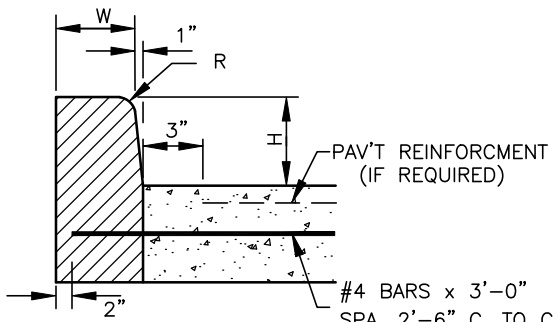
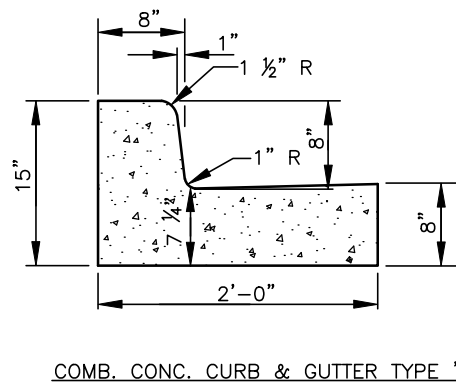
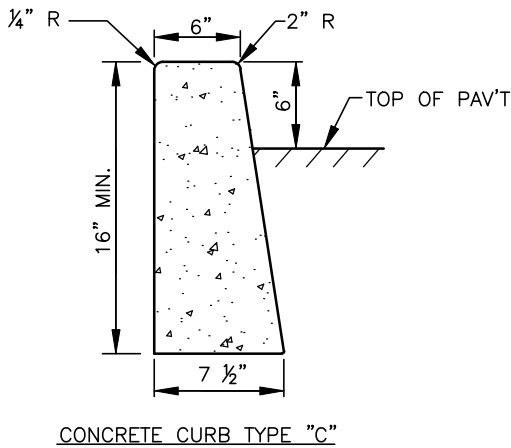
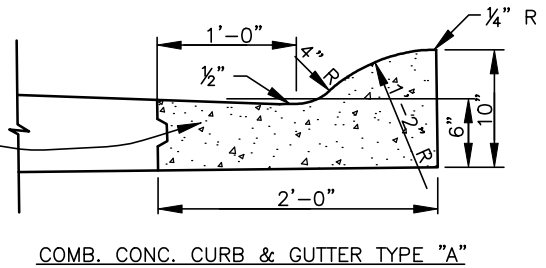
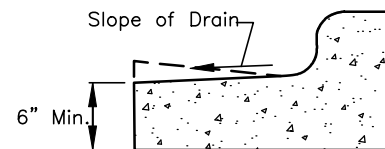


NOTE:
FOR USE ONLY WITH
THE APPROVAL OF THE
CITY ENGINEER



	6" CURB	8" CURB
H	6"	8"
W	6"	7"
R	2"	1 1/2"



NOTES:

1. MINIMUM CURB RADII AT STREET INTERSECTIONS SHALL BE 15 FEET.
2. ALL CONCRETE CURB AND SIDEWALK TO BE CONSTRUCTED OF CLASS "A" CONCRETE.

PREPARED BY: DLZ INDIANA, LLC



Brian M. Smith
2/1/2022

APPROVED/REVISED BY THE BOARD OF PUBLIC WORKS & SAFETY

ITEM	REVISION	APPROVED DATE
	EFFECTIVE	APRIL 2007
	REVISED	FEBRUARY 2008
	REVISED	FEBRUARY 2022



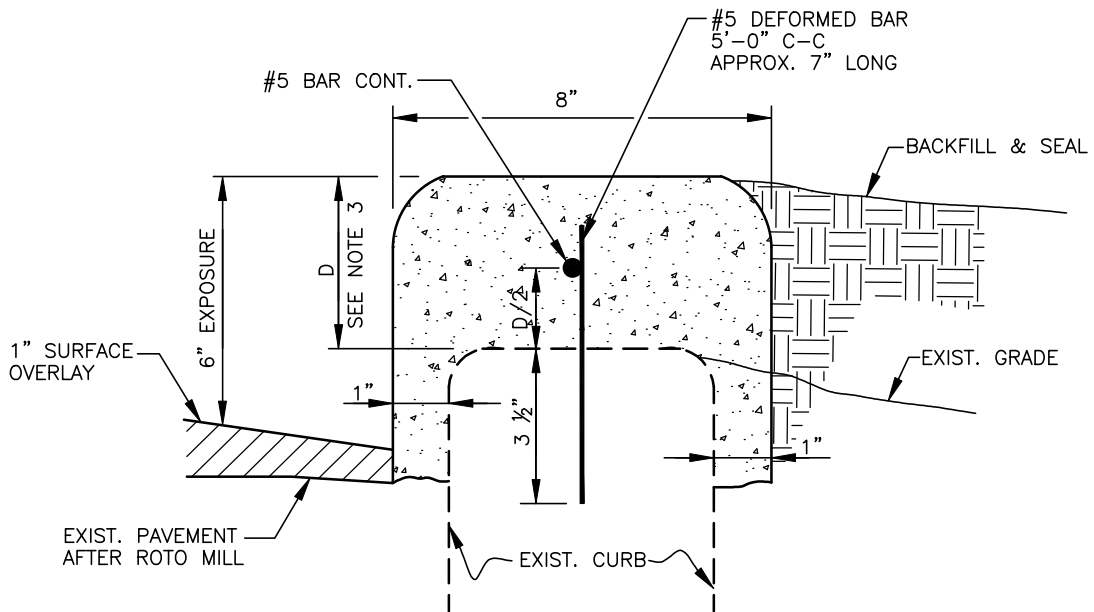
CITY OF MISHAWAKA, INDIANA

ENGINEERING STANDARDS

CURB DETAILS

SHT. NO.

III-1



CURB CAPPING DETAIL

NOTES:

1. SAW CUT CONTROL JOINT EVERY 10'-0" C-C.
2. CLEAN TOP OF CURB BEFORE CAPPING.
3. 4" MIN. CURB CAP DEPTH, IF LESS THAN 4" REMOVE TOP OF EXISTING CURB.

PREPARED BY: DLZ INDIANA, LLC



Brian M. Smith
2/1/2022

APPROVED/REVISED BY THE BOARD OF PUBLIC WORKS & SAFETY



CITY OF MISHAWAKA, INDIANA

ENGINEERING STANDARDS

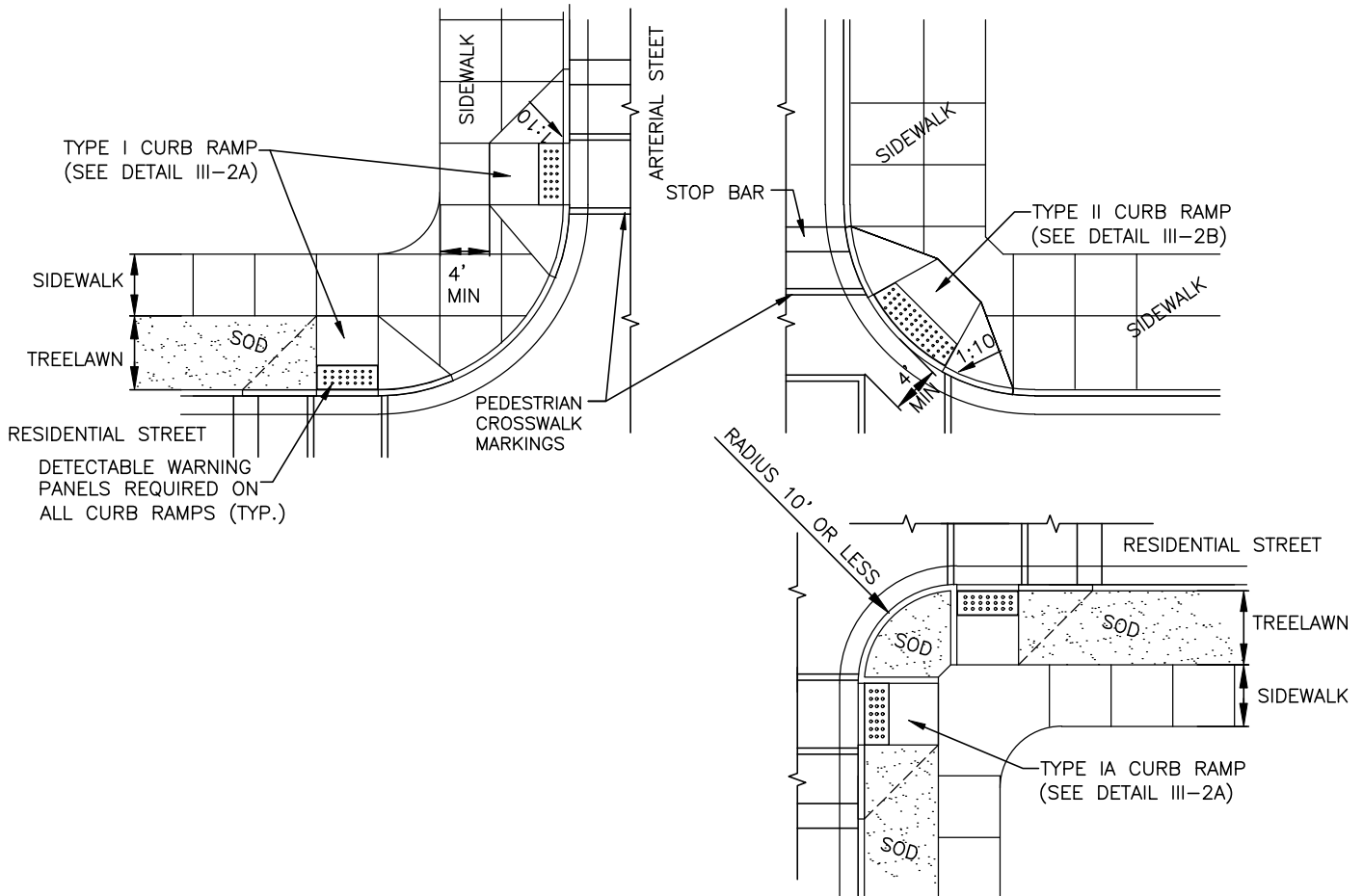
ITEM	REVISION	APPROVED DATE
	EFFECTIVE	APRIL 2007
	REVISED	FEBRUARY 2022

CURB CAPPING DETAIL

SHT. NO.

III-1A

SIDEWALK CURB RAMP TYPICAL LOCATION PLAN



NOTES:

1. CURB RAMPS ARE TO BE LOCATED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
2. SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE SLOPE OF THE RAMP.
3. EXPANSION JOINTS FOR THE RAMP SHALL BE A MAX. 1/2" WIDE. THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH ADJACENT CONCRETE.
4. SIDEWALKS SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK, BUT NO DETECTABLE WARNINGS ARE REQUIRED AT DRIVE RAMPS. 2% MAXIMUM CROSS SLOPE SHALL EXTEND THROUGH ALL DRIVEWAY CROSSINGS AND BE A MIN. 4' WIDTH.
5. CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON ALL RAMPS, WITH NO BREAKS IN GRADE.
6. DRAINAGE STRUCTURES SHALL NOT BE PLACED IN LINE WITH RAMPS. LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER LOCATION OF DRAINAGE STRUCTURE, EXCEPT WHERE EXISTING DRAINAGE STRUCTURES ARE BEING UTILIZED IN THE NEW CONSTRUCTION. DRAINAGE STRUCTURES, IN NEW CONSTRUCTION, SHALL BE PLACED UPSTREAM OF THE RAMP UNLESS OTHERWISE APPROVED BY THE ENGINEER.
7. THE NORMAL GUTTER LINE PROFILE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP. RAMPS SHOULD BE LOCATED TO AVOID PONDING.
8. CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC 4 FEET SHORT OF RAMP CROSSINGS, IN ACCORDANCE WITH CURRENT MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES.
9. RAMPS SHALL BE PROVIDED AT ALL CORNERS OF STREET INTERSECTIONS WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMPS SHALL ALSO BE PROVIDED AT MID-BLOCK WALK LOCATIONS IN THE VICINITIES OF HOSPITALS, MEDICAL CENTERS, AND ATHLETIC STADIUMS.
10. WHEN THE INTERSECTION IS NOT SIGNALIZED, SIDEWALK RAMPS SHALL BE PLACED ON THE RESIDENTIAL STREETS ONLY. WHEN INTERSECTION IS SIGNALIZED, SIDEWALK RAMPS SHALL BE PLACED ON BOTH RESIDENTIAL STREET AND ARTERIAL STREET SIDE.
11. DETECTABLE WARNING PANELS ARE REQUIRED AT ALL CURB RAMPS. PANELS SHALL BE VITRIFIED POLYMER COMPOSITE (VPC) CAST IN PLACE DETECTABLE/TACTILE WARNING SURFACE TILES WITH TRUNCATED DOMES, COLONIAL RED COLOR NO. 20109, AS MANUFACTURED BY ARMOR-TILE OR APPROVED EQUAL. PANELS SHALL BE 24" X FULL RAMP WIDTH, LARGEST PANEL WIDTHS SHALL BE USED TO MEET THE REQUIRED CURB RAMP WIDTH. SEE THE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
12. THE AMERICAN WITH DISABILITIES ACT OF 1990 (ADA) REQUIREMENTS (AND ANY REVISED OR UPDATED SUPPLEMENTS THERETO) MAY EXCEED THE CITY OF MISHAWAKA ENGINEERING STANDARDS. IN CASE OF SUCH OCCURRENCES, THE AMERICAN WITH DISABILITIES ACT OF 1990 (ADA) STANDARDS SHALL SUPERCEDE THE CITY OF MISHAWAKA ENGINEERING STANDARDS.

PREPARED BY: DLZ INDIANA, LLC



Brian M. Smith
2/1/2022

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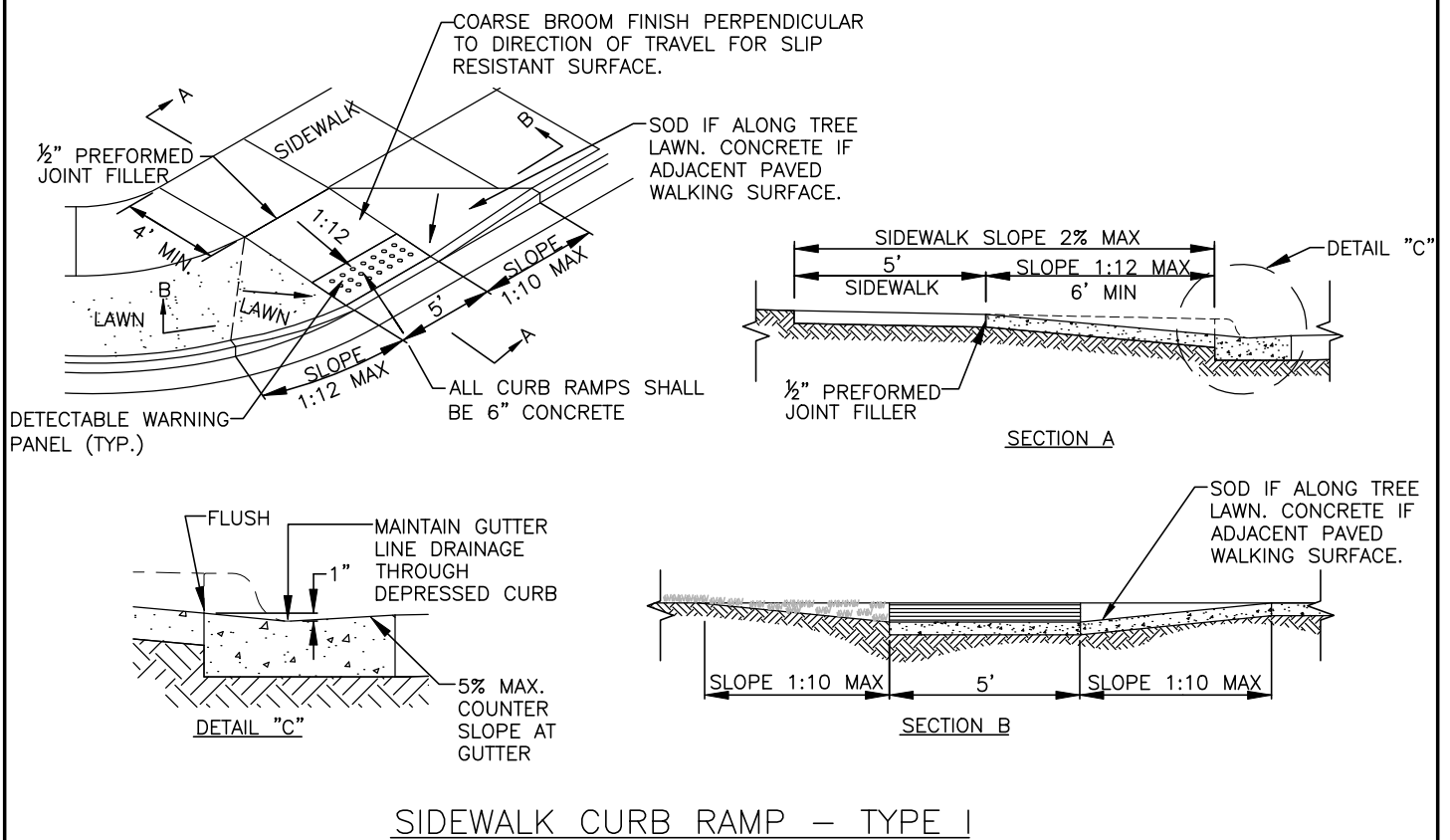
CITY OF MISHAWAKA, INDIANA

ENGINEERING STANDARDS

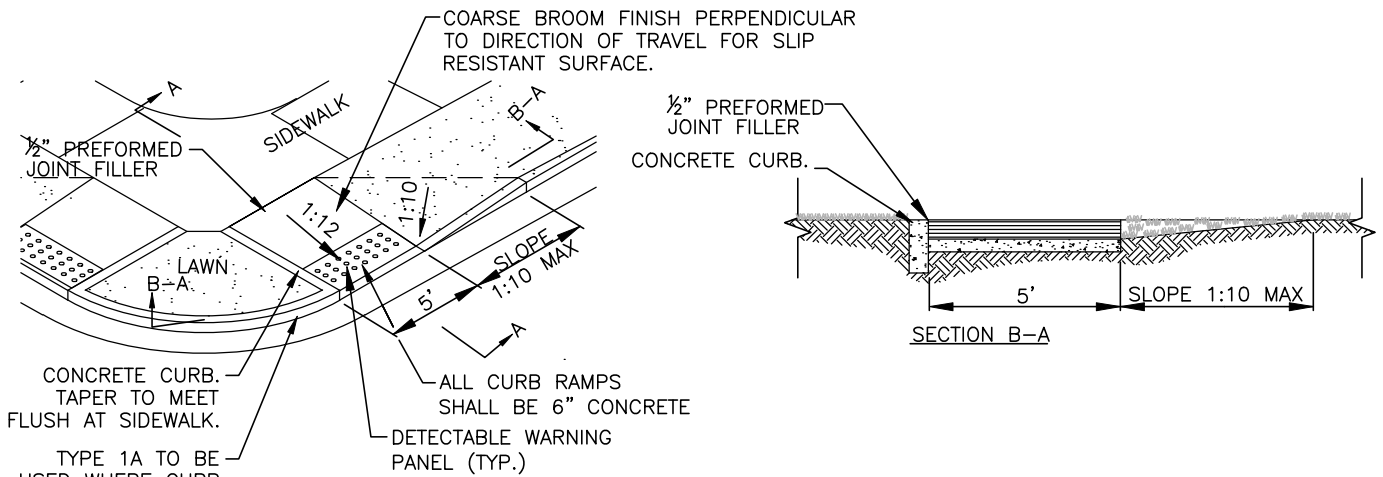
ITEM	REVISION	APPROVED DATE
	EFFECTIVE	APRIL 2007
	REVISED	MARCH 2013
	REVISED	FEBRUARY 2022

**SIDEWALK CURB RAMP
LOCATION PLAN & NOTES**

SHT. NO.
III-2



SIDEWALK CURB RAMP – TYPE I



SIDEWALK CURB RAMP – TYPE IA

TYPE I TO BE USED FOR NEW CONSTRUCTION WHEREVER POSSIBLE. TYPE IA TO BE USED ONLY FOR EXISTING CONDITIONS AND WITH PRIOR APPROVAL BY THE ENGINEER. TYPE II TO BE USED ONLY WITH PRIOR APPROVAL BY THE ENGINEER.

PREPARED BY: DLZ INDIANA, LLC



Brian M. Smith
2/1/2022

NOTES:

- FOR GENERAL NOTES AND TYPICAL LOCATIONS FOR EACH CURB TYPE, SEE SHEET III-2.
- ALL CURB RAMP DIMENSIONS BASED ON 6" CURB HEIGHT AND SHALL BE PROPORTIONALLY ADJUSTED FOR OTHER CURB HEIGHTS.
- DETECTABLE WARNING PANELS REQUIRED ON ALL CURB RAMP, SEE SHEET III-2.
- IF LATEST AMERICAN WITH DISABILITIES ACT (1990 ADA), OR THE MOST CURRENT REVISED OR UPDATED ADA, REQUIREMENTS EXCEED THE CITY OF MISHAWAKA ENGINEERING, THE AMERICAN WITH DISABILITIES ACT STANDARDS SHALL SUPERCEDE THE CITY OF MISHAWAKA ENGINEERING STANDARDS.

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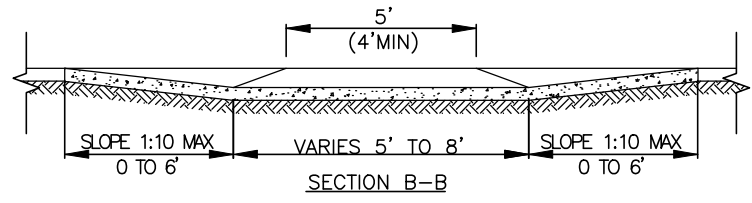
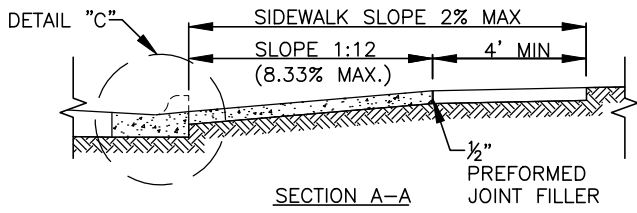
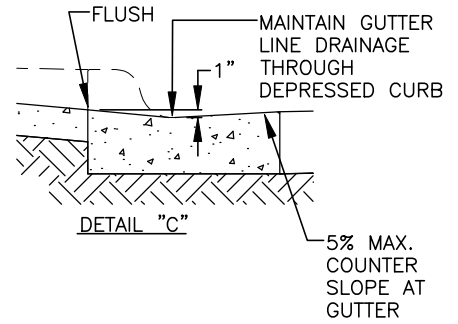
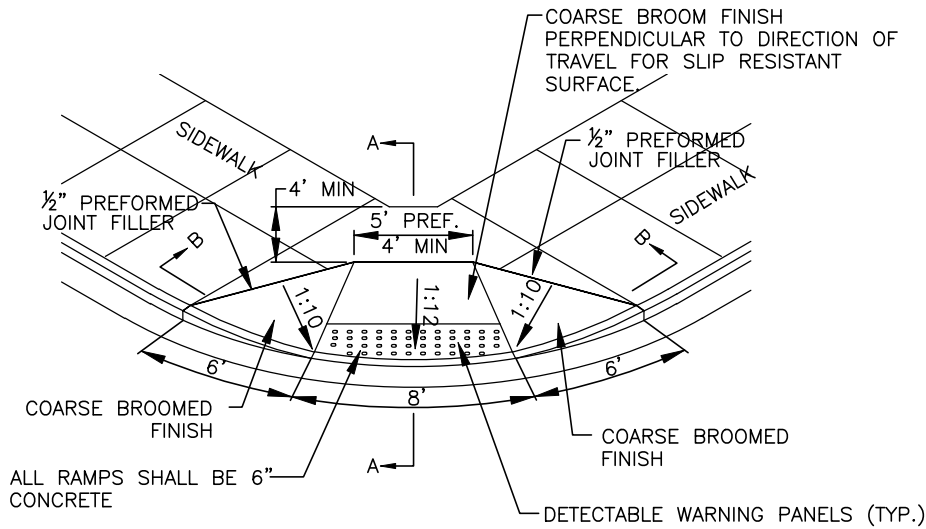
CITY OF MISHAWAKA, INDIANA

ENGINEERING STANDARDS

ITEM	REVISION	APPROVED DATE
	EFFECTIVE	APRIL 2007
	REVISED	MARCH 2013
	REVISED	FEBRUARY 2022

SIDEWALK CURB RAMP
TYPE I & IA

SHT. NO.
III-2A



SIDEWALK CURB RAMP – TYPE II

TYPE I TO BE USED FOR NEW CONSTRUCTION WHEREVER POSSIBLE. TYPE IA TO BE USED ONLY FOR EXISTING CONDITIONS AND WITH PRIOR APPROVAL BY THE ENGINEER. TYPE II TO BE USED ONLY WITH PRIOR APPROVAL BY THE ENGINEER.

PREPARED BY: DLZ INDIANA, LLC



Brian M. Smith
2/1/2022

NOTES:

- FOR GENERAL NOTES AND TYPICAL LOCATIONS FOR EACH CURB TYPE, SEE SHEET III-2.
- ALL CURB RAMP DIMENSIONS BASED ON 6" CURB HEIGHT AND SHALL BE PROPORTIONALLY ADJUSTED FOR OTHER CURB HEIGHTS.
- DETECTABLE WARNING PANELS REQUIRED ON ALL CURB RAMPS, SEE SHEET III-2.
- IF LATEST AMERICAN WITH DISABILITIES ACT (1990 ADA), OR THE MOST CURRENT REVISED OR UPDATED ADA, REQUIREMENTS EXCEED THE CITY OF MISHAWAKE ENGINEERING, THE AMERICAN WITH DISABILITIES ACT STANDARDS SHALL SUPERCEDE THE CITY OF MISHAWAKE ENGINEERING STANDARDS.

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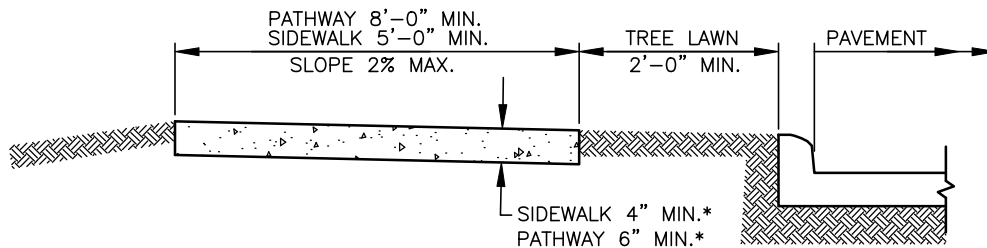
CITY OF MISHAWAKE, INDIANA

ITEM	REVISION	APPROVED DATE
	ADOPTED: NEW	MARCH 2013
	REVISED	FEBRUARY 2022

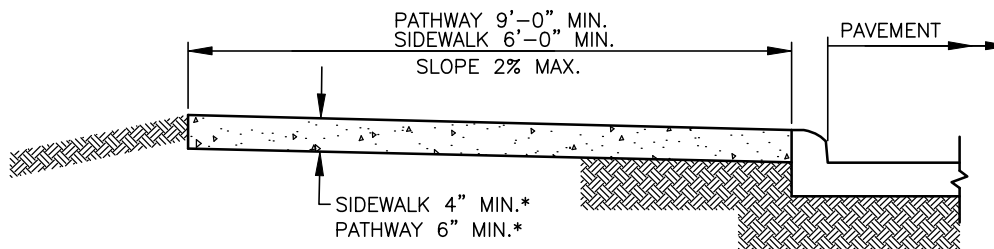
ENGINEERING STANDARDS

SIDEWALK CURB RAMP
TYPE II

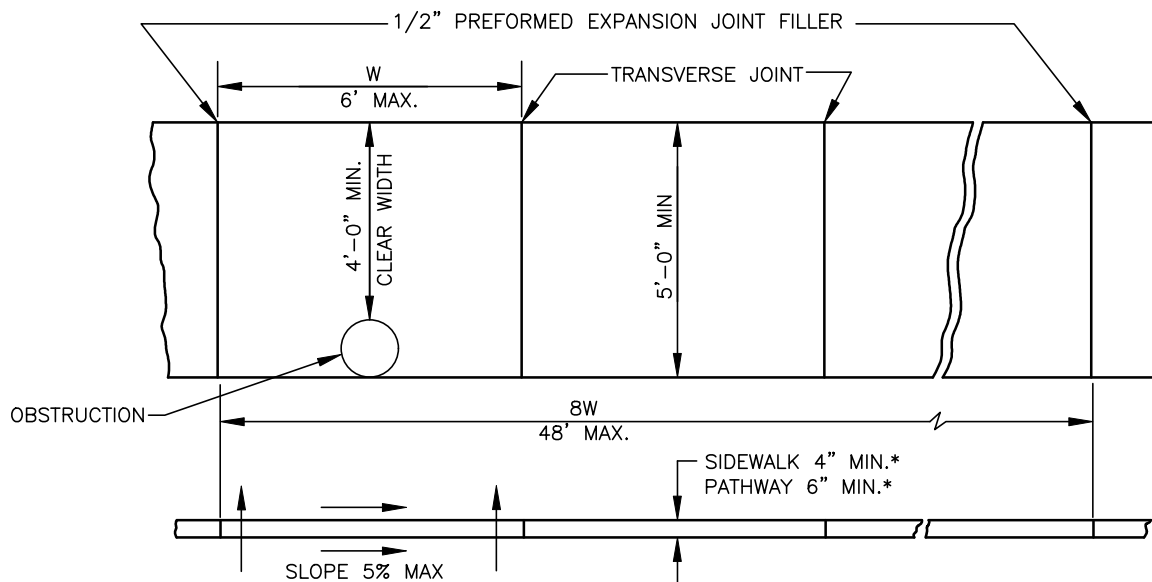
SHT. NO.
III-2B



SECTION THROUGH SIDEWALK WITH TREE LAWN



SECTION THROUGH SIDEWALK ADJACENT TO CURB

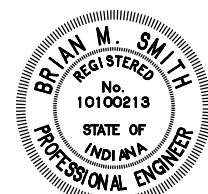


CONCRETE SIDEWALK

NOTES:

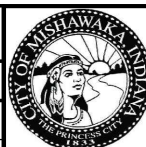
1. CLASS "A" CONCRETE - 6 BAG MIX. MINIMUM COMPRESSION STRENGTH SHALL BE 4,000 PSI.
 2. TRANSVERSE JOINTS SHALL BE TROWELED/TOOLED WITH A JOINTER HAVING A RADIUS OF 1/4" AT SPACING AS INDICATED OR DIRECTED BY THE ENGINEER.
 3. IF LATEST AMERICAN WITH DISABILITIES ACT (1990 ADA), OR THE MOST CURRENT REVISED OR UPDATED ADA, REQUIREMENTS EXCEED THE CITY OF MISHAWAKA ENGINEERING, THE AMERICAN WITH DISABILITIES ACT STANDARDS SHALL SUPERCEDE THE CITY OF MISHAWAKA ENGINEERING STANDARDS.
 4. 4'-0" MIN. CLEAR SIDEWALK WIDTH SHALL BE MAINTAINED AROUND ANY OBSTRUCTION WITHIN THE SIDEWALK.
 5. MAXIMUM CROSS SLOPE SHALL BE 2%
 6. MAXIMUM RUNNING SLOPE SHALL BE 5%. IF THE EXISTING ROAD GRADE IS GREATER THAN 5% CONSULT WITH THE ENGINEER.
- * SIDEWALK AND PATHWAY THICKNESS TO BE MIN. 6" THROUGH RESIDENTIAL DRIVEWAYS AND 8" THROUGH COMMERCIAL DRIVEWAYS (REFER TO DRIVEWAY APPROACH DETAILS.)

PREPARED BY: DLZ INDIANA, LLC



Brian M. Smith
2/1/2022

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CITY OF MISHAWAKA, INDIANA

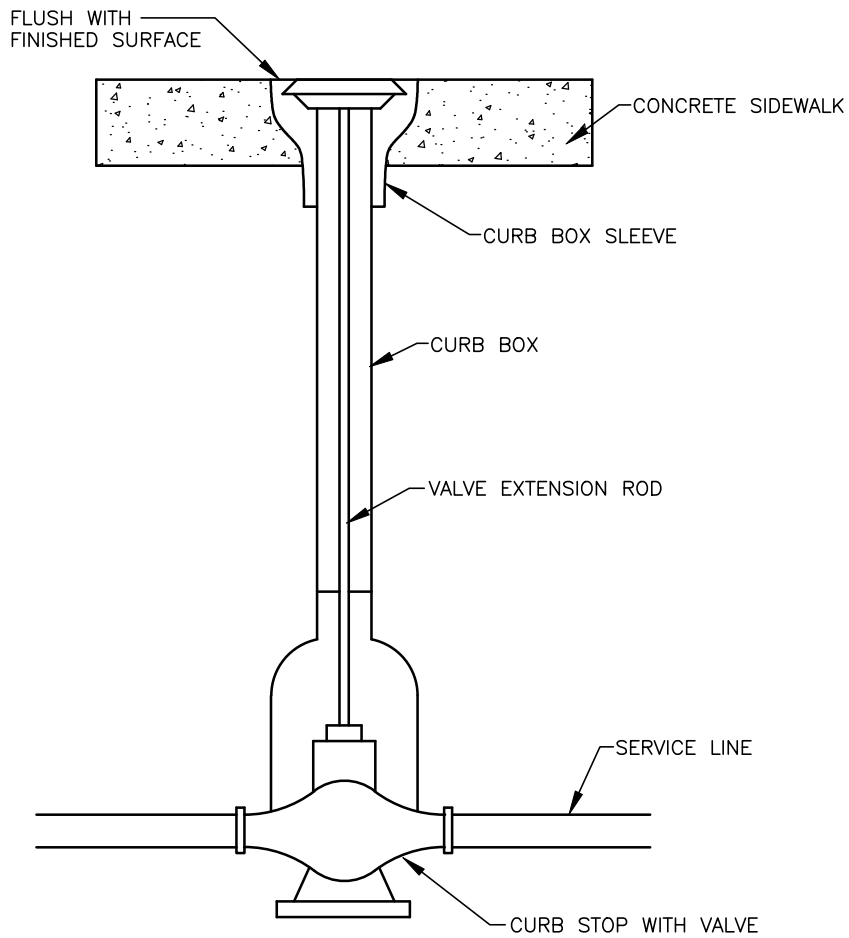
ENGINEERING STANDARDS

ITEM	REVISION	APPROVED DATE
	EFFECTIVE	APRIL 2007
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	REVISED	FEBRUARY 2022

SIDEWALK DETAIL

SHT. NO.

III-3



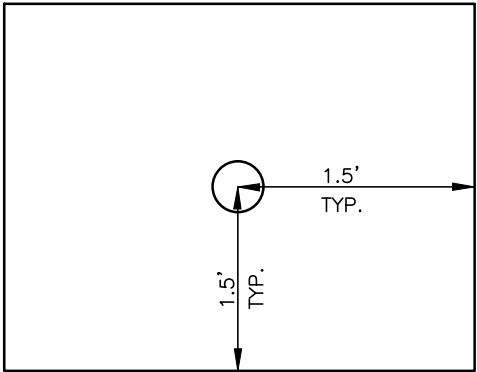
NOTES:

1. REMOVE CAP. (UNSCREW CAP)
2. IF REPLACEMENT OF THE CURB BOX SLEEVE IS REQUIRED, CONTACT THE MISHAWAKA UTILITIES WATER DIVISION (TEL. 574-258-1652). CURB BOXES WILL BE PROVIDED BY THE MISHAWAKA UTILITIES WATER DIVISION.
3. SLIDE SLEEVE OVER BOX.
4. REPLACE CAP.
5. IF BOX IS HIGH OR LOW, IT WILL SLIDE UP OR DOWN SIX INCHES (6"). IF YOU ARE UNABLE TO ADJUST, CALL THE MISHAWAKA UTILITIES WATER DIVISION FOR ASSISTANCE.
6. ONCE THE BOX IS SET, WRAP A PLASTIC BAG AROUND THE BOX SLEEVE. THIS WILL AVOID CONCRETE FROM RUNNING INTO THE BOX. WHEN CONCRETE IS DRY, CUT PLASTIC WITH KNIFE AND REMOVE.
7. IF YOU ENCOUNTER ANY PROBLEMS, CALL THE WATER DIVISION BEFORE POURING SO THEY MAY MAKE CORRECTIONS. IF SIDEWALK REMOVAL IS REQUIRED TO CORRECT OR REPLACE THE BOX SLEEVE, THE CONTRACTOR WILL BE CHARGED FOR SIDEWALK REMOVAL AND REPLACEMENT.

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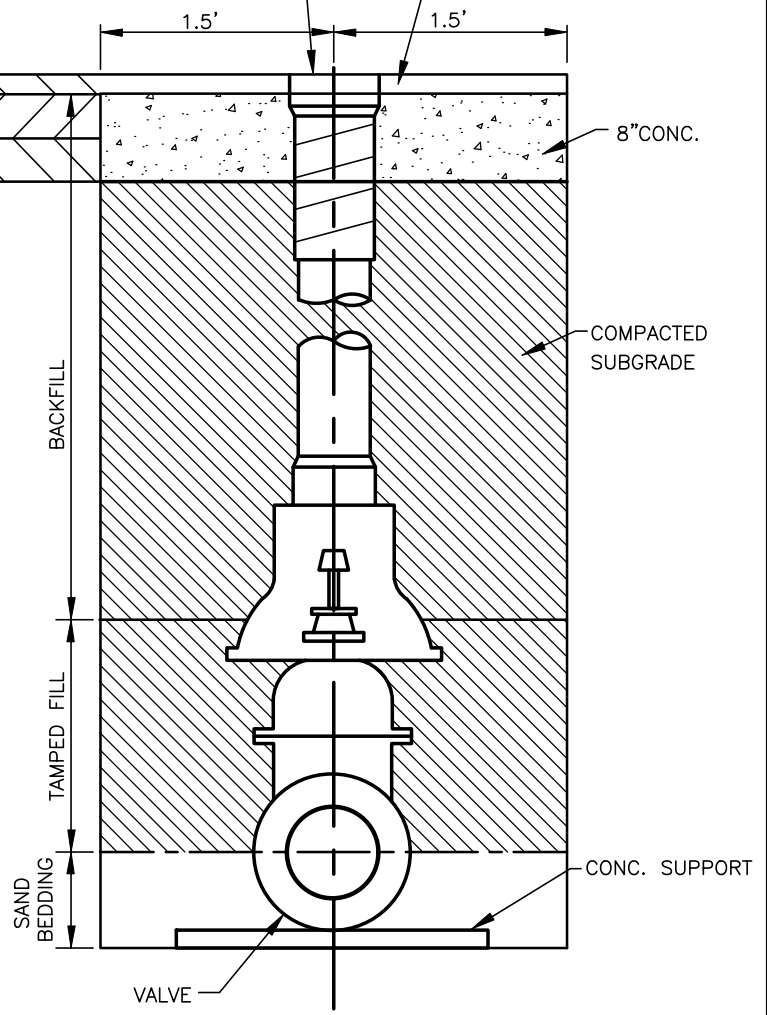
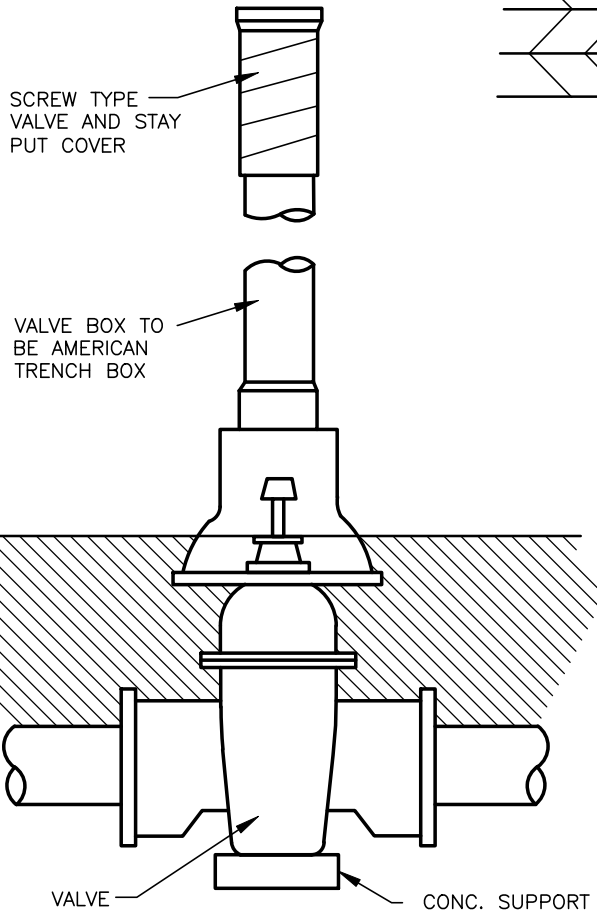
Andrew C. Lemberis
02-01-2022

APPROVED/REVISED BY THE BOARD OF PUBLIC WORKS & SAFETY				CITY OF MISHAWAKA, INDIANA	
ITEM	REVISION	APPROVED DATE		ENGINEERING STANDARDS	
	EFFECTIVE	APRIL 2007	CURB BOX SLEEVE ADJUSTMENT/REPLACEMENT		
	REVISED	FEBRUARY 2022			



COVER SHALL BE FLUSH WITH SURFACE OR FINISHED GRADE

PROJECT TYPE AND THICKNESS OF SURFACE



NOTES:

1. IF REPLACEMENT OF THE VALVE BOX IS REQUIRED, CONTACT THE MISHAWAKA UTILITIES WATER DIVISION (TEL. 574-258-1652). CURB BOXES WILL BE PROVIDED BY THE MISHAWAKA UTILITIES WATER DIVISION.
2. VALVE BOX SHALL BE CAST IRON VALVE BOXES PER THE MISHAWAKA UTILITIES WATER DIVISION, NO SUBSTITUTES ARE ALLOWED.
3. CONTRACTOR SHALL VERIFY PROPER BURY DEPTH AND CORRESPONDING BOX DEPTH THAT MATCHES.
4. VALVE BOX SHALL BE FIRMLY SUPPORTED AND SHALL BE PLACED CENTER AND PLUMB OVER THE WRENCH NUT OF THE VALVE.
5. INTERIOR AND EXTERIOR SURFACES OF THE BOX SHALL BE PAINTED WITH HOT PITCH VARNISH.
6. IF YOU ENCOUNTER ANY PROBLEMS, CALL THE WATER DIVISION BEFORE POURING SO THEY MAY MAKE CORRECTIONS. IF SIDEWALK OR ROADWAY REMOVAL IS REQUIRED TO CORRECT OR REPLACE THE BOX SLEEVE, THE CONTRACTOR WILL BE CHARGED FOR THE SIDEWALK OR ROADWAY REMOVAL AND REPLACEMENT.

PREPARED BY: DLZ INDIANA, LLC

Andrew C. Lemberis
02-01-2022

APPROVED/REVISED BY THE BOARD OF PUBLIC WORKS & SAFETY				CITY OF MISHAWAKA, INDIANA				
ITEM	REVISION	APPROVED DATE		ENGINEERING STANDARDS				
	EFFECTIVE	APRIL 2007	VALVE BOX ADJUSTMENT/REPLACEMENT					
	REVISED	MARCH 2013				SHT. NO. III-5		
	REVISED	FEBRUARY 2022						