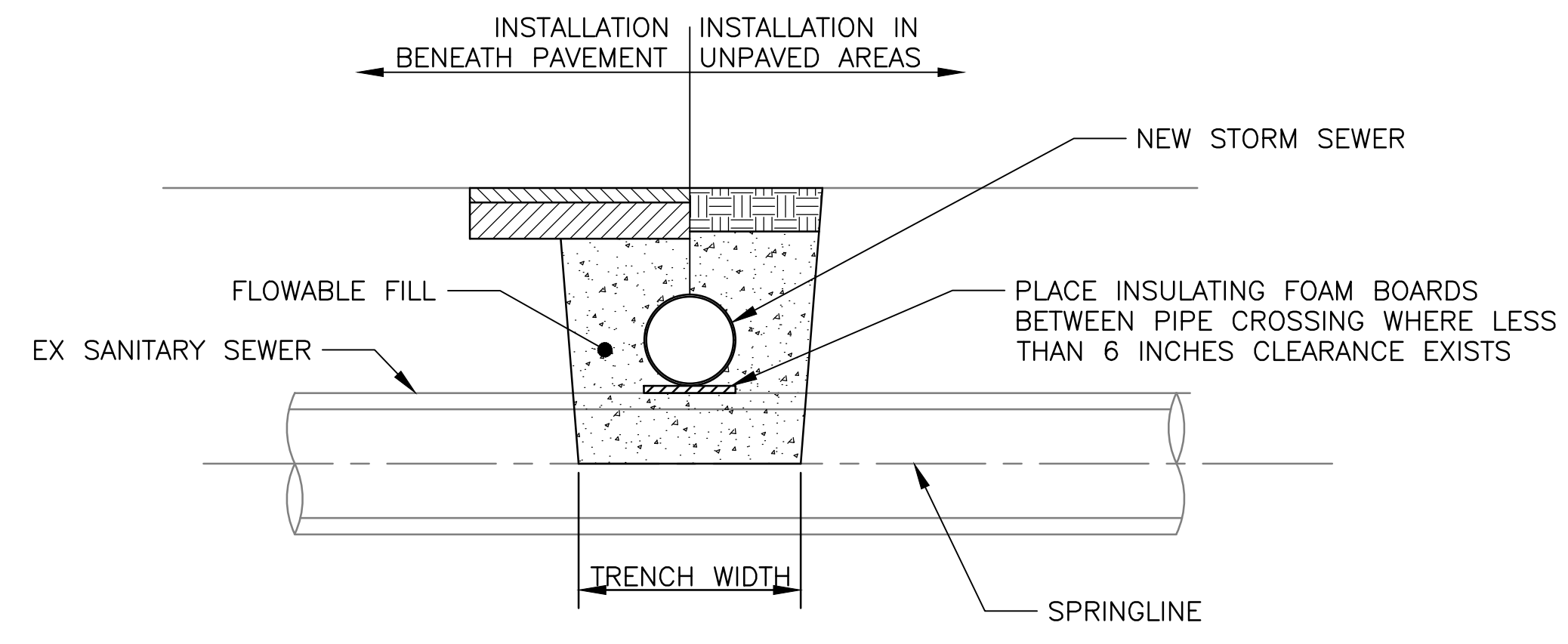
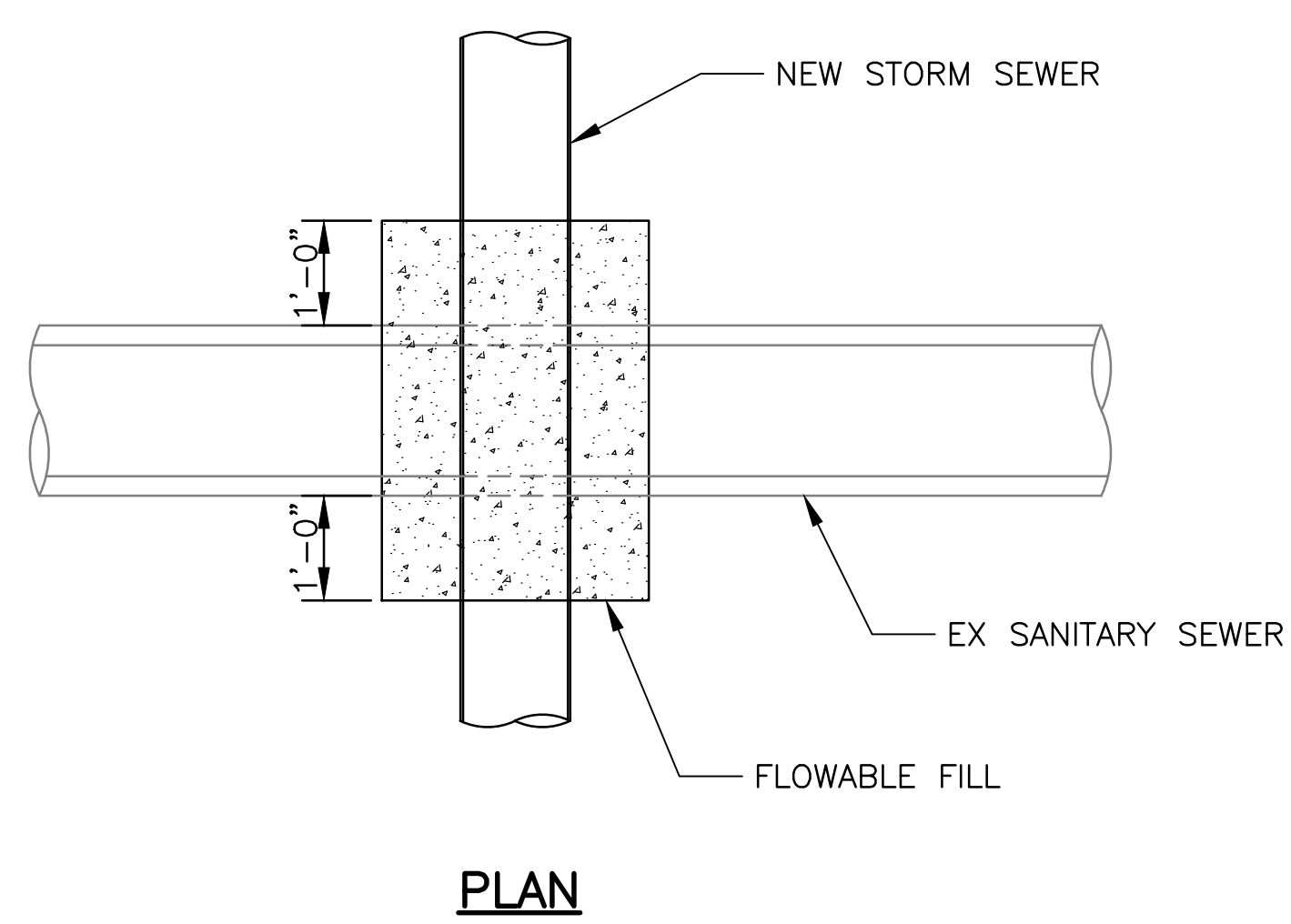
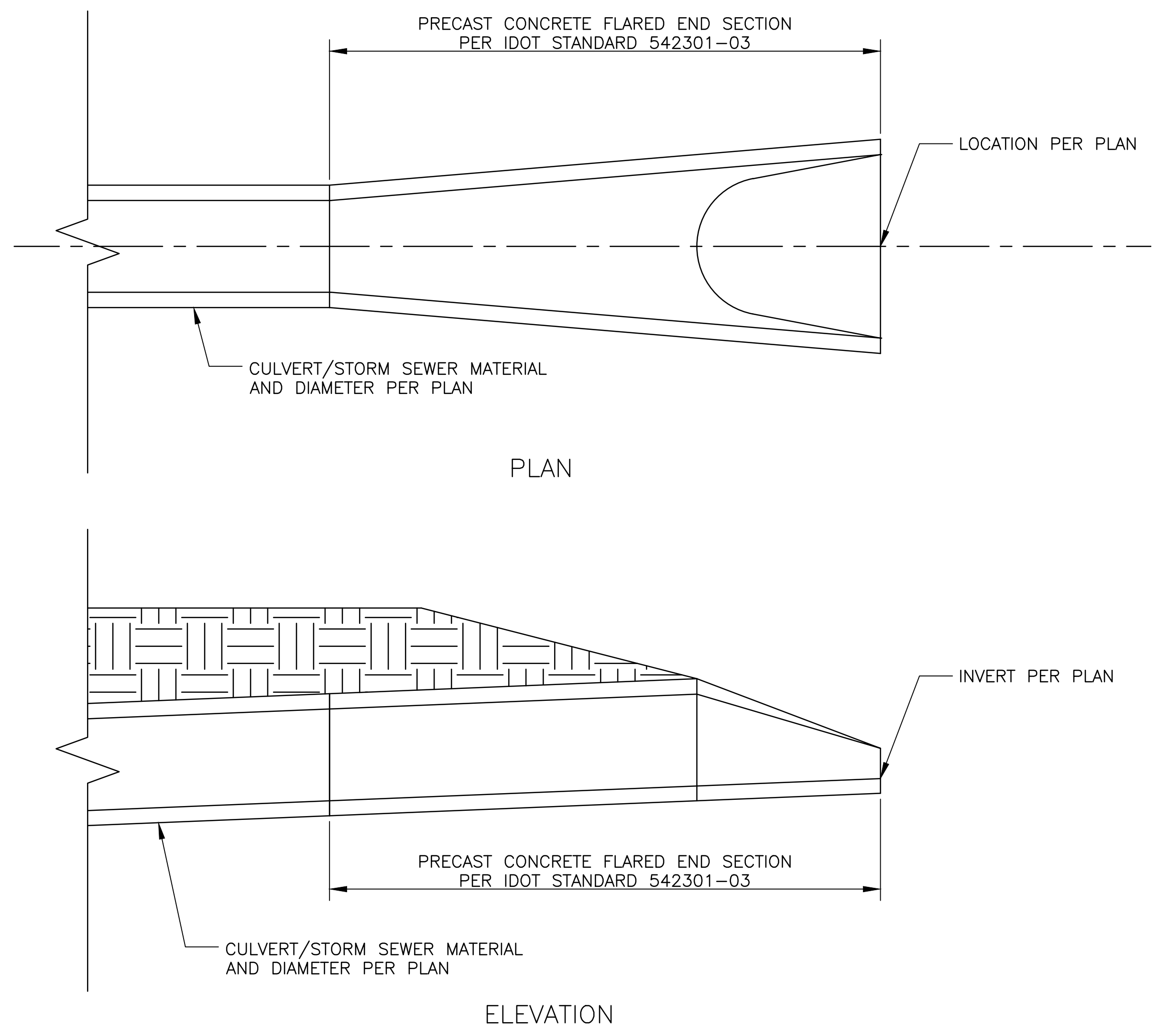


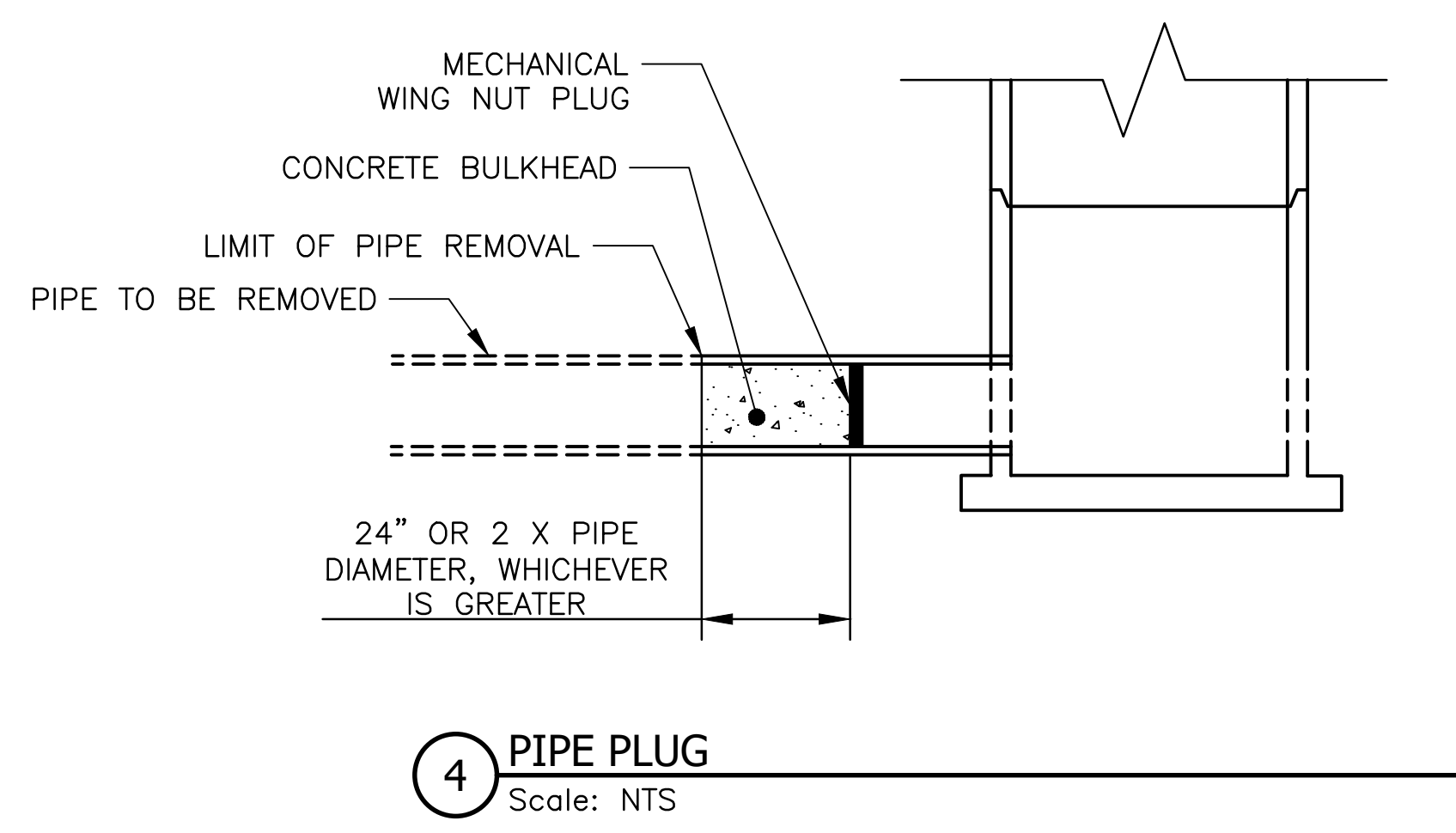
**1 INLET AND CULVERT ASSEMBLY**  
Scale: NTS  
(CU-101, CU-201)



**2 CROSSING OVER EXISTING SANITARY SEWER**  
Scale: NTS  
(CU-101)



**3 PRECAST CONCRETE FLARED END SECTION**  
Scale: NTS  
(CU-101)



**4 PIPE PLUG**  
Scale: NTS

NOTE: PROVIDE BEDDING AND BACKFILL MATERIAL FOR CULVERT/STORM SEWER AND PRECAST CONCRETE FLARED END SECTION PER **3** CU-501

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

Designed by: PMS  
MLM  
Checked by: PMS  
MLM  
Reviewed by: EPC  
MLM  
Date: FEB. 2024  
Scale: AS SHOWN

**DONOHUE CONSULTING ENGINEERS**

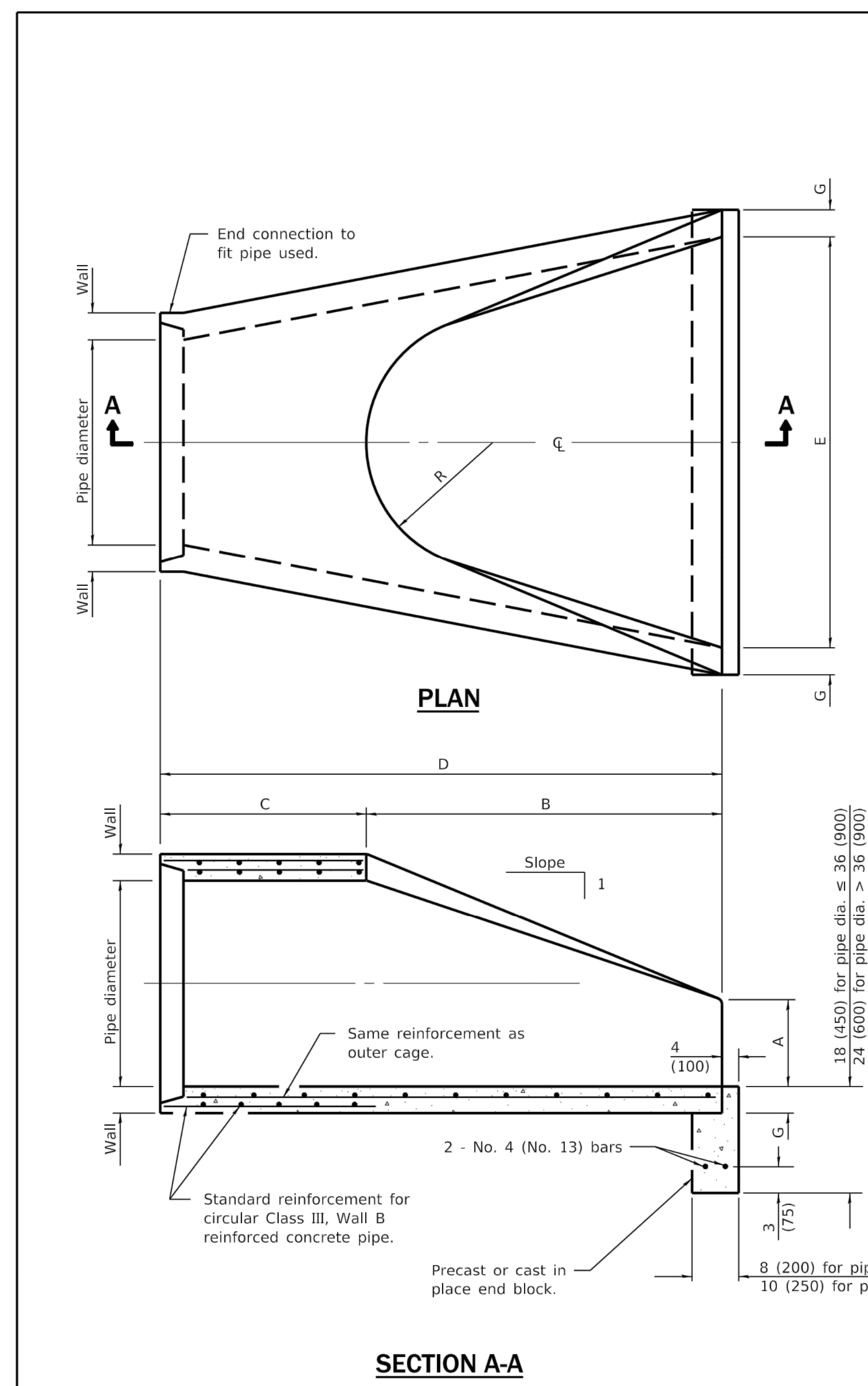
**LIVING HABITATS**

**ZIM GROUP**

**ACCURATE CONSULTING ENGINEERS**

**CONTRACT 14-253-5F**  
FLOOD CONTROL PROJECT ON MIDLOTHIAN CREEK IN ROBBINS, CSA LITTLE CALUMET RIVER WATERSHED

**UTILITY DETAILS**



18 (450) for pipe dia. ≤ 36 (900)  
 24 (600) for pipe dia. > 36 (900)

8 (200) for pipe dia. ≤ 36 (900)  
 10 (250) for pipe dia. > 36 (900)

PIPE DIA.	APPROX. QTY. lbs. (kg)	WALL	A	B	C	D	E	G	R	APPROX. SLOPE
12 (300)	530 (240)	2 (51)	4 (102)	24 (610)	4'-0 7/8" (1.241 m)	6'-0 7/8" (1.851 m)	24 (610)	2 (51)	9 (229)	1:2.4
15 (375)	740 (335)	2 1/4 (57)	6 (152)	27 (686)	3'-10" (1.168 m)	6'-1" (1.854 m)	30 (762)	2 1/4 (57)	11 (280)	1:2.4
18 (450)	990 (450)	2 1/2 (64)	9 (229)	27 (686)	3'-10" (1.168 m)	6'-1" (1.854 m)	36 (914)	2 1/2 (64)	12 (305)	1:2.4
21 (525)	1280 (580)	2 3/4 (70)	9 (229)	35 (889)	3'-7 1/2" (1.105 m)	6'-1" (1.854 m)	3'-6" (1.067 m)	2 3/4 (70)	13 (330)	1:2.4
24 (600)	1520 (690)	3 (76)	9 1/2 (241)	30 (762)	3'-7 1/2" (1.105 m)	6'-1 1/2" (1.867 m)	4'-0" (1.219 m)	3 (76)	14 (356)	1:2.5
27 (675)	1930 (875)	3 1/4 (83)	10 1/2 (267)	30 (762)	4'-0" (1.219 m)	6'-1 1/2" (1.867 m)	4'-6" (1.372 m)	3 1/4 (83)	14 1/2 (368)	1:2.4
30 (750)	2190 (995)	3 1/2 (89)	12 (305)	39 1/4 (997)	4'-6" (1.375 m)	6'-1 3/4" (1.874 m)	5'-0" (1.524 m)	3 1/2 (89)	15 (381)	1:2.5
33 (825)	3200 (1450)	3 3/4 (95)	13 1/2 (343)	39 1/4 (997)	4'-10 1/2" (1.486 m)	8'-1 3/4" (2.483 m)	5'-6" (1.676 m)	3 3/4 (95)	17 1/2 (445)	1:2.5
36 (900)	4100 (1860)	4 (102)	15 (381)	34 3/4 (883)	5'-3" (1.6 m)	8'-1 3/4" (2.483 m)	6'-0" (1.829 m)	4 (102)	20 (508)	1:2.5
42 (1050)	5380 (2440)	4 1/2 (114)	21 (533)	35 (889)	5'-3" (1.6 m)	8'-2" (2.489 m)	6'-6" (1.981 m)	4 1/2 (114)	22 (559)	1:2.5
48 (1200)	6550 (2970)	5 (127)	24 (610)	26 (660)	6'-0" (1.829 m)	8'-2" (2.489 m)	7'-0" (2.134 m)	5 (127)	22 (559)	1:2.5
54 (1350)	8240 (3740)	5 1/2 (140)	27 (686)	35 (889)	5'-5" (1.651 m)	8'-4" (2.54 m)	7'-6" (2.286 m)	5 1/2 (140)	24 (610)	1:2.0
60 (1500)	8730 (3960)	6 (152)	35 (889)	39 (991)	5'-0" (1.524 m)	8'-3" (2.515 m)	8'-0" (2.438 m)	5 (127)	*	1:1.9
66 (1650)	10710 (4860)	6 1/2 (165)	30 (762)	27 (686)	6'-0" (1.829 m)	8'-3" (2.515 m)	8'-6" (2.591 m)	5 1/2 (140)	*	1:1.7
72 (1800)	12520 (5680)	7 (178)	36 (914)	21 (533)	6'-6" (1.981 m)	8'-3" (2.514 m)	9'-0" (2.743 m)	6 (152)	*	1:1.8
78 (1950)	14770 (6700)	7 1/2 (191)	36 (914)	21 (533)	7'-6" (2.286 m)	9'-3" (2.819 m)	9'-6" (2.896 m)	6 1/2 (165)	*	1:1.8
84 (2100)	18160 (8240)	8 (203)	36 (914)	21 (533)	7'-6 1/2" (2.299 m)	9'-3 1/2" (2.832 m)	10'-0" (3.048 m)	6 1/2 (165)	*	1:1.6

\* Radius as furnished by manufacturer

**GENERAL NOTES**  
 All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).  
 All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
1-1-11	Clarified ref. to pipe dia. on Section A-A. Changed 'inner' to 'outer' cage ref.
1-1-09	Switched units to English (metric).

**PRECAST REINFORCED CONCRETE FLARED END SECTION**  
**STANDARD 542301-03**

Illinois Department of Transportation

APPROVED January 1, 2011  
*Ralph E. Anderson*  
 ENGINEER OF BRIDGES AND STRUCTURES

APPROVED January 1, 2011  
*Scott S. Smith*  
 ENGINEER OF DESIGN AND ENVIRONMENT

1 IDOT HIGHWAY STANDARD 542301-03  
 Scale: NTS

Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

Checked by: PMS  
 Designed by: MLM

Reviewed by: EPC  
 Drawn by: MLM

Date: FEB 2024  
 Scale: AS SHOWN

**DONOHUE**  
 CONSULTING ENGINEERS

**Accurate**  
 CONSULTING ENGINEERS

**LIVING HABITATS**

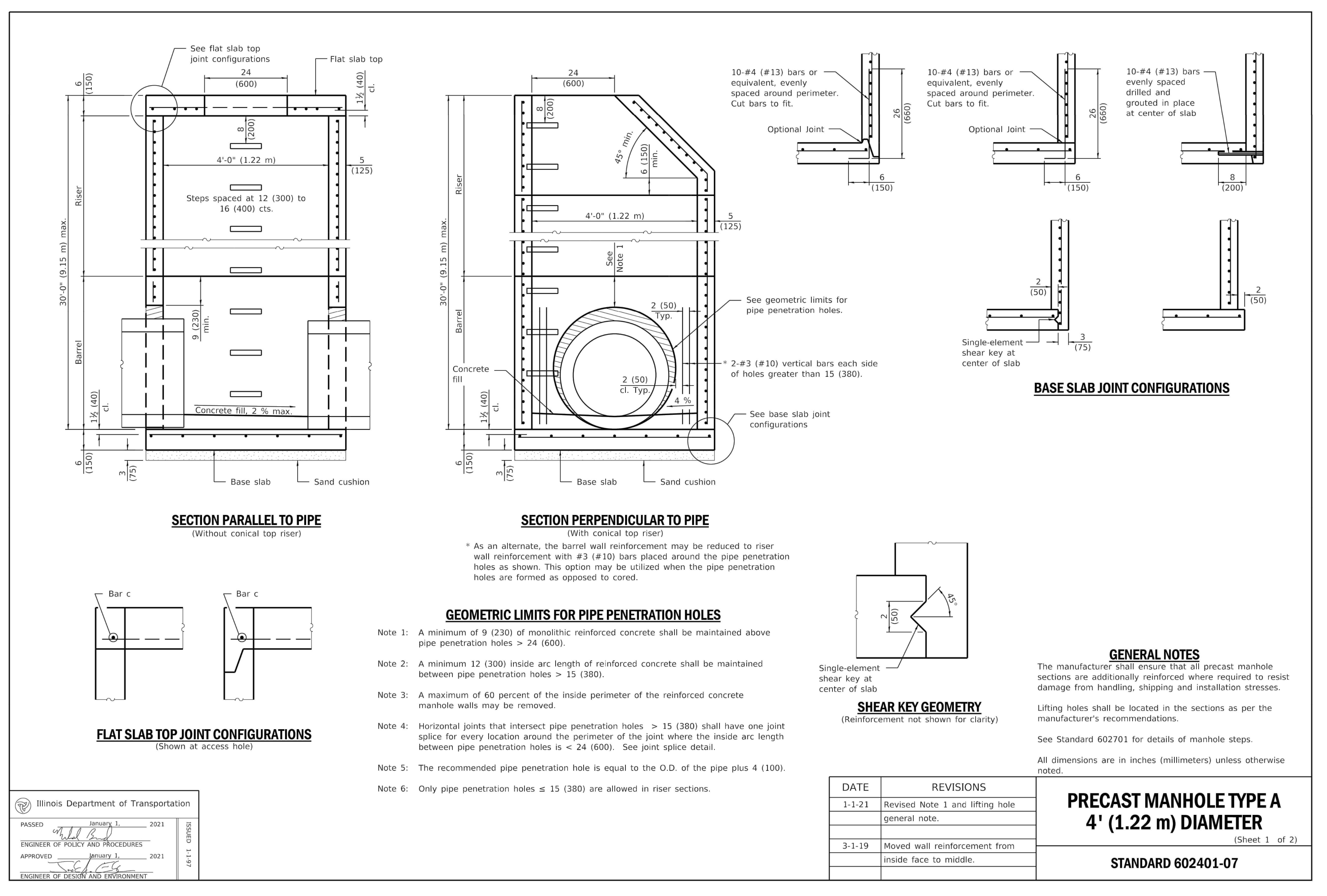
CONTRACT 14-253-5F  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

UTILITY DETAILS

Sheet Number:  
**CU-503**  
 Page Number: 53



P:\13278chi\Drawings\14-253-3F\Civil\Sheets\14-253-BF\CU-505.dwg 1/9/2024 12:21 PM  
 PLOT DATE: 2/7/2024 3:29 PM PLOTTED BY: MADRID, MICHELLE



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

- SECTION PARALLEL TO PIPE**  
(Without conical top riser)
- SECTION PERPENDICULAR TO PIPE**  
(With conical top riser)
- \* 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.

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**  
**4' (1.22 m) DIAMETER**  
 (Sheet 1 of 2)  
**STANDARD 602401-07**

Rev.	Description	Appr.	Date

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

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

**DONOHUE**  
 CONSULTING ENGINEERS

**ACCURATE**  
 CONSULTING ENGINEERS

**LIVING HABITATS**

**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED  
**UTILITY DETAILS**

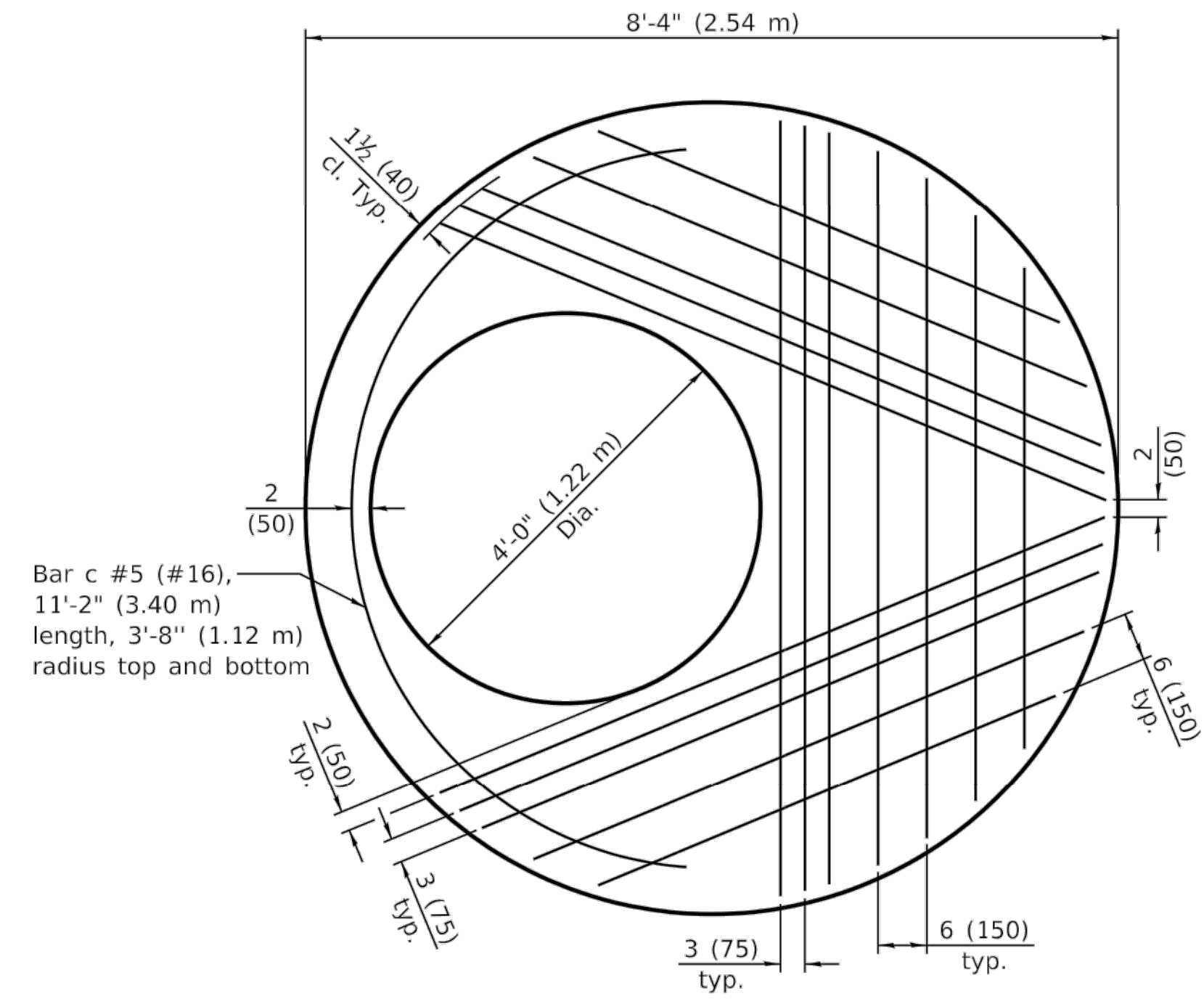
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 Page Number: 55



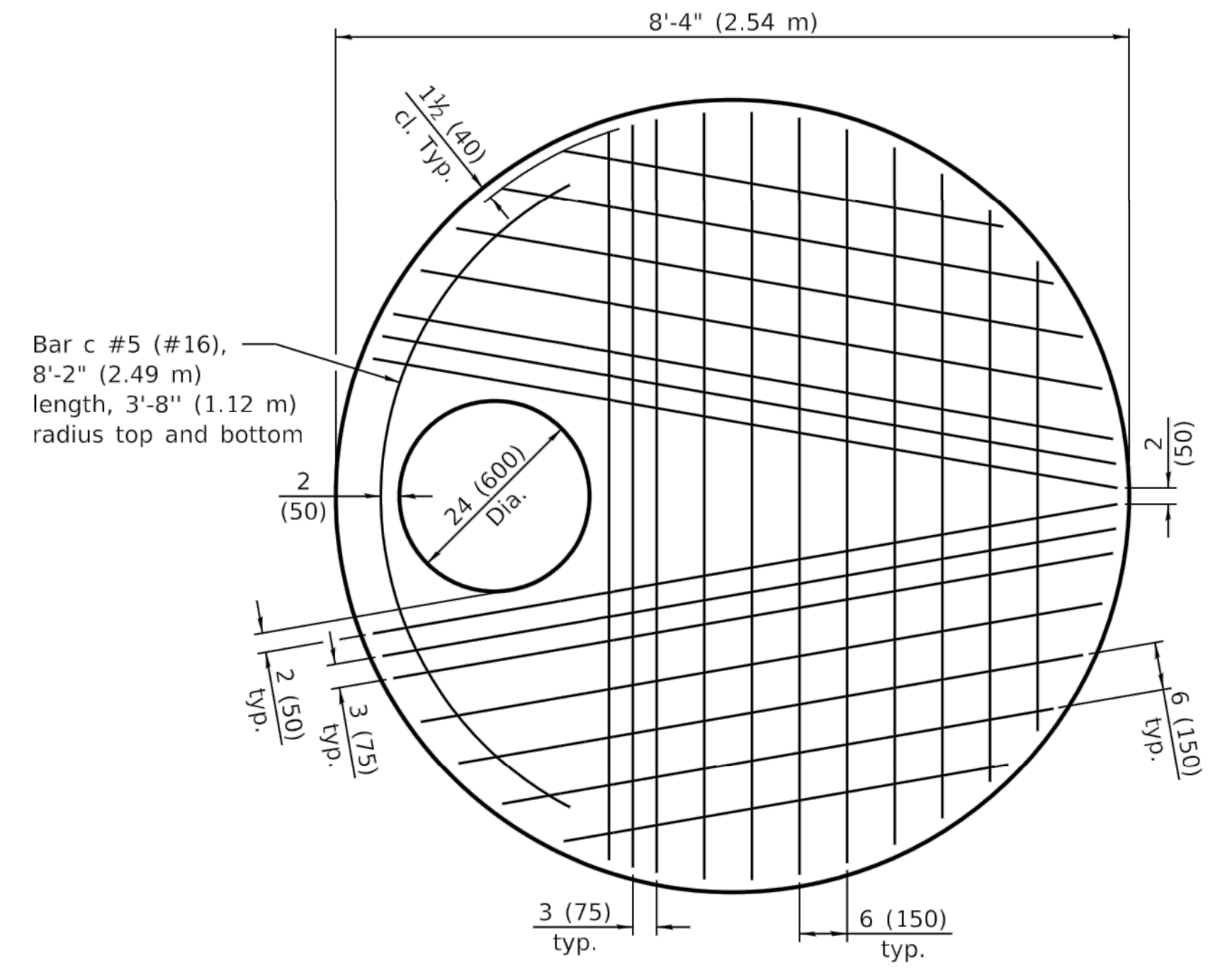


Illinois Department of Transportation

PASSED	January 1, 2021	ISSUED 4-1-06
ENGINEER OF POLICY AND PROCEDURES		
APPROVED	January 1, 2021	
ENGINEER OF DESIGN AND ENVIRONMENT		



**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

METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO

**DONOHUE**  
ACCURATE  
ENGINEERS

**LIVING HABITATS**  
O'BRIEN & ASSOCIATES, INC.  
CONSULTING ENGINEERS

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

**CONTRACT 14-253-5F**  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, CSA  
LITTLE CALUMET RIVER WATERSHED

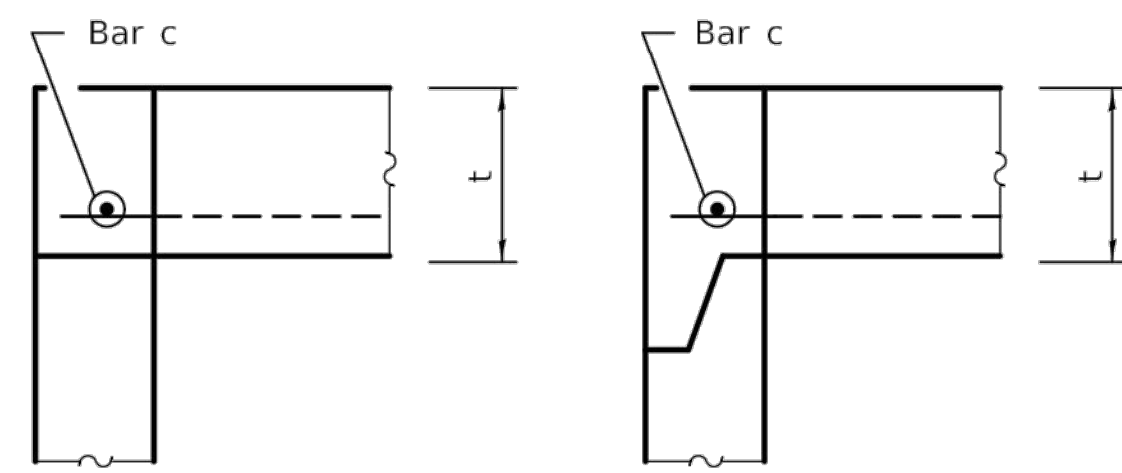
**UTILITY DETAILS**

Sheet Number:  
**CU-508**  
Page Number: 58

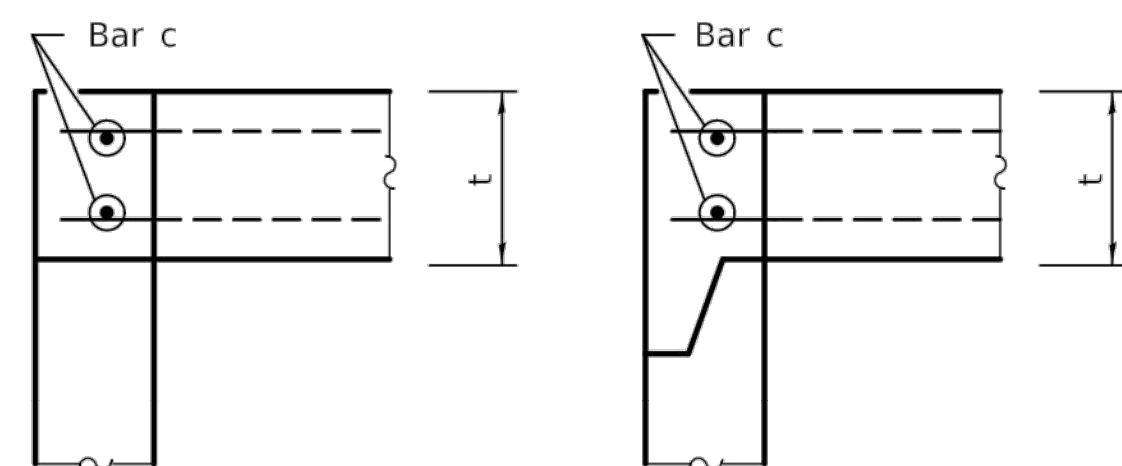
Rev.	Description	Appr.	Date



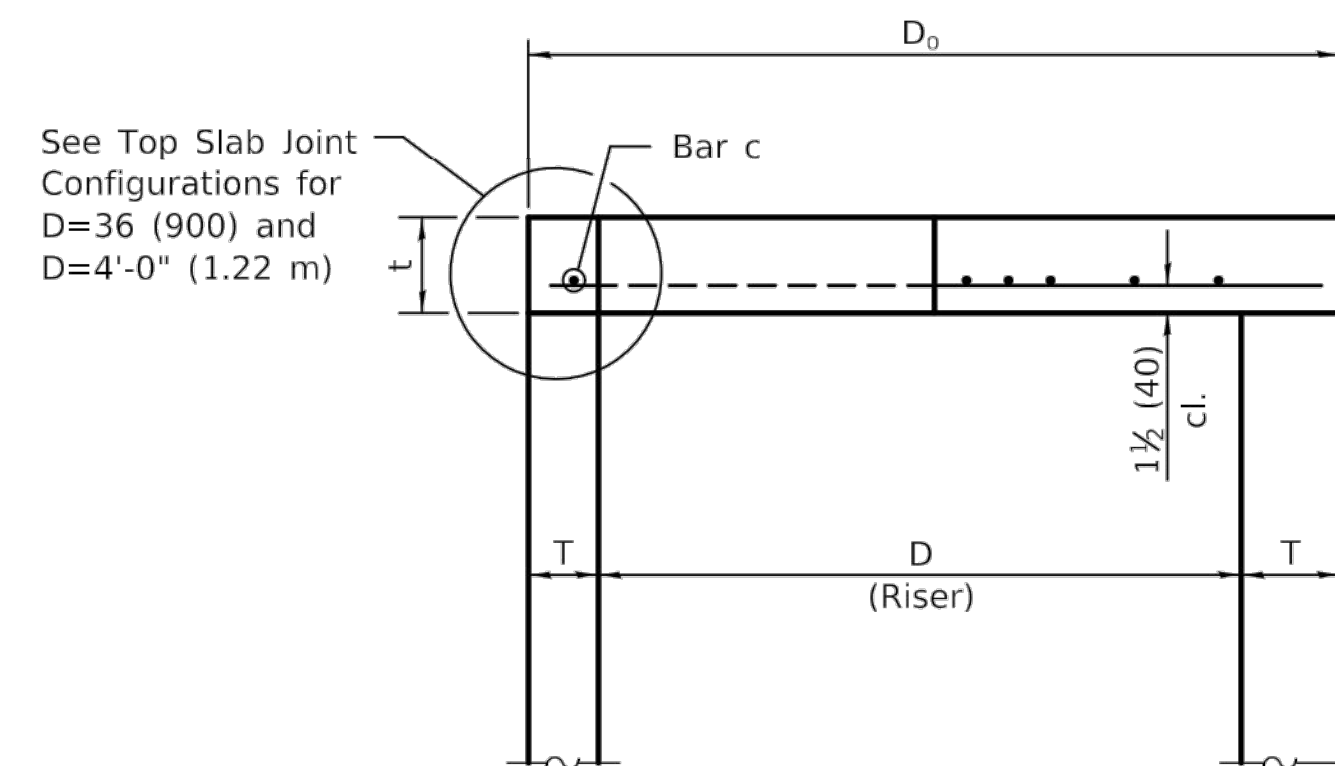




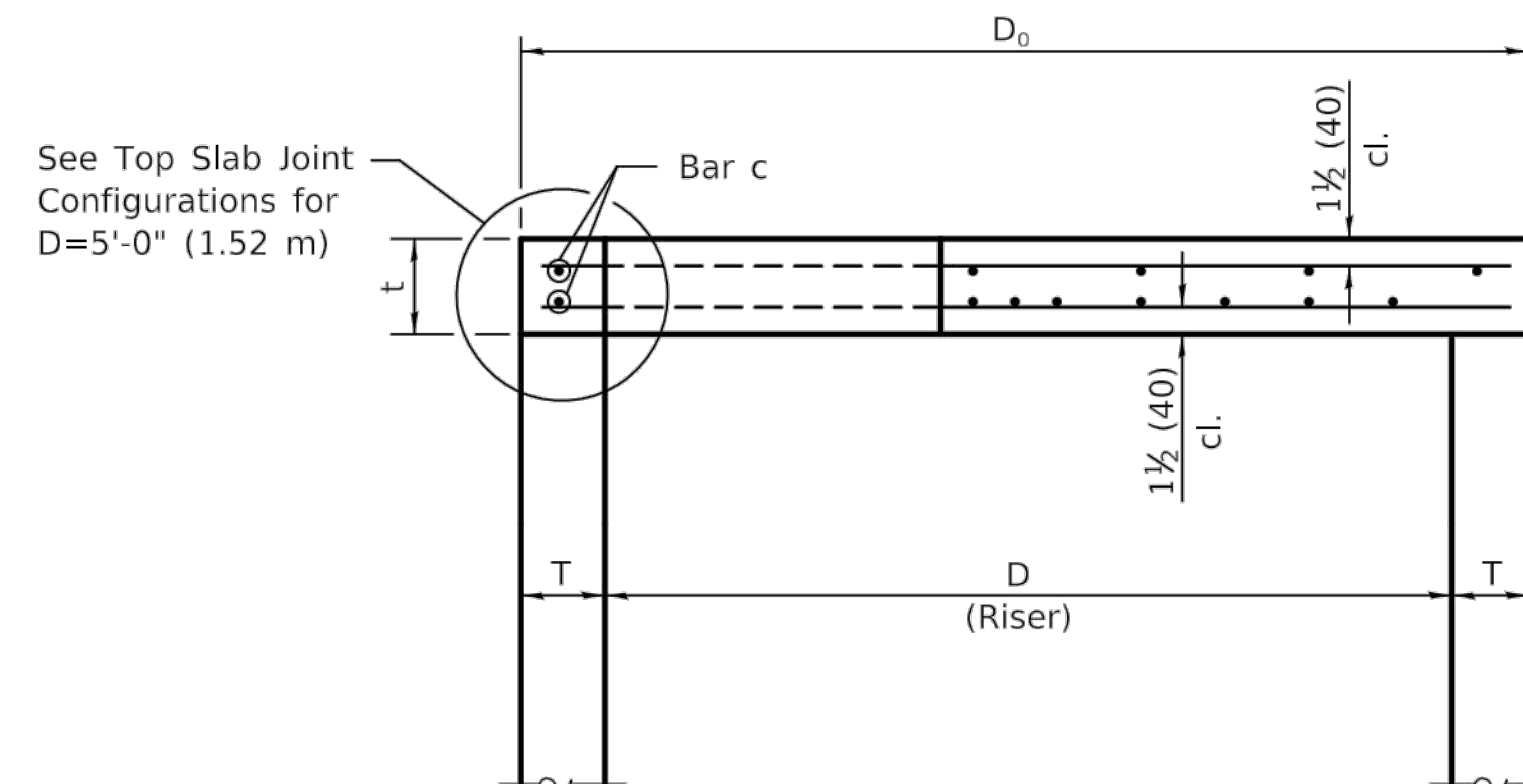
**FLAT SLAB TOP JOINT CONFIGURATIONS**  
**FOR D = 36 (900) AND D = 4'-0" (1.22 m)**  
 (Shown at access hole)



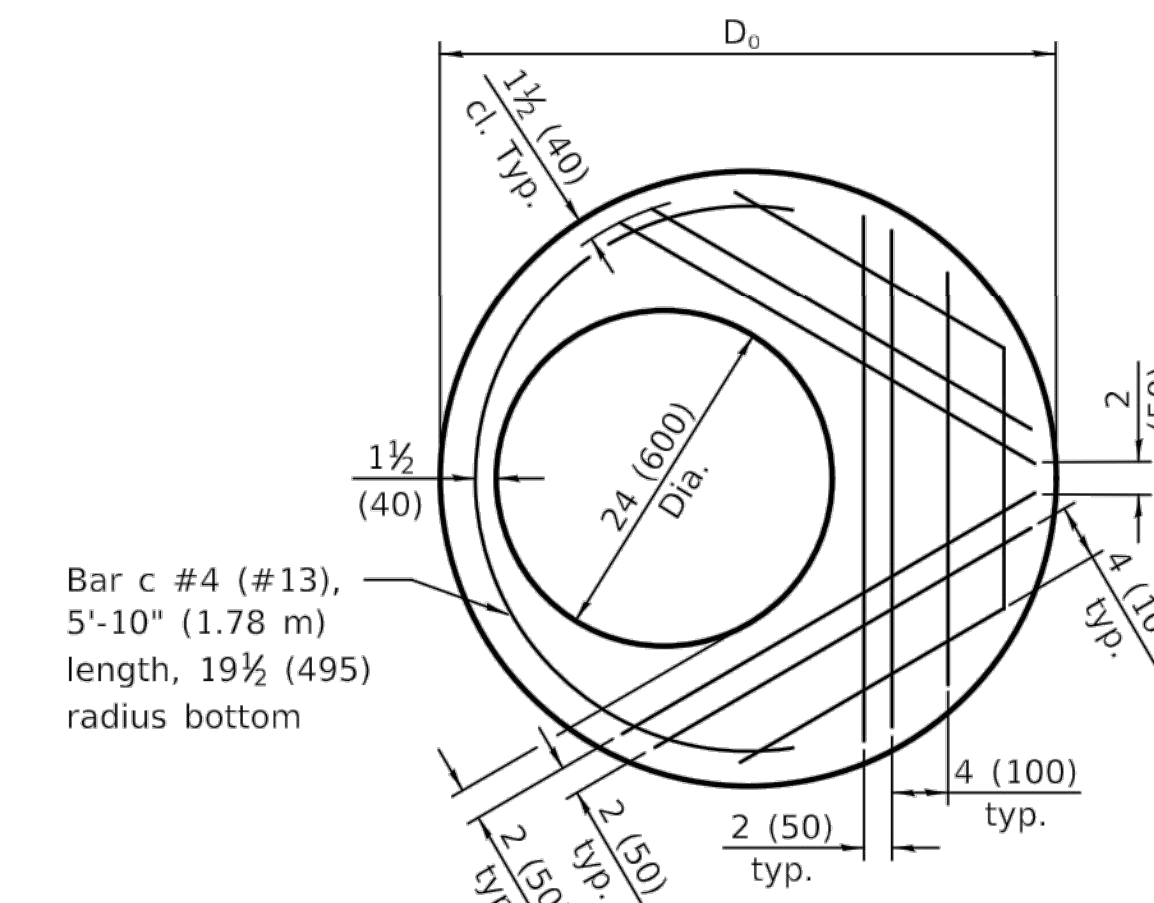
**FLAT SLAB TOP JOINT CONFIGURATIONS**  
**D = 5'-0" (1.52 m)**  
 (Shown at access hole)



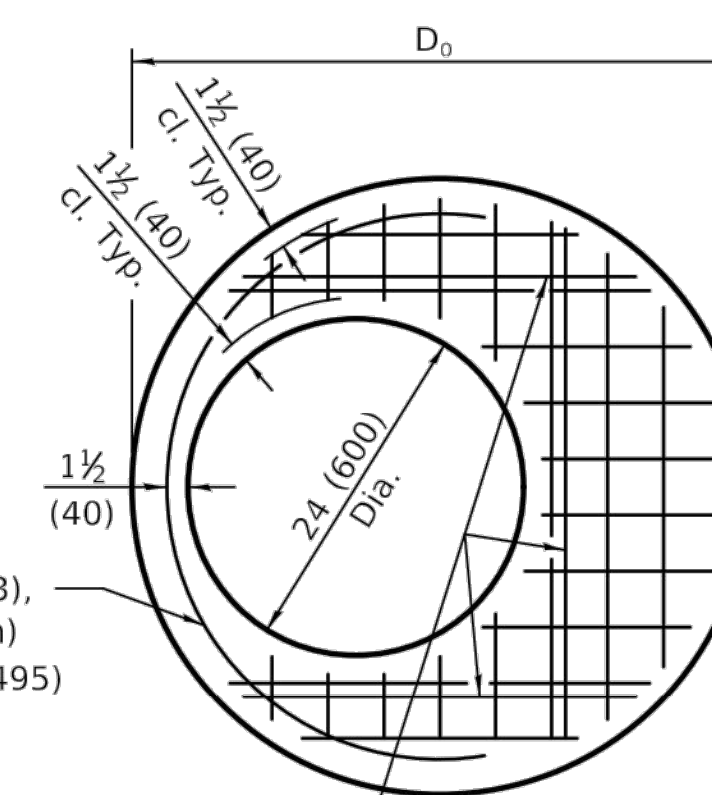
**SECTION THRU FLAT SLAB TOP**  
**FOR D = 36 (900) AND D = 4'-0" (1.22 m)**



**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)



#4 (#13) bars bottom. Bundle with closest WWR bar to the opening.

**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	↓	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	<b>PRECAST REINFORCED CONCRETE FLAT SLAB TOP</b> (Sheet 1 of 2)
1-1-19	Expanded / refined reinforcement options.	
1-1-18	Revised for compliance with LRFD.	
<b>STANDARD 602601-06</b>		

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

Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO

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

**DONOHUE**  
 CONSULTING ENGINEERS

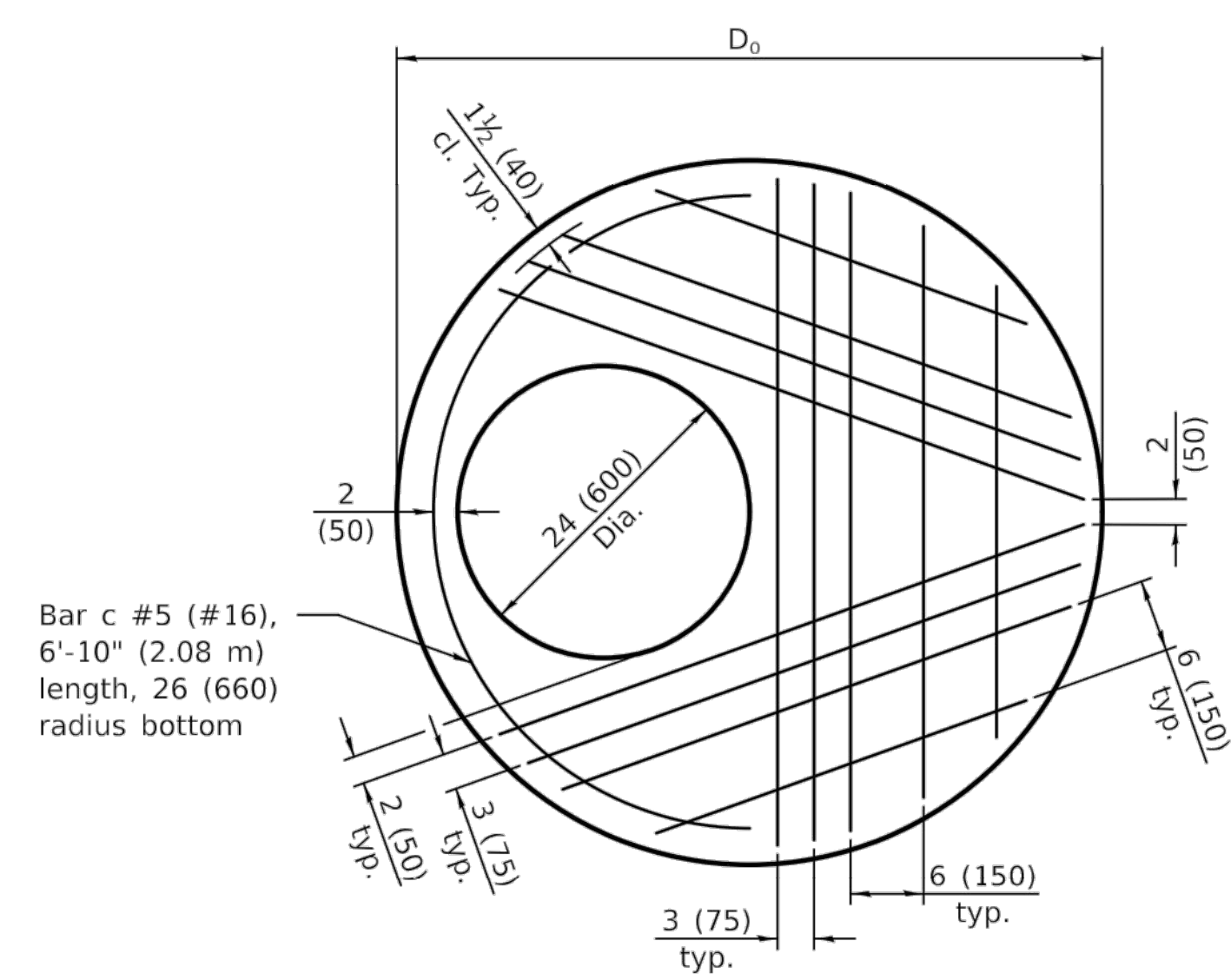
**Accurate**  
 CONSULTING ENGINEERS

**LIVING HABITATS**

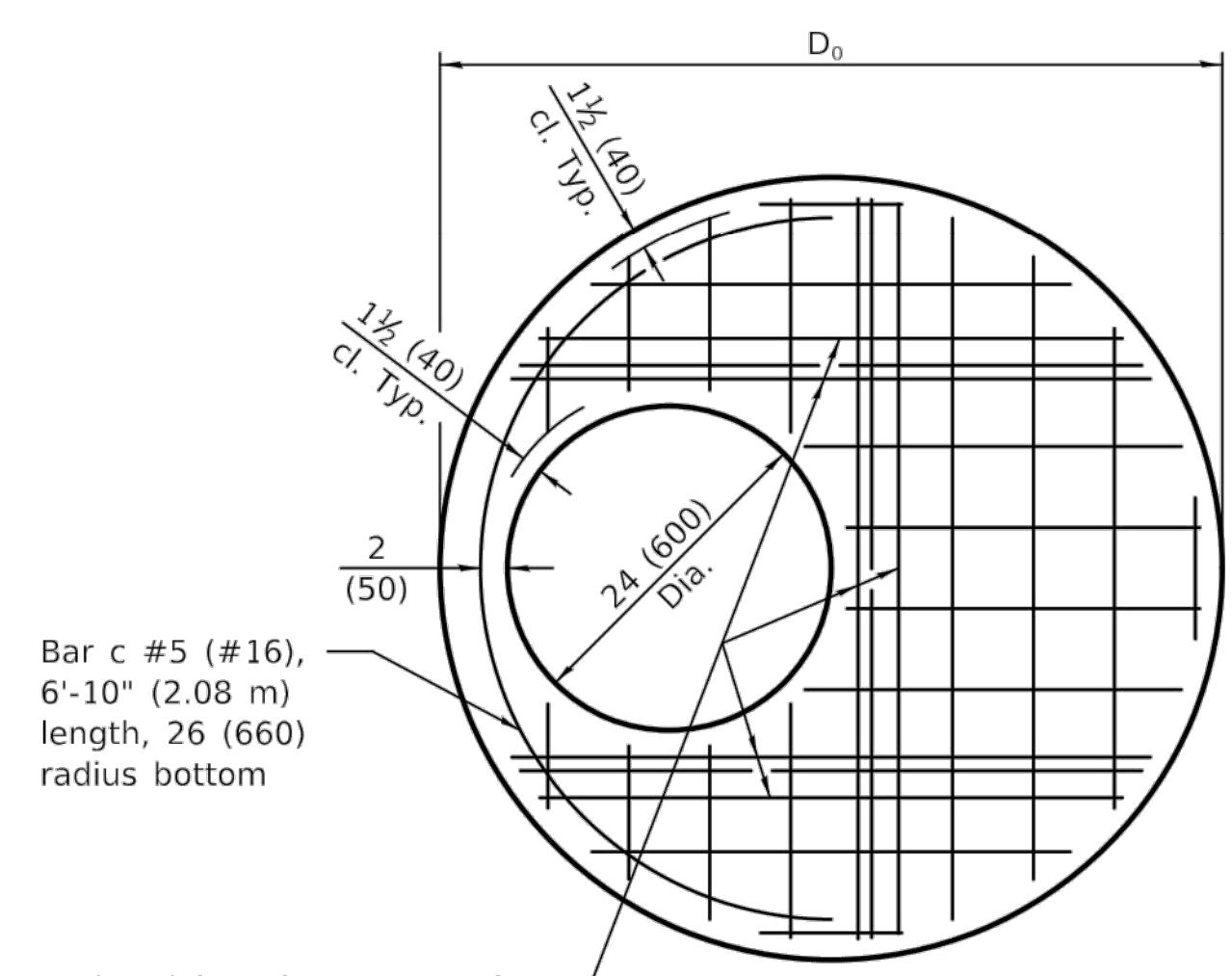
**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

**UTILITY DETAILS**

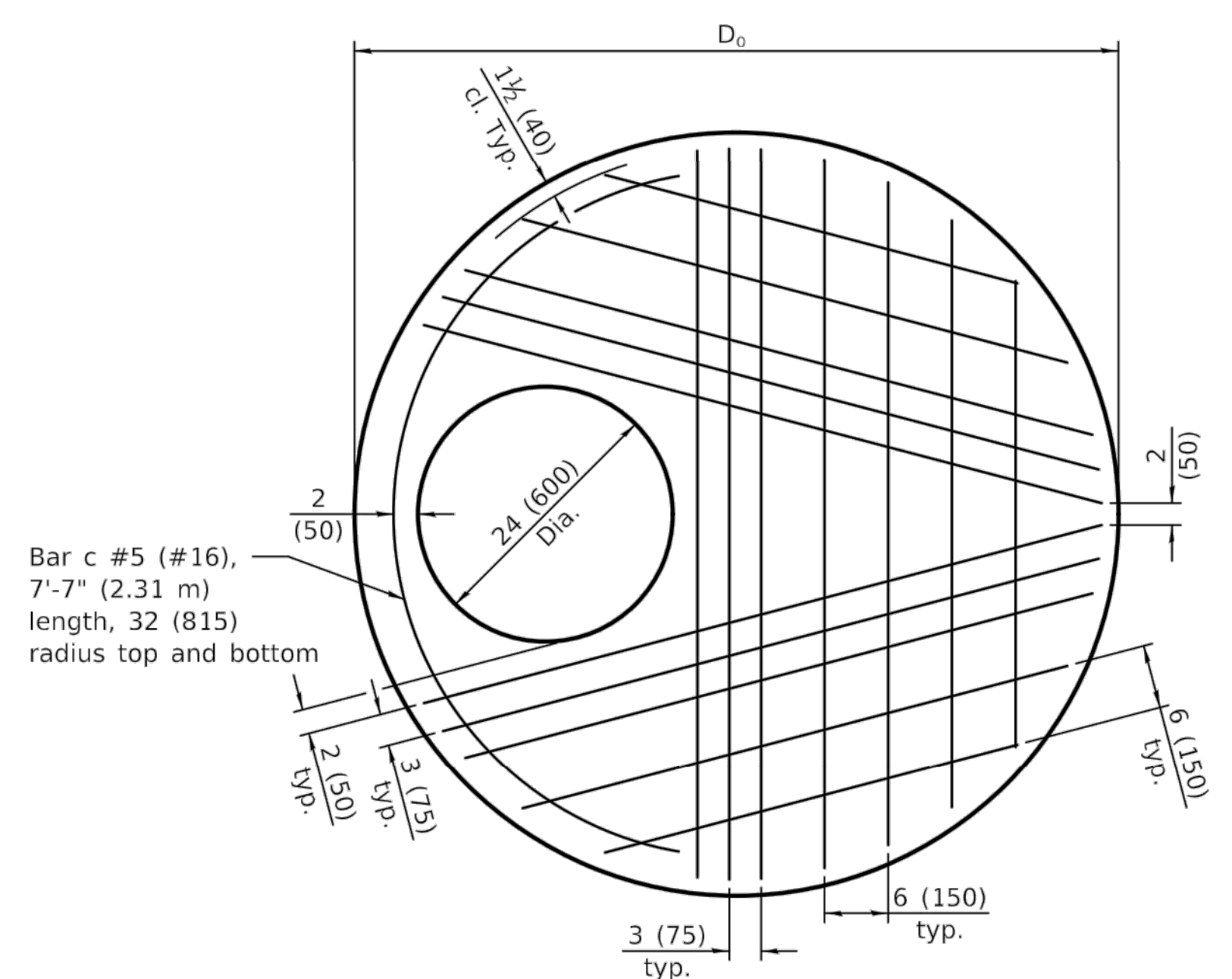
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**CU-510**  
 Page Number: 60



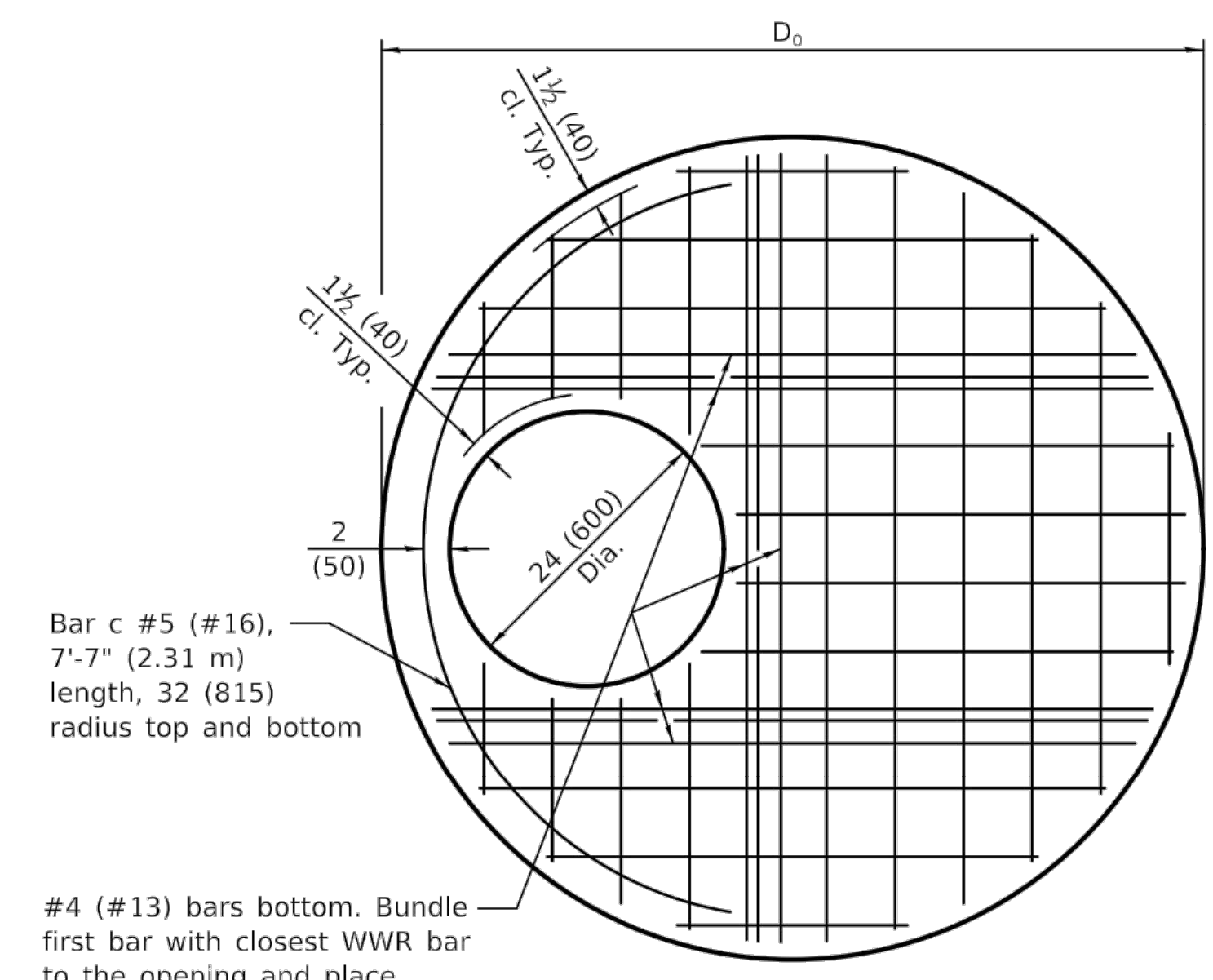
**PLAN - FLAT SLAB TOP FOR D = 4'-0" (1.22 m)**  
 (Showing layout of reinforcement bars and c bars)



**PLAN - FLAT SLAB TOP FOR D = 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 bottom reinforcement bars 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

PASSED January 1, 2019  
 ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2019  
 ENGINEER OF DESIGN AND ENVIRONMENT

**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

Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO

DESIGNED BY: MLM  
 CHECKED BY: PMS

DRAWN BY: MLM  
 REVIEWED BY: EPC

DATE: FEB 2024  
 SCALE: AS SHOWN

**DONOHUE**  
 CONSULTING ENGINEERS

**Accurate**  
 CONSULTING ENGINEERS

**LIVING HABITATS**

**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

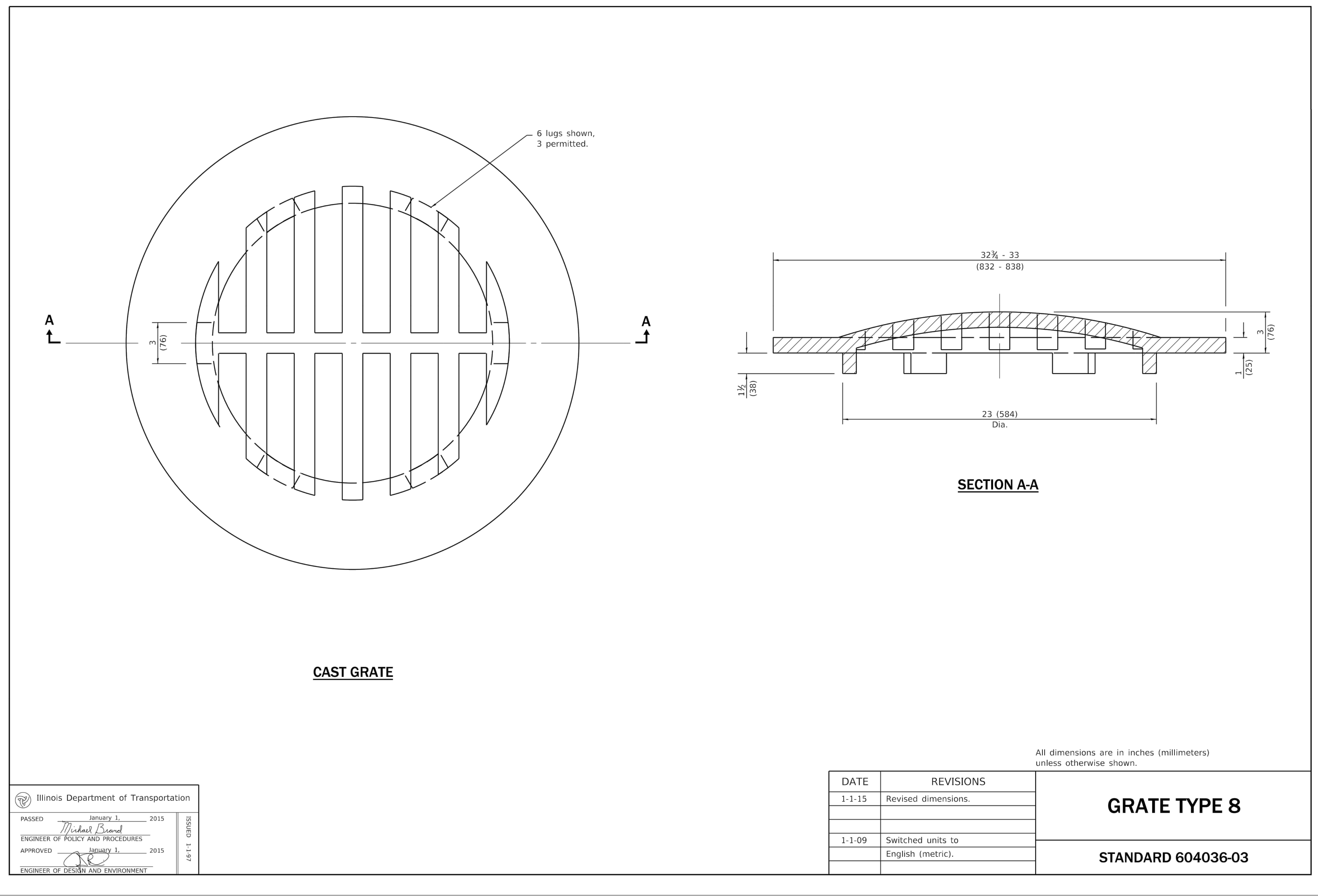
UTILITY DETAILS

Sheet Number:  
**CU-511**

Page Number: 61







**CAST GRATE**

**SECTION A-A**

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

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: 1-1-91  
 4/6 1-1-91

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>

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

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

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

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

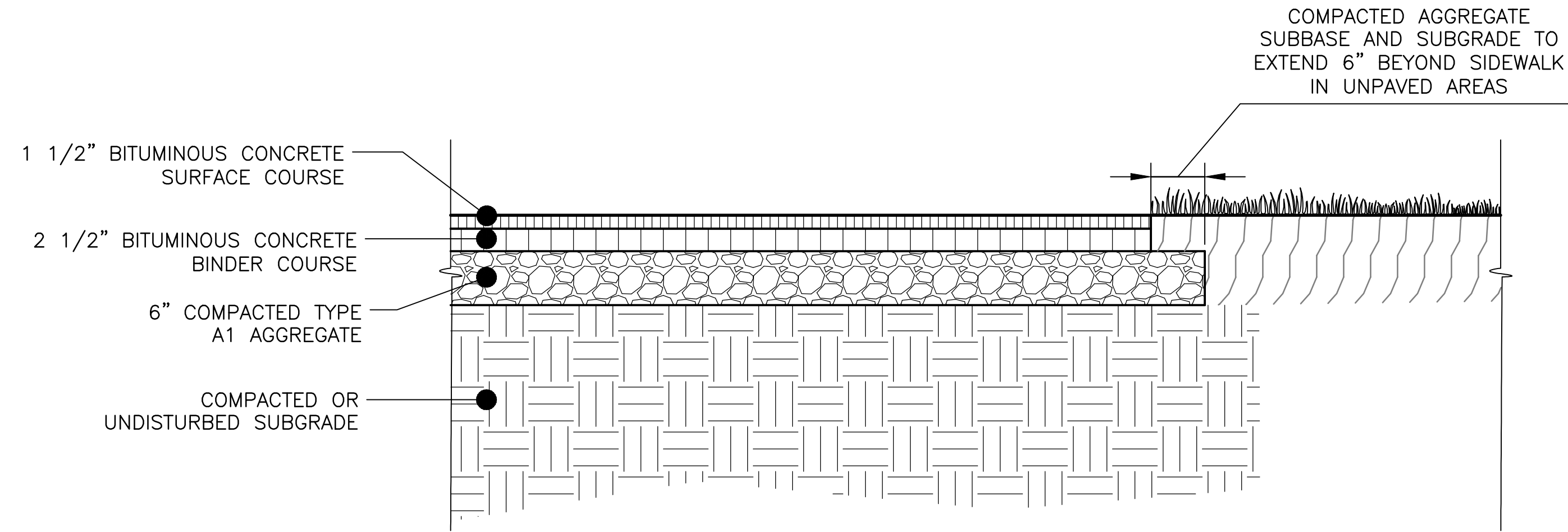
**ILH** **LIVING HABITATS**

**DONOHUE** **accurate** **Zim** **OEA** **ORRIBIN & ASSOCIATES, INC.** **CONSULTING ENGINEERS**

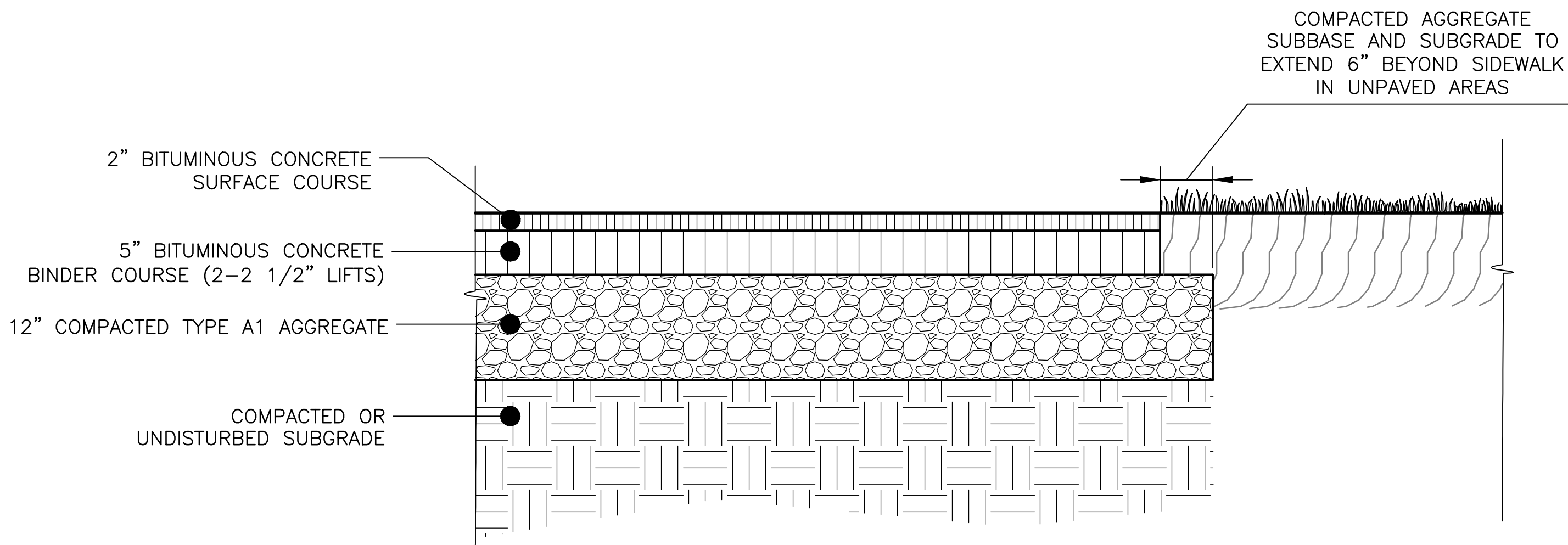
**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

**UTILITY DETAILS**

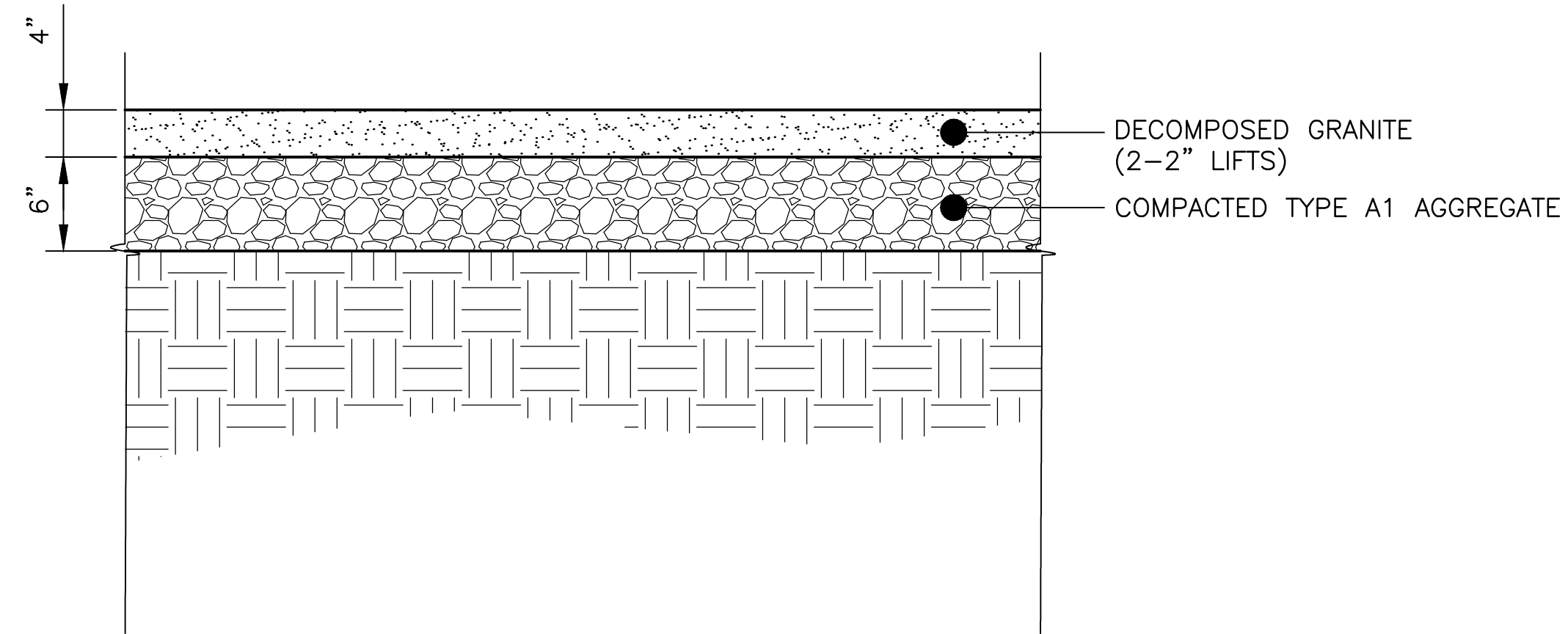
Sheet Number:  
**CU-514**  
 Page Number: 64



**1 PEDESTRIAN ASPHALT PAVEMENT**  
Scale: NTS



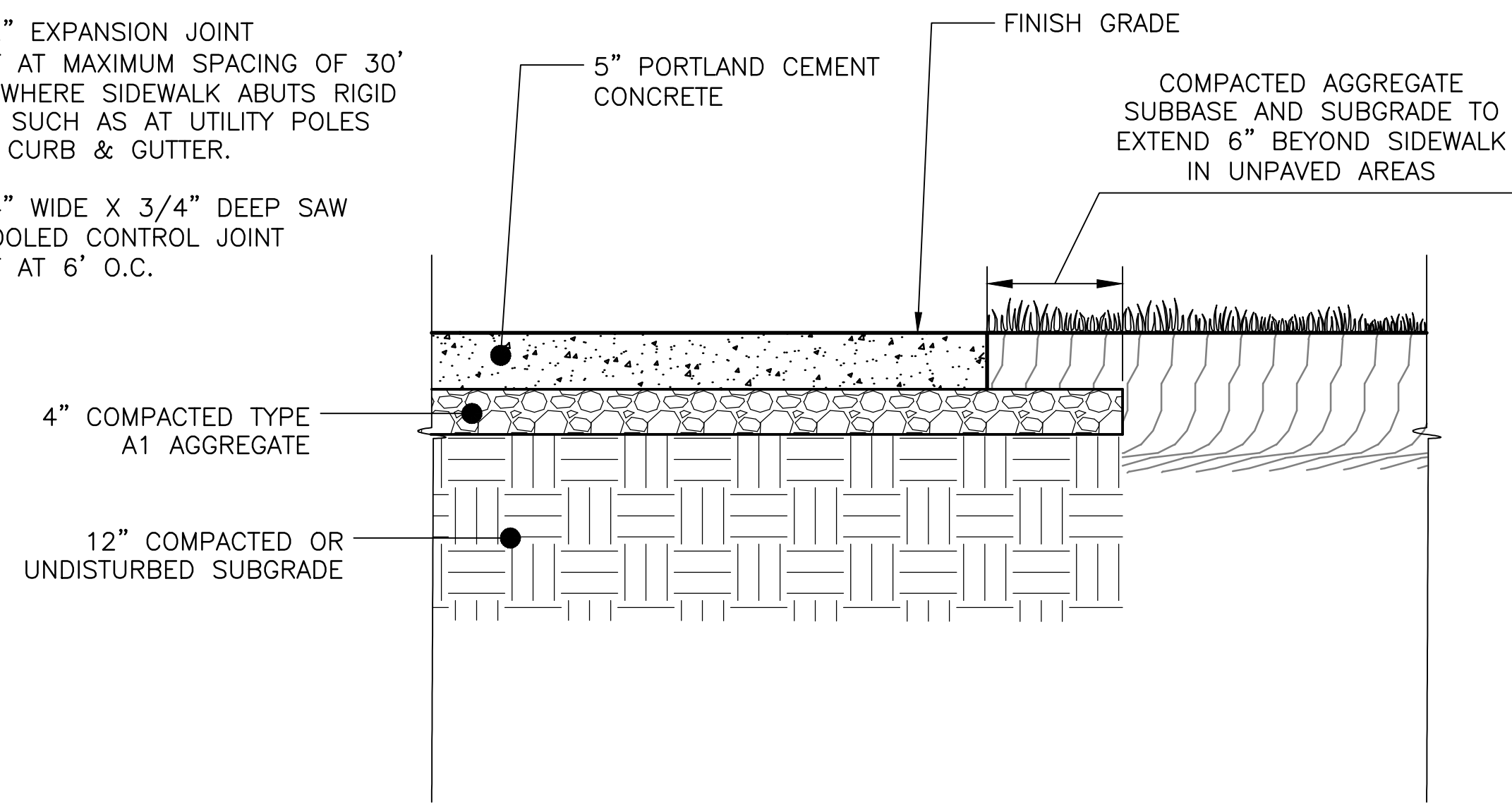
**2 VEHICULAR ASPHALT PAVEMENT - STORMWATER PARK**  
Scale: NTS



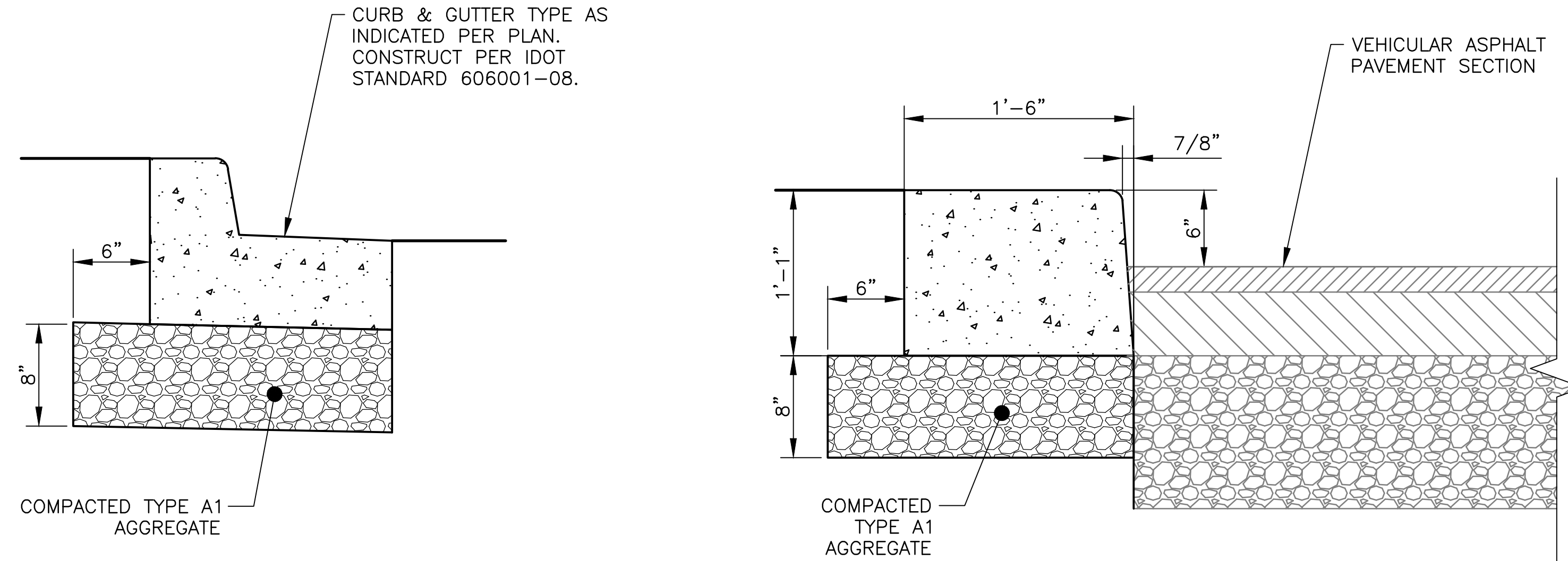
**3 DECOMPOSED GRANITE PAVEMENT**  
Scale: NTS

**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.

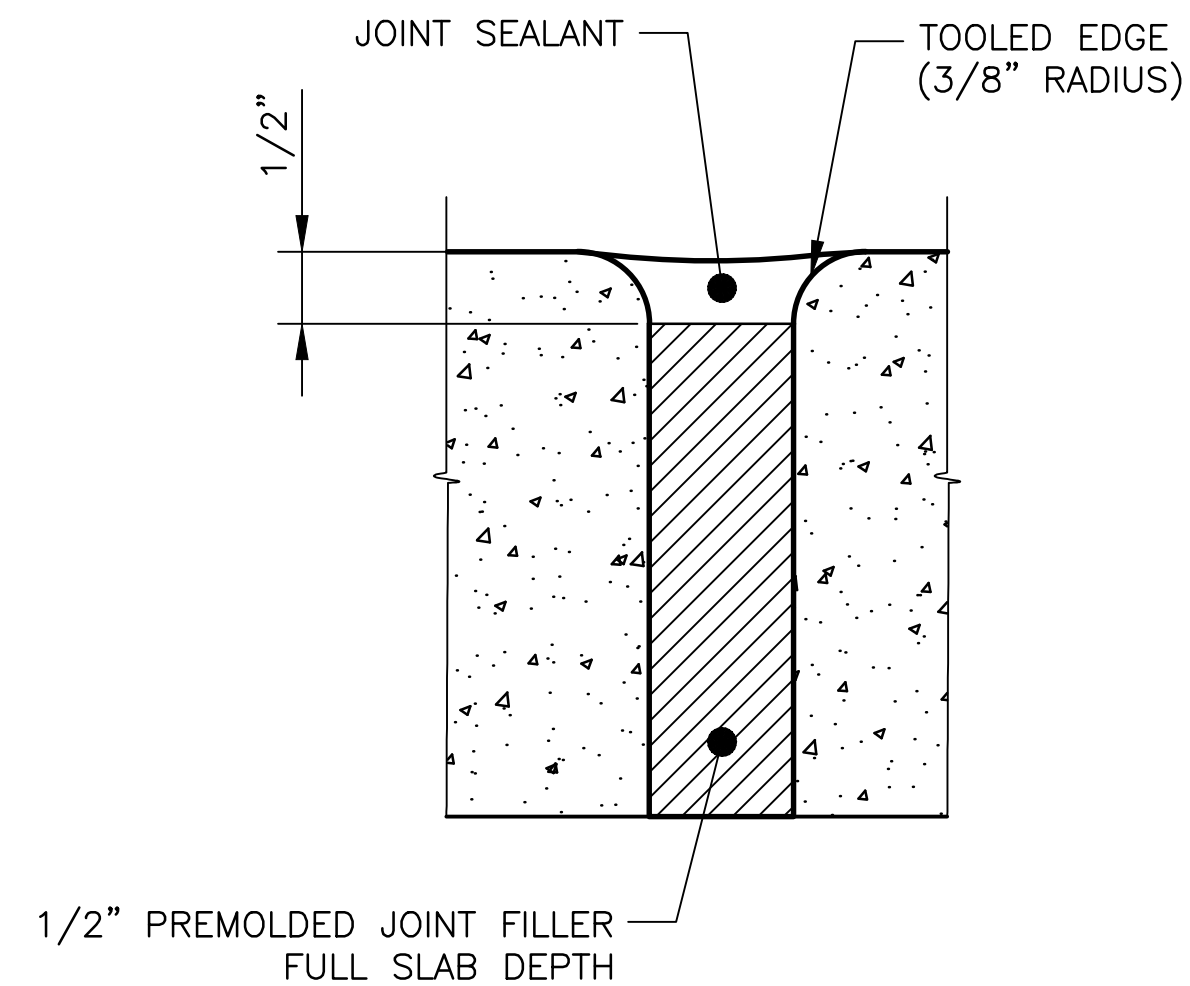


**4 CONCRETE SIDEWALK - STORMWATER PARK**  
Scale: NTS



**5 CURB & GUTTER**  
Scale: NTS

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



**7 EXPANSION JOINT**  
Scale: NTS

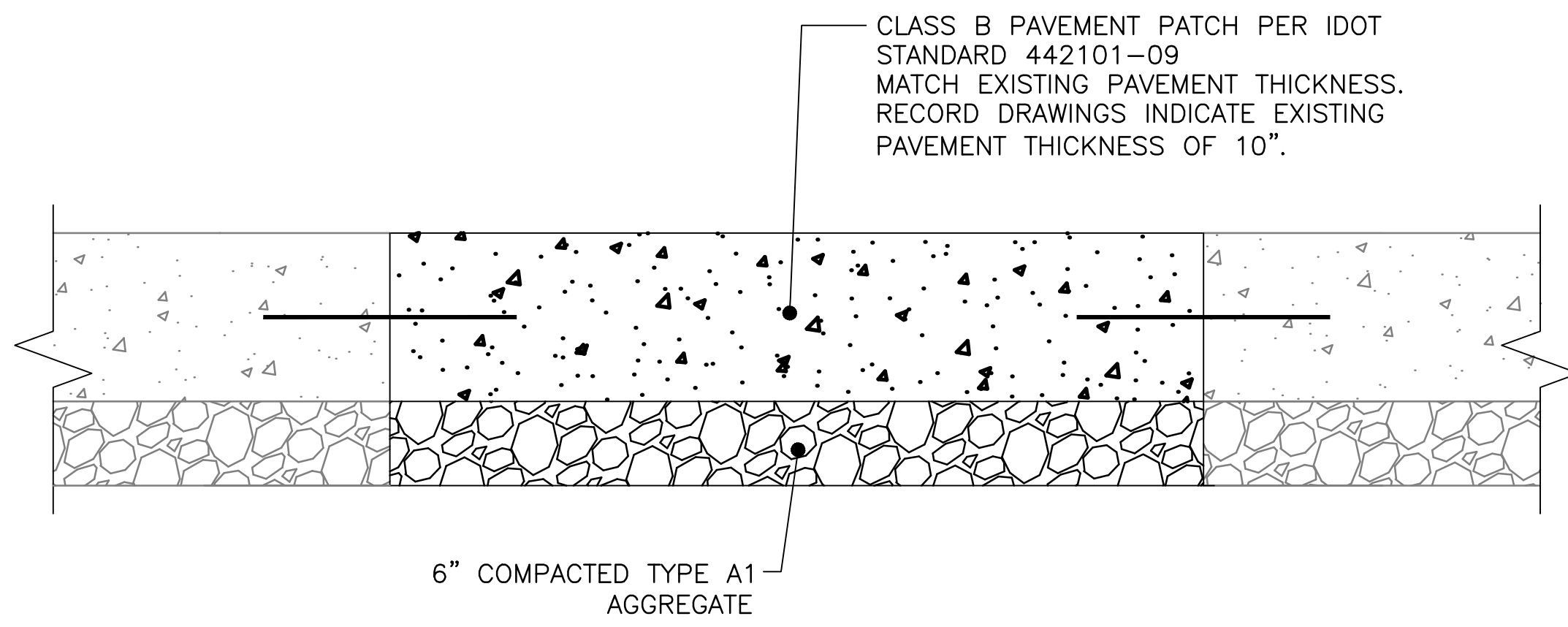
Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO

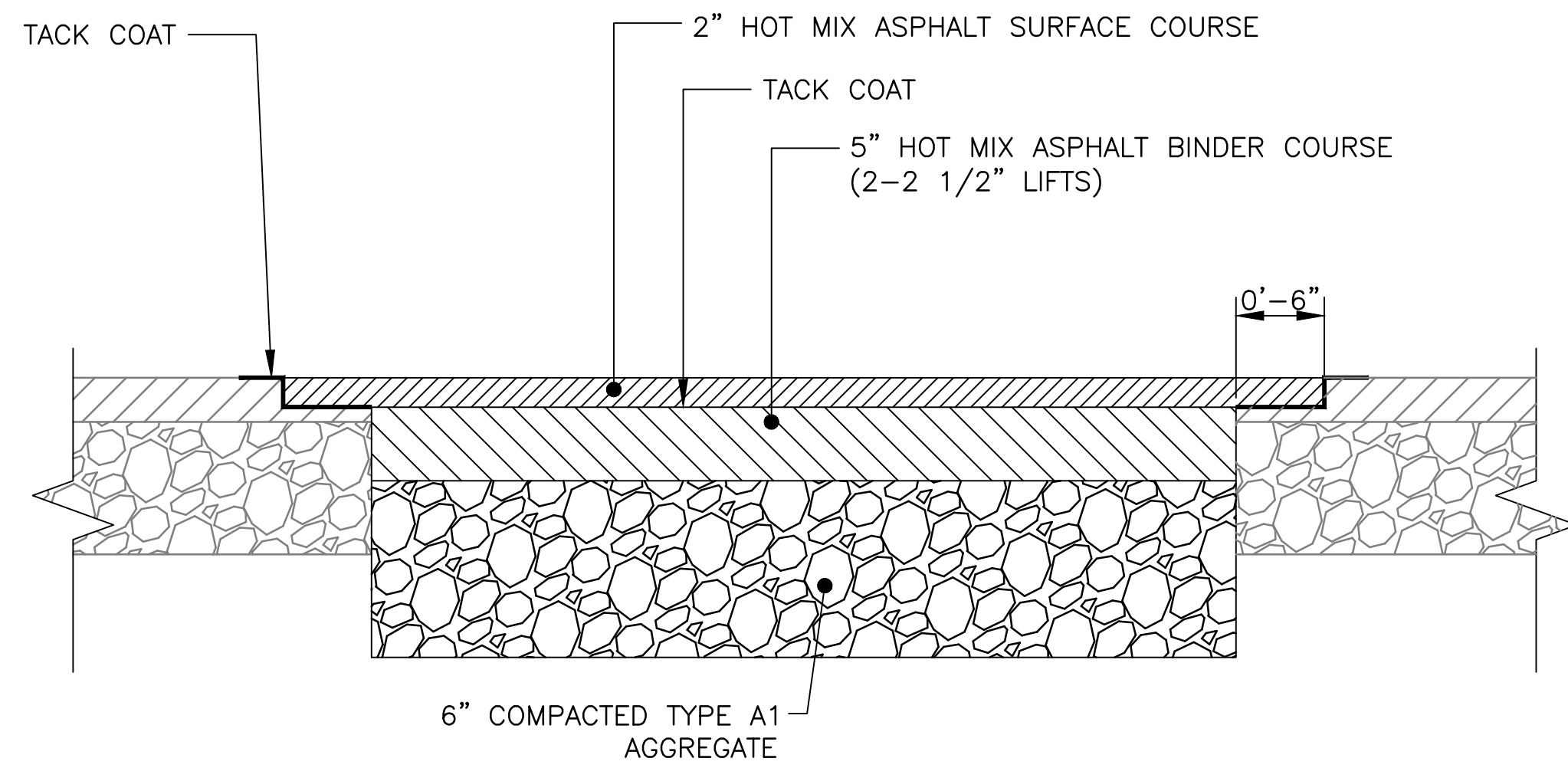
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 ACCURATE

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MLM	PMS
Drawn by:	Reviewed by:
MLM	EPC
Date:	Scale:
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**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

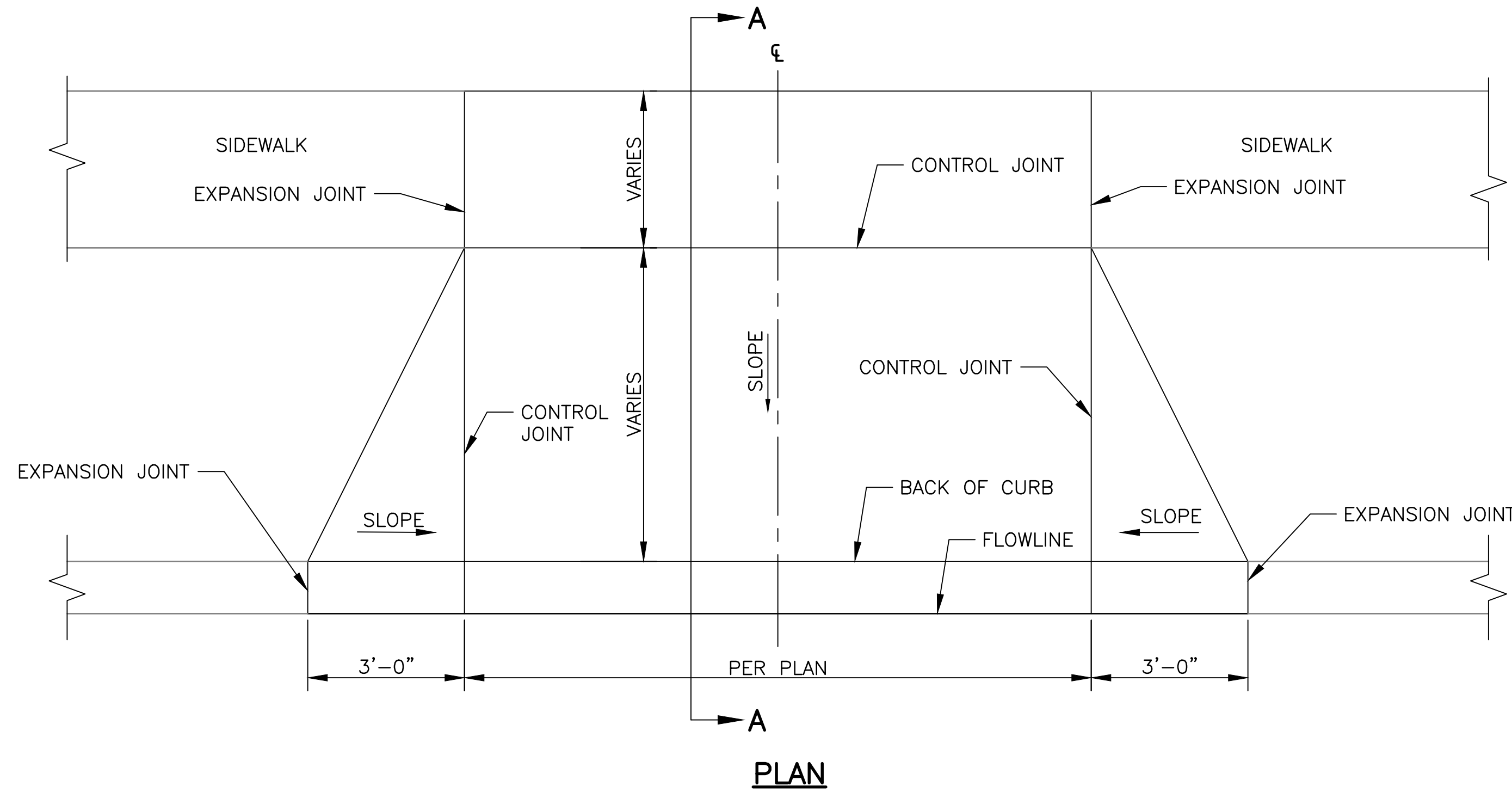


**1 CONCRETE PAVEMENT RESTORATION, KEDZIE AVE AND CLAIRE BLVD**  
Scale: NTS

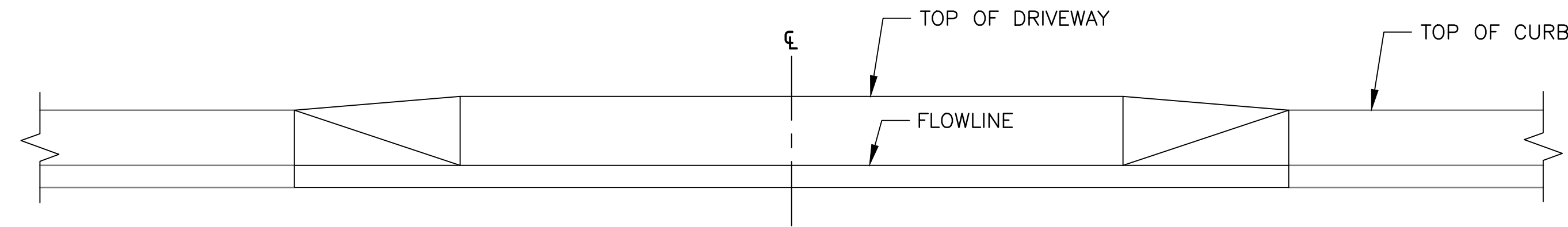


NOTE: ASPHALT RESTORATION SHALL COMPLY WITH REQUIREMENTS OF IDOT CLASS D PAVEMENT PATCHES PER IDOT STANDARD 442201-03.

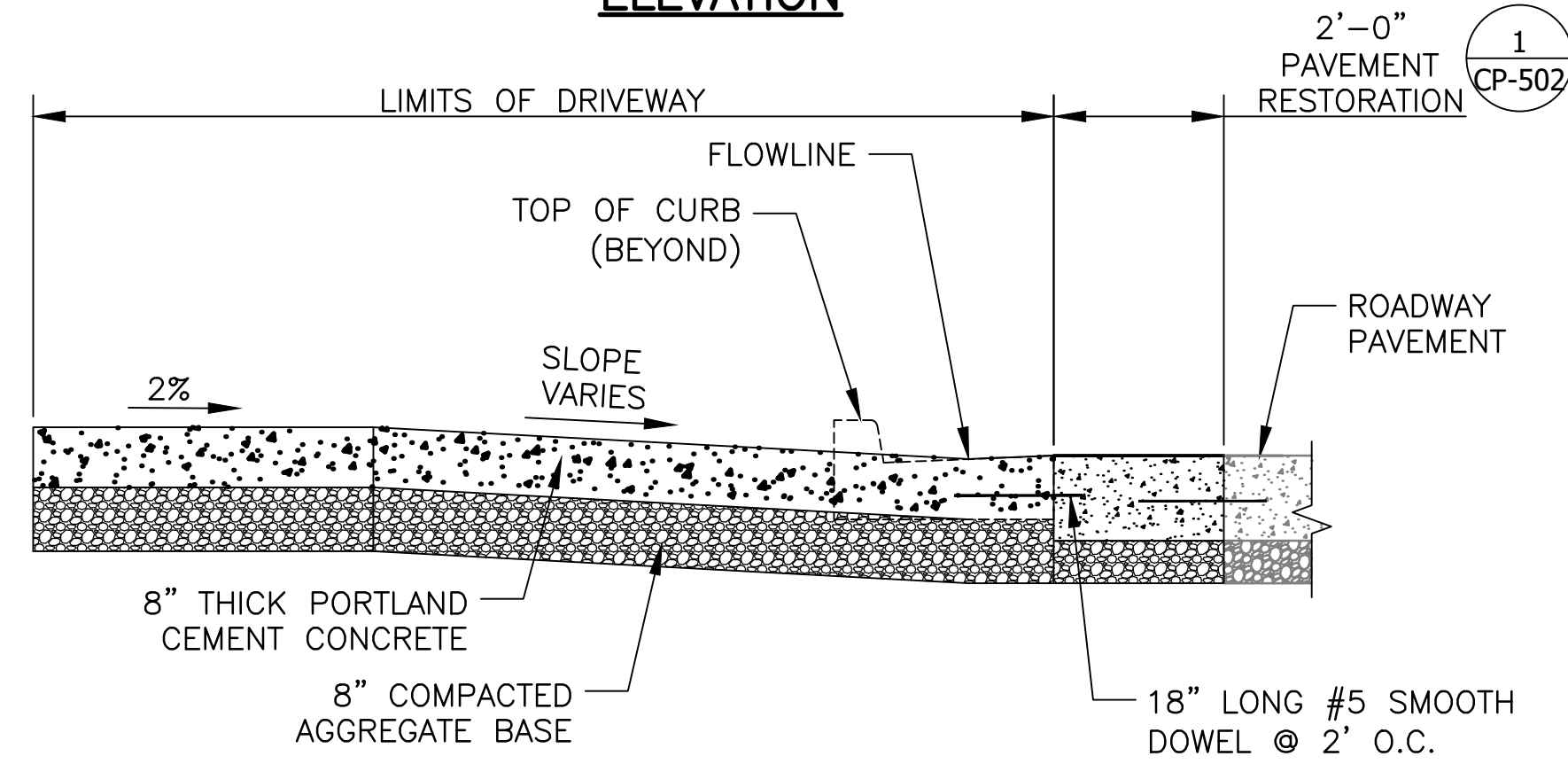
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Scale: NTS



**PLAN**

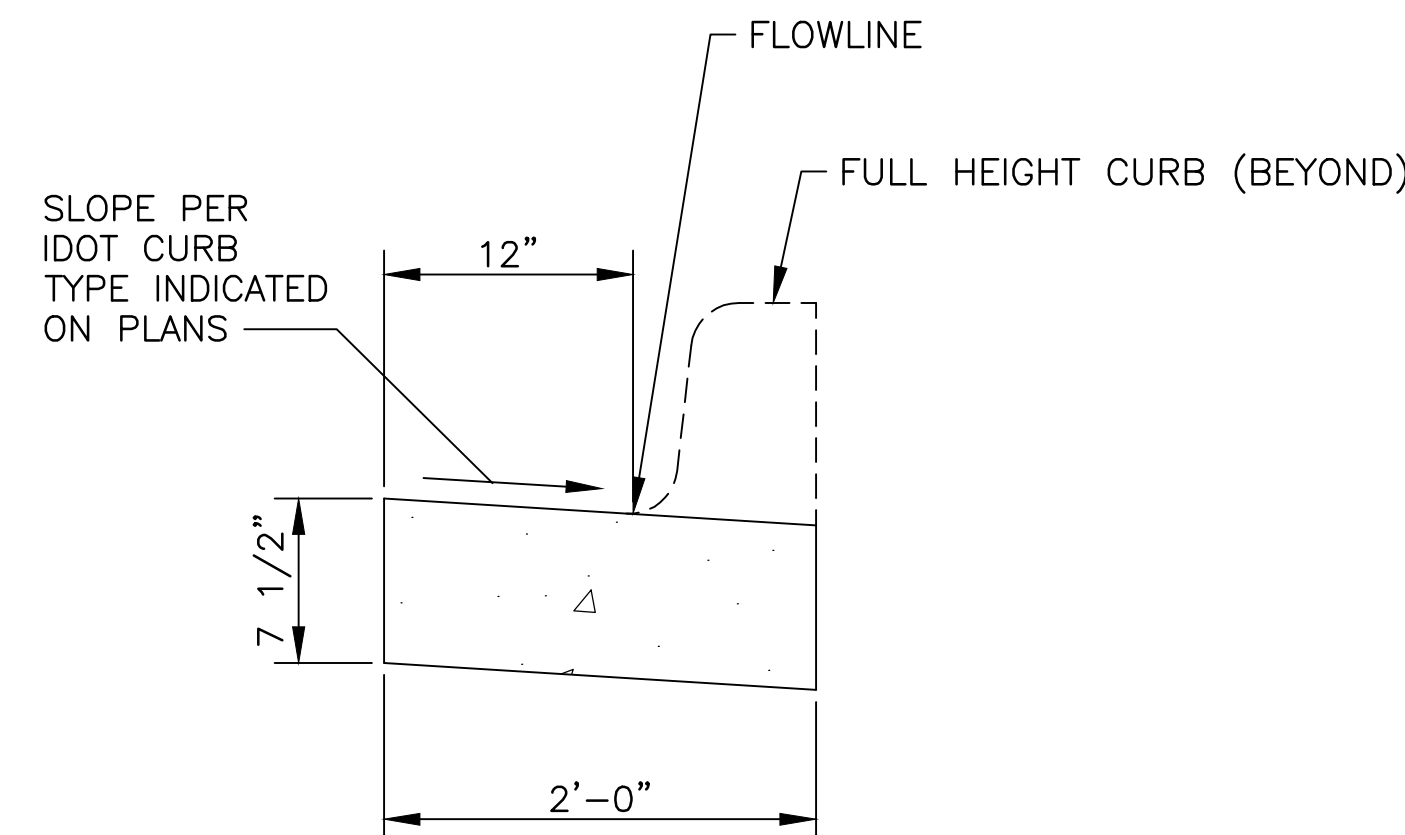
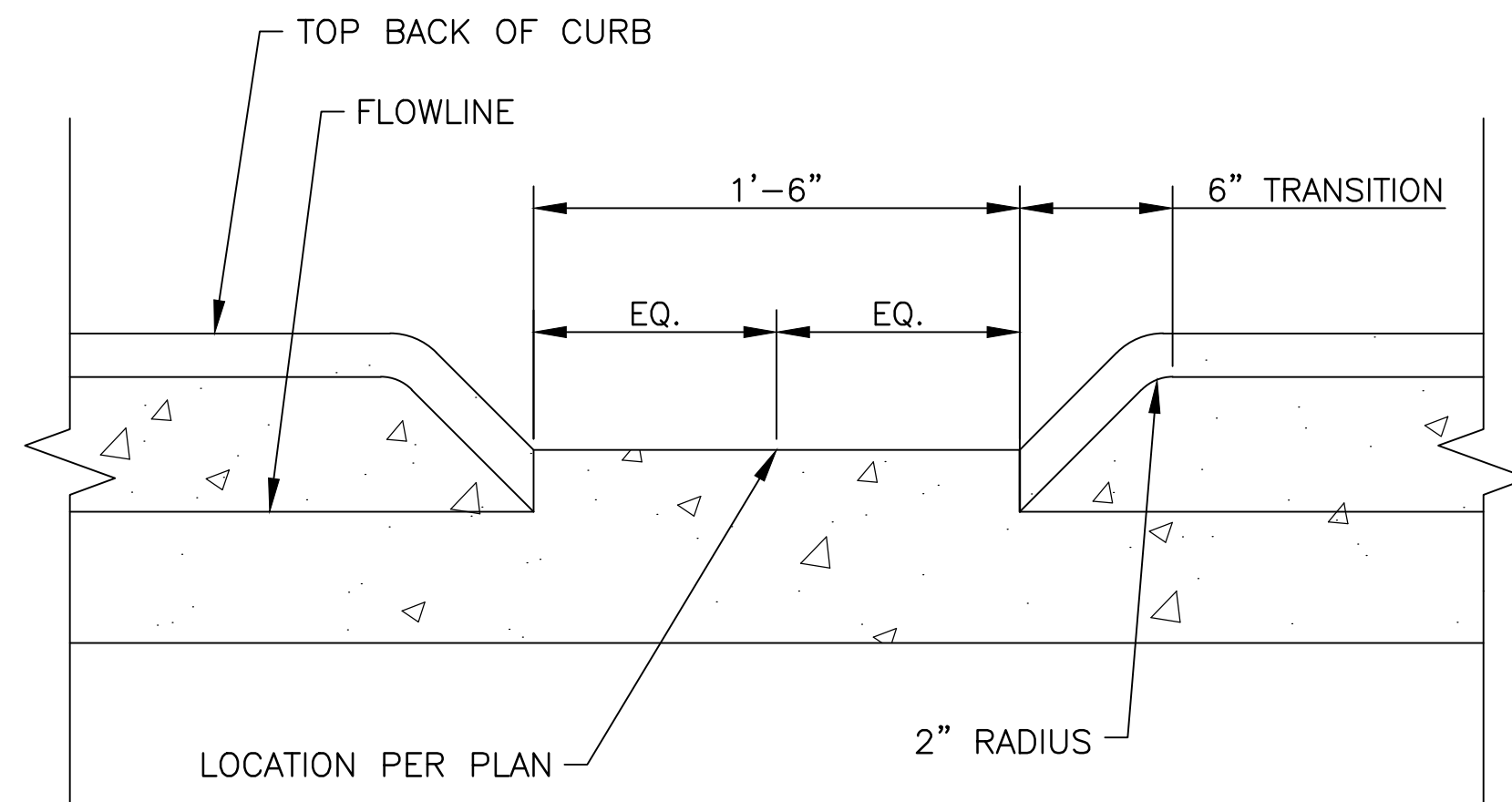


**ELEVATION**



**SECTION A-A**

**3 CONCRETE DRIVEWAY**  
SCALE: NTS



**4 CURB CUT**  
Scale: NTS

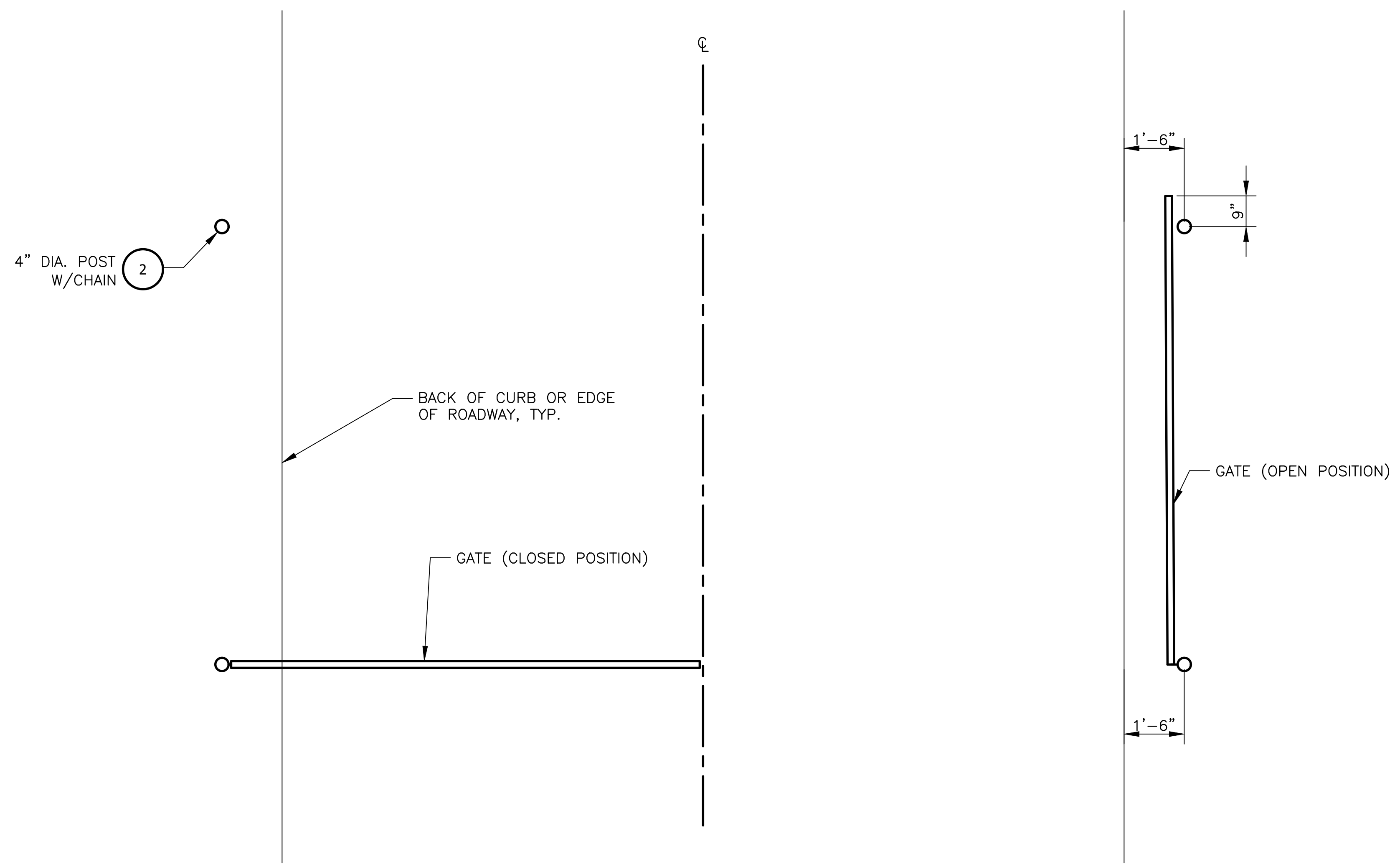
Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO

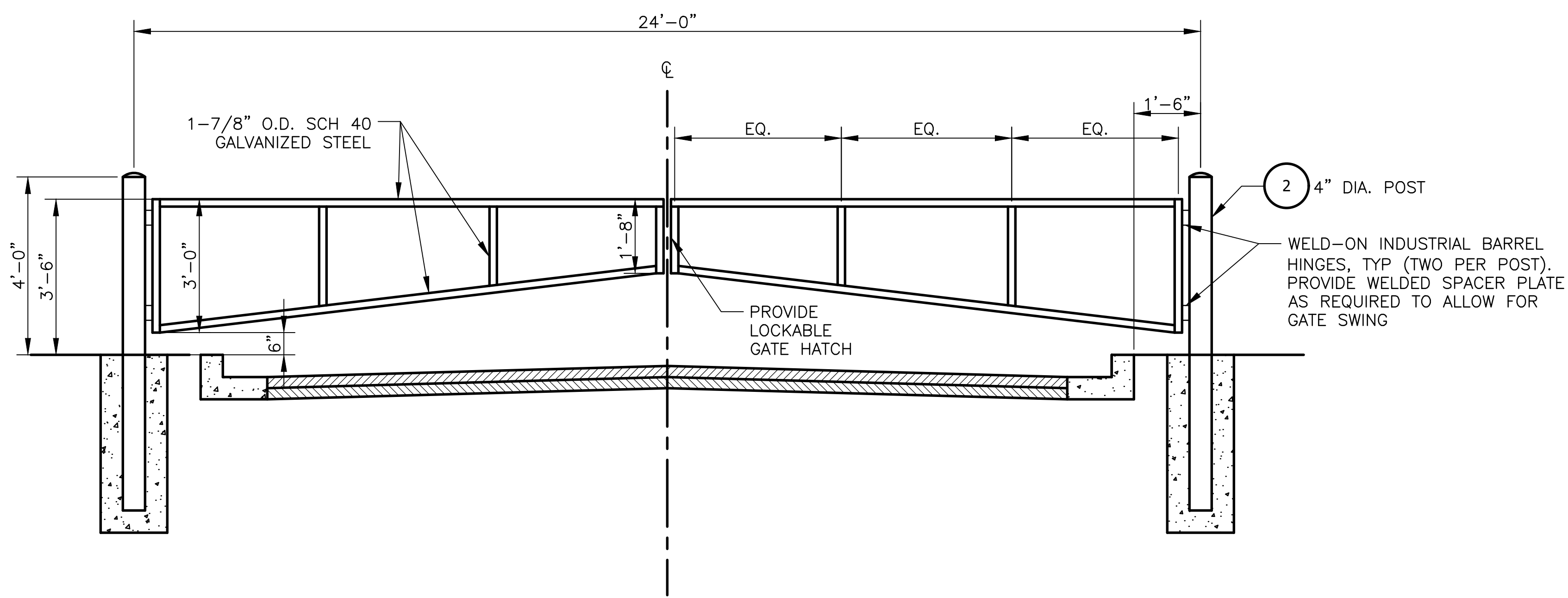
**DONOHUE** ACCURATE  
 CONSULTING ENGINEERS

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MLM	PMS
Drawn by:	Reviewed by:
MLM	EPC
Date:	Scale:
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**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED  
 CIVIL DETAILS

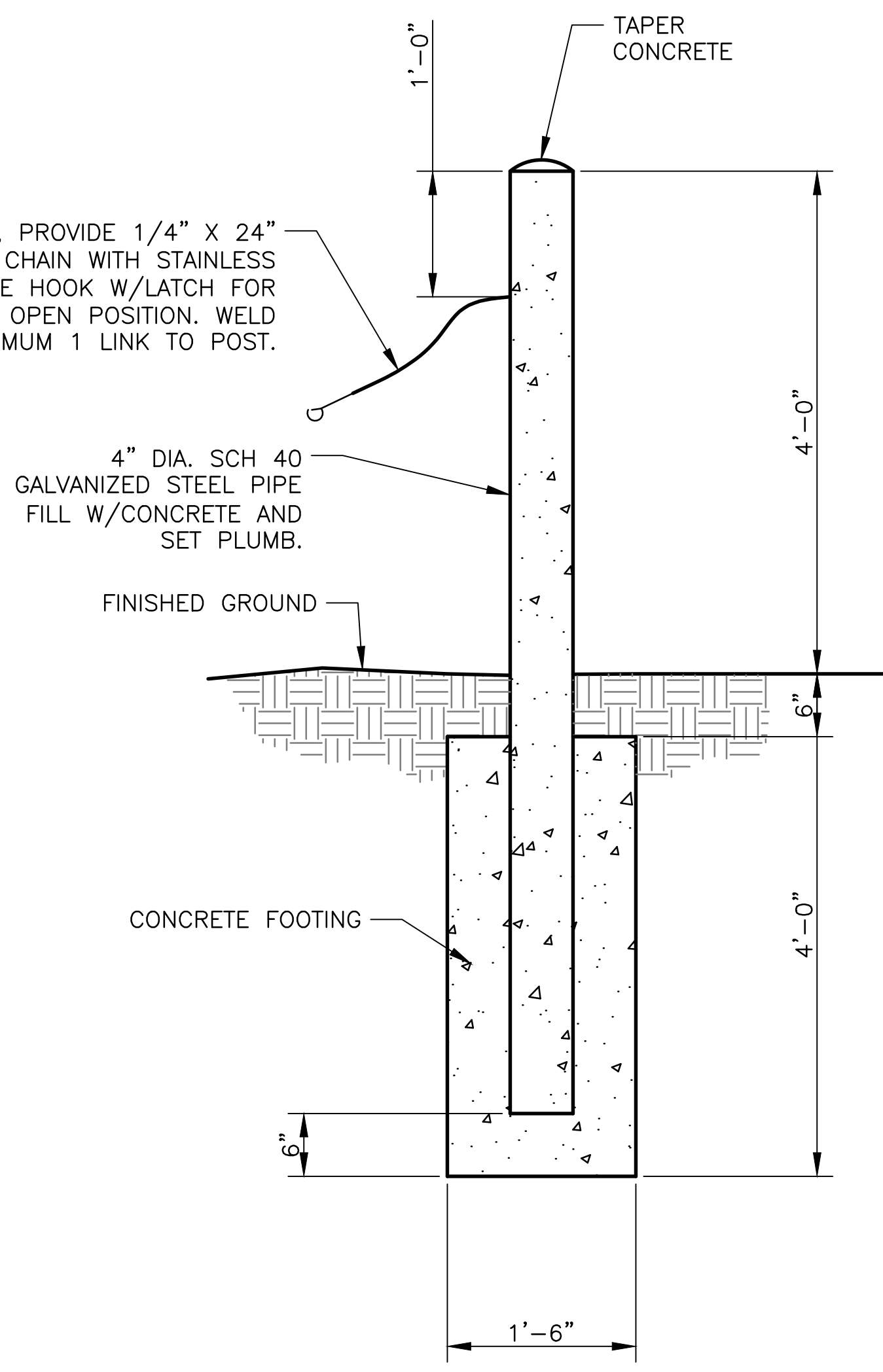


PLAN



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

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OF GREATER CHICAGO

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MLM	EPC
Date:	Scale:
FEB 2024	AS SHOWN

CONTRACT 14-253-5F  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, CSA  
LITTLE CALUMET RIVER WATERSHED

CIVIL DETAILS

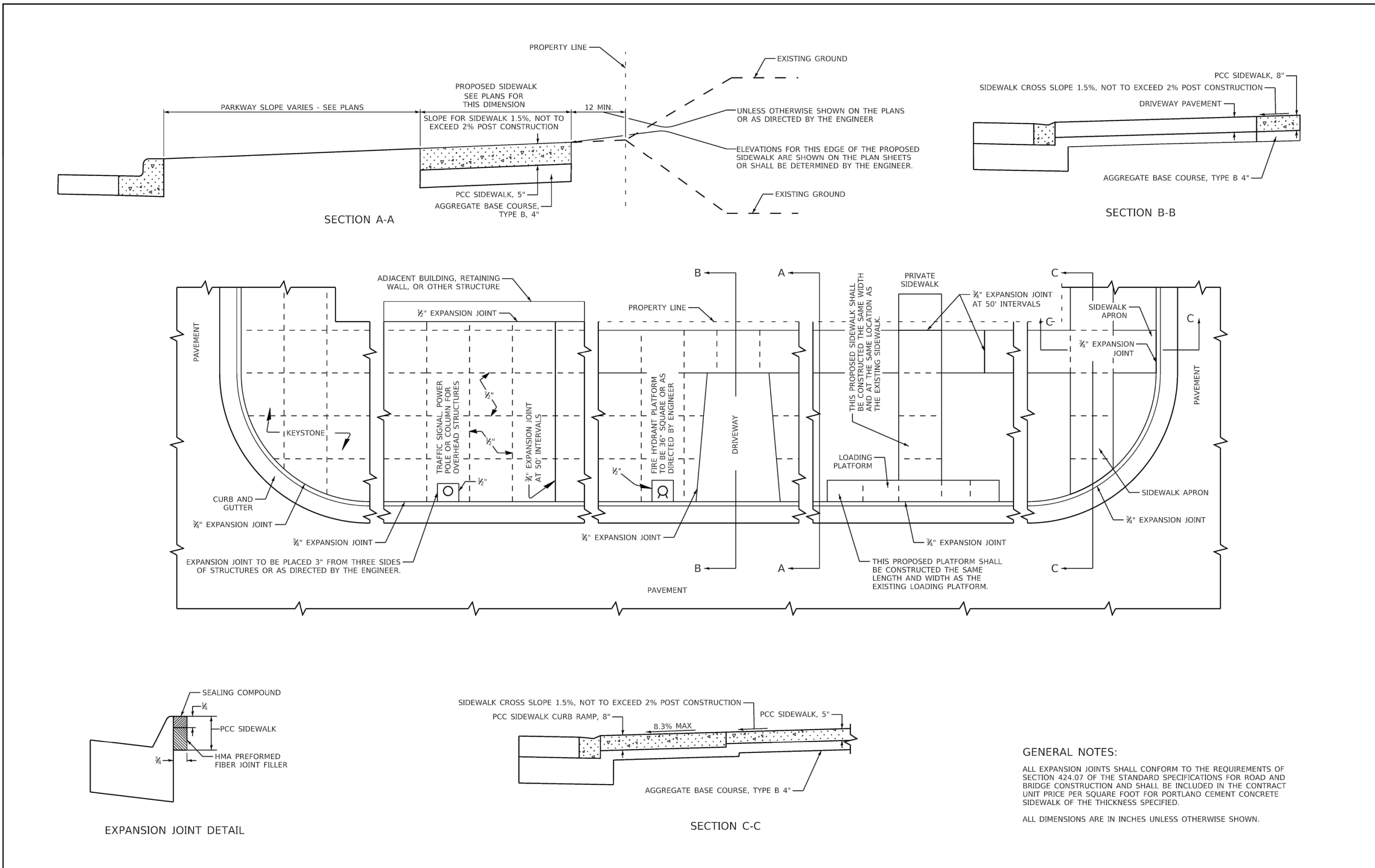
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**GENERAL NOTES:**  
 ALL EXPANSION JOINTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 424.07 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR PORTLAND CEMENT CONCRETE 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
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**1 CDDOTH PCC SIDEWALK DETAIL**  
 Scale: NTS

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

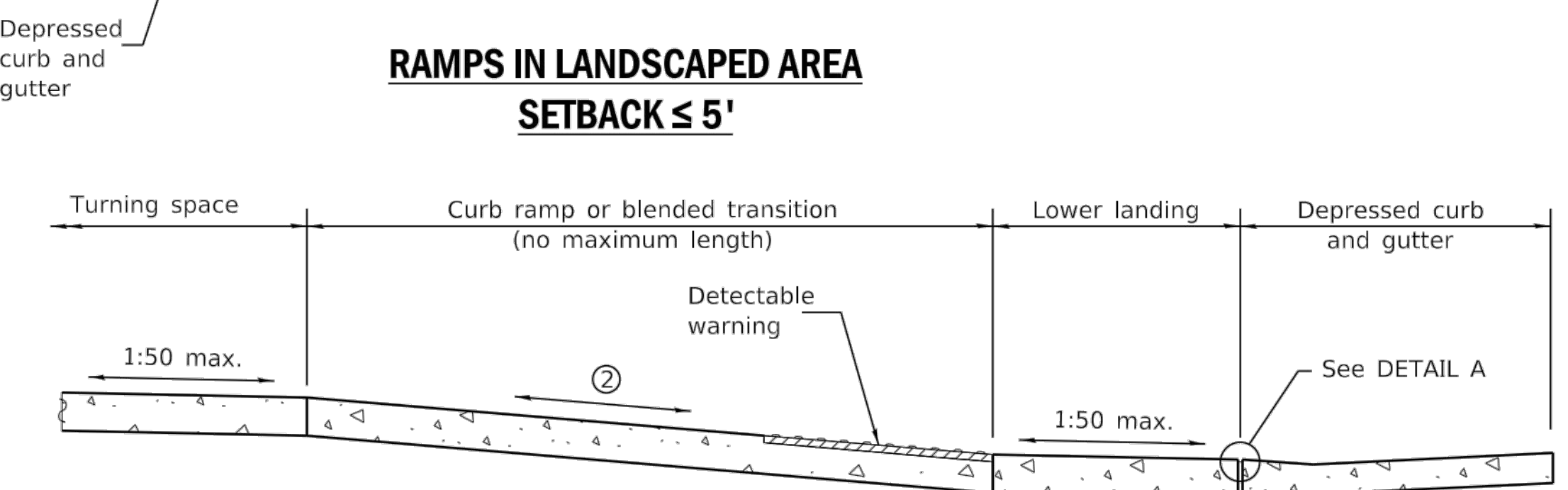
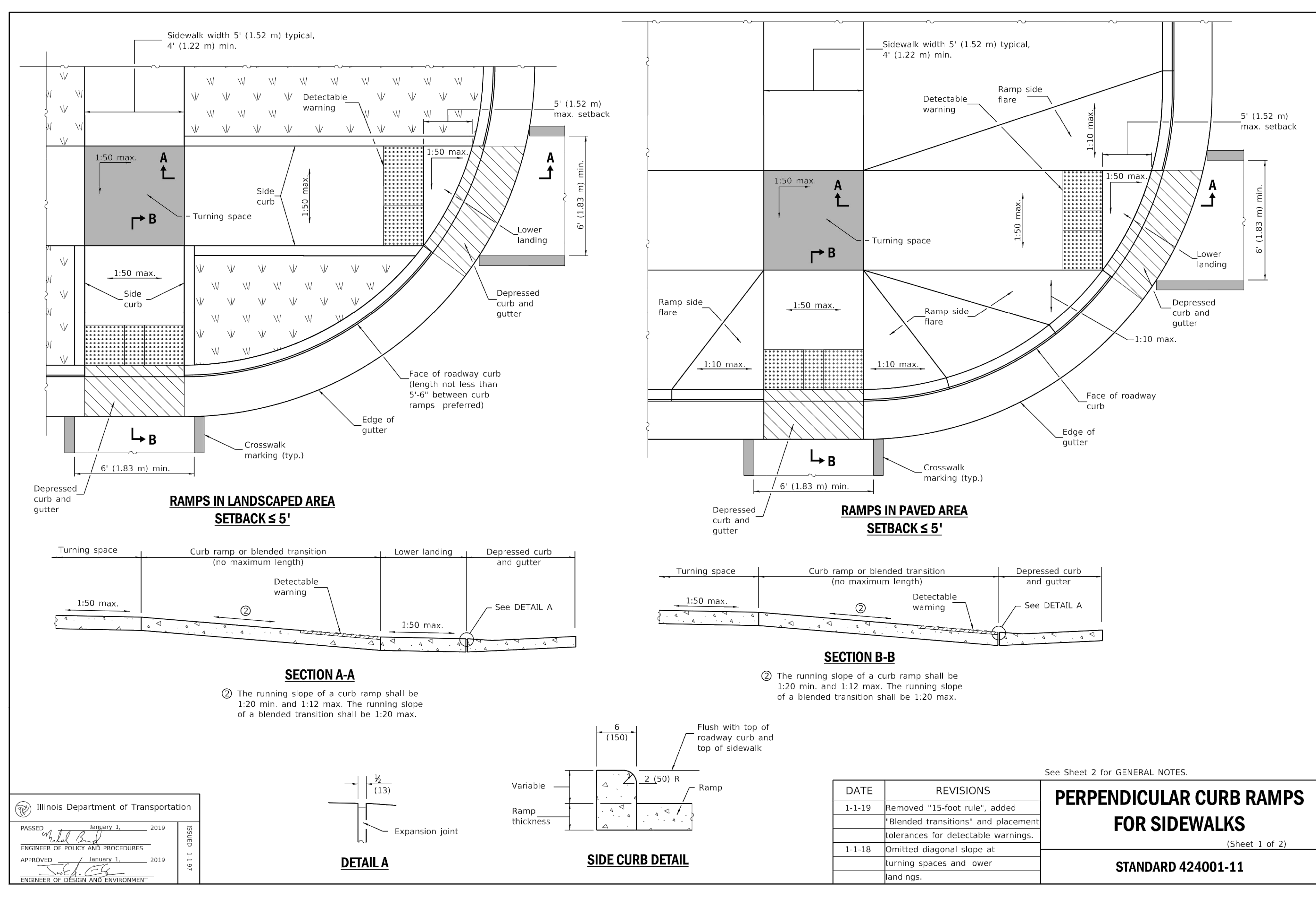
Designed by: MLM  
Checked by: PMS  
Drawn by: MLM  
Reviewed by: EPC  
Date: FEB 2024  
Scale: AS SHOWN

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 ENGINEERING  
 DONOHUE  
 ENGINEERS  
 LIVING HABITATS

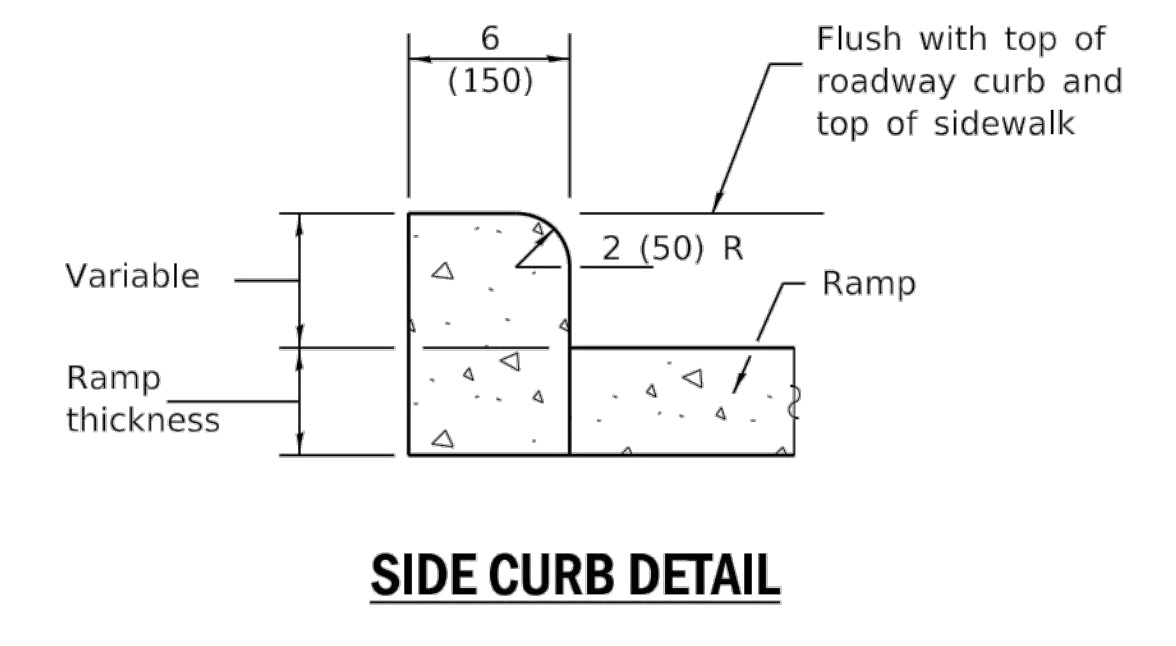
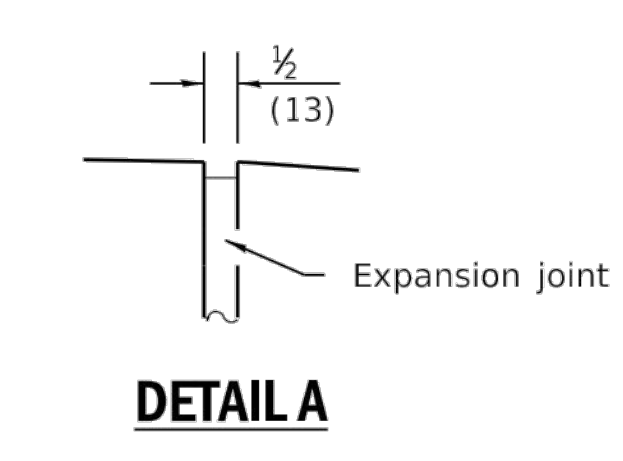
**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

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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 424001-11  
 Scale: NTS

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**

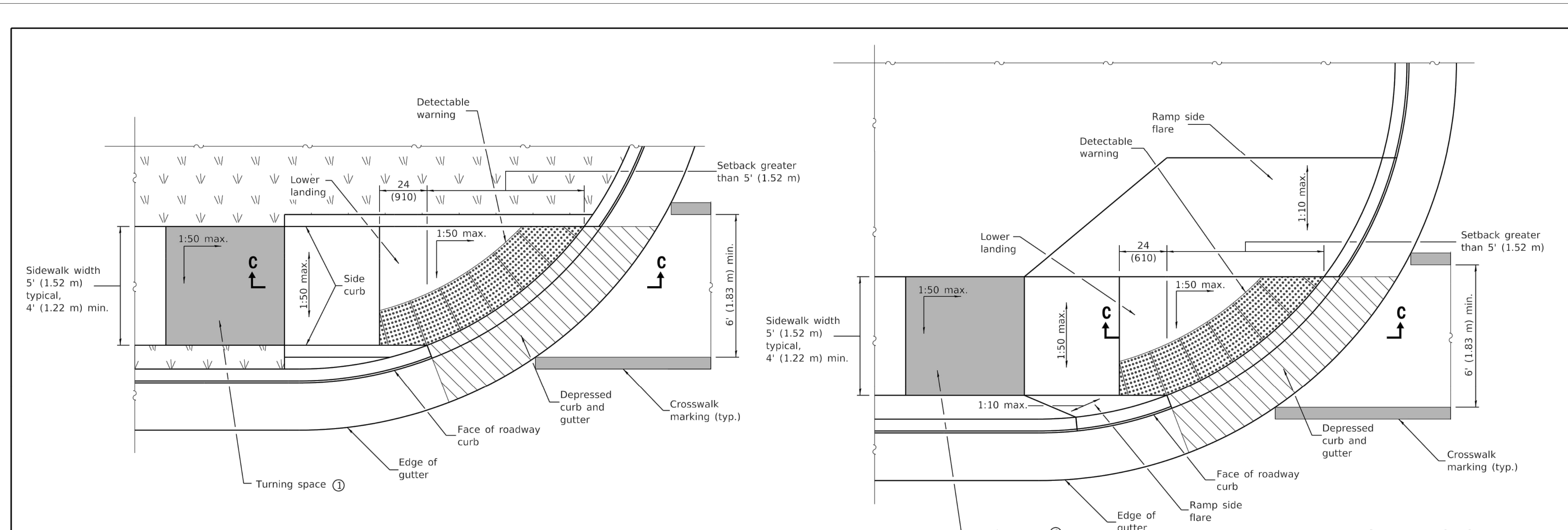
Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO  
 Designed by: PMS  
 Drawn by: MLM  
 Checked by: PMS  
 Reviewed by: EPC  
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 CONSULTING ENGINEERS

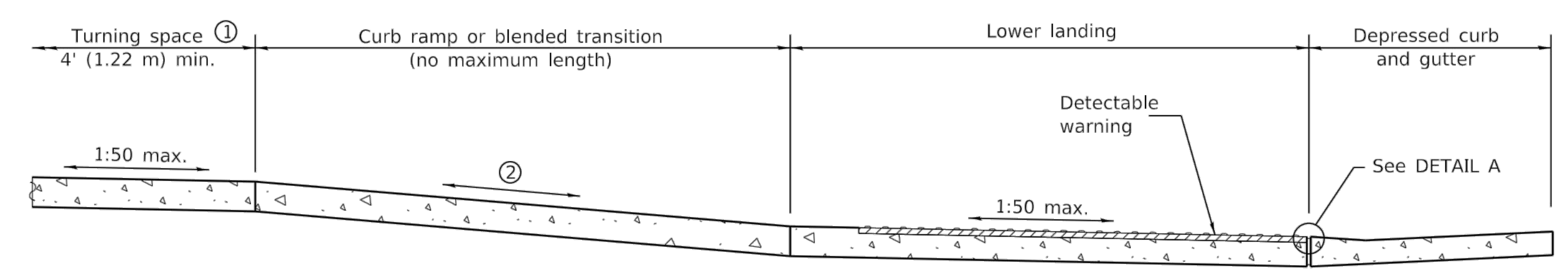
CONTRACT 14-253-5F  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED  
 CIVIL DETAILS

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



**RAMP IN LANDSCAPED AREA  
SETBACK > 5'**

**RAMP IN PAVED AREA  
SETBACK > 5'**



**SECTION C-C**

- ① This turning space not required for blended transitions.
- ② 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.

**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.

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

Illinois Department of Transportation

PASSED January 1, 2019  
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2019  
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUES: 1-19  
6/8 1/1 03/ISS/1

① IDOT HIGHWAY STANDARD 424001-11  
Scale: NTS

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO**

**DESIGNED BY: MLM**  
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**DRAWN BY: MLM**  
**REVIEWED BY: EPC**  
**DATE: FEB 2024**  
**SCALE: AS SHOWN**

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CONSULTING ENGINEERS

**LIVING HABITATS**

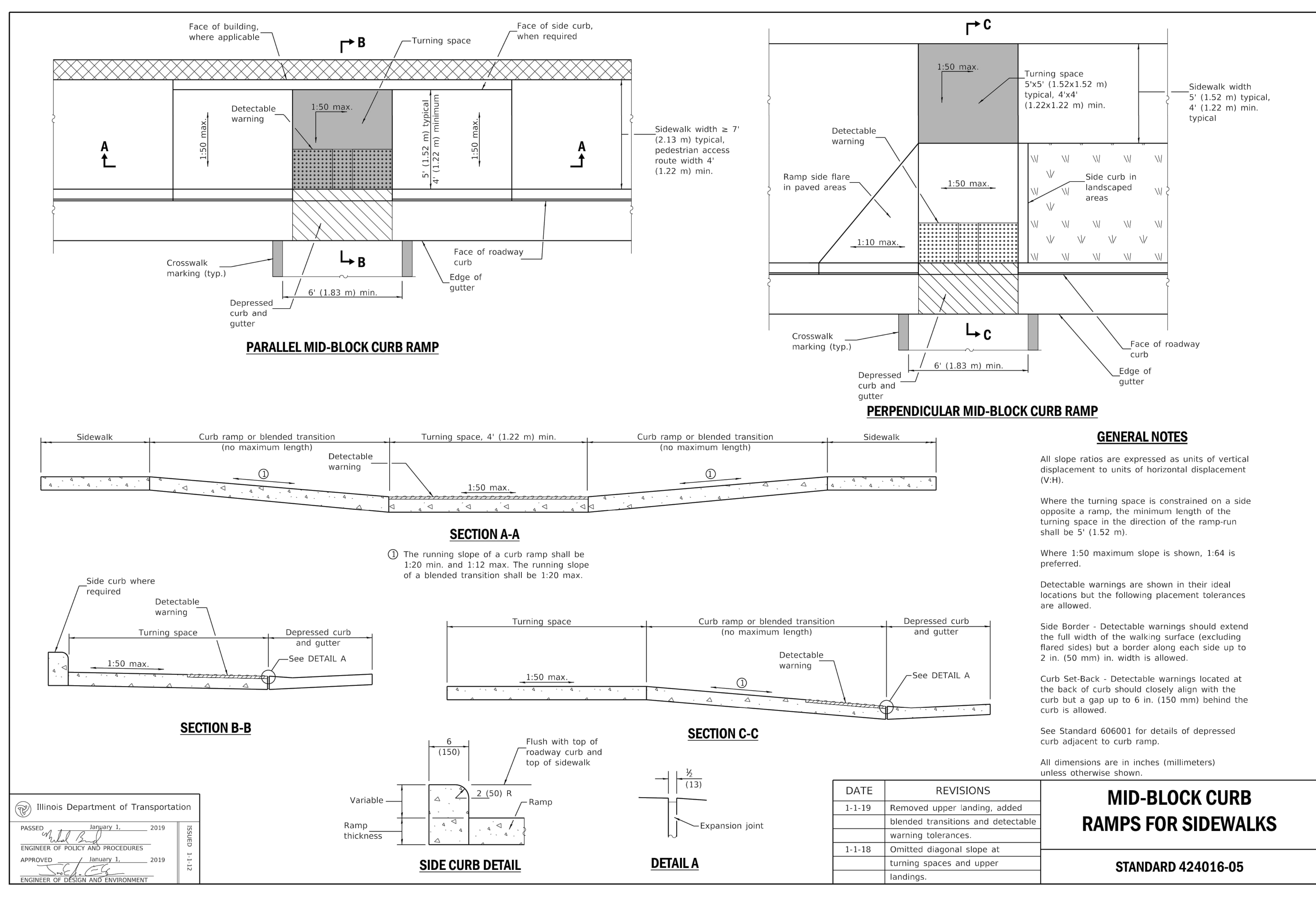
**CONTRACT 14-253-5F**  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, CSA  
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**CIVIL DETAILS**

Sheet Number:  
**CP-507**  
Page Number: 71



PLOT DATE: 2/7/2024 3:33 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 RAMPS FOR SIDEWALKS**

**STANDARD 424016-05**

Illinois Department of Transportation

PASSED January 1, 2019

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2019

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1 IDOT HIGHWAY STANDARD 424016-05  
 Scale: NTS

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

CONTRACT 14-253-5F  
 FLOOD CONTROL PROJECT ON MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

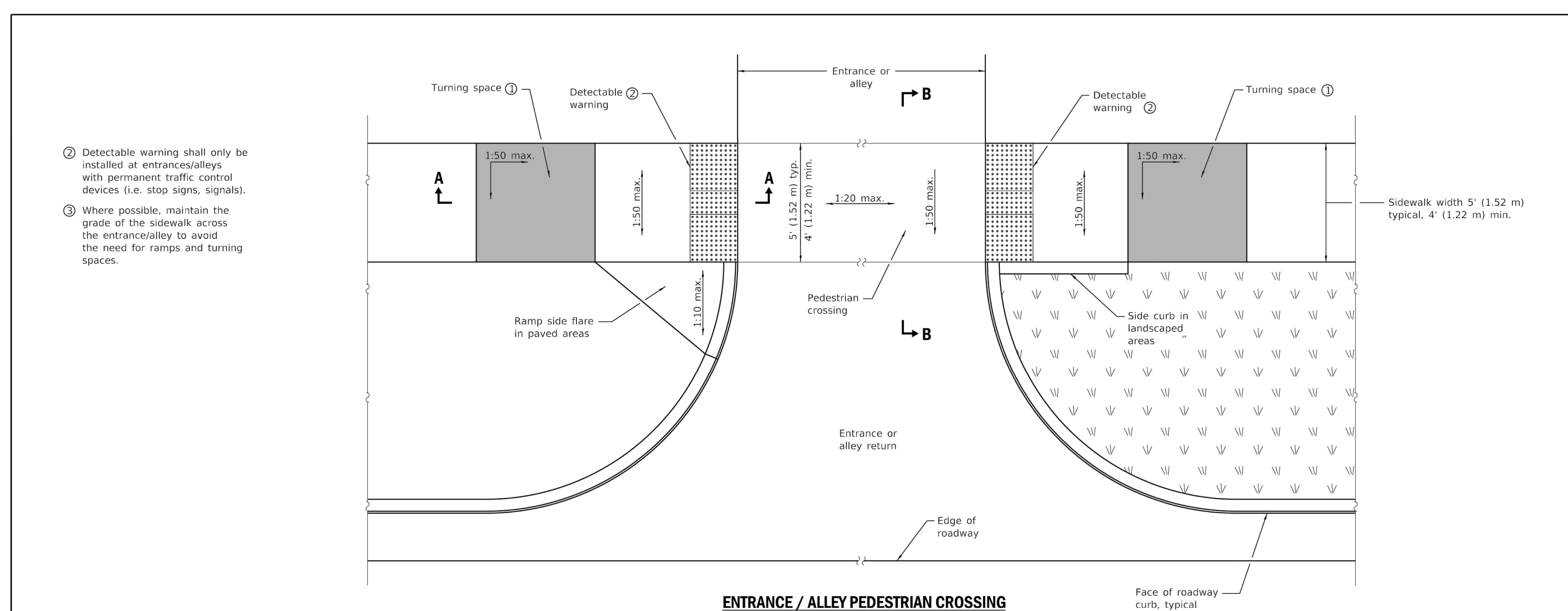
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Sheet Number: CP-509  
 Page Number: 73

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

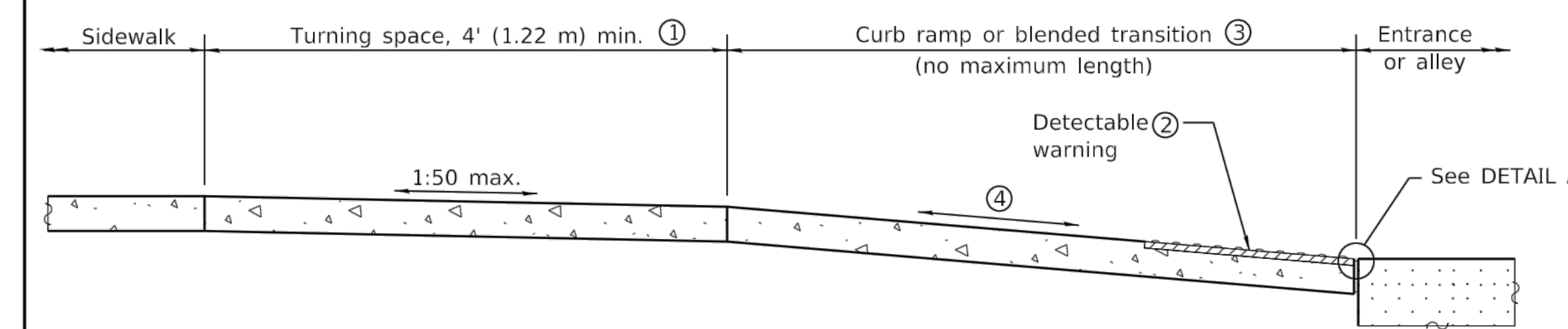
ACCURATE CONSULTING ENGINEERS  
 DONOHUE CONSULTING ENGINEERS  
 OBERLIN & ASSOCIATES, INC. CONSULTING ENGINEERS

Rev.	Description	Appr.	Date



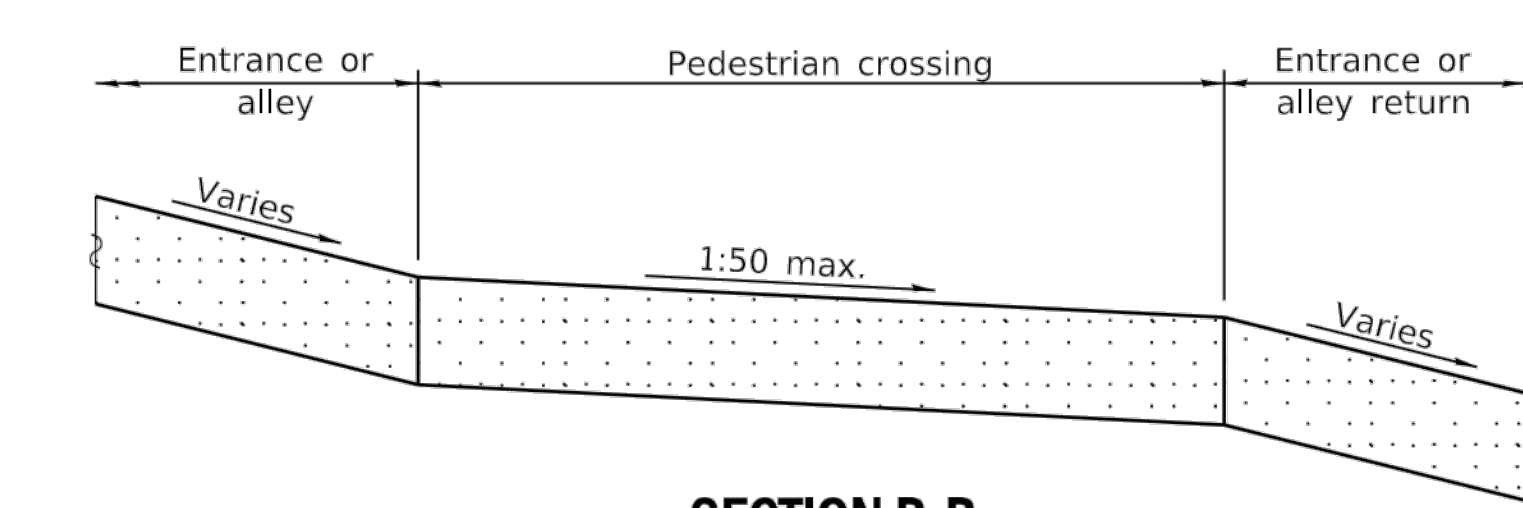
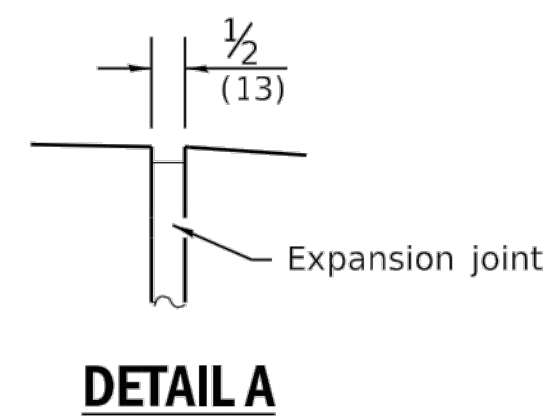
- ② Detectable warning shall only be installed at entrances/alleys with permanent traffic control devices (i.e. stop signs, signals).
- ③ Where possible, maintain the grade of the sidewalk across the entrance/alley to avoid the need for ramps and turning spaces.

**ENTRANCE / ALLEY PEDESTRIAN CROSSING**

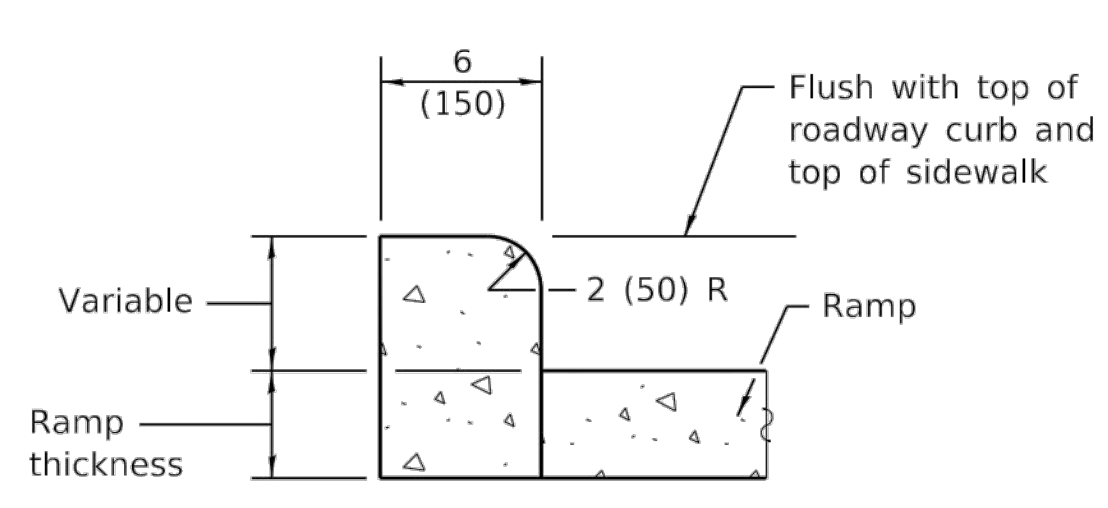


**SECTION A-A**

- 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**

**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.

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**

Illinois Department of Transportation

PASSED January 1, 2019  
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APPROVED January 1, 2019  
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ISSUED 1-1-12

① IDOT HIGHWAY STANDARD 424026-03  
 Scale: NTS

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO**

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MLM  
**DRAWN BY:** MLM  
MLM  
**CHECKED BY:** EPC  
EPC  
**DATE:** FEB 2024  
**SCALE:** AS SHOWN

**ACCURATE**  
CONSULTING ENGINEERS

**DONOHUE**  
CONSULTING ENGINEERS

**LIVING HABITATS**

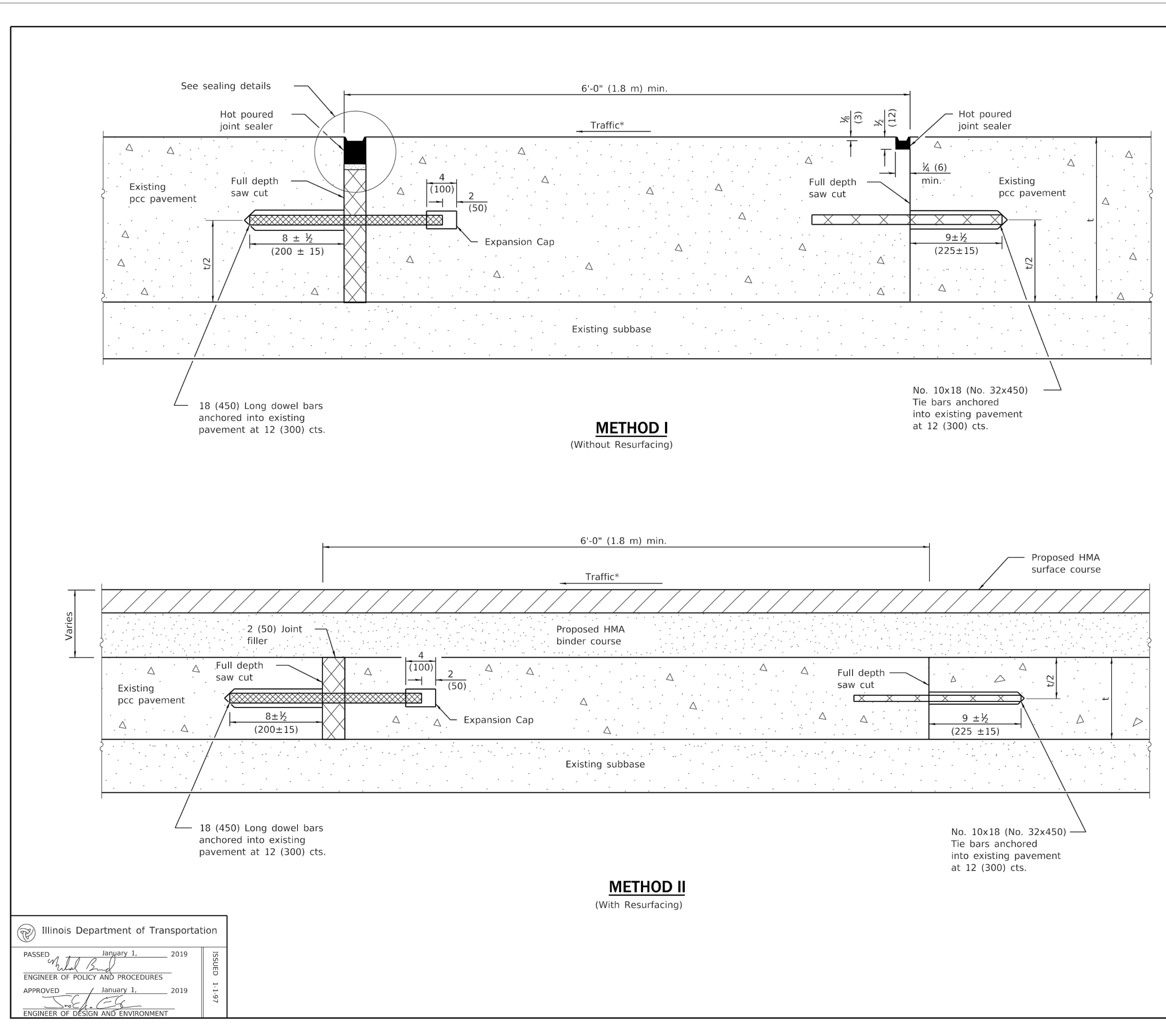
**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

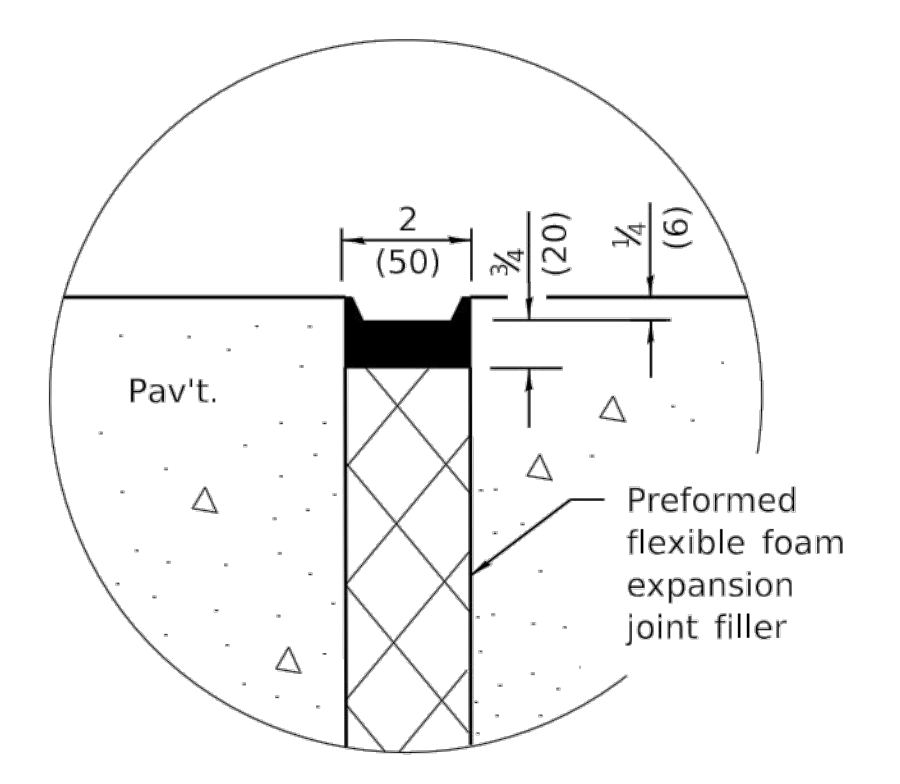
Sheet Number:  
**CP-510**

Page Number: 74

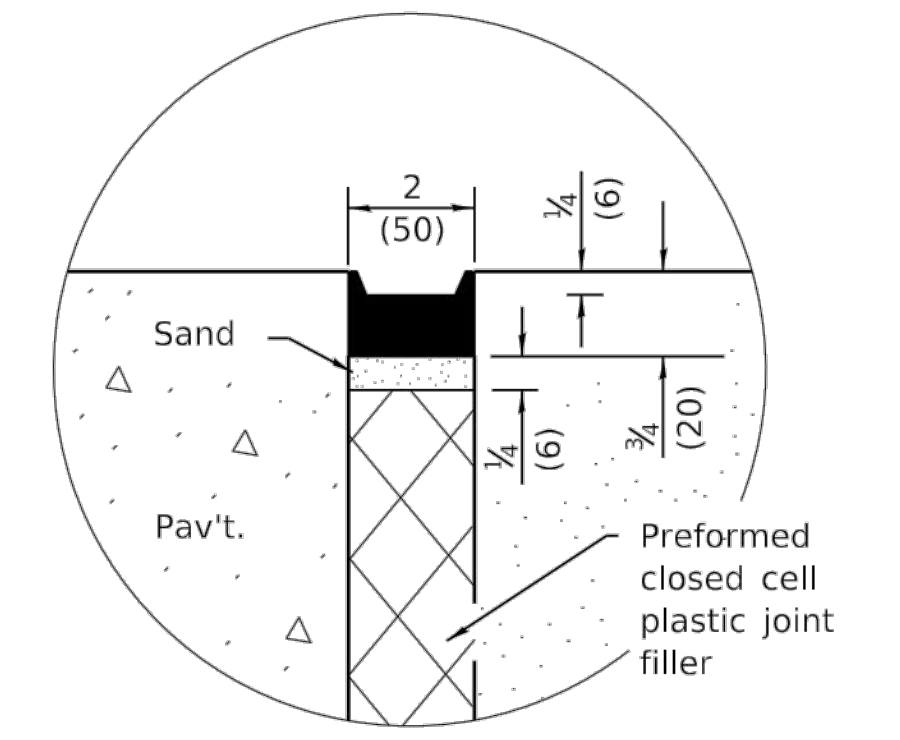
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**TRANSVERSE EXPANSION JOINTS**



**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**

Illinois Department of Transportation

PASSED January 1, 2019  
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APPROVED January 1, 2019  
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ISSUES: 1.1.91  
 4/8 1.1.91 G3/ISS/51

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

Rev.	Description	Appr.	Date

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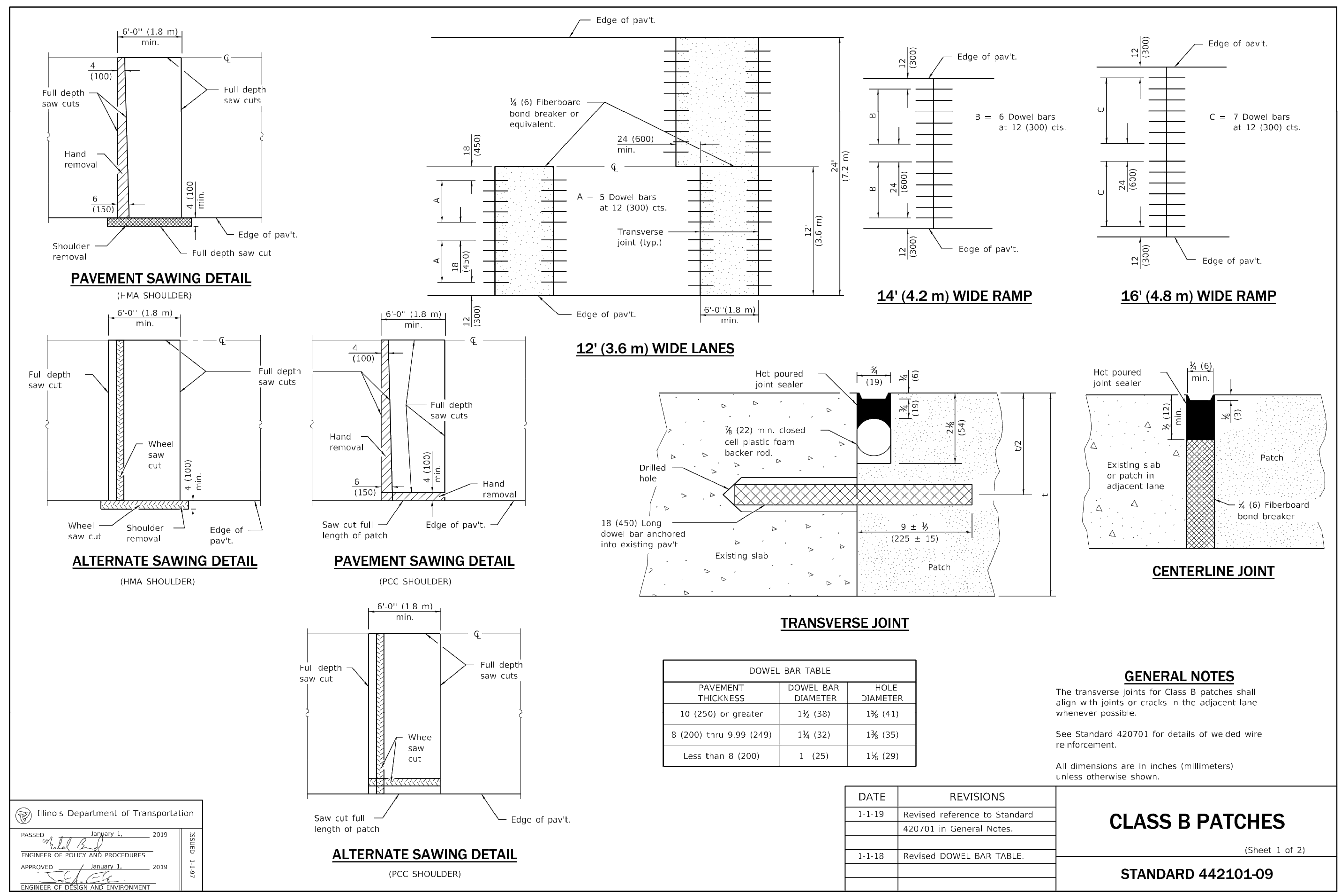
**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
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**CIVIL DETAILS**

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



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 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

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

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 M.L.M.  
 Drawn by: MLM  
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 EPC  
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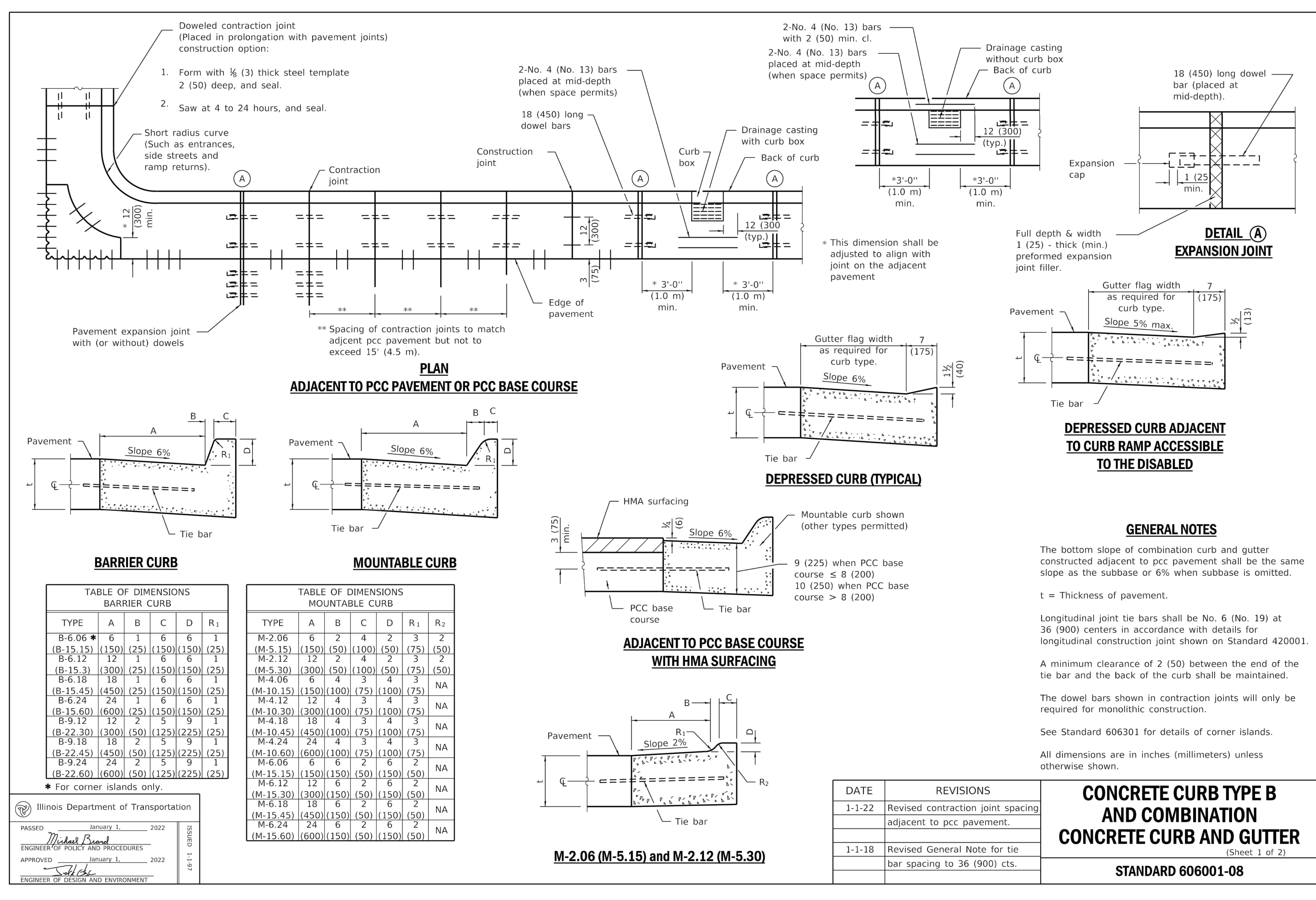
**LIVING HABITATS**

CONTRACT 14-253-5F  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
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CIVIL DETAILS

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





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 PASSED January 1, 2022  
 Michael Beard  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2022  
 [Signature]  
 ENGINEER OF DESIGN AND ENVIRONMENT

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**

**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.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

CONTRACT 14-253-5F  
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 MIDLOTHIAN CREEK IN ROBBINS, CSA  
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CIVIL DETAILS

Checked by: PMS  
 Drawn by: MLM  
 Date: FEB 2024

Reviewed by: EPC  
 Scale: AS SHOWN

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 DATE: [Signature]

APPROVED BY: [Signature]  
 DATE: [Signature]

APPR. DATE

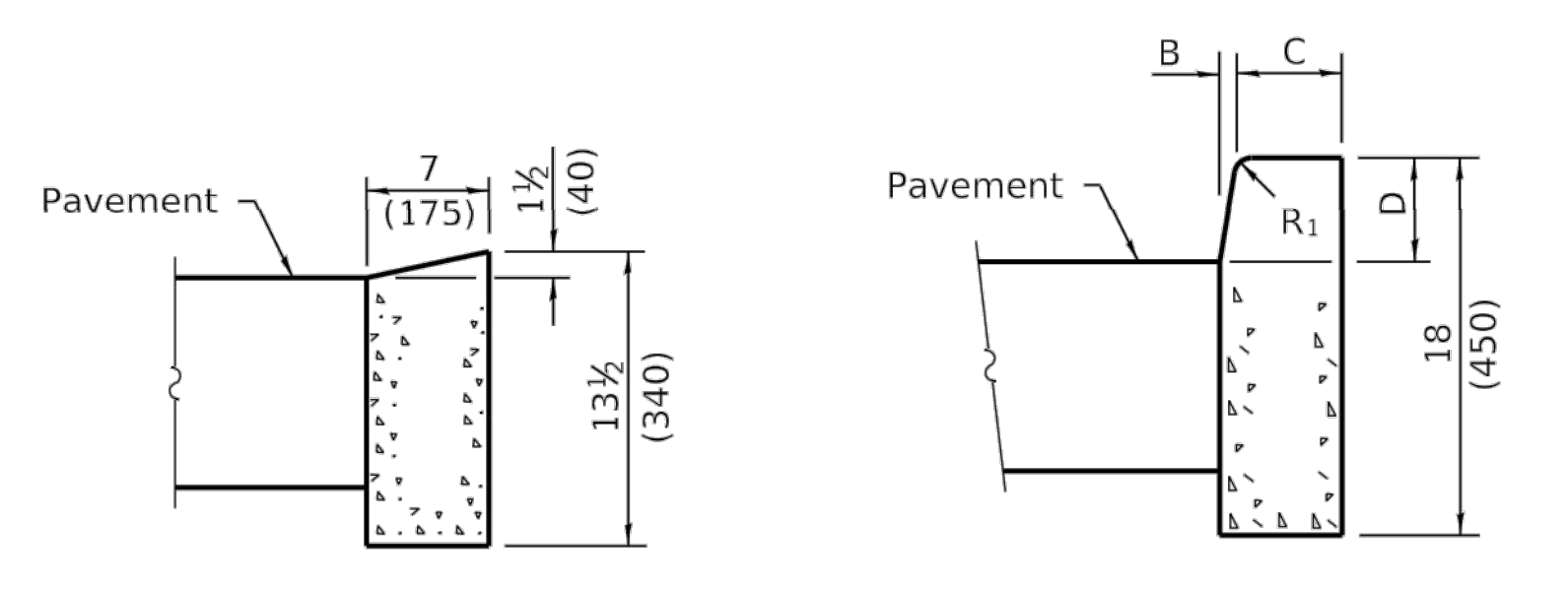
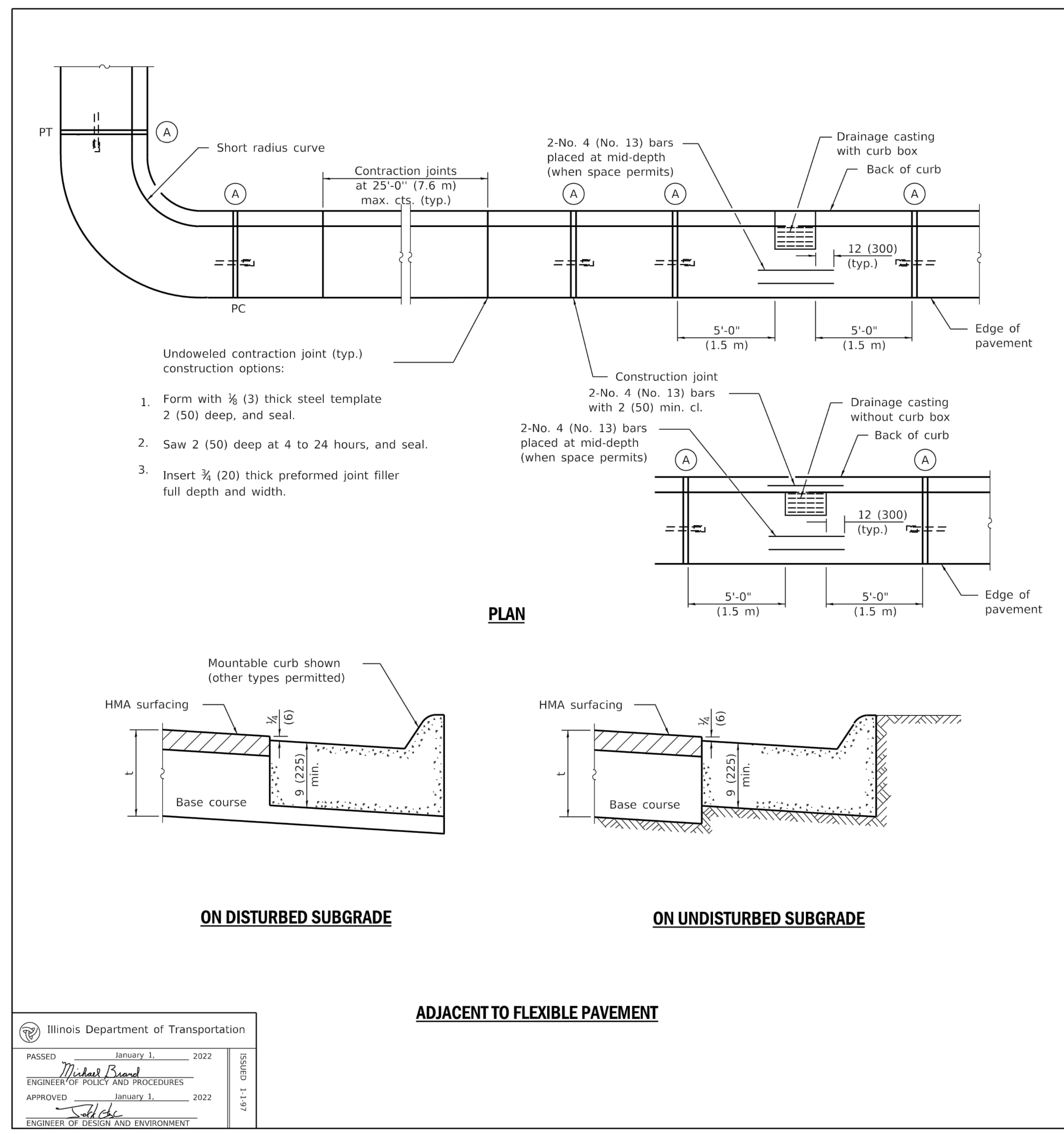
Rev. Description

**DONOHUE**  
 CONSULTING ENGINEERS

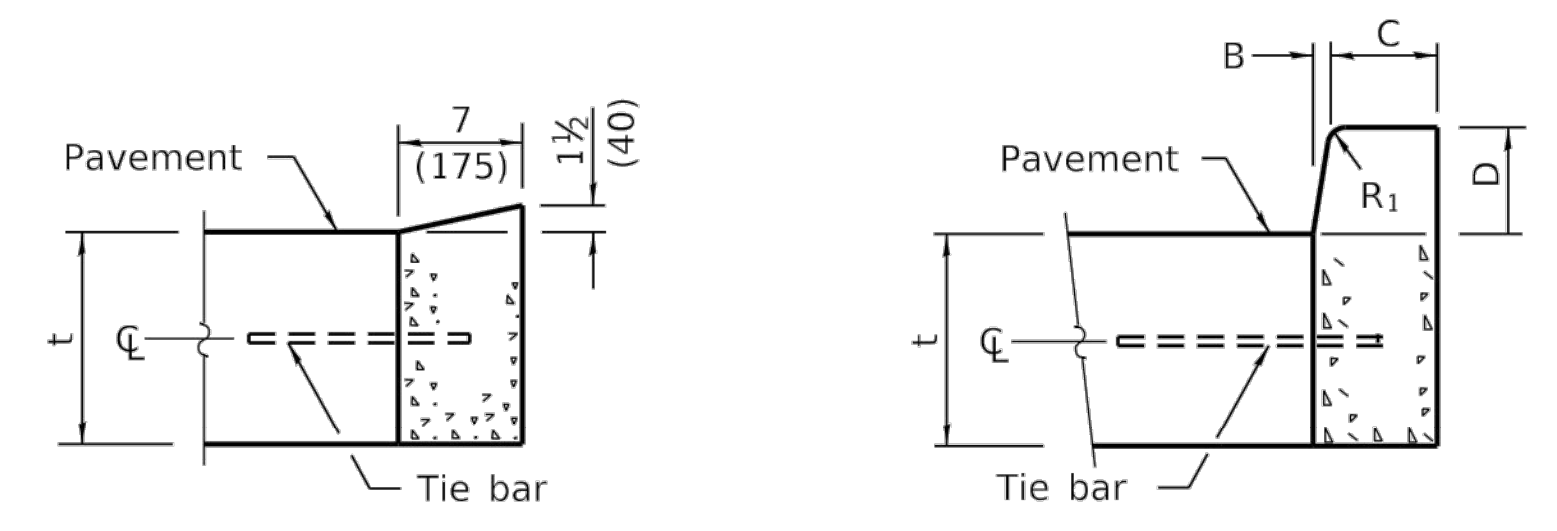
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 Page Number: 78

PLOT DATE: 2/7/2024 3:35 PM PLOTTED BY: MADRID, MICHELLE  
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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  
 Engineer of Design and Environment

1 IDOT HIGHWAY STANDARD 606001-08  
 Scale: NTS

Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO

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

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

**DONOHUE**  
 CONSULTING ENGINEERS

**Accurate**  
 CONSULTING ENGINEERS

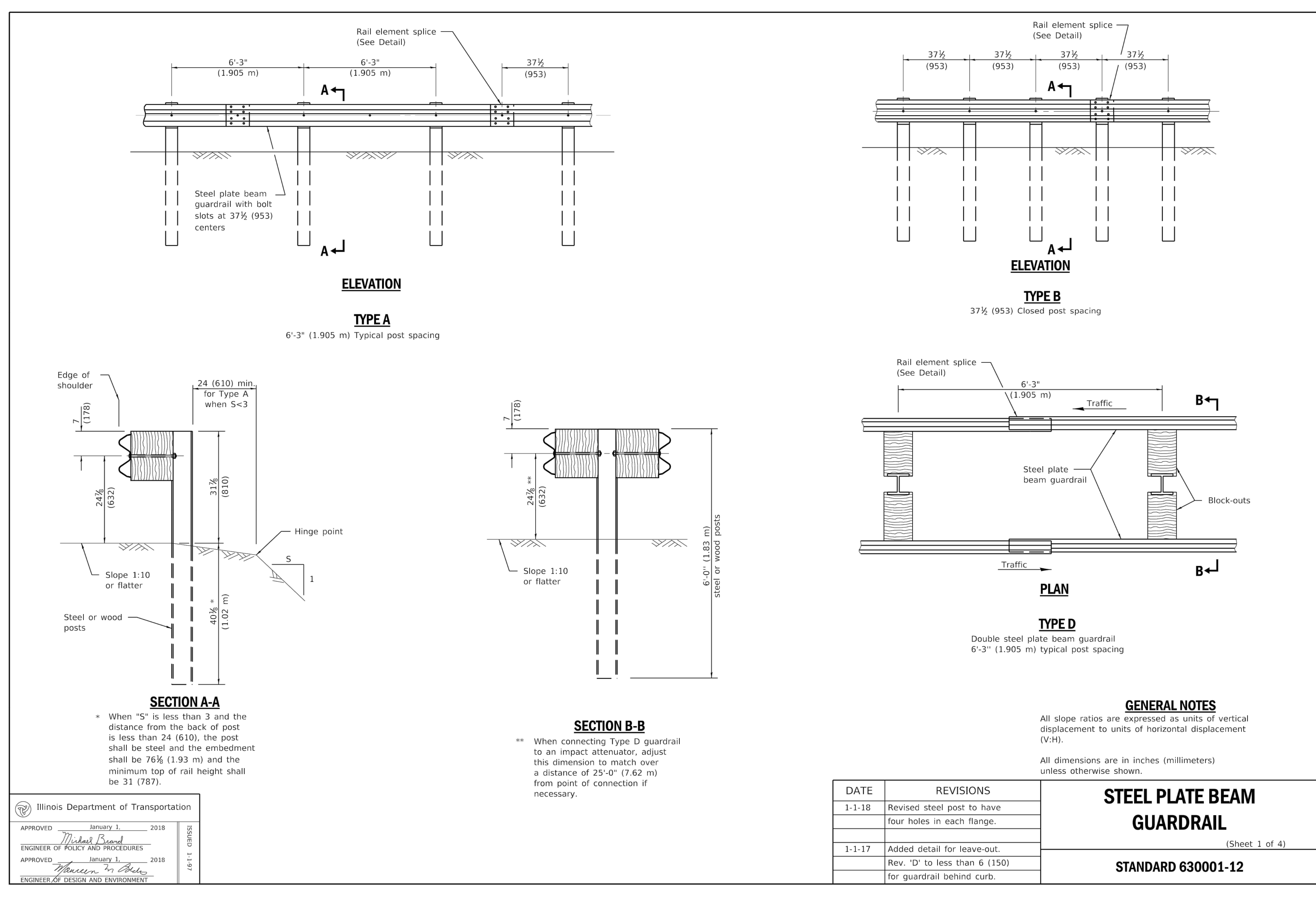
**LIVING HABITATS**

**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

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

PLOT DATE: 2/7/2024 3:35 PM PLOTTED BY: MADRID, MICHELLE  
 P:\13278chi\Dwg\Contracts\14-253-3F\Civil\Sheets\14-253-BF\CP-516.dwg 1/30/2024 12:31 PM



\* When "S" is less than 3 and the distance from the back of post is less than 24 (610), the post shall be steel and the embedment shall be 76½ (1.93 m) and the minimum top of rail height shall be 31 (787).

\*\* When connecting Type D guardrail to an impact attenuator, adjust this dimension to match over a distance of 25'-0" (7.62 m) from point of connection if necessary.

**GENERAL NOTES**  
 All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).  
 All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS
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.

**STEEL PLATE BEAM GUARDRAIL**

(Sheet 1 of 4)

**STANDARD 630001-12**

Illinois Department of Transportation

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

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

1/8" = 1" GRAPHIC SCALE

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

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

**DESIGNED BY: PMS**  
 MLM  
**DRAWN BY: MLM**  
 EPC  
**CHECKED BY: PMS**  
 EPC  
**DATE: FEB 2024**  
**SCALE: AS SHOWN**

**ILH**  
**LIVING HABITATS**

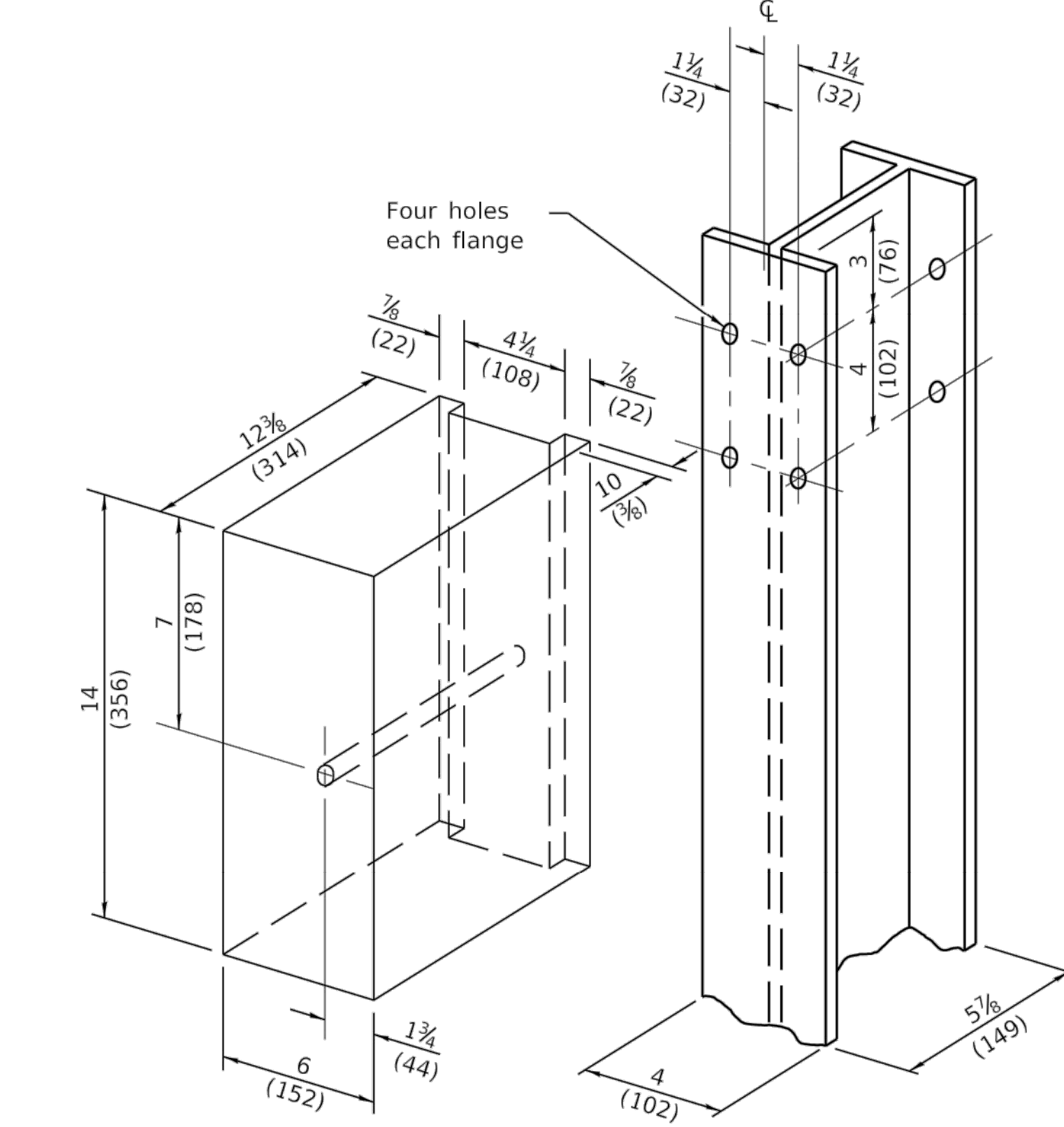
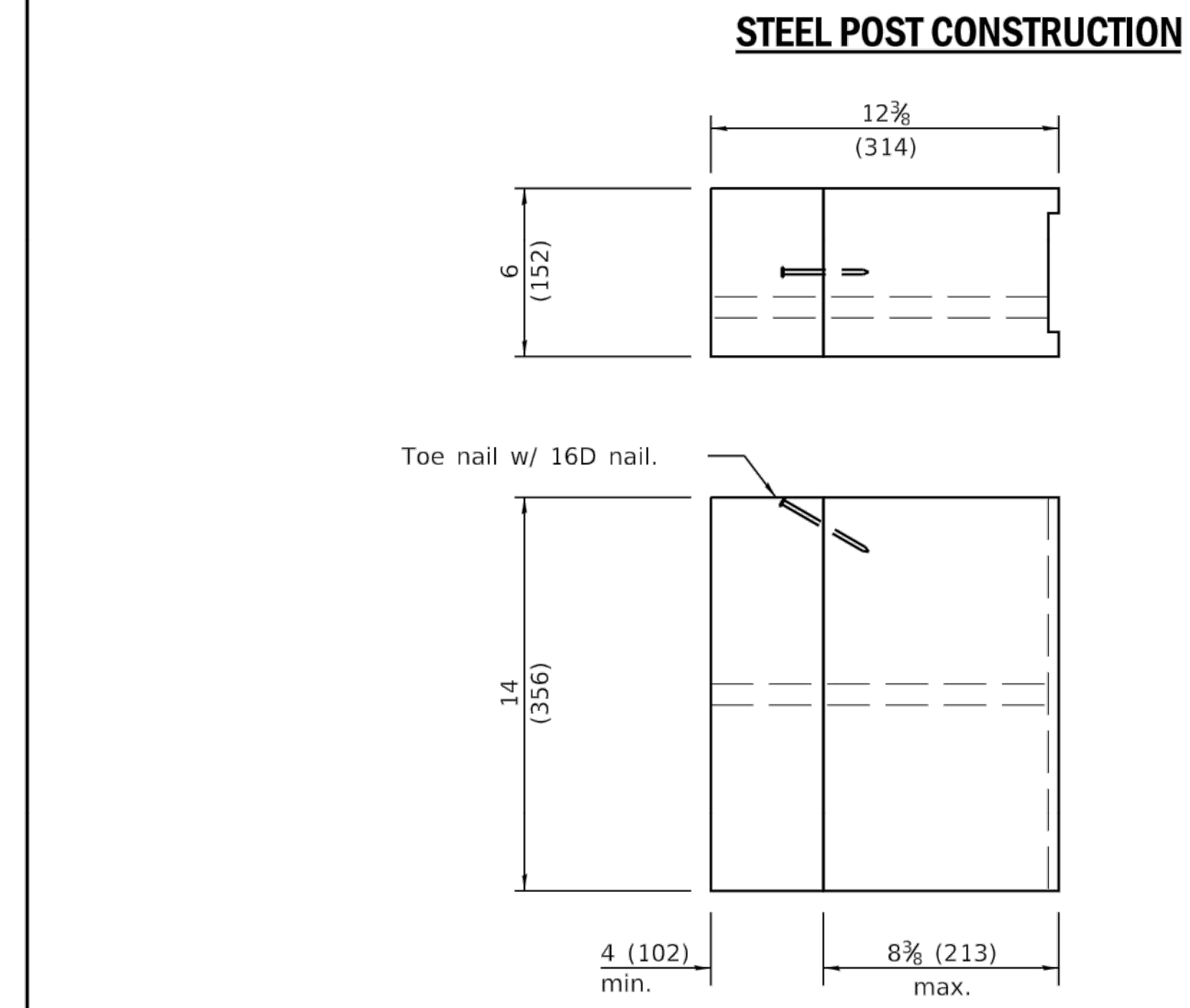
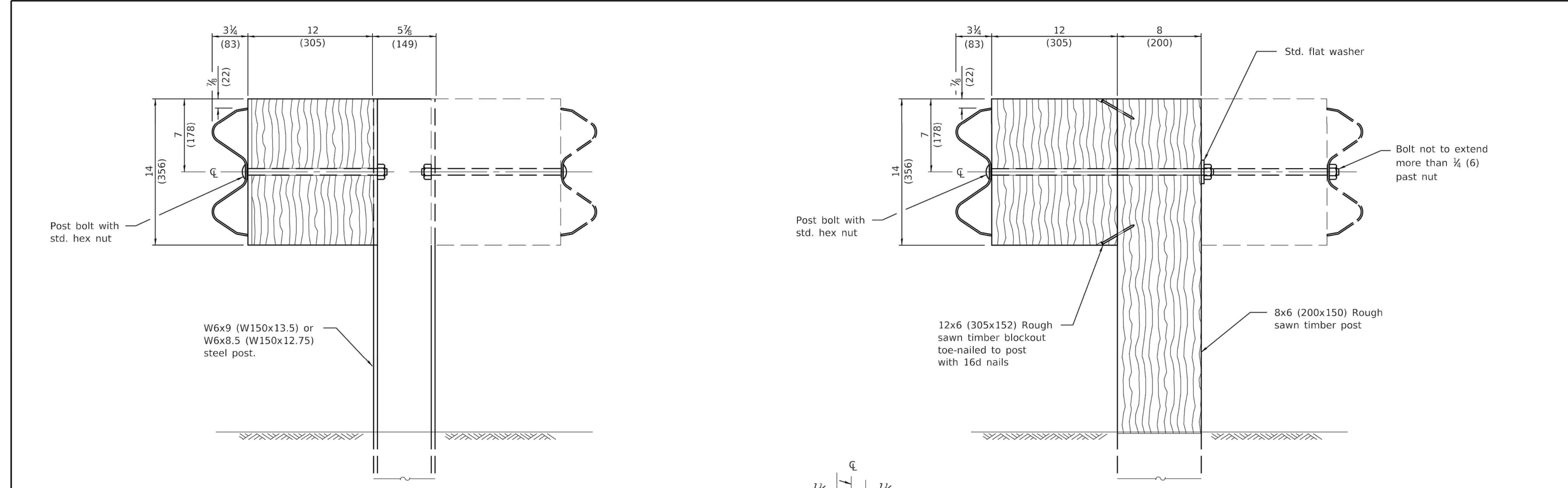
**DONOHUE**  
 CONSULTING ENGINEERS  
 ACCURATE  
 CONSULTING ENGINEERS  
 OBERLIN & ASSOCIATES, INC.  
 CONSULTING ENGINEERS

**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

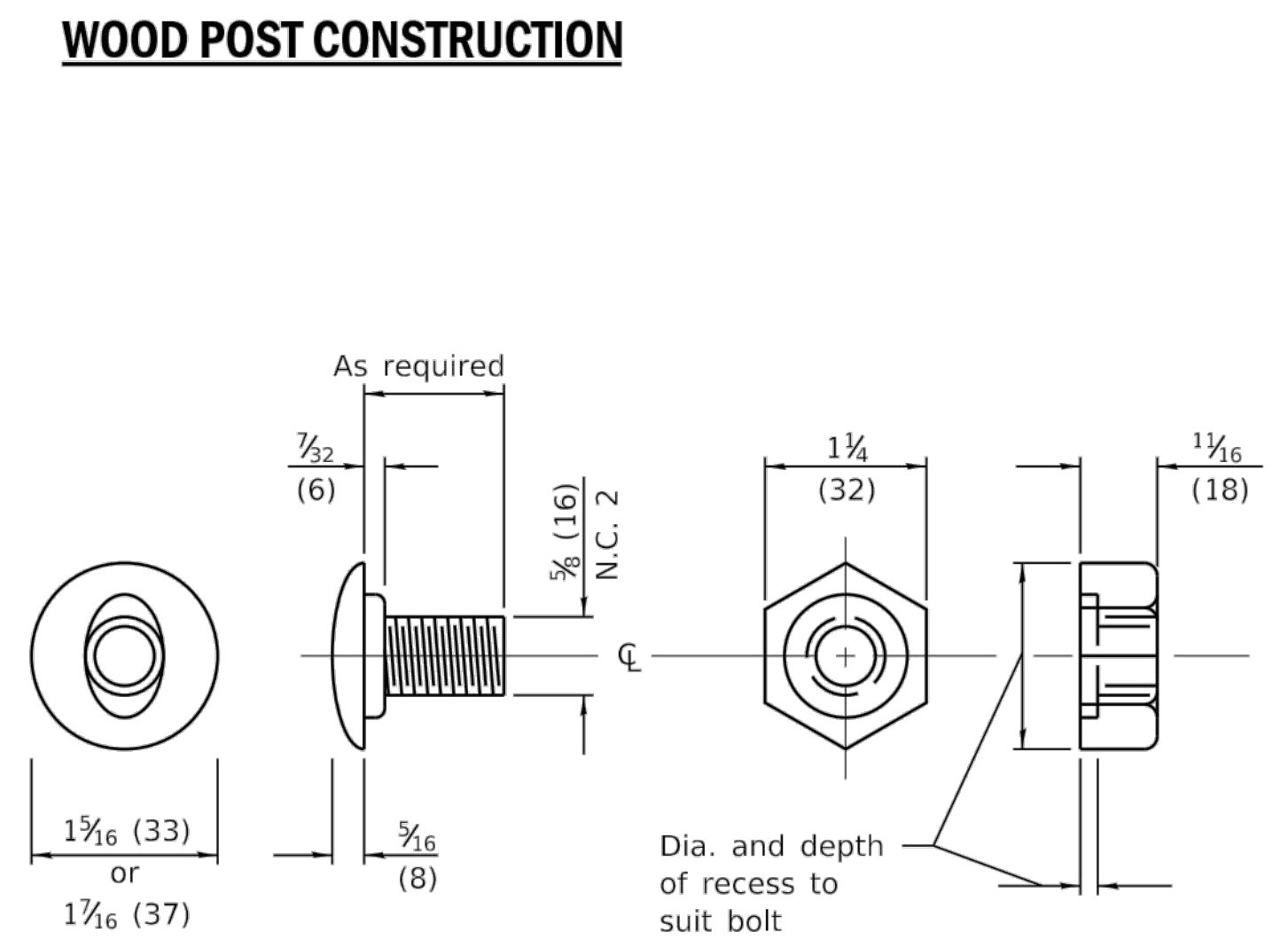
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**CP-516**  
 Page Number: 80

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Note:  
 All holes 3/4 (20) dia.

**WOOD BLOCK-OUT AND STEEL POST DETAILS**



**POST OR SPLICE BOLT & NUT**

**STEEL PLATE BEAM GUARDRAIL**  
 (Sheet 2 of 4)  
**STANDARD 630001-12**

Illinois Department of Transportation  
 APPROVED January 1, 2018  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2018  
 ENGINEER OF DESIGN AND ENVIRONMENT

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

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

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

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

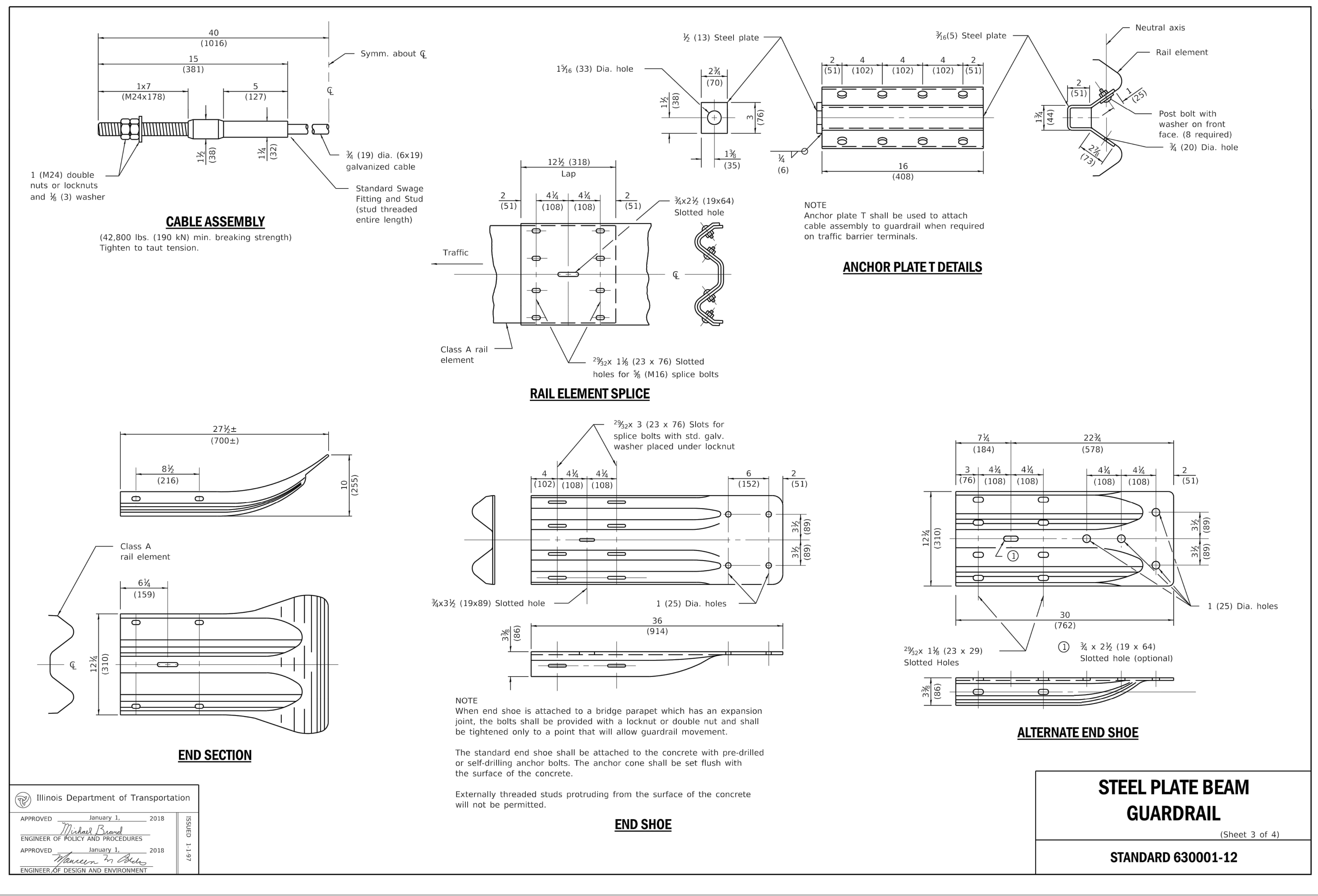
**LIVING HABITATS**

**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-517**  
 Page Number: 81

PLOT DATE: 2/7/2024 3:35 PM PLOTTED BY: MADRID, MICHELLE  
 P:\13278chi\Dwg\Contracts\14-253-3F\Civil\Sheets\14-253-BF\CP-518.dwg 1/30/2024 12:27 PM



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

48 1"1" GRAPHIC

1 IDOT HIGHWAY STANDARD 630001-12  
 Scale: NTS

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

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

**DONOHUE**  
 CONSULTING ENGINEERS

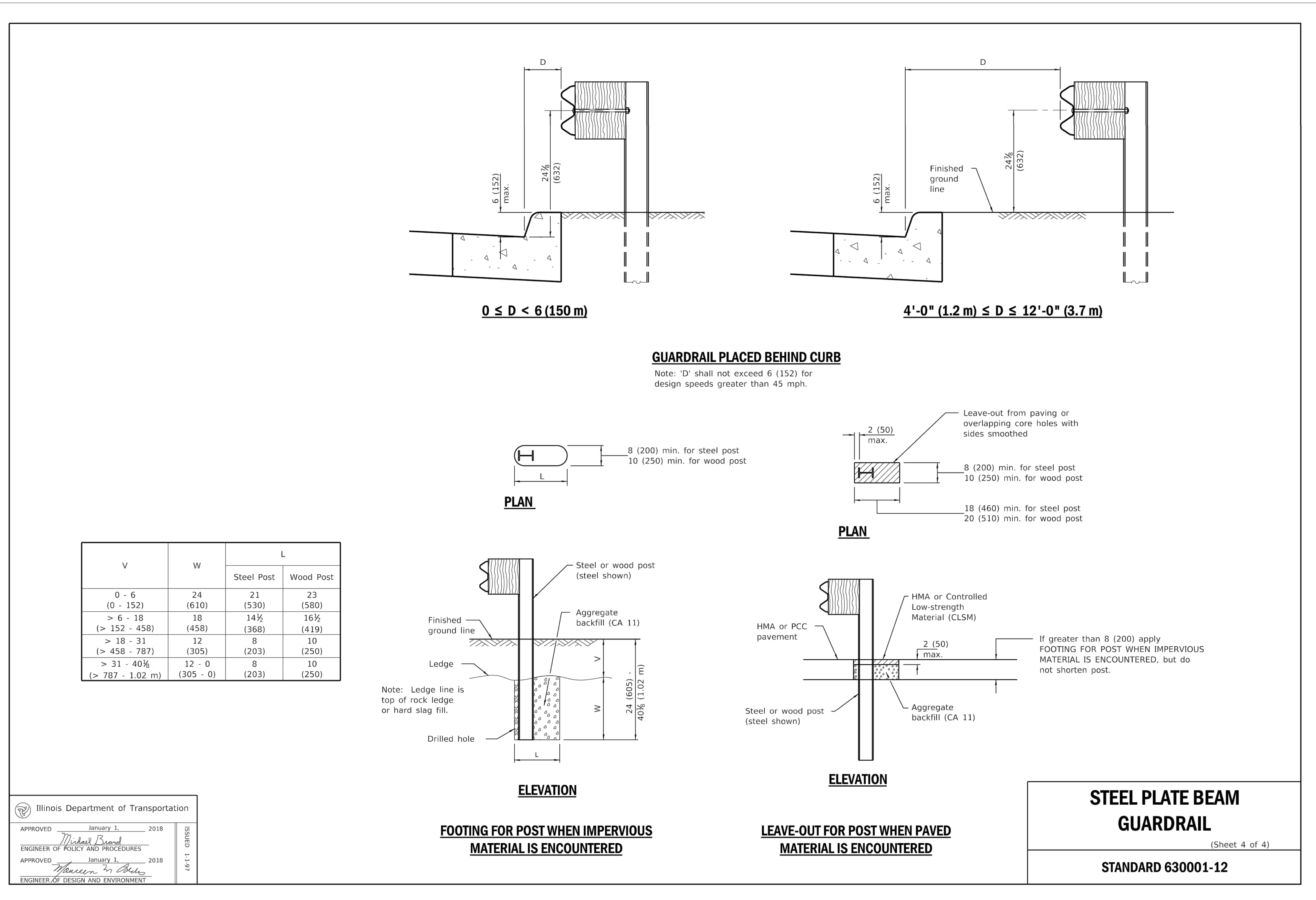
**Accurate**  
 CONSULTING ENGINEERS

**LIVING HABITATS**

**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-518**  
 Page Number: 82



V	W	L	
		Steel Post	Wood Post
0 - 6 (0 - 152)	24 (610)	21 (530)	23 (580)
> 6 - 18 (> 152 - 458)	18 (458)	14½ (368)	16½ (419)
> 18 - 31 (> 458 - 787)	12 (305)	8 (203)	10 (250)
> 31 - 40½ (> 787 - 1.02 m)	12 - 0 (305 - 0)	8 (203)	10 (250)

Illinois Department of Transportation  
 APPROVED January 1, 2018  
 Michael Beard  
 ENGINEER OF POLICY AND PROCEDURES  
 APPROVED January 1, 2018  
 Matthew M. Adams  
 ENGINEER OF DESIGN AND ENVIRONMENT

1 IDOT HIGHWAY STANDARD 630001-12  
 Scale: NTS

**STEEL PLATE BEAM  
 GUARDRAIL**  
 (Sheet 4 of 4)  
**STANDARD 630001-12**

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT  
 OF GREATER CHICAGO**

Designed by: PMS  
 MLM  
 Checked by: PMS  
 Drawn by: MLM  
 Date: FEB 2024

Reviewed by: EPC  
 Scale: AS SHOWN

**DONOHUE**  
 CONSULTANTS, INC.  
 ACCURATE  
 CONSULTING ENGINEERS

**LIVING HABITATS**

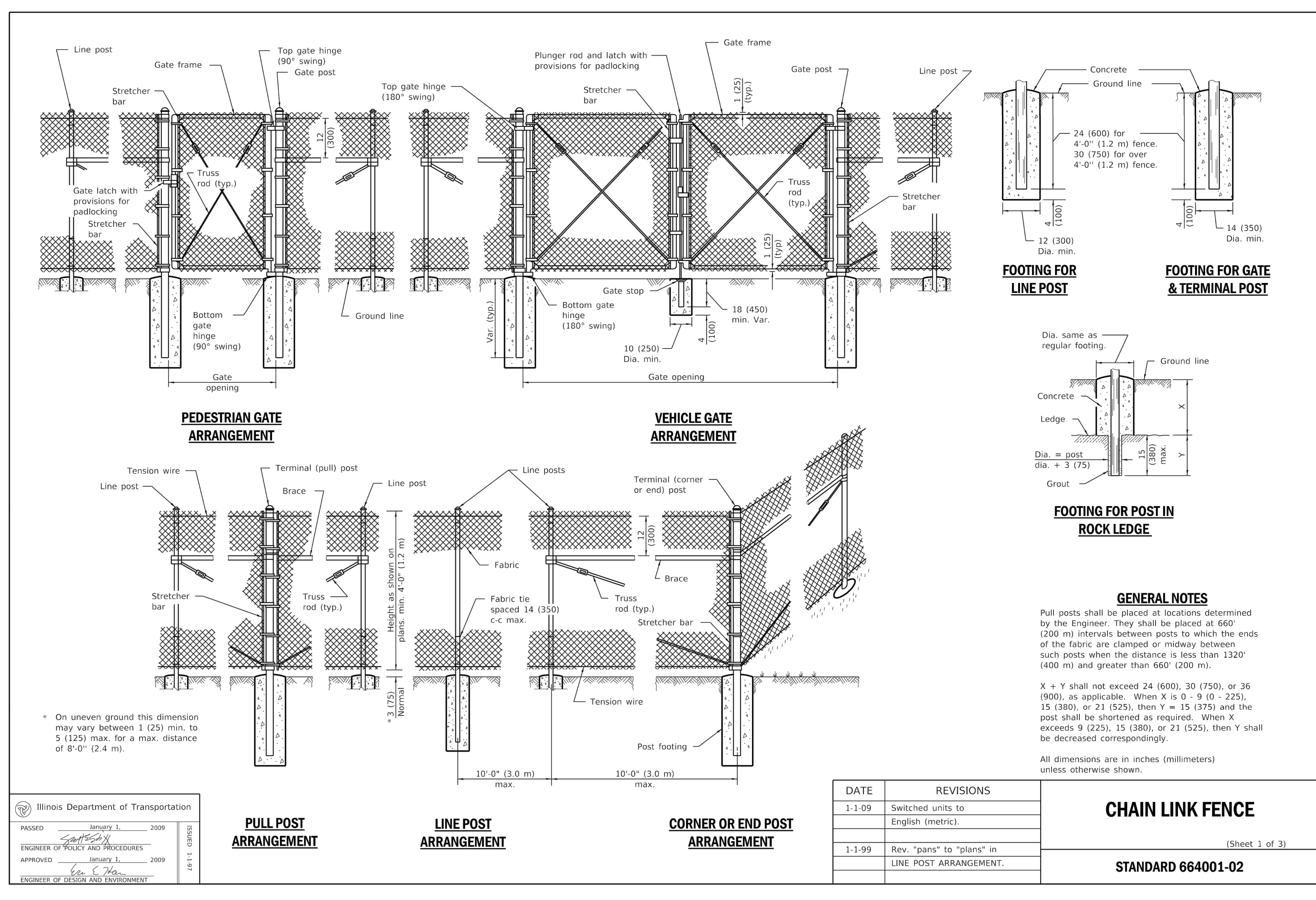
**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-519**  
 Page Number: 83



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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

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

CONTRACT 14-253-5F  
 FLOOD CONTROL PROJECT ON MIDLOTHIAN CREEK IN ROBBINS, CSA LITTLE CALUMET RIVER WATERSHED

CIVIL DETAILS

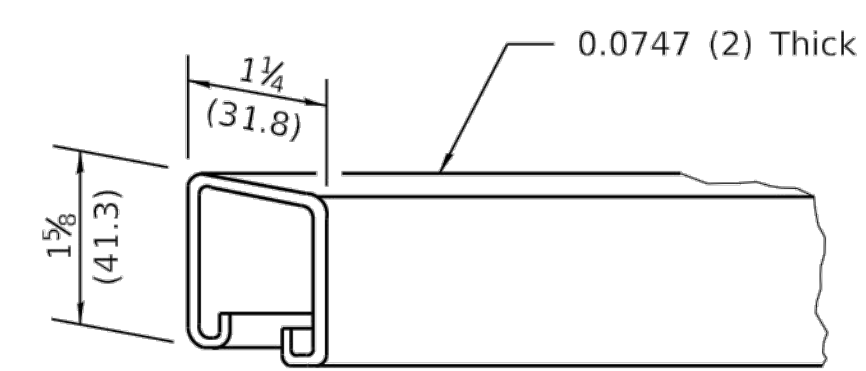
DESIGNED BY: MLM  
 CHECKED BY: PMS  
 DRAWN BY: MLM  
 REVIEWED BY: EPC  
 DATE: FEB 2024

SCALE: AS SHOWN

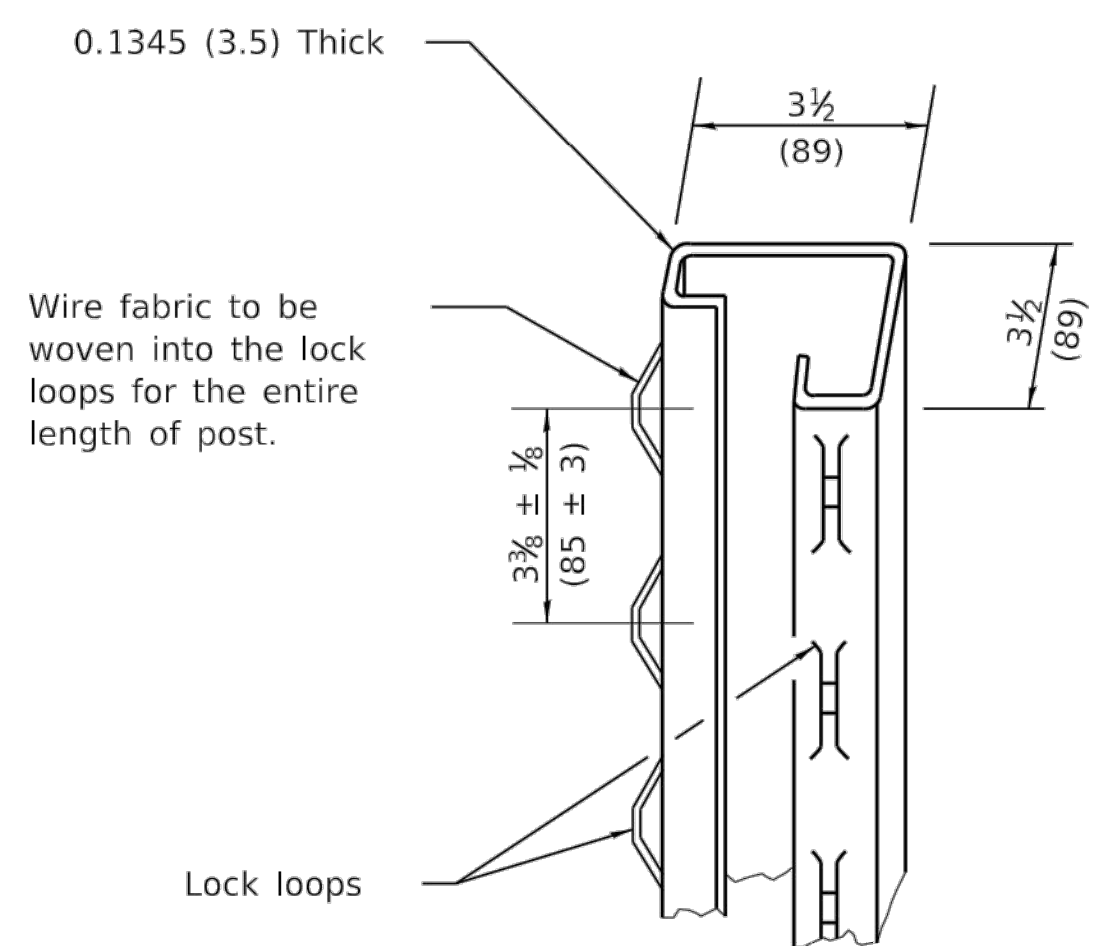
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 DONOHUE  
 ACCURATE  
 O'BRIEN & ASSOCIATES, INC.  
 CONSULTING ENGINEERS

Rev. Description Appr. Date

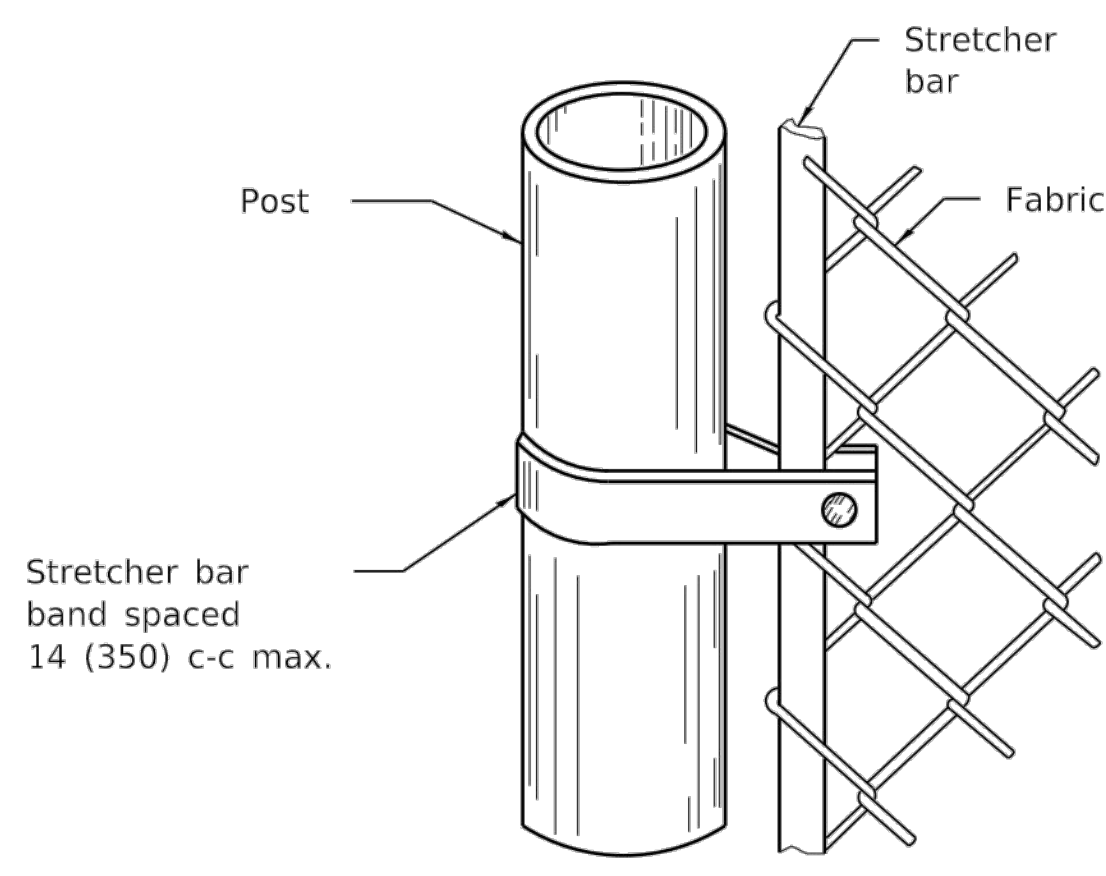
Sheet Number: CP-520  
 Page Number: 84



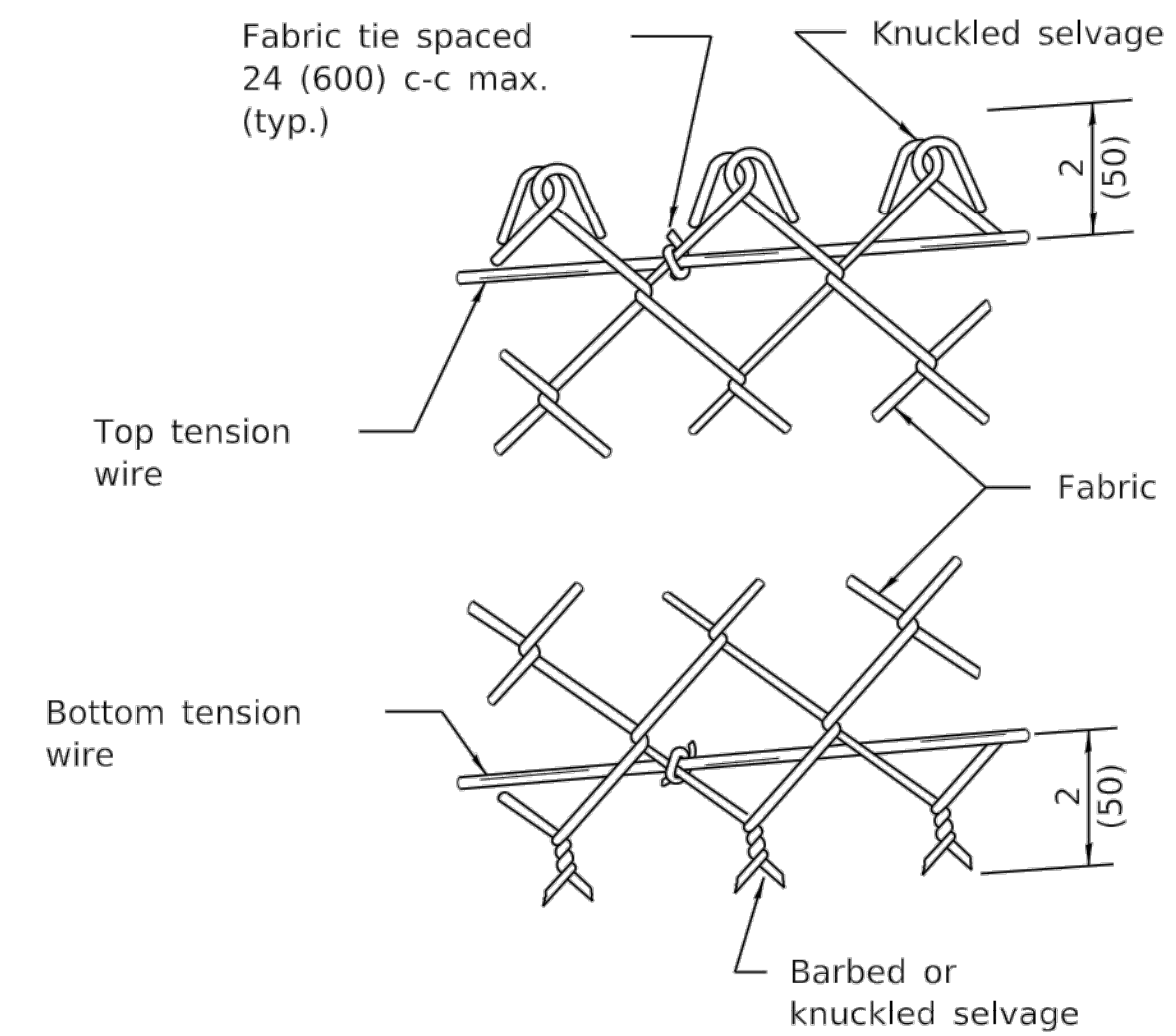
**ROLL FORMED SECTION OF BRACE**



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



**METHOD OF FASTENING STRETCHER BAR TO POST**



**METHOD OF TYING FABRIC TO TENSION WIRES**

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)

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)

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

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

DATE: 1/6/09

**CHAIN LINK FENCE**

(Sheet 2 of 3)

**STANDARD 664001-02**

1 IDOT HIGHWAY STANDARD 664001-02  
Scale: NTS

Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO

Designed by: PMS  
MLM

Checked by: PMS  
MLM

Reviewed by: EPC  
MLM

Date: FEB 2024

Scale: AS SHOWN

**DONOHUE**  
Accurate  
ENGINEERS

**LIVING HABITATS**

**Zim**  
CORPORATION

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

**CONTRACT 14-253-5F**

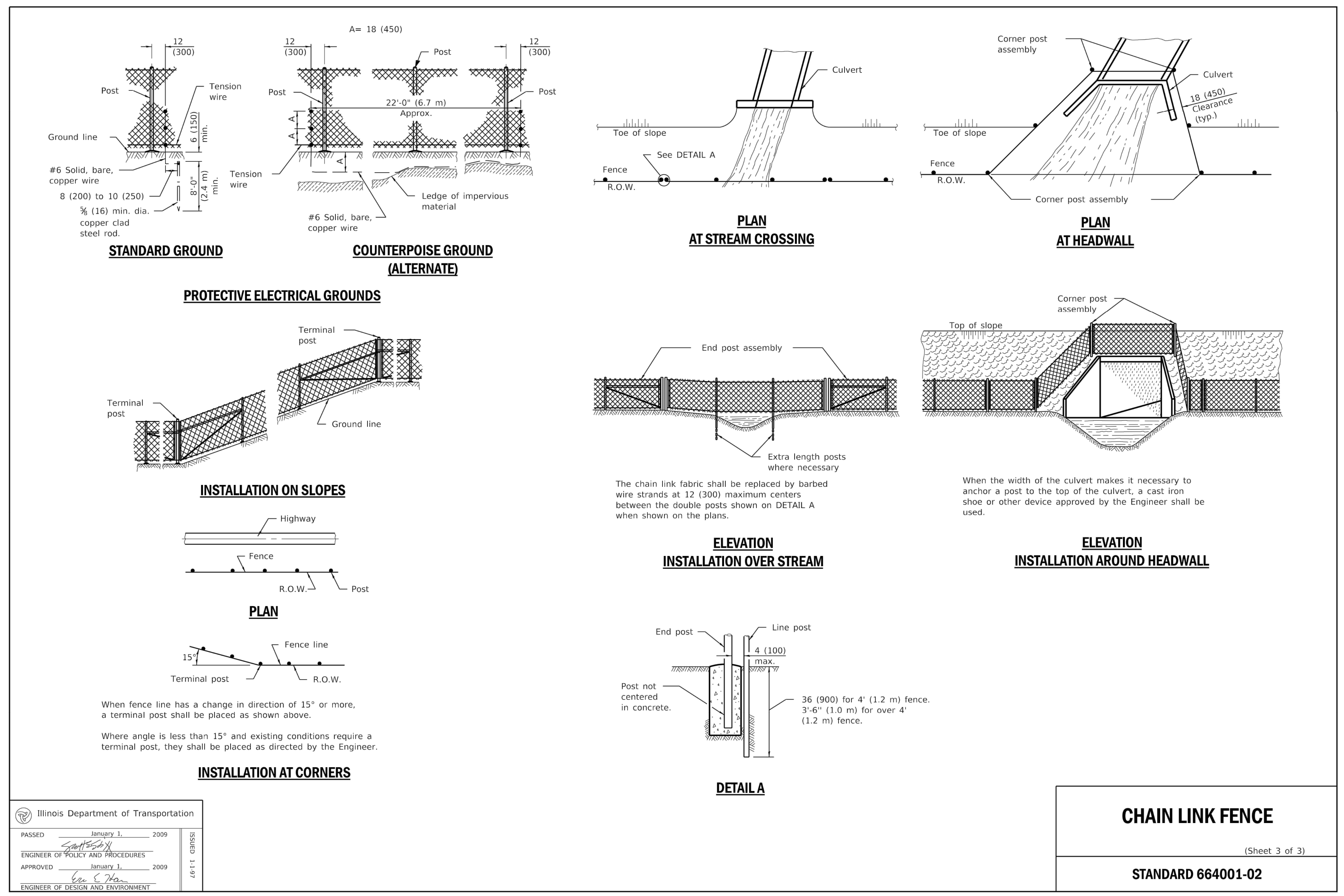
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, CSA  
LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-521**

Page Number: 85

PLOT DATE: 2/7/2024 3:36 PM PLOTTED BY: MADRID, MICHELLE  
 P:\13278chi\Dwg\Contracts\14-253-3F\Civil\Sheets\14-253-BF\CP-522.dwg 1/30/2024 12:25 PM



PASSED	January 1, 2009
ENGINEER OF POLICY AND PROCEDURES	
APPROVED	January 1, 2009
ENGINEER OF DESIGN AND ENVIRONMENT	

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

1 IDOT HIGHWAY STANDARD 664001-02  
 Scale: NTS

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

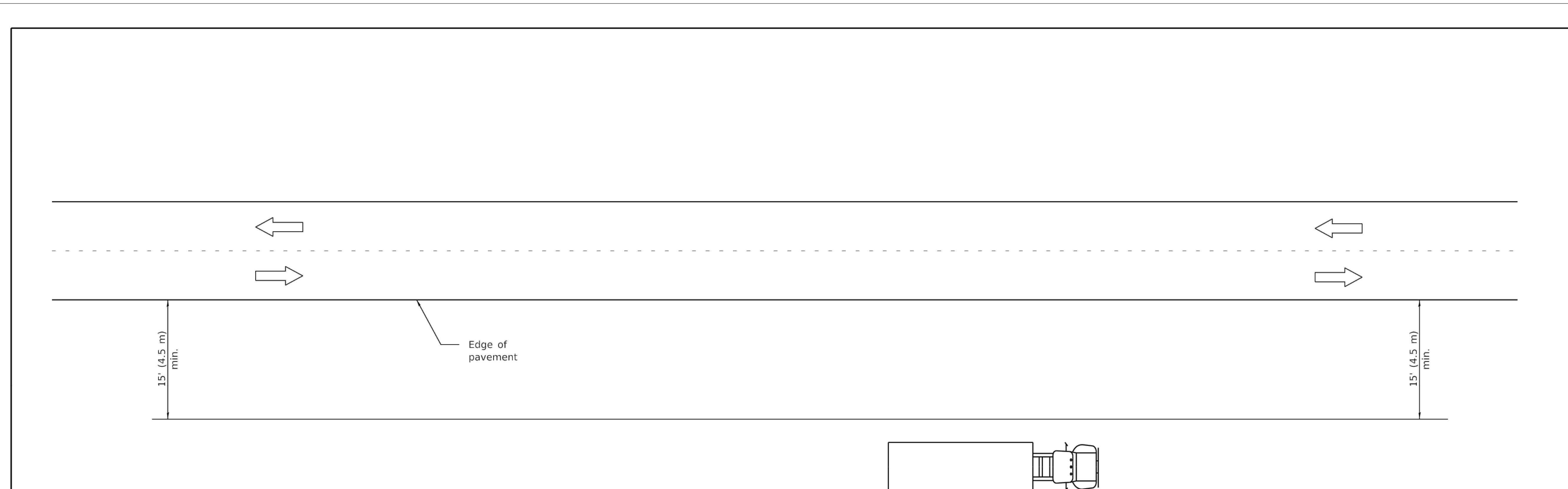
**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

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

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

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



**TYPICAL APPLICATIONS**

- Landscaping work
- Utility work
- Fencing contracts and maintenance
- Cleaning culverts

**GENERAL NOTES**

This Standard is used where at all times all vehicles, equipment, workers or their activities are more than 15' (4.5 m) from the edge of pavement.

When the work operation requires that two or more work vehicles cross the 15' (4.5 m) clear zone in any one hour, traffic control shall be according to Standard 701006.

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

Illinois Department of Transportation

PASSED January 1, 2009

ISSUES: 1.6 1.1 GENRES:

ENGINEER OF OPERATIONS

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

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

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO**

Designed by: MLM  
Checked by: PMS

Drawn by: MLM  
Reviewed by: EPC

Date: FEB 2024  
Scale: AS SHOWN

**ILTRI**  
**LIVING HABITATS**

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

**Accurate**  
CONSULTING ENGINEERS

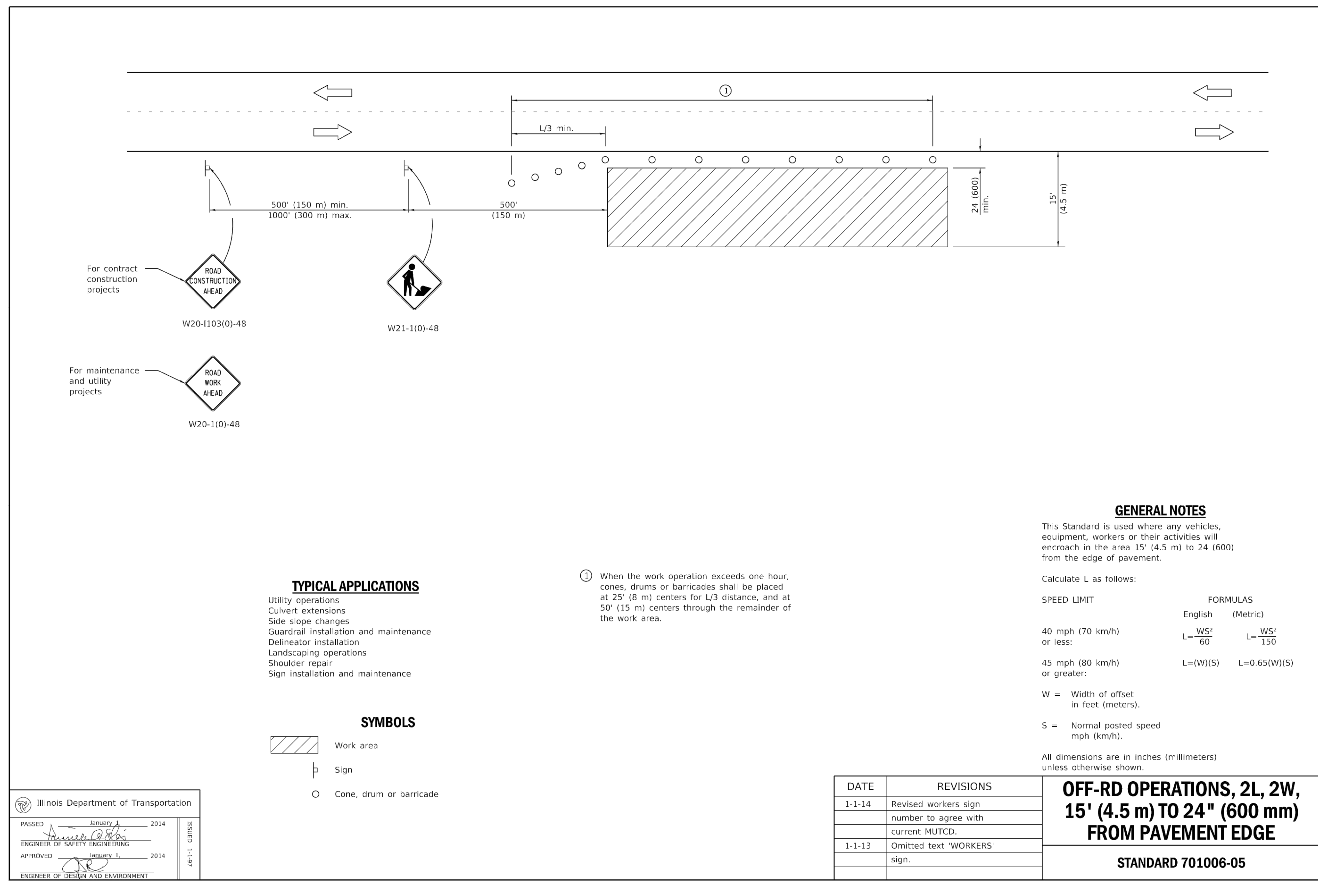
**Zim**  
CONSULTING ENGINEERS

**CONTRACT 14-253-5F**  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, CSA  
LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-523**

Page Number: 87



Illinois Department of Transportation

PASSED January 1, 2014  
ENGINEER OF SAFETY ENGINEERING

APPROVED January 1, 2014  
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUES: 1-1  
DESIGN: 4/6

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**

**1** IDOT HIGHWAY STANDARD 701006-05  
Scale: NTS

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

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

**DONOHUE**  
ACCURATE  
O'NEILL & ASSOCIATES, INC.  
CONSULTING ENGINEERS

**LIVING HABITATS**

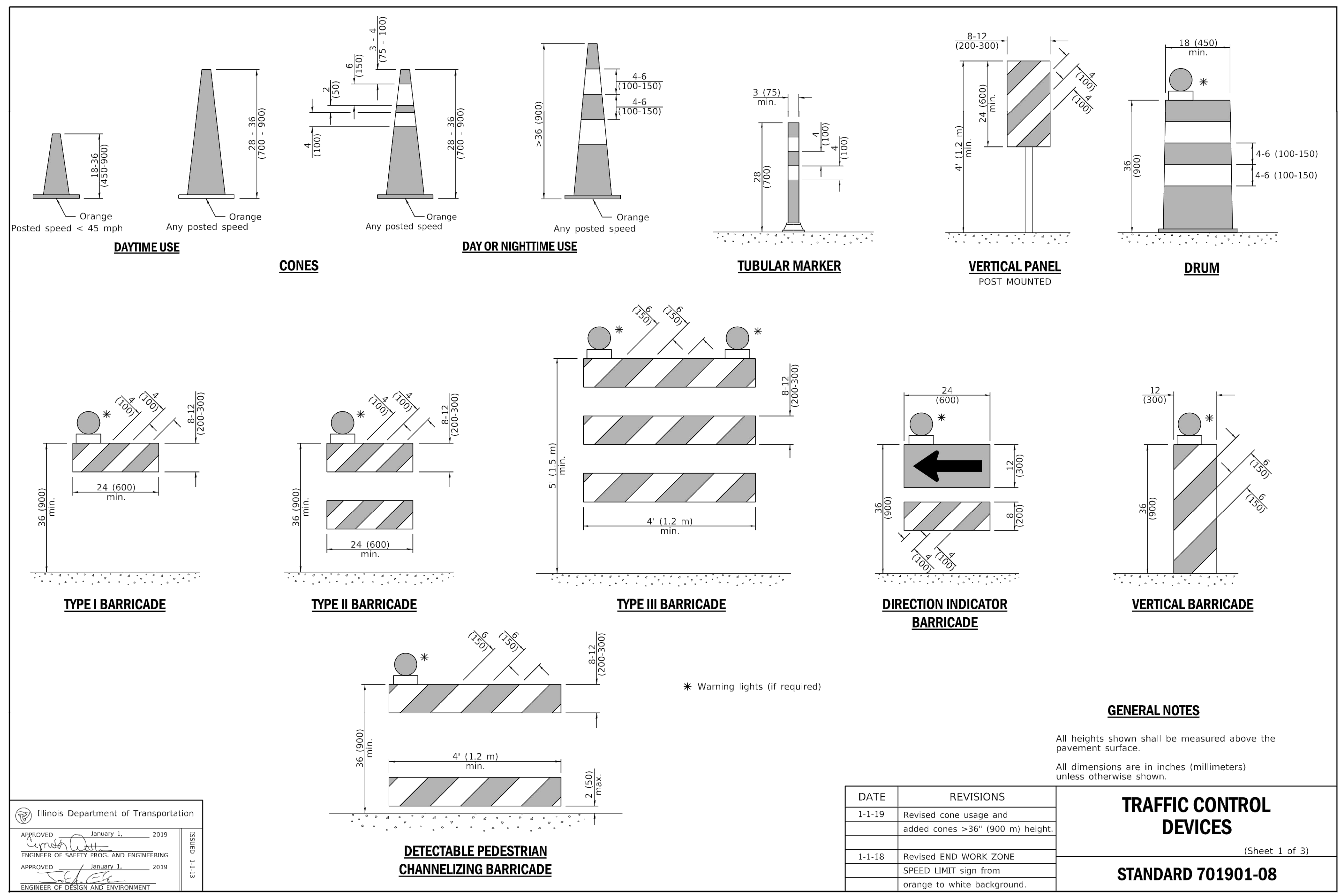
**CONTRACT 14-253-5F**  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, CSA  
LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-524**

Page Number: 88

PLOT DATE: 2/7/2024 3:37 PM PLOTTED BY: MADRID, MICHELLE  
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Illinois Department of Transportation

APPROVED January 1, 2019  
 ENGINEER OF SAFETY PROG. AND ENGINEERING

APPROVED January 1, 2019  
 ENGINEER OF DESIGN AND ENVIRONMENT

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

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

Designed by: MLM  
 Checked by: PMS

Drawn by: MLM  
 Reviewed by: EPC

Date: FEB 2024  
 Scale: AS SHOWN

**DONOHUE**  
 CONSULTING ENGINEERS

**Accurate**  
 CONSULTING ENGINEERS

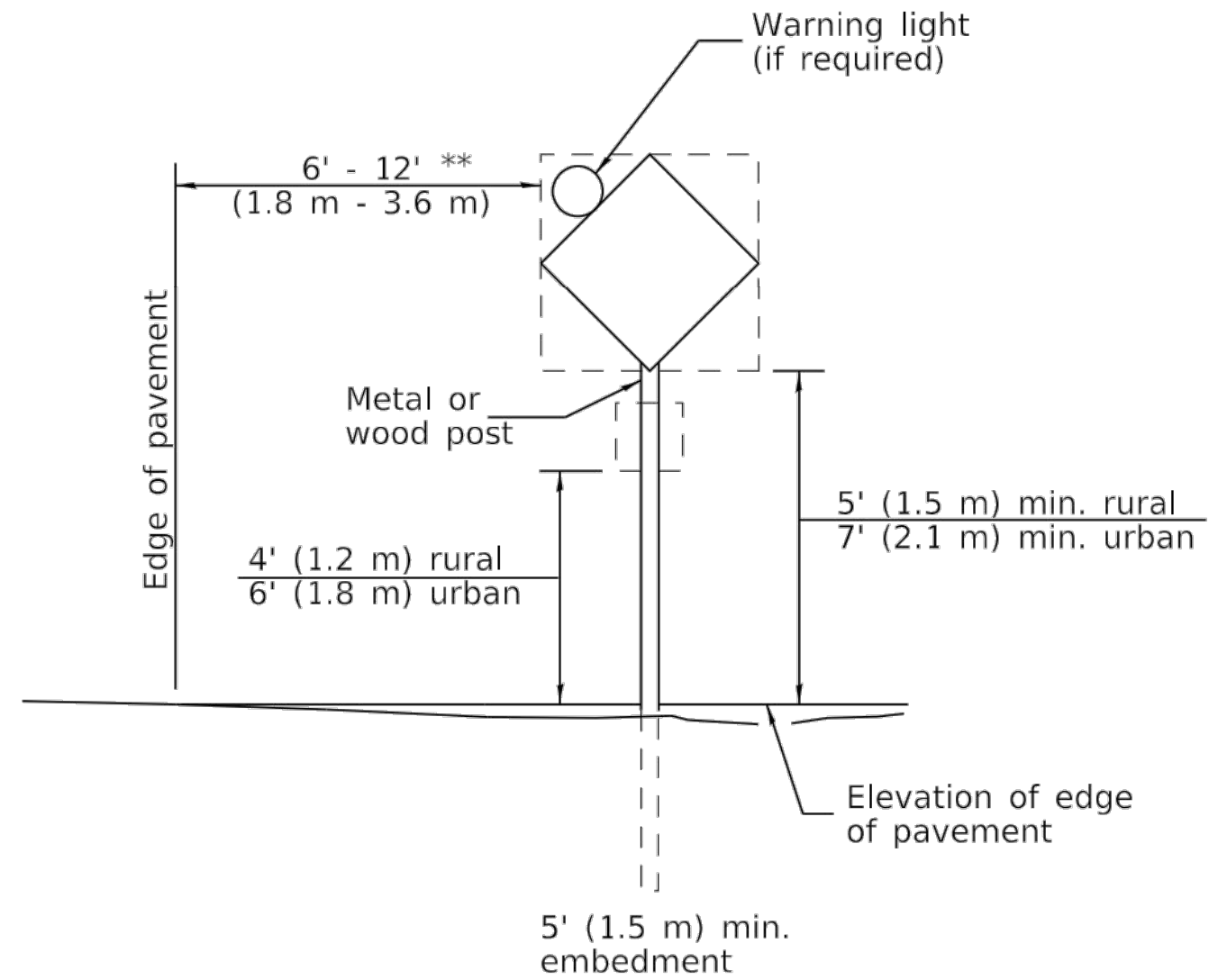
**LIVING HABITATS**

CONTRACT 14-253-5F  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

CIVIL DETAILS

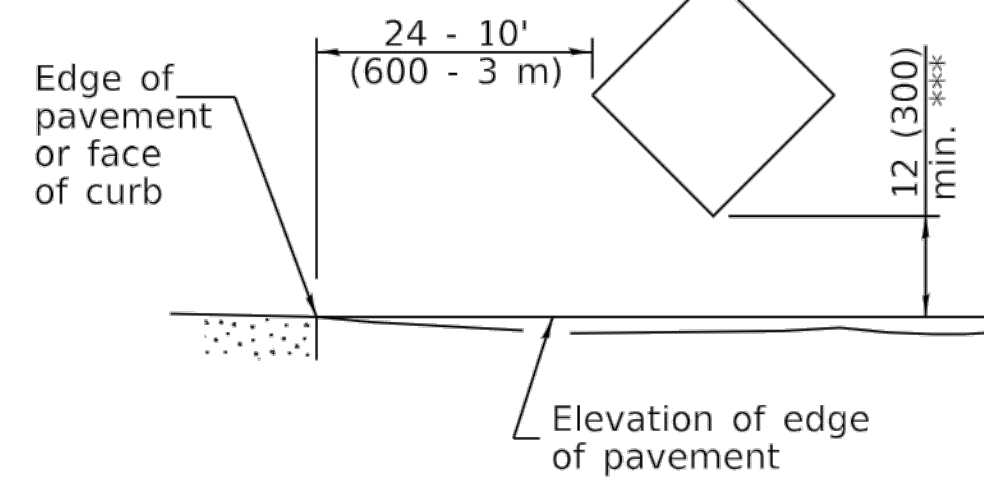
Sheet Number:  
**CP-525**

Page Number: 89



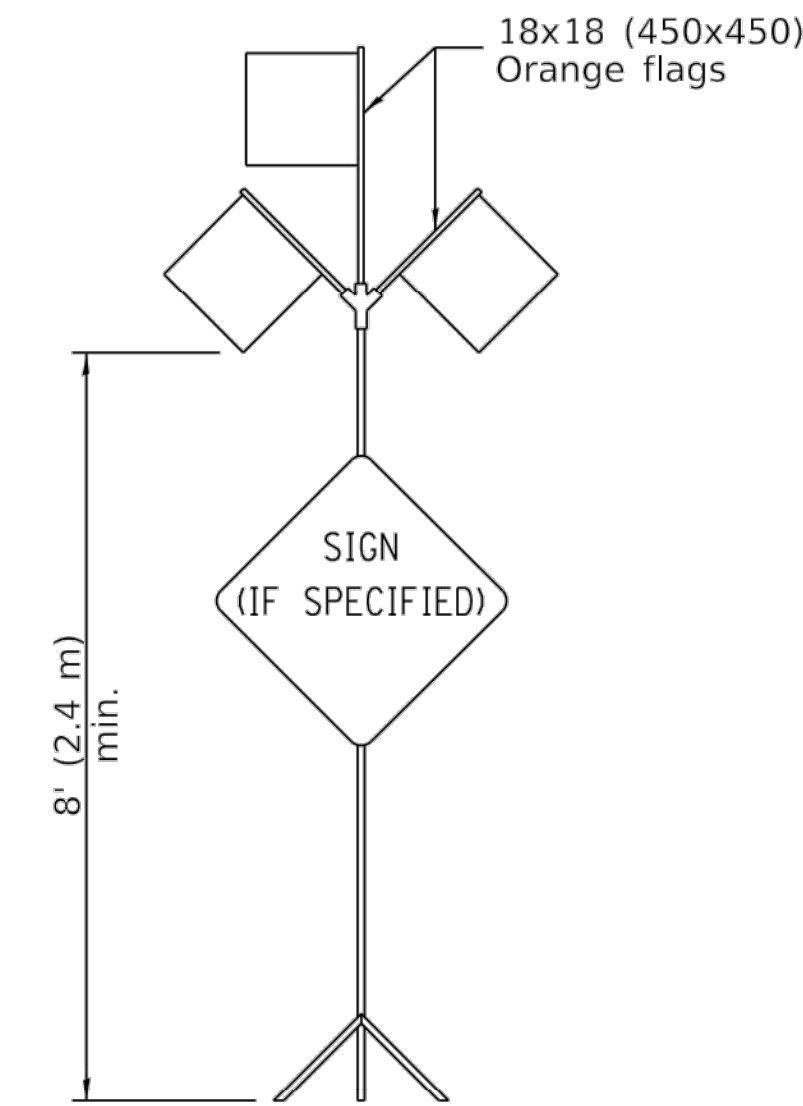
**POST MOUNTED SIGNS**

\*\* When curb or paved shoulder are present this dimension shall be 24 (600) to the face of curb or 6' (1.8 m) to the outside edge of the paved shoulder.



**SIGNS ON TEMPORARY SUPPORTS**

\*\*\* When work operations exceed four days, this dimension shall be 5' (1.5 m) min. If located behind other devices, the height shall be sufficient to be seen completely above the devices.



**HIGH LEVEL WARNING DEVICE**

ROAD CONSTRUCTION NEXT X MILES	END CONSTRUCTION
G20-1104(0)-6036	G20-1105(0)-6024

This signing is required for all projects 2 miles (3200 m) or more in length.  
 ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500' (150 m) in advance of project limits.  
 END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).  
 Dual sign displays shall be utilized on multi-lane highways.

**WORK LIMIT SIGNING**

WORK ZONE	W21-III5(0)-3618
SPEED LIMIT	R2-1-3648
XX	
PHOTO ENFORCED	R10-1108p-3618 ****
\$XXX FINE MINIMUM	R2-1106p-3618

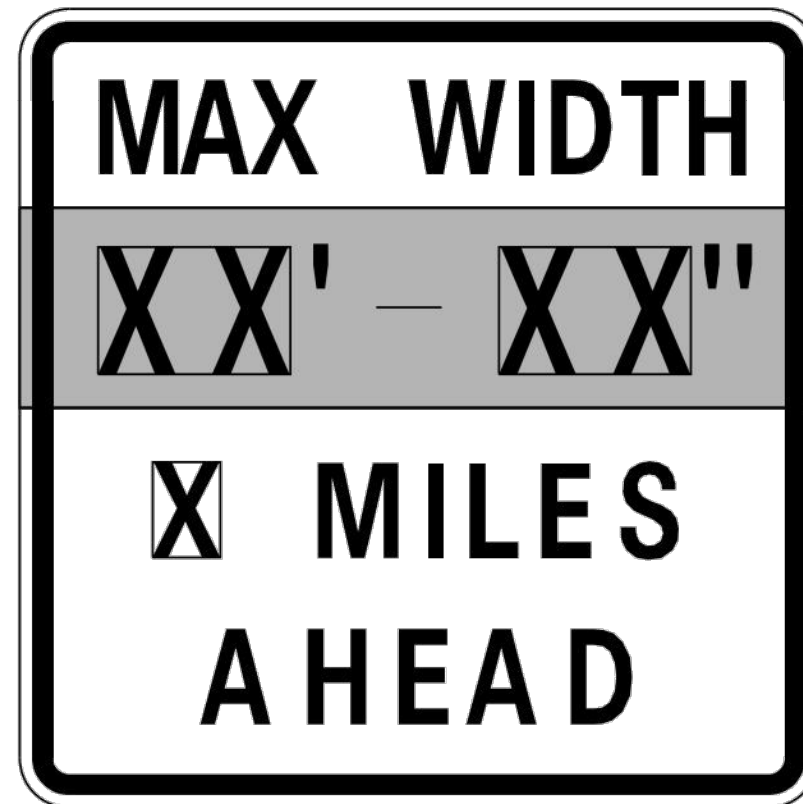
Sign assembly as shown on Standards or as allowed by District Operations.

END WORK ZONE SPEED LIMIT	G20-1103-6036
---------------------------	---------------

This sign shall be used when the above sign assembly is used.

**HIGHWAY CONSTRUCTION SPEED ZONE SIGNS**

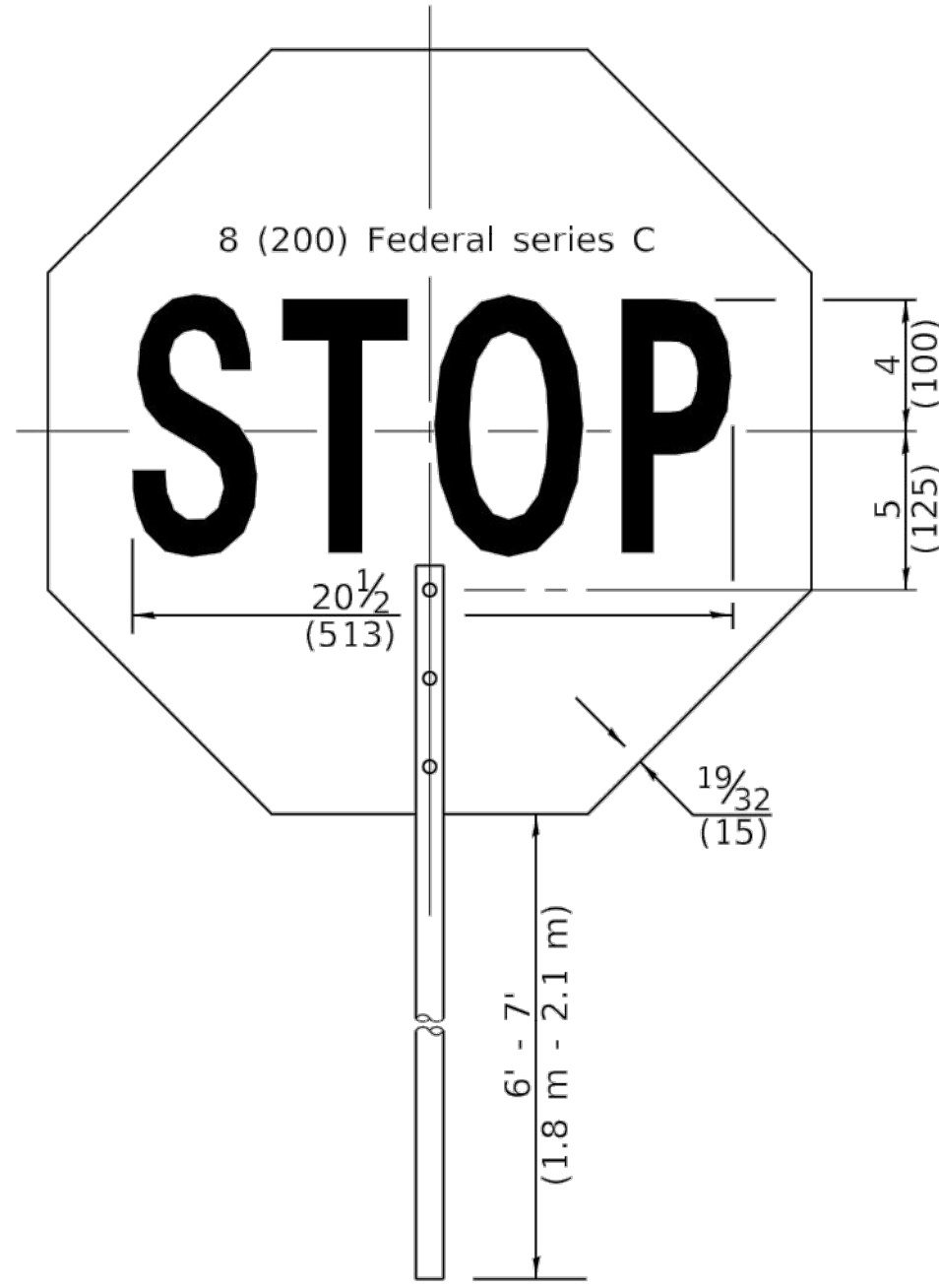
\*\*\*\* R10-1108p shall only be used along roadways under the jurisdiction of the State.



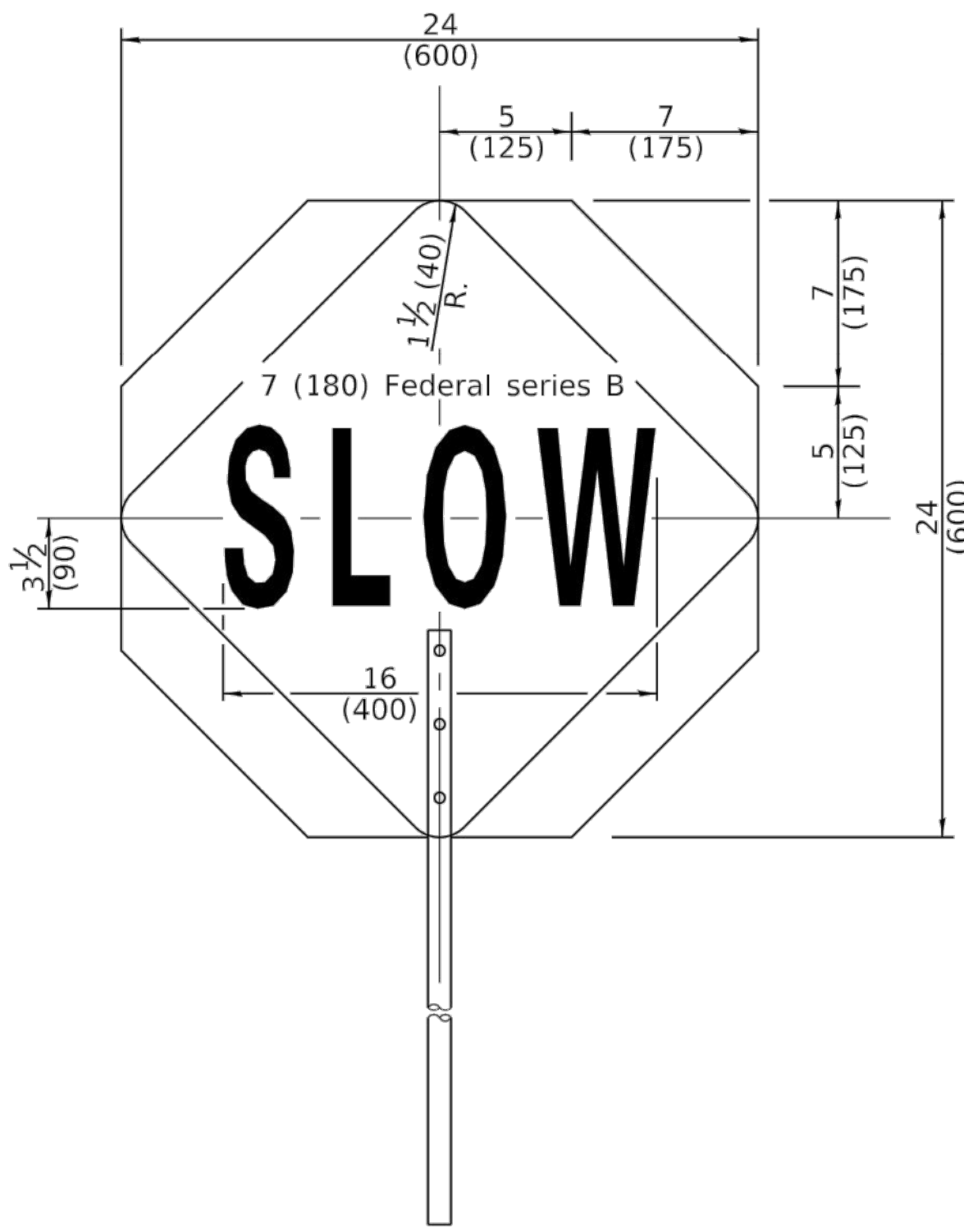
W12-1103-4848

**WIDTH RESTRICTION SIGN**

XX'-XX" width and X miles are variable.



FRONT SIDE



REVERSE SIDE

**FLAGGER TRAFFIC CONTROL SIGN**

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: 0  
 8 1/2 x 11 3/8

**TRAFFIC CONTROL DEVICES**

(Sheet 2 of 3)

**STANDARD 701901-08**

Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

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

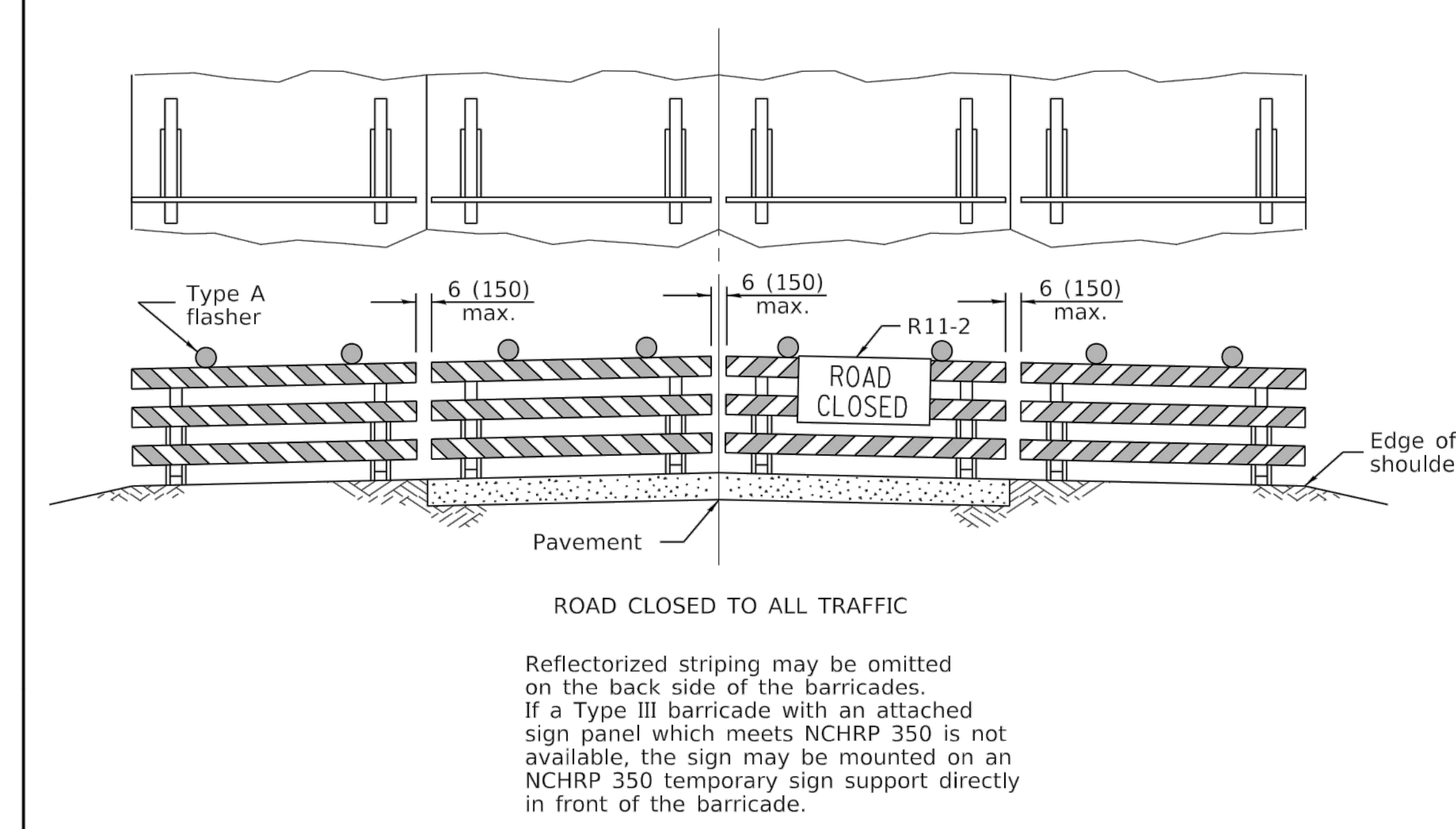
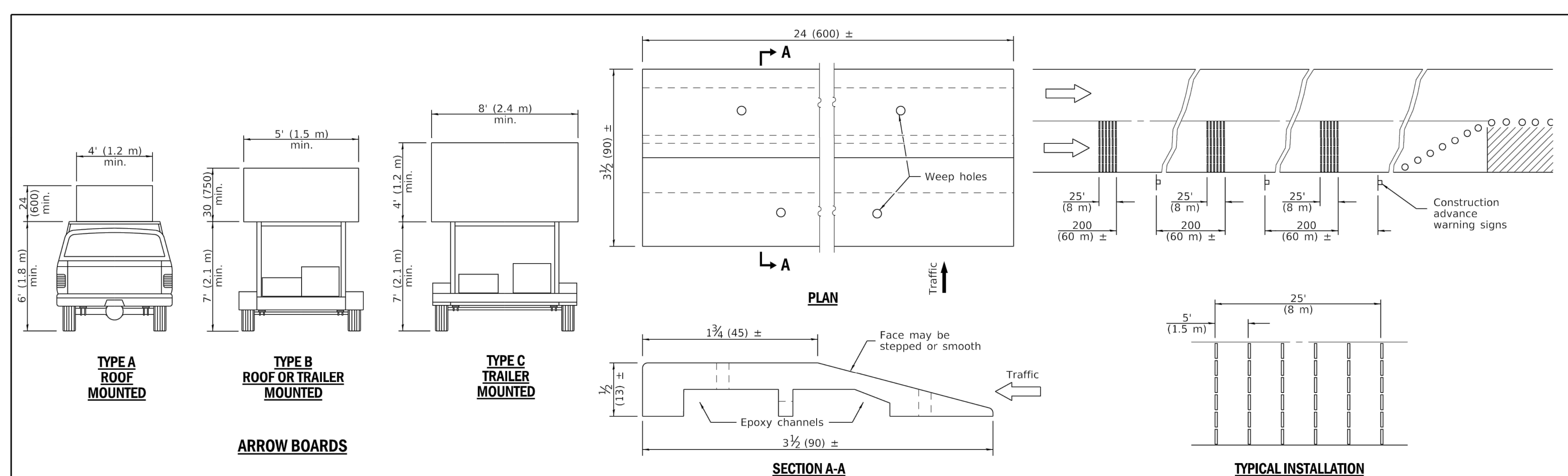
Checked by: [Signature]  
 Reviewed by: EPC  
 Scale: AS SHOWN

Logos: DONOHUE, ACCURATE, OBA, LIVING HABITATS

CONTRACT 14-253-5F  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

CIVIL DETAILS

PLOT DATE: 2/7/2024 3:38 PM PLOTTED BY: MADRID, MICHELLE  
 P:\13278chi\Dwg\Contracts\14-253-5F\Civil\Sheets\14-253-BF\CP-527.dwg 1/30/2024 12:23 PM



Illinois Department of Transportation

APPROVED January 1, 2019  
 ENGINEER OF SAFETY PROG. AND ENGINEERING

APPROVED January 1, 2019  
 ENGINEER OF DESIGN AND ENVIRONMENT

**TRAFFIC CONTROL DEVICES**

(Sheet 3 of 3)

**STANDARD 701901-08**

1 IDOT HIGHWAY STANDARD 701901-08  
 Scale: NTS

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Designed by: MLM  
 Drawn by: MLM  
 Date: FEB 2024

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

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

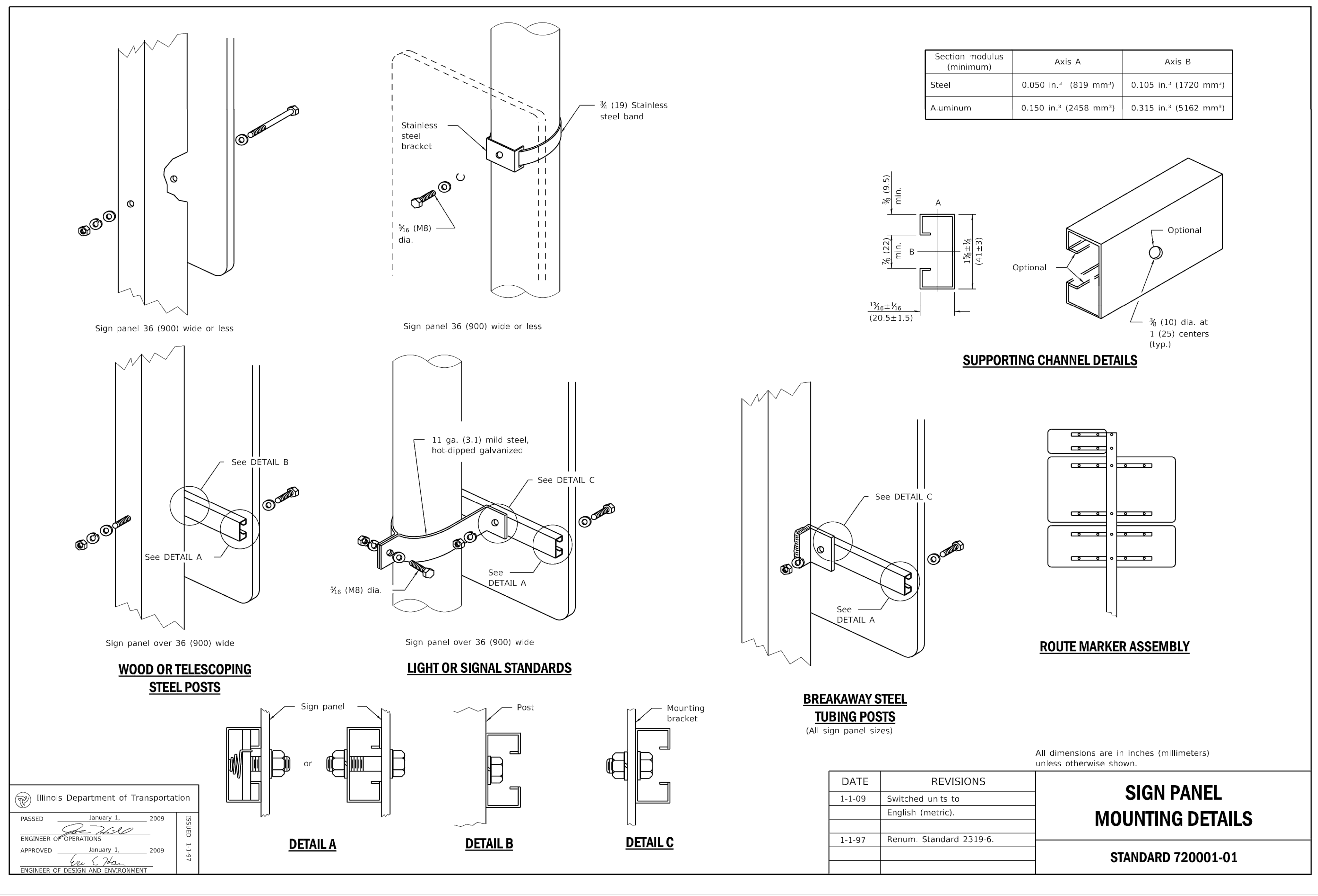
**LOGO: LIVING HABITATS**

Rev. Description Appr. Date

Sheet Number: CP-527  
 Page Number: 91



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Illinois Department of Transportation

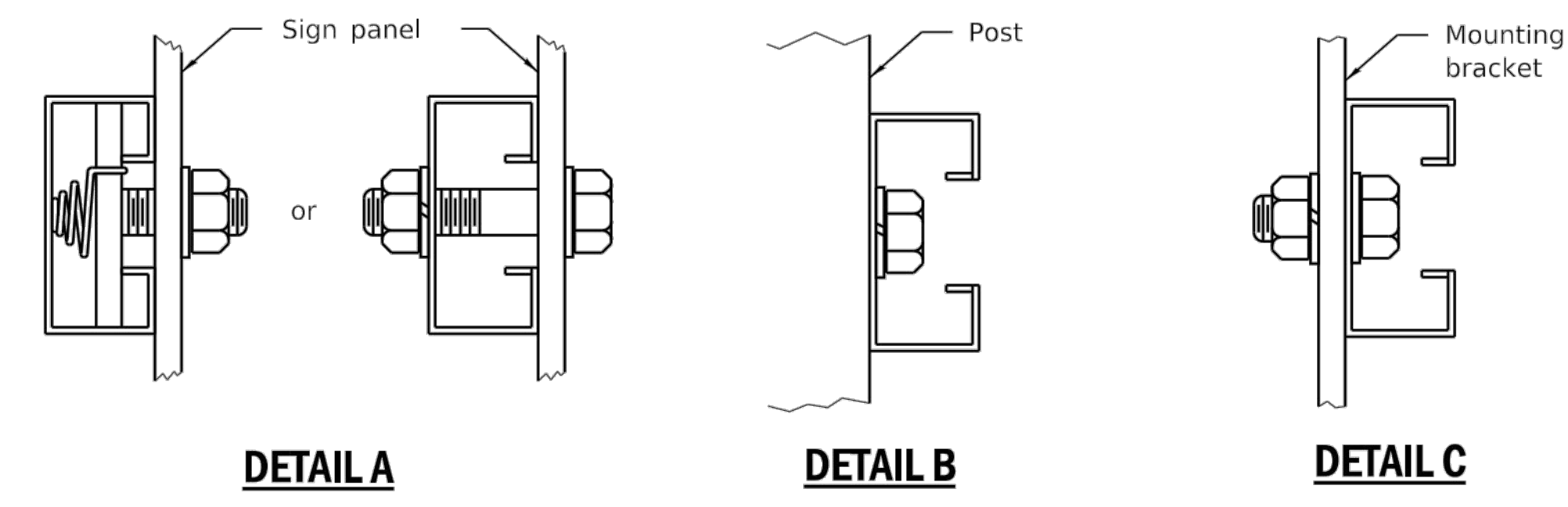
PASSED January 1, 2009

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**

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

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

**ILH**  
**LIVING HABITATS**

**DONOHUE**  
 CONSULTING ENGINEERS

**Accurate**  
 CONSULTING ENGINEERS

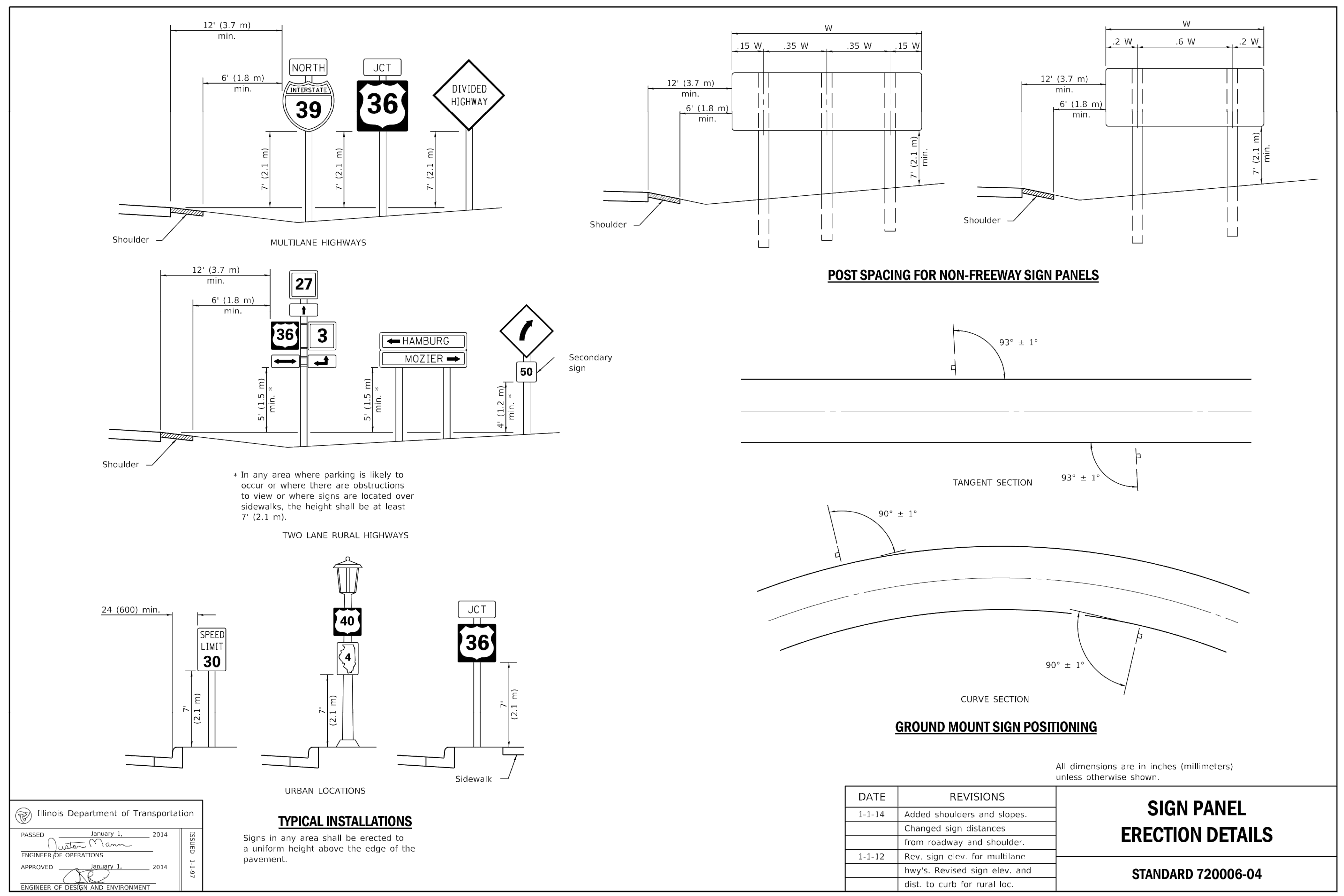
**OEA**  
 O'BRIEN & ASSOCIATES, INC.

**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

**CIVIL DETAILS**

Sheet Number:  
**CP-528**  
 Page Number: 92

PLOT DATE: 2/7/2024 3:38 PM PLOTTED BY: MADRID, MICHELLE  
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\* In any area where parking is likely to occur or where there are obstructions to view or where signs are located over sidewalks, the height shall be at least 7' (2.1 m).

Illinois Department of Transportation

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

**TYPICAL INSTALLATIONS**

Signs in any area shall be erected to a uniform height above the edge of the pavement.

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

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

1 IDOT HIGHWAY STANDARD 720006-04  
 Scale: NTS

Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

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

**DONOHUE** CONSULTING ENGINEERS  
**Accurate** ENGINEERS  
**LIVING HABITATS**

CONTRACT 14-253-5F  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

CIVIL DETAILS

Sheet Number:  
**CP-529**  
 Page Number: 93

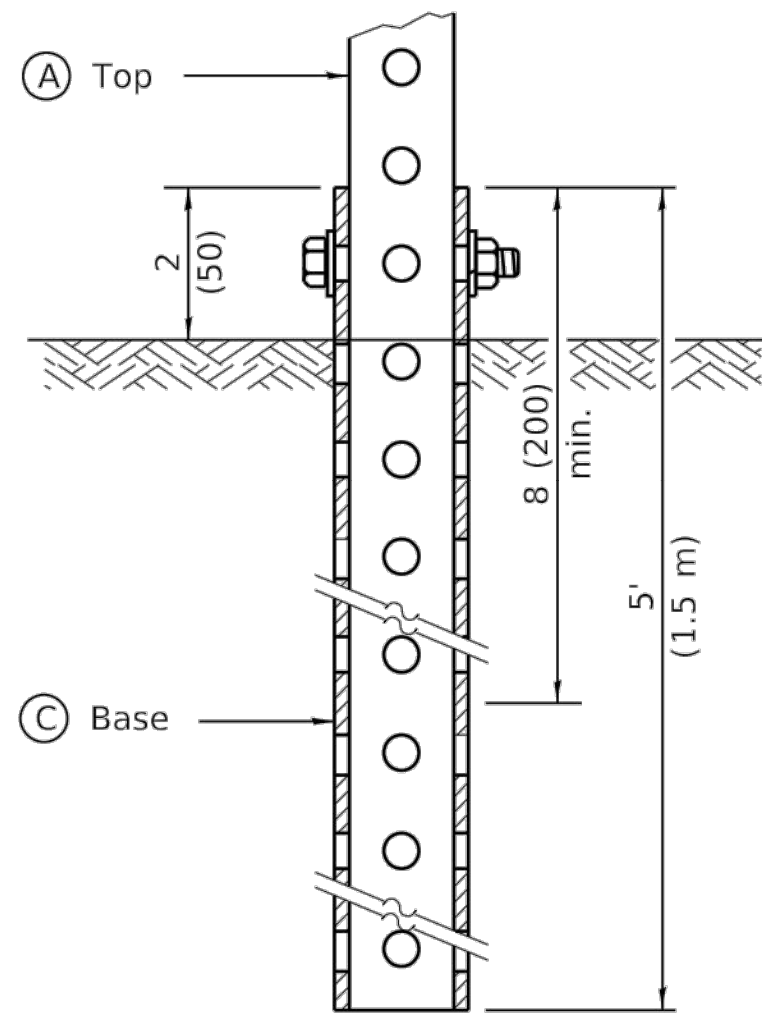
Illinois Department of Transportation

PASSED January 1, 2009

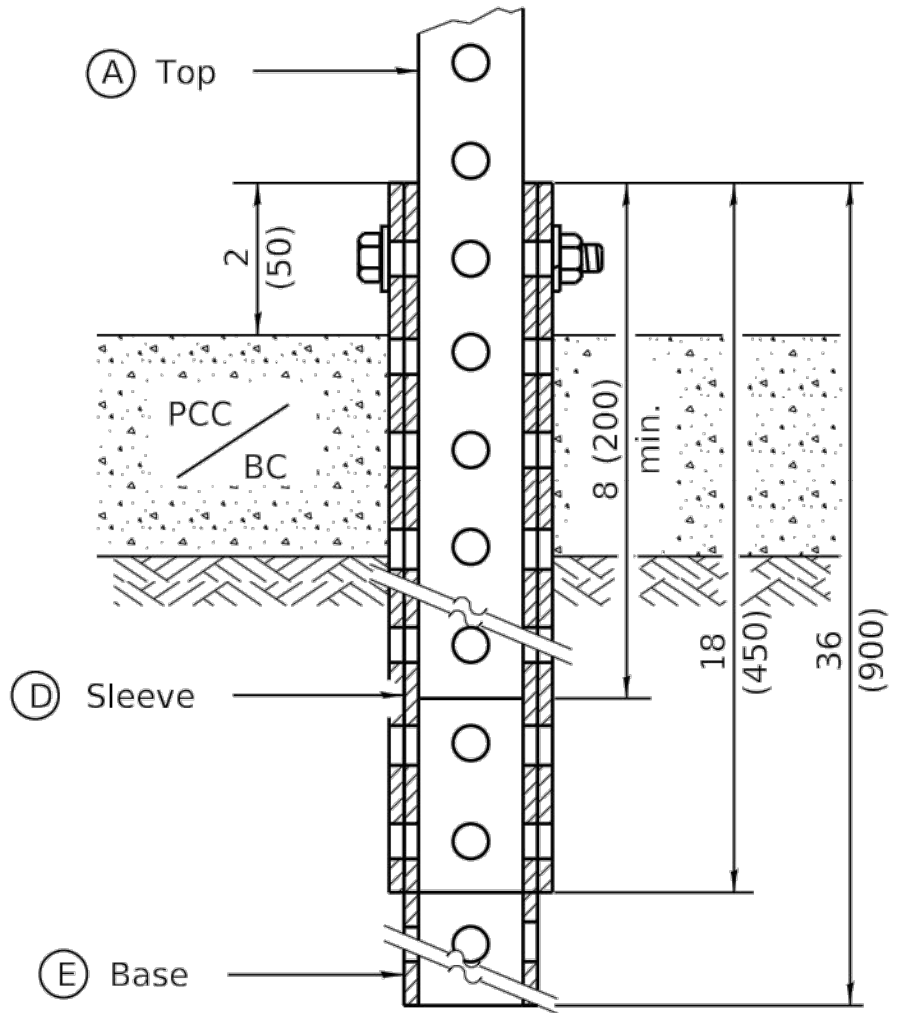
ENGINEER OF OPERATIONS

APPROVED January 1, 2009

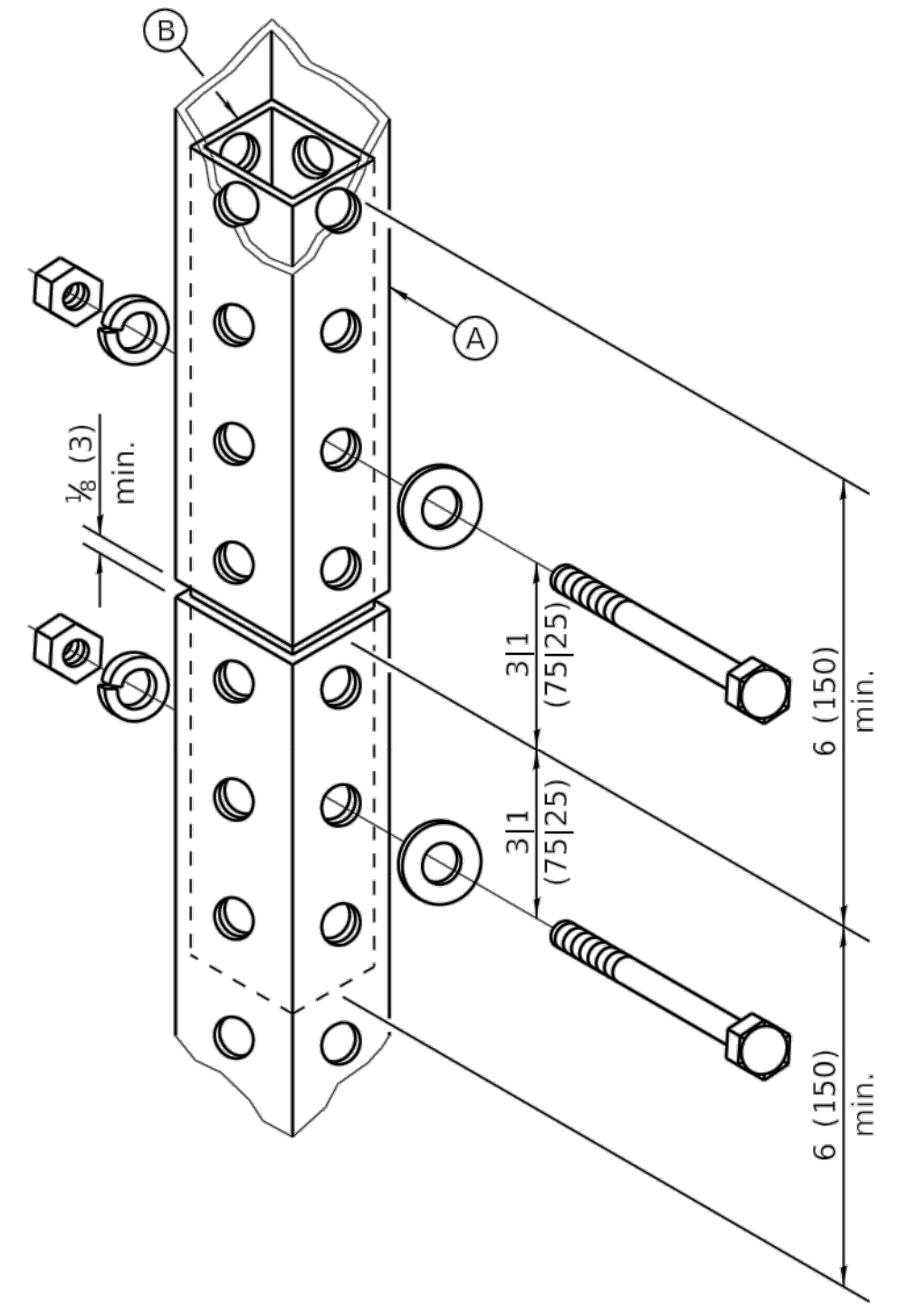
ENGINEER OF DESIGN AND ENVIRONMENT



**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).
1-1-07	New Standard. Used to be part of Standard 720006.

**TELESCOPING STEEL SIGN SUPPORT**

**STANDARD 728001-01**

1 IDOT HIGHWAY STANDARD 728001-01  
Scale: NTS

Rev.	Description	Appr.	Date

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

Designed by: MLM  
Checked by: PMS

Drawn by: MLM  
Reviewed by: EPC

Date: FEB 2024  
Scale: AS SHOWN

**ILH** **LIVING HABITATS**

**DONOHUE** **ACCURATE**

**ZIM** **ORSHAN & ASSOCIATES, INC.**

**CONSTRUCTIVE ENGINEERS**

**CONTRACT 14-253-5F**

FLOOD CONTROL PROJECT ON MIDLOTHIAN CREEK IN ROBBINS, CSA LITTLE CALUMET RIVER WATERSHED

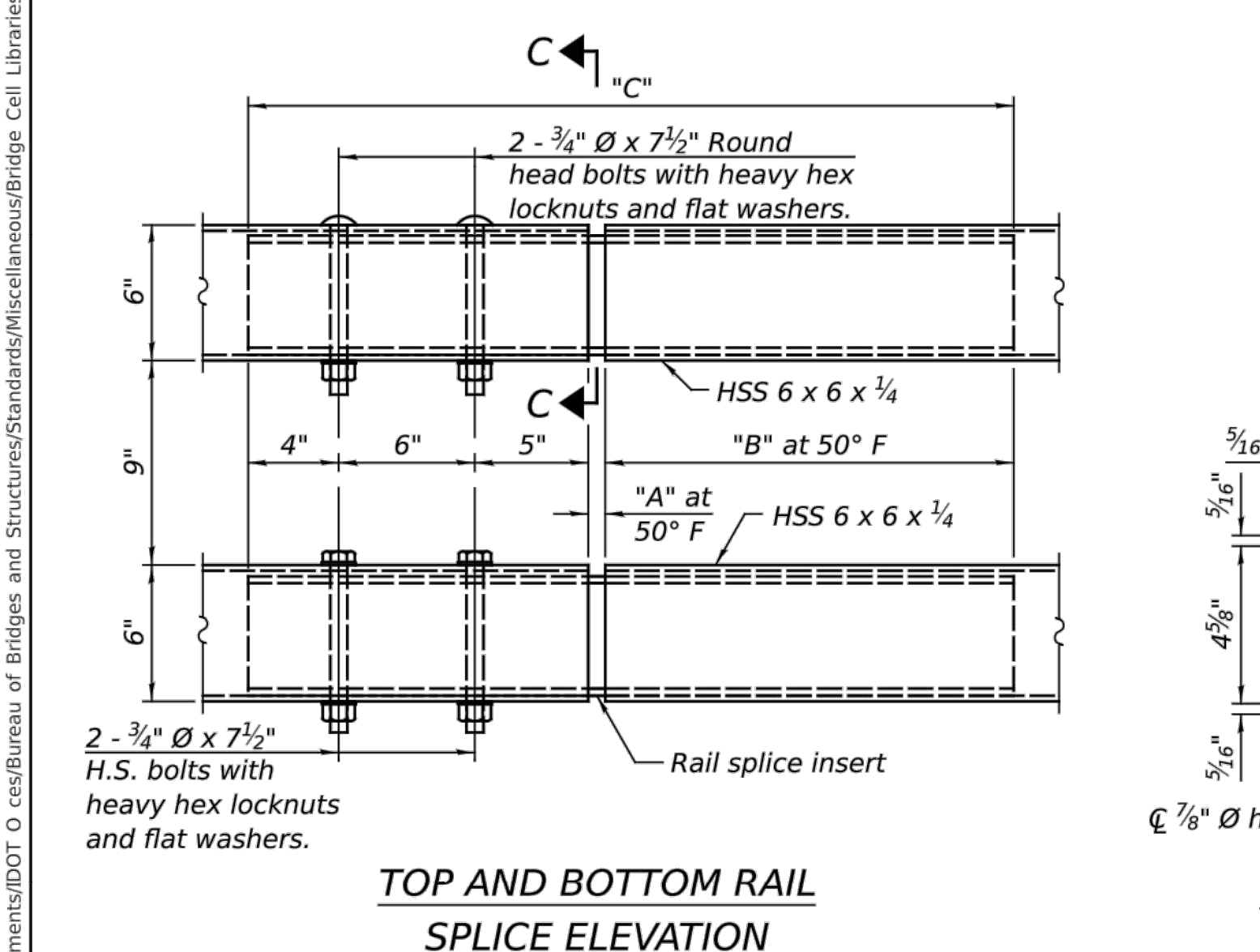
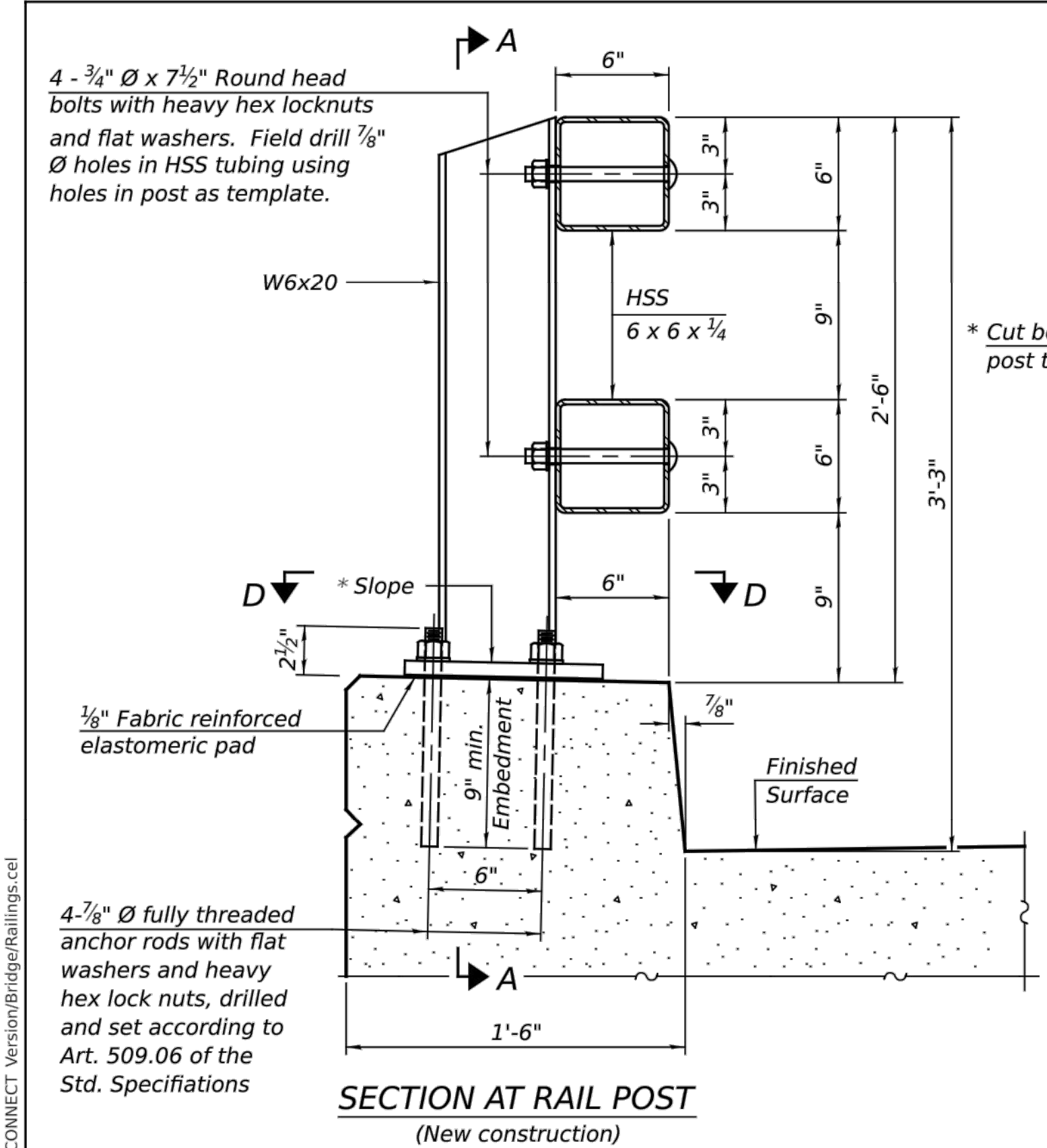
**CIVIL DETAILS**

Sheet Number:  
**CP-530**

Page Number: 94



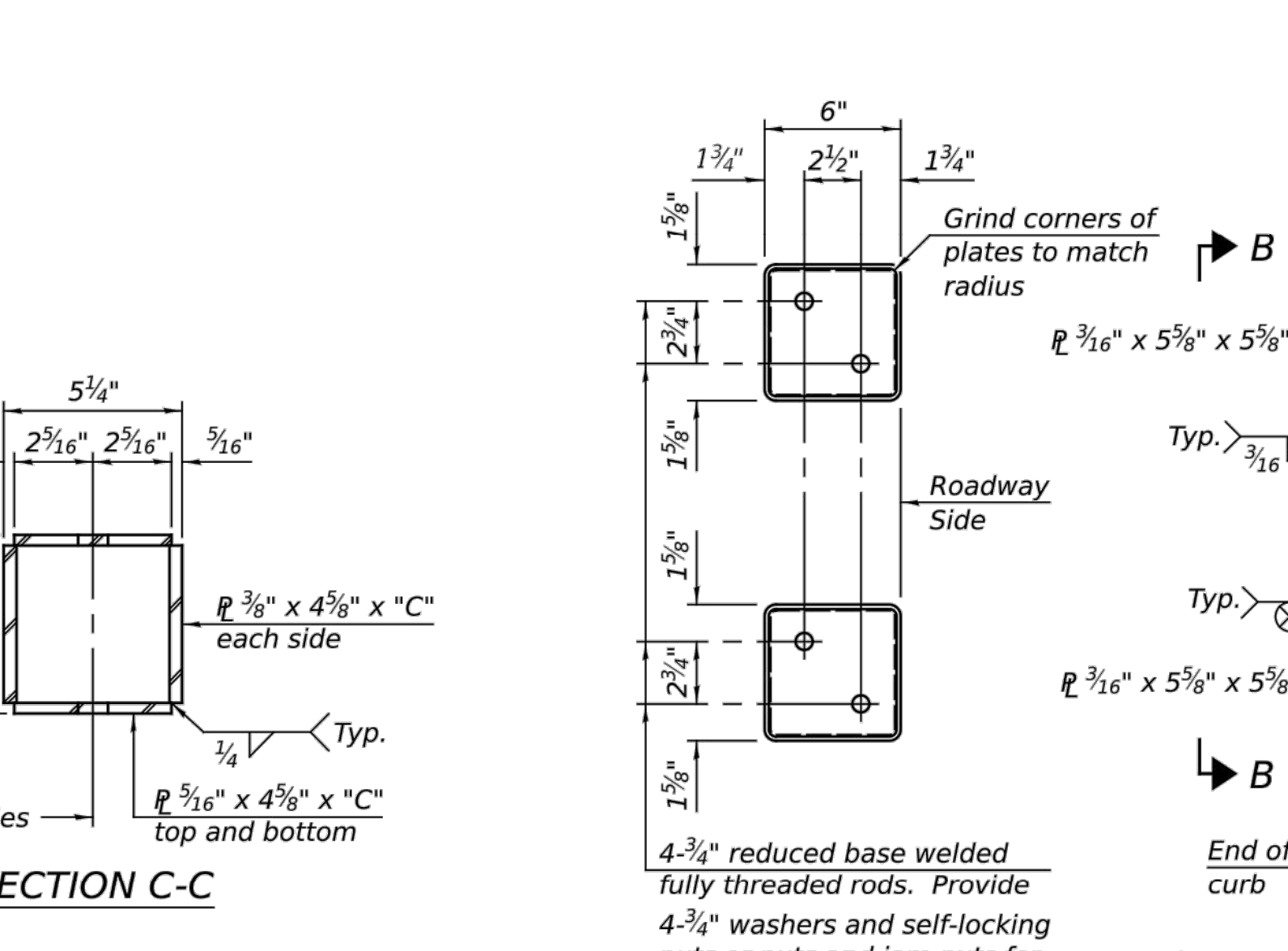
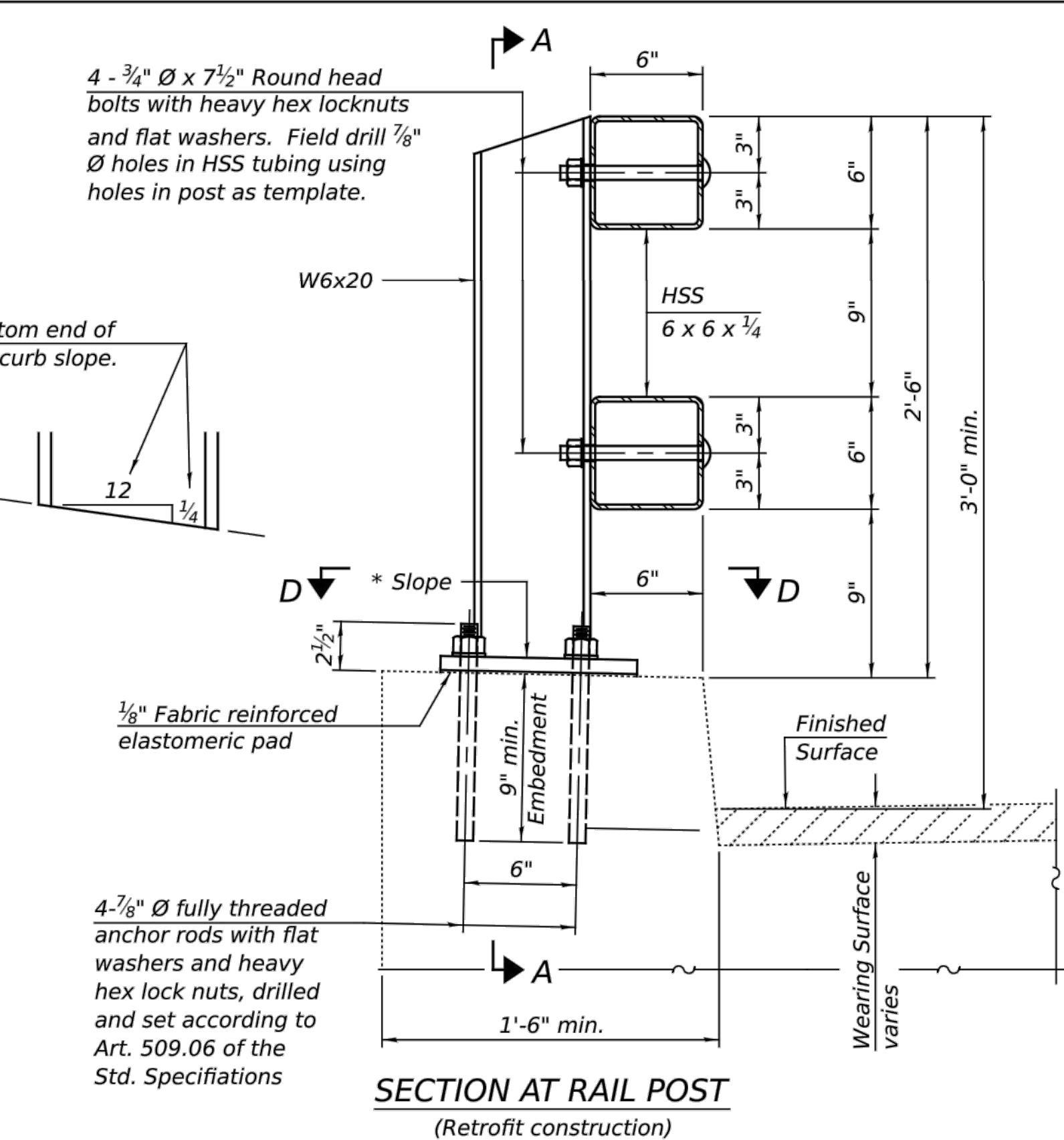
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**RAILING CRITERIA**

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

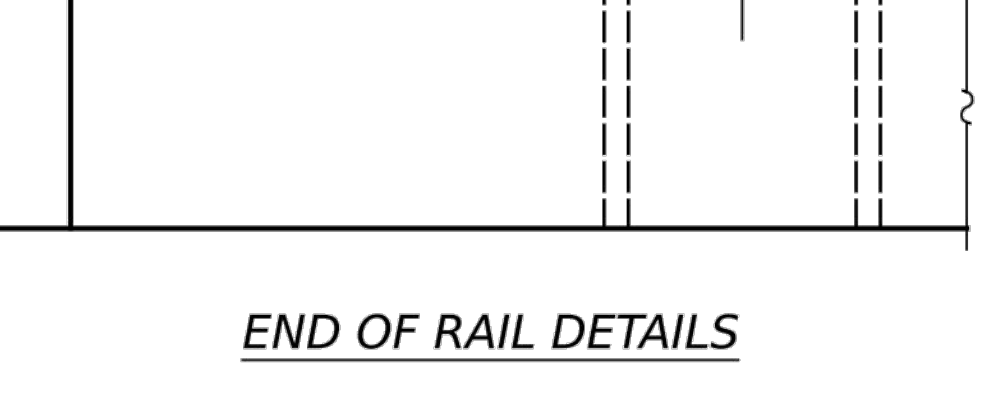
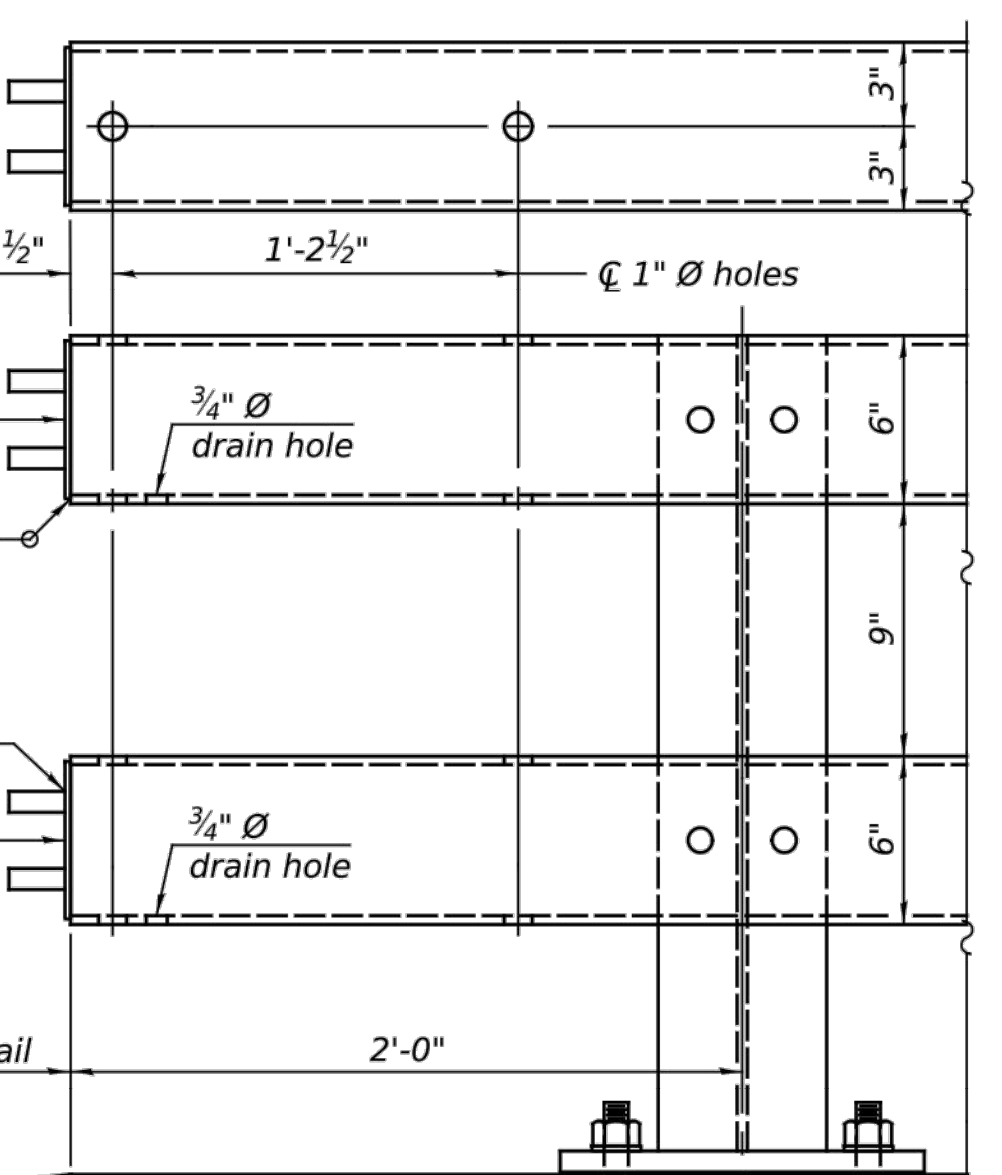
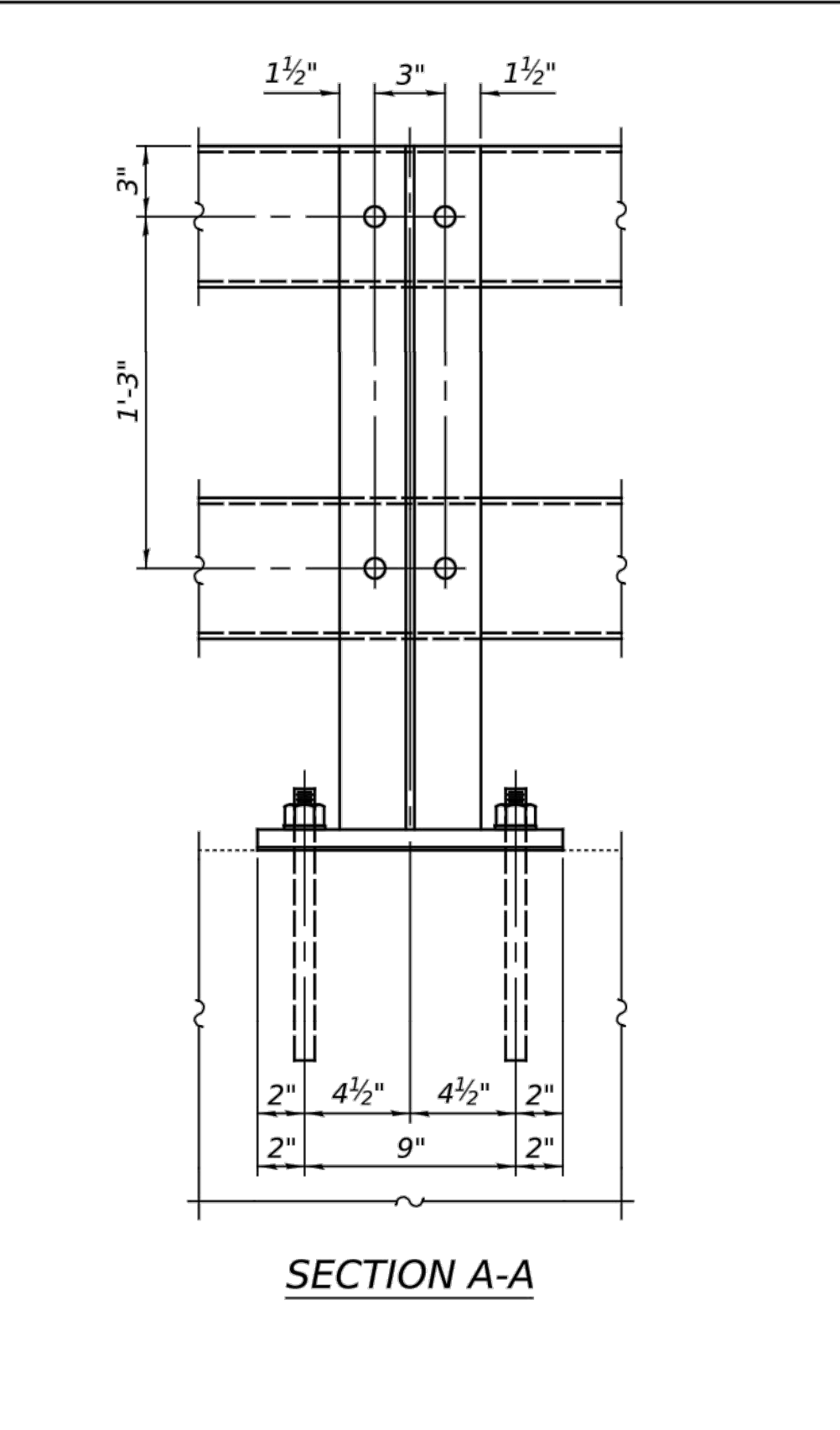
R-42 5-15-2023



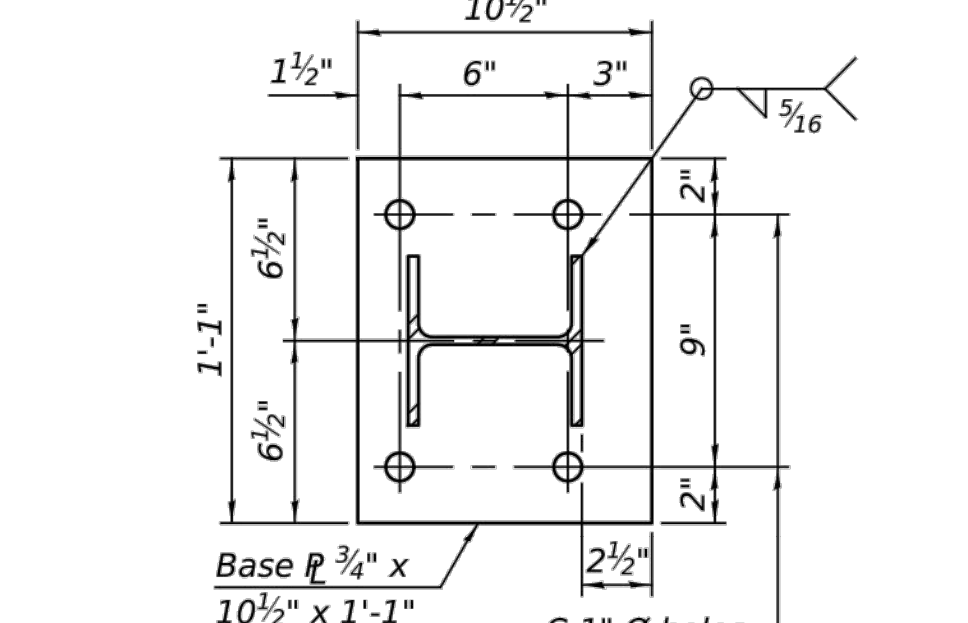
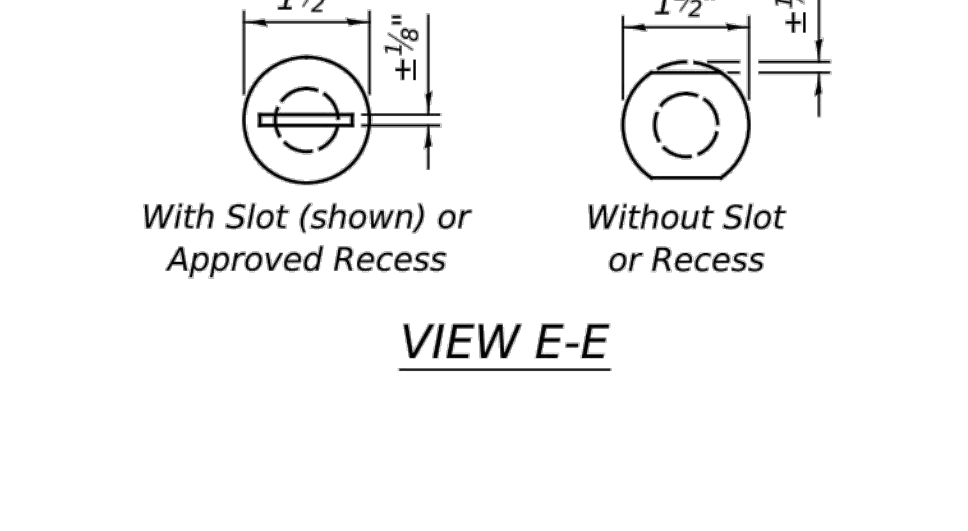
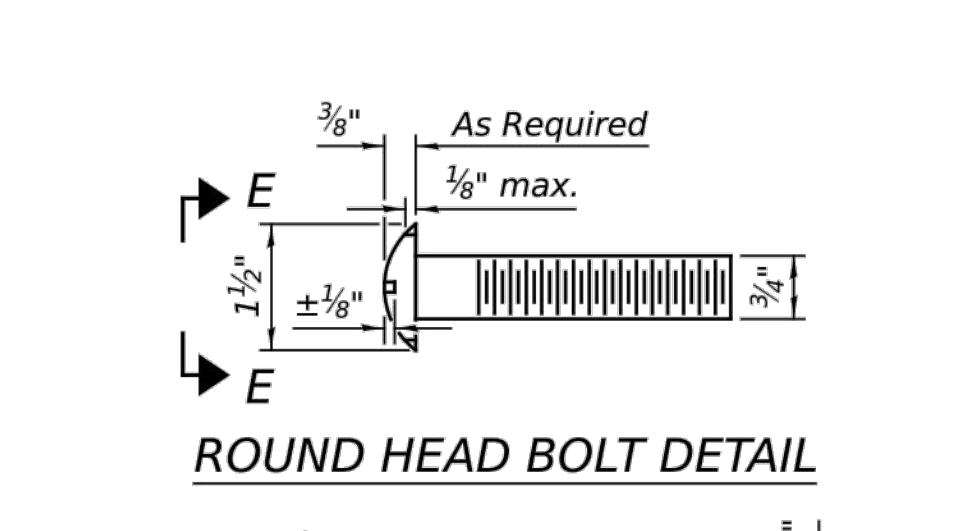
**SPLICE DIMENSIONS**

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.



**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 1/16" 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.



**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type CO-10	Foot	

USER NAME =	DESIGNED -	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STEEL RAILING, TYPE CO-10 STRUCTURE NO.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CHECKED -	REVISD -							
PLOT SCALE =	DRAWN -	REVISD -							
PLOT DATE =	CHECKED -	REVISD -							

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

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON MIDLOTHIAN CREEK IN ROBBINS, CSA LITTLE CALUMET RIVER WATERSHED

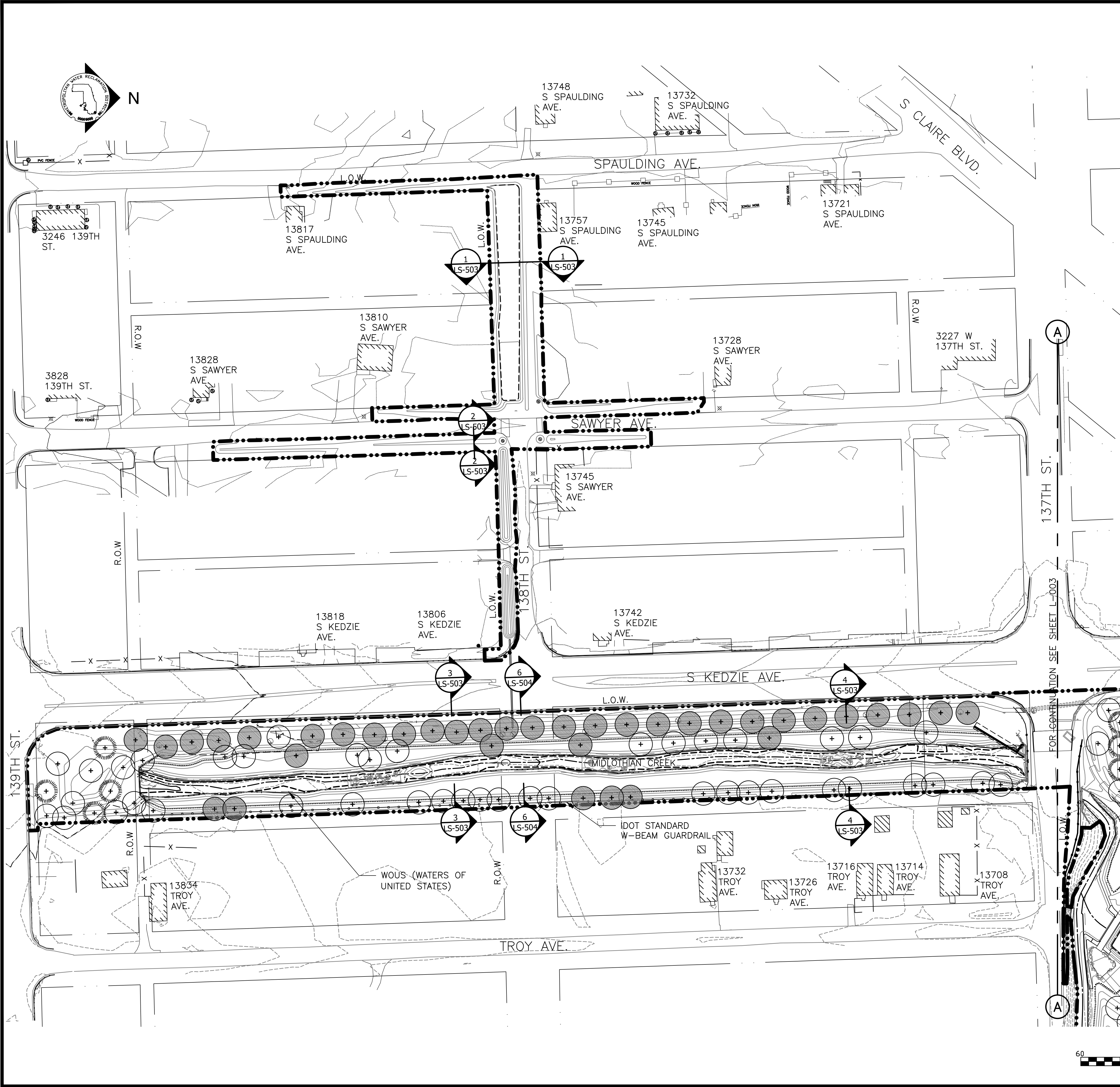
**CIVIL DETAILS**

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

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

Sheet Number: CP-532  
 Page Number: 96





**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.
- [Hatched Box] MOWN TURF PATHS/LANDINGS
- [Symbol] STONE RIFFLES, SEE LS-507
- [Symbol] CHANNEL CENTER LINE & DIRECTION OF FLOW
- [Symbol] EVERGREEN TREE
- [Symbol] DECIDUOUS TREE
- [Symbol] EXISTING TREE TO BE TRANSPLANTED — SEE LD-101 AND LP-101
- [Symbol] SITE SIGNAGE

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED

**GENERAL SITE PLAN — MIDLOTHIAN CREEK**

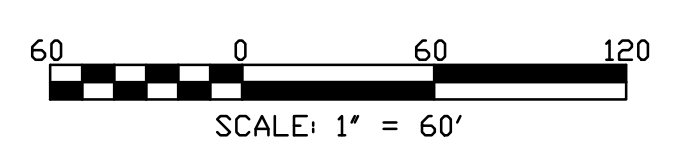
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 Reviewed by: LH  
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 Scale: AS SHOWN

**DONOHUE**  
 ACCURATE  
 ENGINEERS

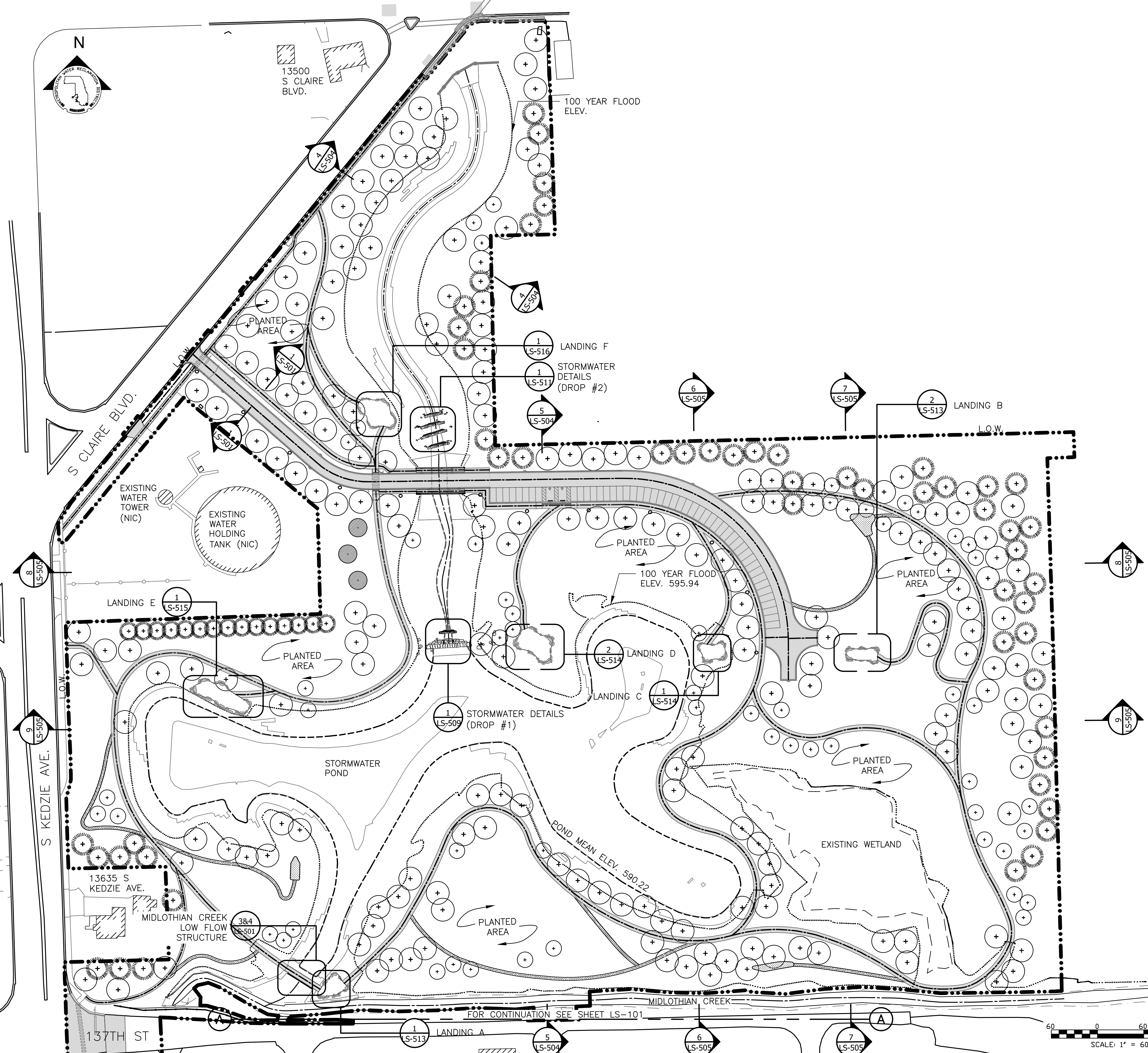
**LIVING HABITATS**  
 ZIM  
 O'Brien & Associates, Inc.  
 CONSULTING ENGINEERS

Sheet Number:  
**L-002**

Page Number: 98



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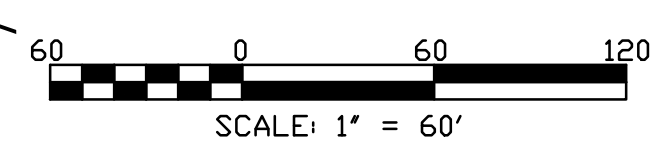


**LEGEND:**

- 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

**METROPOLITAN WATER RECLAMATION DISTRICT  
OF GREATER CHICAGO**

**DONOHUE**  
Accurate  
CONSULTING ENGINEERS

**LIVING HABITATS**  
OF GREATER CHICAGO

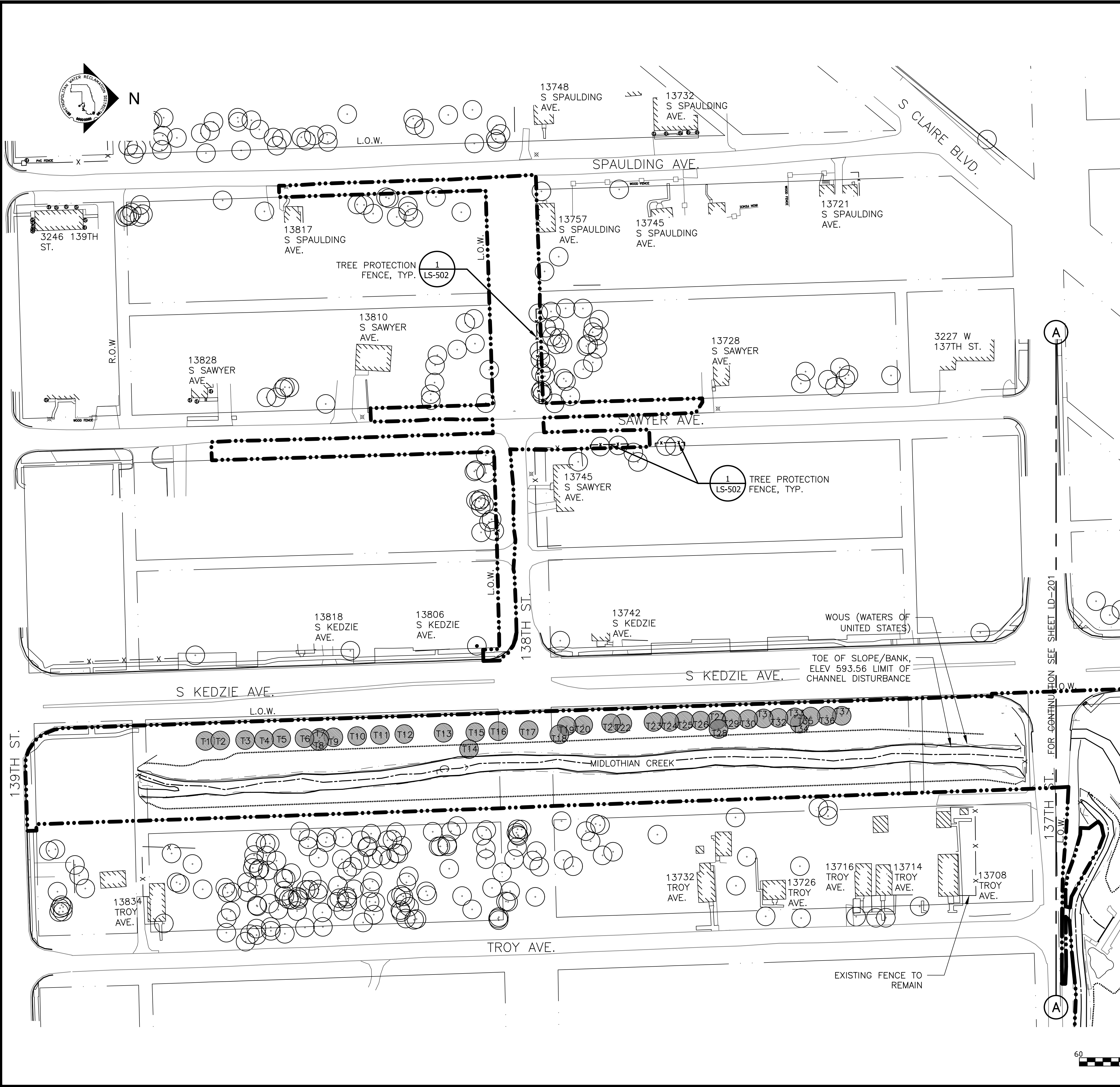
Designed by: LH	Checked by: LH	Reviewed by: LH	Date: FEB 2024
Drawn by: LH	Scale: AS SHOWN		

**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED  
**GENERAL SITE PLAN - STORMWATER PARK**

Sheet Number:  
L-003  
 Page Number: 99



P:\16-105\_Robbins Park - MWRD\04\_CAD\14-253-3F\Landscape\Sheets\14-253-BF-LD-101.dwg LD-101.dwg 1/29/2024 10:40 AM



**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.

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

Contract: 14-253-5F  
 Project: FLOOD CONTROL PROJECT ON MIDLOTHIAN CREEK IN ROBBINS, CSA  
 Location: LITTLE CALUMET RIVER WATERSHED  
 Plan: TREE PROTECTION PLAN - MIDLOTHIAN CREEK

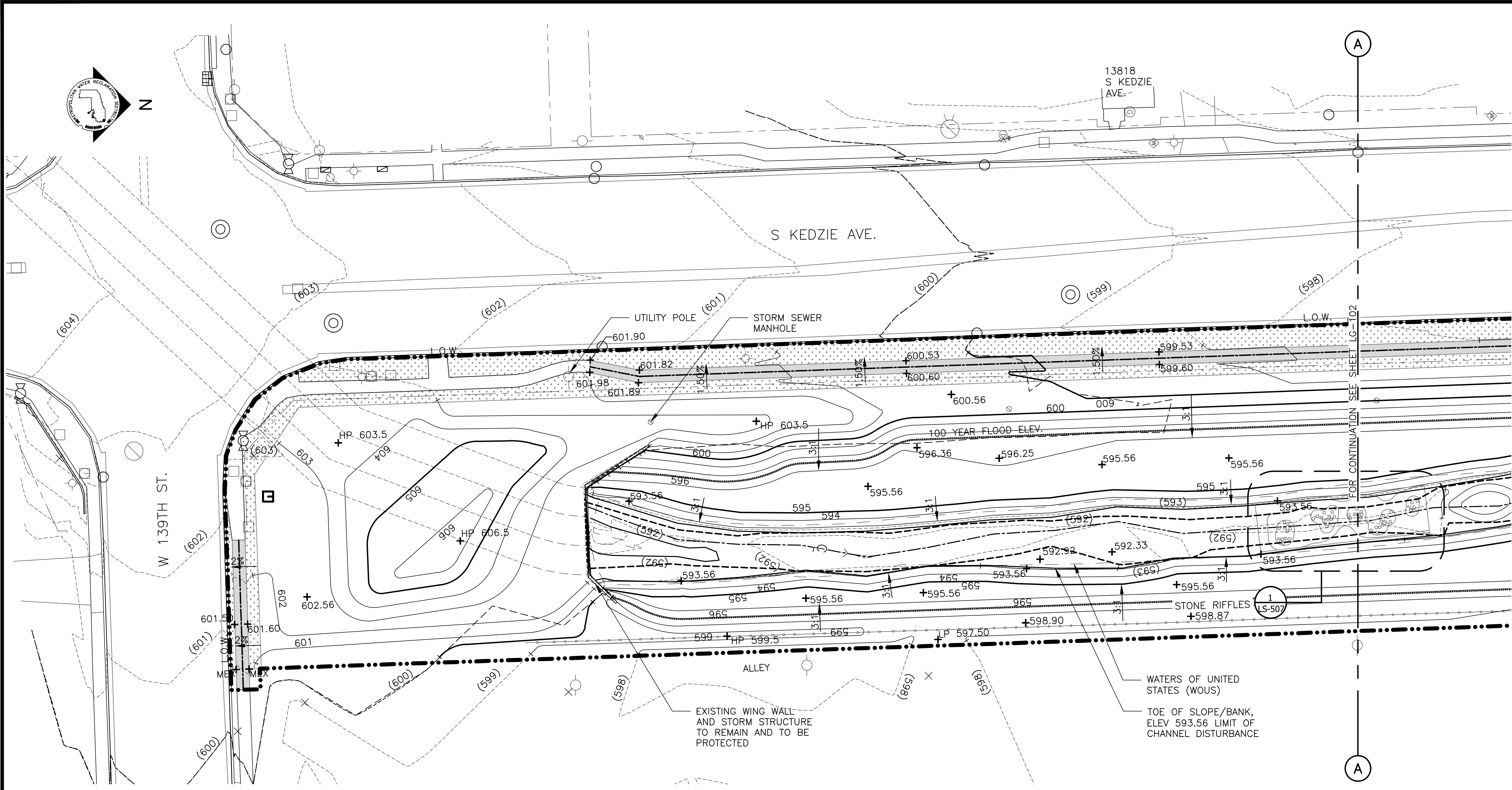
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 Checked by: LH  
 Drawn by: LH  
 Reviewed by: LH  
 Date: FEB 2024  
 Scale: AS SHOWN

**DONOHUE**  
**Accurate**  
**LIVING HABITATS**  
**OPREAR & ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**

CONTRACT 14-253-5F  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED  
 TREE PROTECTION PLAN -  
 MIDLOTHIAN CREEK



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**GRADING NOTES:**

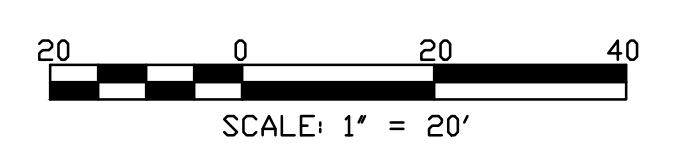
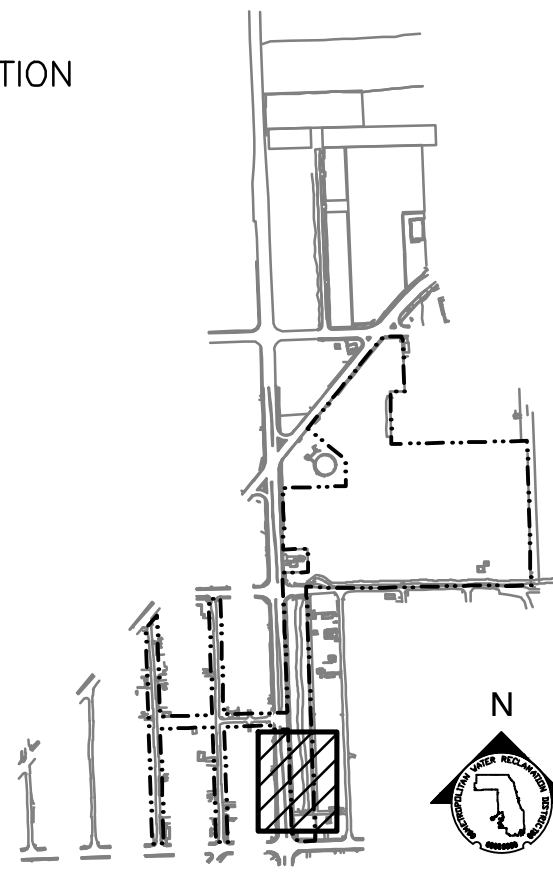
- THE CONTRACTOR SHALL LAYOUT AND DETERMINE THE ELEVATIONS OF ALL SITE ELEMENTS AND PROPOSED UTILITIES FOR APPROVAL BY THE ENGINEER PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES IN WRITING TO THE ENGINEER. THE CONTRACTOR SHALL PROVIDE ELEVATIONS SIMULTANEOUSLY WITH 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                  |
| [Box] ENLARGEMENT BOX                                    |                                | + BW    | BOTTOM OF WALL               |
|  |                                | 4.99%   | DIRECTION & PERCENT OF SLOPE |
|  |                                | 5:1     | H:V SLOPE DESIGNATION        |



Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

Contract 14-253-5F  
 FLOOD CONTROL PROJECT ON MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED  
 PARTIAL GRADING PLAN

Designed by: LH  
 Drawn by: LH  
 Date: FEB 2024

Checked by: LH  
 Reviewed by: LH  
 Scale: AS SHOWN

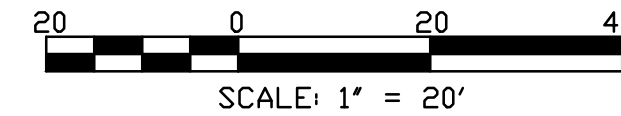
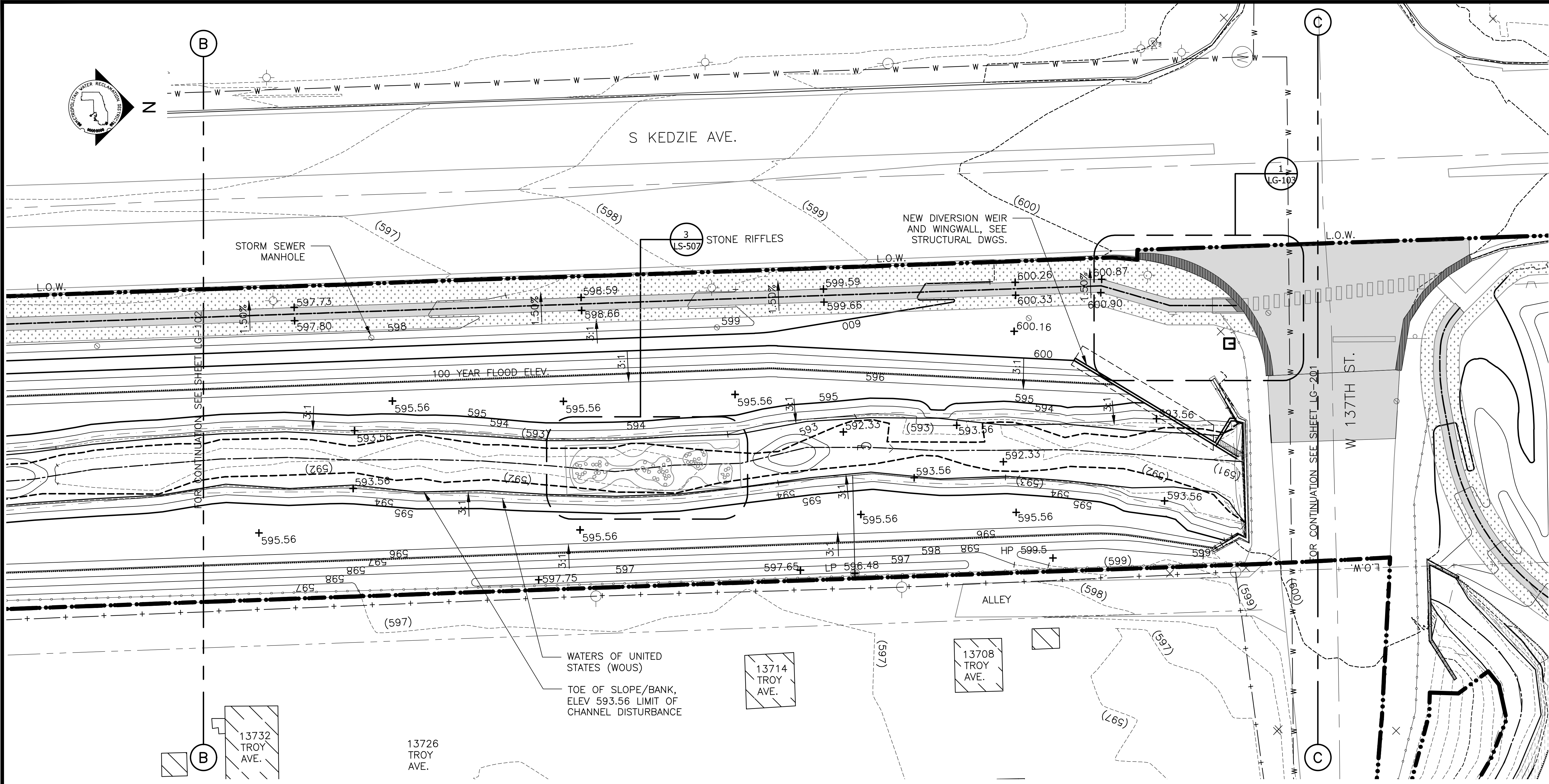
**DONOHUE**  
 Accurate  
 ENGINEERS & ASSOCIATES, INC.  
 CONSULTING ENGINEERS

**LIVING HABITATS**

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



PLOT DATE: 2/7/2024 2:41 PM PLOTTED BY: HANNAH CUSICK  
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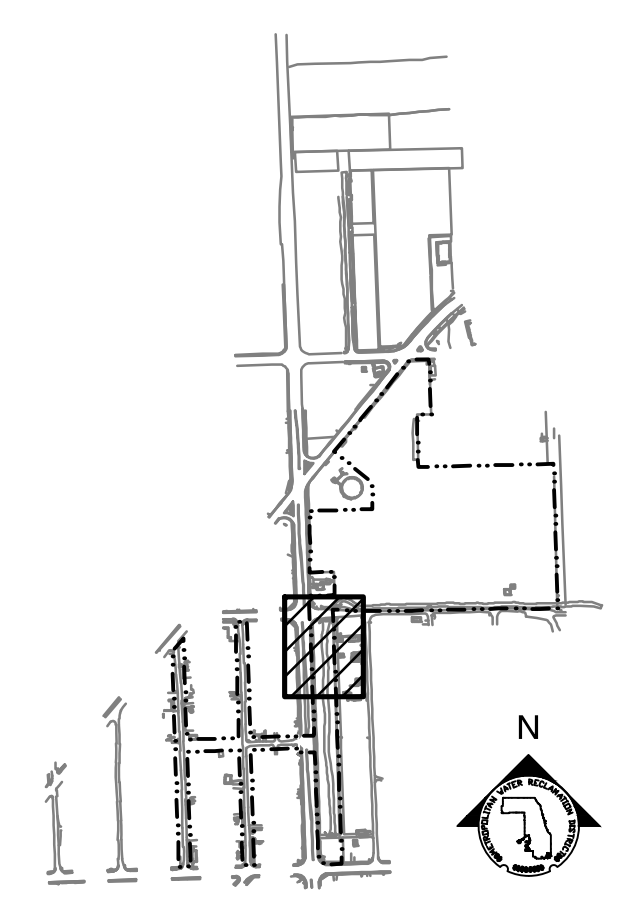
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- REFERENCE NOTES ON GRADING DRAWING LG-101.
- SEE UTILITY DRAWINGS FOR CULVERT AND STORM SEWER INFORMATION.

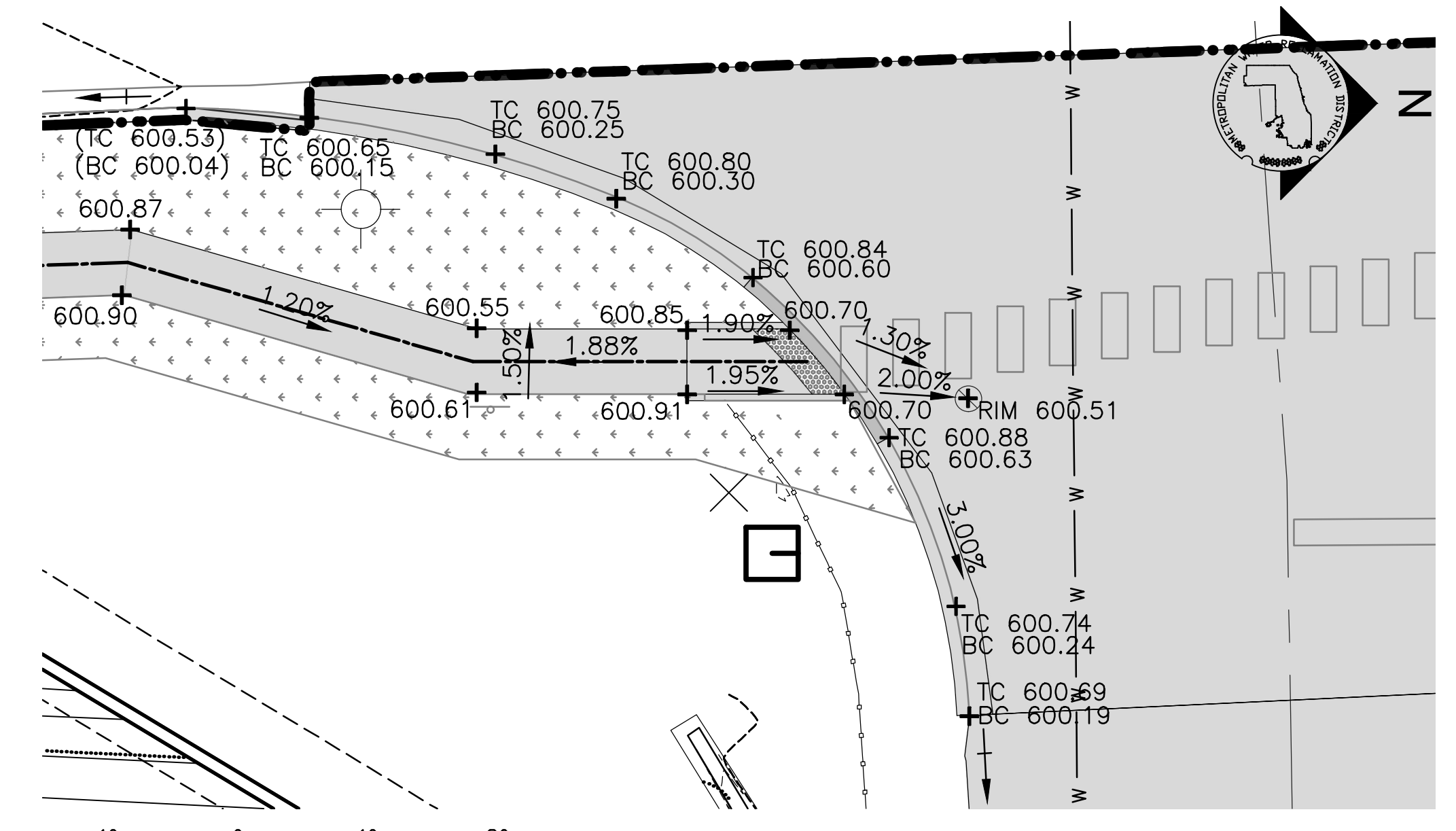
**LEGEND:**

- |                |  |         |                              |
|----------------|--|---------|------------------------------|
| --- 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                  |
| [Pattern]      | ASPHALT PAVEMENT, SEE LM SERIES FOR MATERIALS/FINISHES | + BW    | BOTTOM OF WALL               |
| [Pattern]      | CURB AND GUTTER  | 4.99%   | DIRECTION & PERCENT OF SLOPE |
| [Pattern]      | DETECTABLE WARNING STRIP                               | 5:1     | H:V SLOPE DESIGNATION        |
| [Box]          | ENLARGEMENT BOX  |         |                              |

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



**KEY MAP**



**1 CURB RAMP ENLARGEMENT**  
SCALE: 1"=10'

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

**CONTRACT 14-253-5F**  
 FLOOD CONTROL PROJECT ON  
 MIDLOTHIAN CREEK IN ROBBINS, CSA  
 LITTLE CALUMET RIVER WATERSHED  
**PARTIAL GRADING PLAN**

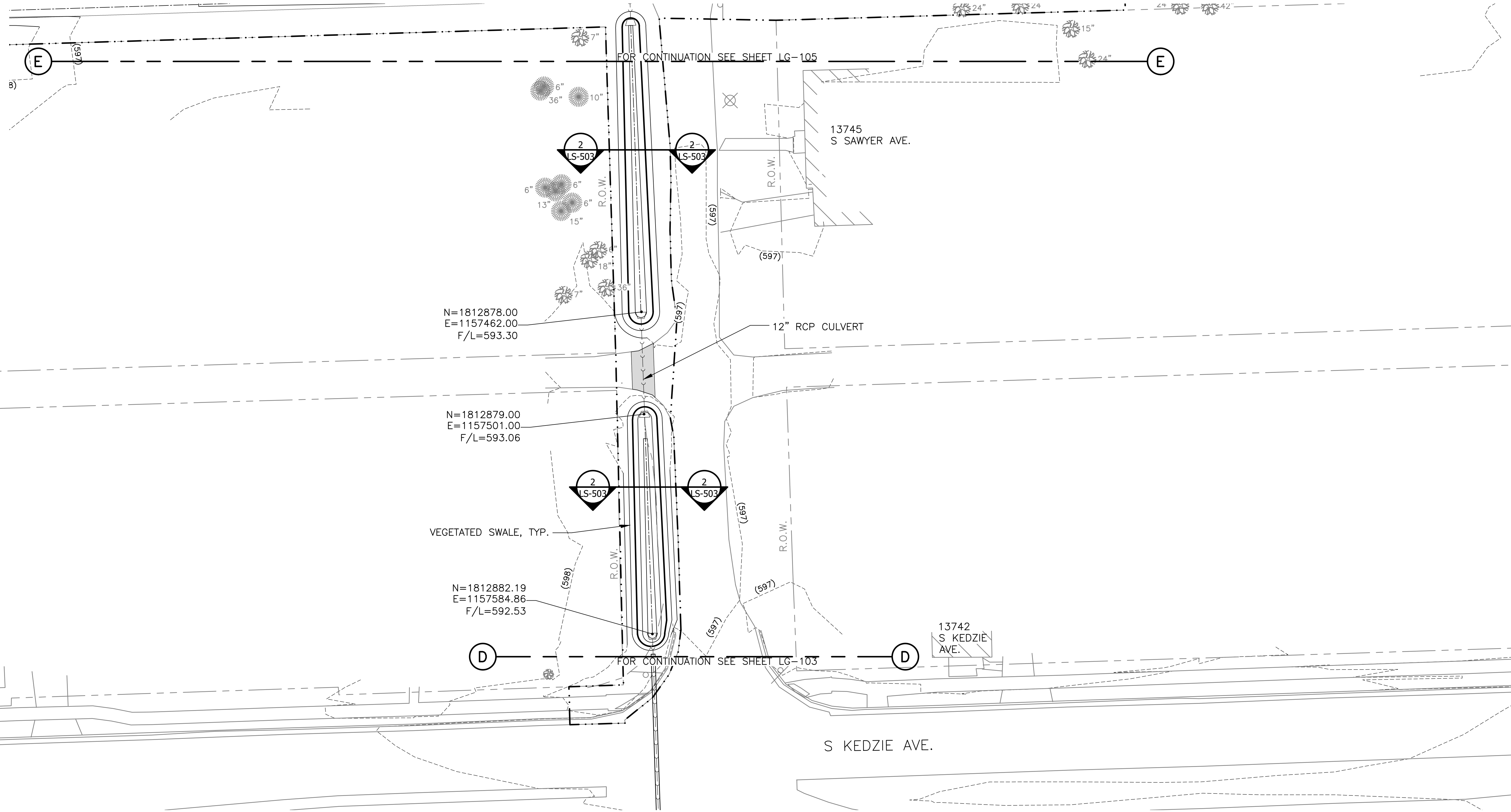
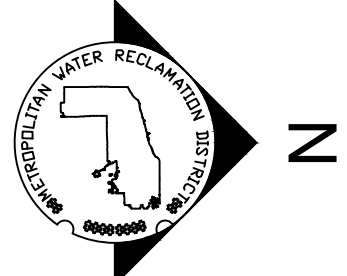
Designed by: LH  
 Drawn by: LH  
 Date: FEB 2024

Checked by: LH  
 Reviewed by: LH  
 Scale: AS SHOWN

**DONOHUE**  
 Accurate  
 CONSULTING ENGINEERS

**LIVING HABITATS**

Sheet Number:  
**LG-103**  
 Page Number: 104



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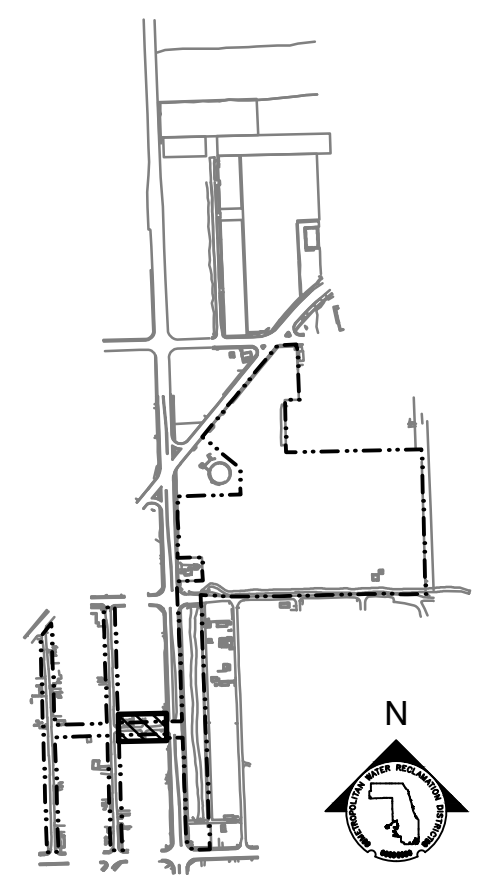
**PARTIAL GRADING PLAN - 138TH ST**  
SCALE = 1"=20'

**GRADING NOTES:**

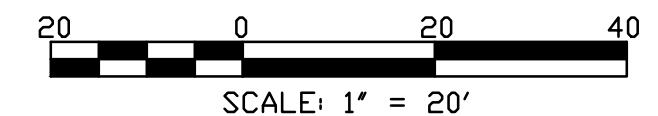
1. REFERENCE NOTES ON GRADING DRAWING LG-101.
2. SEE DRAWING CU-101 FOR CULVERT INFORMATION.

**LEGEND:**

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	W.O.U.S.	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
		GUARDRAIL	+ BC	BOTTOM OF CURB
		MOWN LAWN PATH/LANDING	+ TW	TOP OF WALL
		SIDEWALK, SEE LM SERIES FOR MATERIALS/FINISHES	+ BW	BOTTOM OF WALL
			4.99%	DIRECTION & PERCENT OF SLOPE
			5:1	H:V SLOPE DESIGNATION
		ENLARGEMENT BOX		



**KEY MAP**



SCALE: 1" = 20'

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

Designed by: MLM	Checked by: PMS	Drawn by: MLM	Reviewed by: EPC	Date: FEB 2024	Scale: AS SHOWN
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**LIVING HABITATS**

**DONOHUE**

**Accurate**

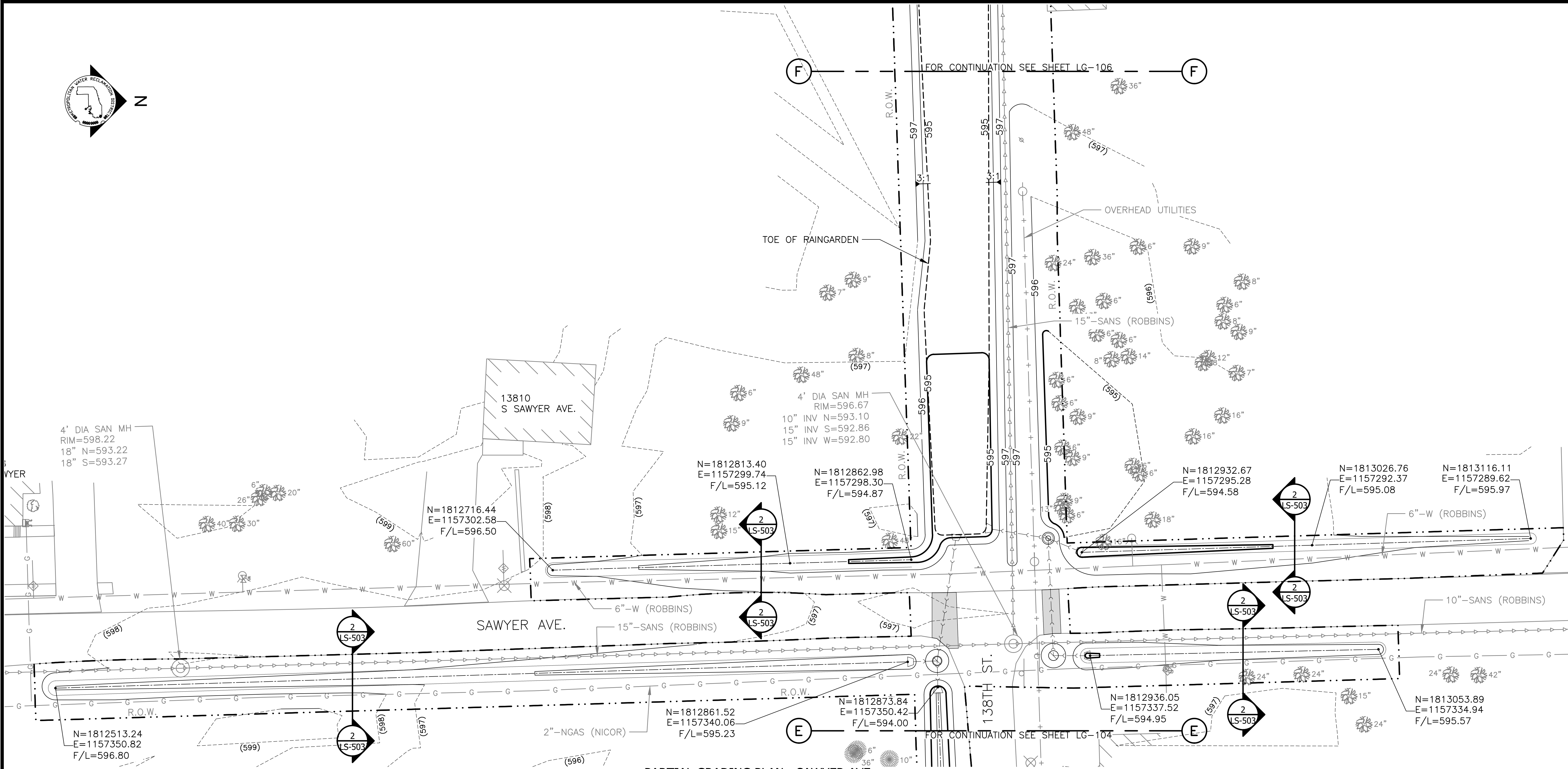
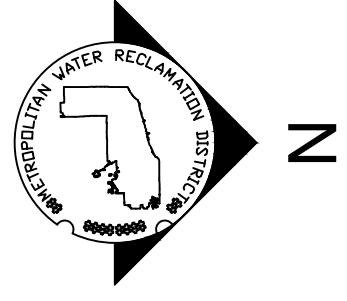
**Zim**

**O'Brien & Associates, Inc.**  
CONSULTING ENGINEERS

**CONTRACT 14-253-5F**  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, CSA  
LITTLE CALUMET RIVER WATERSHED  
**PARTIAL GRADING PLAN**

Sheet Number:  
**LG-104**  
Page Number: 105

P:\13278chi\Drawings\14-253-3F\Landscape\Sheets\14-253-BF\LG-105.dwg 1/31/2024 9:26 AM



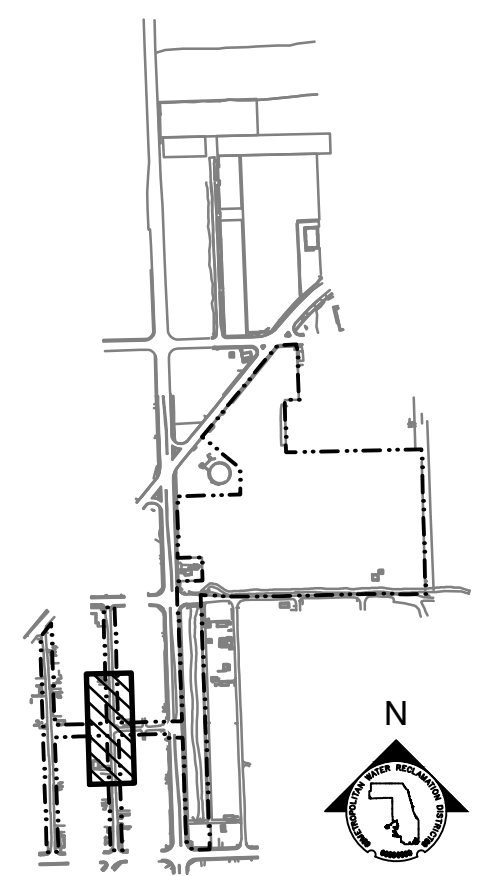
**PARTIAL GRADING PLAN - SAWYER AVE**  
SCALE = 1"=20'

**GRADING NOTES:**

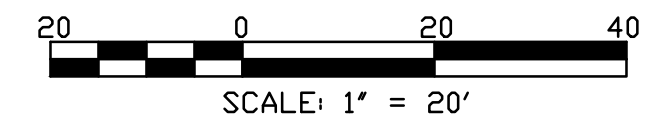
1. REFERENCE NOTES ON GRADING DRAWING LG-101.
2. SEE DRAWING CU-101 FOR CULVERT INFORMATION.

**LEGEND:**

	L.O.W.	LIMIT OF WORK		MEX	MEET EXISTING ELEVATION
	W.O.U.S.	WATERS OF UNITED STATES (W.O.U.S.)		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
		GUARDRAIL		+ BC	BOTTOM OF CURB
		MOWN LAWN PATH/LANDING		+ TW	TOP OF WALL
		SIDEWALK, SEE LM SERIES FOR MATERIALS/FINISHES		+ BW	BOTTOM OF WALL
		ENLARGEMENT BOX		4.99%	DIRECTION & PERCENT OF SLOPE
				5:1	H:V SLOPE DESIGNATION



**KEY MAP**



SCALE: 1" = 20'

Rev.	Description	Appr.	Date

**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

**LIVING HABITATS**

**DONOHUE**

**Accurato**

**Zim**

**O'Brien & Associates, Inc.**

Checked by: PMS  
Designed by: MLM

Reviewed by: EPC  
Drawn by: MLM

Date: FEB 2024  
Scale: AS SHOWN

**CONTRACT 14-253-5F**  
FLOOD CONTROL PROJECT ON  
MIDLOTHIAN CREEK IN ROBBINS, CSA  
LITTLE CALUMET RIVER WATERSHED  
**PARTIAL GRADING PLAN**

Sheet Number:  
**LG-105**  
Page Number: 106

