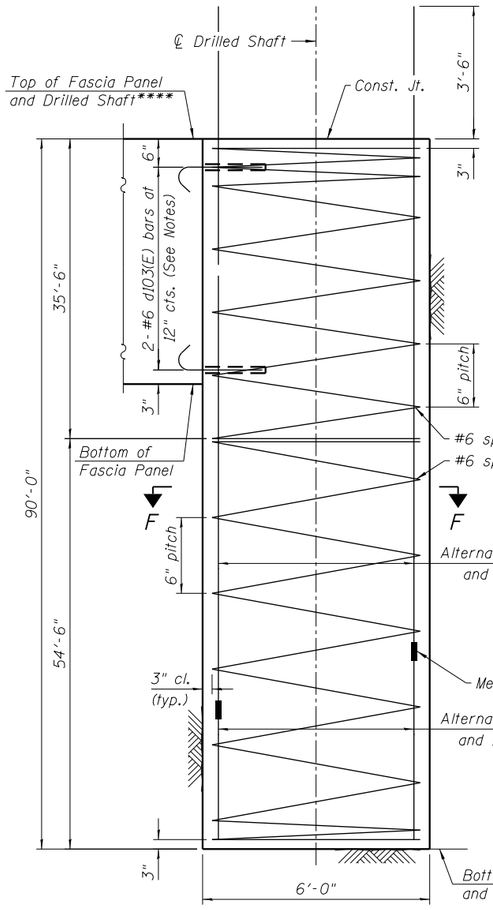
DRILLED SHAFT LAYOUT TABLE

	Shaft No.	Station	Offset	Top of Shaft Elevation	Bottom of Shaft Elevation
	1	8282+77.54	7.95' Rt.	587.83	497.83
	2	8282+87.51	7.78' Rt.	587.83	497.83
	3	8282+97.49	7.64' Rt.	587.83	497.83
	4	8283+07.43	7.58' Rt.	587.83	497.83
	5	8283+17.42	7.58' Rt.	587.83	497.83
	6	8283+27.41	7.58' Rt.	587.83	497.83
	7	8283+37.40	7.58' Rt.	587.83	497.83
	8	8283+47.39	7.58' Rt.	587.83	497.83
	9	8283+57.38	7.58' Rt.	587.83	497.83
	10	8283+67.37	7.58' Rt.	587.83	497.83
	11	8283+77.36	7.58' Rt.	587.83	497.83
	12	8283+87.34	7.58' Rt.	587.83	497.83
	13	8283+97.33	7.58' Rt.	587.83	497.83
	14	8284+07.32	7.58' Rt.	587.83	497.83
	15	8284+17.31	7.58' Rt.	587.83	497.83
	16	8284+27.30	7.58' Rt.	587.83	497.83
	17	8284+38.29	7.58' Rt.	587.83	497.83
*	18	8284+50.78	7.58' Rt.	587.83	497.83
+	19	8284+58.77	7.58' Rt.	587.83	497.83
+	20	8284+83.74	7.58' Rt.	587.83	497.83

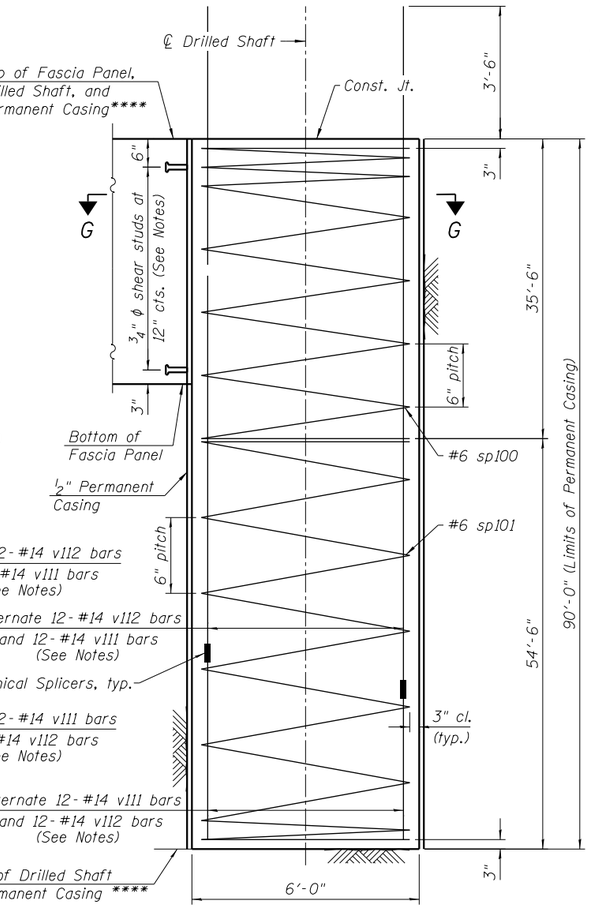
* Extend spiral reinforcing and drilled shaft reinforcing through cap and into HMLT pedestal. See Sheet S5-09 of S5-19 for details.

\+ Permanent Casing

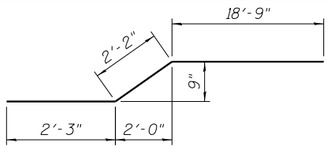


TYPICAL SHAFT ELEVATION

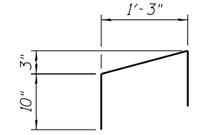
****See Drilled Shaft Layout Table



TYPICAL SHAFT ELEVATION PERMANENTLY CASED



BAR h105(E)



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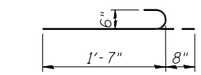

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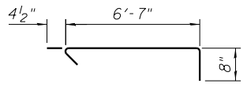

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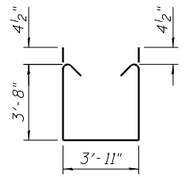

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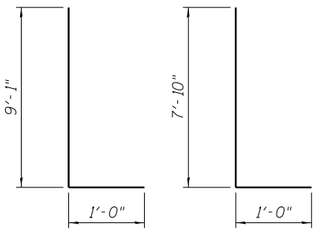
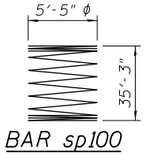
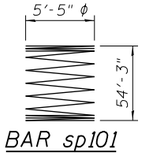


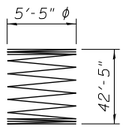
BAR d104(E) BAR d101(E)



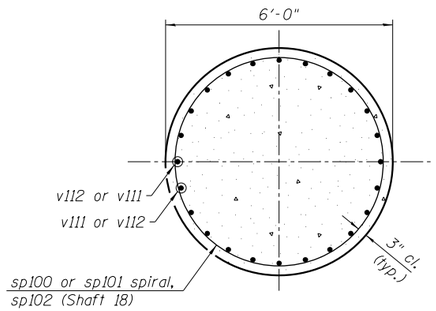
BAR sp100



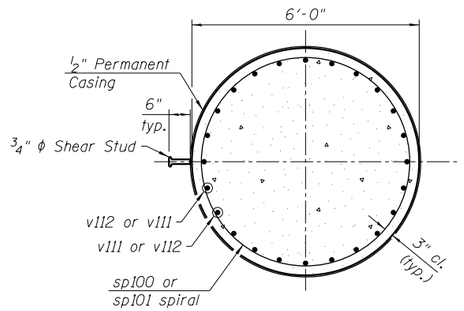
BAR sp101



BAR sp102



SECTION F-F



SECTION G-G

Notes:

Splice v112 bars with v111 bars or v111 bars with v112 bars. For shaft 18, splice v113 bars with v111 bars or v111 bars with v113 bars. See HMLT Pedestal Elevation on Sheet S5-09 of S5-19 .

Splice sp100 and sp101 or sp102 and sp101 bars where they meet.

When splicing spiral reinforcement is necessary, the spiral shall be provided with 1½ 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.

Drilling and grouting of d103(E) bars shall be as per Section 584 of the Standard Specifications. Depth of embedment = 12". Cost included in Class SI Concrete (Miscellaneous).

Cost of shear studs included in Class SI Concrete (Miscellaneous).

¾"X6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Standard Specifications automatically end welded to casing.

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	d100(E)	221	#5	3'-0"	
	d101(E)	380	#6	8'-10"	
***	d103(E)	360	#6	2'-3"	
	d104(E)	62	#6	10'-1"	
	e100(E)	42	#5	33'-2"	
	e101(E)	32	#5	29'-8"	
	e102(E)	14	#5	21'-3"	
	e103(E)	14	#5	26'-6"	
	e104(E)	14	#5	24'-9"	
***	h100(E)	142	#6	33'-10"	
***	h101(E)	75	#6	29'-8"	
***	h102(E)	30	#6	21'-3"	
***	h103(E)	20	#8	30'-0"	
***	h104(E)	26	#8	28'-3"	
***	h105(E)	31	#6	29'-10"	
	h106(E)	19	#4	5'-8"	
	p100(E)	66	#5	33'-2"	
	p101(E)	44	#5	29'-8"	
	p102(E)	22	#5	21'-3"	
	p103(E)	24	#5	26'-6"	
	p104(E)	24	#5	24'-9"	
	s100(E)	153	#4	7'-8"	
	s101(E)	306	#4	12'-0"	
**	sp100	19	#6	35'-3"	
**	sp101	20	#6	54'-3"	
**	sp102	1	#6	42'-5"	
***	v100(E)	23	#5	12'-5"	
***	v101(E)	31	#5	15'-6"	
***	v102(E)	31	#5	19'-1"	
***	v103(E)	31	#5	22'-3"	
***	v104(E)	31	#5	24'-8"	
***	v105(E)	31	#5	27'-6"	
***	v106(E)	24	#5	7'-2"	
***	v107(E)	23	#5	9'-10"	
	v111	480	#14	54'-3"	
	v112	456	#14	39'-0"	
	v113	24	#14	42'-6"	
	v114(E)	10	#4	2'-11"	
	Structure Excavation		Cu. Yd.	511	
	Concrete Structures		Cu. Yd.	224.6	
	Concrete Superstructures		Cu. Yd.	82.9	
	Reinforcement Bars		Pound	438,910	
	Reinforcement Bars, Epoxy Coated		Pound	18,910	
	Permanent Casing		Foot	180	
	Drilled Shaft In Soil		Cu. Yd.	1,885.0	
	Concrete Sealer		Sq. Ft.	4,614	
	Class SI Concrete (Miscellaneous)		Cu. Yd.	123.9	
	Crosshole Sonic Logging Access Ducts		Foot	1,800	
	Crosshole Sonic Logging Testing		Each	4	
	Slope Inclinometer		Each	1	
	Pipe Underdrains for Structures 4"		Foot	217	

** Length is height of spiral

*** Shown for information only. Cost included with Class SI Concrete (Miscellaneous).

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

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TranSystems

USER NAME = wjcolletti	DESIGNED - KRS	REVISED -
	CHECKED - DJG	REVISED -
PLOT SCALE = NTS	DRAWN - AJD	REVISED -
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRILLED SHAFT WALL SECTION AND DETAILS 3
RETAINING WALL 37 (STRUCTURE NO. 016-1826)
SHEET NO. S5-10 OF S5-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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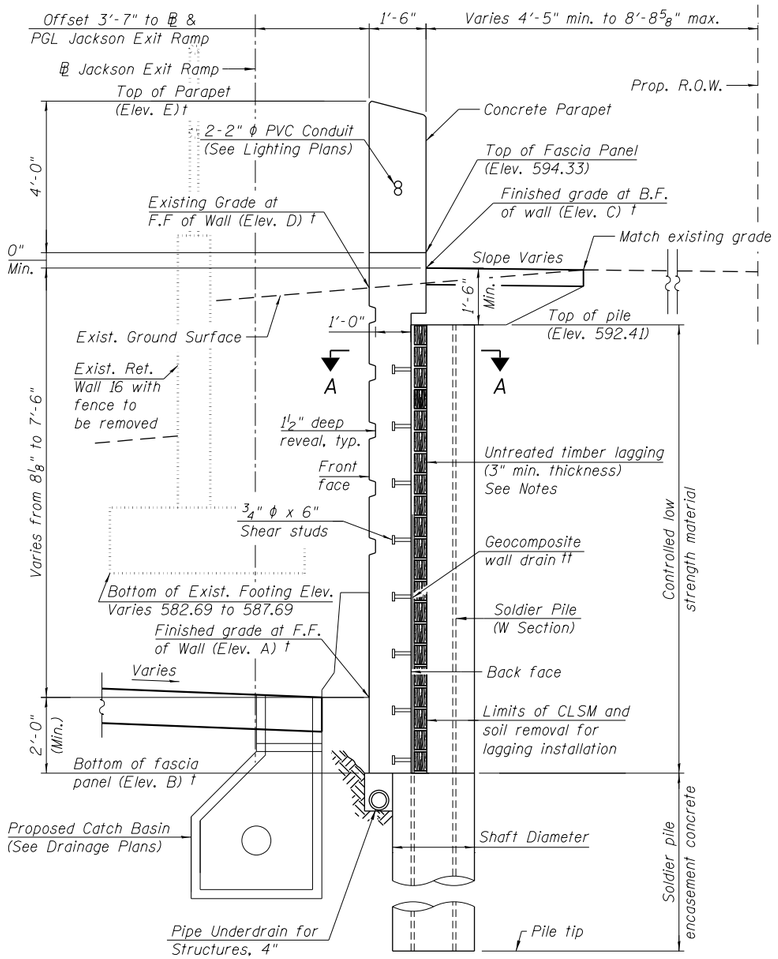
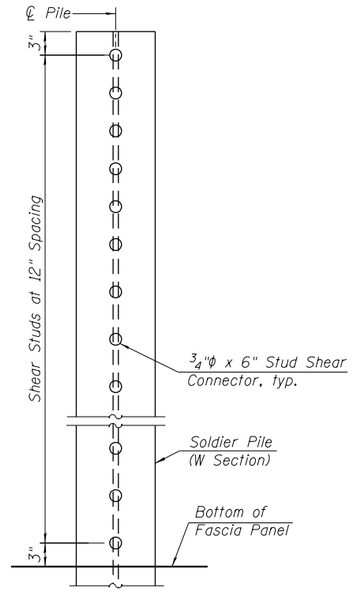
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

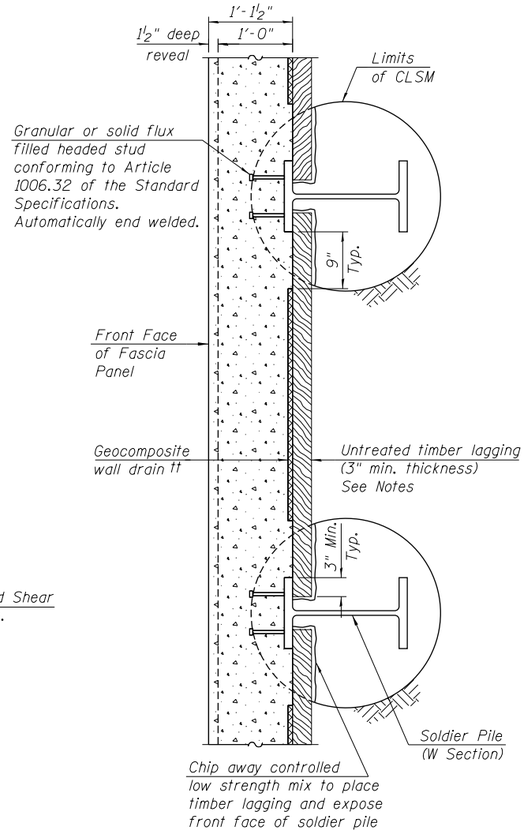


TYPICAL CROSS SECTION - SOLDIER PILE WALL

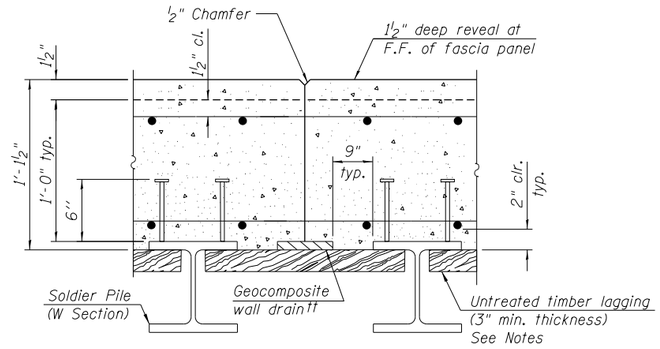
(Looking upstation)
(Sta. 8284+88.74 to Sta. 8286+02.19



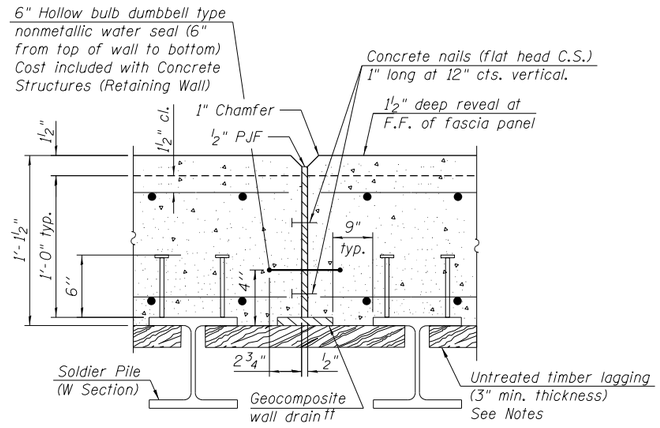
SHEAR STUD DETAIL



SECTION A-A

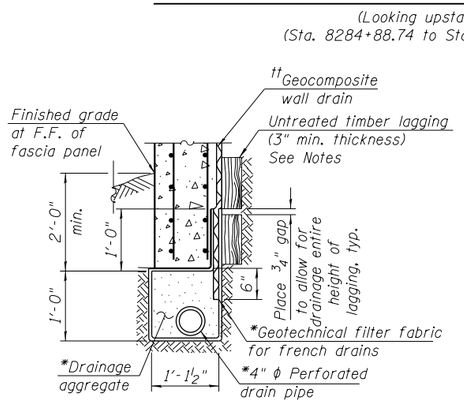


CONSTRUCTION JOINT DETAILS

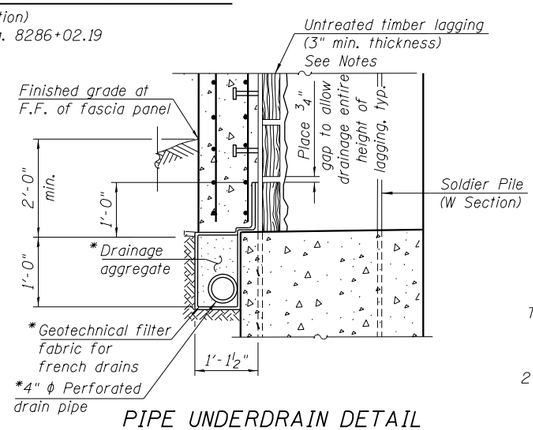


EXPANSION JOINT DETAILS

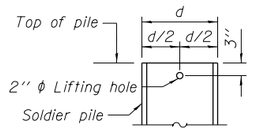
* Cost included with Pipe Underdrains for Structures 4".
† See Table 1 - Wall Elevations on Sheet S5-02 of S5-19 .
†† Geocomposite wall drain thickness shall not exceed 15/16".



PIPE UNDERDRAIN DETAIL
BETWEEN SOLDIER PILES



PIPE UNDERDRAIN DETAIL
AT SOLDIER PILE



LIFTING HOLE DETAIL

Notes:

The Contractor is responsible for the design and performance of the lagging system, the deflection of the lagging shall be limited to 1" maximum using no less than a 3 in. nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi, until the concrete facing is installed. The Contractor shall submit design calculations and details prepared by an Illinois Licensed Structural Engineer for the attachment of the lagging to the shaft for approval by the Engineer. Alternative equivalent systems may be submitted for approval by the Engineer.

Install lagging and Geocomposite Wall Drain from top down as excavation proceeds. Minimize over-excavation and backfill voids with dry loose sand.

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	CHECKED - DJG	REVISED -	
PLOT SCALE = NTS	DRAWN - AJD	REVISED -	
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRILLED SOLDIER PILE WALL SECTION AND DETAILS 1
RETAINING WALL 37 (STRUCTURE NO. 016-1826)
SHEET NO. S5-11 OF S5-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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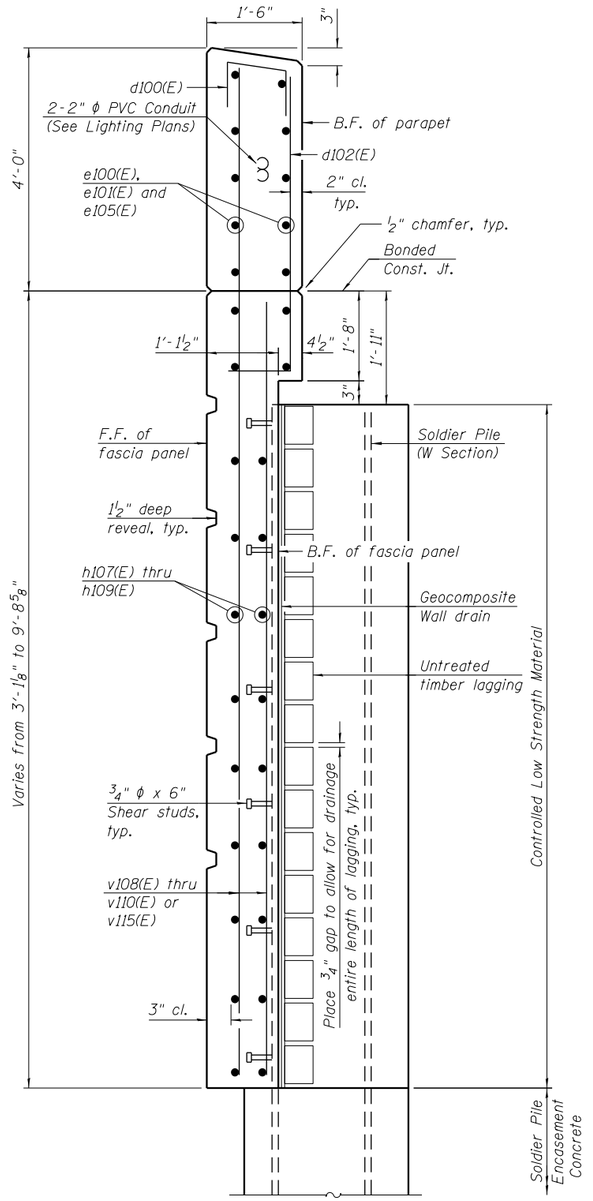
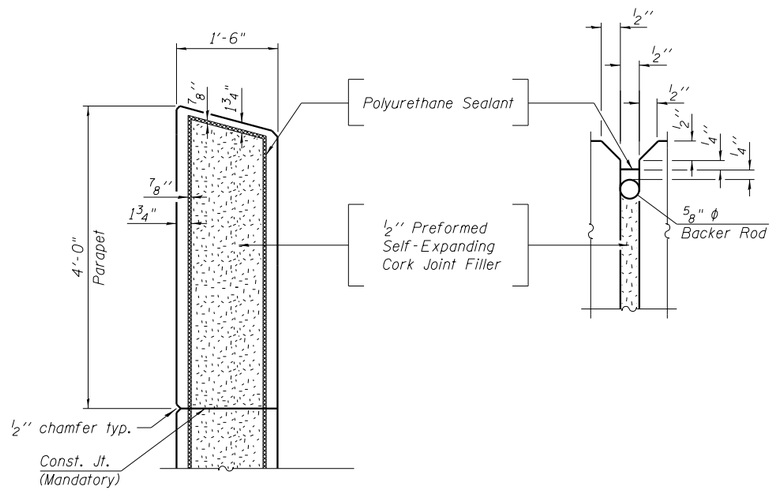
		CONTRACT NO. 60X94		
ILLINOIS FED. AID PROJECT				



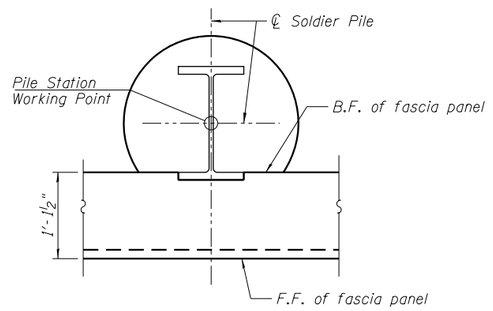
TYPICAL SOLDIER PILE
WALL CROSS SECTION

PILE LAYOUT

Pile	Station at Working Point	Offset	Top of Parapet El.	Top of Pile El.	Bot. of Wall El.	Section	Shaft ϕ	Pile Tip El.	Pile Length
P-1	8284+93.48	5.77' Rt.	598.33	592.41	584.90	W27X84	3'-0"	541.41	51'-0"
P-2	8285+00.97	5.77' Rt.	598.33	592.41	585.34	W27X84	3'-0"	541.41	51'-0"
P-3	8285+08.47	5.77' Rt.	598.33	592.41	585.79	W27X84	3'-0"	541.41	51'-0"
P-4	8285+15.96	5.77' Rt.	598.33	592.41	586.24	W27X84	3'-0"	541.41	51'-0"
P-5	8285+23.45	5.77' Rt.	598.33	592.41	586.69	W27X84	3'-0"	541.41	51'-0"
P-6	8285+30.94	5.77' Rt.	598.33	592.41	587.14	W27X84	3'-0"	541.41	51'-0"
P-7	8285+38.44	5.23' Rt.	598.33	592.41	587.59	W14X43	2'-0"	541.41	51'-0"
P-8	8285+45.94	5.23' Rt.	598.33	592.41	588.04	W14X43	2'-0"	541.41	51'-0"
P-9	8285+53.44	5.23' Rt.	598.33	592.41	588.49	W14X43	2'-0"	541.41	51'-0"
P-10	8285+60.94	5.23' Rt.	598.33	592.41	588.94	W14X43	2'-0"	541.41	51'-0"
P-11	8285+68.44	5.23' Rt.	598.33	592.41	589.39	W14X43	2'-0"	541.41	51'-0"
P-12	8285+75.94	5.23' Rt.	598.33	592.41	589.81	W14X43	2'-0"	541.41	51'-0"
P-13	8285+83.44	5.23' Rt.	598.33	592.41	590.22	W14X43	2'-0"	541.41	51'-0"
P-14	8285+90.94	5.23' Rt.	598.33	592.41	590.63	W14X43	2'-0"	541.41	51'-0"
P-15	8285+98.44	5.23' Rt.	598.33	592.41	591.03	W14X43	2'-0"	541.41	51'-0"



PARAPET EXPANSION JOINT DETAILS

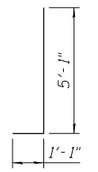


SOLDIER PILE WORKING POINT

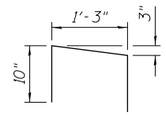
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d100(E)	117	#5	3'-0"	⊓
d102(E)	117	#5	6'-5"	⌊⌋
e100(E)	20	#5	33'-2"	———
e101(E)	10	#5	29'-8"	———
e105(E)	10	#5	23'-2"	———
h107(E)	22	#5	23'-2"	———
h108(E)	30	#5	33'-2"	———
h109(E)	16	#5	29'-8"	———
v108(E)	31	#5	18'-2"	———
v109(E)	24	#5	21'-5"	———
v110(E)	31	#5	11'-2"	———
v115(E)	31	#5	14'-7"	———
Structure Excavation		Cu. Yd.	67	
Concrete Superstructure		Cu. Yd.	24.4	
Stud Shear Connectors		Each	81	
Reinforcement Bars, Epoxy Coated		Pound	6,420	
Furnishing Soldier Piles (W Section)		Foot	765	
Drilling and Setting Soldier Piles (In Soil)		Cu. Ft.	3,731	
Untreated Timber Lagging		Sq. Ft.	484	
Concrete Structures (Retaining Wall)		Cu. Yd.	32.7	
Concrete Sealer		Sq. Ft.	2,142	
Geocomposite Wall Drain		Sq. Yd.	42	
Pipe Underdrain for Structures 4"		Foot	113	

Notes:
Parapet concrete shall be paid for as Concrete Superstructure.
Fascia panel concrete shall be paid for as Concrete Structures (Retaining Wall)



BAR d102(E)



BAR d100(E)

Minimum Bar Laps	
Bar	Lap
#5	3'-2"

TranSystems

USER NAME = wjcolletti	DESIGNED - KRS	REVISED -
	CHECKED - DJG	REVISED -
PLOT SCALE = NTS	DRAWN - AJD	REVISED -
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRILLED SOLDIER PILE WALL SECTION AND DETAILS 2
RETAINING WALL 37 (STRUCTURE NO. 016-1826)
SHEET NO. S5-12 OF S5-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 60X94		
		ILLINOIS	FED. AID PROJECT	

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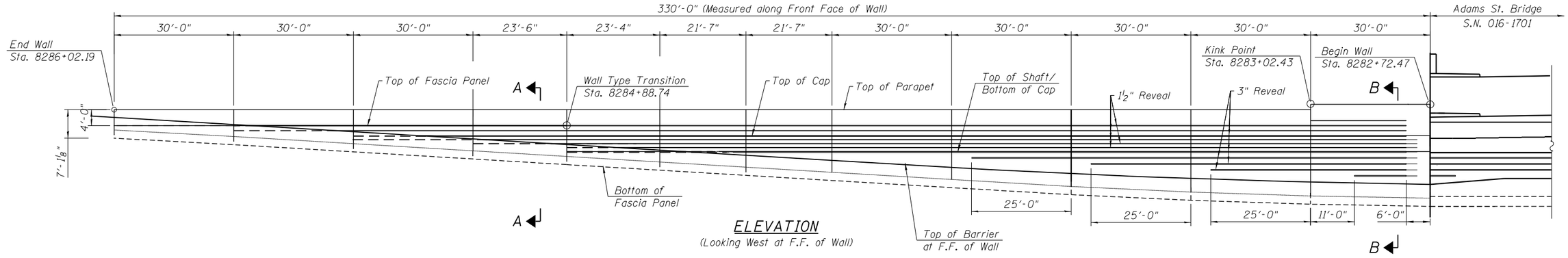
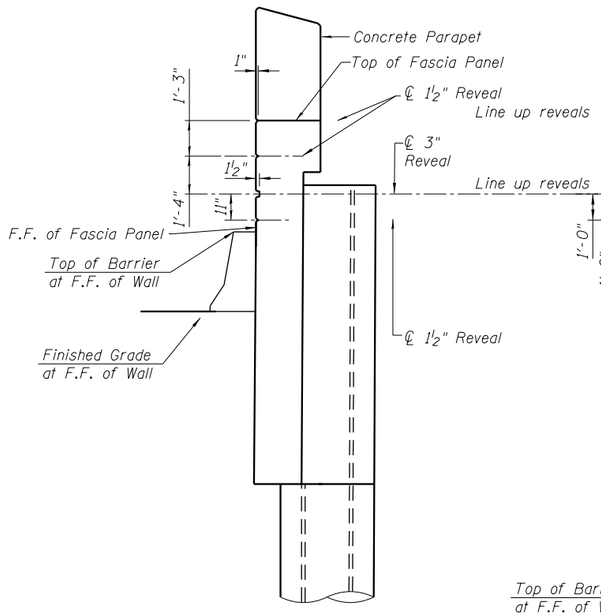
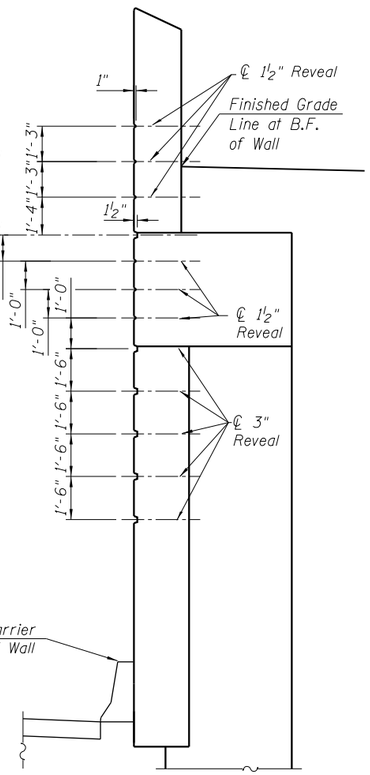


ELEVATION

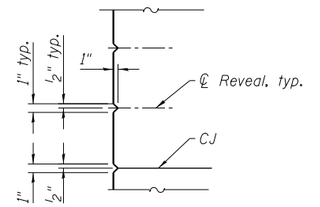
(Looking West at F.F. of Wall)



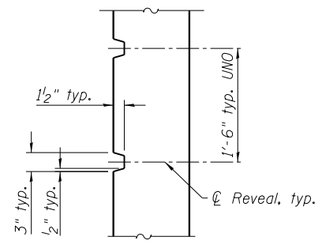
SECTION A-A



SECTION B-B



1½" REVEAL DETAIL



3" REVEAL DETAIL

Notes:

Reveals will not be paid separately and shall be included in the cost of pay item Class SI Concrete (Miscellaneous), Concrete Structures and Concrete Structures (Retaining Wall).

**Installed as part of Contract 62A77.*

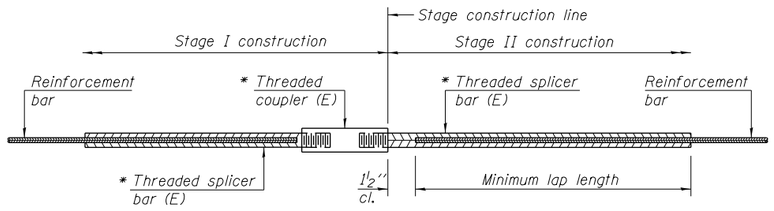
TranSystems	USER NAME = wjcolletti	DESIGNED - KRS	REVISED -
		CHECKED - DJG	REVISED -
	PLOT SCALE = NTS	DRAWN - AJD	REVISED -
	PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARCHITECTURAL DETAILS
RETAINING WALL 37 (STRUCTURE NO. 016-1826)
SHEET NO. S5-13 OF S5-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	504
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

l:\60x94_PW_016826-60X94-S013-ArchDetails_1.dgn



STANDARD BAR SPLICER ASSEMBLY

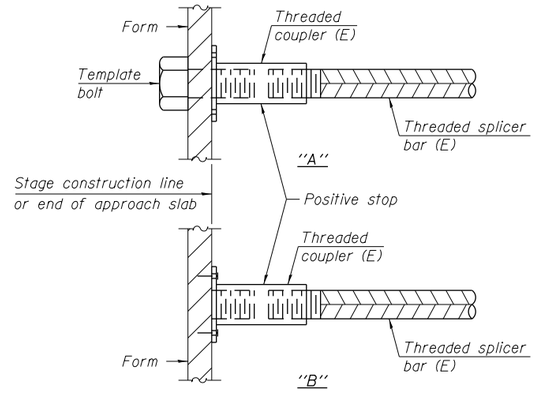
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6

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

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

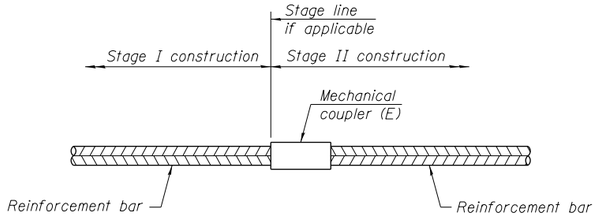
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

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



INSTALLATION AND SETTING METHODS

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



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Drilled Shaft 1	14	24
Drilled Shaft 2	14	24
Drilled Shaft 3	14	24
Drilled Shaft 4	14	24
Drilled Shaft 5	14	24
Drilled Shaft 6	14	24
Drilled Shaft 7	14	24
Drilled Shaft 8	14	24
Drilled Shaft 9	14	24
Drilled Shaft 10	14	24
Drilled Shaft 11	14	24
Drilled Shaft 12	14	24
Drilled Shaft 13	14	24
Drilled Shaft 14	14	24
Drilled Shaft 15	14	24
Drilled Shaft 16	14	24
Drilled Shaft 17	14	24
Drilled Shaft 18	14	24
Drilled Shaft 19	14	24
Drilled Shaft 20	14	24

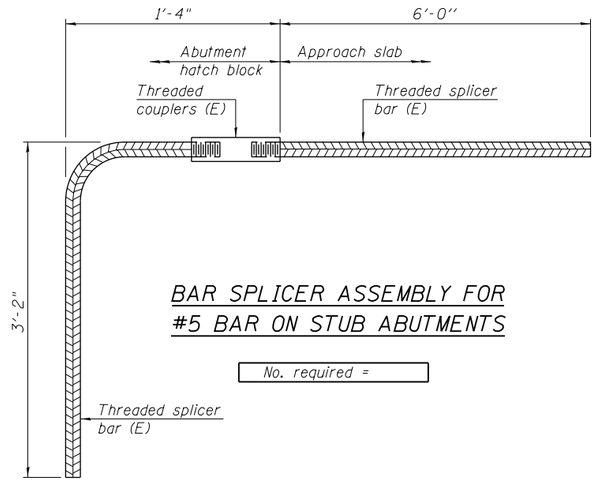
NOTES

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.



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

1:00:22 PM
0161826 60X94-S014-BarSplicer.dgn

TranSystems

USER NAME = wjcolletti	DESIGNED - KRS	REVISED -
	CHECKED - DJG	REVISED -
PLOT SCALE = NTS	DRAWN - AJD	REVISED -
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
RETAINING WALL 37 (STRUCTURE NO. 016–1826)
SHEET NO. S5-14 OF S5-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	505
		CONTRACT NO. 60X94		
	ILLINOIS	FED. AID PROJECT		

Wang Engineering
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Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG 0589-B-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 594.82 ft
North: 1899347.34 ft
East: 1171345.80 ft
Station: 8311+86.85
Offset: 16.7442 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	594.3	6-inch thick ASPHALT --PAVEMENT--						
	593.3	12-inch thick CONCRETE --PAVEMENT--						
		Medium dense, brown and black GRAVELLY SAND; dry to moist --FILL--			1	5 5 6	NP	8
			5		2	1 8 5	NP	11
					3	4 6 6	NP	11
	585.0	Very stiff to hard (4.0P), brown and gray SILTY CLAY LOAM, trace gravel	10		4	3 3 3	NP	13
					5	1 2 3	2.54 B	21
	581.8	Very soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel			6	1 2 2	0.41 B	23
			15		1	PUSH	0.50 P	22
		--In-Situ Vane Shear, 19.0 feet-- --$S_{v\,undis}$ = 958.3 psf-- --$S_{v\,remold}$ = 543.9 psf--			1			
			20					
		--Sensitivity = 1.76--						
					2	PUSH	0.25 P	22
			25					
					3	PUSH	0.25 P	24
			30					
		--In-Situ Vane Shear, 36.5 feet-- --$S_{v\,undis}$ = 802.9 psf-- --$S_{v\,remold}$ = 284.9 psf-- --Sensitivity = 2.82--			2			
			35					
			40					

GENERAL NOTES

Begin Drilling: 06-22-2014 Complete Drilling: 06-22-2014
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR [100%]
Driller: N&R Logger: A. Happel Checked by: C. Marin
Drilling Method: 2.25" HSA to 15', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 1100401.GPJ WANGENGLOGIT 10/29/17

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Fax: 630 953-9938

BORING LOG 0589-B-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 594.82 ft
North: 1899347.34 ft
East: 1171345.80 ft
Station: 8311+86.85
Offset: 16.7442 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45		4	PUSH	< 0.25 P	24
		--In-Situ Vane Shear, 46.5 feet-- --$S_{v\,undis}$ = 1087.8 psf-- --$S_{v\,remold}$ = 647.5 psf-- --Sensitivity = 1.68--			3			
			50		5	PUSH	0.25 P	27
	542.3	Very stiff to hard, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel			7	4 6 10	2.13 B	17
			55					
		--L_L(%)=28, P_I(%)=15-- --%Gravel=4.8-- --%Sand=16.4--	60		8	5 8 9	2.95 B	16
		--%Silt=55.6-- --%Clay=23.2-- --A-6 (8)--			9	8 9 12	3.94 B	15
			65					
					10	12 17 18	6.89 B	13
			70					
		--L_L(%)=37, P_I(%)=21-- --%Gravel=0.5-- --%Sand=1.9-- --%Silt=63.3-- --%Clay=34.3-- --A-6 (17)--			11	4 5 6	1.72 B	28
			75					
	518.1	Gray GRAVELLY SANDY LOAM; moist						
	515.8	Medium dense, gray LOAM; moist			12	12 10 10	NP	10
			80					

GENERAL NOTES

Begin Drilling: 06-22-2014 Complete Drilling: 06-22-2014
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR [100%]
Driller: N&R Logger: A. Happel Checked by: C. Marin
Drilling Method: 2.25" HSA to 15', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
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 0589-B-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 594.82 ft
North: 1899347.34 ft
East: 1171345.80 ft
Station: 8311+86.85
Offset: 16.7442 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	513.1	Dense, gray, fine to medium SAND; moist						
			85		13	12 16 17	NP	14
			90		14	13 17 20	NP	16
	504.3	--DIFFICULT DRILLING at 90.5 -- Very dense, grayish DOLOSTONE fragments --WEATHERED BEDROCK-- --AUGER REFUSAL--			15	50/1	NP	
	501.1	Boring terminated at 93.50 ft			16	50/2	NP	
			95					
			100					

GENERAL NOTES

Begin Drilling: 06-22-2014 Complete Drilling: 06-22-2014
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR [100%]
Driller: N&R Logger: A. Happel Checked by: C. Marin
Drilling Method: 2.25" HSA to 15', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 1100401.GPJ WANGENGLOGIT 10/29/17

Notes:
Boring Log 0589-B-01 Station and Offset along ℄ Jackson Exit Ramp are: Sta. 8282+22.07, Offset 15.66' Rt.

1:00:31 PM
0161826 60x94-S015-Boring_1.dgn

TranSystems

USER NAME = wjcolletti	DESIGNED - KRS	REVISED -
	CHECKED - DJG	REVISED -
PLOT SCALE = NTS	DRAWN - LFP	REVISED -
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 1
RETAINING WALL 37 (STRUCTURE NO. 016-1826)
SHEET NO. S5-15 OF S5-19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	506
		CONTRACT NO. 60X94		
	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 08-RWB-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 579.35 ft
North: 1899261.44 ft
East: 1171382.28 ft
Station: 1310+67.92
Offset: 1.7942 LT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
579.0	4-inch thick, brown SILTY CLAY LOAM						
	Medium dense, gray SANDY GRAVEL; damp			1	8 10 6	NP	10
576.3	Stiff, brown SILTY CLAY, trace gravel	5		2	2 2 2	1.07 B	25
573.8	Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel			3	0 1 2	0.49 B	24
		10		4	0 2 2	1.15 B	17
				5	0 0 1	0.33 B	25
		15		6	0 0 2	0.41 B	28
				7	0 0 0	0.33 B	25
		20		8	0 0 1	0.33 B	27
	--%Clay=30.9-- --A-6 (14)--			9	0 0 0	0.33 B	26
		25		10	0 0 0	NR	
				11	0 0 0	0.33 B	25
		30		12	0 0 3	0.41 B	26
542.8	Stiff to hard, gray SILTY CLAY, trace gravel						
		35		13	0 1 2	0.74 B	24
				14	3 3 4	1.89 B	21
		40					

--L_L(%)=36, P_I(%)=17--
--%Gravel=6.6--
--%Sand=13.3--
--%Silt=49.2--

GENERAL NOTES

Begin Drilling: 07-10-2014 Complete Drilling: 07-10-2014
Drilling Contractor: Wang Testing Services Drill Rig: CME-55 TMR [85%]
Driller: A&K Logger: A. Mohammed Checked by: C. Marin
Drilling Method: 3.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▼ NA

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

WANGENGINC 1100401.GPJ WANGENG.GDT 10/25/17

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BORING LOG 08-RWB-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 579.35 ft
North: 1899261.44 ft
East: 1171382.28 ft
Station: 1310+67.92
Offset: 1.7942 LT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		45		15	3 9 11	1.00 P	22
517.6	Medium dense, gray SILT; damp			19	29 12 6	NP	13
514.3	Boring terminated at 65.00 ft	65					
		50		16	3 4 7	3.36 B	16
		55		17	4 9 9	4.51 B	24
		60		18	2 4 3	1.97 B	24
		70					
		75					
		80					

GENERAL NOTES

Begin Drilling: 07-10-2014 Complete Drilling: 07-10-2014
Drilling Contractor: Wang Testing Services Drill Rig: CME-55 TMR [85%]
Driller: A&K Logger: A. Mohammed Checked by: C. Marin
Drilling Method: 3.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▼ NA

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

WANGENGINC 1100401.GPJ WANGENG.GDT 10/25/17

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BORING LOG 08-RWB-02

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 586.14 ft
North: 1899115.44 ft
East: 1171371.20 ft
Station: 1312+13.98
Offset: 8.4733 RT

Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	Stiff, black LOAM, some gravel --FILL--			1	7 5 3	1.50 P	9
		5		2	10 8 5	1.50 P	9
580.6	Stiff, gray SILTY CLAY LOAM, trace gravel --FILL--			3	1 3 2	1.56 B	14
578.1	Very soft to soft, gray CLAY to SILTY CLAY, trace gravel						
		10		4	1 2 3	0.33 B	21
				5	0 0 1	0.41 B	23
	--In-Situ Vane Shear, 14 feet-- --$S_{u\,undis}$ = 984 psf-- --$S_{u\,remold}$ = 648 psf-- --Sensitivity = 1.52--	15		6			
		20		7	0 2 2	< 0.25 P	27
	--In-Situ Vane Shear, 24 feet-- --$S_{u\,undis}$ = 777 psf-- --$S_{u\,remold}$ = 518 psf-- --Sensitivity = 1.5--	25		8			
		30		9	0 0 0	0.41 B	25
	--In-Situ Vane Shear, 34 feet-- --$S_{u\,undis}$ = 1295 psf-- --$S_{u\,remold}$ = 570 psf-- --Sensitivity = 2.27--	35		10			
549.4	Stiff very stiff, gray GRAVELLY SILTY CLAY LOAM						
		40		11	1 2 4	1.64 B	24

--L_L(%)=32, P_I(%)=17--
--%Gravel=15.2--
--%Sand=9.0--
--%Silt=51.4--

GENERAL NOTES

Begin Drilling: 07-10-2014 Complete Drilling: 07-10-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 TMR [78%]
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 8.00 ft
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▼ NA

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

WANGENGINC 1100401.GPJ WANGENG.GDT 10/25/17

Notes:
Boring Log 08-RWB-01 Station and Offset along ℄ Jackson Exit Ramp are: Sta. 8283+04.84, Offset 22.79' Lt.
Boring Log 08-RWB-02 Station and Offset along ℄ Jackson Exit Ramp are: Sta. 8284+52.34, Offset 23.85' Lt.

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BORING LOG 08-RWB-02

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 586.14 ft
North: 1899115.44 ft
East: 1171371.20 ft
Station: 1312+13.98
Offset: 8.4733 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--%Clay=24.3-- --A-6 (10)--	45			12	0 1 3	0.66 B	20
	539.4	Very stiff to hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel	50			13	4 8 12	3.94 B	18
			55			14	4 8 11	4.35 B	15
			60			15	5 9 14	4.51 B	18
	524.4	Medium stiff, gray CLAY							
	521.1	Boring terminated at 65.00 ft	65			16	3 4 7	0.74 B	42
			70						
			75						
			80						

GENERAL NOTES

Begin Drilling: 07-10-2014 Complete Drilling: 07-10-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 TMR [78%]
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 8.00 ft
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 1100041.GPJ WANGENG.GDT 10/25/17

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BORING LOG 08-RWB-03

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 592.12 ft
North: 1898962.89 ft
East: 1171377.44 ft
Station: 1313+66.49
Offset: 1.3750 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	591.9	3-inch thick ASPHALT --PAVEMENT--							
	589.9	12-inch thick CONCRETE --PAVEMENT--							
		Dense, brown SANDY GRAVEL --BASE COURSE--				1	27 18 16	NP	6
	589.1	Medium dense, brown, fine to medium SAND, trace gravel --FILL--	5			2	7 7 5	NP	4
						3	4 7 8	NP	5
	583.1	Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel	10			4	2 1 2	0.99 B	25
						5	0 1 2	0.82 B	16
			15			6	0 0 0	0.33 B	23
						7	0 0 0	0.33 B	25
			20			8	0 0 2	0.33 B	26
			25			9	0 0 0	0.25 B	25
						10	0 0 2	< 0.25 P	23
			30			11	0 1 2	0.49 B	22
						12	0 0 3	0.66 B	25
			35			13	0 0 0	0.57 B	23
			40			14	0 0 2	0.41 B	25

GENERAL NOTES

Begin Drilling: 07-10-2014 Complete Drilling: 07-10-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 TMR [78%]
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 1100041.GPJ WANGENG.GDT 10/25/17

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

BORING LOG 08-RWB-03

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 592.12 ft
North: 1898962.89 ft
East: 1171377.44 ft
Station: 1313+66.49
Offset: 1.3750 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45			15	0 1 3	0.66 B	25
	530.4	Very stiff, gray SILTY CLAY, trace gravel							
	527.1	Boring terminated at 65.00 ft	65			19	5 8 14	3.94 B	21
			70						
			75						
			80						
	540.4	Stiff, gray SILTY CLAY, trace gravel	50			16	1 2 3	0.57 B	24
			55			17	2 4 6	1.88 B	22
	535.4	Medium dense, gray SILTY LOAM, trace gravel	60			18	9 12 13	NP	14

GENERAL NOTES

Begin Drilling: 07-10-2014 Complete Drilling: 07-10-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 TMR [78%]
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 1100041.GPJ WANGENG.GDT 10/25/17

Notes:

Boring Log 08-RWB-02 Station and Offset along ℄ Jackson Exit Ramp are: Sta. 8284+52.34, Offset 23.85′ Lt.

Boring Log 08-RWB-03 Station and Offset along ℄ Jackson Exit Ramp are: Sta. 8286+05.39, Offset 31.68′ Lt.

BORING LOG 08-ST-01

Wang Engineering
wangeng@wangeng.com
1145 N. Main Street
Lombard/IL/60148
Telephone: 6309539928
Fax: 6309539938

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 585.42 ft
North: 1899122.49 ft
East: 1171372.69 ft
Station: 1312+06.92
Offset: 7.0183 RT

SOIL AND ROCK DESCRIPTION

585.1 14-inch thick, black SILTY CLAY LOAM --TOPSOIL--

Very stiff, brown SILTY CLAY LOAM, little gravel; damp --FILL--

581.2 Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel; moist

--S_u =0.43 tsf (UU TXC) --w_n(%)=23

--S_u =0.29 tsf (UU TXC) --w_n(%)=24

--S_u =0.22 tsf (UU TXC) --w_n(%)=25

--S_u =0.43 tsf (UU TXC) --w_n(%)=24

--S_u =0.50 tsf (UU TXC) --w_n(%)=23

--C_c=0.219, OCR=1.05--

Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
1	3 4 9	2.75 P	10
2	2 2 3	0.83 N/6	
3	1 2 2	0.25 P	25
1	PUSH	< 0.25 P	24
2	PUSH	< 0.25 P	24
3	PUSH	< 0.25 P	25
4	PUSH	< 0.25 P	26
5	PUSH	< 0.25 P	24
6	PUSH	< 0.25 P	24
7	PUSH	0.25 P	24
8	PUSH	0.50 P	23
9	PUSH	0.25 P	25
10	PUSH	0.50 P	23
	PU		

GENERAL NOTES

Begin Drilling 11-03-2014 Complete Drilling 11-03-2014
Drilling Contractor Wang Testing Services Drill Rig
Driller P&P Logger F. Bozga Checked by C. Marin
Drilling Method 3.25" HSA, boring backfilled upon completion

WATER LEVEL DATA

While Drilling ∇ DRY
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.

WANGENGINC 1100-04-01.GPJ WANGENG.GDT 10/27/17

BORING LOG 08-ST-01

Wang Engineering
wangeng@wangeng.com
1145 N. Main Street
Lombard/IL/60148
Telephone: 6309539928
Fax: 6309539938

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 585.42 ft
North: 1899122.49 ft
East: 1171372.69 ft
Station: 1312+06.92
Offset: 7.0183 RT

SOIL AND ROCK DESCRIPTION

--Laboratory Q_u=0.39 tsf (B), w_n(%)=21--

--Laboratory Q_u=0.19 tsf (B), w_n(%)=25--

537.9 Very stiff, gray SILTY CLAY LOAM, trace gravel; damp

--Laboratory Q_u=3.31 tsf (B), w_n(%)=19--

532.9 Boring terminated at 51.50 ft

Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
11	SH	0.50 P	26
12	PUSH	0.25 P	25
13	PUSH	0.75 P	25
14	PUSH	3.25 P	19
4	5 8 12	3.85 B	20

GENERAL NOTES

Begin Drilling 11-03-2014 Complete Drilling 11-03-2014
Drilling Contractor Wang Testing Services Drill Rig
Driller P&P Logger F. Bozga Checked by C. Marin
Drilling Method 3.25" HSA, boring backfilled upon completion

WATER LEVEL DATA

While Drilling ∇ DRY
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.

WANGENGINC 1100-04-01.GPJ WANGENG.GDT 10/27/17

BORING LOG 37-RWB-01

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

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 593.73 ft
North: 1899214.79 ft
East: 1171327.81 ft
Station: 8311+66.54
Offset: 22.2819 RT

SOIL AND ROCK DESCRIPTION

8-inch thick, CONCRETE

593.1 --PAVEMENT--

Loose, gray GRAVELLY SAND --FILL--

588.2 Stiff to very stiff, gray SILTY CLAY, trace gravel

583.2 Very soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel

Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
1	5 4 3	NP	3
2	3 3 3	NP	6
3	2 4 5	2.05 B	21
4	1 3 3	1.15 B	20
5	0 2 2	0.57 B	19
6	0 0 0	0.33 B	26
7	0 0 0	0.33 B	23
8	0 0 0	0.33 B	25
9	0 0 0	0.25 B	25
10	0 0 0	0.25 B	24
11	0 0 0	0.16 B	26
12	0 0 0	< 0.25 P	30
13	0 0 0	< 0.25 P	27
14	0 0 0	0.25 B	26

GENERAL NOTES

Begin Drilling 07-31-2014 Complete Drilling 07-31-2014
Drilling Contractor Wang Testing Services Drill Rig D-50 TMR [78%]
Driller R&J Logger S. Woods Checked by CLM (-Coord)
Drilling Method 2.25" SSA to 10', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling ∇ Rotary wash
At Completion of Drilling ▼ mud in the borehole
Time After Drilling NA
Depth to Water ▼ NA

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

WANGENGINC 1100-04-01.GPJ WANGENG.GDT 10/25/17

Notes:
Boring Log 08-ST-01 Station and Offset along ℄ Jackson Exit Ramp are: Sta. 8284+45.20, Offset 25.14' Lt.
Boring Log 37-RWB-01 Station and Offset along ℄ Jackson Exit Ramp are: Sta. 8283+54.88, Offset 23.83' Rt.

Wang Engineering
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1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
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BORING LOG 37-RWB-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 593.73 ft
North: 1899214.79 ft
East: 1171327.81 ft
Station: 8311+66.54
Offset: 22.2819 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45		15	0 0 0	0.41 B	23
	547.0	Medium stiff, gray SILTY CLAY, trace to some gravel						
			50		16	3 6 6	0.57 B	21
		--Disturbed sample--	55		17	5 6 11	NA	27
	537.0	Medium dense to dense, gray SILTY LOAM, trace gravel, sand lenses						
			60		18	8 9 15	NP	13
			70					
			75					
			80					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	528.7	*--SAND lenses--*	65		19	10 15 17	NP	13
		Boring terminated at 65.00 ft						

GENERAL NOTES

Begin Drilling: 07-31-2014 Complete Drilling: 07-31-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 TMR [78%]
Driller: R&J Logger: S. Woods Checked by: CLM (-Coord)
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: Rotary wash
At Completion of Drilling: mud in the borehole
Time After Drilling: NA
Depth to Water: NA

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

WANGENGINC - 1100041.GPJ WANGENG.GDT - 10/25/17

BORING LOG 37-RWB-02

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 593.30 ft
North: 1899060.29 ft
East: 1171337.17 ft
Station: 1312+69.32
Offset: 42.1927 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	593.0	3-inch thick, ASPHALT --PAVEMENT--						
		Medium dense, brown GRAVELLY SAND --FILL-- --Moist--			1	5 6 10	NP	14
	589.6	Loose, brown fine SAND --Moist--	5		2	4 4 4	NP	10
	587.8	Stiff, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel			3	1 2 3	1.44 B	24
			10		4	3 5 5	1.44 B	19
	582.8	Very soft to medium stiff, gray CL:AY to SILTY CLAY, trace gravel			5	1 1 2	0.57 B	23
			15		1	ST	< 0.25 P	
			20		6	0 0 1	0.41 B	20
			25		2	ST	0.50 P	
			30		7	0 0 2	0.19 B	22
			35		3	ST	0.25 P	
			40		8	0 0 0	0.41 B	25

GENERAL NOTES

Begin Drilling: 08-03-2014 Complete Drilling: 08-03-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 TMR [78%]
Driller: R&J Logger: M. de los Reyes Checked by: C. Marin
Drilling Method: 2.25" SSA to 11', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: Rotary wash
At Completion of Drilling: mud in the borehole
Time After Drilling: NA
Depth to Water: NA

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

WANGENGINC - 1100041.GPJ WANGENG.GDT - 10/25/17

BORING LOG 37-RWB-02

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 593.30 ft
North: 1899060.29 ft
East: 1171337.17 ft
Station: 1312+69.32
Offset: 42.1927 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45		4	ST	0.25 P	
	541.5	Stiff to hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel						
			50		9	0 2 4	0.62 B	25
			55		5	ST	1.25 P	
			60		10	9 8 11	5.33 B	16
			70					
			75					
			80					

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	528.3	Boring terminated at 65.00 ft	65		11	7 10 13	3.49 B	18

GENERAL NOTES

Begin Drilling: 08-03-2014 Complete Drilling: 08-03-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 TMR [78%]
Driller: R&J Logger: M. de los Reyes Checked by: C. Marin
Drilling Method: 2.25" SSA to 11', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: Rotary wash
At Completion of Drilling: mud in the borehole
Time After Drilling: NA
Depth to Water: NA

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

WANGENGINC - 1100041.GPJ WANGENG.GDT - 10/25/17

Notes:
Boring Log 37-RWB-01 Station and Offset along ℄ Jackson Exit Ramp are: Sta. 8283+54.88, Offset 23.83' Rt.
Boring Log 37-RWB-02 Station and Offset along ℄ Jackson Exit Ramp are: Sta. 8285+08.25, Offset 9.13' Rt.

Bench Mark: Set "X" on east barrier wall of I-90 at ℄ of Adams Street. Elev. 581.17.

Existing Structure: Existing Retaining Wall at Quincy Street. Constructed in 1957 under F.A.I. Route 2, Section 0101.6-2P. Cast-in-place concrete retaining wall on battered timber piles that measures approximately 98'-0" at the end of Quincy Street north of Existing Building at 728 W. Jackson Boulevard. Maximum height from top of wall to bottom of footing measures 17'-0". The existing retaining wall is to remain.

Traffic on I-90/94 will be maintained with stage construction.

No Salvage.

Notes:

Wall offsets are measured from the ℄ of NB C-D Road to the front face of cast-in-place fascia panels.
C denotes Construction Joint
E denotes Expansion Joint
F.F. denotes Front Face.
B.F. denotes Back Face.

CURVE DATA

(NB C-D Road)
Prop. Curve P-NCD-NX-5
P.I. Sta. = 6336+57.47
Δ = 35° 13' 41" (RT)
D = 4° 12' 24"
R = 1,362.00'
T = 432.42'
L = 837.42'
E = 67.00'
e = 4.20%
T.R. = 42'
S.E. Run = 87'
P.C. Sta. = 6332+25.05
P.T. Sta. = 6340+62.48

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications 8th Edition

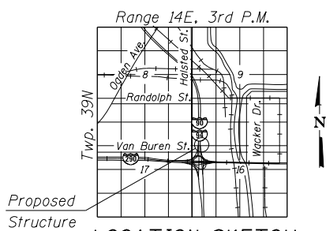
DESIGN STRESSES

FIELD UNITS

f'c = 5,000 psi (Micropile Grout)
f'c = 4,000 psi (Superstructure Concrete)
f'c = 3,500 psi (All other concrete)
fy = 60,000 psi (Reinforcement)
fy = 60,000 psi (Micropile Casing)
fu = 150,000 psi (Micropile Threadbar)

SOLDIER PILES

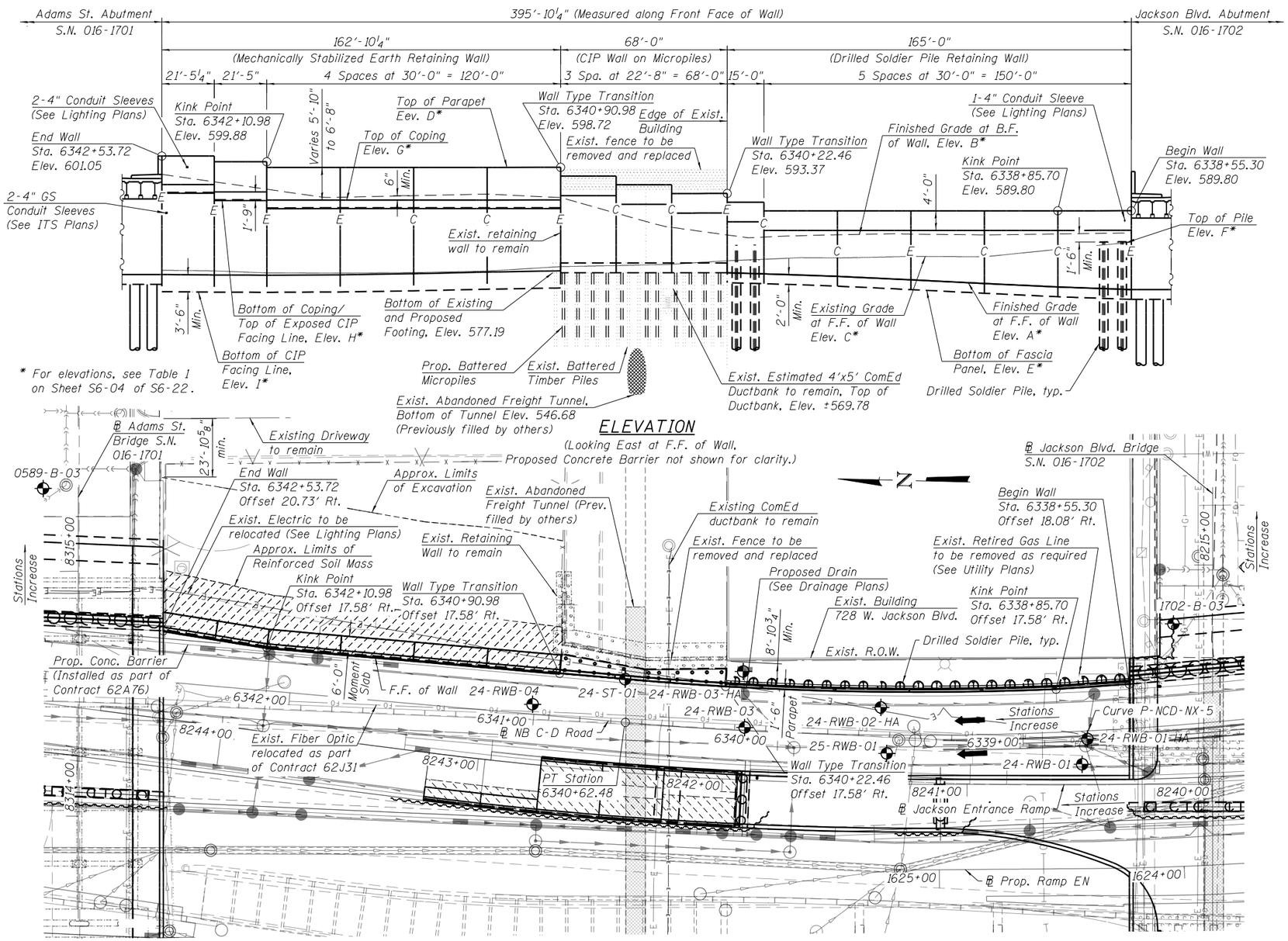
fy = 50,000 psi (AASHTO M270 Gr. 50)



LOCATION SKETCH

MATTHEW D. SANTEFORD
081-007244
LICENSED STRUCTURAL ENGINEER
OF
STATE OF ILLINOIS
03-06-2020

MATTHEW D. SANTEFORD, P.E., S.E.
NO. 081-007244
EXP. DATE 11/30/2020



LEGEND:

Ex. Chain Link Fence	— X — X —	Ex. Gas Line	—G—
Combined Sewer		Ex. Fiber Optic	—FO—
Electric	—E—	Soil Boring	
Ex. Storm Sewer		Existing Catch Basin	
Prop. Storm Sewer		Proposed Catch Basin	
Ex. ITS Cable		Existing Manhole	
Limits of Soil Reinf.		Proposed Inlet	

GENERAL PLAN AND ELEVATION
RETAINING WALL 24 ALONG NB C-D ROAD
F.A.I. RTE. 90/94 (KENNEDY EXPRESSWAY)
SECTION 2014-015R&B-R
COOK COUNTY
STATION 6338+55.30 TO STATION 6342+53.72
STRUCTURE NO. 016-Z016

USER NAME = wjcollett1	DESIGNED - KRS	REVISED -	
	CHECKED - DJG	REVISED -	
PLOT SCALE = NTS	DRAWN - LFP	REVISED -	
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -	

TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. S6-01 OF S6-22 SHEETS

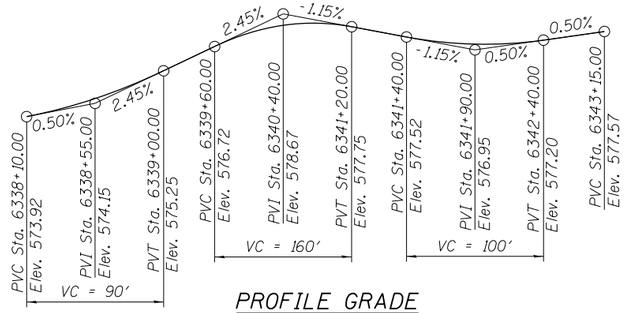
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	511
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

162759 PM
016Z016_60X94-S001-GPE.dgn

GENERAL NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. The Contractor shall exercise extreme caution during construction to make certain that construction activities, live load surcharge and other loads applied to the structures will not have detrimental effects on the adjacent building foundations. Any damage during construction shall be repaired by the Contractor at his expense and no charge to the department. Driving piles and temporary sheet piling is not allowed.
3. The Contractor shall provide vibration and displacement monitoring at the locations specified in the Special Provisions for Construction Vibration Monitoring and Monitoring Adjacent Structures, to ensure that removal/construction activities in the vicinity of the structures do not have detrimental effects on building foundations. No additional compensation shall be provided to the Contractor for alternative means and methods, or additional precautionary measures, required during removal/ construction activities to satisfy these requirements. See Contract Special Provisions for details.
4. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
5. Slipforming of parapets is not allowed.
6. The Contractor shall field verify locations of existing underground utilities. The Contractor shall take precautions to protect existing utilities during construction of the wall. Any damage to the existing utilities shall be the responsibility of the Contractor.
7. MSE Wall supplier shall design the MSE Wall using granular reinforced mass with minimum effective internal friction angle of 34 degrees and unit weight of 120 lbs./cu. ft.. For embankment behind granular reinforced mass, an embankment unit weight of 120 lbs./cu. ft. and an effective friction angle of 30 degrees shall be used in the wall system design.
8. All Lightweight Cellular Concrete Fill shall be Class I. See Special Provisions.
9. Wall to be built along straight chords between construction and expansion joints.
10. Concrete Sealer shall be applied to the exposed top, front, and back faces of the parapet, front faces of the coping and fascia panels, and front face of existing retaining wall.
11. Limited groundwater elevation data is available in the boring logs. In addition, groundwater may also be present in deeper granular layers. The groundwater may rise in the shafts to an elevation above the top of granular layers. The Contractor shall consider this information when choosing construction methods. The Contractor will not be compensated for issues related to the groundwater elevation.
12. The Contractor shall take all necessary precautions not to contaminate groundwater during the drilled shaft construction operation. Contractor is responsible for the proper containment and disposal of the contaminated groundwater and spoils resulting from the Contractor's means and methods. No additional cost will be paid for this effort.
13. Wall repair locations are approximate and were determined from field inspection performed at the time of plan preparation. The necessary adjustments based on current field conditions will be made at time of construction. Such variations shall not be cause for additional compensation for a change in the scope of work. However, the Contractor will be paid for the actual quantity furnished at the unit price bid for the work.
14. The Contractor shall take precautions not to damage existing retaining wall during the construction. Any damage to the existing retaining wall shall be repaired by the Contractor at no additional cost.
15. The contractor shall coordinate the construction of the proposed structure with the construction of the Proposed Adams Street and Jackson Blvd. Bridges. See MOT plan sheets and special provisions, including the Available Work Areas and Sequencing Requirements special provision, for additional construction and coordination requirements.
16. The Contractor shall provide a method to assure the soldier piles achieve at least the plan tip elevations. The soldier pile locations and elevations shall meet the tolerances provided in the Special Provisions. Any additional measures required to satisfy the construction tolerances will not be paid for separately but shall be included in Drilling and Setting Soldier Piles (In Soil).
17. Soldier piles shall be cleaned and given one shop coat of Inorganic Zinc Rich Primer. Cost included with Furnishing Soldier Piles (W Section).

INDEX OF SHEETS



PROFILE GRADE

(℄ NB C-D Road)

TOTAL BILL OF MATERIAL

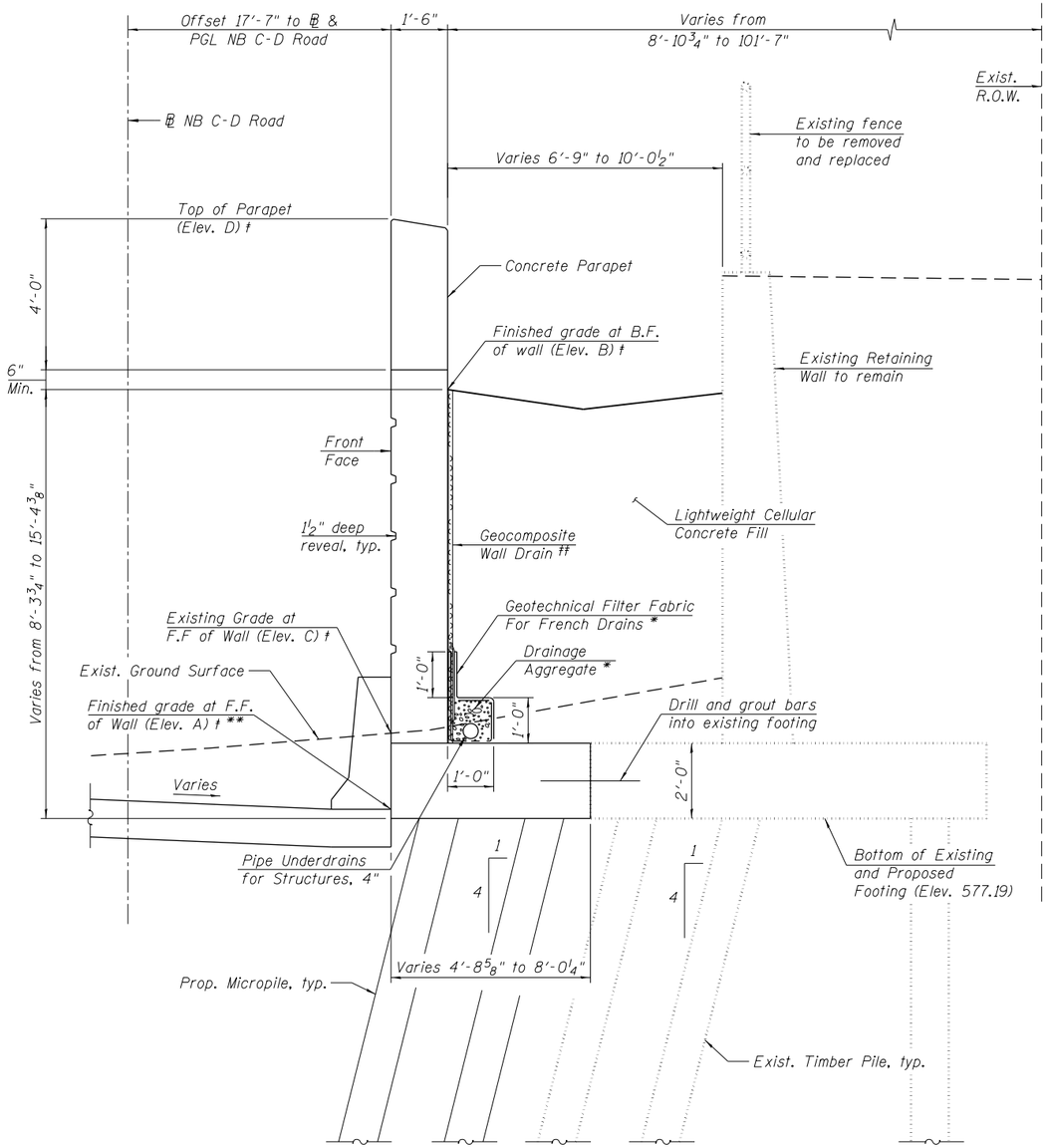
Item	Unit	Total Quantity
Structure Excavation	Cu. Yd.	880
Concrete Superstructure	Cu. Yd.	168.5
Stud Shear Connectors	Each	425
Reinforcement Bars, Epoxy Coated	Pound	34,340
Name Plates	Each	1
Permanent Casing	Foot	1.081
Furnishing Soldier Piles (W Section)	Foot	1,298
Drilling and Setting Soldier Piles (In Soil)	Cu. Ft.	13,928
Untreated Timber Lagging	Sq. Ft.	1,594
Concrete Structures (Retaining Wall)	Cu. Yd.	169.0
Concrete Sealer	Sq. Ft.	10,464
Epoxy Crack Injection	Foot	68
Geocomposite Wall Drain	Sq. Yd.	197
Graffiti Removal	Sq. Yd.	114
Micro-Piles	Each	22
Micropile Load Test	Each	1
Micropile Proof Load Test	Each	1
Lightweight Cellular Concrete Fill	Cu. Yd.	4,162
Slope Inclinometer	Each	1
Chain Link Fence Removal (Special)	Foot	97
Chain Link Fence, 4' Attached to Structure	Foot	97
Structural Repair of Concrete (Depth equal to or less than 5 Inches)	Sq. Ft.	3
Mechanically Stabilized Earth Retaining Wall, Special	Sq. Ft.	2,865
Pipe Underdrain for Structures 4"	Foot	233

STATION 6338+55.30 TO 6342+53.72
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RTE. 90/94 SEC. 2014-015R&B-R
LOADING HL-93
STR. NO. 016-Z016

NAME PLATE
See Std. 515001

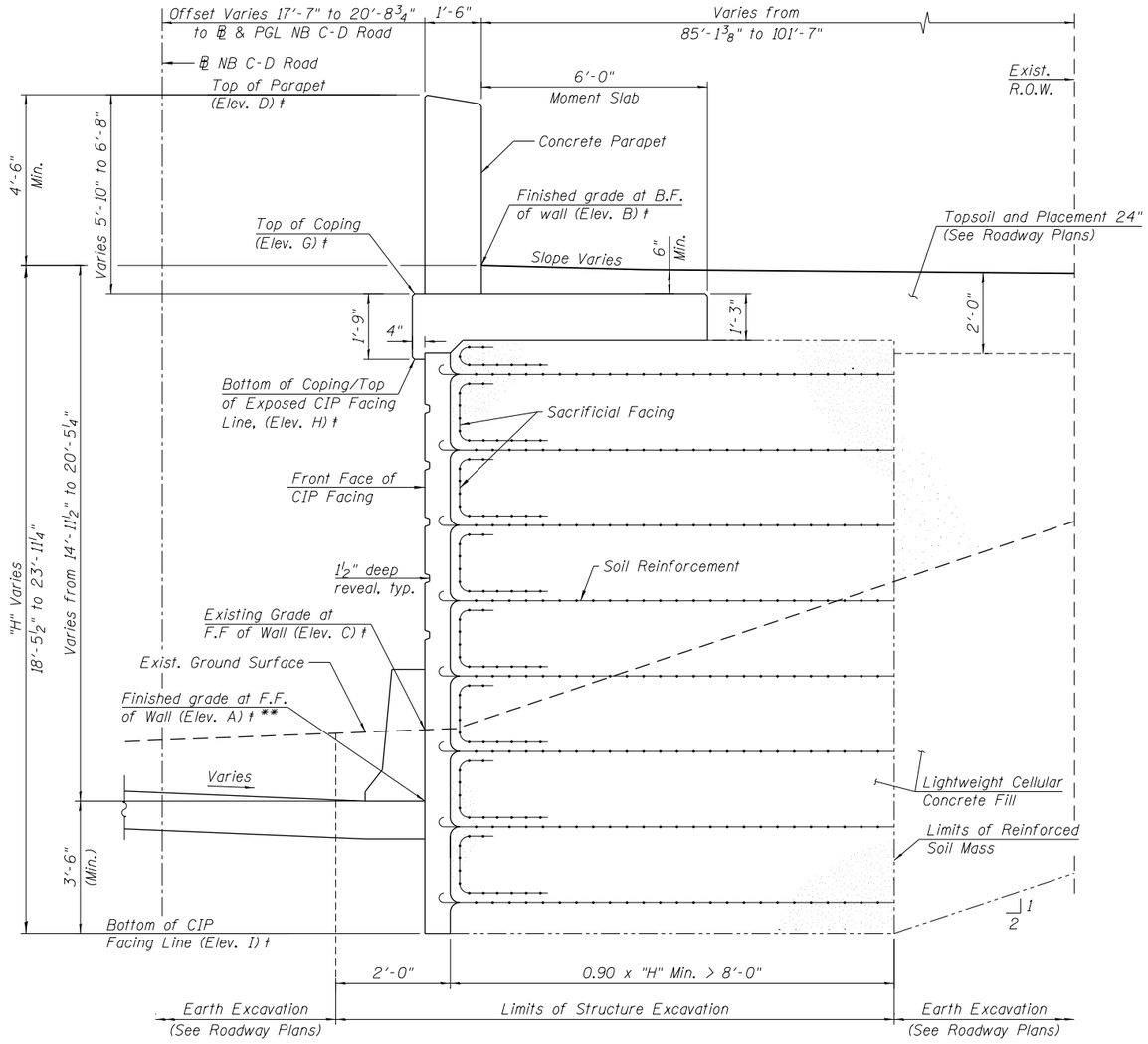
SEQUENCE OF CONSTRUCTION

1. Locate existing utilities that are to remain. Contractor to coordinate any required improvements to or removals of existing utilities with utility owner(s). See Utility Location Plans and ITS Plans.
2. Conduct repairs on existing retaining wall to remain.
3. Install drilled soldier piles for Retaining Wall 24.
4. Excavate in front of piles to finished grade, installing lagging system in the process.
5. Excavate for the remainder of Retaining Wall 24 and install micropiles for CIP Wall.
6. Drill and grout bars into existing retaining wall footing and construct Cast-In-Place Retaining Wall.
7. Construct Mechanically Stabilized Earth Retaining Wall and begin placing Lightweight Cellular Concrete Fill.
8. Construct Cast-In-Place facing for drilled soldier pile and MSE Walls.
9. Construct concrete parapet and anchorage slab and replace fence on existing retaining wall.
10. No portions of the wall shall be compromised by excavation for other elements of work, including the East Abutment of Structures No. 016-1701 and 016-1702, under the contract. If the sequencing of work requires that the wall construction is staged, the stage line shall be located at a panel edge with any exposed lightweight fill protected from damage.



TYPICAL CROSS SECTION - CAST-IN-PLACE WALL

(Looking Upstation)
(Sta. 6340+22.46 to Sta. 6340+90.98)



TYPICAL CROSS SECTION - MSE WALL

(Looking Upstation)
(Sta. 6340+90.98 to Sta. 6342+53.72)

† See Table 1 - Wall Elevations Sheet S6-04 of S6-22.

* Cost included with Pipe Underdrains for Structures 4".

†† Geocomposite wall drain thickness shall not exceed 15/16".

** Installed as part of Contract 62A76.

USER NAME = wjcollett1	DESIGNED - KRS	REVISED -	
	CHECKED - DJG	REVISED -	
PLOT SCALE = NTS	DRAWN - LFP	REVISED -	
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS 1
RETAINING WALL 24 (STRUCTURE NO. 016-Z016)
SHEET NO. S6-03 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	513
		CONTRACT NO. 60X94		
		ILLINOIS FED. AID PROJECT		

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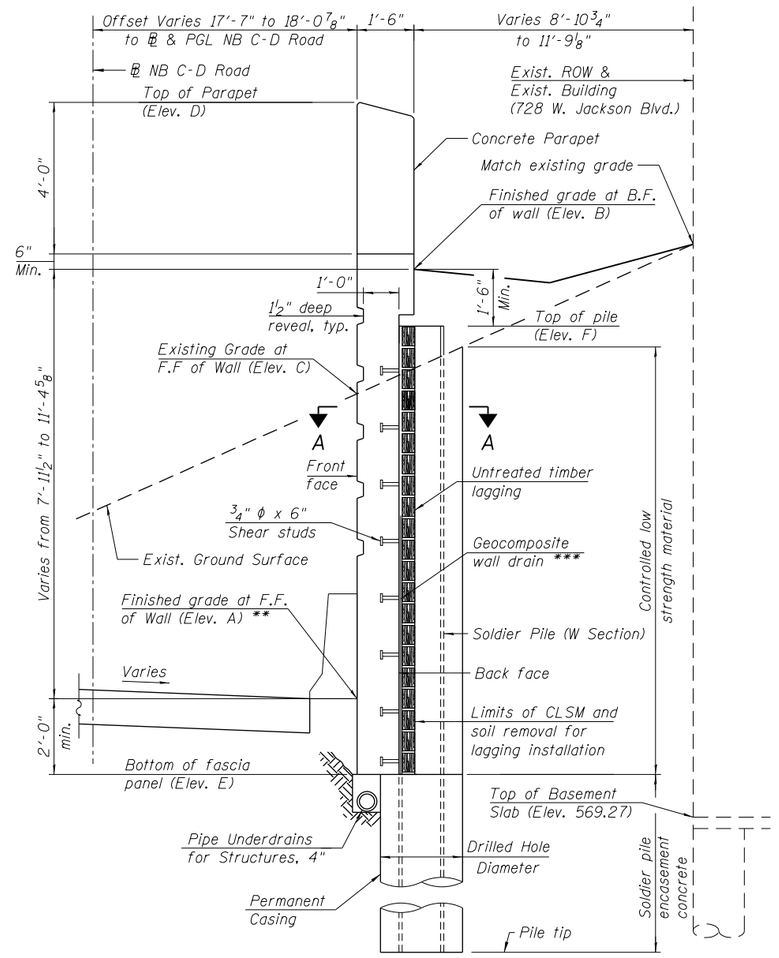
TABLE 1 - WALL ELEVATIONS

	Station	Offset	Elevation A	Elevation B	Elevation C	Elevation D	Elevation E	Elevation F	Elevation G	Elevation H	Elevation I	Wall Type
	6338+55.30	18.08' Rt.	573.70	585.09	583.38	589.80	571.70	583.38	-	-	-	
	6338+85.70	17.58' Rt.	574.25	585.07	581.93	589.80	572.25	583.38	-	-	-	
	6339+16.09	17.58' Rt.	574.97	585.06	580.41	589.80	572.97	583.38	-	-	-	Drilled
	6339+46.48	17.58' Rt.	575.71	585.04	580.50	589.80	573.71	583.38	-	-	-	Soldier
	6339+76.88	17.58' Rt.	576.43	584.90	580.20	589.80	574.43	583.38	-	-	-	Pile
†	6340+07.27	17.58' Rt.	576.95	584.91	579.92	589.80	574.95	583.38	-	-	-	Wall
††	6340+07.27	17.58' Rt.	576.95	584.91	579.92	591.58	574.95	583.38	-	-	-	
†	6340+22.46	17.58' Rt.	577.13	585.50	579.64	591.58	575.13	583.38	-	-	-	
††	6340+22.46	17.58' Rt.	577.13	585.50	579.64	593.37	-	-	-	-	-	
†	6340+45.43	17.58' Rt.	577.39	586.65	578.91	593.37	-	-	-	-	-	
††	6340+45.43	17.58' Rt.	577.39	586.65	578.91	595.15	-	-	-	-	-	CIP
†	6340+68.31	17.58' Rt.	577.59	589.40	578.65	595.15	-	-	-	-	-	Wall
††	6340+68.31	17.58' Rt.	577.59	589.40	578.65	596.93	-	-	-	-	-	
†	6340+90.98	17.58' Rt.	577.59	592.55	578.44	596.93	-	-	-	-	-	
††	6340+90.98	17.58' Rt.	577.59	592.55	578.44	598.72	-	-	592.05	590.30	574.09	
	6341+20.98	17.58' Rt.	577.34	593.26	577.54	598.72	-	-	592.05	590.30	573.84	
	6341+50.98	17.58' Rt.	577.01	592.94	577.24	598.72	-	-	592.05	590.30	573.51	
	6341+80.98	17.58' Rt.	576.79	593.60	577.14	598.72	-	-	592.05	590.30	573.29	
†	6342+10.98	17.58' Rt.	576.72	594.27	577.19	598.72	-	-	592.05	590.30	573.22	MSE
††	6342+10.98	17.58' Rt.	576.72	594.27	577.19	599.88	-	-	593.72	591.97	573.22	Wall
†	6342+32.34	19.16' Rt.	576.77	595.78	577.59	599.88	-	-	593.72	591.97	573.27	
††	6342+32.34	19.16' Rt.	576.77	595.78	577.59	601.05	-	-	595.22	593.47	573.27	
	6342+53.72	20.73' Rt.	576.87	597.30	577.74	601.05	-	-	595.22	593.47	573.37	

Elevation A- Finished Grade at Front Face of Wall **
Elevation B- Finished Grade at Back Face of Wall
Elevation C- Existing Grade at Front Face of Wall
Elevation D- Top of Parapet
Elevation E- Bottom of Fascia Panel
Elevation F- Top of Pile
Elevation G- Top of Coping
Elevation H- Bottom of Coping / Top of Exposed CIP Facing Line
Elevation I- Bottom of CIP Facing Line
† Elevations just to the right of joint
†† Elevations just to the left of joint



TYPICAL CROSS SECTION - SOLDIER PILE WALL

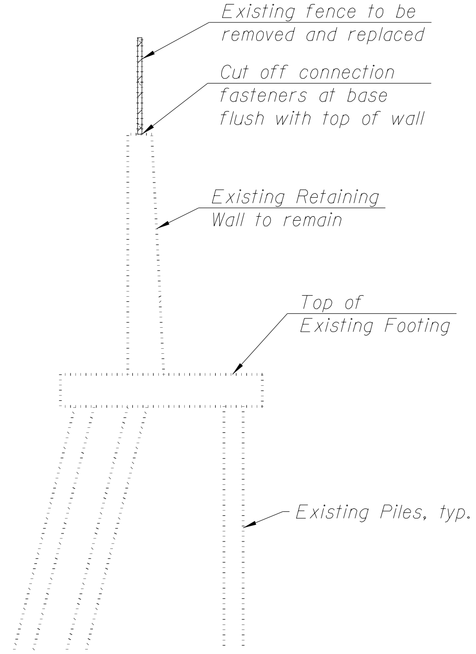
(Looking upstation)
(Sta. 6338+55.30 to Sta. 6340+22.46)

Note:
See Sheet S6-12 of S6-22 for Section A-A.

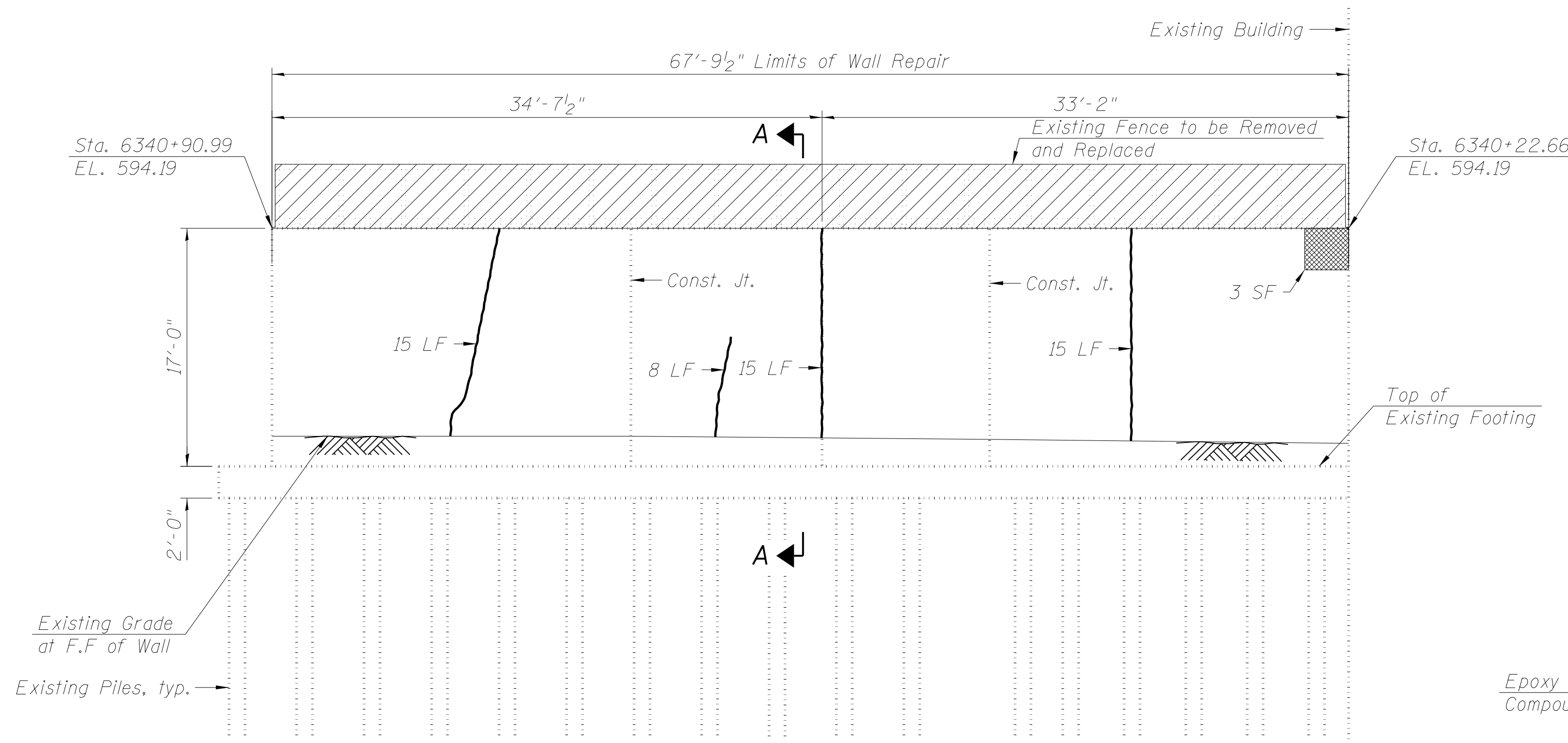
* Cost included with Pipe Underdrains for Structures 4".

** Installed as part of Contract 62A76.

*** Geocomposite wall drain thickness shall not exceed 15/16".

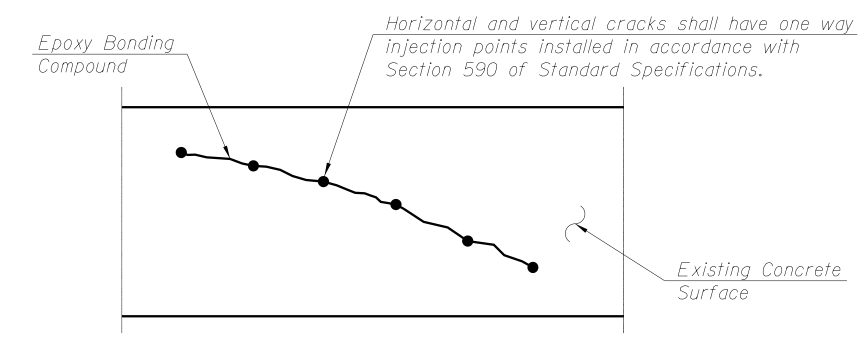


SECTION A-A



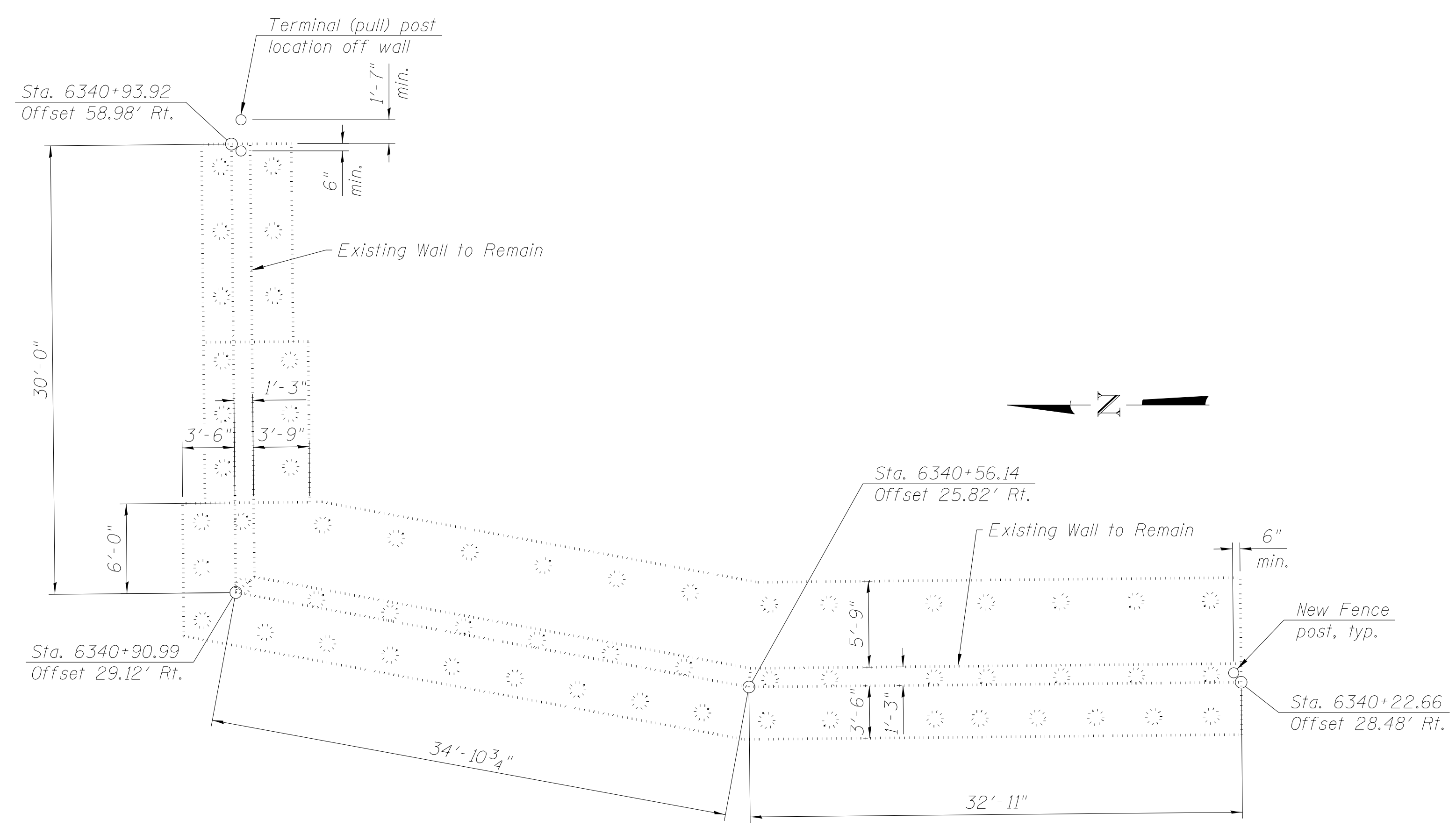
ELEVATION

(Looking East)



EPOXY CRACK INJECTION

Notes:
Fence posts should be spaced a maximum of 10'-0" center to center.
See sheet S6-15 of S6-22 for new fence detail attachments to top of the existing wall.



PLAN

LEGEND

- Limits of Chain Link Fence Removal (Special)
- Structural Repair of Concrete (Depth equal to or less than 5 inches)
- Epoxy Crack Injection
- SF - Square Foot
- LF - Linear Foot

BILL OF MATERIAL

Item	Unit	Total
Concrete Sealer	Sq. Ft.	468
Epoxy Crack Injection	Foot	68
Graffiti Removal	Sq. Yd.	114
Chain Link Fence Removal (Special)	Foot	97
Structural Repair of Concrete (Depth equal to or less than 5 inches)	Sq. Ft.	3

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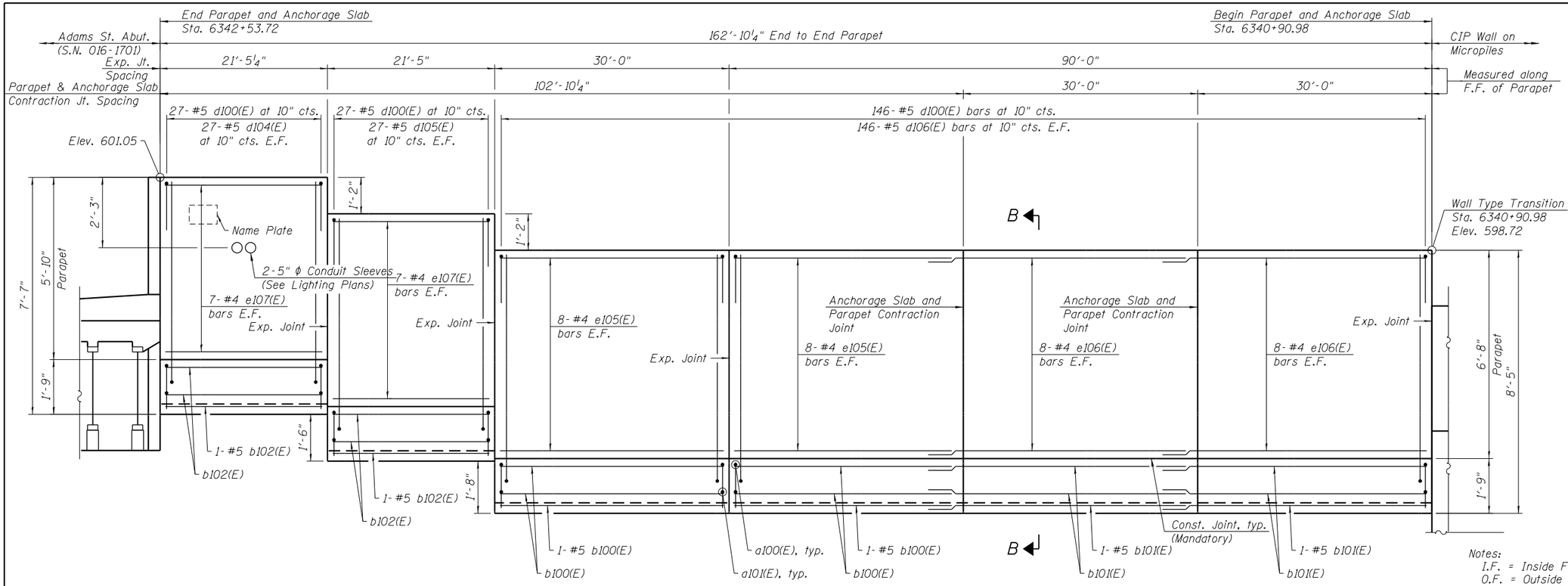
USER NAME = wjcolletti	DESIGNED - KRS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	CHECKED - DJG	REVISED -	
PLOT SCALE = NTS	DRAWN - AJD	REVISED -	
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -	

REPAIR PLANS
RETAINING WALL 24 (STRUCTURE NO. 016–Z016)
SHEET NO. S6-05 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	515
		CONTRACT NO. 60X94		
		ILLINOIS FED. AID PROJECT		

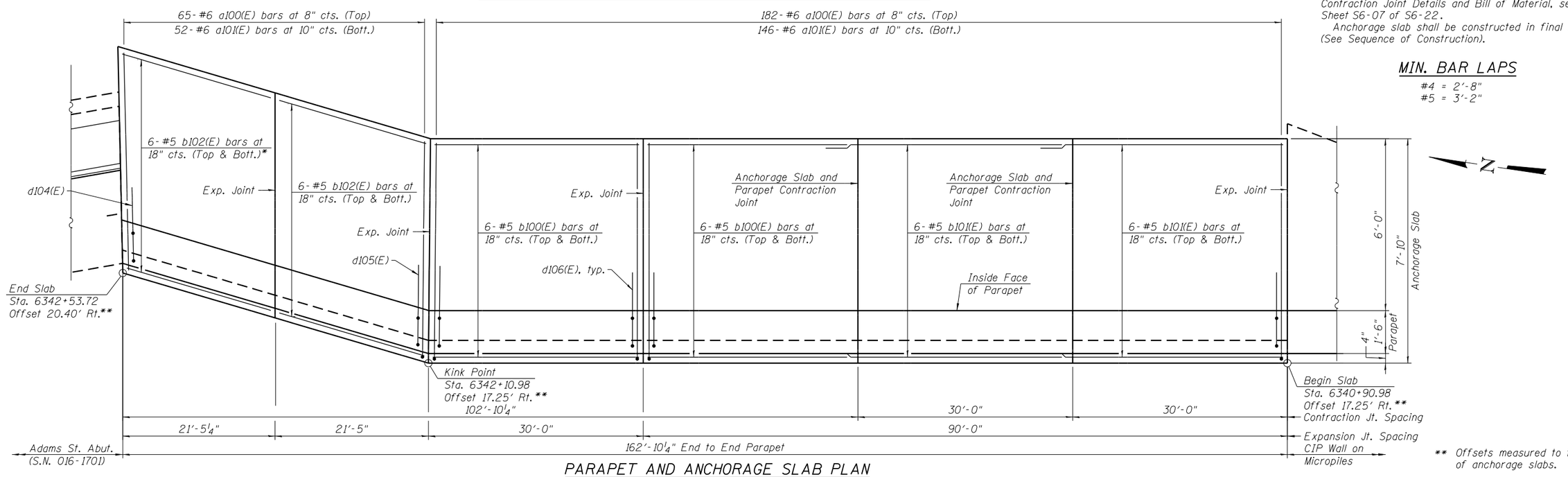


OUTSIDE ELEVATION OF PARAPET AND ANCHORAGE SLAB

Notes:
I.F. = Inside Face
O.F. = Outside Face
E.F. = Each Face
For Section B-B, Bar Diagram, Expansion and Contraction Joint Details and Bill of Material, see Sheet S6-07 of S6-22.
Anchorage slab shall be constructed in final stage (See Sequence of Construction).

MIN. BAR LAPS

#4 = 2'-8"
#5 = 3'-2"



PARAPET AND ANCHORAGE SLAB PLAN

** Offsets measured to front face of anchorage slabs.

USER NAME = wjcollett	DESIGNED - KRS	REVISED -	
	CHECKED - DJG	REVISED -	
PLOT SCALE = NTS	DRAWN - LFP	REVISED -	
PLOT DATE = 3/5/2020	CHECKED - KRS/WJC	REVISED -	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET AND ANCHORAGE SLAB PLAN AND ELEVATION
RETAINING WALL 24 (STRUCTURE NO. 016-Z016)
SHEET NO. S6-06 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	516
		CONTRACT NO. 60X94		
		ILLINOIS FED. AID PROJECT		

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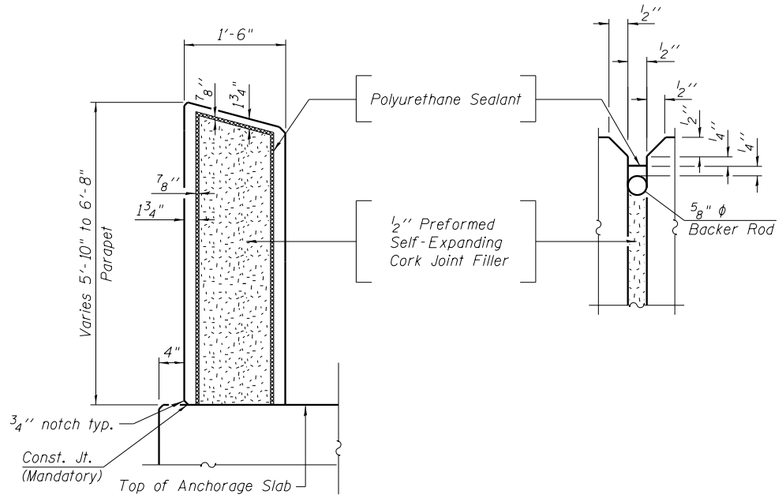
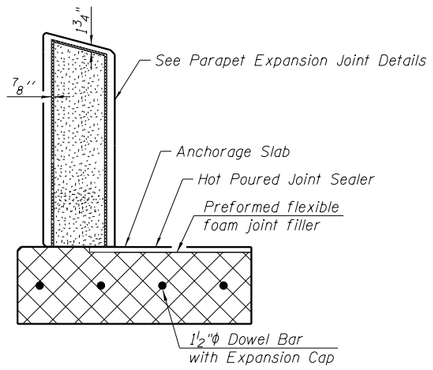
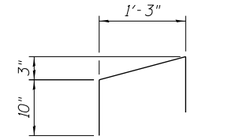


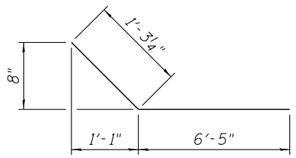
PARAPET EXPANSION JOINT DETAILS



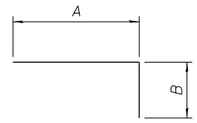
TRANSVERSE EXPANSION JOINT SECTION



BAR d100(E)

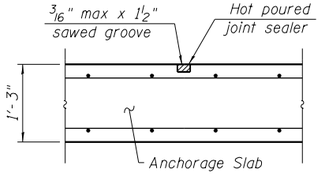


BAR a101(E)



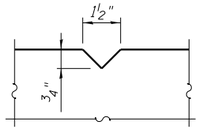
BARS a100(E), d104(E), d105(E) and d106(E)

Bar	A	B
a100(E)	7'-7"	1'-5"
d104(E)	6'-11"	1'-0"
d105(E)	7'-6"	1'-0"
d106(E)	8'-0"	1'-0"



TRANSVERSE CONTRACTION JOINT

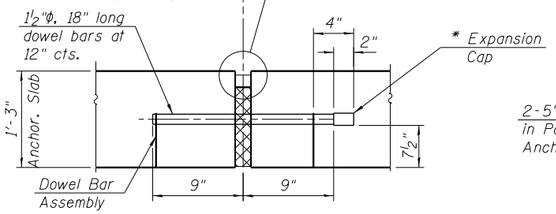
See Article 420.05 & 420.12 of the Standard Specifications



PARAPET TRANSVERSE CONTRACTION JOINT

BILL OF MATERIAL

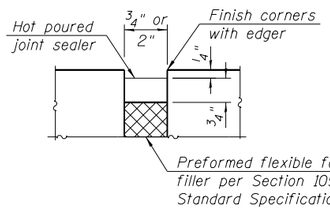
Bar	No.	Size	Length	Shape
a100(E)	247	#6	9'-0"	
a101(E)	198	#6	7'-8"	
b100(E)	26	#5	29'-8"	
b101(E)	26	#5	33'-2"	
b102(E)	26	#5	21'-1"	
d100(E)	202	#5	3'-0"	
d104(E)	54	#5	7'-11"	
d105(E)	54	#5	8'-6"	
d106(E)	292	#5	9'-0"	
e105(E)	32	#4	29'-8"	
e106(E)	32	#4	32'-8"	
e107(E)	28	#4	21'-1"	
Structure Excavation		Cu. Yd.	643	
Concrete Superstructure		Cu. Yd.	118.3	
Reinforcement Bars, Epoxy Coated		Pound	13,920	
Concrete Sealer		Sq. Ft.	4,775	
Lightweight Cellular Concrete Fill		Sq. Ft.	3,938	
Mechanically Stabilized Earth Retaining Wall, Special		Sq. Ft.	2,865	



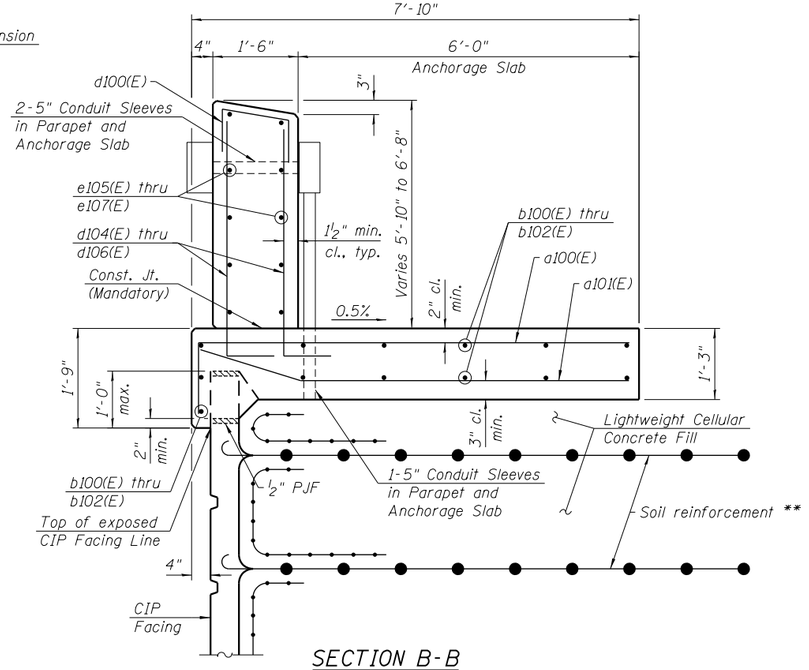
ANCHORAGE SLAB TO ANCHORAGE SLAB TRANSVERSE EXPANSION JOINT

Expansion Joint Filler, Sealer and Dowel Bars included in cost of Concrete Superstructure.

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



SEALER DETAIL



SECTION B-B

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

Notes:

All edges shall be chamfered 3/4 inches.

Bars indicated thus 3x4-#5 etc. indicates 3 lines of bars with 4 lengths per line.

See Sheet S6-02 of S6-22 for additional notes for MSE wall suppliers.

The Polyurethane Sealant shall be according to Article 1050.04 of Std. Spec. and the color shall be gray.

Furnishing and installing conduit sleeves is included in cost of Concrete Superstructure.

Coordinate location of sleeves for lighting conduit with Lighting Plans.

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USER NAME = wjcollett	DESIGNED - KRS	REVISED -
	CHECKED - DJG	REVISED -
PLOT SCALE = NTS	DRAWN - LFP	REVISED -
PLOT DATE = 3/6/2020	CHECKED - KRS/WJC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET AND ANCHORAGE SLAB DETAILS
RETAINING WALL 24 (STRUCTURE NO. 016-Z016)
SHEET NO. S6-07 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	517
		CONTRACT NO. 60X94		
		ILLINOIS FED. AID PROJECT		

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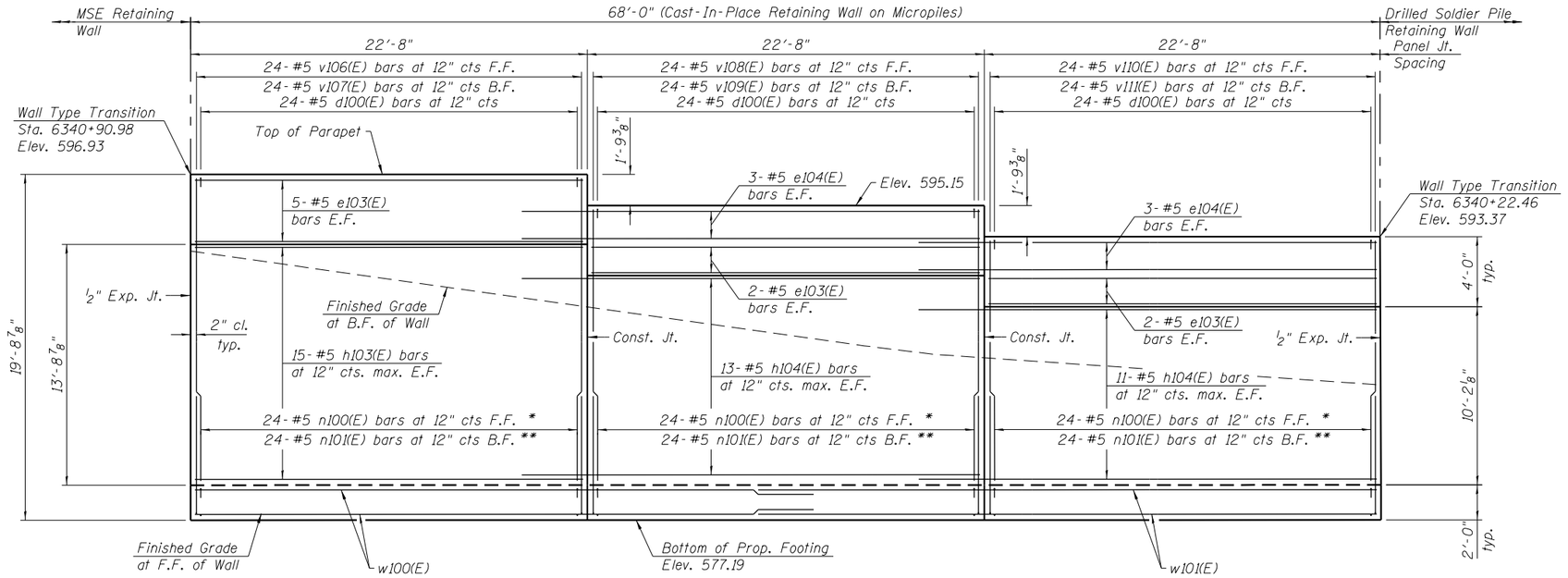


WALL ELEVATION

(Looking East)

(See plan view for remaining footing reinforcement)

* Lap to v106(E), v108(E), or v110(E) bars

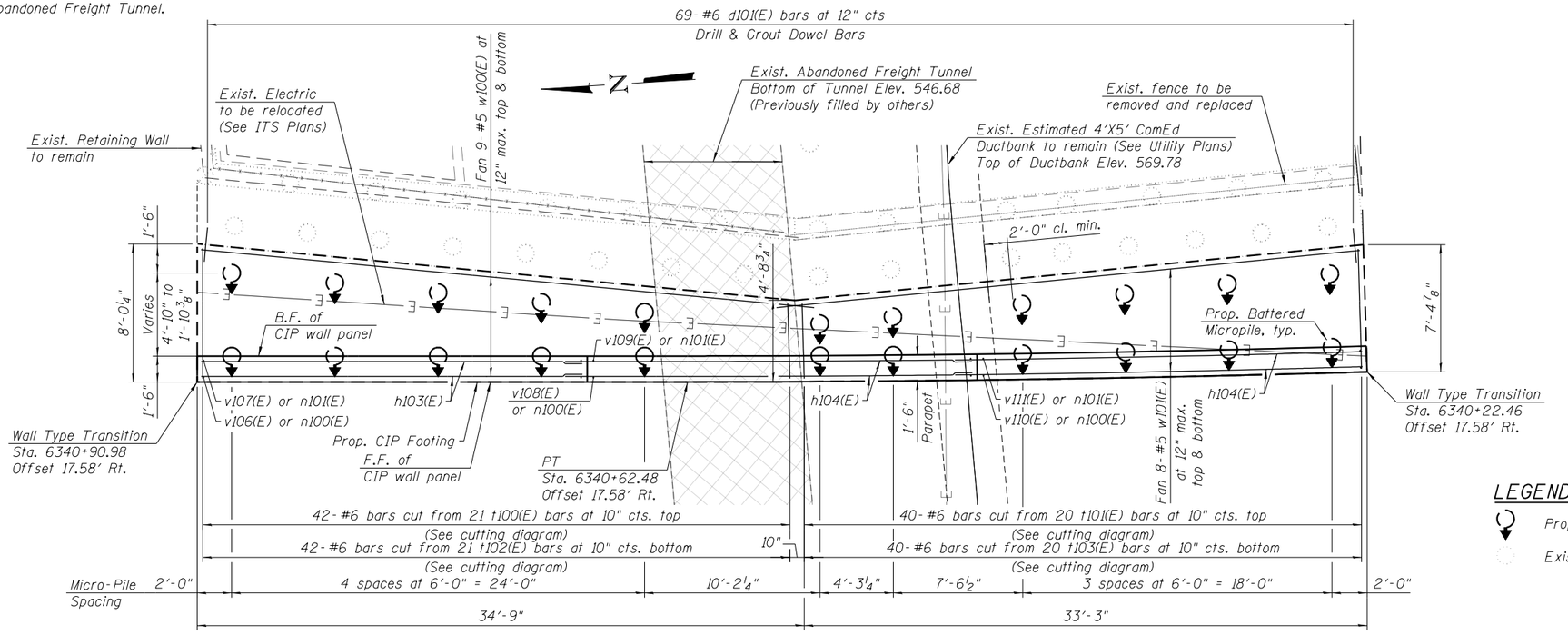
** Lap to v107(E), v109(E), or v111(E) bars

Notes:

F.F. = Front Face.
B.F. = Back Face.
E.F. = Each Face.

For cast-in-place wall typical cross section and details and Bill of Material, see Sheet S6-09 of S6-22.

Micropiles shall be spaced to avoid Existing ComEd Ductbank and maintain a two foot clear distance between the ductbank and the piles. Micropiles shall be spaced to avoid the Abandoned Freight Tunnel.



PLAN

(Parapet reinforcement not shown for clarity)

LEGEND:

- Proposed Battered Pile at 1:4 Batter
- Existing Timber Pile

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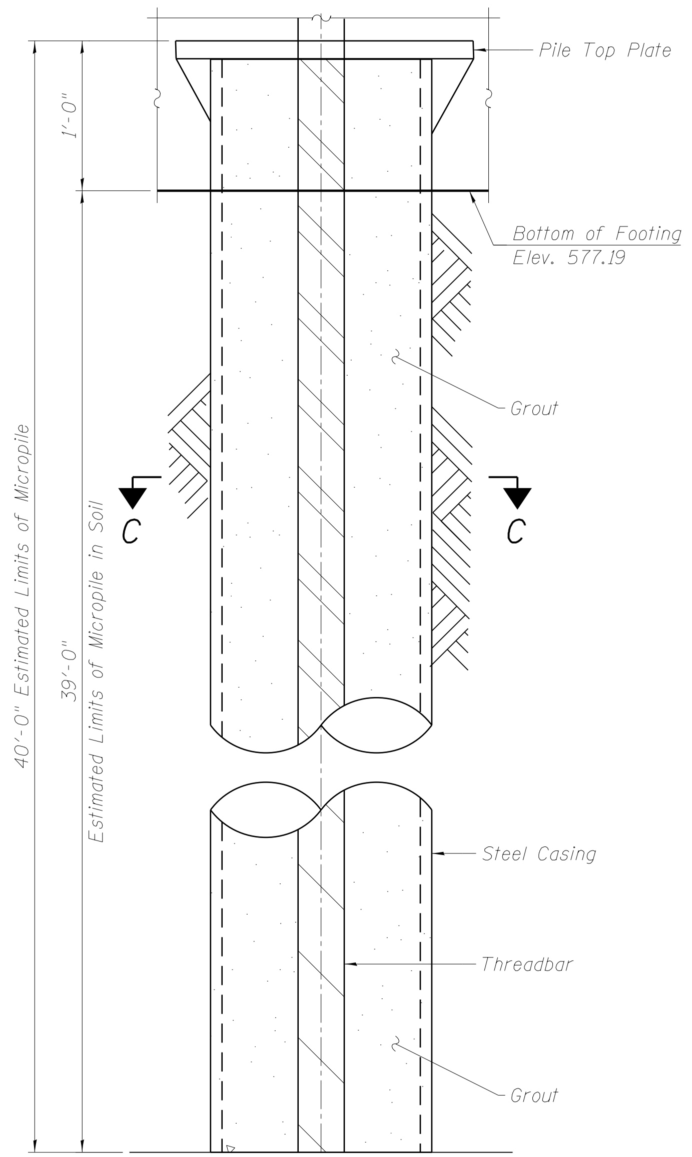
TranSystems	USER NAME = wjcolletti	DESIGNED - KRS	REVISED -
		CHECKED - DJG	REVISED -
	PLOT SCALE = NTS	DRAWN - AJD	REVISED -
	PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -

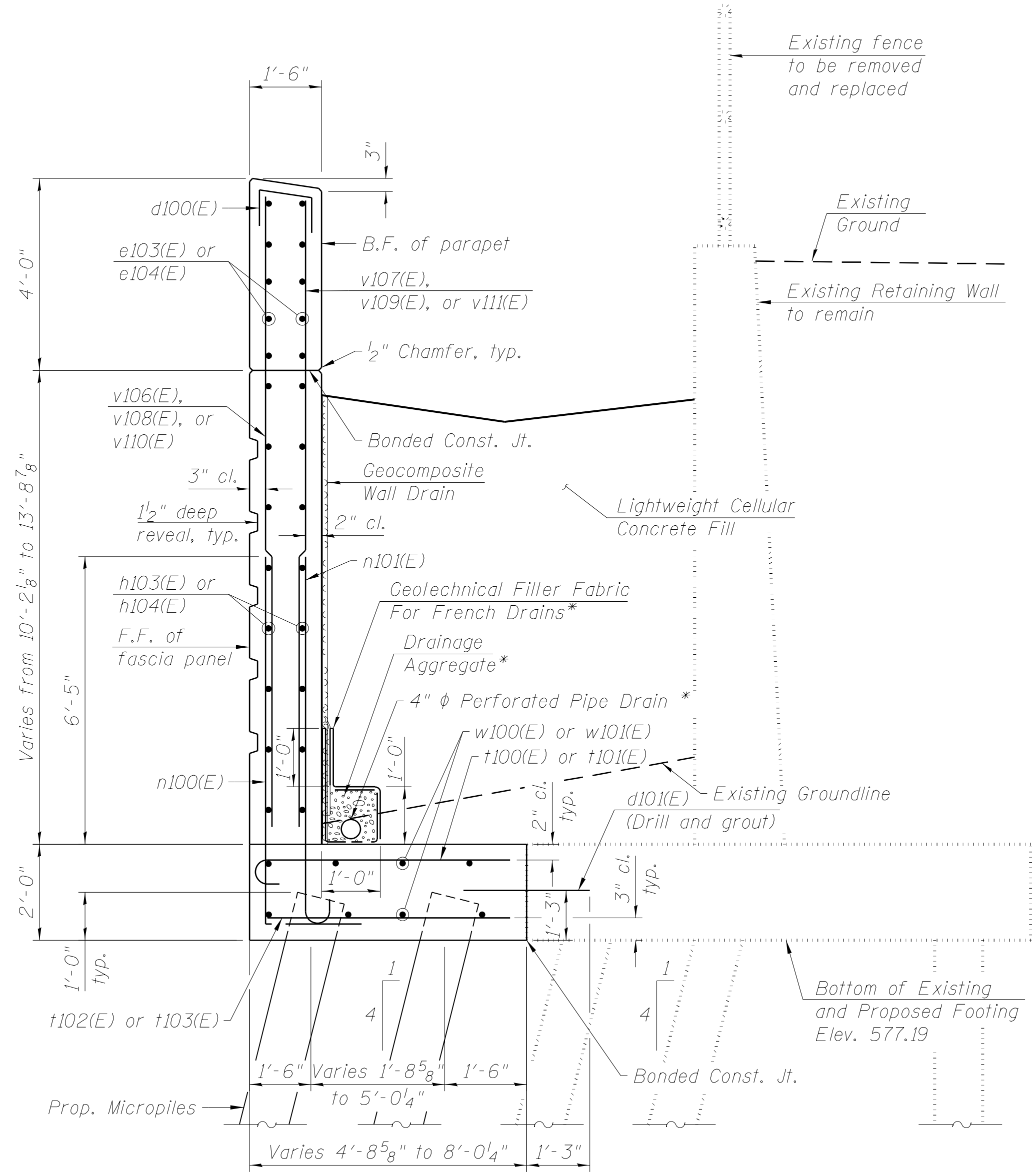
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CAST-IN-PLACE WALL PLAN AND ELEVATION
RETAINING WALL 24 (STRUCTURE NO. 016-Z016)
SHEET NO. S6-08 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	518
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

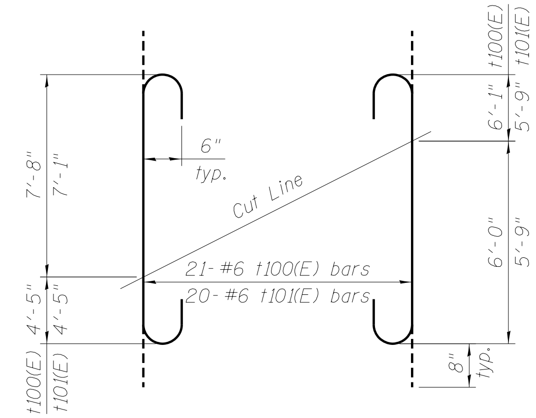


MICROPILE



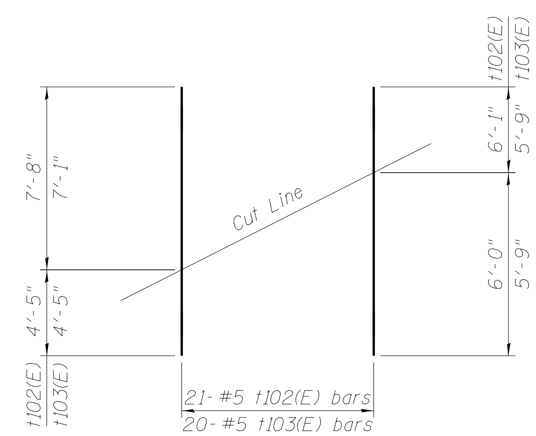
TYPICAL CAST-IN-PLACE WALL CROSS SECTION

* Cost included with Pipe Underdrains for Structures 4".



BARS t100(E) & t101(E)

Order Bars Full Length



BARS t102(E) & t103(E)

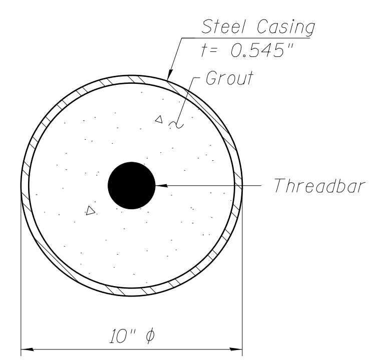
Order Bars Full Length

FIELD CUTTING DIAGRAMS

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d100(E)	72	#5	3'-0"	
d101(E)	69	#6	2'-6"	
e103(E)	18	#5	22'-4"	
e104(E)	12	#5	25'-10"	
h103(E)	30	#5	22'-4"	
h104(E)	48	#5	25'-10"	
n100(E)	72	#5	9'-0"	
n101(E)	72	#5	8'-9"	
v106(E)	24	#5	17'-4"	
v107(E)	24	#5	17'-1"	
v108(E)	24	#5	15'-7"	
v109(E)	24	#5	15'-4"	
v110(E)	24	#5	13'-10"	
v111(E)	24	#5	13'-7"	
t100(E)	21	#6	13'-5"	
t101(E)	20	#6	12'-9"	
t102(E)	21	#6	12'-1"	
t103(E)	20	#6	11'-6"	
w100(E)	18	#5	34'-9"	
w101(E)	16	#5	36'-2"	
Structure Excavation			Cu. Yd.	119
Concrete Superstructure			Cu. Yd.	14.7
Reinforcement Bars, Epoxy Coated			Pound	6,540
Concrete Structures (Retaining Wall)			Cu. Yd.	77.1
Concrete Sealer			Sq. Ft.	1,765
Geocomposite Wall Drain			Sq. Yd.	70
Micro-Piles			Each	22
Micropile Load Test			Each	1
Micropile Proof Load Test			Each	1
Lightweight Cellular Concrete Fill			Cu. Yd.	224
Pipe Underdrain for Structures 4"			Foot	68

Minimum Bar Laps	
Bar	Lap
#5	3'-2"

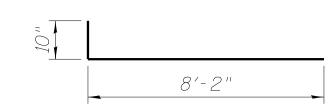


SECTION C-C

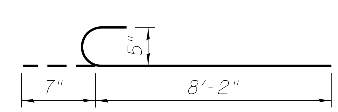
MICROPILE DATA

Type and Size: Micropile, Contractor Designed
Nominal Required Bearing: Maximum Tip Elev.
Maximum Factored Compression Load: 57 kips
Maximum Service Compression Load: 43 kips
Estimated Length: 40'
Number Required: 22
Estimated Tip Elev.: 538.19
Notes:
The Factored and Service Loads shall be used for testing requirements according to the Special Provision Micropiles. For test pile and proof test requirements, see special provision.
All micropile loads are given at Bottom of Footing level.
Contractor to verify micropile design.
Micropile types refer to FHWA NHI-05-039: Micropile Design and Construction Reference Manual.

Notes:
Epoxy grout d101(E) bars according to Article 584 of the Standard Specifications. Drill to miss existing reinforcement. All work shall be included in the unit Bid Price for Reinforcement Bars, Epoxy Coated.
Concrete Parapet shall be paid for as Concrete Superstructure.
Fascia Panels and Footing shall be paid for as Concrete Structures (Retaining Wall).



BAR n100(E)



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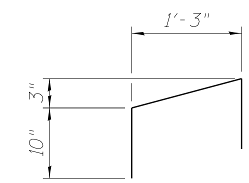

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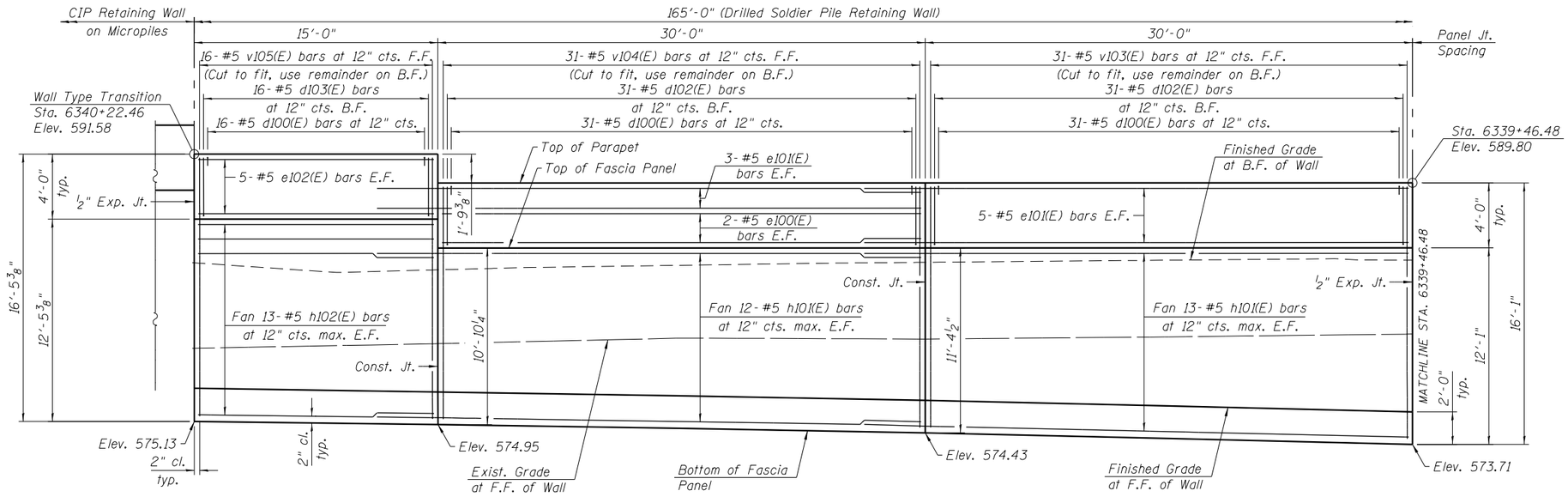
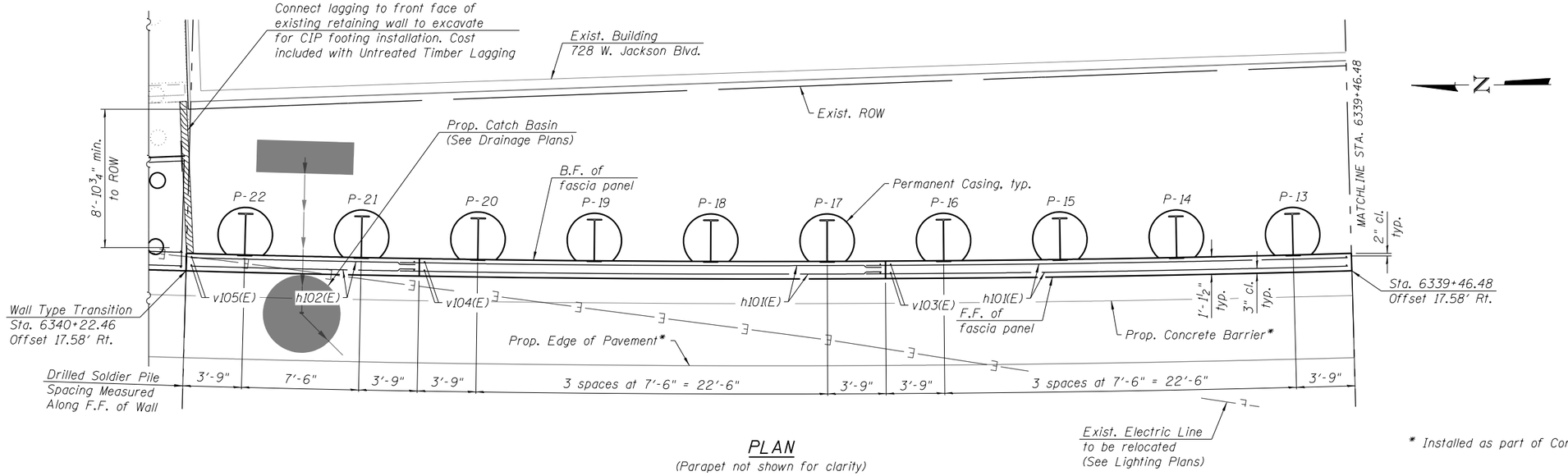


WALL ELEVATION
(Looking East)



PLAN
(Parapet not shown for clarity)

* Installed as part of Contract 62A76.

Notes:
- F.F. = Front Face.
- B.F. = Back Face.
- E.F. = Each Face.
- For soldier pile wall cross sections and details, see Sheet S6-12 of S6-22.
- For soldier pile layout, sections and details and Bill of Material, see Sheet S6-13 of S6-22.

Minimum Bar Laps	
Bar	Lap
#5	3'-2"

USER NAME = wjcollett	DESIGNED - KRS	REVISED -	
	CHECKED - DJG	REVISED -	
PLOT SCALE = NTS	DRAWN - AJD	REVISED -	
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -	

TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRILLED SOLDIER PILE WALL PLAN AND ELEVATION 1
RETAINING WALL 24 (STRUCTURE NO. 016-Z016)
SHEET NO. S6-10 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	520
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

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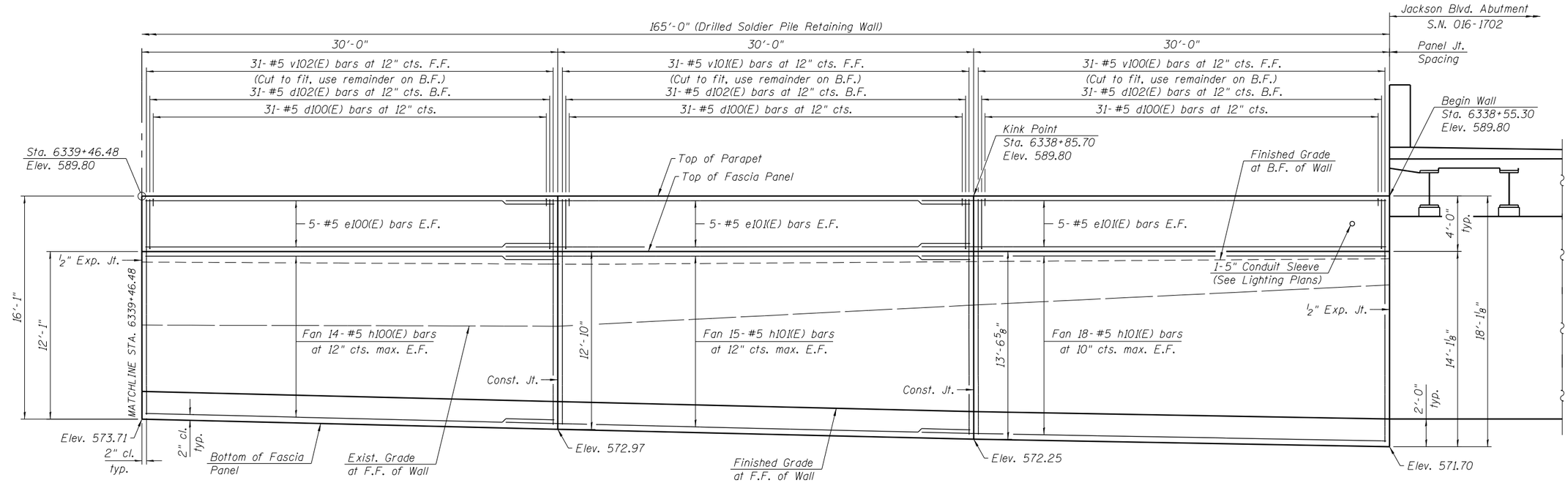
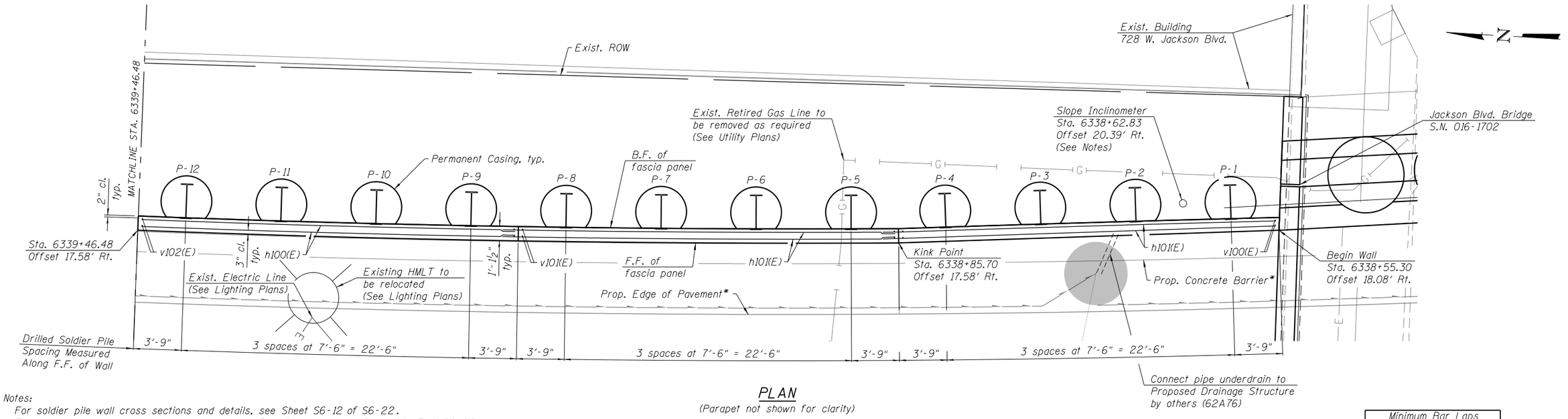


WALL ELEVATION
(Looking East)



PLAN
(Parapet not shown for clarity)

Notes:
For soldier pile wall cross sections and details, see Sheet S6-12 of S6-22.
For soldier pile layout, sections and details and Bill of Material, see Sheet S6-13 of S6-22.
In addition to vibration and displacement monitoring, the Contractor shall monitor movements with Slope Inclinometers. All inclinometers shall be installed prior to drilling. See special provisions for Slope Inclinometers.
Furnishing and installing conduit sleeve is included in cost of Concrete Superstructure. Coordinate location of sleeve for lighting conduit with Lighting Plans.

Minimum Bar Laps	
Bar	Lap
#5	3'-2"

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0162016-60X94-S011-SoldierPile_Plan2.dgn

TranSystems

USER NAME = wjcollett1	DESIGNED - KRS	REVISED -
	CHECKED - DJG	REVISED -
PLOT SCALE = NTS	DRAWN - AJD	REVISED -
PLOT DATE = 3/6/2020	CHECKED - KRS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRILLED SOLDIER PILE WALL PLAN AND ELEVATION 2
RETAINING WALL 24 (STRUCTURE NO. 016-Z016)
SHEET NO. S6-11 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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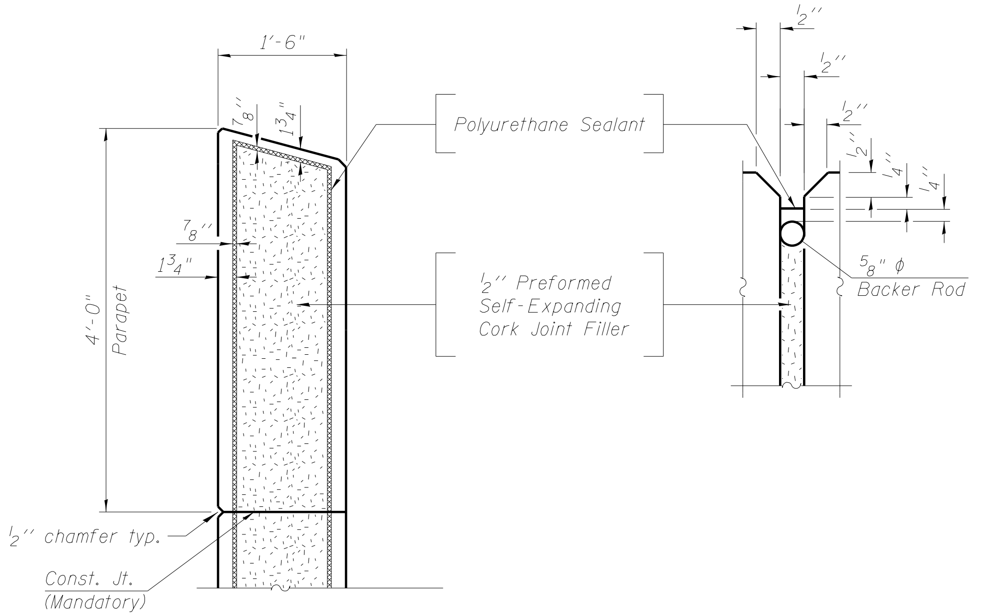
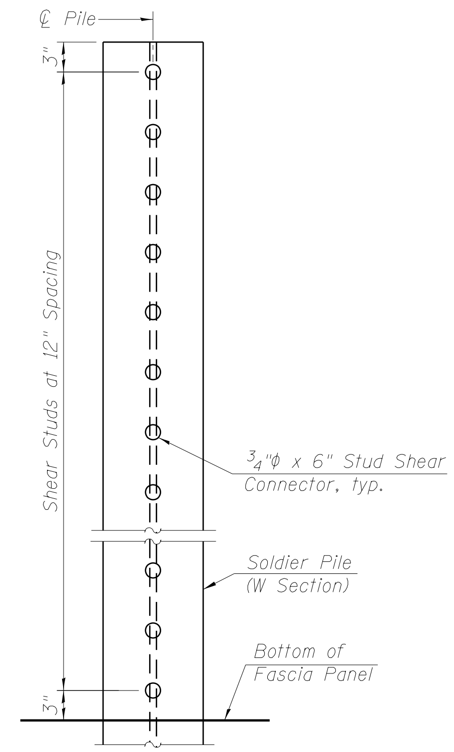
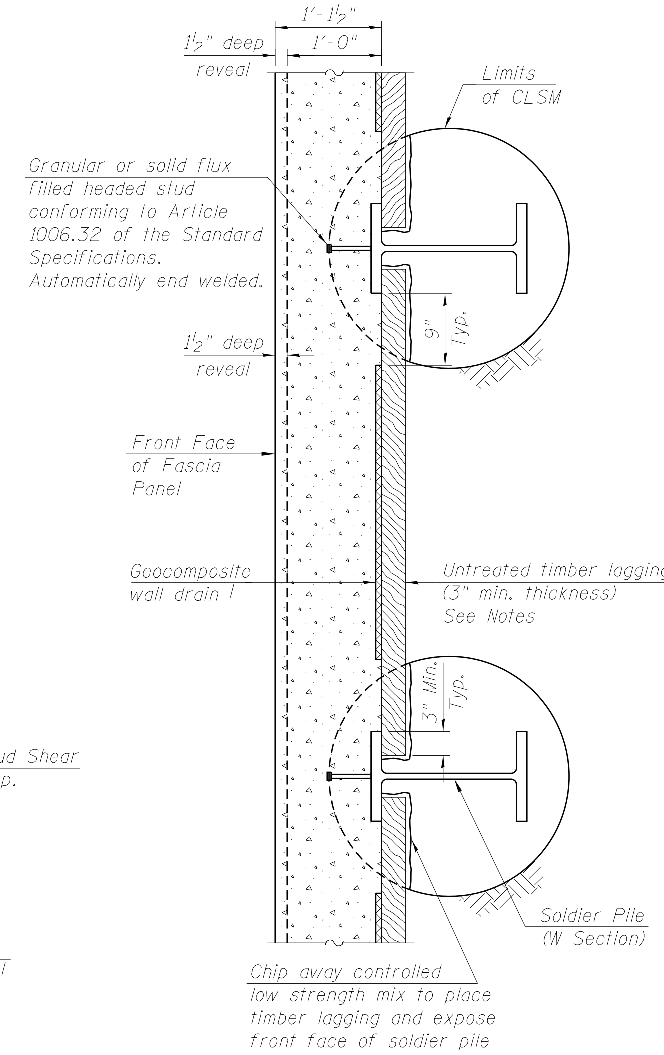
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			



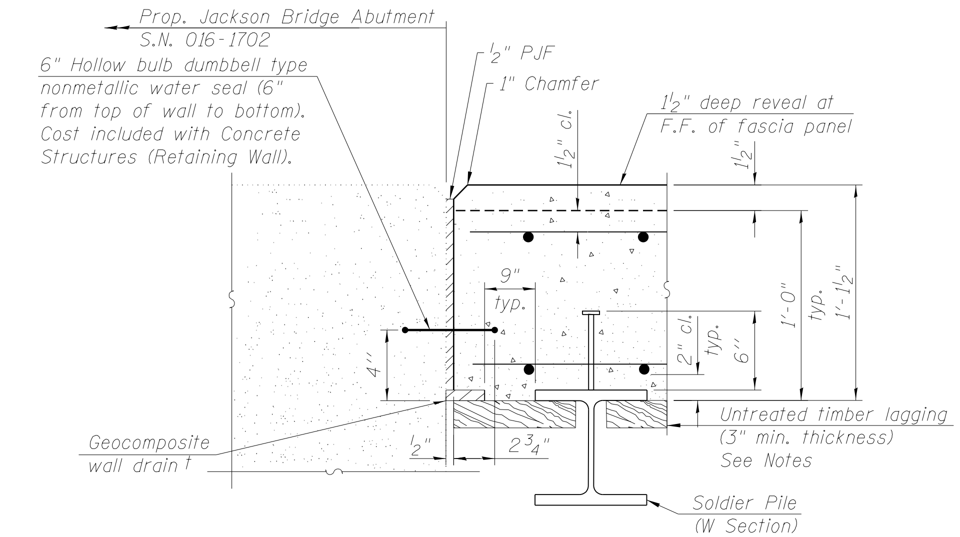
PARAPET EXPANSION JOINT DETAILS



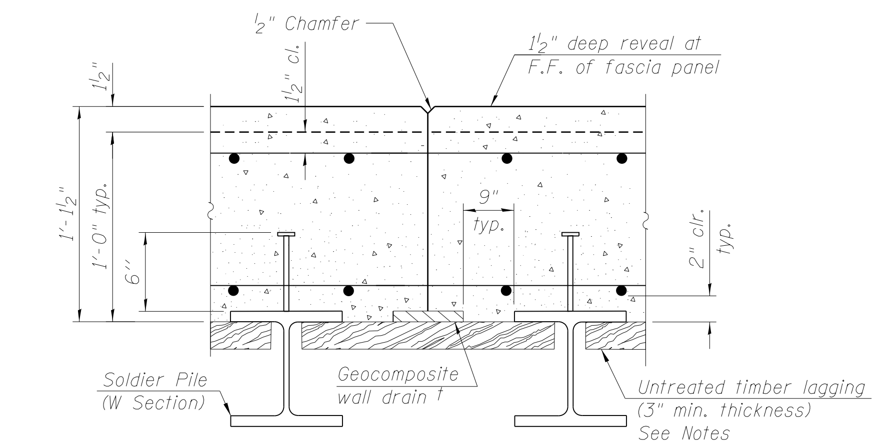
SHEAR STUD DETAIL



SECTION A-A



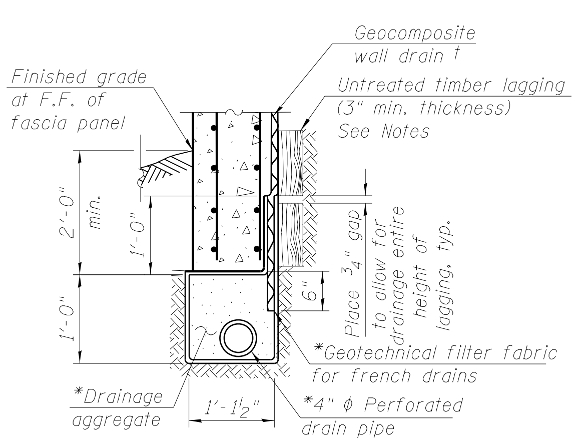
EXPANSION JOINT DETAIL AT PROP. JACKSON BLVD. BRIDGE ABUTMENT



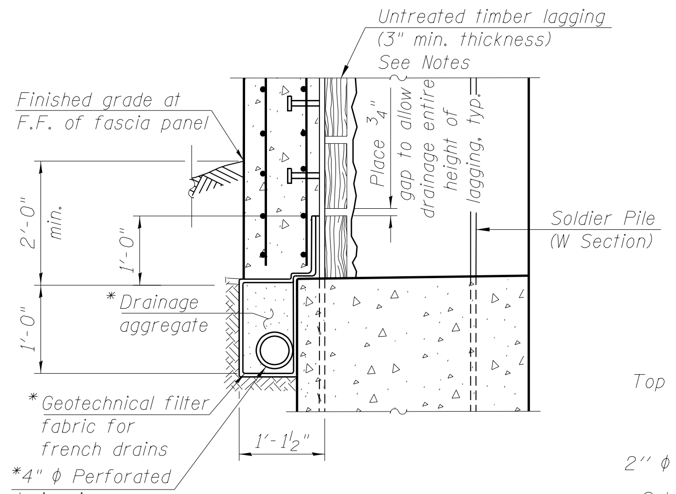
CONSTRUCTION JOINT DETAILS

* Cost included with Pipe Underdrains for Structures 4".

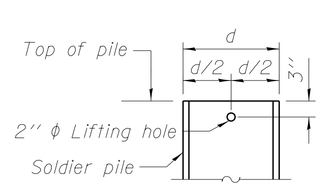
† Geocomposite wall drain thickness shall not exceed 15/16".



PIPE UNDERDRAIN DETAIL BETWEEN SOLDIER PILES



PIPE UNDERDRAIN DETAIL AT SOLDIER PILE

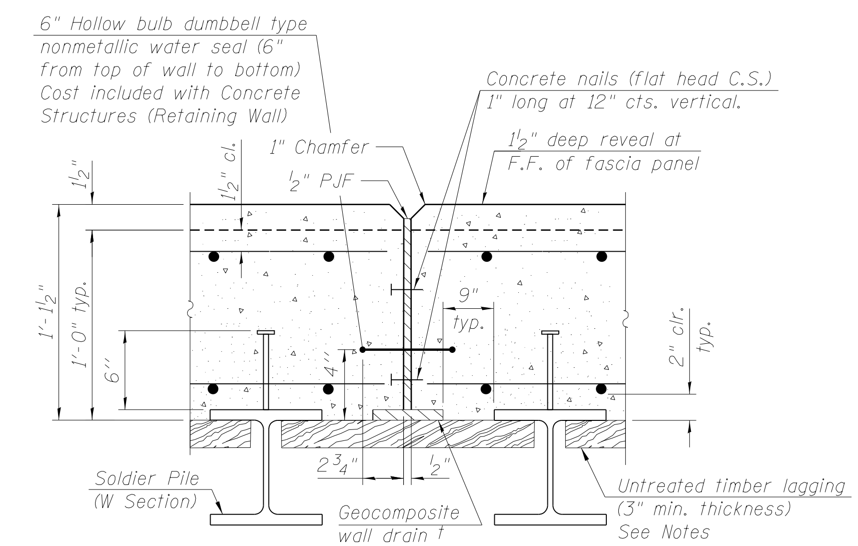


LIFTING HOLE DETAIL

Notes:

The Contractor is responsible for the design and performance of the lagging system, the deflection of the lagging shall be limited to 1" maximum using no less than a 3 in. nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi, until the concrete facing is installed. The Contractor shall submit design calculations and details prepared by an Illinois Licensed Structural Engineer for the attachment of the lagging to the shaft for approval by the Engineer. Alternative equivalent systems may be submitted for approval by the Engineer.

Install lagging and Geocomposite Wall Drain from top down as excavation proceeds. Minimize over-excavation and backfill voids with dry loose sand.



EXPANSION JOINT DETAILS

TranSystems	USER NAME = wjcolletti	DESIGNED - KRS	REVISED -
		CHECKED - DJG	REVISED -
	PLOT SCALE = NTS	DRAWN - AJD	REVISED -
	PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DRILLED SOLDIER PILE WALL DETAILS 1
RETAINING WALL 24 (STRUCTURE NO. 016-Z016)

SHEET NO. S6-12 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	522
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

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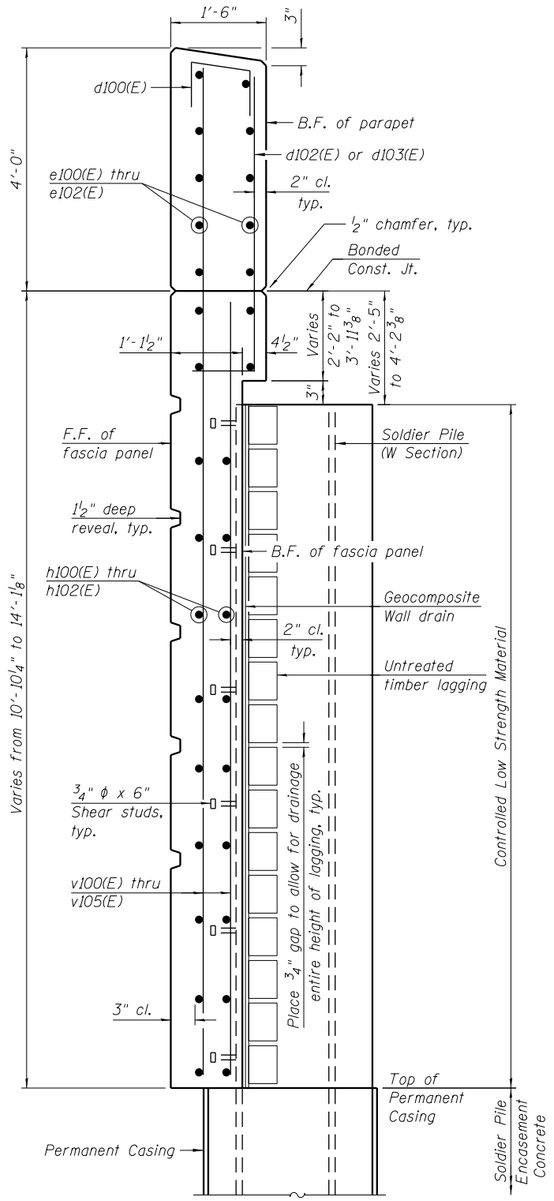


TYPICAL SOLDIER PILE WALL CROSS SECTION

PILE LAYOUT

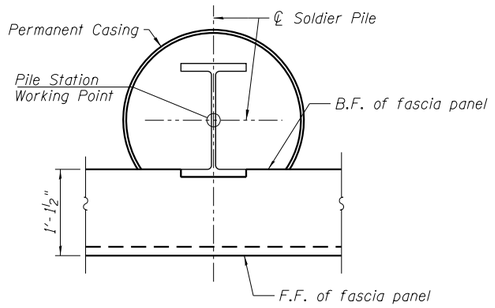
Pile	Station at Working Point	Offset	Top of Parapet El.	Top of Pile El.	Bot. of Wall El.	Section	Shaft ϕ	Pile Tip El.	Pile Length
P-1	6338+59.12	20.40' Rt.	589.80	583.38	571.77	W36X170	4'-0"	524.38	59'-0"
P-2	6338+66.73	20.36' Rt.	589.80	583.38	571.91	W36X170	4'-0"	524.38	59'-0"
P-3	6338+74.35	20.27' Rt.	589.80	583.38	572.04	W36X170	4'-0"	524.38	59'-0"
P-4	6338+81.96	20.11' Rt.	589.80	583.38	572.18	W36X170	4'-0"	524.38	59'-0"
P-5	6338+89.50	20.02' Rt.	589.80	583.38	572.34	W36X170	4'-0"	524.38	59'-0"
P-6	6338+97.10	20.02' Rt.	589.80	583.38	572.52	W36X170	4'-0"	524.38	59'-0"
P-7	6339+04.69	20.02' Rt.	589.80	583.38	572.70	W36X170	4'-0"	524.38	59'-0"
P-8	6339+12.29	20.02' Rt.	589.80	583.38	572.88	W36X170	4'-0"	524.38	59'-0"
P-9	6339+19.89	20.02' Rt.	589.80	583.38	573.06	W36X170	4'-0"	524.38	59'-0"
P-10	6339+27.49	20.02' Rt.	589.80	583.38	573.25	W36X170	4'-0"	524.38	59'-0"
P-11	6339+35.09	20.02' Rt.	589.80	583.38	573.44	W36X170	4'-0"	524.38	59'-0"
P-12	6339+42.68	20.02' Rt.	589.80	583.38	573.62	W36X170	4'-0"	524.38	59'-0"
P-13	6339+50.28	20.02' Rt.	589.80	583.38	573.80	W33X118	3'-6"	524.38	59'-0"
P-14	6339+57.88	20.02' Rt.	589.80	583.38	573.98	W33X118	3'-6"	524.38	59'-0"
P-15	6339+65.48	20.02' Rt.	589.80	583.38	574.16	W33X118	3'-6"	524.38	59'-0"
P-16	6339+73.08	20.02' Rt.	589.80	583.38	574.34	W33X118	3'-6"	524.38	59'-0"
P-17	6339+80.67	20.02' Rt.	589.80	583.38	574.49	W33X118	3'-6"	524.38	59'-0"
P-18	6339+88.27	20.02' Rt.	589.80	583.38	574.62	W33X118	3'-6"	524.38	59'-0"
P-19	6339+95.87	20.02' Rt.	589.80	583.38	574.75	W33X118	3'-6"	524.38	59'-0"
P-20	6340+03.47	20.02' Rt.	589.80	583.38	574.88	W33X118	3'-6"	524.38	59'-0"
P-21	6340+11.07	20.02' Rt.	591.58	583.38	575.00	W33X118	3'-6"	524.38	59'-0"
P-22	6340+18.67	20.02' Rt.	591.58	583.38	575.09	W33X118	3'-6"	524.38	59'-0"

BILL OF MATERIAL

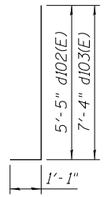
Bar	No.	Size	Length	Shape
d100(E)	171	#5	3'-0"	⌐
d102(E)	155	#5	6'-6"	⌐
d103(E)	16	#5	8'-5"	⌐
e100(E)	14	#5	29'-8"	——
e101(E)	36	#5	33'-2"	——
e102(E)	10	#5	14'-8"	——
h100(E)	28	#5	29'-8"	——
h101(E)	116	#5	33'-2"	——
h102(E)	26	#5	14'-8"	——
v100(E)	31	#5	31'-0"	——
v101(E)	31	#5	29'-9"	——
v102(E)	31	#5	28'-3"	——
v103(E)	31	#5	26'-10"	——
v104(E)	31	#5	25'-7"	——
v105(E)	16	#5	28'-3"	——

Structure Excavation	Cu. Yd.	118
Concrete Superstructure	Cu. Yd.	35.5
Stud Shear Connectors	Each	425
Reinforcement Bars, Epoxy Coated	Pound	13,880
Permanent Casing	Foot	1,081
Furnishing Soldier Piles (W Section)	Foot	1,298
Drilling and Setting Soldier Piles (In Soil)	Cu. Ft.	13,928
Untreated Timber Lagging	Sq. Ft.	1,594
Concrete Structures (Retaining Wall)	Cu. Yd.	91.9
Concrete Sealer	Sq. Ft.	3,456
Geocomposite Wall Drain	Sq. Yd.	127
Slope Inclinometer	Each	1
Pipe Underdrain for Structures 4"	Foot	165

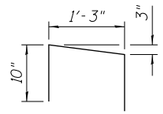
Minimum Bar Laps	
Bar	Lap
#5	3'-2"



SOLDIER PILE WORKING POINT



BARS d102(E) & d103(E)



BAR d100(E)

TranSystems	USER NAME = wjcolletti	DESIGNED - KRS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - DJG	REVISED -	
	PLOT SCALE = NTS	DRAWN - AJD	REVISED -	
	PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -	

DRILLED SOLDIER PILE WALL DETAILS 2
RETAINING WALL 24 (STRUCTURE NO. 016-Z016)
SHEET NO. S6-13 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	523
		CONTRACT NO. 60X94		
	ILLINOIS	FED. AID PROJECT		

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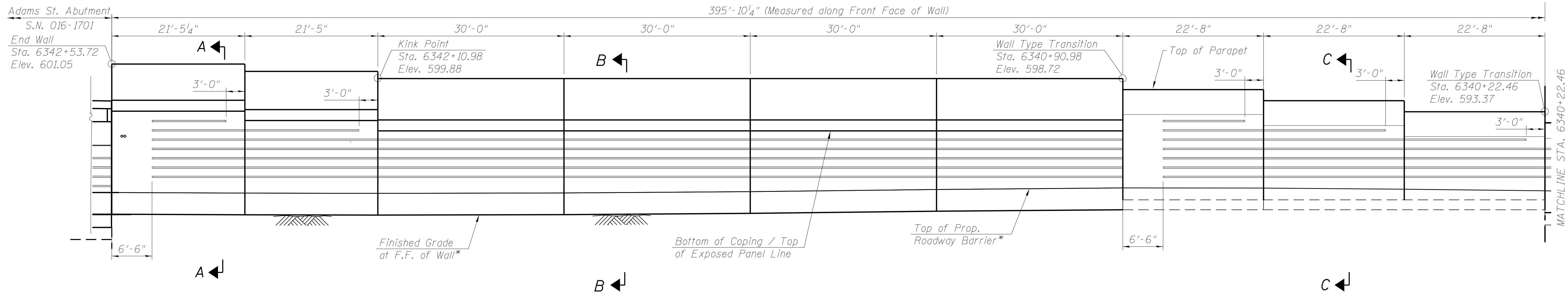
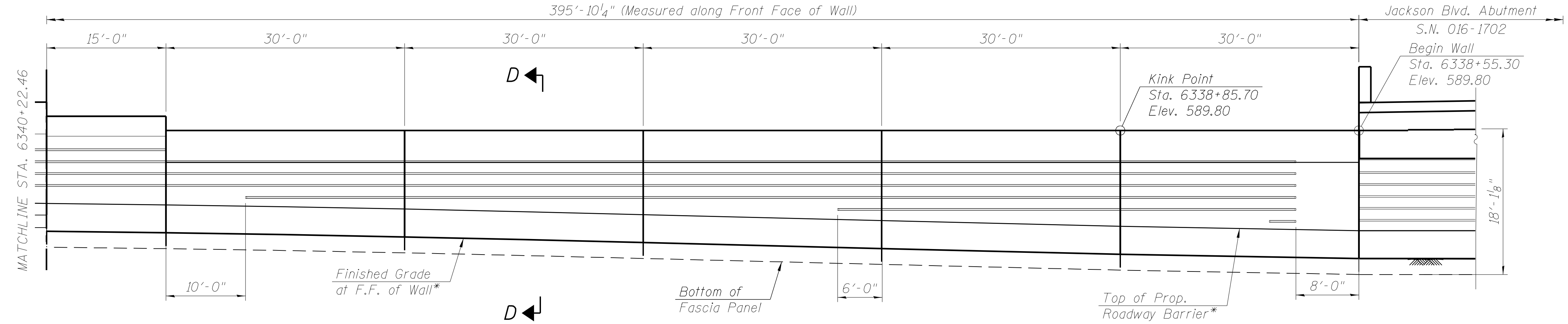
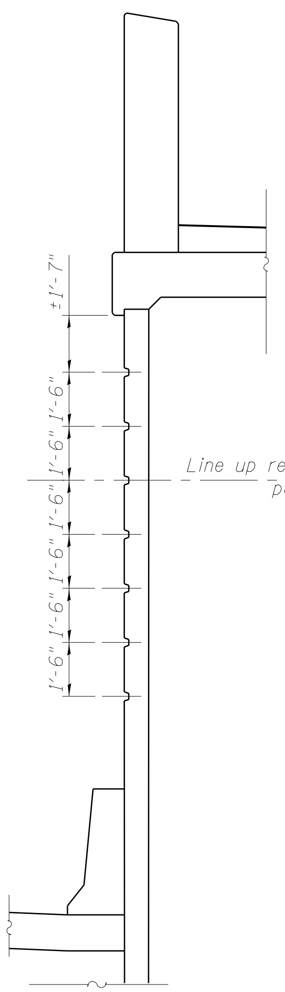
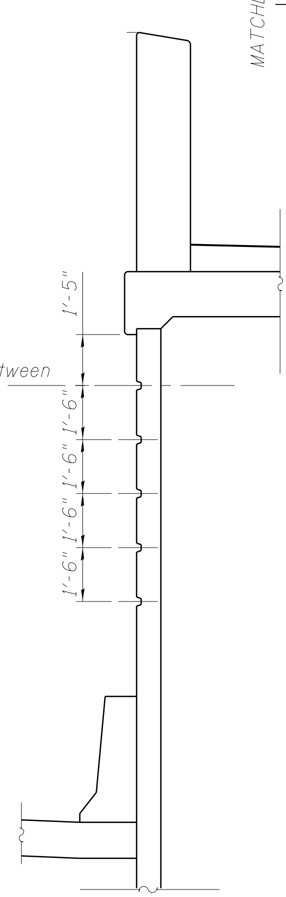






SECTION A-A



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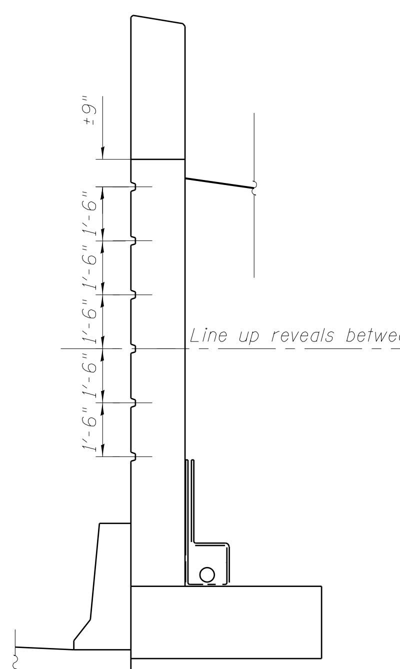
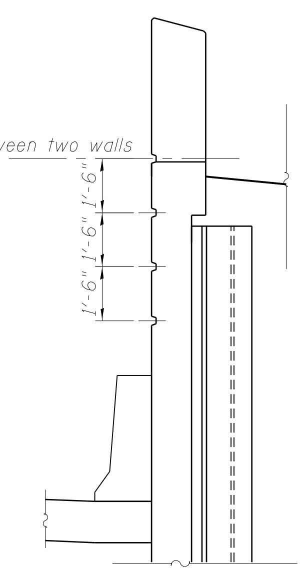


SECTION C-C



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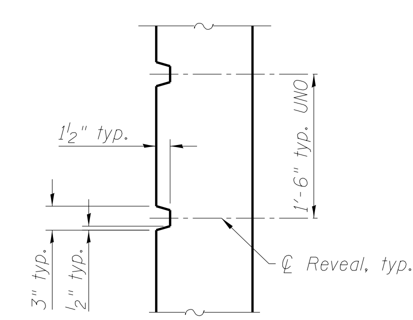

3" REVEAL DETAIL

Notes:

Reveals will not be paid separately and shall be included in the cost of either Mechanically Stabilized Earth Retaining Wall (Special) or Concrete Structures (Retaining Wall) corresponding to the location of the reveals.

Construction joints between parapet and fascia wall that are not incorporated in the reveal pattern to be butt type and smoothed after installation.

* Installed as part of Contract 62A76.

TranSystems	USER NAME = wjcolletti	DESIGNED - KRS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ARCHITECTURAL DETAILS RETAINING WALL 24 (STRUCTURE NO. 016–Z016)
	PLOT SCALE = NTS	CHECKED - DJG	REVISED -		SHEET NO. S6-14 OF S6-22 SHEETS
	PLOT DATE = 3/5/2020	DRAWN - AJD	REVISED -		
		CHECKED - KRS	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	524
		CONTRACT NO. 60X94		
		ILLINOIS FED. AID PROJECT		

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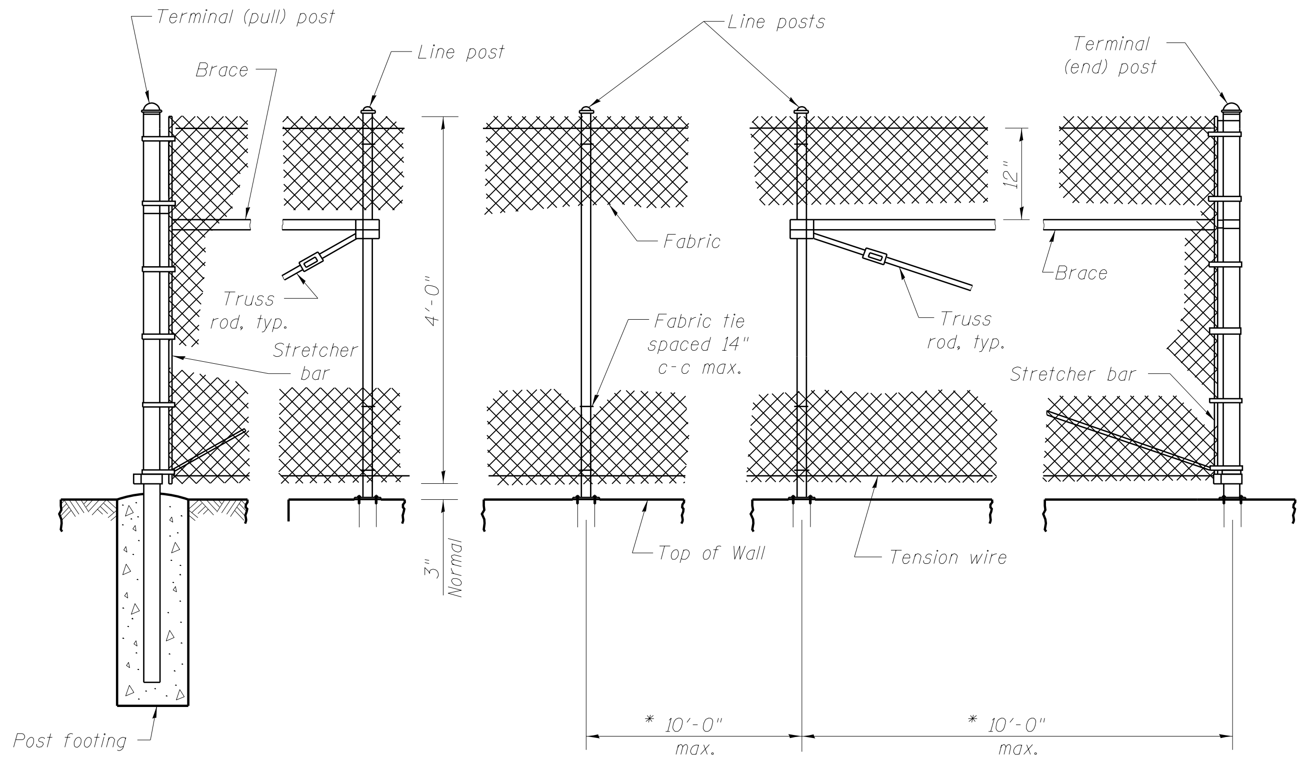


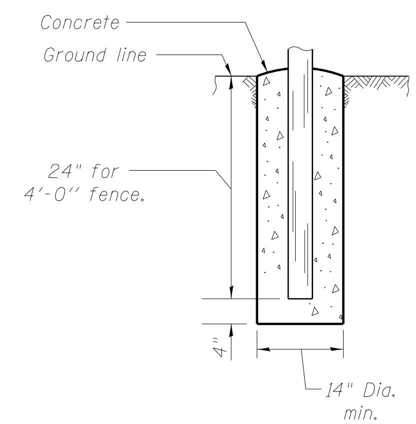
PULL POST ARRANGEMENT

LINE POST ARRANGEMENT

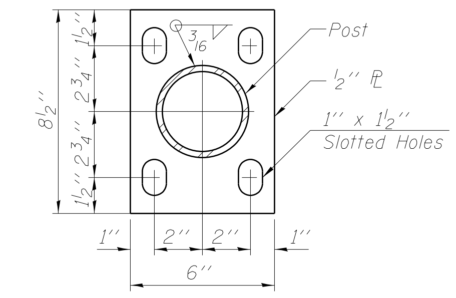
END POST ARRANGEMENT

* The Post Anchors Shall be At least 2'-0" From Wall Expansion Joints.

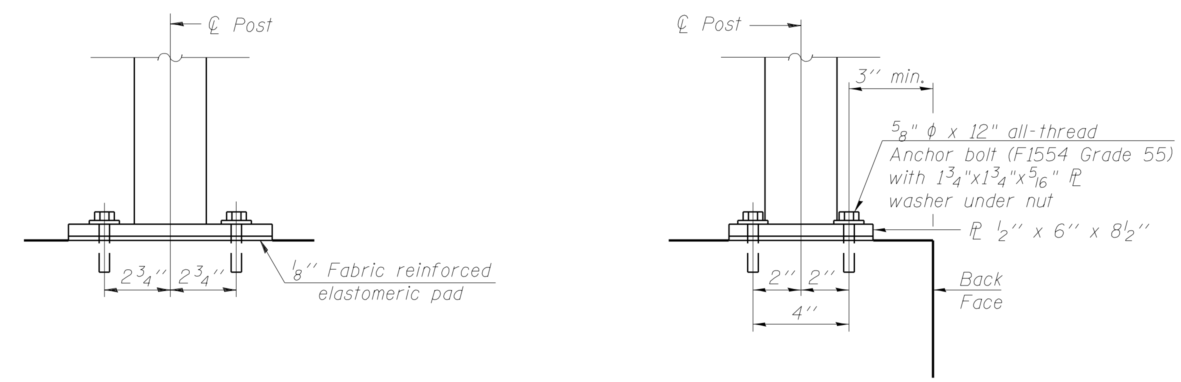
Pull Post Shall Be Placed Off of Wall.



FOOTING FOR TERMINAL POST

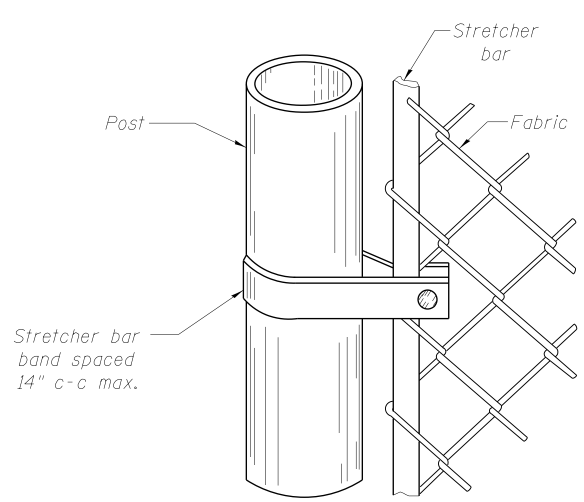


BASE ℙ

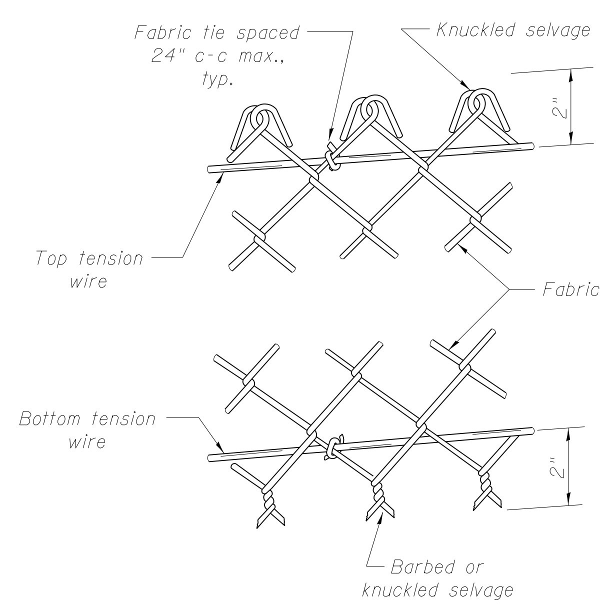


ANCHOR BOLT DETAILS

The Contractor shall drill and set ⅝'' ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



METHOD OF FASTENING STRETCHER BAR TO POST



METHOD OF TYING FABRIC TO TENSION WIRES

LINE POST	
Section	lbs./ft.
Pipe Type A 1.90 (48.3) O.D.	2.72
Pipe Type B 1.90 (48.3) O.D.	2.28
Pipe Type C 1.90 (48.3) O.D.	2.26
H 1.875x1.625 (47.6x41.3)	2.72

BILL OF MATERIAL

Item	Unit	Quantity
Chain Link Fence, 4' Attached to Structure	Foot	97

Notes:
Cost of all the anchor bolts and accessories required for Chain Link Supports are included in Chain Link Fence, 4' Attached to Structure.

TERMINAL POST	
Section	lbs./ft.
Pipe Type A 2.375 O.D.	3.65
Pipe Type B 2.375 O.D.	3.11
Pipe Type C 2.375 O.D.	3.09
Roll Formed 3½x3½	See detail
Sq. Tubing 2½x2½	4.32

HORIZONTAL BRACES	
Section	lbs./ft.
Pipe Type A 1.66 O.D.	2.27
Pipe Type B 1.66 O.D.	1.83
Pipe Type C 1.66 O.D.	1.82
H 1.31x1.5	2.25
Roll Formed 1⅝x1¼	See detail

Wang Engineering
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Lombard/IL/60148
Telephone: 6309539928
Fax: 6309539938

BORING LOG 0589-B-03

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 594.27 ft
North: 1899354.98 ft
East: 1171689.92 ft
Station: 8315+31.06
Offset: 15.8956 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	593.7	7-inch thick ASPHALT --PAVEMENT--						
	592.99	9-inch thick CONCRETE --PAVEMENT--						
		Loose to very dense, brown GRAVELLY SAND; dry to wet --FILL--			1	3 2 2	NP	5
			5		2	5 3 3	NP	5
					3	32 44 3	NP	11
	586.3	Very stiff, gray SILTY CLAY LOAM, trace gravel			4	4 6 7	2.62 B	20
	583.8	Very soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel	10		5	1 2 2	0.66 B	25
			15		6	0 0 0	0.16 B	25
					7	1 2 1	< 0.25 P	29
			20		8	0 0 0	< 0.25 P	24
		--L_L(%)=34, P_I(%)=16-- --%Gravel=7.0-- --%Sand=13.9-- --%Silt=50.1-- --%Clay=29.1-- --A-6 (13)--	25		9	0 0 0	0.25 B	26
					10	0 0 0	NR	
			30		11	0 0 0	< 0.25 P	26
					12	0 0 3	0.57 B	29
			35		13	1 2 2	< 0.25 P	28
			40		14	0 0 1	0.41 B	26

GENERAL NOTES

Begin Drilling: 06-19-2014 Complete Drilling: 06-22-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: P&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 5.50 ft
At Completion of Drilling: ▼ mud in the borehole
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 0589-B-03

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 594.27 ft
North: 1899354.98 ft
East: 1171689.92 ft
Station: 8315+31.06
Offset: 15.8956 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45		15	0 0 2	0.41 B	26
			50		16	1 2 4	0.66 B	25
			55		17	0 3 5	0.82 B	21
	537.5	Stiff to hard, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel	60		18	3 6 11	1.89 B	23
	522.5	Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel	65		19	3 6 8	2.71 B	19
			70		20	10 14 17	4.00 P	19
			75		21	1 3 6	0.82 B	37
			80		22	7 7 11	< 0.25 P	26

GENERAL NOTES

Begin Drilling: 06-19-2014 Complete Drilling: 06-22-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: P&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 5.50 ft
At Completion of Drilling: ▼ mud in the borehole
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 0589-B-03

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 594.27 ft
North: 1899354.98 ft
East: 1171689.92 ft
Station: 8315+31.06
Offset: 15.8956 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	512.5	Gray SILT; dry						
	510.3	Medium dense to dense, gray SAND, trace gravel; moist	85		23	8 10 12	NP	16
	502.5	Dense to very dense, gray GRAVELLY SAND; moist to saturated	90		24	14 18 26	NP	19
			95		25	13 13 20	NP	12
			100		26	19 27 35	NP	11
	490.4	Boring terminated at 103.82 ft	105		27	10 14	NP	12
			110					
			115					
			120					

GENERAL NOTES

Begin Drilling: 06-19-2014 Complete Drilling: 06-22-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: P&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 5.50 ft
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▽ NA

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

Notes:
Boring Log 0589-B-03 Station and Offset along ℄ NB C-D Road are: Sta. 6343+08.87, Offset 71.41' Rt.

TranSystems

USER NAME = wjcolletti	DESIGNED - KRS	REVISED -	
	CHECKED - DJG	REVISED -	
PLOT SCALE = NTS	DRAWN - LFP	REVISED -	
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 1
RETAINING WALL 24 (STRUCTURE NO. 016–Z016)
SHEET NO. S6-16 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	526
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

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BORING LOG 1702-B-03

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 593.01 ft
North: 1898890.82 ft
East: 1171649.04 ft
Station: 8214+76.16
Offset: 15.8644 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	593.0	3-inch thick ASPHALT --PAVEMENT--							
	592.0	9-inch thick CONCRETE --PAVEMENT--							
		Loose, gray GRAVELLY SAND --BASE COURSE--				1	5 3 5	NP	9
	589.8	Very loose, grayish brown SANDY LOAM to SAND, trace to little gravel; moist to wet --FILL--	5			2	1 0 1	NP	11
	585.8	Stiff, grayish brown SILTY CLAY to SILTY CLAY LOAM, trace gravel				3	1 2 1	NP	16
			10			4	1 3 3	1.31 B	22
	582.5	Very soft to soft, gray CLAY to SILTY CLAY, trace gravel				5	1 1 1	0.49 B	24
		--In-Situ Vane Shear, 14.0 feet-- --$S_{u\,undis}$ = 544 psf-- --$S_{u\,remold}$ = 181 psf-- --Sensitivity = 3.00--	15			1			
			20	P U S H	< 0.25	1			31
		--In-Situ Vane Shear, 24.0 feet-- --$S_{u\,undis}$ = 1067 psf-- --$S_{u\,remold}$ = 648 psf-- --Sensitivity = 1.64--	25			2			
			30	P U S H	0.25 P	2			24
		--In-Situ Vane Shear, 34.0 feet-- --$S_{u\,undis}$ = 712 psf-- --$S_{u\,remold}$ = 233 psf-- --Sensitivity = 3.05--	35			3			
			40	P U S H	0.25 P	3			25

WANGENGINC 1100401.GPJ WANGENG.GDT 12/17/17

GENERAL NOTES

Begin Drilling: 06-26-2014 Complete Drilling: 06-26-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 76.75 ft
At Completion of Drilling: ▽ Rotary wash
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 1702-B-03

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 593.01 ft
North: 1898890.82 ft
East: 1171649.04 ft
Station: 8214+76.16
Offset: 15.8644 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
				H	P				
		--In-Situ Vane Shear, 44.0 feet-- --$S_{u\,undis}$ = 1450 psf-- --$S_{u\,remold}$ = 803 psf-- --Sensitivity = 1.81--	45			4			
			50	PUSH	0.41 B	6			
	540.3	Very stiff to hard, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel							
			55			7	7 9 13	3.85 B	21
			60			8	4 7 17	3.44 B	16
		--L_L(%)=34, P_L(%)=17-- --%Gravel=4.1-- --%Sand=13.2-- --%Silt=49.7-- --%Clay=33.0-- --A-6 (13)--	65			9	3 7 12	2.30 B	22
	521.3	Medium stiff, gray CLAY to SILTY CLAY, trace gravel							
			70			10	6 12 16	4.84 B	21
			75			11	1 2 5	0.98 B	30
	516.3	Medium dense to dense, gray SAND; moist to saturated							
			80			12	10 9 8	NP	12

WANGENGINC 1100401.GPJ WANGENG.GDT 12/17/17

GENERAL NOTES

Begin Drilling: 06-26-2014 Complete Drilling: 06-26-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 76.75 ft
At Completion of Drilling: ▽ Rotary wash
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 1702-B-03

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 593.01 ft
North: 1898890.82 ft
East: 1171649.04 ft
Station: 8214+76.16
Offset: 15.8644 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	491.3	Very dense, gray GRAVELLY SILTY LOAM; wet							
	489.0	*Dolostone fragments in the head of the spoon* --difficult drilling from 104 feet-- --WEATHERED BEDROCK--	85			13	13 16 15	NP	17
			90			14	17 19 25	NP	20
	484.5	--ROLLER BIT REFUSAL-- Boring terminated at 108.50 ft							
	499.0	Dense, gray SILT; saturated	95			15	13 17 18	NP	25
	496.3	Dense, brown GRAVELLY SAND; wet	100			16	18 21 22	NP	15
			105			17	50/6	NP	18
			110						
			115						
			120						

WANGENGINC 1100401.GPJ WANGENG.GDT 12/17/17

GENERAL NOTES

Begin Drilling: 06-26-2014 Complete Drilling: 06-26-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 76.75 ft
At Completion of Drilling: ▽ Rotary wash
Time After Drilling: NA
Depth to Water: ▽ NA

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

Notes:
Boring Log 1702-B-03 Station and Offset along ℄ NB C-D Road are: Sta. 6338+35.25, Offset 41.54′ Rt.

TranSystems	USER NAME = wjcollett	DESIGNED - KRS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS 2 RETAINING WALL 24 (STRUCTURE NO. 016-Z016)
		CHECKED - DJG	REVISED -		
	PLOT SCALE = NTS	DRAWN - LFP	REVISED -		
	PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -		SHEET NO. S6-17 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	527
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

LI713.PM
016Z016-60X94-S017-Boring_2.dgn

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BORING LOG 24-RWB-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 575.41 ft
North: 1898928.01 ft
East: 1171591.28 ft
Station: 6338+77.83
Offset: 12.7329 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	575.0	5-inch thick ASPHALT --PAVEMENT--						
	574.2	9-inch thick CONCRETE --PAVEMENT--						
	572.9	CRUSHED STONE --BASE COURSE--			1	1 1 3	NR	
		Very soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel	5		2	2 2 2 2	0.67 N/6	18
					3	1 2 2 4	0.25 B	22
					4	1 2 2 3	0.49 B	23
			10		5	1 1 3 3	0.33 B	23
					6	1 2 2 2	0.49 B	23
			15		7	1 1 2	0.41 B	26
					8	1 1 2	0.25 B	26
	538.7	Stiff, gray SILTY CLAY LOAM, trace gravel						
			20		9	1 1 2	0.16 B	26
			25		10	1 1 3	0.25 B	25
					11	1 2 2	0.33 B	25
					12	2 2 3	0.98 B	24
			30		13	2 2 4	0.82 B	26
					14	2 3 4	0.66 B	20
			35					
			40		15	4 5 9	1.72 B	19

GENERAL NOTES

Begin Drilling: 08-29-2014 Complete Drilling: 08-29-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" HSA to 11', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
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 24-RWB-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 575.41 ft
North: 1898928.01 ft
East: 1171591.28 ft
Station: 6338+77.83
Offset: 12.7329 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	533.7	Very stiff, gray SILTY LOAM to SILTY CLAY LOAM, trace gravel						
			45		1	5 7 11	2.05 B	12
	528.7	Very stiff, gray SILTY CLAY, trace gravel						
			50		17	8 13 20	3.53 B	18
	523.7	Stiff, gray CLAY to SILTY CLAY, trace gravel						
			55		18	5 7 8	1.89 B	26
			60		19	3 3 4	1.17 N/6	27
	513.7	Medium dense, gray SILTY LOAM, trace gravel						
		--Occasional fine to medium SAND lenses--	65		20	7 8 14	NP	14
	510.4	Boring terminated at 65.00 ft						
			70					
			75					
			80					

GENERAL NOTES

Begin Drilling: 08-29-2014 Complete Drilling: 08-29-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" HSA to 11', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
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 24-RWB-01-HA

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 581.00 ft
North: 1898926.95 ft
East: 1171600.35 ft
Station: 6338+76.12
Offset: 3.7646 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	580.3	8-inch thick black LOAM, trace gravel --TOPSOIL--						
		Very stiff, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel --FILL--			1	PUSH	NP	15
					2	PUSH	3.00 P	16
			5		3	PUSH	2.50 P	18
	574.0	Stiff, gray SILTY CLAY to CLAY, trace gravel			4	PUSH	1.50 P	20
			10		5	PUSH	1.00 P	19
	571.0	Boring terminated at 10.00 ft						
			15					
			20					

GENERAL NOTES

Begin Drilling: 08-20-2014 Complete Drilling: 08-20-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 1" IDA Pneumatic Geoprobe LB Sampler

WATER LEVEL DATA

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

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

Notes:
Boring Log 24-RWB-01 Station and Offset are measured along ℄ NB C-D Road.
Boring Log 24-RWB-01-HA Station and Offset are measured along ℄ NB C-D Road.

TranSystems

USER NAME = wjcollett	DESIGNED - KRS	REVISED -
	CHECKED - DJG	REVISED -
PLOT SCALE = NTS	DRAWN - LFP	REVISED -
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 3
RETAINING WALL 24 (STRUCTURE NO. 016-Z016)
SHEET NO. S6-18 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	528
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

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BORING LOG 24-RWB-02-HA

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 581.00 ft
North: 1899009.13 ft
East: 1171602.85 ft
Station: 6339+59.76
Offset: 12 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	580.7	Black, SILTY LOAM, and roots --TOPSOIL--/						
	579.3	Black, SILTY LOAM, trace gravel and brick --FILL--			1	PUSH	NP	24
		Medium stiff to very stiff, gray SILTY CLAY LOAM, trace gravel			2	PUSH	3.50 P	17
			5		3	PUSH	3.00 P	17
		--SAND lenses--			4	PUSH	1.75 P	20
	573.2	Medium stiff, gray CLAY to SILTY CLAY, trace gravel						
					5	PUSH	0.75 P	21
	571.0	Boring terminated at 10.00 ft	10					
			15					
			20					

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	08-19-2014	Complete Drilling	08-19-2014	While Drilling	▽ DRY
Drilling Contractor	Wang Testing Services	Drill Rig		At Completion of Drilling	▼ DRY
Driller	R&J	Logger	A. Tomaras	Checked by	C. Marin
Drilling Method	1" IDA Pneumatic Geoprobe LB Sampler			Time After Drilling	NA
				Depth to Water	▽ NA

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

WANGENGINC 1100040I.GPJ WANGENG.GDT 12/12/17

BORING LOG 24-RWB-03

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Fax: 6309539938

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 575.86 ft
North: 1899066.62 ft
East: 1171604.08 ft
Station: 6340+15.70
Offset: 3.1076 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		6-inch thick, ASPHALT over 6-inch thick, CONCRETE --PAVEMENT--						
	574.9	Loose, brown GRAVELLY SAND --FILL--			1	6 5 3	NP	5
	572.9	Very soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel			2	1 2 3	NR	
			5		3	1 2 2	0.33 B	22
			10		4	1 1 2	0.49 B	21
					5	2 2 3	0.33 B	26
			15		6	1 1 2	0.16 B	26
					7	1 1 2	0.25 B	25
			20		8	1 1 2	0.16 B	27
	536.9	Very stiff, gray SILTY CLAY LOAM, trace gravel						
			25		9	1 2 3	0.25 B	24
					10	1 2 3	0.16 B	24
			30		11	1 2 2	0.16 B	25
					12	1 2 3	0.25 B	26
			35		13	2 3 3	0.33 B	24
			40		14	3 10 16	2.62 B	17

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	08-14-2014	Complete Drilling	08-14-2014	While Drilling	▽ Rotary wash
Drilling Contractor	Wang Testing Services	Drill Rig		At Completion of Drilling	▼ mud in the borehole
Driller	R&J	Logger	S. Woods	Checked by	C. Marin
Drilling Method	2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion			Time After Drilling	NA
				Depth to Water	▽ NA

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

WANGENGINC 1100040I.GPJ WANGENG.GDT 12/12/17

BORING LOG 24-RWB-03

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Fax: 6309539938

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 575.86 ft
North: 1899066.62 ft
East: 1171604.08 ft
Station: 6340+15.70
Offset: 3.1076 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	534.1	Very stiff, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel						
			45		15	9 10 11	3.03 B	12
	529.1	Brown fine SAND						
	526.9	Very stiff, gray SILTY CLAY LOAM, trace gravel	50		16	12 12 18	3.36 B	18
	524.1	Very stiff, gray CLAY to SILTY CLAY, trace gravel						
			55		17	5 5 5	2.21 B	27
	516.9	Medium dense to very dense, gray SILTY LOAM, trace gravel	60		18	4 11 17	NP	19
	510.9	Boring terminated at 65.00 ft	65		19	23 33 44	NP	20
			70					
			75					
			80					

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	08-14-2014	Complete Drilling	08-14-2014	While Drilling	▽ Rotary wash
Drilling Contractor	Wang Testing Services	Drill Rig		At Completion of Drilling	▼ mud in the borehole
Driller	R&J	Logger	S. Woods	Checked by	C. Marin
Drilling Method	2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion			Time After Drilling	NA
				Depth to Water	▽ NA

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

WANGENGINC 1100040I.GPJ WANGENG.GDT 12/12/17

Notes:
Boring Log 24-RWB-02-HA Station and Offset are measured along ℄ NB C-D Road.
Boring Log 24-RWB-03 Station and Offset are measured along ℄ NB C-D Road.

USER NAME = wjcolletti	DESIGNED - KRS	REVISED -	
	CHECKED - DJG	REVISED -	
PLOT SCALE = NTS	DRAWN - LFP	REVISED -	
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 4
RETAINING WALL 24 (STRUCTURE NO. 016-Z016)
SHEET NO. S6-19 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	529
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

bi735 PM
016Z016_60X94-S019-Boring_4.dgn

Wang Engineering
wangeng@wangeng.com
1145 N. Main Street
Lombard/IL/60148
Telephone: 6309539928
Fax: 6309539938

BORING LOG 24-RWB-03-HA

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 581.77 ft
North: 1899066.47 ft
East: 1171624.13 ft
Station: 6340+16.13
Offset: 23.1586 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	581.4	Black, SILTY LOAM, trace roots --TOPSOIL--						
	580.3	Medium stiff, gray and black SILTY CLAY LOAM, trace gravel, roots, brick, and glass --FILL--			1	PUSH	0.75 P	17
		Stiff to very stiff , gray SILTY CLAY LOAM to SILTY CLAY, trace gravel			2	PUSH	2.25 P	20
			5		3	PUSH	2.25 P	19
					4	PUSH	1.50 P	19
	571.8		10		5	PUSH	1.25 P	22
		Boring terminated at 10.00 ft						
			15					
			20					

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	08-19-2014	Complete Drilling	08-19-2014	While Drilling	DRY
Drilling Contractor	Wang Testing Services	Drill Rig		At Completion of Drilling	DRY
Driller	R & J	Logger	A. Tomaras	Checked by	C. Marin
Drilling Method	1" IDA Pneumatic Geoprobe LB Sampler			Time After Drilling	NA
				Depth to Water	NA

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

WANGENGINC 1100401.GPJ WANGENG.GDT 12/12/17

BORING LOG 24-RWB-04

Wang Engineering
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1145 N. Main Street
Lombard/IL/60148
Telephone: 6309539928
Fax: 6309539938

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 576.17 ft
North: 1899150.98 ft
East: 1171608.16 ft
Station: 6341+00.27
Offset: 2.6124 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Stiff, black SILTY CLAY LOAM, trace gravel, trace roots --TOPSOIL--			1	5 8 9	1.39 B	9
	573.7	Stiff, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel			2	4 3 4	1.48 B	18
	570.7	Very soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel	5		3	2 1 2	0.25 B	23
			10		4	2 2 2	0.25 B	23
					5	1 1 2	0.41 B	26
			15		6	1 1 2	< 0.25 P	26
					7	1 1 2	0.16 B	24
			20		8	1 1 2	0.33 B	26
			25		9	1 1 2	0.50 N/6	
					10	0 1 2	0.33 B	27
			30		11	1 1 1	< 0.25 P	27
					12	1 2 2	0.41 B	24
			35		13	1 2 3	0.74 B	20
			40		14	3 4 6	0.82 B	24

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	08-12-2014	Complete Drilling	08-12-2014	While Drilling	Rotary wash
Drilling Contractor	Wang Testing Services	Drill Rig		At Completion of Drilling	mud in the borehole
Driller	R&J	Logger	S. Woods	Checked by	C. Marin
Drilling Method	2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion			Time After Drilling	NA
				Depth to Water	NA

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

WANGENGINC 1100401.GPJ WANGENG.GDT 12/12/17

BORING LOG 24-RWB-04

Wang Engineering
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1145 N. Main Street
Lombard/IL/60148
Telephone: 6309539928
Fax: 6309539938

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 576.17 ft
North: 1899150.98 ft
East: 1171608.16 ft
Station: 6341+00.27
Offset: 2.6124 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	534.4	Very stiff, gray SILTY LOAM to SILTY CLAY LOAM, trace gravel						
			45		15	4 6 9	3.77 B	13
	529.4	Very stiff, gray SILTY CLAY, trace gravel						
			50		16	4 6 12	2.87 B	19
	524.4	Very stiff, gray CLAY to SILTY CLAY, trace gravel						
			55		17	4 6 8	2.95 B	25
	516.9	Gray SILT						
			60		18	3 4 4	NP	26
	514.4	Medium dense, brown, medium SAND with silt	65		19	6 9 14	NP	14
	511.2	Boring terminated at 65.00 ft						
			70					
			75					
			80					

GENERAL NOTES				WATER LEVEL DATA	
Begin Drilling	08-12-2014	Complete Drilling	08-12-2014	While Drilling	Rotary wash
Drilling Contractor	Wang Testing Services	Drill Rig		At Completion of Drilling	mud in the borehole
Driller	R&J	Logger	S. Woods	Checked by	C. Marin
Drilling Method	2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion			Time After Drilling	NA
				Depth to Water	NA

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

WANGENGINC 1100401.GPJ WANGENG.GDT 12/12/17

Notes:
Boring Log 24-RWB-03-HA Station and Offset are measured along ℄ NB C-D Road.
Boring Log 24-RWB-04 Station and Offset are measured along ℄ NB C-D Road.

BORING LOG 24-ST-01

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Fax: 6309539938

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 578.77 ft
North: 1899116.08 ft
East: 1171620.82 ft
Station: 6340+66.26
Offset: 17.4976' RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)		Moisture Content (%)
	578.8	Very stiff, black SILTY CLAY LOAM, trace gravel, roots --TOPSOIL--				1	3 3 4 5	1.00	P	23
		Very stiff, gray SILTY CLAY LOAM, trace gravel --FILL--				2	3 5 6 9	2.71	B	14
			5			3	3 4 5 5	2.54	B	18
	572.5	Soft to stiff, gray CLAY to SILTY CLAY, trace gravel				4	3 4 4 4	0.90	B	19
		--S_u=0.37 tsf (UU TXC) --w_n(%)=23	10			1	PUSH	0.25	P	23
						2	PUSH	0.50	P	22
		--S_u=0.50 tsf (UU TXC) --w_n(%)=23	15			3	PUSH	0.25	P	24
						4	PUSH	0.25	P	24
			20				PU			
		--S_u=0.49 tsf (UU TXC) --w_n(%)=24	25			6	SH	0.25	P	23
							PUSH	0.25	P	24
						7	PUSH	0.50	P	25
			30			8	PUSH	0.25	P	25
						9	PUSH	0.50	P	23
			35			10	PUSH	0.50	P	25
						11	PUSH	1.00	P	19
	539.8	Very stiff, gray SILTY CLAY, trace gravel	40				PU			

GENERAL NOTES

Begin Drilling: 10-23-2014 Complete Drilling: 10-23-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 3.25" HSA, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Groundwater
At Completion of Drilling: ▼ not observed
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 1100040X1.GPJ WANGENG.GDT 12/13/17

BORING LOG 24-ST-01

Wang Engineering
wangeng@wangeng.com
1145 N. Main Street
Lombard/IL/60148
Telephone: 6309539928
Fax: 6309539938

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 578.77 ft
North: 1899116.08 ft
East: 1171620.82 ft
Station: 6340+66.26
Offset: 17.4976' RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)		Moisture Content (%)
		--Laboratory Q_u=1.57 tsf (B), w_n(%)=21--				12	S H	2.25	P	21
						5	3 5 8	2.05	P	20
						6	4 6 10	3.94	B	20
	533.8	Boring terminated at 45.00 ft	45							
			50							
			55							
			60							

GENERAL NOTES

Begin Drilling: 10-23-2014 Complete Drilling: 10-23-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 3.25" HSA, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Groundwater
At Completion of Drilling: ▼ not observed
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 1100040X1.GPJ WANGENG.GDT 12/13/17

BORING LOG 25-RWB-01

Wang Engineering
wangeng@wangeng.com
1145 N. Main Street
Lombard/IL/60148
Telephone: 6309539928
Fax: 6309539938

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 575.97 ft
North: 1899010.62 ft
East: 1171588.78 ft
Station: 6339+59.75
Offset: 11.7335 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)		Moisture Content (%)
	575.5	5-inch thick, ASPHALT --PAVEMENT--								
	574.6	10-inch thick, CONCRETE --PAVEMENT--								
		Medium dense, gray CRUSHED STONE --BASE COURSE--				1	6 8 6	NP		6
	572.7	Medium stiff, gray SILTY CLAY LOAM, trace gravel --FILL--	5			2	1 2 2	0.57	B	18
	570.5	Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel				3	0 1 2	0.57	B	23
			10			4	0 2 2	0.57	B	24
						5	0 2 2	0.74	B	24
			15			6	0 2 1	0.49	B	24
						7	0 2 2	0.49	B	24
			20			8	0 2 2	0.25	B	25
	539.2	Very stiff to hard, gray SILTY CLAY LOAM, trace gravel								
			25			9	0 0 1	0.25	B	25
						10	0 1 2	0.25	B	25
						11	0 2 2	0.49	B	25
			30			12	0 2 2	0.57	B	25
						13	0 0 1	0.41	B	19
			35							
						14	8 10 23	4.76	B	16
			40							

GENERAL NOTES

Begin Drilling: 07-09-2014 Complete Drilling: 07-09-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 61.75 ft
At Completion of Drilling: ▼ Rotary wash
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 1100040X1.GPJ WANGENG.GDT 12/13/17

Notes:
Boring Log 24-ST-01 Station and Offset are measured along ℄ NB C-D Road.
Boring Log 25-RWB-01 Station and Offset are measured along ℄ NB C-D Road.

11:57 PM
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TranSystems

USER NAME = wjcolletti	DESIGNED - KRS	REVISED -
	CHECKED - DJG	REVISED -
PLOT SCALE = NTS	DRAWN - LFP	REVISED -
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 6
RETAINING WALL 24 (STRUCTURE NO. 016-Z016)
SHEET NO. S6-21 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	531
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

Wang Engineering
wangeng@wangeng.com
1145 N. Main Street
Lombard/IL/60148
Telephone: 6309539928
Fax: 6309539938

BORING LOG 25-RWB-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 575.97 ft
North: 1899010.62 ft
East: 1171588.78 ft
Station: 6330+59.75
Offset: 11.7335 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	529.2	Medium stiff to stiff, gray CLAy to SILTY CLAY, trace gravel	45		15	4 7 10	3.12 B	15
			50		16	5 9 14	3.83 N/6	24
			55		17	3 4 5	1.50 N/6	
	519.2	Stiff, gray SILTY CLAY LOAM, trace gravel	60		18	8 11 12	1.72 B	19
	514.2	Dense, brown fine SAND	65		19	14 21 23	NP	26
			70		20	13 18 28	NP	19
	504.2	Very dense, gray GRAVELLY SAND --DRY--	75		21	33 38 29/4	NP	9
			80		22	50/4	NP	16

GENERAL NOTES

Begin Drilling: 07-09-2014 Complete Drilling: 07-09-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 61.75 ft
At Completion of Drilling: ▼ Rotary wash
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 1100D401.GPJ WANGENG.GDT 12/7/17

Wang Engineering
wangeng@wangeng.com
1145 N. Main Street
Lombard/IL/60148
Telephone: 6309539928
Fax: 6309539938

BORING LOG 25-RWB-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 575.97 ft
North: 1899010.62 ft
East: 1171588.78 ft
Station: 6330+59.75
Offset: 11.7335 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	494.2	Very dense, gray SILT to SILTY LOAM, trace gravel --DRY--	85		23	33 43 24/3	NP	17
			90		24	50/2	NR	
	486.5	--ROLLER BIT REFUSAL-- Boring terminated at 89.50 ft	95					
			100					

GENERAL NOTES

Begin Drilling: 07-09-2014 Complete Drilling: 07-09-2014
Drilling Contractor: Wang Testing Services Drill Rig:
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ 61.75 ft
At Completion of Drilling: ▼ Rotary wash
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 1100D401.GPJ WANGENG.GDT 12/7/17

Notes:
Boring Log 25-RWB-01 Station and Offset are measured along ℄ NB C-D Road.

i18207 PM
0162016-60X94-S022-Boring_7.dgn

USER NAME = wjcolletti	DESIGNED - KRS	REVISED -	
	CHECKED - DJG	REVISED -	
PLOT SCALE = NTS	DRAWN - LFP	REVISED -	
PLOT DATE = 3/5/2020	CHECKED - KRS	REVISED -	

TranSystems

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS 7
RETAINING WALL 24 (STRUCTURE NO. 016-Z016)
SHEET NO. S6-22 OF S6-22 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015R&B-R	COOK	825	532
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

Bench Mark: BM 1400 - Chisel "X" on chain bolt of fire hydrant, south side of Monroe, first fire hydrant west of Des Plaines Street. Elevation 594.76'.

Existing Structure: Existing Cast-in-Place Cantilever Retaining Wall was originally built as F.A.I. Route No. 2, Section 0101.6-2P in 1957. The existing wall supporting the alley is aproximatelly 100'-1" long and has a total height of 6'-0".

Traffic Control: Traffic will be maintained along NB I-90/94 lanes during construction. Alley behind proposed wall will be closed for traffic.

DESIGN STRESSES

FIELD UNITS

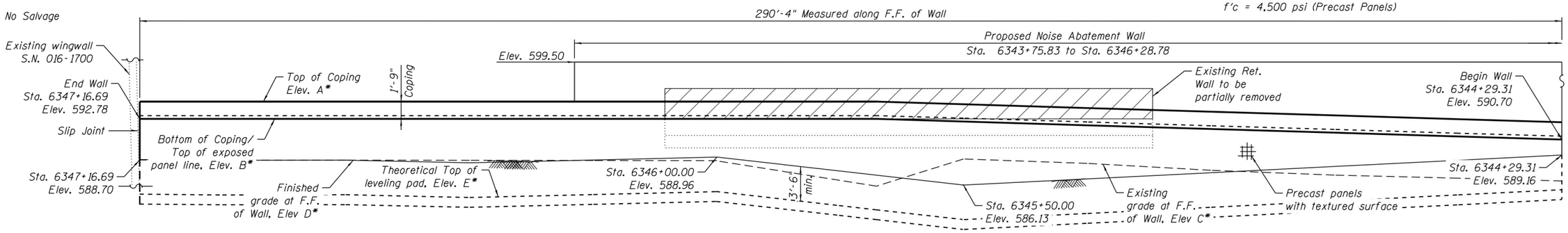
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST UNITS

f'c = 4,500 psi (Precast Panels)

DESIGN SPECIFICATIONS

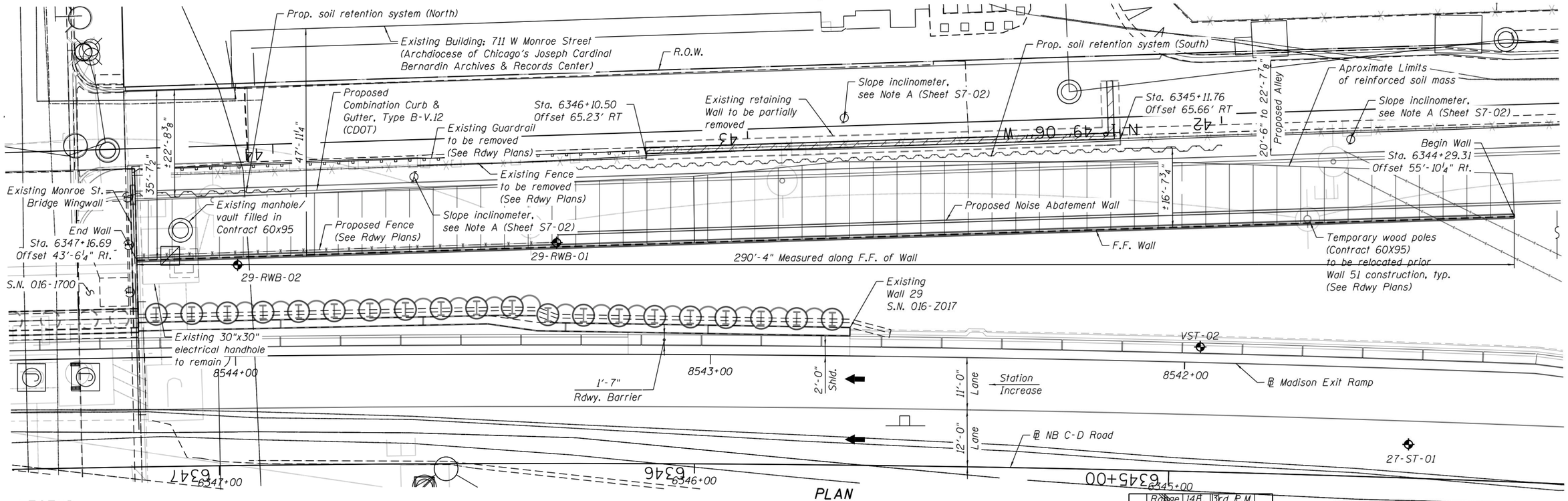
2017 AASHTO LRFD Bridge Design Specifications, 8th Edition



* See Elevations Table on Sheet S7-03

ELEVATION

(Looking East)



PLAN

LEGEND:

B.F. - Back Face of Wall
F.F. - Front Face of Wall
Limits of Removal of Existing Retaining Wall
Electric —E—
Existing Catch Basin
Proposed Catch Basin
Existing Fence — x — x —
Fiber Optic —FO—
Temporary Aerial Cable
Temporary Wood Pole
Existing Manhole
Soil Boring Location
Limits of reinforced Soil Mass

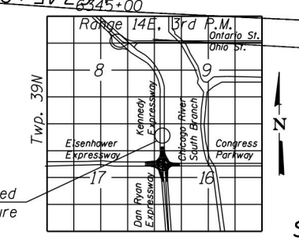
NOTES:

1. Stations and offsets are measured along ℄ NB C-D Road.

STATE OF ILLINOIS
AMISH T. BHATT
081-006249
LICENSED STRUCTURAL ENGINEER

Amish T. Bhatt

AMISH T. BHATT DATE 3/02/2020
LICENSE EXPIRES 11/30/2020



Proposed Structure

LOCATION SKETCH

GENERAL PLAN & ELEVATION
RETAINING WALL 51
F.A.I. RTE. 90/94
SECTION 2014-015 R&B-R
COOK COUNTY
STA. 6344+29.31 TO STA. 6347+16.69
STRUCTURE NO. 016-Z048

USER NAME = keserovicm	DESIGNED - MK	REVISED	
	CHECKED - ATB	REVISED	
PLOT SCALE = N.T.S.	DRAWN - MK	REVISED	
PLOT DATE = 3/5/2020	CHECKED - ATB	REVISED	

AECOM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
RETAINING WALL 51 (STRUCTURE NO. 016-Z048)
SHEET NO. S7-01 OF 9 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	533
		CONTRACT NO. 60X94		
ILLINOIS	FED. AID PROJECT			

016-Z048-SHT-ACM-001-GPE.dgn

GENERAL NOTES:

1. Stations and offsets for the wall are given from the ℄ NB C-D Road to the front face of the precast panels.
2. MSE Wall length measured along front face of the precast panels.
3. Reinforcement bars shall be epoxy coated.
4. Protective coat shall be applied to the exposed surfaces of MSE coping.
5. Plan dimensions and details relative to existing plans are subjected to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering materials. Such variations shall not be cause for additional compensation for a change in scope of work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
6. Lightweight Cellular Concrete Fill shall be Class III (District 1), see Special Provisions.
7. MSE Wall supplier shall design the MSE Wall using granular reinforced mass with minimum effective internal friction angle of 34 degrees and unit weight of 120 lbs./cu. ft. For embankment behind granular reinforced mass, an embankment unit weight of 120 lbs./cu. ft and an effective friction angle of 30 degrees shall be used in the wall system design.
8. Quantity for Lightweight Cellular Concrete Fill includes reinforced soil mass and fill area behind reinforced soil mass within excavated area; Type is specified as Class III (District 1) Lightweight Fill.
9. MSE wall supplier shall coordinate MSE wall design with prop. Noise Abatement Wall. MSE wall shall be designed to carry loads from the prop. Noise Abatement Wall. See Special Provision for Mechanically Stabilized Earth Retaining Wall, Special and Ground Mounted Concrete Noise Abatement Walls (Absorptive and Reflective) for design and construction requirements.
10. MSE Supplier to design load transfer systems to accommodate drainage structures and foundation elements of Noise Abatement Wall.
11. The Contractor shall field verify location of existing utilities prior to construction. The Contractor shall take precautions not to damage existing utilities. Any such damage shall be repaired by the Contractor at no additional cost.
12. The Contractor shall exercise extreme caution during construction to make certain that construction activities, live load surcharge and other loads applied to the structures will not have detrimental effects on the adjacent buildings and utilities. See Contract Special Provision for details.
13. The contractor shall provide vibration and displacement monitoring at the locations specified in the Special Provision for Construction Vibration Monitoring, to ensure that removal/construction activities in the vicinity of the structures do not have detrimental effects on building foundations. No additional compensation shall be provided to the Contractor for alternative means and methods, or additional precautionary measures, required during removal/construction activities to satisfy these requirements. See Contract Special Provisions for details.
14. Earth Excavation beyond the limits of Structure Excavation shall be at slope as shown in cross sections. For Earth Excavation quantity see Civil sheets.
15. The Contractor shall coordinate proposed Wall 51 construction with construction of proposed Noise Abatement Wall.
16. For the Noise Abatement Wall plans, see sheets S9-01 thru. S9-08.

SUGGESTED SEQUENCE OF CONSTRUCTION

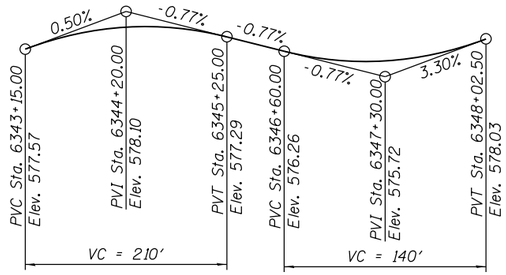
1. Locate existing utilities that are to remain. Contractor to coordinate any required improvements to or removals of existing utilities with utility owner(s).
2. Install Soil Retention System.
3. Complete excavate for Wall 51 and perform partial removal of existing retaining wall as necessary.
4. Install Noise Abatement Wall (NAW) foundation and install Sleeve around NAW foundation elements.
5. Construct Wall 51.
6. Place 2'-0" of top soil in the landscaping area (see roadway plans)

TOTAL BILL OF MATERIAL

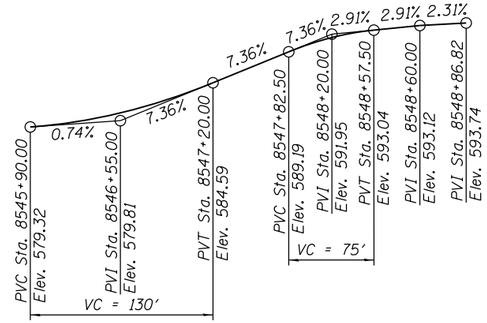
	ITEM	UNIT	TOTAL
	Removal of Existing Structures No. 4	Each	1
	Structure Excavation	Cu Yd	896
	Protective Coat	Sq Yd	140
	Mechanically Stabilized Earth Retaining Wall, Special	Sq Ft	2761
	Lightweight Cellular Concrete Fill	Cu Yd	1285
	Name Plates	Each	1
	Soil Retention System	Sq Ft	1365
	Slope Inclinometer	Each	3
**	Concrete Removal, Special	Cu Yd	50

** Provided quantities are approximate. The Contractor will be paid for the actual quantity at the unit price bid for the work.

INDEX OF SHEETS:



PROFILE GRADE
(℄ NB C-D Road)



PROFILE GRADE
(℄ Madison NB Exit Ramp)

STATION 6344+29.31 TO 6347+16.69
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I RTE. 90/94 SEC 2014-015R&B-R
LOADING HL-93
STRUCTURE NO. 016-2048

NAME PLATE

See Std. 515001

CURVE DATA

(NB C-D Road)
Curve: P-NCD-NX-6
PI Sta. = 6345+36.95
Δ = 5° 12' 37" (LT)
D = 1° 05' 35"
R = 5,242.00'
T = 238.51'
L = 476.70'
E = 5.42'
e = RC
T.R. = NA
S.E. Run = NA
P.C. Sta. = 6342+98.44
P.T. Sta. = 6347+75.14

Note A:

In addition to vibration and displacement monitoring, the contractor shall monitor ground movements with slope inclinometer. Install Slope inclinometer at Station 6344+64.37, offset 70.40' RT, Station 6345+69.16, offset 72.31' RT and Station 6346+59.24 offset 60.94' RT. All inclinometers shall be installed prior to placing soil retention system and any excavation for the proposed Wall 51. See special provision for Slope Inclinometer.

016-Z048-SHT-ACM-002-GenNote.dgn

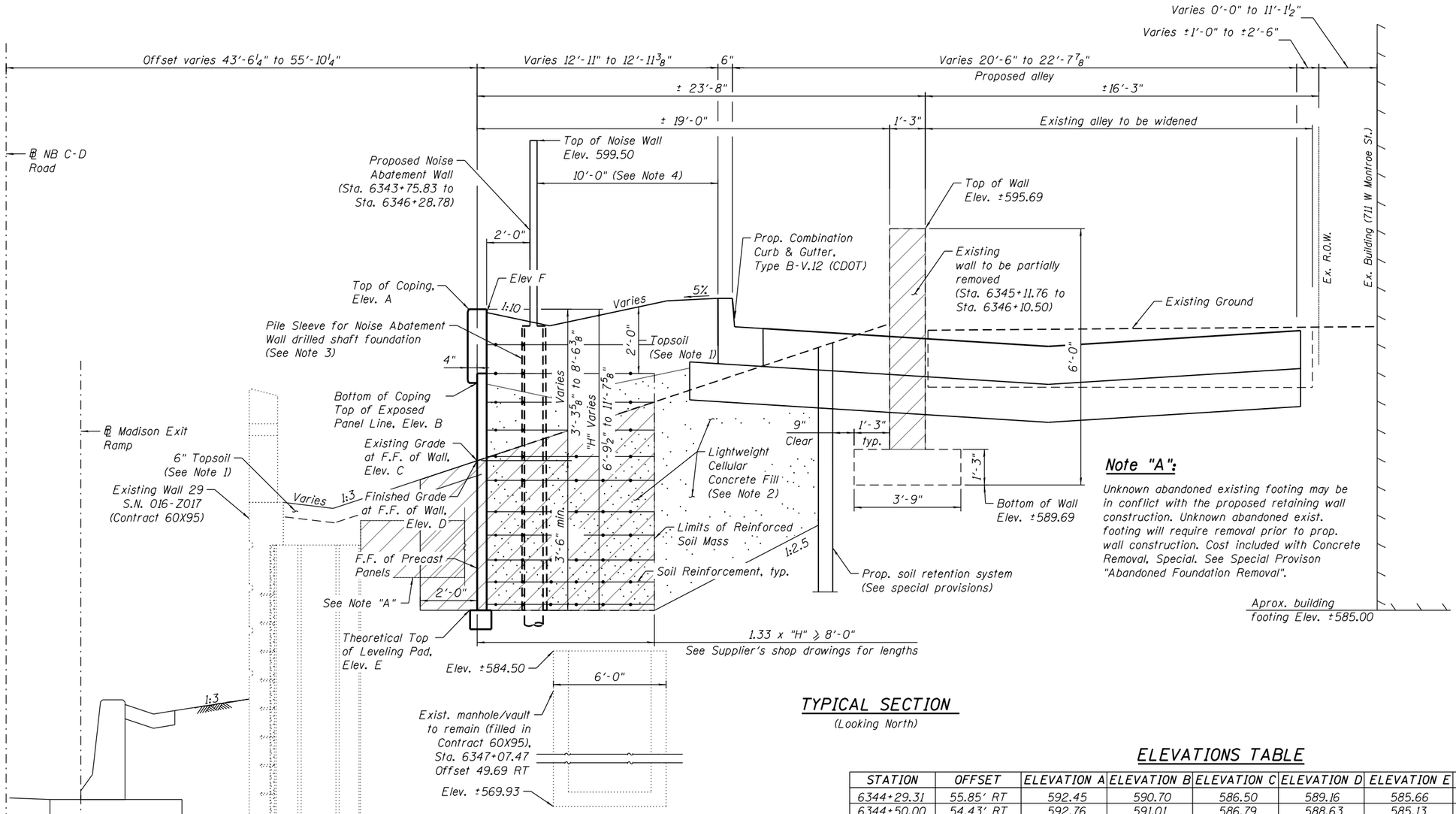
AECOM

USER NAME = keserovicm	DESIGNED - MK	REVISED	
	CHECKED - ATB	REVISED	
PLOT SCALE = N.T.S.	DRAWN - MK	REVISED	
PLOT DATE = 3/5/2020	CHECKED - ATB	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
STRUCTURE NO. 016-Z048
SHEET NO. S7-02 OF 9 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	534
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			



Note "A":

Unknown abandoned existing footing may be in conflict with the proposed retaining wall construction. Unknown abandoned exist. footing will require removal prior to prop. wall construction. Cost included with Concrete Removal, Special. See Special Provison "Abandoned Foundation Removal".

TYPICAL SECTION

(Looking North)

LEGEND:

- Lightweight Cellular Concrete Fill
- Structure Removal Limit
- Structure Excavation Limits

B.F. - Back Face of Wall

F.F. - Front Face of Wall

NOTES:

1. For top soil quantity see Civil plans.
2. Lightweight Cellular Concrete fill shall be Class III (District I) Lightweight Cellular Concrete Fill. LCCF shall be used within reinforced soil mass and behind reinforced soil mass within excavated area.
3. Noise Abatement Wall (NAW) drilled shaft foundation diameter, depth, and spacing to be determined by the Contractor. The Contractor shall install pile sleeve around NAW drilled shaft foundation prior to LCCF placement for the prop. Wall 51. The pipe sleeve shall be provided within prop. Wall 51 reinforced soil mass limits. The annulus between sleeve and NAW drilled shaft foundation shall be filled with loose dry sand. Cost of pipe sleeve and filling annulus with dry loose sand shall be included with Mechanically Stabilized Earth Retaining Wall, Special.
4. Planting of trees or other large plants with deep root systems shall not be allowed in the area between MSE Wall and alley curb.

ELEVATIONS TABLE

STATION	OFFSET	ELEVATION A	ELEVATION B	ELEVATION C	ELEVATION D	ELEVATION E	ELEVATION F
6344+29.31	55.85' RT	592.45	590.70	586.50	589.16	585.66	592.28
6344+50.00	54.43' RT	592.76	591.01	586.79	588.63	585.13	592.60
6344+75.00	52.82' RT	593.14	591.39	587.10	588.00	584.50	592.98
6345+00.00	51.33' RT	593.51	591.76	587.59	587.37	583.87	593.35
6345+25.00	49.97' RT	593.89	592.14	588.38	586.75	583.25	593.61
6345+50.00	48.73' RT	594.27	592.52	588.72	586.13	582.63	593.87
6345+67.48	47.93' RT	594.53	592.78	586.94	587.12	583.62	594.03
6345+75.00	47.60' RT	594.53	592.78	586.60	587.55	584.05	594.07
6346+00.00	46.60' RT	594.53	592.78	588.57	588.96	585.46	594.12
6346+25.00	45.72' RT	594.53	592.78	588.58	588.66	585.16	594.24
6346+50.00	44.96' RT	594.53	592.78	588.59	588.37	584.87	594.36
6346+75.00	44.32' RT	594.53	592.78	588.60	588.64	585.14	594.37
6347+00.00	43.80' RT	594.53	592.78	590.66	588.62	585.12	594.37
6347+16.69	43.52' RT	594.53	592.78	588.62	588.70	585.20	594.36

NOTES (Contd.):

5. Wall 51 shall be designed to carry loads from the prop. Noise Abatement Wall. See Special Provision for Mechanically Stabilized Earth Retaining Wall, Special and Ground Mounted Concrete Noise Abatement Walls (Absorptive and Reflective) for design and construction requirements.

Elevation A: Top of Coping
Elevation B: Bottom of Coping / Top of Exposed Panel Line
Elevation C: Existing Grade at F.F. of Wall
Elevation D: Finished Grade at F.F. of Wall
Elevation E: Theoretical Top of Leveling Pad
Elevation F: Finished Grade at B.F. of Wall

AECOM

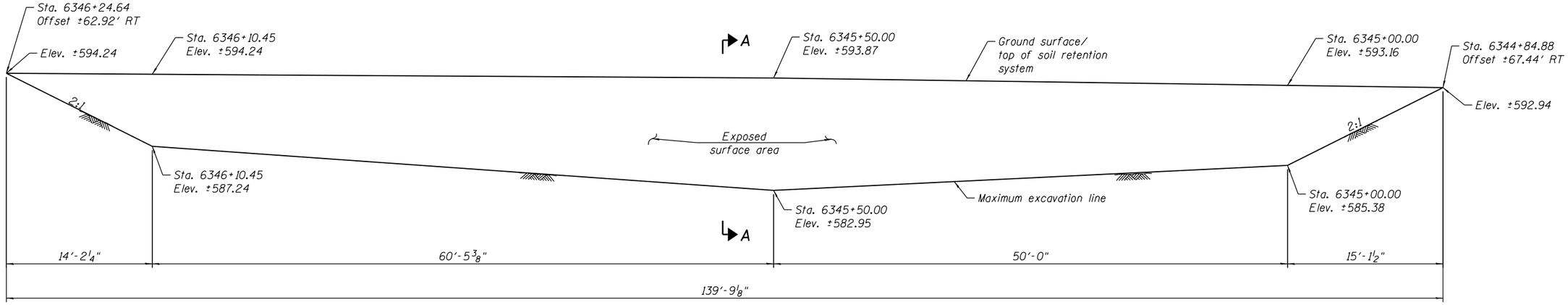
USER NAME = keserovicm	DESIGNED - MK	REVISED	
	CHECKED - ATB	REVISED	
PLOT SCALE = N.T.S.	DRAWN - MK	REVISED	
PLOT DATE = 3/5/2020	CHECKED - ATB	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

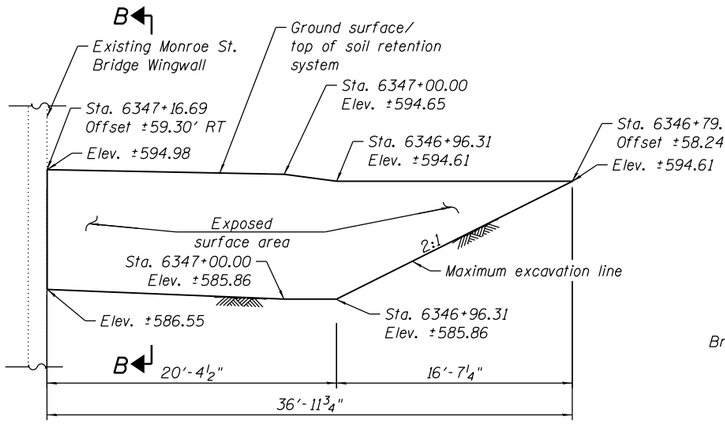
TYPICAL SECTION
STRUCTURE NO. 016-Z048
SHEET NO. S7-03 OF 10 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	535
		CONTRACT NO. 60X94		
ILLINOIS	FED. AID PROJECT			

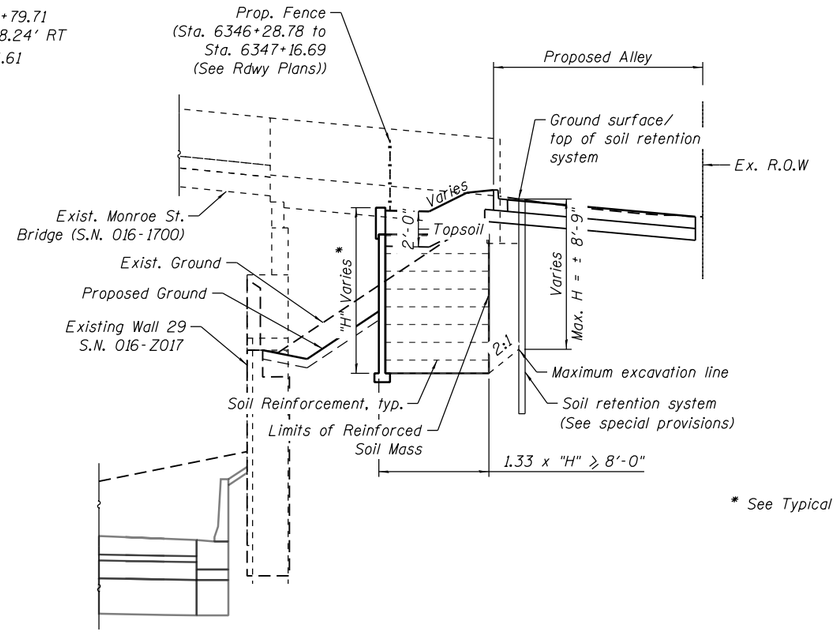
016-Z048-SHT-ACM-003-TypSec.dgn



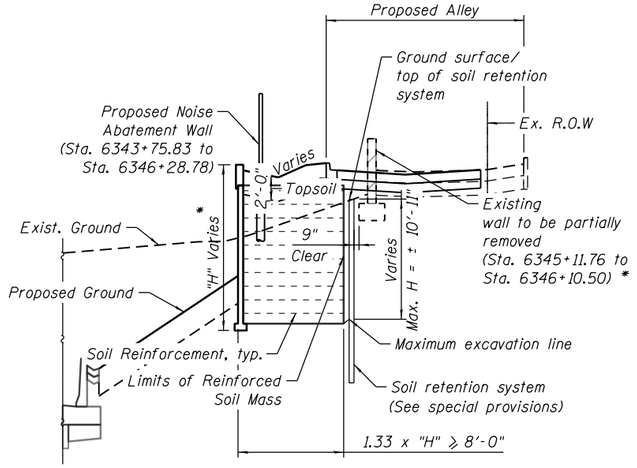
SOIL RETENTION SYSTEM - SOUTH



SOIL RETENTION SYSTEM - NORTH



SECTION B-B



SECTION A-A

* See Typical Section, Sheet S7-03

NOTES:

1. See Special Provisions for Soil Retention System for design and construction requirements.
2. Soil Retention System shall be cut and removed 1'-0" below finished grade or as directed by the Engineer, and the amount left below the cutoff point is to remain in location, undisturbed.

016-Z048-SHT-ACM-004-Details.dgn

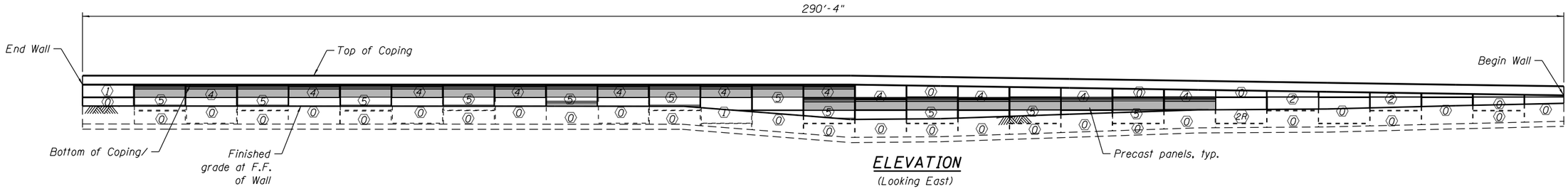
AECOM

USER NAME = keserovicm	DESIGNED - MK	REVISED	
	CHECKED - ATB	REVISED	
PLOT SCALE = N.T.S.	DRAWN - MK	REVISED	
PLOT DATE = 3/5/2020	CHECKED - ATB	REVISED	

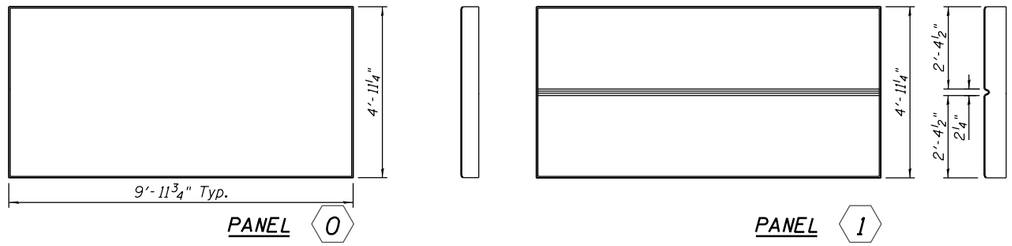
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL RETENTION SYSTEM
STRUCTURE NO. 016-Z048
SHEET NO. S7-04 OF 10 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	536
		CONTRACT NO. 60X94		
ILLINOIS FED. AID PROJECT				



ELEVATION
(Looking East)

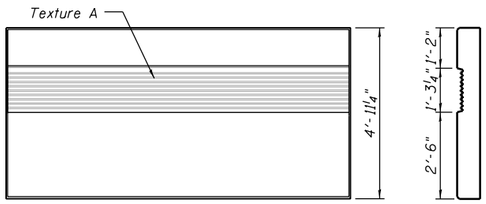


PANEL 0

PANEL 1

PANEL 2

PANEL 2R



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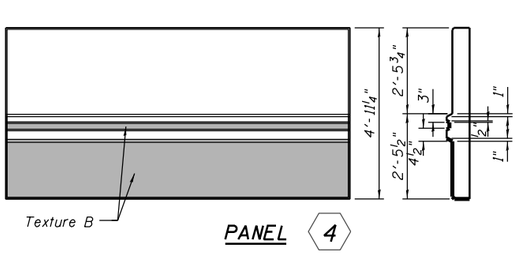

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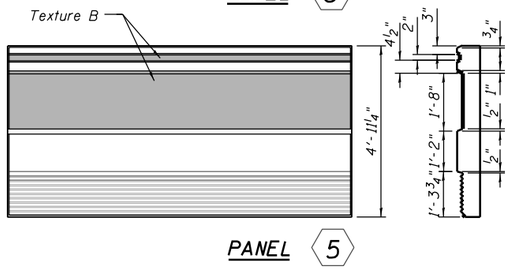
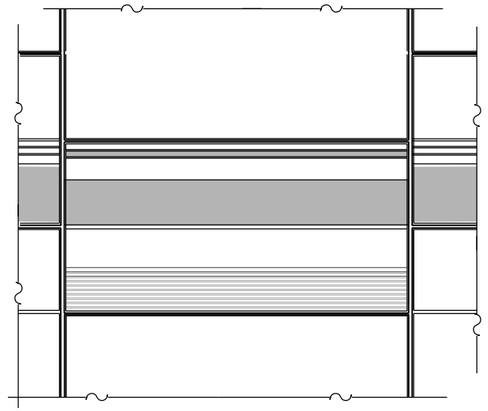
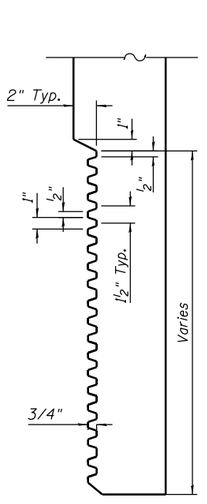


PANEL 5

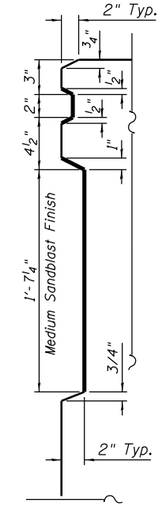
TYPICAL CONCRETE PANELS DETAILS



DETAIL



FORMLINER TEXTURE A



FORMLINER TEXTURE B

NOTES:

1. Textured formliner for precast panels shall not be paid separately but shall be included in the cost of "Mechanically Stabilized Earth Retaining Wall, Special".
2. Formliner layout numbering is typical for all MSE retaining walls in this Contract. Formliner details for precast panels are typical for all panels shown in this Contract.
3. MSE Supplier to determine precast panel dimensions based on proprietary design. The suggested 10'-0" Nom. width shown here may change depending on supplier. If this is the case, it will be addressed by the Engineer and coordinated with the supplier during the Shop Drawing submittal and review.

016-Z048-CIRCLE100-SHT-ACM-ST-ARCH-1.dgn

AECOM

USER NAME = keserovicm	DESIGNED - MK	REVISED
	CHECKED - ATB	REVISED
PLOT SCALE = N.T.S.	DRAWN - MK	REVISED
PLOT DATE = 3/5/2020	CHECKED - ATB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARCHITECTURAL DETAILS
RETAINING WALL 51 (STRUCTURE NO. 016-Z048)
SHEET NO. S7-05 OF 9 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	537
		CONTRACT NO. 60X94		
	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 29-RWB-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 591.82 ft
North: 1899679.29 ft
East: 1171674.90 ft
Station: 6346+29.02
Offset: 46.4686 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Black SANDY LOAM, trace slag --FILL--						
	589.8				1	8 16 17	NP	12
		Dense to very dense, brown SANDY GRAVEL --FILL--	5		2	4 13 24	NP	8
					3	5 50/3"	NP	10
	583.1				4	1 2 3	0.66 B	16
		Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel	10		5	0 0 0	0.25 B	27
			15		6	0 0 0	0.25 B	27
					7	0 0 0	0.25 B	27
			20		8	0 0 0	0.25 B	27
			25		9	0 0 0	0.25 B	24
					10	0 0 0	0.66 B	25
					11	0 0 0	0.41 B	26
			30		12	0 1 2	0.25 P	26
		--L_L(%)=34, P_L(%)=17-- --%Gravel=10.0-- --%Sand=13.8-- --%Silt=47.8-- --%Clay=28.5-- --A-6 (11)--			13	0 0 0	0.33 B	27
			35		14	0 0 0	0.41 B	27

GENERAL NOTES

Begin Drilling: 06-17-2014 Complete Drilling: 06-17-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 TMR [78%]
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10',mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 1/4/18

Wang Engineering
wangeng@wangeng.com
1145 N Main Street
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Telephone: (630) 953-9928
Fax: (630) 953-9938

BORING LOG 29-RWB-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 591.82 ft
North: 1899679.29 ft
East: 1171674.90 ft
Station: 6346+29.02
Offset: 46.4686 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45		15	0 2 2	0.57 B	23
			50		16	2 3 3	0.66 B	27
	540.1	Stiff, gray SILTY CLAY LOAM, trace gravel			17	3 4 6	1.48 B	21
	535.1	Stiff, gray SILTY LOAM to SILTY CLAY LOAM, trace gravel --L_L(%)=24, P_L(%)=14-- --%Gravel=5.8-- --%Sand=19.4-- --%Silt=57.2--	60		18	4 9 8	1.75 P	16
		--%Clay=17.6-- --A-4 (5)--						
	530.1	Very stiff, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel			19	4 7 13	2.30 B	18
	526.8	Boring terminated at 65.00 ft	65					
			70					
			75					
			80					

GENERAL NOTES

Begin Drilling: 06-17-2014 Complete Drilling: 06-17-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 TMR [78%]
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10',mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 1/4/18

NOTE:

1. Station and offset are measured along ℄ NB C-D Road.

016-Z048-SHT-ACM-006-Boring1.dgn

AECOM

USER NAME = keserovicm	DESIGNED - MK	REVISED	
	CHECKED - ATB	REVISED	
PLOT SCALE = N.T.S.	DRAWN - MK	REVISED	
PLOT DATE = 3/5/2020	CHECKED - ATB	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS I
RETAINING WALL 51 (STRUCTURE NO. 016-Z048)
SHEET NO. S7-06 OF 9 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	538
		CONTRACT NO. 60X94		
	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 29-RWB-02

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 593.63 ft
North: 1899746.45 ft
East: 1171670.23 ft
Station: 6346+95.65
Offset: 42.2226 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	593.2	5-inch thick, black LOAM --TOPSOIL--				H	P	
		Medium dense, gray and black SANDY LOAM, trace slag --FILL--			1	5 8 8	NP	14
	590.6	Loose to very dense, brown SANDY GRAVEL --FILL--	5		2	9 13 31	NP	10
		--HARD DRILLING--			3	7 8 50/4"	NP	11
			10		4	25 5 4	NP	6
	583.1	Very soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel			5	0 0 0	0.41 B	26
			15					
			20		1	P U S	0.25	22
			25					
		--UC test-- --Shear strength (Cu) = 320 psf--	30		2	P U S H	0.25 P	25
			35					
			40		3	P U S	0.25	26

GENERAL NOTES

Begin Drilling: 06-16-2014 Complete Drilling: 06-16-2014
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR [100%]
Driller: N&K Logger: A. Happel Checked by: C. Marin
Drilling Method: 3.25" HSA to 11', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: Rotary wash
At Completion of Drilling: mud in the borehole
Time After Drilling: NA
Depth to Water: NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 1/4/18

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

BORING LOG 29-RWB-02

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 593.63 ft
North: 1899746.45 ft
East: 1171670.23 ft
Station: 6346+95.65
Offset: 42.2226 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45			H	P	
	541.6	Very stiff, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel	50		4	P U S H	0.75 P	25
			55		6	3 5 6	1.39 B	20
			60		7	6 8 11	2.54 B	15
			65		8	4 6 10	2.13 B	20
	528.6	Boring terminated at 65.00 ft						
			70					
			75					
			80					

GENERAL NOTES

Begin Drilling: 06-16-2014 Complete Drilling: 06-16-2014
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR [100%]
Driller: N&K Logger: A. Happel Checked by: C. Marin
Drilling Method: 3.25" HSA to 11', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: Rotary wash
At Completion of Drilling: mud in the borehole
Time After Drilling: NA
Depth to Water: NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 1/4/18

NOTE:

1. *Station and offset are measured along ℄ NB C-D Road.*

016-Z048-SHT-ACM-007-Boring2.dgn

AECOM

USER NAME = keserovicm	DESIGNED - MK	REVISED	
	CHECKED - ATB	REVISED	
PLOT SCALE = N.T.S.	DRAWN - MK	REVISED	
PLOT DATE = 3/5/2020	CHECKED - ATB	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS II
RETAINING WALL 51 (STRUCTURE NO. 016-Z048)
SHEET NO. S7-07 OF 9 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	539
		CONTRACT NO. 60X94		
	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 27-ST-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 583.22 ft
North: 1899499.80 ft
East: 1171633.19 ft
Station: 6344+49.77
Offset: 7.8352 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	582.9	4-inch thick, black SILTY CLAY LOAM						
		--TOPSOIL--						
		Stiff to very stiff, brown SILTY CLAY LOAM, trace to some gravel, bricks fragments			1	5 5 3	2.50 P	20
		--FILL--			2	3 4 5	1.97 P	15
	577.7	Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel	5		3	2 2 2	0.90 B	19
		--S_u=0.22 tsf (UU TXC 10psi)--			1	PUSH		25
		--S_u=0.37 tsf (UU TXC 20psi)--						
		--S_u=0.15 tsf (UU TXC 40psi)--	10					
		--C_c=0.215, OCR=1.9--			2	PUSH		25
		--S_u=0.29 tsf (UU TXC 10psi)--	15		3	PUSH		22
		--S_u=0.23 tsf (UU TXC 20psi)--						
		--S_u=0.30 tsf (UU TXC 40psi)--						
					4	PUSH	NA	
			20					
		--S_u=0.27 tsf (UU TXC 10psi)--	25		5	PUSH	NA	
		--S_u=0.29 tsf (UU TXC 20psi)--						
		--S_u=0.32 tsf (UU TXC 40psi)--			6	PUSH		
			30		7	PUSH		25
					8	PUSH	NA	
		--S_u=0.41 tsf (UU TXC 10psi)--	35		9	PUSH		24
		--S_u=0.37 tsf (UU TXC 20psi)--						
		--S_u=0.41 tsf (UU TXC 40psi)--			10	PUSH	NA	
		--S_u=0.39 tsf (UU TXC 10psi)--	40		11	PUSH		24
		--S_u=0.45 tsf (UU TXC 20psi)--						
		--S_u=0.46 tsf (UU TXC 40psi)--						

GENERAL NOTES

Begin Drilling: 10-27-2014 Complete Drilling: 10-27-2014
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR [100%]
Driller: P&P Logger: F. Bozga Checked by: C. Marin
Drilling Method: 3.25" IDA HSA, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: Groundwater
At Completion of Drilling: not observed
Time After Drilling: NA
Depth to Water: NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 1/4/18

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Telephone: (630) 953-9928
Fax: (630) 953-9938

BORING LOG 27-ST-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 583.22 ft
North: 1899499.80 ft
East: 1171633.19 ft
Station: 6344+49.77
Offset: 7.8352 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	542.7	Stiff to very stiff, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel						
		-- Laboratory Q_u=0.93 tsf--			12	PUSH	0.93 B	17
		-- Laboratory Q_u=1.38 tsf--	45		13	PUSH	1.38 B	18
	533.2	Boring terminated at 50.00 ft	50		14	5 7 9	2.71 B	15
			55					
			60					

GENERAL NOTES

Begin Drilling: 10-27-2014 Complete Drilling: 10-27-2014
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR [100%]
Driller: P&P Logger: F. Bozga Checked by: C. Marin
Drilling Method: 3.25" IDA HSA, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: Groundwater
At Completion of Drilling: not observed
Time After Drilling: NA
Depth to Water: NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 1/4/18

NOTE:

1. *Station and offset are measured along ℄ NB C-D Road.*

USER NAME = keserovicm	DESIGNED - MK	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS III RETAINING WALL 51 (STRUCTURE NO. 016-Z048)
	CHECKED - ATB	REVISED		
PLOT SCALE = N.T.S.	DRAWN - MK	REVISED		SHEET NO. S7-08 OF 9 SHEETS
PLOT DATE = 3/5/2020	CHECKED - ATB	REVISED		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	540
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

016-Z048-SHT-ACM-008-Boring3.dgn

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

BORING LOG VST-02

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 585.26 ft
North: 1899543.57 ft
East: 1171652.91 ft
Station: 6344+93.97
Offset: 26.2366 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Medium stiff, black and gray SILTY CLAY, trace sand and gravel --FILL--						
			5		1	6 4 3	0.90 B	28
	579.8							
		Very soft, gray SILTY CLAY, trace sand and gravel			2	1 2 1	0.20 B	25
	576.8							
			10					
		--In-Situ Vane Shear, 10.5 feet-- --$S_{u\,undis}$ = 425.9 psf-- --$S_{u\,remold}$ = 218.4 psf-- --Sensitivity = 2.0--			1	VS		
		--In-Situ Vane Shear, 13.0 feet-- --$S_{u\,undis}$ = 589.7 psf-- --$S_{u\,remold}$ = 283.9 psf-- --Sensitivity = 2.1--	15		2	VS		
		--In-Situ Vane Shear, 15.5 feet-- --$S_{u\,undis}$ = 622.5 psf-- --$S_{u\,remold}$ = 425.9 psf-- --Sensitivity = 1.5--			3	VS		
		--In-Situ Vane Shear, 18.0 feet-- --$S_{u\,undis}$ = 491.4 psf-- --$S_{u\,remold}$ = 415.0 psf-- --Sensitivity = 1.2--	20		4	VS		
		--In-Situ Vane Shear, 20.5 feet-- --$S_{u\,undis}$ = 884.6 psf-- --$S_{u\,remold}$ = 655.2 psf-- --Sensitivity = 1.4--			5	VS		
		--In-Situ Vane Shear, 23.0 feet-- --$S_{u\,undis}$ = 939.2 psf-- --$S_{u\,remold}$ = 655.2 psf-- --Sensitivity = 1.4--	25		6	VS		
		--In-Situ Vane Shear, 25.5 feet-- --$S_{u\,undis}$ = 786.3 psf-- --$S_{u\,remold}$ = 611.6 psf-- --Sensitivity = 1.3--			7	VS		
		--In-Situ Vane Shear, 28.0 feet-- --$S_{u\,undis}$ = 644.3 psf-- --$S_{u\,remold}$ = 382.2 psf-- --Sensitivity = 1.7--			8	VS		
		--In-Situ Vane Shear, 30.5 feet-- --$S_{u\,undis}$ = 720.8 psf-- --$S_{u\,remold}$ =458.7 psf-- --Sensitivity = 1.6--	30		9	VS		
		--In-Situ Vane Shear, 33.0 feet-- --$S_{u\,undis}$ = 851.8 psf-- --$S_{u\,remold}$ = 567.9 psf-- --Sensitivity = 1.5--			10	VS		
		--In-Situ Vane Shear, 35.5 feet-- --$S_{u\,undis}$ = 895.5 psf-- --$S_{u\,remold}$ = 666.2 psf-- --Sensitivity = 1.3--	35		11	VS		
		--In-Situ Vane Shear, 38.0 feet-- --$S_{u\,undis}$ = 993.8 psf-- --$S_{u\,remold}$ = 720.8 psf-- --Sensitivity = 1.4--	40		12	VS		

GENERAL NOTES

Begin Drilling: 12-04-2015 Complete Drilling: 12-05-2015
Drilling Contractor: Wang Testing Services Drill Rig: CME-55 TMR [85%]
Driller: R&N Logger: I. Mohammud Checked by: A. Kurnia
Drilling Method: 2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 1/4/18

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Fax: (630) 953-9938

BORING LOG VST-02

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 585.26 ft
North: 1899543.57 ft
East: 1171652.91 ft
Station: 6344+93.97
Offset: 26.2366 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--In-Situ Vane Shear, 40.5 feet-- --$S_{u\,undis}$ = 1277.7 psf-- --$S_{u\,remold}$ = 808.1 psf-- --Sensitivity = 1.6--			13	VS		
	541.8	--In-Situ Vane Shear, 43.0 feet-- --$S_{u\,undis}$ > 1750 psf--			14	VS		
		Boring terminated at 43.50 ft						
			45					
			50					
			55					
			60					

GENERAL NOTES

Begin Drilling: 12-04-2015 Complete Drilling: 12-05-2015
Drilling Contractor: Wang Testing Services Drill Rig: CME-55 TMR [85%]
Driller: R&N Logger: I. Mohammud Checked by: A. Kurnia
Drilling Method: 2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 1/4/18

NOTE:

1. Station and offset are measured along ℄ NB C-D Road.

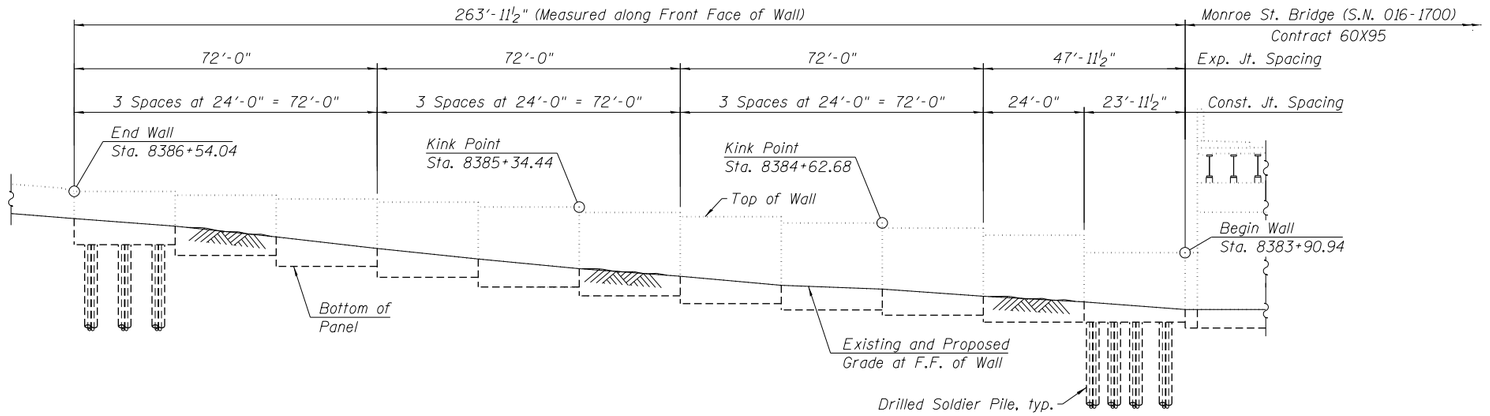
Bench Mark: Set "X" on east barrier wall of I-90 at ℄ of Adams Street. Elev. 581.17.

Existing Structure: Existing Retaining Wall 18. Constructed in 2009 under Section 0202.6-2P, ETC. 1415 & 1517 R-7. Drilled soldier pile wall with reinforced concrete facing. Total length of 263′-11½″ from Monroe Street to Adams Street. Height varies 3′-8″ to 8′-2″.

Traffic on Adams Exit Ramp will be detoured during construction.

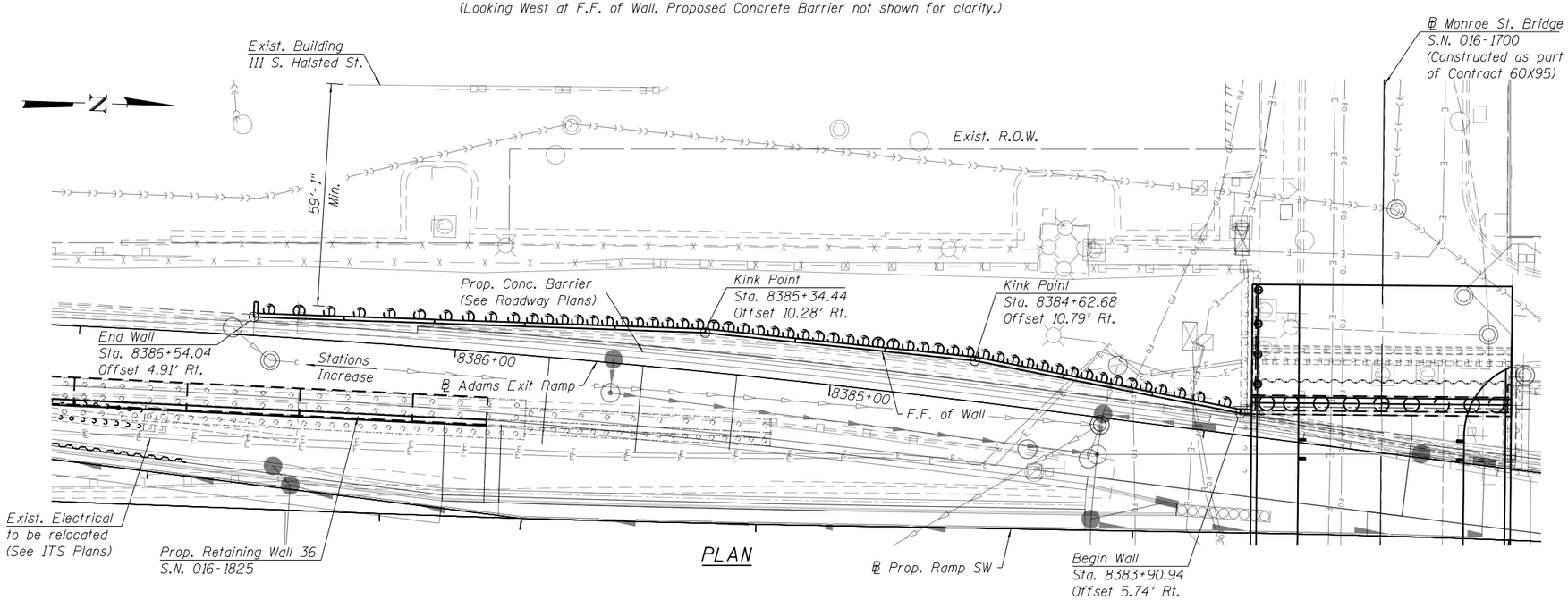
No Salvage.

Notes:
Stations and offsets of Existing Retaining Wall 18 are refereced along proposed Prop. ℄ Adams Exit Ramp to the front face of the existing wall.
F.F. denotes Front Face.
B.F. denotes Back Face.

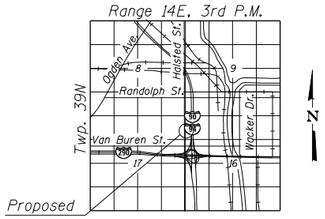


ELEVATION

(Looking West at F.F. of Wall, Proposed Concrete Barrier not shown for clarity.)



PLAN



LOCATION SKETCH

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

DESIGN STRESSES

EXISTING UNITS

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

LEGEND:

Ex. Chain Link Fence	— X —	Existing Catch Basin	○
Ex. Combined Sewer	→→→→	Proposed Catch Basin	●
Ex. Electric	—E—	Existing Manhole	◎
Ex. Fiber Optic	—FO—	Proposed Manhole	⊙
Ex. Storm Sewer	——▷——	Proposed Inlet	▬
Prop. Storm Sewer	——▶——		

MATTHEW D. SANTEFORD
081-007244
LICENSED STRUCTURAL ENGINEER
OF
STATE OF ILLINOIS

03-06-2020

MATTHEW D. SANTEFORD, P.E., S.E.
NO. 081-007244
EXP. DATE 11/30/2020

GENERAL PLAN AND ELEVATION
EXISTING RETAINING WALL 18 ALONG ADAMS STREET EXIT RAMP
SECTION 2014-015 R&B-R
COOK COUNTY
STATION 8383+90.94 TO STATION 8386+54.04
STRUCTURE NO. 016-W989

TranSystems

USER NAME = wjcollett	DESIGNED - WJC	REVISED -
	CHECKED - MDS	REVISED -
PLOT SCALE = NTS	DRAWN - WJC	REVISED -
PLOT DATE = 3/5/2020	CHECKED - MDS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. S8-01 OF S8-03 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	542
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES:

1. Wall repair locations are approximate and were determined from field inspection performed at the time of plan preparation. The necessary adjustments based on current field conditions will be made at time of construction. Such variations shall not be cause for additional compensation for a change in the scope of work. However, the Contractor will be paid for the actual quantity furnished at the unit price bid for the work.

2. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

3. Concrete Sealer shall be applied to exposed front face of existing retaining wall.

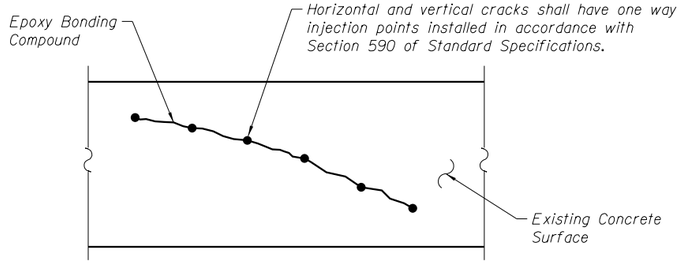
4. Existing reinforcing steel which is exposed by the concrete repair process, but is to remain embedded in the existing structure and reused, shall be cleaned to be free of existing concrete and rust, and straightened if necessary. Existing reinforcing steel which is cut, stretched or damaged by the Contractor during the concrete repair process shall be replaced by embedded reinforcing steel or anchorage, equal to or greater than the size of original reinforcing steel, at no cost to the Department. See Special Provisions for Structural Repair of Concrete.

5. The Contractor shall take precautions not to damage existing retaining wall during the construction. Any damage to the existing retaining wall shall be repaired by the Contractor at no additional cost.

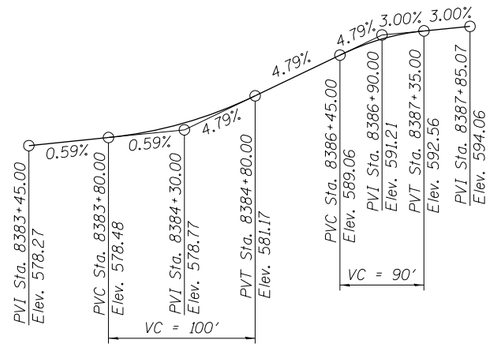
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL QUANTITY
Concrete Sealer	Sq. Ft.	1,949
Epoxy Crack Injection	Foot	26
Structural Repair of Concrete (Depth equal to or less than 5 inches)	Sq. Ft.	2

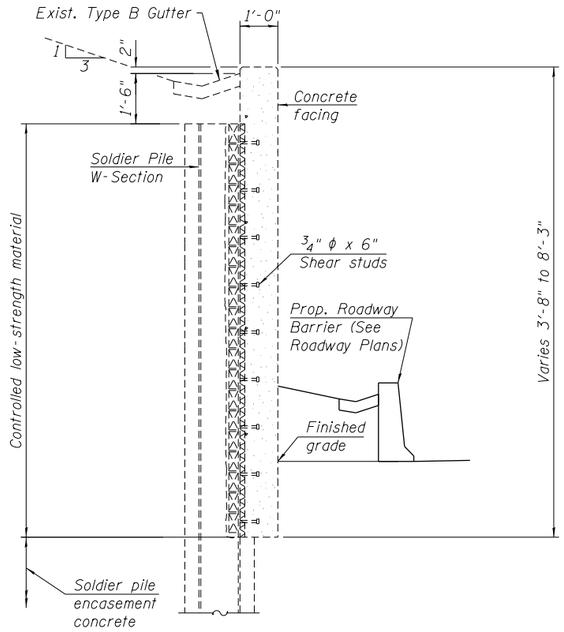
INDEX OF SHEETS



EPOXY CRACK INJECTION



PROFILE GRADE
(℄ Adams Exit Ramp)



TYPICAL CROSS SECTION

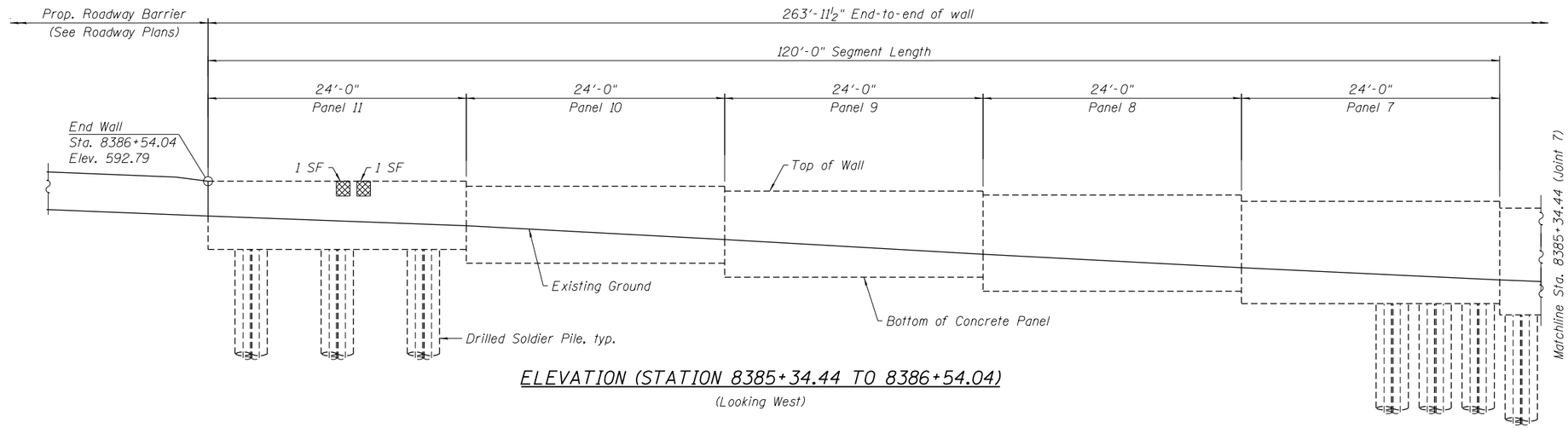
TranSystems

USER NAME = wjcollett1	DESIGNED - WJC	REVISED -
	CHECKED - MDS	REVISED -
PLOT SCALE = NTS	DRAWN - WJC	REVISED -
PLOT DATE = 3/5/2020	CHECKED - MDS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

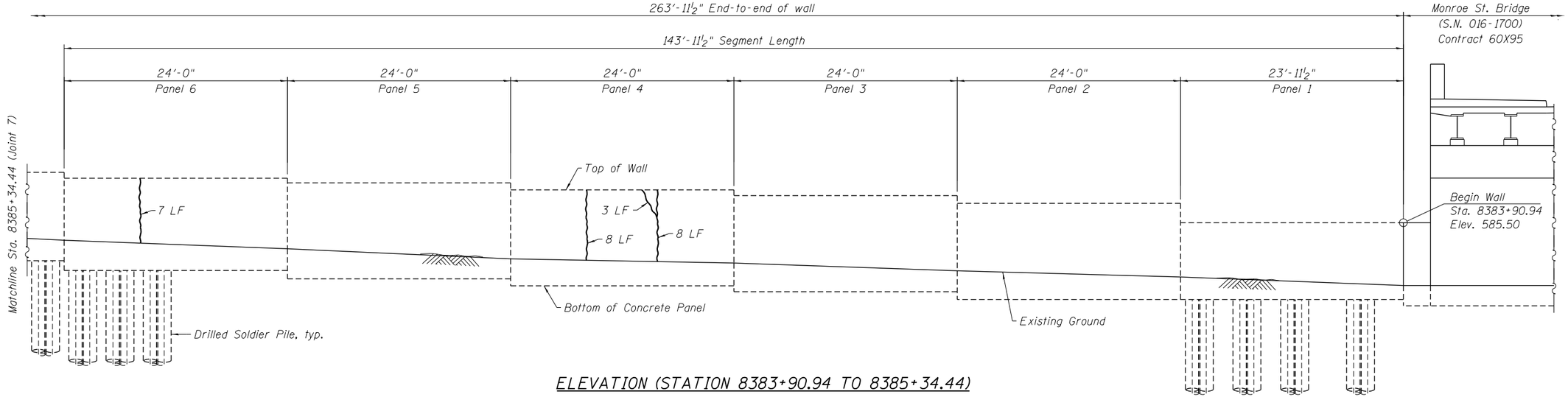
GENERAL DATA
EXISTING RETAINING WALL 18 (STRUCTURE NO. 016-W989)
SHEET NO. S8-02 OF S8-03 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	543
		CONTRACT NO.		60X94
		ILLINOIS FED. AID PROJECT		



ELEVATION (STATION 8385+34.44 TO 8386+54.04)

(Looking West)



ELEVATION (STATION 8383+90.94 TO 8385+34.44)

(Looking West)

LEGEND

- Area of Structural Repair of Concrete (Depth Equal to or Less than 5")
- Epoxy Crack Injection
- SF - Square Foot
- LF - Linear Foot

Notes:
Stations are measured along the ℄ of Prop. Adams Exit Ramp.

TranSystems	USER NAME = wjcollett	DESIGNED - WJC	REVISED -
		CHECKED - MDS	REVISED -
	PLOT SCALE = NTS	DRAWN - WJC	REVISED -
	PLOT DATE = 3/5/2020	CHECKED - MDS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR PLANS
EXISTING RETAINING WALL 18 (STRUCTURE NO. 016-W989)
SHEET NO. S8-03 OF S8-03 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	544
		CONTRACT NO. 60X94		
		ILLINOIS FED. AID PROJECT		

Bench Mark:
Chisel "X" on chain bolt of fire hydrant, south side of Monroe, first fire hydrant west of Des Plaines Street. Elevation 594.76'.
Existing Structure: None
Traffic Control: Traffic will be maintained along NB I-90/94 lanes during construction

DESIGN SPECIFICATIONS

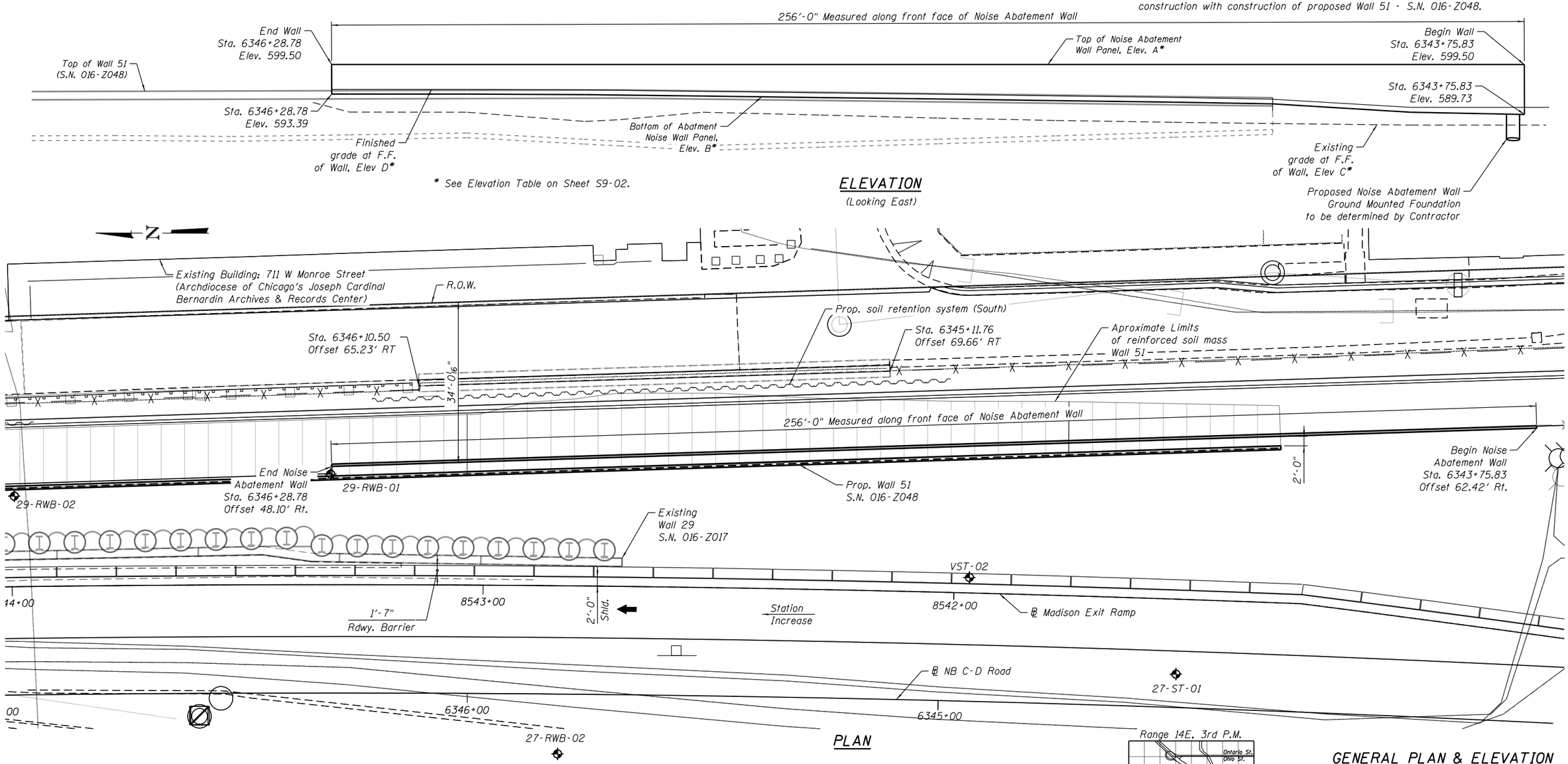
2017 AASHTO LRFD Bridge Design Specifications, 8th Edition
Guide Specifications for structural Design of Sound Barriers, 2002.

NOISE WALL WIND LOADING

35 psf (Ground Mounted)

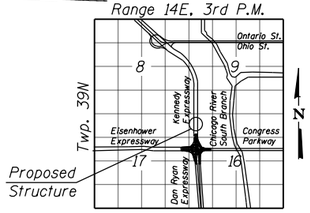
NOTES:

1. Stations and offsets are measured along ℄ NB C-D Road to the front face of the Wall.
2. For the Prop. Wall 51, S.N. 016-Z048 and Soil Retention System details, see sheets S7-01 thru. S7-10.
3. The Contractor shall coordinate proposed Noise Abatement Wall construction with construction of proposed Wall 51 - S.N. 016-Z048.



LEGEND:

Combined Sewer
Existing Storm Sewer
Proposed Storm Sewer
Electric — E —
Light Pole
Soil Boring Location
Existing Fence
Fiber Optic — FO —
Catch Basin
FF = Front face of wall
BF = Back face of wall



LOCATION SKETCH

GENERAL PLAN & ELEVATION
NOISE ABATEMENT WALL
F.A.I. RTE. 90/94
SECTION 2014-015 R&B-R
COOK COUNTY
STA. 6343+75.83
TO STA. 6346+28.78

USER NAME = keserovicm	DESIGNED - [illegible]		REVISED
	CHECKED - ATB		REVISED
PLOT SCALE = N.T.S.	DRAWN - [illegible]		REVISED
PLOT DATE = 3/5/2020	CHECKED - ATB		REVISED

AECOM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

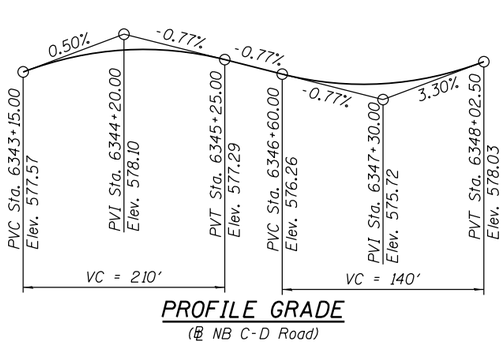
GENERAL PLAN AND ELEVATION
NOISE ABATEMENT WALL
SHEET NO. S9-01 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	545
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			

60X94-SHT-01-GPE-NOISE WALL

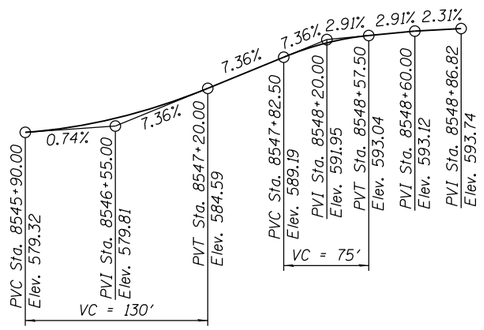
GENERAL NOTES

1. Contractor shall follow requirements of Special Provision "Ground Mounted Concrete Noise Abatement Walls (Absorptive and Reflective)" for material, design, fabrication, construction and erection requirements of the proposed Noise Abatement Wall.
2. The Contractor shall field verify location of existing utilities prior to construction. The Contractor shall take precautions not to damage existing utilities. Any such damage shall be repaired by the Contractor at no additional cost.
3. The Contractor shall exercise extreme caution during construction to make certain that construction activities, live load surcharge and other loads applied to the structures will not have detrimental effects on the adjacent buildings and utilities. See Contract Special Provision for details.
4. Noise Abatement Wall (NAW) drilled shaft foundation construction shall follow the requirements of Special Provision "Foundation Drilling Procedures".
5. Noise Abatement Wall (NAW) drilled shaft foundation diameter, depth, and spacing to be determined by Contractor.
6. The Contractor shall install pile sleeve around NAW drilled shaft foundation prior to LCCF placement for the Prop. Wall 51, S.N. 016-Z048. The pipe sleeve shall be provided within Prop. Wall 51 reinforced soil mass limits. The annulus between sleeve and NAW drilled shaft foundation shall be filled with loose dry sand.
7. The Contractor shall take all necessary precautions not to contaminate groundwater during the Noise Abatement Wall drilled shaft foundation construction operation. Contractor is responsible for the proper containment and disposal of the contaminated groundwater and spoils resulting from Contractor's means and methods. No additional cost will be paid for this effort.
8. Contractor shall provide one 4" ϕ weep hole per Noise Abatement Wall precast panel. Weep hole shall be located at the center of precast panel along the finished grade elevation at the front face of Noise Abatement Wall. Cost shall be included with Noise Abatement Wall, Ground Mounted.
9. The Contractor shall coordinate construction of Prop. Noise Abatement Wall with Wall 51, S.N. 016-Z048 construction.



PROFILE GRADE

(℄ NB C-D Road)



PROFILE GRADE

(℄ Madison NB Exit Ramp)

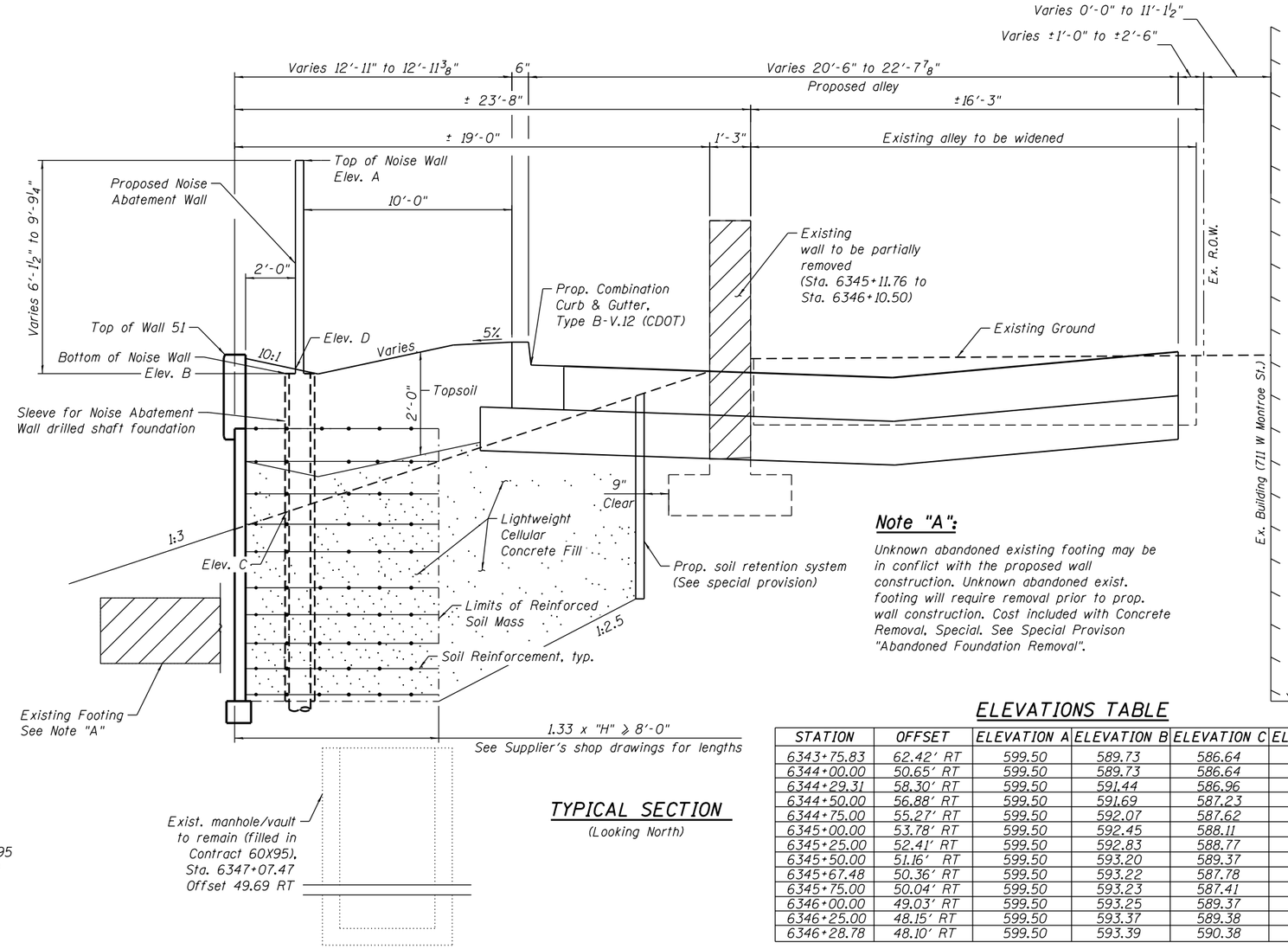
CURVE DATA

(NB C-D Road)
Curve: P-NCD-NX-6
PI Sta. = 6345+36.95
Δ = 5° 12' 37" (LT)
D = 1° 05' 35"
R = 5,242.00'
T = 238.51'
L = 476.70'
E = 5.42'
e = RC
T.R. = NA
S.E. Run = NA
P.C. Sta. = 6342+98.44
P.T. Sta. = 6347+75.14

TOTAL BILL OF MATERIAL

DESCRIPTION	UNIT	TOTAL
Noise Abatement Wall, Ground Mounted	SQ.FT.	1859
Stainless Steel Cable Plant Support System	L.SUM.	1

INDEX OF SHEETS:



Note "A":

Unknown abandoned existing footing may be in conflict with the proposed wall construction. Unknown abandoned exist. footing will require removal prior to prop. wall construction. Cost included with Concrete Removal, Special. See Special Provison "Abandoned Foundation Removal".

TYPICAL SECTION

(Looking North)

ELEVATIONS TABLE

STATION	OFFSET	ELEVATION A	ELEVATION B	ELEVATION C	ELEVATION D
6343+75.83	62.42' RT	599.50	589.73	586.64	590.40
6344+00.00	50.65' RT	599.50	589.73	586.64	590.40
6344+29.31	58.30' RT	599.50	591.44	586.96	592.11
6344+50.00	56.88' RT	599.50	591.69	587.23	592.36
6344+75.00	55.27' RT	599.50	592.07	587.62	592.74
6345+00.00	53.78' RT	599.50	592.45	588.11	593.12
6345+25.00	52.41' RT	599.50	592.83	588.77	593.50
6345+50.00	51.16' RT	599.50	593.20	589.37	593.87
6345+67.48	50.36' RT	599.50	593.22	587.78	593.89
6345+75.00	50.04' RT	599.50	593.23	587.41	593.90
6346+00.00	49.03' RT	599.50	593.25	589.37	593.92
6346+25.00	48.15' RT	599.50	593.37	589.38	594.04
6346+28.78	48.10' RT	599.50	593.39	590.38	594.06

Elevation A: Top of Noise Abatement Wall Panel
Elevation B: Bottom of Noise Abatement Wall Panel
Elevation C: Existing Grade at F.F. of Wall
Elevation D: Finished Grade at F.F. of Wall

LEGEND:

Structure Removal Limit

AECOM	USER NAME = keserovicm	DESIGNED - MK	REVISED
		CHECKED - ATB	REVISED
	PLOT SCALE = N.T.S.	DRAWN - MK	REVISED
	PLOT DATE = 3/5/2020	CHECKED - ATB	REVISED

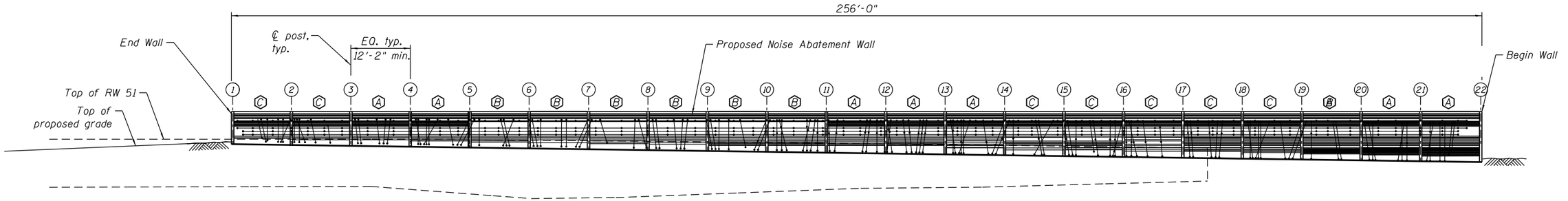
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION, TOTAL BILL OF MATERIAL, INDEX OF SHEETS & GENERAL NOTES
NOISE ABATEMENT WALL

SHEET NO. S9-02 OF 8 SHEETS

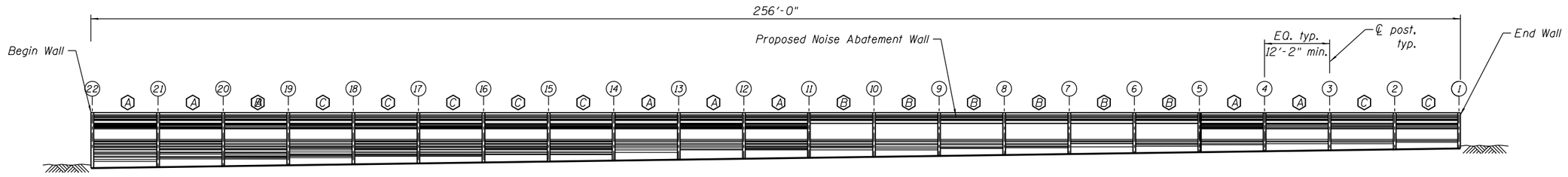
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	546
		CONTRACT NO. 60X94		
		ILLINOIS FED. AID PROJECT		

60X94-SHT-02-GenNote-NOISE WALL



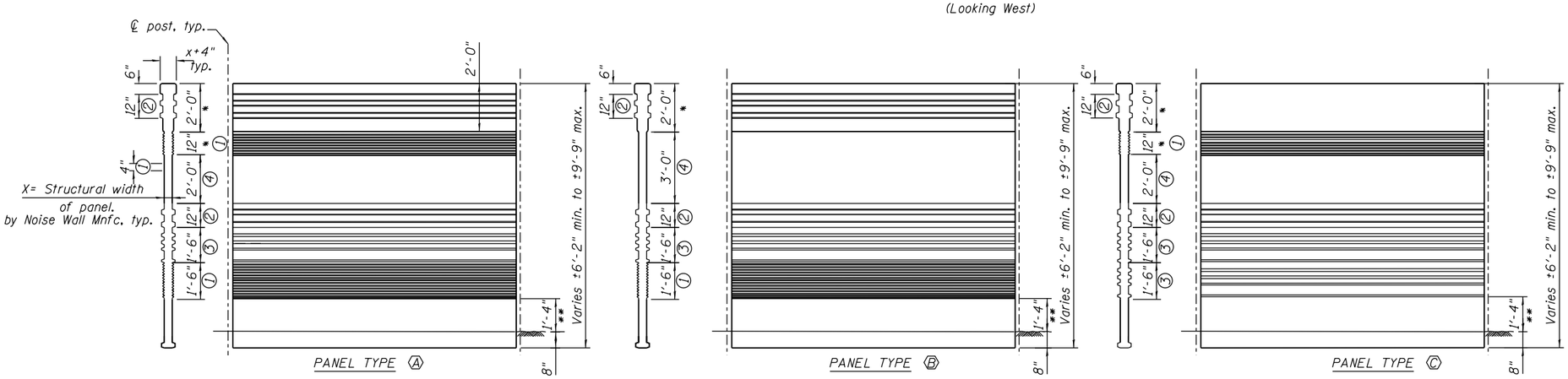
NOISE ABATEMENT WALL - ELEVATION

(Looking East)



NOISE ABATEMENT WALL - ELEVATION

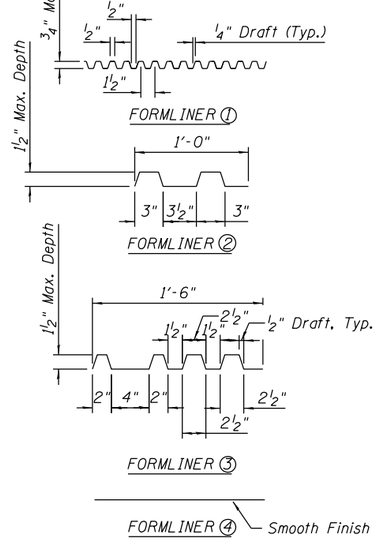
(Looking West)



PRECAST PANEL TYPE DETAILS

* Fixed dimension from top of panel. Formliner patterns below fixed dimension shall vary to accomodate different panel height.

** Formliner layout is shown for the max. panel height. Omit formliner 1'-4" above finished grade to allow for the SS spacer to be attached on flat surface.



FORMLINER DETAILS

LEGEND:

Ⓐ Ⓑ Ⓒ — Precast Panel Type Designation Based on Formliner Layout

① ② ③ ④ — Formliner Type Designation

NOTES:

1. Textured formliner for precast panels will not be paid separately and will be included in the cost of the pay item "Noise Abatement Wall, ground mounted".
2. For detailed dimensions, station and elevation of noise wall, see Sheets S9-01 and S9-02.

60X94-SHT-03-ARCH-NOISE WALL.dgn

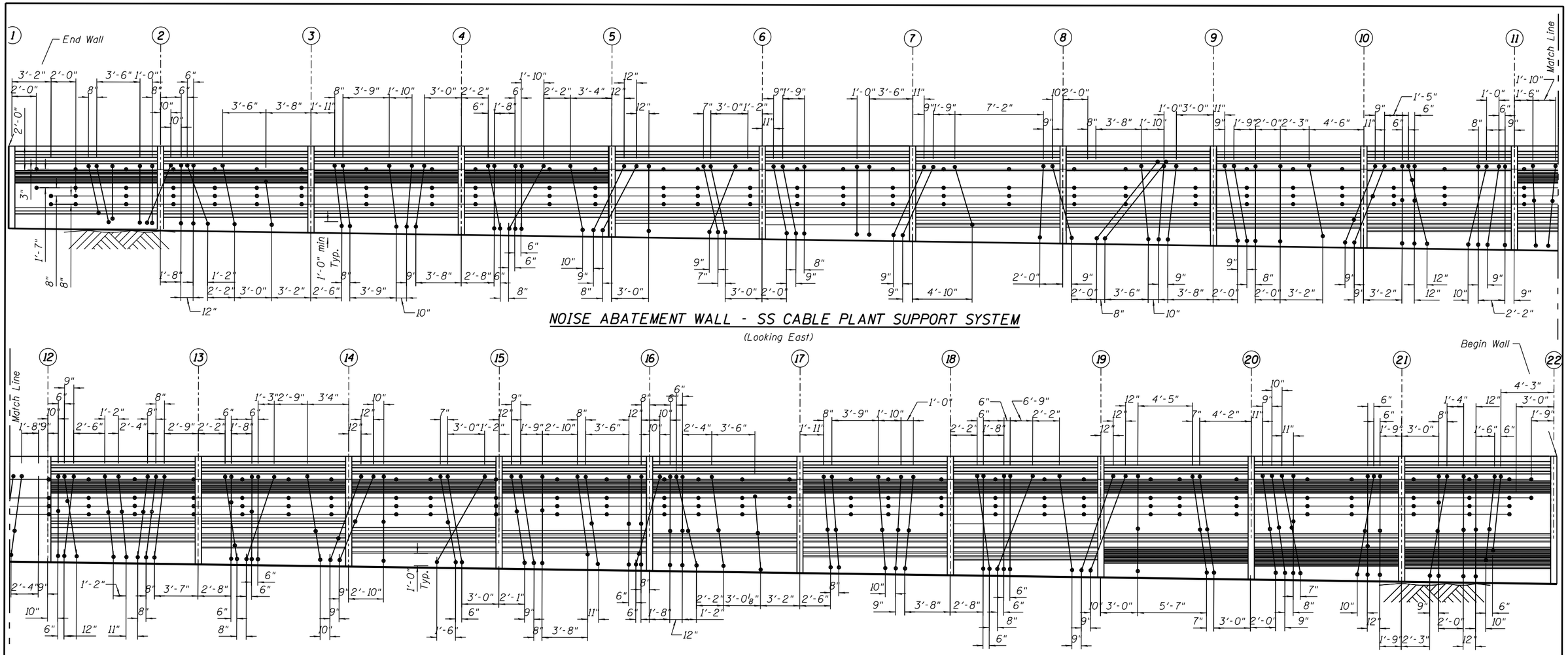
AECOM

USER NAME = keserovicm	DESIGNED - MR	REVISED
	CHECKED - ATB	REVISED
PLOT SCALE = N.T.S.	DRAWN - MR	REVISED
PLOT DATE = 3/5/2020	CHECKED - ATB	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARCHITECTURAL DETAILS I
NOISE ABATEMENT WALL
SHEET NO. S9-03 OF 9 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	547
		CONTRACT NO. 60X94		
ILLINOIS	FED. AID PROJECT			

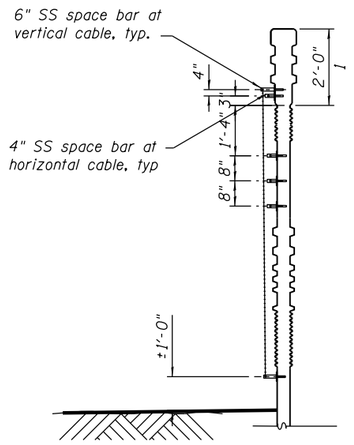


NOISE ABATEMENT WALL - SS CABLE PLANT SUPPORT SYSTEM

(Looking East)

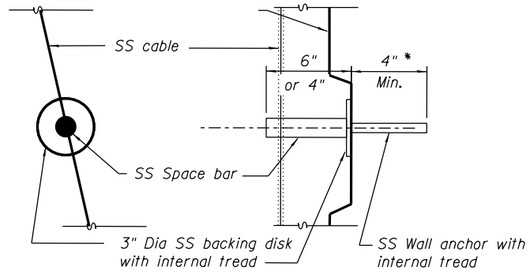
NOISE ABATEMENT WALL - SS CABLE PLANT SUPPORT SYSTEM

(Looking East)



TYPICAL SECTION

(Looking North)



* For size and type of wall anchor follow Manufacturer's instructions and installation guide.

SS CABLE WALL MOUNT UNIT TYPICAL DETAIL

NOTES:

1. Stainless steel cable system will be paid at a lump sum price for "Stainless Steel Cable Plant Support System" per noise abatement wall.
2. Locate bottom anchor ±1'-0" above finished grade.
3. Line up anchors as shown on elevation where possible, maintaining 6'-0" maximum spacing between anchor points.
4. Anchors location should be on flat surface of panel, not on top of formliner textured portion.
5. If the suggested post spacing for the Noise Abatement Wall change, the SS cable panels may need to be repositioned to fit the new spacing. If this will be the case, it will be addressed by the Engineer and coordinated with the supplier during the Shop Drawing submittal and review.
6. For precast panel details and formliners see drawing S9-03.
7. For detailed dimensions, station and elevation of noise wall, see sheet S9-01.

BILL OF MATERIAL

Item	Unit	Total
Stainless Steel Cable Plant Support System	L. Sum	1

60X94-SHT-04-Cables_ARCH-NOISE WALL.dgn

AECOM

USER NAME = keserovicm	DESIGNED - MRB	REVISED	
	CHECKED - ATB	REVISED	
PLOT SCALE = N.T.S.	DRAWN - MRK	REVISED	
PLOT DATE = 3/5/2020	CHECKED - ATB	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARCHITECTURAL DETAILS – II
NOISE ABATEMENT WALL
SHEET NO. S9-04 OF 9 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	548
		CONTRACT NO. 60X94		
	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 29-RWB-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 591.82 ft
North: 1899679.29 ft
East: 1171674.90 ft
Station: 6346+29.02
Offset: 46.4686 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Black SANDY LOAM, trace slag --FILL--						
	589.8				1	8 16 17	NP	12
		Dense to very dense, brown SANDY GRAVEL --FILL--						
			5		2	4 13 24	NP	8
					3	5 50/3"	NP	10
	583.1							
		Soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel			4	1 2 3	0.66 B	16
			10		5	0 0 0	0.25 B	27
			15		6	0 0 0	0.25 B	27
					7	0 0 0	0.25 B	27
			20		8	0 0 0	0.25 B	27
			25		9	0 0 0	0.25 B	24
					10	0 0 0	0.66 B	25
					11	0 0 0	0.41 B	26
			30		12	0 1 2	0.25 P	26
		--L_L(%)=34, P_L(%)=17-- --%Gravel=10.0-- --%Sand=13.8-- --%Silt=47.8-- --%Clay=28.5-- --A-6 (11)--	35		13	0 0 0	0.33 B	27
			40		14	0 0 0	0.41 B	27

GENERAL NOTES

Begin Drilling: 06-17-2014 Complete Drilling: 06-17-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 TMR [78%]
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 1/4/18

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Fax: (630) 953-9938

BORING LOG 29-RWB-01

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 591.82 ft
North: 1899679.29 ft
East: 1171674.90 ft
Station: 6346+29.02
Offset: 46.4686 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--%Clay=17.6-- --A-4 (5)--						
	530.1							
		Very stiff, gray SILTY CLAY to SILTY CLAY LOAM, trace gravel						
			45		15	0 2 2	0.57 B	23
	526.8		65		19	4 7 13	2.30 B	18
		Boring terminated at 65.00 ft						
			50		16	2 3 3	0.66 B	27
	540.1							
		Stiff, gray SILTY CLAY LOAM, trace gravel						
			55		17	3 4 6	1.48 B	21
	535.1							
		Stiff, gray SILTY LOAM to SILTY CLAY LOAM, trace gravel --L_L(%)=24, P_L(%)=14-- --%Gravel=5.8-- --%Sand=19.4-- --%Silt=57.2--	60		18	4 9 8	1.75 P	16
			70					
			75					
			80					

GENERAL NOTES

Begin Drilling: 06-17-2014 Complete Drilling: 06-17-2014
Drilling Contractor: Wang Testing Services Drill Rig: D-50 TMR [78%]
Driller: R&J Logger: S. Woods Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring
backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▽ NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 1/4/18

NOTE:

1. *Station and offset are measured along ℄ NB C-D Road.*

60X94-SHT-05-Boring-NOISE WALL.dgn

USER NAME = keserovicm	DESIGNED - MK	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BORING LOGS – I NOISE ABATEMENT WALL
	CHECKED - ATB	REVISED		
PLOT SCALE = N.T.S.	DRAWN - MK	REVISED		
PLOT DATE = 3/5/2020	CHECKED - ATB	REVISED		SHEET NO. S9-05 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	549
		CONTRACT NO. 60X94		
	ILLINOIS	FED. AID PROJECT		

Wang Engineering
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Lombard, IL 60148
Telephone: (630) 953-9928
Fax: (630) 953-9938

BORING LOG 29-RWB-02

WEI Job No.: 1100-04-01

Client ..... AECOM
Project ..... Circle Interchange Reconstruction
Location ..... Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 593.63 ft
North: 1899746.45 ft
East: 1171670.23 ft
Station: 6346+95.65
Offset: 42.2226 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
	593.2	5-inch thick, black LOAM --TOPSOIL--						
		Medium dense, gray and black SANDY LOAM, trace slag --FILL--			1	5 8 8	NP	14
	590.6	Loose to very dense, brown SANDY GRAVEL --FILL--	5		2	9 13 31	NP	10
		--HARD DRILLING--			3	7 8 50/4"	NP	11
			10		4	25 5 4	NP	6
	583.1	Very soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel			5	0 0 0	0.41 B	26
			15					
			20		1	P U S H	0.25	22
			25			H	P	
		--UC test-- --Shear strength (Cu) = 320 psf--	30		2	P U S H	0.25 P	25
			35					
			40		3	P U S H	0.25	26

GENERAL NOTES

Begin Drilling 06-16-2014 Complete Drilling 06-16-2014
Drilling Contractor Wang Testing Services Drill Rig B-57 TMR [100%]
Driller N&K Logger A. Happel Checked by C. Marin
Drilling Method 3.25" HSA to 11', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling ▽ Rotary wash
At Completion of Drilling ▼ mud in the borehole
Time After Drilling NA
Depth to Water ▼ NA

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

WANGENGINC 1100401.GPJ WANGENG.GDT 1/4/18

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Fax: (630) 953-9938

BORING LOG 29-RWB-02

WEI Job No.: 1100-04-01

Client ..... AECOM
Project ..... Circle Interchange Reconstruction
Location ..... Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 593.63 ft
North: 1899746.45 ft
East: 1171670.23 ft
Station: 6346+95.65
Offset: 42.2226 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
			45		4	P U S H	0.75 P	25
	541.6	Very stiff, gray SILTY CLAY LOAM to SILTY LOAM, trace gravel	55		6	3 5 6	1.39 B	20
			60		7	6 8 11	2.54 B	15
	528.6	Boring terminated at 65.00 ft	65		8	4 6 10	2.13 B	20
			70					
			75					
			80					

GENERAL NOTES

Begin Drilling 06-16-2014 Complete Drilling 06-16-2014
Drilling Contractor Wang Testing Services Drill Rig B-57 TMR [100%]
Driller N&K Logger A. Happel Checked by C. Marin
Drilling Method 3.25" HSA to 11', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling ▽ Rotary wash
At Completion of Drilling ▼ mud in the borehole
Time After Drilling NA
Depth to Water ▼ NA

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

WANGENGINC 1100401.GPJ WANGENG.GDT 1/4/18

NOTE:

1. *Station and offset are measured along ℄ NB C-D Road.*

AECOM	USER NAME = keserovicm	DESIGNED - MK	REVISED	
		CHECKED - ATB	REVISED	
	PLOT SCALE = N.T.S.	DRAWN - MK	REVISED	
	PLOT DATE = 3/5/2020	CHECKED - ATB	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BORING LOGS – II
NOISE ABATEMENT WALL
SHEET NO. S9-06 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2014-015 R&B-R	COOK	825	550
		CONTRACT NO. 60X94		
	ILLINOIS	FED. AID PROJECT		

60X94-SHT-6-Boring-NOISE WALL.dgn

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

BORING LOG 27-RWB-02

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 579.64 ft
North: 1899634.17 ft
East: 1171605.63 ft
Station: 6345+83.90
Offset: 10.7197 LT

Elevation (ft)	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	SOIL AND ROCK DESCRIPTION
							Medium dense, gray GRAVELLY SAND --FILL--
576.6							
							Very soft to medium stiff, gray CLAY to SILTY CLAY, trace gravel
	5		1	14 11 6	NP	5	
			2	2 2 2	0.41 B	23	
	10		3	1 1 1	0.41 B	26	
			4	1 1 2	0.41 B	25	
	15		5	1 1 2	0.25 B	25	
			6	1 1 2	0.41 B	25	
			7	1 1 1	0.41 B	17	
	20		8	0 1 2	0.33 B	26	
	25		9	1 1 2	0.33 B	26	
			10	3 3 4	0.41 B	25	
			11	1 2 2	0.41 B	26	
	30		12	1 2 3	0.41 B	26	
	35		13	2 2 2	0.16 B	26	
	40		14	3 4 4	0.90 B	22	

GENERAL NOTES

Begin Drilling: 06-24-2014 Complete Drilling: 06-24-2014
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR
Driller: N&K Logger: A. Happel Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: Rotary wash
At Completion of Drilling: unable to measure
Time After Drilling: NA
Depth to Water: NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 8/18/16

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

BORING LOG 27-RWB-02

WEI Job No.: 1100-04-01
Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM
Datum: NAVD 88
Elevation: 579.64 ft
North: 1899634.17 ft
East: 1171605.63 ft
Station: 6345+83.90
Offset: 10.7197 LT

Elevation (ft)	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)	SOIL AND ROCK DESCRIPTION
537.9							Stiff to very stiff, gray SILTY CLAY, trace gravel
	45		15	3 4 6	2.87 B	17	
	50		16	5 5 7	1.56 B	22	
522.9	55		17	6 8 11	3.53 B	21	
							Stiff, gray CLAY to SILTY CLAY, trace gravel --L_L(%)=41, P_L(%)=19X-- --%Gravel=0.3-- --%Sand=1.6-- --%Silt=51.6--
	60		18	3 4 4	1.23 B	41	
517.9							--%Clay=46.5-- --A-7-6 (23)--
							Dense, gray SANDY LOAM, trace gravel
514.6	65		19	8 21 21	NP	13	
							Boring terminated at 65.00 ft
	70						
	75						
	80						

GENERAL NOTES

Begin Drilling: 06-24-2014 Complete Drilling: 06-24-2014
Drilling Contractor: Wang Testing Services Drill Rig: B-57 TMR
Driller: N&K Logger: A. Happel Checked by: C. Marin
Drilling Method: 2.25" SSA to 10', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: Rotary wash
At Completion of Drilling: unable to measure
Time After Drilling: NA
Depth to Water: NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 8/18/16

NOTE:

1. Station and offset are measured along Ⓔ Madison Exit Ramp.

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

BORING LOG VST-02

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 585.26 ft
North: 1899543.57 ft
East: 1171652.91 ft
Station: 6344+93.97
Offset: 26.2366 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		Medium stiff, black and gray SILTY CLAY, trace sand and gravel --FILL--						
			5		1	6 4 3	0.90 B	28
	579.8	Very soft, gray SILTY CLAY, trace sand and gravel						
					2	1 2 1	0.20 B	25
	576.8		10					
		--In-Situ Vane Shear, 10.5 feet-- $S_{u\,undis}$ = 425.9 psf-- $S_{u\,remold}$ = 218.4 psf-- Sensitivity = 2.0--			1	VS		
		--In-Situ Vane Shear, 13.0 feet-- $S_{u\,undis}$ = 589.7 psf-- $S_{u\,remold}$ = 283.9 psf-- Sensitivity = 2.1--	15		2	VS		
		--In-Situ Vane Shear, 15.5 feet-- $S_{u\,undis}$ = 622.5 psf-- $S_{u\,remold}$ = 425.9 psf-- Sensitivity = 1.5--			3	VS		
		--In-Situ Vane Shear, 18.0 feet-- $S_{u\,undis}$ = 491.4 psf-- $S_{u\,remold}$ = 415.0 psf-- Sensitivity = 1.2--	20		4	VS		
		--In-Situ Vane Shear, 20.5 feet-- $S_{u\,undis}$ = 884.6 psf-- $S_{u\,remold}$ = 655.2 psf-- Sensitivity = 1.4--			5	VS		
		--In-Situ Vane Shear, 23.0 feet-- $S_{u\,undis}$ = 939.2 psf-- $S_{u\,remold}$ = 655.2 psf-- Sensitivity = 1.4--	25		6	VS		
		--In-Situ Vane Shear, 25.5 feet-- $S_{u\,undis}$ = 786.3 psf-- $S_{u\,remold}$ = 611.6 psf-- Sensitivity = 1.3--			7	VS		
		--In-Situ Vane Shear, 28.0 feet-- $S_{u\,undis}$ = 644.3 psf-- $S_{u\,remold}$ = 382.2 psf-- Sensitivity = 1.7--	30		8	VS		
		--In-Situ Vane Shear, 30.5 feet-- $S_{u\,undis}$ = 720.8 psf-- $S_{u\,remold}$ =458.7 psf-- Sensitivity = 1.6--			9	VS		
		--In-Situ Vane Shear, 33.0 feet-- $S_{u\,undis}$ = 851.8 psf-- $S_{u\,remold}$ = 567.9 psf-- Sensitivity = 1.5--	35		10	VS		
		--In-Situ Vane Shear, 35.5 feet-- $S_{u\,undis}$ = 895.5 psf-- $S_{u\,remold}$ = 666.2 psf-- Sensitivity = 1.3--			11	VS		
		--In-Situ Vane Shear, 38.0 feet-- $S_{u\,undis}$ = 993.8 psf-- $S_{u\,remold}$ = 720.8 psf-- Sensitivity = 1.4--	40		12	VS		

GENERAL NOTES

Begin Drilling: 12-04-2015 Complete Drilling: 12-05-2015
Drilling Contractor: Wang Testing Services Drill Rig: CME-55 TMR [85%]
Driller: R&N Logger: I. Mohammud Checked by: A. Kurnia
Drilling Method: 2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▼ NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 1/4/18

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BORING LOG VST-02

WEI Job No.: 1100-04-01

Client: AECOM
Project: Circle Interchange Reconstruction
Location: Section 17, T39N, R14E of 3rd PM

Datum: NAVD 88
Elevation: 585.26 ft
North: 1899543.57 ft
East: 1171652.91 ft
Station: 6344+93.97
Offset: 26.2366 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type / recovery	Sample No.	SPT Values (blw/6 in)	Qu (tsf)	Moisture Content (%)
		--In-Situ Vane Shear, 40.5 feet-- $S_{u\,undis}$ = 1277.7 psf-- $S_{u\,remold}$ = 808.1 psf-- Sensitivity = 1.6--			13	VS		
	541.8	--In-Situ Vane Shear, 43.0 feet-- $S_{u\,undis}$ > 1750 psf--			14	VS		
		Boring terminated at 43.50 ft	45					
			50					
			55					
			60					

GENERAL NOTES

Begin Drilling: 12-04-2015 Complete Drilling: 12-05-2015
Drilling Contractor: Wang Testing Services Drill Rig: CME-55 TMR [85%]
Driller: R&N Logger: I. Mohammud Checked by: A. Kurnia
Drilling Method: 2.25" HSA to 10', mud rotary thereafter, boring backfilled upon completion

WATER LEVEL DATA

While Drilling: ▽ Rotary wash
At Completion of Drilling: ▼ mud in the borehole
Time After Drilling: NA
Depth to Water: ▼ NA

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

WANGENGINC 11000401.GPJ WANGENG.GDT 1/4/18

NOTE:

1. Station and offset are measured along ℄ NB C-D Road.

LEGEND

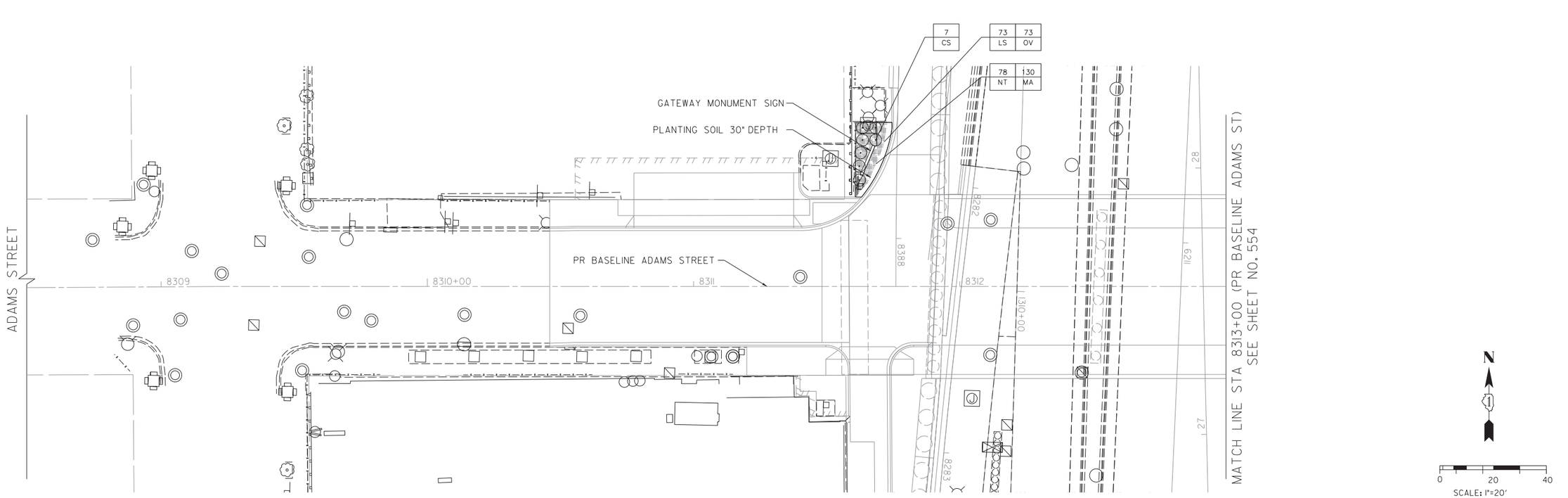
SHADE TREE

SHRUB

PLANTING SOIL MIX FURNISH AND PLACE, 30" DEPTH

SODDING SALT TOLERANT OR SEEDING, SEE PERMANENT EROSION CONTROL SHEETS

PLANT SCHEDULE						
SHRUBS						
CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
CS	7	Cornus sericea 'Farrow'	Farrow Red Twig Dogwood	30" H	5 gal	per plan
PERENNIALS (PAY ITEM K0012990)						
CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
LS	73	Liriope spicata	Creeping Lilyturf	#1	pot	12" oc
OV	73	Origanum vulgare 'Aureum'	Golden Oregano	#1	pot	12" oc
BULBS (PAY ITEM K0012970)						
CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
NT	78	Narcissus 'Tete-a-tete'	Daffodil	bulb	bulb	In groups of 3, 18" oc
MA	130	Muscari armeniacum	Grape Hyacinth	bulb	bulb	In groups of 5, 18" oc



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PLOT DATE = 3/9/2020	DATE - 3-13-2020	REVISED -	

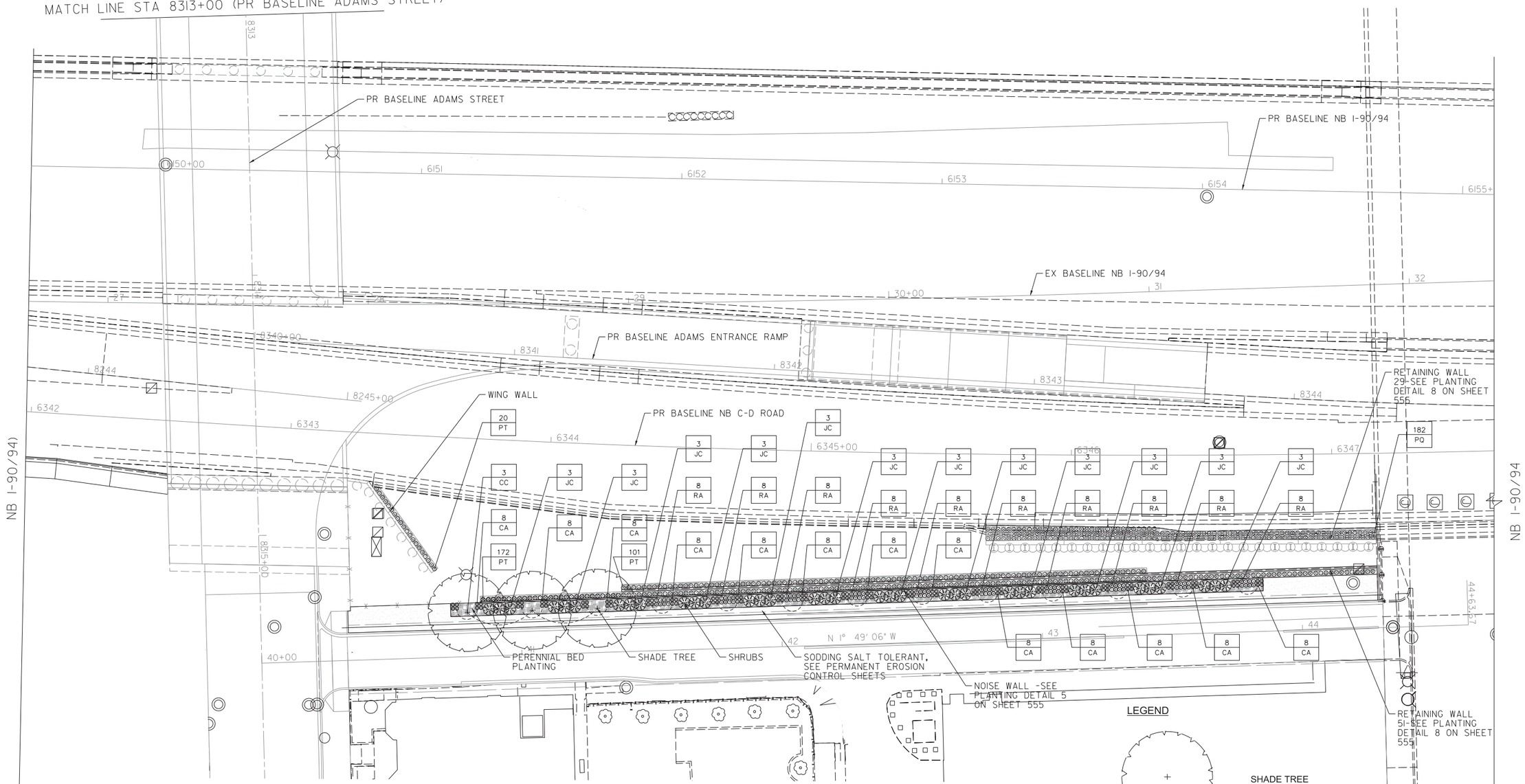
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPE PLANS

SCALE: 1"=20' | SHEET 1 OF 6 SHEETS | STA. 8308+00 | TO STA. 8313+00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-015R&B-R	COOK	826	553
		CONTRACT NO. 60X94		
	ILLINOIS	FED. AID PROJECT		

SEE SHEET NO. 553
MATCH LINE STA 8313+00 (PR BASELINE ADAMS STREET)



PLANT SCHEDULE

ORNAMENTAL TREES						
CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
CC	3	Crataegus crus-galli	Thornless Cockspur Hawthorn	8' H	B&B	Shrub Form
SHRUBS						
CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
JC	36	Juniperus chinensis 'Hetzi Columnaris'	Hetzi Columnar Juniper	5' H	B&B	per plan
RA	80	Rhus aromatica 'Gro-Low'	Grow-Low Sumac	3 gal	pot	per plan
VINES						
CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
PQ	182	Parthenocissus quinquefolia	Virginia Creeper	1 gal	pot	2' oc
PT	293	Parthenocissus tricuspidata	Boston Ivy	1 gal	pot	2' oc
PERENNIALS (PAY ITEM K0012990)						
CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
CA	104	Calamagrostis x acutiflora 'Karl Foerster'	Feather Reed Grass	1 gal	pot	per plan

LEGEND

SHADE TREE

SHRUB

VINE

PLANTING SOIL MIX FURNISH AND PLACE, 30" DEPTH

SODDING SALT TOLERANT OR SEEDING, SEE PERMANENT EROSION CONTROL SHEETS

0 20 40

SCALE: 1" = 20'

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PLOT SCALE = 1:20	CHECKED - BM	REVISED -	
PLOT DATE = 3/6/2020	DATE - 3-13-2020	REVISED -	

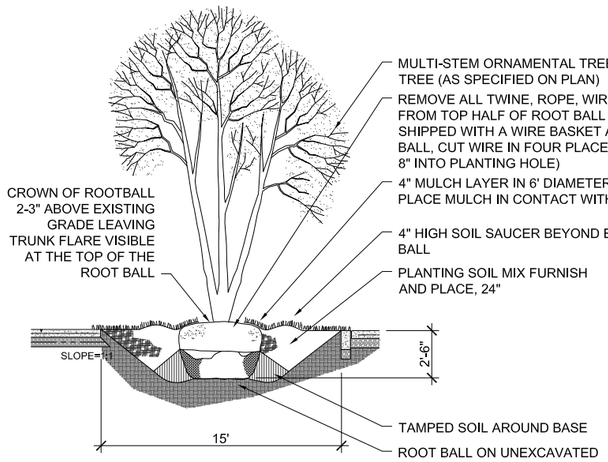
LANDSCAPE PLANS

SCALE: 1"=20' | SHEET 2 OF 6 SHEETS | STA. 6149+50 | TO STA. 6155+12

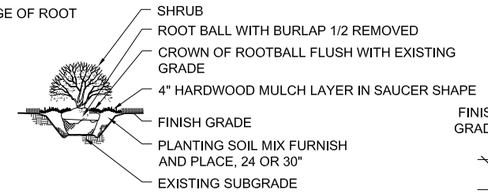
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-015R&B-R	COOK	826	554
		CONTRACT NO. 60X94		
		ILLINOIS	FED. AID PROJECT	

MASTER PLANT SCHEDULE

ORNAMENTAL TREES							
CODE	PAY CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
CC	B2001570	3	Crataegus crus-galli	Thornless Cockspur Hawthorn	8' H	B&B	Shrub Form
SHRUBS							
CODE	PAY CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
CS	K0012970	7	Cornus sericea 'Farrow'	Farrow Red Twig Dogwood	30" H	5 gal	per plan
JC	K0012970	36	Juniperus chinensis 'Hetzi Columnaris'	Hetzi Columnar Juniper	5' H	B&B	per plan
RA	K0012975	80	Rhus aromatica 'Gro-Low'	Grow-Low Sumac	3 gal	pot	per plan
VINES							
CODE	PAY CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
PQ	K0012990	182	Parthenocissus quinquefolia	Virginia Creeper	1 gal	pot	2' oc
PT	K0012970	293	Parthenocissus tricuspidata	Boston Ivy	1 gal	pot	2' oc
PERENNIALS (PAY ITEM K0012990)							
CODE	PAY CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
CA	K0012990	* 104	Calamagrostis x acutiflora 'Karl Foerster'	Feather Reed Grass	1 gal	pot	per plan
LS	K0012990	* 73	Liliope spicata	Creeping Lilyturf	#1	pot	12" oc
OV	K0012990	* 73	Origanum vulgare 'Aureum'	Golden Oregano	#1	pot	12" oc
		2.5	* PAID FOR AS PERENNIAL PLANTS, ORNAMENTAL TYPE PER UNIT = 100				
BULBS (PAY ITEM K0012970)							
CODE	PAY CODE	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
NT	K0012990	78	Narcissus 'Tete-a-tete'	Daffodil	bulb	bulb	In groups of 3, 18" oc
MA	K0012990	130	Muscari armeniacum	Grape Hyacinth	bulb	bulb	In groups of 5, 18" oc

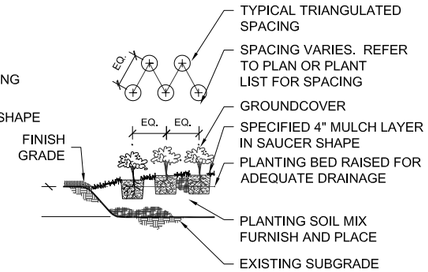


1 ORNAMENTAL TREE PLANTING SECTION
NOT TO SCALE



NOTE:
1. ADJACENT MULCH IS TO BE 4" HARDWOOD MULCH.

2 SHRUB PLANTING DETAIL
NOT TO SCALE



3 PERENNIAL PLANTING DETAIL
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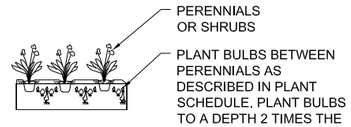
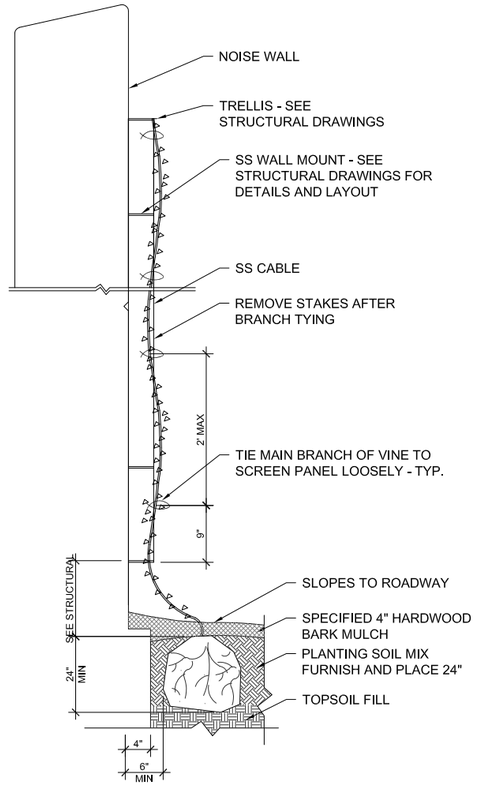
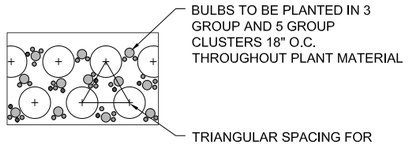


4 BULB PLANTING DETAIL
NOT TO SCALE



5 TRELLIS PLANTING DETAIL
NOT TO SCALE



6 INTERPLANTING DETAIL
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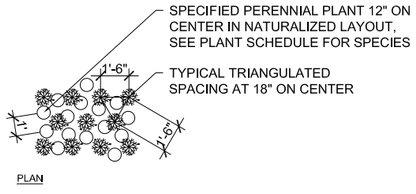
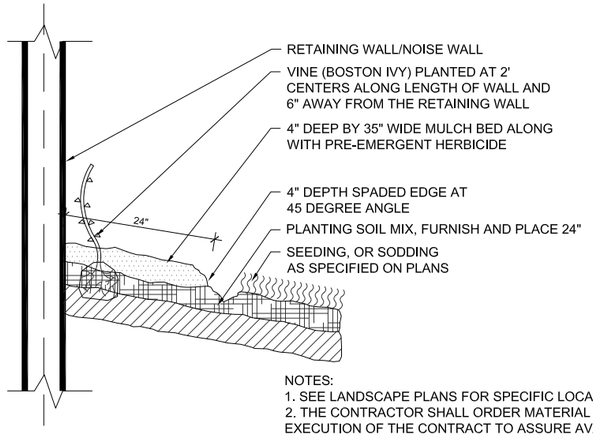


7 INTERPLANTING DETAIL
NOT TO SCALE



NOTES:
1. SEE LANDSCAPE PLANS FOR SPECIFIC LOCATIONS OF VINES.
2. THE CONTRACTOR SHALL ORDER MATERIAL FOR VINES IMMEDIATELY FOLLOWING EXECUTION OF THE CONTRACT TO ASSURE AVAILABILITY OF THE PLANT MATERIAL FOR SPRING PLANTING AT THE CONCLUSION OF THE CONTRACT.
3. MULCH BED SHALL BE PLACED OVER ROTOTILLED COMPOST/TOPSOIL AS SHOWN IN VINE PLANTING DETAIL AND ACCORDING TO IDOT STANDARD SPECIFICATION 253.11 EXCEPT THAT NO WEED BARRIER FABRIC IS REQUIRED. COST OF MULCH COVER IS INCLUDED WITH PAYMENT UNDER THE RESPECTIVE VINE PAY ITEM.
4. PRE-EMERGENT HERBICIDE SHALL BE PLACED IN MULCHED BEDS ACCORDING TO THE SPECIAL PROVISION.

8 VINE PLANTING DETAIL
NOT TO SCALE

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site

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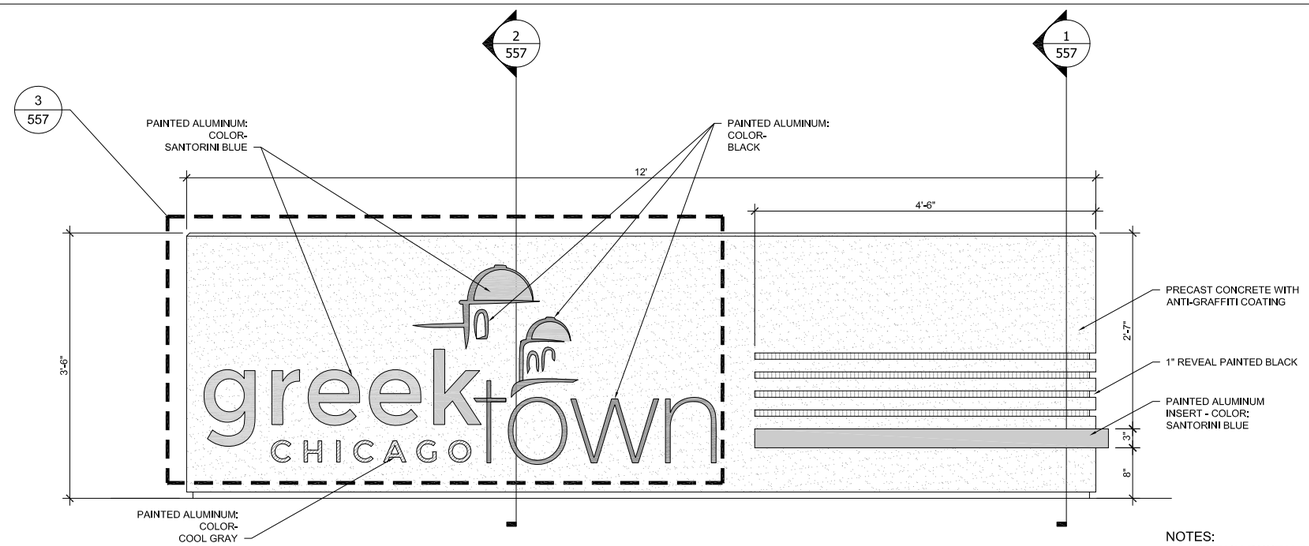
USER NAME = JR	DRAWN JT	REVISED – ___
PLOT SCALE = AS NOTED	CHECKED BK	REVISED – ___
PLOT DATE = 3/2/2020	DATE 3-13-2020	REVISED – ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPING DETAILS PLANTING

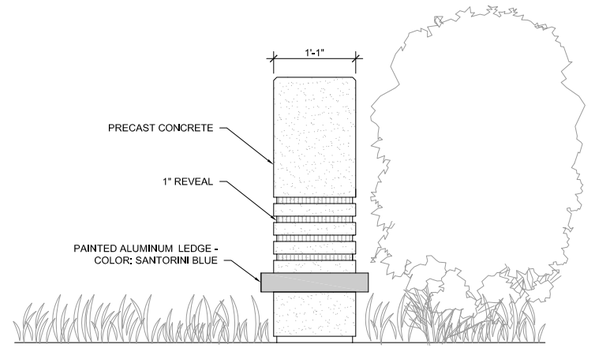
SCALE: AS NOTED | SHEET 3 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-015R&B-R	COOK	826	555
		CONTRACT NO. 60X94		
		ILLINOIS FED. AID PROJECT		

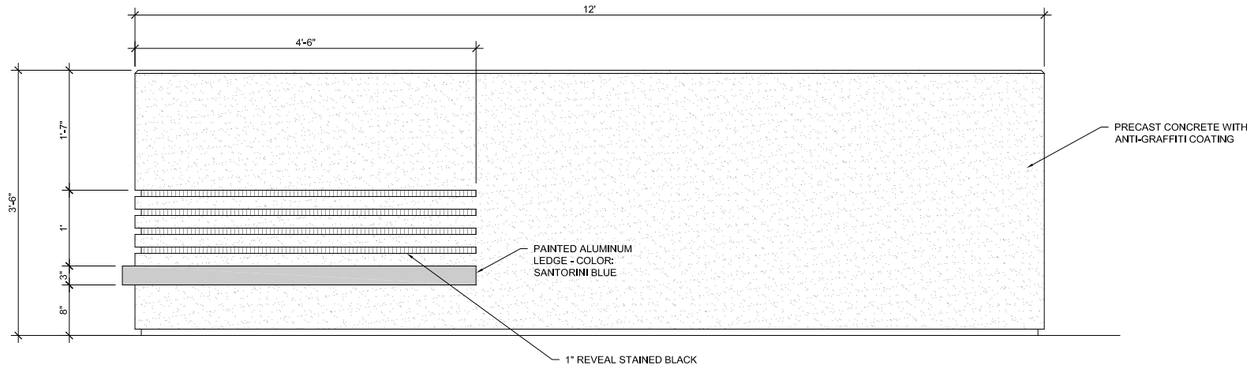


1 GATEWAY MONUMENT SIGN ELEVATION - SOUTHEAST
1" = 1'-0"

NOTES:
1. OBTAIN DIGITAL VECTOR FILE OF LOGO PRIOR TO FABRICATION OF METAL INSERT
2. PROVIDE GRAFFITI COATING PRIOR TO DELIVERY TO PROJECT SITE.



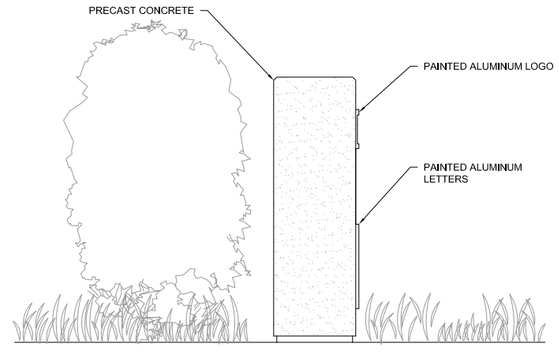
2 GATEWAY MONUMENT SIGN ELEVATION - NORTHEAST
1" = 1'-0"



3 GATEWAY MONUMENT SIGN ELEVATION - NORTHWEST
1" = 1'-0"

COLOR LEGEND

- PAINTED ALUMINUM INSERT - COLOR: BLACK
- PAINTED ALUMINUM LEDGE - COLOR: SANTORINI BLUE
- PAINTED ALUMINUM LEDGE - COLOR: COOL GRAY
- PRECAST CONCRETE COLOR: WHITE - SMOOTH FINISH
- PRECAST CONCRETE REVEAL: STAINED BLACK



4 GATEWAY MONUMENT SIGN ELEVATION - SOUTHWEST
1" = 1'-0"

NOTES:
1. GATEWAY MONUMENT SIGN SHALL BE FABRICATED FROM A QUALIFIED SIGN MANUFACTURER AND SHALL COME TO THE PROJECT SITE COMPLETE.
2. ITEMS INCLUDED IN THE COST OF GATEWAY MONUMENT SIGN:
   - 2.1. PAINTED ALUMINUM LETTERS, LOGO AND LEDGE
   - 2.2. ANTI-GRAFFITI COATING
   - 2.3. PRECAST CONCRETE WALL AND ALL REINFORCEMENT RECOMMENDED BY MANUFACTURER
   - 2.4. CAST-IN-PLACE FOUNDATION
3. DRAWINGS SHOW DESIGN INTENT ONLY. PRIOR TO FABRICATION, THE CONTRACTOR MUST PROVIDE PROFESSIONAL STRUCTURAL ENGINEERING FOR THE MONUMENT SIGN, MONUMENT SIGN COMPONENTS, MONUMENT SIGN MOUNTING, AND HARDWARE. THE SEAL OF A LICENSED PROFESSIONAL STRUCTURAL ENGINEER TO APPEAR ON THE SHOP DRAWINGS.
4. ALL WELDS TO BE GROUND SMOOTH FOR A SEAMLESS APPEARANCE.
5. APPLY ALL FINISHES IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
6. ALL CUT METAL PIECES SHALL BE WATERJET CUT. CAD ART FOR THE LOGO AND LETTERS TO BE PROVIDED BY ENGINEER.
7. SEE STRUCTURAL DRAWINGS FOR FOUNDATION DETAILS.
8. PROVIDE GASKET BETWEEN ALL DISSIMILAR METALS.

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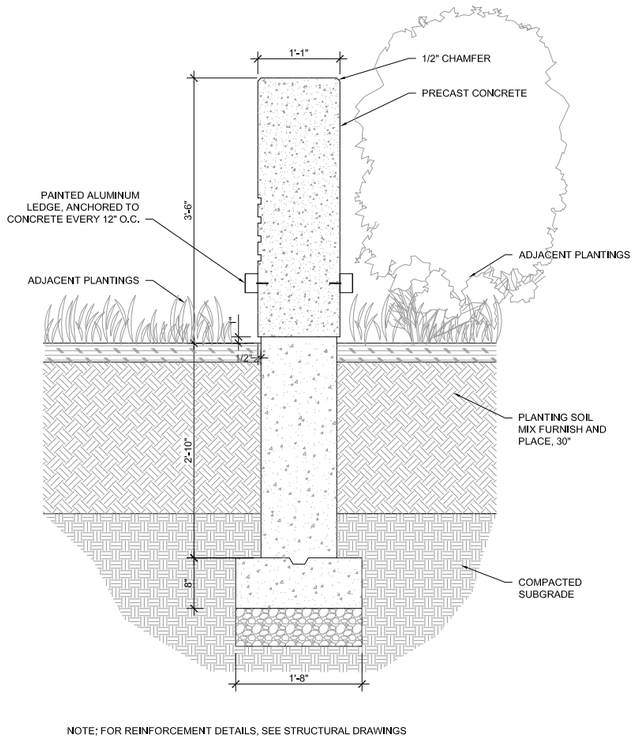
USER NAME = JR	DRAWN JT	REVISED – ___
PLOT SCALE = AS NOTED	CHECKED BK	REVISED – ___
PLOT DATE = 3/2/2020	DATE 3-13-2020	REVISED – ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPE DETAILS
GATEWAY MONUMENT DETAILS

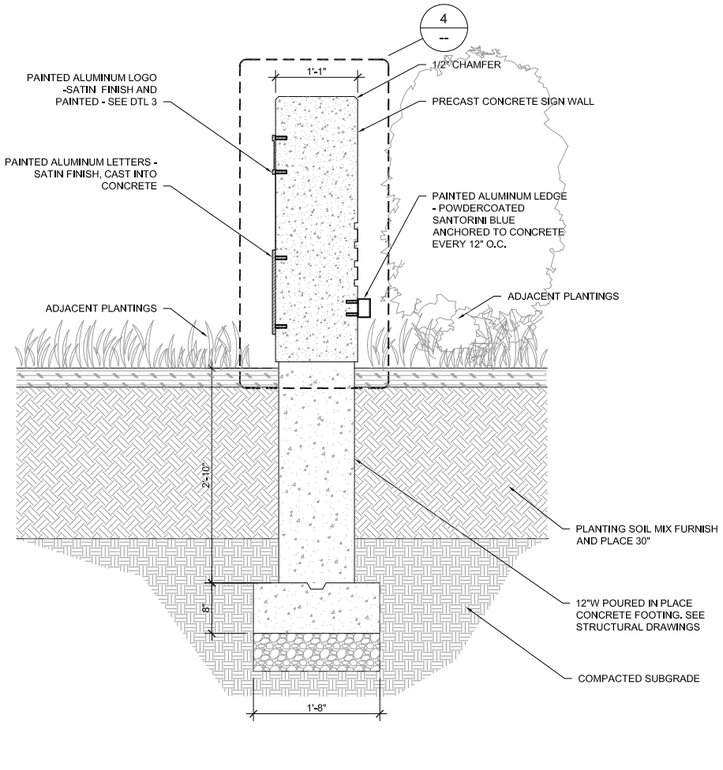
SCALE: AS NOTED | SHEET 4 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-015R&B-R	COOK	826	556
		CONTRACT NO. 60X94		
		ILLINOIS FED. AID PROJECT		



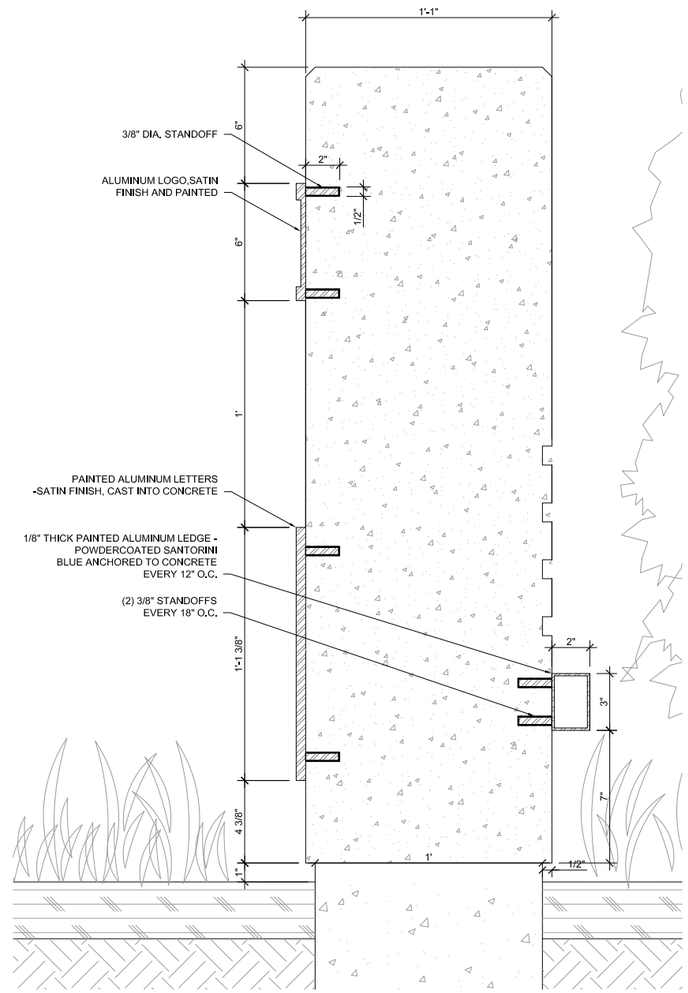
NOTE; FOR REINFORCEMENT DETAILS, SEE STRUCTURAL DRAWINGS

1 GATWAY MONUMENT SIGN SECTION
1" = 1'-0"



2 GATEWAY MONUMENT SIGN
1" = 1'-0"

3 GATEWAY LOGO ENLARGEMENT DETAIL
1 1/2"=1'-0"



4 GATEWAY MONUMENT SIGN ENLARGED SECTION DETAIL
3"=1'-0"

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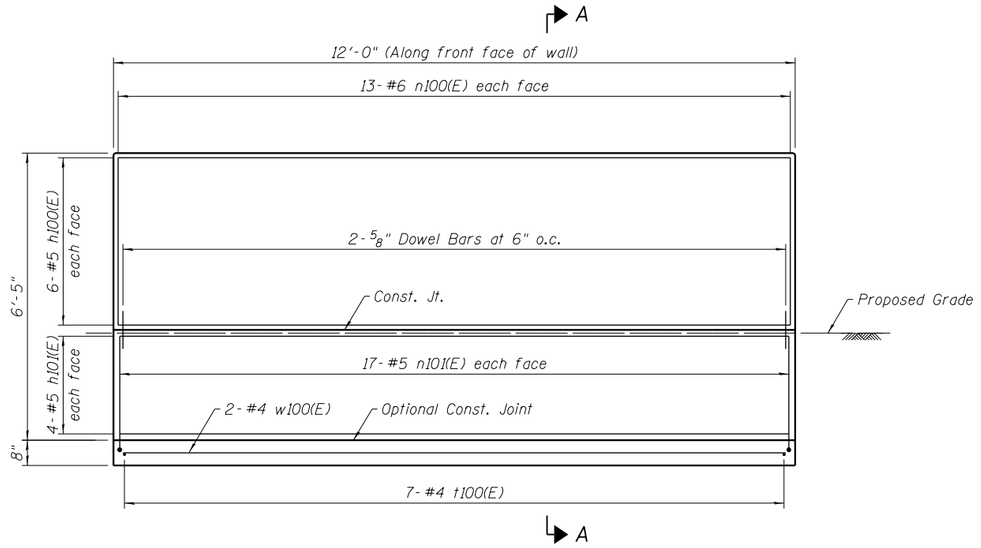
USER NAME = JR	DRAWN JT	REVISED – ___
PLOT SCALE = AS NOTED	CHECKED BK	REVISED – ___
PLOT DATE = 3/2/2020	DATE 3-13-2020	REVISED – ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LANDSCAPE DETAILS
GATEWAY MONUMENT DETAILS

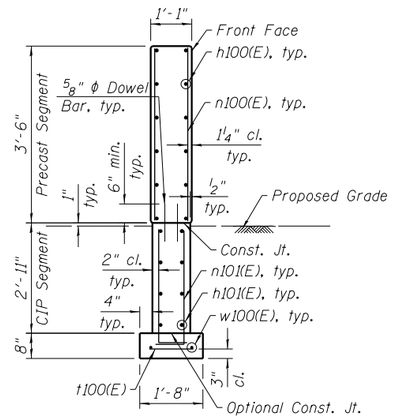
SCALE: AS NOTED | SHEET 5 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-015R&B-R	COOK	826	557
		CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			



GATEWAY MONUMENT SIGN ELEVATION

(Looking Northwest)

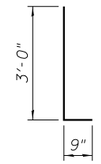


SECTION A-A

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
**	h100(E)	12	#5	11'-10"	
**	h101(E)	8	#5	11'-8"	
**	n100(E)	26	#6	3'-5"	
**	n101(E)	34	#5	3'-9"	
**	t100(E)	7	#4	1'-2"	
**	w100(E)	2	#4	11'-6"	
**	Protective Coat			Sq. Yd.	12
**	Dowel Bars 5/8"			Each	50
**	Concrete Structures			Cu. Yd.	1.8
**	Reinforcement Bars, Epoxy Coated			Pound	540
**	Precast Wall Type A			Foot	12
	Gateway Monument Sign Complete			Each	1

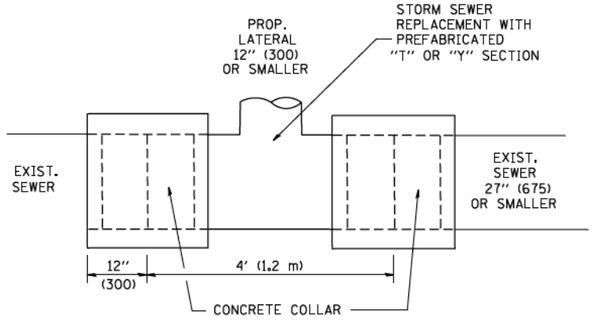
**For reference only. Cost included in Gateway Monument Sign Complete.



BAR n101(E)

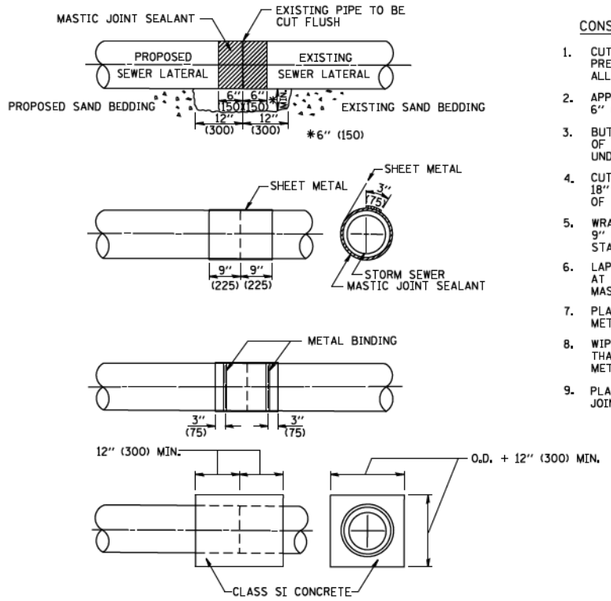
NOTES:

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Protective coat shall be applied to all exposed faces of sign.
3. Exposed concrete edges shall have a standard 1/2" chamfer UNO. Chamfer on vertical edges shall continue a minimum of 1'-0" below finished grade.
4. Maximum allowable bearing pressure is 2.0 ksf.
5. Maximum excavation slope is 1:2 (V:H).
6. 1/2" PJF shall conform to Article 1051.09 of the Standard Specifications. Cost included with Gateway Monument Sign Complete.



DETAIL "A"

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

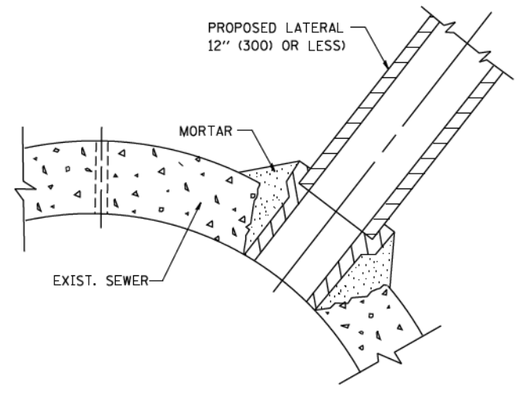


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

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



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

I. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.

II. CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:

A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".

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 PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

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

FILE NAME = W:\diststd\22x34\bd07.dgn	USER NAME = gaglianobt	DESIGNED - M. DE YONG	REVISED - M. DE YONG 05-08-92
		DRAWN -	REVISED - R. SHAH 09-09-94
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - R. SHAH 10-25-94
	PLOT DATE = 1/4/2008	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 1 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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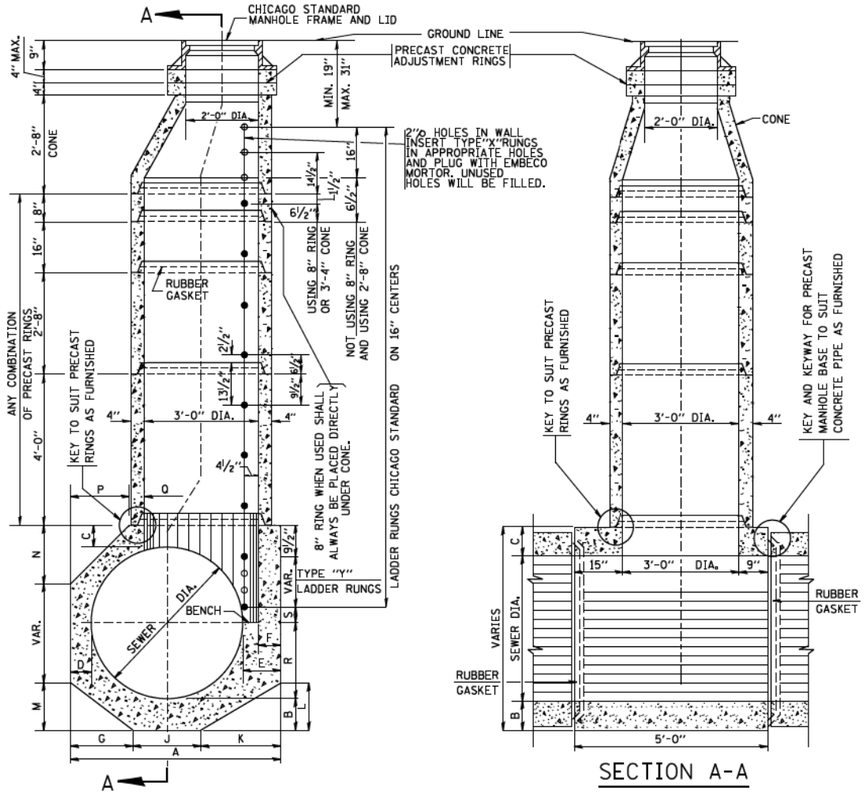
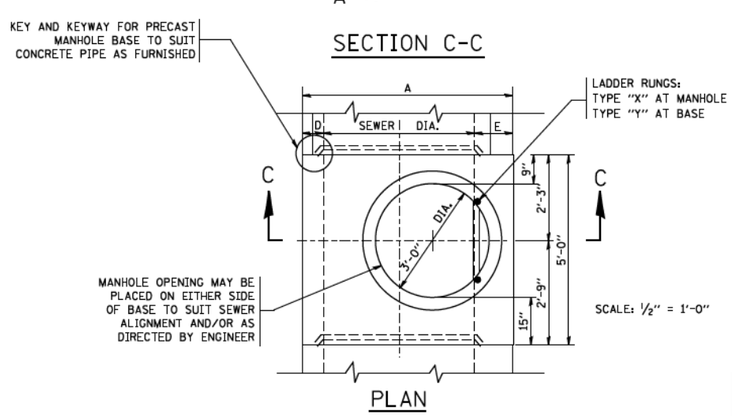
	BD500-01 (BD-7)	CONTRACT NO. 60X94		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



SECTION A-A



SECTION C-C

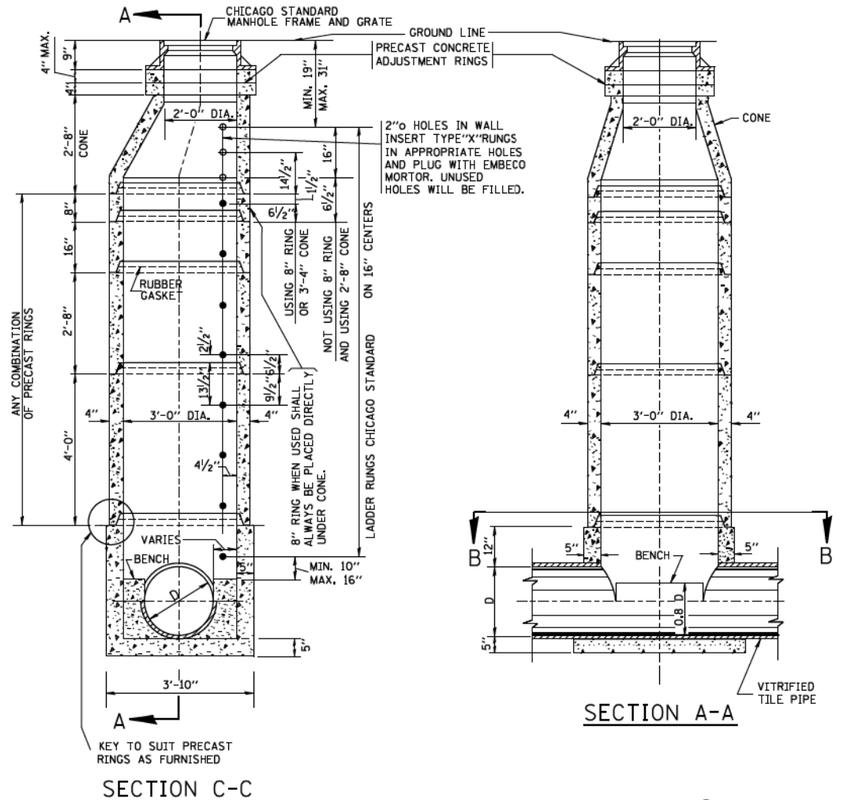
PLAN

TYPE "A" MANHOLE

FOR SEWERS
24" TO 120" DIAMETER
PRECAST BASES AND RINGS

FOR STATE CONTRACT
ALL DIMENSIONS SHOULD
BE PREPARED IN METRIC
UNITS SOFT CONVERSION
METHOD SHOULD BE USED.

SEWER DIA.	PART OF ITEM	DIMENSIONS OF PRECAST MANHOLE BASE															NO. "Y" RINGS
		A	B	C	D	E	F	G	J	K	L	M	N	P	Q	R	
120"	____	12"-4½"	12"	12"	12"	16½"	12"	4'-0"	4'-0"	4'-4½"	2'-7½"	2'-5"	3'-7"	3'-7"	4'-8½"	2'-0"	2½"	7
108"	____	11"-4½"	12"	12"	12"	16½"	12"	3'-8"	3'-8"	4'-0½"	2'-5"	2'-2"	3'-4"	3'-4"	4'-0½"	2'-0"	6½"	6
102"	____	10"-10½"	12"	12"	12"	16½"	12"	3'-6"	3'-6"	3'-10½"	2'-4"	2'-1"	3'-2"	3'-2"	3'-8½"	2'-0"	16½"	5
96"	10-A	10"-2½"	11"	11"	11"	15½"	11"	3'-3"	3'-3"	3'-8½"	2'-3"	23"	2'-11"	2'-11"	3'-4½"	2'-0"	9½"	5
90"	10-B	9'-8½"	11"	11"	11"	15½"	11"	3'-1"	3'-1"	3'-6½"	2'-1½"	22"	2'-10"	2'-10½"	2'-11½"	2'-0"	3½"	5
84"	10-C	9'-0½"	10"	10"	10"	14½"	10"	2'-11"	2'-11"	3'-2½"	23"	21"	2'-7"	2'-7"	2'-7½"	2'-0"	12½"	4
78"	10-D	8'-6½"	10"	10"	10"	14½"	10"	2'-9"	2'-9"	3'-0½"	22"	20"	2'-6"	2'-6"	2'-2½"	2'-0"	6½"	4
72"	10	7"-10½"	9"	9"	9"	13½"	9"	2'-6"	2'-6"	2'-10½"	21"	18"	2'-3"	2'-3"	22½"	2'-0"	15½"	3
66"	11	7'-4½"	9"	9"	9"	13½"	9"	2'-4"	2'-4"	2'-8½"	19½"	17"	2'-1"	2'-1"	18½"	2'-0"	9½"	3
60"	12	6'-8½"	8"	8"	8"	12½"	8"	2'-1½"	2'-1"	2'-6"	18"	15"	23"	23"	13½"	2'-0"	2½"	3
54"	13	6'-2½"	8"	8"	8"	12½"	8"	23½"	23"	2'-4"	17"	14"	21"	21"	9½"	2'-0"	12½"	2
48"	14	5'-6½"	7"	7"	7"	11½"	7"	20½"	21"	2'-1"	15"	12½"	18½"	18½"	5"	2'-0"	5½"	2
42"	15	5'-0½"	7"	7"	7"	11½"	7"	18½"	19"	23"	14"	11"	---	---	17½"	21"	2½"	2
36"	16	4'-4½"	6"	6"	6"	10½"	6"	16"	16"	20½"	12½"	9½"	---	---	10½"	18"	14½"	1
30"	17	4'-0"	6"	6"	6"	12"	6"	14"	14"	20"	12"	8½"	---	---	6"	15"	11½"	1
24"	18	4'-0"	6"	6"	12"	12"	6"	16"	16"	16"	9½"	9½"	---	---	6"	12"	8½"	1

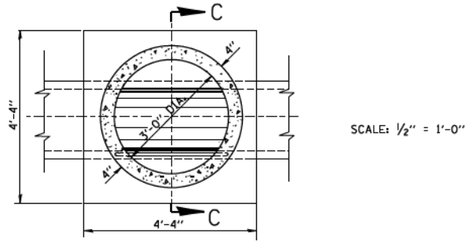


SECTION C-C

SECTION A-A

TYPE "A" MANHOLE

FOR SEWERS
21" DIAMETER AND SMALLER
PRECAST BASES AND RINGS



SECTION B-B

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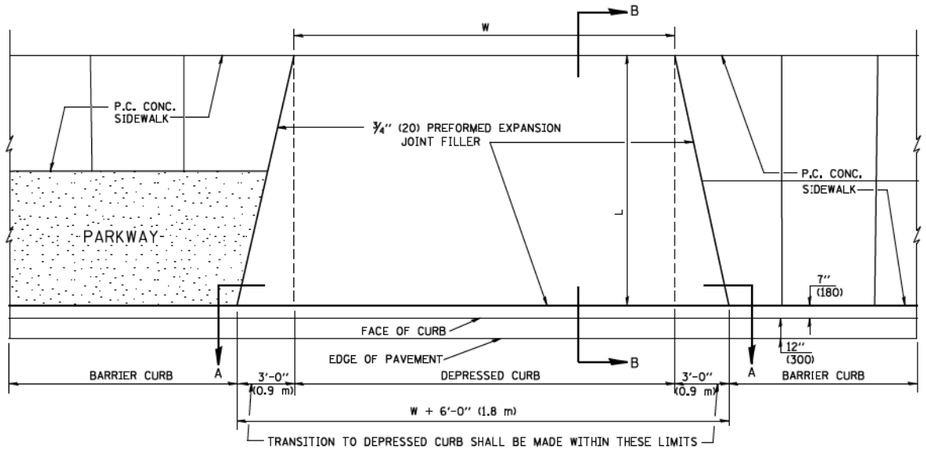
		DRAWN -	REVISED -		
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -		SCALE: NONE SHEET 2 OF 34 SHEETS STA. TO STA.
	PLOT DATE = 1/4/2008	DATE - 06-18-82	REVISED -		

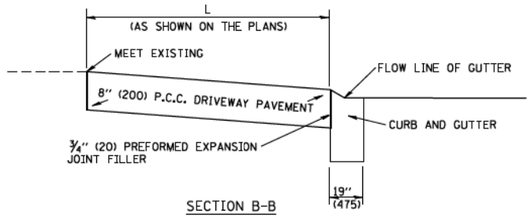
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	560
	BD600-12 (BD-9)		CONTRACT NO. 60X94	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



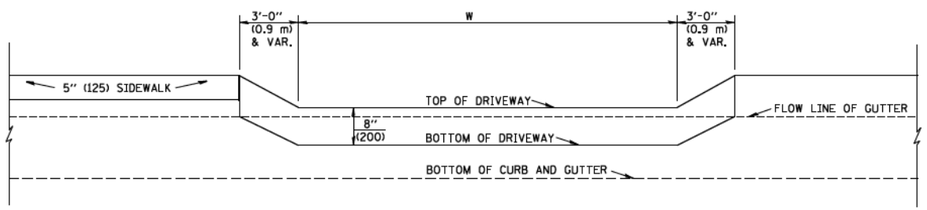
PLAN VIEW

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 4 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. ¾" (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.

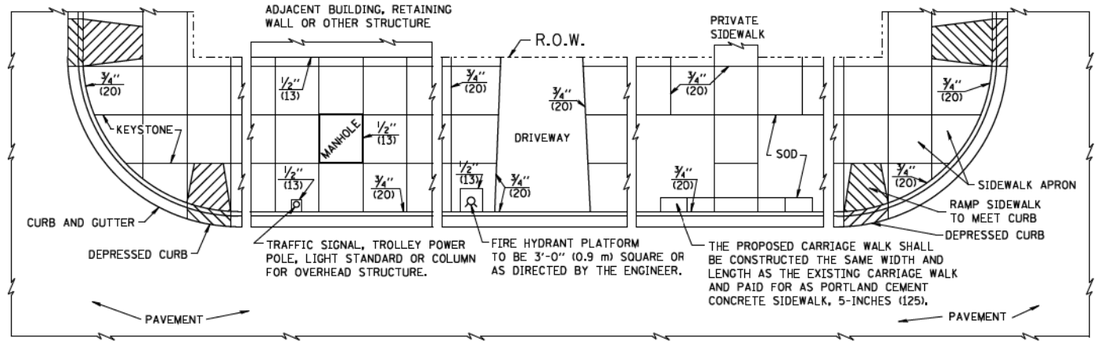


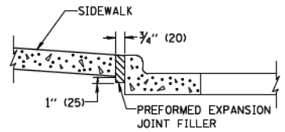
SECTION B-B



SECTION A-A

P.C.C. DRIVEWAY PAVEMENT DETAIL





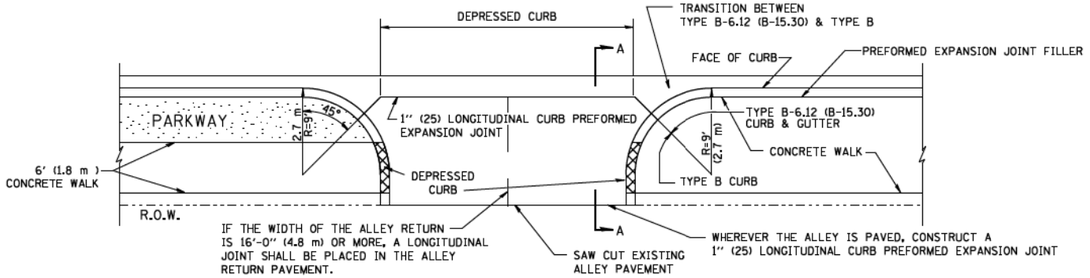
SLOPE FOR SIDEWALK
1" (25) IN 3'-0" (0.9 m) IN CHICAGO

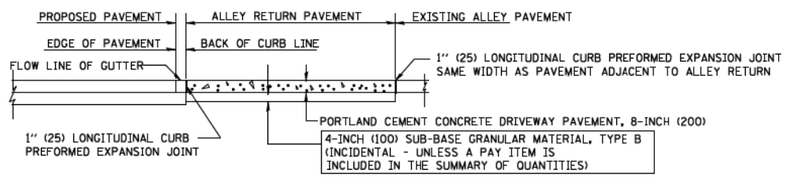
NOTES:

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. ¾" (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.

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

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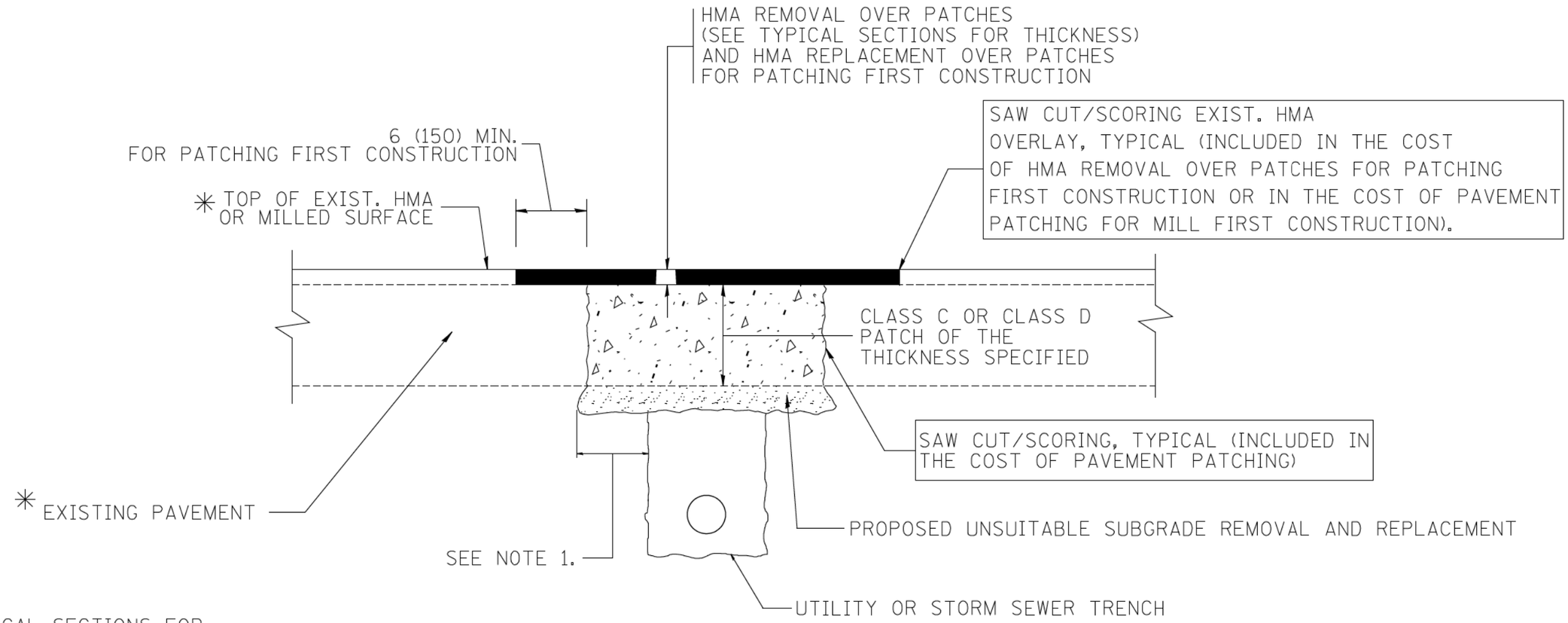
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO
DETAILS FOR P.C. CONCRETE DRIVEWAY, ALLEY RETURN AND SIDEWALK

SCALE: NONE | SHEET 3 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	561
	BD400-03 (BD-17)	CONTRACT NO. 60X94		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



* 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)

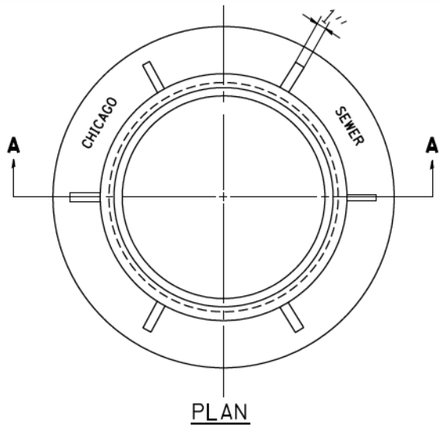
1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

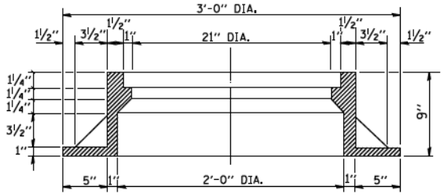
1. MILL HMA FIRST IF THERE IS AT LEAST $4\frac{1}{2}$ INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

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	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. BORO 01-01-07						825	562
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - R. BORO 09-04-07				BD400-04 (BD-22)		CONTRACT NO. 60X94	
	PLOT DATE = 10/27/2008	DATE - 10-25-94	REVISED - K. ENG 10-27-08		SCALE: NONE SHEET 4 OF 34 SHEETS STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



PLAN

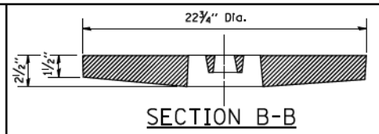


SECTION A-A

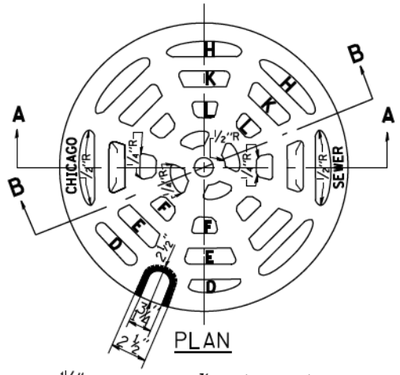
NOTE: METAL PLATES MUST BE FURNISHED FOR PERFORMED LIDS ON MANHOLES

CHICAGO STANDARD MANHOLE FRAME

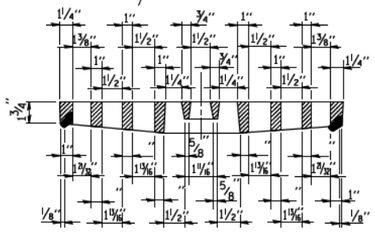
SCALE: 1½"=1'-0"
MATERIAL: CAST IRON



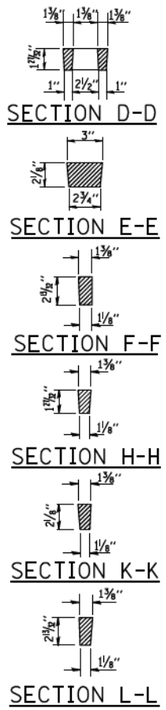
SECTION B-B



PLAN



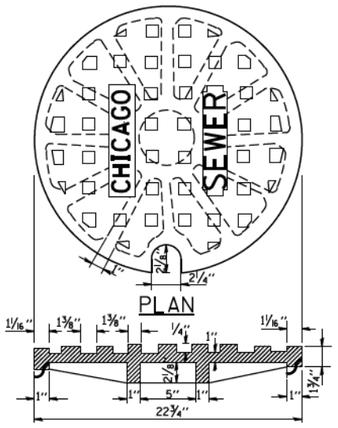
SECTION A-A



SECTION D-D
SECTION E-E
SECTION F-F
SECTION H-H
SECTION K-K
SECTION L-L

PERFORMED LID FOR CATCH BASINS & MANHOLES

SCALE: 2"=1'-0"
MATERIAL: CAST IRON

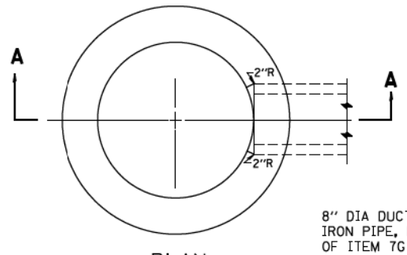


PLAN

SECTION

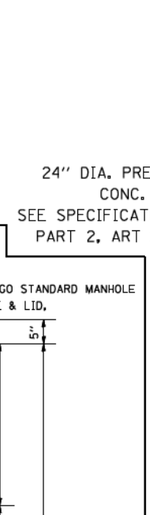
SOLID LID FOR MANHOLES

SCALE: NONE
MATERIAL: CAST IRON



8" DIA DUCTILE IRON PIPE, PART OF ITEM 7G

PLAN
(FRAME & LID NOT SHOWN)

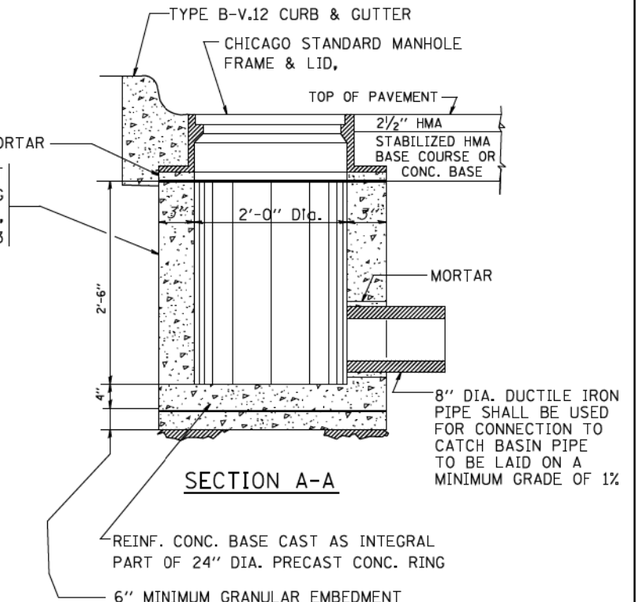


PRECAST

NOTE:
6" MINIMUM GRANULAR EMBEDMENT UNDER ALL CATCH BASINS

STANDARD CATCH BASINS

SCALE: ¾"= 1'-0"
ITEM 9



SECTION A-A

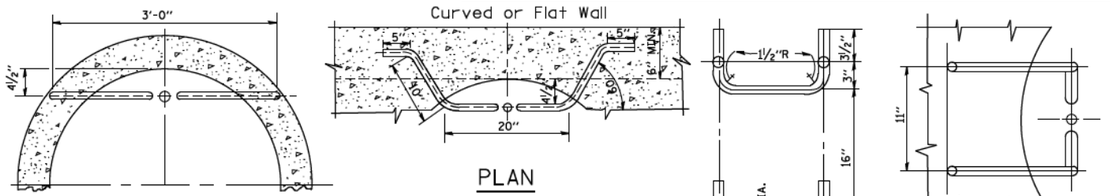
STANDARD INLETS

SCALE 1"= 1'-0"
ITEM 12

THIS INLET DETAIL IS SOMETIMES REFERRED TO AS "CHICAGO STANDARD INLET, TYPE A"

NOTE:
INLETS SHALL NOT BE CONSTRUCTED UNLESS IT IS IMPOSSIBLE TO CONSTRUCT A CATCH BASIN. THE CONTRACTOR SHALL HAVE THE DEPARTMENT OF SEWERS APPROVAL BEFORE CONSTRUCTING INLETS.

CITY OF CHICAGO
DEPARTMENT OF SEWERS
ENGINEERING DIVISION



STANDARD LADDER RUNGS

ALL LADDER RUNGS SHALL BE ALUMINUM OR GALVANIZED WROUGHT IRON AS SPECIFIED IN THE SPECIFICATIONS, PART 2, ARTICLE 214.2. RUNGS SHALL BE 1" DIAMETER OR OF A SHAPE HAVING AN EQUIVALENT CROSS-SECTIONAL AREA.

FILE NAME = W:\diststd\22x34\bd47.dgn	USER NAME = gaglianobt	DESIGNED - M. GOMEZ	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE - 01-25-01	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO
CATCH BASIN, INLET AND MANHOLE DETAILS

SCALE: NONE | SHEET 5 OF 34 SHEETS | STA. | TO STA.

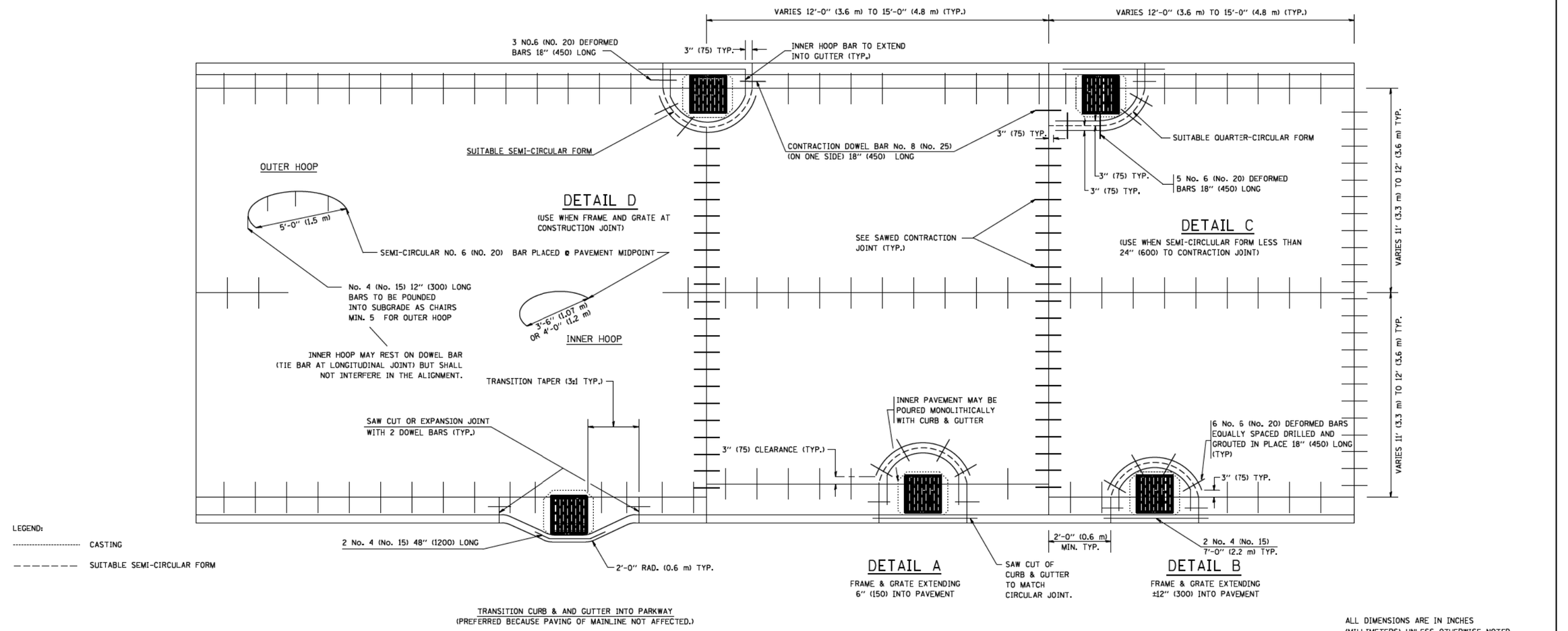
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	563
	BD600-13 (BD47)		CONTRACT NO. 60X94	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

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.



TRANSITION CURB & AND GUTTER INTO PARKWAY
(PREFERRED BECAUSE PAVING OF MAINLINE NOT AFFECTED.)

ALL DIMENSIONS ARE IN INCHES
(MILLIMETERS) UNLESS OTHERWISE NOTED

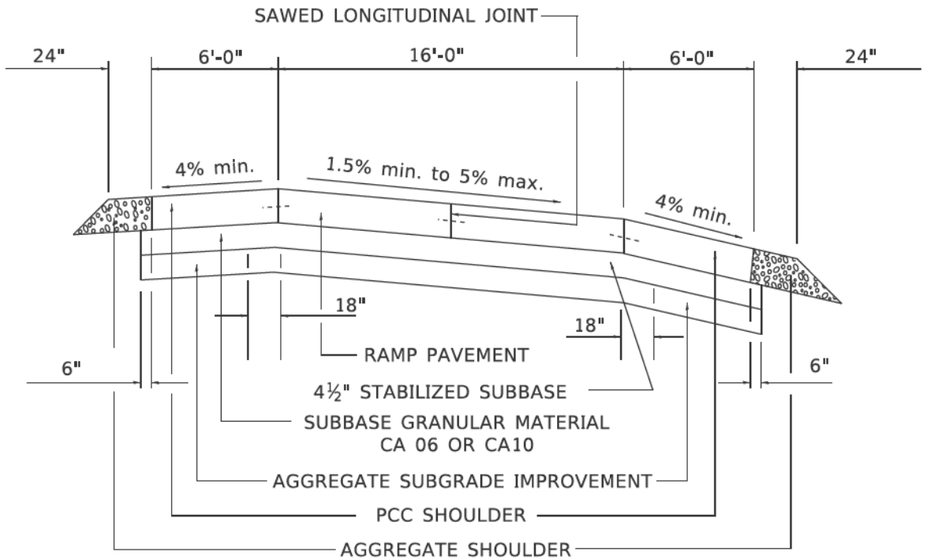
FILE NAME = W:\diststd\22x34\bd48.dgn	USER NAME = gaglianobt	DESIGNED - A. ABBAS	REVISED - T. MATOUSEK 08-28-00
		DRAWN - TOM MATOUSEK	REVISED - T. MATOUSEK 10-02-00
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - A. ABBAS	REVISED - T. MATOUSEK 04-25-02
	PLOT DATE = 1/4/2008	DATE - 01-04-99	REVISED - P. LAFLEUR 08-27-02

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

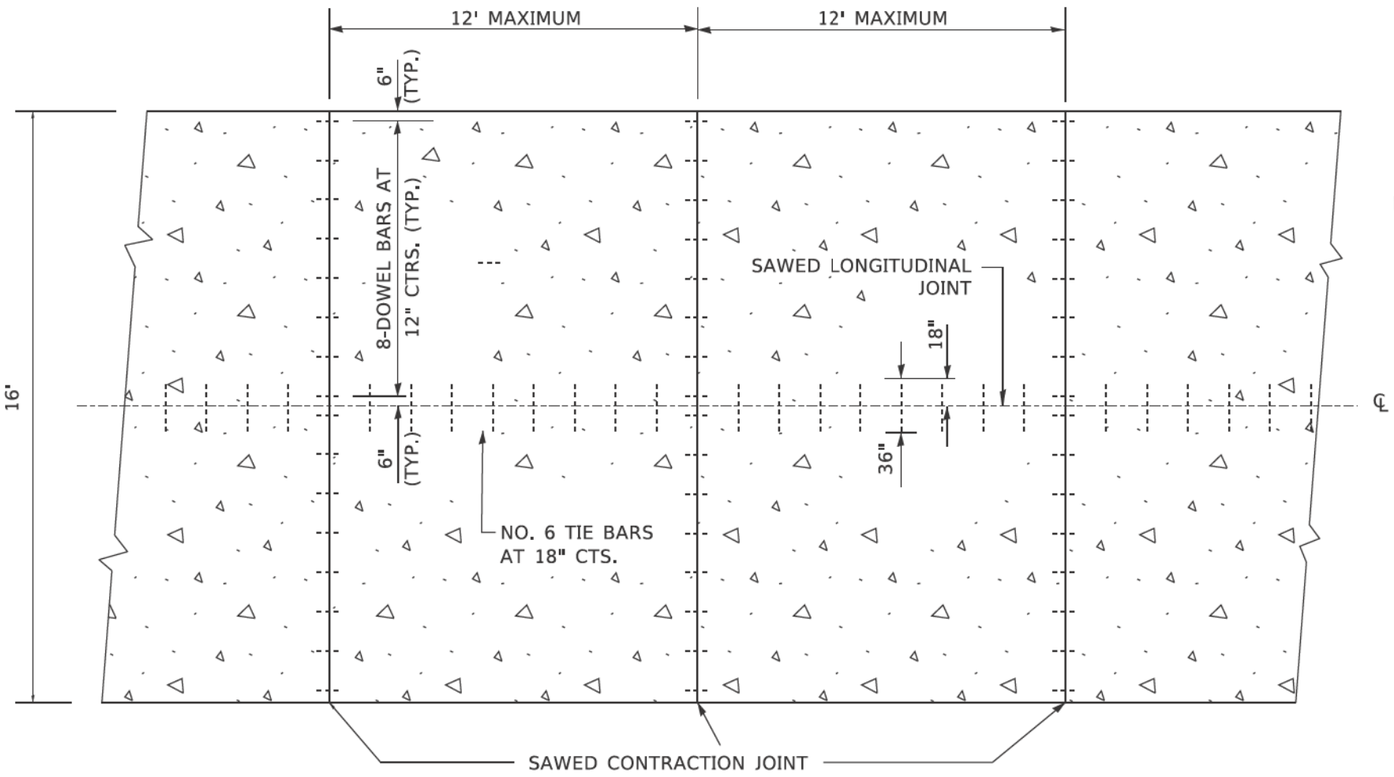
PCC PAVEMENT ROUNDOUTS AT CURB AND GUTTER

SCALE: NONE | SHEET 6 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	564
	BD-48	CONTRACT NO. 60X94		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



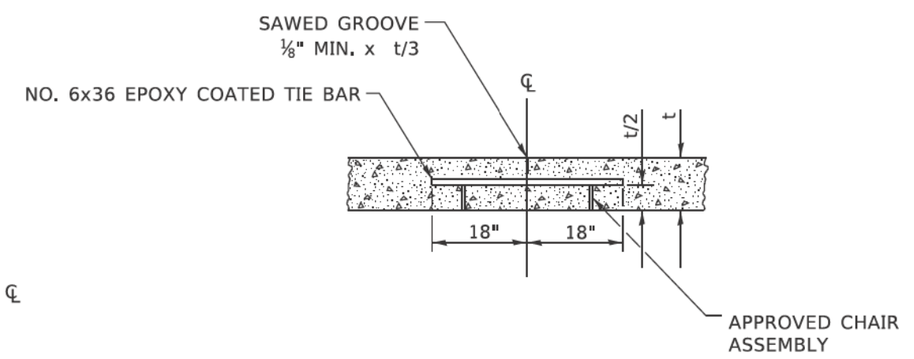
SECTION



PLAN

NOTES:

1. CENTERLINE JOINT REMAINS IN THE CENTER WHEN RAMP TRANSITIONS TO TWO (2) RAMPS AT 12'.
2. ALL BARS TO BE EPOXY COATED.



SAWED LONGITUDINAL JOINT

ALL DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE NOTED

USER NAME = footemj	DESIGNED -	REVISED - TOM MATOUSEK 08/19/10
	DRAWN - TOM MATOUSEK	REVISED - -
PLOT SCALE = 50.0000 ' / In.	CHECKED - A. ABBAS	REVISED - -
PLOT DATE = 3/27/2019	DATE - 10-18-02	REVISED - -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL FOR CENTERLINE SAW CUT 16' AND VARIABLE JOINTED PCC PAVEMENT FOR RAMPS

SCALE: NONE | SHEET 7 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	565
BD49			CONTRACT NO. 60X94	
		ILLINOIS	FED. AID PROJECT	

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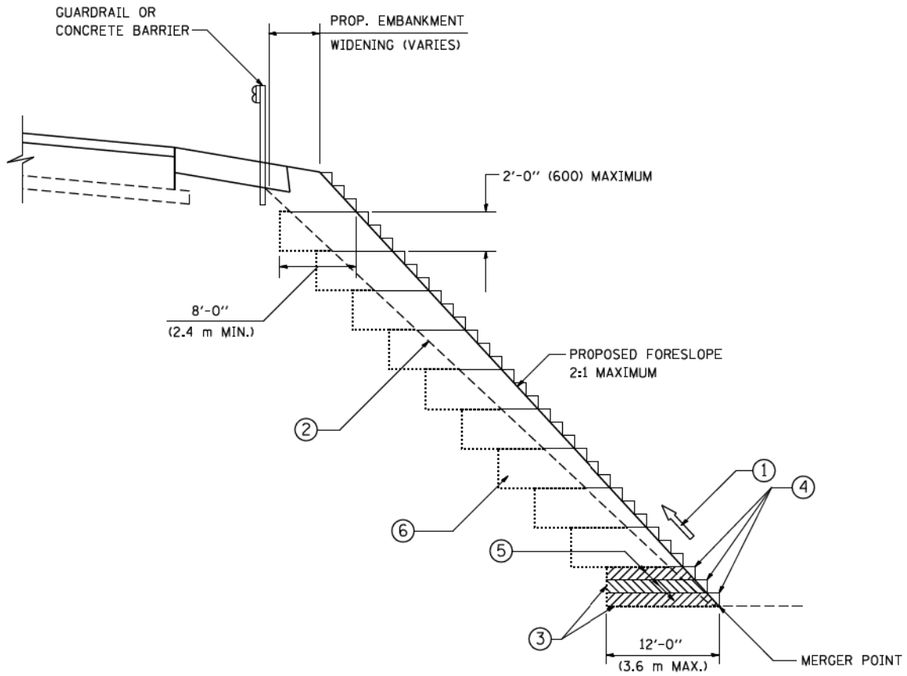

TYPICAL BENCHING DETAIL FOR EMBANKMENT

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.

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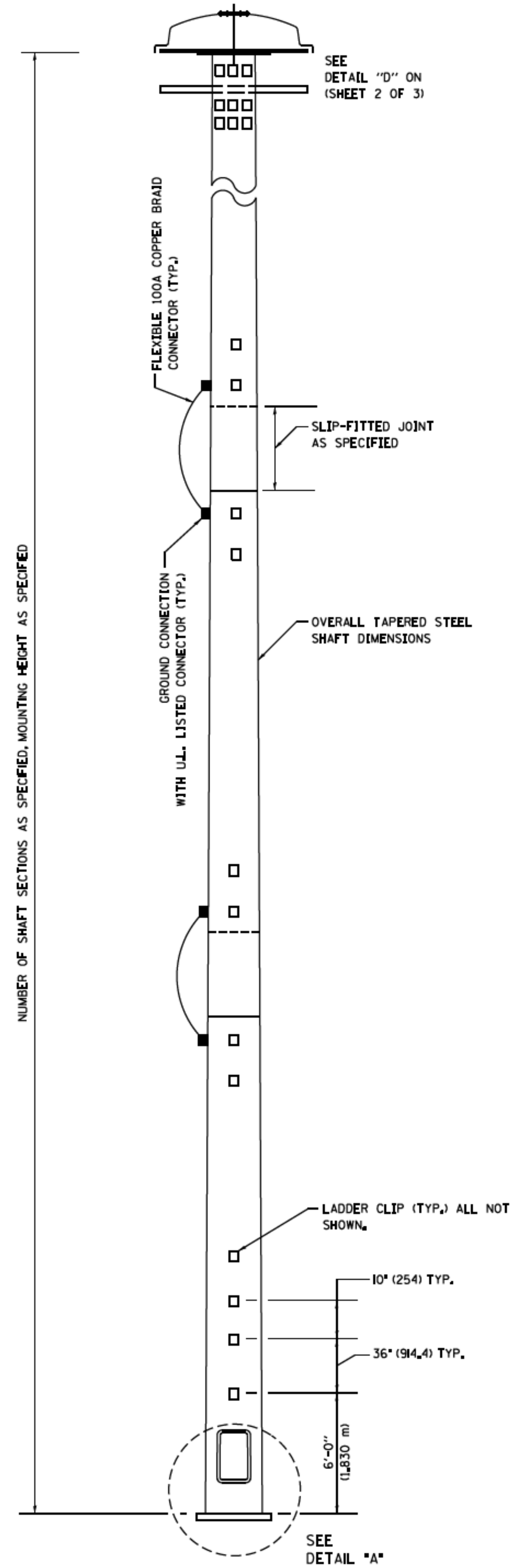
		DRAWN - CADD	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED - S.E.B.	REVISED -
	PLOT DATE = 1/4/2008	DATE - 06-16-04	REVISED -

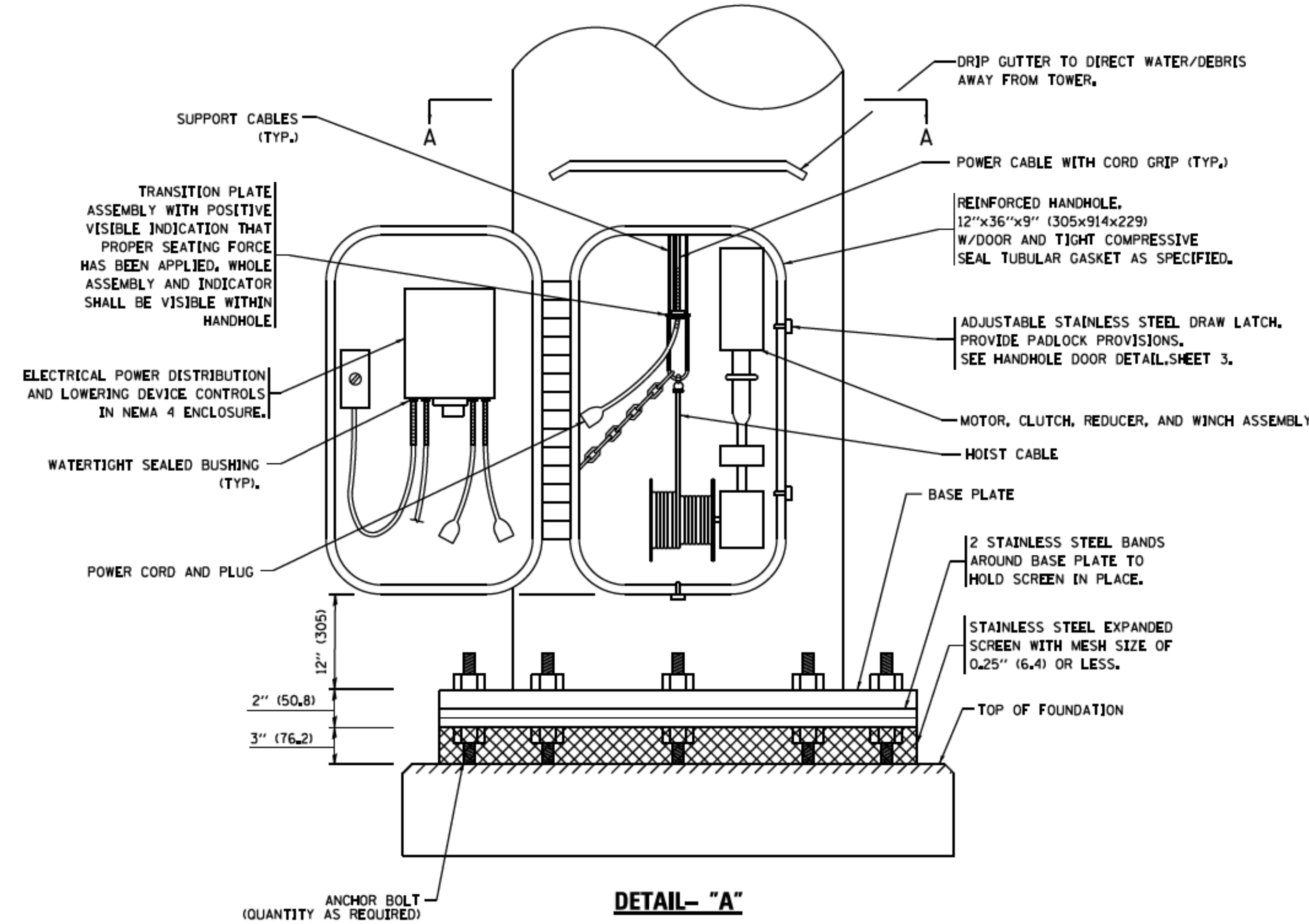
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL
FOR EMBANKMENT WIDENING

SCALE: NONE | SHEET 8 OF 34 SHEETS | STA. | TO STA.

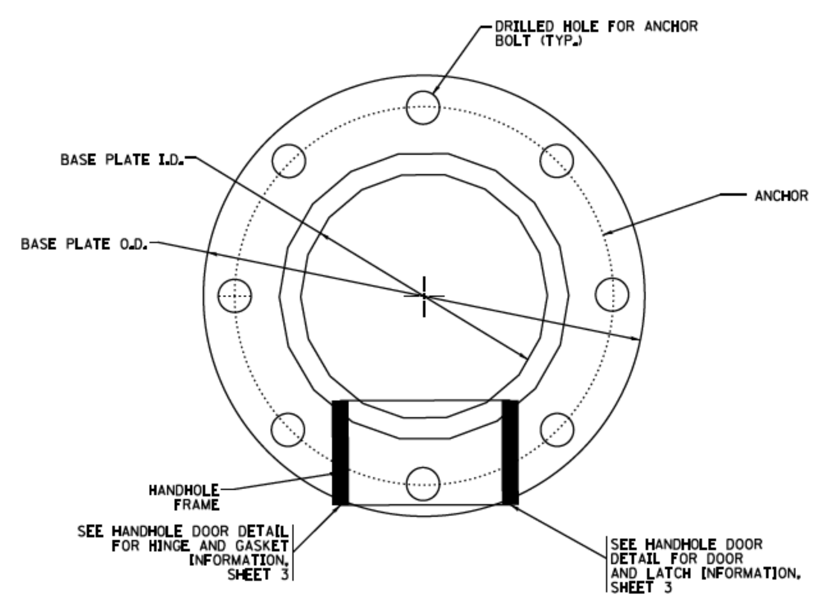
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	566
	BD-51	CONTRACT NO. 60X94		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





DETAIL– "A"

3 CABLE LOWERING & SUPPORT
MECHANISM SHOWN.



SECTION – A–A

NOTES:

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

2. THE DESIGN SHALL BE BASED UPON AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" IN EFFECT ON THE DATE OF INVITATION FOR BIDS. HOWEVER THE WIDTH OF REINFORCED OPENING REQUIREMENT IN CHAPTER 5, SECTION 5.6.6.1 SHALL NOT APPLY. LIGHT TOWERS SHALL BE DESIGNED FOR ADT > 10,000, RISK CATEGORY TYPICAL, AND FATIGUE IMPORTANCE CATEGORY I.

   A MINIMUM TOTAL COMBINED LUMINAIRE WEIGHT OF 600 LB (272 KG) SHALL BE USED PLUS A COMBINED HOOD AREA AND LOWERING RING WEIGHT OF 400 LB (181 KG). THE ASSOCIATED TOTAL PROJECTED AREA SHALL BE 24 SQ FT (2.23 SQ M) AND 10 SQ FT (0.93 SQ.) RESPECTIVELY.

3. ALL TOWER SHAFT COMPONENTS, INCLUDING, BUT NOT LIMITED TO THE SHAFT SECTIONS, BASE PLATE, LADDER CLIPS, HANDHOLE DOOR, HANDHOLE REINFORCING, RAIN GUTTER, AND BASE PLATE, SHALL BE FABRICATED FROM HIGH-STRENGTH, LOW ALLOY, STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI (345 K PA) ACCORDING TO AASHTO M 270 (ASTM A 572 GR50)

4. THE ELECTRIC MOTOR, MOTOR GEAR REDUCER, WINCH DRUM ASSEMBLY AND AUTOMATIC SHUTOFF SWITCH OF THE LOWERING DEVICE SHALL BE ACCESSIBLE FROM THE FRONT OF THE TOWER FOR EASY REMOVAL AND MAINTENANCE. ALL COMPONENTS SHALL BE REMOVABLE THROUGH THE HANDHOLE.

5. THE LIGHT TOWER SHAFT SHALL HAVE LADDER CLIPS. CLIPS SHALL BEGIN 6 FT. (1.8 m) ABOVE THE BASE PLATE WITH ALTERNATE 36 INCH) (900) AND 10 INCH (250) SPACING THEREAFTER, FOR THE ENTIRE LENGTH. THE TOP 10 FT. (3 m) OF THE POLE SHAFT SHALL HAVE 3 SETS OF CLIPS. EACH SET OF CLIPS SHALL BE 120 DEGREES APART. CLIPS SHALL BE 0.25 X 2 INCHES (6 X 50) WELDED TO THE SHAFT TO PRODUCE A SLOT 0.625 INCHES (15.9) DEEP AND 1.625 INCHES (41.3) LONG. THE TOP INSIDE EDGE SHALL BE CHAMFERED.

6. A COPPER BONDING JUMPER SHALL BOND SLIP-FIT POLE SECTIONS TOGETHER WITH A FLAT COPPER MESH AND STAINLESS STEEL GROUND LUGS.

7. ALL TOWER SHAFT HARDWARE, SUCH AS GROUND LUGS, JUNCTION BOXES, HARDWARE FOR THE HANDHOLE DOOR, INCLUDING THE HANDLE/LATCH MECHANISM, HINGE AND DOOR STOP, SHALL BE STAINLESS STEEL. ALL CONDUIT AND CONDUIT FITTINGS SHALL BE PVC COATED GALVANIZED STEEL.

8. THE ENTIRE TOWER INCLUDING THE SHAFT, HANDHOLE, HANDHOLE DOOR, BASE PLATE AND ALL OTHER ELEMENTS WELDED TO THE SHAFT SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111 (ASTM A 123). THE LUMINAIRE RING SHALL BE PRIMED AND PAINTED AS SPECIFIED OR BE STAINLESS STEEL

9. ALL MULTI-CONDUCTOR CABLES SHALL BE FITTED WITH A HEAT-SHRINK MULTI-LEG BOOT. THE BOOT SHALL MEET MILITARY SPECIFICATION MIL-I-81765/1.

10. THE LIGHT TOWER SHALL BE STRAIGHT AND CENTERED ON ITS LONGITUDINAL AXIS, UNDER NO-WIND CONDITIONS, SO WHEN EXAMINED WITH A TRANSIT FROM ANY DIRECTION, THE DEVIATION FROM THE NORMAL SHALL NOT EXCEED ⅛ IN. IN 3 FT (2 mm IN 1 m) WITHIN ANY 5 FT (1.5 m) OF HEIGHT, WITH TOTAL DEVIATION NOT TO EXCEED 3 IN. (75) FROM THE VERTICAL AXIS THROUGH THE CENTER OF THE POLE BASE.

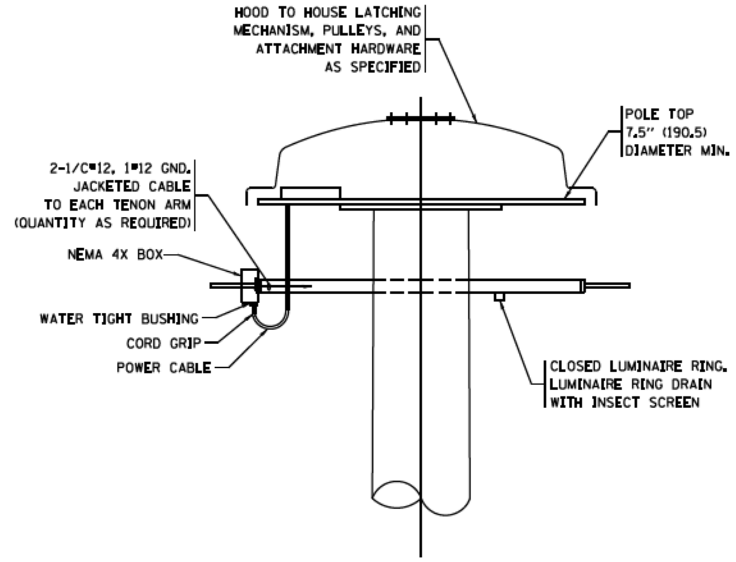
11. PVC CONDUIT WILL NOT BE ALLOWED FOR ANY LIGHT TOWER COMPONENT.

12. COUNTER WEIGHTS TO BE INCLUDED AS A PART OF THE LIGHT TOWER PAY ITEM.

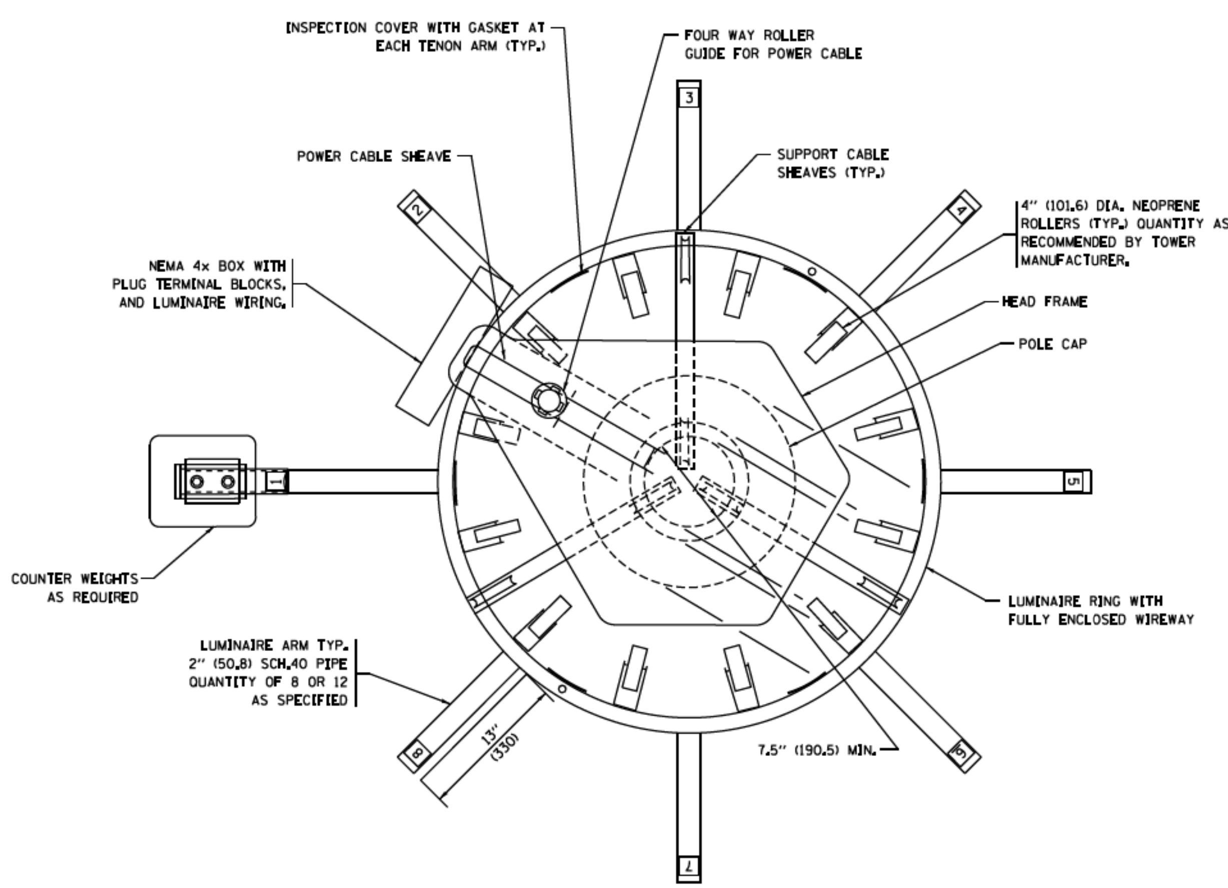
LIGHT TOWER DIMENSIONS

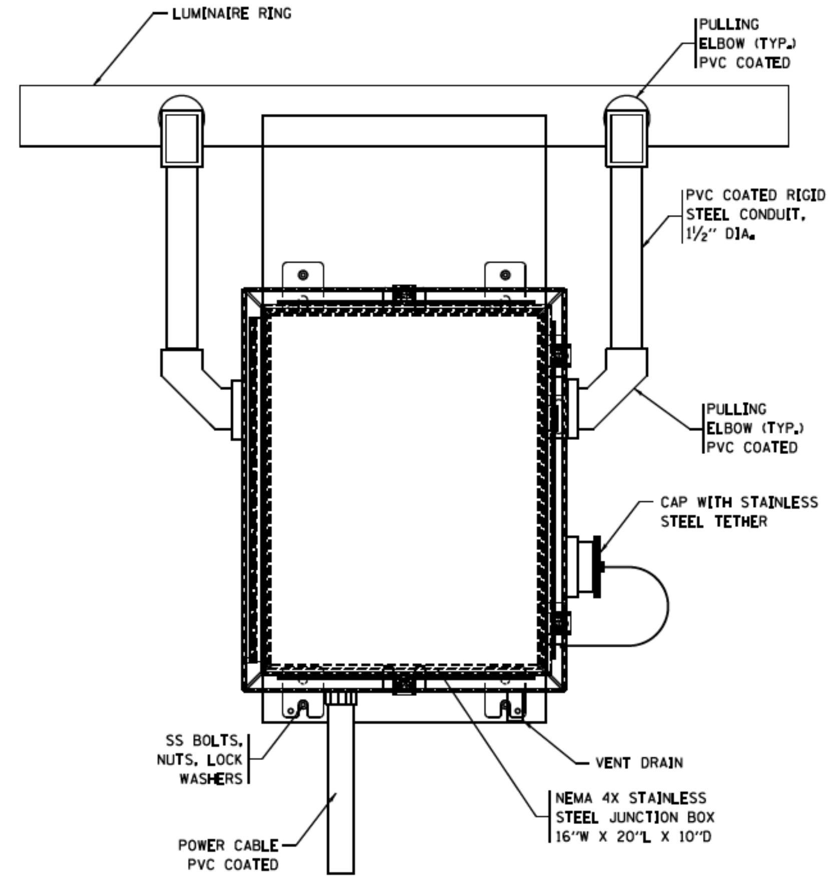
MOUNTING HEIGHT (FEET)	MAXIMUM NUMBER OF SECTIONS	MINIMUM NUMBER OF ANCHOR RODS	MINIMUM TOWER TOP DIAMETER (INCHES)	MINIMUM TOWER BOTTOM DIAMETER (INCHES)	MINIMUM ROD DIAMETER (INCHES)	MINIMUM ANCHOR ROD CIRCLE (INCHES)
100	3	8	7.5	24	1.5	30
110	3	8	7.5	24	1.5	30
120	3	8	7.5	26	1.75	36
130	4	8	7.5	28	1.75	36
140	4	8	7.5	28	1.75	36
150	4	8	7.5	30	2.25	38
160	4	8	7.5	32	2.25	38

FILE NAME =	USER NAME = footemj	DESIGNED -	REVISED - R. TOMSONS 09-02-10	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HIGH MAST LIGHT TOWER 100 FT TO 160 FT (30 m TO 49 m)	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
pw\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist		DRAWN \CADData\CADsheets\be500.dgn	REVISED - R. TOMSONS 02-27-13						825	567
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. TOMSONS 04-29-16			BE-500		CONTRACT NO. 60X94		
Default	PLOT DATE = 7/27/2016	DATE -	REVISED - R. TOMSONS 07-26-16		SCALE: SHEET 9 OF 34 SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

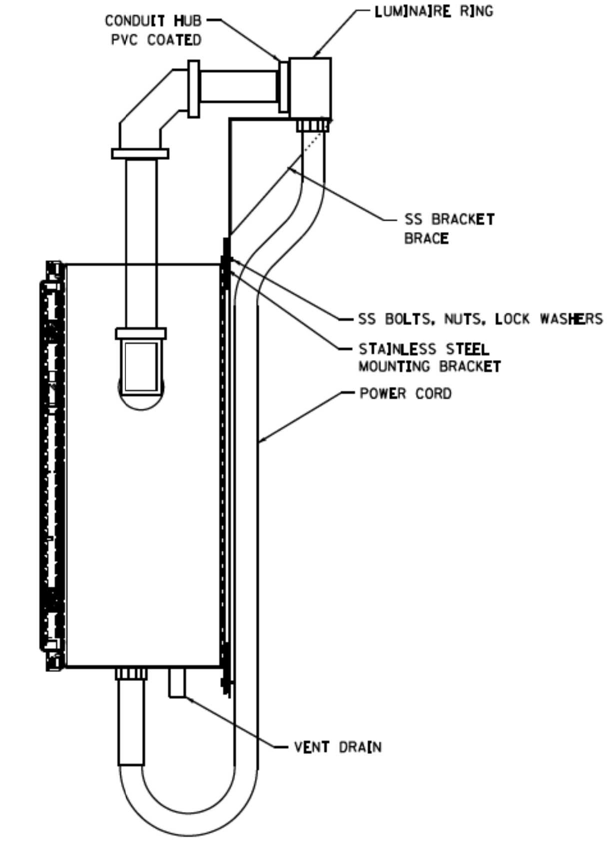


DETAIL-"D"





FRONT VIEW
N.T.S.



SIDE VIEW
N.T.S.

LUMINAIRE RING TERMINAL BOX

NOTES:

1. LUMINAIRE WIRES SHALL EXTEND 24 INCHES (609mm) LONGER THAN THE RESPECTIVE TENON ARM AND SHALL BE TRAINED BACK INTO THE ARM WHICH SHALL THEN BE CLOSED WITH A CAP AS SPECIFIED ALL WIRES SHALL BE CAPPED WITH HEAT SHRINK INSULATING BOOTS, CRIMP CAPS ARE UNACCEPTABLE. ALL RING WIRES SHALL BE TAGGED WITH WIRE MARKERS AT BOTH ENDS THE TENON ARMS SHALL ALSO BE TAGGED CORRESPONDING TO THE WIRING CONTAINED WITHIN.
2. SPLICING WILL NOT BE ALLOWED WITHIN THE LUMINAIRE RING.
3. ALL TOWER SHAFT HARDWARE, SUCH AS GROUND LUGS, JUNCTION BOXES, HARDWARE FOR THE HANDHOLE DOOR, INCLUDING THE HANDLE/LATCH MECHANISM, HINGE AND DOOR STOP, SHALL BE STAINLESS STEEL. ALL CONDUIT AND CONDUIT FITTINGS SHALL BE PVC COATED GALVANIZED STEEL.
4. ALL MULTI-CONDUCTOR CABLES SHALL BE FITTED WITH A HEAT-SHRINK MULTI-LEG BOOT. THE BOOT SHALL MEET MILITARY SPECIFICATION MIL-I-81765/1.

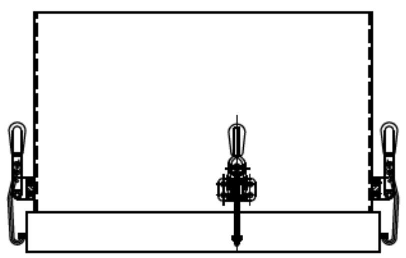
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist...	USER NAME = footemj	DESIGNED -	REVISED - R. TOMSONS 09-02-10
		DRAWN - \CADData\CADsheets\be500.dgn	REVISED - R. TOMSONS 02-27-13
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED - R. TOMSONS 04-29-16
Default	PLOT DATE = 7/27/2016	DATE -	REVISED - R. TOMSONS 07-26-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

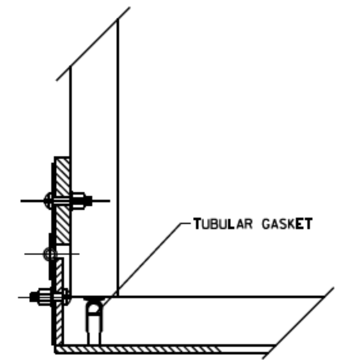
HIGH MAST LIGHT TOWER
100 FT TO 160 FT (30 m TO 49 m)

SCALE: | SHEET 10 OF 34 SHEETS | STA. | TO STA.

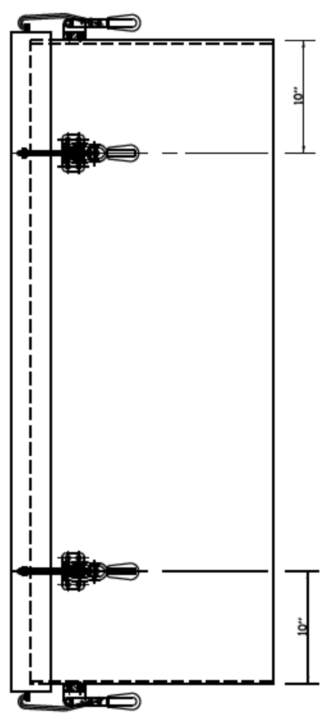
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	568
	BE-500	CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			



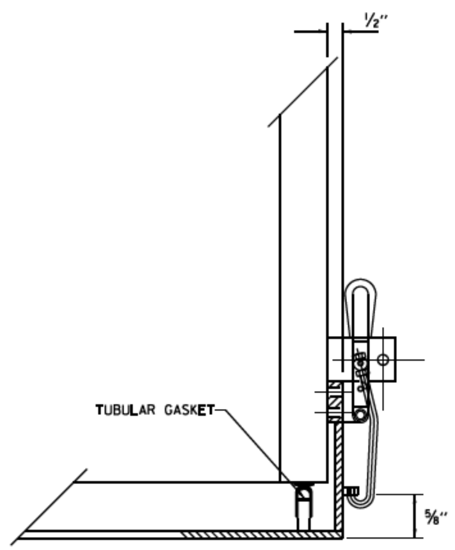
TOP VIEW



HINGE DETAIL

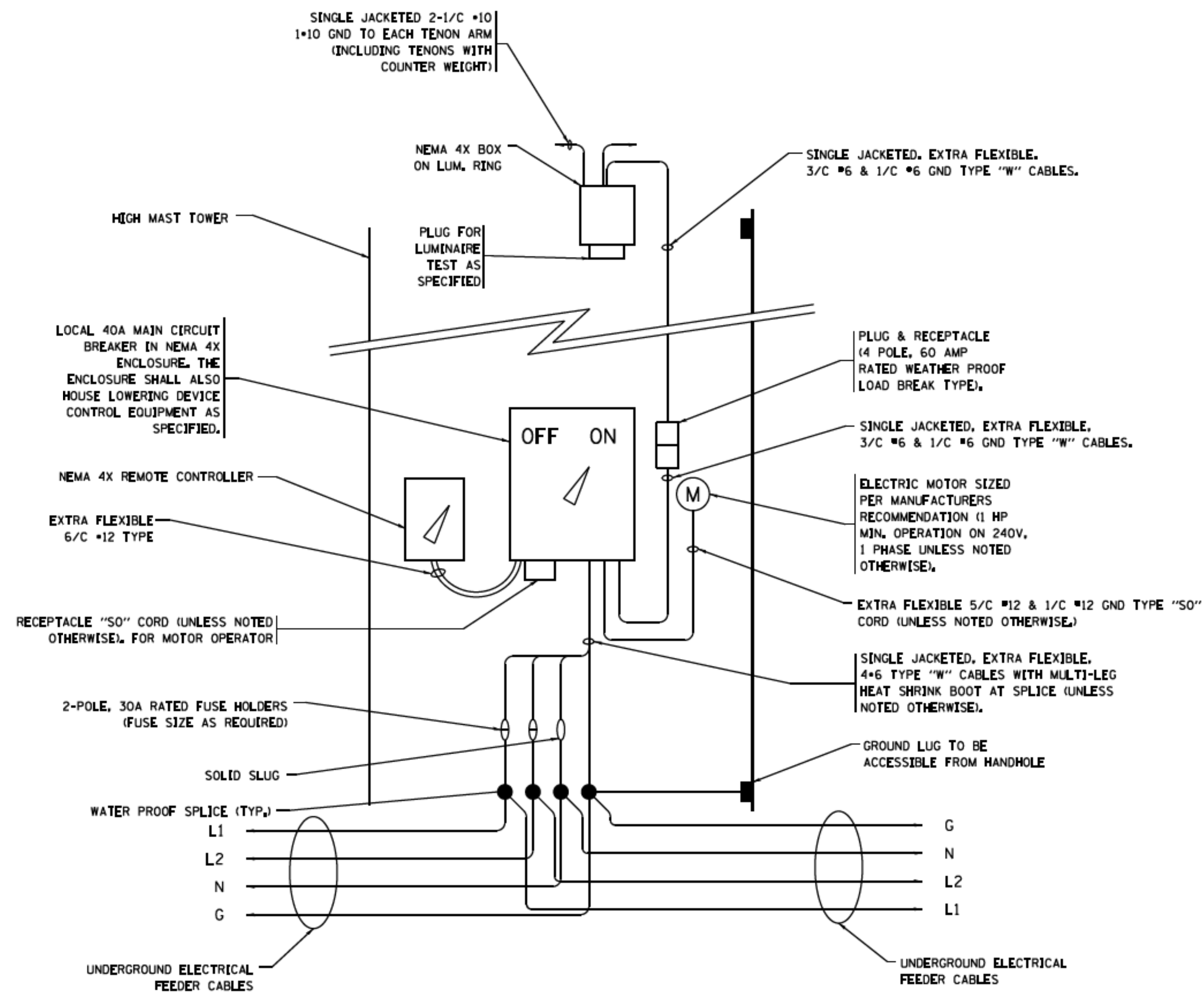


SIDE VIEW

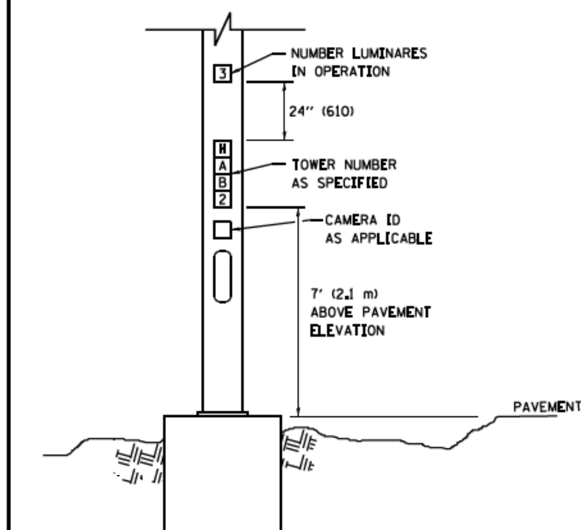


LATCH DETAIL

HANDHOLE DOOR DETAILS



HIGH MAST POLE WIRING DIAGRAM



LIGHT TOWER NUMBERING DETAIL

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Default	PLOT DATE = 7/27/2016	CHECKED -	REVISED - R. TOMSONS 04-29-16
		DATE -	REVISED - R. TOMSONS 07-26-16

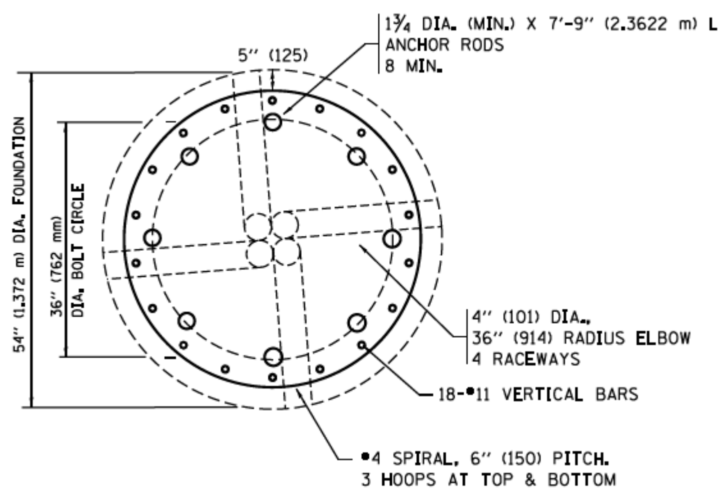
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HIGH MAST LIGHT TOWER
100 FT TO 160 FT (30 m TO 49 m)

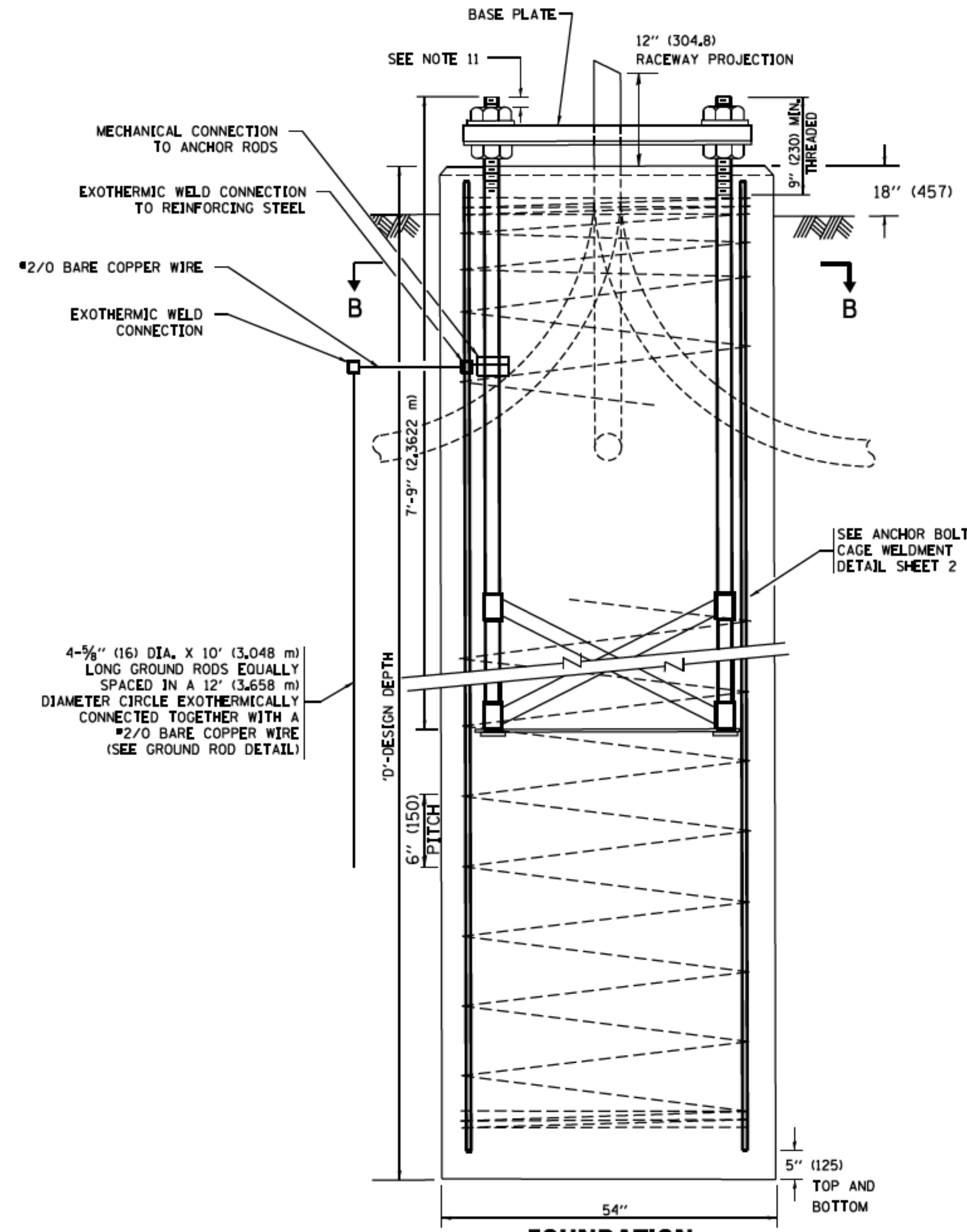
SCALE: | SHEET 11 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	569
	BE-500	CONTRACT NO. 60X94		
		ILLINOIS FED. AID PROJECT		

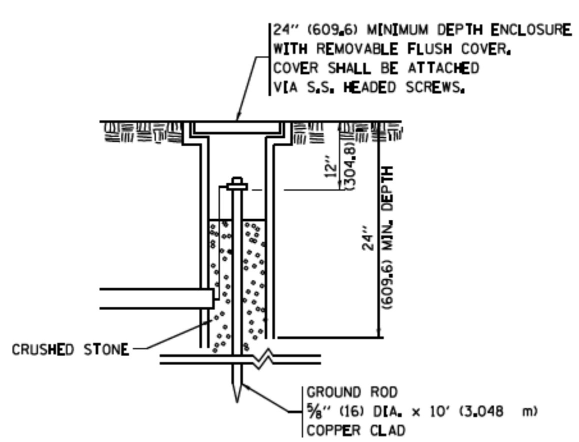
SHAFT LENGTH (D) TABLE					
SOIL CONSISTENCY		AVERAGE STRENGTH	LIGHT TOWER MOUNTING HEIGHT		
		Qu In tsf (Qu In kPa)	120 FT. (37 m)	130 FT. (40 m)	140 FT. (43 m)
	SOFT	<0.5 (<50)	25'-0" (7.6 m)	26'-6" (8.0 m)	27'-6" (8.3 m)
	MEDIUM	0.5 TO 1 (50 to 100)	20'-6" (6.2 m)	21'-6" (6.4 m)	22'-0" (6.7 m)
COHESIVE	STIFF	1 TO 2 (100 TO 200)	17'-6" (5.2 m)	18'-0" (5.4 m)	18'-6" (5.5 m)
	VERY STIFF	2 TO 4 (200 TO 400)	15'-0" (4.5 m)	15'-6" (4.6 m)	16'-0" (4.7 m)
	HARD	>4 (>400)	13'-6" (4.0 m)	13'-6" (4.1 m)	14'-0" (4.2 m)
		N In BLOWS/FT. (N In BLOWS/0.3m)			
	VERY LOOSE	<5 (<5)	19'-0" (6.3 m)	20'-0" (6.0 m)	20'-6" (6.2 m)
	LOOSE	5 TO 10 (5 TO 10)	17'-6" (5.7 m)	18'-0" (5.5 m)	18'-6" (5.6 m)
GRANULAR	MEDIUM	10 TO 25 (10 TO 25)	16'-6" (5.5 m)	17'-0" (5.2 m)	17'-6" (5.3 m)
	DENSE	25 TO 50 (25 TO 50)	15'-6" (5.2 m)	16'-6" (4.9 m)	16'-6" (5.0 m)
	VERY DENSE	>50 (>50)	15'-0" (4.5 m)	15'-6" (4.7 m)	16'-0" (4.8 m)



SECTION–B–B



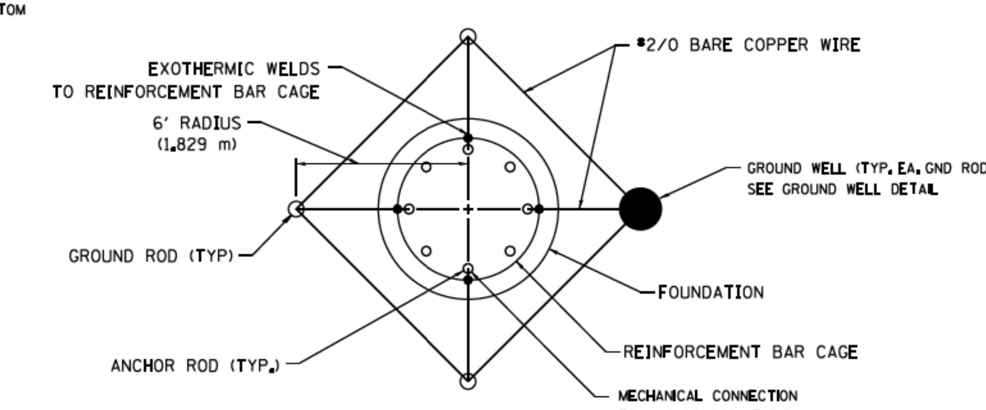
FOUNDATION ELEVATION



GROUND WELL DETAIL

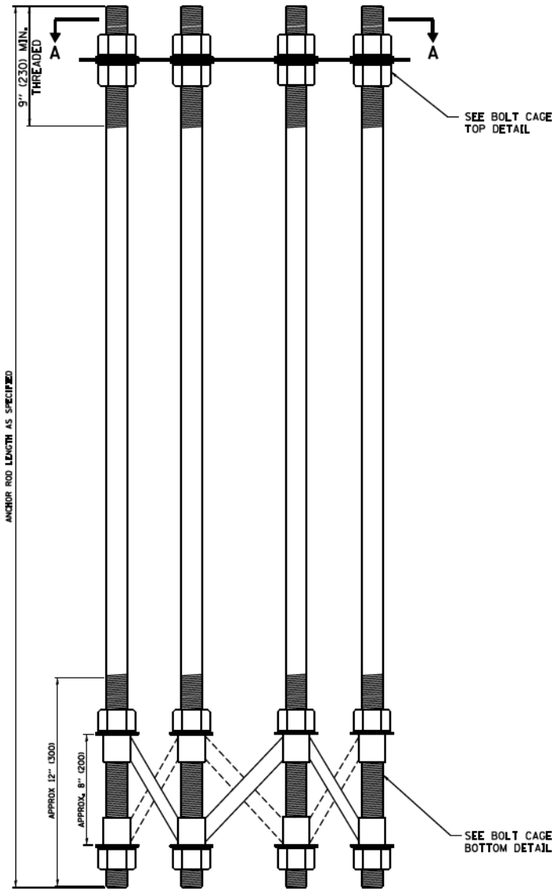
DESIGN NOTES

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN
2. THE ANCHOR RODS SHALL BE VERTICAL NO ADJUSTMENT SHALL BE ALLOWED AFTER THE FOUNDATION IS PLACED.
3. THE GAP BETWEEN THE FOUNDATION AND THE BASE PLATE SHALL BE ENCLOSED WITH A STAINLESS STEEL SCREEN FASTENED WITH A STAINLESS STEEL BAND.
4. THE TOP OF THE FOUNDATION TO 18" (450) BELOW GRADE SHALL BE FORMED.
5. SURFACE WATER WILL NOT BE PERMITTED TO ENTER THE HOLE AND ALL WATER WHICH MAY HAVE INFILTRATED INTO THE HOLE SHALL BE REMOVED BEFORE PLACING CONCRETE.
6. THE LIGHT TOWER SHALL NOT BE ERECTED UNTIL AFTER THE CONCRETE HAS BEEN CURED ACCORDING TO ARTICLE 1020.13.
7. ANCHOR RODS SHALL BE STRAIGHT AND SHALL BE ACCORDING TO ASTM F1554, GRADE 725 (GRADE 105) AND GALVANIZED ACCORDING TO ARTICLE 1006.9.
8. ANCHOR ROD INFORMATION SHALL BE SUBMITTED FOR APPROVAL AND SHALL BE FULLY COORDINATED FOR APPROVAL WITH TOWER MANUFACTURER REQUIREMENTS.
9. REINFORCEMENT BARS SHALL BE ACCORDING TO ARTICLE 1006.10
10. TWO ANCHOR RODS OPPOSITE EACH OTHER SHALL HAVE THE ANCHOR ROD THREADS PEENED AFTER NUTS ARE INSTALLED.
11. A MINIMUM OF THREE FULL THREADS SHALL REMAIN EXPOSED AFTER LIGHT TOWER IN INSTALLED.
12. ALL GROUNDING INDICATED IN THE PLANS SHALL BE INCLUDED IN THE COST OF THE LIGHT TOWER FOUNDATION AND SHALL NOT BE PAID FOR SEPARATELY.
13. CUT NUTS, OR JAM NUTS, ARE NOT ALLOWED
14. ANCHOR ROD QUANTITY, DIAMETER, AND LENGTH SHALL BE DETERMINED BY THE TOWER MANUFACTURER AND APPROVED BY THE ENGINEER. EACH FOUNDATION SHALL HAVE A MINIMUM OF 8 ANCHOR RODS.
15. COORDINATE THE ROD CIRCLE DIAMETER OF THE TOWER WITH THE DIAMETER OF THE ANCHOR ROD CAGE.
16. THE FOUNDATION SHALL BE POURED MONOLITHICALLY AND SHALL HAVE NO CONSTRUCTION JOINTS.

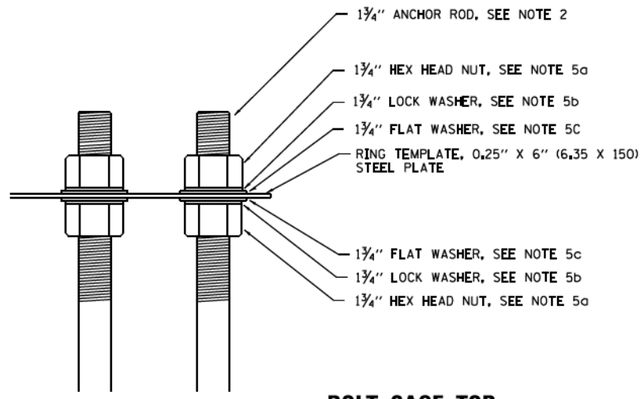


GROUND ROD DETAIL

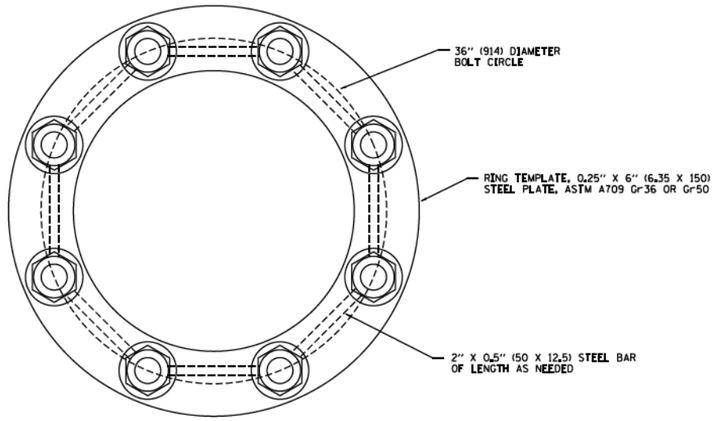
FILE NAME =	USER NAME = footemj	DESIGNED -	REVISED - R. TOMSONS 09-02-10	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HIGH MAST LIGHT TOWER 120 FT TO 140 FT FOUNDATION DETAIL	F.A. RTE. / SECTION / COUNTY / TOTAL SHEETS 825 / SHEET NO. 570
pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist 1\DRAWN\CADData\CADsheets\be506.dgn	PLOT SCALE = 50.000 ' / in.	DRAWN -	REVISED - R. TOMSONS 02-27-13			BE-506
		CHECKED -	REVISED - R. TOMSONS 04-29-16		SCALE:	CONTRACT NO. 60X94
Default	PLOT DATE = 4/29/2016	DATE - 03-12-10	REVISED -		SHEET 12 OF 34 SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT



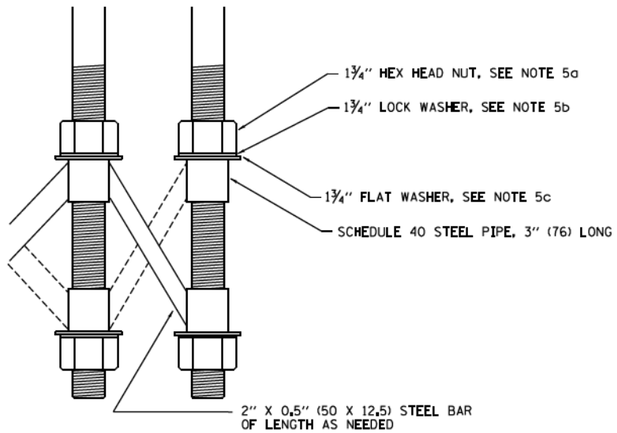
ANCHOR BOLT CAGE



BOLT CAGE TOP



SECTION A–A

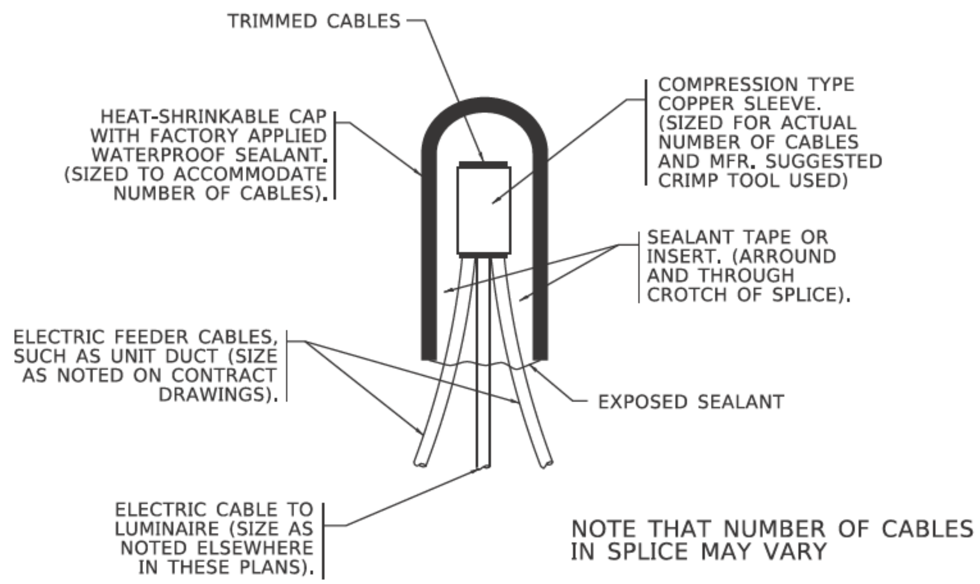


BOLT CAGE BOTTOM

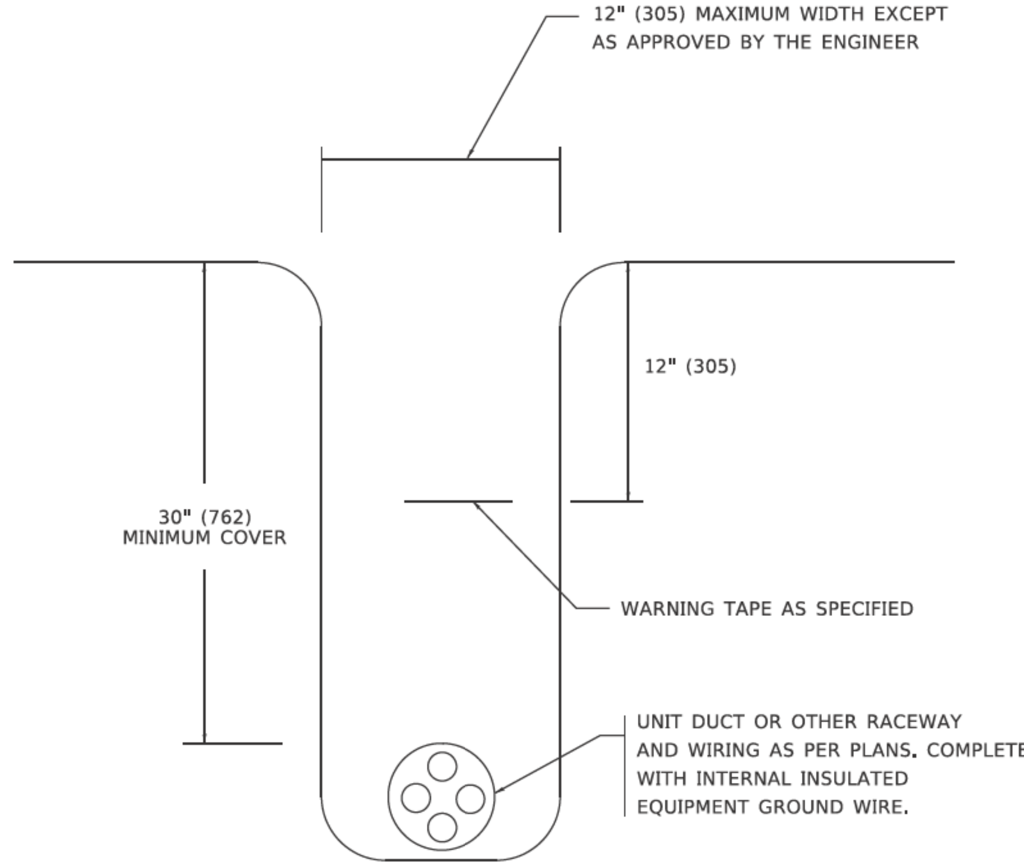
NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN
2. ANCHOR RODS SHALL BE STRAIGHT AND SHALL BE ACCORDING TO ASTM F1554, GRADE 725 (GRADE 105) AND GALVANIZED ACCORDING TO ARTICLE 1006.09.
3. ANCHOR ROD INFORMATION SHALL BE SUBMITTED FOR APPROVAL AND SHALL BE FULLY COORDINATED WITH TOWER MANUFACTURERS REQUIREMENTS
4. CUT NUTS, OR JAM NUTS, ARE NOT ALLOWED
5. ANCHOR ROD CAGE HARDWARE SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
   a) 1.5 (38) HEX HEAD NUTS
      AASHTO M291, GRADE C, C3, D ,DH OR DH3
      HOT DIPPED GALVANIZED AASHTO M 232
   b) 1.5 (38) HELICAL LOCK WASHERS
      ANSI/ASME B18.21.1
      I.D. 1.504 - 1.524
      O.D. 2.159 MAX.
      WIDTH 0.292 MIN.
      THICKNESS 0.375 MIN.
      HARDNESS 26-45 ROCKWELL C
      HOT DIPED GALVANIZED AASHTO M232
   c) 1.5 (38) FLAT WASHERS
      AASHTO M293
      O.D. 2.75
      I.D. 1.56
      THICKNESS 0.16 - 0.25
      HARDNESS 26-45 ROCKWELL C.
      HOT DIPED GALVANIZED AASHTO M232
6. THE SHAFT LENGTHS SHALL BE BASED ON SOIL BORINGS IN THE PLANS AND OR A DETERMINATION OF SOIL CONDITIONS BY THE ENGINEER.
7. ALL FOUNDATION REINFORCEMENT STEEL SHALL BE EPOXY COATED.
8. THE FOUNDATION SHALL BE POURED MONOLITHICALLY AND SHALL HAVE NO CONSTRUCTION JOINTS.
9. ANCHOR RODS AND ALL ASSOCIATED HARDWARE ARE SHOWN AS MINIMUMS. SIZING SHALL BE DETERMINED BY THE TOWER MANUFACTURER AND APPROVED BY THE ENGINEER. EACH FOUNDATION SHALL HAVE A MINIMUM OF 8 ANCHOR RODS.

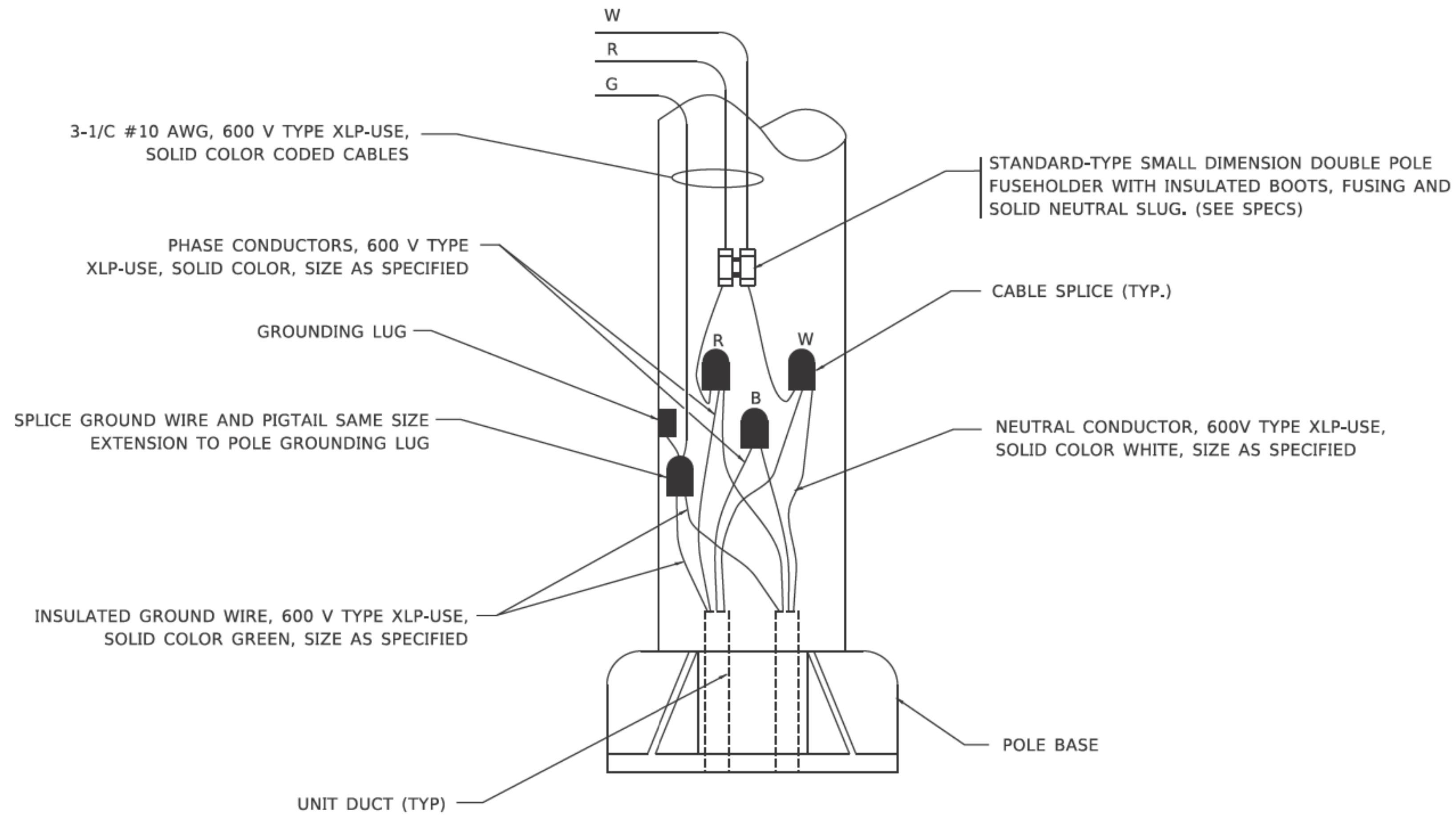
FILE NAME = pw:\\IL884EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\02WPM\CADData\CADsheets\be506.dgn	USER NAME = footemj	DESIGNED - R. TOMSONS 09-02-10	REVISED - R. TOMSONS 02-27-13	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HIGH MAST LIGHT TOWER 120 FT TO 140 FT FOUNDATION DETAIL	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
									825	571
	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED -				BE-506		CONTRACT NO. 60X94	
Default	PLOT DATE = 4/29/2016	DATE -	REVISED -		SCALE:	SHEET 13 OF 34 SHEETS	STA.	TO STA.	ILLINOIS	FED. AID PROJECT



TYPICAL SPLICE DETAIL
N.T.S.



TYPICAL WIRING IN TRENCH DETAIL
N.T.S.



POLE WIRING DETAIL
N.T.S.

USER NAME = leysa	DESIGNED -	REVISED - 02/04/2020
	DRAWN -	REVISED -
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 3/2/2020	DATE - 08/08/2003	REVISED -

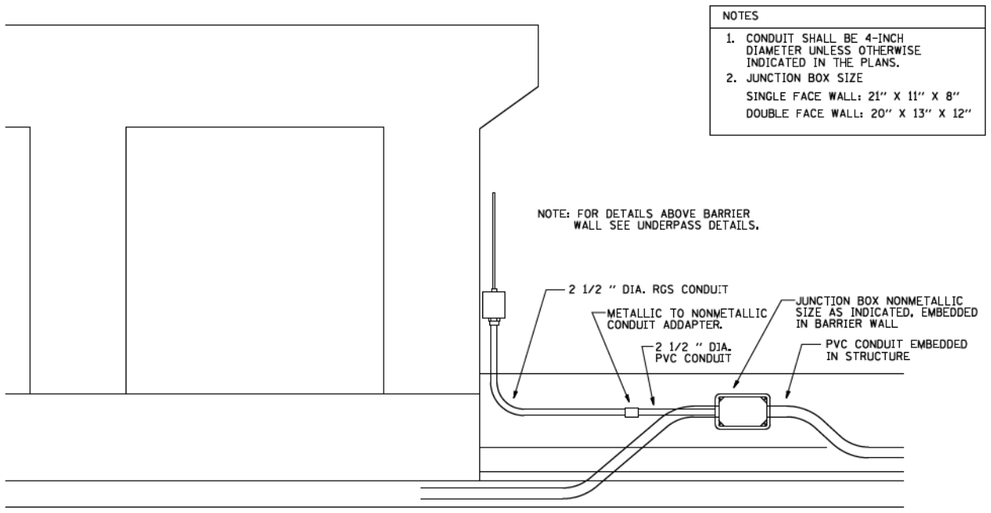
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISC. ELECTRICAL DETAILS
SHEET A

SCALE: NONE | SHEET 14 OF 34 SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	572

BE-702 | CONTRACT NO. 60X94
ILLINOIS | FED. AID PROJECT

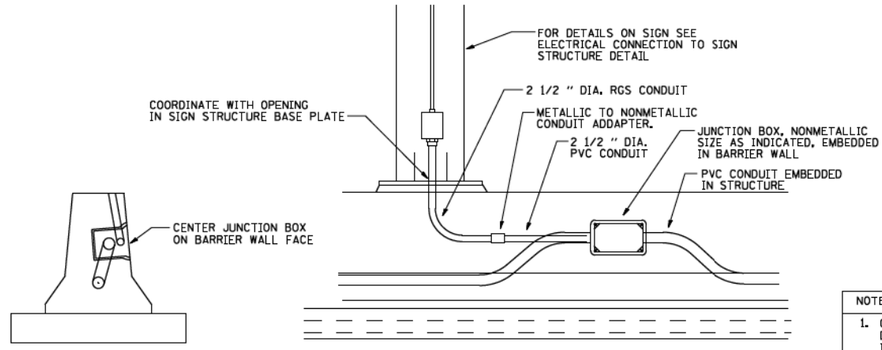


NOTES

1. CONDUIT SHALL BE 4-INCH DIAMETER UNLESS OTHERWISE INDICATED IN THE PLANS.
2. 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

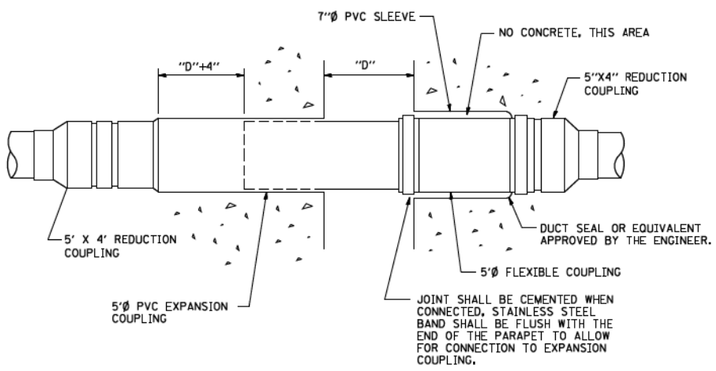


NOTES

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

ED - SGN

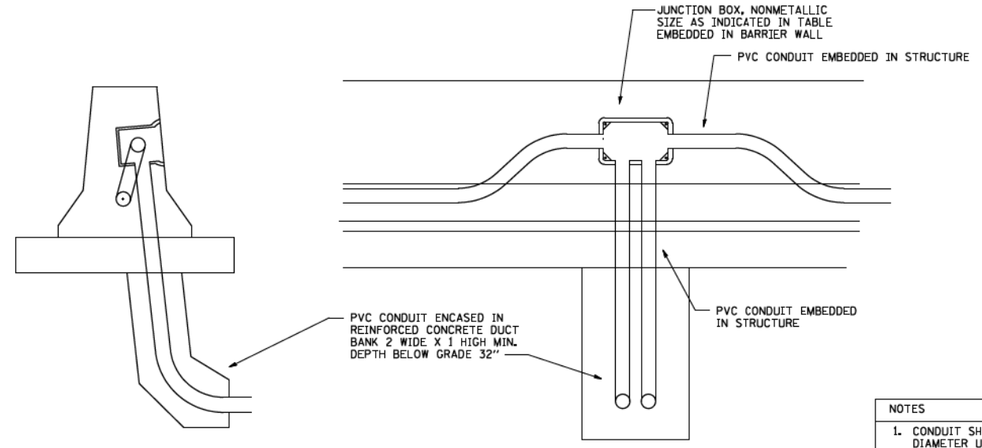
JUNCTION BOX EMBEDDED IN BARRIER WALL FOR SIGN LIGHTING



INSTALLATION OF CONDUIT

IN BRIDGE PARAPET EXPANSION JOINT

(N.T.S.)



NOTES

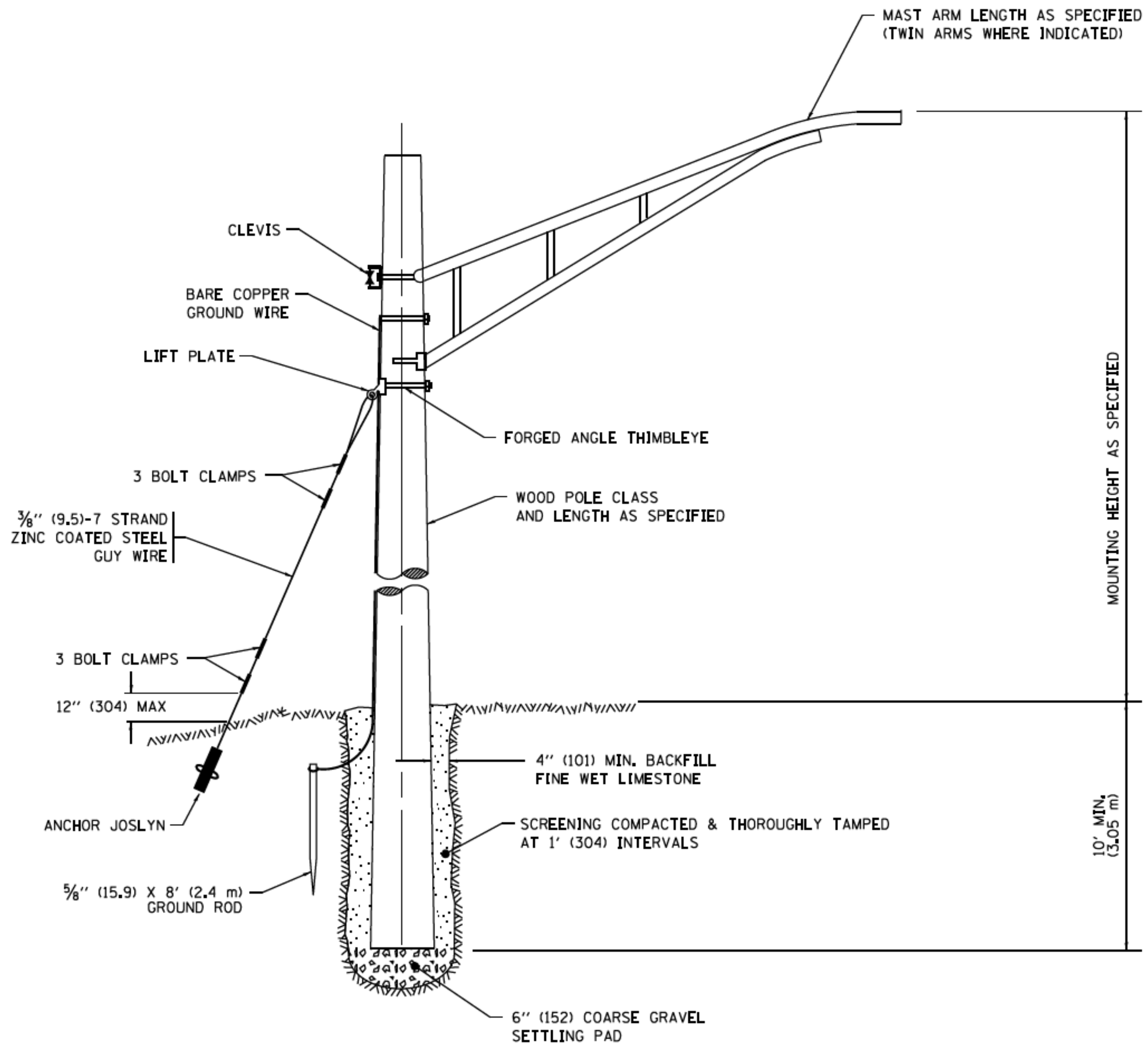
1. CONDUIT SHALL BE 4-INCH DIAMETER UNLESS OTHERWISE INDICATED IN THE PLANS.
2. JUNCTION BOX SIZE
   SINGLE FACE WALL: 21" X 11" X 8"
   DOUBLE FACE WALL: 20" X 13" X 12"

ED - BW

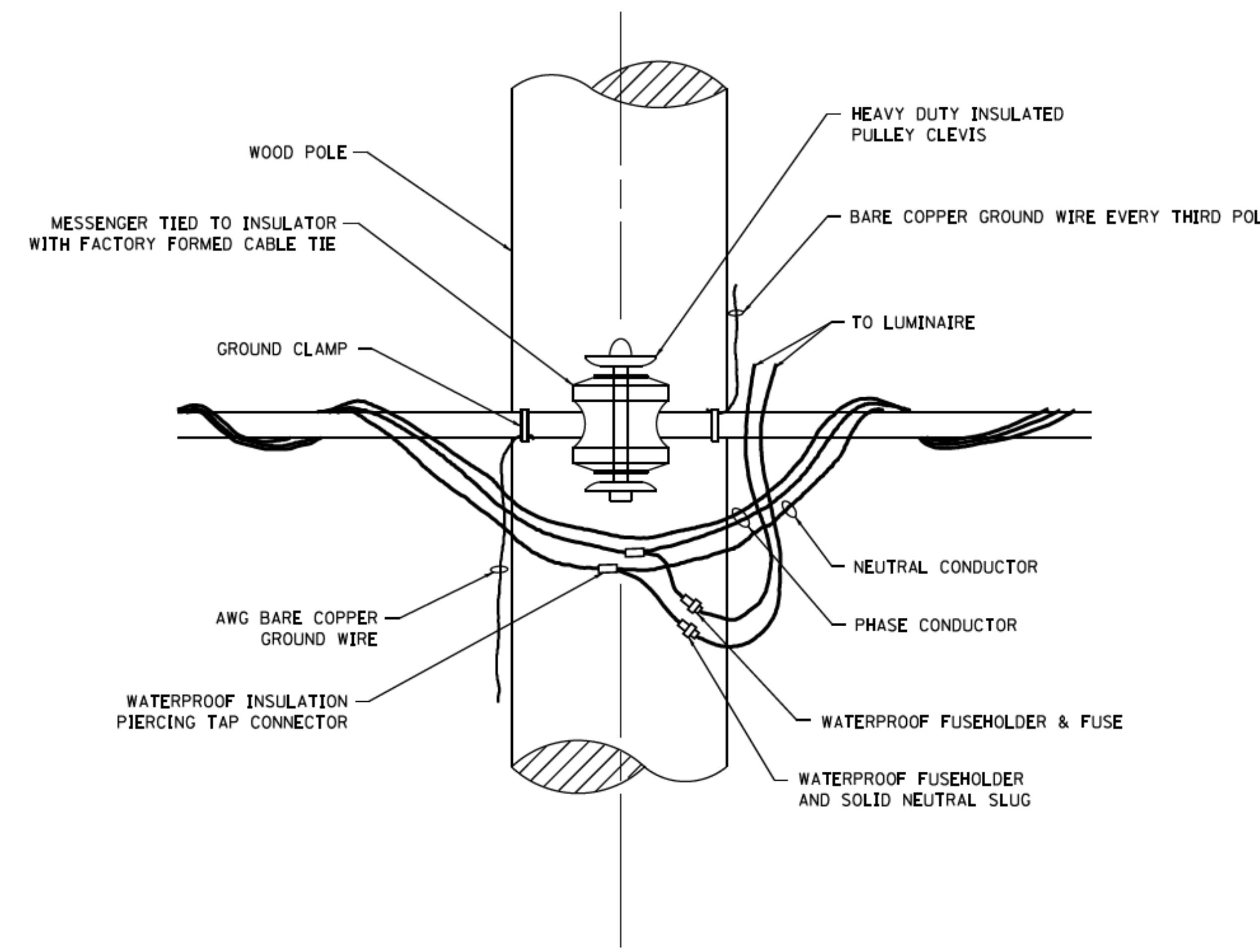
JUNCTION BOX EMBEDDED IN BARRIER WALL

FILE NAME = be703.dgn	USER NAME = gaglianobt	DESIGNED -	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
		DRAWN -	REVISED -		
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -		SCALE: NONE | SHEET 15 OF 34 SHEETS | STA. | TO STA.
	PLOT DATE = 2/5/2009	DATE - 01-20-2009	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	573
	BE-703	CONTRACT NO. 60X94		
FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT				



TEMPORARY LIGHT POLE DETAIL



TEMPORARY LIGHT POLE ATTACHMENT DETAIL

NOTE:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
2. MAST ARM SHALL BE RATED FOR THE SPECIFIED MOUNTING HEIGHT.

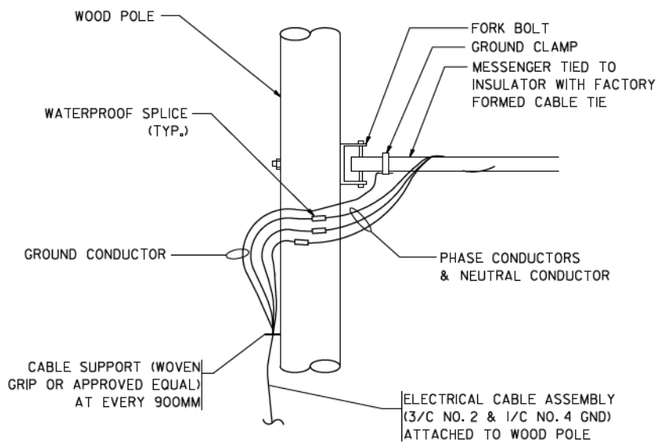
FILE NAME =	USER NAME = footemj	DESIGNED -	REVISED - 08-08-03
pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist... \CADData\CADsheets\be800.dgn		DRAWN	REVISED - R.T. 07-26-16
	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 9/1/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY LIGHT POLE DETAILS

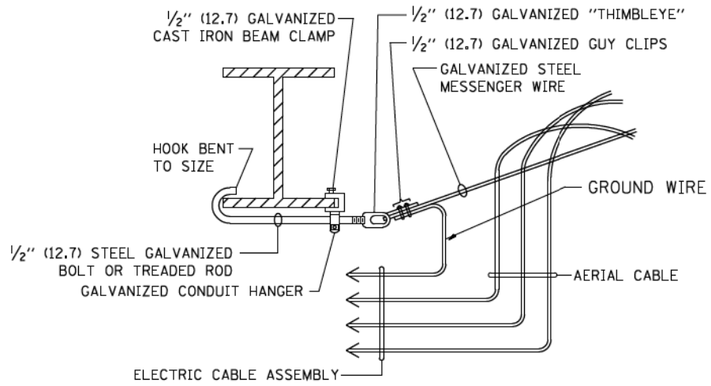
SCALE: NONE | SHEET 16 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	574
	BE-800	CONTRACT NO. 60X94		
	ILLINOIS FED. AID PROJECT			



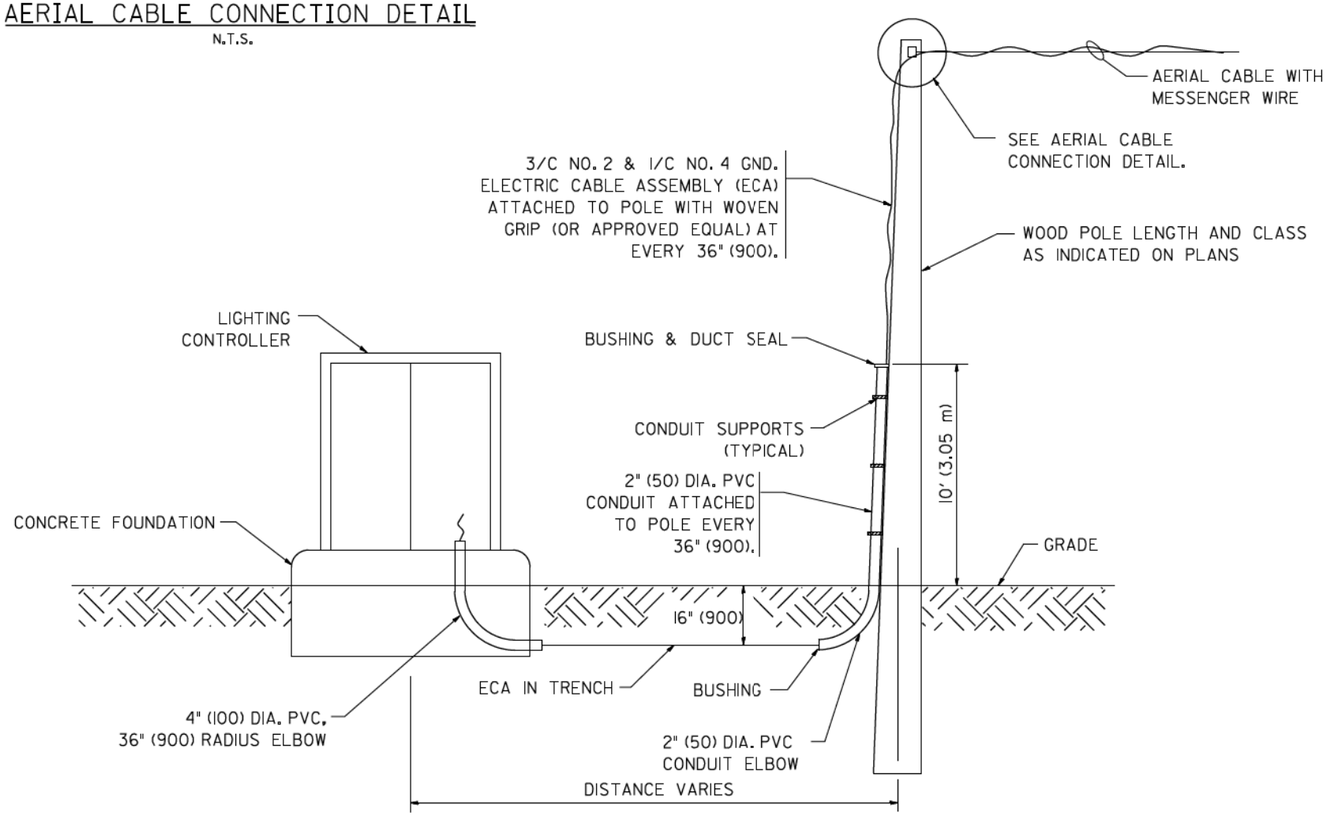
AERIAL CABLE CONNECTION DETAIL

N.T.S.



AERIAL CABLE ATTACHED TO STRUCTURE

NOT TO SCALE



WOOD POLE TO LIGHTING CONTROLLER WIRING CONNECTION DETAIL

N.T.S.

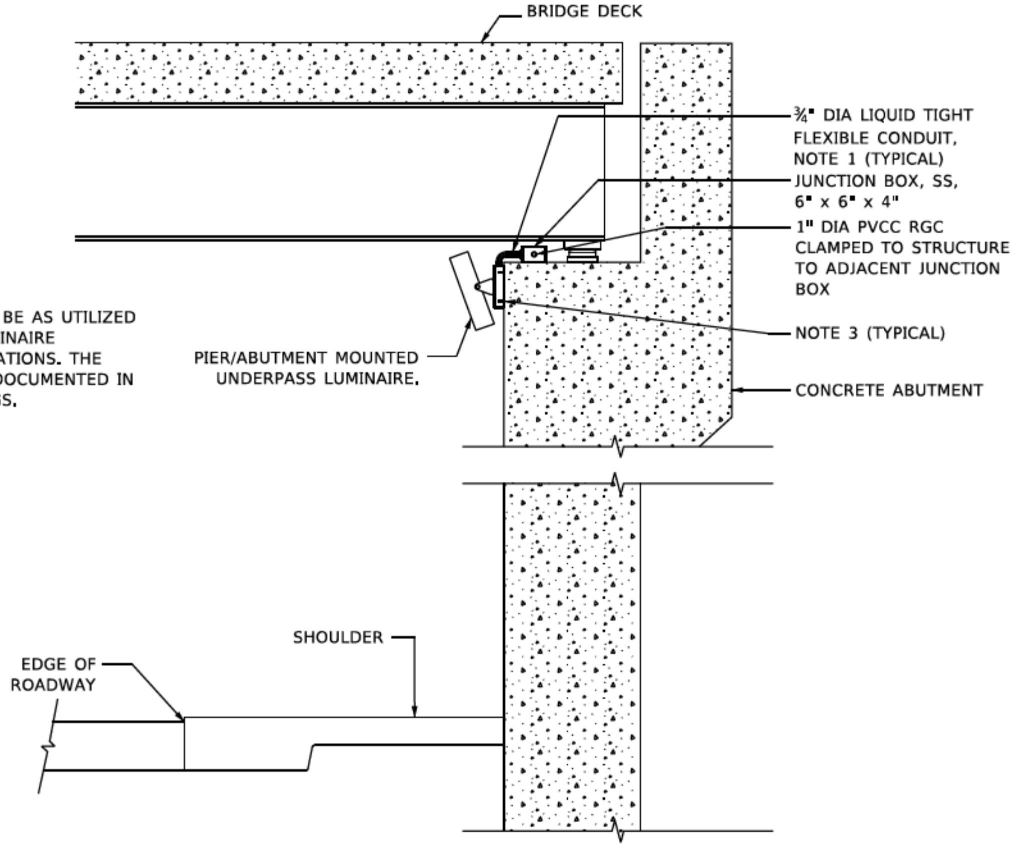
NOTES:

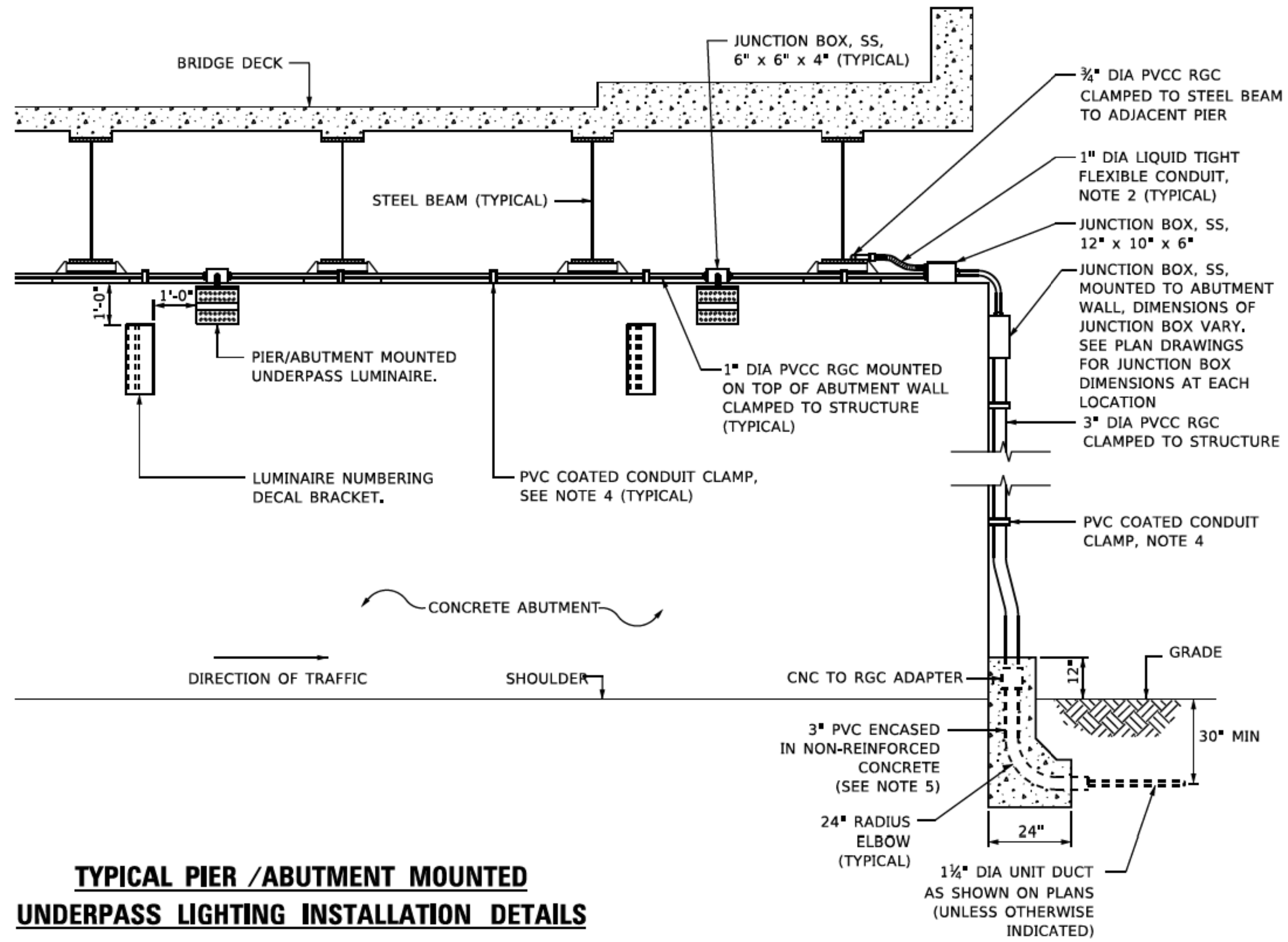
1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
2. SEE PROPOSED LIGHTING PLAN FOR CONDUIT, CABLE AND ROUTING.
3. THE CONTRACTOR SHALL PROVIDE INTERMEDIATE SUPPORTS TO MAINTAIN MINIMUM CLEARANCES. REFER TO AERIAL AERIAL CABLE ATTACHED TO STRUCTURE DETAIL.
4. COST OF SPLICES AND MOUNTING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

FILE NAME = W:\diststd\22x34\be801.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-08-03	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY AERIAL CABLE INSTALLATION	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -						825	575
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -				BE-801		CONTRACT NO. 60X94	
	PLOT DATE = 1/4/2008	DATE -	REVISED -		SCALE: NONE SHEET 17 OF 34 SHEETS STA. TO STA.			FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT

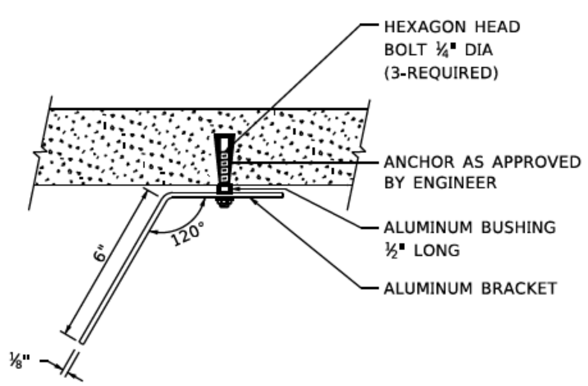
NOTE:

LUMINAIRE TILT SHALL BE AS UTILIZED IN THE APPROVED LUMINAIRE PHOTOMETRIC CALCULATIONS. THE TILT ANGLE MUST BE DOCUMENTED IN THE RECORD DRAWINGS.

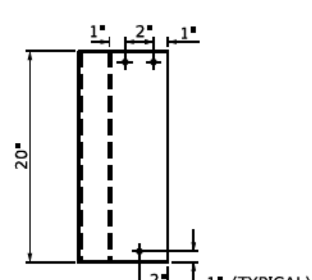




TYPICAL PIER /ABUTMENT MOUNTED UNDERPASS LIGHTING INSTALLATION DETAILS



TOP VIEW



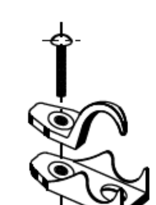
ELEVATION

LUMINAIRE NUMBERING DECAL BRACKET

NOT TO SCALE

PVC COATED CONDUIT BEAM CLAMP

NOT TO SCALE

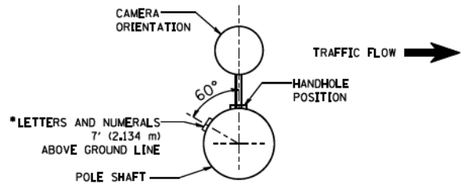


PVC COATED CONDUIT CLAMP

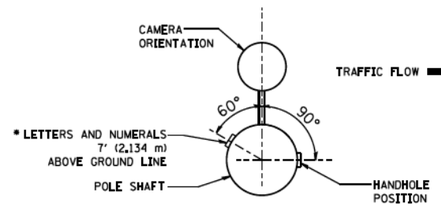
NOT TO SCALE

NOTES:

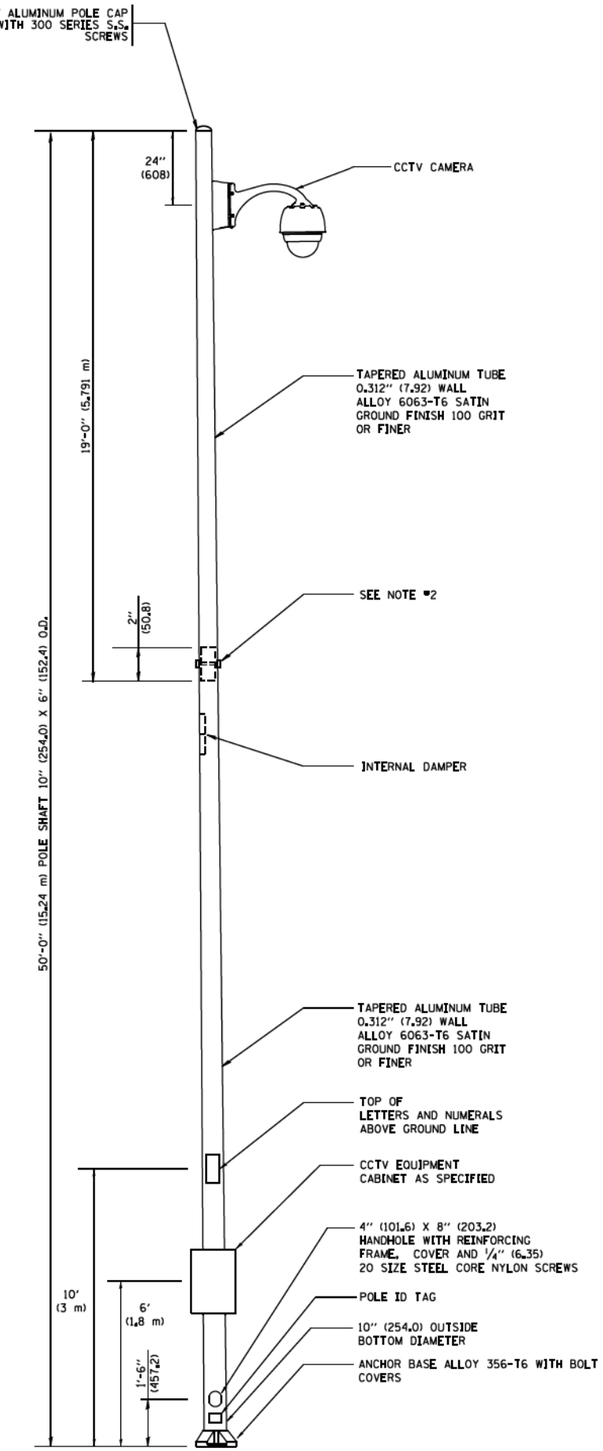
1. LIQUID TIGHT FLEXIBLE METAL CONDUIT, MAXIMUM LENGTH 6'-0", TYPICAL FOR EACH INSTANCE AS SHOWN. PROVIDE PVC COATED RIGID GALVANIZED STEEL CONDUIT AS REQUIRED NOT TO EXCEED 6'-0" OF FLEXIBLE LIQUID TIGHT METAL CONDUIT. LIQUID TIGHT FLEXIBLE METAL CONDUIT WILL BE INCLUDED IN THE COST OF THE CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED PAY ITEM EXCEPT THAT THE COST OF THE " DIA. RIGID STEEL CONDUIT AND " DIA. FLEXIBLE CONDUIT SHALL BE INCLUDED IN THE LUMINAIRE INSTALLATION.
2. SEE UNDERPASS LIGHTING PLANS FOR INSTALLATION LOCATION OF UNDERPASS LIGHTING LUMINAIRES.
3. 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.
4. EXPANSION ANCHOR, POWDER ACTUATED FASTENERS WILL NOT BE ALLOWED. EXPANSION ANCHOR MUST BE SIZED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.
5. 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.
6. THE CONCRETE ENCASED CONDUIT TRANSITION SHALL BE INCLUDED IN THE COST OF THE GALVANIZED RIGID STEEL CONDUIT PAY ITEMS.
7. ALL CONDUIT ATTACHED TO STRUCTURE SHALL BE PVC COATED RIGID STEEL CONDUIT (PVCC RGC) TYPICAL.



POSITION OF HANDHOLE AND CAMERA NUMBER FOR POLE MOUNTED ON BRIDGE PARAPET OR BARRIER WALL

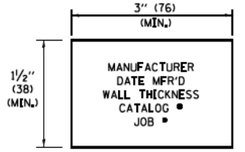


POSITION OF HANDHOLE AND CAMERA NUMBER



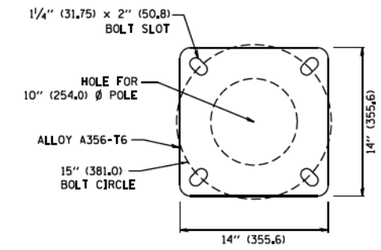
NOTES:

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED.
3. THE POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
4. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR. BURNDY K2C23, T&B SP4DL OR APPROVED EQUAL.
5. POLES WILL BE INSTALLED IN ACCORDANCE TO MANUFACTURER'S INSTRUCTIONS.
6. POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.



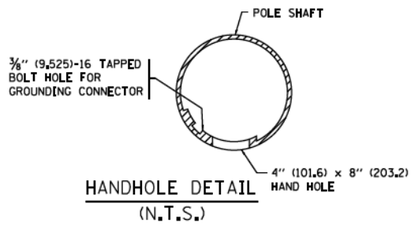
POLE ID TAG

NTS



POLE BASE PLATE DETAIL

15 INCH (381.0) BOLT CIRCLE

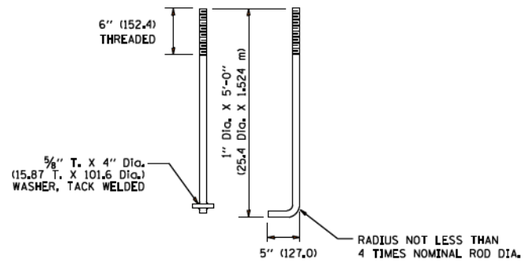


HANDHOLE DETAIL
(N.T.S.)

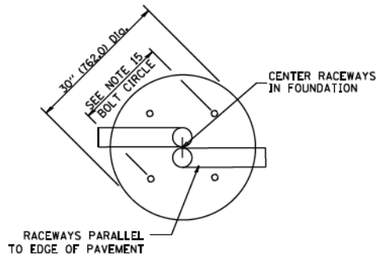
FILE NAME = c:\pw_work\pwidot\drivakosgn\d0108315\be1000.dgn	USER NAME = drivakosgn	DESIGNED -	REVISED - R. TOMSONS 09-06-00	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CCTV CAMERA STRUCTURE 50' (15.24 m) MOUNTING HEIGHT			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - R. TOMSONS 09-03-03								825	577
	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED - R. TOMSONS 02-27-13						BE-1000		CONTRACT NO. 60X94	
	PLOT DATE = 6/5/2014	DATE -	REVISED - R. TOMSONS 05-04-14		SCALE: NONE	SHEET NO. 19 OF 34 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	

CCTV CAMERA POLE FOUNDATION DEPTH TABLE

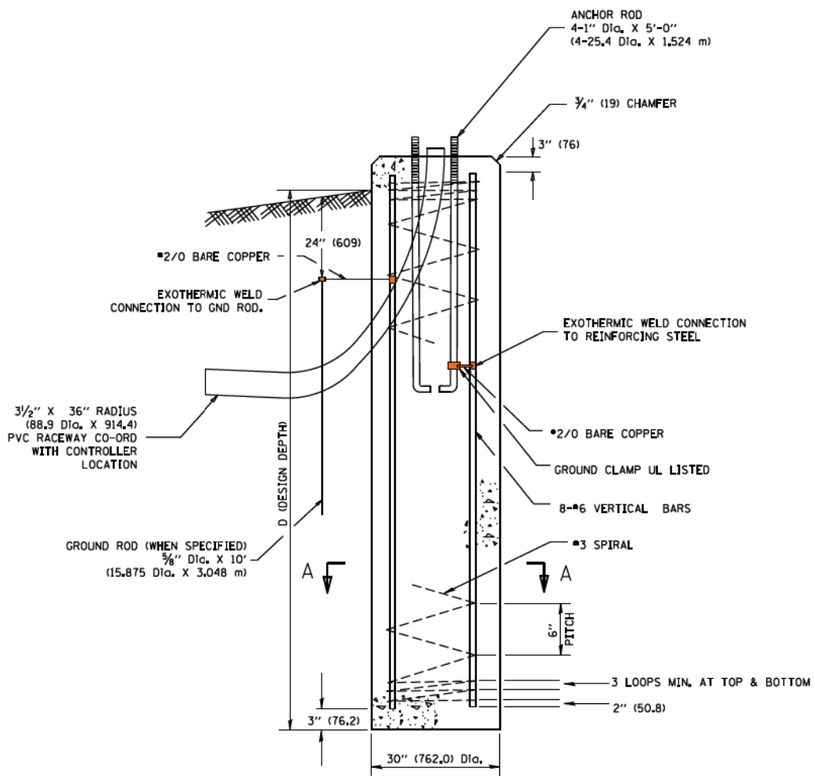
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION
SOFT CLAY Qu = 0.375 TON/SQ. FT.	13'-0" (3.96 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-6" (2.09 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-0" (2.13 m)
LOOSE SAND Ø = 34°	9'-0" (2.74 m)
MEDIUM SAND Ø = 37.5°	8'-3" (2.52 m)
DENSE SAND Ø = 40°	7'-9" (2.36 m)



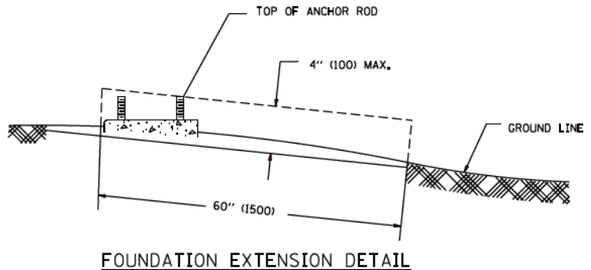
ANCHOR ROD DETAIL



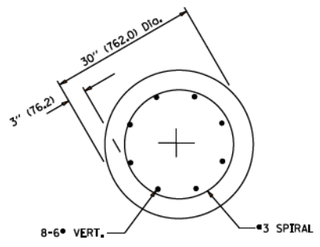
TOP VIEW



FOUNDATION DETAIL



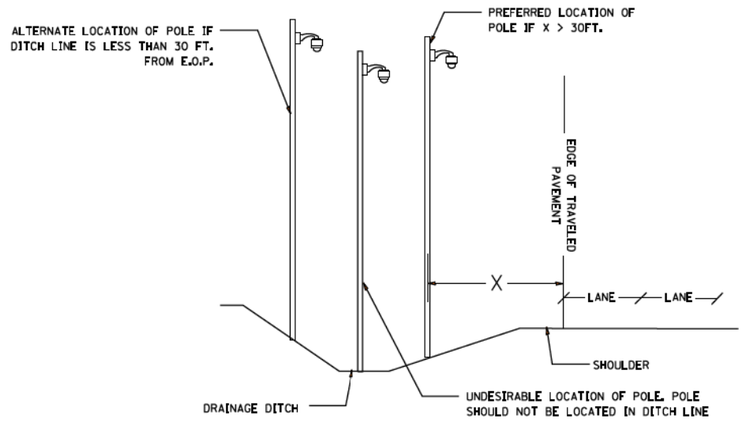
FOUNDATION EXTENSION DETAIL



SECTION A-A

NOTES

1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
2. THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IN PLACED.
3. THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED. IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
4. THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
5. THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
6. THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
7. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
8. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
9. ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232. THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM(6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
10. THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
11. ANCHOR RODS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
12. THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
13. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
14. THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.
15. ANCHOR ROD BOLT CIRCLE TO BE COORDINATED WITH CAMERA STRUCTURE



CAMERA POLE PLACEMENT

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		DRAWN -	REVISED -
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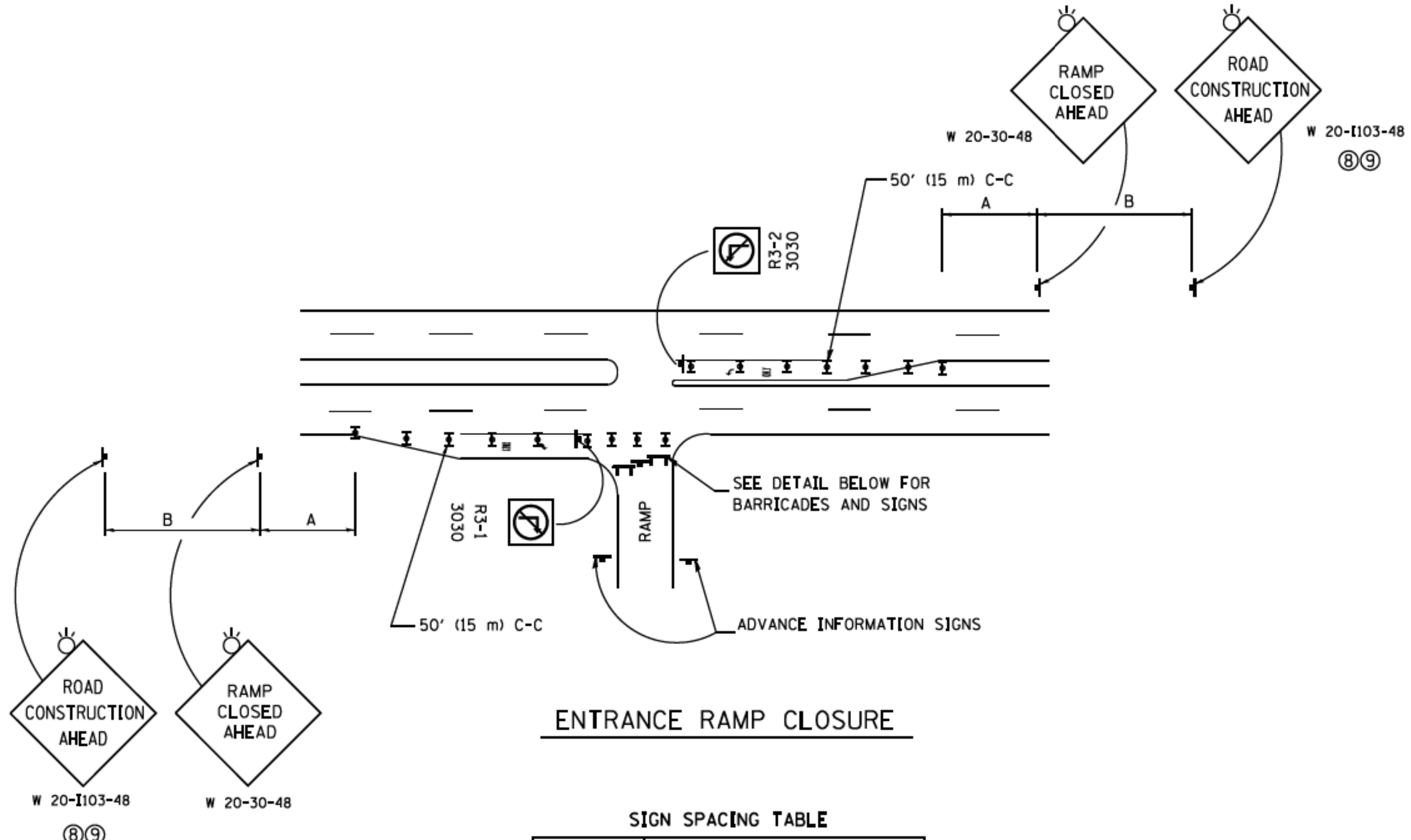
	PLOT DATE = 4/3/2013	DATE - 03-11-13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CCTV CAMERA STRUCTURE FOUNDATION
50' (15 – 24m) MOUNTING HEIGHT

SCALE: NONE | SHEET NO. 20 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	578
	BE-1001		CONTRACT NO. 60X94	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

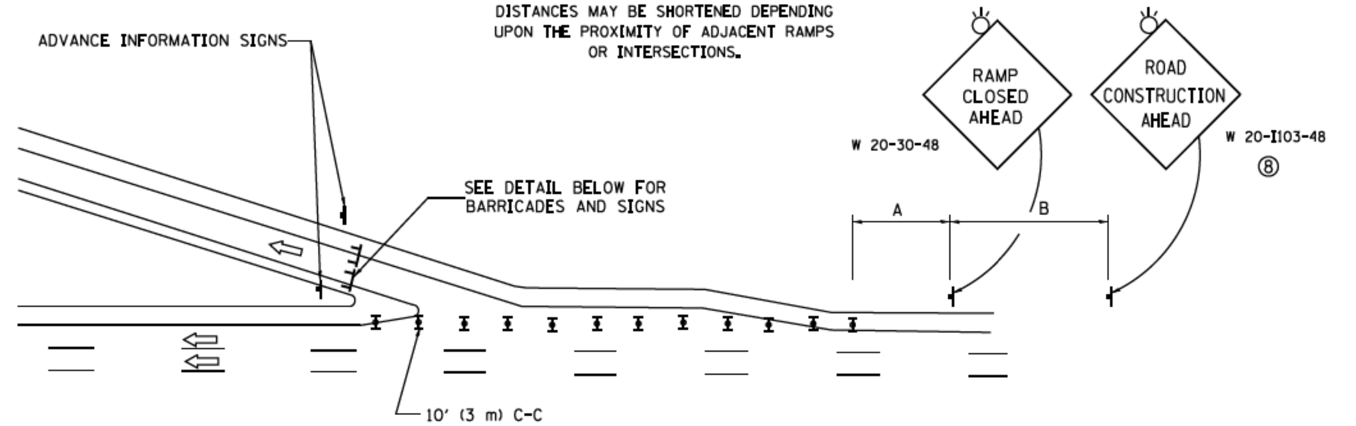


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

FACILITY	DISTANCE BETWEEN SIGNS A	DISTANCE BETWEEN SIGNS B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY ≤24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.

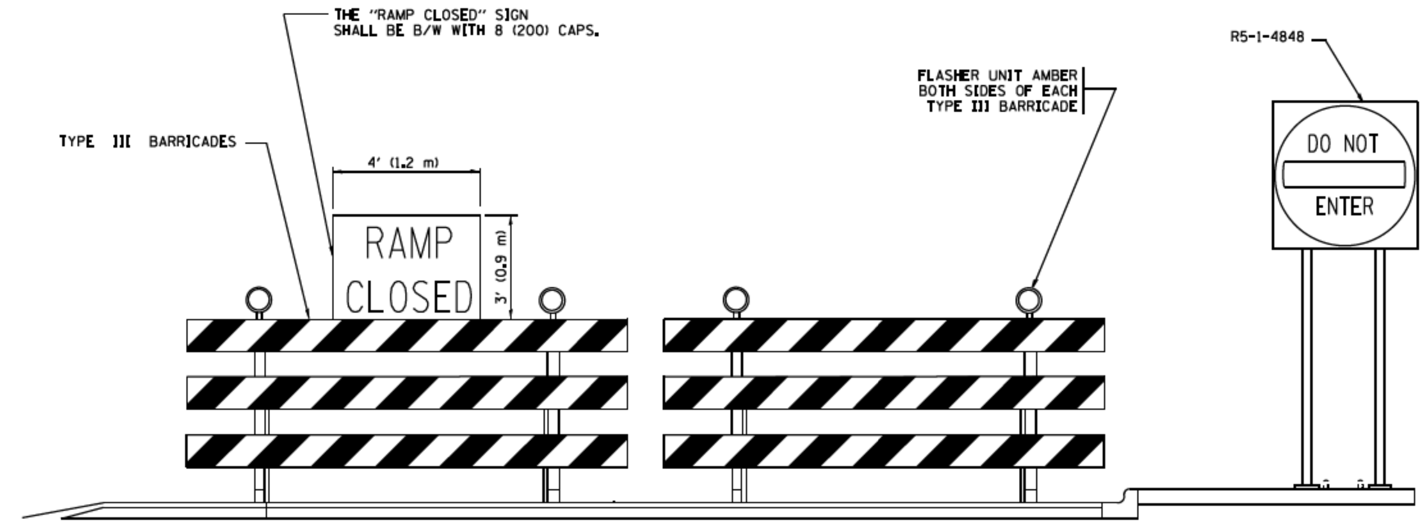


EXIT RAMP CLOSURE

SYMBOLS

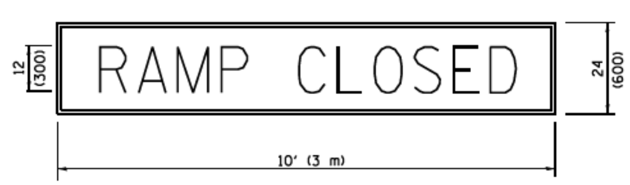
TYPE II BARRICADE OR DRUM

TYPE III BARRICADE WITH 2 FLASHING LIGHTS



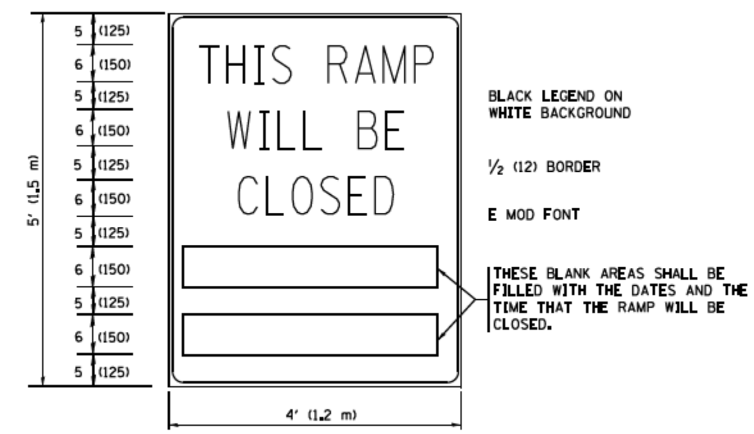
DETAIL FOR REQUIRED BARRICADES & SIGNS

RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY
E MOD FONT
1 (25) BORDER
THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



BLACK LEGEND ON WHITE BACKGROUND

½ (12) BORDER

E MOD FONT

THESE BLANK AREAS SHALL BE FILLED WITH THE DATES AND THE TIME THAT THE RAMP WILL BE CLOSED.

THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

GENERAL NOTES:

① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.

② VERTICAL BARRICADES SHALL NOT BE USED FOR RAMP CLOSURES.

③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES, PRECEEDED BY A W20-7 FLAGGER WARNING SIGN.

④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.

⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).

⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.

⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED FOUR (4) DAYS IN LENGTH

⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.

⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

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

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			REVISED - S.P.B. 12-09
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Default	PLOT DATE = 11/27/2017	DATE - 02-83	REVISED - M.D. 01-18

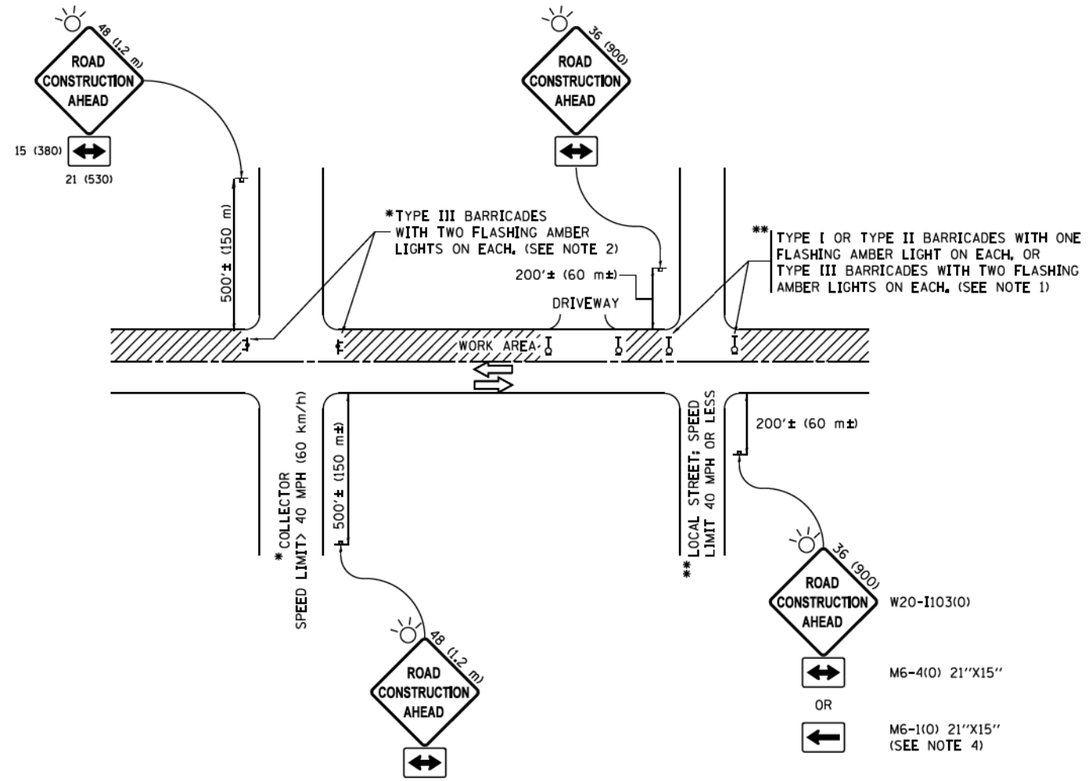
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ENTRANCE AND EXIT RAMP CLOSURE DETAILS

SCALE: NONE | SHEET 21 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	579
TC-08		CONTRACT NO. 60X94		

ILLINOIS FED. AID PROJECT



NOTES:

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 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. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
4. 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).
5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

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			REVISED - A. SCHUETZE 09-15-16

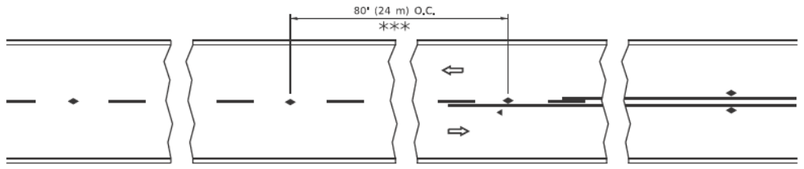
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: NONE | SHEET 22 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	580

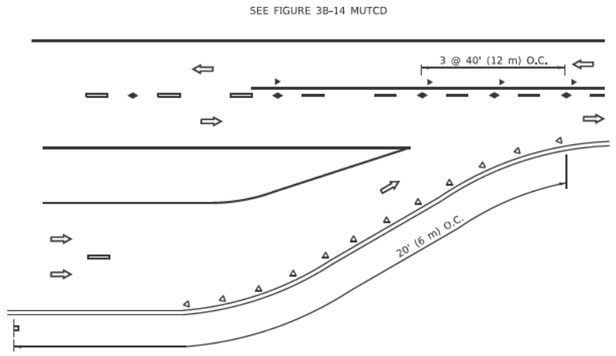
TC-10 CONTRACT NO. 60X94
ILLINOIS FED. AID PROJECT



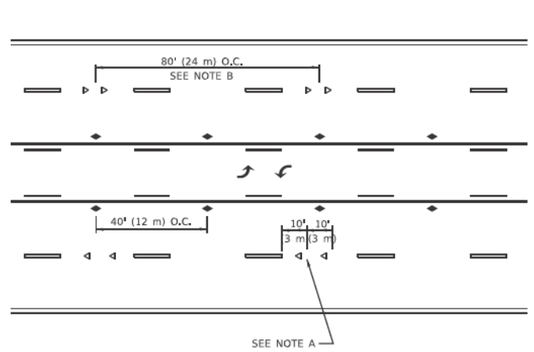
*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

TWO–LANE/TWO–WAY

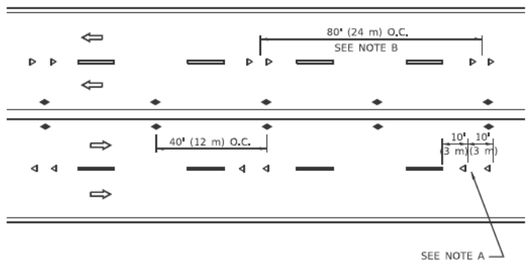
SEE FIGURE 3B-14 MUTCD



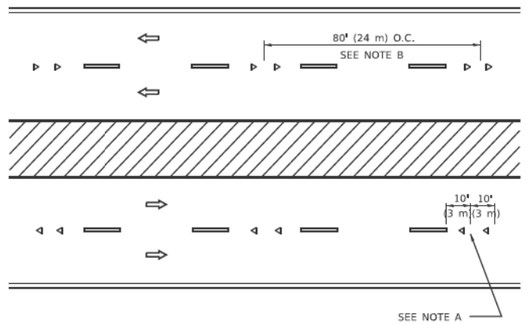
LANE REDUCTION TRANSITION



TWO–WAY LEFT TURN



MULTI–LANE/UNDIVIDED



MULTI–LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.
4. MARKERS ARE TO BE USED ADJACENT TO BOTH SOLID WHITE LINES IN DUAL LEFT TURN LANES

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- TWO-WAY AMBER MARKER

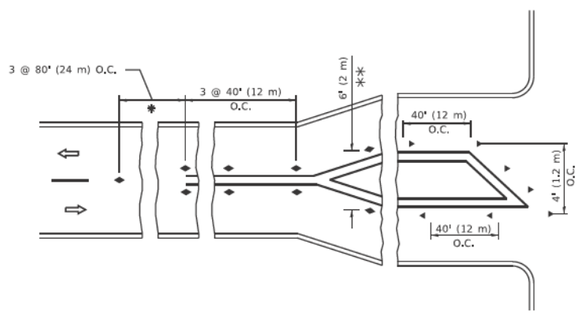
LANE MARKER NOTES

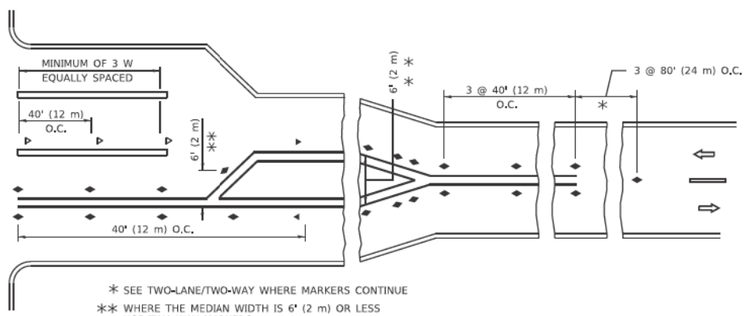
A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.





* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE

** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

TURN LANES

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

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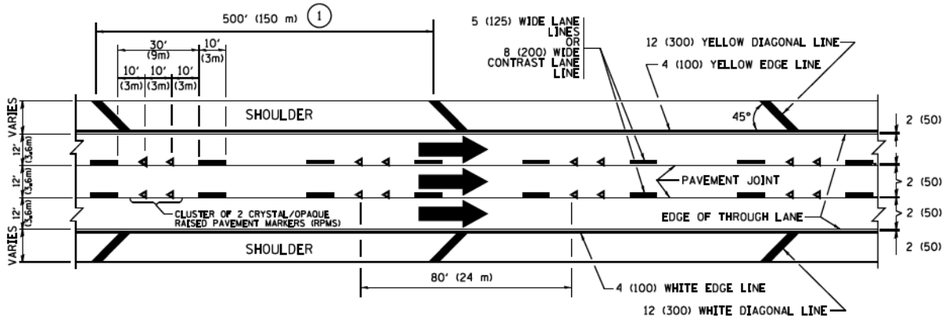
PLOT DATE = 3/4/2019	DATE -	REVISED	- C. JUCIUS 07-01-13

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW–PLOW RESISTANT)

SCALE: NONE | SHEET 23 OF 34 SHEETS | STA. | TO STA.

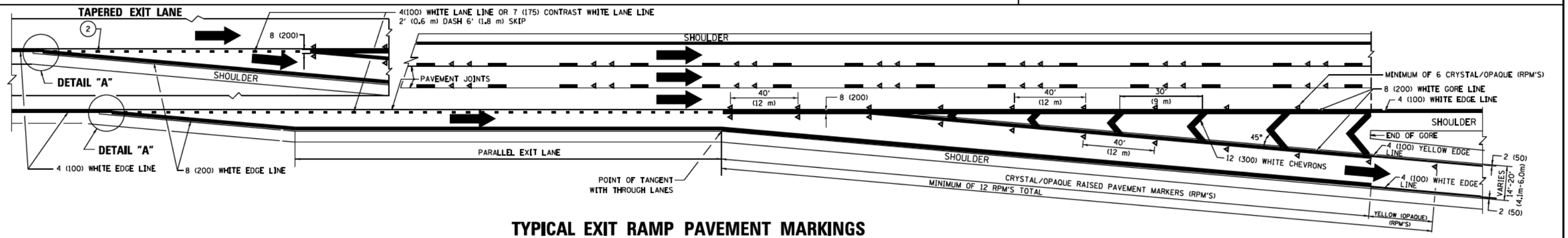
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	581
	TC-11		CONTRACT NO. 60X94	
		ILLINOIS FED. AID PROJECT		



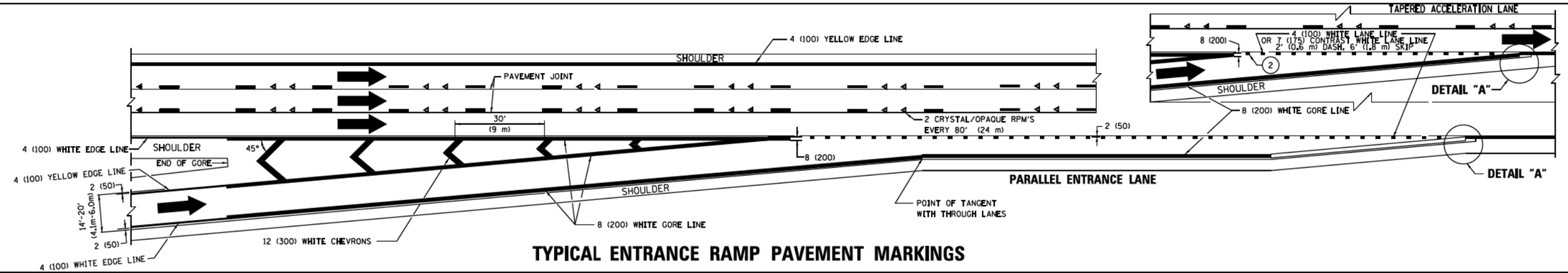
TYPICAL EDGE LINES & LANE LINES

PAVEMENT MARKING MATERIALS

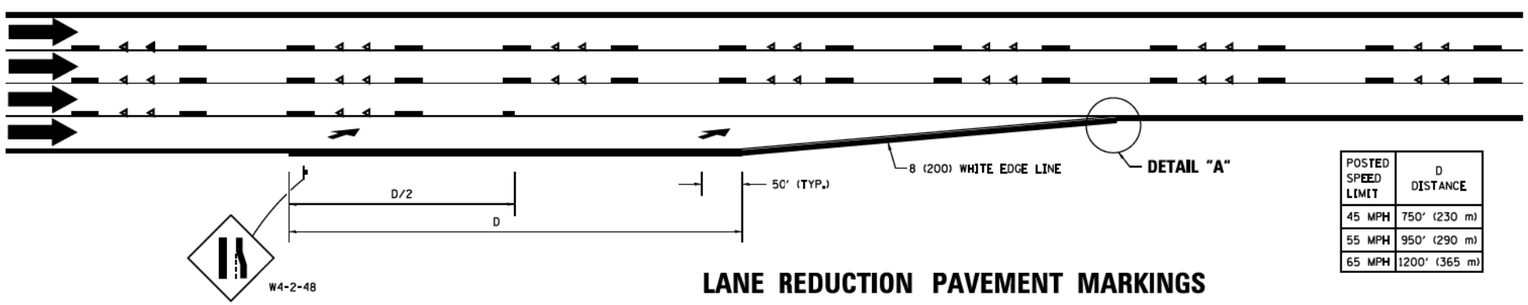
1. THERMOPLASTIC PAVEMENT MARKING LINE SHALL BE USED FOR ALL EDGE LINES, GORE LINES, AND DIAGONAL LINES ON HMA PAVEMENTS.
2. POLYUREA OR MODIFIED URETHANE PAVEMENT MARKING LINE SHALL BE USED FOR ALL EDGE LINES, GORE LINES, AND DIAGONAL LINES ON PCC PAVEMENTS.
3. PREFORMED PLASTIC PAVEMENT MARKING LINE TYPE B, INLAID OR GROOVE IN, SHALL BE USED FOR ALL LANE LINES ON HMA PAVEMENTS.
4. CONTRAST PREFORMED PLASTIC PAVEMENT MARKING LINE TYPE B, GROOVE IN, SHALL BE USED FOR ALL LANE LINES ON PCC PAVEMENT.



TYPICAL EXIT RAMP PAVEMENT MARKINGS

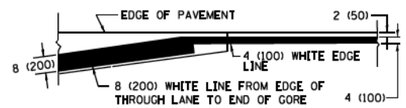


TYPICAL ENTRANCE RAMP PAVEMENT MARKINGS



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

LANE REDUCTION PAVEMENT MARKINGS



DETAIL "A"

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.

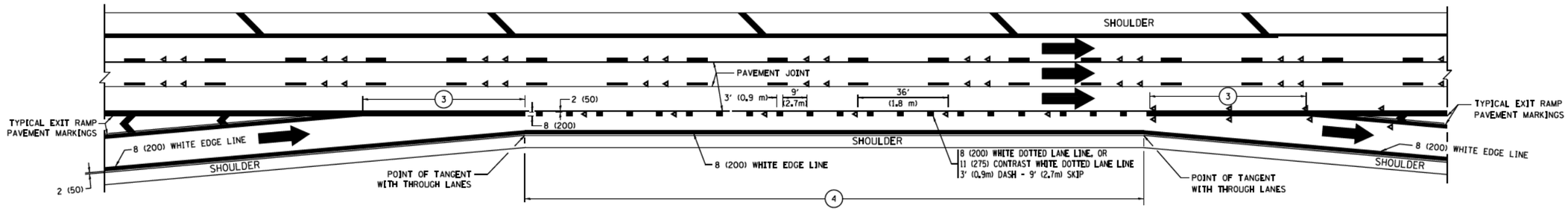
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\$\ORZWM\CADData\CADsheets\tc12.dgn	USER NAME = footemj	DESIGNED - D.W.S.	REVISED - S.P.B. 01-07
	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED - S.P.B. 01-10
Default	PLOT DATE = 9/6/2017	DATE - 01-90	REVISED - M.D. 05-13
			REVISED - M.D. 09-17

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

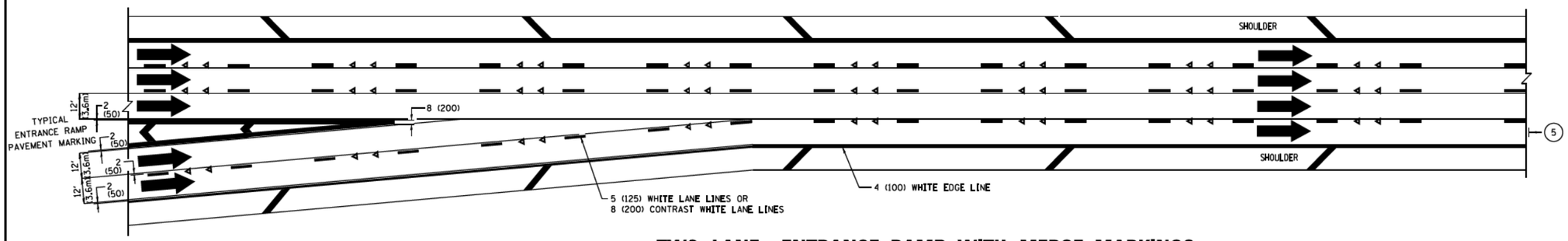
MULTI-LANE FREEWAY
PAVEMENT MARKING DETAILS

SCALE: NONE | SHEET 24 OF 34 SHEETS | STA. | TO STA.

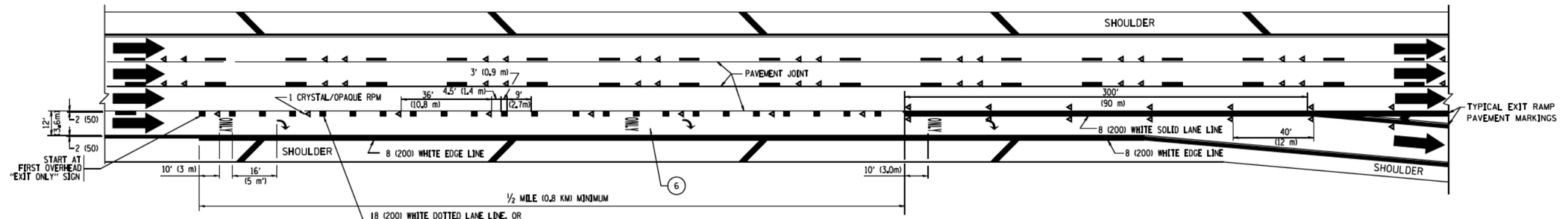
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	582
	TC-12		CONTRACT NO. 60X94	
		ILLINOIS	FED. AID PROJECT	



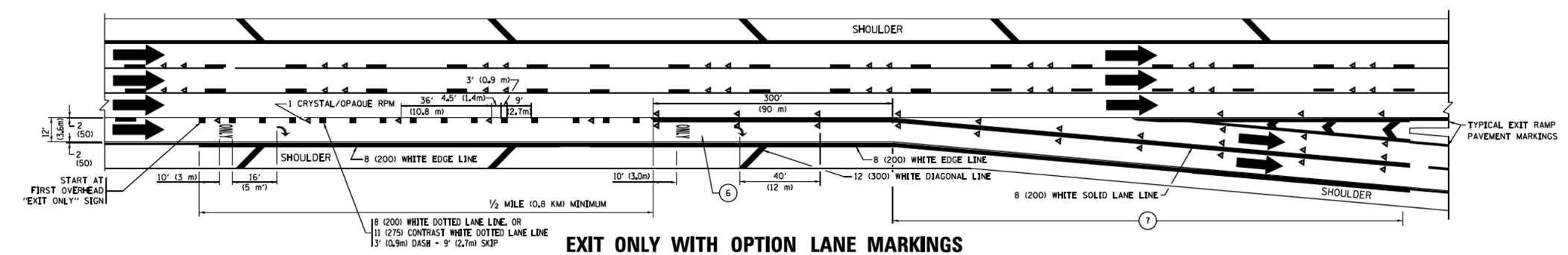
AUXILIARY LANE MARKINGS



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.

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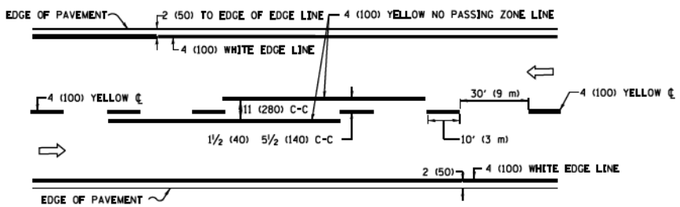
Default	PLOT DATE = 9/6/2017	DATE - 01-90	REVISED - S.P.B. 01-10
			REVISED - M.D. 09-17

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

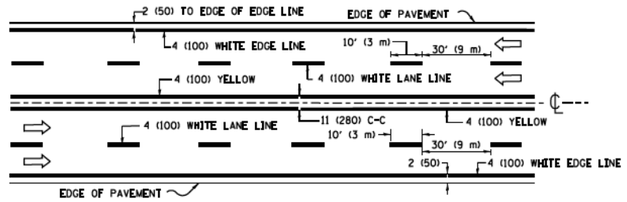
MULTI-LANE FREEWAY
PAVEMENT MARKING DETAILS

SCALE: NONE | SHEET 25 OF 34 SHEETS | STA. | TO STA.

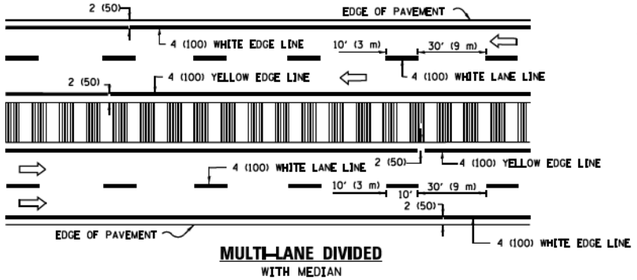
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	583
	TC-12		CONTRACT NO. 60X94	
	ILLINOIS FED. AID PROJECT			



2–LANE ROADWAY

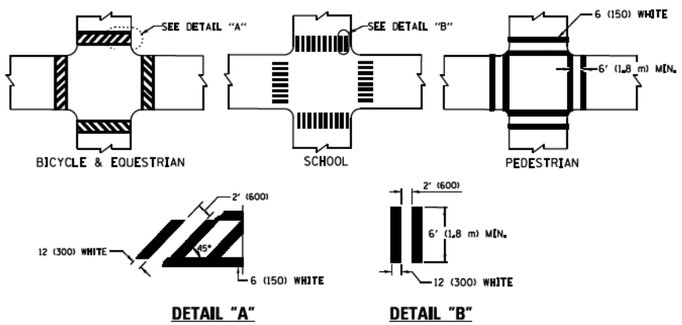


MULTI–LANE UNDIVIDED



MULTI–LANE DIVIDED
WITH MEDIAN

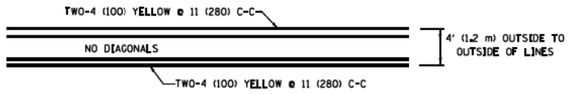
TYPICAL LANE AND EDGE LINE MARKING



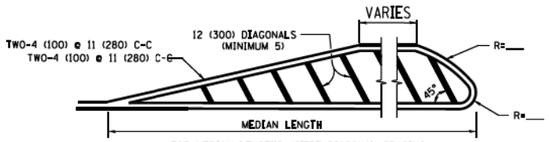
DETAIL "A" **DETAIL "B"**

TYPICAL CROSSWALK MARKING

✳ MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



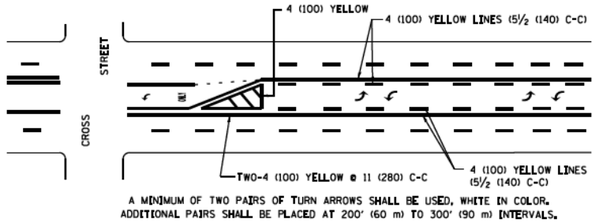
4' (1.2 m) WIDE MEDIANS ONLY



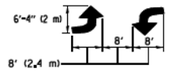
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1,2 m) WIDE

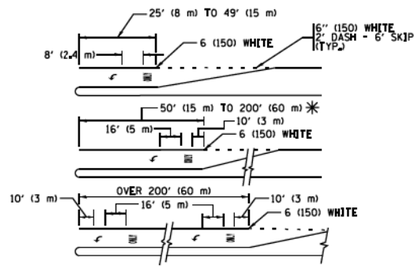


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO–WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

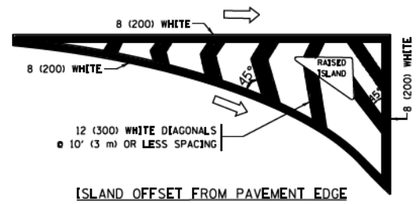


FULL SIZE LETTERS 8' (2,4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m²) ↑ AREA = 20.8 SQ. FT. (1.9 m²)

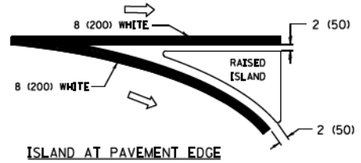
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

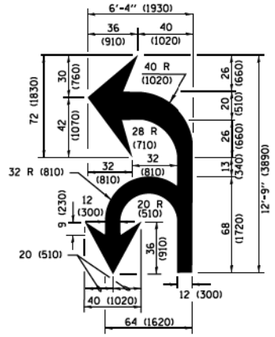


ISLAND OFFSET FROM PAVEMENT EDGE

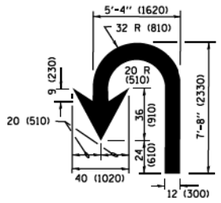


ISLAND AT PAVEMENT EDGE

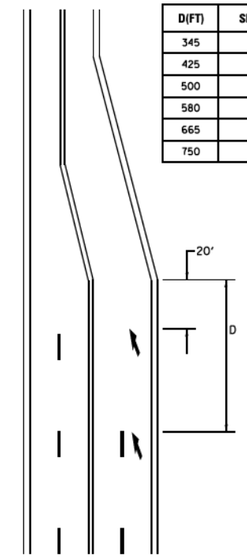
TYPICAL ISLAND MARKING



COMBINATION LEFT AND U–TURN



U–TURN



LANE REDUCTION TRANSITION

✳ LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING /REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 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 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2,4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2,4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1,8 m) APART 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° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) 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: 15' (4,5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 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. (0,33 m²) EACH "X"=54,0 SQ. FT. (5,0 m2)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16,3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30,4 SF

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

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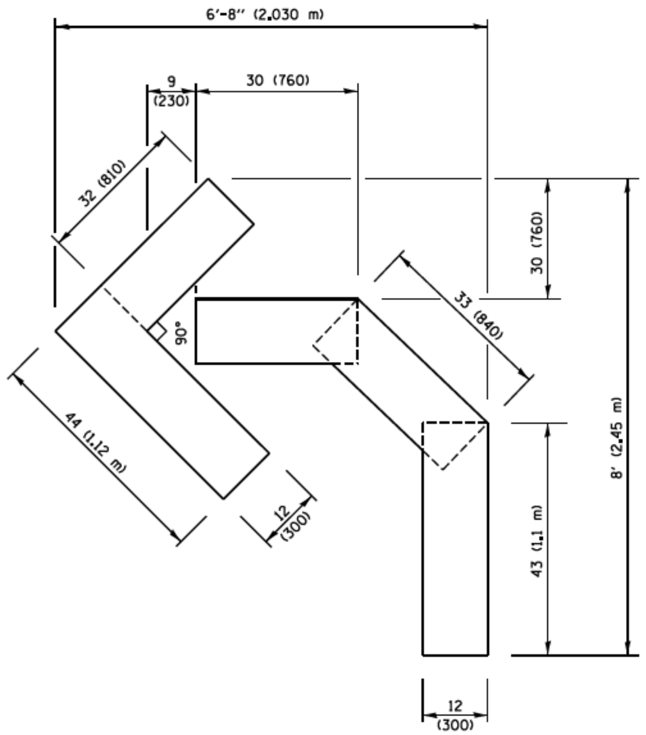
		DRAWN -	REVISED - C. JUCIUS 07-01-13
	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED - C. JUCIUS 12-21-15
Default	PLOT DATE = 6/23/2017	DATE - 03-19-90	REVISED - C. JUCIUS 04-12-16

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

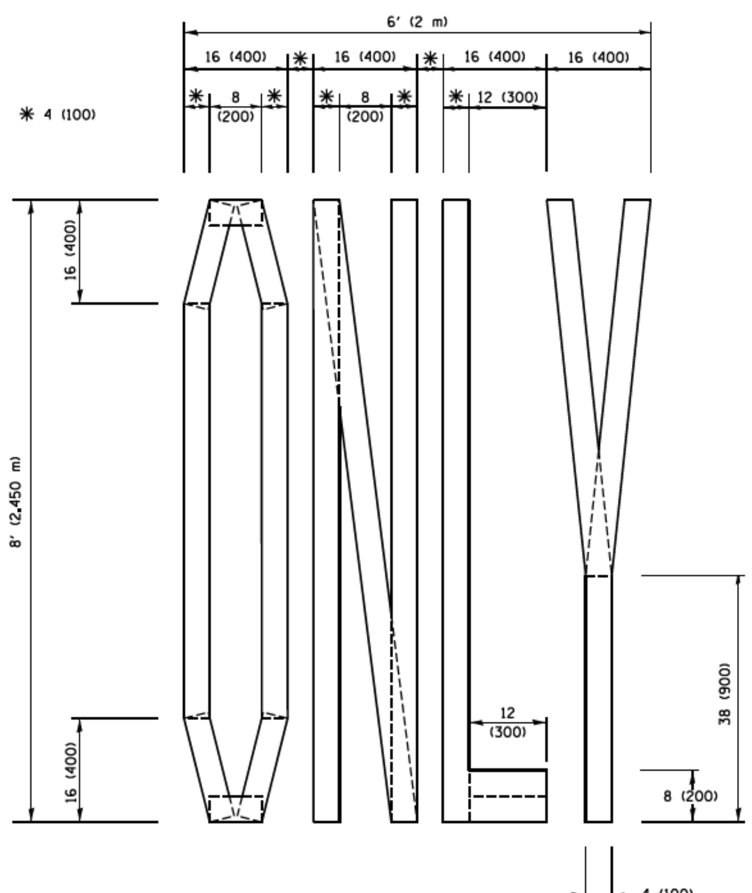
SCALE: NONE | SHEET 26 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	584
	TC-13		CONTRACT NO. 60X94	
		ILLINOIS FED. AID PROJECT		



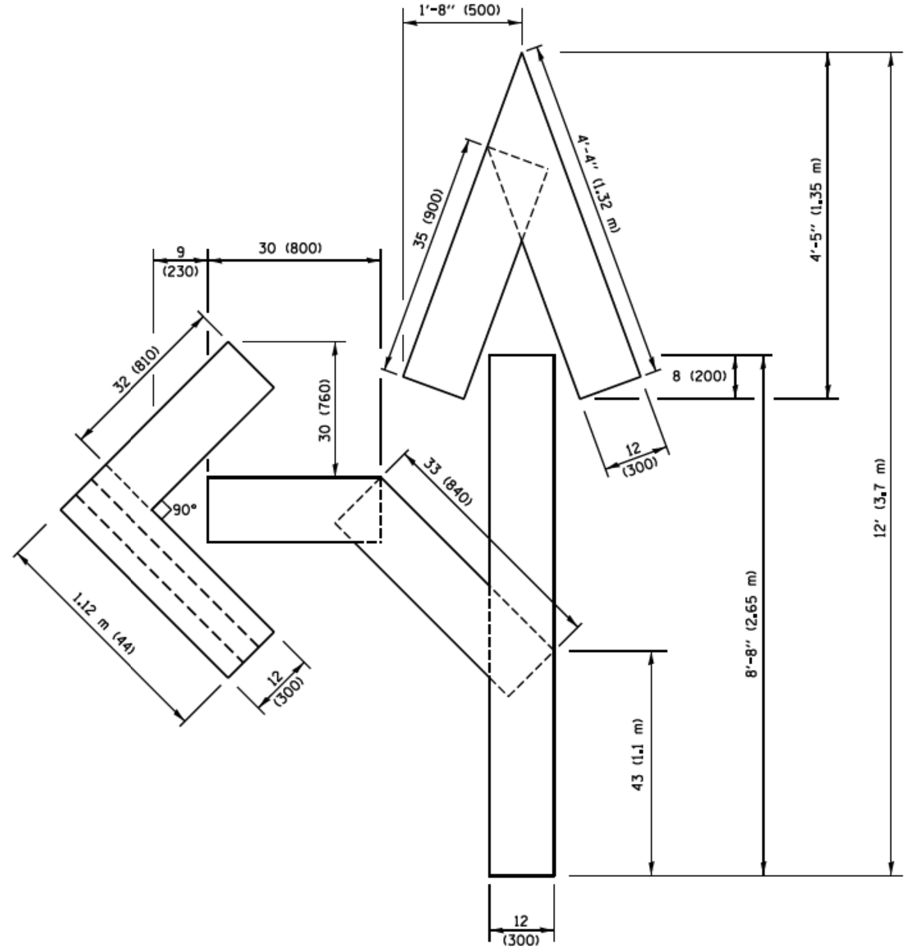
QUANTITY

4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.41 sq. m)



QUANTITY

4 (100) LINE = 64.1 ft. (19.5 m)
21.4 sq. ft. (1.99 sq. m)

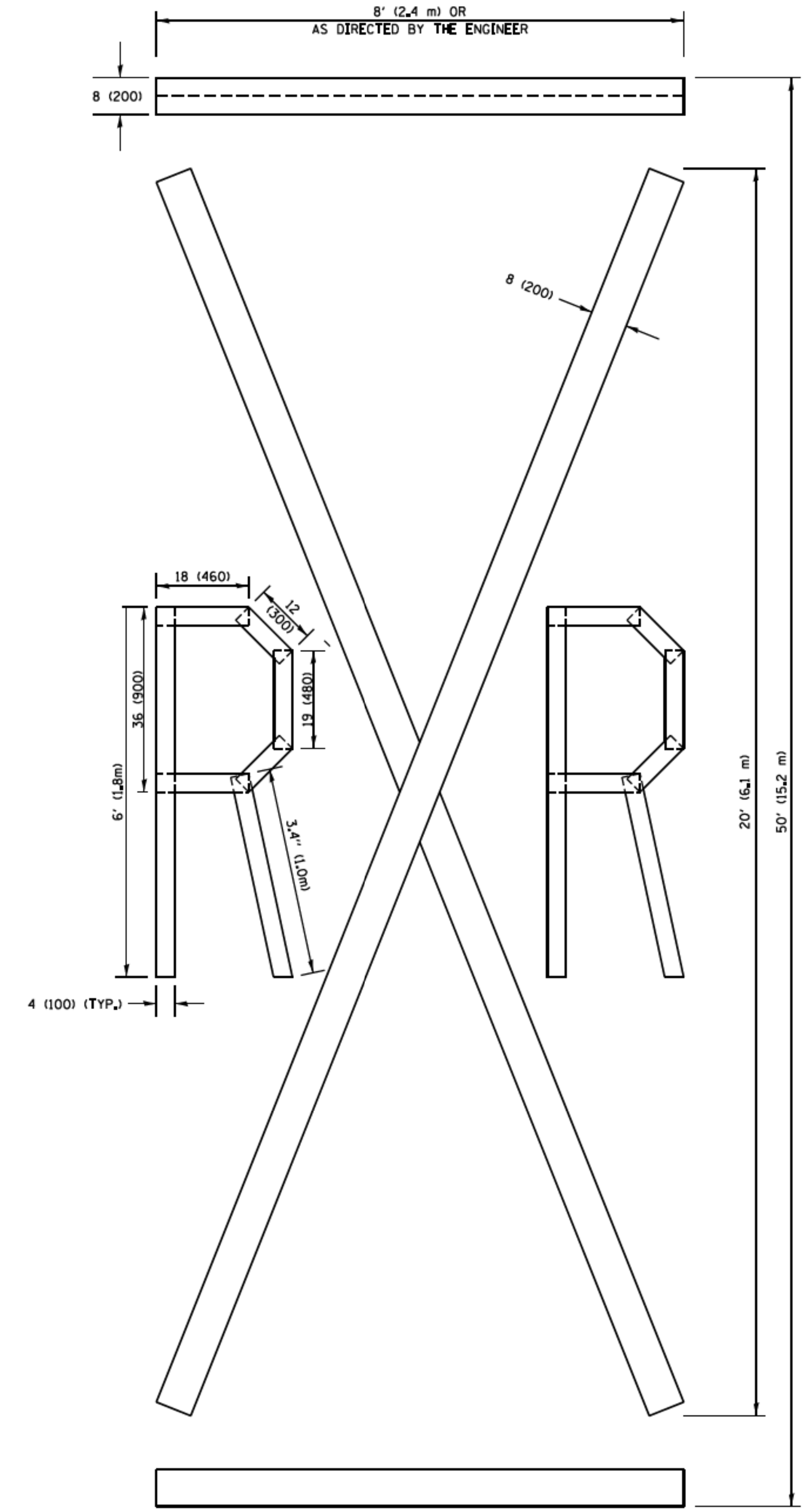


QUANTITY

4 (100) LINE = 82.5 ft. (25.1 m)
27.5 sq. ft. (2.53 sq. m)

NOTE:

ALL QUANTITIES OF PLACEMENT ARE REPRESENTED IN LINEAR FEET OF 4" LINES TO MATCH THE 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



QUANTITY

4 (100) LINE = 225.9 ft. (68.9 m)
75.3 sq. ft. (6.99 sq. m)

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

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		DRAWN	REVISED -E. GOMEZ 08-28-00
	PLOT SCALE = 50.0000 '/ in.	CHECKED -	REVISED -E. GOMEZ 08-28-00
	PLOT DATE = 9/15/2016	DATE - 09-18-94	REVISED -A. SCHUETZE 09-15-16

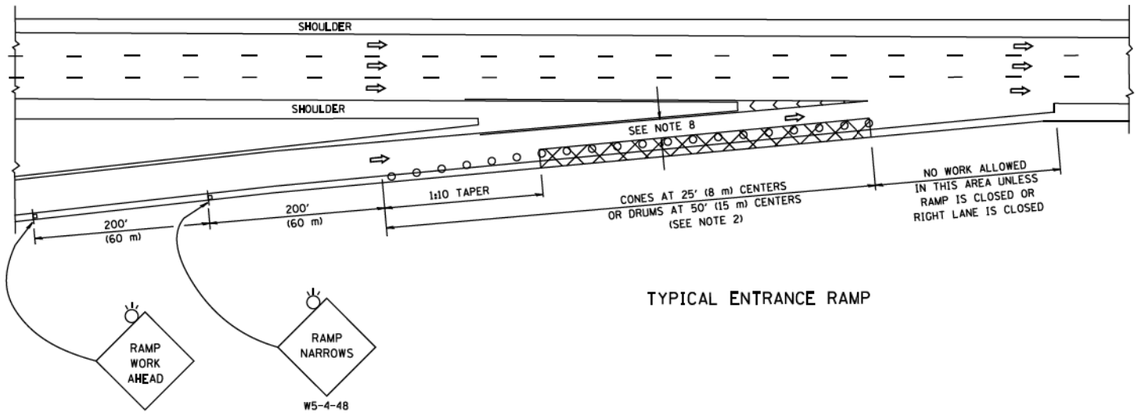
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS

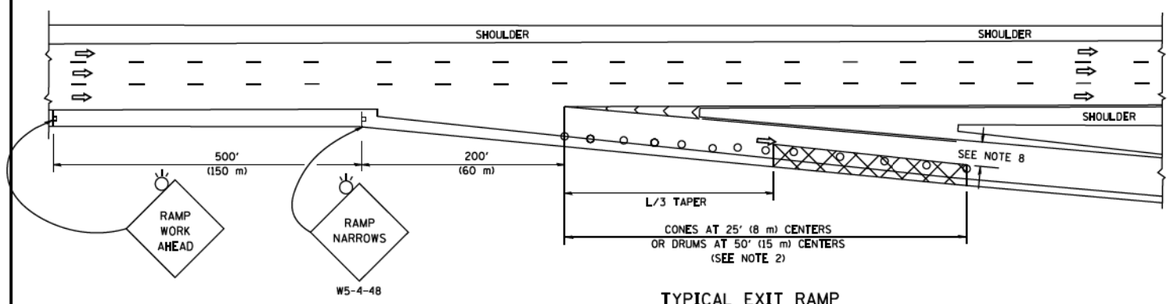
SCALE: NONE | SHEET 27 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	585
TC-16		CONTRACT NO. 60X94		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

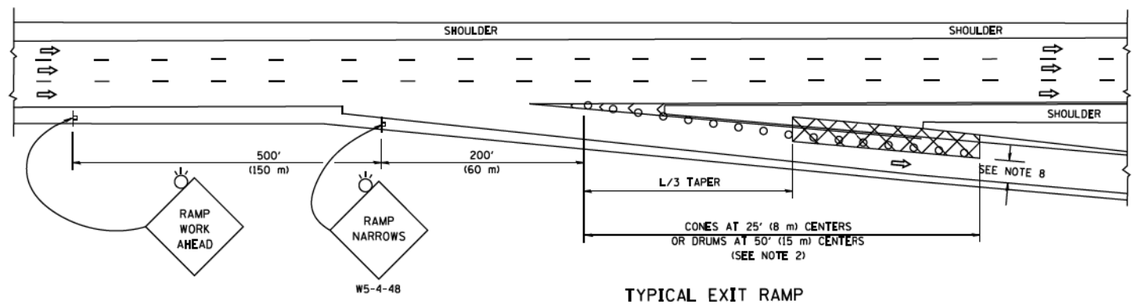
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP

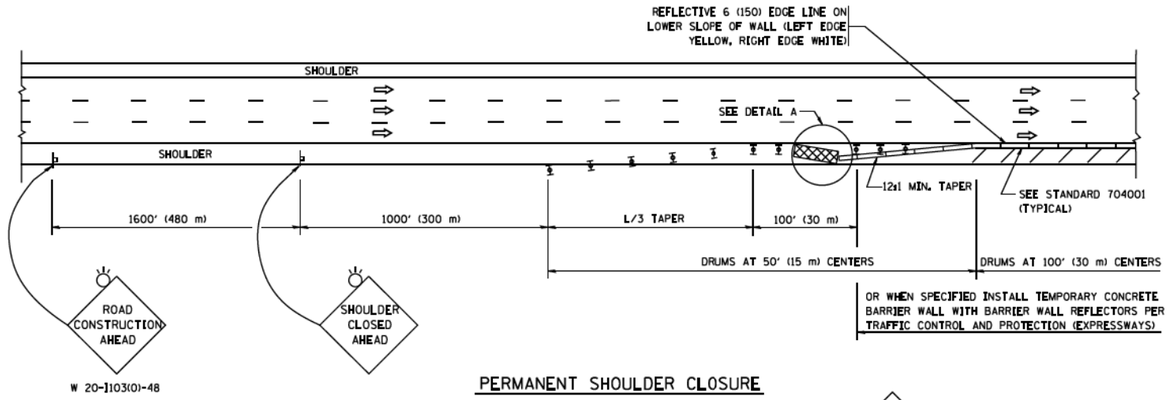


TYPICAL EXIT RAMP

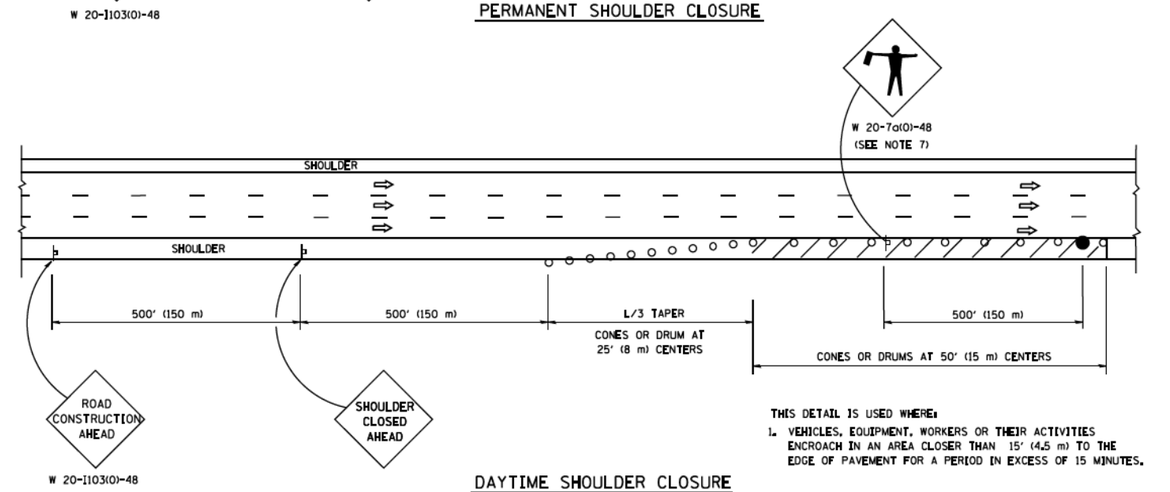


TYPICAL EXIT RAMP

SHOULDER CLOSURE DETAILS



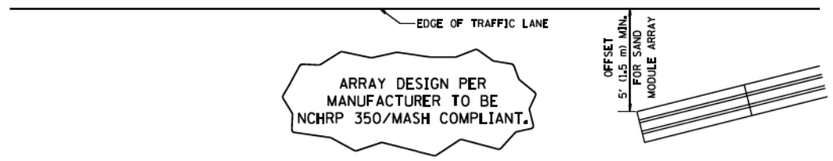
PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:

1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH 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 ATTENTUATOR, TEMPORARY
(SEE NOTE 5)

SYMBOLS

- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE OR DRUM
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

GENERAL NOTES

1. THE "L" DISTANCE EQUALS:

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

W = WIDTH OF OFFSET IN FEET (METERS)
S = NORMAL POSTED SPEED MPH (KM/H)

2. TYPE II BARRICADES OR DRUMS ARE REQUIRED FOR ALL NIGHTIME CLOSURES. TYPE II BARRICADES OR DRUMS WITH MONODIRECTIONAL STEADY BURN LIGHTS ARE REQUIRED FOR DELINEATING OBSTICLES, EXCAVATIONS, OR HAZARDS EXCEEDING 100 FT (30m) IN LENGTH AT NIGHT.
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.
5. THE IMPACT ATTENTUATOR, 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/MASH.
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 ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.

   THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
8. 12' MIN. WIDTH TANGENT SECTION
   16' MIN. WIDTH CURVE SECTION.

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

FILE NAME = pw:\\IL884EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 1\Projects\Dist\<redacted>\CADData\CADD Files\tc17.dgn	USER NAME = footemj	DESIGNED -	REVISED - S.P.B. 01-07
			REVISED - S.P.B. 12-09
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Default	PLOT DATE = 11/27/2017	DATE - 11-96	REVISED - M.D. 01-18

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

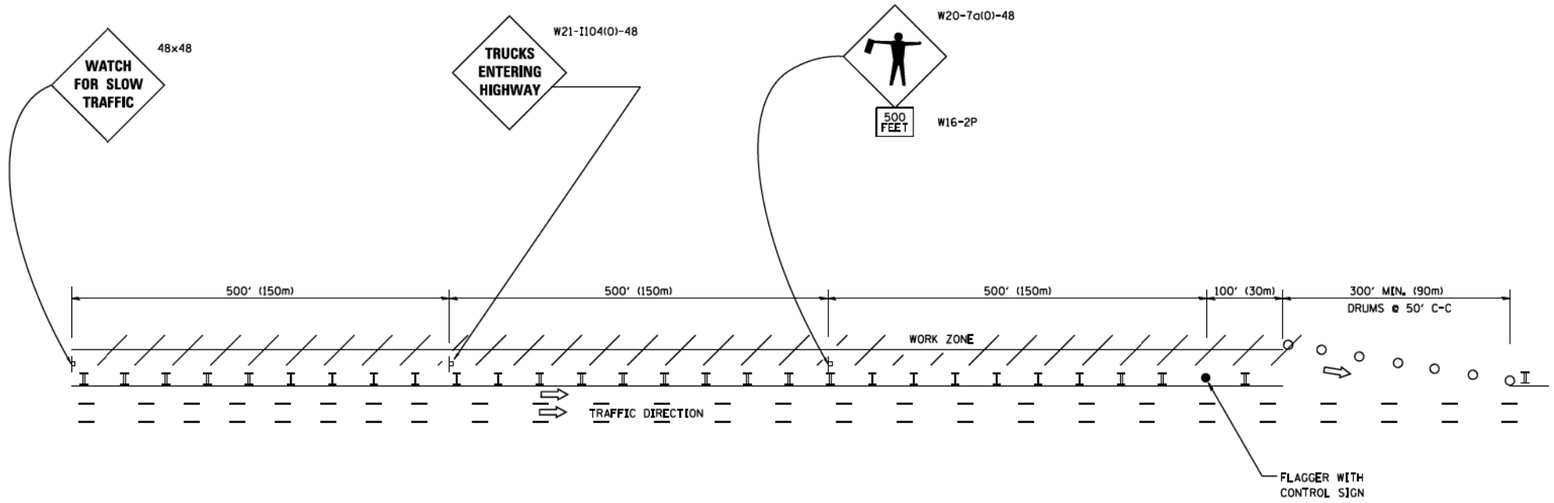
TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES

SCALE: NONE | SHEET 28 OF 34 SHEETS | STA. | TO STA.

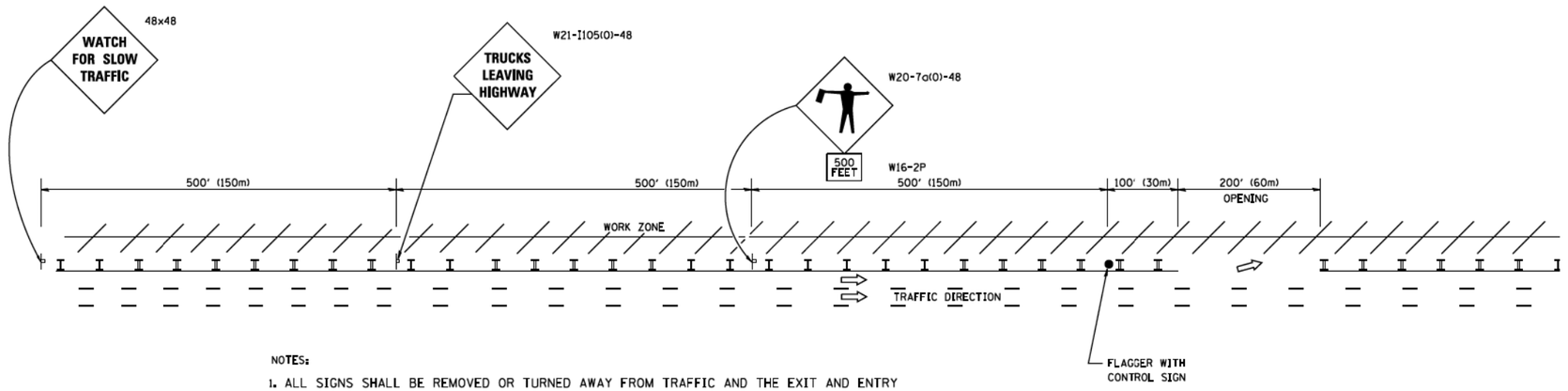
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	586
	TC-17		CONTRACT NO. 60X94	
	ILLINOIS FED. AID PROJECT			

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 RAMPS.
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

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		DRAWN -	REVISED - S.P.B. 01-07
	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED - S.P.B. 12-09
	PLOT DATE = 7/8/2013	DATE -	REVISED - M.D. 06-13

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FREEWAY/EXPRESSWAY SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS ON FREEWAYS/EXPRESSWAYS

SCALE: NONE | SHEET 29 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	587
	TC-18		CONTRACT NO. 60X94	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

ROUTE MARKERS

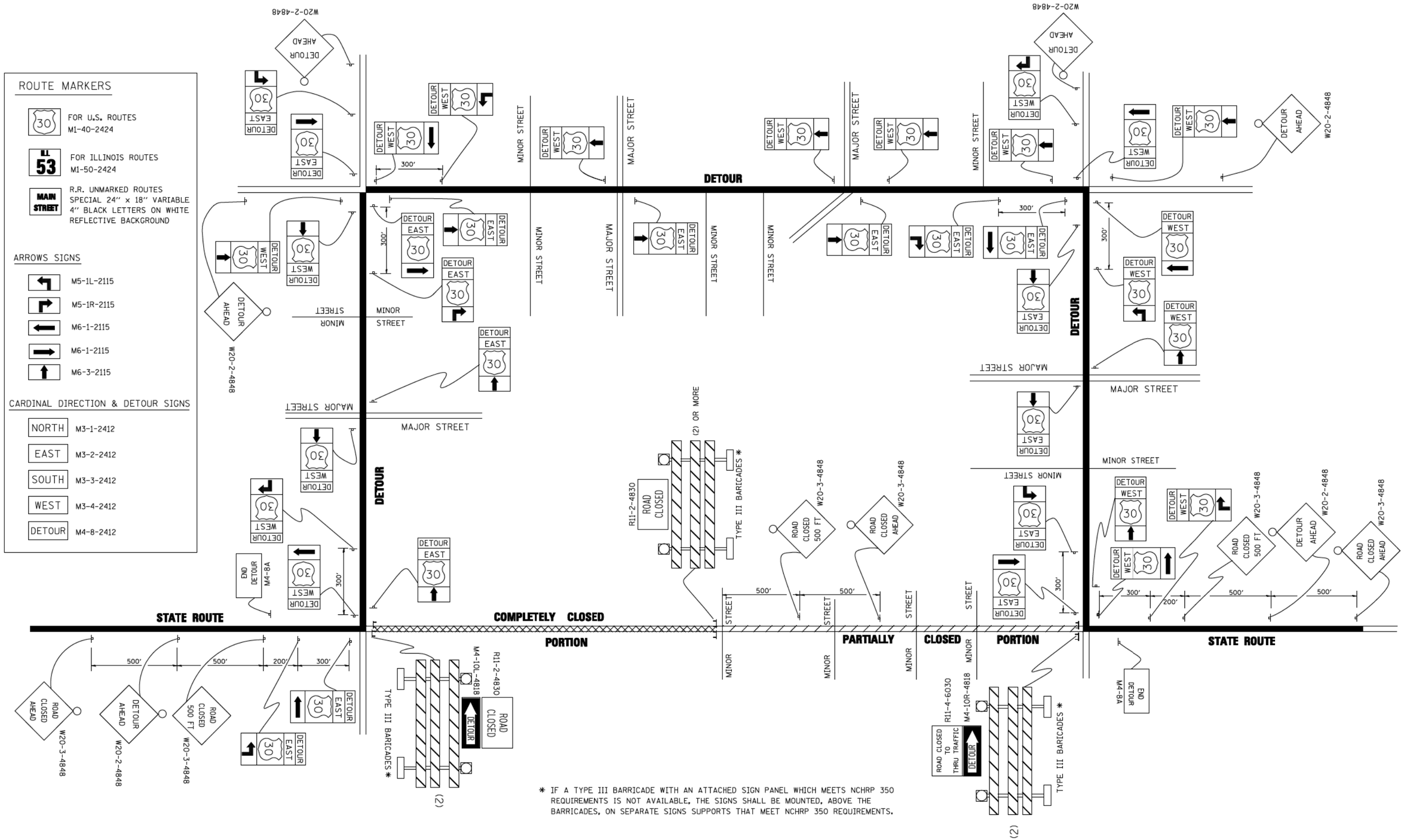
- 30 — FOR U.S. ROUTES M1-40-2424
- IL 53 — FOR ILLINOIS ROUTES M1-50-2424
- MAIN STREET — R.R. UNMARKED ROUTES SPECIAL 24" x 18" VARIABLE 4" BLACK LETTERS ON WHITE REFLECTIVE BACKGROUND

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



* 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.

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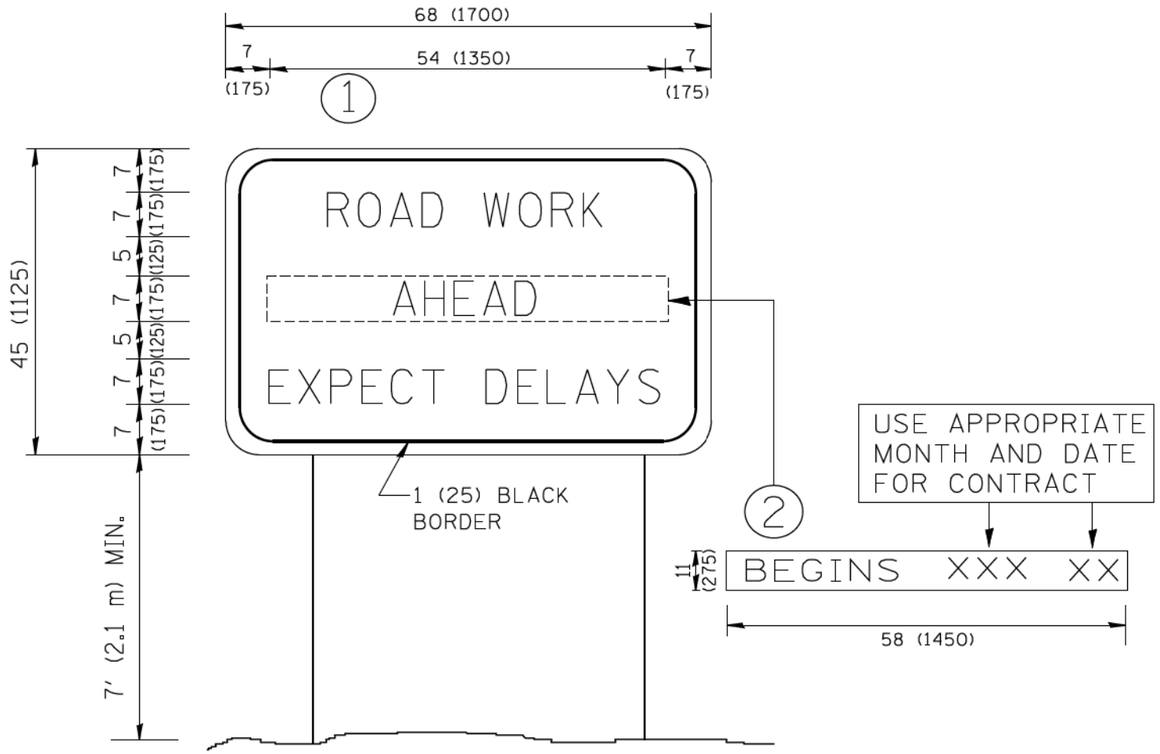
	PLOT SCALE = 49.9999 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 9/14/2009	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETOUR SIGNING FOR CLOSING STATE HIGHWAYS

SCALE: NONE | SHEET 30 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	588
	TC-21		CONTRACT NO. 60X94	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL (2) SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

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

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		DRAWN -	REVISED - R. MIRS 12-11-97
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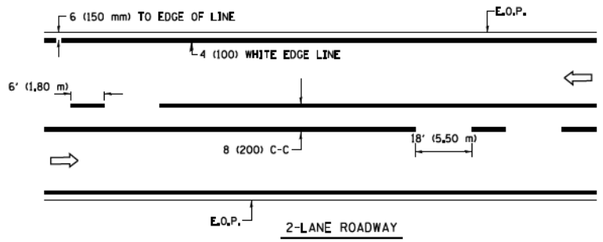
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

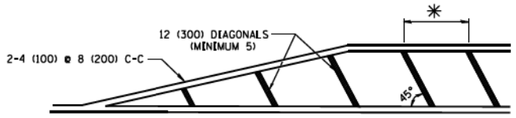
ARTERIAL ROAD INFORMATION SIGN

SCALE: NONE | SHEET 31 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	589
	TC-22	CONTRACT NO. 60X94		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



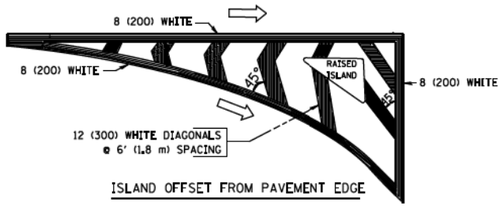
2-LANE ROADWAY



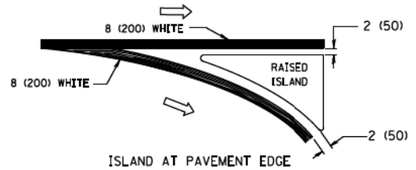
*FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

* DIAGONAL LINE SPACING: 20' (6.1 m) C-C

PAINTED MEDIANS

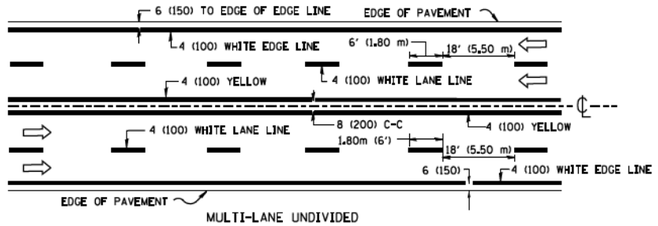


ISLAND OFFSET FROM PAVEMENT EDGE

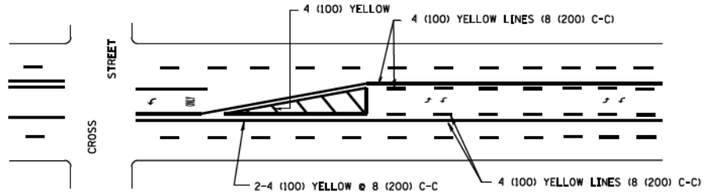


ISLAND AT PAVEMENT EDGE

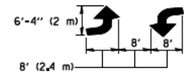
TYPICAL ISLAND MARKING



MULTI-LANE UNDIVIDED

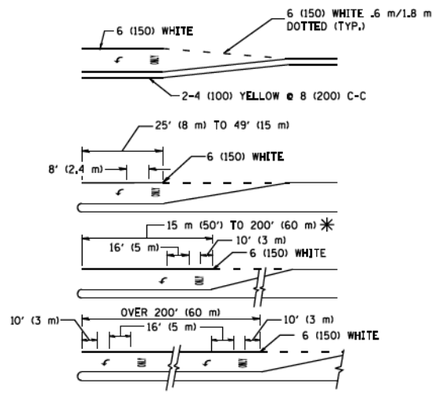


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

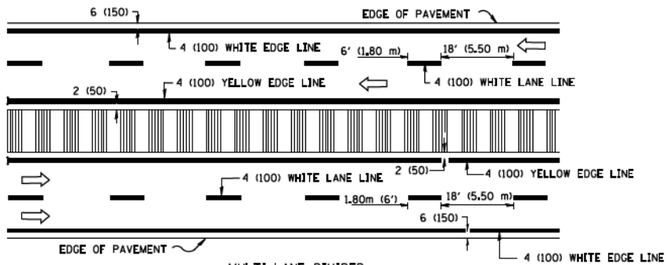


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.8 SQ. FT. (1.47 m²) ONLY AREA = 22.9 SQ. FT. (2.13 m²)

* 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

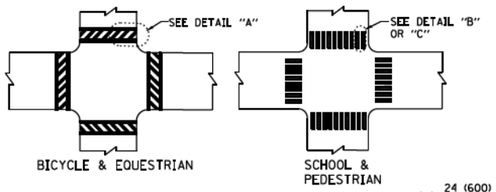
TYPICAL TURN LANE MARKING

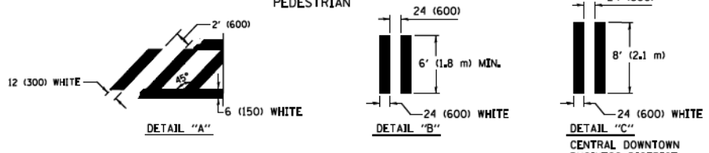


MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

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

TYPICAL LANE AND EDGE LINE MARKING





TYPICAL CROSSWALK 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. (0.33m²) EACH "X"=54.0 SQ. FT. (5.0 m²)

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.

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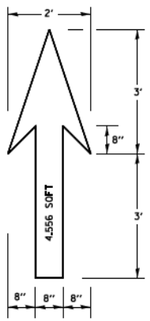
	PLOT SCALE = 50.000 ' / in.	DRAWN -	REVISED - K. ENG 02-28-12
	PLOT DATE = 3/1/2012	CHECKED -	REVISED -
		DATE -	REVISED -

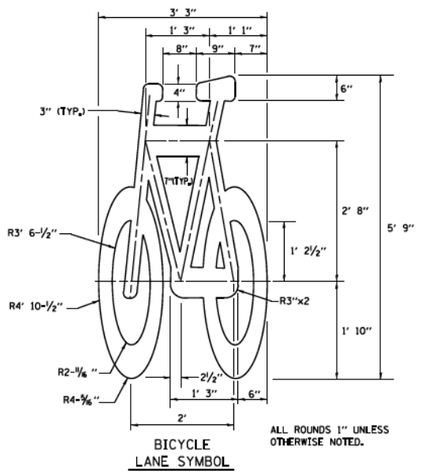
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO
TYPICAL PAVEMENT MARKINGS

SCALE: NONE | SHEET 32 OF 34 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	590
	TC-24	CONTRACT NO. 60X94		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





BICYCLE
LANE SYMBOL

ALL ROUNDS 1" UNLESS OTHERWISE NOTED.

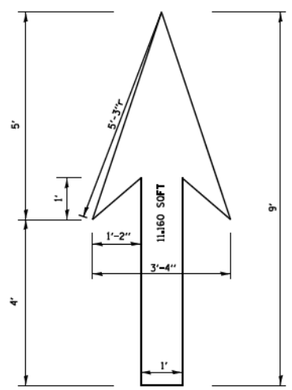
NOTE:

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

DRAWING #29



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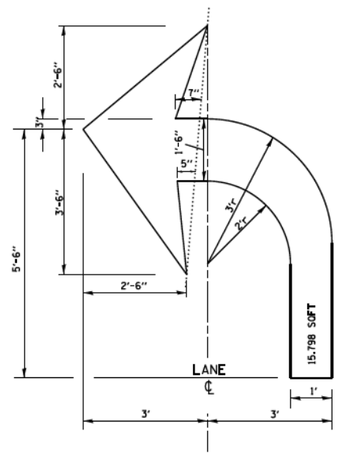

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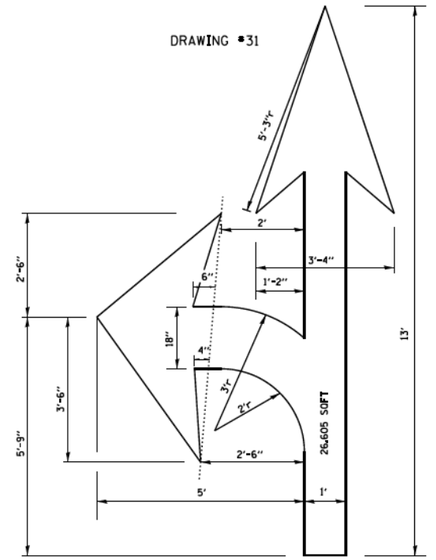

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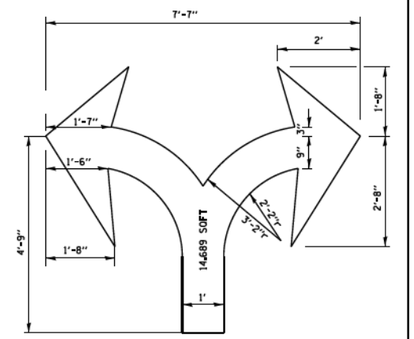

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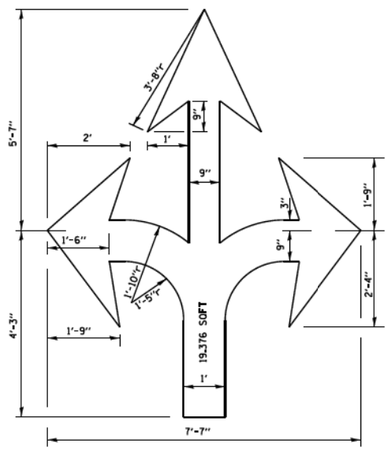

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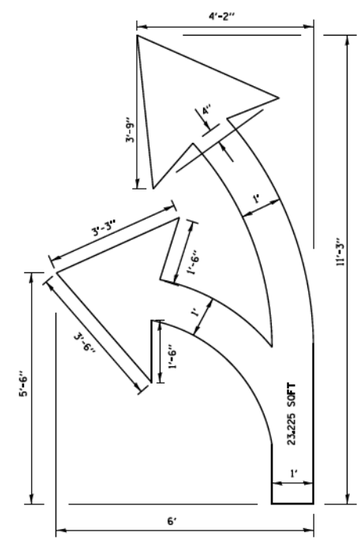

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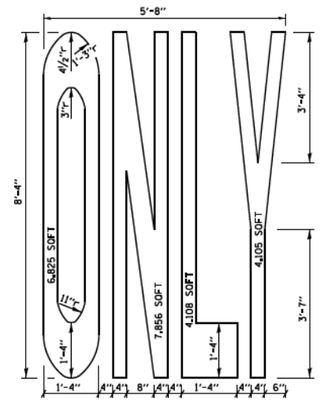

NOTE:
ALL MARKINGS SHALL BE SOLID WHITE UNLESS OTHERWISE NOTED IN THE PLANS

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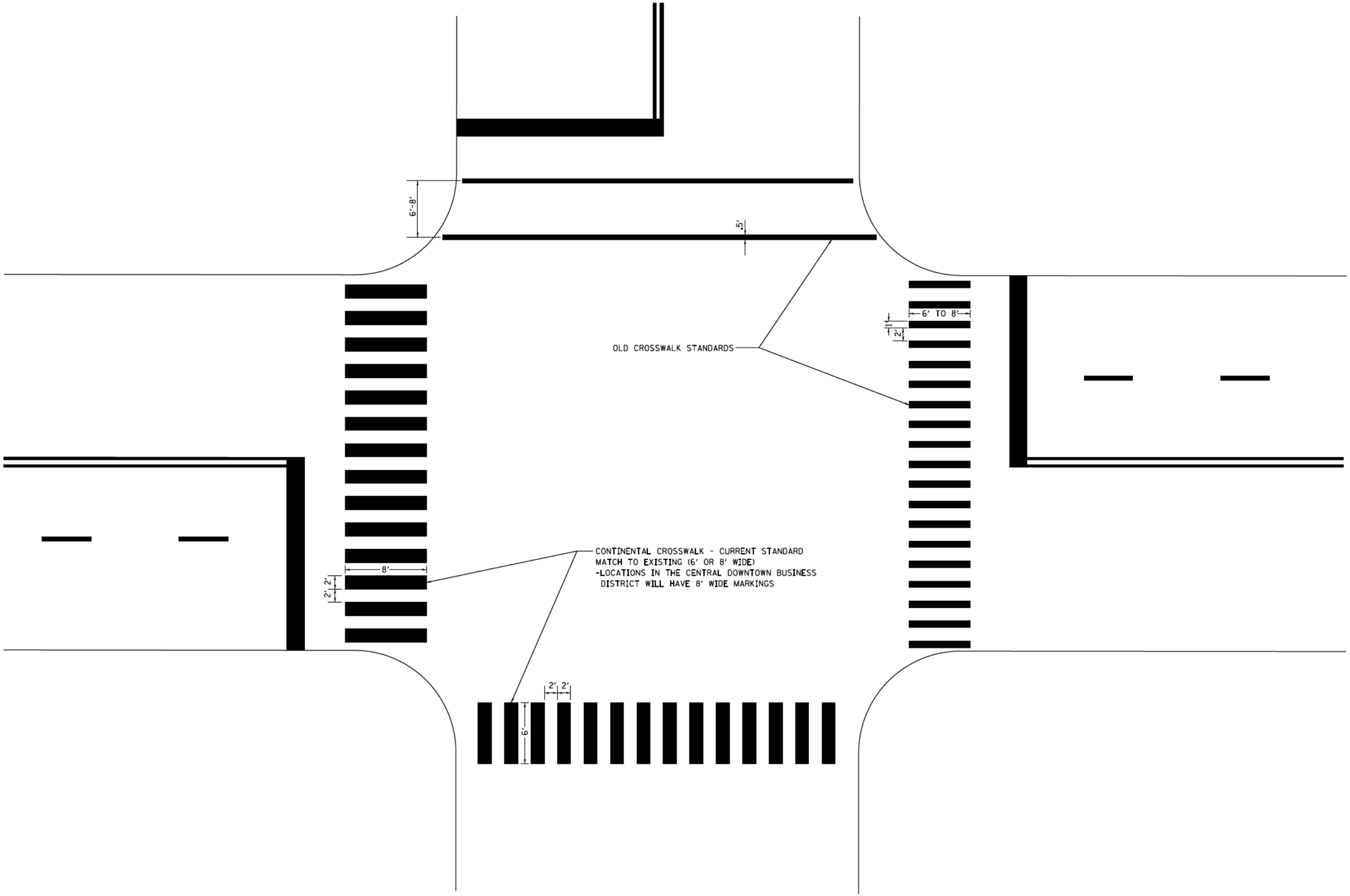
		DRAWN -	REVISED - K. ENG 02-28-12		
	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED -		SCALE: NONE SHEET 33 OF 34 SHEETS STA. TO STA.
	PLOT DATE = 3/29/2012	DATE -	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	591
	TC-24		CONTRACT NO. 60X94	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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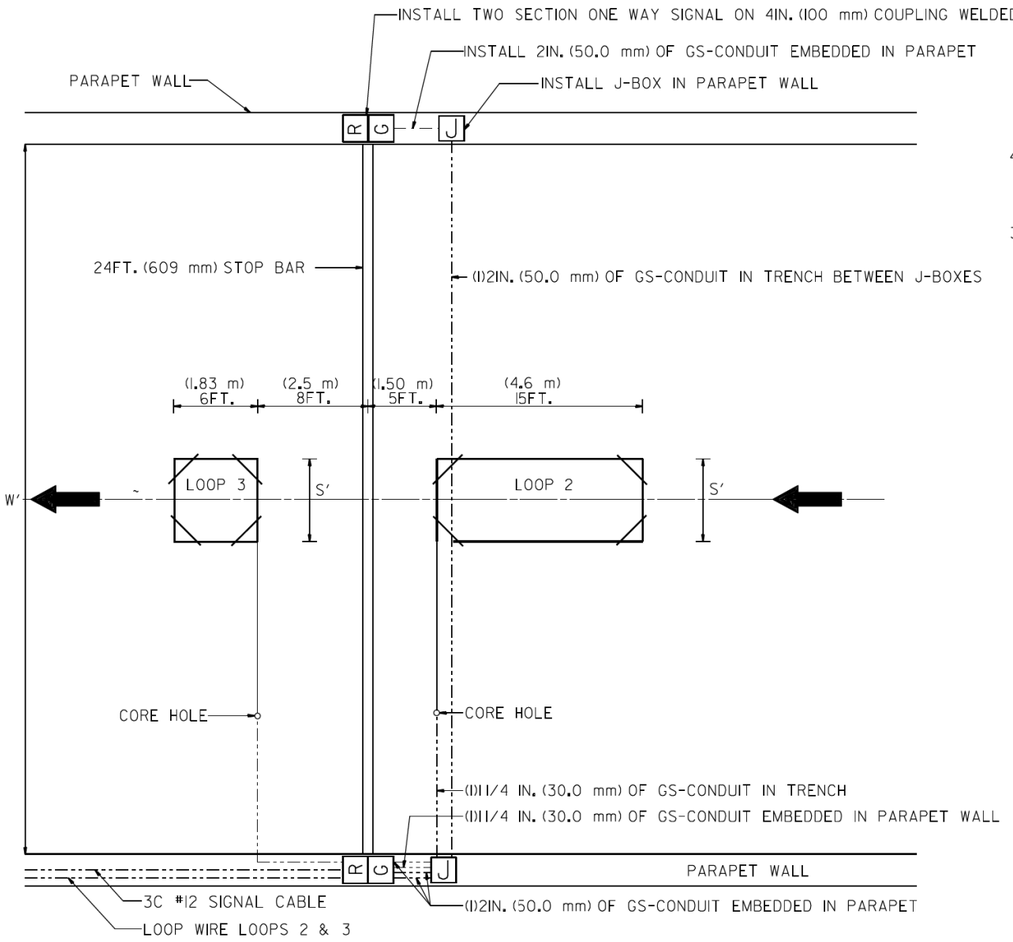
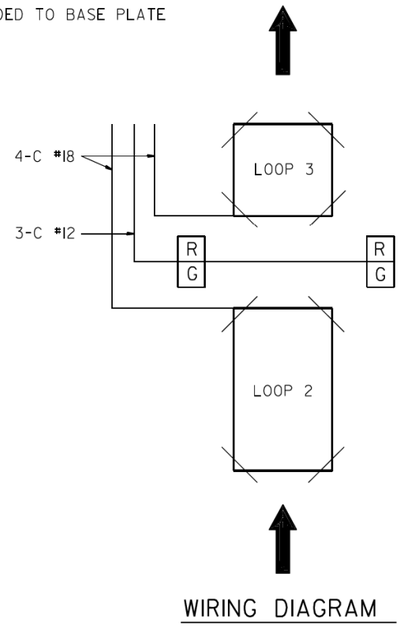
	PLOT SCALE = 50.000 '/ in.	CHECKED -	REVISED - K. ENG 02-28-12		
	PLOT DATE = 3/29/2012	DATE -	REVISED -		SCALE: NONE SHEET 34 OF 34 SHEETS STA. TO STA.

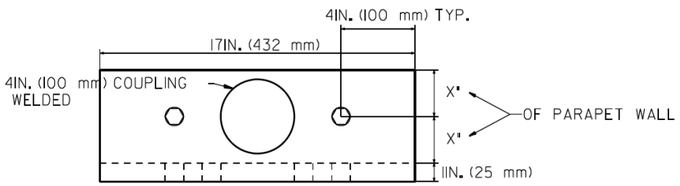
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	592
	TC-24		CONTRACT NO. 60X94	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



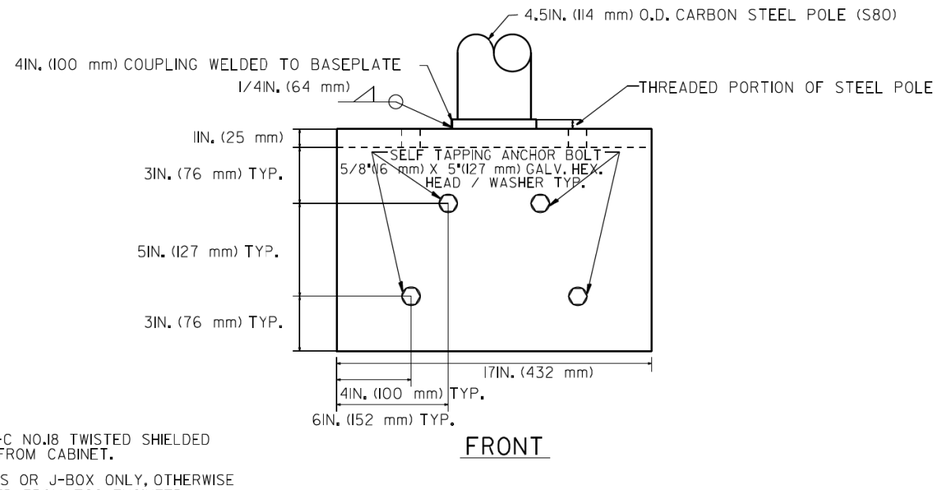
TYPICAL LOOP LAYOUT



WIRING DIAGRAM



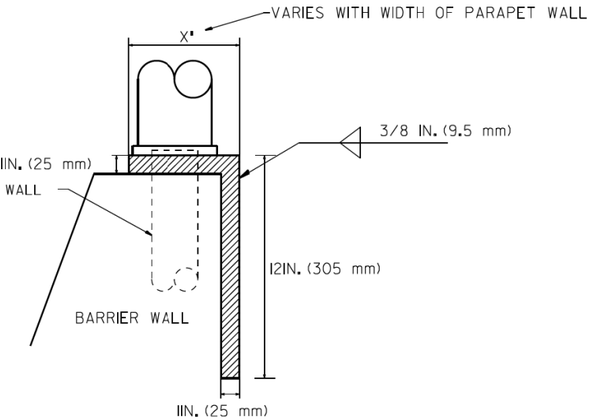
TOP



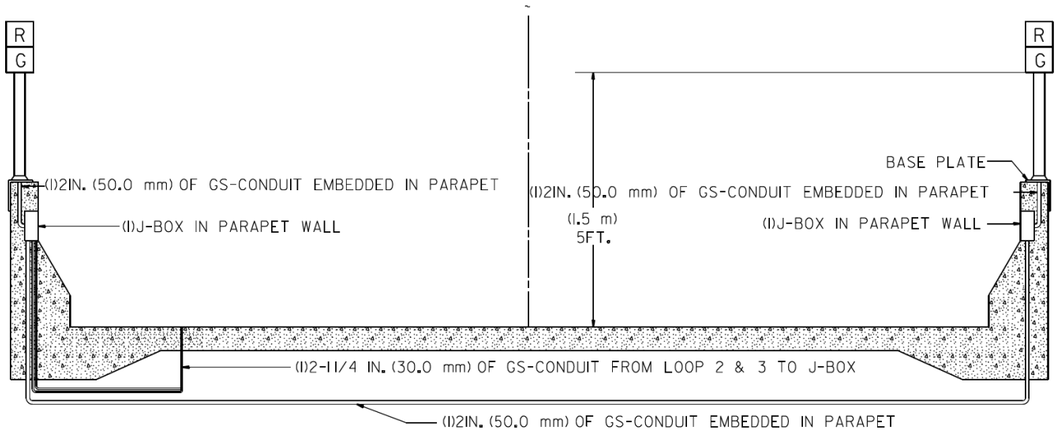
FRONT

NOTES

1. EACH LOOP SHALL BE SPLICED TO A 4-C NO.18 TWISTED SHIELDED LEAD IN WHEN 150FT. (45 m) OR MORE FROM CABINET.
2. LOOPS SHALL BE SPLICED IN HANDHOLES OR J-BOX ONLY, OTHERWISE WRITTEN PERMISSION SHALL BE OBTAINED FROM TSC ENGINEER.
3. LOOPS SHALL NOT BE SPLICED IN SERIES.
4. EACH LOOP LEAD IN SHALL BE IDENTIFIED AND PERMANENTLY COLOR CODED IN THE COREHOLE, HANDHOLE & CABINETS THRU WHICH THEY ENTER OR PASS AND TAGGED WITH THE CORRECT NOMENCLATURES.



SIDE

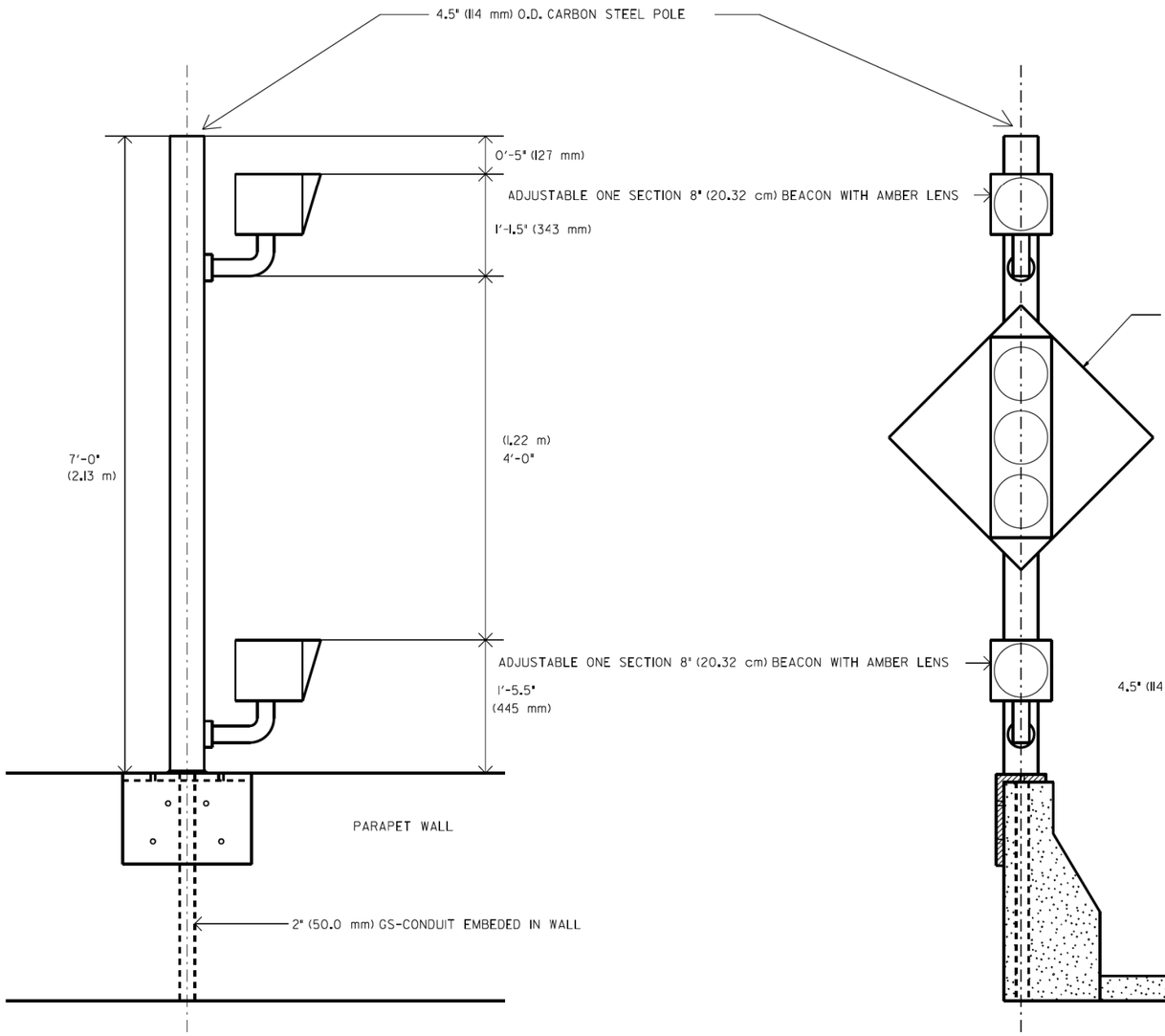


SECTION

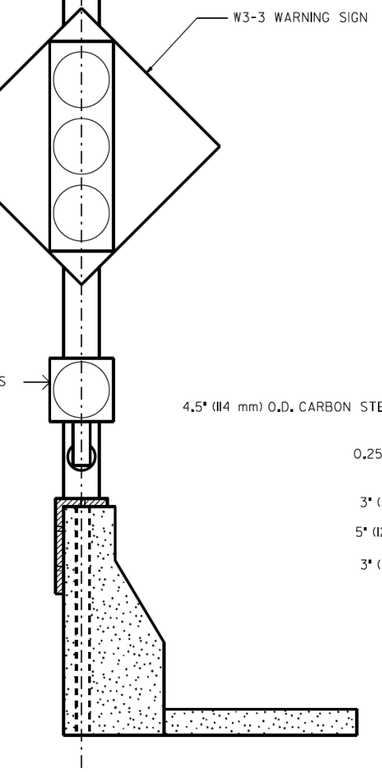
TABLE I	
WIDTH (W)	WIDTH (S)
12' (3.7 m)	8' (2.5 m)
13' (4.0 m)	9' (2.8 m)
14' (4.3 m)	10' (3.1 m)
15' (4.6 m)	11' (3.4 m)
16' (4.9 m)	12' (3.7 m)
17' (5.2 m)	13' (4.0 m)
18' (5.5 m)	14' (4.3 m)
19' (5.8 m)	15' (4.6 m)
20' (6.1 m)	18' (4.9 m)
21' (6.4 m)	17' (5.2 m)
22' (6.7 m)	18' (5.5 m)
23' (7.0 m)	19' (5.8 m)
24' (7.3 m)	20' (6.1 m)
25' (7.6 m)	21' (6.4 m)

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED - R.L.	REVISED - 06/94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	TYPICAL RAMP METERING TYPE 3 BARRIER WALL INSTALLATION
		DRAWN - G.M.	REVISED - 02/96		
$MODELNAME$	PLOT SCALE = $SCALE$	CHECKED - R.L.	REVISED - 09/96		SCALE: NONE SHEET OF SHEETS STA. TO STA.
	PLOT DATE = $DATE$	DATE - 06-22-94	REVISED - 02/98		

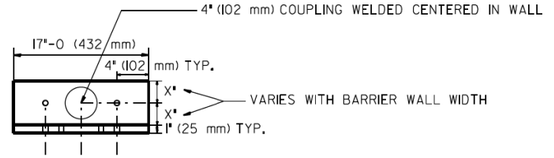
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	593
			CONTRACT NO.	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



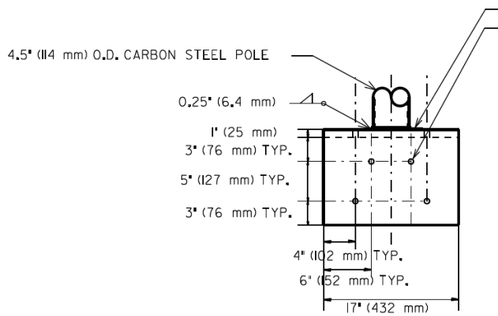
SIDE VIEW



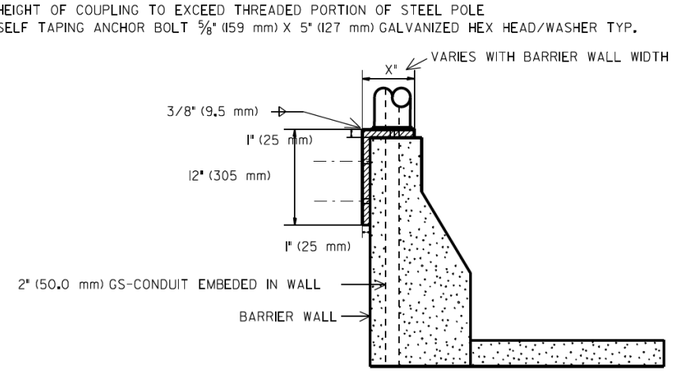
FRONT VIEW



TOP VIEW



FRONT VIEW



SIDE VIEW

FLASHER POST ON BARRIER WALL

SADDLE MOUNTING FOR FLASHER POST

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED - R.L.	REVISED - 09/96
$MODELNAME$		DRAWN - G.M.	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - R.L.	REVISED -
	PLOT DATE = $DATE$	DATE - 02/96	REVISED -

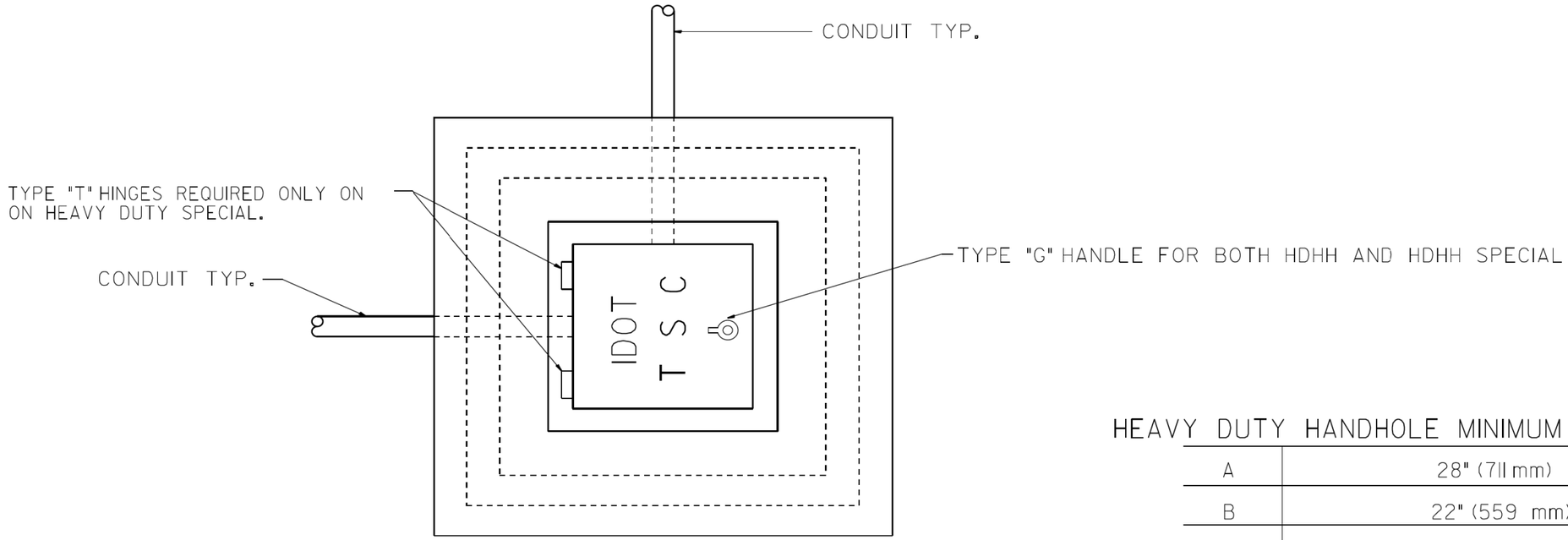
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
TRAFFIC SYSTEMS CENTER

FLASHER DETAIL
ON BARRIER WALL

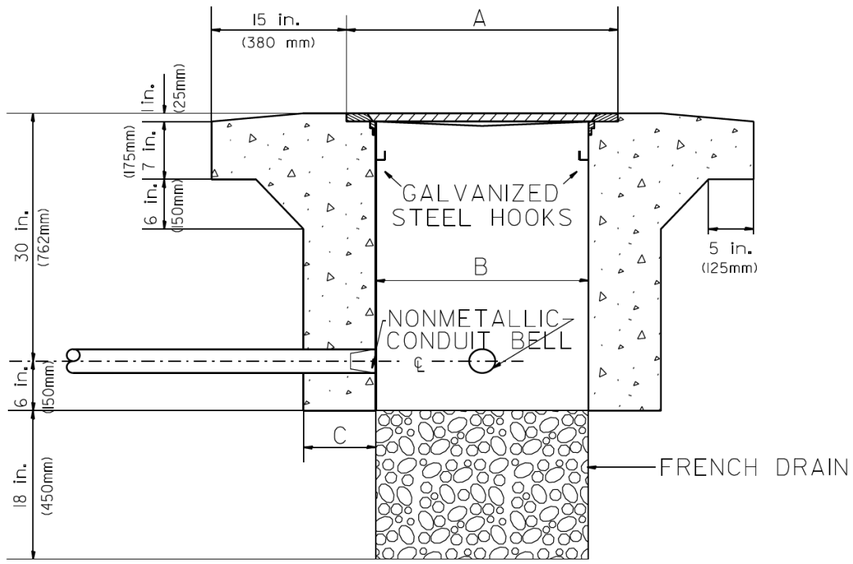
SCALE: NONE | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	594
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SYSTEMS CENTER (TY-ITSC-400#14)



PLAN



ELEVATION

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.)

HEAVY DUTY HANDHOLE SPECIAL MINIMUM DIMENSIONS

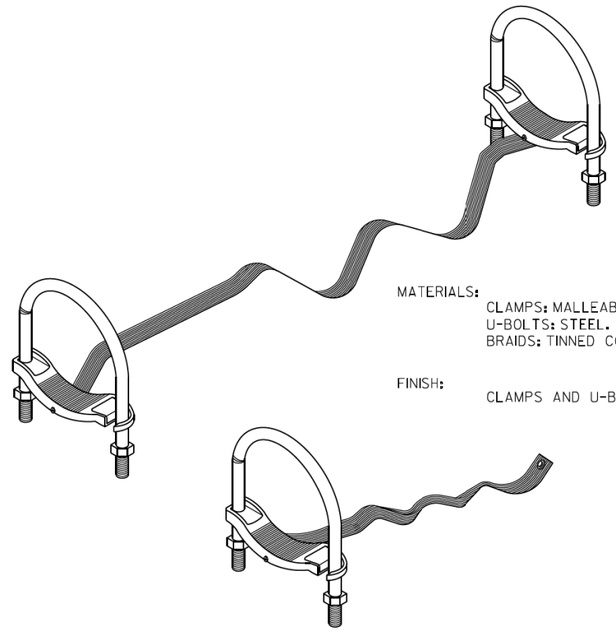
A	31.5" (800 mm)
B	30.0" (762 mm)
C	10.0" (250 mm)

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

PC CONCRETE - HEAVY DUTY HAND HOLE

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED - R.L.	REVISED - 04/97	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	PC CONCRETE - HEAVY DUTY HAND HOLE	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - G.M.	REVISED -						825	595
	PLOT SCALE = $SCALE$	CHECKED - R.L.	REVISED -					CONTRACT NO.		
$MODELNAME$	PLOT DATE = $DATE$	DATE - 09/11/96	REVISED -		SCALE: NONE SHEET OF SHEETS STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

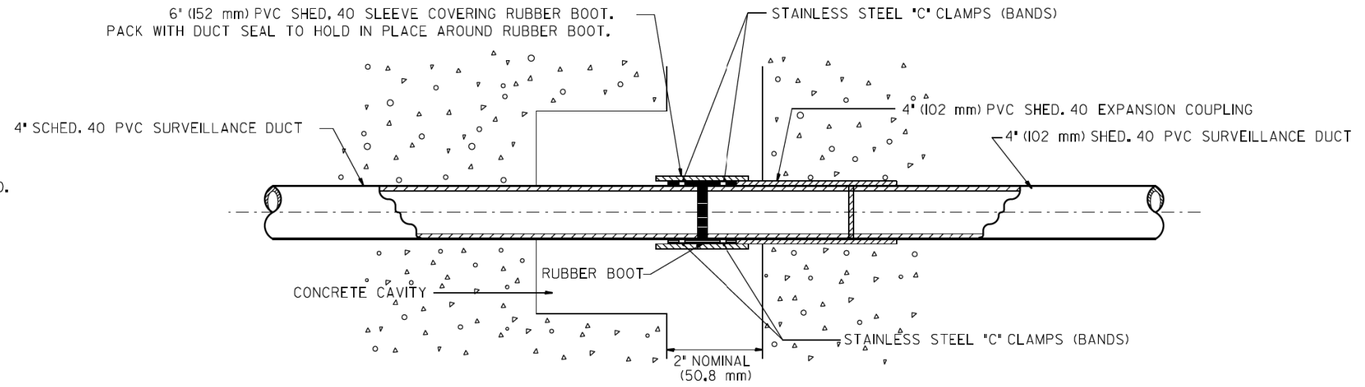
TRAFFIC SYSTEMS CENTER (TY-ITSC-400#15)



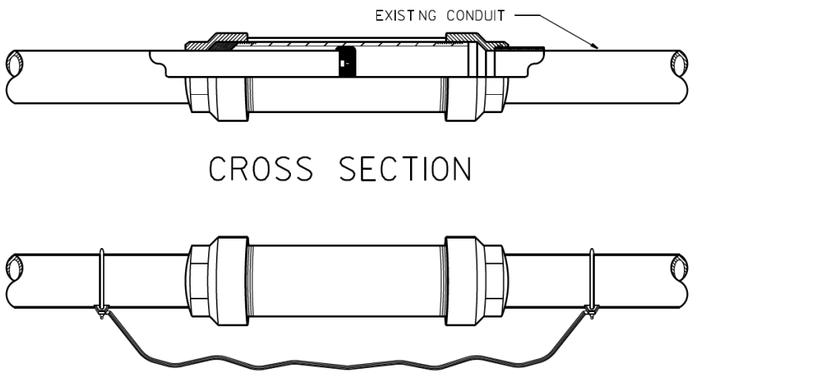
MATERIALS:
CLAMPS: MALLEABLE OR DUCTILE IRON.
U-BOLTS: STEEL.
BRAIDS: TINNED COPPER.

FINISH:
CLAMPS AND U-BOLTS ARE HOT DIP GALVANIZED.

GROUNDING & BONDING JUMPERS FOR RIGID STEEL, IMC & EMT



EXPANSION/DEFLECTION FITTING



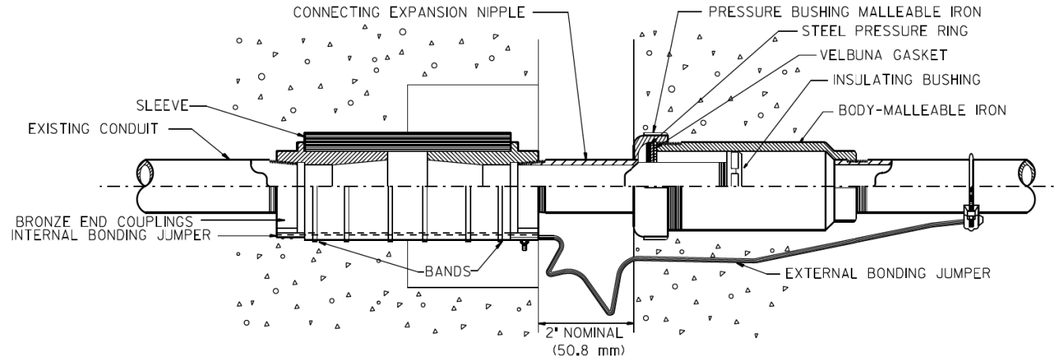
CROSS SECTION

BONDING

EXPANSION FITTINGS

MATERIALS:
HEAD: MALLEABLE OR DUCTILE IRON.
SLEEVE: STEEL.
INSULATING BUSHING: PHENOLIC.

FINISH:
HOT DIP GALVANIZED.



COMBINATION DEFLECTION/EXPANSION FITTINGS FOR RIGID METAL CONDUIT & IMC

FITTING CAN BE USED EXPOSED OR EMBEDDED IN CONCRETE.

MATERIALS:
SLEEVE: NEOPRENE.
END COUPLINGS: BRONZE.
BONDING JUMPER: TINNED COPPER BRAIDS.
BANDS: STAINLESS STEEL.

FINISH:
ALL MALLEABLE, DUCTILE IRON OR STEEL PARTS ARE HOT DIP GALVANIZED.

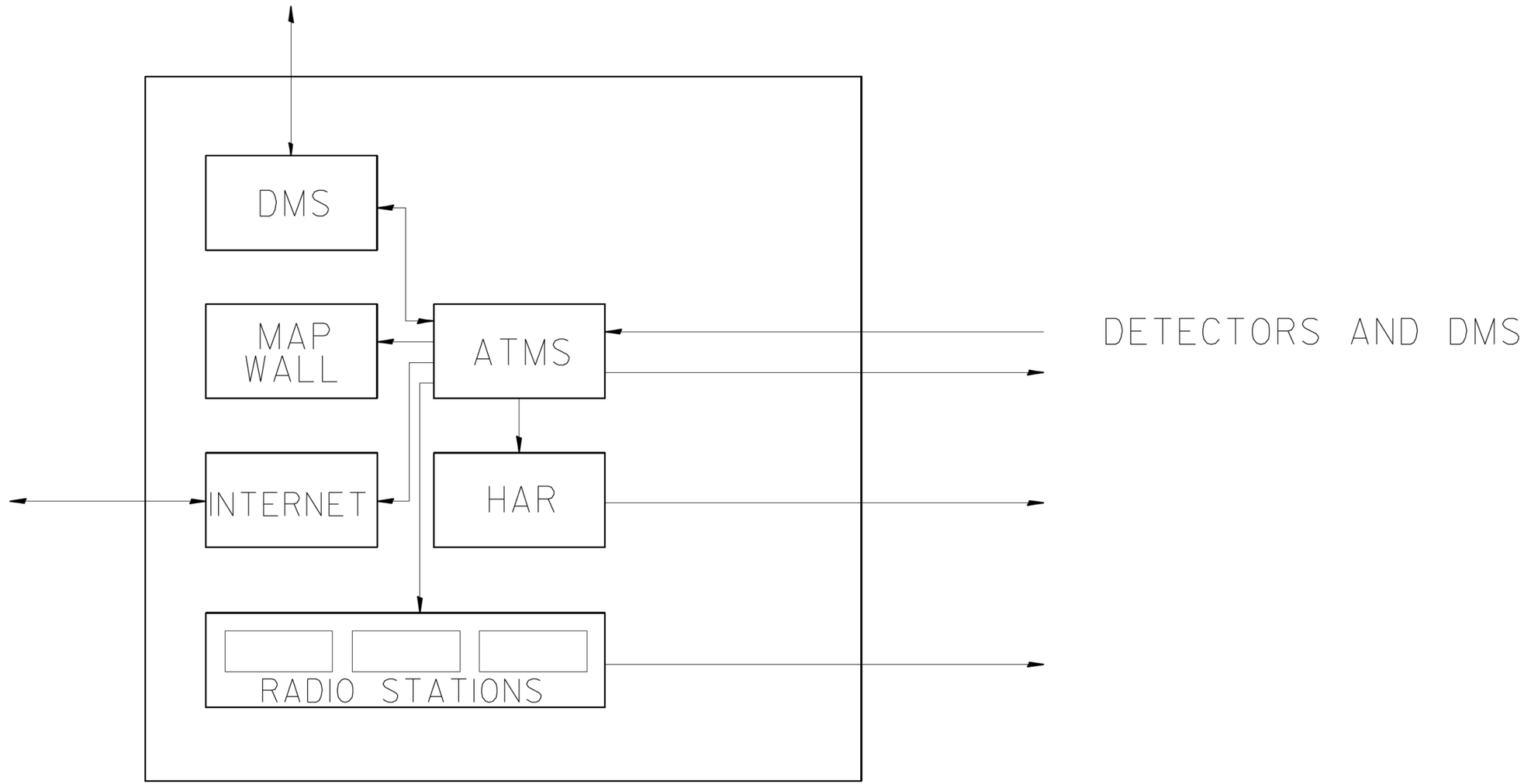
FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED - R.L.	REVISED - 03/99
		DRAWN - G.M.	REVISED -
$MODELNAME$	PLOT SCALE = $SCALE$	CHECKED - R.L.	REVISED -
	PLOT DATE = $DATE$	DATE - 01/22/98	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
TRAFFIC SYSTEMS CENTER

EXPANSION FITTING DETAIL SHEET

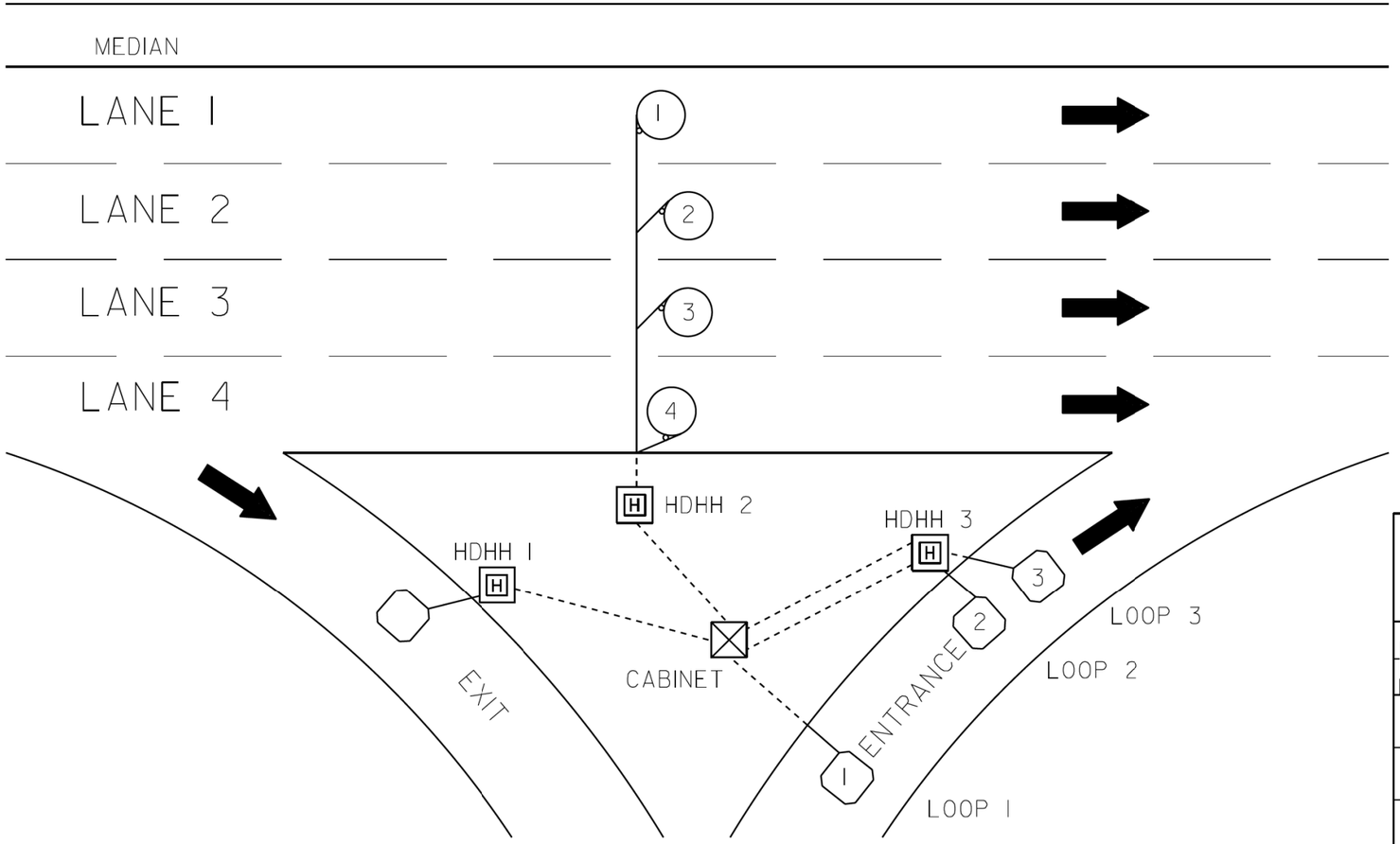
SCALE: NONE | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	596
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TSC

FILE NAME = C:\d106010\155TSCTYP.DGN	USER NAME = $USER$	DESIGNED - J.G.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	TSC ATMS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
$FILEL$		DRAWN - G.M.	REVISED -									825	597
$MODELNAME$	PLOT SCALE = $SCALE$	CHECKED - J.G.	REVISED -		SCALE: NONE	SHEET OF SHEETS	STA.	TO STA.				CONTRACT NO.	
	PLOT DATE = $DATE$	DATE - 01/07/2010	REVISED -						FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SIZE
2.5" (63.5 mm) X 1.75" (44.45 mm)

SUGGESTED TAG
PANDUIT
#MP250WI75-C
OR EQUIVALENT

LOOP ANALYZER

LOCATION _____ DATE _____

LOOP LOCATION LANE DIRECTION	LOOP WIRE MARKED AND CODED	LOOP SIZE	FREQ. INDUCTANCE	INSULATION	LOOP RESISTANCE

HDHH 1 EXAMPLE

IB-EB EXIT
CCW IN/
TO CABINET #____

HDHH 2 EXAMPLE

IB (OB) LANE # ___
CCW /OUT
TO CABINET #____

HDHH 3 EXAMPLE

IB-EB ENT.
LOOP #2
CW IN/

NOTE:

EACH LOOP WIRE SHALL BE TAGGED AS "IN" OR "OUT" AND "CW" OR "CCW". SHIELDED CABLE WILL BE TAGGED IN EACH HANDHOLE AND CABINET TO MATCH THE CABLE LOG.

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED - R.L.	REVISED - 6/94
		DRAWN - G.M.	REVISED - 10/96
$MODELNAME$	PLOT SCALE = $SCALE$	CHECKED - R.L.	REVISED -
	PLOT DATE = $DATE$	DATE - 6-27-94	REVISED -

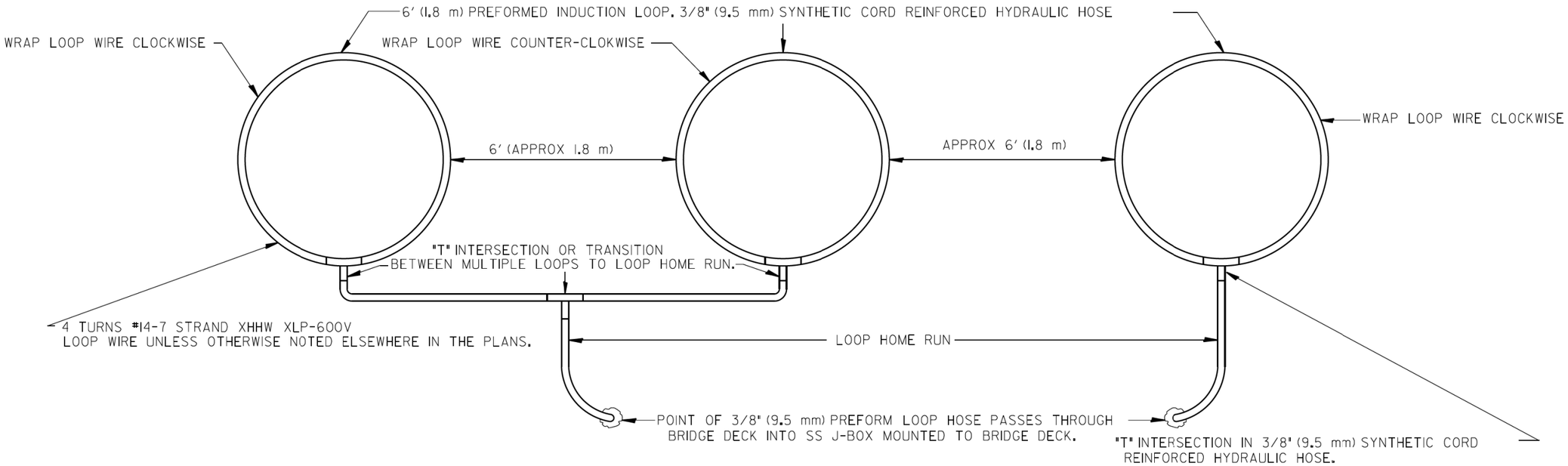
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
TRAFFIC SYSTEMS CENTER

LOOP STATUS REPORT

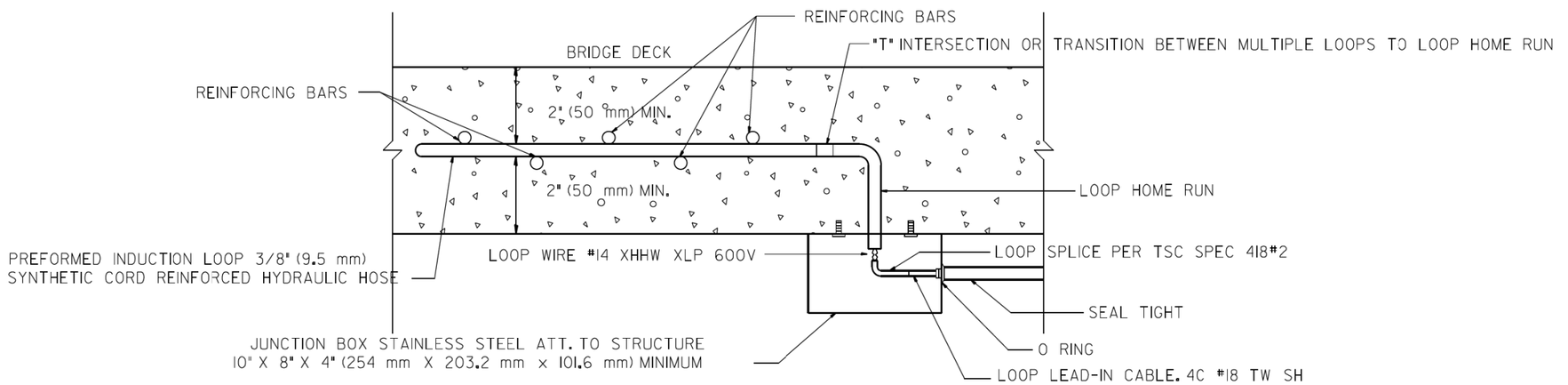
SCALE: NONE | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	598
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SYSTEMS CENTER (TY-ITSC-418#7)



TYPICAL 3 LANE COUNT STATION EMBEDDED IN BRIDGE DECK



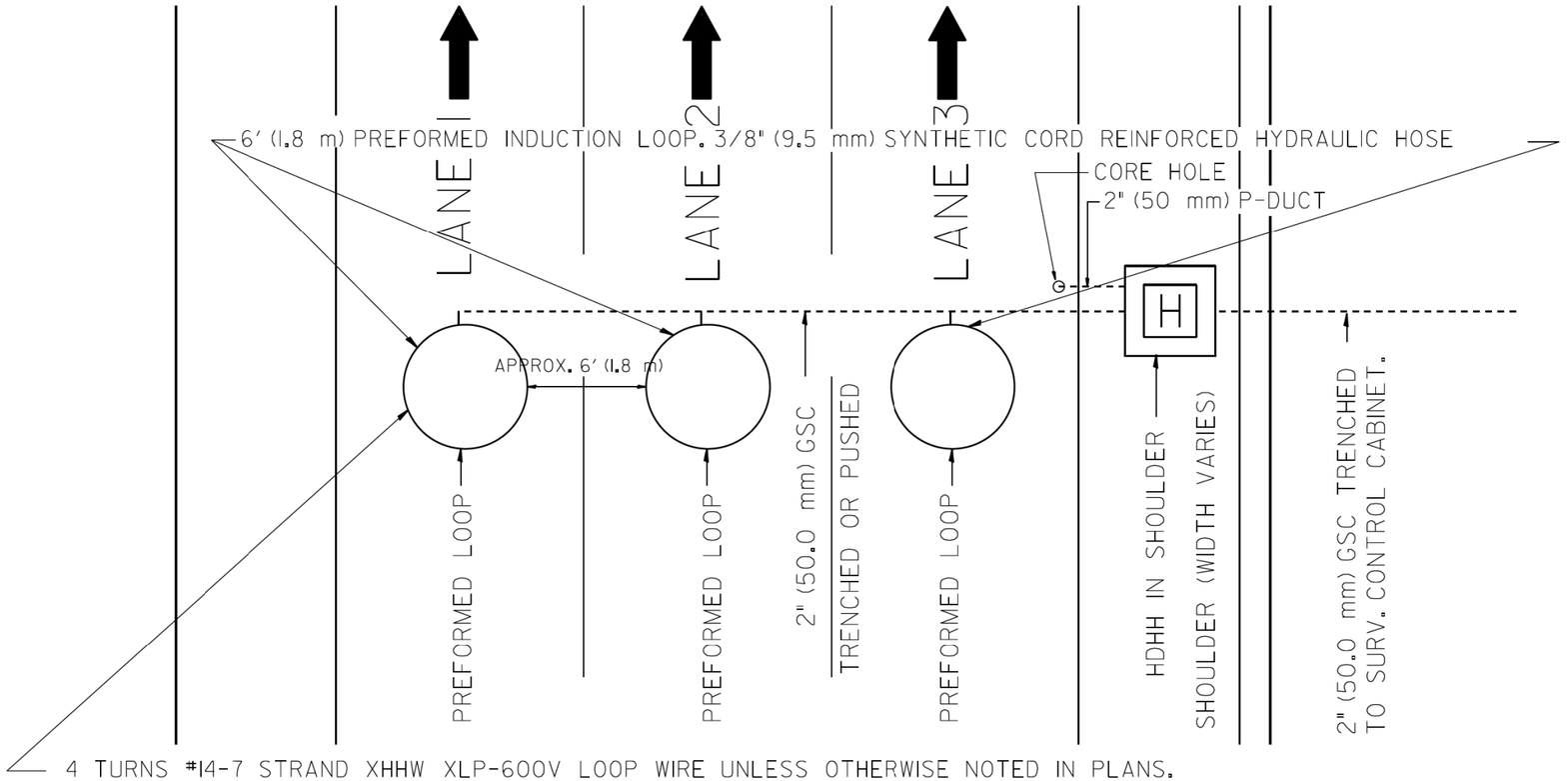
LOOP JUNCTION BOX UNDER BRIDGE DECK

NOTES:

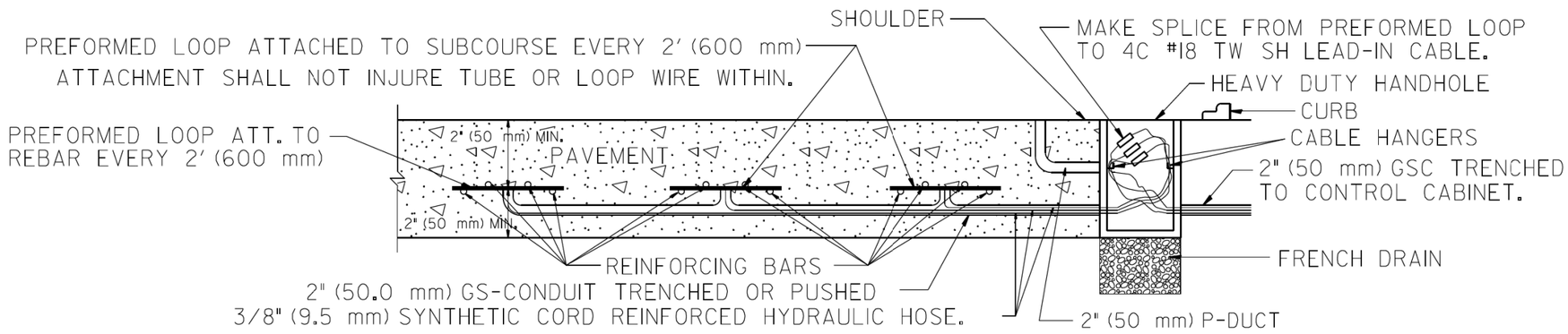
1.- EACH INDUCTION LOOP SHALL HAVE ITS OWN LEAD-IN CABLE TO CABINET.
2.- INDUCTION LOOPS SHALL NOT BE CONNECTED IN SERIES WITH OTHER LOOPS.
3.- LOOPS LOCATED OVER 1000' (300 m) FROM CABINET SHALL
REQUIRE 5 TURNS OF #14 WIRE.

FILE NAME =	USER NAME = $USER$	DESIGNED - R.L.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC SYSTEMS CENTER	PREFORMED LOOP INSTALLATION IN BRIDGE DECK				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
$FILE$		DRAWN - G.M.	REVISED -									825	599
	PLOT SCALE = $SCALE$	CHECKED - R.L.	REVISED -								CONTRACT NO.		
$MODELNAME$	PLOT DATE = $DATE$	DATE - 2-97	REVISED -		SCALE: NONE	SHEET	OF	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

TRAFFIC SYSTEMS CENTER (TY-ITSC-418#9)



TYPICAL 3 LANE COUNT STATION IN NEW CONCRETE PAVEMENT



LOOP INSTALLATION IN NEW CONCRETE PAVEMENT

NOTES:

1.- EACH INDUCTION LOOP SHALL HAVE ITS OWN LEAD-IN CABLE TO CABINET.
2.- INDUCTION LOOPS SHALL NOT BE CONNECTED IN SERIES WITH OTHER LOOPS.
3.- LOOPS LOCATED OVER 1000' (300 m) FROM CABINET SHALL REQUIRE 5 TURNS OF #14 WIRE.
4.- FOR LANES 1 AND 3 WRAP LOOPS CLOCKWISE, FOR LANE 2 WRAP LOOP COUNTER CLOCKWISE.
5.- FOR COUNT STATIONS WHICH HAVE MORE THAN 3 LANES, A 3" (75 mm) GSC SHALL BE USED.
6.- COREHOLE SHALL BE FILLED WITH DUCT SEAL. JOINT SEALER (OZ GEDNEY DOZSEAL 230 OR BETTER) SHALL BE ADDED AFTER DUCT SEAL.

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED - J.G.	REVISED -
		DRAWN - G.M.	REVISED -
$MODELNAME$	PLOT SCALE = $SCALE$	CHECKED - J.G.	REVISED -
	PLOT DATE = $DATE$	DATE - 06/22/04	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
TRAFFIC SYSTEMS CENTER

PREFORMED LOOP
TYPICAL INSTALLATION
NEW CONCRETE PAVEMENT

SCALE: NONE | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			825	600
		CONTRACT NO.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		