

- of the Standard Specifications and place bedding for precast box culvert end sections.
- Set precast box culvert end section.
- Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
- Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specfications.

SECTION B-B

clear cover.)

(Top slab at downstream end)

SECTION B-B

(Top slab at upstream end)

full length of span

clear cover.)

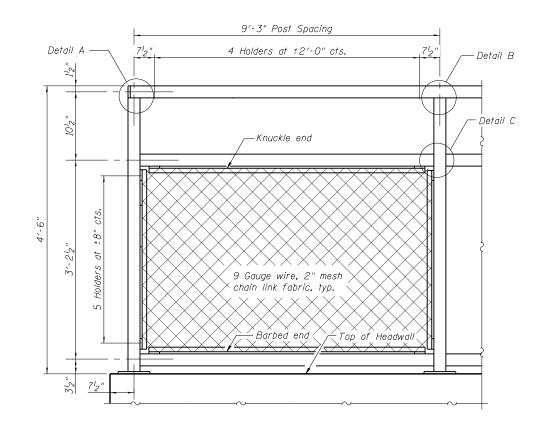
Bar	No.	Size	Length	Shape
h(E)	3	#4	8′-8"	
v(E)	10	#4	2'-4"	
Reinford Epoxy C		Bars,	Pound	40
Concrete	Structu	ıres	Cu. Yd.	1



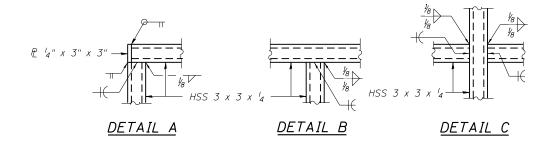
USER NAME =	DESIGNED - AM	REVISED
	CHECKED - DD	REVISED
PLOT SCALE =	DRAWN - AM	REVISED
PLOT DATE = 2/8/2021	CHECKED - MCC	REVISED

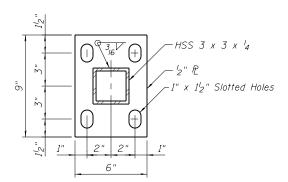
PRECAS	T CONCRET	ге вох	CULV	ERT APR	ON END
SECTION	DETAILS -	- BOX	CULVE	RT STRU	CTURE #1
	SHEET NO.	SB-03 OF	SB-05	SHEETS	

.A.P.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.			
	11-F3001-01-BT	WILL	234	101				
			CONTRACT	NO. (51G74			
ILLINOIS FED. AID PROJECT								

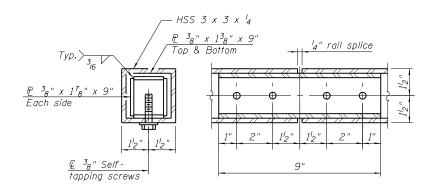


BICYCLE RAILING ELEVATION



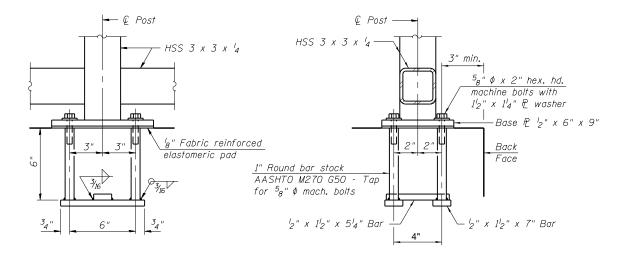


BASE PLATE



RAIL SPLICE

All structural steel tubing, post and railing, for parapet railing shall be CVN tested according to 1006.34(b) of the Standard Specifications. CVN testing may be omitted for the Bicycle Railing.



ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 58 " ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

NOTES:

1. All steel rail elements shall be galvanized according to article 509.05 of the Standard Specifications

BILL OF MATERIAL

Item	Unit	Quantity		
Bicycle Railing	Foot	40		



USER NAME =	DESIGNED - AM	REVISED
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PLOT DATE = 2/8/2021	CHECKED - MCC	REVISED

вох				RAILIN TRUC	G TURE #1
SHI	EET NO	SB-04	OF	SB-05	SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-F3001-01-BT	WILL	234	102
		CONTRACT	NO. 6	IG74
	THE THOSE FED. A	ID DDO IECT		



Page <u>1</u> of <u>1</u>

						SOIL BORIN						7/20
ROUTE	DE	SCR	IPTION	١		Proposed Culvert Local	tion # 1	Lo	ogg	ED BY	S`	YED
SECTION11-F3001-01-	BT	_ ı	OCAT	ION _	Northi	ng:1.787,868.01 Eastir	ng:1.076.215.	71, SEC	:., T\	NP., F	RNG.	
COUNTY WILL I	DRILLING	ME	THOD		Но	llow Stem Auger	_ HAMMER	TYPE		Auto	matic	
STRUCT. NOStation	_	D E P T	B L O W	U C S	M O I S	Surface Water Elev. Stream Bed Elev.		_ ft _ ft	DEP	B L O	U C S	M 0 1
BORING NO. B-1 Station Offset Ground Surface Elev. 708.9	_	н	S	Qu (tsf)	Т	Upon Completion After Hrs.	682.9 680.9	ft $\bar{\nabla}$	H (ft)	W S (/6")	Qu (tsf)	S T (%)
FILL- SANDY SILT with Gravel, Organic Brown FILL- CLAY, Brown and Grav			3			LEAN CLAY, trace So Gravel Gray Very Stiff to Hard				4	(63)	(70)
Brown and Gray			5 6	1.5 P	15.9	CL (continued)			_	8 11	4.5 P	15.0
		=	5	2.0	15.3					4	3.5	17.6
LEAN CLAY, trace Sand and	<u>703.90</u>	-5	6	Р		- " . "			-25	9	P	17.0
Gravel Brown and Gray Very Stiff CL		-	4	2.5	17.6				<u>*</u> _	8	2.0	11.2
-	3		7	Р				7	7	5	Р	
			4	4.0	16.6				-	6		12.9
	9	-10	6	Р		End of Boring		678.90	-30	13		
LEAN CLAY, trace Sand and	696.40		2 3 6	3.5 P	18.0				-			
Gravel Gray Very Stiff to Hard CL		-15	5 9 8	2.3 P	6.2				-35			
	,		3 5 7	2.3 P	12.0				-35			
		-20	9 8 9	-	7.4							

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

BBS, from 137 (Rev. 8-99)



Page <u>1</u> of <u>1</u>

ROUTE	DE	SCR	IPTION	N	F	SOIL BORING				6-1 33	27/20 YFD
SECTION 11-F3001-01-E											
COUNTY WILL D									790.0		
STRUCT. NO		D E P T H	B L O W s	U C S Qu (tsf)		Upon Completion	None ft	D E P T H	B L O W S	U C S Qu (tsf)	M O I S T
6"TOP SOIL FILL- LEAN CLAY, trace Sand Brown	708.12	_	8 8 8	1.5 P	11.4	LEAN CLAY, trace Gr Gray Very Stiff to Stiff CL (continued)	avel	=	4 4 6	2.5 P	16.8
LEAN CLAY with Sand and	703.62	-5	6 7 7	1.8 P	21.1			-25	3 4 7	2.5 P	16.2
Gravel Brown and Gray Very Stiff to Hard CL			4 5 7	3.0 P	19.6				4 6 9	2.5 P	16.8
		-10	5 7 9	4.5 P	15.7	End of Boring	678.6	2 -30	4 6 8	2.5 P	15.6
LEAN CLAY, trace Gravel	696.12		4 7 10	4.5 P	14.4						
Gray Very Stiff to Stiff CL	,	-15	3 6 6	3.5 P	17.4						
		-20	8 6 8 3 5 8	2.0 P	17.0						

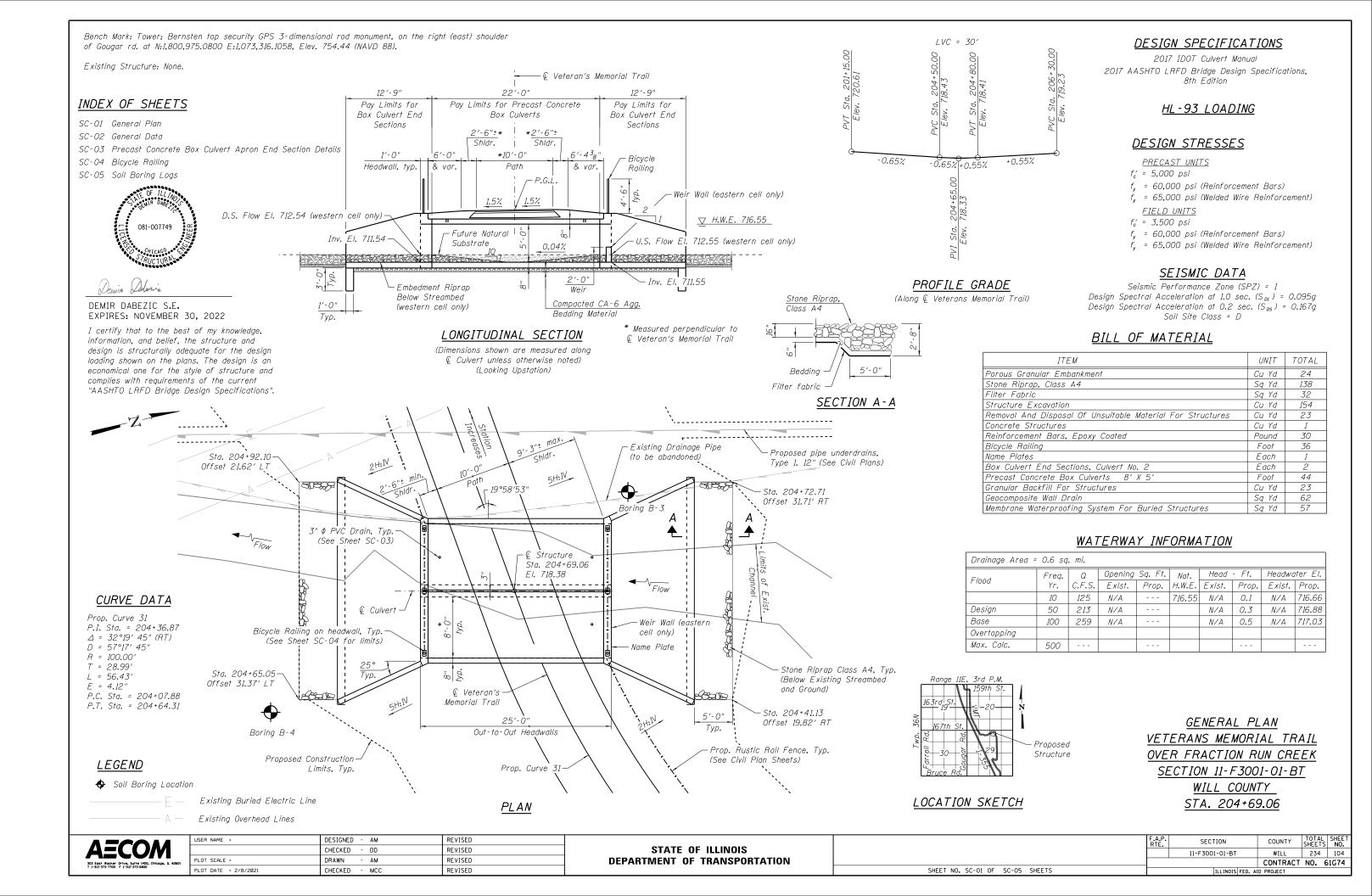
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

AECOM
303 East Wacker Drive, Suite 1400, Chicago, IL 60601 T 1-312-373-7700 F 1-312-373-6800

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SOIL BORING LOGS BOX CULVERT STRUCTURE #1		SECTION	COUNTY	TOTAL SHEETS	SHEI NO
		11-F3001-01-BT	WILL	234	10
			CONTRACT	NO. (61G74
SHEET NO. SB-05 OF SB-05 SHEETS		ILLINOIS FED. AI	D PROJECT		

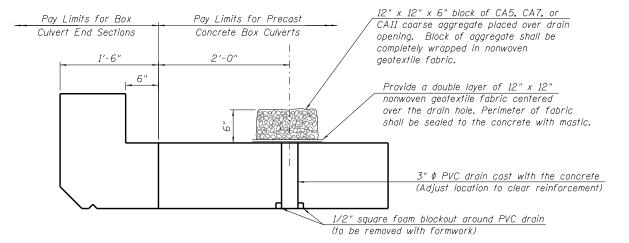


GENERAL NOTES

- 1. The design fill height for this box culvert is 1.0 ft. The precast box culvert sections shall conform to the requirements of ASTM C 1577.
- 2. Contractor is responsible for waterway diversion and dewatering of the work area during box culvert construction. See Special Provision, In-Stream Work.
- 3. Undercut shall be paid for at the contract unit price per cubic yard as Removal and Disposal of Unsuitable Material for Structures. CA-6 bedding stone will be paid for at the contract unit price per cubic yard as Granular Backfill for Structures.
- 4. Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within \(\frac{1}{3} \) of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specifications.
- 5. Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard. Precast concrete box culverts and box culvert end sections shall be backfilled with Porous Granular Embankment below the top of of the box culvert extending to a vertical plane 2 ft from the exterior sides of the culvert and end sections, and not closer than 2 ft from the face of the embankment.
- 6. Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. End sections will be paid for at the contract unit price per each for Box Culvert End Sections.
- 7. Box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements for ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.
- 8. The details contained herein are for constructing the end sections using cast-in-place (CIP) construction. The Contractor may propose to furnish the end sections using precast construction methods and the end sections may consist of multiple precast concrete segments. The Contractor shall be responsible for determining all details associated with the precast option including any strengthening of stiffening provisions necessary for handling the precast segments. Conceptual details followed by shop drawings and design calculations sealed by an Illinois Licensed Structural Engineer shall be submitted to the Engineer for review and approval. Elements of the precast option shall at a minimum result in the same wingwall geometry and not have a thickness less than that detailed herein. The option to construct the end sections using precast construction methods shall be at no charge.
- 9. Shop drawings that detail slab thickness and reinforcement layout for the Box Culvert End Sections shall be provided to the Engineer for review and approval. Reinforcement bars not detailed herein shall be detailed with a clear distance at the end of the reinforcement not less than ¹₂" nor more than 2".
- 10. The contractor may use reinforcement bars in lieu of welded wire reinforcement (WWR). Reinforcement bars shall be limited to the sizes of #3 through #5 bars, a maximum spacing of the lesser of 8" or the member thickness, and shall result in an area of reinforcement equal to or greater than that provided by the WWR. Minimum lap lengths detailed herein are applicable to WWR and reinforcement bars.
- 11. Reinforcement (circumferential and longitudinal) in the precast concrete box culvert segments immediately adjacent to the box culvert end sections that is being lapped with the end section reinforcement shall not be less than that required by ASTM C 1577 for the design fill height or the reinforcement detailed for the end section, whichever is greater.
- 12. One drain hole shall be provided in each wingwall for end sections of box culverts having an opening with a clear rise greater than 3 ft. The drain hole shall be located within $\frac{1}{2}$ 3 of the clear rise of the box culvert and shall conform to the reuigrements of Article 503.11 of the Standard Specifications.

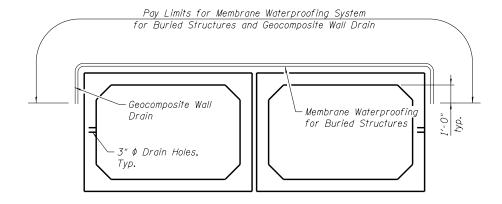
FRACTION RUN CREEK
BUILT 20__ BY
FOREST PRESERVE DISTRICT
OF WILL COUNTY
SEC. 11-F3001-01-BT
LOADING HL-93

NAME PLATE
See Std. 515001



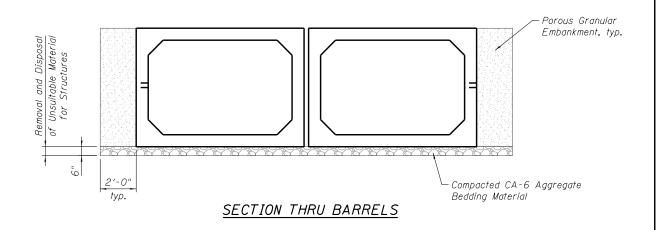
DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)



MEMBRANE WATERPROOFING AND GEOCOMPOSITE WALL DRAIN DETAIL

Note: Geocomposite Wall Drain shall be according to Section 591 of the Standard Specifications, except that concrete nails shall not be used in areas where it overlaps Memrbane Waterpoofing System fo Buried Structures.



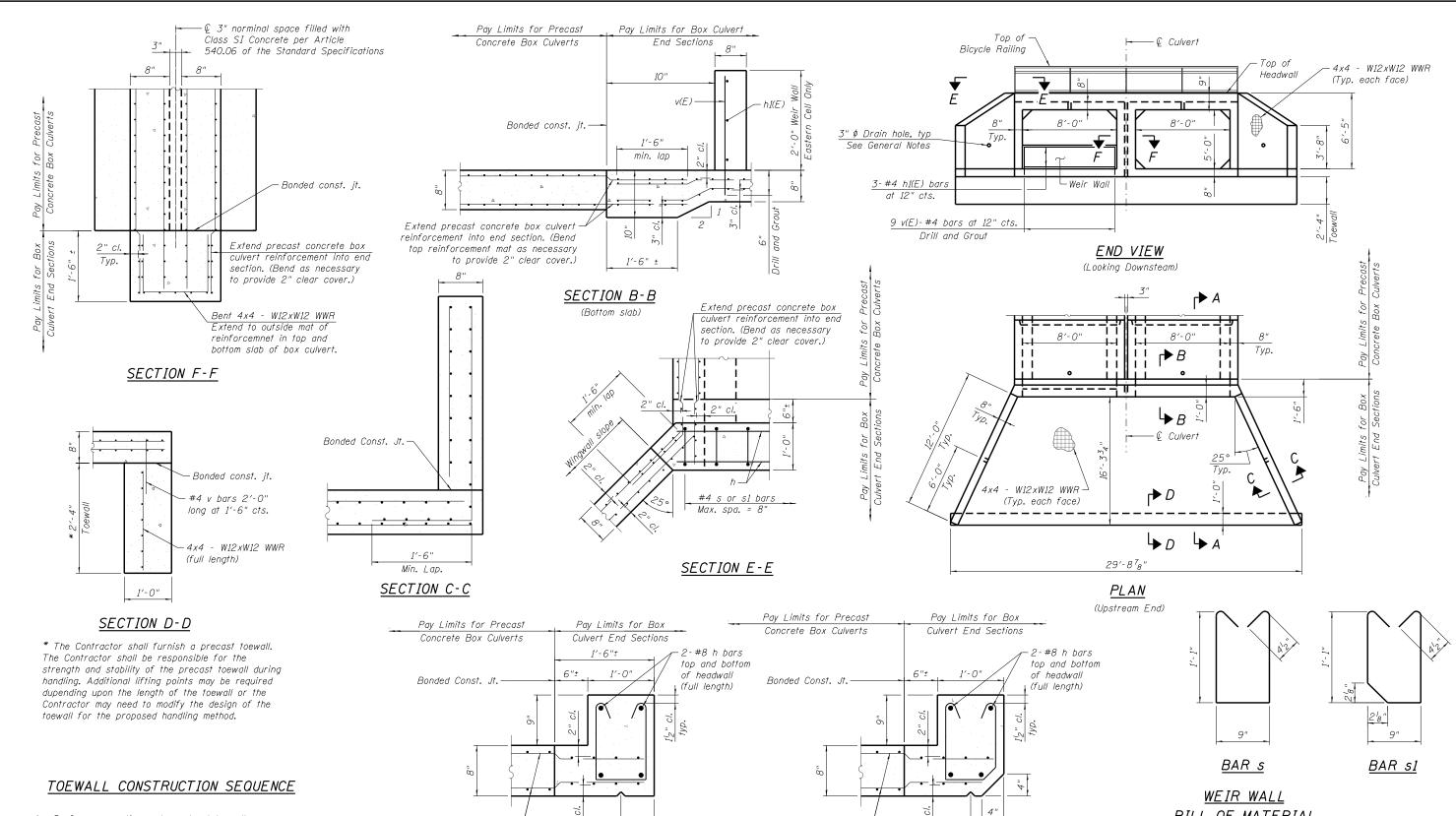
BOX

SHE

AECOM 303 East Rocker Orles, Sultre 1400, Onleage, IL 60601

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	CHECKED - DD	REVISED
PLOT SCALE =	DRAWN - AM	REVISED
PLOT DATE = 2/8/2021	CHECKED - MCC	REVISED

GENERAL DATA CULVERT STRUCTURE #2		SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		11-F3001-01-BT	WILL	234	105
			CONTRACT	NO. 6	1G74
EET NO. SC-02 OF SC-05 SHEETS		ILLINOIS FED. AI	D PROJECT		



- 1. Perform excavation and construct toewall.
- 2. Backfill according to the applicable paragraphs of Article 502.10 of the Standard Specifications and place bedding for precast box culvert end sections.
- 3. Set precast box culvert end section.
- 4. Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
- 5. Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specfications.

SECTION B-B (Top slab at downstream end)

3₄" "△" Drip Notch

SECTION B-B

(Top slab at upstream end)

to provide 2" 3_4 " " Δ " Drip Notch clear cover.)

BILL OF MATERIAL

Bar	No. Size		Length	Shape
h1(E)	3	#4	7′-8"	
v(E)	9 #4		2'-4"	
Reinforcement Bars, Epoxy Coated			Pound	30
Concrete	: Structu	ıres	Cu. Yd.	1



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	CHECKED -	DD	REVISED
PLOT SCALE =	DRAWN -	AM	REVISED
PLOT DATE = 2/8/2021	CHECKED -	MCC	REVISED

Extend precast concrete

box culvert reinforcement

into end section. (Bend as

necessary to provide 2"

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

Extend precast concrete

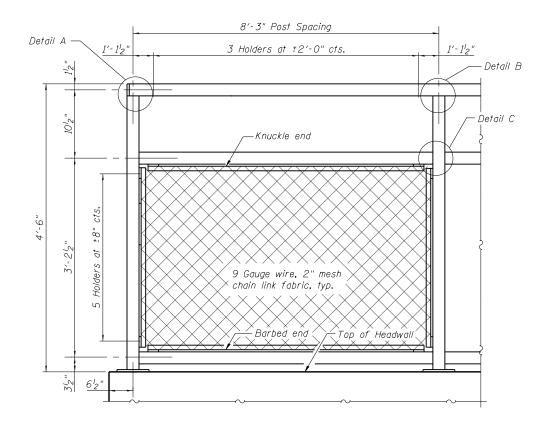
box culvert reinforcement

into end section. (Bend as

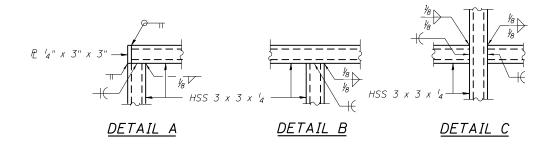
necessary to provide 2"

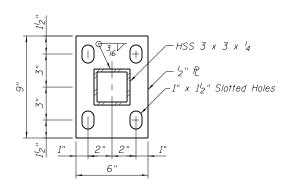
PRECAS	T CONCRE	ге вох	CULV	ERT APRON	END
SECTION	DETAILS -	- BOX (CULVE	RT STRUCTUR	E #2
	SHEET NO.	SC-03 OF	SC-05	SHEETS	

.A.P.				TOTAL	SHEET
TE.	SECTION	COUNTY	SHEETS	NO.	
	11-F3001-01-BT	WILL	234	106	
			CONTRACT	NO. 6	IG74
		0011111101			
ILLINOIS FED. AID PROJECT					

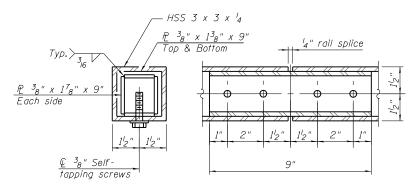


BICYCLE RAILING ELEVATION



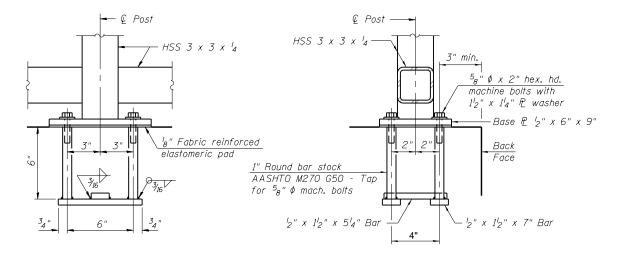


BASE PLATE



RAIL SPLICE

All structural steel tubing, post and railing, for parapet railing shall be CVN tested according to 1006.34(b) of the Standard Specifications. CVN testing may be omitted for the Bicycle Railing.



ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 58 " $^{\circ}$ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

NOTES:

1. All steel rail elements shall be galvanized according to article 509.05 of the Standard Specifications

BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing	Foot	36



USER NAME =	DESIGNED - AM	REVISED
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вох (RAILIN FRUCT	G TURE #2
SHEE	T NO	SC-04	OF	SC-05	SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.					
	11-F3001-01-BT	WILL	234	107					
		CONTRACT	NO. 6	51G74					
	THE PROOF FED. AND DROUGET								



Page <u>1</u> of <u>1</u>

					SOIL BORIN	GLOG			Date	8/2	7/20
ROUTE	DES	CRIPTIC	N						ED BY	S\	YED
SECTION11-F30	001-01-BT	LOCA	TION	Northi	ng: 1.791.046.80 Eastir	ng:1.076.059	.74, SEC). , T	WP.	RNG.	
COUNTY WILL	DRILLING	METHO	D	Но	llow Stem Auger	HAMMER	TYPE		Auto	matic	
STRUCT. NO	-3	D B L P O T W H S	U C S Qu	0 I S	Surface Water Elev. Stream Bed Elev. Groundwater Elev.: Upon Completion	None	_ft ft	D E P T H	B L O W S	U C S Qu	M O I S T
Ground Surface Elev.	714.77 ft	(ft) (/6") (tsf)	(%)	After Hrs.		_ft	(ft)	(/6")	(tsf)	(%)
12"TOPSOIL FILL- LEAN CLAY, trace sand Gravel Brown and Gray	71 <u>3.77</u> Sand	6 4 5	1.8 P	16.1	LEAN CLAY, trace Sa Gray Very Stiff to Stiff CL (continued)	<u>ind</u>			2 3 5	1.8 P	17.4
	-	2	1.8	19.3					2	2.0	16.5
LEAN CLAY, trace Sand Brown and Gray Very Stiff CL	<u>709.77</u> 	_5 2 2 4 6	3.0 P	18.4				-25	5 4 6 7	1.3 P	17.9
7800000		5 6 9	3.5 P	15.4			684.77	-30	2 5 7	1.8 P	17.5
LEAN CLAY, trace Sand Gray Very Stiff to Stiff CL	-	3 5 7	2.5 P	16.2	End of Boring		-				
	_	3 5 15 7 3 5	3.3 P	15.6				-35			
	-	3 -20 6	2.8 P	17.4							

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

BBS, from 137 (Rev. 8-99)



Page <u>1</u> of <u>1</u>

						SOIL BORING				_ 8/2	
ROUTE	DES	SCR	PTION		F	Proposed Culvert Location	# 2	LOGG	ED BY	_S	/ED_
SECTION11-F3001-01-BT		_ ι	OCAT	ION .	Northi	ng:1.790.986.46 Easting:1.	076.069.35,	SEC., T	WP., F	RNG.	
COUNTY WILL DRI	LLING	ME	THOD		Но	llow Stem Auger H	AMMER TY	PE	Auto	matic	
STRUCT. NO	_	D E P T H (ft)	B L O W S	U C S Qu (tsf)	M O I S T	Upon Completion After Hrs.	ft ft ft	P T H	B L O W S	U C S Qu (tsf)	M O I S T
12" TOPSOIL FILL-LEAN CLAY with Sand and Gravel Brown and Gray	<u>14.33 </u>	_	7 6 5	1.5 P	22.6	LEAN CLAY, trace Sand a Gravel, Gravelly at 28.5' Gray Very Stiff CL	and	_	3 5 7	2.0 P	16.9
		-5	2 2 3	2.0 P	17.3				3 3 5	2.5 P	16.6
			2 2 3	2.0 P	26.2				2 3 5	2.0 P	19.0
LEAN CLAY, trace Sand and Gravel Brown and Gray Hard to Very Stiff CL	<u>07.33</u> - -	-10	3 5 7	4.5 P	16.0		685	5.33 -30	10 7 13		7.1
			4 5 7	3.5 P	16.0	End of Boring					
	-	-15	3 4 7	3.0 P	15.9			-35			
	-		3 5 8	3.5 P	15.3					4.8 17 17 1	
6	- 9 <u>5.33</u> _	-20	3 5 7	3.5 P	15.5			-40			

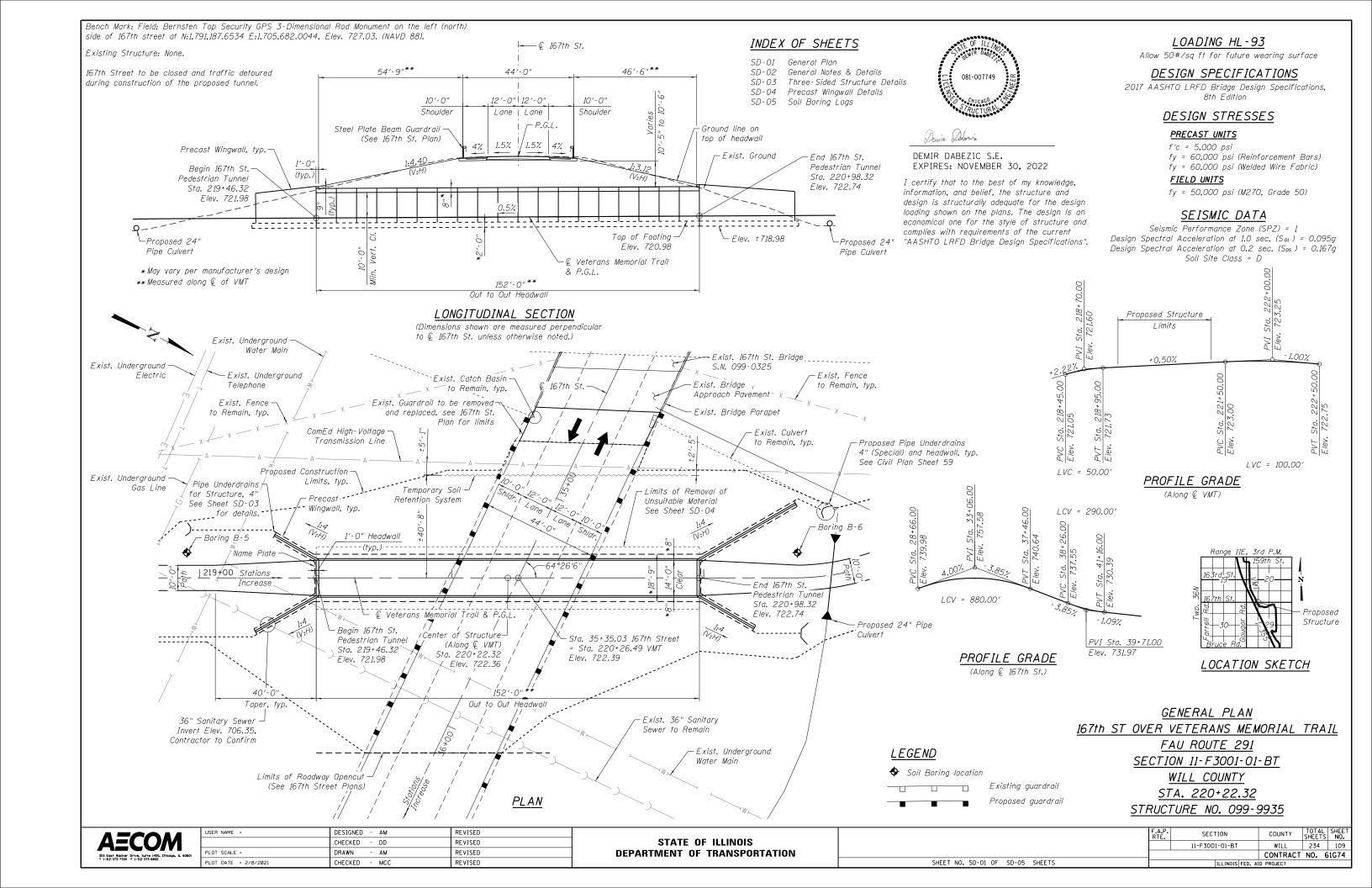
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)



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PLOT SCALE =	DRAWN - AM	REVISED
PLOT DATE = 2/8/2021	CHECKED - MCC	REVISED

SOIL BORING LOGS		SECTION	COUNTY	TOTAL SHEETS	SHEE NO.
BOX CULVERT STRUCTURE #2		11-F3001-01-BT	WILL	234	108
BOX COLVENT CHICOTONE #2			CONTRACT	NO. 6	51G74
SHEFT NO. SC-05 OF SC-05 SHEFTS		TILINOIS EED AT	n ppn iect		



GENERAL NOTES

- This work consists of the fabrication and erection of a Three-Sided Precast Concrete Structure with a clear width of 14' as shown in these plans. See Special Provisions.
- 2. If the Engineer determines that a line outage is required to safely work within the vicinity of ComEd's existing overhead transmission facilities, a minimum 16-week advanced notification to ComEd is required. Outage dates cannot be guaranteed due to system concerns and/or weather conditions. Outages on overheard transmission facilities will not be permitted between May 15 and September 15.
- 3. Under no circumstances shall truck beds be raised under ComEd's electric transmission lines.
- 4. The foundation design is based on the following factored reactions applied at the top of the base slab:

North & South footings: 32.9 kips/ft. (vertical), 7.0 kips/ft. (horiz.)

- 5. The loadings shown above are for the final condition with all backfill and roadway in place. The Contractor shall verify that the selected structure meets these design parameters. If the design parameters are exceeded, a complete foundation design with calculations, details, and the required seals shall be submitted for review and approval.
- 6. Factored bearing capacity of soil: 2.5 ksf.
- 7. Undercut shall be paid for at the contract unit price per cubic yard as Removal and Disposal of Unsuitable Material for Structures. CA-7 bedding stone will be paid for at the contract unit price per cubic yard as Granular Backfill for Structures.

Exist, ground surface and -

top of soil retention system

Max Excavation

23'-1"

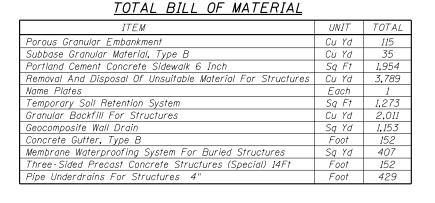
Line

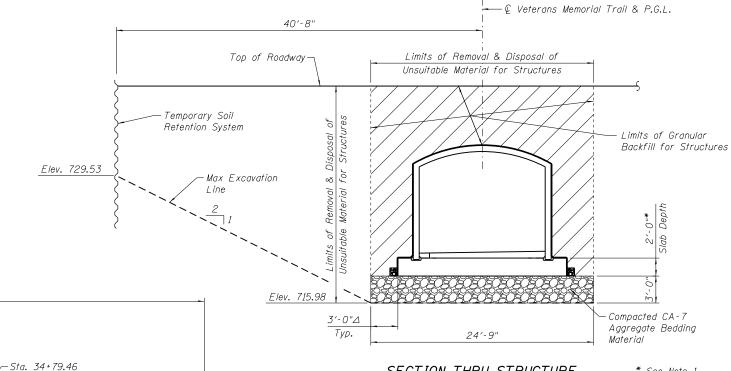
- 8. Calculated length of Three-Sided Structure = 152'-0".
- 9. For Steel Plate Beam Guardrail layout and quantity, see 167th Street Plan and Profile sheet.

VETERANS MEMORIAL TRAIL
BUILT 20__ BY
FOREST PRESERVE DISTRICT
OF WILL COUNTY
SEC. 11-F3001-01-BT
FAU RT. 291 STA. 35+35.03
LOADING HL-93
STRUCTURE NO. 099-9935

NAME PLATE

See Std. 515001





SECTION THRU STRUCTURE (Looking North)

* See Note 1

△ Structural Excavation horizontal dimensions beyond vertical planes 3'-0" from the outside edge of the base slab shall not be measured for payment but shall be considered included in the cost of Structure Excavation.

<u>NOTES:</u>

1. Three-Sided Precast Concrete Unit details and geometry may vary per selected manufacturer's design. See Special Provisions.

TEMPORARY SOIL RETENTION SYSTEM

48'-9"

Limits of Temporary Soil Retention System

-Sta. 34+89.95

· © Veteran's Memorial

Elev. 729.53 -

Off. 0.00'

Trail

Elev. 747.57

(Looking West) (All Stations and Offsets are along © 167th St.)



Sta. 35+10.92-

Off. 43.84' Rt.

Elev. 741.07

USER NAME =	DESIGNED - AM	REVISED
	CHECKED - DD	REVISED
PLOT SCALE =	DRAWN - AM	REVISED
PLOT DATE = 2/8/2021	CHECKED - MCC	REVISED

Sta. 35+00.69

Off. 22.00' Rt.

Temporary Soil Retention System

Elev. 746.83

exposed surface area

Elev. 729.53

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Off. 22.00' Lt.

23'-7"

Elev. 747.16

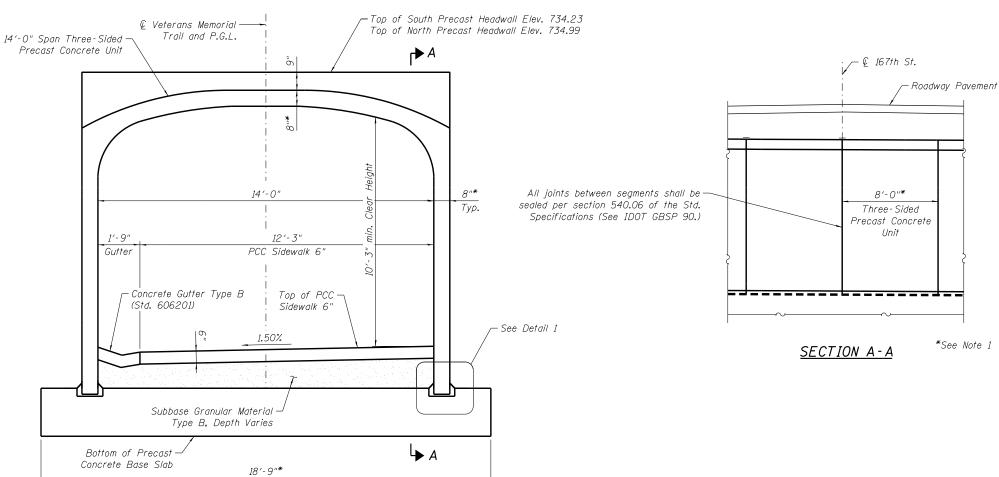
GENERAL STRUCT				
SHEET NO	SD-02	OF .	SD-05	SHEETS

- Sta. 34+69.28

Off. 43.21' Lt.

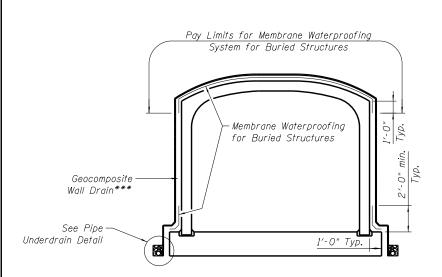
Elev. 741.32

F.A.P. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHE
	11-F3001-01-BT	WILL	234	110	
			CONTRACT	NO. 6	1G74
	ILLINOIS	FED. A	D PROJECT		



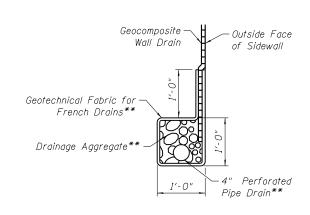
THREE-SIDED STRUCTURE END ELEVATION

*See Note 1



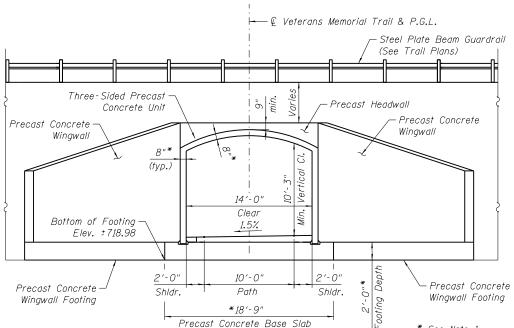
MEMBRANE WATERPROOFING DETAIL

*** The pay limits for Geocomposite Wall Drain are along the perimeter of the top and side walls and shall be placed on top of the footing as shown. Geocomposite Wall Drain shall be according to Section 591 of the Standard Specifications, except that concrete nails shall not be used in areas where it overlaps Membrane Waterproofing System for Buried Structures.



PIPE UNDERDRAIN DETAIL

** Cost included with Pipe underdrains for structures 4". All drainage components shall extend to 2'-0" from the end of each wingwall, except an outlet pipe shall extend until intersecting with side slopes. The pipes shall drain into concrete headwalls. See Highway Standard 601101.



Inside face of Three-Sided Precast Concrete Unit

Precast Concrete

Base Slab

DETAIL 1

Fill entire keyway including nominal 1" void

between bottom of keyway and bottom of

precast unit leg with grout

*See Note 1

* See Note 1

STRUCTURE END VIEW

Note: Additional PCC thickness for path to provide cross slope shall be considered Included in the Cost of the Item PCC Sidewalk 6".

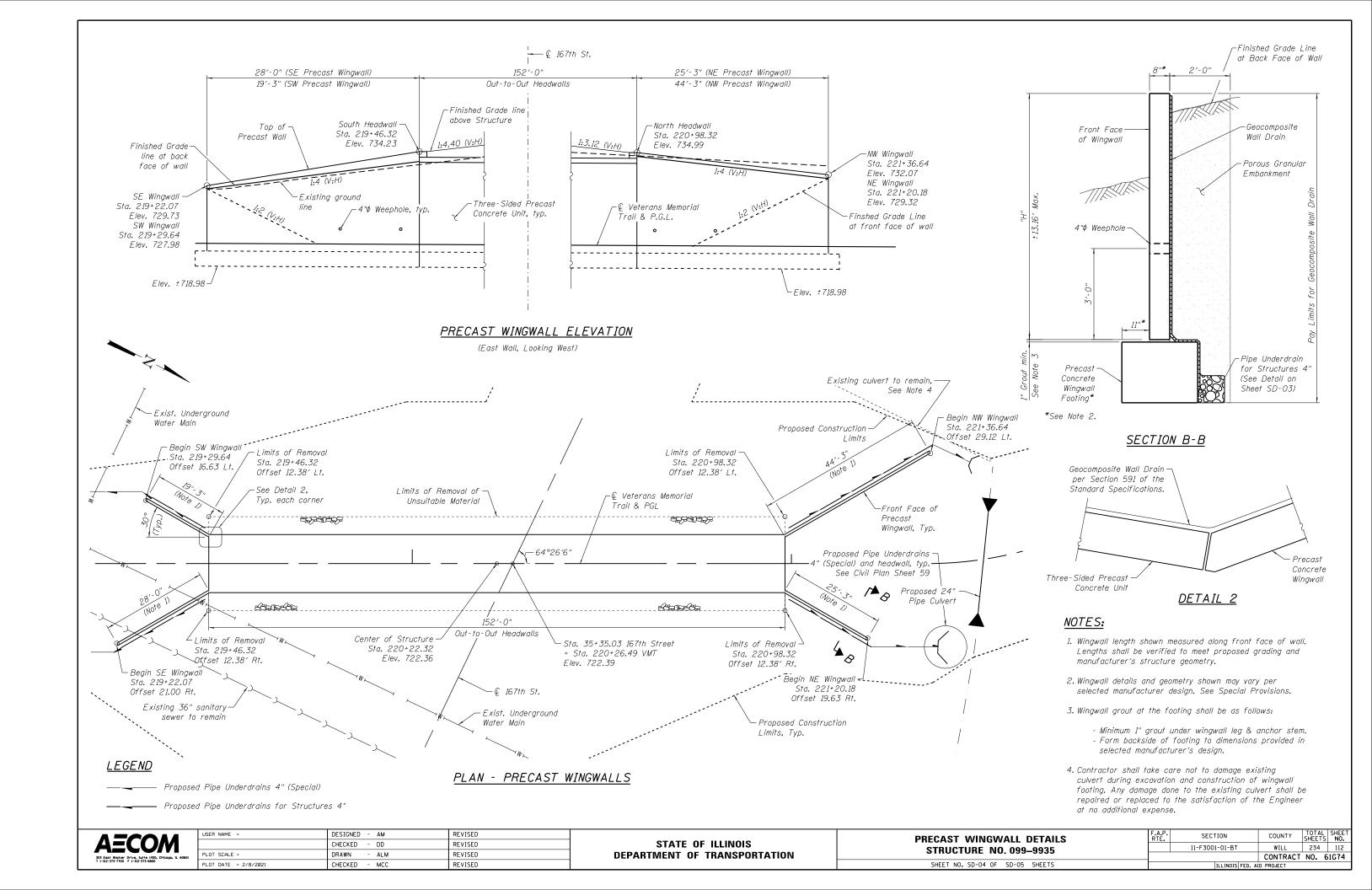
NOTES:

1. Three-Sided Precast Concrete Unit details and geometry may vary per selected manufacturer's design. See Special Provisions.



USER NAME =	DESIGNED - AM	REVISED
	CHECKED - DD	REVISED
PLOT SCALE =	DRAWN - ALM	REVISED
PLOT DATE = 2/8/2021	CHECKED - MCC	REVISED

THREE-SIDED STRUCTURE DETAILS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STRUCTURE NO. 099-9935		11-F3001-01-BT	WILL	234	111
3111001011L 140: 033-3333			CONTRACT	NO. 6	51G74
SHEET NO. SD-03 OF SD-05 SHEETS		TILLINOIS FED. AT	D. PROJECT		





Page <u>1</u> of <u>1</u>

222,12						SOIL BORIN	IG LOG			Date	2/3	3/16
ROUTE	DE	SCR	IPTION	٧	Pro			LC	oggi	ED BY	Da	nish
SECTION		_ ı	LOCAT	TION _	Northi	ng: 1790990.6304, Ea	sting: 107470	0.6842,	SEC	. , TWI	P. , RN	IG.
COUNTY Will County D	RILLING	ME	THOD		Hol	llow Stem Auger	_ HAMMER	TYPE .		Auto	matic	
Proposed Tunne under 167th Street	<u>et</u> 	D E P T H	B L O W S	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. Stream Bed Elev. Groundwater Elev.: Upon Completion After Hrs.	None	_ ft _ ft _ ft	D E P T H (ft)	B L O W S (/6")	U C S Qu (tsf)	M O I S T (%)
12"- TOPSOIL, Black CLAY with trace organic, Dark Brown, Stiff. CL	719.00		2 5 5	2.0 P	25.1	CLAY with pieces of Stiff to Very Stiff. CL (continued)	stone, Gray,			3 5 7	2.1 B	15.0
CLAY, Brown and Gray, Stiff.	_71 <u>5.00</u>		2 2 2	2.0 P	26.0					5 5 7 8	2.3 B	19.5
SILTY CLAY, Gray, Very Stiff to Stiff. CL-ML	<u>712.50</u>		8 10 ST	1.2 B 2.7 P	18.2	CLAY with trace of o	<u>ıravel</u> , Gray,	<u>691.50</u>		6 7 5	1.7 B	14.2
			2 4 5	1.7 B	16.6	CL			-30	9	В	
			7 9	1.3 P	16.1				-35	13	2.5 B	15.7
	702.00	_	5 7 9	2.7 B	15.8							
CLAY with pieces of stone, Gray, Stiff to Very Stiff. CL	<u> 102.00</u>	_	5	1.3	14.6					6 8	6.0	16.5

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

BBS, from 137 (Rev. 8-99) Page 24



Page <u>1</u> of <u>1</u>

DBE/IRBE FW	ĬĬ.				SOIL BORING LOG			Date	2/9	9/16
ROUTE DI	SCR	IPTION		Pro	posed Tunnel under 167th Street	L	OGG	ED BY	S	yed
SECTION		LOCAT	TION .	Northi	ng: 1791205.0536, Easting: 107458	8.1178,	SEC	. , TWI	P. , RN	IG.
COUNTY Will County DRILLIN	G ME	THOD		Hol	low Stem Auger HAMMER	TYPE		Auto	matic	
Proposed Tunnel under 167th Street	D E P T H	B L O W s	U C S Qu (tsf)	M O I S T (%)	Surface Water Elev. Stream Bed Elev. Groundwater Elev.: Upon Completion After Hrs.	_ ft _ ft	D E P T H	B L O W S	U C S Qu (tsf)	M O I S T
11"-TOPSOIL, Black	n —				SILTY CLAY with trace of gravel, Gray, Medium stiff to Stiff.		_			
719.10 CLAY with trace of sand and gravel, Brown, Very Stiff to Medium Stiff. CL	_	6 6	3.5 P	14.2	CL-ML		_	3 4 5	0.5 P	17.3
	_	3					_	2		
		4	0.5 P	24.7		695.00	-25	4 7	1.8 B	16.0
714.0		1			CLAY with trace of gravel, Gray, Very Stiff. CL			2		
and Gray, Medium Stiff. CL	2	3	0.8 B	26.6			_	5 8	2.5 B	16.0
<u>gravel,</u> Brown and Gray, Hard. CL		5 7	5.4	17.2				4	2.5	18.1
	10	11	S				30	7	В	
		3 7 10	4.5 S	14.9			_			
CLAY with trace of gravel and pieces of stone, Gray, Very Stiff to Stiff. CL	_	3 6	2.5	15.4			_	14	2.9	13.8
	15	٠ ا	B B	15.4			-35	_	2.9 B	13.0
		ST	2.5 B	16.5			_			
	_	3			CLAY mixed with gravel, Gray, Hard.	<u>682.00</u>	_	20		
700.0	 D -20	5 7	1.7 B	14.9	CL	680.00	-40	25 12		13.4

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

BBS, from 137 (Rev. 8-99) Page 25



USER NAME =	DESIGNED - AM	REVISED
	CHECKED - DD	REVISED
PLOT SCALE =	DRAWN - AM	REVISED
PLOT DATE = 2/8/2021	CHECKED - MCC	REVISED

SOIL BORING LOGS	F.A.P. RTE.	SECTION	COUNTY	TOTAL	SHEE NO.
STRUCTURE NO. 099-9935		11-F3001-01-BT	WILL	234	113
			CONTRACT	NO. (61G74
SHEET NO. SD-05 OF SD-05 SHEETS		ILLINOIS FED. A	ID PROJECT		

Bench Mark; Tower; Bernsten top security GPS 3-dimensional rod monument, on the right (east) shoulder of Gougar rd. at N:1,800,975.0800 E:1,073,316.1058, Elev. 754.44 (NAVD 88).

Existing Structure: None.

INDEX OF SHEETS

SE-01 General Plan & Elevation SE-02 M.S.E. Wall Details

SE-03 Bicycle Railing Details

SE-04 Soil Boring Logs

WALL ELEVATIONS TABLE

Station	Offset	Elev. A	Elev. B	Elev. C
244+20.00	8.67 Rt.	749.40	747.65	749.04
244+50.00	8.67 Rt.	750.84	749.09	744.41
244+80.00	8.67 Rt.	752.28	750,53	746.39
245+10.00	8.67 Rt.	753.72	751.97	748.35
245+40.00	8.67 Rt.	755 . 16	753.41	750.27
245+70.00	8.67 Rt.	756.58	754.83	753.41
246+00.00	8.67 Rt.	757.74	755.99	757.14

Elevation A - Top of coping

Elevation B - Top of Exposed Panel Line

Elevation C - Finished grade line at front face of wall

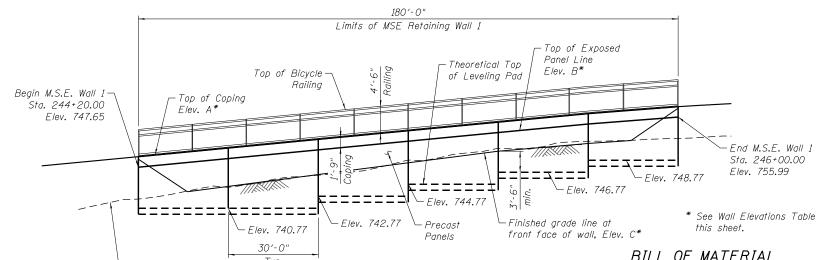
081-007749

NOTES:

(Looking West at F.F. of Wall) 1. Wall offsets are measured from Q Veterans Memorial Trail to the front face of precast panels.

-Existing ground line at front face of wall

- 2. F.F denotes Front Face.
- 3. For Wall typical section, see Sheet SE-02.
- 4. For Temporary Soil Retention System details, see Sheet SE-02.



ELEVATION

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Structures	Cu Yd	92
Protective Coat	Sq Yd	280
Reinforcement Bars, Epoxy Coated	Pound	12,280
Bicycle Railing	Foot	180
Temporary Soil Retention System	Sq Ft	1,445
Mechanically Stabilized Earth Retaining Wall	Sq Ft	1,411
Structure Excavation (Special)	Cu Yd	476
Pipe Underdrains For Structures 4"	Foot	180

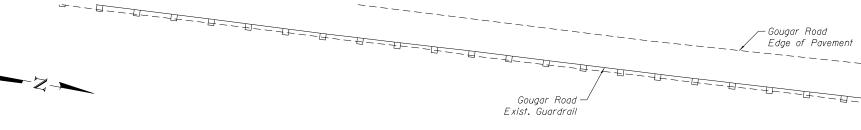
SHEET NO. SE-01 OF SE-04 SHEETS

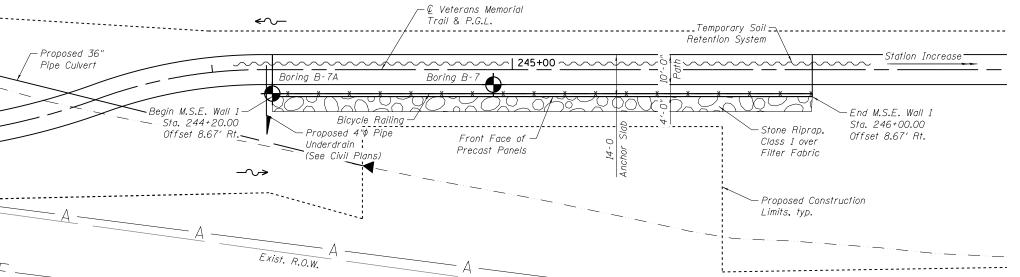
DEMIR DABEZIC S.E. EXPIRES: NOVEMBER 30, 2022 I certify that to the best of my knowledge,

information, and belief, the structure and design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO LRFD Bridge Design Specifications".

Existing Aerial Cable

Existing Guardrail





PLAN

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications,

DESIGN STRESSES

FIELD UNITS

fc' = 3,500 psi

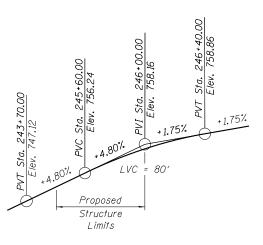
fy = 60,000 psi (Reinforcement)

PRECAST UNITS

fc' = 4,500 psi (Precast Panels)

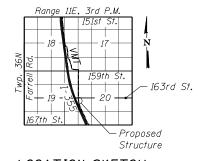
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S DI) = 0.095g Design Spectral Acceleration at 0.2 sec. (Sps) = 0.167g Soil Site Class = D



PROFILE GRADE

(Along & Veterans Memorial Trail)



LOCATION SKETCH

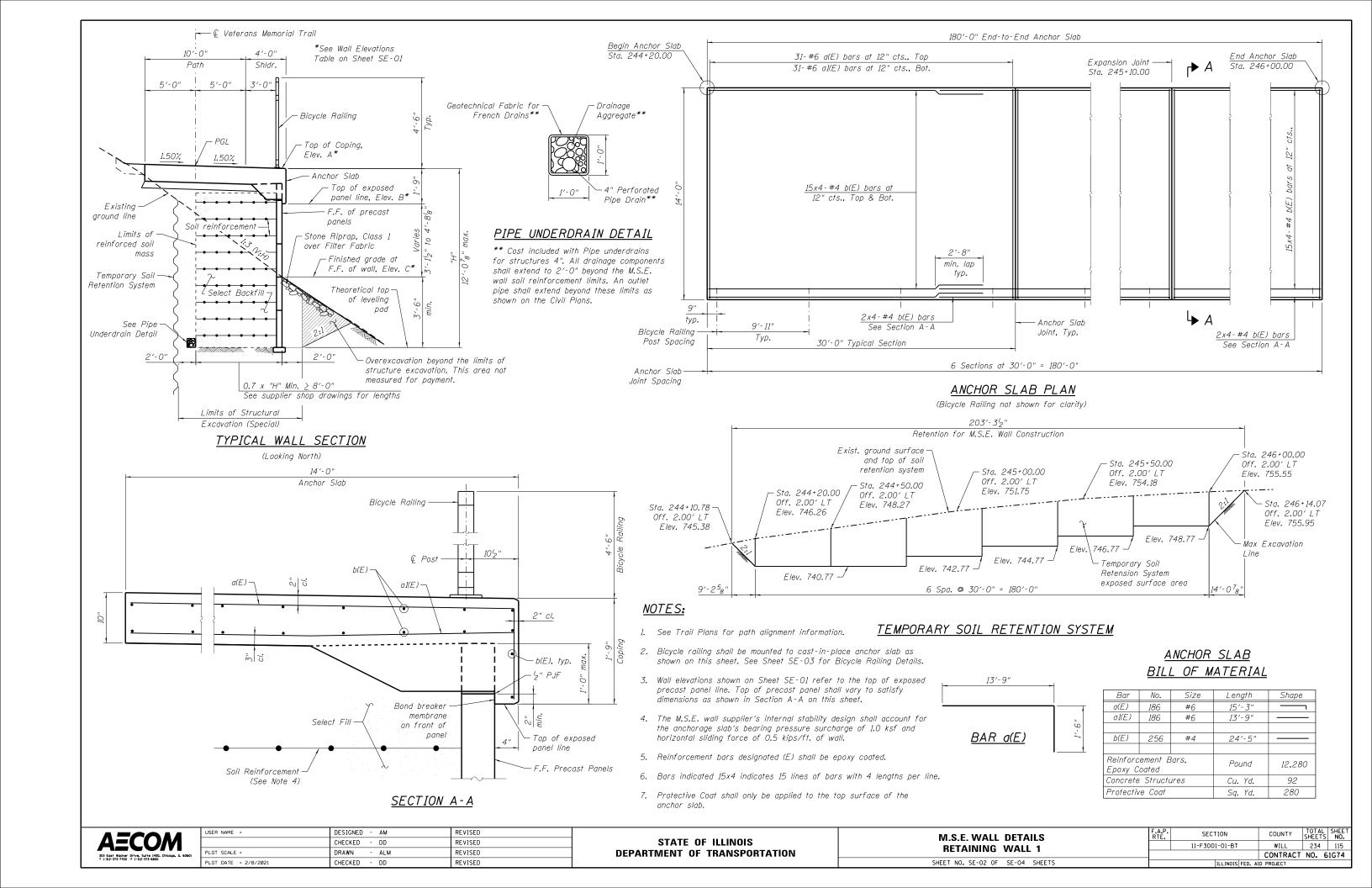
GENERAL PLAN & ELEVATION VETERANS MEMORIAL TRAIL M.S.E. RETAINING WALL 1 SECTION 11-F3001-01-BT WILL COUNTY STA. 244+20.00 TO STA. 246+00.00

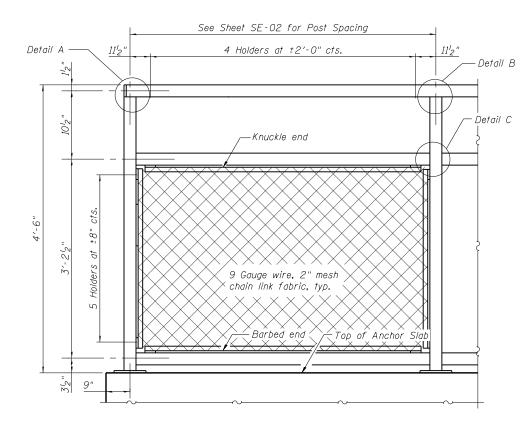


LEGEND

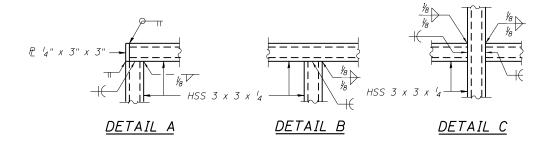
USER NAME =	DESIGNED - AM	REVISED
	CHECKED - DD	REVISED
PLOT SCALE =	DRAWN - AM	REVISED
PLOT DATE = 2/8/2021	CHECKED - MCC	REVISED

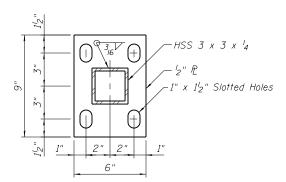
F.A.P. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
	11-F3001-01-BT		WILL	234	114
			CONTRACT	NO. 6	1G74
	ILLINOIS FE	D. A	ID PROJECT		



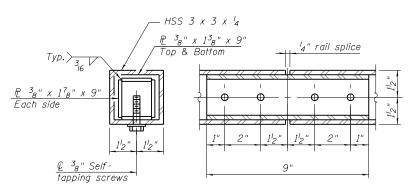


BICYCLE RAILING ELEVATION



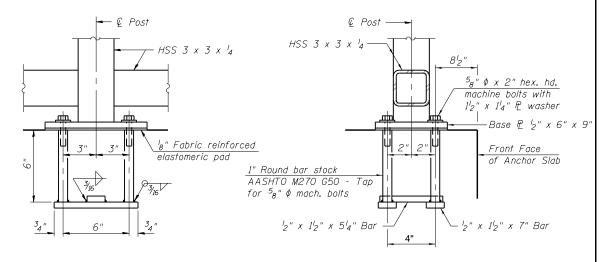


BASE PLATE



RAIL SPLICE

All structural steel tubing, post and railing, for parapet railing shall be CVN tested according to 1006.34(b) of the Standard Specifications. CVN testing may be omitted for the Bicycle Railing.



ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 58 " ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

NOTES:

1. All steel rail elements shall be galvanized according to article 509.05 of the Standard Specifications

BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing	Foot	180



USER NAME =	DESIGNED - AM	REVISED
	CHECKED - DD	REVISED
PLOT SCALE =	DRAWN - AM	REVISED
PLOT DATE = 2/8/2021	CHECKED - MCC	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	 RAI		 	TAILS 1	
	 	٥.	 	SHEETS	

F.A.P. SECTION COUNTY TOTAL SHEETS NO.

11-F3001-01-BT WILL 234 116

CONTRACT NO. 61674



Page <u>1</u> of <u>1</u>

DBE/MBE Firm Date 2/9/16 **SOIL BORING LOG** DESCRIPTION Proposed Retaining Wall #1 __ LOGGED BY __ Syed ROUTE SECTION LOCATION Northing: 1793302.1618, Easting: 1073604.9982, SEC., TWP., RNG. HAMMER TYPE COUNTY Will County DRILLING METHOD Hollow Stem Auger Proposed Retaining STRUCT. NO. Wall #1 Surface Water Elev. L С 0 L O Station Stream Bed Elev. 0 s S Т W W S BORING NO. B-7 (East of Trail) Groundwater Elev.: Qu S S Qu 244+93.69 Station 5.00ft E **Upon Completion** Ground Surface Elev. 752.00 ft (ft) (/6") (tsf) (%) (ft) (/6") (tsf) (%) After ____ Hrs. 12"-TOPSOIL, Black. CLAY with sand and gravel, CLAY with trace of sand and 4 3.7 17.2 7 B gravel, Brown, Very Stiff to Hard. 18.5 17 SAND with gravel, Brown, Medium Dense. 2 4 3.9 16.9 13.8 7 B SILTY CLAY with trace of gravel, Gray, Medium Stiff. CL-ML 2 7 4.1 17.0 4 0.3 15.6 10 B CLAY with gravel, Gray, Stiff. <u>743.50</u> CLAY with gravel, Brown and Gray, Very Stiff. 1.7 19.5 7 3.3 16.4 14 B SILT, Gray, Medium Dense. CLAYEY SILT, Gray, Stiff to Medium Stiff. 6 3.3 15.9 ML 13 B ST 1.7 14.5 13.3 В <u>717.00 -35</u> CLAY with sand and gravel, Gray, Very Stiff. 5 0.8 15.9 8 P CLAY with gravel, Gray, Stiff. 7 1.7 14.1 10 2.1 16.1

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

BBS, from 137 (Rev. 8-99)

8 B



Page <u>1</u> of <u>1</u>

SOIL BORING LOG

Date __10/20/17_

ROUTE	DESCR	RIPTION	١		Proposed Retaining V	<u>Wall</u> LOG	GED BY Danish
SECTION		LOCAT	ION _	Northi	ng: 1793229.53, Eastin	g:1073617.82, SEC. , T	WP. , RNG.
COUNTY Will County DRI	LLING ME	THOD		Hol	low Stem Auger	_ HAMMER TYPE	Automatic
Proposed Retaining Wall	_ D _ E _ P _ T	B L O W	U C S	M O I S	Surface Water Elev Stream Bed Elev Groundwater Elev.:	ft ft	
Station 244+20 Offset 17,00ft E Ground Surface Elev. 742.64	_ H _ _{ff} (ft)	(/6")	Qu (tsf)	(%)	Upon Completion _ After Hrs.		
9"-TOPSOIL	_	<u> </u>	<u> </u>	(, ,	Alter III3.	··	
LEAN CLAY, Trace Sand and Gravel, Gray,	<u></u>	4 5	2.1	17.2			
Very Stiff. CL	_	6	В				
LEAN CLAY, Trace Gravel,	73 <u>9.14</u>	4					
Brown and Gray, Very Stiff. CL		7 5 7	2.3 B	18.4			
01	_	5					
	_	7 8	2.1 B	19.1			
SANDY LEAN CLAY, Trace Fine	<u></u> 734.14	3					
Gravel, Brown and Gray, Stiff.		7	1.2 B	14.9			
CL SANDY LEAN CLAY, Trace Fine	73 <u>1.64</u>	3					
Gravel, Gray, Stiff to Very Stiff.	_	5 8	1.0 B	12.1			
CL		3		16:			
		4 5 6	2.1 B	13.1			
End of Boring	_						
	_						
	_						
	_	-					

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

-20

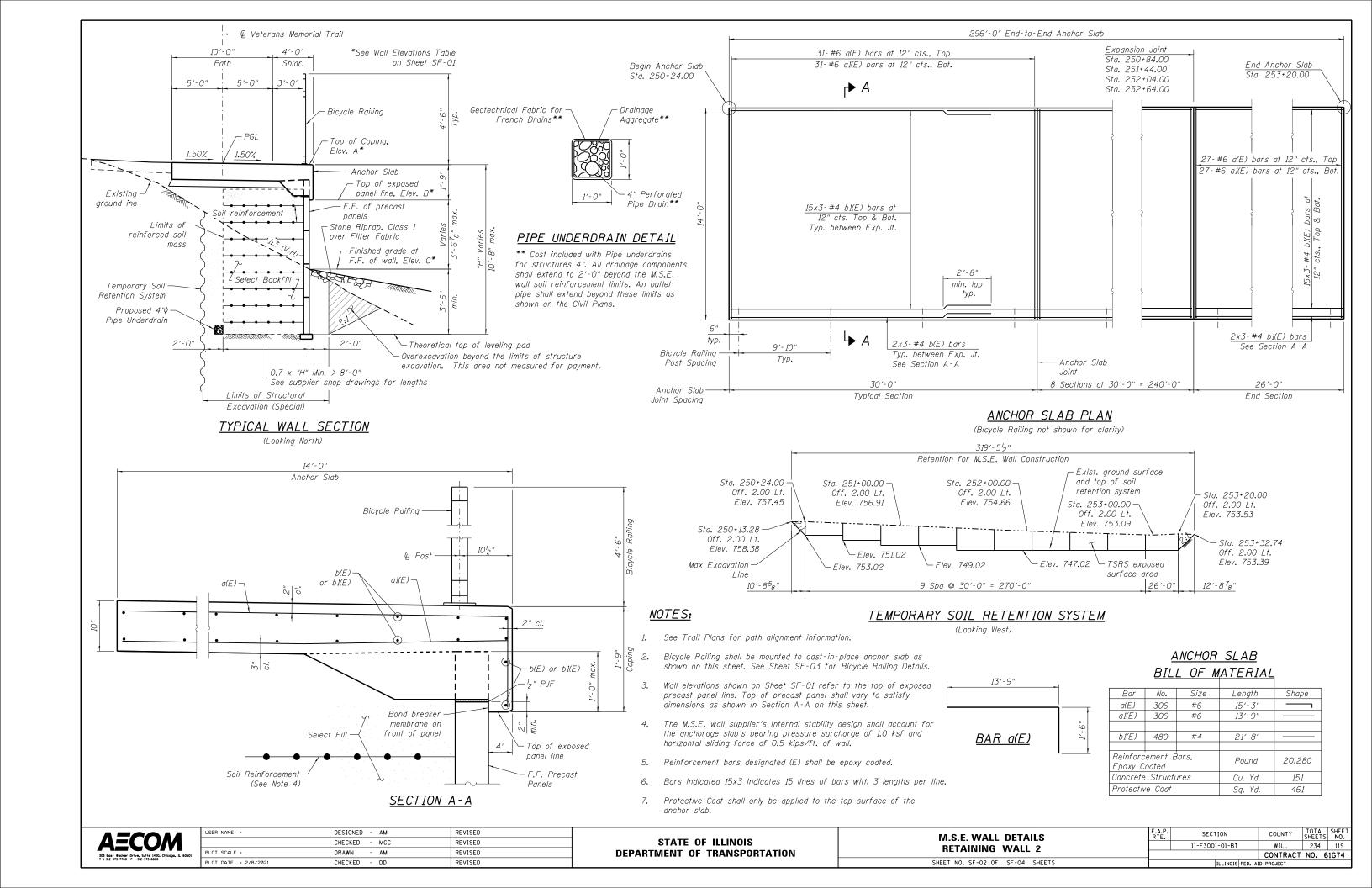
BBS, from 137 (Rev. 8-99)

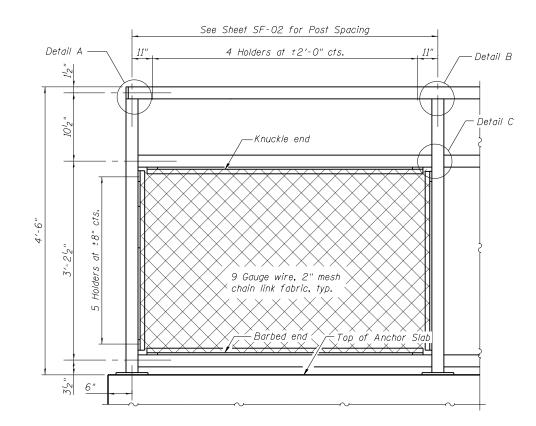


USER NAME =	DESIGNED - AM	REVISED
	CHECKED - DD	REVISED
PLOT SCALE =	DRAWN - AM	REVISED
PLOT DATE = 2/8/2021	CHECKED - MCC	REVISED

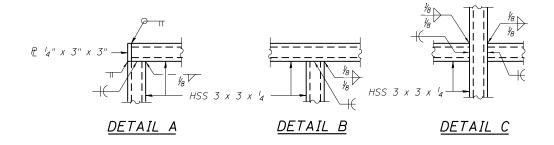
SOIL BORING LOGS RETAINING WALL 1		F.A.P. SECTION		COUNTY	TOTAL SHEETS	SHEE NO.	
		11-F300	1-01-BT		WILL	234	117
HETAINING WALL I					CONTRACT	NO. (61G74
HEET NO. SE-04 OF SE-04 SHEETS			ILLINOIS	FED. AID	PROJECT		

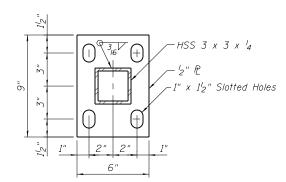
Bench Mark: Tower; Bernsten top security GPS 3-dimensional rod monument, on the right (east) shoulder of Gougar rd. at N:1,800,975.0800 E:1,073,316.1058, Elev. 754.44 (NAVD 88). DESIGN SPECIFICATIONS 2017 AASHTO LRFD Bridge Design Specifications, Existing Structure: None, 8th Edition INDEX OF SHEETS DESIGN STRESSES FIELD UNITS SF-01 General Plan & Elevation 296'-0" SF-02 M.S.E. Wall Details fc' = 3,500 psi SF-03 Bicycle Railing Details Limits of MSE Retaining Wall 2 fy = 60,000 psi (Reinforcement) SF-04 Soil Boring Logs Top of Coping PRECAST UNITS Top of Exposed Sta. 252+67.00 fc' = 4,500 psi (Precast Panels) Begin M.S.E. Wall 2-Top of Bicycle Panel Line Theoretical Top Inv. Elev. 751.52 at wall Prop. 4" underdrain Elev. B* Sta. 250+24.00 Railina of Leveling Pad pipe extension, 4" I.D. pipe Elev. 757.40 See Note 4 SEISMIC DATA Seismic Performance Zone (SPZ) = 1 Design Spectral Acceleration at 1.0 sec. (S ni) = 0.095a Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.167g Soil Site Class = D Existing ground line at -- End M.S.E. Wall 2 front face of wall Sta. 253+20.00 Elev. 753.73 Elev. 751.02 NOTES: - Elev. 749.02 Elev. 747.02 26'-0" **Panels** - Finished grade line at Typ. 1. Wall offsets are measured from Q Veterans Memorial Trail to the front face of precast panels. 2. F.F denotes Front Face. * See Wall Elevations Table this sheet ELEVATION 3. For Wall typical section, see Sheet SF-02. (Looking West at F.F. of Wall) 4. The M.S.E. wall supplier shall accommodate the opening for the 4" underdrain pipe at Sta. 252+67.00. -0.48% Pipe outlet shall be 6" above finished grade at front face of wall. 1.22% Gougar Road 1.48% 5. For Temporary Soil Retension System details, see Sheet SF-02. Existing 4" Pipe Edge of Pavement Underdrain Proposed Structure Limits Existing roadway sign € Veterans Memorial - Existing concrete to be relocated, typ. headwall to be removed Trail & P.G.L. PROFILE GRADE Temporary Soil (Along © Veterans Memorial Trail) Retention System Boring B-8 Range 11F. 3rd P.M. Begin M.S.E. Wall 2 -End M.S.E. Wall 2 Sta. 250+24.00 Bicycle Railing Front Face of -Sta. 253+20.00 Offset 8.67' Rt. -Existing power pole Precast Panels Offset 8.67' Rt. to be relocated Proposed 4"\$ Class 1 over Pipe Ünderdrain Filter Fabric Proposed 4" Pipe Underdrain -(See Civil Plans) -) 163rd St. extension through M.S.E. wall -Proposed Limits (See Note 4) of Construction, typ. WALL ELEVATIONS TABLE Exist R.O.W ← Proposed Station Offset | Elev. A Elev. B Existing power — PLAN 250+24.00 8.67 Rt. 759.15 757,40 758.57 pole to remain 081-007749 250+54.00 8.67 Rt. 758.79 757.04 756,64 LOCATION SKETCH BILL OF MATERIAL 250+84.00 8.67 Rt. 758.42 756.67 754.70 251+14.00 8.67 Rt. 758.06 251+44.00 8.67 Rt. 755.94 UNIT TOTAL 251+74.00 8.67 Rt. 755,57 752.20 Concrete Structures 151 Cu Yd GENERAL PLAN & ELEVATION 252+04.00 8.67 Rt. 756.96 755.21 Dewin Dolorie 461 Protective Coat Sq Yd 756.59 754.84 751.29 252+34.00 | 8.67 Rt. VETERANS MEMORIAL TRAIL Reinforcement Bars, Epoxy Coated Pound 20,280 252+64.00 8.67 Rt. 756.23 754.48 Bicycle Railing Foot 296 DEMIR DABEZIC S.E. M.S.E. RETAINING WALL 2 LEGEND 755.86 754.11 252+94.00 8.67 Rt. EXPIRES: NOVEMBER 30, 2022 Temporary Soil Retention System 2,098 253+20.00 8.67 Rt. 755.48 753.73 754.70 SECTION 11-F3001-01-BT Mechanically Stabilized Earth Retaining Wall Sq Ft 2,119 Soil Boring Location I certify that to the best of my knowledge, information, and belief, Structure Excavation (Special) Cu Yd 724 Elevation A - Top of coping the structure and design is structurally adequate for the design WILL COUNTY Pipe Underdrains For Structures Foot 296 Elevation B - Top of Exposed Panel Line loading shown on the plans. The design is an economical one for STA. 250+24.00 TO STA. 253+20.00 Elevation C - Finished grade line at front face of wall the style of structure and complies with requirements of the current − A *−−− Existing aerial cable* "AASHTO LRFD Bridge Design Specifications". DESIGNED - AM REVISED SECTION COUNTY STATE OF ILLINOIS CHECKED - DD REVISED 11-F3001-01-BT WILL 234 118 DRAWN REVISED **DEPARTMENT OF TRANSPORTATION** CONTRACT NO. 61G74 SHEET NO. SF-01 OF SF-04 SHEETS PLOT DATE = 2/8/2021 CHECKED - MCC REVISED



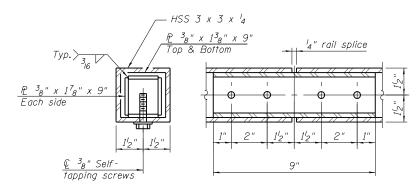


BICYCLE RAILING ELEVATION



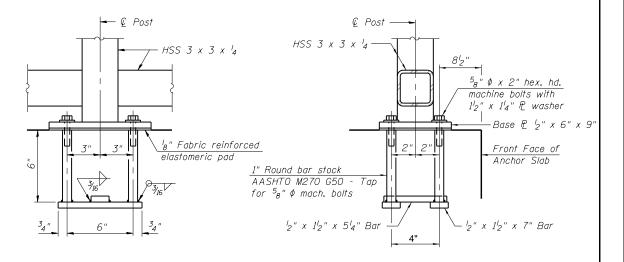


BASE PLATE



RAIL SPLICE

All structural steel tubing, post and railing, for parapet railing shall be CVN tested according to 1006.34(b) of the Standard Specifications. CVN testing may be omitted for the Bicycle Railing.



ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 58 " ϕ anchor rods according to Article 509,06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

NOTES:

 All steel rail elements shall be galvanized according to article 509.05 of the Standard Specifications.

BILL OF MATERIAL

Item	Unit	Quantity	
Bicycle Railing	Foot	296	



USER NAME =	DESIGNED - AM	REVISED
	CHECKED - DD	REVISED
PLOT SCALE =	DRAWN - AM	REVISED
PLOT DATE = 2/8/2021	CHECKED - MCC	REVISED

E			RAI ININ				TAILS	}
	SHEET	NO.	SF-03	OF	SF-	04	SHEETS	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11-F3001-01-BT	WILL	234	120
		CONTRACT	NO. 6	1G74
	THE THOUGHT FED.	AID DDO IECT		



Page <u>1</u> of <u>1</u>

DBE/MBE Firm Date 2/3/16 **SOIL BORING LOG** DESCRIPTION Proposed Retaining Wall #2 __ LOGGED BY __Danish ROUTE SECTION LOCATION Northing: 1793946.3814, Easting: 1073548.4735, SEC. , TWP. , RNG. COUNTY Will County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Proposed Retaining STRUCT. NO. Wall #2 Surface Water Elev. С 0 L O С L Stream Bed Elev. s 0 S - 1 Т w S W BORING NO. B-8 (East of Trail) Groundwater Elev.: S Qu Н S Qu 251+42.32 Station 5.00ft E Ground Surface Elev. 755.00 ft (ft) (/6") (tsf) (%) (ft) (/6") (tsf) (%) After ___ Hrs. 10"-TOPSOIL, Black. **GRAVELLY CLAY**, Gray, Very CLAY with trace of sand, Brown, Very Stiff. CL Hard to Very Stiff. 4 2.9 17.5 13 6.2 17.5 5 B 22 S 8 2.9 16.1 8 2.0 31.8 Ρ 11 B 6 CLAY with trace of gravel, Brown, Very Stiff. 7 3.5 16.0 ST 2.3 16.6 8 S SANDY LEAN CLAY, Trace Fine 2.3 16.1 Gray, Stiff. 1.3 15.0 9 В В ST 3.3 22.6 В <u>__742.00</u> _ GRAVELLY CLAY, Brown, Very Stiff. 28 2.5 3.3 1.2 18.9 19 P 5 В 720.00 -35 SANDY LEAN CLAY, Trace Fine gravel, Gray, Very Stiff. 20.1 10 15 11 2.7 18.0 5 2.1 19.5

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

735.00 -20 16 B

BBS, from 137 (Rev. 8-99)

6 B



Page <u>1</u> of <u>1</u>

SOIL BORING LOG Date 10/19/17

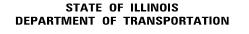
ROUTE DESCRIPTION Proposed Retaining Wall __ LOGGED BY __Syed SECTION LOCATION Northing: 1794104.006, Easting:1073547.194, SEC., TWP., RNG. COUNTY Will County DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic Proposed Retaining U C S STRUCT. NO. Surface Water Elev. Station Stream Bed Elev. 0 W S BORING NO. Groundwater Elev.: Qu S Station 253+00 Offset **Upon Completion** Ground Surface Elev. 750.81 ft (ft) (/6") (tsf) (%) After _ 6"-TOPSOIL FILL- LEAN CLAY, Trace Gravel and Organic, Brown and Gray. 5 2.8 17.9 Ρ 6 8 3.8 17.9 9 LEAN CLAY, Trace Gravel, Brown and Gray, Very Stiff. 3.1 16.7 9 S 9 3.3 10.1 12 S LEAN CLAY, Trace Gravel, Gray, Very Stiff. CL 3.7 14.9 14 B 8 2.1 15.9 735.81 -15 10 B End of Boring

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

BBS, from 137 (Rev. 8-99)

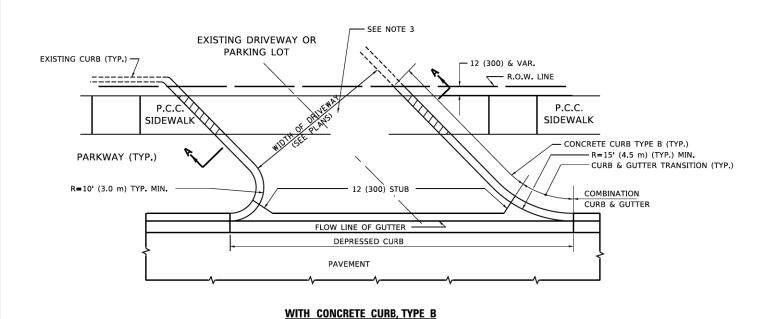


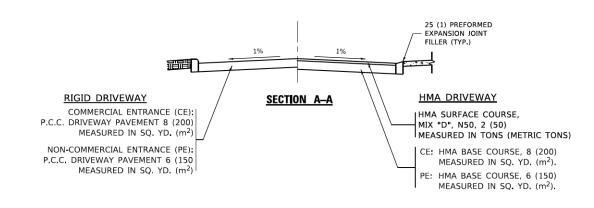
USER NAME =	DESIGNED - AM	REVISED
	CHECKED - DD	REVISED
PLOT SCALE =	DRAWN - AM	REVISED
PLOT DATE = 2/8/2021	CHECKED - MCC	REVISED

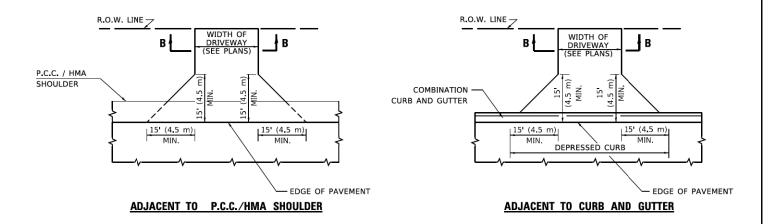


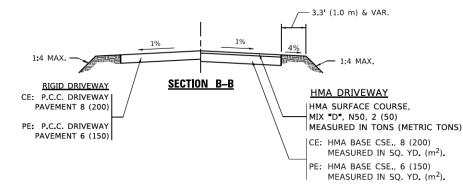
SOIL BORING LOGS RETAINING WALL 2		SECTION	COUNTY TOTAL SHEETS		
		11-F3001-01-BT	WILL	234	121
			CONTRACT	NO. 6	51G74
EET NO. SF-04 OF SF-04 SHEETS		ILLINOIS FED. AI	D PROJECT		

WITH CONCRETE CURB, TYPE B









DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

GENERAL NOTES:

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

RURAL FIELD ENTRANCE (FE)

HMA SURFACE COURSE, MIX "D", N50, 2 (50) MEASURED IN TONS (METRIC TONS)

AGGREGATE BASE CSE., TYPE B, 8 (200) MEASURED IN SQ. YD. (m²).

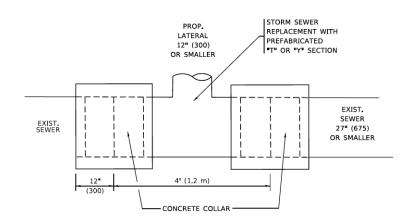
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	DRAWN -	REVISED - R. BORO 01-01-07
PLOT SCALE = 50.0000 ' / In.	CHECKED -	REVISED - R. BORO 06-11-08
PLOT DATE - 3/37/2019	DATE 11-04-95	DEVISED D BODO 00-06-11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DRIVEWAY DETAILS - DISTANCE BETWEEN
AND FACE OF CURB & EDGE OF SHOULDER

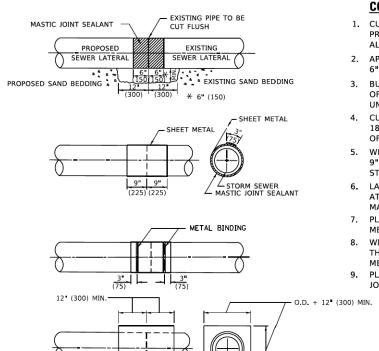
SCALE: NONE SHEET 1 OF 1 SHEETS STA.

RI۱	IVEWAY DETAILS – DISTANCE BETWEEN R.O.W.								F.A. SECTION		COUNTY	TOTAL SHEETS	SHEET NO.	
E	ACE O	F C	IIRR	Q.	EDGE OF	: chui	II NER	> 15'// 5m)				WILL	234	122
	FACE OF CURB & EDGE OF SHOULDER ≥15'(4.5m)					В	D400-01 (BD-01)	CONTRACT NO. 61G74						
	SHEET	1	OF	1	SHEETS	STA.		TO STA.			ILLINOIS FED.	AID PROJECT		



DETAIL "A"

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



CLASS SI CONCRETE

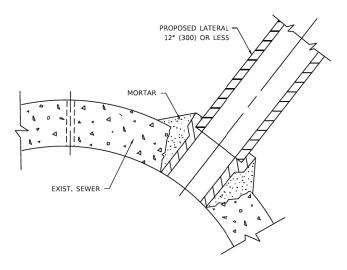
<u>DETAIL "B"</u> CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

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

SCALE: NONE

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



DETAIL "C"

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

NOTES:

MATERIAL

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

CONSTRUCTION METHODS

- 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.

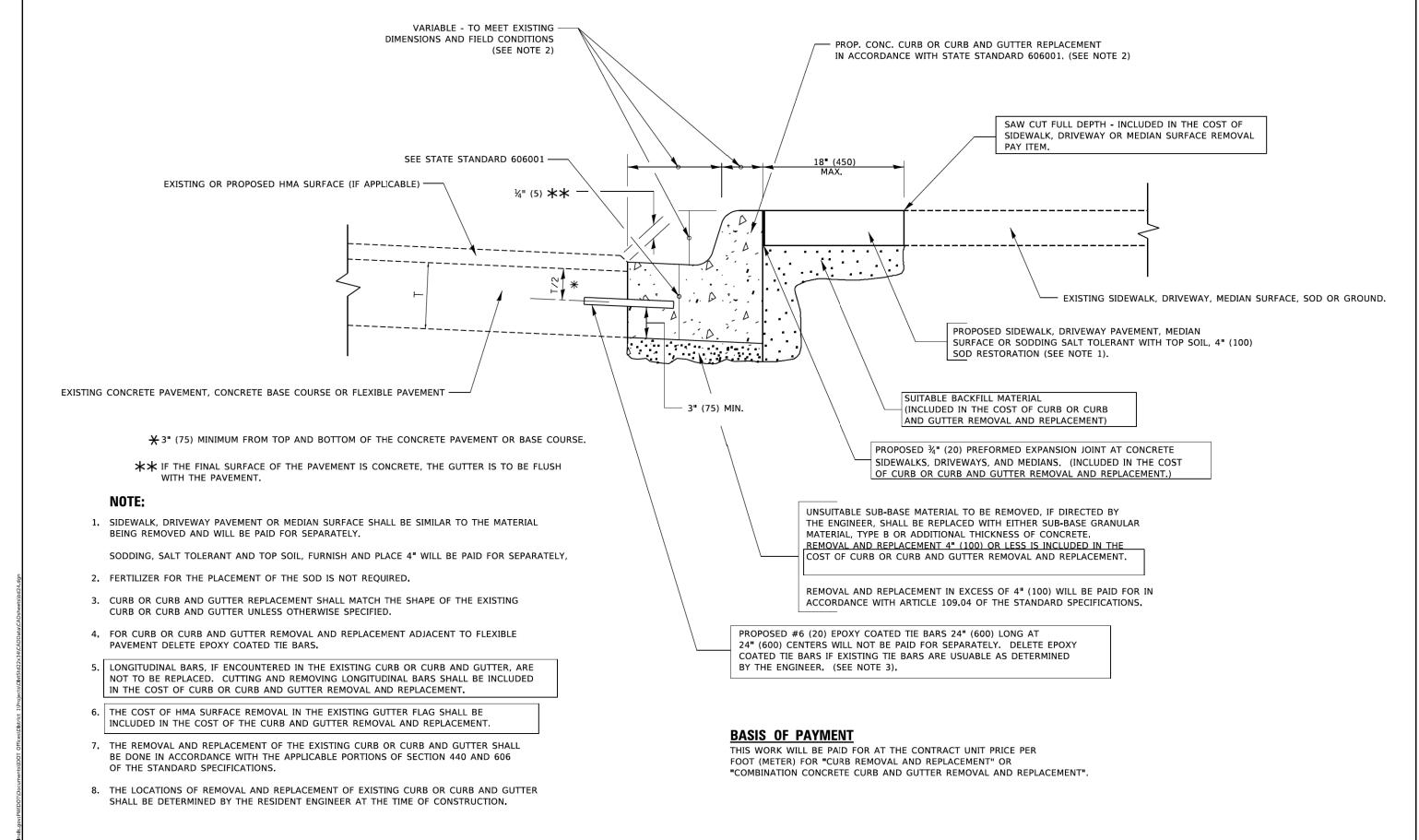
REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

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.

USER NAME - footemj	DESIGNED -	M. DE YONG	REVISED	-	M. DE YONG 5-8-92
	DRAWN -		REVISED	-	R. SHAH 09-09-94
PLOT SCALE = 50.0000 ' / In.	CHECKED -		REVISED	-	R. SHAH 10-25-94
PLOT DATE = 3/27/2019	DATE -	07-25-90	REVISED	-	R. SHAH 06-12-96

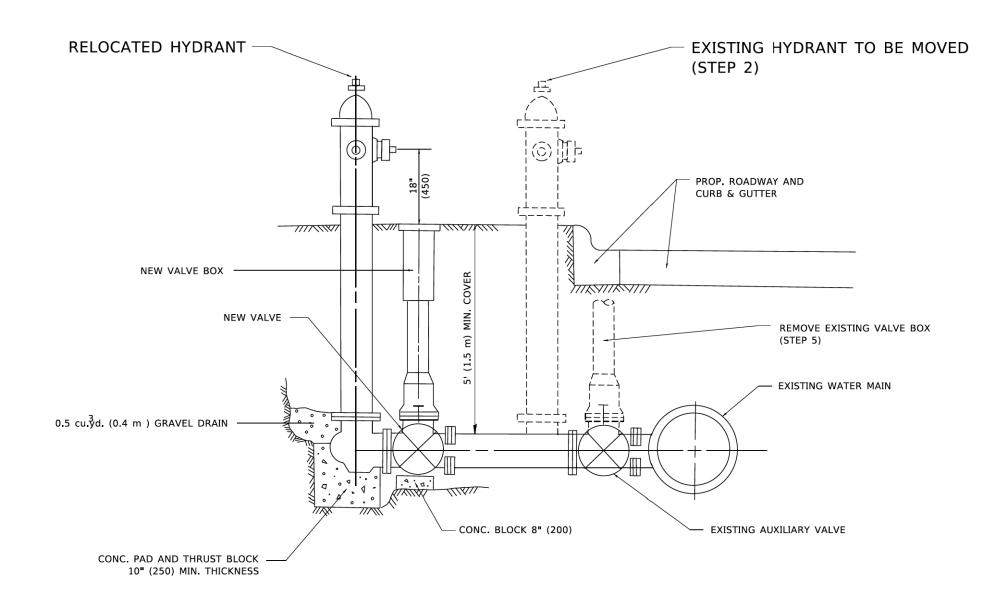
DE	TAIL OF	STORM	SEWER		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONNECTION TO EXISTING SEWER			ED		11-F3001-01-BT	WILL	234	123	
COMM	.UTIUN	IO LAISI	ING SEVVI	-11		BD500-01 (BD-7)	CONTRACT	NO. 6	1G74
SHEET 1	OF 1	SHEETS	STA	TO STA.		TILINOIS EED	UD BROJECT		



CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

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

USER NAME - footemj	DESIGNED - A. HOUSEH	REVISED - R. SHAH 10-03-96			CURB OR CURB AND GUTTER	F	SECTION	COUNTY TO	OTAL SI	HEET NO.
	DRAWN -	REVISED - A. ABBAS 03-21-97	STATE OF ILLINOIS		REMOVAL AND REPLACEMENT		11-F3001-01-BT	WILL 2	234	124
PLOT SCALE = 50.0000 ' / In.	CHECKED -	REVISED - M. GOMEZ 01-22-01	DEPARTMENT OF TRANSPORTATION				BD600-06 (BD-24)	CONTRACT N	NO. 61G	i74
PLOT DATE = 3/27/2019	DATE - 03-11-94	REVISED - R. BORO 12-15-09		SCALE: NONE	SHEET 1 OF 1 SHEETS STA. TO STA.		ILLINOIS FED.	AID PROJECT		



SEQUENCE OF CONSTRUCTION:

- 1. CLOSE EXISTING VALVE.
- 2. REMOVE EXISTING HYDRANT.
- 3. INSTALL HYDRANT EXTENSION AND NEW VALVE.
- 4. RELOCATE EXISTING HYDRANT.
- 5. OPEN EXISTING VALVE, REMOVE BOX.
- BACKFILL.
- FLUSH AND TEST FOR CHLORIDE RESIDUAL AND PROVIDE TEST.

NOTE:

ALL WORK TO BE DONE IN ACCORDANCE WITH ARTICLE 564 OF THE STANDARD SPECIFICATIONS. NEW VALVE AND BOX SHALL BE SAME MAKE AND MODEL AS EXISTING.

FIRE HYDRANT TO BE MOVED

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

USER NAME = footemj	DESIGNED -	REVISED - R. SHAH 09-09-94
	DRAWN -	REVISED - R. SHAH 10-25-94
PLOT SCALE = 50.0000 ' / In.	CHECKED -	REVISED -
PLOT DATE = 3/27/2019	DATE -	REVISED -

				DE 1101/ED		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FIRE	HYDRA	NT TO	BE MOVED			11-F3001-01-BT	WILL	234	125
							BD-36	CONTRACT	NO. 6	1G74
SCALE: NONE	SHEET 1	OF 1	SHEETS	STA.	TO STA.		ILLINOIS FED. A	ID PROJECT		

TYPICAL BENCHING DETAIL FOR EMBANKMENT

NOTES:

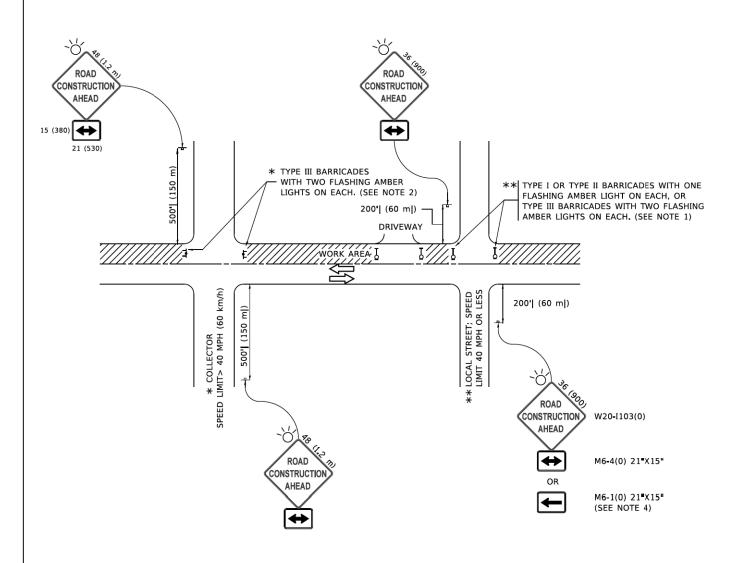
- 2 EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- 3 BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- 4 TRIM TO FINAL SLOPE.
- EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- EXCAVATION 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.
- 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.

USER NAME = footemj	DESIGNED	-		REVISED	-
	DRAWN	-	CADD	REVISED	-
PLOT SCALE = 50.0000 ' / In.	CHECKED	-	S.E.B.	REVISED	-
PLOT DATE = 3/27/2019	DATE	_	06-16-04	REVISED	_

STATI	E 01	F ILLINOIS
DEPARTMENT	0F	TRANSPORTATION

		В	ENC	HING DI	ETAIL		F.A. RTE	SEC	TION		COUNTY	TOTAL SHEETS	SHEE NO.
FOR EMBANKMENT WIDENING								11-F3001-01-BT			WILL	234	126
FOR EWIDANKIVIEWI WIDEWING							BD-51				CONTRACT NO. 61G74		
SCALE: NONE	SHEET 1	. 0	- 1	SHEETS	STA.	TO STA.			ILLINOIS	FED. A	ID 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.
- 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.
- THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY
 b) 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)
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE
 4. SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL
 BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

SCALE: NONE

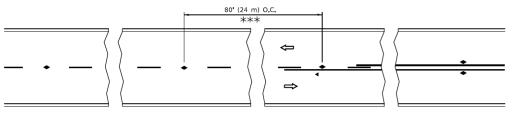
- 5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
- ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
- 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.

USER NAME = footemj	DESIGNED - L.H.A.	REVISED - A. HOUSEH 10-15-96
	DRAWN -	REVISED - T. RAMMACHER 01-06-00
PLOT SCALE = 50,0000 ' / In.	CHECKED -	REVISED - A. SCHUETZE 07-01-13
PLOT DATE = 3/4/2019	DATE - 06-89	REVISED _ A. SCHUETZE 09-15-16

STATE	OF ILLI	NOIS
DEPARTMENT	OF TRAI	NSPORTATION

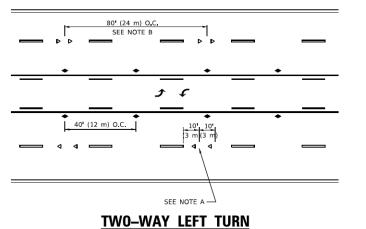
	TRAFFIC CONTROL AND PR	F.A. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ÇI	DE ROADS, INTERSECTIONS,	AND DRIVEWAVE		11-F3001-01-BT	WILL	234	127
SIDE NUADS, INTERSECTIONS, AND DRIVEWATS				TC-10	CONTRACT NO. 61G74		G74
	CHEET 1 OF 1 CHEETS O	CTA TO CTA		WILMOSE FED. 4	ID DOOLEGE		



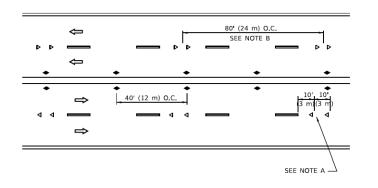
*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

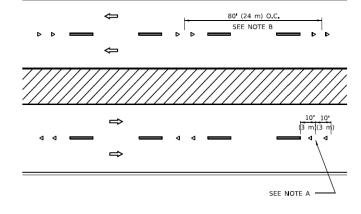
LANE REDUCTION TRANSITION

SEE FIGURE 3B-14 MUTCD



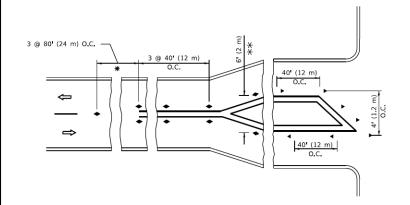
TWO-LANE/TWO-WAY

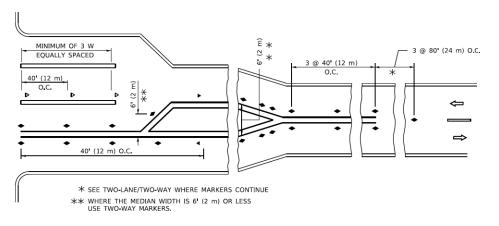




MULTI-LANE/UNDIVIDED







TURN LANES

GENERAL NOTES

- 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.
- 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

<u>SYMBOLS</u>

- 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.
- 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.
- MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

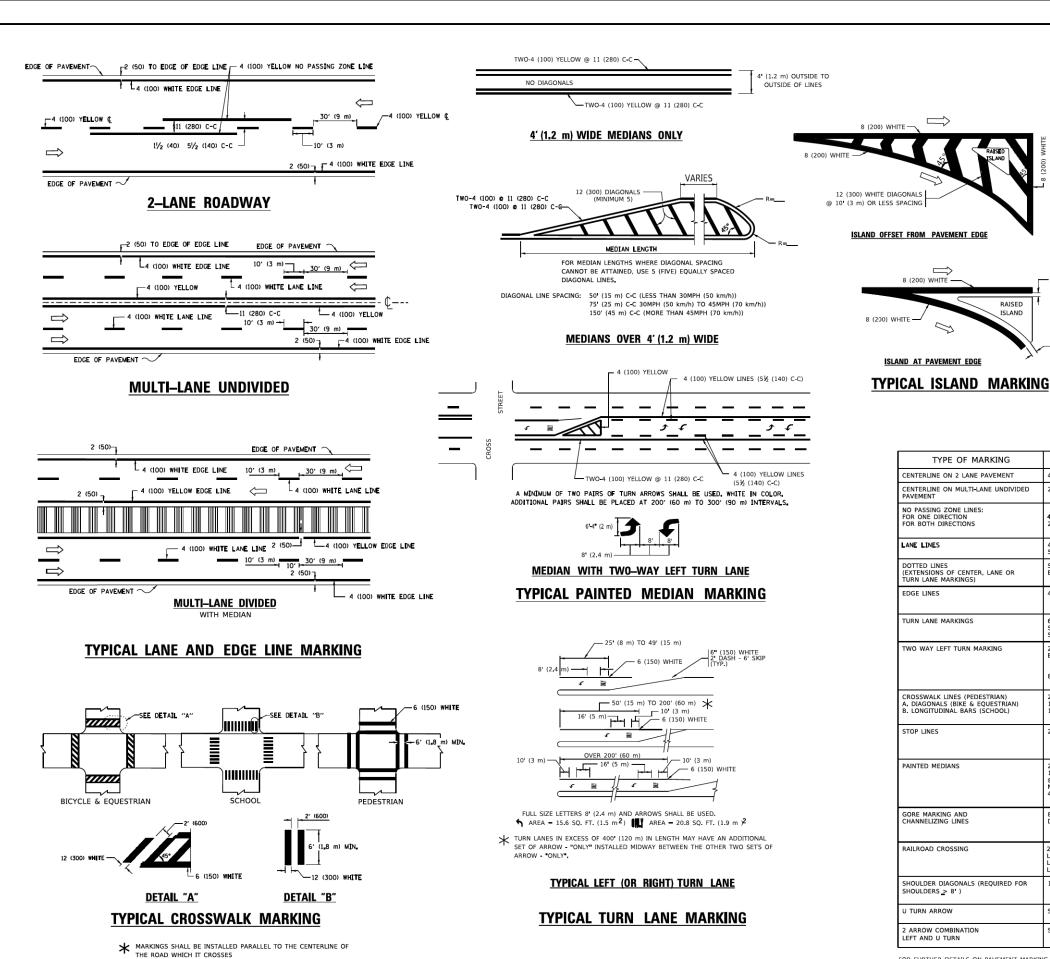
TYPICAL APPLICATIONS

RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

A. TE. SECTION COUNTY TOTAL SHEETS NO. 11-F3001-01-BT WILL 234 128

| TC-11 | CONTRACT NO. 61G74



D(FT) SPEED LIMIT 665 50 750 55 **COMBINATION** LEFT AND U-TURN 5'-4" (1620) ▼ 32 R (810) LANE REDUCTION TRANSITION 40 (1020) * LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS. **U-TURN**

TYPE OF MARKING WIDTH OF LINE PATTERN COLOR SPACING / REMARKS SKIP-DASH CENTERLINE ON 2 LANE PAVEMENT 10' (3 m) LINE WITH 30' (9 m) SPACE YELLOW NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS 5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN 4 (100) 2 @ 4 (100) LANE LINES SKIP-DASH SKIP-DASH WHITE 10' (3 m) LINE WITH 30' (9 m) SPACE (125) ON FREEWAYS DOTTED LINES SAME AS LINE BEING EXTENDED SKIP-DASH SAME AS LINE BEING EXTENDED 2' (600) LINE WITH 6' (1.8 m) SPACE (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS) EDGE LINES 4 (100) SOLID YELLOW-LEFT WHITE-RIGHT OUTLINE MEDIANS IN YELLOW 6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m)) TURN LANE MARKINGS SOLID SEE TYPICAL TURN LANE MARKING DETAIL WHITE TWO WAY LEFT TURN MARKING SKIP-DASH AND SOLID IN PAIRS 10' (3 m) LINE WITH 30' (9 m) SPACE FOR 2 @ 4 (100) EACH DIRECTION **ELLOW** SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART 5' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS, 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 STOP LINES 24 (600) SOLID WHITE PAINTED MEDIANS 2 @ 4 (100) WITH 12 (300) DIAGONALS SOLID 11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING. TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC NO DIAGONALS USED FO 4' (1.2 m) WIDE MEDIAN GORE MARKING AND CHANNELIZING LINES 8 (200) WITH 12 (300) DIAGONALS @ 45° SOLID 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)) 24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X" RAILROAD CROSSING SOLID SEE STATE STANDARD 780001 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)) SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS > 8') 12 (300) @ 45 U TURN ARROW SEE DETAIL SOLID WHITE 2 ARROW COMBINATION SEE DETAIL SOLID 30,4 SF LEFT AND U TURN

2 (50)

2 (50)

RAISED

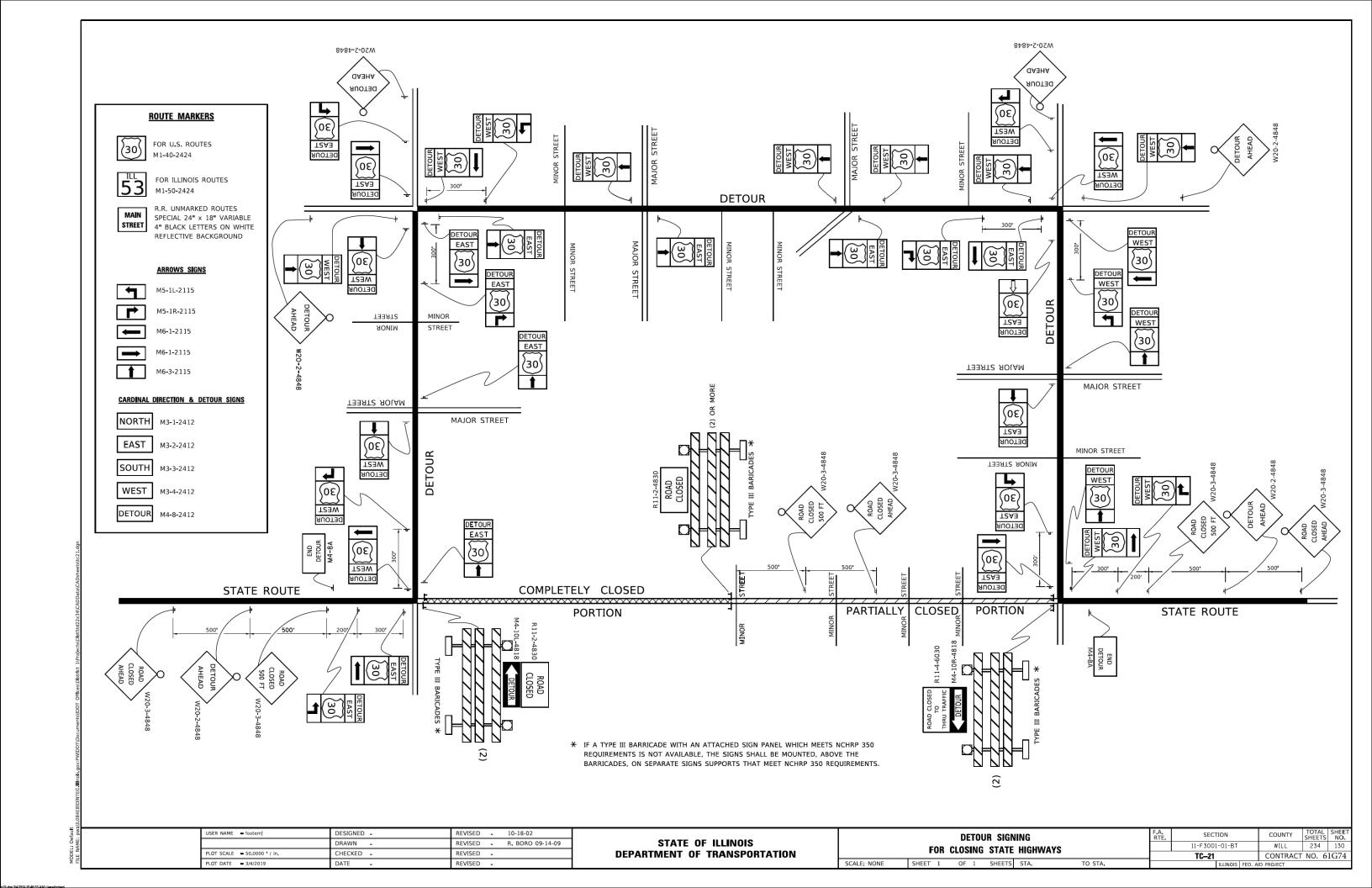
8 (200) WHITE -

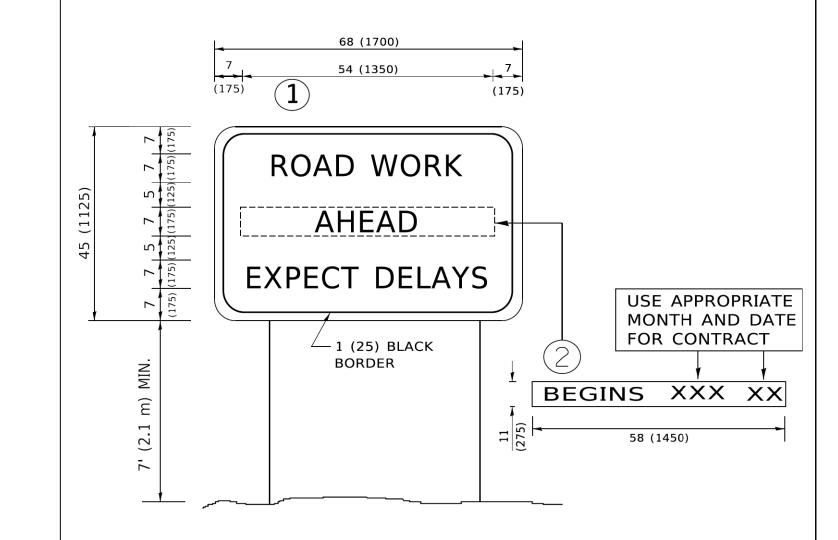
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown

USER NAME = footemj	DESIGNED - EVERS	REVISED	-	C. JUCIUS 09-09-09
	DRAWN -	REVISED	-	C. JUCIUS 07-01-13
PLOT SCALE = 50.0000 ' / In.	CHECKED -	REVISED	-	C. JUCIUS 12-21-15
PLOT DATE = 3/4/2019	DATE - 03-19-90	REVISED	-	C. JUCIUS 04-12-16

	DISTRICT ONE								F.A. RTE.	SECTION	COUNTY	SHEETS	NO.	
	TYPICAL PAVEMENT MARKINGS									11-F3001-01-BT	WILL	234	129	
	TTFICAL FAVEWENT WARRINGS									TC-13 CONTRACT NO. 61 G74				
SCAL	E: NONE	SHEET	1	OF	2	SHEETS	STA.	TO STA.		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.

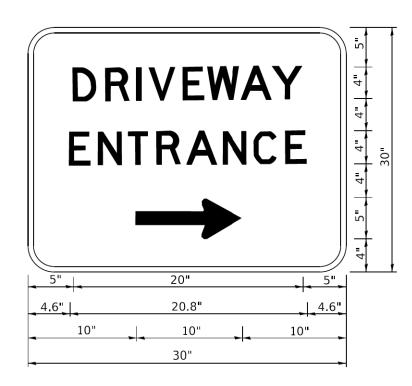
SCALE: NONE

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

USER NAME - footemj	DESIGNED -	REVISED	- R. MIRS 09-15-97
	DRAWN -	REVISED	- R. MIRS 12-11-97
PLOT SCALE = 50.0000 ' / In.	CHECKED -	REVISED	-T. RAMMACHER 02-02-99
PLOT DATE = 3/4/2019	DATE -	REVISED	 C. JUCIUS 01-31-07

STATE	OF ILLINOIS
DEPARTMENT (OF TRANSPORTATION

								F.A.					TOTAL	SHEET
	ARTERIAL ROAD INFORMATION SIGN						RTE	SECTION			COUNTY	SHEETS		
							11-F3001-01-BT				WILL	234	131	
							TC-22				CONTRACT	NO.	51G74	
	SHEET	1	OF	1	SHEETS	STA.	TO STA.			ILLINOIS	FED. AI	D PROJECT		



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED "DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

NOTES:

- 1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
- 2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE PLACED BACK-TO-BACK: ONE WITH A RIGHT HAND ARROW (SHOWN) SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE FAR LEFT SIDE OF THE DRIVEWAY.
- 3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM	<u>existing</u>	<u>PROPOSED</u>	ITEM	<u>EXISTING</u>	PROPOSED	ITEM	<u>EXISTING</u>	<u>PROPOSED</u>
CONTROLLER CABINET	\boxtimes		HANDHOLE -SQUARE -ROUND			SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD		R R Y
COMMUNICATION CABINET	ECC	СС	HEAVY DUTY HANDHOLE					G G 4Y
MASTER CONTROLLER	ЕМС	MC	-SQUARE -ROUND		⊞ ⊕			4 G 4 G P
MASTER MASTER CONTROLLER	ЕММС	ммд	DOUBLE HANDHOLE			SIGNAL HEAD WITH BACKPLATE		R R R
UNINTERRUPTABLE POWER SUPPLY	3	7	JUNCTION BOX		•	-(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE		Y Y G G
SERVICE INSTALLATION -(P) POLE MOUNTED	-D- P	- - P	RAILROAD CANTILEVER MAST ARM	$X \cup X = X \cup X$	I I			4 Y 4 Y 4 G 4 G
SERVICE INSTALLATION			RAILROAD FLASHING SIGNAL	∑⊙ ∑	¥◆X		P RB	P RB
-(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED	$\boxtimes^{G} \boxtimes^{GM}$	⊠ ^G ⊠ ^{GM}	RAILROAD CROSSING GATE	४०४ →	X• X -	PEDESTRIAN SIGNAL HEAD	(D)	♥
TELEPHONE CONNECTION	ET	Т	RAILROAD CROSSBUCK	₹	*	AT RAILROAD INTERSECTIONS	5	*
STEEL MAST ARM ASSEMBLY AND POLE	O	•——	RAILROAD CONTROLLER CABINET		▶∢	PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER	₽ C ★ D	₽ C ★ D
ALUMINUM MAST ARM ASSEMBLY AND POLE			UNDERGROUND CONDUIT (UC), GALVANIZED STEEL			Will cooking with the cooking of the		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	↔	•*	TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE			ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
SIGNAL POST	0	● BM	SYSTEM ITEM	S	SP	NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE.		
-(BM) BARREL MOUNTED - TEMPORARY			INTERSECTION ITEM	1	IP	ALL DETECTOR LOOP CABLE TO BE SHIELDED		•
WOOD POLE	⊗ .	•	REMOVE ITEM		R	GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)	1#6	
GUY WIRE	>-	>	RELOCATE ITEM		RL	ELECTRIC CABLE IN CONDUIT, TRACER	\sim	
SIGNAL HEAD	>	-	ABANDON ITEM		Α	NO. 14 1/C		
SIGNAL HEAD WITH BACKPLATE	+t>> P P	1▶ P P	CONTROLLER CABINET AND FOUNDATION TO BE REMOVED		RCF	COAXIAL CABLE	_ ©_	<u> </u>
SIGNAL HEAD OPTICALLY PROGRAMMED	- ⊳` + ⊳`	→ ` + > `	MAST ARM POLE AND		RMF	VENDOR CABLE	_ V	
FLASHER INSTALLATION -(FS) SOLAR POWERED	o⇔ ^F o⇔ ^{FS}	•→ ^F •→ ^{FS} F FS	FOUNDATION TO BE REMOVED		KMF	COPPER INTERCONNECT CABLE,	6#18	(6#18)
	□→ ^F □→ ^{FS}	■→ ^F ■→ ^{FS}	SIGNAL POST AND FOUNDATION TO BE REMOVED		RPF	NO. 18, 3 PAIR TWISTED, SHIELDED		
PEDESTRIAN SIGNAL HEAD	-0		DETECTOR LOOP, TYPE I			FIBER OPTIC CABLE -NO. 62.5/125, MM12F -NO. 62.5/125, MM12F SM12F	12F	——————————————————————————————————————
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON			PREFORMED DETECTOR LOOP	P P	PP	-NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F		—(24F)—
RADAR DETECTION SENSOR	R 1	R	SAMPLING (SYSTEM) DETECTOR	s s	s s			—(36F)—
VIDEO DETECTION CAMERA	◯ 1	V	INTERSECTION AND SAMPLING (SYSTEM) DETECTOR	IS (IS)	IS (IS)			
RADAR/VIDEO DETECTION ZONE	III	III	QUEUE AND SAMPLING (SYSTEM) DETECTOR	os (s)	QS QS	GROUND ROD -(C) CONTROLLER -(M) MAST ARM	T T T	T T T T
PAN, TILT, ZOOM (PTZ) CAMERA	PTZ	PTZ.	WIRELESS DETECTOR SENSOR	®	®	-(P) POST -(S) SERVICE		
EMERGENCY VEHICLE LIGHT DETECTOR	\bowtie	~	WIRELESS ACCESS POINT					
CONFIMATION BEACON	o - -()	⊷		_	_			
WIRELESS INTERCONNECT	⊶1 	•- 						
WIRELESS INTERCONNECT RADIO REPEATER	ERR	RR						

AECO/	И
303 East Wacker Drive, Suite 1400, Chic	ago, IL 600

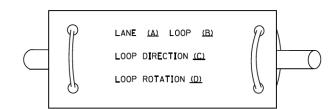
USER NAME = ken.moy	DESIGNED	-	JN	REVISED -	
	DRAWN	-	JN	REVISED -	
PLOT SCALE = 10.0000 '/ in.	CHECKED	-	KLM	REVISED -	
PLOT DATE = 2/8/2021	DATE	-	2/09/2021	REVISED -	

STATE OF ILLINOIS						
DEPARTMENT OF	TRANSPORTATION					

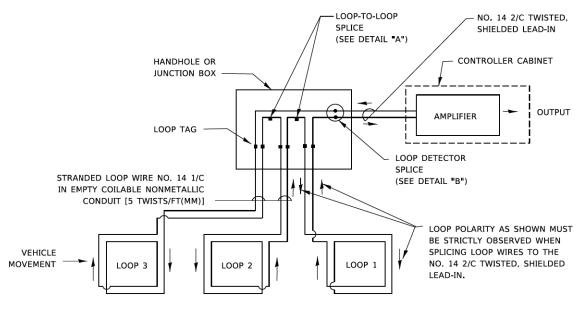
VETERANS MEMORIAL TRAIL								F.A. RTE.	SECTION
STAI	NDARE) 1	TRAF	FIC	SIGI	NAL DESI	GN DETAILS		11-F3001-01-B
SCALE: 1''=5'	SHEET	1	OF	7	SHEETS	STA.	TO STA.		ILL INO

- 2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
- 3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
- 4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- 5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- 6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- 7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

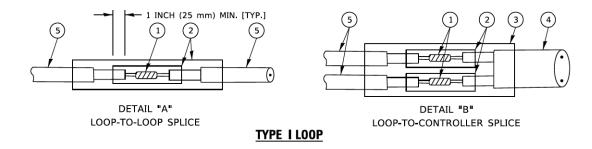


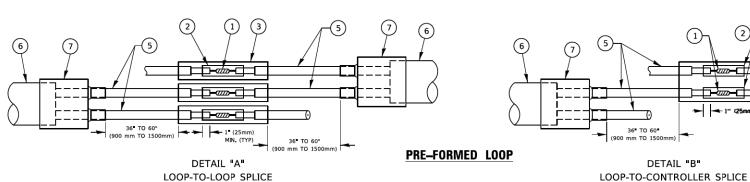
- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT"
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES. SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE,
- THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2 (50 mm) DIAMETER CORE.





LOOP DETECTOR SPLICE

- (1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- (2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- (3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.

SCALE: 1"=5"

4 NO. 14 2/C TWISTED, SHIELDED CABLE.

- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE. PRE-FORMED LOOP
- (6) XL POLYOLEFIN 2 CONDUCTOR
- (7) BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

1" (25mm) MIN. (TYP)



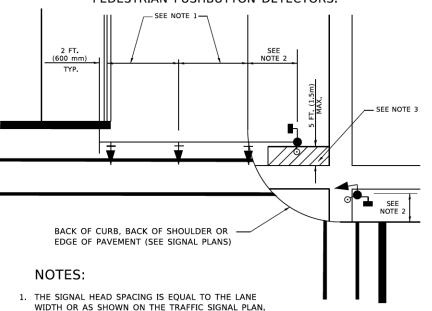
JSER NAME = ken.moy	DESIGNED - JN	REVISED -
	DRAWN - JN	REVISED -
PLOT SCALE = 10.0000 '/ in.	CHECKED - KLM	REVISED -
PLOT DATE = 2/8/2021	DATE - 2/09/2021	REVISED -

VETERANS MEMORIAL TRAIL	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STANDARD TRAFFIC SIGNAL DESIGN DETAILS		11-F3001-01-BT	WILL	234	134
CITALDANIS THAT IS CICILATE DECICIO DETAILED			CONTRAC	T NO. 6	31G74
5′ SHEET 2 OF 7 SHEETS STA. TO STA.		ILLINOIS FED. AI	D PROJECT		

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

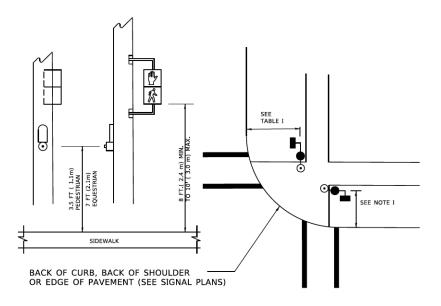
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND

PEDESTRIAN PUSHBUTTON DETECTORS.



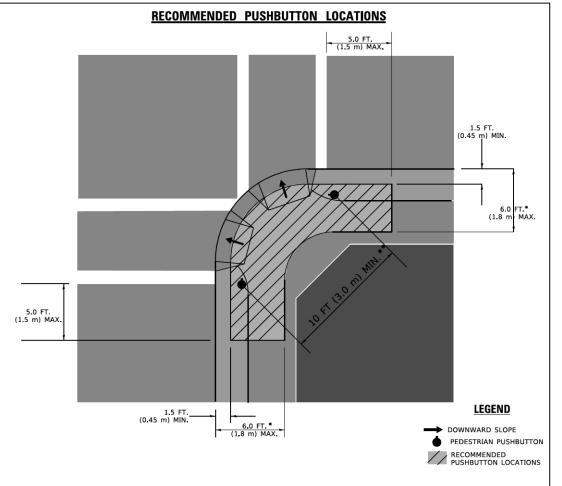
- 2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
- 4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
- 5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

- 1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
- THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
- 4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."



- * WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB. SHOULDER, OR PAVEMENT.
- ** WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

- PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
- THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
- 3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
- 4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
- 5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE DAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

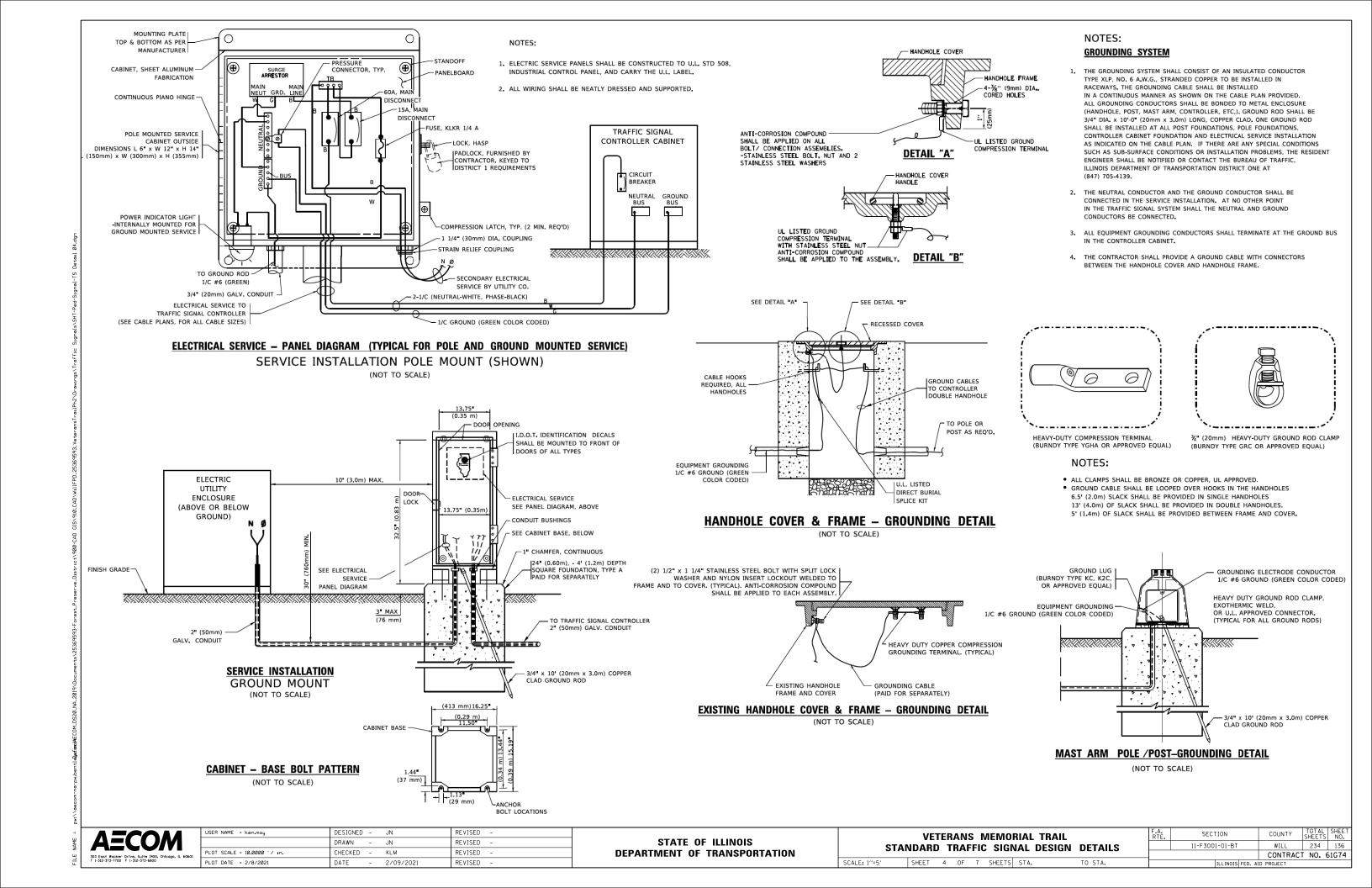
- 1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
- 2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
- 3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TOTHE ROADWAY SIDE OF THE FOUNDATION.
- 4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

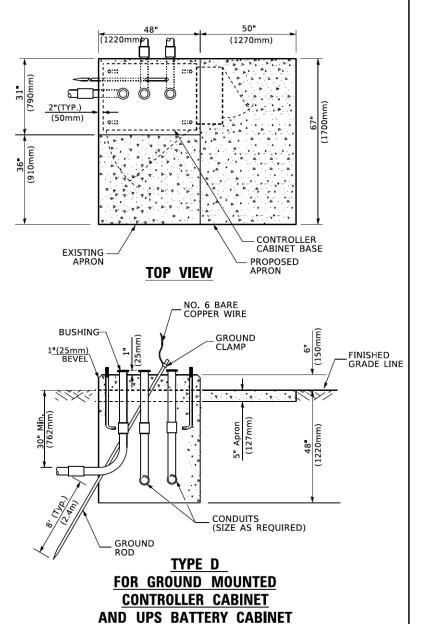
SCALE: 1"=5"

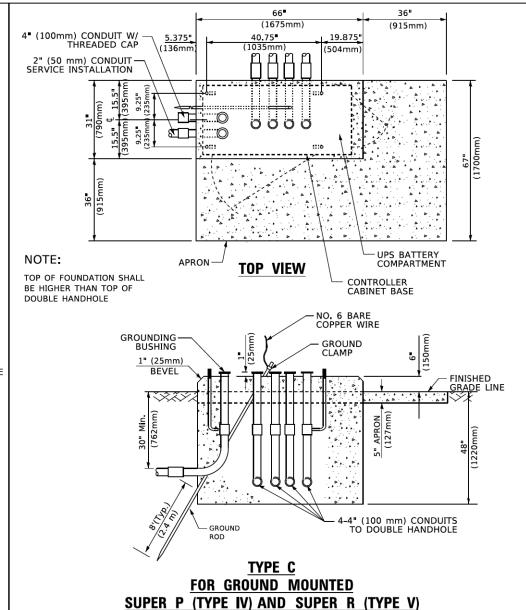


USER NAME = ken.moy	DESIGNED	-	JN	REVISED -
	DRAWN	-	JN	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED	-	KLM	REVISED -
PLOT DATE = 2/8/2021	DATE	-	2/09/2021	REVISED -

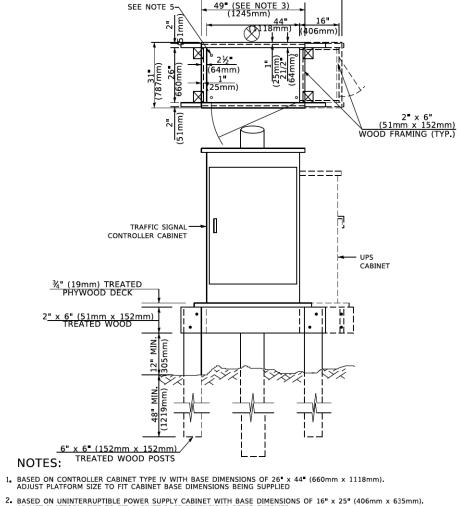
VETERANS M	EMORIAL TRAIL	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
STANDARD TRAFFIC SIGNAL DESIGN DETAILS				11-F3001-01-BT	WILL	234	135
	Oldital Decidit			CONTRAC	T NO. 6	51G74	
SHEET 3 OF 7 S	SHEETS STA.	TO STA.		ILLINOIS FED. A	ID PROJECT		







CONTROLLER CABINETS



65" (SEE NOTE 4) (1651mm)

- 2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- 3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
- 4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
- 5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
- 6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION..

TEMPORARY SIGNAL CONTROLLER WOOD SUPPORT PLATFORM

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD)		
(L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

CABLE SLACK

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SOUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

SCALE: 1"=5"

Mast Arm Length	① Foundation Dep t h	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3₌0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to	13'-6" (4 ₄ 1 m)	30" (750mm)	24" (600mm)	8	6(19)
30' (9.1 m) and less than 40' (12.2 m)	11'-0" (3 ₄ m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0'' (4 . 0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0'' (4 . 6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25' - 0" (7 . 6 m)	42" (1060mm)	36" (900mm)	16	8(25)

- 1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
- 2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36'' (900 mm) diameter foundations.
- 4. For most arm assemblies with dual arms refer to state standard 878001.

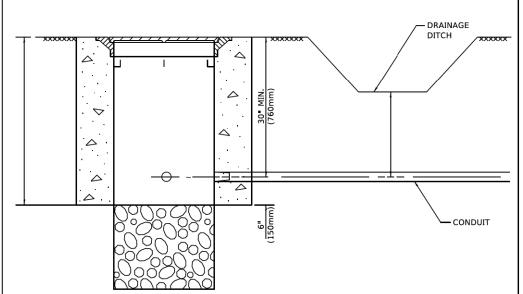
DEPTH OF MAST ARM FOUNDATIONS, TYPE E



USER NAME = ken.moy	DESIGNED	-	JN	REVISED -
	DRAWN	-	JN	REVISED -
PLOT SCALE = 10.0000 '/ in.	CHECKED	-	KLM	REVISED -
PLOT DATE = 2/8/2021	DATE	-	2/09/2021	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

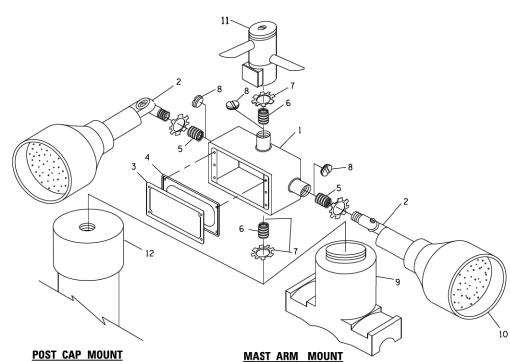
	VE.	TEF	RANS	s r	иемо	RIAL TRA	IL	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STAN	IDARI) 1	RΔF	FIC	: SIGN	JAI DESI	GN DETAILS		11-F3001-01-BT	WILL	234	137
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NOTES:

- 1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30 (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
- 2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
- 3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

HANDHOLE WITH MINIMUM CONDUIT DEPTH (NOT TO SCALE)



EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

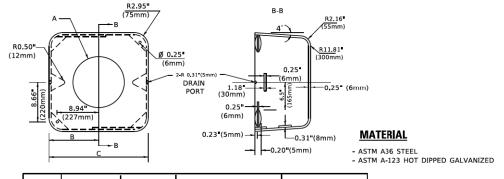
REVISED USER NAME = ken.moy DESIGNED - JN ORAWN REVISED CHECKED -REVISED PLOT DATE = 2/8/2021 REVISED

(1675mm (915mm) 40.75" 19.875" (136mm) (1035mm) (504mm) **~** \bigcirc CONTROLLER CABINET BASE PROPOSED-**TOP VIEW** APRON -NO. 3 DOWEL 18" (450mm NO. 6 BARE COPPER WIRE LONG (8 REQ.) **BUSHING-**_GROUND CLAMP EXISTING-ANCHOR BOLTS **FINISHED** GRADE LINE BEVEL (300mm) (225mm) -EXISTING CONDUITS EXISTING GROUND ROD MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION (NOT TO SCALE)

ITEM NO. OUTLET BOX- GALV, 21 CU,IN, (0,000344 CU-M) LAMP HOLDER AND COVER OUTLET BOX COVER 4 RUBBER COVER GASKET 5 REDUCING BUSHING 6 ¾"(19 mm) CLOSE NIPPL 7 ¾"(19 mm) LOCKNUT 8 ¾"(19 mm) HOLE PLUG 9 SADDLE BRACKET - GAL 10 6 WATT PAR 38 LED FLOOD LAMF

NOTES:

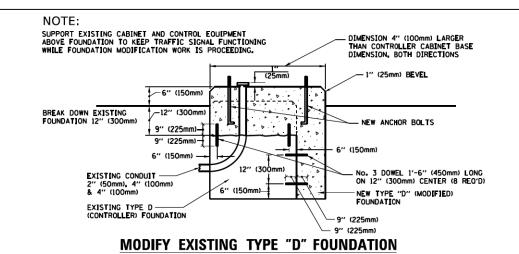
- 1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR
- 2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- 3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4 "(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.

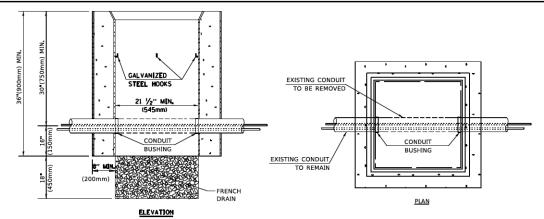


Α	В	С	HEIGHT	WEIGHT
VARIES	9.5*(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75 (273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

SHROUD

- 1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
- 2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
- 3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.





- 1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
- 2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

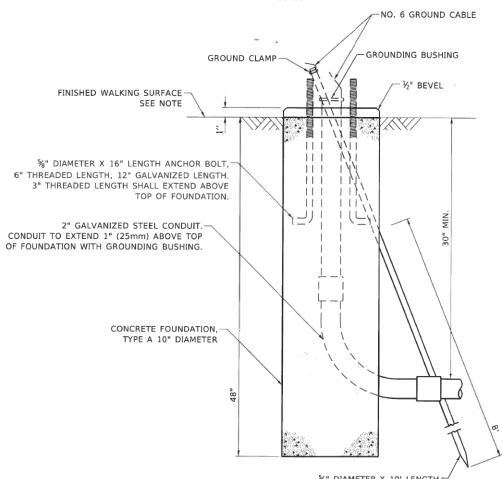
234 138

SECTION COUNTY **VETERANS MEMORIAL TRAIL** 11-F3001-01-BT WILL STANDARD TRAFFIC SIGNAL DESIGN DETAILS CONTRACT NO. 61G74 SHEET 6 OF 7 SHEETS STA.

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

BOLT PATTERN

1. IF THE PEDESTRIAN SIGNAL POST FOUNDATION IS INSTALLED WITHIN OR BEHIND A BARRIER CURB, THE TOP OF THE FOUNDATION



CONCRETE FOUNDATION, TYPE A 10-INCH DIAMETER

PEDESTRIAN SIGNAL POST, 10 FT.

STATE OF ILLINOIS

PEDESTRIAN SIGNAL POST, 5 FT.



PEDESTRIAN SIGNAL HEAD

COUNTDOWN PEDESTRIAN SIGNAL HEADS ARE NOT TO BE USED AT RAILROAD INTERSECTIONS

ALUMINUM OR-

ALUMINUM-PUSH-BUTTON STATION

PEDESTRIAN PUSH-BUTTON-

GALVANIZED STEEL POST, 4.5" OUTSIDE DIAMETER

CAST IRON GALVANIZED BASE CENTERED ON FOUNDATION

FINISHED WALKING SURFACE-

ALUMINUM OR-

ALUMINUM OR-

DRILLED AND TAPPED -GROUNDING HOLE

GALVANIZED STEEL POST CAP

SIGN (SEE SIGN TABLE) -





R10-3b

R10-3d

R10-3e

WILL

234 139

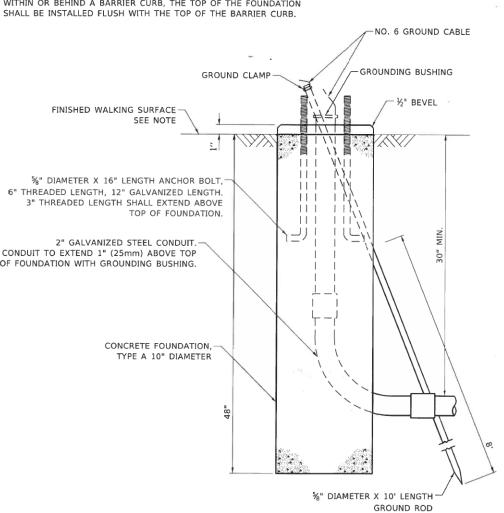
CONTRACT NO. 61G74

SIGN TABLE

SIGN	DIMENSIONS
R10-3b (RAILROAD ONLY)	9" X 12"
R10-3d (RAILROAD ONLY)	9" X 12"
R10-3e	9" X 15"

NOTES:

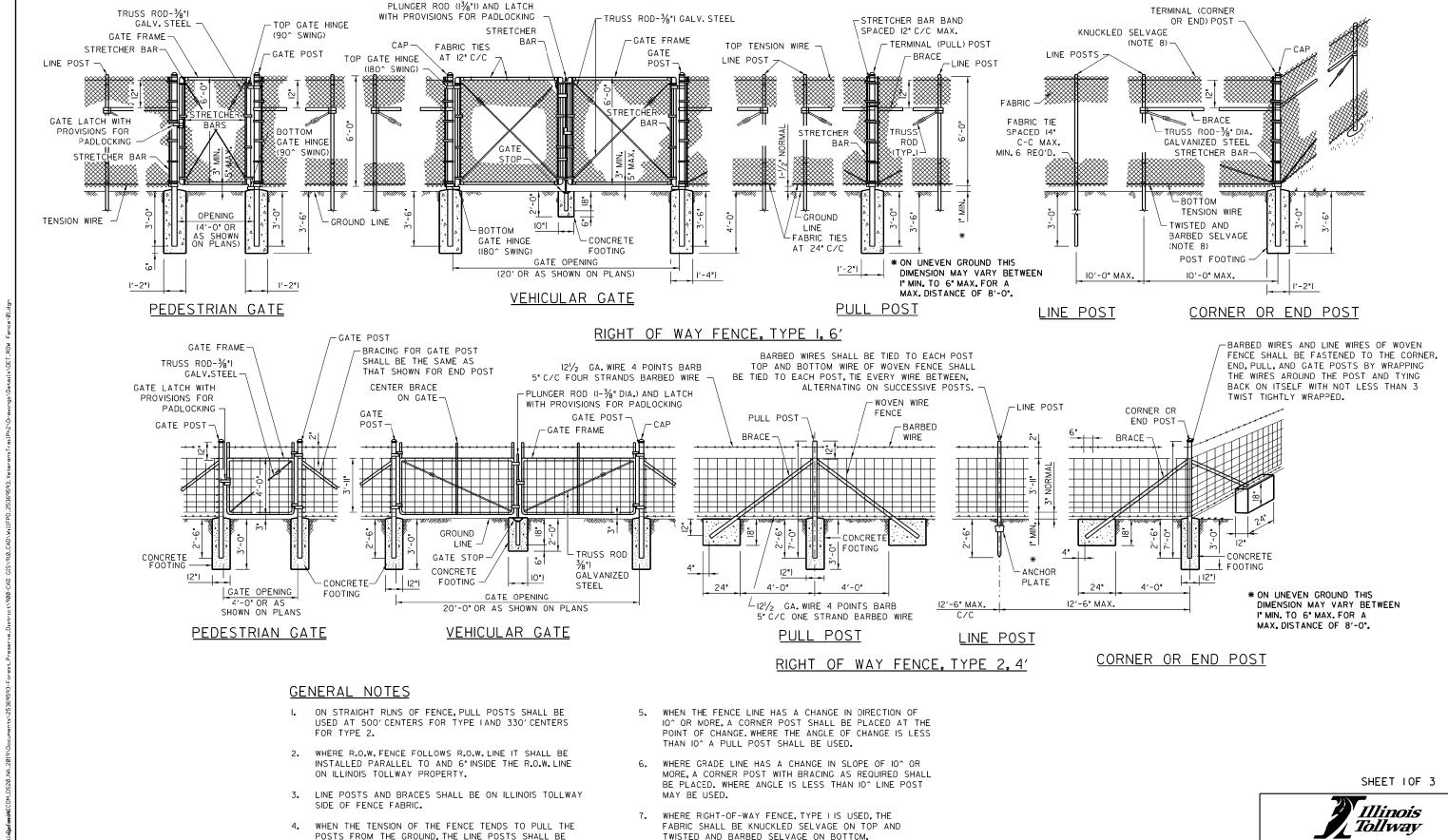
- 1. THE SIGN PANELS SHALL BE TYPE AP SHEETING.
- 2. THE ARROW ON SIGNS FOR PUSH-BUTTONS SERVING TWO DIRECTIONS ON THE SAME PHASE SHALL BE BI-DIRECTIONAL.
- 3. THE SIGN FOR DUAL-CALL PUSH-BUTTONS SHALL HAVE NO ARROW.



SECTION **VETERANS MEMORIAL TRAIL** 11-F3001-01-BT STANDARD TRAFFIC SIGNAL DESIGN DETAILS SHEET 7 OF 7 SHEETS STA.

REVISED USER NAME = ken.moy DESIGNED - JN DRAWN -JN REVISED PLOT SCALE = 10.0000 '/ in. CHECKED -REVISED PLOT DATE = 2/8/2021 DATE 2/09/2021 REVISED

DEPARTMENT OF TRANSPORTATION



DATE 7-1-2009

DESIGNED - JN REVISED ORAWN JN REVISED HECKED -KLM REVISED PLOT DATE = 2/8/2021 DATE REVISED 2/09/202

ANCHORED WITH ANCHORAGE SPECIFIED FOR CORNER POSTS.

WITHIN THE CLEAR ZONE SHALL BE AVOIDED.

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

8. PLACEMENT OF BRACED END POSTS OR CORNER POSTS

SCALE:

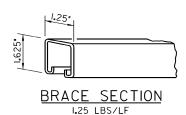
DATE REVISIONS RIGHT OF WAY FENCE REVISED ROLLED FORM SECTIONS REVISED NOTES REVISED NOTES STANDARD DI-06

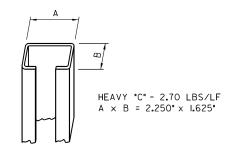
VETERANS MEMORIAL TRAIL TOLLWAY RIGHT OF WAY FENCE DETAIL SHEET 1 OF 3 SHEETS STA.

SECTION COUNTY 11-F3001-01-BT WILL 234 140 CONTRACT NO. 61G74

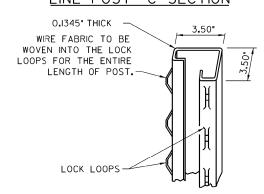
STRETCHER BARS SHALL BE GALVANIZED FLAT STEEL BAR NOT LESS THAN 1/4" x 3/4" AND THE STRETCHER BAR BANDS SHALL BE GALVANIZED FLAT STEEL BAR NOT LESS THAN $\frac{1}{8}$ X I" WITH A $\frac{3}{8}$ GALVANIZED

METHOD OF FASTENING STRETCHER BAR TO POST



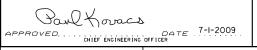


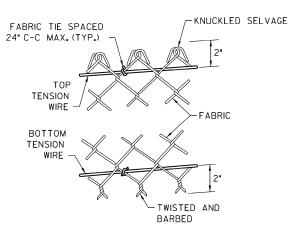
LINE POST "C" SECTION



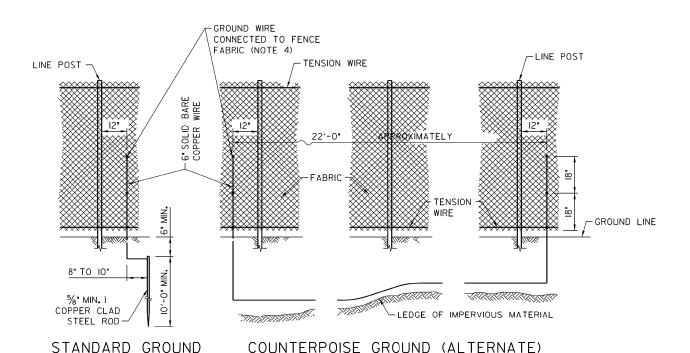
TERMINAL POST SECTION

DETAILS OF ROLL FORMED SECTIONS





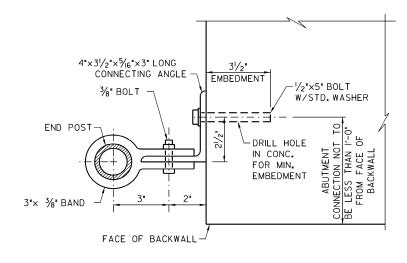
METHOD OF TYING FABRIC TO TENSION WIRES



NOTES FOR STANDARD AND COUNTERPOISE GROUND:

- THE INTERVALS FOR GROUNDING CONTINUOUS FENCING SHALL NOT EXCEED 500 FEET IN URBAN AREAS AND 1000 FEET IN RURAL AREAS. FENCE ADJACENT TO A GATE SHALL BE GROUNDED A MAXIMUM DISTANCE 100 FEET EACH SIDE OF THE GATE.
- 2. FENCE CROSSING UNDER A POWER LINE SHALL BE GROUNDED, ONCE DIRECTLY UNDER THE CROSSING AND ONE ON EACH SIDE AT 25 TO 50 FEET AWAY. FENCE LOCATED DIRECTLY UNDER A TELEPHONE WIRE OR CABLE CROSSING SHALL HAVE A SINGLE GROUND.
- COUNTERPOISE GROUNDS SHALL BE USED AT LOCATIONS WHERE GROUND RODS CAN NOT BE DRIVEN DUE TO IMPERVIOUS EARTH MATERIALS.
- THE GROUND WIRES SHALL BE CONNECTED TO FENCE FABRIC AND GROUND ROD BY STAINLESS STEEL BOLTS AND WASHERS. THE LOWER CONNECTION OF THE GROUND WIRE SHALL BE MADE TO THE BOTTOM TENSION WIRE.

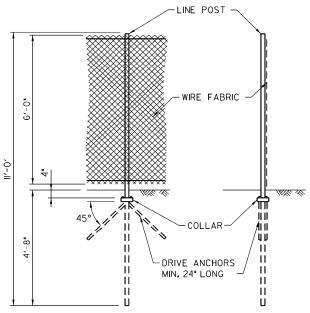
ELECTRICAL GROUNDING DETAILS



ABUTMENT CONNECTION DETAIL

NOTES FOR ABUTMENT CONNECTION:

WHEN ROLL FORMED SECTION IS USED IN LIEU OF PIPE AS END POST, THE POST SHALL BE BOLTED DIRECTLY TO THE ABUTMENT WALL WITH 21/2" x 5" BOLTS WITH STANDARD WASHERS MEETING THE APPROVAL OF THE ENGINEER.



ALTERNATE DRIVEN LINE POST ANCHORAGE WITH OR WITHOUT DRIVE ANCHORS

NOTE FOR FENCE POST:

ALTERNATE DRIVEN LINE POST ANCHORAGE IS OPTIONAL. DRIVEN LINE POST ANCHORAGE WITHOUT DRIVE ANCHORS MAY BE USED IN AVERAGE TO GOOD SOIL CONDITIONS. WHEN SOIL IS WEAKER (Qu < 1.25 TONS/ SQ. FT.) AND STABILITY OF THE POST IS QUESTIONABLE, DRIVE ANCHORS SHALL BE USED. TYPES, SHAPES, DIMENSIONS AND COATING REQUIREMENTS OF DRIVE ANCHORS (ANCHOR BLADES AND COLLARS) FOR DIFFERENT TYPE OF POSTS SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

SHEET 2 OF 3



RIGHT OF WAY FENCE

STANDARD DI-06

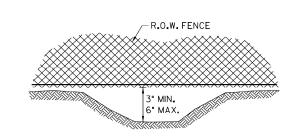
STATE OF ILLINOIS

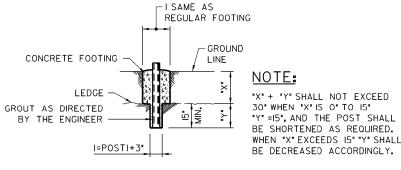
VETERANS MEMORIAL TRAIL TOLLWAY RIGHT OF WAY FENCE DETAIL SHEET 2 OF 3 SHEETS STA.

SECTION COUNTY 11-F3001-01-BT WILL 234 141 CONTRACT NO. 61G74

DESIGNED -REVISED ORAWN REVISED HECKED REVISED PLOT DATE = 2/8/2021 REVISED

DEPARTMENT OF TRANSPORTATION





CORNER POST ASSEMBL'

PLAN AT HEADWALL

CORNER POST

ASSEMBLY

FENCE

FOOTING FOR POST WHEN ROCK LEDGE IS ENCOUNTERED

- CULVERT

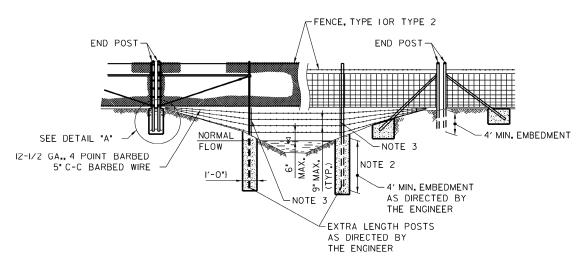
18" CLEARANCE

-CORNER POST

ASSEMBLY

FENCE INSTALLATION OVER DITCH

STREAM CROSSING, TYPE I



STREAM CROSSING, TYPE 2

NOTES FOR STREAM CROSSING TYPE I AND TYPE 2:

- END POST -END POST 4 MAX. END POST NOT CENTERED IN CONCRETE
- THESE INSTALLATION CONDITIONS ARE TYPICAL AND ARE NOT TO BE CONSTRUED AS REPRESENTATIVE OF ALL CONDITIONS WHICH WILL BE ENCOUNTERED. CONSTRUCTION WILL BE VARIED AS REQUIRED OR DIRECTED TO MEET FIELD CONDITIONS.
- FOR STREAM CROSSING OF THE TYPE REQUIRED THE BOTTOM BARBED WIRE SHALL BE ANCHORED TO CONCRETE FOOTING OR TO HOLES DRILLED IN POSTS, AND INTERMEDIATE WIRES SHALL BE TIED TO THE BOTTOM WIRE AND TO POSTS IN AN EVENLY SPACED FASHION TO PREVENT SLIPPAGE.
- CONCRETE AND FITTINGS FOR ALL TYPES OF FENCE SHALL BE AS DETAILED FOR SIMILAR CONDITIONS PER STANDARD DRAWING.

THE FENCE FABRIC SHALL BE REPLACED BY BARBED WIRE STRANDS AT 12" MAXIMUM CENTERS BETWEEN THE END POSTS.

DETAIL A

TOP OF SLOPE

PEDESTRIAN GATE WHEN

SHOWN ON PLANS. LOCATION MAY VARY. -

SCALE:

PEDESTRIAN GATE WHEN SHOWN

TOE OF SLOPE

CORNER POST

ASSEMBLY

R.O.W. LINE

ON PLANS. LOCATION MAY VARY.

ELEVATION

NOTES FOR INSTALLATION AROUND HEADWALL:

- THIS TYPE OF INSTALLATION IS TO BE USED ONLY WHEN SPECIFICALLY CALLED FOR IN THE CONTRACT PLANS.
- WHEN THE WIDTH OF THE CULVERT MAKES IT NECESSARY TO ANCHOR A POST TO THE TOP OF THE CULVERT, A CAST IRON SHOE OR OTHER DEVICE APPROVED BY THE ENGINEER SHALL BE USED.

INSTALLATION AROUND HEADWALL



Tollway

RIGHT OF WAY FENCE

STANDARD DI-06

DESIGNED - JN REVISED SER NAME = ken.moy ORAWN JN REVISED CHECKED -KLM REVISED PLOT DATE = 2/8/2021 DATE 2/09/2021 REVISED

STATE OF ILLINOIS

VETERANS MEMORIAL TRAIL TOLLWAY RIGHT OF WAY FENCE DETAIL SHEET 3 OF 3 SHEETS STA.

SECTION COUNTY 11-F3001-01-BT WILL 234 142 CONTRACT NO. 61G74

Youl Koracs CHIEF ENGINEERING OFFICER 7-1-2009

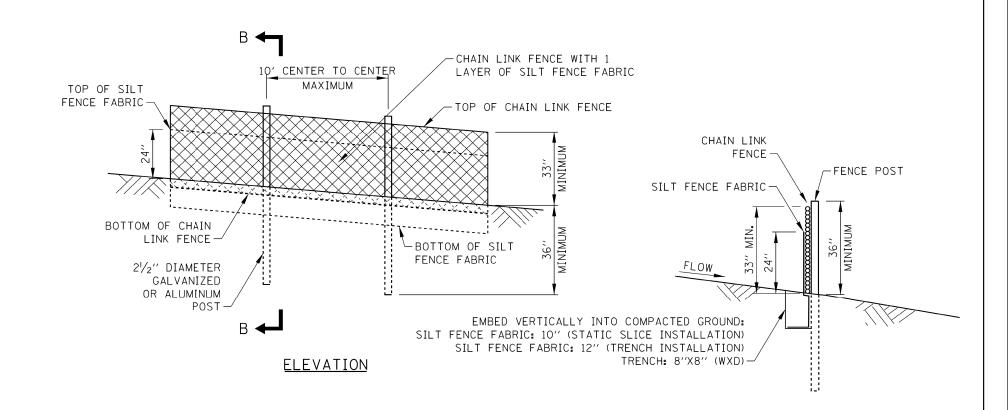
DEPARTMENT OF TRANSPORTATION

NOTES:

- 1. FENCING SHALL BE 36" IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH ILLINOIS TOLLWAY STANDARD DRAWING D1, RIGHT-OF-WAY FENCE, TYPE 1. THE SPECIFICATION FOR A 6' FENCE SHALL BE USED, SUBSTITUTING 36" FABRIC AND 6' LENGTH POSTS.
- CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED. PULL POSTS, CORNER POSTS, HORIZONTAL BRACING AND TIE RODS ARE NOT REQUIRED.
- SILT FENCE FABRIC SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
- WHEN TWO SECTIONS OF SILT FENCE FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED 2' HORIZONTALLY.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED. SILT BUILD-UP AGAINST FENCE SHALL BE REMOVED WHEN SILT REACHES 50% OF FENCE HEIGHT.
- SUPER SILT FENCE IS TO BE USED TO PROTECT ENVIRONMENTALLY SENSITIVE AREAS AND CONTROL SEDIMENT RUNOFF FROM CONSTRUCTION SITES WHEN ADDITIONAL REINFORCEMENT IS REQUIRED DUE TO SLOPE OF SITE OR VOLUME OF STORM WATER RUNOFF.

SUPER SILT FENCE (SSF) STANDARD SYMBOL

——— SSF ———



SECTION B-B

NOTES:

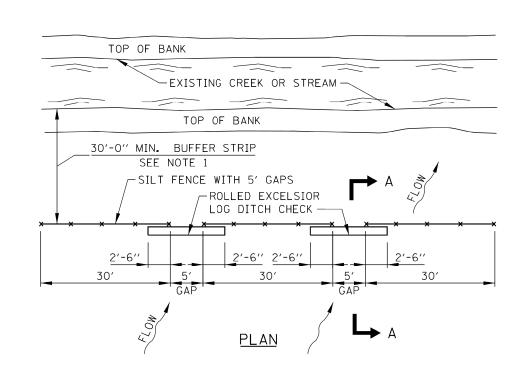
1. A MINIMUM 50' WIDE VEGETATED BUFFER STRIP SHALL BE PRESERVED AND/OR RE-ESTABLISHED WHERE POSSIBLE ALONG EXISTING CHANNELS.

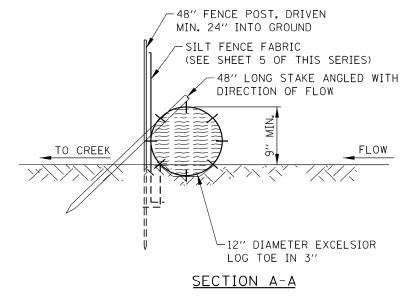
a. FOR ANY WATERS OF THE U.S. DETERMINED TO BE A HIGH-QUALITY AQUATIC RESOURCE, THE BUFFER MUST BE A MINIMUM OF 100'.

b. FOR ANY WATERS OF THE U.S. THAT DO NOT QUALIFY AS WETLAND (FOR EXAMPLE LAKES, RIVERS, PONDS, ETC.), THE BUFFER MUST BE A MINIMUM OF 50' FROM THE ORDINARY HIGH WATER MARK (OHWM).

c. FOR ANY JURISDICTIONAL WETLAND, THE BUFFER MUST BE A MINIMUM OF 50'.

- THE 5' GAPS IN THE SILT FENCE AND THE 12" DIAMETER TEMPORARY DITCH CHECKS ARE TO ALLOW FLOODWATER FLOW INTO THE CREEK FROM THE SITE WITHOUT DAMAGE TO THE SILT FENCE.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT SHALL BE REMOVED WHEN IT REACHES 50% OF ROLL HEIGHT. WHEN THE ROLLED EXCELSIOR LOG IS REDUCED TO 50% OF ROLL HEIGHT IT SHALL BE REPLACED.





SHEET 7 OF 13



EROSION CONTROL & LANDSCAPE

VETERANS MEMORIAL TRAIL

STANDARD K1-09 SECTION COUNTY 11-F3001-01-BT WILL 234 143

CONTRACT NO. 61G74

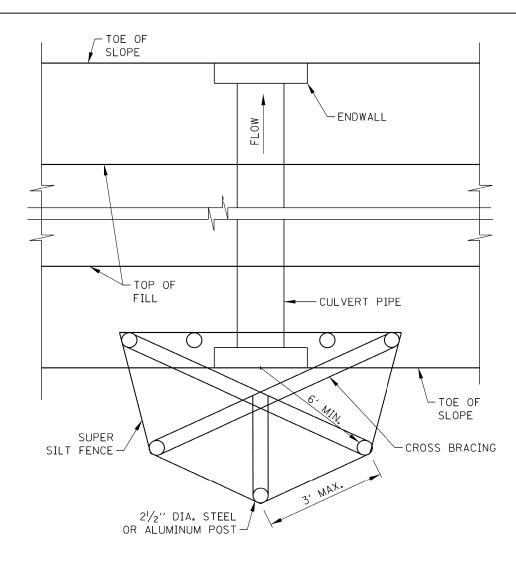
Paul Koracs PATE 2-7-2012

OFFICER		
USER NAME = ken.moy	DESIGNED - JN	REVISED -
	DRAWN - JN	REVISED -
PLOT SCALE = 20.0000 '/ in.	CHECKED - KLM	REVISED -
PLOT DATE = 2/8/2021	DATE - 2/09/2021	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

CREEK BUFFER STRIP AND SILT FENCE

TEMPORARY EROSION AND SEDIMENT CONTROLS DETAIL SHEET 1 OF 2 SHEETS STA.



PLAN VIEW

NOTES:

- CONSTRUCT SUPER SILT FENCE PER SHEET 6 IN THIS SERIES, EXCEPT THE MAXIMUM POST SPACING SHALL BE 3 FEET, THE PLACEMENT OF THE SUPER SILT FENCE SHALL BE A MINIMUM OF 6 FEET FROM THE CULVERT IN THE DIRECTION OF INCOMING FLOW AND THE TOPS OF POSTS SHALL BE CROSS BRACED.
- 2. MAINTENANCE SHALL BE PERFORMED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 50% OF THE FENCE HEIGHT.
- 3. THE CULVERT INLET PROTECTION AND SEDIMENT SHALL BE REMOVED WHEN CONSTRUCTION IS COMPLETE.
- THE CULVERT INLET PROTECTION FENCE TO BE MEASURED AND PAID FOR AS SUPER SILT FENCE.





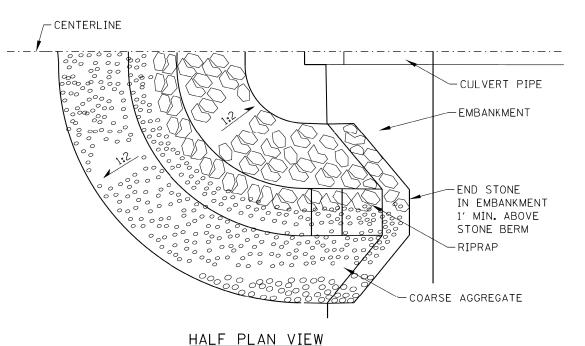


DESIGNED - JN REVISED DRAWN - JN REVISED REVISED PLOT DATE = 2/8/2021 DATE - 2/09/2021 REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

VETERANS MEMORIAL TRAIL TEMPORARY EROSION AND SEDIMENT CONTROLS DETAIL

STANDARD K1-09 COUNTY TOTAL SHEETS SECTION WILL 234 144 11-F3001-01-BT CONTRACT NO. 61G74



- NATURAL GROUND TOP OF RIPRAP AT NATURAL GROUND . TOP OF RIPRAP FLOW FLOW _ -CULVERT PIPE INVERT ►RIPRAP GRADATION RR4 COARSE AGGREGATE -FILTER FABRIC (FOR USE WITH RIPRAP), TOE IN 8" AT EDGES

CENTERLINE CROSS SECTION

NOTES:

- MAINTENANCE SHALL BE PERFORMED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 50% OF THE STONE HEIGHT.
- THE CULVERT INLET PROTECTION AND SEDIMENT SHALL BE REMOVED WHEN CONSTRUCTION IS COMPLETE.
- THE CULVERT INLET PROTECTION STONE TO BE MEASURED AND PAID FOR AS TEMPORARY RIPRAP.

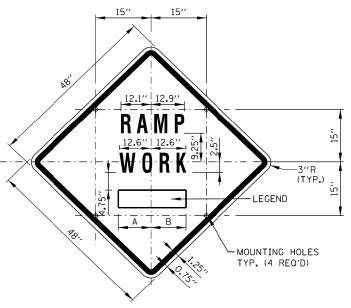
CULVERT INLET PROTECTION - STONE STANDARD SYMBOL





EROSION CONTROL & LANDSCAPE

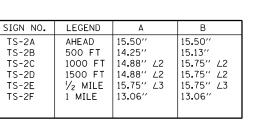
SHEET 2 OF 2 SHEETS STA.

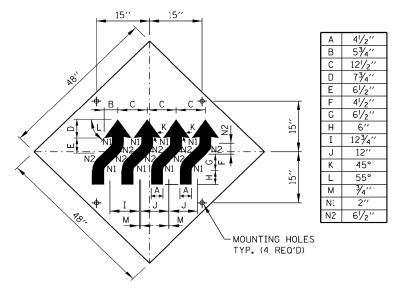


SIGN TS-2 (0)

COLOR: BACKGROUND - FLUORESCENT ORANGE (O) BORDER AND SYMBOL - BLACK SIZE: 48"x48"

LETTERING: 7" FEDERAL SERIES D MOUNTING HOLES: $\frac{7}{6}$ " DIA., 4 HOLES SPACED AS SHOWN

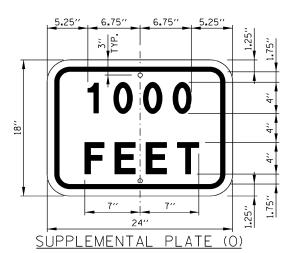




SIGN W1-4dR (0)

COLOR: BACKGROUND-FLUORESCENT ORANGE (0) TYPE A REFLECTIVE SHEETING PER STANDARD SPECIFICATIONS (* A) BORDER AND LETTERS-BLACK

SIZE: 48"×48" MOUNTING HOLES: $\frac{1}{16}$ " DIA., 4 HOLES SPACED AS SHOWN.



COLOR: BACKGROUND - FLUCRESCENT ORANGE (0) BORDER AND LETTTERS - BLACK

SIZE: 24"×18"

LETTERING: 4" FEDERAL SERIES D

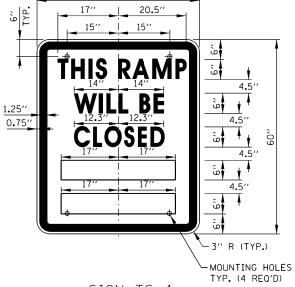
MOUNTING HOLES: 1/6" DIA., 2 HOLES SPACED AS SHOWN

<u>1.25</u>" 0.75 15'' _ 15'' ~3" R (TYP.) -MOUNTING HOLES TYP. (4 REQ'D)

SIGN TS-3

COLOR: BACKGROUND - WHITE (REFLECTORIZED) (*A) BORDER AND LETTERS - BLACK

LETTERING: LEGEND - 8" FEDERAL SERIES D MOUNTING HOLES: 7/6" DIA., 4 HOLES, SPACED AS SHOWN



48"

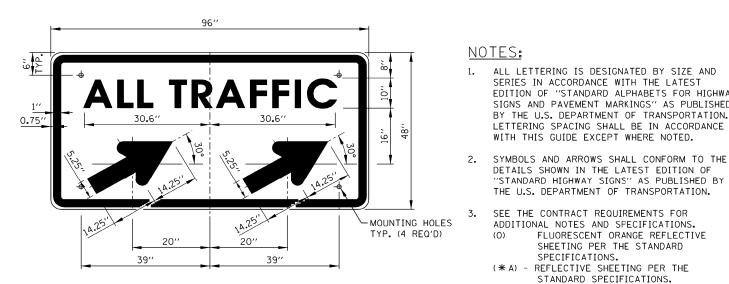
SIGN TS-4

BACKGROUND - WHITE (REFLECTORIZED)(* A) COLOR: BORDER AND LETTERS - BLACK SIZE: 48"x60"

LETTERING: LEGEND - 6" FEDERAL SERIES C
MOUNTING HOLES: 1/16" DIA., 4 HOLES, SPACED AS SHOWN

RAMP CLOSURE ADVANCE INFORMATION SIGN

THE VARIABLE MESSAGE WITH DATES FOR THE BOTTOM TWO LINES SHALL BE DETERMINED BY THE ENGINEER AND GIVEN TO THE CONTRACTOR BEFORE THE REQUIRED FIELD ERECTION DATE.



SIGN TS-5a & TS-5b

COLOR: BACKGROUND - WHITE (REFLECTORIZED)(* A) BORDER AND LETTERS - BLACK ARROW - BLACK

MOUNTING HOLES: 1/6" DIA., 4 HOLES, SPACED AS SHOWN NOTE: SIGN TS-5a IS SHOWN, SUBSTITUTE

(*A) - REFLECTIVE SHEETING PER THE STANDARD SPECIFICATIONS.

SPECIFICATIONS.

SEE THE CONTRACT REQUIREMENTS FOR

ADDITIONAL NOTES AND SPECIFICATIONS.

4. DIMENSIONS INDICATED THUS L ARE BASED ON A REDUCTION IN STANDARD LETTERING SPACING AS SHOWN BELOW:

ALL LETTERING IS DESIGNATED BY SIZE AND

SIGNS AND PAVEMENT MARKINGS" AS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION.

LETTERING SPACING SHALL BE IN ACCORDANCE

DETAILS SHOWN IN THE LATEST EDITION OF

"STANDARD HIGHWAY SIGNS" AS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION.

FLUORESCENT ORANGE REFLECTIVE

SHEETING PER THE STANDARD

SERIES IN ACCORDANCE WITH THE LATEST EDITION OF "STANDARD ALPHABETS FOR HIGHWAY

WITH THIS GUIDE EXCEPT WHERE NOTED.

L1 SPACING REDUCED BY 25%

SHEET 1 OF 2

Illinois

DATE	REVISIONS	Tollway
11-01-12	DELETED SIGN TS-1	
03-31-14	REVISED FINE SIGN NUMBER AND	
	ADDED LED SPEED LIMIT DISPLAY	CONSTRUCTION SIGNS
3-11-2015	REVISED NOTES	
3-31-2017	REVISED END WZSL SIGN COLOR	
3-01-2019	REMOVED STANDARD IDOT SIGNS,	
	REVISED WZSL ASSEMBLY, ADDED WZSL	STANDARD E1-07

Paul Koracs DATE 5-1-2009

,,,,	01110211				
	USER NAME = ken.moy	DESIGNED -	-	JN	REVISED -
		DRAWN -	-	JN	REVISED -
ωı	PLOT SCALE = 20.0000 '/ in.	CHECKED -	-	KLM	REVISED -
	PLOT DATE = 2/8/2021	DATE -	-	2/09/2021	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

STANDARD TRANSITION SECTION COUNTY **VETERANS MEMORIAL TRAIL** 11-F3001-01-BT WILL 234 145 CONSTRUCTION SIGNS DETAIL CONTRACT NO. 61G74 SHEET 1 OF 2 SHEETS STA. TO STA.

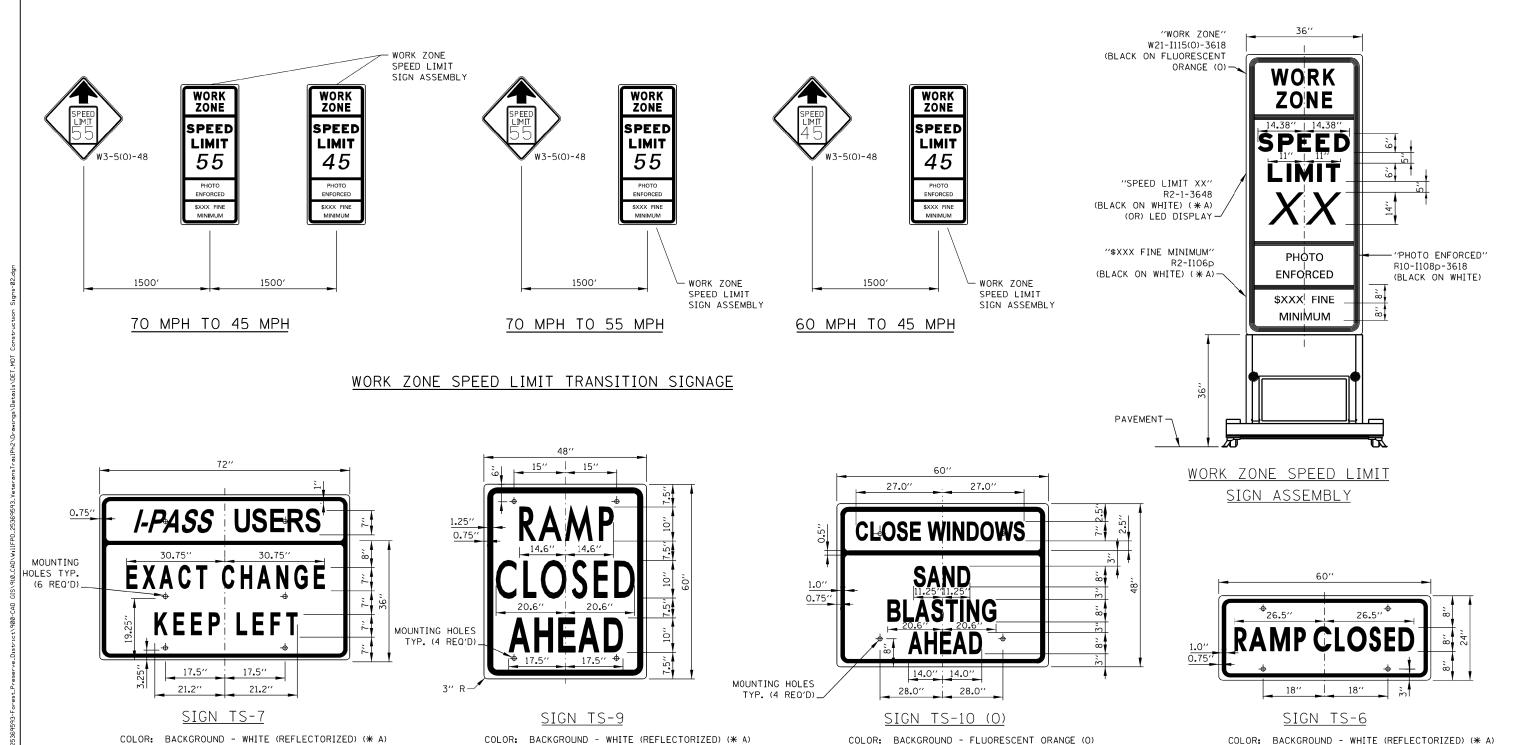
SIZE: 96"×48"

LETTERING: 10" FEDERAL SERIES D

SCALE:

LEGEND "#" FOR "##" FOR SIGN TS-5b

L2 SPACING REDUCED BY 40% L3 SPACING REDUCED BY 50%



COLOR: BACKGROUND - WHITE (REFLECTORIZED) (* A) BORDER AND LETTTERS - BLACK

SIZE: 60"x24"

LETTERING: 8" FEDERAL SERIES C
MOUNTING HOLES: 1/6" DIA. 4 HOLES SPACED AS SHOWN

SHEET 2 OF 2

Illinois *Tollway*

CONSTRUCTION SIGNS

NOTE: SEE SHEET 1 OF THIS SERIES FOR NOTES.

> STANDARD E1-07 SECTION COUNTY



LETTERING:

BORDER AND LETTTERS - BLACK

7" FEDERAL SERIES C

MOUNTING HOLES: 1/6" DIA., 4 HOLES SPACED AS SHOWN

72''×36''

DESIGNED - JN REVISED DRAWN - JN REVISED CHECKED - KLM REVISED PLOT DATE = 2/8/2021 DATE - 2/09/2021 REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

VETERANS MEMORIAL TRAIL CONSTRUCTION SIGNS DETAIL SHEET 2 OF 2 SHEETS STA. TO STA.

BORDER AND LETTTERS - BLACK

LETTERING: 8" FEDERAL SERIES C, 7" FEDERAL SERIES B

MOUNTING HOLES: 7/16" DIA., 4 HOLES SPACED AS SHOWN

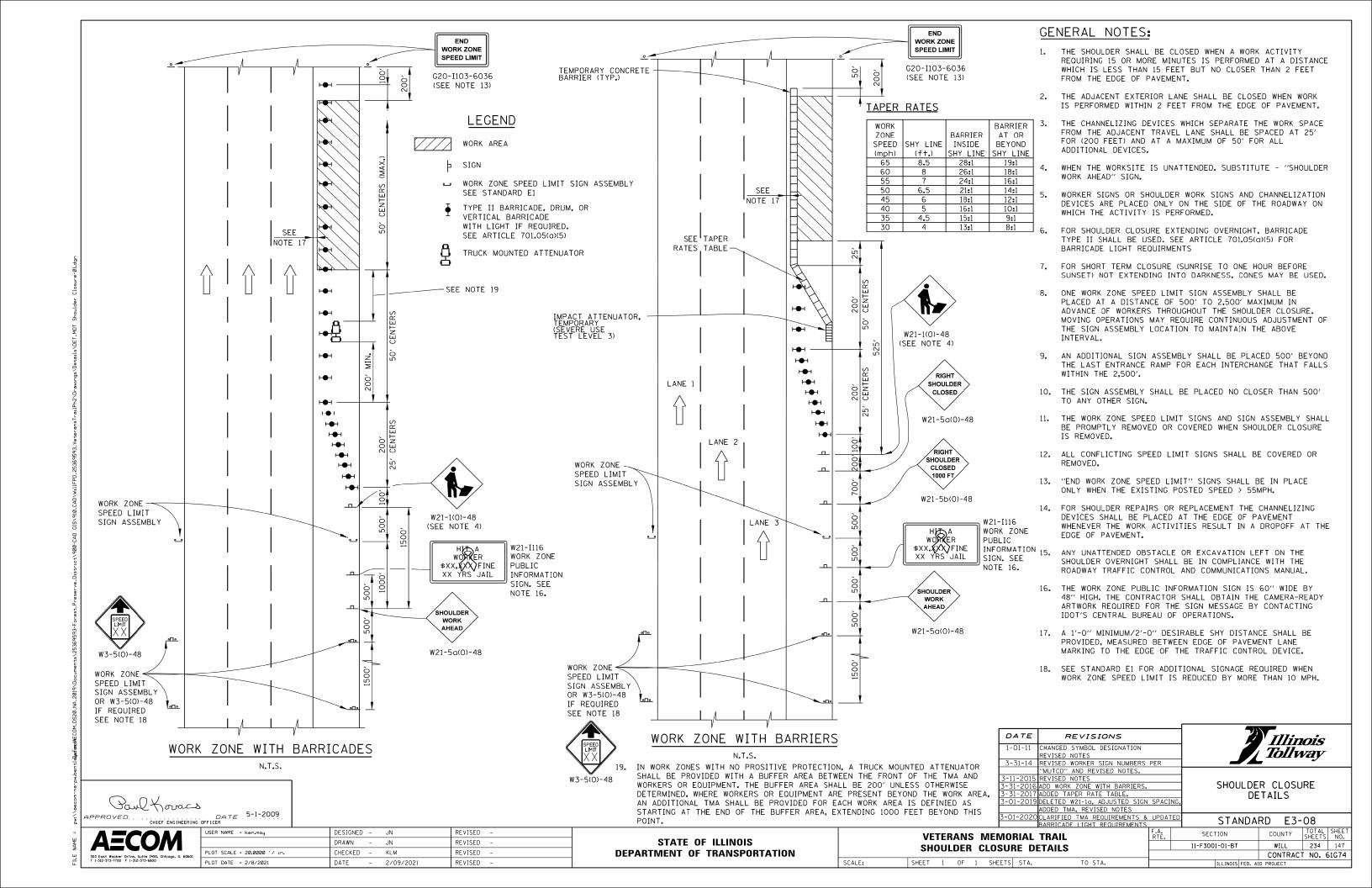
SCALE:

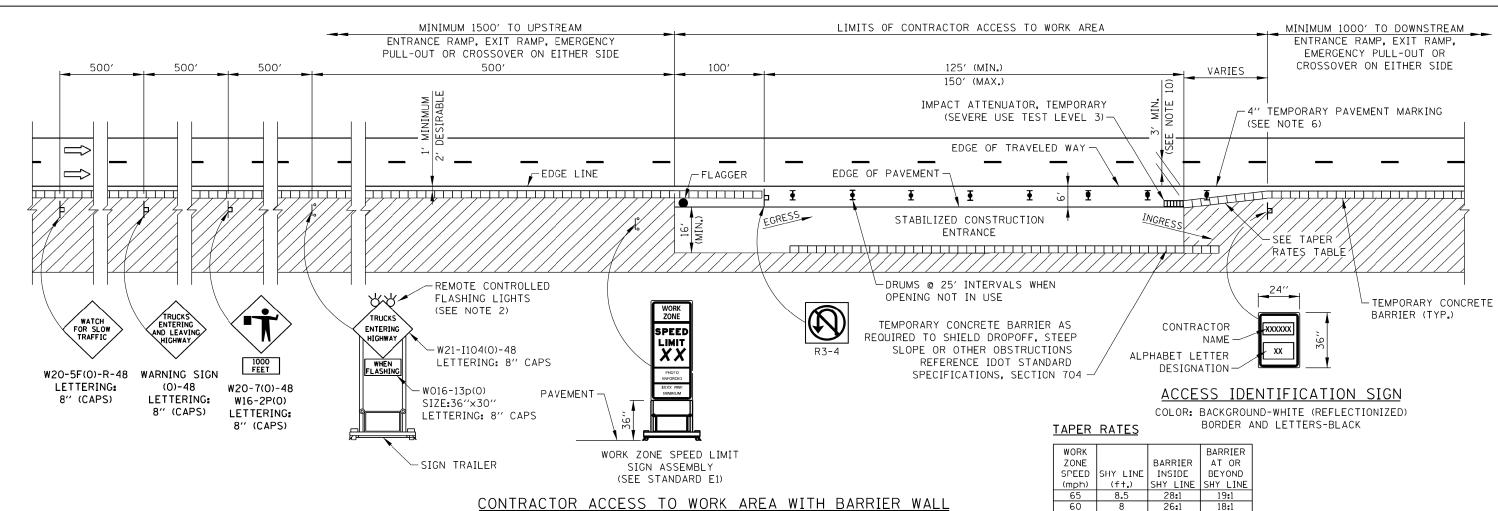
11-F3001-01-BT WILL 234 146 CONTRACT NO. 61G74

BORDER AND LETTTERS - BLACK

LETTERING: 10" FEDERAL SERIES C

MOUNTING HOLES: 7/6" DIA., 4 HOLES SPACED AS SHOWN





CONTRACTOR ACCESS TO WORK AREA WITH BARRIER WALL

NOTES:

- SIGNS DESIGNATED FOR THIS ACCESS TO WORK AREA SHALL BE COVERED OR TURNED AWAY FROM THE TRAFFIC WHEN THE FLAGGER IS NOT ON STATION AND THE ACCESS OPENINGS ARE NOT IN USE.
- THE FLASHING WARNING LIGHT SHALL MEET THE REQUIREMENTS OF ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS AND BE OPERATED BY THE FLAGGER REMOTELY. THE LIGHTS SHALL BE FLASHING ONLY WHEN A VEHICLE IS ENTERING THE ILLINOIS TOLLWAY.
- 3. WHEN THREE LANES OR MORE ARE OPENED TO TRAFFIC, ADVANCE WARNING SIGNS AND ASSEMBLIES SHALL BE PROVIDED ON BOTH SIDES OF TRAVELED WAY.
- WHEN CONTRACTOR ACCESS TO WORK AREA IS ON OPPOSITE SIDE FROM SHOWN, ALL INSTALLATIONS ARE MIRROR IMAGE.
- FOR NIGHTIME OPERATIONS, TEMPORARY LIGHTING OF CONSTRUCTION ACCESS TO WORK AREA SHALL BE PROVIDED.
- 6. TEMPORARY PAVEMENT MARKINGS SHALL BE REPLACED AS OFTEN AS NECESSARY TO DELINEATE OPENINGS.
- IF POSSIBLE, LANE CLOSURES SHALL BE UTILIZED TO ELIMINATE THE MERGING OF CONSTRUCTION TRAFFIC INTO THROUGH TRAFFIC LANES.
- 8. A 1'-0" MINIMUM/2'-0" DESIRABLE SHY DISTANCE SHALL BE PROVIVED. MEASURED BETWEEN EDGE OF PAVEMENT LANE MARKING TO THE EDGE OF THE TRAFFIC CONTROL DEVICES.

- "TRUCKS ENTERING HIGHWAY" SIGN MAY BE SUPPORTED BY OPTIONAL POST OR STAND MOUNTED DEVICES WHEN POSITIONED BEHIND TEMPORARY CONCRETE BARRIER.
- 10. A TEMPORARY EXCEPTION TO THE 3' MINIMUM CLEARANCE BETWEEN EDGE OF TRAVELED WAY AND EDGE OF ATTENUATOR MAY BE REQUESTED FOR PCC PAVING OPERATIONS WHEN THIS CONFIGURATION DOES NOT PROVIDE 4' OF CLEARANCE BETWEEN BACK OF ATTENUATOR AND THE PROPOSED EDGE OF THE LANE BEING CONSTRUCTED IN THE CURRENT STAGE. THE DURATION OF REDUCED CLEARANCE SHALL BE LIMITED TO 24 HOURS.
- 11. CONTRACTOR ACCESS LOCATIONS SHALL BE SPACED NO CLOSER THAN 2,600 FEET BETWEEN AREAS, EXCEPT FOR BRIDGE WORK WHERE 1 ACCESS LOCATION MAY BE PROVIDED ON EACH SIDE OF THE STRUCTURE. AT THESE LOCATIONS, ONLY 1 ACCESS LOCATION AT A TIME WILL BE ALLOWED TO BE OPEN FOR USE.
- 12. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT WORK ZONE EXIT OPENING WILL BE PROHIBITED.
- 13. ALL VEHICLES SHALL USE THEIR TURN SIGNALS TO WARN MOTORISTS WHEN ENTERING AND EXITING THE WORK ZONE OPENINGS.
- 14. FLAGGERS SHALL NOT STOP TRAFFIC OR DIRECT TRAFFIC INTO AN ADJACENT LANE.
- 15. IN WORK ZONES WITH NO POSITIVE PROTECTION, A TRUCK MOUNTED ATTENUATOR (TMA) SHALL BE PROVIDED WITH A BUFFER AREA BETWEEN THE FRONT OF THE TMA AND WORKERS OR EQUIPMENT. THE BUFFER AREA SHALL BE 200' UNLESS OTHERWISE DETERMINED. WHERE WORKERS OR EQUIPMENT ARE PRESENT BEYOND THE WORK AREA, AN ADITIONAL TMA SHALL BE PROVIDED FOR EACH WORK AREA. A WORK AREA IS DEFINED AS STARTING AT THE END OF THE BUFFER AREA, EXTENDING 1000 FEET BEYOND THIS POINT.

SCALE.

LEGEND

24:1

21:1

18:1

16:1

13:1

FLAGGER

50

45

40

6.5

- SPOTTER
- CONSTRUCTION SIGN ON SUPPORT PER ILLINOIS TOLLWAY STANDARD UNLESS

18:1

14:1

12:1

10:1 9:1

- DIRECTION OF TRAFFIC FLOW
- WORK AREA
- DRUM WITH LIGHT IF REQUIRED. SEE ARTICLE 701.05(d)(5)
- TRUCK MOUNTED ATTENUATOR (TMA) (ROLL WITH MOVING OPERATION)

SHEET 1 OF 2

W Illinois		
/ Tollway	REVISIONS	DATE
	REVISED NOTES.	3-01-2013
	REVISED NOTE FOR TEMPORARY	3-31-2014
	CONCRETE BARRIER.	
CONTRACTOR ACCESS	ADDED TAPER RATES TABLE	3-31-2017
TO WORK AREA	ADDED NOTES 10 & 11	3-01-2018
TO HOUR AMEN	ADDED SHEET FOR DETAILS	3-01-2019
	WITHOUT BARRIER WALL	
STANDARD E6-06	CLARFIED TMA REQUIREMENTS &	3-01-2020
	UPDATED BARRICADE LIGHT REO.	
GEOTION CONNENT TOTAL SHE	[F.Δ.]	

DATE 2-7-2012

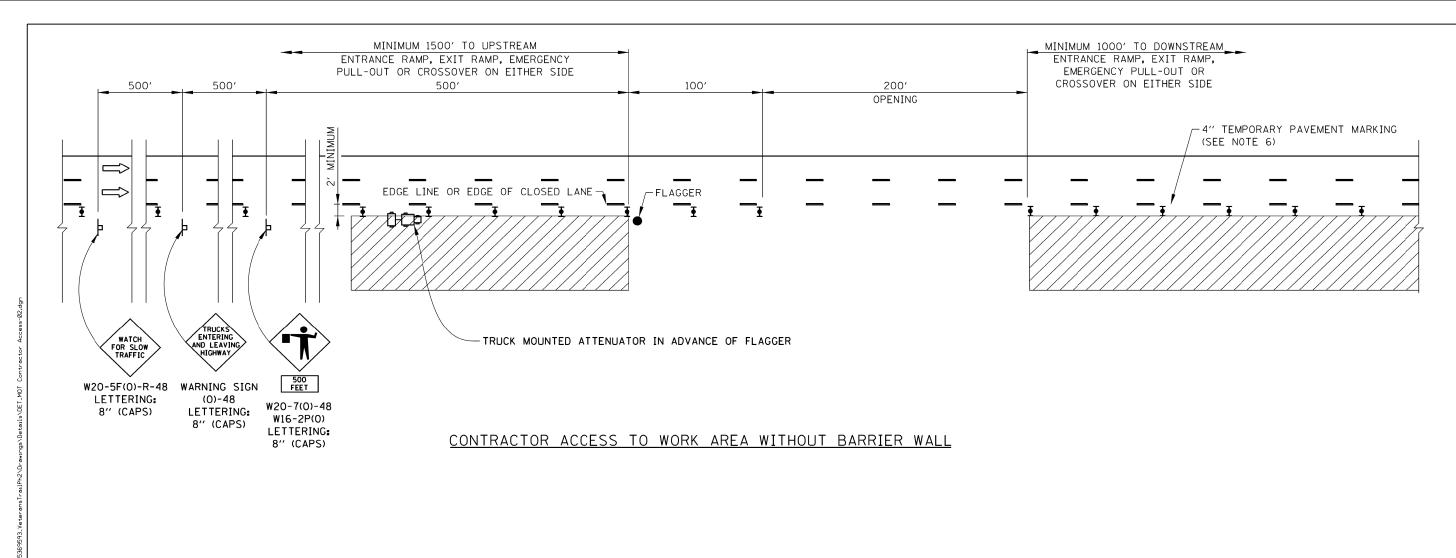
Paul Koracs

DESIGNED - JN REVISED USER NAME = ken.mou DRAWN -JN REVISED HECKED -KLM REVISED PLOT DATE = 2/8/2021 DATE - 2/09/2021 REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

VETERANS MEMORIAL TRAIL CONTRACTOR ACCESS TO WORK AREA SHEET 1 OF 2 SHEETS STA.

SECTION COUNTY SHEETS 11-F3001-01-BT WILL 234 148 CONTRACT NO. 61G74





SPOTTER

CONSTRUCTION SIGN ON SUPPORT PER ILLINOIS TOLLWAY STANDARD UNLESS NOTED

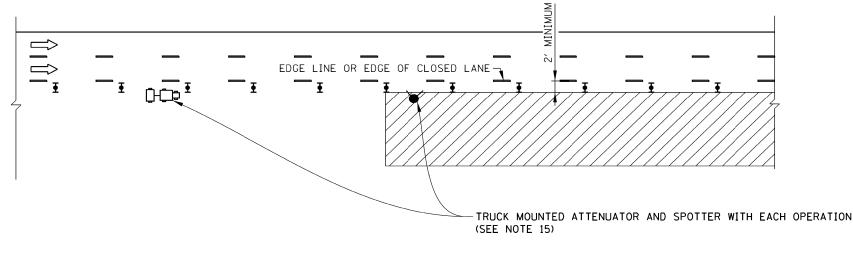
DIRECTION OF TRAFFIC FLOW



WORK AREA

Ī DRUM WITH LIGHT IF REQUIRED. SEE ATICLE 701.05(d)(5)

TRUCK MOUNTED ATTENUATOR (TMA) (ROLL WITH MOVING OPERATION)



SPOTTER AND TMA AT WORK AREA



CONTRACTOR ACCESS TO WORK AREA

STANDARD E6-06

Paul Koracs

CHIEF ENGINEERING OFFICER 2-7-2012 DESIGNED - JN REVISED DRAWN - JN REVISED CHECKED - KLM REVISED PLOT DATE = 2/8/2021 DATE - 2/09/2021 REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

VETERANS MEMORIAL TRAIL CONTRACTOR ACCESS TO WORK AREA SHEET 2 OF 2 SHEETS STA.

COUNTY TOTAL SHEET NO. WILL 234 149 11-F3001-01-BT CONTRACT NO. 61G74

