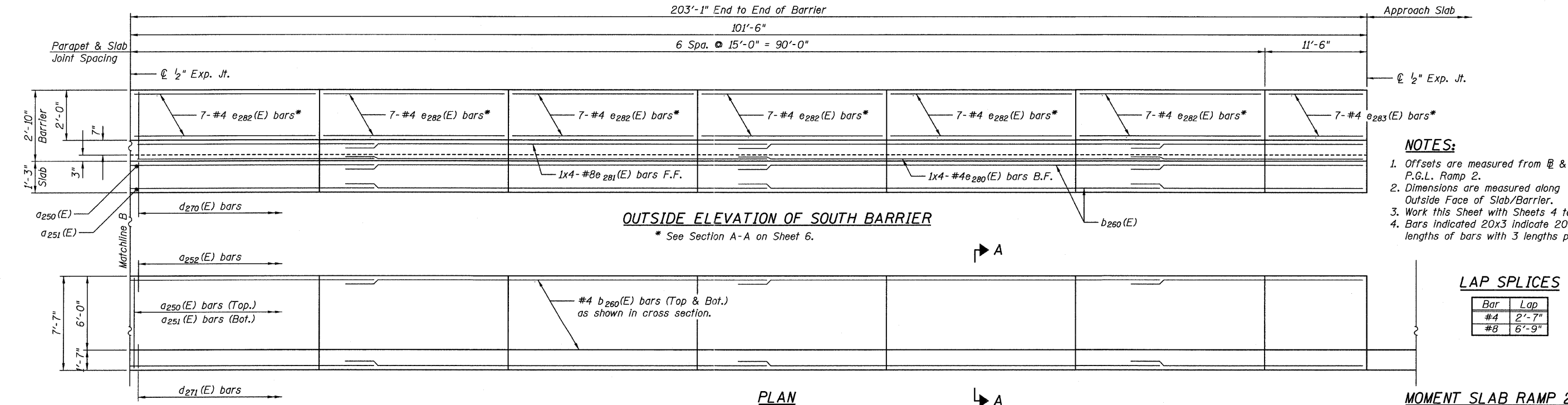
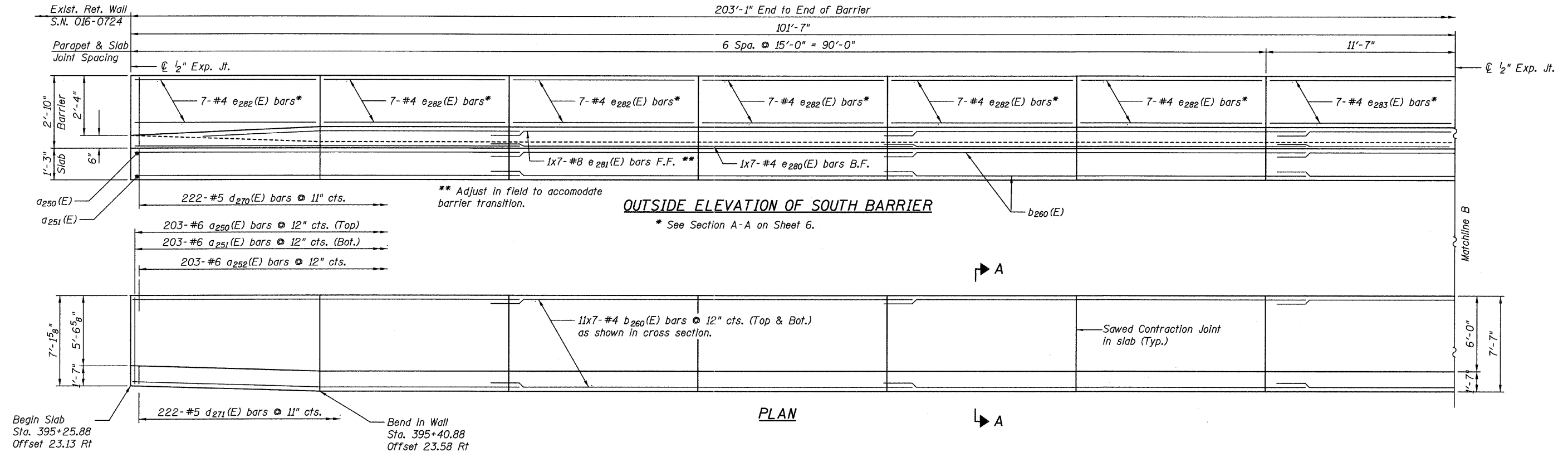
- NOTES**
- Offsets are measured from @ & P.G.L. Ramp 2.
  - Dimensions are measured along Outside Face of Slab/Barrier.
  - Work this Sheet with Sheets 5 to 7.
  - Bars indicated 20x3 indicate 20 lengths of bars with 3 lengths per line.

**RAMP 2 MOMENT SLAB  
PLAN AND ELEVATION 1 OF 2  
STRUCTURE NO. 016-1305**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH	REVISIONS		SHEET NO. 4  10 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, MMB	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	577	
	DRAWN - EKH				CONTRACT NO. 60999					
	CHECKED - AMD, MMB				FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

p:\01345\structure\02\_Central\_Ave\_016-0724\155-2\memslab1.dgn 4/28/2011 12:29:36 PM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



- NOTES:**
1. Offsets are measured from @ & P.G.L. Ramp 2.
  2. Dimensions are measured along Outside Face of Slab/Barrier.
  3. Work this Sheet with Sheets 4 to 7.
  4. Bars indicated 20x3 indicate 20 lengths of bars with 3 lengths per line.

**LAP SPLICES**

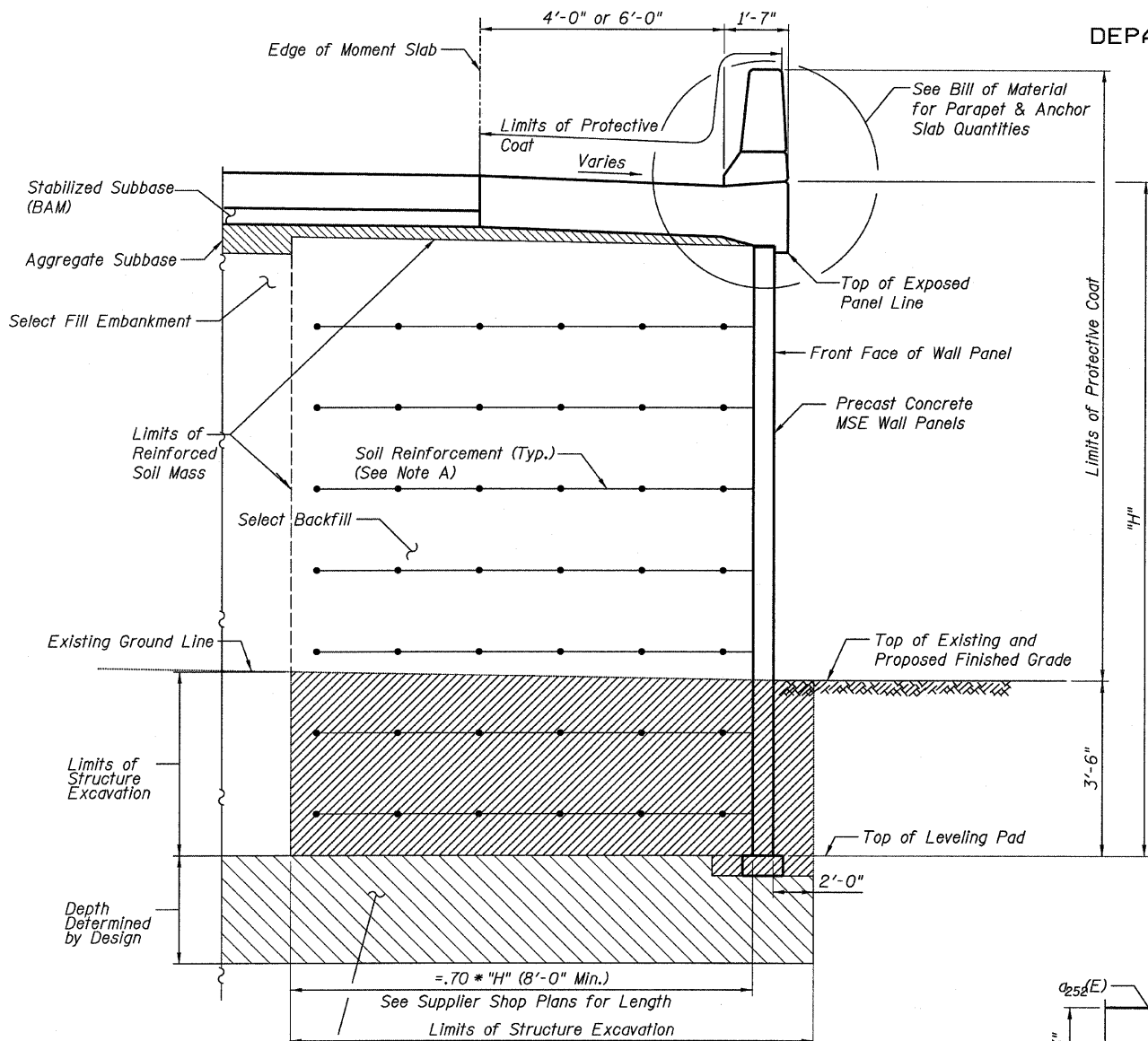
Bar	Lap
#4	2'-7"
#8	6'-9"

**MOMENT SLAB RAMP 2  
PLAN AND ELEVATION 2 OF 2  
STRUCTURE NO. 016-1305**

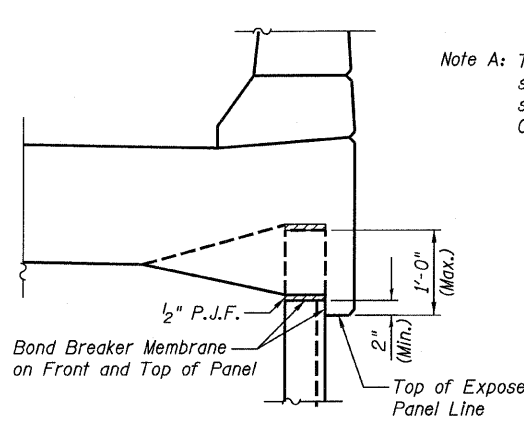
<b>TYLIN INTERNATIONAL</b>	DESIGNED - EKH	REVISIONS		SHEET NO. 5	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD,MMB	NAME	DATE					741	578
	DRAWN - EKH							CONTRACT NO. 60999	
	CHECKED - AMD,MMB							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	
	DATE - 03/25/2011								

4/28/2011 1:29:37 PM p:\01345\structure\2 Central Ave. 016-0724\155-2\moms\lab2.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

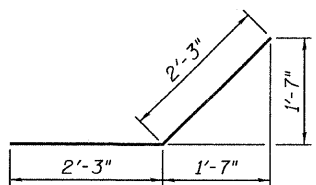


TYPICAL CROSS SECTION

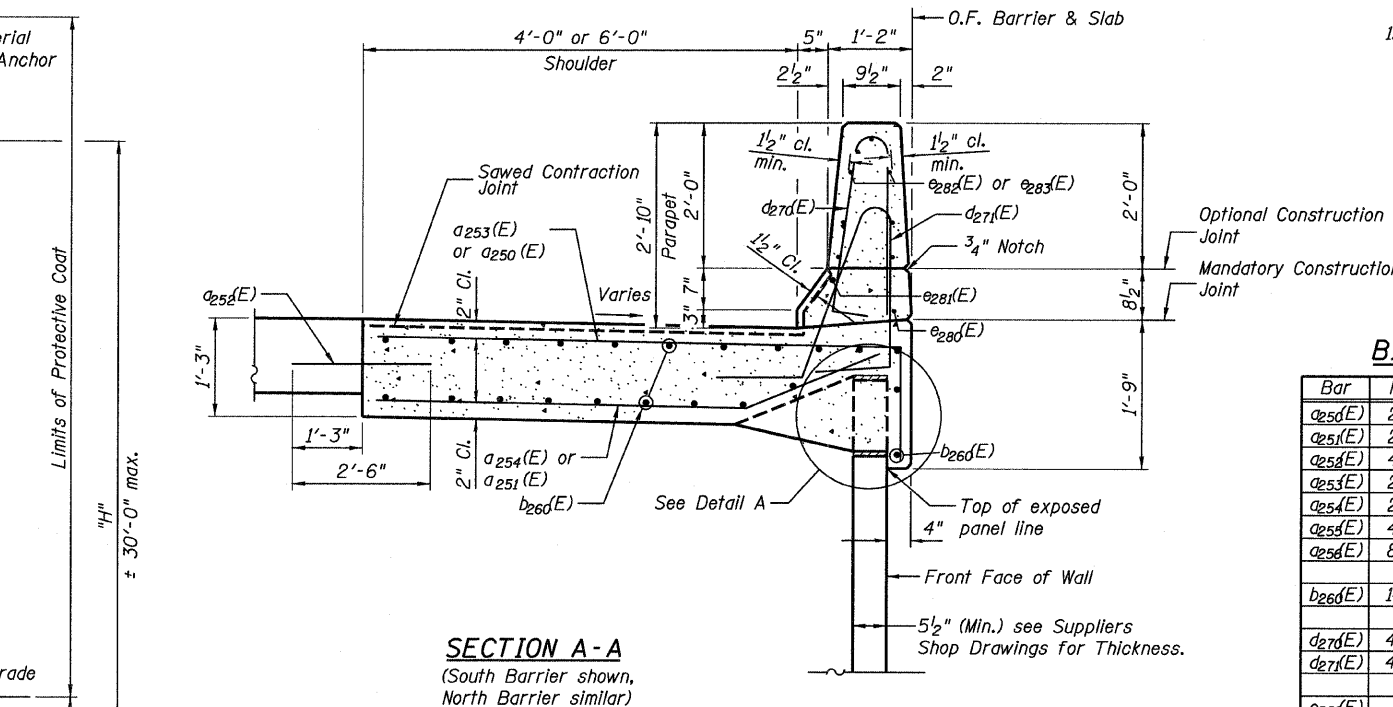


DETAIL A

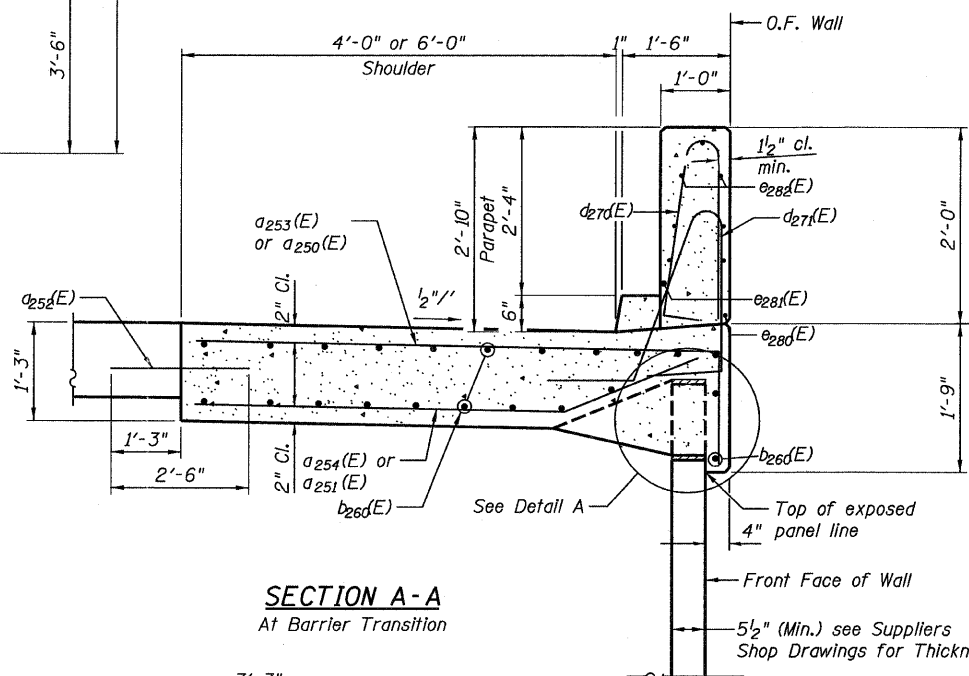
Note A: The M.S.E. Wall Suppliers internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and a horizontal sliding force of 0.5 k/ft of wall.



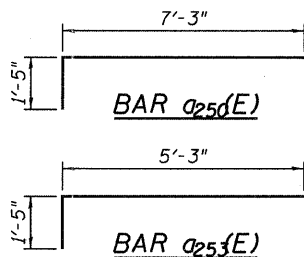
BAR a256(E)



SECTION A-A  
(South Barrier shown,  
North Barrier similar)

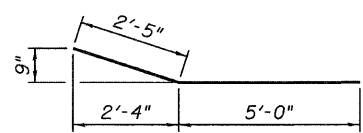


SECTION A-A  
At Barrier Transition

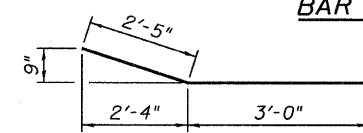


BAR a25d(E)

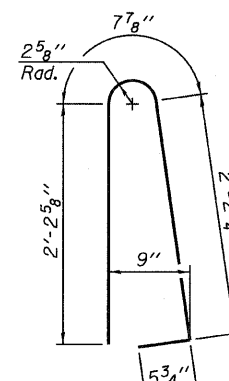
BAR a25f(E)



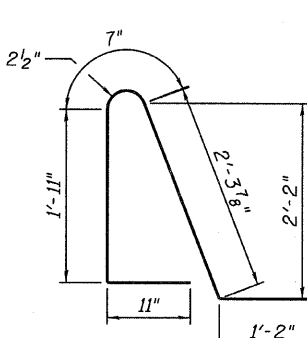
BAR a25i(E)



BAR a25j(E)



BAR d27d(E)



BAR d27f(E)

RAMP 2 MOMENT SLAB  
SECTIONS AND BAR LIST  
STRUCTURE NO. 016-1305

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a25d(E)	203	#6	8'-8"	┌
a25f(E)	203	#6	7'-5"	└
a25i(E)	406	#6	2'-6"	┌
a25j(E)	203	#6	6'-8"	└
a25k(E)	203	#6	5'-5"	┌
a25l(E)	40	#6	5'-6"	└
a25m(E)	8	#6	4'-6"	┌
b26d(E)	140	#4	31'-2"	┌
d27d(E)	444	#5	5'-7"	┌
d27f(E)	444	#5	6'-11"	└
e28d(E)	16	#4	27'-3"	┌
e28f(E)	16	#8	30'-4"	└
e28g(E)	168	#4	14'-8"	┌
e28h(E)	28	#4	11'-2"	└
Reinforcement Bars, Epoxy Coated		Pound	22,650	
Concrete Superstructure		Cu. Yds.	183.8	

Bars indicated thus 1 x 15-#5 etc. indicates 1 line of bars with 15 lengths per line.

Note:  
1. In Typical Cross Section, See Roadway plans for payment of Stabilized Subbase, Aggregate Subbase and Embankment.

TYLIN INTERNATIONAL

DESIGNED	REVISIONS
EKH	
CHECKED - AMD, MMB	NAME
DRAWN - EKH	DATE
CHECKED - AMD, MMB	
DATE - 03/25/2011	

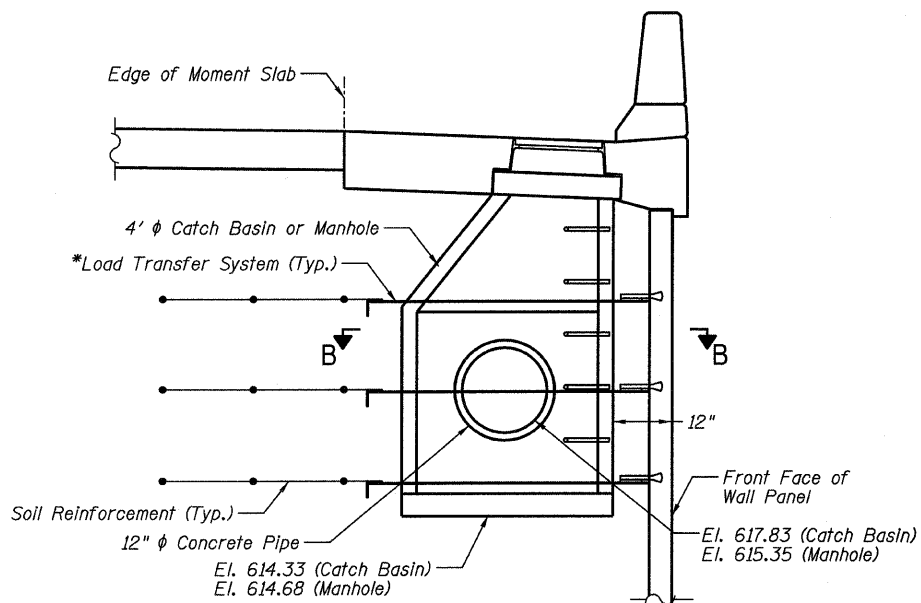
SHEET NO. 6	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	579
10 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

2:13:56 PM

pl:\01345\structure\C2 Central Ave. 016-0724\55-2\mmslab3.dgn

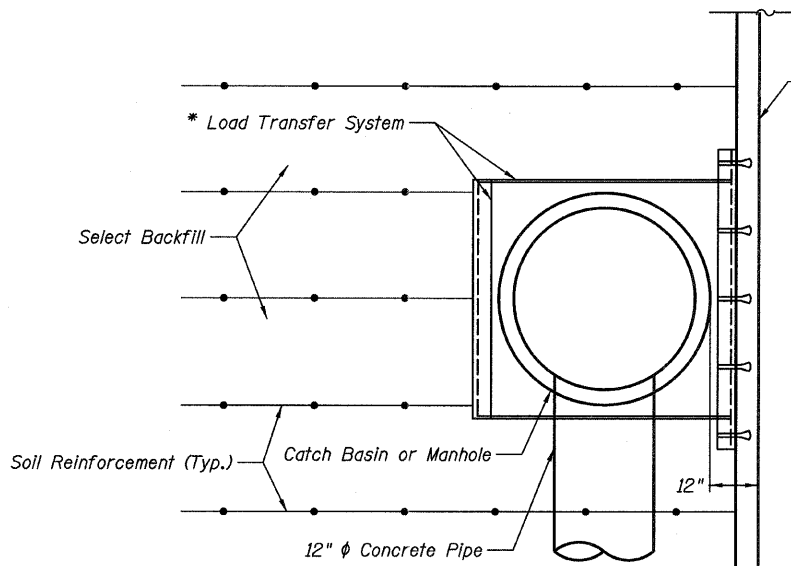
4/20/2011

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

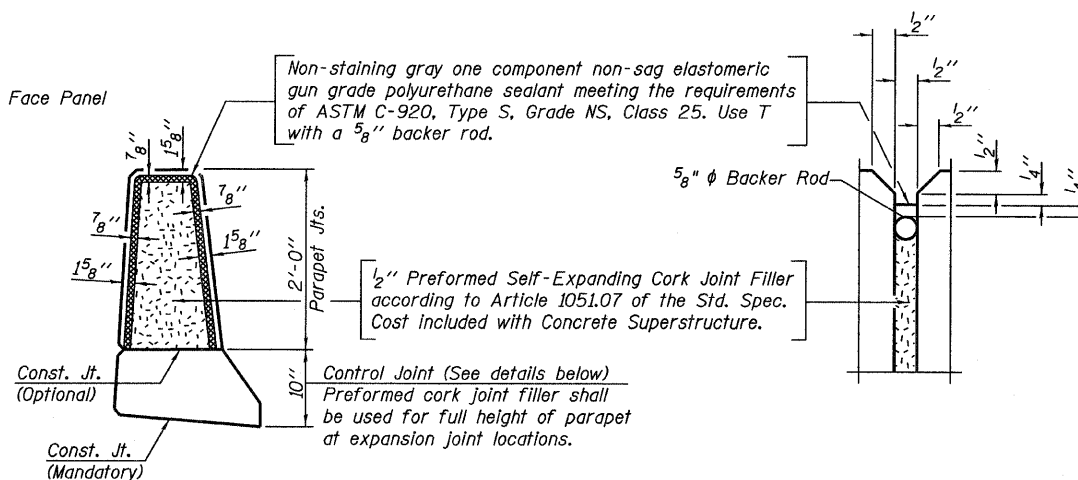


**SECTION A-A**

Note:  
\*M.S.E. supplier to design load transfer system to accommodate concrete pipe and catch basin/manhole.

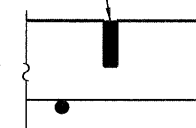


**SECTION B-B**

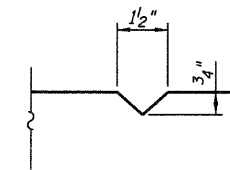


**PARAPET JOINT DETAILS**

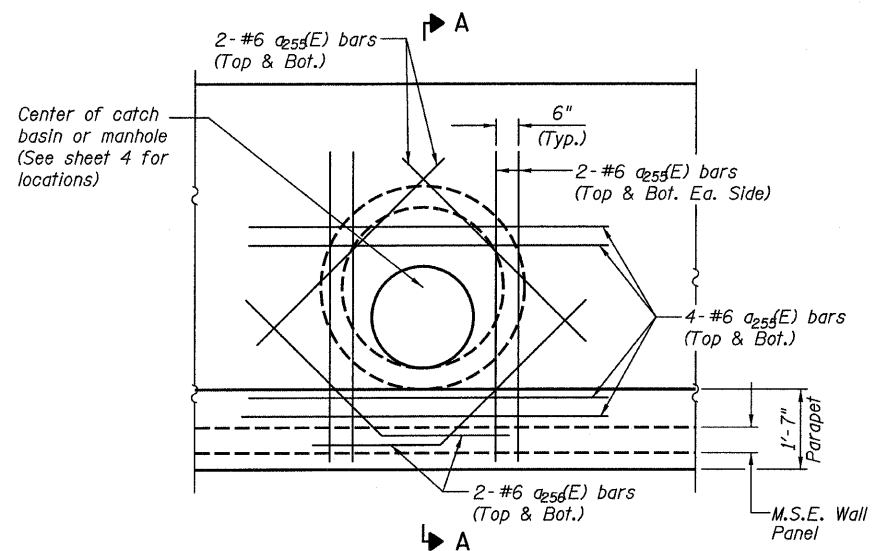
1/4" wide x 1/2" deep sawed joint filled with hot poured sealant in accordance with Article 1050 of Standard Specifications.



**SAWED CONTRACTION JOINT DETAIL - SLAB**  
(Cost Included with Concrete Structures)



**CONTROL JOINT DETAIL - PARAPET**



**PLAN AT CATCH BASIN OR MANHOLE**

**RAMP 2 MOMENT SLAB  
DETAILS  
STRUCTURE NO. 016-1305**

**TYLIN INTERNATIONAL**

DESIGNED - EKH	REVISIONS	
CHECKED - AMD,MMB	NAME	DATE
DRAWN - EKH		
CHECKED - AMD,MMB		
DATE - 03/25/2011		

SHEET NO. 7	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	580
10 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

pi:\01345\structure\02 Central Ave. 016-0724\155r-2\moms\lebbet1.dgn 4/28/2011 12:39:39 PM





STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 1  
DATE 7/9/2010  
LOGGED BY RJ  
GSI JOB No. 10098

**SOIL BORING LOG**

ROUTE F.A.I. RTE. 55 DESCRIPTION Central Avenue Over Interstate 55 Ramp Reconstruction  
SECTION 9(H, HB & SB)R-1 LOCATION SEC. 4 & 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township  
COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1305  
Station 395+26 to 397+65  
BORING NO. RW-09  
Station 396+39  
Offset 47.5' Left  
Ground Surface Elev. 598.1

Description	Elev. (ft)	D (ft)	B (6")	U (tsf)	M (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After Hrs.	D (ft)	B (6")	U (tsf)	M (%)
10.0" GRAVEL, STONE & BRICK (Fill)	597.3		AS	NP	10	n/a	n/a								
CLAY LOAM with Cinders & Brick-brown & gray-hard (Fill)	595.1		8										4		
			8										7		
			8	4.5+P	16								8	1.0P	30
CLAY-gray-stiff (A-6)			2										4		
			2										6		
SILTY CLAY-dark brown & gray-soft (A-6) Wet			-5	3	NR								-25	8	1.0P 29
			1										2		104
			1										4		
			2	0.25P	32								6	1.1B	23
CLAY-brown & gray-stiff to very stiff (A-6)			3												
			4												
			-10	7	3.5B	22							-30	ST	1.75P 16
			3												
			3												
			3	1.0B	27										
SILTY CLAY-gray-stiff (A-6) Wet			3												
			4												
			-15	6	2.1B	23									
CLAY-gray-stiff (A-6)			3												
			3												
			6	1.8B	21										
			3												
			4												
			-20	6	1.5B	21									

End Of Boring @ -35.0  
Hollow Stem Augers To -10.0'  
Rotary Drilling To Completion  
CME Automatic Hammer

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

PAGE 1 of 1  
DATE 7/9/2010  
LOGGED BY DR  
GSI JOB No. 10098

**SOIL BORING LOG**

ROUTE F.A.I. RTE. 55 DESCRIPTION Central Avenue Over Interstate 55 Ramp Reconstruction  
SECTION 9(H, HB & SB)R-1 LOCATION SEC. 4 & 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township  
COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1305  
Station 395+26 to 397+65  
BORING NO. RW-10  
Station 396+80  
Offset 48.9' Left  
Ground Surface Elev. 598.6

Description	Elev. (ft)	D (ft)	B (6")	U (tsf)	M (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After Hrs.	D (ft)	B (6")	U (tsf)	M (%)
18.0" CRUSHED STONE (Fill)	597.1		AS	NP	4	n/a	n/a								
CRUSHED STONE & CLAY-medium dense (Fill)	595.6		9												
			9												
			10	NP	9										
CLAY-gray-medium stiff to stiff (A-6)			1												
			2												
CLAY-brown & gray-very stiff (A-6) Apparent Fill			-5	3	3.5P	21									
			2												
			2												
SANDY LOAM-dark brown & black-loose (A-2)			2												
			2												
			3	NP	23										
CLAY-brown & gray-stiff to very stiff (A-6)			2												
			3												
			-10	4	2.5B	22									
			3												
			3												
			ST	2.0P	25										
CLAY LOAM-gray-stiff (A-6)			3												
			4												
			-15	6	2.6B	22									
CLAY-gray-medium stiff to stiff (A-6)			3												
			5												
			6	0.5B	23										
			3												
			4												
			-20	6	1.1B	22									

End Of Boring @ -35.0  
Hollow Stem Augers To -10.0'  
Rotary Drilling To Completion  
CME Automatic Hammer

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

**BORING LOGS 2**  
**STRUCTURE NO. 016-1305**

<b>TYLIN INTERNATIONAL</b>	DESIGNED -	REVISIONS		SHEET NO. 9	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	582	
	DRAWN -				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

4/28/2011 12:29:41 PM p:\01345\structure\02\_Central\_Ave\_016-0724\155-2br2.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 1

**SOIL BORING LOG**

DATE 7/6/2010  
LOGGED BY MR  
GSI JOB No. 10098

ROUTE F.A.I. RTE. 55 DESCRIPTION Central Avenue Over Interstate 55 Ramp Reconstruction  
SECTION 9H, HB & SB/R-1 LOCATION SEC. 4 & 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township  
COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1305  
Station 395+26 to 397+65  
BORING NO. RW-11  
Station 397+14  
Offset 46.5' Left  
Ground Surface Elev. 588.6

Description	D E P T H (ft)	B L O W S (blows)	U N C O N F I N E D C O M P R E S S I O N S T R E N G T H (tsf)	M O I S T U R E (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	D E P T H (ft)	B L O W S (blows)	U N C O N F I N E D C O M P R E S S I O N S T R E N G T H (tsf)	M O I S T U R E (%)
CRUSHED STONE-medium dense (Fill)	6	AS	NP	2	n/a	n/a		2			107
	14							4			
	596.1	12	NP	5				7	2.4B	21	
SILTY CLAY-gray-very stiff (A-6) Apparent Fill	4			103				3			107
	5							4			
	592.6	-5	5	2.5B	22			-25	7	2.4B	21
SILTY CLAY LOAM-dark brown-loose (A-4)	2							2			98
	3	NP	26					3			
	590.6	3		107				6	1.8B	26	
	3							2			101
	5							3			
	589.1	-10	8	3.1B	21			-30	5	1.6B	25
CLAY-brown & gray-stiff to very stiff (A-6)	2			103							
	4										
	588.1	7	2.9B	23							
	3							4			121
	5							7			
	583.1	-15	7	1.0P	26			-35	12	3.5B	15
CLAY-gray-stiff to very stiff (A-6)	2			116							
	3										
	5	1.2B	17								
	3			107							
	4										
	583.1	-20	6	1.8B	21			-40			

End Of Boring @ -35.0  
Hollow Stem Augers To -10.0'  
Rotary Drilling To Completion  
CME Automatic Hammer

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shaly Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

PAGE 1 of 2

**SOIL BORING LOG**

DATE 7/6/2010  
LOGGED BY MR  
GSI JOB No. 10098

ROUTE F.A.I. RTE. 55 DESCRIPTION Central Avenue Over Interstate 55 Ramp Reconstruction  
SECTION 9H, HB & SB/R-1 LOCATION SEC. 4 & 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township  
COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1305  
Station 395+26 to 397+65  
BORING NO. RW-12  
Station 397+57  
Offset 46.5' Left  
Ground Surface Elev. 598.2

Description	D E P T H (ft)	B L O W S (blows)	U N C O N F I N E D C O M P R E S S I O N S T R E N G T H (tsf)	M O I S T U R E (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	D E P T H (ft)	B L O W S (blows)	U N C O N F I N E D C O M P R E S S I O N S T R E N G T H (tsf)	M O I S T U R E (%)
18.0" CRUSHED STONE	6	AS	NP	1	n/a	n/a		3			103
	8							5			
	596.7	4	4.5+P	17				8	2.1B	23	
CLAY to CLAY LOAM-brown & gray-medium dense (A-6) Fill	4			103				3			103
	5							6			
	592.2	-5	7	-	15			-25	6	1.3B	23
SILTY LOAM-dark brown & gray-very loose (A-4)	1							2			102
	1	NP	26					4			
	590.2	1		26				6	1.4B	24	
	3			104				2			99
	5							3			
	587.7	-10	7	1.9B	23			-30	5	1.7B	26
CLAY-brown & gray-medium stiff to stiff (A-6)	3										
	6										
	566.2	7	0.75P	25							
	2			103				3			120
	3							5			
	582.7	-15	6	1.2B	24			-35	8	1.25B	15
CLAY LOAM-gray-stiff (A-6)	2			107							
	3										
	582.7	6	1.25B	21							
	3							9			
	582.7	-20	ST	2.25P	21			-40	22	1.0P	18

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shaly Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

BORING LOGS 3  
STRUCTURE NO. 016-1305

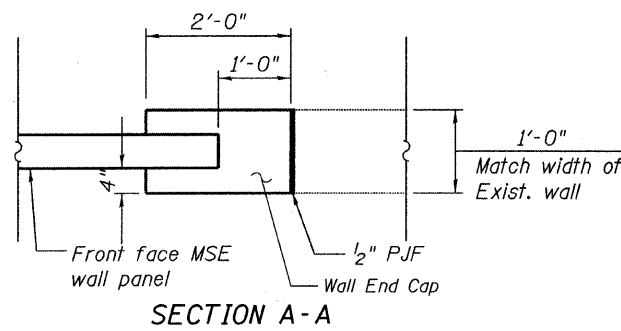
<b>TYLIN INTERNATIONAL</b>	DESIGNED -	REVISIONS		SHEET NO. 10	F.A.I. RTE. 55	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS 741	SHEET NO. 583
	CHECKED - AMD,	NAME	DATE						
	DRAWN -								
	CHECKED - AMD,								
DATE - 03/25/2011				10 SHEETS	CONTRACT NO. 60999				
					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

p:\01345\structure\C2 Central Ave. 016-0724\55r-2br-3.dan 4/28/2011 1:23:42 PM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

LEGEND

- Boring Location
- Existing Manhole
- Proposed Manhole
- Proposed Catch Basin
- Existing Underdrain
- Existing Storm Sewer
- Removal of Existing Sub-Structures
- Proposed Underdrain
- Proposed Storm Sewer



SECTION A-A

APPROVED  
FOR STRUCTURAL ADEQUACY ONLY

*Anna M. Dukes*  
ENGINEER OF BRIDGES AND STRUCTURES

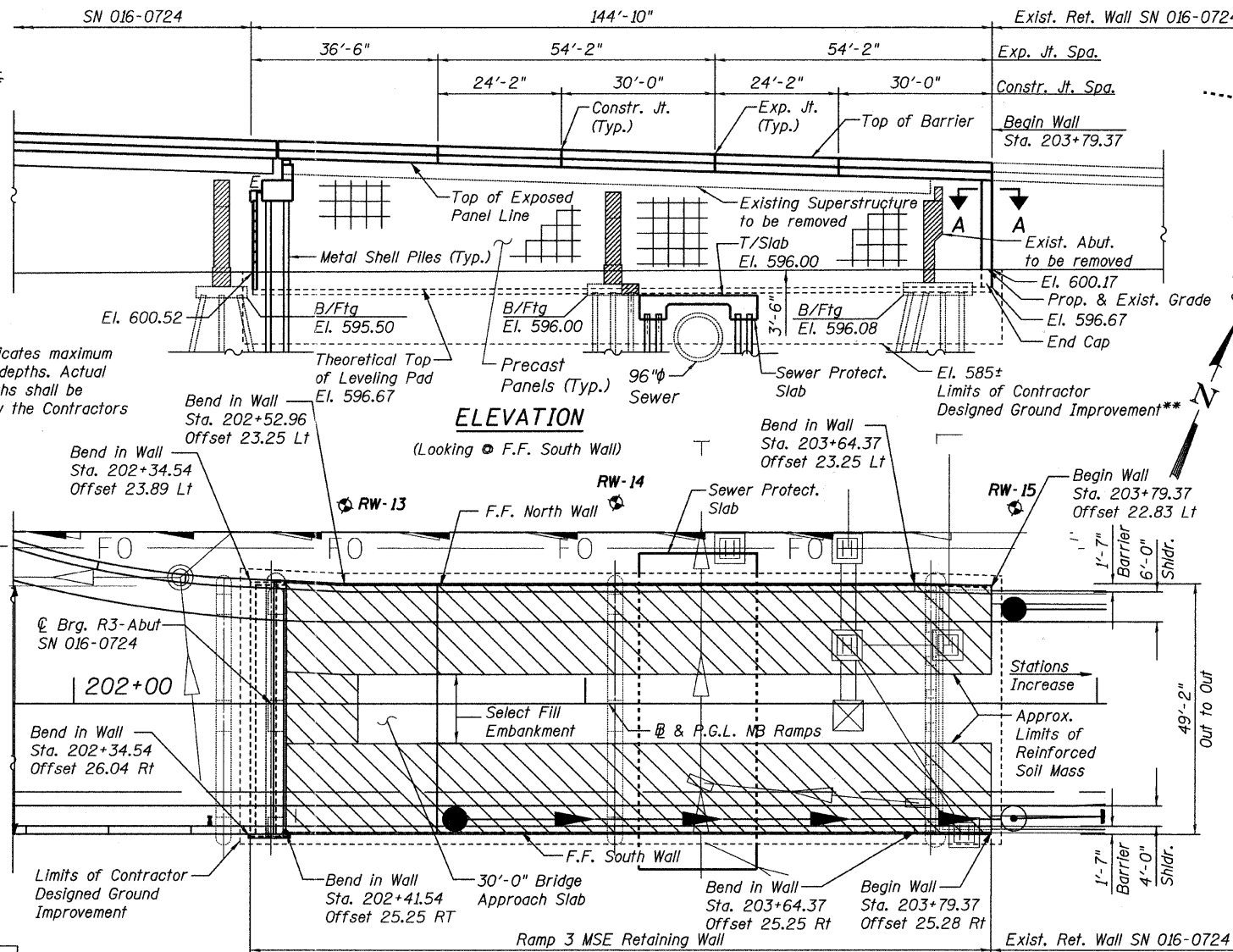


Signed *Anna M. Dukes*  
Anna M. Dukes, S.E. II Lic. No. 081-005598  
Expires 11-30-2012  
Date March 25, 2011

Notes:

- Wall stations and offsets are given to the front face of the precast concrete wall panels, and are measured from the NB Ramps Baseline.
- For sections thru Ramp and Abutment, refer to Sheet 2.
- Slipforming of the parapets is not allowed.
- Contractor Designed Ground Improvement:  
Bearing Capacity = 4300 psf  
Maximum Allowable Settlement = 0.4"
- For existing structure removal details see Sheet 335.  
Cost of removals is included with S.N. 016-0724.
- Reinforcement bars shall conform to the requirements of ASTM A706 Gr. 60.

\*\* Elevation indicates maximum improvement depths. Actual remedial depths shall be determined by the Contractors design



ELEVATION  
(Looking @ F.F. South Wall)

PLAN

RAMP 3 PROFILE GRADE

SCOPE OF WORK

- Spans 3 and 4  
- Remove and replace the existing structure with Mechanically Stabilized Earth Retaining Walls.

TOTAL BILL OF MATERIALS

ITEM	UNIT	TOTAL
Structure Excavation	CU YD	1,157
Concrete Superstructure	CU YD	102.8
Reinforcement Bars, Epoxy Coated	POUND	31,610
Mechanically Stabilized Earth Retaining Wall	SQ FT	7535
Protective Coat	SQ YD	1033
Contractor Designed Ground Improvement	L SUM	0.25
Concrete Structures	CU YD	251.4
Driving Piles	FOOT	2,120
Furnishing Metal Shell Piles, 12"x0.25"	FOOT	2,120
Test Pile Metal Shells	EACH	1

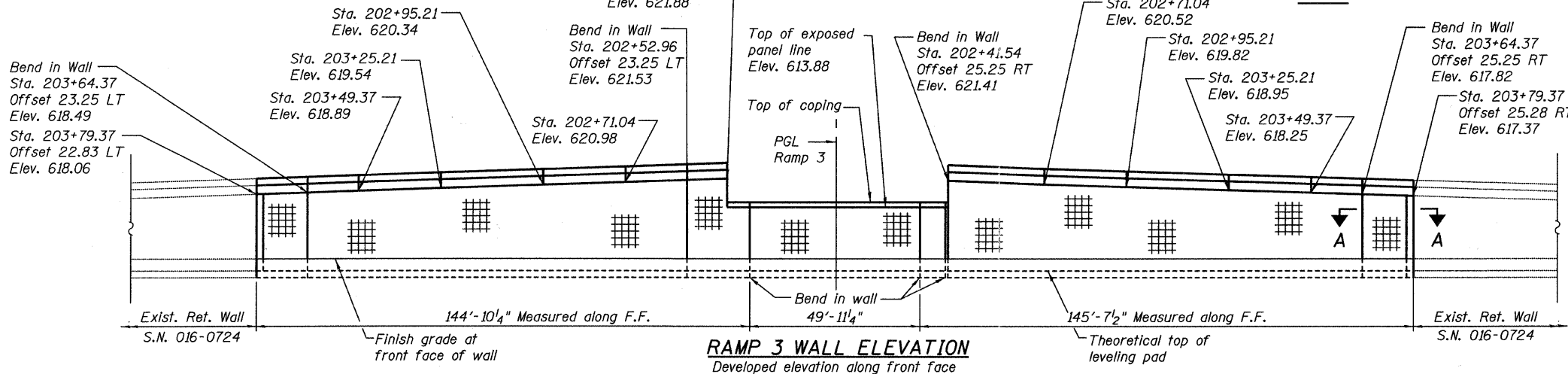
INDEX OF SHEETS

- General Plan And Elevation - Ramp 3 Retaining Wall
- Ramp 3 MSE Abutment Wall Sections
- Ramp 3 MSE Abutment Wall & End Cap Details
- Ramp 3 Moment Slab Plan & Elevation
- Ramp 3 Moment Slab Sections & Bar List
- Ramp 3 Moment Slab Details
- Ramp 3 Sewer Protection Slab
- Boring Logs 1
- Boring Logs 2

BORING LOCATIONS

No.	Station	*Offset
RW-13	202+53.00	39.0 L
RW-14	203+06.00	39.5 L
RW-15	203+84.00	38.5 L

\* Offset from PGL Ramp 3



RAMP 3 WALL ELEVATION  
Developed elevation along front face

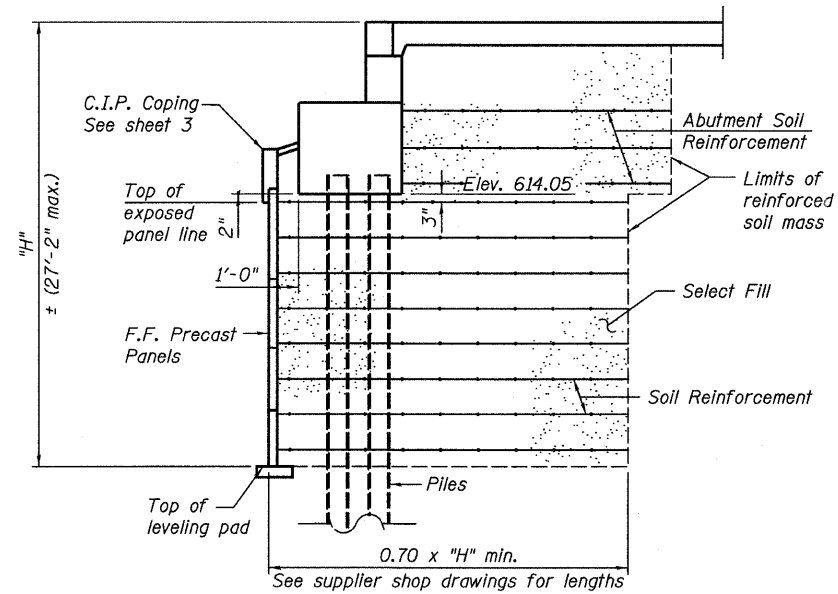
GENERAL PLAN AND ELEVATION  
RAMP 3 RETAINING WALL  
CENTRAL AVE. OVER I-55  
COOK COUNTY  
STATION 202+34.54 TO 203+79.37  
STRUCTURE NO. 016-1306

TYLIN INTERNATIONAL

DESIGNED -	EKH	REVISIONS	
CHECKED -	AMD, MMB	NAME	DATE
DRAWN -	EKH		
CHECKED -	AMD, MMB		
DATE -	03/25/2011		

SHEET NO. 1	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9 SHEETS	55	0711.2R & 1011.1BR	COOK	741	584
CONTRACT NO. 60999					
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

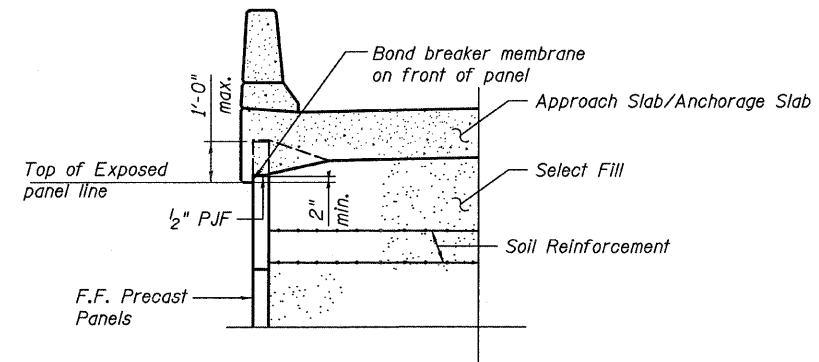


**SECTION THRU ABUTMENT**

**NOTES**

The MSE wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 1.83 kips/ft of abutment.

Piles shall be driven prior to placement of the reinforced select fill and coated with coal tar epoxy from the bottom of the select fill to 1" above the base of abutment. The cost of the coal tar epoxy shall be included with the cost of furnishing piles. Cost of furnishing and driving piles is included with S.N. 016-0724.



**SECTION THRU RETAINING WALLS**

**NOTES**

Offsets are to Front Face of precast panels.

For coping details see sheet 3.

For anchorage slab details, see sheets 5 & 6.

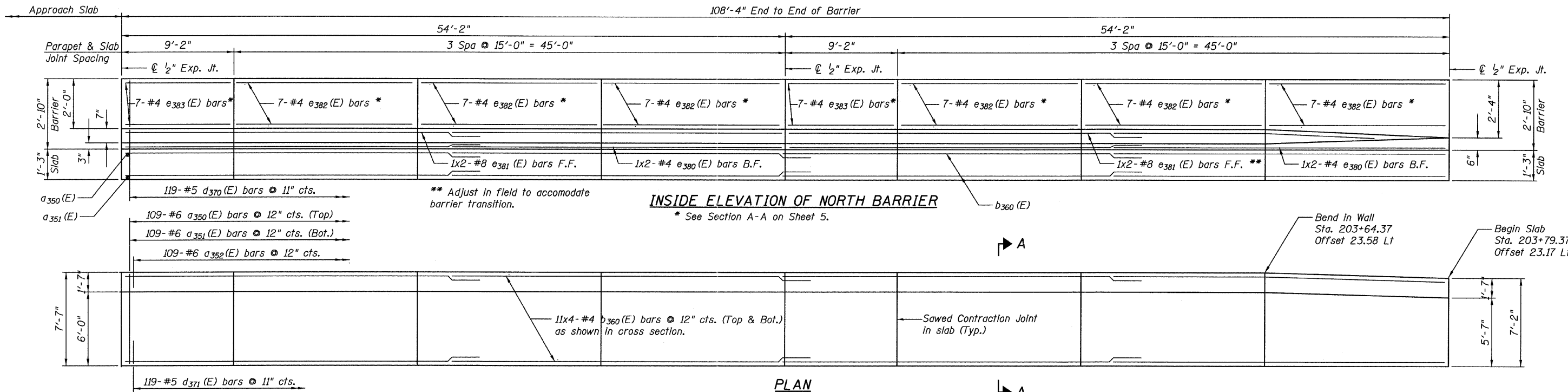
**RAMP 3 MSE ABUTMENT WALL SECTIONS  
STRUCTURE NO. 016-1306**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - JMA	REVISIONS		SHEET NO. 2	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,MMB	NAME	DATE		55					0711.2R & 1011.1BR
	DRAWN - JMA				9 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD,MMB					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
	DATE - 03/25/2011									

4/28/2011 1:29:45 PM p:\01345\structure\C2 Central Ave. 016-0724\155-3inse.dgn



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



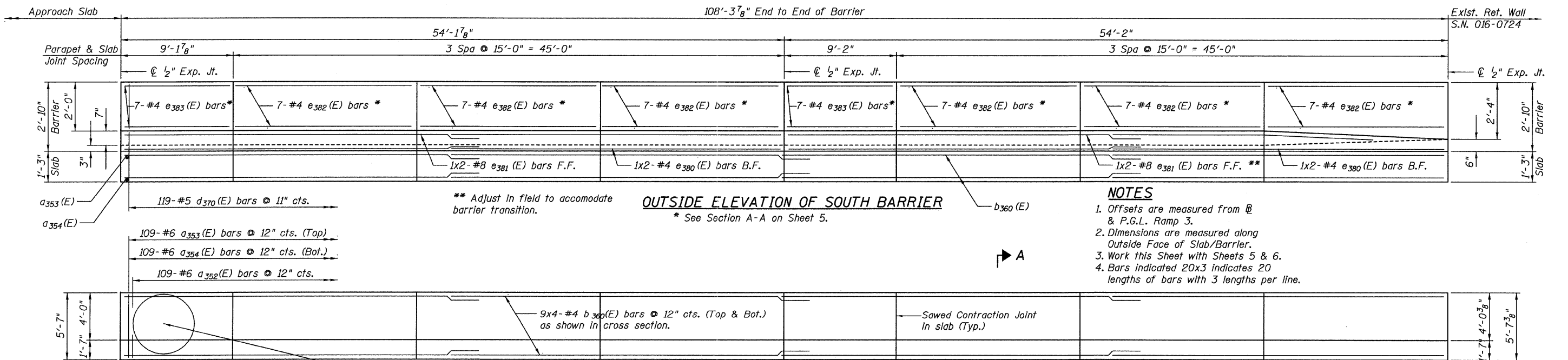
**INSIDE ELEVATION OF NORTH BARRIER**

\* See Section A-A on Sheet 5.

PLAN

**LAP SPLICES**

Bar	Lap
#4	2'-7"
#8	6'-9"



**OUTSIDE ELEVATION OF SOUTH BARRIER**

\* See Section A-A on Sheet 5.

PLAN

**NOTES**

1. Offsets are measured from @ & P.G.L. Ramp 3.
2. Dimensions are measured along Outside Face of Slab/Barrier.
3. Work this Sheet with Sheets 5 & 6.
4. Bars indicated 20x3 indicates 20 lengths of bars with 3 lengths per line.

**MOMENT SLAB RAMP 3  
PLAN AND ELEVATION  
STRUCTURE NO. 016-1306**

**TYLIN** INTERNATIONAL

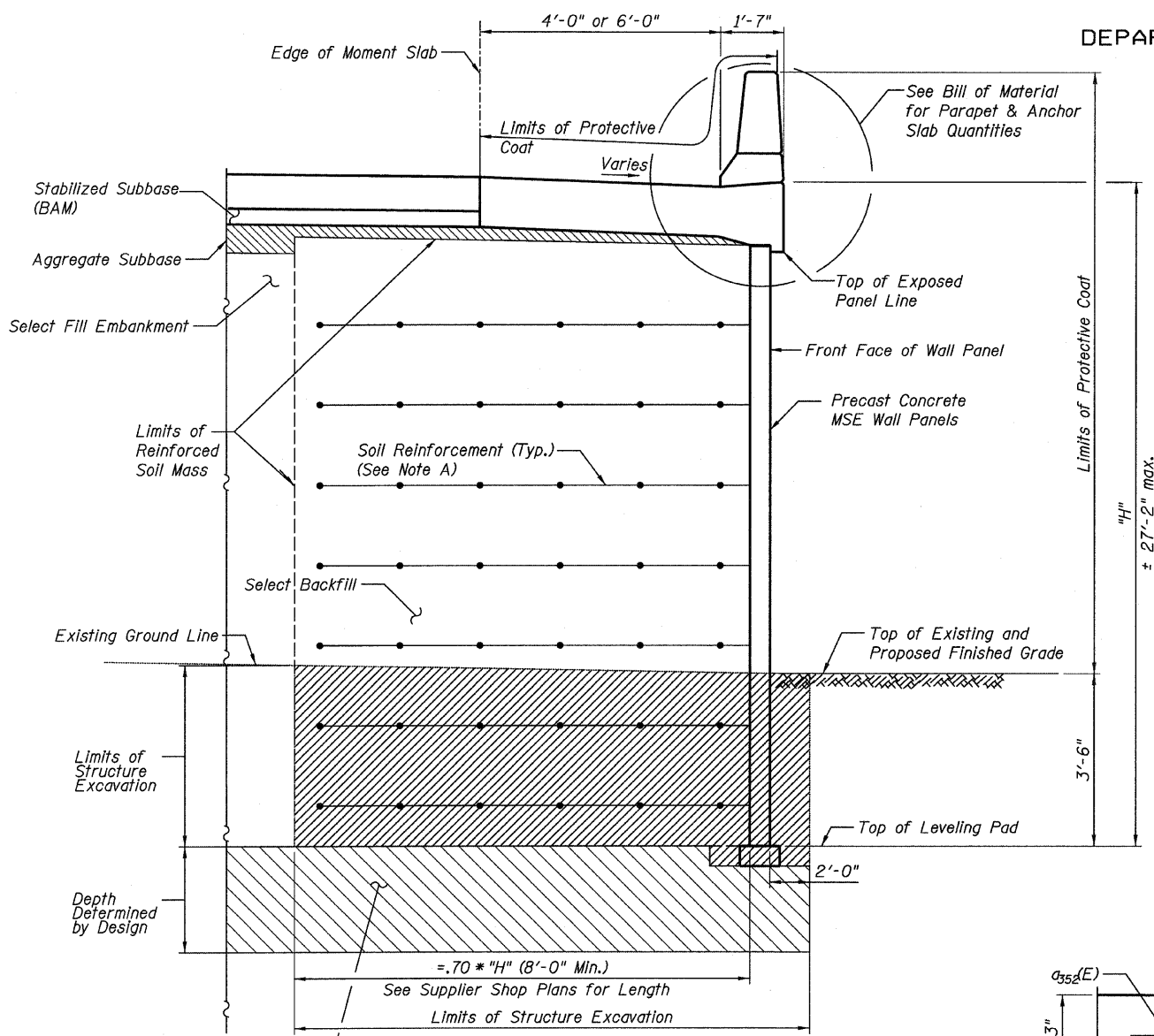
DESIGNED	EKH	REVISIONS	
CHECKED	AMD,MMB	NAME	DATE
DRAWN	EKH		
CHECKED	AMD,MMB		
DATE	03/25/2011		

SHEET NO. 4	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	587
9 SHEETS		CONTRACT NO. 60999			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

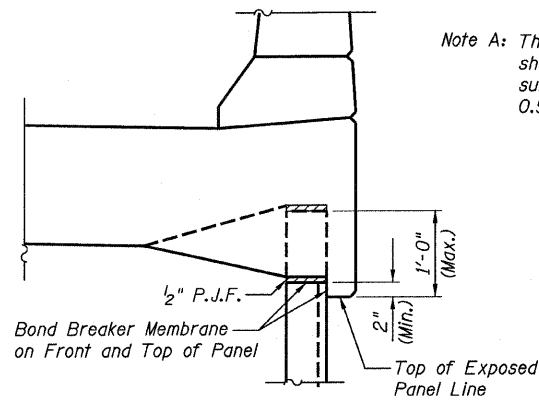
4/28/2011 1:29:47 PM



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

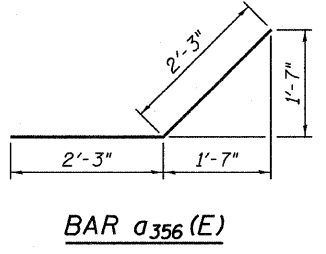


**TYPICAL CROSS SECTION**

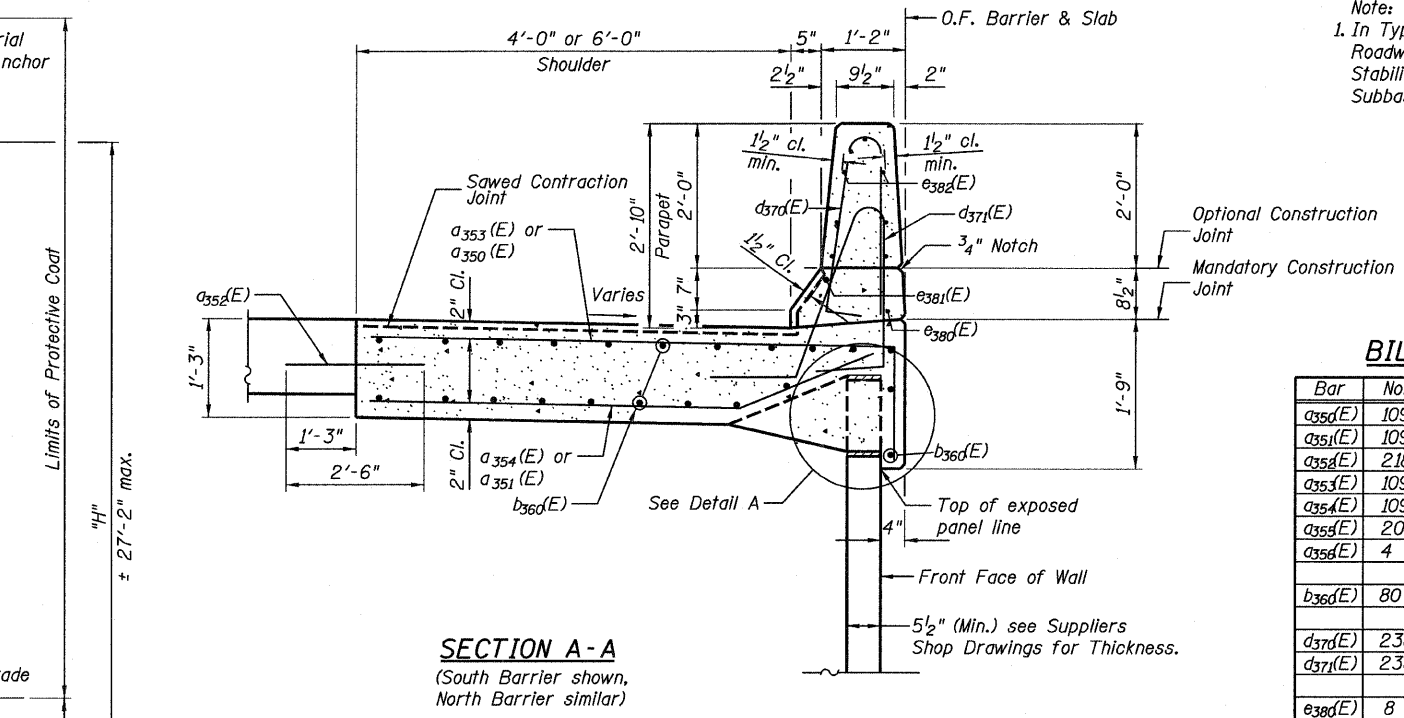


**DETAIL A**

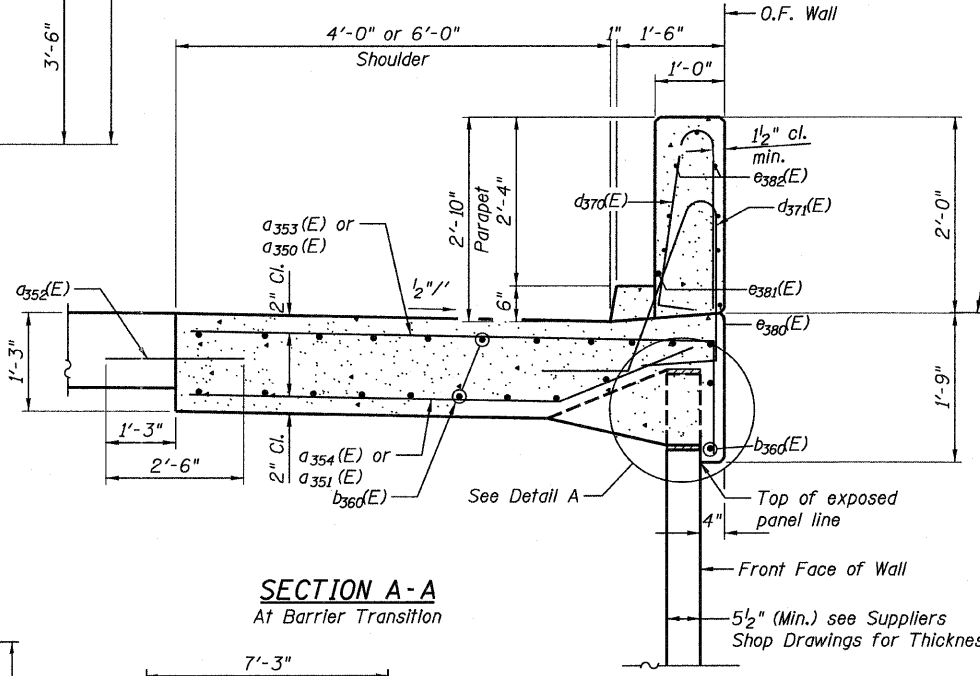
Note A: The M.S.E. Wall Suppliers internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and a horizontal sliding force of 0.5 k/ft of wall.



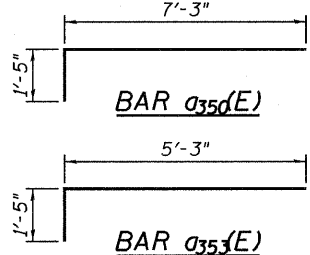
**BAR a356(E)**



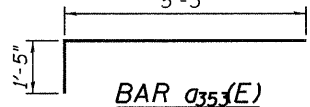
**SECTION A-A**  
(South Barrier shown, North Barrier similar)



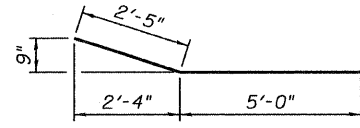
**SECTION A-A**  
At Barrier Transition



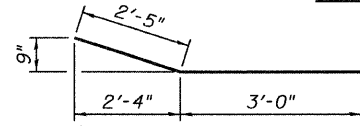
**BAR a350(E)**



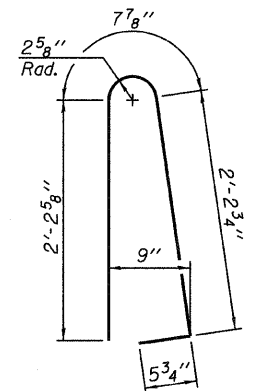
**BAR a351(E)**



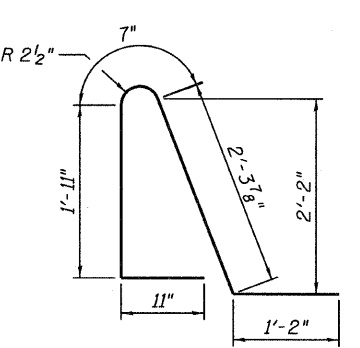
**BAR a351(E)**



**BAR a354(E)**



**BAR d370(E)**



**BAR d371(E)**

**RAMP 3 MOMENT SLAB  
SECTIONS AND BAR LIST  
STRUCTURE NO. 016-1306**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a350(E)	109	#6	8'-8"	┌
a351(E)	109	#6	7'-5"	┌
a352(E)	218	#6	2'-6"	┌
a353(E)	109	#6	6'-8"	┌
a354(E)	109	#6	5'-5"	┌
a355(E)	20	#6	5'-6"	┌
a356(E)	4	#6	4'-6"	┌
b360(E)	80	#4	29'-0"	┌
d370(E)	238	#5	5'-7"	└
d371(E)	238	#5	6'-11"	└
e380(E)	8	#4	28'-3"	┌
e381(E)	8	#8	30'-4"	┌
e382(E)	84	#4	14'-8"	┌
e383(E)	28	#4	8'-10"	┌
Reinforcement Bars, Epoxy Coated		Pound	12,070	
Concrete Superstructure		Cu. Yds.	102.8	

Bars indicated thus 1 x 15- #5 etc. indicates 1 line of bars with 15 lengths per line.

Note:  
1. In Typical Cross Section, See Roadway plans for payment of Stabilized Subbase, Aggregate Subbase and Embankment.

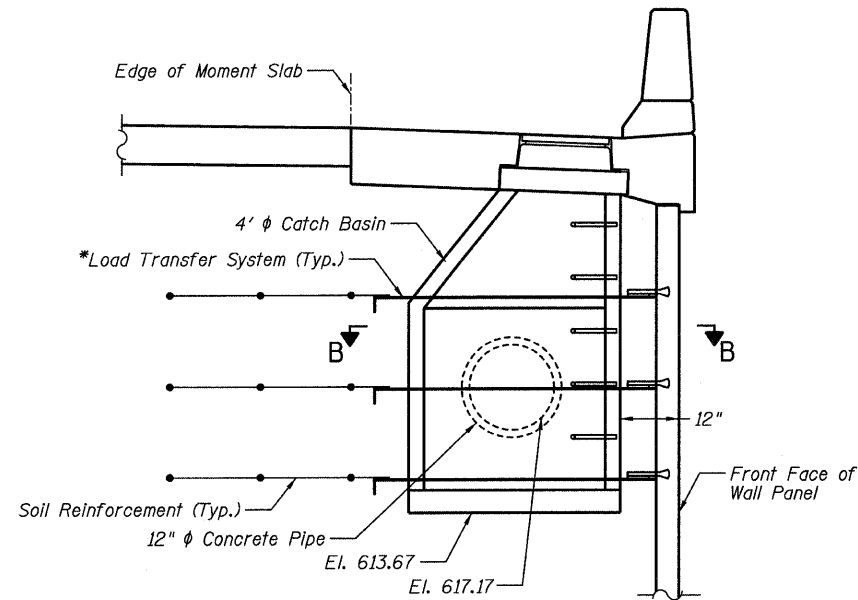
**TYLIN INTERNATIONAL**

DESIGNED	EKH	REVISIONS	
CHECKED	AMD, MMB	NAME	DATE
DRAWN	EKH		
CHECKED	AMD, MMB		
DATE	03/25/2011		

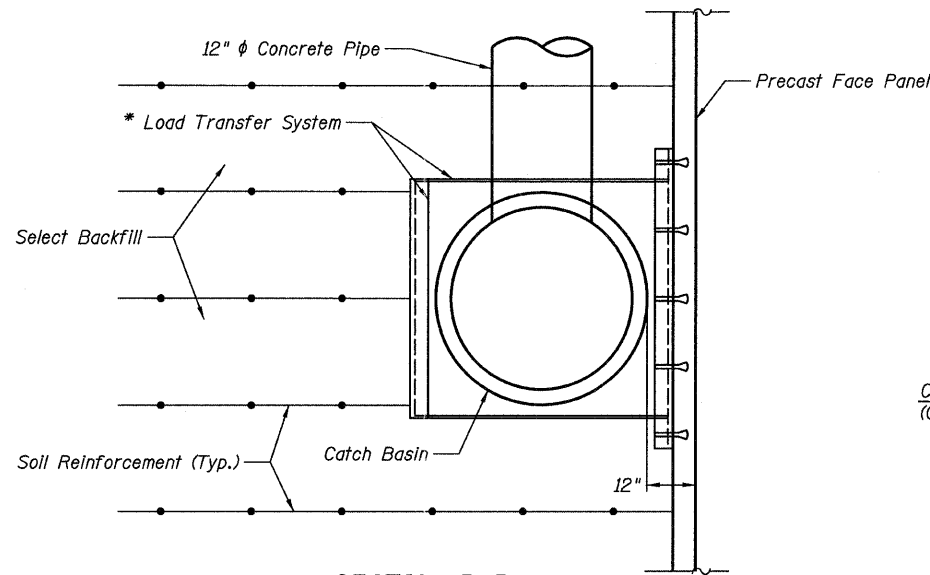
SHEET NO. 5	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	588
9 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

4/28/2011 2:13:57 PM p:\01345\structure\02\_Central\_Ave\_016-0724\155-3moms\lab2.dwg

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

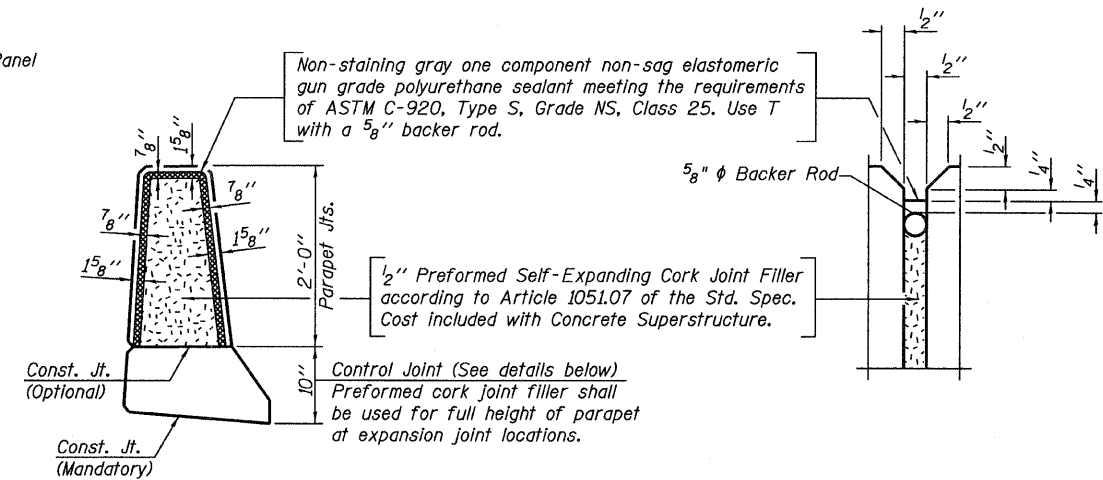


SECTION A-A

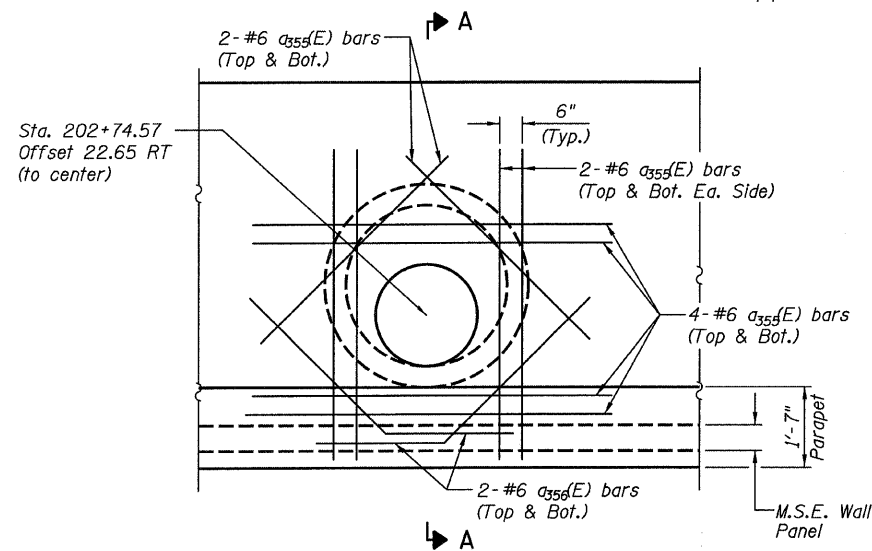


SECTION B-B

Note:  
\*M.S.E. supplier to design load transfer system to accommodate concrete pipe and catch basin.

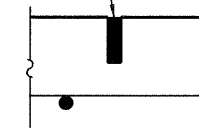


PARAPET JOINT DETAILS

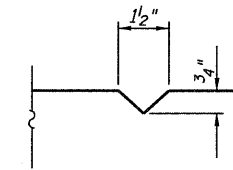


PLAN AT CATCH BASIN

1/4" wide x 1/2" deep sawed joint filled with hot poured sealant in accordance with Article 1050 of Standard Specifications.



SAWED CONTRACTION JOINT DETAIL - SLAB  
(Cost Included with Concrete Structures)



CONTROL JOINT DETAIL - PARAPET

RAMP 3 MOMENT SLAB  
DETAILS  
STRUCTURE NO. 016-1306

TYLIN INTERNATIONAL

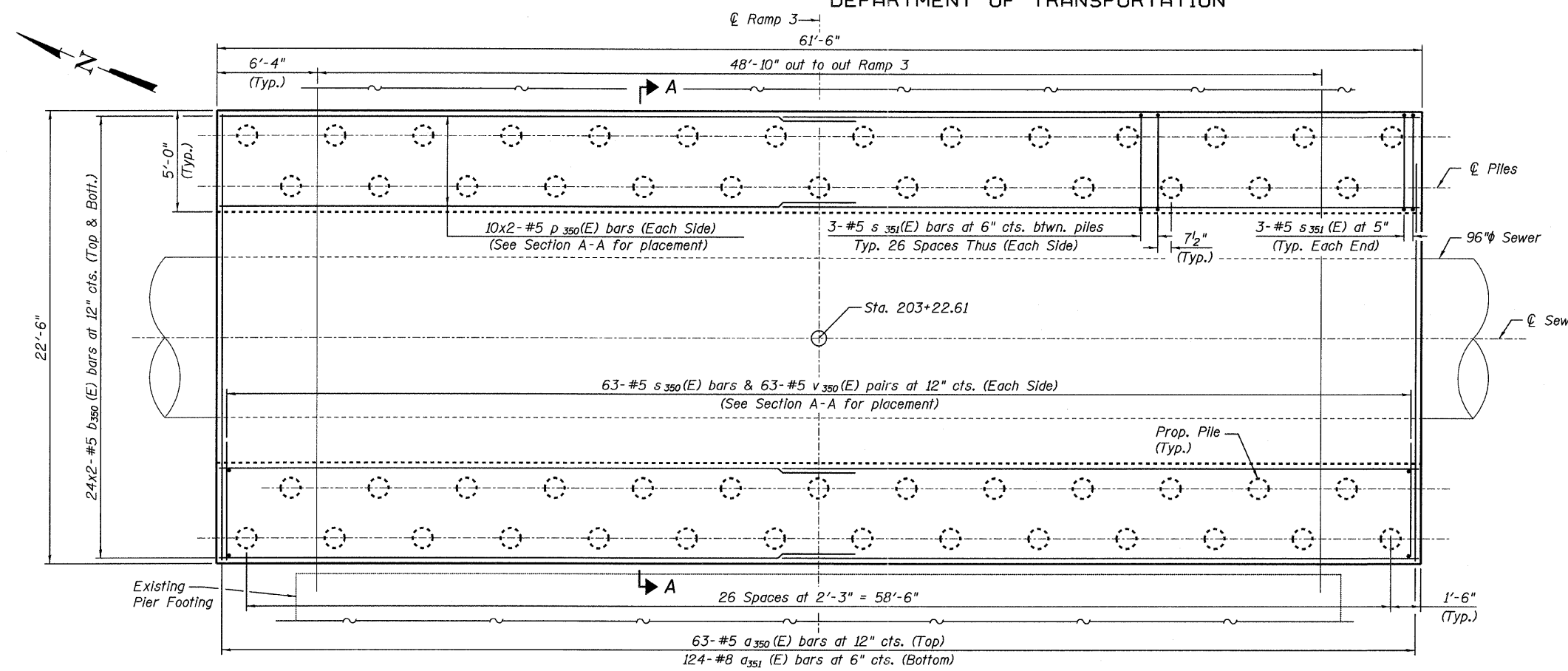
DESIGNED - EKH	REVISIONS	
CHECKED - AMD, MMB	NAME	DATE
DRAWN - EKH		
CHECKED - AMD, MMB		
DATE - 03/25/2011		

SHEET NO. 6	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	589
9 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT					

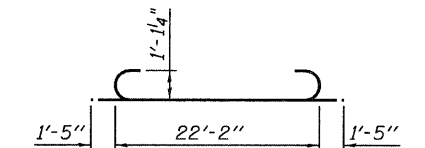
p:\01345\structure\2\_Central\_Ave\_016-0724\55-3\moms\lab01.dgn 4/28/2011 1:29:49 PM

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

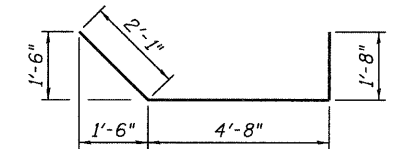
BILL OF MATERIAL



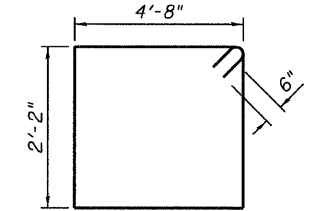
Bar	No.	Size	Length	Shape
a <sub>350</sub> (E)	63	#5	22'-2"	—
a <sub>351</sub> (E)	124	#8	25'-0"	—
b <sub>350</sub> (E)	96	#5	32'-5"	—
p <sub>350</sub> (E)	40	#5	32'-5"	—
s <sub>350</sub> (E)	126	#5	8'-5"	—
s <sub>351</sub> (E)	168	#5	14'-8"	—
v <sub>350</sub> (E)	252	#5	3'-0"	—
Driving Piles			Foot	2,120
Furnishing Metal Shell Piles, 12"x0.25"			Foot	2,120
Concrete Structures			Cu. Yd.	248.3
Reinforcement Bars, Epoxy Coated			Pound	18,800
Structure Excavation			Cu. Yd.	370
Test Pile Metal Shells			Each	1



BAR a<sub>351</sub>(E)



BAR s<sub>350</sub>(E)



BAR s<sub>351</sub>(E)

PLAN

PILE DATA

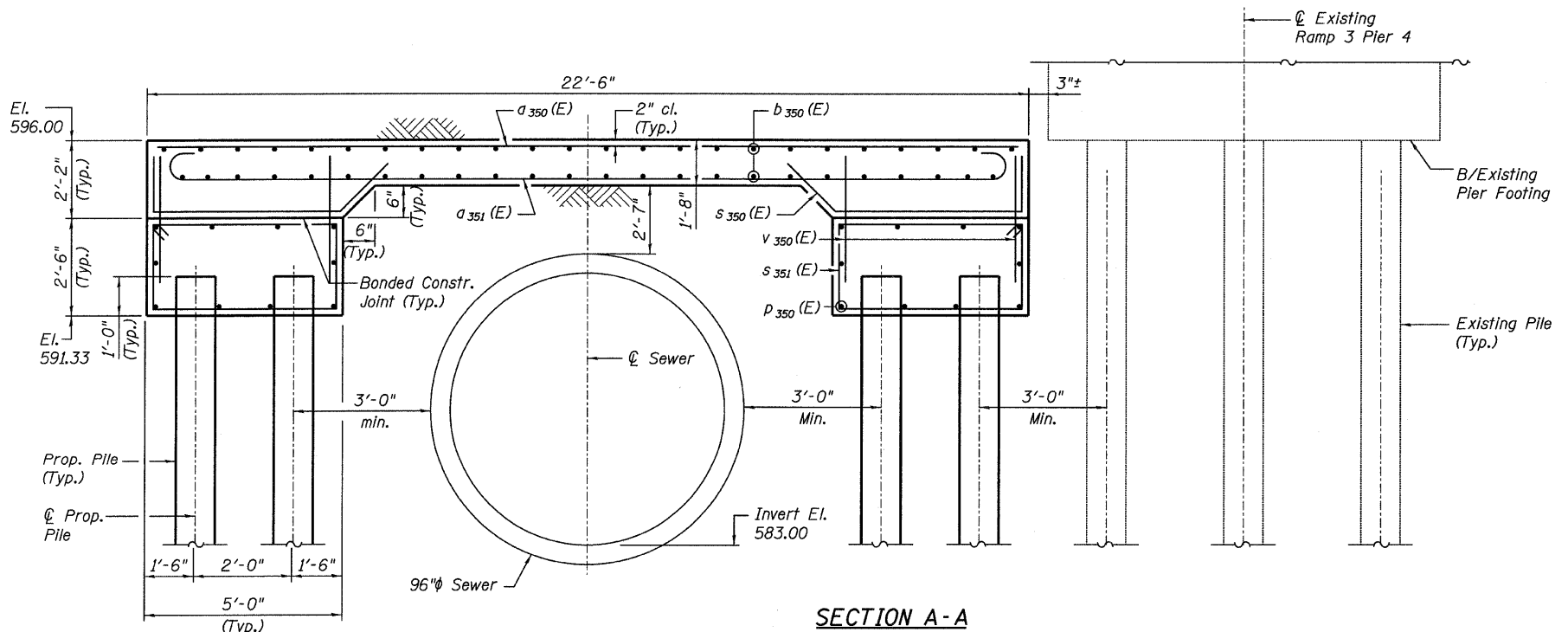
Type: Metal Shell  
12" φ x 0.25" wall.  
Nominal Required Bearing: 270 kips  
Factored Resistance Available: 90 kips  
Est. Length: 40'-0"  
No. Production Piles: 53 Piles  
No. Test Piles: 1 Test Pile.

MIN. LAP LENGTH

#5 3'-8"

NOTES

- Load Capacity: The pipe protection structure, as depicted in Section A-A, is designed to support the:
  - Self-weight of the concrete structure, plus
  - Earth backfill of approximately 21'-3".
  - A uniformly distributed construction live load of 1,000 psf.



SECTION A-A

RAMP 3 SEWER PROTECTION SLAB  
STRUCTURE NO. 016-1306

<p><b>TYLIN</b> INTERNATIONAL</p>	DESIGNED - CBS	REVISIONS		<p>SHEET NO. 7</p>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	590	
	DRAWN - CBS				CONTRACT NO. 60999					
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

9:15:15 AM  
p:\01345\structure\02\_Central\_Ave\_016-0724\155-3sewerlabadan

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Geo Services, Inc. Geotechnical, Environmental & Civil Engineering 806 Parkview Court, Suite 204 Naperville, Illinois 60565 (630) 251-1888		SOIL BORING LOG		PAGE 1 of 2	
ROUTE <u>F.A.I. RTE. 55</u>		DESCRIPTION <u>Central Avenue Over Interstate 55 Ramp Reconstruction</u>		DATE <u>7/15-16/2010</u>	
SECTION <u>9(H, HB &amp; SB)R-1</u>		LOCATION <u>SEC. 4 &amp; 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township</u>		LOGGED BY <u>RJ</u>	
COUNTY <u>Cook</u>		DRILLING METHOD <u>Hollow Stem Auger/Rotary</u> HAMMER TYPE <u>CME Automatic</u>		GSI JOB No. <u>10098</u>	
STRUCT. NO. <u>016-1306</u>		Surface Water Elev. <u>n/a</u>		D B U M	
Station <u>202+34 to 203+79</u>		Stream Bed Elev. <u>n/a</u>		E L C O	
BORING NO. <u>RW-13</u>		Groundwater Elevation:		P O S I	
Station <u>202+53</u>		First Encounter <u>n/a</u>		T W S I	
Offset <u>39.0' Left</u>		Upon Completion <u>n/a</u>		H S Qu T	
Ground Surface Elev. <u>600.7</u>		After _____ Hrs. <u>    </u>		(ft) (6") (tsf) (%)	
6.0" ASPHALT, 8.0" CONCRETE, 3.0" CRUSHED STONE		599.3		15	
				6	
				6 4.5+P 17	
				3	
				3 111	
CLAY LOAM with Cinders-brown & gray- medium stiff to hard (A-6) Fill		-5		5 2.6B 18	
				2	
				2 100	
				4 0.75B 22	
				5 106	
				8	
				12 2.0B 20	
		572.7			
				2	
				2 112	
				2	
				-10 2 1.2B 19	
				3	
				4 110	
				6 1.1B 19	
		587.7			
SILTY CLAY-brown & gray- stiff (A-6)				2 95	
				2	
				-15 4 0.7B 27	
		585.2			
				4 107	
				5	
				7 1.9B 21	
				2	
				8 115	
				4	
				16 2.2B@	
		-20		5 NR	
				-40 30 12.7% 15	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

Geo Services, Inc. Geotechnical, Environmental & Civil Engineering 806 Parkview Court, Suite 204 Naperville, Illinois 60565 (630) 251-1888		SOIL BORING LOG		PAGE 2 of 2	
ROUTE <u>F.A.I. RTE. 55</u>		DESCRIPTION <u>Central Avenue Over Interstate 55 Ramp Reconstruction</u>		DATE <u>7/15-16/2010</u>	
SECTION <u>9(H, HB &amp; SB)R-1</u>		LOCATION <u>SEC. 4 &amp; 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township</u>		LOGGED BY <u>RJ</u>	
COUNTY <u>Cook</u>		DRILLING METHOD <u>Hollow Stem Auger/Rotary</u> HAMMER TYPE <u>CME Automatic</u>		GSI JOB No. <u>10098</u>	
STRUCT. NO. <u>016-1306</u>		Surface Water Elev. <u>n/a</u>		D B U M	
Station <u>202+34 to 203+79</u>		Stream Bed Elev. <u>n/a</u>		E L C O	
BORING NO. <u>RW-13</u>		Groundwater Elevation:		P O S I	
Station <u>202+53</u>		First Encounter <u>n/a</u>		T W S I	
Offset <u>39.0' Left</u>		Upon Completion <u>n/a</u>		H S Qu T	
Ground Surface Elev. <u>600.7</u>		After _____ Hrs. <u>    </u>		(ft) (6") (tsf) (%)	
SILTY CLAY-gray- stiff to very stiff (A-6)		558.7			
				7	
				10 1.7B 22	
				3	
				3 107	
				6	
				-25 8 2.25B 21	
				5	
				5 106	
				8	
				12 2.0B 20	
		553.7			
				17	
				23	
				-50 25 NP 19	
				532.2	
				1001"	
				-70 NR	
				548.7	
				10	
				5	
				-35 9 1.1B 16	
				-75	
				24	
				-55 26 4.5P 15	
				9	
				18 3.1S@	
				-60 27 12.7% 13	
				-80	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

**BORING LOGS 1**  
**STRUCTURE NO. 016-1306**

**TYLIN INTERNATIONAL**

DESIGNED -	REVISIONS	
	NAME	DATE
CHECKED - AMD,		
DRAWN -		
CHECKED - AMD,		
DATE - 03/25/2011		

SHEET NO. 8	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	591
9 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

p:\01345\structure\2 Central Ave. 016-0724\55-3br-1.dgn 4/28/2011 1:29:51 PM



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Exist. Ref. Wall SN 016-0724 **TOTAL BILL OF MATERIALS**

ITEM	UNIT	TOTAL
Structure Excavation	CU YD	1315
Concrete Superstructure	CU YD	183.8
Reinforcement Bars, Epoxy Coated	POUND	23,510
Mechanically Stabilized Earth Retaining Wall	SQ FT	12,126
Protective Coat	SQ YD	1705
Contractor Designed Ground Improvement	L SUM	0.25
Concrete Structures	CU YD	2.9

**INDEX OF SHEETS**

- General Plan And Elevation - Ramp 4 Retaining Wall
- Ramp 4 MSE Abutment Wall Sections
- Ramp 4 MSE Abutment Wall & End Cap Details
- Ramp 4 Moment Slab Plan & Elevation 1 of 2
- Ramp 4 Moment Slab Plan & Elevation 2 of 2
- Ramp 4 Moment Slab Sections & Bar List
- Ramp 4 Moment Slab Details
- Boring Logs 1
- Boring Logs 2
- Boring Logs 3
- Boring Logs 4

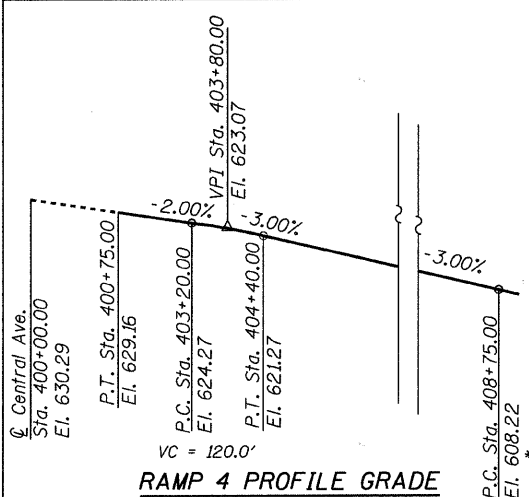
**BORING LOCATIONS**

No.	Station	*Offset
RW-17	402+37.00	64.0 L
RW-18	402+89.00	60.0 L
RW-19	403+39.00	59.5 L
RW-20	403+89.00	57.5 L
RW-21	404+44.00	56.5 L
RW-22	404+97.00	54.8 L

\* Offset from PGL Ramp 4

**LEGEND**

- Boring Location
- Existing Manhole
- Proposed Catch Basin
- Proposed Manhole
- Existing Catch Basin
- Existing Underdrain
- Existing Storm Sewer
- Removal of Existing Sub-Structures
- Proposed Underdrain
- Proposed Storm Sewer



**RAMP 4 PROFILE GRADE**

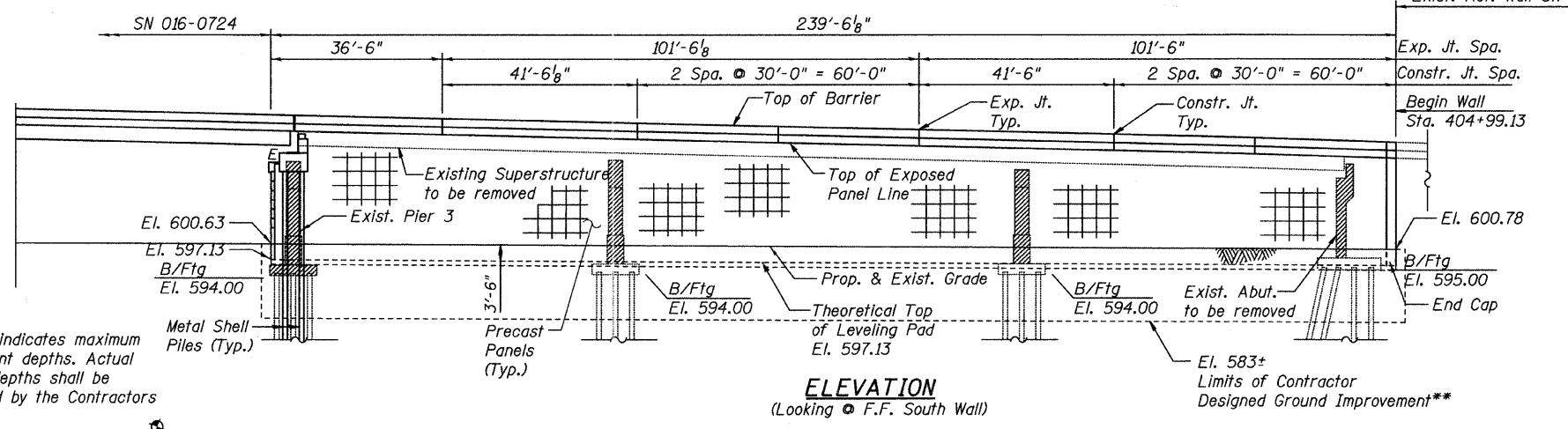
**SCOPE OF WORK**

Spans 3-5  
- Remove and replace the existing structure with Mechanically Stabilized Earth Retaining Walls.

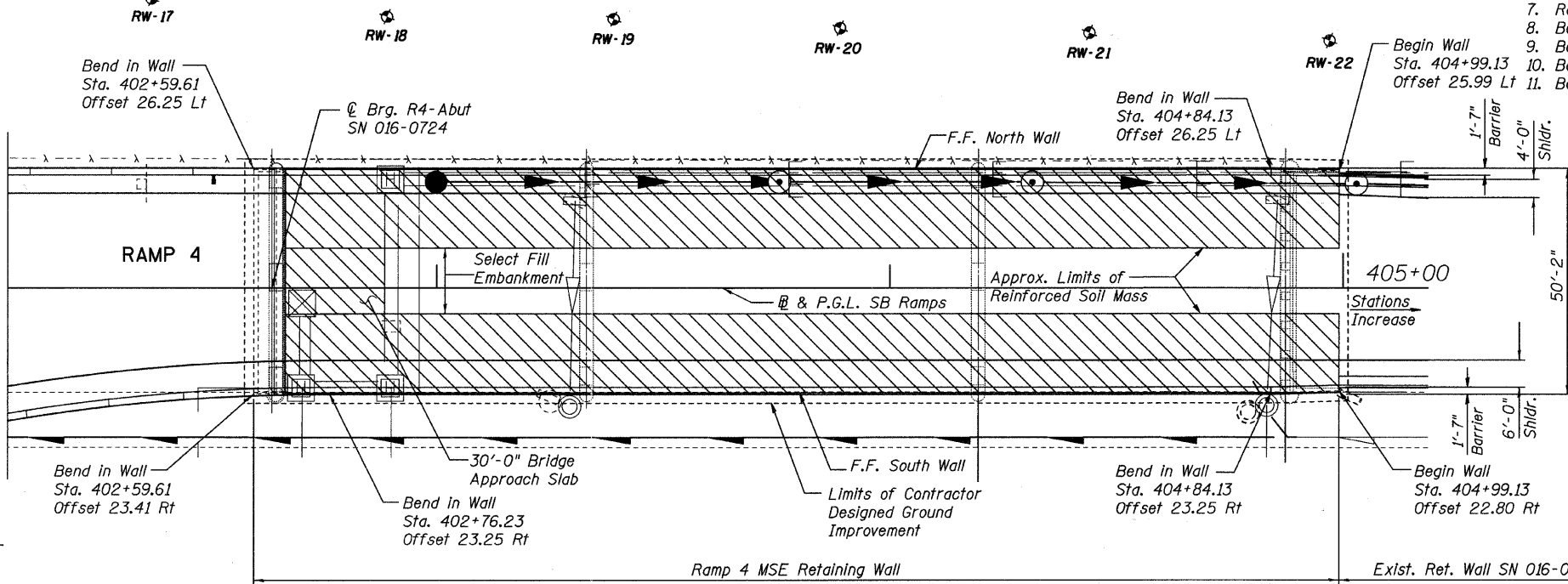
**Notes:**

- Wall stations and offsets are given to the front face of the precast concrete wall panels, and are measured from the SB Ramps Baseline.
- For sections through Ramp and Abutment, refer to Sheet 2.
- Slipforming of the parapets is not allowed.
- Contractor Designed Ground Improvement: Bearing Capacity = 4600 psf Maximum Allowable Settlement = 0.4"
- For existing structure removal details see Sheet 335. Cost of removals is included with S.N. 016-0724.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60.

\*\* Elevation indicates maximum improvement depths. Actual remedial depths shall be determined by the Contractors design



**ELEVATION**  
(Looking @ F.F. South Wall)

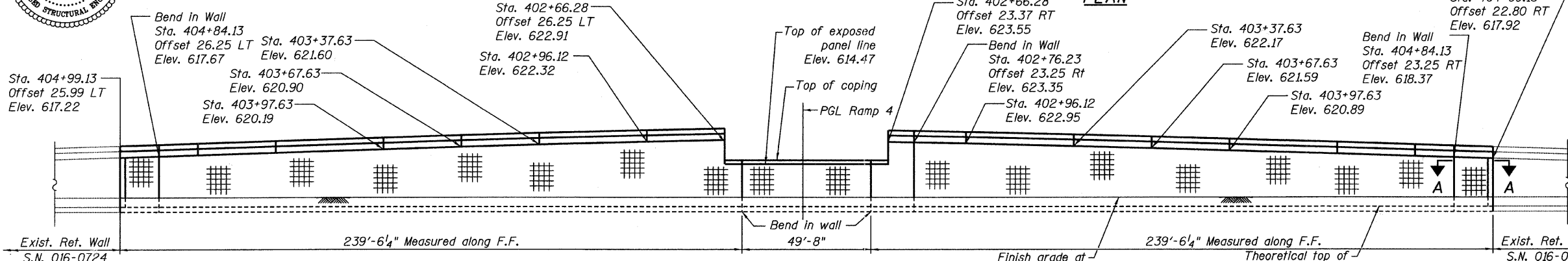


**PLAN**

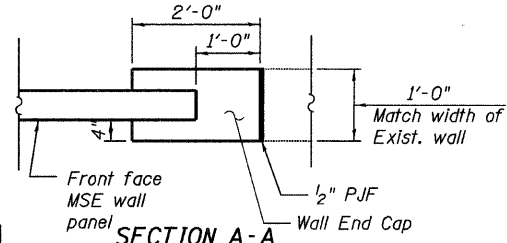
**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY  
*Anna M. Dukes*  
ENGINEER OF BRIDGES AND STRUCTURES



Signed *Anna M. Dukes*  
Anna M. Dukes, S.E. Il Lic. No. 081-005598  
Expires 11-30-2012.  
Date **March 25, 2011**



**RAMP 4 WALL ELEVATION**  
Developed elevation along front face



**SECTION A-A**

**GENERAL PLAN AND ELEVATION  
RAMP 4 RETAINING WALL  
CENTRAL AVE. OVER I-55  
COOK COUNTY  
STATION 402+59.61 TO 404+99.13  
STRUCTURE NO. 016-1307**

**TYLIN INTERNATIONAL**

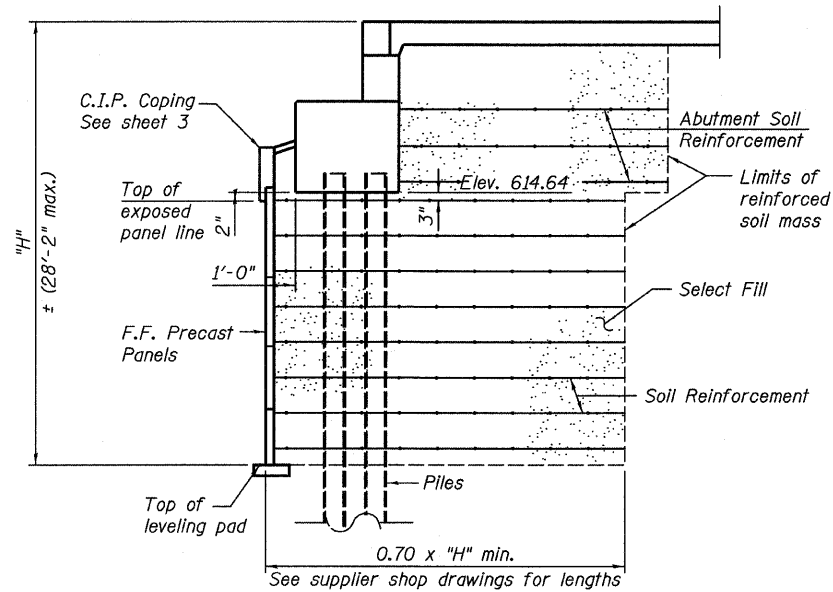
DESIGNED -	EKH	REVISIONS	
CHECKED -	AMD, MMB	NAME	DATE
DRAWN -	EKH		
CHECKED -	AMD, MMB		
DATE -	03/25/2011		

SHEET NO. 1  
11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	0711.2R & 1011.1BR	COOK	741	593
CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

5/12/10 PM  
p:\01345\structure\2 Central Ave. 016-0724\155-4.msp\ape.dgn  
5/10/2011

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

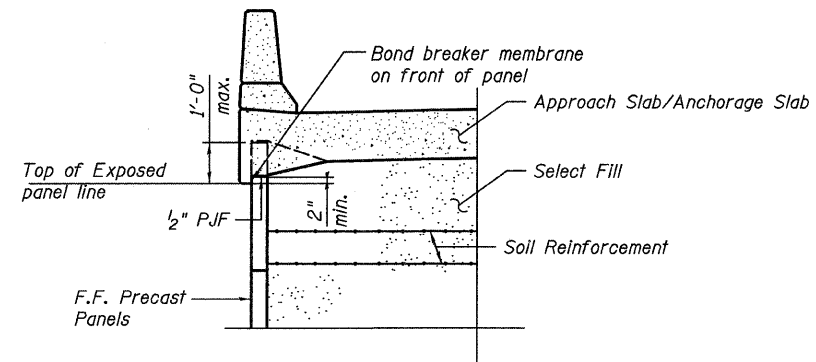


**SECTION THRU ABUTMENT**

**NOTES**

The MSE wall supplier shall design the abutment soil reinforcement to resist a horizontal force of 1.83 kips/ft of abutment.

Piles shall be driven prior to placement of the reinforced select fill and coated with coal tar epoxy from the bottom of the select fill to 1" above the base of abutment. The cost of the coal tar epoxy shall be included with the cost of furnishing piles. Cost of furnishing and driving piles is included with S.N. 016-0724.



**SECTION THRU RETAINING WALLS**

**NOTES**

Offsets are to Front Face of precast panels.

For coping details see sheet 3.

For anchorage slab details, see sheets 6 & 7.

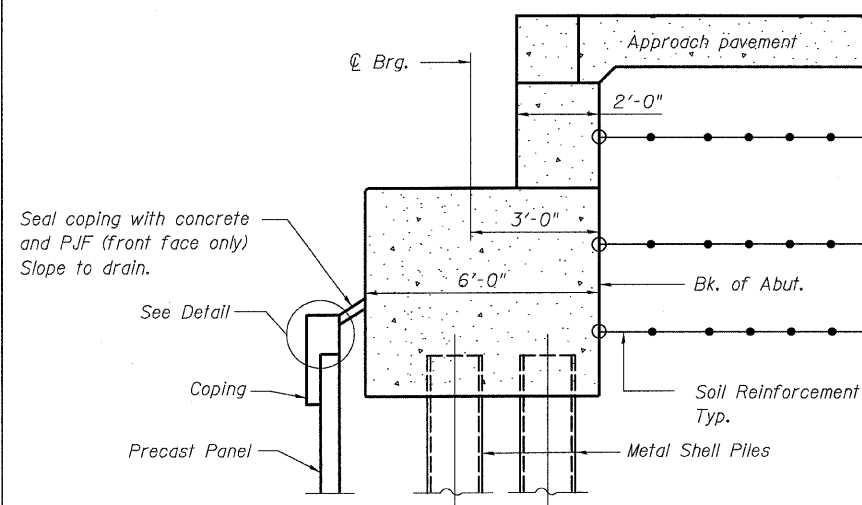
**RAMP 4 MSE ABUTMENT WALL SECTIONS  
STRUCTURE NO. 016-1307**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - JMA	REVISIONS		SHEET NO. 2	F.A.I. RTE.	SECTION 0711.2R & 1011.1BR	COUNTY COOK	TOTAL SHEETS	SHEET NO.
	CHECKED - AMD, MMB	NAME	DATE		55			741	594
	DRAWN - JMA				CONTRACT NO. 60999				
	CHECKED - AMD, MMB				FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT				
	DATE - 03/25/2011								

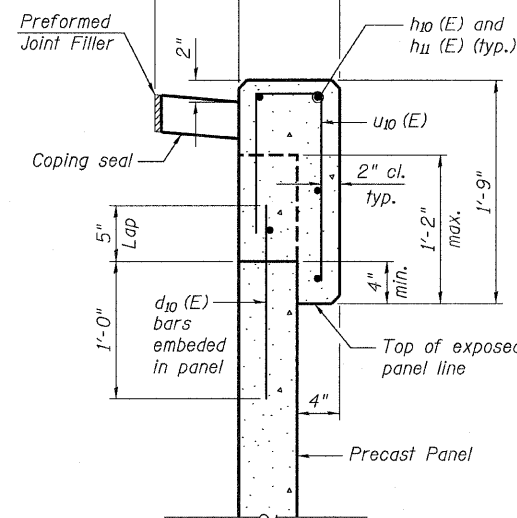
p:\01345\structure\02\_Central\_Ave\_016-0724\155-4.msxdan 4/28/2011 1:29:56 PM



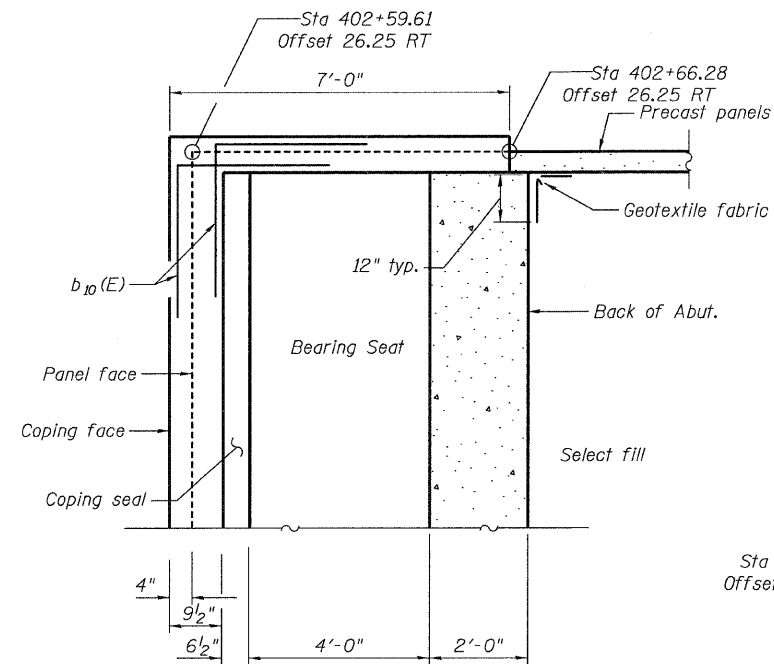
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



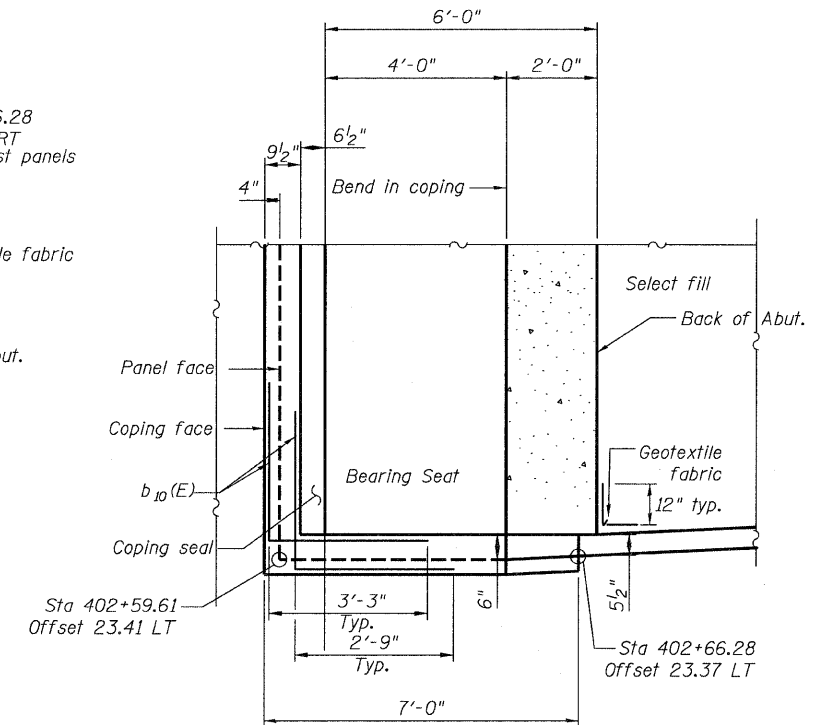
**SECTION THRU ABUTMENT**  
(Horiz. dim. @ Rt. L's)



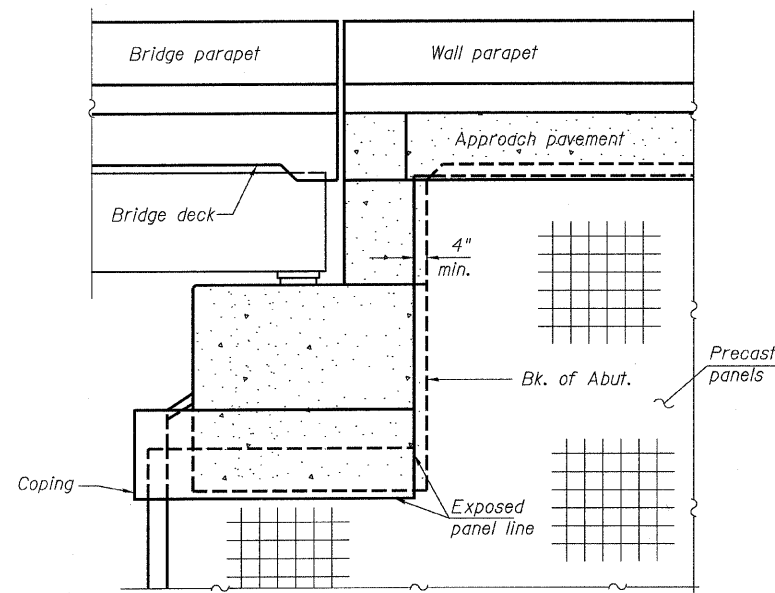
**DETAIL**



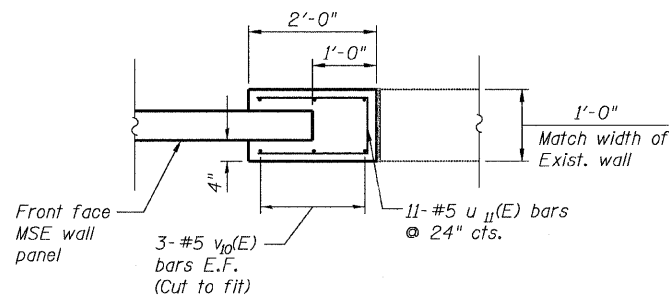
**PLAN AT ABUT. - N. END**



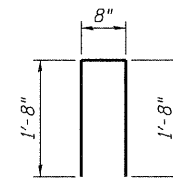
**PLAN AT ABUT. - S. END**



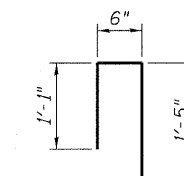
**END VIEW**



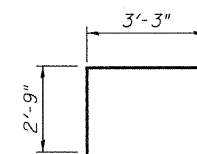
**SECTION A-A  
WALL END CAP DETAIL**



**BAR u11(E)**



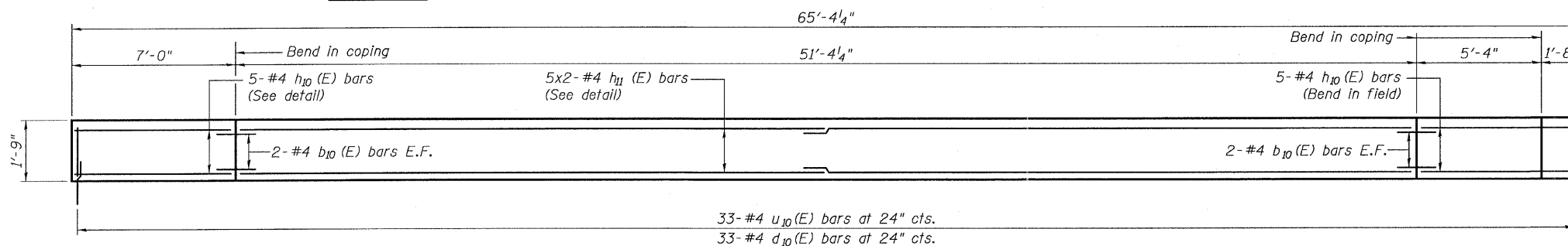
**BAR u10(E)**



**BAR b10(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d <sub>10</sub> (E)	33	#4	1'-5"	—
b <sub>10</sub> (E)	8	#4	6'-0"	┌
h <sub>10</sub> (E)	10	#4	6'-8"	—
h <sub>11</sub> (E)	10	#4	26'-10"	—
u <sub>10</sub> (E)	33	#4	3'-0"	┌
u <sub>11</sub> (E)	22	#5	4'-0"	┌
v <sub>10</sub> (E)	12	#5	20'-5"	—
Concrete Structures			Cu. Yd.	2.9
Reinforcement Bars, Epoxy Coated			Pound	660



**MINIMUM BAR LAP**

#4 bar - 2'-7"

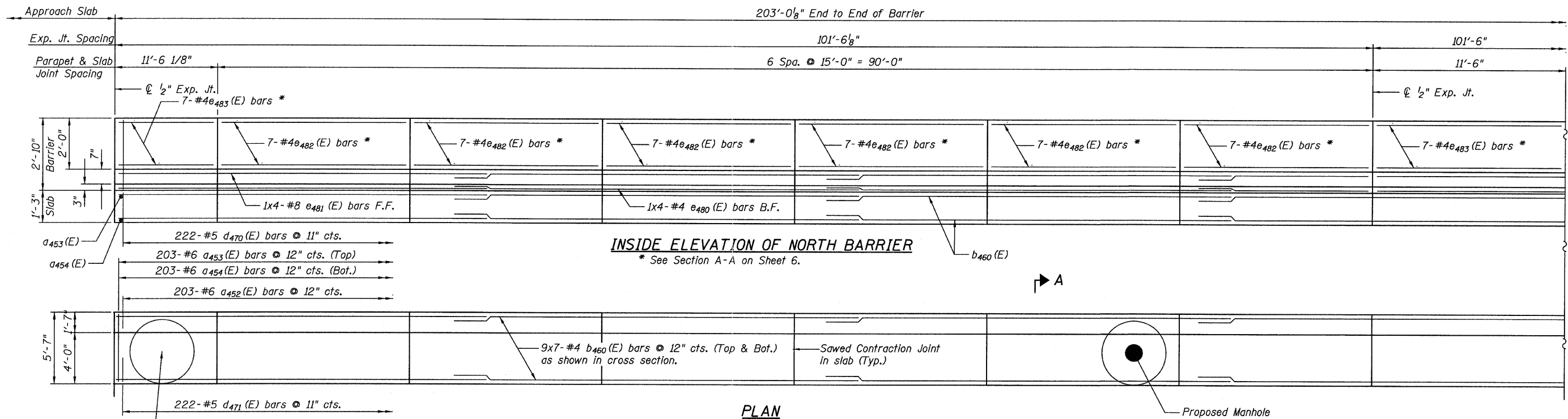
**COPING ELEVATION**

**RAMP 4 MSE ABUTMENT WALL  
& END CAP DETAILS  
STRUCTURE NO. 016-1307**

<b>TYLIN INTERNATIONAL</b>	DESIGNED - JMA	REVISIONS		SHEET NO. 3	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD, MMB	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	595	
	DRAWN - JMA				CONTRACT NO. 60999					
	CHECKED - AMD, MMB				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011				11 SHEETS					

4/28/2011 1:29:57 PM p:\01345\structure\2 Central Ave. 016-072\155-4\sect1.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



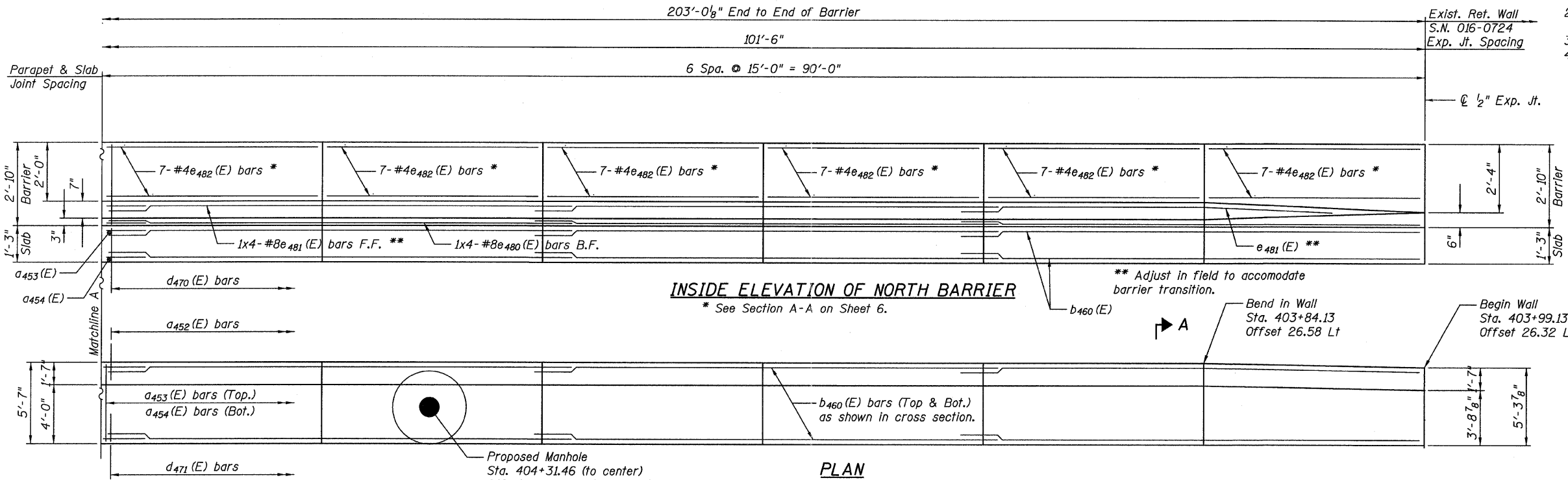
PLAN

Proposed Catch Basin  
Sta. 402+99.84 (to center)  
Offset 23.51' Lt (to center)  
See Sheet 7 for additional  
slab reinforcement.

Proposed Manhole  
Sta. 403+75.60 (to center)  
Offset 23.52' Lt (to center)  
See Sheet 7 for additional  
slab reinforcement.

NOTES

- Offsets are measured from  $\mathbb{E}$  & P.G.L. Ramp 4.
- Dimensions are measured along Outside Face of Slab/Barrier.
- Work this Sheet with Sheets 5 to 7.
- Bars indicated 20x3 indicate 20 lengths of bars with 3 lengths per line.



PLAN

Proposed Manhole  
Sta. 404+31.46 (to center)  
Offset 23.47' Lt (to center)  
See Sheet 7 for additional  
slab reinforcement.

\*\* Adjust in field to accommodate barrier transition.

Bend in Wall  
Sta. 403+84.13  
Offset 26.58 Lt

Begin Wall  
Sta. 403+99.13  
Offset 26.32 Lt

LAP SPLICES

Bar	Lap
#4	2'-7"
#8	6'-9"

MOMENT SLAB RAMP 4  
PLAN AND ELEVATION 1 OF 2  
STRUCTURE NO. 016-1307

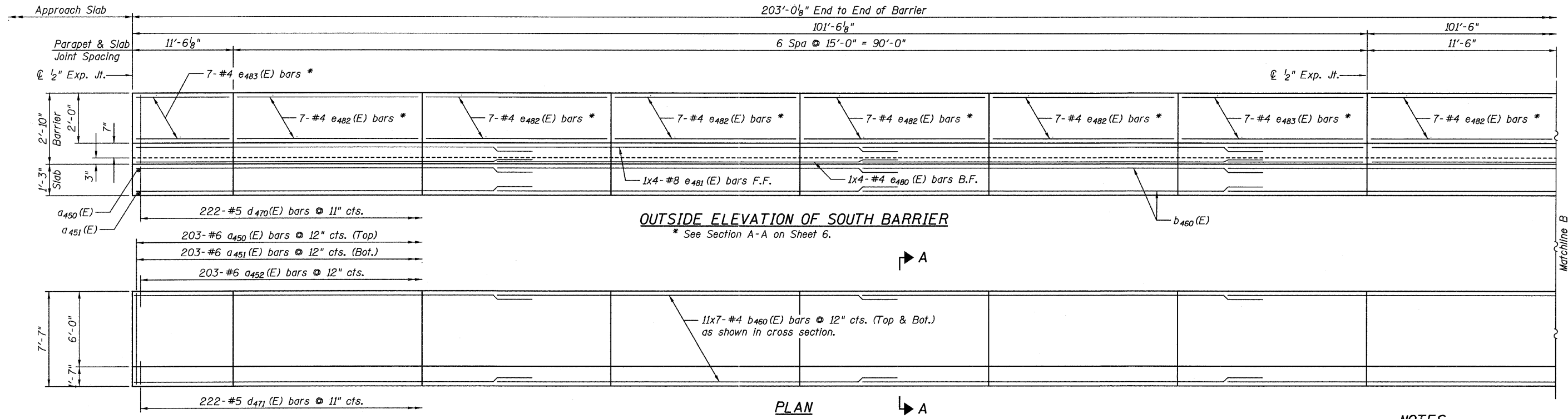
TYLIN INTERNATIONAL

DESIGNED	REVISIONS
EKH	NAME
AMD, MMB	DATE
EKH	
AMD, MMB	
03/25/2011	

SHEET NO. 4	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
11 SHEETS	55	0711.2R & 1011.1BR	COOK	741	596
			CONTRACT NO. 60999		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

4/28/2011 1:29:58 PM p:\01345\structure\02 Central Ave. 016-0724\155-4momslab1.dgn

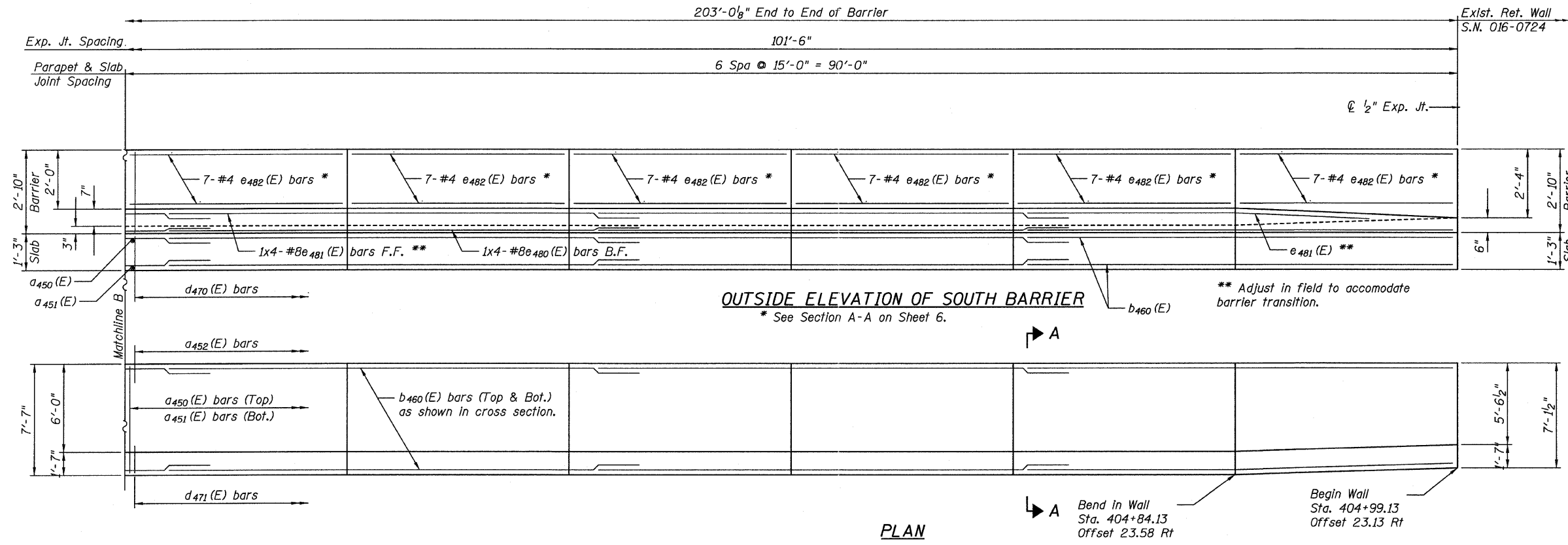
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**OUTSIDE ELEVATION OF SOUTH BARRIER**

\* See Section A-A on Sheet 6.

PLAN



**OUTSIDE ELEVATION OF SOUTH BARRIER**

\* See Section A-A on Sheet 6.

PLAN

**NOTES**

1. Offsets are measured from @ & P.G.L. Ramp 4.
2. Dimensions are measured along Outside Face of Slab/Barrier.
3. Work this Sheet with Sheets 4 to 7.
4. Bars indicated 20x3 indicates 20 lengths of bar with 3 lengths per line.

**LAP SPLICES**

Bar	Lap
#4	2'-7"
#8	6'-9"

**MOMENT SLAB RAMP 4  
PLAN AND ELEVATION 2 OF 2  
STRUCTURE NO. 016-1307**

**TYLIN** INTERNATIONAL

DESIGNED - EKH	REVISIONS	
	NAME	DATE
CHECKED - AMD,MMB		
DRAWN - EKH		
CHECKED - AMD,MMB		
DATE - 03/25/2011		

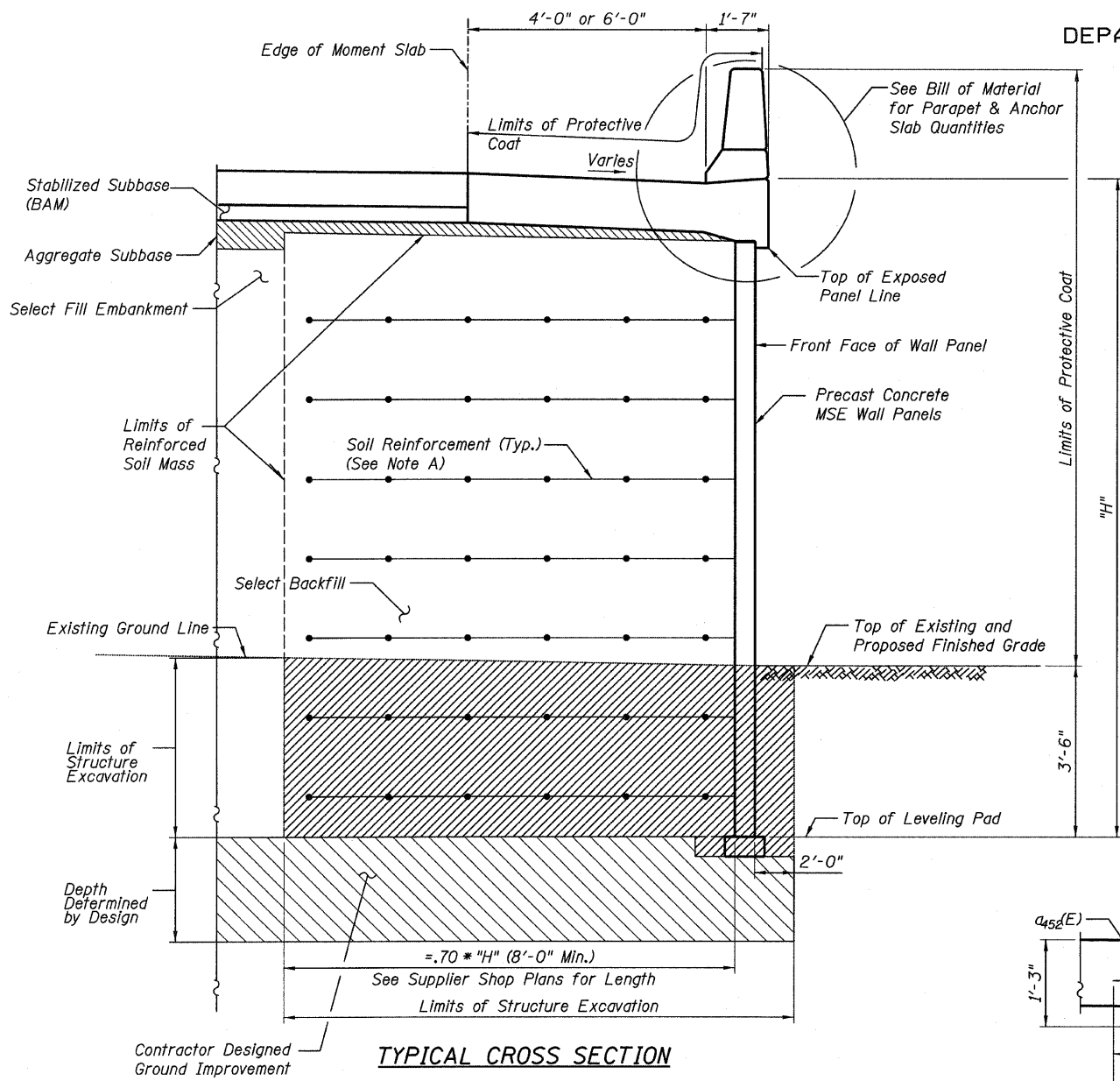
SHEET NO. 5

11 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	0711.2R & 1011.1BR	COOK	741	597
CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

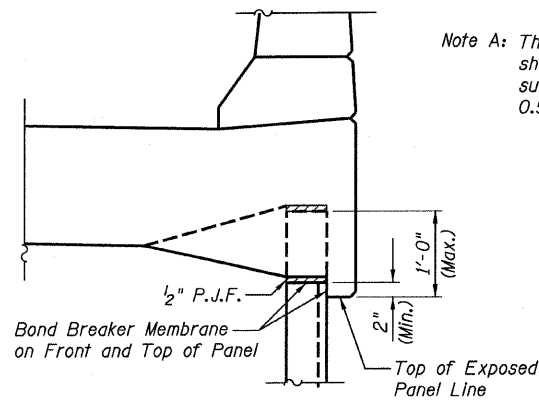
4/28/2011 12:29:59 PM p:\01345\structure\2 Central Ave. 016-0724\155-4\mcm\lab2.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

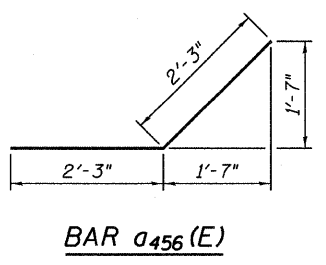


TYPICAL CROSS SECTION

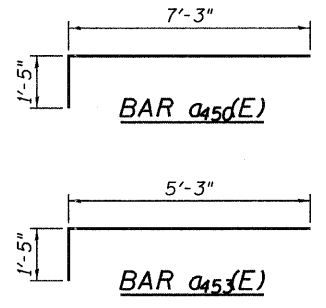
Note A: The M.S.E. Wall Suppliers internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and a horizontal sliding force of 0.5 k/ft of wall.



DETAIL A

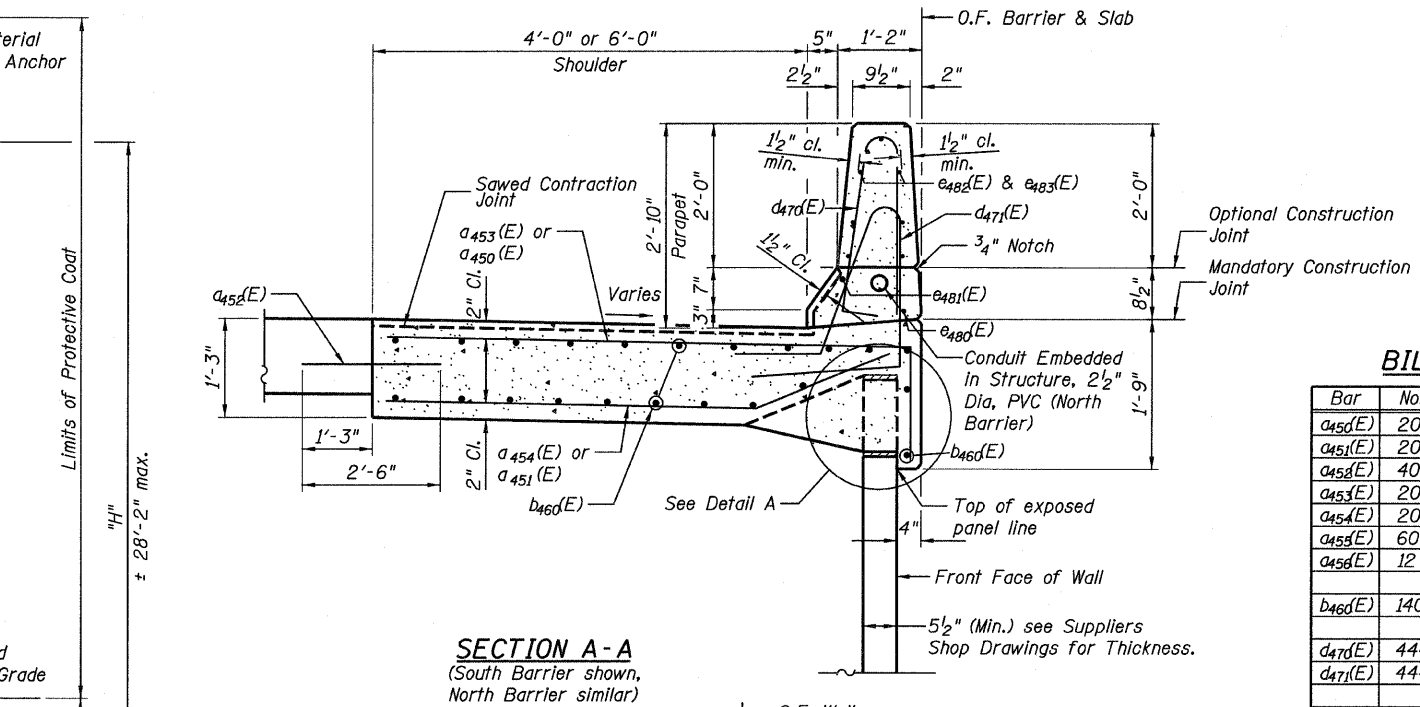


BAR a456(E)

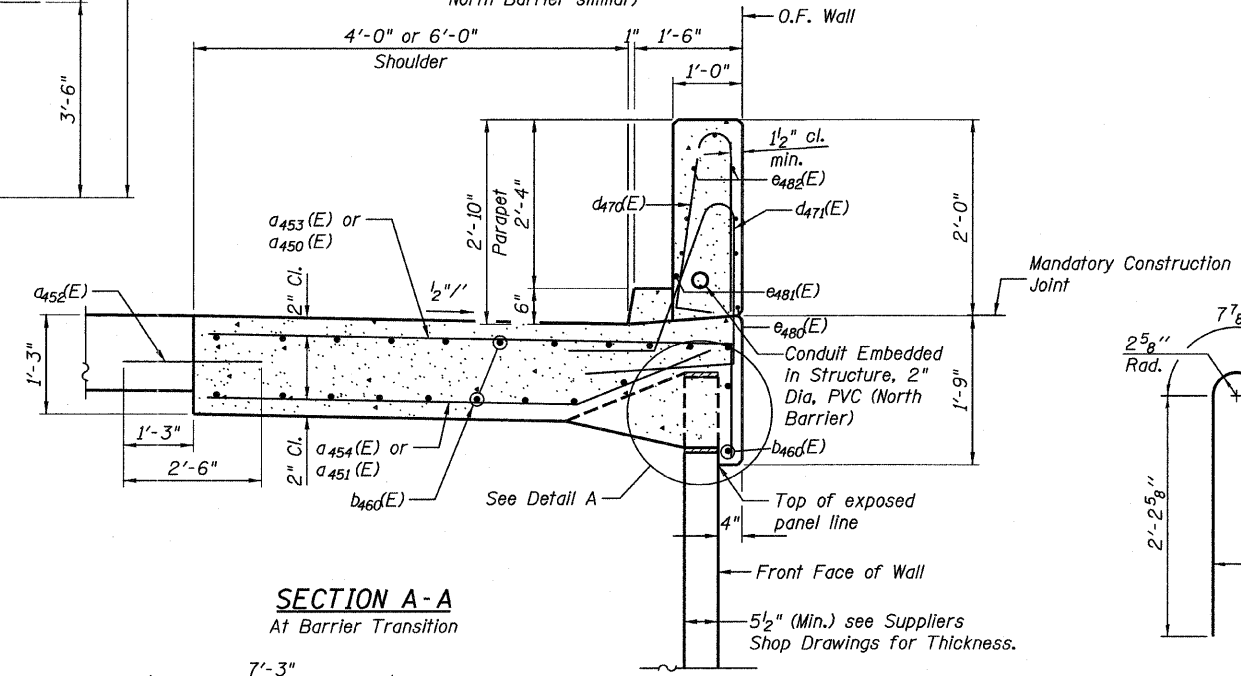


BAR a453(E)

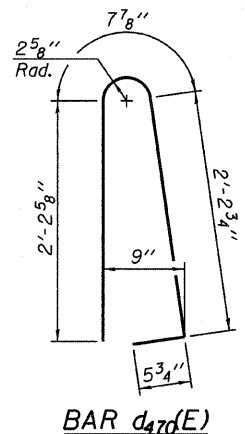
BAR a454(E)



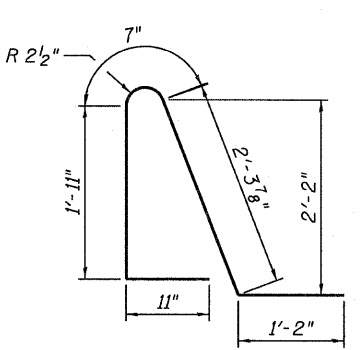
SECTION A-A  
(South Barrier shown, North Barrier similar)



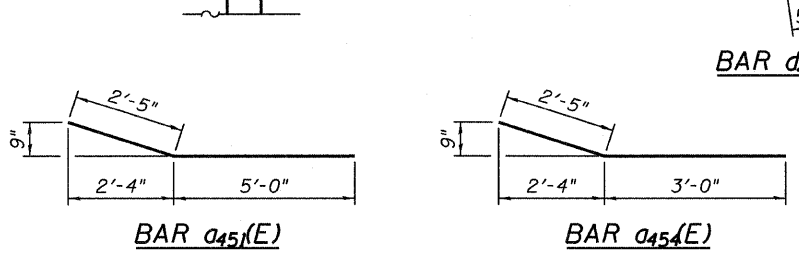
SECTION A-A  
At Barrier Transition



BAR d47d(E)



BAR d47f(E)



BAR a451(E)

BAR a454(E)

RAMP 4 MOMENT SLAB  
SECTIONS AND BAR LIST  
STRUCTURE NO. 016-1307

Note:  
1. See electrical drawings for conduit details and payment information.  
2. In Typical Cross Section, See Roadway plans for payment of Stabilized Subbase, Aggregate Subbase and Embankment.

BILL OF MATERIAL

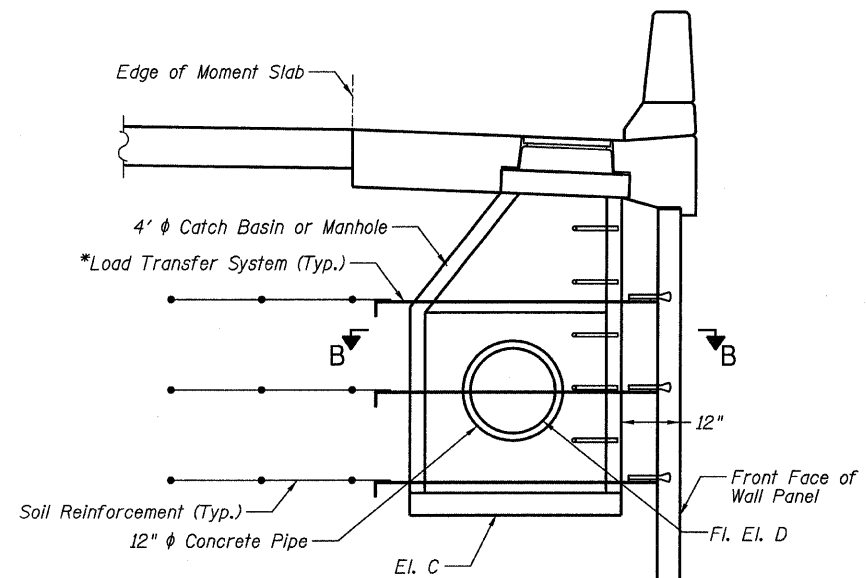
Bar	No.	Size	Length	Shape
a45d(E)	203	#6	8'-8"	┌
a45f(E)	203	#6	7'-5"	└
a45g(E)	406	#6	2'-6"	┌
a45h(E)	203	#6	6'-8"	└
a45i(E)	203	#6	5'-5"	┌
a45j(E)	60	#6	5'-6"	└
a45k(E)	12	#6	4'-6"	┌
b46d(E)	140	#4	31'-2"	┌
d47d(E)	444	#5	5'-7"	└
d47f(E)	444	#5	6'-11"	└
e48d(E)	16	#4	27'-3"	┌
e48f(E)	16	#8	30'-4"	└
e48g(E)	168	#4	14'-8"	┌
e48h(E)	28	#4	11'-2"	└
Reinforcement Bars, Epoxy Coated		Pound	22,850	
Concrete Superstructure		Cu. Yds.	183.8	

Bars indicated thus 1 x 15-#5 etc. indicates 1 line of bars with 15 lengths per line.

TYLIN INTERNATIONAL	DESIGNED - EKH	REVISIONS		SHEET NO. 6	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	CHECKED - AMD,MMB	NAME	DATE		55	0711.2R & 1011.1BR	COOK	741	598	
	DRAWN - EKH				11 SHEETS	CONTRACT NO. 60999				
	CHECKED - AMD,MMB				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
	DATE - 03/25/2011									

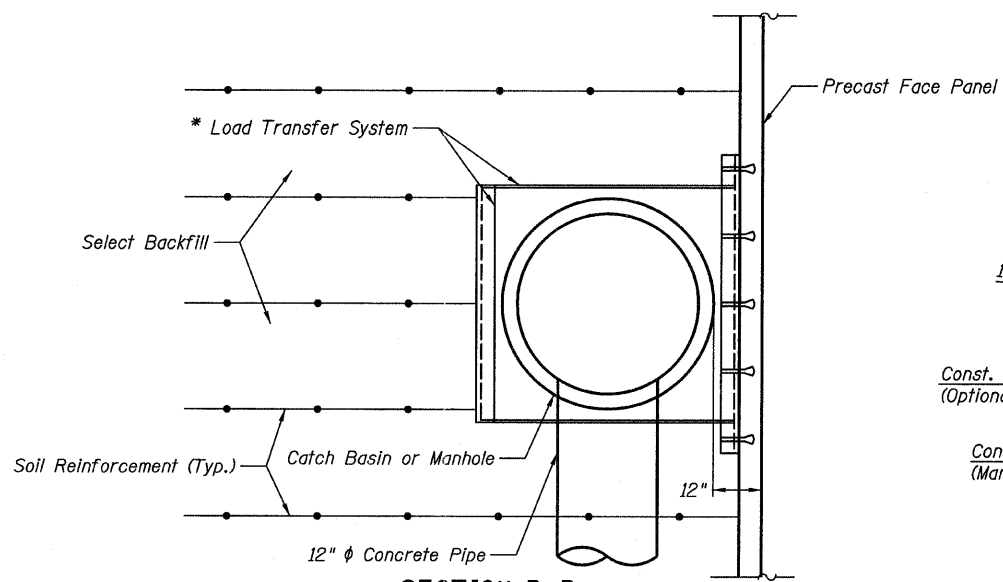
4/28/2011 2:13:58 PM p:\01345\structure\2 Central Ave. 016-0724\155-4\moms\lab3.dgn

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

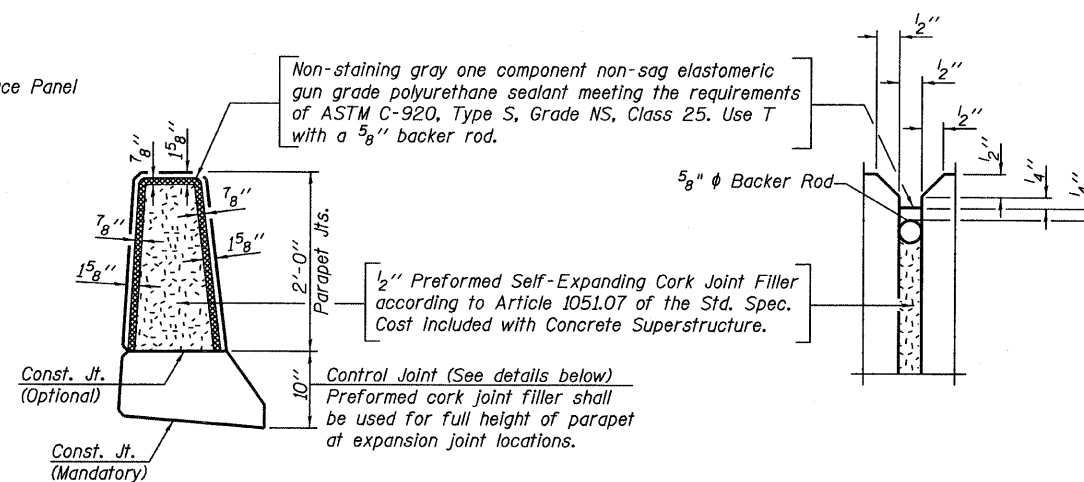


**SECTION A-A**

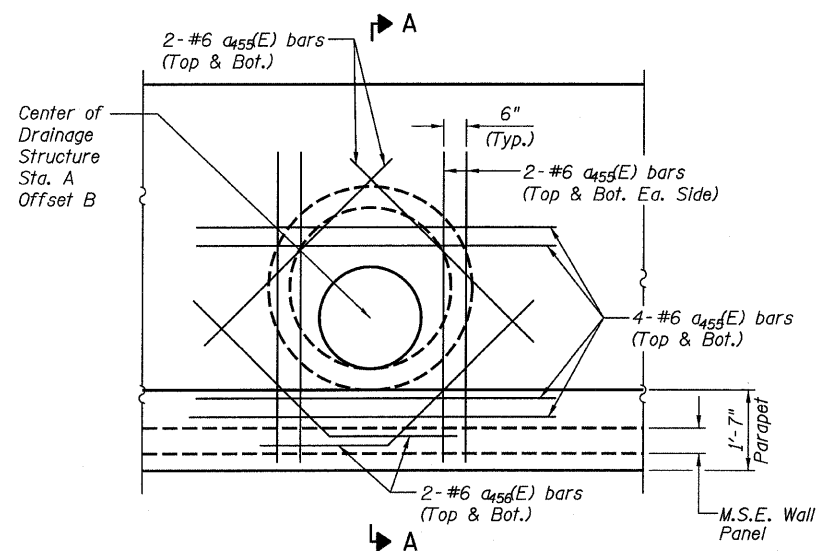
Note:  
\*M.S.E. supplier to design load transfer system to accommodate concrete pipe and catch basin/manhole.



**SECTION B-B**



**PARAPET JOINT DETAILS**

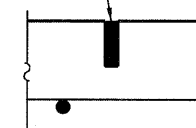


**PLAN AT CATCH BASIN OR MANHOLE**

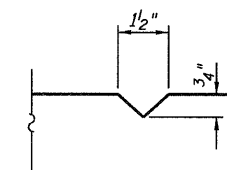
**DRAINAGE STRUCTURE TABLE**

Type	Center Sta. A	Center Offset B	El. C	Fl. El. D
Catch Basin	402+99.84	23.51' Lt	615.57	619.07
Manhole	403+75.60	23.52' Lt	616.75	617.42
Manhole	404+31.46	23.47' Lt	615.25	615.92

1/4" wide x 1/2" deep sawed joint filled with hot poured sealant in accordance with Article 1050 of Standard Specifications.



**SAWED CONTRACTION JOINT DETAIL - SLAB**  
(Cost Included with Concrete Structures)



**CONTROL JOINT DETAIL - PARAPET**

**RAMP 4 MOMENT SLAB  
DETAILS  
STRUCTURE NO. 016-1307**

**TYLIN INTERNATIONAL**

DESIGNED - EKH  
CHECKED - AMD,  
DRAWN - EKH  
CHECKED - AMD,  
DATE - 03/25/2011

REVISIONS	
NAME	DATE

SHEET NO. 7	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	599
11 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PAGE 1 of 2  
DATE 7/7/2010  
LOGGED BY MR  
GSI JOB No. 10098

**SOIL BORING LOG**

ROUTE F.A.I. RTE. 55 DESCRIPTION Central Avenue Over Interstate 55 Ramp Reconstruction  
SECTION 9(H, HB & SB)R-1 LOCATION SEC. 4 & 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township  
COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1307  
Station 402+64 to 404+99  
BORING NO. RW-17  
Station 402+37  
Offset 64.0' Left  
Ground Surface Elev. 599.1

Soil Description	Elev. (ft)	D (ft)	B (6")	U (tsf)	M (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After Hrs.	D (ft)	B (6")	U (tsf)	M (%)
SILTY SAND, GRAVEL & STONE (Fill)	597.6		AS	NP	9	n/a	n/a								
CLAY LOAM with Asphalt-medium dense (Fill)	596.1			13	1.5P	12							ST	3.25P	15
CLAY-brown & gray-stiff (A-6)	594.6			3		102									102
CLAY-gray-stiff to very stiff (A-6)				4											
				-5	5	1.3B	22								
SILT-brown & gray-loose (A-4)				2											
				2		NP	26								
				2											96
				2											
				-10	3	NP	20								
SILTY CLAY-gray-medium stiff (A-4/A-6)	588.6					97									
				2											
				2		0.9B	25								
CLAY-brown & gray-stiff (A-6)	586.1			3		100									119
				3											
				-15	4	1.1B	25								
CLAY LOAM-gray-very stiff (A-6)	583.6					107									
				3											
				5											
				7		1.3B	22								
				3											108
				5											
				-20	7	1.8B	21								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T296) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

PAGE 2 of 2  
DATE 7/7/2010  
LOGGED BY MR  
GSI JOB No. 10098

**SOIL BORING LOG**

ROUTE F.A.I. RTE. 55 DESCRIPTION Central Avenue Over Interstate 55 Ramp Reconstruction  
SECTION 9(H, HB & SB)R-1 LOCATION SEC. 4 & 5, TWP. 38 N., RNG. 13 E., 3rd P.M., Stickney Township  
COUNTY Cook DRILLING METHOD Hollow Stem Auger/Rotary HAMMER TYPE CME Automatic

STRUCT. NO. 016-1307  
Station 402+64 to 404+99  
BORING NO. RW-17  
Station 402+37  
Offset 64.0' Left  
Ground Surface Elev. 599.1

Soil Description	Elev. (ft)	D (ft)	B (6")	U (tsf)	M (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elevation:	First Encounter	Upon Completion	After Hrs.	D (ft)	B (6")	U (tsf)	M (%)
CLAY LOAM-gray-very stiff (A-6)	557.1					n/a	n/a								
				21											16
				26											17
				-45	21	NP	13								-65
SANDY LOAM-gray-dense to very dense (A-2)															
				22											110
				506"											506"
				-50		NP	10								
				6											102
				12											
				-55	18	4.25B	21								-75
CLAY LOAM-gray-very stiff to hard (A-6)															
				7											103
				10											
				-60	12	2.7B	23								-80

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T296) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

**BORING LOGS 1**  
**STRUCTURE NO. 016-1307**

**TYLIN INTERNATIONAL**

DESIGNED -	REVISIONS	
	NAME	DATE
CHECKED - AMD,		
DRAWN -		
CHECKED - AMD,		
DATE - 03/25/2011		

SHEET NO. 8	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	55	0711.2R & 1011.1BR	COOK	741	600
11 SHEETS	CONTRACT NO. 60999				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

I:\01345\structure\2 Central Ave. 016-0724\155-4br1.dgn 4/28/2011 1:30:02 PM