

Illinois Department of Transportation

PASSED January 1, 2021  
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2021  
ENGINEER OF DESIGN AND ENVIRONMENT

- \* As an alternate, the barrel wall reinforcement may be reduced to riser wall reinforcement with #3 (#10) bars placed around the pipe penetration holes as shown. This option may be utilized when the pipe penetration holes are formed as opposed to cored.
- GEOMETRIC LIMITS FOR PIPE PENETRATION HOLES**
- Note 1: A minimum of 9 (230) of monolithic reinforced concrete shall be maintained above pipe penetration holes > 24 (600).
- Note 2: A minimum 12 (300) inside arc length of reinforced concrete shall be maintained between pipe penetration holes > 15 (380).
- Note 3: A maximum of 60 percent of the inside perimeter of the reinforced concrete manhole walls may be removed.
- Note 4: Horizontal joints that intersect pipe penetration holes > 15 (380) shall have one joint splice for every location around the perimeter of the joint where the inside arc length between pipe penetration holes is < 24 (600). See joint splice detail.
- Note 5: The recommended pipe penetration hole is equal to the O.D. of the pipe plus 4 (100).
- Note 6: Only pipe penetration holes ≤ 15 (380) are allowed in riser sections.

1 IDOT HIGHWAY STANDARD 602401-07  
Scale: NTS

Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	MLM	08/2024

**METROPOLITAN WATER RECLAMATION DISTRICT**  
**OF GREATER CHICAGO**

**CONTRACT 14-253-5FR**  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
LITTLE CALUMET RIVER WATERSHED

**UTILITY DETAILS**

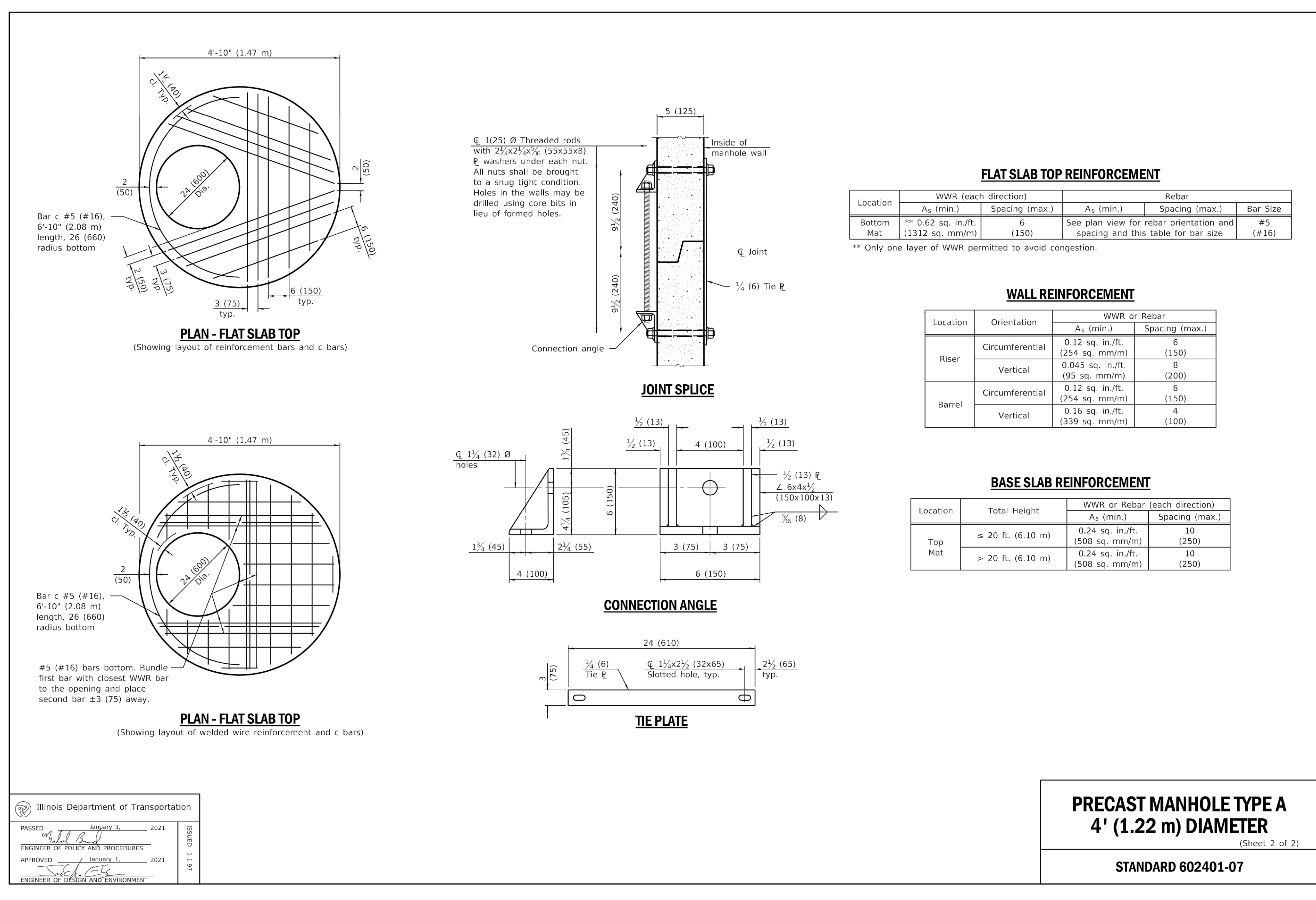
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Checked by: PMS  
Drawn by: MLM  
Reviewed by: EPC  
Date: MAY 2024  
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**CU-505**

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Illinois Department of Transportation

PASSED January 1, 2021  
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2021  
ENGINEER OF DESIGN AND ENVIRONMENT

**PRECAST MANHOLE TYPE A**  
**4' (1.22 m) DIAMETER**  
(Sheet 2 of 2)

**STANDARD 602401-07**

1 IDOT HIGHWAY STANDARD 602401-07  
Scale: NTS

Rev.	Description	Appr.	Date
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METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO

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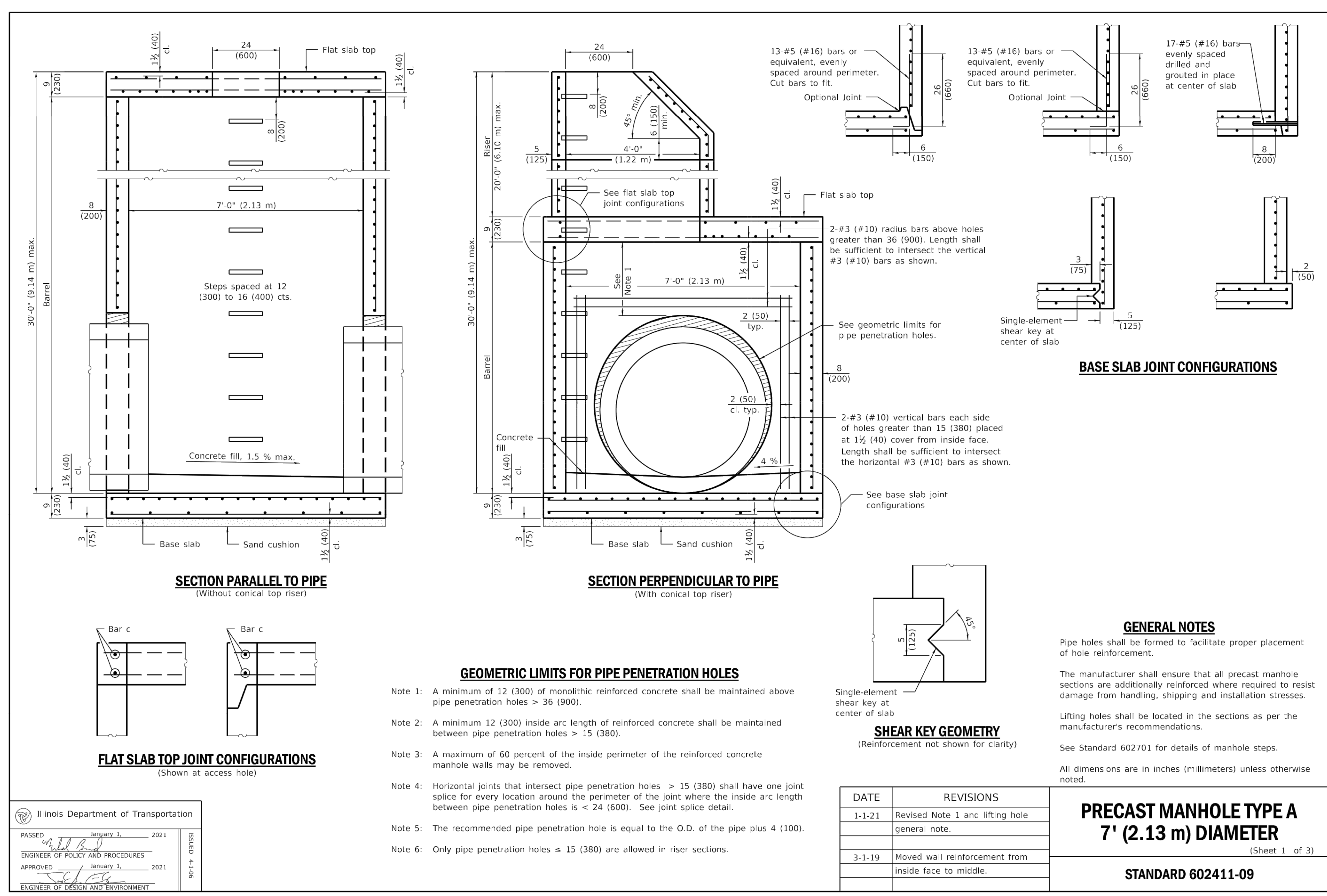
**CONTRACT 14-253-5FR**  
FLOOD CONTROL PROJECT ON  
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LITTLE CALUMET RIVER WATERSHED

UTILITY DETAILS

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**CU-506**  
Page Number: 56



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Illinois Department of Transportation

PASSED January 1, 2021  
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2021  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 4-1-06

**GEOMETRIC LIMITS FOR PIPE PENETRATION HOLES**

- Note 1: A minimum of 12 (300) of monolithic reinforced concrete shall be maintained above pipe penetration holes > 36 (900).
- Note 2: A minimum 12 (300) inside arc length of reinforced concrete shall be maintained between pipe penetration holes > 15 (380).
- Note 3: A maximum of 60 percent of the inside perimeter of the reinforced concrete manhole walls may be removed.
- Note 4: Horizontal joints that intersect pipe penetration holes > 15 (380) shall have one joint splice for every location around the perimeter of the joint where the inside arc length between pipe penetration holes is < 24 (600). See joint splice detail.
- Note 5: The recommended pipe penetration hole is equal to the O.D. of the pipe plus 4 (100).
- Note 6: Only pipe penetration holes ≤ 15 (380) are allowed in riser sections.

DATE	REVISIONS
1-1-21	Revised Note 1 and lifting hole general note.
3-1-19	Moved wall reinforcement from inside face to middle.

**PRECAST MANHOLE TYPE A**  
**7' (2.13 m) DIAMETER**  
 (Sheet 1 of 3)  
**STANDARD 602411-09**

1 IDOT HIGHWAY STANDARD 602411-09  
 Scale: NTS

Rev.	Description	Appr.	Date
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METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO

CONTRACT 14-253-5FR  
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 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
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DESIGNED BY: MLM  
 CHECKED BY: PMS  
 DRAWN BY: MLM  
 REVIEWED BY: EPC  
 DATE: MAY 2024  
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UTILITY DETAILS

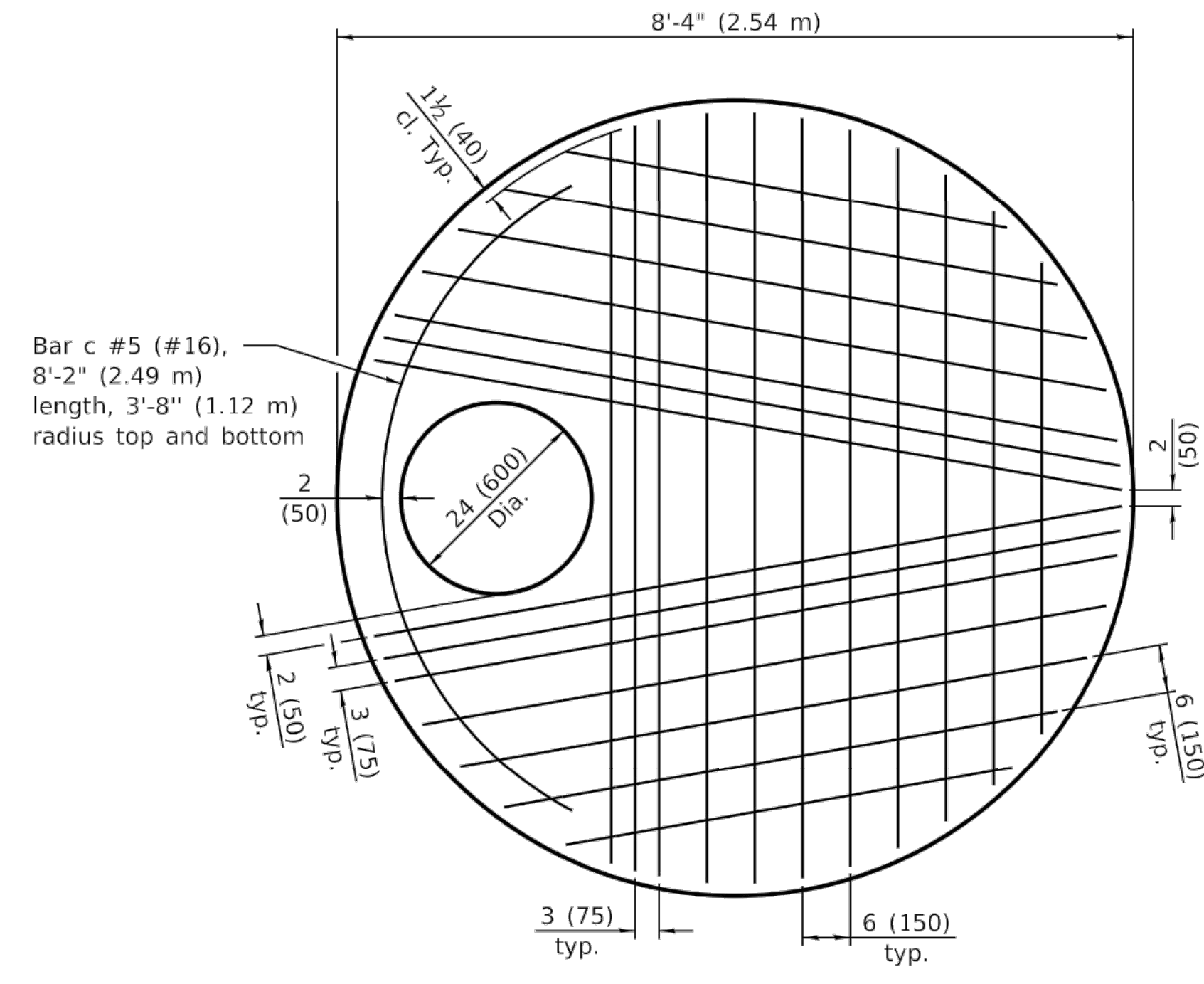
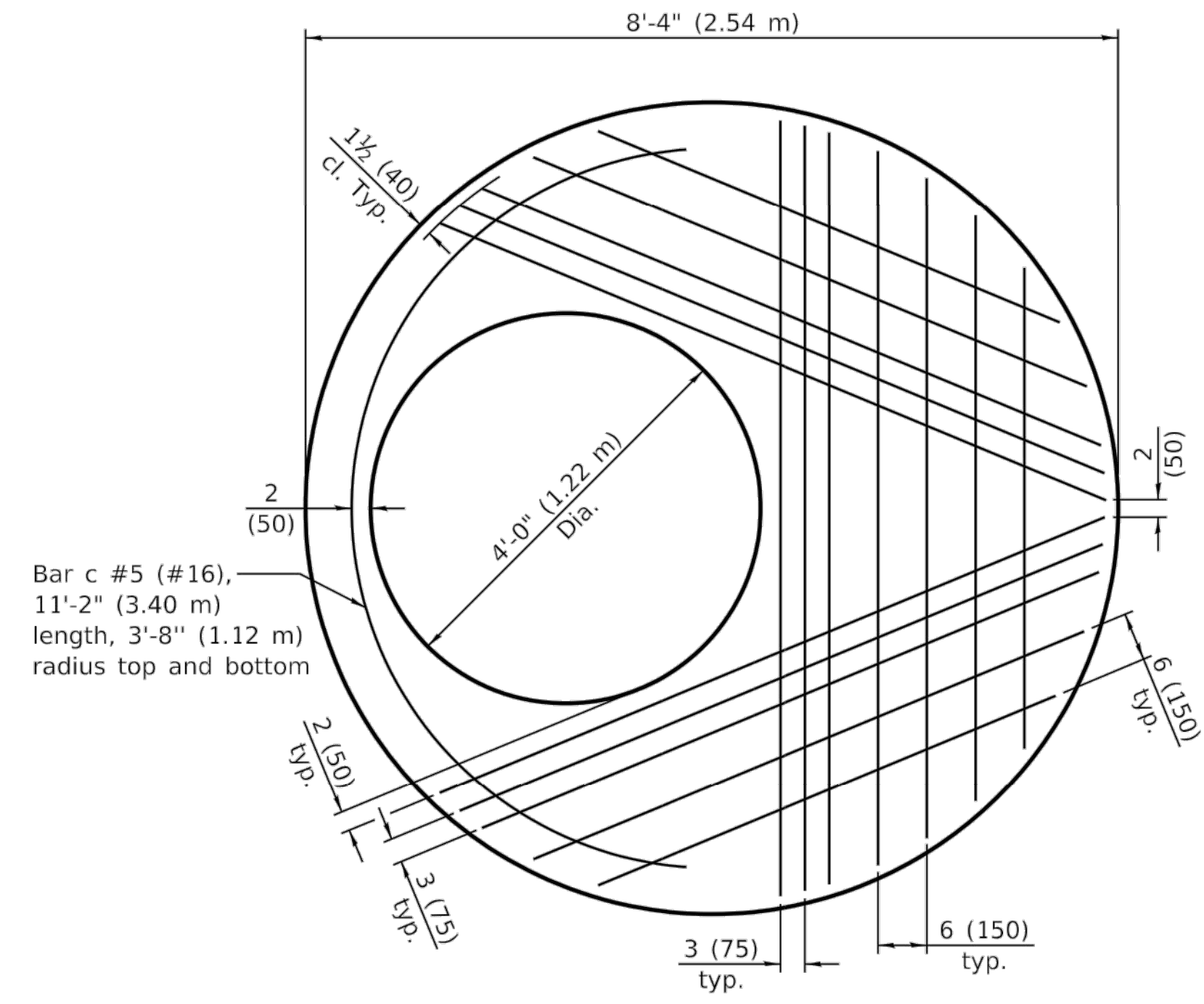
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PASSED January 1, 2021  
*Michelle Madrid*  
 ENGINEER OF POLICY AND PROCEDURES

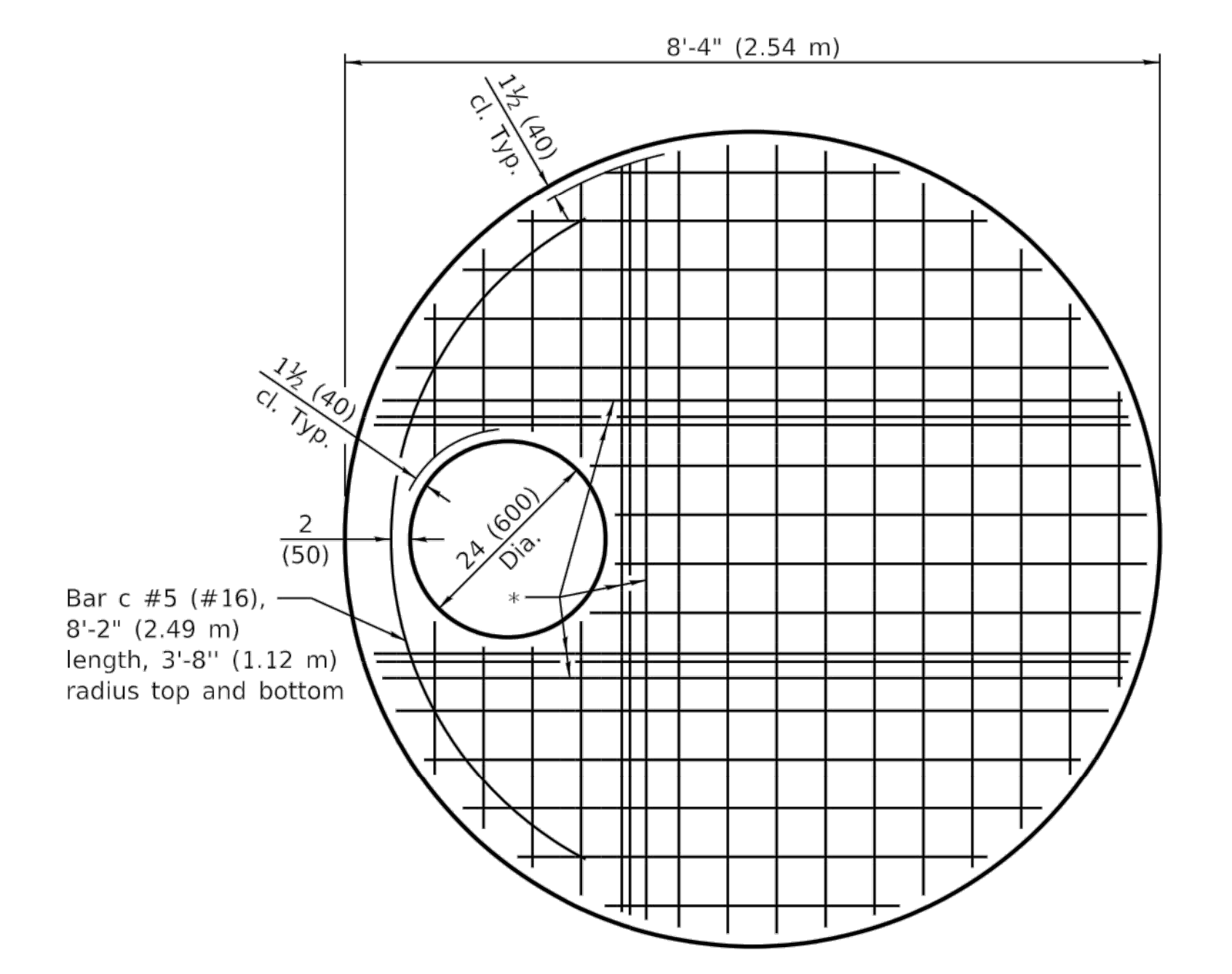
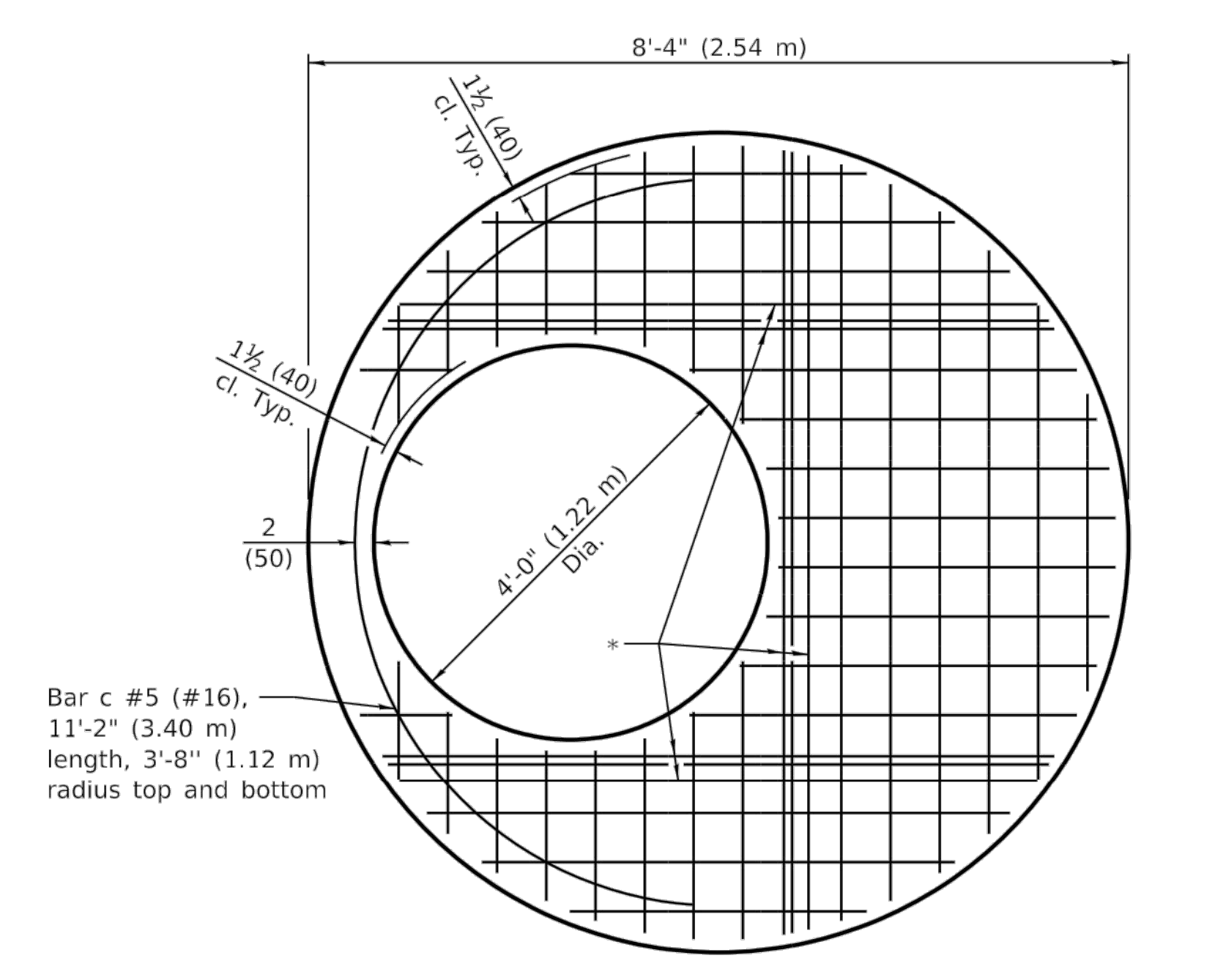
APPROVED January 1, 2021  
*John E. G...*  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 4-1-06



**PLAN - FLAT SLAB TOP**

(Showing layout of bottom reinforcement bars and c bars)



**PLAN - FLAT SLAB TOP**

(Showing layout of Welded Wire Reinforcement and c bars)  
 WWR not permitted for riser heights > 10' (3.05 m).

\* #5 (#16) bars bottom. Bundle first bar with closest WWR bar to the opening and place second bar ±3 (75) away.

**PRECAST MANHOLE TYPE A**  
**7' (2.13 m) DIAMETER**  
 (Sheet 2 of 3)

**STANDARD 602411-09**

1 IDOT HIGHWAY STANDARD 602411-09  
 Scale: NTS

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 OF GREATER CHICAGO

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**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

**UTILITY DETAILS**

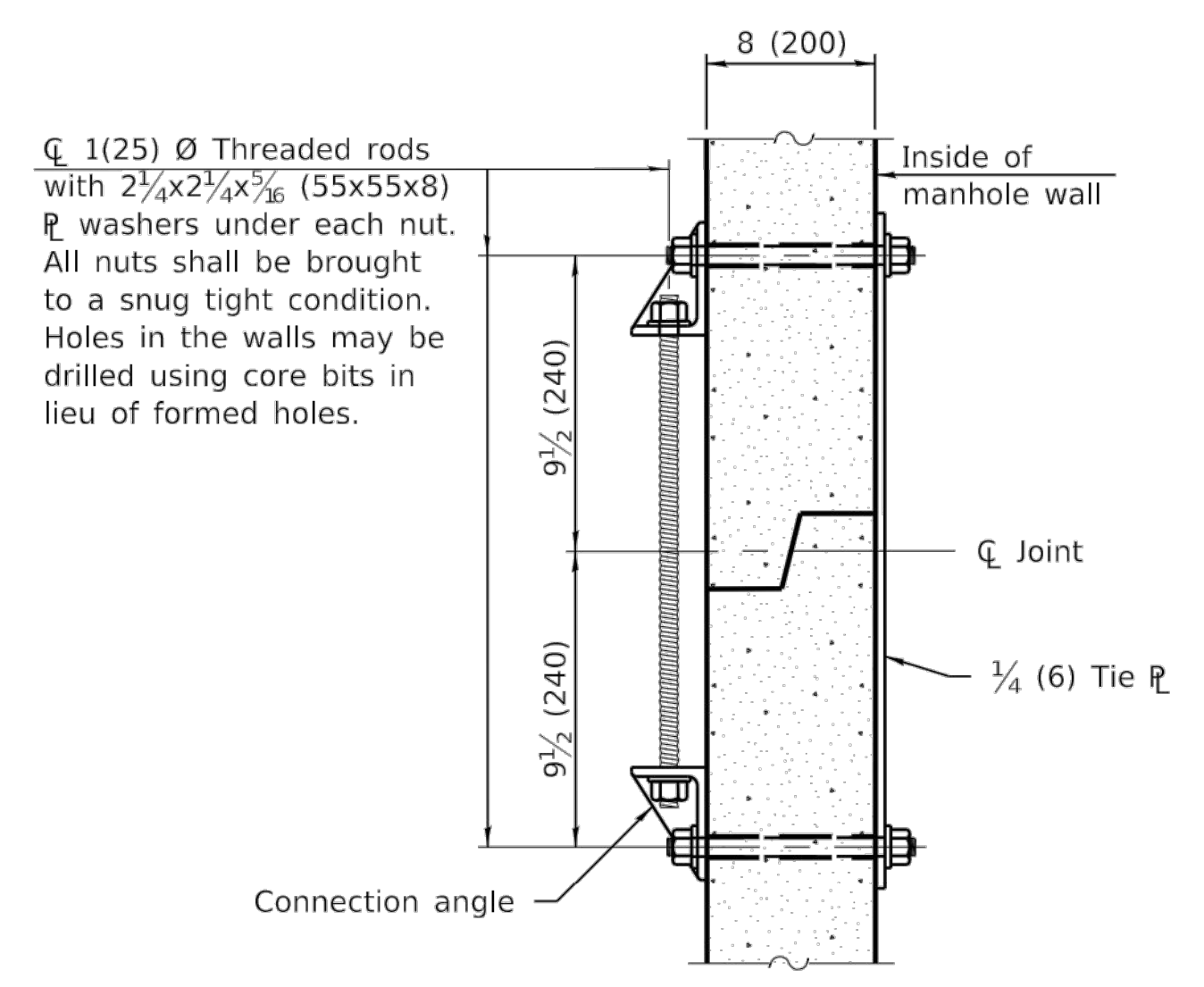
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 Page Number: 58

Illinois Department of Transportation

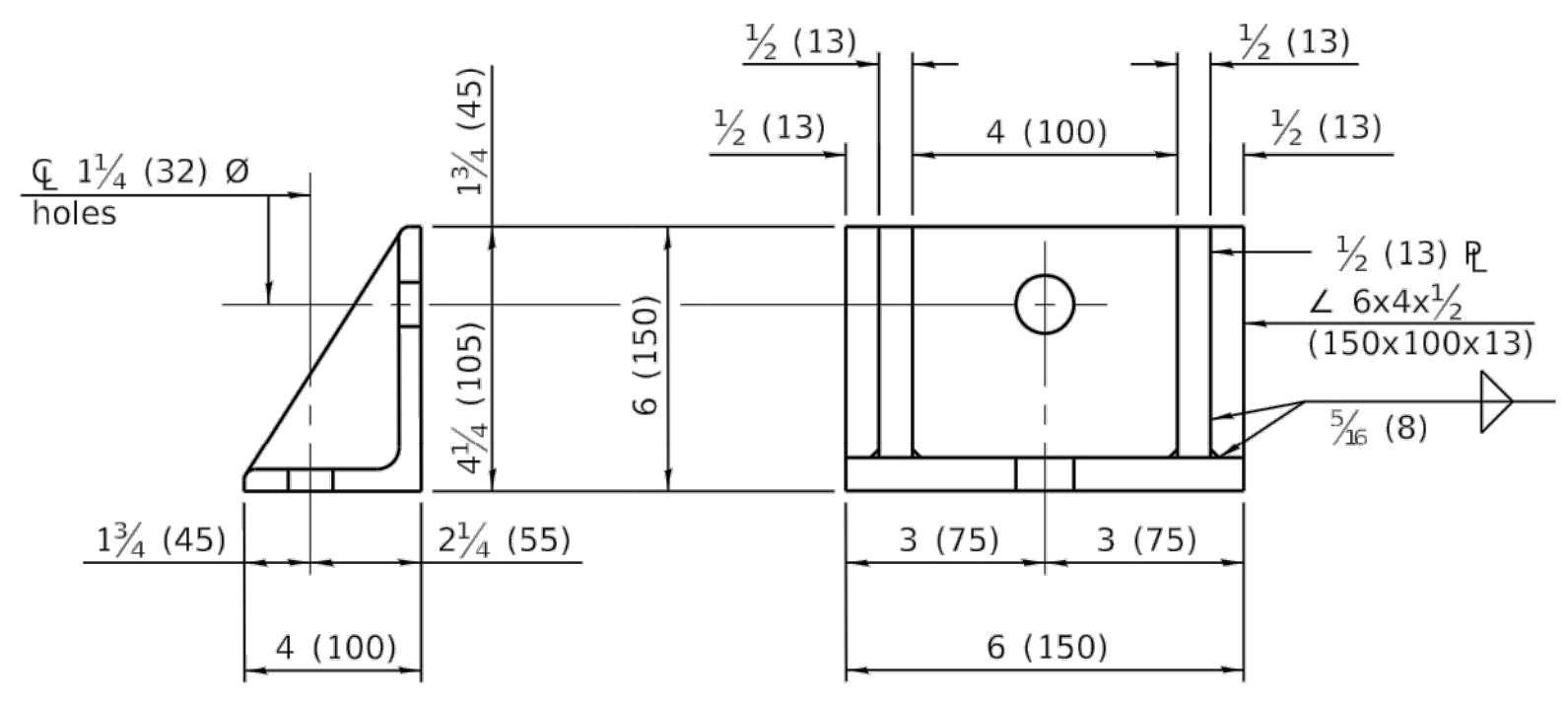
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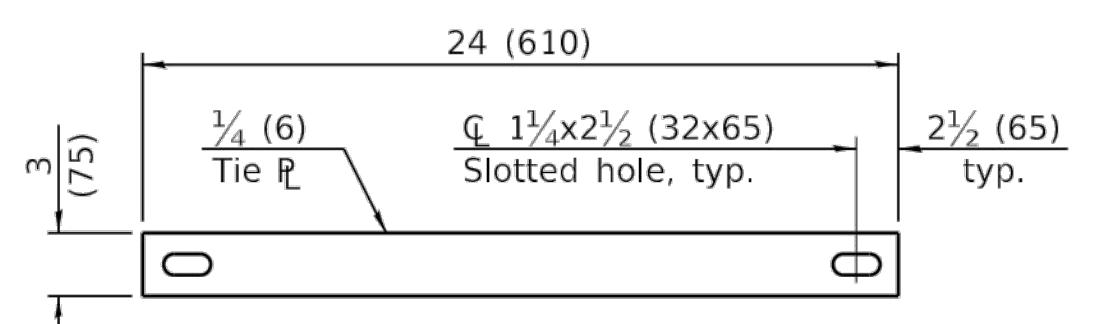
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**JOINT SPLICE**



**CONNECTION ANGLE**



**TIE PLATE**

**FLAT SLAB TOP REINFORCEMENT**

Location	Riser Height (RH)	WWR (each direction)		Rebar (each direction except as noted)		
		A <sub>s</sub> (min.)	Spacing (max.)	A <sub>s</sub> (min.)	Spacing (max.)	Bar Size
Top Mat	All	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	#3 or #4 (#10) (#13)
Bottom Mat	RH ≤ 10 ft. (3.05 m)	** 0.62 sq. in./ft. (312 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and this table for bar size		#5 (#16)
	RH > 10 ft. (3.05 m)	WWR not permitted				#7 (#22)

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

**WALL REINFORCEMENT**

Location	Orientation	WWR or Rebar	
		A <sub>s</sub> (min.)	Spacing (max.)
4 ft. (1.22 m) Ø Riser	Circumferential	0.12 sq. in./ft. (254 sq. mm/m)	6 (150)
	Vertical	0.045 sq. in./ft. (95 sq. mm/m)	8 (200)
7 ft. (2.13 m) Ø Barrel	Circumferential	0.21 sq. in./ft. (445 sq. mm/m)	6 (150)
	Vertical	0.045 sq. in./ft. (95 sq. mm/m)	8 (200)

**BASE SLAB REINFORCEMENT**

Location	Riser Height (RH)/ Total Height (TH)	WWR or Rebar (each direction)	
		A <sub>s</sub> (min.)	Spacing (max.)
Top Mat	RH ≤ 10 ft. (3.05 m) & TH ≤ 20 ft. (6.10 m)	0.32 sq. in./ft. (677 sq. mm/m)	6 (150)
	RH > 10 ft. (3.05 m) or TH > 20 ft. (6.10 m)	0.52 sq. in./ft. (1101 sq. mm/m)	6 (150)
Bottom Mat	All	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)

**PRECAST MANHOLE TYPE A  
 7' (2.13 m) DIAMETER**

(Sheet 3 of 3)

**STANDARD 602411-09**

**1 IDOT HIGHWAY STANDARD 602411-09**  
 Scale: NTS

METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO

Checked by: PMS  
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**CONTRACT 14-253-5FR**  
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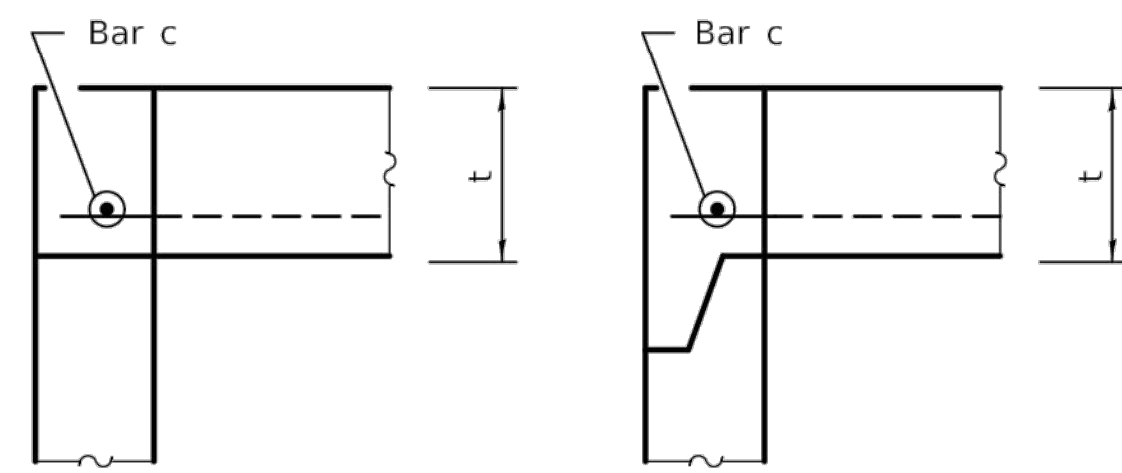
**UTILITY DETAILS**

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**CU-509**  
 Page Number: 59

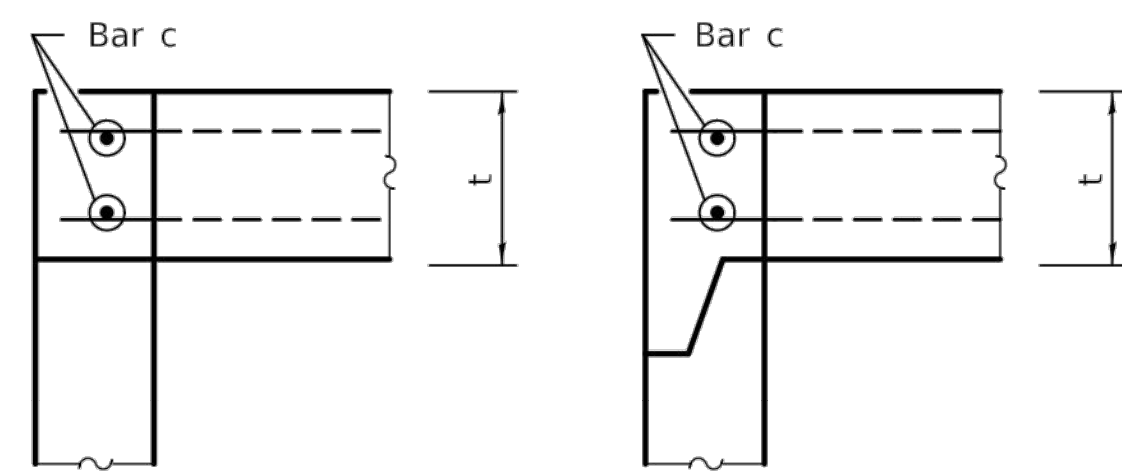
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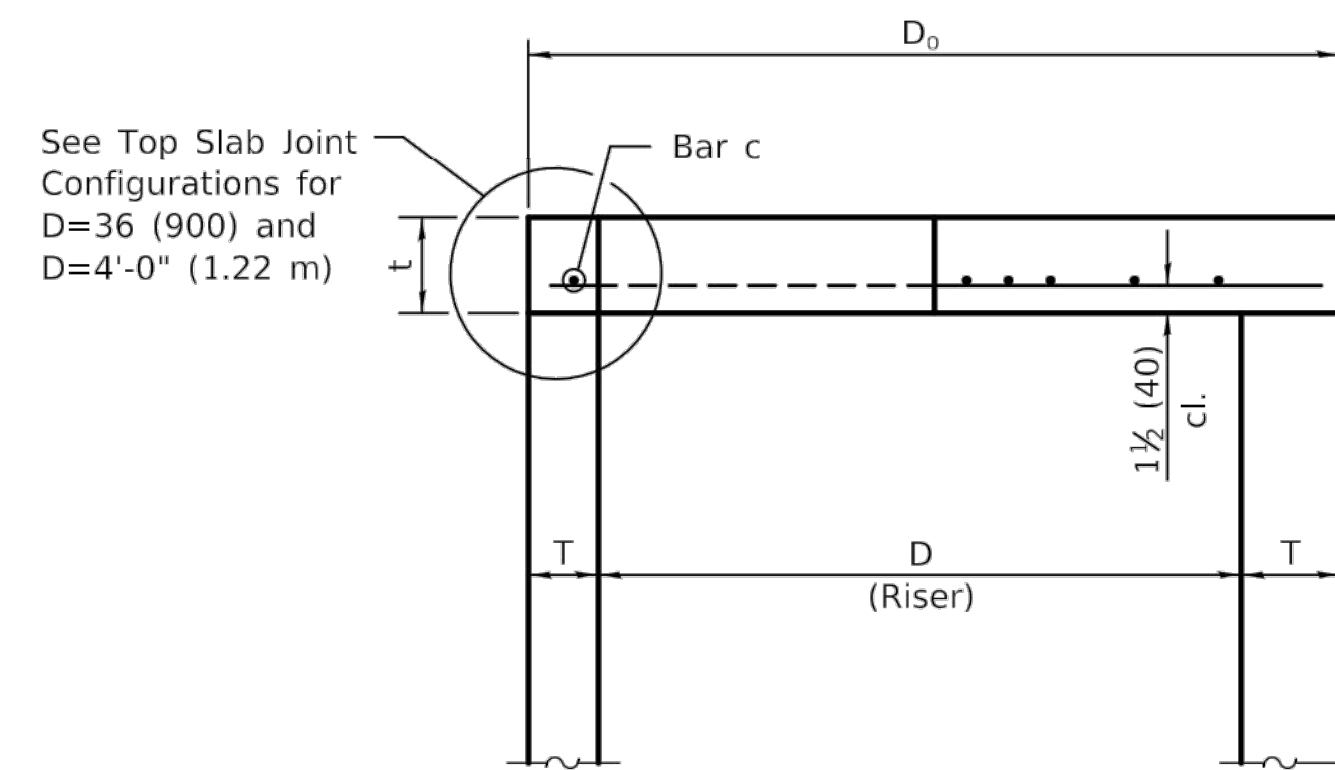
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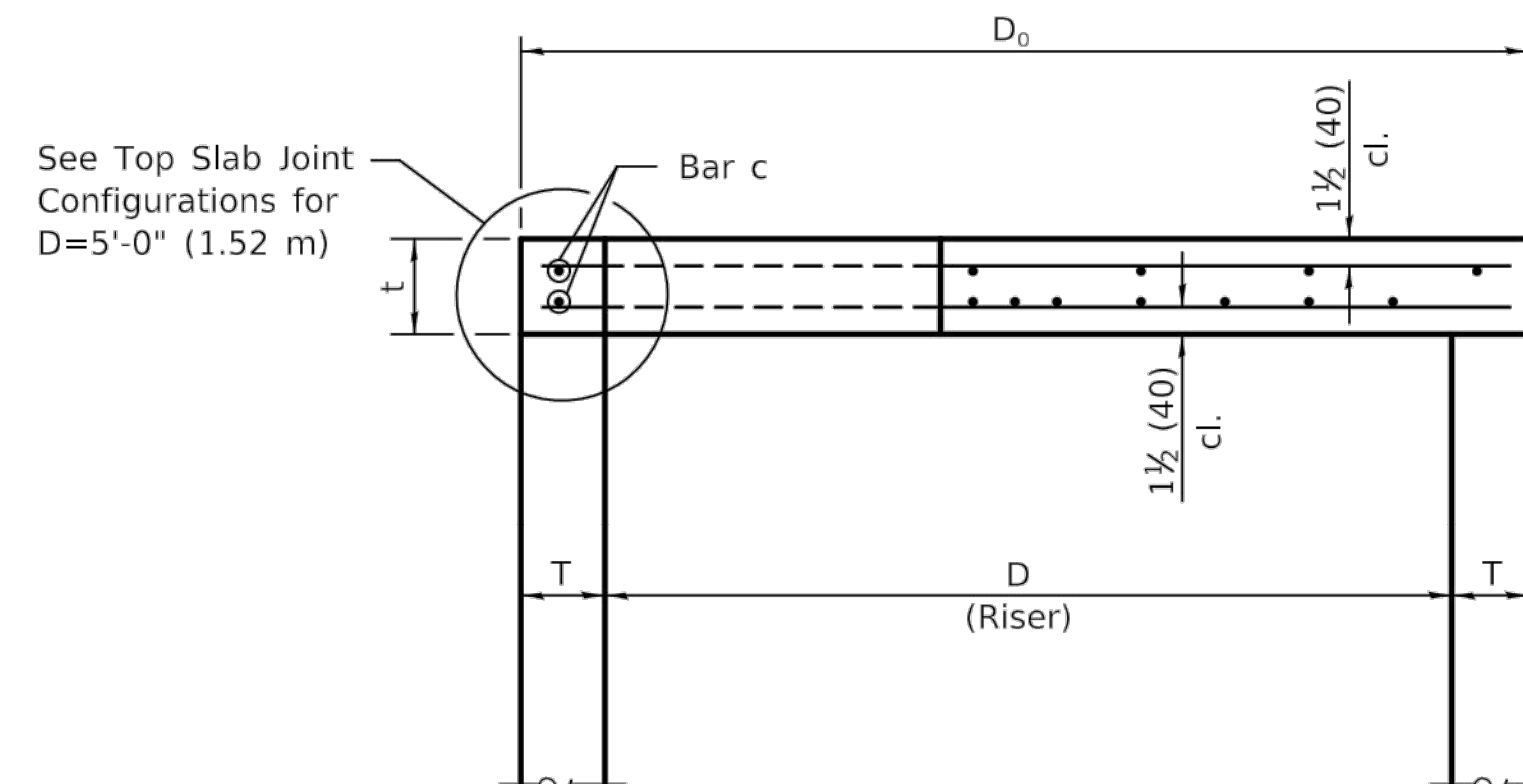
**FLAT SLAB TOP JOINT CONFIGURATIONS**  
**FOR D = 36 (900) AND D = 4'-0" (1.22 m)**  
 (Shown at access hole)



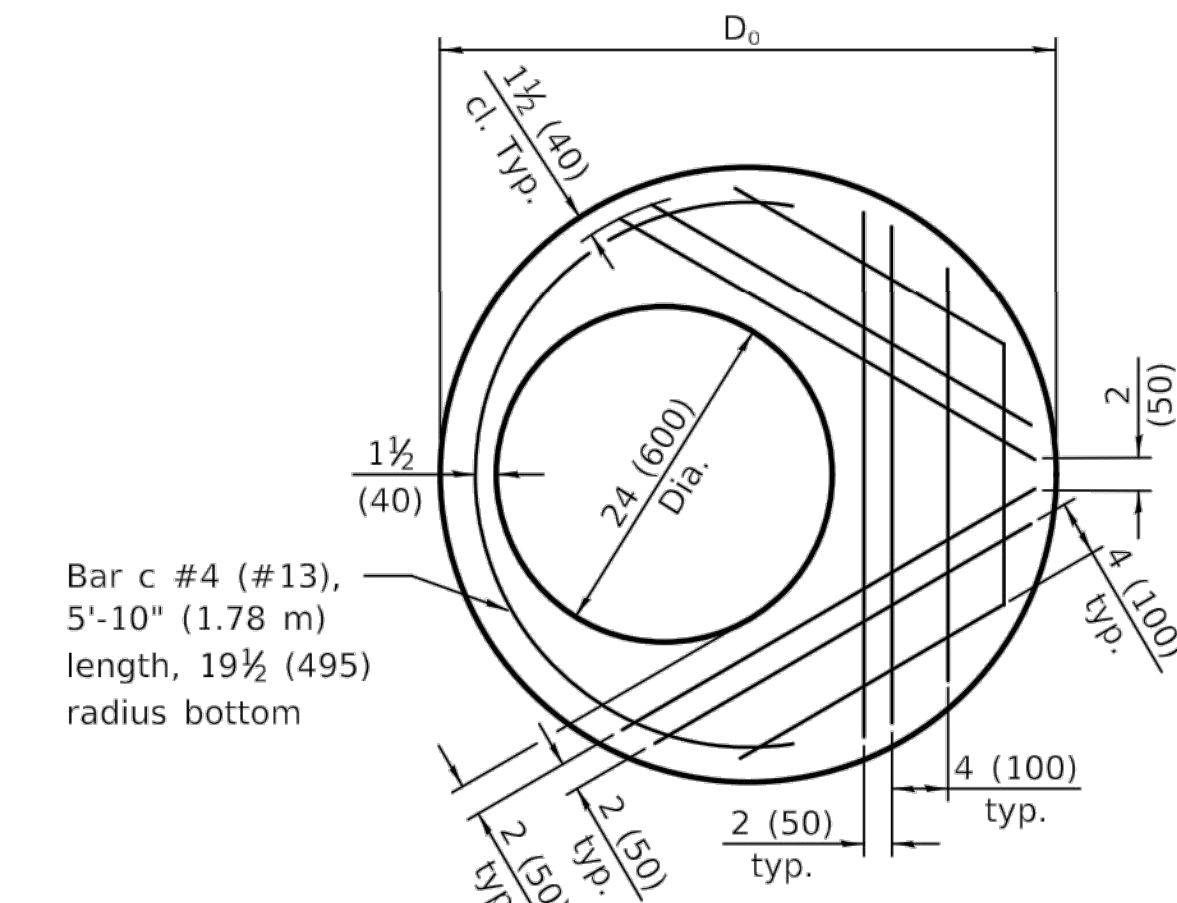
**FLAT SLAB TOP JOINT CONFIGURATIONS**  
**D = 5'-0" (1.52 m)**  
 (Shown at access hole)



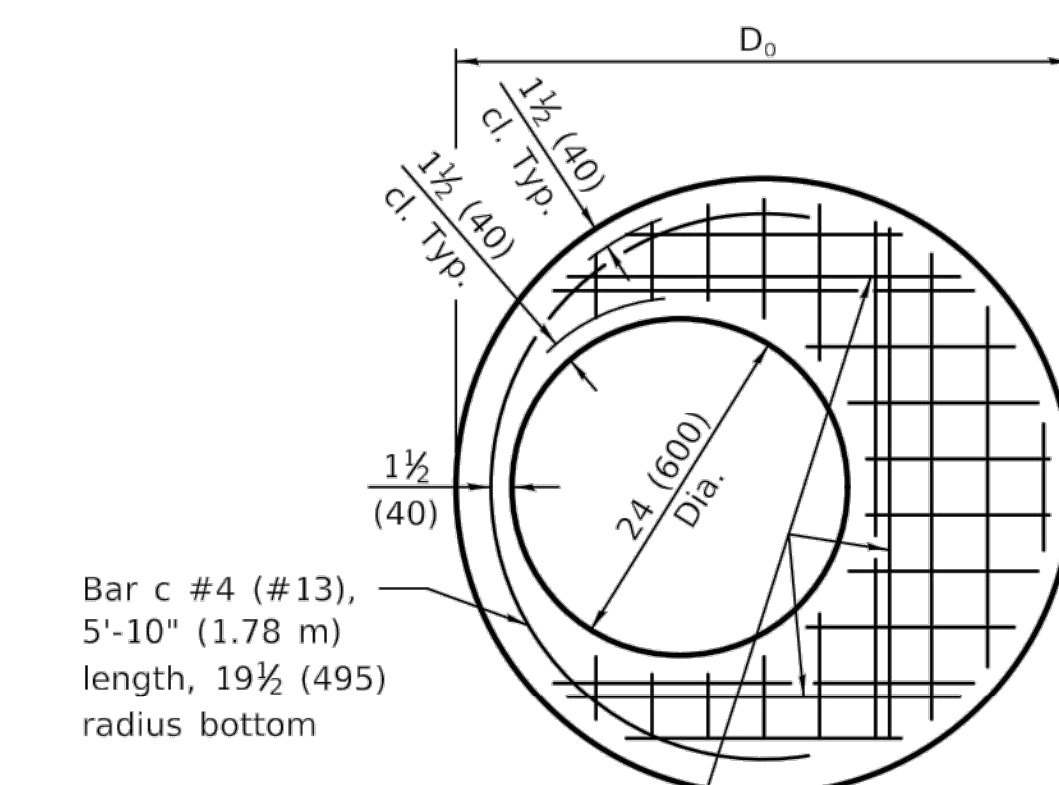
**SECTION THRU FLAT SLAB TOP**  
**FOR D = 36 (900) AND D = 4'-0" (1.22 m)**



**SECTION THRU FLAT SLAB TOP**  
**FOR D = 5'-0" (1.52 m)**



**PLAN - FLAT SLAB TOP FOR D = 36 (900)**  
 (Showing layout of reinforcement bars and c bars)



**PLAN - FLAT SLAB TOP FOR D = 36 (900)**  
 (Showing layout of welded wire reinforcement and c bars)

**TABLE**

D	T	D <sub>0</sub> (min.)	t
36 (900)	See applicable Standards D + 2T	D + 2T	6 (150)
4'-0" (1.2 m)			6 (150)
5'-0" (1.5 m)			8 (200)

**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.

DATE	REVISIONS
1-1-19	Expanded / refined reinforcement options.
1-1-18	Revised for compliance with LRFD.

**PRECAST REINFORCED  
 CONCRETE FLAT SLAB TOP**

**STANDARD 602601-06**

(Sheet 1 of 2)

Illinois Department of Transportation

PASSED January 1, 2019  
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2019  
 ENGINEER OF DESIGN AND ENVIRONMENT

**1** IDOT HIGHWAY STANDARD 602601-06  
 Scale: NTS

**METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO**

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Checked by: PMS  
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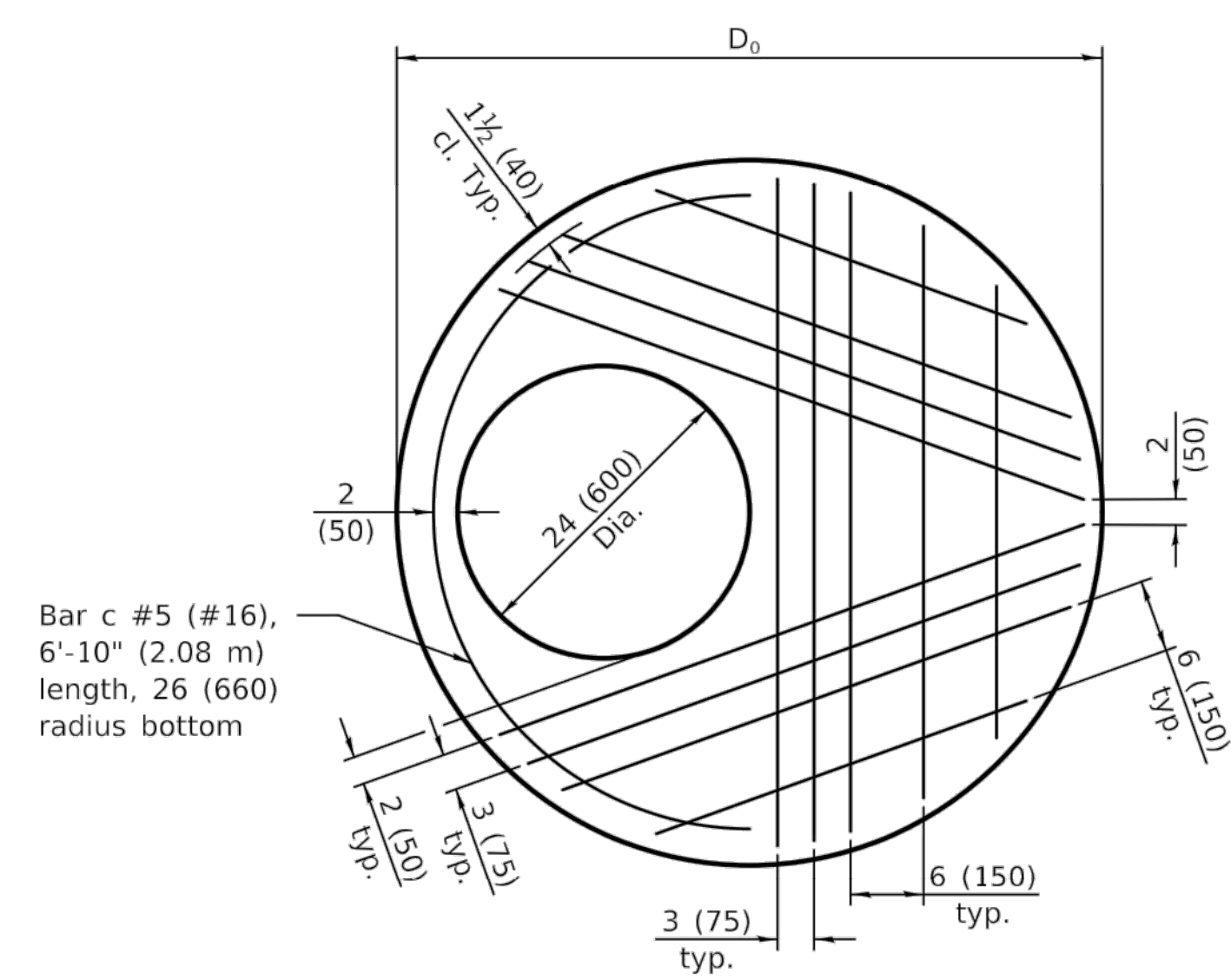
**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
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 LITTLE CALUMET RIVER WATERSHED

**UTILITY DETAILS**

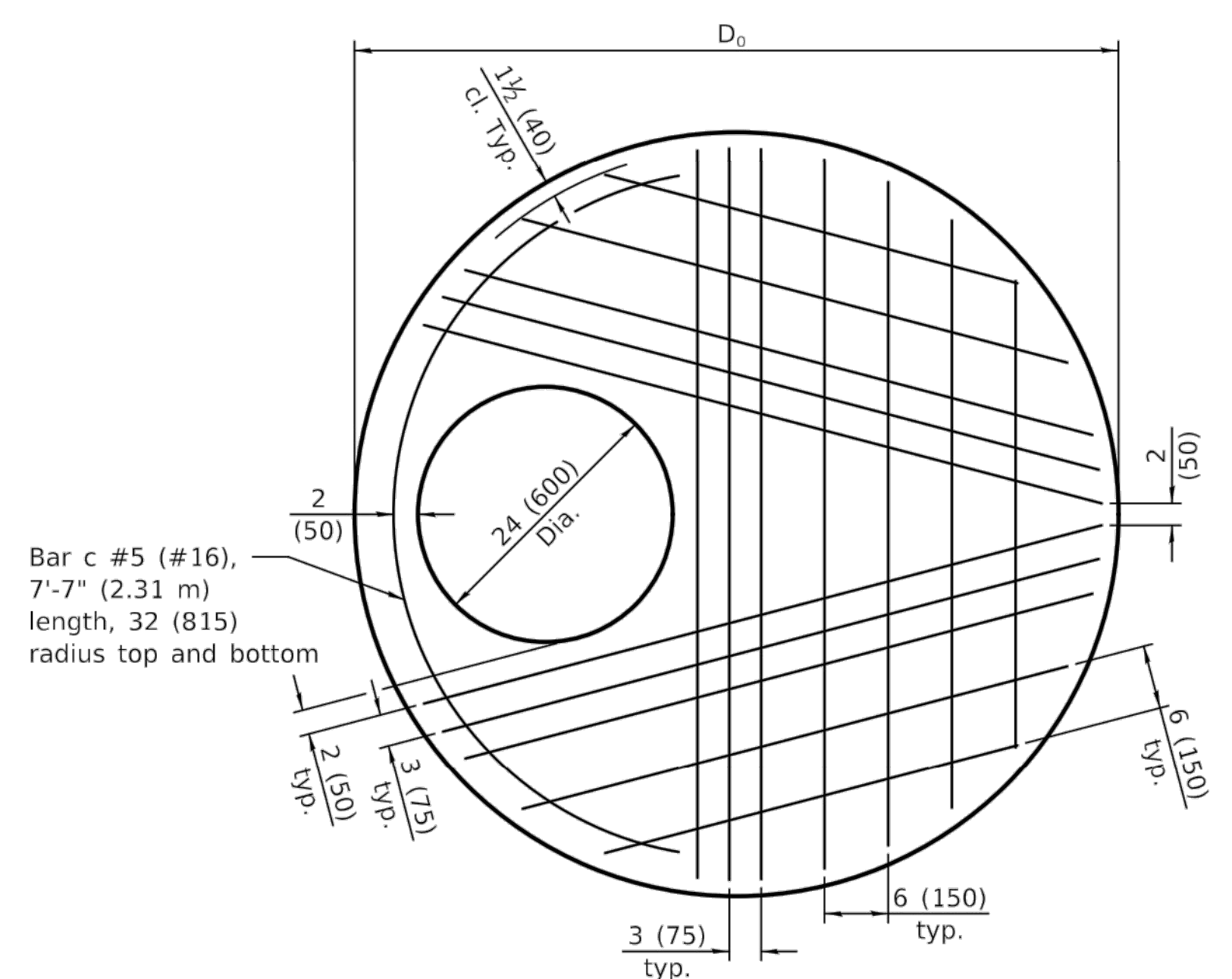
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Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	MLM	08/2024

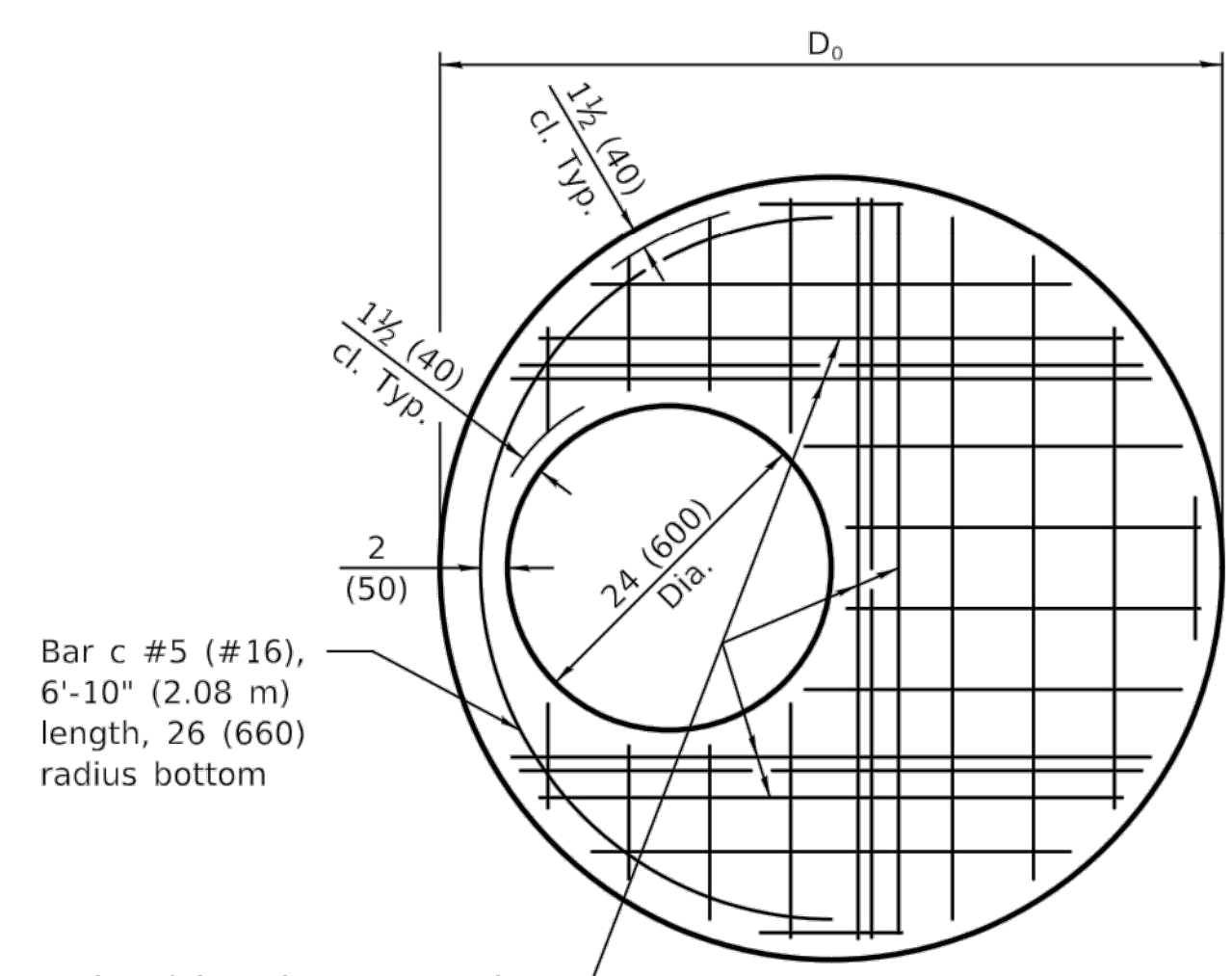
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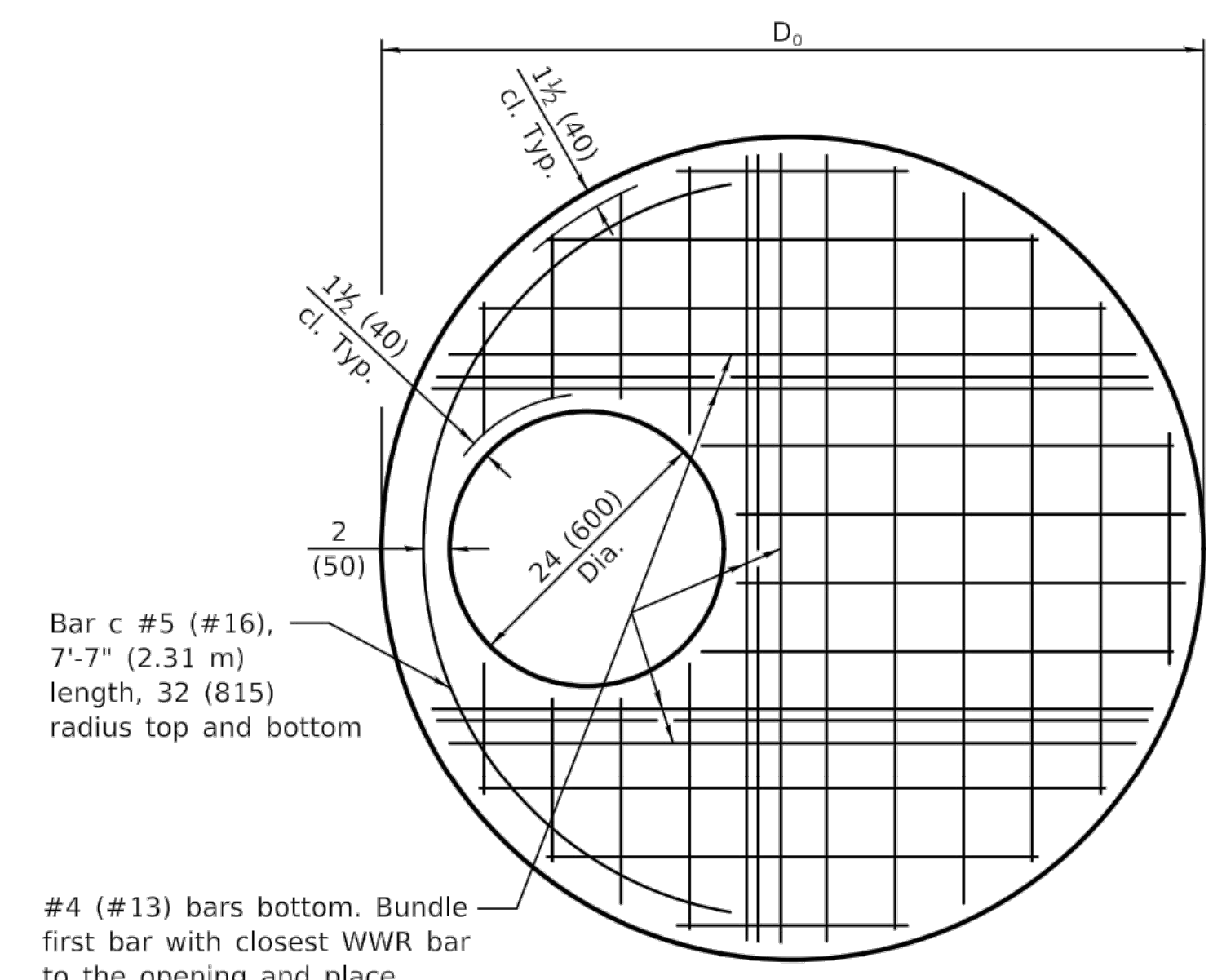
**PLAN - FLAT SLAB TOP FOR D = 4'-0" (1.22 m)**  
 (Showing layout of reinforcement bars and c bars)



**PLAN - FLAT SLAB TOP FOR D = 5'-0" (1.52 m)**  
 (Showing layout of bottom reinforcement bars and c bars)



**PLAN - FLAT SLAB TOP FOR D = 4'-0" (1.22 m)**  
 (Showing layout of welded wire reinforcement and c bars)



**PLAN - FLAT SLAB TOP FOR D = 5'-0" (1.52 m)**  
 (Showing layout of welded wire reinforcement and c bars)

Illinois Department of Transportation

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**FLAT SLAB TOP REINFORCEMENT FOR D = 36 (900)**

Location	WWR (each direction)		Rebar		
	A <sub>s</sub> (min.)	Spacing (max.)	A <sub>s</sub> (min.)	Spacing (max.)	Bar Size
Bottom Mat	* 0.60 sq. in./ft. (1270 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and this table for bar size		#4 (#13)

**FLAT SLAB TOP REINFORCEMENT FOR D = 4'-0" (1.22 m)**

Location	WWR (each direction)		Rebar		
	A <sub>s</sub> (min.)	Spacing (max.)	A <sub>s</sub> (min.)	Spacing (max.)	Bar Size
Bottom Mat	* 0.62 sq. in./ft. (1312 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and this table for bar size		#5 (#16)

**FLAT SLAB TOP REINFORCEMENT FOR D = 5'-0" (1.52 m)**

Location	WWR (each direction)		Rebar (each direction except as noted)		
	A <sub>s</sub> (min.)	Spacing (max.)	A <sub>s</sub> (min.)	Spacing (max.)	Bar Size
Top Mat	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	#3 or #4 (#10) (#13)
Bottom Mat	* 0.40 sq. in./ft. (847 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and this table for bar size		#4 (#13)

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

**PRECAST REINFORCED  
 CONCRETE FLAT SLAB TOP**  
 (Sheet 2 of 2)  
**STANDARD 602601-06**

1 IDOT HIGHWAY STANDARD 602601-06  
 Scale: NTS

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METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO

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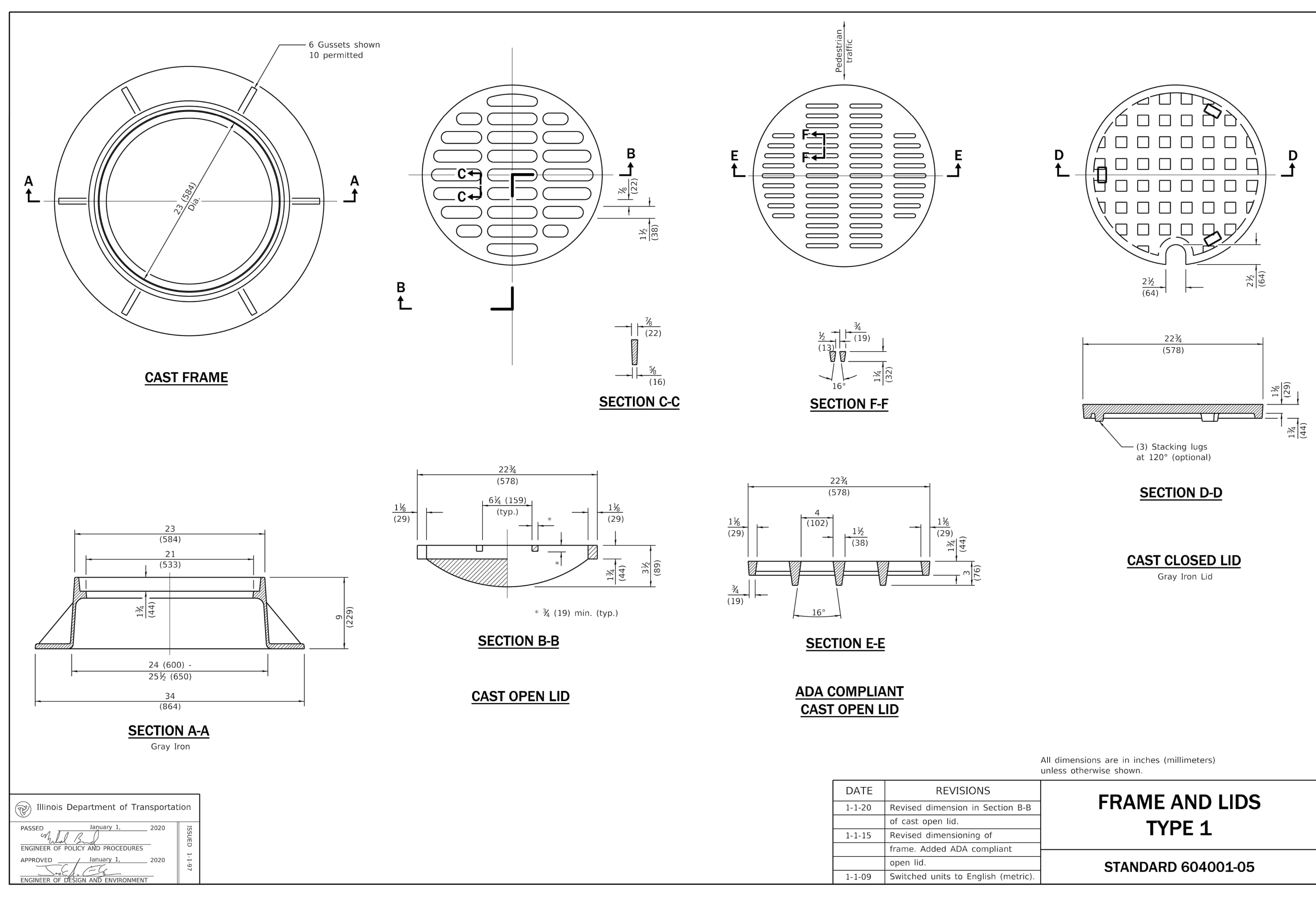
CONTRACT 14-253-5FR  
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 LITTLE CALUMET RIVER WATERSHED  
 UTILITY DETAILS

Sheet Number:  
**CU-511**  
 Page Number: 61





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

DATE	REVISIONS
1-1-20	Revised dimension in Section B-B of cast open lid.
1-1-15	Revised dimensioning of frame. Added ADA compliant open lid.
1-1-09	Switched units to English (metric).

**FRAME AND LIDS  
TYPE 1**  
**STANDARD 604001-05**

Illinois Department of Transportation

PASSED January 1, 2020  
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 OF GREATER CHICAGO

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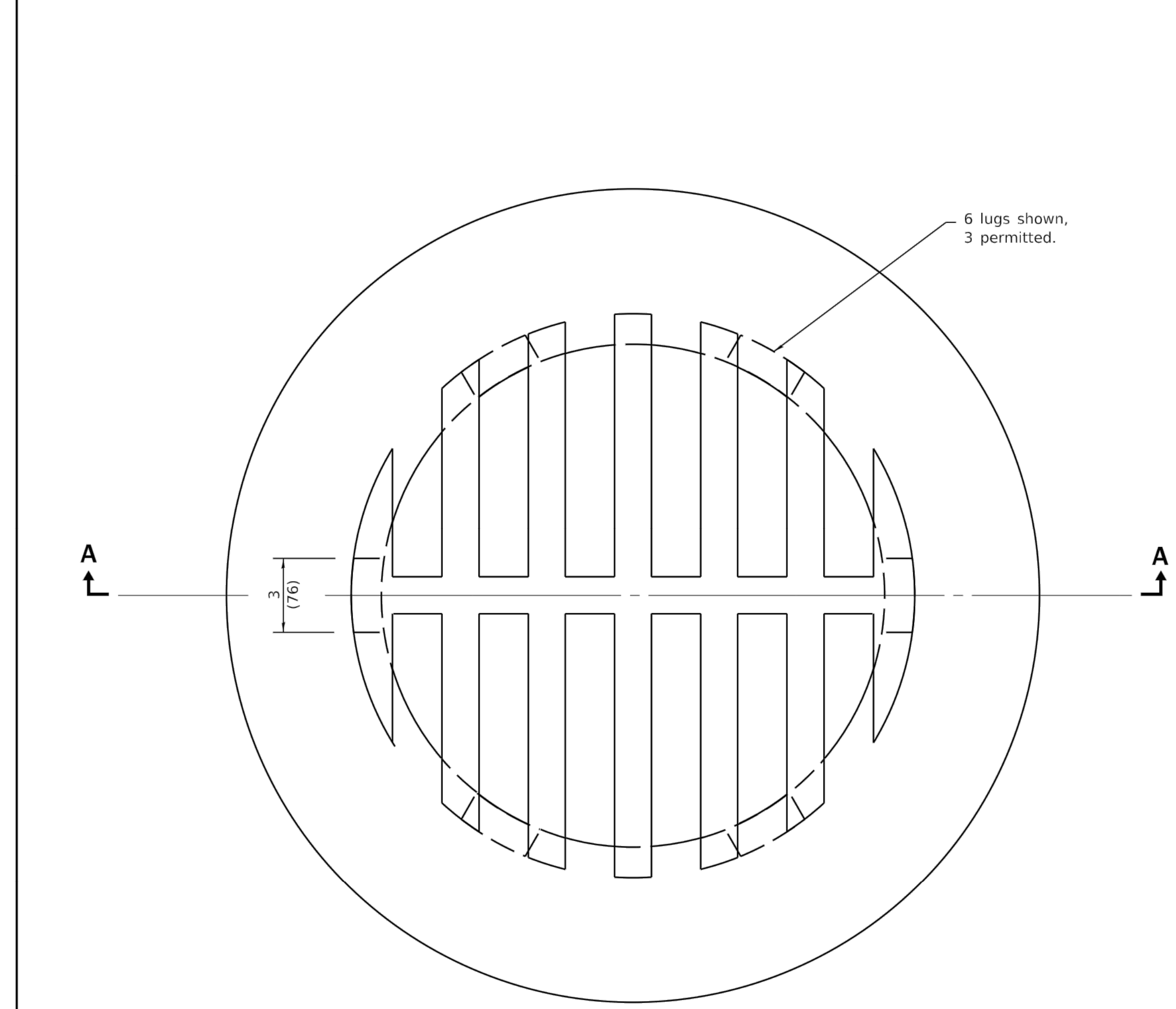
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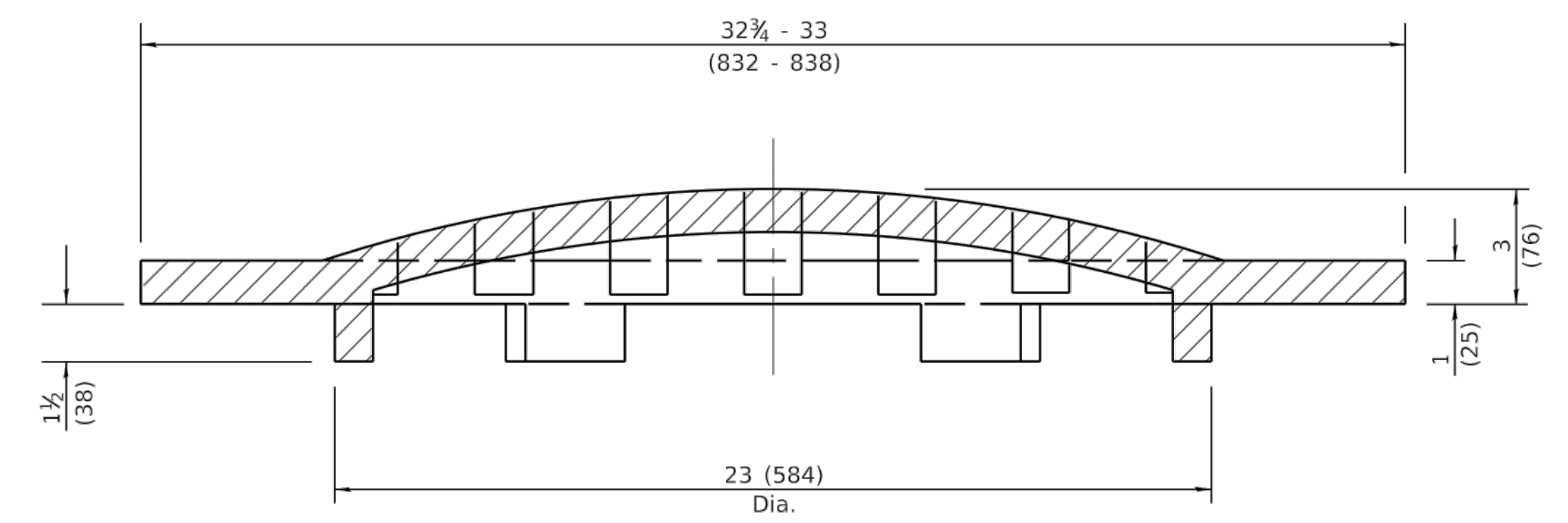
**CONTRACT 14-253-5FR**  
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 LITTLE CALUMET RIVER WATERSHED

UTILITY DETAILS

Sheet Number:  
**CU-513**  
 Page Number: 63



**CAST GRATE**



**SECTION A-A**

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

DATE	REVISIONS	<b>GRATE TYPE 8</b>
1-1-15	Revised dimensions.	
1-1-09	Switched units to English (metric).	<b>STANDARD 604036-03</b>

Illinois Department of Transportation

PASSED January 1, 2015  
*Michael Brand*  
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2015  
*[Signature]*  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUES: 1.19  
 4/8 1"1 GENISEI

**1** IDOT HIGHWAY STANDARD 604036-03  
 Scale: NTS

Rev.	Description	Appr.	Date
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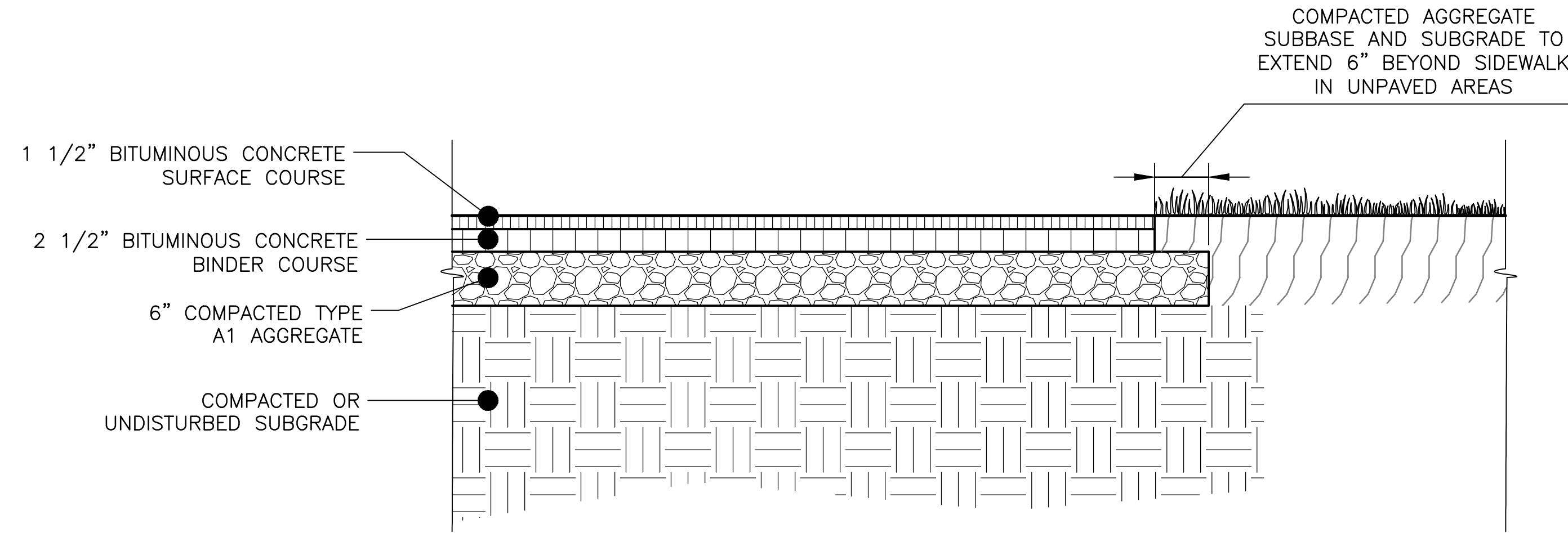
**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

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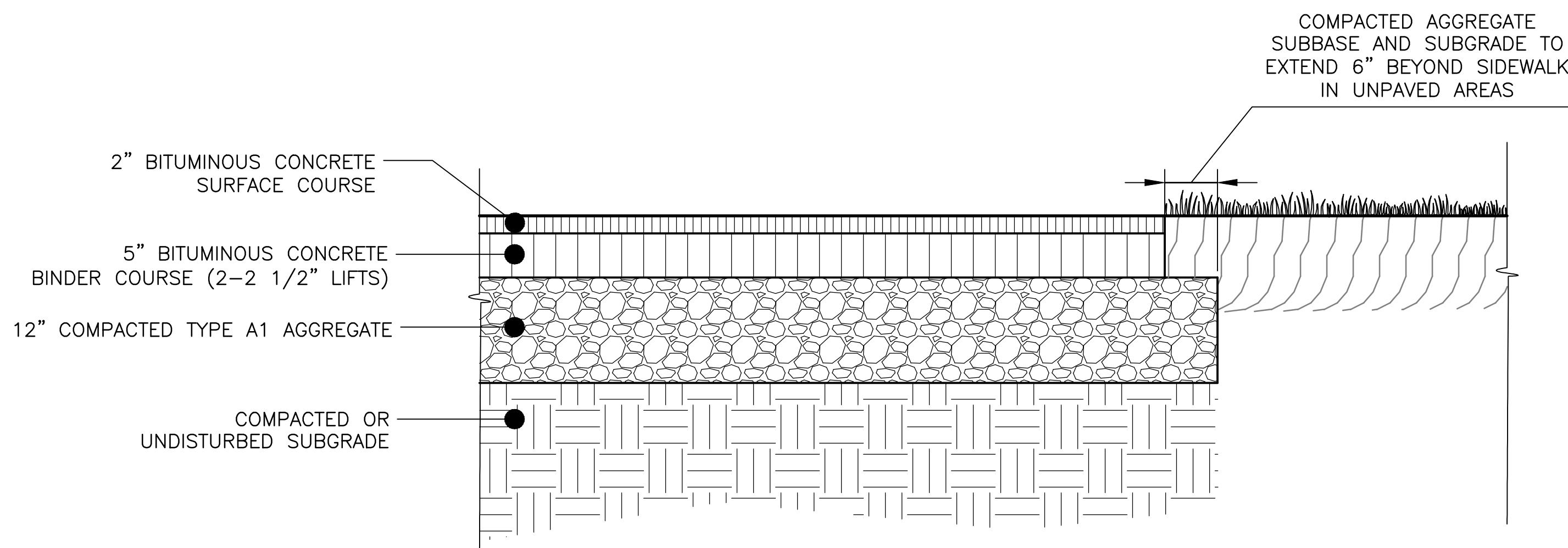
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**DONOHUE** **accurate**  
**Zim** **Engineering**  
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 LITTLE CALUMET RIVER WATERSHED  
**UTILITY DETAILS**

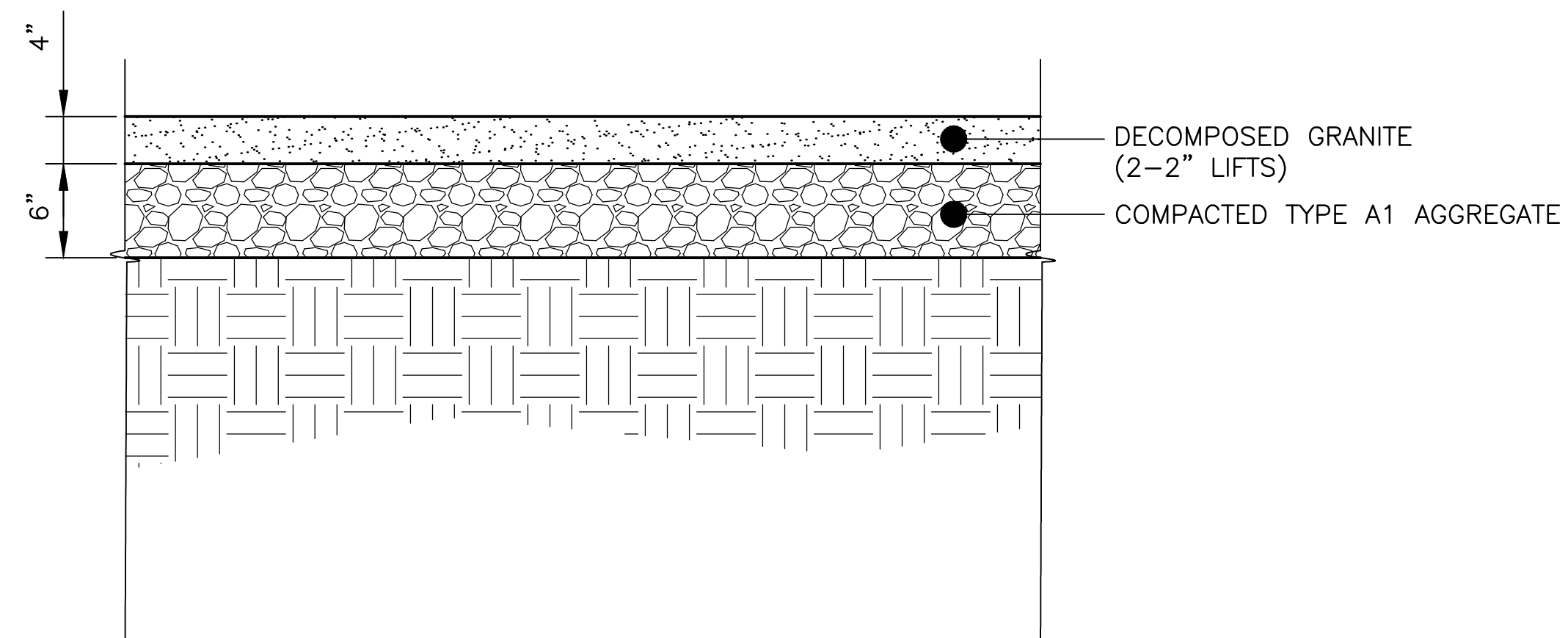
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**CU-514**  
 Page Number: 64



**1 PEDESTRIAN ASPHALT PAVEMENT**  
Scale: NTS

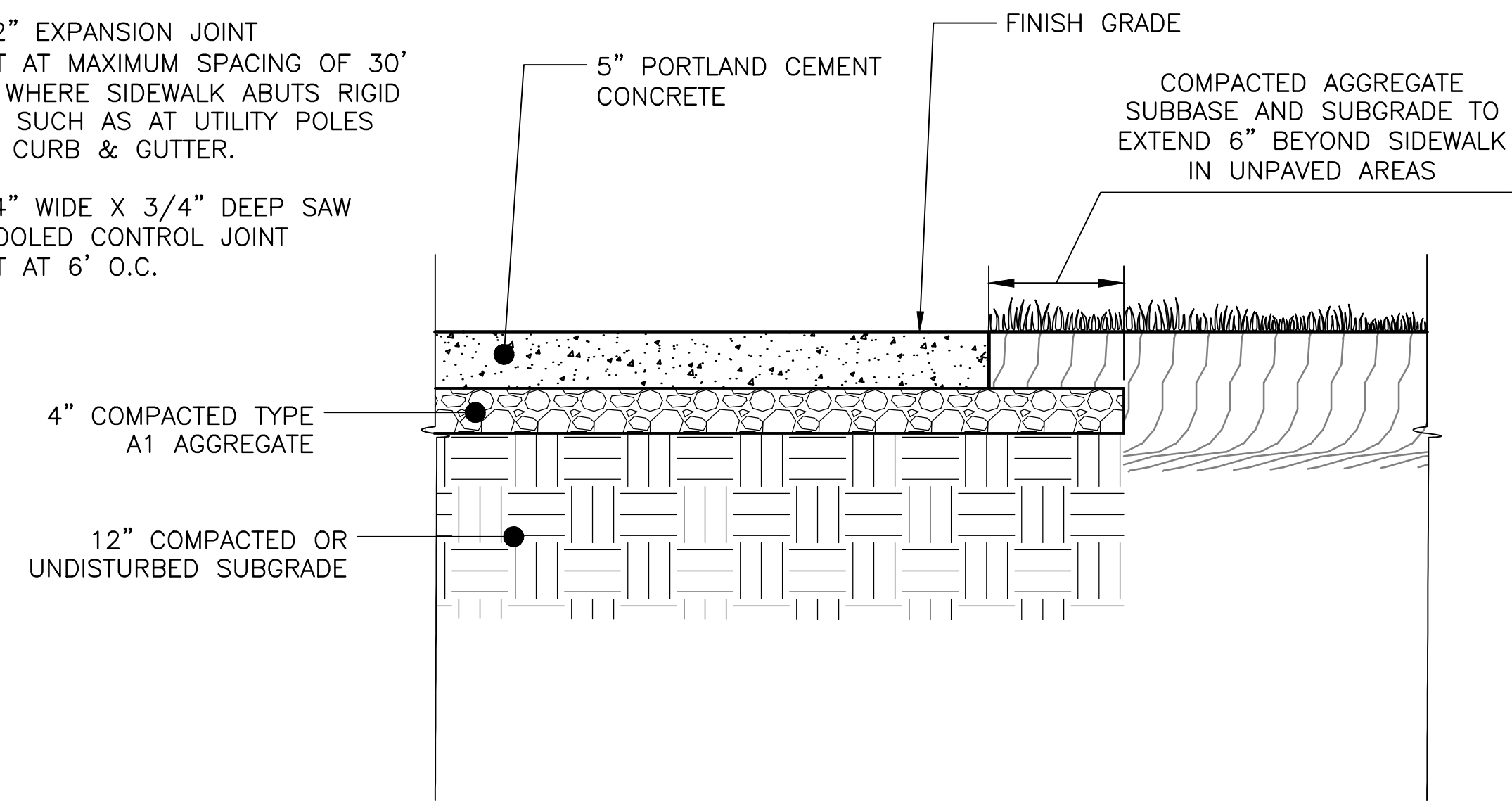


**2 VEHICULAR ASPHALT PAVEMENT - STORMWATER PARK**  
Scale: NTS

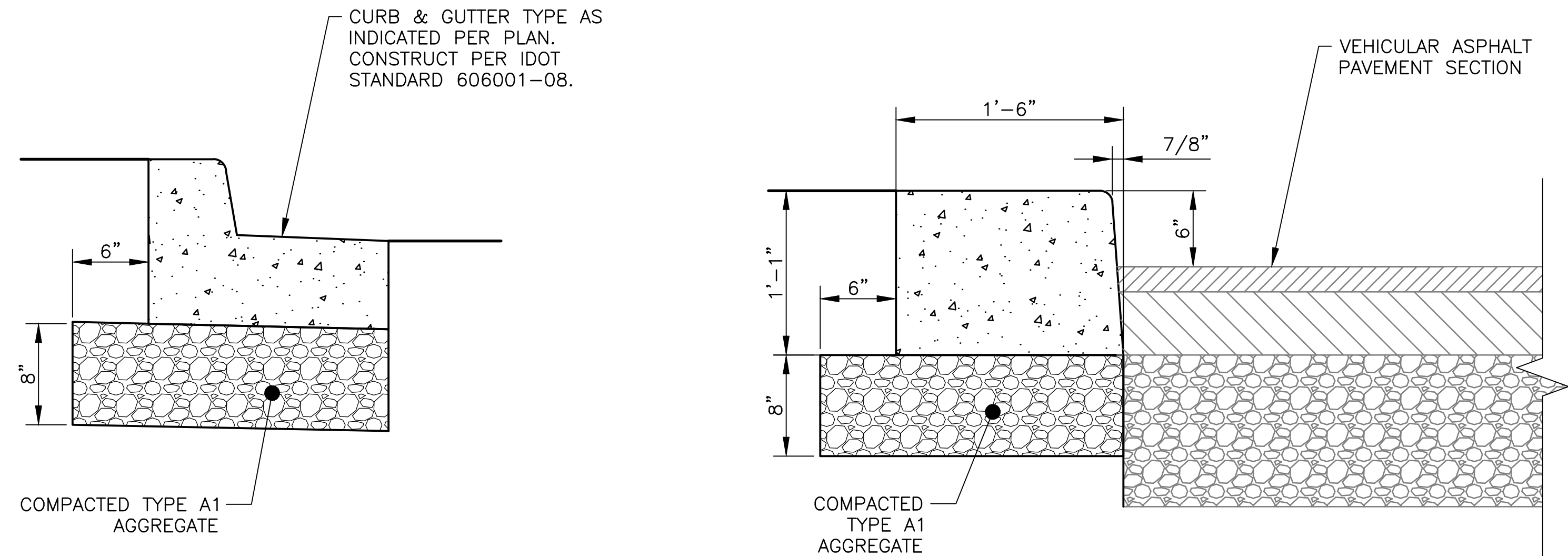


**3 DECOMPOSED GRANITE PAVEMENT**  
Scale: NTS

- NOTES:**
1. PLACE 1/2" EXPANSION JOINT W/SEALANT AT MAXIMUM SPACING OF 30' O.C., AND WHERE SIDEWALK ABUTS RIGID SURFACES, SUCH AS AT UTILITY POLES OR ALONG CURB & GUTTER.
  2. PLACE 1/4" WIDE X 3/4" DEEP SAW CUT OR TOOLED CONTROL JOINT W/SEALANT AT 6' O.C.

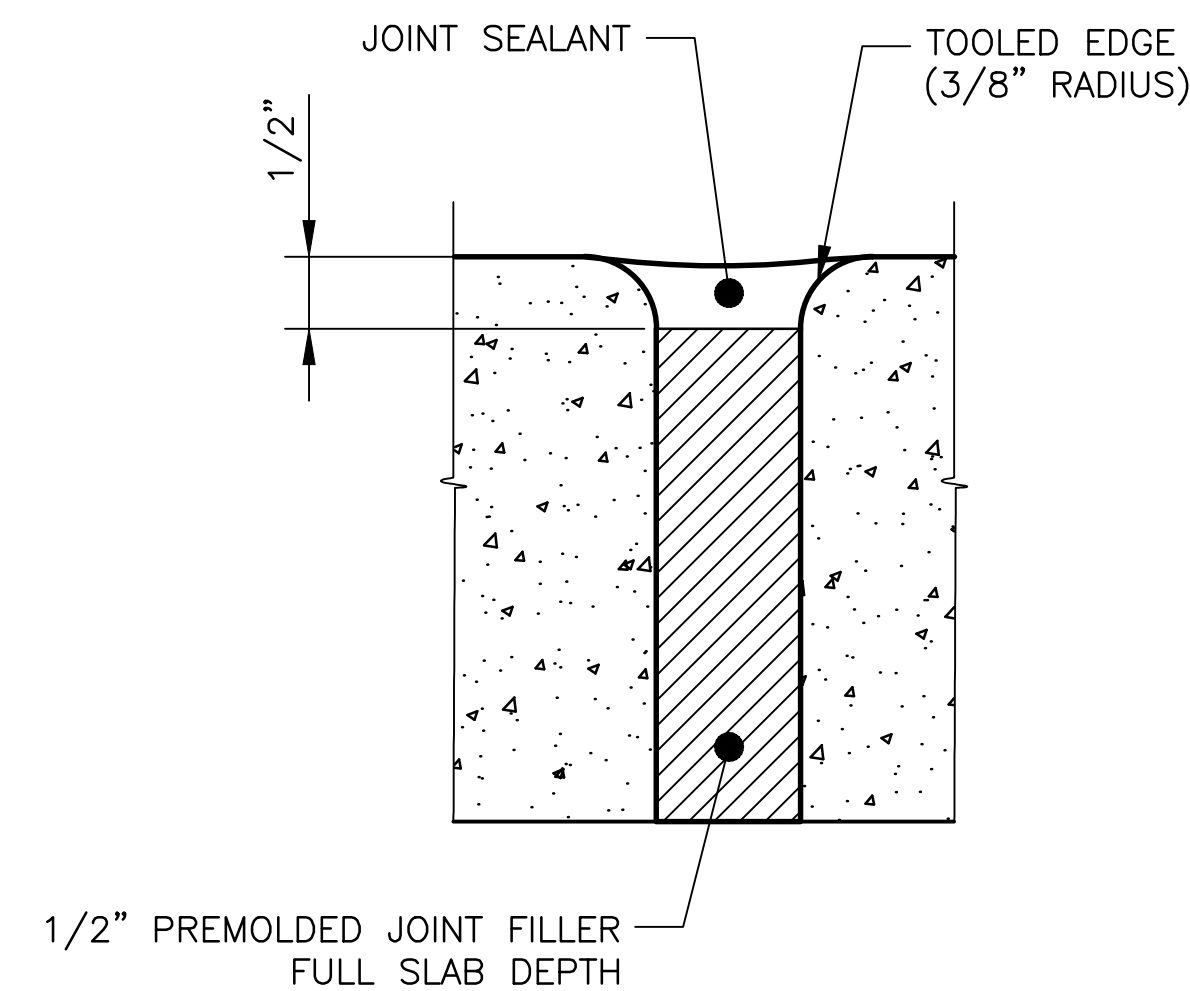


**4 CONCRETE SIDEWALK - STORMWATER PARK**  
Scale: NTS



**5 CURB & GUTTER**  
Scale: NTS

**6 CURB AT STORMWATER PARK BRIDGE**  
Scale: NTS



**7 EXPANSION JOINT**  
Scale: NTS

Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO

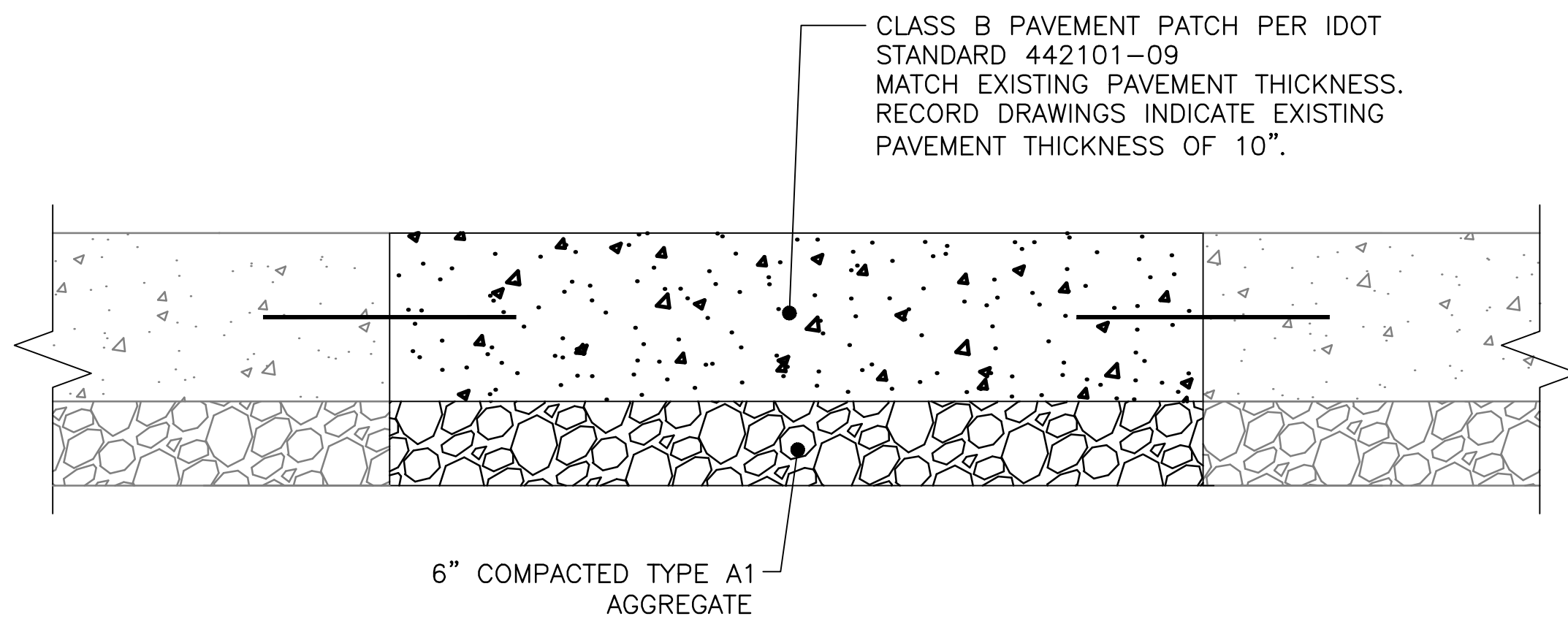
**DONOHUE**
  
**ACCURATE**
  
**LIVING HABITATS**

Designed by:	MLM	Checked by:	PMS
Drawn by:	MLM	Reviewed by:	EPC
Date:	MAY 2024	Scale:	AS SHOWN

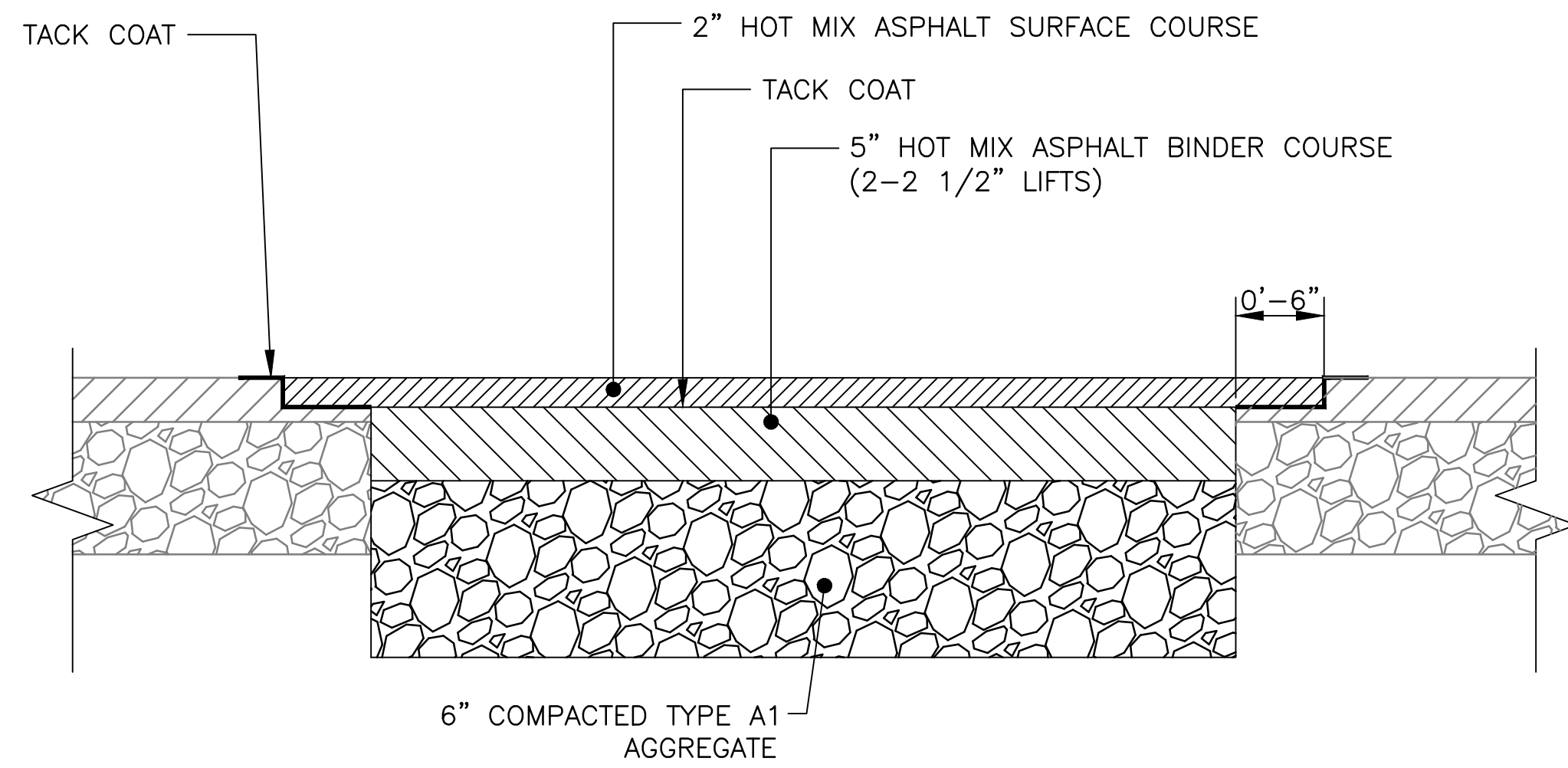
**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

CIVIL DETAILS



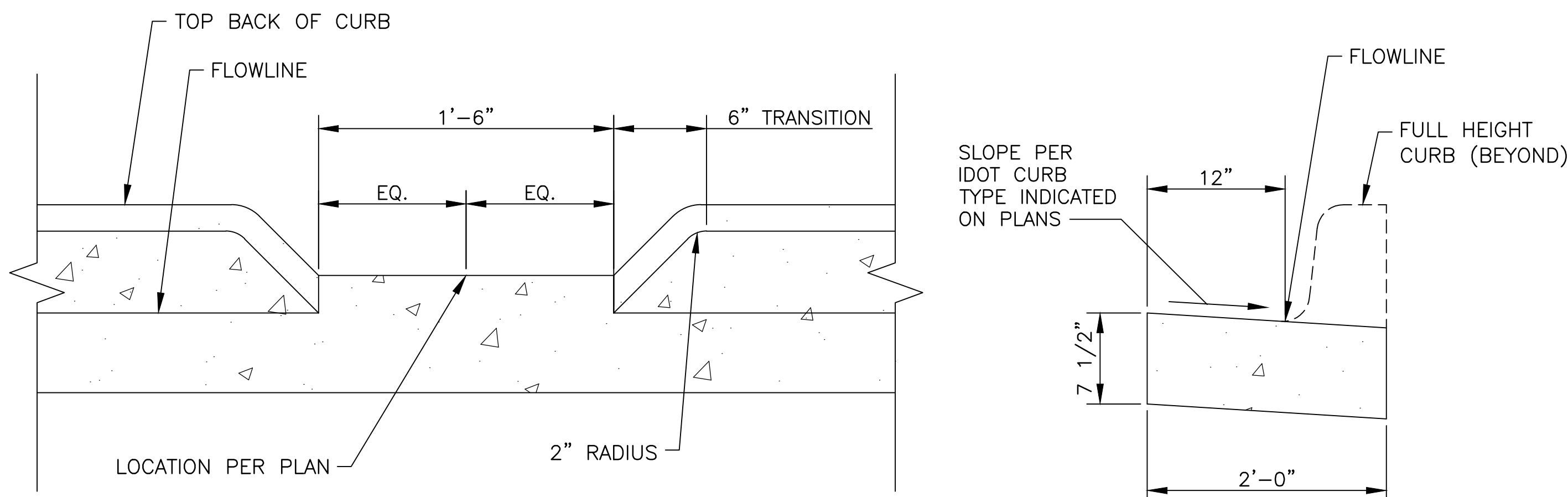


**1 CONCRETE PAVEMENT RESTORATION, KEDZIE AVE AND CLAIRE BLVD**  
Scale: NTS

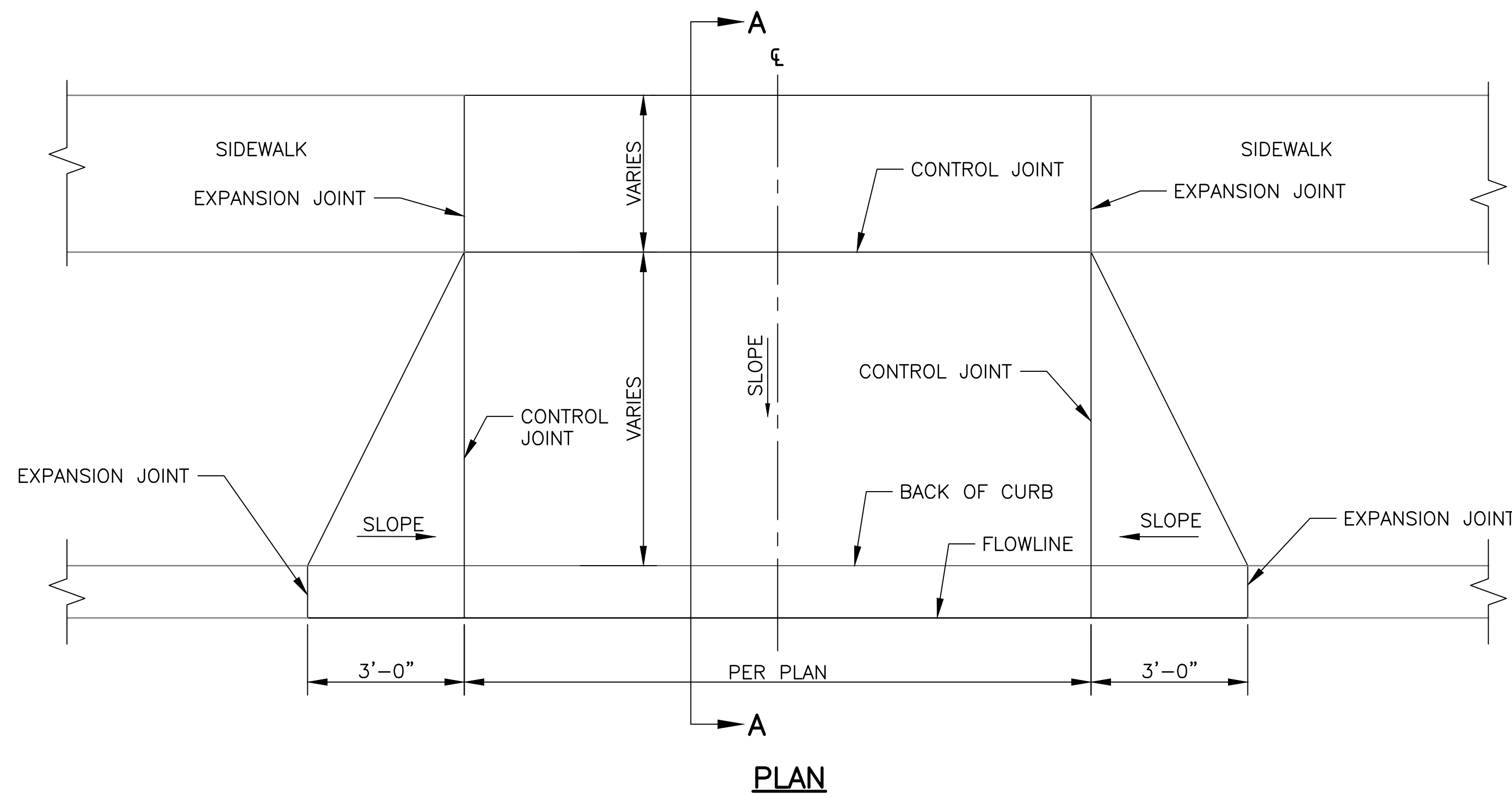


NOTE: ASPHALT RESTORATION SHALL COMPLY WITH REQUIREMENTS OF IDOT CLASS D PAVEMENT PATCHES PER IDOT STANDARD 442201-03.

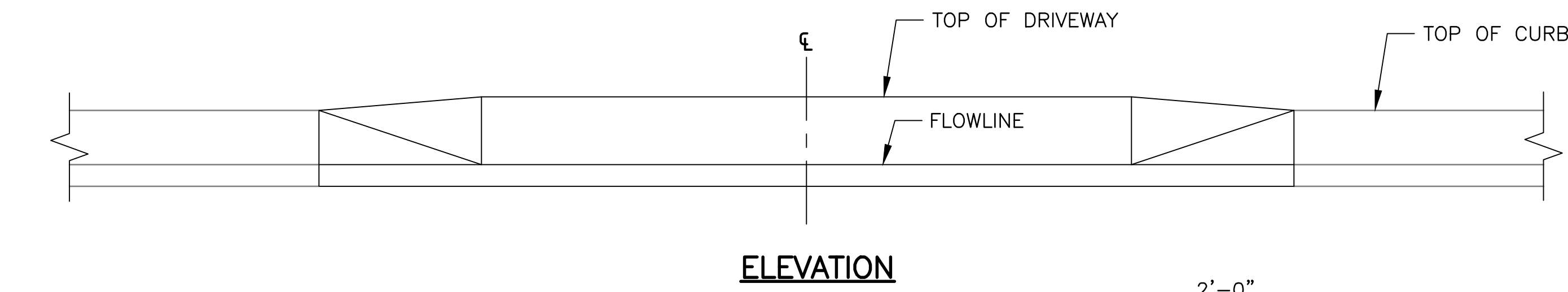
**2 ASPHALT PAVEMENT RESTORATION**  
Scale: NTS



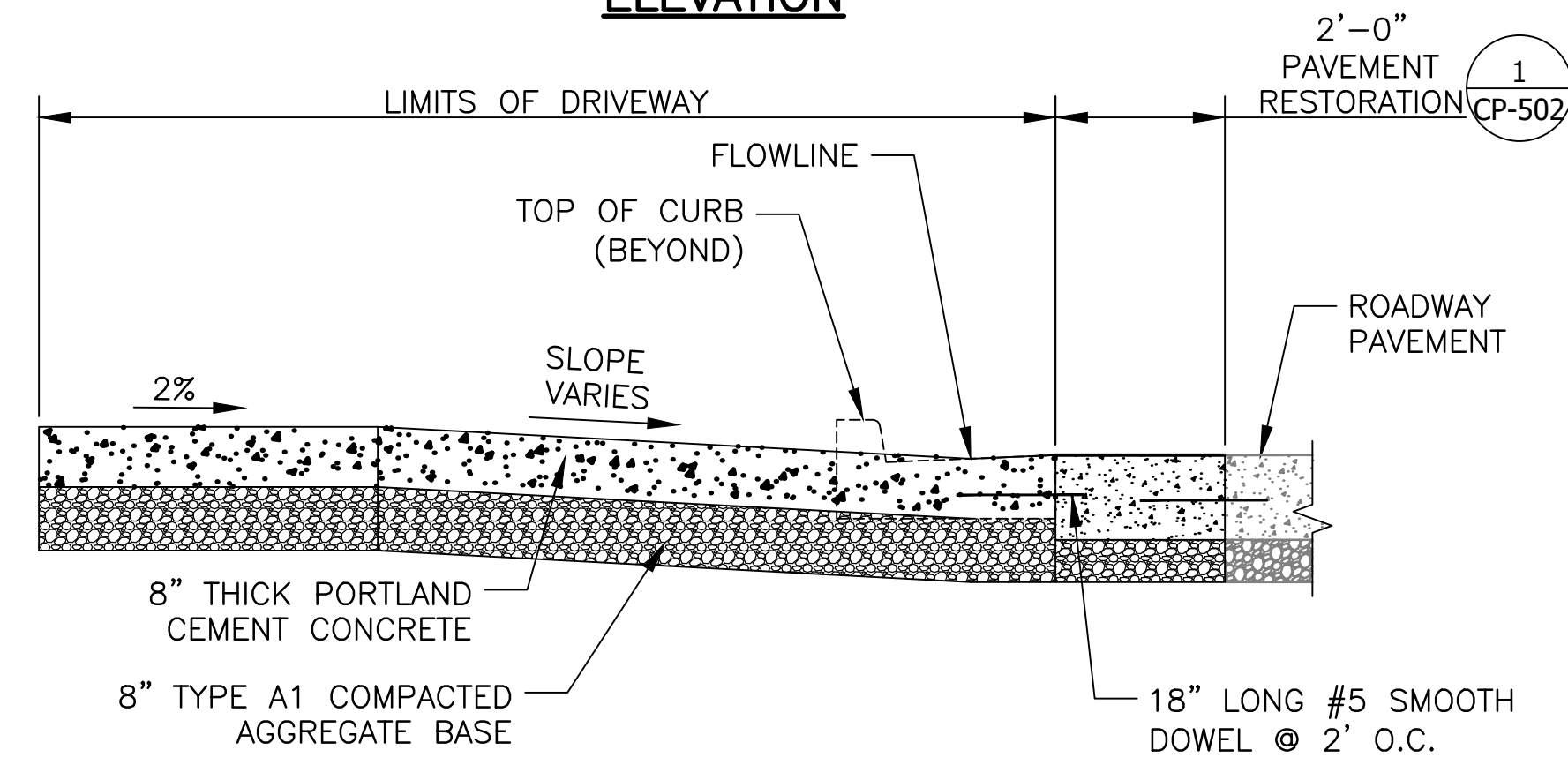
**4 CURB CUT**  
Scale: NTS



**PLAN**

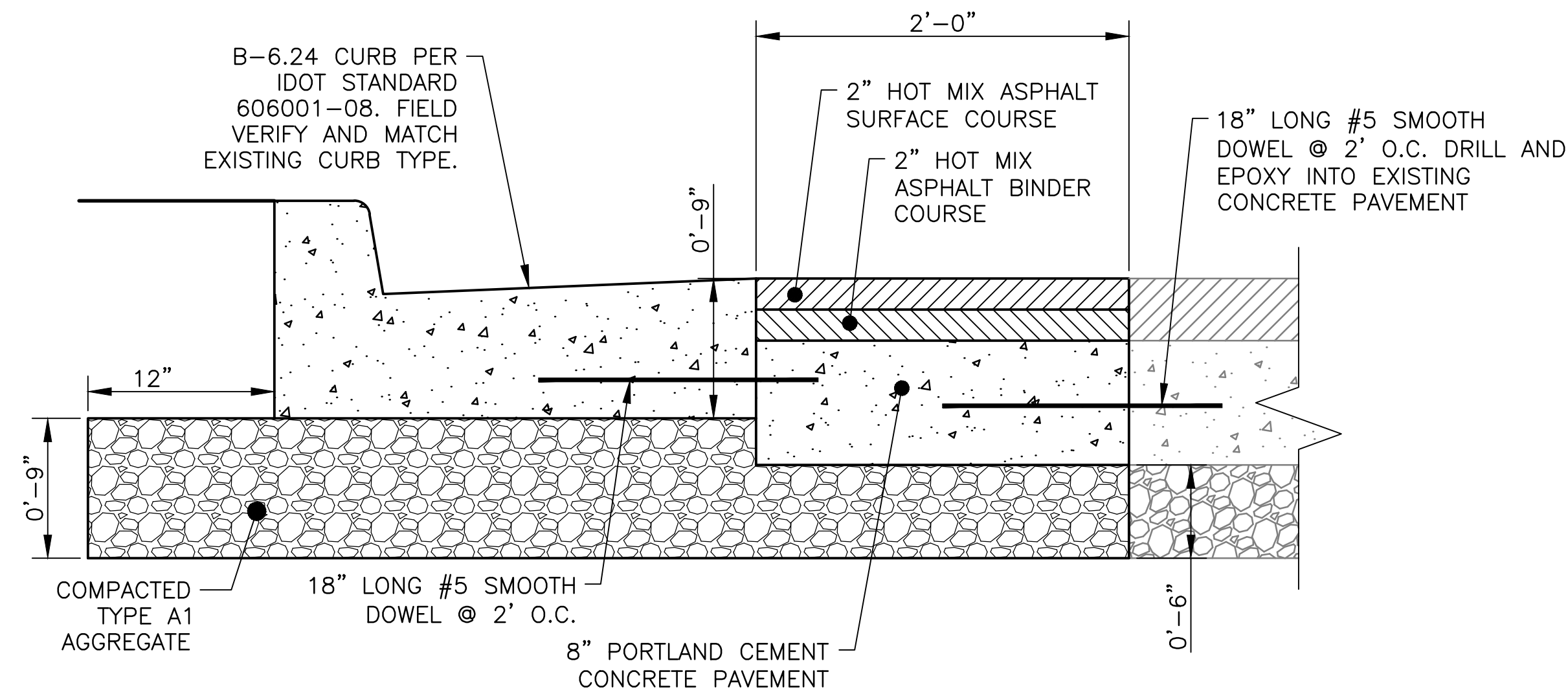


**ELEVATION**



**SECTION A-A**

**3 CONCRETE DRIVEWAY**  
SCALE: NTS



**5 CURB & GUTTER RESTORATION, CLAIRE BLVD**  
SCALE: NTS

Rev.	Description	Appr.	Date
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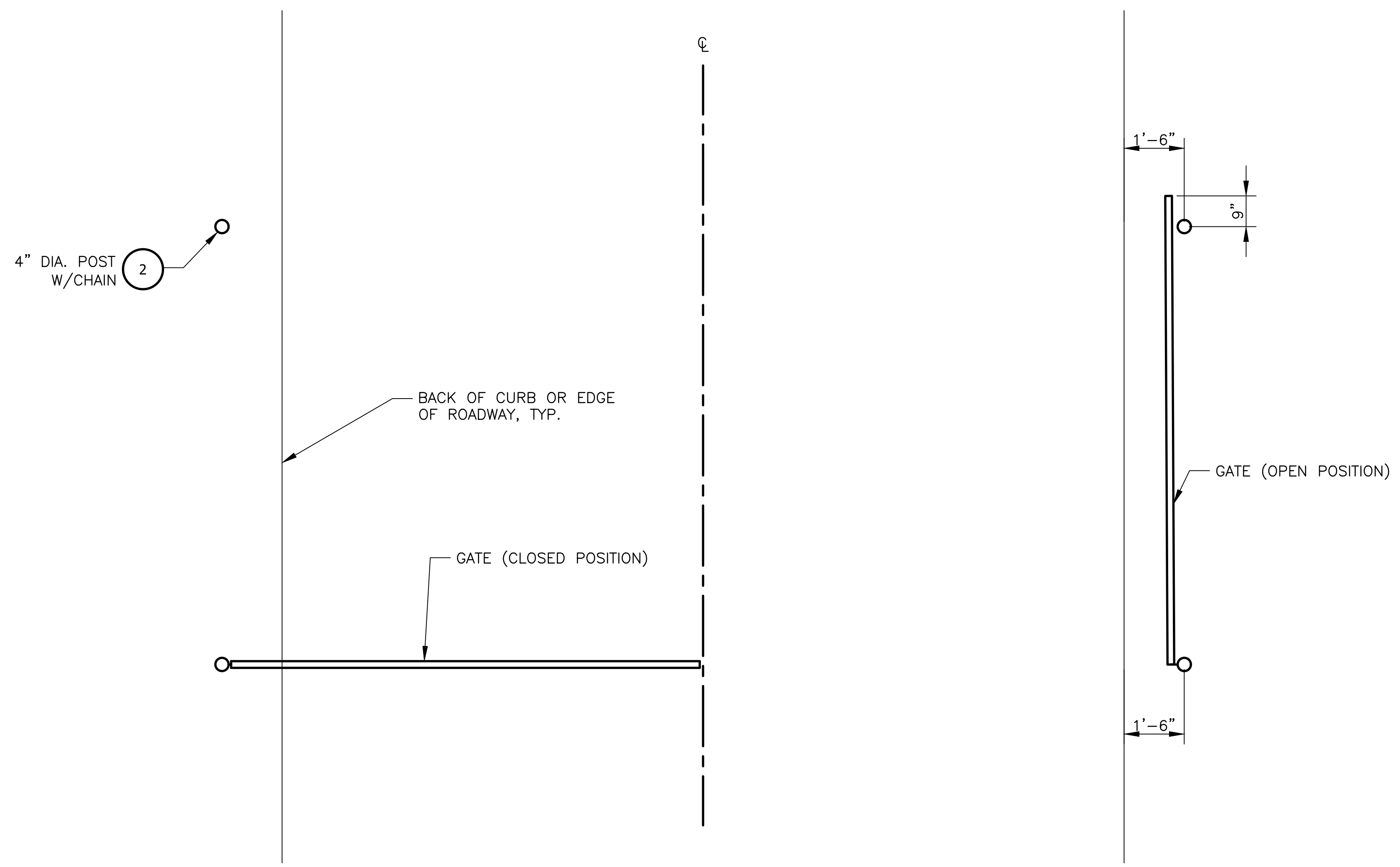
**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

**CONTRACT 14-253-5FR**  
FLOOD CONTROL PROJECT ON MIDDLETHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
LITTLE CALUMET RIVER WATERSHED

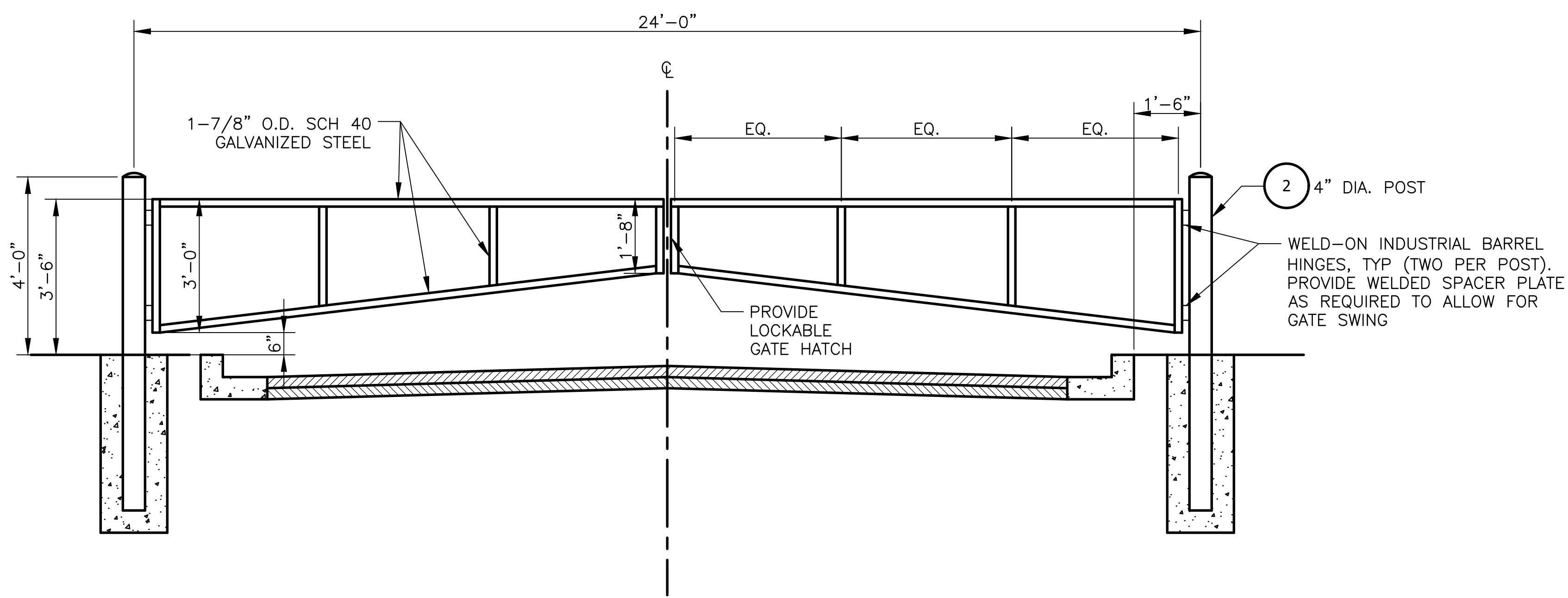
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Designed by: MLM  
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Reviewed by: EPC  
Date: MAY 2024  
Scale: AS SHOWN

**Accurate**  
DONOHUE  
ZIM  
LIVING HABITATS

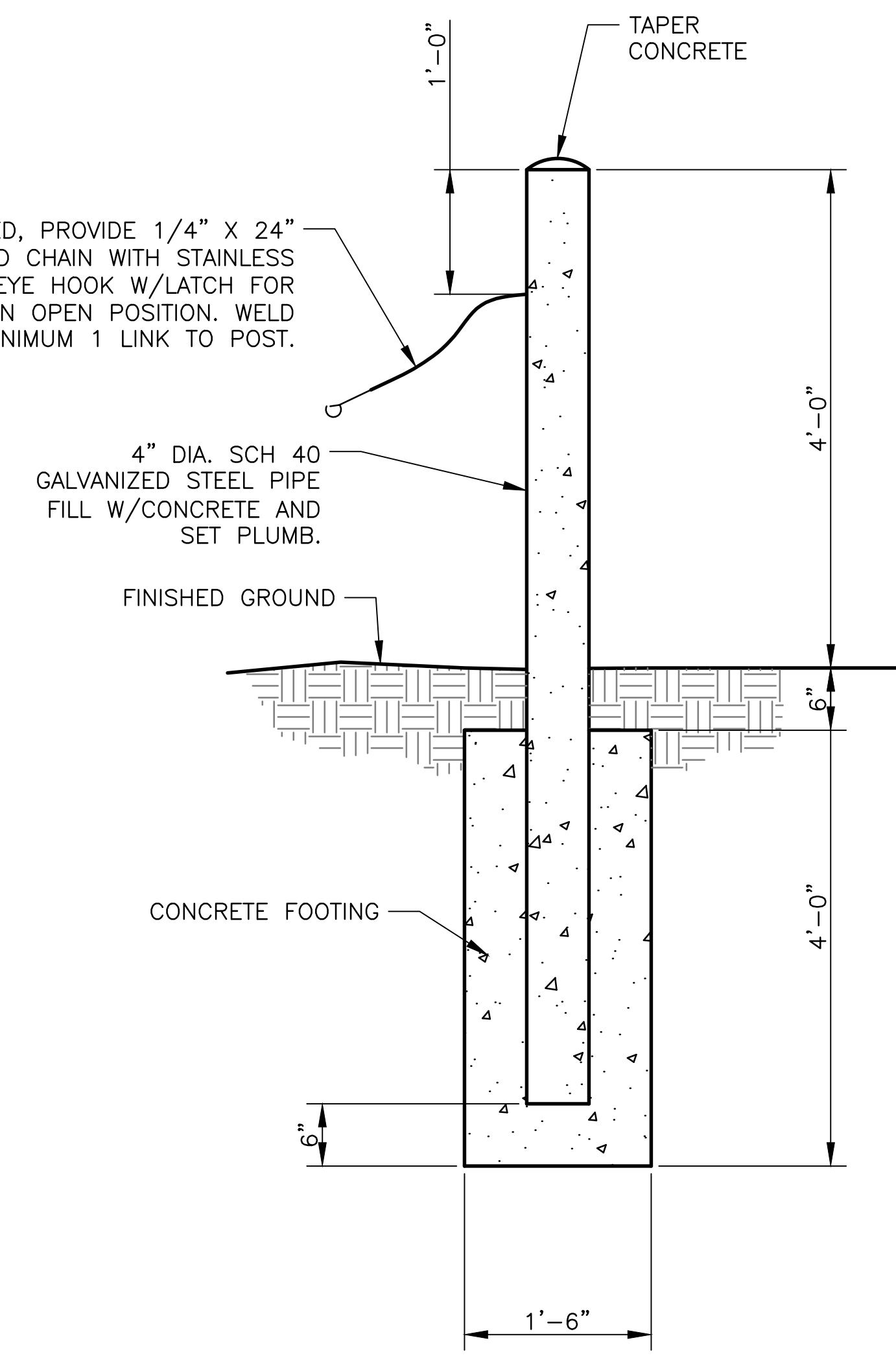


**PLAN**



**1 DOUBLE LEAF MANUAL SWING BARRIER GATE**  
Scale: NTS

WHERE INDICATED, PROVIDE 1/4" X 24" LONG GALVANIZED CHAIN WITH STAINLESS STEEL SWIVEL EYE HOOK W/LATCH FOR SECURING GATE IN OPEN POSITION. WELD MINIMUM 1 LINK TO POST.



**2 4" DIAMETER POST**  
Scale: NTS

METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO

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MLM	PMS
Drawn by:	Reviewed by:
MLM	EPC
Date:	Scale:
MAY 2024	AS SHOWN

**CONTRACT 14-253-5FR**  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	MLM	08/2024

**DONOHUE**  
Accurate  
ENGINEERS, INC.

**ZIM**  
CORPORATION

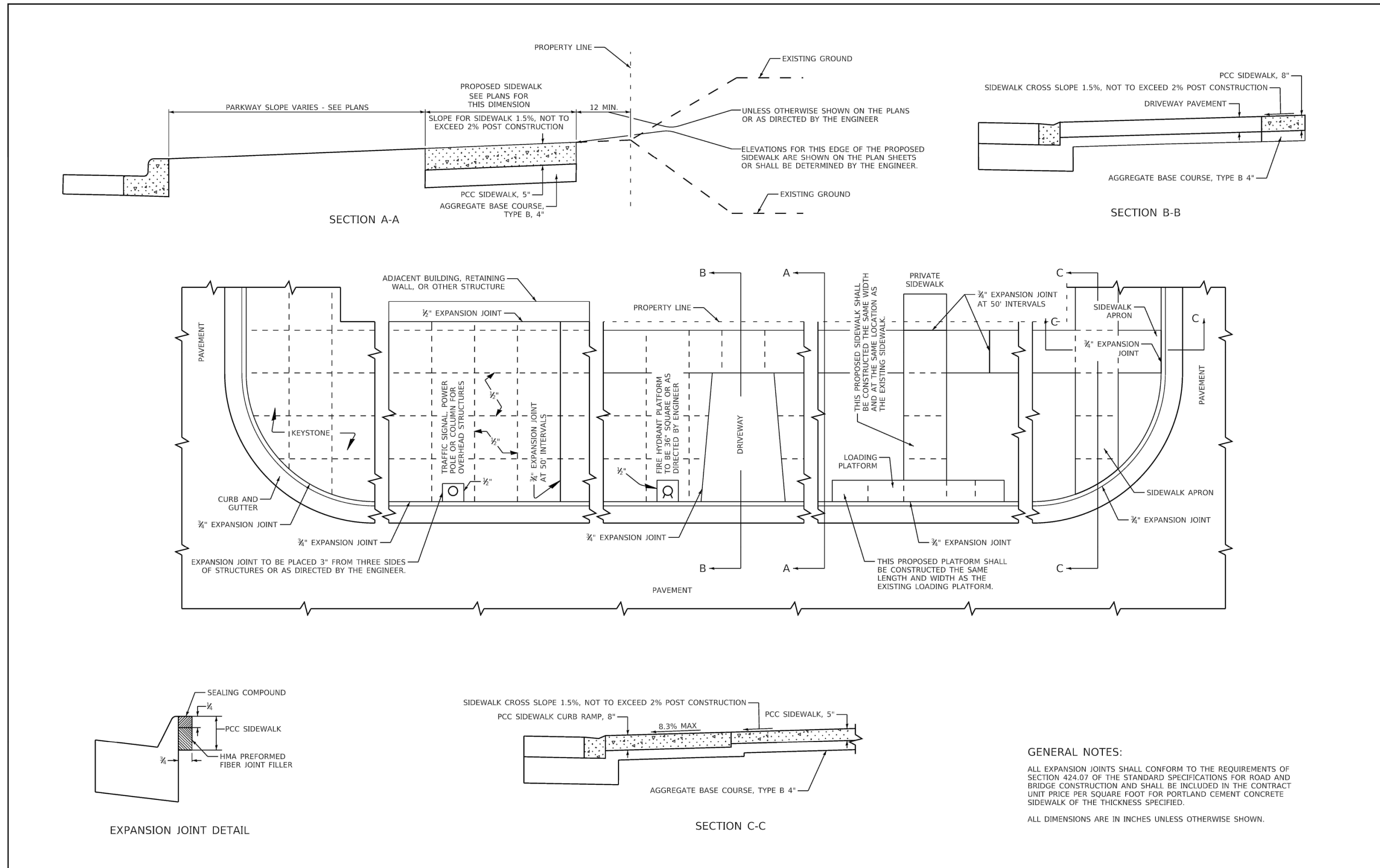
**LIVING HABITATS**

**OVERBEN & ASSOCIATES, INC.**  
CONSULTING ENGINEERS





PLOT DATE: 8/15/2024 12:16 PM PLOTTED BY: MADRID, MICHELLE  
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**GENERAL NOTES:**  
 ALL EXPANSION JOINTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 424.07 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR PORTLAND CEMENT CONCRETE SIDEWALK OF THE THICKNESS SPECIFIED.  
 ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

MUNICIPALITY, IL MUNICIPALITY, IL NAME TOWNSHIP	COUNTY HIGHWAY: XXX FISCAL YEAR: XXXX SECTION: XX-XXXX-XX-XX	 COUNTY OF COOK DEPARTMENT OF TRANSPORTATION AND HIGHWAYS	COMPUTED: XXX DRAWN: XXX CHECKED: XXX	REVISIONS GENERAL 1/1/20 NEW DRAWING SECTION C-C 11/10/22	DATE 1/1/20 11/10/22	PORTLAND CEMENT CONCRETE SIDEWALK CONSTRUCTION DETAIL COOK COUNTY DEPARTMENT OF TRANSPORTATION AND HIGHWAYS STANDARD C-003	C-XXX NOT TO SCALE SHEET X

**1** CCDOTH PCC SIDEWALK DETAIL  
 Scale: NTS

Rev.	Description	Appr.	Date
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**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

Designed by: MLM  
 Checked by: PMS  
 Drawn by: MLM  
 Reviewed by: EPC  
 Date: MAY 2024  
 Scale: AS SHOWN

**LIVING HABITATS**

**DONOHUE**  
 CONSULTING ENGINEERS

**Accurate**  
 CONSULTING ENGINEERS

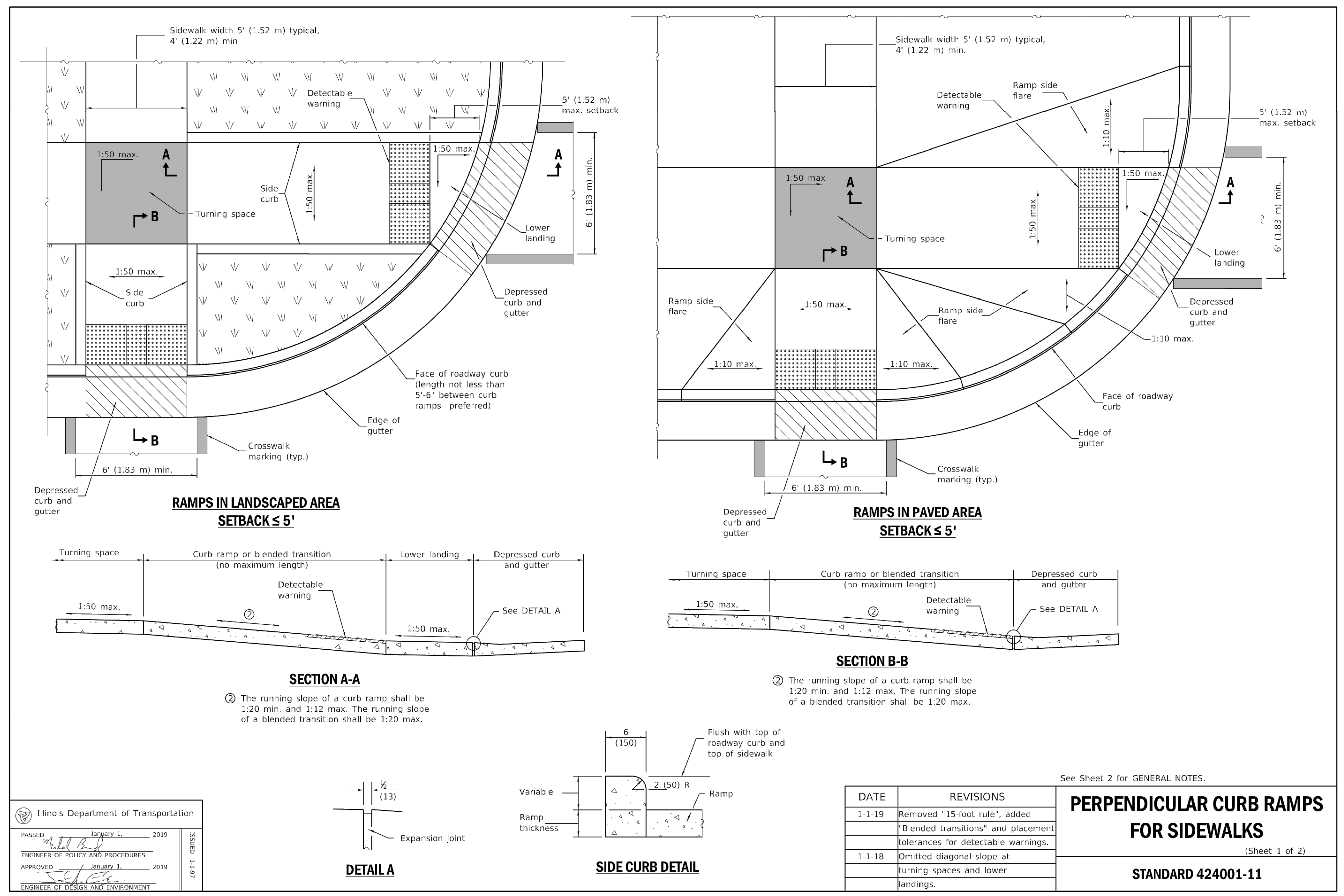
**Zim**  
 CONSULTING ENGINEERS

**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

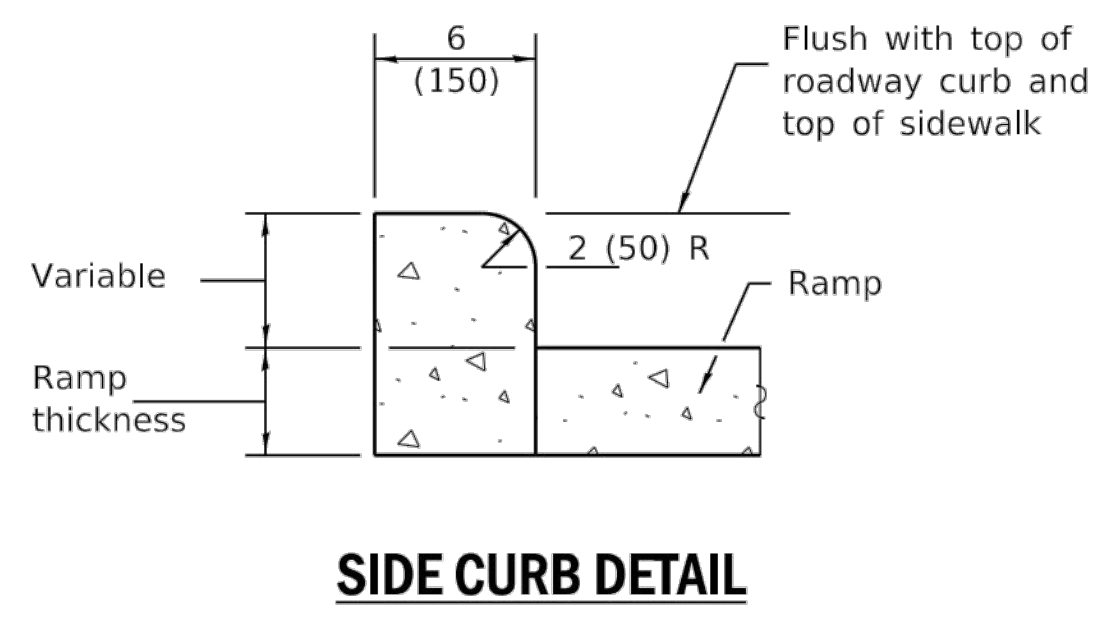
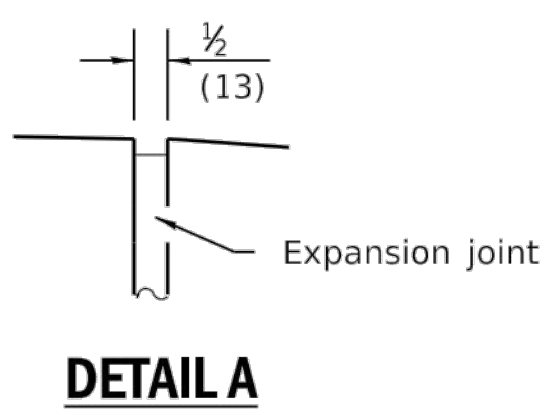
**CIVIL DETAILS**

Sheet Number:  
**CP-505**  
 Page Number: 69

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Illinois Department of Transportation  
 PASSED January 1, 2019  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2019  
 ENGINEER OF DESIGN AND ENVIRONMENT



DATE	REVISIONS
1-1-19	Removed "15-foot rule", added "Blended transitions" and placement tolerances for detectable warnings.
1-1-18	Omitted diagonal slope at turning spaces and lower landings.

See Sheet 2 for GENERAL NOTES.

**PERPENDICULAR CURB RAMPS FOR SIDEWALKS**  
 (Sheet 1 of 2)  
**STANDARD 424001-11**

1 IDOT HIGHWAY STANDARD 424001-11  
 Scale: NTS

Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

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 Drawn by: MLM  
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 Date: MAY 2024  
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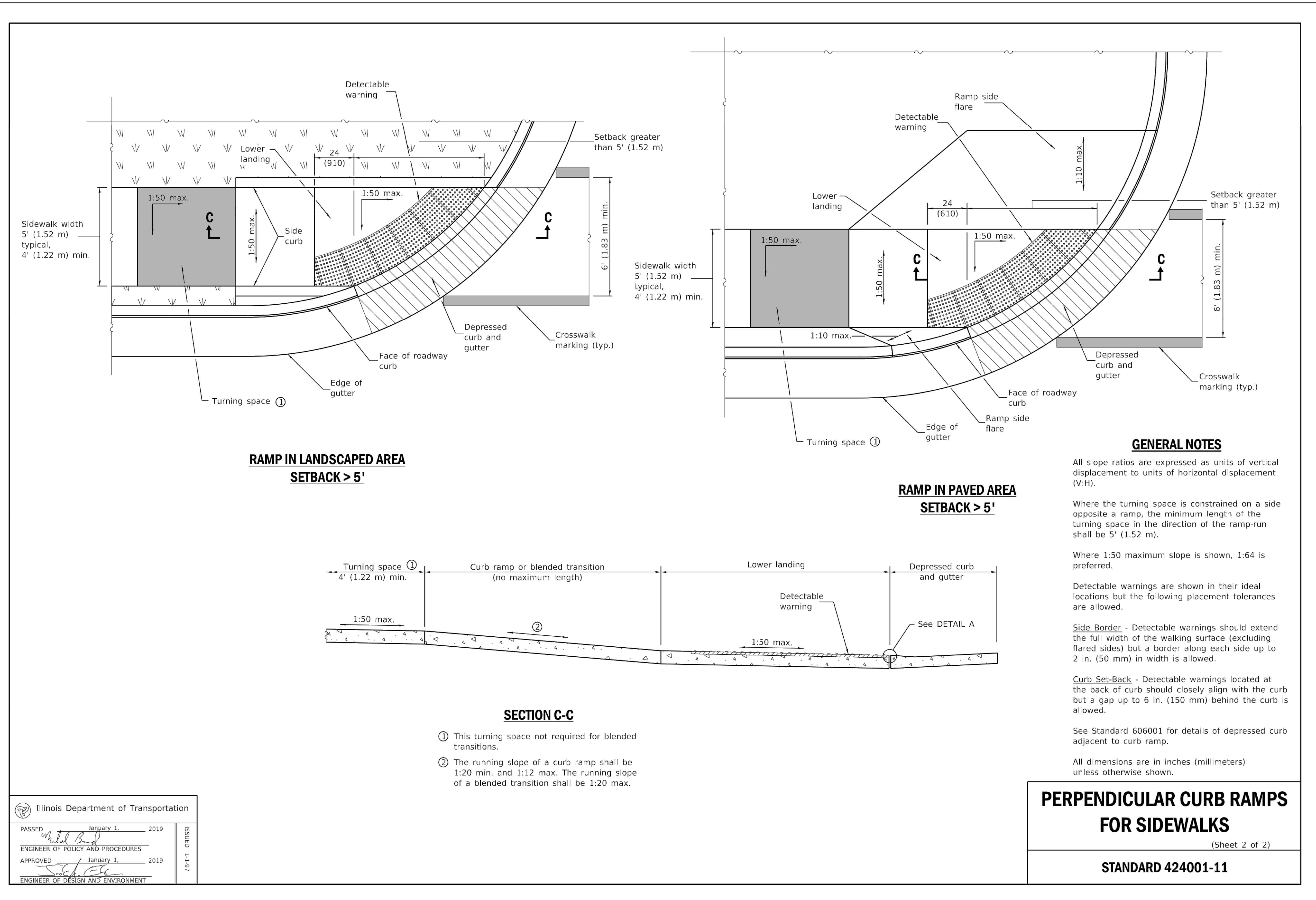
**Accurate**  
 CONSULTING ENGINEERS

**LIVING HABITATS**

CONTRACT 14-253-5FR  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

CIVIL DETAILS

Sheet Number:  
**CP-506**  
 Page Number: 70



Illinois Department of Transportation

PASSED January 1, 2019  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2019  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1.19  
 6/8/11 03/ISS/

1 IDOT HIGHWAY STANDARD 424001-11  
 Scale: NTS

**PERPENDICULAR CURB RAMPS  
 FOR SIDEWALKS**  
 (Sheet 2 of 2)  
**STANDARD 424001-11**

Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024

**METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO**

**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Designed by: MLM  
 Checked by: PMS  
 Drawn by: MLM  
 Reviewed by: EPC  
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**ILTRI**  
**LIVING HABITATS**

**DONOHUE**  
 CONSULTING ENGINEERS

**Accurate**  
 CONSULTING ENGINEERS

**ZIM**  
 CONSULTING ENGINEERS

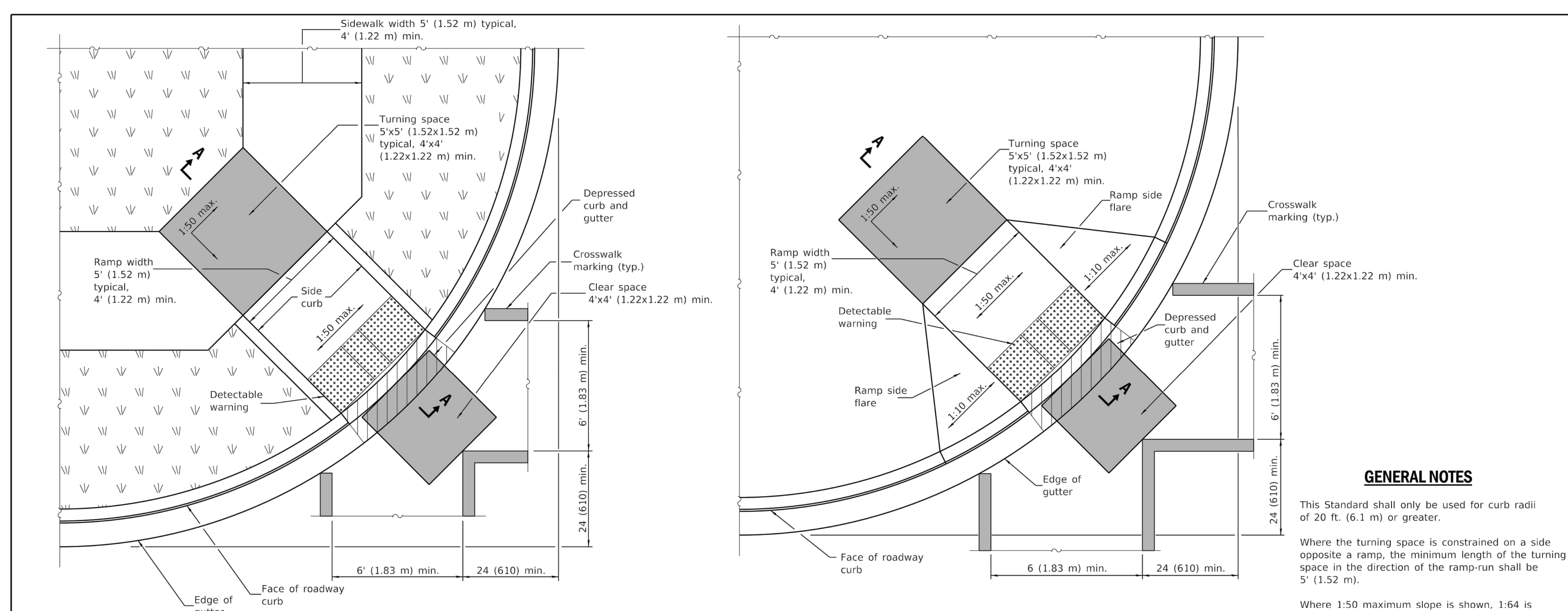
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 OYLERIN & ASSOCIATES, INC.  
 CONSULTING ENGINEERS

Sheet Number:  
**CP-507**

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 PLOT DATE: 8/15/2024 12:16 PM PLOTTED BY: MADRID, MICHELLE



**RAMP IN LANDSCAPED AREA**

**RAMP IN PAVED AREA**

**GENERAL NOTES**

This Standard shall only be used for curb radii of 20 ft. (6.1 m) or greater.

Where the turning space is constrained on a side opposite a ramp, the minimum length of the turning space in the direction of the ramp-run shall be 5' (1.52 m).

Where 1:50 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

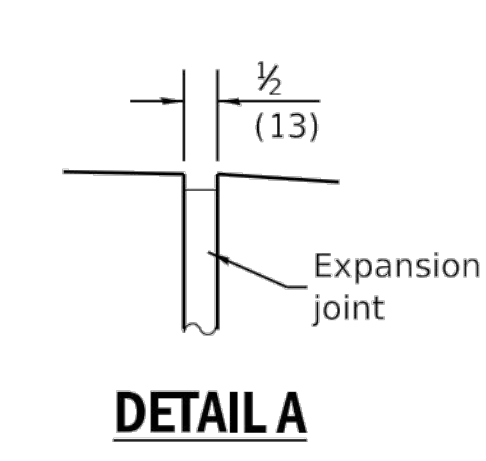
**Side Border** - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in width is allowed.

**Curb Set-Back** - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

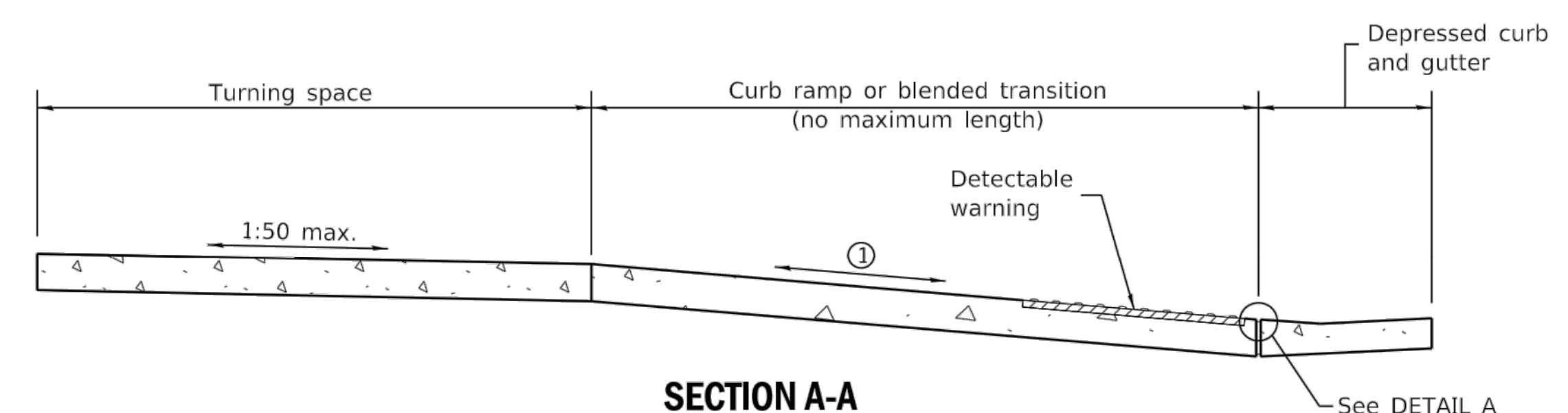
All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

See Standard 606001 for details of depressed curb adjacent to curb ramp.

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

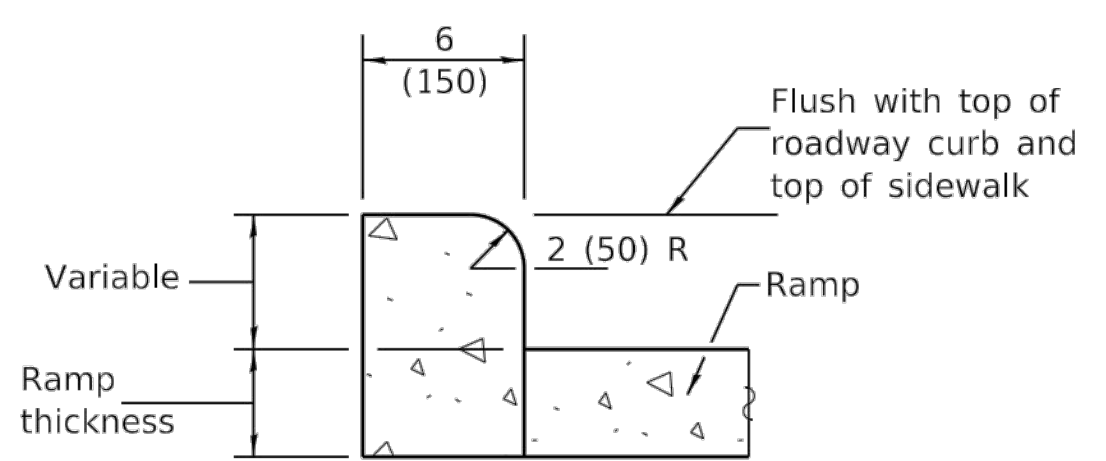


**DETAIL A**



**SECTION A-A**

① The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.



**SIDE CURB DETAIL**

DATE	REVISIONS
1-1-21	Clarified minimum crosswalk width and locations.
1-1-19	Removed "15-foot rule", added "blended transitions" and placement tolerances for detectable warnings.

**DIAGONAL CURB RAMPS FOR SIDEWALKS**  
**STANDARD 424006-05**

Illinois Department of Transportation  
 PASSED January 1, 2021  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2021  
 ENGINEER OF DESIGN AND ENVIRONMENT

1 IDOT HIGHWAY STANDARD 424006-05  
 Scale: NTS

Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024

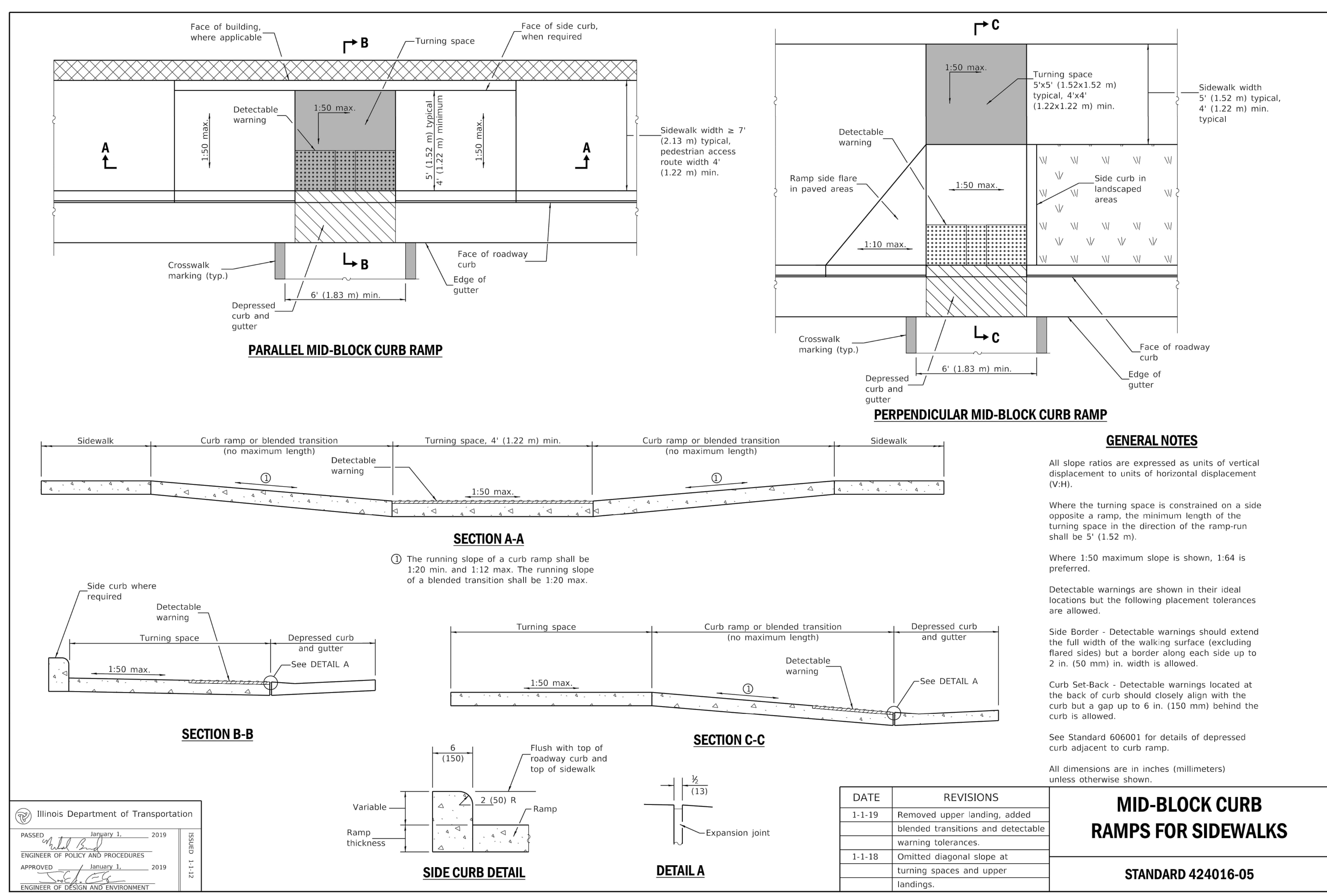
METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO  
 DONOHUE CONSULTING ENGINEERS  
 ACCURATE CONSULTING ENGINEERS  
 LIVING HABITATS  
 Checked by: PMS  
 Reviewed by: EPC  
 Scale: AS SHOWN  
 Date: MAY 2024

CONTRACT 14-253-5FR  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED  
 CIVIL DETAILS

Sheet Number:  
**CP-508**  
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PLOT DATE: 8/15/2024 12:17 PM PLOTTED BY: MADRID, MICHELLE  
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**GENERAL NOTES**

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

Where the turning space is constrained on a side opposite a ramp, the minimum length of the turning space in the direction of the ramp-run shall be 5' (1.52 m).

Where 1:50 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in. width is allowed.

Curb Set-Back - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

See Standard 606001 for details of depressed curb adjacent to curb ramp.

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

DATE	REVISIONS
1-1-19	Removed upper landing, added blended transitions and detectable warning tolerances.
1-1-18	Omitted diagonal slope at turning spaces and upper landings.

**MID-BLOCK CURB RAMP FOR SIDEWALKS**

**STANDARD 424016-05**

Illinois Department of Transportation

PASSED January 1, 2019  
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2019  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-12  
 2F 1-12

**1** IDOT HIGHWAY STANDARD 424016-05  
 Scale: NTS

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Designed by: MLM  
 Checked by: PMS  
 Drawn by: MLM  
 Reviewed by: EPC  
 Date: MAY 2024  
 Scale: AS SHOWN

**2im**  
 CONSULTING ENGINEERS

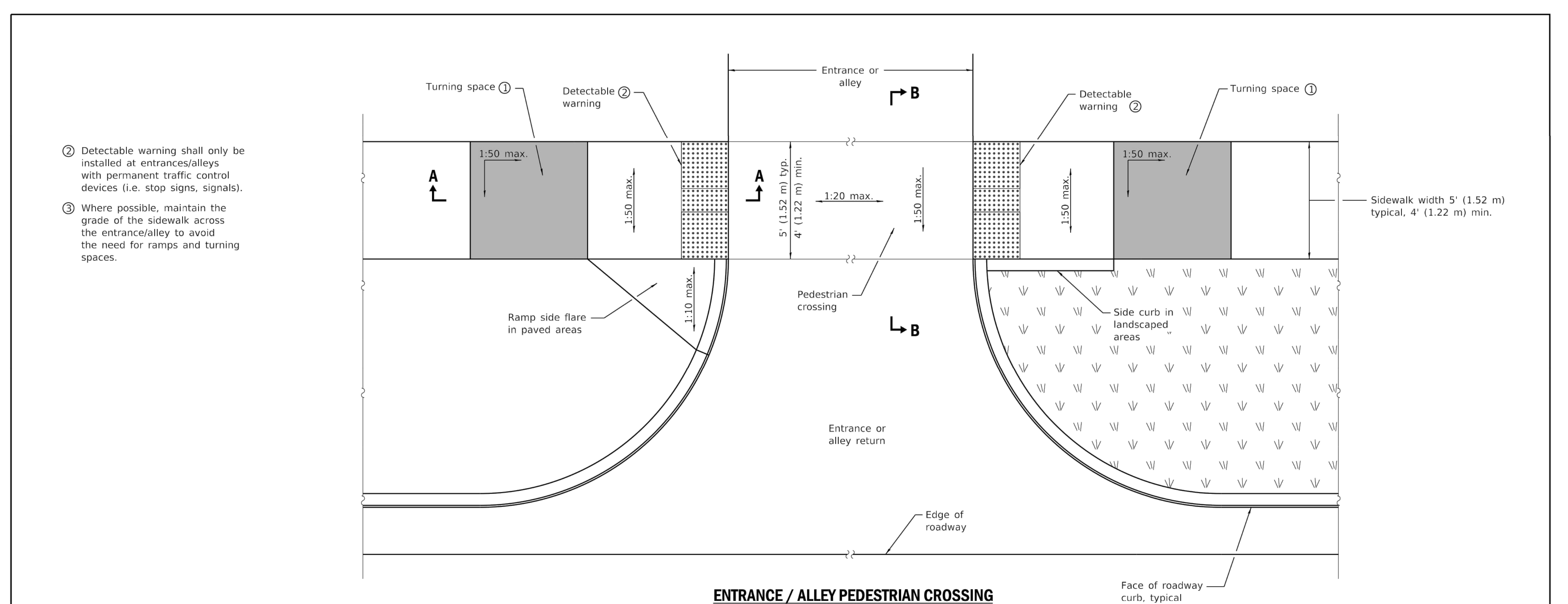
**DONOHUE**  
 ACCURATE  
 CONSULTING ENGINEERS

**LIVING HABITATS**

Rev. Description Appr. Date  
 ISSUE FOR CONSTRUCTION MLM 08/2024

Sheet Number:  
**CP-509**

Page Number: 73



- ② Detectable warning shall only be installed at entrances/alleys with permanent traffic control devices (i.e. stop signs, signals).
- ③ Where possible, maintain the grade of the sidewalk across the entrance/alley to avoid the need for ramps and turning spaces.

**ENTRANCE / ALLEY PEDESTRIAN CROSSING**

**GENERAL NOTES**

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

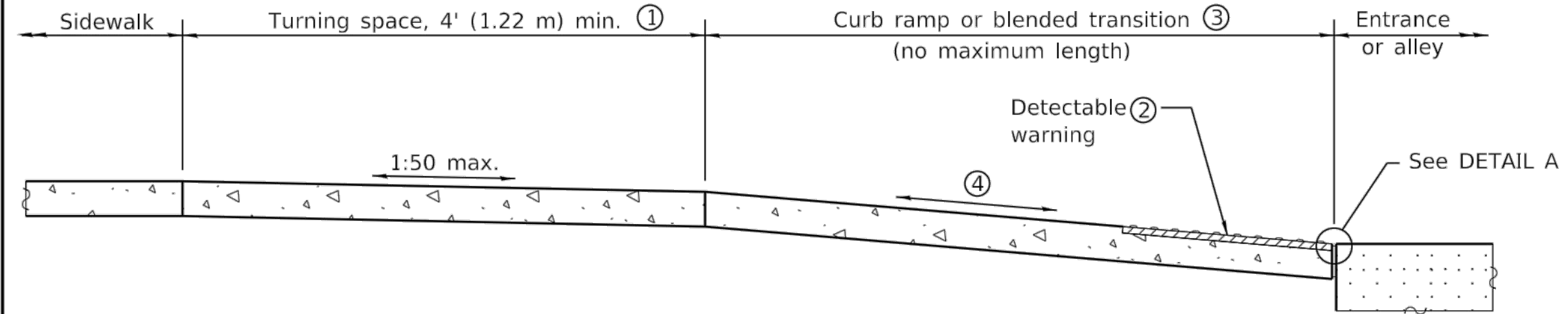
Where 1:50 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

**Side Border** - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in width is allowed.

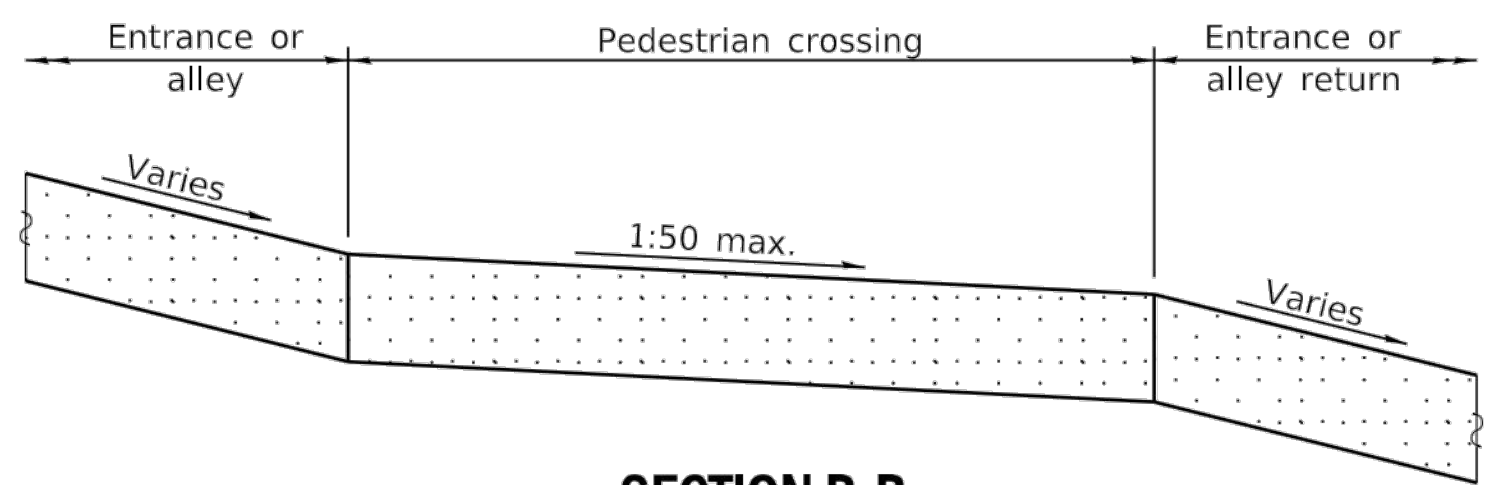
**Curb Set-Back** - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

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

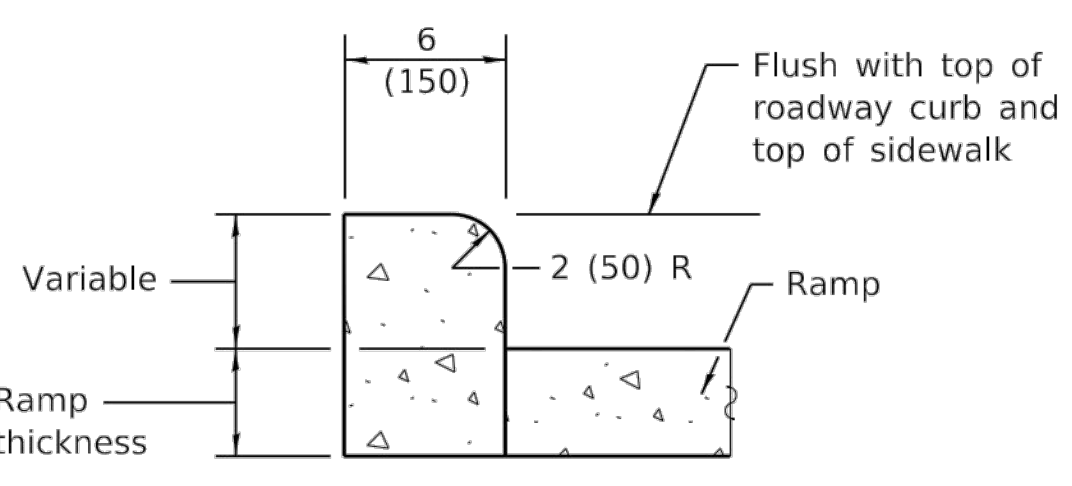


**SECTION A-A**

- ① Turning space not required for blended transitions.
- ④ The running slope of a curb ramp shall be 1:20 min and 1:12 max. The running slope of a blended transition shall be 1:20 max.



**SECTION B-B**



**SIDE CURB DETAIL**

Illinois Department of Transportation

PASSED January 1, 2019  
*Michael B. ...*  
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2019  
*S. E. ...*  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-12

**DETAIL A**

DATE	REVISIONS
1-1-19	Added blended transitions and placement tolerances for detectable warnings.
1-1-18	Omitted diagonal slope at upper landings.

**ENTRANCE / ALLEY PEDESTRIAN CROSSINGS**

**STANDARD 424026-03**

① IDOT HIGHWAY STANDARD 424026-03  
 Scale: NTS

Rev.	Description	Appr.	Date
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**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

Designed by: MLM  
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 Reviewed by: EPC  
 Date: MAY 2024  
 Scale: AS SHOWN

**ILTRI**  
**LIVING HABITATS**

**DONOHUE**  
 CONSULTING ENGINEERS

**Accurate**  
 CONSULTING ENGINEERS

**OBERLIN & ASSOCIATES, INC.**  
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**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-510**  
 Page Number: 74

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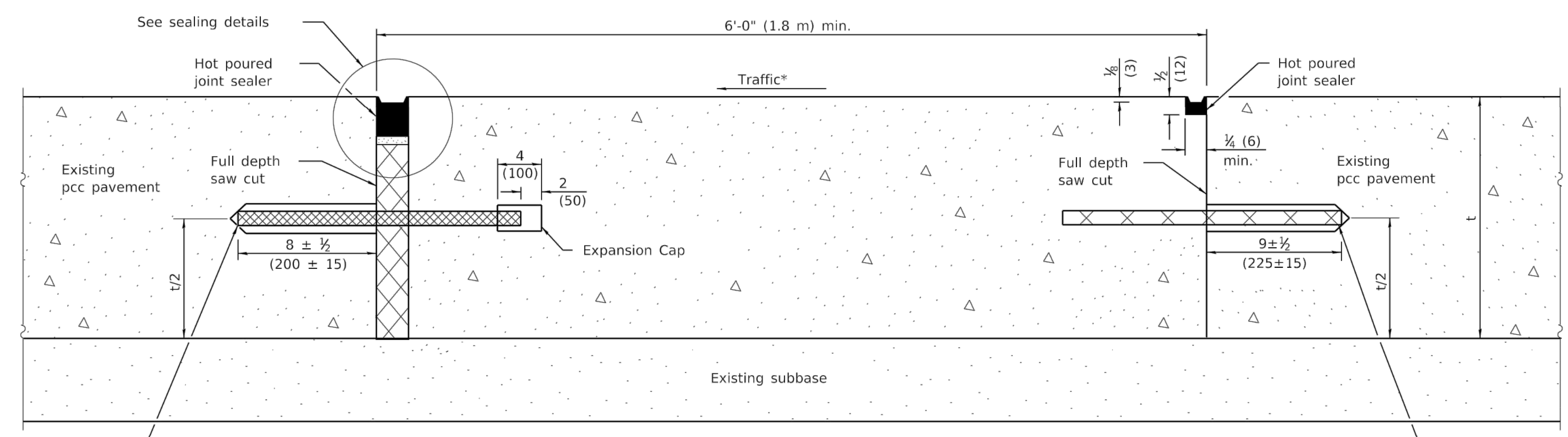
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Illinois Department of Transportation

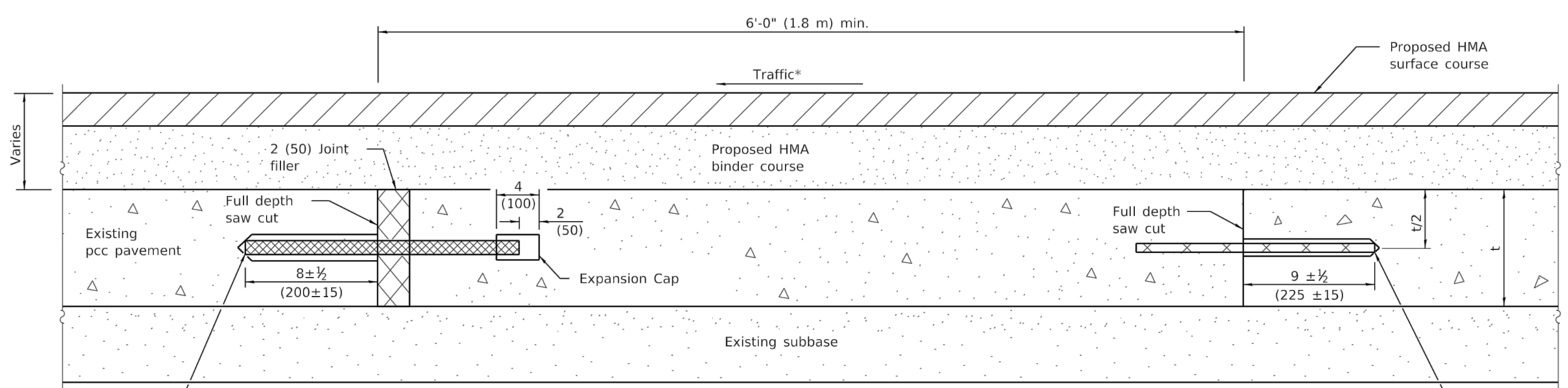
PASSED January 1, 2019  
*Michael B. ...*  
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2019  
*J. ...*  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUES: /6 1-1 GEN/SES/

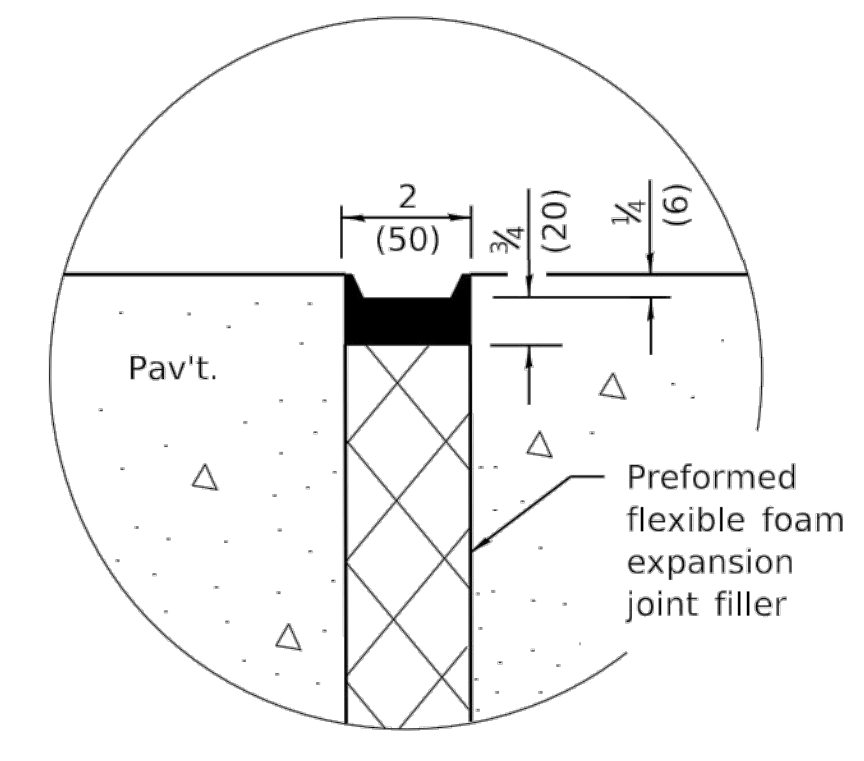


**METHOD I**  
(Without Resurfacing)

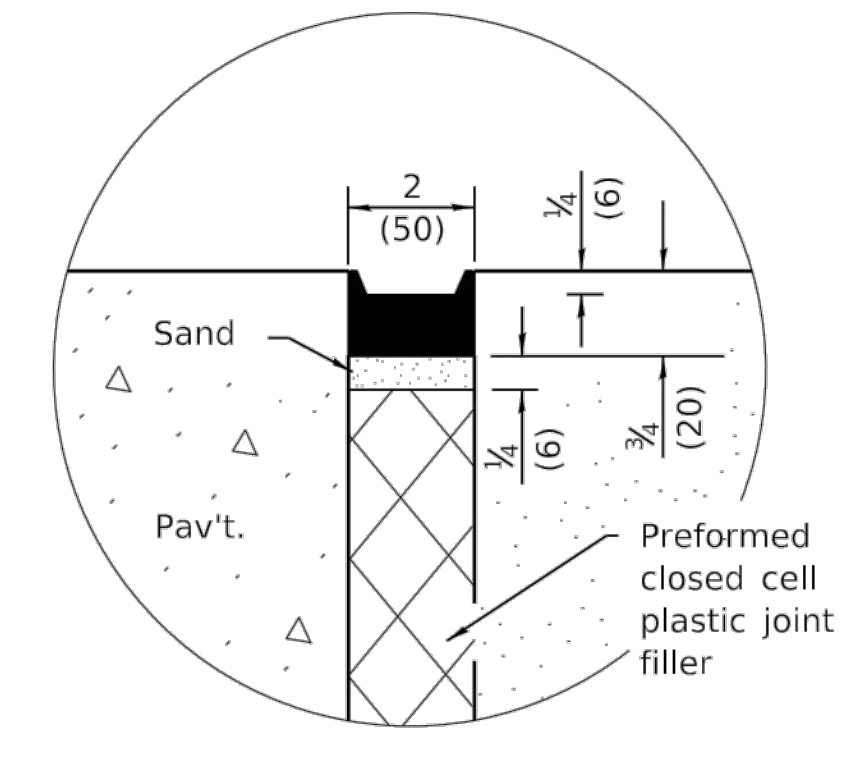


**METHOD II**  
(With Resurfacing)

**TRANSVERSE EXPANSION JOINTS**



**SEALING DETAIL**



**SEALING DETAIL**

**NOTE**

\* When re-establishing a transverse expansion joint on a two-lane, two-way road, reverse the orientation of the dowel bars with respect to traffic for one of the patches such that the joint will be continuous across both lanes.

**CLASS B PATCHES**

(Sheet 2 of 2)

**STANDARD 442101-09**

**1 IDOT HIGHWAY STANDARD 442101-09**  
Scale: NTS

Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	MLM	08/2024

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

Designed by: MLM  
 Checked by: PMS  
 Drawn by: MLM  
 Reviewed by: EPC  
 Date: MAY 2024  
 Scale: AS SHOWN

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**DONOHUE**  
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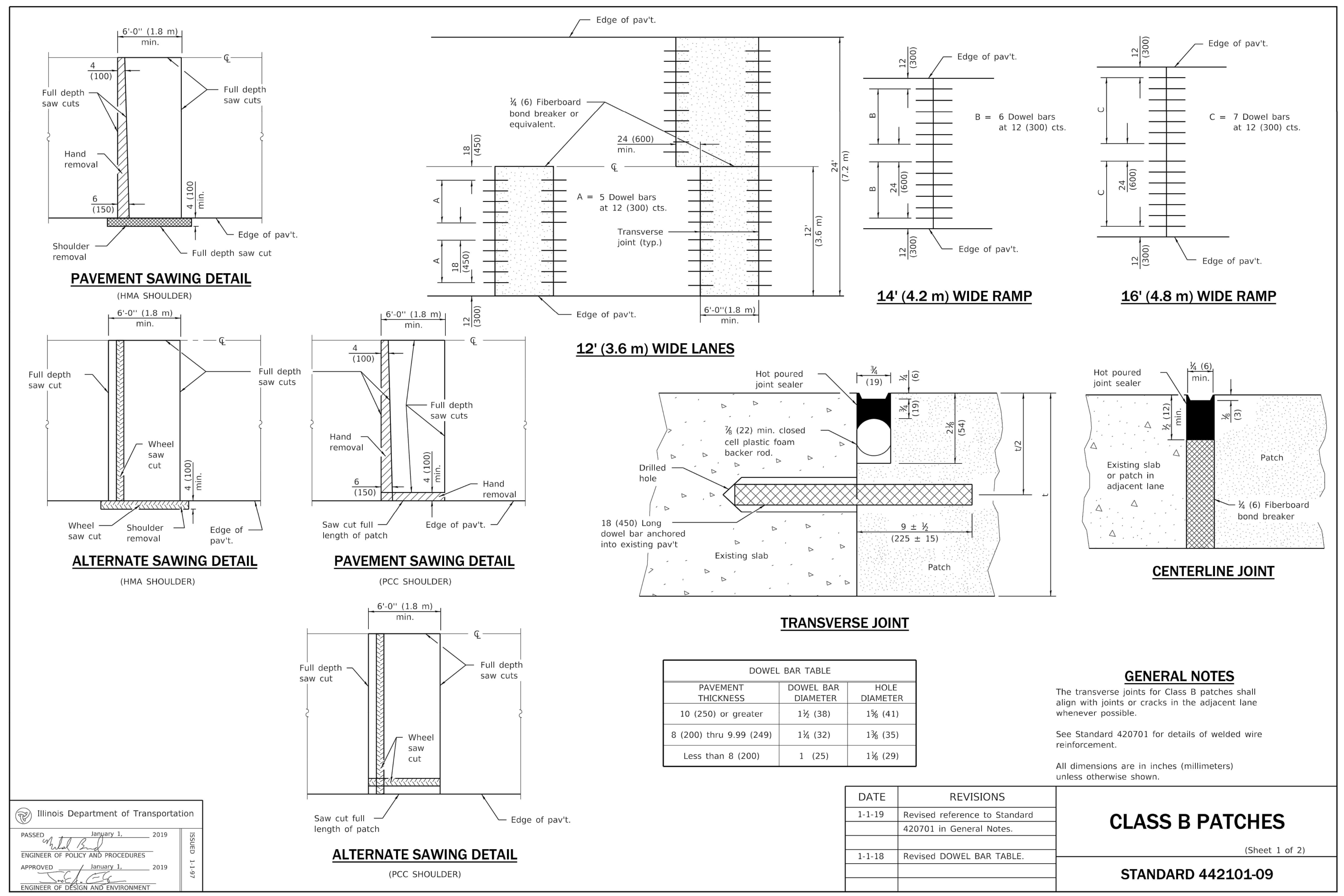
**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-511**  
 Page Number: 75



PLOT DATE: 8/15/2024 12:17 PM PLOTTED BY: MADRID, MICHELLE  
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Illinois Department of Transportation  
 PASSED January 1, 2019  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2019  
 ENGINEER OF DESIGN AND ENVIRONMENT

1 IDOT HIGHWAY STANDARD 442101-09  
 Scale: NTS

DATE	REVISIONS
1-1-19	Revised reference to Standard 420701 in General Notes.
1-1-18	Revised DOWEL BAR TABLE.

**CLASS B PATCHES**  
 (Sheet 1 of 2)  
**STANDARD 442101-09**

Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

Designed by: MLM  
 Checked by: PMS  
 Drawn by: MLM  
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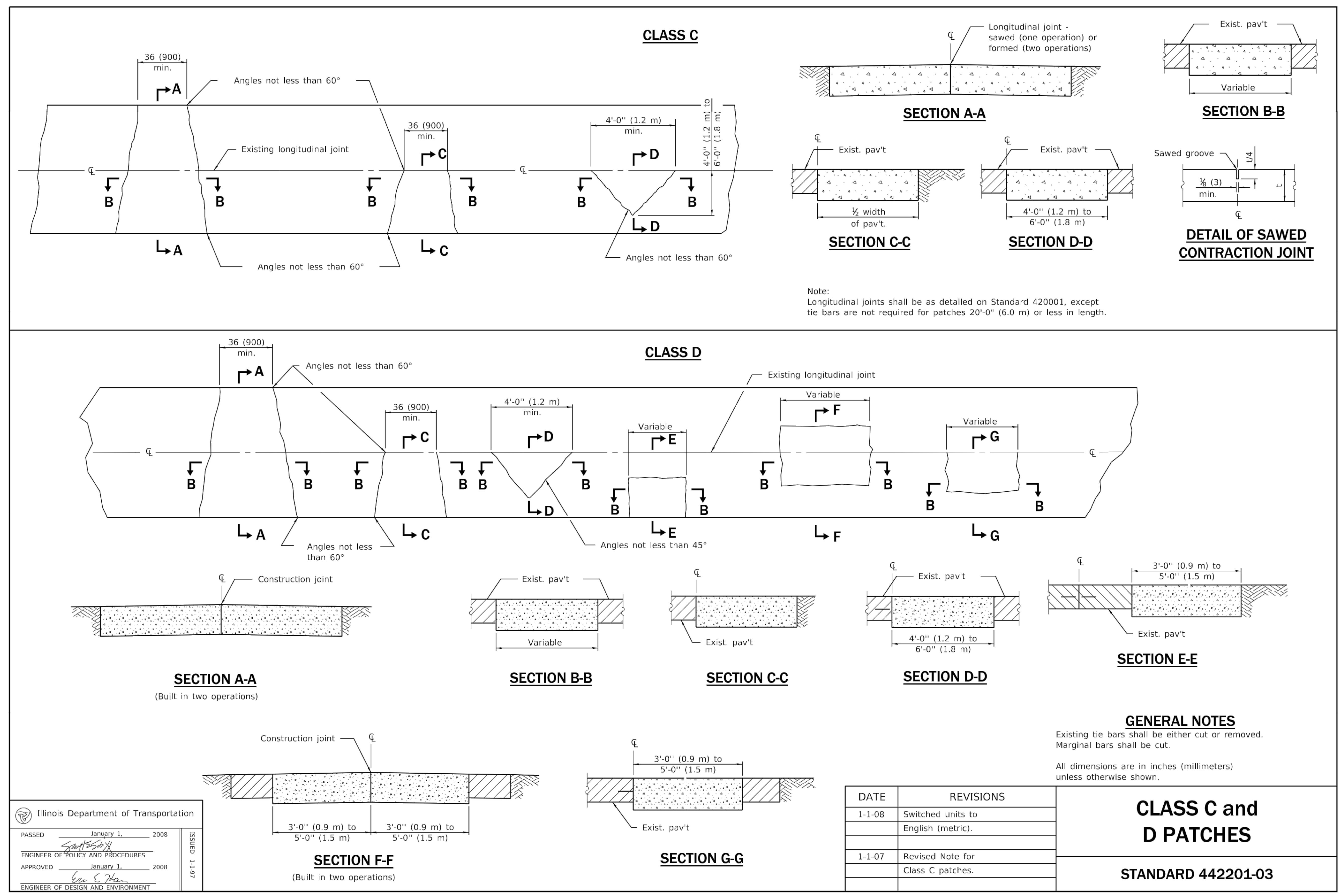
**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-512**  
 Page Number: 76



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Illinois Department of Transportation

PASSED January 1, 2008

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2008

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUES 1-1-08

1 IDOT HIGHWAY STANDARD 442201-03  
Scale: NTS

Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

Designed by: PMS  
MLM

Checked by: PMS

Drawn by: MLM

Reviewed by: EPC

Date: MAY 2024

Scale: AS SHOWN

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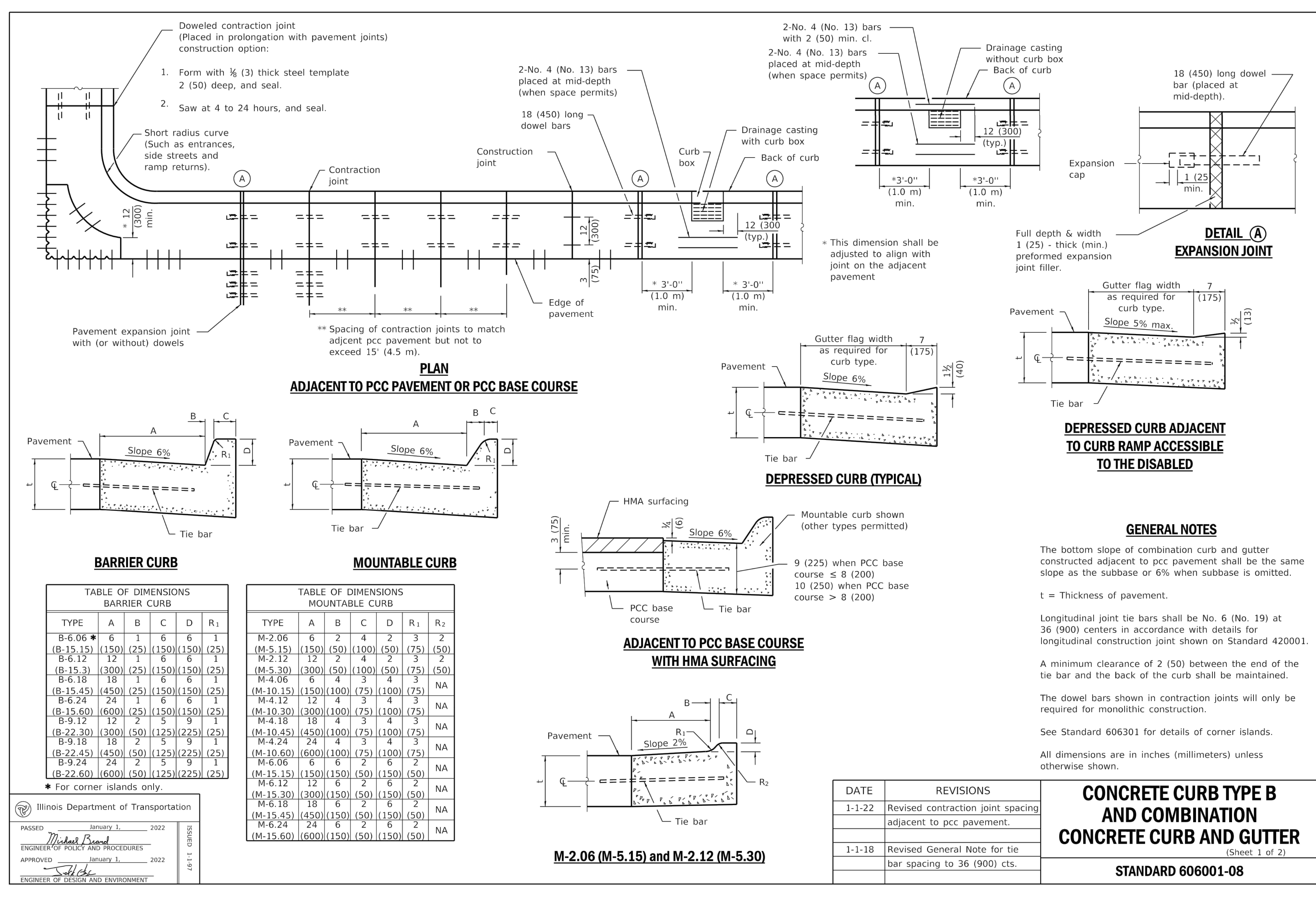
**LIVING HABITATS**

**CONTRACT 14-253-5FR**  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-513**  
Page Number: 77

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**GENERAL NOTES**

The bottom slope of combination curb and gutter constructed adjacent to pcc pavement shall be the same slope as the subbase or 6% when subbase is omitted.

t = Thickness of pavement.

Longitudinal joint tie bars shall be No. 6 (No. 19) at 36 (900) centers in accordance with details for longitudinal construction joint shown on Standard 420001.

A minimum clearance of 2 (50) between the end of the tie bar and the back of the curb shall be maintained.

The dowel bars shown in contraction joints will only be required for monolithic construction.

See Standard 606301 for details of corner islands.

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

DATE	REVISIONS
1-1-22	Revised contraction joint spacing adjacent to pcc pavement.
1-1-18	Revised General Note for tie bar spacing to 36 (900) cts.

**CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER**  
 (Sheet 1 of 2)

**STANDARD 606001-08**

Illinois Department of Transportation

PASSED January 1, 2022

Michael Brand  
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2022

ENGINEER OF DESIGN AND ENVIRONMENT

1 IDOT HIGHWAY STANDARD 606001-08  
 Scale: NTS

Rev. Description Appr. Date  
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METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

CONTRACT 14-253-5FR  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

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 DRAWN BY: MLM  
 REVIEWED BY: EPC  
 DATE: MAY 2024  
 SCALE: AS SHOWN

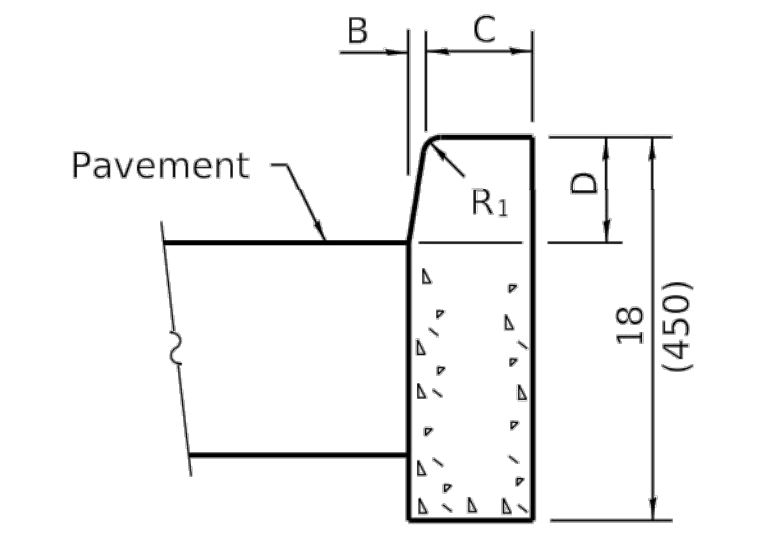
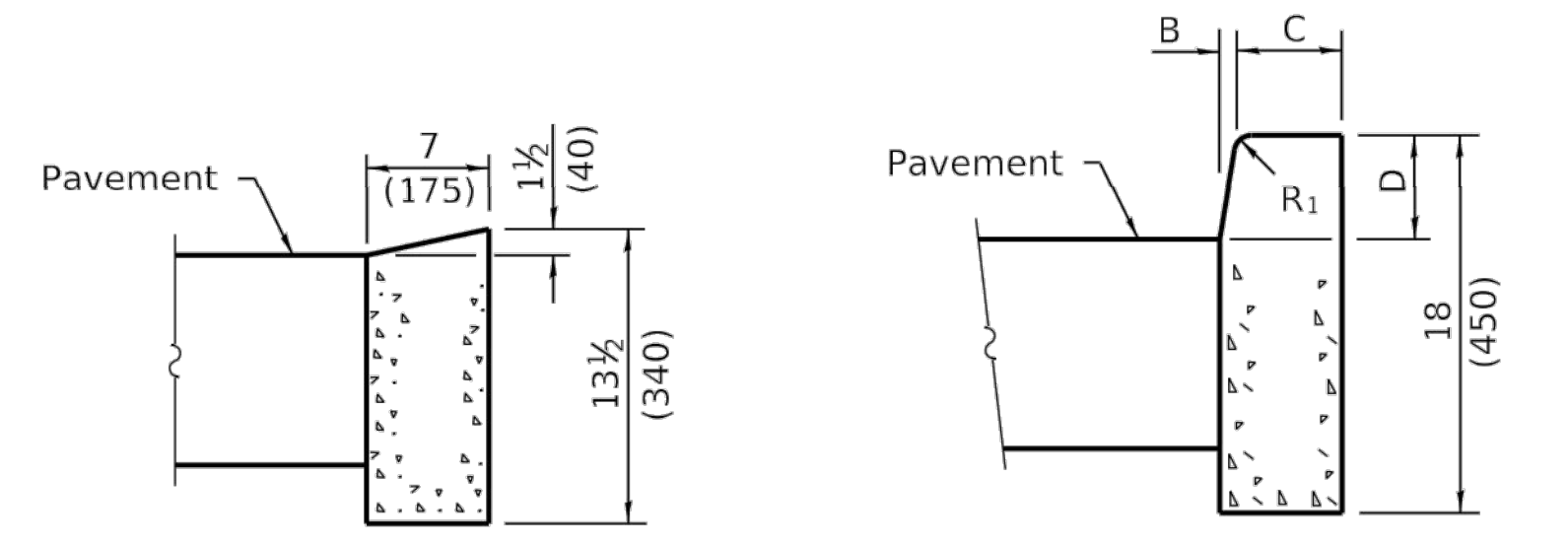
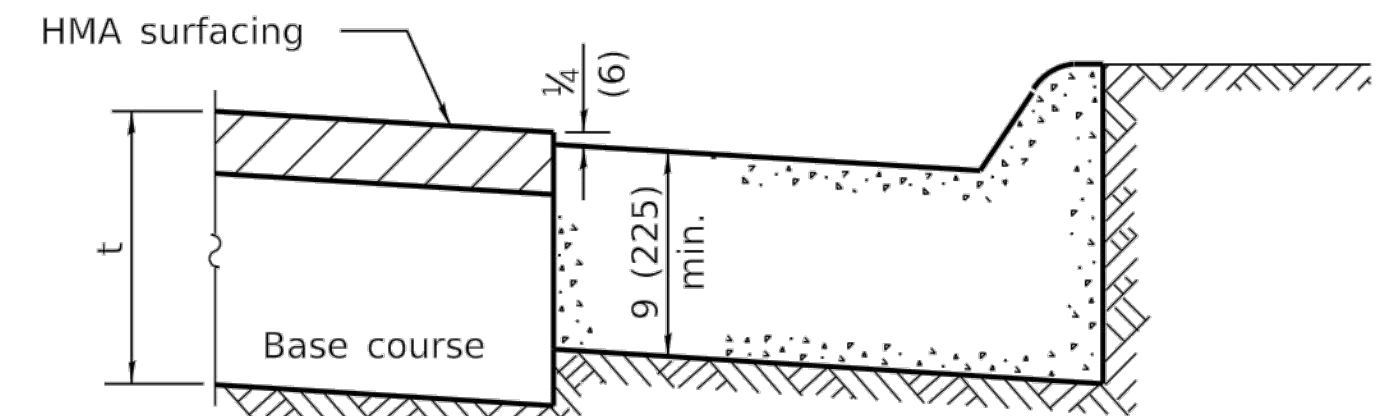
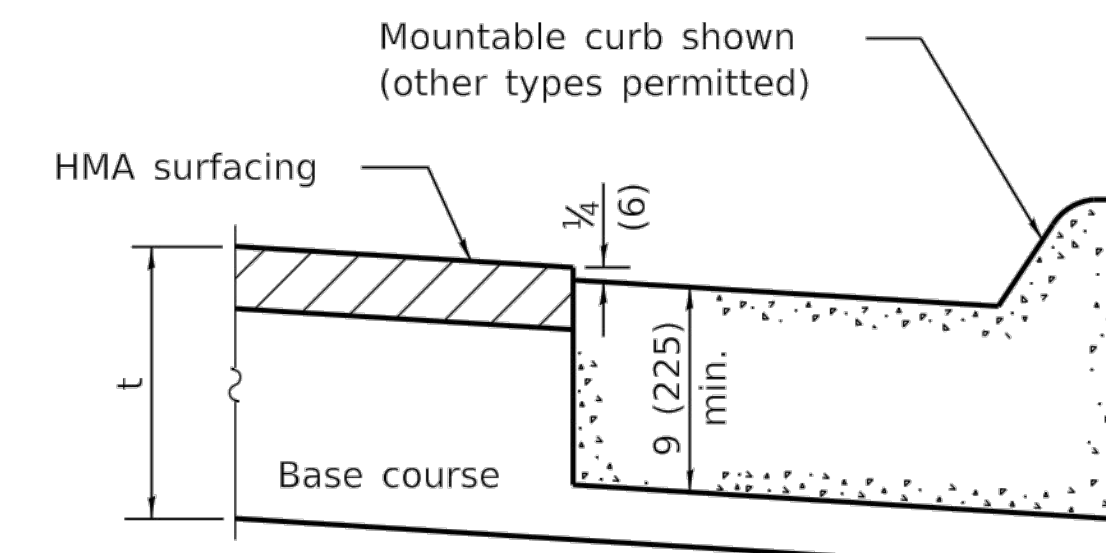
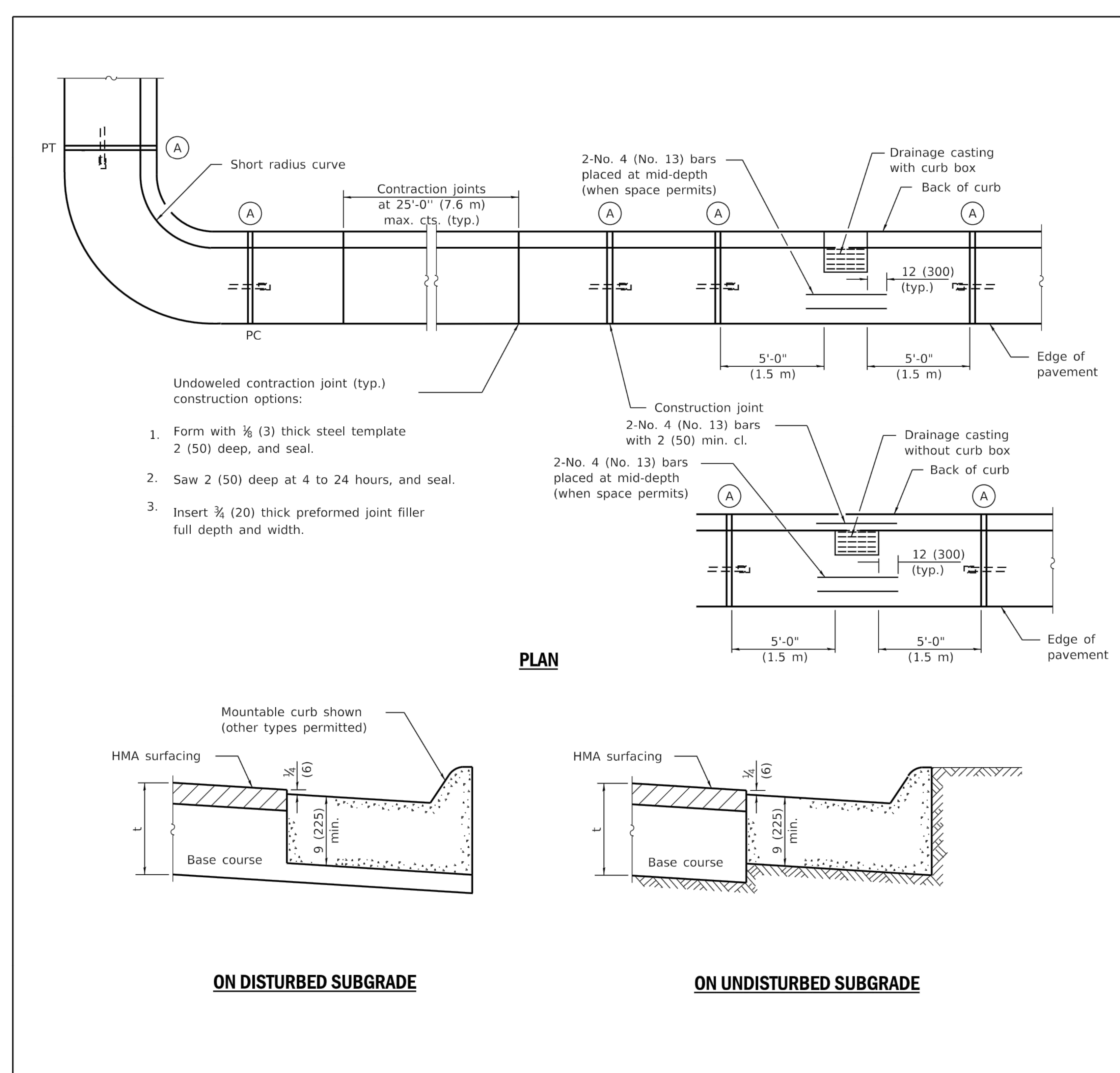
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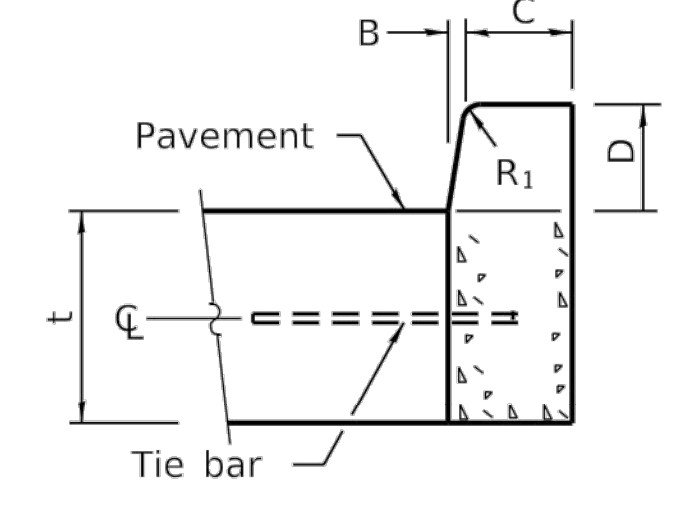
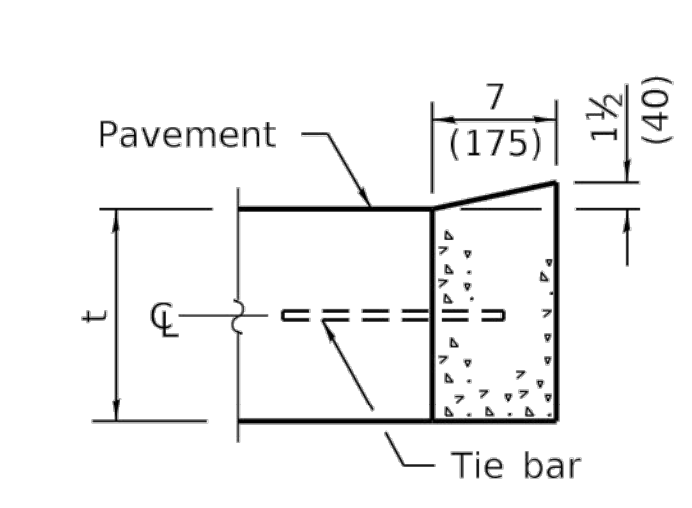
CIVIL DETAILS

Sheet Number:  
 CP-514  
 Page Number: 78

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**ADJACENT TO FLEXIBLE PAVEMENT**



**ADJACENT TO PCC PAVEMENT OR PCC BASE COURSE**

**CONCRETE CURB TYPE B**

**CONCRETE CURB TYPE B  
AND COMBINATION  
CONCRETE CURB AND GUTTER**  
(Sheet 2 of 2)

**STANDARD 606001-08**

Illinois Department of Transportation

PASSED January 1, 2022

*Michael Brand*  
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2022

*John C. ...*  
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUES: 1/8 1-T 03/15/21

1 IDOT HIGHWAY STANDARD 606001-08  
Scale: NTS

Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	MLM	08/2024

**METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO**

**CONTRACT 14-253-5FR**  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
LITTLE CALUMET RIVER WATERSHED

**CONCRETE CURB TYPE B  
AND COMBINATION  
CONCRETE CURB AND GUTTER**  
(Sheet 2 of 2)

**STANDARD 606001-08**

**CIVIL DETAILS**

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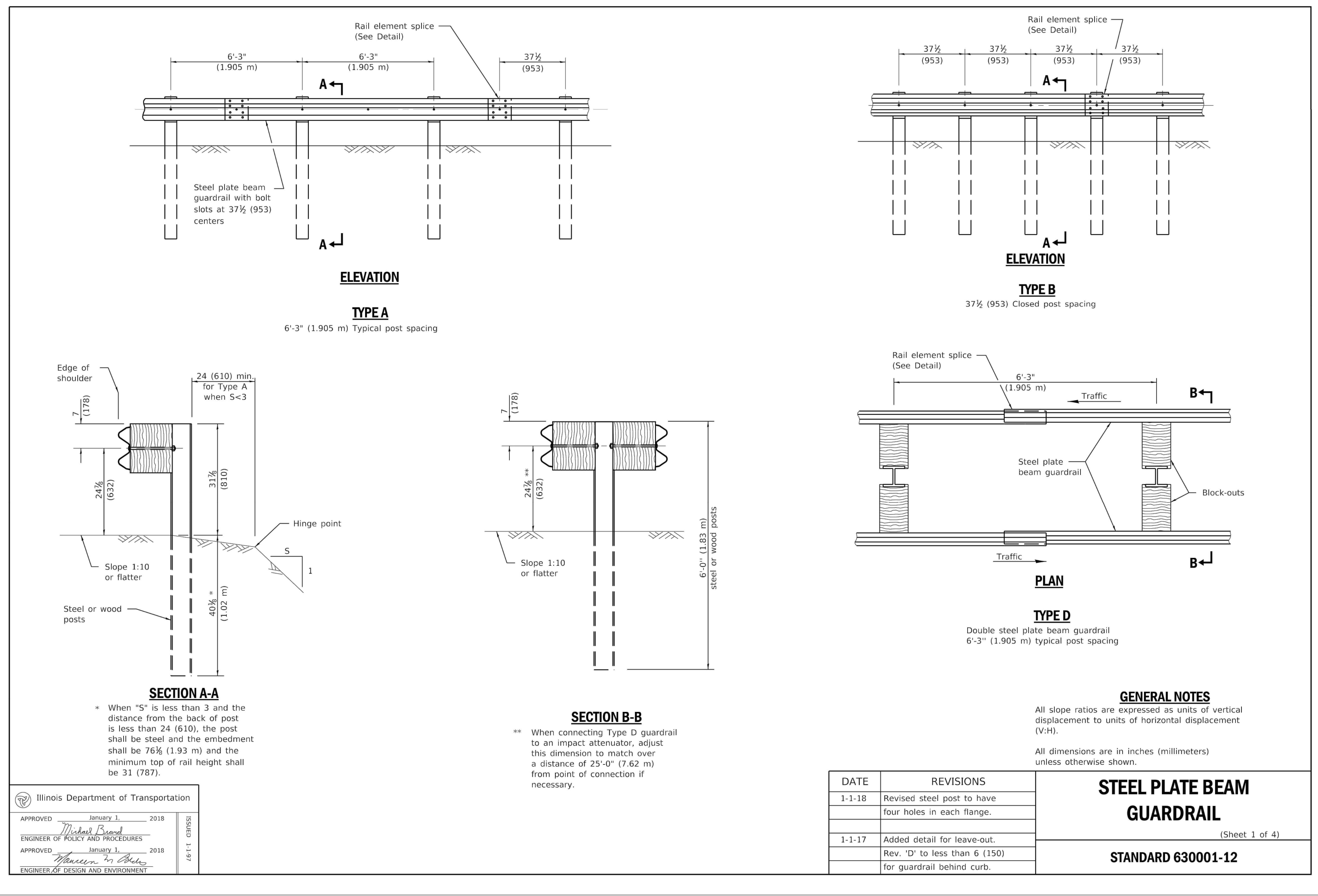
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**OEA**  
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Sheet Number:  
**CP-515**  
Page Number: 79



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Illinois Department of Transportation

APPROVED January 1, 2018  
 Michael Brand  
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2018  
 Matthew M. Adams  
 ENGINEER OF DESIGN AND ENVIRONMENT

1/8" = 1" GRAPHIC SCALE

DATE	REVISIONS	<b>STEEL PLATE BEAM GUARDRAIL</b> (Sheet 1 of 4) <b>STANDARD 630001-12</b>
1-1-18	Revised steel post to have four holes in each flange.	
1-1-17	Added detail for leave-out. Rev. 'D' to less than 6 (150) for guardrail behind curb.	

1 IDOT HIGHWAY STANDARD 630001-12  
 Scale: NTS

Rev.	Description	Appr.	Date
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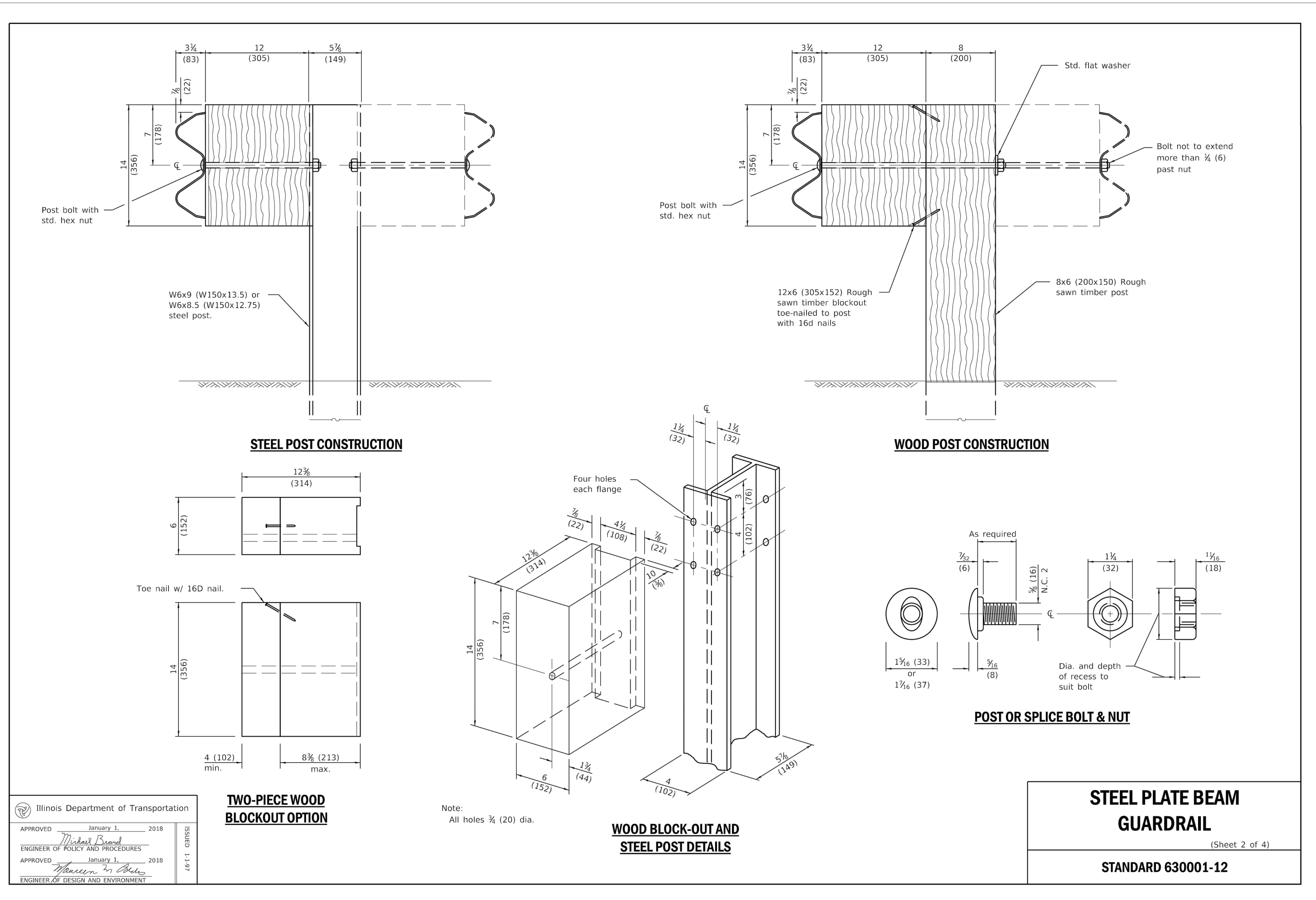
**LIVING HABITATS**

CONTRACT 14-253-5FR  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

CIVIL DETAILS

Sheet Number:  
**CP-516**  
 Page Number: 80





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APPROVED January 1, 2018  
*Michael Brand*  
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2018  
*Heaven M. Adams*  
 ENGINEER OF DESIGN AND ENVIRONMENT

48 F.T. GRIFFIN

1 IDOT HIGHWAY STANDARD 630001-12  
 Scale: NTS

Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO

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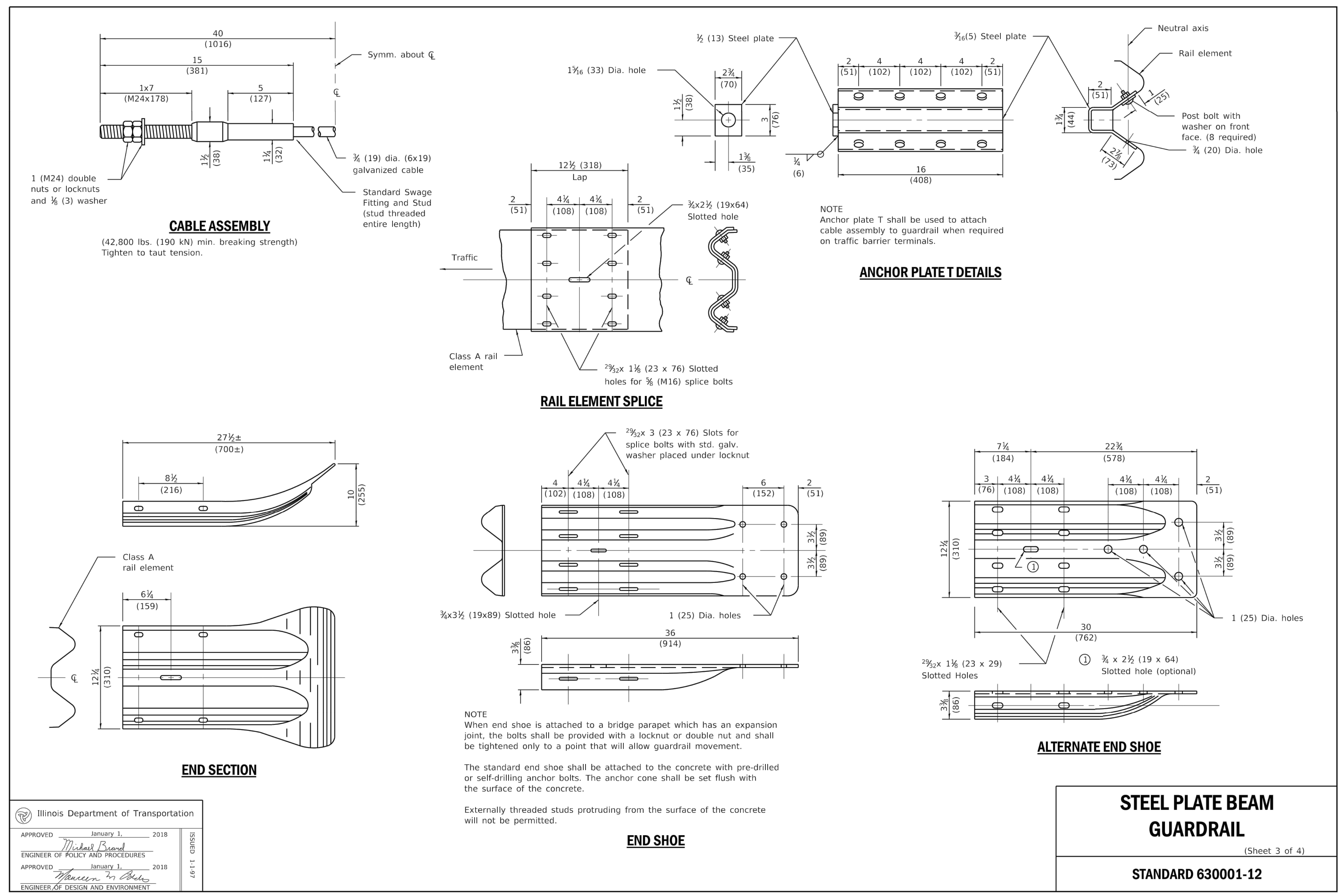
**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

CIVIL DETAILS

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**CP-517**

Page Number: 81

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APPROVED January 1, 2018  
 Michael Brand  
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2018  
 Matthew M. Adams  
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48 1-1 03/15/11

1 IDOT HIGHWAY STANDARD 630001-12  
 Scale: NTS

Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO

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Date: MAY 2024  
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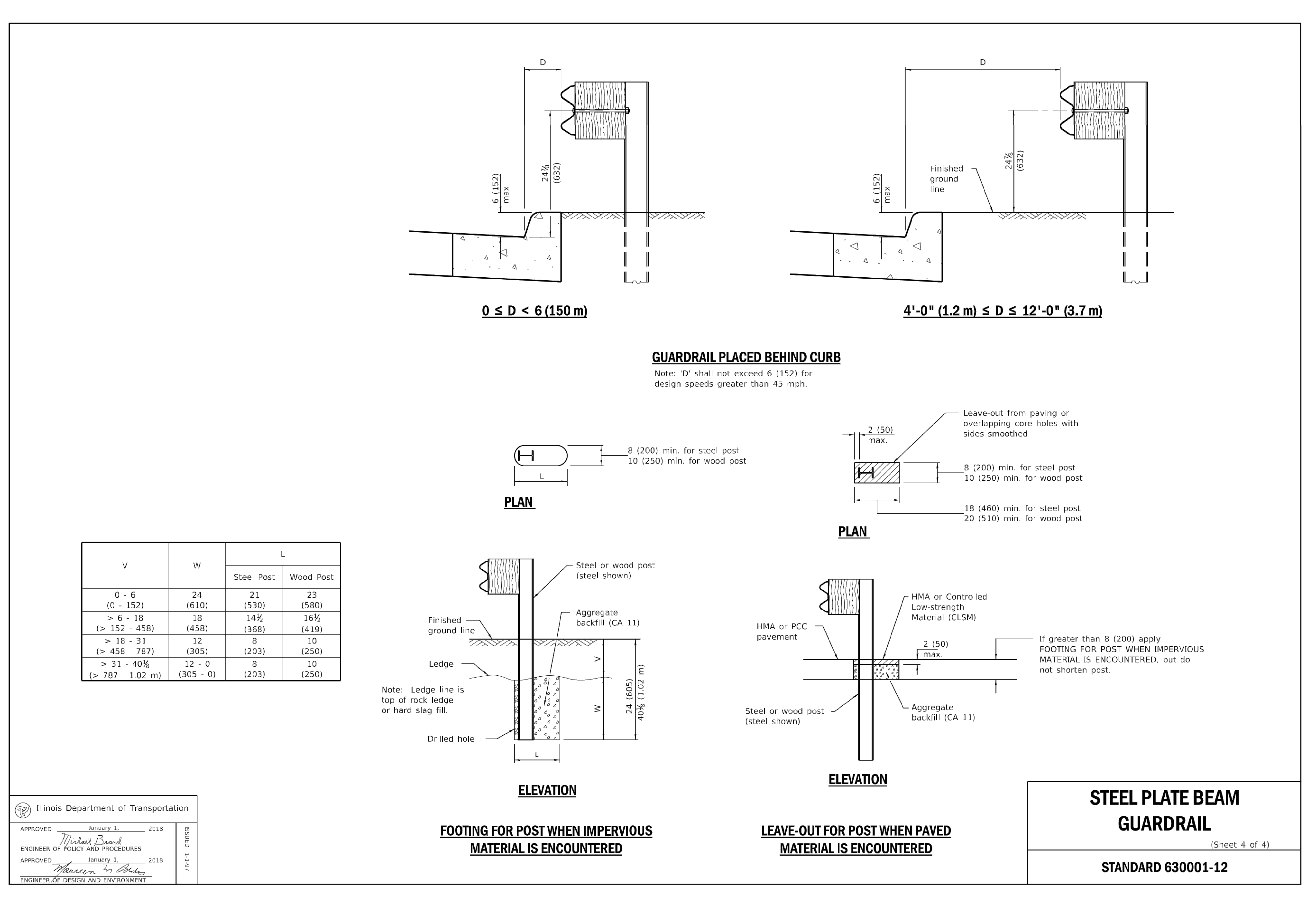
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 O'BRIEN & ASSOCIATES, INC.  
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CONTRACT 14-253-5FR  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

CIVIL DETAILS

Sheet Number:  
 CP-518  
 Page Number: 82



Illinois Department of Transportation

APPROVED January 1, 2018  
Michael Beard  
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2018  
Heaven M. Adams  
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUES: 4/8/11 G3/ISS1

**1** IDOT HIGHWAY STANDARD 630001-12  
Scale: NTS

Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

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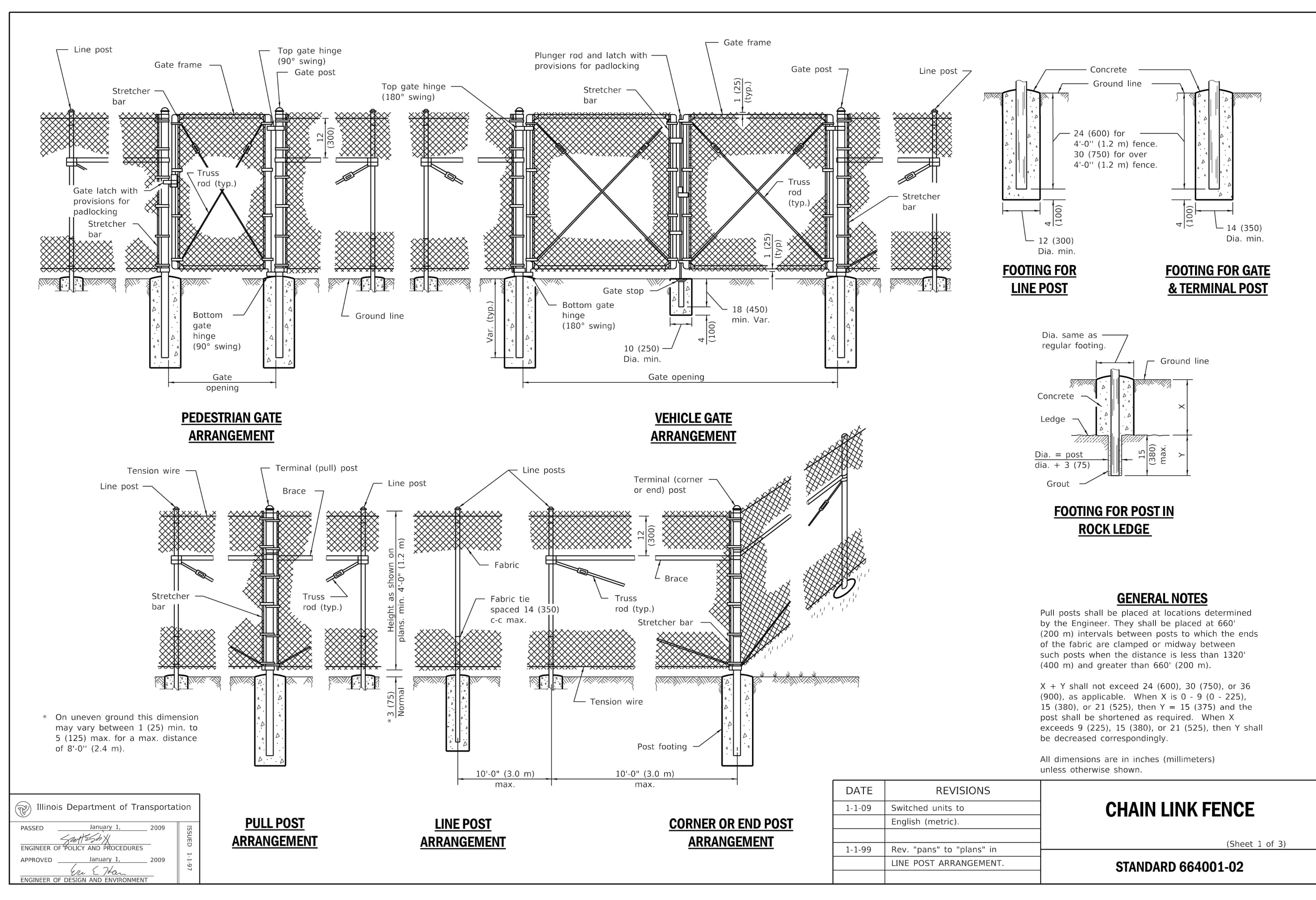
O'BRIEN & ASSOCIATES, INC.  
CONSULTING ENGINEERS

**CONTRACT 14-253-5FR**  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

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**CP-519**  
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Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-99	Rev. "pans" to "plans" in LINE POST ARRANGEMENT.

**CHAIN LINK FENCE**

(Sheet 1 of 3)

**STANDARD 664001-02**

1 IDOT HIGHWAY STANDARD 664001-02  
Scale: NTS

Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO

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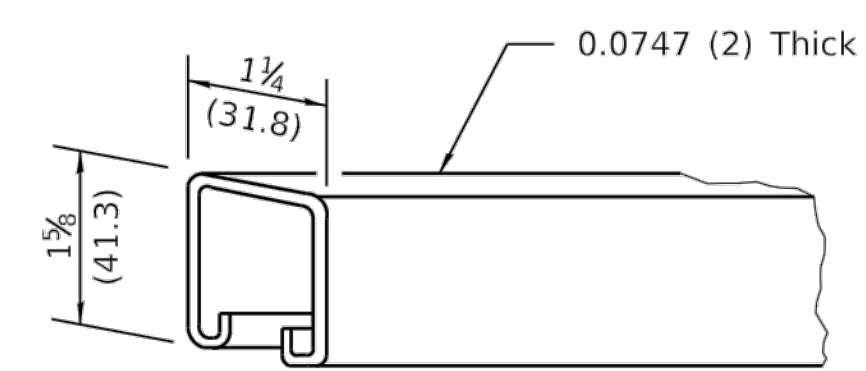
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**CONTRACT 14-253-5FR**  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

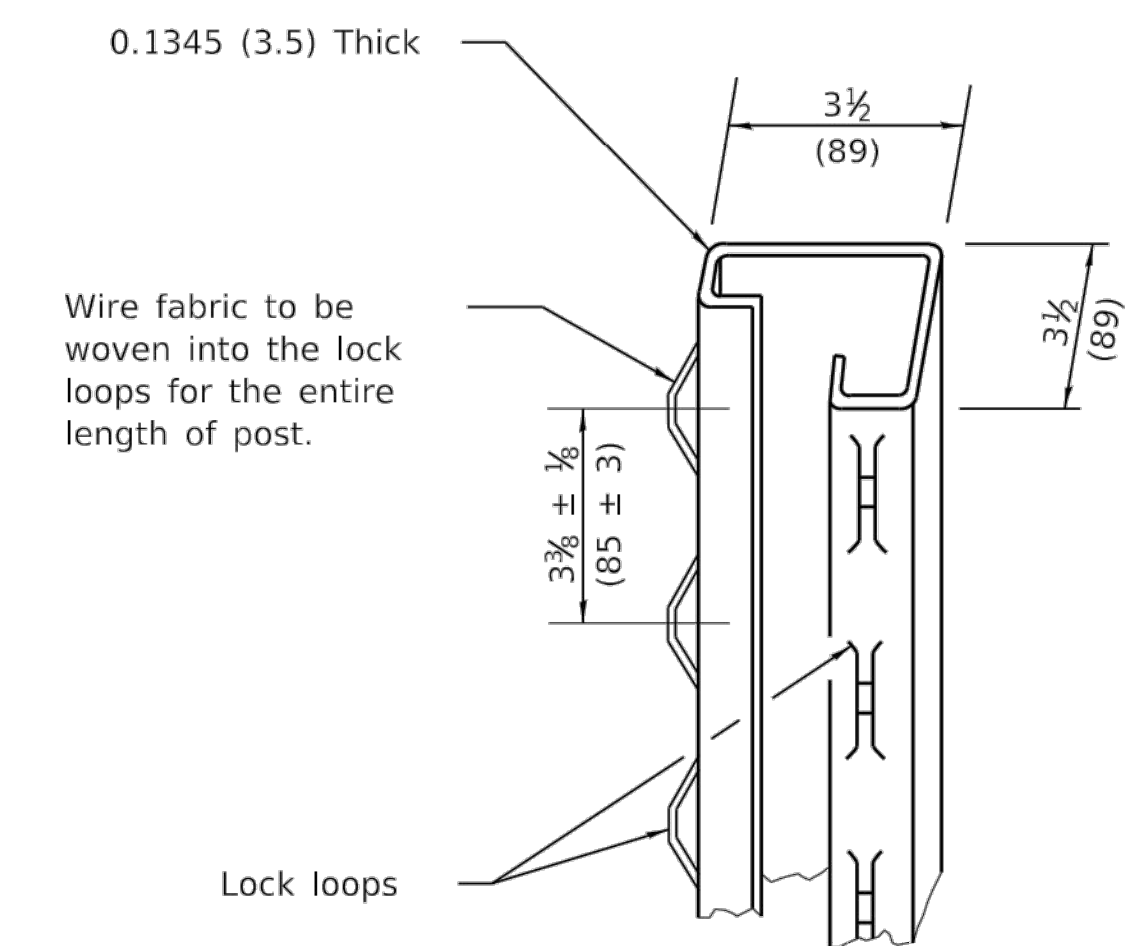
Sheet Number:  
**CP-520**  
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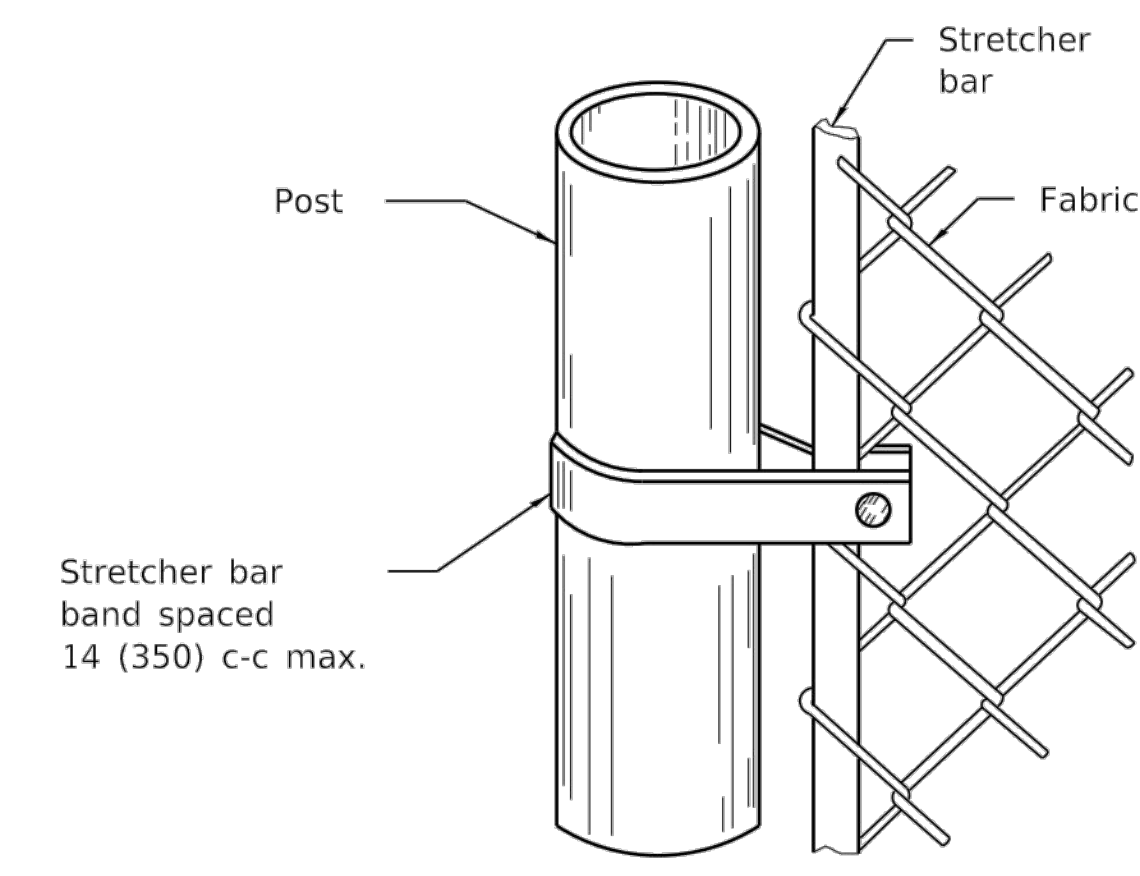
**ROLL FORMED SECTION OF BRACE**

LINE POST	
Section	lbs./ft. (kg/m)
Pipe Type A 1.90 (48.3) O.D.	2.72 (4.05)
Pipe Type B 1.90 (48.3) O.D.	2.28 (3.39)
Pipe Type C 1.90 (48.3) O.D.	2.26 (3.36)
H 1.875x1.625 (47.6x41.3)	2.72 (4.05)
□	1.60 (2.38)
I	2.30 (3.42)



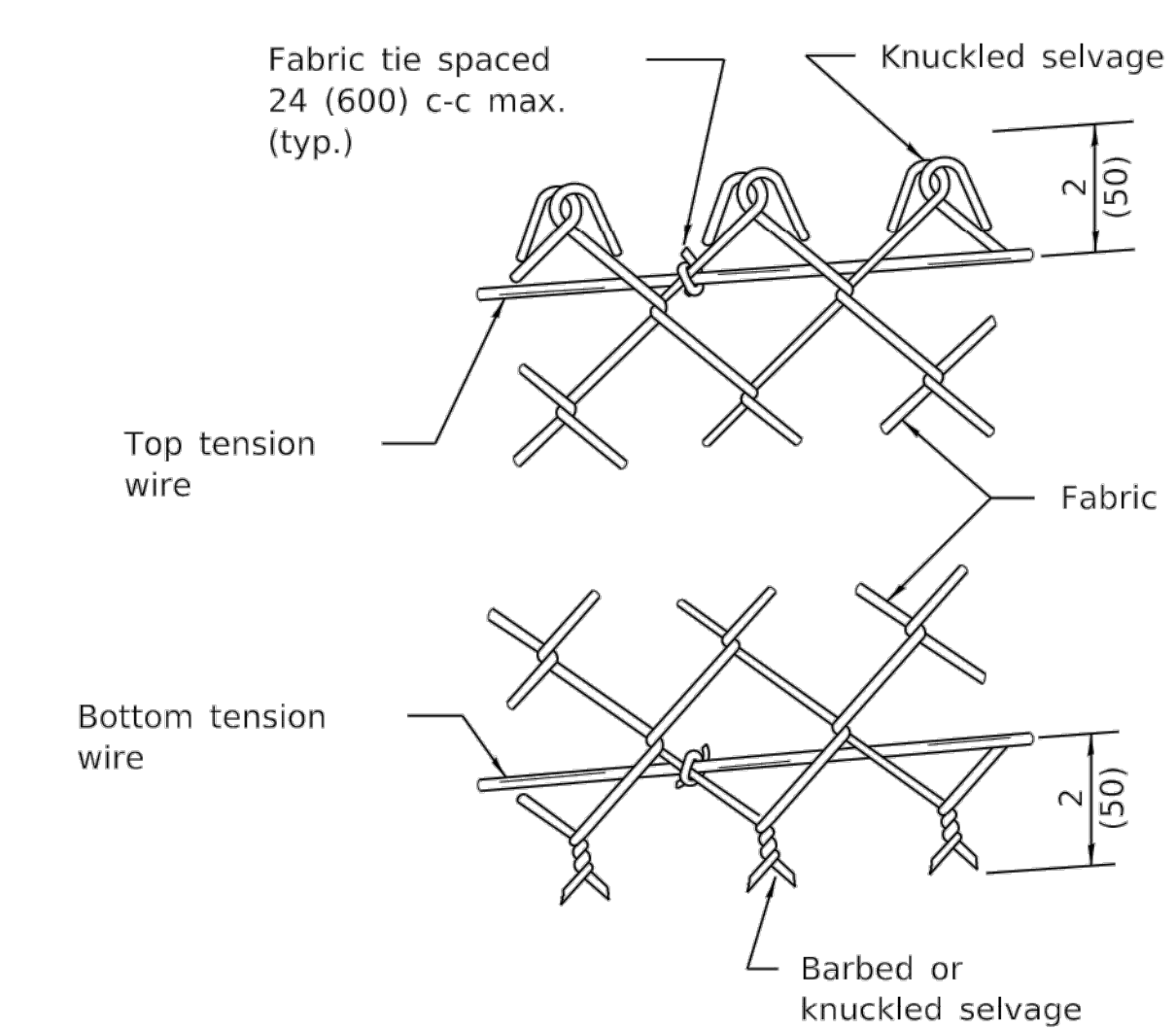
**ROLL FORMED SECTION OF TERMINAL & GATE POST**

TERMINAL POST	
Section	lbs./ft. (kg/m)
Pipe Type A 2.375 (60.3) O.D.	3.65 (5.43)
Pipe Type B 2.375 (60.3) O.D.	3.11 (4.63)
Pipe Type C 2.375 (60.3) O.D.	3.09 (4.60)
Roll Formed 3 1/2 x 3 1/2 (89.0 x 89.0)	See detail
Sq. Tubing 2 1/2 x 2 1/2 (63.5 x 63.5)	4.32 (6.43)



**METHOD OF FASTENING STRETCHER BAR TO POST**

HORIZONTAL BRACES	
Section	lbs./ft. (kg/m)
Pipe Type A 1.66 (42.2) O.D.	2.27 (3.38)
Pipe Type B 1.66 (42.2) O.D.	1.83 (2.72)
Pipe Type C 1.66 (42.2) O.D.	1.82 (2.71)
H 1.31x1.5 (33.3x38.1)	2.25 (3.35)
Roll Formed 1 3/8 x 1 1/4 (41.3 x 31.8)	See detail



**METHOD OF TYING FABRIC TO TENSION WIRES**

GATE FRAMES	
Section	lbs./ft. (kg/m)
Pipe Type A 1.66 (42.2) O.D.	2.27 (3.38)
Pipe Type B 1.66 (42.2) O.D.	1.83 (2.72)
Pipe Type C 1.66 (42.2) O.D.	1.82 (2.71)

GATE POSTS *							
Gate Opening * ft. (m)		Pipe Type A		Sq. Tubing		Pipe Type B	
		Size (O.D.)	lbs./ft. (kg/m)	Size	lbs./ft. (kg/m)	Size (O.D.)	kg/m (lbs./ft.)
Single	Double						
Up to 4 (1.2)	Up to 8 (2.5)	2.375 (60.3)	3.65 (5.43)	2 1/2 (63.5)	4.32 (6.43)	2.375 (60.3)	3.11 (4.63)
Over 4 (1.2) to 8 (2.5)	Over 8 (2.5) to 16 (5.0)	2.875 (73.0)	5.79 (8.62)	3 (76.2)	5.78 (8.60)	2.875 (73.0)	4.64 (6.91)
Over 8 (2.5) to 12 (3.6)	Over 16 (5.0) to 24 (7.4)	3.5 (89.0)	7.58 (11.28)	3 (76.2)	8.80 (13.10)	3.5 (89)	5.707 (8.49)

\* The 3 1/2 x 3 1/2 (89.0 x 89.0) roll formed section as detailed may be used as gate posts for single gate up to 6' (1.8 m) and double gate up to 12' (3.6 m).

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUES: 1.9

**CHAIN LINK FENCE**

(Sheet 2 of 3)

**STANDARD 664001-02**

Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO

Designed by: PMS  
MLM

Checked by: PMS  
MLM

Reviewed by: EPC  
MLM

Date: MAY 2024

Scale: AS SHOWN

**ILH**

**DONOHUE**

**Accurate**

**LIVING HABITATS**

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**O'NEIL & ASSOCIATES, INC.**  
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**CONTRACT 14-253-5FR**

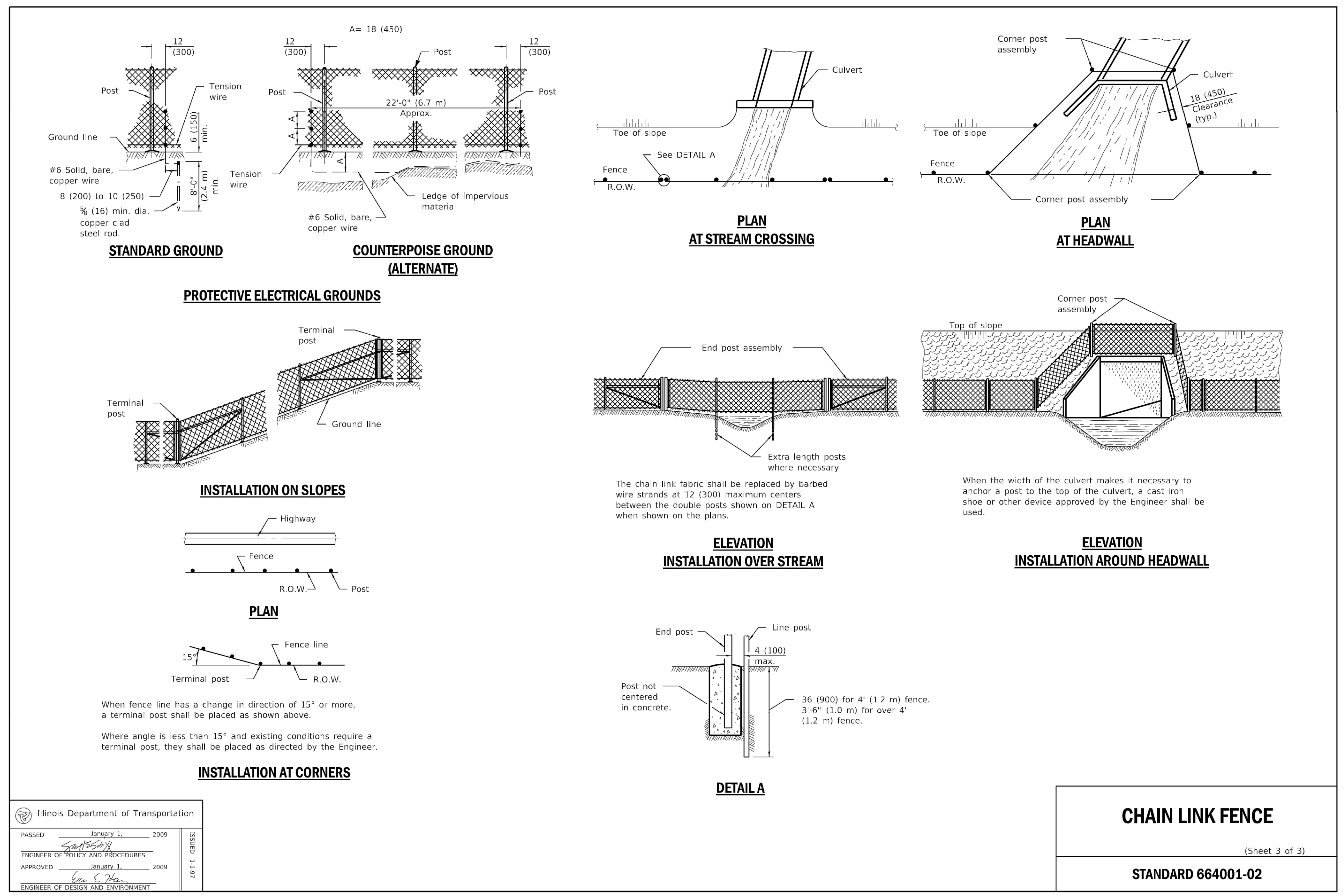
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-521**

Page Number: 85

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**CHAIN LINK FENCE**  
 (Sheet 3 of 3)  
**STANDARD 664001-02**

Illinois Department of Transportation  
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 ENGINEER OF POLICY AND PROCEDURES  
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1 IDOT HIGHWAY STANDARD 664001-02  
 Scale: NTS

Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	MLM	08/2024

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

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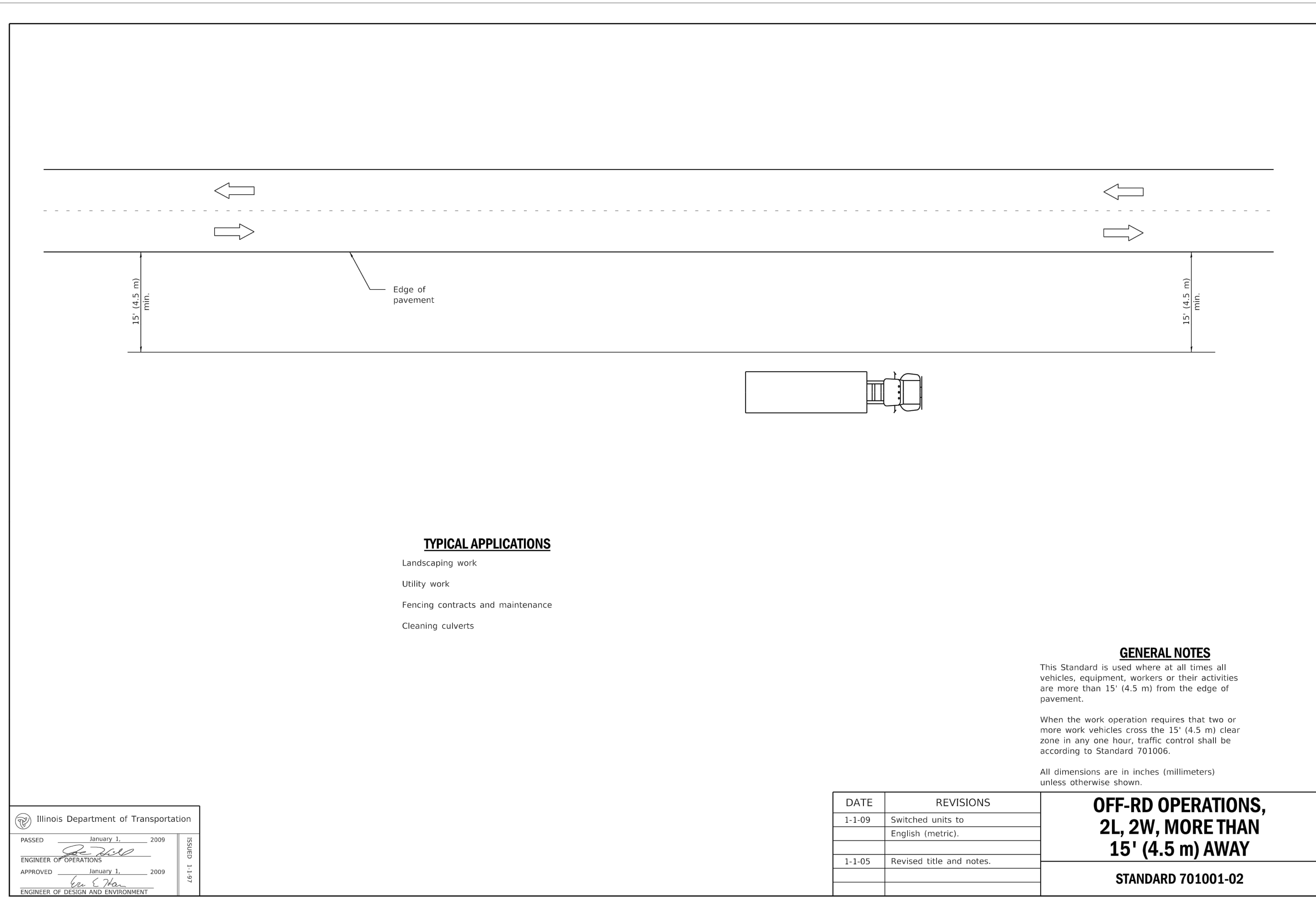
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**LIVING HABITATS**

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 ACCURATE  
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**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-522**  
 Page Number: 86



Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF OPERATIONS

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUES: 1.1.1.1

DATE: 7/8/11

DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-05	Revised title and notes.

**OFF-RD OPERATIONS,  
2L, 2W, MORE THAN  
15' (4.5 m) AWAY**

**STANDARD 701001-02**

**1** IDOT HIGHWAY STANDARD 701001-02  
Scale: NTS

**METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO**

Designed by: PMS  
MLM

Checked by: PMS  
MLM

Drawn by: EPC  
MLM

Reviewed by: EPC  
MLM

Date: MAY 2024

Scale: AS SHOWN

**ILH**

**LIVING HABITATS**

**DONOHUE**

**Accurate**

**Zim**

**OEA**

**OYBRIEN & ASSOCIATES, INC.**  
CONSULTING ENGINEERS

**CONTRACT 14-253-5FR**

FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
LITTLE CALUMET RIVER WATERSHED

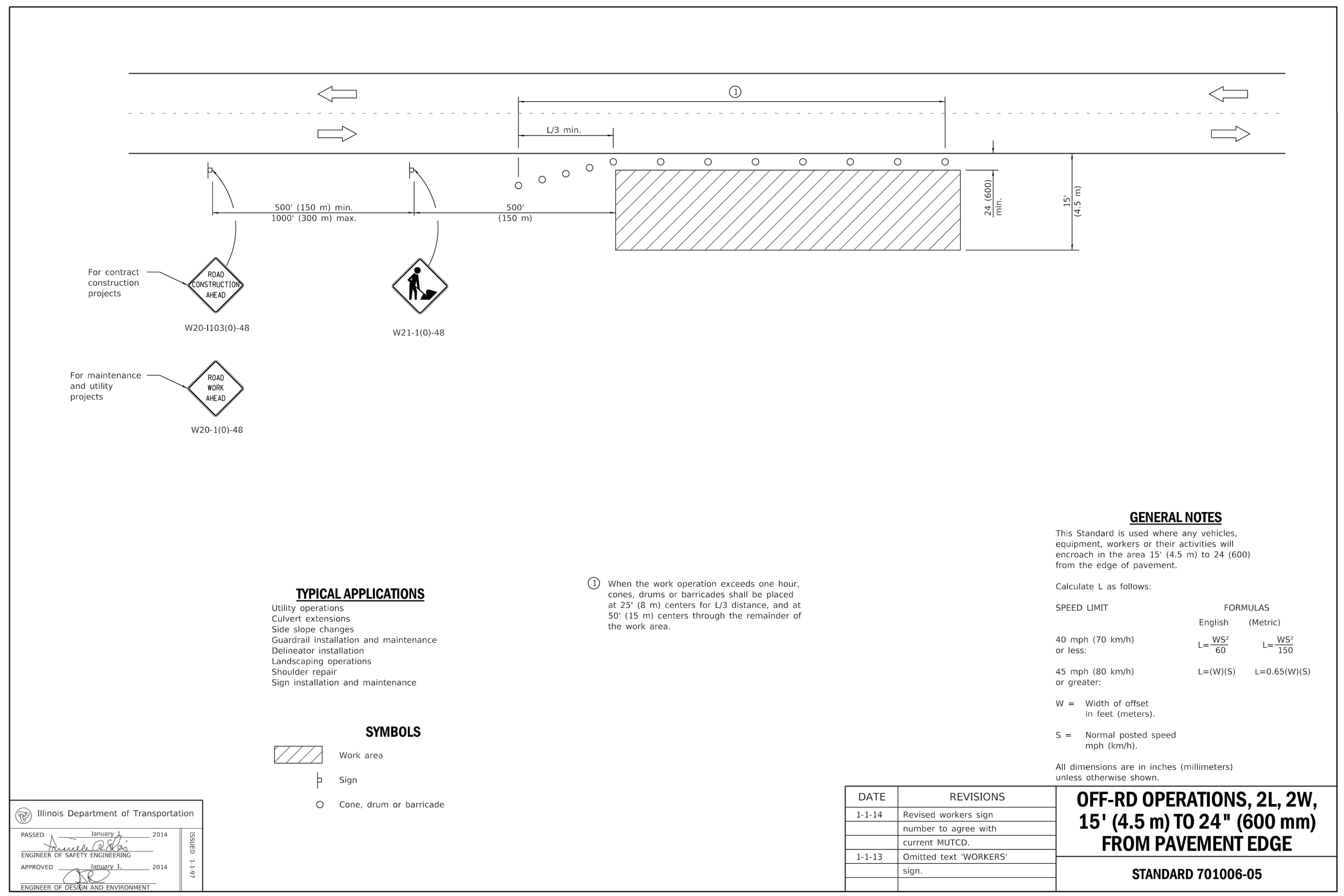
**CIVIL DETAILS**

Sheet Number:  
**CP-523**

Page Number: 87

Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024





For contract construction projects  
 W20-1103(0)-48  
 W21-1(0)-48

For maintenance and utility projects  
 W20-1(0)-48

**TYPICAL APPLICATIONS**  
 Utility operations  
 Culvert extensions  
 Side slope changes  
 Guardrail installation and maintenance  
 Delineator installation  
 Landscaping operations  
 Shoulder repair  
 Sign installation and maintenance

**SYMBOLS**

Work area  
 Sign  
 Cone, drum or barricade

① When the work operation exceeds one hour, cones, drums or barricades shall be placed at 25' (8 m) centers for L/3 distance, and at 50' (15 m) centers through the remainder of the work area.

**GENERAL NOTES**  
 This Standard is used where any vehicles, equipment, workers or their activities will encroach in the area 15' (4.5 m) to 24 (600) from the edge of pavement.

Calculate L as follows:

SPEED LIMIT	FORMULAS	
	English	(Metric)
40 mph (70 km/h) or less:	$L = \frac{WS^2}{60}$	$L = \frac{WS^2}{150}$
45 mph (80 km/h) or greater:	$L = (W)(S)$	$L = 0.65(W)(S)$

W = Width of offset in feet (meters).  
 S = Normal posted speed mph (km/h).

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

DATE	REVISIONS
1-1-14	Revised workers sign number to agree with current MUTCD.
1-1-13	Omitted text 'WORKERS' sign.

**OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE**  
**STANDARD 701006-05**

Illinois Department of Transportation

PASSED January 1, 2014  
 ENGINEER OF SAFETY ENGINEERING

APPROVED January 1, 2014  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUES: 1-1-14  
 CHANGES: 4/8/14

① IDOT HIGHWAY STANDARD 701006-05  
 Scale: NTS

Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

Designed by: PMS  
 MLM  
 Drawn by: MLM  
 Date: MAY 2024

Checked by: PMS  
 Reviewed by: EPC  
 Scale: AS SHOWN

**DONOHUE**  
 CONSULTING ENGINEERS

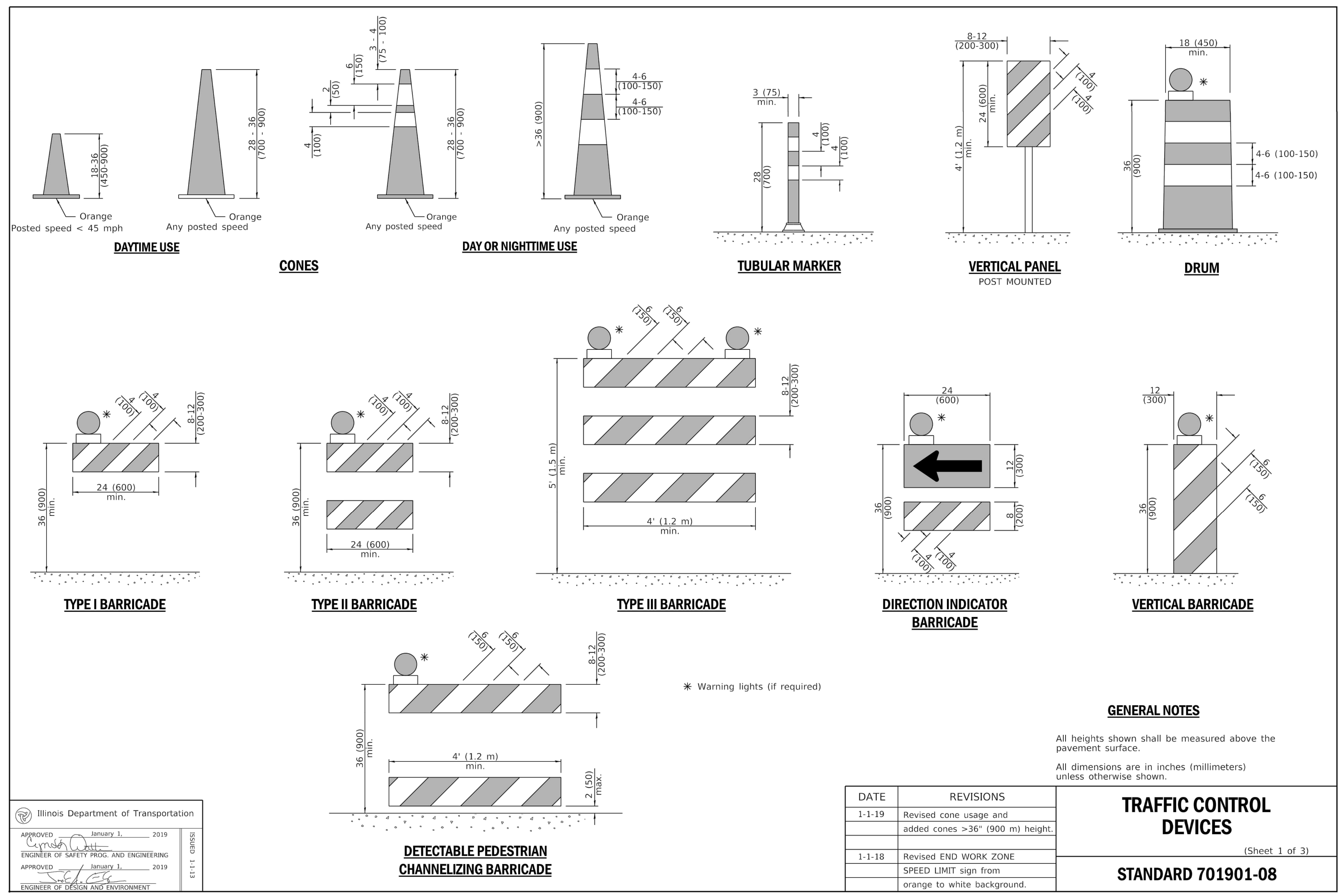
**Accurate**  
 CONSULTING ENGINEERS

**LIVING HABITATS**

**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-524**  
 Page Number: 88



Illinois Department of Transportation

APPROVED January 1, 2019  
*[Signature]*  
 ENGINEER OF SAFETY PROG. AND ENGINEERING

APPROVED January 1, 2019  
*[Signature]*  
 ENGINEER OF DESIGN AND ENVIRONMENT

EF-TT GENISSI

DATE	REVISIONS
1-1-19	Revised cone usage and added cones >36" (900 m) height.
1-1-18	Revised END WORK ZONE SPEED LIMIT sign from orange to white background.

**GENERAL NOTES**

All heights shown shall be measured above the pavement surface.

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

**TRAFFIC CONTROL DEVICES**

(Sheet 1 of 3)

**STANDARD 701901-08**

1 IDOT HIGHWAY STANDARD 701901-08  
 Scale: NTS

Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

Designed by: MLM  
 Checked by: PMS  
 Drawn by: MLM  
 Reviewed by: EPC  
 Date: MAY 2024  
 Scale: AS SHOWN

**ILTRI**

**DONOHUE**  
 CONSULTING ENGINEERS

**ACCURATE**  
 CONSULTING ENGINEERS

**LIVING HABITATS**

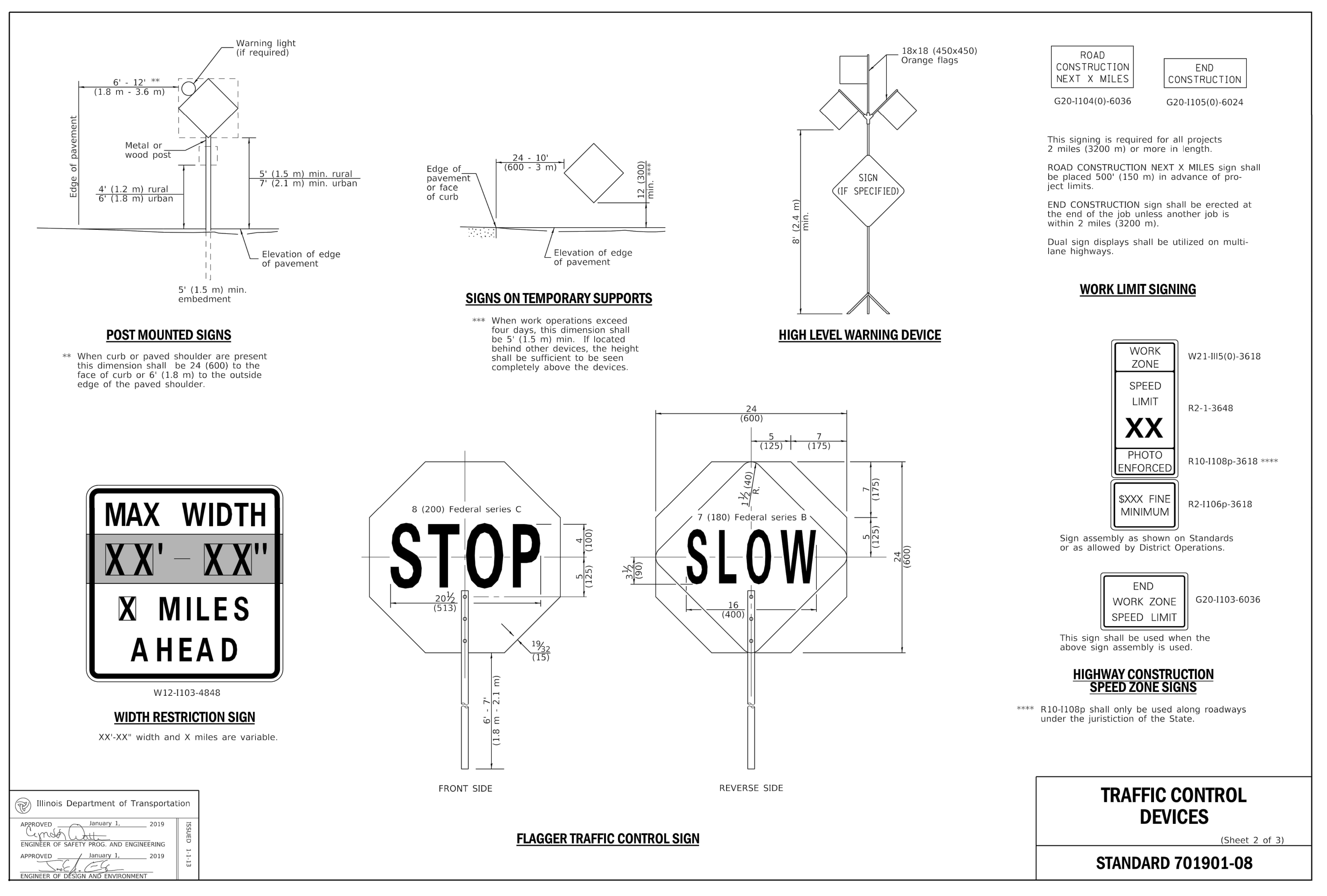
**CONTRACT 14-253-5FR**

FLOOD CONTROL PROJECT ON MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID) LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-525**

Page Number: 89



Illinois Department of Transportation

APPROVED January 1, 2019  
*[Signature]*  
 ENGINEER OF SAFETY PROG. AND ENGINEERING

APPROVED January 1, 2019  
*[Signature]*  
 ENGINEER OF DESIGN AND ENVIRONMENT

ISSUES: \_\_\_\_\_  
 8 1/2" x 11" GRAPHIC

1 IDOT HIGHWAY STANDARD 701901-08  
 Scale: NTS

**TRAFFIC CONTROL DEVICES**

(Sheet 2 of 3)

**STANDARD 701901-08**

Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

Designed by: PMS  
 Drawn by: MLM  
 Checked by: EPC  
 Reviewed by: EPC  
 Date: MAY 2024  
 Scale: AS SHOWN

**ILH** **LIVING HABITATS**

**DONOHUE** **Accurate** **OEA** **ORRIBIN & ASSOCIATES, INC.** **CONSULTING ENGINEERS**

**CONTRACT 14-253-5FR**

FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

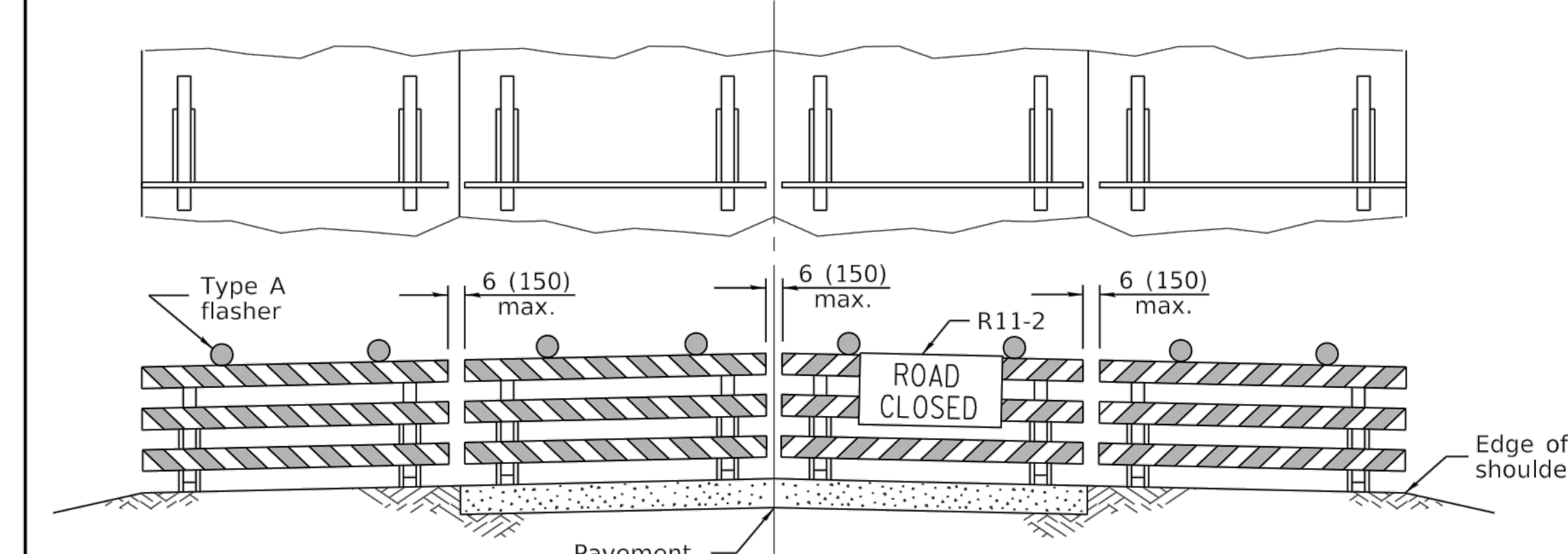
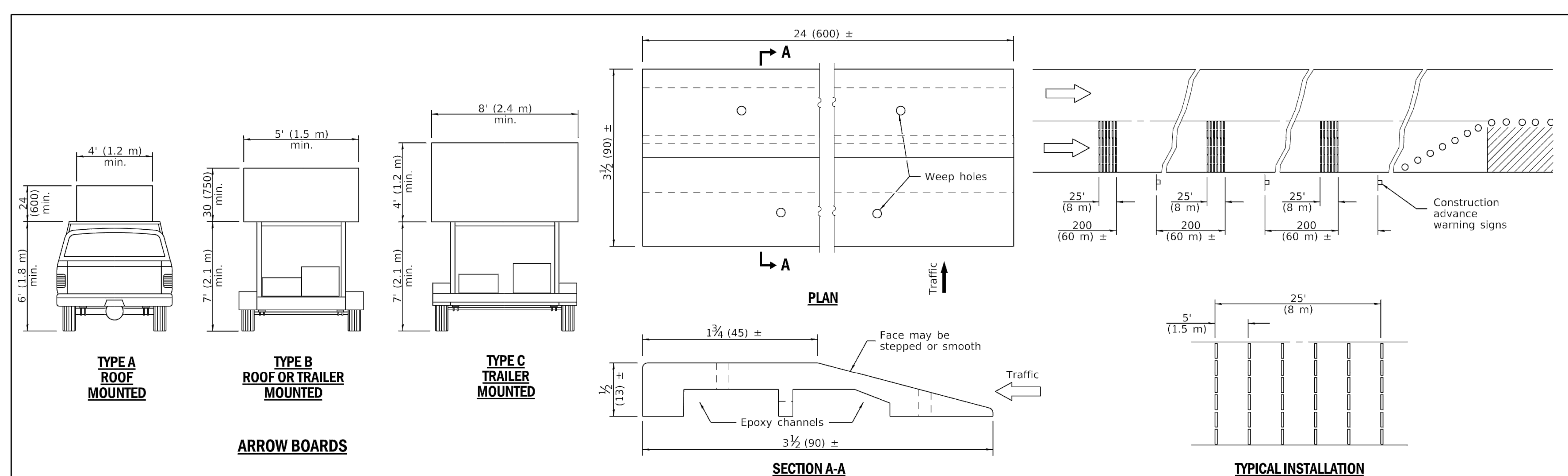
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Sheet Number:  
**CP-526**

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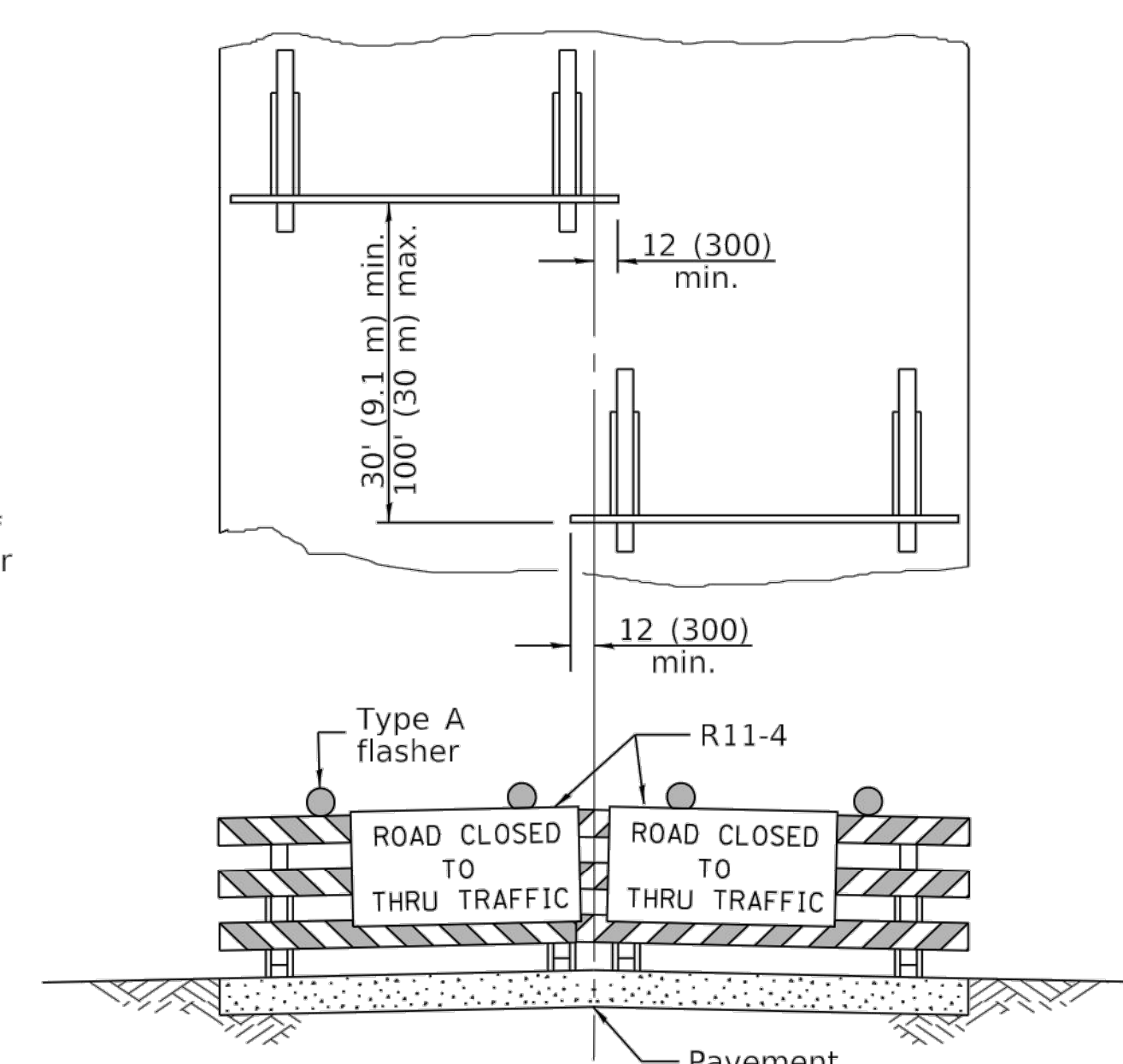


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**ROAD CLOSED TO ALL TRAFFIC**

ReflectORIZED striping may be omitted on the back side of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the sign may be mounted on an NCHRP 350 temporary sign support directly in front of the barricade.



**ROAD CLOSED TO THRU TRAFFIC**

ReflectORIZED striping shall appear on both sides of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the signs may be mounted on NCHRP 350 temporary sign supports directly in front of the barricade.

Illinois Department of Transportation

APPROVED January 1, 2019  
*[Signature]*  
 ENGINEER OF SAFETY PROG. AND ENGINEERING

APPROVED January 1, 2019  
*[Signature]*  
 ENGINEER OF DESIGN AND ENVIRONMENT

**TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD**

**TRAFFIC CONTROL DEVICES**

(Sheet 3 of 3)

**STANDARD 701901-08**

1 IDOT HIGHWAY STANDARD 701901-08  
 Scale: NTS

Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

CONTRACT 14-253-5FR  
 FLOOD CONTROL PROJECT ON MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

DESIGNED BY: MLM  
 CHECKED BY: PMS  
 DRAWN BY: MLM  
 REVIEWED BY: EPC  
 DATE: MAY 2024  
 SCALE: AS SHOWN

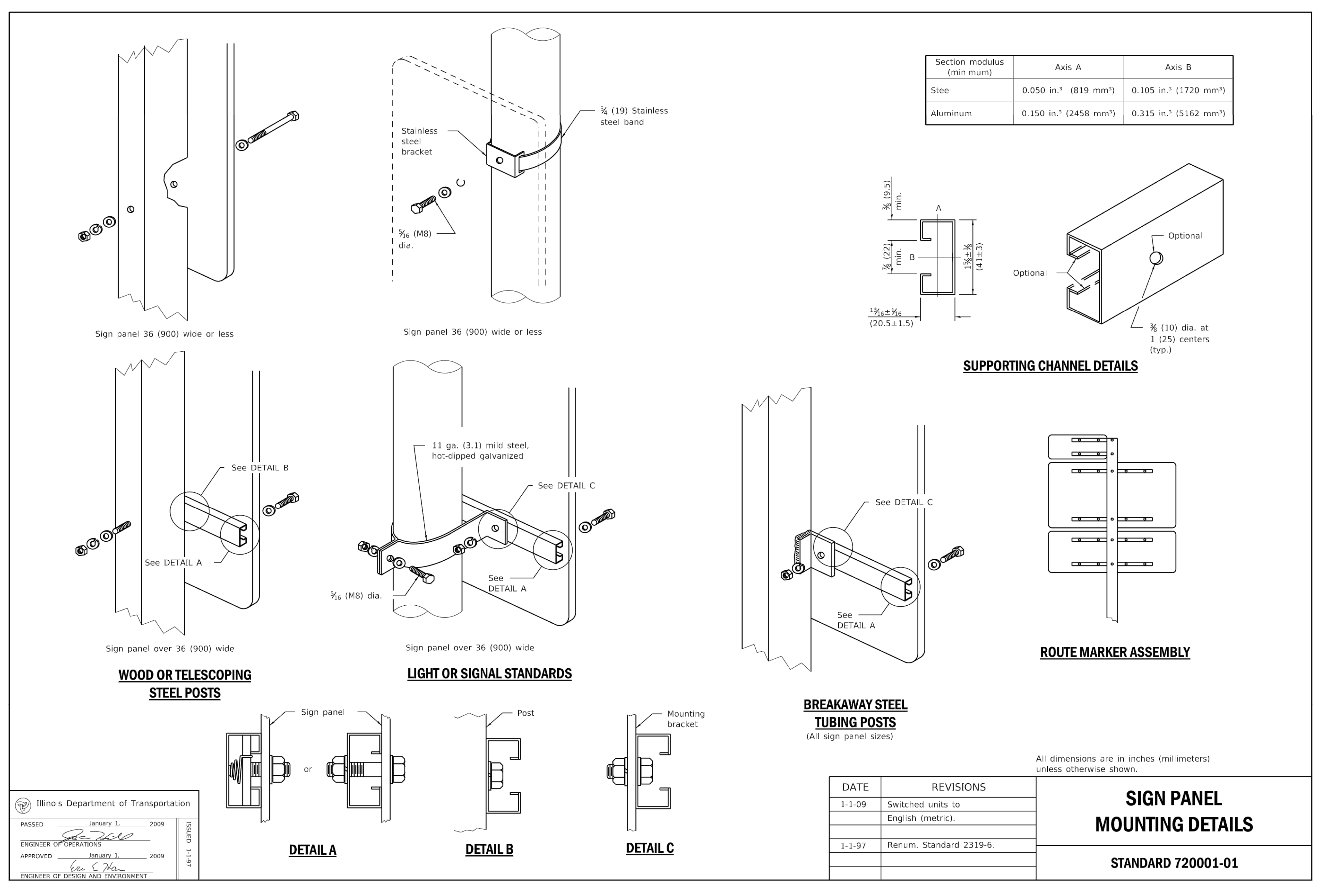
ILH  
 LIVING HABITATS

DONOHUE  
 ACCURATE  
 O'BRIEN & ASSOCIATES, INC.  
 CONSULTING ENGINEERS

CIVIL DETAILS

Sheet Number:  
**CP-527**

Page Number: 91



Illinois Department of Transportation

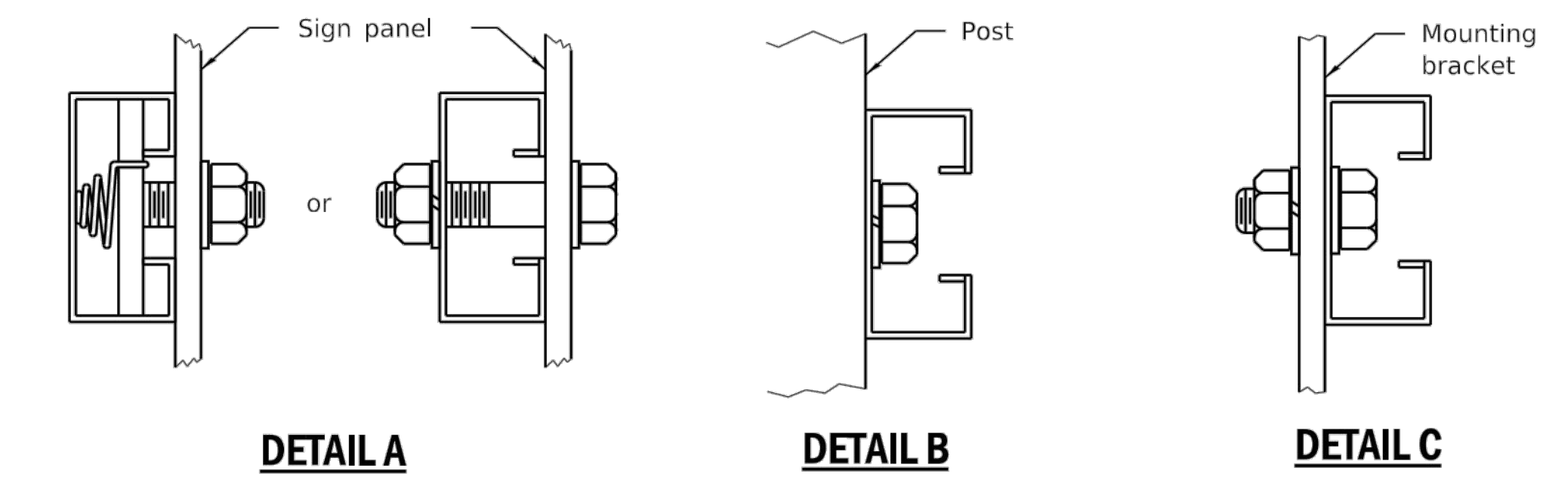
PASSED January 1, 2009

ENGINEER OF OPERATIONS

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUES: 4/8 1:1 03/15/01



DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-97	Renum. Standard 2319-6.

**SIGN PANEL MOUNTING DETAILS**

**STANDARD 720001-01**

1 IDOT HIGHWAY STANDARD 720001-01  
 Scale: NTS

Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO

Designed by: PMS  
 MLM

Checked by: PMS

Drawn by: MLM

Reviewed by: EPC

Date: MAY 2024

Scale: AS SHOWN

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 ACCURATE  
 O'BRIEN & ASSOCIATES, INC.  
 CONSULTING ENGINEERS

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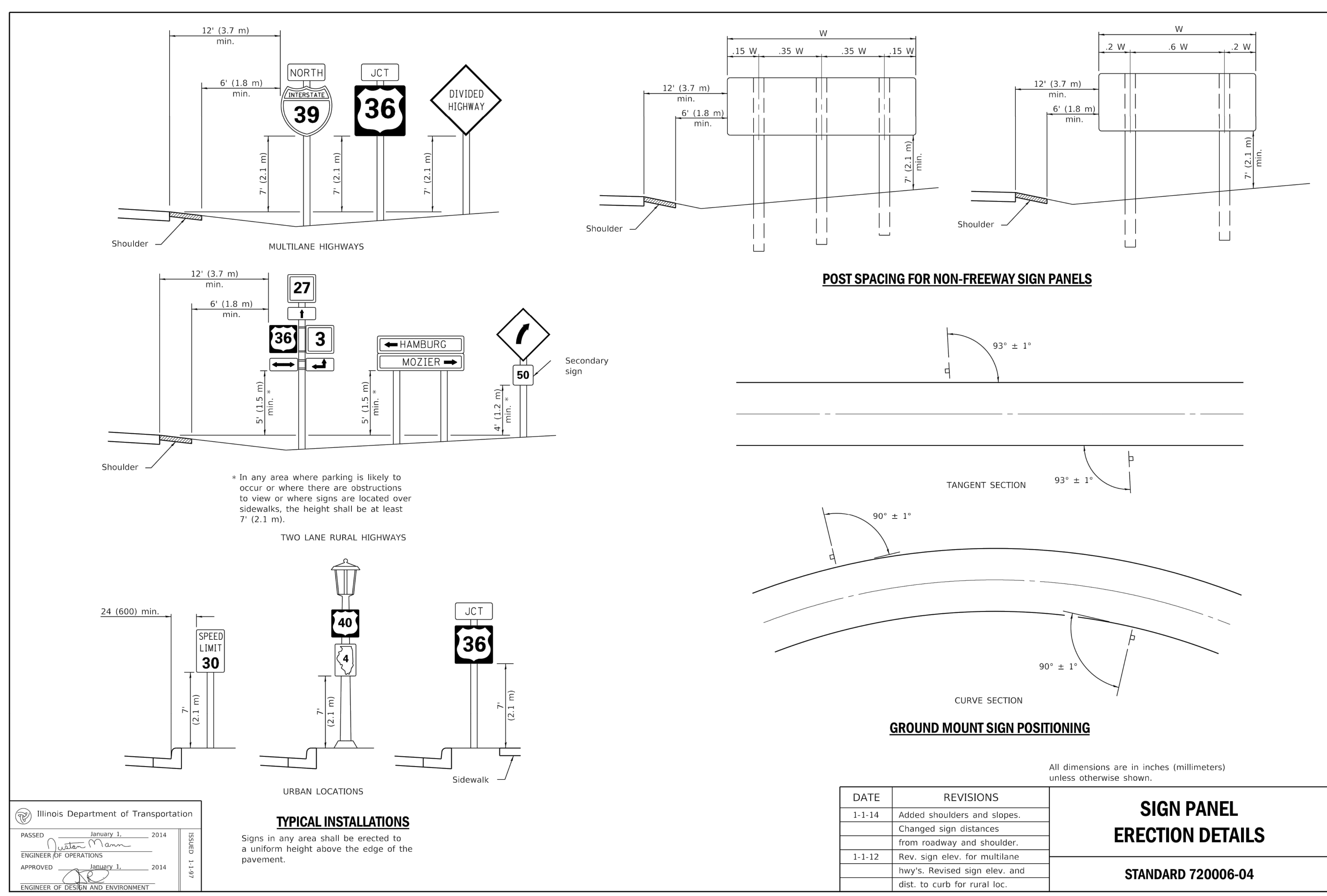
CONTRACT 14-253-5FR  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

CIVIL DETAILS

Sheet Number:  
**CP-528**

Page Number: 92

PLOT DATE: 8/15/2024 12:19 PM PLOTTED BY: MADRID, MICHELLE  
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Illinois Department of Transportation

PASSED January 1, 2014  
 ENGINEER OF OPERATIONS  
 APPROVED January 1, 2014  
 ENGINEER OF DESIGN AND ENVIRONMENT

DATE	REVISIONS
1-1-14	Added shoulders and slopes.
	Changed sign distances from roadway and shoulder.
1-1-12	Rev. sign elev. for multilane hwy's. Revised sign elev. and dist. to curb for rural loc.

**SIGN PANEL ERECTION DETAILS**

**STANDARD 720006-04**

1 IDOT HIGHWAY STANDARD 720006-04  
 Scale: NTS

Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

Designed by: PMS  
 Drawn by: MLM  
 Checked by: PMS  
 Reviewed by: EPC  
 Date: MAY 2024  
 Scale: AS SHOWN

**DONOHUE**  
 CONSULTING ENGINEERS

**Accurate**  
 CONSULTING ENGINEERS

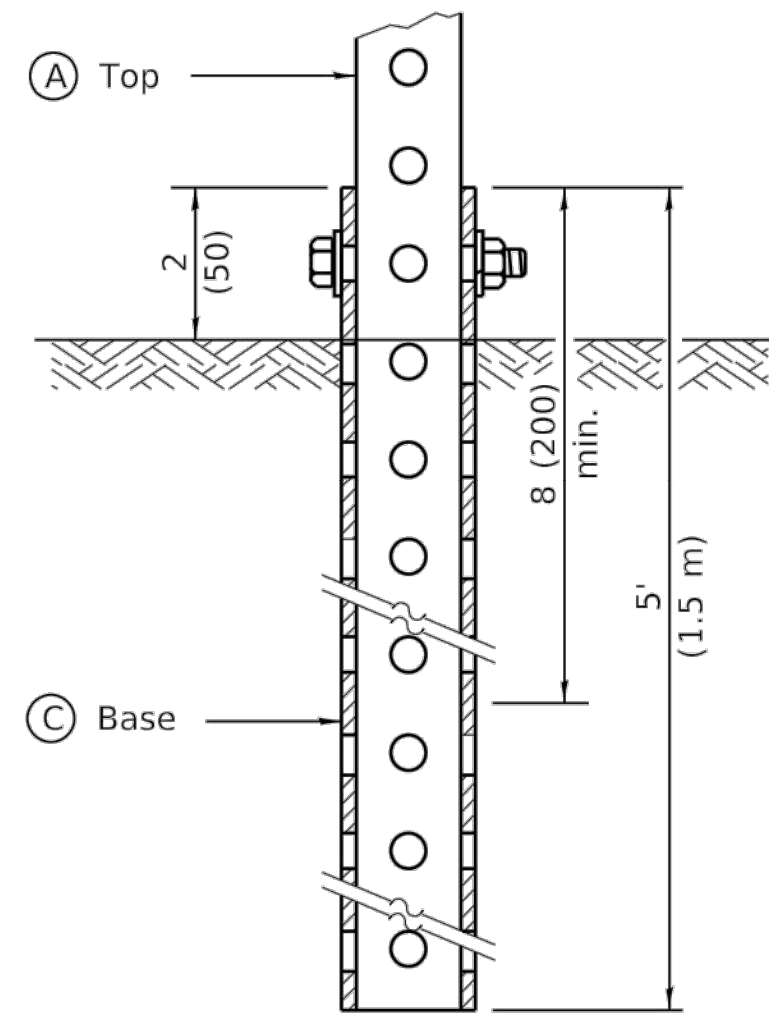
**LIVING HABITATS**

**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

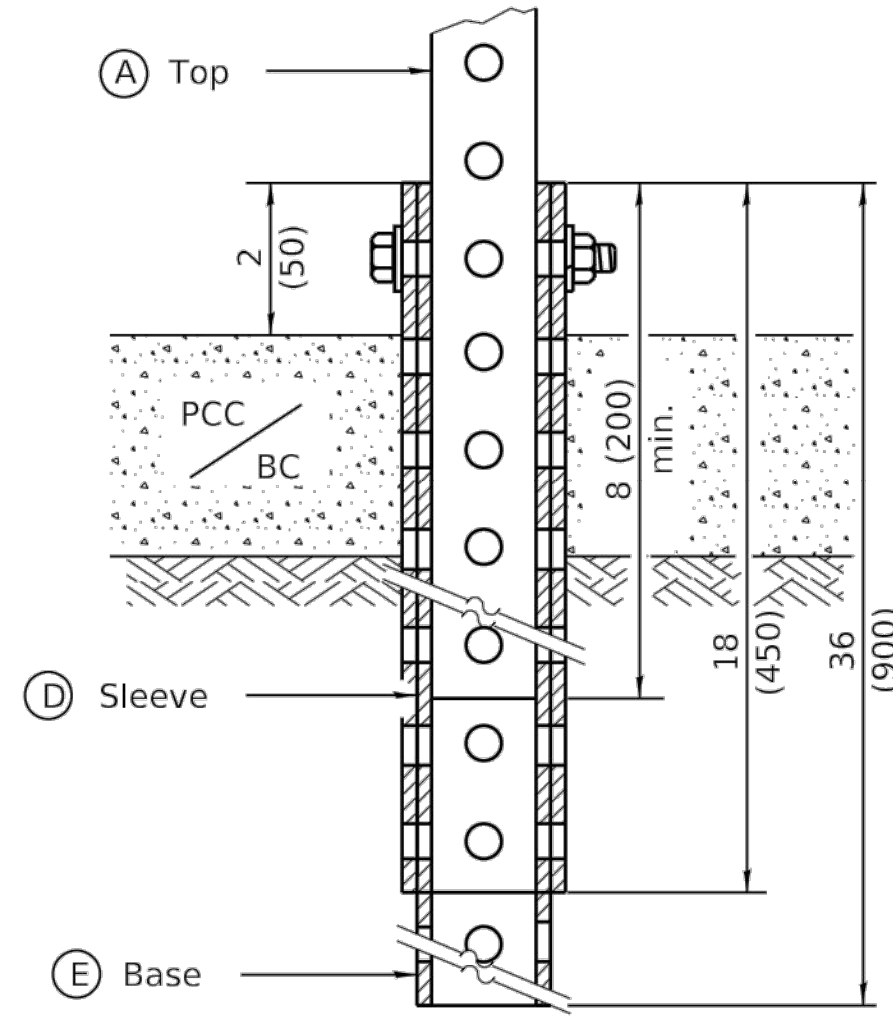
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**CP-529**  
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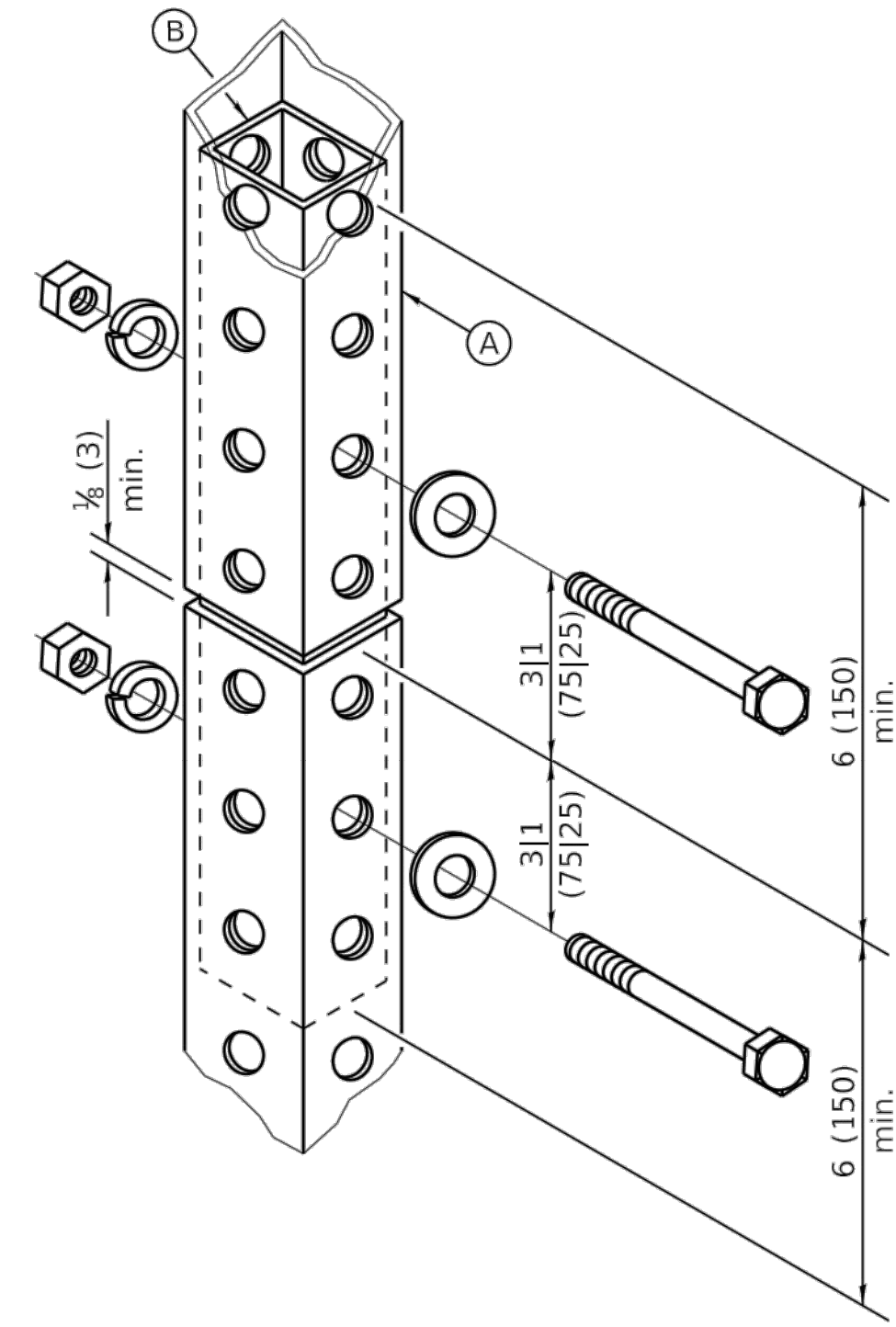




**GROUND MOUNT DETAIL**



**PAVEMENT MOUNT DETAIL**



**SPLICE DETAIL**

A	2 x 2 x var. (51 x 51 var.)
B	1 3/4 x 1 3/4 x 12 (44 x 44 x 300)
C	2 1/4 x 2 1/4 x 60 (57 x 57 x 1500)
D	2 1/2 x 2 1/2 x 18 (64 x 64 x 450)
E	2 1/4 x 2 1/4 x 36 (57 x 57 x 900)

**GENERAL NOTES**  
 All bolts 3/8 (M10) hex head zinc or cadmium plated.  
 All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS	
1-1-09	Switched units to English (metric).	<b>TELESCOPING STEEL SIGN SUPPORT</b>
1-1-07	New Standard. Used to be part of Standard 720006.	
		<b>STANDARD 728001-01</b>

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF OPERATIONS

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

**1** IDOT HIGHWAY STANDARD 728001-01  
 Scale: NTS

METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO

**ILH** **LIVING HABITATS**

**DONOHUE** **ACCURATE**

**ZIM** **CR**

**OBERLIN & ASSOCIATES, INC.**  
 CONSULTING ENGINEERS

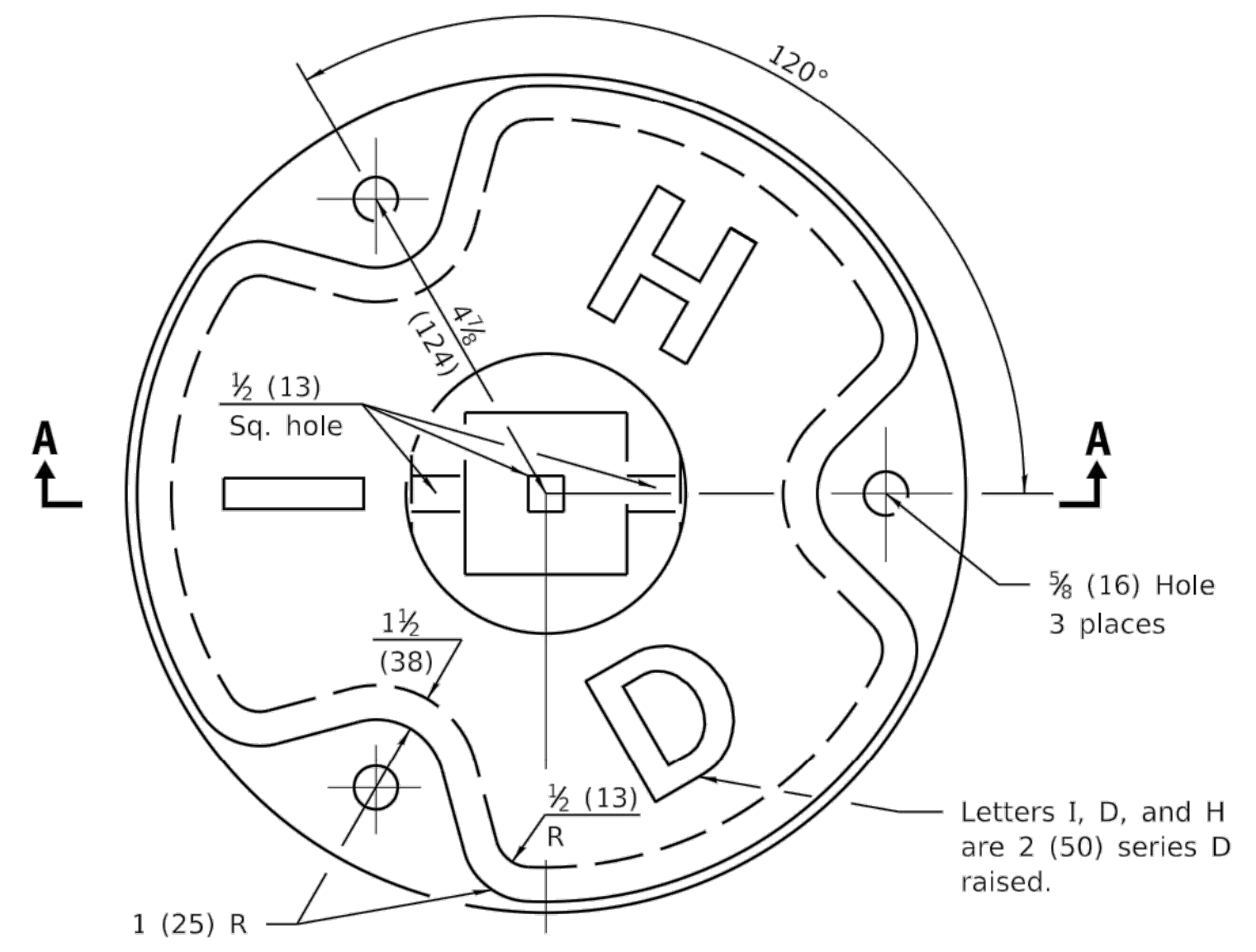
Designed by:	Checked by:
MLM	PMS
Drawn by:	Reviewed by:
MLM	EPC
Date:	Scale:
MAY 2024	AS SHOWN

**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

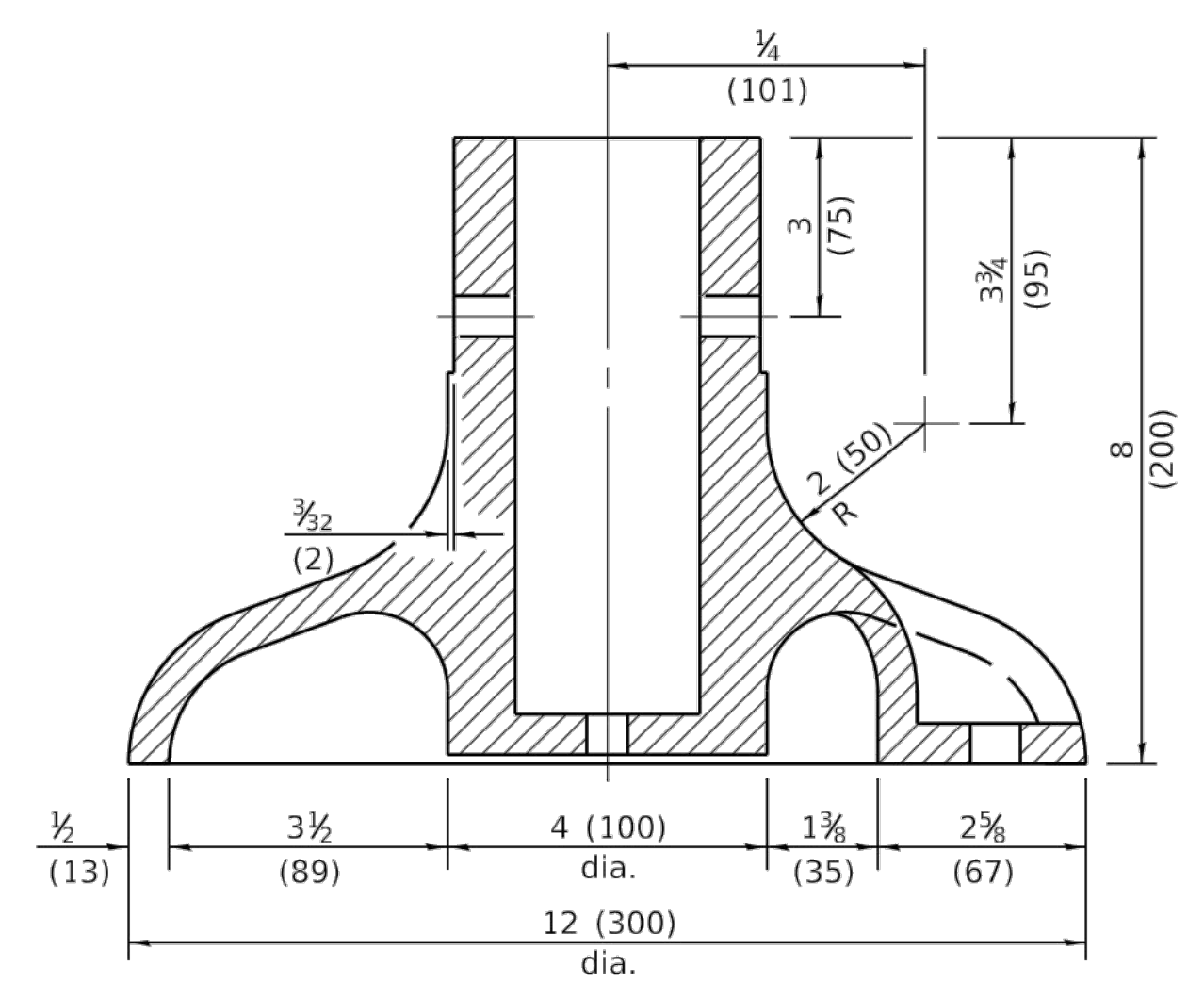
**CIVIL DETAILS**

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**CP-530**  
 Page Number: 94

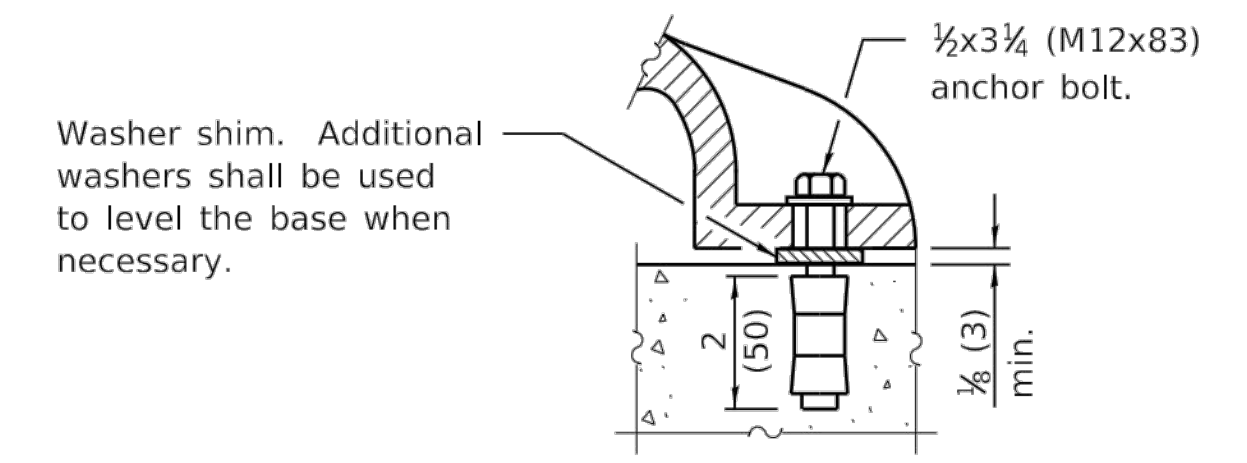
Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024



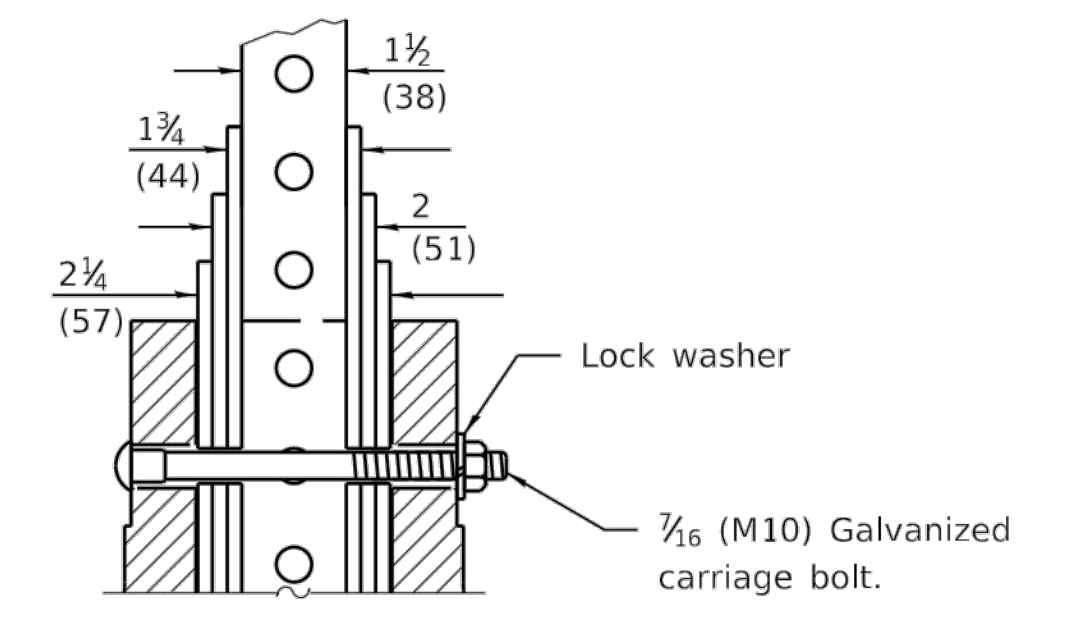
**PLAN**



**SECTION A-A**



**ANCHOR BOLT DETAIL**



**POST ASSEMBLY DETAIL**

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

Illinois Department of Transportation  
 PASSED January 1, 2009  
 ENGINEER OF OPERATIONS  
 APPROVED January 1, 2009  
 ENGINEER OF DESIGN AND ENVIRONMENT

DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-07	New Standard. Used to be part of Standard 720006.

**BASE FOR TELESCOPING STEEL SIGN SUPPORT**

**STANDARD 731001-01**

1 IDOT HIGHWAY STANDARD 731001-01  
 Scale: NTS

Rev.	Description	Appr.	Date
	ISSUE FOR CONSTRUCTION	MLM	08/2024

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

Designed by: PMS  
 Drawn by: MLM  
 Date: MAY 2024

Checked by: PMS  
 Reviewed by: EPC  
 Scale: AS SHOWN

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 LIVING HABITATS

DONOHUE  
 ACCURATE  
 O'BRIEN & ASSOCIATES, INC.  
 CONSULTING ENGINEERS

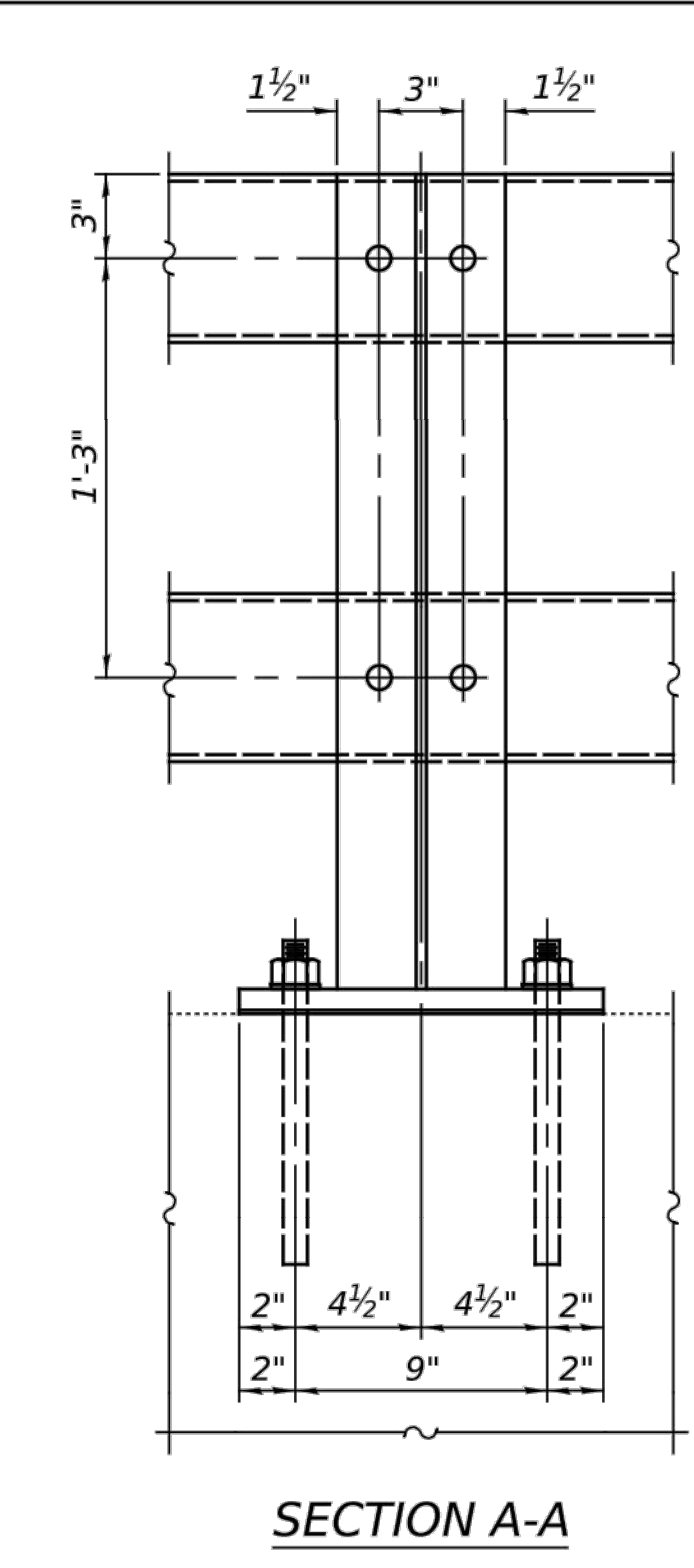
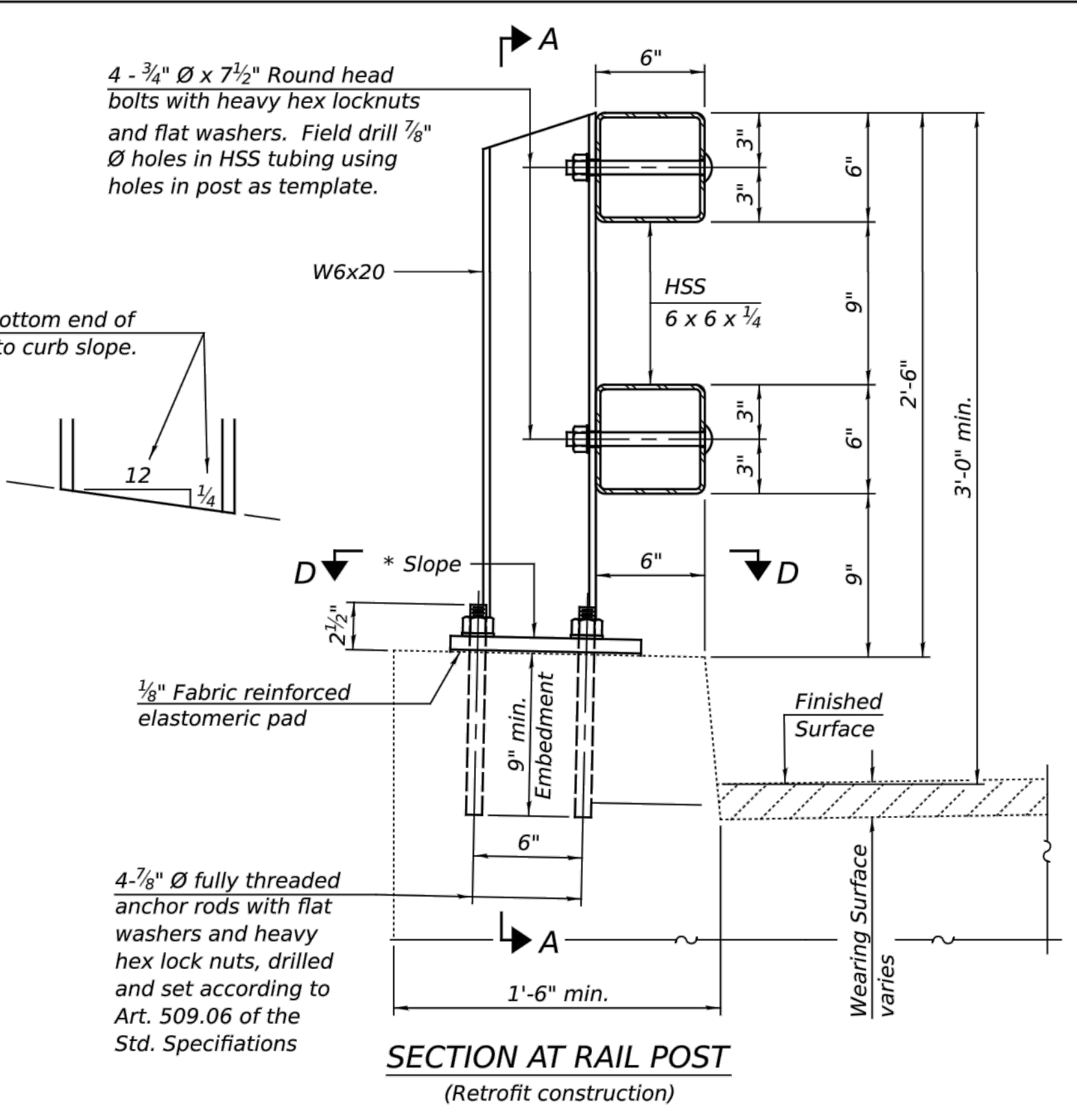
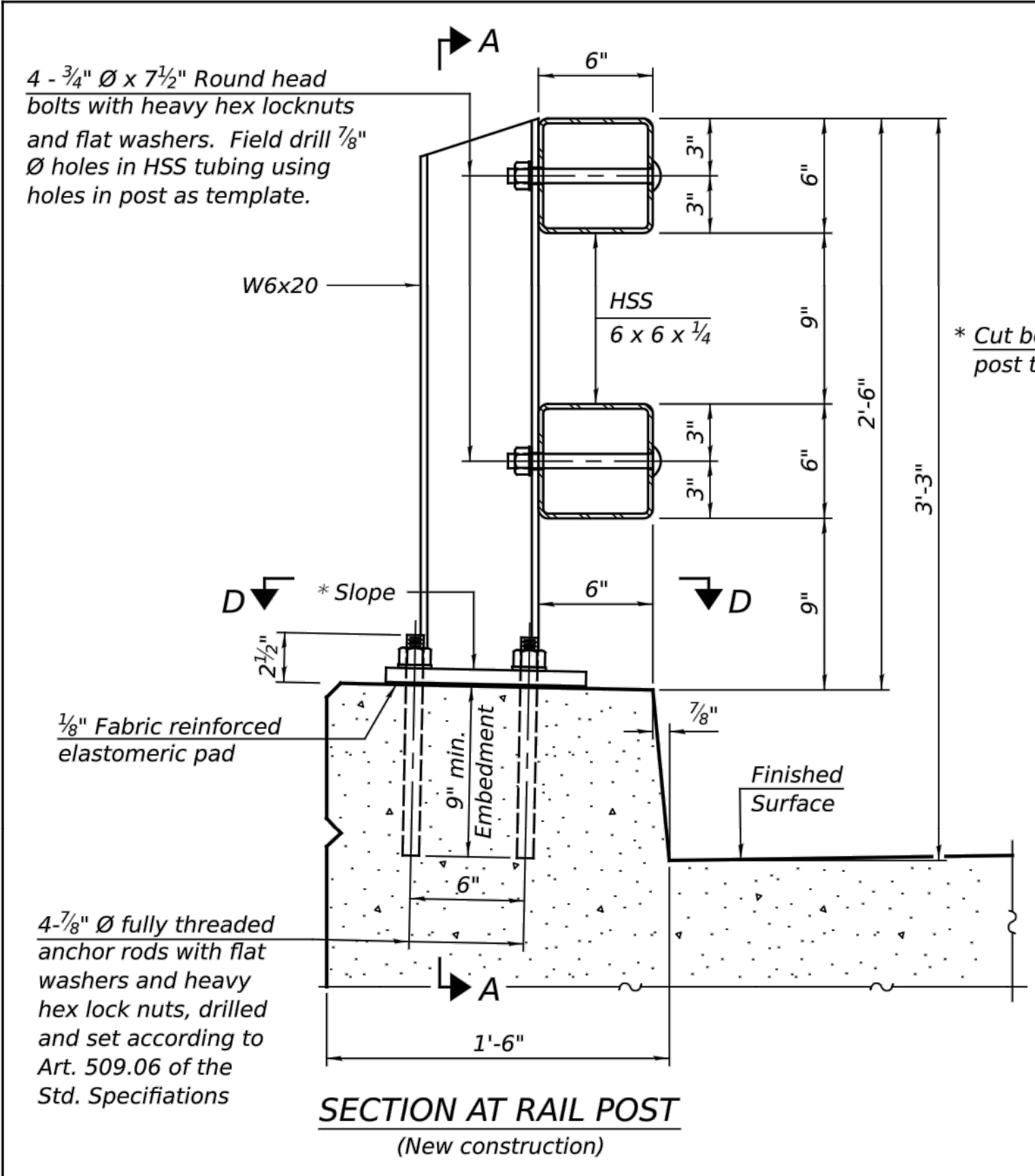
CONTRACT 14-253-5FR  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

CIVIL DETAILS

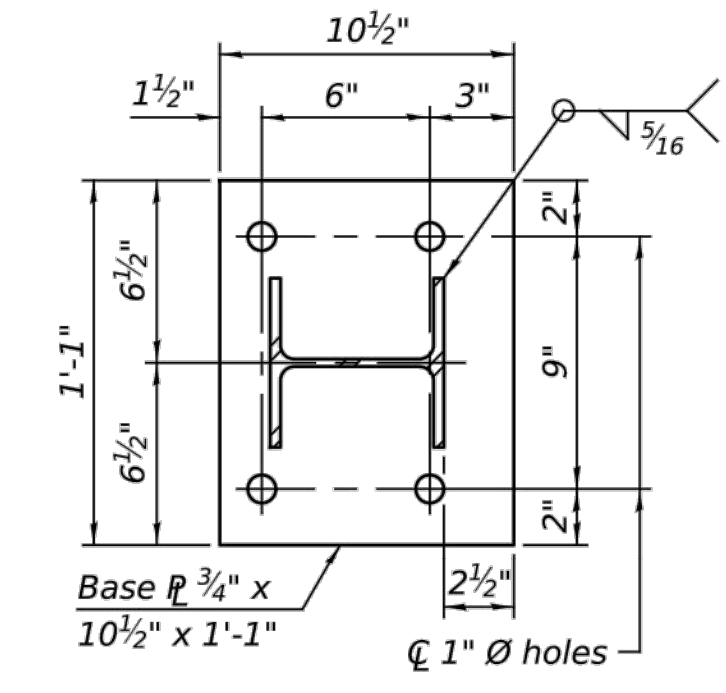
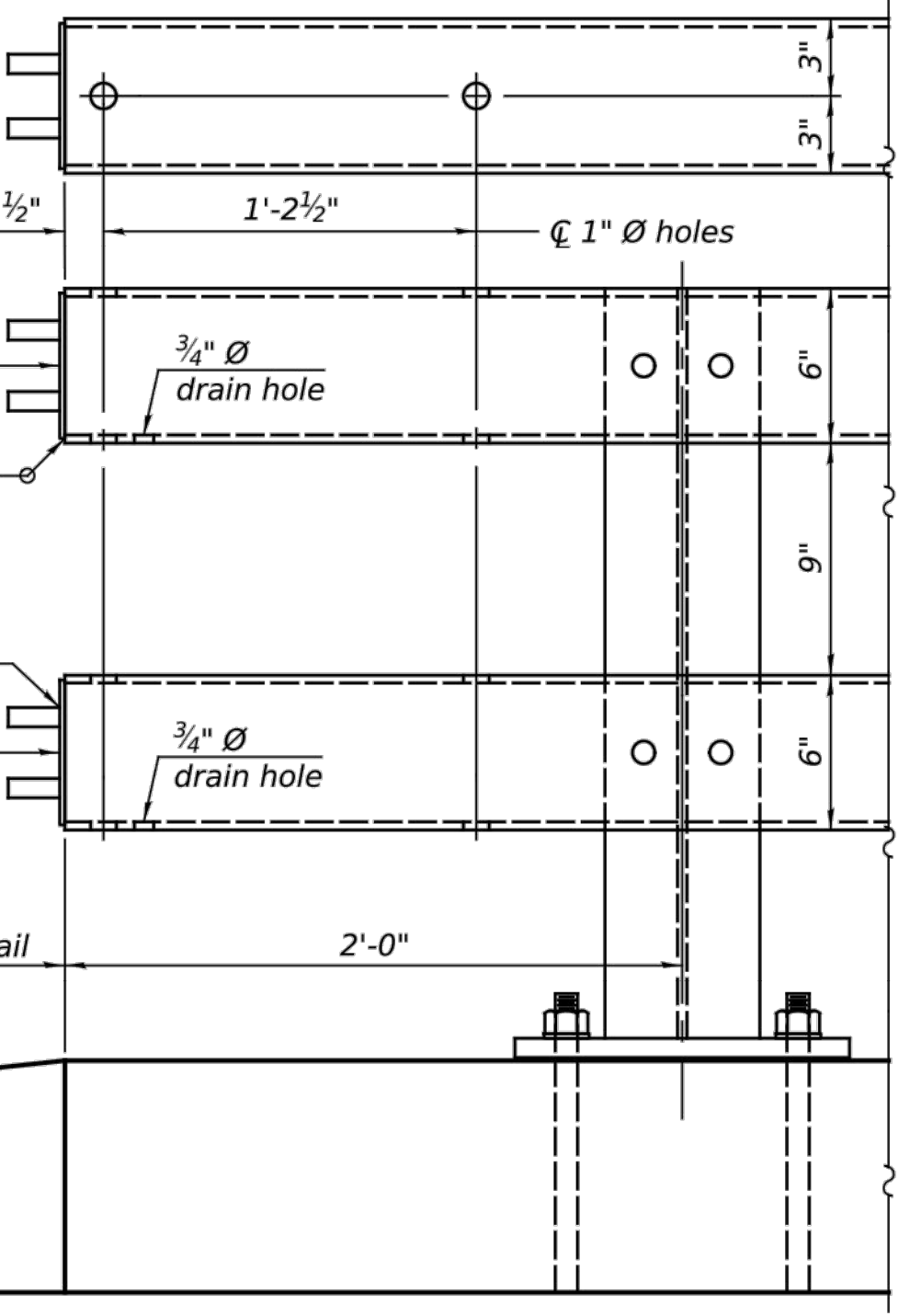
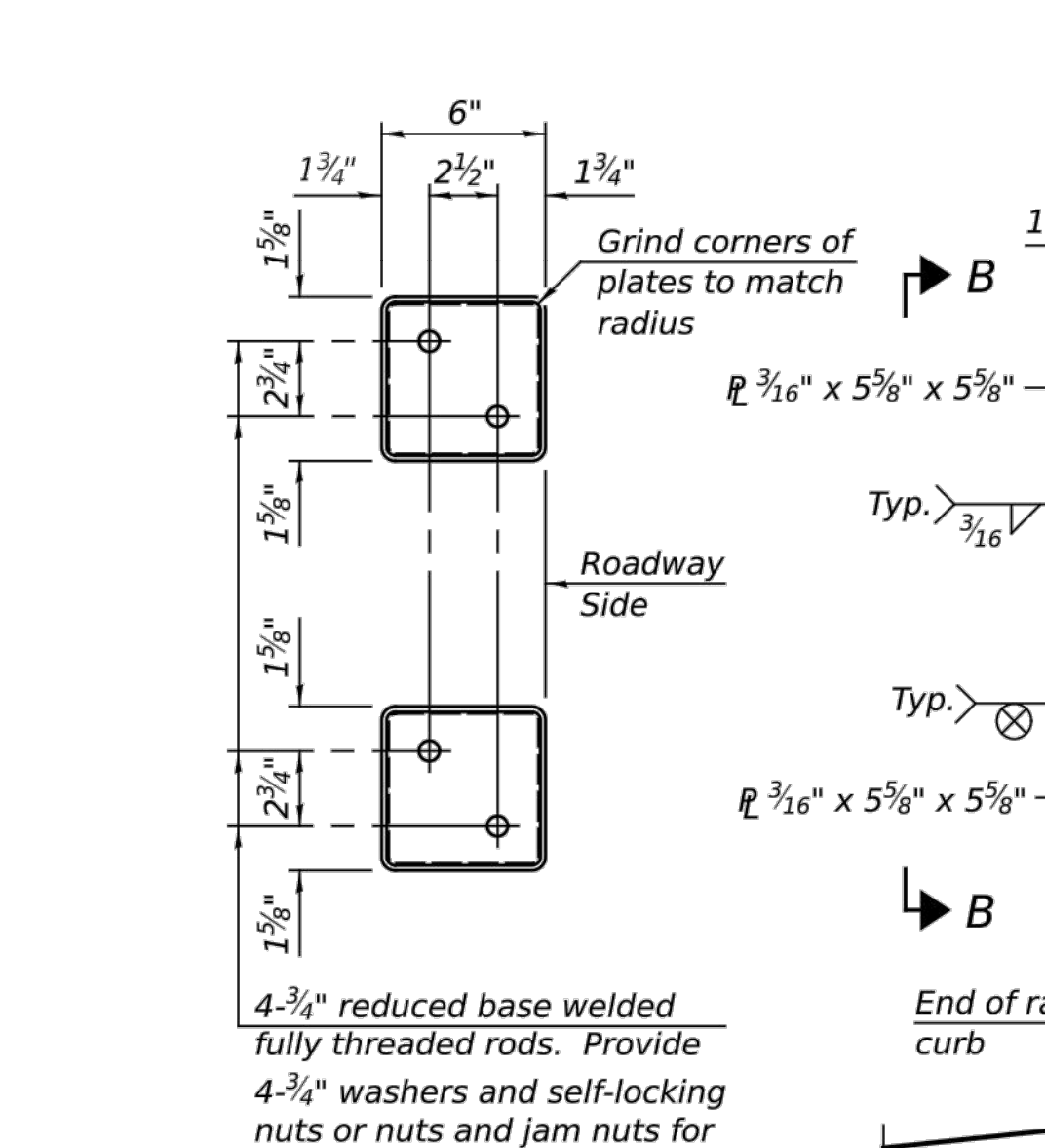
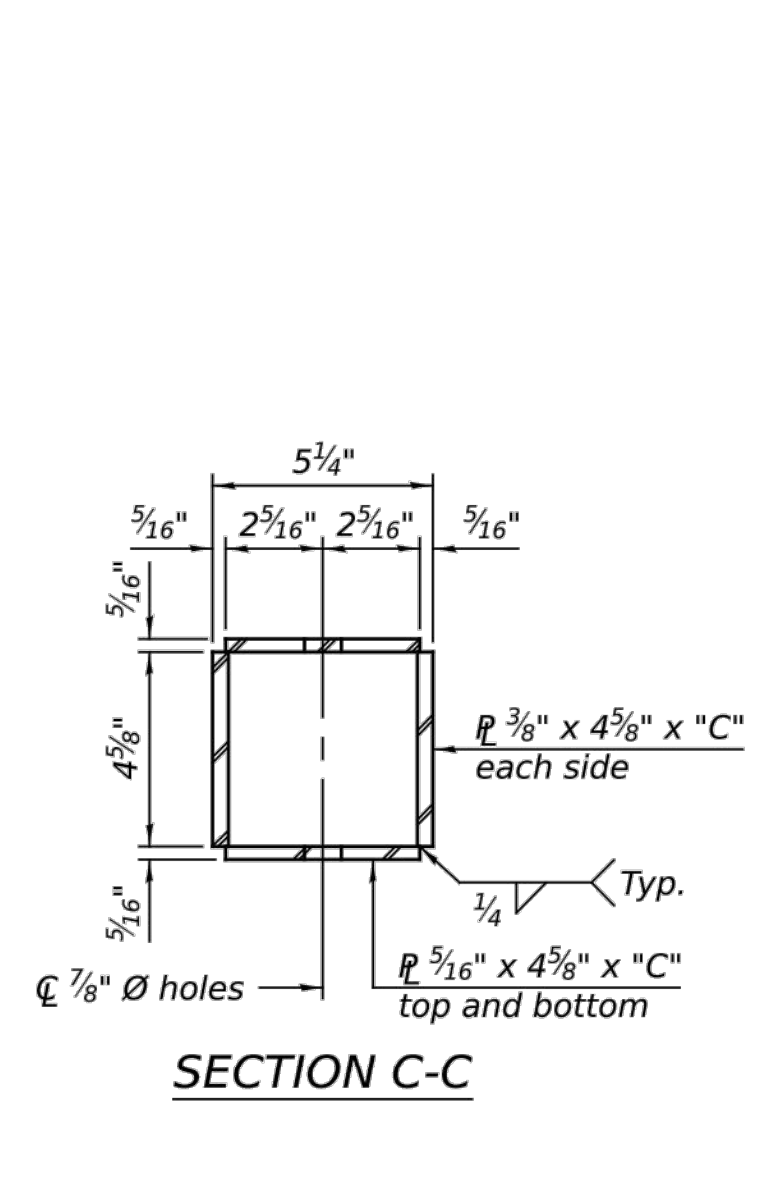
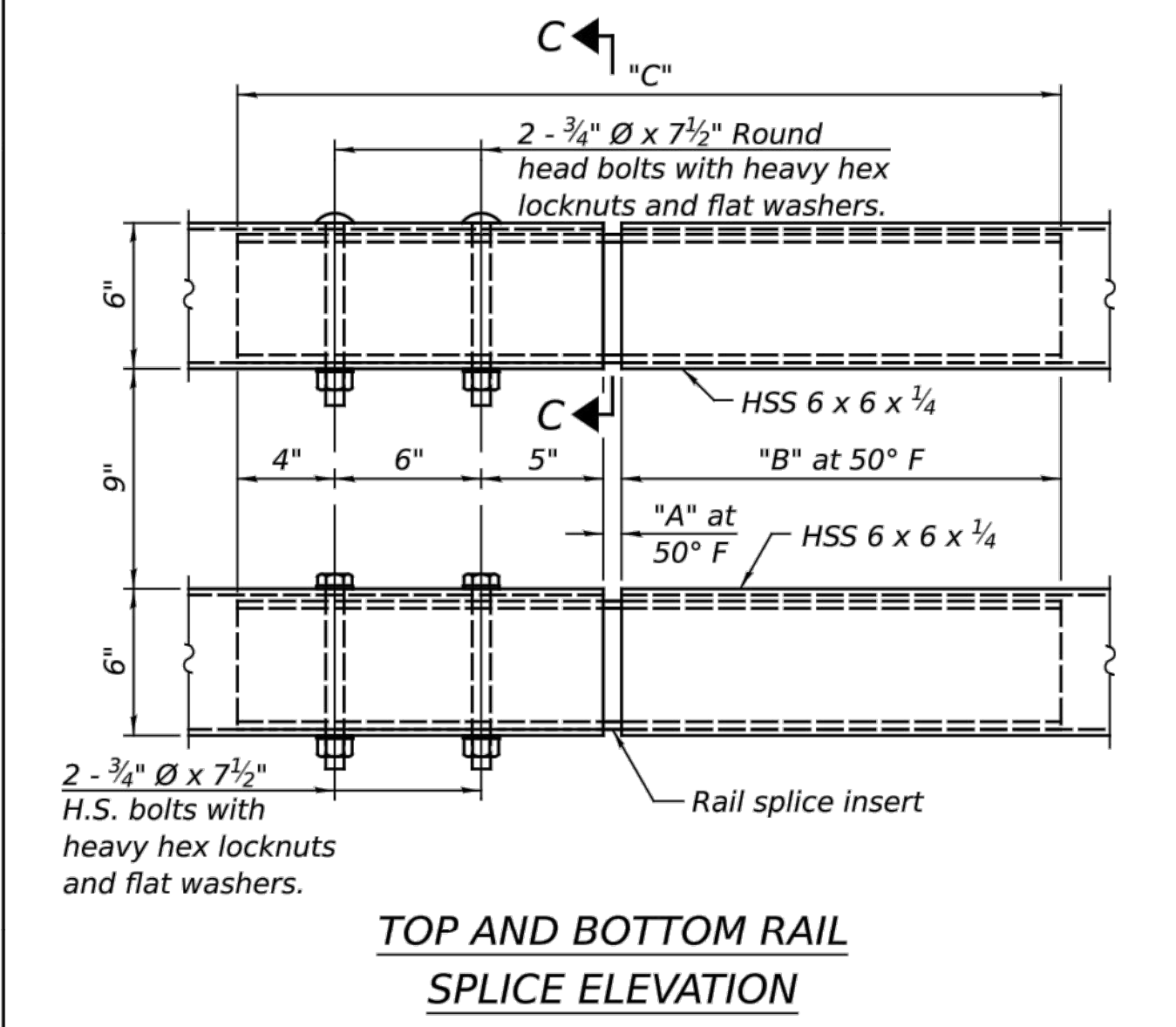
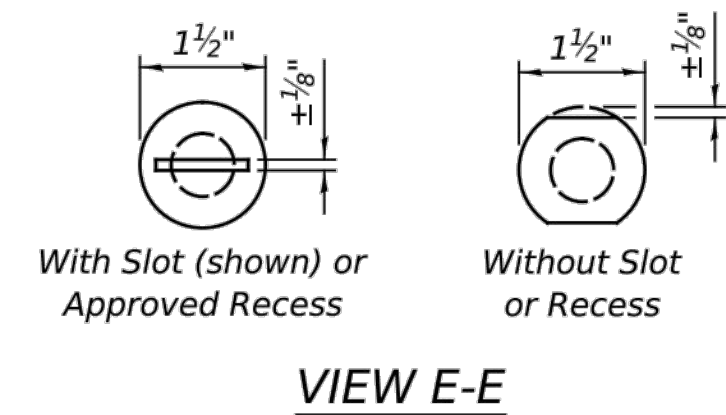
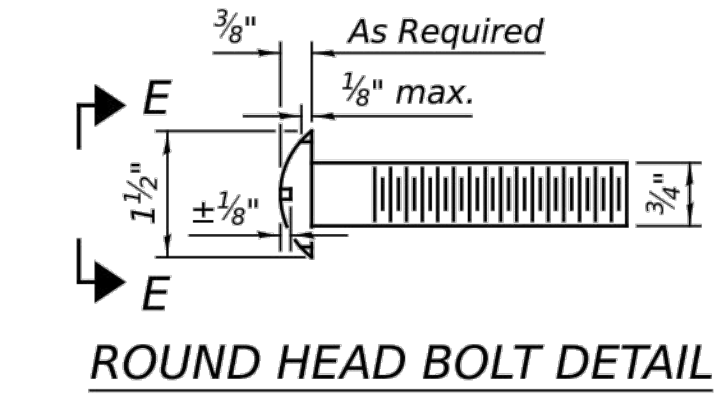
Sheet Number:  
**CP-531**  
 Page Number: 95

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Notes:  
 All HSS tubing shall be ASTM A500 grade C.  
 All plates shall be AASHTO M270 grade 50.  
 All heavy hex nuts shall be according to ASTM A563 grade DH.  
 All fully threaded anchor rods shall be ASTM F1554 grade 105.  
 The post base plate shall be fastened to the curb snug tight and given an additional 1/8" turn.  
 Posts shall not be located closer than 2'-6" to a bridge expansion joint.  
 Provide one 1/8" and two 1/4" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.  
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.  
 All HSS tubing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.  
 Rail splice inserts may be built out of 2-3/8" bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions are matched.  
 All round head bolts shall be ASTM A449.  
 The centerline of rail splices shall be placed between 1'-8" to 2'-6" from the centerline of the posts. The free end of the splice tube shall be oriented away from the closest post.



**RAILING CRITERIA**

MASH 2016 Test Level	4
Railing Weight (plf)	75
Min Fc (psi)	4,500
Post Spacing Range	6'-8" - 10'-0"

**SPLICE DIMENSIONS**

Location	T	A	B	C
All locs. not over exp. jts.	0	1/2"	1'-6"	2'-9 1/2"
Over Strip Seal Jt.	≤4"	2 1/2"	1'-8"	3'-1 1/2"
Over Finger or Modular Jt.	≤9 1/2"	5 1/2"	1'-10 3/4"	3'-7 1/4"
Over Finger or Modular Jt.	≤15"	8 1/4"	2'-1 1/2"	4'-0 3/4"

T = ; total movement along centerline of roadway at expansion joint.

**R-42** 5-15-2023

USER NAME =	DESIGNED -	REVISD -
PLOT SCALE =	CHECKED -	REVISD -
PLOT DATE =	DRAWN -	REVISD -
	CHECKED -	REVISD -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**STEEL RAILING, TYPE CO-10  
 STRUCTURE NO.**

Item	Unit	Quantity
Steel Railing, Type CO-10	Foot	

**1 IDOT TYPE CO-10 STEEL RAILING**  
 Scale: NTS

Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	MLM	08/2024

**METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO**

Designed by: MLM  
 Checked by: PMS  
 Drawn by: MLM  
 Reviewed by: EPC  
 Date: MAY 2024  
 Scale: AS SHOWN

**DONOHUE**  
 ACCURATE  
 CONSULTING ENGINEERS

**LIVING HABITATS**

**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-532**  
 Page Number: 96



LANDSCAPE ARCHITECTURE ABBREVIATIONS

ABP	ASPHALT BLACK PAVEMENT	MA	MANAGED SUCCESSION
AD	AREA DRAIN	MATL	MATERIAL
AGGR	AGGREGATE	MAX	MAXIMUM
ALLOW	ALLOWANCE	MDO	MEDIUM DENSITY OVERLAY
ALT	ALTERNATE	MET	METAL
AVG	AVERAGE	MEX	MEET EXISTING CONDITION/ELEVATION
BET	BETWEEN	MFR	MANUFACTURER
BIT CONC	BITUMINOUS CONCRETE	MIN	MINIMUM
BB	BOTTOM OF BENCH	MISC	MISCELLANEOUS
BR	BOTTOM OF RAMP	NORMAL	NORMAL
BS	BOTTOM OF STAIR	N	NORTH
BW	BOTTOM OF WALL	N/A	NOT APPLICABLE
BLDG	BUILDING	NIC	NOT IN CONTRACT
BO	BY OTHER	NTS	NOT TO SCALE
C-C	CENTER TO CENTER	NO	NUMBER
CL	CENTERLINE	OC	ON CENTER
CIP	CAST IN PLACE	OF	OUTFALL
CIR	CIRCLE	OPNG	OPENING
CLR	CLEAR	OPP	OPPOSITE
CM	CONSTRUCTION MANAGER	OD	OUTSIDE DIAMETER
COL	COLUMN	PB	PLANT BED
COMP	COMPACTED	POB	POINT OF BEGINNING
CONC	CONCRETE	PC	POINT OF CURVATURE
CONST	CONSTRUCTION	PCC	POINT OF COMPOUND CURVATURE
CJ	CONSTRUCTION OR CONTROL JOINT	PRC	POINT OF REVERSE CURVATURE
CONT	CONTINUOUS	PT	POINT OF TANGENCY
CF	CUBIC FEET	PR	PAIR
CY	CUBIC YARDS	PAR	PARAGRAPH
DEG	DEGREE	PERP	PERPENDICULAR
DET	DETAIL	PL	PROPERTY LINE
DGA	DENSELY GRADED AGGREGATE	PLMB	PLUMBING
DH	DENSE HEDGEROW	PM	PLANT MIX
DIA	DIAMETER	LB	POUND
DBH	DIAMETER AT BREAST HEIGHT	PSI	POUNDS PER SQUARE INCH
DIM	DIMENSION	PREFAB	PREFABRICATED
DN	DOWN	PROJ	PROJECT
DI	DRAIN INLET	R	RADIUS
DWG	DRAWING	RECD	RECEIVED
E	EAST	REF	REFERENCE
EC	EROSION CONTROL	REBAR	REINFORCED BAR
ELEC	ELECTRIC	REINF	REINFORCE, REINFORCE
ELEV, EL	ELEVATION	REQD	REQUIRED
ENG	ENGINEER	RET	RETAINING
EPS	EXPANDED POLYSTYRENE	RIM	RIM ELEVATION
EQ	EQUAL	ROW	RIGHT OF WAY
EQUIP	EQUIPMENT	SCH	SCHEDULE
EXIST	EXISTING	SECT	SECTION
EJ	EXPANSION JOINT	SHT	SHEET
EXT	EXTERIOR	SIM	SIMILAR
FFE	FINISHED FLOOR ELEVATION	SK	SKETCH
FT	FEET	S	SOUTH
FG	FINISHED GRADE	SPEC	SPECIFICATION
FIN	FINISH	SQ	SQUARE
FTG	FOOTING	SS	STAINLESS STEEL
FDN	FOUNDATION	STD	STANDARD
GALV	GALVANIZE	STL	STEEL
HT	HEIGHT	STR, STRUC	STRUCTURAL
HORIZ	HORIZONTAL	T	TREAD
HDG	HOT DIP GALVANIZED	TO	TOP OF BENCH
IN	INCH	TCSS	TOP OF CONCRETE SLAB
INCL	INCLUDE, INCLUDING	TEL	TELEPHONE
INFO	INFORMATION	TEMP	TEMPORARY
ID	INSIDE DIAMETER	THK	THICK
INT	INTERIOR	THRU	THROUGH
INV	INVERT ELEVATION	TOS	TOE OF SLOPE
JT	JOINT	T&B	TOP AND BOTTOM
JB	JUNCTION BOX	TR	TOP OF RAMP
LA	LANDSCAPE ARCHITECT	TYP	TYPICAL
LI	LIGHT	TS	TOP OF STAIR
LIN	LINEAR	TW	TOP OF WALL
LOW	LIMIT OF WORK	VERT	VERTICAL
		WM	WHIP MIX
		WP	WATERPROOFING
		WT	WEIGHT
		W	WIDTH
		W/	WITH
		W/O	WITHOUT

LANDSCAPE ARCHITECTURE SYMBOLS

PLANTING TAG	QUANTITY 
REFERENCE TAG	SHEET NUMBER DETAIL NUMBER 
ELEMENTS PARALLEL	ALIGN 
ELEMENTS TO BE FLUSH	ALIGN 
ENLARGEMENT BOX	
POINT OF CENTERLINE INTERSECTION	
SECTION ELEVATION KEY	
BREAK LINE	
PLUS OR MINUS - CONTRACTOR MAY PROCEED WITH LAYOUT IF DEVIATION IS NO GREATER THAN TWO UNITS OF THE SMALLEST DIMENSION GIVEN	
PROPOSED CONTOUR	XXX 
EXISTING CONTOUR	(xxx) 
WATERS OF UNITED STATES (WOUS)	WOUS 
RIGHT OF WAY	R.O.W. 
TOE OF SLOPE	
VERIFY IN FIELD. DO NOT PROCEED WITHOUT ENGINEER'S INPUT	VIF 
NORTHING AND EASTING COORDINATES	N:XX.XXX E:XX.XXX
LAYOUT COORDINATE POINT	
LIMIT OF WORK	L.O.W. 
CHANNEL CENTER LINE & DIRECTION OF FLOW	
CHANNEL MEAN ELEV.	
100 YR FLOOD ELEV.	
TOP OF CURB ELEVATION	+ TC
BOTTOM OF CURB ELEVATION	+ BC
TOP OF WALL ELEVATION	+ TW
BOTTOM OF WALL ELEVATION	+ BW
HIGH POINT	+ HP
LOW POINT	+ LP
DIRECTION AND PERCENT OF DOWN SLOPE	4.99% 
H:V SLOPE DESIGNATION	5:1 
POINT OF BEGINNING	POB 
EXISTING TREE TO REMAIN	
PROPOSED TREE	
REVISION ISSUE NUMBER IN TRIANGLE DENOTES REVISION NUMBER ON SHEET ADDENDUM NO 1 DENOTES ADDENDA RELEASE NUMBER XX DENOTES ENGINEER INITIALS 00/00/00 DENOTES ISSUE DATE	 ADDENDUM NO. 1    XX    00/00/00

GENERAL NOTES

- DIMENSIONS AND COORDINATES TAKE PRECEDENCE OVER SCALE. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS REQUIRED TO PERFORM THE WORK AND IS TO REPORT ANY DISCREPANCIES WITH THE CONTRACT DOCUMENTS TO THE ENGINEER BEFORE COMMENCING WORK.
- THE LANDSCAPE ARCHITECTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS INCLUDING THE PROJECT MANUALS, SPECIFICATIONS AND ENGINEERING DRAWINGS. IN CASES OF DIFFERENCE BETWEEN THE CONTRACT DOCUMENTS WITH RESPECT TO THE QUANTITY, SIZES, OR SCOPE OF WORK, THE GREATER SHALL APPLY.
- DIMENSIONS INDICATED ARE TAKEN BETWEEN THE FACES OF FINISHED SURFACES UNLESS OTHERWISE NOTED.

METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO

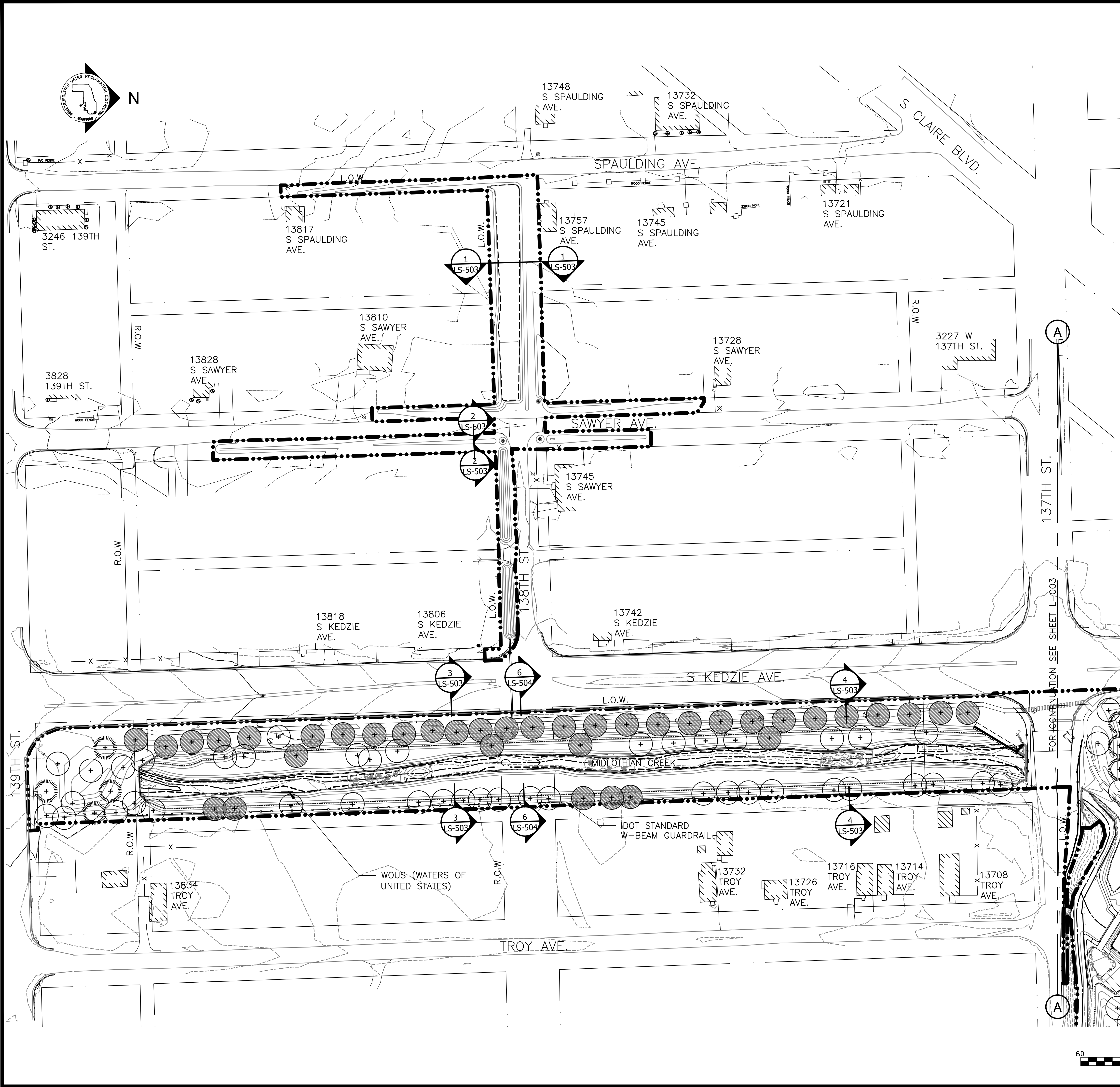
Designed by: LH	Checked by: LH
Drawn by: LH	Reviewed by: LH
Date: MAY 2024	Scale: AS SHOWN

**DONOHUE**  
ENGINEERS & ARCHITECTS, INC.  
**Accurate**  
CONSULTING ENGINEERS

**LIVING HABITATS**

CONTRACT 14-253-5FR  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
LITTLE CALUMET RIVER WATERSHED  
**LANDSCAPE SYMBOLS AND ABBREVIATIONS**

PLOT DATE: 8/13/2024 11:30 AM PLOTTED BY: HANNAH CUSICK  
 P:\16-105\_Robbins Park - MWRD\04\_CAD\14-253-3F\Landscape\Sheets\14-253-BF\L-002.dwg 1/10/2024 10:36 AM



**GENERAL SITE PLAN NOTES:**

1. DIMENSIONS AND COORDINATES TAKE PRECEDENCE OVER SCALE. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS REQUIRED TO PERFORM THE WORK AND IS TO REPORT ANY DISCREPANCIES WITH THE CONTRACT DOCUMENTS TO THE ENGINEER BEFORE COMMENCING WORK.
2. THE LANDSCAPE ARCHITECTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS INCLUDING THE PROJECT MANUALS, SPECIFICATIONS AND ENGINEERING DRAWINGS. IN CASES OF DIFFERENCE BETWEEN THE CONSULTANTS' DOCUMENTS WITH RESPECT TO THE QUANTITY, SIZES, OR SCOPE OF WORK, THE GREATER SHALL APPLY.
3. DIMENSIONS INDICATED ARE TAKEN BETWEEN THE FACES OF FINISHED SURFACES UNLESS OTHERWISE NOTED.
4. EXISTING TREES TO BE TRANSPLANTED MUST BE IDENTIFIED AND TAGGED WITH VERIFICATION BY ENGINEER.

**LEGEND:**

- L.O.W. — LIMIT OF WORK
- WOUS — WATERS OF UNITED STATES
- - - CHANNEL MEAN ELEV.
- · · · · 100 YR FLOOD ELEV.
- ▨ MOWN TURF PATHS/LANDINGS
- ⊗ STONE RIFFLES, SEE LS-507
- CHANNEL CENTER LINE & DIRECTION OF FLOW
- ⊕ EVERGREEN TREE
- ⊕ DECIDUOUS TREE
- EXISTING TREE TO BE TRANSPLANTED — SEE LD-101 AND LP-101
- ⊖ SITE SIGNAGE

Rev.	Description	Appr.	Date
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**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED  
**GENERAL SITE PLAN - MIDLOTHIAN CREEK**

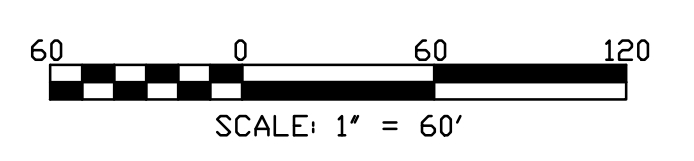
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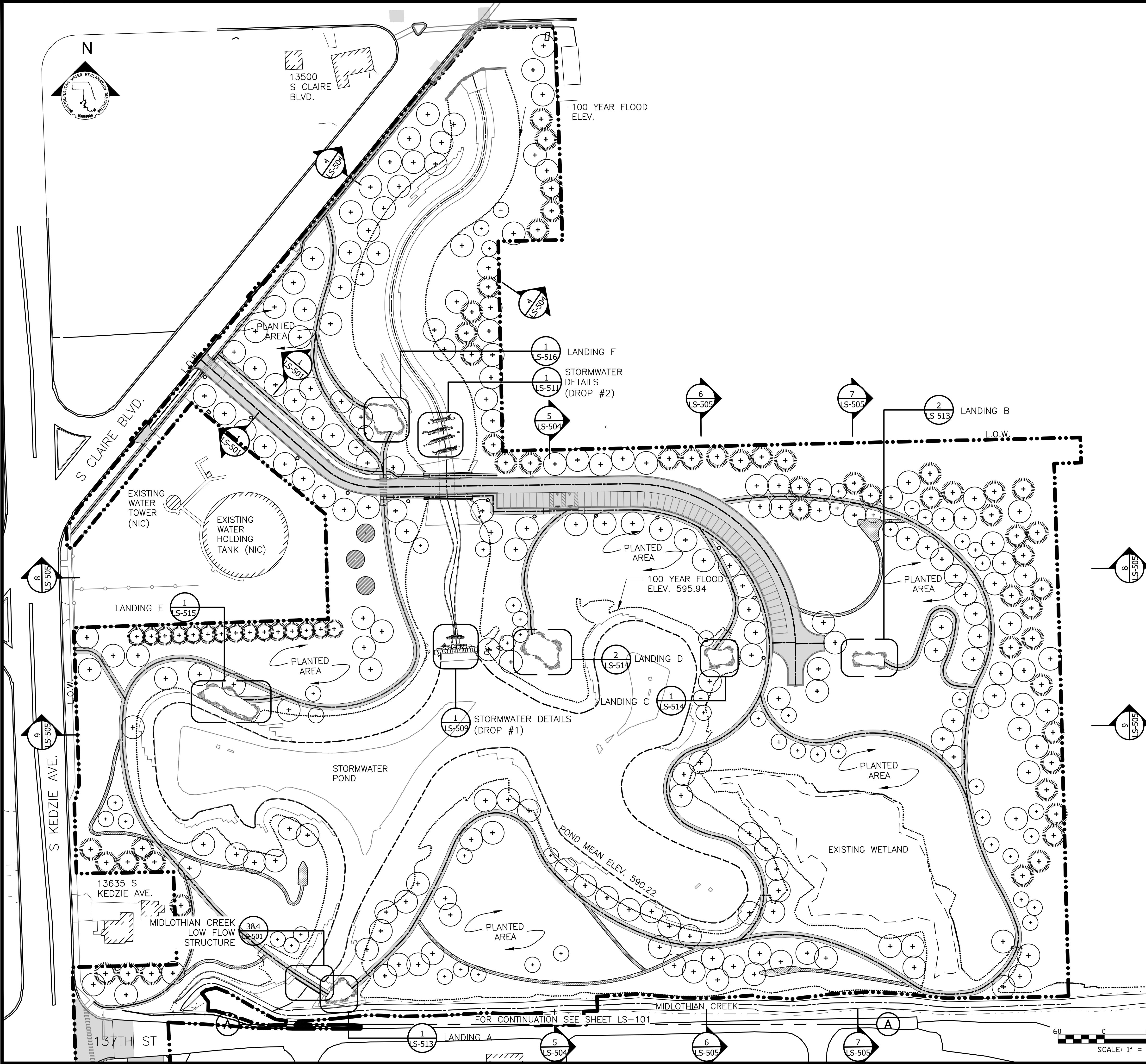
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**L-002**

Page Number: 98





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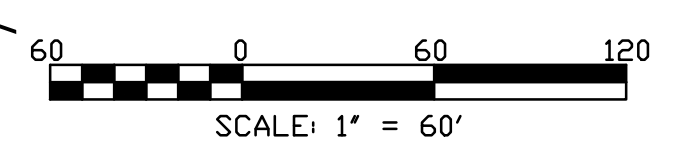


**LEGEND:**

- L.O.W. LIMIT OF WORK
- WOUS WATERS OF UNITED STATES
- CHANNEL MEAN ELEV.
- 100 YR FLOOD ELEV.
- EVERGREEN TREE
- DECIDUOUS TREE
- STONE RIFFLES
- MOWN TURF PATHS/LANDINGS
- PAVED PATHS
- ROADWAYS
- FISH HABITAT
- SITE SIGNAGE
- SITE LIGHTING
- ENLARGEMENT BOX
- EXISTING TREE TO BE TRANSPLANTED - SEE LD-201 AND LP-201

**GENERAL SITE PLAN NOTES:**

1. REFERENCE NOTES ON SITE PLAN DRAWING L-002.
2. EXISTING TREES TO BE TRANSPLANTED MUST BE IDENTIFIED AND TAGGED WITH VERIFICATION BY THE ENGINEER.



Rev.	Description	Appr.	Date
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**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

Contract 14-253-5FR  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED

**GENERAL SITE PLAN - STORMWATER PARK**

Designed by: LH  
 Checked by: LH  
 Drawn by: LH  
 Reviewed by: LH  
 Date: MAY 2024  
 Scale: AS SHOWN

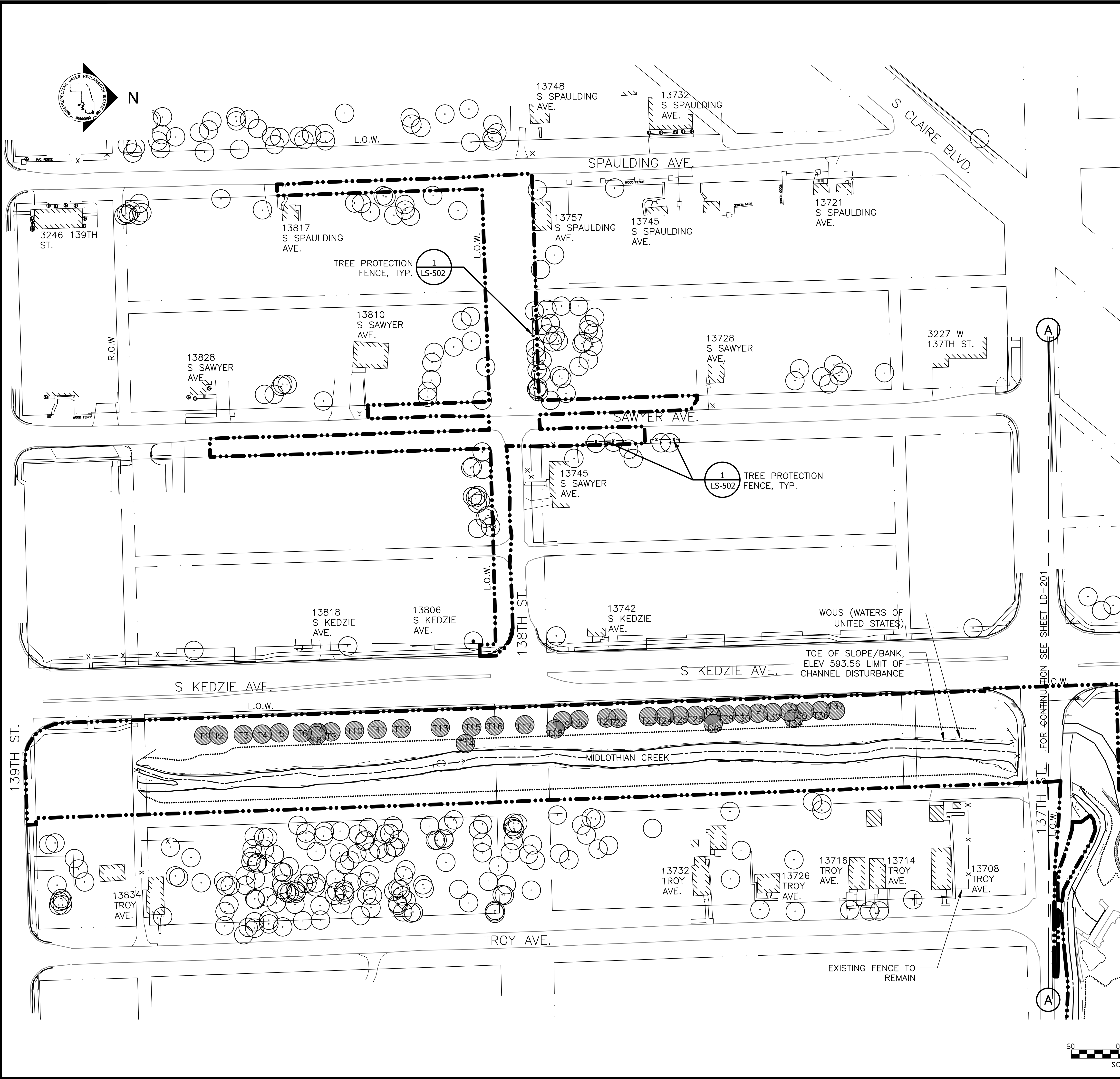
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**LIVING HABITATS**

Sheet Number:  
**L-003**

Page Number: 99



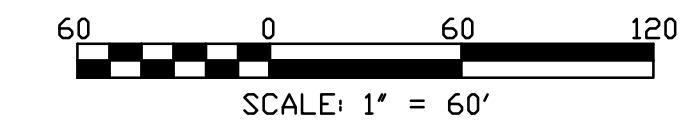


**TREE PROTECTION / SITE PREP NOTES:**

1. ALTHOUGH EVERY EFFORT HAS BEEN MADE TO LOCATE ACCURATELY ALL CONDITIONS, ACTUAL CONDITIONS MAY VARY FROM THOSE SHOWN. THE CONTRACTOR SHALL MAKE A FULL REVIEW OF ALL EXISTING CONDITIONS OF THE SITE AND SHALL REPORT DISCREPANCIES TO THE ENGINEER BEFORE BIDDING. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ACTUAL CONDITIONS AS THEY EXIST ON SITE.
2. THE CONTRACTOR SHALL FAMILIARIZE ITSELF WITH ALL UTILITIES ABOVE GRADE, AT GRADE, AND UNDERGROUND, INCLUDING UTILITY PIPES AND STRUCTURES. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES WITH THE VILLAGE OF ROBBINS AND ALL RELEVANT UTILITY COMPANIES. THE CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR THE COST INCURRED DUE TO DAMAGE AND REPLACEMENT OF ALL UTILITIES DAMAGED ON THE SITE.
3. PROTECTIVE FENCING SHALL BE PLACED BEFORE ANY SITEMWORK BEGINS AND IS TO REMAIN UNDISTURBED UNTIL CONSTRUCTION IS COMPLETED, EXCEPT AS NOTED HEREIN.
4. FENCE LOCATION IS APPROXIMATE. VERIFY FINAL FENCE LOCATION IN THE FIELD WITH THE ENGINEER.
5. FENCE SHALL NOT BE MOVED OR DISTURBED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
6. EXISTING TREES TO BE TRANSPLANTED MUST BE IDENTIFIED AND TAGGED WITH VERIFICATION BY THE ENGINEER. CONTRACTOR TO DETERMINE LOCATION FOR ON-SITE STORAGE OF TRANSPLANTED TREES WITH THE ENGINEER.

**LEGEND:**

- - - L.O.W. LIMIT OF WORK
- - - WOUS WATERS OF UNITED STATES
- x - x - TREE PROTECTION FENCE
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE TRANSPLANTED
- - -> CHANNEL CENTER LINE & DIRECTION OF FLOW
- - - CHANNEL MEAN ELEV.
- - - 100 YR FLOOD ELEV.



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**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

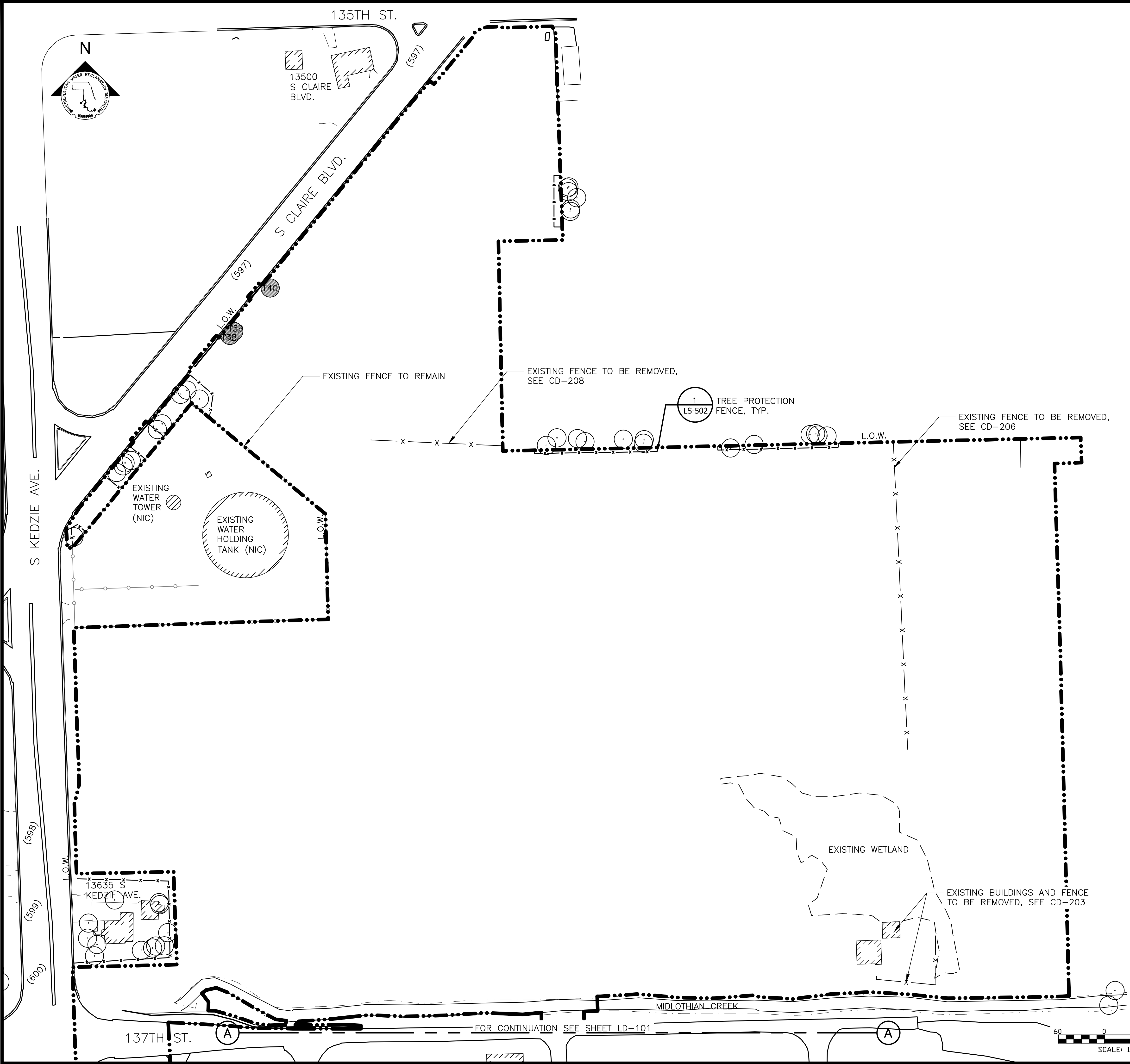
**CONTRACT 14-253-5FR**  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
LITTLE CALUMET RIVER WATERSHED  
**TREE PROTECTION PLAN -**  
MIDLOTHIAN CREEK

Designed by: LH  
Checked by: LH  
Drawn by: LH  
Reviewed by: LH  
Date: MAY 2024  
Scale: AS SHOWN

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Sheet Number:  
**LD-101**  
Page Number: 100

PLOT DATE: 8/13/2024 11:32 AM PLOTTED BY: HANNAH CUSICK  
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**TREE PROTECTION / SITE PREP NOTES:**

1. REFERENCE NOTES ON TREE PROTECTION DRAWING LD-101.
2. EXISTING TREES TO BE TRANSPLANTED MUST BE IDENTIFIED AND TAGGED WITH VERIFICATION BY THE ENGINEER.

**LEGEND:**

- L.O.W. --- LIMIT OF WORK
- - - W.O.U.S. - - - WATERS OF UNITED STATES
- x - x - x - TREE PROTECTION FENCE
- (600) --- EXISTING CONTOUR
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE TRANSPLANTED

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED  
**TREE PROTECTION PLAN - STORMWATER PARK**

Designed by: LH	Checked by: LH
Drawn by: LH	Reviewed by: LH
Date: MAY 2024	Scales: AS SHOWN

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**LIVING HABITATS**

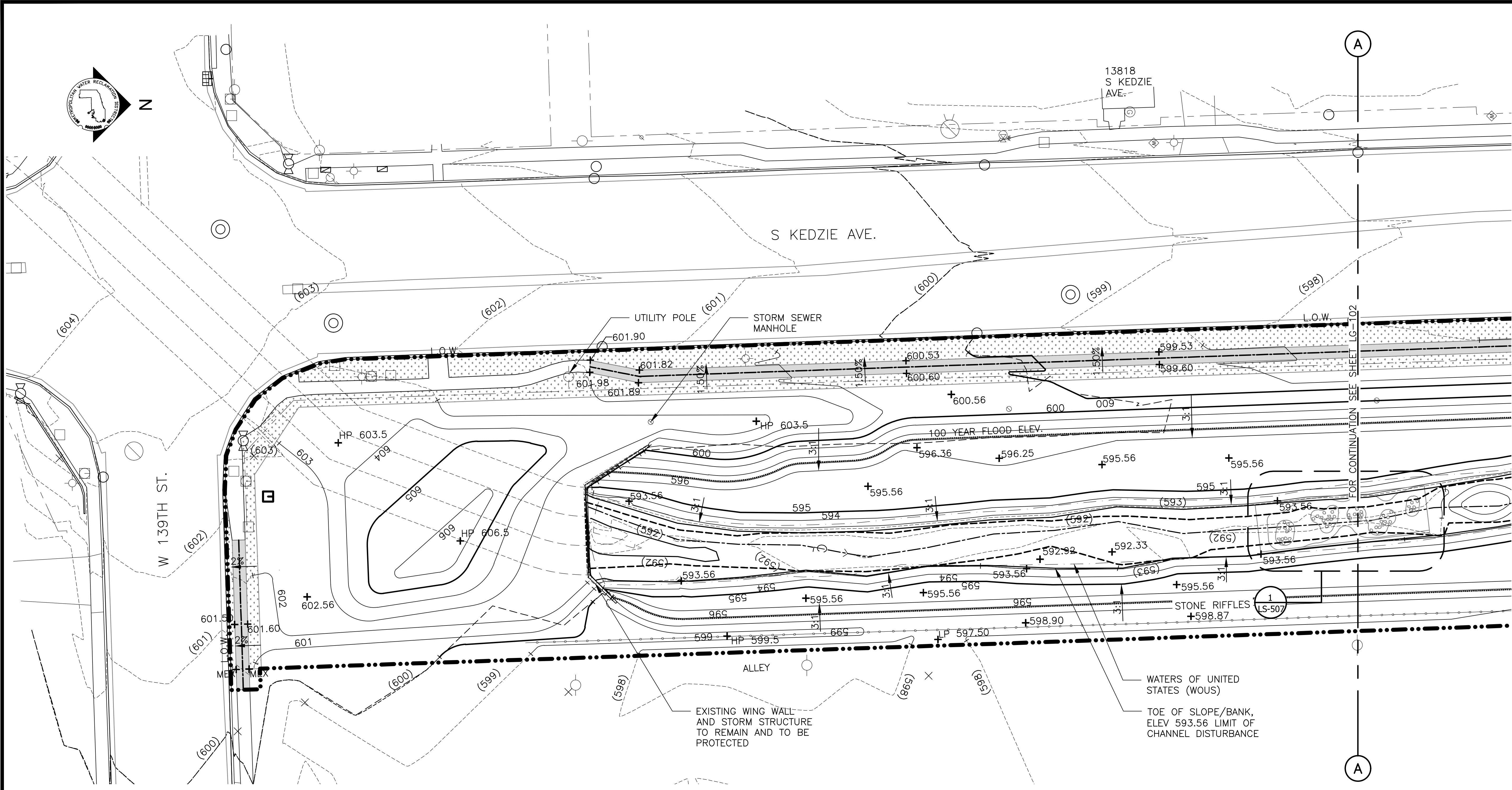
**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED  
**TREE PROTECTION PLAN - STORMWATER PARK**

Sheet Number:  
**LD-201**  
 Page Number: 101

Rev.	Description	Appr.	Date
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**GRADING NOTES:**

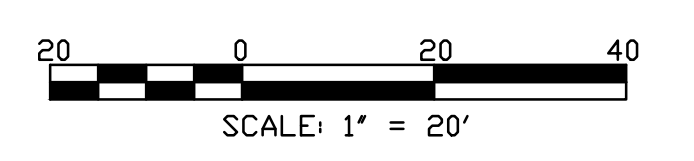
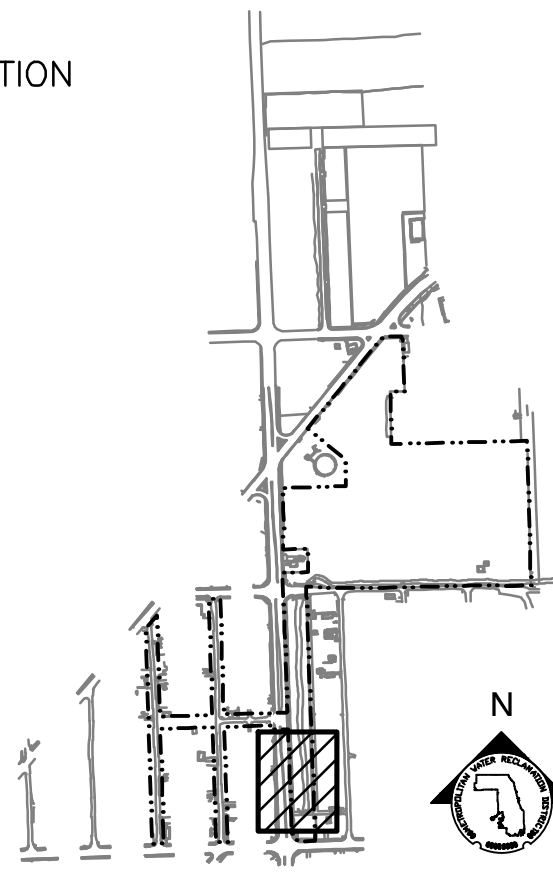
- THE CONTRACTOR SHALL LAYOUT AND DETERMINE THE ELEVATIONS OF ALL SITE ELEMENTS AND PROPOSED UTILITIES FOR APPROVAL BY THE ENGINEER PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES IN WRITING TO THE ENGINEER. THE CONTRACTOR SHALL PROVIDE ELEVATIONS SIMULTANEOUSLY WITH LAYOUT.
- THE CONTRACTOR SHALL ENSURE THAT ALL EROSION CONTROL MEASURES ARE IN PLACE AND FUNCTIONING PRIOR TO THE START OF EXCAVATION AND PLACEMENT OF FILL MATERIAL.
- CONTRACTOR SHALL FIELD VERIFY GRADES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION PRIOR TO STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL NOT PROCEED UNDER UNCERTAINTY AND SHALL ASSUME FULL RESPONSIBILITY AND ALL COSTS FOR REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR POSITIVE SURFACE DRAINAGE IN ALL AREAS, UNLESS OTHERWISE NOTED. ALL NEWLY GRADED SURFACES SHALL BE FINISHED TO UNIFORM GRADES AND SLOPED IN SUCH A MANNER AS TO DRAIN PROPERLY AND BE FREE OF DEPRESSIONS THAT CAUSE AREAS OF STANDING WATER. WHERE PROPOSED GRADES MEET EXISTING, BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN THE NEW WORK AND THE EXISTING WORK. PONDING AT JOINTS IN PAVING WILL NOT BE ACCEPTED.
- ALL GRADING SHALL BE COMPLETED IN A WAY TO MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES. THE CONTRACTOR SHALL REPORT ANY CONFLICTS WITH THIS REQUIREMENT TO THE ENGINEER FOR RESOLUTION PRIOR TO FINAL GRADING OPERATIONS.
- GRADING WITHIN THE DRIP LINES OF EXISTING TREES TO REMAIN AND NEW TREES SHALL BE DONE BY HAND TO AVOID DAMAGE TO TREE ROOTS. ALSO REFER TO SPECIFICATIONS.
- REFER TO SPECIFICATIONS FOR COMPACTION REQUIREMENTS UNDER PAVEMENTS AND PLANTED AREAS.
- WHEN ROUGH GRADING IS COMPLETE, THE CONTRACTOR MUST GIVE ENGINEER NOTICE FOR ON-SITE REVIEW PRIOR TO COMMENCEMENT OF FINISH GRADING AND PLANTING SOIL PLACEMENT.
- FINE GRADING: SET SUFFICIENT GRADE STAKES FOR REVIEW OF FINISHED GRADES. STAKES MUST BE SET AT THE BOTTOM AND TOP OF SLOPES AND AS NEEDED TO REVIEW THE PROPOSED ELEVATION. GRADES SHALL BE ESTABLISHED THAT ARE ACCURATE TO 1/10 OF A FOOT EITHER WAY. CONNECT CONTOURS AND SPOT ELEVATIONS UNTIL AN EVEN SLOPE IS ACHIEVED.
- DURING THE REVIEW OF ROUGH GRADING AND FINISH GRADE GRADING STAKES, THE ENGINEER MAY MAKE MINOR ADJUSTMENTS TO ROUGH GRADING WITHOUT INCURRING ADDITIONAL COST TO THE PROJECT.
- THE CONTRACTOR SHALL ADJUST ALL UTILITY ELEMENTS OR COVERS (INCLUDING BUT NOT LIMITED TO: CLEAN OUTS, MANHOLES, CATCH BASINS, INLETS, GATE VALVES) TO BE FLUSH WITH THE FINAL FINISH GRADE WHETHER SHOWN ON THE DRAWINGS OR NOT.

**PARTIAL GRADING PLAN**  
 SCALE = 1"=20'

NOTE: SEE UTILITY DRAWINGS FOR CULVERT AND STORM SEWER INFORMATION

**LEGEND:**

- |                          |  |         |                              |
|--------------------------|--|---------|------------------------------|
| --- L.O.W.               | LIMIT OF WORK                                  | + MEX   | MEET EXISTING ELEVATION      |
| - - - WOUS               | WATERS OF UNITED STATES (WOUS)                 | + HP    | HIGH POINT                   |
| ----- CHANNEL MEAN ELEV. |  | + LP    | LOW POINT                    |
| ..... 100 YR FLOOD ELEV. |  | + 600   | PROPOSED ELEVATION           |
| --- (600) ---            | EXISTING CONTOUR                               | + (600) | EXISTING ELEVATION           |
| --- 600 ---              | PROPOSED CONTOUR                               | + TC    | TOP OF CURB                  |
| [Pattern]                | MOWN TURF PATH/LANDING                         | + BC    | BOTTOM OF CURB               |
| [Pattern]                | SIDEWALK, SEE LM SERIES FOR MATERIALS/FINISHES | + TW    | TOP OF WALL                  |
| [Symbol]                 | ENLARGEMENT BOX                                | + BW    | BOTTOM OF WALL               |
|                          |  | 4.99%   | DIRECTION & PERCENT OF SLOPE |
|                          |  | 5:1     | H:V SLOPE DESIGNATION        |



Rev.	Description	Appr.	Date
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**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED  
**PARTIAL GRADING PLAN**

Designed by: LH  
 Checked by: LH  
 Drawn by: LH  
 Reviewed by: LH  
 Date: MAY 2024  
 Scale: AS SHOWN

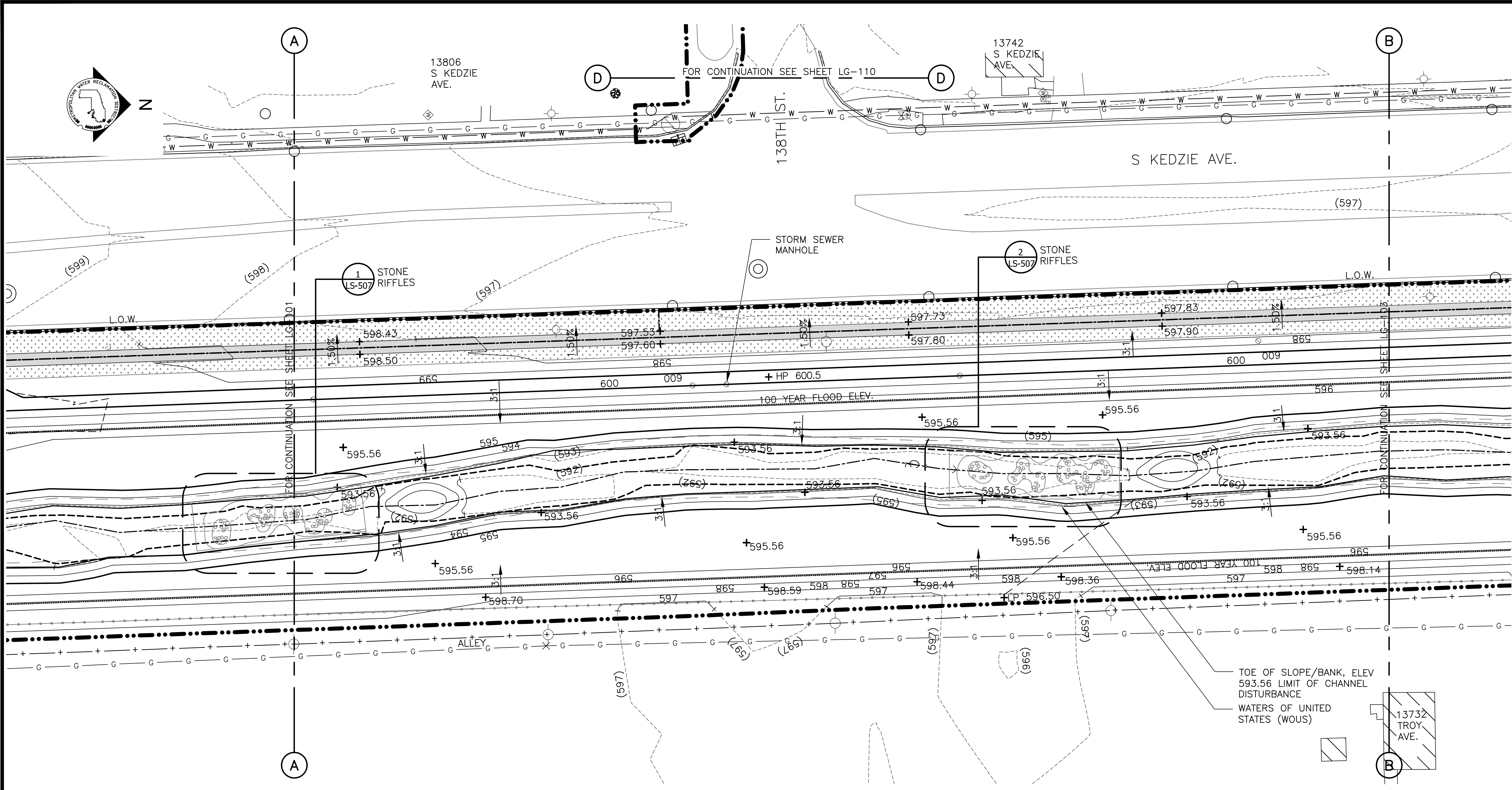
**DONOHUE**  
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**LIVING HABITATS**  
 O'Brien & Associates, Inc.

Sheet Number:  
**LG-101**  
 Page Number: 102



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**GRADING NOTES:**

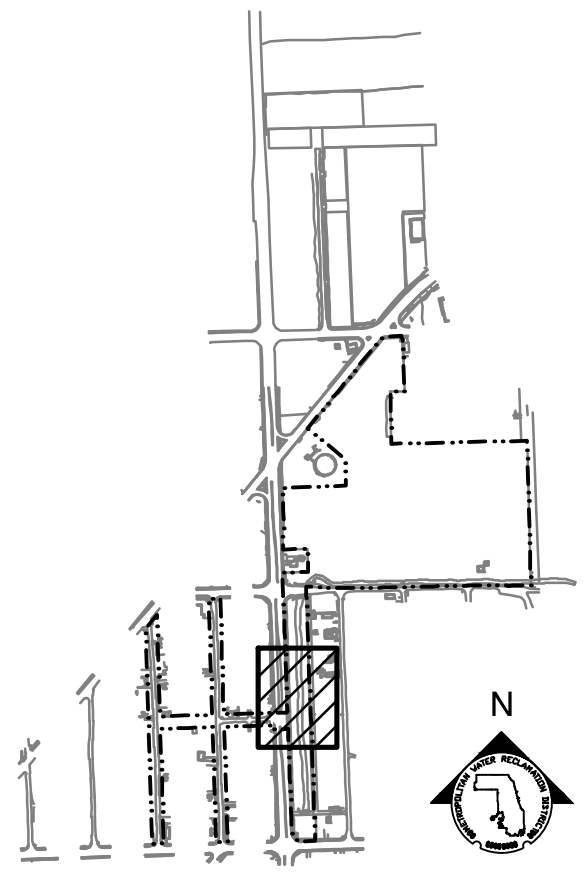
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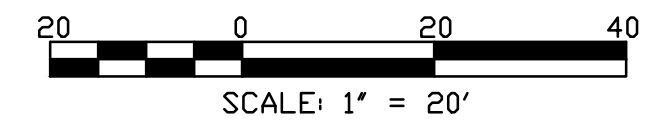
- |                                |  |         |                              |
|--------------------------------|--|---------|------------------------------|
| --- L.O.W. ---                 | LIMIT OF WORK                                  | + MEX   | MEET EXISTING ELEVATION      |
| - - - WOUS - - -               | WATERS OF UNITED STATES (WOUS)                 | + HP    | HIGH POINT                   |
| - - - CHANNEL MEAN ELEV. - - - |  | + LP    | LOW POINT                    |
| ..... 100 YR FLOOD ELEV. ....  |  | + 600   | PROPOSED ELEVATION           |
| --- (600) ---                  | EXISTING CONTOUR                               | + (600) | EXISTING ELEVATION           |
| --- 600 ---                    | PROPOSED CONTOUR                               | + TC    | TOP OF CURB                  |
| [Pattern]                      | MOWN TURF PATH/LANDING                         | + BC    | BOTTOM OF CURB               |
| [Pattern]                      | SIDEWALK, SEE LM SERIES FOR MATERIALS/FINISHES | + TW    | TOP OF WALL                  |
| [Circle]                       | ENLARGEMENT BOX                                | + BW    | BOTTOM OF WALL               |
|                                |  | 4.99%   | DIRECTION & PERCENT OF SLOPE |
|                                |  | 5:1     | H:V SLOPE DESIGNATION        |

NOTE: SEE UTILITY DRAWINGS FOR CULVERT AND STORM SEWER INFORMATION

**PARTIAL GRADING PLAN**  
SCALE = 1"=20'



**KEY MAP**



Rev.	Description	Appr.	Date
1	ISSUE FOR CONSTRUCTION	LH	08/2024

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, ILLINOIS (RE-BID)  
 LITTLE CALUMET RIVER WATERSHED  
**PARTIAL GRADING PLAN**

Designed by: LH  
 Checked by: LH  
 Drawn by: LH  
 Reviewed by: LH  
 Date: MAY 2024  
 Scale: AS SHOWN

**DONOHUE**  
 Accurate  
 ENGINEERS & ASSOCIATES, INC.  
 CONSULTING ENGINEERS

**LIVING HABITATS**

**CONTRACT 14-253-5FR**  
 FLOOD CONTROL PROJECT ON  
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**PARTIAL GRADING PLAN**