#### **FULL SIZE**

- 3.1 Mailbox Turnout in Curb and Gutter Section
- 4.1 PC Concrete Islands and Medians Accessible to the Disabled
- 5.1 Standard Outlet for Curb and Gutter
- 6.1 Precast Reinforced Concrete Flat Slab Top Centered and Offset Manhole 36" Opening
- 10.1 Box Culvert End Sections
- 11.1 Concrete End Sections for Parallel Pipe Culverts 15" thru 84" Dia.
- 12.1 Concrete End Sections for Parallel Pipe Arch Culverts 15" thru 84" Dia.
- 13.1 Traversable Pipe Grate for Box Culvert End Section
- 14.1 Traversable Pipe Grate for Parallel Drainage Structure
- 20.1 Hot-Mix Asphalt Approaches and Mailbox Returns
- 25.1 Entrance Approaches Urban Area
- 26.1 ADA Curb Ramp Pavement Removal And Replacement
- 32.1 Sewer and Water Main Crossings
- 33.1 Concrete Collars for Pipe or Box Culvert Extensions
- 34.1 Work Zone Sign Details
- 35.1 Urban Lane Inside Closure, Multilane, 2W, with Mountable Median
- 36.1 Temporary Road Closure Expressway
- 37.1 Traffic Control for Three Lane Section
- 38.1 Traffic Control for Transition Areas
- 39.1 Traffic Control Typical Weave
- 40.1 Traffic Control for Road Closure
- 41.1 Typical Pavement Markings
- 53.1 Remove and Re-erect Steel Plate Beam Guardrail
- 54.1 Traffic Barrier Terminal, Type 2 (27" height)
- 55.1 Guardrail Reflectors, Type C (Special)
- 68.1 Slotted Drain Pipe (Variable Height)
- 71.1 Detail of Flood Gate
- 72.1 40' Single Lane Median Crossover (45 mph Work Zone Speed Limit)
- 73.1 50' Single Lane Median Crossover (45 mph Work Zone Speed Limit)
- 74.1 64' Single Lane Median Crossover (45 mph Work Zone Speed Limit)
- 75.1 40' Single Lane Median Crossover (55 mph Work Zone Speed Limit)
- 76.1 50' Single Lane Median Crossover (55 mph Work Zone Speed Limit)
- 77.1 64' Single Lane Median Crossover (55 mph Work Zone Speed Limit)
- 78.1 88' Single Lane Median Crossover (55 mph Work Zone Speed Limit)
- 79.1 40' Two Lane Median Crossover (45 mph Work Zone Speed Limit)
- 80.1 50' Two Lane Median Crossover (45 mph Work Zone Speed Limit)
- 81.1 64' Two Lane Median Crossover (45 mph Work Zone Speed Limit)
- 82.1 40' Two Lane Median Crossover (55 mph Work Zone Speed Limit)
- 83.1 50' Two Lane Median Crossover (55 mph Work Zone Speed Limit)
- 84.1 64' Two Lane Median Crossover (55 mph Work Zone Speed Limit)
- 85.1 88' Two Lane Median Crossover (55 mph Work Zone Speed Limit)
- 86.1 Beveled Pipe & Guard Detail for Median Crossover
- 90.1 Traffic Barrier Terminal, Type 6B (Special)
- 92.1 Details of Planting and Bracing Trees

#### Full Size District 2 Standards

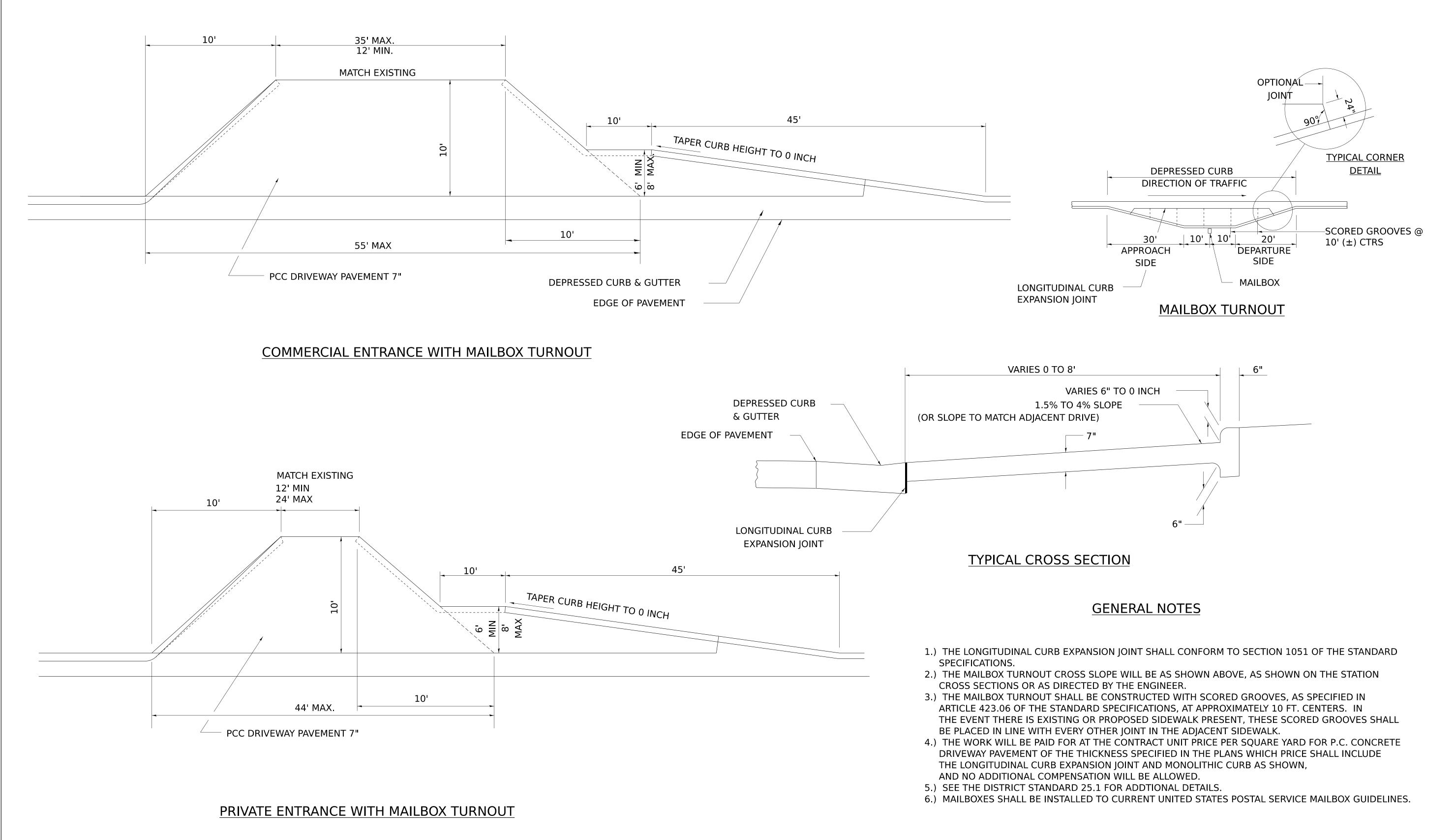
3.1	Use when a mailbox turnout is needed in a curb & gutter section and there isn't a parking lane or a mail delivery lane.
4.1	Use this when there are cross walks that will go through an island or median. Specify which option the contractor is required to use when building the Concrete Median (Special).
5.1	Use this when you need an outlet for curb and gutter, other than type B-6.24
10.1	This is to be used whenever we have a precast box culvert.
11.1	This is to be used for pipe culverts, Class D under all sideroads.
12.1	This is to be used for EQRS pipe culverts, Class D under all sideroads.
13.1	Use this whenever a cross drainage box culvert end section needs traversable pipe grates. Also include Standard 542311.
14.1	Use this whenever you use District Standards 10.1, 11.1 & 12.1 and the culvert is within the main line clear zone.
20.1	Include for rural entrances and sideroads on 3R projects, reconstruction projects, or for new entrances. Do not include on 3P or Smart resurfacing projects.
25.1	Include for urban entrances with curb & gutter on 3R projects, reconstruction projects, or for new entrances. Do not include on 3P or Smart resurfacing projects.
26.1	Use this on all projects with ADA curb ramps requiring HMA replacement in front of curb & gutter.
32.1	Include in urban projects with proposed storm sewers or water mains.
33.1	Use this for pipe or box culvert extensions. Fill in the information in the table for the Bill of Materials.

34.1	<ul> <li>Work Zone Sign Details. Include this when you have any of the following:</li> <li>Include in projects where the clear width through a work zone with temporary concrete barrier wall will be 16.0 feet or less.</li> <li>Include when using Traffic Control and Protection Standard 701316 or 701321.</li> <li>Use this in conjunction with the special provision Traffic Control for Narrow Lanes which is under the Traffic Control Plan. Use this on one-lane stage construction jobs when the lane is less than 13'-6" measured from the toe of the barrier wall to the guardrail or bridge wall.</li> <li>Use this when using District Standard 37.1 and 38.1.</li> <li>Use this on low volume entrances that are between the traffic signals on Highway Standard 701316 or 701321.</li> <li>Include this for any milling of the mainline pavement.</li> </ul>
35.1	Use this when it is necessary to close the inside lane on an urban project. Also include Highway Standard 701606 and the pay item for 701606.
36.1	Use this district standard for any short term closure of an expressway at a diamond interchange.
37.1	Use this district standard for work that will require a lane closure in a three lane section such as a truck climbing lane.
38.1	Use this district standard when there is a transition from a four lane section that transitions to a two lane section.
39.1	Include on 4 lane highways where the contractor may change a portion of the work to the opposite lane.
40.1	Include for a mainline road closure.
41.1	Include in projects with pavement marking or raised reflective pavement markers.
53.1	Use this to remove and re-erect an old type steel plate beam guardrail which has $6$ " block outs and a $27\frac{1}{2}$ " rail height.
54.1	Use this when installing a Traffic Barrier Terminal, Type 2 on the old type of steel plate beam guardrail with a $27\frac{1}{2}$ " rail height.
55.1	This will be used on all projects with guardrail, permanet barrier wall, and bridge structures. Use pay item (X7820007 Guardrail Reflectors. Type C (Special)). ( <b>Do not</b> use the pay items Guardrail Reflectors Type A & B or Barrier Wall Reflectors Type B & C).
68.1	This can be used to increase drainage in curb & gutter with very flat grades (less than 0.3%). Also include this when constructing median crossovers.

#### District 2 Standards Designer Notes

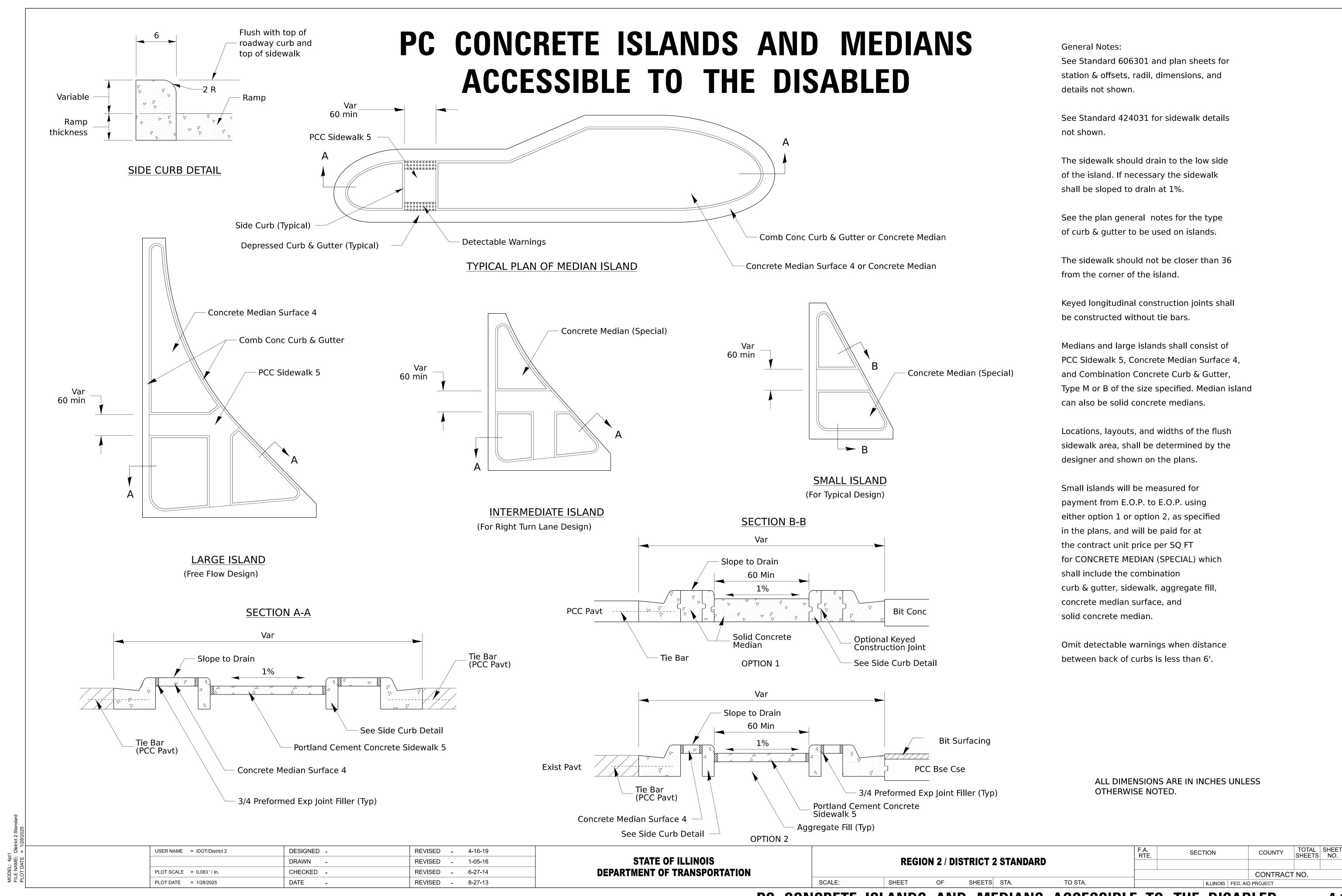
71.1	Use if a property owner has a fenced field with livestock and a stream or river. The flood gate will be placed near the right-of-way to prevent livestock from leaving the field through the waterway. During high water, the flood gate will open to let water and debris through.
72.1, 73.1, 74.1, 75.1, 76.1, 77.1, 78.1	Use on single lane median crossovers of the median width specified and for the work zone speed limit. Include District Standard 86.1. If there are overlays on the existing PCC pavement, installing tie bars into the existing PCC pavement will not work. Talk to the Construction Field Engineer or your Project Engineer for more information.
79.1, 80.1, 81.1, 82.1, 83.1, 84.1, 85.1	Use on two lane median crossovers of the median width specified and for the work zone speed limit. Include District Standard 86.1. If there are overlays on the existing PCC pavement, installing tie bars into the existing PCC pavement will not work. Talk to the Construction Field Engineer or your Project Engineer for more information.
90.1	Use this on 4-lane highways that go under dual structures and the piers required shielding. The outside of the piers are shielded with impact attenuators. The gap between the piers is shielded using Traffic Barrier Terminal Type 6B (Special). The Traffic Barrier Terminal Type 6B (Special) is required on both sides of the piers.  Design Note: The <u>length</u> of the double thrie beam between the piers <u>must be added on the elevation on the District Standard</u> .
92.1	Include when planting new ball & burlapped trees.

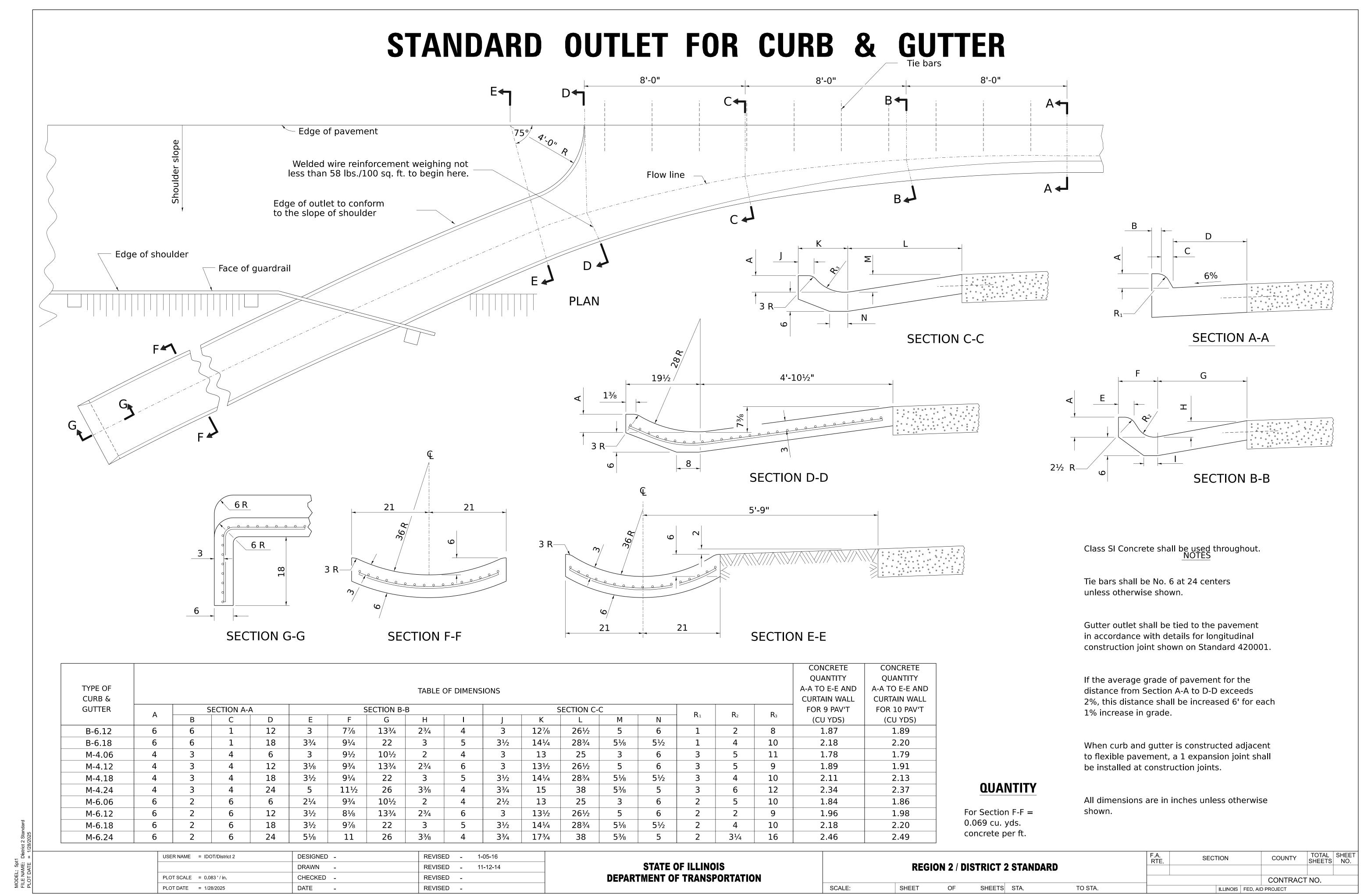
# MAILBOX TURNOUT IN CURB AND GUTTER SECTION

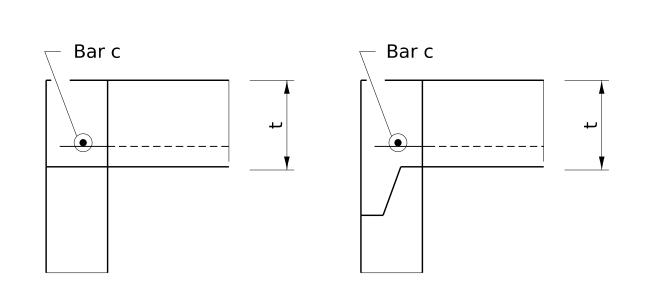


ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

TOTAL SHEET NO. DESIGNED -REVISED 1-10-19 USER NAME = IDOT/District 2 **SECTION** STATE OF ILLINOIS **REGION 2 / DISTRICT 2 STANDARD** DRAWN 1-03-18 REVISED -REVISED -**DEPARTMENT OF TRANSPORTATION** CHECKED -10-17-11 PLOT SCALE = 0.083'/in. CONTRACT NO. DATE REVISED -SCALE: SHEETS STA. TO STA. PLOT DATE = 1/28/2025 ILLINOIS | FED. AID PROJECT

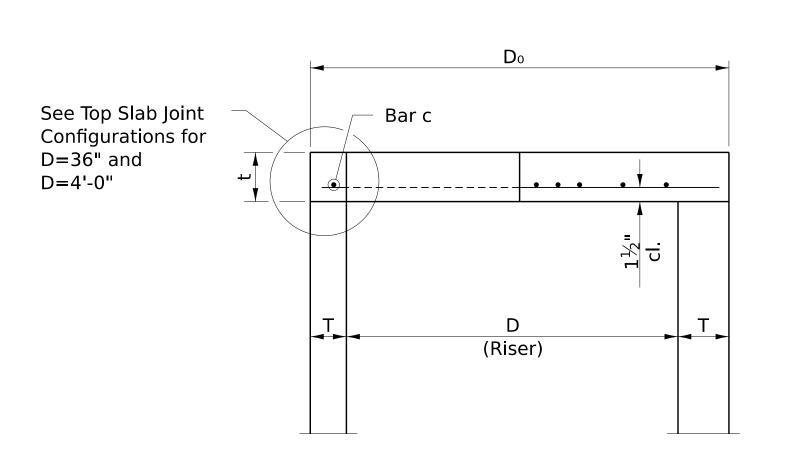




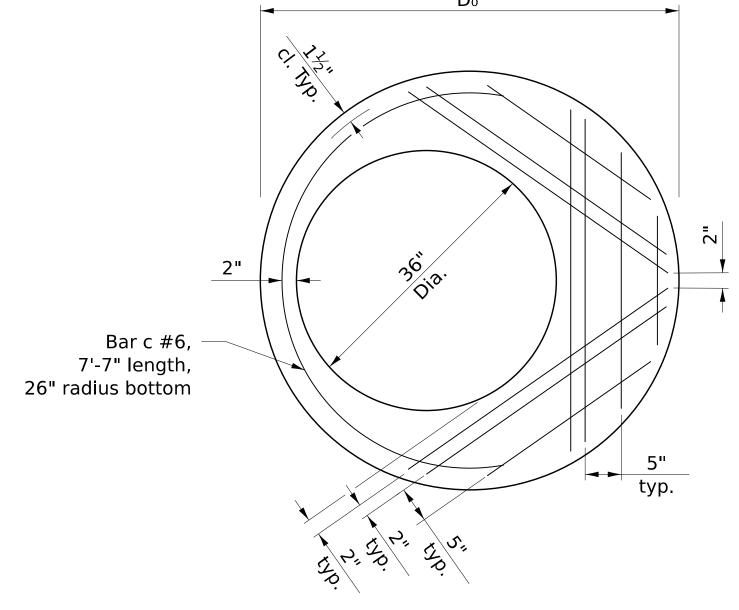


FLAT SLAB TOP JOINT CONFIGURATIONS FOR D = 4'-0'' AND D = 6'-0''

(Shown at access hole)

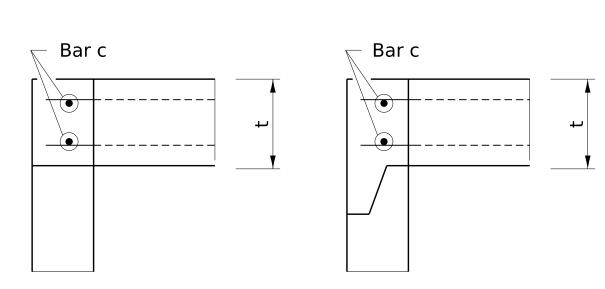


SECTION THRU FLAT SLAB TOP FOR D = 4'-0'' AND D = 6'-0''



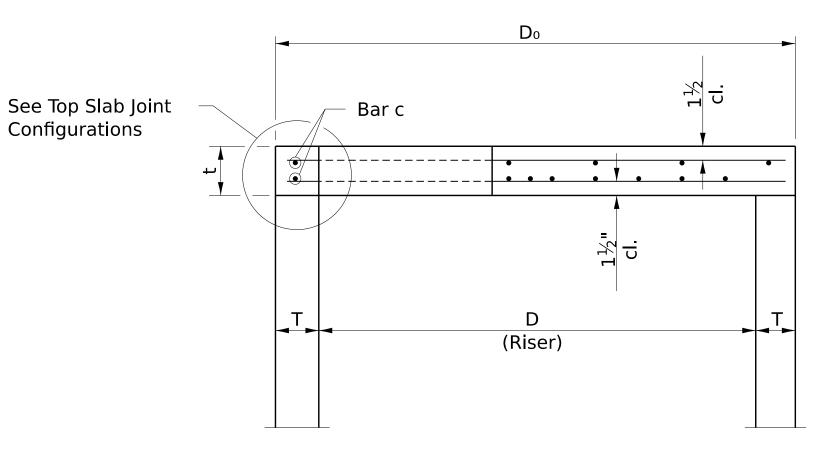
PLAN - FLAT SLAB TOP FOR D = 4'-0"

(Showing layout of reinforcement bars and c bars)

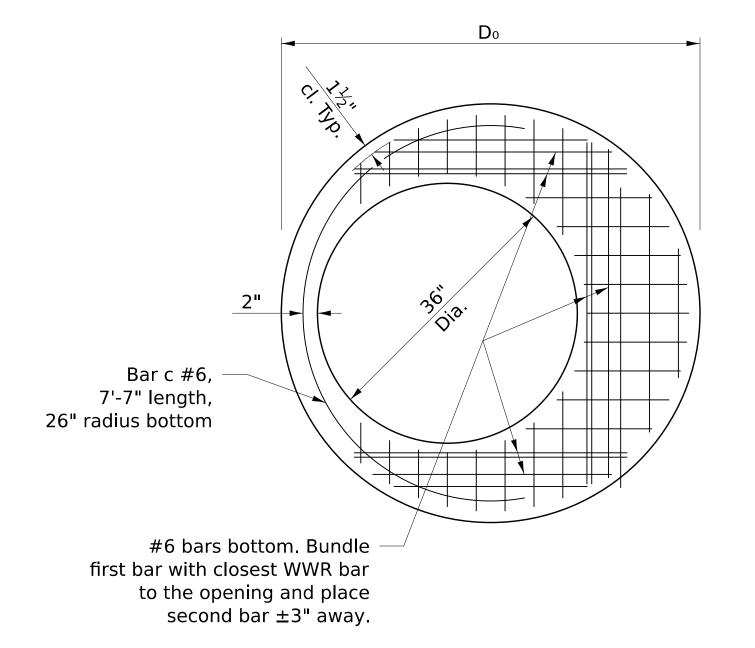


FLAT SLAB TOP JOINT CONFIGURATIONS FOR D = 8'-0" AND D = 10'-0"

(Shown at access hole)



SECTION THRU FLAT SLAB TOP FOR D = 8'-0'' AND D = 10'-0''



PLAN - FLAT SLAB TOP FOR D = 4'-0"

(Showing layout of welded wire reinforcement and c bars)

# **GENERAL NOTES**

The flat slab top may be used in lieu of the tapered tops shown on Standards 602001, 602016, or 602306 at the option of the Contractor or when field conditions prohibit the use of tapered tops.

Lifting holes shall be located in the sections as per the manufacturer's recommendations.

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

# $\mathsf{D}_0$ (min.) 4'-0" 6'-0" 10'-0" 12"

**TABLE** 

DESIGNED REVISED 3-23-23 USER NAME = IDOT/District 2 DRAWN REVISED CHECKED -REVISED PLOT SCALE = 0.0833'/in. PLOT DATE = 1/28/2025 DATE REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

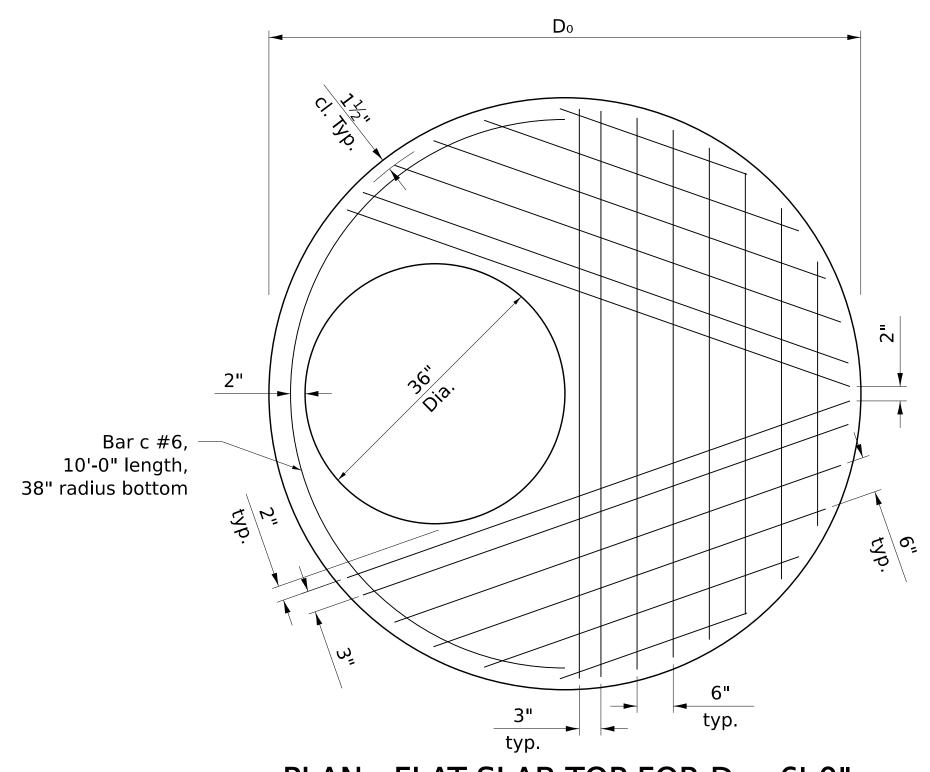
**REGION 2 / DISTRICT 2 STANDARD** SHEETS STA. SHEET TO STA. ILLINOIS FED. AID PROJECT

SCALE:

TOTAL SHEET SHEETS NO.

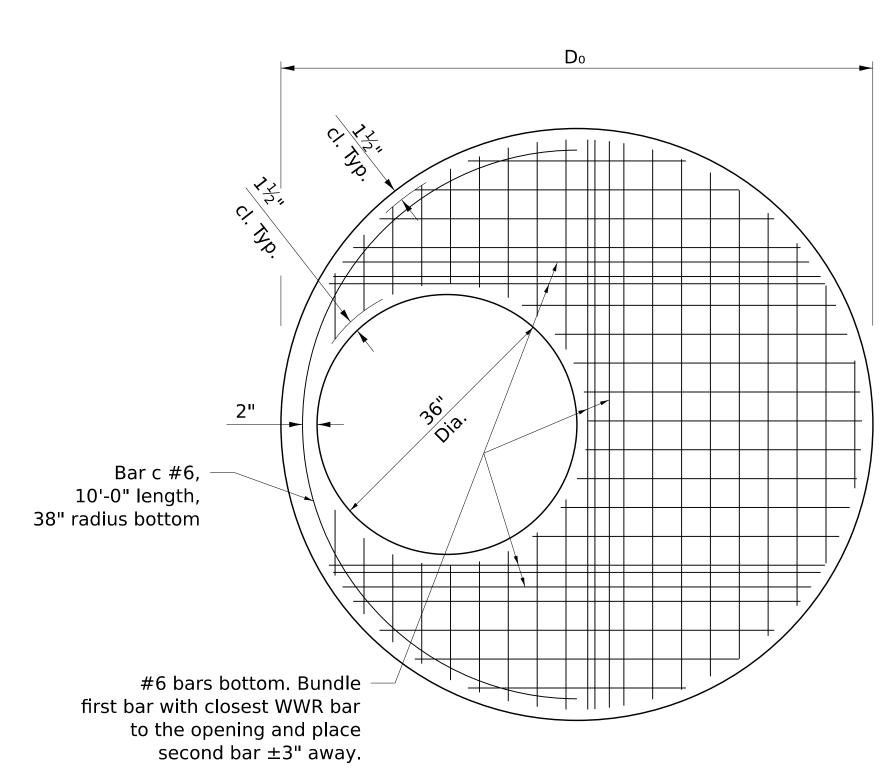
COUNTY

CONTRACT NO.



# PLAN - FLAT SLAB TOP FOR D = 6'-0"

(Showing layout of reinforcement bars and c bars)



# PLAN - FLAT SLAB TOP FOR D = 6'-0"

(Showing layout of welded wire reinforcement and c bars)

Bar c #6,
12'-0" length,
50" radius
top and bottom

#6 bars bottom. Bundle
first bar with closest WWR bar
to the opening and place
second bar ±3" away.

2"

2"

2"

2"

2"

4"

4"

typ.

# PLAN - FLAT SLAB TOP FOR D = 8'-0"

(Showing layout of reinforcement bars and c bars)

PLAN -	. ΕΙ ΔΤ	SIAR	TOP	FOR .	D =	8'-0"
FLAN -	• • • ~ •	JLAD	IOE			0-0

(Showing layout of welded wire reinforcement and c bars)

	USER NAME = IDOT/District 2	DESIGNED -	REVISED - 3-23-23				F.A. RTF	SECTION COUNTY TOTAL SHEET NO.
<u> </u>		DRAWN -	REVISED -	STATE OF ILLINOIS	REGION 2 / DISTRICT 2 STANDARD			
	PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION				CONTRACT NO.
	PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE:	SHEET OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT

Bar c #6,

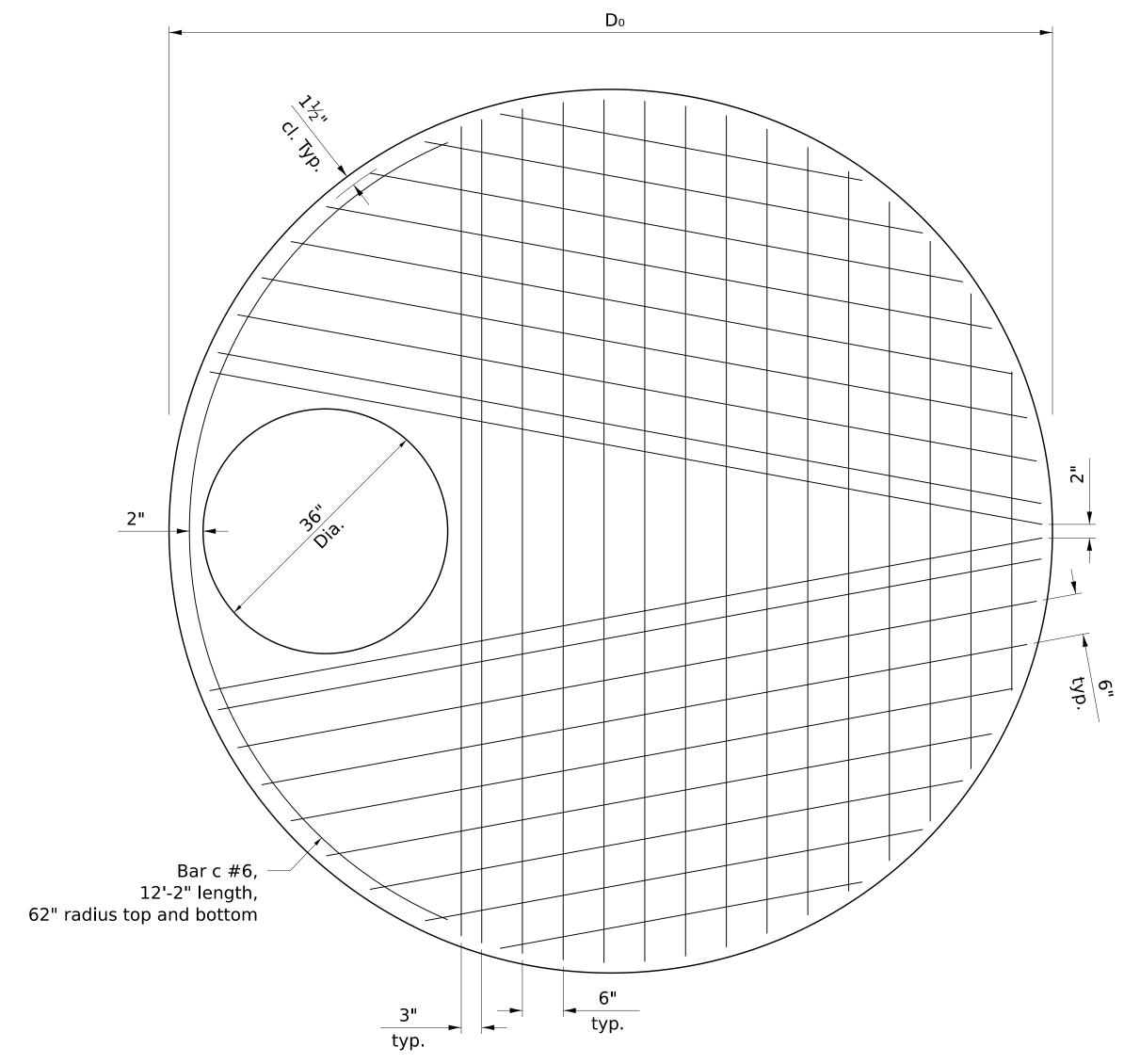
50" radius

12'-0" length,

top and bottom

STATE OF ILLINOIS

**DEPARTMENT OF TRANSPORTATION** 



# PLAN - FLAT SLAB TOP FOR D = 10'-0"

(Showing layout of reinforcement bars and c bars)

# FLAT SLAB TOP REINFORCEMENT FOR D = 4'-0"

Location	WWR (eacl	n direction)	Rebar				
Location	A <sub>s</sub> (min.)	Spacing (max.)	A <sub>s</sub> (min.)	Spacing (max.)	Bar Size		
Bottom Mat	* 0.88 sq. in./ft.	6"	· •	See plan view for rebar orientation and spacing and this table for bar size			

# FLAT SLAB TOP REINFORCEMENT FOR D = 6'-0"

Location	WWR (eacl	n direction)	Rebar				
Location	A <sub>s</sub> (min.)	Spacing (max.)	A <sub>s</sub> (min.)	Spacing (max.)	Bar Size		
Bottom Mat	* 0.88 sq. in./ft.	6"	6" See plan view for rebar orientation and spacing and this table for bar size				

REVISED

REVISED

REVISED

DESIGNED

CHECKED -

DRAWN

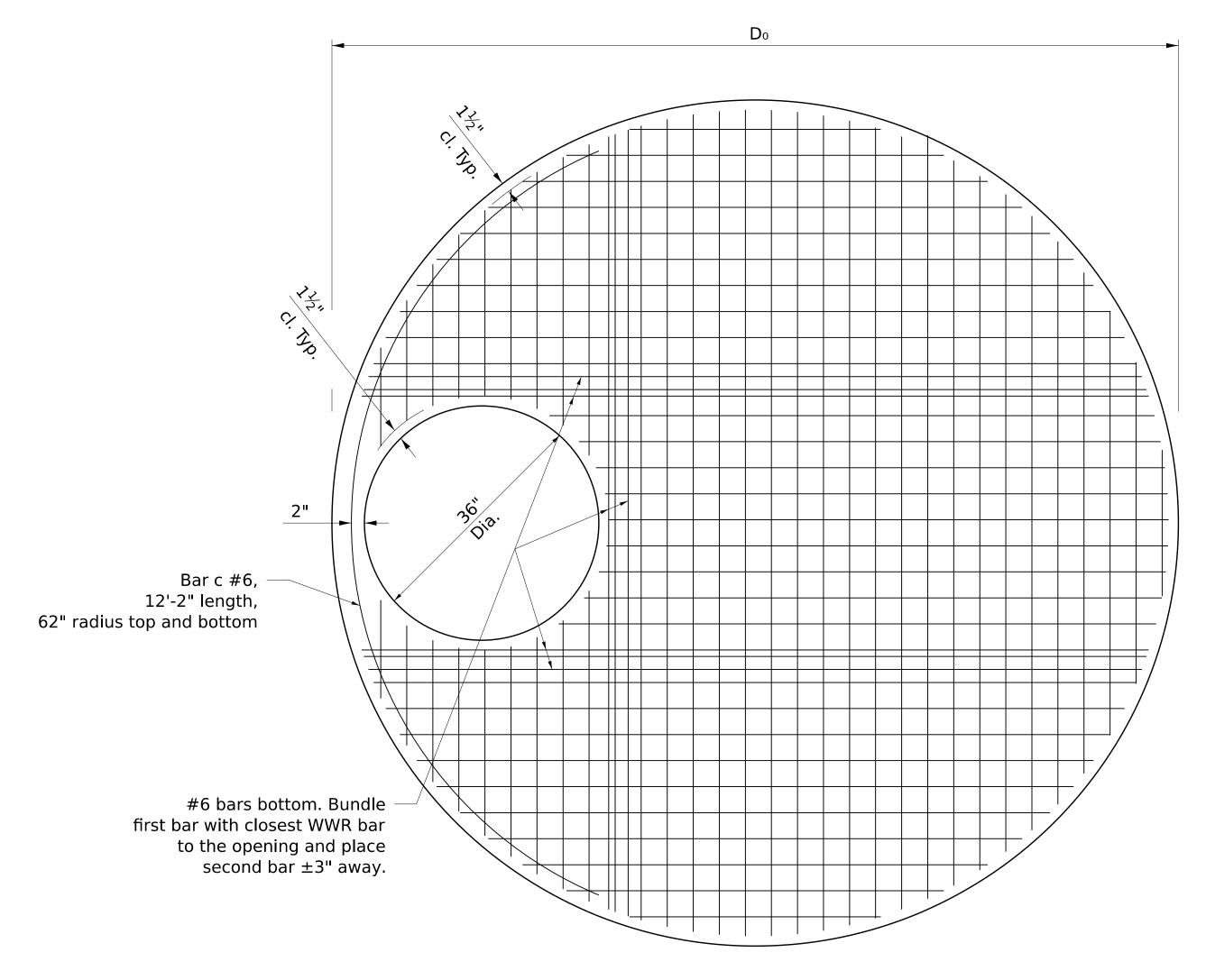
DATE

USER NAME = IDOT/District 2

PLOT SCALE = 0.083'/in.

PLOT DATE = 1/28/2025

3-23-23



# PLAN - FLAT SLAB TOP FOR D = 10'-0"

(Showing layout of welded wire reinforcement and c bars)

# FLAT SLAB TOP REINFORCEMENT FOR D = 8'-0"

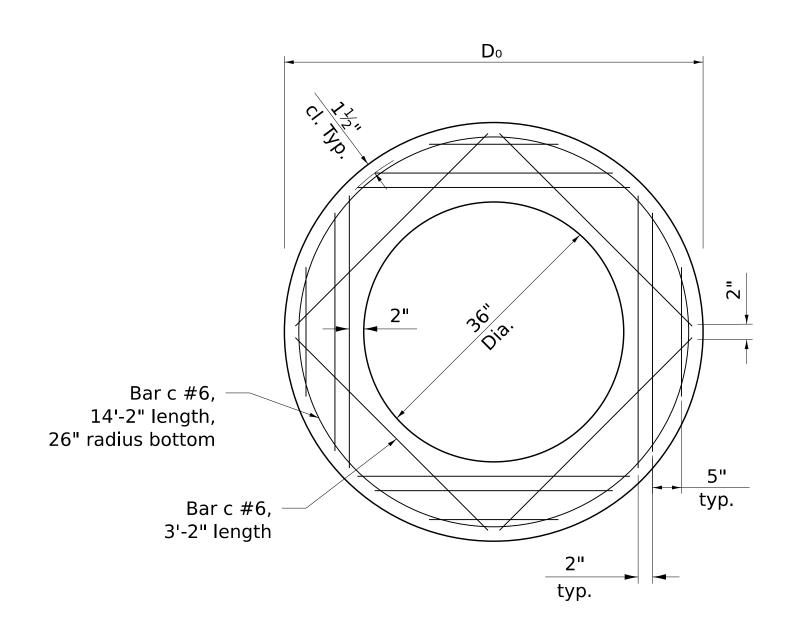
Location	WWR (eacl	n direction)	Rebar (each direction except as noted)					
Location	A <sub>s</sub> (min.)	Spacing (max.)	A <sub>s</sub> (min.)	Spacing (max.)	Bar Size			
Top Mat	0.11 sq. in./ft.	18"	0.11 sq. in./ft.	18"	#3 or #4			
Bottom Mat	* 0.88 sq. in./ft.	6"	See plan view for spacing and this	#6				

<sup>\*</sup> Only one layer of WWR permitted to avoid congestion.

## FLAT SLAB TOP REINFORCEMENT FOR D = 10'-0"

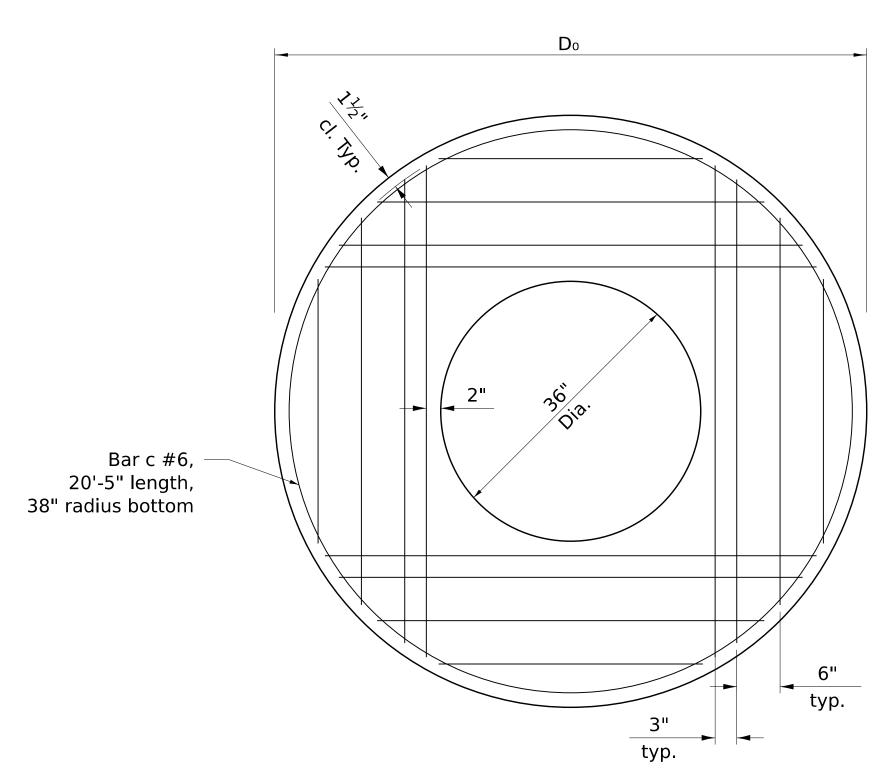
Location	WWR (eacl	n direction)	Rebar (each direction except as noted)				
Location	A <sub>s</sub> (min.)	Spacing (max.)	A <sub>s</sub> (min.)	Spacing (max.)	Bar Size		
Top Mat	0.11 sq. in./ft.	18"	18" 0.11 sq. in./ft. 18"				
Bottom Mat	* 0.88 sq. in./ft.	6"	See plan view for spacing and thi	#6			

<sup>\*</sup> Only one layer of WWR permitted to avoid congestion.



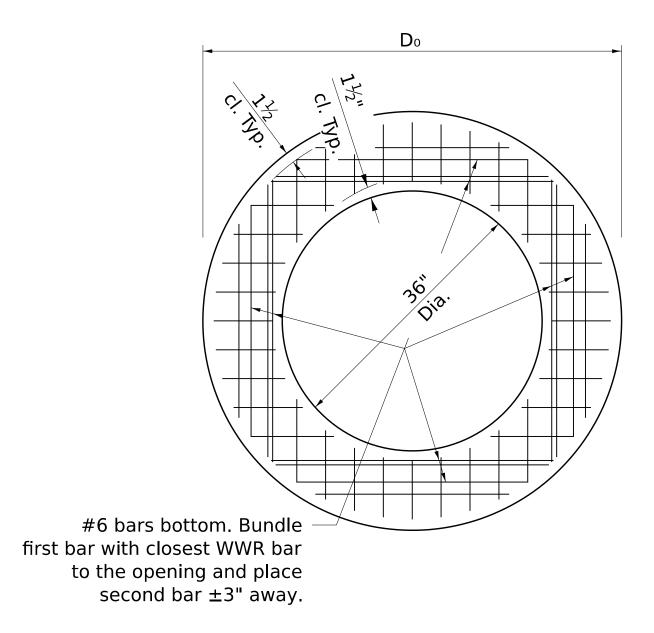
# PLAN - FLAT SLAB TOP FOR D = 4'-0"

(Showing layout of reinforcement bars and c bars)



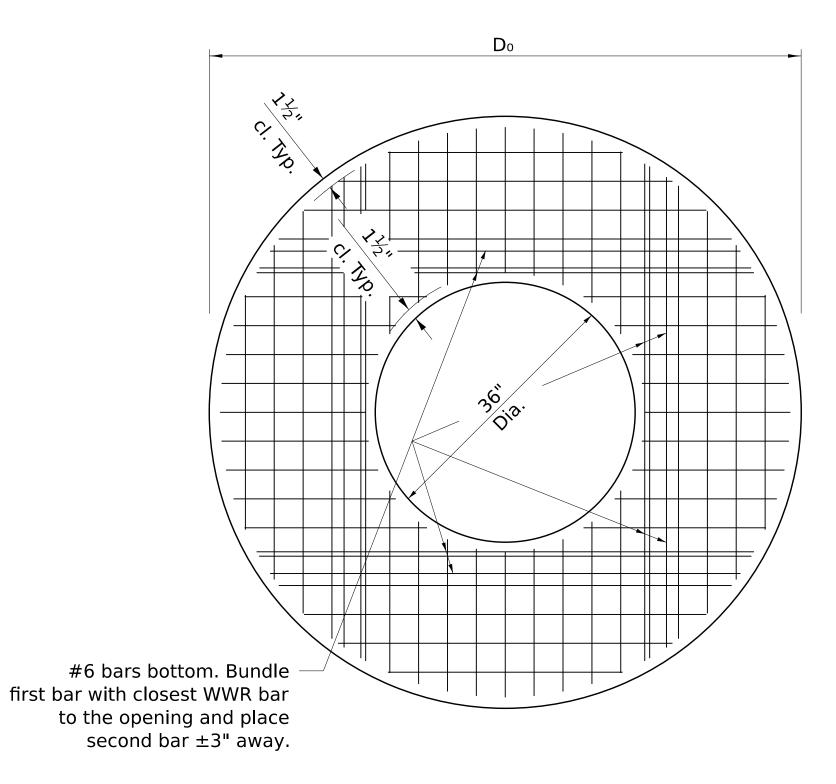
# PLAN - FLAT SLAB TOP FOR D = 6'-0"

(Showing layout of reinforcement bars and c bars)



## PLAN - FLAT SLAB TOP FOR D = 4'-0"

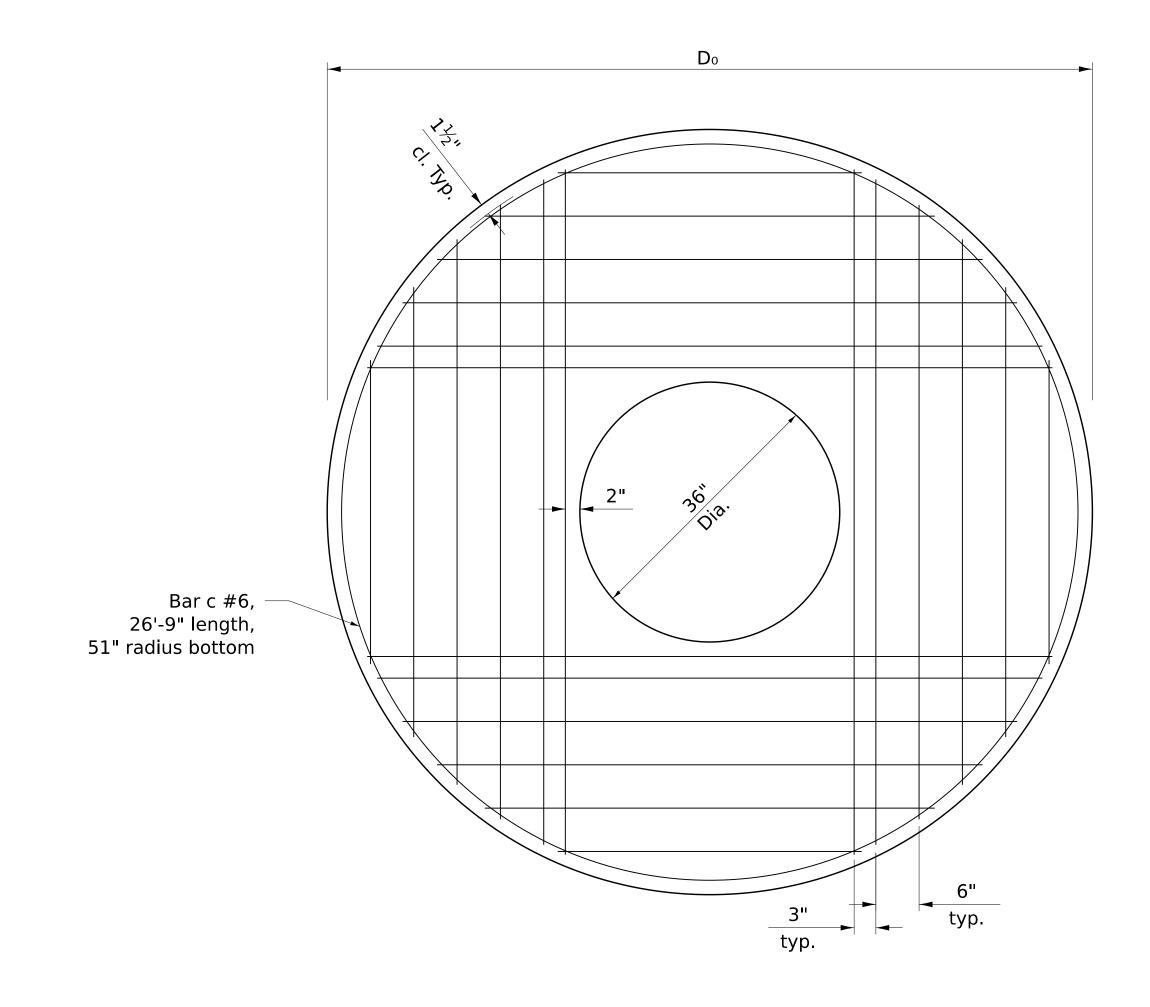
(Showing layout of welded wire reinforcement and c bars)



# PLAN - FLAT SLAB TOP FOR D = 6'-0"

(Showing layout of welded wire reinforcement and c bars)

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 3-23-23						F.A.	SECTION	COUNTY	TOTAL SHEET	
	DRAWN -	REVISED -	STATE OF ILLINOIS		REGION 2 / DISTRICT 2 STANDARD				TOTE.			
PLOT SCALE = 0.083 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION							CONTRAC	T NO.	
PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA.		TO STA.		ILLINOIS FE	D. AID PROJECT			



PLAN - FLAT SLAB TOP FOR D = 8'-0"

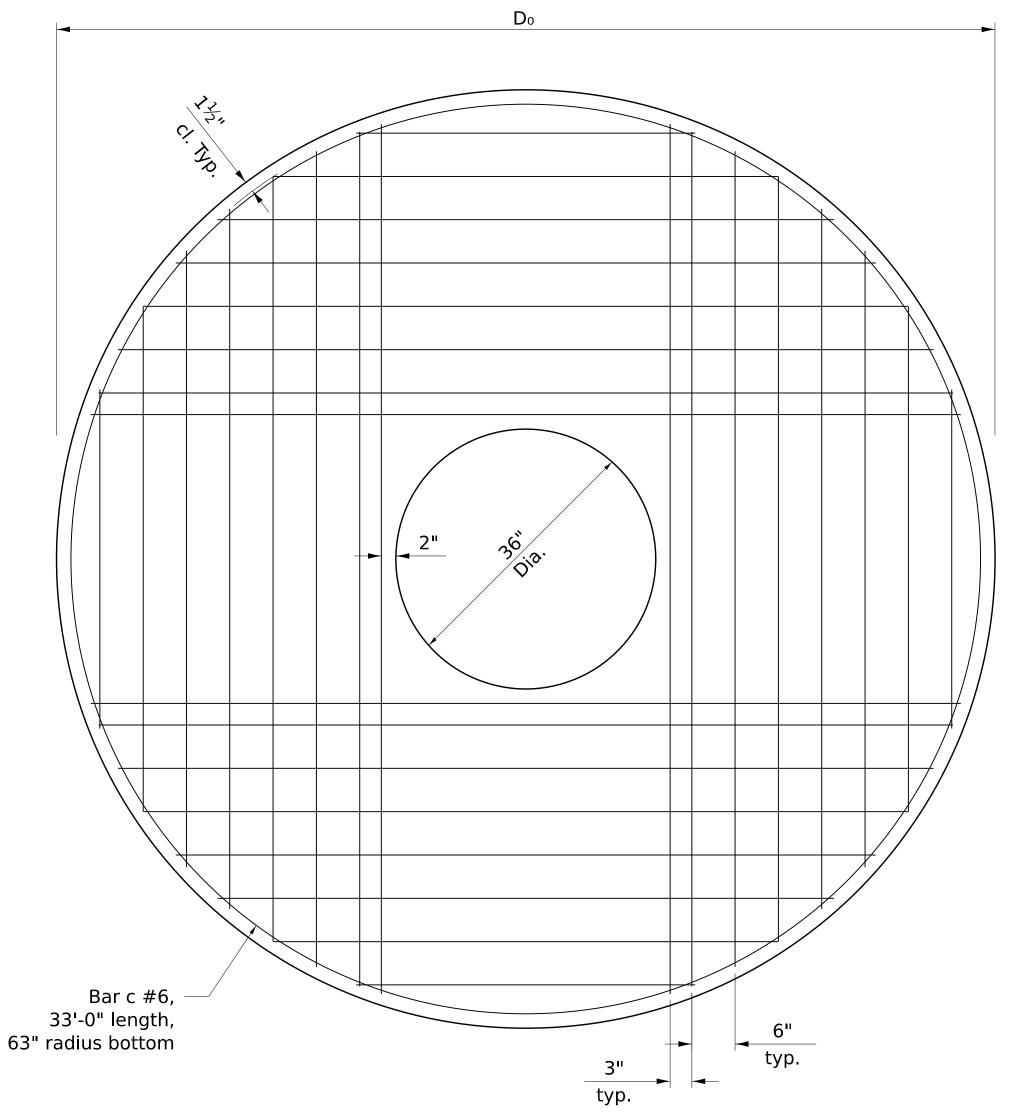
(Showing layout of reinforcement bars and c bars)

#6 bars bottom. Bundle first bar with closest WWR bar to the opening and place second bar ±3" away.

PLAN - FLAT SLAB TOP FOR D = 8'-0"

(Showing layout of welded wire reinforcement and c bars)

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 3-23-23							F.A. RTF	SECTION	COUNTY	TOTAL S	SHEET NO.
	DRAWN -	REVISED -	STATE OF ILLINOIS			REGION 2 / DISTRICT 2 STANDARD			.,,				
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION							CONTRAC	T NO.		
PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE:	SCALE: SHEET OF SHEETS STA.		TO STA.		ILLINOIS FE	D. AID PROJECT			



PLAN - FLAT SLAB TOP FOR D = 10'-0"

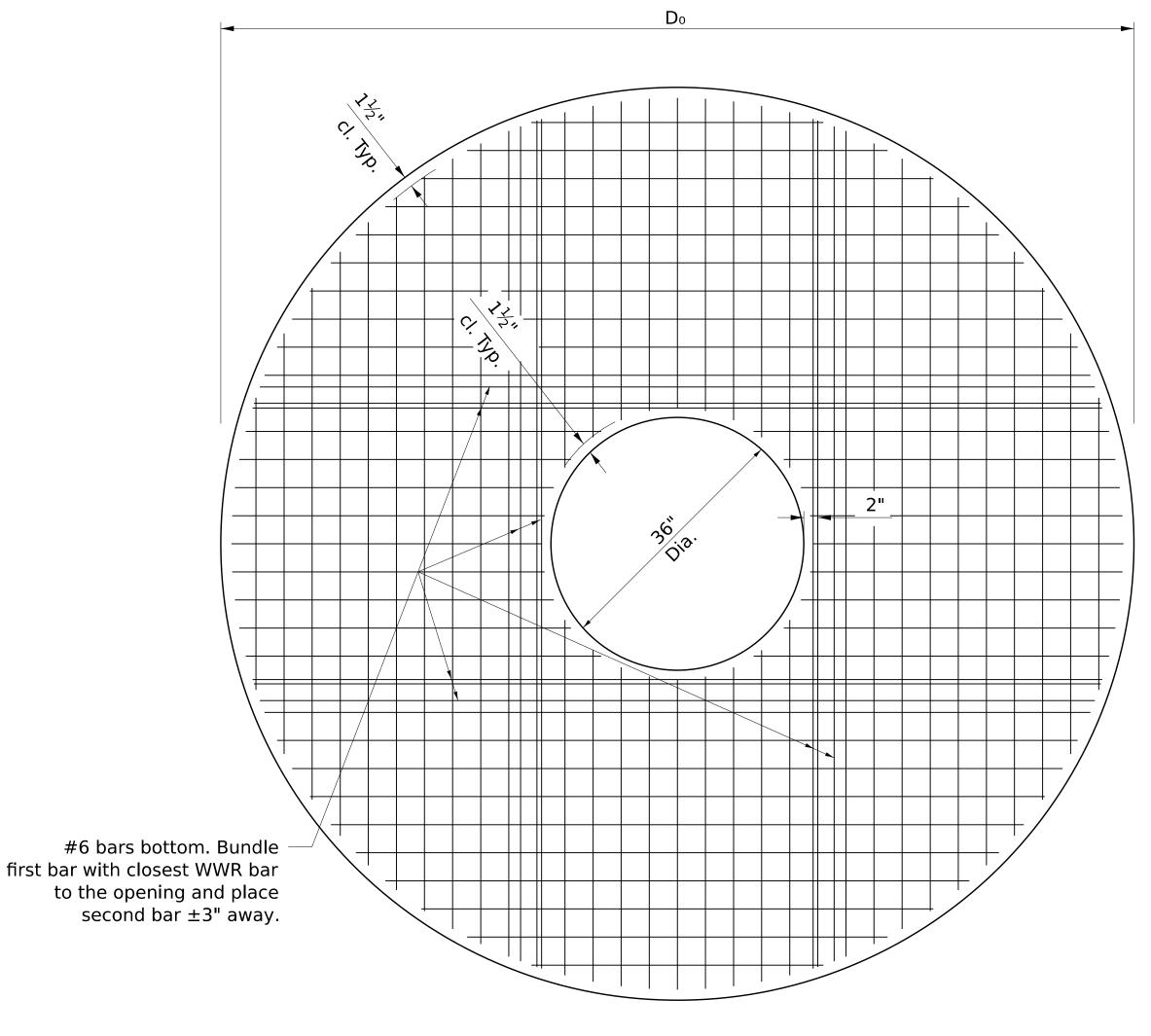
(Showing layout of reinforcement bars and c bars)

# FLAT SLAB TOP REINFORCEMENT FOR D = 4'-0

Location	WWR (eacl	n direction)	Rebar				
Location	A <sub>s</sub> (min.)	Spacing (max.)	A <sub>s</sub> (min.)	Spacing (max.)	Bar Size		
Bottom Mat	* 0.88 sq. in./ft.	6"	#6				

# FLAT SLAB TOP REINFORCEMENT FOR D = 6'-0"

Location	WWR (eac	n direction)	Rebar						
Location	A <sub>s</sub> (min.)	Spacing (max.)	A <sub>s</sub> (min.)	Bar Size					
Bottom Mat	* 0.88 sq. in./ft.	6"	· ·	rebar orientation and s table for bar size	#6"				



# PLAN - FLAT SLAB TOP FOR D = 10'-0"

(Showing layout of welded wire reinforcement and c bars)

# FLAT SLAB TOP REINFORCEMENT FOR D = 8'-0"

	\\\\\\D (026	h direction)	Dobar (oac	h direction except as no	2+0d)
Location	A <sub>s</sub> (min.)	Spacing (max.)	A <sub>s</sub> (min.)	Spacing (max.)	Bar Size
Top Mat	0.11 sq. in./ft.	18"	0.11 sq. in./ft.	18"	#3 or #4
Bottom Mat	* 0.88 sq. in./ft.	6"	See plan view for spacing and thi	#6	

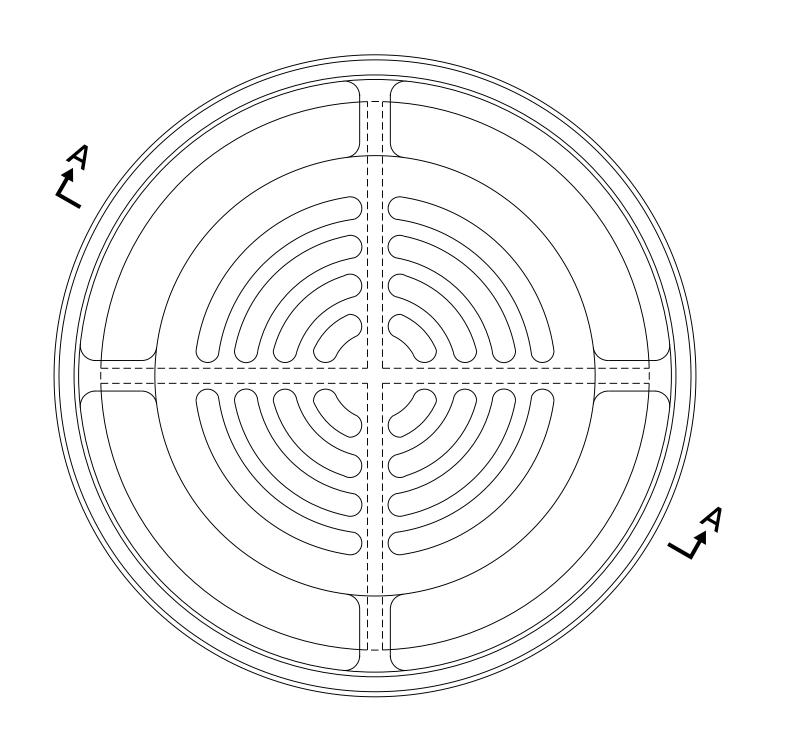
# \* Only one layer of WWR permitted to avoid congestion.

# FLAT SLAB TOP REINFORCEMENT FOR D = 10'-0''

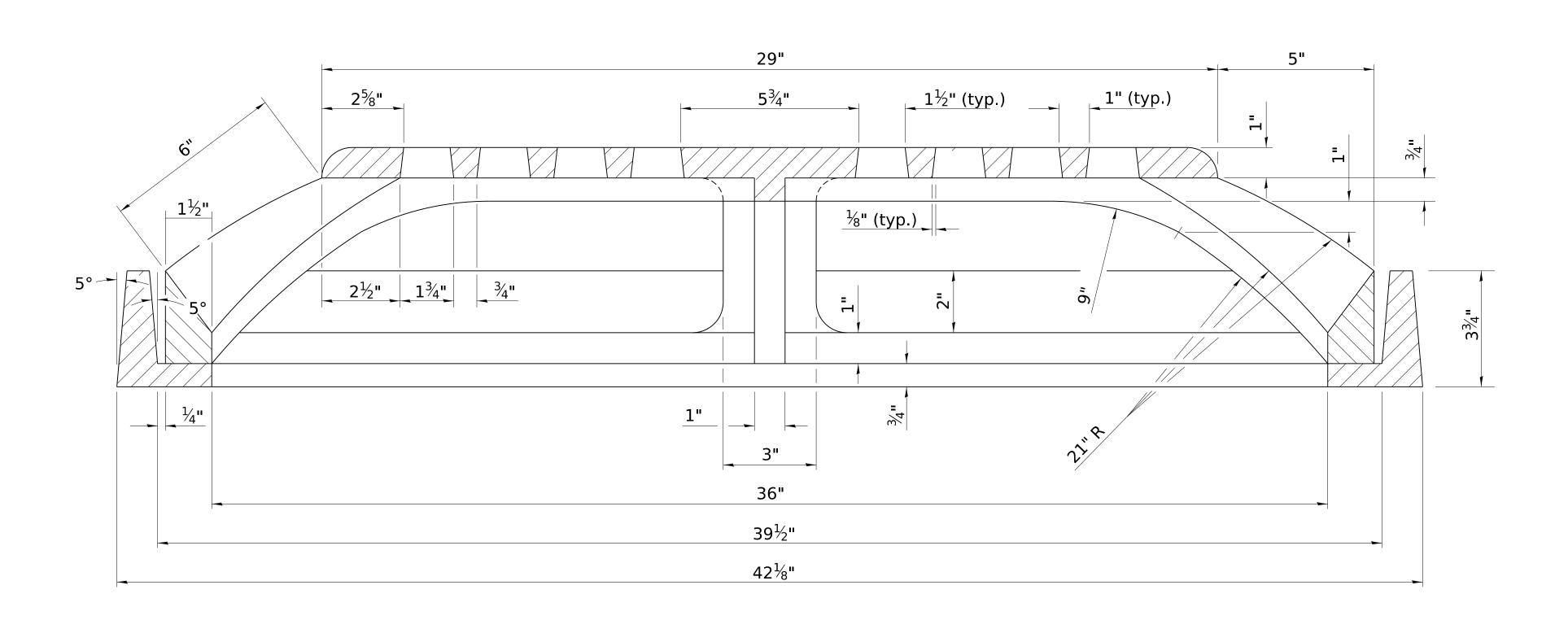
Location	WWR (each	n direction)	Rebar (eacl	h direction except as no	oted)
Location	A <sub>s</sub> (min.)	Spacing (max.)	A <sub>s</sub> (min.)	Spacing (max.)	Bar Size
Top Mat	0.11 sq. in./ft.	18"	0.11 sq. in./ft.	0.11 sq. in./ft. 18"	
Bottom Mat	* 0.88 sq. in./ft.	6"	See plan view for spacing and this	#6	

\* Only one layer of WWR permitted to avoid congestion.

				•	•	•							
USER NAME = IDOT/District 2	DESIGNED -	REVISED - 3-23-23								F.A.	SECTION	COUNTY TOTAL	
	DRAWN -	REVISED -	STATE OF ILLINOIS		REG	ION 2 / D	<b>ISTRIC</b>	T 2 STAND	ARD	IXIE.		OFFICE	15 NO.
PLOT SCALE = 0.083 '/in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION									CONTRACT NO.	
PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE:	SHEET	OF	SHEE	TS STA.	TO STA.		ILLINOIS F	ED. AID PROJECT	



NEENAH: R-4349-D 5.4 sq. ft. Opening



# **SECTION A-A**

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 4-27-23	STATE OF ILLINOIS REGION 2 / DISTRICT 2 STANDARD	F.A. RTF	SECTION	COUNTY	TOTAL SHEET						
	DRAWN -	REVISED - 3-23-23	STATE OF ILLINOIS		REGI	ION 2 / DI	STRICT 2	2 STANDAR	RD	IXIL.			OFFICE TO
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION									CONTRAC	CT NO.
PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS F	ED. AID PROJECT	

# BOX CULVERT END SECTIONS Pay Limits for Box Pay Limits for Precast Concrete Box Culverts Culvert End Sections \* Precast box culvert end section joints with a total vertical height less than 8'-0" shall only require one culvert tie placed at midheight. $\rightarrow D$

 $\rightarrow$ 

Box Culvert End Section Length (See Roadway Plans)

See General Notes regarding number of required segments.

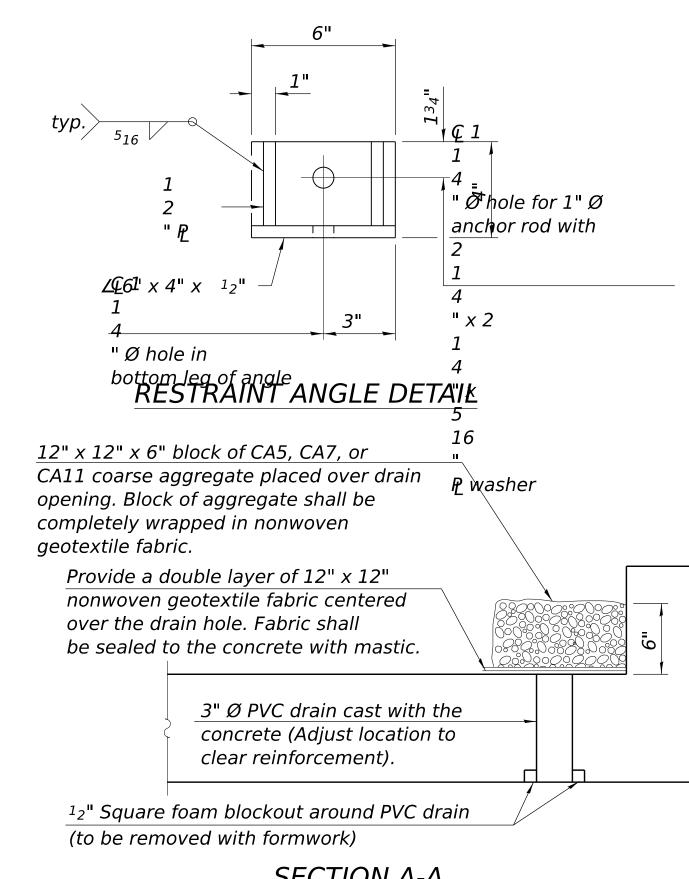
ELEVATION

3" Ø Drain holes

8' cts. max., typ.

# Headwall 2'-0" Span Porous granular material

#### **END VIEW**



#### SECTION A-A

SCALE:

SHEET

(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.) (Sheet 1 of 2)

#### GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. This work will be measured for payment as each, with each end of each culvert being one each. End sections will be paid for at the contract unit price per each for Box Culvert End Sections of the culvert number specified.

Typical box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements of 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.

Number of segments shown in Elevation is for example only. Length and number of precast box sections required to construct Box Culvert End Sections shall be determined by the Contractor.

\*\* See roadway plans for embankment slope (V:H).

1" Ø anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2<sup>1</sup><sub>4</sub>" x 2 <sup>1</sup><sub>4</sub>" x <sup>5</sup><sub>16</sub>" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional <sup>1</sup>2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

All costs associated with furnishing and installing or constructing the toewall and culvert ties will not be measured for payment but shall be included in the contract unit price for Box Culvert End Sections of the culvert number specified.

Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.

Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01. The minimum weight of the fabric shall be 6 oz. / sq. yd..

For end sections with traversable pipe grate systems, see grate detail sheet for required modifications.

# – **©** Joint Culver Wall **₡** 1" Ø anchor rods with 13<sub>4</sub>" Restraint angle typ. 1'-4" 1'-4" (Showing end saction tie details) in culver‡ walls 214" typ. " Tie P ₹ Slotted hole, typ. TIE PLATE DETAIL

# **SCB-TES**

-----

€ 3" Ø Drain hole

2-17-2017

DESIGNED REVISED 1-10-18 USER NAME = IDOT/District 2 DRAWN 1-05-16 REVISED CHECKED -REVISED 5-09-14 PLOT SCALE = 0.083'/in. DATE REVISED PLOT DATE = 1/28/2025

PLAN

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION** 

Toewall --

1'-0"

Min. 6" thick bed of porous

granular material

**REGION 2 / DISTRICT 2 STANDARD** 

SHEETS STA.

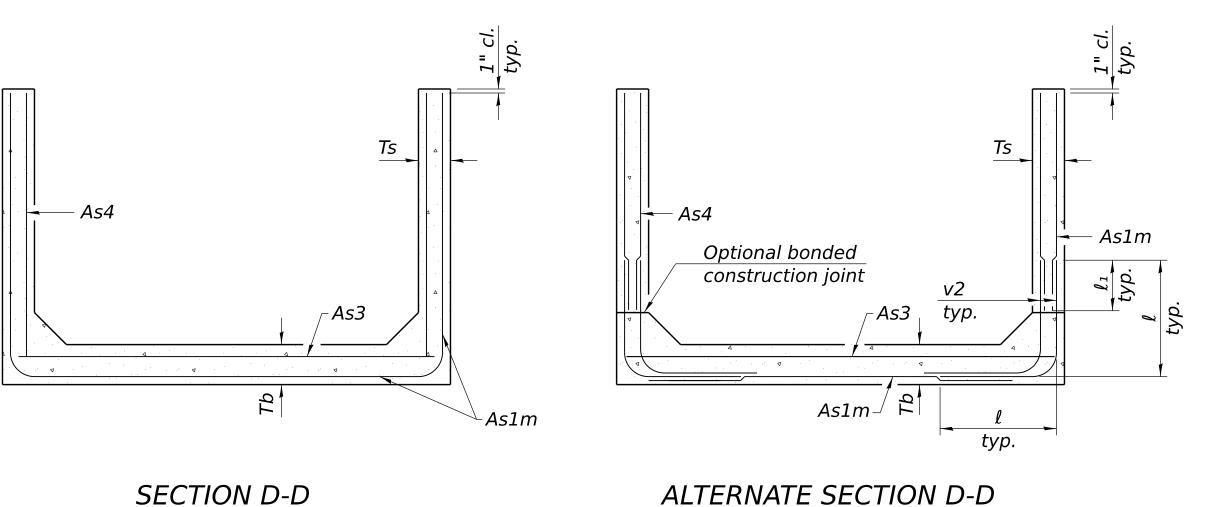
**SECTION** 

TO STA.

# *⊢ As7* As1m As2 As5 Ts As4 - As4 (Design Earth Cover < 2 ft) (Design Earth Cover $\ge 2$ ft)

SECTION C-C

# BOX CULVERT END SECTIONS



4-h bars

#### As1m REINFORCEMENT (in.<u>□</u>/ ft) Rise (ft) 10 3 4 11 5 8 9 Ts (in.) 0.19 | 0.17 0.26 | 0.21 | 0.18 0.22 | 0.26 | 0.23 | 0.22 0.25 | 0.33 | 0.59 | 0.27 | 0.28 0.40 | 0.35 | 0.43 | 0.39 | 0.36 | 0.34 | 0.40 0.44 | 0.39 | 0.35 | 0.43 | 0.40 | 0.37 | 0.36 | 0.48 0.48 | 0.42 | 0.38 | 0.47 | 0.44 | 0.41 | 0.38 | 0.42 | 0.56 12 0.55 | 0.49 | 0.58 | 0.54 | 0.50 | 0.48 | 0.45 | 0.46 | 0.46 | 0.61 | 0.75

(As1m reinforcement based upon welded wire reinforcement conforming to AASHTO M 55 or M 221).

# **ℓ**1 DIMENSION

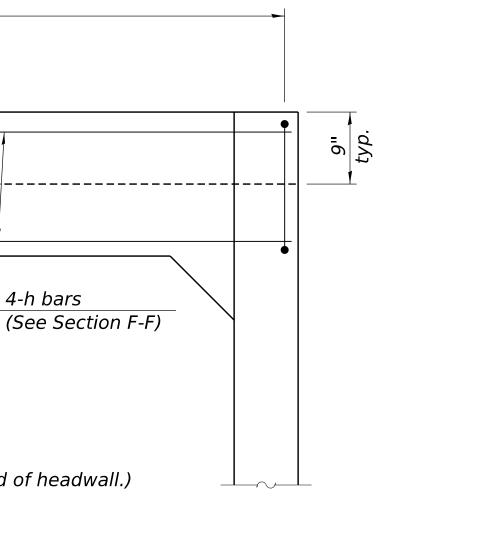
 $#3 \ bar = 2'-0"$ #4 bar = 2'-8"

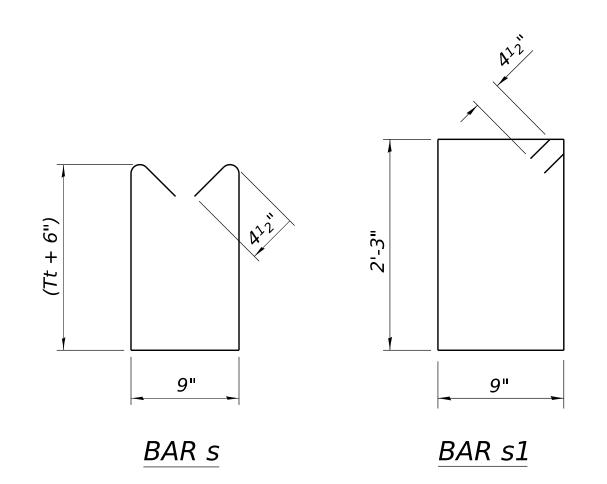
#5 bar = 3'-4" #6 bar = 3'-11"

Alternate Section D-D is provided to allow the Contractor the option of casting the bottom slab of the end section first followed by construction of the sidewalls using conventional forming methods. Shop drawings that detail slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval when using Alternate Section D-D.

The size and spacing of the v2 bars shall provide a minimum reinforcement area along each face of the walls (in. □/ft.) equal to 1.10\*(As1m). v2 bars may consist of #3 thru #6 size reinforcement bars and the longitudinal spacing shall not exceed the lesser of the wall thickness or 8 inches.

Bonded construction joints shall be prepared according to Article 503.09 of the Standard Specifications.





# TOEWALL CONSTRUCTION SEQUENCE

#4 s bars at spacing = Tt

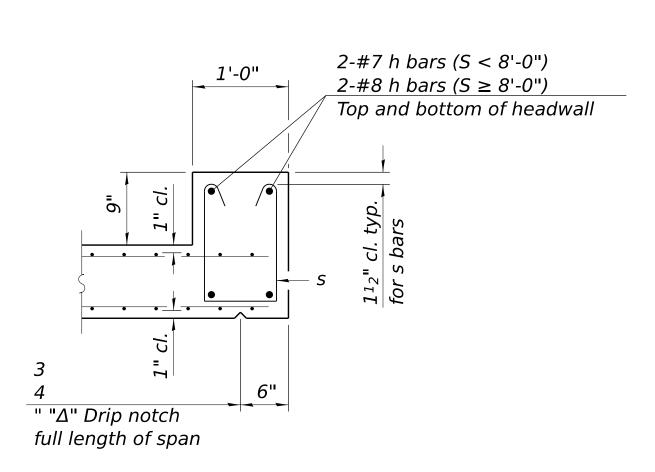
(Spacing need not be less than 8")

 $\mapsto F$ 

HEADWALL ELEVATION

(Allow sidewall reinforcement to extend into end of headwall.)

- 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 Specifications.
- The Contractor may furnish a precast or cast-in-place toewall. The Contractor shall be responsible for the strength and stability of the precast toewall during handling. Additional lifting points may be required depending upon the length of the toewall or the Contractor may need to modify the design of the toewall for the proposed handling the method.
- \*\* If soil conditions permit, the sides of the toewall may be poured directly against the soil. The clear cover on the sides of the toewall shall be increased to 3" by increasing the thickness of the toewall.



SECTION F-F

SCALE:

SECTION E-E SCB-TES

3" Ø corrugated PE pipe

Standard Specifications.

Fill with non-shrink grout

#4 v1 bars drilled and

grouted into toewall in 9" min.

deep holes at 1'-6" cts., max.

per Article 1040.04 of the

6-#5 h1 bars

placed as shown

#4 s1 bars at

1'-0" cts., max.

2-17-2017				
USER NAME = IDOT/District 2	DESIGNED -	REVISED .	_	1-10-18
	DRAWN -	REVISED .	-	1-05-16
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED .	-	5-09-14
PLOT DATE = 1/28/2025	DATE -	REVISED .	_	

\*\* 112" cl.

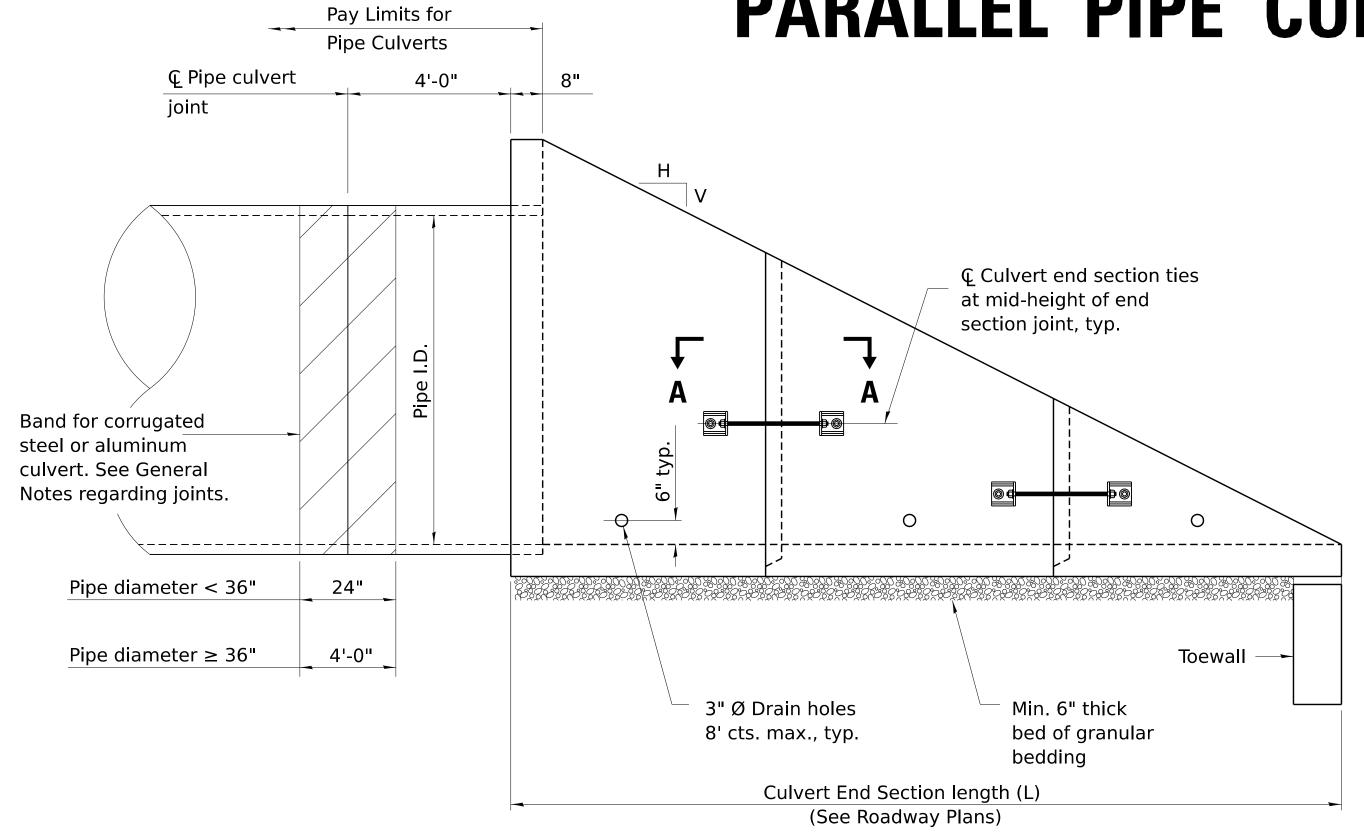
typ.

1'-0"

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

	(Sh	neet 2 of 2	2)						
DEOL	)				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REGIO	JN 2 / DI	ISTRICT	2 STANDA	<b>K</b> D					
Γ							CONTRAC	T NO.	
SHEET	OF	SHEETS	STA	TO STA		ILLINOIS EED A	ID PPO IECT		

# CONCRETE END SECTIONS FOR PARALLEL PIPE CULVERTS 15" THRU 84" DIA.



# Backwall 24" typ. Span (S) Granular bedding END VIEW (Showing pipes)

\* This dimension shall be increased by 1" for CIP field construction. See General Notes.

### **GENERAL NOTES**

The concrete end sections detailed herein for flexible type pipe culverts are restricted to use with parallel type drainage structures only and traversable pipe grating placed perpendicular to the sidewalls. When traversable pipe grating placed parallel to the sidewalls is required, use standard 542001 or 542011.

A segment of pipe culvert shall be cast into the backwall of the concrete end section such that a minimum of 4 ft of pipe culvert extends from the back face of the end section as shown in Elevation.

Segments of pipe culvert shall be joined in accordance with Article 542 of the Standard Specifications except bands for corrugated steel or aluminum culverts shall conform to the length requirements shown in elevation and have the same corrugations as the culvert pipe. These bands will be included in cost of the pipe.

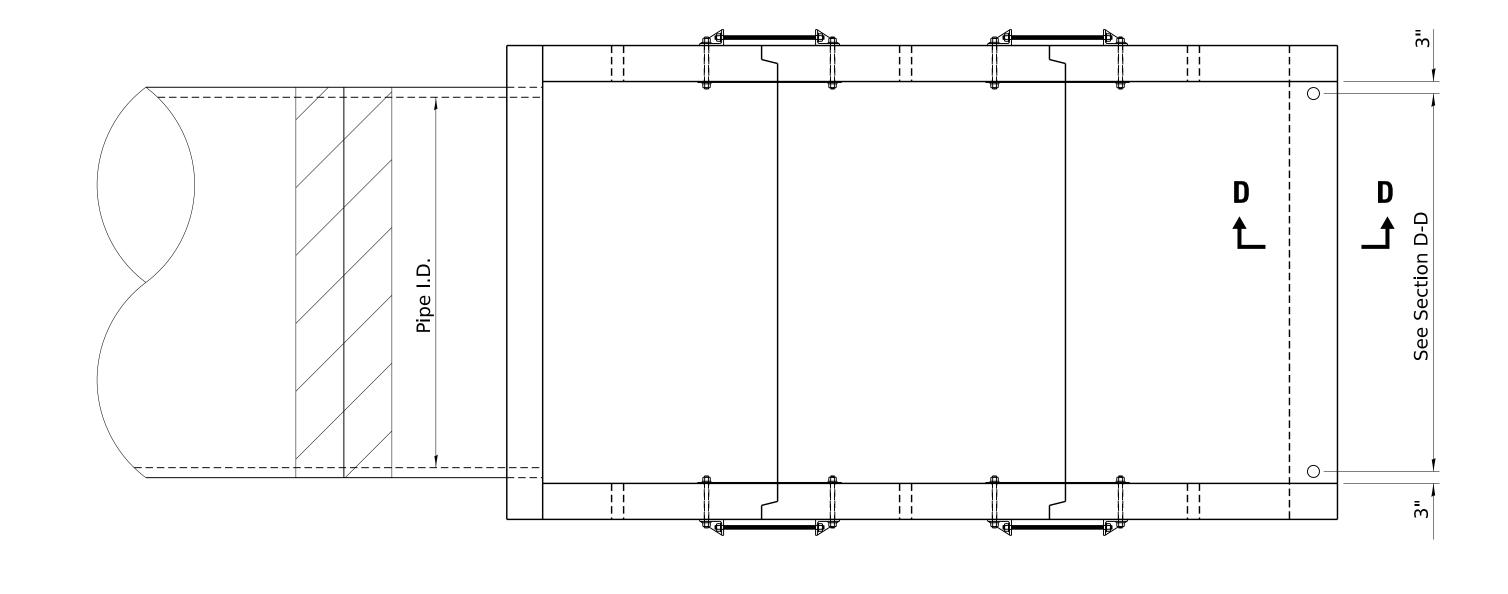
The number of segments shown in elevation is for example only. The length and number of precast sections required to construct the end section shall be determined by the Contractor.

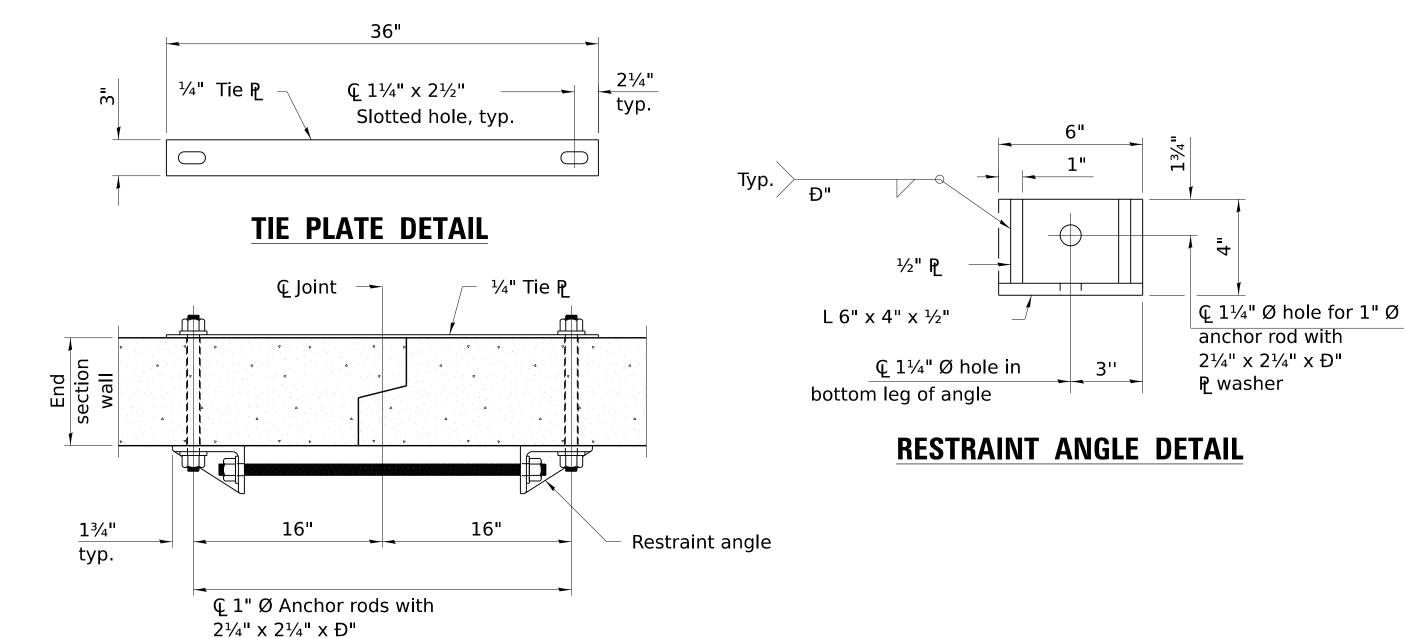
See roadway plans for slope (V:H) and pipe inside diameter.

21/4" x 21/4" x Đ" plate washers shall be provided under each nut required for the anchor rods. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of formed holes.

All slope ratios are expressed as units of verical dispacement to units of horizontal displacement (V:H).

All dimensions are in inches unless otherwise shown.





# **SECTION A–A**(Showing end section tie details)

SCALE:

**PLAN** 

**ELEVATION** 

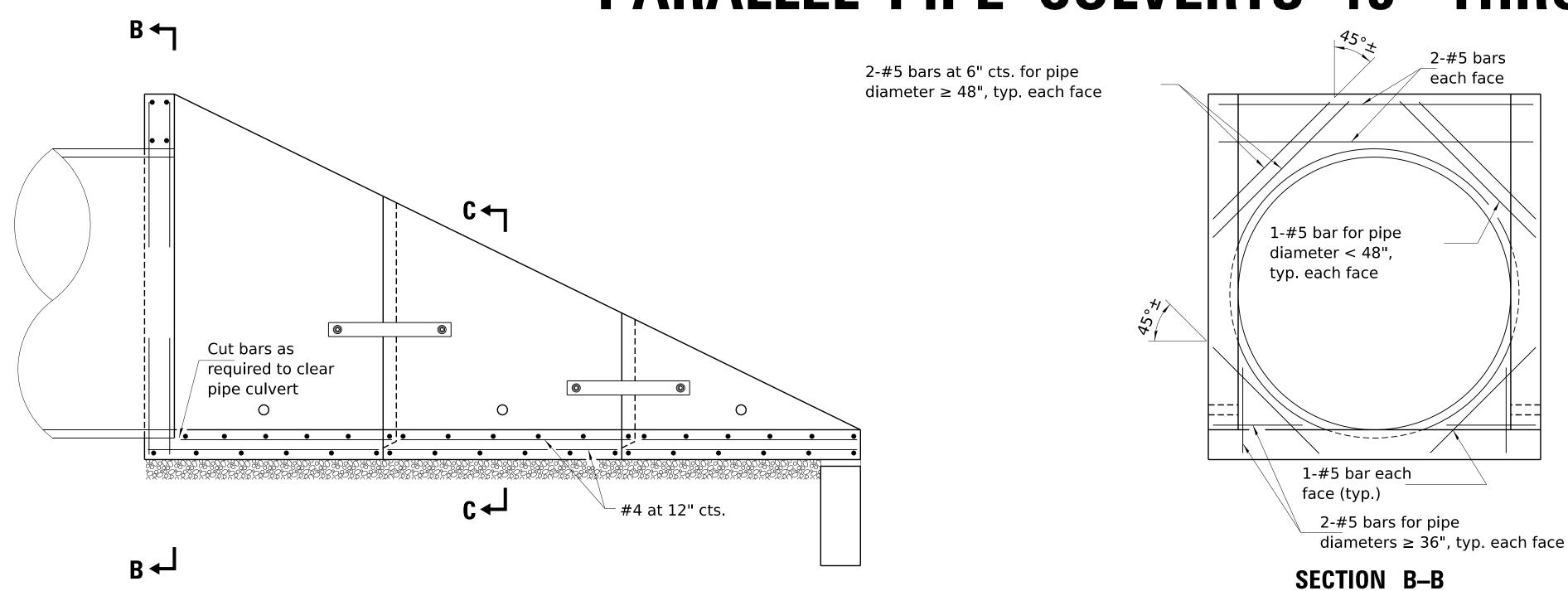
DEGIAN					F.A. RTE.	SECTION		COUNT
REGION	2 / DIST	RICT 2	2 STANDARD					CONTR
								CONTR
SHEET	OF S	SHEETS	STA.	TO STA.		ILLINOIS	FED. AID	PROJECT

 $\mathbb{P}$  washers installed in  $1\frac{1}{8}$ " dia. formed holes in end section walls

TOTAL SHEET SHEETS NO.

CONTRACT NO.

# CONCRETE END SECTIONS FOR PARALLEL PIPE CULVERTS 15" THRU 84" DIA.



# LONGITUDINAL SECTION

(Showing bottom slab and backwall reinforcement.)

(Showing backwall reinforcement for pipes.)

# PARALLEL PIPE CULVERT END SECTION DIMENSIONS

		Tables	IB, IC, IIIA, AI	ND IIIB	
Pipe I.D.				L	
·			Slop	e of End Sect	ion
	R	S	1:4	1:6	1:10
15"	25"	16"	9'-0"	13'-2"	21'-6"
18"	28"	18"	10'-0"	14'-8"	24'-0"
21"	31"	22"	11'-0"	16'-2"	26'-6"
24"	35"	24"	12'-4"	18'-2"	29'-10"
30"	3'-5"	30"	14'-4"	21'-2"	34'-10"
36"	3'-11"	36"	16'-4"	24'-2"	39'-10"
42"	4'-5"	3'-6"	18'-4"	27'-2"	44'-10"
48"	5'-0"	4'-0"	20'-8"	30'-8"	50'-8"
54"	5'-4"	4'-6"	22'-0"	32'-8"	54'-0"
60"	5'-10"	5'-0"	24'-0"	35'-8"	59'-0"
66"	6'-4"	5'-6"	26'-0"	38'-8"	64'-0"
72"	6'-10"	6'-0"	28'-0"	41'-8"	69'-0"
78"	7'-4"	6'-6"	30'-0"	44'-8"	74'-0"
84"	7'-10"	7'-0"	32'-0"	47'-8"	79'-0"

The above "Tables" are referenced from Article 542.03 of the Standard Specifications.

SCALE:

### LAP DIMENSION

#5 bar = 21"

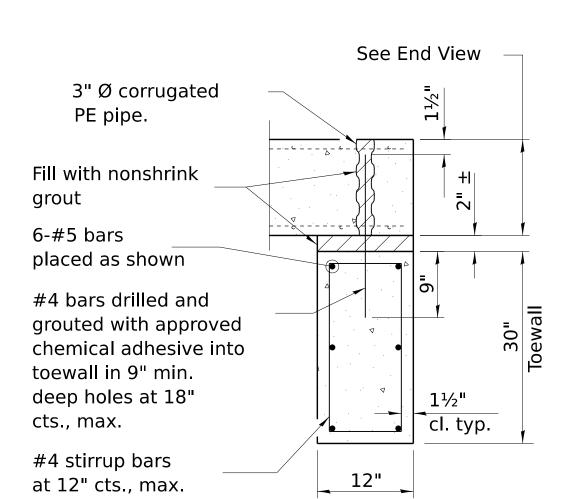
#6 bar = 25"

\* The Contractor may use lap splices for the sidewall

#4 bars at

<sup>/</sup> 12" cts.

reinforcement at the locations shown.



SECTION D-D

SECTION C-C

1½" cl.

(3" cl. for CIP constr.)

DESIGNED REVISED 1-05-16 USER NAME = IDOT/District 2 5-09-14 DRAWN REVISED CHECKED -REVISED PLOT SCALE = 0.083'/in. PLOT DATE = 1/28/2025 DATE REVISED -

1½" cl.

Optional bonded

construction joint

(Typ., except

8" (typ.)

as noted)

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION** 

**SECTION REGION 2 / DISTRICT 2 STANDARD** SHEET SHEETS STA. TO STA.

TOTAL SHEET NO. COUNTY CONTRACT NO. ILLINOIS FED. AID PROJECT

REINFORCEMENT SCHEDULE

**PIPES** 

#4

#4

#4

#4

#4

#4

#4

#4

#5

#5

#5

Pipe I.D.

15"

18"

21"

24"

36"

42"

48"

54"

72"

78"

84"

 $A_{s1m}$ 

| Size | Spacing

12"

12"

12"

12"

12"

12"

12"

8"

8"

8"

8"

8"

8"

CONCRETE END SECTIONS FOR PARALLEL PIPE CULVERTS 15" THRU 84" DIA. SHEET 2 OF 3

# CONCRETE END SECTIONS FOR PARALLEL PIPE CULVERTS 15" THRU 84" DIA.

### QUANTITIES

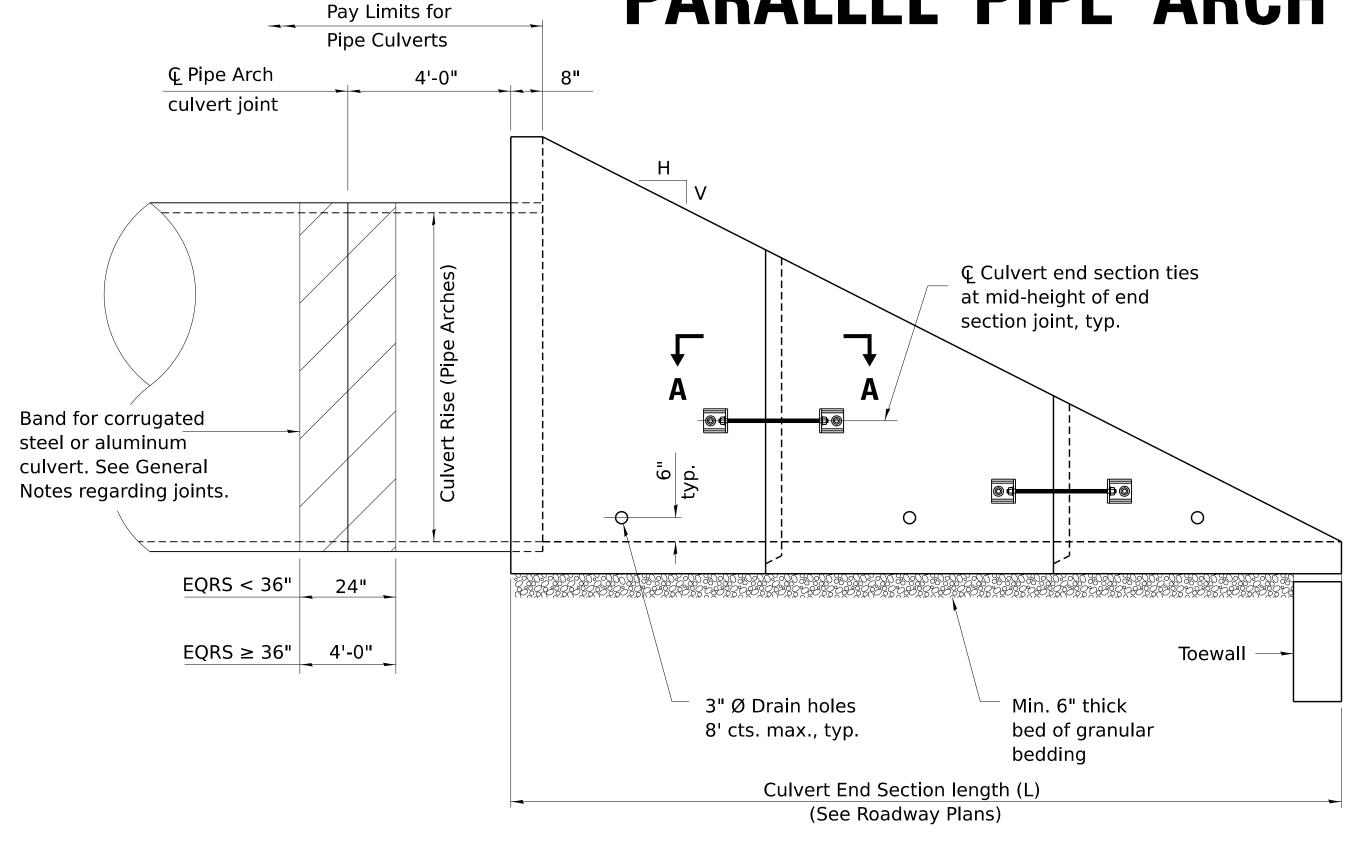
				Tables IB	, IC, IIIA, A	ND IIIB				
Pipe I.D.		Concrete y	d <sup>3</sup>	Reinfo	rcement w Lap lbs.	ithout	Reint	forcement Lap lbs.	with	
	Slope	of End Sec	ction	Slope	of End Sec	ction	Slope of End Section			
	1:4	1:6	1:10	1:4	1:6	1:10	1:4	1:6	1:10	
15"	1.4	1.9	2.8	250	330	510	270	350	540	
18"	1.6	2.2	3.4	290	400	600	310	420	640	
21"	2.0	2.7	4.2	330	450	690	360	480	740	
24"	2.3	3.2	5.0	370	510	790	400	550	850	
30"	3.1	4.3	6.7	490	680	1060	520	720	1130	
36"	3.9	5.5	8.7	580	810	1270	620	870	1360	
42"	4.9	6.9	10.9	720	1020	1610	770	1080	1710	
48"	6.0	8.6	13.7	940	1320	2090	1010	1420	2240	
54"	6.9	9.8	15.7	1090	1540	2440	1160	1650	2610	
60"	8.1	11.6	18.6	1410	2000	3190	1530	2180	3480	
66"	9.5	13.6	21.8	1650	2360	3780	1780	2560	4100	
72"	10.9	15.7	25.2	1840	2630	4220	1990	2850	4580	
78"	12.4	17.9	28.9	2110	3040	4900	2280	3280	5290	
84"	14.1	20.3	32.8	2710	3910	6320	2970	4290	6950	

The above quantities are estimates and provided for information only. Actual quantities may vary depending upon the final layout of reinforcement and number of segments determined by the Contractor.

For cast-in-place construction, increase concrete volumes by approximately 12%.

	DEGL	0N 0 / D				F./	A. TE.	
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E:	SHEET	OF	SHEETS	STA.	TO STA.			

# CONCRETE END SECTIONS FOR PARALLEL PIPE ARCH CULVERTS 15" THRU 84" DIA.



# Backwall (B) 98 Span (S) END VIEW (Showing pipe arches)

# \* This dimension shall be increased by $1\frac{1}{2}$ " for CIP field construction. See General Notes.

#### **GENERAL NOTES**

The concrete end sections detailed herein for flexible type pipe culverts are restricted to use with parallel type drainage structures only and traversable pipe grating placed perpendicular to the sidewalls. When traversable pipe grating placed parallel to the sidewalls is required, use standard 542001 or 542011.

A segment of pipe culvert shall be cast into the backwall of the concrete end section such that a minimum of 4 ft of pipe culvert extends from the back face of the end section as shown in Elevation.

Segments of pipe culvert shall be joined in accordance with Article 542 of the Standard Specifications except bands for corrugated steel or aluminum culverts shall conform to the length requirements shown in elevation and have the same corrugations as the culvert pipe. These bands will be included in cost of the pipe.

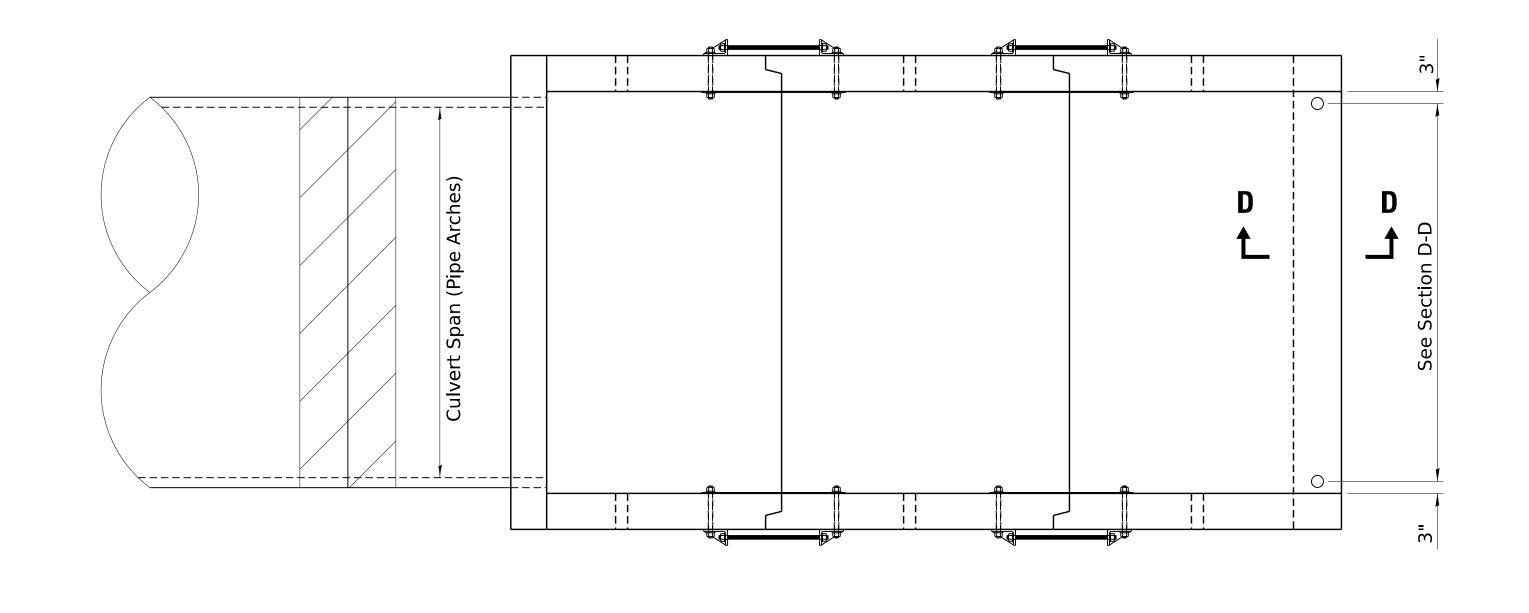
The number of segments shown in elevation is for example only. The length and number of precast sections required to construct the end section shall be determined by the Contractor.

See roadway plans for slope (V:H) and pipe inside diameter.

2<sup>1</sup>/<sub>4</sub>" x 2<sup>1</sup>/<sub>4</sub>" x Đ" plate washers shall be provided under each nut required for the anchor rods. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of formed holes.

All slope ratios are expressed as units of verical dispacement to units of horizontal displacement (V:H).

All dimensions are in inches unless otherwise shown.



DESIGNED

CHECKED -

DRAWN

DATE

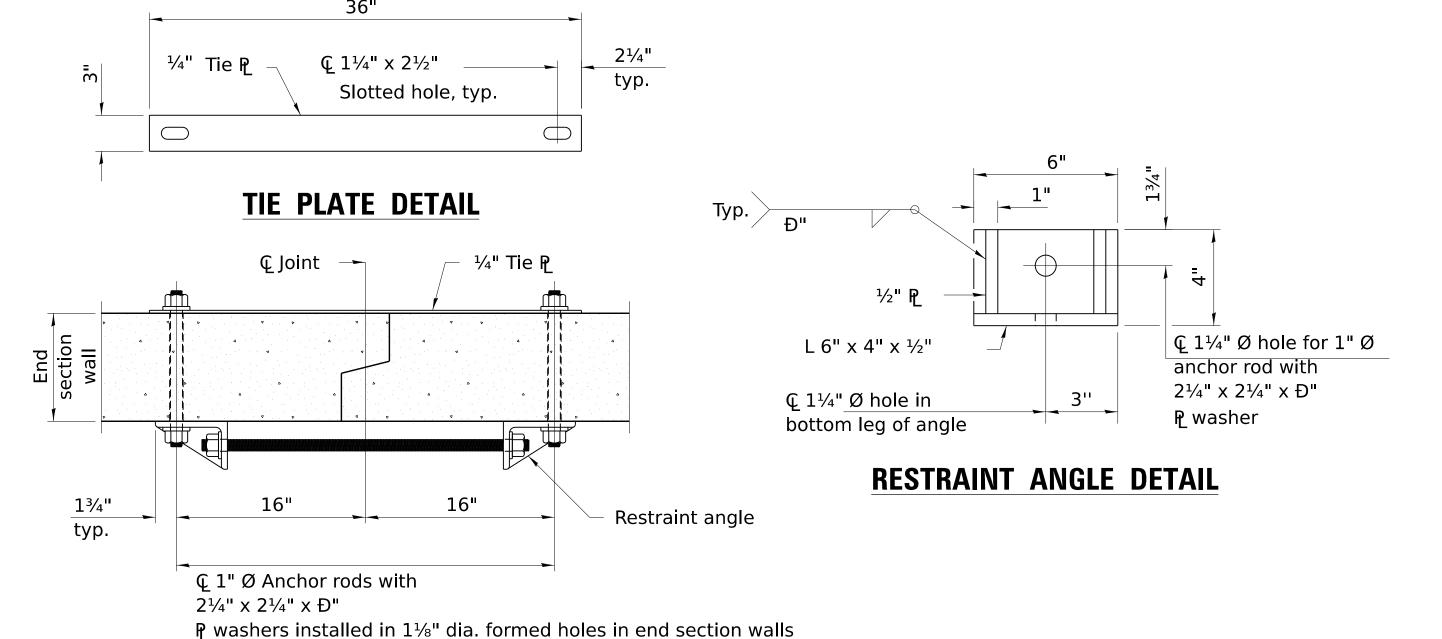
USER NAME = IDOT/District 2

PLOT SCALE = 0.083'/in.

PLOT DATE = 1/28/2025

**ELEVATION** 

**PLAN** 



# **SECTION A–A**(Showing end section tie details)

SCALE:

REVISED - 5-09-14

REVISED - STATE OF ILLINOIS

REVISED - DEPARTMENT OF TRANSPORTATION

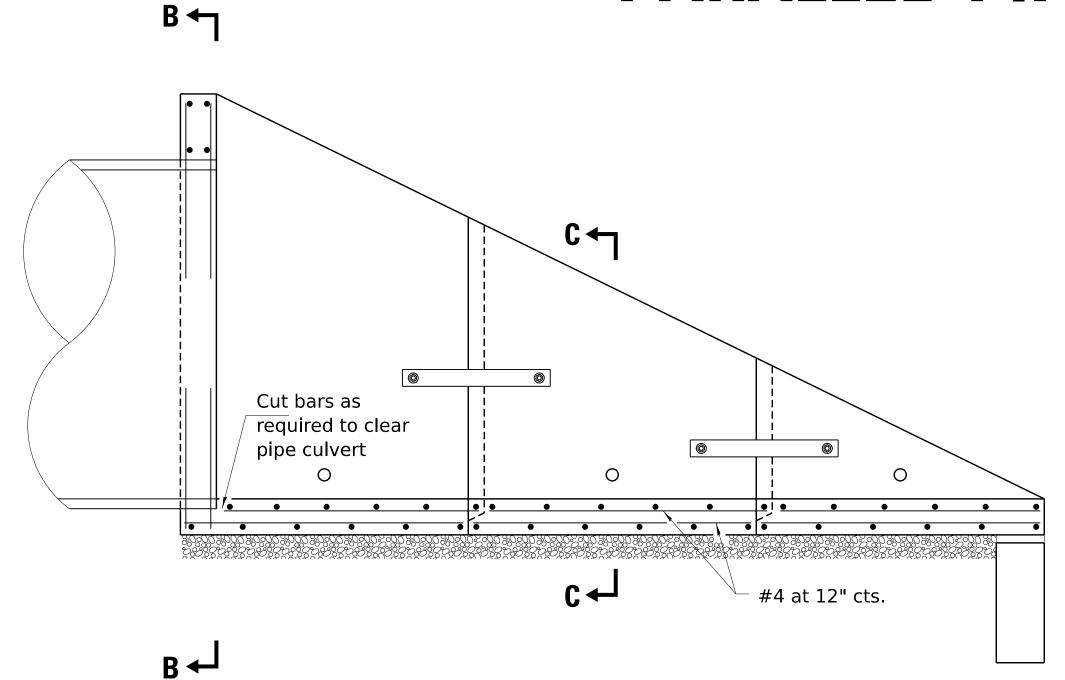
REVISED -

TOTAL SHEET NO.

# CONCRETE END SECTIONS FOR PARALLEL PIPE ARCH CULVERTS 15" THRU 84" DIA.

2-#5 bars

each face



# 1-#5 bar each face (typ.) 2-#5 bars for EQRS $\geq$ 36", typ. each face

1-#5 bar for EQRS <48", typ. each face

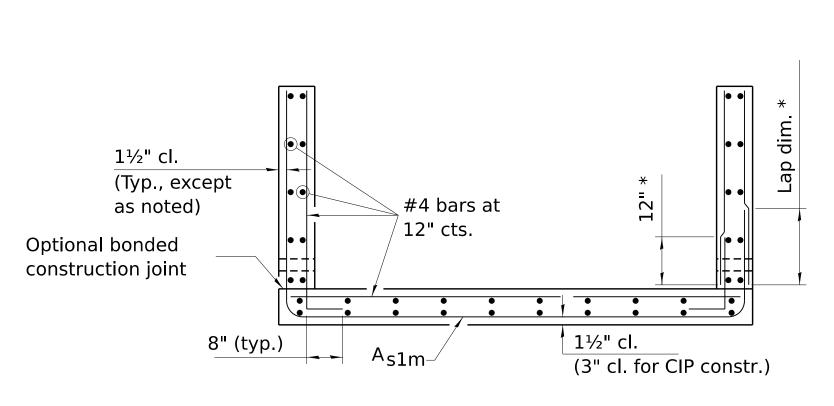
SECTION B-B

(Showing backwall reinforcement for arches.)

# LAP DIMENSION

#4 bar = 17" #5 bar = 21" #6 bar = 25"

\* The Contractor may use lap splices for the sidewall reinforcement at the locations shown.



SECTION C-C

REINFORCEMENT SCHEDULE

PIPE ARCHES

Round Size | Size | Spacing

#4

#4

#4

#4

#4

#4

#5

#5

Equivalent

15"

18"

21"

24"

30"

36"

42"

48"

54"

60"

66"

72"

78"

84"

 $A_{s1m}$ 

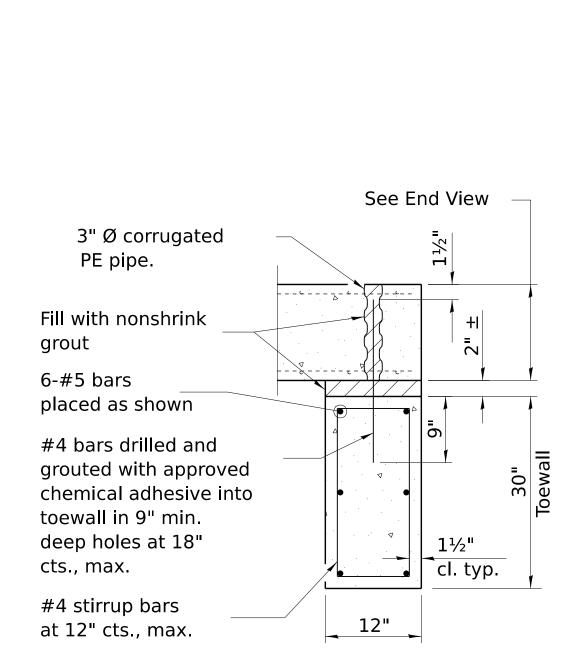
12"

# LONGITUDINAL SECTION

(Showing bottom slab and backwall reinforcement.)

# PARALLEL PIPE ARCH CULVERT END SECTION DIMENSIONS

	Cul	vert	Tabl	e IIA, Corrug	gation :	2	' X ½"	Cul	vert	Table	e IIA, Corruç	gation :	3	3" x 1"
Equivalent Round Size	_	D.				L		_	<b>D</b> 1				L	
Nourid Size	Span	Rise			•	e of End Sec		Span	Rise	<b>D</b>		l	pe of End Se	
			R	S	1:4	1:6	1:10			R	S	1:4	1:6	1:10
15"	17"	13"	23"	18"	8'-4"	12'-2"	19'-10"	-	-	-	-	-	-	-
18"	21"	15"	25"	22"	9'-0"	13'-2"	21'-6"	-	-	-	-	-	-	-
21"	24"	18"	28"	24"	10'-0"	14'-8"	24'-0"	-	-	-	-	-	-	-
24"	28"	20"	30"	28"	10'-8"	15'-8"	25'-8"	-	-	-	-	-	-	-
30"	35"	24"	34"	36"	12'-0"	17'-8"	29'-0"	-	-	-	-	-	-	-
36"	42"	29"	39"	3'-6"	13'-8"	20'-2"	33'-2"	40"	31"	3'-6"	40"	14'-8"	21'-8"	35'-8"
42"	49"	33"	3'-7"	4'-2"	15'-0"	22'-2"	36'-6"	46"	36"	3'-11"	3'-10"	16'-4"	24'-2"	39'-10'
48"	57"	38"	4'-0"	4'-10"	16'-8"	24'-8"	40'-8"	53"	41"	4'-5"	4'-6"	18'-4"	27'-2"	44'-10
54"	64"	43"	4'-5"	5'-4"	18'-4"	27'-2"	44'-10"	60"	46"	4'-10"	5'-0"	20'-0"	29'-8"	49'-0"
60"	71"	47"	4'-9"	6'-0"	19'-8"	29'-2"	48'-2"	66"	51"	5'-3"	5'-6"	21'-8"	32'-2"	53'-2"
66"	77"	52"	5'-2"	6'-6"	21'-4"	31'-8"	52'-4"	73"	55"	5'-8"	6'-2"	23'-4"	34'-8"	57'-4"
72"	83"	57"	5'-7"	7'-0"	23'-0"	34'-2"	56'-6"	81"	59"	6'-0"	6'-10"	24'-8"	36'-8"	60'-8"
78"	-	-	-	-	-	-	-	87"	63"	6'-5"	7'-4"	26'-4"	39'-2"	64'-10
84"	-	-	-	-	-	-	-	95"	67"	6'-9"	8'-0"	27'-8"	41'-2"	68'-2"



SECTION D-D

The above "Tables" are referenced from Article 542.03 of the Standard Specifications.

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 5-09-14								F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -	STATE OF ILLINOIS		REGI	ON 2 / DI	ISTRICT	2 STANDAR	<b>KD</b>					
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION					T				CONTRAC	T NO.	
PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED.	AID PROJECT		

2-#5 bars at 6" cts. for

EQRS ≥48", typ. each face

# CONCRETE END SECTIONS FOR PARALLEL PIPE ARCH CULVERTS 15" THRU 84" DIA.

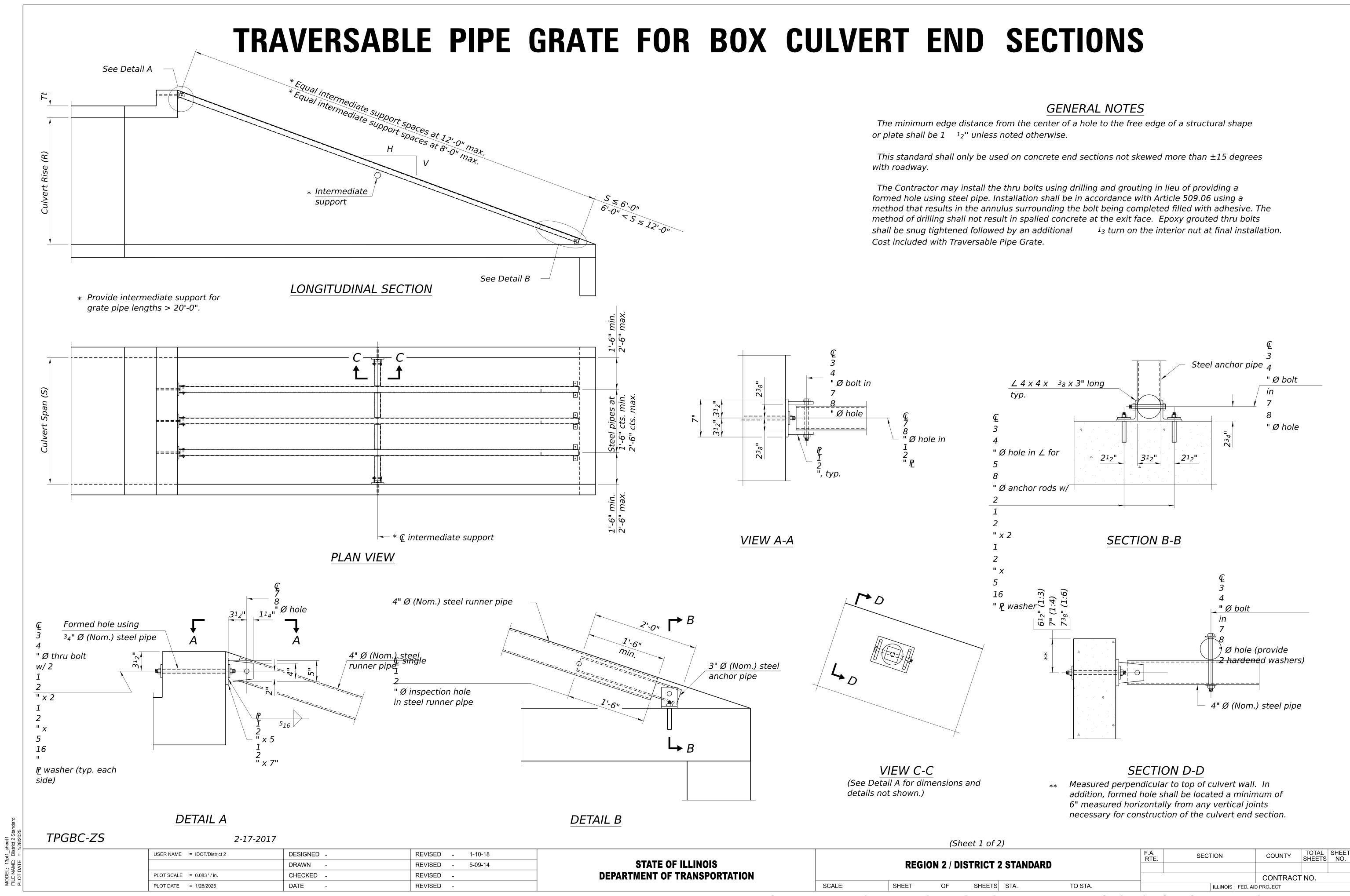
# QUANTITIES

			Ta	able IIA, Co	rrugation:	2  " x ½	⁄2"					7	Гable IIA, С	Corrugation	: 3" x 1"			
Equivalent	(	Concrete y	′d <sup>3</sup>	Reinfo	rcement w Lap lbs.	vithout	Rein	forcement Lap lbs.	with	(	Concrete y	d <sup>3</sup>	Reinfo	rcement w Lap lbs.	ithout	Rein	forcement Lap lbs.	with
Round Size	Slope	of End Se	ction	Slope	of End Se	ction	Slope	of End Se	ction	Slope	of End Se	ction	Slope	of End Se	ction	Slope	of End Se	ction
	1:4	1:6	1:10	1:4	1:6	1:10	1:4	1:6	1:10	1:4	1:6	1:10	1:4	1:6	1:10	1:4	1:6	1:10
15"	1.3	1.8	2.7	240	320	480	250	330	500	-	-	-	-	-	-	-	-	-
18"	1.5	2.1	3.2	270	360	540	290	370	570	-	-	-	-	-	-	-	-	-
21"	1.8	2.5	3.8	310	420	630	330	450	670	-	-	-	-	-	-	-	-	-
24"	2.1	2.8	4.4	360	480	730	380	510	780	-	-	-	-	-	-	-	-	-
30"	2.7	3.7	5.7	420	570	860	440	610	920	-	-	-	-	-	-	-	-	-
36"	3.4	4.6	7.2	520	700	1070	550	740	1140	3.6	5.0	7.8	560	770	1200	600	820	1270
42"	4.1	5.7	8.9	630	860	1340	660	910	1420	4.4	6.1	9.6	640	890	1380	680	940	1470
48"	5.0	7.0	11.0	740	1010	1560	780	1070	1650	5.5	7.7	12.2	800	1120	1750	840	1180	1860
54"	5.9	8.4	13.2	940	1320	2060	1000	1400	2190	6.4	9.1	14.4	980	1380	2170	1050	1470	2310
60"	6.9	9.7	15.4	1050	1470	2300	1110	1560	2440	7.4	10.6	16.8	1120	1580	2500	1190	1680	2670
66"	8.0	11.3	17.9	1190	1680	2630	1260	1780	2800	8.7	12.4	19.7	1320	1870	2960	1390	1980	3140
72"	9.1	12.9	20.6	1540	2190	3490	1660	2350	3770	9.9	14.1	22.4	1660	2360	3760	1790	2550	4060
78"	-	-	-	-	-	-	-	-	-	11.1	15.9	25.5	1880	2700	4320	2010	2900	4640
84"	-	-	-	-	-	-	-	-	-	12.4	17.8	28.5	2050	2940	4690	2200	3150	5040

The above quantities are estimates and provided for information only. Actual quantities may vary depending upon the final layout of reinforcement and number of segments determined by the Contractor.

For cast-in-place construction, increase concrete volumes by approximately 12%.

TOTAL SHEET NO.



# TRAVERSABLE PIPE GRATE FOR BOX CULVERT END SECTIONS

#### PIPE-GRATE SCHEDULE FOR BOX CULVERT END SECTIONS

#### Slope of End Section Precast Box 1:3 1:4 1:6 **Culvert Dimensions** Main Pipe Main Pipe Main Pipe Total Length Int. Support Total Length Int. Support Total Length Int. Support S (ft) | R (ft) | Tt (in) No. / Length No. / Length of Pipe No. / Length No. / Length of Pipe No. / Length No. / Length of Pipe *17'-2"* 7.5 1 @ 8'-10" 1 @ 11'-7" 11'-7" 1 @ 17'-2" N/A 8'-10" 1 @ 15'-11" 5 1 @ 8'-2" 1 @ 10'-8" N/A 15'-11" 1 @ 3'-7" 3 7.5 12'-0" 26'-10" 1 @ 12'-0" N/A 1 @ 15'-8" 15'-8" 1 @ 23'-3" 5 1 @ 11'-4" 1 @ 14'-10" N/A 1 @ 22'-0" 1 @ 3'-7" 25'-7" 11'-4" 14'-10" 7.5 1 @ 15'-2" 1 @ 19'-10" 1 @ 29'-4" 36'-6" 4 15'-2" 1 @ 3'-7" *23'-5*" 2 @ 3'-7" 4 5 1 @ 14'-6" 14'-6" 1 @ 18'-11" 18'-11" 1 @ 28'-1" 2 @ 3'-7" *35*'-3" 1 @ 17'-5" 17'-5" 1 @ 8'-11" 1 @ 11'-9" 11'-9" 16'-5" 1 @ 8'-5" 8'-5" 1 @ 11'-1" 1 @ 16'-5" N/A 11'-1" 1 @ 12'-1" 1 @ 15'-10" 1 @ 23'-6" 12'-1" 15'-10" 1 @ 4'-7" 1 @ 11'-7" 11'-7" 1 @ 15'-2" 1 @ 22'-6" 1 @ 4'-7" 27'-1" 15'-3" 38'-9" 1 @ 15'-3" 1 @ 20'-0" 1 @ 4'-7" 24'-7" 1 @ 29'-7" 2 @ 4'-7" 1 @ 14'-9" 2 @ 4'-7" *37*'-9" 14'-9" 1 @ 19'-3" N/A 19'-3" 1 @ 28'-7" 1 @ 18'-5" 49'-5" 1 @ 24'-1" 2 @ 4'-7" 1 @ 35'-8" *3 @ 4'-7*" 1 @ 17'-11' N/A 17'-11" 1 @ 23'-5" 28'-0" 43'-10" 1 @ 4'-7" 1 @ 34'-8" 2 @ 4'-7" 2 @ 17'-5" 2 @ 8'-11" *17'-10*" 2 @ 11'-9" *23'-6*" 34'-10" 2 @ 8'-8" 2 @ 11'-5" 2 @ 16'-11" 33'-10" N/A *17'-4*" N/A 22'-10" N/A 1 @ 5'-7" *52'-7*" 2 @ 12'-1" 2 @ 15'-10" 2 @ 23'-6" N/A 2 @ 11'-10' 2 @ 15'-6" N/A 1 @ 5'-7" *51'-7*" *23*'-8" 31'-0" 2 @ 23'-0" 2 @ 20'-0" 70'-4" 2 @ 15'-3" 30'-6" 1 @ 5'-7" 2 @ 29'-7" 2 @ 5'-7" *45'-7*" 4 2 @ 15'-0" 30'-0" 2 @ 19'-8" 1 @ 5'-7" 44'-11" 2 @ 29'-1" 2 @ 5'-7" 69'-4" 2 @ 18'-5" 36'-10" 2 @ 24'-1" 2 @ 35'-8" *3 @ 5'-7*" 2 @ 5'-7" N/A 81'-6" 2 @ 18'-2" 36'-4" 2 @ 23'-9" 2 @ 5'-7" 58'-8" 2 @ 35'-2" 2 @ 5'-7" 2 @ 21'-7" 1 @ 5'-7" *2 @ 28'-3*" 2 @ 5'-7" *67'-8*" 2 @ 41'-9" 3 @ 5'-7" 100'-3" 2 @ 21'-4" 1 @ 5'-7" 2 @ 27'-11" *2 @ 5'-7*" *67'-0*" 2 @ 41'-3" *3 @ 5'-7*" 99'-3" 2 @ 17'-5" 34'-10" 2 @ 8'-11" 17'-10" 2 @ 11'-9" *23*'-6" N/A 2 @ 12'-1" 2 @ 15'-10" 2 @ 23'-6" 2 @ 6'-7" 2 @ 15'-3" N/A 30'-6" 2 @ 20'-0" 2 @ 6'-7" 2 @ 29'-7" *3 @ 6'-7*" 78'-11" *53*'-2" 2 @ 18'-5" 36'-10" 2 @ 35'-8" 2 @ 24'-1" 3 @ 6'-7" 67'-11" 4 @ 6'-7" 97'-8" 116'-5" 2 @ 21'-7" 2 @ 6'-7" 2 @ 28'-3" 3 @ 6'-7" *76'-3*" 2 @ 41'-9" 5 @ 6'-7" 2 @ 24'-9" 2 @ 32'-4" 91'-0" 2 @ 47'-10" 135'-2" *3 @ 6'-7*" 4 @ 6'-7" 6 @ 6'-7" 3 @ 8'-11" 3 @ 11'-9" *35'-3*" *3 @ 17'-5*" N/A *52*'-3" 3 @ 12'-1" 3 @ 15'-10" 3 @ 23'-6" *85'-8*" 2 @ 7'-7" 3 @ 15'-3" 45'-9" 3 @ 20'-0" 2 @ 7'-7" *75*'-2" 3 @ 29'-7" *3 @ 7'-7*" 111'-6" N/A 3 @ 18'-5" *3 @ 7'-7*" *3 @ 35'-8*" 4 @ 7'-7" 137'-4" 3 @ 24'-1" 2 @ 7'-7" 3 @ 7'-7" 107'-6" *3 @ 21'-7*" *3 @ 28'-3*" 3 @ 41'-9" 5 @ 7'-7" *3 @ 7'-7*" 97'-0" 3 @ 24'-9" 3 @ 32'-4" 4 @ 7'-7" 127'-4" 3 @ 47'-10" 6 @ 7'-7" 189'-0" 3 @ 27'-11" *3 @ 7'-7*" 106'-6" 3 @ 36'-6" 4 @ 7'-7" 139'-10" 3 @ 53'-11" 6 @ 7'-7" 207'-3" 53'-9" 3 @ 9'-3" N/A *27*'-9" 3 @ 12'-1" N/A 3 @ 17'-11" *36*'-3" 3 @ 12'-4" N/A *37'-0*" 3 @ 16'-2" 48'-6" 3 @ 24'-0" *3 @ 8'-7*" 97'-9" 3 @ 15'-6" 3 @ 20'-4" 2 @ 8'-7" 3 @ 30'-1" *3 @ 8'-7*" 116'-0" 3 @ 36'-2" 3 @ 18'-8" 56'-0" 3 @ 24'-5" 3 @ 8'-7" 4 @ 8'-7" 142'-10" 3 @ 21'-10" 2 @ 8'-7" *3 @ 42'-3*" 5 @ 8'-7" 82'-8" 3 @ 28'-7" *3 @ 8'-7*" 169'-8" 3 @ 48'-4" *3 @ 8'-7*" *3 @ 32*'-8" *3 @ 25'-0*" 100'-9" 4 @ 8'-7" 132'-4" 6 @ 8'-7" 196'-6" 3 @ 28'-2" 3 @ 8'-7" 110'-3" 3 @ 36'-10" 4 @ 8'-7" 144'-10" 3 @ 54'-5" 6 @ 8'-7" 214'-9" 3 @ 40'-11" 3 @ 60'-6" 7 @ 8'-7" 241'-7" 3 @ 31'-4" *3 @ 8'-7*" 119'-9" *5 @ 8'-7*" 3 @ 9'-6" 28'-6" 3 @ 12'-5" 3 @ 18'-5" *55*'-3" *37'-3*" 3 @ 12'-8" *3 @ 24'-6*" 3 @ 16'-6" N/A *3 @ 9'-7*" 102'-3" 3 @ 15'-10' *3 @ 20'-8*" 2 @ 9'-7" *3 @ 30'-7*" *3 @ 9'-7*" 120'-6" 3 @ 19'-0" *57*'-0" 3 @ 24'-9" 3 @ 9'-7" 103'-0" 3 @ 36'-8" 4 @ 9'-7" 148'-4" 3 @ 22'-1" 2 @ 9'-7" 85'-5" 3 @ 28'-11" 3 @ 9'-7" 3 @ 42'-9" *5 @ 9'-7*" 176'-2" 115'-6" 3 @ 25'-3" *3 @ 9'-7*" *3 @ 33*'-0" 4 @ 9'-7" 3 @ 48'-10" 6 @ 9'-7" 204'-0" 104'-6" 3 @ 28'-5" 3 @ 9'-7" 114'-0" *3 @ 37'-2*" 4 @ 9'-7" 149'-10" 3 @ 54'-11" 6 @ 9'-7" 222'-3" 10 3 @ 31'-7" 4 @ 9'-7" 133'-1" 3 @ 41'-3" *5 @ 9'-7*" 3 @ 61'-0" 7 @ 9'-7" 250'-1" 171'-8" 10 3 @ 34'-9" 4 @ 9'-7" 142'-7" 3 @ 45'-5" *5 @ 9'-7*" 184'-2" 3 @ 67'-1" 8 @ 9'-7" 277'-11" 4 @ 9'-9" 4 @ 12'-9" 4 @ 18'-11" N/A *75*'-8" 11 4 @ 12'-11' 4 @ 25'-0" 3 @ 10'-7" 131'-9" 51'-8" 4 @ 16'-11" 4 @ 16'-1" 4 @ 21'-0" 4 @ 31'-1" 2 @ 10'-7" 3 @ 10'-7" 156'-1" 11 64'-4" 105'-2" 4 @ 22'-5" 4 @ 29'-3" 2 @ 10'-7" 110'-10" 3 @ 10'-7" 4 @ 43'-3" 5 @ 10'-7" 225'-11" 148'-9" 4 @ 55'-5" 4 @ 28'-9" 3 @ 10'-7" 4 @ 37'-6" 4 @ 10'-7" 6 @ 10'-7" 285'-2" 146'-9" 11 4 @ 35'-0" 4 @ 10'-7" 182'-4" 4 @ 45'-9" *5 @ 10'-7*" 235'-11" 4 @ 67'-7" 8 @ 10'-7" 355'-0" 11 4 @ 38'-2" 4 @ 10'-7" 4 @ 49'-10" 6 @ 10'-7" 4 @ 73'-8" 9 @ 10'-7" 389'-11" 195'-0" 262'-10" 4 @ 10'-0" 4 @ 13'-1" *77*'-8" 12 4 @ 19'-5" 4 @ 25'-6" 12 4 @ 13'-2" *52*'-8" 4 @ 17'-3" N/A 3 @ 11'-7" *136*'-9" 69'-0" 4 @ 21'-4" 4 @ 31'-7" 12 4 @ 16'-4" 2 @ 11'-7" 4 @ 11'-7" 172'-8" 4 @ 43'-9" 4 @ 22'-8" 2 @ 11'-7" 113'-10" 4 @ 29'-7" 3 @ 11'-7" 153'-1" 5 @ 11'-7" 232'-11"

#### GENERAL NOTES

This table is only to be used for cross drainage structures.

TPGBC-ZS 2-17-2017 (Sheet 2 of 2) TOTAL SHEE SHEETS NO. USER NAME = IDOT/District 2 DESIGNED REVISED 1-10-18 STATE OF ILLINOIS **REGION 2 / DISTRICT 2 STANDARD** DRAWN REVISED -5-09-14 **DEPARTMENT OF TRANSPORTATION** CHECKED -REVISED PLOT SCALE = 0.083 '/in. CONTRACT NO.

4 @ 11'-7"

5 @ 11'-7"

6 @ 11'-7"

*197*'-8"

*242*'-3"

286'-10"

4 @ 55'-11"

4 @ 68'-1"

4 @ 80'-3"

7 @ 11'-7"

8 @ 11'-7"

10 @ 11'-7"

304'-9"

365'-0"

436'-10"

4 @ 37'-10"

4 @ 46'-1"

4 @ 54'-4"

4 @ 29'-0"

4 @ 35'-4"

4 @ 41'-8"

10

REVISED

PLOT DATE = 1/28/2025

12

12 12

3 @ 11'-7"

4 @ 11'-7"

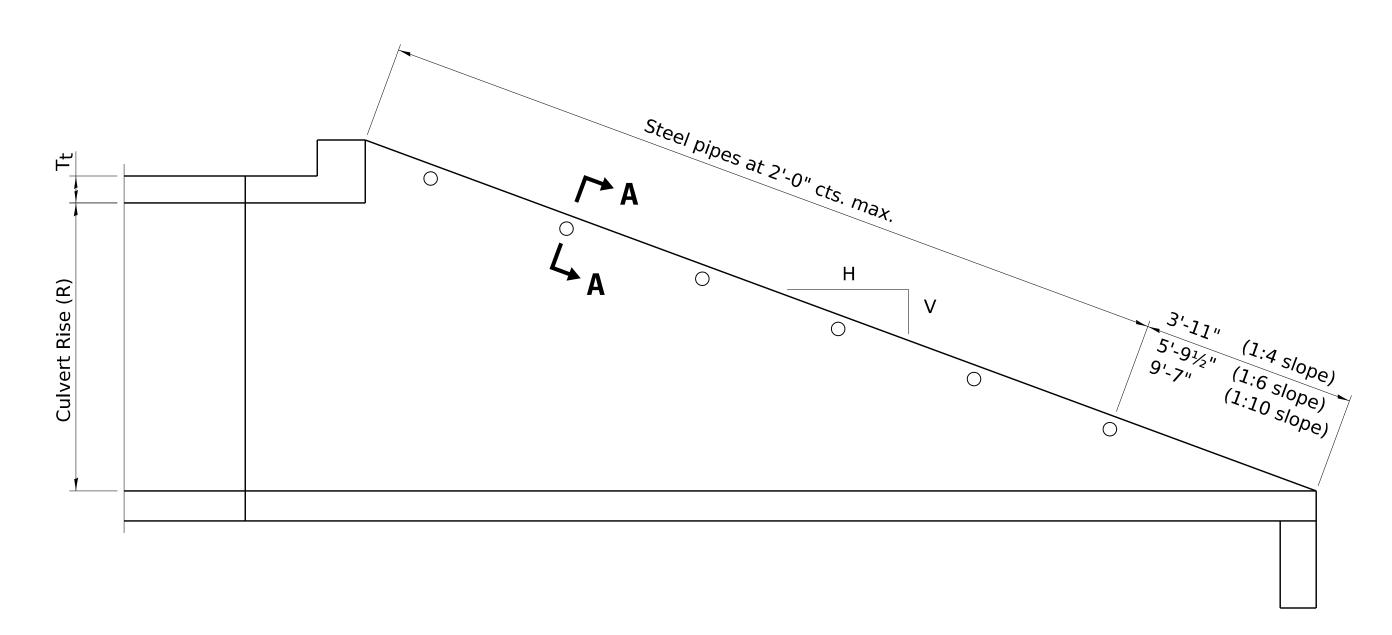
5 @ 11'-7"

150'-9"

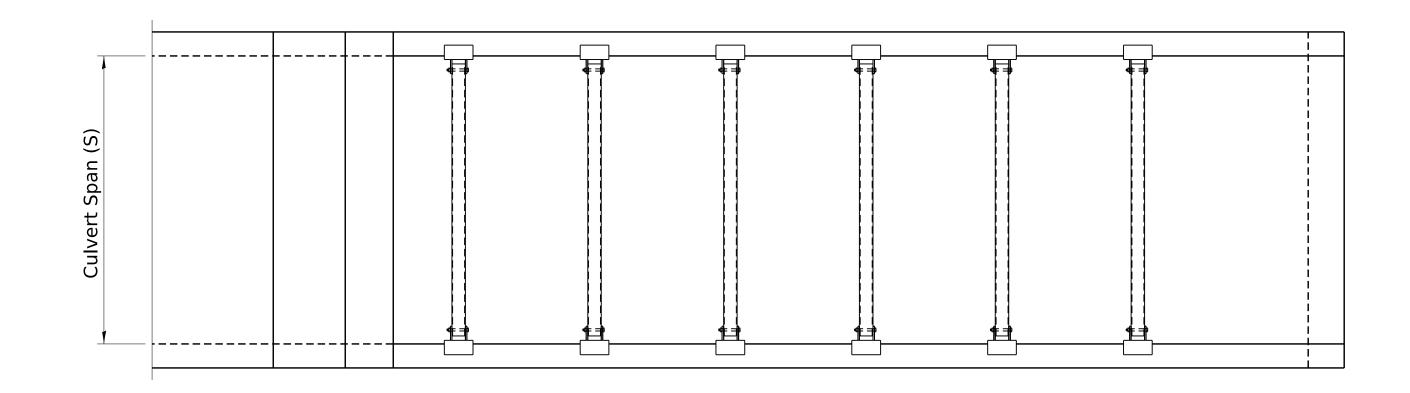
*187'-8*"

224'-7"

13.1



## LONGITUDINAL SECTION



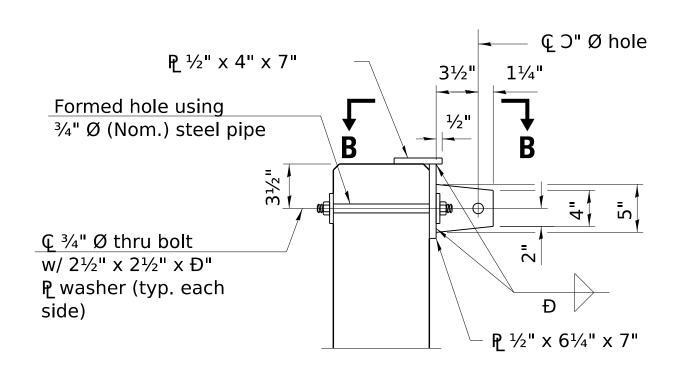
**PLAN VIEW** 

## **GENERAL NOTES**

The minimum edge distance from the center of a hole to the free edge of a structural shape or plate shall be  $1\frac{1}{2}$ " unless noted otherwise.

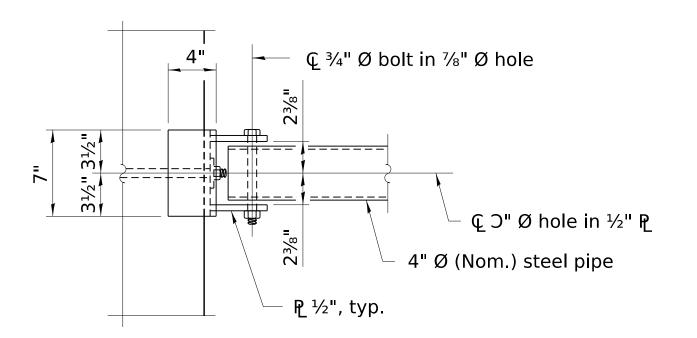
This standard shall only be used on concrete end sections for parallel drainage structures.

The Contractor may install the thru bolts using drilling and grouting in lieu of providing a formed hole using steel pipe. Installation shall be in accordance with Article 509.06 using a method that results in the annulus surrounding the bolt being completely filled with adhesive. The method of drilling shall not result in spalled concrete at the exit face. Epoxy grouted thru bolts shall be snug tightened followed by an additional 1/3 turn on the interior nut at final installation. Cost included with Traversable Pipe Grate.



## SECTION A-A

(4" Ø pipe not shown for clarity.)



VIEW B-B

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 5-09-14								F.A.	SECTION	COUNTY	TOTAL SHEET
	DRAWN -	REVISED -	STATE OF ILLINOIS		REGIO			2 STANDAR		T(TE.			GHEETO NO.
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION									CONTRAC	ΓNO.
PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FE	D. AID PROJECT	

# PIPE GRATE SCHEDULE FOR PARALLEL BOX CULVERTS

				(<2 FT COVER	)		
BOY	CIZE		S	SLOPE OF END SEC	TION		
	SIZE	1	:4		1:6		1:10
SPAN	RISE	Pipes	Total Length	Pipes	Total Length of Pipe	Pipes	Total Length
(FT.)	(FT.)	No. / Length	of Pipe	No. / Length		No. / Length	of Pipe
3	3	5 @ 2'-7"	12'-11" 18'-1"	8 @ 2'-7"	20'-8" 28'-5"	12 @ 2'-7"	31'-0" 43'-11"
	+	7 @ 2'-7"		11 @ 2'-7"	28'-8"	17 @ 2'-7"	
4	3	5 @ 3'-7"	17'-11" 28'-8"	8 @ 3'-7"	39'-5"	13 @ 3'-7"	46'-7" 64'-6"
4	1	8 @ 3'-7"		11 @ 3'-7"		18 @ 3'-7"	
<u>4</u> 5	4	10 @ 3'-7"	35'-10"	14 @ 3'-7"	50'-2"	23 @ 3'-7"	82'-5"
	2	6 @ 4'-7"	27'-6"	8 @ 4'-7"	36'-8"	13 @ 4'-7"	59'-7"
5	3	8 @ 4'-7"	36'-8"	11 @ 4'-7"	50'-5"	18 @ 4'-7"	82'-6"
5	4	10 @ 4'-7"	45'-10"	14 @ 4'-7"	64'-2"	23 @ 4'-7"	105'-5"
5	5	12 @ 4'-7"	55'-0"	17 @ 4'-7"	77'-11"	28 @ 4'-7"	128'-4"
6	2	6 @ 5'-7"	33'-6"	8 @ 5'-7"	44'-8"	13 @ 5'-7"	72'-7"
6	3	8 @ 5'-7"	44'-8"	11 @ 5'-7"	61'-5"	18 @ 5'-7"	100'-6"
6	4	10 @ 5'-7"	55'-10"	14 @ 5'-7"	78'-2"	23 @ 5'-7"	128'-5"
6	5	12 @ 5'-7"	67'-0"	17 @ 5'-7"	94'-11"	28 @ 5'-7"	156'-4"
6	6	14 @ 5'-7"	78'-2"	20 @ 5'-7"	111'-8"	33 @ 5'-7"	184'-3"
7	2	6 @ 6'-7"	39'-6"	8 @ 6'-7"	52'-8"	13 @ 6'-7"	85'-7"
7	3	8 @ 6'-7"	52'-8"	11 @ 6'-7"	72'-5"	18 @ 6'-7"	118'-6"
7	4	10 @ 6'-7"	65'-10"	14 @ 6'-7"	92'-2"	23 @ 6'-7"	151'-5"
7	5	12 @ 6'-7"	79'-0"	17 @ 6'-7"	111'-11"	28 @ 6'-7"	184'-4"
7	6	14 @ 6'-7"	92'-2"	20 @ 6'-7"	131'-8"	33 @ 6'-7"	217'-3"
7	7	16 @ 6'-7"	105'-4"	23 @ 6'-7"	151'-5'	38 @ 6'-7"	250'-2"
8	2	6 @ 7'-7"	45'-6"	8 @ 7'-7"	60'-8"	13 @ 7'-7"	98'-7"
8	3	8 @ 7'-7"	60'-8"	11 @ 7'-7"	83'-5"	18 @ 7'-7"	136'-6"
8	4	10 @ 7'-7"	75'-10"	14 @ 7'-7"	106'-2"	23 @ 7'-7"	174'-5"
8	5	12 @ 7'-7"	91'-0"	17 @ 7'-7"	128'-11"	28 @ 7'-7"	212'-4"
8	6	14 @ 7'-7"	106'-2"	20 @ 7'-7"	151'-8"	33 @ 7'-7"	250'-3"
8	7	16 @ 7'-7"	121'-4"	23 @ 7'-7"	174'-5"	38 @ 7'-7"	288'-2"
8	8	18 @ 7'-7"	136'-6"	26 @ 7'-7"	197'-2"	43 @ 7'-7"	326'-1"
9	2	6 @ 8'-7"	51'-6"	8 @ 8'-7"	68'-8"	13 @ 8'-7"	111'-7"
9	3	8 @ 8'-7"	68'-8"	11 @ 8'-7"	94'-5"	18 @ 8'-7"	154'-6'
9	4	10 @ 8'-7"	85'-10"	14 @ 8'-7"	120'-2"	23 @ 8'-7"	197'-5"
9	5	12 @ 8'-7"	103'-0"	17 @ 8'-7"	145'-11"	28 @ 8'-7"	240'-4"
9	6	14 @ 8'-7"	120'-2"	20 @ 8'-7"	171'-8"	33 @ 8'-7"	283'-3"
9	7	16 @ 8'-7"	137'-4"	23 @ 8'-7"	197'-5"	38 @ 8'-7"	326'-2"
9	8	18 @ 8'-7"	154'-6"	26 @ 8'-7"	223'-2"	43 @ 8'-7"	369'-1"
9	9	20 @ 8'-7"	171'-8"	30 @ 8'-7"	257'-6"	48 @ 8'-7"	412'-0"
10	2	6 @ 9'-7"	57'-6"	9 @ 9'-7"	86'-3"	14 @ 9'-7"	134'-2"
10	3	8 @ 9'-7"	76'-8"	12 @ 9'-7"	115'-0"	19 @ 9'-7"	182'-1"
10	4	10 @ 9'-7"	95'-10"	15 @ 9'-7"	143'-9"	24 @ 9'-7"	230'-0"
10	5	12 @ 9'-7"	115'-0"	18 @ 9'-7"	172'-6"	29 @ 9'-7"	277'-11"
10	6	14 @ 9'-7"	134'-2"	21 @ 9'-7"	201'-3"	34 @ 9'-7"	325'-10"
10	7	16 @ 9'-7"	153'-4"	24 @ 9'-7"	230'-0"	39 @ 9'-7"	373'-9"
10	8	18 @ 9'-7"	172'-6"	27 @ 9'-7"	258'-9"	44 @ 9'-7"	421'-8"
10	9	20 @ 9'-7"	191'-8"	30 @ 9'-7"	287'-5"	49 @ 9'-7"	469'-7"
10	10	22 @ 9'-7"	210'-10"	33 @ 9'-7"	316'-3"	54 @ 9'-7"	517'-6"

# PIPE GRATE SCHEDULE FOR PARALLEL BOX CULVERTS

				(<2 FT COVER	)				
DOV	CIZE		S	LOPE OF END SEC	TION				
BOX	SIZE	1	.:4		1:6	1:10			
SPAN (FT.)	RISE (FT.)	Pipes No. / Length	Total Length of Pipe	Pipes No. / Length	Total Length of Pipe	Pipes No. / Length	Total Length of Pipe		
11	2	6 @ 10'-7"	63'-6"	9 @ 10'-7"	95'-3"	14 @ 10'-7"	148'-2"		
11	3	8 @ 10'-7"	84'-8"	12 @ 10'-7"	127'-0"	19 @ 10'-7"	201'-1"		
11	4	10 @ 10'-7"	105'-10"	15 @ 10'-7"	158'-9"	24 @ 10'-7"	254'-0"		
11	6	14 @ 10'-7"	148'-2"	21 @ 10'-7"	222'-3"	34 @ 10'-7"	359'-10"		
11	8	18 @ 10'-7"	190'-6"	27 @ 10'-7"	285'-9"	44 @ 10'-7"	465'-8"		
11	10	23 @ 10'-7"	243'-5"	33 @ 10'-7"	349'-3"	54 @ 10'-7"	571'-6"		
11	11	25 @ 10'-7"	264'-7"	36 @ 10'-7"	381'-0"	59 @ 10'-7"	624'-5"		
12	2	6 @ 11'-7"	69'-6"	9 @ 11'-7"	104'-3"	15 @ 11'-7"	173'-9"		
12	3	8 @ 11'-7"	92'-8"	12 @ 11'-7"	139'-0"	20 @ 11'-7"	231'-8"		
12	4	10 @ 11'-7"	115'-10"	15 @ 11'-7"	173'-9"	25 @ 11'-7"	289'-7"		
12	6	15 @ 11'-7"	173'-9"	21 @ 11'-7"	243'-3"	35 @ 11'-7"	405'-5"		
12	8	19 @ 11'-7"	220'-1"	27 @ 11'-7"	312'-9"	45 @ 11'-7"	521'-3"		
12	10	23 @ 11'-7"	266'-5"	33 @ 11'-7"	382'-3"	55 @ 11'-7"	637'-1"		
12	12	27 @ 11'-7"	312'-9"	39 @ 11'-7"	451'-9"	65 @ 11'-7"	752'-11"		

# PIPE GRATE SCHEDULE FOR PARALLEL BOX CULVERTS

				(>2 FT COVER	.)			
DOV	CIZE		S	SLOPE OF END SEC	TION			
BOX	SIZE	-	L:4		1:6	1:10		
SPAN (FT.)	RISE (FT.)	Pipes No. / Length	Total Length of Pipe	Pipes No. / Length	Total Length of Pipe	Pipes No. / Length	Total Length of Pipe	
3	2	5 @ 2'-7"	12'-11"	7 @ 2'-7"	18'-1"	11 @ 2'-7"	28'-5"	
3	3	7 @ 2'-7"	18'-1"	10 @ 2'-7"	25'-10"	16 @ 2'-7"	41'-4"	
4	2	5 @ 3'-7"	17'-11"	7 @ 3'-7"	25'-1"	12 @ 3'-7"	43'-0"	
4	3	7 @ 3'-7"	25'-1"	10 @ 3'-7"	35'-10"	17 @ 3'-7"	60'-11"	
4	4	9 @ 3'-7"	32'-3"	13 @ 3'-7"	46'-7"	22 @ 3'-7"	78'-10"	
5	2	5 @ 4'-7"	22'-11"	7 @ 4'-7"	32'-1"	12 @ 4'-7"	55'-0"	
5	3	7 @ 4'-7"	32'-1"	11 @ 4'-7"	50'-5"	17 @ 4'-7"	77'-11"	
5	4	9 @ 4'-7"	41'-3"	14 @ 4'-7"	64'-2"	22 @ 4'-7"	100'-10"	
5	5	11 @ 4'-7"	50'-5"	17 @ 4'-7"	77'-11"	27 @ 4'-7"	123'-9"	
6	2	5 @ 5'-7"	27'-11"	8 @ 5'-7"	44'-8"	12 @ 5'-7"	67'-0"	
6	3	7 @ 5'-7"	39'-1"	11 @ 5'-7"	61'-5"	17 @ 5'-7"	94'-11"	
6	4	10 @ 5'-7"	55'-10"	14 @ 5'-7"	78'-2"	23 @ 5'-7"	128'-5"	
6	5	12 @ 5'-7"	67'-0"	17 @ 5'-7"	94'-11"	28 @ 5'-7"	156'-4"	
6	6	14 @ 5'-7"	78'-2"	20 @ 5'-7"	111'-8"	33 @ 5'-7"	184'-3"	

Follow (<2 FT Cover) table for all other sizes

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 5-09-14
	DRAWN -	REVISED -
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -
PLOT DATE = 1/28/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	DECIO	M 2 / DI	STRICT 1	CTANDA	.DD	F.A. RTE.	
	KEGIU	N Z / DI	SIRICI 2	2 STANDA	AKD .		
SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		

# PIPE GRATE SCHEDULE FOR PARALLEL PIPE CULVERTS 15" THRU 84" DIA.

		S	LOPE OF END SECTION					
Dino I D	1	:4		1:6		1:10		
Pipe I.D.	Pipes No. / Length	Total Length of Pipe	Pipes No. / Length	Total Length of Pipe	Pipes No. / Length	Total Length of Pipe		
15"	3 @ 0'-11"	2'-9"	4 @ 0'-11"	3'-8"	6 @ 0'-11"	5'-6"		
18"	3 @ 1'-1"	3'-3"	5 @ 1'-1"	5'-5"	7 @ 1'-1"	7'-7"		
21"	4 @ 1'-5"	5'-8"	5 @ 1'-5"	7'-1"	9 @ 1'-5"	12'-9"		
24"	5 @ 1'-7"	7'-11"	6 @ 1'-7"	9'-6"	10 @ 1'-7"	15'-10"		
30"	6 @ 2'-1"	12'-6"	8 @ 2'-1"	16'-8"	13 @ 2'-1"	27'-1"		
36"	7 @ 2'-7"	18'-1"	10 @ 2'-7"	25'-10"	15 @ 2'-7"	38'-9"		
42"	8 @ 3'-1"	24'-8"	11 @ 3'-1"	33'-11"	18 @ 3'-1"	55'-6"		
48"	9 @ 3'-7"	32'-3"	13 @ 3'-7"	46'-7"	21 @ 3'-7"	75'-3"		
54"	10 @ 4'-1"	40'-10"	14 @ 4'-1"	57'-2"	23 @ 4'-1"	93'-11"		
60"	11 @ 4'-7"	50'-5"	15 @ 4'-7"	68'-9"	25 @ 4'-7"	114'-7"		
66"	12 @ 5'-1"	61'-0"	17 @ 5'-1"	86'-5"	28 @ 5'-1"	142'-4"		
72"	13 @ 5'-7"	72'-7"	18 @ 5'-7"	100'-6"	30 @ 5'-7"	167'-6"		
78"	14 @ 6'-1"	85'-2"	20 @ 6'-1"	121'-8"	33 @ 6'-1"	200'-9"		
84"	15 @ 6'-7"	98'-9"	21 @ 6'-7"	138'-3"	35 @ 6'-7"	230'-5"		

	REGIO	ON 2 / D	ISTRICT 2	2 STANDAR	D	F.A. RTE.	SECT	TION	COUNTY	SHEETS	SHEET NO.
	T								CONTRACT	NO.	
CALE:	SHEET	OF	SHEETS	STA.	TO STA.			ILLINOIS FED. AID	D PROJECT		

### PIPE GRATE SCHEDULE FOR PARALLEL PIPE ARCH CULVERTS 15" THRU 84" DIA.

PIPE GKA	AIL GOILLDOL	E FUK PAKA	LLLL I II L AI	KCH CULVER	15 15 IHKU	0 84 DIA.		
		S	LOPE OF END SEC	TION				
		Table IIA, Corrugat	ion :	2  " x ½"				
Pino I D	1	L:4		1:6	1:10			
Pipe I.D.	Pipes No. / Length	Total Length of Pipe	Pipes No. / Length	Total Length of Pipe	Pipes No. / Length	Total Length of Pipe		
15"	2 @ 1'-1"	2'-2"	3 @ 1'-1"	3'-3"	5 @ 1'-1"	5'-5"		
18"	3 @ 1'-5"	4'-3"	4 @ 1'-5"	5'-8"	6 @ 1-5"	8'-6"		
21"	3 @ 1'-7"	4'-9"	5 @ 1'-7"	7'-11"	7 @ 1'-7"	11'-1"		
24"	4 @ 1'-11"	7'-8"	5 @ 1'-11"	9'-7"	8 @ 1'-11"	15'-4"		
30"	4 @ 2'-7"	10'-4"	6 @ 2'-7"	15'-6"	10 @ 2'-7"	25'-10"		
36"	5 @ 3'-1"	15'-5"	7 @ 3'-1"	21'-7"	12 @ 3'-1"	37'-0"		
42"	6 @ 3'-9"	22'-6"	9 @ 3'-9"	33'-9"	14 @ 3'-9"	52'-6"		
48"	7 @ 4'-5"	30'-11"	10 @ 4'-5"	44'-2"	16 @ 4'-5"	70'-8"		
54"	8 @ 4'-11"	39'-4"	11 @ 4'-11"	54'-1"	18 @ 4'-11"	88'-6"		
60"	8 @ 5'-7"	44'-8"	12 @ 5'-7"	67'-0"	20 @ 5'-7"	111'-8"		
66"	9 @ 6'-1"	54'-9"	13 @ 6'-1"	79'-1"	22 @ 6'-1"	133'-10"		
72"	10 @ 6'-7"	65'-10"	15 @ 6'-7"	98'-9"	24 @ 6'-7"	158'-0"		
78"	-	-	-	-	-	-		
84"	-	-	-	-	-	_		

# PIPE GRATE SCHEDULE FOR PARALLEL PIPE ARCH CULVERTS 15" THRU 84" DIA.

		SI	OPE OF END SEC	ΓΙΟΝ		
		Table IIA, Corru	ugation :	3" x 1"		
Pipe I.D.	1	:4		1:6	1	.:10
Tipe i.b.	Pipes No. / Length	Total Length of Pipe	Pipes No. / Length	Total Length of Pipe	Pipes No. / Length	Total Length of Pipe
15"	-	-	-	-	-	-
18"	-	_	-	_	-	-
21"	-	_	-	-	-	-
24"	-	-	-	-	-	-
30"	-	-	-	_	-	-
36"	6 @ 2'-11"	17'-6"	8 @ 2'-11"	23'-4"	13 @ 2'-11"	37'-11"
42"	7 @ 3'-5"	23'-11"	10 @ 3'-5"	34'-2"	15 @ 3'-5"	51'-3"
48"	8 @ 4'-1"	32'-8"	11 @ 4'-1"	44'-11"	18 @ 4'-1"	73'-6"
54"	9 @ 4'-7"	41'-3"	12 @ 4'-7"	55'-0"	20 @ 4'-7"	91'-10"
60"	9 @ 5'-1"	45'-9"	14 @ 5'-1"	71'-2"	22 @ 5'-1"	111'-10"
66"	10 @ 5'-9"	57'-6"	15 @ 5'-9"	86'-3"	24 @ 5'-9"	138'-0"
72"	11 @ 6'-5"	70'-7"	16 @ 6'-5"	102'-8"	26 @ 6'-5"	166'-10"
78"	12 @ 6'-11"	83'-0"	17 @ 6'-11"	117'-7"	28 @ 6'-11"	193'-8"
84"	12 @ 7'-7"	91'-0"	18 @ 7'-7"	136'-6"	30 @ 7'-7"	227'-6"

	<b>DE0101</b>	. o / Dio				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
	REGION	N 2 / DIS	TRICT 2	2 STANDARD					
	I							CONTRACT	ΓNO.
SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FEE	. AID PROJECT	

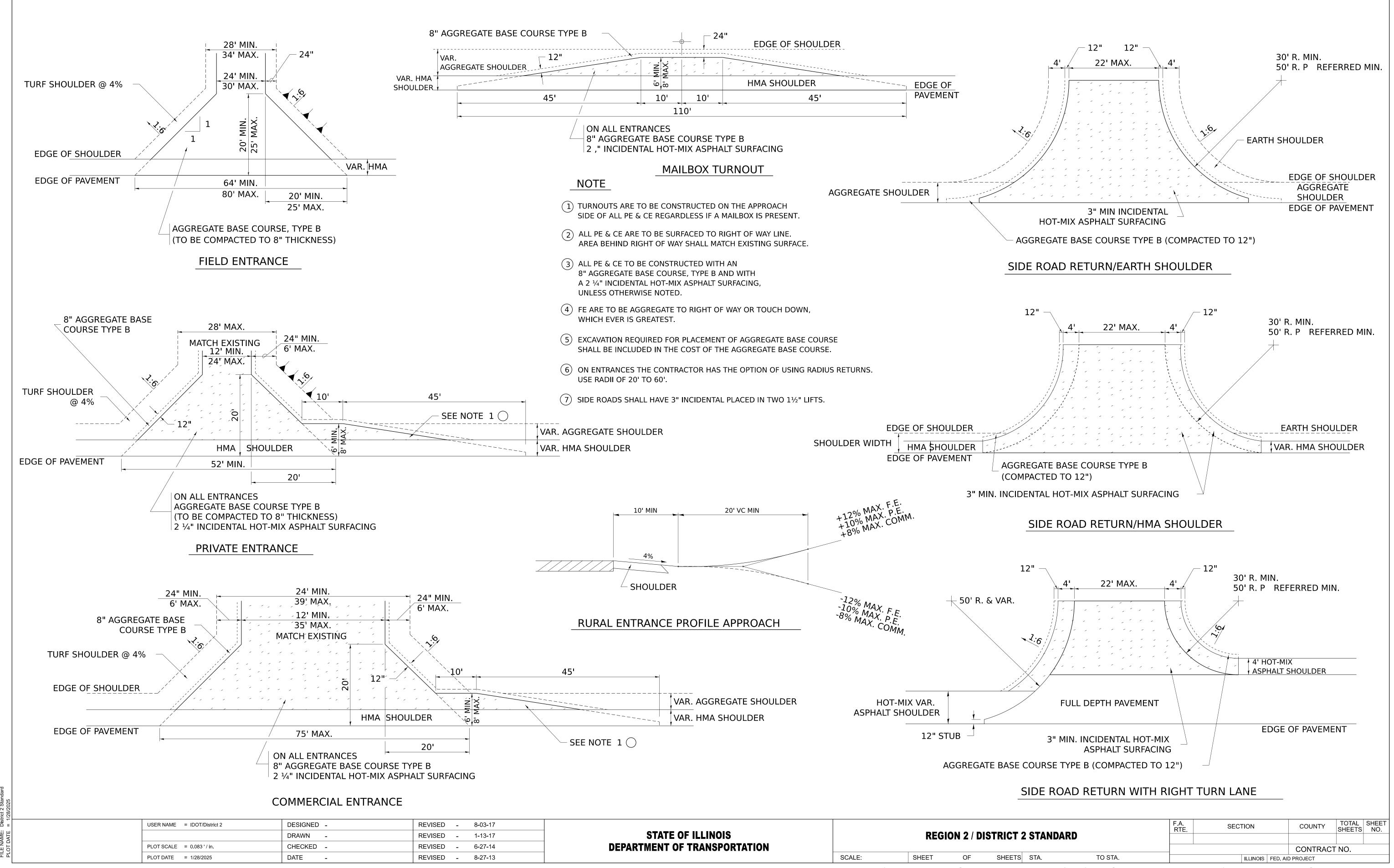
# PIPE GRATE SCHEDULE FOR PARALLEL ELLIPTICAL PIPE CULVERTS 15" THRU 72" DIA.

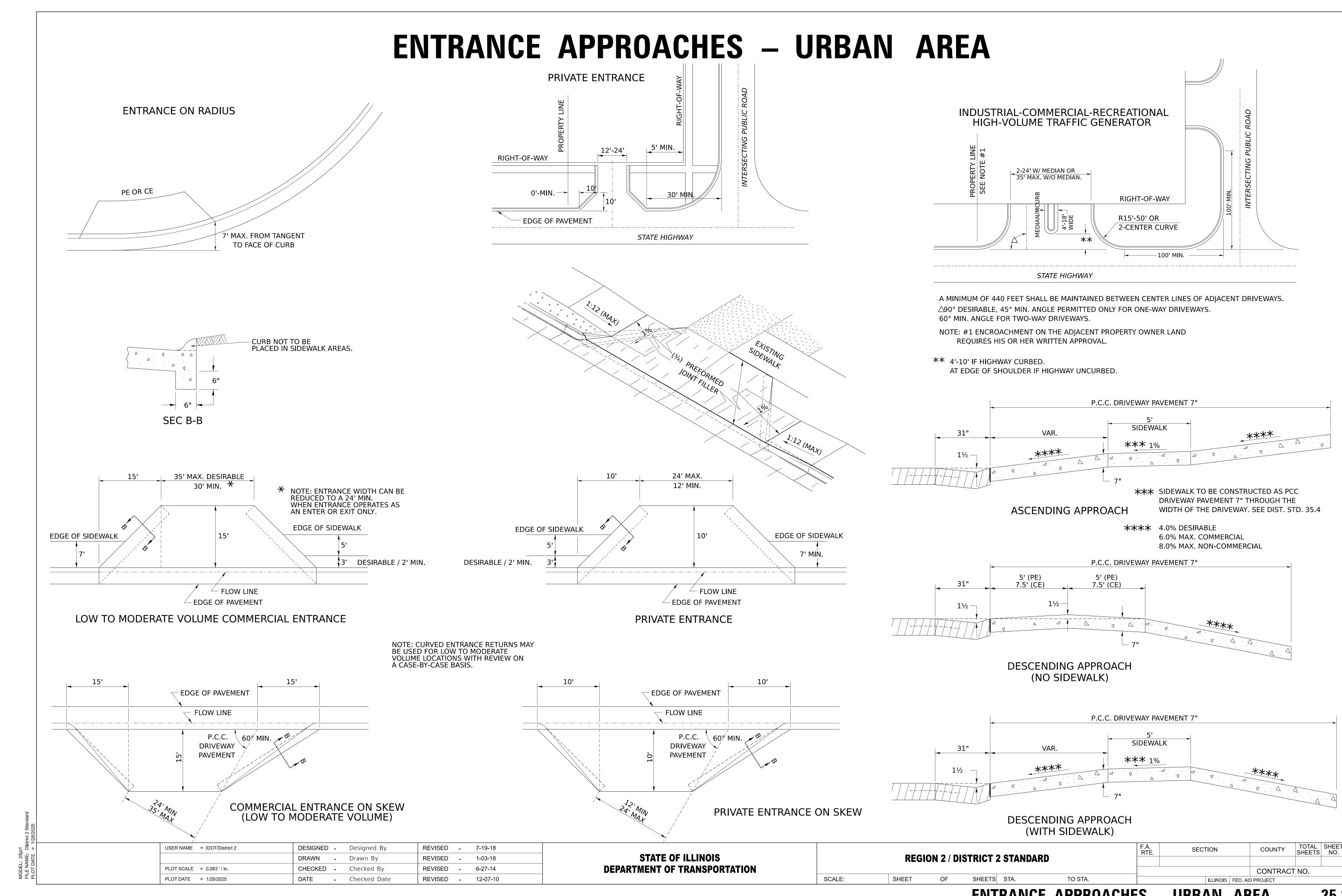
		S	LOPE OF END SEC	TION		
Dino I D	1	:4		1:6	1	.:10
Pipe I.D.	Pipes No. / Length	Total Length of Pipe	Pipes No. / Length	Total Length of Pipe	Pipes No. / Length	Total Length of Pipe
15"	3 @ 2'-7"	7'-9"	5 @ 2'-7"	12'-11"	7 @ 2'-7"	18'-1"
18"	3 @ 2'-7"	7'-9"	5 @ 2'-7"	12'-11"	7 @ 2'-7"	18'-1"
21"	5 @ 3'-3"	16'-3"	7 @ 3'-3"	22'-9"	12 @ 3'-3"	39'-0"
24"	5 @ 3'-3"	16'-3"	7 @ 3'-3"	22'-9"	12 @ 3'-3"	39'-0"
27"	6 @ 3'-7"	21'-6"	8 @ 3'-7"	28'-8"	13 @ 3'-7"	46'-7"
30"	6 @ 3'-11"	23'-6"	9 @ 3'-11"	35'-3"	14 @ 3'-11"	54'-10"
36"	7 @ 4'-7"	32'-1"	10 @ 4'-7"	45'-10"	16 @ 4'-7"	73'-4"
42"	8 @ 5'-5"	43'-4"	11 @ 5'-5"	59'-7"	18 @ 5'-5"	97'-6"
48"	9 @ 6'-1"	54'-9"	13 @ 6'-1"	79'-1"	20 @ 6'-1"	121'-8"
54"	10 @ 6'-9"	67'-6"	14 @ 6'-9"	94'-6"	23 @ 6'-9"	155'-3"
60"	11 @ 7'-7"	83'-5"	15 @ 7'-7"	113'-9"	25 @ 7'-7"	189'-7"
66"	11 @ 8'-3"	90'-9"	17 @ 8'-3"	140'-3"	27 @ 8'-3"	222'-9"
72"	12 @ 8'-11"	107'-0"	18 @ 8'-11"	160'-6"	30 @ 8'-11"	267'-6"

	DEOL	0N 0 / D	IOTRICT (	OTANDA	<b>nn</b>	F.A. RTE.	SEC	ΓΙΟΝ		COUNTY	TOTAL SHEETS	SHEET NO.
	REGION 2 / DISTRICT 2 STANDARD									001177407		
	T		T			_				CONTRACT	NO.	
SCALE:	SHEET	OF	SHEETS	STA.	TO STA.			ILLINOIS	FED. AII	PROJECT		

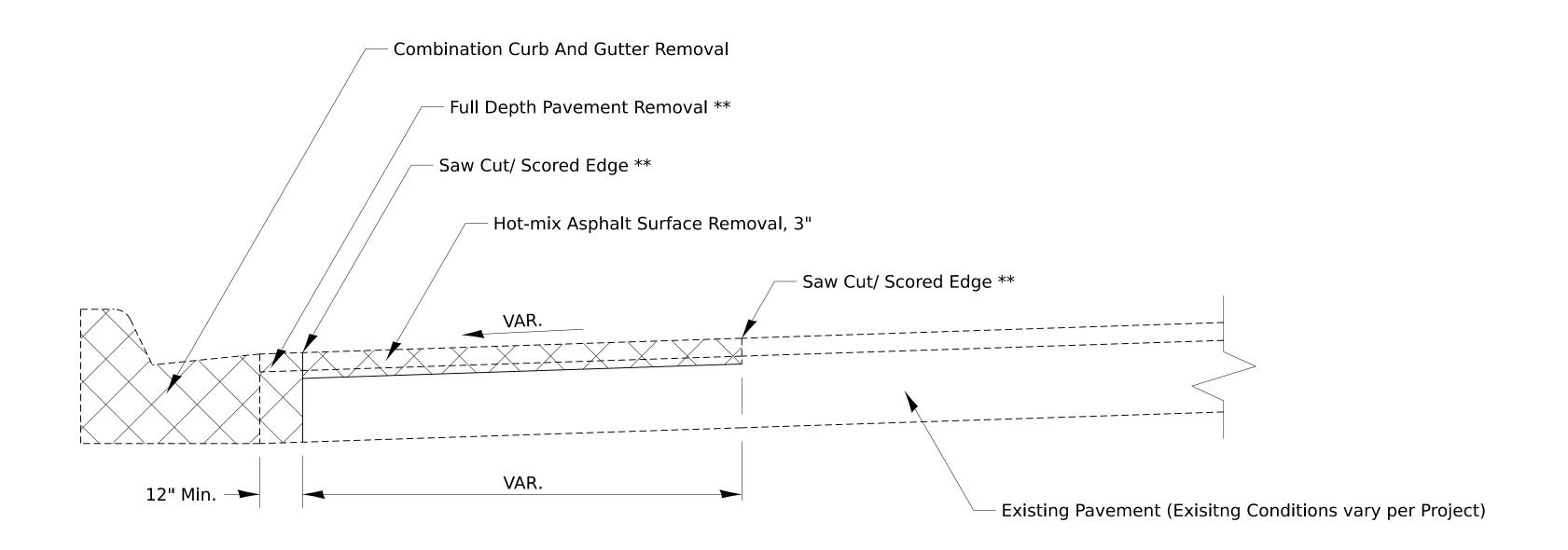
TRAVERSABLE PIPE GRATE FOR PARALLEL DRAINAGE STRUCTURE SHEET 5 OF 5

# HOT-MIX ASPHALT APPROACHES AND MAILBOX RETURNS

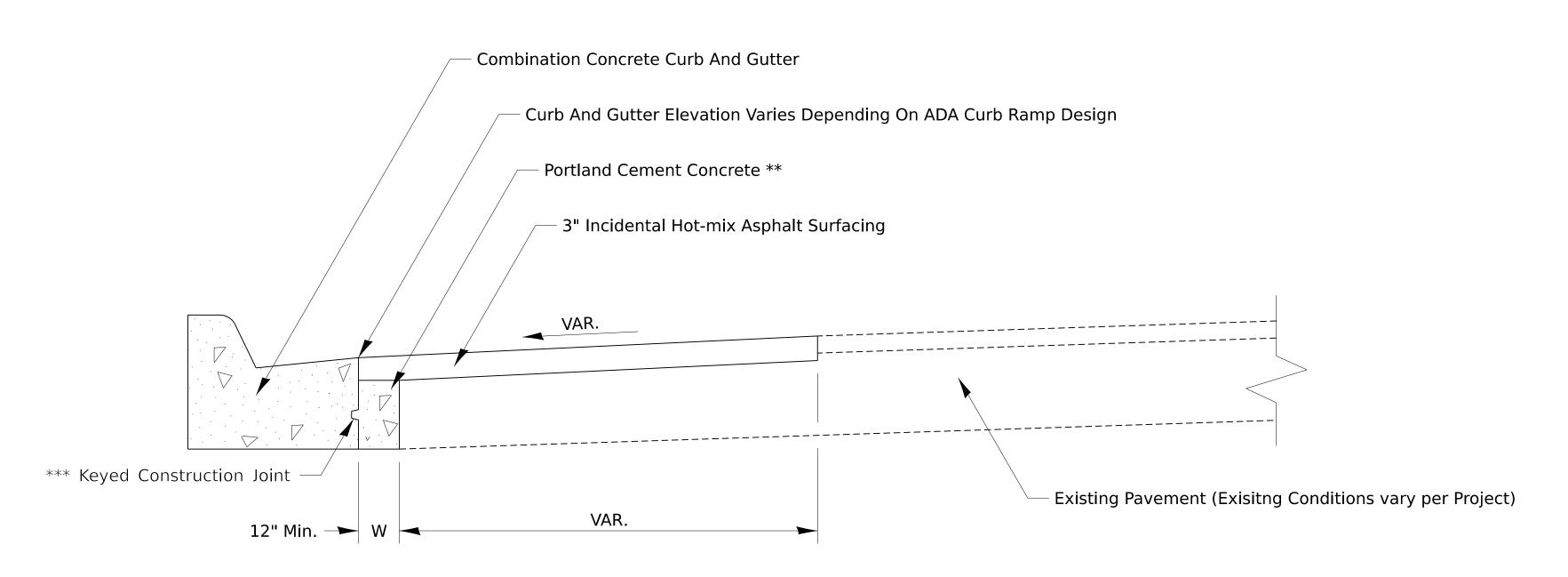




# ADA CURB RAMP PAVEMENT REMOVAL AND REPLACEMENT



## PAVEMENT REMOVAL



## PAVEMENT REPLACEMENT

#### **GENERAL NOTES:**

SEE STANDARD 606001 FOR CONCRETE CURB AND COMBINATION CURB AND GUTTER DETAILS NOT SHOWN.

SEE STANDARD 420001 FOR KEYED CONSTRUCTION JOINT DETAILS

SAW CUTTING/ SCORING SHALL BE INCLUDED IN THE UNIT COST OF HOT-MIX ASPHALT SURFACE REMOVAL.

FULL DEPTH PAVEMENT REMOVAL SHALL BE INCLUDED IN THE UNIT COST OF COMBINATION CURB AND GUTTER REMOVAL.

PORTLAND CEMENT CONCRETE NEEDED TO FILL IN THE FORMWORK AREA IN FRONT OF THE COMBINATION CURB AND GUTTER SHALL BE INCLUDED IN THE UNIT COST OF COMBINATION CONCRETE CURB AND GUTTER.

IF THERE IS A CHANGE IN RADIUS AND THE DISTANCE BETWEEN THE NEW COMBINATION CURB AND GUTTER AND THE EXISTING PAVEMENT IS 4FT OF GREATER, THE PCC IN FRONT OF THE CURB AND GUTTER SHALL BE TIED TO THE NEW COMBINATION CURB AND GUTTER AND THE EXISTING PAVEMENT WITH TIE BARS. TIE BARS SHALL BE INCLUDED IN THE UNIT COST OF COMBINATION CONCRETE CURB AND GUTTER.

#### **CONSTRUCTION SEQUENCE**

- 1. REMOVE EXISTING FULL DEPTH PAVEMENT AND CURB AND GUTTER
- 2. FORM AND POUR COMBINATION CONCRETE CURB AND GUTTER
- 3. REPLACE FULL DEPTH PAVEMENT WITH PORTLAND CEMENT CONCRETE

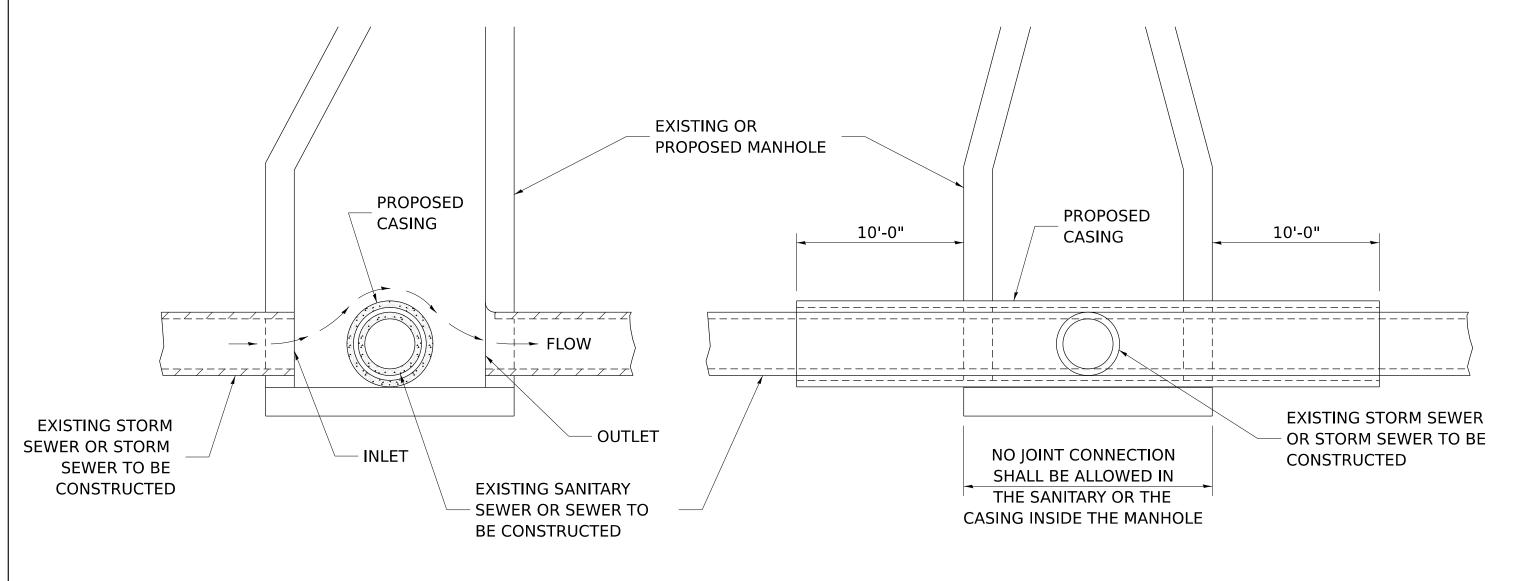
  (UP TO 3" FROM FINISHED SURFACE ELVATION TO ALLOW FOR HMA OVERLAY)
- 4. HOT-MIX ASPHALT REMOVAL AND REPLACEMENT.

#### NOTES:

- ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- \*\* COST INCLUDED IN OTHER PAY ITEMS PER GENERAL NOTES
- \*\*\* IF W > 24" TIE BARS SHALL BE USED INSTEAD OF A KEYED CONSTRUCTION JOINT

TOTAL SHEET NO. DESIGNED 1-10-22 USER NAME = IDOT/District 2 REVISED **SECTION** COUNTY STATE OF ILLINOIS **REGION 2 / DISTRICT 2 STANDARD** DRAWN REVISED **DEPARTMENT OF TRANSPORTATION** REVISED CHECKED -PLOT SCALE = 0.083'/in. CONTRACT NO. SCALE: SHEETS STA. TO STA. PLOT DATE = 1/28/2025 DATE REVISED

# SEWER AND WATER MAIN CROSSINGS



**ELEVATION - ECCENTRIC** 

**ELEVATION - CONCENTRIC** 

CASING SHALL BE CAST IRON WITH AN INSIDE DIAMETER 2" LARGER IN DIAMETER THAN ENCASED PIPE OUTSIDE DIAMETER WITH BOTH ENDS OF CASING SEALED

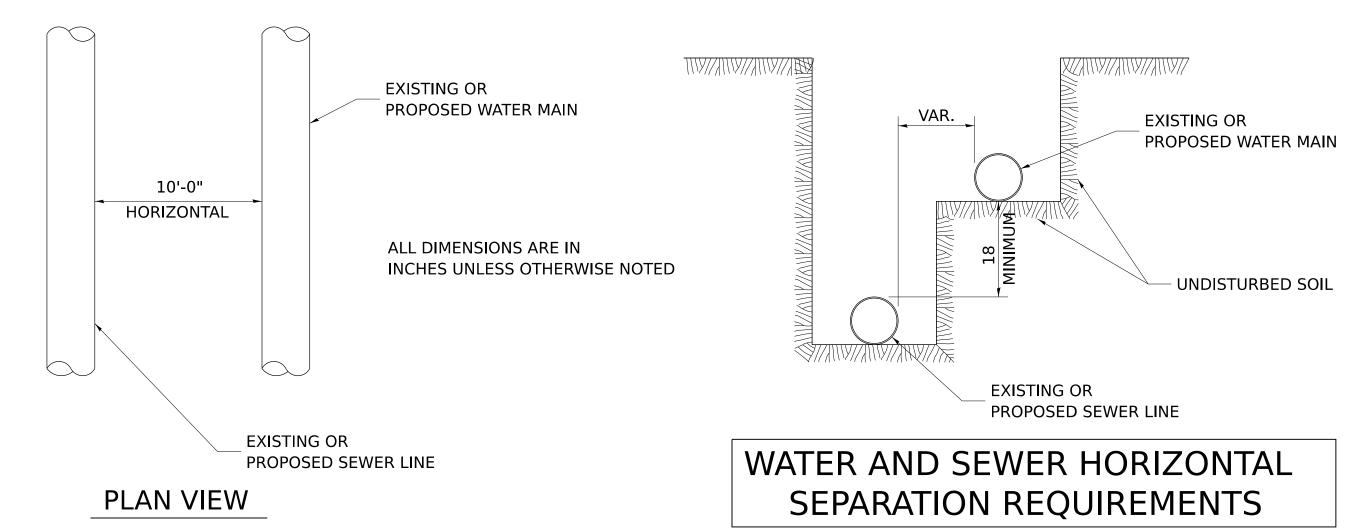
# AT GRADE CROSSING OF SANITARY AND STORM SEWER

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

THIS DETAIL IS FOR UNKNOWN UTILITIES UNLESS QUANTITIES ARE INCLUDED IN THE PLANS THE EXTRA WORK WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04.

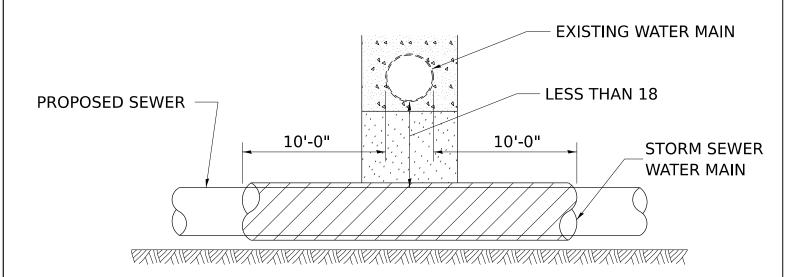
WHEN PROPOSED SEWER (OR WATER) IS
LOCATED 10'-0" OR MORE
FROM EXISTING WATER (OR SEWER)
NO SPECIAL CONSTRUCTION REQUIRED.

WHEN PROPOSED SEWER (OR WATER) IS
LOCATED LESS THAN 10'-0"
FROM EXISTING WATER (OR SEWER)
DETAILS BELOW SHALL APPLY.



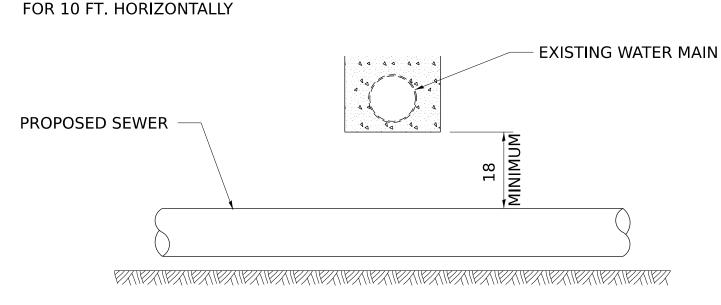
POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN

PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH



PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN
TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH

MAINTAIN 18 MINIMUM VERTICAL SEPARATION

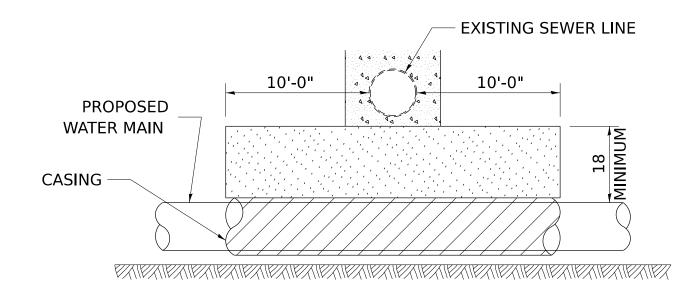


ALL DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE NOTED

PROPOSED SEWER LINE BELOW EXISTING WATER MAIN PROVIDE ADEQUATE SUPPORT FOR EXISTING SEWER LINE
TO PREVENT DAMAGE DUE TO SETTLEMENT

PLACE TRENCH BACKETH FOR 10 FT ON FITHER SIDE OF SE

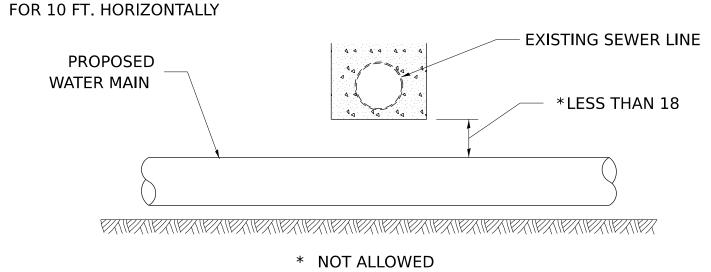
PLACE TRENCH BACKFILL FOR 10 FT. ON EITHER SIDE OF SEWER LINE



CASING SHALL BE CAST IRON WITH AN INSIDE DIAMETER 2" LARGER IN DIAMETER THAN ENCASED PIPE OUTSIDE DIAMETER WITH BOTH ENDS OF CASING SEALED

PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN
TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH

MAINTAIN 18 MINIMUM VERTICAL SEPARATION



ALL DIMENSIONS ARE IN

PROPOSED WATER MAIN
BELOW EXISTING SEWER LINE

POINT LOADS SHALL NOT BE ALLOWED BETWEEN WATER MAIN
OR WATER MAIN CASING AND SEWER

PROPOSED
WATER MAIN

TRENCH BACKFILL

CASING
EXISTING SEWER LINE

CASING SHALL BE CAST IRON WITH AN INSIDE DIAMETER 2" LARGER IN DIAMETER
THAN ENCASED PIPE OUTSIDE DIAMETER WITH BOTH ENDS OF CASING SEALED

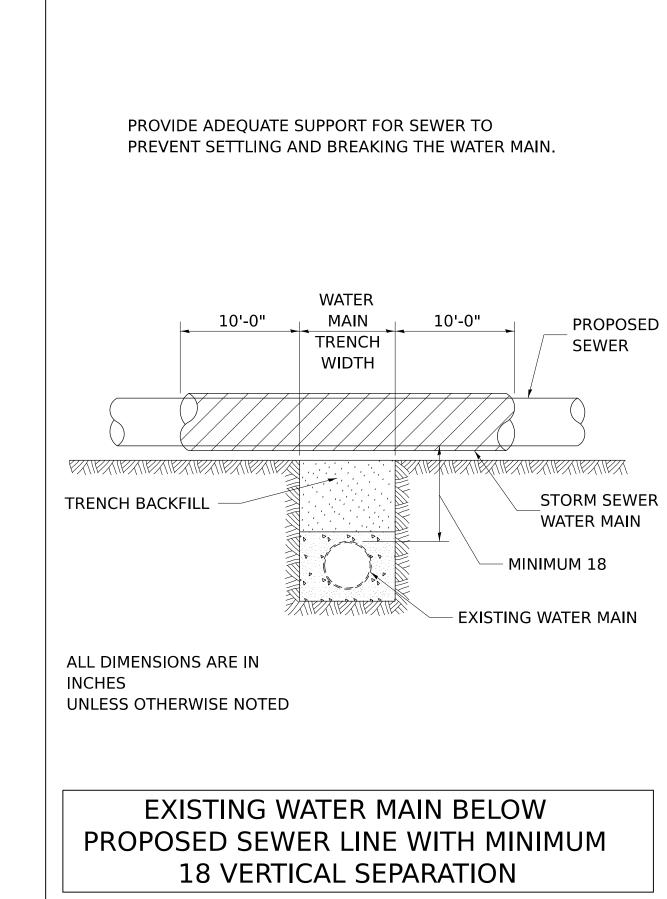
ALL DIMENSIONS ARE IN

DDODOSED WATER MAIN

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

SCALE:

PROPOSED WATER MAIN ABOVE EXISTING SEWER LINE



 USER NAME
 = IDOT/District 2
 DESIGNED REVISED 10-17-11

 DRAWN REVISED 

 PLOT SCALE = 0.083 '/ in.
 CHECKED REVISED 

 PLOT DATE = 1/28/2025
 DATE REVISED

**INCHES** 

**UNLESS OTHERWISE NOTED** 

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

REGION 2 / DISTRICT 2 STANDARD

SHEET OF SHEETS STA.

F.A. SECTION COUNTY TOTAL SHEET NO.

CONTRACT NO.

ILLINOIS FED. AID PROJECT

TO STA.

# CONCRETE COLLARS FOR PIPE OR BOX CULVERT EXTENSIONS

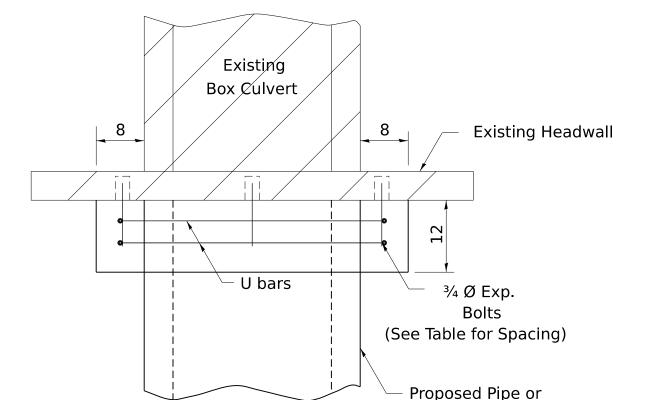
U bar

SIDE

Existing Culvert

#### Bill of Materials

#### CONCRETE **EXPANSION** Ա bar dimensions U bar dimensions h bar BARS BOLTS 3/4" COLLAR Quantity Length Quantity Length LBS EACH Cu. Yds. Quantity Total All h bars 18 Long



PLAN OF CULVERT WITH STRAIGHT HEADWALL

(See Table for Spacing)

3/4 Ø Exp. Bolts

Lap bars

Proposed Pipe or

**Box Culvert Extension** 

Clear

 $\otimes$   $\otimes$ 

¾ Ø Exp.

(See Table for Spacing)

Bolts

FRONT

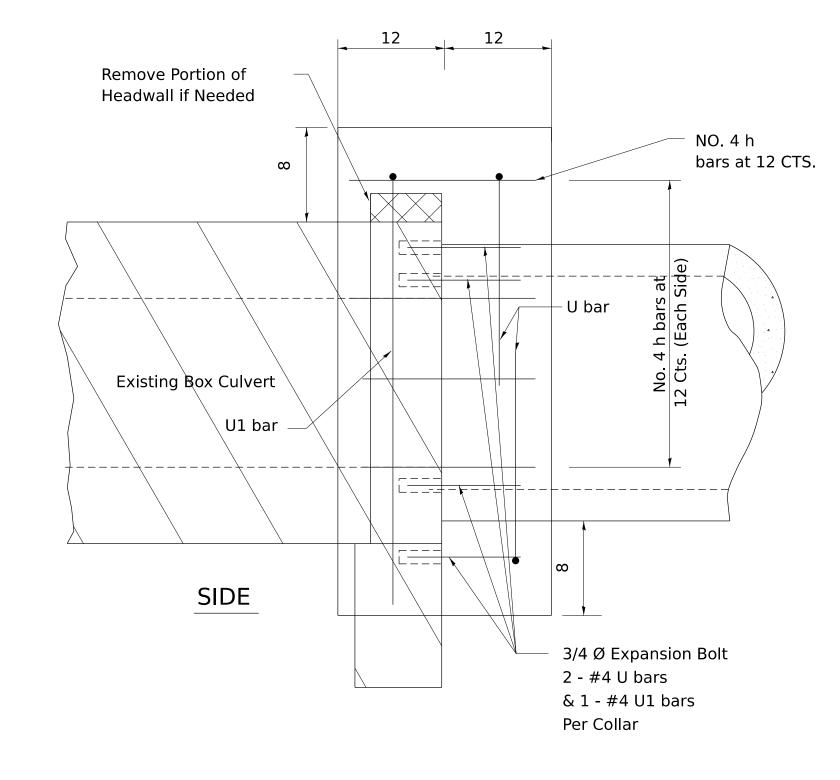
#### General Notes

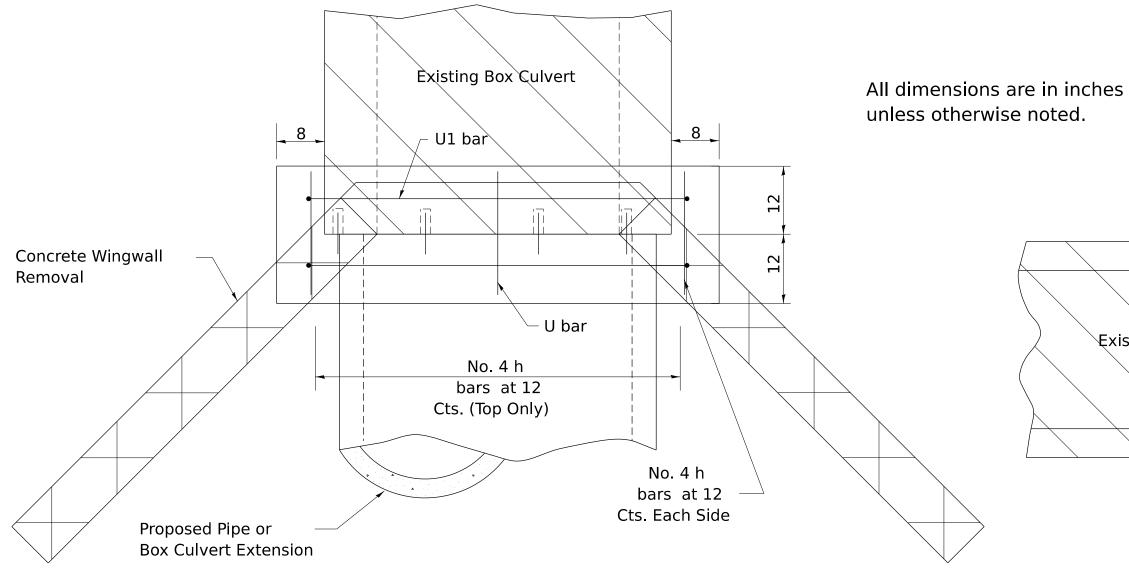
Concrete Collars shall be constructed of Class SI Concrete in accordance with Section 503 of the Standard Specifications

Reinforcement bars shall conform to Section 508 of the Standard Specifications.

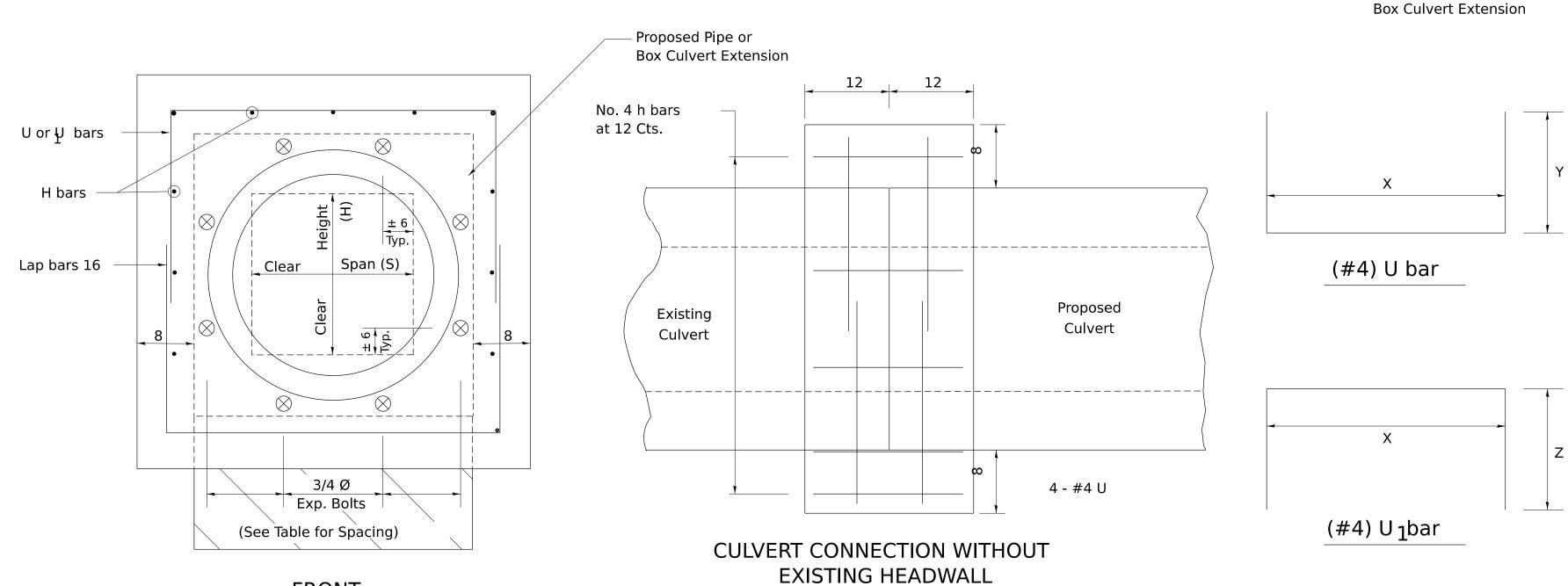
Expansion bolts shall be 3/4 Ø hooked bolts and shall conform to Section 540 of the Standard Specifications.

The concrete will be paid for at the contract unit price per cubic yard for CONCRETE COLLAR. Reinforcement will be paid for at the contract unit price per pound for REINFORCEMENT BARS. Expansion Bolts, when required, will be paid for at the contract unit price each for EXPANSION BOLTS ¾ inch, which price shall include furnishing, drilling holes, and installing the expansion bolts complete in place. These bolts shall extend at least 9 inches into the new concrete.









#### PLACEMENT DETAILS FOR EXPANSION BOLTS

	NUMBER OF	<b>EXPANSION BO</b>	OLTS REQUIRED I	PER SIDE
	EXTENSIO	NS ≤ 15'	EXTENSIO	NS > 15'
H or S	NUMBER *	SPACING	NUMBER *	SPACING
24	**	**	**	**
30	2	18	2	18
36	2	24	2	24
48	3	18	3	18
60	4	16	3	24
72	5	15	4	20
84	5	18	4	24
96	6	17	5	21
108	6	19	5	24
120	7	18	6	21
132	8	17	6	24
144	8	19	7	22

# \* Expansion bolts based on non-skewed culverts \*\* Minimum one expansion bolt at each corner

Example:

6' x 4' box culvert to be extended 18' at one end only.

From table find

6' side requires 4 - ¾" Ø expansion bolts at 20" cts. 4' side requires 3 - ¾" Ø expansion bolts at 18" cts.

Total Number required  $(4+3)2 = 14 - \frac{3}{4}$  Ø expansion bolts.

FRONT

USER NAME = IDOT/District 2	DESIGNED -	REVISED -	1-18-17
	DRAWN -	REVISED -	1-05-16
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -	6-27-14
PLOT DATE = 1/28/2025	DATE -	REVISED -	10-17-11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2 / DISTRICT 2 STANDARD								
REGION 2 / DISTRICT 2 STANDARD								
SHEET	OF	SHEETS	STA.	TO STA.				

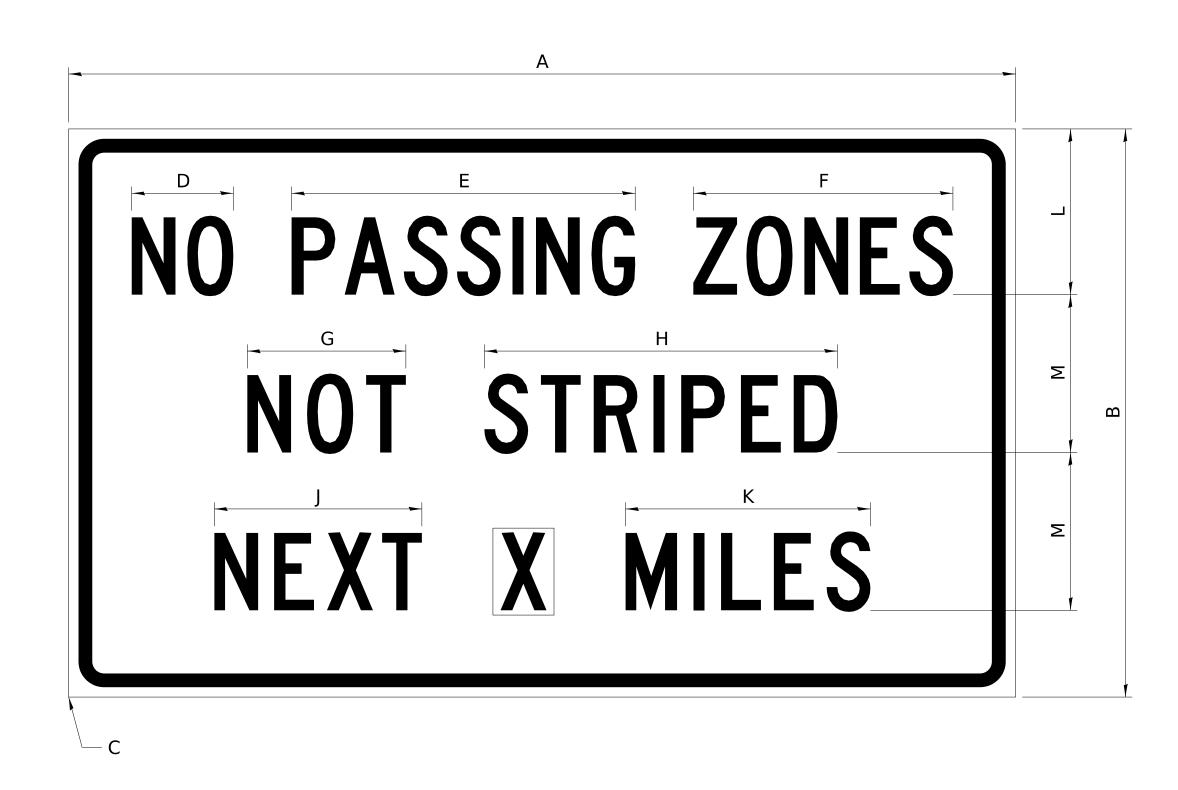
F.A. RTE. SECTION COUNTY TOTAL SHEET NO.

CONTRACT NO.

ILLINOIS FED. AID PROJECT

# WORK ZONE SIGN DETAILS

# **ILLINOIS STANDARD G20–I100**



COLOR LEGEND AND BORDER BACKGROUND

BLACK ORANGE NON-REFLECTORIZED REFLECTORIZED

SICN SIZE		DIMENSIONS										
SIGN SIZE	Α	В	С	D	E	F	G	Н	J	K	L	М
60 x 36	60.00	36.00	2.25	6.4	21.80	16.40	10.00	22.40	13.20	15.50	10.50	10.00

SIGN SIZE	SER	IES BY L	INE	MADCINI	BORDER
SIGN SIZE	1	2 3		BURDER	
60 x 36	5C	5C	5C	0.625	0.875

Sign not to scale

## **GENERAL NOTES**

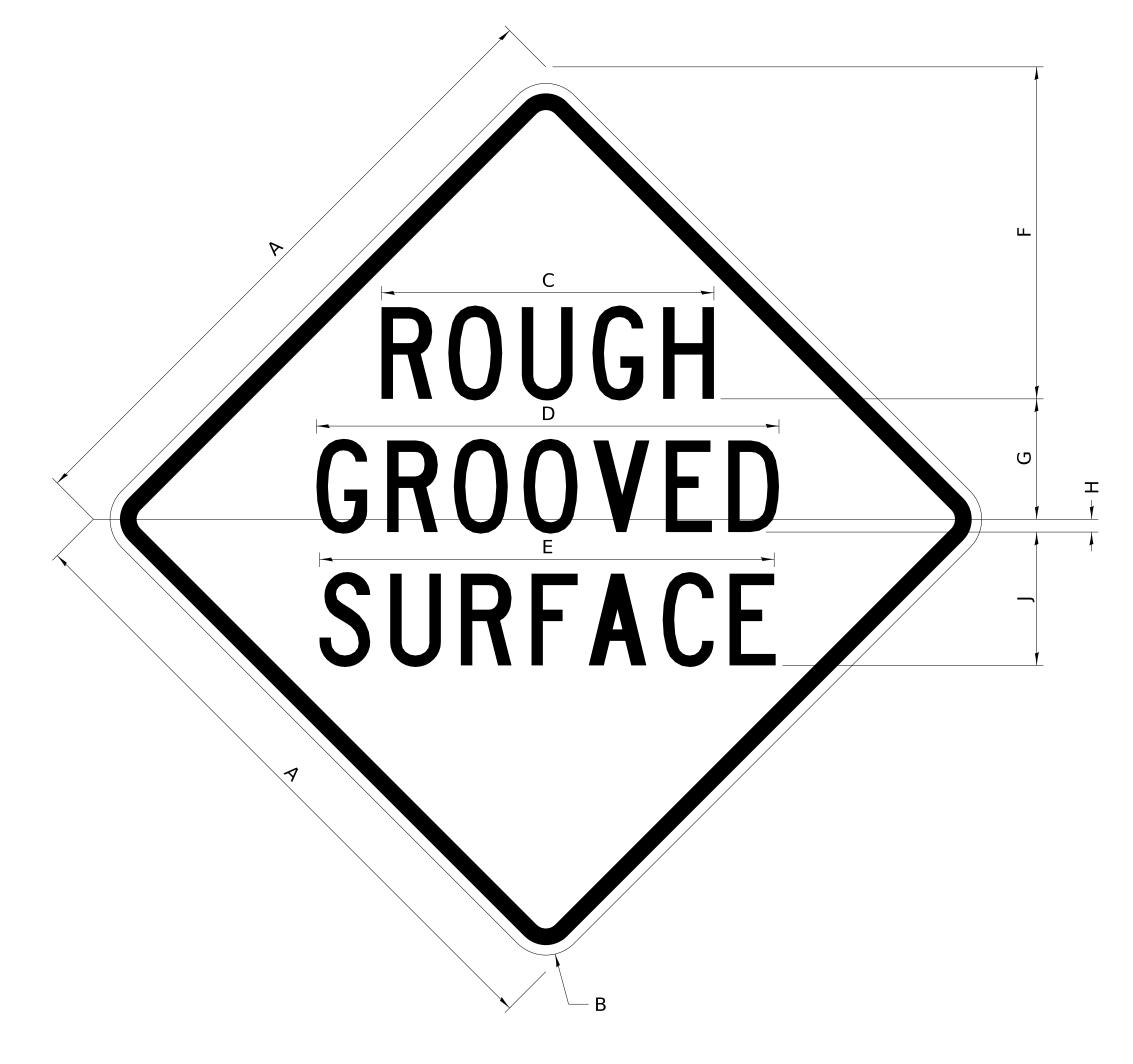
All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

# **ILLINOIS STANDARD W8–I107**



COLOR LEGEND AND BORDER BACKGROUND

BLACK ORANGE

NON-REFLECTORIZED REFLECTORIZED

SIGN SIZE				DIM	IENSIC	ONS			
SIGN SIZE	Α	В	С	D	Е	F	G	Н	J
48 x 48	48.00	3.00	25.00	34.80	34.20	24.94	9.00	1.00	10.00

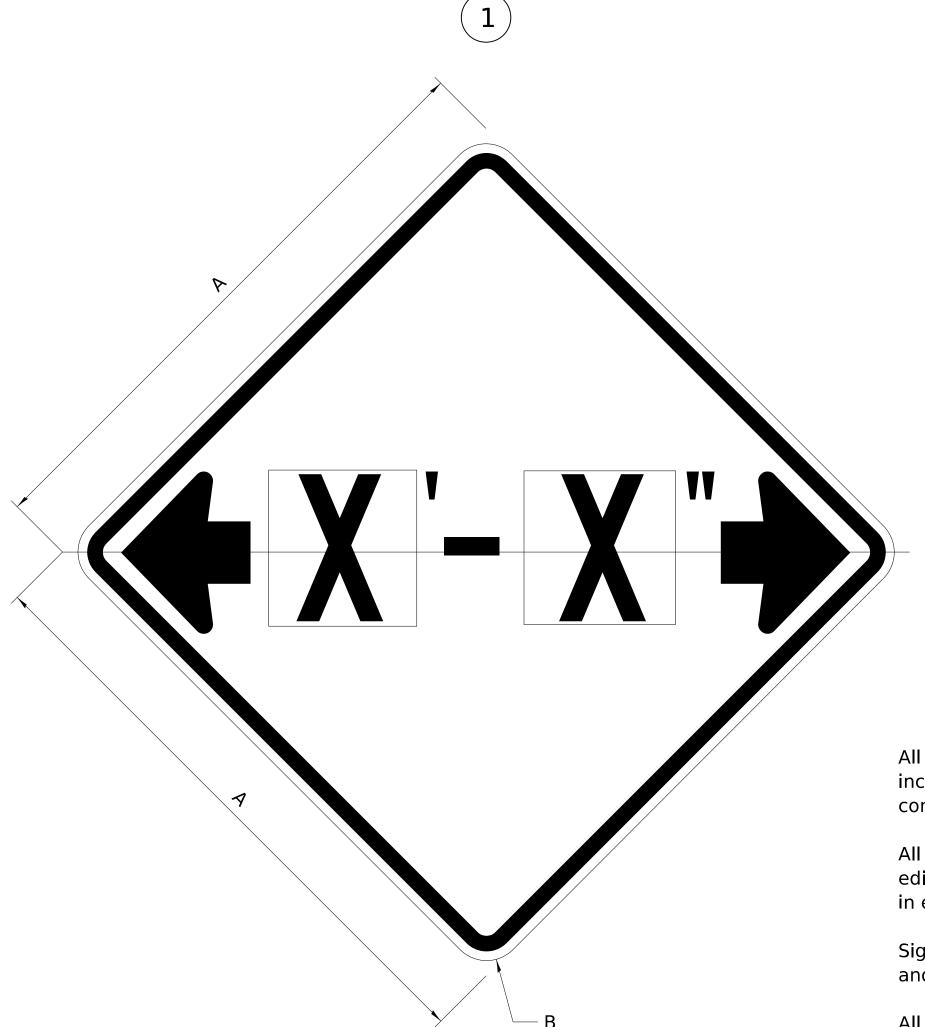
SIGN SIZE	SER	IES BY L	S BY LINE 2 3	MARGIN	BORDER
SIGN SIZE	1	2 3	MARGIN	DONDER	
48 x 48	7C	7C	7C	1.250	0.750

Sign not to scale

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 3-02-16						F.A.	SECTION	COUNTY	TOTAL SHEET
	DRAWN -	REVISED -	STATE OF ILLINOIS		REGION 2	2 / DISTRICT 2 STANDAI		1712.			STILL TO THO.
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION							CONTRACT	NO.
PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE:	SHEET C	OF SHEETS STA.	TO STA.		ILLINOIS FE	ED. AID PROJECT	

# WORK ZONE SIGN DETAILS

# **ILLINOIS STANDARD W12–I102**



## **GENERAL NOTES**

All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

COLOR

LEGEND AND BORDER BACKGROUND

BLACK FL ORANGE NON-REFLECTORIZED REFLECTORIZED

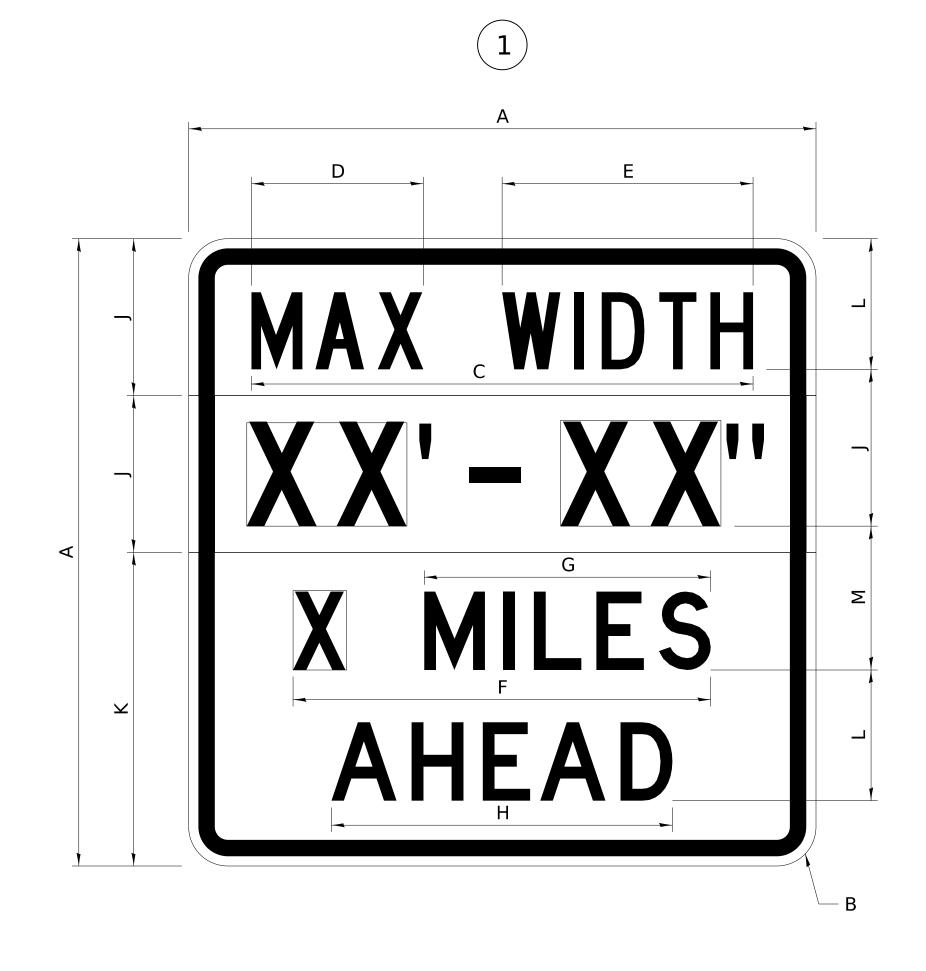
SIGN SIZE	DIMENSIONS				
	Α	В			
48 x 48	48.00	3.00			

Illinois Standard signs W12-I102 and W12-I103 shall be used as described in the special provisions.

CICN CIZE	SERIES BY LINE	MADCINI	BORDER	
SIGN SIZE	1	MARGIN		
48 x 48	12C	0.750	1.250	

#### Sign not to scale

# **ILLINOIS STANDARD W12–I103**



COLOR

LEGEND AND BORDER
BACKGROUND
BACKGROUND (WIDTH)

BLACK WHITE FL ORANGE NON-REFLECTORIZED REFLECTORIZED REFLECTORIZED

CICN CIZE	DIMENSIONS											
SIGN SIZE	Α	В	С	D	Е	F	G	Н	J	K	Г	М
48 x 48	48.00	3.00	38.40	13.20	19.20	32.00	22.00	26.20	12.00	24.00	10.00	11.00

SIGN SIZE		SERIES	BY LINE		MARGIN	BORDER
SIGN SIZE	1	2	3	4	MARGIN	DONDER
48 x 48	6C	8D	6D	6D	0.750	1.250

Sign not to scale

SHEET

SCALE:

XX'-XX" WIDTH AND X MILES ARE VARIABLE TOP AND BOTTOM OF BACKGROUND WHITE

USER NAME = IDOT/District 2	DESIGNED -	REVISED -	-	3-02-16
	DRAWN -	REVISED .	-	
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED .	-	
PLOT DATE = 1/28/2025	DATE -	REVISED -	_	

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

REGION 2 / DISTRICT 2 STANDARD

SHEETS STA.

F.A. RTE. SECTION COUNTY TOTAL SHEET NO.

CONTRACT NO.

ILLINOIS FED. AID PROJECT

TO STA.

## WORK ZONE SIGN DETAILS

#### ROAD CLOSED TO OVERSIZED LOADS



COLOR

LEGEND AND BORDER BACKGROUND

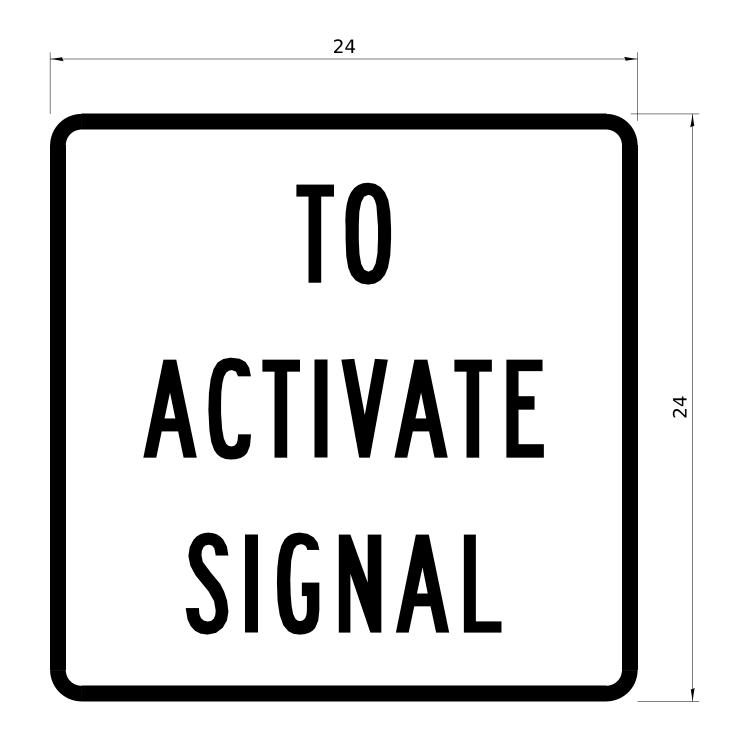
BLACK ORANGE NON-REFLECTORIZED REFLECTORIZED

Permit Loads - Loads Over 13 Feet; 3.0" Radius, 1.3" Border; [NO OVERSIZE -] D; [OVERWEIGHT LOADS] D 85% spacing; [XX MILES AHEAD] D; Table of letter and object lefts.

N 11.7	O 18.1	O 30.0	V 36.2	E 42.8	R 48.4	<b>S</b> 54.4	<b>l</b> 60.7	Z 63.5	<b>E</b> 69.5	<b>-</b> 80.8				
O 2.6	<b>V</b> 8.6	E 15.0	R 20.4	<b>W</b> 26.2	E 33.4	<b> </b> 38.8	<b>G</b> 41.3	H 47.4	T 53.2	<b>L</b> 64.5	O 69.9	<b>A</b> 75.9	D 82.9	<b>S</b> 88.7
X 7.6	X 13.6	<b>M</b> 25.3	<b>I</b> 32.3	<b>L</b> 35.1	<b>E</b> 40.6	<b>S</b> 46.2	<b>A</b> 57.9	H 65.1	E 71.4	<b>A</b> 76.6	D 83.7			

Sign not to scale

#### STOP LINE SIGN FOR TEMPORARY SIGNALS



COLOR

LEGEND AND BORDER BACKGROUND

BLACK WHITE NON-REFLECTORIZED REFLECTORIZED

SIGN SIZE	SER	IES BY L	INE
SIGN SIZE	1	2	3
24 x 24	4C	4C	4C

Sign not to scale

#### **GENERAL NOTES**

All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

SCALE:

SHEET

MODEL: 34pt1\_sheet3 FILE NAME: District 2 Standard PLOT DATE = 1/28/2025

 USER NAME
 = IDOT/District 2
 DESIGNED REVISED 3-02-16

 DRAWN REVISED 

 PLOT SCALE = 0.083 ' / in.
 CHECKED REVISED 

 PLOT DATE = 1/28/2025
 DATE REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2 / DISTRICT 2 STANDARD

SHEETS STA.

F.A. SECTION

COUNTY TOTAL SHEETS NO.

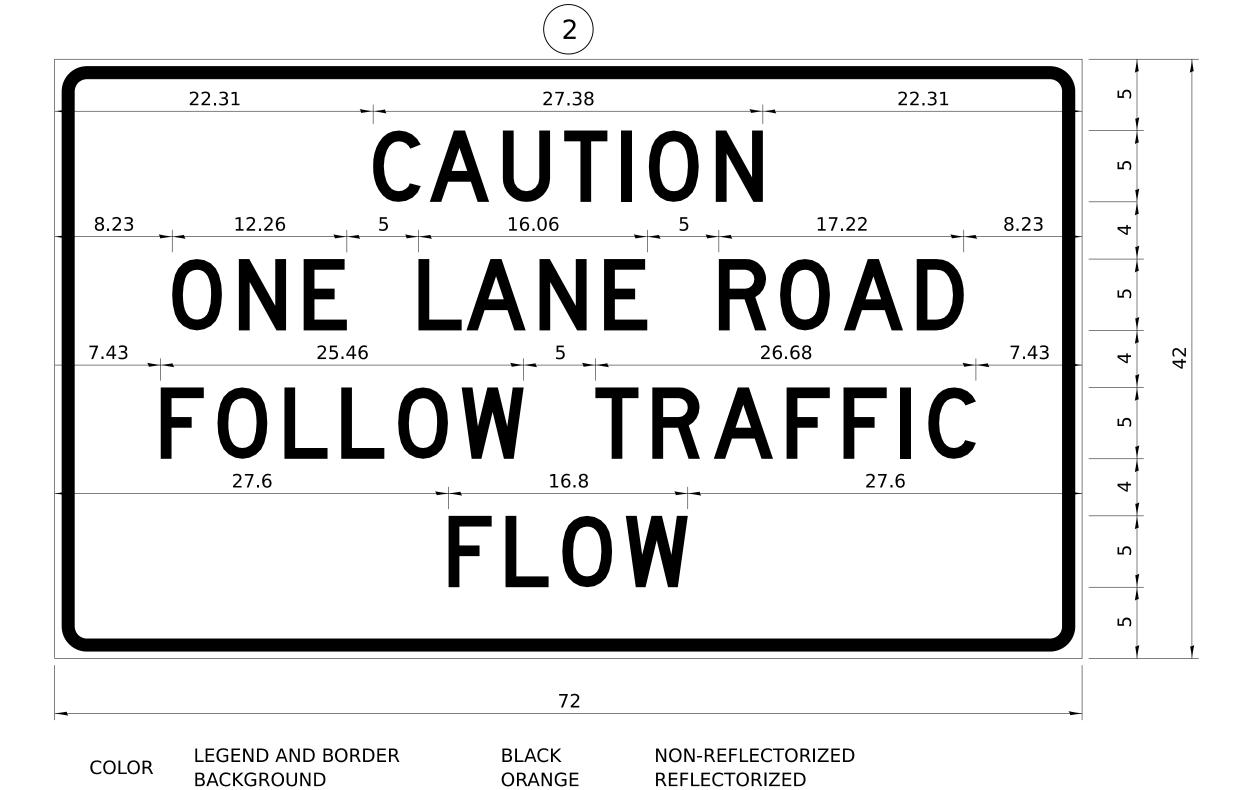
CONTRACT NO.

ILLINOIS FED. AID PROJECT

TO STA.

## ENTRANCE SIGN FOR USE WITH TEMPORARY SIGNALS

## WORK ZONE SIGN DETAILS



2.25" Radius, 0.88" Border, 0.50" IndenT; [CAUTION] D; [ONE LANE ROAD] D; [FOLLOW TRAFFIC] D; [FLOW] D

This sign shall be installed at entrances located between the temporary signals as shown in the staging plans.

#### **Table Of Widths And Spaces**

22.31	<b>C</b> 3.36	0.62	A 4.18	0.94	U 3.36	0.94	T 3.04	0.94	<b>I</b> 0.78	1.17	O 3.52	1.17	N 3.36	22.31
-------	---------------	------	-----------	------	-----------	------	-----------	------	---------------	------	-----------	------	-----------	-------

	0		N		Е
8.23	3.51	1.17	3.36	1.18	3.04

	L		Α		N		Е
5.00	3.05	0.31	4.18	0.94	3.36	1.17	3.05

	R		0		Α		D	
5.00	3.36	0.93	3.52	0.94	4.18	0.93	3.36	8.23

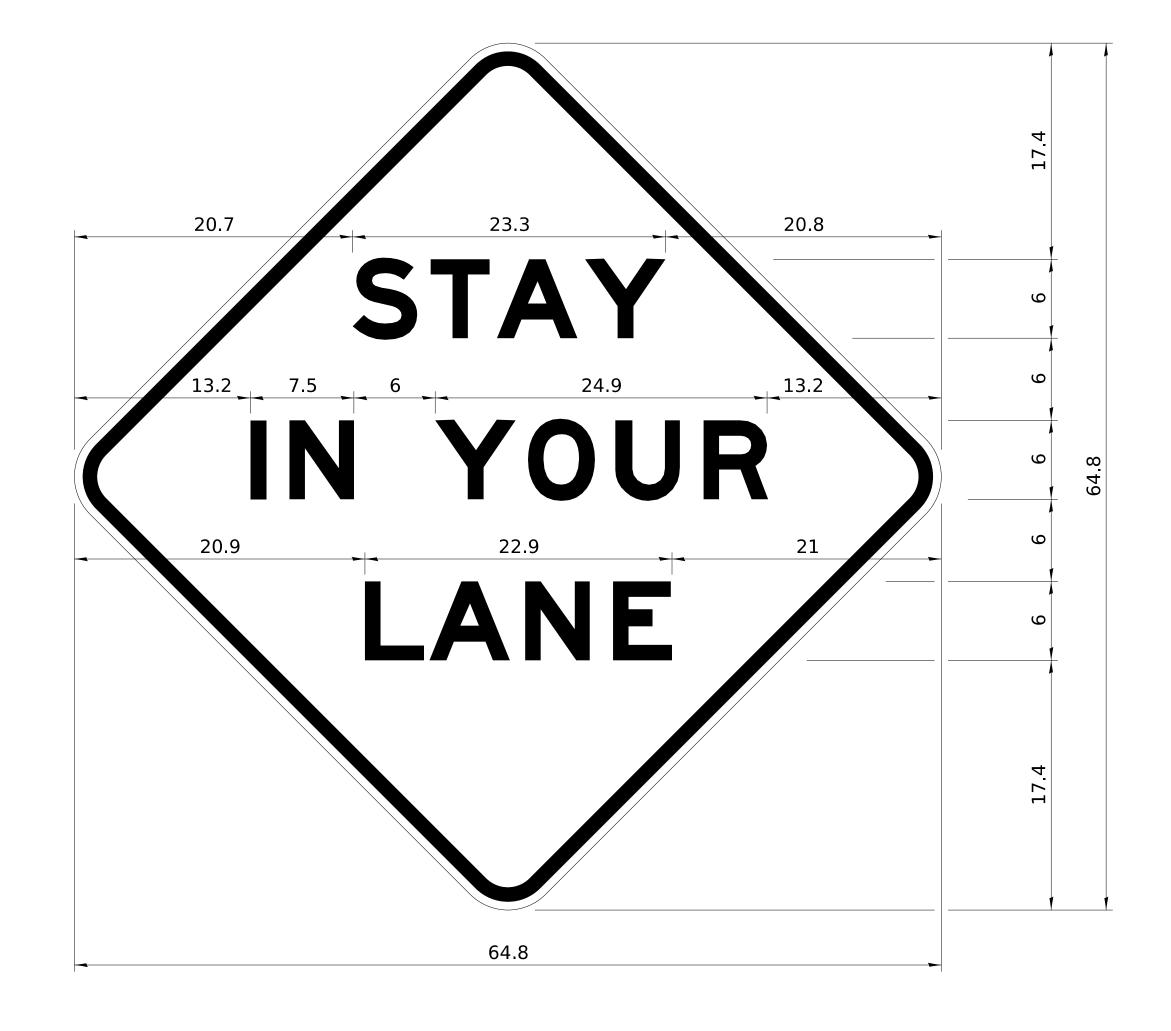
	F		О		L		L		0		W
7.43	3.04	0.94	3.52	1.17	3.04	0.94	3.05	0.94	3.51	0.94	4.37

5.00	T 3.05	0.94	R 3.36	0.94	<b>A</b> 4.18	0.93	F 3.05	0.94	F 3.04	0.94	<b>l</b> 0.78	1.18	C 3.35	7.43
														i

	F		L		0		W	
27.60	3.05	0.94	3.04	0.94	3.52	0.93	4.38	27.60

#### Sign not to scale

#### STAY IN YOUR LANE



COLOR LEGEND AND BORDER BACKGROUND

BLACK ORANGE

NON-REFLECTORIZED REFLECTORIZED

48.0" across sides 3.8" Radius, 1.0" Border, 0.6" Indent; "STAY" E Mod; "IN YOUR" E Mod; "LANE" E Mod;

#### Table of Letter and Object Lefts

5 T 26.8	5.8 A 31.6	Y 38.0
----------	------------	-----------

	N	Υ	0	U	R
13.2	15.9	26.7	33.9	40.5	46.8

L A N E 20.9 25.8 33.1 39.4

Sign not to scale

	DEGIG					F.A. RTE.	SECT	ION		COUNTY	TOTAL SHEETS	SHEET NO.
	KEGION	N 2 / DIS	TRICT 2	STANDARD								
										CONTRACT	NO.	
SCALE:	SHEET	OF	SHEETS	STA.	TO STA.			ILLINOIS F	ED. AID F	PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**GENERAL NOTES** 

All work to furnish and install these signs shall be

control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book"

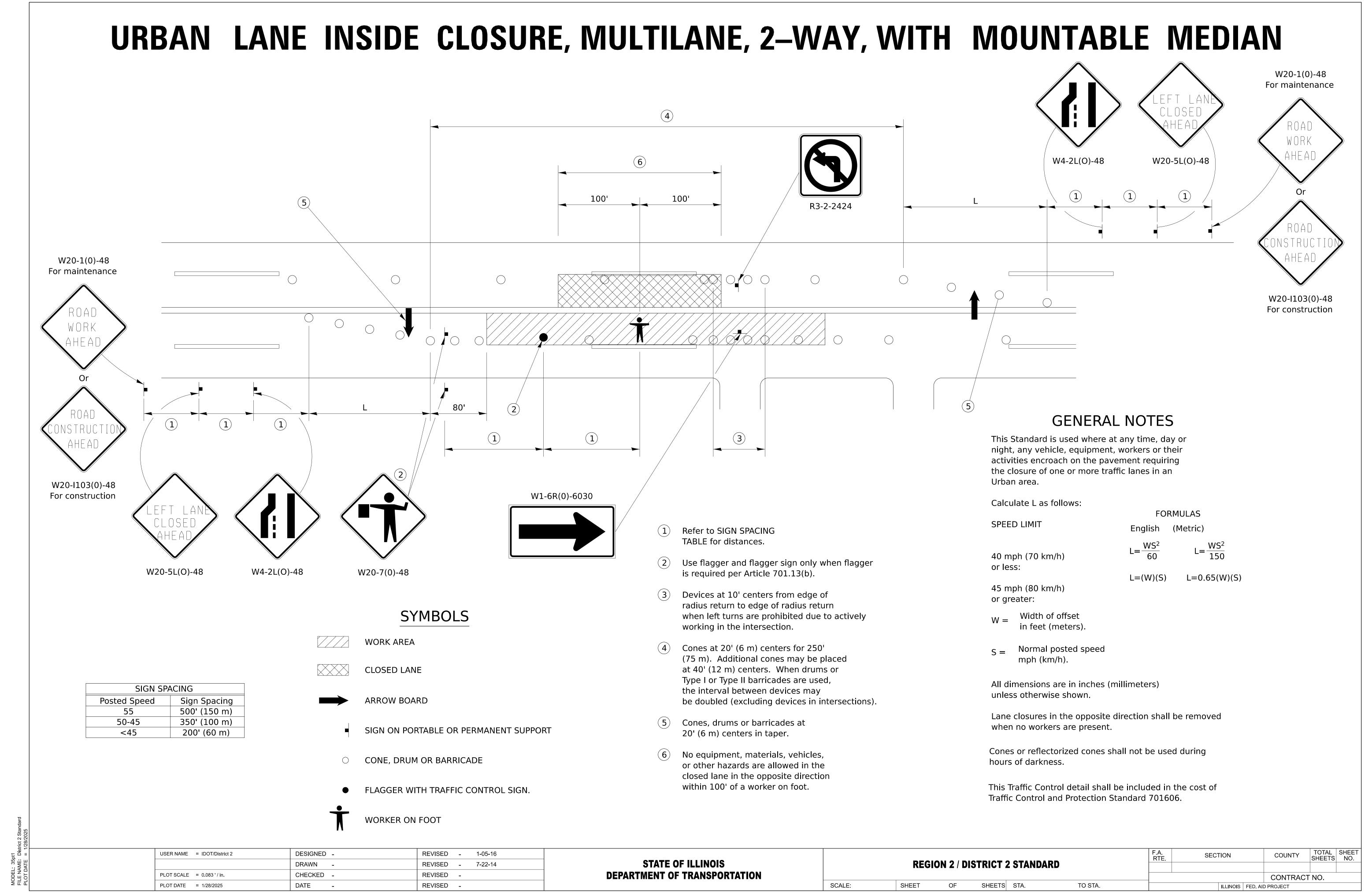
Signs shall meet the applicable portions of Sections 701

All dimensions are in inches unless otherwise noted.

included in the cost of the specified traffic

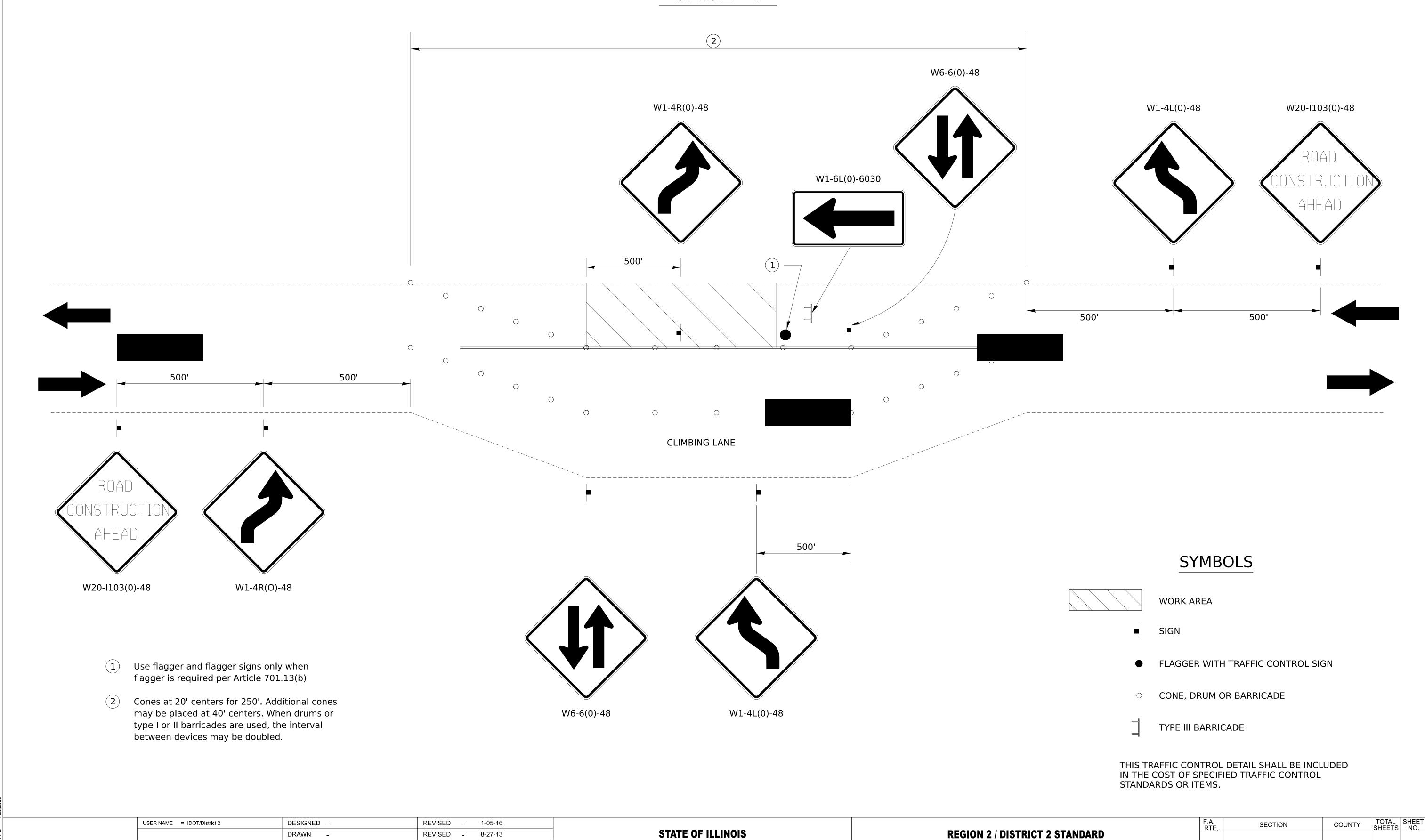
in effect on the date of invitation for bids.

and 720 of the Standard Specifications.



#### TEMPORARY ROAD CLOSURE EXPRESSWAY **MESSAGE BOARD CONSTRUCTION ZONE** R11-2 TYPE II BARRICADES OR DRUMS AT 40' CENTERS 1000' TAPER 1000' SHIFTING TAPER DIRECTION INDICATOR AT 40' CENTERS AT 40' CENETERS ARROW BOARD 1000' MININMUM W1-4R(0)-48 **GENERAL NOTES** 500' **SYMBOLS** 1. MAINTENANCE OF TRAFFIC IS ACCORDING TO STANDARDS W20-7(0)-48 701400, AND 701401 (NIGHT) OR 701406 (DAY ONLY). 2. TYPE II BARRICADES OR DRUMS AT EXIT RAMP WITH LIGHTS AT 20' CENTERS (NO LESS THAN FOUR DRUMS). DIRECTION INDICATOR BARRICADE WITH LIGHT TYPE II BARRICADE OR DRUM WITH LIGHT FLAGGER WITH TRAFFIC CONTROL SIGN R11-2 TYPE III BARRICADE WITH FLASHERS PORTABLE CHANGEABLE MESSAGE SIGN ARROW BOARD SIGNING ACCORDING TO SPECIFIED STANDARDS TOTAL SHEET NO. DESIGNED -REVISED 4-20-17 USER NAME = IDOT/District 2 **STATE OF ILLINOIS** REGION 2 / DISTRICT 2 STANDARD DRAWN -1-05-16 **DEPARTMENT OF TRANSPORTATION** CHECKED -REVISED 8-27-13 PLOT SCALE = 0.083 '/ in. CONTRACT NO. DATE -SCALE: SHEET SHEETS STA. TO STA. PLOT DATE = 1/28/2025

## TRAFFIC CONTROL FOR THREE LANE SECTION CASE 1



**DEPARTMENT OF TRANSPORTATION** 

CHECKED -

DATE -

PLOT SCALE = 0.083 '/ in.

PLOT DATE = 1/28/2025

REVISED - 7-30-13

REVISED -

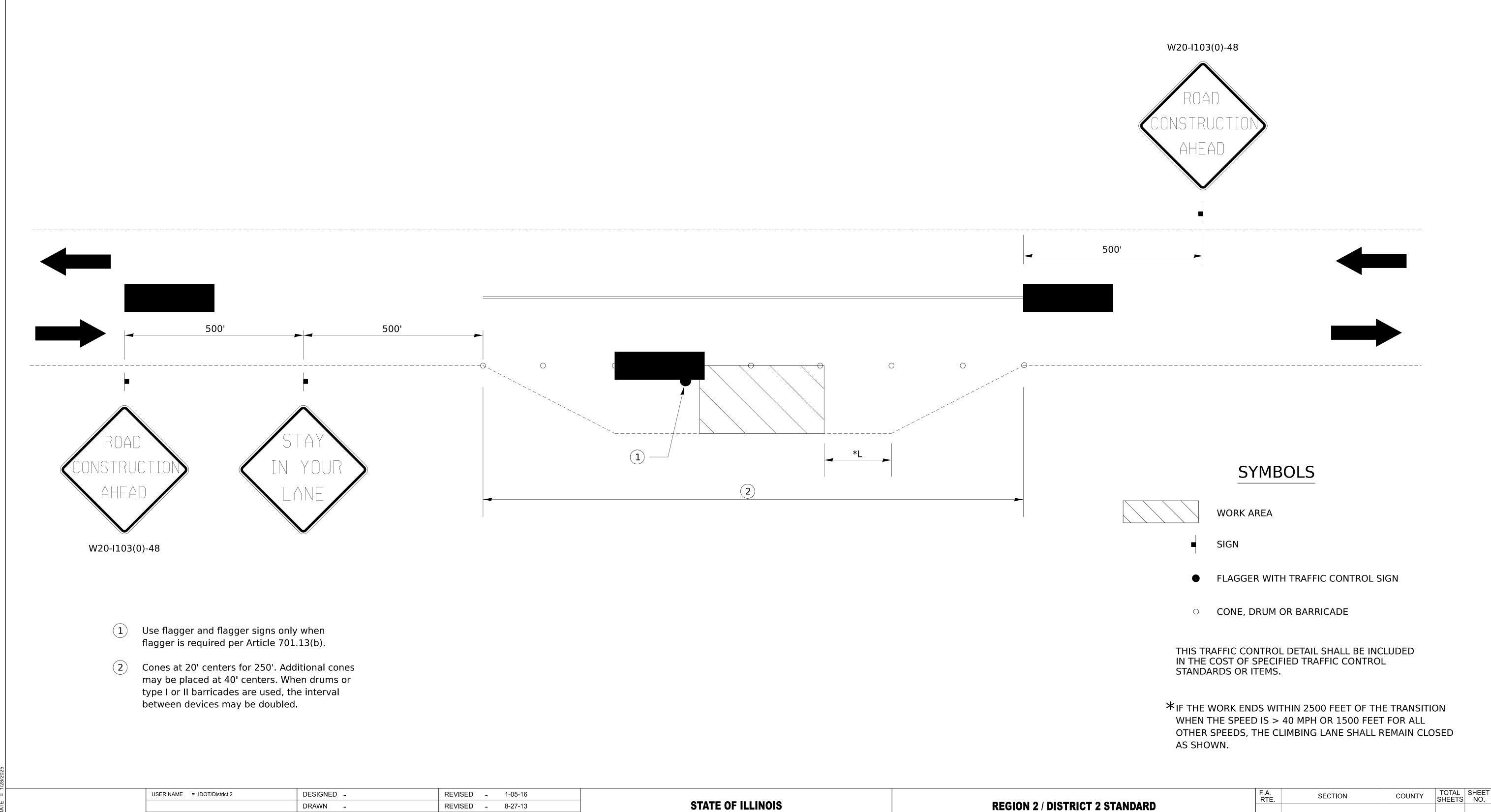
TO STA.

SHEET

ILLINOIS FED. AID PROJECT

CONTRACT NO.

# TRAFFIC CONTROL FOR THREE LANE SECTION CASE 2



CHECKED -

DATE -

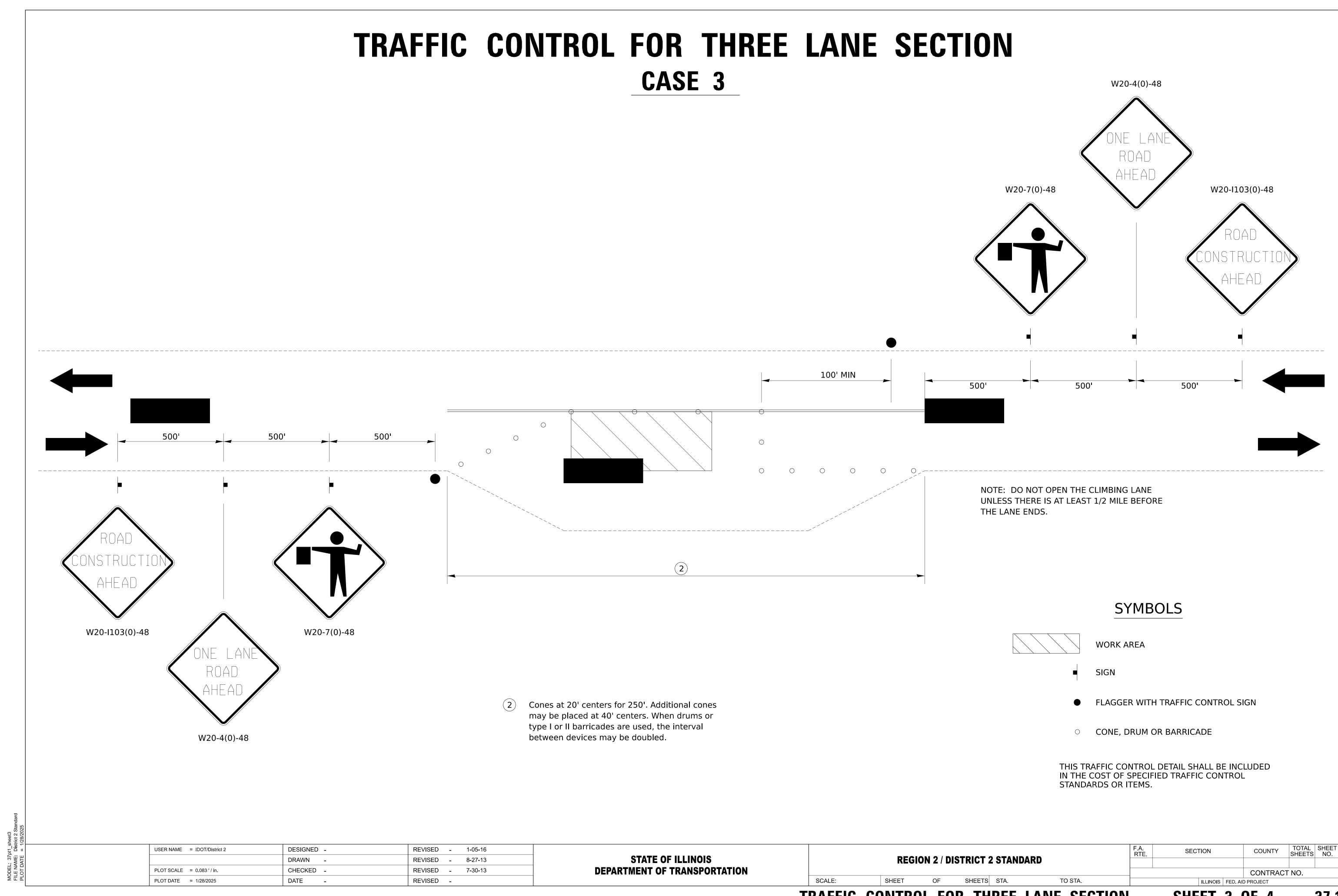
PLOT SCALE = 0.083 '/in.

PLOT DATE = 1/28/2025

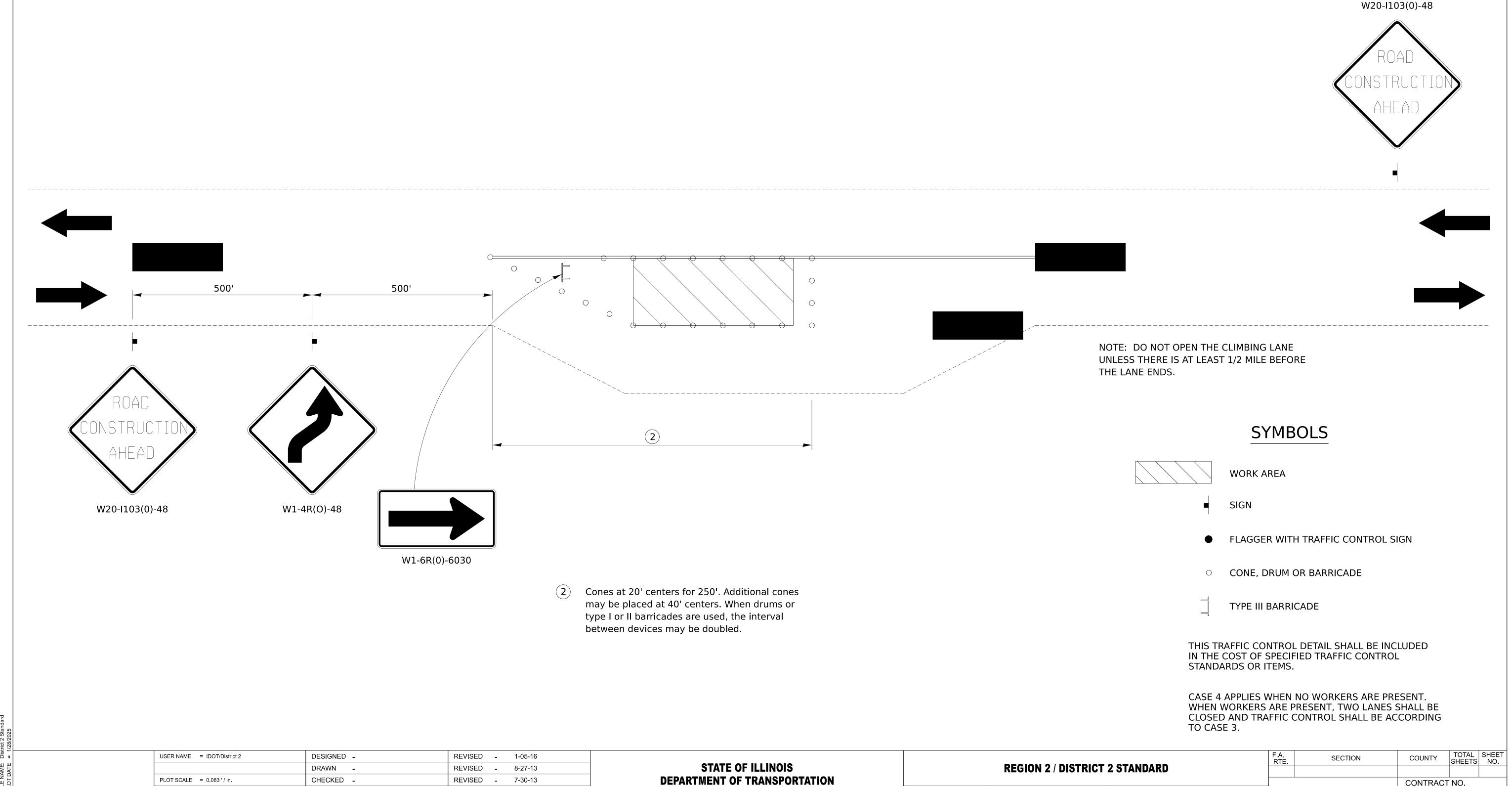
REVISED

REVISED -

- 7-30-13



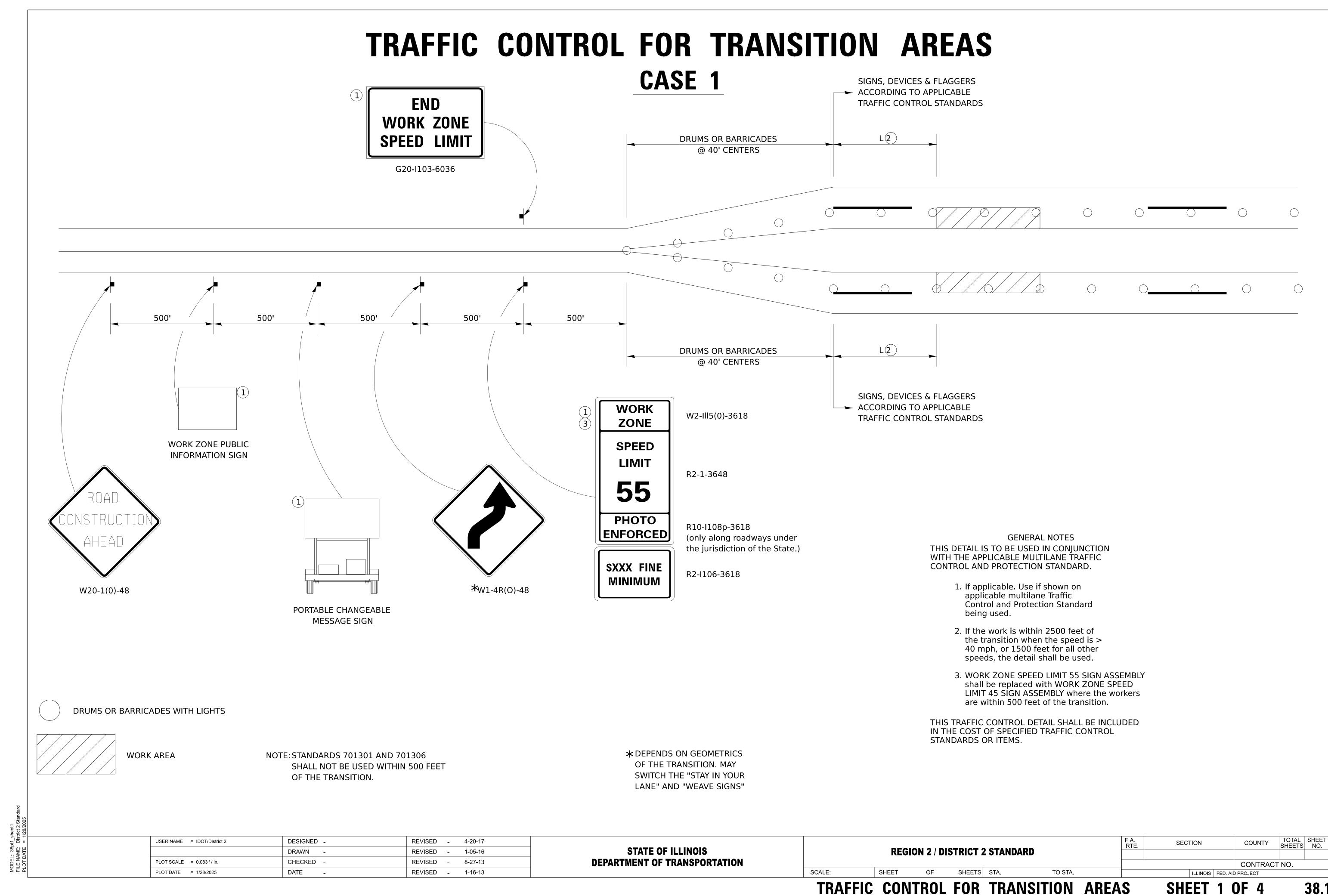
## TRAFFIC CONTROL FOR THREE LANE SECTION CASE 4

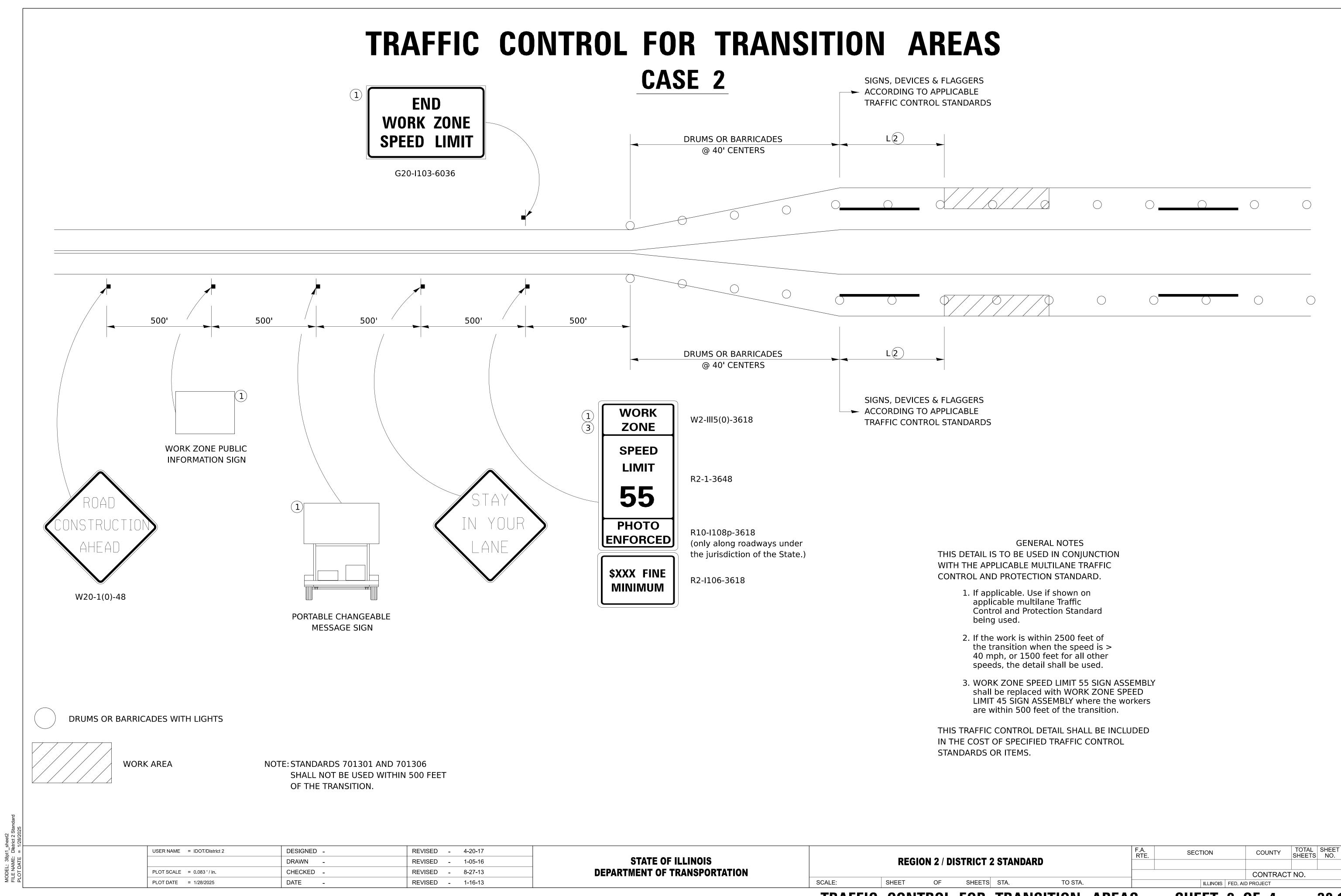


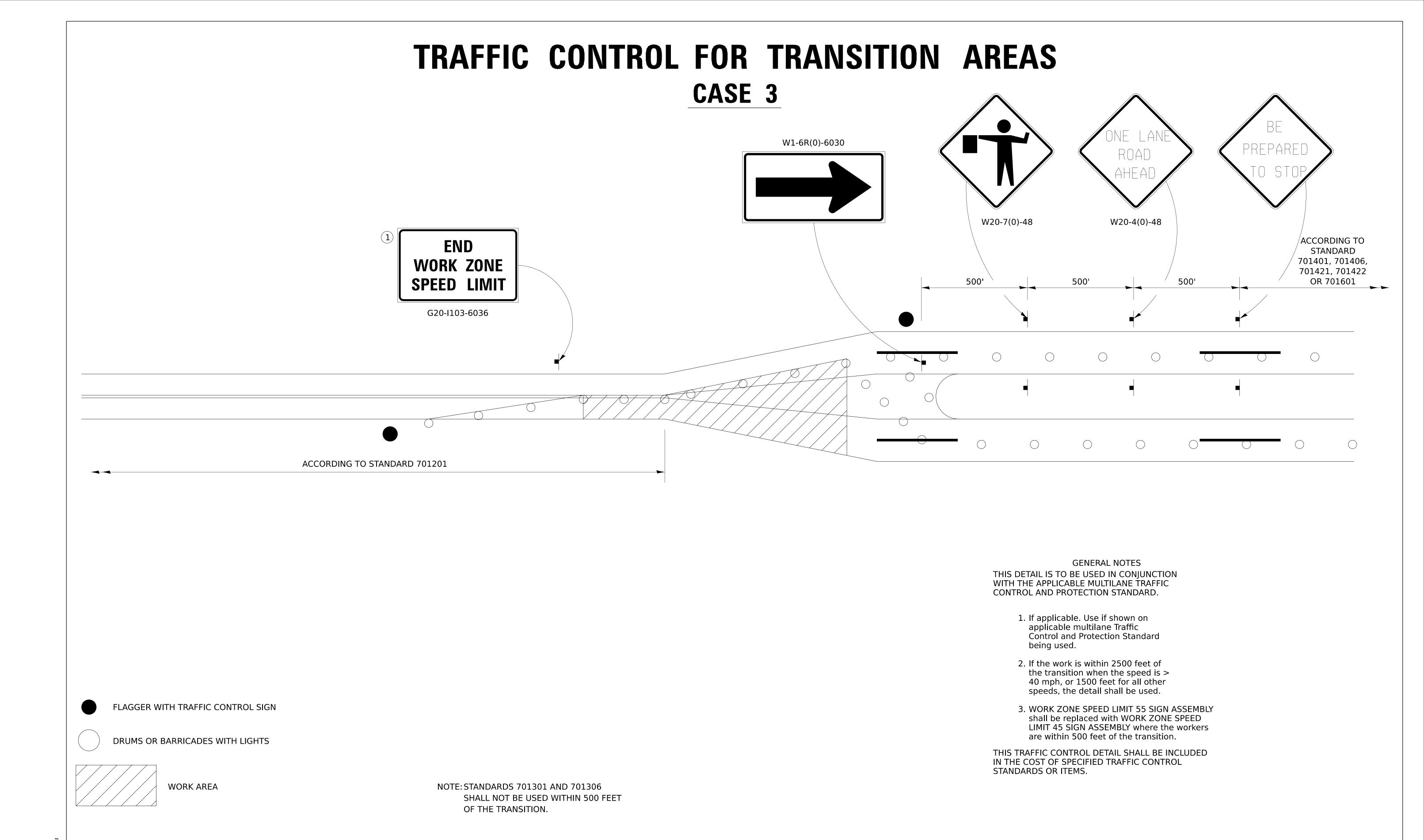
PLOT DATE = 1/28/2025

DATE -

REVISED -







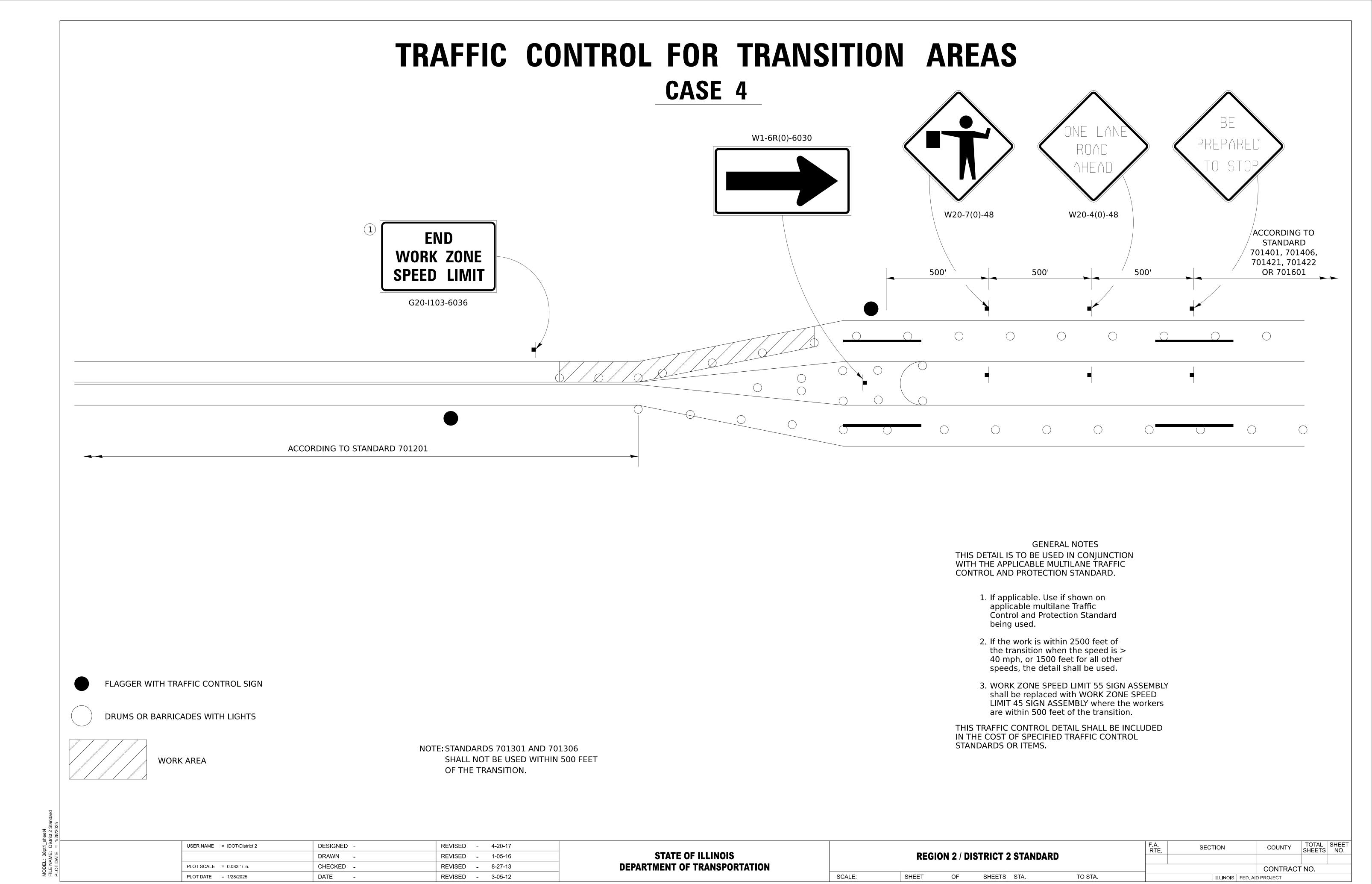
REVISED

4-20-17

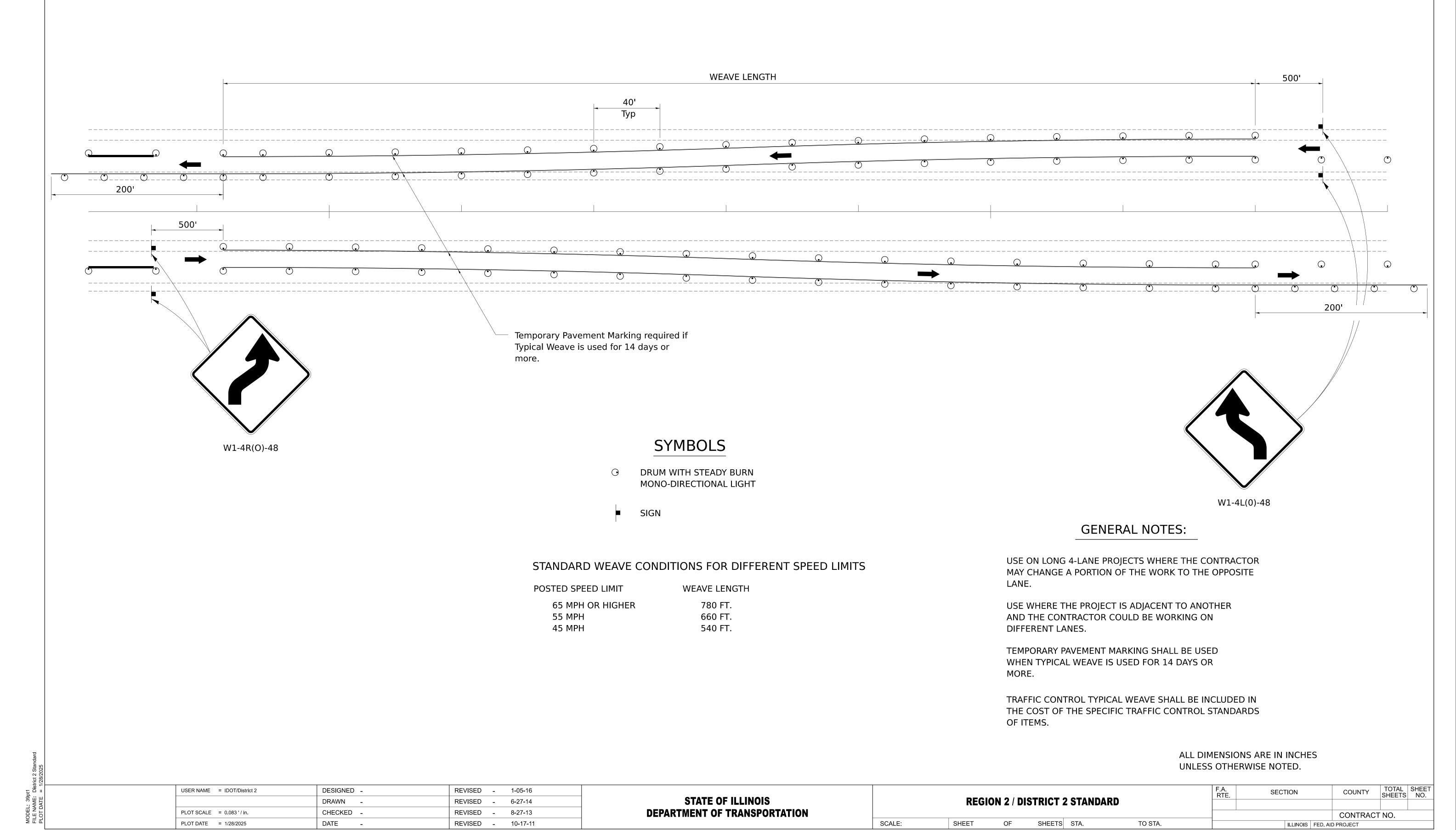
DESIGNED -

USER NAME = IDOT/District 2

						F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	REGION 2 / DISTRICT 2 STANDARD									
								CONTRAC	T NO.	
SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FEI	. AID PROJECT		



## TRAFFIC CONTROL TYPICAL WEAVE

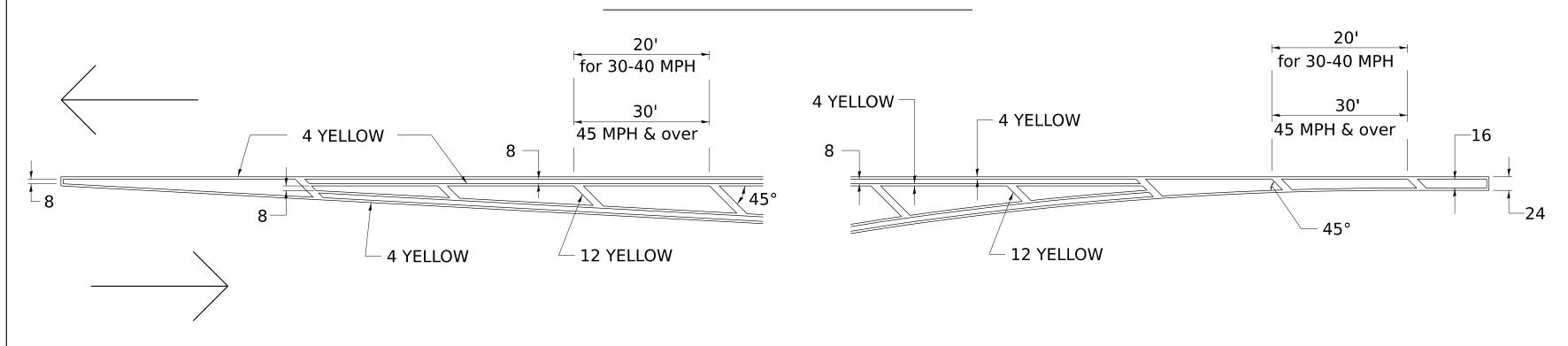


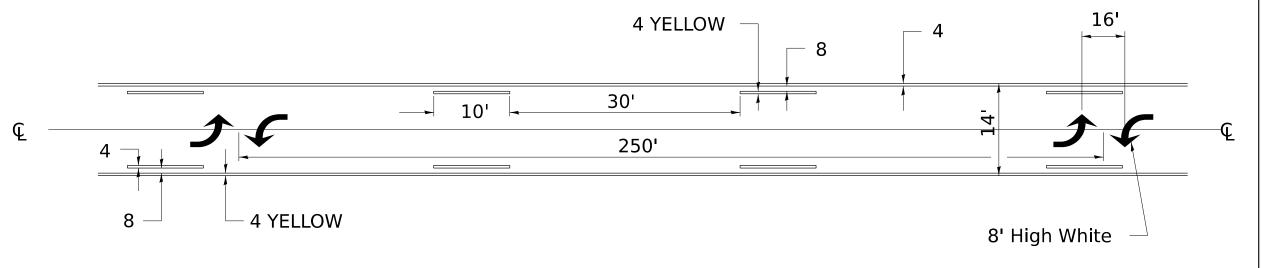
#### TRAFFIC CONTROL FOR ROAD CLOSURE **CONDITION II** Minor Sideroad Closure W20-3(O)-48 W20-3(O)-48 W20-3(O)-48 W21-I100(O)-48 (1) (1) **SYMBOLS** W20-3(O)-48 W21-I100(O)-48 W20-3(O)-48 Work area CLOSED CLOSED Type III Barricade with Flashers W20-3(O)-48 W21-I100(O)-48 Sign with flashing light W1-7(O)-3618 CLOSED **CONDITION I GENERAL NOTES 1** SIGN SPACING TABLE Longitudinal dimensions may be adjusted to Major Sign Spacing 500' Posted Speed fit field conditions. ROAD CLOSED TO THRU TRAFFIC 45 MPH and above W20-3(O)-48 Sideroad Closure 250' BARRICADE SET UP Below 45 MPH Side roads requiring all three signs as shown in CONDITION I (Major Sideroad Closure), shall be listed in the special provision. Variable \*\* Where local access is to be maintained, CLOSED **2** barricades are to be set up as shown SIGN LEGEND in "Road Closed To Thru Traffic". Posted Speed Limit Distance Type III Barricades and R11-2-4830 signs 1000' 45 MPH and above shall be as shown in "Road Closed To All Traffic" 500' Below 45 MPH detail on Highway Standard 701901. W20-3(O)-48 All dimensions are in inches unless otherwise shown. Type III Barricades and R11-4-4830 signs shall be as shown in "Road Closed To Thru Traffic" detail on Highway Standard 701901. If the distance "D" TYPICAL APPLICATION exceeds 2000' an additional set of FOR ROAD CLOSURE barricades and R11-4-4830 shall be placed at each end of the work area. DESIGNED -REVISED 8-03-17 USER NAME = IDOT/District 2 SECTION COUNTY **REGION 2 / DISTRICT 2 STANDARD** STATE OF ILLINOIS DRAWN REVISED 1-05-16 REVISED **DEPARTMENT OF TRANSPORTATION** CHECKED -8-27-13 PLOT SCALE = 0.083 '/ in. CONTRACT NO. PLOT DATE = 1/28/2025 DATE REVISED -10-17-11 SCALE: SHEET SHEETS STA. TO STA. ILLINOIS FED. AID PROJECT

## TYPICAL PAVEMENT MARKINGS

#### MEDIAN PAVEMENT MARKING

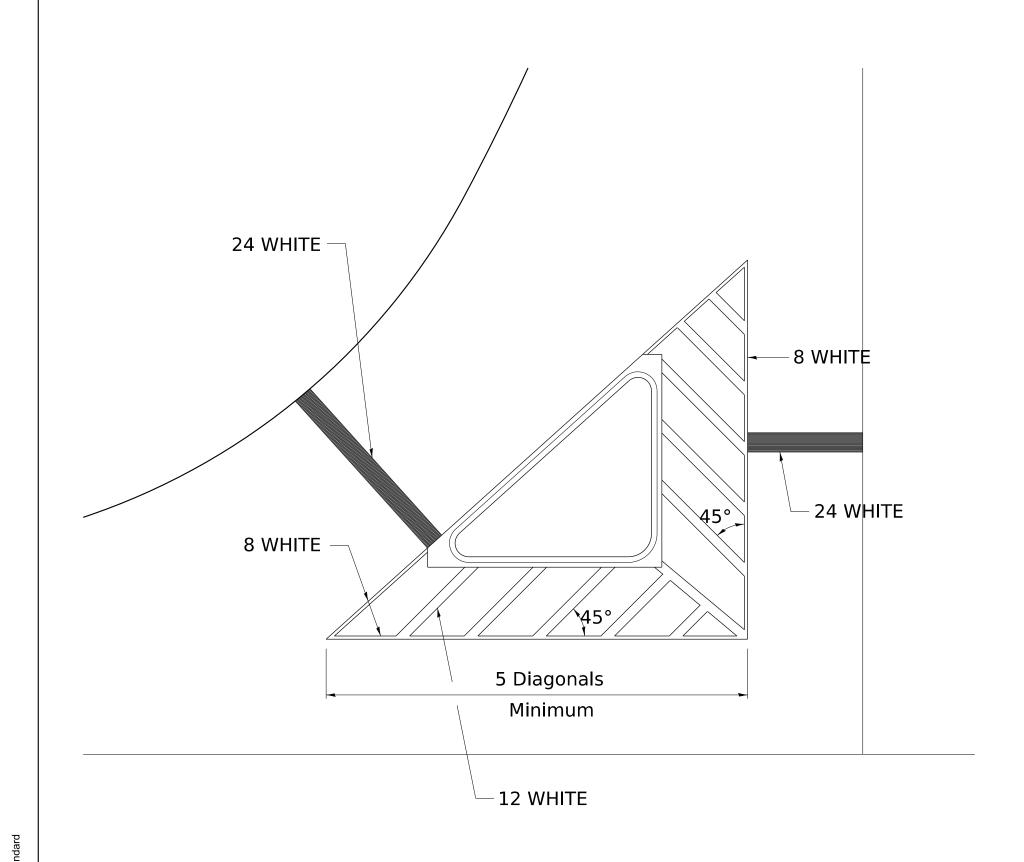
## TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN AT LEFT TURN LANE



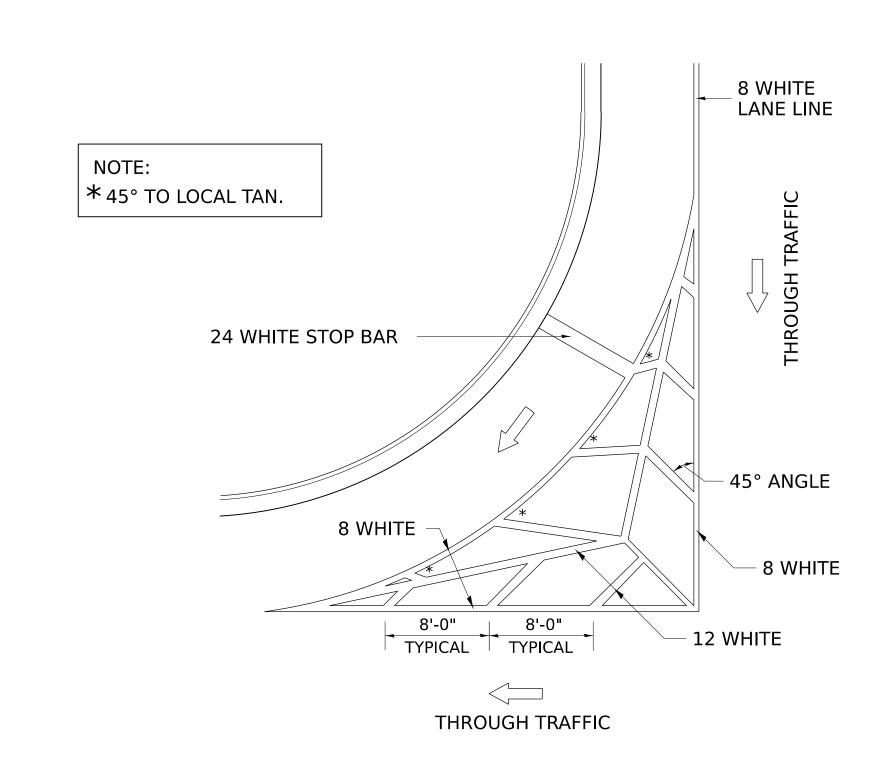


\*\* ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

## TYPICAL ISLAND OFFSET SHOULDER WIDTH

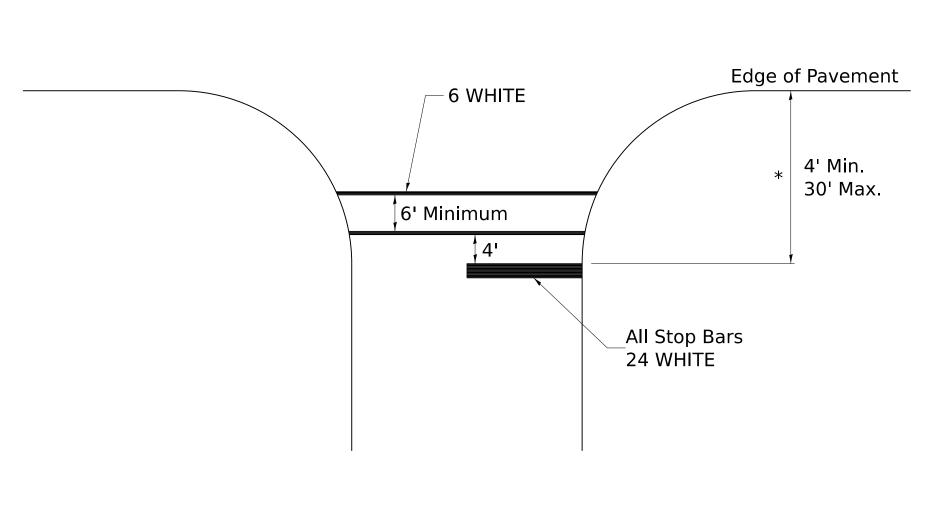


# TYPICAL MARKING FOR PAINTED ISLANDS



#### STANDARD CROSSWALK MARKING

See Schedules for Locations

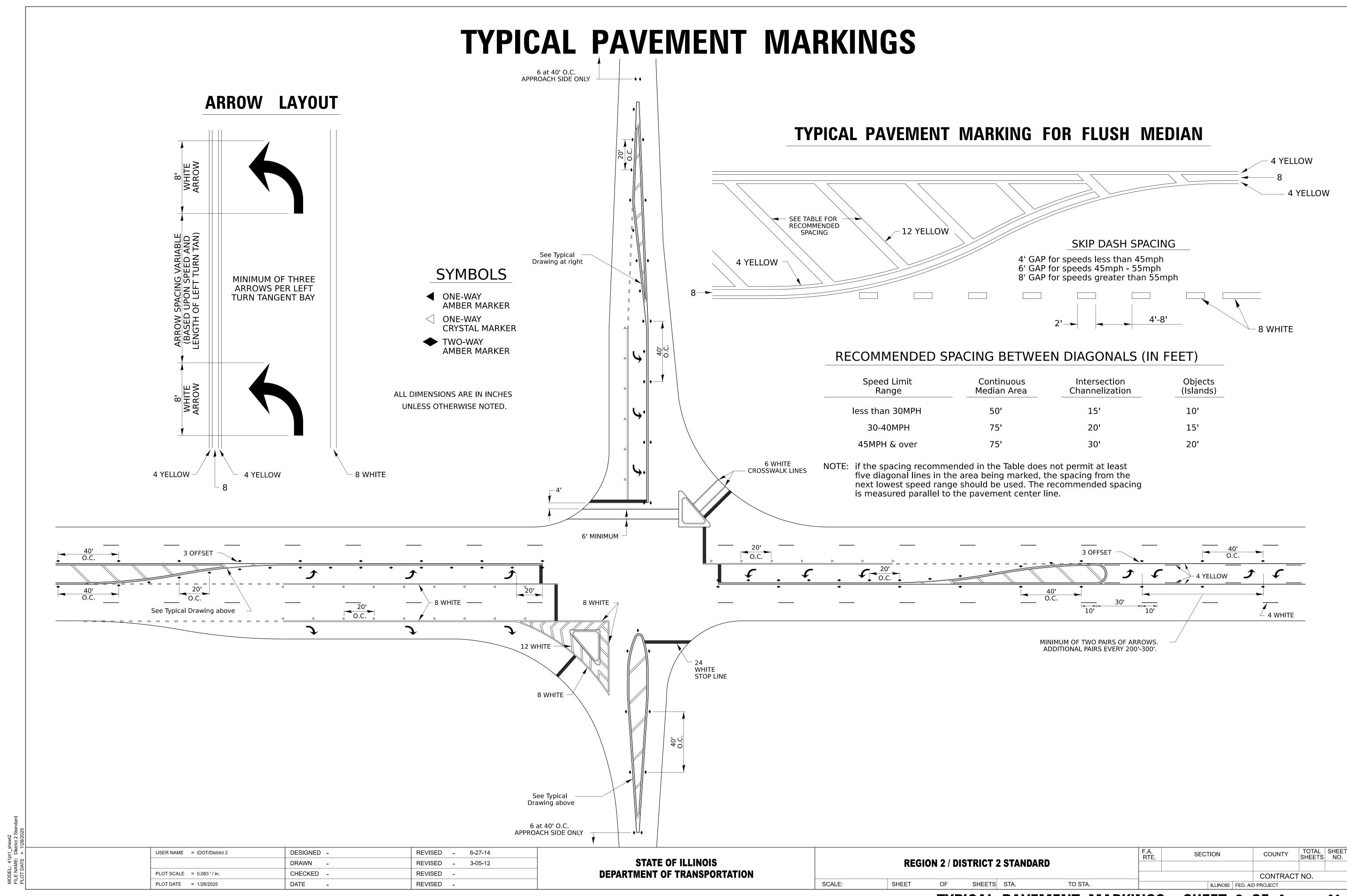


\* Distance to the nearest edge of the intersecting roadway in the absence of a marked crosswalk.

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 6-27-14
	DRAWN -	REVISED - 3-05-12
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -
PLOT DATE = 1/28/2025	DATE -	REVISED -

SCALE:

DECION O / DICTRICT O CTANDARD									
	REGION 2 / DISTRICT 2 STANDARD								
	SHEET	OF	SHEETS	STA.	TO STA.				

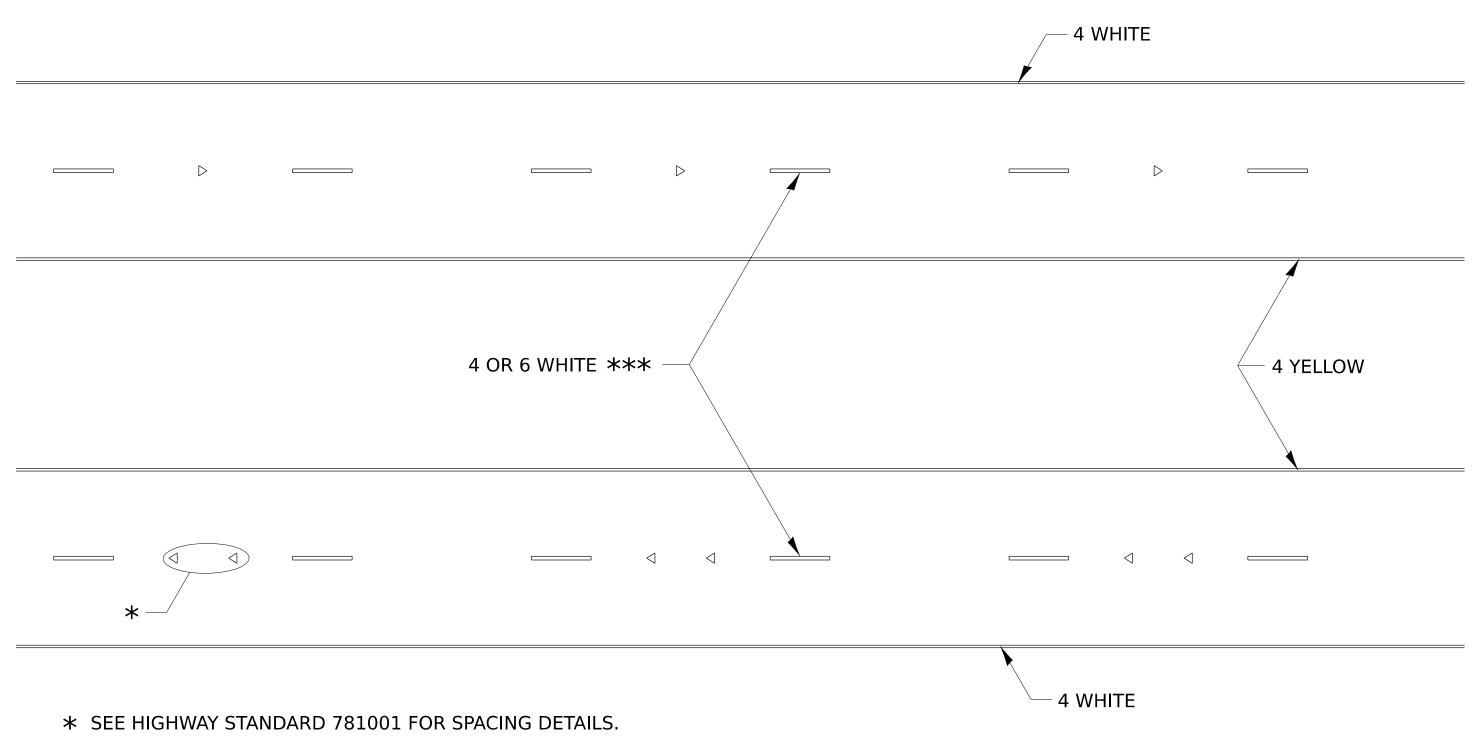


## TYPICAL PAVEMENT MARKINGS

#### TYPICAL PARKING SPACING

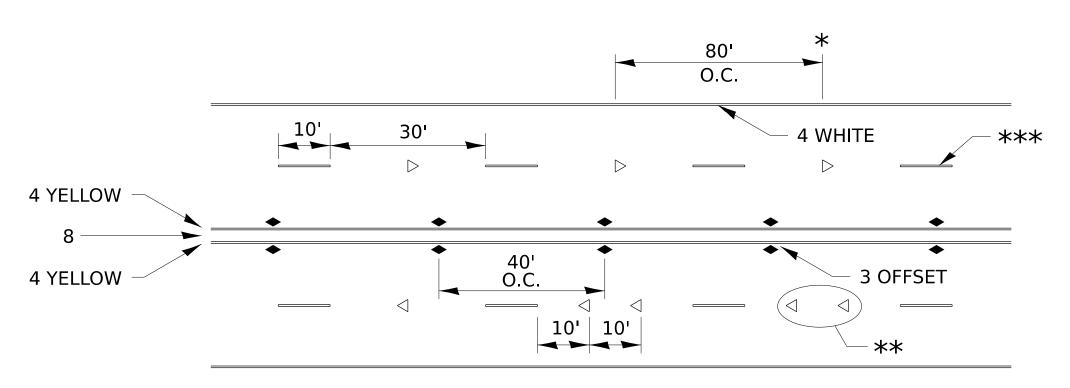
- Face of Curb

22'-25'



USE DOUBLE MARKERS WHEN ADT  $\geq$  20,000.

#### MULTI-LANE / DIVIDED



- \* REDUCE TO 40' O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH LOWER THAN POSTED SPEEDS.
- \*\* USE DOUBLE MARKERS WHEN ADT ≥ 20,000
- \*\*\* CENTERLINE SKIP DASH PAVEMENT MARKING SPEED LIMIT LESS THAN 40 MPH USE 4" LINE. SPEED LIMIT 40 MPH AND OVER USE 6" LINE.

#### MULTI-LANE / UNDIVIDED & ONE WAY

(FOR MULTI-LANE UNDIVIDED HIGHWAYS USE THIS DETAIL NOT HIGHWAY STANDARD 781001)

USER NAME = IDOT/District 2	DESIGNED -	REVISED -	6-27-14
	DRAWN -	REVISED -	8-27-13
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -	11-28-12
PLOT DATE = 1/28/2025	DATE -	REVISED -	

#### **STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

REGION 2 / DISTRICT 2 STANDARD								
SCALE:	SHEET	OF	SHEETS	STA.	TO STA.			

F.A. RTE	SEC	TION		COUNTY	TOTAL SHEETS	-;
				CONTRACT	NO.	
		ILLINOIS	FED. AII	D PROJECT		

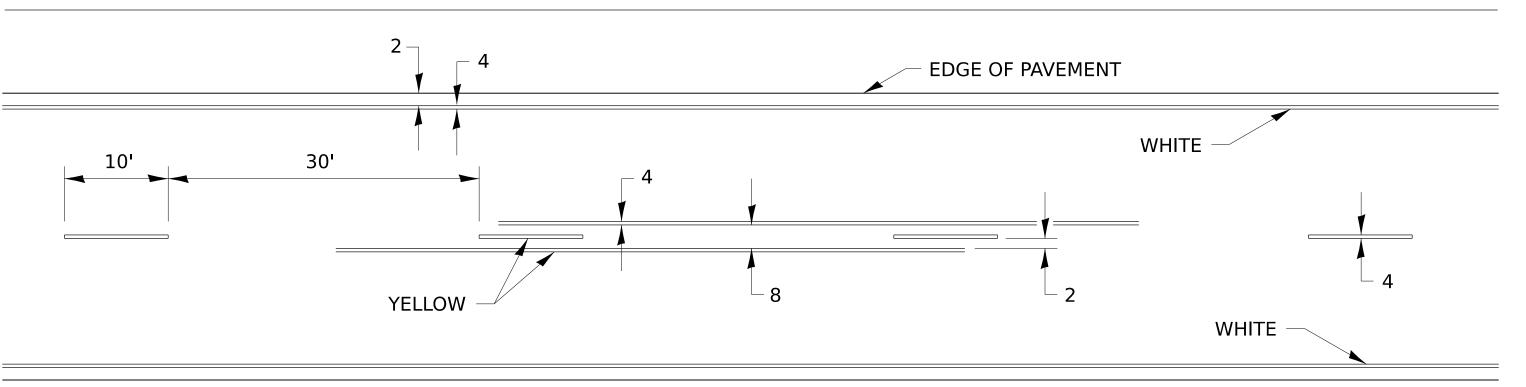
12 20' Min. No Parking Zone	Face of Curb  30' Min.  Approach to Signal
	20' Min. ————————————————————————————————————

4 WHITE

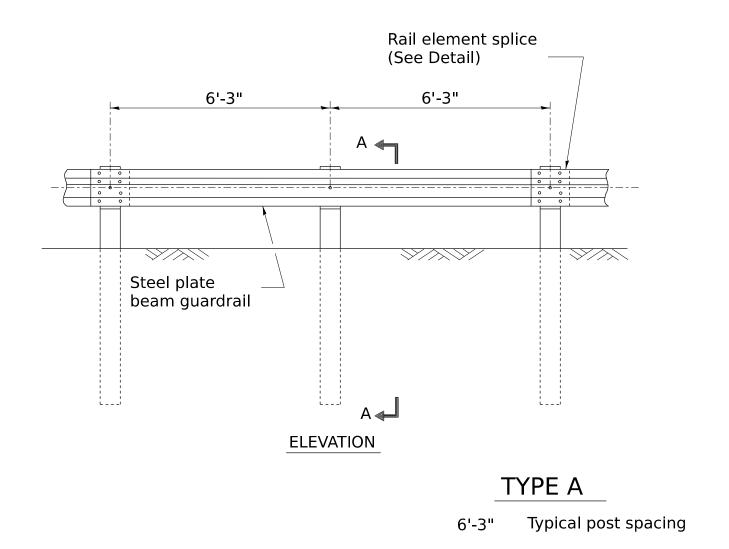
#### TYPICAL PAVEMENT MARKING FOR TWO LANE SECTION - NO PASSING ZONES

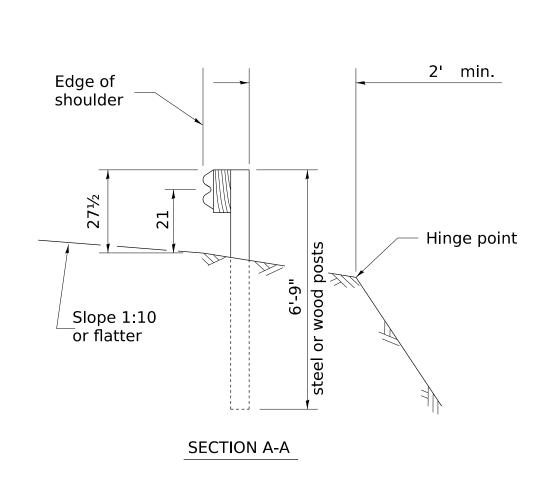
No Parking Zone

No Parking Zone



#### TYPICAL PAVEMENT MARKINGS \*\* 6" WHITE ON INTERSTATES, WHERE THE SPPED LIMIT IS 65 MPH, OR WHEN DIRECTED BY THE ENGINEER. **EXIT RAMP** 4" WIDE AT ALL OTHER LOCATIONS. EOP 4 YELLOW NOTE: GORE HATCHING PLACED ONLY WHEN SCHEDULED IN THE PLANS 10' 12 WHITE - EOP 8 WHITE 30' CENTERS 0' SHOULDER 4 WHITE 4' SHOULDER 8' SHOULDER 4 YELLOW ENTRANCE RAMP 4 YELLOW 8 WHITE 4 WHITE 4 10' SHOULDER - 8 WHITE \_\_ 4 WHITE 8' SHOULDER 4 YELLOW ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED. 4 YELLOW 4 YELLOW **CLOVERLEAF** 10' SHOULDER 10' SHOULDER 4 WHITE - 8 WHITE 10' SHOULDER 8 WHITE 8 WHITE 4 WHITE EOP-4 YELLOW 200' (TYP.) (TAPER LENGTH AS DIRECTED BY THE ENGINEER) TOTAL SHEET SHEETS NO. DESIGNED -REVISED 9-15-23 USER NAME = IDOT/District 2 **STATE OF ILLINOIS** REGION 2 / DISTRICT 2 STANDARD DRAWN 8-27-13 **DEPARTMENT OF TRANSPORTATION** CHECKED -REVISED -PLOT SCALE = 0.083 '/ in. CONTRACT NO. DATE -TO STA. REVISED -SCALE: SHEET PLOT DATE = 1/28/2025 ILLINOIS FED. AID PROJECT



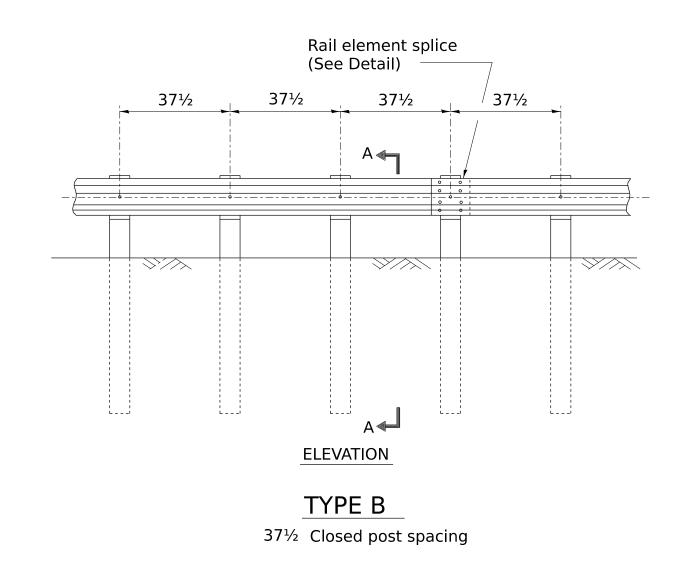


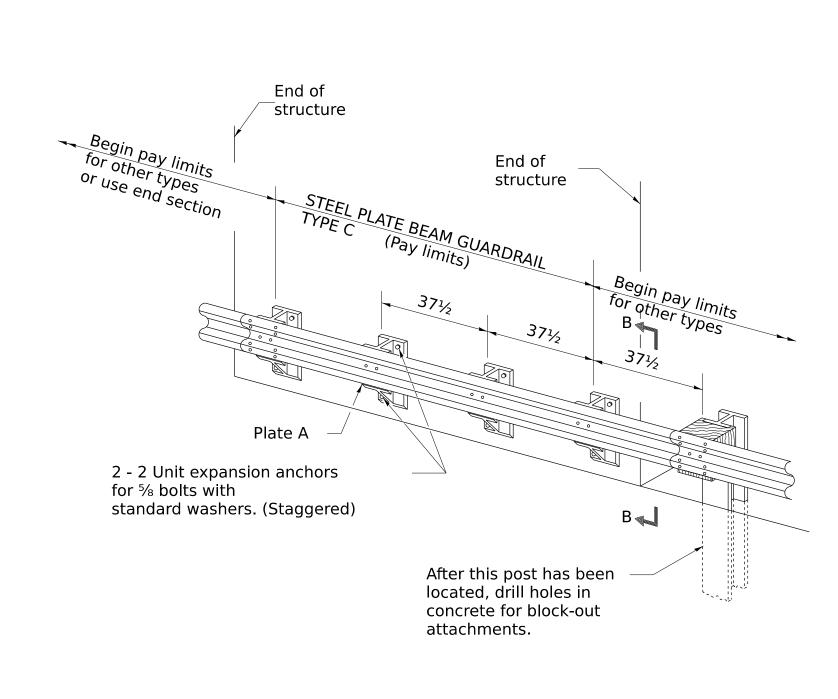
/ Slope 1:10

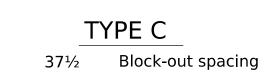
or flatter

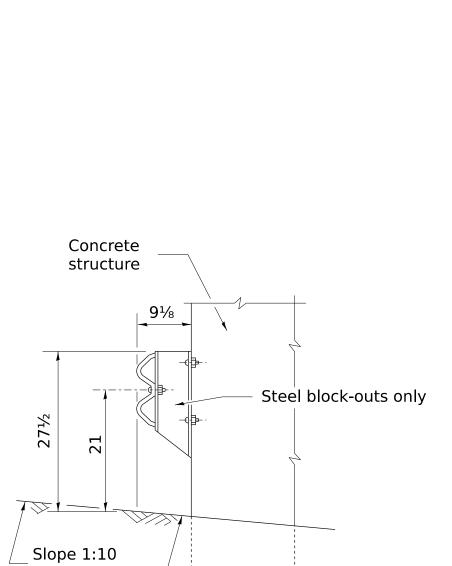
Finished

ground line





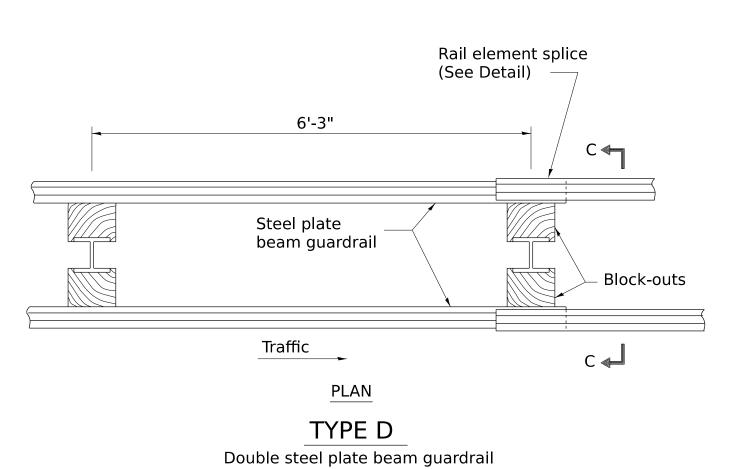




Finished

ground line

SECTION C-C



6'-3" typical post spacing

#### **GENERAL NOTES**

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches unless otherwise shown.

The existing steel posts may be drilled to match the bolt pattern shown herein for the wood block-out, or a new steel post shall be provided.

This detail is applicable to the guardrail system used prior to January 1, 2007. For details on the Midwest Guardrail System, see Standard 630001.

 USER NAME
 = IDOT/District 2
 DESIGNED REVISED 1-05-16

 DRAWN REVISED 10-18-11

 PLOT SCALE = 0.083 '/ in.
 CHECKED REVISED 

 PLOT DATE = 1/28/2025
 DATE REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTION B-B

or flatter

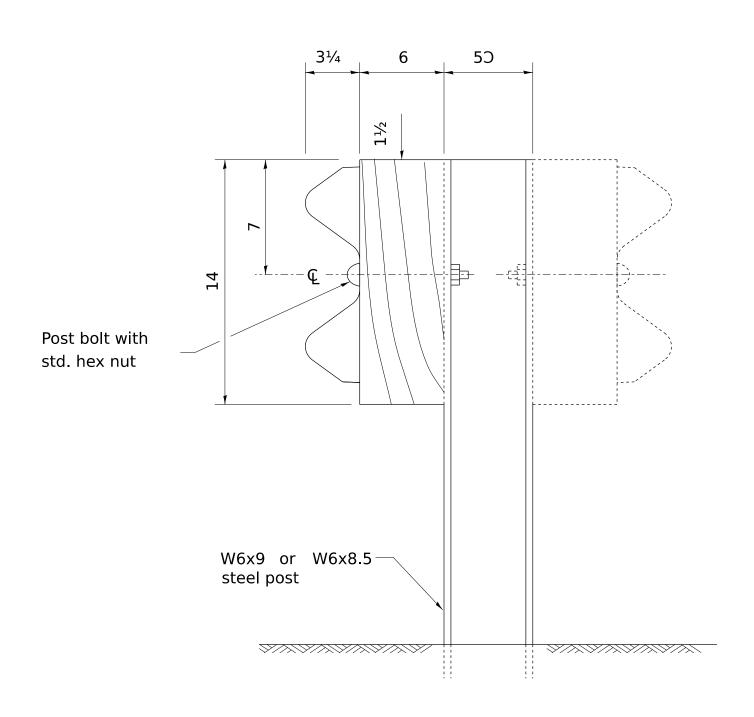
REGION 2 / DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

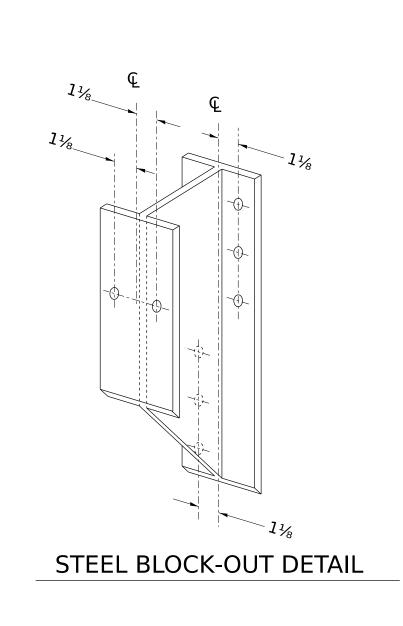
F.A. RTE. SECTION COUNTY SHEET STANDARD

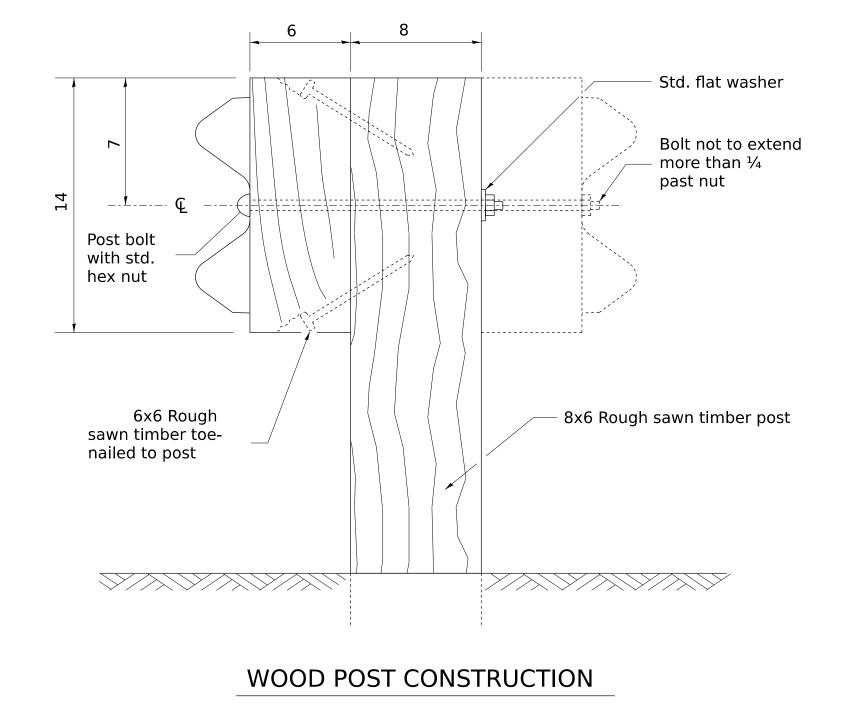
CONTRACT NO. SECTION COUNTY SHEET STA. TO STA.

TOTAL SHEET NO.



STEEL POST CONSTRUCTION





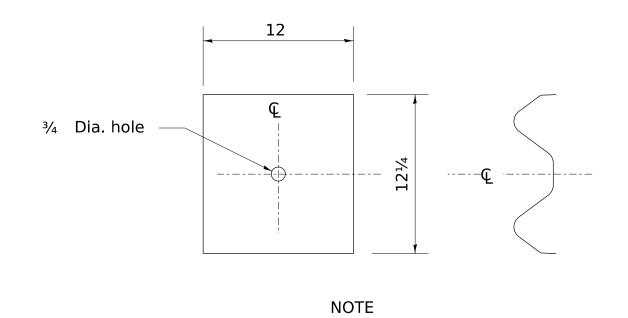
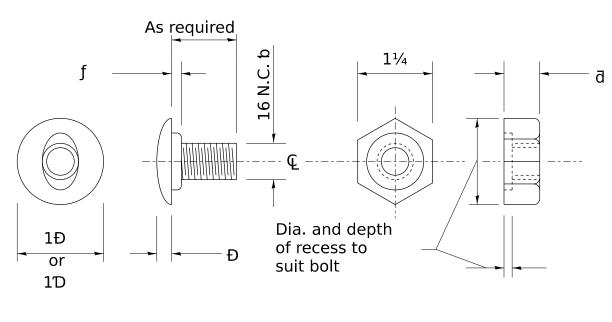


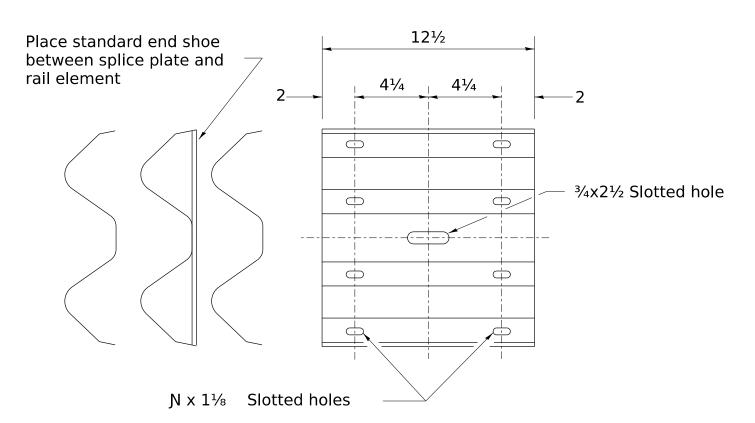
Plate A shall be placed between rail element and block-out at non-splice mounting points only when steel block-outs are used.

PLATE A

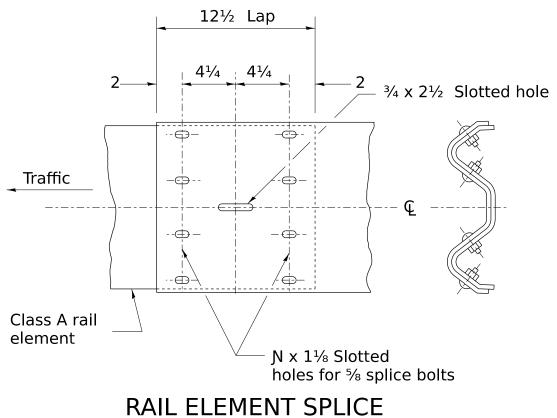


POST OR SPLICE BOLT & NUT

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 1-05-16		REGION 2 / DISTRICT 2 STANDARD				F.A. RTF	SECTION	COUNTY TOTAL SHEET NO.	
	DRAWN -	REVISED - 10-18-11	STATE OF ILLINOIS					1112.		SHEETS INC.	
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION						CONTRACT NO.		
PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO S				TO STA.		ILLINOIS FE	ED. AID PROJECT



SPLICE PLATE



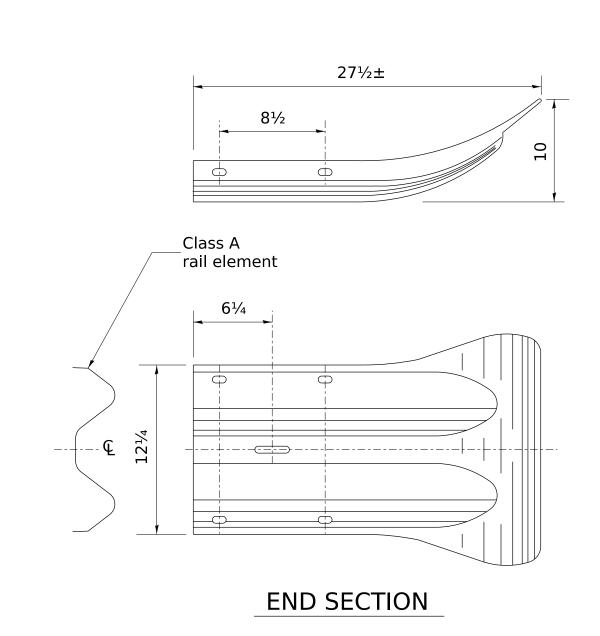
NOTE

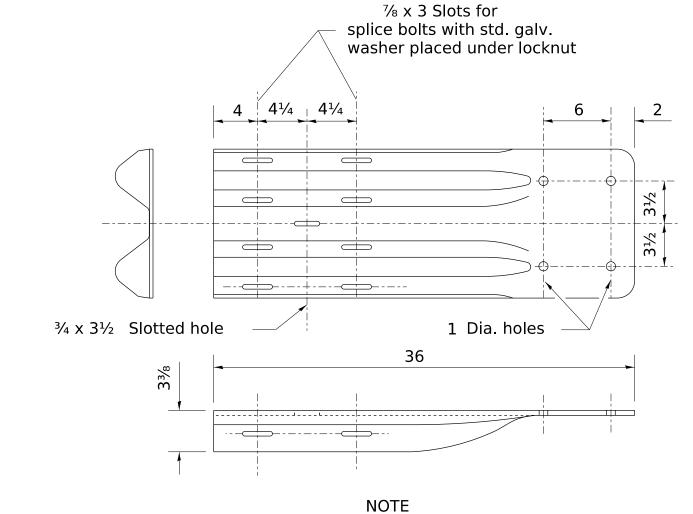
Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

ANCHOR PLATE T DETAILS

½ Steel plate

1Đ Dia. hole



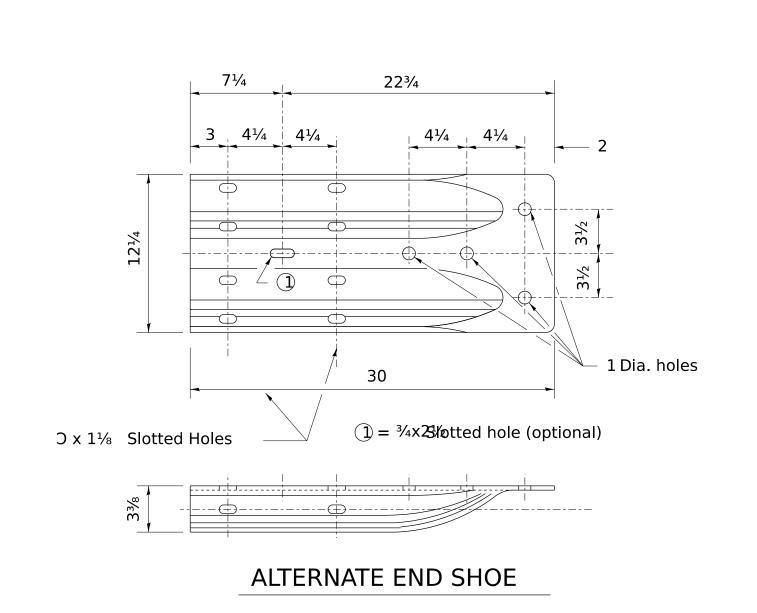


When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.

Externally threaded studs protruding from the surface of the concrete will not be permitted.

**END SHOE** 



Neutral axis

Rail element

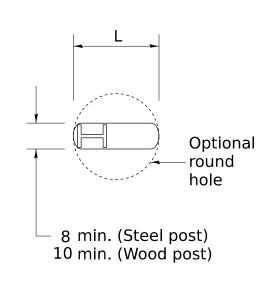
Post bolt with washer on front face. (8 required)

<sup>– ¾</sup> Dia. hole

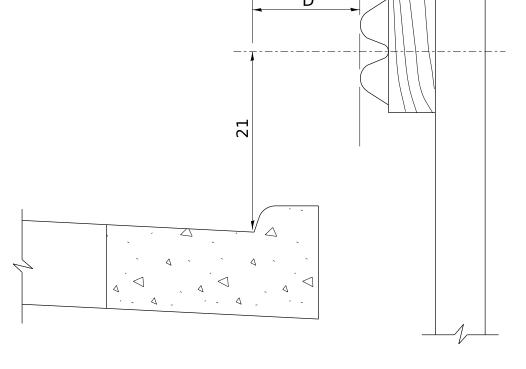
0

0

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 1-05-16							F.A.	SECTION	COUNTY	TOTAL SHEET
	DRAWN -	REVISED - 10-18-11	STATE OF ILLINOIS	REGION 2 / DISTRICT 2 STANDARD			RD	IXI'L.			SHEETS NO.	
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION								CONTRAC	T NO.
PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS STA.	TO STA.		ILLINOIS F	ED. AID PROJECT	



PLAN

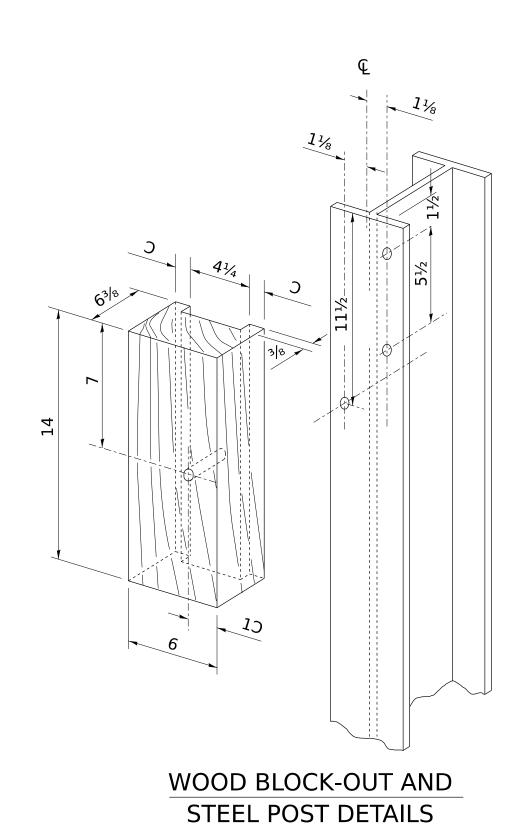


Note:

If it is necessary for D to be more than and less than 10'-0y'pe durb and gutter (Std. 606001) shall be used in front of and in advance of the quardrail

#### GUARDRAIL PLACED BEHIND CURB

(D = O desirable to 12 aximum)



Finished ground line

Ledge

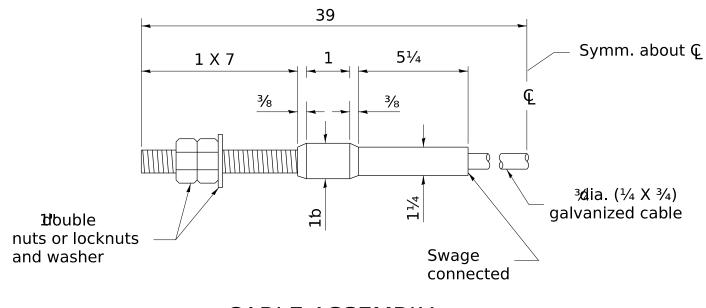
Drilled Hole

Note:
Ledge line is top of rock ledge or hard slag fill.

**ELEVATION** 

## FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

V	W	L	-
V	VV	Steel Post	Wood Post
0 - 18	24	21	23
>18 - 41.5	12	8	10
>41.5 - 53.5	12 - 0	8	10

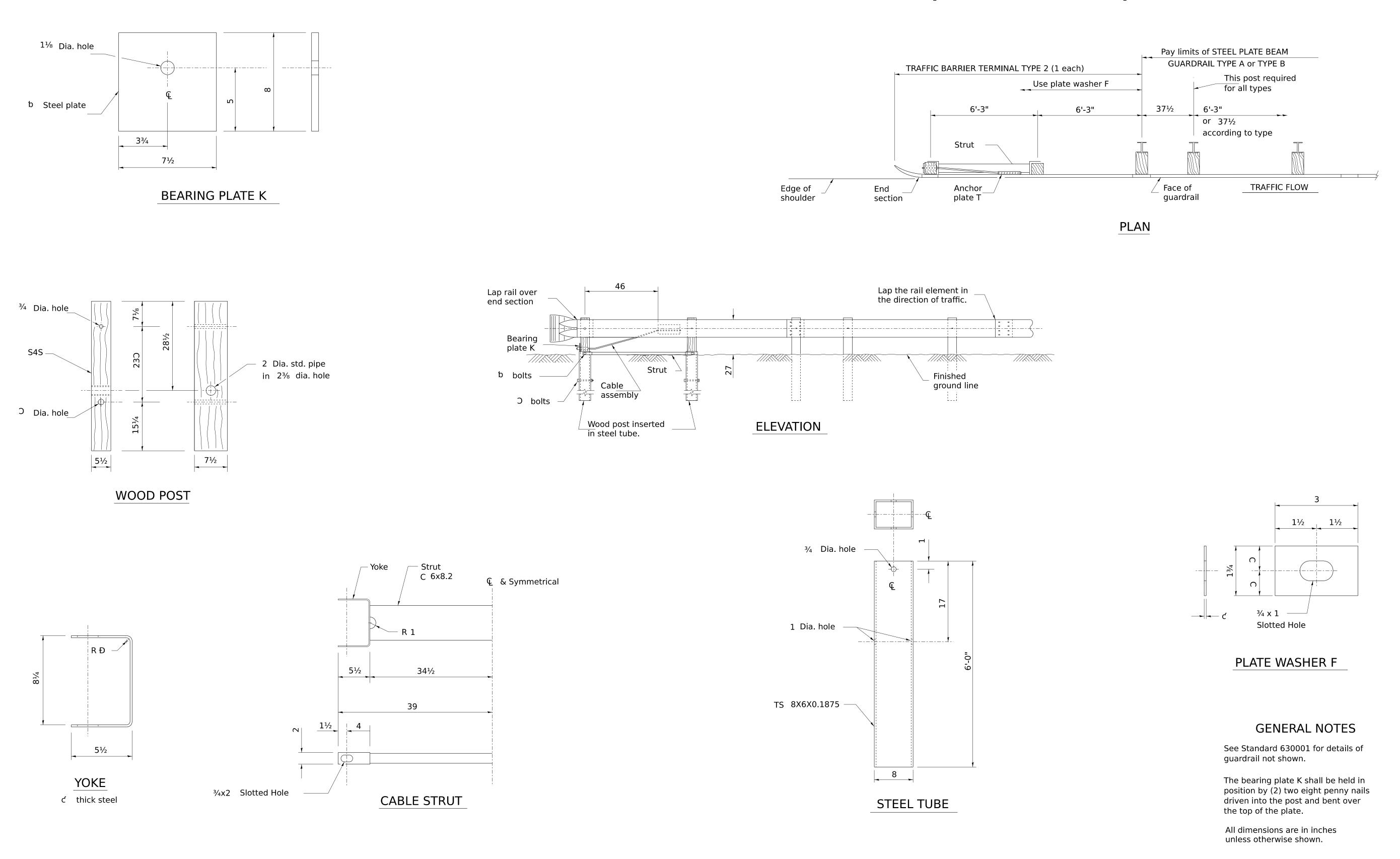


#### CABLE ASSEMBLY

(40,000 lbs. min. breaking strength)
Tighten to taut tension.

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 1-05-16		REGION 2 / DISTRICT 2 STANDARD				F.A. RTF	SECTION	COUNTY TOTAL SHEET NO.	
	DRAWN -	REVISED - 10-18-11	STATE OF ILLINOIS					1112.		SHEETS INC.	
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION						CONTRACT NO.		
PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO S				TO STA.		ILLINOIS FE	ED. AID PROJECT

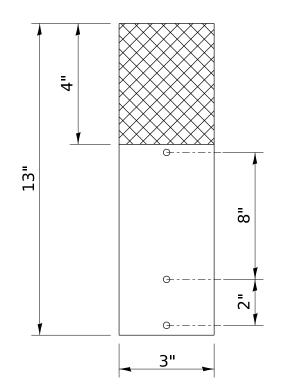
## TRAFFIC BARRIER TERMINAL, TYPE 2 (27" HEIGHT)



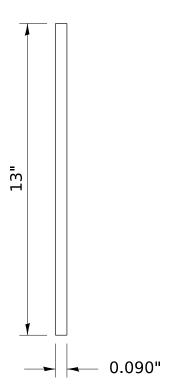
## GUARDRAIL REFLECTORS, TYPE C (SPECIAL)

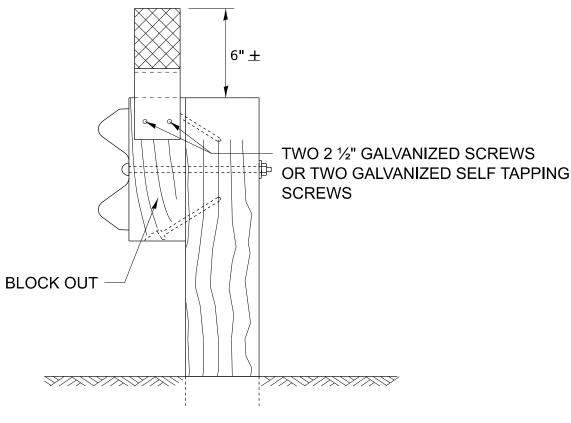
#### REFLECTORS FOR GUARDRAIL BLOCK OUT OR DELINEATOR POST

#### STRAIGHT REFLECTOR / DELINEATOR



#### SIDE VIEW



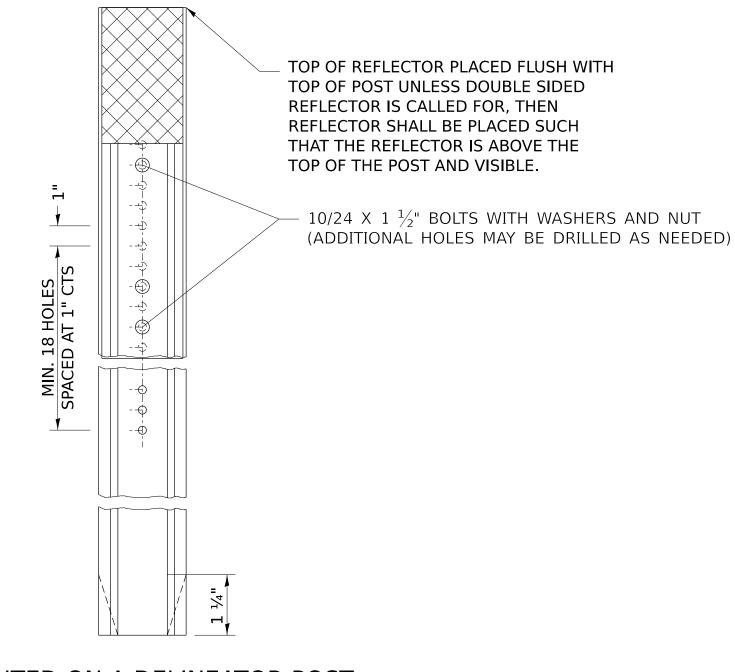


#### MOUNTED ON A GUARDRAIL BLOCK OUT

REFLECTORS SHALL BE MOUNTED DIRECTLY TO BLOCK OUTS.

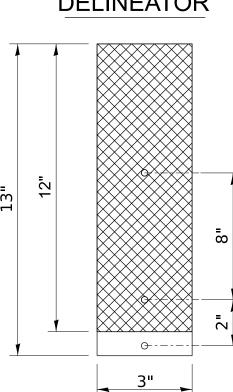
REFLECTORS MOUNTED ON WOODEN OR PLASTIC OR METAL BLOCK OUT SHALL BE MOUNTED USING TWO 2 ½" GALVANIZED SCREWS WITH WASHERS OR TWO SELF TAPPING GALVANIZED SCREWS WITH WASHERS.

ADDITIONAL SHEETING MAY BE ADDED AS NEEDED FOR TURN AROUNDS AS SHOWN IN THE PLANS

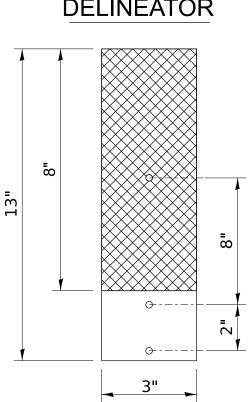


#### MOUNTED ON A DELINEATOR POST

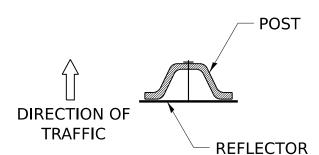
#### REPLACING 3 BUTTON DELINEATOR



REPLACING 2 BUTTON DELINEATOR



#### ADDITIONAL HOLES SHALL BE DRILLED IN THE REFLECTORS AS SHOWN ABOVE.



DELINEATORS SHALL BE INSTALLED ACCORDING TO STANDARD 635001 EXCEPT THAT THE POST SHALL BE ROTATED 180°. THE POST WILL HAVE THE WIDE SIDE FACING TRAFFIC AND THE REFLECTOR ATTACHECD AS SHOWN ABOVE.

#### NOTE:

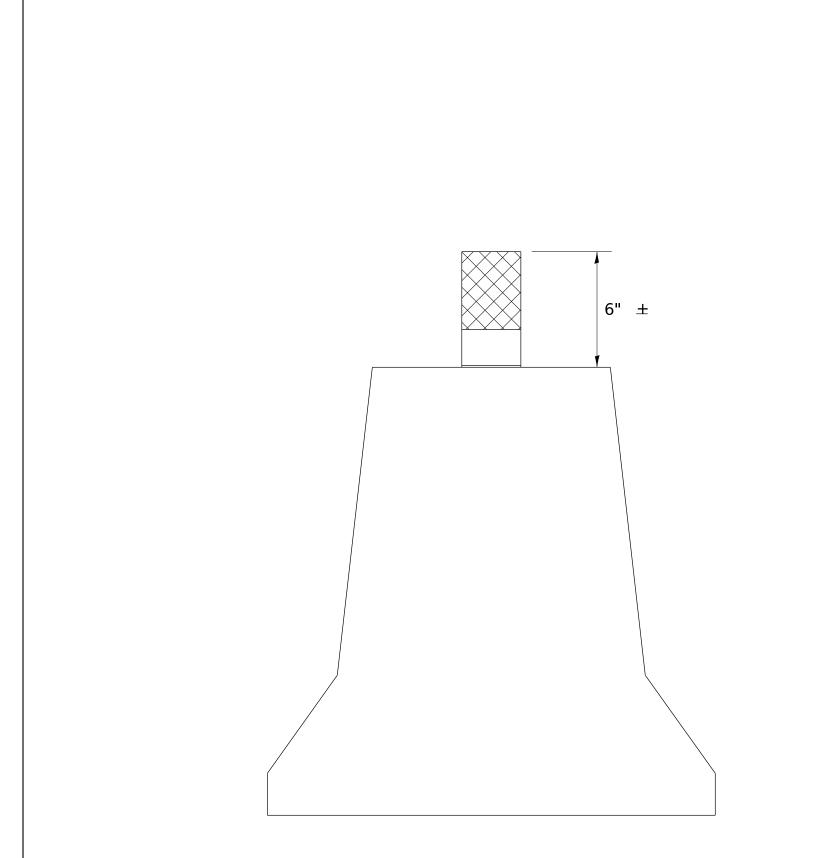
REFLECTORS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR GUARDRAIL REFLECTORS, TYPE C (SPECIAL), WHICH PRICE SHALL ALSO INCLUDE SCREWS, WASHERS OR AN APPROVED BONDING AGENT.

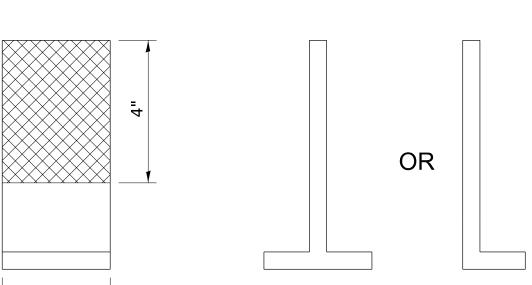
REFLECTORS INSTALLED ON TWO LANE ROADS SHALL BE DOUBLE SIDED AND BOTH SIDES SHALL BE CRYSTAL.

REFLECTORS INSTALLED ON CENTER BARRIER OR IN THE MEDIAN SHALL BE DOUBLE SIDED AND BOTH SIDES SHALL BE AMBER.

REFLECTORS INSTALLED ON DIVIDED HIGHWAYS ON THE OUTSIDE OF THE ROADWAY SHALL BE DOUBLE SIDED CRYSTAL.

SPACING FOR REFLECTORS SHALL BE ACCORDING TO STANDARD 782006 UNLESS OTHERWISE NOTED IN THE PLANS.





#### SIDE VIEW

#### NOTE:

REFLECTORS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR GUARDRAIL REFLECTORS, TYPE C (SPECIAL), WHICH PRICE SHALL ALSO INCLUDE SCREWS, WASHERS OR AN APPROVED BONDING AGENT.

REFLECTORS INSTALLED ON TWO LANE ROADS SHALL BE DOUBLE SIDED AND BOTH SIDES SHALL BE CRYSTAL.

REFLECTORS INSTALLED ON CENTER BARRIER SHALL BE DOUBLE SIDE AND BOTH SIDES SHALL BE AMBER.

REFLECTORS INSTALLED ON DIVIDED HIGHWAYS ALONG THE OUSTIDE OF

THE HIGHWAY SHALL BE DOUBLE SIDED CRYSTAL.

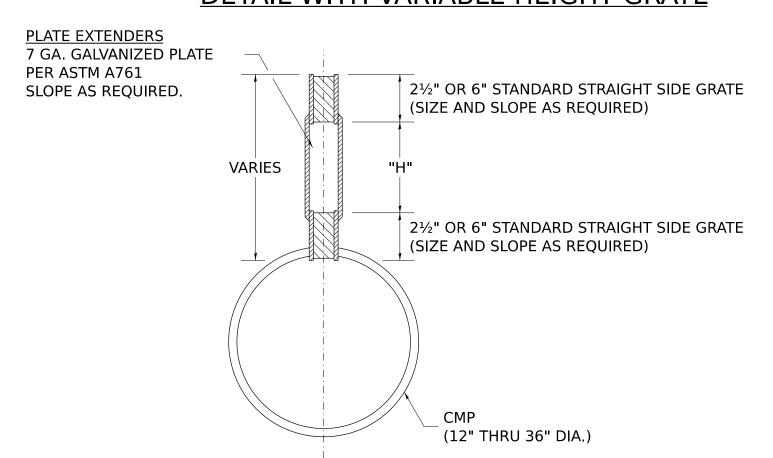
SPACING FOR REFLECTORS SHALL BE ACCORDING TO STANDARD 782006 UNLESS OTHERWISE NOTED IN THE PLANS.

#### REFLECTORS MOUNTED ON BARRIER WALL

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 3-07-24				F	.A. SECT	TOTAL SHEETS NO
	DRAWN -	REVISED - 4-27-23	STATE OF ILLINOIS		REGION 2 / DISTRICT 2 STANDARD	-	(TC.	ONEETO NO.
PLOT SCALE = 0.083 '/in.	CHECKED -	REVISED - 6-21-21	DEPARTMENT OF TRANSPORTATION					CONTRACT NO.
PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE:	SHEET OF SHEETS STA.	TO STA.		ILLINOIS FED. AID PROJECT

#### 2½" OR 6" STANDARD STRAIGHT SIDE GRATE LOADING MAX. EXTENDER CONDITION HEIGHT - "H" H20/H25 750 PSI 19" CONCRETE \* 125 PSI TIRE PRESSURE (12" THRU 36" DIA.) **MAXIMUM 1% GRADE SIDE VIEW**

#### DETAIL WITH VARIABLE HEIGHT GRATE



**SECTION A-A** 

#### **GENERAL**

Class SI Concrete shall be used throughout.

This specification covers Slottted Drain used for the removal of water as shown on the plans.

The Slotted Drain shall be Corrugated Pipe Culvert with Integral Slotted Drains.

Before placing the concrete adjacent to the pipe, the slot shall be covered by either thin, flat metal sheeting or by a board notched to fit over the grate bars. This covering must fit closely in the slot to prevent entry of concrete into the pipe. Paving over the slotted drain will then be one continuous operation over the protected drain. The protection for the drain slot shall then be removed. The pipe shall drain into the side of the inlet. The opening where the slot

is removed shall be covered to prevent concrete from entering the pipe. The Corrugated Steel Pipe used in the Slotted Drain shall meet the requirements of AASHTO

M36/ASTM A760.

The CMP shall be ALUMINIZED STEEL Type 2. The diameter shall be as shown on the plans.

Steel grating shall meet the galvanizing requirements of AASHTO M111.

This work will be paid for at the contract unit price per foot for SLOTTED DRAIN of the pipe diameter specified WITH VARIABLE SLOT, or SLOTTED DRAIN, of the pipe diameter specified, WITH 6" SLOT,

and shall include concrete and grating for depth specified on plans. Use approved end cap to prevent concrete entry into the pipe during gutter construction on the upstream end of the pipe.

#### **CONNECTIONS**

The Corrugated Steel Pipe shall have a minimum of two rerolled annular ends.

The Slotted Drain bands shall be modified HUGGER Bands to secure the pipe and prevent infiltration of the backfill.

#### When the Slotted Drain is banded together, the adjacent grates shall have a maximum 3" gap.

<u>GRATES</u> The grates shall be manufactured from ASTM A670, Grade 36 steel. The spacers and bearing

bars (sides) shall be 3/16 " material ±0.008" The spacers shall be on 6" centers and welded on both sides to each bearing bar (sides) with four (4) 1- 1/4 " long 3/16 " fillet welds on each side of the bearing bar.

The plate extender shall be 7 gage steel meeting ASTM A761.

The engineer may call for tensile strength tests on the grate if the grate is not in compliance with the above spacer specifications. If tensile strength tests are called for, minimum results for an in-place spacer pulled perpendicular to the bearing bar shall be:

T= 12,000 pounds for 2- 1/2 " grate T= 15,000 pounds for 6" grate

#### **GALVANIZING**

The grate and plate extenders shall be galvanized in accordance with ASTM A123 except with a 2 oz. galvanized coating.

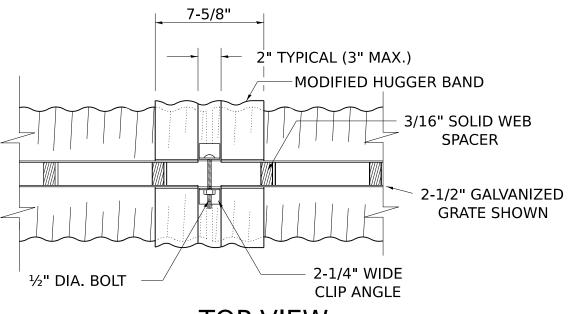
#### GRATE ATTACHED TO CSP

The grate shall be fillet welded with a minimum weld 1" long to the CSP on each side of the grate at every other corrugation.

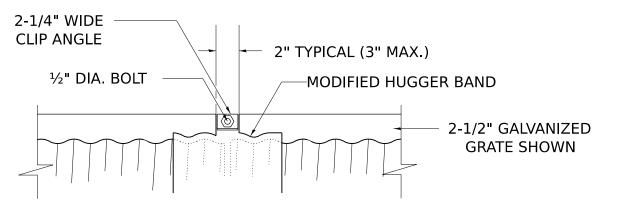
TOLERANCES - FINISHED SLOTTED DRAIN - 20' LENGTHS

Vertical Bow=  $\pm$  3/8 " Horizontal Bow =  $\pm$  5/8 " Twist=  $\pm$  1/2 "

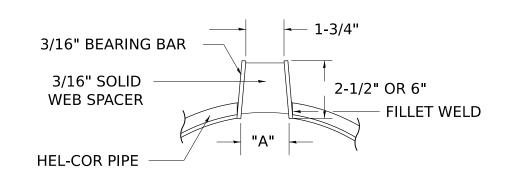
## SLOTTED DRAIN PIPE



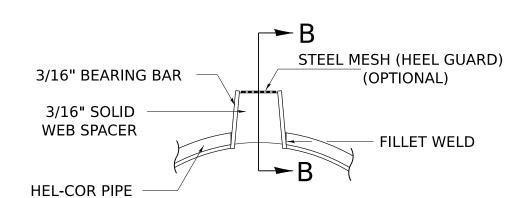
#### **TOP VIEW**



#### **SIDE VIEW**



#### **SECTION A-A** STANDARD DETAIL



#### **SECTION A-A DETAIL WITH MESH**

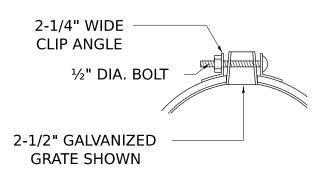
#### (TRAPEZOIDAL GALVANIZED GRATE SHOWN)

VE VE
TR
TR
V

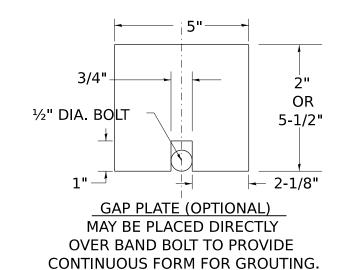
_	GRATE TYPE	"A"					
VERT	2-1/2"	1-3/4"					
VERT	6"	1-3/4"					
TRAP	2-1/2"	2-1/4"					
TRAP	6"	3"					
VERT = VERTICAL TRAP = TRAPIZOIDAL							

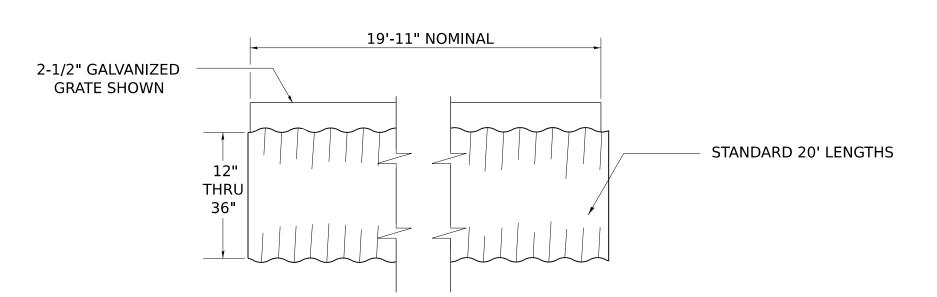
#### SLOTTED DRAIN NOTES

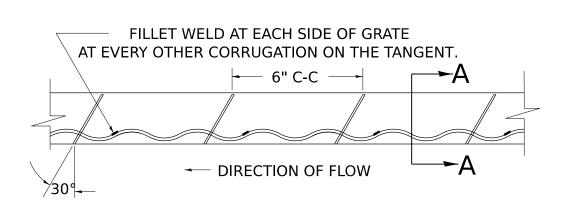
- 1. GRATING IS AVAILABLE IN DEPTHS OF 2-1/2" AND 6".
- 2. VERTICAL GRATING (STRAIGHT SIDES) WITH VERTICAL SPACERS IS ALSO AVAILABLE.
- 3. FOR 6" VERTICAL & TRAPIZOIDAL REQUIREMENTS, THE SLOTTED DRAIN BAND MAY BE FURNISHED WITH THE 4" TECHCO BAND ANGLE.
- 4. DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
- 5. DIMENSIONS FOR H AND H AS REQUIRED.
- 6. H AND H MEASURED FROM TOP OF GRATE TO BOTTOM OF GRATE.



**END VIEW** 

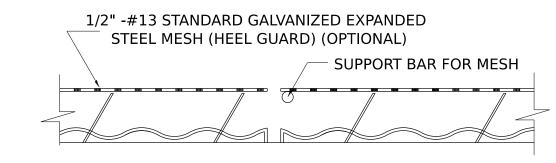




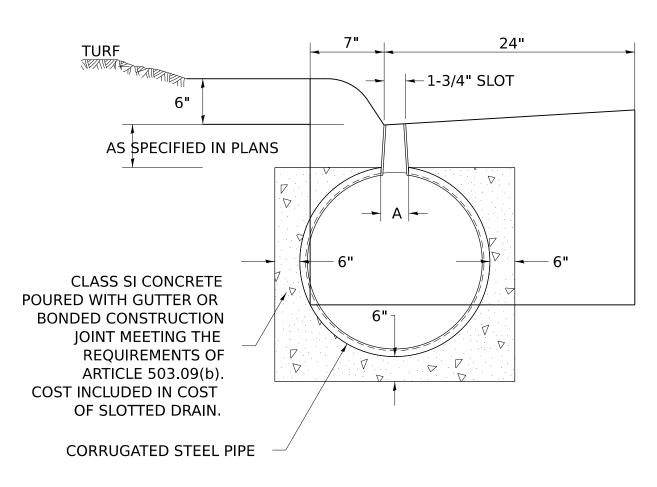


**GRATE WELDING DETAIL** 

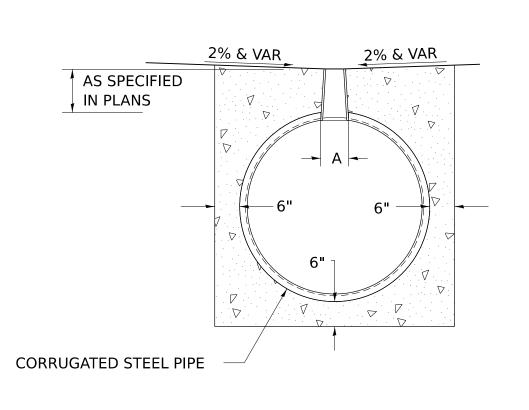
TYPICAL PIPE SECTION



#### **SECTION B-B**



#### **DETAIL FOR CURB & GUTTER**



#### **DETAIL FOR CROSSOVERS,** DRIVEWAYS, OR PARKING LOTS

ALL DIMENSIONS ARE IN INCHES UNLESS	5
OTHERWISE NOTED.	

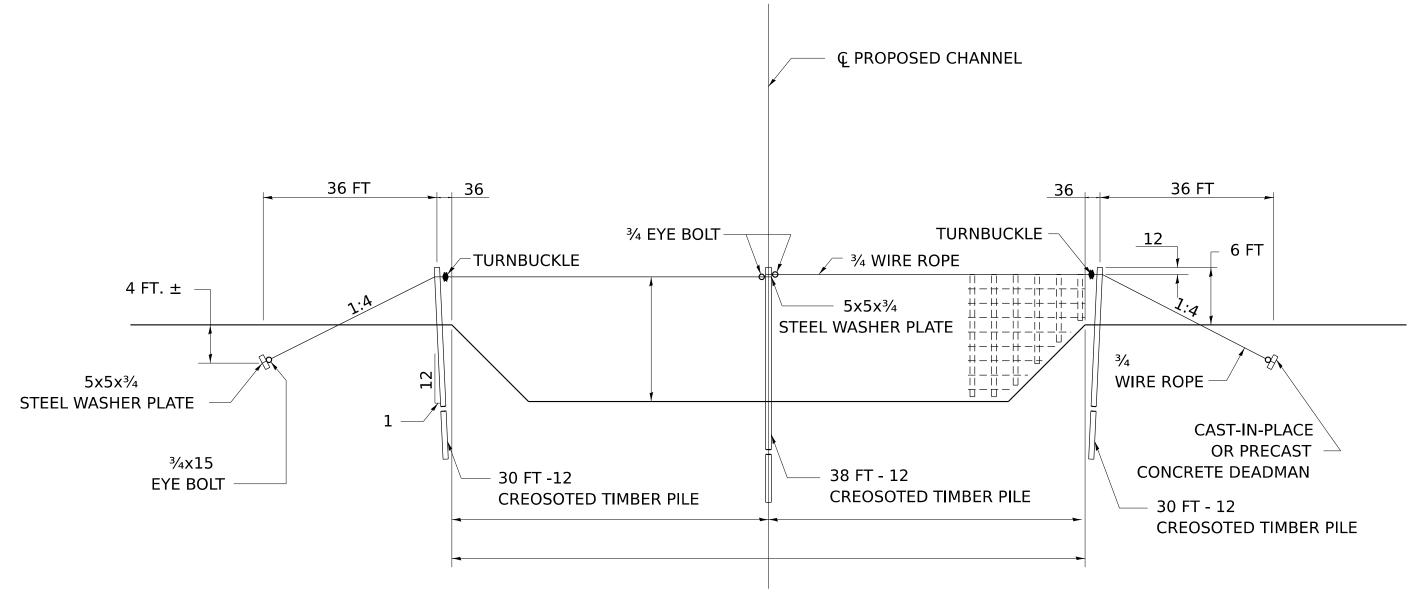
DESIGNED 1-05-16 USER NAME = IDOT/District 2 REVISED DRAWN REVISED 6-27-14 PLOT SCALE = 0.083'/in. CHECKED -REVISED 10-18-11 DATE PLOT DATE = 1/28/2025 REVISED

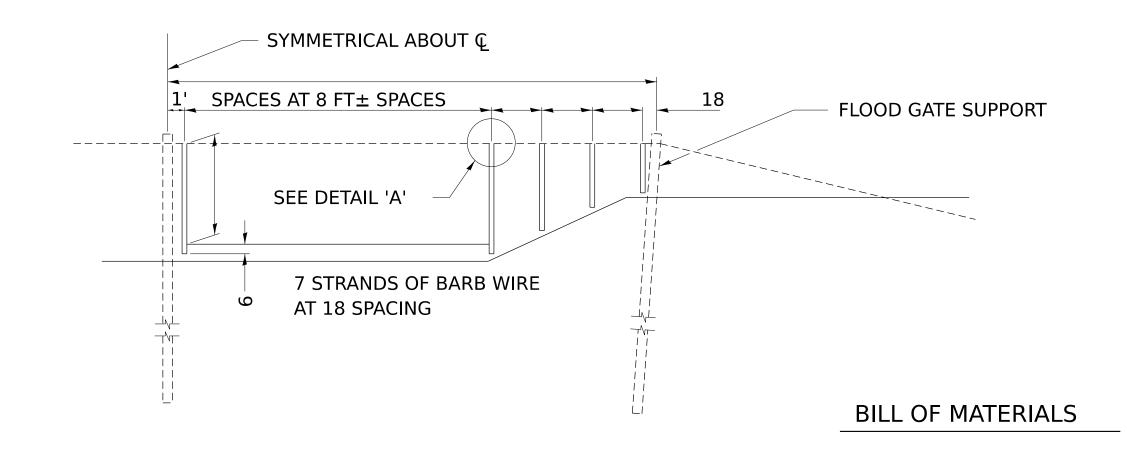
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

**REGION 2 / DISTRICT 2 STANDARD** TO STA. SCALE: SHEET SHEETS STA.

F.A. RTE.	SEC <sup>-</sup>	ΓΙΟΝ		COUNTY	TOTAL SHEETS	SHEET NO.
				CONTRACT	NO.	
		ILLINOIS	FED. AII	D PROJECT		

## DETAIL OF FLOOD GATE

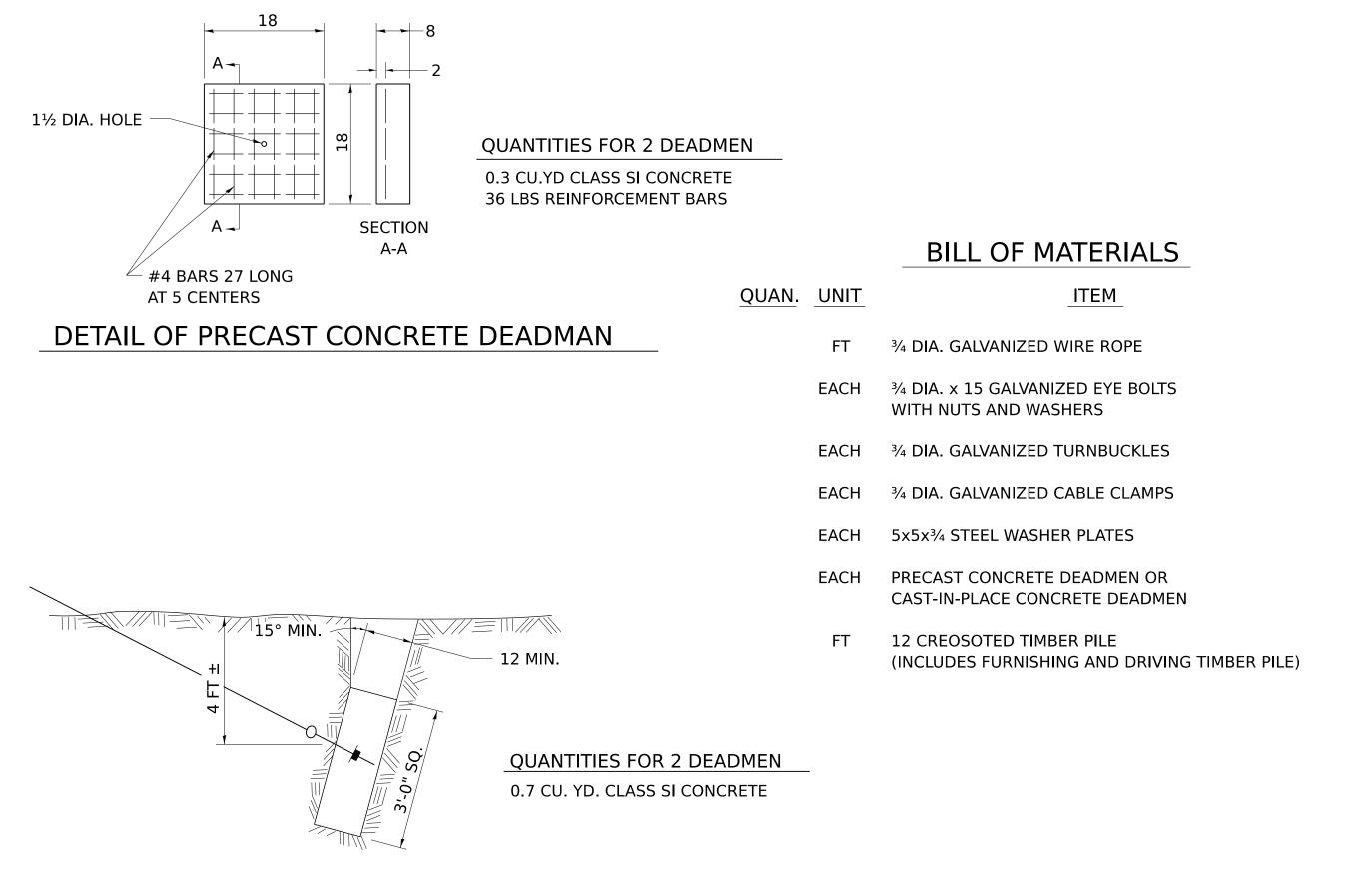




<u>ITEM</u> QUANTITY UNIT THIS WORK WILL BE PAID FOR AT THE FT 2 x 4 TREATED LUMBER CONTRACT UNIT PRICE PER EACH FOR FT GALVANIZED BARBED WIRE SPECIAL STEEL CHANNEL FT SC 25, 2½ x 2½ **EACH** 3/8 x 3 GALVANIZED STEEL BOLTS AND WASHERS 3/8 x 2 GALVANIZED EACH STEEL U-BOLTS

EACH GALVANIZED CABLE CLAMPS

LBS GALVANIZED FENCE STAPLES

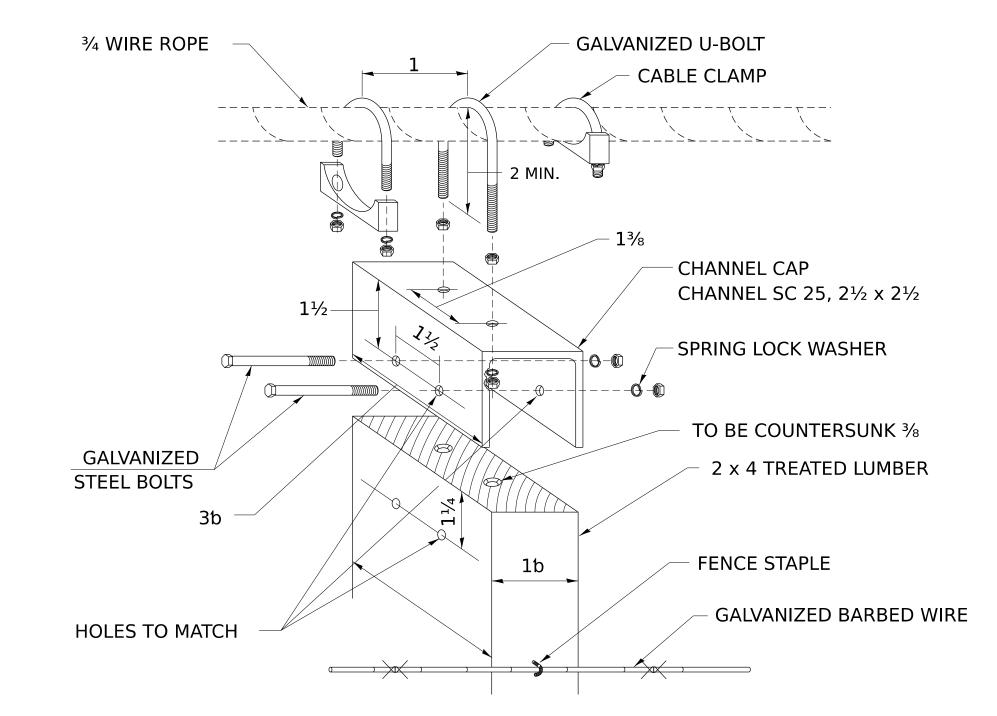


PRECAST CONCRETE DEADMEN AND CAST-IN-PLACE CONCRETE

DEADMEN SHALL BE CONSTRUCTED OF CLASS SI CONCRETE

DETAIL OF CAST-IN-PLACE CONCRETE DEADMAN

NOTE:



<u>DETIAL 'A'</u>
EXPLODED VIEW OF FLOOD GATE TO CABLE

## ALL DIMENSIONS ARE IN INCHES UNLESS

trict 2 /28/2													
Z = Dist	USER NAME = IDOT/District 2	DESIGNED -	REVISED - 8-09-12						F.A.	SECTION	COUNTY TOTAL SHEETS NO		
AME		DRAWN -	REVISED -	STATE OF ILLINOIS	REGION 2 / DISTRICT 2 STANDARD					1012.		OTILL TO THO.	
N H O	PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION									CONTRACT NO.
	PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED.	ID PROJECT

OTHERWISE NOTED.

#### TYPICAL SECTION

#### (POSTED SPEED LIMIT 55 MPH, WORK ZONE SPEED LIMIT 45 MPH)

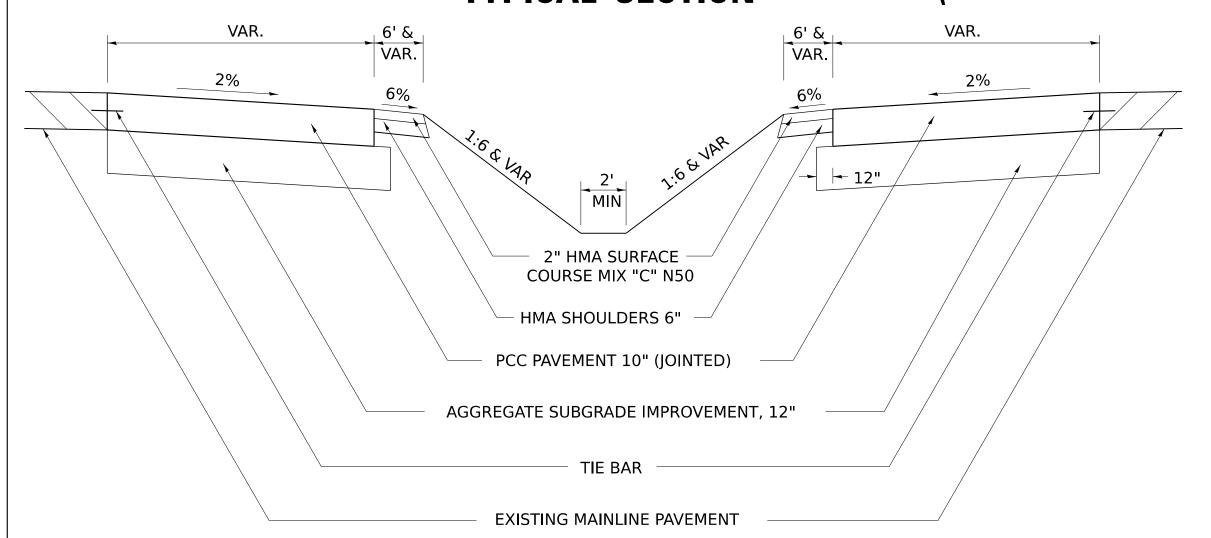
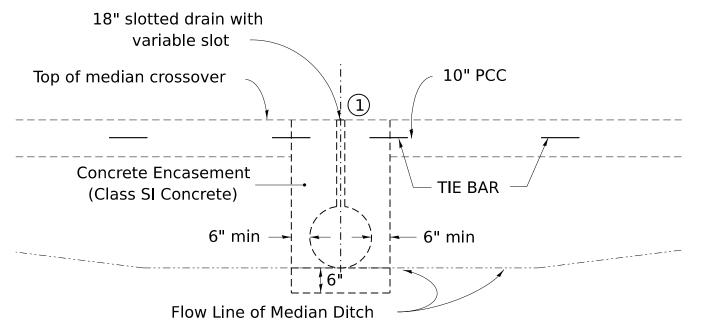
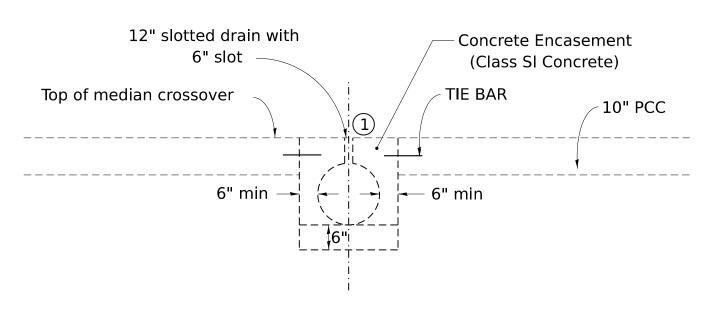


	TABLE OF OI	FFSETS A	ND DRO	PS		
Distance feet from location station	0	60' B	75'	100'	125'	143.73' ©
Offsets feet from inside edge of pavement	20'	18'	15.32'	11.37'	8.06'	6.00'
Drop feet from inside edge of pavement	0.0'	0.0'	0.0'	0.0'	0.0'	0.0'



#### SECTION A-A

(USE TO MAINTAIN MEDIAN DRAINAGE THROUGH THE CROSSOVER)



① Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)

#### **GENERAL NOTES**

Construction of median crossover shall conform to the requirement of current Standard Specifications.

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Pavement, subbase, & shoulder quantities are:

(1340.88 Sq. Yds.) AGGREGATE SUBGRADE IMPROVEMENT, 12" (1250.80 Sq. Yds.) P.C.C. PAVEMENT 10" (JOINTED)

(45.1 Tons) 2" HMA SURFACE COURSE, MIX "C", N50 (402.52 Sq. Yds.) HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

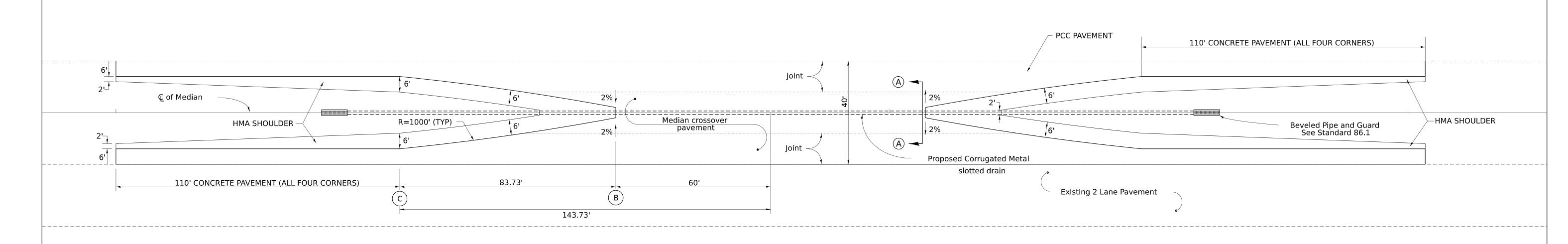
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 45mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

The PCC Pavement 10" (Jointed) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (Jointed).



#### TYPICAL PLAN

Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 2-26	26-19								F.A.	SECTION	COUNTY TOTAL SHEET
	DRAWN -	REVISED - 1-05	05-16	STATE OF ILLINOIS	REGION 2 / DISTRICT 2 STANDARD				1(1)		SHEETS NO.		
PLOT SCALE = 0.083 '/in.	CHECKED -	REVISED - 8-27	27-13	DEPARTMENT OF TRANSPORTATION					_		CONTRACT NO.		
PLOT DATE = 1/28/2025	DATE -	REVISED - 12-0	-07-10		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED. AID	PROJECT

#### TYPICAL SECTION

#### (POSTED SPEED LIMIT 55 MPH, WORK ZONE SPEED LIMIT 45 MPH)

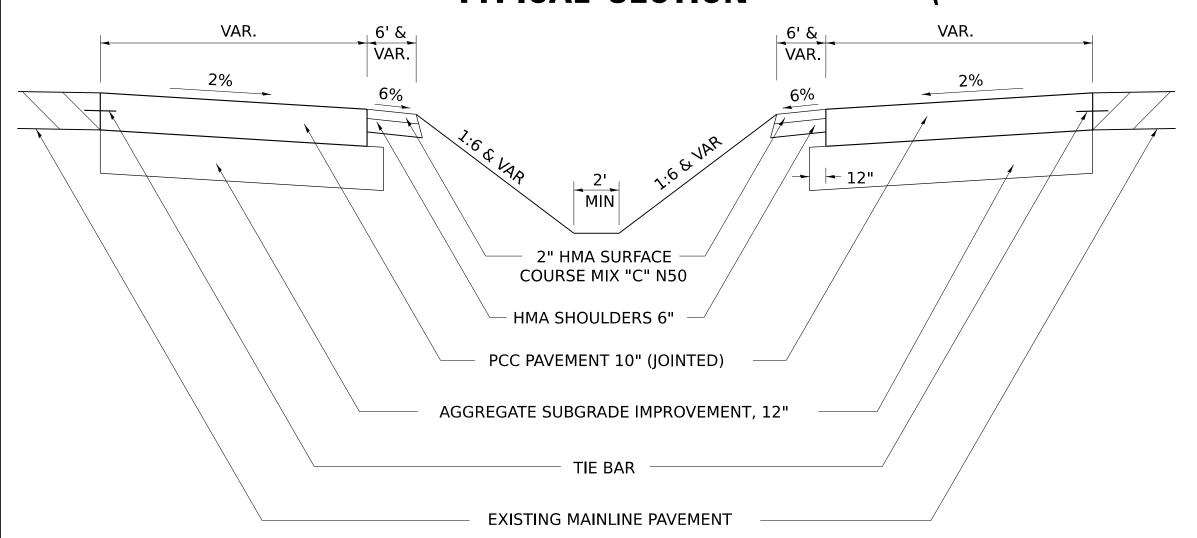
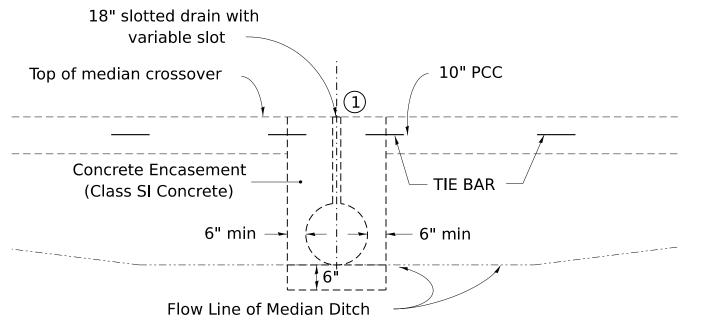
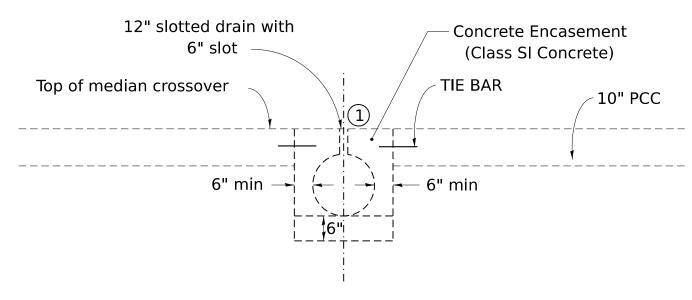


	TABLE (	OF OFFSE	TS AND	DROPS	_	_	
Distance feet from location station	0'	53' B	75'	100'	125'	150.00'	161.73'
Offsets feet from inside edge of pavement	25' <b>Q</b>	23'	18.57'	14.14'	10.37'	7.25'	6.00'
Drop feet from inside edge of pavement	0.5'	0.46'	0.37'	0.28'	0.021'	0.15'	0.12'



#### SECTION A-A

(USE TO MAINTAIN MEDIAN DRAINAGE THROUGH THE CROSSOVER)



① Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)

#### **GENERAL NOTES**

Construction of median crossover shall conform to the requirement of current Standard Specifications.

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Pavement, subbase, & shoulder quantities are:

(1634.94 Sq. Yds.) AGGREGATE SUBGRADE IMPROVEMENT, 12" (1533.52 Sq. Yds.) P.C.C. PAVEMENT 10" (JOINTED)

(52.9 Tons) 2" HMA SURFACE COURSE, MIX "C", N50

(472.79 Sq. Yds.) HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

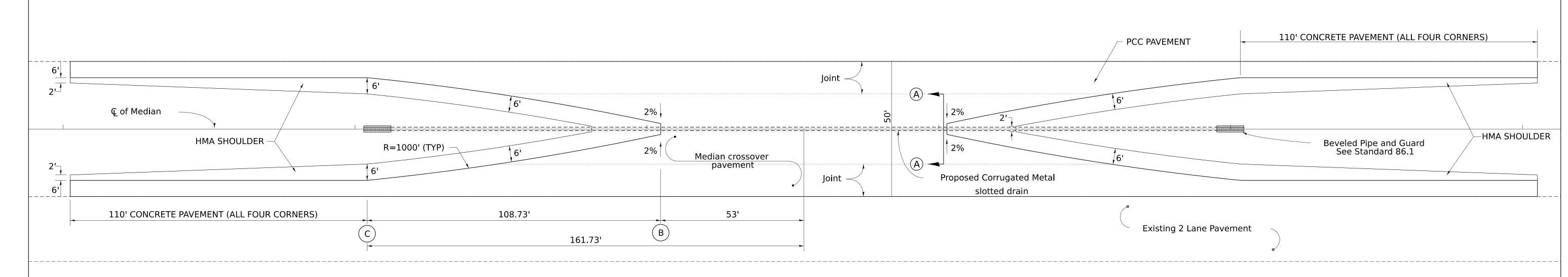
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 45mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

The PCC Pavement 10" (Jointed) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (Jointed).



#### TYPICAL PLAN

Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

728/									
"	USER NAME = IDOT/District 2	THE VIOLE IS THE STATE OF THE S			F.A.	SECTION	COUNTY TOTAL SHEET		
DAID TO		DRAWN -	REVISED - 1-05-16	STATE OF ILLINOIS		REGION 2 / DISTRICT 2 STANDARD	1.1.2.		CHEETO NO.
	PLOT SCALE = 0.083 '/in.	CHECKED -	REVISED - 8-27-13	DEPARTMENT OF TRANSPORTATION					CONTRACT NO.
<u> </u>	PLOT DATE = 1/28/2025	DATE -	REVISED - 12-07-10		SCALE:	SHEET OF SHEETS STA. TO STA.		ILLINOIS FE	ED. AID PROJECT

#### TYPICAL SECTION

#### (POSTED SPEED LIMIT 55 MPH, WORK ZONE SPEED LIMIT 45 MPH)

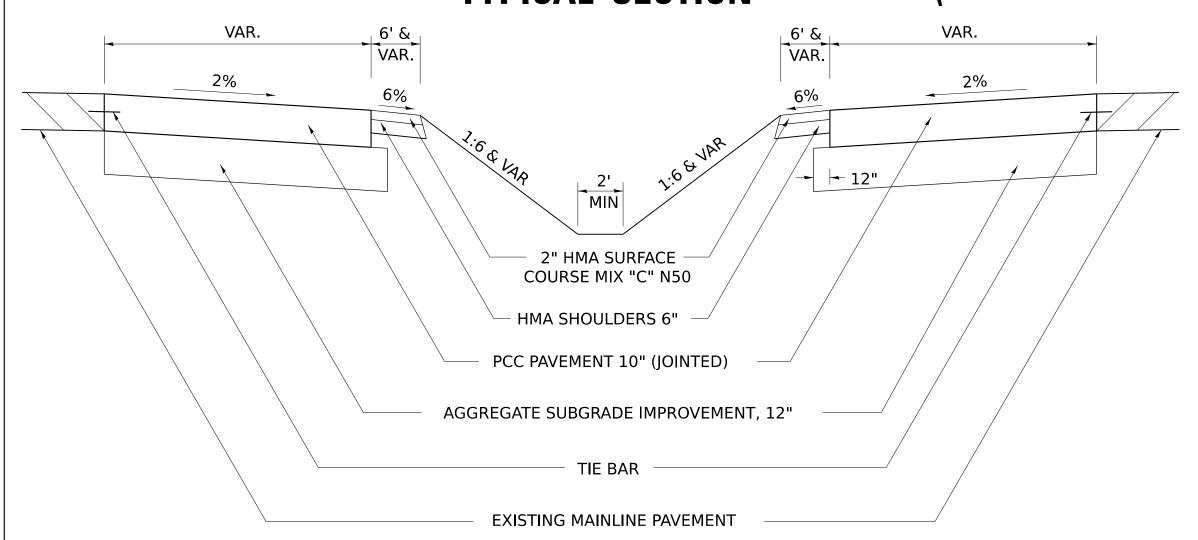
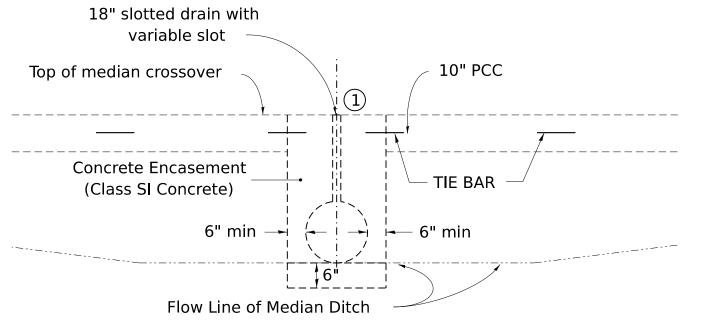
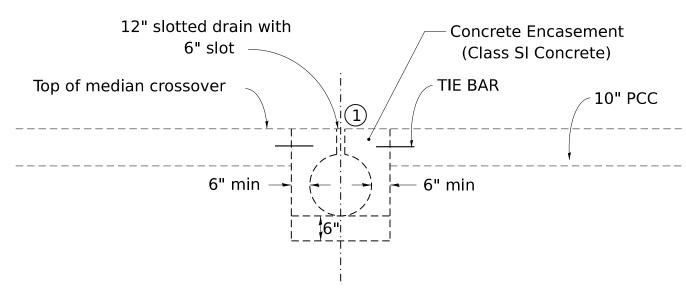


		TABLE (	OF OFFSE	TS AND	DROPS				<u>,                                      </u>
Distance feet from location station	0	46' B	50'	75'	100'	125'	150'	175'	185.20' ©
Offsets feet from inside edge of pavement	32'	30'	29.02'	23.32'	18.28'	13.90'	10.17'	7.08'	6'
Drop feet from inside edge of pavement	0.64'	0.6'	0.58'	0.47'	0.37'	0.28'	0.20'	0.14'	0.12'



#### SECTION A-A

(USE TO MAINTAIN MEDIAN DRAINAGE THROUGH THE CROSSOVER)



① Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)

#### **GENERAL NOTES**

Construction of median crossover shall conform to the requirement of current Standard Specifications.

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Pavement, subbase, & shoulder quantities are:

(2071.96 Sq. Yds.) AGGREGATE SUBGRADE IMPROVEMENT, 12" (1956.64 Sq. Yds.) P.C.C. PAVEMENT 10" (JOINTED) 2" HMA SURFACE COURSE, MIX "C", N50

(558.24 Sq. Yds.) HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

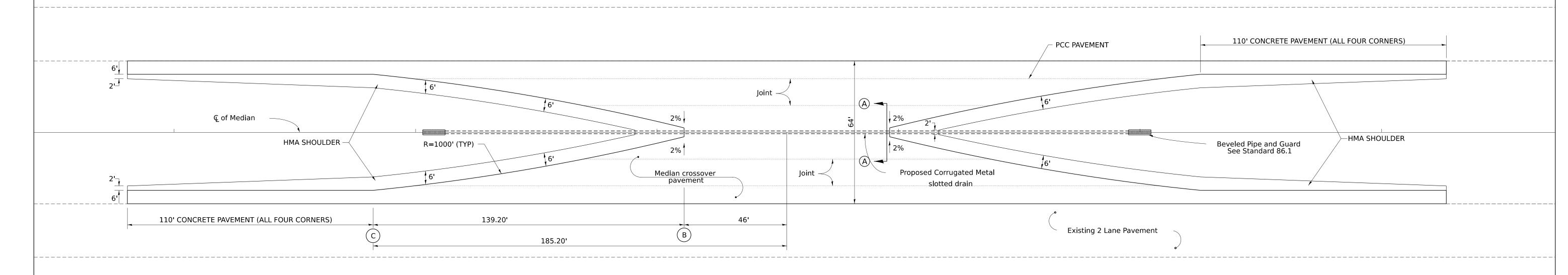
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 45mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

The PCC Pavement 10" (JOINTED) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (JOINTED).



#### TYPICAL PLAN

Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 2-26-19								SECTION	COUNTY	TOTAL SHEET SHEETS NO.
	DRAWN -	REVISED - 1-05-16	STATE OF ILLINOIS	REGION 2 / DISTRICT 2 STANDARD					RTE.			
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED - 8-27-13	DEPARTMENT OF TRANSPORTATION								CONTRAC	ΓNO.
PLOT DATE = 1/28/2025	DATE -	REVISED - 12-07-10		SCALE:	SHEET	OF	SHEETS STA.	TO STA.		ILLINOIS FED. A	ID PROJECT	

TYPICAL SECTION

2" HMA SURFACE —
 COURSE MIX "C" N50

- HMA SHOULDERS 6"

PCC PAVEMENT 10" (JOINTED)

TIE BAR

EXISTING MAINLINE PAVEMENT

125'

0.23'

150'

8.98'

0.18'

175'

6.67'

0.13'

183.23

0.12'

(C)

TABLE OF OFFSETS AND DROPS

 $\bigcirc$ B

0.36'

0.4'

100'

14.79'

0.3'

AGGREGATE SUBGRADE IMPROVEMENT, 12"

2%

VAR.

2%

Distance feet

from location

Offsets feet

from inside edge

of pavement

Drop feet

of pavement

from inside edge

station

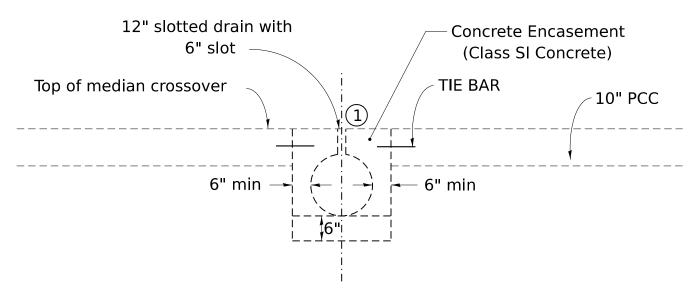
(POSTED SPEED LIMIT 65 MPH OR HIGHER, WORK ZONE SPEED LIMIT 55 MPH)

# 18" slotted drain with variable slot Top of median crossover Concrete Encasement (Class SI Concrete) 6" min — 6" min

#### SECTION A-A

(USE TO MAINTAIN MEDIAN DRAINAGE THROUGH THE CROSSOVER)

Flow Line of Median Ditch



① Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)

Construction of median crossover shall conform to the requirement

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Pavement, subbase, & shoulder quantities are:

of current Standard Specifications.

(1709.35 Sq. Yds.) AGGREGATE SUBGRADE IMPROVEMENT, 12" (1596.03 Sq. Yds.) P.C.C. PAVEMENT 10" (JOINTED) 2" HMA SURFACE COURSE, MIX "C", N50

**GENERAL NOTES** 

(509.64 Sq. Yds.) HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

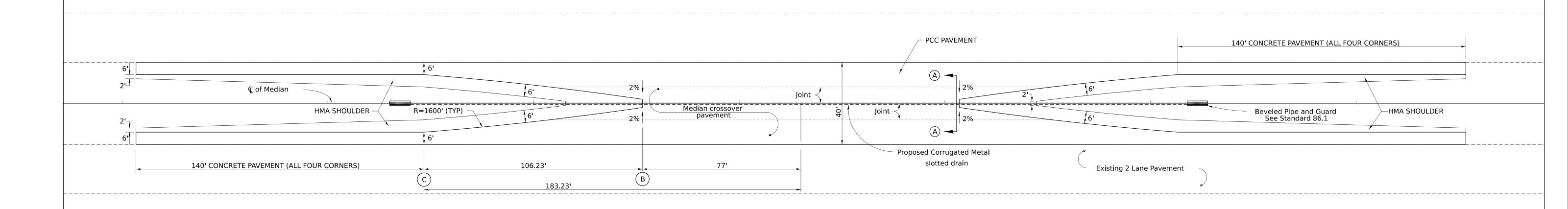
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 55mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

The PCC Pavement 10" (JOINTED) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (JOINTED).



#### TYPICAL PLAN

Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 2-26-19				F.A.	SECTION	COUNTY TOTAL SHEET
	DRAWN -	REVISED - 1-05-16	STATE OF ILLINOIS		REGION 2 / DISTRICT 2 STANDARD	IXIL		SILLIS NO.
PLOT SCALE = 0.083 ' / in.	CHECKED -	REVISED - 6-27-14	DEPARTMENT OF TRANSPORTATION					CONTRACT NO.
PLOT DATE = 1/28/2025	DATE -	REVISED - 8-27-13		SCALE:	SHEET OF SHEETS STA.	ГО STA.	ILLING	OIS FED. AID PROJECT

TYPICAL SECTION

(POSTED SPEED LIMIT 65 MPH OR HIGHER, WORK ZONE SPEED LIMIT 55 MPH)

#### **GENERAL NOTES**

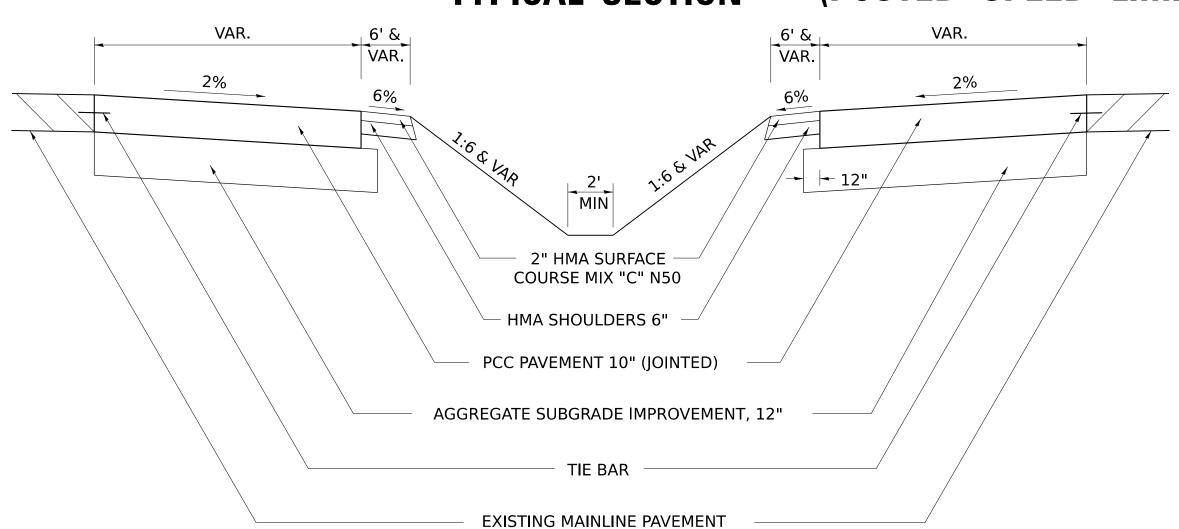
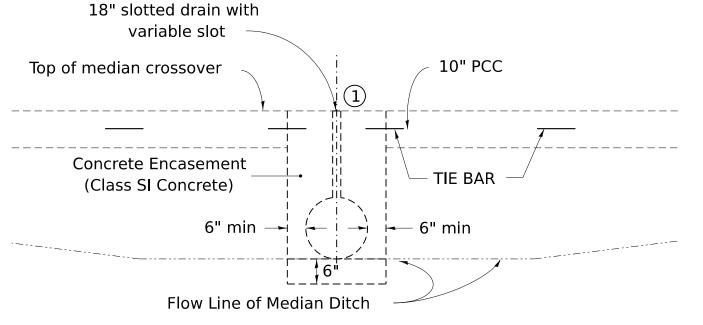
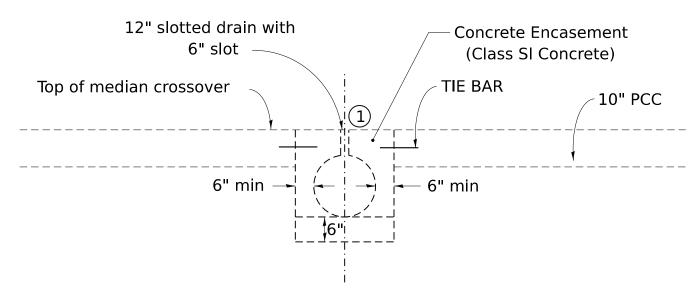


		TABLE	OF OFFSI	TS AND	DROPS	_			_
Distance feet from location station	0'	68' (B)	75'	100'	125'	150'	175'	200'	206.02
Offsets feet from inside edge of pavement	25'	23'	21.84'	17.97'	14.50'	11.43'	8.76'	6.49'	6'
Drop feet from inside edge of pavement	0.5'	0.46'	0.44'	0.36'	0.29'	0.23'	0.175'	0.13'	0.12'



#### SECTION A-A

(USE TO MAINTAIN MEDIAN DRAINAGE THROUGH THE CROSSOVER)



① Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)

Construction of median crossover shall conform to the requirement of current Standard Specifications.

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Pavement, subbase, & shoulder quantities are:

(2084.0 Sq. Yds.)
AGGREGATE SUBGRADE IMPROVEMENT, 12"
(1956.55 Sq. Yds.)
P.C.C. PAVEMENT 10" (JOINTED)
2" HMA SURFACE COURSE, MIX "C", N50

(598.67 Sq. Yds.) HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

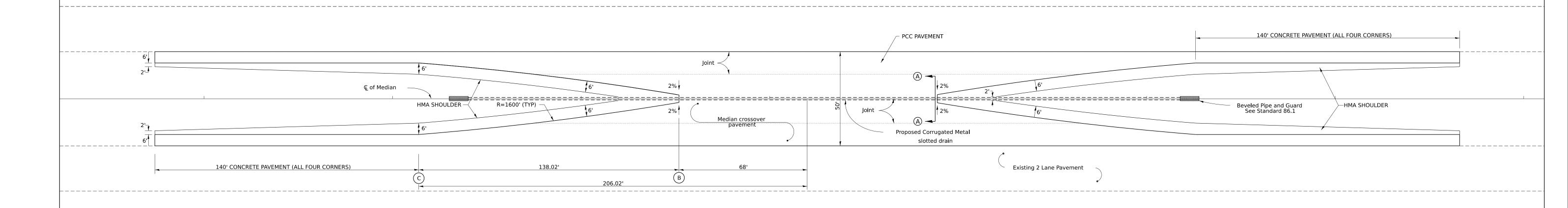
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 55mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

The PCC Pavement 10" (JOINTED) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (JOINTED).



## TYPICAL PLAN

Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 2-26-19							F.A. RTE.	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
	DRAWN -	REVISED - 1-05-16	STATE OF ILLINOIS		REGI	ON 2 / DI	STRICT 2 STANDAR	<b>RD</b>				
PLOT SCALE = 0.083 '/in.	CHECKED -	REVISED - 6-27-14	DEPARTMENT OF TRANSPORTATION						_		CONTRAC	T NO.
PLOT DATE = 1/28/2025	DATE -	REVISED - 8-27-13		SCALE:	SHEET	OF	SHEETS STA.	TO STA.		ILLINOIS FED.	AID PROJECT	

TYPICAL SECTION

2" HMA SURFACE —
 COURSE MIX "C" N50

- HMA SHOULDERS 6"

PCC PAVEMENT 10" (JOINTED)

TIE BAR

EXISTING MAINLINE PAVEMENT

60'

 $\bigcirc$ B

30'

0.6'

0.64'

75'

0.54'

TABLE OF OFFSETS AND DROPS

100'

22.80'

0.456'

125'

18.84'

0.377'

150'

15.27

0.31'

AGGREGATE SUBGRADE IMPROVEMENT, 12"

2%

175'

12.11

0.24'

200'

0.187'

225'

6.98

0.139'

236.83'

(C)

0.12'

VAR.

2%

Distance feet

from location

Offsets feet

from inside edge

of pavement

Drop feet

of pavement

from inside edge

station

(POSTED SPEED LIMIT 65 MPH OR HIGHER, WORK ZONE SPEED LIMIT 55 MPH)

## GENERAL NOTES

Construction of median crossover shall conform to the requirement of current Standard Specifications.

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Pavement, subbase, & shoulder quantities are:

(2651.79 Sq. Yds.) AGGREGATE SUBGRADE IMPROVEMENT, 12" (2509.74 Sq. Yds.) P.C.C. PAVEMENT 10" (JOINTED)

(79.2 Tons) 2" HMA SURFACE COURSE, MIX "C", N50 (707.03 Sq. Yds.) HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

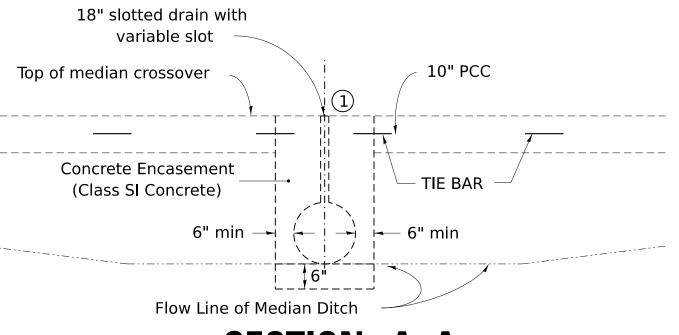
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 55mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

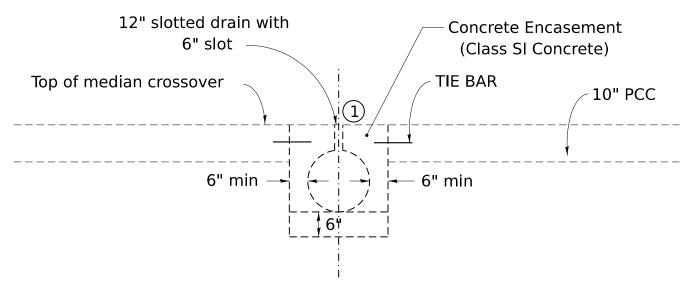
The PCC Pavement 10" (JOINTED) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (JOINTED).



#### SECTION A-A

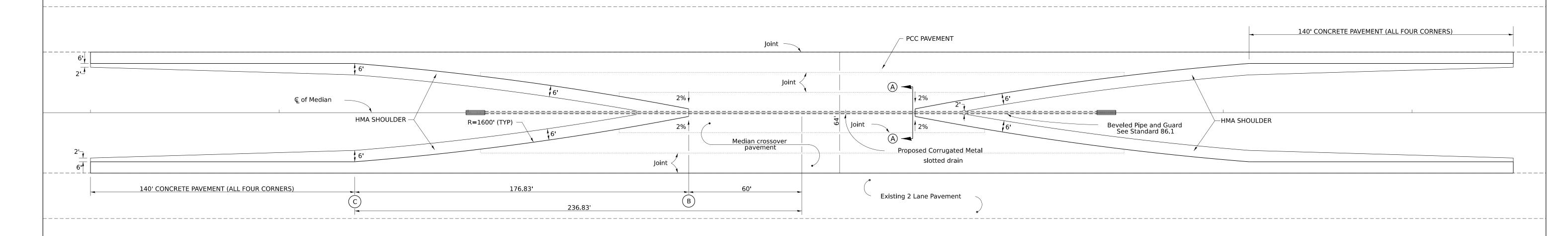
(USE TO MAINTAIN MEDIAN DRAINAGE THROUGH THE CROSSOVER)



① Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)



#### **TYPICAL PLAN**

Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 2-26-19	
	DRAWN -	REVISED - 1-05-16	
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED - 6-27-14	
PLOT DATE = 1/28/2025	DATE -	REVISED - 8-27-13	

STATE OF ILLINOIS
<b>DEPARTMENT OF TRANSPORTATION</b>

DEGLO	N 0 / DIO				F.A. RTE.	SECTION		COUNTY	TOTAL SHEET
REGIO	N 2 / DIS	TRICT 2	STANDARD						
T								CONTRACT	NO.
SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS	FED. AID	PROJECT	

TYPICAL SECTION (POSTED SPEED LIMIT 65 MPH OR HIGHER, WORK ZONE SPEED LIMIT 55 MPH)

6' & VAR

2" HMA SURFACE — COURSE MIX "C" N50

- HMA SHOULDERS 6"

PCC PAVEMENT 10" (JOINTED)

AGGREGATE SUBGRADE IMPROVEMENT, 12"

TIE BAR

EXISTING MAINLINE PAVEMENT

125'

26.57'

0.53'

75'

36.44'

0.73'

100'

31.30'

0.63'

50'

42'

0.84'

44'

**(£**)

0.88'

TABLE OF OFFSETS AND DROPS

150'

22.25'

0.43'

175'

18.34'

0.37'

200'

14.83'

0.30'

225'

11.72'

0.23'

2%

250'

0.18'

275'

6.70'

0.13'

283.50'

(C)

0.12'

VAR.

2%

Distance feet

from location

Offsets feet

of pavement

Drop feet

of pavement

from inside edge

from inside edge

station

#### **GENERAL NOTES**

Construction of median crossover shall conform to the requirement of current Standard Specifications.

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Pavement, subbase, & shoulder quantities are:

(96.79 Tons)

(3704.06 Sq. Yds.) AGGREGATE SUBGRADE IMPROVEMENT, 12" (3535.98 Sq. Yds.) P.C.C. PAVEMENT 10" (JOINTED)

2" HMA SURFACE COURSE, MIX "C", N50

(864.23 Sq. Yds.) HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

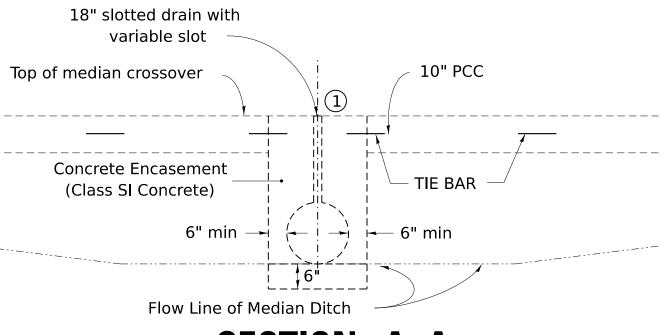
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 55mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

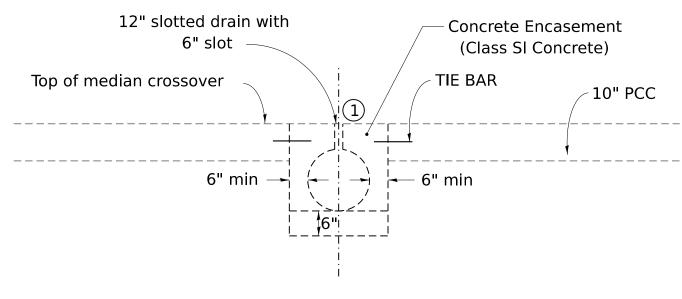
The PCC Pavement 10" (JOINTED) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (JOINTED).



#### SECTION A-A

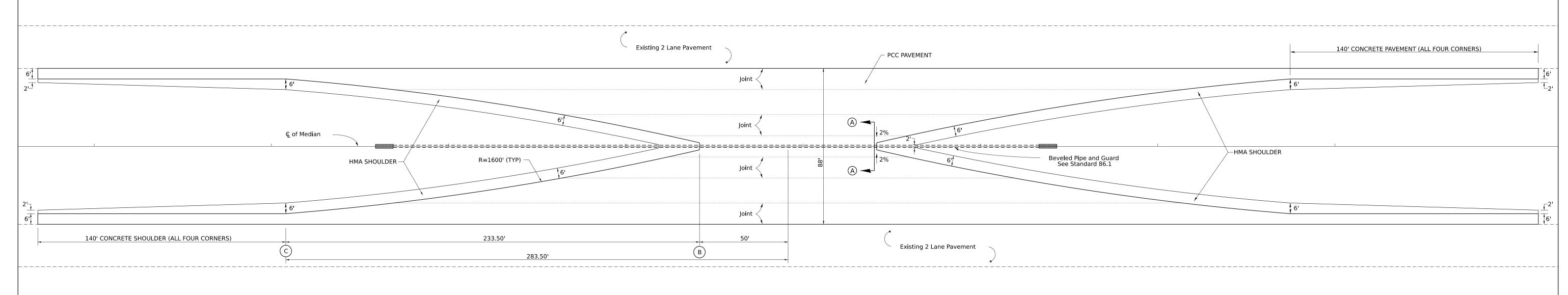
(USE TO MAINTAIN MEDIAN DRAINAGE THROUGH THE CROSSOVER)



① Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)



## TYPICAL PLAN

Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

TRAFFIC CONTROL STANDARD 701416 IS TO BE USED WITH THIS DETAIL

USER NAME = IDOT/District 2 DESIGNED REVISED 2-26-19 **SECTION** STATE OF ILLINOIS **REGION 2 / DISTRICT 2 STANDARD** DRAWN 1-05-16 **DEPARTMENT OF TRANSPORTATION** CHECKED -REVISED 6-27-14 PLOT SCALE = 0.083'/in. CONTRACT NO. TO STA. PLOT DATE = 1/28/2025 DATE 8-27-13 REVISED -

#### TYPICAL SECTION

#### (POSTED SPEED LIMIT 55 MPH, WORK ZONE SPEED LIMIT 45 MPH)

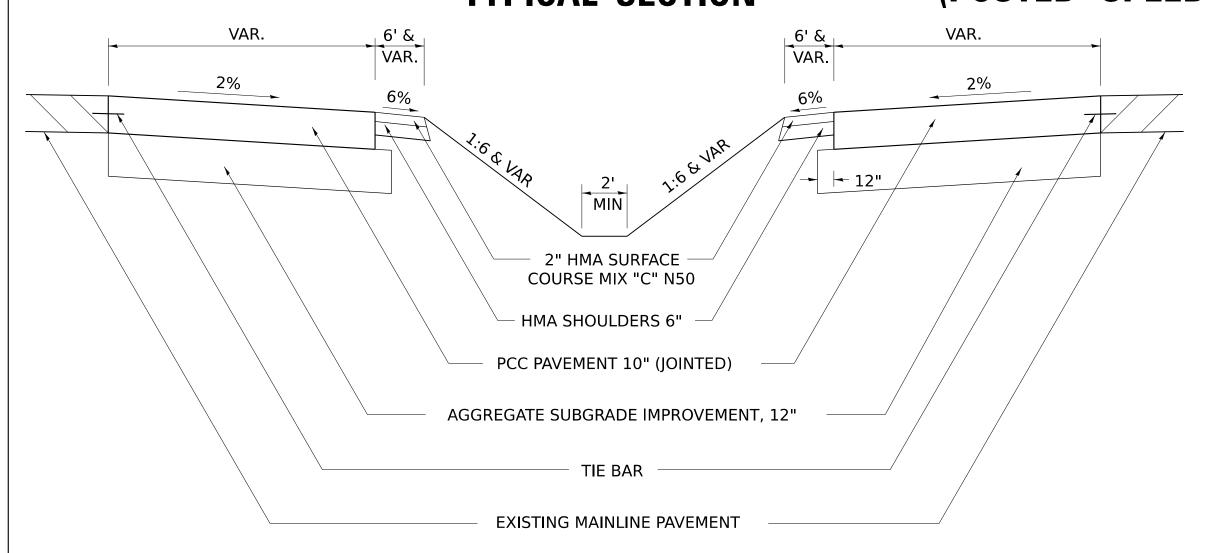
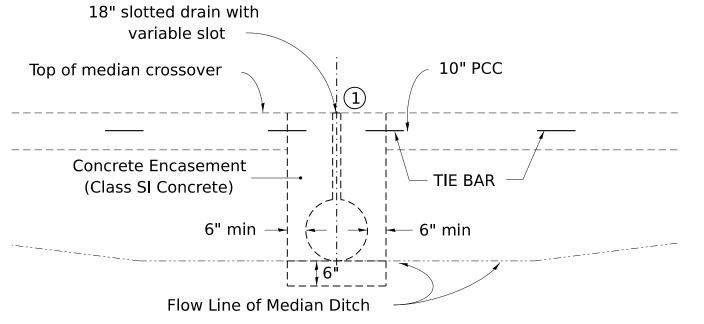
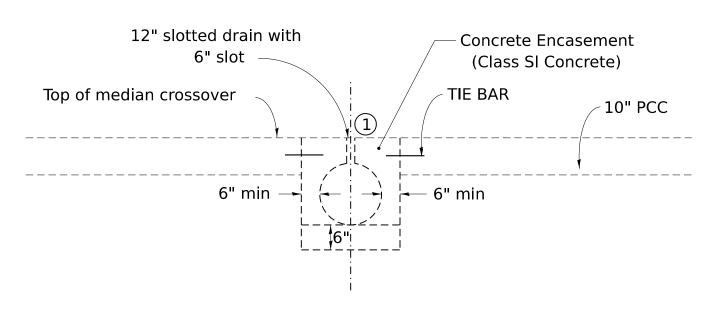


	TABLE OF O	FFSETS /	AND DRO	PS		
Distance feet from location station	0	76.95'	100'	125'	150'	168.69' ©
Offsets feet from inside edge of pavement	20'	18'	14.22'	10.70'	7.79'	6.00'
Drop feet from inside edge of pavement	0.4'	0.36'	0.28'	0.21'	0.16'	0.12'



#### SECTION A-A

(USE TO MAINTAIN MEDIAN DRAINAGE THROUGH THE CROSSOVER)



① Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)

#### **GENERAL NOTES**

Construction of median crossover shall conform to the requirement of current Standard Specifications.

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Pavement, subbase, & shoulder quantities are:

(1685.28 Sq. Yds.) AGGREGATE SUBGRADE IMPROVEMENT, 12" (1572.43 Sq. Yds.) P.C.C. PAVEMENT 10" (JOINTED)

(1372.43 Sq. 1ds.) P.C.C. PAVEMENT 10" (JOINTED)
(57.28 Tons) 2" HMA SURFACE COURSE, MIX "C", N50

(511.45 Sq. Yds.) HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

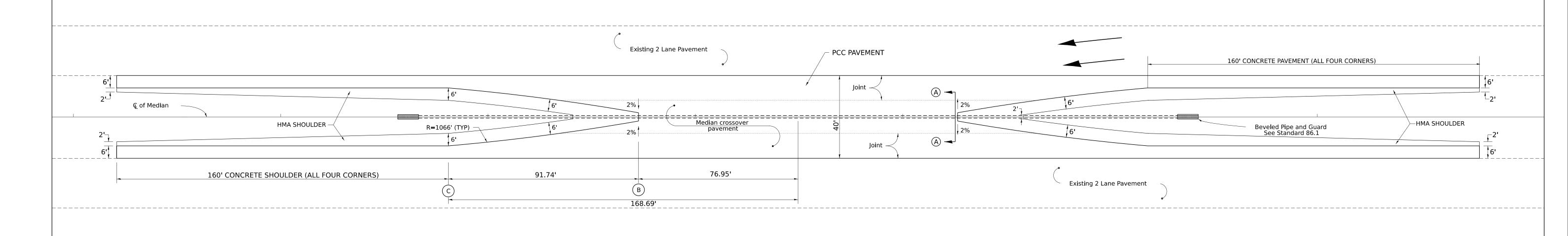
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 45mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

The PCC Pavement 10" (JOINTED) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (JOINTED).



## TYPICAL PLAN

Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 2-26-19							F.A.	SECTION	COUNTY	TOTAL SHEET
	DRAWN -	REVISED - 1-05-16	STATE OF ILLINOIS		REGIO	)N 2 / DIS	STRICT 2 STANDARD		IXIL.			OTILLIO 140.
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED - 8-27-13	DEPARTMENT OF TRANSPORTATION								CONTRACT	ΓNO.
PLOT DATE = 1/28/2025	DATE -	REVISED - 4-04-11		SCALE:	SHEET	OF	SHEETS STA.	TO STA.		ILLINOIS	FED. AID PROJECT	

#### TYPICAL SECTION

#### (POSTED SPEED LIMIT 55 MPH, WORK ZONE SPEED LIMIT 45 MPH)

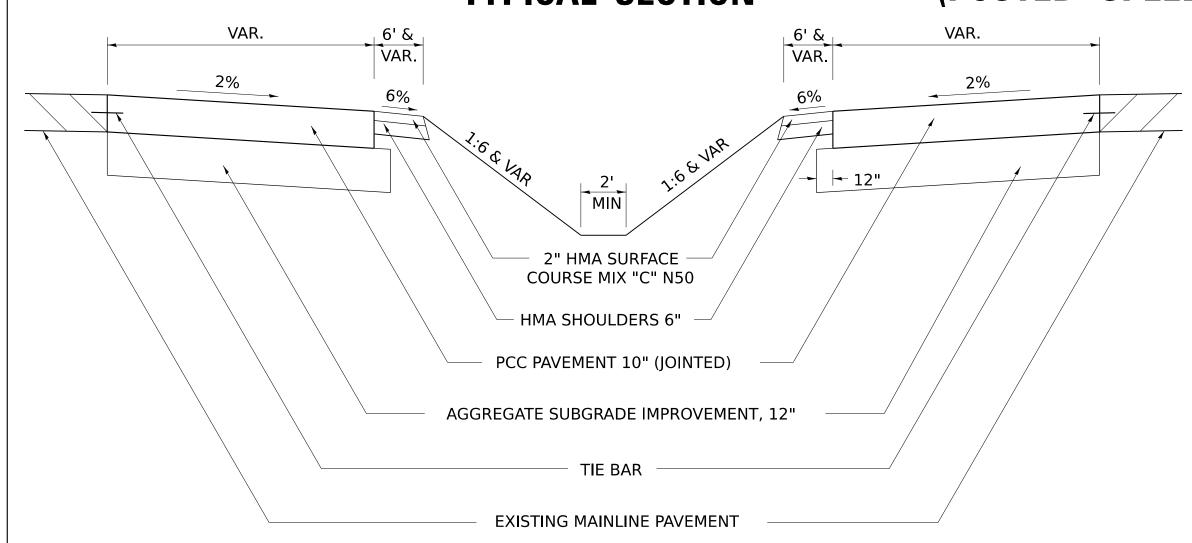
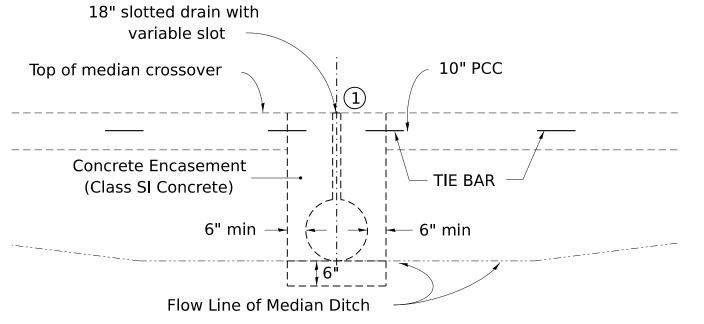
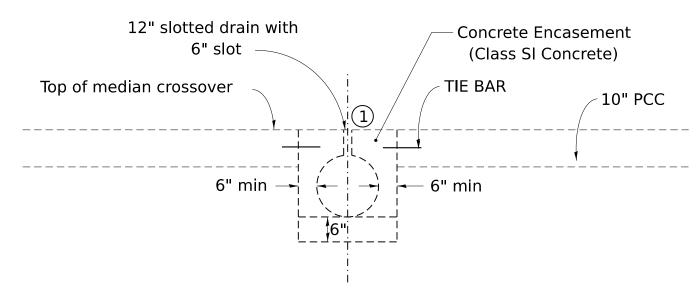


		TABLE	OF OFFSE	TS AND	DROPS			
Distance feet from location station	0	69.72'	75'	100'	125'	150'	175'	188.01'
Offsets feet from inside edge of pavement	25' <b>Q</b>	23'	21.95'	17.35'	13.37'	9.99'	7.21'	6.00'
Drop feet from inside edge of pavement	0.5'	0.46'	0.44'	0.35'	0.27'	0.20'	0.14'	0.12'



#### SECTION A-A

(USE TO MAINTAIN MEDIAN DRAINAGE THROUGH THE CROSSOVER)



① Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)

#### **GENERAL NOTES**

Construction of median crossover shall conform to the requirement of current Standard Specifications.

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Pavement, subbase, & shoulder quantities are:

(2029.23 Sq. Yds.) AGGREGATE SUBGRADE IMPROVEMENT, 12" (1904.29 Sq. Yds.) P.C.C. PAVEMENT 10" (JOINTED)

(65.64 Tons) 2" HMA SURFACE COURSE, MIX "C", N50 (586.07 Sq. Yds.) HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

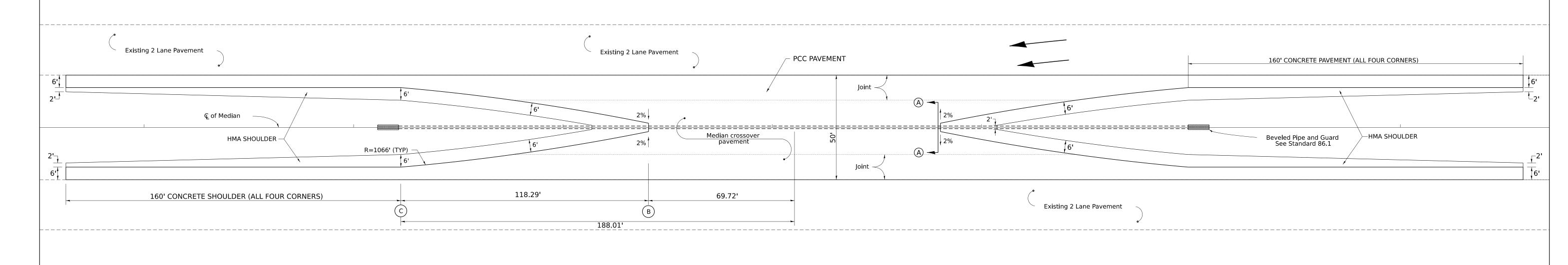
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 45mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

The PCC Pavement 10" (JOINTED) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (JOINTED).



#### TYPICAL PLAN

Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

TRAFFIC CONTROL STANDARD 701416 IS TO BE USED WITH THIS DETAIL

TOTAL SHEET NO. USER NAME = IDOT/District 2 DESIGNED REVISED 2-26-19 **SECTION** STATE OF ILLINOIS **REGION 2 / DISTRICT 2 STANDARD** DRAWN 1-05-16 **DEPARTMENT OF TRANSPORTATION** CHECKED -REVISED 8-27-13 PLOT SCALE = 0.083'/in. CONTRACT NO. TO STA. PLOT DATE = 1/28/2025 DATE 4-04-11 REVISED -ILLINOIS | FED. AID PROJECT

#### TYPICAL SECTION

#### (POSTED SPEED LIMIT 55 MPH, WORK ZONE SPEED LIMIT 45 MPH)

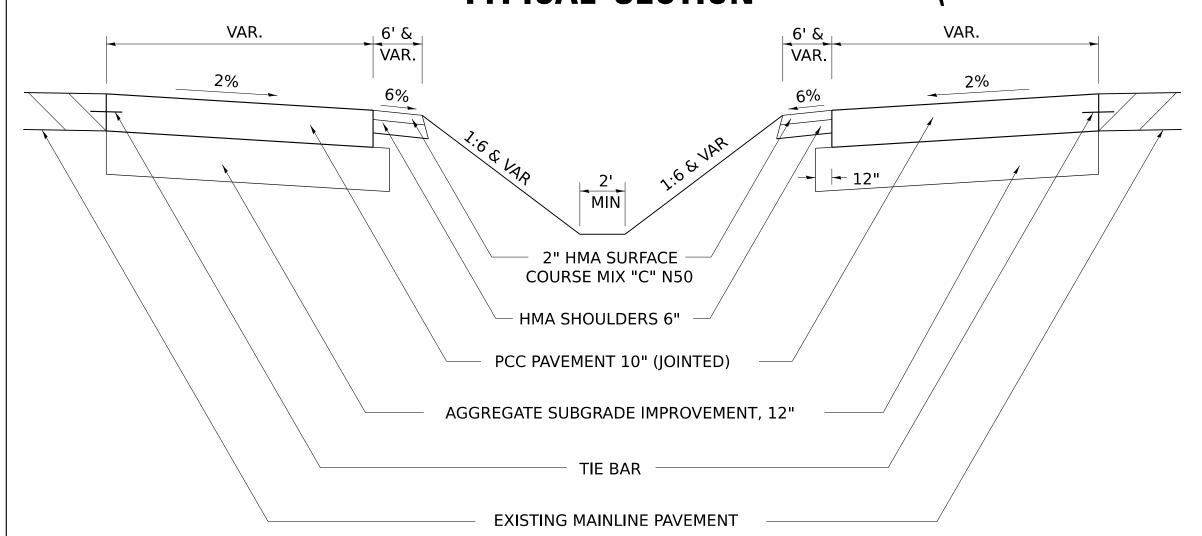
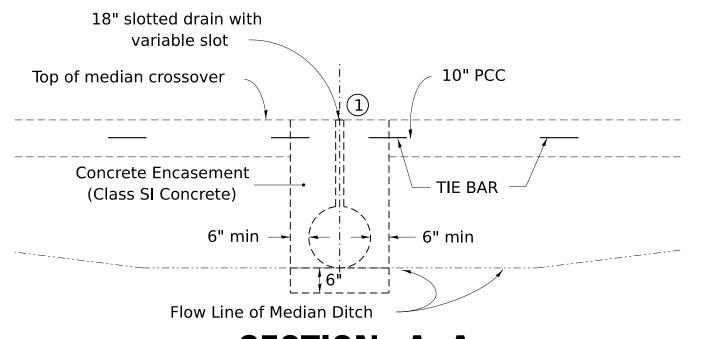
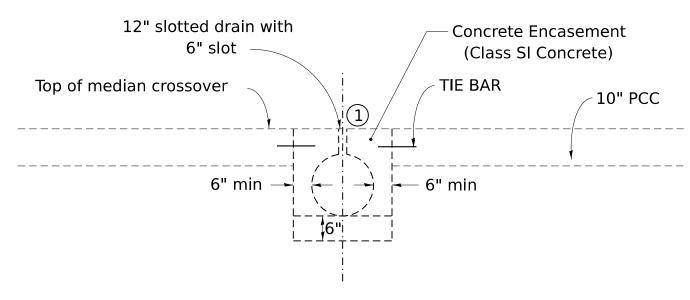


		TABLE (	OF OFFSE	TS AND	DROPS				
Distance feet from location station	0	62.41'	75'	100'	125'	150'	175'	200'	212.87' ©
Offsets feet from inside edge of pavement	32'	30'	27.14'	21.92'	17.33'	13.35'	9.97'	7.20'	6.00'
Drop feet from inside edge of pavement	0.64'	0.60'	0.54'	0.44'	0.35'	0.27'	0.20'	0.14'	0.12'



#### SECTION A-A

(USE TO MAINTAIN MEDIAN DRAINAGE THROUGH THE CROSSOVER)



① Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)

#### **GENERAL NOTES**

Construction of median crossover shall conform to the requirement of current Standard Specifications.

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Pavement, subbase, & shoulder quantities are:

(2534.76 Sq. Yds.) AGGREGATE SUBGRADE IMPROVEMENT, 12" (2394.89 Sq. Yds.) P.C.C. PAVEMENT 10" (JOINTED)

(75.73 Tons) 2" HMA SURFACE COURSE, MIX "C", N50 (676.15 Sq. Yds.) HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

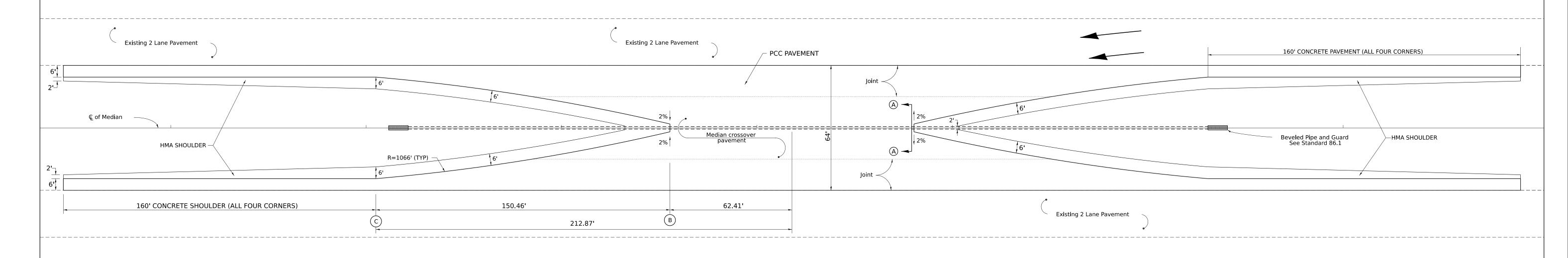
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 45mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

The PCC Pavement 10" (JOINTED) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (JOINTED).



#### TYPICAL PLAN

Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

					·									
USER NAME = IDOT/District 2	DESIGNED -	REVISED - 2-26-19								F.A.	SECTION	COUNTY	TOTAL	SHEE
	DRAWN -	REVISED - 1-05-16	STATE OF ILLINOIS		REGIO	)N 2 / DI	<b>ISTRIC</b>	T 2 STAN	DARD	KIL.			OTILLIO	110.
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED - 8-27-13	DEPARTMENT OF TRANSPORTATION									CONTRA	ACT NO.	
PLOT DATE = 1/28/2025	DATE -	REVISED - 4-04-11		SCALE:	SHEET	OF	SHEE	ETS STA.	TO STA.		ILLINOIS FED.	AID PROJECT		

TYPICAL SECTION

2" HMA SURFACE —
 COURSE MIX "C" N50

- HMA SHOULDERS 6"

PCC PAVEMENT 10" (JOINTED)

AGGREGATE SUBGRADE IMPROVEMENT, 12"

TIE BAR

EXISTING MAINLINE PAVEMENT

150'

12.07'

0.24'

175'

9.60'

0.19'

200'

7.48'

0.15'

220.57'

6.00'

0.12'

(C)

TABLE OF OFFSETS AND DROPS

100.33'

 $\bigcirc$ B

18'

0.36'

0.40'

125'

0.30'

VAR.

2%

VAR.

2%

Distance feet

from location

Offsets feet

from inside edge

of pavement

Drop feet

of pavement

from inside edge

station

#### (POSTED SPEED LIMIT 65 MPH OR HIGHER, WORK ZONE SPEED LIMIT 55 MPH)

#### **GENERAL NOTES**

Construction of median crossover shall conform to the requirement of current Standard Specifications.

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Pavement, subbase, & shoulder quantities are:

(71.01 Tons)

(634.04 Sq. Yds.)

(2142.56 Sq. Yds.) AGGREGATE SUBGRADE IMPROVEMENT, 12" (2003.87 Sq. Yds.) P.C.C. PAVEMENT 10" (JOINTED)

P.C.C. PAVEMENT 10" (JOINTED)
2" HMA SURFACE COURSE, MIX "C", N50

HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

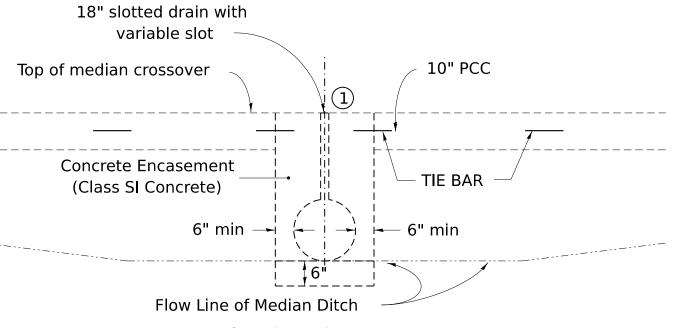
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 55mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

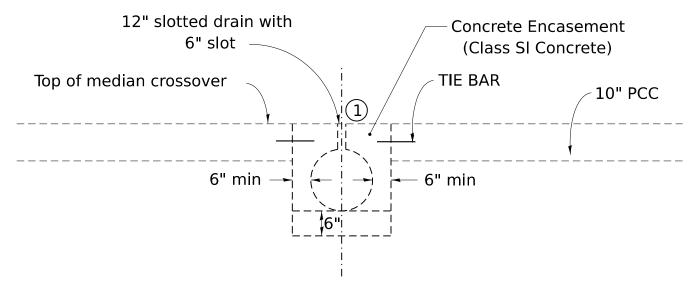
The PCC Pavement 10" (JOINTED) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (JOINTED).



#### SECTION A-A

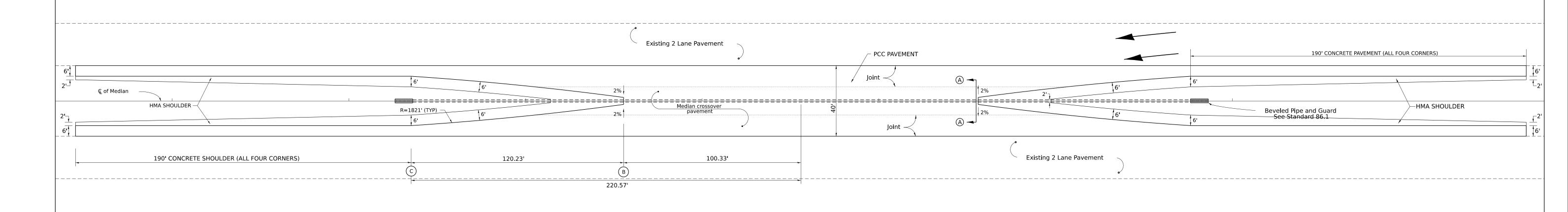
(USE TO MAINTAIN MEDIAN DRAINAGE THROUGH THE CROSSOVER)



① Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)



## TYPICAL PLAN

Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

TRAFFIC CONTROL STANDARD 701416 IS TO BE USED WITH THIS DETAIL

USER NAME = IDOT/District 2 DESIGNED REVISED 2-26-19 **SECTION** STATE OF ILLINOIS **REGION 2 / DISTRICT 2 STANDARD** DRAWN 1-05-16 **DEPARTMENT OF TRANSPORTATION** CHECKED -REVISED 6-27-14 PLOT SCALE = 0.083'/in. CONTRACT NO. TO STA. PLOT DATE = 1/28/2025 DATE 8-27-13 REVISED -

TYPICAL SECTION

2" HMA SURFACE COURSE MIX "C" N50

- HMA SHOULDERS 6"

PCC PAVEMENT 10" (JOINTED)

TIE BAR

EXISTING MAINLINE PAVEMENT

100'

21.63'

0.43'

90.88'

 $\bigcirc$ B

23'

0.46'

0.50'

TABLE OF OFFSETS AND DROPS

125'

18.10'

0.36'

150'

14.93'

0.30'

175'

12.11'

0.24'

200'

0.19'

225'

7.52'

0.15'

246'

6.00'

0.12'

(C)

AGGREGATE SUBGRADE IMPROVEMENT, 12"

2%

VAR.

2%

Distance feet

from location

Offsets feet

from inside edge

of pavement

Drop feet

of pavement

from inside edge

station

#### (POSTED SPEED LIMIT 65 MPH OR HIGHER, WORK ZONE SPEED LIMIT 55 MPH)

#### **GENERAL NOTES**

Construction of median crossover shall conform to the requirement of current Standard Specifications.

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Pavement, subbase, & shoulder quantities are:

(2593.23 Sq. Yds.) AGGREGATE SUBGRADE IMPROVEMENT, 12" (2438.79 Sq. Yds.)

P.C.C. PAVEMENT 10" (JOINTED) 2" HMA SURFACE COURSE, MIX "C", N50

(81.92 Tons) (731.46 Sq. Yds.)

HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

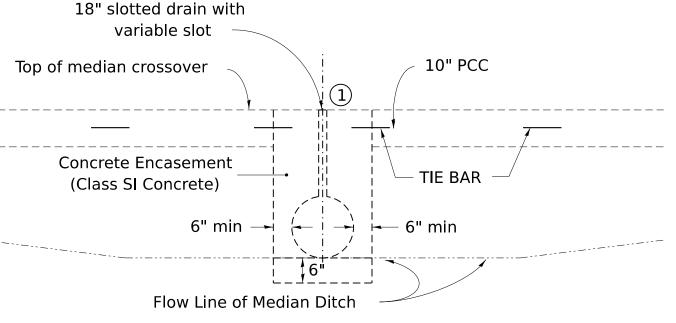
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 55mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

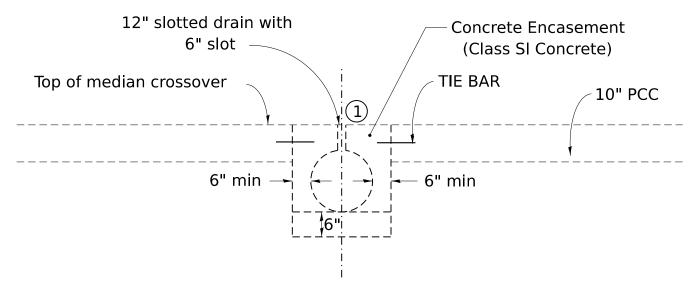
The PCC Pavement 10" (JOINTED) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (JOINTED).



#### SECTION A-A

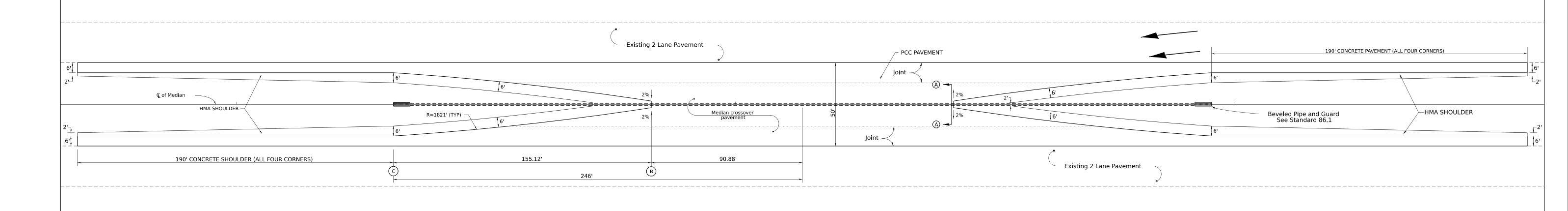
(USE TO MAINTAIN MEDIAN DRAINAGE THROUGH THE CROSSOVER)



1 Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)



#### **TYPICAL PLAN**

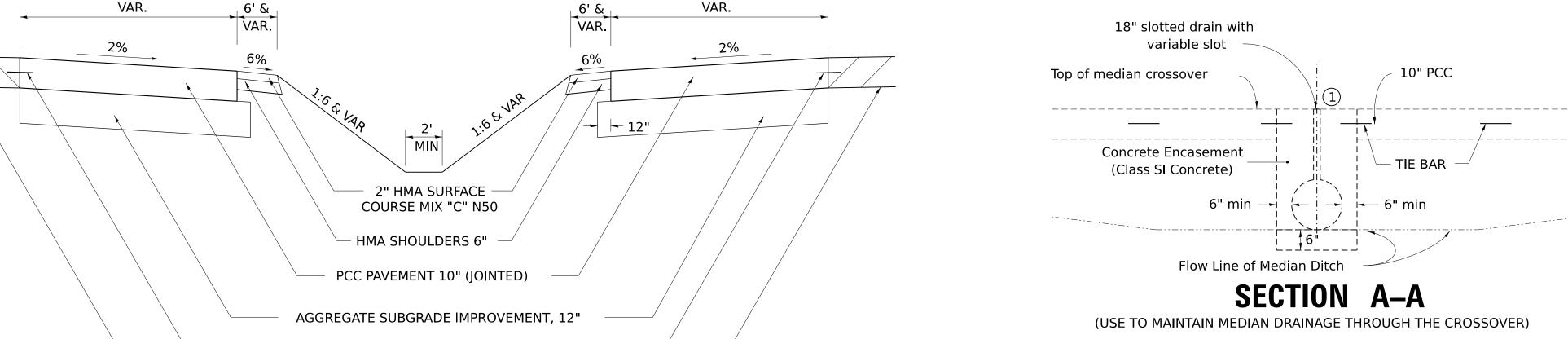
Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 2-26-19								F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED - 1-05-16	STATE OF ILLINOIS		REGI	ON 2 / D	ISTRICT	2 STANDARI	)					
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED - 6-27-14	DEPARTMENT OF TRANSPORTATION									CONTRAC	T NO.	
PLOT DATE = 1/28/2025	DATE -	REVISED - 8-27-13		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FEE	D. AID PROJECT		

TYPICAL SECTION

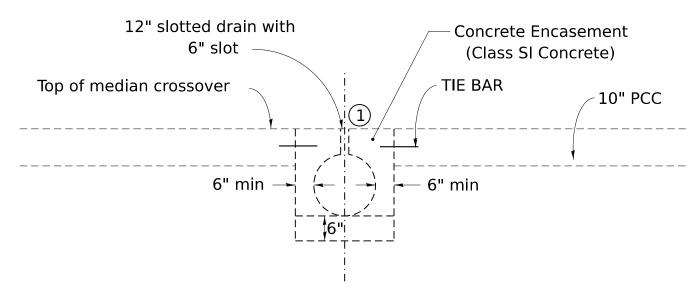
#### (POSTED SPEED LIMIT 65 MPH OR HIGHER, WORK ZONE SPEED LIMIT 55 MPH)



			TAE	BLE OF O	FFSETS A	AND DRO	PS				<b>.</b>
Distance feet from location station	0	81.32' B	100'	125'	150'	175'	200'	225'	250'	275'	278.80' ©
Offsets feet from inside edge of pavement	32' <b>Q</b>	30'	26.79'	22.80'	19.16'	15.88'	12.95'	10.37'	8.14'	6.26'	6.00'
Drop feet from inside edge of pavement	0.64'	0.60'	0.54'	0.46'	0.38'	0.32'	0.26'	0.21'	0.16'	0.13'	0.12'

TIE BAR

EXISTING MAINLINE PAVEMENT



1 Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)

**GENERAL NOTES** 

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Construction of median crossover shall conform to the requirement

Pavement, subbase, & shoulder quantities are:

of current Standard Specifications.

(3256.59 Sq. Yds.) AGGREGATE SUBGRADE IMPROVEMENT, 12" (3082.80 Sq. Yds.) P.C.C. PAVEMENT 10" (JOINTED)

(95.09 Tons) 2" HMA SURFACE COURSE, MIX "C", N50 (848.99 Sq. Yds.) HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

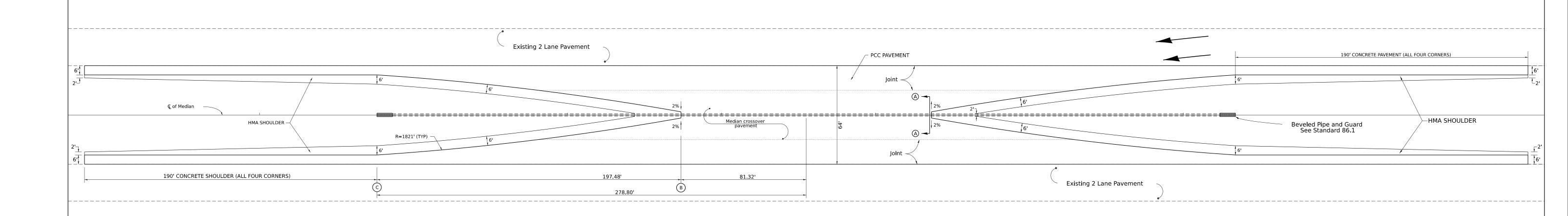
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 55mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

The PCC Pavement 10" (JOINTED) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (JOINTED).



## **TYPICAL PLAN**

Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 2	2-26-19						F.A.	SECTION	COUNTY TOTAL	SHEET	
	DRAWN -	REVISED - 1	1-05-16	STATE OF ILLINOIS	REGION 2 / DISTRICT 2 STANDARD			IXIE.		OFFICE	<u> </u>		
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED - 6	5-27-14	DEPARTMENT OF TRANSPORTATION								CONTRACT NO.	
PLOT DATE = 1/28/2025	DATE -	REVISED - 8	3-27-13		SCALE:	SHEET	OF	SHEETS STA.	TO STA.		ILLINOIS FED.	AID PROJECT	

TYPICAL SECTION (POSTED SPEED LIMIT 65 MPH OR HIGHER, WORK ZONE SPEED LIMIT 55 MPH)

2%

225'

15.94'

0.32'

200'

19.22'

0.38'

250'

13.00'

0.26'

275'

10.42'

0.21'

8.18'

0.16'

325'

6.29'

0.13'

329.24'

(C)

6.00'

0.12'

2" HMA SURFACE —
 COURSE MIX "C" N50

- HMA SHOULDERS 6"

PCC PAVEMENT 10" (JOINTED)

TIE BAR

EXISTING MAINLINE PAVEMENT

TABLE OF OFFSETS AND DROPS

125'

31.23'

0.62'

150'

26.86'

0.54'

175'

22.86'

0.46'

100'

35.93'

0.72'

70.29'

 $\bigcirc$ B

42'

41.00'

0.82'

44'

AGGREGATE SUBGRADE IMPROVEMENT, 12"

VAR.

2%

Distance feet

station

from location

Offsets feet

of pavement

Drop feet

of pavement

from inside edge

from inside edge

#### **GENERAL NOTES**

Construction of median crossover shall conform to the requirement of current Standard Specifications.

Slotted drain shall be constructed of 14 or 16 gauge corrugated metal roadway pipe modified to accommodate slotted drain as shown.

Pavement, subbase, & shoulder quantities are:

(4481.22 Sq. Yds.) AGGREGATE SUBGRADE IMPROVEMENT, 12" (4279.37 Sq. Yds.) P.C.C. PAVEMENT 10" (JOINTED)

(114.14 Tons) 2" HMA SURFACE COURSE, MIX "C", N50 (1019.14 Sq. Yds.) HMA SHOULDERS 6"

Elbows and Caps shall be considered included to the SLOTTED DRAIN 12" WITH 6" SLOT.

See District Standard 61.2 or 68.1 for details for the slotted drain.

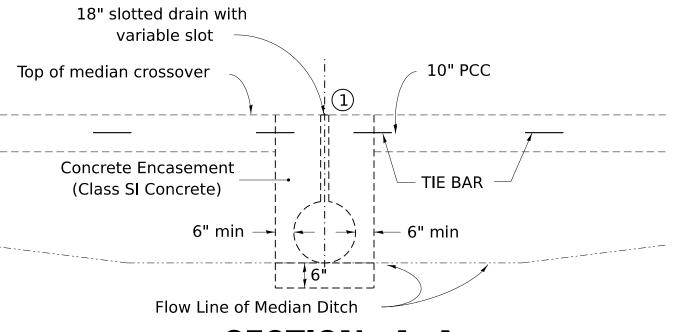
See District Standard 86.1 for details for the beveled pipe & guard.

The crossover is designed using a 55mph design speed.

The end of the pipe guard shall be set where a minimum 1:4 front slope can be constructed from each side of pipe guard to the HMA shoulder.

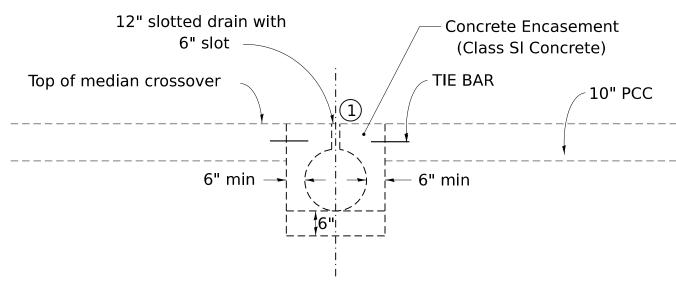
The PCC Pavement 10" (Jointed) shall be constructed according to Section 420 of the Standard Specifications and Highway Standards 420001, 420101, & 420106

The PCC Pavement 10" (Jointed) shall be tied to adjacent existing concrete pavement and the concrete encasement for the slotted drain. The tie bars shall be No.6 bars 24" long @ 30" cts, and installed according to the applicable portions of Article 420.05(b) of the Standard Specifications. The cost of the bars to be included in the cost of the PCC Pavement 10" (Jointed).



#### SECTION A-A

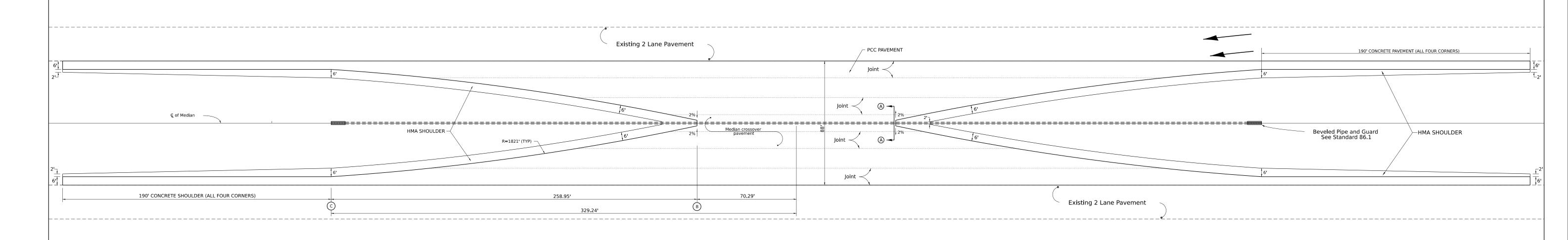
(USE TO MAINTAIN MEDIAN DRAINAGE THROUGH THE CROSSOVER)



① Duct tape or wood blocks shall be used to cover slotted drain during construction of crossover paving

#### SECTION A-A

(WHEN CROSSOVER IS AT MEDIAN HIGH POINT)



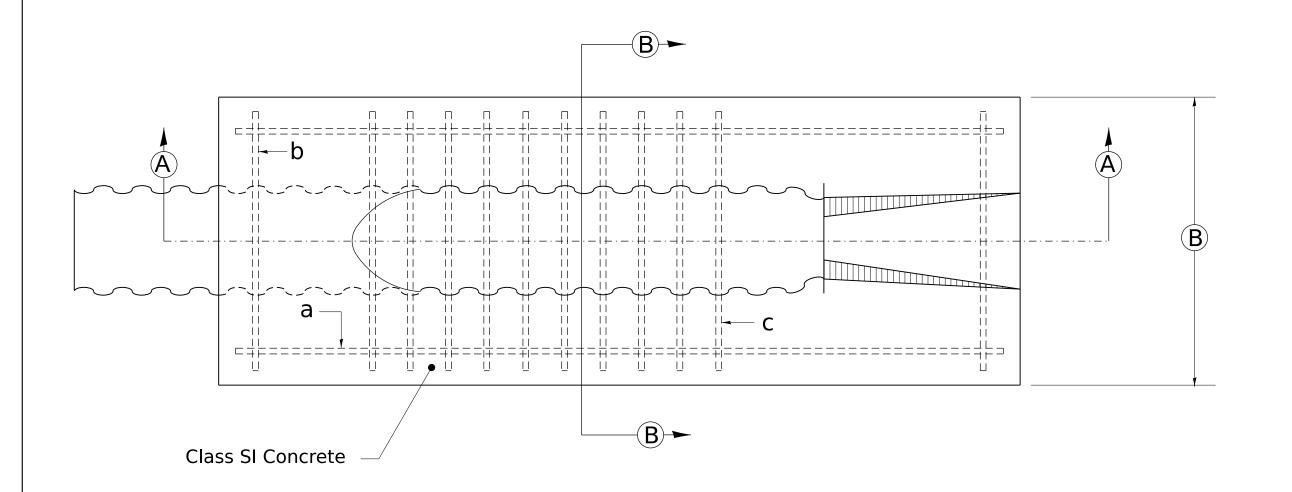
#### TYPICAL PLAN

Unless otherwise specified, when the median crossover is to be removed, the Contractor shall be required to saw full-depth along the shoulder line 6'from edge of pavement. The 6' adjacent to the edge of pavement shall remain in place and be used as shoulders. The cost of Sawing shall be included in the Pavement Removal.

Longitudinaljoints shall be sawed at a max 12' width. All joints shall be sealed.

USER NAME = IDOT/District 2	DESIGNED -	REVISED - 2-26-19							F.A.	SECTION	COUNTY TOT/	AL SHEE
	DRAWN -	REVISED - 1-05-16	STATE OF ILLINOIS	REGION 2 / DISTRICT 2 STANDARD			ICIE.		OTILL	110 110.		
PLOT SCALE = 0.083'/in.	CHECKED -	REVISED - 6-27-14	DEPARTMENT OF TRANSPORTATION								CONTRACT NO.	
PLOT DATE = 1/28/2025	DATE -	REVISED - 8-27-13		SCALE:	SHEET	OF	SHEETS STA.	TO STA.		ILLINOIS FED.	AID PROJECT	

## BEVELED PIPE & GUARD DETAIL FOR MEDIAN CROSSOVER



#### PLAN VIEW

12	ORCING SCHED	ULE	
Mark Req'd	Bar Size	Length	No.
а	5	110	2
b	5	32	2
С	8	34	10

18 PIPE REINFORCING SCHEDULE									
Mark Req'd	Bar Size	Length	No.						
а	5	162	2						
b	5	38	2						
С	8	40	18						

**SECTION B-B** 

#### **GENERAL NOTES:**

Details shown hereon are for the construction of beveled pipe and guard. Alternate designs, methods of construction or materials may be submitted to the Engineer for approval. All methods of construction and materials involved shall conform to current Standard Specifications.

Reinforcing steel used in construction of "Beveled Pipe and Guard" shall be deformed bars meeting the requirements of Article 1006.10 of the Standard Specifications. All steel bars shall be hot-dip galvanized in accordance with ASTM A 123 specifications.

Concrete used in construction of the beveled pipe and guard shall be Class "SI" Concrete.

The corrugated metal pipe shall be cut to fit the 1:8 foreslope. Slots shall be cut into the C.M.P. for placement of the 'b' and 'c' bars. After the foreslope has been placed, the 'b' and 'c' bars shall be fitted into the slots cut in the C.M.P. so they will be in proper position when the concrete collar is poured.

This work shall be paid for at the contract unit price per Each for "Beveled Pipe and Guard", as shown hereon and as directed by the Engineer.

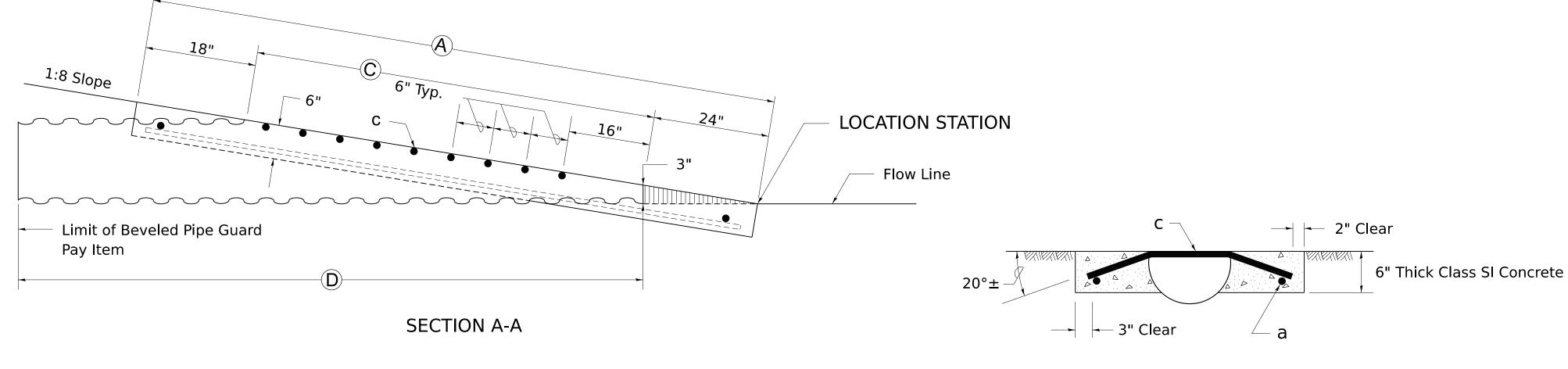


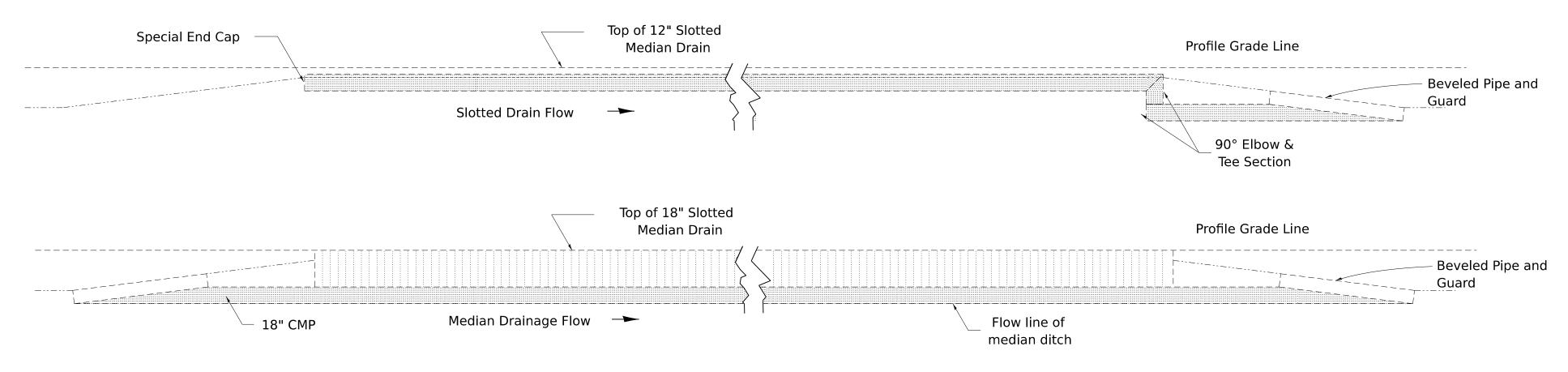
TABLE OF DIMENSIONS									
PIPE SIZE	А	В	С	D					
12	9'-6'	36	6'	10'					
18	13'-10"	42	10'-4"	14'-10"					

## TYPICAL SECTION THRU CENTERLINE OF MEDIAN CROSSOVER

REVISED - 5-27-09

REVISED

REVISED



ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: SHEET OF SHEETS STA. TO STA.

| F.A. RTE. | SECTION | COUNTY | SHEETS | SHEETS | STA. | SHEETS | SHEETS | SHEETS | STA. | SHEETS | SHEETS | SHEETS | STA. | SHEETS | STA. | SHEETS | SHEETS | STA. | SHEETS | STA. | SHEETS | SHEETS | STA. | SHEETS | STA. | SHEETS | SHEETS | STA. | SHEETS | STA. | SHEETS | SHEET

USER NAME = IDOT/District 2

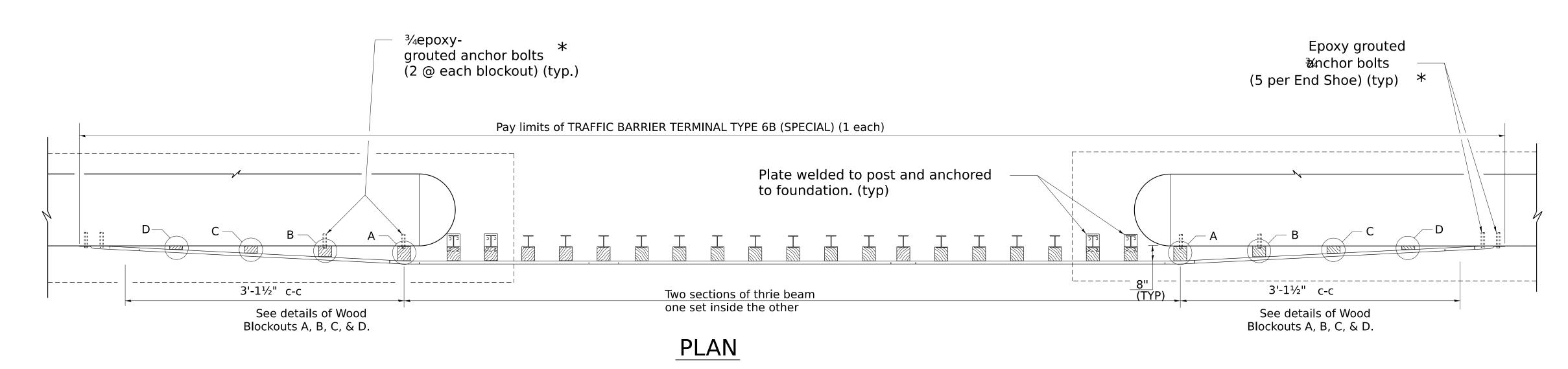
PLOT SCALE = 0.083'/in.

PLOT DATE = 1/28/2025

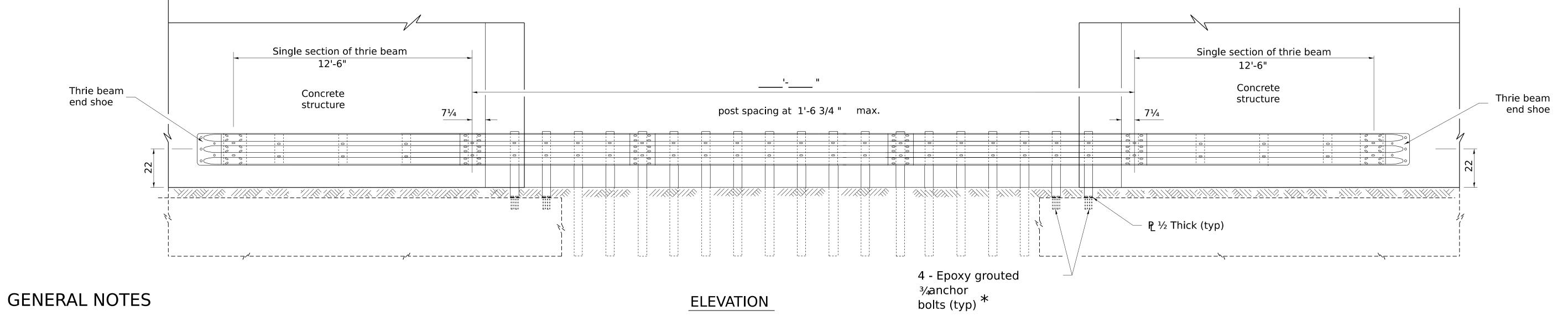
DESIGNED

CHECKED -

DRAWN



\* With standard washers. After tightening, cut the anchor bolts flush with the nuts and damage the nuts to prevent them from loosing.



This work shall be done according to Section 631 of the Standard Specifications and this detail.

See Standard 630001 for details of guardrail not shown.

Thrie beam rail shall be bolted to block-out at all posts.

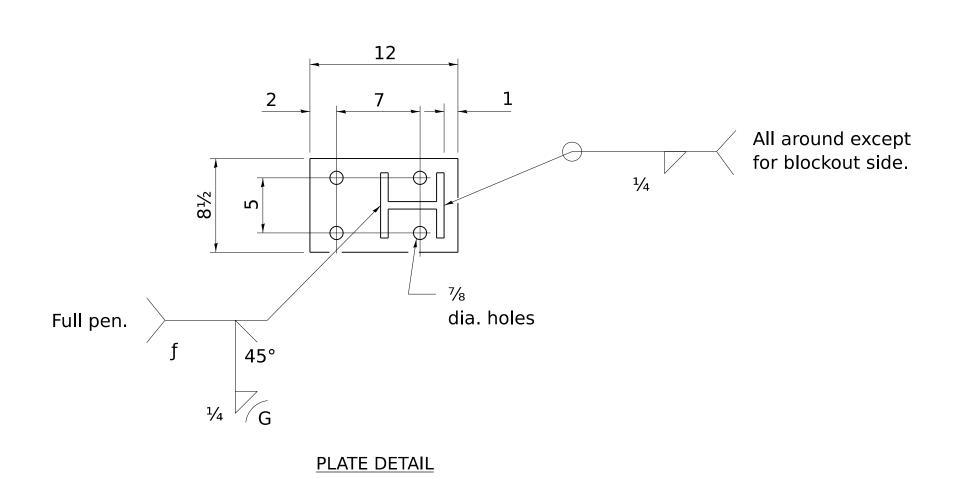
Posts located above pier foundation shall have plate attached to post and anchored to foundation.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches unless otherwise shown.

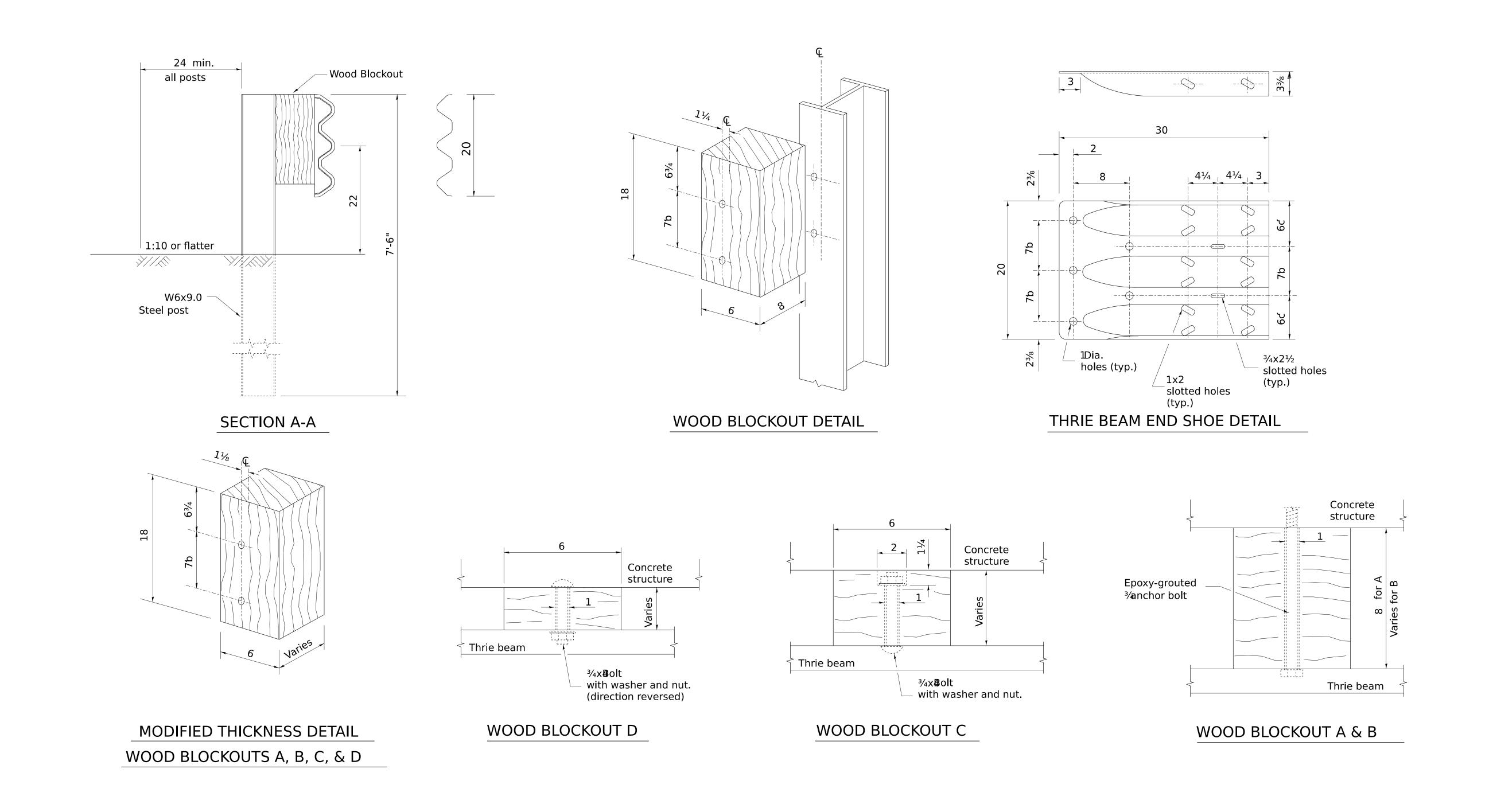
The Traffic barrier Terminal, Type 6B (Special) will be measured for payment, complete in place, in units of each.

This work shall be paid for at the contract unit price per each for TRAFFIC BARRIER TERMINAL, TYPE 6B (SPECIAL).



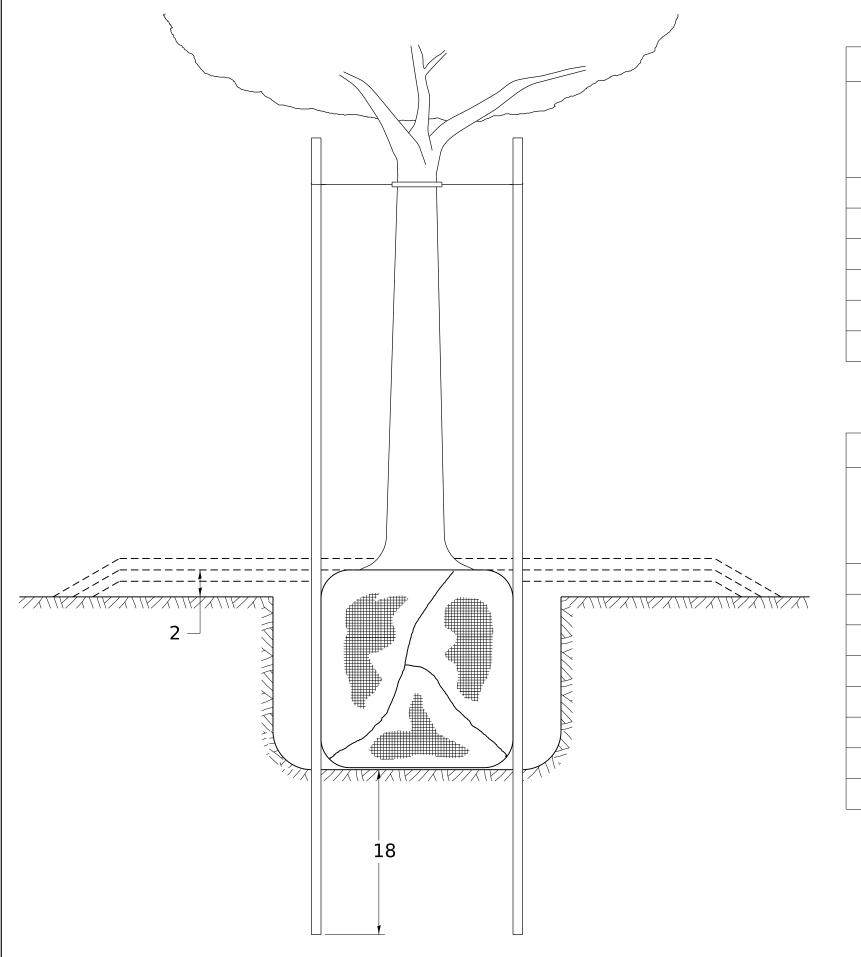
······································	(0 - 0 - 0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -										
USER NAME = IDOT/District 2	DESIGNED -	REVISED - 10-18-11						F.A. RTE.	SECTION	COUNTY TOTAL SHEETS NO	1
	DRAWN -	REVISED -	STATE OF ILLINOIS	REGION 2 / DISTRICT 2 STANDARD						CHEETO NO.	1
PLOT SCALE = 0.083 '/in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION							CONTRACT NO.	
PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE:	SHEET OF	SHEETS STA.	TO STA.		ILLINOIS	FED. AID PROJECT	1

## TRAFFIC BARRIER TERMINAL, TYPE 6B (SPECIAL)



-	USER NAME = IDOT/District 2	DESIGNED -	REVISED - 10-18-11								SECTION	COUNTY	TOTAL SHEET SHEETS NO.
		DRAWN -	REVISED -	STATE OF ILLINOIS  REGION 2 / DISTRICT 2 STANDARD  DEPARTMENT OF TRANSPORTATION									
	PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -								CONTRACT	NO.	
	PLOT DATE = 1/28/2025	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.				ILLINOIS FED.	ILLINOIS FED. AID PROJECT			

DETAILS OF PLANTING AND BRACING TREES



TREES SMALLER THAN 4½ IN DIAMETER

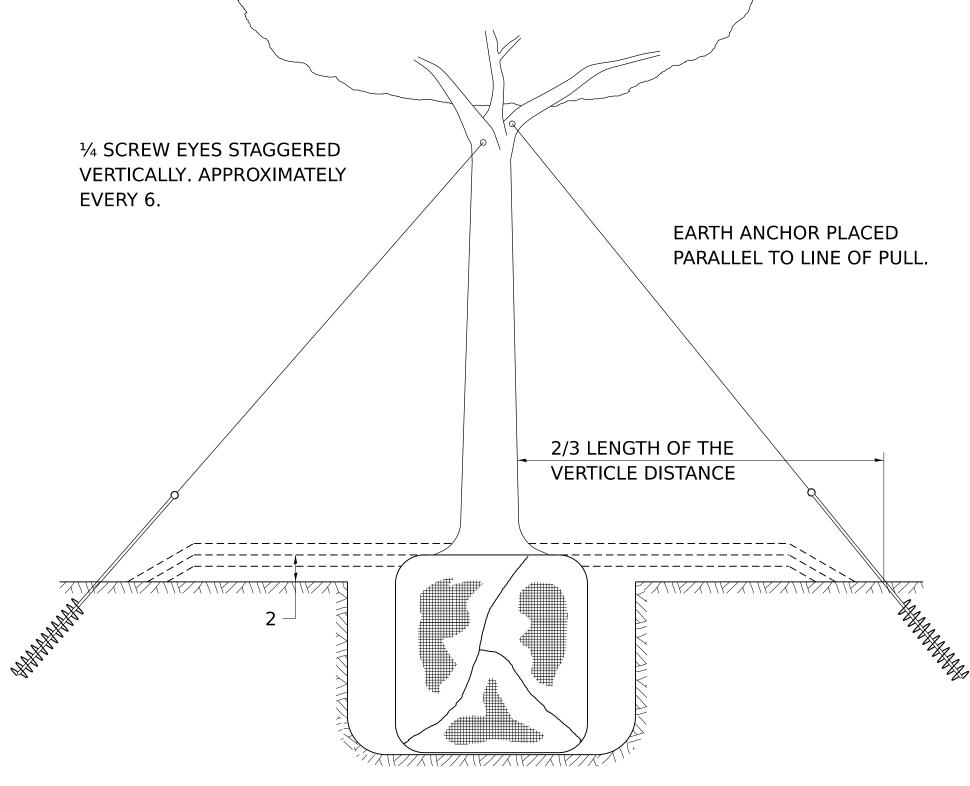
STEEL POST AND

NO. 14 STEEL WIRE

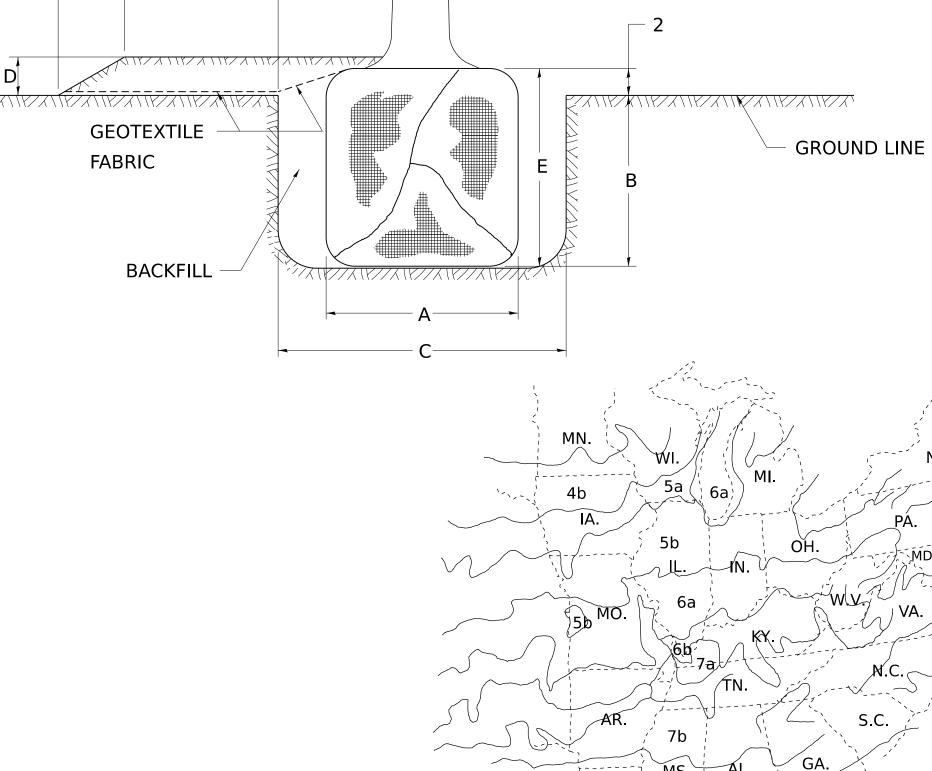
ANCHOR PLATE

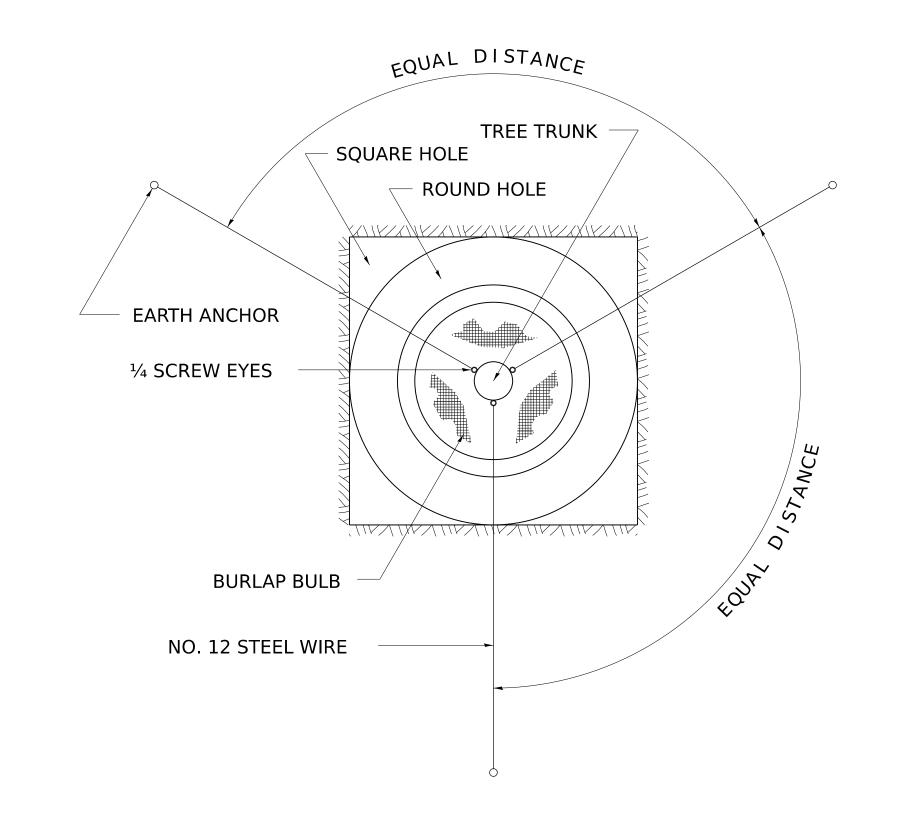
SMALL	А	В	С	D	Е	F
TREE SIZE	DIAMETER OF BALL OR ROOT SYS.	DEPTH OF HOLE EXCAVATION	WIDTH OF HOLE EXCAVATION	THICKNESS OF MULCH COVER	DEPTH OF BALL OR ROOT SYS.	VOLUME OF MULCH COVER CU. YDS.
5'-6'	16	10	30	4	12	0.54
5'-6' BB	16	10	30	4	12	0.54
6'-7' BB	18	12	30	4	14	0.54
7'-8' BB	20	11	30	4	13	0.54
8'-10' BB	24	14	36	4	16	0.61
10'-12' BB	26	15	36	4	17	0.61

LARGE	А	В	С	D	Е	F
TREE SIZE	DIAMETER OF BALL OR ROOT SYS.	DEPTH OF HOLE EXCAVATION	WIDTH OF HOLE EXCAVATION	THICKNESS OF MULCH COVER	DEPTH OF BALL OR ROOT SYS.	VOLUME OF MULCH COVER CU. YDS.
0-2	20	11	36	4	13	0.61
2-2½ BB	24	14	48	4	16	0.78
2½-3 BB	28	17	48	4	19	0.78
3-3½ BB	32	17	60	4	19	0.96
3½-4 BB	36	20	60	4	22	0.96
4-4½ BB	40	22	72	4	24	1.16
4½-5 BB	44	24	72	4	26	1.16
5-5½ BB	48	27	84	4	29	1.38



TREES OVER 4½ IN DIAMETER





U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL RESEARCH SERVICE PUBLICATION NO. 814

SCALE:

PLANT HARDINESS ZONE MAP

ALL DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE NOTED.

2 11	USER NAME = IDOT/District 2	DESIGNED -	REVISED - 10-18-11
DATE		DRAWN -	REVISED -
10 10	PLOT SCALE = 0.083'/in.	CHECKED -	REVISED -
<sup>‡</sup> 립	PLOT DATE = 1/28/2025	DATE -	REVISED -

ROUND HOLE

HOSE

BURLAPPED BULB

STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	