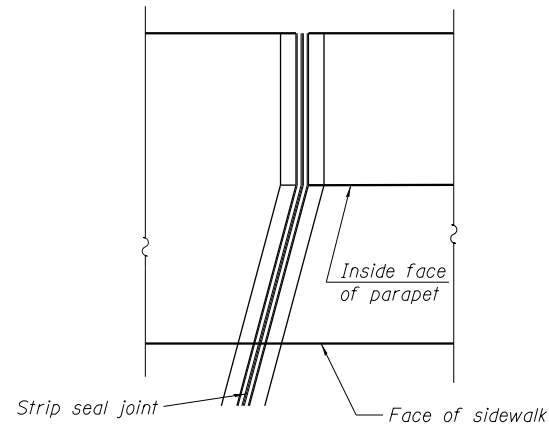
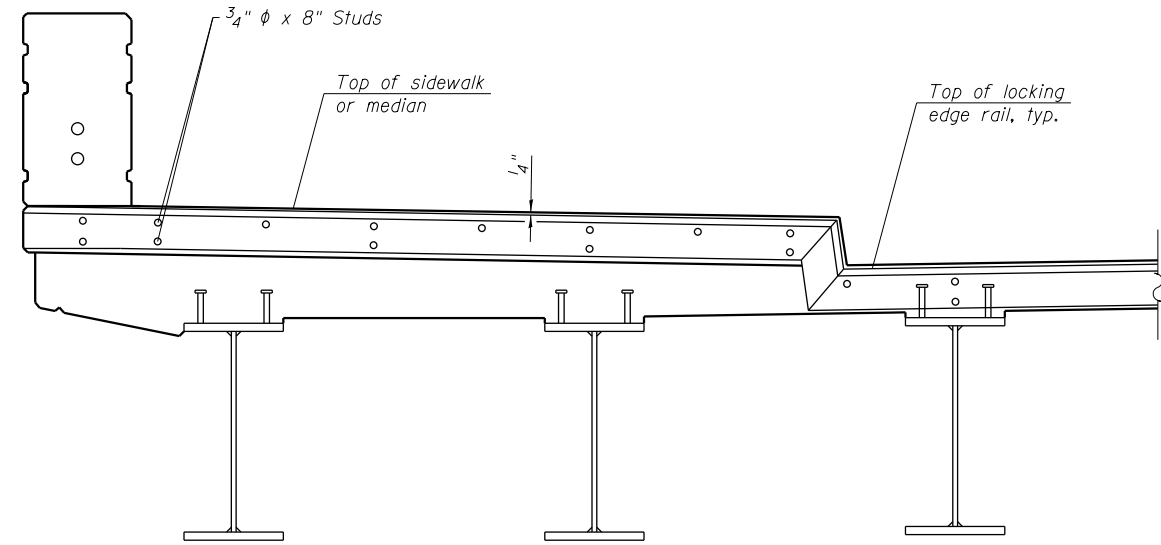


TRIMETRIC VIEW - WEST SIDEWALK

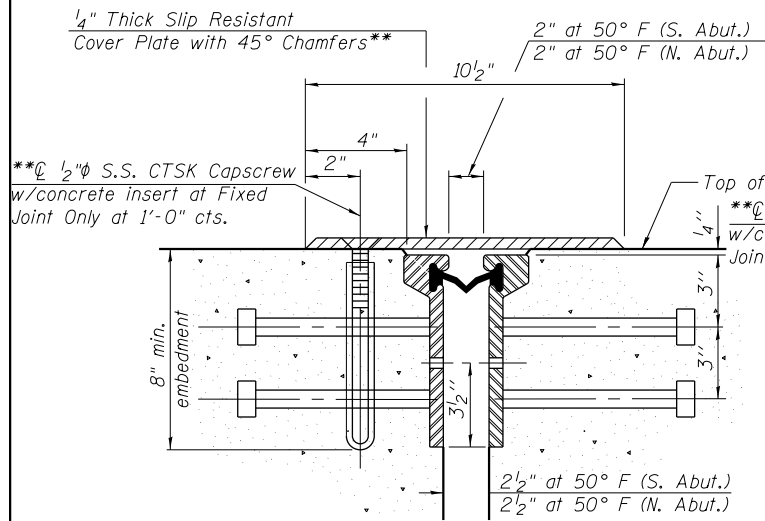


PLAN AT WEST SIDEWALK



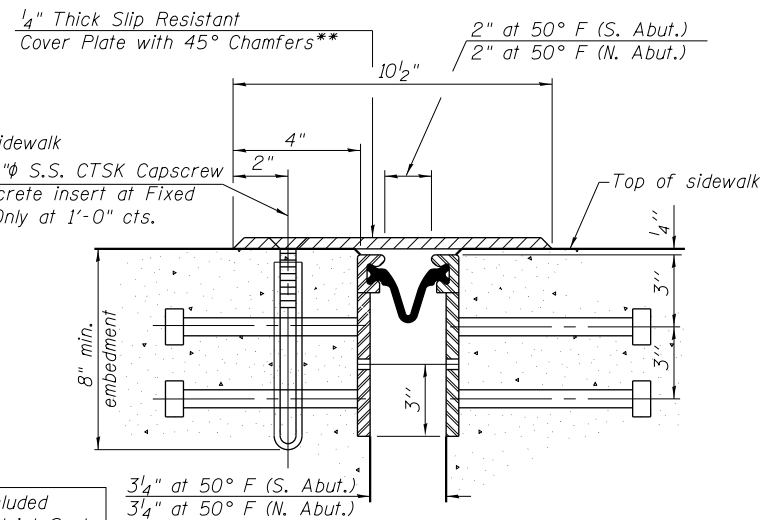
TYPICAL END TREATMENT AT WEST SIDEWALK

Shorter plates with a single row of studs at 12" cts. may be necessary on sidewalks which are shallower than 9". See manufacturer's recommendation.

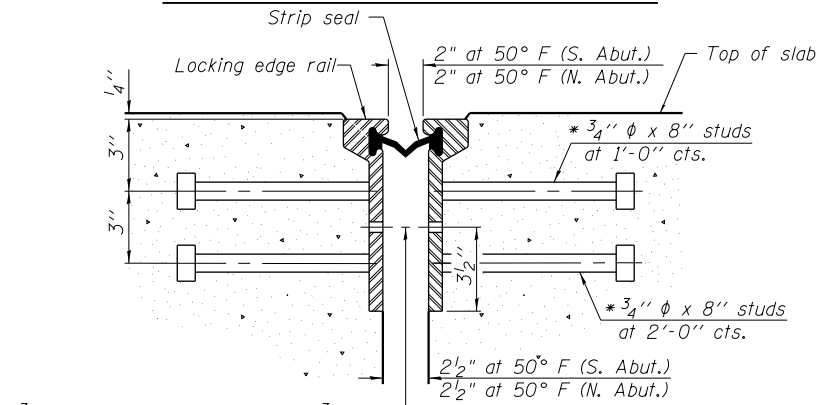


SECTION THRU ROLLED RAIL JOINT AT SIDEWALK

** Cost shall be included with Preformed Joint Seal.

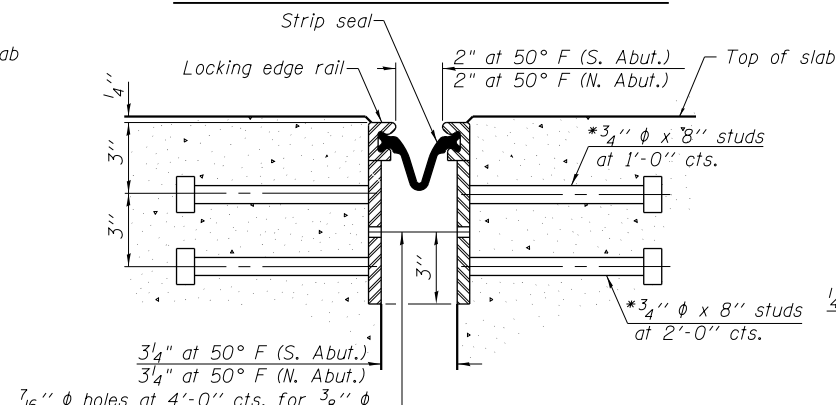


SECTION THRU ROLLED RAIL JOINT AT SIDEWALK



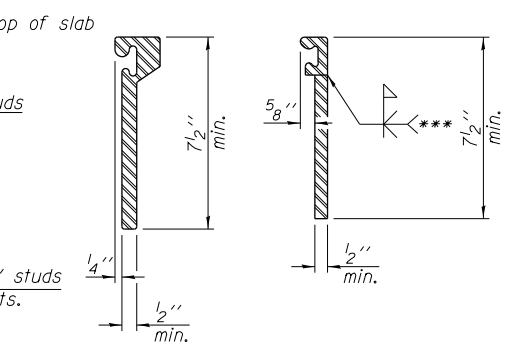
SECTION THRU ROLLED RAIL JOINT AT ROADWAY

7/16 inch diameter holes at 4 foot 0 inch centers for 3/8 inch diameter bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

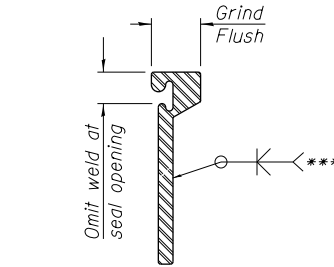


SECTION THRU WELDED RAIL JOINT AT ROADWAY

7/16 inch diameter holes at 4 foot 0 inch centers for 3/8 inch diameter bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



ROLLED EXTRUDED RAIL WELDED RAIL



*** Back gauge not required if complete joint penetration is verified by mock-up.
LOCKING EDGE RAIL SPLICE
The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.
The inside of the Locking Edge Rail groove shall be free of weld residue.
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
The manufacturer's recommended installation methods shall be followed.
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	213

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded. Cost shall be included with Preformed Joint Seal.

LOCKING EDGE RAILS

4:33:13 PM 0161716-60W26-S041-ExpJoint_Details1.dgn



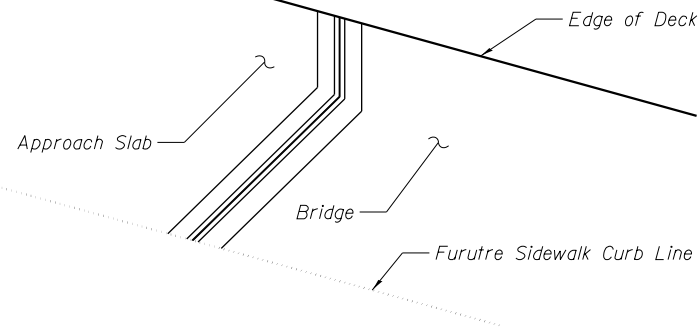
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	CHECKED - MDS	REVISED
PLOT SCALE = 0:1.0000 ' = 1/8" / in.	DRAWN - RLS	REVISED
PLOT DATE = 9/15/2013	CHECKED - MDS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

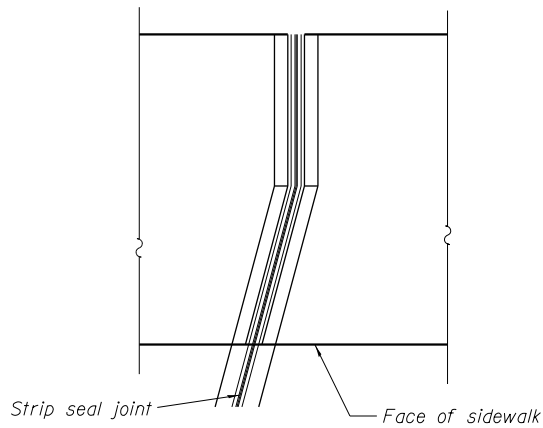
EXPANSION JOINT DETAILS 1
STRUCTURE NO. 016-1716

SHEET NO. S2-41 OF S2-81 SHEETS

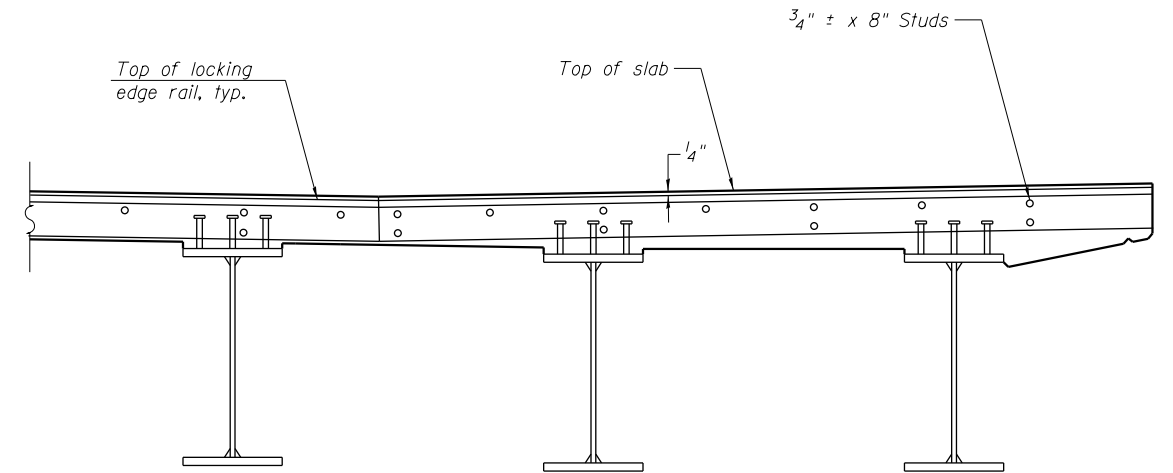
F.A.U. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	401
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



TRIMETRIC VIEW - STAGE I AND II EAST SIDEWALK

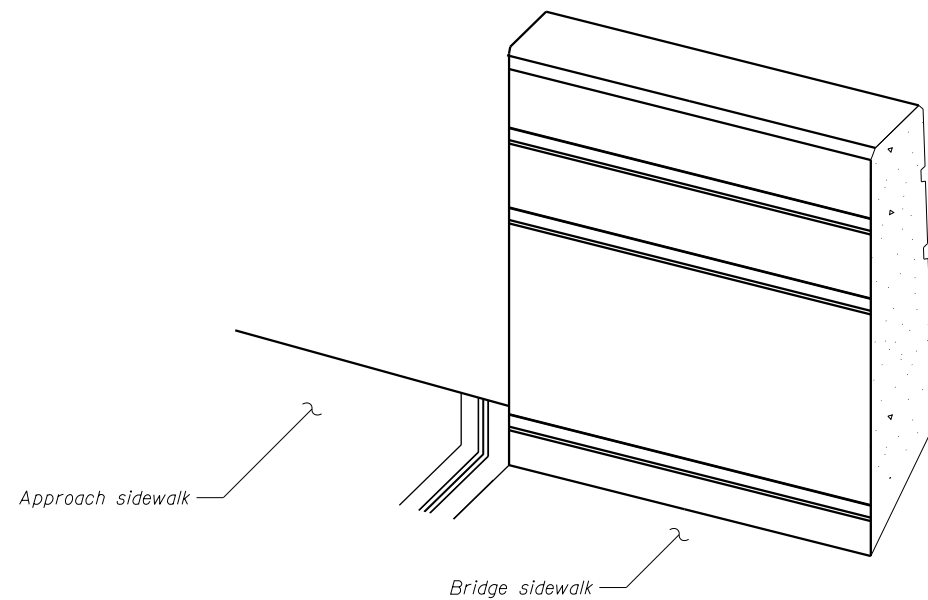


PLAN - STAGE I AND II AT EAST SIDEWALK

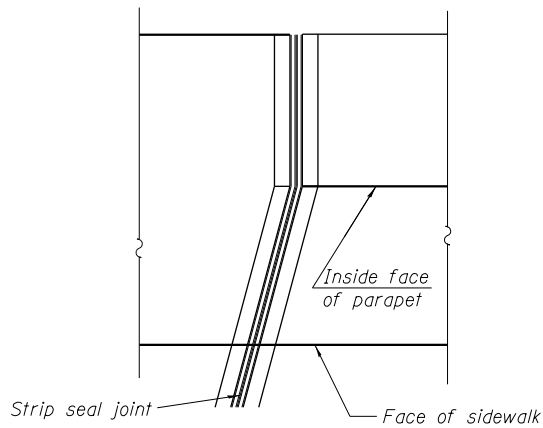


STAGE I AND II TYPICAL END TREATMENT AT EAST SIDEWALK

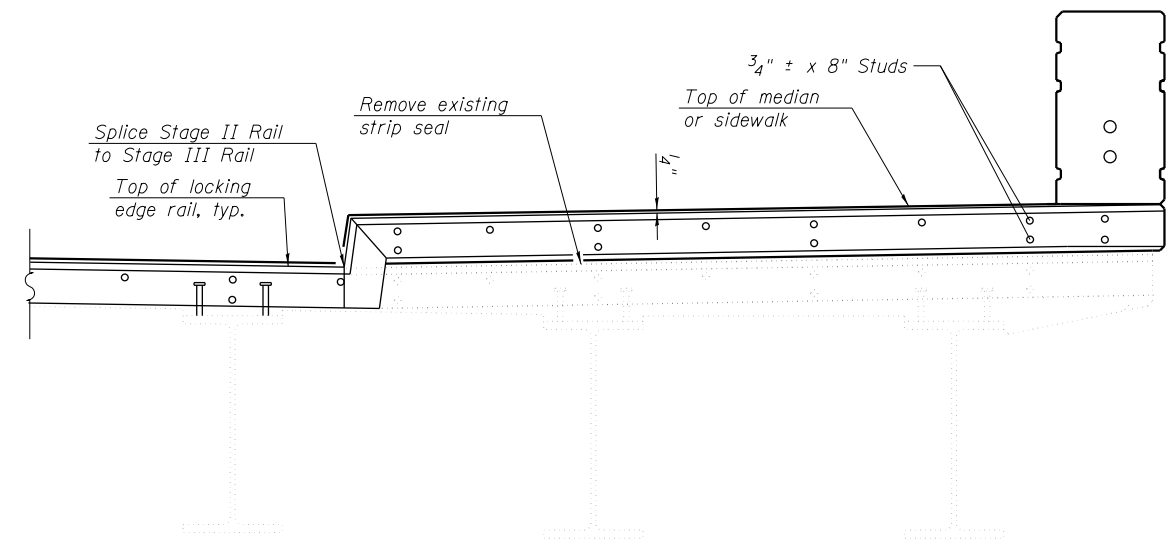
Shorter plates with a single row of studs at 12" cts. may be necessary on sidewalks which are shallower than 9". See manufacturer's recommendation.



TRIMETRIC VIEW - STAGE III AT EAST SIDEWALK

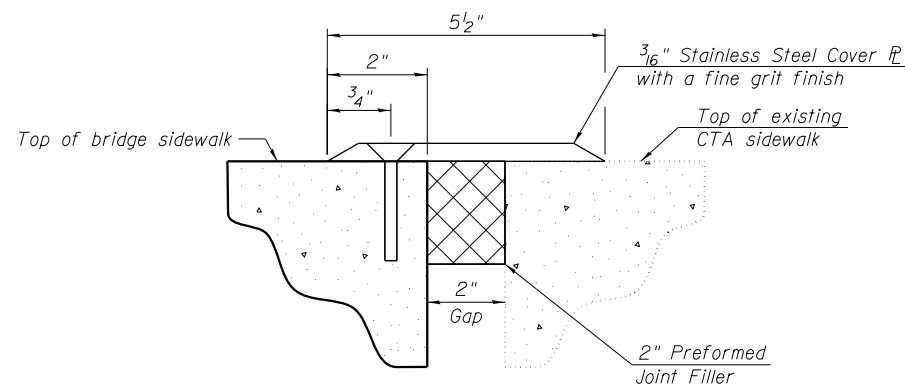


PLAN - STAGE III AT EAST SIDEWALK



STAGE III TYPICAL END TREATMENT AT EAST SIDEWALK

Shorter plates with a single row of studs at 12" cts. may be necessary on sidewalks which are shallower than 9". See manufacturer's recommendation.



CTA STATION EXPANSION JOINT DETAIL

(To be confirmed by the CTA. Cost to be included with Concrete Superstructure)

5/15/16 PM 0161716-60W26-S042-ExpJoint_Details2.dgn



USER NAME = jlvuorenmaa	DESIGNED - KAH	REVISED
PLOT SCALE = 0:1.0000 ' / in.	CHECKED - MDS	REVISED
PLOT DATE = 8/18/2013	DRAWN - RLS	REVISED
	CHECKED - MDS	REVISED

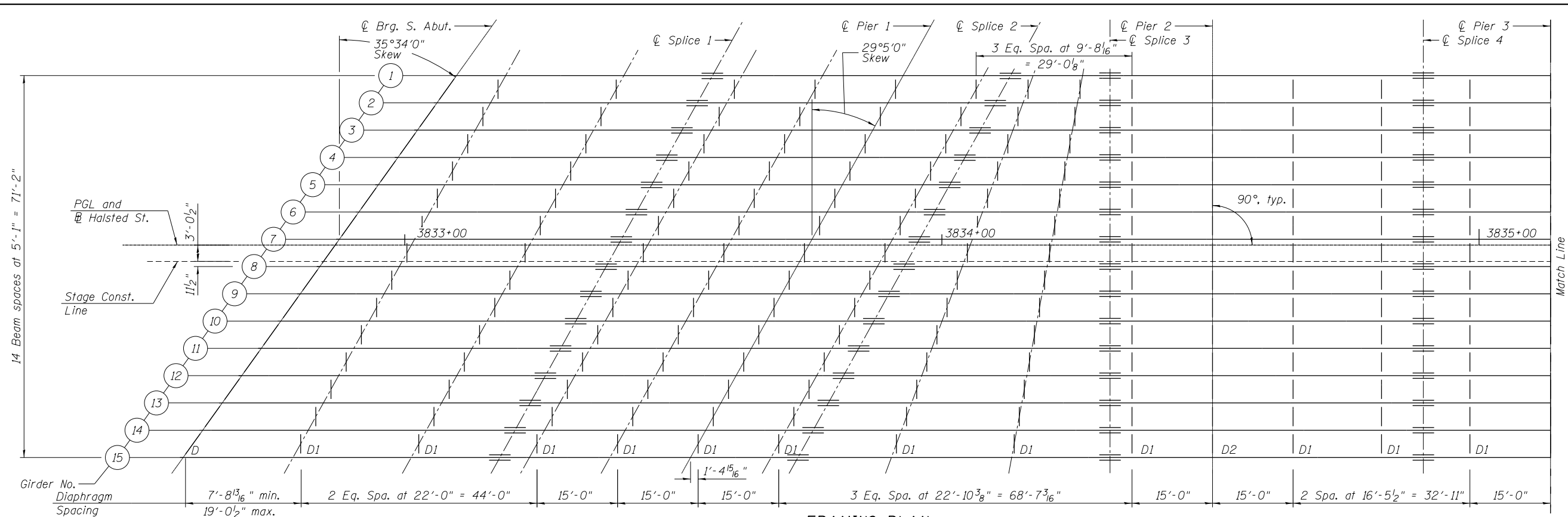
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT DETAILS 2
STRUCTURE NO. 016-1716**

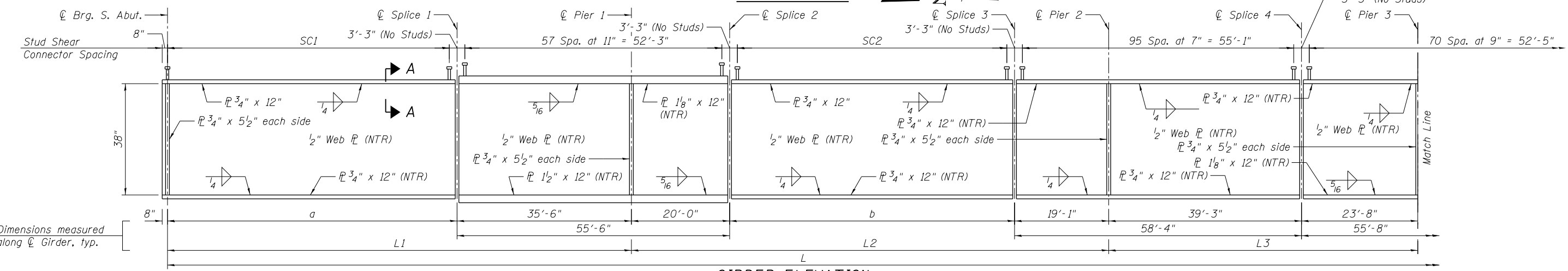
SHEET NO. S2-42 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	402
CONTRACT NO.			60W26	

ILLINOIS FED. AID PROJECT



FRAMING PLAN



GIRDER ELEVATION

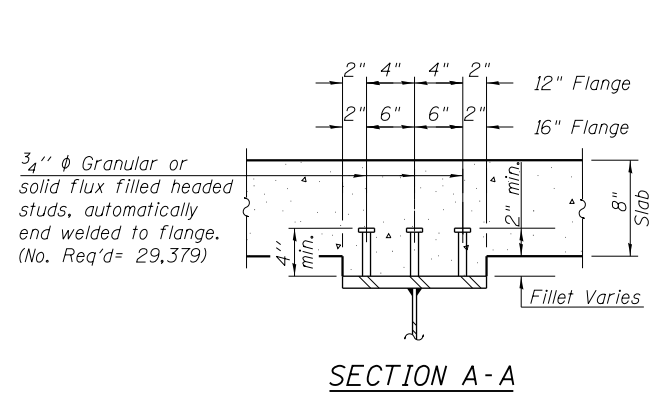
"NTR" denotes plates to which notch toughness requirements are applicable.

BEAM DIMENSIONS

Girder	L	L1	L2	L3	a	b
1	452'-2 1/8"	83'-1 3/16"	57'-7 3/16"	62'-11"	47'-7 3/16"	18'-6 3/16"
2	459'-2 1/8"	83'-11 1/2"	60'-5 1/8"	62'-11"	48'-5 1/2"	21'-4 1/8"
3	466'-2 1/8"	84'-9 3/16"	63'-3 1/16"	62'-11"	49'-3 3/16"	24'-2 1/16"
4	473'-2 1/8"	85'-6 7/8"	66'-1"	62'-11"	50'-0 7/8"	27'-0"
5	480'-2 1/8"	86'-4 9/16"	68'-10 15/16"	62'-11"	50'-10 9/16"	29'-9 15/16"
6	487'-2 1/8"	87'-2 1/4"	71'-8 1/4"	62'-11"	51'-8 1/4"	32'-7 15/16"
7	494'-2 1/8"	87'-11 5/16"	74'-6 3/4"	62'-11"	52'-5 5/16"	35'-5 3/4"
8	501'-2 1/16"	88'-9 5/8"	77'-4 1/16"	62'-11"	53'-3 5/8"	38'-3 1/16"
9	508'-2 1/16"	89'-7 5/16"	80'-2 5/8"	62'-11"	54'-1 5/16"	41'-1 5/16"
10	515'-2 1/16"	90'-5"	83'-0 9/16"	62'-11"	54'-11"	43'-11 9/16"
11	522'-2 1/16"	91'-2 1/16"	85'-10 1/2"	62'-11"	55'-8 1/16"	46'-9 1/2"
12	529'-2 1/16"	92'-0 3/8"	88'-8 7/16"	62'-11"	56'-6 3/8"	49'-7 7/16"
13	536'-2 1/16"	92'-10 1/16"	91'-6 5/16"	62'-11"	57'-4 1/16"	52'-5 5/16"
14	543'-2 1/16"	93'-7 3/4"	94'-4 1/4"	62'-11"	58'-1 3/4"	55'-3 1/4"
15	550'-2 1/16"	94'-5 7/16"	97'-2 3/16"	62'-11"	58'-11 7/16"	58'-1 3/16"

STUD SHEAR CONNECTOR SPACING

Girder	SC1	SC2
1	62 Spa. at 9" = 46'-0"	21 Spa. at 9" = 15'-3"
2	63 Spa. at 9" = 46'-10"	25 Spa. at 9" = 18'-1"
3	64 Spa. at 9" = 47'-8"	28 Spa. at 9" = 20'-11"
4	65 Spa. at 9" = 48'-5"	32 Spa. at 9" = 23'-9"
5	66 Spa. at 9" = 49'-3"	36 Spa. at 9" = 26'-7"
6	67 Spa. at 9" = 50'-1"	40 Spa. at 9" = 29'-5"
7	68 Spa. at 9" = 50'-10"	43 Spa. at 9" = 32'-3"
8	69 Spa. at 9" = 51'-8"	47 Spa. at 9" = 35'-0"
9	70 Spa. at 9" = 52'-6"	51 Spa. at 9" = 37'-10"
10	72 Spa. at 9" = 53'-3"	55 Spa. at 9" = 40'-8"
11	73 Spa. at 9" = 54'-1"	59 Spa. at 9" = 43'-6"
12	74 Spa. at 9" = 54'-11"	62 Spa. at 9" = 46'-4"
13	75 Spa. at 9" = 55'-8"	66 Spa. at 9" = 49'-2"
14	76 Spa. at 9" = 56'-6"	70 Spa. at 9" = 52'-0"
15	77 Spa. at 9" = 57'-4"	74 Spa. at 9" = 54'-10"



SECTION A-A

Notes:
 All plates of the girders, including bearing stiffeners and splice plates, shall be AASHTO M 270, Grade 50.
 All diaphragms, angles, fill plates and connecting plates may be AASHTO M270, Grade 36.
 Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
 Work this sheet with Sheet S2-44 of S2-81.
 For diaphragm details, see Sheet S2-48 of S2-81.
 All structural steel shall be hot dip galvanized. Cost included with Furnishing and Erecting Structural Steel.
 For notes on galvanized steel, see Sheet S2-02 of S2-81.

4:33:16 PM 01/16/17 6-60W26-S043-FramePlan.1.dgn



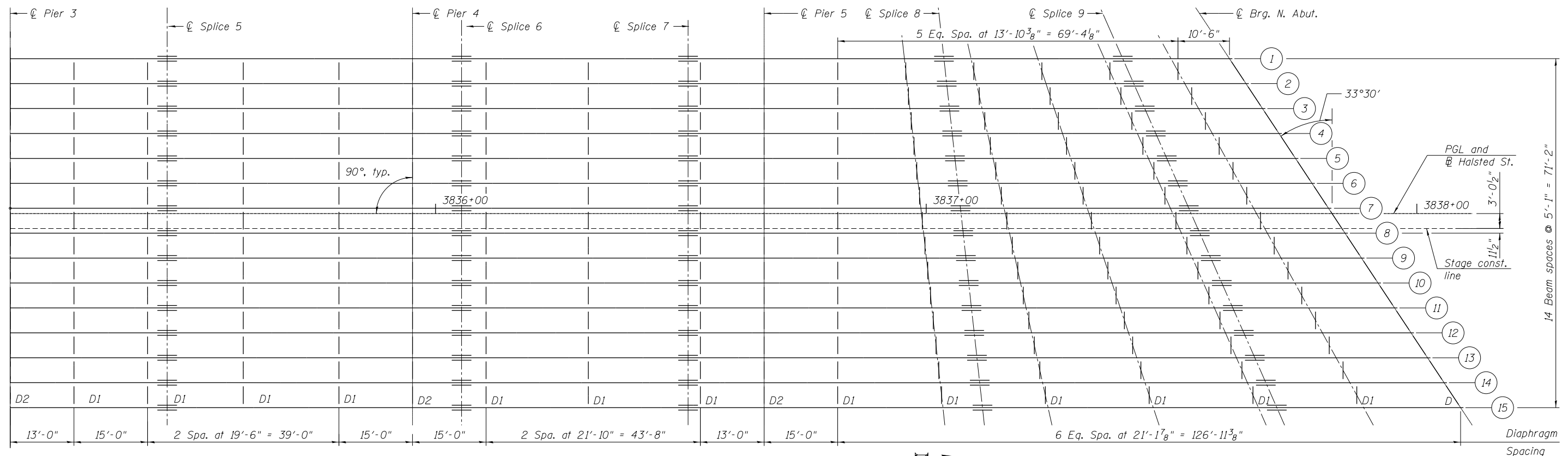
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PLOT SCALE = 10:8" = 1" / in.	CHECKED - DL	REVISED
PLOT DATE = 9/15/2013	DRAWN - RLS	REVISED
	CHECKED - DL	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

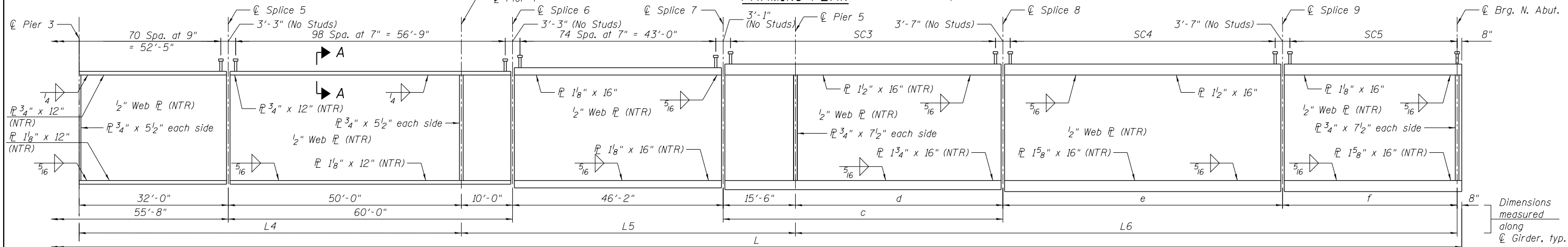
**FRAMING PLAN 1
STRUCTURE NO. 016-1716**

SHEET NO. S2-43 OF S2-81 SHEETS

F.A.U. RTE. 3730	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 403
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	



FRAMING PLAN



GIRDER ELEVATION

"NTR" denotes plates to which notch toughness requirements are applicable.

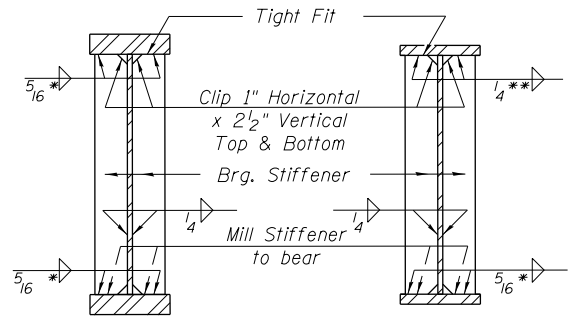
BEAM DIMENSIONS

Girder	L	L4	L5	L6	c	d	e	f
1	452'-2 ¹ / ₈ "	82'-0"	71'-8"	94'-10 ¹ / ₈ "	52'-1 ³ / ₁₆ "	36'-7 ¹³ / ₁₆ "	36'-5 ³ / ₈ "	21'-9"
2	459'-2 ¹ / ₈ "	82'-0"	71'-8"	98'-2 ¹ / ₂ "	52'-8 ¹ / ₂ "	37'-2 ¹ / ₂ "	38'-1 ⁹ / ₁₆ "	22'-10 ⁷ / ₁₆ "
3	466'-2 ¹ / ₈ "	82'-0"	71'-8"	101'-6 ⁷ / ₈ "	53'-3 ¹ / ₄ "	37'-9 ¹ / ₄ "	39'-9 ³ / ₁₆ "	23'-11 ⁷ / ₈ "
4	473'-2 ¹ / ₈ "	82'-0"	71'-8"	104'-11 ¹ / ₄ "	53'-10"	38'-4"	41'-5 ¹⁵ / ₁₆ "	25'-1 ³ / ₈ "
5	480'-2 ¹ / ₈ "	82'-0"	71'-8"	108'-3 ⁵ / ₈ "	54'-4 ¹ / ₁₆ "	38'-10 ¹ / ₁₆ "	43'-2 ¹ / ₈ "	26'-2 ¹³ / ₁₆ "
6	487'-2 ¹ / ₈ "	82'-0"	71'-8"	111'-8"	54'-11 ¹ / ₁₆ "	39'-5 ⁷ / ₁₆ "	44'-10 ⁵ / ₁₆ "	27'-4 ¹ / ₄ "
7	494'-2 ¹ / ₈ "	82'-0"	71'-8"	115'-0 ³ / ₈ "	55'-6 ³ / ₁₆ "	40'-0 ³ / ₁₆ "	46'-6 ¹ / ₂ "	28'-5 ³ / ₄ "
8	501'-2 ¹ / ₁₆ "	82'-0"	71'-8"	118'-4 ³ / ₄ "	56'-0 ⁷ / ₈ "	40'-6 ⁷ / ₈ "	48'-2 ¹ / ₁₆ "	29'-7 ³ / ₁₆ "
9	508'-2 ¹ / ₁₆ "	82'-0"	71'-8"	121'-9 ⁸ / ₁₆ "	56'-7 ⁵ / ₈ "	41'-1 ⁵ / ₈ "	49'-10 ⁷ / ₈ "	30'-8 ⁵ / ₈ "
10	515'-2 ¹ / ₁₆ "	82'-0"	71'-8"	125'-1 ¹ / ₂ "	57'-2 ³ / ₈ "	41'-8 ³ / ₈ "	51'-7 ¹ / ₁₆ "	31'-10 ¹ / ₈ "
11	522'-2 ¹ / ₁₆ "	82'-0"	71'-8"	128'-5 ⁷ / ₈ "	57'-9 ¹ / ₁₆ "	42'-3 ¹ / ₁₆ "	53'-3 ¹ / ₄ "	32'-11 ⁹ / ₁₆ "
12	529'-2 ¹ / ₁₆ "	82'-0"	71'-8"	131'-10 ¹ / ₄ "	58'-3 ¹³ / ₁₆ "	42'-9 ¹³ / ₁₆ "	54'-11 ⁷ / ₁₆ "	34'-1"
13	536'-2 ¹ / ₁₆ "	82'-0"	71'-8"	135'-2 ⁵ / ₈ "	58'-10 ⁹ / ₁₆ "	43'-4 ⁹ / ₁₆ "	56'-7 ⁵ / ₈ "	35'-2 ¹ / ₂ "
14	543'-2 ¹ / ₁₆ "	82'-0"	71'-8"	138'-7"	59'-5 ¹ / ₄ "	43'-11 ¹ / ₄ "	58'-3 ¹ / ₁₆ "	36'-3 ¹⁵ / ₁₆ "
15	550'-2 ¹ / ₁₆ "	82'-0"	71'-8"	141'-11 ³ / ₈ "	60'-0"	44'-6"	60'-0"	37'-5 ³ / ₈ "

STUD SHEAR CONNECTOR SPACING

Girder	SC3	SC4	SC5
1	49 Spa. at 1'-0" = 48'-9"	33 Spa. at 1'-0" = 32'-11"	24 Spa. at 10" = 20'-0"
2	50 Spa. at 1'-0" = 49'-4"	35 Spa. at 1'-0" = 34'-8"	26 Spa. at 10" = 21'-1"
3	50 Spa. at 1'-0" = 49'-10"	37 Spa. at 1'-0" = 36'-4"	27 Spa. at 10" = 22'-3"
4	51 Spa. at 1'-0" = 50'-5"	38 Spa. at 1'-0" = 38'-0"	28 Spa. at 10" = 23'-4"
5	52 Spa. at 1'-0" = 51'-0"	40 Spa. at 1'-0" = 39'-8"	30 Spa. at 10" = 24'-6"
6	52 Spa. at 1'-0" = 51'-6"	42 Spa. at 1'-0" = 41'-4"	31 Spa. at 10" = 25'-7"
7	53 Spa. at 1'-0" = 52'-1"	43 Spa. at 1'-0" = 43'-0"	33 Spa. at 10" = 26'-9"
8	53 Spa. at 1'-0" = 52'-8"	45 Spa. at 1'-0" = 44'-9"	34 Spa. at 10" = 27'-10"
9	54 Spa. at 1'-0" = 53'-3"	47 Spa. at 1'-0" = 46'-5"	35 Spa. at 10" = 29'-0"
10	54 Spa. at 1'-0" = 53'-9"	49 Spa. at 1'-0" = 48'-1"	37 Spa. at 10" = 30'-1"
11	55 Spa. at 1'-0" = 54'-4"	50 Spa. at 1'-0" = 49'-9"	38 Spa. at 10" = 31'-2"
12	55 Spa. at 1'-0" = 54'-11"	52 Spa. at 1'-0" = 51'-5"	39 Spa. at 10" = 32'-4"
13	56 Spa. at 1'-0" = 55'-6"	54 Spa. at 1'-0" = 53'-2"	41 Spa. at 10" = 33'-5"
14	57 Spa. at 1'-0" = 56'-0"	55 Spa. at 1'-0" = 54'-10"	42 Spa. at 10" = 34'-7"
15	57 Spa. at 1'-0" = 56'-7"	57 Spa. at 1'-0" = 56'-5"	43 Spa. at 10" = 35'-8"

Notes:
Work this sheet with Sheet S2-43 of S2-81.
For Section A-A, see Sheet S2-43 of S2-81.



SECTION AT PIER

SECTION AT ABUTMENT

* Use 1/4" Weld for S. Abut. and Piers 2 through 4.
** Use 5/16" Weld for N. Abut.

4/3/17 PM 0161716-60W26-S044-FramePlan-2.dgn



USER NAME = rlschultz	DESIGNED - WJC	REVISED
PLOT SCALE = 10:8.0012 " / in.	CHECKED - DL	REVISED
PLOT DATE = 9/15/2013	DRAWN - RLS	REVISED
	CHECKED - DL	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN 2
STRUCTURE NO. 016-1716

SHEET NO. S2-44 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	404
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				

GIRDER 11 MOMENT TABLE											
	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.5 Sp. 5	Pier 5	0.6 Sp. 6
I_s	(in ⁴)	9,044	14,313	9,044	9,044	9,044	10,639	10,639	16,067	22,624	21,839
$I_c(n)$	(in ⁴)	21,739	-	21,739	-	21,739	-	26,712	-	-	41,251
$I_c(3n)$	(in ⁴)	15,990	-	15,990	-	15,990	-	19,189	-	-	30,956
$I_c(cr)$	(in ⁴)	-	17,437	-	11,604	-	13,701	-	18,805	18,805	24,840
S_s	(in ³)	458	766	458	458	458	592	592	799	1,155	1,090
$S_c(n)$	(in ³)	642	-	642	-	642	-	818	-	-	1,328
$S_c(3n)$	(in ³)	581	-	581	-	581	-	743	-	-	1,226
$S_c(cr)$	(in ³)	-	831	-	515	-	662	-	851	851	1,145
DC1	(k'/')	0.68	0.73	0.68	0.68	0.68	0.70	0.70	0.75	0.81	0.80
M _{DC1}	(k)	427	685	197	209	68	347	334	180	174	1,149
DC2*	(k'/')	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
M _{DC2}	(k)	152	234	74	82	30	106	98	44	44	361
DW	(k'/')	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
M _{DW}	(k)	109	167	52	54	17	86	84	43	34	252
$M_L \cdot IM$	(k)	857	959	699	600	544	620	708	607	659	1,148
M_u (Strength I)	(k)	2,387	3,078	1,640	1,495	1,100	1,780	1,905	1,407	1,477	4,275
$\phi_r M_n$	(k)	3,149	-	3,325	-	3,330	-	4,019	-	-	6,020
f_s DC1	(ksi)	11.2	10.7	5.2	5.5	1.8	7.0	6.8	3.6	2.6	11.9
f_s DC2	(ksi)	3.1	3.4	1.5	1.9	0.6	1.9	1.6	0.6	0.6	3.8
f_s DW	(ksi)	2.3	2.4	1.1	1.3	0.4	1.6	1.4	0.6	0.5	2.6
f_s ($\phi + IM$)	(ksi)	16.0	13.8	13.1	14.0	10.2	11.2	10.4	8.6	9.3	12.0
f_s (Service II)	(ksi)	37.4	34.5	24.8	26.8	16.0	25.1	23.2	16.0	15.8	34.0
$0.95R_h F_{yr}$	(ksi)	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	-	45.49	-	35.59	-	33.20	-	21.22	21.03	44.67
$\phi_r F_n$	(ksi)	-	50.0	-	44.6	-	45.1	-	46.2	42.6	47.5
V_f	(k)	31.1	-	31.3	-	31.1	-	28.3	-	30.4	30.7

* Load allowance includes 0.01 k/'' for duct banks

GIRDER 11 REACTION TABLE							
	S. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	N. Abut.
R _{DC1}	(k)	25.51	76.96	44.15	55.73	40.48	103.37
R _{DC2}	(k)	8.80	26.46	16.49	17.74	12.62	32.32
R _{DW}	(k)	6.26	18.83	11.33	13.84	10.12	22.58
R $\phi + IM$	(k)	80.90	128.41	111.99	113.06	109.34	150.53
R _{Total}	(k)	121.47	250.66	183.96	200.37	172.56	308.80

GIRDER 15 MOMENT TABLE											
	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.5 Sp. 5	Pier 5	0.6 Sp. 6
I_s	(in ⁴)	9,044	14,313	9,044	9,044	9,044	10,639	10,639	16,067	22,624	21,839
$I_c(n)$	(in ⁴)	21,423	-	21,423	-	21,423	-	26,290	-	-	40,604
$I_c(3n)$	(in ⁴)	15,715	-	15,715	-	15,715	-	18,840	-	-	30,536
$I_c(cr)$	(in ⁴)	-	17,437	-	11,604	-	13,701	-	18,805	18,805	24,840
S_s	(in ³)	458	766	458	458	458	592	592	799	1,155	1,090
$S_c(n)$	(in ³)	639	-	639	-	639	-	815	-	-	1,322
$S_c(3n)$	(in ³)	577	-	577	-	577	-	739	-	-	1,221
$S_c(cr)$	(in ³)	-	831	-	515	-	662	-	851	851	1,145
DC1	(k'/')	0.72	0.77	0.72	0.72	0.72	0.74	0.74	0.79	0.85	0.84
M _{DC1}	(k)	425	726	285	270	32	328	346	131	278	1,363
DC2*	(k'/')	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
M _{DC2**}	(k)	159	277	123	37	93	468	756	367	175	365
DW	(k'/')	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
M _{DW}	(k)	116	186	76	72	9	84	89	33	55	305
$M_L \cdot IM$	(k)	593	673	473	454	199	411	431	367	636	1,313
M_u (Strength I)	(k)	1,497	2,206	1,097	946	368	1,532	1,942	1,039	1,285	3,931
$\phi_r M_n$	(k)	3,136	-	3,241	-	1,946	-	3,984	-	-	5,981
f_s DC1	(ksi)	11.1	11.4	7.5	7.1	0.8	6.6	7.0	2.7	4.2	14.2
f_s DC2	(ksi)	3.3	4.0	2.6	0.9	1.9	8.5	12.3	5.2	2.5	3.8
f_s DW	(ksi)	2.4	2.7	1.6	1.7	0.2	1.5	1.4	0.5	0.8	3.2
f_s ($\phi + IM$)	(ksi)	11.1	9.7	8.9	10.6	3.7	7.4	6.4	5.2	9.0	13.8
f_s (Service II)	(ksi)	31.3	30.7	23.2	23.4	7.8	26.3	29.0	15.0	19.1	39.1
$0.95R_h F_{yr}$	(ksi)	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	-	40.26	-	30.95	-	34.22	-	19.55	25.17	51.36
$\phi_r F_n$	(ksi)	-	50.0	-	44.6	-	45.1	-	46.2	42.6	47.5
V_f	(k)	-	-	-	-	-	-	-	-	-	-

* Load allowance includes 0.01 k/'' for duct banks

** Moment includes two concentrated forces of 58.0 k each. This force is due to the unfactored reactions at the locations of the CTA canopy columns under dead, snow and wind loads.

GIRDER 15 REACTION TABLE							
	S. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	N. Abut.
R _{DC1}	(k)	24.38	78.14	47.61	52.54	34.00	109.96
R _{DC2}	(k)	8.76	29.11	11.23	96.96	43.55	29.60
R _{DW}	(k)	6.32	20.15	12.73	13.60	9.12	24.89
R $\phi + IM$	(k)	12.08	34.72	29.99	28.45	26.28	55.94
R _{Total}	(k)	51.54	162.12	101.56	191.55	112.95	220.39

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

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

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

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

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

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

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

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

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

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

$M_L \cdot IM$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

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

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

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

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
M_{DC2} / $S_c(3n)$ or M_{DC2} / $S_c(cr)$ as applicable.

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

f_s ($\phi + IM$): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
 $M_L \cdot IM$ / $S_c(n)$ or M_{DW} / $S_c(cr)$ as applicable.

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

$0.95R_h F_{yr}$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

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

$\phi_r F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

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

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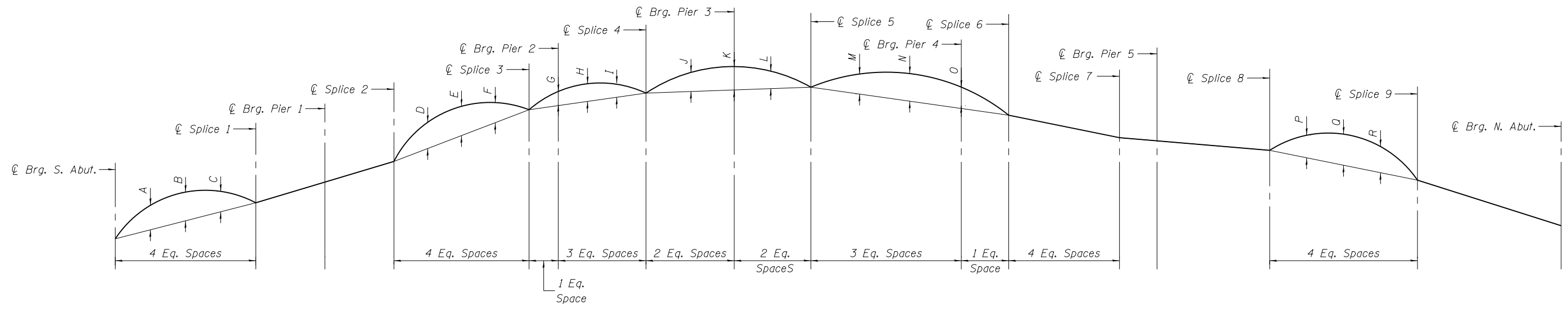
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS 1
STRUCTURE NO. 016-1716

SHEET NO. S2-45 OF S2-81 SHEETS

F.A.U. RT.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	405
CONTRACT NO.				60W26
ILLINOIS FED. AID PROJECT				



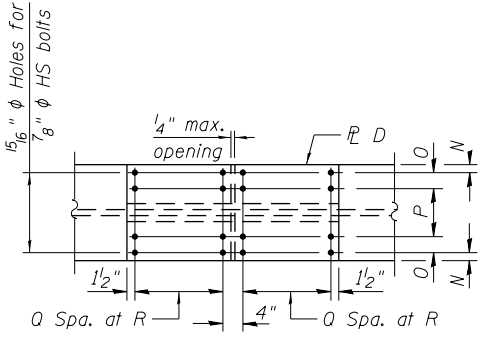
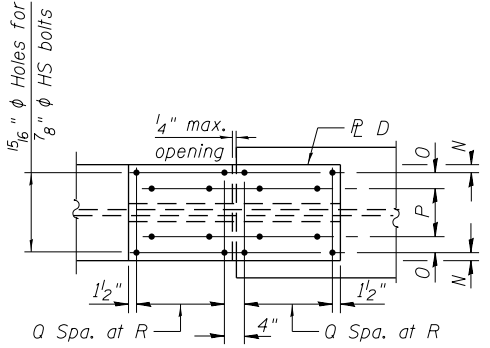
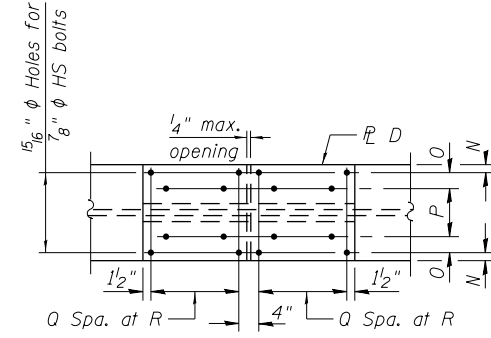
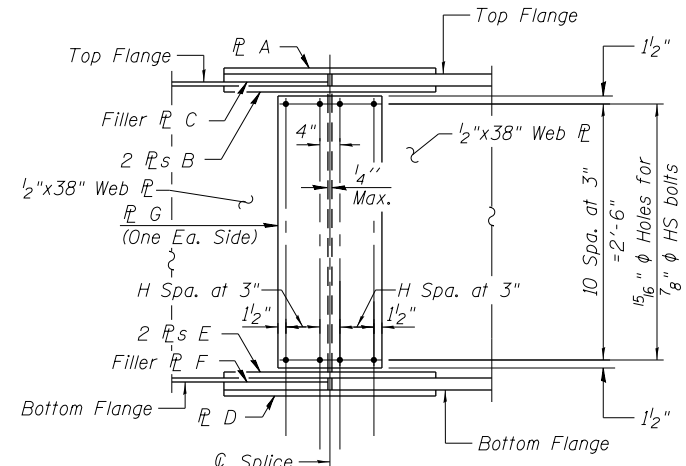
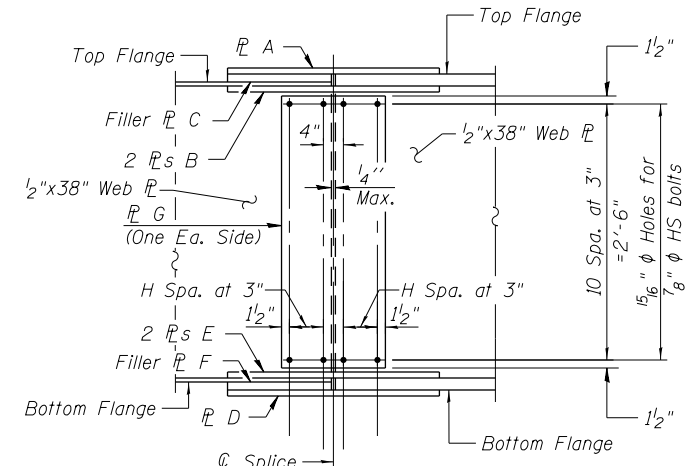
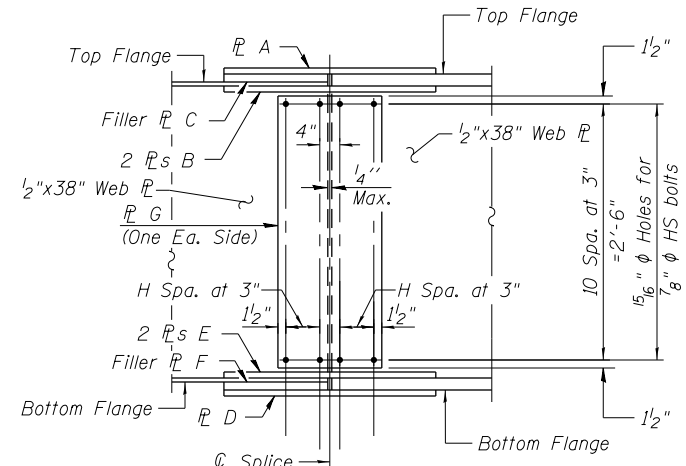
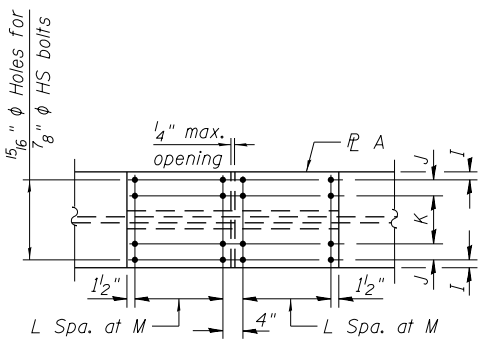
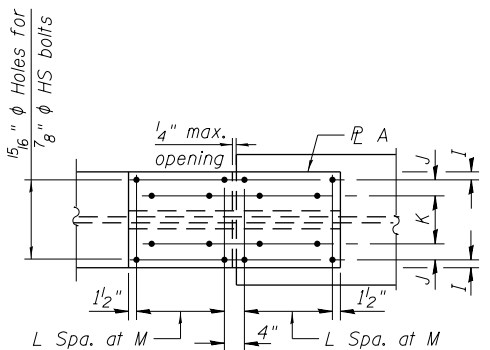
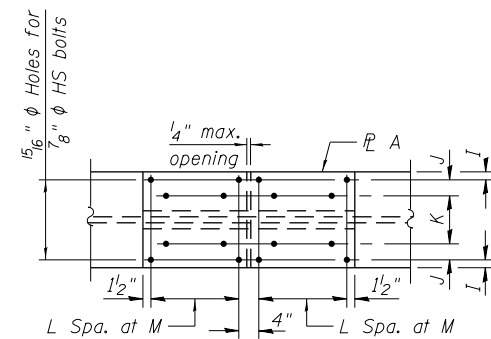
CAMBER DIAGRAM

TOP OF WEB ELEVATIONS
(For fabrication use only)

Girder	☐ Brg. S. Abut.	☐ Splice 1	☐ Brg. Pier 1	☐ Splice 2	☐ Splice 3	☐ Brg. Pier 2	☐ Splice 4	☐ Brg. Pier 3	☐ Splice 5	☐ Brg. Pier 4	☐ Splice 6	☐ Splice 7	☐ Brg. Pier 5	☐ Splice 8	☐ Splice 9	☐ Brg. N. Abut.
1	594.06	595.44	596.37	596.88	597.39	597.82	598.30	598.45	598.41	597.78	597.54	596.34	595.99	595.15	594.25	593.72
2	593.96	595.34	596.29	596.83	597.39	597.81	598.30	598.45	598.41	597.78	597.51	596.34	595.99	595.15	594.23	593.63
3	593.88	595.32	596.24	596.75	597.42	597.84	598.33	598.48	598.44	597.81	597.54	596.39	596.04	595.18	594.22	593.58
4	593.90	595.33	596.29	596.82	597.55	597.97	598.45	598.60	598.57	597.94	597.69	596.49	596.15	595.31	594.31	593.63
5	593.92	595.38	596.33	596.87	597.68	598.10	598.58	598.73	598.69	598.06	597.79	596.64	596.30	595.44	594.37	593.68
6	593.93	595.47	596.38	596.89	597.81	598.23	598.70	598.86	598.82	598.20	597.94	596.77	596.43	595.57	594.46	593.74
7	593.97	595.48	596.43	596.96	597.94	598.35	598.83	598.99	598.95	598.32	598.07	596.86	596.54	595.71	594.56	593.79
8	593.99	595.57	596.48	596.99	598.07	598.48	598.96	599.11	599.08	598.44	598.16	597.01	596.69	595.84	594.66	593.85
9	594.03	595.58	596.52	597.05	598.20	598.60	599.08	599.24	599.21	598.57	598.32	597.13	596.82	595.97	594.78	593.91
10	594.07	595.63	596.57	597.10	598.33	598.73	599.21	599.37	599.34	598.69	598.42	597.23	596.93	596.11	594.89	593.97
11	594.10	595.70	596.62	597.13	598.46	598.86	599.33	599.49	599.47	598.83	598.54	597.37	597.07	596.24	594.98	594.03
12	594.22	595.72	596.67	597.20	598.59	598.99	599.46	599.62	599.59	598.95	598.70	597.48	597.19	596.39	595.06	594.10
13	594.27	595.81	596.71	597.22	598.72	599.11	599.58	599.75	599.73	599.08	598.79	597.60	597.32	596.53	595.17	594.16
14	594.29	595.81	596.72	597.23	598.82	599.20	599.67	599.84	599.82	599.17	598.88	597.69	597.41	596.62	595.24	594.19
15	594.31	595.77	596.72	597.26	598.90	599.28	599.75	599.92	599.90	599.25	598.99	597.76	597.49	596.72	595.33	594.21

CAMBER TABLE

Girder	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	0"	0"	0"	0"	0"	0"	1 ⁵ / ₈ "	1 ³ / ₄ "	1 ³ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ³ / ₄ "	2"	1 ¹ / ₈ "	3 ⁴ / ₈ "	7 ⁶ / ₈ "	3 ⁴ / ₈ "
2	0"	0"	0"	0"	0"	0"	1 ¹ / ₂ "	1 ⁵ / ₈ "	1 ³ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ⁷ / ₈ "	2 ¹ / ₈ "	1 ¹ / ₂ "	7 ⁸ / ₈ "	3 ⁴ / ₈ "	3 ⁴ / ₈ "
3	0"	0"	0"	0"	0"	0"	1 ¹ / ₂ "	1 ⁵ / ₈ "	1 ³ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ⁷ / ₈ "	2 ¹ / ₈ "	1 ¹ / ₂ "	3 ⁴ / ₈ "	3 ⁴ / ₈ "	3 ⁴ / ₈ "
4	0"	0"	0"	0"	0"	0"	1 ¹ / ₂ "	1 ³ / ₄ "	1 ³ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ⁷ / ₈ "	2"	1 ¹ / ₄ "	7 ⁸ / ₈ "	3 ⁴ / ₈ "	3 ⁴ / ₈ "
5	3 ⁴ / ₈ "	3 ⁴ / ₈ "	7 ⁸ / ₈ "	0"	0"	0"	1 ¹ / ₂ "	1 ³ / ₄ "	1 ³ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ⁷ / ₈ "	2 ¹ / ₈ "	1 ¹ / ₂ "	1"	1 ¹ / ₈ "	1"
6	3 ⁴ / ₈ "	3 ⁴ / ₈ "	3 ⁴ / ₈ "	7 ⁸ / ₈ "	1"	7 ⁸ / ₈ "	1 ¹ / ₂ "	1 ⁵ / ₈ "	1 ³ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ⁷ / ₈ "	2"	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ¹ / ₄ "	1"
7	3 ⁴ / ₈ "	1"	7 ⁸ / ₈ "	3 ⁴ / ₈ "	7 ⁸ / ₈ "	3 ⁴ / ₈ "	1 ¹ / ₂ "	1 ⁵ / ₈ "	1 ³ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ⁷ / ₈ "	2"	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ¹ / ₄ "	1 ¹ / ₈ "
8	3 ⁴ / ₈ "	3 ⁴ / ₈ "	3 ⁴ / ₈ "	1"	1 ¹ / ₈ "	1"	1 ¹ / ₂ "	1 ⁵ / ₈ "	1 ³ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ⁷ / ₈ "	2"	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ¹ / ₄ "	1 ¹ / ₈ "
9	3 ⁴ / ₈ "	7 ⁸ / ₈ "	1"	3 ⁴ / ₈ "	1"	7 ⁸ / ₈ "	1 ³ / ₈ "	1 ⁵ / ₈ "	1 ³ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ⁷ / ₈ "	2 ¹ / ₈ "	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ¹ / ₄ "	7 ⁸ / ₈ "
10	3 ⁴ / ₈ "	3 ⁴ / ₈ "	1"	3 ⁴ / ₈ "	1"	7 ⁸ / ₈ "	1 ³ / ₈ "	1 ⁵ / ₈ "	1 ³ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	2"	2 ¹ / ₈ "	1 ¹ / ₂ "	1 ¹ / ₄ "	1 ³ / ₈ "	1"
11	3 ⁴ / ₈ "	1"	3 ⁴ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	1 ³ / ₈ "	1 ⁵ / ₈ "	1 ³ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	2"	2 ³ / ₈ "	1 ⁵ / ₈ "	1 ¹ / ₄ "	1 ¹ / ₂ "	1 ¹ / ₄ "
12	0"	0"	0"	3 ⁴ / ₈ "	1 ¹ / ₈ "	1"	1 ³ / ₈ "	1 ⁵ / ₈ "	1 ³ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	2"	2 ¹ / ₈ "	1 ¹ / ₄ "	1 ¹ / ₂ "	1 ³ / ₈ "	1 ¹ / ₂ "
13	0"	0"	0"	1 ¹ / ₈ "	1 ³ / ₈ "	1 ¹ / ₄ "	1 ¹ / ₄ "	1 ¹ / ₂ "	1 ¹ / ₄ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	2"	2 ³ / ₈ "	1 ⁵ / ₈ "	1 ⁵ / ₈ "	1 ⁷ / ₈ "	1 ¹ / ₂ "
14	0"	0"	0"	1 ¹ / ₈ "	1 ³ / ₈ "	1 ¹ / ₄ "	1 ¹ / ₄ "	1 ¹ / ₂ "	1 ¹ / ₄ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	2"	2 ³ / ₈ "	1 ⁵ / ₈ "	1 ⁵ / ₈ "	2"	1 ⁵ / ₈ "
15	0"	0"	0"	7 ⁸ / ₈ "	1 ¹ / ₄ "	7 ⁸ / ₈ "	1 ¹ / ₄ "	1 ³ / ₈ "	1 ¹ / ₈ "	1"	1 ¹ / ₄ "	1 ¹ / ₈ "	2"	2 ¹ / ₈ "	1 ¹ / ₄ "	1 ⁵ / ₈ "	1 ⁷ / ₈ "	1 ³ / ₈ "



FIELD SPLICE DETAIL (SPLICE 1 THROUGH 5)
(75 Required)

FIELD SPLICE DETAIL (SPLICE 6)
(15 Required)

FIELD SPLICE DETAIL (SPLICE 7 THROUGH 9)
(45 Required)

TABLE OF FIELD SPLICE DATA

Splice	PL A	PL B	Filler PL C	PL D	PL E	Filler PL F	PL G	H	I	J	K	L	M	N	O	P	Q	R
1	1/2" x 1'-0" x 2'-9 1/4"	5/8" x 4 1/2" x 2'-9 1/4"	3/8" x 1'-0" x 1'-4 5/8"	1/2" x 1'-0" x 3'-2 1/2"	5/8" x 4 1/2" x 3'-2 1/2"	3/4" x 1'-0" x 1'-7 1/4"	3/8" x 1'-7" x 2'-9"	2	1 1/2"	1 1/2"	6"	5	2 5/8"	1 1/2"	1 1/2"	6"	6	2 5/8"
2	1/2" x 1'-0" x 2'-9 1/4"	5/8" x 4 1/2" x 2'-9 1/4"	3/8" x 1'-0" x 1'-4 5/8"	1/2" x 1'-0" x 3'-2 1/2"	5/8" x 4 1/2" x 3'-2 1/2"	3/4" x 1'-0" x 1'-7 1/4"	3/8" x 1'-1" x 2'-9"	1	1 1/2"	1 1/2"	6"	5	2 5/8"	1 1/2"	1 1/2"	6"	6	2 5/8"
3	1/2" x 1'-0" x 2'-9 1/4"	5/8" x 4 1/2" x 2'-9 1/4"	N/A	1/2" x 1'-0" x 3'-2 1/2"	5/8" x 4 1/2" x 3'-2 1/2"	N/A	3/8" x 1'-1" x 2'-9"	1	1 1/2"	1 1/2"	6"	5	2 5/8"	1 1/2"	1 1/2"	6"	6	2 5/8"
4	1/2" x 1'-0" x 2'-9 1/4"	5/8" x 4 1/2" x 2'-9 1/4"	N/A	1/2" x 1'-0" x 3'-2 1/2"	5/8" x 4 1/2" x 3'-2 1/2"	3/8" x 1'-0" x 1'-7 1/4"	3/8" x 1'-1" x 2'-9"	1	1 1/2"	1 1/2"	6"	5	2 5/8"	1 1/2"	1 1/2"	6"	6	2 5/8"
5	1/2" x 1'-0" x 2'-9 1/4"	5/8" x 4 1/2" x 2'-9 1/4"	N/A	1/2" x 1'-0" x 3'-2 1/2"	3/4" x 4 1/2" x 3'-2 1/2"	N/A	3/8" x 1'-1" x 2'-9"	1	1 1/2"	1 1/2"	6"	5	2 5/8"	1 1/2"	1 1/2"	6"	6	2 5/8"
6	1/2" x 1'-0" x 2'-9 1/4"	5/8" x 4 1/2" x 2'-9 1/4"	3/8" x 1'-0" x 1'-4 5/8"	1/2" x 1'-0" x 3'-2 1/2"	3/4" x 4 1/2" x 3'-2 1/2"	N/A	3/8" x 1'-1" x 2'-9"	1	1 1/2"	1 1/2"	6"	5	2 5/8"	1 1/2"	1 1/2"	6"	6	2 5/8"
7	5/8" x 1'-4" x 2'-7"	3/4" x 6 1/2" x 2'-7"	3/8" x 1'-4" x 1'-3 1/2"	3/4" x 1'-4" x 4'-1"	1" x 6 1/2" x 4'-1"	5/8" x 1'-4" x 2'-0 1/2"	3/8" x 1'-7" x 2'-9"	2	1 1/2"	3 1/2"	6"	4	3"	1 1/2"	3 1/2"	6"	7	3"
8	3/4" x 1'-4" x 3'-1"	1" x 6 1/2" x 3'-1"	N/A	3/4" x 1'-4" x 3'-1"	1" x 6 1/2" x 3'-1"	1" x 1'-4" x 1'-6 1/2"	3/8" x 1'-7" x 2'-9"	2	1 1/2"	3 1/2"	6"	5	3"	1 1/2"	3 1/2"	6"	5	3"
9	5/8" x 1'-4" x 3'-1"	3/4" x 6 1/2" x 3'-1"	3/8" x 1'-4" x 1'-6 1/2"	1" x 1'-4" x 4'-7"	1 1/8" x 6 1/2" x 4'-7"	N/A	3/8" x 1'-7" x 2'-9"	2	1 1/2"	3 1/2"	6"	5	3"	1 1/2"	3 1/2"	6"	8	3"

Notes:
 All splice plates except filler plates shall meet NTR.
 Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 All splice plates, except filler plates, shall be AASHTO M 270 Grade 50.

4/3/21 PM 0161716-60W26-S047-SuperStruct-SteelDet3.dgn



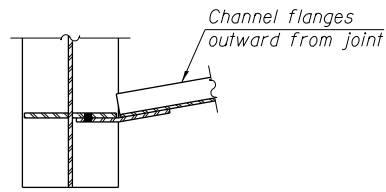
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PLOT DATE = 9/15/2013	DRAWN - RLS	REVISED
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

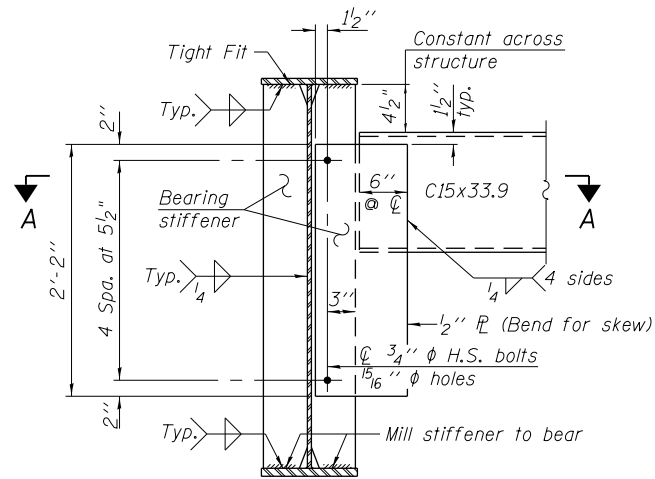
**STRUCTURAL STEEL DETAILS 3
STRUCTURE NO. 016-1716**

SHEET NO. S2-47 OF S2-81 SHEETS

F.A.U. RT.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	407
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				

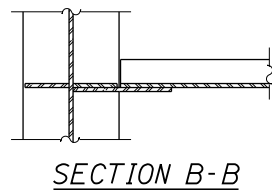


SECTION A-A

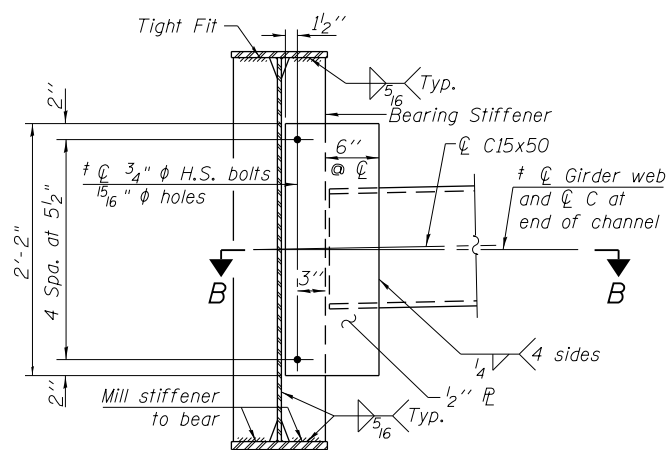


END DIAPHRAGM D

Note: (28 Required)
Two hardened washers required for each set of oversized holes.



SECTION B-B

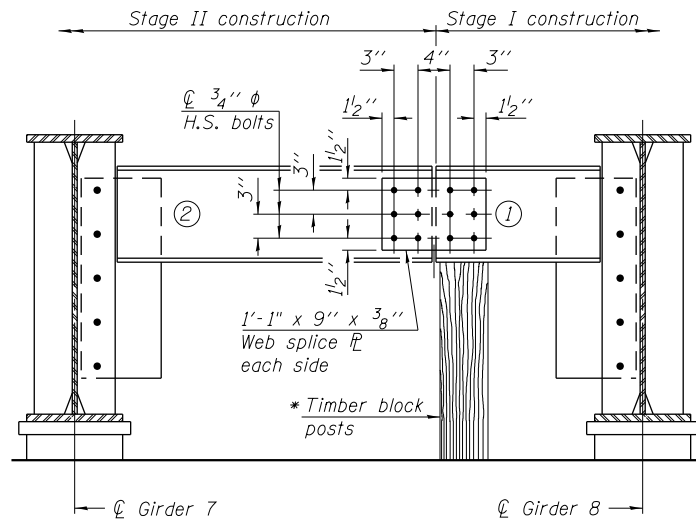


INTERIOR DIAPHRAGM D2

(56 Required)

Note: Two hardened washers required for each set of oversized holes.

* Cost of Timber Block Posts is included with Structural Steel.



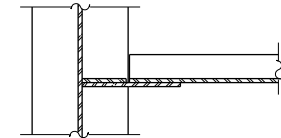
END DIAPHRAGM D

(Looking North, 2 Required)

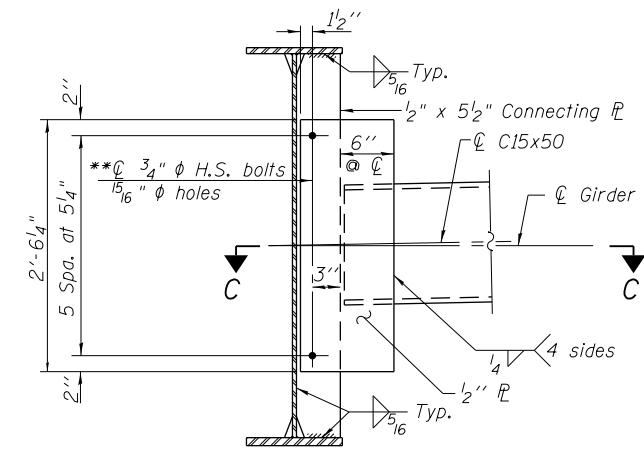
END DIAPHRAGM STAGE CONSTRUCTION SEQUENCE

- 1.) Order diaphragm in two sections.
- 2.) Attach section ① of diaphragm to girder
- 3.) Place timber block posts between section ① of diaphragm and abutment bearing section.
- 4.) Attach section ② of diaphragm to both girder and section ① of diaphragm during stage II construction with splice plates.
- 5.) Remove timber block posts.

† For the diaphragm connection between girder 7 and 8, only the top bolt hole shall be shop drilled in the connecting angle. The diaphragms shall be installed with a finger tightened bolts in the top holes prior to the Stage II deck pour. After the Stage II deck pour, the remaining holes in the connecting angle for the diaphragm shall be drilled using the holes in the diaphragm as a template. Install and tighten the remaining bolts. Cost of field drilling included with Furnishing and Erecting Structural Steel.



SECTION C-C



INTERIOR DIAPHRAGM D1

(350 Required)

Note: Two hardened washers required for each set of oversized holes.

** For the diaphragm connection between girder 7 and 8, only the top bolt hole shall be shop drilled in the connecting angle. The diaphragms shall be installed with a finger tightened bolts in the top holes prior to the Stage II deck pour. After the Stage II deck pour, the remaining holes in the connecting angle for the diaphragm shall be drilled using the holes in the diaphragm as a template. Install and tighten the remaining bolts. Cost of field drilling included with Furnishing and Erecting Structural Steel.

4:33:22 PM 0161716-60W26-S048-SuperStruct - SteelDet4.dgn



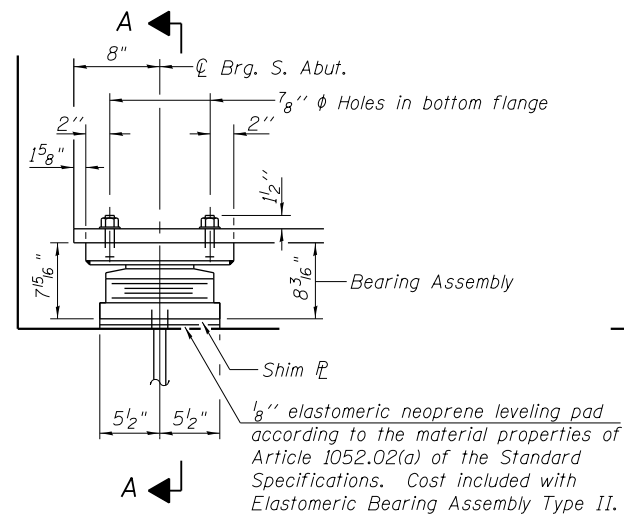
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	CHECKED - DL	REVISED
PLOT SCALE = 0:1.0000 ' = 1/8" / in.	DRAWN - RLS	REVISED
PLOT DATE = 9/15/2013	CHECKED - DL	REVISED

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STRUCTURAL STEEL DETAILS 4
STRUCTURE NO. 016-1716

SHEET NO. S2-48 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				

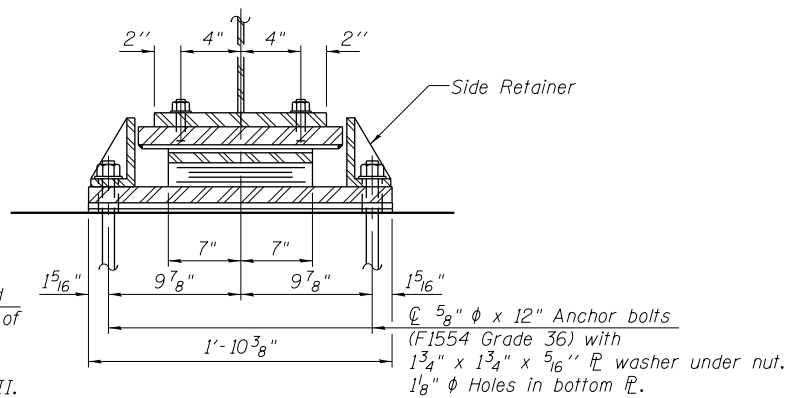


ELEVATION AT ABUT.

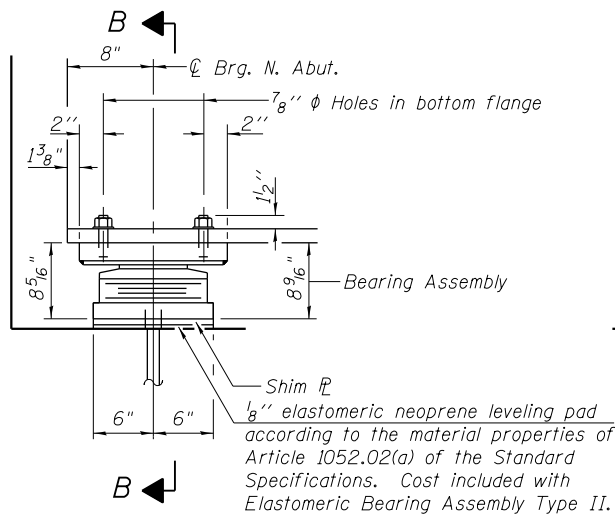
(Looking West)

TYPE II ELASTOMERIC EXP. BRG.

(at South Abutment)



SECTION A-A

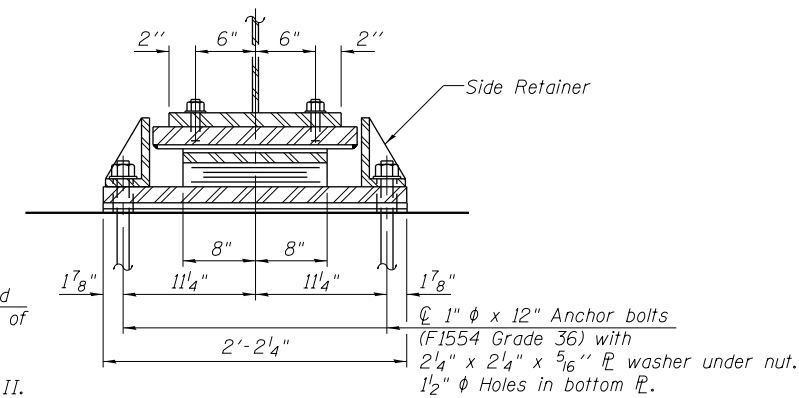


ELEVATION AT ABUT.

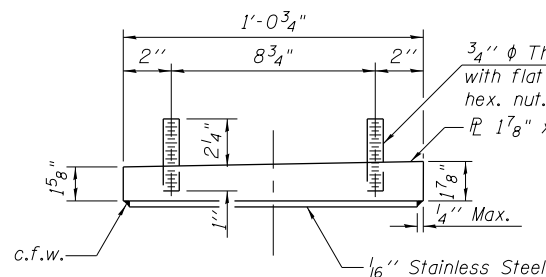
(Looking East)

TYPE II ELASTOMERIC EXP. BRG.

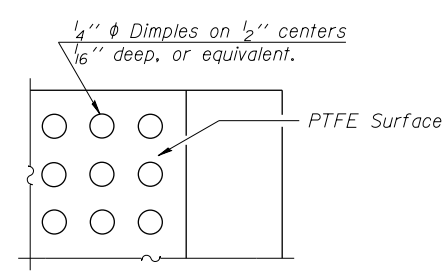
(at North Abutment)



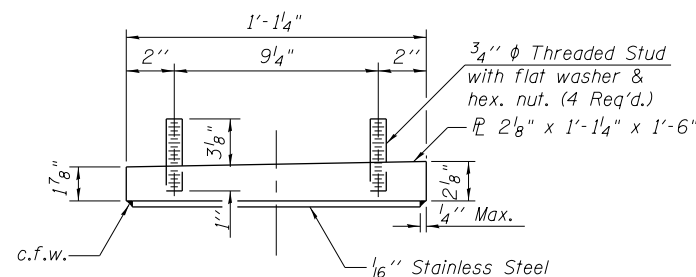
SECTION B-B



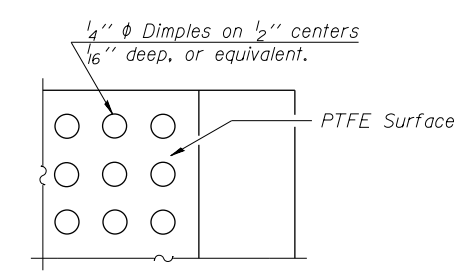
TOP BEARING ASSEMBLY



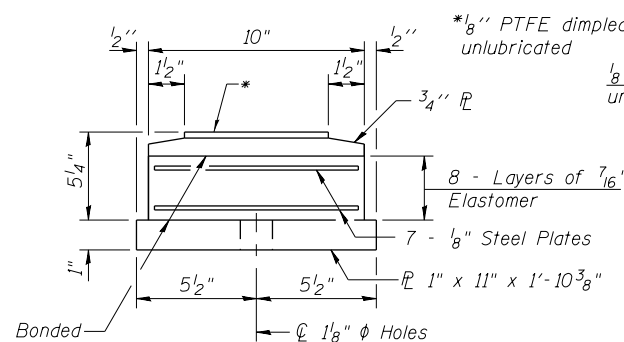
PLAN-PTFE SURFACE



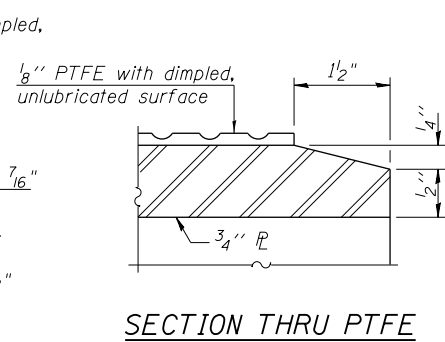
TOP BEARING ASSEMBLY



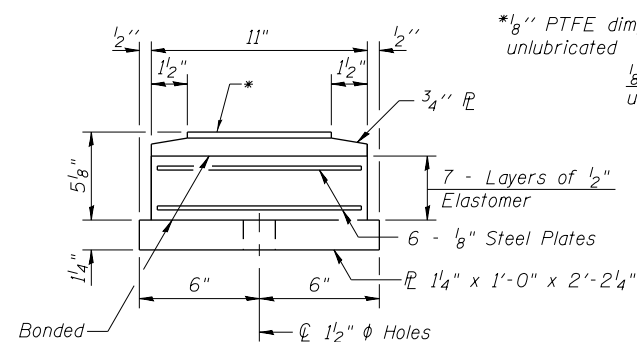
PLAN-PTFE SURFACE



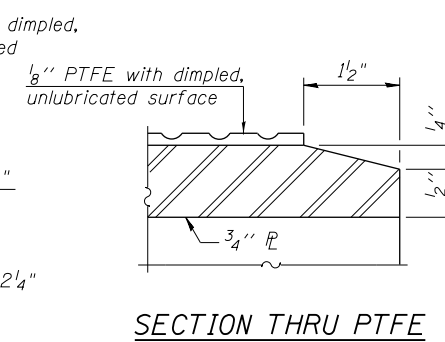
BOTTOM BEARING ASSEMBLY



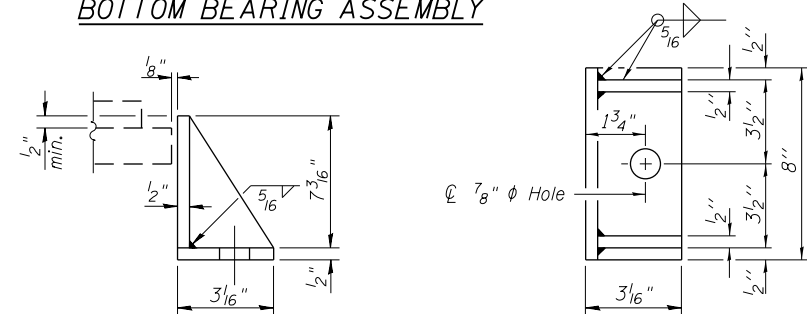
SECTION THRU PTFE



BOTTOM BEARING ASSEMBLY

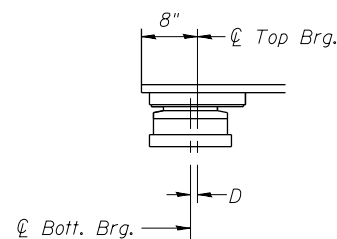


SECTION THRU PTFE



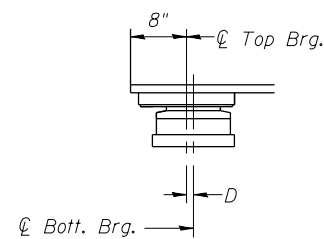
SIDE RETAINER

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



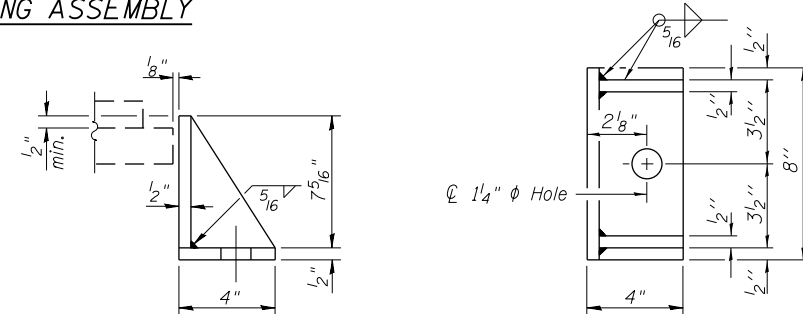
BELOW 50°F.

(Move bott. brg. away from fixed brg.)



ABOVE 50°F.

(Move bott. brg. toward fixed brg.)



SIDE RETAINER

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

SHIM PLATE THICKNESS TABLE

Location	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15
S. Abut.	-	-	-	3/8"	1/2"	5/8"	-	1/4"	-	1/2"	-	-	5/8"	-	1/4"
N. Abut.	-	-	1/4"	-	5/8"	-	5/8"	-	5/8"	-	-	-	-	-	3/8"

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

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

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

The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

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.

All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts and washers shall be galvanized according to ASTM M111 or M232 as applicable.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	30
Anchor Bolts, 5/8"	Each	30
Anchor Bolts, 1"	Each	30

4:33:23 PM 0161716-60W26-S049-Bearing-AbutDetails.dgn



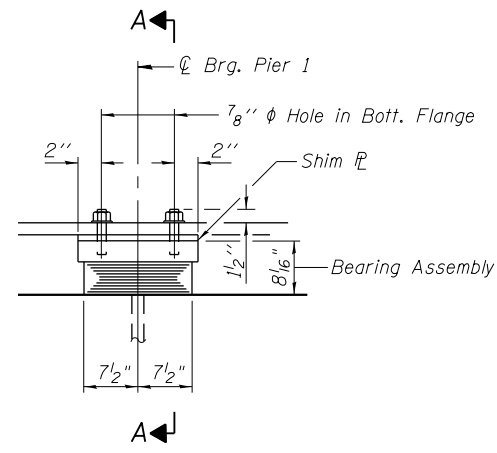
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	CHECKED - MDS	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

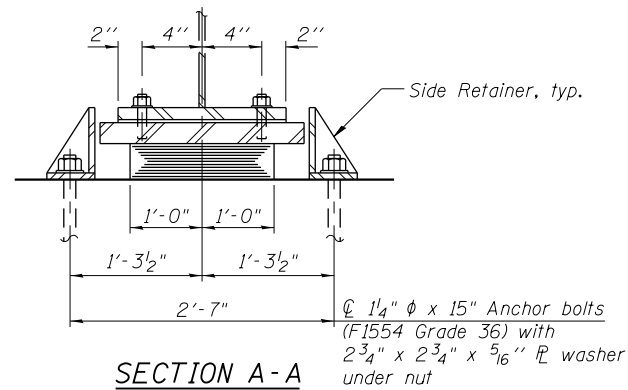
**ABUTMENT BEARING DETAILS
STRUCTURE NO. 016-1716**

SHEET NO. S2-49 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	409
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				

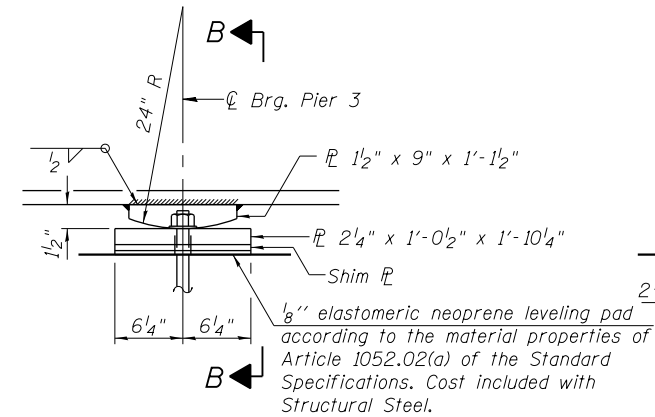


ELEVATION AT PIER
(Looking West)



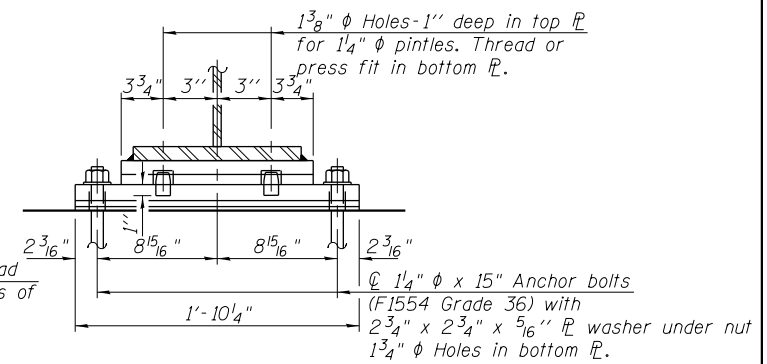
SECTION A-A
Anchor bolts (F1554 Grade 36) with 2 3/4" x 2 3/4" x 5/16" R washer under nut

TYPE I ELASTOMERIC EXP. BRG.
(At Pier 1)

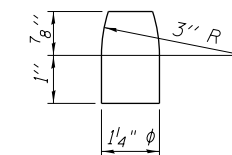


ELEVATION AT PIER

FIXED BEARING
(At Pier 3)



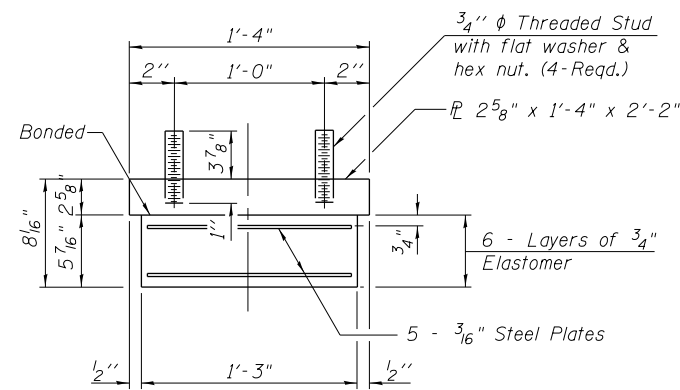
SECTION B-B



PINTLE

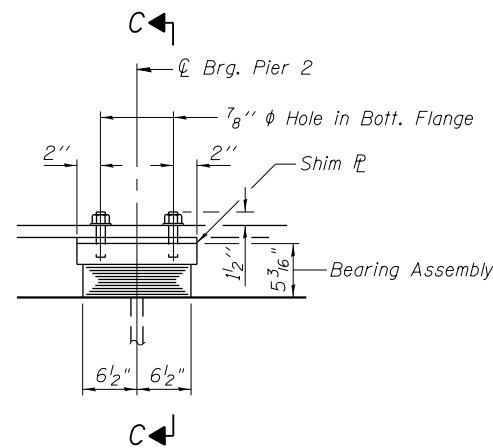
SHIM PLATE THICKNESS TABLE

Location	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15
Pier 1	-	-	-	1/2"	-	1/2"	-	1/2"	-	1/2"	-	1/2"	-	-	-



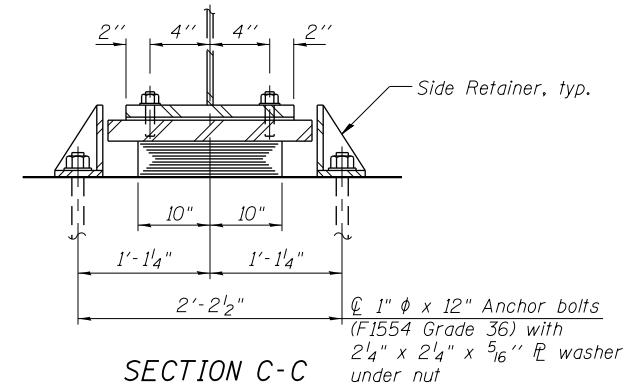
BEARING ASSEMBLY
(At Pier 1)

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



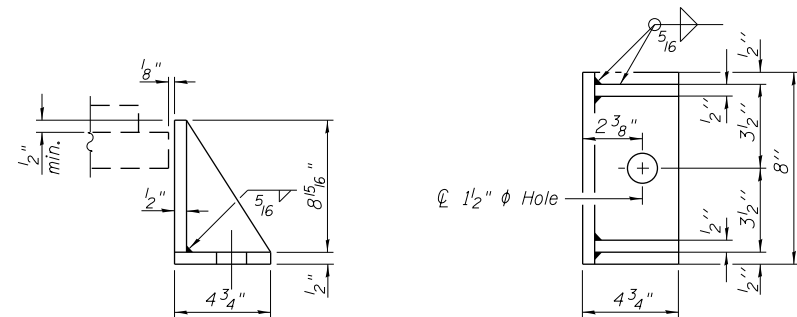
ELEVATION AT PIER
(Looking West)

TYPE I ELASTOMERIC EXP. BRG.
(At Pier 2)



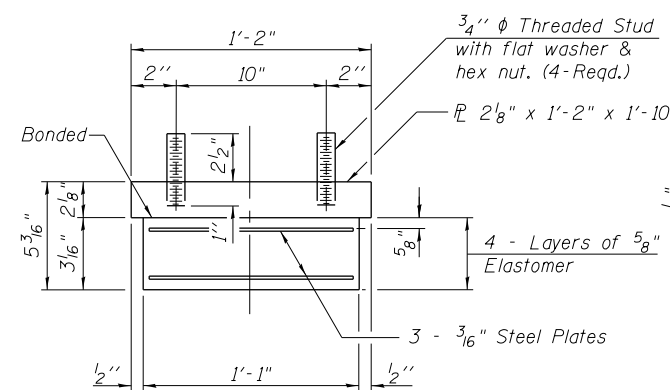
SECTION C-C

Anchor bolts (F1554 Grade 36) with 2 1/4" x 2 1/4" x 5/16" R washer under nut



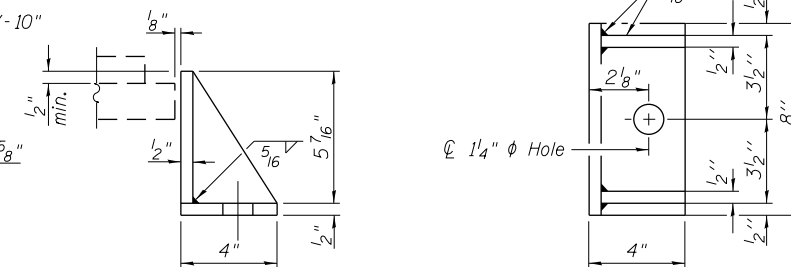
SIDE RETAINER

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



BEARING ASSEMBLY
(At Pier 2)

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



SIDE RETAINER

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

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
Two 8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to ASTM M111 or M232 as applicable.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	30
Anchor Bolts, 1"	Each	30
Anchor Bolts, 1 1/4"	Each	60

4:33:25 PM 0161716-60W26-S050-Bearing_Details.dgn



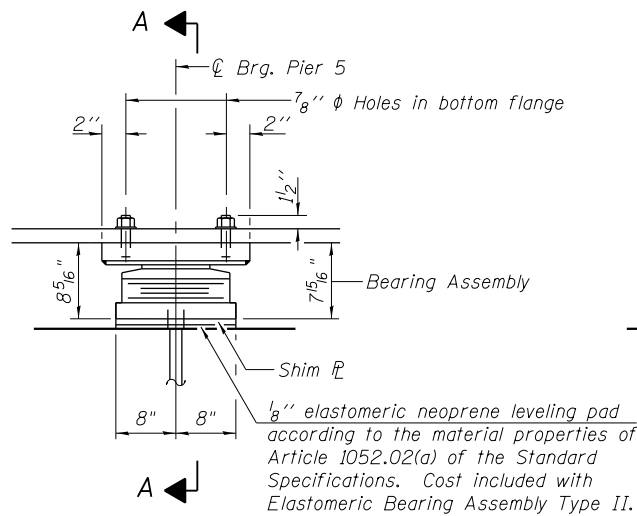
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PLOT SCALE = 0:1.0000 ' = 1/8" / in.	CHECKED - MDS	REVISED
PLOT DATE = 9/15/2013	DRAWN - MTS	REVISED
	CHECKED - MDS	REVISED

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PIER BEARING DETAILS 1
STRUCTURE NO. 016-1716

SHEET NO. S2-50 OF S2-81 SHEETS

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	410
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				

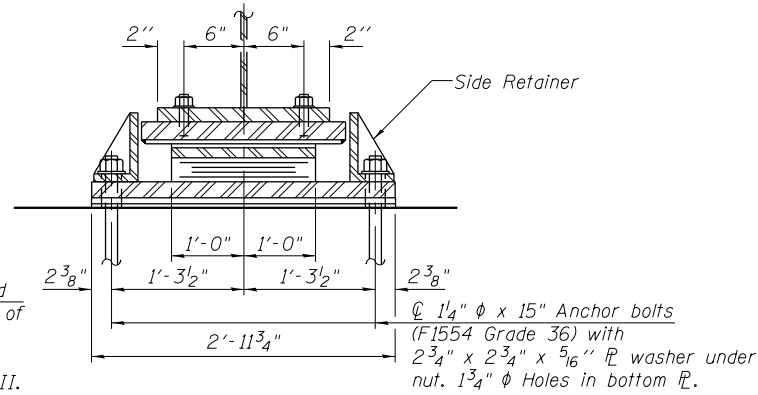


ELEVATION AT PIER

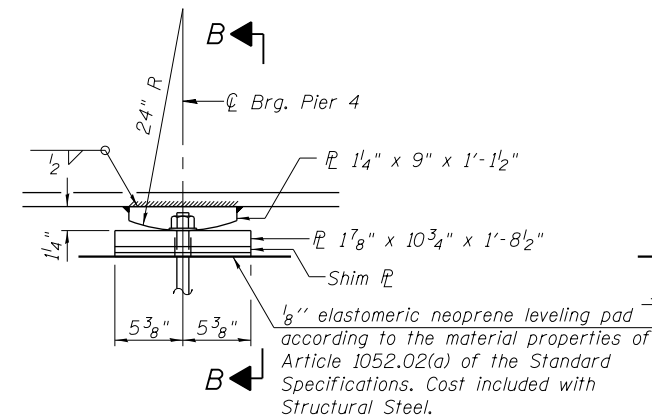
(Looking West)

TYPE II ELASTOMERIC EXP. BRG.

(At Pier 5)



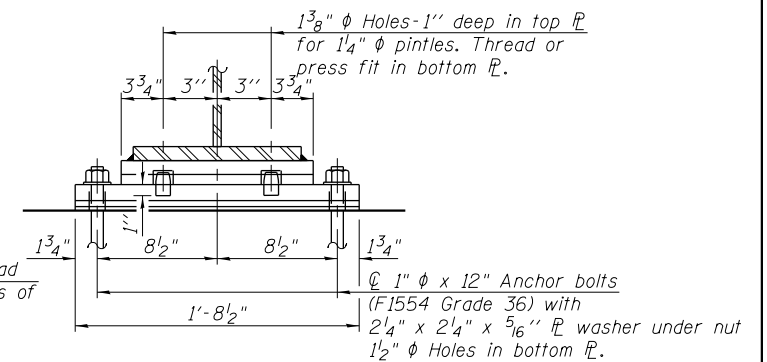
SECTION A-A



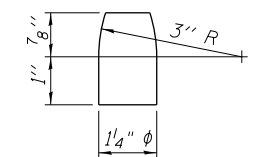
ELEVATION AT PIER

FIXED BEARING

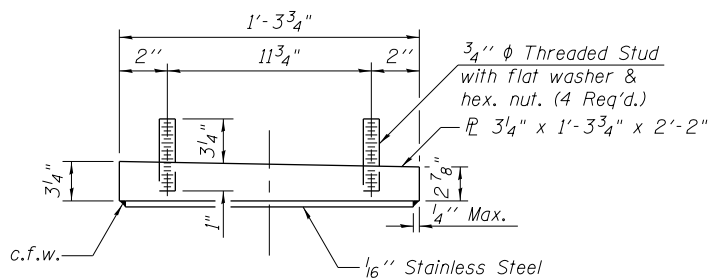
(At Pier 4)



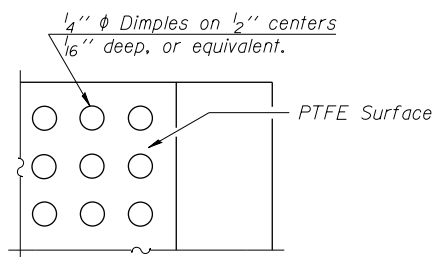
SECTION B-B



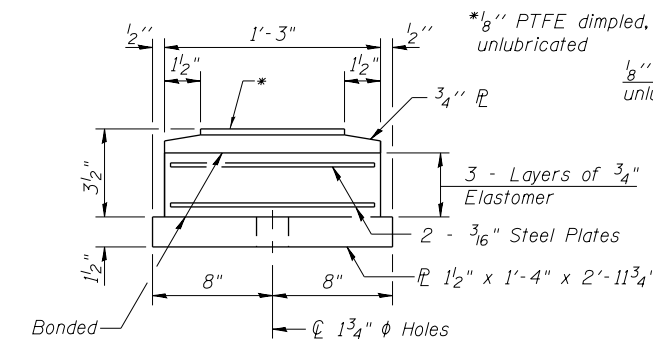
PINTLE



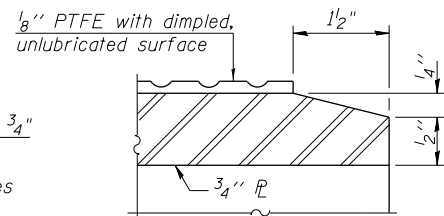
TOP BEARING ASSEMBLY



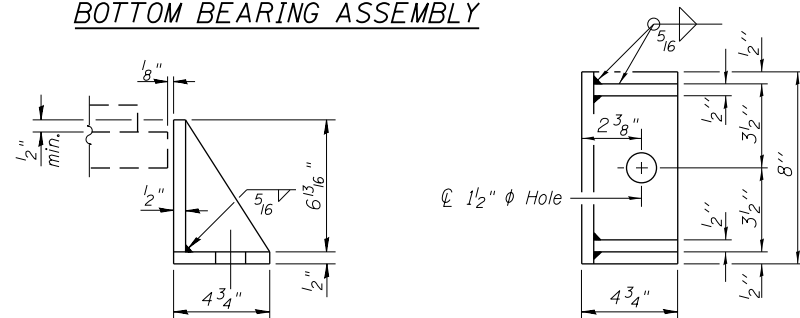
PLAN-PTFE SURFACE



BOTTOM BEARING ASSEMBLY

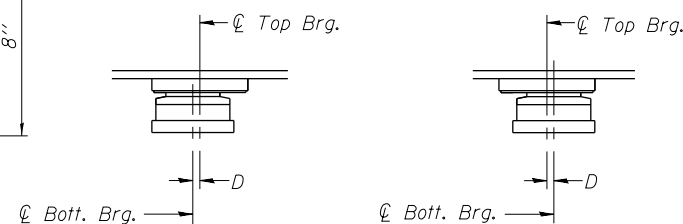


SECTION THRU PTFE



SIDE RETAINER

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



BELOW 50°F.

ABOVE 50°F.

(Move bott. brg. away from fixed brg.) (Move bott. brg. toward fixed brg.)

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.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

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

Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

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

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

The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

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.

All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to ASTM M111 or M232 as applicable.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	15
Anchor Bolts, 1"	Each	30
Anchor Bolts, 1 1/4"	Each	30

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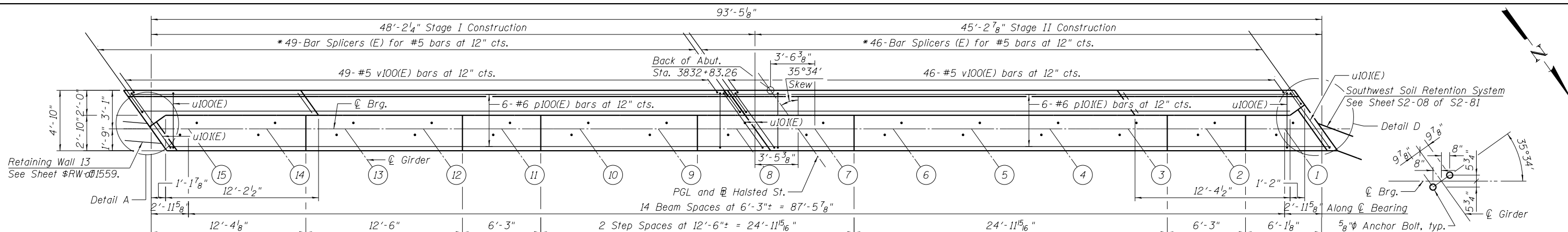
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

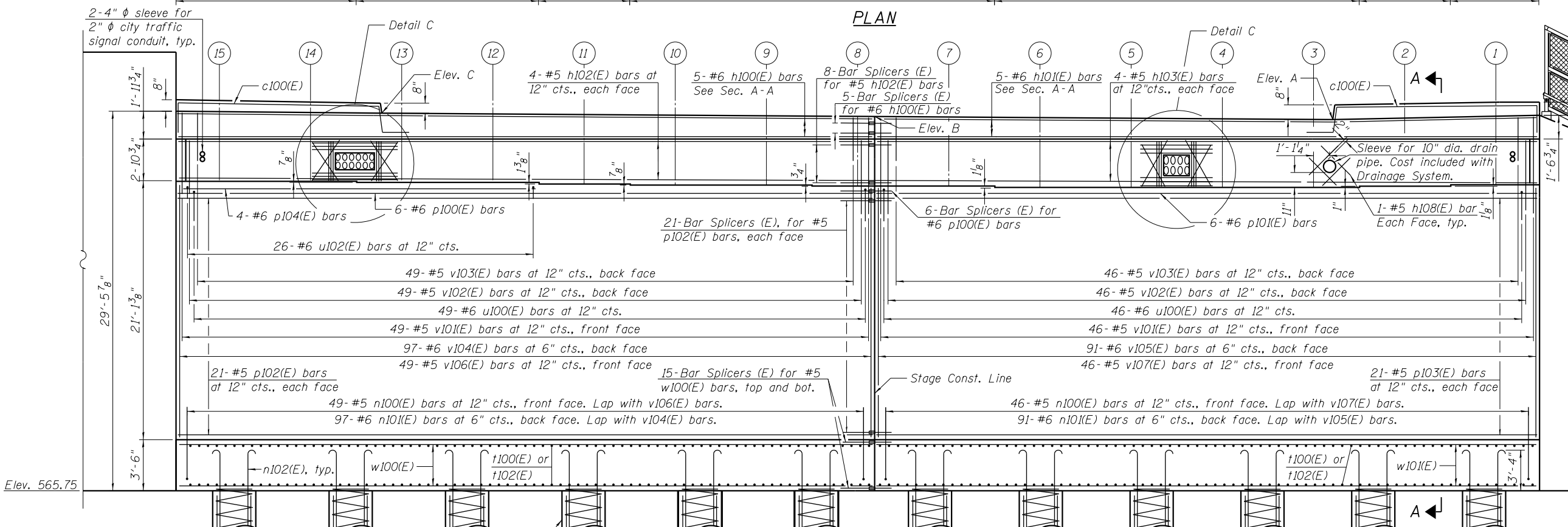
**PIER BEARING DETAILS 2
STRUCTURE NO. 016-1716**

SHEET NO. S2-51 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	411
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



ANCHOR BOLT LAYOUT

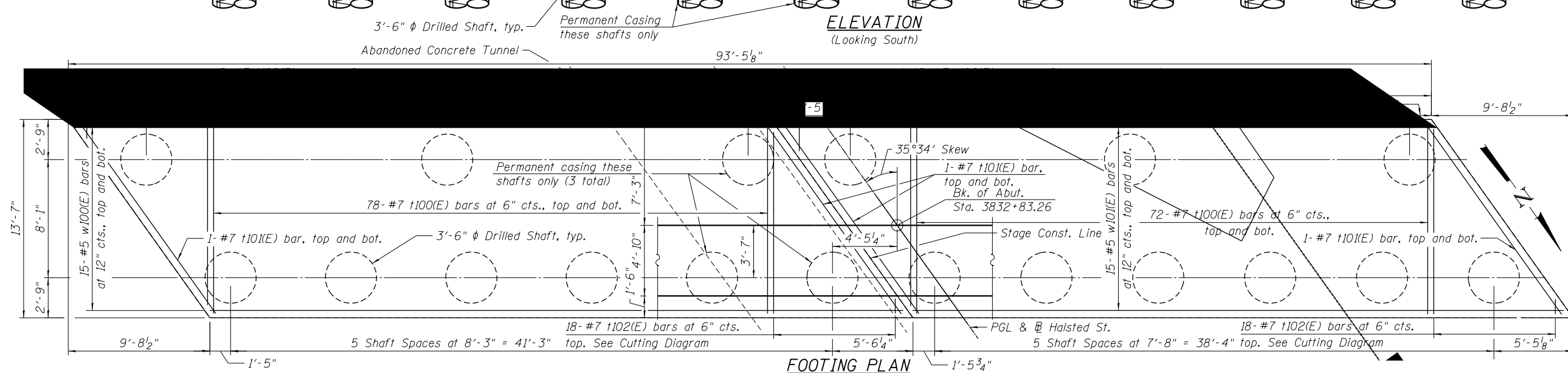


TOP OF SEAT ELEVATIONS

Girder No.	Seat Elevation
1	590.13
2	590.03
3	589.95
4	589.95
5	589.95
6	589.95
7	590.05
8	590.05
9	590.11
10	590.11
11	590.18
12	590.29
13	590.29
14	590.36
15	590.36

TOP OF BACK WALL ELEVATIONS

POINTS	FRONT FACE	BACK FACE
A - West Curb Line	594.64	594.59
B - Stage Const. Line	594.80	594.75
C - East Curb Line	595.06	595.03



Notes:
 For Section A-A and Detail C, see Sheet S2-53.
 For Detail A and Detail D, see Sheet S2-54.

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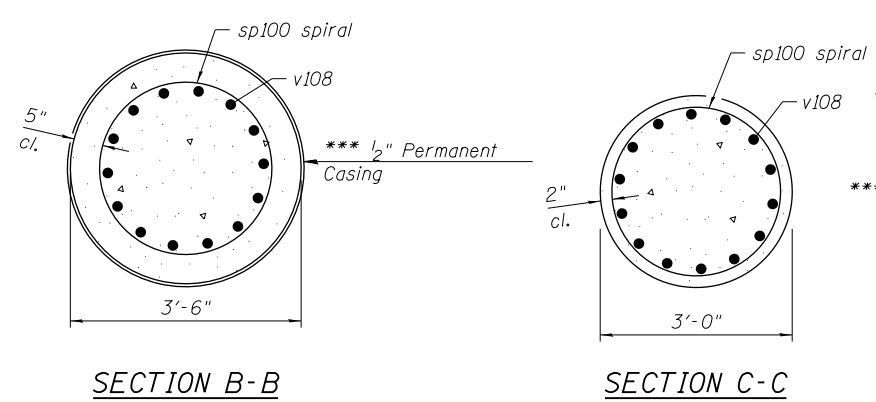
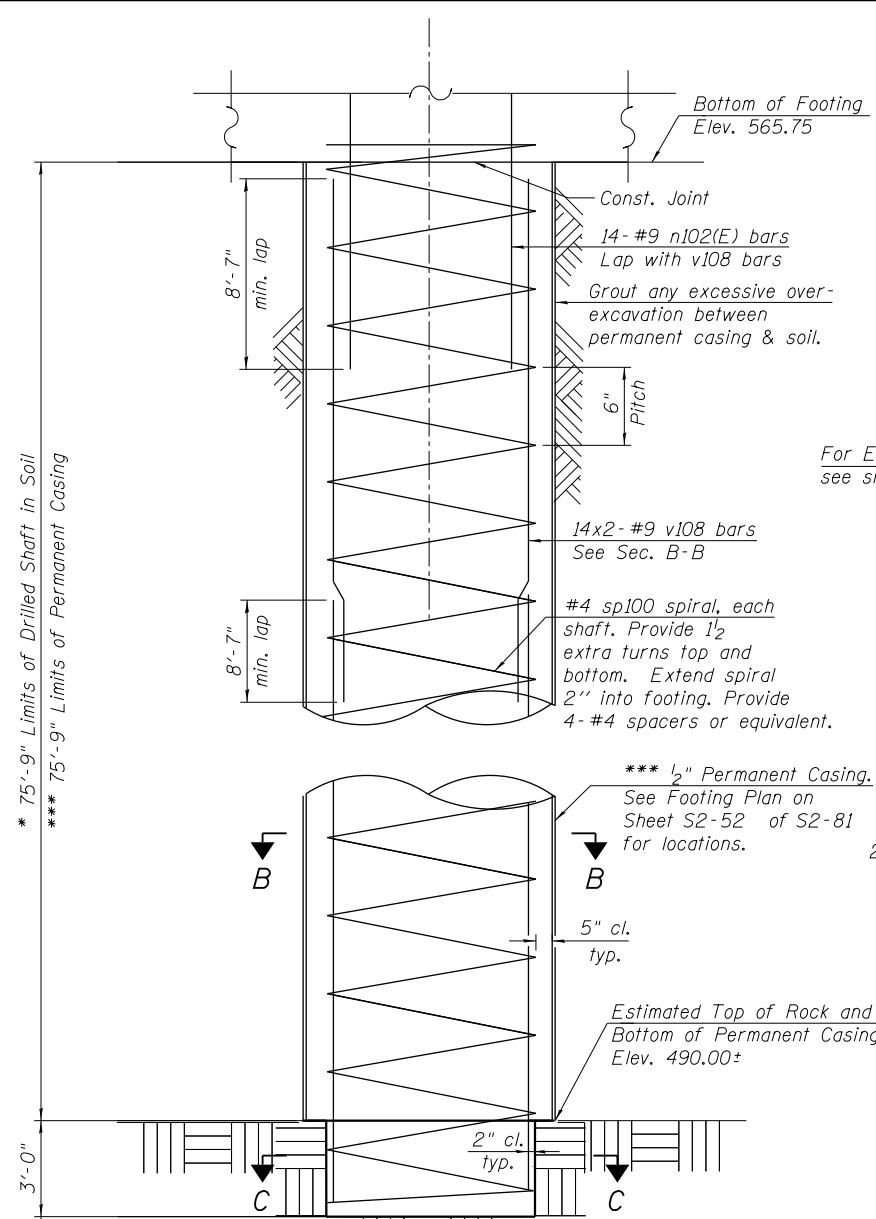
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SOUTH ABUTMENT PLAN AND ELEVATION
 STRUCTURE NO. 016-1716**

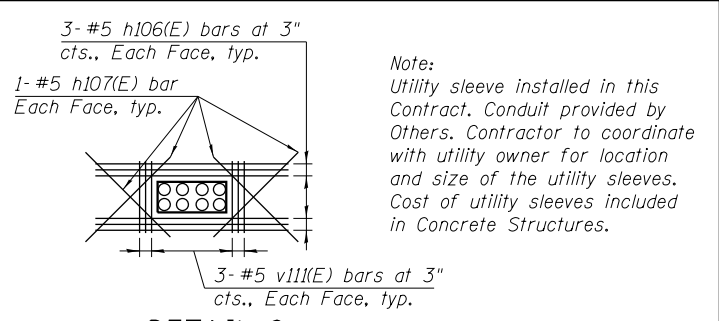
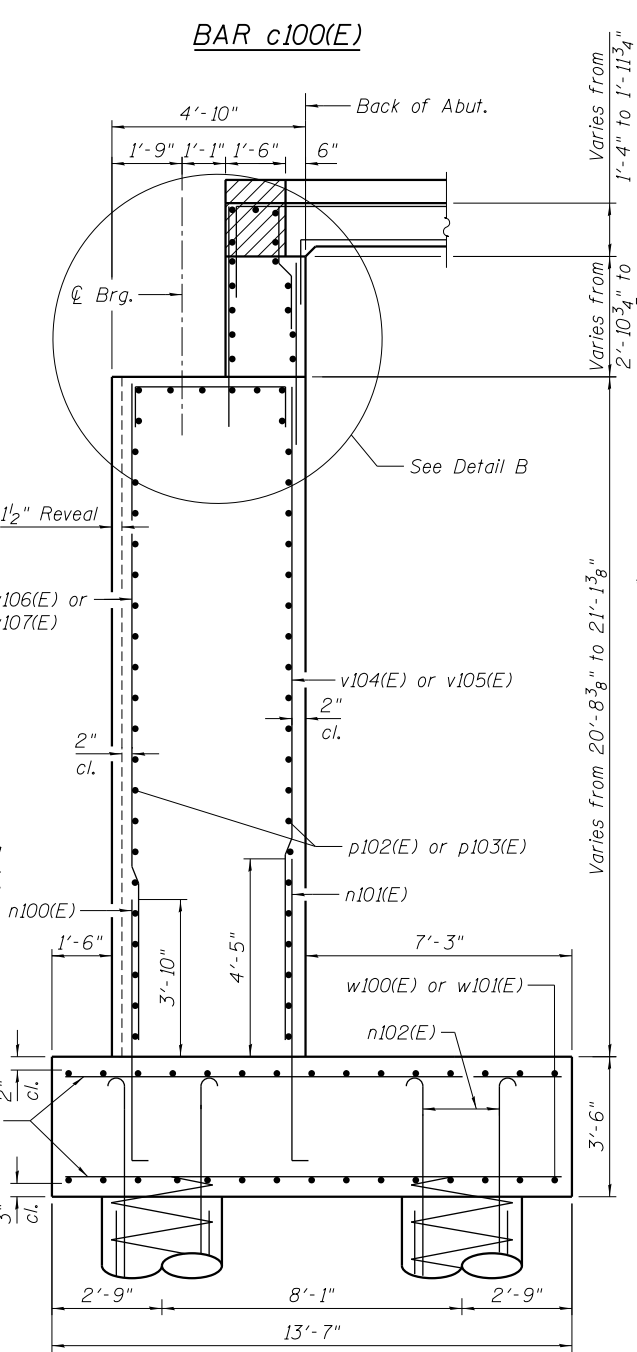
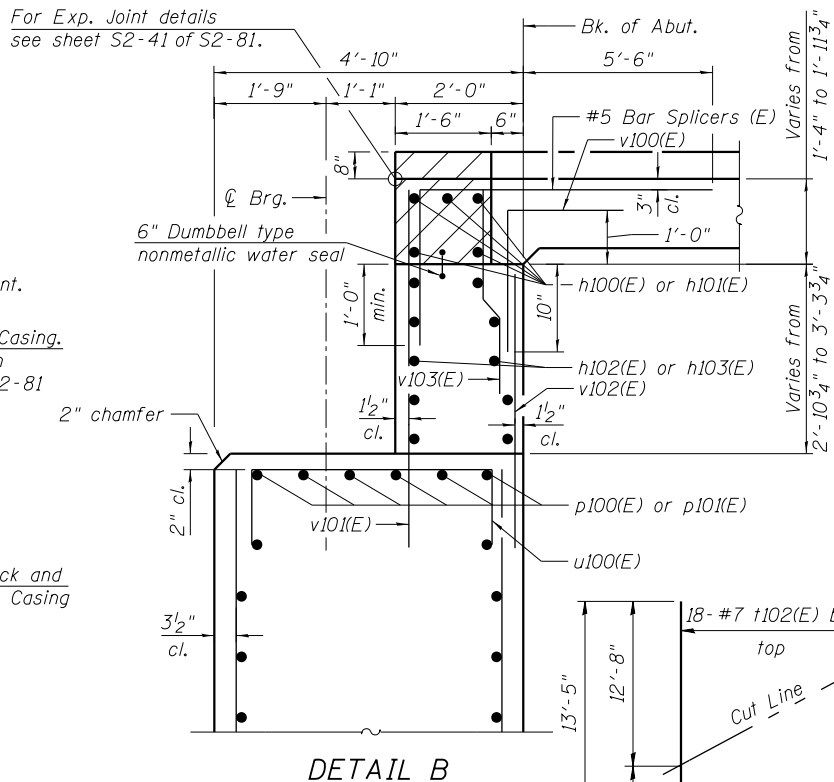
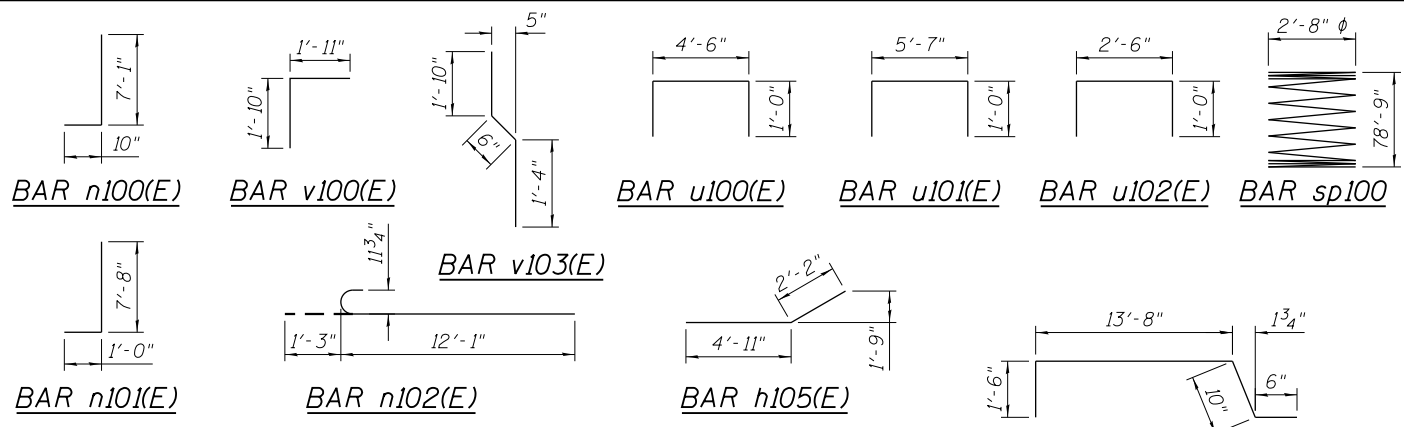
SHEET NO. S2-52 OF S2-81 SHEETS

F.A.U. RE. 3730	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 412
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	

* 75'-9" Limits of Drilled Shaft in Soil
 *** 75'-9" Limits of Permanent Casing
 Limits of Drilled Shaft in Rock



Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#9	8'-7"



DETAIL C
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
b100(E)	26	#5	1'-6"	—
c100(E)	6	#5	16'-6"	└
h100(E)	5	#6	47'-10"	—
h101(E)	5	#6	44'-11"	—
h102(E)	8	#5	47'-10"	—
h103(E)	8	#5	44'-11"	—
h104(E)	4	#5	3'-8"	—
h105(E)	4	#5	7'-1"	—
h106(E)	24	#5	9'-3"	—
h107(E)	16	#5	4'-0"	—
h108(E)	8	#5	2'-10"	—
n100(E)	95	#5	7'-11"	└
n101(E)	188	#6	8'-8"	└
n102(E)	252	#9	13'-4"	└
p100(E)	6	#6	47'-10"	—
p101(E)	6	#6	44'-11"	—
p102(E)	42	#5	47'-10"	—
p103(E)	42	#5	44'-11"	—
p104(E)	4	#6	24'-6"	—
sp100	18	#4	78'-9"	▩
t100(E)	300	#7	13'-3"	—
t101(E)	8	#7	16'-3"	—
t102(E)	72	#7	13'-5"	—
u100(E)	95	#6	6'-6"	└
u101(E)	4	#6	7'-7"	└
u102(E)	26	#6	4'-6"	└
v100(E)	95	#5	3'-9"	└
v101(E)	95	#5	5'-7"	—
v102(E)	95	#5	3'-9"	—
v103(E)	95	#5	3'-8"	—
v104(E)	97	#6	20'-6"	—
v105(E)	91	#6	20'-4"	—
v106(E)	49	#5	20'-6"	—
v107(E)	46	#5	20'-4"	—
v108	504	#9	43'-8"	—
v109(E)	4	#5	4'-6"	—
v110(E)	6	#5	4'-2"	—
v111(E)	24	#5	2'-8"	—
w100(E)	30	#5	47'-10"	—
w101(E)	30	#5	44'-11"	—
Structure Excavation		Cu. Yd.	1646	
Concrete Structures		Cu. Yd.	536.2	
Concrete Superstructure		Cu. Yd.	9.6	
Reinforcement Bars		Pound	90,730	
Reinforcement Bars, Epoxy Coated		Pound	45,660	
Permanent Casing		Foot	228	
Drilled Shaft in Soil		Cu. Yd.	485.9	
Drilled Shaft in Rock		Cu. Yd.	14.1	
Concrete Sealer		Sq. Ft.	1934	
Geocomposite Wall Drain		Sq. Yd.	250	
Granular Backfill for Structures		Cu. Yd.	334	

Notes:
 Apply Concrete Sealer to all exposed concrete surfaces of the abutment. Pour steps monolithically with cap.
 Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.
 Space u100(E), p100(E) and p101(E) bars to miss anchor bolts.
 * The quantities and detailing are based on the estimated elevations shown on the plans. The actual elevations may differ at each shaft and corresponding adjustments shall be made to the drilled shaft and reinforcement quantities and payment limits.
 *** Contractor may need to increase the casing thickness to withstand the installation process. The Estimated Top of Rock/Bottom of Permanent Casing Elevation is shown. The limits of the casing shall be adjusted as necessary, and as approved, such that the actual installed casing length extends to the as-encountered top of rock at each shaft. See Article 516.06(d) of the Standard Specifications.
 When Contractor's means and methods include initiating drilling for shafts at elevations higher than the final top of shaft elevation (e.g. Existing Ground Elevation, the costs for drilling, disposing of excavation, providing casing and backfilling of drilled shafts or other appurtenant work activities in the areas between the elevation where drilling is initiated and the proposed elevation of the top of shaft shall not be paid for separately but shall be included in the cost of Drilled Shaft in Soil.

Bars indicated thus, 1x15-#5 etc., indicates 1 line of bars with 15 lengths per line.
 ** Length is height of spiral.

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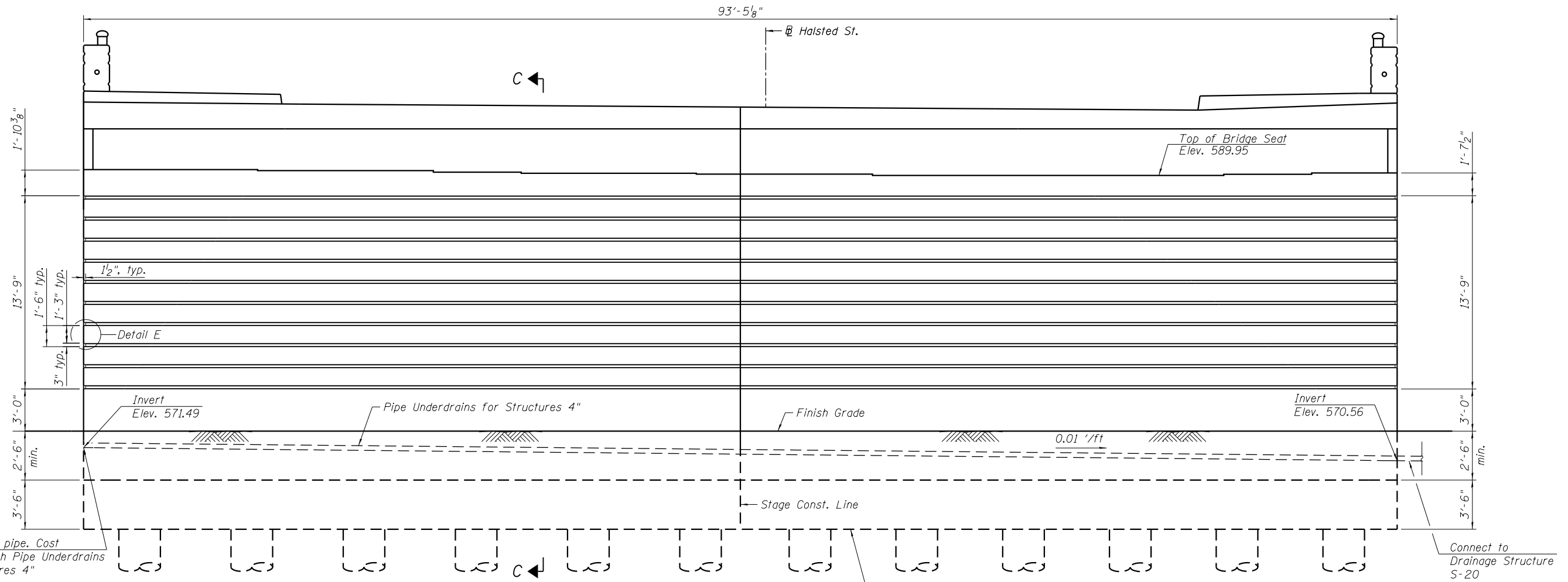
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

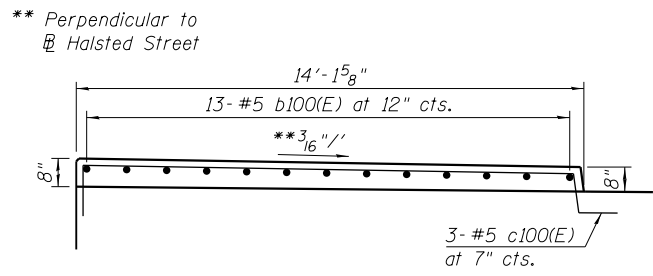
SOUTH ABUTMENT DETAILS 1
STRUCTURE NO. 016-1716

SHEET NO. S2-53 OF S2-81 SHEETS

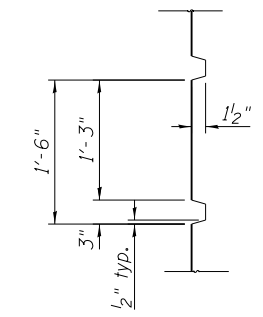
F.A.U. RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	413
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	



SOUTH ABUTMENT ELEVATION - ARCHITECTURAL DETAILS
(Looking South)

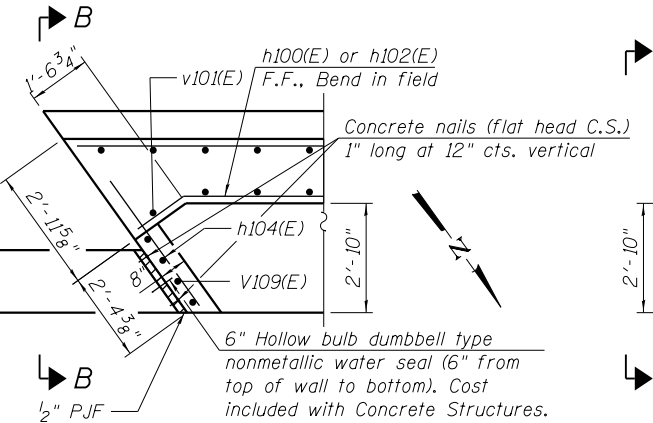


SIDEWALK DETAIL
(East sidewalk shown, West sidewalk similar, opp. hand)

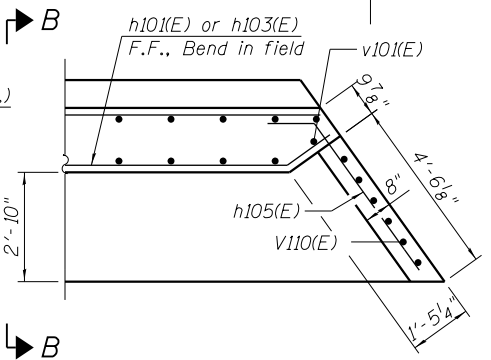


DETAIL E
(Typical Reveal Detail)

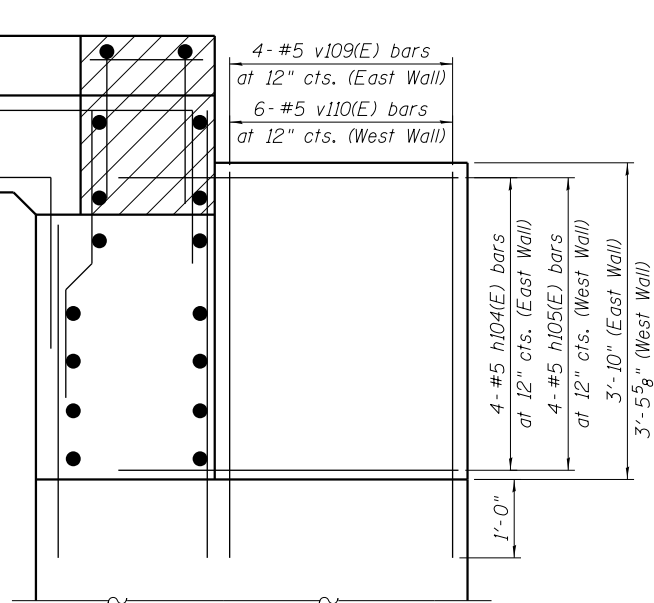
Note:
The 3" x 1 1/2" reveal will not be paid separately and shall be included in the cost of the pay item "Concrete Structures".



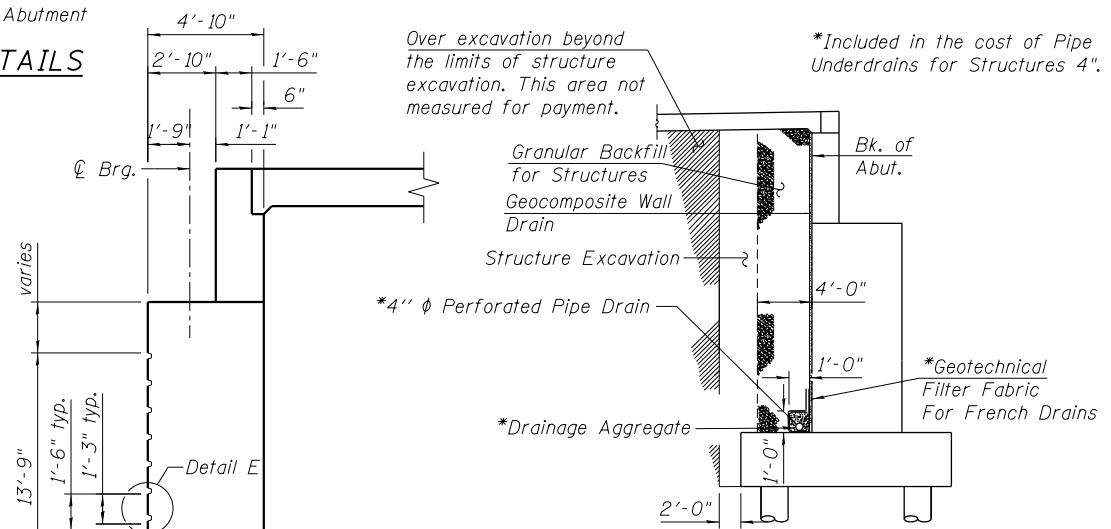
DETAIL A
(East Wall)



DETAIL D
(West Wall)



SECTION B-B



SECTION THRU ABUTMENT

All drainage system components shall extend to the end of the Southwest Soil Retention System to the West and to Retaining Wall 13 to the East. An outlet pipe shall extend from the West end of the Southwest Soil Retention System to drain into proposed drainage structure S-20.

BILL OF MATERIAL

Item	Unit	Total
Pipe Underdrains for Structures 4"	Foot	151

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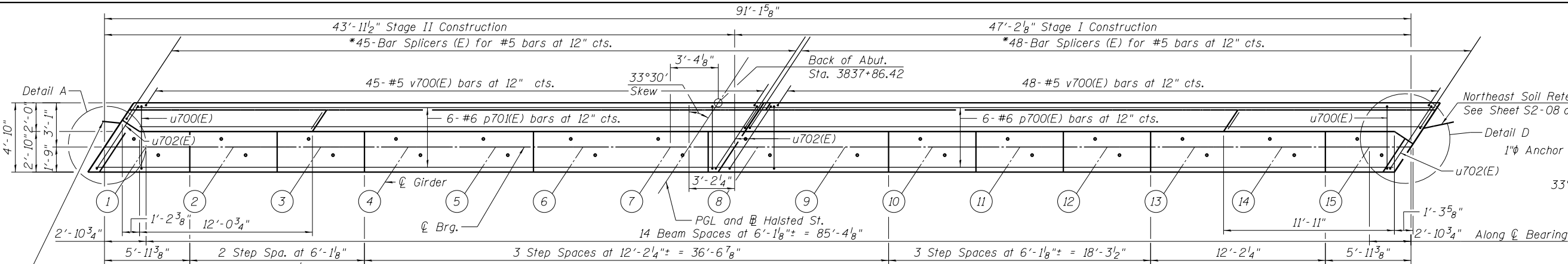
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT DETAILS 2
STRUCTURE NO. 016-1716

SHEET NO. S2-54 OF S2-81 SHEETS

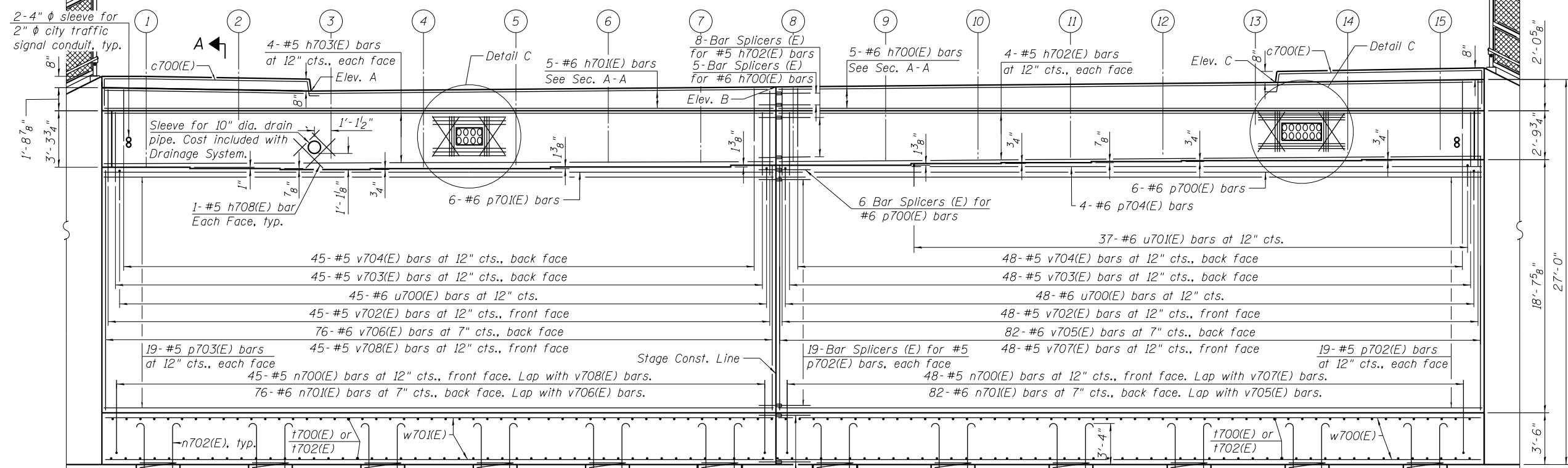
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CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	



PLAN

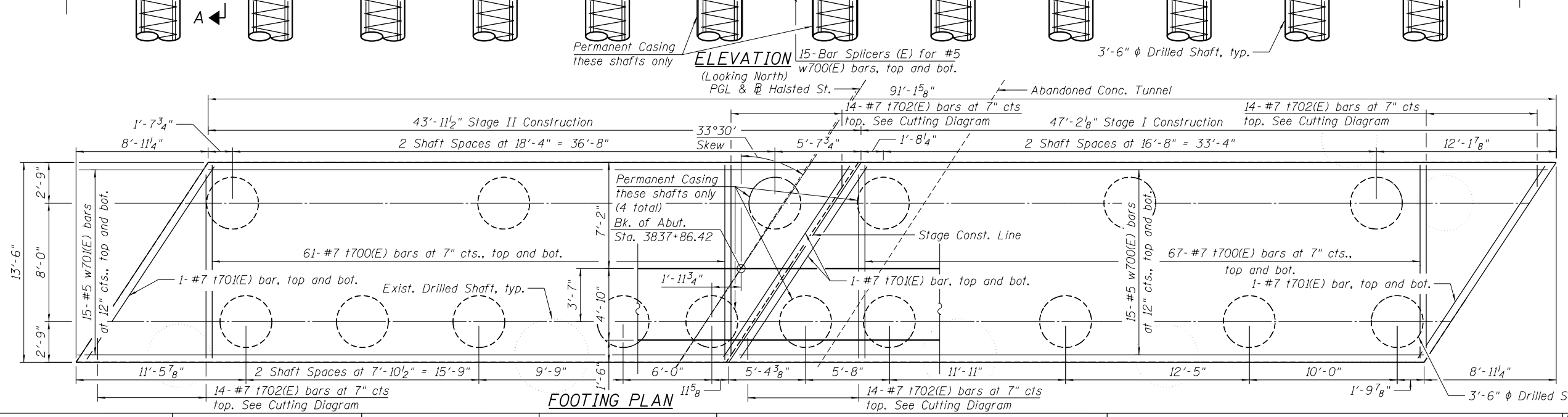
ANCHOR BOLT LAYOUT

*Alternate with v700(E) bars. Place parallel to the beams.



TOP OF SEAT ELEVATIONS

Girder No.	Seat Elevation
1	589.69
2	589.61
3	589.54
4	589.60
5	589.60
6	589.71
7	589.71
8	589.82
9	589.82
10	589.94
11	590.00
12	590.07
13	590.13
14	590.13
15	590.19



ELEVATION

TOP OF BACK WALL ELEVATIONS

POINTS	FRONT FACE	BACK FACE
A - West Curb Line	594.38	594.34
B - Stage Const. Line	594.65	594.61
C - East Curb Line	594.99	594.96

Notes:
 For Section A-A and Detail C, see Sheet S2-56.
 For Detail A and Detail D, see Sheet S2-57.
 Existing drilled shafts are belled at the base. Contractor shall drill through the bells to place the proposed shafts.

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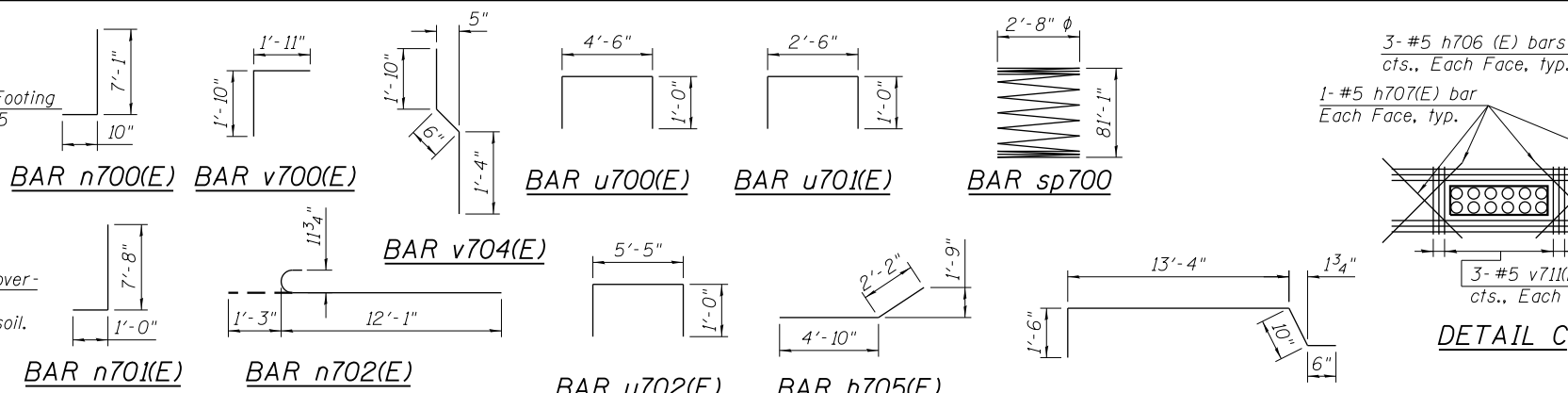
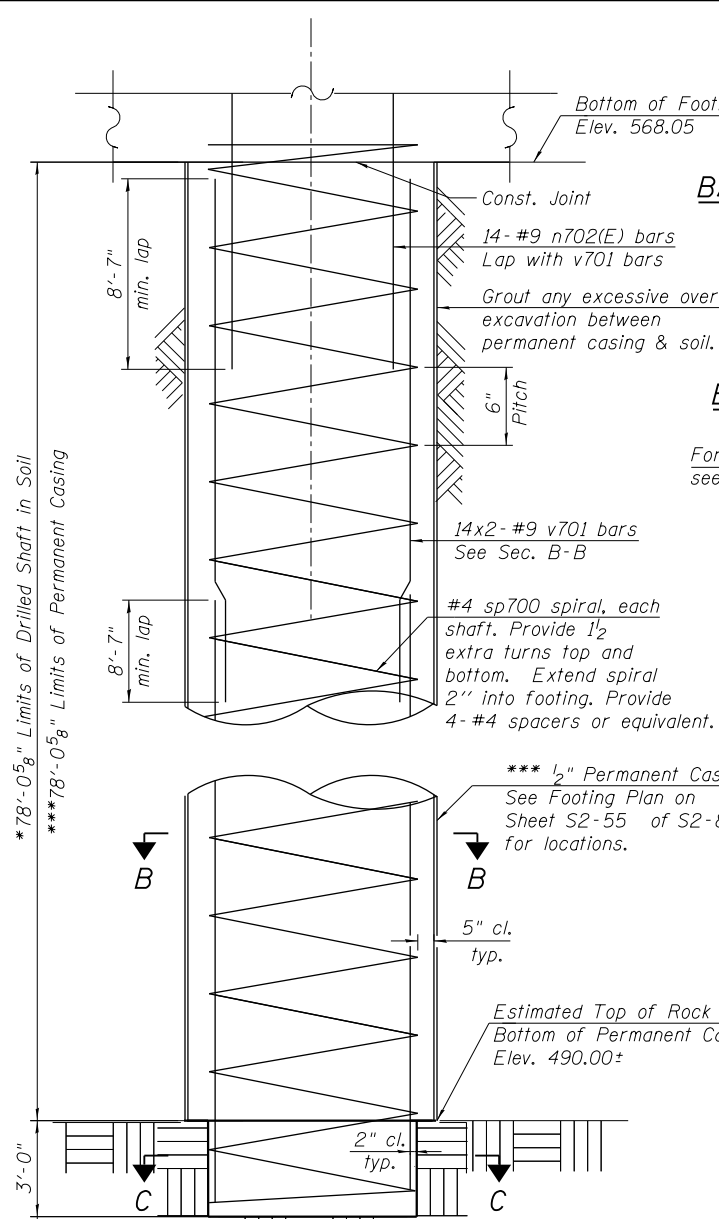
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**NORTH ABUTMENT PLAN AND ELEVATION
STRUCTURE NO. 016-1716**

SHEET NO. S2-55 OF S2-81 SHEETS

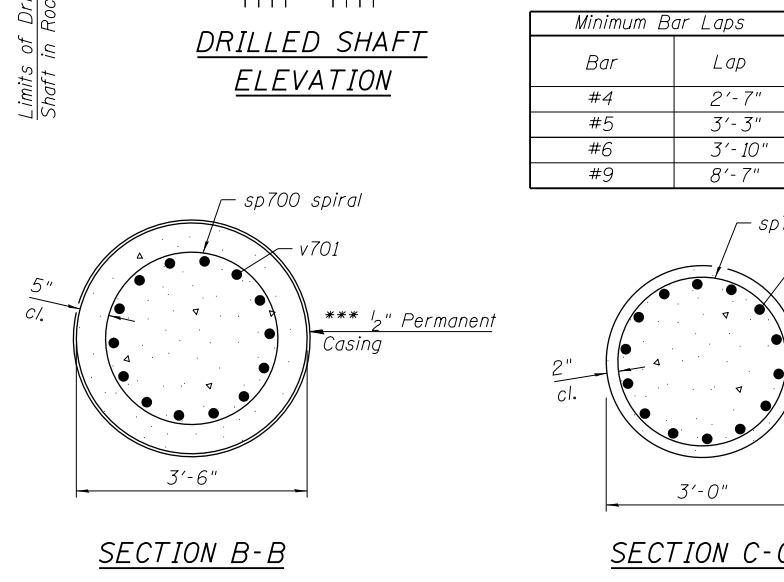
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3730	2013-008R	COOK	559	415
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



Note:
Utility sleeve installed in this Contract. Conduit provided by Others. Contractor to coordinate with utility owner for location and size of the utility sleeves. Cost of utility sleeves included in Concrete Structures.

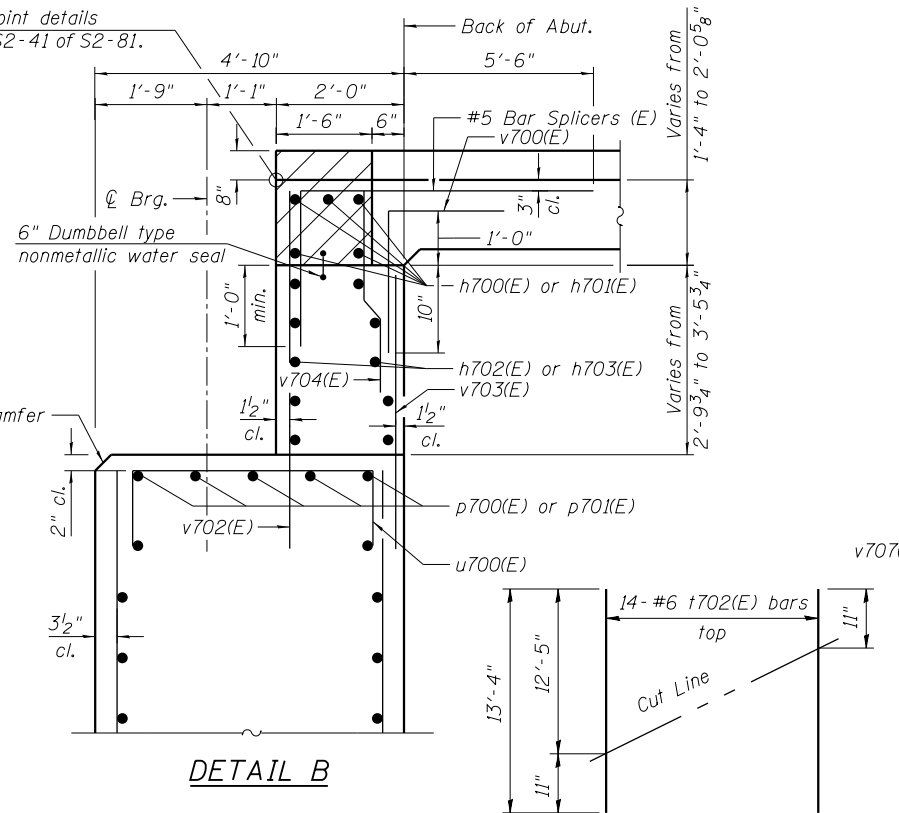
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
b700(E)	26	#5	1'-6"	—
c700(E)	6	#5	16'-2"	┌
h700(E)	5	#6	46'-10"	—
h701(E)	5	#6	43'-7"	—
h702(E)	8	#5	46'-10"	—
h703(E)	8	#5	43'-7"	—
h704(E)	4	#5	3'-3"	—
h705(E)	4	#5	7'-0"	┌
h706(E)	24	#5	9'-3"	—
h707(E)	16	#5	4'-0"	—
h708(E)	8	#5	2'-10"	—
n700(E)	93	#5	7'-11"	┌
n701(E)	158	#6	8'-8"	┌
n702(E)	224	#9	13'-4"	┌
p700(E)	6	#6	46'-10"	—
p701(E)	6	#6	43'-7"	—
p702(E)	38	#5	46'-10"	—
p703(E)	38	#5	43'-7"	—
p704(E)	4	#6	36'-1"	—
sp700	16	#4	81'-1"	—
t700(E)	256	#7	13'-2"	—
t701(E)	8	#7	15'-9"	—
t702(E)	56	#7	13'-4"	—
u700(E)	93	#6	6'-6"	┌
u701(E)	37	#6	4'-6"	┌
u702(E)	4	#6	7'-5"	┌
v700(E)	93	#5	3'-9"	┌
v701	448	#9	44'-10"	—
v702(E)	93	#5	5'-9"	—
v703(E)	93	#5	4'-1"	—
v704(E)	93	#5	3'-8"	—
v705(E)	82	#6	17'-11"	—
v706(E)	76	#6	17'-8"	—
v707(E)	48	#5	17'-11"	—
v708(E)	45	#5	17'-8"	—
v709(E)	4	#5	5'-0"	—
v710(E)	6	#5	5'-2"	—
v711(E)	24	#5	2'-6"	—
w700(E)	30	#5	46'-10"	—
w701(E)	30	#5	43'-7"	—
Structure Excavation		Cu. Yd.	1470	
Concrete Structures		Cu. Yd.	480.2	
Concrete Superstructure		Cu. Yd.	9.7	
Reinforcement Bars		Pound	82,840	
Reinforcement Bars, Epoxy Coated		Pound	39,980	
Permanent Casing		Foot	313	
Drilled Shaft in Soil		Cu. Yd.	445.1	
Drilled Shaft in Rock		Cu. Yd.	12.6	
Concrete Sealer		Sq. Ft.	1747	
Geocomposite Wall Drain		Sq. Yd.	218	
Granular Backfill for Structures		Cu. Yd.	291	



Minimum Bar Laps

Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#9	8'-7"



Notes:

Apply Concrete Sealer to all exposed concrete surfaces of the abutment. Pour steps monolithically with cap.

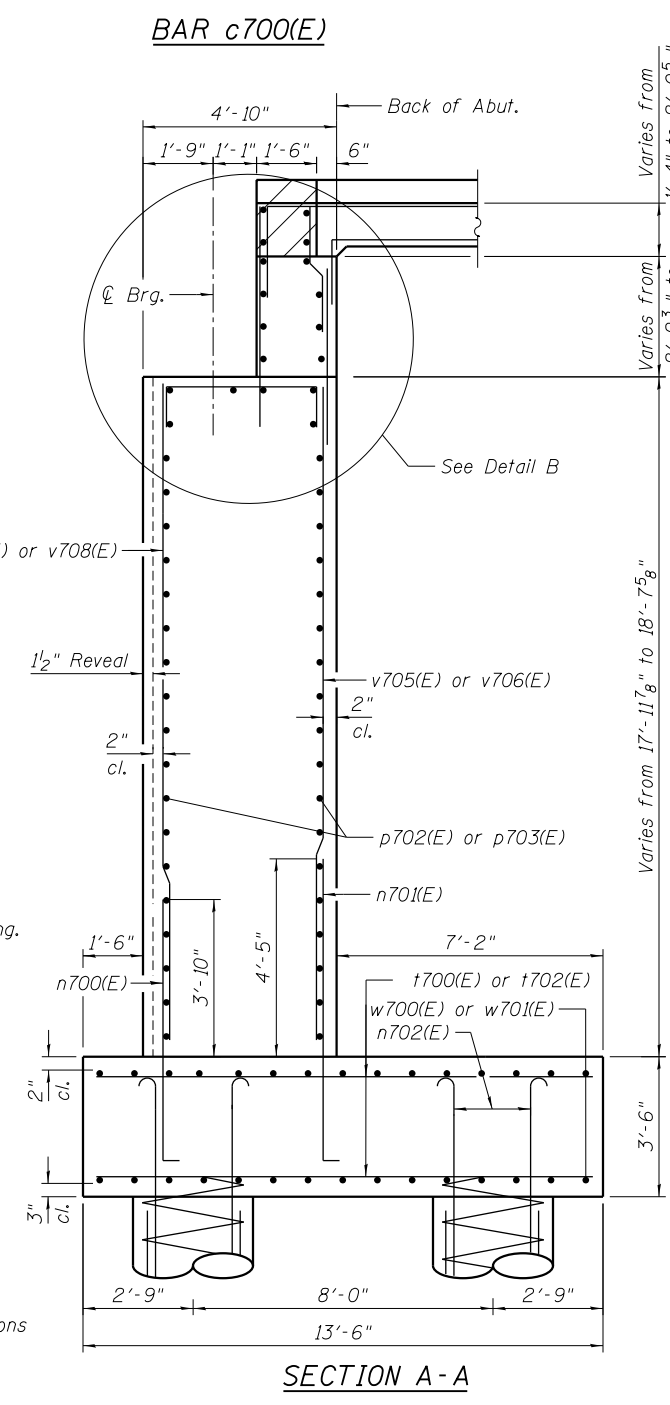
Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure.

Space u700(E), p700(E) and p701(E) bars to miss anchor bolts.

* The quantities and detailing are based on the estimated elevations shown on the plans. The actual elevations may differ at each shaft and corresponding adjustments shall be made to the drilled shaft and reinforcement quantities and payment limits.

*** Contractor may need to increase the casing thickness to withstand the installation process. The Estimated Top of Rock/Bottom of Permanent Casing Elevation is shown. The limits of the casing shall be adjusted as necessary, and as approved, such that the actual installed casing length extends to the as-encountered top of rock at each shaft. See Article 516.06(d) of the Standard Specifications.

When Contractor's means and methods include initiating drilling for shafts at elevations higher than the final top of shaft elevation (e.g. Existing Ground Elevation), the costs for drilling, disposing of excavation, providing casing and backfilling of drilled shafts or other appurtenant work activities in the areas between the elevation where drilling is initiated and the proposed elevation of the top of shaft shall not be paid for separately but shall be included in the cost of Drilled Shaft in Soil.



4/3/2011 PM 0161716-60W26-S056-Abutment-NorthernDetails.dgn



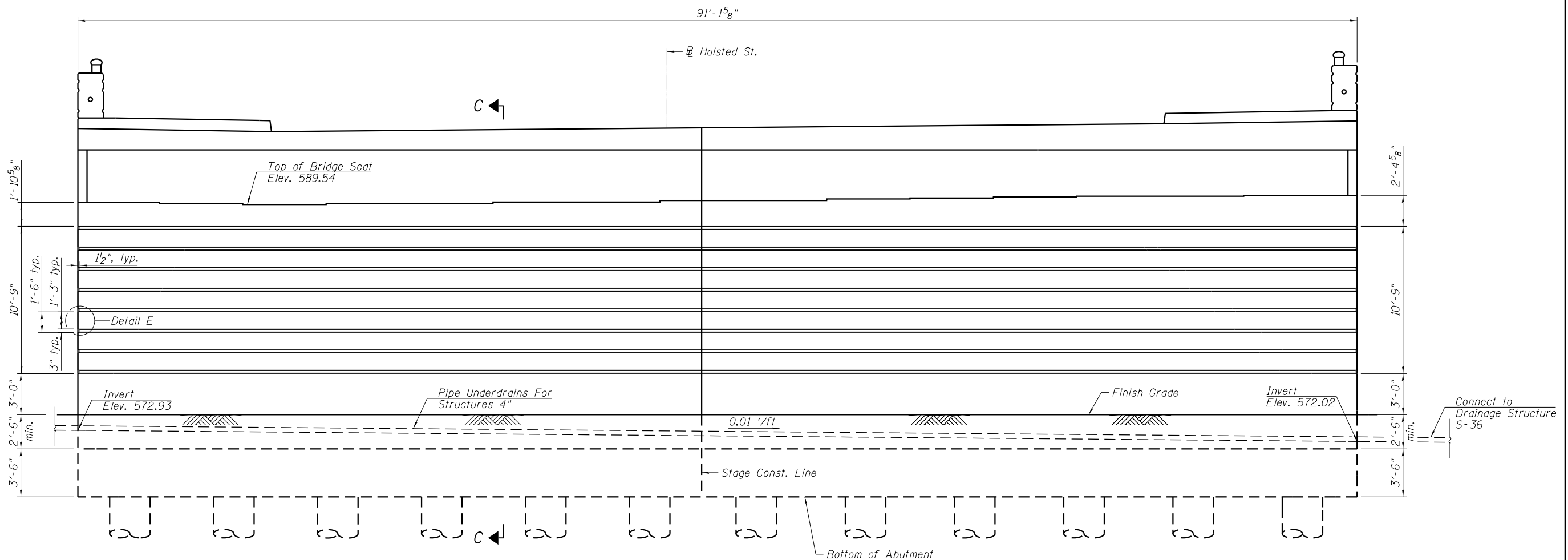
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

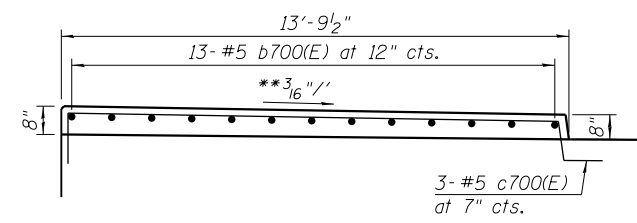
**NORTH ABUTMENT DETAILS 1
STRUCTURE NO. 016-1716**

SHEET NO. S2-56 OF S2-81 SHEETS

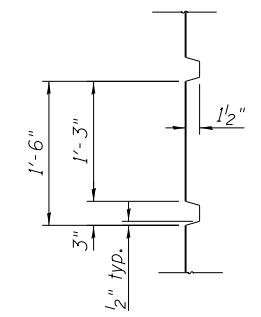
F.A.U. RT.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	416
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



** Perpendicular to Halsted Street



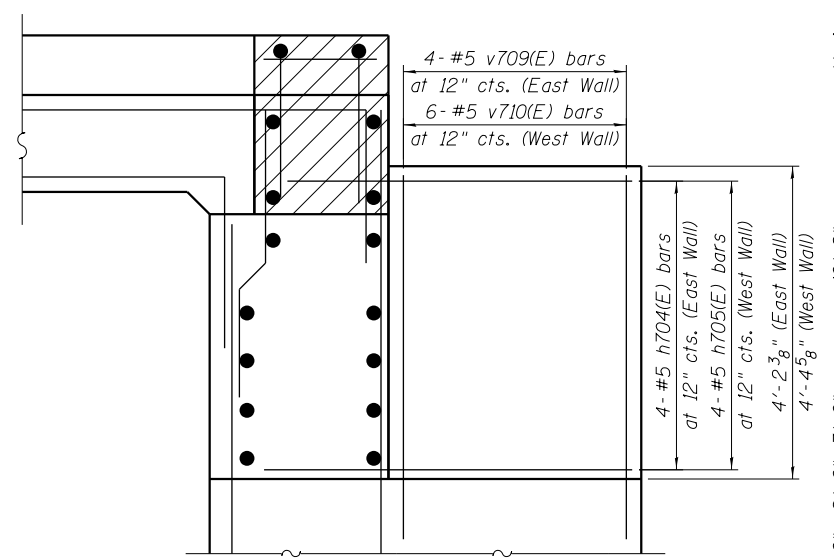
SIDEWALK DETAIL
(West sidewalk shown,
East sidewalk similar, opp. hand)



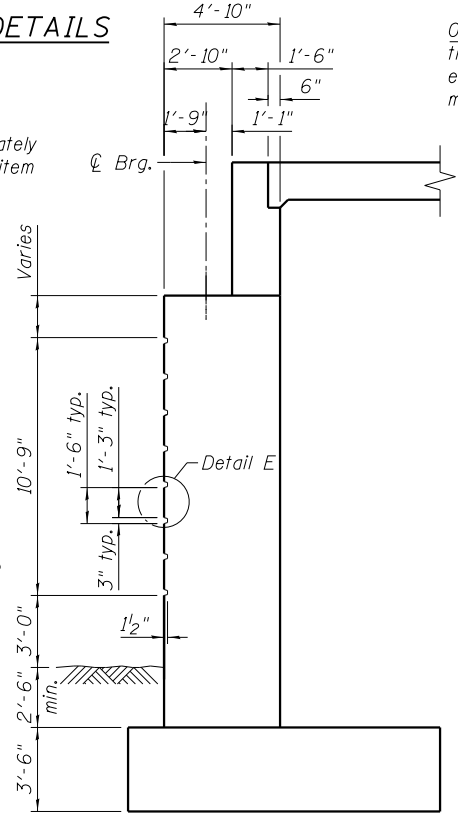
DETAIL E
(Typical Reveal Detail)

NORTH ABUTMENT ELEVATION - ARCHITECTURAL DETAILS
(Looking North)

Note:
The 3" x 1/2" reveal will not be paid separately and shall be included in the cost of the pay item "Concrete Structures".



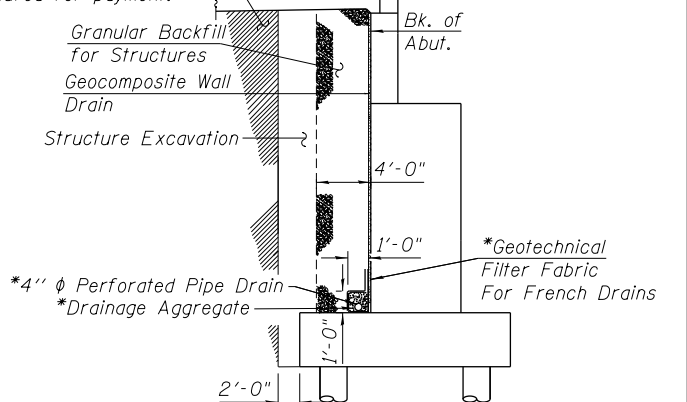
SECTION B-B



SECTION C-C

Over excavation beyond the limits of structure excavation. This area not measured for payment.

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



SECTION THRU ABUTMENT

All drainage system components shall extend to the end of each Soil Retention System. An outlet pipe shall extend underneath the Northwest Soil Retention System to drain into proposed drainage structure S-36.

BILL OF MATERIAL

Item	Unit	Total
Pipe Underdrains For Structures 4"	Foot	174

4:42:17 PM 0161716-60W26-S057-Abutment_NorthDetails2.dgn



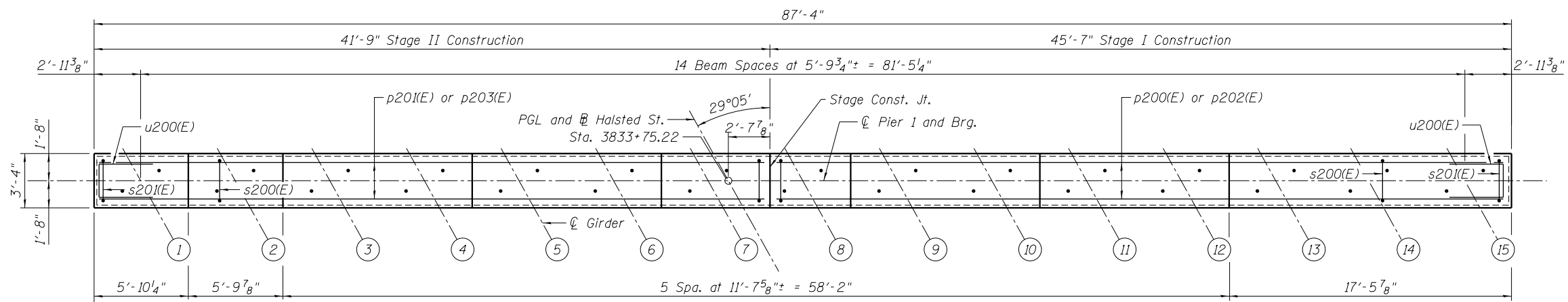
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PLOT DATE = 9/15/2013	CHECKED - MDS	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

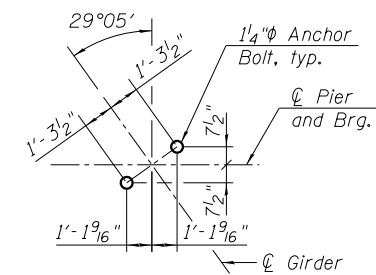
NORTH ABUTMENT DETAILS 2
STRUCTURE NO. 016-1716

SHEET NO. S2-57 OF S2-81 SHEETS

F.A.U. RTE. 3730	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 417
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	

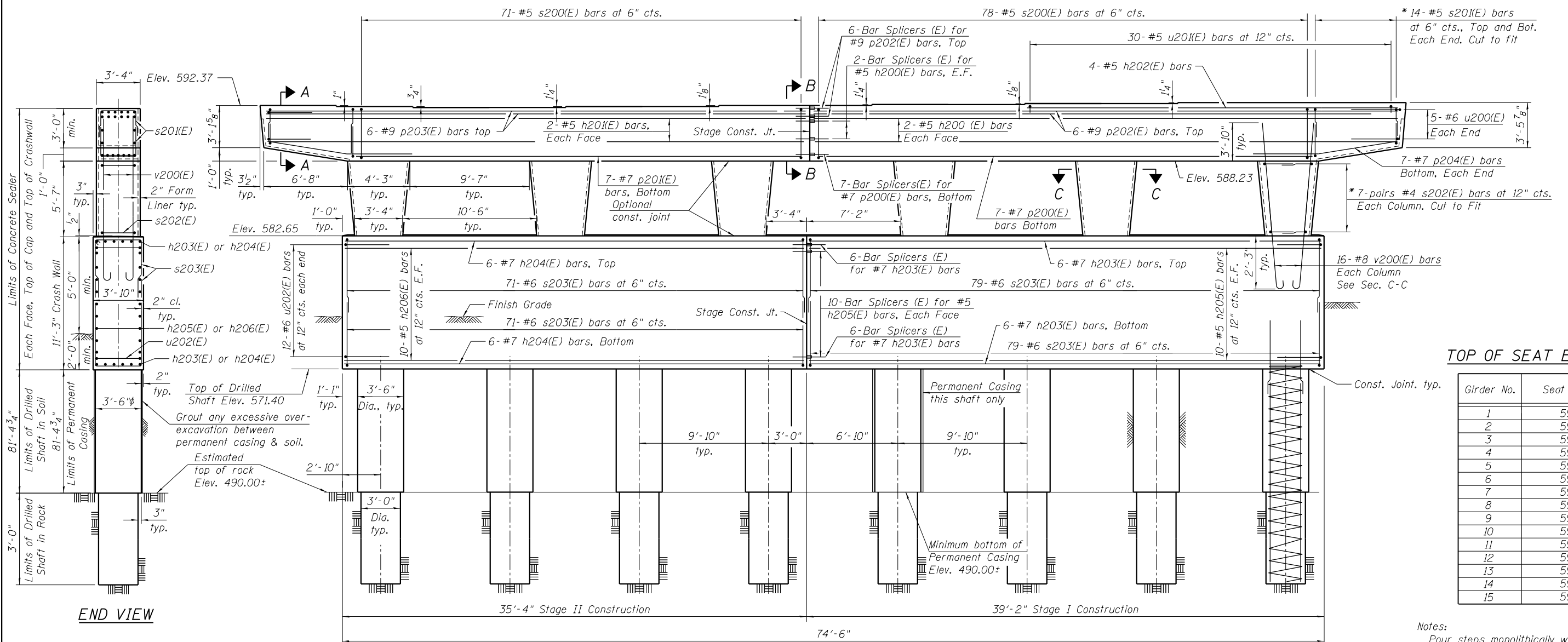


TOP PLAN



ANCHOR BOLT LAYOUT

*Cut vertical legs of bar to fit.



ELEVATION
(Looking North)

TOP OF SEAT ELEVATION

Girder No.	Seat Elevation
1	592.37
2	592.29
3	592.23
4	592.23
5	592.34
6	592.34
7	592.43
8	592.43
9	592.53
10	592.53
11	592.62
12	592.62
13	592.72
14	592.72
15	592.72

Notes:
 Pour steps monolithically with cap.
 Space reinforcement in cap to miss anchor bolts.
 For Sections A-A, B-B and C-C, see sheet S2-59 of S2-81.

5/16/04 PM 0161716-60W26-S057-Pier-1-P&E.dgn



USER NAME = jlvuorenmaa	DESIGNED - JRM	REVISED
CHECKED - MDS	REVISOR	REVISOR
PLOT SCALE = 4:0.0005 ' = 1/16" IN.	DRAWN - RLS	REVISOR
PLOT DATE = 8/18/2013	CHECKED - JRM	REVISOR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 PLAN AND ELEVATION
STRUCTURE NO. 016-1716

SHEET NO. S2-58 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	418
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

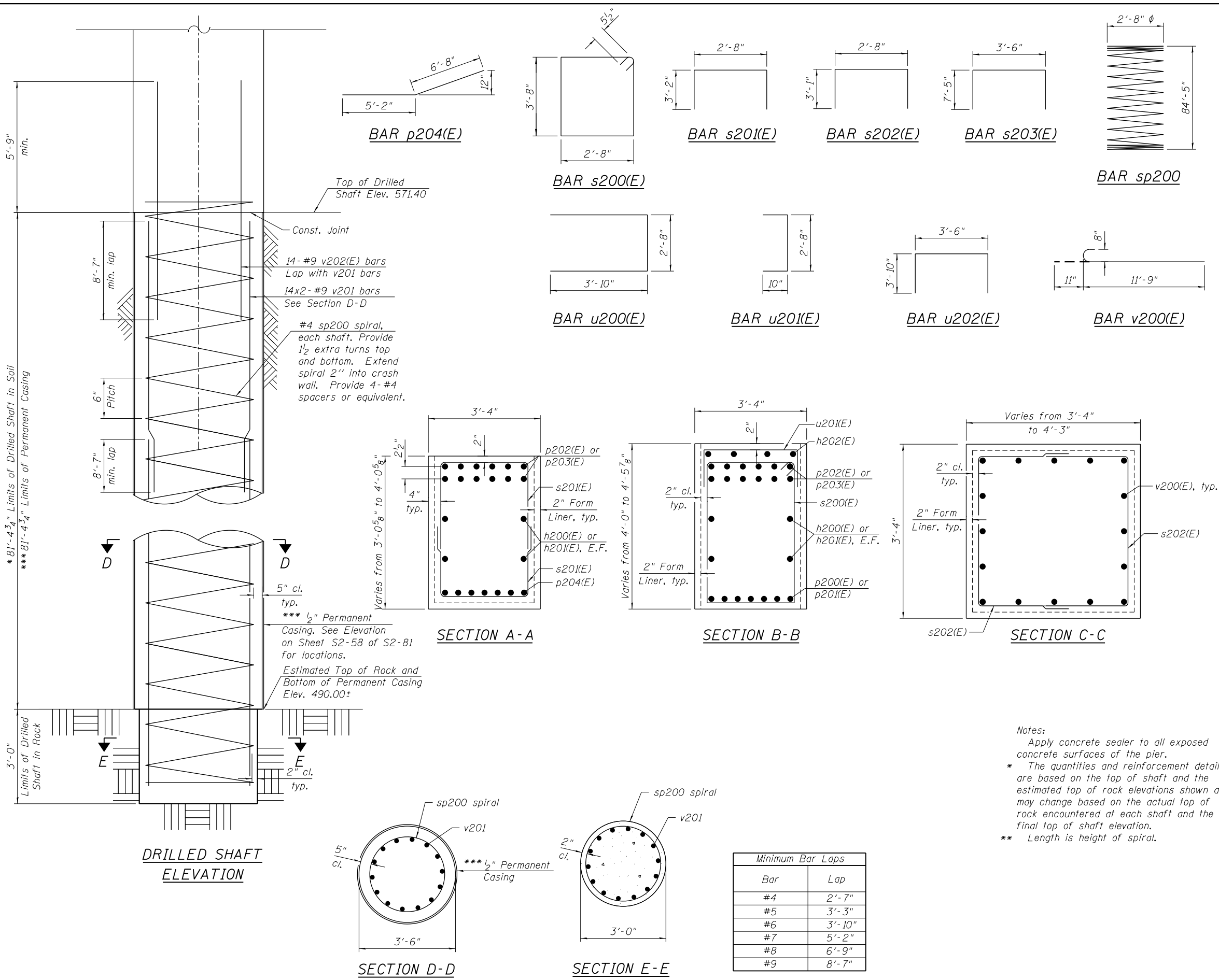
Bar	No.	Size	Length	Shape
h200(E)	4	#5	44'-10"	—
h201(E)	4	#5	41'-0"	—
h202(E)	4	#5	28'-7"	—
h203(E)	12	#7	38'-10"	—
h204(E)	12	#7	35'-0"	—
h205(E)	20	#5	38'-10"	—
h206(E)	20	#5	35'-0"	—
p200(E)	7	#7	38'-2"	—
p201(E)	7	#7	34'-4"	—
p202(E)	12	#9	45'-1"	—
p203(E)	12	#9	41'-3"	—
p204(E)	14	#7	11'-10"	—
s200(E)	149	#5	13'-7"	□
s201(E)	56	#5	9'-0"	□
s202(E)	84	#4	8'-10"	□
s203(E)	300	#6	18'-4"	□
sp200	8	#4	84'-5"	⊘
u200(E)	10	#6	10'-4"	□
u201(E)	30	#5	4'-4"	□
u202(E)	24	#6	11'-2"	□
v200(E)	96	#8	12'-8"	⊘
v201	224	#9	46'-4"	—
v202(E)	112	#9	14'-6"	—
Structure Excavation		Cu. Yd.	68	
Concrete Structures		Cu. Yd.	179.7	
Reinforcement Bars		Pound	42,860	
Reinforcement Bars, Epoxy Coated		Pound	29,590	
Permanent Casing		Foot	82	
Drilled Shaft in Soil		Cu. Yd.	232.1	
Drilled Shaft in Rock		Cu. Yd.	6.3	
Concrete Sealer		Sq. Ft.	3773	

**

Bars indicated thus 1x15 etc., indicates 1 line of bars with 15 lengths per line.

*** Contractor may need to increase the casing thickness to withstand the installation process. The Estimated Top of Rock/Bottom of Permanent Casing Elevation is shown. The limits of casing shall be adjusted as necessary, and as approved, such that the actual installed casing length extends to the as-encountered top of rock at each shaft. See Article 516.06(d) of the Standard Specifications. When Contractor's means and methods include initiating drilling for shafts at elevations higher than the final top of shaft elevation (e.g. Existing Ground Elevation, the costs for drilling, disposing of excavation, providing casing and backfilling of drilled shafts or other appurtenant work activities in the areas between the elevation where drilling is initiated and the proposed elevation of the top of shaft shall not be paid for separately but shall be included in the cost of Drilled Shaft in Soil.

Notes:
 Apply concrete sealer to all exposed concrete surfaces of the pier.
 * The quantities and reinforcement detailing are based on the top of shaft and the estimated top of rock elevations shown and may change based on the actual top of rock encountered at each shaft and the final top of shaft elevation.
 ** Length is height of spiral.



Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

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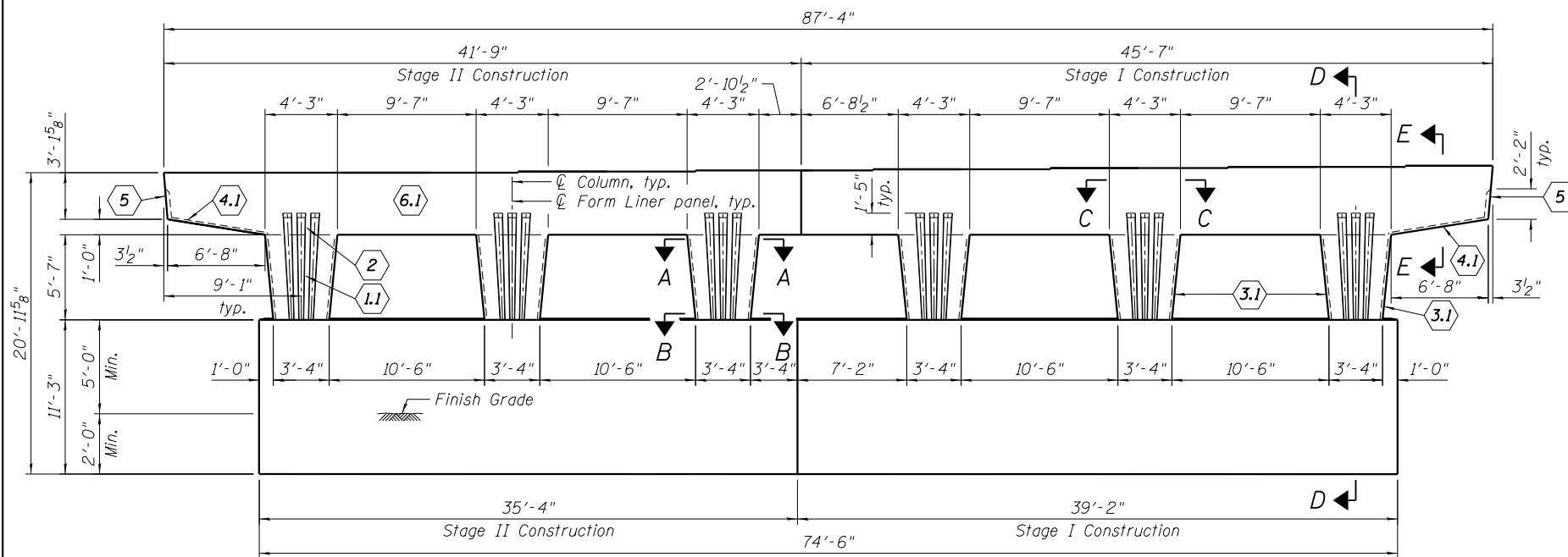
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	CHECKED - JRM	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PIER 1 DETAILS
STRUCTURE NO. 016-1716**

SHEET NO. S2-59 OF S2-81 SHEETS

F.A.U. RTE. 3730	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 419
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	

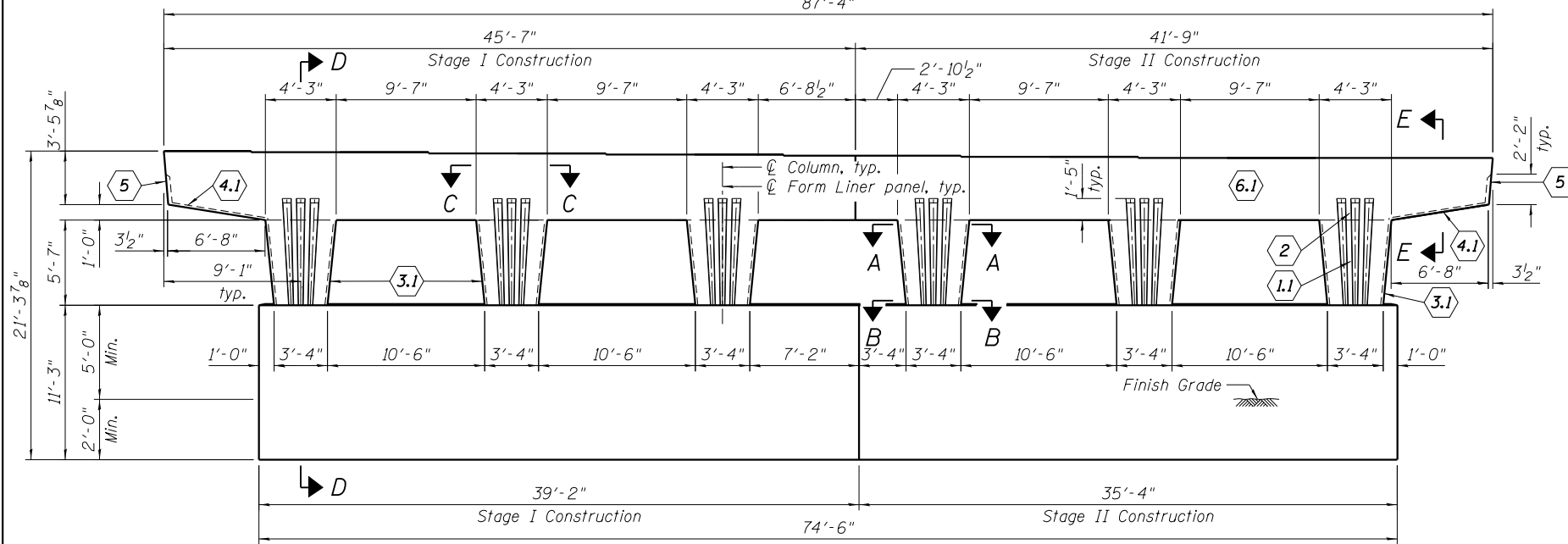
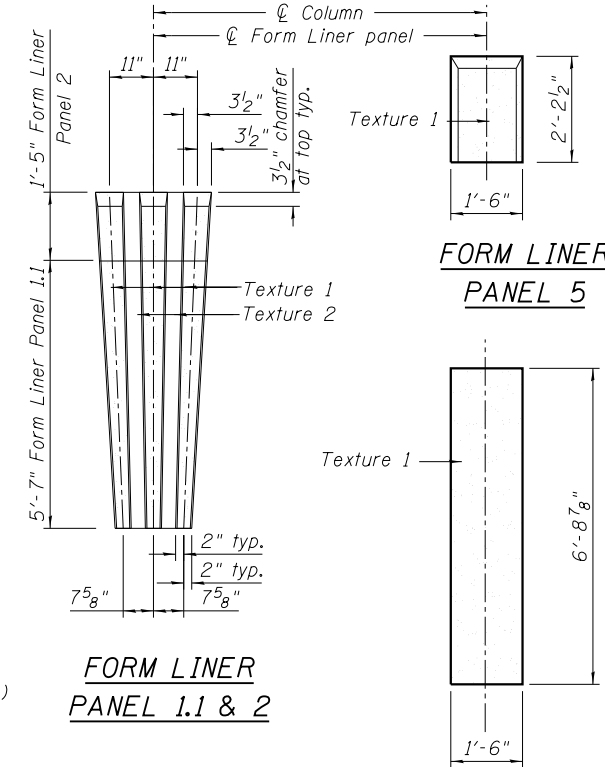


PIER ELEVATION
(Looking North)

PIER END VIEW
(Looking East)
(Looking West - Sim.)

Looking East
Looking West - Sim.
C Brg.

FORM LINER
PANEL 1.1 & 2

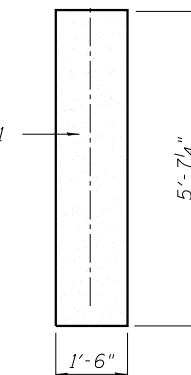


PIER ELEVATION
(Looking South)

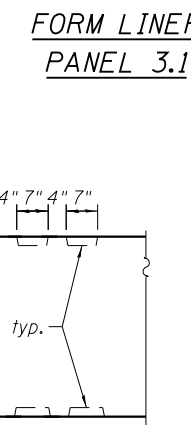
SECTION D-D

SECTION E-E

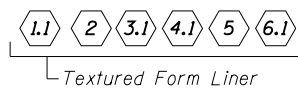
FORM LINER
PANEL 4.1



FORM LINER
PANEL 3.1



LEGEND

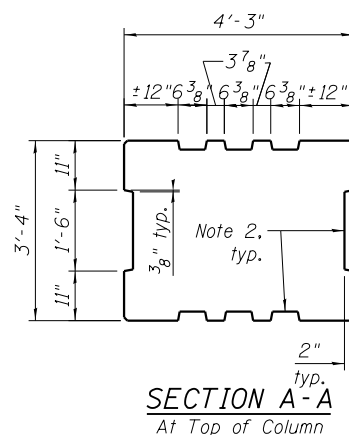


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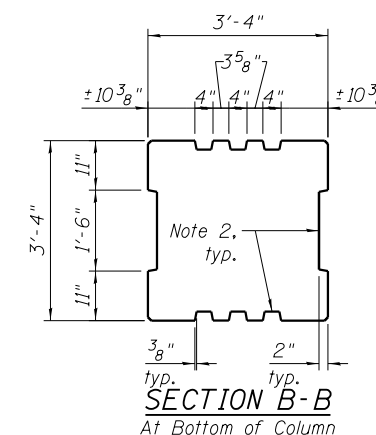
- Alternate: For surface indicated as Textured Form Liner (6.1), Contractor can chose to build large protrusion directly into these forms if a smooth uniform surface can be provided.
- Tapered fluting - dimensions vary, see elevation profile.
- Form liner panel (2) is continuation of panel (1.1). Keep adjacent form liners aligned.
- Hand clean and smooth the surface of the construction joint between the pier and cap.
- Texture 1: Light Sandblast as selected from manufacturer's standard pattern selection. Texture 2: Smooth

BILL OF MATERIAL

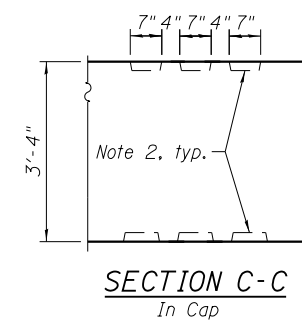
Item	Unit	Total
Form Liner Textured Surface	Sq. Ft.	603



SECTION A-A
At Top of Column



SECTION B-B
At Bottom of Column



SECTION C-C
In Cap

4/3/14 4:48 PM 0161716-60W26-S060-Pier.dgn



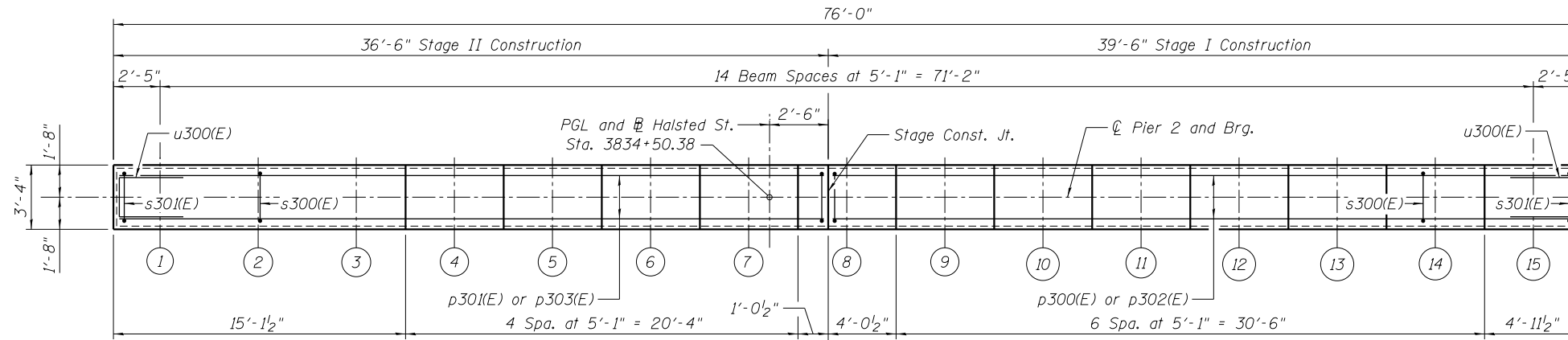
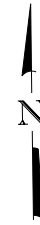
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PLOT SCALE = 5:4.0006 ' / in.	CHECKED - MDS	REVISED
PLOT DATE = 9/15/2013	DRAWN - RLS	REVISED
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

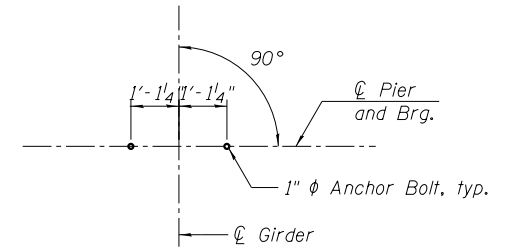
PIER 1 ARCHITECTURAL DETAILS
STRUCTURE NO. 016-1716

SHEET NO. S2-60 OF S2-81 SHEETS

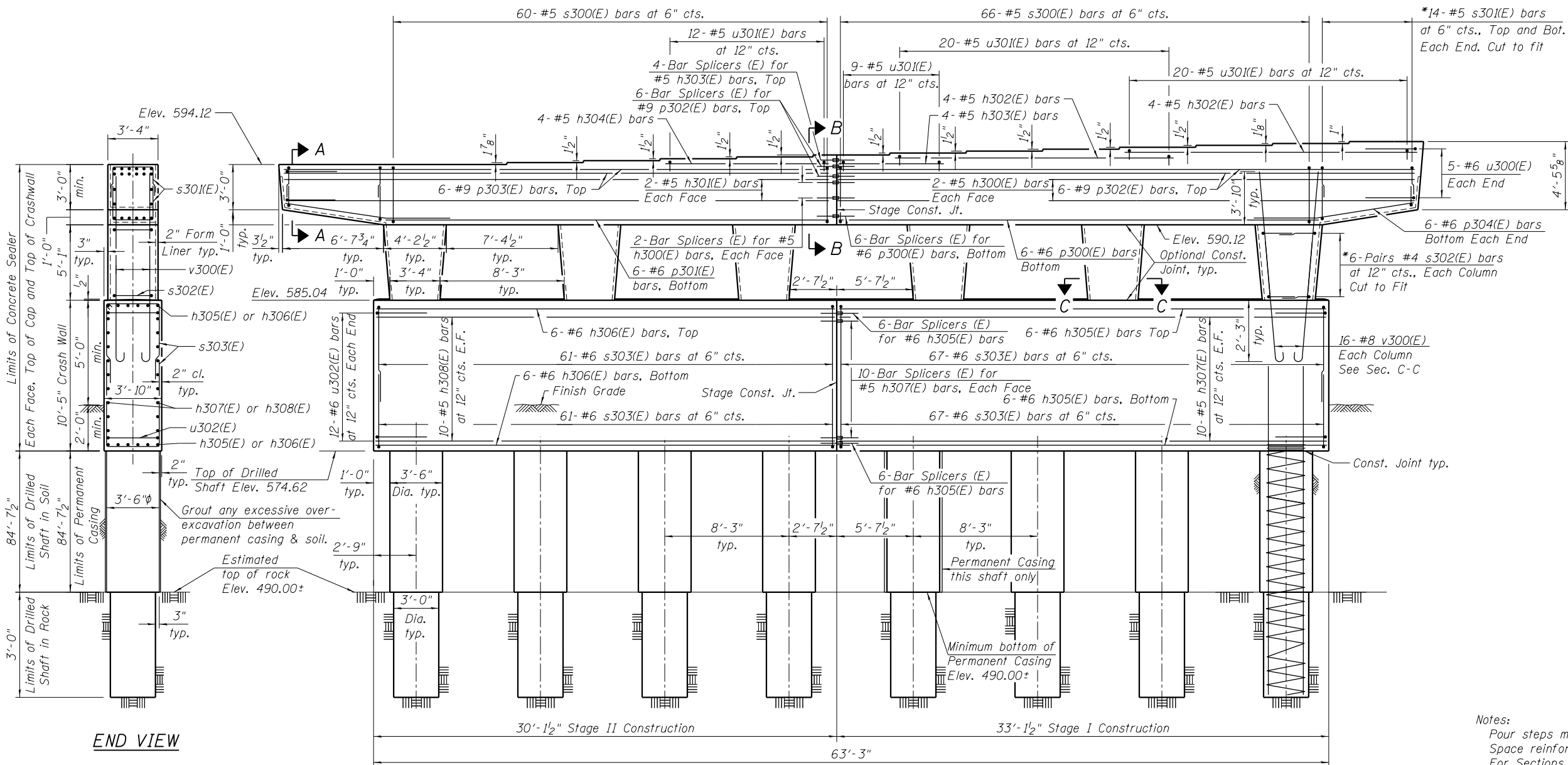
F.A.U. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	420
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



TOP PLAN



ANCHOR BOLT LAYOUT



ELEVATION
Looking North

* Cut vertical legs of bar to fit.

TOP OF SEAT ELEVATION

Girder No.	Seat Elevation
1	594.12
2	594.12
3	594.12
4	594.28
5	594.41
6	594.53
7	594.66
8	594.79
9	594.91
10	595.04
11	595.17
12	595.29
13	595.42
14	595.51
15	595.59

Notes:
Pour steps monolithically with cap.
Space reinforcement in cap to miss anchor bolts.
For Sections A-A, B-B and C-C, see sheet S2-62 of S2-81.

5/16/09 PM 0161716-60W26-S059-Pier2-P&E.dgn



USER NAME = jlvuorenmaa	DESIGNED - JRM	REVISED
PLOT SCALE = 4:0.0005 ' = 1"	CHECKED - MDS	REVISED
PLOT DATE = 8/18/2013	DRAWN - RLS	REVISED
	CHECKED - JRM	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 PLAN AND ELEVATION
STRUCTURE NO. 016-1716

SHEET NO. S2-61 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	421
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h300(E)	4	#5	38'-9"	—
h301(E)	4	#5	35'-9"	—
h302(E)	8	#5	19'-8"	—
h303(E)	4	#5	7'-3"	—
h304(E)	4	#5	10'-10"	—
h305(E)	12	#6	32'-9"	—
h306(E)	12	#6	29'-9"	—
h307(E)	20	#5	32'-9"	—
h308(E)	20	#5	29'-9"	—
p300(E)	6	#6	32'-2"	—
p301(E)	6	#6	29'-2"	—
p302(E)	12	#9	38'-11"	—
p303(E)	12	#9	35'-11"	—
p304(E)	12	#6	10'-6"	—
s300(E)	126	#5	13'-7"	□
s301(E)	56	#5	9'-0"	□
s302(E)	72	#4	8'-10"	□
s303(E)	256	#6	17'-6"	□
sp300	8	#4	87'-8"	≡
u300(E)	10	#6	10'-4"	□
u301(E)	61	#5	4'-4"	□
u302(E)	24	#6	11'-2"	□
v300(E)	96	#8	12'-2"	⌒
v301	224	#9	48'-0"	—
v302(E)	112	#9	14'-6"	—
Structure Excavation			Cu. Yd.	56
Concrete Structures			Cu. Yd.	150.8
Reinforcement Bars			Pound	44,430
Reinforcement Bars, Epoxy Coated			Pound	25,720
Permanent Casing			Foot	85
Drilled Shaft in Soil			Cu. Yd.	241.3
Drilled Shaft in Rock			Cu. Yd.	6.3
Concrete Sealer			Sq. Ft.	3262

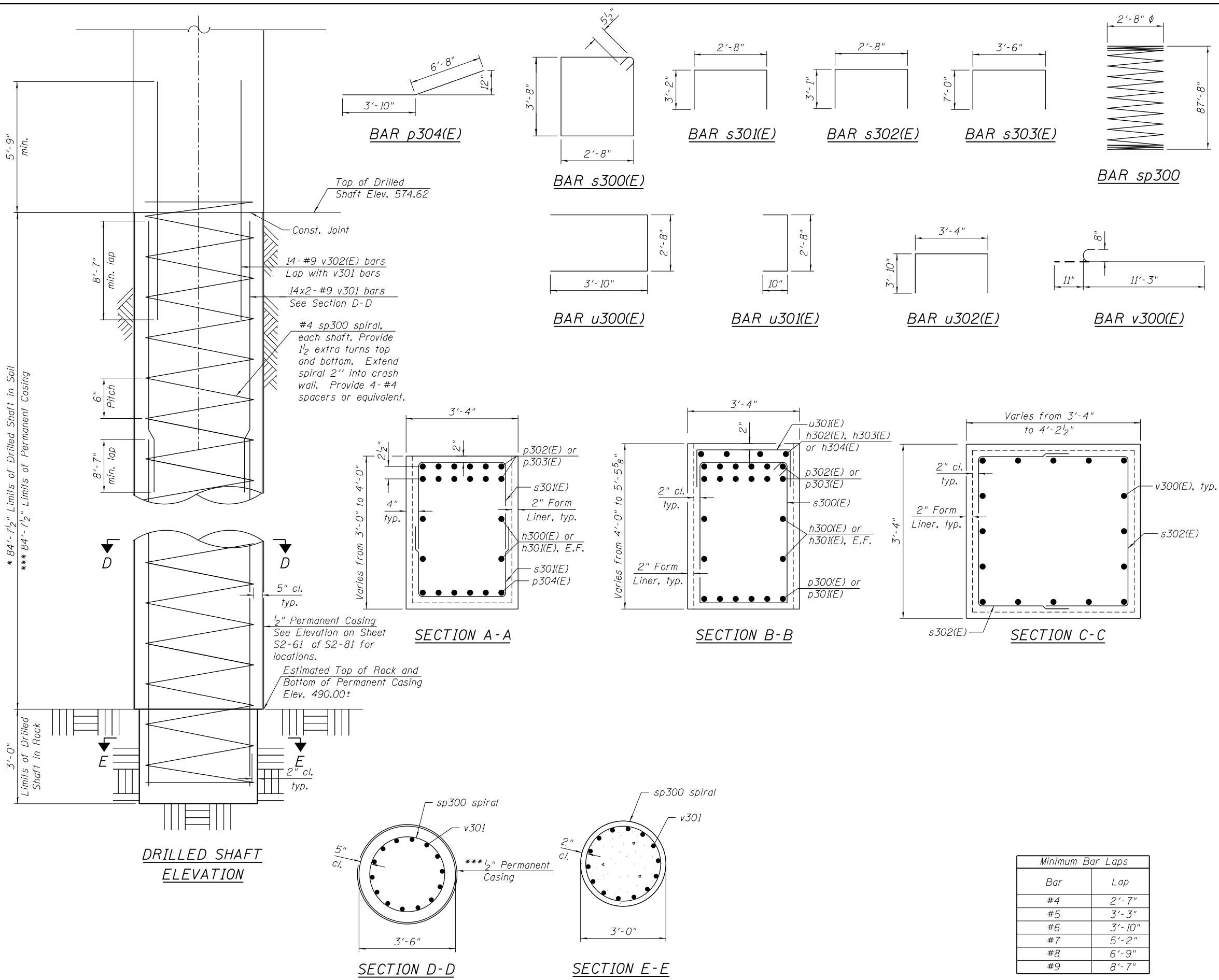
**

Bars indicated thus 1x15 etc., indicates 1 line of bars with 15 lengths per line.

Notes:

- Apply concrete sealer to all exposed concrete surfaces of the pier.
- The quantities and reinforcement detailing are based on the top of shaft and the estimated top of rock elevations shown and may change based on the actual top of rock encountered at each shaft and the final top of shaft elevation.
- Length is height of spiral.
- Contractor may need to increase the casing thickness to withstand the installation process. The Estimated Top of Rock/Bottom of Permanent Casing Elevation is shown. The limits of casing shall be adjusted as necessary, and as approved, such that the actual installed casing length extends to the as-encountered top of rock of each shaft. See Article 516.06(d) of the Standard Specifications.

Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"



4/3/15 PM 0161716-60W26-S062-Pier2_Details.dgn



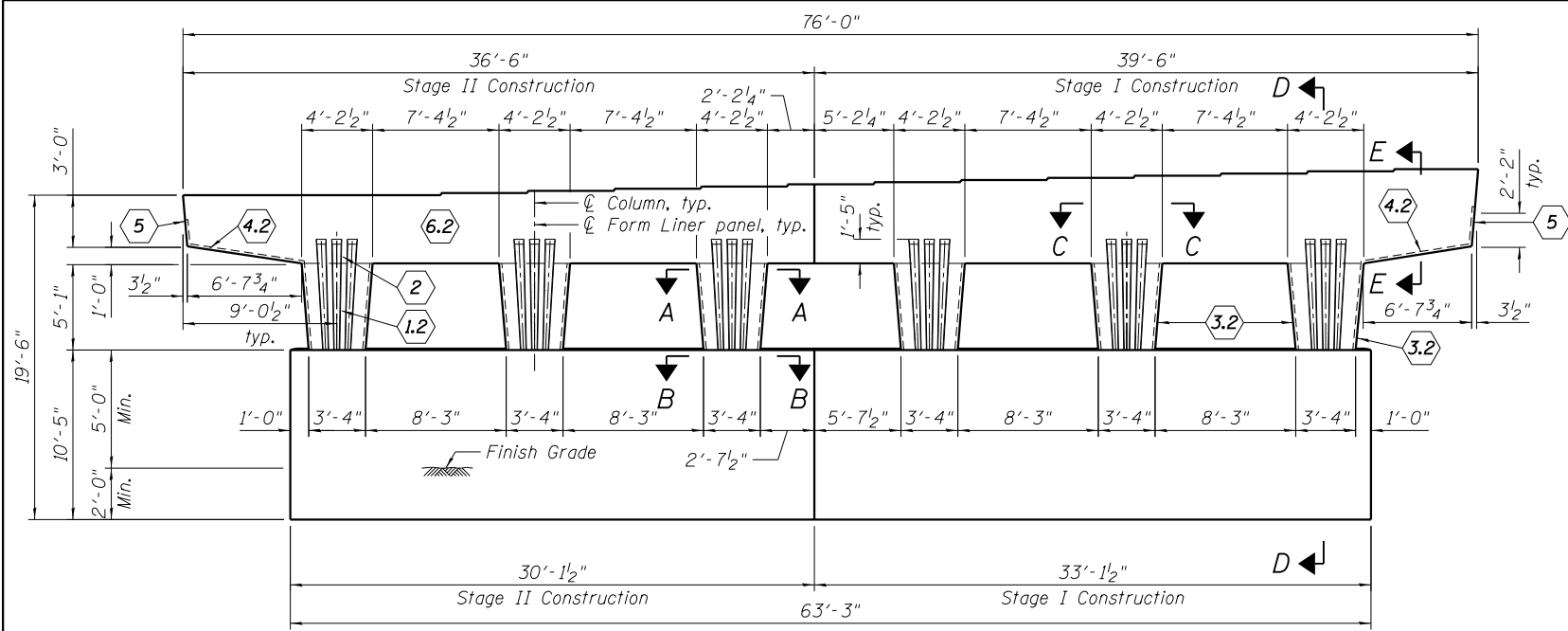
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PLOT DATE = 9/15/2013	DRAWN - RLS	REVISED
	CHECKED - JRM	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PIER 2 DETAILS
STRUCTURE NO. 016-1716**

SHEET NO. S2-62 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	422
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				

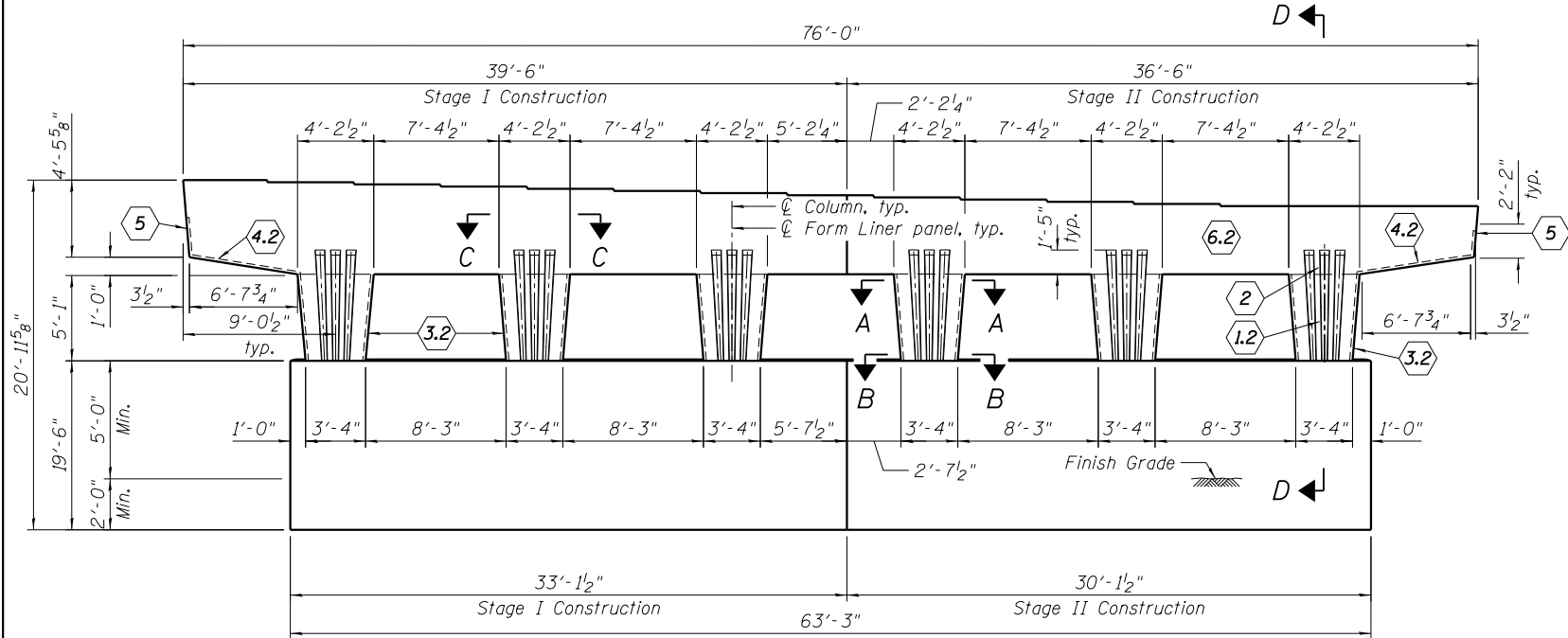


PIER ELEVATION (Looking North)

PIER END VIEW (Looking East) (Looking West - Sim.)

FORM LINER PANEL 1.2 & 2

FORM LINER PANEL 4.2



PIER ELEVATION (Looking South)

SECTION D-D

SECTION E-E

FORM LINER PANEL 3.2

LEGEND

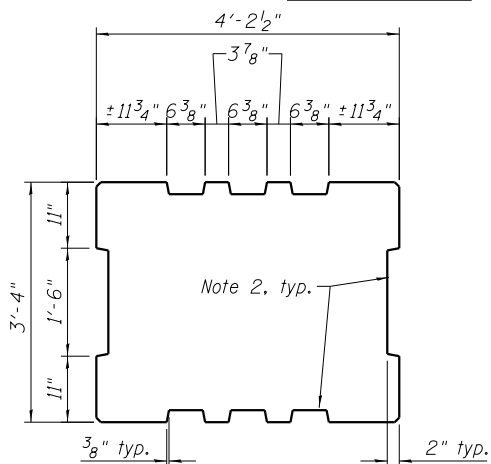


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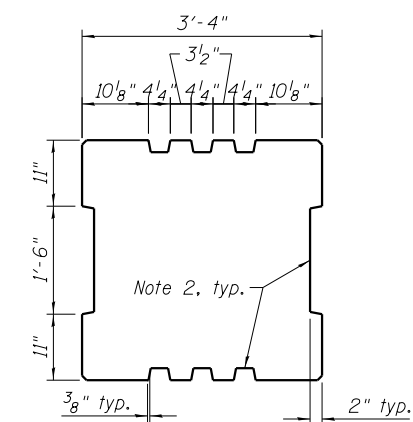
1. Alternate: For surface indicated as Textured Form Liner (6.2), Contractor can chose to build large protrusion directly into these forms if a smooth uniform surface can be provided.
2. Tapered fluting - dimensions vary, see elevation profile.
3. Form liner panel (2) is continuation of panel (1.2). Keep adjacent form liners aligned.
4. Hand clean and smooth the surface of the construction joint between the pier and cap.
5. Texture 1: Light Sandblast as selected from manufacturer's standard pattern selection. Texture 2: Smooth

BILL OF MATERIAL

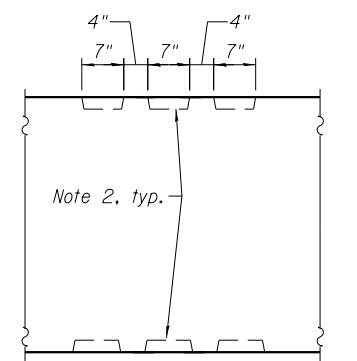
Item	Unit	Total
Form Liner Textured Surface	Sq. Ft.	558



SECTION A-A At Top of Column



SECTION B-B At Bottom of Column



SECTION C-C In Cap

4:33:52 PM 0161716-60W26-S063-Pier.dgn



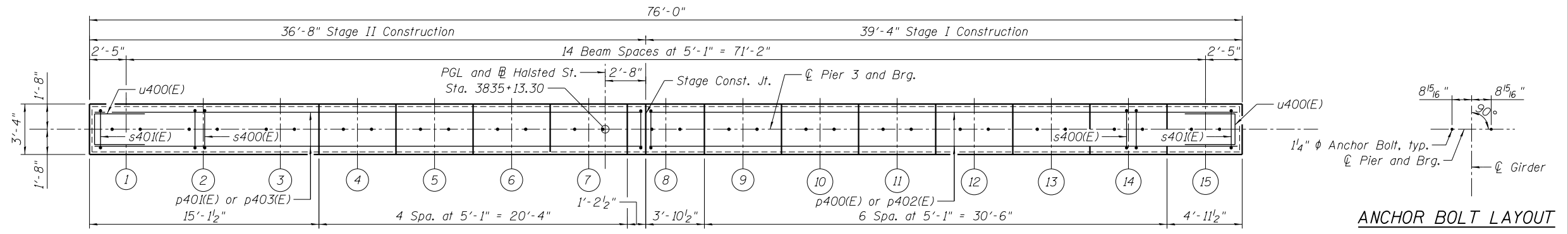
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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

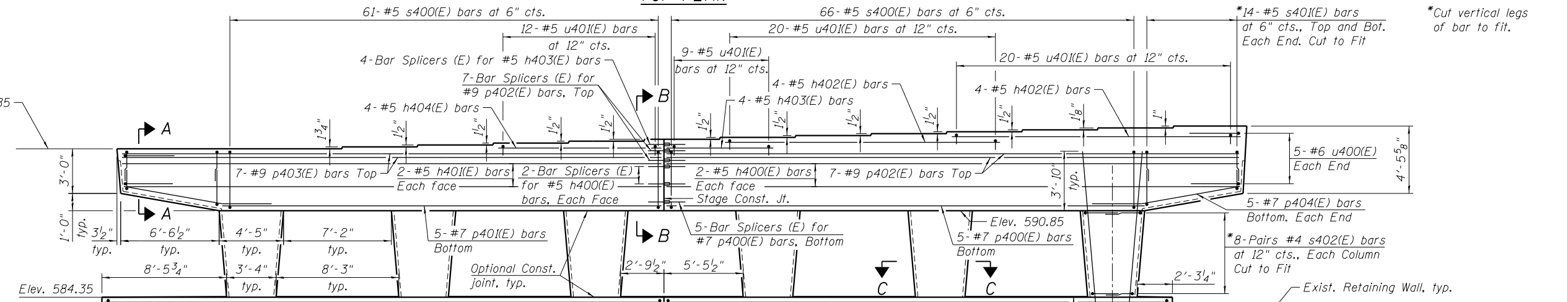
PIER 2 ARCHITECTURAL DETAILS STRUCTURE NO. 016-1716

SHEET NO. S2-63 OF S2-81 SHEETS

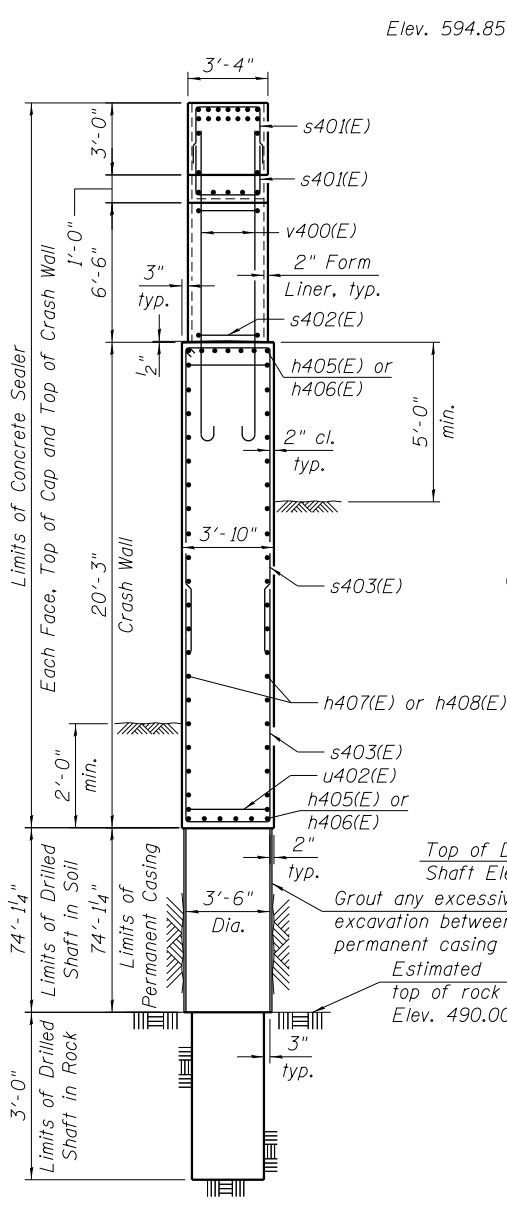
F.A.U. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	423
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



TOP PLAN



ELEVATION
(Looking North)



END VIEW
(Looking East)

TOP OF SEAT ELEVATION

Girder No.	Seat Elevation
1	594.85
2	594.85
3	594.85
4	595.00
5	595.13
6	595.26
7	595.38
8	595.51
9	595.64
10	595.77
11	595.89
12	596.02
13	596.15
14	596.24
15	596.32

Notes:
 Four steps monolithically with cap.
 Space reinforcement in cap to miss anchor bolts.
 For Sections A-A, B-B and C-C, see sheet S2-65 of S2-81.
 Backfill shall be placed behind the pier after the superstructure has been poured and false work removed. See Article 502.10 of the Standard Specifications.

4:33:54 PM 0161716-60W26-S064-Pier3-P&E.dgn



USER NAME = rlschultz	DESIGNED - JRM	REVISED
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PLOT DATE = 9/15/2013	DRAWN - RLS	REVISED
	CHECKED - JRM	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3 PLAN AND ELEVATION
STRUCTURE NO. 016-1716

SHEET NO. S2-64 OF S2-81 SHEETS

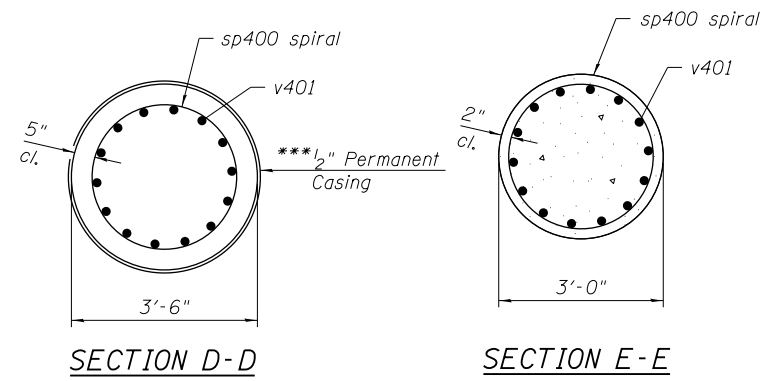
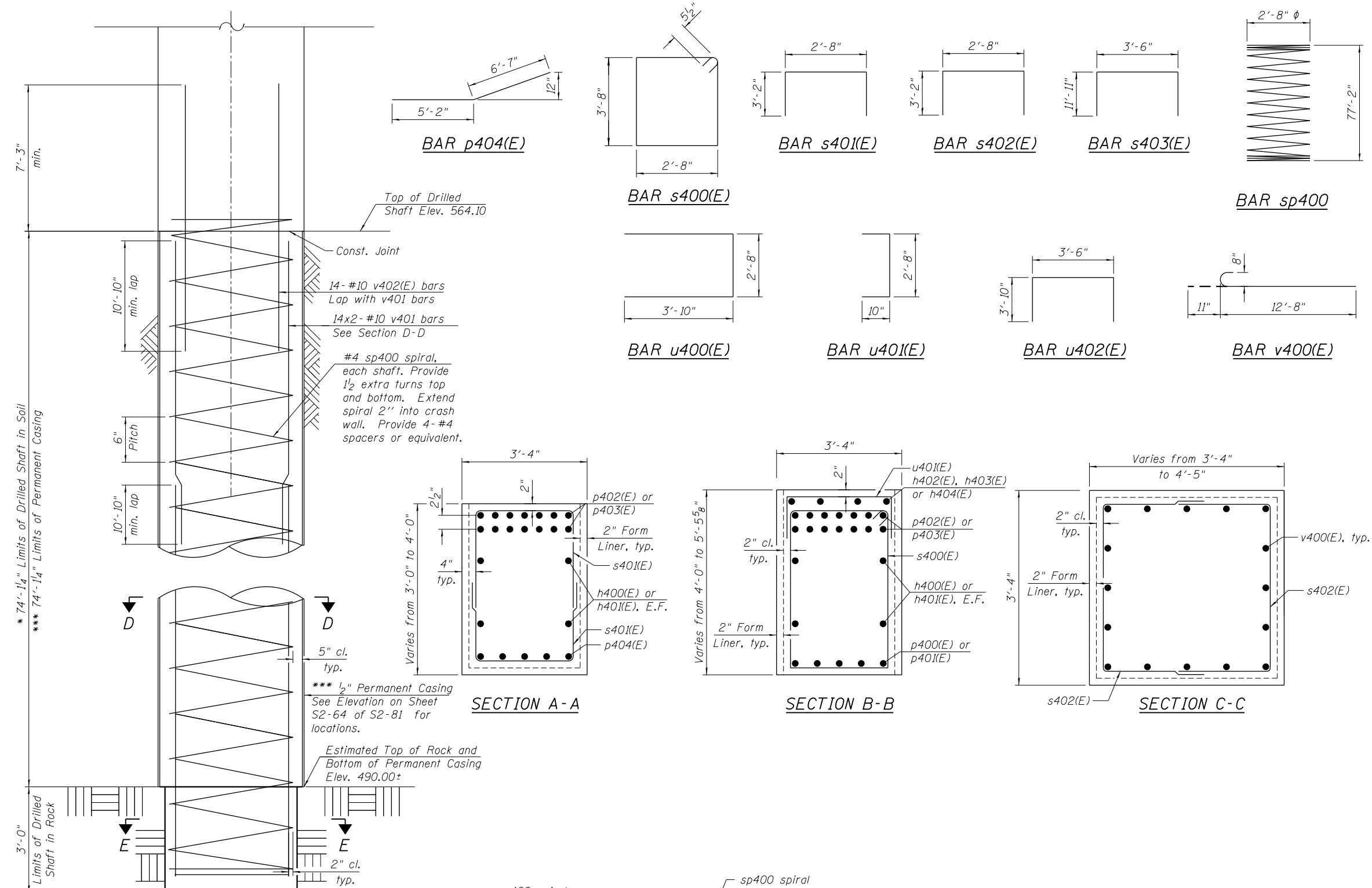
F.A.U. R.E. 3730	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 424
CONTRACT NO. ILLINOIS FED. AID PROJECT			60W26	

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h400(E)	4	#5	38'-7"	—
h401(E)	4	#5	35'-11"	—
h402(E)	8	#5	19'-8"	—
h403(E)	4	#5	7'-1"	—
h404(E)	4	#5	11'-0"	—
h405(E)	13	#6	33'-10"	—
h406(E)	13	#6	37'-5"	—
h407(E)	38	#5	33'-10"	—
h408(E)	38	#5	37'-5"	—
p400(E)	5	#7	32'-2"	—
p401(E)	5	#7	29'-6"	—
p402(E)	14	#9	38'-10"	—
p403(E)	14	#9	36'-2"	—
p404(E)	10	#7	11'-9"	—
s400(E)	127	#5	13'-7"	□
s401(E)	56	#5	9'-0"	□
s402(E)	96	#4	9'-0"	□
s403(E)	290	#5	27'-4"	□
sp400	12	#4	77'-2"	⌘
u400(E)	10	#6	10'-4"	□
u401(E)	61	#5	4'-4"	□
u402(E)	42	#6	11'-2"	□
v400(E)	96	#8	13'-7"	—
v401	336	#10	43'-10"	—
v402(E)	168	#10	18'-3"	—
Structure Excavation		Cu. Yd.	199	
Concrete Structures		Cu. Yd.	268.7	
Reinforcement Bars		Pound	73,760	
Reinforcement Bars, Epoxy Coated		Pound	38,190	
Permanent Casing		Foot	149	
Drilled Shaft in Soil		Cu. Yd.	316.9	
Drilled Shaft in Rock		Cu. Yd.	9.4	
Concrete Sealer		Sq. Ft.	5095	

Bars indicated thus 1x15 etc., indicates 1 line of bars with 15 lengths per line.

Notes:
 Apply concrete sealer to all exposed concrete surfaces of the pier.
 * The quantities and reinforcement detailing are based on the top of shaft and the estimated top of rock elevations shown and may change based on the actual top of rock encountered at each shaft and the final top of shaft elevation.
 ** Length is height of spiral.
 *** Contractor may need to increase the casing thickness to withstand the installation process. The Estimated Top of Rock/Bottom of Permanent Casing Elevation is shown. The limits of casing shall be adjusted as necessary, and as approved, such that the actual installed casing length extends to the as-encountered top of rock at each shaft. See Artical 516.06(d) of the Standard Specifications.



Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"
#10	10'-10"

**

4:33:55 PM 0161716-60W26-S065-Pier3_Details.dgn



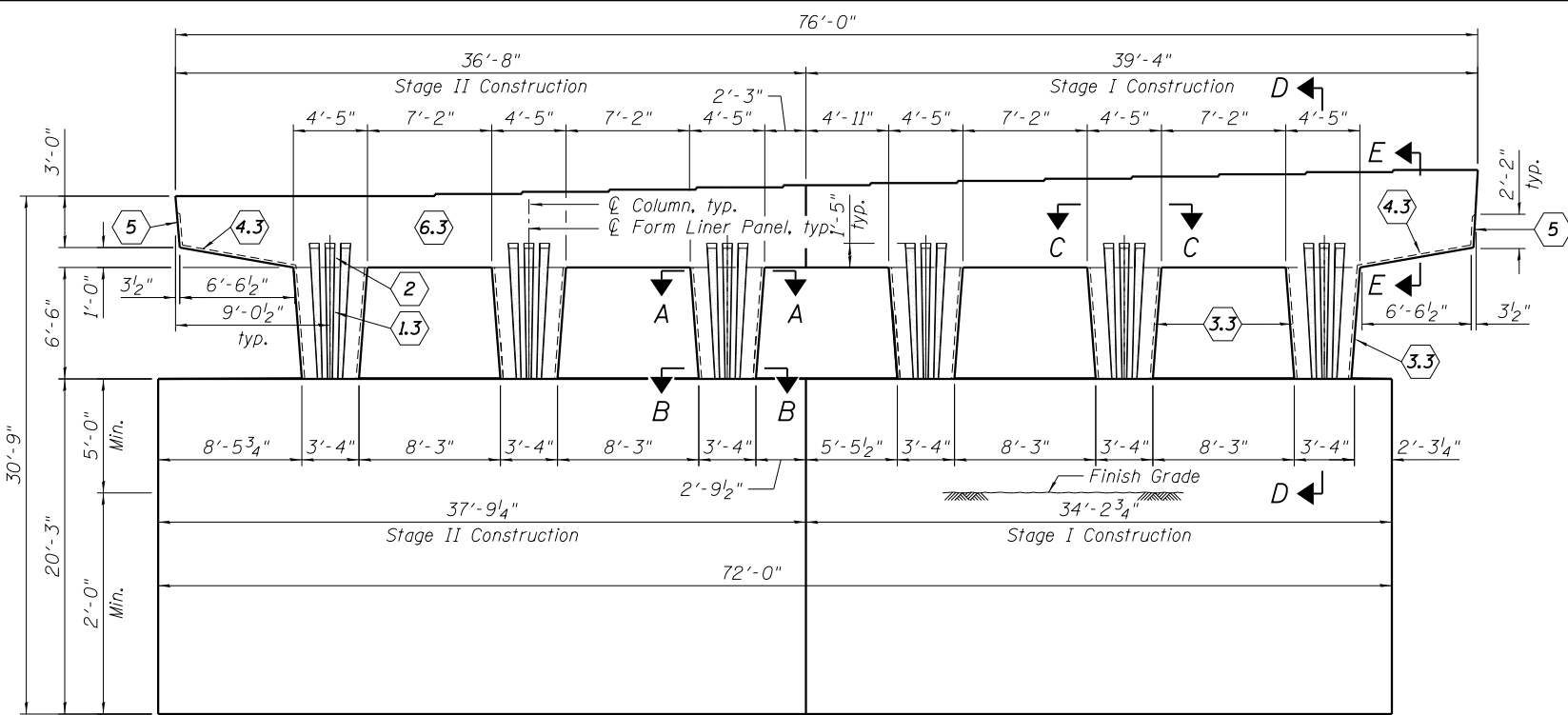
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	CHECKED - JRM	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

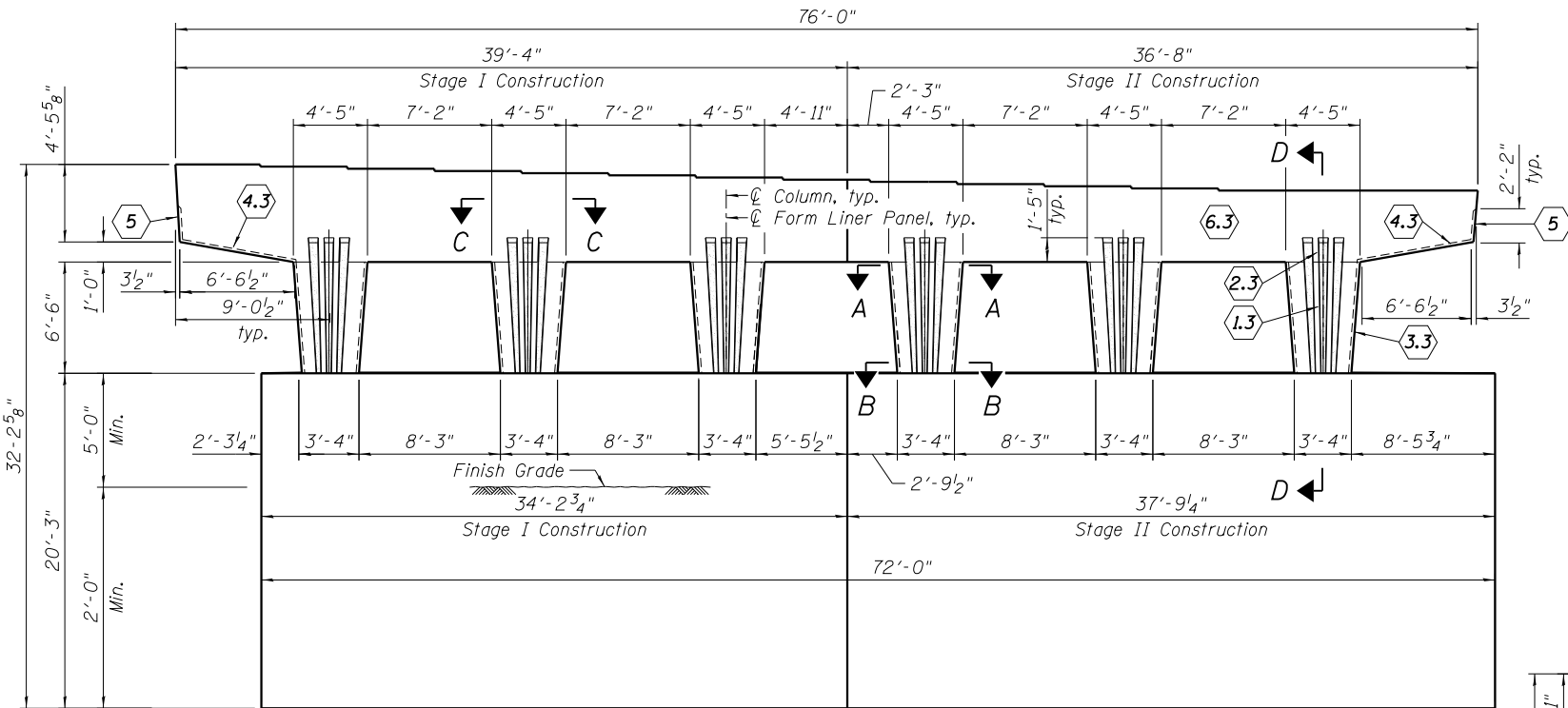
**PIER 3 DETAILS
STRUCTURE NO. 016-1716**

SHEET NO. S2-65 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	425
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



PIER ELEVATION
(Looking North)



PIER ELEVATION
(Looking South)

LEGEND

1.3 2 3.3 4.3 5 6.3

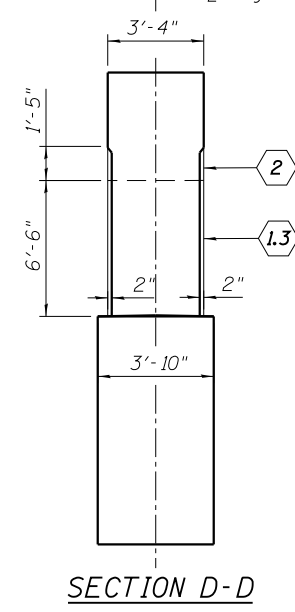
Textured Form Liner

BILL OF MATERIAL

Item	Unit	Total
Form Liner Textured Surface	Sq. Ft.	688

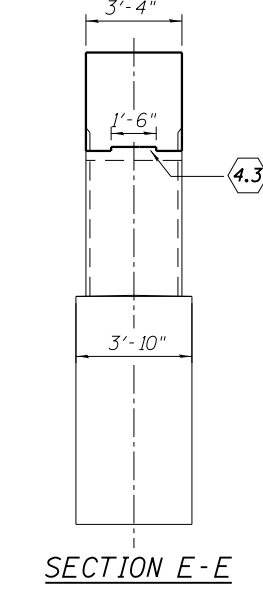
- Notes:
- Alternate: For surface indicated as Textured Form Liner (6.3), Contractor can chose to build large protrusion directly into these forms if a smooth uniform surface can be provided.
 - Tapered fluting - dimensions vary, see elevation profile.
 - Form liner panel (2) is continuation of panel (1.3). Keep adjacent form liners aligned.
 - Hand clean and smooth the surface of the construction joint between the pier and cap.
 - Texture 1: Light Sandblast as selected from manufacturer's standard pattern selection. Texture 2: Smooth

PIER END VIEW
(Looking East)
(Looking West - Sim.)



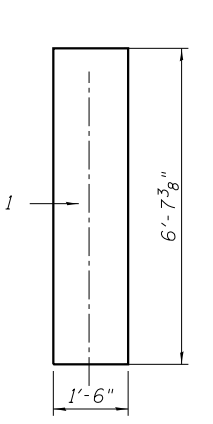
SECTION D-D

FORM LINER PANEL 1.3 & 2

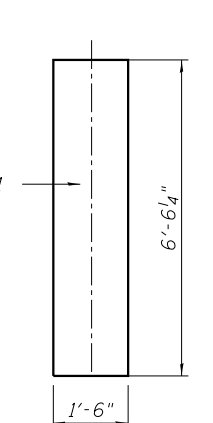


SECTION E-E

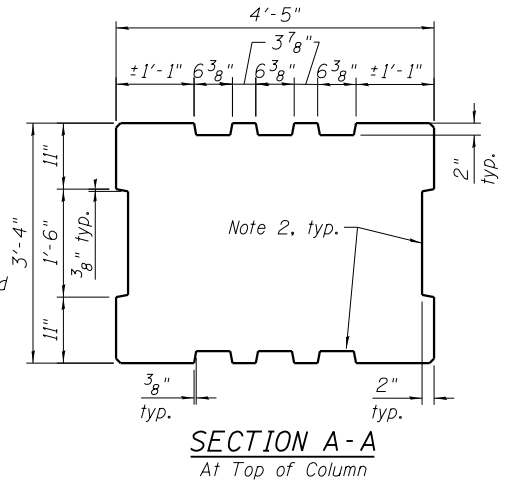
FORM LINER PANEL 5



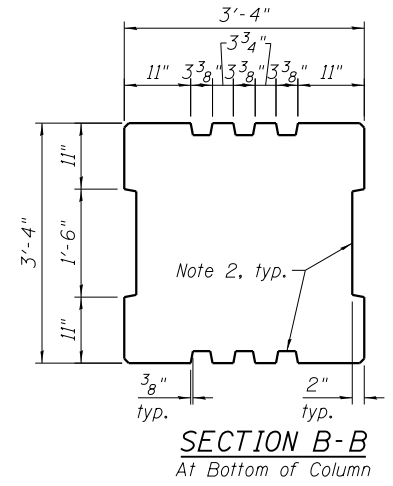
FORM LINER PANEL 4.3



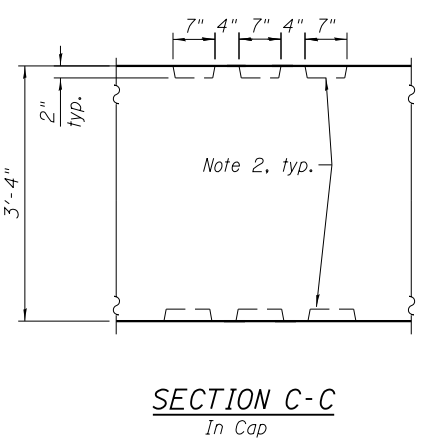
FORM LINER PANEL 3.3



SECTION A-A
At Top of Column



SECTION B-B
At Bottom of Column



SECTION C-C
In Cap

4:33:56 PM 0161716-60W26-Pier-3-Details.dgn



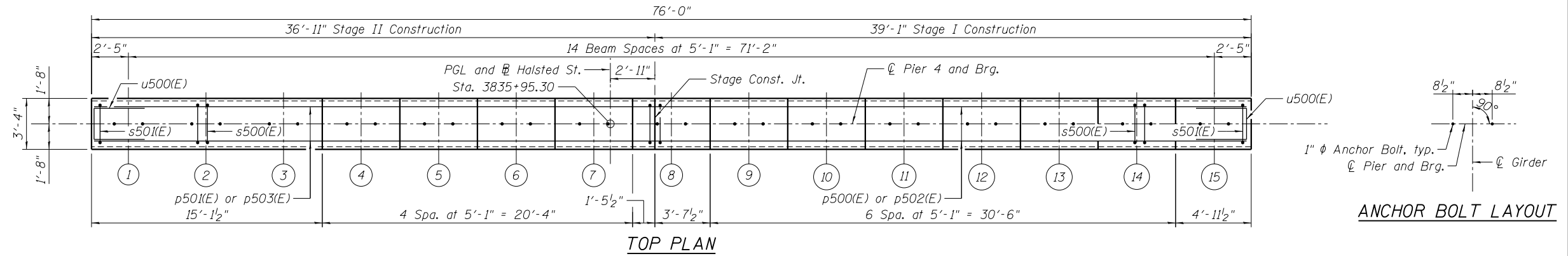
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CHECKED - JRM	REVISIONS	
PLOT SCALE = 5:4.0006 '1' / in.	DRAWN - RLS	REVISIONS
PLOT DATE = 9/15/2013	CHECKED - MDS	REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 3 ARCHITECTURAL DETAILS
STRUCTURE NO. 016-1716

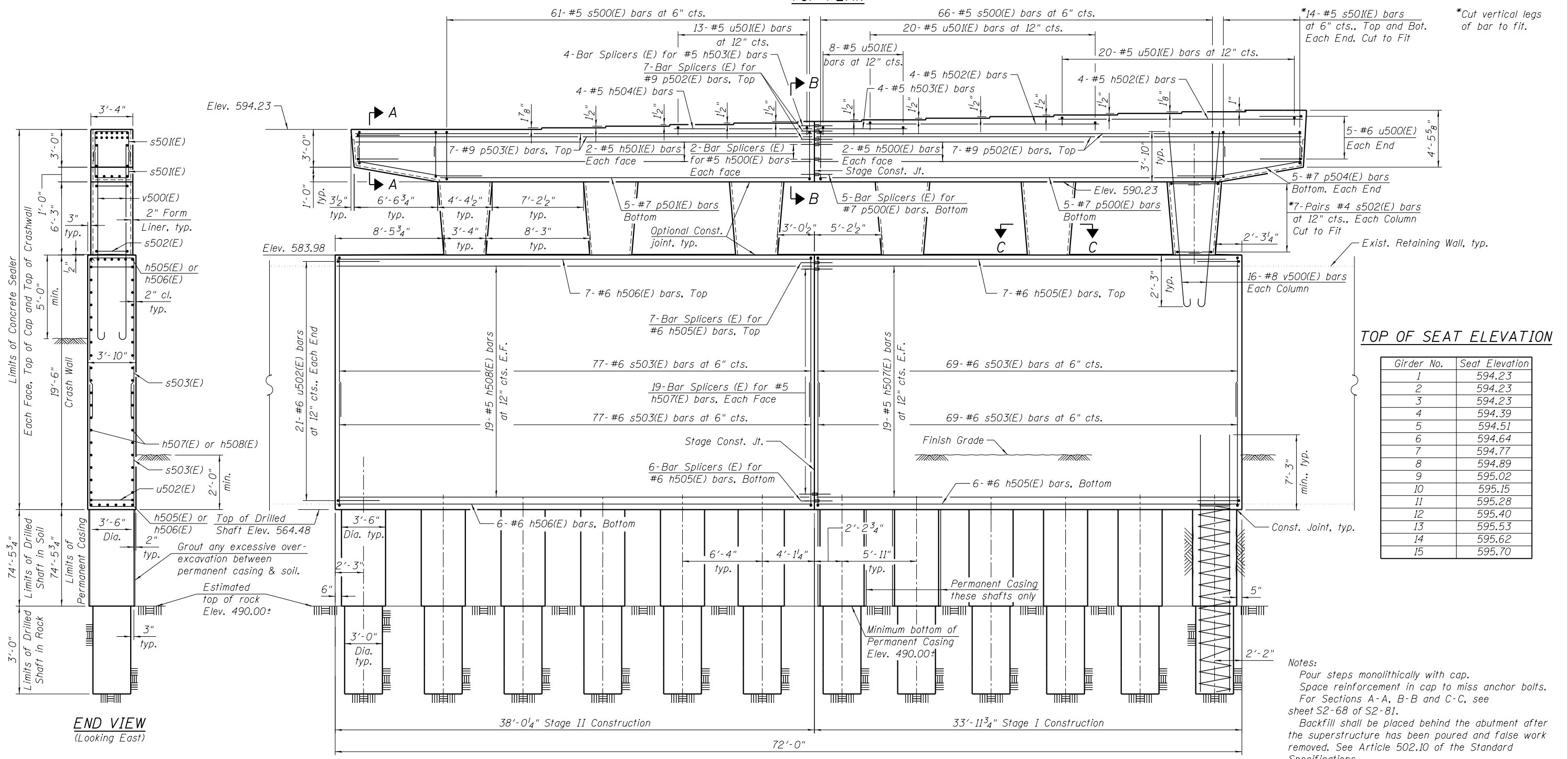
SHEET NO. S2-66 OF S2-81 SHEETS

F.A.U. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	426
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



TOP PLAN

ANCHOR BOLT LAYOUT



ELEVATION
(Looking North)

TOP OF SEAT ELEVATION

Girder No.	Seat Elevation
1	594.23
2	594.23
3	594.23
4	594.39
5	594.51
6	594.64
7	594.77
8	594.89
9	595.02
10	595.15
11	595.28
12	595.40
13	595.53
14	595.62
15	595.70

Notes:
 Four steps monolithically with cap.
 Space reinforcement in cap to miss anchor bolts.
 For Sections A-A, B-B and C-C, see sheet S2-68 of S2-81.
 Backfill shall be placed behind the abutment after the superstructure has been poured and false work removed. See Article 502.10 of the Standard Specifications.

4:33:58 PM 0161716-60W26-S067-Pier4_P&E.dgn



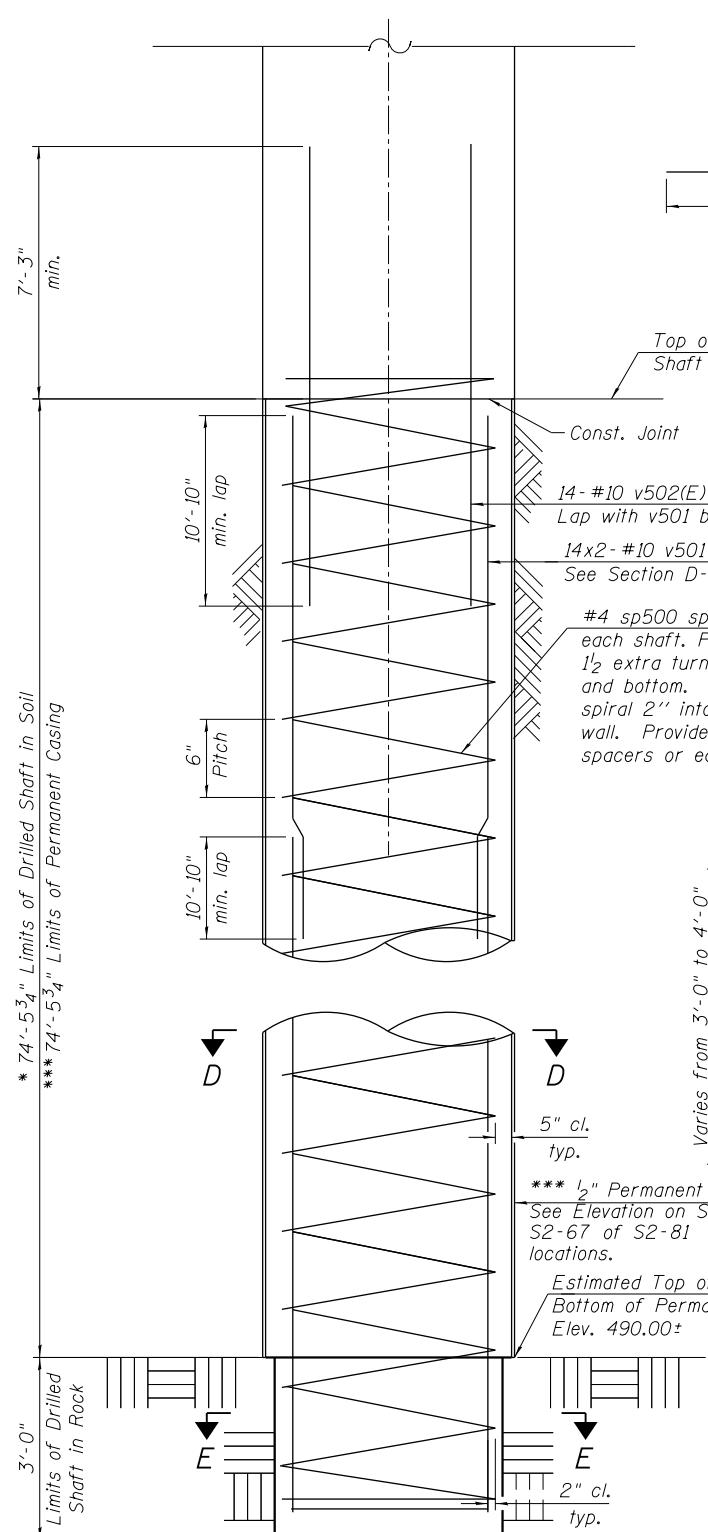
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PLOT SCALE = 4:0.0005 ' / in.	CHECKED - MDS	REVISED
PLOT DATE = 9/15/2013	DRAWN - RLS	REVISED
	CHECKED - JRM	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

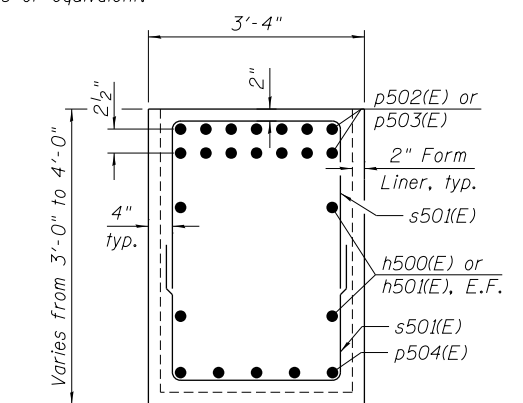
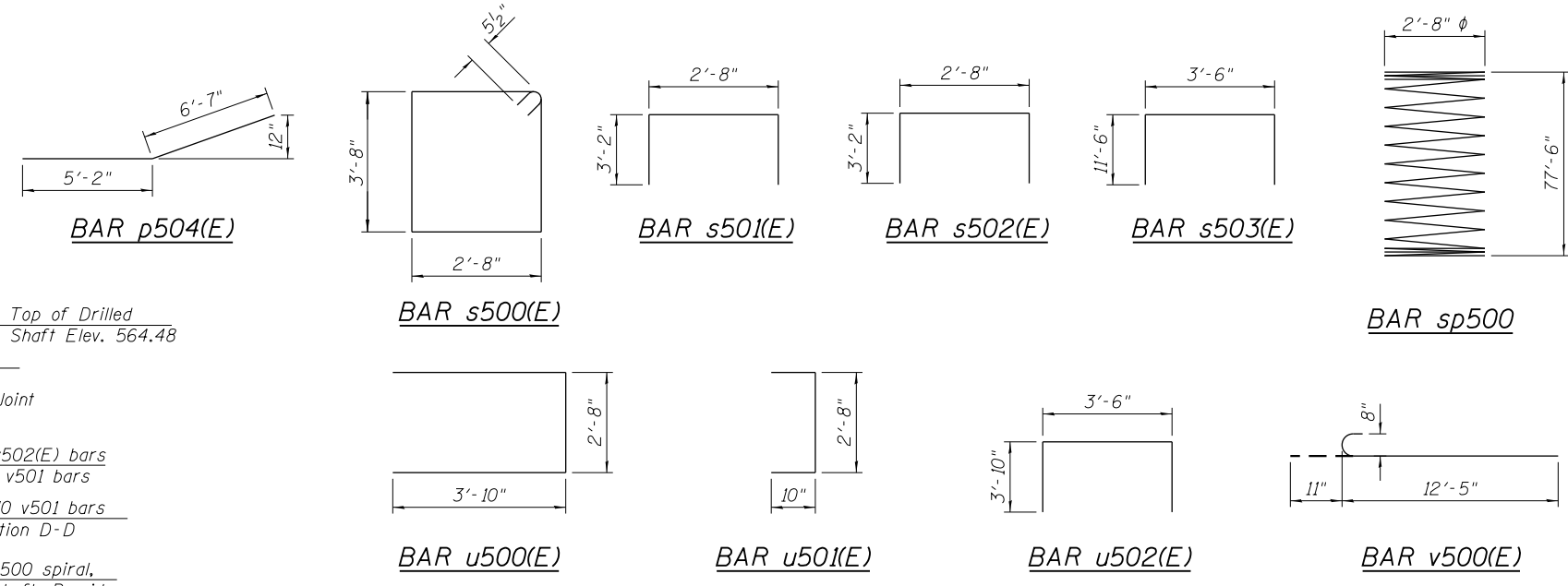
PIER 4 PLAN AND ELEVATION
STRUCTURE NO. 016-1716

SHEET NO. S2-67 OF S2-81 SHEETS

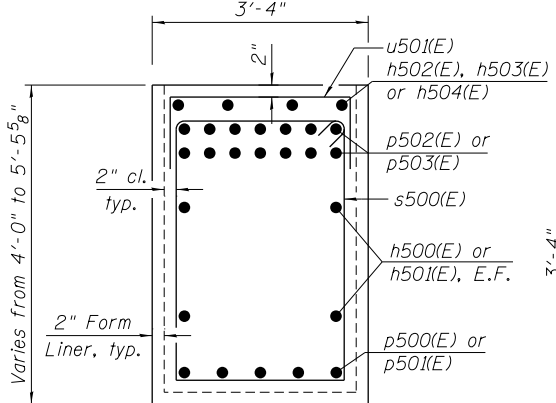
F.A.U. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	427
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



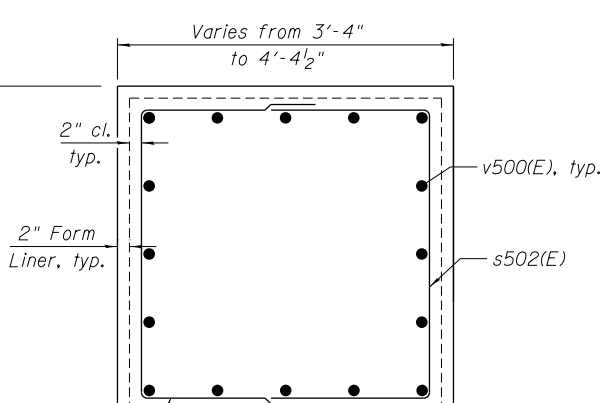
DRILLED SHAFT ELEVATION



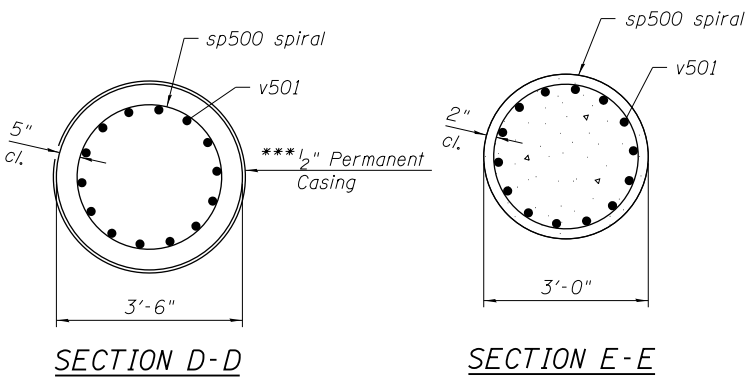
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

SECTION E-E

Minimum Bar Laps	
Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"
#10	10'-10"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h500(E)	4	#5	38'-4"	—
h501(E)	4	#5	36'-2"	—
h502(E)	8	#5	19'-8"	—
h503(E)	4	#5	6'-10"	—
h504(E)	4	#5	11'-3"	—
h505(E)	13	#6	33'-7"	—
h506(E)	13	#6	37'-8"	—
h507(E)	38	#5	33'-7"	—
h508(E)	38	#5	37'-8"	—
p500(E)	5	#7	31'-11"	—
p501(E)	5	#7	29'-9"	—
p502(E)	14	#9	38'-7"	—
p503(E)	14	#9	36'-5"	—
p504(E)	10	#7	11'-9"	—
s500(E)	127	#5	13'-7"	□
s501(E)	56	#5	9'-0"	□
s502(E)	84	#4	9'-0"	□
s503(E)	292	#6	26'-6"	□
sp500	12	#4	77'-6"	⊞
u500(E)	10	#6	10'-4"	□
u501(E)	61	#5	4'-4"	□
u502(E)	42	#6	11'-2"	□
v500(E)	96	#8	13'-4"	⊞
v501	336	#10	44'-0"	—
v502(E)	168	#10	18'-3"	—
Structure Excavation		Cu. Yd.	182	
Concrete Structures		Cu. Yd.	260.3	
Reinforcement Bars		Pound	74,050	
Reinforcement Bars, Epoxy Coated		Pound	41,410	
Permanent Casing		Foot	149	
Drilled Shaft in Soil		Cu. Yd.	318.5	
Drilled Shaft in Rock		Cu. Yd.	9.4	
Concrete Sealer		Sq. Ft.	4957	

Bars indicated thus 1x15 etc., indicates 1 line of bars with 15 lengths per line.

Notes:
 Apply concrete sealer to all exposed concrete surfaces of the pier.
 * The quantities and reinforcement detailing are based on the top of shaft and the estimated top of rock elevations shown and may change based on the actual top of rock encountered at each shaft and the final top of shaft elevation.
 ** Length is height of spiral.
 *** Contractor may need to increase the casing thickness to withstand the installation process. The Estimated Top of Rock/Bottom of Permanent Casing Elevation is shown. The limits of casing shall be adjusted as necessary, and as approved, such that the actual installed casing length extends to the as-encountered top of rock at each shaft. See Article 516.06(d) of the Standard Specifications.

4/3/15 5:59 PM 0161716-60W26-S068-Pier-4_Details.dgn



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PLOT DATE = 9/15/2013	DRAWN - RLS	REVISED
	CHECKED - JRM	REVISED

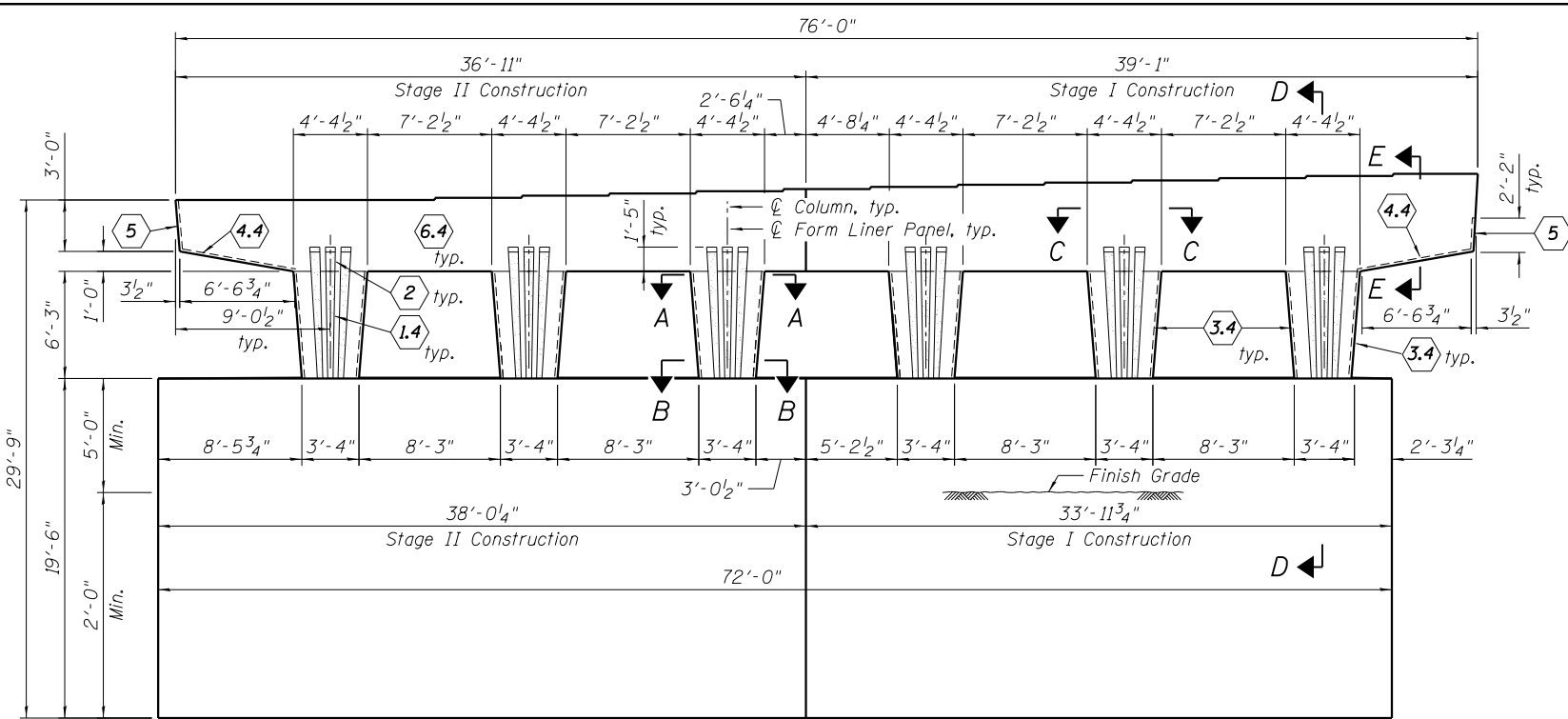
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PIER 4 DETAILS
STRUCTURE NO. 016-1716**

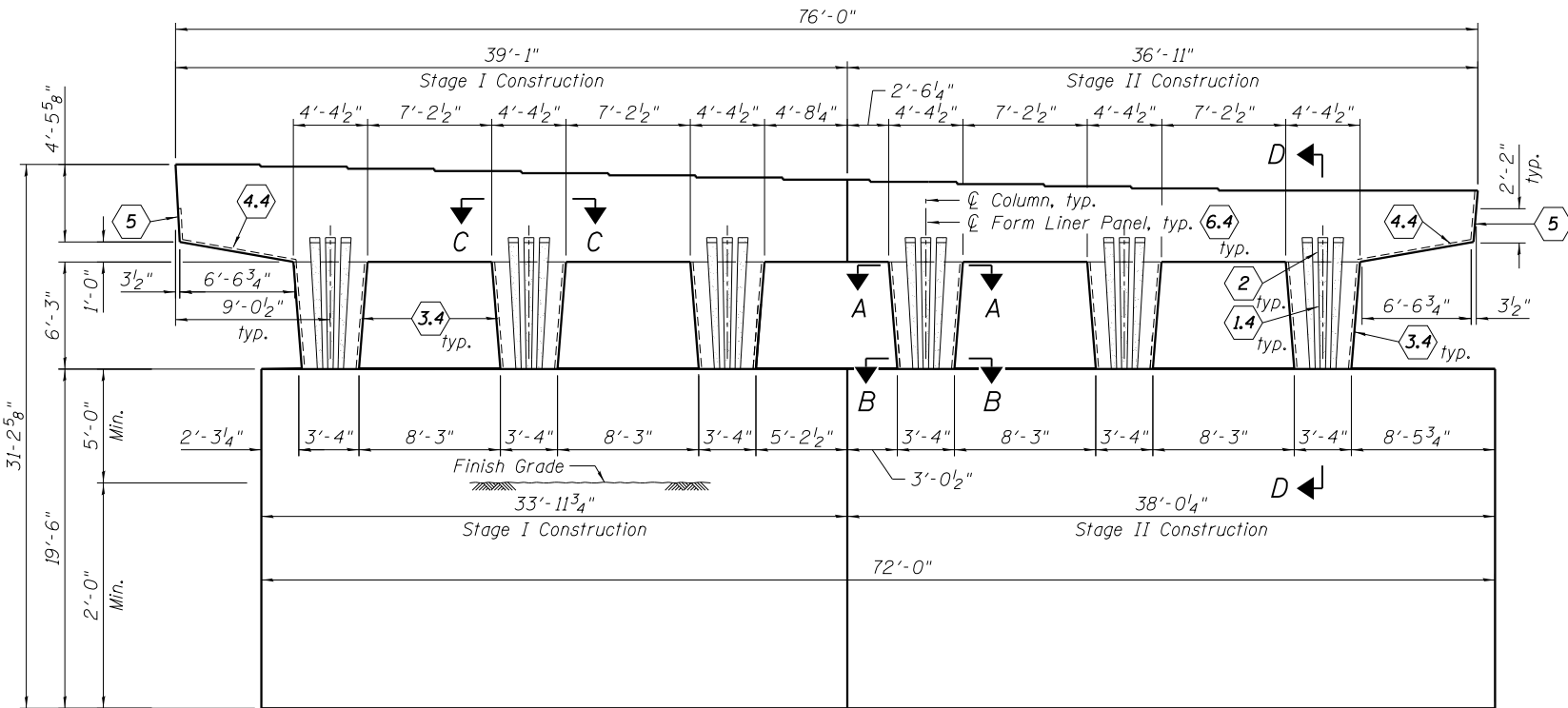
SHEET NO. S2-68 OF S2-81 SHEETS

F.A.U. RT.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	428
CONTRACT NO.			60W26	

ILLINOIS FED. AID PROJECT



PIER ELEVATION
(Looking North)



PIER ELEVATION
(Looking South)

LEGEND

1.4 2 3.4 4.4 5 6.4

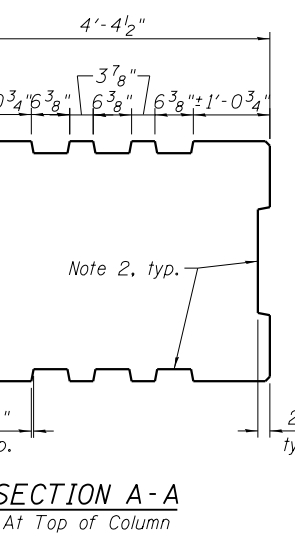
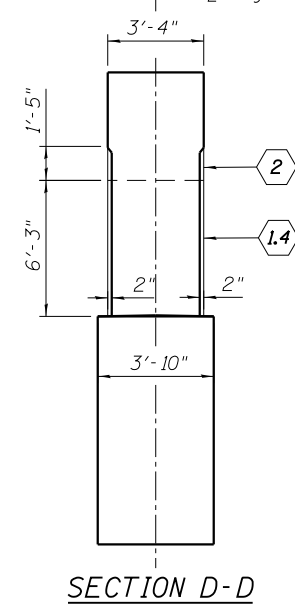
Textured Form Liner

BILL OF MATERIAL

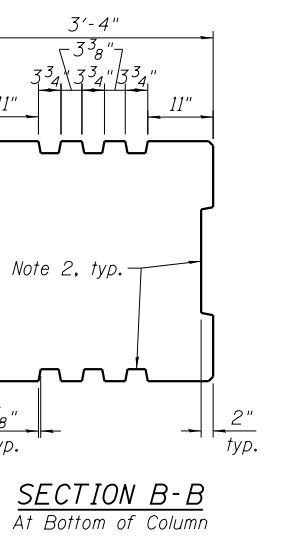
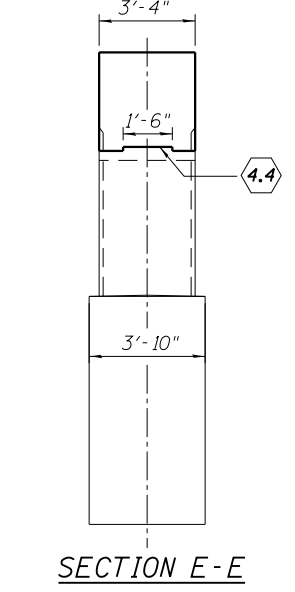
Item	Unit	Total
Form Liner Textured Surface	Sq. Ft.	665

- Notes:**
- Alternate: For surface indicated as Textured Form Liner (6.4), Contractor can chose to build large protrusion directly into these forms if a smooth uniform surface can be provided.
 - Tapered fluting - dimensions vary, see elevation profile.
 - Form liner panel (2) is continuation of panel (1.4). Keep adjacent form liners aligned.
 - Hand clean and smooth the surface of the construction joint between the pier and cap.
 - Texture 1: Light Sandblast as selected from manufacturer's standard pattern selection.
Texture 2: Smooth

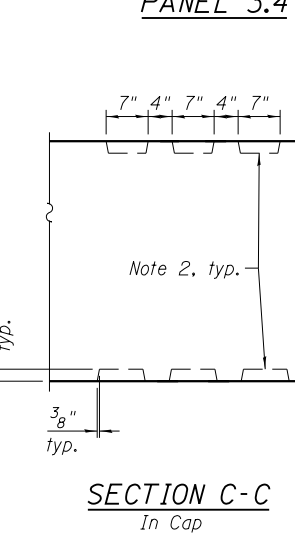
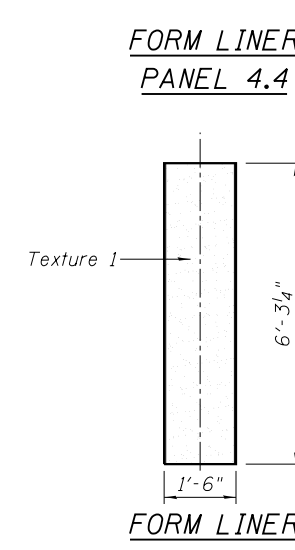
PIER END VIEW
(Looking East)
(Looking West - Sim.)



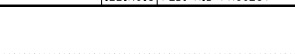
FORM LINER PANEL 1.4 & 2



FORM LINER PANEL 5



FORM LINER PANEL 4.4



FORM LINER PANEL 3.4

4/3/14:00 PM 0161716-60W26-S069-Pier.dgn



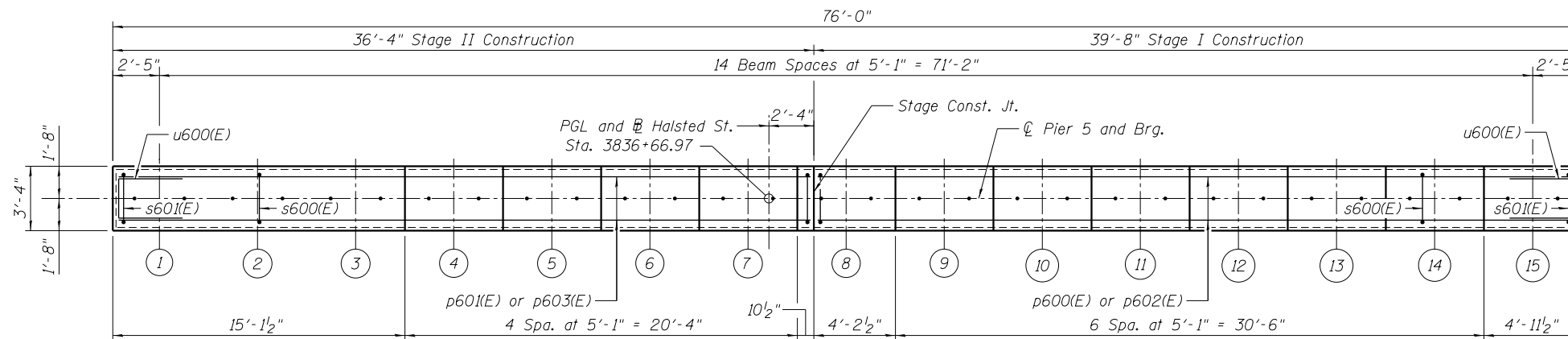
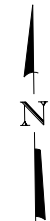
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PLOT DATE = 9/15/2013	CHECKED - MDS	REVISD

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

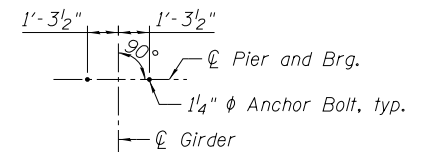
PIER 4 ARCHITECTURAL DETAILS
STRUCTURE NO. 016-1716

SHEET NO. S2-69 OF S2-81 SHEETS

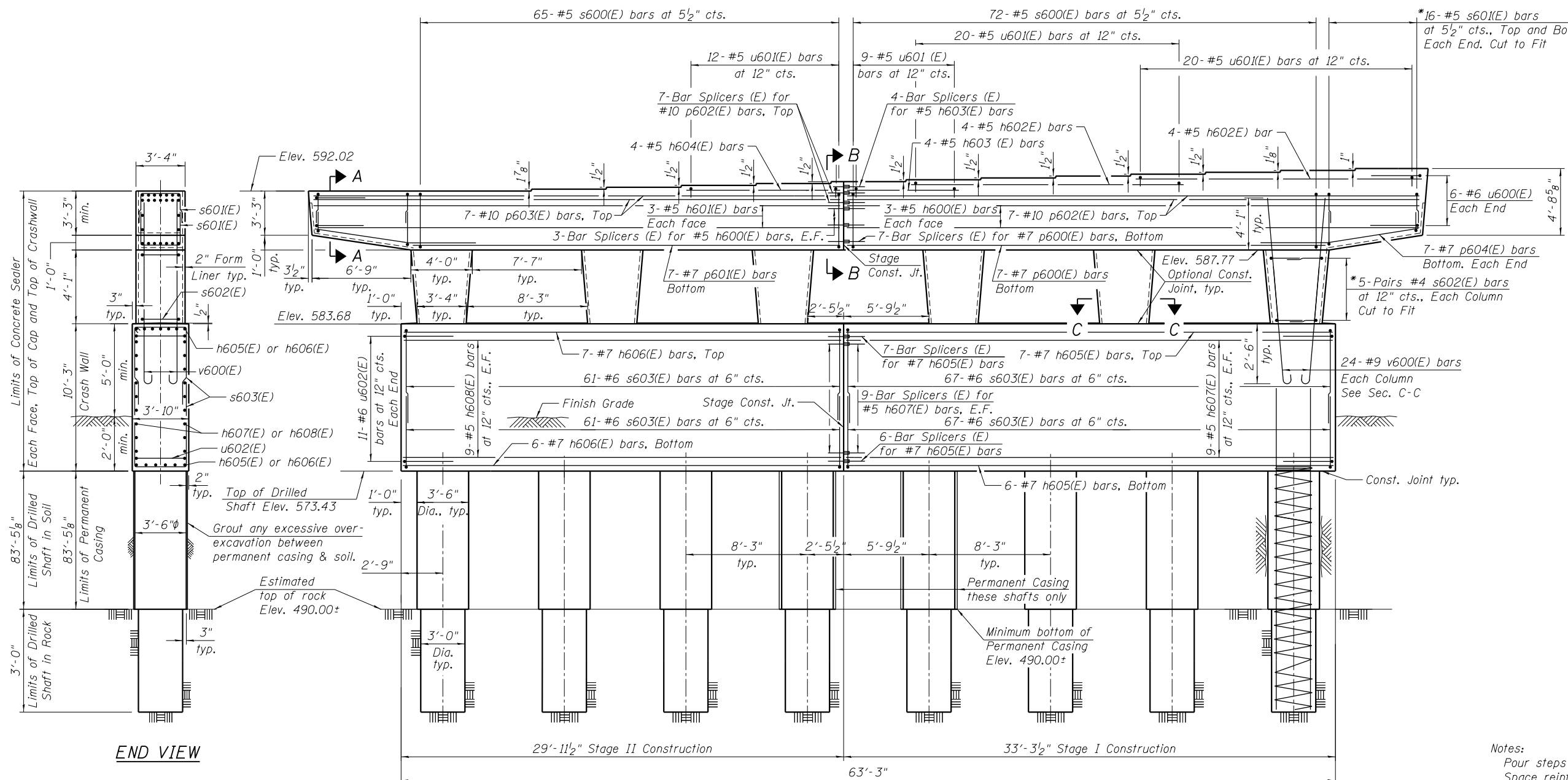
F.A.U. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	429
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



TOP PLAN



ANCHOR BOLT LAYOUT



ELEVATION
(Looking North)

TOP OF SEAT ELEVATION

Girder No.	Seat Elevation
1	592.02
2	592.02
3	592.02
4	592.18
5	592.30
6	592.43
7	592.56
8	592.68
9	592.81
10	592.94
11	593.06
12	593.19
13	593.32
14	593.41
15	593.49

Notes:
 Pour steps monolithically with cap.
 Space reinforcement in cap to miss anchor bolts.
 For Sections A-A, B-B and C-C, see sheet S2-71 of S2-81.

4:34:02 PM 0161716-60W26-S070-Pier5-P&E.dgn



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

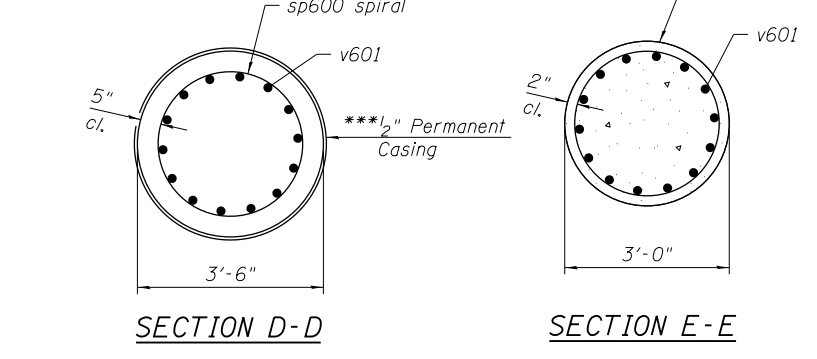
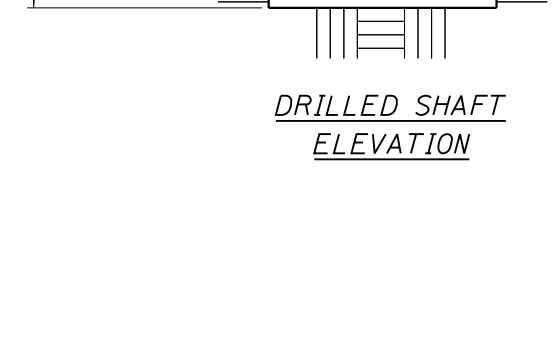
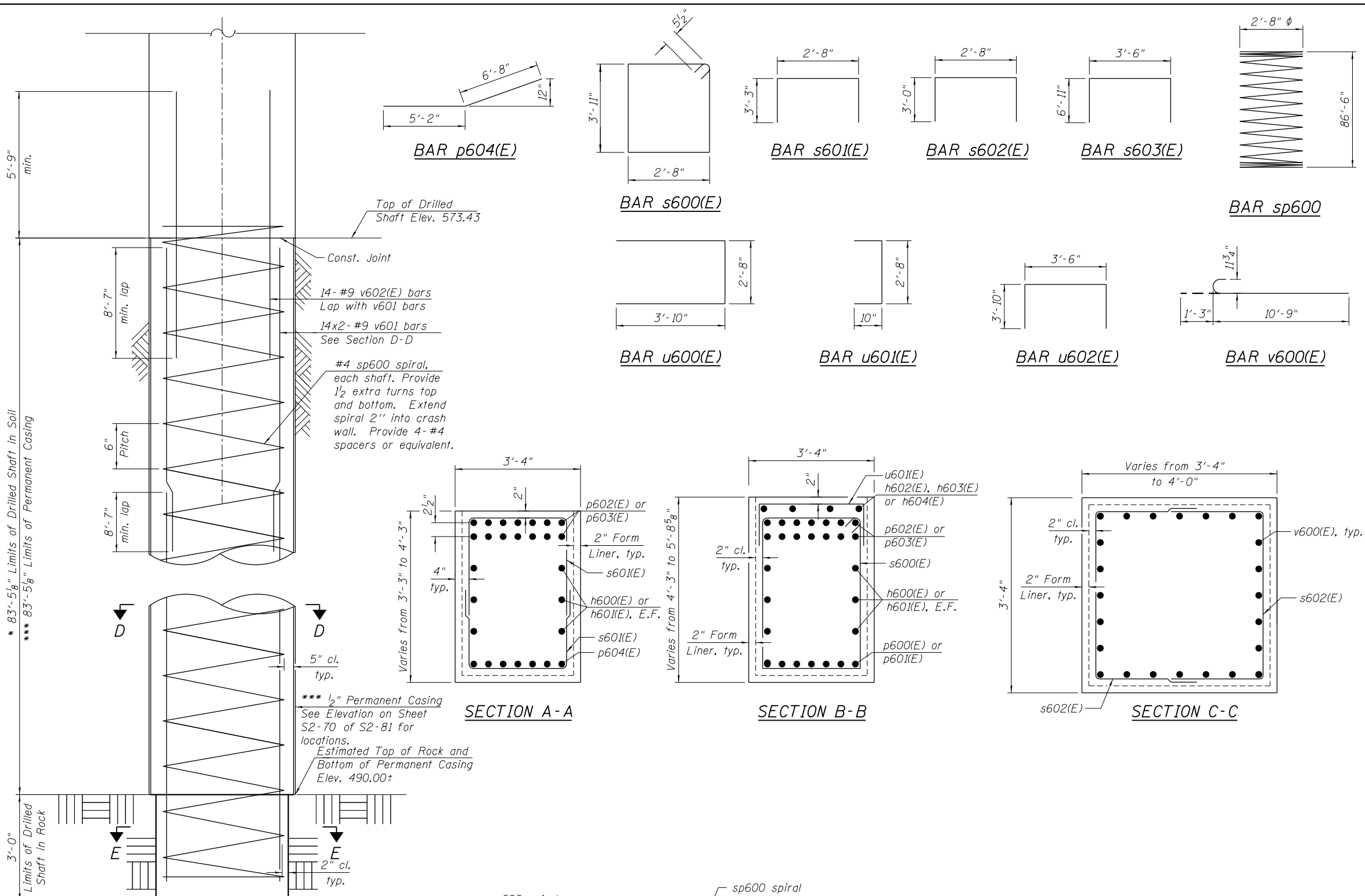
PIER 5 PLAN AND ELEVATION
STRUCTURE NO. 016-1716

SHEET NO. S2-70 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	430
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h600(E)	6	#5	38'-11"	—
h601(E)	6	#5	35'-7"	—
h602(E)	8	#5	19'-8"	—
h603(E)	4	#5	7'-5"	—
h604(E)	4	#5	10'-8"	—
h605(E)	13	#7	32'-11"	—
h606(E)	13	#7	29'-7"	—
h607(E)	18	#5	32'-11"	—
h608(E)	18	#5	29'-7"	—
p600(E)	7	#7	32'-3"	—
p601(E)	7	#7	28'-11"	—
p602(E)	14	#10	39'-1"	—
p603(E)	14	#10	35'-9"	—
p604(E)	14	#7	11'-10"	—
s600(E)	137	#5	14'-1"	□
s601(E)	64	#5	9'-2"	□
s602(E)	60	#4	8'-8"	□
s603(E)	256	#6	17'-4"	□
sp600	8	#4	86'-6"	≡
u600(E)	12	#6	10'-4"	□
u601(E)	61	#5	4'-4"	□
u602(E)	22	#6	11'-2"	□
v600(E)	144	#9	12'-0"	⌋
v601	224	#9	47'-4"	—
v602(E)	112	#9	14'-6"	—
Structure Excavation			Cu. Yd.	77
Concrete Structures			Cu. Yd.	148.5
Reinforcement Bars			Pound	43,810
Reinforcement Bars, Epoxy Coated			Pound	31,130
Permanent Casing			Foot	167
Drilled Shaft in Soil			Cu. Yd.	237.9
Drilled Shaft in Rock			Cu. Yd.	6.3
Concrete Sealer			Sq. Ft.	3183



Bar	Lap
#4	2'-7"
#5	3'-3"
#6	3'-10"
#7	5'-2"
#8	6'-9"
#9	8'-7"

Notes:
 Apply concrete sealer to all exposed concrete surfaces of the pier.
 * The quantities and reinforcement detailing are based on the top of shaft and the estimated top of rock elevations shown and may change based on the actual top of rock encountered at each shaft and the final top of shaft elevation.
 ** Length is height of spiral.
 *** Contractor may need to increase the casing thickness to withstand the installation process. The Estimated Top of Rock/Bottom of Permanent Casing Elevation is shown. The limits of casing shall be adjusted as necessary, and as approved, such that the actual installed casing length extends to the as-encountered top of rock at each shaft. See Article 516.06(d) of the Standard Specifications.

4/3/13 4:03 PM 0161716-60W26-S071-Pier5_Details.cgn



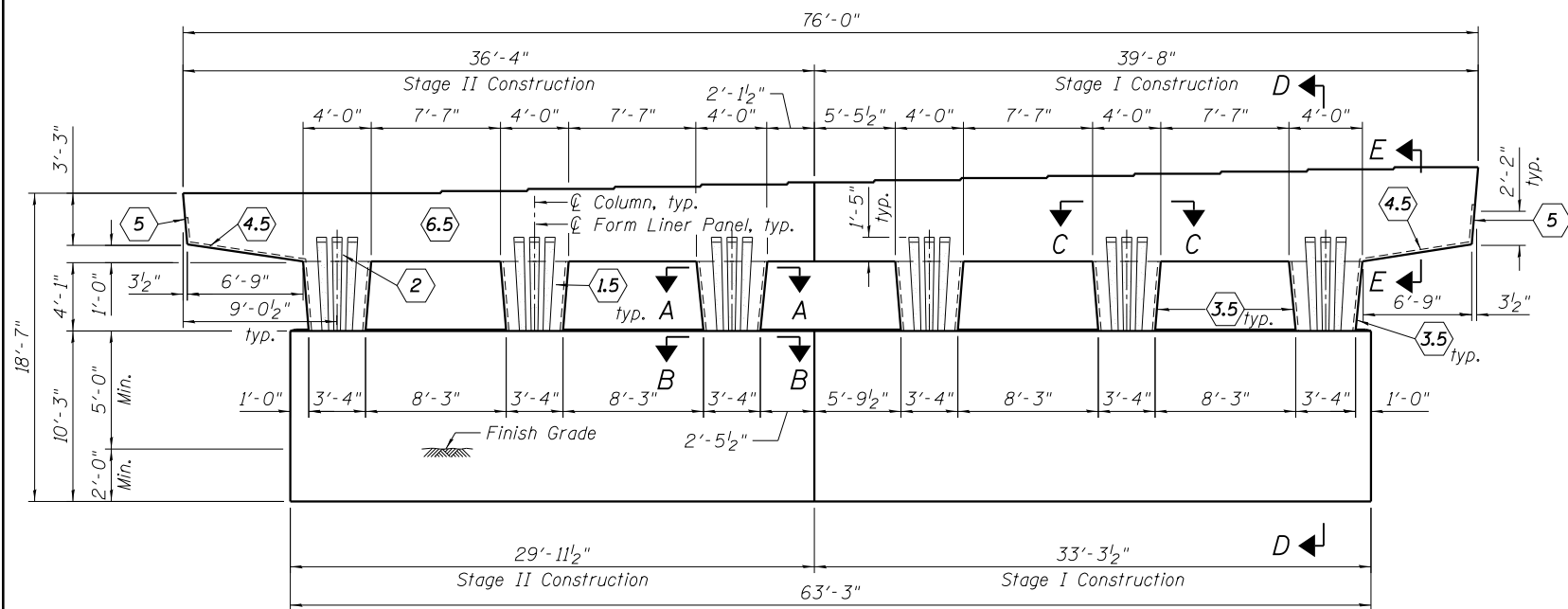
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CHECKED - MDS	REVISIONS	
PLOT SCALE = 0:1.0000 ' / in.	DRAWN - RLS	REVISIONS
PLOT DATE = 9/15/2013	CHECKED - JRM	REVISIONS

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

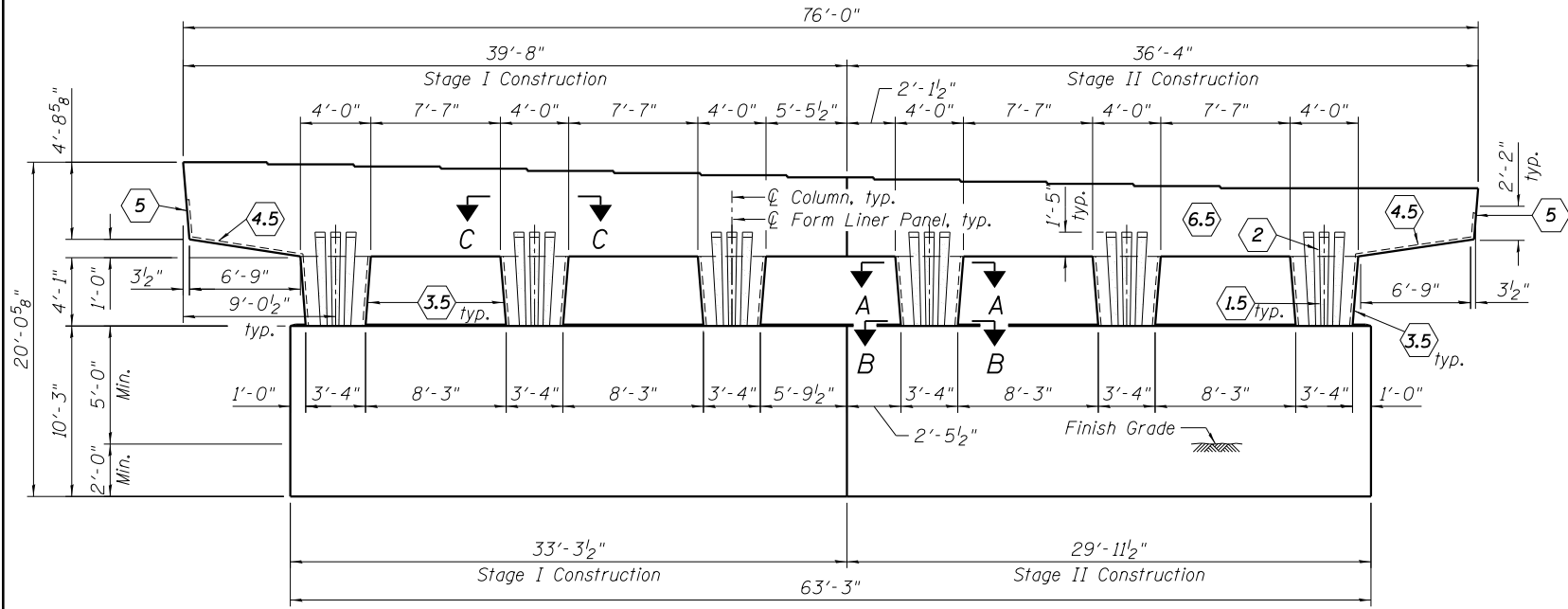
**PIER 5 DETAILS
STRUCTURE NO. 016-1716**

SHEET NO. S2-71 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	431
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



PIER ELEVATION (Looking North)



PIER ELEVATION (Looking South)

LEGEND

1.5, 2, 3.5, 4.5, 5, 6.5

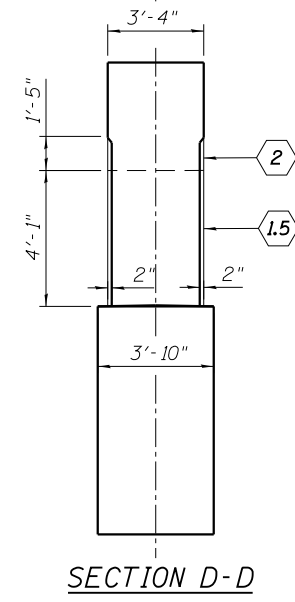
Textured Form Liner

- Notes:**
- Alternate: For surface indicated as Textured Form Liner (6.5), Contractor can chose to build large protrusion directly into these forms if a smooth uniform surface can be provided.
 - Tapered fluting - dimensions vary, see elevation profile.
 - Form liner panel (2) is continuation of panel (1.5). Keep adjacent form liners aligned.
 - Hand clean and smooth the surface of the construction joint between the pier and cap.
 - Texture 1: Light Sandblast as selected from manufacturer's standard pattern selection. Texture 2: Smooth

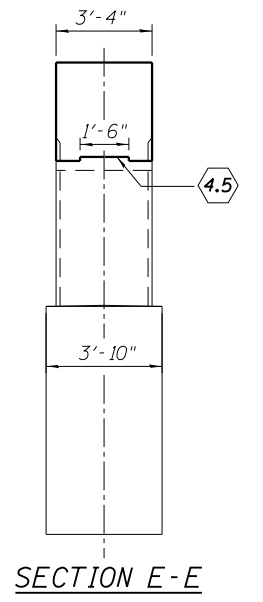
BILL OF MATERIAL

Item	Unit	Total
Form Liner Textured Surface	Sq. Ft.	466

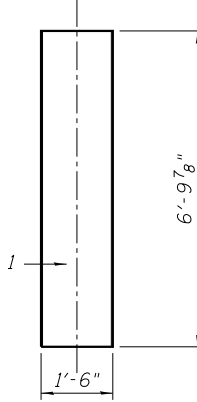
PIER END VIEW (Looking East) (Looking West - Sim.)



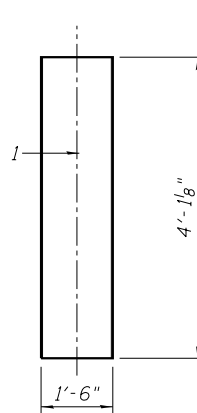
FORM LINER PANEL 1.5 & 2



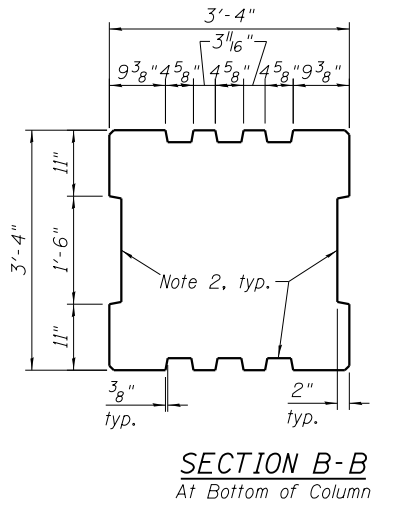
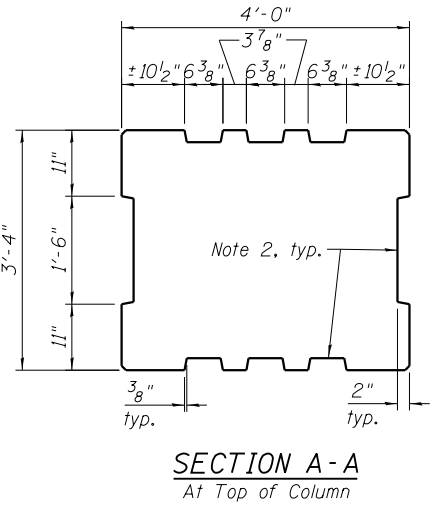
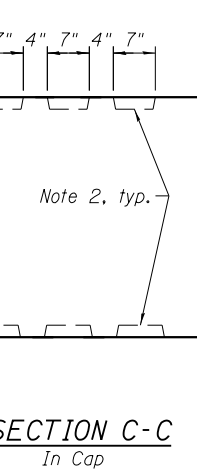
FORM LINER PANEL 5



FORM LINER PANEL 4.5



FORM LINER PANEL 3.5



4:34:04 PM 0161716-60W26-S072-Pier.dgn



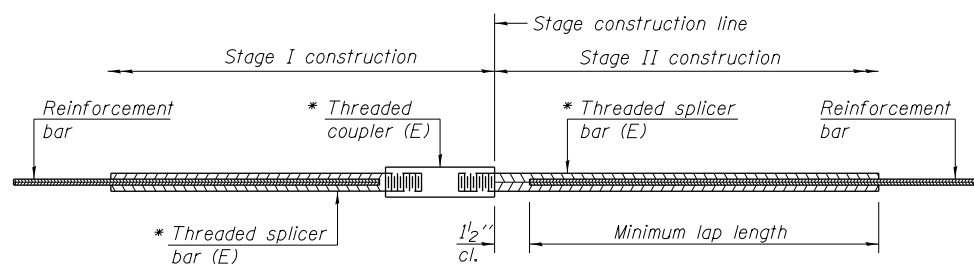
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CHECKED - JRM	REVISD	REVISD
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PLOT DATE = 9/15/2013	CHECKED - DL	REVISD

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PER 5 ARCHITECTURAL DETAILS
STRUCTURE NO. 016-1716

SHEET NO. S2-72 OF S2-81 SHEETS

F.A.U. RTE. 3730	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 432
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	



STANDARD BAR SPLICER ASSEMBLY

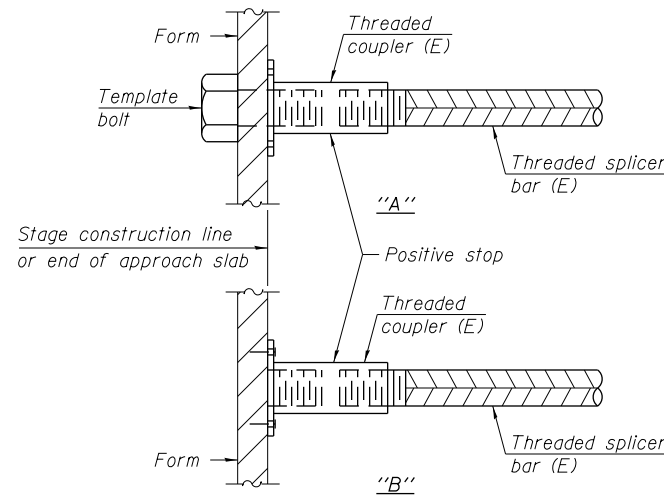
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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

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

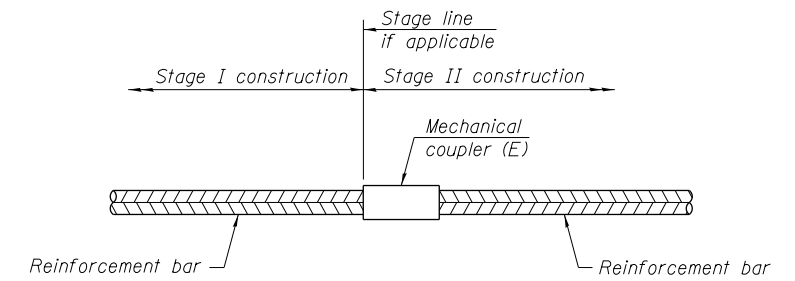
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	1212	Table 5
South Approach	#4	25	Table 5
South Approach	#5	86	Table 5
North Approach	#4	25	Table 5
North Approach	#5	86	Table 5
South Abutment	#5	80	Table 5
South Abutment	#6	11	Table 5
North Abutment	#5	76	Table 5
North Abutment	#6	11	Table 5
Pier 1	#5	24	Table 5
Pier 1	#7	19	Table 5
Pier 1	#9	12	Table 5
Pier 2	#5	28	Table 5
Pier 2	#6	18	Table 5
Pier 2	#9	12	Table 5
Pier 3	#5	46	Table 5
Pier 3	#6	13	Table 5
Pier 3	#7	5	Table 5
Pier 3	#9	14	Table 5
Pier 4	#5	46	Table 5
Pier 4	#6	13	Table 5
Pier 4	#7	5	Table 5
Pier 4	#9	14	Table 5
Pier 5	#5	28	Table 5
Pier 5	#7	20	Table 5
Pier 5	#10	14	Table 5



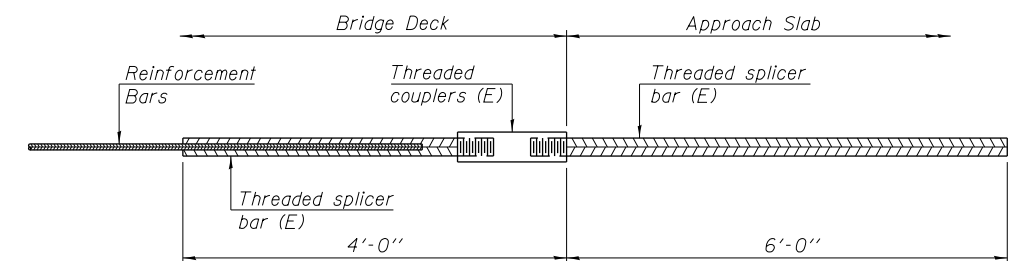
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



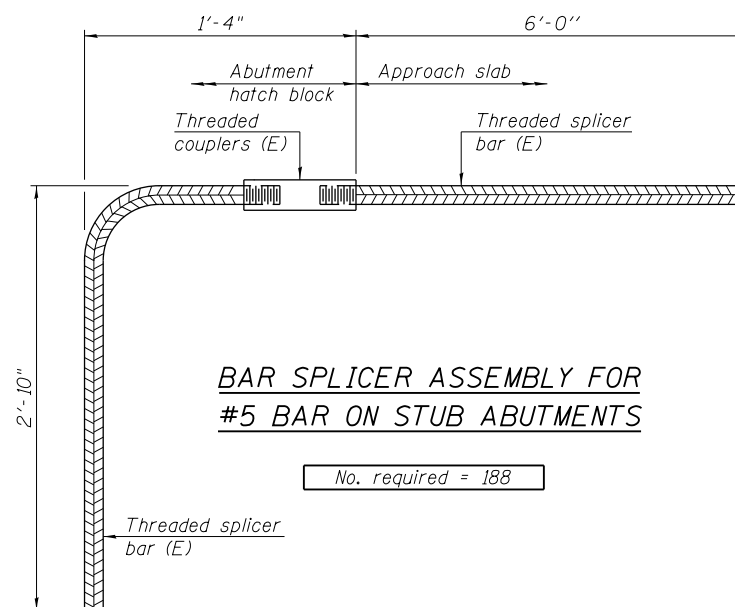
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 188

NOTES

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

4:34:06 PM 0161716-60W26-S073-Bar Splice.dgn

BSD-1

1-27-12



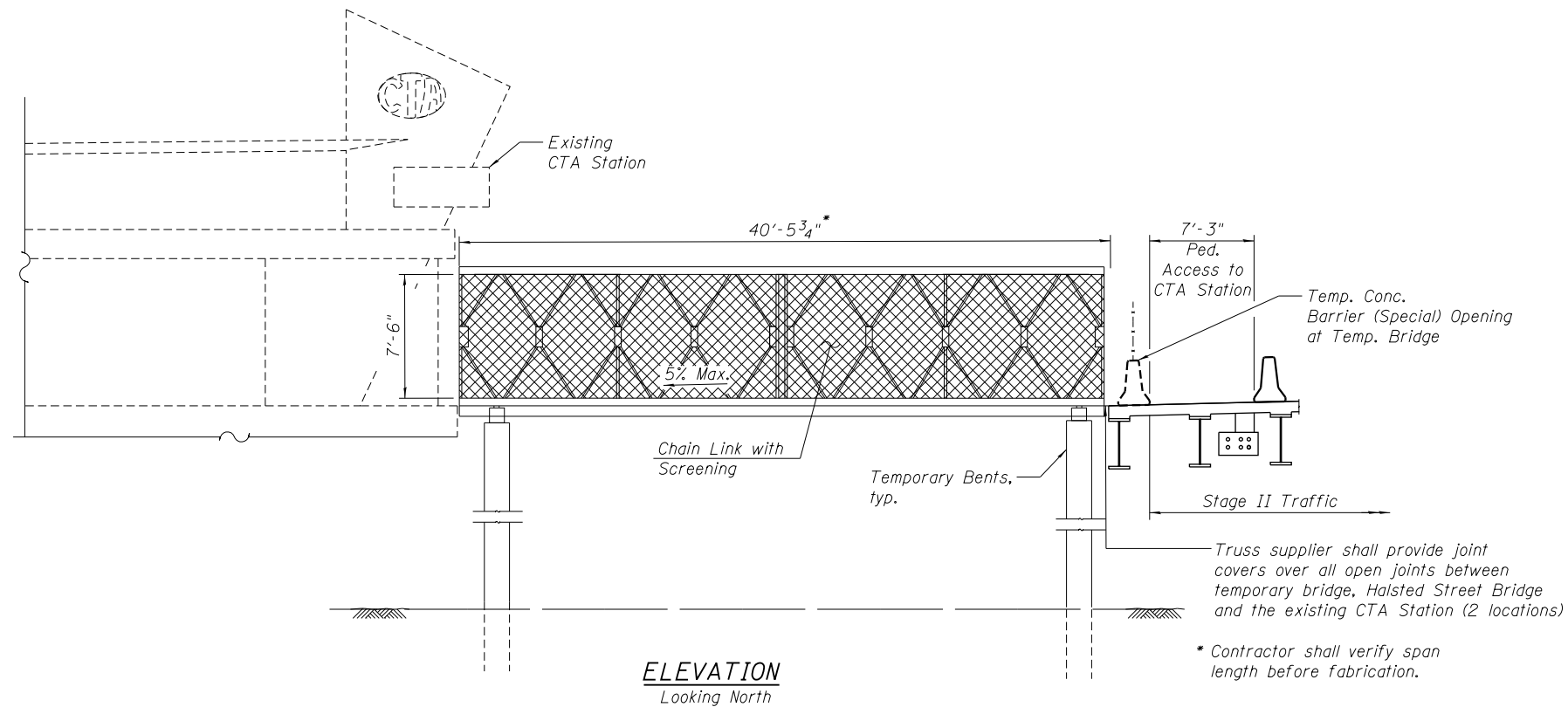
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PLOT SCALE = 0:1' = 1/4" / 1 in.	CHECKED - KAH	REVIS
PLOT DATE = 9/15/2013	DRAWN - RLS	REVIS
	CHECKED - WJC/JRM	REVIS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

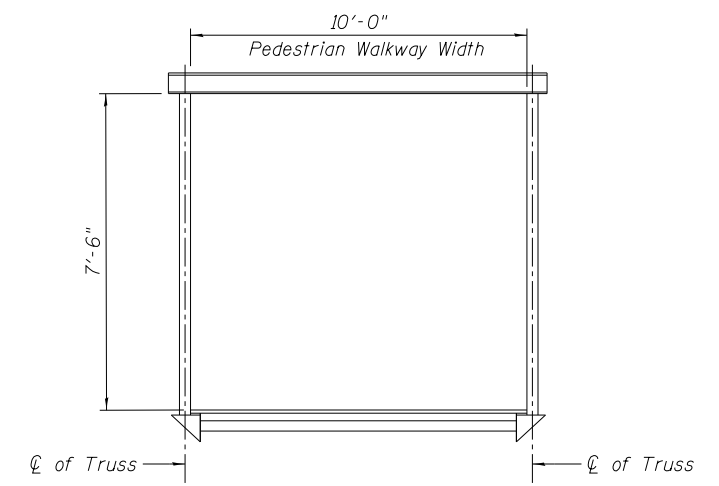
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 016-1716

SHEET NO. S2-73 OF S2-81 SHEETS

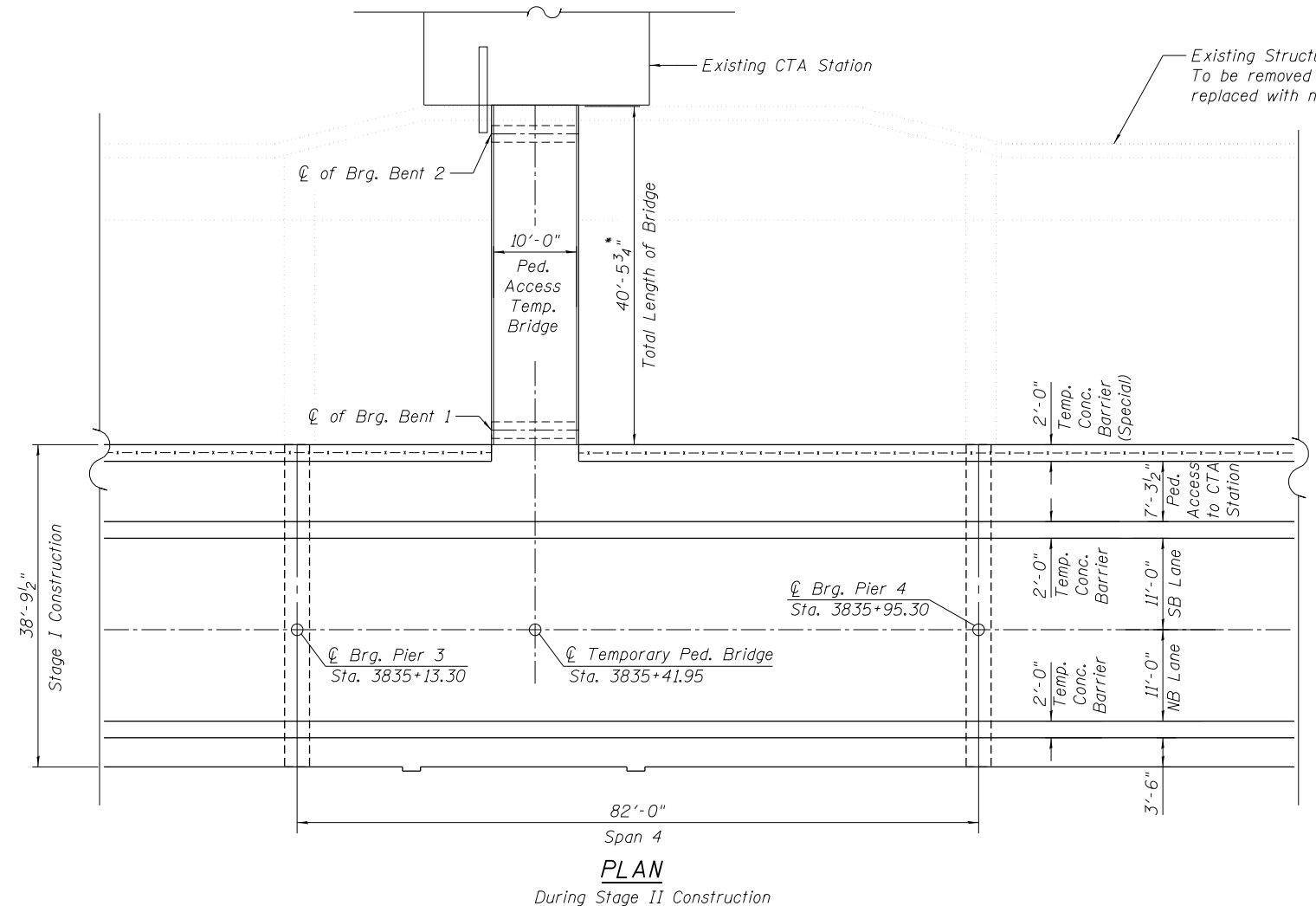
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CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



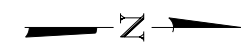
ELEVATION
Looking North



CROSS SECTION



PLAN
During Stage II Construction



CONSTRUCTION SEQUENCE

1. Remove existing superstructure.
2. Erect temporary bents.
3. Place prefabricated superstructure.
4. Remove and re-erect as necessary to permit construction of the Stage II bridge. See Special Provisions.
5. Remove temporary bridge.

BILL OF MATERIAL

Item	Unit	Quantity
Temporary Bridge	L. Sum	1

5/16/13 3:36 PM 0161716-60W26-S069-Deck_TempPedBr.dgn



USER NAME = jlvuorenmaa	DESIGNED - KAH	REVISED
PLOT SCALE = 10:0 ' / in.	CHECKED - WJC	REVISED
PLOT DATE = 8/18/2013	DRAWN - MTS	REVISED
	CHECKED - DL	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY PEDESTRIAN BRIDGE PLAN AND ELEVATION
STRUCTURE NO. 016-1716

SHEET NO. S2-74 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	434
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



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BORING LOG 2081-B-01

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Circle Interchange Reconstruction**
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 594.27 ft
North: 1898215.40 ft
East: 1171096.56 ft
Station: 3837+74.38
Offset: 18.23 LT

Page 1 of 2

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
593.7	6.5-inch thick ASPHALT --PAVEMENT--												
592.9	10.5-inch thick CONCRETE --PAVEMENT--												
	Loose to medium dense, gray, GRAVELLY SAND --FILL--	1	7 8 6	NP	6				11	0 2 2	0.33 B	27	
		2	7 7 7	NP	7				12	0 0 1	0.33 B	27	
		3	4 4 4	NP	4				13	0 0 1	0.33 B	27	
		4	10 11 9	NP	6				14	0 0 3	0.16 B	27	
		5	5 4 3	NP	16				15	0 2 3	0.57 B	26	
		6	5 3 3	NP	15				16	0 0 3	0.41 B	28	
578.8	Medium stiff to stiff, black and gray SILTY CLAY, trace gravel	7	4 2 2	0.50 P	23				17	0 3 3	7.79 B	14	
573.8	Loose, gray, medium SAND	8	8 4 2	1.50 P	18				18	5 10 13	3.53 B	17	
571.3	Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel	9	2 2 2	NP	22				19	4 10 14	2.95 B	16	
		10	2 2 2	NP	22				20	5 10 13	3.53 B	17	
		11	2 2 2	NP	22				21	18 22 50/4	7.79 B	14	

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-02-2013	Complete Drilling	04-02-2013	While Drilling	11.00 ft		
Drilling Contractor	Wang Testing Services	Drill Rig	B-57 TMR	At Completion of Drilling	NA		
Driller	R&T	Logger	D. Wind	Time After Drilling	NA		
Checked by	C. Marin	Drilling Method	3.25" HSA to 11', Mud Rotary 11' thereafter, boring backfilled upon completion	Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							



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BORING LOG 2081-B-01

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Circle Interchange Reconstruction**
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 594.27 ft
North: 1898215.40 ft
East: 1171096.56 ft
Station: 3837+74.38
Offset: 18.23 LT

Page 2 of 2

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
		17	0 3 3	0.98 B	22				22	12 14 21	10.25 B	14	
537.5	Very stiff to hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel	18	5 6 10	3.28 B	16				23	10 17 17	3.28 S	18	
		19	4 10 14	2.95 B	16				24	45 50/5	NP	21	
507.5	Very dense, gray GRAVELLY SAND	20	5 10 13	3.53 B	17				25	50/4	4.50 P	16	
502.5	Very stiff to hard, gray SILTY LOAM, trace gravel	21	18 22 50/4	7.79 B	14				26	40 37 50/5	3.69 S	22	
		22	12 14 21	10.25 B	14				27	40 37 50/5	3.69 S	22	

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-02-2013	Complete Drilling	04-02-2013	While Drilling	11.00 ft		
Drilling Contractor	Wang Testing Services	Drill Rig	B-57 TMR	At Completion of Drilling	NA		
Driller	R&T	Logger	D. Wind	Time After Drilling	NA		
Checked by	C. Marin	Drilling Method	3.25" HSA to 11', Mud Rotary 11' thereafter, boring backfilled upon completion	Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

5:16:38 PM 01/17/16-60W26-S070-Boring-1.dgn



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PLOT DATE = 8/18/2013	DRAWN - RLS	REVISED
	CHECKED - DL	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 1
STRUCTURE NO. 016-1716

SHEET NO. S2-75 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	435
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



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BORING LOG 2081-B-02

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Circle Interchange Reconstruction**
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 576.15 ft
North: 1898095.00 ft
East: 1171065.77 ft
Station: 3836+54.98
Offset: 52.71 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
574.6	18-inch thick CONCRETE --PAVEMENT--												
574.5	11-inch thick CRUSHED STONE --BASE COURSE--	1	1	2 3 4	2.46 B	16	548.1	Medium stiff to stiff, gray SILTY CLAY, trace gravel	11	1 1 2	0.41 B	26	
572.8	Very stiff, brown and gray SILTY CLAY, trace gravel --FILL--	2	2	2 3 4	0.98 B	19			12	1 2 2	0.91 B	25	
	Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel	3	3	2 4 5	0.66 B	20			13	2 3 5	1.72 B	21	
		4	4	2 2 2	0.57 B	23			14	4 9 12	3.61 B	17	
		5	5	1 1 1	0.49 B	24			15	11 6 7	2.87 B	15	
		6	6	1 1 2	0.41 B	25	536.8	Very stiff, gray SILTY LOAM, trace gravel	16	6 11 17	5.17 B	21	
		7	7	0 1 1	0.25 B	25	534.4	Very stiff to hard, gray SILTY CALY, trace gravel					
		8	8	0 2 2	0.25 B	25							
		9	9	1 1 1	0.25 B	27							
		10	10	0 1 2	0.41 B	26							

WANGENGINC 11000401.GPJ, WANGENG.GDT, 4/5/13

GENERAL NOTES

Begin Drilling: **04-01-2013** Complete Drilling: **04-01-2013**
 Drilling Contractor: **Wang Testing Services** Drill Rig: **CME-55 TMR**
 Driller: **P&N** Logger: **D. Wind** Checked by: **C. Marin**
 Drilling Method: **3.25" HSA to 10', Mud Rotary 10' thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **NA**
 At Completion of Drilling: **NA**
 Time After Drilling: **NA**
 Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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BORING LOG 2081-B-02

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Circle Interchange Reconstruction**
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 576.15 ft
North: 1898095.00 ft
East: 1171065.77 ft
Station: 3836+54.98
Offset: 52.71 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
499.4	Very dense, gray SILT --WET--												
		17	17	5 8 14	2.46 B	16			22	27 48 48	1.97 B	20	
		18	18	19 23 32	1.80 B	12			23	50/5	NP	12	
519.4	Dense to very dense, gray SILTY LOAM, trace to little gravel						494.4	Very dense, gray GRAVELLY SANDY LOAM					
		19	19	11 18 25	7.95 S	14	491.1	Boring terminated at 85.00 ft					
		20	20	12 14 50/5	7.65 B	9							
		21	21		4.50 P	17							

WANGENGINC 11000401.GPJ, WANGENG.GDT, 4/5/13

GENERAL NOTES

Begin Drilling: **04-01-2013** Complete Drilling: **04-01-2013**
 Drilling Contractor: **Wang Testing Services** Drill Rig: **CME-55 TMR**
 Driller: **P&N** Logger: **D. Wind** Checked by: **C. Marin**
 Drilling Method: **3.25" HSA to 10', Mud Rotary 10' thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **NA**
 At Completion of Drilling: **NA**
 Time After Drilling: **NA**
 Depth to Water: **NA**

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



USER NAME = jlvuorenmaa	DESIGNED - MTS	REVISED
PLOT SCALE = 0:1.0000 ' = 1" / in.	CHECKED - KAH	REVISED
PLOT DATE = 8/18/2013	DRAWN - RLS	REVISED
	CHECKED - KAH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 2
STRUCTURE NO. 016-1716

SHEET NO. S2-76 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	436
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



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BORING LOG 2081-B-03

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Circle Interchange Reconstruction**
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 581.38 ft
North: 1898040.36 ft
East: 1171151.03 ft
Station: 3835+97.75
Offset: 30.83 RT

Page 1 of 3

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
581.14	14-inch thick ASPHALT --PAVEMENT--												
580.1	11-inch thick CONCRETE --PAVEMENT--												
	Loose to medium dense, gray CRUSHED STONE --FILL--		1	2 3 5	2.50 P	14			11	0 0 0	0.25 B	24	
			2	7 16 12	NP	5			12	0 1 2	0.49 B	26	
575.9	Medium stiff to stiff, gray SILTY CLAY, trace gravel		3	5 8 8	1.97 B	19			13	0 1 2	0.41 B	29	
			4	2 2 3	1.15 B	19			14	1 4 4	1.23 B	23	
			5	2 3 3	0.82 B	23	544.6	Stiff to hard, gray SILTY CLAY, trace gravel					
568.4	Soft to medium stiff, gray CLAY		6	2 3 3	0.57 B	25			15	7 8 12	5.99 B	13	
			7	0 2 2	0.57 B	20			16	5 5 10	3.28 B	21	
			8	0 2 3	0.57 B	26							
			9	0 0 1	0.33 B	25							
			10	0 1 2	0.33 B	27							

WANGENGINC 11000401.GPJ, WANGENG.GDT, 4/5/13

GENERAL NOTES

Begin Drilling: 03-28-2013 Complete Drilling: 03-29-2013
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR
Driller: P& Logger: D. Wind Checked by: C. Marin
Drilling Method: 3.25" HSA to 8.5', Mud Rotary 8.5' thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: NA
At Completion of Drilling: NA
Time After Drilling: NA
Depth to Water: NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



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BORING LOG 2081-B-03

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Circle Interchange Reconstruction**
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 581.38 ft
North: 1898040.36 ft
East: 1171151.03 ft
Station: 3835+97.75
Offset: 30.83 RT

Page 2 of 3

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
							504.6	Very dense, gray GRAVELLY SANDY LOAM		22	50/6	NP	12
			17	4 9 13	4.51 B	18							
524.6	Medium dense, gray SILT						499.6	Very dense, gray SILT --MOIST--		23	39 49 50	NP	20
			18	4 7 9	NP	17							
519.6	Hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel						494.6	Very dense, gray GRAVELLY SANDY LOAM		24	50/6	NP	11
			19	18 24 32	7.95 S	12							
			20	16 32 50	9.84 S	12	489.4	Strong, very poor rock quality 92'-94', light gray, highly fractured, slightly vuggy DOLOSTONE					
			21	35 50/6	6.23 S	10							

WANGENGINC 11000401.GPJ, WANGENG.GDT, 4/5/13

GENERAL NOTES

Begin Drilling: 03-28-2013 Complete Drilling: 03-29-2013
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR
Driller: P& Logger: D. Wind Checked by: C. Marin
Drilling Method: 3.25" HSA to 8.5', Mud Rotary 8.5' thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: NA
At Completion of Drilling: NA
Time After Drilling: NA
Depth to Water: NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

5/17/16 PM 0161716-60W26-S072-Boring_3.dgn



USER NAME = jlvuorenmaa	DESIGNED - MTS	REVISED
PLOT SCALE = 0:1.0000 ' = 1/8" in.	CHECKED - KAH	REVISED
PLOT DATE = 8/18/2013	DRAWN - RLS	REVISED
	CHECKED - KAH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 3
STRUCTURE NO. 016-1716

SHEET NO. S2-77 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	437
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



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 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

BORING LOG 2081-B-03

Page 3 of 3

WEI Job No.: 1100-04-01

Client: **AECOM**
 Project: **Circle Interchange Reconstruction**
 Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
 Elevation: 581.38 ft
 North: 1898040.36 ft
 East: 1171151.03 ft
 Station: 3835+97.75
 Offset: 30.83 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)
479.4	Strength of rock material = 12 Drill core quality RQD = 13 Spacing of joints = 10 Condition of joints = 12 Groundwater condition = 10 Boring terminated at 102.00 ft														
105															
110															
115															
120															
125															

WANGENGINC 11000401.GPJ, WANGENG.GDT, 4/5/13

GENERAL NOTES

Begin Drilling: **03-28-2013** Complete Drilling: **03-29-2013**
 Drilling Contractor: **Wang Testing Services** Drill Rig: **B-57 TMR**
 Driller: **P&** Logger: **D. Wind** Checked by: **C. Marin**
 Drilling Method: **3.25" HSA to 8.5', Mud Rotary 8.5' thereafter, boring backfilled upon completion**

WATER LEVEL DATA

While Drilling: **NA**
 At Completion of Drilling: **NA**
 Time After Drilling: **NA**
 Depth to Water: **NA**
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

5/17/13 3:33 PM 0161716-60W26-S073-Boring-4.dgn



USER NAME = jlvuorenmaa	DESIGNED - MTS	REVISED
	CHECKED - KAH	REVISED
PLOT SCALE = 0:1.0000 ' = 1" / in.	DRAWN - RLS	REVISED
PLOT DATE = 8/18/2013	CHECKED - KAH	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BORING LOGS 4
STRUCTURE NO. 016-1716**

SHEET NO. S2-78 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	438
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



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BORING LOG 2081-B-04

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Circle Interchange Reconstruction**
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 578.68 ft
North: 1897947.00 ft
East: 1171154.08 ft
Station: 3835+04.34
Offset: 31.00 RT

Page 1 of 2

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
577.5	14-inch thick ASPHALT --PAVEMENT--												
577.2	4-inch thick CRUSHED STONE --BASE COURSE--												
574.9	Very stiff, brown and gray SILTY CLAY LOAM, trace gravel --FILL--	1	1	4 5 6	3.85 B	18			11	0 0 2	0.33 B	26	
	Medium dense CRUSHED STONE --FILL--	5	2	11 16 14	NP	4			12	0 1 2	0.33 B	24	
			3	10 12 9	NP	5							
570.7	Loose, light brown GRAVELLY SAND --FILL--	10	4	6 5 4	NP	6			13	1 1 3	0.57 B	27	
			5	10 5 4	NP								
			6	8 4 4	NP	9			14	2 4 4	0.98 B	19	
563.2	Very soft to medium stiff, gray CLAY, trace gravel		7	0 1 2	0.25 B	26	536.9	Stiff to hard, gray SILTY CLAY LOAM, trace gravel					
			8	0 0 1	0.16 B	24			15	7 8 11	1.97 B	16	
			9	1 2 1	0.16 B	24							
			10	0 0 2	0.25 B	27			16	9 13 13	5.58 B	13	

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-01-2013	Complete Drilling	04-01-2013	While Drilling	DRY		
Drilling Contractor	Wang	Drill Rig	D-50 TMR	At Completion of Drilling	NA		
Driller	R&N	Logger	D. Kolpacki	Time After Drilling	NA		
Checked by	C. Marin	Drilling Method	2.25" SSA to 10', Mud Rotary 10' thereafter	Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							



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BORING LOG 2081-B-04

WEI Job No.: 1100-04-01

Client: **AECOM**
Project: **Circle Interchange Reconstruction**
Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Datum: NAVD 88
Elevation: 578.68 ft
North: 1897947.00 ft
East: 1171154.08 ft
Station: 3835+04.34
Offset: 31.00 RT

Page 2 of 2

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
			17	8 9 11	2.05 S	14			80	22	14 20 31	10.25 B	23
521.9	Medium stiff, gray SILTY LOAM, trace silt and sand seams												
			18	4 4 5	0.98 B	29			60	18	4 4 5	0.98 B	29
							493.7	Boring terminated at 85.00 ft					
516.9	Hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel												
			19	15 30 32	10.00 S	12			65	19	15 30 32	10.00 S	12
			20	14 23 31	10.25 B	15			70	20	14 23 31	10.25 B	15
			21	11 19 40	6.97 B	22			75	21	11 19 40	6.97 B	22

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-01-2013	Complete Drilling	04-01-2013	While Drilling	DRY		
Drilling Contractor	Wang	Drill Rig	D-50 TMR	At Completion of Drilling	NA		
Driller	R&N	Logger	D. Kolpacki	Time After Drilling	NA		
Checked by	C. Marin	Drilling Method	2.25" SSA to 10', Mud Rotary 10' thereafter	Depth to Water	NA		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

5/17/14 11:41 PM 0161716-60W26-S074-Boring_5.dgn



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CHECKED - WTC	REVISED	
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PLOT DATE = 8/18/2013	CHECKED - KAH	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 5
STRUCTURE NO. 016-1716

SHEET NO. S2-79 OF S2-81 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	439
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				

Wang Engineering
 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

BORING LOG 2081-B-05
 WEI Job No.: 1100-04-01
 Datum: NAVD 88
 Elevation: 576.47 ft
 North: 1897894.07 ft
 East: 1171080.41 ft
 Station: 3834+53.70
 Offset: 44.26 LT

Client: **AECOM**
 Project: **Circle Interchange Reconstruction**
 Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blow/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blow/6 in)	Qu (tsf)	Moisture Content (%)
576.06	6-inch thick, ASPHALT --PAVEMENT--												
575.5	10-inch thick, CONCRETE --PAVEMENT--												
573.2	5-inch thick, CRUSHED STONE --BASE COURSE--												
	Hard, brown SILTY CLAY LOAM, trace gravel --FILL--		1	9 5 5	4.00 P	19	548.5	Medium dense, gray SANDY LOAM, some gravel		11	0 2 3	0.49 B	26
	Medium stiff to very stiff, gray SILTY CLAY LOAM, trace gravel --L _c (%)=30, P _L (%)=15-- --%Gravel=5.9-- --%Sand=17.2-- --%Silt=51.1-- --%Clay=25.8-- --A-6 (9)--		2	3 4 4	2.30 B	18				12	4 5 5	NP	14
			3	2 2 4	0.90 B	20	544.7	Soft, gray SILTY CLAY LOAM, trace gravel and silt layers --L _c (%)=28, P _L (%)=14-- --%Gravel=4.9-- --%Sand=18.9-- --%Silt=54.4--35-- --%Clay=21.9-- --A-6 (8)--		13	3 3 4	0.25 B	20
			4	2 3 4	0.90 B	19				14	4 5 12	2.95 B	21
			5	3 3 5	1.89 B	18	539.7	Very stiff to hard, gray SILTY CLAY, trace gravel --L _c (%)=36, P _L (%)=16-- --%Gravel=2.7-- --%Sand=8.6--40-- --%Silt=49.7-- --%Clay=39.0-- --A-6 (17)--		15	5 8 11	3.94 B	14
	Soft to medium stiff, gray CLAY, trace gravel		6	2 3 3	0.74 B	20				16	6 8 14	4.54 B	19
			7	2 2 2	0.66 B	23							
			8	1 1 2	0.25 B	26							
			9	0 1 1	0.25 B	26							
			10	0 0 2	0.25 B	25							

GENERAL NOTES			WATER LEVEL DATA		
Begin Drilling	03-26-2013	Complete Drilling	03-26-2013	While Drilling	DRY
Drilling Contractor	Wang Testing Services	Drill Rig	D-50 TMR	At Completion of Drilling	DRY
Driller	R&T	Logger	D. Kolpacki	Time After Drilling	NA
Checked by	C. Marin	Depth to Water	NA	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	
Drilling Method	2.25" SSA to 10', Mud Rotary 10' thereafter, boring		backfilled upon completion		

WANGENGINC 11000401.GPJ, WANGENG.GDT, 4/5/13

Wang Engineering
 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

BORING LOG 2081-B-05
 WEI Job No.: 1100-04-01
 Datum: NAVD 88
 Elevation: 576.47 ft
 North: 1897894.07 ft
 East: 1171080.41 ft
 Station: 3834+53.70
 Offset: 44.26 LT

Client: **AECOM**
 Project: **Circle Interchange Reconstruction**
 Location: **Sections 16 and 17, T39N, R14E of 3rd PM**

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blow/6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blow/6 in)	Qu (tsf)	Moisture Content (%)
							499.7	Very dense, gray SILTY LOAM, trace gravel		22	38 50/4*	NP	20
	Very stiff, gray CLAY, some SILT layers		17	3 4 5	2.05 B	28				23	50/5*	NP	13
			18	6 9 18	3.44 B	17							
	Very stiff to hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel		19	11 18 30	9.85 B	15							
			20	19 24 24	3.44 S	20							
			21	14 25 37	9.84 S	21							
							490.5	Strong, good rock quality, light gray, fresh, slightly fractured, vertical and horizontal breaks, joint breaks with little to no infill, slightly vuggy DOLOSTONE Run 1 = 86' to 91' --RECOVERY=100% --RQD=77% ⁹⁰					
								Run 2 = 91' to 96' --RECOVERY=100% --RQD=84%					
								ROCK MASS RATING: Strength of rock material = 12 Drill core quality RQD = 17 Spacing of joints = 10 Condition of joints = 20 Groundwater condition = 10 Boring terminated at 96.00 ft					

GENERAL NOTES			WATER LEVEL DATA		
Begin Drilling	03-26-2013	Complete Drilling	03-26-2013	While Drilling	DRY
Drilling Contractor	Wang Testing Services	Drill Rig	D-50 TMR	At Completion of Drilling	DRY
Driller	R&T	Logger	D. Kolpacki	Time After Drilling	NA
Checked by	C. Marin	Depth to Water	NA	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	
Drilling Method	2.25" SSA to 10', Mud Rotary 10' thereafter, boring		backfilled upon completion		

WANGENGINC 11000401.GPJ, WANGENG.GDT, 4/5/13

5:18:00 PM 0161716-60W26-5075-Boring_6.dgn



USER NAME = jlvuorenna	DESIGNED - MTS	REVISED
PLOT SCALE = 0:1.0000 ' = 1" / in.	CHECKED - KAH	REVISED
PLOT DATE = 8/18/2013	DRAWN - RLS	REVISED
	CHECKED - KAH	REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BORING LOGS 6
 STRUCTURE NO. 016-1716

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	440
				CONTRACT NO. 60W26
ILLINOIS FED. AID PROJECT				

SHEET NO. S2-80 OF S2-81 SHEETS

DESIGN CRITERIA

Building Codes and Specifications:

- A. Chicago Building Code (CBC), 2012 Edition
 - 1. Type of Construction: Type II - Non-Combustible per Section 6 (13-60-030)
- B. American Institute of Steel Construction (AISC), LRFD, 13th Edition
- C. American Concrete Institute (ACI), Building Code Requirements for Structural Concrete, ACI 318-08

Design Loads Criteria:

- A. Dead Loads
 - 1. UV Resistant Polycarbonate Glazing Panels 2.5 PSF
 - 2. 12" Polycarbonate Traffic Signal 24 LB
- B. Snow Loads
 - 1. Roof Snow Load (Pf) 25 PSF
- C. Wind Loads
 - 1. MWFRS Wind Pressure 20 PSF

Materials:

All structural steel materials shall be as follows unless noted otherwise:

- A. Steel:
 - 1. Structural Steel Wide Flange ASTM A992
 - 2. Structural Plates ASTM A572, Grade 50
 - 3. Hollow Structural Sections ASTM A500, Grade B
 - 4. High Strength Bolts ASTM A325-N or SC
 - 5. Anchor Rods ASTM F1554, Grade 55
 - 6. Welding Electrode AWS A5.1 or A5.5 E70XX

GENERAL NOTES

1. Field verify all existing dimensions and elevations for conformance with the drawings. All discrepancies shall be immediately brought to the attention of the Engineer.
2. Shop drawings prepared by suppliers, subcontractors, etc. shall be reviewed and coordinated by the Contractor prior to submitting to the Engineer.
3. Shop drawings prepared by the subcontractors, suppliers, etc. shall be reviewed by the Engineer for conformance with design concept only.
4. Unless otherwise noted, all details, sections and notes on the drawings are intended to be typical for similar situations elsewhere.
5. The Contractor is to refer to the architectural drawings for dimensions and details not provided.
6. Comply with all applicable city, county, state and federal laws, including the Occupational Safety and Health Act (OSHA) and regulations adopted pursuant thereto.
7. The contract structural drawings and specifications represent the finished structure. Unless otherwise indicated, they do not indicate the means or method of construction. Provide all measures necessary for construction including, but not limited to, bracing, shoring for construction equipment, shoring for the building, forms, scaffolding, planking, safety nets, support and bracing for cranes and gin poles, etc.
8. Supervise and direct the work so as to maintain sole responsibility for all construction means, methods, techniques, sequences and procedures. As a part of this responsibility, retain the services of a licensed Structural Engineer to design and supervise any scaffolding for working personnel, and all shoring of forms and elements of construction.

STRUCTURAL STEEL

1. Structural steel details, fabrication, and erection shall conform to the latest edition of the AISC Manual of Steel Construction unless otherwise shown or specified.
2. Estimated weight of Structural Steel = 67,910 pounds (ASTM A992)
Estimated weight of Structural Steel = 32,950 pounds (ASTM A572, Grade 50)
Estimated weight of Structural Steel = 43,930 pounds (ASTM A500, Grade B)
3. Field connections shall be bolted or welded. High strength bolts shall be installed in accordance with AISC Specifications. Bolts shall be ASTM A325, 3/4" diameter unless noted otherwise. Use Type N for framed connections and Type SC (Slip Critical) at wind moment connections. All welding to be done by certified welders. All welds to be E70XX electrodes.
4. Shop connections may be welded unless otherwise indicated. Welds shall be designed to be fully equivalent in strength to bolted connections.
5. Unless otherwise noted, all welds shall be continuous 1/4" fillet welds.
6. Provide welded moment connections where shown and as detailed on the drawings using full penetration welds, unless noted otherwise.
7. All full penetration welds shall be provided with backup bars unless noted otherwise.
8. Fabricator shall select AISC simple shear connections for steel beams capable of carrying either the reaction force when indicated or 50% of the total uniform load for the given size, span, and grade of the beam, as tabulated in the AISC tables for allowable loads.
9. Other connections shall be standard double angle shear connections, unless noted otherwise.
 - A. The minimum number of bolts per vertical row shall be as follows, unless noted otherwise.

Beam Size	Min. No. of Bolts
W8, W10	2
W12, W14, W16	3
W18	4
W21	5
W24	6
W27	7
W30	8
W33	9
W36	10

10. Cuts, holes (openings), etc., required in structural steel members for the work of other trades shall be shown on the shop drawings. Burning of holes and cuts in structural steel members in the field shall not be allowed, except by written permission from the Engineer.
11. Erect and maintain temporary bracing to ensure the alignment and stability of the structure during erection until permanent connections have been completed.
12. Fabricate and install beams with natural camber up.
13. All exposed structural steel shall be hot-dip galvanized per ASTM A123.
14. All structural bolts, nuts, and washers shall be hot-dip galvanized per ASTM A153.
15. Repair of damaged and uncoated areas of galvanized steel shall conform to ASTM A780. Submit to the Illinois Department of Transportation for approval of all proposed repair work.

MASONRY

1. Grout under column base plates shall attain a minimum 28-day compressive strength of 6000 psi and shall conform to ASTM C1107 standards. Grout shall also contain inhibitors.

INDEX OF SHEETS

- 1 Pedestrian Canopy General Notes
- 2 Pedestrian Canopy Framing Plan
- 3 Pedestrian Canopy Elevation and Section
- 4 Pedestrian Canopy Details
- 5 Pedestrian Canopy Floor Plan
- 6 Pedestrian Canopy Roof Plan
- 7 Pedestrian Canopy Sections
- 8 Pedestrian Canopy Roof Details
- 9 Pedestrian Canopy Drainage Plan
- 10 Pedestrian Canopy Heat Trace Plan
- 11 Pedestrian Canopy Lighting Plan

TOTAL BILL OF MATERIAL

Item	Unit	Total Quantity
Structural Steel (CTA)	L. Sum	1
Translucent Canopy Roof (CTA)	Sq Ft	1,662
Flashing, Gutters And Sheet Metal (CTA)	L. Sum	1
Plumbing - Downspouts (CTA)	L. Sum	1
Electrical Work For Canopy Lighting And Heat Trace (CTA)	L. Sum	1
LED Light Source Fixture For Canopy Lighting (CTA)	Each	36

0161716-60W26-A001-CanopyGenNote.dgn



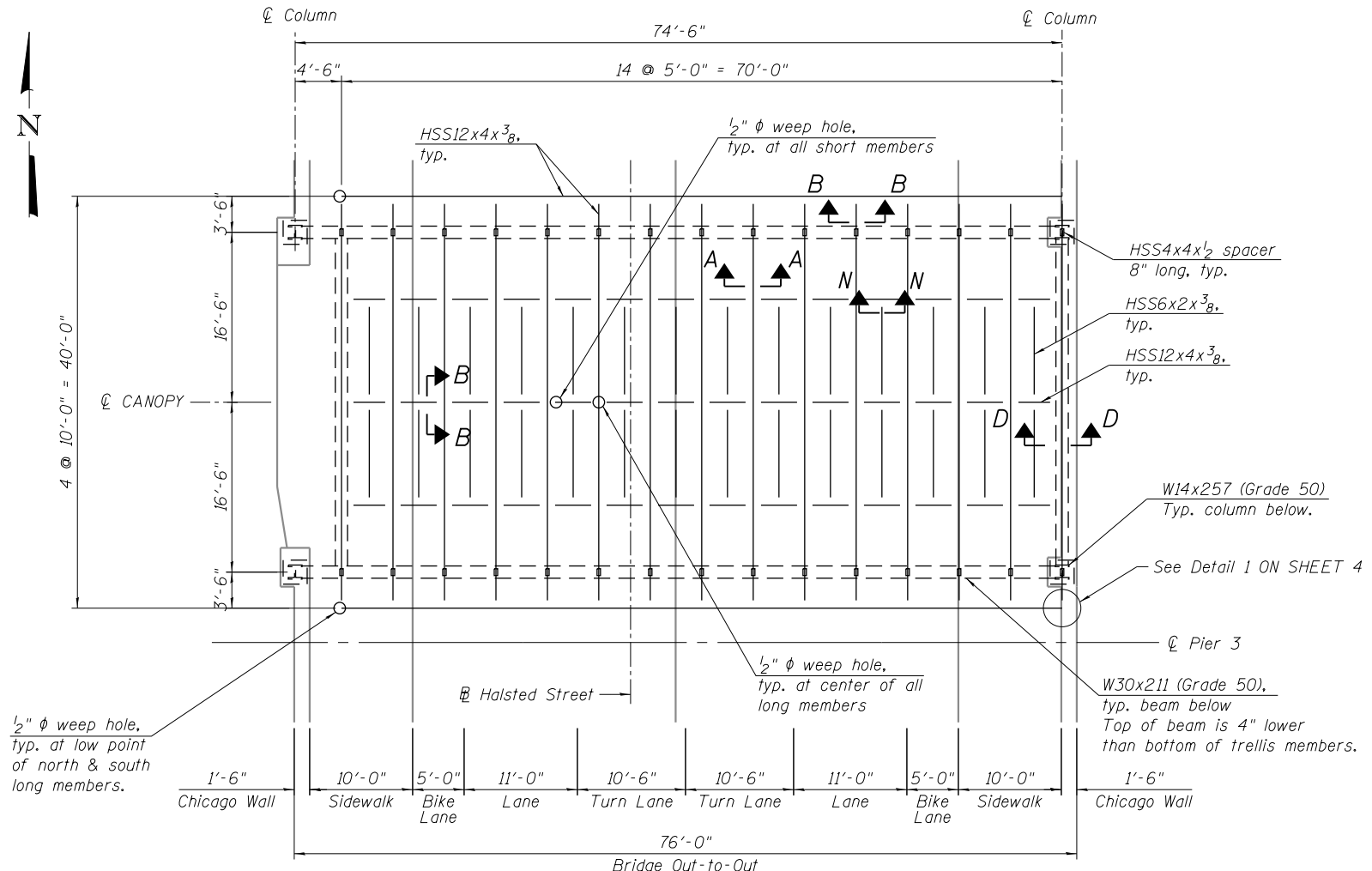
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

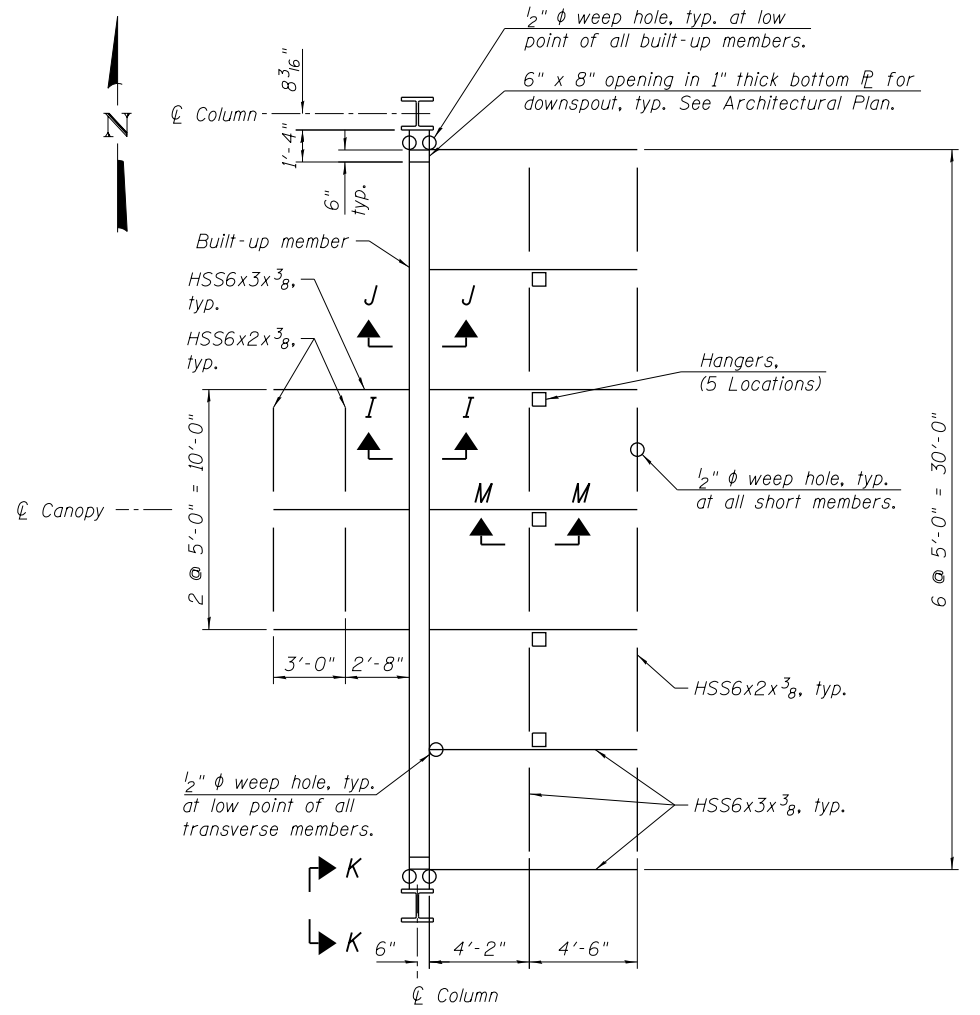
**PEDESTRIAN CANOPY GENERAL NOTES
STRUCTURE NO. 016-1716**

SHEET NO. 1 OF 11 SHEETS

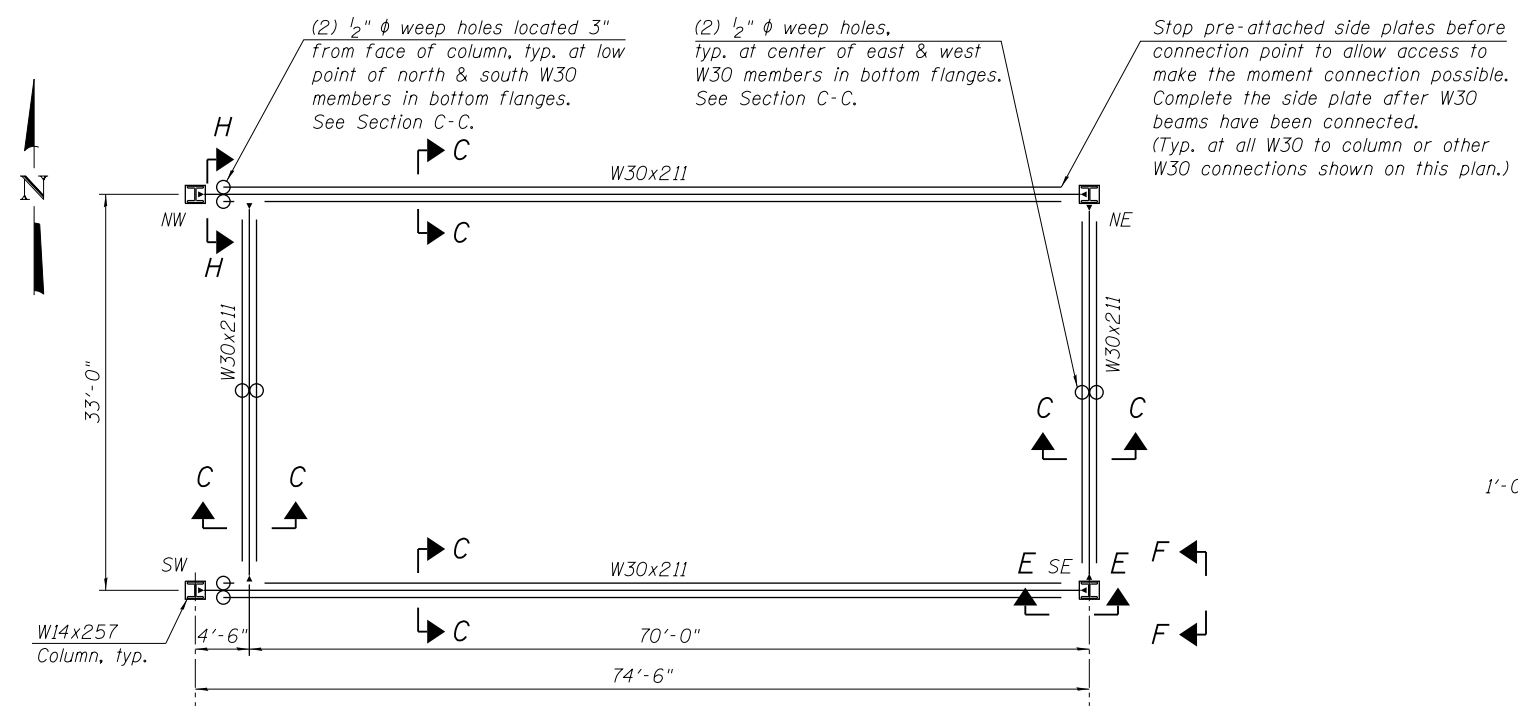
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3730	2013-008R	COOK	559	442
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



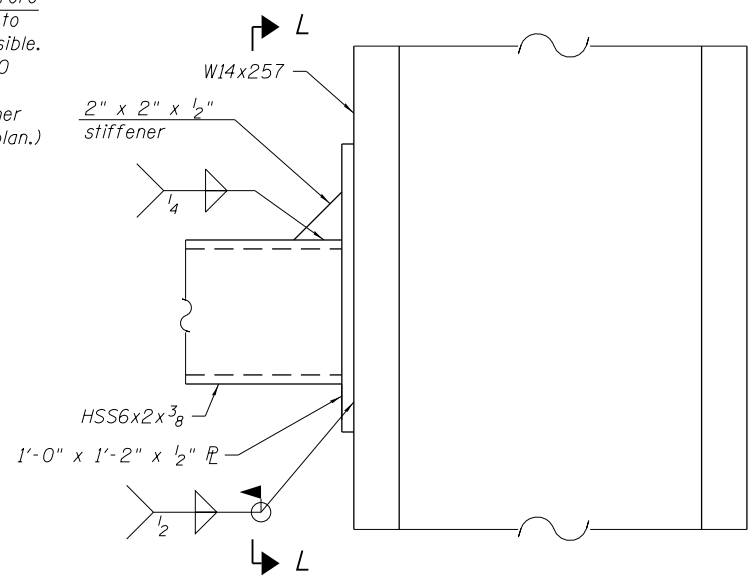
UPPER CANOPY TRELLIS FRAMING PLAN



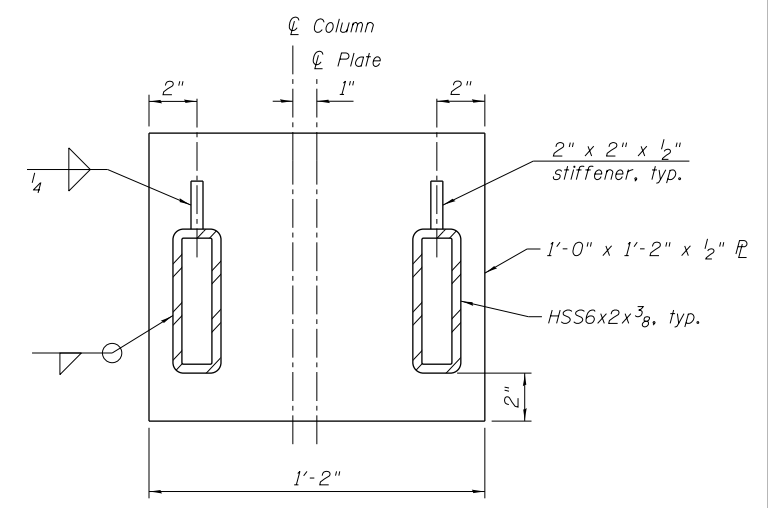
ENLARGED LOWER CANOPY FRAMING PLAN



UPPER CANOPY STEEL FRAMING PLAN



SECTION K-K



SECTION L-L

NOTES:
REFER TO SHEET 4 OF 11 FOR SECTION A-A THROUGH SECTION M-M.

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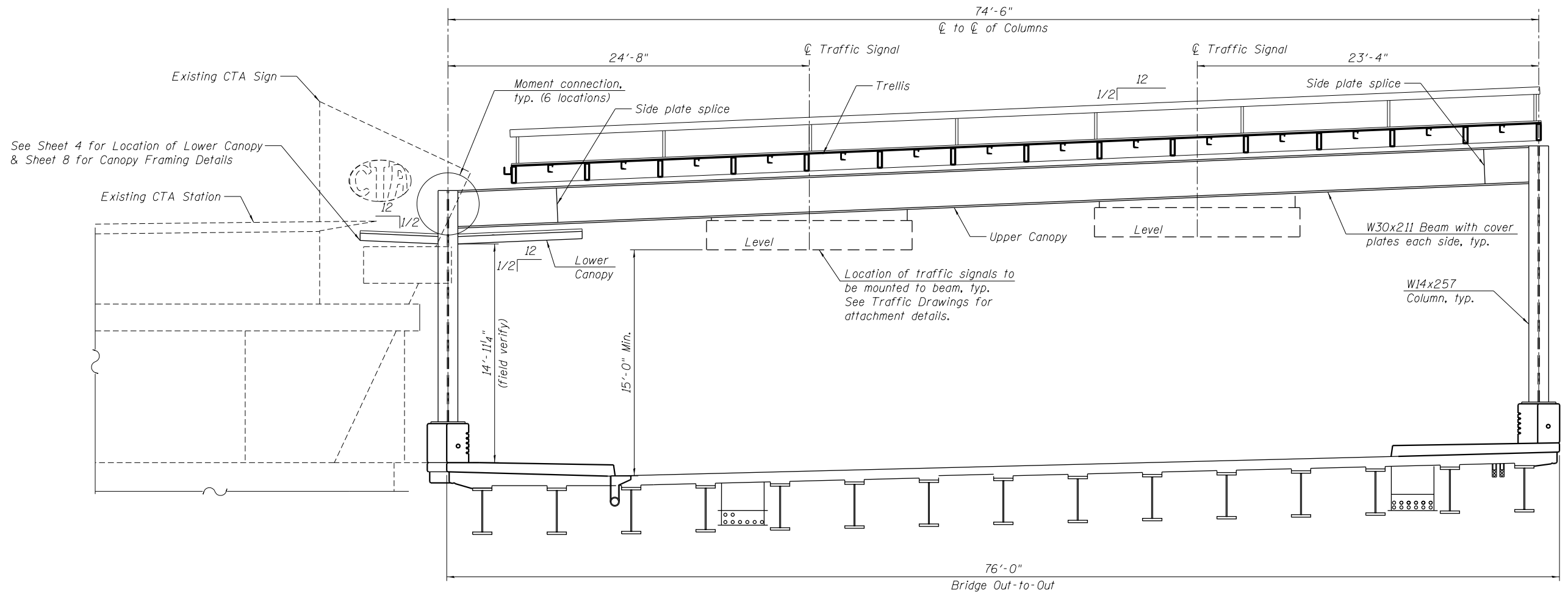
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

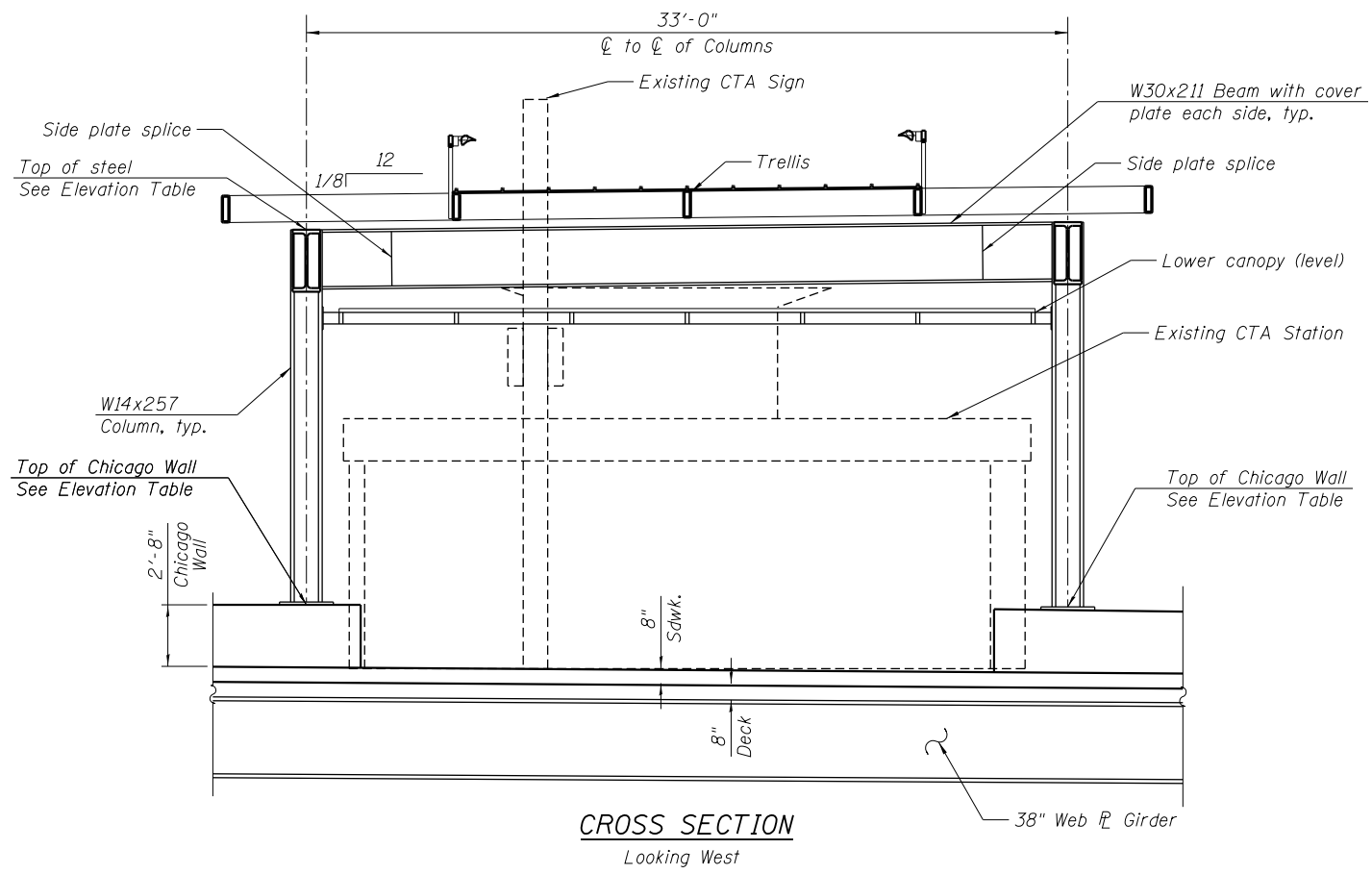
PEDESTRIAN CANOPY FRAMING PLAN
STRUCTURE NO. 016-1716

SHEET NO. 2 OF 11 SHEETS

F.A.U. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	443
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



CANOPY ELEVATION
Looking North



CROSS SECTION
Looking West

BILL OF MATERIAL

Item	Unit	Total
Structural Steel (CTA)	L. Sum	1

ELEVATION TABLE

LOCATION	TOP OF CHICAGO WALL	TOP OF STEEL
NE	604.17	623.75
SE	604.13	623.37
SW	602.78	618.91
NW	602.77	619.24

Notes:

10:30:47 AM 0161716-60W26-A003-CanopySuperStruct-01.dgn



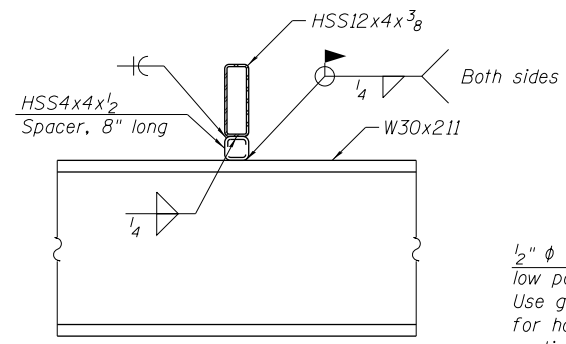
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

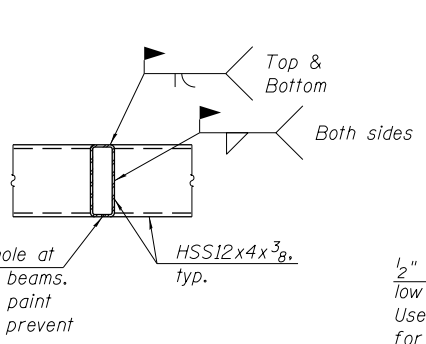
PEDESTRIAN CANOPY ELEVATION AND SECTION
STRUCTURE NO. 016-1716

SHEET NO. 3 OF 11 SHEETS

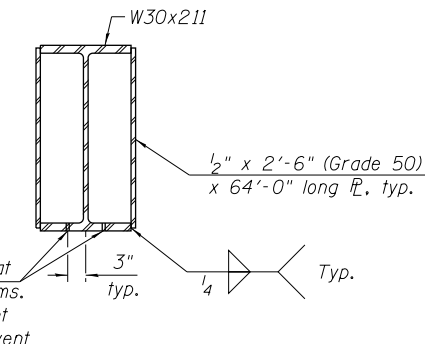
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CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



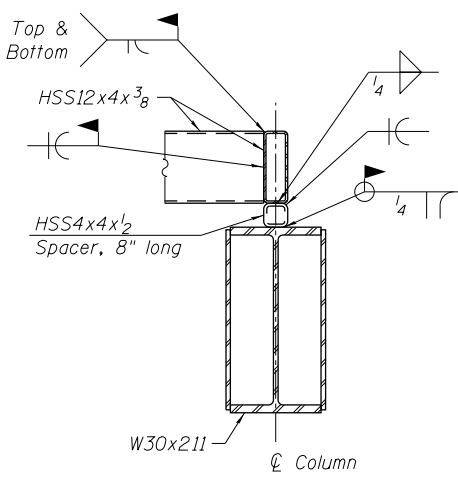
SECTION A-A



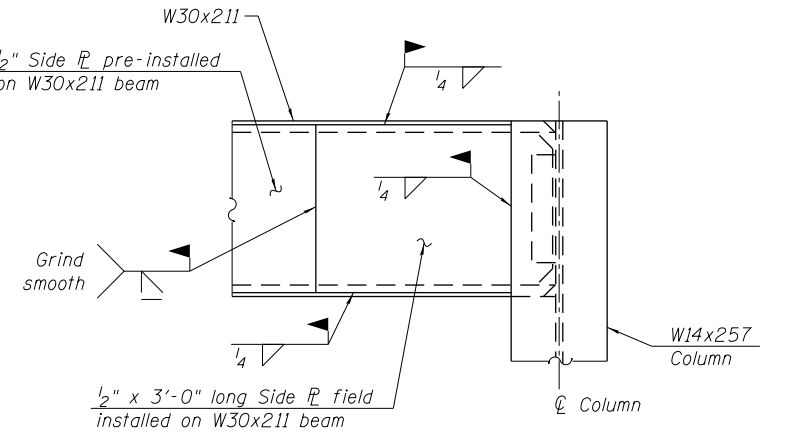
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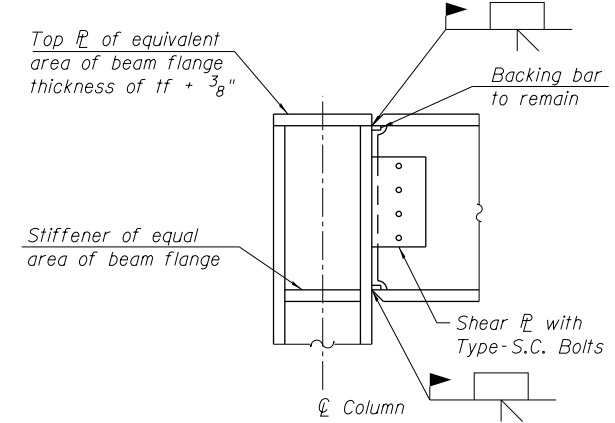
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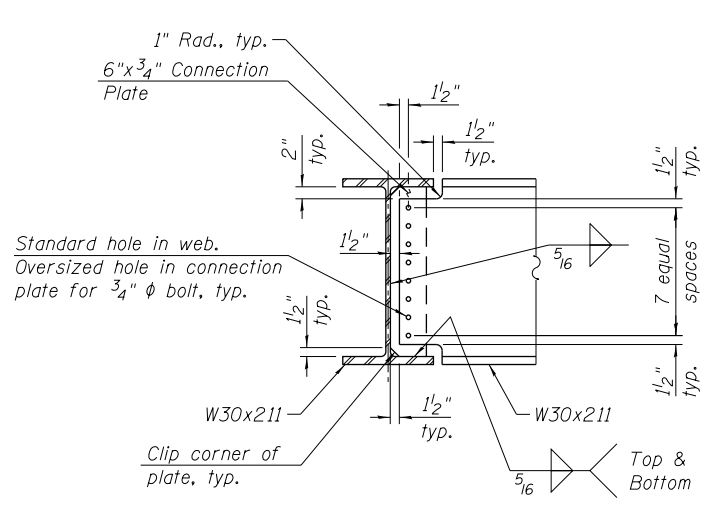
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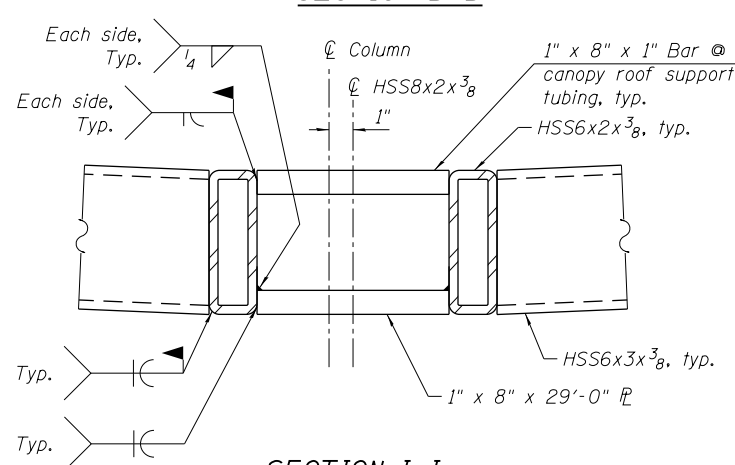
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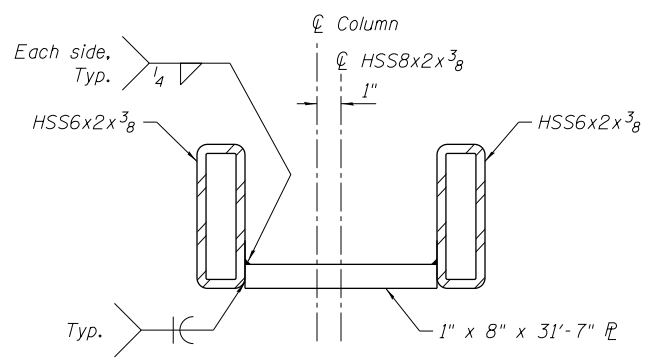
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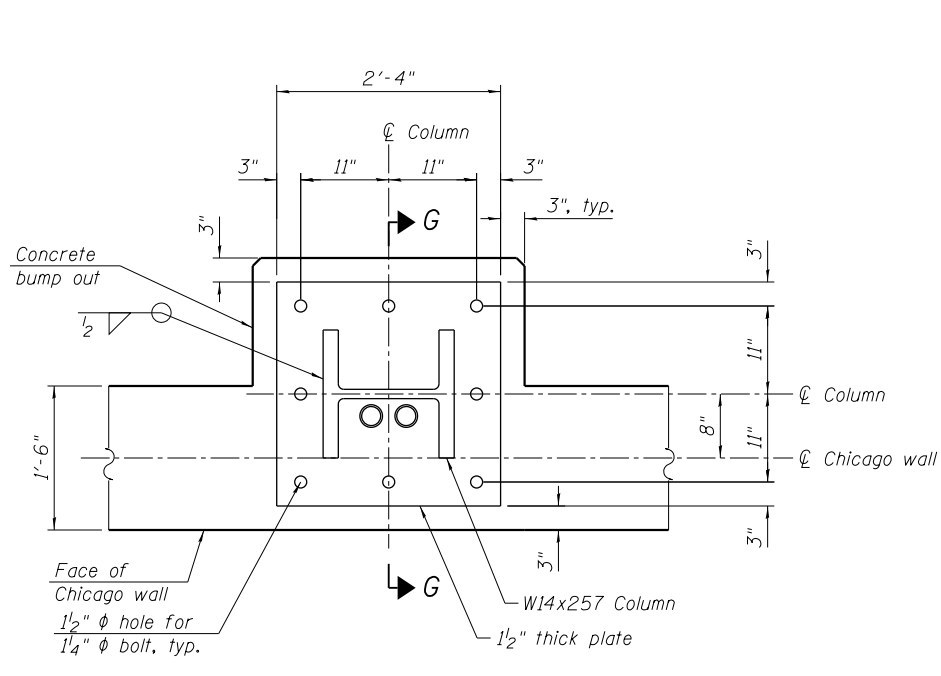
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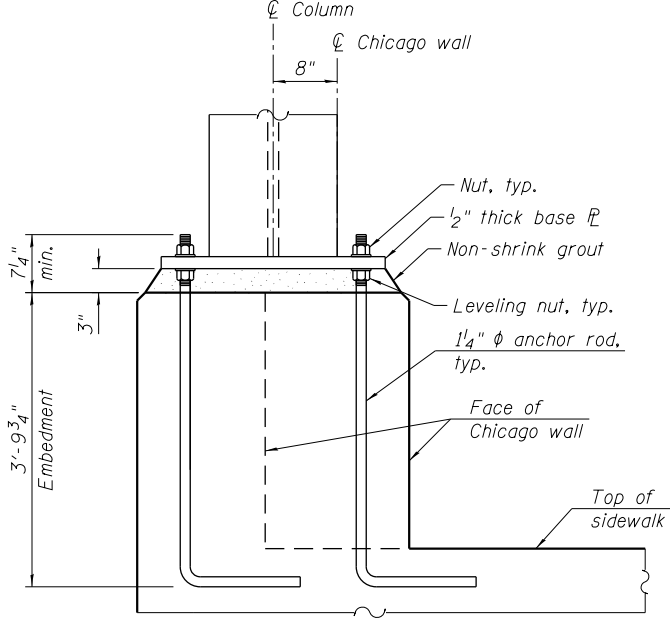
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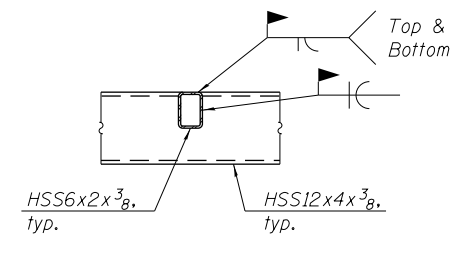
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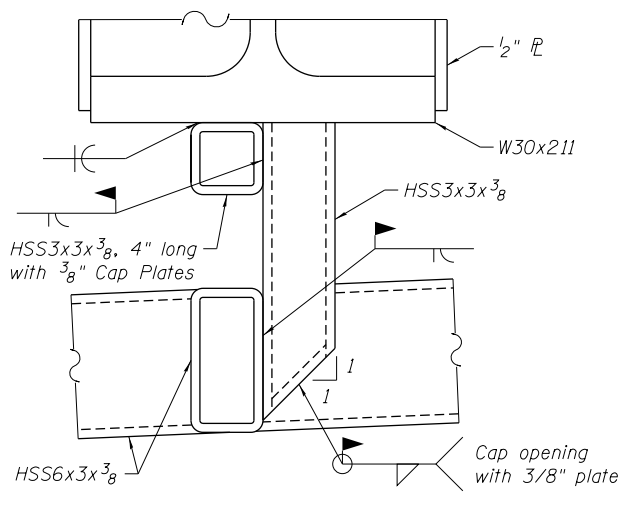
BASE PLATE DETAIL



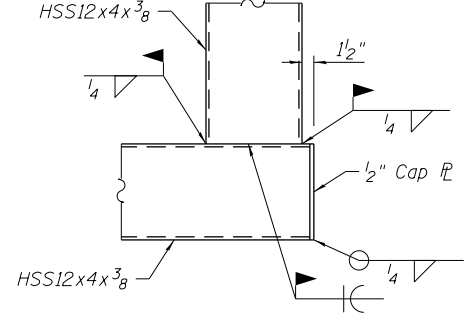
SECTION G-G



SECTION N-N



SECTION M-M



DETAIL 1

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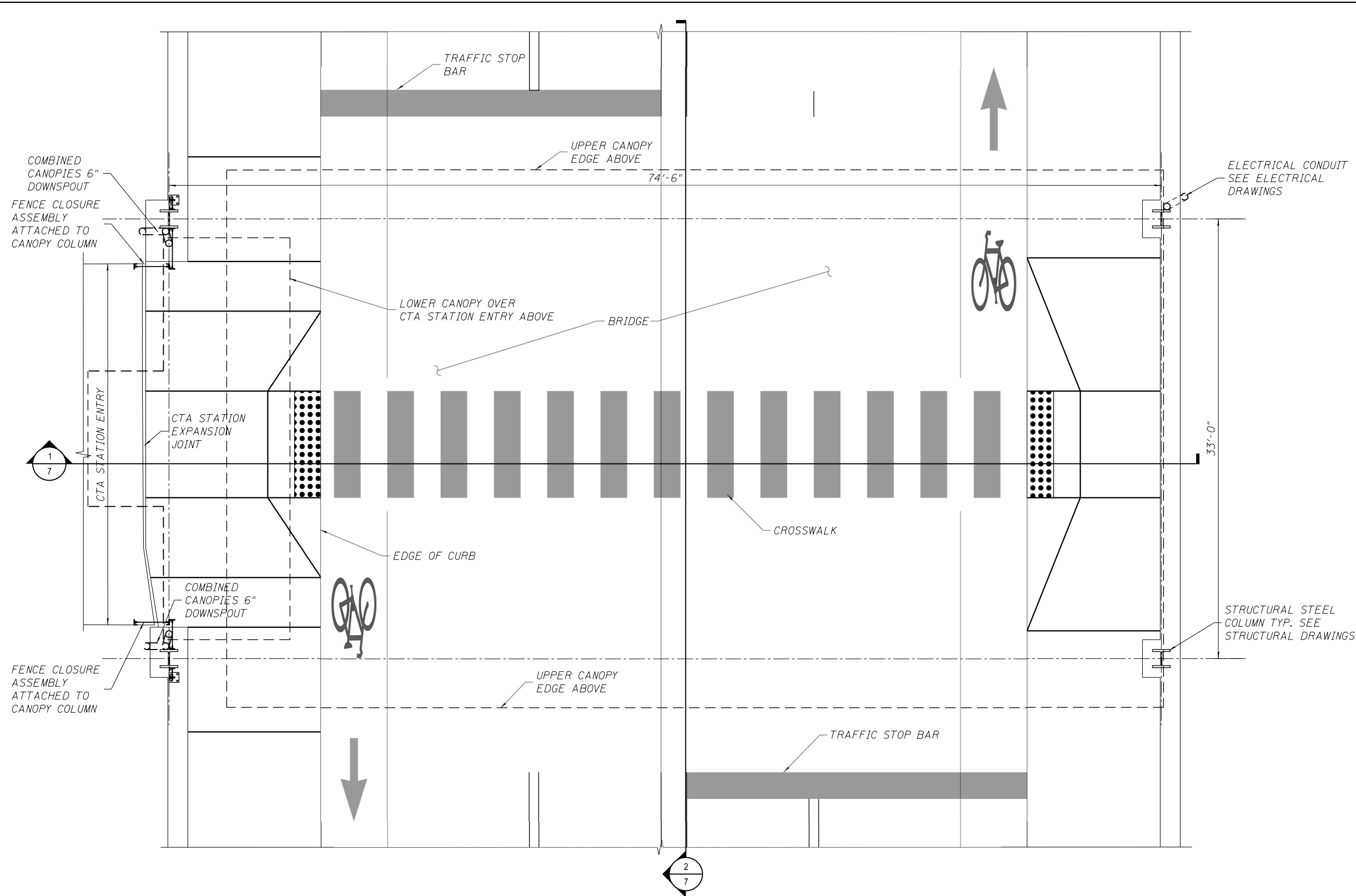
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	CHECKED - HKB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PEDESTRIAN CANOPY DETAILS
STRUCTURE NO. 016-1716

SHEET NO. 4 OF 11 SHEETS

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	445
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



1 CANOPY ENLARGED PLAN
SCALE: 1/4" = 1'-0"

NOTES:

1. CONNECTIONS AND JOINTS TO BE CONTINUOUSLY WELDED AND GROUND SMOOTH AS NOTED ON STRUCTURAL BRIDGE DRAWINGS
2. ALL STEEL TO BE GALVANIZED AND FIELD PAINTED WHITE PER SAMPLE SELECTED BY CTA.
3. ROUTE CONDUIT CENTERED ALONG TOP OF BEAM
4. LOWER CANOPY DOWNSPOUT TO TIE INTO UPPER CANOPY DOWNSPOUT BELOW LOWER CANOPY
5. CANOPY DOWNSPOUTS TO TIE INTO HALSTED STEET BRIDGE DRAINAGE BELOW DECK. SEE CANOPY DRAINAGE PLAN FOR DETAILS.
6. FENCE CLOSURE ASSEMBLY TO MATCH BRIDGE FENCE RAILING (SPECIAL), SEE STRUCTURAL BRIDGE DRAWINGS
7. FOR ALL PAVEMENT MARKINGS SIZE AND LOCATION SEE ROADWAY DRAWINGS



10:30:50 AM 0161716-60W26-MOD-A-FP-CNPY.dgn



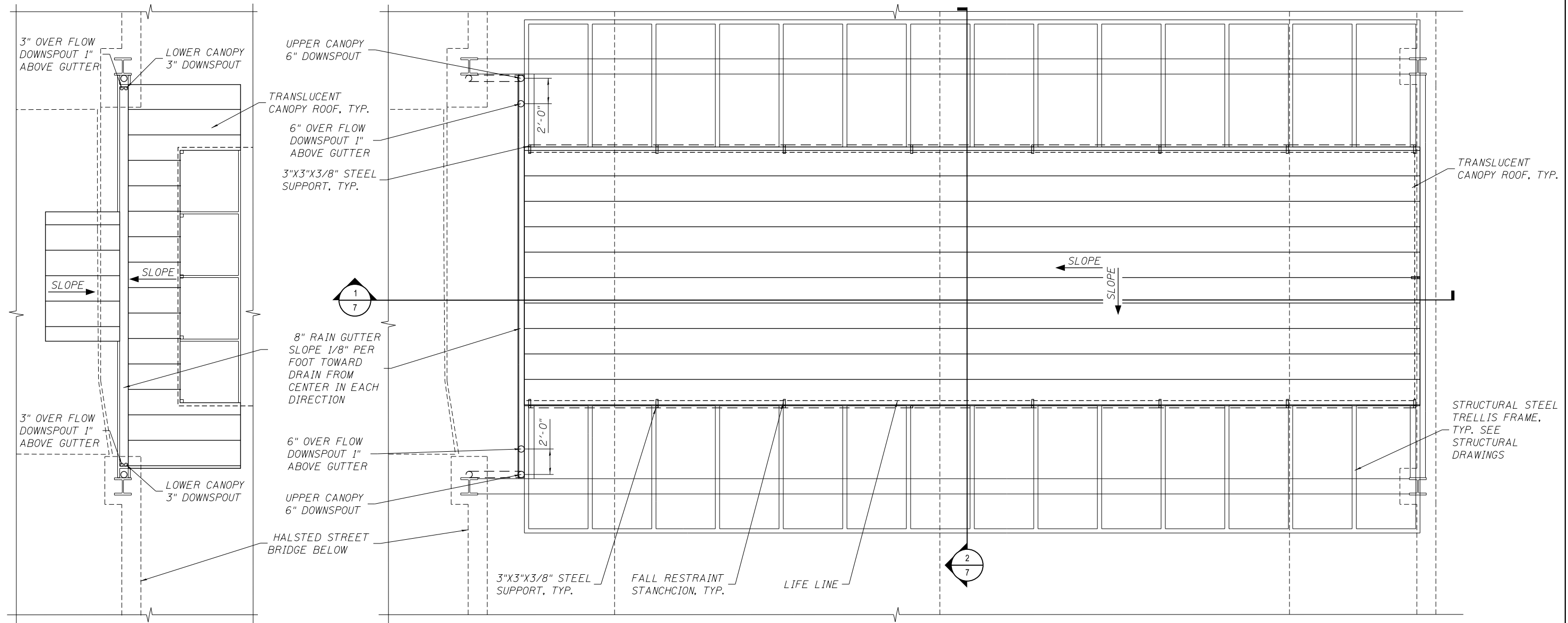
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PEDESTRIAN CANOPY FLOOR PLAN
STRUCTURE NO. 016-1716**

SHEET NO. 5 OF 11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	446
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



1 LOWER CANOPY ROOF PLAN
SCALE: 1/4" = 1'-0"

2 UPPER CANOPY ROOF PLAN
SCALE: 1/4" = 1'-0"

BILL OF MATERIAL

ITEM	UNIT	TOTAL QUANTITY
TRANSLUCENT CANOPY ROOF (CTA)	SQ. FT.	1,662
* FLASHING, GUTTERS AND SHEET METAL (CTA)	L. SUM	1

* INCLUDES DOWNSPOUTS, JOINT SEALER, AND FALL RESTRAINT SYSTEM

NOTES:

1. CONNECTIONS AND JOINTS TO BE CONTINUOUSLY WELDED AND GROUND SMOOTH AS NOTED ON STRUCTURAL BRIDGE DRAWINGS
2. ALL STEEL TO BE GALVANIZED AND FIELD PAINTED WHITE PER SAMPLE SELECTED BY CTA.
3. ROUTE CONDUIT CENTERED ALONG TOP OF BEAM
4. LOWER CANOPY DOWNSPOUT TO TIE INTO UPPER CANOPY DOWNSPOUT BELOW LOWER CANOPY
5. CANOPY DOWNSPOUTS TO TIE INTO HALSTED STEET BRIDGE DRAINAGE BELOW DECK, SEE CANOPY DRAINAGE PLAN FOR DETAILS.
6. FENCE CLOSURE ASSEMBLY TO MATCH BRIDGE FENCE RAILING (SPECIAL), SEE STRUCTURAL BRIDGE DRAWINGS

10:30:51 AM 0161716-60W26-MOD-A-RP-CNRY.dgn



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	CHECKED - CRR	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PEDESTRIAN CANOPY ROOF PLAN
STRUCTURE NO. 016-1716**

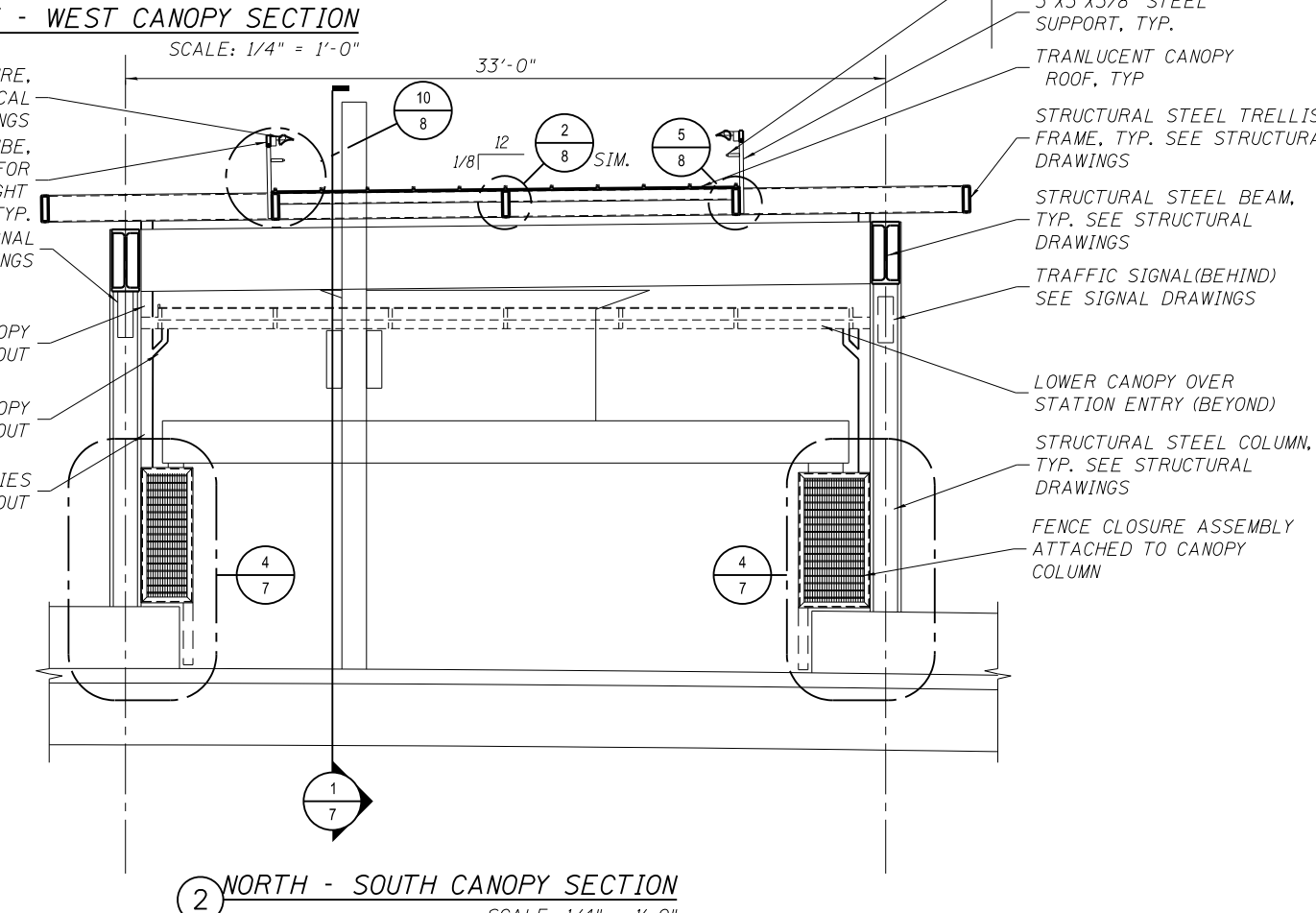
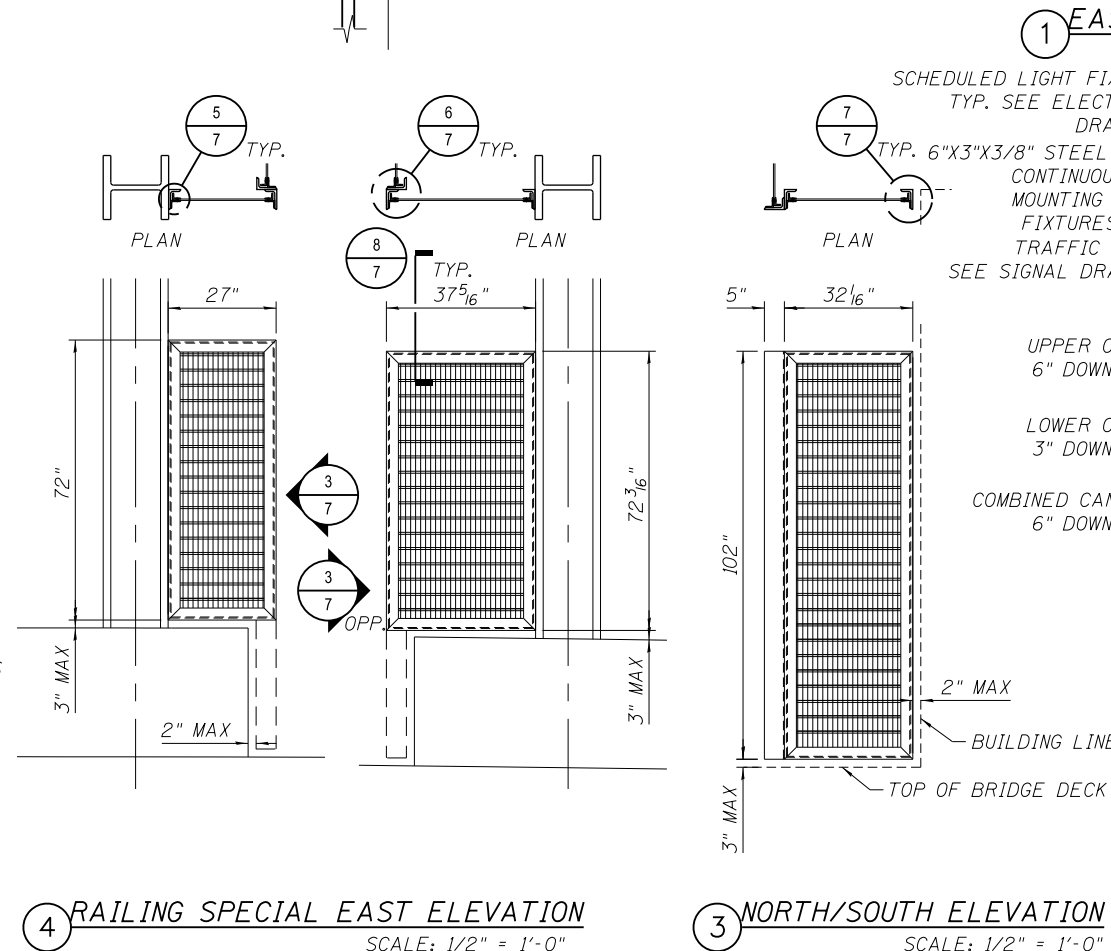
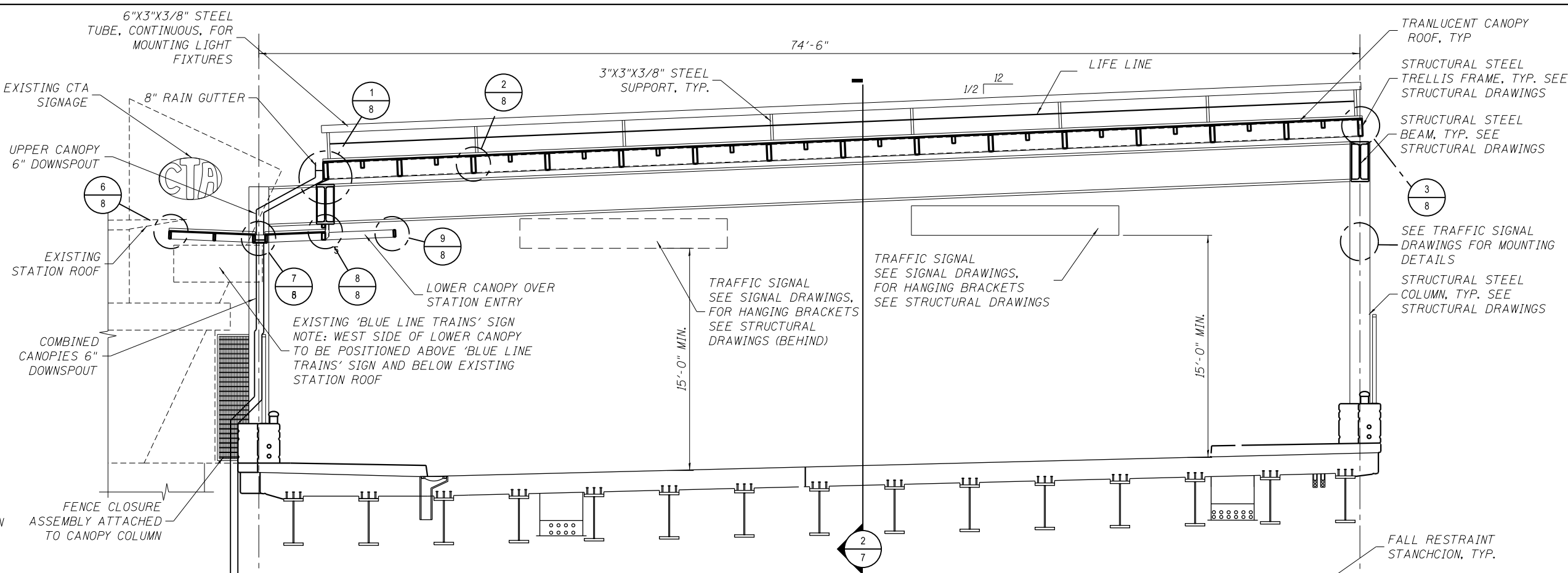
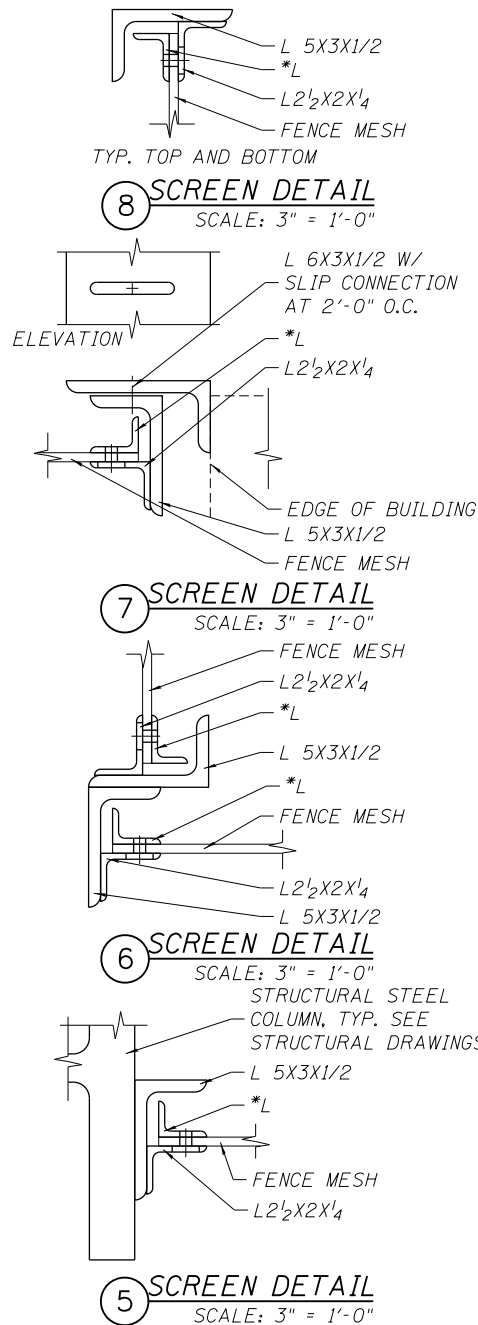
SHEET NO. 6 OF 11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	447
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



NOTES:

1. CONNECTIONS AND JOINTS TO BE CONTINUOUSLY WELDED AND GROUND SMOOTH AS NOTED ON STRUCTURAL BRIDGE DRAWINGS
2. ALL STEEL TO BE GALVANIZED AND FIELD PAINTED WHITE PER SAMPLE SELECTED BY CTA.
3. ROUTE CONDUIT CENTERED ALONG TOP OF BEAM
4. LOWER CANOPY DOWNSPOUT TO TIE INTO UPPER CANOPY DOWNSPOUT BELOW LOWER CANOPY
5. CANOPY DOWNSPOUTS TO TIE INTO HALSTED STEET BRIDGE DRAINAGE BELOW DECK, SEE CANOPY DRAINAGE PLAN FOR DETAILS.
6. FENCE CLOSURE ASSEMBLY TO MATCH BRIDGE FENCE RAILING (SPECIAL), SEE STRUCTURAL SHEET BRIDGE DRAWINGS



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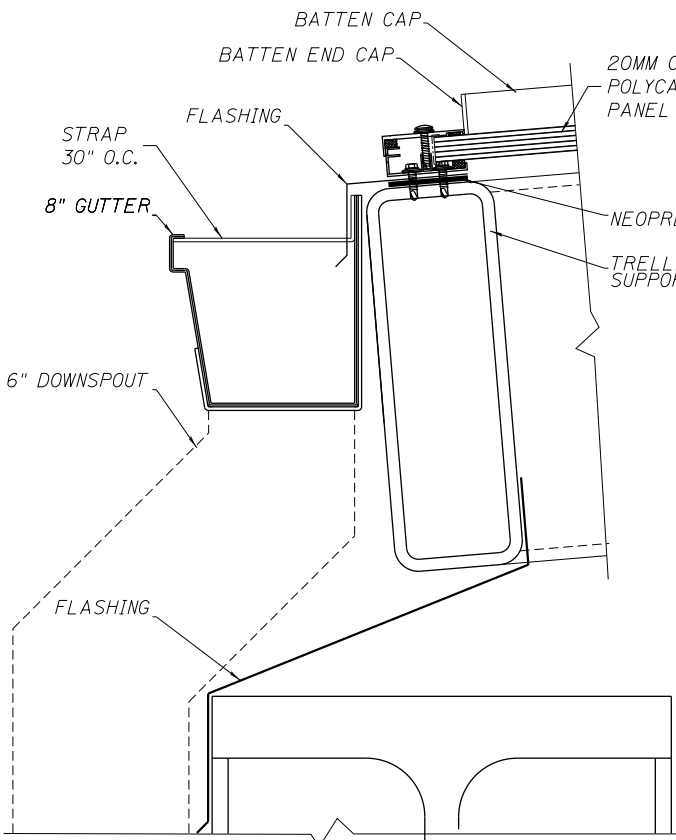
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

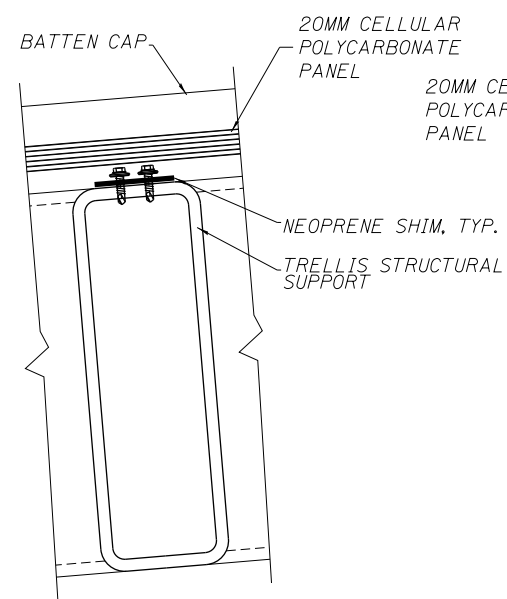
**PEDESTRIAN CANOPY SECTIONS
STRUCTURE NO. 016-1716**

SHEET NO. 7 OF 11 SHEETS

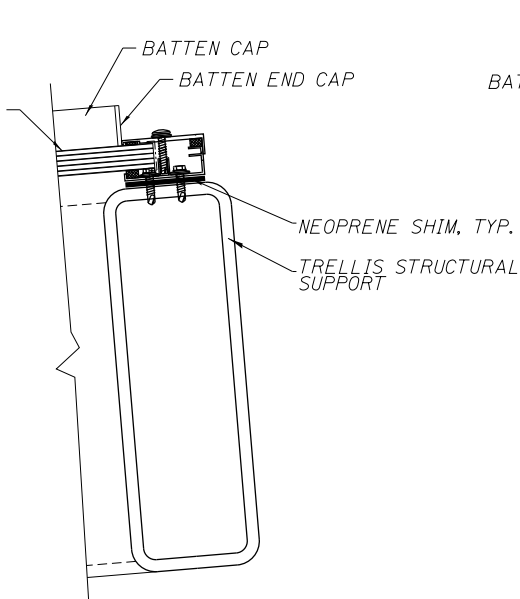
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CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	



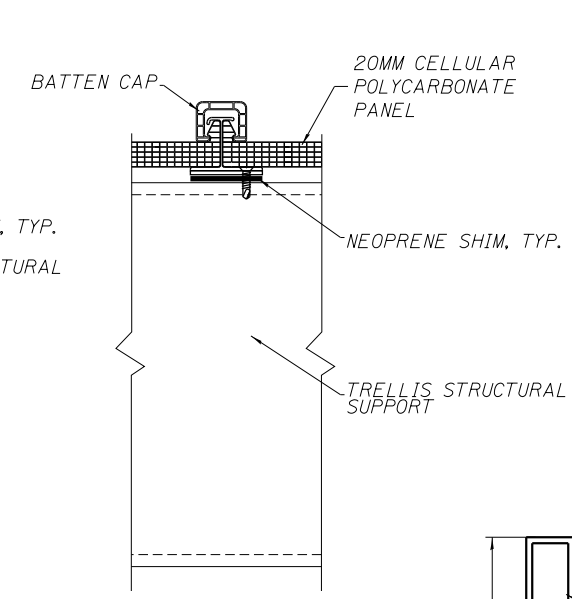
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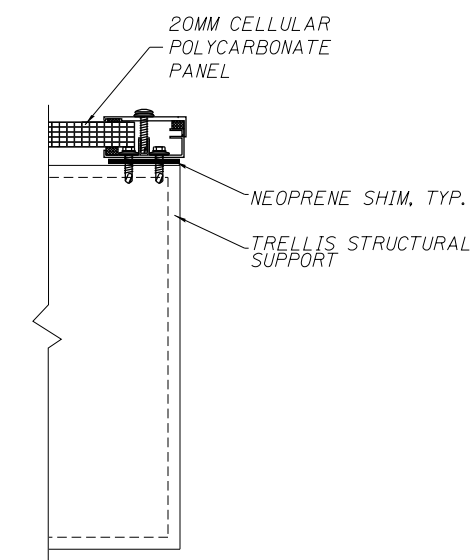
2 SECTION AT PURLIN
SCALE: 3" = 1'-0"



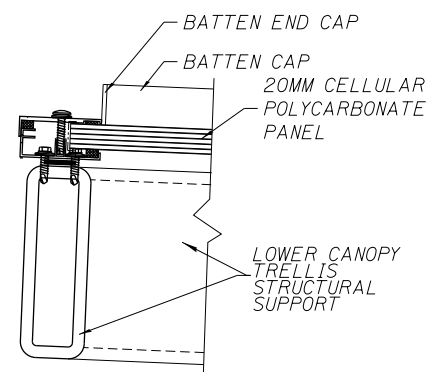
3 SECTION AT END
SCALE: 3" = 1'-0"



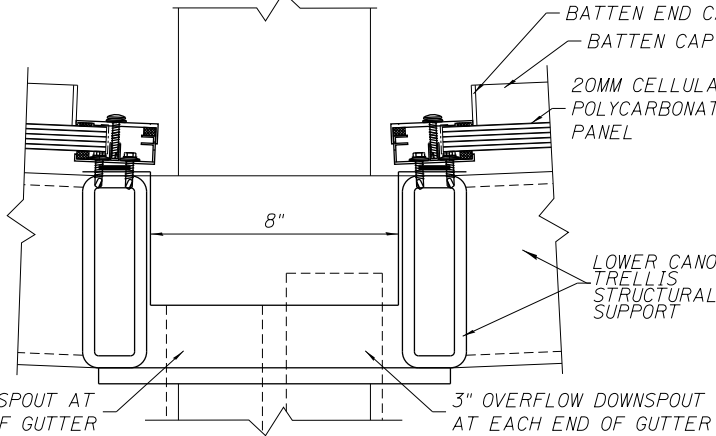
4 SECTION AT TYP. BATTEN
SCALE: 3" = 1'-0"



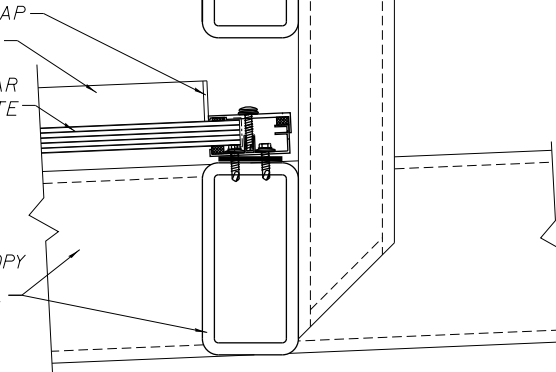
5 SECTION AT END
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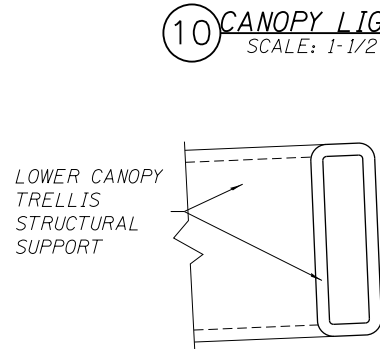
6 LC SECTION AT END
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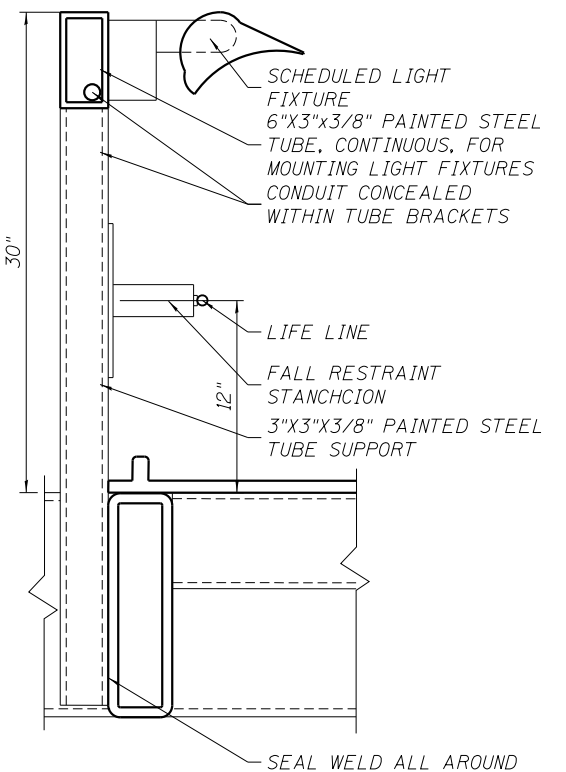
7 LC SECTION AT GUTTER
SCALE: 3" = 1'-0"



8 LC SECTION AT VERTICAL SUPPORT
SCALE: 3" = 1'-0"



9 LC SECTION AT END
SCALE: 3" = 1'-0"



10 CANOPY LIGHTING
SCALE: 1-1/2" = 1'-0"

NOTES:

1. CONNECTIONS AND JOINTS TO BE CONTINUOUSLY WELDED AND GROUND SMOOTH AS NOTED ON STRUCTURAL BRIDGE DRAWINGS
2. ALL STEEL TO BE GALVANIZED AND FIELD PAINTED WHITE PER SAMPLE SELECTED BY CTA.
3. ROUTE CONDUIT CENTERED ALONG TOP OF BEAM
4. LOWER CANOPY DOWNSPOUT TO TIE INTO UPPER CANOPY DOWNSPOUT BELOW LOWER CANOPY
5. CANOPY DOWNSPOUTS TO TIE INTO HALSTED STEEL BRIDGE DRAINAGE BELOW DECK, SEE CANOPY DRAINAGE PLAN FOR DETAILS.
6. FENCE CLOSURE ASSEMBLY TO MATCH BRIDGE FENCE RAILING (SPECIAL), SEE STRUCTURAL BRIDGE DRAWINGS

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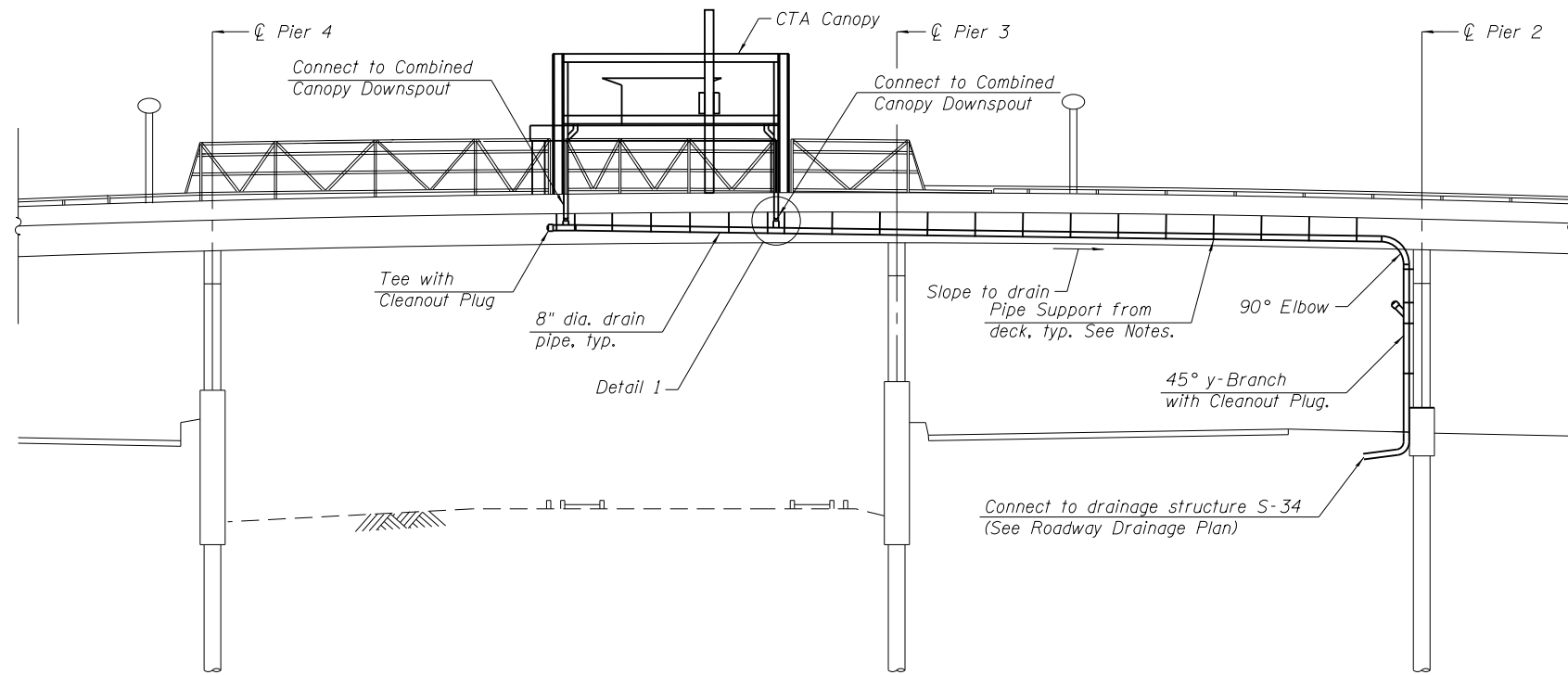
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

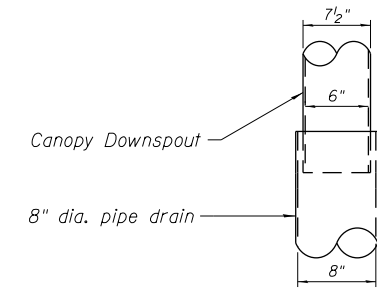
PEDESTRIAN CANOPY ROOF DETAILS
STRUCTURE NO. 016-1716

SHEET NO. 8 OF 11 SHEETS

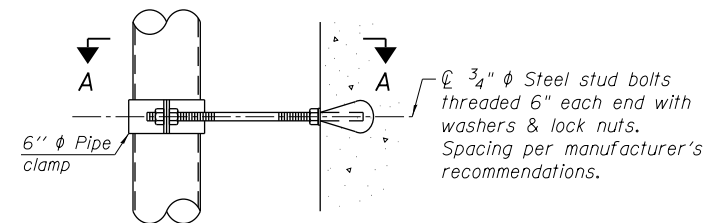
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	449
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



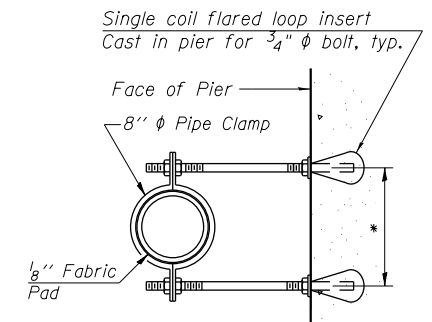
ELEVATION
Looking West



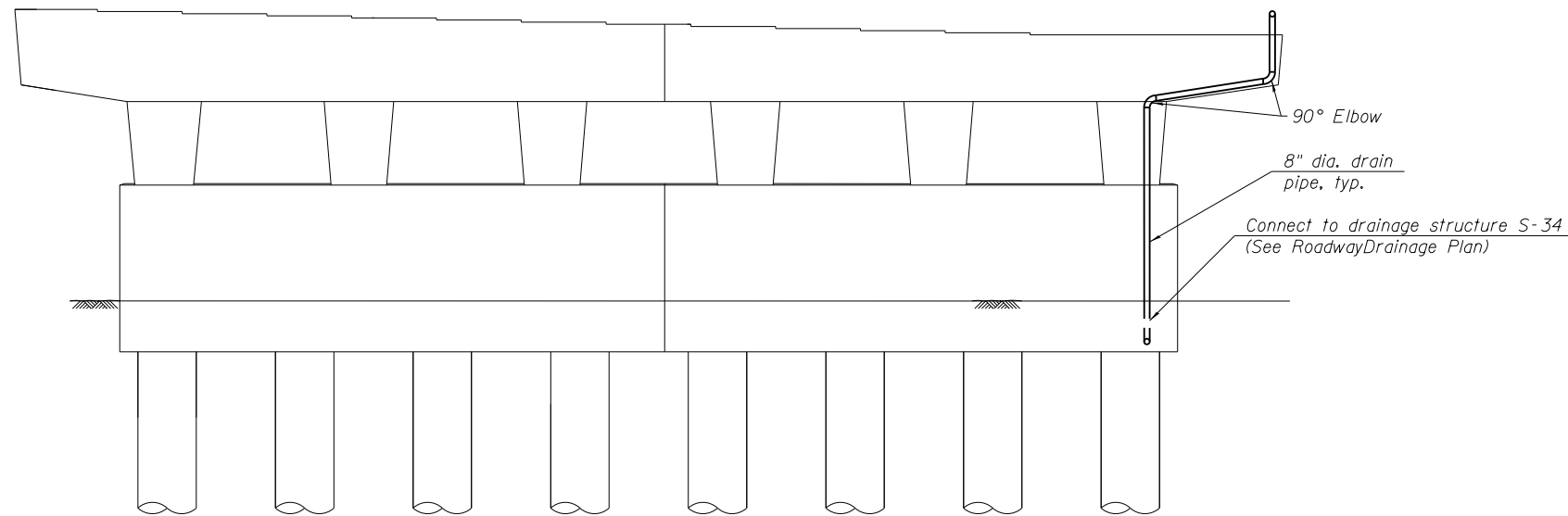
DETAIL 1



PIPE BRACKET DETAIL



SECTION A-A
* Dimension as required by Pipe Clamp



PIER 2 FRONT ELEVATION
Looking North

Notes:

Provide structural support from proposed deck slab for drain pipe per manufacturer's recommendation, not to exceed 6' cts. Cost included with "Plumbing - Downspouts (CTA)," All pipes, pipe fittings and brackets needed shall be included with cost of "Plumbing - Downspouts (CTA)". See Sheet Architectural drawings for Canopy Roof Plan and Cross Sections.

BILL OF MATERIAL

Item	Unit	Total
Plumbing - Downspouts (CTA)	L. Sum	1

60W26-265.dgn



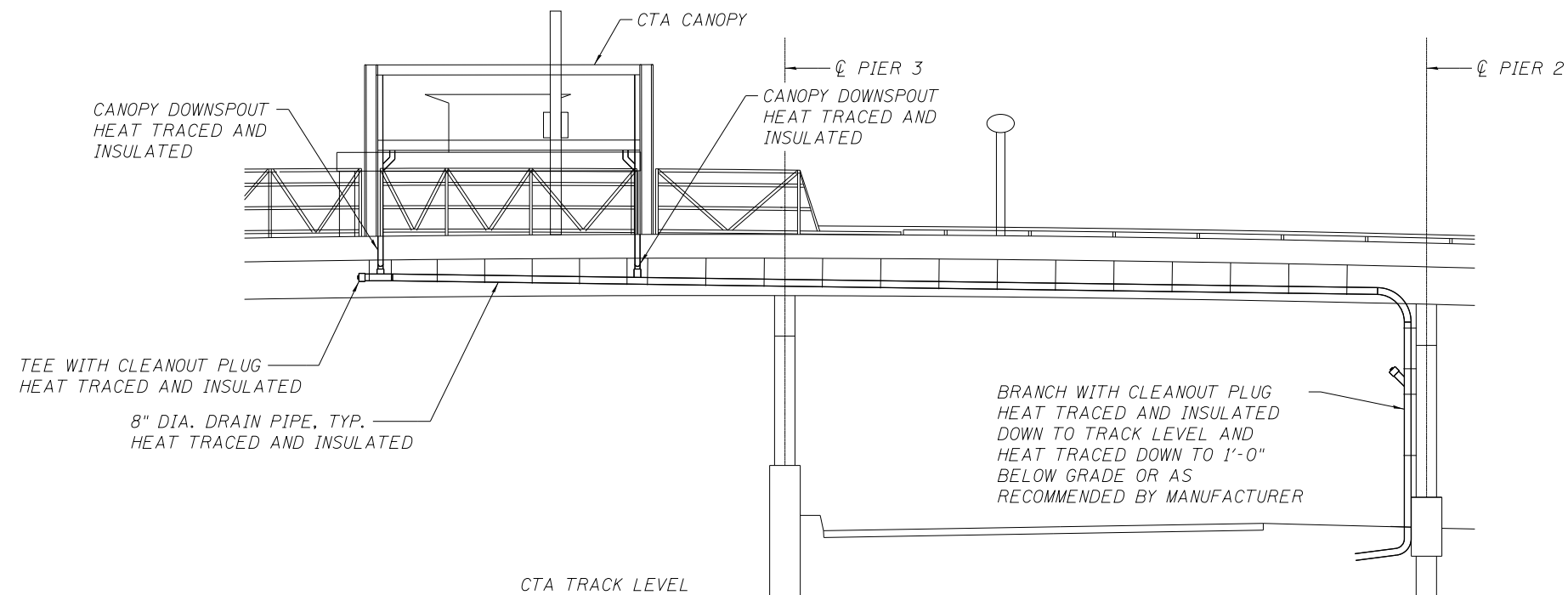
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

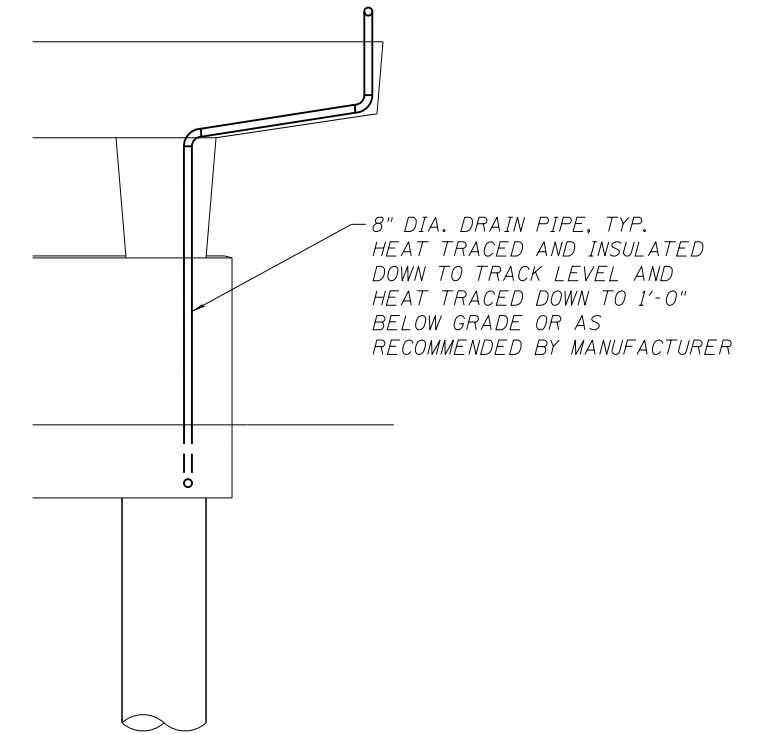
PEDESTRIAN CANOPY DRAINAGE PLAN
STRUCTURE NO. 016-1716

SHEET NO. 9 OF 11 SHEETS

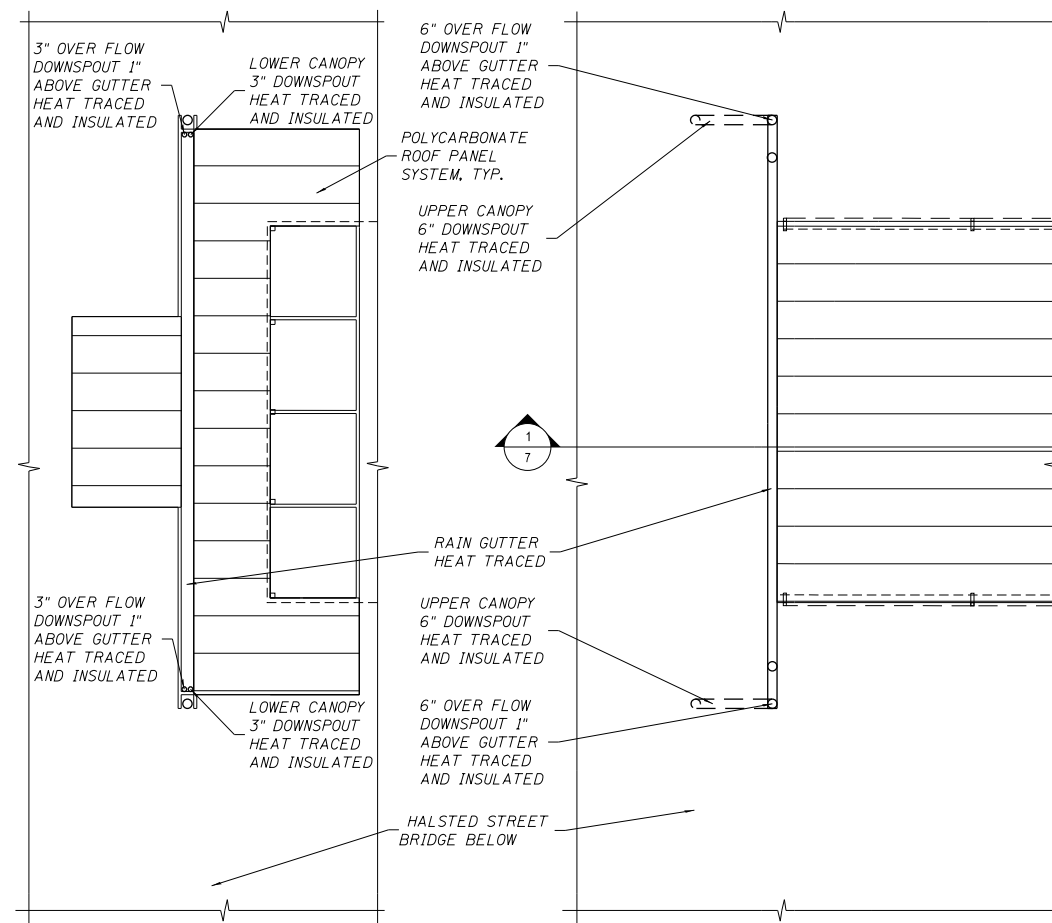
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	450
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



ELEVATION
(Looking West)
N.T.S.



PIER 2 FRONT ELEVATION
(Looking North)
N.T.S.

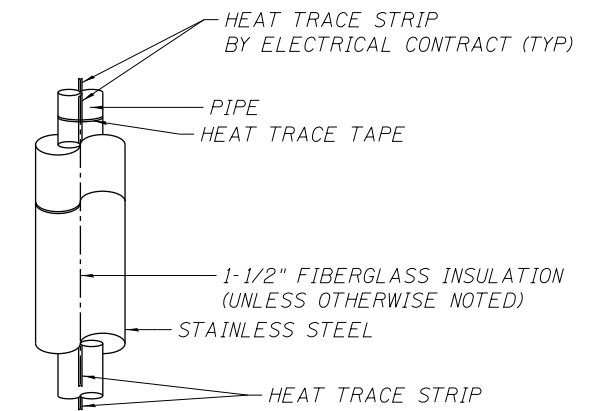


LOWER CANOPY ROOF PLAN
N.T.S.

UPPER CANOPY ROOF PLAN
N.T.S.

NOTES:

- 1) HEAT TRACING SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- 2) THE HEAT TRACING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH CTA MASTER SPECIFICATION SECTION 23 83 30.
- 3) FOR HORIZONTAL PIPING, RUN HEAT TRACE STRIP BETWEEN 4:00 AND 5:00 POSITIONS OR BETWEEN 7:00 AND 8:00 POSITIONS.
- 4) PROVIDE HEAT TRACE CABLES AND INSULATION FOR ALL CANOPY DOWNSPOUT DRAIN PIPES AND HEAT TRACE FOR ALL CANOPY GUTTERS.
- 5) THE HEAT TRACE SYSTEM POWER AND CONTROL CIRCUITS SHALL BE CONNECTED TO THE EXISTING CTA POWER PANEL ELECTRIC HEAT (PPEH) LOCATED IN THE SUB-PANEL ROOM WITHIN THE CTA STATION. PROVIDE ALL THE NEW CIRCUIT BREAKERS REQUIRED FOR THE HEAT TRACE SYSTEM IN PANEL PPEH.
- 6) THE NEW HEAT TRACE CONTROL/MONITOR AND RELAY PANELS SHALL BE INSTALLED IN THE EXISTING SUB-PANEL ROOM WITHIN THE EXISTING CTA STATION AS DIRECTED BY THE CTA AND THE ENGINEER.
- 7) THE CONTRACTOR SHALL PROVIDE ALL CONDUITS, WIRES, HARDWARE, HEAT TRACE CABLES, CONTROL/MONITOR AND RELAY PANELS, THERMOSTATS, CIRCUIT BREAKERS, JUNCTION BOXES, HEAT TRACING COMPONENTS, ACCESSORIES AND INSULATION MATERIAL REQUIRED FOR A COMPLETE OPERATING HEAT TRACE SYSTEM AS REQUIRED BY THE MANUFACTURER AND AS DIRECTED BY THE ENGINEER. THE HEAT TRACE SYSTEM WORK WILL BE INCLUDED IN THE LUMP SUM COST OF THE "ELECTRICAL WORK FOR CANOPY LIGHTING AND HEAT TRACE" PAY ITEM.



TYPICAL DETAIL OF PIPING WITH HEAT TRACE AND INSULATION
N.T.S.

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0161716-60W26-E001-CanopyHeatTrace
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DATE - 9/15/13

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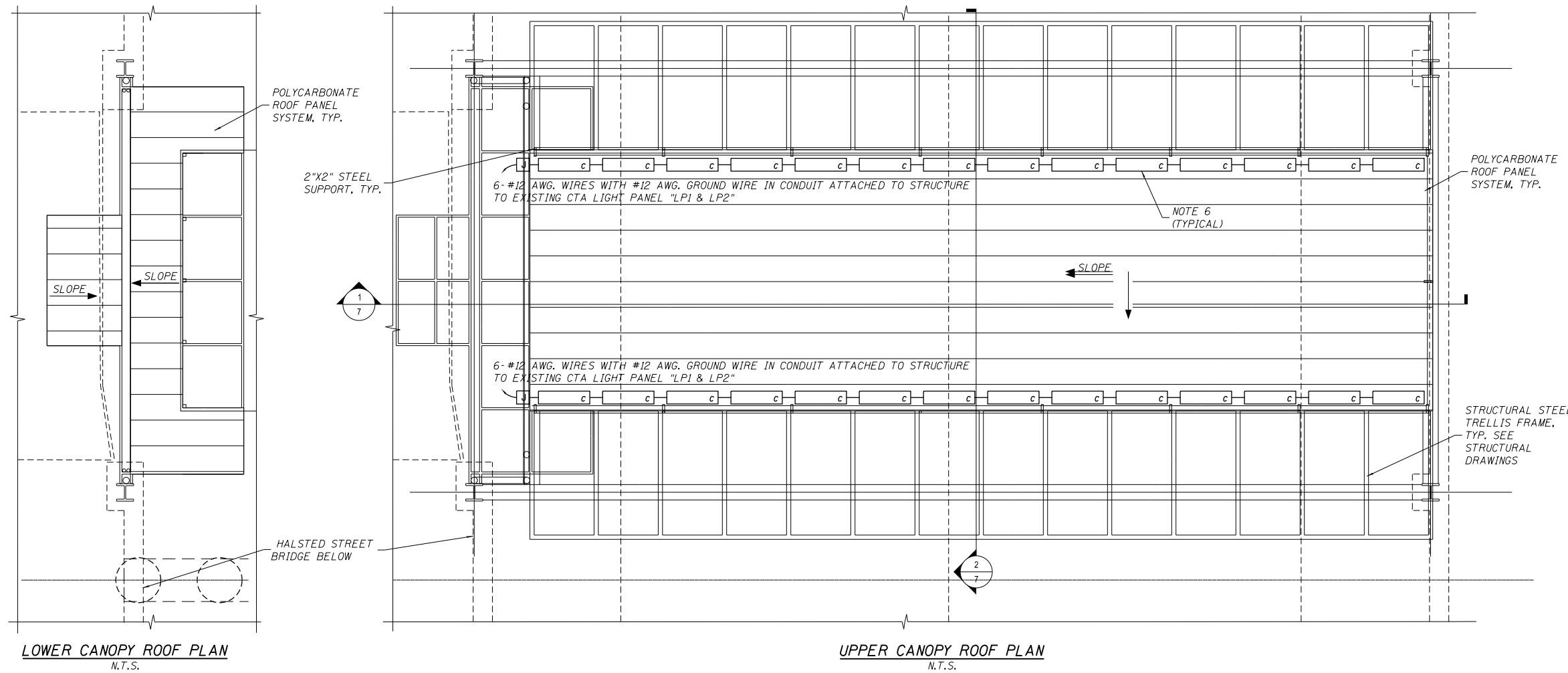
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PEDESTRIAN CANOPY HEAT TRACE PLAN
STRUCTURE NO. 016-1716**

SCALE: N.T.S. SHEET 10 OF 11 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-008R	COOK	559	451
CONTRACT NO. 60W26				
ILLINOIS FED. AID PROJECT				

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- NOTES:**
- 1) CANOPY LIGHTING SHALL BE FED FROM EXISTING CTA LIGHTING PANEL "LP1 & LP2". LIGHTING PANEL IS LOCATED IN THE SUB-PANEL ROOM WITHIN THE CTA STATION. PROVIDE A MINIMUM OF 4-15 AMP, 1-POLE CIRCUIT BREAKERS IN EXISTING LIGHTING PANEL "LP1 & LP2" FOR THE CANOPY LIGHTING UNITS.
 - 2) ALL HORIZONTAL CONDUIT RUNS SHALL BE AT THE TOP AND CENTERED ABOVE THE FRAMING MEMBERS.
 - 3) ALL CONDUITS, WIRES, HARDWARE, CIRCUIT BREAKERS, JUNCTION BOXES, AND FITTINGS REQUIRED TO INSTALL THE CANOPY LIGHTING SYSTEM WILL BE INCLUDED IN THE LUMP SUM COST OF THE "ELECTRICAL WORK FOR CANOPY LIGHTING AND HEAT TRACE" PAY ITEM.
 - 4) PROVIDE FOUR 120 VOLT LIGHTING CIRCUITS TO THE CANOPY LIGHTING SYSTEM. THE LIGHTING UNITS SHALL BE CONNECTED BY ALTERNATING BETWEEN FOUR CIRCUITS SUCH THAT EVERY FOURTH FIXTURE IS ON THE SAME CIRCUIT.
 - 5) THE CANOPY LIGHTING SYSTEM SHALL BE CONNECTED TO THE EXISTING CTA STATION LIGHTING SYSTEM CONTROLLED BY PHOTOCELL AS DIRECTED BY THE CTA.
 - 6) SEE THE PEDESTRIAN CANOPY STRUCTURE DRAWINGS FOR THE MOUNTING DETAILS FOR THE CANOPY LIGHTING UNITS.
 - 7) PROVIDE KENALL MODEL NO. CTA-99-301-FUSE-50L 50K LED LIGHTING FIXTURES AS LISTED IN THE LIGHTING FIXTURE SCHEDULE OR APPROVED EQUAL. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CTA MASTER SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.
 - 8) AFTER THE LIGHT FIXTURES ARE INSTALLED THEY SHALL BE ADJUSTED/AIMED AT THE POLYCARBONATE ROOF PANEL AS DIRECTED BY THE ENGINEER.

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	WATTS/FIXTURE	LAMPS	VOLTAGE	MOUNTING	DESCRIPTION
C	KENALL	CTA-99-301-FUSE-50L 50K	57	LED	120V	CANOPY STANCHION	CANOPY BACK LIGHT FINISH TO MATCH CANOPY STRUCTURE

c TYPE C LED CANOPY FIXTURE
J JUNCTION BOX (AS REQUIRED)



0161716-60W26-E002-CanopyLighting
 USER NAME = BAWtor1
 PLOT SCALE = 5.0000' / 1"

DESIGNED - WDS
 DRAWN - CAM
 CHECKED - WDS
 DATE - 9/15/13

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

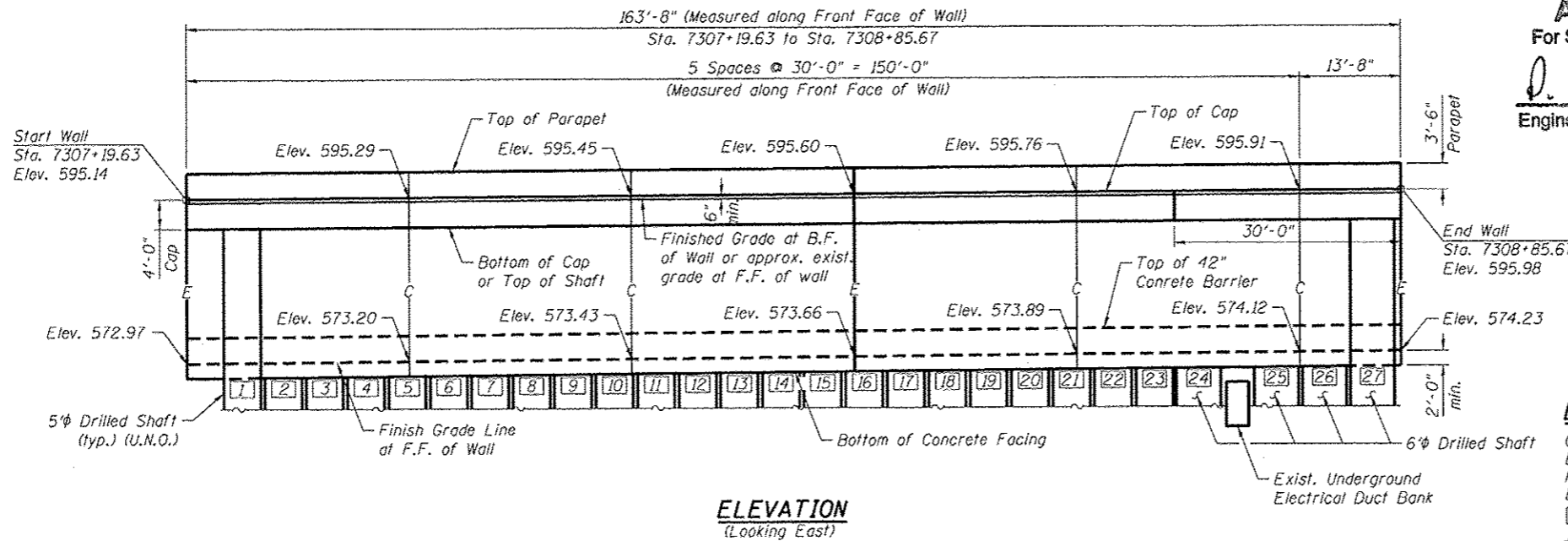
PEDESTRIAN CANOPY LIGHTING PLAN
STRUCTURE NO. 016-1716

SCALE: N.T.S. SHEET 11 OF 11 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-008R	COOK	559	452
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	

Bench Mark: Cut square on southwest parapet wall over I-90 on west end, +2.5 A/G. Elevation 598.65.

Existing Structure: None.



ELEVATION
(Looking East)

APPROVED
For Structural Adequacy Only

P. Carl Loney, P.E.
Engineer of Bridges & Structures



Amish T. Bhatt 8/20/13
AMISH T. BHATT
LICENSE EXPIRES 11/30/2014

LEGEND:

- C = Construction Joint
- E = Expansion Joint
- F.F. = Front Face
- B.F. = Back Face
- [] = Drilled Shaft Number
- ⊕ = Soil Boring Locations
- e— = Exist. Underground Electric
- W— = Exist. Underground Water

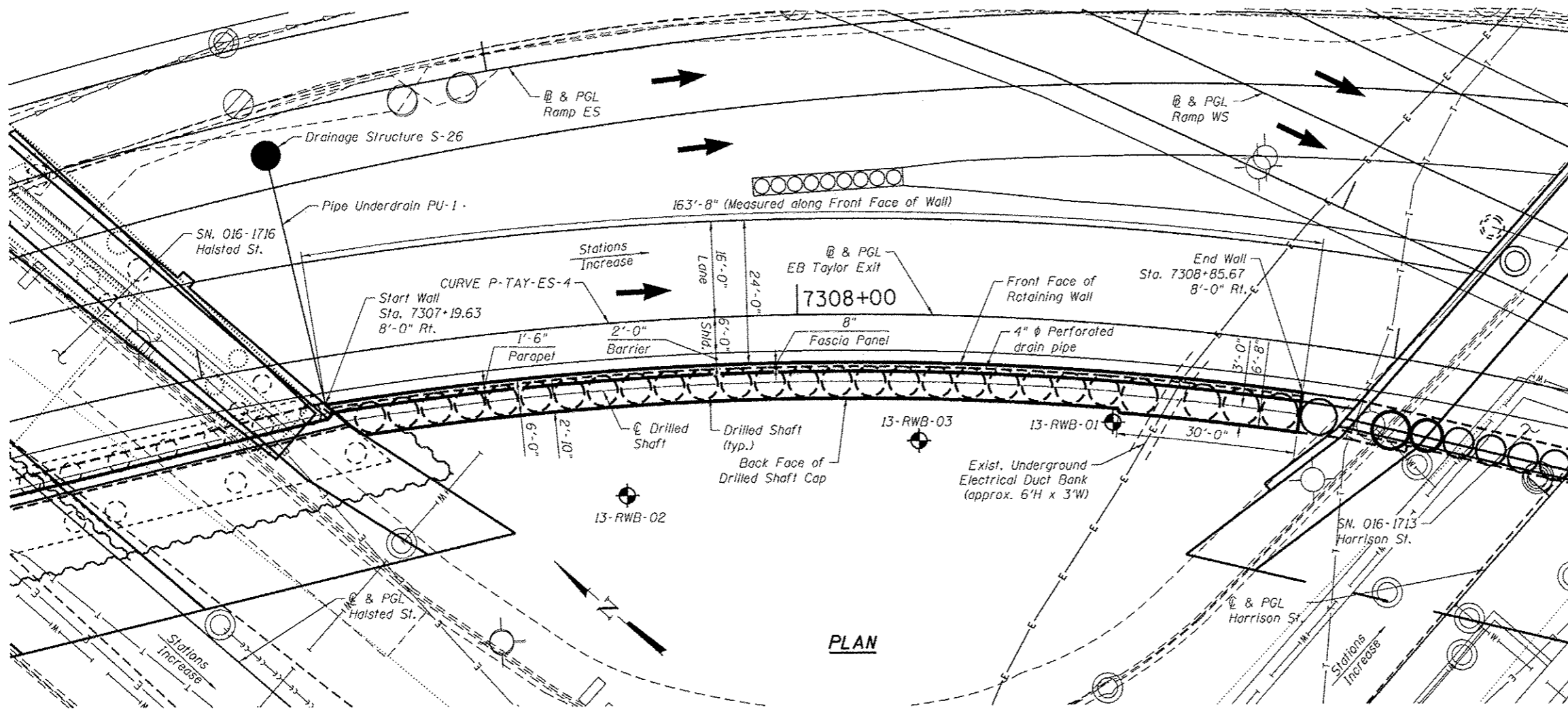
DESIGN SPECIFICATIONS
2012 AASHTO LRFD Bridge Design Specifications,
6th Edition with 2013 Interim Revisions

DESIGN STRESSES

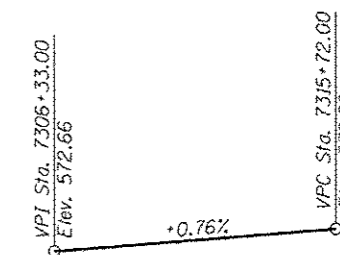
FIELD UNITS
f'c = 3,500 psi
f'c = 7,000 psi (Drilled Shaft - see Gen. Note 7)
fy = 60,000 psi (Reinforcement)

CURVE DATA

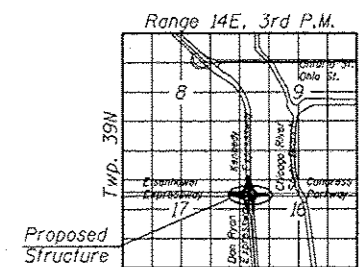
(EB Taylor Exit)
Prop. Curve P-TAY-ES-4
P.I. Sta. = 7309+22.03
Δ = 43° 22' 59" (RT)
D = 10° 13' 53"
R = 560.00'
T = 222.76'
L = 424.02'
E = 42.68'
e = 5.8%
T.R. = NA'
S.E. Run = 150'
P.C. Sta. = 7306+99.28
P.T. Sta. = 7311+23.30



PLAN



PROFILE GRADE
(along EB Taylor Exit)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A.I. RTE. SB 90/94
(DAN RYAN EXPRESSWAY)
F.A.I. RTE. 90/94 - SECTION 2013-008R
COOK COUNTY
STATION 7307+19.63 TO STATION 7308+85.67
STRUCTURE NO. 016-1802



USER NAME: dunkerlayb	DESIGNED: OD	REVISED:
CHECKED: ATB	REVISOR:	
PLLOT SCALE: N.T.S.	DRAWN: BRO	REVISED:
PLLOT DATE: 8/21/2013	CHECKED: ATB	REVISED:

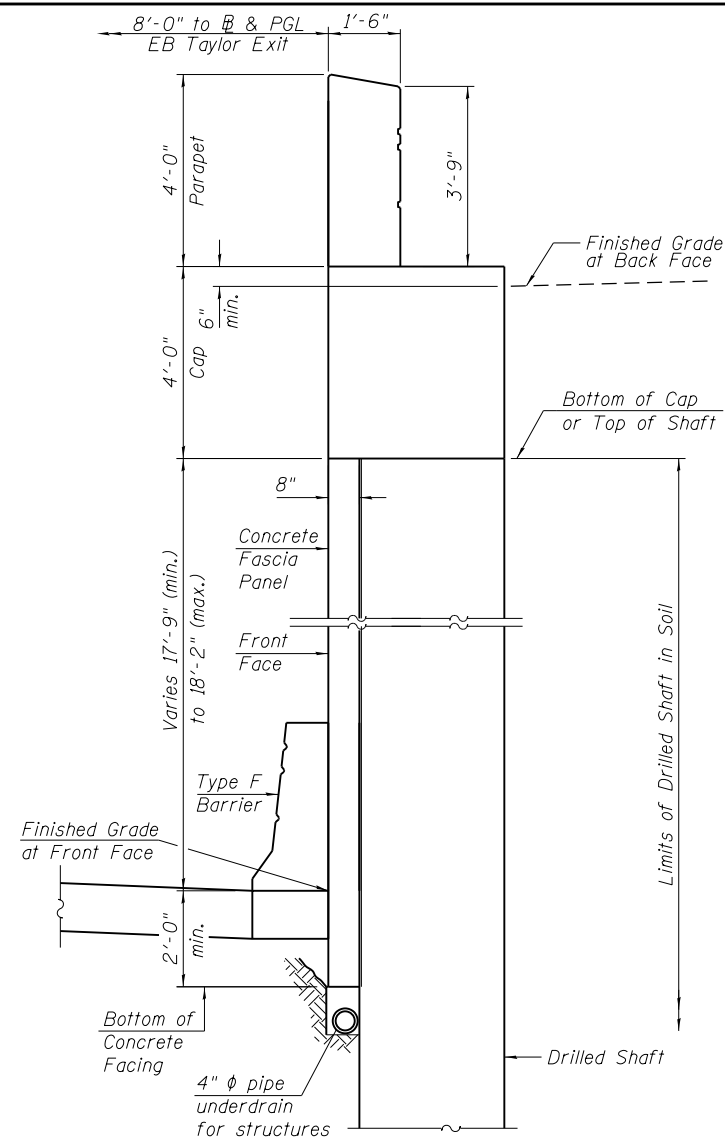
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 016-1802

SHEET NO. RW-01 OF RW-08 SHEETS

F.A.I. RTE. 90/94/290	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 453
CONTRACT NO. 60W26				ILLINOIS FED. AID PROJECT

0161802-60W26-S01-GPE



TYPICAL CROSS-SECTION

(Looking upstasion)

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Bars noted thus, 3x2-#5 indicates 3 lines of bars with 2 lengths per line.
3. Concrete Sealer shall be applied to the designated areas of the wall.
4. Slipforming of the parapets is not allowed.
5. The Contractor shall field verify location of existing underground electrical duct bank and shall take all precautions to protect existing underground electrical duct bank during the construction of the wall. Any damage to the existing utilities shall be responsibility of the Contractor.
6. Wall to be built along straight chords between construction joints.
7. Concrete for the Drilled Shafts shall be in accordance with Section 516 of Standard Specifications, except that the mix design of concrete shall attain a compressive strength of 7,000 psi at 14 days.
8. The Contractor shall coordinate construction of the retaining wall with the construction of South Abut. of S.N. 016-1716 & West Abut. of S.N. 016-1713.
9. Concrete Fascia Panel shall be paid for as Class SI Concrete Miscellaneous.

INDEX OF SHEETS

- RW-01 General Plan and Elevation
- RW-02 Total Bill of Material and General Notes
- RW-03 Wall Elevation Detail
- RW-04 Wall Sections and Details
- RW-05 Architectural Details
- RW-06 Boring Logs I
- RW-07 Boring Logs II
- RW-08 Boring Logs III
- RW-09 Boring Logs IV

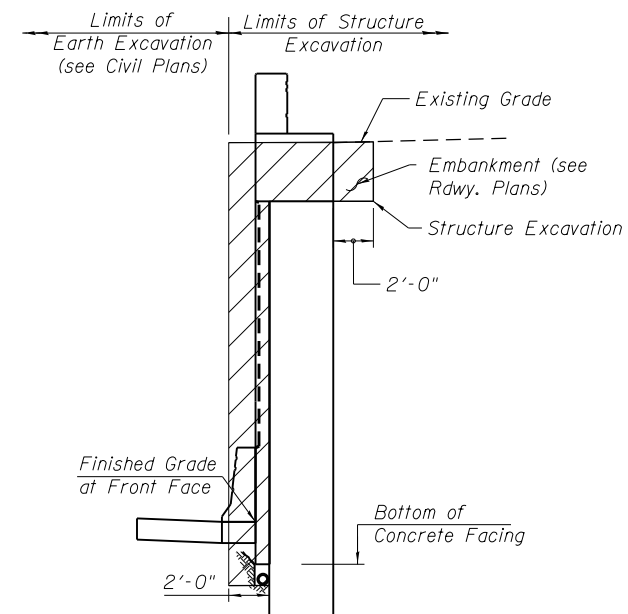
STATION 7307+19.63
 BUILT BY
 STATE OF ILLINOIS
 F.A.I. RTE. 90/94-SEC. 2013-008R
 LOADING HL-93
 STRUCTURE NO. 016-1802

NAME PLATE

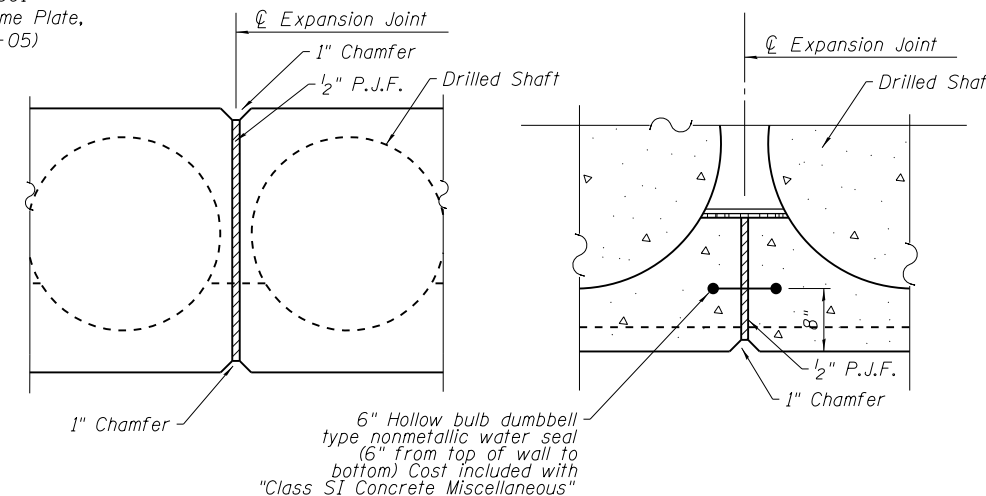
See Std. 515001
 (For location of Name Plate, see Sheet RW-05)

TOTAL BILL OF MATERIAL

DESCRIPTION	UNIT	TOTAL
STRUCTURE EXCAVATION	CU. YD.	467
CONCRETE STRUCTURES	CU. YD.	162
CONCRETE SUPERSTRUCTURE	CU. YD.	36
REINFORCEMENT BARS, EPOXY COATED	POUND	14,150
REINFORCEMENT BARS	POUND	1,016,700
NAME PLATES	EACH	1
DRILLED SHAFT IN SOIL	CU. YD.	2,011
CONCRETE SEALER	SQ. FT.	6,363
PIPE UNDERDRAIN FOR STRUCTURES 4"	FOOT	170
CLASS SI CONCRETE MISCELLANEOUS	CU. YD.	127
MECHANICAL SPLICERS	EACH	1304
CROSSHOLE SONIC LOGGING	EACH	1



STRUCTURE EXCAVATION



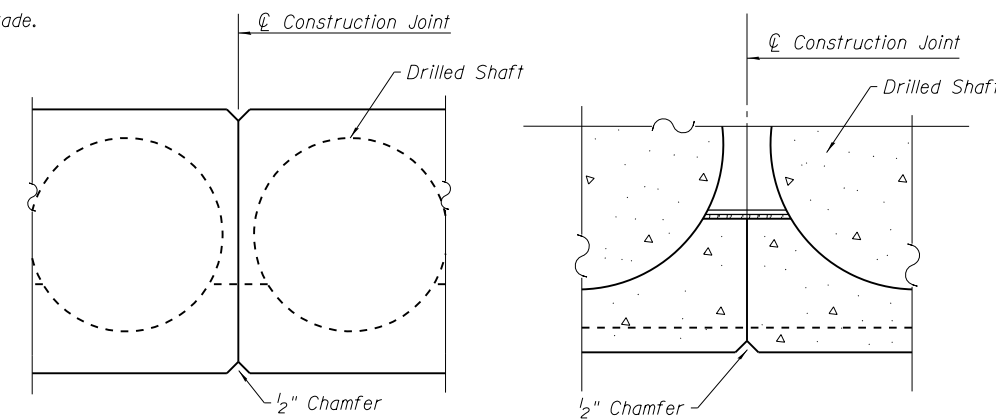
PLAN
(Cap)

SECTION THRU WALL

EXPANSION JOINT DETAILS

Suggested Construction Sequence

1. Construct drilled shaft 1 thru. 24.
2. Construct drilled shaft cap & parapet.
3. Excavate in front of shafts to finish grade.
4. Construct concrete fascia panel.

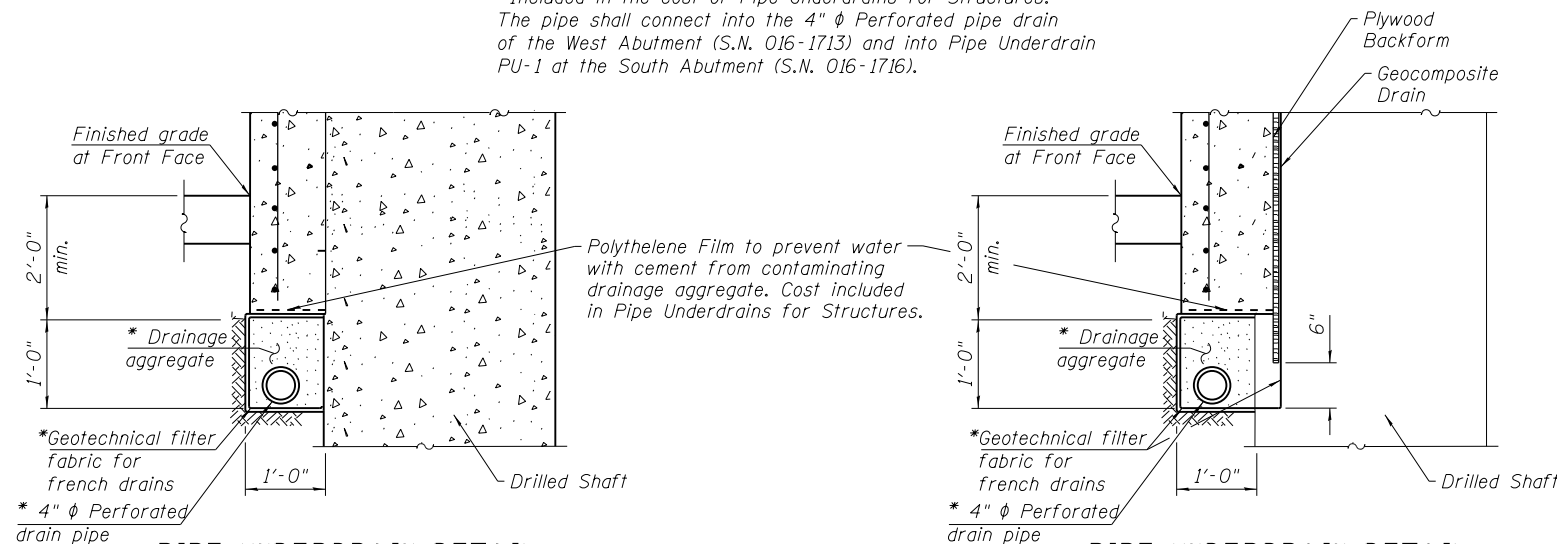


PLAN
(Cap)

SECTION THRU WALL

CONSTRUCTION JOINT DETAILS

*Included in the cost of Pipe Underdrains for Structures. The pipe shall connect into the 4" phi Perforated pipe drain of the West Abutment (S.N. 016-1713) and into Pipe Underdrain PU-1 at the South Abutment (S.N. 016-1716).



PIPE UNDERDRAIN DETAIL

(At Drilled Shaft)

(Type F barrier not shown for clarity)

PIPE UNDERDRAIN DETAIL

(Between Drilled Shaft)

(Type F barrier not shown for clarity)

0161802-50W26-502-CenNote



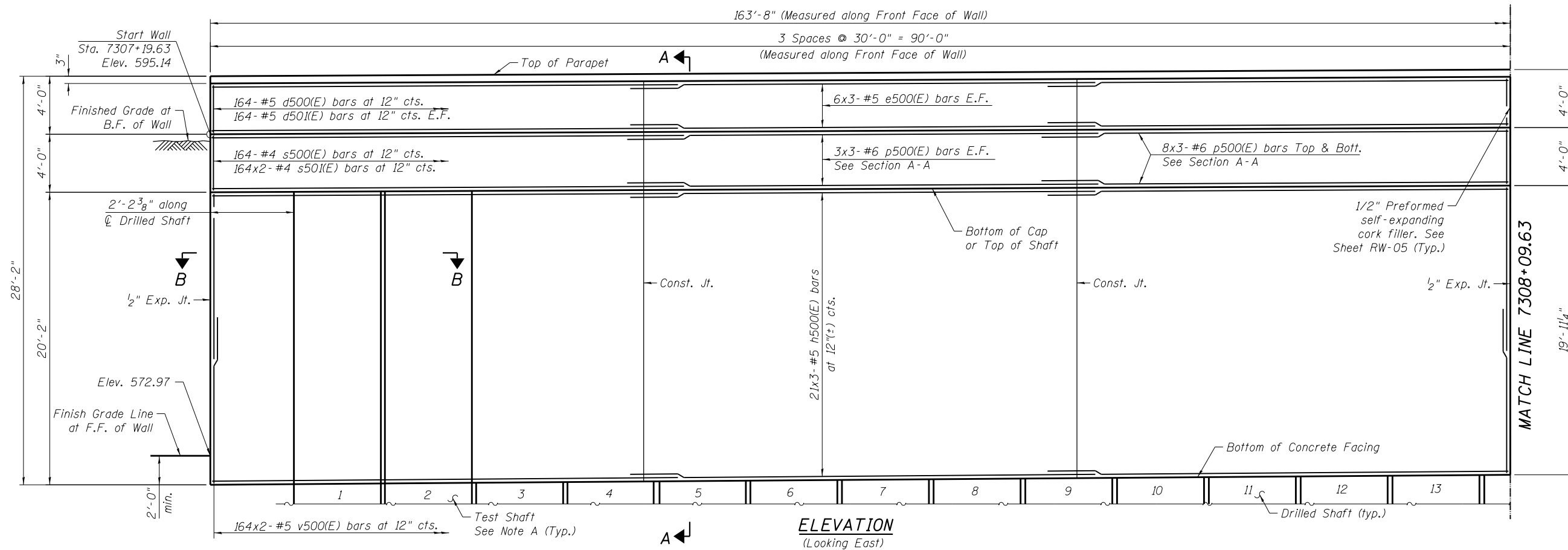
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PLOT SCALE = N.T.S.	CHECKED - DD	REVISED
PLOT DATE = 9/15/2013	DRAWN - BRD	REVISED
	CHECKED - ATB	REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

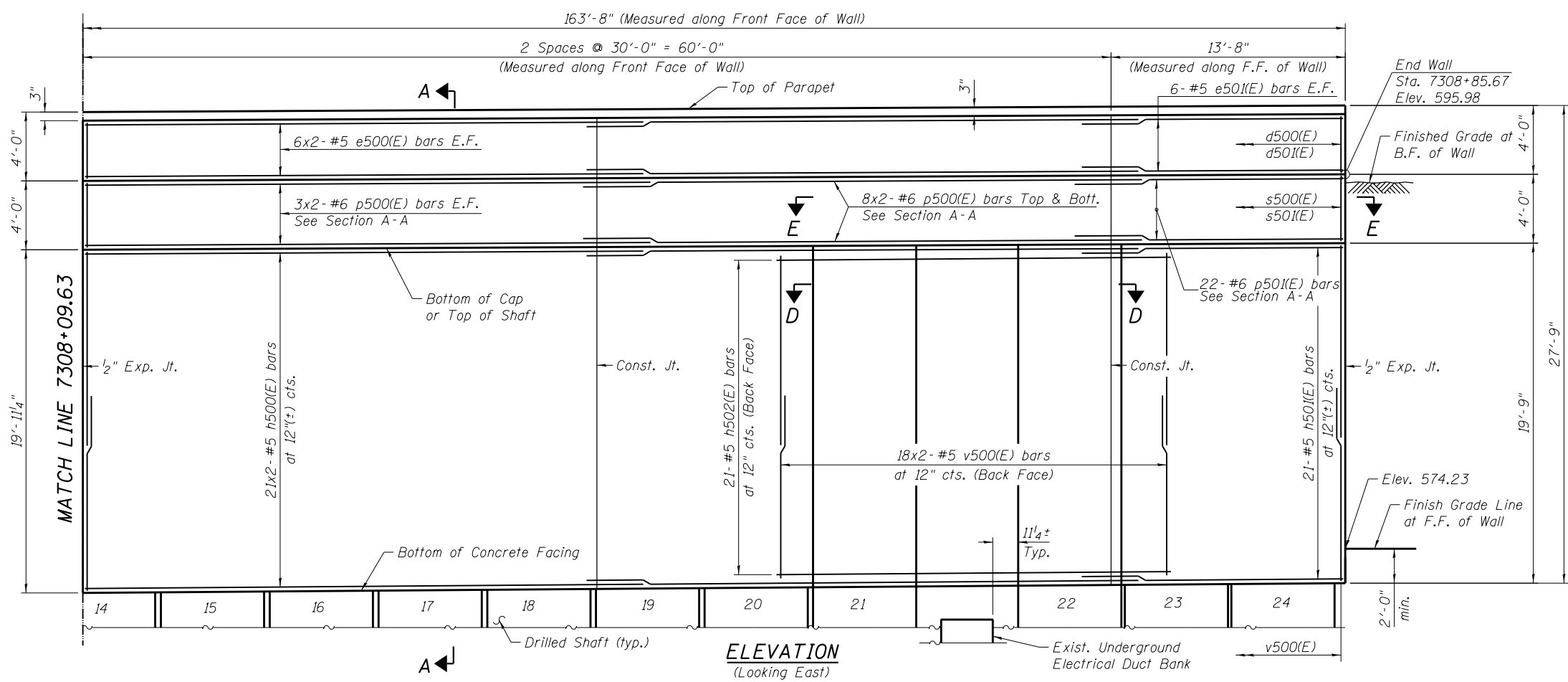
TOTAL BILL OF MATERIAL AND GENRAL NOTES
 STRUCTURE NO. 016-1802

SHEET NO. RW-02 OF RW-08 SHEETS

F.A.I. RTE. 90/94/290	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 454
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	



ELEVATION
(Looking East)



ELEVATION
(Looking East)

NOTE A:

Contractor shall test the Drilled Shaft in accordance with Special Provision for Crosshole Sonic Logging.

NOTES:

1. Work this sheet with Sheet RW-04 & RW-05.
2. Parapet concrete shall be paid for as Concrete Superstructure.
3. Shaft Cap concrete shall be paid for as Concrete Structures.
4. B.F. = Back Face
F.F. = Front Face
E.F. = Each Face

0161802-60W26-503-SuperStruct



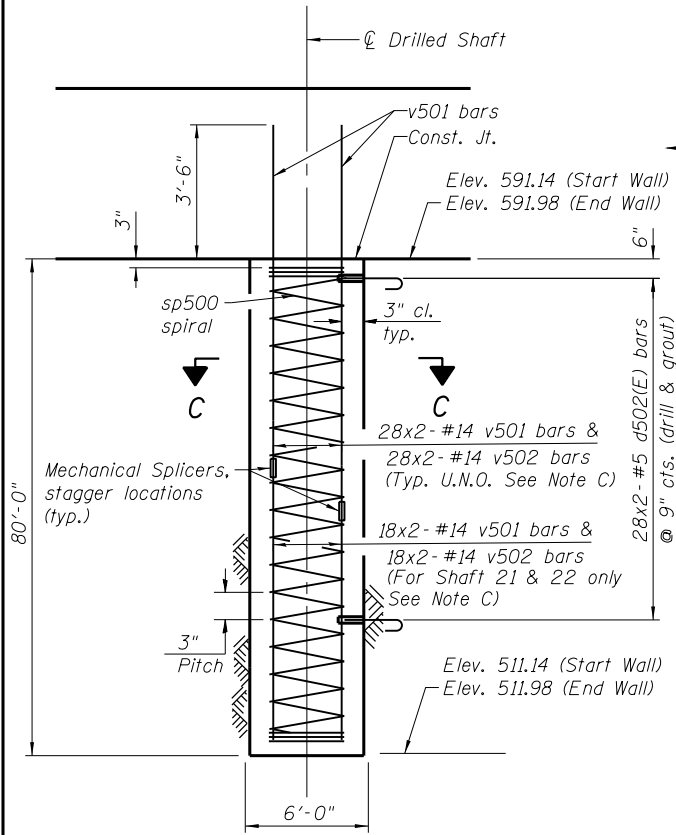
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PLOT SCALE = N.T.S.	CHECKED - ATB	REVISED
PLOT DATE = 9/15/2013	DRAWN - BRD	REVISED
	CHECKED - ATB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

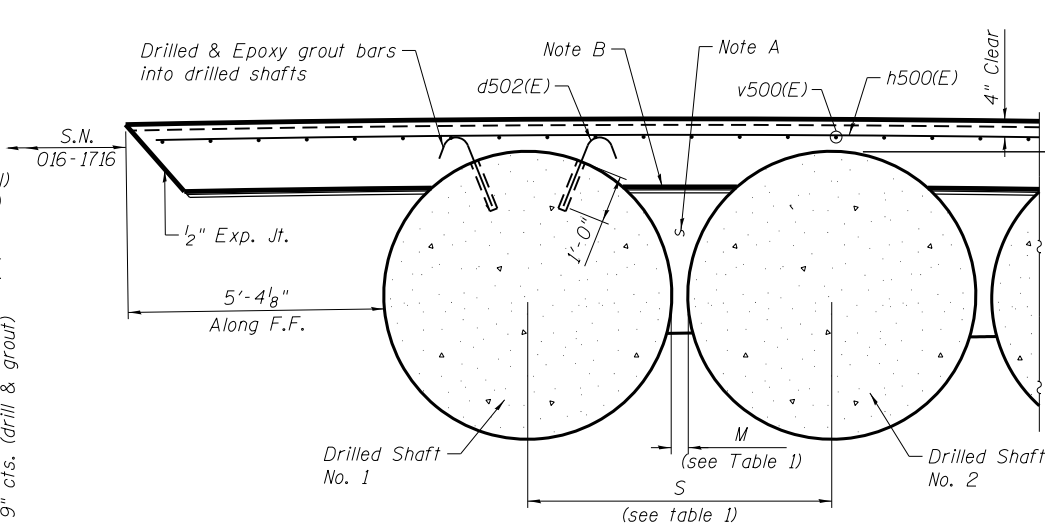
WALL ELEVATION DETAIL
STRUCTURE NO. 016-1802

SHEET NO. RW-03 OF RW-08 SHEETS

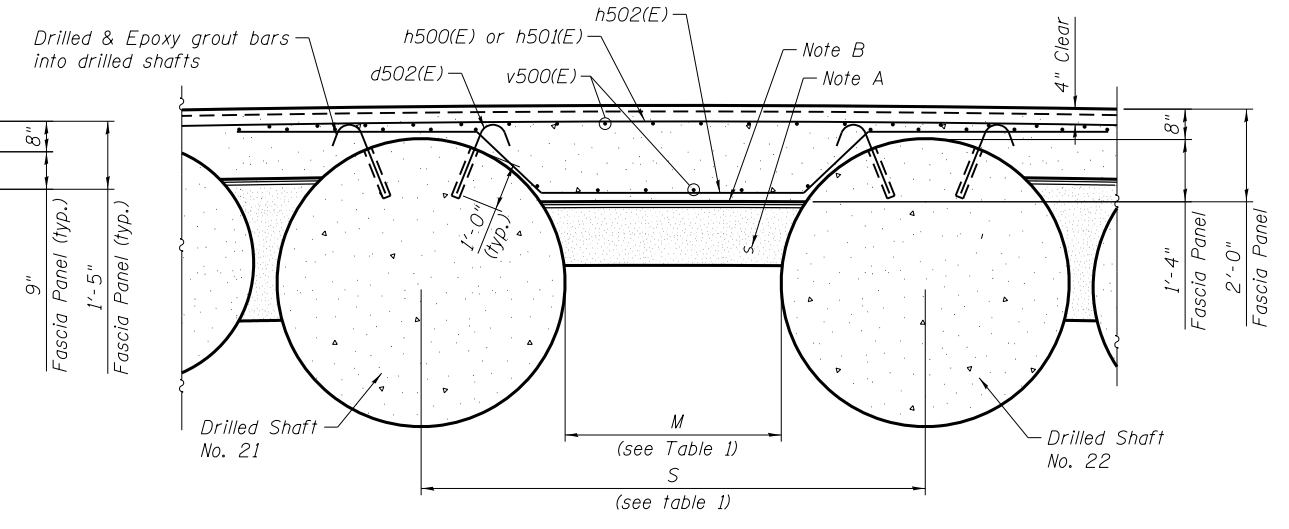
F.A.I. RTE. 90/94/290	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 455
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	



TYPICAL SHAFT ELEVATION



SECTION B-B
(Typical for Shaft 1 thru. 20 & Shaft 23 & 24)
(Shaft rebars are not shown for clarity)



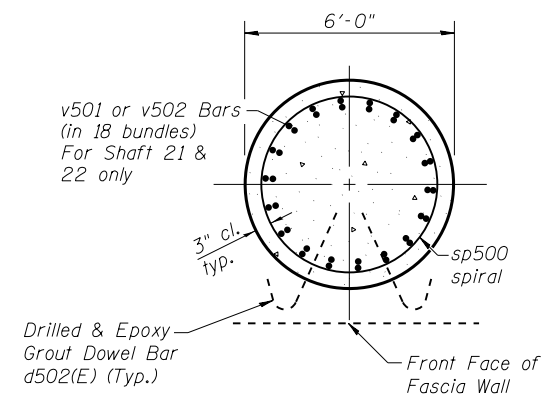
SECTION D-D
(Shaft rebars are not shown for clarity)

TABLE 1

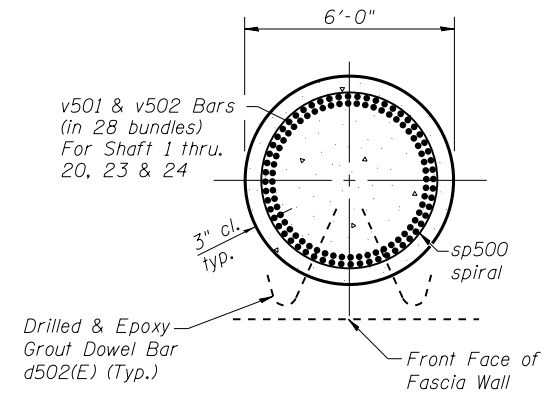
Drilled Shafts	S	M
1-21	6'-4"	4"
21-22	12'-0"	6'-0"
22-24	6'-3"	3"

- Note A**
Remove loose soil on and between the drilled shafts. Place plywood with Geocomposite Wall Drain and backfill voids with dry loose sand.
- Note B**
Plywood backform with Geocomposite Wall Drain attached to the back face, install between Drilled Shafts (typ.). Use dry loose sand as per IDOT Standard Specifications to fill voids between undisturbed soil and Geocomposite Wall Drain. Cost included with Class S1 Concrete Miscellaneous.
- Note C**
Bundle v501 bars with v502 bars.

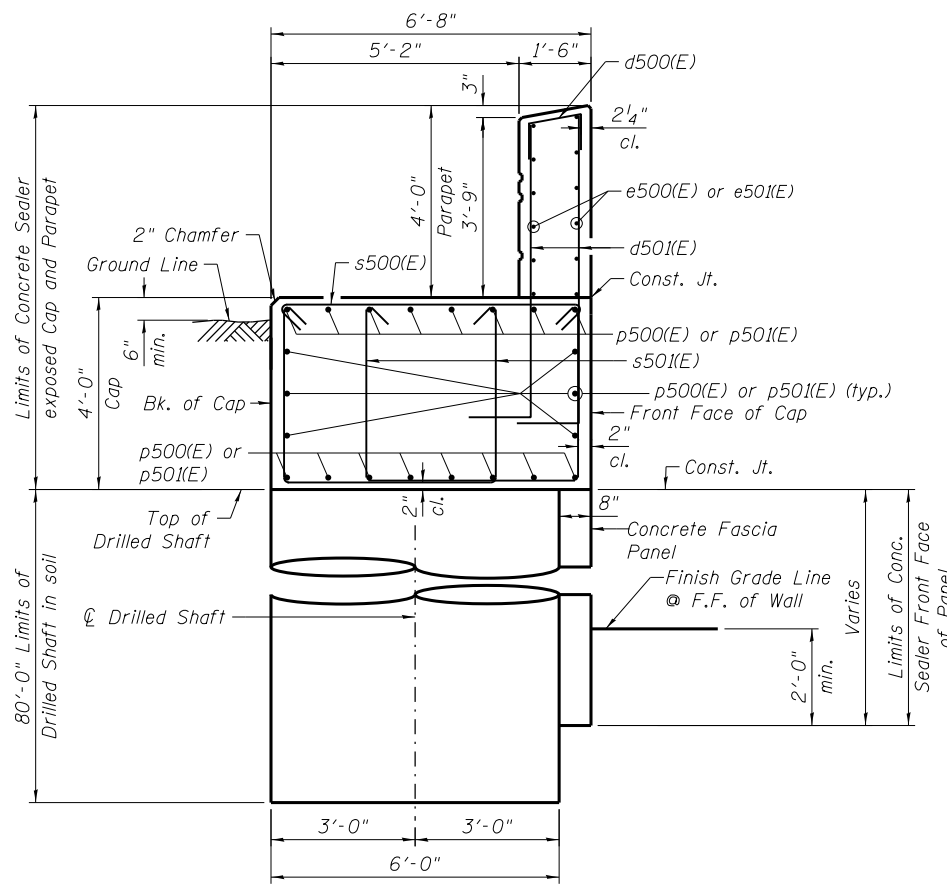
- NOTES**
- When splicing spiral reinforcement is necessary, the spiral shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4 or shall both terminate with a 135° standard hook.
 - Work this sheet with Sheet RW-03 & RW-05.



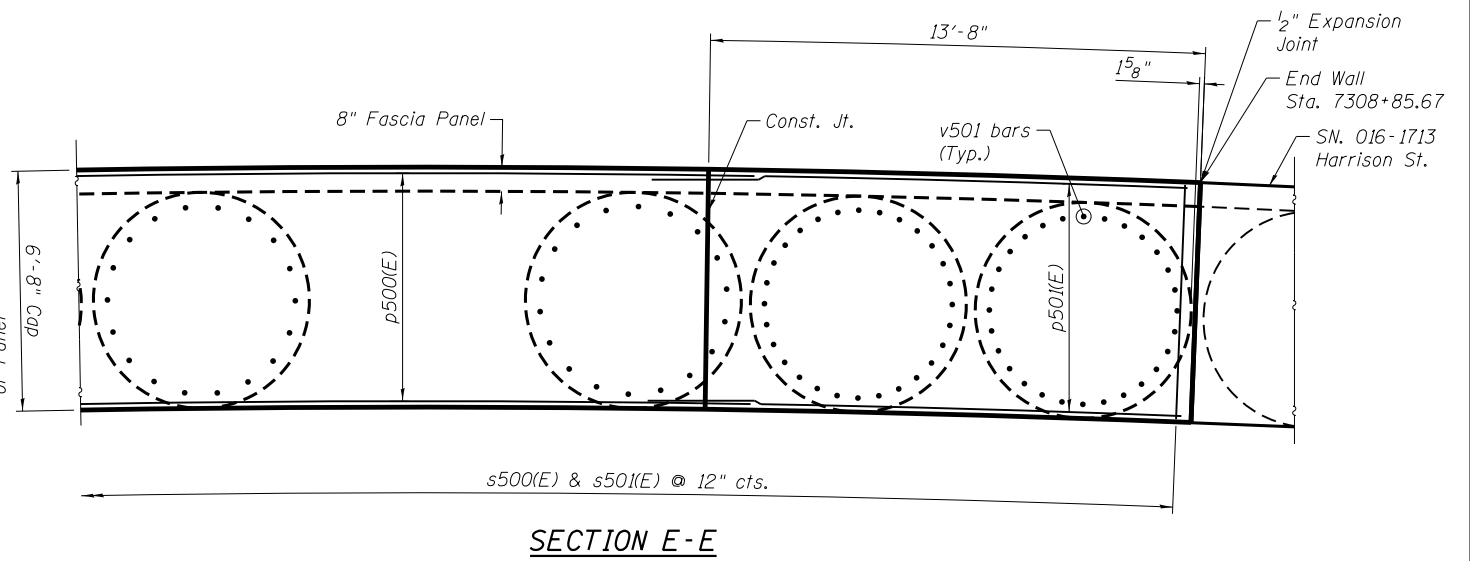
SECTION C-C



SECTION C-C



SECTION A-A



SECTION E-E

TYP. MIN. BAR LAP
(Unless Noted Otherwise)
#5 bar = 3'-3"
#6 bar = 3'-10"

0161802-50W26-504-SuperStruct

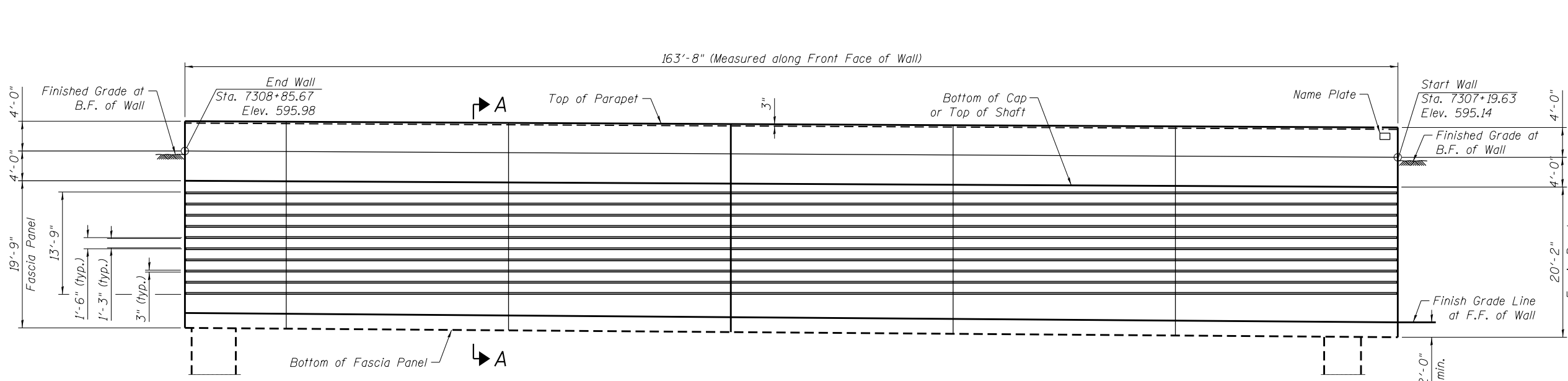


USER NAME = BhattA	DESIGNED - DD	REVISED
PLOT SCALE = N.T.S.	CHECKED - ATB	REVISED
PLOT DATE = 9/15/2013	DRAWN - BRD	REVISED
	CHECKED - ATB	REVISED

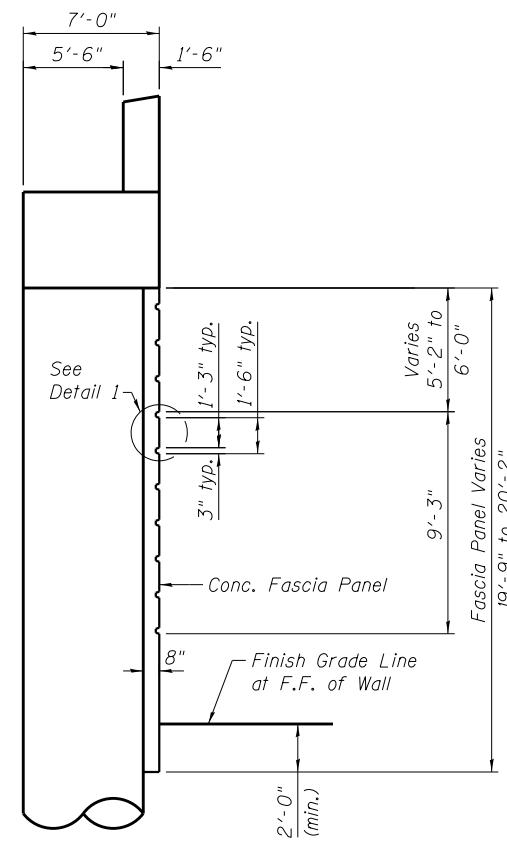
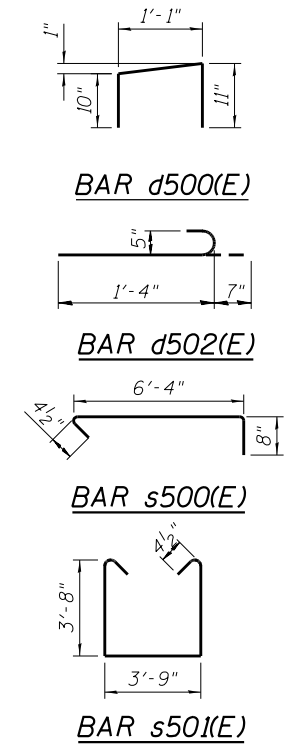
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WALL SECTIONS AND DETAILS
STRUCTURE NO. 016-1802
SHEET NO. RW-04 OF RW-08 SHEETS

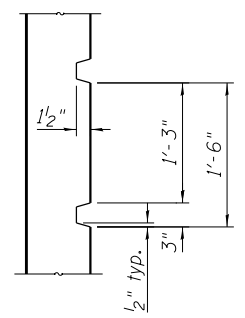
F.A.I. RTE. 90/94/290	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 456
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	



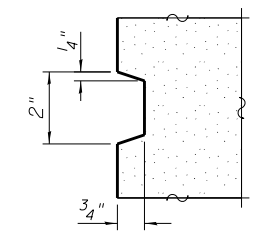
ELEVATION
(Looking West)



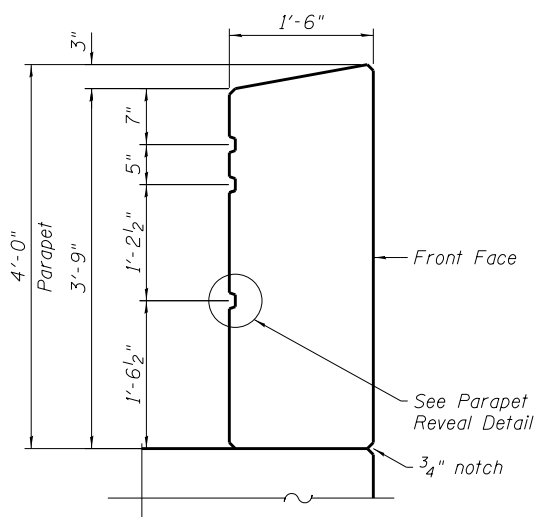
SECTION A-A



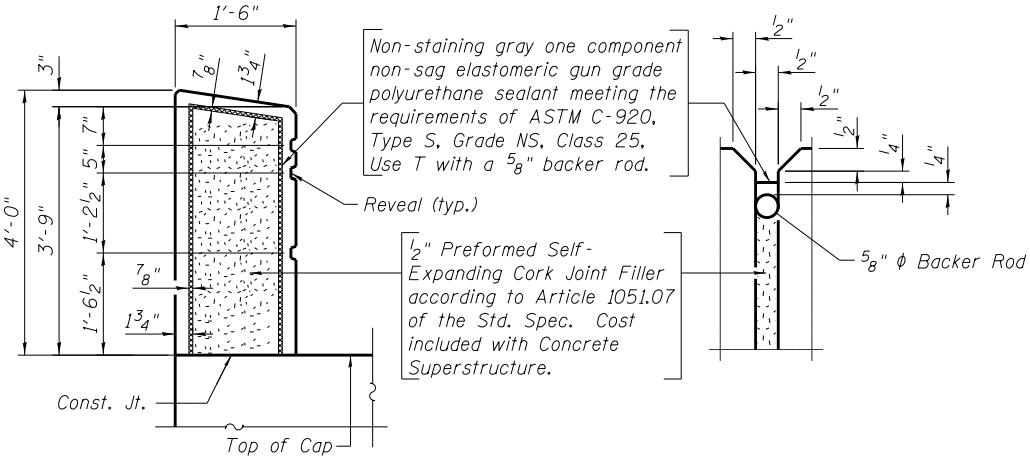
DETAIL 1



PARAPET REVEAL DETAIL



DETAIL 2



PARAPET JOINT DETAILS

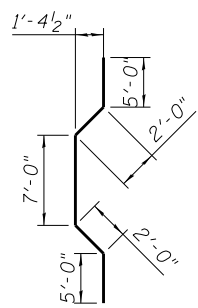
- NOTES:**
- The 3" x 1/2" reveal will not be paid separately and shall be included in the cost of the pay item Class SI Concrete Miscellaneous.
 - Parapet reveal will not be paid separately and shall be included in the cost of pay item Concrete Superstructures.
 - Work this sheet with Sheet RW-03 & RW-04.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d500(E)	164	#5	2'-10"	[Shape]
d501(E)	328	#5	6'-4"	[Shape]
d502(E)	1,512	#5	1'-11"	[Shape]
e500(E)	60	#5	32'-1"	[Shape]
e501(E)	12	#5	15'-8"	[Shape]
h500(E)	105	#5	32'-1"	[Shape]
h501(E)	21	#5	15'-8"	[Shape]
h502(E)	21	#5	21'-0"	[Shape]
p500(E)	110	#6	32'-6"	[Shape]
p501(E)	22	#6	16'-0"	[Shape]
s500(E)	164	#4	7'-4 1/2"	[Shape]
s501(E)	328	#4	11'-10"	[Shape]
sp500	24	#6	79'-9"	[Shape]
v500(E)	364	#5	11'-7"	[Shape]
v501	1304	#14	41'-9"	[Shape]
v502	1304	#14	40'-0"	[Shape]
Structure Excavation		Cu. Yd.	467	
Concrete Structures		Cu. Yd.	162	
Concrete Superstructure		Cu. Yd.	36	
Reinforcement Bars, Epoxy Coated			14,150	
Drilled Shaft In Soil		Cu. Yd.	2,011	
Concrete Sealer		Sq. Ft.	6,363	
Geocomposite Wall Drain		Sq. Yd.	44	
Pipe Underdrain for Structures 4"		Foot	170	
Class SI Concrete Miscellaneous		Cu. Yd.	127	
Crosshole Sonic Logging		Each	1	
Reinforcement Bars		Pound	1,016,700	
Mechanical Splicers		Each	1,304	

* Length is height of spiral
** Shown for information only. Cost included with Class SI Concrete Special (Fascia Wall).

BAR d501(E)



BAR h502(E)

0161802-60W26-505-SuperStruct



USER NAME = dunkerleyb	DESIGNED - DD	REVISED
PLOT SCALE = N.T.S.	CHECKED - ATB	REVISED
PLOT DATE = 9/15/2013	DRAWN - BRD	REVISED
	CHECKED - ATB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARCHITECTURAL DETAILS
STRUCTURE NO. 016-1802

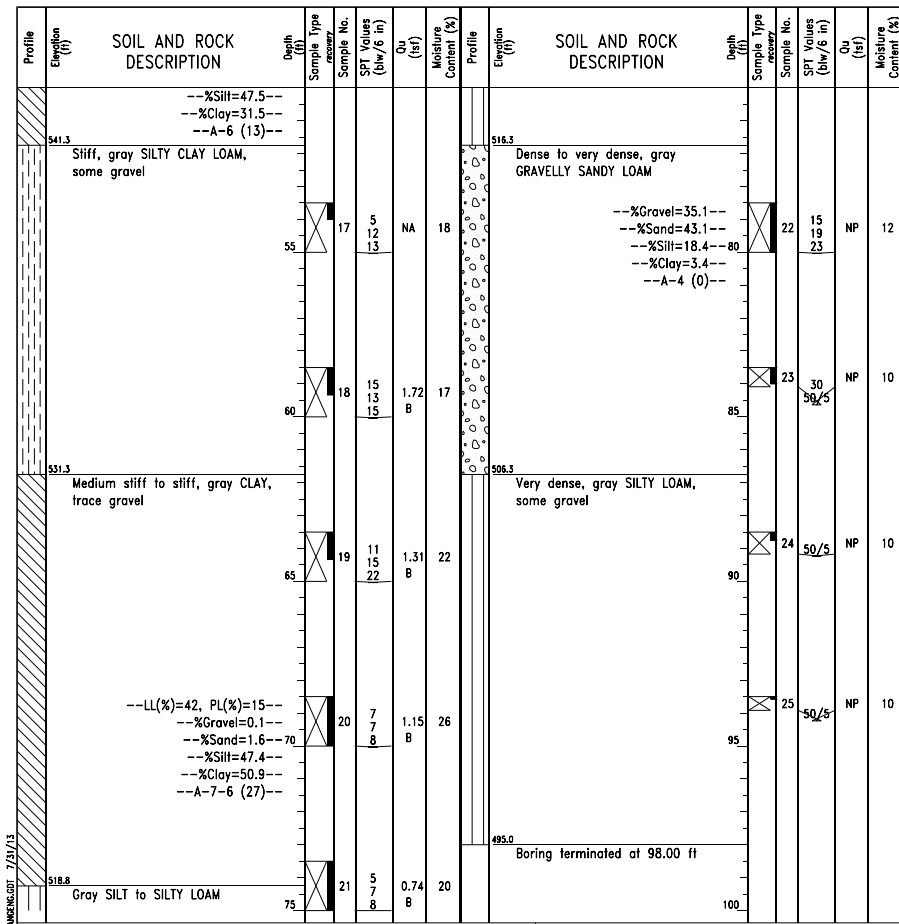
SHEET NO. RW-05 OF RW-08 SHEETS

F.A.I. RTE. 90/94/290	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 457
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	

Wang Engineering
 wangeng@wangeng.com
 1145 N Main Street
 Lombard, IL 60148
 Telephone: 630 953-9928
 Fax: 630 953-9938

BORING LOG 13-RWB-02 Page 2 of 2
 WEI Job No.: 1100-04-01
 Client: AECOM
 Project: Circle Interchange Reconstruction
 Location: Sections 16 and 17, T39N, R14E of 3rd PM

Datum: NGVD
 Elevation: 593.02 ft
 North: 1897654.41 ft
 East: 1171195.41 ft
 Station: 7307+69.61
 Offset: 28.9060 RT

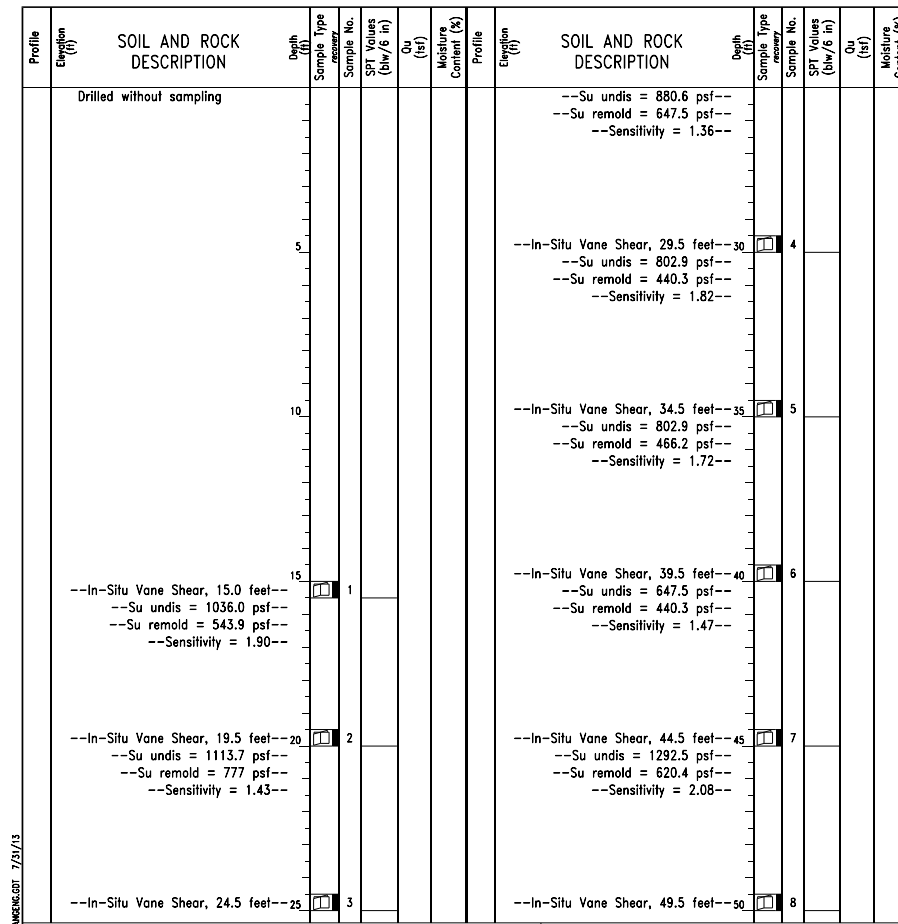


GENERAL NOTES			WATER LEVEL DATA		
Begin Drilling	06-26-2013	Complete Drilling	04-16-2013	While Drilling	NA
Drilling Contractor	Wang Testing Services	Drill Rig	D-25 ATV	At Completion of Drilling	NA
Driller	P&N	Logger	A. Tomaras	Time After Drilling	NA
Checked by	C. Marin	Drilling Method	2.25" HSA to 16', Mud Rotary 16' thereafter, boring backfilled upon completion	Depth to Water	NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

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BORING LOG 13-RWB-03 Page 1 of 3
 WEI Job No.: 1100-04-01
 Client: AECOM
 Project: Circle Interchange Reconstruction
 Location: Sections 16 and 17, T39N, R14E of 3rd PM

Datum: NGVD
 Elevation: 593.23 ft
 North: 1897624.69 ft
 East: 1171234.97 ft
 Station: 7308+20.74
 Offset: 20.9635 RT

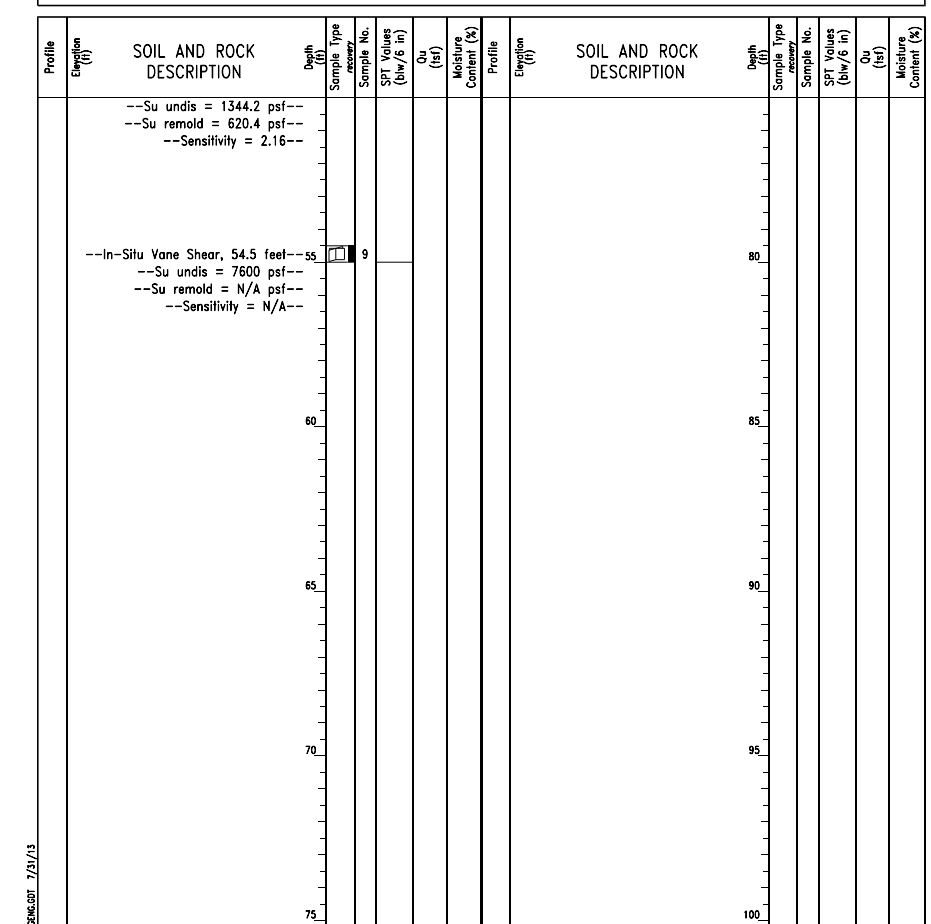


GENERAL NOTES			WATER LEVEL DATA		
Begin Drilling	07-02-2013	Complete Drilling	07-03-2013	While Drilling	NA
Drilling Contractor	Wang Testing Services	Drill Rig	CME-55 TMR	At Completion of Drilling	NA
Driller	R&J	Logger	D. Kolpacki	Time After Drilling	NA
Checked by	C. Marin	Drilling Method	2.25" HSA to 13', Mud Rotary 13' thereafter, boring backfilled upon completion	Depth to Water	NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

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BORING LOG 13-RWB-03 Page 2 of 3
 WEI Job No.: 1100-04-01
 Client: AECOM
 Project: Circle Interchange Reconstruction
 Location: Sections 16 and 17, T39N, R14E of 3rd PM

Datum: NGVD
 Elevation: 593.23 ft
 North: 1897624.69 ft
 East: 1171234.97 ft
 Station: 7308+20.74
 Offset: 20.9635 RT



GENERAL NOTES			WATER LEVEL DATA		
Begin Drilling	07-02-2013	Complete Drilling	07-03-2013	While Drilling	NA
Drilling Contractor	Wang Testing Services	Drill Rig	CME-55 TMR	At Completion of Drilling	NA
Driller	R&J	Logger	D. Kolpacki	Time After Drilling	NA
Checked by	C. Marin	Drilling Method	2.25" HSA to 13', Mud Rotary 13' thereafter, boring backfilled upon completion	Depth to Water	NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.					

0161802-60W26-507-Boring




USER NAME = dunkerleyb	DESIGNED - DD	REVISED
PLOT SCALE = N.T.S.	CHECKED - ATB	REVISED
PLOT DATE = 9/15/2013	DRAWN - BRD	REVISED
	CHECKED - ATB	REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BORING LOGS II
STRUCTURE NO. 016-1802
 SHEET NO. RW-07 OF RW-08 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-008R	COOK	559	459
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				

 Wang Engineering wangeng@wangeng.com 1145 N Main Street Lombard, IL 60148 Telephone: 630 953-9928 Fax: 630 953-9938	BORING LOG 13-RWB-03		Page 3 of 3
	WEI Job No.: 1100-04-01		Datum: NGVD
	Client: AECOM	Project: Circle Interchange Reconstruction	Elevation: 593.23 ft
	Location: Sections 16 and 17, T39N, R14E of 3rd PM		North: 1897624.69 ft East: 1171234.97 ft Station: 7308+20.74 Offset: 20.9635 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	SPT Values (blows/6 in)	Qu (tsf)	Moisture Content (%)
488.2	Strong, fair rock quality, light gray, fresh, slightly fractured, joint breaks with little to no infill, slightly vuggy DOLOSTONE Run#1: 104 to 114 feet --RECOVERY=100%-- --RQD=66%-- --RQD Top 5' = 56%-- --RQD Bottom 5' = 75%-- Qu = 13,410 psi	105	1		NP									
		110												
478.2	Boring terminated at 114.00 ft	115												
		120												
		125												

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	07-02-2013	Complete Drilling	07-03-2013	White Drilling	<input checked="" type="checkbox"/>	NA	
Drilling Contractor	Wang Testing Services	Drill Rig	CME-55 TMR	At Completion of Drilling	<input checked="" type="checkbox"/>	NA	
Driller	R&J	Logger	D. Kolpacki	Checked by	C. Marin		
Drilling Method	2.25" HSA to 13', Mud Rotary 13' thereafter, boring backfilled upon completion			Time After Drilling	NA		
				Depth to Water	<input checked="" type="checkbox"/>	NA	
				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

0161802-60W26-508-Boring



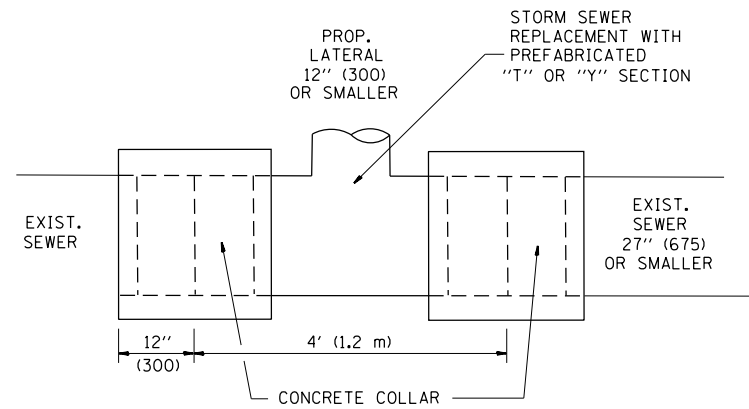
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PLOT SCALE = N.T.S.	CHECKED - ATB	REVISED
PLOT DATE = 9/15/2013	DRAWN - BRD	REVISED
	CHECKED - ATB	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BORING LOGS III
STRUCTURE NO. 016-1802**

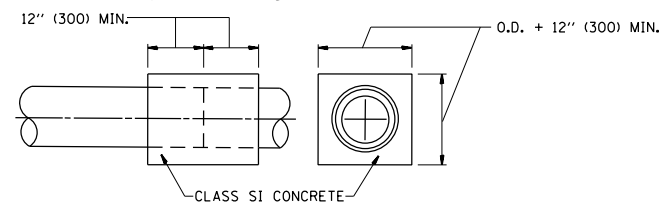
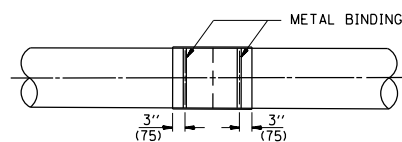
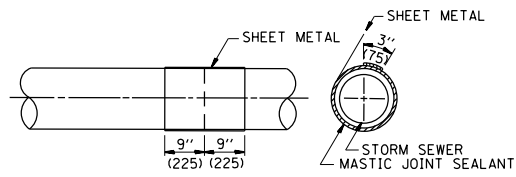
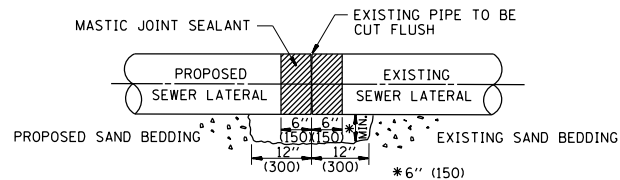
SHEET NO. RW-08 OF RW-08 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-008R	COOK	559	460
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				



DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER



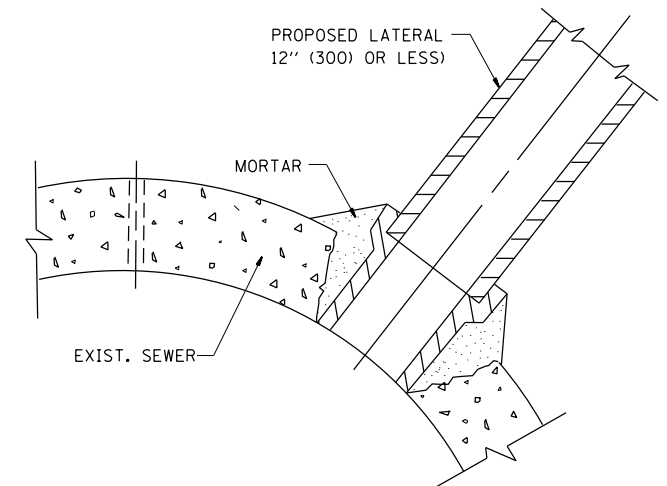
DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

- CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
- APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
- BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12" x 6" (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
- CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
- WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
- LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
- PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
- WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
- PLACE CLASS SI CONCRETE AROUND THE JOINT.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.



DETAIL "C"

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

- THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
 - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
 - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS. THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

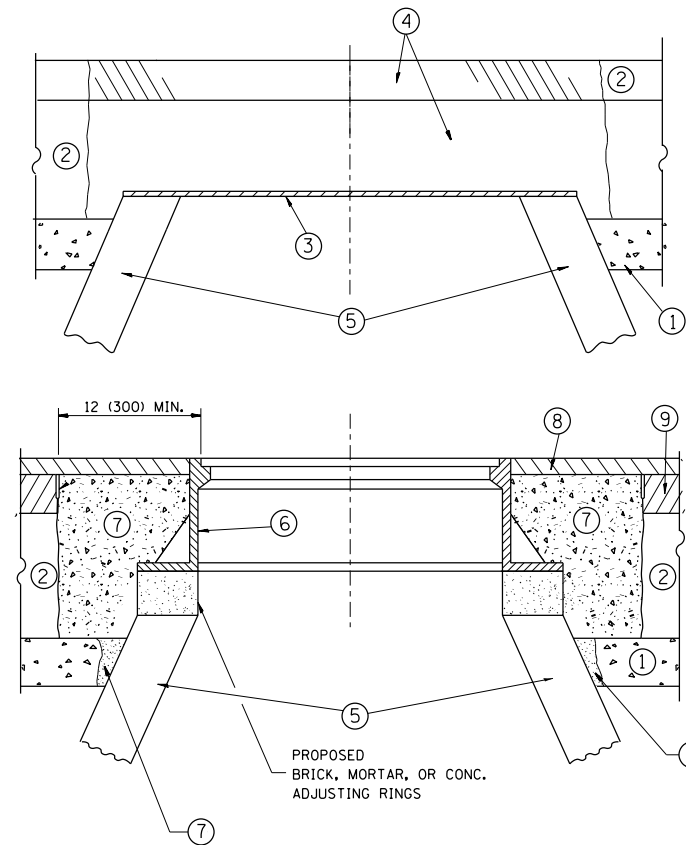
CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

FILE NAME =	USER NAME = ougeungh	DESIGNED - M. DE YONG	REVISED - M. DE YONG 05-08-92
pw:\388039-pwintl\ecomonline\local\pwae\000\Documents\01 Americas\Transportation\000\Drawn Circle\Phase II\000\CAD\006\Road\REVISED\60W26\COOK\09-08-94\HT-D\Detail-01-(BD-7).dgn		DRAWN - R. SHAH 10-25-94	REVISED - R. SHAH 06-12-96
	PLOT SCALE = 50.000' / in.	CHECKED -	REVISED - R. SHAH 10-25-94
	PLOT DATE = 8/16/2013	DATE - 07-25-90	REVISED - R. SHAH 06-12-96

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER	
SCALE: NONE	SHEET NO. 1 OF 27 SHEETS
STA.	TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2013-008R	COOK	559	461
BD500-01 (BD-7)		CONTRACT NO. 60W26		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



CONSTRUCTION PROCEDURES

STAGE 1 (BEFORE PAVEMENT MILLING)

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

* UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

LEGEND

- ① SUB-BASE GRANULAR MATERIAL
- ② EXISTING PAVEMENT
- ③ 36 (900) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS PP-1* CONCRETE
- ⑧ PROPOSED HMA SURFACE COURSE
- ⑨ PROPOSED HMA BINDER COURSE

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT:

REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

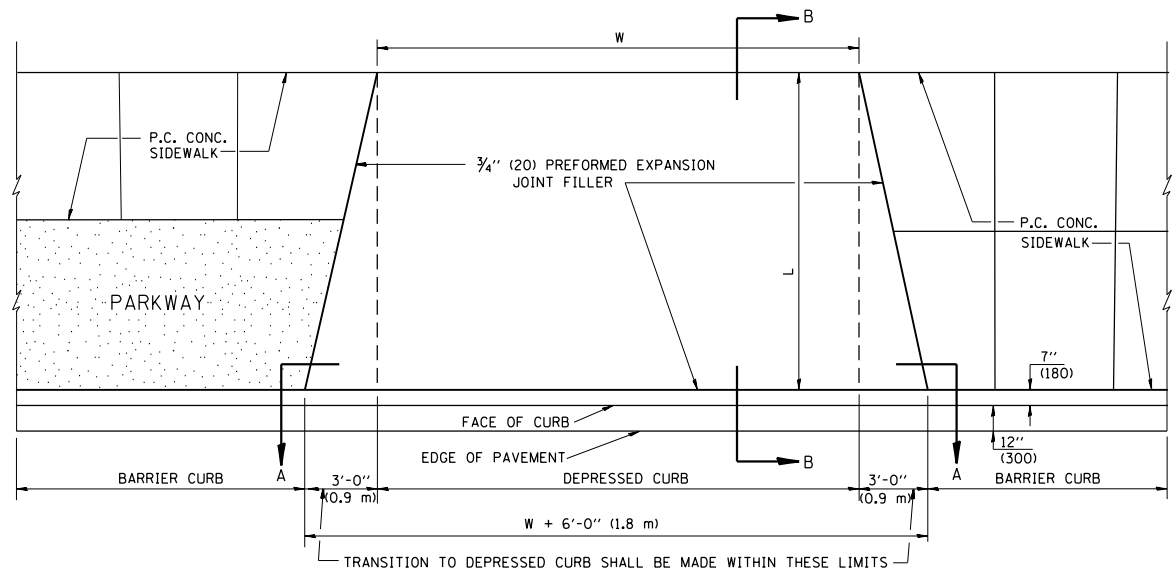
THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

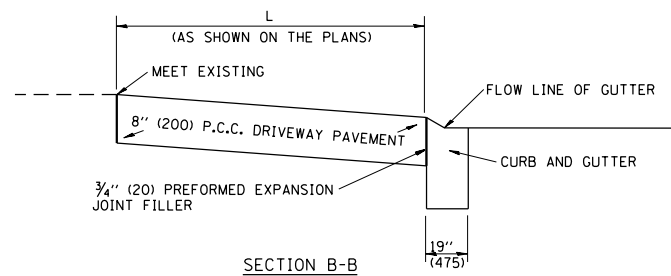
FILE NAME =	USER NAME = ougeungh	DESIGNED - R. SHAH	REVISED - R. WIEDEMAN 05-14-04	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING			F.A.I. R.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\388039-pwintl\ecomonline.local\PWAE	COM\Documents\01 Americas\Transportation	DRAWN CirclePhase.II\000.CAD\006.Road	REVISED - R. BORO 03-09-11		SCALE: NONE	SHEET NO. 2 OF 27 SHEETS	STA.	TO STA.	2013-008R	COOK	559	462
	PLOT SCALE = 49.9999' / in.	CHECKED -	REVISED - R. BORO 12-06-11		BD600-03 (BD-8)		CONTRACT NO. 60W26		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			



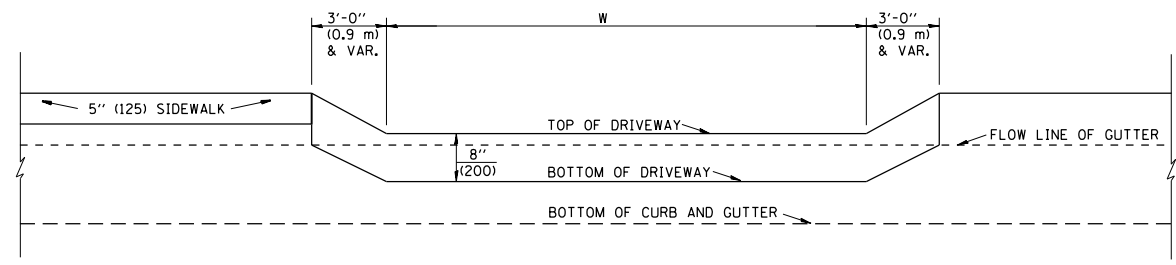
PLAN VIEW

NOTES:

1. EXPANSION JOINTS SHALL BE CONSTRUCTED AS SHOWN ON THE DETAILS FOR P.C.C. SIDEWALK.
2. THE CURB BETWEEN ADJACENT DRIVEWAYS SHALL BE FULL HEIGHT FOR A DISTANCE OF AT LEAST FOUR FEET (1.2 METERS)
3. P.C. CONCRETE DRIVEWAYS SHALL BE CONSTRUCTED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
4. 3/4" (20) PREFORMED EXPANSION JOINTS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO P.C.C. DRIVEWAY PAVEMENT 8" (200).
5. COMBINATION CONC. CURB AND GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE TRANSITION CURB AND GUTTER.

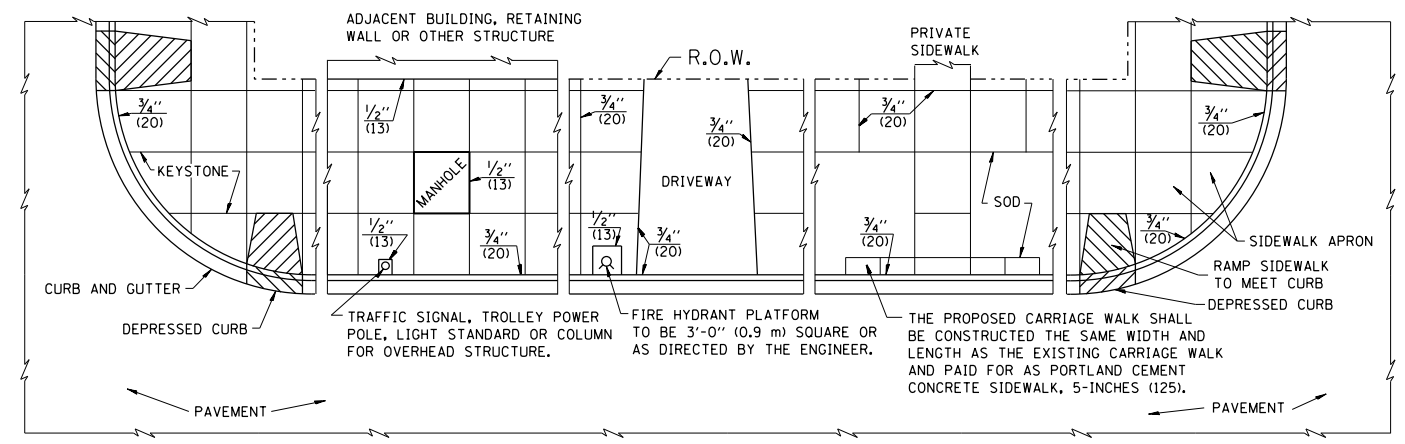


SECTION B-B



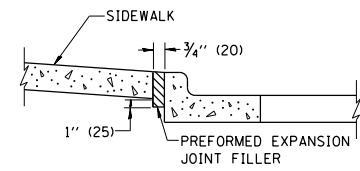
SECTION A-A

P.C.C. DRIVEWAY PAVEMENT DETAIL



NOTES:

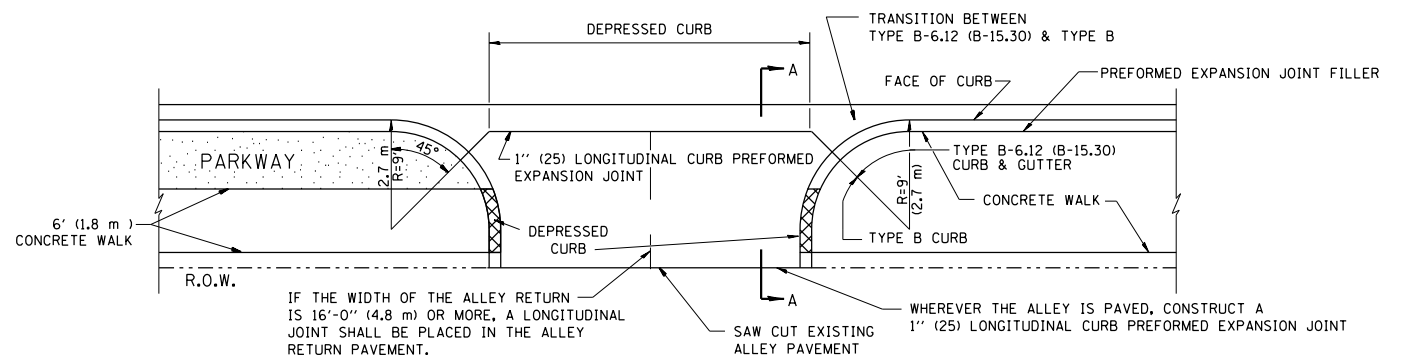
1. ONE-HALF INCH THICK EXPANSION JOINTS SHALL BE PLACED BETWEEN THE SIDEWALK AND ALL STRUCTURES SUCH AS LIGHT STANDARDS, TRAFFIC LIGHT STANDARDS, MANHOLES, WHICH EXTEND THROUGH THE SIDEWALK.
2. 3/4" (20) THICK EXPANSION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 100 FEET (30 METERS) IN THE SIDEWALK, WHERE THE SIDEWALK IS CONSTRUCTED ADJACENT TO PAVEMENT OR CURB HAVING EXPANSION JOINTS, THE EXPANSION JOINTS IN THE SIDEWALK SHALL BE PLACED OPPOSITE THE EXISTING EXPANSION JOINTS AS NEARLY AS PRACTICABLE. EXPANSION JOINTS SHALL ALSO BE PLACED WHERE THE SIDEWALK ABUTS EXISTING SIDEWALKS, BETWEEN DRIVEWAY PAVEMENT AND SIDEWALK, AND BETWEEN SIDEWALK AND CURBS WHERE THE SIDEWALK ABUTS A CURB.



SLOPE FOR SIDEWALK
1" (25) IN 3'-0" (0.9 m) IN CHICAGO

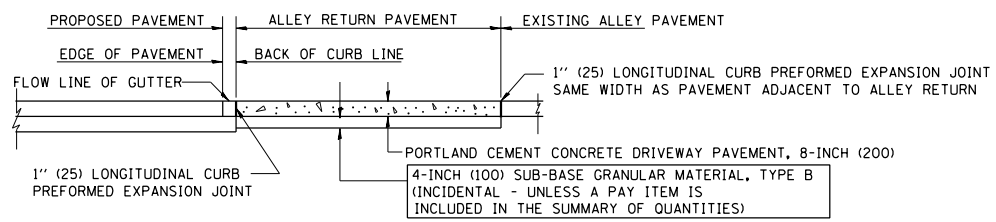
PORTLAND CEMENT CONCRETE SIDEWALK DETAILS

NOTES: NO EXTRA COMPENSATION SHALL BE ALLOWED FOR THE GUTTER FLARE

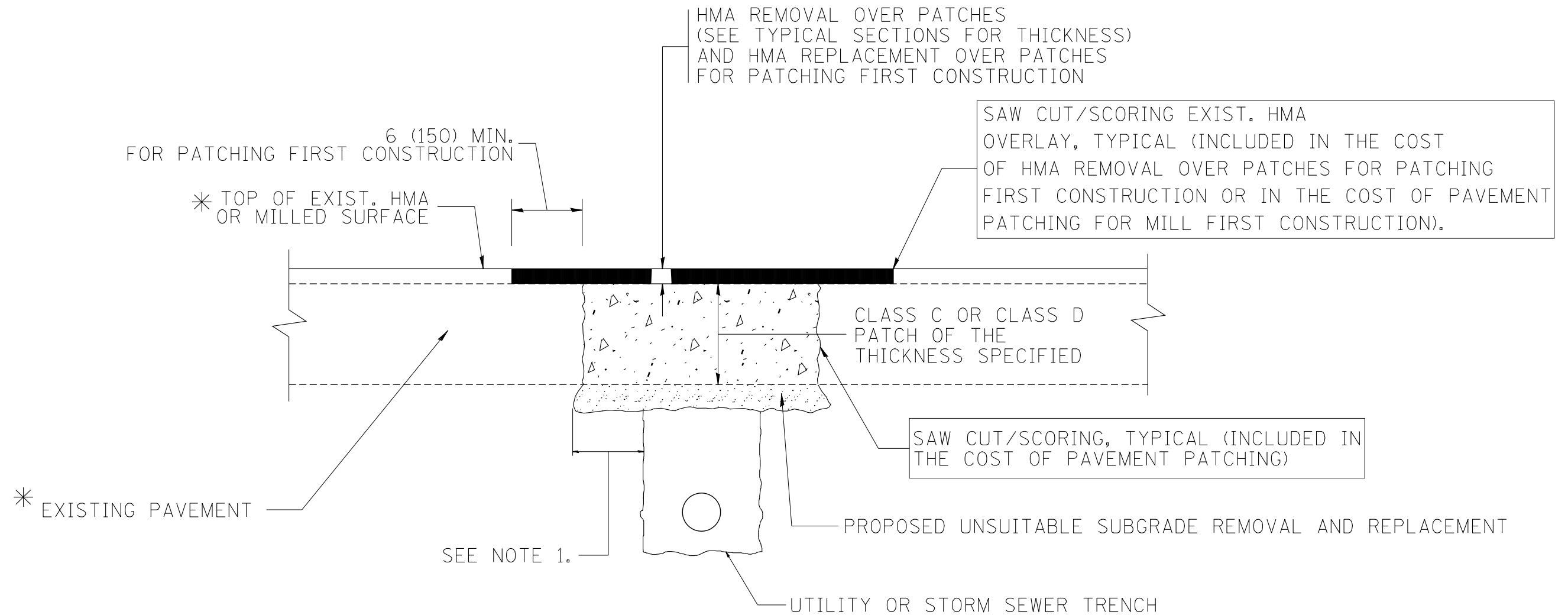


SECTION A-A

ALLEY RETURN DETAIL



ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = c:\projects\diststd22x34\bd22.dgn	USER NAME = bauerdl	DESIGNED - R. SHAH	REVISED - A. ABBAS 04-27-98
		DRAWN -	REVISED - R. BORO 01-01-07
		PLOT SCALE = 50.000' / IN.	REVISED - R. BORO 09-04-07
		PLOT DATE = 10/27/2008	REVISED - K. ENG 10-27-08

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS
STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			559	464
BD400-04 (BD-22)		CONTRACT NO.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

VARIABLE - TO MEET EXISTING DIMENSIONS AND FIELD CONDITIONS (SEE NOTE ②)

PROP. CONC. CURB OR CURB AND GUTTER REPLACEMENT IN ACCORDANCE WITH STATE STANDARD 606001. (SEE NOTE ②)

SAW CUT FULL DEPTH - INCLUDED IN THE COST OF SIDEWALK, DRIVEWAY OR MEDIAN SURFACE REMOVAL PAY ITEM.

EXISTING SIDEWALK, DRIVEWAY, MEDIAN SURFACE, SOD OR GROUND.

PROPOSED SIDEWALK, DRIVEWAY PAVEMENT, MEDIAN SURFACE OR SODDING SALT TOLERANT WITH TOP SOIL, 4" (100) SOD RESTORATION (SEE NOTE ①).

SUITABLE BACKFILL MATERIAL (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT)

PROPOSED 3/4" (20) PREFORMED EXPANSION JOINT AT CONCRETE SIDEWALKS, DRIVEWAYS, AND MEDIANS. (INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.)

UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.

REMOVAL AND REPLACEMENT 4" (100) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

REMOVAL AND REPLACEMENT IN EXCESS OF 4" (100) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

PROPOSED #6 (20) EPOXY COATED TIE BARS 24" (600) LONG AT 24" (600) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

BASIS OF PAYMENT:
THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "CURB REMOVAL AND REPLACEMENT" OR "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT".

SEE STATE STANDARD 606001
EXISTING OR PROPOSED HMA SURFACE (IF APPLICABLE)

1/4" (5) **

18" (450) MAX.

T/2 *

3" (75) MIN.

EXISTING CONCRETE PAVEMENT, CONCRETE BASE COURSE OR FLEXIBLE PAVEMENT

* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

** IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

NOTE: ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.

SODDING, SALT TOLERANT AND TOP SOIL, FURNISH AND PLACE 4" WILL BE PAID FOR SEPARATELY.

② FERTILIZER FOR THE PLACEMENT OF THE SOD IS NOT REQUIRED

③ CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.

④ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.

⑤ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

⑥ THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.

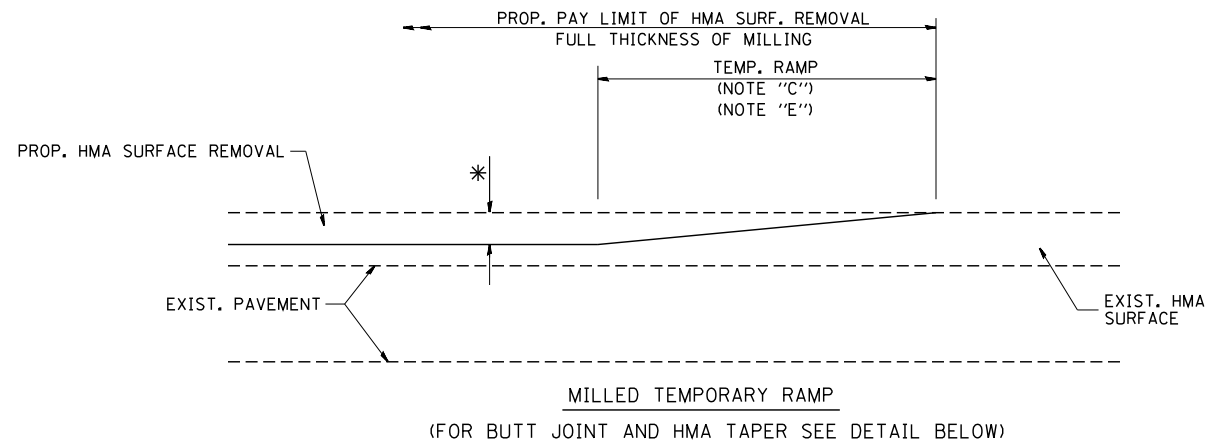
⑦ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.

⑧ THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

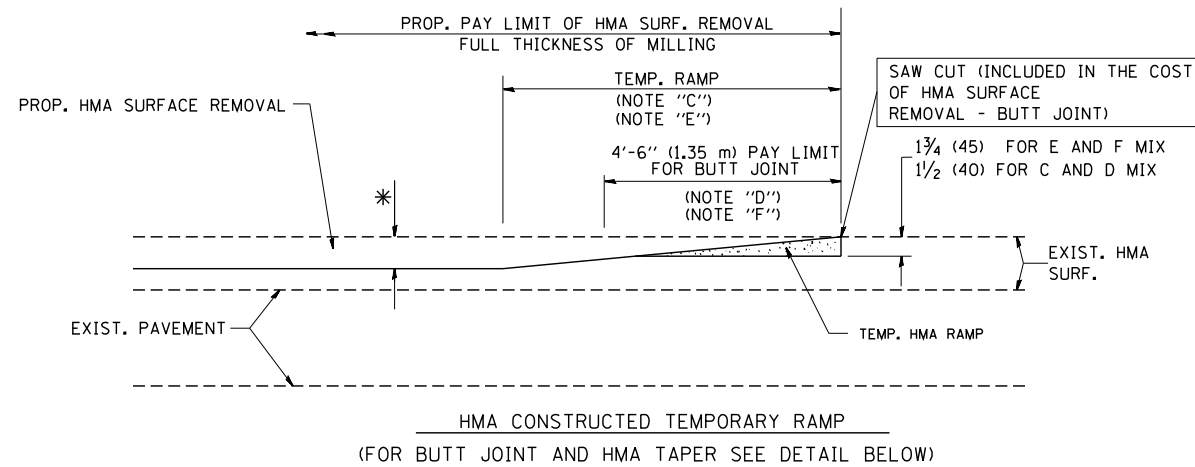
CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME =	USER NAME = ougeungh	DESIGNED - A. HOUSEH	REVISED - R. SHAH 10-03-96	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\388039-pwintl.eocom\lne.local\PWAE	COMMENTS: 01 Americas\Transportation\	DRAWN Circle\Phase.II\000.CAD\006.Road	REVISED - M. GOMEZ 01-22-01			•	2013-008R	COOK	559	465
	PLOT SCALE = 50.000' / in.	CHECKED -	REVISED - R. BORO 12-15-09			BD600-06 (BD-24)		CONTRACT NO. 60W26		
	PLOT DATE = 8/16/2013	DATE - 03-11-94		SCALE: NONE	SHEET NO. 5 OF 27 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

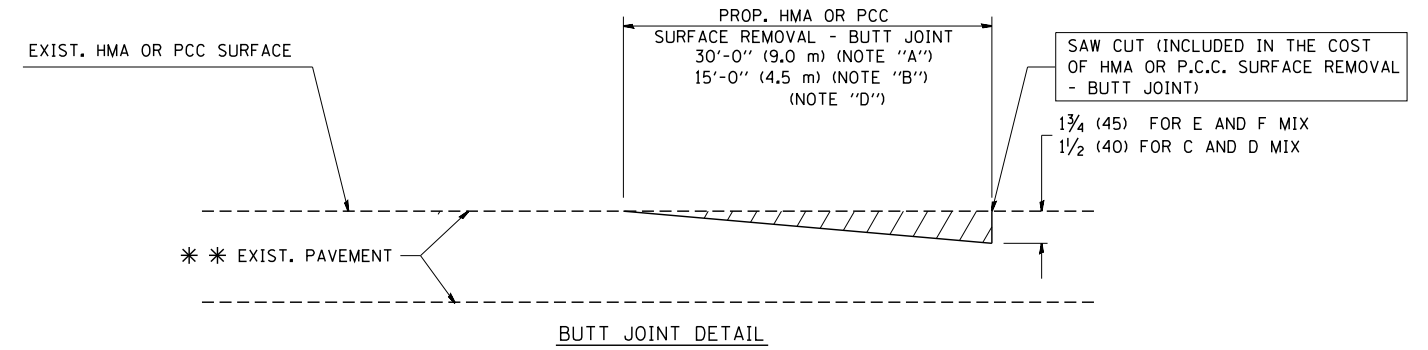


OPTION 1

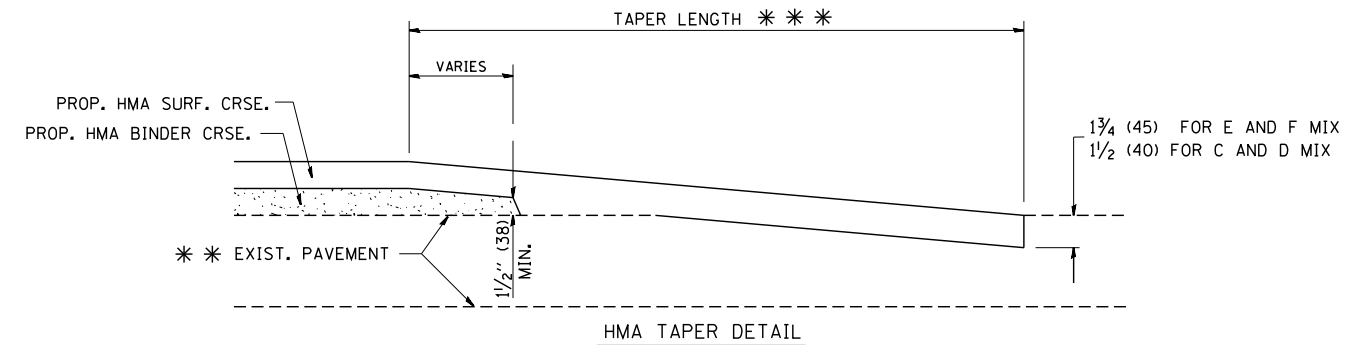


OPTION 2

TYPICAL TEMPORARY RAMP



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

*** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

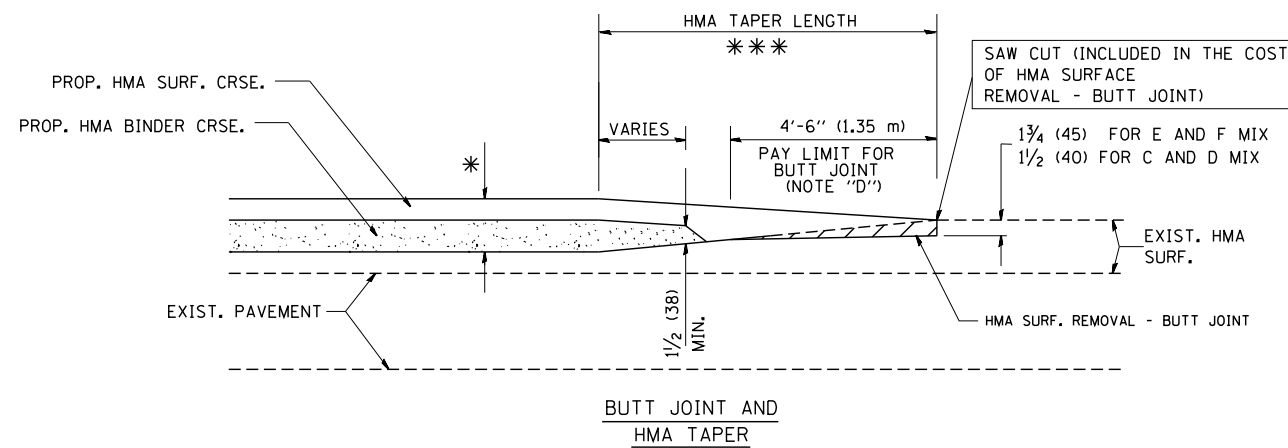
NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
 - B: MINOR SIDE ROADS.
 - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
 - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
 - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
 - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.



TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

FILE NAME = W:\diststd\22x34\bd32.dgn	USER NAME = gaglionobt	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
		DRAWN -	REVISED - A. ABBAS 03-21-97
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED - M. GOMEZ 04-06-01
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

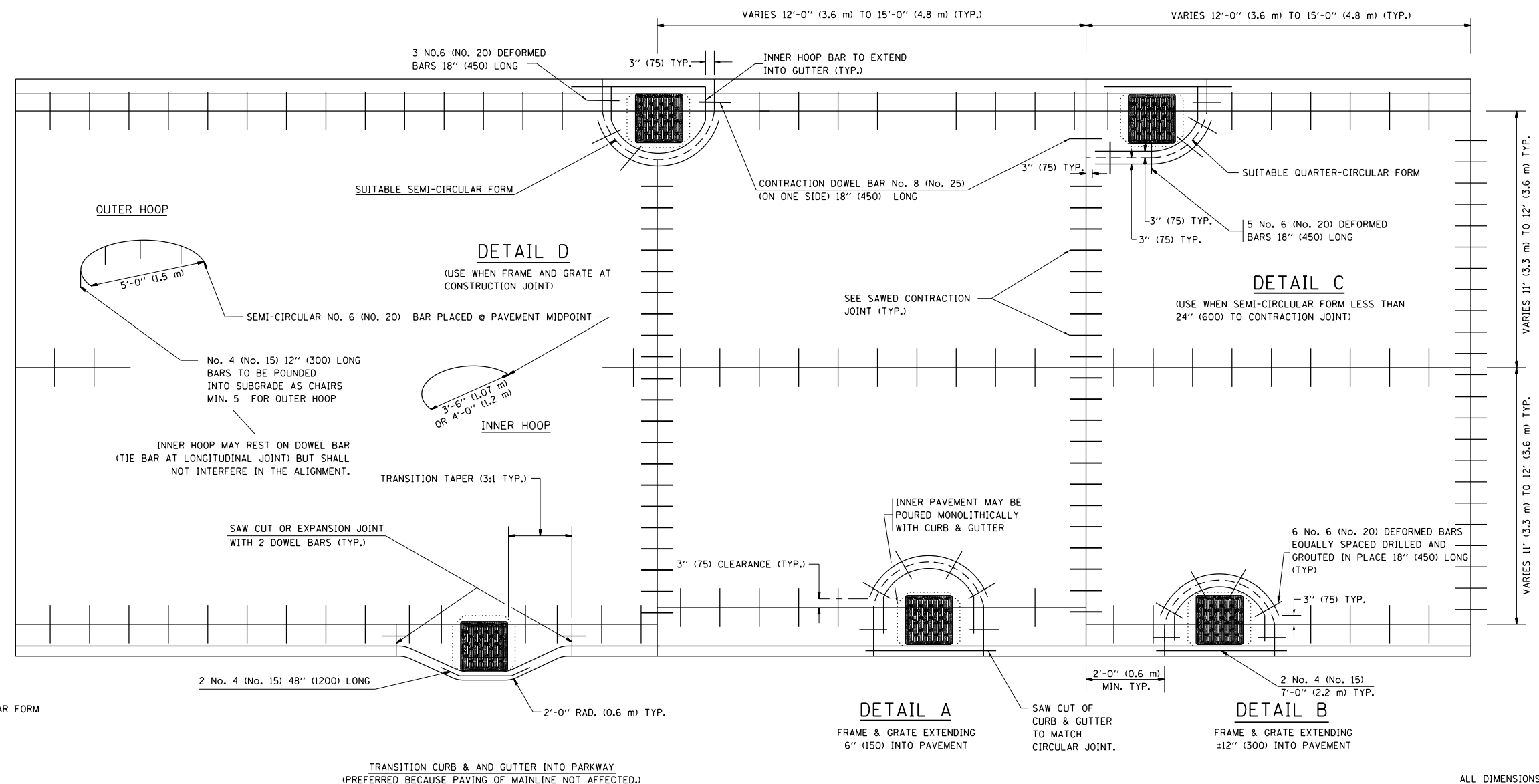
BUTT JOINT AND HMA TAPER DETAILS	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS
STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			559	466
BD400-05 BD32		CONTRACT NO.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

FRAME EXTENSION INTO PAVEMENT	INNER HOOP REINFORCEMENT DIAMETER	SEMI CIRCULAR FORM DIAMETER	OUTER HOOP REINFORCEMENT DIAMETER
UP TO 8" (200)	3'-6" (1.1 m)	4'-0" (1.2 m)	5'-0" (1.5 m)
> 8" (200) TO 14" (360)	4'-0" (1.2 m)	4'-6" (1.4 m)	5'-0" (1.5 m)

DESIGNER NOTE:
THIS DETAIL IS TO BE USED
WHEN THE GUTTER FLAG IS
LESS THAN 24"

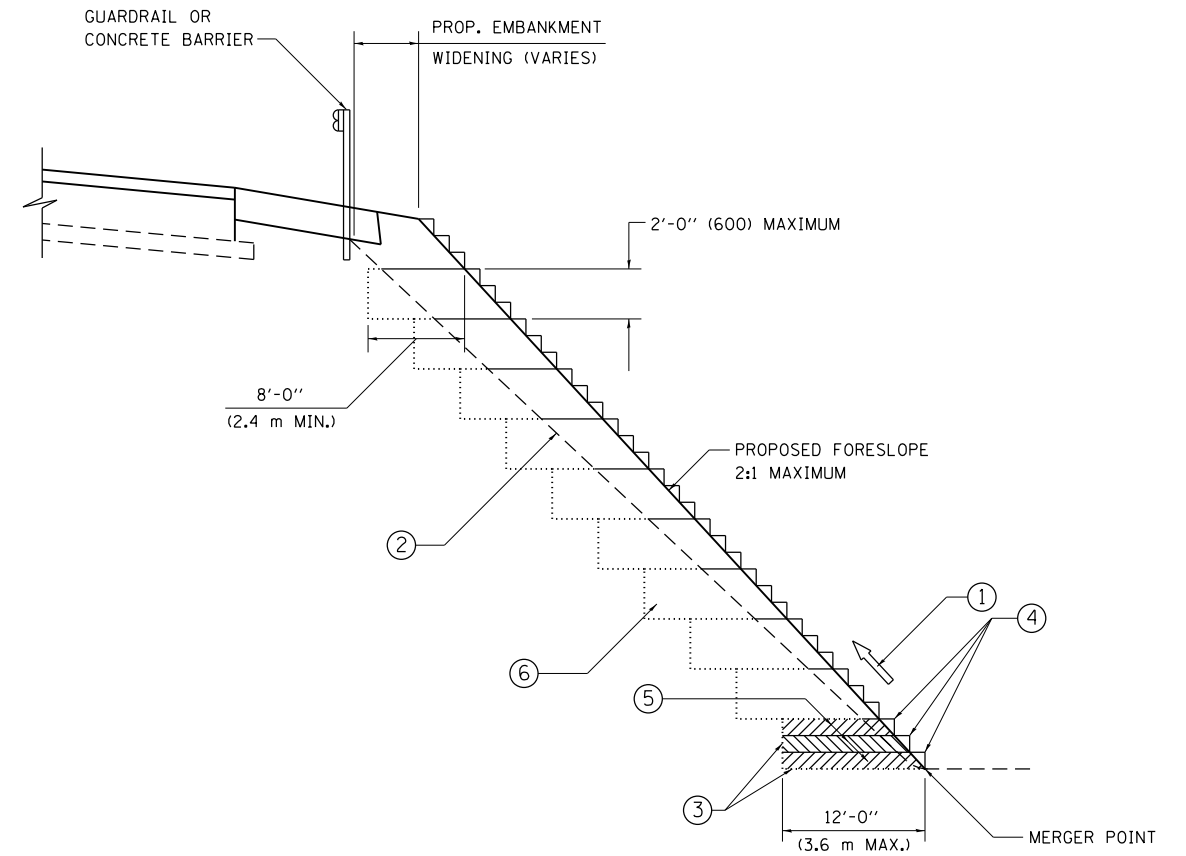
- NOTES :
1. THE ROUNDOUT AND ADDED REINFORCEMENT WILL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE PAVEMENT.
 2. TRANSVERSE JOINTS MAY BE MOVED TO ACCOMMODATE ROUNDOUT. EDGE OF CIRCULAR JOINT SHALL BE MINIMUM 12" (300) FROM TRANSVERSE JOINT. RELOCATED TRANSVERSE JOINT SHALL BE CONTINUOUS FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT.
 3. SEMI-CIRCULAR FORM SHALL BE REMOVED PRIOR TO DRILL AND GROUT OF TIE BARS.
 4. ALL REINFORCED BARS SHALL BE EPOXY COATED.
 5. DRILL AND GROUT IS PREFERRED, HOWEVER TIE BARS CAN BE POURED IN PLACE IF CLEARANCE IS PROVIDED TO OUTER EDGE OF FRAME. MINIMUM 2" (50) CLEARANCE.
 6. WOOD SHIMS SHALL BE USED TO ADJUST ALL FRAMES. AFTER ADJUSTING MORTAR HAS CURED, THE WOOD SHIMS SHALL BE REMOVED AND THE VOIDS UNDER THE FRAMES FILLED WITH NON SHRINK GROUT.
 7. HOOP REINFORCEMENT SHALL BE ONE PIECE CONSTRUCTION.
 8. CIRCULAR FRAMES AND GRATES MAY BE SUBSTITUTED.
 9. CURB DOWELS MUST BE PLACED LEVEL & TRUE TO ALLOW CONTRACTION MOVEMENT.



LEGEND:
..... CASTING
- - - - - SUITABLE SEMI-CIRCULAR FORM

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED

FILE NAME =	USER NAME = ougeungh	DESIGNED - A. ABBAS	REVISED - T. MATOUSEK 08-28-00	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PCC PAVEMENT ROUNDOUTS AT CURB AND GUTTER	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\388039-pwintl.eocom\online.local\pwaec\000\Documents\01 Americas\Transportation\000\Drawn Circle\Photo\06.Road\REVISED\60W26.CMAA\0602\000\Detail-09-(BD-48).dgn	DRAWN - T. MATOUSEK	CHECKED - A. ABBAS	REVISED - T. MATOUSEK 04-25-02			•	2013-00BR	COOK	559	467
PLOT SCALE = 49.9999' / in.	DATE - 01-04-99	REVISED - P. LAFLEUR 08-27-02	SCALE: NONE			SHEET NO. 7 OF 27 SHEETS	STA.	TO STA.	BD-48 CONTRACT NO. 60W26	
PLOT DATE = 8/18/2013							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT • 90/94/290			



**TYPICAL BENCHING DETAIL
FOR EMBANKMENT**

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

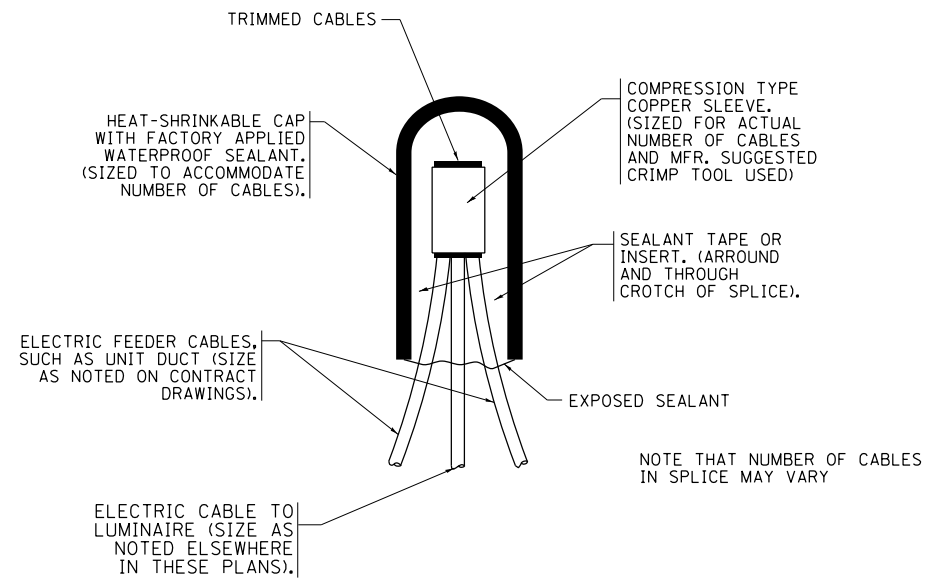
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

FILE NAME =	USER NAME = ougeungh	DESIGNED -	REVISED -
pw:\388039-pwintl.eecomonline.local\PWAE	COM\Documents\01 Americas\Transportation	DRAWN Circle\Ph	REVISED 60W26.Contract\DI60W26-SHT-DI
	PLOT SCALE = 49.9999' / in.	CHECKED - S.E.B.	REVISED -
	PLOT DATE = 8/18/2013	DATE - 06-16-04	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

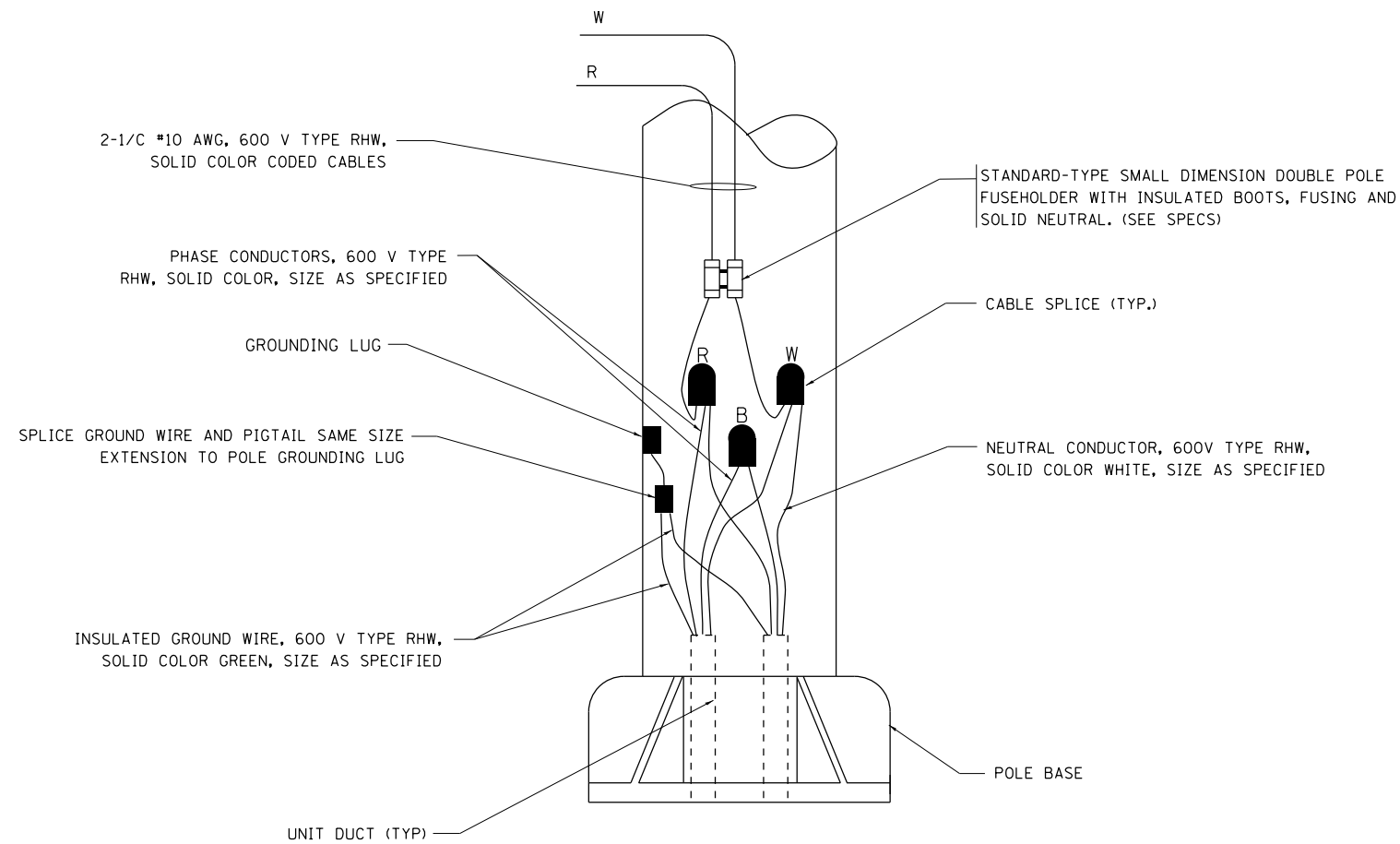
BENCHING DETAIL FOR EMBANKMENT WIDENING	
SCALE: NONE	SHEET NO. 8 OF 27 SHEETS
STA.	TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2013-008R	COOK	559	468
BD-51		CONTRACT NO. 60W26		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



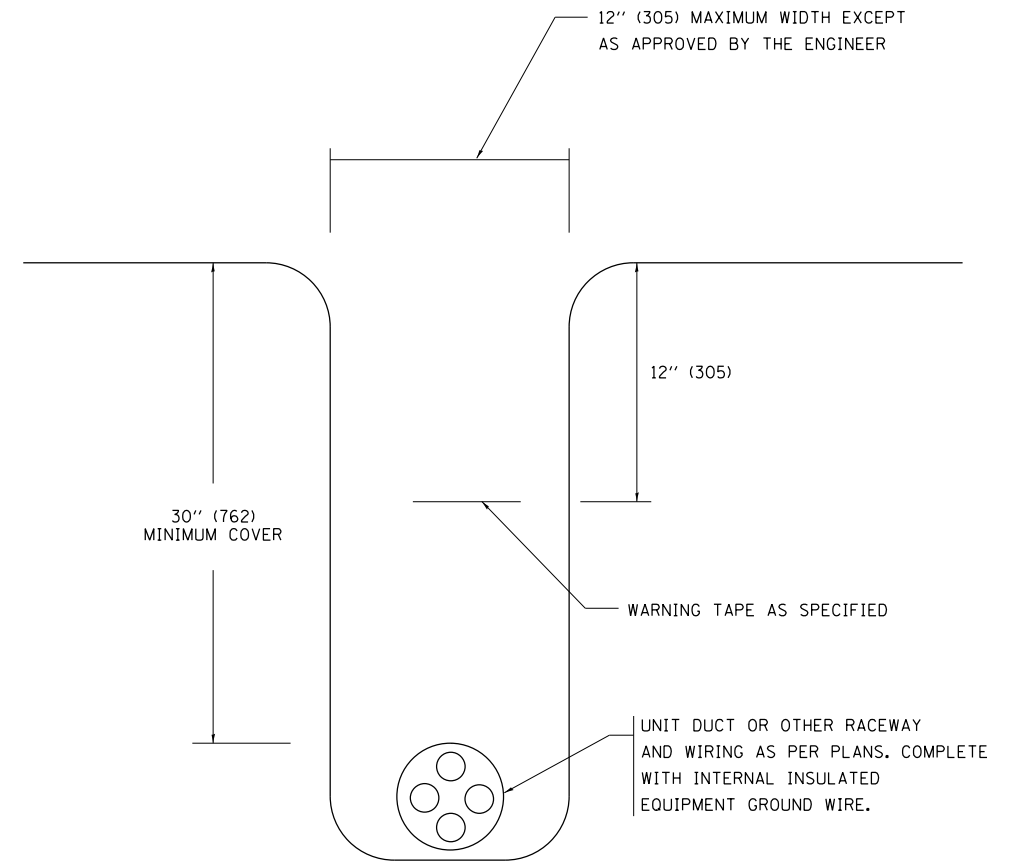
TYPICAL SPLICE DETAIL

N.T.S.



POLE WIRING DETAIL

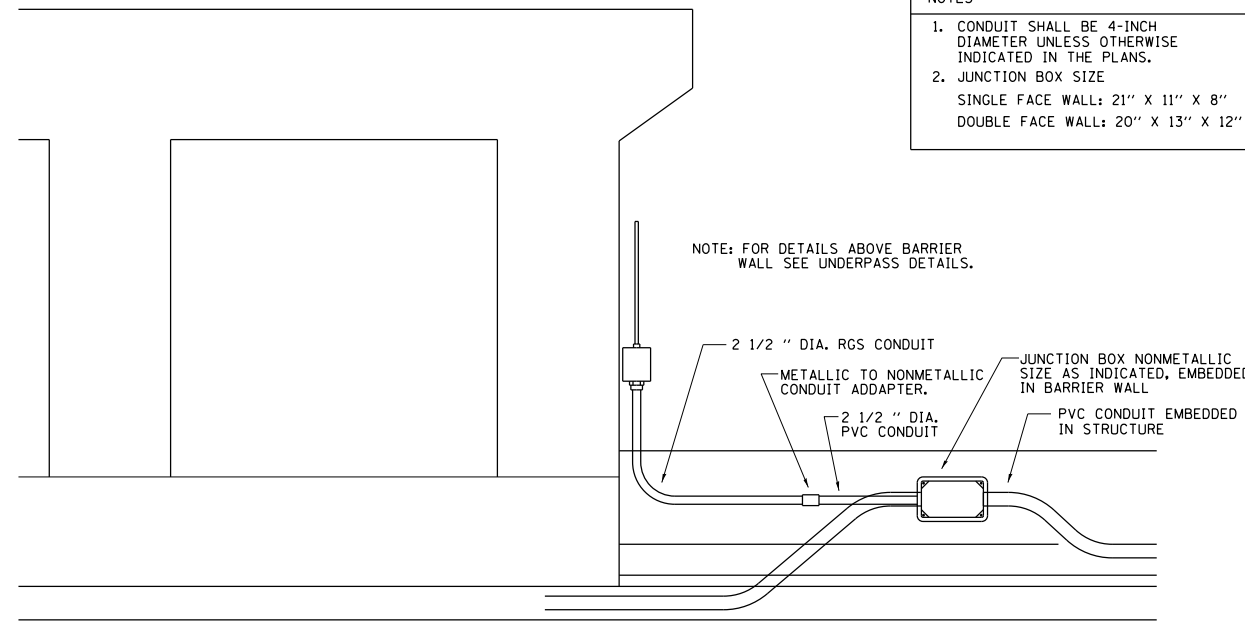
N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

N.T.S.

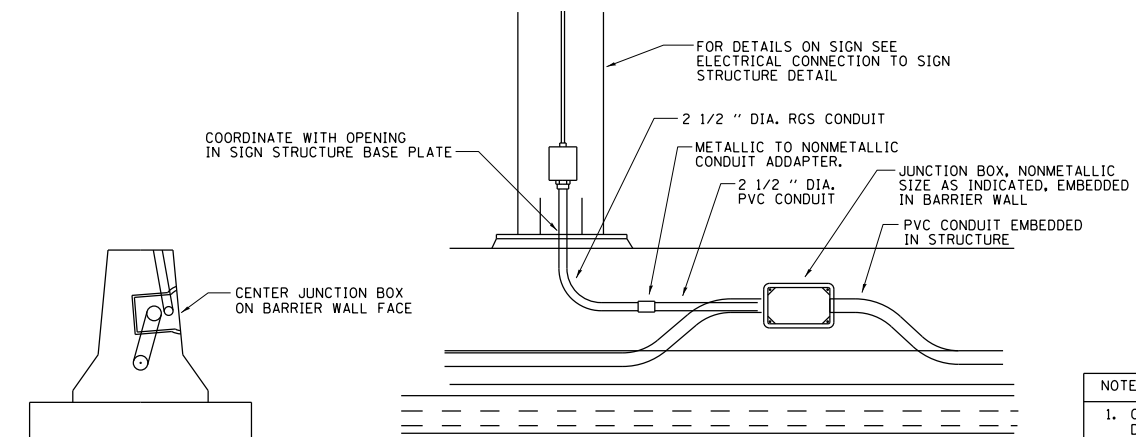
FILE NAME =	USER NAME = ougeungh	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MISC. ELECTRICAL DETAILS SHEET A			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw:\388039-pwintl\ecomonline\local\pwae	COMMENTS	DRAWN	CHECKED		SCALE: NONE	SHEET NO. 9 OF 27 SHEETS	STA.	TO STA.	•	2013-008R	COOK	559	469
										BE-702	CONTRACT NO. 60W26		
										FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT		



NOTES

- CONDUIT SHALL BE 4-INCH DIAMETER UNLESS OTHERWISE INDICATED IN THE PLANS.
- JUNCTION BOX SIZE
SINGLE FACE WALL: 21" X 11" X 8"
DOUBLE FACE WALL: 20" X 13" X 12"

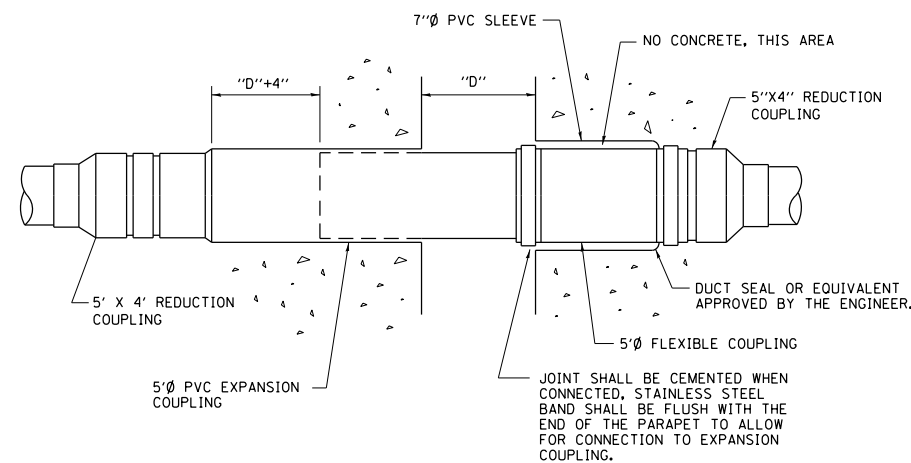
ED - BWD
ELECTRIC CONNECTION TO UNDERPASS LIGHTING



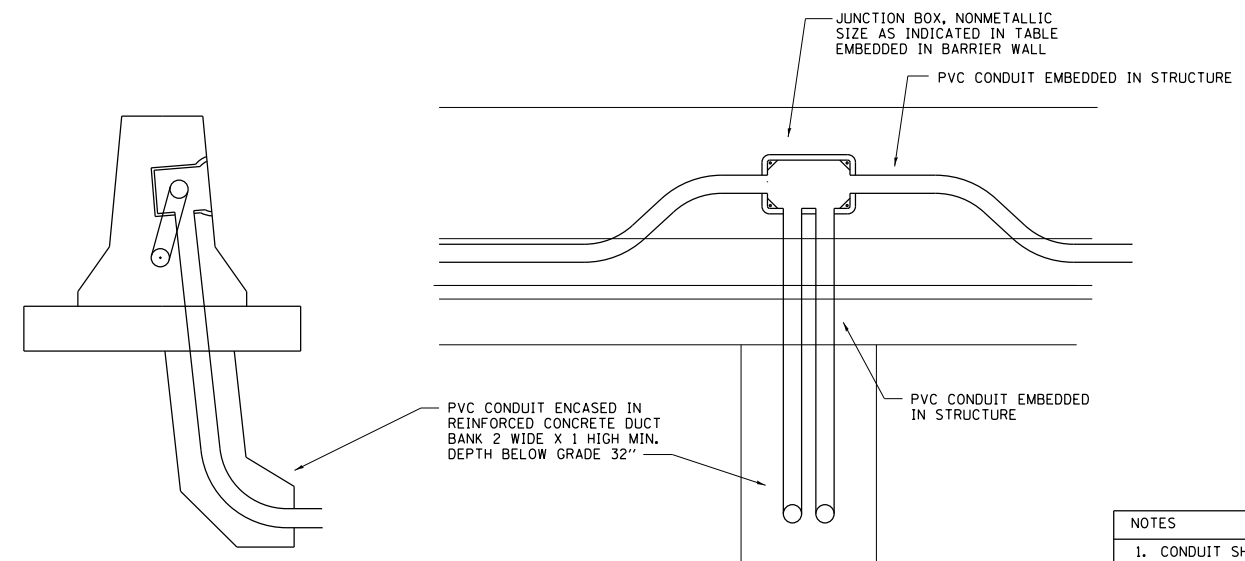
NOTES

- CONDUIT SHALL BE 4-INCH DIAMETER UNLESS OTHERWISE INDICATED IN THE PLANS.
- JUNCTION BOX SIZE
SINGLE FACE WALL: 21" X 11" X 8"
DOUBLE FACE WALL: 20" X 13" X 12"

ED - SGN
JUNCTION BOX EMBEDDED IN BARRIER WALL FOR SIGN LIGHTING



INSTALLATION OF CONDUIT
IN BRIDGE PARAPET EXPANSION JOINT
(N.T.S.)



NOTES

- CONDUIT SHALL BE 4-INCH DIAMETER UNLESS OTHERWISE INDICATED IN THE PLANS.
- JUNCTION BOX SIZE
SINGLE FACE WALL: 21" X 11" X 8"
DOUBLE FACE WALL: 20" X 13" X 12"

ED - BW
JUNCTION BOX EMBEDDED IN BARRIER WALL

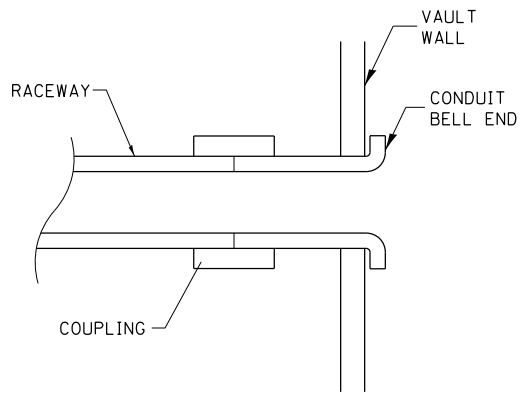
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		DRAWN -	REVISED -
	PLOT SCALE = 49.9999' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/18/2013	DATE - 01-20-2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

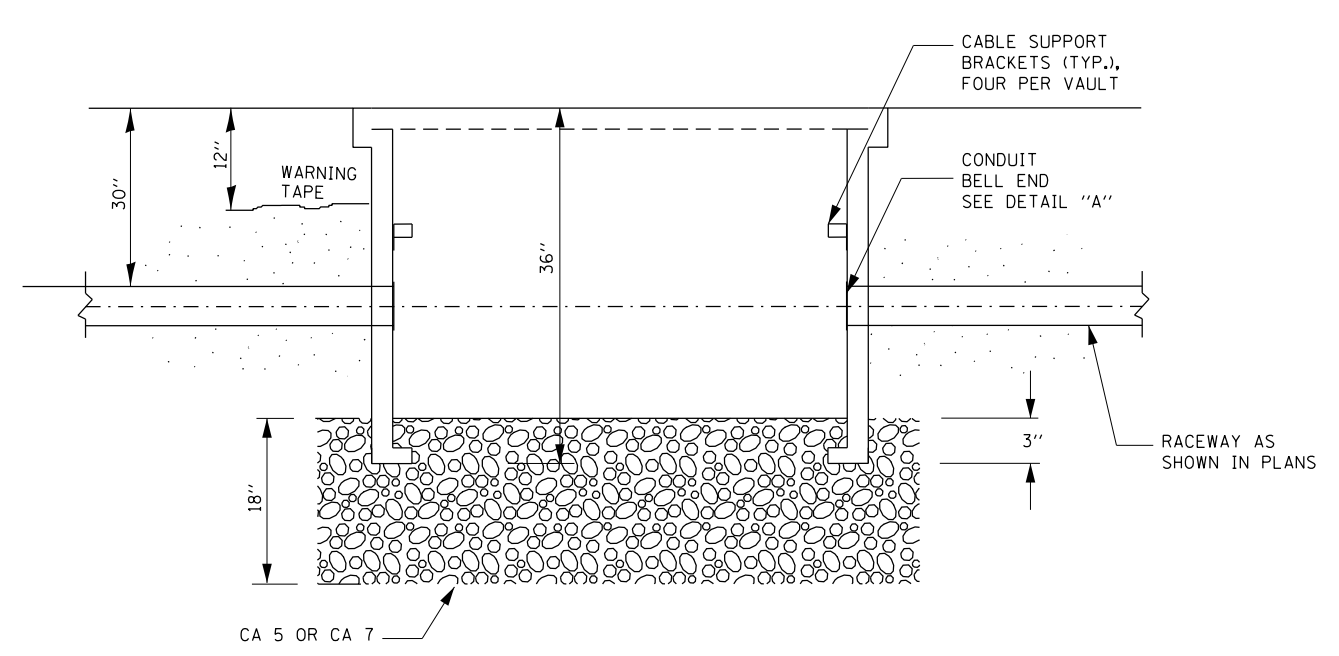
MISCELLANEOUS ELECTRICAL DETAILS, SHEET B			
J BOX EMBEDDED IN BARRIER WALL - INSTALLATION OF CONDUIT IN BRIDGE PARAPET EXPANSION JOINT - ELECTRIC CONNECTION TO UNDERPASS LIGHTING			
SCALE: NONE	SHEET NO. 10 OF 27 SHEETS	STA.	TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2013-008R	COOK	559	470
BE-703			CONTRACT NO. 60W26	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

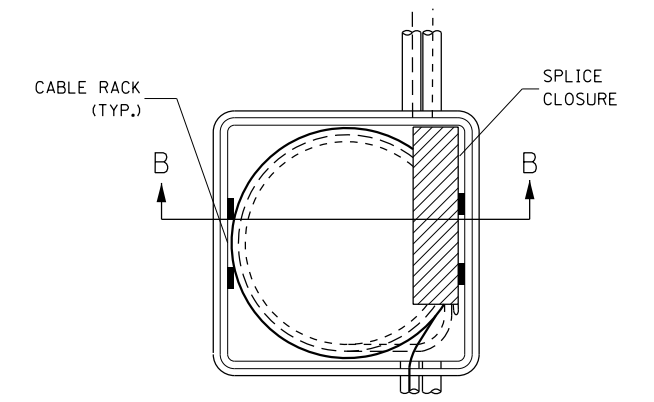
COMMUNICATIONS VAULT LOAD RATINGS			
COMPONENT	ANSI TIER	LOADING	
		DESIGN	TEST
BOX	22	22,500 lbs.	37,750 lbs.
COVER	22	22,500 lbs.	37,750 lbs.



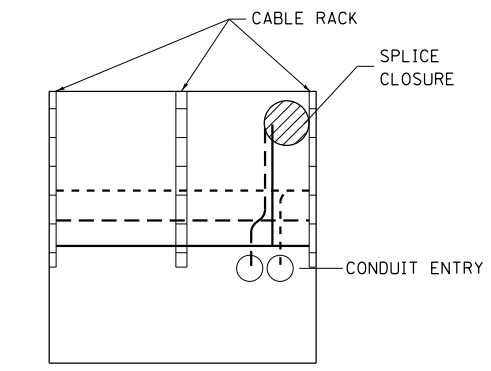
DETAIL A



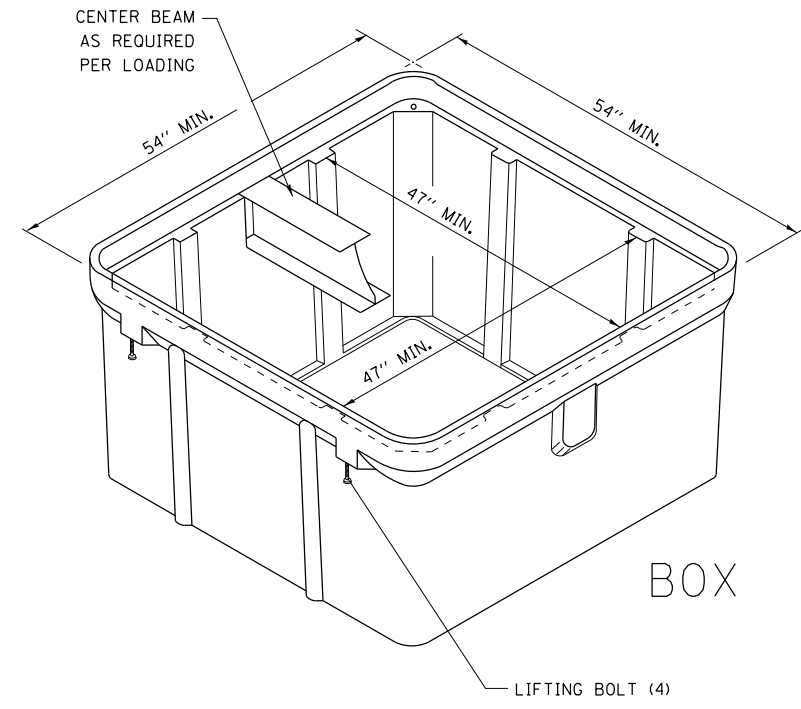
SECTION A-A



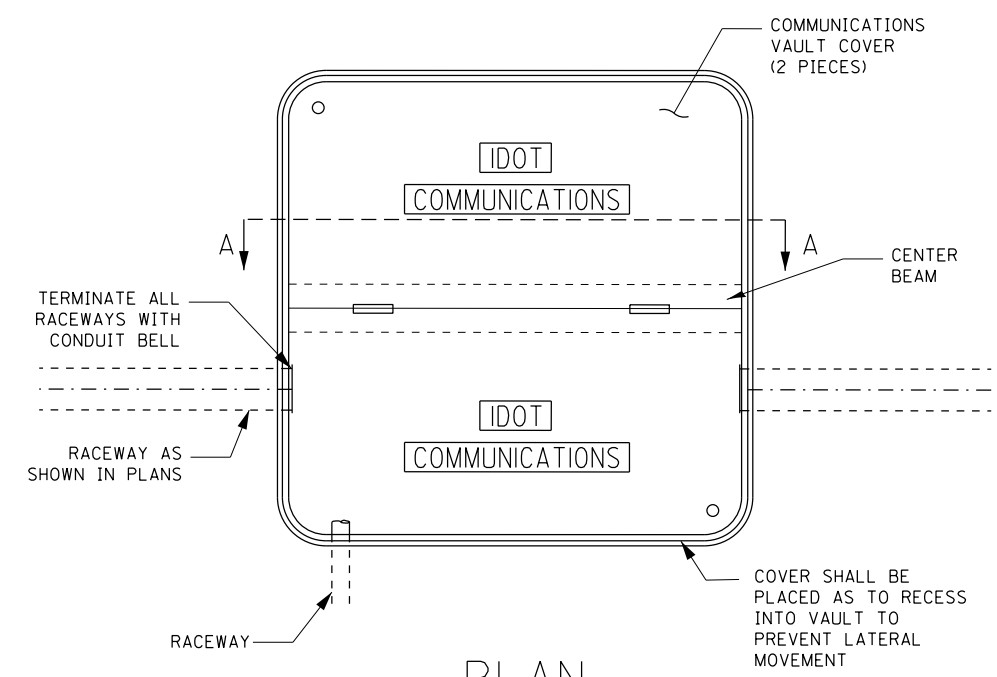
TOP VIEW



SECTION B-B



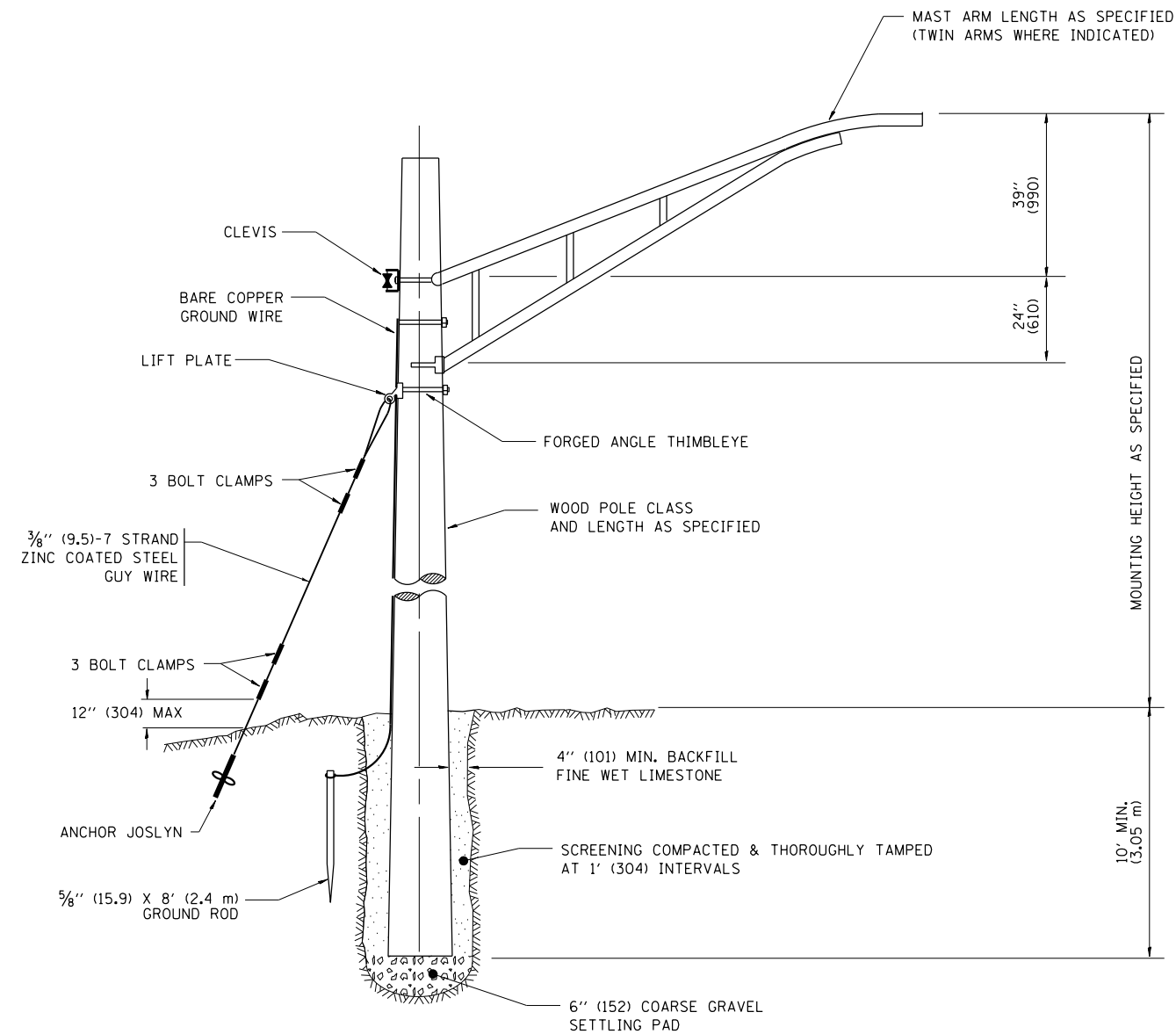
ISOMETRIC



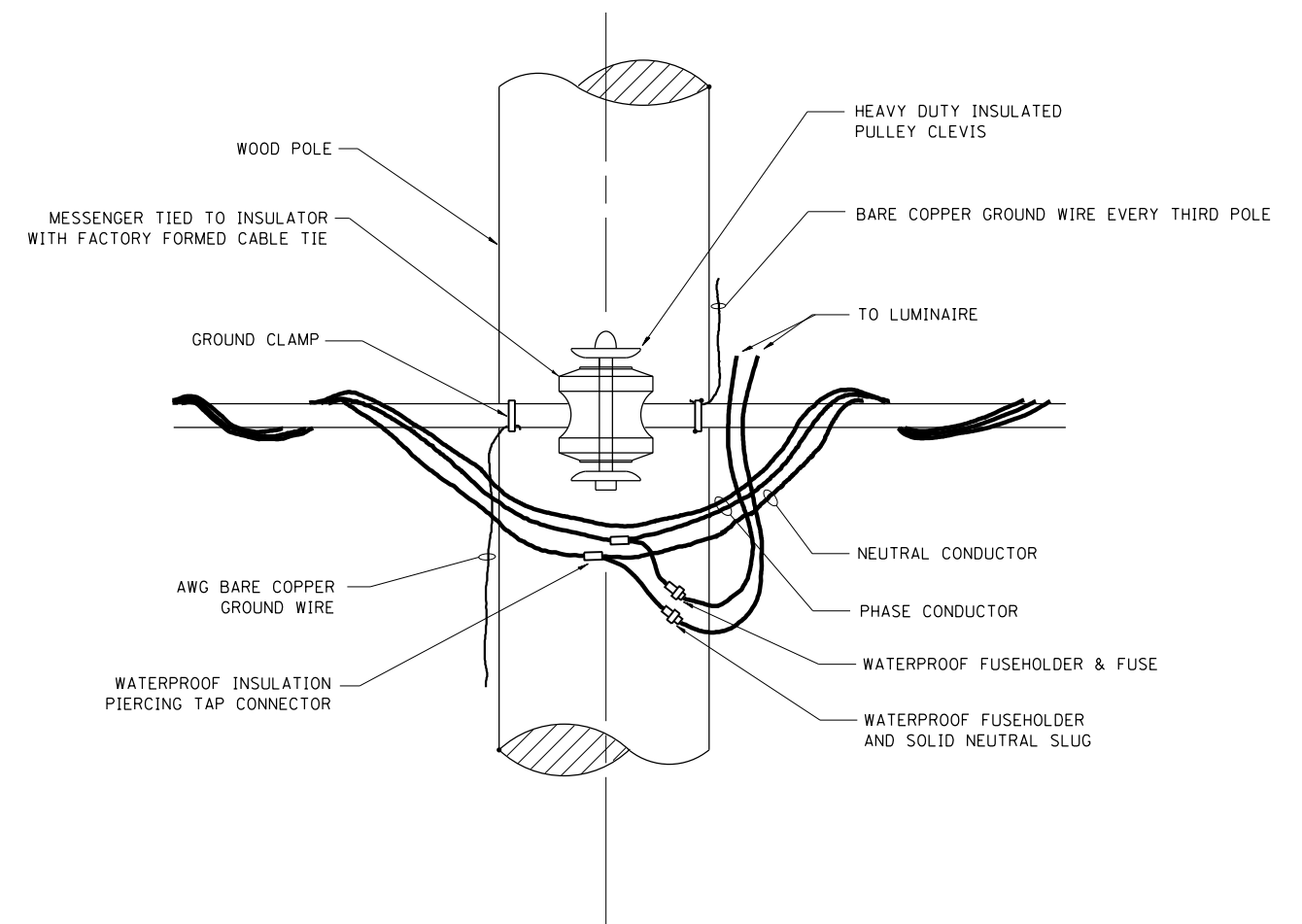
PLAN

NOTES:

1. BOX SHALL HAVE AN OPEN BASE.
2. ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION OR PUNCH DRIVEN AT TIME OF PLACEMENT. IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
3. FIELD PLACEMENT OF COMMUNICATIONS VAULT SHALL BE AS DIRECTED BY THE ENGINEER.
4. ALL DIMENSIONS ARE MINIMUM AND A LARGER SIZE HANDHOLE MAY BE USED, WITH THE APPROVAL OF THE ENGINEER, TO FACILITATE USING A MANUFACTURER'S STANDARD PRODUCT.



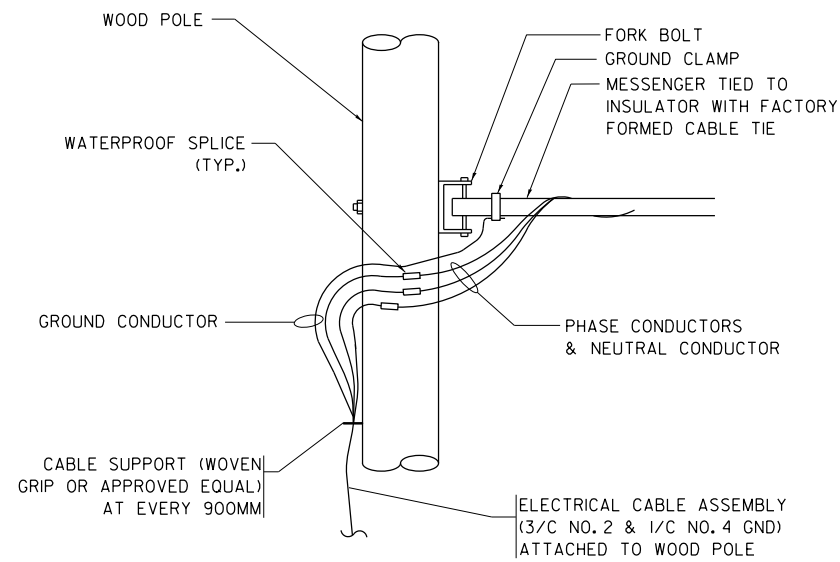
TEMPORARY LIGHT POLE DETAIL



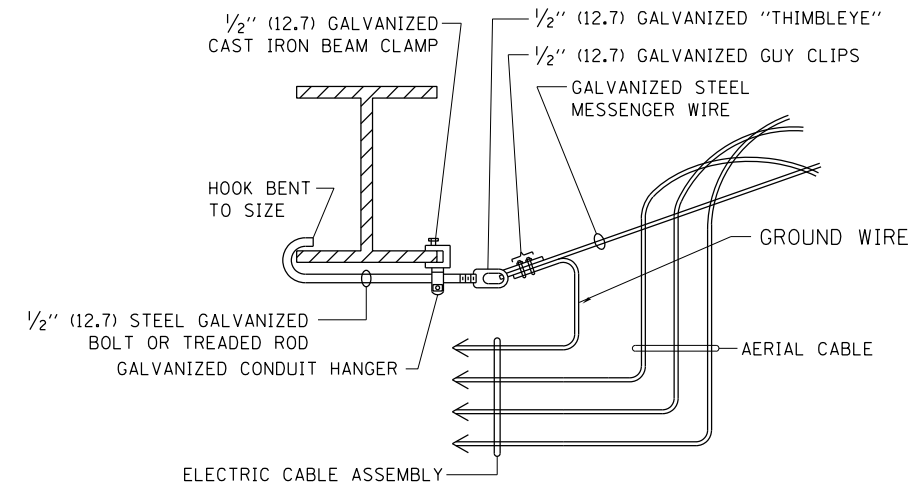
TEMPORARY LIGHT POLE ATTACHMENT DETAIL

NOTES:
 1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED

FILE NAME =	USER NAME = ougeungh	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY LIGHT POLE DETAILS			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw:\388039-pwintl\ecomonline\local\pwaecom\Documents\01 Americas\Transportation\40000\Drawn Circle\Phase II\000\CAD\006\Road\60W26\Contract\DI60W26-SHT-DI\Detail-14-(BE-800).dgn	DRAWN	CHECKED -	REVISED -		SCALE: NONE	SHEET NO. 12 OF 27 SHEETS	STA.	TO STA.	2013-008R	COOK	559	472
	PLOT SCALE = 50.000' / in.	DATE -	REVISED -		BE-800		CONTRACT NO. 60W26		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			



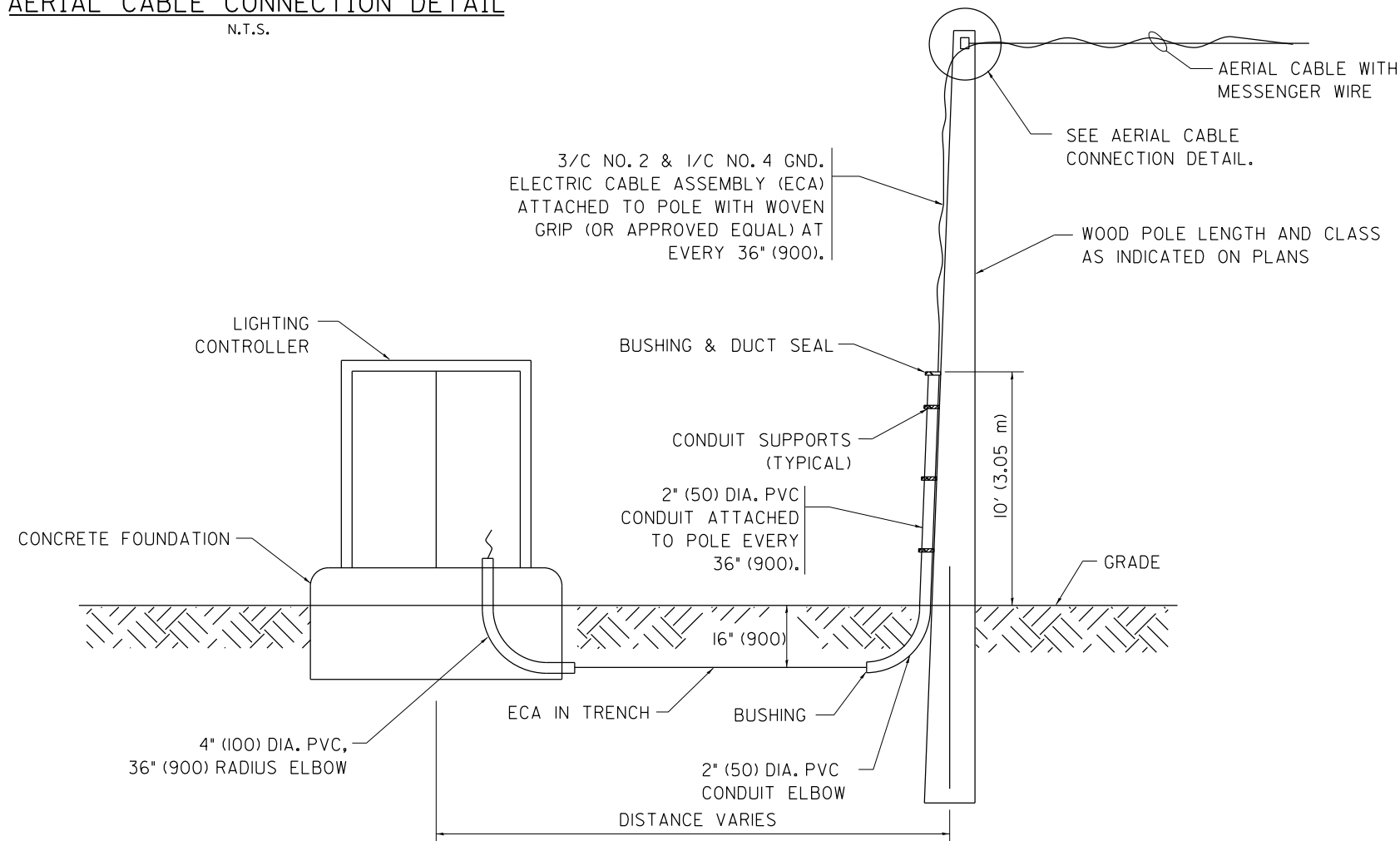
AERIAL CABLE CONNECTION DETAIL
N.T.S.



AERIAL CABLE ATTACHED TO STRUCTURE
NOT TO SCALE

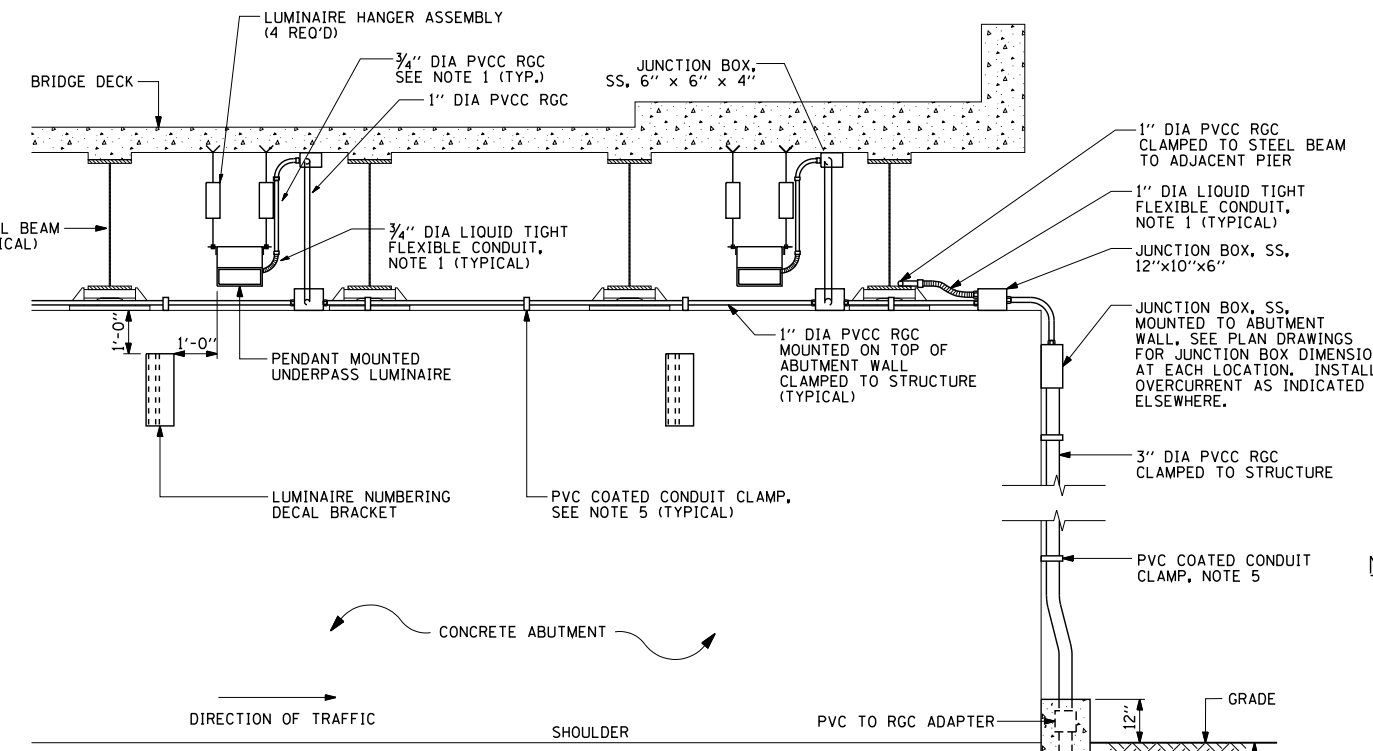
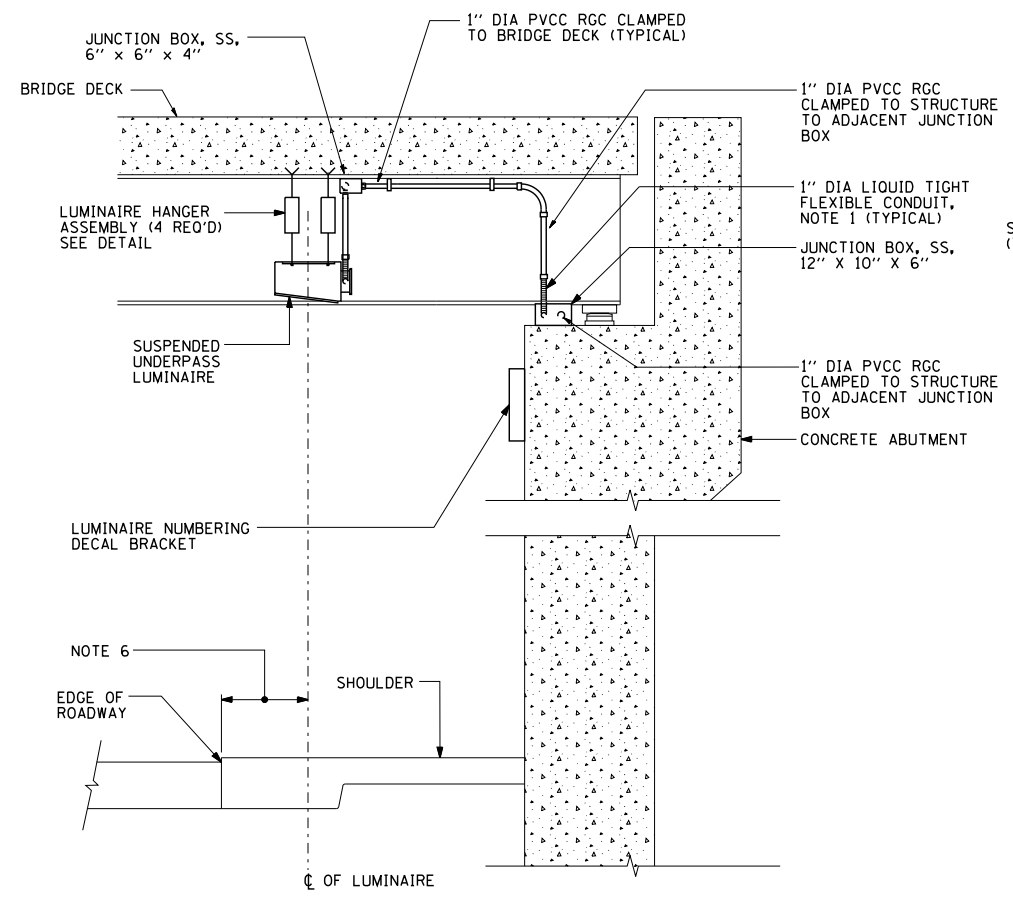
NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
2. SEE PROPOSED LIGHTING PLAN FOR CONDUIT, CABLE AND ROUTING.
3. THE CONTRACTOR SHALL PROVIDE INTERMEDIATE SUPPORTS TO MAINTAIN MINIMUM CLEARANCES. REFER TO AERIAL AERIAL CABLE ATTACHED TO STRUCTURE DETAIL.
4. COST OF SPLICES AND MOUNTING HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE FOR AERIAL CABLE.

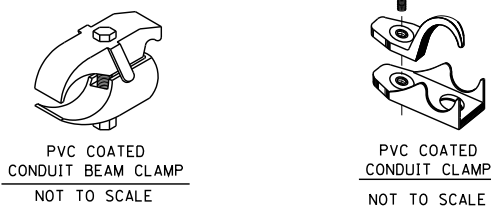
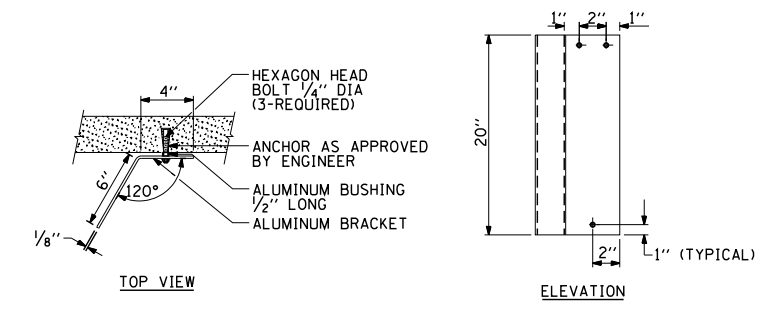
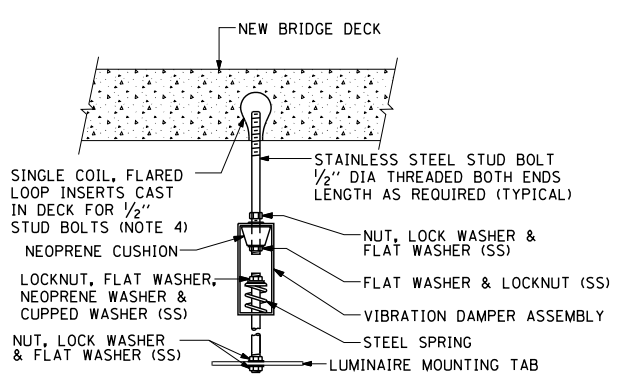
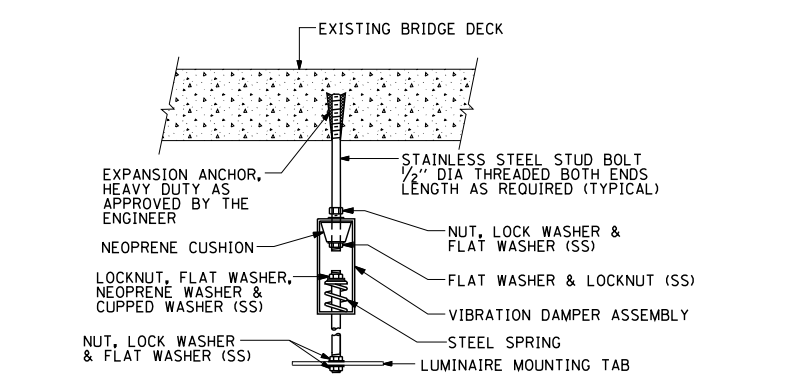


WOOD POLE TO LIGHTING CONTROLLER WIRING CONNECTION DETAIL
N.T.S.

FILE NAME =	USER NAME = ougeungh	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY AERIAL CABLE INSTALLATION			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
DRAWN -					REVISED -	SCALE: NONE	SHEET NO. 13 OF 27 SHEETS	STA.	TO STA.	2013-008R	COOK	559	473
CHECKED -					REVISED -				BE-801		CONTRACT NO. 60W26		
PLOT DATE = 8/18/2013					REVISED -	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT							



- NOTES:**
- LIQUID TIGHT FLEXIBLE METAL CONDUIT, MAXIMUM LENGTH 6'-0", TYPICAL FOR EACH INSTANCE AS SHOWN. PROVIDE PVC COATED RIGID GALVANIZED STEEL CONDUIT AS REQUIRED NOT TO EXCEED 6'-0" OF FLEXIBLE LIQUID TIGHT METAL CONDUIT. LIQUID TIGHT FLEXIBLE METAL CONDUIT WILL BE INCLUDED IN THE COST OF THE CONDUIT ATTACHED TO STRUCTURE OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED PAY ITEM EXCEPT THAT 3/4" DIA. CONDUIT AND 3/4" DIA. FLEXIBLE CONDUIT SHALL BE INCLUDED IN THE COST OF UNDERPASS LUMINAIRE INSTALLATION.
 - SEE UNDERPASS LIGHTING PLANS FOR INSTALLATION LOCATION OF UNDERPASS LIGHTING LUMINAIRES.
 - THE CONTRACTOR SHALL USE APPROVED SINGLE COIL FLARED LOOP INSERTS WHEN SUSPENDED MOUNTING AN UNDERPASS LUMINAIRE TO A NEW BRIDGE DECK. THE FLARED LOOP INSERTS MUST BE CAST INTO THE CONCRETE DECK. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND COORDINATING THE INSERT LOCATIONS FOR MOUNTING THE UNDERPASS LIGHTING SYSTEM AS SHOWN ON THE PLANS WITH THE BRIDGE DECK CONTRACTOR. SEE DETAIL.
 - THE UNDERPASS LUMINAIRE HANGER ASSEMBLY COMPLETE WITH HEAVY DUTY ANCHORS/INSERTS AND ALL APPLICABLE HARDWARE SHALL BE INCLUDED IN THE COST OF THE UNDERPASS LUMINAIRE PAY ITEM.
 - SECURE THE CONDUIT WITH PVC COATED CONDUIT CLAMPS OR CONDUIT BEAM CLAMPS AS SHOWN AT 5'-0" INTERVALS FOR LATERALS AND WITHIN 2'-0" MAXIMUM FROM ANY JUNCTION BOX, FLEXIBLE CONDUIT, OR CHANGE IN DIRECTION. ALL PVC COATED CONDUIT CLAMPS OR BEAM CLAMPS SHALL BE INCLUDED WITH THE COST OF THE "CONDUIT ATTACHED TO STRUCTURE OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED" PAY ITEM.
 - ALL UNDERPASS LUMINAIRES MUST BE CENTERED IN THE BEAM SPACE AS INDICATED ON THE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGR. LUMINAIRE SETBACK SHALL BE AS INDICATED IN PLANS FOR EACH SPECIFIC UNDERPASS
 - THE CONCRETE ENCASED CONDUIT TRANSITION SHALL BE INCLUDED IN THE COST OF THE GALVANIZED RIGID STEEL CONDUIT PAY ITEMS.
 - ALL CONDUIT ATTACHED TO STRUCTURE SHALL BE PVC COATED RIGID STEEL CONDUIT (PVCC RGC) TYPICAL.



EXISTING BRIDGE DECK INSTALLATION

NEW BRIDGE DECK INSTALLATION

TYPICAL LUMINAIRE HANGER ASSEMBLY DETAILS

FILE NAME = W:\diststd\22x34\be900.dgn

USER NAME = gaglionobt
 PLOT SCALE = 50.000' / IN.
 PLOT DATE = 1/4/2008

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

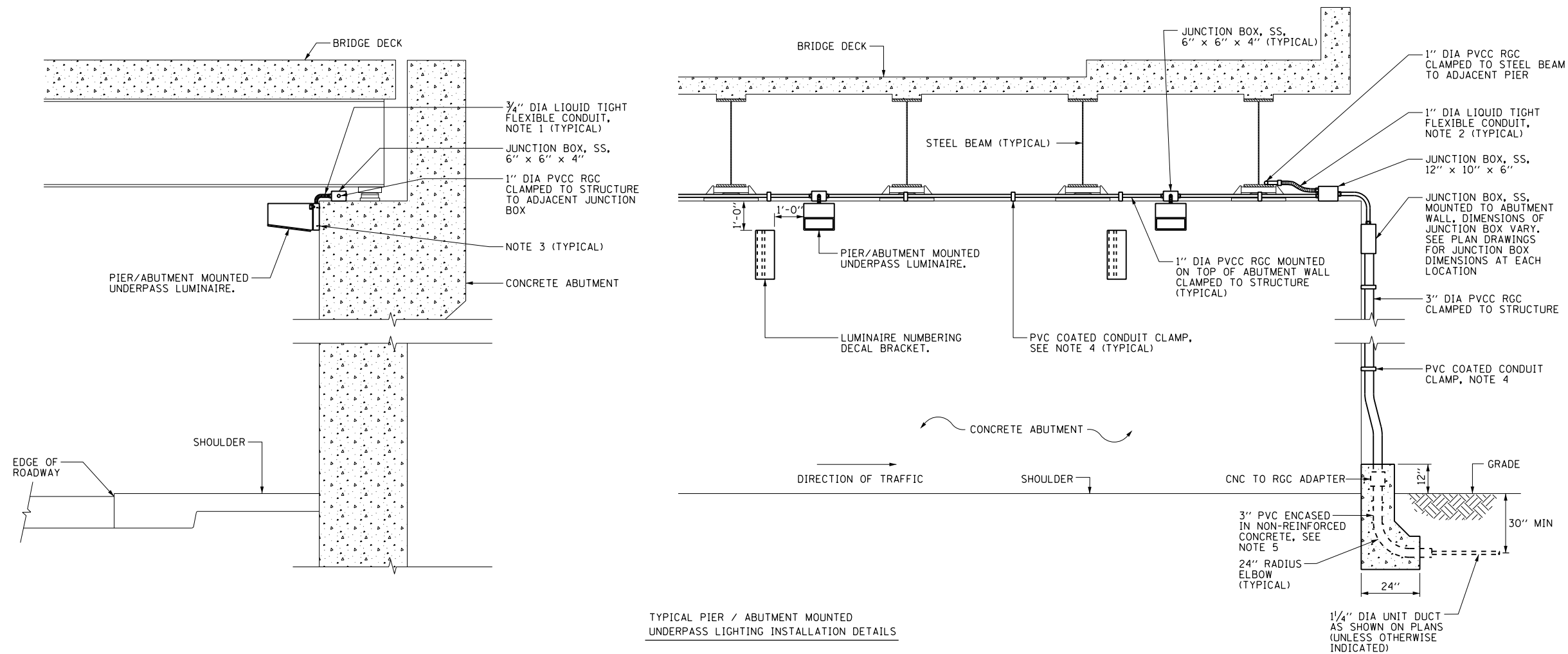
REVISED - 12-12-05
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

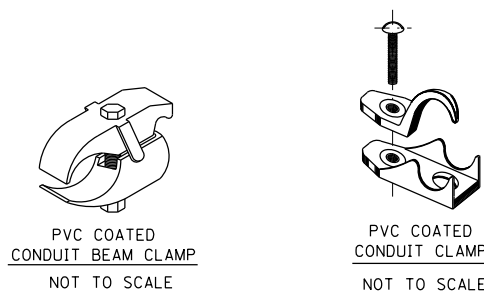
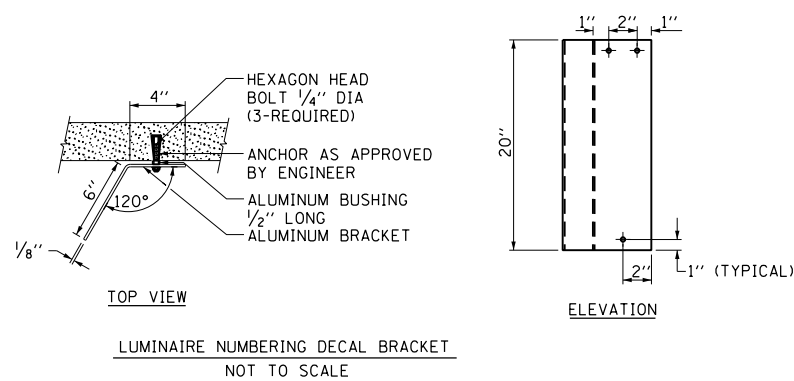
**SUSPENDED MOUNT UNDERPASS
 LUMINAIRE INSTALLATION DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	BE-900		559	474
CONTRACT NO.		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		



TYPICAL PIER / ABUTMENT MOUNTED UNDERPASS LIGHTING INSTALLATION DETAILS



NOTES:

- LIQUID TIGHT FLEXIBLE METAL CONDUIT, MAXIMUM LENGTH 6'-0", TYPICAL FOR EACH INSTANCE AS SHOWN. PROVIDE PVC COATED RIGID GALVANIZED STEEL CONDUIT AS REQUIRED NOT TO EXCEED 6'-0" OF FLEXIBLE LIQUID TIGHT METAL CONDUIT. LIQUID TIGHT FLEXIBLE METAL CONDUIT WILL BE INCLUDED IN THE COST OF THE CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED PAY ITEM EXCEPT THAT THE COST OF THE 3/4" DIA. RIGID STEEL CONDUIT AND 3/4" DIA. FLEXIBLE CONDUIT SHALL BE INCLUDED IN THE LUMINAIRE INSTALLATION.
- UNDERPASS LUMINAIRE MOUNTED TO FACE OF PIER OR ABUTMENT WALL. MOUNTING HEIGHT OF 1" BELOW THE TOP OF PIER OR ABUTMENT WALL TYPICAL FOR ALL PIER/ABUTMENT MOUNTED UNDERPASS LUMINAIRES UNLESS OTHERWISE NOTED.
- EXPANSION ANCHOR, POWDER ACTUATED FASTENERS WILL NOT BE ALLOWED. EXPANSION ANCHOR MUST BE SIZED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
- SECURE THE CONDUIT WITH PVC COATED CONDUIT CLAMPS OR CONDUIT BEAM CLAMPS AS SHOWN AT 5'-0" INTERVALS FOR LATERALS AND WITHIN 2'-0" MAXIMUM FROM ANY JUNCTION BOX, FLEXIBLE CONDUIT, OR CHANGE IN DIRECTION. ALL PVC COATED CONDUIT CLAMPS OR BEAM CLAMPS SHALL BE INCLUDED WITH THE COST OF THE "CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED" PAY ITEM.
- THE CONCRETE ENCASED CONDUIT TRANSITION SHALL BE INCLUDED IN THE COST OF THE GALVANIZED RIGID STEEL CONDUIT PAY ITEMS.
- ALL CONDUIT ATTACHED TO STRUCTURE SHALL BE PVC COATED RIGID STEEL CONDUIT (PVCC RGC) TYPICAL.

FILE NAME =	USER NAME = ougeungh	DESIGNED -	REVISED - 01-25-05
C:\388039-pwintl\ecomonline\local\PWAE\COM00\Documents\01 Americas\Transportation\0000\Drawn Circle\Phase II\000 CAD\006 Road\REVISED\60W26-Contract\0160W26-SHT-D1\Detail-17-(BE-902).dgn		CHECKED -	REVISED -
PLOT SCALE = 50.000' / in.		DATE -	REVISED -
PLOT DATE = 8/18/2013			

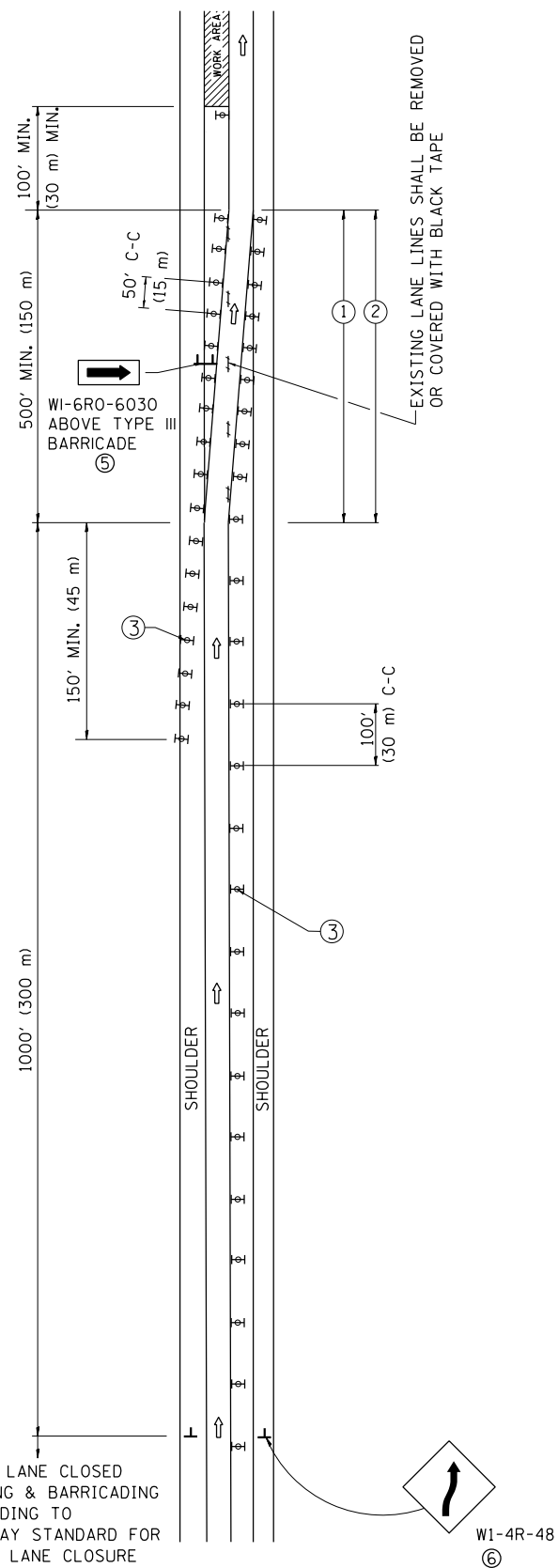
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER / ABUTMENT MOUNTED UNDERPASS
LUMINAIRE INSTALLATION DETAILS

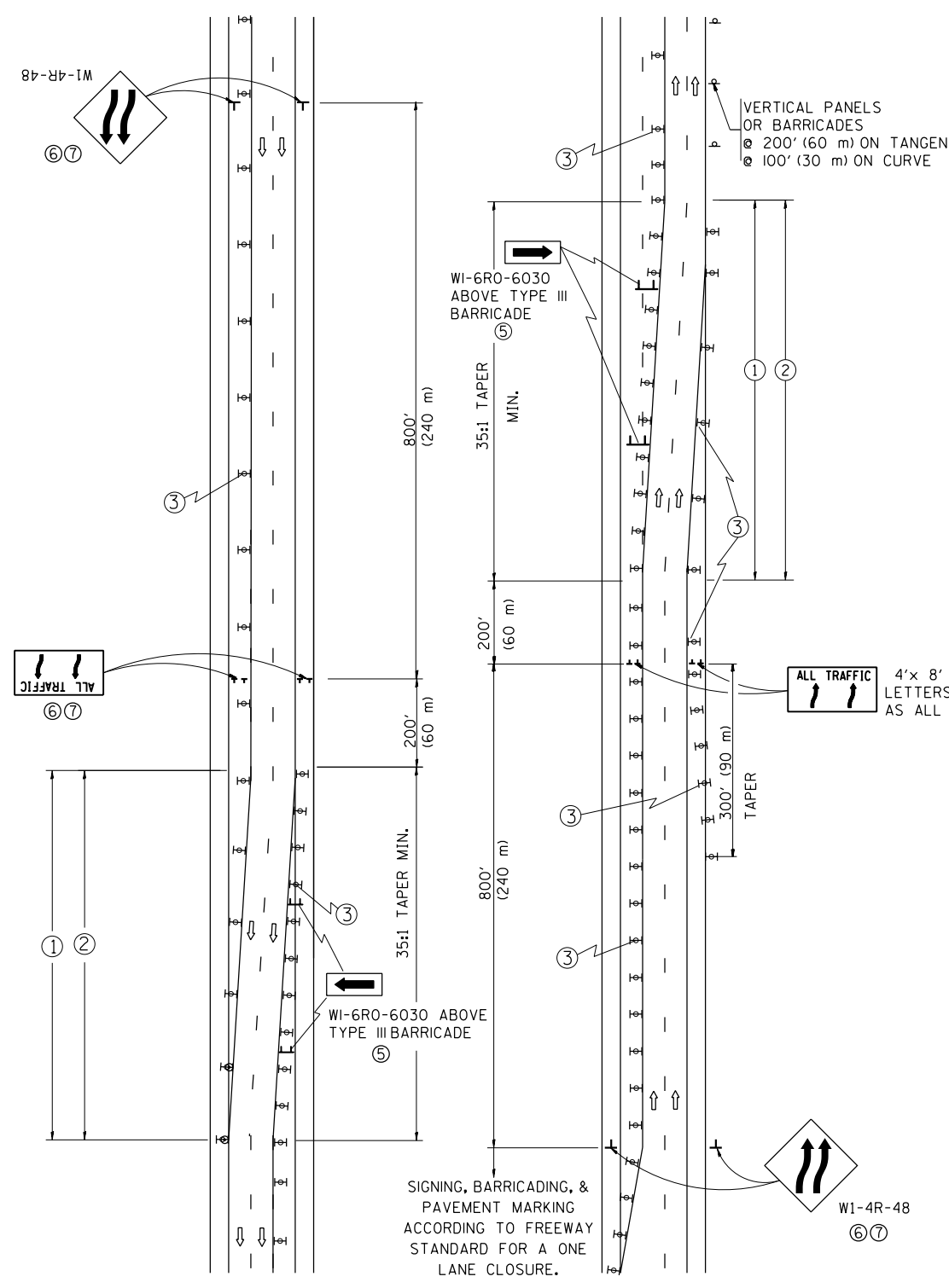
SCALE: NONE SHEET NO. 15 OF 27 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2013-008R	COOK	559	475
BE-902		CONTRACT NO. 60W26		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

SINGLE LANE WEAVE



MULTI-LANE WEAVE



GENERAL NOTES

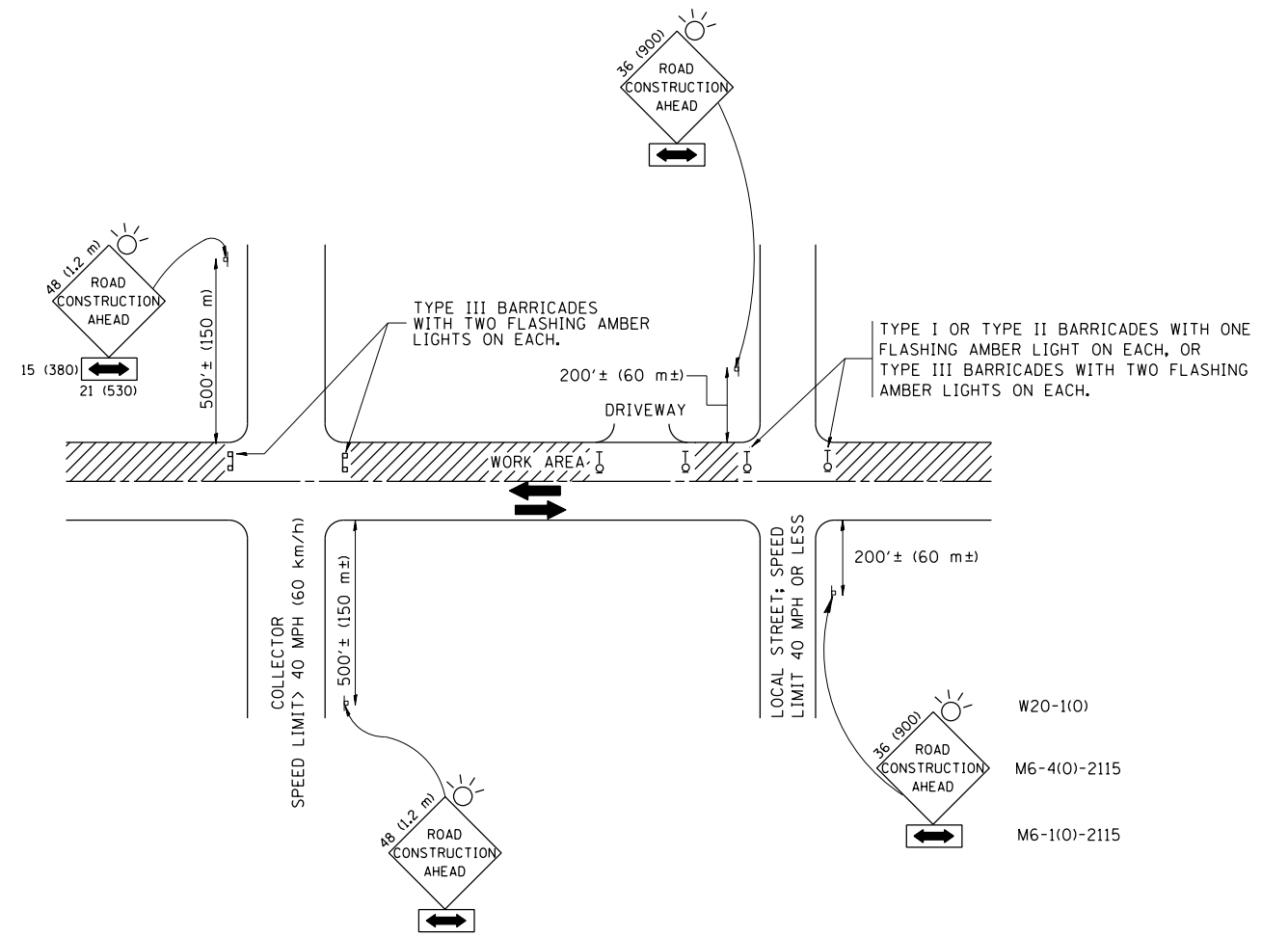
- ① EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 24 HOURS IN DURATION.
- ② CONTINUOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 300' (90 m) ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVES LANE LINES SHALL BE 5 INCH, 10'-30' (3 m-9 m) SKIP DASH, WHITE.
- ③ PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.
- ④ ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- ⑤ IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON NCHRP 350 TEMPORARY SIGN SUPPORTS. TYPE III BARRICADES MAY BE OMITTED FOR SINGLE-LANE WEAVES UNDER 24-HOURS IN DURATION. W1-6 SIGNS WILL STILL BE REQUIRED. IF THE WIDTH OF OFFSET IS LESS THAN 6' THEN THE TYPE III BARRICADE WITH ATTACHED ARROW SIGN PANEL CAN BE ELIMINATED IN THE TAPER AREAS.
- ⑥ WHEN THE LENGTH OF THE SHIFTED SEGMENT (DISTANCE BETWEEN WEAVE POINTS) IS LESS THAN 1500', DOUBLE REVERSE CURVE SIGNS (W24-1) SHOULD BE USED INSTEAD OF THE REVERSE CURVE (W1-4) SIGNS. ARROWS ON THE 4'X8' "ALL TRAFFIC" SIGNS SHALL BE THE SAME SHAPE.
- ⑦ THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

SYMBOLS

- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TYPE II BARRICADE OR DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- W1-4R-48
- W24-1-48

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME =	USER NAME = ougeungh	DESIGNED - DWS	REVISED - JAF 01-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE & MULTI-LANE WEAVE			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN - CirclePhase.II\000.CAD\006.Road\REVISED\60W26.CAD\02-06\60W26-SHT-D1\Detail-19-TC-09.dgn					SCALE: NONE	SHEET NO. 16 OF 27 SHEETS	STA.	TO STA.	2013-008R	COOK	559	476
PLOT SCALE = 50.000' / in.					CHECKED -	REVISED - SPB 01-07	TC-09		CONTRACT NO. 60W26			
PLOT DATE = 8/18/2013					DATE - 02-87	REVISED - SPB 12-09	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.

b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.

b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

FILE NAME =	USER NAME = ouyeungh	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
pw:\388039-pwintl\ecomonline\local\PWAE	C:\00\Documents\01 Americas\Transportation\400	DRAWN Circle\Phase.II\000.CAD\006.Road	REVISED - A. HOUSEH 10-15-96
	PLOT SCALE = 50.000' / in.	CHECKED -	REVISED - T. RAMMACHER 01-06-00
	PLOT DATE = 8/16/2013	DATE - 06-89	

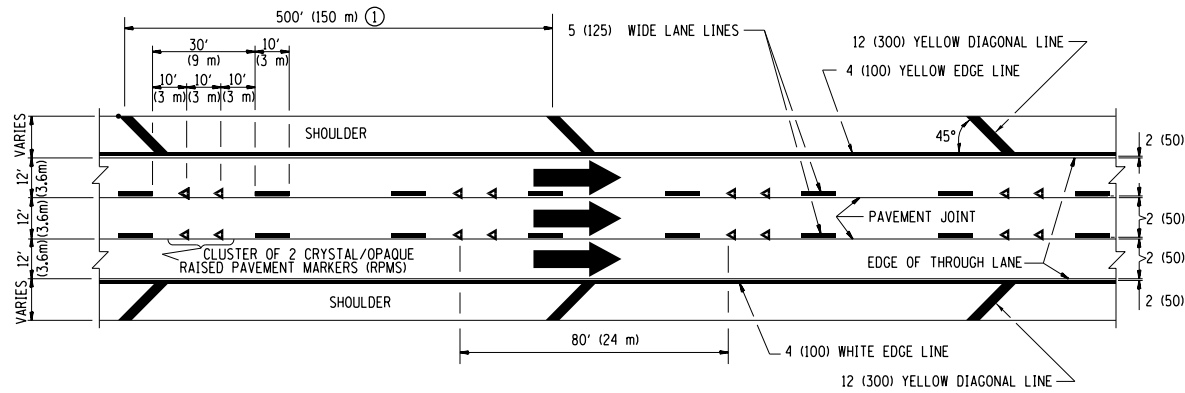
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: NONE SHEET NO. 17 OF 27 SHEETS STA. TO STA.

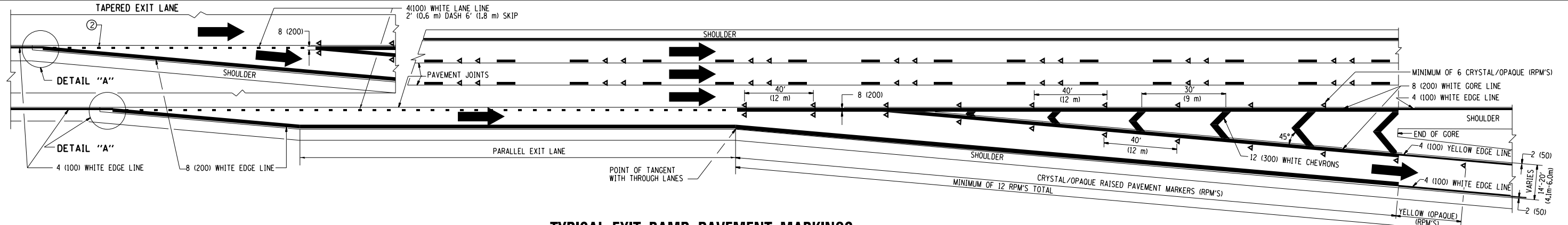
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2013-008R	COOK	559	477
TC-10			CONTRACT NO. 60W26	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

90/94/290

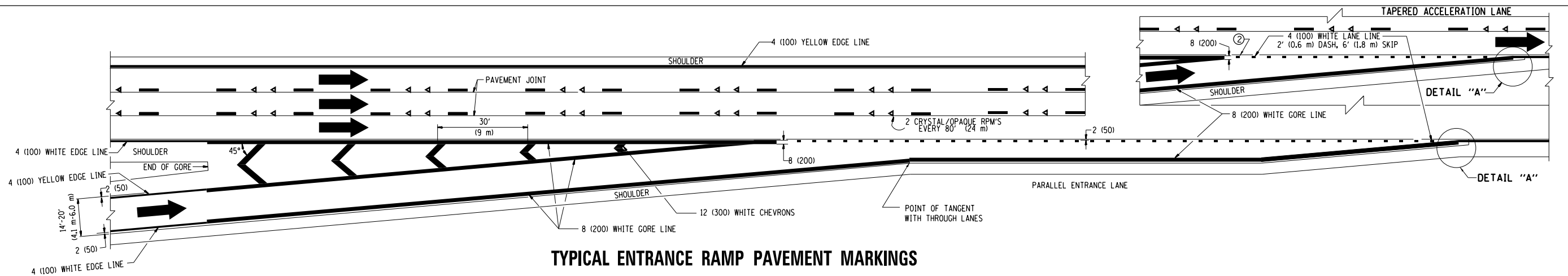


TYPICAL EDGE LINES & LANE LINES

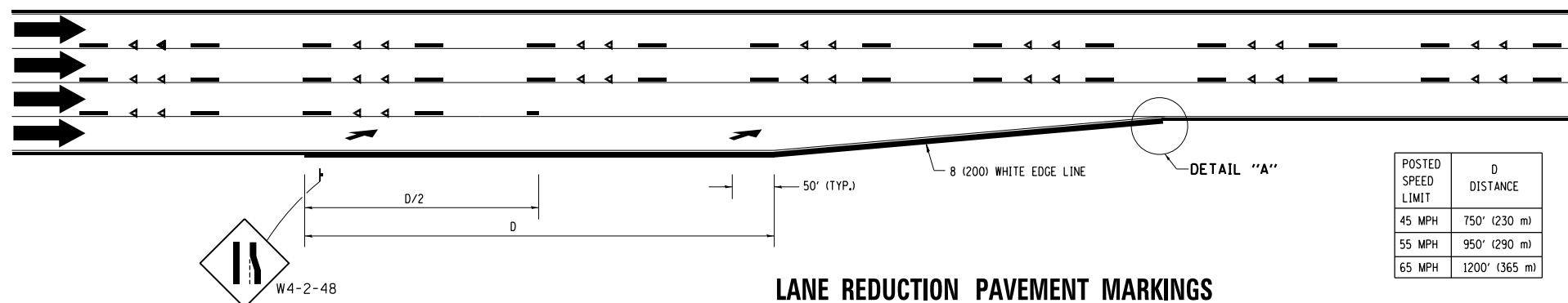
- PAVEMENT MARKING MATERIALS**
1. THERMO PLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR THE EDGE LINES, GORE LINES, AND DIAGONAL LINES ON BITUMINOUS PAVEMENT ONLY.
 2. PREFORMED PLASTIC TYPE B PAVEMENT MARKING LINE SHALL BE USED FOR ALL LANE LINES ON BITUMINOUS PAVEMENT.
 3. POLYUREA PAVEMENT MARKING SHALL BE USED FOR ALL MARKINGS ON PCC.



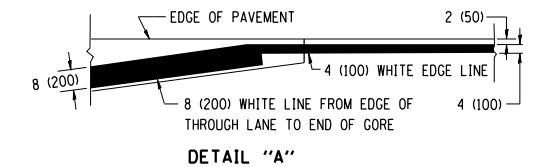
TYPICAL EXIT RAMP PAVEMENT MARKINGS



TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS

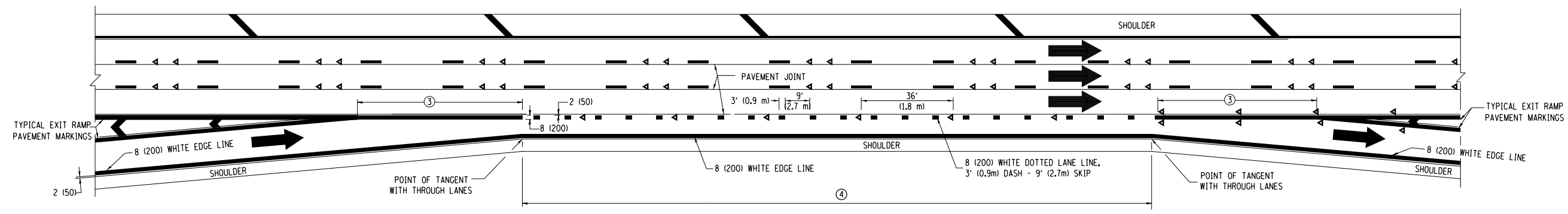


LANE REDUCTION PAVEMENT MARKINGS

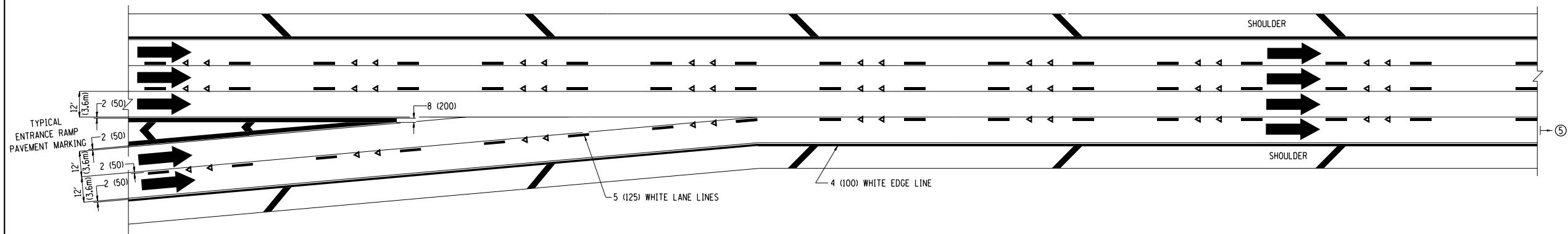


- NOTES:**
- ① THE DIAGONAL LINES SHALL BE SPACED AT 40' (12 m) C-C ACROSS ALL STRUCTURES WHICH ARE 500' (150 m) OR LESS IN LENGTH. THE DIAGONAL LINES ARE NOT REQUIRED ON SHOULDERS WHICH ARE 6' (1.8 m) OR LESS IN WIDTH.
 - ② 4" (2' DASH, 6' SKIP) MARKING ON TAPERED ENTRANCE AND EXIT RAMP SHALL BE OMITTED ON TANGENT SECTIONS.

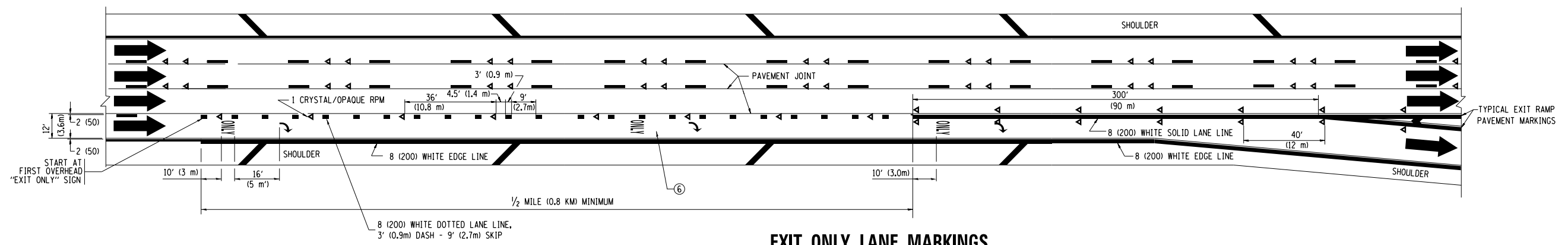
POSTED SPEED LIMIT	D DISTANCE
45 MPH	750' (230 m)
55 MPH	950' (290 m)
65 MPH	1200' (365 m)



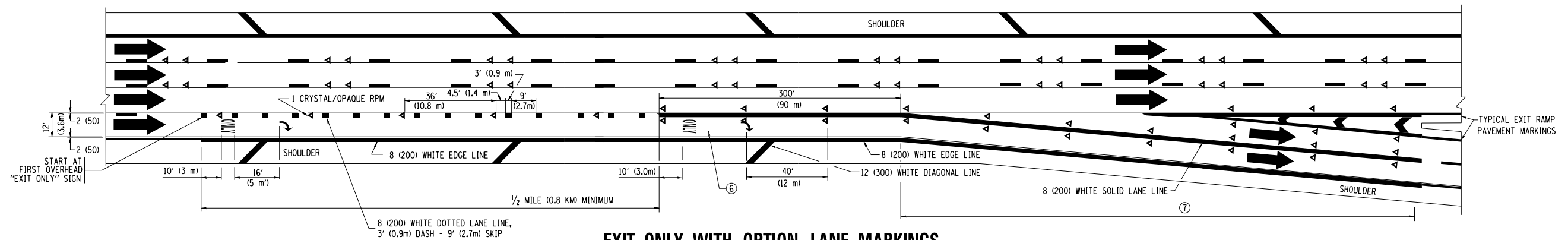
AUXILIARY LANE MARKINGS



TWO LANE ENTRANCE RAMP WITH MERGE MARKINGS



EXIT ONLY LANE MARKINGS

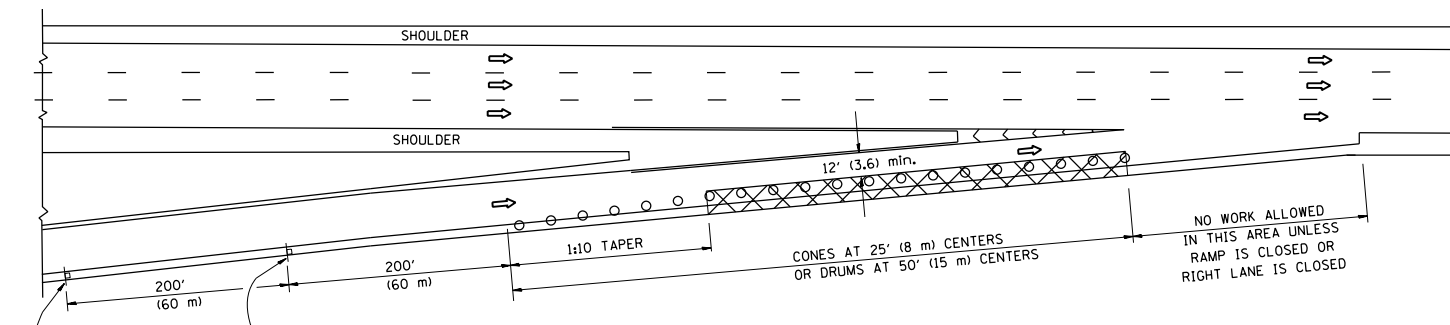


EXIT ONLY WITH OPTION LANE MARKINGS

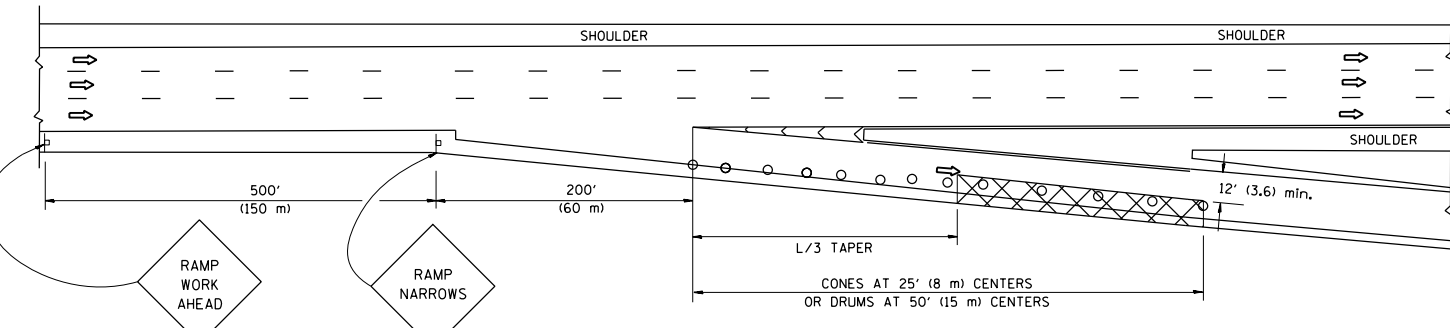
- NOTES**
- ③ OMIT WHEN LENGTH OF AUXILIARY LANE IS LESS THAN 500' (150 m).
 - ④ 8-INCH WIDE DOTTED LANE LINE MARKINGS SHALL BE USED WHEN THE LENGTH OF THE AUXILIARY LANE IS 2 MILES OR LESS.
 - ⑤ FOR TWO-LANE ENTRANCE RAMP, IF RIGHT LANE ENDS, USE TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS.
 - ⑥ ONLY AND ARROWS EQUALLY SPACED, 500' (150 m) MAXIMUM SPACING. FULL SIZE LETTERS AND ARROW SHALL BE USED.
 - ⑦ CONTINUE 8" SOLID LANE LINE THROUGH EXIT TO END OF PAVED GORE.

FILE NAME =	USER NAME = ougeungh	DESIGNED - D.W.S.	REVISED - D.W.S. 07-96	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
DRAWN CirclePhase, ILLINOIS CAD, 206, Road, 60W26, Cd, 02-06, 26-SHT-DI, Detail-21-22-(TC-12).dgn					REVISIONS	SCALE: NONE	SHEET NO. 19 OF 27 SHEETS	STA.	TO STA.	2013-008R	COOK	559	479
PLOT SCALE = 50.000' / in.					CHECKED -	REVISED - S.P.B. 01-07				TC-12		CONTRACT NO. 60W26	
PLOT DATE = 8/16/2013					DATE - 01-90	REVISED - S.P.B. 01-10				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

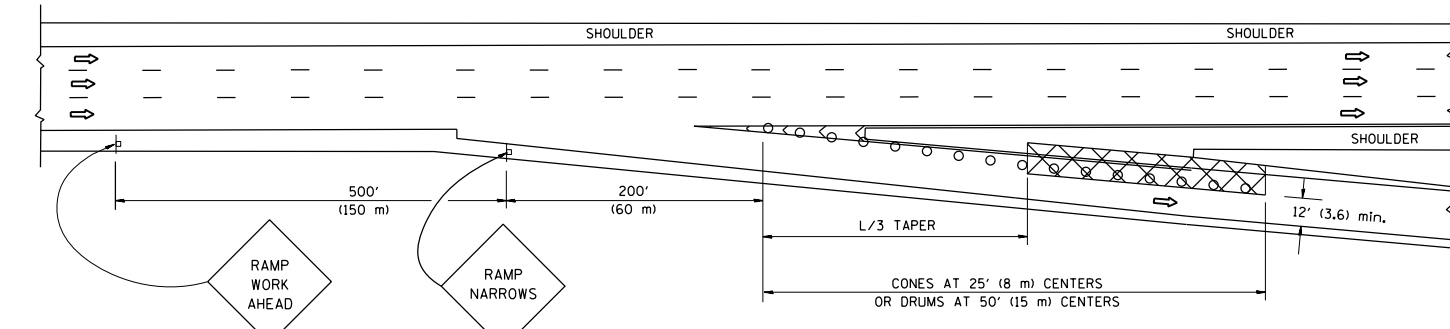
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

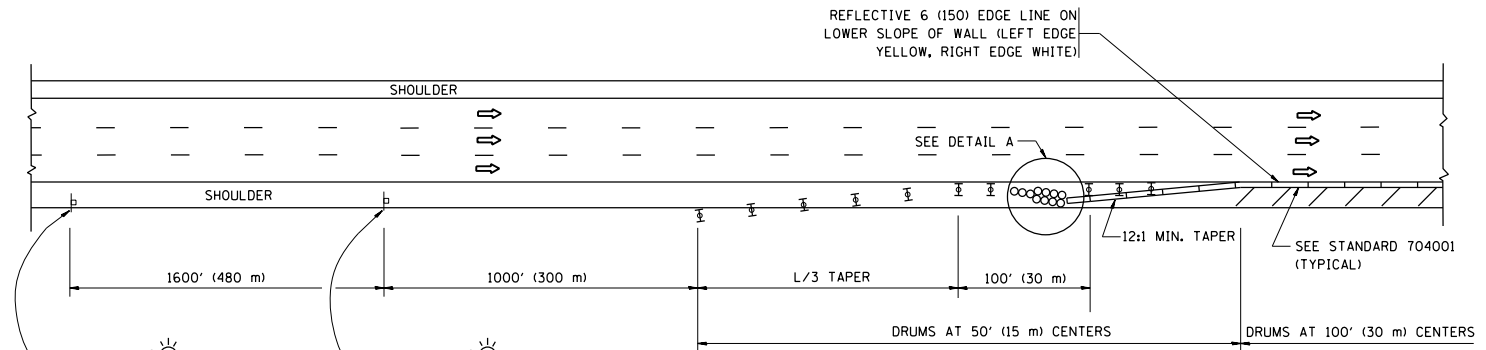
GENERAL NOTES

1. THE "L" DISTANCE EQUALS:

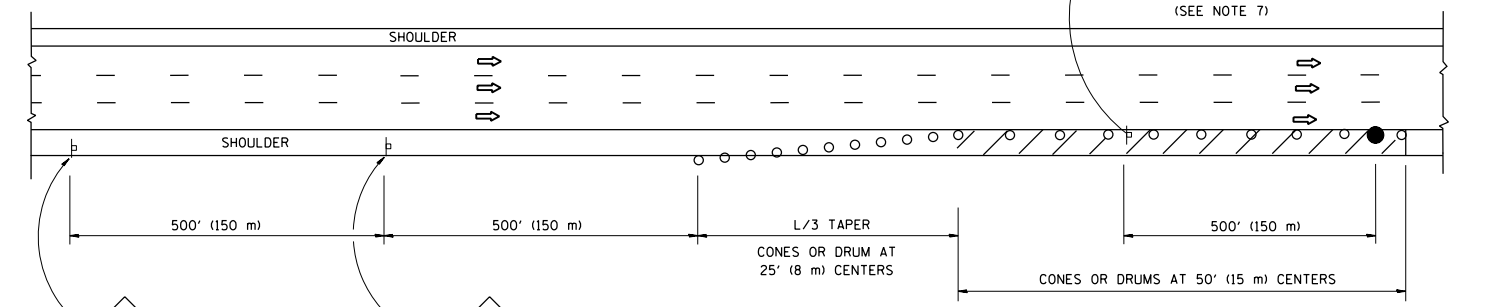
SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC ENGLISH
	$L = 0.65(W)(S)$ $L = (W)(S)$

W = WIDTH OF OFFSET IN FEET (METERS)
S = NORMAL POSTED SPEED MPH (KM/H)
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

SHOULDER CLOSURE DETAILS

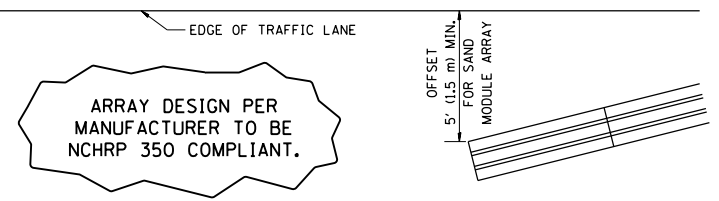


PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:
1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCRANCH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



DETAIL "A"
IMPACT ATTENUATOR, TEMPORARY
(SEE NOTE 5)

5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
 - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
 - b. THE WORK AVTIVITY REQUIRES FREQUENT ENCRACHMENT INTO THE LANE OPEN TO TRAFFIC.

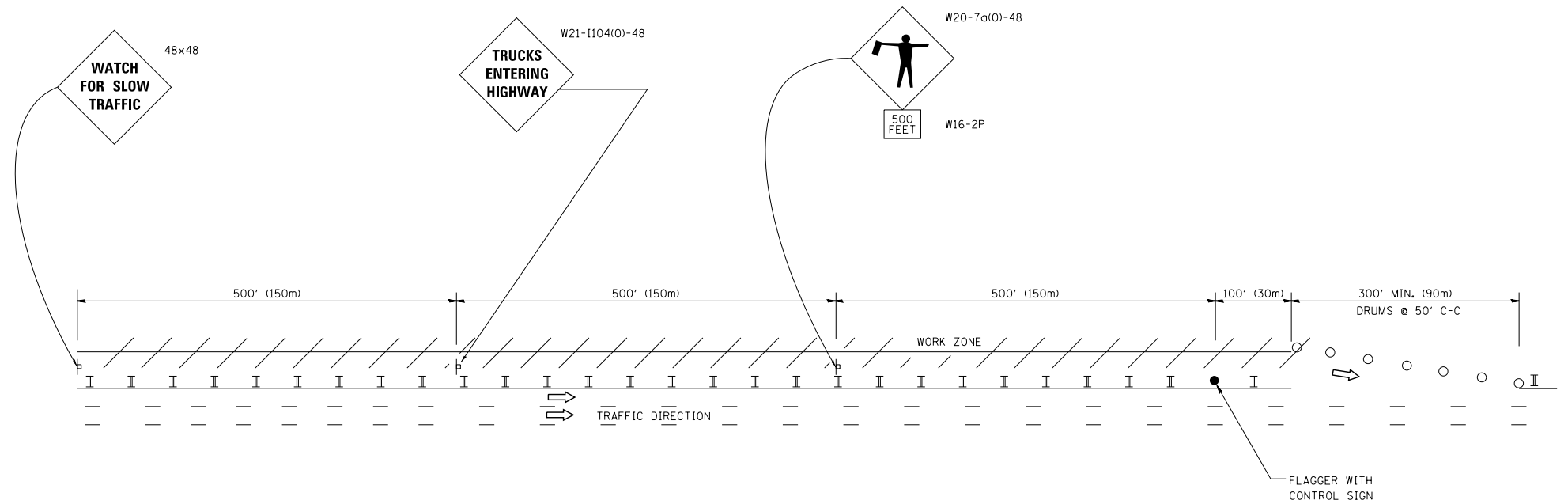
THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

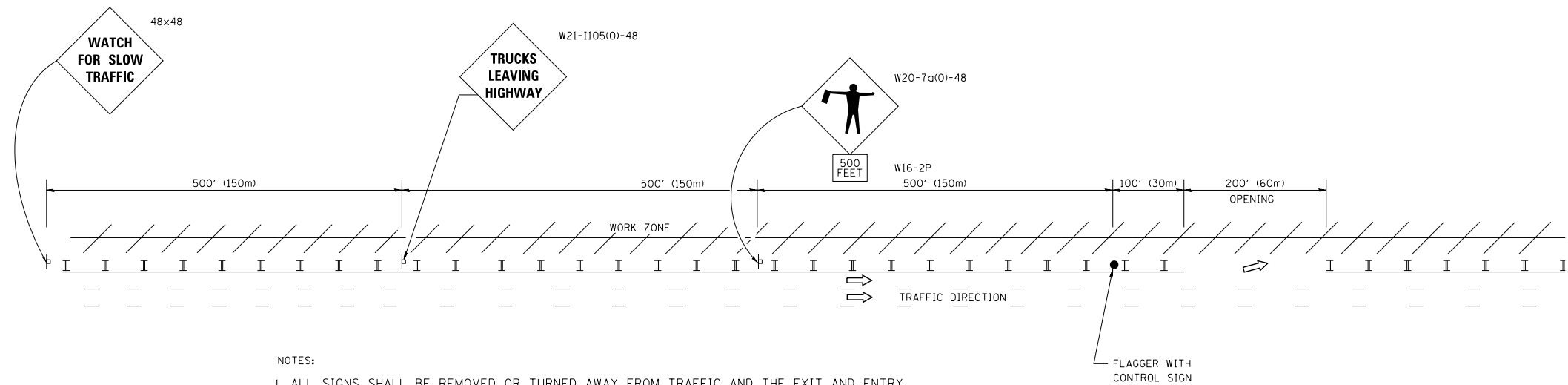
FILE NAME =	USER NAME = ougeungh	DESIGNED -	REVISED - 04-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
DRAWN - Circle 15.000.CAD.006.Road					REVISIONS - 60W26.Cdr.Fc.12-00				2013-008R	COOK	559	480	
PLOT SCALE = 50.0000' / in.					CHECKED -	REVISED - S.P.B. 01-07				TC-17			CONTRACT NO. 60W26
PLOT DATE = 8/16/2013					DATE - 11-96	REVISED - S.P.B. 12-09				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			90/94/290

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING






NOTES:

1. ALL SIGNS SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE OPENINGS SHALL BE A MINIMUM OF ONE HALF MILE APART AND A MINIMUM OF ONE QUARTER MILE FROM ALL ENTRANCE AND EXIT RAMP.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS
5. FLAGGERS SHALL NOT STOP TRAFFIC OR DIRECT TRAFFIC INTO AN ADJACENT LANE.






ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME =	USER NAME = footemj	DESIGNED -	REVISED - J.A.F. 02-06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FREEWAY/EXPRESSWAY SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS ON FREEWAYS/EXPRESSWAYS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ct:\pwork\pwork\footemj\d0108315\tc18.dgn		DRAWN -	REVISED - S.P.B. 01-07						559	481	
		CHECKED -	REVISED - S.P.B. 12-09			TC-18		CONTRACT NO.			
		DATE -	REVISED - M.D. 06-13			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.		FED. ROAD DIST. NO. 1






ROUTE MARKERS

-  FOR U.S. ROUTES
MI-40-2424
-  FOR ILLINOIS ROUTES
MI-50-2424
-  R.R. UNMARKED ROUTES
SPECIAL 24" x 18" VARIABLE
4" BLACK LETTERS ON WHITE
REFLECTIVE BACKGROUND

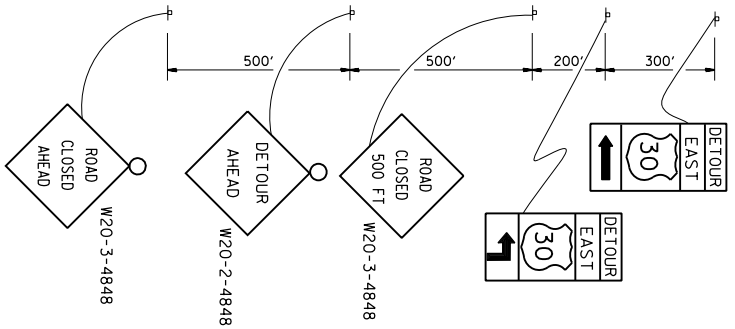
ARROWS SIGNS

-  M5-1L-2115
-  M5-1R-2115
-  M6-1-2115
-  M6-1-2115
-  M6-3-2115

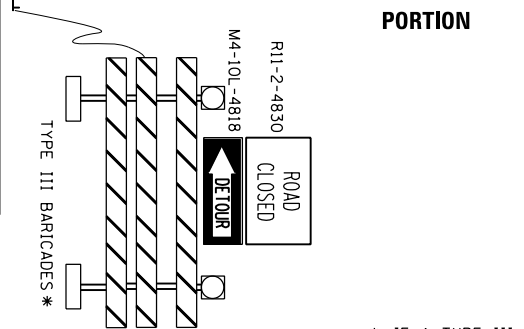
CARDINAL DIRECTION & DETOUR SIGNS

-  NORTH M3-1-2412
-  EAST M3-2-2412
-  SOUTH M3-3-2412
-  WEST M3-4-2412
-  DETOUR M4-8-2412

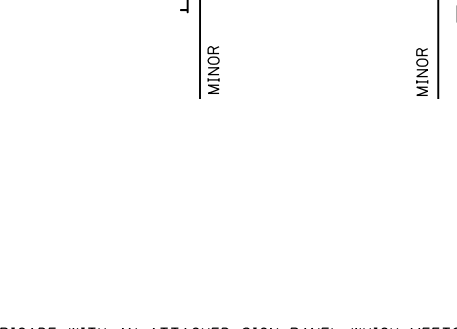
STATE ROUTE



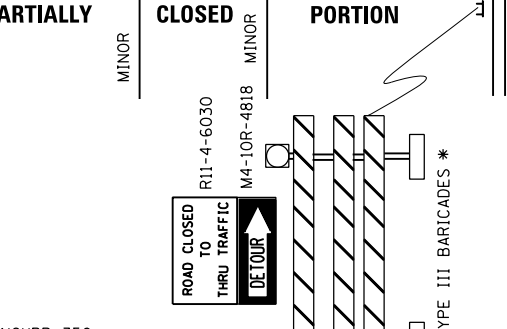
COMPLETELY CLOSED PORTION



PARTIALLY CLOSED PORTION



STATE ROUTE



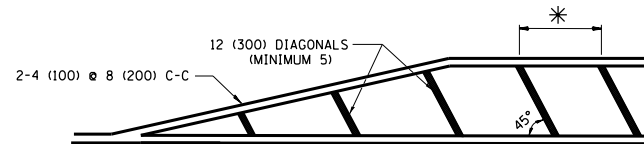
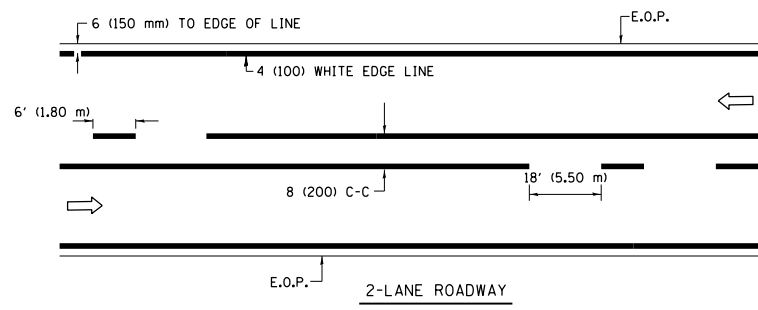
* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

FILE NAME =	USER NAME = ouyeungh	DESIGNED -	REVISED - 10-18-02
pw:\388039\pwin\l.econom\lne.local\PAE\COM\Documents\01 Americas\Transportation\4000\Drawn\Circle\Phase 11\000.CAD\006.Road\01\000\60W22\TC-21-0964209.DWG	DATE = 8/16/2013	CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

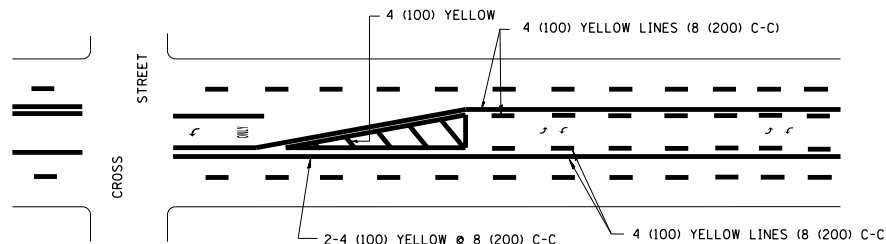
DETOUR SIGNING		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FOR CLOSING STATE HIGHWAYS			2013-008R	COOK	559	482
SCALE: NONE	SHEET NO. 22 OF 27 SHEETS	STA.	CONTRACT NO. 60W26			
		TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			

90/94/290					
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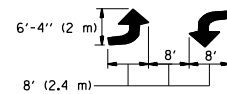


* FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.
 * DIAGONAL LINE SPACING: 20' (6.1 m) C-C

PAINTED MEDIANS

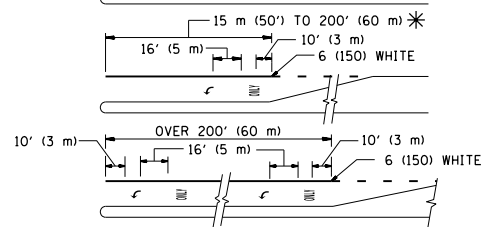
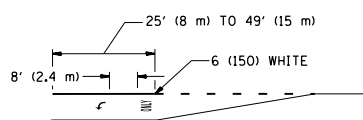
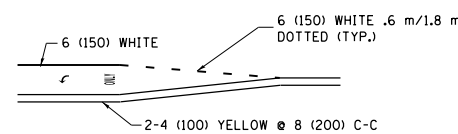


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

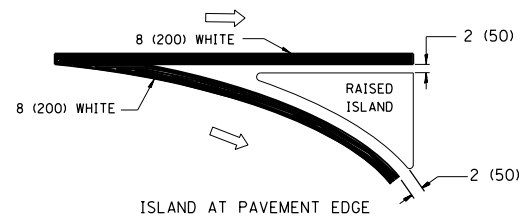
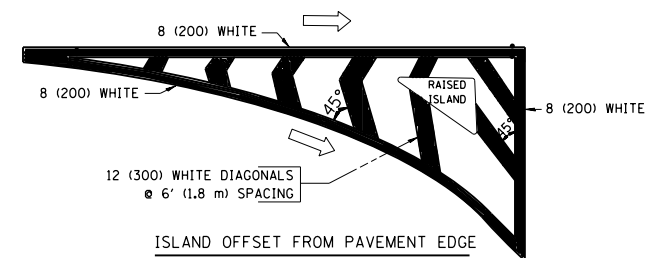


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 AREA = 15.8 SQ. FT. (1.47 m²) ONLY AREA = 22.9 SQ. FT. (2.13 m²)

* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

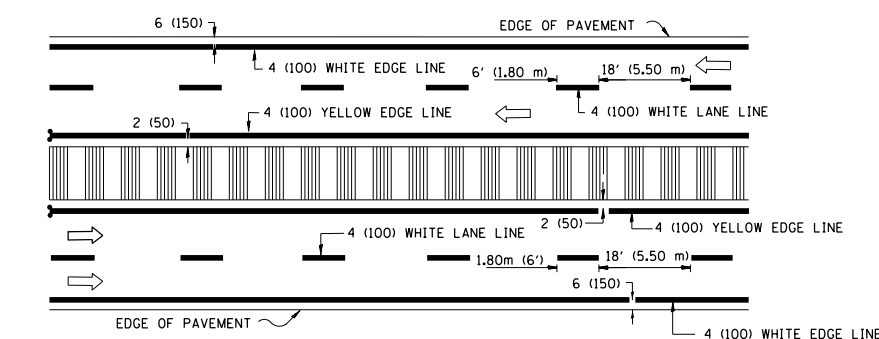
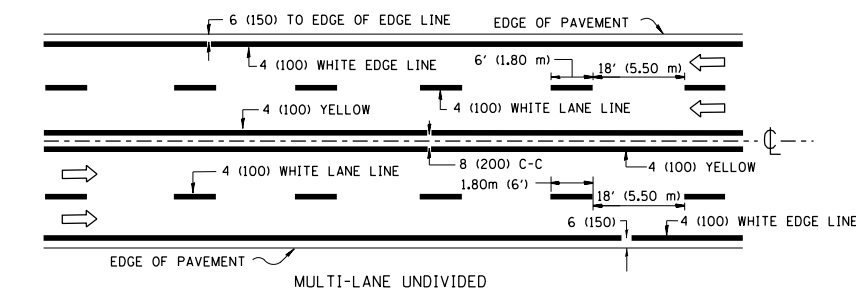


TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	6' (1.80 m) LINE WITH 18' (5.50 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	8 (200) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	8 (200) C-C
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	6' (1.80 m) LINE WITH 18' (5.50 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4 m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4 m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	6' (1.8 m) LINE WITH 18' (5.50 m) SPACE FOR SKIP-DASH; 8 (200) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL & PEDESTRIAN)	12 (300) @ 45° 24 (600) @ 90°	SOLID SOLID	WHITE WHITE	2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45°	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	8 (200) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 20' (6.1 m) (LESS THAN 30 MPH (50 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)

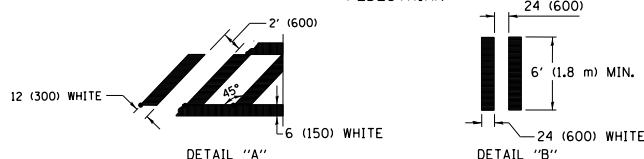
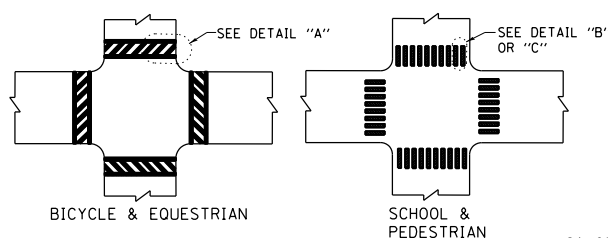
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STREET MARKING STANDARDS, PRINTED BY CITY OF CHICAGO, DEPARTMENT OF TRANSPORTATION, BUREAU OF TRAFFIC.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

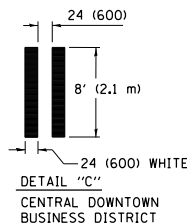


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



**DETAIL "C"
CENTRAL DOWNTOWN BUSINESS DISTRICT**

FILE NAME =	USER NAME = ougeungh	DESIGNED -	REVISED - T. RAMMACHER 12-07-00
pw:\388039\p\intl\ecomonline\local\PAE\COM\Documents\01 Americas\Transportation\0000\Road\REVISED\60W2R_CEN\Detail\26-28-TC-24.dgn		CHECKED -	REVISED -
		DATE -	REVISED -

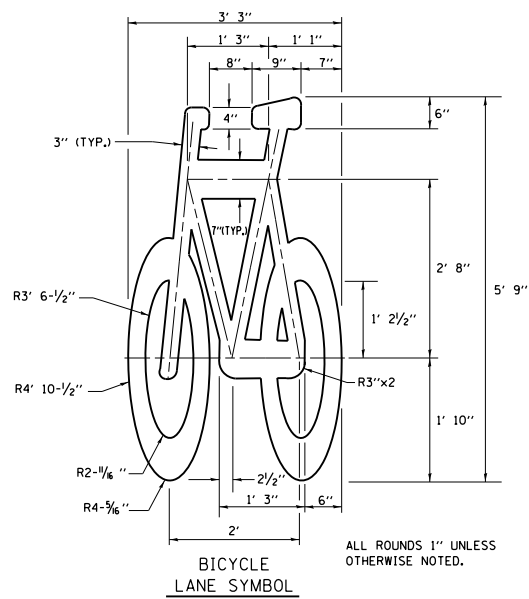
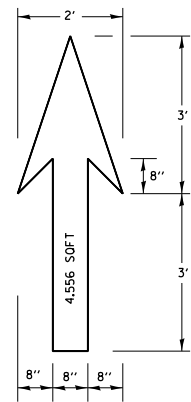
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO
TYPICAL PAVEMENT MARKINGS

SCALE: NONE SHEET NO. 23 OF 27 SHEETS STA. TO STA.

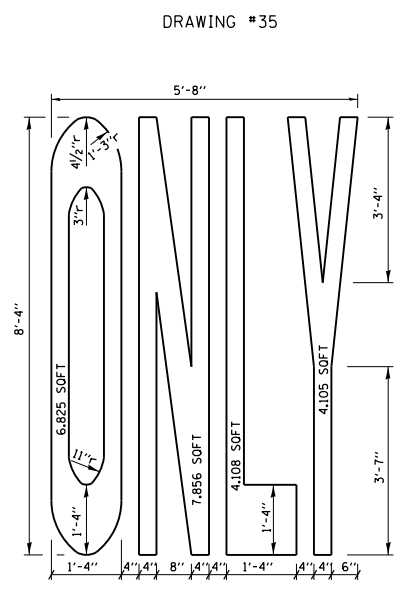
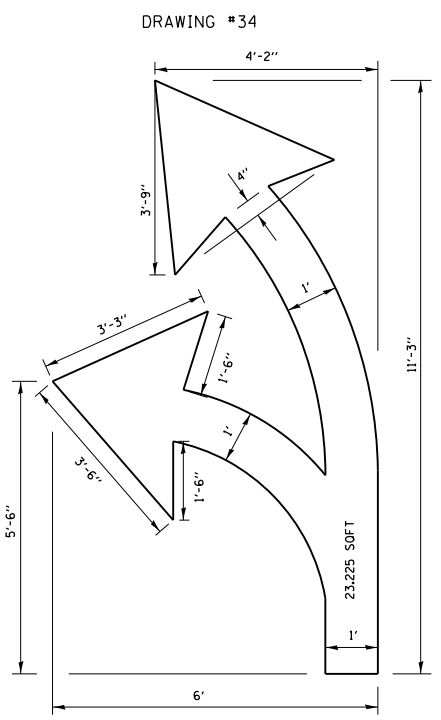
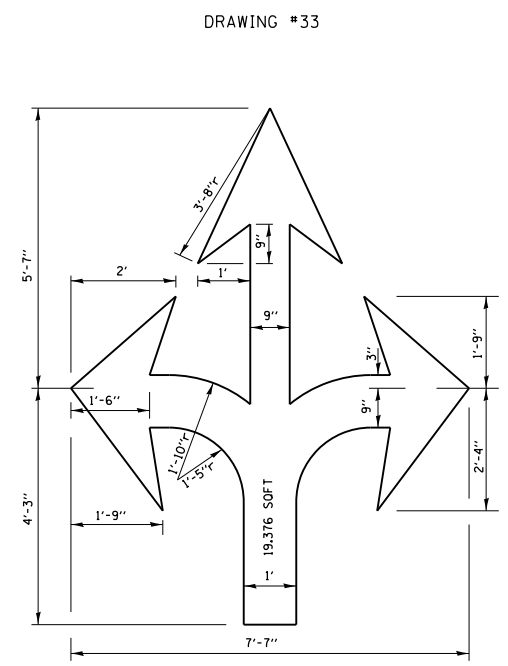
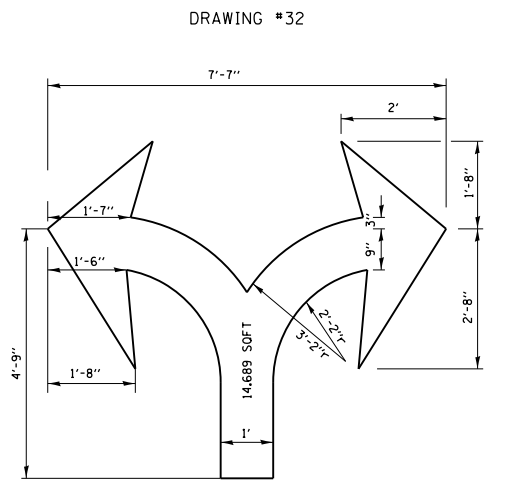
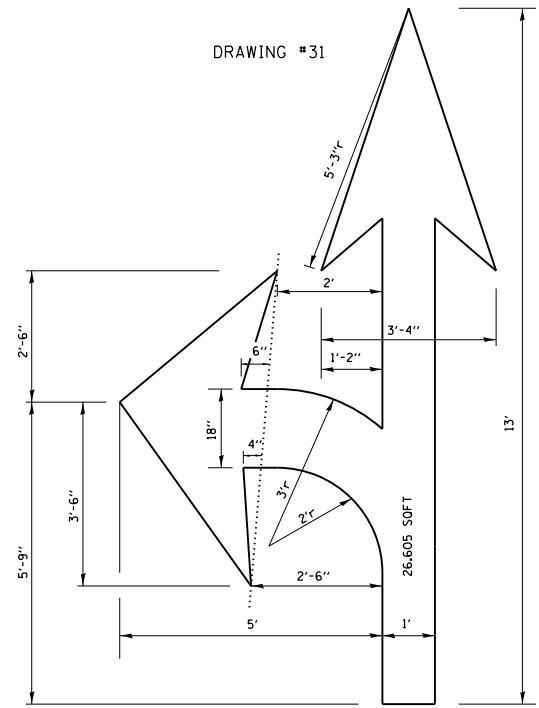
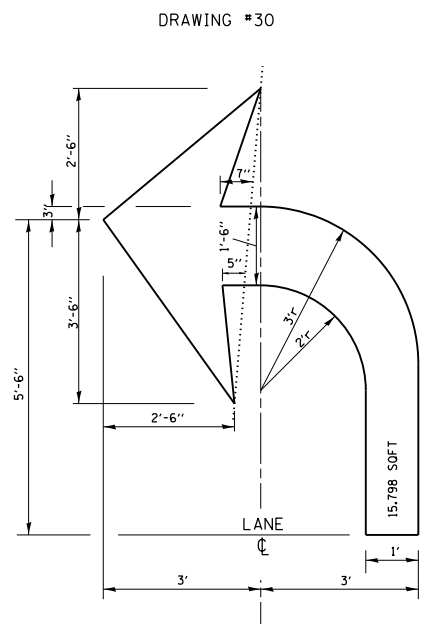
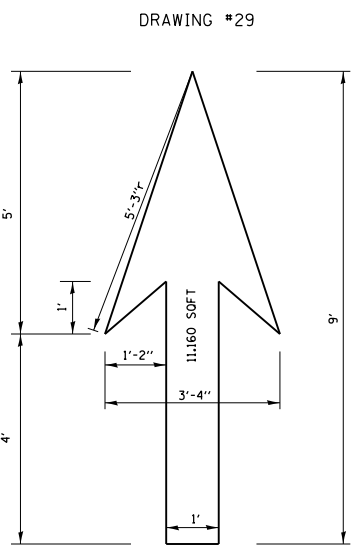
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2013-00BR	COOK	559	483
TC-24		CONTRACT NO. 60W26		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

90/94/290



NOTE:
 1.) FOR BIKE LANE SYMBOLS ONLY, USE PRE-FORMED THERMOPLASTIC WITH A MINIMUM THICKNESS OF 90 MILS, MINIMUM SKID RESISTANCE VALUE OF 60 BPN, & A MINIMUM INDEX OF REFRACTION OF 1.50.
 2.) THE RESIDENT ENGINEER SHALL CONTACT MR. BEN GOMBERG AT 312-744-8093 AT LEAST ONE CALENDAR WEEK PRIOR TO INSTALLING BIKE LANE SYMBOLS.

TYPICAL BIKE LANE SYMBOLS
DRAWING #28



NOTE: ALL MARKINGS SHALL BE SOLID WHITE UNLESS OTHERWISE NOTED IN THE PLANS

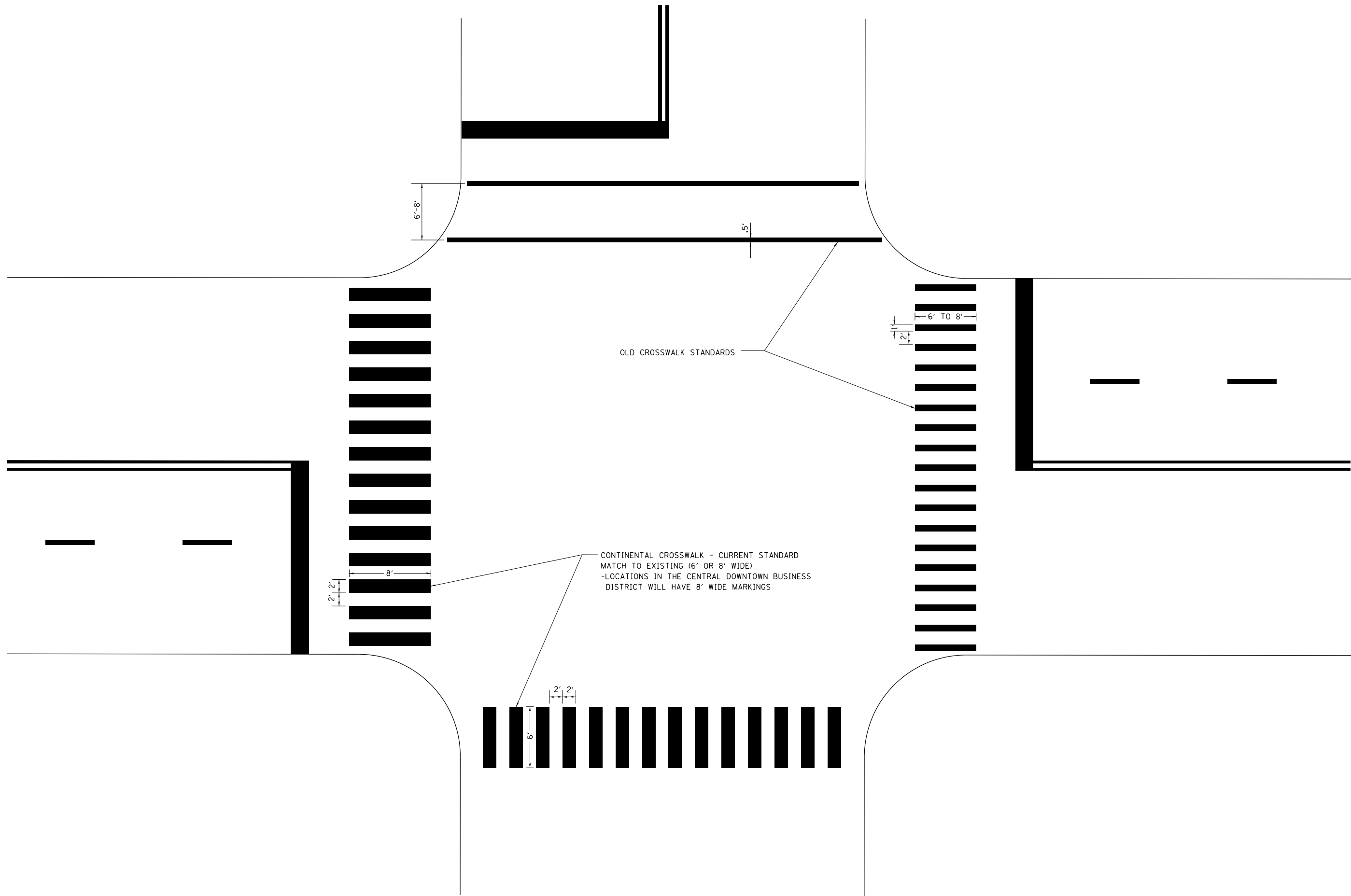
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PLT SCALE = 50.000' / in.	CHECKED -	REVISIONS	
DATE = 8/16/2013	DATE -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO	
TYPICAL PAVEMENT MARKINGS	
SCALE: NONE	SHEET NO. 24 OF 27 SHEETS
STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2013-008R	COOK	559	484
TC-24		CONTRACT NO. 60W26		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

90/94/290



OLD CROSSWALK STANDARDS

CONTINENTAL CROSSWALK - CURRENT STANDARD
 MATCH TO EXISTING (6' OR 8' WIDE)
 -LOCATIONS IN THE CENTRAL DOWNTOWN BUSINESS
 DISTRICT WILL HAVE 8' WIDE MARKINGS

FILE NAME =	USER NAME = ougeungh	DESIGNED -	REVISED - T. RAMMACHER 12-07-00
pw:\388039-pwintl.aecomonline.local\PWAE	COM00\Documents\01 Americas\Transportation\400	DRAWN Circle\Phase.II\000.CAD\006.Road	REVISED 60W26-TC-24-12
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	PLOT DATE = 8/16/2013	DATE -	REVISED -

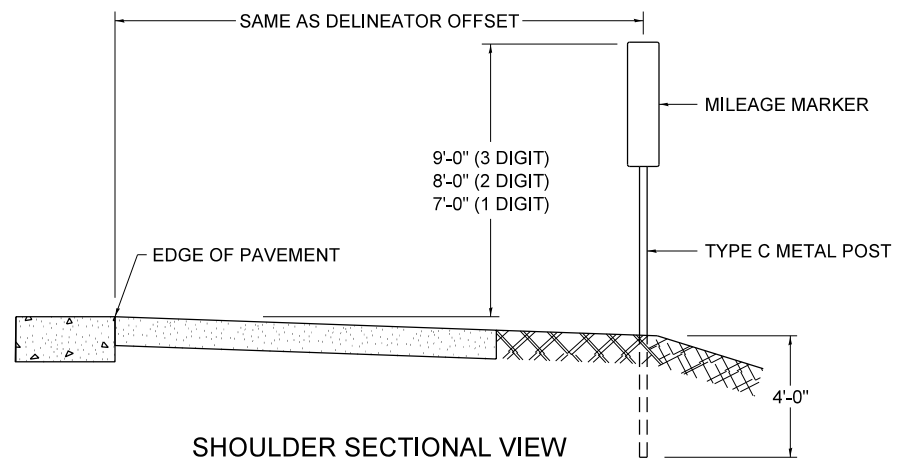
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO
TYPICAL PAVEMENT MARKINGS

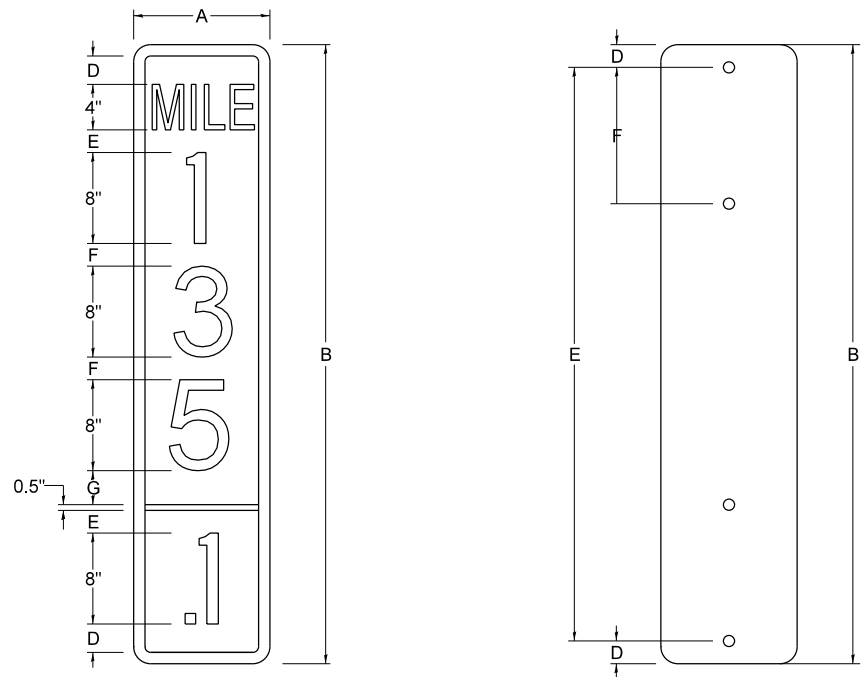
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	2013-008R	COOK	559	485
TC-24		CONTRACT NO. 60W26		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

STANDARD DESIGN FOR MILE POST



SHOULDER SECTIONAL VIEW

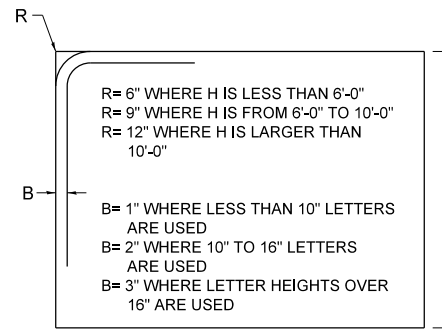


SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	DIGIT
12 x 24	12.0	24.0	1.5	1.5	1.5	N/A	1.5	1
12 x 36	12.0	36.0	1.5	2.0	2.0	2.0	1.5	2
12 x 48	12.0	48.0	1.5	2.5	2.0	2.0	2.5	3

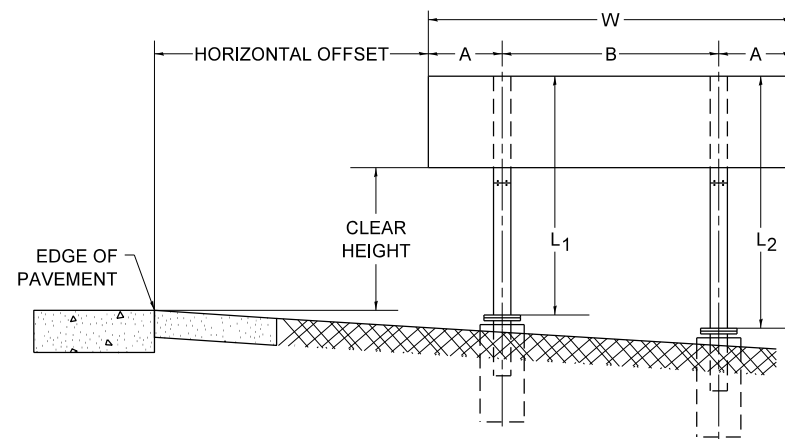
BLANK	A	B	C	D	E	F
B9-1224	12.0	24.0	1.5	2.0	20.0	N/A
B9-1236	12.0	36.0	1.5	2.0	32.0	12.0
B9-1248	12.0	48.0	1.5	2.0	44.0	12.0

SIGN SIZE	SERIES					BLANK STD.	
	LINES						
	1	2	3	4	5	BORDER	
12 x 24	4C	8D	4C	N/A	N/A	0.5	B9-1224
12 x 36	4C	8D	8D	4C	N/A	0.5	B9-1236
12 x 48	4C	8D	8D	8D	4C	0.5	B9-1248

BORDER AND RADIUS LAYOUT



MAJOR GUIDE SIGN LAYOUT

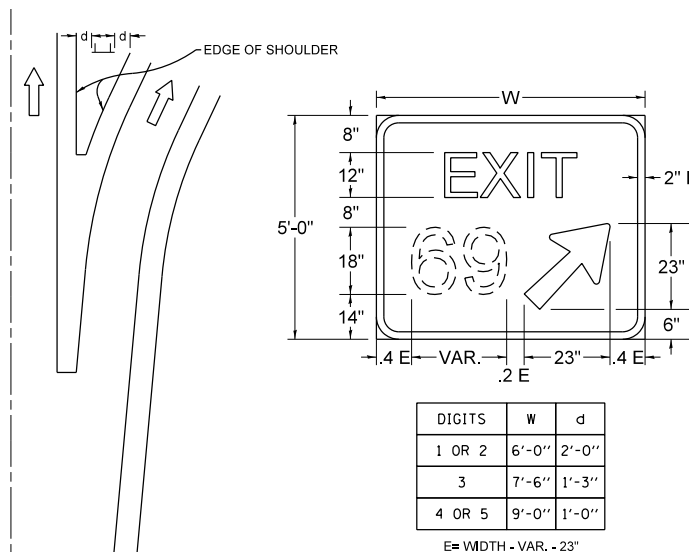


NUMBER OF STEEL SUPPORTS	A	B
2	.2 W	.6 W
3	.15 W	.35 W
4	.125 W	.25 W
5	.1 W	.2 W

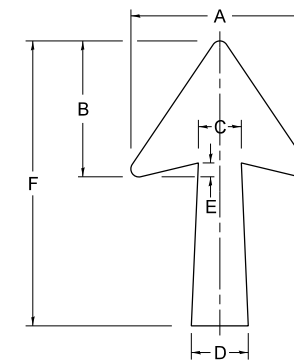
"L1 IS THE LENGTH OF SUPPORT, NOT INCLUDING THE STUB PROJECTION, CLOSEST TO THE EDGE OF THE PAVEMENT."

"A" IS THE DISTANCE FROM THE SIGN EDGE TO THE CENTERLINE OF THE NEAREST SUPPORT. "B" IS THE DISTANCE BETWEEN CENTERLINES OF SUPPORTS.

GORE SIGNS

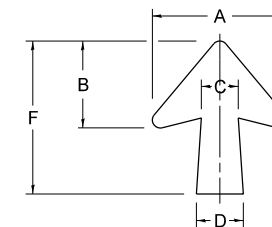


STANDARD ARROWS FOR INTERSTATE GUIDE SIGNS



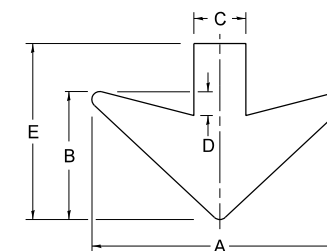
ARROW SYMBOL	A	B	C	D	E	F	R
24 1/4 x 15 1/8	15 1/8	11 1/8	3 3/4	5	1 1/2	24 1/4	1 1/8
29 1/4 x 18 1/4	18 1/4	14	4 1/2	6	1 1/2	29 1/4	3/4
35 5/8 x 22 1/4	22 1/4	17	5 3/8	7 1/8	1 3/4	35 5/8	1
18 1/4 x 11 1/4	11 1/4	8 3/4	3 1/8	3 3/8		18 1/4	

NOTE: D & F ARE RECOMMENDED DIMENSIONS. TAPER SHOULD BE HELD CONSTANT FOR LONGER OR SHORTER SHAFT LENGTHS



ARROW SYMBOL	A	B	C	D	E	F	R
17 1/4 x 14 1/4	14 1/4	9 3/8	3 3/8	4 1/2	1 5/8	17 1/4	3/4
20 1/4 x 17 1/4	17 1/4	11 3/4	4 3/8	5 5/8	1 1/2	20 1/4	
25 x 21 1/8	21 1/8	14 1/4	5	6 3/4	1 3/4	25	1
9 5/8 x 8 1/8	8 1/8	5 5/8	2 3/8	2 3/8		9 5/8	1/2

DOWN ARROWS



ARROW SYMBOL	A	B	C	D	E	R
16 1/2 x 24	24	12	5	1 1/2	16 1/2	3/4
22 x 32	32	16	6 1/2	3	22	1

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USER NAME = augeungh

DESIGNED - REVISED - 02-04-2009

DRAWN - REVISED -

PLOT SCALE = 50.0000' / in. CHECKED - REVISED -

PLOT DATE = 8/16/2013 DATE - 03-08-1984 REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MILE POST MARKERS - GORE SIGNS
MAJOR GUIDE SIGN LAYOUT - ARROWS

SCALE: NONE SHEET NO. 26 OF 27 SHEETS STA. TO STA.

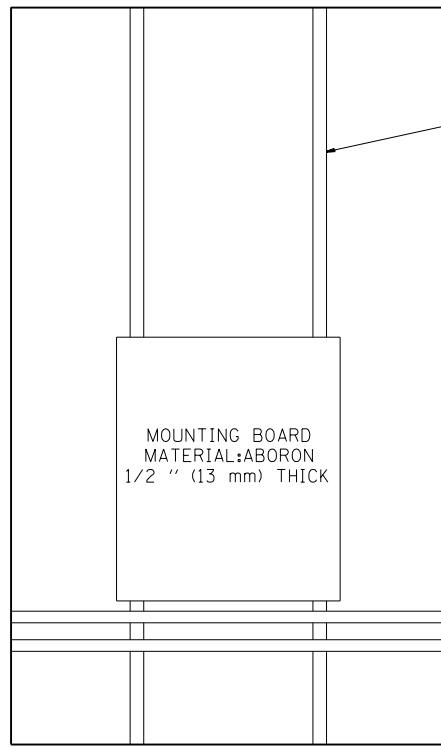
F.A.I. SECTION COUNTY TOTAL SHEETS SHEET NO.

RTE. 2013-008R COOK 559 486

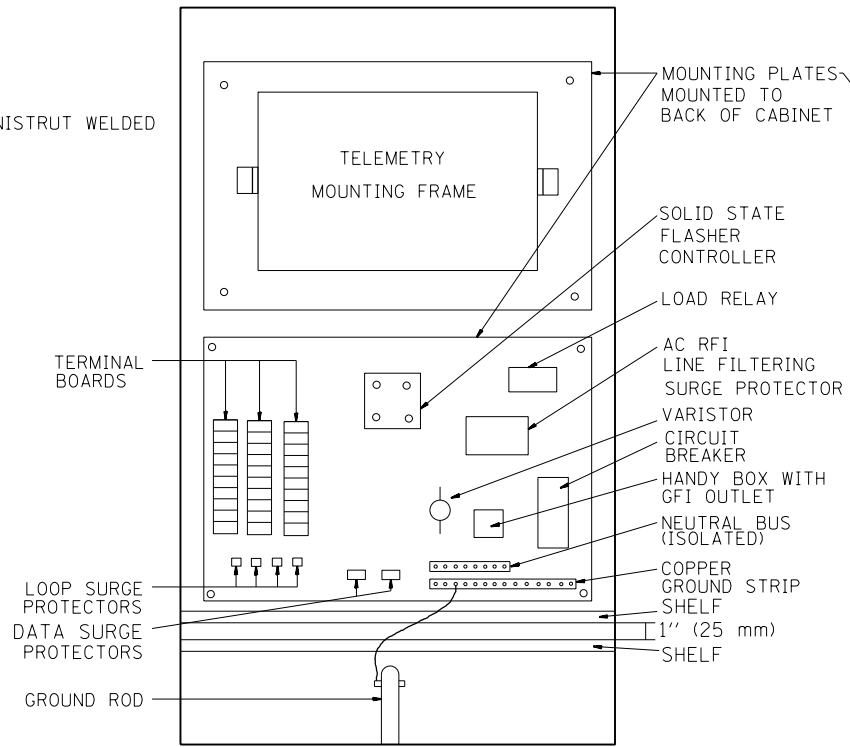
TC-27 (TS-2341-1) CONTRACT NO. 60W26

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT

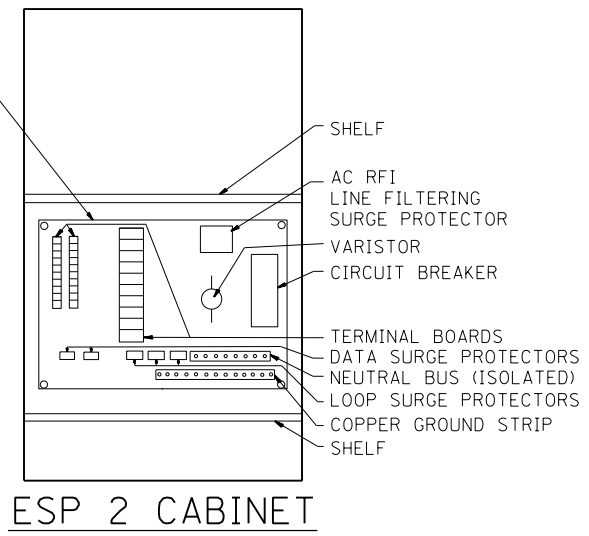
90/94/290



SIDE VIEW ESP 3 & 4 CABINET



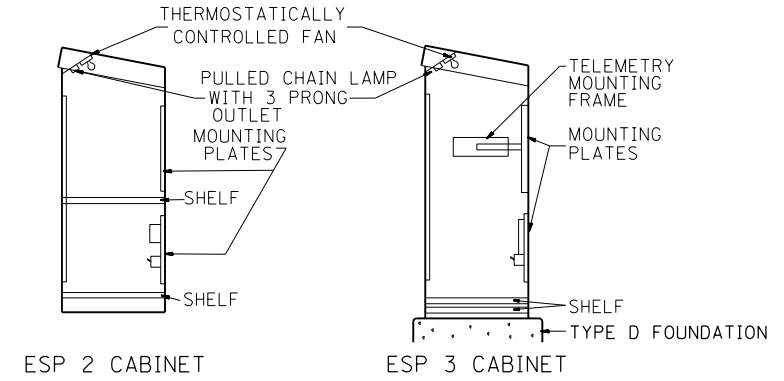
ESP 3 CABINET



ESP 2 CABINET

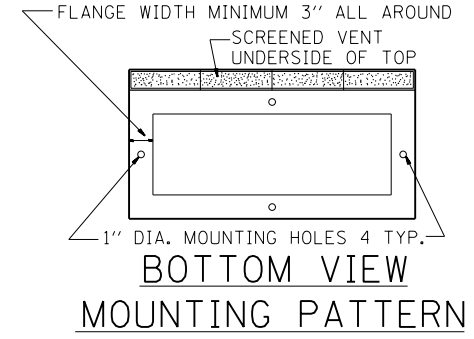
TYPICAL CABINET INTERIORS
STANDARD TRAFFIC SYSTEMS CENTER CABINETS

TYPE	HEIGHT (IN-mm)	WIDTH (IN-mm)	DEPTH (IN-mm)	THICKNESS (IN-mm)	MATERIAL
ESP1	22.5" (571.5 mm)	14.25" (361.95mm)	9.75" (247.65mm)	3/16" (4.76mm)	FABRICATED ALUMINUM
ESP2	36" (914.4mm)	20" (508.0mm)	15" (381.0mm)	7/32" (4.76mm)	FABRICATED ALUMINUM
ESP3	49.5" (1,260 mm)	30" (762.0mm)	17" (431.8mm)	3/16" (4.76mm)	FABRICATED ALUMINUM
ESP4	55" (1,400 mm)	44" (1,120 mm)	26" (660.4mm)	3/16" (4.76mm)	FABRICATED ALUMINUM



PROFILE VIEWS

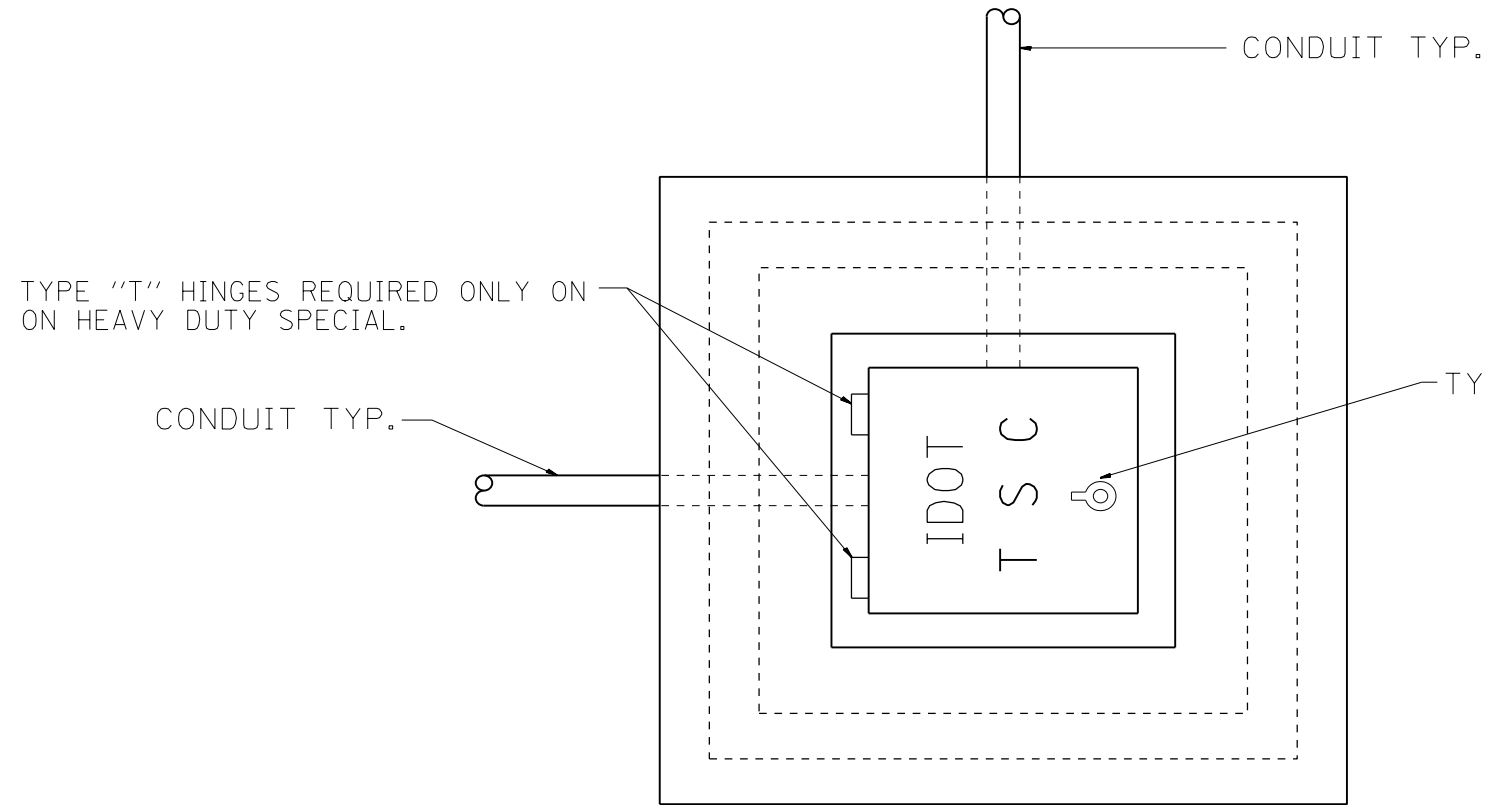
NOTE: MOUNTING PLATES TO BE MOUNTED TO BACK PANEL OF CABINET



- NOTES:
- CABINETS, CABINET POSTS AND CABINET PEDESTALS SHALL BE PRIMED AND PAINTED IN ACCORDANCE WITH SECTION T637 OF THE "STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS". THE FINAL COAT SHALL BE (X) IN COLOR. THE INTERIOR SHALL BE PAINTED WHITE. SIGNAL POSTS AND HEADS TO BE FEDERAL YELLOW 89-19(MAUTZ).
 - CABINETS SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION T400 OF THE "STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS".
 - ALL CABINETS WHICH ARE SERVICED BY 117 VOLTS A.C. POWER SHALL BE EQUIPPED WITH A 10 AMP CIRCUIT BREAKER, A.C. R.F.I. LINE FILTERING SURGE PROTECTOR, VARIATOR, DATA SURGE AND LOOP SURGE PROTECTORS AS INCIDENTAL TO THE COST OF THE CABINET. CMS CABINETS TYPE IV SHALL HAVE A 60 AMP. CIRCUIT BREAKER MINIMUM.
 - ESP 2/3/4 CABINETS SHALL BE FITTED WITH A THERMOSTATICALLY CONTROLLED FAN. IT SHALL BE MOUNTED AT THE TOP OF THE CABINET. THE FAN SHALL BE CAPABLE OF OPERATING AT 130 CPM AT 160" (48.8 m) OF STATIC WATER PRESSURE. A PORCELAIN BASED PULL CHAIN FIXTURE WITH 3 PRONG OUTLET SHALL ALSO BE PROVIDED.
 - RAMP METERING ESP 3 TYPE CABINETS SHALL ALSO BE EQUIPPED WITH A LOAD RELAY AND 2 CIRCUIT FLASHER. LAMPS, FAN, LOAD RELAY, AND 2 CIRCUIT FLASHER SHALL BE INCIDENTAL TO THE COST OF THE CABINET
 - INCIDENTAL TO THE COST OF EACH CABINET THE CONTRACTOR SHALL CONSTRUCT A 5 INCH (130mm) PCC SIDEWALK OF A RECTANGULAR AREA 3 FEET (915 mm) BY 4 FEET (1.25 m) IMMEDIATELY ADJACENT TO THE CABINET FOUNDATION ON THE SAME SIDE OF THE FOUNDATION AS THE CABINET DOOR TO PROVIDE FOOTING DURING INSTALLATION AND MAINTENANCE.
 - ANCHOR BOLTS FOR PEDESTAL AND BASE MOUNTED CABINETS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CABINET.
 - ALL CABINETS SHALL HAVE TERMINAL BLOCKS AND SHELVES AS SHOWN. THESE ITEMS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CABINET.
 - THE CABINET DOOR SHALL BE HINGED ON THE RIGHT SIDE WHEN FACING THE CABINET. THE DOOR SHALL BE FURNISHED WITH A GASKET THAT SHALL FORM A WEATHER TIGHT SEAL BETWEEN THE CABINET AND DOOR. THE HINGES SHALL BE CONTINUOUS AND BOLTED TO THE CABINET AND DOOR UTILIZING 1/4-20 STAINLESS STEEL CARRIAGE BOLTS AND NY-LOCK NUTS. THE HINGES WILL BE MADE OF STAINLESS STEEL WITH A 0.25 INCH (6.35 mm) DIAMETER STAINLESS STEEL HINGE PIN. THE HINGE PIN SHALL BE CAPPED TOP AND BOTTOM BY WELD TO RENDER IT TAMPER PROOF.
 - THE LATCHING MECHANISM SHALL BE A 3 POINT DRAW ROLLER TYPE. THE CENTER CATCH AND PUSHRODS SHALL BE EITHER CADMIUM OR ZINC PLATED, TYPE II CLASS I. PUSHRODS WILL BE TURNED EDGEWISE AT THE OUTWARD SUPPORTS AND SHALL BE 0.25 INCH (6.35 mm) BY 0.75 INCH (19.05 mm), MINIMUM. ROLLERS SHALL HAVE A MINIMUM DIAMETER OF 0.875 INCH (22.22 mm) AND WILL BE MADE OF NYLON. THE CENTER CATCH SHALL BE FABRICATED FROM 0.14 INCH (3.55 mm) STEEL, MINIMUM. WHEN THE DOOR IS CLOSED AND LATCHED, IT WILL BE LOCKED. THE LATCHING HANDLE SHALL HAVE A PROVISION FOR PADLOCKING IN THE CLOSED POSITION. AN OPERATING HANDLE SHALL BE FURNISHED WITH EACH LOCK. THE HANDLE WILL BE STAINLESS STEEL WITH A 0.75 INCH (19.05 mm) DIAMETER SHANK.
 - THE ENCLOSURE SHALL BE EQUIPPED WITH TWO ADJUSTABLE "C" MOUNTING CHANNELS WELDED ON BOTH SIDE WALLS AND BACK WALL OF THE ENCLOSURE, ALLOWING VERSATILE POSITIONING OF SHELVES OR PANELS. MOUNTING CHANNELS SHALL BE FACTORY PAINTED SAME COLOR AS INTERIOR OF CABINET.
 - CABINET DOOR SHALL NOT HAVE COMPARTMENT DOORS OR LOUVERS.
 - ALL FIELD CABINETS SHALL BE FITTED WITH BRASS LOCKS.
 - ESP TYPE 2 & 3 CABINETS FITTED WITH TWO SHELVES AS SHOWN.
 - POST TOP MOUNTED CABINETS, SHALL HAVE A 0.25 INCH (6.3 mm) BOTTOM OF CABINET WELDED.
 - THE CONTROL CABINET SHALL BE SET PLUMB ON THE FOUNDATION AND FASTENED TO THE ANCHOR BOLTS WITH NUTS AND WASHERS. FLAT WASHERS SHALL BE INSTALLED BELOW AND ABOVE THE BASE PLATE OF THE CONTROL CABINET. LOCKWASHERS SHALL BE INSTALLED ON TOP OF THE TOP FLAT WASHER.

- (X)
- | | |
|------------------|---------------------|
| EDENS | WALNUT * |
| KENNEDY | BLUE STREAK ** |
| EISENHOWER | CARIBBEAN BLUE * |
| I-290/IL53/1-355 | POST OFFICE BLUE ** |
| RYAN | YELLOW STONE II ** |
| I-55 | MEDIUM BRONZE * |
| I-57 | RED BARON ** |
| CAL-KING | BLUE STREAK ** |
| LAKE SHORE DR. | GREEN * |
| I-80 | STATUARY BRONZE ** |
- ALL RAMP METERING CABINETS LIME GREEN ***. ALL POSTS, T.S. HEADS AND SERVICES WILL BE PAINTED FEDERAL YELLOW.
- * MORTON POWDER PAINT COLOR OR EQUIVALENT.
 - ** O'BRIEN POWDER PAINT COLOR OR EQUIVALENT.
 - *** BENJAMIN MOORE ENAMEL COLOR OR EQUIVALENT.
- NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR CONFORMING TO COLOR REQUIREMENTS

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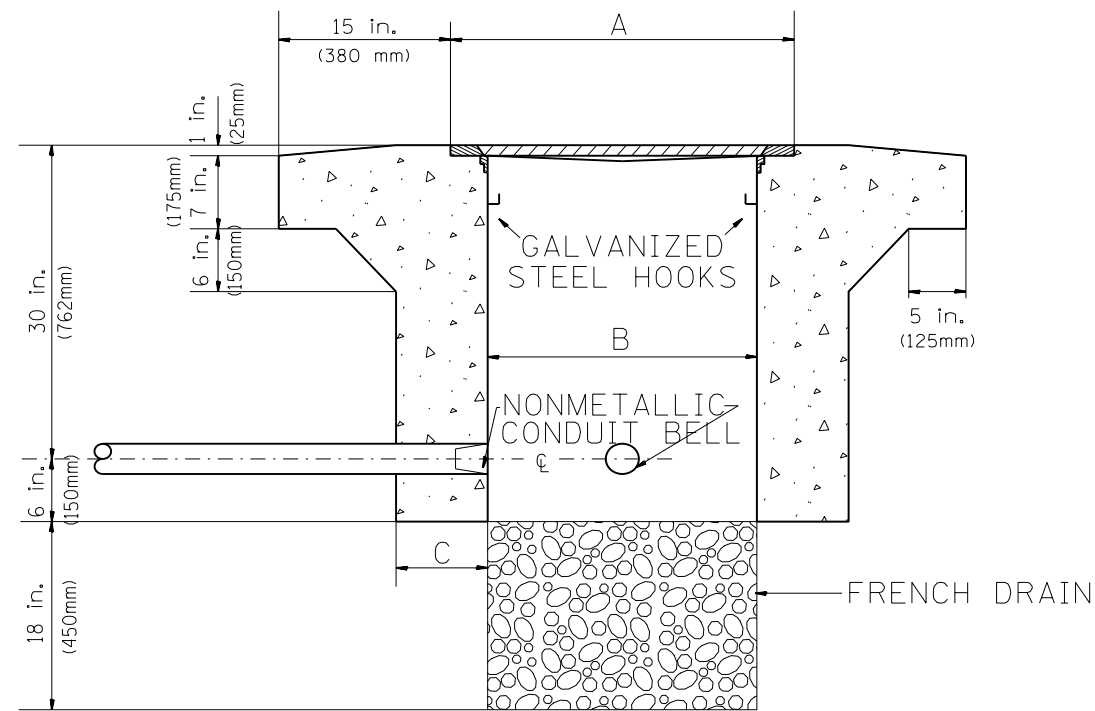


PLAN

HEAVY DUTY HANDHOLE MINIMUM DIMENSIONS (UNHINGED)

A	28" (711 mm)
B	22" (559 mm)
C	8" (200 mm)

(FRAME AND COVER 260 LBS. (118 Kg.) MIN.)



ELEVATION

HEAVY DUTY HANDHOLE SPECIAL MINIMUM DIMENSIONS

A	31.5" (800 mm)
B	30.0" (762 mm)
C	10.0" (250 mm)

(FRAME AND COVER 405 LBS. (184 Kg. (405)))

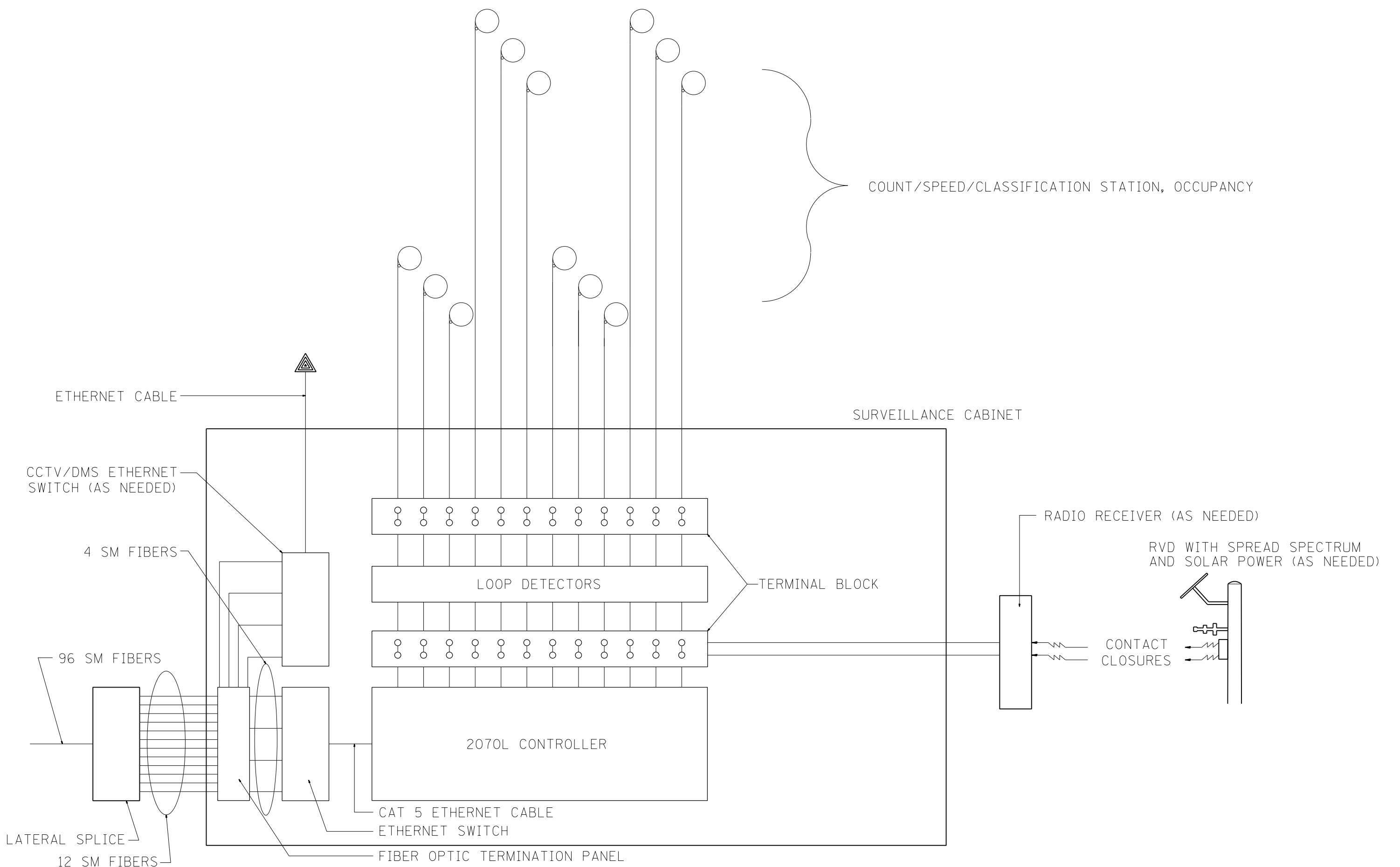
PC CONCRETE - HEAVY DUTY HAND HOLE

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PLOT DATE = 8/18/2013	DATE - 09/11/96	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
TRAFFIC SYSTEMS CENTER

PC CONCRETE - HEAVY DUTY HAND HOLE				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE: NO SCALE SHEET 2 OF 3 SHEETS STA. TO STA.				90/94/290	2013-008R	COOK	559	489
				ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W26	

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	PLOT DATE = 8/18/2013		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
 TRAFFIC SYSTEMS CENTER

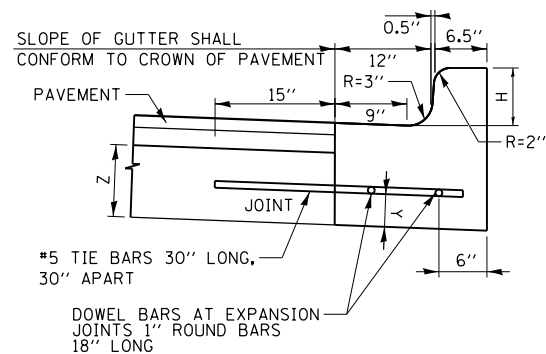
LOOP DETECTOR / SPEED DETECTOR	
CABINET LAYOUT	
SCALE: NO SCALE	SHEET 3 OF 3 SHEETS STA. TO STA.

F.A.I. RTE. 90/94/290	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 490
CONTRACT NO. 60W26				
ILLINOIS FED. AID PROJECT				

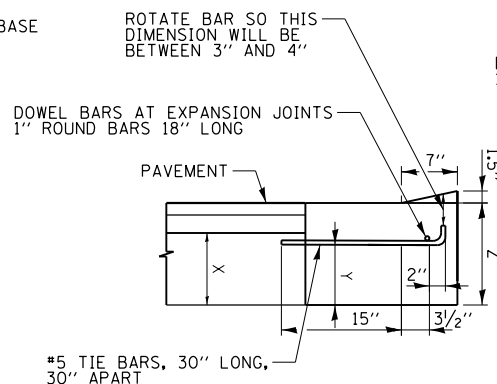
TRAFFIC SYSTEMS CENTER (TY-1TSC-400#44)

**COMBINATION CURB AND GUTTER
TYPE B V.12 (CDOT) AND
CONCRETE CURB, TYPE B (SPECIAL) (CDOT)**

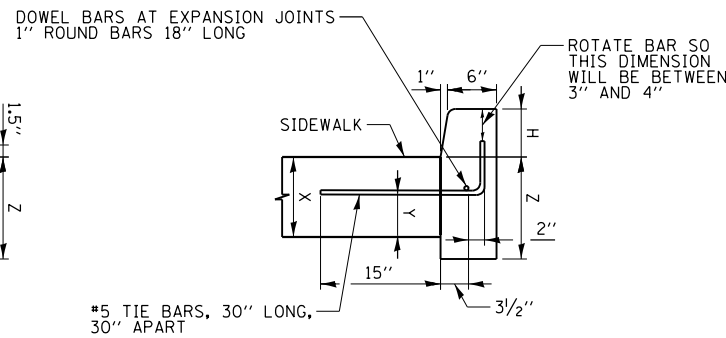
NOTE:
H = VARIABLE, MINIMUM 3" AND NOT TO EXCEED 9" (SEE PLANS)
X = THICKNESS OF PAVEMENT
Y = ONE HALF THE THICKNESS OF CONCRETE PAVEMENT OR CONCRETE BASE
Z = 10" OR THICKNESS OF PAVEMENT - WHICHEVER IS GREATER



**COMBINATION CURB AND GUTTER
TYPE B V.12 (CDOT)**
(USED AT HARRISON AND HALSTED STREETS)



DEPRESSED CURB
(USED AT DRIVEWAY AND ADA RAMP)



BARRIER CURB
(USED NEXT TO ADA RAMP AND DRIVEWAY
PAVEMENT WHEN NEEDED)

CONCRETE CURB, TYPE B (SPECIAL) (CDOT)

DEPRESSED CURB & GUTTER

DEPRESSED CURB AND GUTTER AND TRANSITIONS BETWEEN BARRIER CURB WILL BE PAID FOR UNDER THE ADJACENT CURB ITEM. DEPRESSED CURB AND MOUNTABLE GUTTER MUST MEET CDOT ADA STANDARDS.

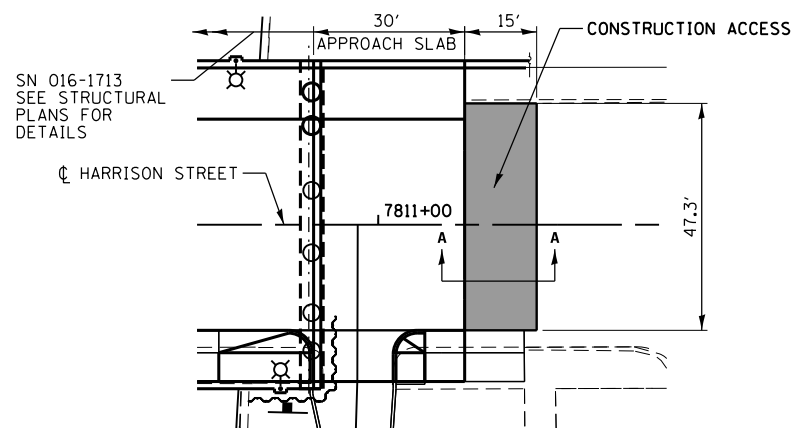
JOINTS IN CURB, COMBINED CURB AND GUTTER

TRANSVERSE JOINTS OF A TYPE SIMILAR TO THAT USED IN THE ADJACENT PAVEMENT SHALL BE INSTALLED IN THE CURB, GUTTER AND COMBINED CURB & GUTTER IN PROLONGATION WITH THE JOINTS IN THE PAVEMENT. THE DETAILS OF THE TRANSVERSE JOINTS IN THE CURB, GUTTER AND COMBINED CURB & GUTTER SHALL BE APPROVED BY THE ENGINEER. CURB, GUTTER OR COMBINED CURB AND GUTTER IS CONSTRUCTED ADJACENT TO A FLEXIBLE BASE PAVEMENT, 1" THICK EXPANSION JOINTS COMPOSED OF BITUMINOUS PREFORMED JOINT FILLER SHALL BE INSTALLED IN THE CURB AND/OR GUTTER AT POINTS OF CURVATURE AND AT CONSTRUCTION JOINTS. CONTRACTION JOINTS SHALL ALSO BE PLACED BETWEEN THESE EXPANSION JOINTS AT DISTANCES NOT EXCEEDING 20 FEET. ALL TIE BARS SHALL BE DEFORMED - ALL DOWEL BARS SHALL BE SMOOTH. ALL TIE BARS AND DOWEL BARS TO BE EPOXY COATED.

JOINTS IN CURB, COMBINED CURB AND GUTTER

THE COST OF ALL JOINTS, INCLUDING LABOR, FURNISH AND PLACING OF STEEL, JOINT FILLER, SEALANT, AND ALL OTHER INCIDENTALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE CURB, TYPE B (SPECIAL) (CDOT), AND COMBINATION CURB AND GUTTER TYPE B V.12 (CDOT) ITEMS. SAWCUTTING AND FURNISHING AND INSTALLING CURB ANCHORS, DOWELS, AND TIE BARS SHALL ALSO BE INCIDENTAL TO THESE ITEMS.

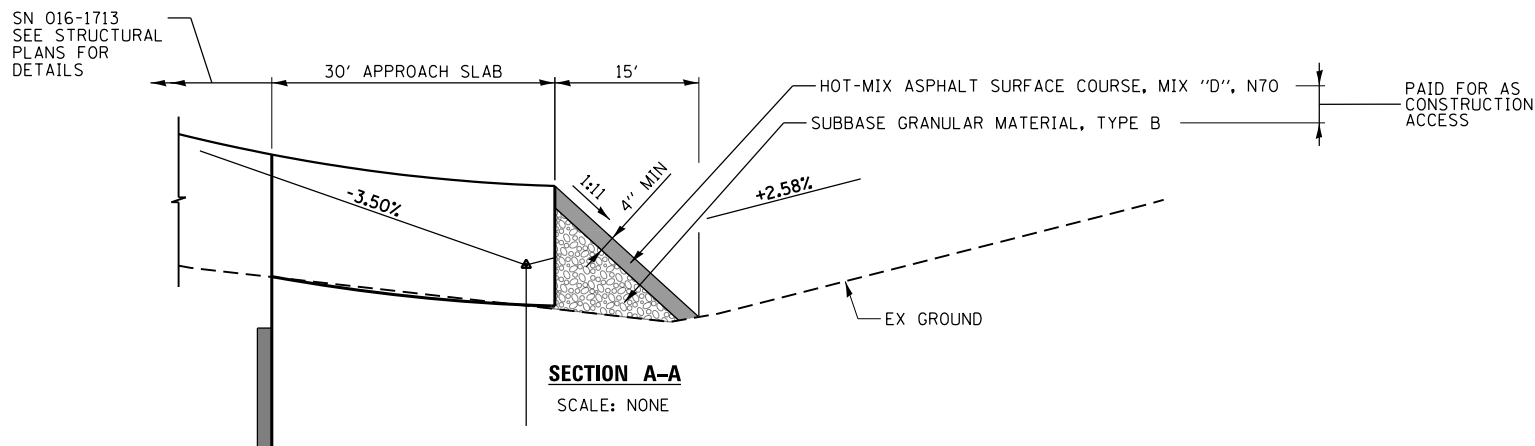
**DETAILS OF CONCRETE CURB, TYPE B (SPECIAL) (CDOT) AND
COMBINATION CURB AND GUTTER TYPE B V.12 (CDOT)**



DETAILS OF CONSTRUCTION ACCESS

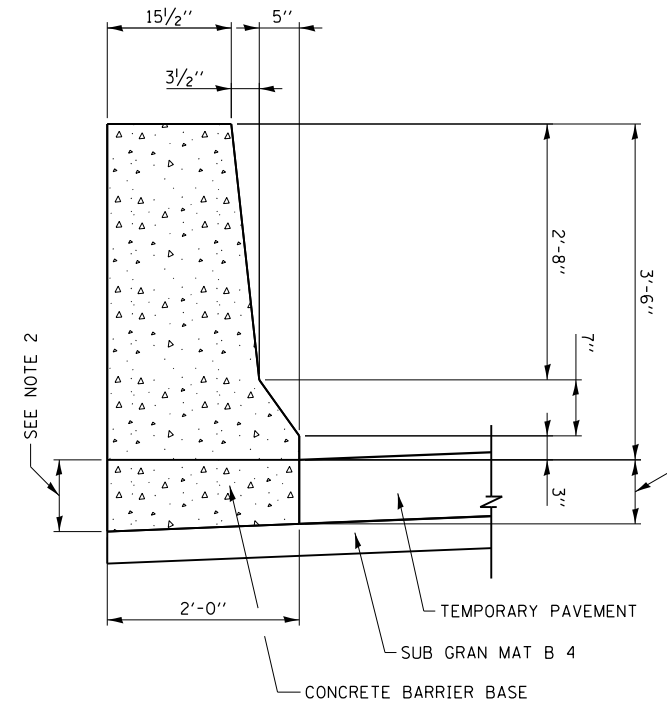
CONSTRUCTION ACCESS

- NOTES:**
- SEE CONSTRUCTION ACCESS SPECIAL PROVISION FOR ADDITIONAL INFORMATION.
 - CONSTRUCTION ACCESS MAY REQUIRE PERIODIC INSPECTION AND NEEDED MAINTENANCE. ACCESS REPAIR AND/OR MAINTENANCE SHALL BE INCLUDED IN COST OF CONSTRUCTION ACCESS.



SECTION A-A
SCALE: NONE

**CONCRETE BARRIER, SINGLE FACE
42 INCH HEIGHT DETAILS**



**DETAILS OF CONCRETE BARRIER, SINGLE FACE
42 INCH HEIGHT**

NOTES:

- SEE ROADWAY DETAILS SHEETS 2, 10, 11 AND 12 FOR ADDITIONAL DETAILS.
- CONCRETE BARRIER BASE THICKNESS TO MATCH TEMPORARY PAVEMENT THICKNESS.
- SEE TYPICAL SECTION SHEET 6 FOR TEMPORARY PAVEMENT DETAILS.

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PLOT DATE = 9/15/2013

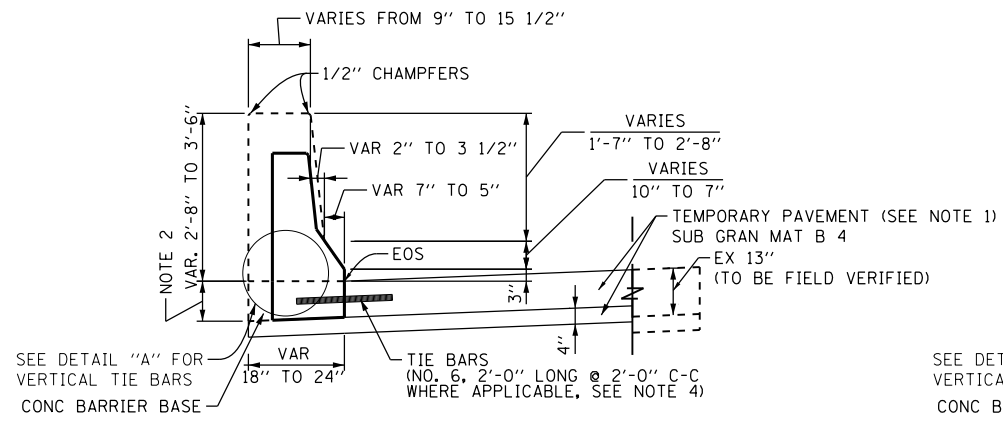
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CHECKED - DBM
DATE - 9/15/13

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

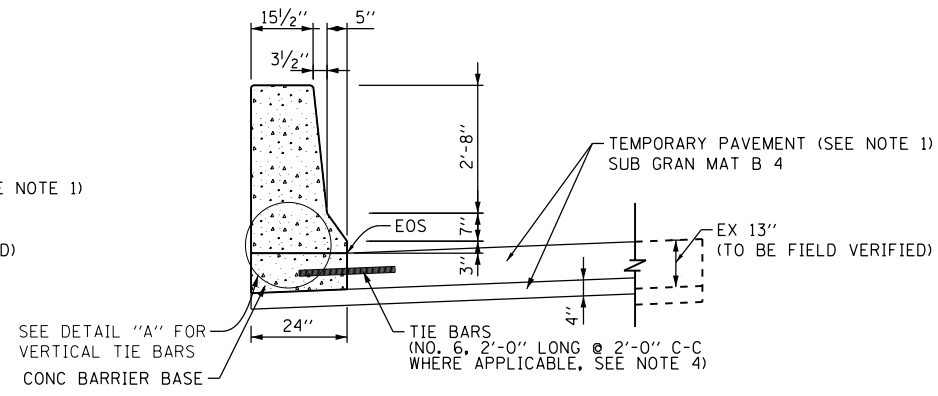
**ROADWAY DETAILS
CONC CURB TB SPL CDOT, COMB C&G B V.12(CDOT),
CONSTRUCTION ACCESS AND CONC BAR 1F 42HT**

SCALE: N.T.S. SHEET 1 OF 12 SHEETS STA. TO STA.

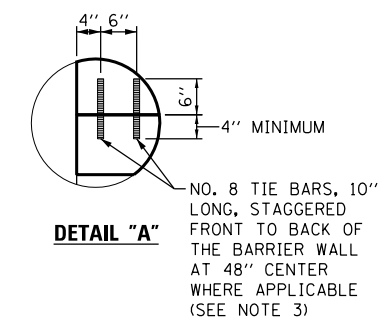
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-008R	COOK	559	491
CONTRACT NO. 60W26				
ILLINOIS FED. AID PROJECT				



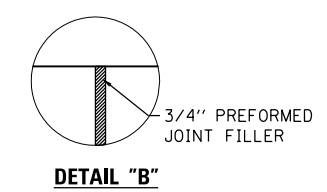
SECTION A-A



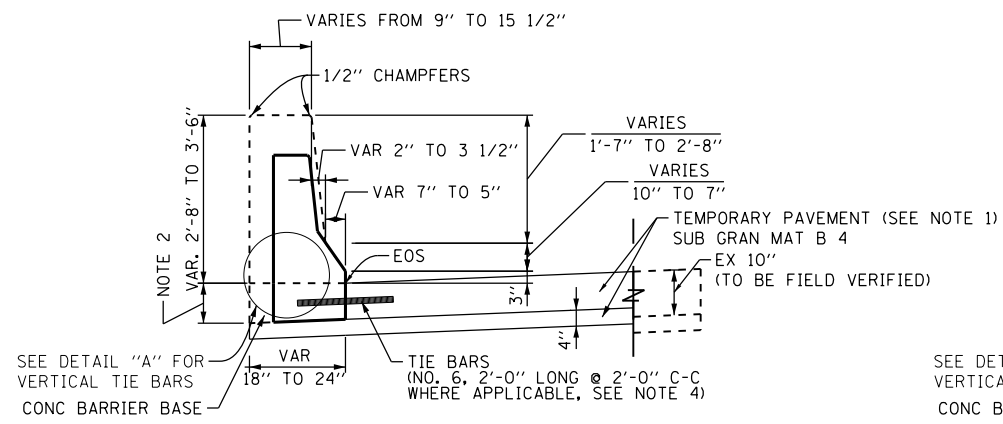
SECTION B-B



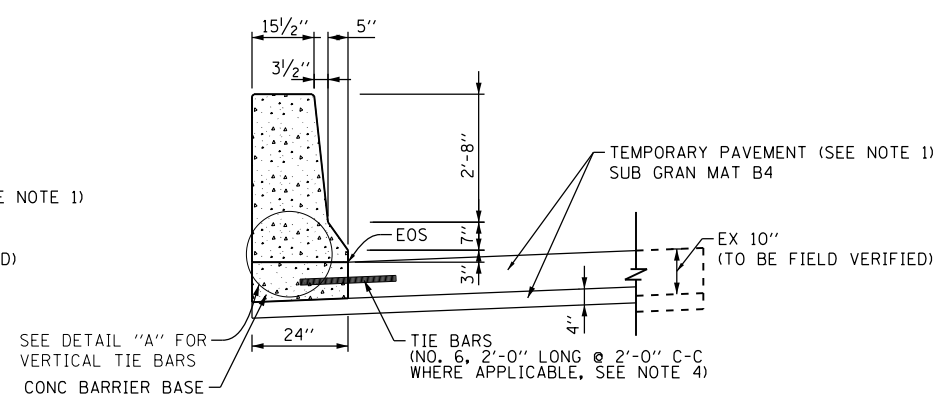
DETAIL "A"



DETAIL "B"



SECTION C-C



SECTION D-D

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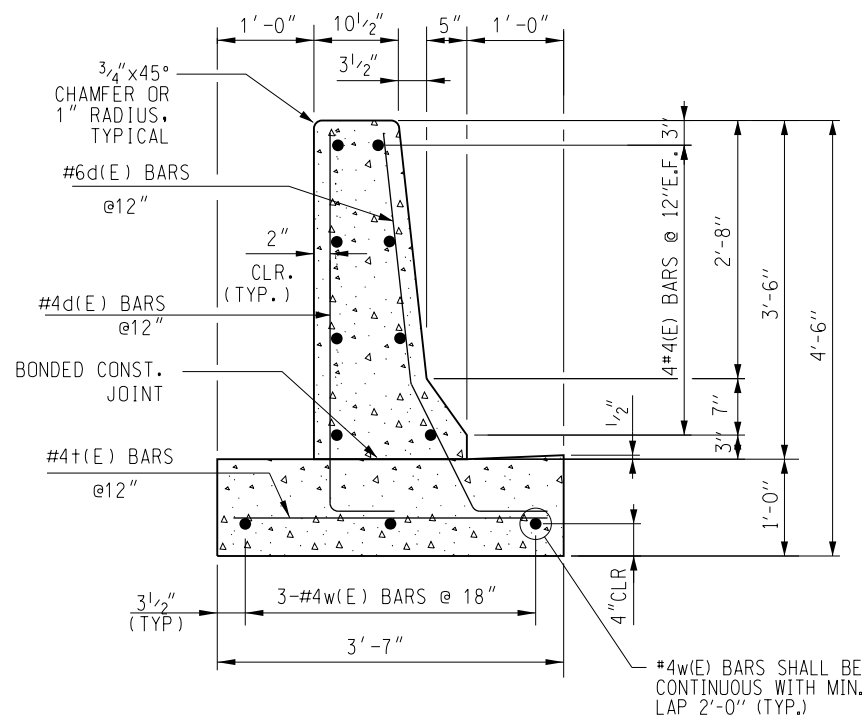
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

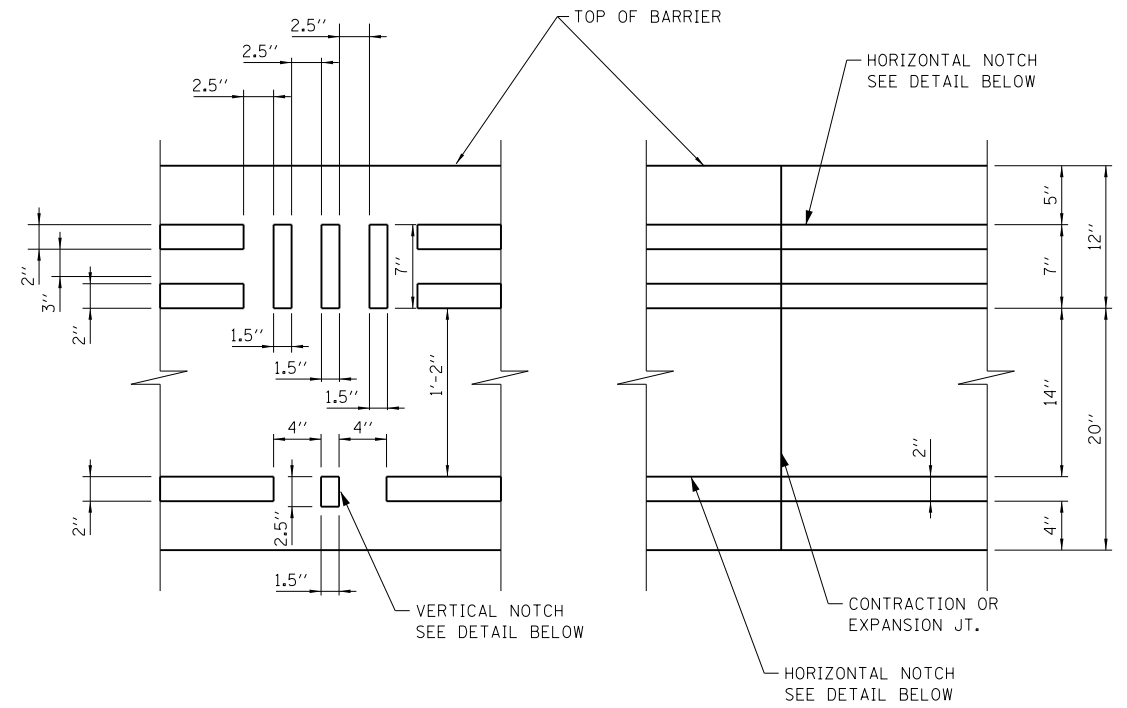
ROADWAY DETAILS
CONCRETE BARRIER WALL (SPECIAL)

SCALE: N.T.S. SHEET 2 OF 12 SHEETS STA. TO STA.

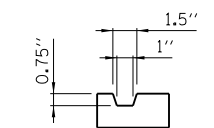
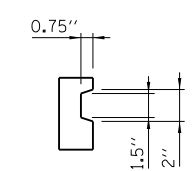
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90/94/290	2013-008R	COOK	559	492
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	



CONCRETE BARRIER WALL (SPECIAL)



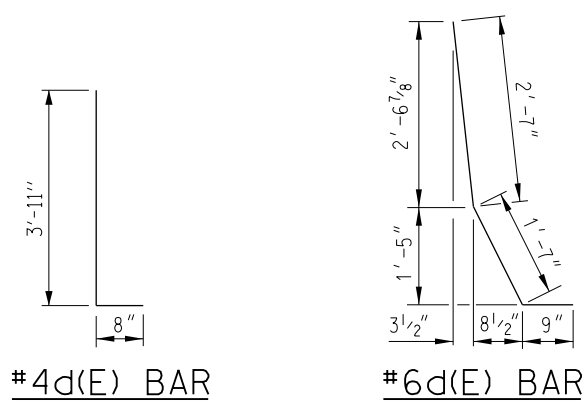
NOTCH LAYOUT DETAIL



HORIZONTAL NOTCH DETAIL

VERTICAL NOTCH DETAIL

NOTCH DETAILS FOR CONCRETE BARRIER WALL (SPECIAL)
NTS



BENDING DIAGRAMS

NOTES:

1. TOP SHOULDER EDGE OF BARRIER BASE GUTTER SHALL MATCH THE TOP OF SHOULDER ELEVATION.
2. 1" DEEP CONTRACTION JOINTS SHALL BE CONSTRUCTED IN BOTH THE REINFORCED CONCRETE BARRIER WALL AND BASE.
3. THE FORMING OF CONTRACTION JOINTS SHALL BE DONE WITH AN APPROVED FINISHING TOOL OR BY SAWING AT THE DISCRETION OF THE ENGINEER SUBJECT TO THE SATISFACTORY CONTROL OF CRACKING.
4. REINFORCING BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
5. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES ", ACI 315, LATEST EDITION.
6. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
7. BARRIER SHALL BE USED WITH ALL NEW CONSTRUCTION, OR RECONSTRUCTION OF EXISTING BARRIERS.

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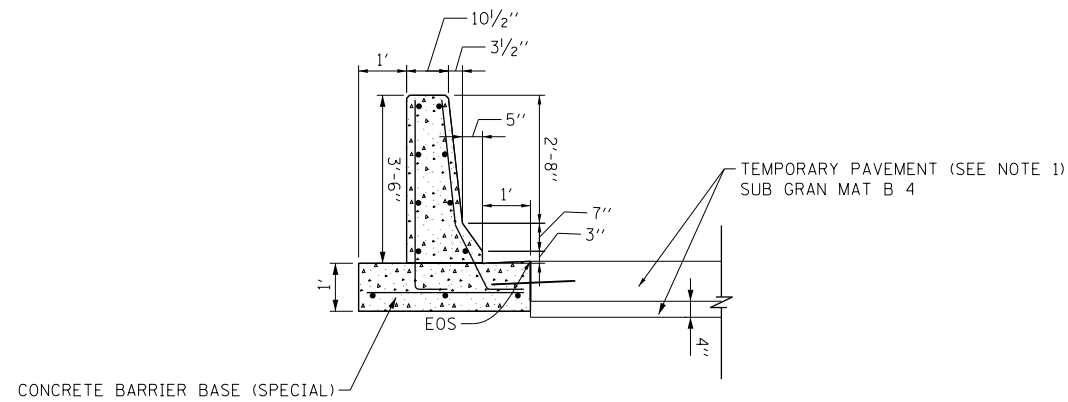


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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

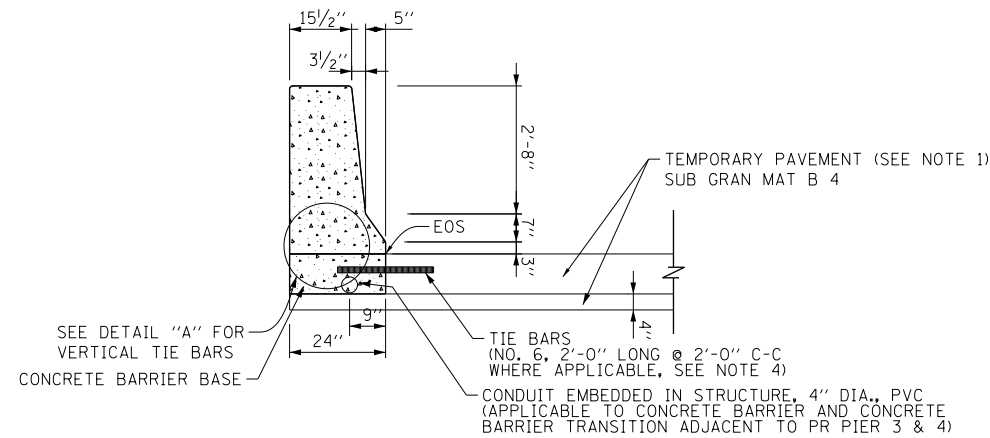
ROADWAY DETAILS			
SCALE: 1"=10'	SHEET 3	OF 12 SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-008R	COOK	559	493
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	



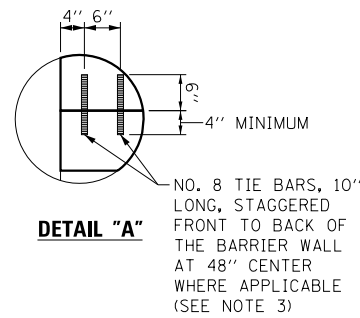
SECTION E-E

CONCRETE BARRIER WALL (SPECIAL)

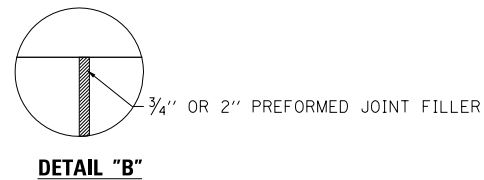


SECTION F-F

CONCRETE BARRIER, SINGLE FACE 42 INCH HEIGHT



DETAIL "A"



DETAIL "B"

NOTES:

1. SEE TYPICAL SECTION SHT 6 FOR TEMPORARY PAVEMENT DETAILS.
2. CONCRETE BARRIER BASE THICKNESS TO MATCH TEMPORARY PAVEMENT THICKNESS.
3. VERTICAL TIE BARS ARE APPLICABLE WHEN CONCRETE BARRIER AND CONCRETE BARRIER BASE ARE NOT POURED MONOLITHICALLY.
4. HORIZONTAL TIE BARS ARE APPLICABLE WHEN THE TEMPORARY PAVEMENT IS PCC.

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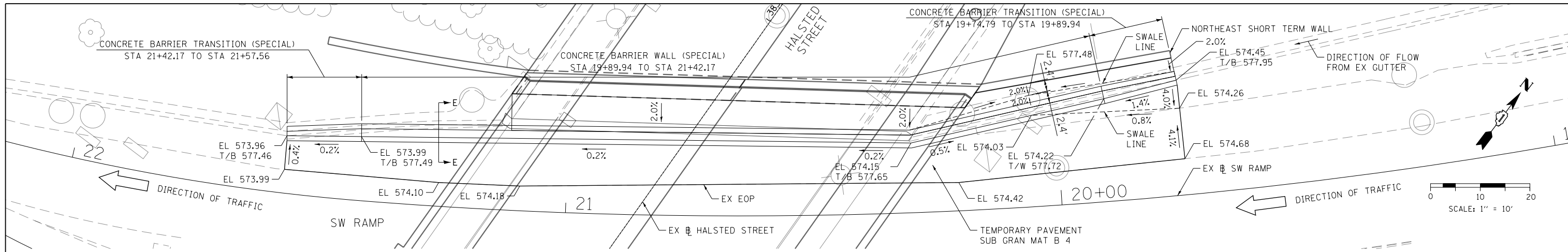
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PLOT DATE = 9/12/2013	DATE - 9/15/13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ROADWAY DETAILS

SCALE: 1"=10' SHEET 4 OF 12 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-008R	COOK	559	494
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	



T/B = TOP OF BARRIER WALL

**PLAN VIEW
CONCRETE BARRIER WALL (SPECIAL)
AT SW RAMP**

NOTES:

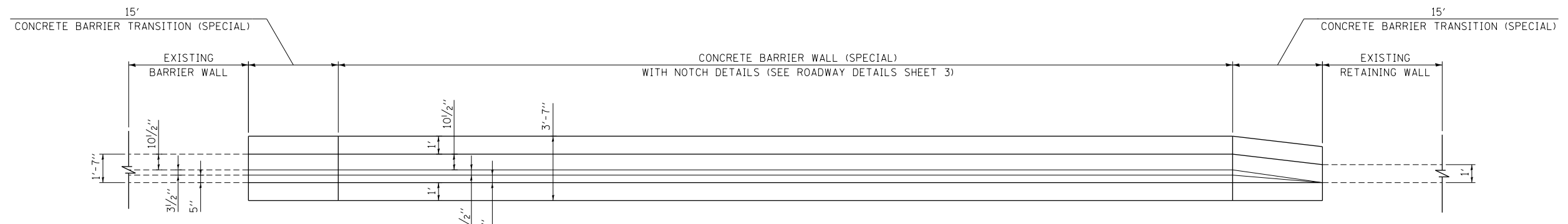
1. EXPANSION JOINTS SHOWN ON THIS DRAWING SHALL BE PREFORMED JOINT MATERIAL (BITUMINOUS TYPE) FILLER SHALL MEET AASHTO DESIGNATION M-33.
2. ALL WORK DETAILED HEREIN SHALL BE INCLUDED IN THE COST OF THE VARIOUS CONCRETE BARRIER PAY ITEMS UNLESS OTHERWISE NOTED.
3. PREFORMED JOINT FILLER SHALL BE INCLUDED IN THE COST OF THE CONCRETE BARRIER TRANSITION.
4. JOINTS SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH ARTICLE 637.08 OF THE STANDARD SPECIFICATIONS

5. TWO VERTICAL EPOXY COATED, NO. 8 TIE BARS, 10" LONG, SHALL BE PLACED STAGGERED FRONT TO BACK OF THE BARRIER WALL AT 48" CENTERS ALONG THE CONCRETE BARRIER TRANSITION. TIE BARS SHALL BE INCLUDED IN THE COST OF CONCRETE BARRIER TRANSITION.

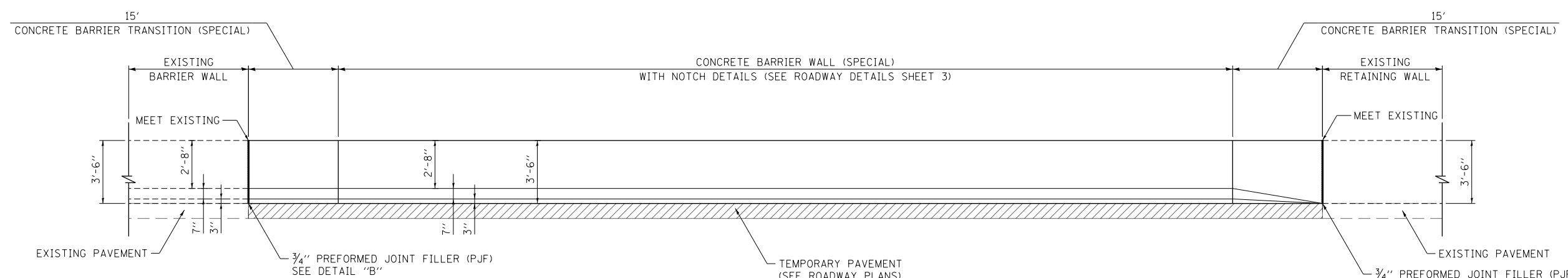
6. HORIZONTAL TIE BARS SHALL BE NO. 6 EPOXY COATED, 24" LONG, 24" C-C AND SHALL BE INCLUDED IN THE COST OF THE BARRIER BASE.

7. SEE ROADWAY DETAILS SHEETS 1 THRU 4 FOR ADDITIONAL DETAILS.

8. SEE TYPICAL SECTION SHEET 6 FOR TEMPORARY PAVEMENT DETAILS.



**PLAN VIEW
N.T.S.**



**ELEVATION VIEW
N.T.S.**

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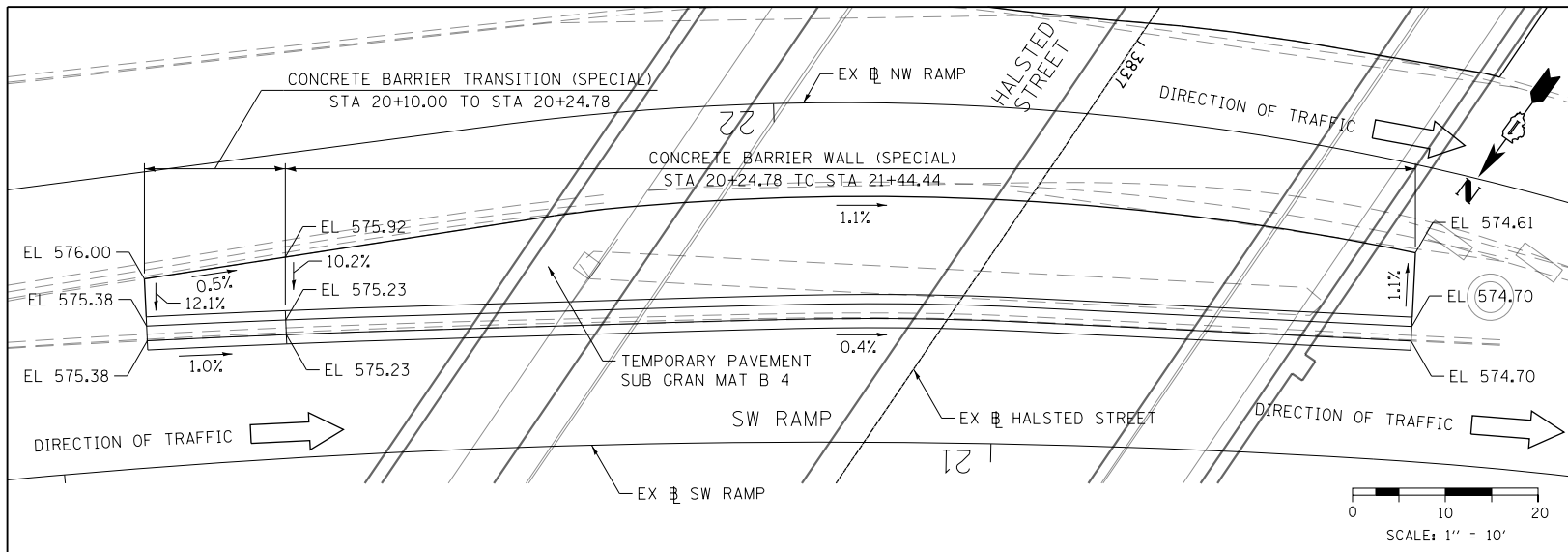


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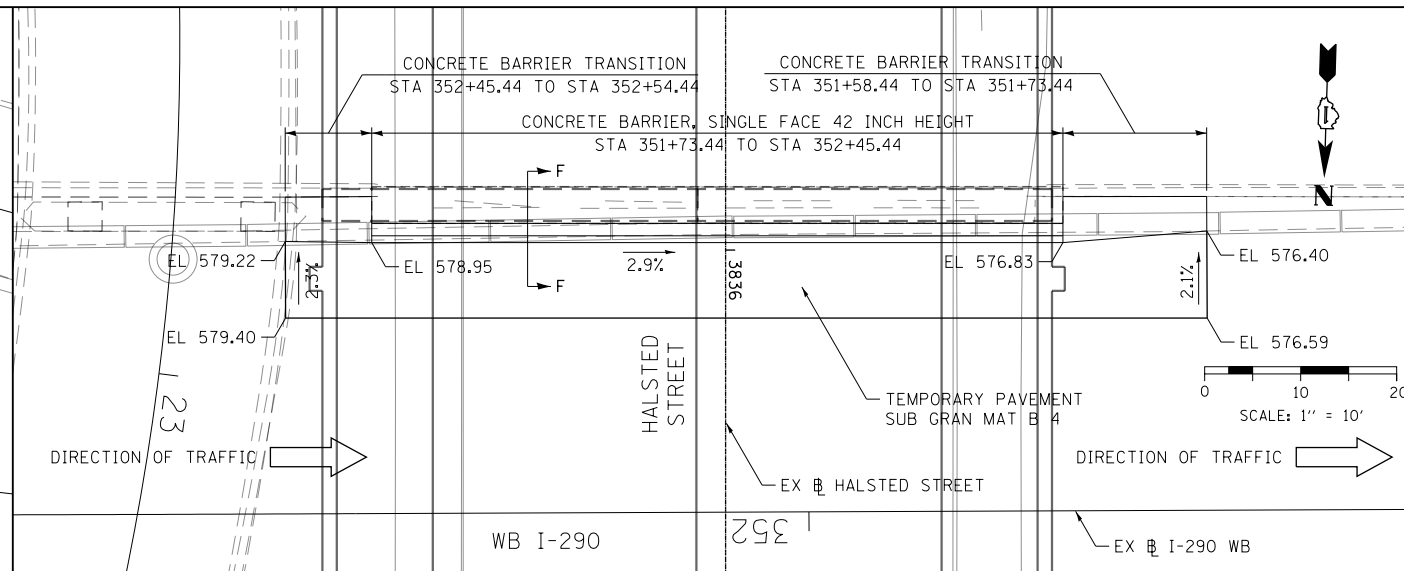
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ROADWAY DETAILS SW RAMP - NORTH ABUTMENT			
SCALE: NONE	SHEET 5	OF 12 SHEETS	STA. TO STA.

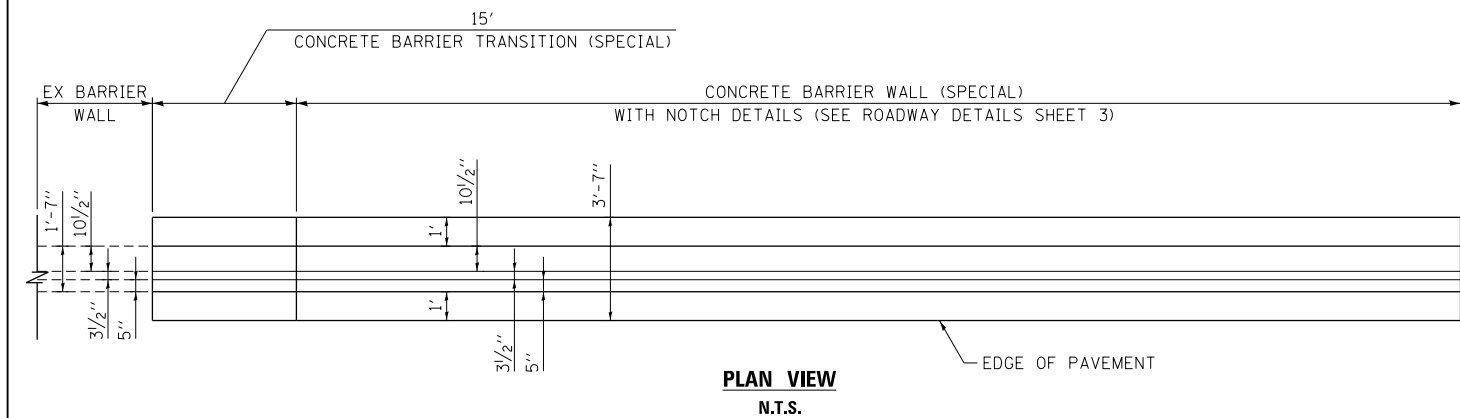
F.A.I. RTE. 90/94/290	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 495
CONTRACT NO. 60W26				ILLINOIS FED. AID PROJECT



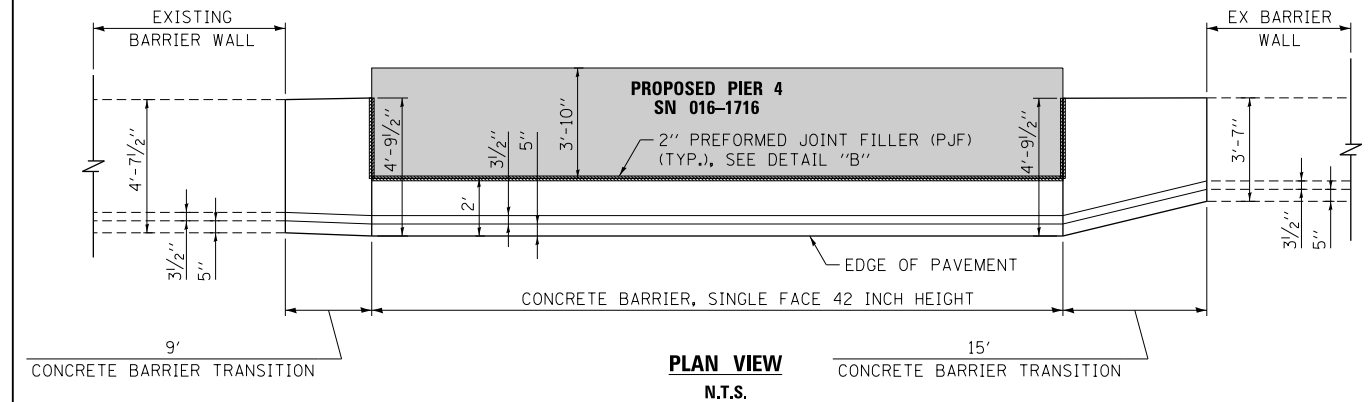
**PLAN VIEW
CONCRETE BARRIER WALL (SPECIAL)
AT SW RAMP**



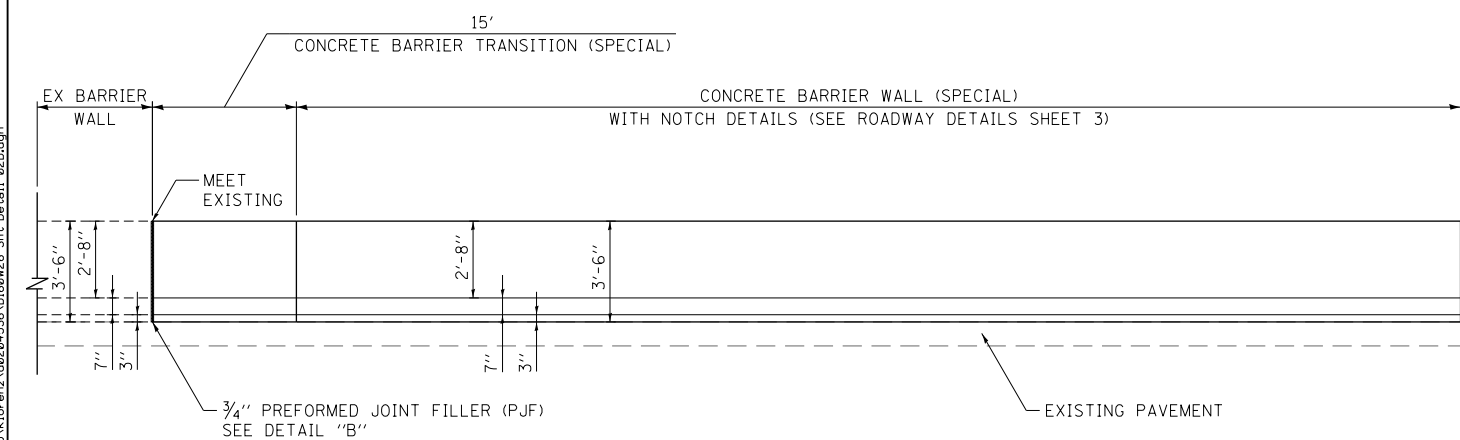
**PLAN VIEW
CONCRETE BARRIER, SINGLE FACE 42 INCH HEIGHT
AT WB I-290**



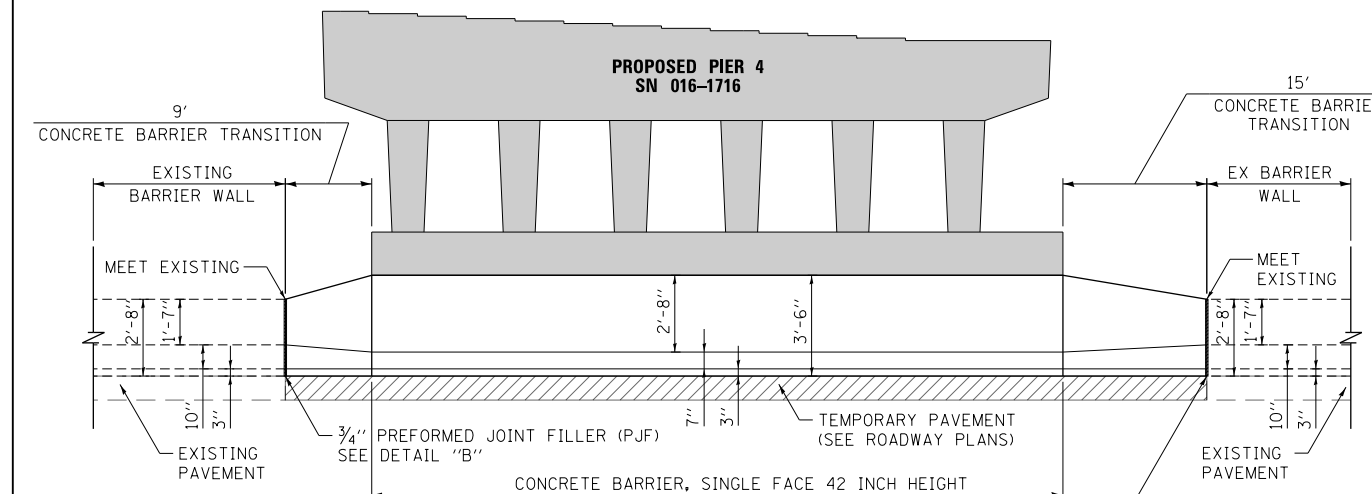
**PLAN VIEW
N.T.S.**



**PLAN VIEW
N.T.S.**



**ELEVATION VIEW
N.T.S.**



**ELEVATION VIEW
N.T.S.**

NOTE:
SEE ROADWAY DETAILS SHEET 5 FOR ADDITIONAL NOTES.

NOTE:
SEE ROADWAY DETAILS SHEET 5 FOR ADDITIONAL NOTES.

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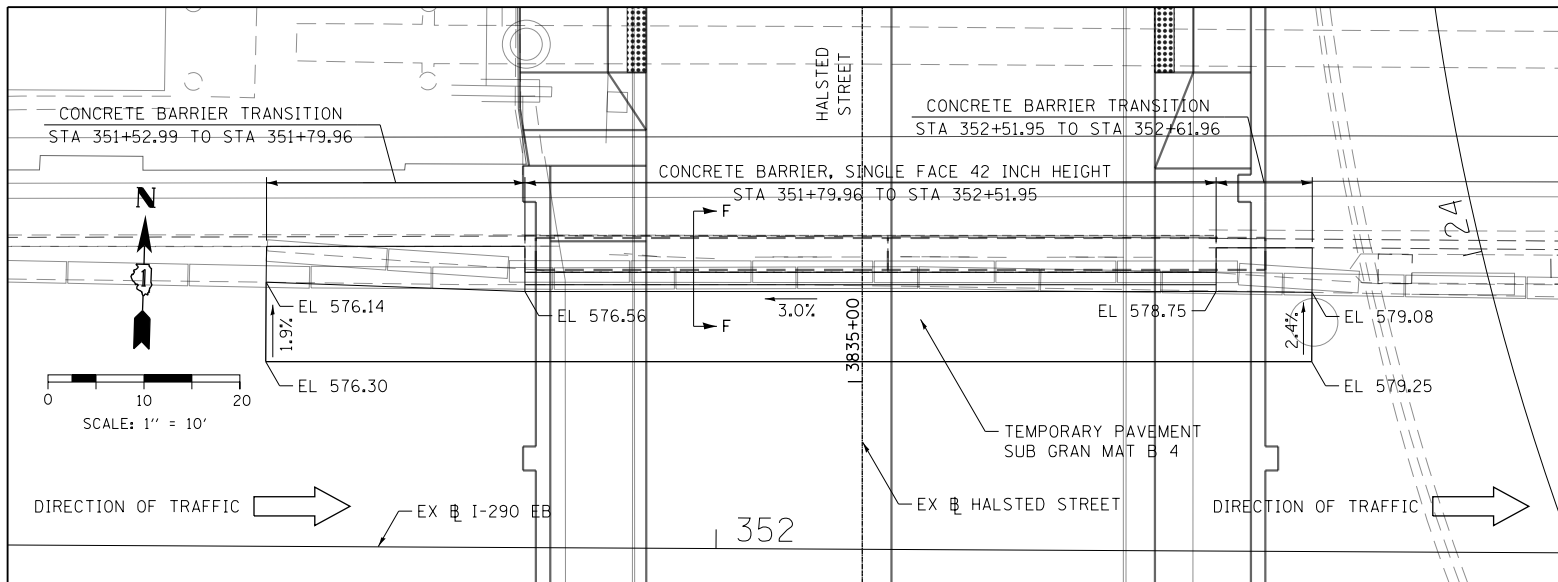
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

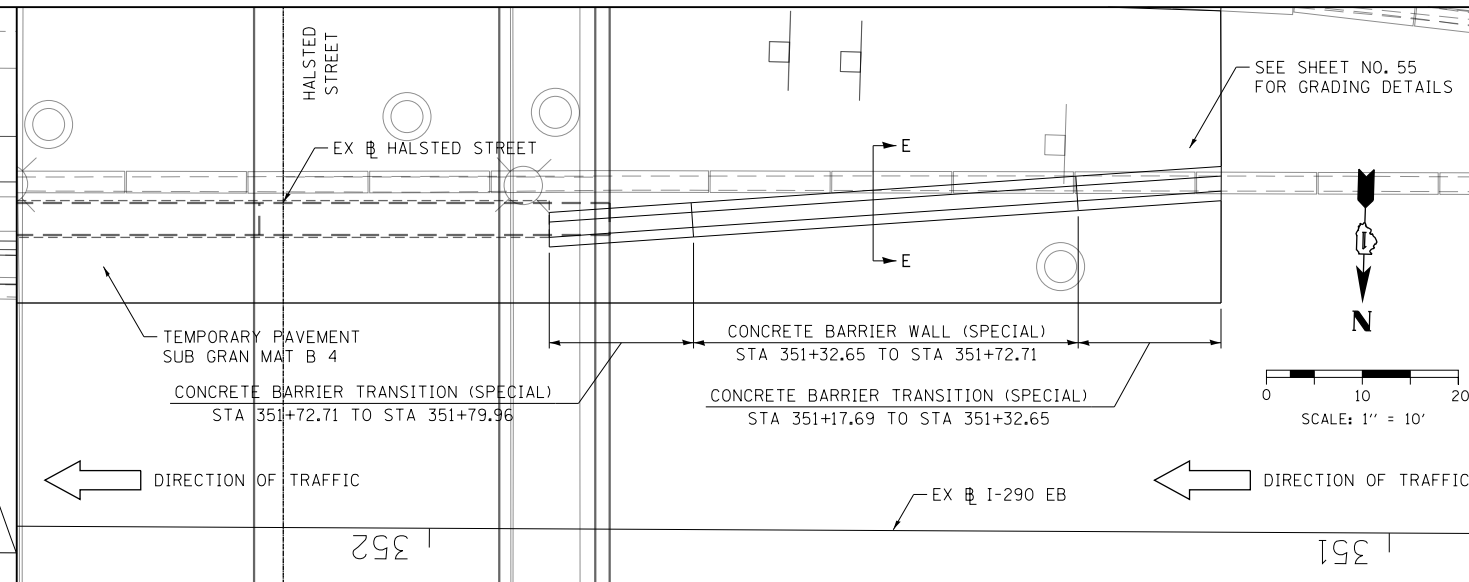
**ROADWAY DETAILS
SW RAMP - WB I-290 PIER 4**

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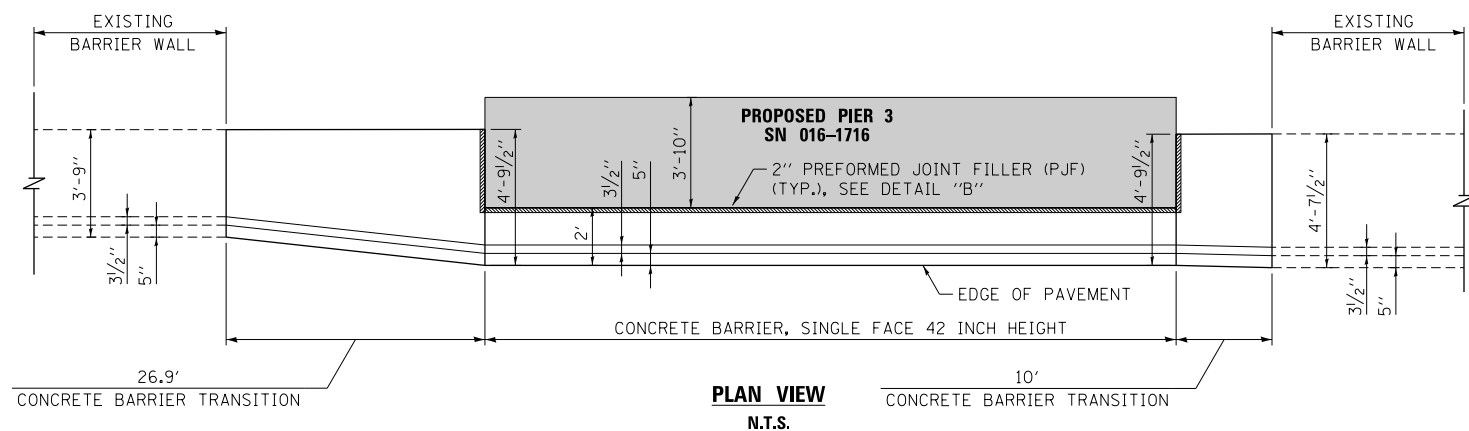
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2013-008R	COOK	559	496
CONTRACT NO. 60W26				
ILLINOIS FED. AID PROJECT				



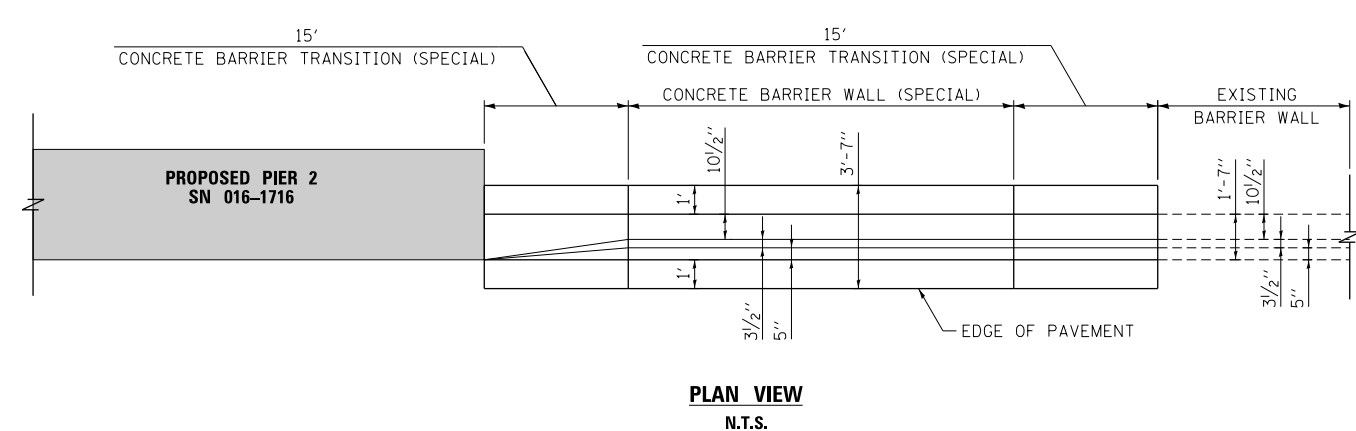
PLAN VIEW
CONCRETE BARRIER, SINGLE FACE 42 INCH HEIGHT
AT I-290 EB



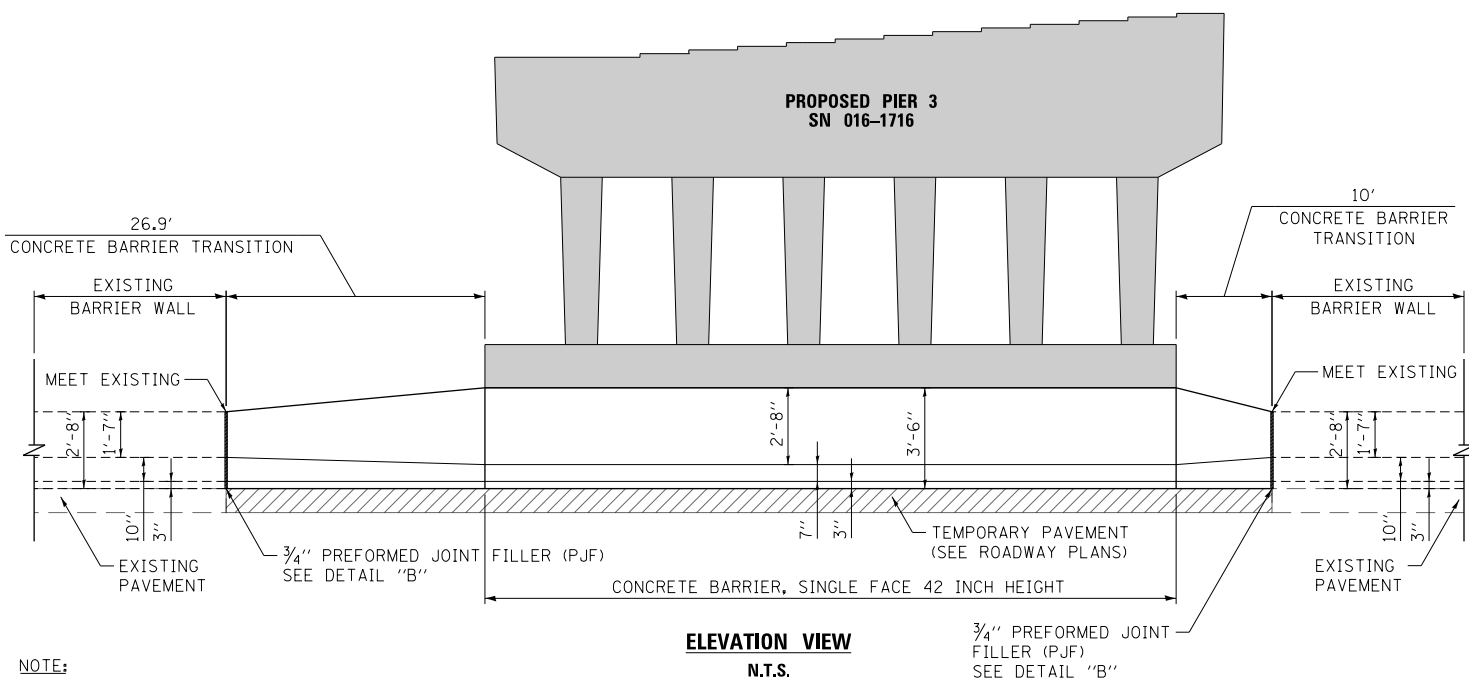
PLAN VIEW
CONCRETE BARRIER WALL (SPECIAL)
AT I-290 EB



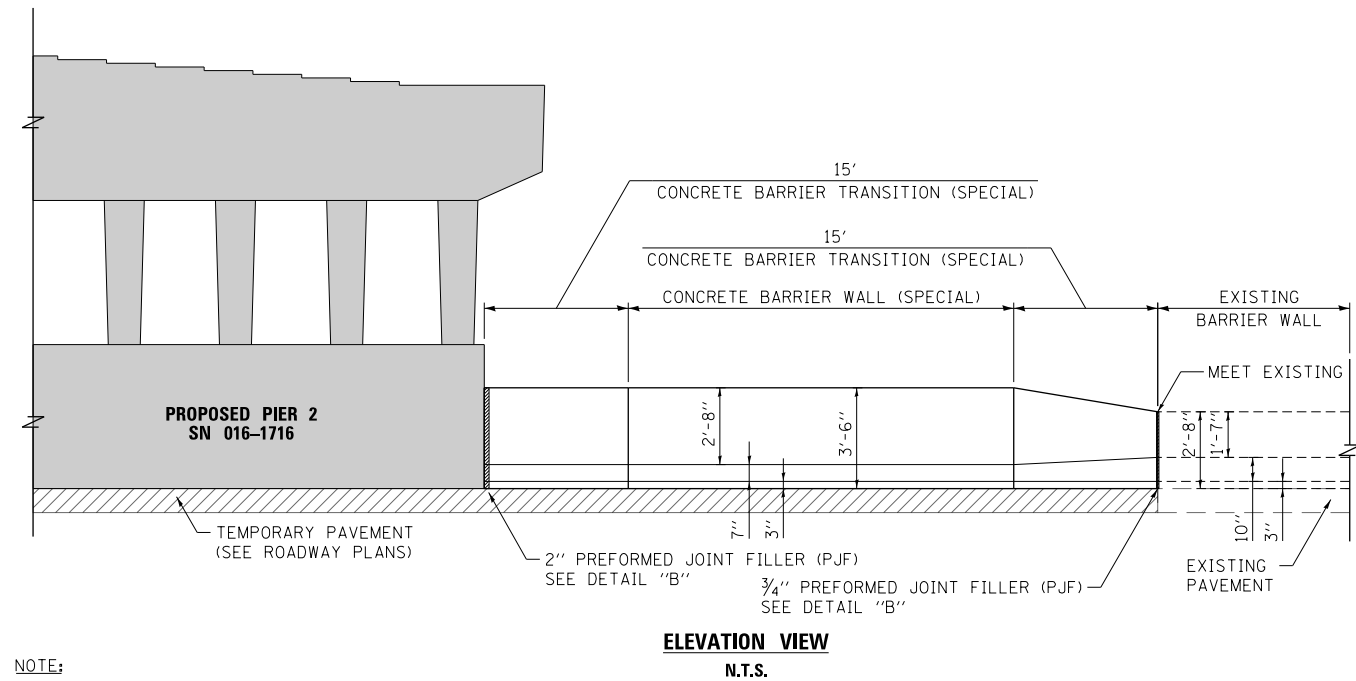
PLAN VIEW
N.T.S.



PLAN VIEW
N.T.S.



ELEVATION VIEW
N.T.S.



ELEVATION VIEW
N.T.S.

NOTE:
SEE ROADWAY DETAILS SHEET 5 FOR ADDITIONAL NOTES.

NOTE:
SEE ROADWAY DETAILS SHEET 5 FOR ADDITIONAL NOTES.

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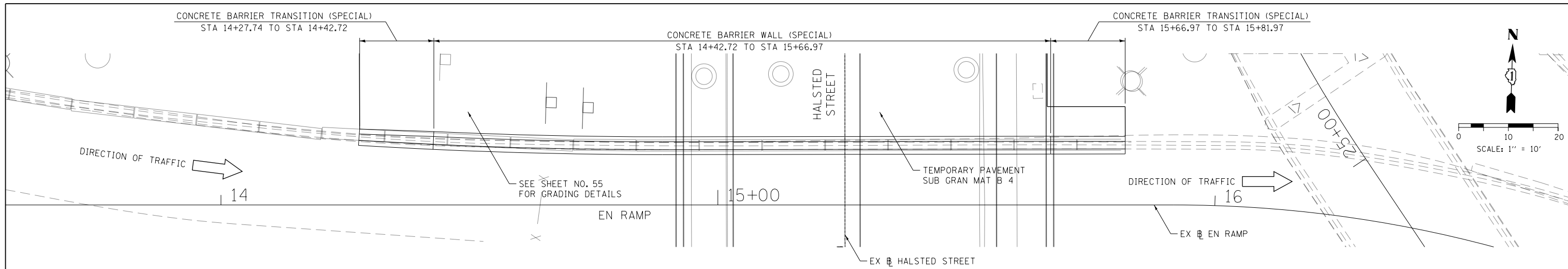
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

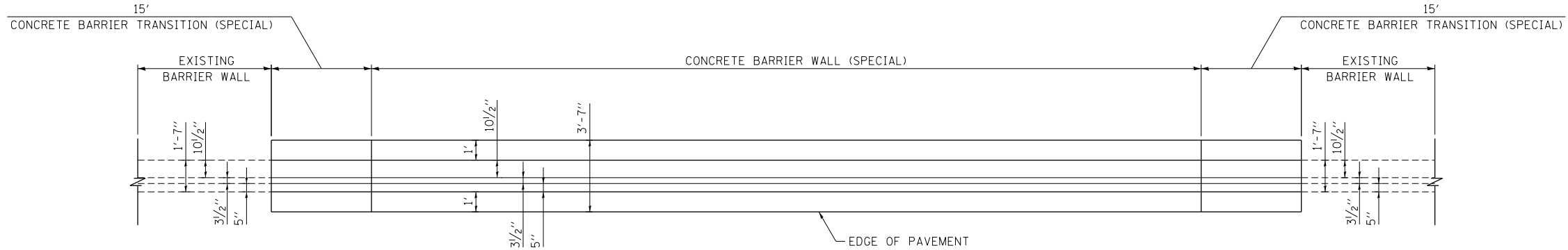
ROADWAY DETAILS
I-290 PIER 2 & 3

SCALE: NONE SHEET 7 OF 12 SHEETS STA. TO STA.

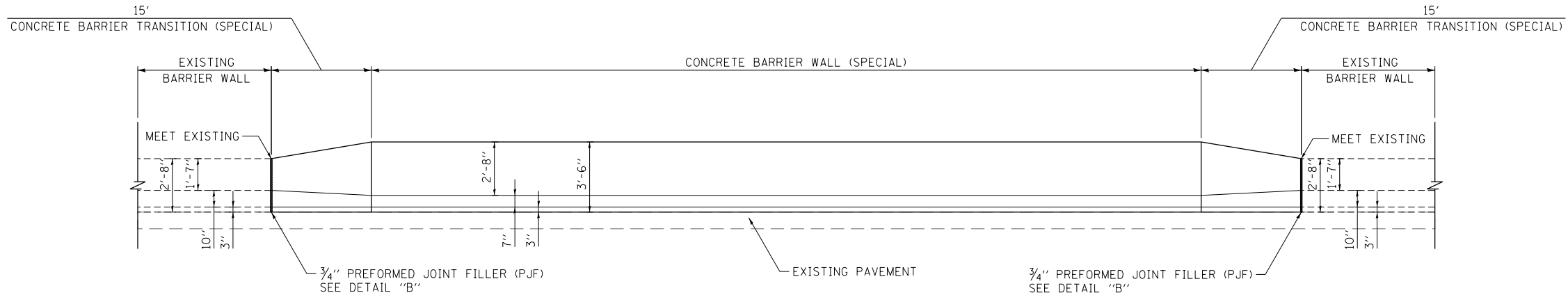
F.A.I. RTE. 90/94/290	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 497
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	



PLAN VIEW
CONCRETE BARRIER WALL (SPECIAL)
AT EN RAMP



PLAN VIEW
N.T.S.



ELEVATION VIEW
N.T.S.

NOTE:
SEE ROADWAY DETAILS SHEET 5 FOR ADDITIONAL NOTES.

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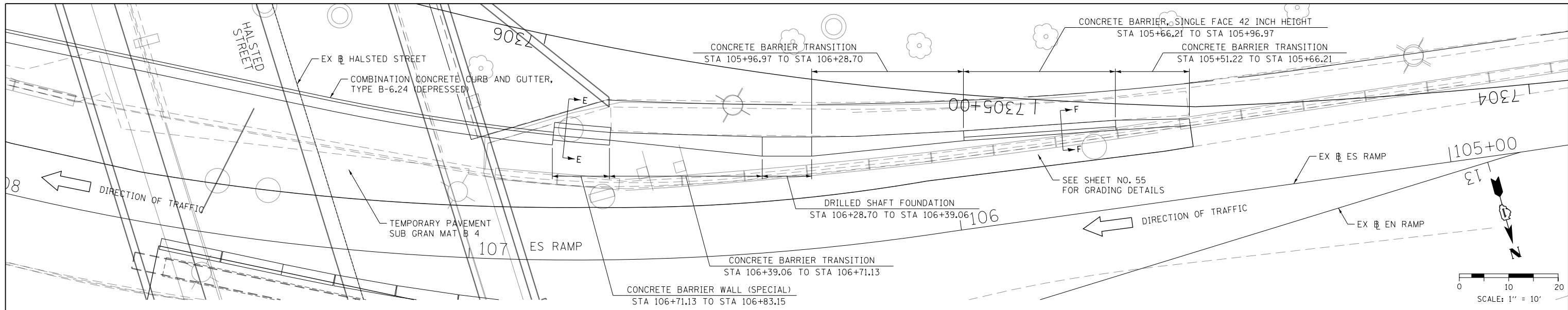


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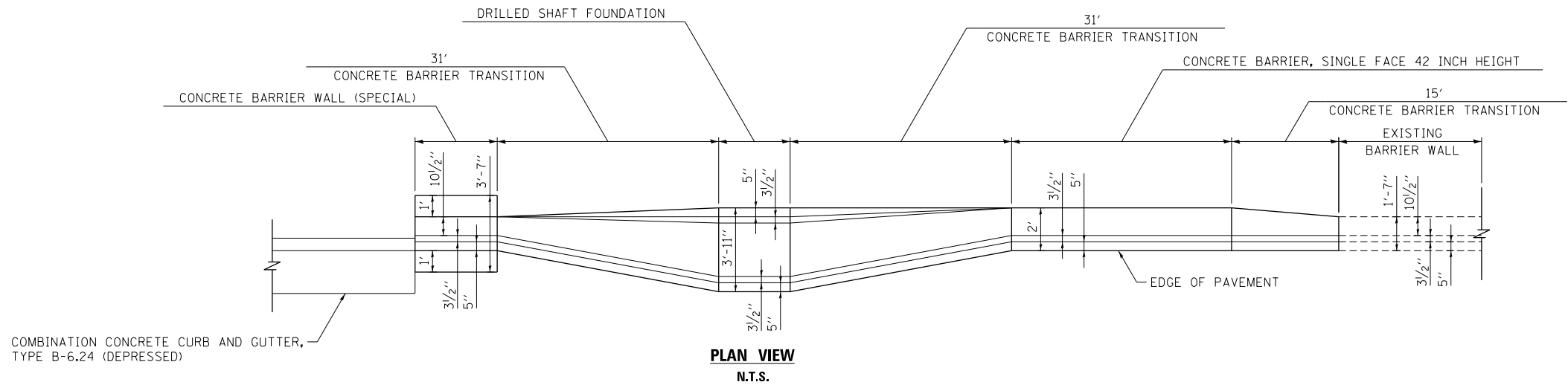
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS			
EN RAMP			
SCALE: NONE	SHEET 8	OF 12 SHEETS	STA. TO STA.

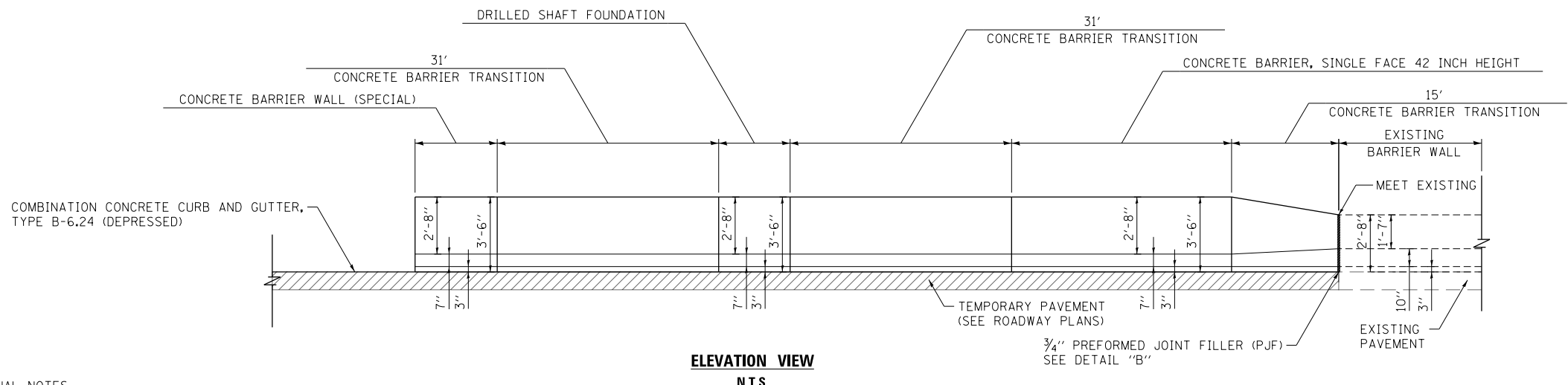
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90/94/290	2013-008R	COOK	559	498
CONTRACT NO. 60W26				
ILLINOIS FED. AID PROJECT				



PLAN VIEW
CONCRETE BARRIER, SINGLE FACE 42 INCH HEIGHT
CONCRETE BARRIER WALL (SPECIAL)
AT ES RAMP



PLAN VIEW
N.T.S.



ELEVATION VIEW
N.T.S.

NOTE:
 SEE ROADWAY DETAILS SHEET 5 FOR ADDITIONAL NOTES.

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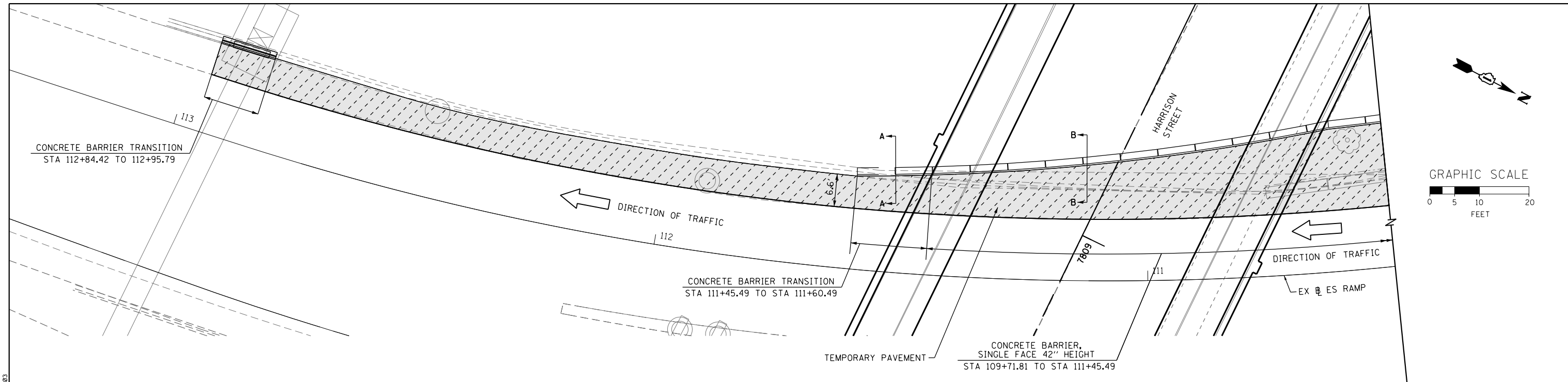


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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS			
ES RAMP - SOUTH ABUTMENT			
SCALE: NONE	SHEET 9	OF 12 SHEETS	STA. TO STA.

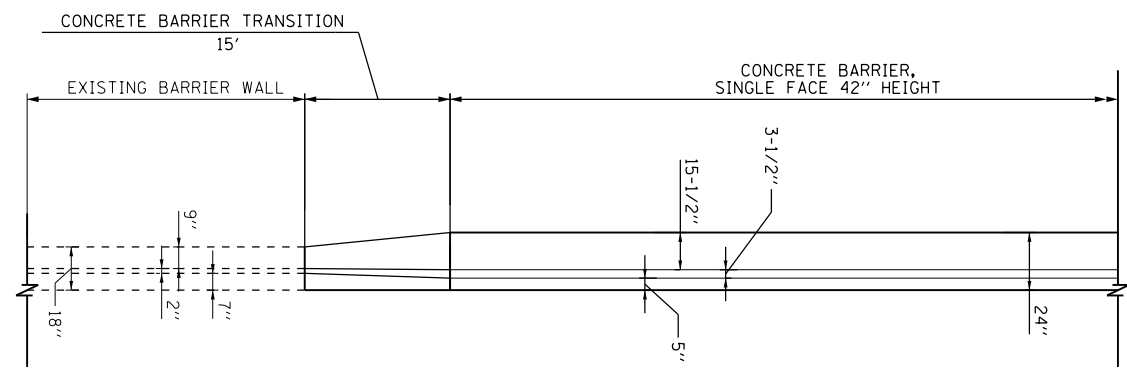
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CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	



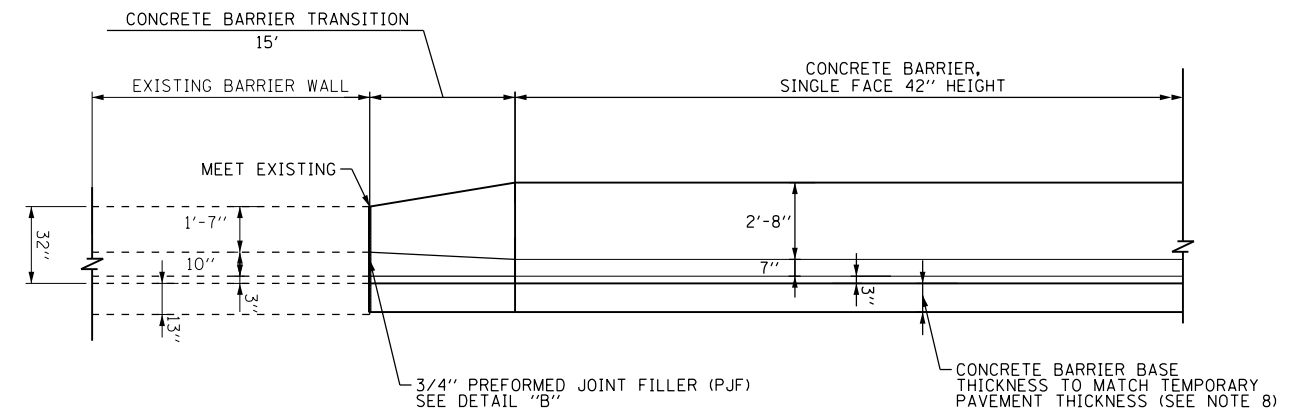
PLAN VIEW
CONCRETE BARRIER, SINGLE FACE 42" HEIGHT
AT ES RAMP

NOTES:

1. EXPANSION JOINTS SHOWN ON THIS DRAWING SHALL BE PREFORMED JOINT MATERIAL (BITUMINOUS TYPE) FILLER SHALL MEET AASHTO DESIGNATION M-33.
2. ALL WORK DETAILED HEREIN SHALL BE INCLUDED IN THE COST OF THE VARIOUS CONCRETE BARRIER PAY ITEMS UNLESS OTHERWISE NOTED.
3. PREFORMED JOINT FILLER SHALL BE INCLUDED IN THE COST OF THE CONCRETE BARRIER TRANSITION.
4. JOINTS SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH ARTICLE 637.08 OF THE STANDARD SPECIFICATIONS
5. TWO VERTICAL EPOXY COATED, NO. 8 TIE BARS, 10" LONG, SHALL BE PLACED STAGGERED FRONT TO BACK OF THE BARRIER WALL AT 48" CENTERS ALONG THE CONCRETE BARRIER TRANSITION. TIE BARS SHALL BE INCLUDED IN THE COST OF CONCRETE BARRIER TRANSITION.
6. HORIZONTAL TIE BARS SHALL BE NO. 6 EPOXY COATED, 24" LONG, 24" C-C AND SHALL BE INCLUDED IN THE COST OF THE BARRIER BASE.
7. SEE ROADWAY DETAILS SHEETS 1 AND 2 FOR ADDITIONAL DETAILS.
8. SEE TYPICAL SECTION SHEET 6 FOR TEMPORARY PAVEMENT DETAILS.



PLAN VIEW



ELEVATION VIEW

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D160W26-sht-Detail-03
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 PLOT DATE = 8/17/2013

DESIGNED - JWM	REVISED -
DRAWN - JWM	REVISED -
CHECKED - DBM	REVISED -
DATE - 8/20/13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS

SCALE: N.T.S. SHEET 10 OF 12 SHEETS STA. TO STA.

F.A.I. RTE. 90/94/290	SECTION 2013-008R	COUNTY COOK	TOTAL SHEETS 559	SHEET NO. 500
CONTRACT NO. 60W26			ILLINOIS FED. AID PROJECT	