

# ENGINEERING STANDARD DRAWINGS

Nathan Lang, City Engineer





**ENGINEERING DIVISION**  
**STANDARD CONSTRUCTION DRAWINGS**  
**REFERENCE INDEX**

DESCRIPTION	NUMBER	DATE
<b>COMMUNICATION</b>		
TRACER WIRE STATION	COMM-01	6/12/2020
COMMUNICATION MANHOLE	COMM-02	2/15/2022
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3'x6' COMM. UTILITY BOX	COMM-04	5/16/2022
ELEC./COMM. DUCT BANK ENCASEMENT	COMM-05	2/15/2022
<b>ROADWAY</b>		
TYPICAL PAVEMENT SECTION – 50' R/W	RD-01	2/15/2022
TYPICAL PAVEMENT SECTION – 60' R/W	RD-01	2/15/2022
COMBINED CURB AND GUTTER	RD-02	4/15/2019
STRAIGHT 18" CONCRETE CURB	RD-03	4/15/2019
RESIDENTIAL APPROACH TYPE 1	RD-04	11/21/2023
RESIDENTIAL APPROACH TYPE 2	RD-04	11/21/2023
SIDEWALK	RD-05	4/15/2019
SIDEWALK WITH BRICK PAVERS	RD-06	4/15/2019
RECREATIONAL PATHWAY	RD-07	2/15/2022
BRICK STREET TRENCH REPAIR	RD-08	4/15/2019
DECORATIVE RAILING	RD-09	4/15/2019
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COMMERICAL APPROACH TYPE 2	RD-10	2/15/2022
COMMERICAL APPROACH TYPE 3	RD-10	2/15/2022
COMMERCIAL APPROACH GUTTER	RD-11	3/24/2020
TREE PLANTING & GRATE – TYPE A	RD-12	2/15/2022
TREE PLANTING & GRATE – TYPE B	RD-13	2/15/2022
UTILITY TRENCH REPAIR FOR RESIDENTIAL & LOCAL STREETS	RD-14	2/15/2022
UTILITY TRENCH REPAIR FOR ARTERIAL STREETS	RD-15	2/15/2022
FULL CURB REPLACEMENT	RD-16	2/15/2022

## SANITARY SEWER

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ANTI INFILTRATION & INFLOW BARRIER	SS-01	4/15/2019
MANHOLE CASTING ADJUSTMENT IN PAVEMENT SECTION	SS-02	8/30/2019
SANITARY MANHOLE DETAILS	SS-03	4/15/2019

## STORM SEWER

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RESIDENTIAL ROOF DRAIN CONNECTION	STM-01	4/15/2019
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## WATER

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FIRE HYDRANT	WTR-01	4/15/2019
WATER SERVICE IN PAVEMENT	WTR-02	4/15/2019
CURB BOX INSTALLATION ¾" THRU 2"	WTR-03	2/15/2022

## TRAFFIC CONTROL

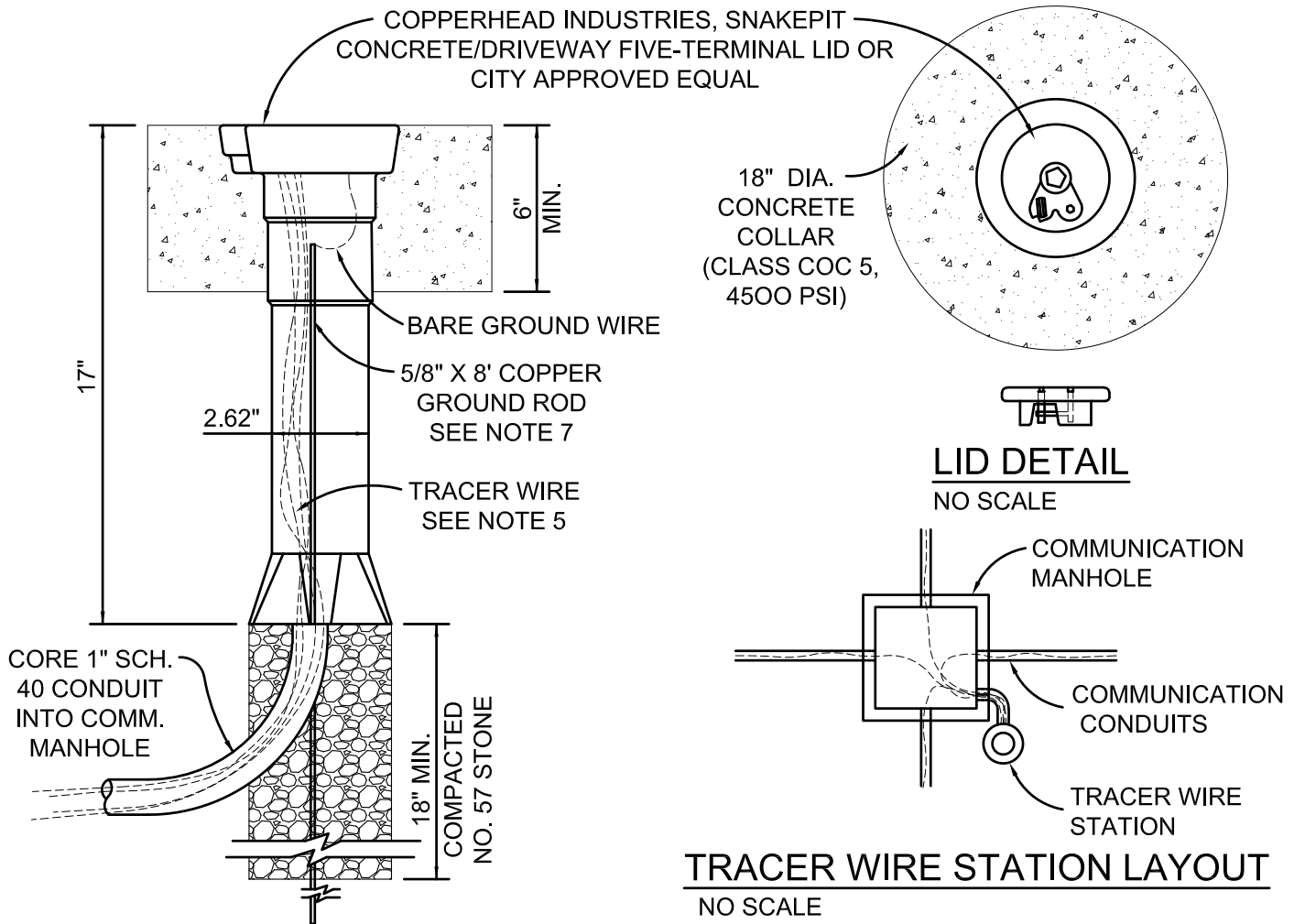
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PAVEMENT MARKINGS STANDARDS	TC-01	2/15/2022
PAVEMENT MARKINGS STANDARDS TURN LANE	TC-02	2/15/2022
PAVEMENT MARKINGS CROSSWALK DETAIL	TC-03	2/15/2022

## FIRE DEPARTMENT

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FIRE DEPARTMENT CONNECTION	FD-01	12/5/2023
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1. TRACER WIRE STATION SHALL BE COPPERHEAD INDUSTRIES SNAKEPIT CONCRETE/DRIVEWAY FIVE-TERMINAL LID OR CITY APPROVED EQUAL. WITH FOUR DIRECTIONAL TRACER WIRE & ONE GROUND CONNECTION, WITH JUMPER BAR INCLUDED. LID COLOR SHALL BE ORANGE FOR COMMUNICATIONS.
2. TRACER WIRE STATION SHALL BE INSTALLED AT EVERY COMMUNICATION MANHOLE. IF THE TRACER WIRE STATION IS SET IN LAWN THE STATION SHALL BE SET OPPOSITE SIDE FROM ROADWAY, STREET LIGHT, FIRE HYDRANT, ETC.
3. ALL TRACER WIRE SHALL BE TESTED FOR CONTINUITY IN THE PRESENCE OF THE CITY OF WESTERVILLE PRIOR TO ACCEPTANCE AND OR ASPHALT PLACEMENT. ANY TRACER WIRE FOUND NOT TO BE CONTINUOUS AFTER TESTING SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE PRIOR TO ACCEPTANCE AND OR ASPHALT PLACEMENT.
4. ALL TRACER WIRE SHALL BE RE-TESTED AT THE 1-YEAR WARRANTY INSPECTION. ANY TRACER WIRE FOUND NOT TO BE CONTINUOUS AFTER TESTING SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
5. TRACER WIRE SHALL BE #10 AWG COPPER CLAD STEEL WITH ORANGE 45 MIL HIGH DENSITY POLYETHYLENE INSULATION. LEAVE 1' EXCESS TRACER WIRE IN TRACER STATION, NO LOOPING OR COILING OF TRACER WIRE ALLOWED.
6. ONE TRACER WIRE PER DIRECTION OF CONDUIT BANK SHALL BE INSTALLED TO THE TERMINALS OF THE TRACER WIRE STATION LID. (I.E. NORTH, SOUTH, EAST, WEST). TRACER SHALL BE TAGGED WITH DIRECTION. CONNECTIONS SHALL BE MADE WITH DIELECTRIC SILICONE TO SEAL OUT MOISTURE AND CORROSION.
7. 5/8" X 8' COPPER GROUND ROD SHALL BE INSTALLED WITH EVERY STATION & INSIDE THE STATION. PROVIDE A BARE COPPER #6 AWG FROM THE GROUND ROD TO THE 5TH TERMINAL OF THE TRACER WIRE STATION LID. THE GROUND ROD SHALL BE INSTALLED APPROXIMATE 4-INCHES FROM THE LID/TOP.
8. CONDUITS SHALL BE CORED INTO COMMUNICATION MANHOLE AND SHALL BE SEALED PER COC ITEM 604.06 OR CITY APPROVED WATER TIGHT SEALER.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

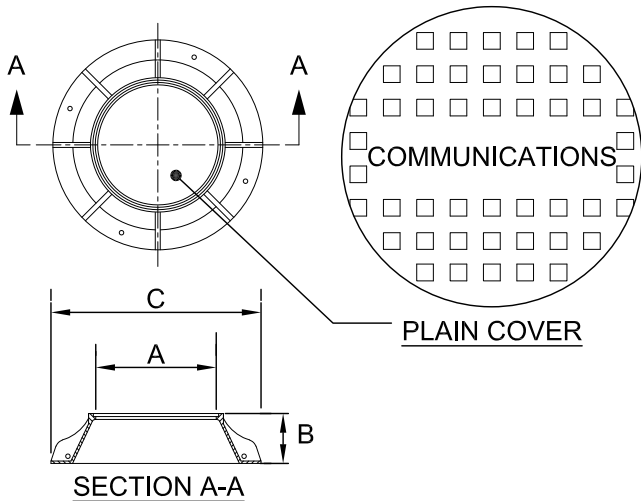
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CITY ENGINEER

6/12/20  
DATE

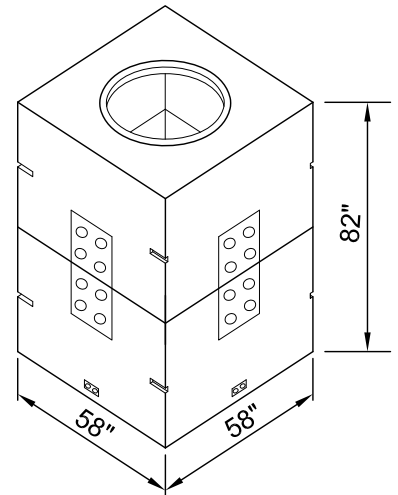
STANDARD CONSTRUCTION DRAWING  
**TRACER WIRE  
STATION**

**COMM-01**

SHEET 1 OF 1



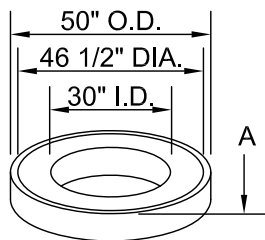
MANHOLE WITH DUCT  
TERMINATORS  
CASTING NO. 10-022T  
SCALE: NONE



DESCRIPTION	DIMENSIONS (IN.)			WEIGHT LBS
	A	B	C	
OPTION 3	30	5 5/8	46	600
OPTION 4	30	10	46	695

LOCATION	DIMENSIONS (IN.)		
	L	W	HT
INSIDE	48	48	72
OUTSIDE	58	58	82

HEAVY DUTY MANHOLE FRAME & COVER  
SCALE: NONE



DIMENSIONS (IN.)	WEIGHT (LBS)
12-080	705

LOCATION	THICKNESS	LOCATION	WEIGHT
	IN		LBS.
TOP	5	WALL	4500
BOTTOM	5	ROOF	5050
TOTAL	5	FLOOR	9550

GRADE RING WITH 30" I.D. & 46 1/2" RECESS  
SCALE: NONE

**NOTES:**

1. PRECAST REINFORCED CONCRETE MANHOLE ONLY BY NORWALK CONCRETE INDUSTRIES. THERE ARE NO EQUALS. COMMUNICATION MANHOLE SHALL MEET OR EXCEED CITY OF WESTERVILLE SPECIFICATION ITEM 13120 AND CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS ITEM 604.
2. TOP OF PRECAST MANHOLE SECTION SHALL BE SET A MINIMUM OF 30" BELOW FINISHED GRADE OF MANHOLE FRAME & COVER. GRADE RINGS SHALL BE USED AS NEEDED FOR THIS.
3. MANHOLE COVER SHALL BE STAMPED "COMMUNICATIONS".
4. TRACER WIRE STATION SHALL BE INSTALLED AT EVERY COMMUNICATION MANHOLE, SEE CITY OF WESTERVILLE STANDARD DRAWINGS COMM-O1.

**DESIGN CRITERIA:**

1. DESIGN SPECIFICATIONS: ACI 318, AASHTO LOAD FACTOR DESIGN METHOD AND ASTM C857
2. DESIGN LOADING: AASHTO HS20 (32,000 LB/AXLE)
3. LIVE LOAD SURCHARGE: 0.5% OF THE WHEEL LOADING APPLIED TO 8'-0" OF DEPTH
4. CONCRETE COMPRESSIVE STRENGTH: F'c = 4,500 PSI
5. REINFORCING STEEL: ASTM A706, Fy = 60,000 PSI



CITY OF WESTERVILLE  
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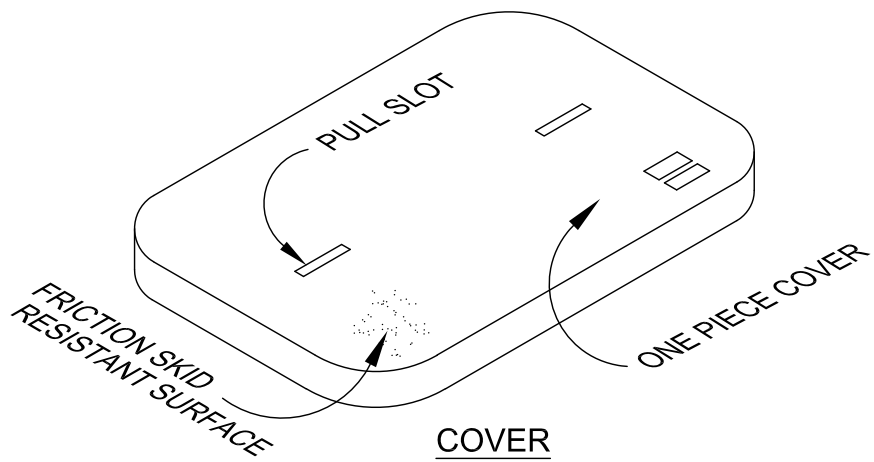
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2/15/2022  
DATE

STANDARD CONSTRUCTION DRAWING  
COMMUNICATION  
MANHOLE

COMM-02

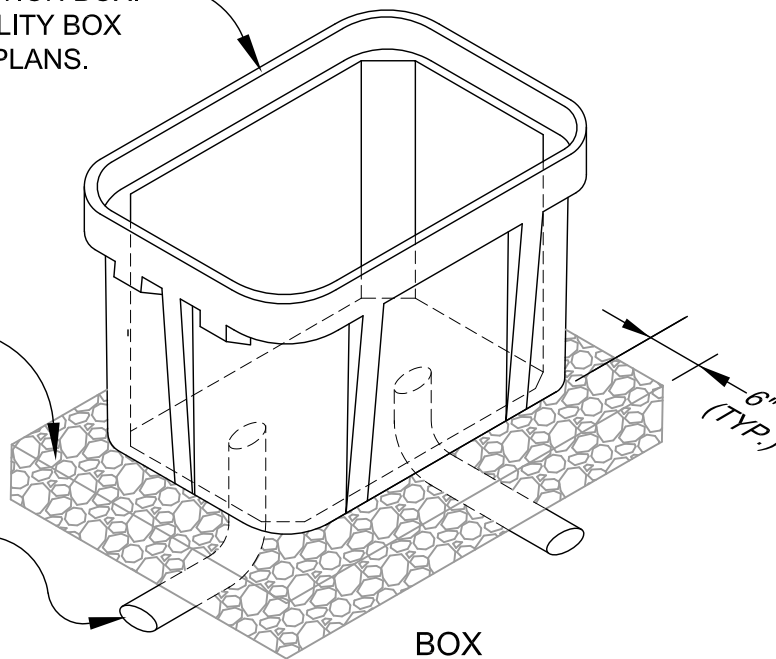
SHEET 1 OF 1



2' X 3' COMMUNICATION BOX.  
DEPTH OF THE UTILITY BOX  
AS SPECIFIED ON PLANS.

6" OF NO. 57  
STONE  
(6" THICK & 6"  
OUTSIDE OF BOX  
ON ALL 4 SIDES)

CONDUIT(TYP.)  
SEE PLANS  
FOR LOCATION



NOTES

COMMUNICATION BOX SHALL BE BY HUBBELL "QUAZITE" OR CHANNELL COMM. CORP OR APPROVED EQUAL. INSTALL PER MANUFACTURES RECOMMENDATION.

UTILITY BOX SHALL NOT BE INSULATED, CONTAIN NO MOUSEHOLES, AND CONDUIT(S) ENTRY SHALL COME FROM BENEATH THE BOX.

UTILITY BOX AND COVER SHALL HAVE A LOAD RATING OF 22 TIER.



CITY OF WESTERVILLE  
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ENGINEERING DIVISION

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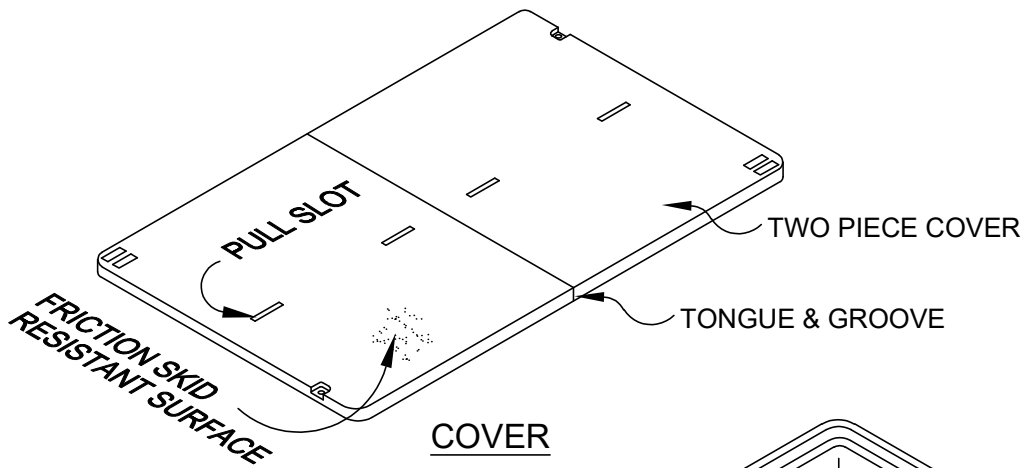
2/15/2022  
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STANDARD CONSTRUCTION DRAWING

2'x3' COMM.  
UTILITY BOX

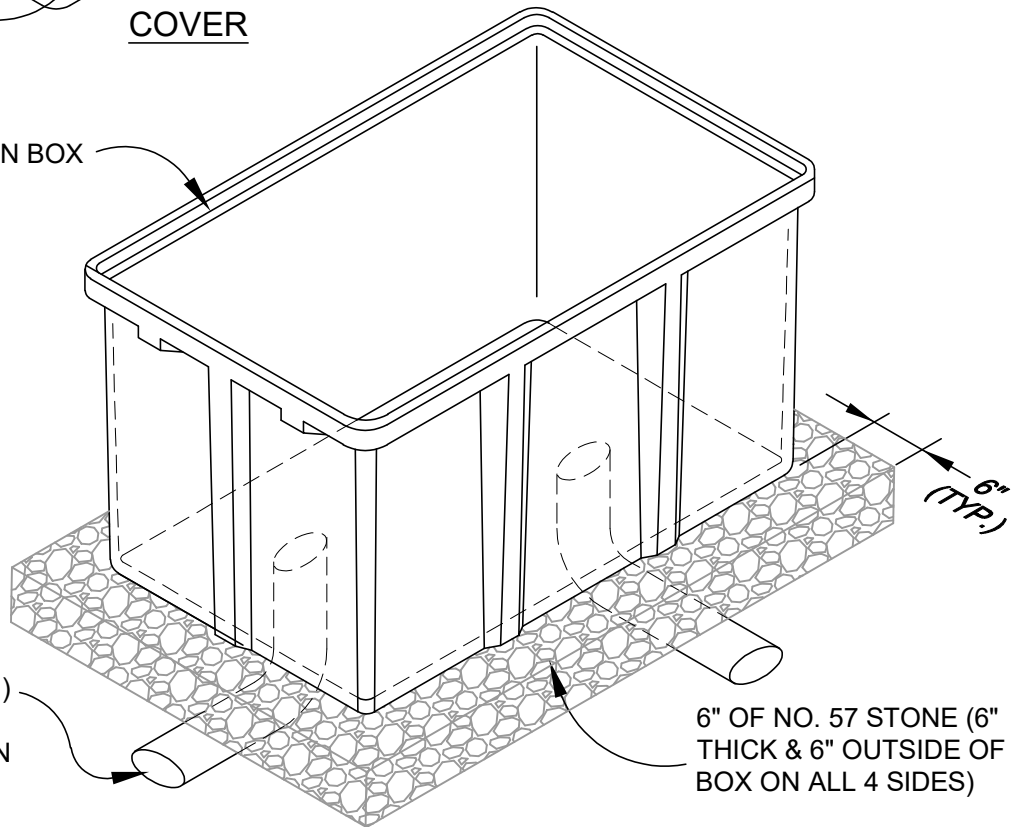
COMM-03

SHEET 1 OF 1



COVER

3' X 5' X 3' COMMUNICATION BOX



BOX

NOTES

COMMUNICATION BOX SHALL BE BY HUBBELL "QUAZITE" OR CHANNELL COMM. CORP OR APPROVED EQUAL. INSTALL PER MANUFACTURES RECOMMENDATION.

UTILITY BOX SHALL NOT BE INSULATED, CONTAIN NO MOUSEHOLES, AND CONDUIT(S) ENTRY SHALL COME FROM BENEATH THE BOX.

UTILITY BOX AND COVER SHALL HAVE A LOAD RATING OF 22 TIER.



CITY OF WESTERVILLE  
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ENGINEERING DIVISION

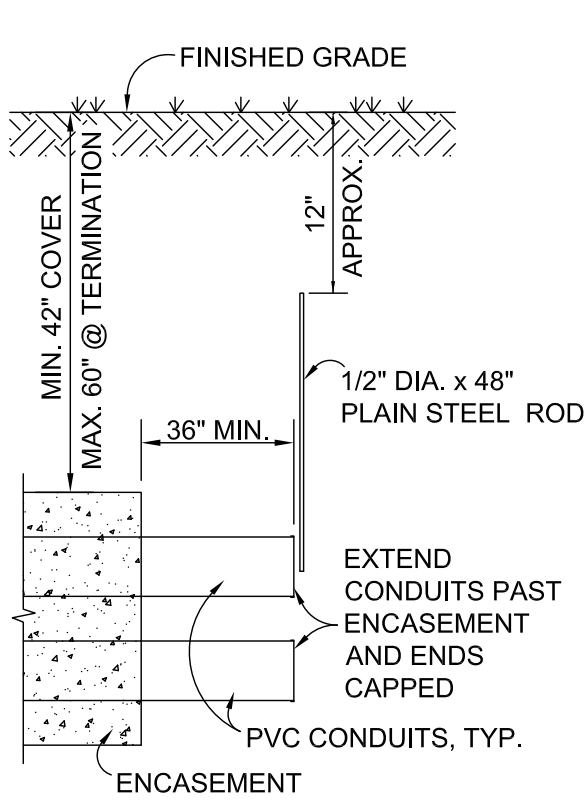
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5/16/2022  
DATE

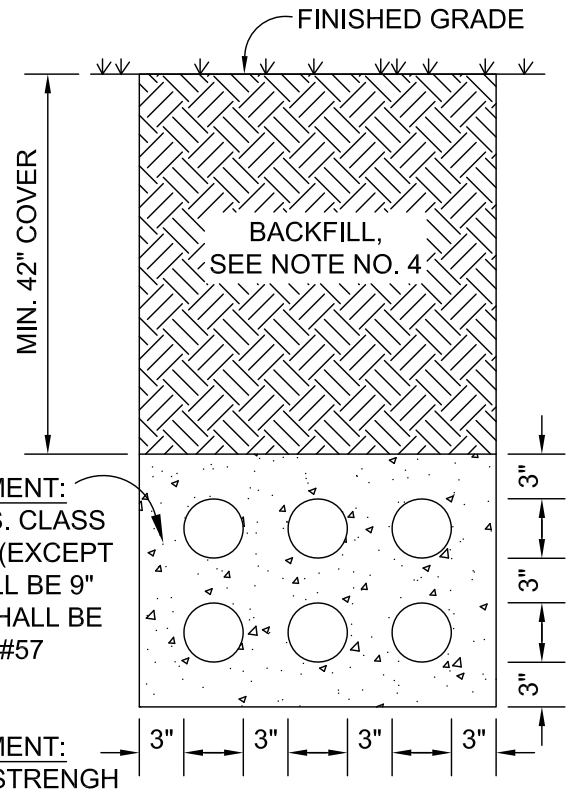
STANDARD CONSTRUCTION DRAWING  
**3'x5' COMM.  
UTILITY BOX**

**COMM-04**

SHEET 1 OF 1



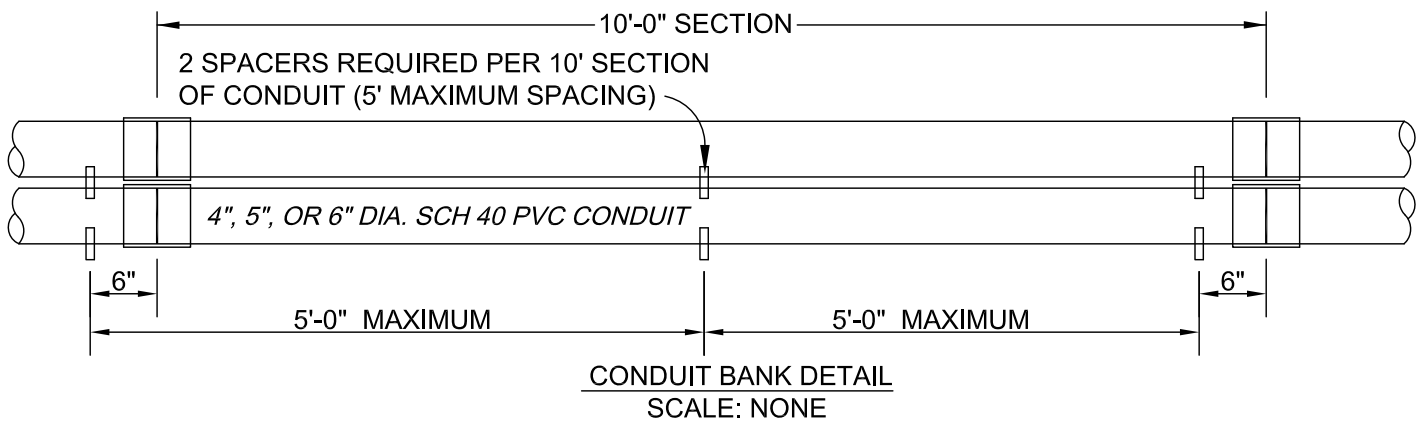
**CONDUIT BANK TERMINATION**  
SCALE: NONE



**BACKFILL & ENCASEMENT**  
SCALE: NONE

**TYPE 1 ENCASEMENT:**  
CONCRETE COLS. CLASS COC 1 (4000 PSI) (EXCEPT THE SLUMP SHALL BE 9" AND #8 STONE SHALL BE USED IN LIEU OF #57 STONE).  
**OR**  
**TYPE 2 ENCASEMENT:**  
COLS. 613, LOW STRENGTH MORTAR BACKFILL, TYPE 2

TYPE OF ENCASEMENT AS SPECIFIED ON PLANS AS REQUIRED BY THE CITY.



**CONDUIT BANK DETAIL**  
SCALE: NONE

**NOTES:**

1. TOP OF CONCRETE ENCASEMENT SHALL HAVE A MIN. COVER 42" BELOW FINAL GRADE. REFER TO PLAN AND/OR PROFILE FOR ACTUAL ELEVATIONS.
2. CONDUIT SIZE(S) ARE SHOWN ON THE PLANS.
3. FOR SPACER TYPES SEE NOTES OR SPECIFICATION.
4. BACKFILL ON TOP OF CONCRETE ENCASEMENT SHALL USE COLS. ITEM 912 WITHIN PAVEMENT INFLUENCE LINE AND COLS. ITEM 911 OUTSIDE PAVEMENT INFLUENCE LINE.
5. BOTH VERTICAL AND HORIZONTAL SEPARATION BETWEEN CONDUITS SHALL BE 3". ENCASEMENT SHALL EXTEND 3" MIN. BEYOND THE DUCT BANK.



CITY OF WESTERVILLE  
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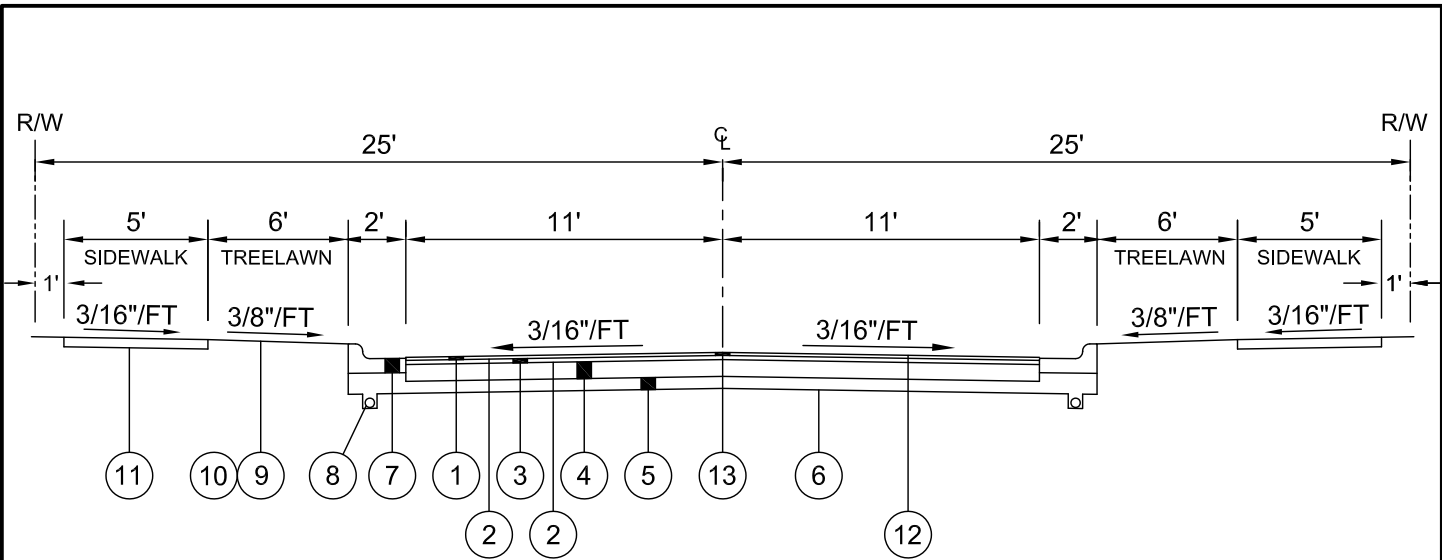
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2/15/2022  
DATE

STANDARD CONSTRUCTION DRAWING  
ELEC. / COMM.  
DUCT BANK  
ENCASEMENT

COMM-05  
SHEET 1 OF 1





- ① ITEM 441 - 1-1/4" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, PG64-22 (448)
- ② ITEM 407 - NON-TRACKING TACK COAT (0.075 GAL./SQ. YD.)
- ③ ITEM 441 - 1-3/4" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2, PG64-22 (448)
- ④ ITEM 301 - 7" ASPHALT CONCRETE BASE, PG64-22
- ⑤ ITEM 304 - 6" AGGREGATE BASE
- ⑥ ITEM 204 - SUBGRADE COMPACTION
- ⑦ ITEM 609 - COMBINATION CURB AND GUTTER (PER COW. STANDARD DWG RD-02)
- ⑧ ITEM 605 - 6" PIPE UNDERDRAIN, 707.12 TYPE SP
- ⑨ ITEM 12659 - SEEDING AND MULCHING \*\*
- ⑩ ITEM 12653 - 3" TOPSOIL \*\*
- ⑪ ITEM 608 - 4" CONCRETE WALK (PER COW. STANDARD DWG RD-05)  
(8" AT CURB RAMP LOCATION AS PER COLS. STANDARD DWG. 2303)
- ⑫ ITEM 1540 - ASPHALT REJUVENATING AGENT
- ⑬ ITEM 873 - VOID REDUCING ASPHALT MEMBRANE (VRAM) \*

ALL ITEMS ARE COLUMBUS (COLS.)  
UNLESS OTHERWISE INDICATED:

- \* ODOT
- \*\* CITY OF WESTERVILLE (COW.)

NOTE: THIS PAVEMENT SECTION IS INTENDED AS A MINIMUM PAVEMENT DESIGN ONLY, IT IS THE RESPONSIBILITY OF EACH APPLICANT TO PERFORM ANY NECESSARY SUB-SURFACE INVESTIGATIONS TO PROPERLY ENGINEER A SUITABLE 30-YEAR PAVEMENT DESIGN.

THIS STANDARD DRAWING IS A GUIDELINE. FOR EACH PROJECT THE TYPICAL SECTION SHALL BE APPROVED BY THE CITY ENGINEER.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

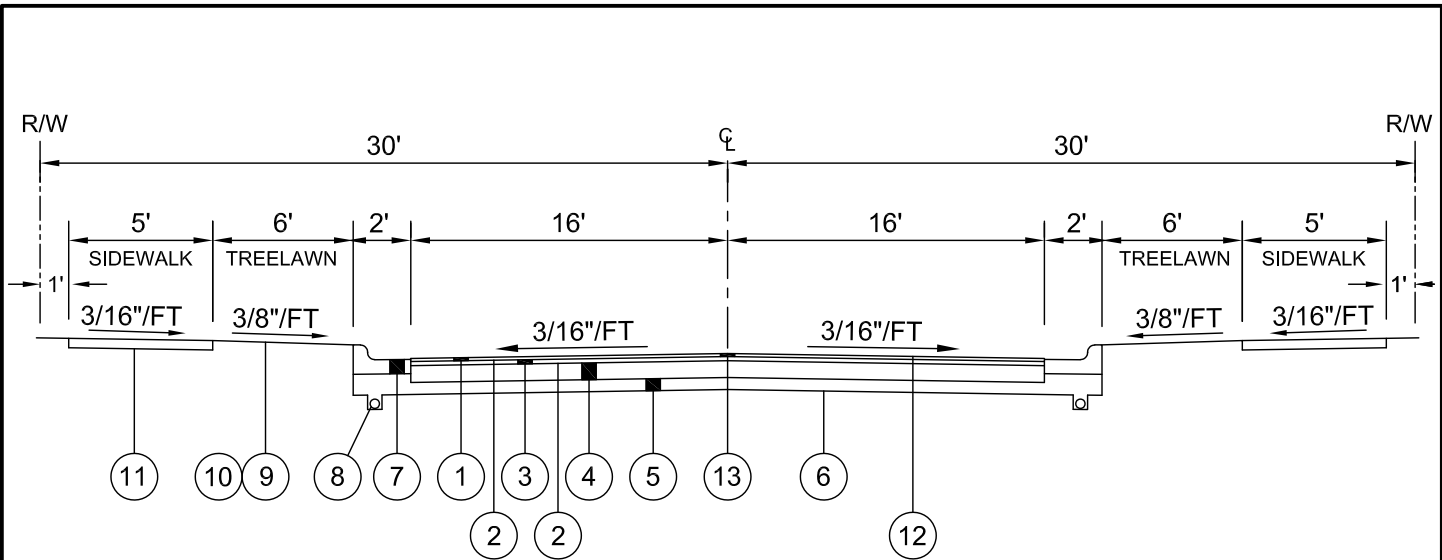
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CITY ENGINEER

2/15/2022  
DATE

STANDARD CONSTRUCTION DRAWING  
TYPICAL PAVEMENT  
SECTION - 50' R/W

RD-01

SHEET 1 OF 2



- ① ITEM 441 - 1-1/4" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, PG64-22 (448)
- ② ITEM 407 - NON-TRACKING TACK COAT (0.075 GAL./SQ. YD.)
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CITY OF WESTERVILLE  
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ENGINEERING DIVISION

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CITY ENGINEER

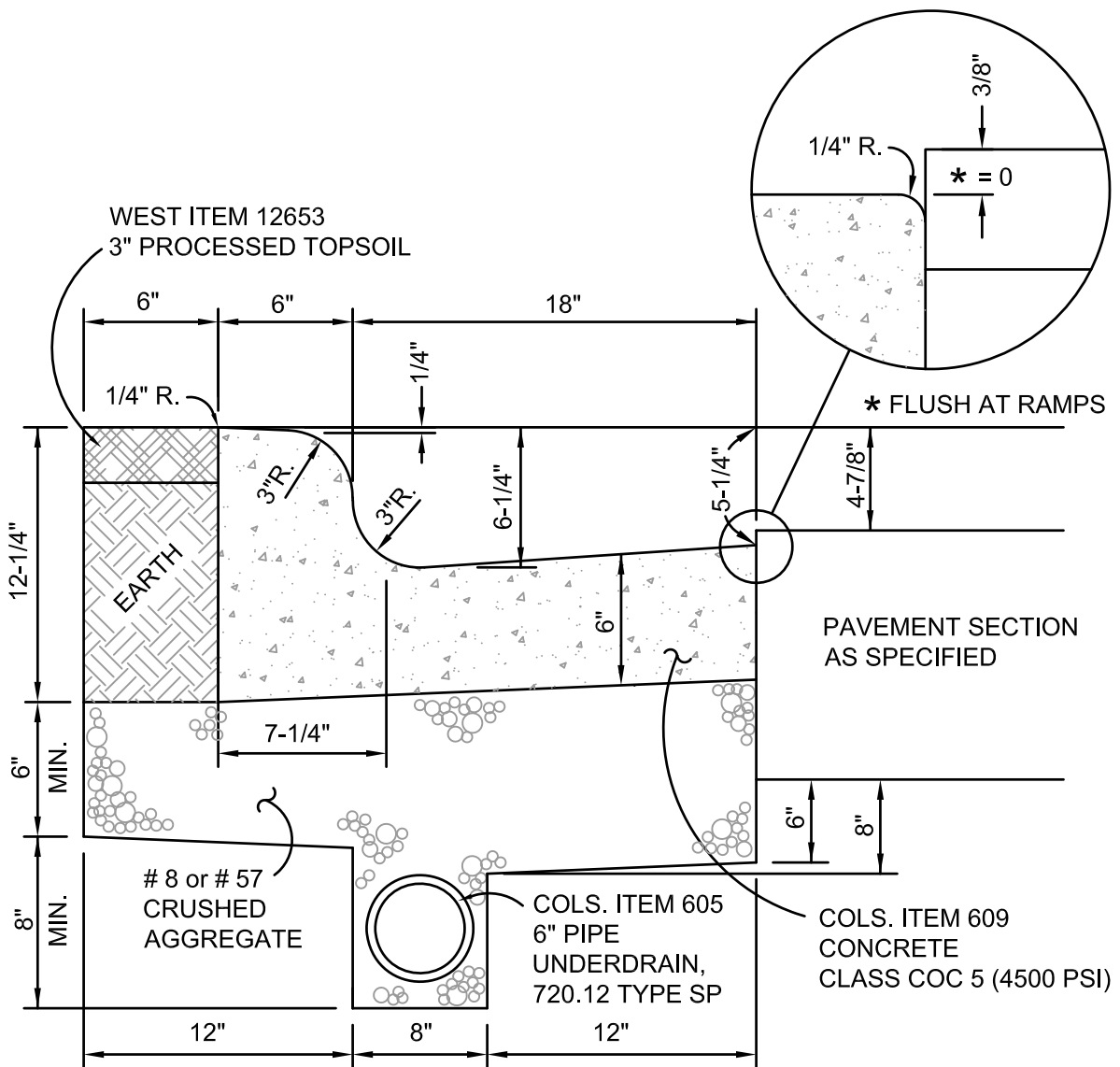
2/15/2022

DATE

STANDARD CONSTRUCTION DRAWING  
**TYPICAL PAVEMENT  
SECTION - 60' R/W**

**RD-01**

SHEET 2 OF 2



NOTES: THE BELOW NOTES APPLY TO ALL WORK WITHIN THE PUBLIC RIGHT OF WAY AND OR PUBLIC EASEMENT AREAS.

THE ASPHALT SHALL BE FLUSH AT THE GUTTER IN FRONT OF CURB RAMPS AND RAKED OUT A MINIMUM OF 4' IN WIDTH SLOPED 20:1 FROM THE GUTTER TOWARDS THE CENTERLINE OF THE ROADWAY A DISTANCE OF 8'.

THE VOLUME OF CONCRETE PER LINEAL FOOT = 1.26 CF.

ALL EXPOSED SURFACES OF CONCRETE SHALL HAVE A BRUSH FINISH.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

*Letell*  
CITY ENGINEER

4/15/19

DATE

STANDARD CONSTRUCTION DRAWING

COMBINED CURB  
AND GUTTER

RD-02

SHEET 1 OF 2

CURB RAMPS, SIDEWALKS, AND PATHWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GUIDELINES PROPOSED BY THE UNITED STATES ACCESS BOARD (ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD) AS PUBLISHED IN THE "PROPOSED GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY" AND THE "ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY; SHARED USE PATHS".

THE CONTRACTOR SHALL REFERENCE THE LATEST EDITION OF THE CITY OF COLUMBUS CURB RAMP STANDARD DRAWINGS FOR ADDITIONAL DETAILS AND MATERIAL REQUIREMENTS. FINAL ACCEPTANCE AND COMPLIANCE WITH THE ABOVE REFERENCED GUIDELINES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

ALL CURB RAMPS, SIDEWALKS, PATHWAYS AND/OR ASSOCIATED CONCRETE WORK FOUND TO BE NON-COMPLIANT WITH THE ABOVE GUIDELINES SHALL BE REMOVED AND RECONSTRUCTED BY THE CONTRACTOR TO MEET THE ABOVE GUIDELINES.

ALL NEW CONCRETE AND ASPHALT SHALL HAVE POSITIVE DRAINAGE. ANY AREAS HOLDING WATER SHALL BE REMOVED AND RECONSTRUCTED BY THE CONTRACTOR.

ALL CONCRETE SHALL BE COLS. CLASS COC 5 (4500 PSI).

ALL SAWCUTTING SHALL BE PERFORMED USING WATER.

IMMEDIATELY AFTER FINISHING, CONCRETE SHALL BE CURED AND SEALED WITH A CLEAR CONCRETE CURING MEMBRANE. USE OF PIGMENTED CURING MEMBRANES SHALL RESULT IN THE REMOVAL AND REPLACEMENT OF ANY CONCRETE SO CURED AT THE CONTRACTOR'S EXPENSE.

ALL CONCRETE SHALL BE PLACED IN ONE COURSE AND FINISHED ACCORDING TO SPECIFICATIONS.

NO. 8 OR NO. 57 STONE UNDER THE CURB AND GUTTER SECTION SHALL BE 6" DEEPER THAN ALL PAVING AND UNDERCUT MATERIALS TO ALLOW SUBSURFACE DRAINAGE TO FLOW TO THE ROADWAY UNDERDRAINS.

THE CONTRACTOR SHALL PROPERLY PROTECT THE WORK AREA DURING CONSTRUCTION AND SHALL NOT REMOVE THE PROTECTION UNTIL THE WORK AREA IS 100% COMPLETE AND ACCESSIBLE.

EXTEND ROOF DRAINS UNDER THE SIDEWALK AND THROUGH THE CURB. (SEE CITY OF COLUMBUS, OHIO STANDARD CONSTRUCTION DRAWING 2320 DR. A.). PLACE/SPACE CONTROL JOINTS TO LINE UP OVER DRAIN CROSSING. ENSURE POSITIVE DRAINAGE FROM RIGHT OF WAY LINE.

COLD WEATHER CONCRETE PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH COLS. ITEM 451.061.

FOR REPLACEMENT WORK, THE CURB SHALL BE REMOVED TO EXISTING JOINT OR NO CLOSER THAN 5-FEET FROM AN EXISTING JOINT.

SUBGRADE COMPACTION SHALL BE COMPLETED BEFORE UNDERDRAIN INSTALLATION.

WHEN A CURB AND GUTTER INLET IS INSTALLED, THE TOP OF THE CASTING SHALL BE THE SAME AS THE TOP OF CURB ELEVATION. THE EDGE OF PAVEMENT SHALL BE 3/8" HIGHER THAN THE GRATE WHEREVER THEY MEET/TOUCH. WHEN NEW CURBING IS INSTALLED ADJACENT TO A CURB INLET, 1" PERFORMED EXPANSION JOINT FILLER SHALL BE PLACED IN THE CURB & GUTTER 5' ON EACH SIDE OF INLET CASTING.

1/2" EXPANSION JOINTS WILL BE INSTALLED BEHIND THE CURB WHEN A CONCRETE WALK, DRIVE OR OTHER ITEM IS ADJOINING IT.



CITY OF WESTERVILLE  
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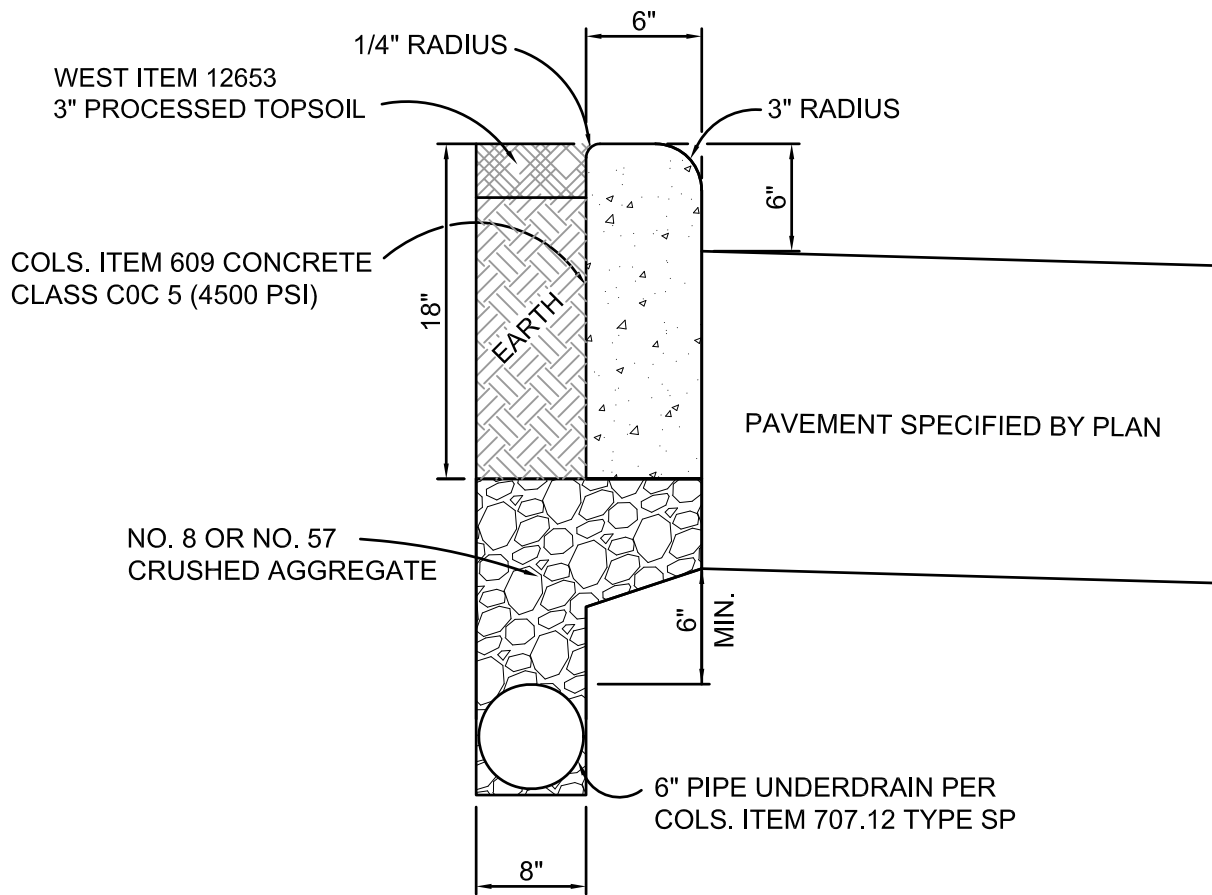
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 CITY ENGINEER

4/15/19  
 DATE

STANDARD CONSTRUCTION DRAWING  
**COMBINED CURB  
 AND GUTTER**

**RD-02**

SHEET 2 OF 2



NOTES: THE BELOW NOTES APPLY TO ALL WORK WITHIN THE PUBLIC RIGHT OF WAY AND OR PUBLIC EASEMENT AREAS.

THE ASPHALT SHALL BE FLUSH AT THE GUTTER IN FRONT OF CURB RAMPS AND RAKED OUT A MINIMUM OF 4' IN WIDTH SLOPED 20:1 FROM THE GUTTER TOWARDS THE CENTERLINE OF THE ROADWAY A DISTANCE OF 8'.

THE VOLUME OF CONCRETE PER LINEAL FOOT = 0.75 CF.

ALL EXPOSED SURFACES OF CONCRETE SHALL HAVE A BRUSH FINISH.



CITY OF WESTERVILLE  
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ENGINEERING DIVISION

*Let Till*  
CITY ENGINEER

4/15/19  
DATE

STANDARD CONSTRUCTION DRAWING  
**STRAIGHT 18"  
CONCRETE CURB**

RD-03

SHEET 1 OF 2

CURB RAMPS, SIDEWALKS, AND PATHWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GUIDELINES PROPOSED BY THE UNITED STATES ACCESS BOARD (ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD) AS PUBLISHED IN THE "PROPOSED GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY" AND THE "ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY; SHARED USE PATHS".

THE CONTRACTOR SHALL REFERENCE THE LATEST EDITION OF THE CITY OF COLUMBUS CURB RAMP STANDARD DRAWINGS FOR ADDITIONAL DETAILS AND MATERIAL REQUIREMENTS. FINAL ACCEPTANCE AND COMPLIANCE WITH THE ABOVE REFERENCED GUIDELINES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

ALL CURB RAMPS, SIDEWALKS, PATHWAYS AND/OR ASSOCIATED CONCRETE WORK FOUND TO BE NON-COMPLIANT WITH THE ABOVE GUIDELINES SHALL BE REMOVED AND RECONSTRUCTED BY THE CONTRACTOR TO MEET THE ABOVE GUIDELINES.

ALL NEW CONCRETE AND ASPHALT SHALL HAVE POSITIVE DRAINAGE. ANY AREAS HOLDING WATER SHALL BE REMOVED AND RECONSTRUCTED BY THE CONTRACTOR.

ALL CONCRETE SHALL BE COLS. CLASS COC 5 (4500 PSI).

ALL SAWCUTTING SHALL BE PERFORMED USING WATER.

IMMEDIATELY AFTER FINISHING, CONCRETE SHALL BE CURED AND SEALED WITH A CLEAR CONCRETE CURING MEMBRANE. USE OF PIGMENTED CURING MEMBRANES SHALL RESULT IN THE REMOVAL AND REPLACEMENT OF ANY CONCRETE SO CURED AT THE CONTRACTOR'S EXPENSE.

ALL CONCRETE SHALL BE PLACED IN ONE COURSE AND FINISHED ACCORDING TO SPECIFICATIONS.

NO. 8 OR NO. 57 STONE UNDER THE CURB AND GUTTER SECTION SHALL BE 6" DEEPER THAN ALL PAVING AND UNDERCUT MATERIALS TO ALLOW SUBSURFACE DRAINAGE TO FLOW TO THE ROADWAY UNDERDRAINS.

THE CONTRACTOR SHALL PROPERLY PROTECT THE WORK AREA DURING CONSTRUCTION AND SHALL NOT REMOVE THE PROTECTION UNTIL THE WORK AREA IS 100% COMPLETE AND ACCESSIBLE.

EXTEND ROOF DRAINS UNDER THE SIDEWALK AND THROUGH THE CURB. (SEE CITY OF COLUMBUS, OHIO STANDARD CONSTRUCTION DRAWING 2320 DR. A.). PLACE/SPACE CONTROL JOINTS TO LINE UP OVER DRAIN CROSSING. ENSURE POSITIVE DRAINAGE FROM RIGHT OF WAY LINE.

COLD WEATHER CONCRETE PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH COLS. ITEM 451.061.


FOR REPLACEMENT WORK, THE CURB SHALL BE REMOVED TO EXISTING JOINT OR NO CLOSER THAN 5-FEET FROM AN EXISTING JOINT.

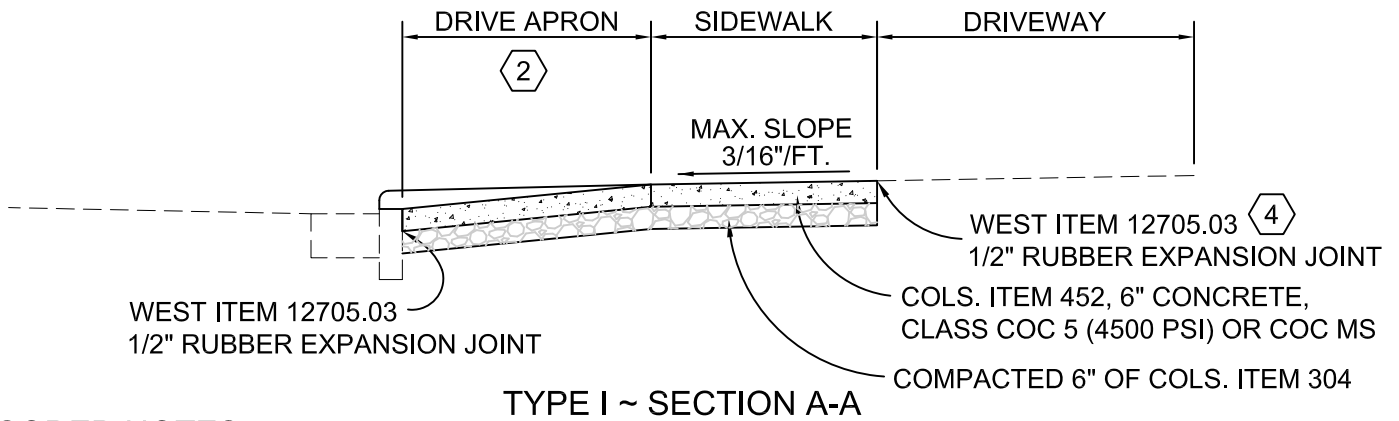
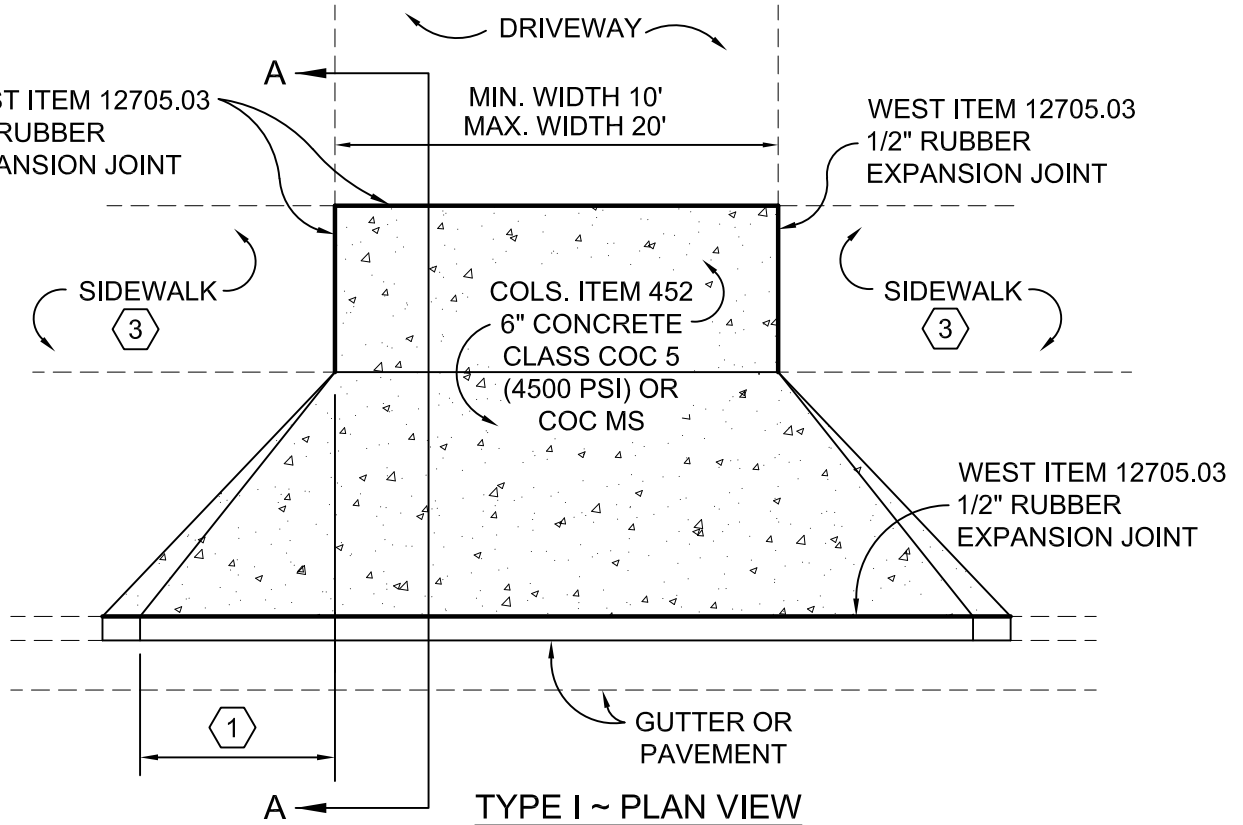
SUBGRADE COMPACTION SHALL BE COMPLETED BEFORE UNDERDRAIN INSTALLATION.

WHEN A CURB AND GUTTER INLET IS INSTALLED, THE TOP OF THE CASTING SHALL BE THE SAME AS THE TOP OF CURB ELEVATION. THE EDGE OF PAVEMENT SHALL BE 3/8" HIGHER THAN THE GRATE WHEREVER THEY MEET/TOUCH. WHEN NEW CURBING IS INSTALLED ADJACENT TO A CURB INLET, 1" PERFORMED EXPANSION JOINT FILLER SHALL BE PLACED IN THE CURB & GUTTER 5' ON EACH SIDE OF INLET CASTING.

1/2" EXPANSION JOINTS WILL BE INSTALLED BEHIND THE CURB WHEN A CONCRETE WALK, DRIVE OR OTHER ITEM IS ADJOINING IT.



CITY OF WESTERVILLE DEPARTMENT OF PLANNING AND DEVELOPMENT ENGINEERING DIVISION	STANDARD CONSTRUCTION DRAWING	
	<b>STRAIGHT 18" CONCRETE CURB</b>	
 CITY ENGINEER	4/15/19 DATE	<b>RD-03</b>
		SHEET 2 OF 2



**CODED NOTES**

- ① 3' ON ROADWAYS LESS THAN 35 MPH (DESIGN SPEED).  
5' ON ROADWAYS 35 MPH (DESIGN SPEED) OR GREATER
- ② MAXIMUM DRIVE APRON SLOPE OF 8% ON LOCALS STREETS. COLLECTORS AND ARTERIALS  
MAXIMUM DRIVE APRON SLOPE OF 4%. THIS APPLIES TO NEW AND/OR RE-DEVELOPMENTS UNLESS  
OTHERWISE APPROVED.
- ③ SIDEWALKS SHALL BE CONSTRUCTED PER WESTERVILLE STANDARD DRAWING RD-05.
- ④ ALL EXPANSION JOINTS SHALL BE 1/2" RUBBER BY "REFLEX" (BY THE JD RUSSELL COMPANY) OR  
APPROVED EQUAL.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

*[Signature]*  
CITY ENGINEER

11/21/23

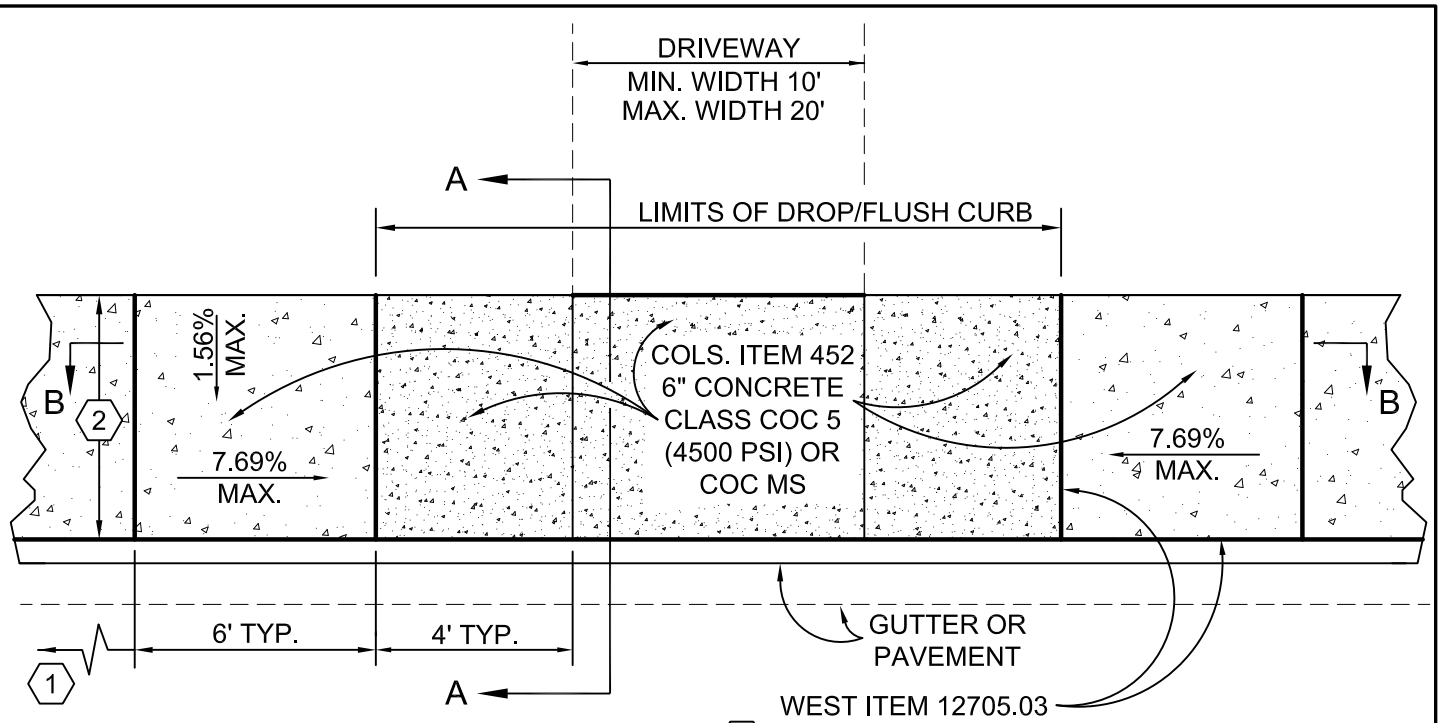
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STANDARD CONSTRUCTION DRAWING

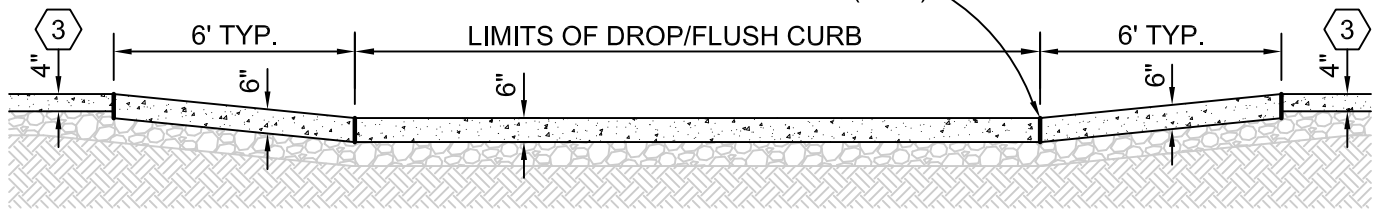
**RESIDENTIAL  
APPROACH TYPE 1**

**RD-04**

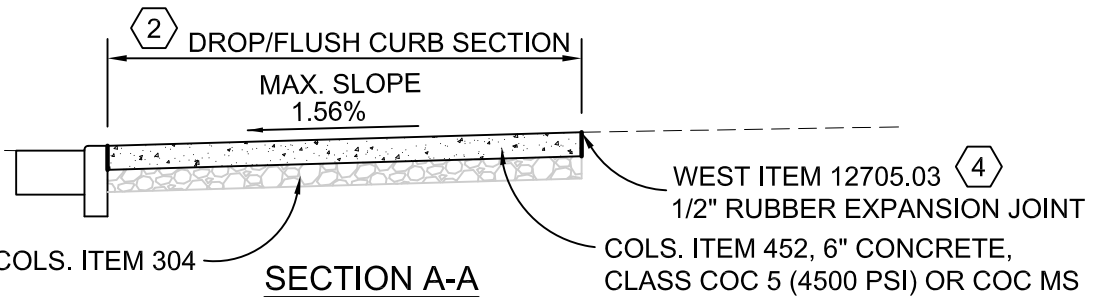
SHEET 1 OF 3



**PLAN VIEW**



**SECTION B-B**



**SECTION A-A**

**CODED NOTES**

- ① REMOVE AND REPLACE SIDEWALK PANELS AS NEEDED TO ACHIEVE 7.69% MAX. SLOPE, WITH A MAXIMUM RISE OF 6-INCH. REPLACE SIDEWALK PANELS TO NEAREST JOINT.
- ② 6' MINIMUM WIDTH DRIVE APRON AND/OR SIDEWALK UNLESS OTHERWISE REQUIRED.
- ③ SIDEWALKS SHALL BE CONSTRUCTED PER WESTERVILLE STANDARD DRAWING RD-05.
- ④ ALL EXPANSION JOINTS SHALL BE 1/2" RUBBER BY "REFLEX" (BY THE JD RUSSELL COMPANY) OR APPROVED EQUAL.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

*[Signature]*  
CITY ENGINEER

11/21/23  
DATE

STANDARD CONSTRUCTION DRAWING  
**RESIDENTIAL  
APPROACH TYPE 2**

**RD-04**

SHEET 2 OF 3



NOTES: THE BELOW NOTES APPLY TO ALL WORK WITHIN THE PUBLIC RIGHT OF WAY AND OR PUBLIC EASEMENT AREAS.

CURB RAMPS, SIDEWALKS, AND PATHWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GUIDELINES PROPOSED BY THE UNITED STATES ACCESS BOARD (ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD) AS PUBLISHED IN THE "PROPOSED GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY" AND THE "ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY; SHARED USE PATHS".

THE CONTRACTOR SHALL REFERENCE THE LATEST EDITION OF THE CITY OF COLUMBUS CURB RAMP STANDARD DRAWINGS FOR ADDITIONAL DETAILS AND MATERIAL REQUIREMENTS. FINAL ACCEPTANCE AND COMPLIANCE WITH THE ABOVE REFERENCED GUIDELINES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

ALL CURB RAMPS, SIDEWALKS, PATHWAYS AND/OR ASSOCIATED CONCRETE WORK FOUND TO BE NON-COMPLIANT WITH THE ABOVE GUIDELINES SHALL BE REMOVED AND RECONSTRUCTED BY THE CONTRACTOR TO MEET THE ABOVE GUIDELINES.

ALL NEW CONCRETE AND ASPHALT SHALL HAVE POSITIVE DRAINAGE. ANY AREAS HOLDING WATER SHALL BE REMOVED AND RECONSTRUCTED BY THE CONTRACTOR.

ALL CONCRETE SHALL BE CLASS COC 5 (4500 PSI) OR COC MS.

ALL SAWCUTTING SHALL BE PERFORMED USING WATER.

IMMEDIATELY AFTER FINISHING, CONCRETE SHALL BE CURED AND SEALED WITH A CLEAR CONCRETE CURING MEMBRANE. USE OF PIGMENTED CURING MEMBRANES SHALL RESULT IN THE REMOVAL AND REPLACEMENT OF ANY CONCRETE SO CURED AT THE CONTRACTOR'S EXPENSE.

ALL CONCRETE SHALL BE PLACED IN ONE COURSE AND FINISHED ACCORDING TO SPECIFICATIONS.

THE CONTRACTOR SHALL PROPERLY PROTECT THE WORK AREA DURING CONSTRUCTION AND SHALL NOT REMOVE THE PROTECTION UNTIL THE WORK AREA IS 100% COMPLETE AND ACCESSIBLE.

EXPANSION JOINTS SHALL BE PLACED AT 30' INTERVALS AND AT PROPERTY LINES ON SIDEWALKS AND WHEREVER NEW CONCRETE ABUTS EXISTING CONCRETE, FOUNDATIONS, CASTINGS, WATER VALVES, ETC.

ADJUST CASTINGS, MANHOLES, WATER VALVES, GAS VALVES, ETC. IN THE CONCRETE TO THE PROPER GRADE.

A MINIMUM OF 48 HOURS BEFORE CONCRETE IS TO BE PLACED, CALL 614-901-6650 TO SCHEDULE A FORMWORK INSPECTION. IN NO CASE MAY CONCRETE BE PLACED WITHOUT APPROVAL OF FORM WORK BY THE INSPECTOR.

COLD WEATHER CONCRETE PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH ITEM COLS. 451.061.

IMMEDIATELY AFTER FINISHING, CONCRETE SHALL BE CURED AND SEALED WITH A CURING MEMBRANE IN AN APPROVED MANNER.

FOR REPLACEMENT WORK, THE SIDEWALK AND CURB SHALL BE REMOVED TO EXISTING JOINT OR NO CLOSER THAN 5-FEET FROM AN EXISTING JOINT.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

  
CITY ENGINEER

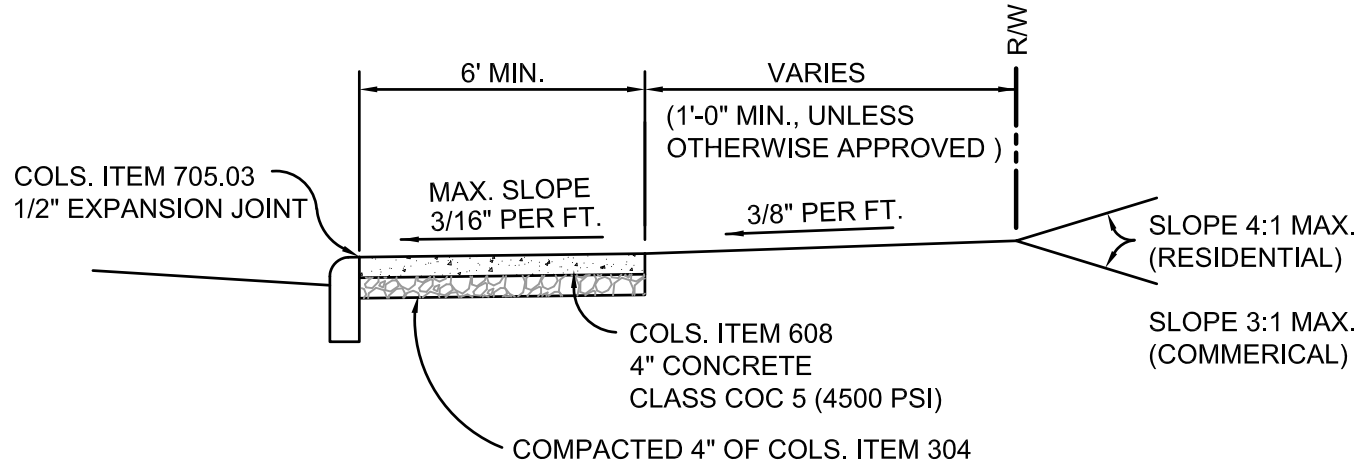
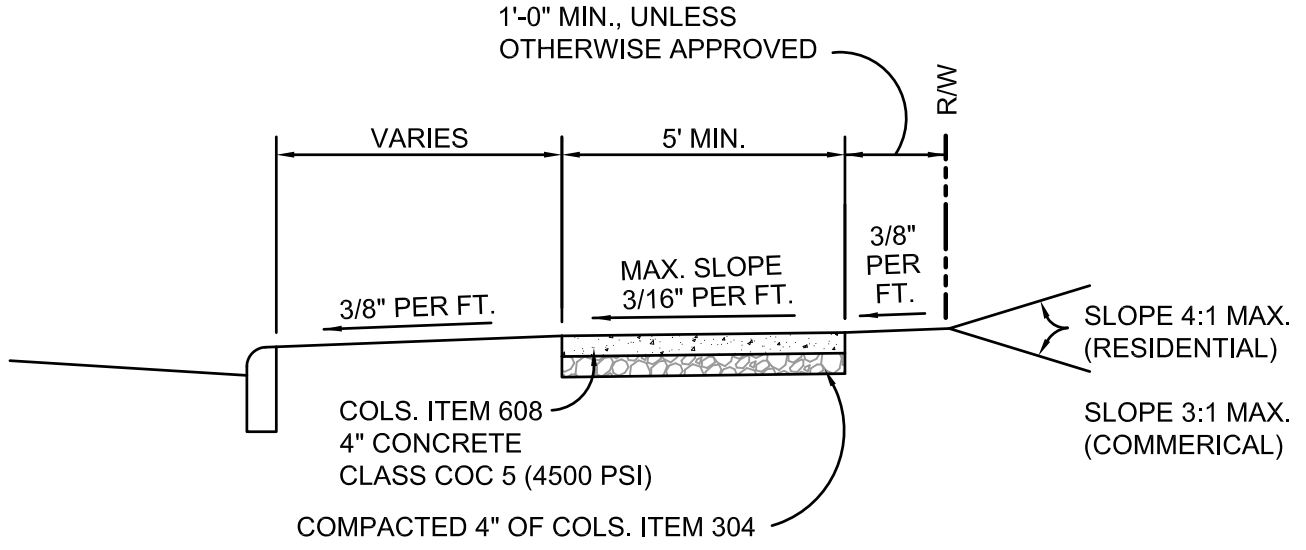
11/21/23  
DATE

STANDARD CONSTRUCTION DRAWING

RESIDENTIAL  
APPROACH

RD-04

SHEET 3 OF 3



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

*Let Till*  
CITY ENGINEER

4/15/19  
DATE

STANDARD CONSTRUCTION DRAWING

**SIDEWALK**

**RD-05**

SHEET 1 OF 2

NOTES: THE BELOW NOTES APPLY TO ALL WORK WITHIN THE PUBLIC RIGHT OF WAY AND OR PUBLIC EASEMENT AREAS.

CURB RAMPS, SIDEWALKS, AND PATHWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GUIDELINES PROPOSED BY THE UNITED STATES ACCESS BOARD (ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD) AS PUBLISHED IN THE "PROPOSED GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY" AND THE "ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY; SHARED USE PATHS".

THE CONTRACTOR SHALL REFERENCE THE LATEST EDITION OF THE CITY OF COLUMBUS CURB RAMP STANDARD DRAWINGS FOR ADDITIONAL DETAILS AND MATERIAL REQUIREMENTS. FINAL ACCEPTANCE AND COMPLIANCE WITH THE ABOVE REFERENCED GUIDELINES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

ALL CURB RAMPS, SIDEWALKS, PATHWAYS AND/OR ASSOCIATED CONCRETE WORK FOUND TO BE NON-COMPLIANT WITH THE ABOVE GUIDELINES SHALL BE REMOVED AND RECONSTRUCTED BY THE CONTRACTOR TO MEET THE ABOVE GUIDELINES.

ALL NEW CONCRETE AND ASPHALT SHALL HAVE POSITIVE DRAINAGE. ANY AREAS HOLDING WATER SHALL BE REMOVED AND RECONSTRUCTED BY THE CONTRACTOR.

ALL CONCRETE SHALL BE CLASS COC 5 (4500 PSI).

USE SAW CUT ON ALL JOINTS (CONTROL, TRANSVERSE, CONTRACTION, EXPANSION, ETC.) DIVIDE THE SURFACE OF THE WALKS INTO EQUALLY SPACED RECTANGULAR BLOCKS AT APPROXIMATELY 5-FOOT INTERVALS. NOT PERMITTED IS A TOOL JOINT AND OR EDGING TOOL TO EDGE ALL OUTSIDE EDGES AND JOINTS UNLESS OTHERWISE APPROVED.

ALL SAWCUTTING SHALL BE PERFORMED USING WATER.

IMMEDIATELY AFTER FINISHING, CONCRETE SHALL BE CURED AND SEALED WITH A CLEAR CONCRETE CURING MEMBRANE. USE OF PIGMENTED CURING MEMBRANES SHALL RESULT IN THE REMOVAL AND REPLACEMENT OF ANY CONCRETE SO CURED AT THE CONTRACTOR'S EXPENSE.

WHERE RESIDENTIAL DRIVEWAYS CROSS THE SIDEWALK, THE SIDEWALK SHALL BE A MINIMUM OF 6" THICK.

ALL CONCRETE SHALL BE PLACED IN ONE COURSE AND FINISHED ACCORDING TO SPECIFICATIONS.

THE CONTRACTOR SHALL PROPERLY PROTECT THE WORK AREA DURING CONSTRUCTION AND SHALL NOT REMOVE THE PROTECTION UNTIL THE WORK AREA IS 100% COMPLETE AND ACCESSIBLE.

EXPANSION JOINTS SHALL BE PLACED AT 30' INTERVALS AND AT PROPERTY LINES ON SIDEWALKS AND WHEREVER NEW CONCRETE ABUTS EXISTING CONCRETE, FOUNDATIONS, CASTINGS, WATER VALVES, ETC.

ADJUST WATER AND GAS VALVE BOXES IN THE SIDEWALK TO THE PROPER GRADE.

FORMS SHALL CONSIST OF LUMBER (2" NOMINAL THICKNESS) OR METAL OF EQUAL STRENGTH. FULL DEPTH FORMWORK SHALL BE USED.

A MINIMUM OF 48 HOURS BEFORE CONCRETE IS TO BE PLACED, CALL 614-901-6650 TO SCHEDULE A FORMWORK INSPECTION. IN NO CASE MAY CONCRETE BE PLACED WITHOUT APPROVAL OF FORM WORK BY THE INSPECTOR.


COLD WEATHER CONCRETE PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH COLS. ITEM 451.061.

IMMEDIATELY AFTER FINISHING, CONCRETE SHALL BE CURED AND SEALED WITH A CURING MEMBRANE IN AN APPROVED MANNER.

FOR REPLACEMENT WORK, THE SIDEWALK AND CURB SHALL BE REMOVED TO EXISTING JOINT OR NO CLOSER THAN 5-FEET FROM AN EXISTING JOINT.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
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4/15/19  
DATE

STANDARD CONSTRUCTION DRAWING

SIDEWALK

RD-05

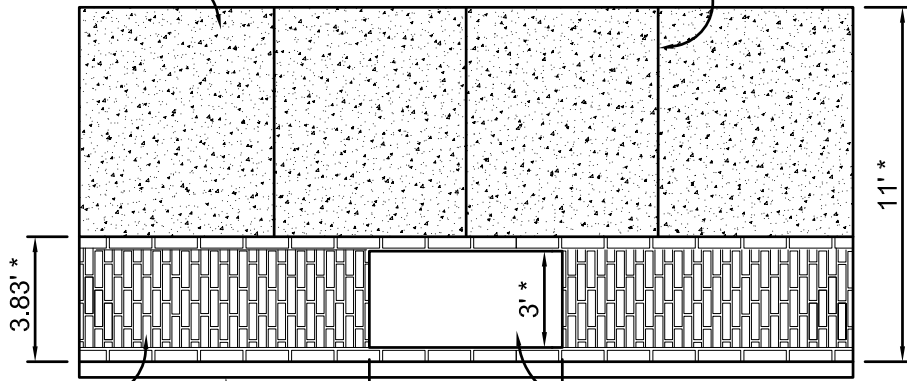
SHEET 2 OF 2

CONCRETE WALK BROOM FINISH  
PERPENDICULAR TO CURB

5' 5'

SAW CUT  
JOINT (TYP.)

\* AS REQUIRED  
BY THE CITY



2-1/4" THICK  
4" x 8" BRICK PAVERS

CURB

6' \*

3' x 6' RECTANGULAR TREE PIT W/  
NEENAH R-8808 GRATE & FRAME  
(CENTERED IN PAVERS) \*

**PLAN VIEW**

POLYMERIC SAND SWEEP JOINTS  
COLOR AS APPROVED

NEOPRENE MODIFIED  
ASPHALT ADHESIVE

3/4" BITUMINOUS SETTING BED

EXPANSION JOINT

REFER TO CONCRETE  
WALK DETAIL

2-1/4" THICK  
4" x 8" BRICK PAVERS

FINISHED GRADE

3/4" WEEPS AT 24" O.C.

3.83' \*

1.56%

EXPANSION JOINT

EX. CURB

REFER TO  
PAVEMENT DETAIL

TACK COAT

COLS. ITEM 608 - 4" CONCRETE

COMPACTED 4" OF COLS. ITEM 304  
COMPACTED SUBGRADE

POLYMERIC SAND SWEEP JOINTS  
COLOR AS APPROVED

NEOPRENE MODIFIED  
ASPHALT ADHESIVE

3/4" BITUMINOUS SETTING BED

EXPANSION JOINT

REFER TO  
PAVEMENT DETAIL

PATTERN PER PLAN

3/4" WEEPS AT 24" O.C.

REFER TO  
PAVEMENT DETAIL

COLS. ITEM 608 - 4" CONCRETE

COMPACTED 4" OF COLS. ITEM 304  
COMPACTED SUBGRADE

ALL ITEM NUMBERS ARE THE CURRENT EDITION  
OF THE CITY OF COLUMBUS CONSTRUCTION  
AND MATERIAL SPECIFICATIONS



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

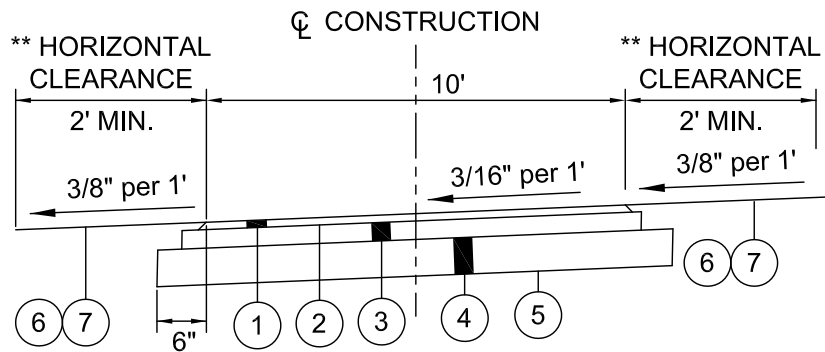
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CITY ENGINEER

4/15/19  
DATE

STANDARD CONSTRUCTION DRAWING  
**SIDEWALK WITH  
BRICK PAVERS**

**RD-06**

SHEET 1 OF 1



### CODED NOTES

- ① ITEM 1530 - 1-1/2" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, (448), PG 64-22
- ② ITEM 407 - NON-TRACKING TACK COAT (0.075 GAL./SQ. YD.)
- ③ ITEM 301 - 3" ASPHALT CONCRETE BASE
- ④ ITEM 304 - 6" AGGREGATE BASE
- ⑤ ITEM 204 - SUBGRADE COMPACTION
- ⑥ ITEM 12659 - SEEDING AND MULCHING \*
- ⑦ ITEM 12653 - 3" TOPSOIL FURNISHED AND PLACED \*

ALL ITEMS ARE COLS. UNLESS OTHERWISE INDICATED:

\* CITY OF WESTERVILLE

\*\* THE PATHWAY SHALL BE CONSTRUCTED WITH A PREFERRED 4 FOOT HORIZONTAL CLEARANCE (SAFETY ZONE) ON EACH SIDE, WITH A MINIMUM OF 2 FOOT HORIZONTAL CLEARANCE ON EACH SIDE, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

THE PATHWAY SHALL HAVE A 10 FOOT VERTICAL CLEARANCE ACROSS THE PATHWAY AND THE HORIZONTAL CLEARANCE AREA, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

THE CITY OF WESTERVILLE FOLLOWS THE "GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES, 2012 FOURTH EDITION".



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

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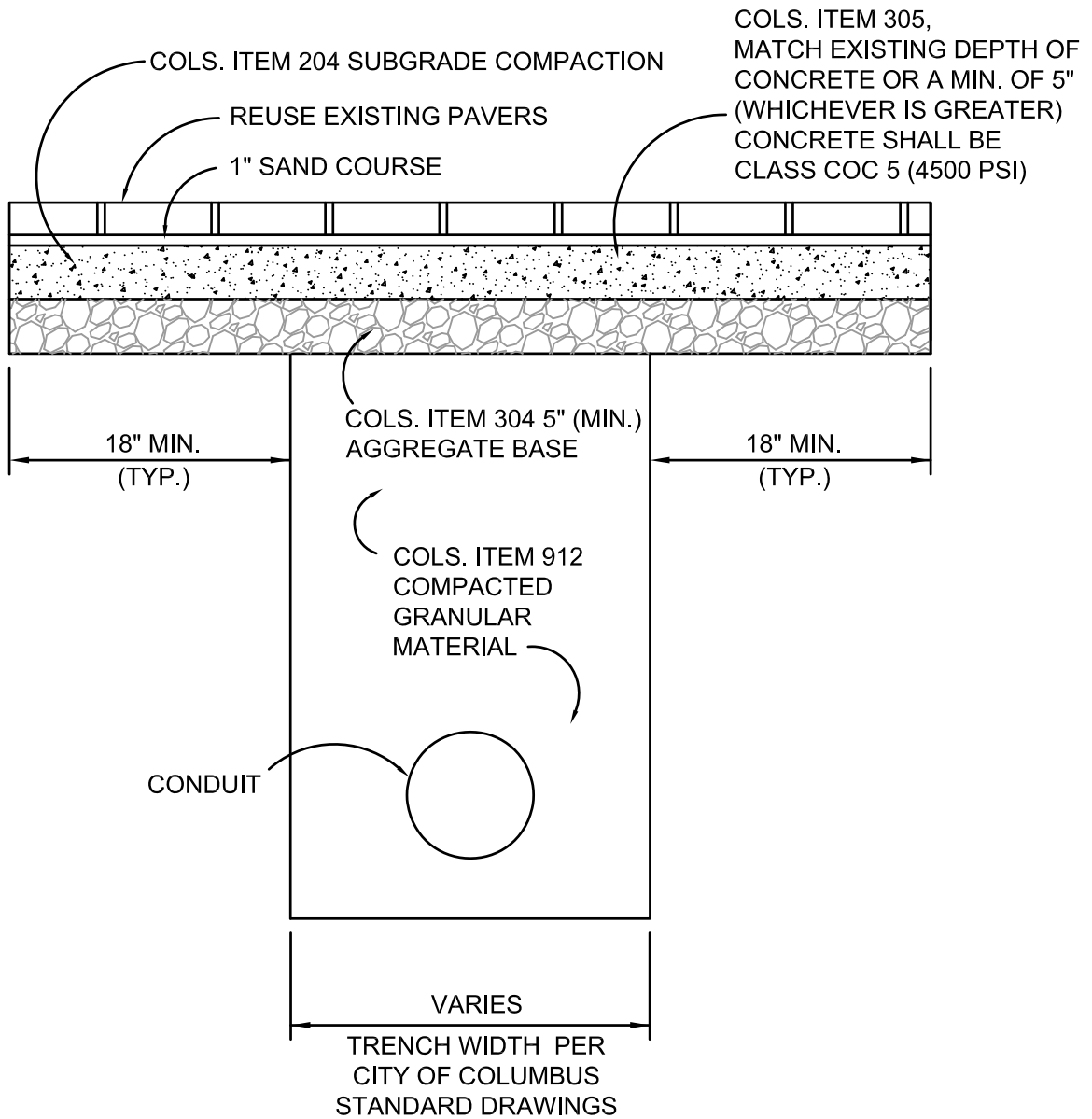
2/15/2022  
DATE

STANDARD CONSTRUCTION DRAWING

**RECREATIONAL  
PATHWAY**

**RD-07**

SHEET 1 OF 1



NOTE: NO. 8 OR NO.57 STONE SHALL NOT BE USED AS BACKFILL

FOLLOW CITY OF COLUMBUS STANDARD DRAWINGS FOR BEDDING AND BACKFILL



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

STANDARD CONSTRUCTION DRAWING

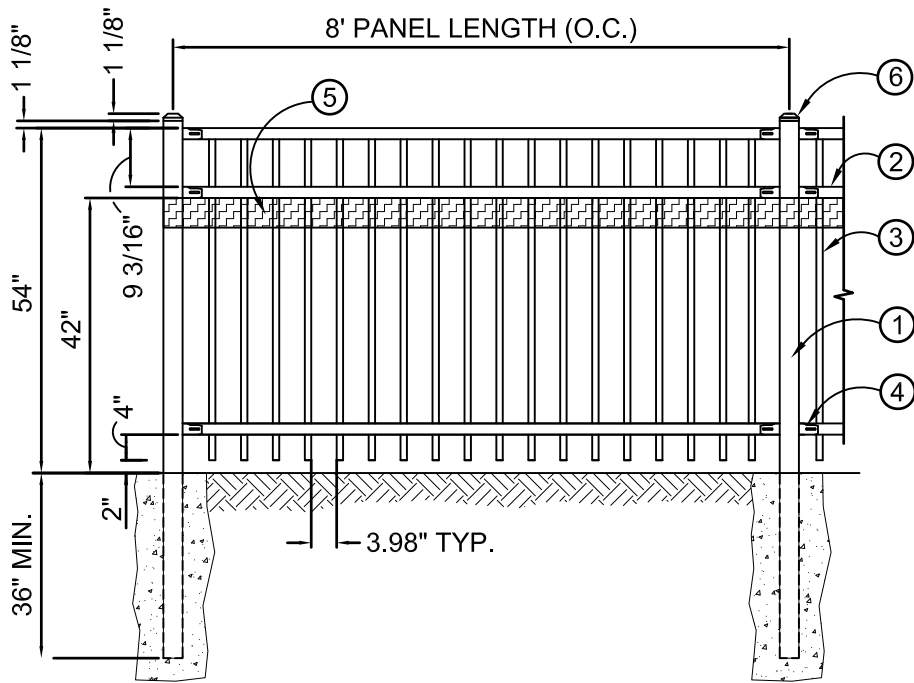
**BRICK STREET  
TRENCH REPAIR**

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CITY ENGINEER

4/15/19  
DATE

**RD-08**

SHEET 1 OF 1

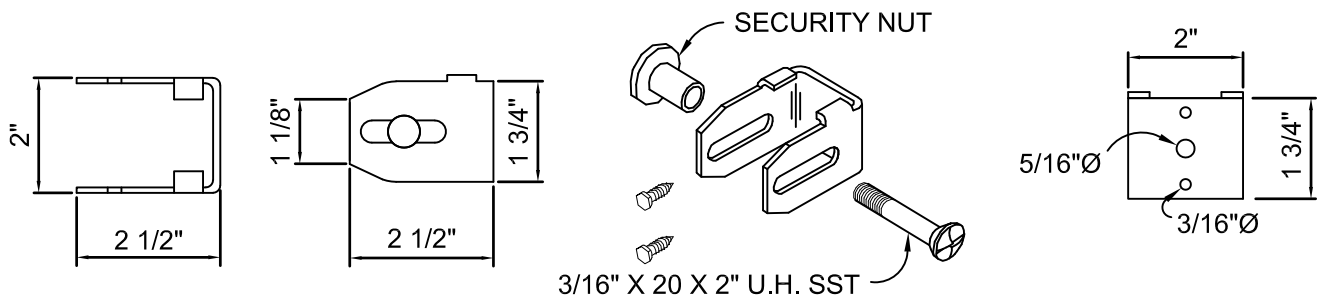


**CODED NOTES**

- ① 3" x 3" x 12 GA. POST
- ② 1 3/4"x 1 3/4" x 14 GA. FORERUNNER RAIL
- ③ 1" x 1" x 14 GA. PICKET
- ④ BB301 BRACKET
- ⑤ RUB RAIL - 1"X6" ASC TREATED LUMBER SANDED SMOOTH
- ⑥ STANDARD FLAT CAP SECURED TO POST WITH SCREWS

**NOTES:**

1. FENCE SHALL BE MODEL AEGIS II, MAJESTIC STYLE, 3-RAIL, 8' PANEL LENGTH, AS MANUFACTURED BY AMERISTAR, TULSA OK, OR EQUAL. PER CITY OF WESTERVILLE SPECIFICATION SECTION 12607.
2. FINISH PAINT SHALL BE BLACK, THIS INCLUDES ALL POST, PICKETS, RAILS, CAPS, BRACKETS, SCREWS, BOLTS, ETC.
3. FACE OF RAILING SHALL BE 2' MINIMUM OFF EDGE OF BIKE PATH / SIDE WALK UNLESS OTHERWISE SHOWN ON PLANS.
4. TOP AND BOTTOM RAILS SHALL BE PARALLEL TO THE GROUND AND VERTICAL PICKETS AND POSTS FINISHED PLUM.



**INDUSTRIAL FLAT MOUNTING BRACKET (BB301)**

SCALE: NONE



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

*Let Till*  
CITY ENGINEER

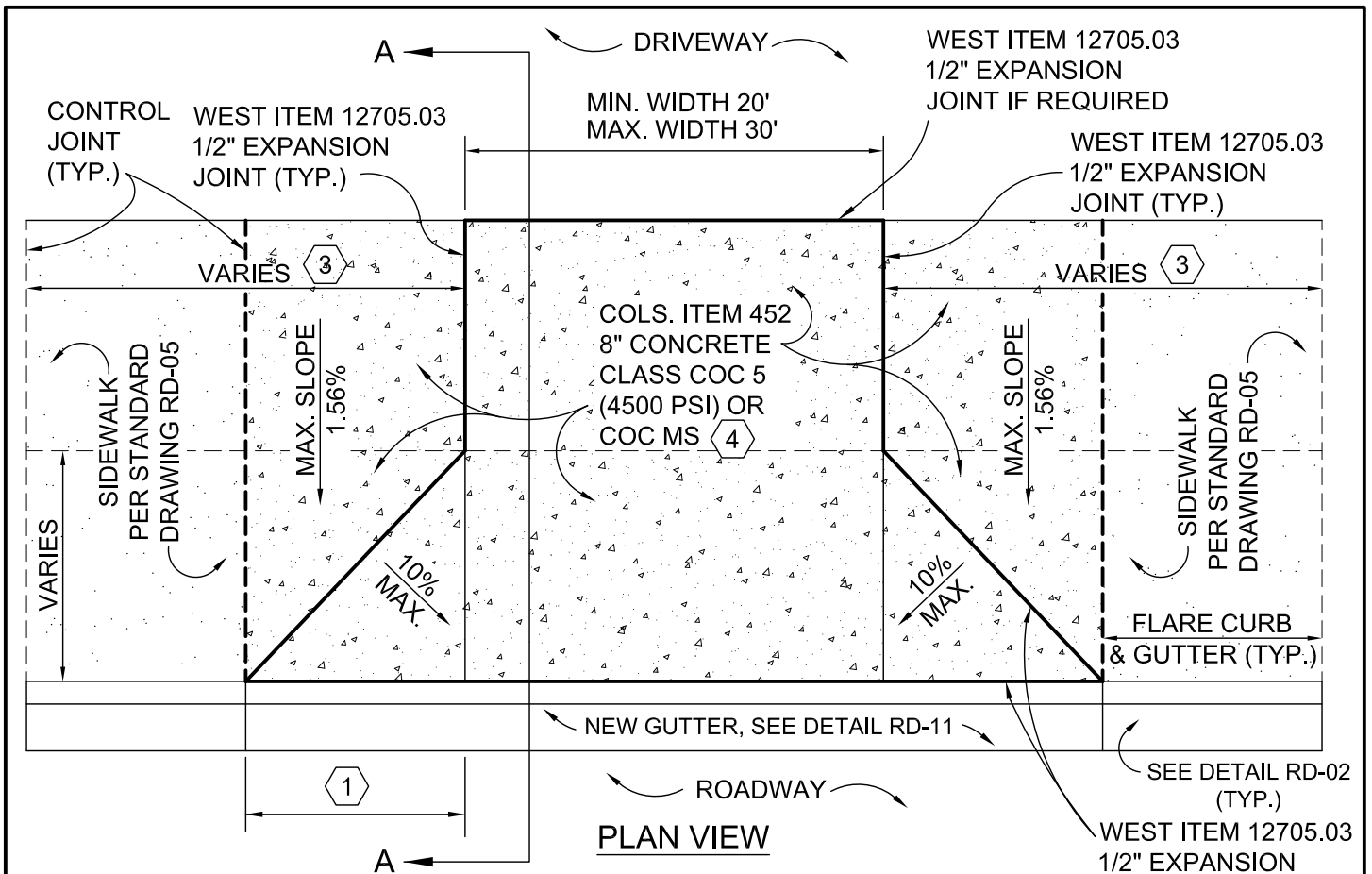
4/15/19  
DATE

STANDARD CONSTRUCTION DRAWING

**DECORATIVE  
RAILING**

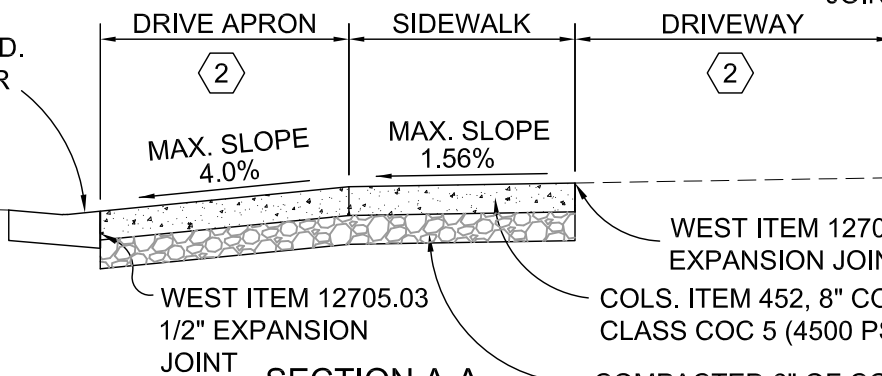
**RD-09**

SHEET 1 OF 1



PLAN VIEW


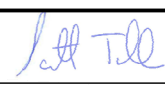
SAW CUTTING OF CURB NOT PERMITTED. INSTALL NEW GUTTER PER STANDARD DRAWING RD-11.



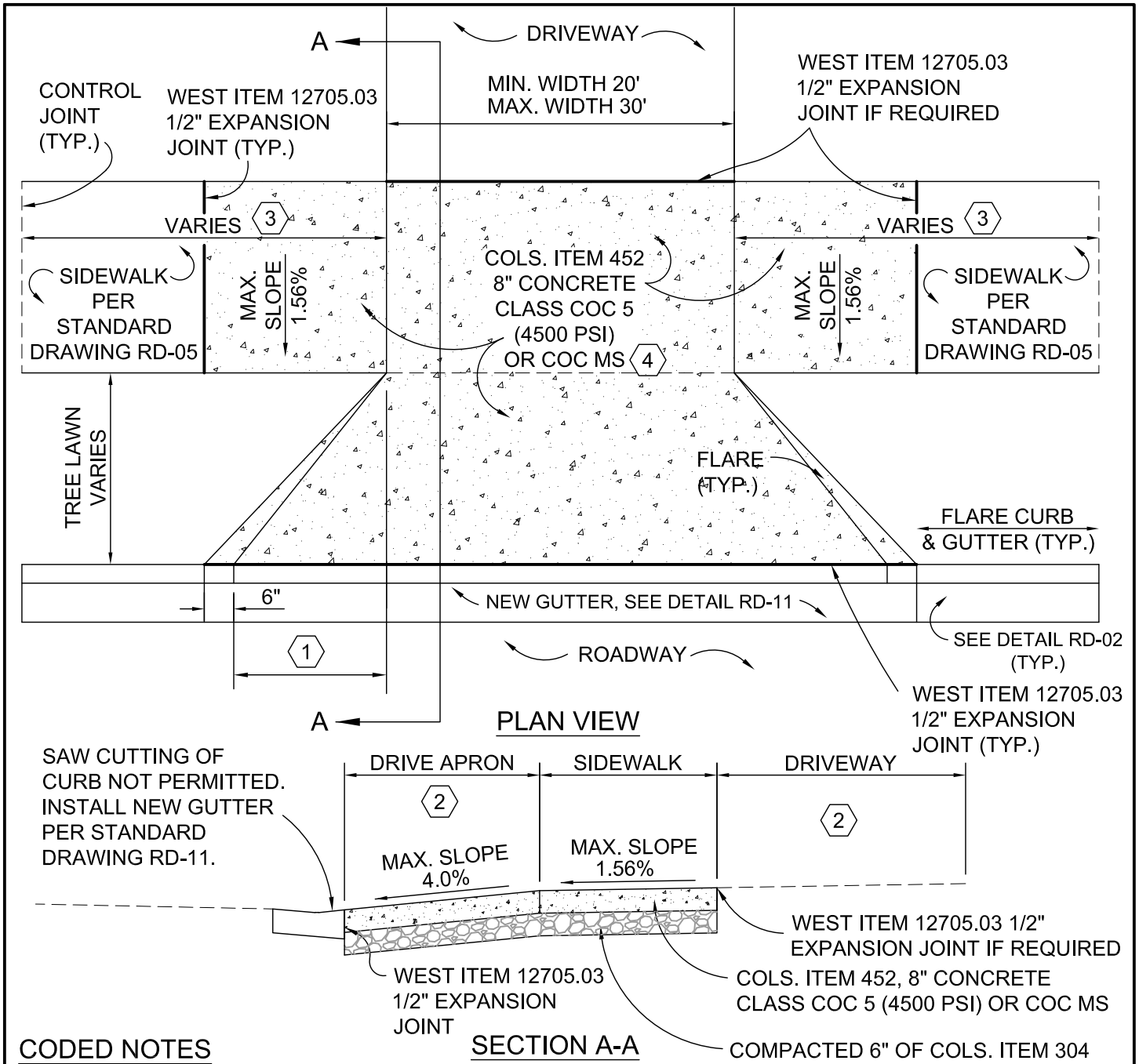
SECTION A-A

**CODED NOTES**

- ① FLARE WIDTH VARIES FROM STREET TO STREET. RETURNS SHALL BE EXTENDED BACK TO THE SIDEWALK CONTROL JOINT. THE MAXIMUM WIDTH OF THE FLARE SHALL BE 45° OR 5' WHICHEVER IS GREATER.
- ② MAXIMUM DRIVE APRON AND DRIVEWAY SLOPE IS 4% AND APPLIES TO NEW AND RE-DEVELOPMENTS. UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- ③ TO ACHIEVE MAXIMUM SLOPE OF 4% ON DRIVEWAY APRON, FIRST TWO SIDEWALK SECTIONS/PANELS MAY BE SLOPED TOWARDS THE DRIVEWAY APRON, MAXIMUM RUNNING SLOPE OF 3.0%. DRIVEWAY FLARE AT CURB AND GUTTER SHALL NOT BE GREATER THAN 6" IN HEIGHT.
- ④ ALL 8" CONCRETE AREAS SHALL INCLUDE WIRE FABRIC IN ACCORDANCE WITH ODOT CMS 451 AND ODOT STANDARD CONSTRUCTION DRAWING BP-1.1.


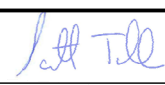
	CITY OF WESTERVILLE DEPARTMENT OF PLANNING AND DEVELOPMENT ENGINEERING DIVISION	STANDARD CONSTRUCTION DRAWING <b>COMMERCIAL</b> <b>APPROACH TYPE 1</b>	
	 CITY ENGINEER	2/15/2022 DATE	<b>RD-10</b>
			SHEET 1 OF 4

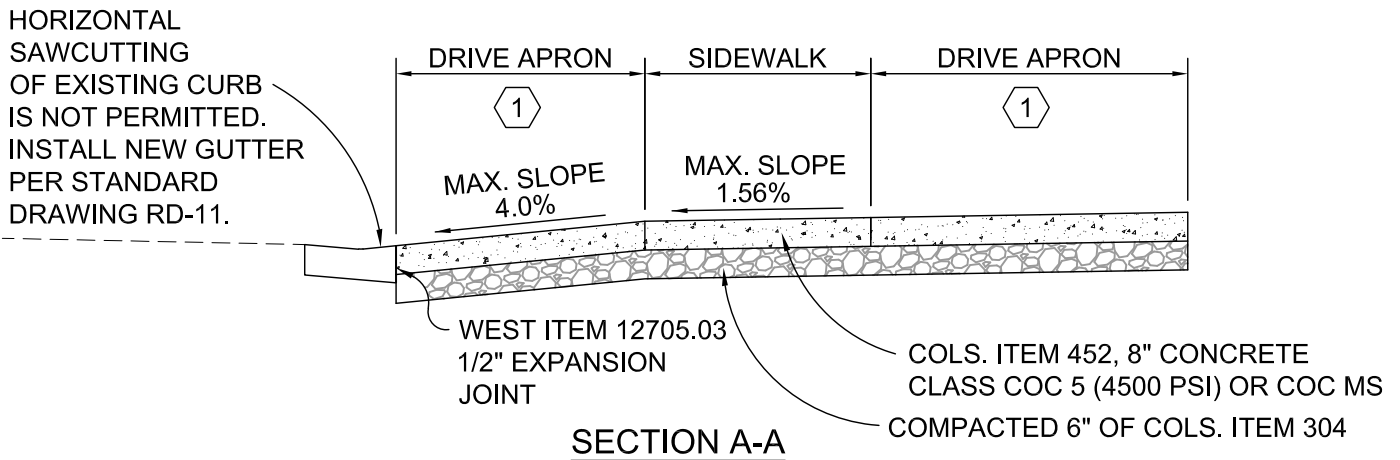
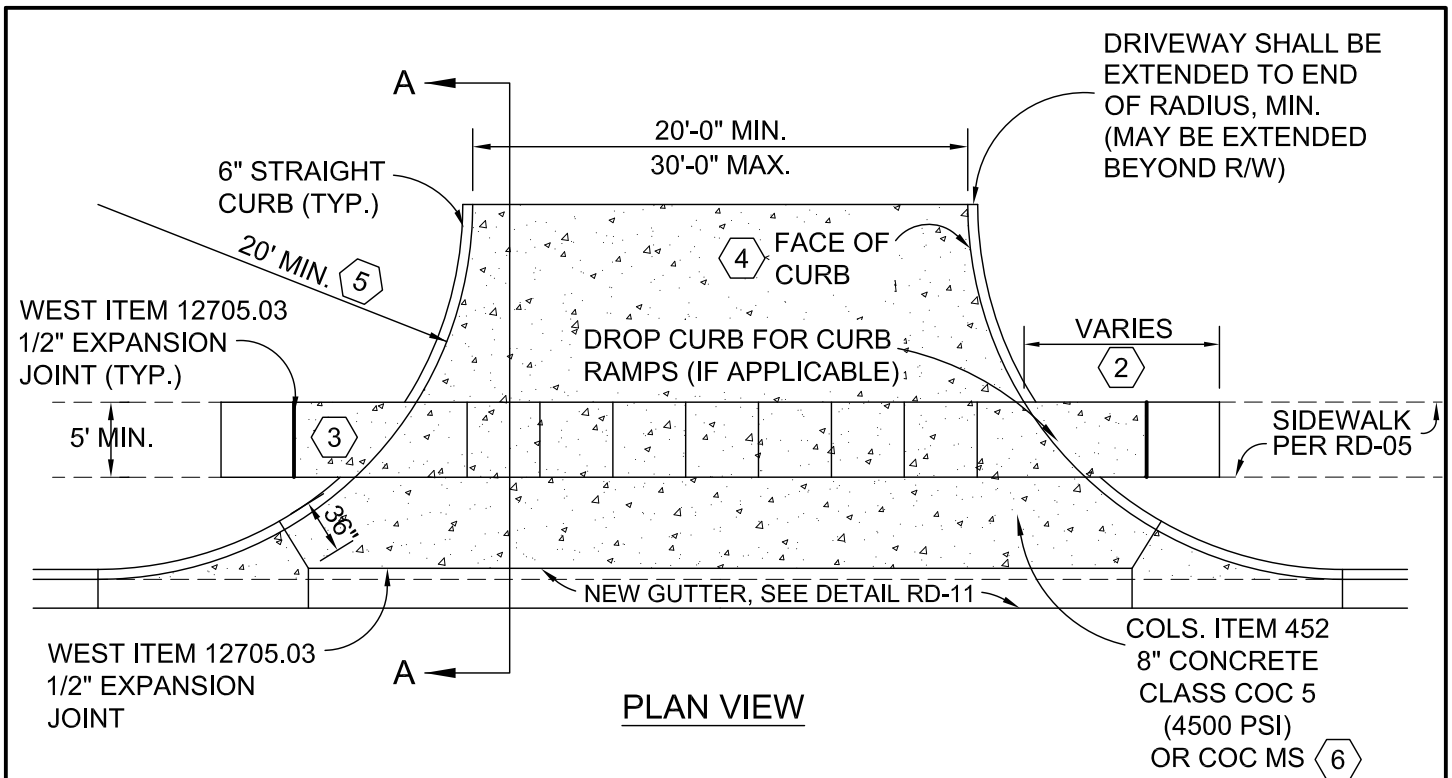




**CODING NOTES**



- (1) FLARE WIDTH VARIES FROM STREET TO STREET. RETURNS SHALL BE EXTENDED BACK TO THE SIDEWALK CONTROL JOINT. THE MAXIMUM WIDTH OF THE FLARE SHALL BE 45° OR 5' WHICHEVER IS GREATER.
- (2) MAXIMUM DRIVE APRON AND DRIVEWAY SLOPE IS 4% AND APPLIES TO NEW AND RE-DEVELOPMENTS. UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- (3) TO ACHIEVE MAXIMUM SLOPE OF 4% ON DRIVEWAY APRON, FIRST TWO SIDEWALK SECTIONS/PANELS MAY BE SLOPED TOWARDS THE DRIVEWAY APRON, MAXIMUM RUNNING SLOPE OF 3.0%. DRIVEWAY FLARE AT CURB AND GUTTER SHALL NOT BE GREATER THAN 6" IN HEIGHT.
- (4) ALL 8" CONCRETE AREAS SHALL INCLUDE WIRE FABRIC IN ACCORDANCE WITH ODOT CMS 451 AND ODOT STANDARD CONSTRUCTION DRAWING BP-1.1.

	CITY OF WESTERVILLE DEPARTMENT OF PLANNING AND DEVELOPMENT ENGINEERING DIVISION	STANDARD CONSTRUCTION DRAWING <b>COMMERCIAL          APPROACH TYPE 2</b>
	 CITY ENGINEER	2/15/2022 DATE



**CODED NOTES**

- (1) MAXIMUM DRIVE APRON AND DRIVEWAY SLOPE IS 4% AND APPLIES TO NEW AND RE-DEVELOPMENTS. UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- (2) TO ACHIEVE MAXIMUM SLOPE OF 4% ON DRIVEWAY APRON, FIRST TWO SIDEWALK SECTIONS/PANELS MAY BE SLOPED TOWARDS THE DRIVEWAY APRON, MAXIMUM RUNNING SLOPE OF 3.0%.
- (3) 8" CONCRETE SIDEWALK FOR 1 FULL PANEL (MIN. 5 FT.) BEYOND EDGE OF APPROACH.
- (4) 6" STRAIGHT CURB AND 8" CONCRETE APPROACH SHALL BE POURED INTEGRAL.
- (5) LARGER RADIUS SHALL BE APPROVED BY THE CITY ENGINEER.
- (6) ALL 8" CONCRETE AREAS SHALL INCLUDE WIRE FABRIC IN ACCORDANCE WITH ODOT CMS 451 AND ODOT STANDARD CONSTRUCTION DRAWING BP-1.1.

	CITY OF WESTERVILLE DEPARTMENT OF PLANNING AND DEVELOPMENT ENGINEERING DIVISION	STANDARD CONSTRUCTION DRAWING <b>COMMERCIAL          APPROACH TYPE 3</b>	
	 CITY ENGINEER	2/15/2022 DATE	<b>RD-10</b>
			SHEET 3 OF 4

NOTES: THE BELOW NOTES APPLY TO ALL WORK WITHIN THE PUBLIC RIGHT OF WAY AND OR PUBLIC EASEMENT AREAS.

ALL NEW CONCRETE SHALL HAVE POSITIVE DRAINAGE. ANY AREAS HOLDING WATER SHALL BE REMOVED AND RECONSTRUCTED BY THE CONTRACTOR.

ALL CONCRETE SHALL BE COLS CLASS COC 5 (4500 PSI) OR COC MS.

USE SAW CUT ON ALL JOINTS (CONTROL, TRANSVERSE, CONTRACTION, EXPANSION, ETC.) DIVIDE THE SURFACE OF THE WALKS INTO EQUALLY SPACED RECTANGULAR BLOCKS AT APPROXIMATELY 5-FOOT INTERVALS. NOT PERMITTED IS A TOOL JOINT AND OR EDGING TOOL TO EDGE ALL OUTSIDE EDGES AND JOINTS UNLESS OTHERWISE APPROVED.

ALL SAWCUTTING SHALL BE PERFORMED USING WATER.

IMMEDIATELY AFTER FINISHING, CONCRETE SHALL BE CURED AND SEALED WITH A CLEAR CONCRETE CURING MEMBRANE. USE OF PIGMENTED CURING MEMBRANES SHALL RESULT IN THE REMOVAL AND REPLACEMENT OF ANY CONCRETE SO CURED AT THE CONTRACTOR'S EXPENSE.

ALL CONCRETE SHALL BE PLACED IN ONE COURSE AND FINISHED ACCORDING TO SPECIFICATIONS.

THE CONTRACTOR SHALL PROPERLY PROTECT THE WORK AREA DURING CONSTRUCTION AND SHALL NOT REMOVE THE PROTECTION UNTIL THE WORK AREA IS 100% COMPLETE AND ACCESSIBLE.


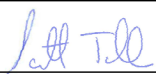
EXPANSION JOINTS SHALL BE PLACED AS SHOWN ON THE STANDARD DRAWINGS AND WHEREVER NEW CONCRETE ABUTS EXISTING CONCRETE, FOUNDATIONS, CASTINGS, WATER VALVES, ETC.

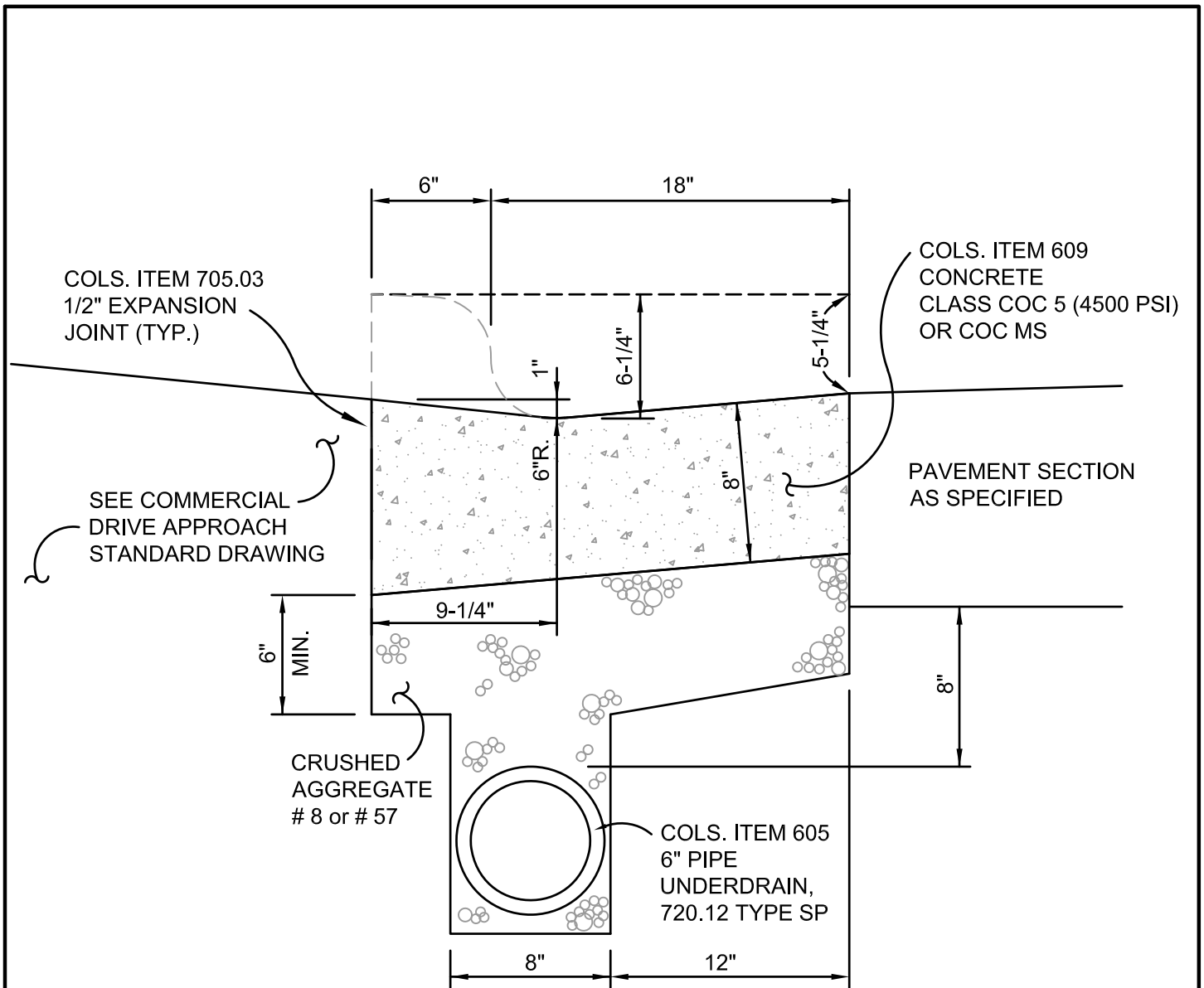
ADJUST MANHOLES, WATER VALVE AND GAS VALVE BOXES IN THE CONCRETE TO THE PROPER GRADE.

CALL 614-901-6650 A MINIMUM OF 48 HOURS BEFORE CONCRETE IS TO BE PLACED TO SCHEDULE A FORMWORK INSPECTION. IN NO CASE MAY CONCRETE BE PLACED WITHOUT APPROVAL OF FORM WORK BY THE INSPECTOR.

COLD WEATHER CONCRETE PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH COLS. ITEM 451.

FOR REPLACEMENT WORK, THE SIDEWALK AND CURB SHALL BE REMOVED TO NEAREST EXISTING JOINT OR NO CLOSER THAN 5-FEET FROM AN EXISTING JOINT.



	CITY OF WESTERVILLE DEPARTMENT OF PLANNING AND DEVELOPMENT ENGINEERING DIVISION	STANDARD CONSTRUCTION DRAWING <b>COMMERICAL APPROACH</b>
	 CITY ENGINEER	2/15/2022 DATE



NOTES: THE BELOW NOTES APPLY TO ALL WORK WITHIN THE PUBLIC RIGHT OF WAY AND OR PUBLIC EASEMENT AREAS.

ALL EXPOSED SURFACES OF CONCRETE SHALL HAVE A STRAIGHT BRUSH FINISH.

CONTRACTOR IS RESPONSIBLE FOR PROTECTING ADJACENT DRIVEWAY, SIDEWALK, UNDERDRAIN AND STREET LIGHTING CONDUIT, AND REPLACEMENT OF DAMAGED ITEM WITH LIKE MATERIAL IF DAMAGED DUE TO CONTRACTOR'S WORK.

	CITY OF WESTERVILLE DEPARTMENT OF PLANNING AND DEVELOPMENT ENGINEERING DIVISION		STANDARD CONSTRUCTION DRAWING <b>COMMERCIAL          APPROACH GUTTER</b>
	 CITY ENGINEER	3/24/20 DATE	<b>RD-11</b> SHEET 1 OF 2

ALL NEW CONCRETE SHALL HAVE POSITIVE DRAINAGE. ANY AREAS HOLDING WATER SHALL BE REMOVED AND RECONSTRUCTED BY THE CONTRACTOR.

ALL CONCRETE SHALL BE COLS. CLASS COC 5 (4500 PSI) OR COC MS.

ALL SAWCUTTING SHALL BE PERFORMED USING WATER.

IMMEDIATELY AFTER FINISHING, CONCRETE SHALL BE CURED AND SEALED WITH A CLEAR CONCRETE CURING MEMBRANE. USE OF PIGMENTED CURING MEMBRANES SHALL RESULT IN THE REMOVAL AND REPLACEMENT OF ANY CONCRETE SO CURED AT THE CONTRACTOR'S EXPENSE.

ALL CONCRETE SHALL BE PLACED IN ONE COURSE AND FINISHED ACCORDING TO SPECIFICATIONS.

NO. 8 OR NO. 57 STONE UNDER THE CURB AND GUTTER SECTION SHALL BE 6" DEEPER THAN ALL PAVING AND UNDERCUT MATERIALS TO ALLOW SUBSURFACE DRAINAGE TO FLOW TO THE ROADWAY UNDERDRAINS.

THE CONTRACTOR SHALL PROPERLY PROTECT THE WORK AREA DURING CONSTRUCTION AND SHALL NOT REMOVE THE PROTECTION UNTIL THE WORK AREA IS 100% COMPLETE AND ACCESSIBLE.

COLD WEATHER CONCRETE PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH COLS. ITEM 451.071.

FOR REPLACEMENT WORK, THE CURB SHALL BE REMOVED TO NEAREST EXISTING JOINT OR NO CLOSER THAN 5-FEET FROM AN EXISTING JOINT.

SUBGRADE COMPACTION SHALL BE COMPLETED BEFORE UNDERDRAIN INSTALLATION.

WHEN A CURB AND GUTTER INLET IS INSTALLED, THE TOP OF THE CASTING SHALL BE THE SAME AS THE TOP OF CURB ELEVATION. THE EDGE OF PAVEMENT SHALL BE 3/8" HIGHER THAN THE GRATE WHEREVER THEY MEET/TOUCH. WHEN NEW CURBING IS INSTALLED ADJACENT TO A CURB INLET, 1" PERFORMED EXPANSION JOINT FILLER SHALL BE PLACED IN THE CURB & GUTTER 5' ON EACH SIDE OF INLET CASTING.

1/2" EXPANSION JOINTS WILL BE INSTALLED BEHIND THE CURB WHEN A CONCRETE WALK, DRIVE OR OTHER ITEM IS ADJOINING IT.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

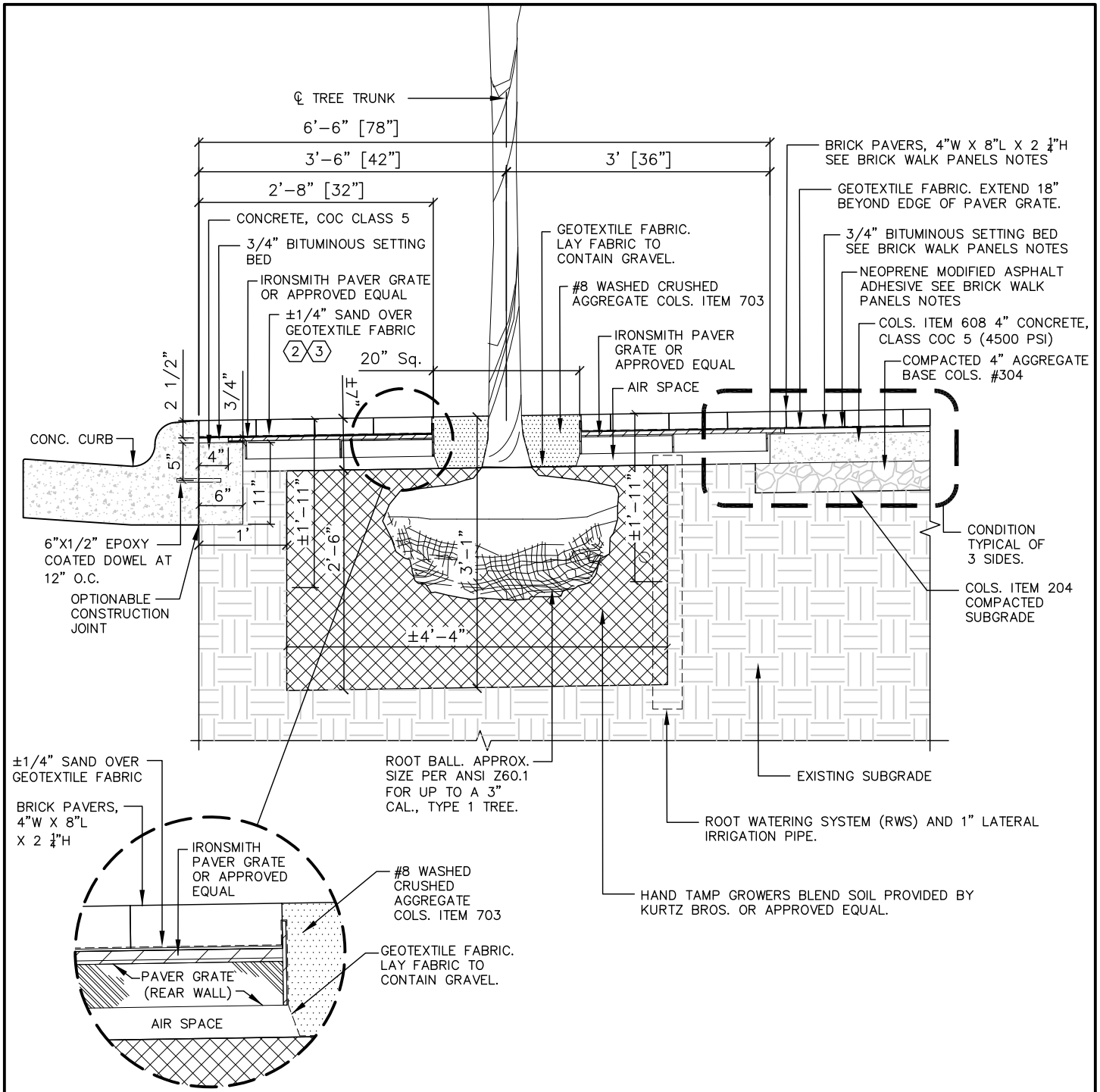
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CITY ENGINEER

3/24/20  
DATE

STANDARD CONSTRUCTION DRAWING  
**COMMERCIAL  
APPROACH GUTTER**

RD-11

SHEET 2 OF 2

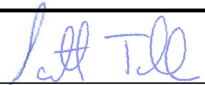


**NOTES:**

1. UNDERGROUND ROOT WATERING SYSTEM AND OTHER UTILITIES MAY BE PRESENT WITHIN TREE PITS. VERIFY UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
2. GEOTEXTILE FABRIC SHALL BE ODOT ITEM 712.09, TYPE A. PLACE GEOTEXTILE FABRIC OVER ENTIRE GRATE AND EXTEND 18" BEYOND EDGE OF PAVER GRATE. OVERLAP SEAMS 12-INCHES.
3. PLACE ±1/4 INCH OF ASTM C33 BEDDING SAND OVER GEOTEXTILE FABRIC FOR LEVELING ADJUSTMENT.
4. FILL JOINTS BETWEEN PAVERS WITH TAN POLYMERIC JOINT SAND, ASTM C144, MATCHING EXISTING JOINTS, TECHNISEAL HP, OR EQUAL. SEE BRICK WALK PANELS NOTES.
5. 6'-4" X 5'-8" IRONSMITH PAVER GRATE OR APPROVED EQUAL. VERIFY OPENING SIZE AT EACH PIT FOLLOWING PLACEMENT OF CONCRETE AND PRIOR TO PLACING PAVER GRATE.



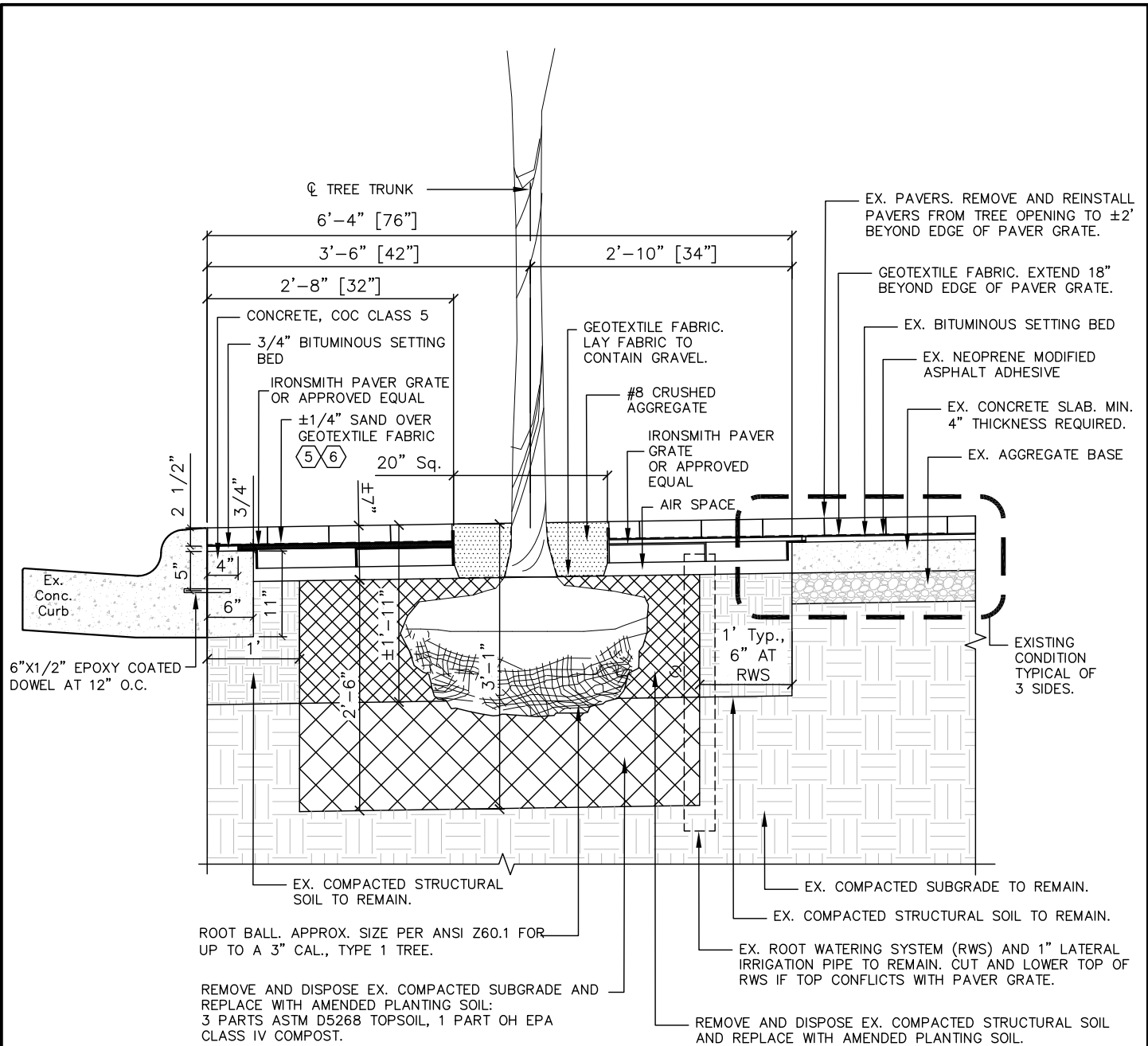
CITY OF WESTERVILLE  
 DEPARTMENT OF PLANNING AND DEVELOPMENT  
 ENGINEERING DIVISION

  
 CITY ENGINEER

2/15/2022  
 DATE

STANDARD CONSTRUCTION DRAWING  
**TREE PLANTING  
 & GRATE - TYPE A**

RD-12  
 SHEET 1 OF 1



**NOTES:**

1. THIS STANDARD DRAWING IS FOR A RETROFIT CONDITION. VERIFY CONDITION AND INTEGRITY OF CONCRETE SLAB. CUT AND REPLACE CRACKED, UNEVEN OR THIN SECTIONS.
2. SIZE OF CONCRETE SLAB OPENING FROM RECORD PLANS IS 76" X 68". VERIFY OPENING SIZE AT EACH PIT FOLLOWING PLACEMENT OF CONCRETE AND PRIOR TO ORDERING PAVER GRATE.
3. UNDERGROUND ROOT WATERING SYSTEM AND OTHER UTILITIES MAY BE PRESENT WITHIN TREE PITS. VERIFY UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
4. GEOTEXTILE FABRIC SHALL BE ODOT ITEM 712.09, TYPE A. PLACE GEOTEXTILE FABRIC OVER ENTIRE GRATE AND EXTEND 18" BEYOND EDGE OF PAVER GRATE. OVERLAP SEAMS 12-INCHES.
5. PLACE ±1/4 INCH OF ASTM C33 BEDDING SAND OVER GEOTEXTILE FABRIC FOR LEVELING ADJUSTMENT.
6. FILL JOINTS BETWEEN PAVERS WITH TAN POLYMERIC JOINT SAND, ASTM C144, MATCHING EXISTING JOINTS, TECHNISEAL HP, OR EQUAL.
7. 6'-4" X 5'-8" IRONSMITH PAVER GRATE OR APPROVED EQUAL. VERIFY OPENING SIZE AT EACH PIT FOLLOWING PLACEMENT OF CONCRETE AND PRIOR TO PLACING PAVER GRATE.



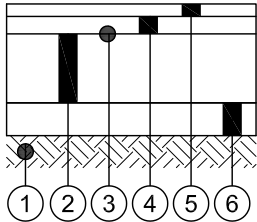
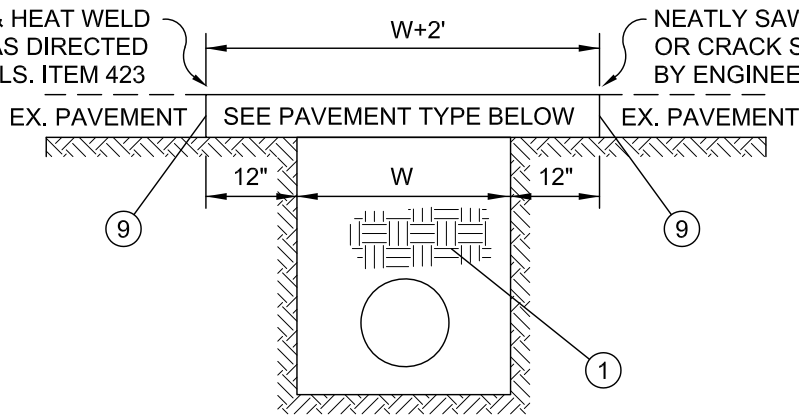
CITY OF WESTERVILLE  
 DEPARTMENT OF PLANNING AND DEVELOPMENT  
 ENGINEERING DIVISION  
  
*Let Till*  
 CITY ENGINEER

2/15/2022  
 DATE

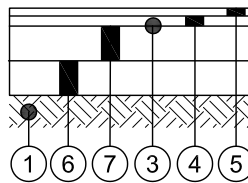
STANDARD CONSTRUCTION DRAWING  
**TREE PLANTING &  
 GRATE - TYPE B**  
  
**RD-13**  
 SHEET 1 OF 1

NEATLY SAWCUT & HEAT WELD OR CRACK SEAL (AS DIRECTED BY ENGINEER), COLS. ITEM 423

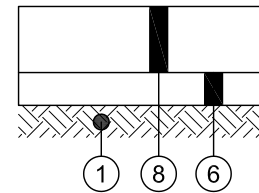
NEATLY SAWCUT & HEAT WELD OR CRACK SEAL (AS DIRECTED BY ENGINEER), COLS. ITEM 423



**TYPE A**  
**COMPOSITE PAVEMENT, 10"**



**TYPE B**  
**ASPHALT PAVEMENT, 16"**



**TYPE C**  
**CONCRETE PAVEMENT, 7"**

**PAVEMENT SECTION ITEMS**

- ① COLS. ITEM 613 - LOW STRENGTH MORTAL BACKFILL, TYPE 2
- ② COLS. ITEM 305 - 7" PORTLAND CONCRETE CEMENT BASE, CLASS COC 5
- ③ COLS. ITEM 407 - NON-TRACKING TACK COAT, 0.10 GAL/SY
- ④ COLS. ITEM 441 - 1-3/4" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2, PG64-22 (448)
- ⑤ COLS. ITEM 441 - 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG-64-22 (448)
- ⑥ COLS. ITEM 304 - 6" AGGREGATE BASE, PLACED IN 2 - 3" LIFTS
- ⑦ COLS. ITEM 301 - 7" BITUMINOUS AGGREGATE BASE, PLACED IN 2 - 3 1/2" LIFTS
- ⑧ COLS. ITEM 452 - 7" PORTLAND CEMENT CONCRETE PAVEMENT, CLASS COC 5 OR COC MS
- ⑨ COLS. ITEM 409 - SAWCUTTING

**DETAIL NOTES**

1. THE TRENCH REPAIR DETAIL USED (A, B, OR C) SHALL CORRESPOND TO THE EXISTING PAVEMENT COMPOSITION ENCOUNTERED AND OR AS REQUIRED BY THE CITY ENGINEER.
2. PAY ITEM SHALL BE PAID BY THE SQUARE YARD.
3. TRENCH WIDTH "W", SHALL BE PER CITY OF COLS. STANDARD DRAWINGS.
4. UNLESS OTHERWISE SPECIFIED, PAYMENT LIMIT FOR PAVEMENT REPLACEMENT SHALL BE W + 2 FT.
5. TYPE A, COMPOSITE PAVEMENT, SHALL BE USED WHEN ANY COMPOSITE PAVEMENT IS ENCOUNTERED.
6. NO RECYCLED PORTLAND CEMENT CONCRETE SHALL BE PERMITTED FOR THE BACKFILL MATERIAL.
7. TRENCH SHALL BE NEATLY SAWCUT PRIOR TO PAVEMENT REPLACEMENT AND BUTT JOINTS WITH EXISTING PAVEMENT SHALL BE HEAT WELDED PER COLUMBUS SUPPLEMENTAL SPECIFICATION 1541 (THERMAL BOND ASPHALT REPAIR) OR CRACK SEAL PER COLS. ITEM 423 AS DETERMINED BY CITY ENGINEER.
8. WHEN TRENCH IS LESS THAN 2 FT. FROM AN ADJACENT CURB, THE PAVEMENT REPLACEMENT LIMIT SHALL BE EXTENDED TO THE CURB, AS DIRECTED BY THE CITY ENGINEER.
9. REPLACE ANY DISTURBED TRAFFIC MARKINGS ACCORDING TO COLS. ITEM 644. COST OF REPLACEMENT PAVEMENT MARKINGS SHALL BE INCLUDED IN THE COST OF THE REPAIR.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

*Jeff Telle*  
CITY ENGINEER

2/15/2022

DATE

STANDARD CONSTRUCTION DRAWING  
UTILITY TRENCH REPAIR  
FOR RESIDENTIAL &  
LOCAL STREETS

RD-14

SHEET 1 OF 2



**DETAIL NOTES, CON'T:**

10. BACKFILL OF ALL TRENCHES SHALL BE LOW-STRENGTH MORTAR BACKFILL AS PER COLS. ITEM 613 WITH A MINIMUM DENSITY OF 125 LBS./CU.FT. USE TYPE 2 ONLY.
11. TIMING OF THE PAVEMENT REPAIR SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER. THE EDGE SHALL BE CUT VERTICALLY AND TRIMMED BEHIND ALL BROKEN PAVEMENT TO PROVIDE A SINGLE STRAIGHT LINE. TEMPORARY PAVEMENT OR STEEL PLATES SHALL BE INSTALLED IN THE INTERIM TIME BETWEEN EXCAVATION & PERMANENT REPLACEMENT. STREETS WITH MACADAM BASE MATERIAL ARE TO BE TREATED AS COMPOSITE, PER TYPE A.
12. THIS PAY ITEM SHALL BE PAID BY THE SQUARE YARD.
13. WARRANTY: ALL PAVEMENT REPAIRS SHALL BE GUARANTEED FOR ONE YEAR TO REFILL SETTLED AREAS, SEAL JOINTS, AND REMOVE AND REPAIR ANY DEFECT AS DIRECTED BY THE CITY ENGINEER.
14. NON-TRACKING TACK COAT IS NOT REQUIRED IF ALL ASPHALT IS PLACED WITHIN A 24-HOUR WINDOW UNLESS REQUIRED BY THE CITY ENGINEER.
15. IF THE EXISTING PAVEMENT SECTION IS THICKER THAN THE DETAIL, MATCH EXISTING PAVEMENT THICKNESS.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

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CITY ENGINEER

2/15/2022  
DATE

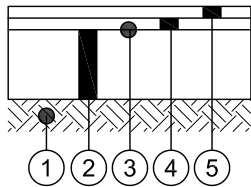
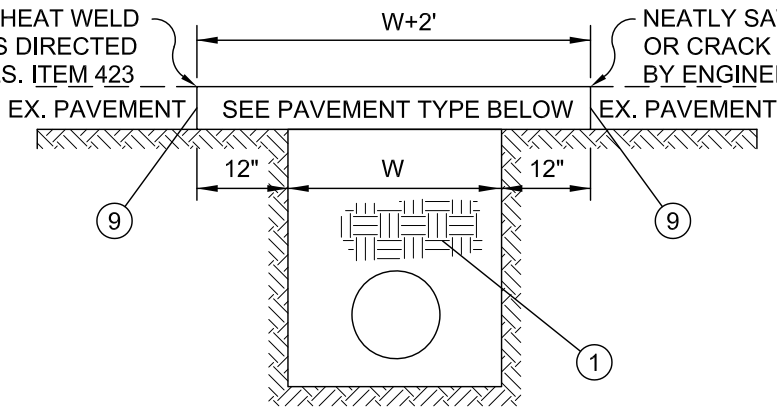
STANDARD CONSTRUCTION DRAWING  
UTILITY TRENCH REPAIR  
FOR RESIDENTIAL &  
LOCAL STREETS

**RD-14**

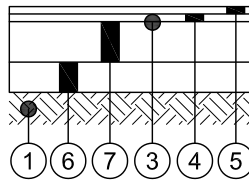
SHEET 2 OF 2

NEATLY SAWCUT & HEAT WELD OR CRACK SEAL (AS DIRECTED BY ENGINEER), COLS. ITEM 423

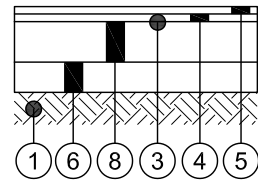
NEATLY SAWCUT & HEAT WELD OR CRACK SEAL (AS DIRECTED BY ENGINEER), COLS. ITEM 423



**TYPE A**  
**COMPOSITE PAVEMENT, 12"**



**TYPE B**  
**ASPHALT PAVEMENT, 17"**



**TYPE C**  
**ASPHALT PAVEMENT, 21"**

**PAVEMENT SECTION ITEMS**

- ① COLS. ITEM 613 - LOW STRENGTH MORTAR BACKFILL, TYPE 2
- ② COLS. ITEM 305 - 9" PORTLAND CONCRETE CEMENT BASE, CLASS COC 6
- ③ COLS. ITEM 407 - NON-TRACKING TACK COAT, 0.10 GAL/SY
- ④ COLS. ITEM 441 - 1-1/2" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2, PG64-22 (448)
- ⑤ COLS. ITEM 441 - 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (448)
- ⑥ COLS. ITEM 304 - 6" AGGREGATE BASE, PLACED IN 2 - 3" LIFTS
- ⑦ COLS. ITEM 301 - 8" BITUMINOUS AGGREGATE BASE, PLACED IN 2 - 4" LIFTS
- ⑧ COLS. ITEM 301 - 12" BITUMINOUS AGGREGATE BASE, PLACED IN 4 - 3" LIFTS
- ⑨ COLS. ITEM 409 - SAWCUTTING

**DETAIL NOTES**

1. THE TRENCH REPAIR DETAIL USED (A, B OR C) SHALL CORRESPOND TO THE EXISTING PAVEMENT COMPOSITION ENCOUNTERED AND OR AS REQUIRED BY THE CITY ENGINEER.
2. PAY ITEM SHALL BE PAID BY THE SQUARE YARD.
3. TRENCH WIDTH "W", SHALL BE PER CITY OF COLS. STANDARD DRAWINGS.
4. UNLESS OTHERWISE SPECIFIED, PAYMENT LIMIT FOR PAVEMENT REPLACEMENT SHALL BE W + 2 FT.
5. TYPE A, COMPOSITE PAVEMENT, SHALL BE USED WHEN ANY COMPOSITE PAVEMENT IS ENCOUNTERED.
6. NO RECYCLED PORTLAND CEMENT CONCRETE SHALL BE PERMITTED FOR BACKFILL MATERIAL.
7. TRENCH SHALL BE NEATLY SAWCUT PRIOR TO PAVEMENT REPLACEMENT AND BUTT JOINTS WITH EXISTING PAVEMENT SHALL BE HEAT WELDED PER COLUMBUS SUPPLEMENTAL SPECIFICATION 1541 (THERMAL BOND ASPHALT REPAIR) OR CRACK SEAL, PER COLS. ITEM 423.
8. WHEN TRENCH IS LESS THAN 2 FT. FROM AN ADJACENT CURB, THE PAVEMENT REPLACEMENT LIMIT MAY BE EXTENDED TO THE CURB AS DIRECTED BY THE CITY ENGINEER .
9. REPLACE ANY DISTURBED TRAFFIC MARKINGS ACCORDING TO COLS. ITEM 644. COST OF REPLACEMENT PAVEMENT MARKINGS SHALL BE INCLUDED IN THE COST OF THE REPAIR.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

*Jeff Telle*  
CITY ENGINEER

2/15/2022

DATE

STANDARD CONSTRUCTION DRAWING

UTILITY TRENCH REPAIR  
FOR ARTERIAL STREETS

RD-15

SHEET 1 OF 2

**DETAIL NOTES, CON'T:**

10. BACKFILL OF ALL TRENCHES SHALL BE LOW-STRENGTH MORTAR BACKFILL AS PER COLS. ITEM 613 WITH A MINIMUM DENSITY OF 125 LBS./CU.FT. USE TYPE 2 ONLY.
11. TIMING OF THE PAVEMENT REPAIR SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER. THE EDGE SHALL BE CUT VERTICALLY AND TRIMMED BEHIND ALL BROKEN PAVEMENT TO PROVIDE A SINGLE STRAIGHT LINE. TEMPORARY PAVEMENT OR STEEL PLATES SHALL BE INSTALLED IN THE INTERIM TIME BETWEEN EXCAVATION & PERMANENT REPLACEMENT.
12. STREETS WITH MACADAM BASE MATERIAL ARE TO BE TREATED AS COMPOSITE, PER TYPE A.
13. WARRANTY: ALL PAVEMENT REPAIRS SHALL BE GUARANTEED FOR ONE YEAR TO REFILL SETTLED AREAS, SEAL JOINTS, AND REMOVE AND REPAIR ANY DEFECT AS DIRECTED BY THE CITY ENGINEER.
14. NON-TRACKING TACK COAT IS NOT REQUIRED IF ALL ASPHALT IS PLACED WITHIN A 24-HOUR WINDOW UNLESS REQUIRED BY THE CITY ENGINEER.
15. IF THE EXISTING PAVEMENT SECTION IS THICKER THAN THE DETAIL, MATCH EXISTING PAVEMENT THICKNESS.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

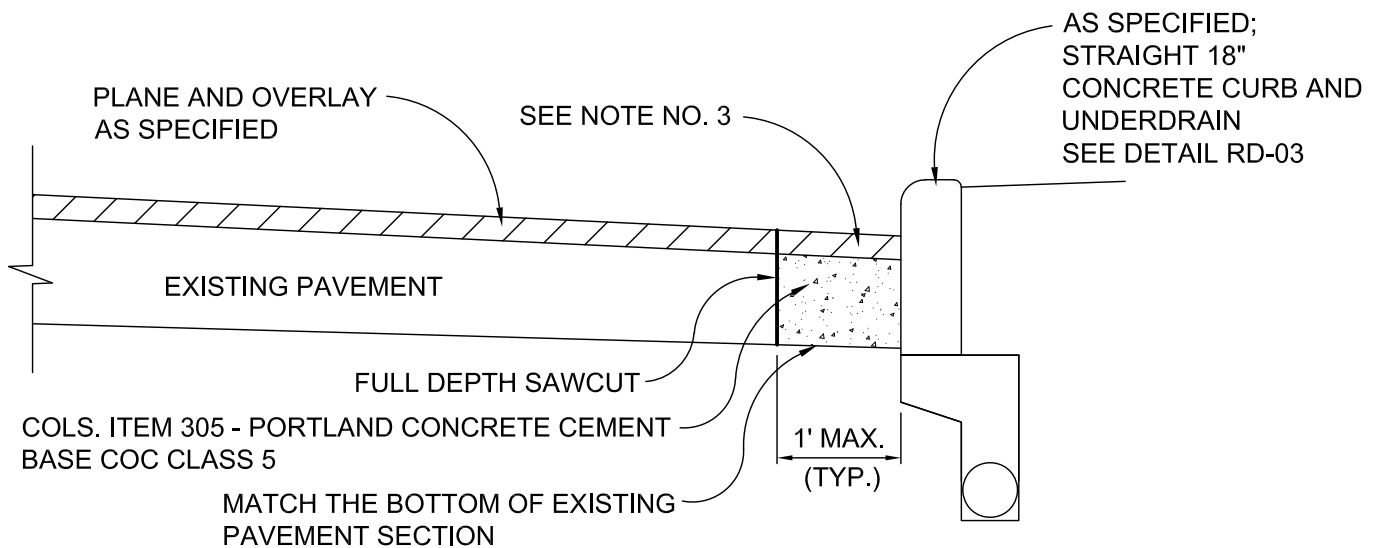
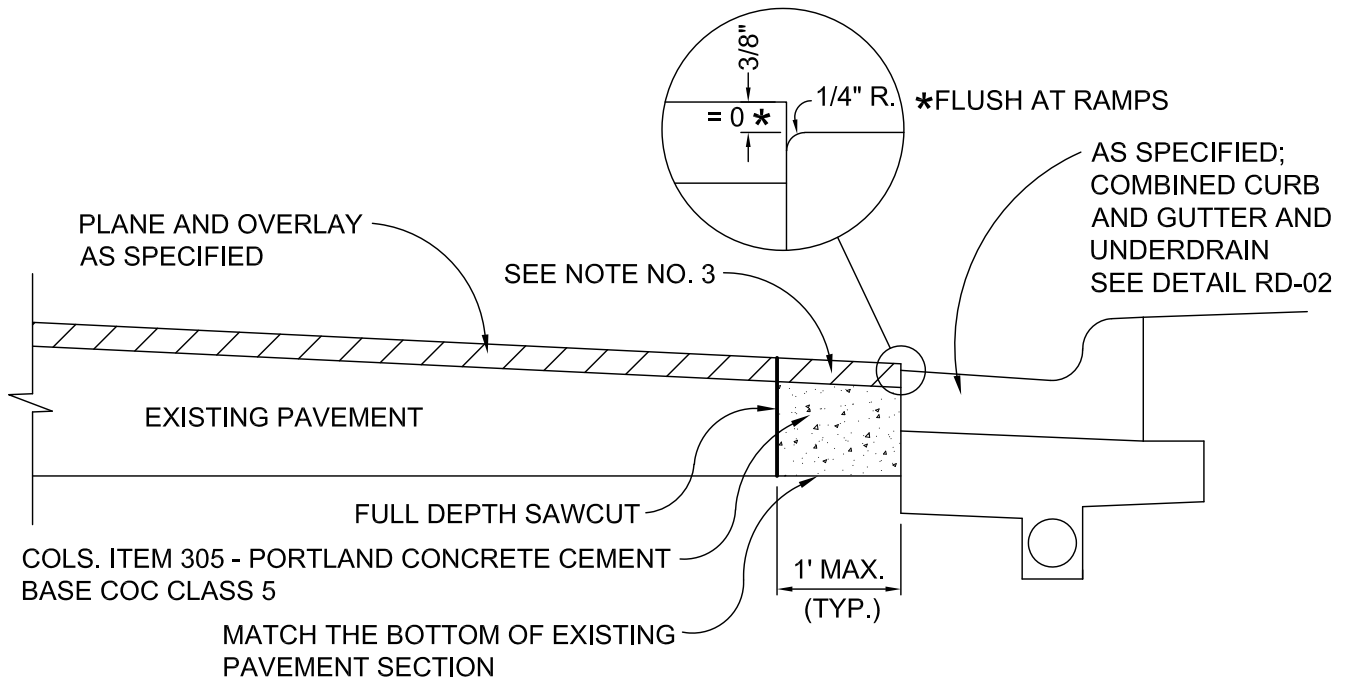
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CITY ENGINEER

2/15/2022  
\_\_\_\_\_  
DATE

STANDARD CONSTRUCTION DRAWING  
UTILITY TRENCH REPAIR  
FOR ARTERIAL STREETS

**RD-15**

SHEET 2 OF 2



**NOTES:**

1. THE ASPHALT SHALL BE FLUSH AT THE GUTTER IN FRONT OF CURB RAMPS AND RAKED OUT A MINIMUM OF 4' IN WIDTH SLOPED 20:1 FROM THE GUTTER TOWARDS THE CENTERLINE OF THE ROADWAY A DISTANCE OF 8'.
2. SAWCUT AND COLS. ITEM 305 - PORTLAND CONCRETE CEMENT BASE (COC CLASS 5) SHALL BE INCLUDED IN PRICE OF CURB.
3. PROJECTS NOT INCLUDING PLANE AND OVERLAY, THE ASPHALT CONCRETE SURFACE COURSE AND INTERMEDIATE COURSE SHALL MATCH STANDARD DRAWING RD-01.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

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2/15/2022  
DATE

STANDARD CONSTRUCTION DRAWING

**FULL CURB  
REPLACEMENT**

**RD-16**

SHEET 1 OF 1

← FLEXIBLE SEWER PIPE      RIGID SEWER PIPE →

\* Inches

D *	W <sub>n</sub> *
6	30
8	30
10	30
12	32
15	36
18	40
21	44

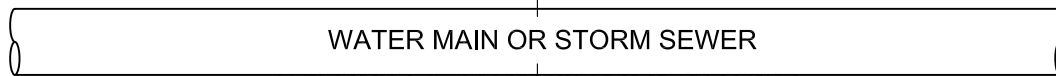
D *	W <sub>n</sub> *
24	48
27	52
30	56
36	64
42	72
48	80

D *	W <sub>n</sub> *
6	24
8	27
10	30
12	32
15	36
18	40
21	44
24	48
27	52

\* Inches

D *	W <sub>n</sub> *
30	57
33	61
36	64
42	71
48	78
54	87
60	96
66	105

D *	W <sub>n</sub> *
72	116
78	123
84	130
90	136
96	143
102	151
108	160



WATER MAIN & STORM SEWER BEDDING (4" MIN)

1' MIN.

1' BEDDING MATERIAL

REFERENCE CITY OF COLUMBUS STANDARD DRAWING AA-S149 FOR BEDDING REQUIREMENTS.

4" BEDDING MATERIAL

SUBGRADE BELL HOLE

REFERENCE CITY OF COLUMBUS STANDARD DRAWING AA-S151 FOR BEDDING REQUIREMENTS.

COMPACTED CLAY PER ITEM 203, STARTING AT 1' ABOVE SANITARY SEWER, BETWEEN STORM SEWER/WATER MAIN AND SANITARY SEWER. IN AREAS WITH LESS THAN 28" OF SEPARATION, STORM SEWER PIPE RUN TO BE SANITARY GRADE (WATERTIGHT) AND HAVE WATER TIGHT JOINTS PER CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS 901.15, AND TRENCH DAMS PER THE CITY OF COLUMBUS CMS 901.11. THIS APPLIES TO THE FULL PIPE LENGTH, FROM STRUCTURE TO STRUCTURE.

THE ABOVE SHALL BE USED DURING THE CONSTRUCTION OF THE SANITARY SEWER & SANITARY SERVICE LATERALS AT EXISTING/PROPOSED STORM SEWER AND WATERLINE CROSSINGS. IF A SANITARY SEWER OR SANITARY SEWER LATERAL IS DISTURBED DURING CONSTRUCTION OF THE STORM SEWER OR THE WATERLINE, IT MUST BE RESTORED TO THE REQUIREMENTS OF THIS DETAIL. LENGTH OF THE I/I BARRIER PROTECTION FOR LATERALS SHALL BE 10 FEET CENTERED ON STORM/WATERLINE PIPE CROSSING AND MEASURED ALONG THE SANITARY MAINLINE OR SERVICE LATERAL.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

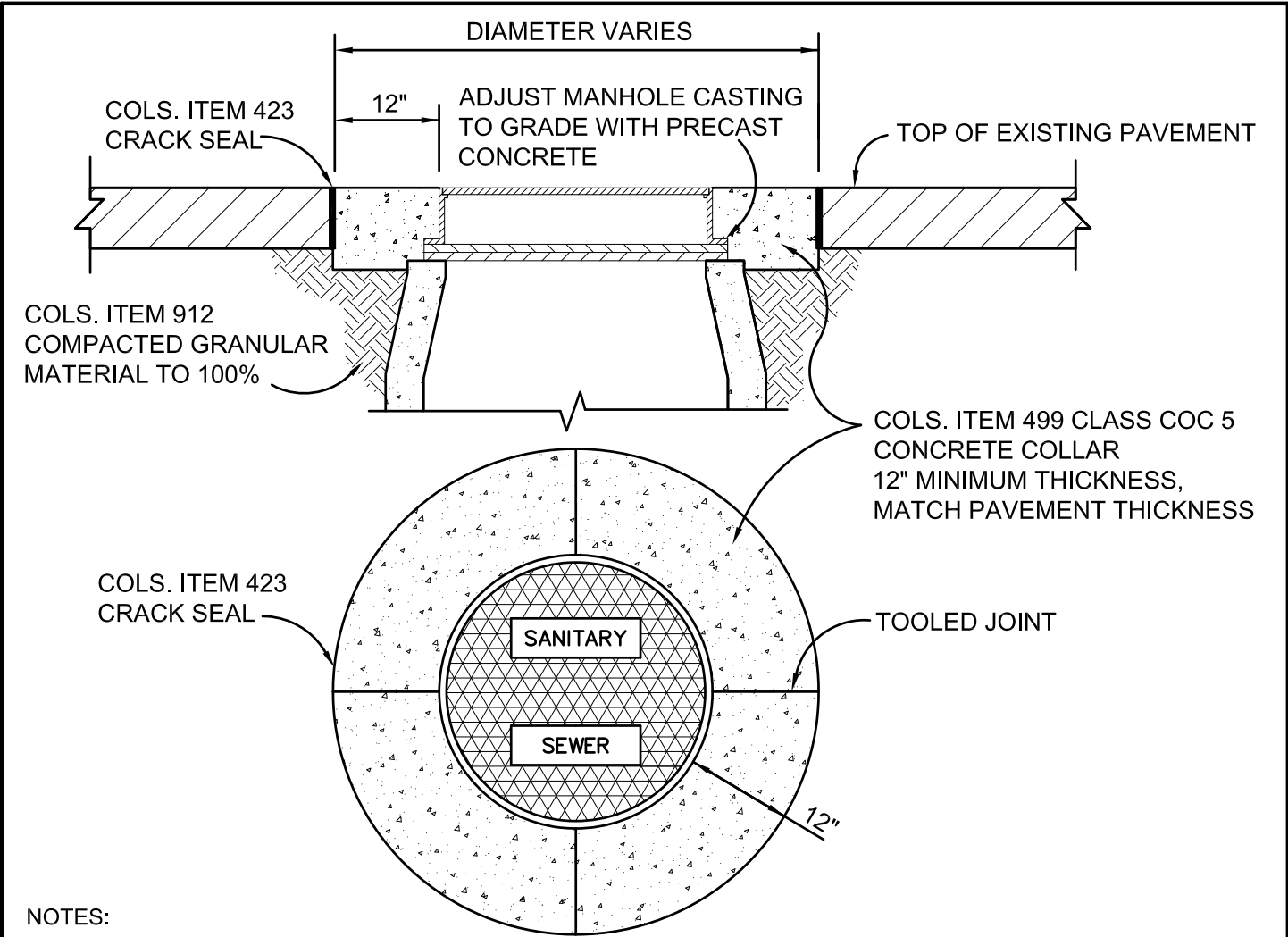
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CITY ENGINEER

4/15/19  
DATE

STANDARD CONSTRUCTION DRAWING  
**ANTI INFILTRATION  
& INFLOW BARRIER**

SS-01

SHEET 1 OF 1



**NOTES:**


ALL PUBLIC MANHOLES (CITY OF WESTERVILLE - SANITARY SEWER, STORM SEWER, ELECTRIC & COMMUNICATION) AND ALL PRIVATE MANHOLES (PRIVATE UTILITY COMPANIES) LOCATED WITHIN A PUBLIC STREET/PAVEMENT SHALL FOLLOW THIS STANDARD CONSTRUCTION DRAWING.

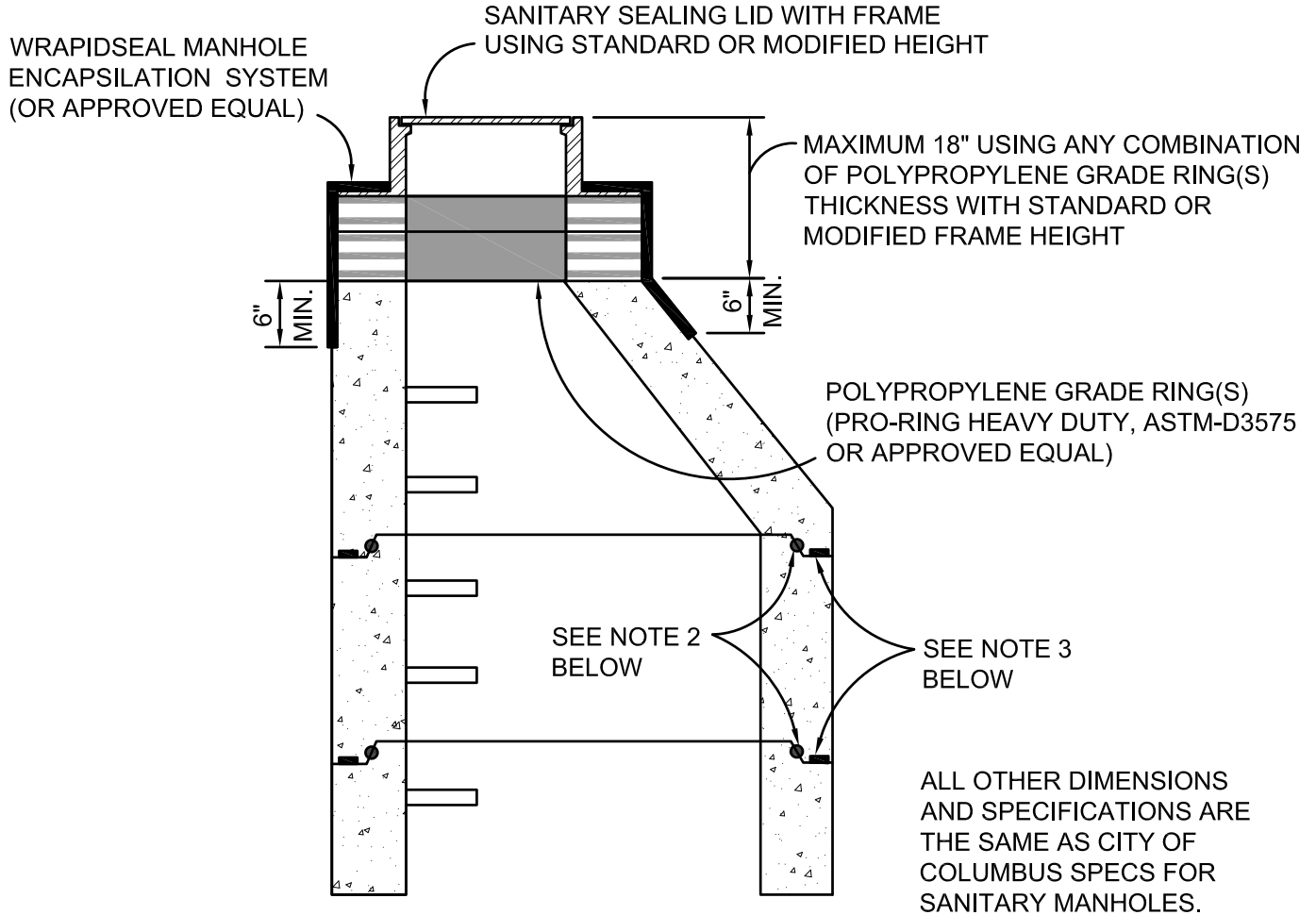
ALL MANHOLES (PUBLIC & PRIVATE) SHALL MEET OR EXCEED THE LATEST CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR ITEM 604 WITH THE FOLLOWING EXCEPTIONS OR ADDITIONS:

ADJUSTMENT TO GRADE SHALL BE ACCOMPLISHED BY CAREFULLY REMOVING THE EXISTING COVER OR GRATE AND FURNISH AND INSTALL POLYPROPYLENE GRADE RING(S) PRO-RING HEAVY DUTY, ASTM-D3575 PER CITY OF WESTERVILLE STANDARD DRAWING SS-03 OR PRECAST CONCRETE RINGS. NINE (9) INCHES IS THE MAXIMUM ALLOWABLE HEIGHT OF STACKING RINGS.

BRICK AND BLOCK MASONRY ARE NOT PERMITTED ON ANY MANHOLES INCLUDING RECONSTRUCTION TO GRADE AND OR ADJUSTMENT TO GRADE.

WHEN MANHOLES ARE BEING RAISED OR LOWERED MORE THAN 9 INCHES THEY SHALL BE RECONSTRUCTED TO GRADE. RECONSTRUCTION SHALL CONSIST OF THE CAREFUL REMOVAL AND CLEANING OF EXISTING CASTINGS; THE REMOVAL OF EXISTING WALLS DOWN TO THE SPRING LINE OR BELOW AS NECESSARY FOR MANHOLES AND RECONSTRUCTION TO THE NEW GRADES, CONFORMING AS NEARLY AS PRACTICAL TO THE EXISTING DIMENSIONS AND TYPE OF CONSTRUCTION, USING THE SALVAGED CASTINGS AS DIRECTED BY THE CITY.

	<p>CITY OF WESTERVILLE DEPARTMENT OF PLANNING AND DEVELOPMENT ENGINEERING DIVISION</p>	<p>STANDARD CONSTRUCTION DRAWING MANHOLE CASTING ADJUSTMENT IN PAVEMENT</p>
	<p><i>L.H. Till</i></p> <p>_____ CITY ENGINEER</p>	<p>8/30/19 DATE</p>



**NOTES:**

1. CLEAN EACH SURFACE BY WIRE BRUSHING ALL LOOSE CONCRETE DUST AND DIRT. PLACE SEALANT IN A CIRCULAR CONFIGURATION ON EACH CONCRETE SURFACE AND OVERLAP A MINIMUM 1/4" AND KNEAD ENDS.
2. CLEAN BELL AND SPIGOT, APPLY APPROVED LUBRICATION TO JOINT SURFACE AND TO O-RING; THEN EQUALIZE GASKET TO GROOVE.
3. PLACE 1/2" DIAMETER SEALANT AS MANUFACTURED BY CONCRETE SEALANTS INC., "CONCEAL" OR APPROVED EQUAL ON RISER TO LEDGE.



CITY OF WESTERVILLE  
 DEPARTMENT OF PLANNING AND DEVELOPMENT  
 ENGINEERING DIVISION

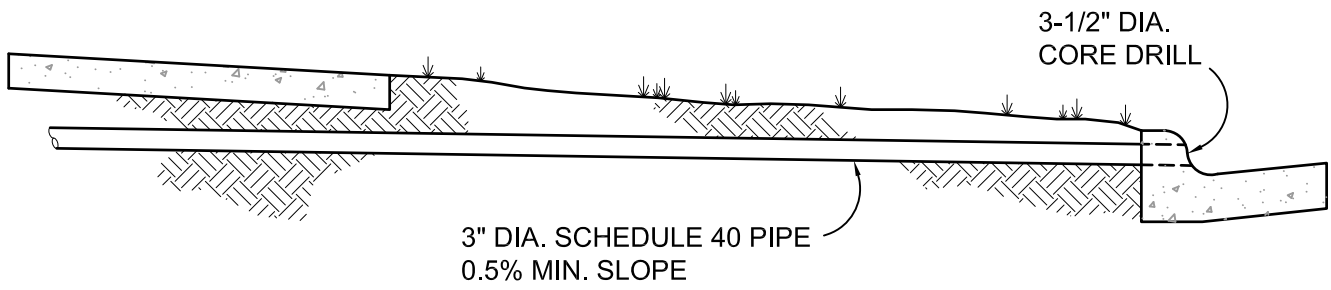
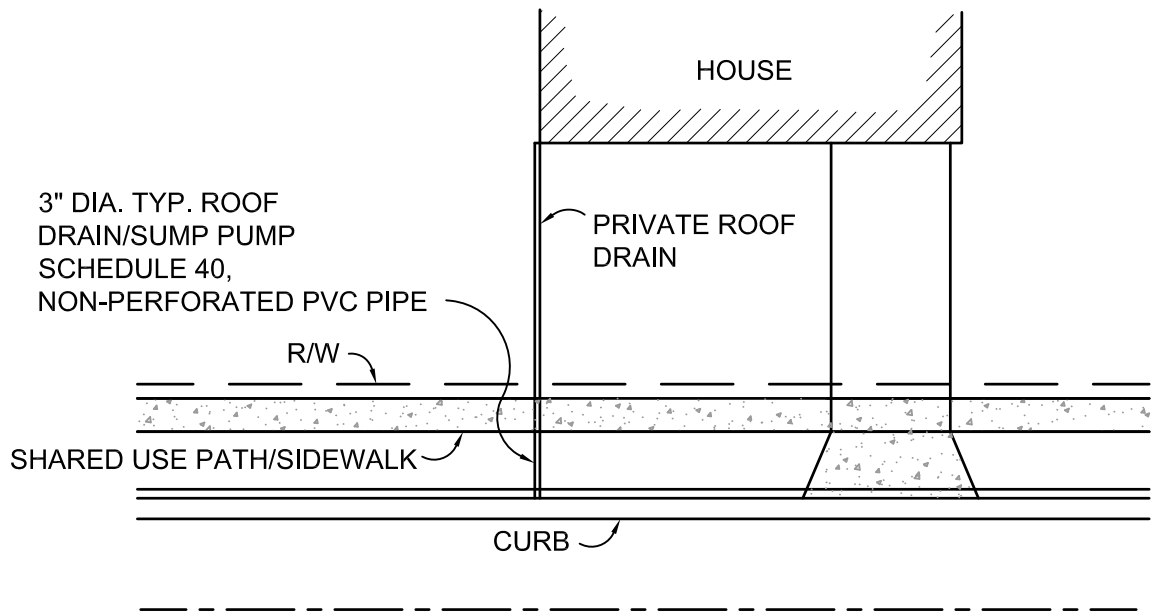
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 CITY ENGINEER

4/15/19  
 DATE

STANDARD CONSTRUCTION DRAWING  
**SANITARY  
 MANHOLE DETAILS**

**SS-03**

SHEET 1 OF 1



**NOTES:**

ALL ROOF DRAIN/SUMP PUMP PIPE SHALL BE SCHEDULE 40 SOLID WALL (NON-PERFORATED) PIPE WITHIN THE RIGHT OF WAY (R/W)

TYPICAL RESIDENTIAL TYPE CONNECTIONS SHALL BE 3" IN DIAMETER

THE CONNECTION AT THE CURB SHALL BE CORE DRILLED

PIPE SLOPE SHALL BE 0.5% MINIMUM TOWARDS STREET

ROOF DRAIN/SUMP PUMP PIPE SHALL BE PRIVATELY OWNED AND MAINTAINED INCLUDING WITHIN THE RIGHT OF WAY.



CITY OF WESTERVILLE  
 DEPARTMENT OF PLANNING AND DEVELOPMENT  
 ENGINEERING DIVISION

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 CITY ENGINEER

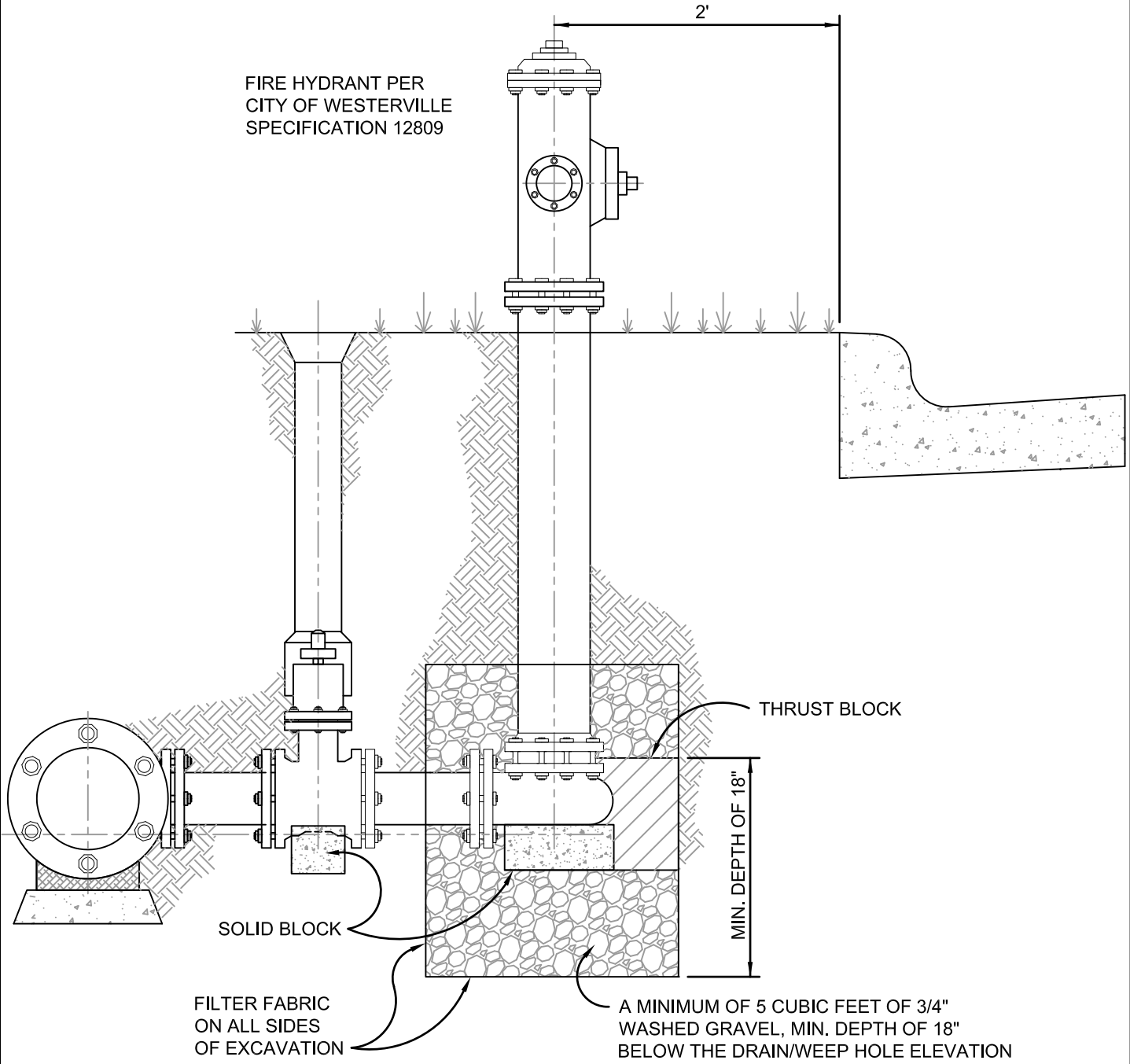
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 DATE

STANDARD CONSTRUCTION DRAWING  
**RESIDENTIAL ROOF  
 DRAIN CONNECTION**

**STM-01**  
 SHEET 1 OF 1



FIRE HYDRANT PER  
CITY OF WESTERVILLE  
SPECIFICATION 12809



SPECIFICATIONS OF A FIRE HYDRANT SHALL BE PER THE CITY OF WESTERVILLE SPECIFICATION SECTION 12809, FURNISHING AND INSTALLING FIRE HYDRANTS.

ALL FIRE HYDRANTS SHALL BE SELF DRAINING FIRE HYDRANTS.

ALL OTHER SPECIFICATION AND DIMENSIONS SHALL BE PER CITY OF COLUMBUS STANDARD DRAWINGS L-6637A AND OR L-6409A



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

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CITY ENGINEER

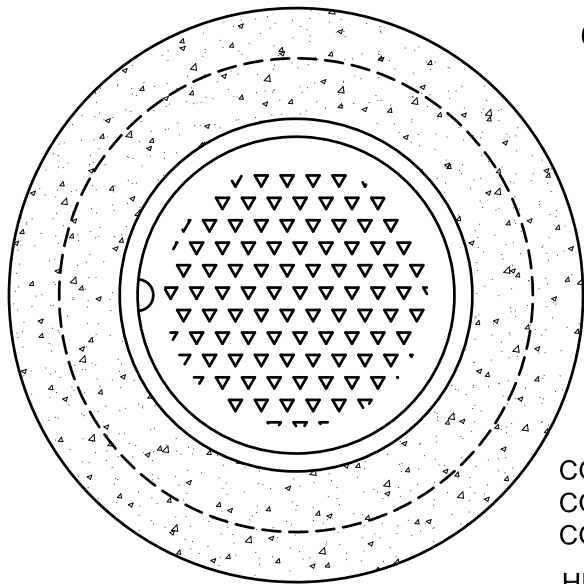
4/15/19  
DATE

STANDARD CONSTRUCTION DRAWING

FIRE HYDRANT

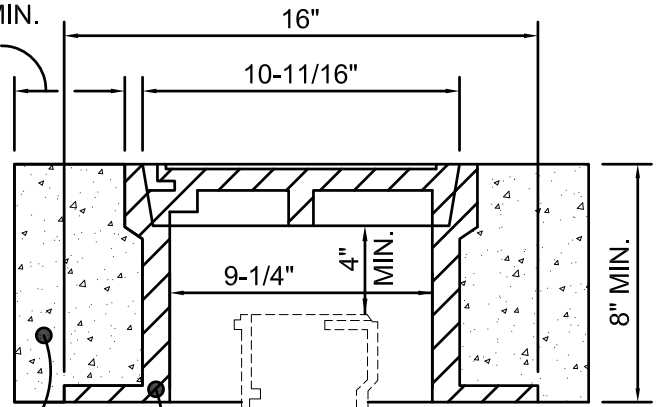
WTR-01

SHEET 1 OF 1



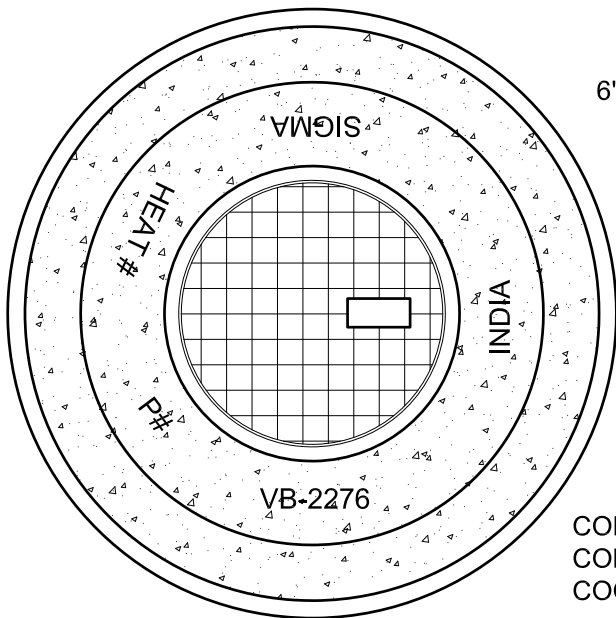
**PLAN VIEW**  
NO SCALE

6" OR 8" MIN.  
(TYP.)



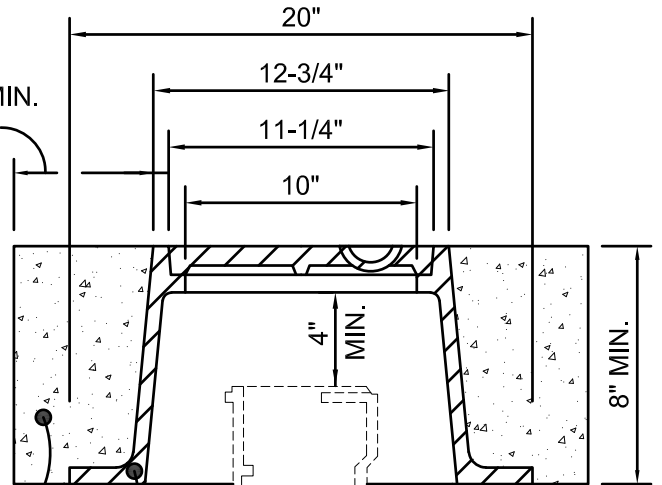
CONCRETE COLLAR, CLASS COC 5  
HEAVY DUTY FRAME AND COVER BY GENERAL FOUNDRIES INC. ITEM #11081

WATER SERVICE CURB BOX, SEE CURB BOX INSTALLATION STANDARD DRAWING



**PLAN VIEW**  
NO SCALE

6" OR 8" MIN.  
(TYP.)



CONCRETE COLLAR, CLASS COC 5  
HEAVY DUTY FRAME AND COVER BY SIGMA CORPORATION MODEL VB-2276

WATER SERVICE CURB BOX, SEE CURB BOX INSTALLATION STANDARD DRAWING

A HEAVY DUTY FRAME AND COVER SHALL BE USED IN PAVEMENT AREAS ON THE CURB BOX ON ALL WATER SERVICES 2-INCH AND SMALLER. A FERRULE BOX WILL NOT BE PERMITTED. HEAVY DUTY FRAME AND COVER BY GENERAL FOUNDRIES INC., SIGMA CORPORATION OR AN APPROVED EQUAL.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

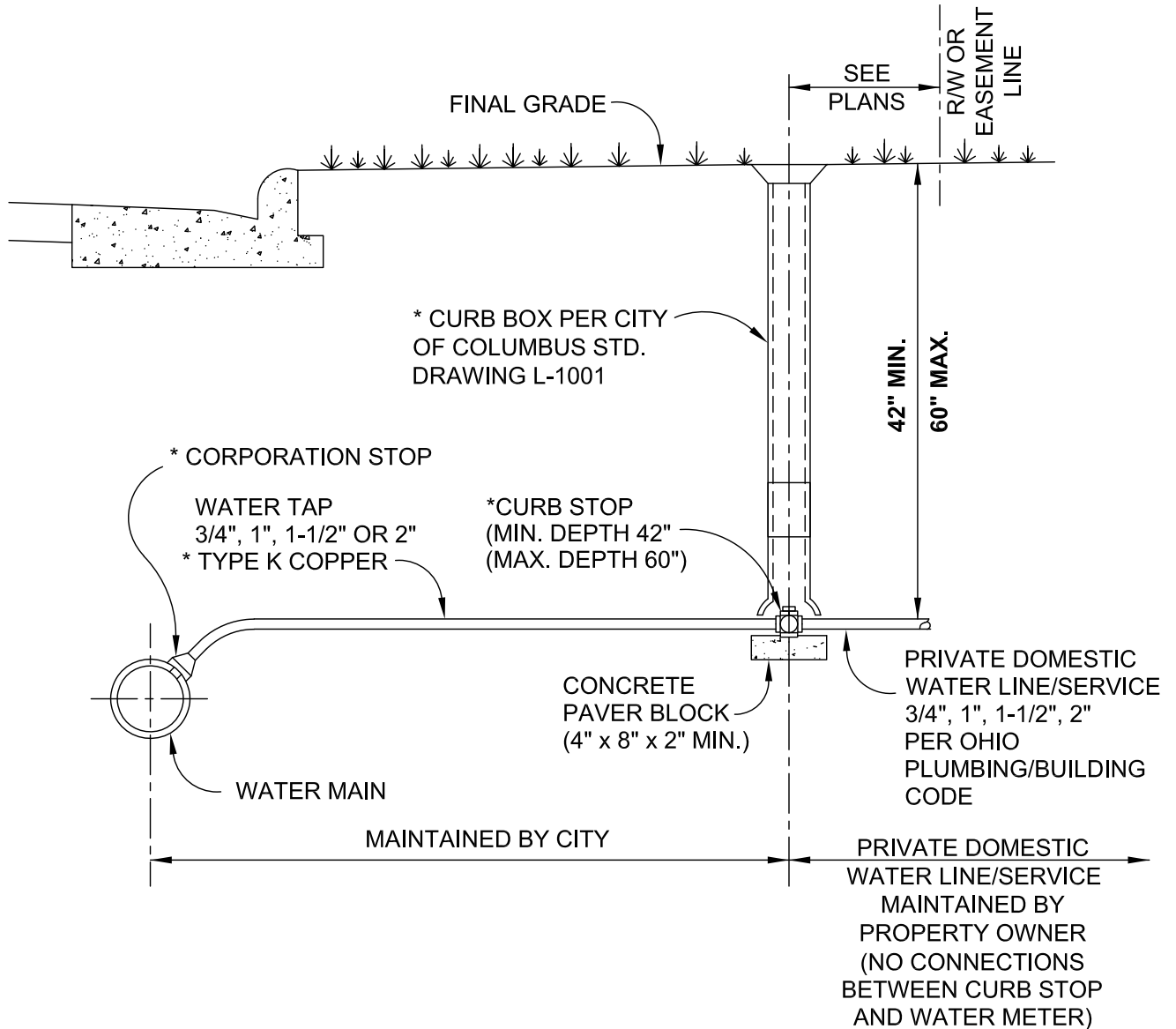
*L.H. Till*  
CITY ENGINEER

4/15/19  
DATE

STANDARD CONSTRUCTION DRAWING  
**WATER SERVICE  
IN PAVEMENT**

**WTR-02**

SHEET 1 OF 1



NOTES:

1. CURB BOX SHALL BE INSTALLED WITHIN THE PUBLIC RIGHT OF WAY AND OR PUBLIC EASEMENT. SEE THE FINAL PLANS FOR LOCATION OF CURB BOX.
2. CURB BOX INSTALLED IN PAVED AREAS SHALL HAVE A HEAVY DUTY FRAME AND COVER PER CITY OF WESTERVILLE STANDARD DRAWING WTR-02. **A FERRULE BOX IS NOT PERMITTED.**
3. CURB STOP SHALL BE INSTALLED WITH VALVE OPENING FACING THE STRUCTURE BEING SERVED. CURB STOP SHALL TURN 90 DEGREES CLOCKWISE FROM 'ON' TO 'OFF' POSITION (TYPICAL).
4. CURB STOP DEPTH SHALL BE A MINIMUM DEPTH OF 42" AND A MAXIMUM DEPTH OF 60" FROM FINAL GRADE. **A EXTENSION IN THE CURB BOX IS NOT PERMITTED.**
5. ITEMS WITH AN \* SHALL BE ON THE CITY OF COLUMBUS DIVISION OF WATER (DOW) APPROVED MATERIALS LIST.
6. THE PRIVATE DOMESTIC WATER LINE/SERVICE REQUIRES A SEPARATE PERMIT AND INSPECTION THROUGH THE CITY OF WESTERVILLE BUILDING DIVISION, (614) 901-6650.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

*Let Till*  
CITY ENGINEER

2/15/2022  
DATE

STANDARD CONSTRUCTION DRAWING  
**CURB BOX  
INSTALLATION**  
3/4" THRU 2"

**WTR-03**

SHEET 1 OF 1

LONG LINE MARKINGS						
	CENTERLINE	CHANNELIZING	CROSSWALK	DASH	EDGE	LANE
<b>FACILITY TYPE</b>						
COLS. ITEM	<u>644</u>	<u>644</u>	<u>647 (B90)</u>	<u>644</u>	<u>644</u>	<u>644</u>
ARTERIAL, MULTILANE	4"	12"	8"	6"	6"	6"
ARTERIAL	4"	8"	8"	6"	6"	6"
COLS. ITEM	<u>644</u>	<u>644</u>	<u>647 (B90)</u>	<u>644</u>	<u>644</u>	<u>644</u>
ALL OTHER ROADWAYS	4"	8"	8"	6"	6"	6"

LONG LINE MARKINGS		
	PARKING STALL	TRANSVERSE
<b>FACILITY TYPE</b>		
COLS. ITEM	<u>644</u>	<u>644</u>
ARTERIAL, MULTILANE	4"	24"
ARTERIAL	4"	24"
COLS. ITEM	<u>642, TYPE 1</u>	<u>644</u>
ALL OTHER ROADWAYS	4"	24"

SYMBOL MARKINGS							
	ARROW	BIKE	SCHOOL SYMBOL	SHARROW	STOP	WORDS	YIELD
<b>FACILITY TYPE</b>							
COLS. ITEM	<u>644</u>	<u>644</u>	<u>644</u>	<u>644</u>	<u>644</u>	<u>644</u>	<u>644</u>
ARTERIAL, MULTILANE	6' H	6' H	10' H	9'-4" H	24"	6' H	24"
ARTERIAL	6' H	6' H	6' H	9'-4" H	24"	6' H	24"
COLS. ITEM	<u>644</u>	<u>644</u>	<u>644</u>	<u>644</u>	<u>644</u>	<u>644</u>	<u>644</u>
ALL OTHER ROADWAYS	6' H	6' H	6' H	9'-4" H	24"	6' H	24"



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

*[Signature]*  
CITY ENGINEER

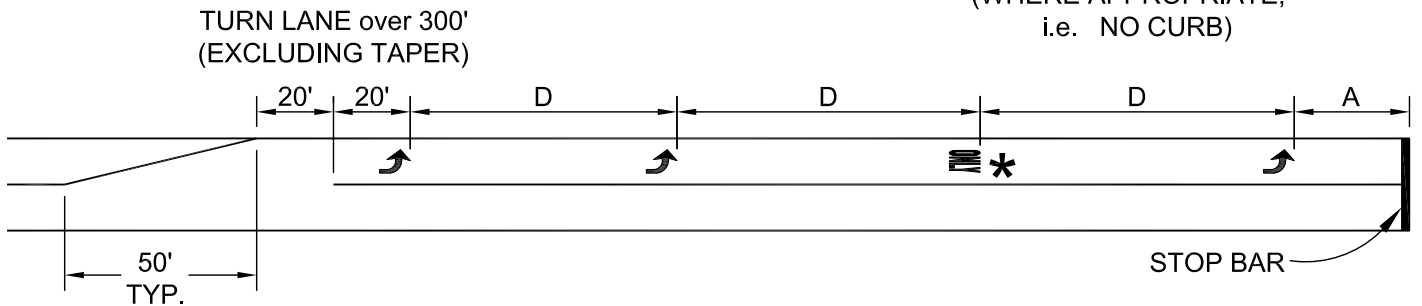
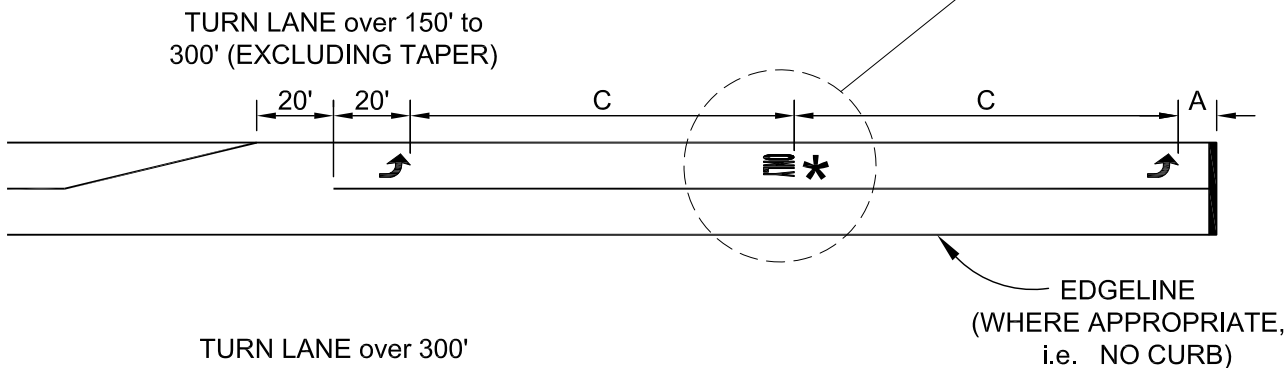
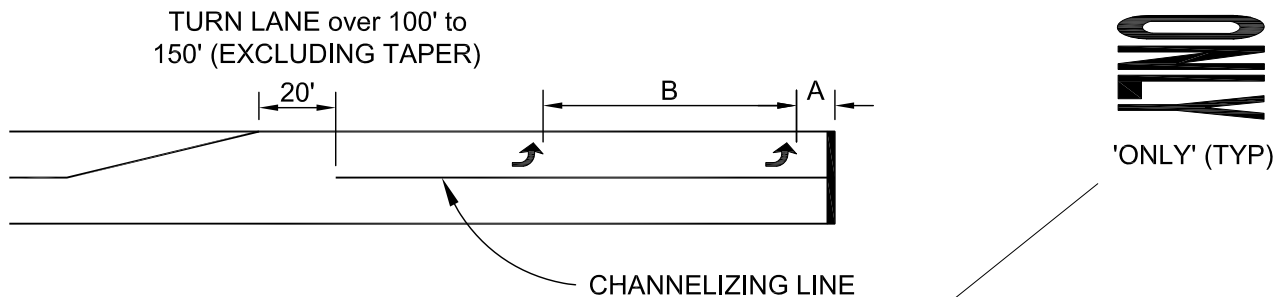
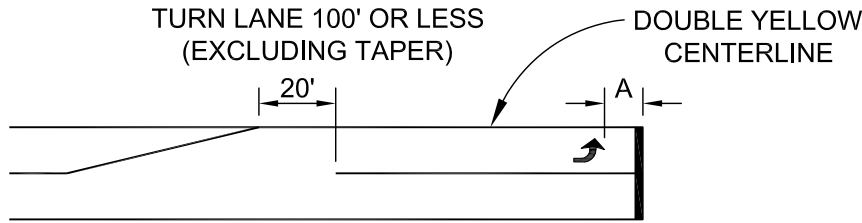
2/15/2022  
DATE

STANDARD CONSTRUCTION DRAWING  
PAVEMENT MARKINGS  
STANDARDS

TC-01

SHEET 1 OF 1

SPEED LIMIT	"A"	"B"	"C & D"
25 MPH	10'	66'	EVENLY SPACED
30-35 MPH	20'	66'	EVENLY SPACED
40-45 MPH	30'	66'	EVENLY SPACED



**NOTES**

- \* 1. INSTALL AN ARROW INSTEAD OF THE WORD "ONLY" WHEN ROADWAY POSTED SPEED IS 40-45 MPH.
- 2. THIS STANDARD DRAWING APPLIES TO BOTH LEFT TURN AND RIGHT TURN LANES.



CITY OF WESTERVILLE  
DEPARTMENT OF PLANNING AND DEVELOPMENT  
ENGINEERING DIVISION

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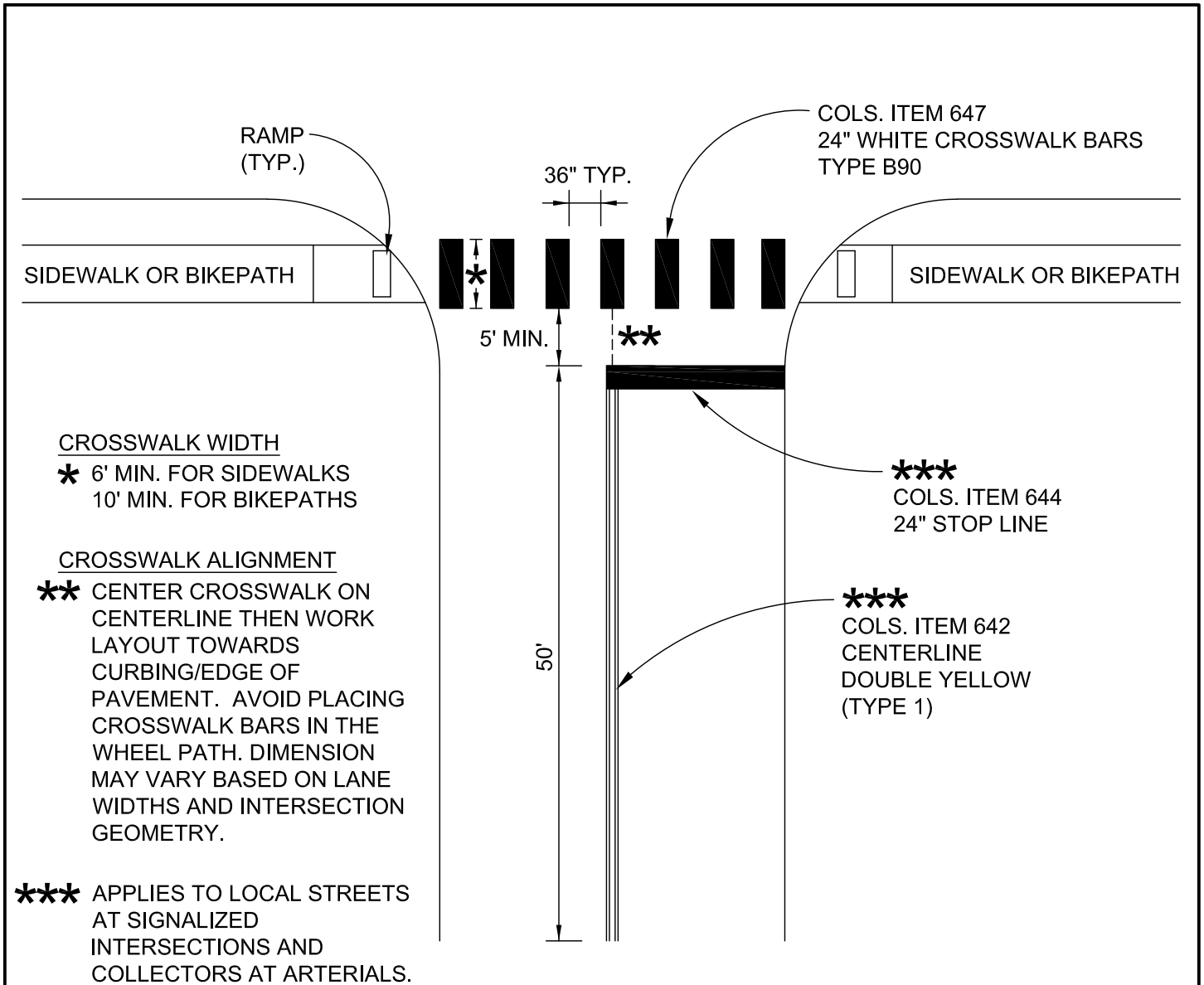
CITY ENGINEER

STANDARD CONSTRUCTION DRAWING  
PAVEMENT MARKINGS  
TURN LANE

TC-02


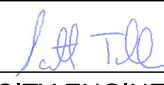
SHEET 1 OF 1

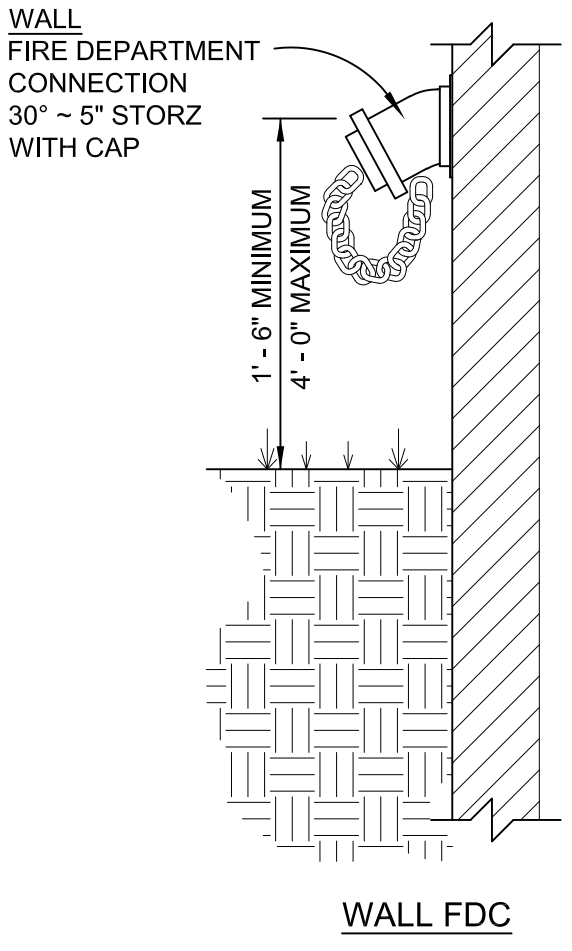
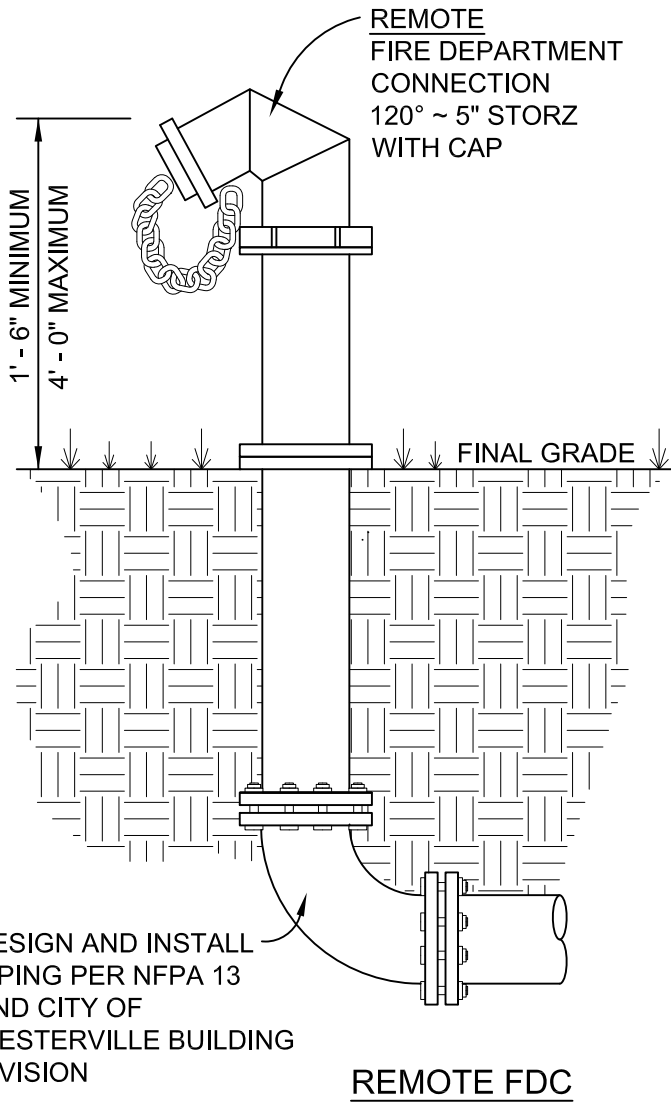
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**NOTES:**

1. THE CROSSWALK BARS SHALL BE CENTERED ON THE SIDEWALK/BIKEPATH RAMPS.
2. THE TYPICAL 36" GAPS BETWEEN THE 24" CROSSWALK BARS SHOULD BE A UNIFORM WIDTH AS MUCH AS POSSIBLE. THE MAXIMUM GAP BETWEEN CROSSWALK BARS SHOULD BE 42".
3. A MINIMUM OF 1.5' CLEAR DISTANCE SHALL BE LEFT ADJACENT TO THE CURB FACE OR EDGE OF PAVEMENT.
4. CROSSWALK BARS SHALL BE PARALLEL TO THE CENTERLINE MARKING.
5. **THE LAYOUT AND DIMENSIONS SHALL BE APPROVED BY CITY ENGINEER PRIOR TO INSTALLATION.**

	CITY OF WESTERVILLE DEPARTMENT OF PLANNING AND DEVELOPMENT ENGINEERING DIVISION	STANDARD CONSTRUCTION DRAWING <b>PAVEMENT MARKINGS          CROSSWALK DETAIL</b>
	 CITY ENGINEER	2/15/2022 DATE




**NOTES:**  
 THE FIRE DEPARTMENT CONNECTION SYSTEM (FDC) SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13 STANDARDS, CITY OF WESTERVILLE BUILDING DIVISION AND FIRE DEPARTMENT.

LOCATION OF THE FIRE DEPARTMENT CONNECTION (FDC) SHALL BE APPROVED BY THE CITY OF WESTERVILLE FIRE DEPARTMENT.

THE CITY OF WESTERVILLE ALLOWS FDC'S TO BE REMOTE OR LOCATED ON THE BUILDING WALL AS APPROVED BY THE CITY.

THE LOCATION OF THE FDC SHALL BE SHOW ON THE CIVIL SITE PLAN AND TITLED FOR "REFERENCE ONLY".

THE LOCATION OF THE FIRE DEPARTMENT CONNECTION (FDC) SHALL BE WITHIN A 100-FT OF A PUBLIC FIRE HYDRANT.

	CITY OF WESTERVILLE DEPARTMENT OF PLANNING AND DEVELOPMENT ENGINEERING DIVISION		STANDARD CONSTRUCTION DRAWING <b>FIRE DEPARTMENT          CONNECTION</b>
	DAVID A. WILLIAMS DEPUTY FIRE CHIEF	12/5/23 DATE	<b>FD-01</b>
			SHEET 1 OF 1