

Policy of Requirements for Utility Appurtenances Within the Public Right-of-Way (v1.0) 11/15/2018

Reference Standard Details

S100-1 – GRADE LEVEL UTILITY APPURTENANCE CONDITION EVALUATION
S100-2 – PAVEMENT CONDITION AT UTILITY APPURTENANCE
S604-90 – UTILITY MANHOLE INSTALLATION – ROUND COLLAR
S604-91 – ALTERNATE UTILITY MANHOLE INSTALLATION – SQUARE COLLAR

Grade Level Utility Appurtenance Condition Evaluation

The following policy outlines the requirements and acceptable tolerance limitations for grade-level utility appurtenances within the public right-of-way (ROW).

Grade-level utility appurtenances refer to any structure that allows access to the accompanying infrastructure by means of an access point (i.e. cover, grate, hatch, etc.) at the surface, that is flush with the grade and elevation, and is not typically consistent in material or type as paved surfaces, gravel or lawn areas.

In an effort to keep our facilities (i.e. streets, sidewalks, tree-lawn areas, etc.) within the City's public ROWs in good operating condition while functioning to serve the public need for safe unobstructed travel, the following tolerance levels are provided to assist in the analysis of grade-level utility appurtenances.

Vertical Difference*	Requirement
$\leq \frac{1}{4}$ inch	No Corrective Action Required
$\frac{1}{4}$ inch up to $\frac{1}{2}$ inch	Corrective Transitioning Required – Refer to Detail S100-1
$\geq \frac{1}{2}$ inch	Corrective Action Required Within 30 Days of Deficiency Identification – Refer to Detail S100-1

* All measurements are from the surrounding level surface elevation

Grade-level utility appurtenances are to be installed and maintained in the same horizontal plane as the surrounding elevation, true to line and grade, and with the cover/grate having full continuous and uniform bearing contact with its corresponding frame. The cover/grate is to be stable and immovable when in place and when under the influence of traffic or any other type of load bearing stress. The top of the cover/grate is to be level with the top of the corresponding frame, within $\frac{1}{4}$ " (Refer to Detail S100-1, S604-90 and S604-91).

Grade-level utility appurtenances that are located within pedestrian access routes are to be fully compliant with the requirements of the *Americans with Disabilities Act (ADA)* and *Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)*. (<https://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines>)



In general, utility appurtenances should not be placed within the pedestrian access route whenever practical; placement in curb ramps, blended transitions, turning spaces and landings are prohibited. If the placement of the appurtenances outside of the pedestrian access route is technically unfeasible, then the following conditions shall be met:

- Shall be slip resistant.
- Horizontal openings in gratings and joints shall not permit passage of a sphere more than 0.5 inches in diameter (see R302.7.3 of the PROWAG).
- Elongated openings in gratings shall be placed such that the long dimension is perpendicular to the dominant direction of pedestrian travel (see R302.7.3 of the PROWAG).

Utility Pavement Maintenance Responsibility At Utility Appurtenance

The following policy outlines the requirements for maintenance of pavement surrounding utility appurtenances within the public right-of-way (ROW).

Pavement condition evaluations are based on ASTM D6433.

Pavement condition index (PCI) – a numerical rating of the pavement condition that ranges from 0 to 100 with 0 being the worst possible condition and 100 being the best possible condition.

Pavement condition rating – a verbal description of pavement condition as a function of the PCI value that varies from *failed* to *very good*.

PCI	RATING
100 - 86	VERY GOOD
85 - 71	GOOD
70 - 56	FAIR
55 - 41	POOR
40 - 26	VERY POOR
25 - 11	SERIOUS
10 - 0	FAILED

Utility Agency is responsible to maintain the pavement area around utility appurtenance in *Very Good to Good condition* within 36 inches from outer edge of casting, or 12 inches from the outer edge of the underlying structure, whichever is greater. Where pavement is showing deficiencies (*Good condition or less*), corrective action must be taken by Utility Agency as shown in Detail S100-2.

Utility Manhole Installation

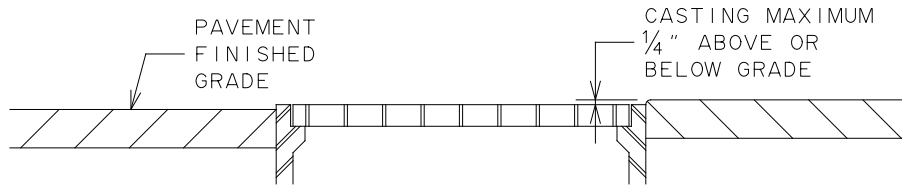
The following policy outlines the requirements for installation or adjustment of utility manhole appurtenances within the public right-of-way (ROW).

Utility manhole installation requirements herein amend or supplement the City's supplementary specification S604. All provisions which are not amended remain in full force and effect. (<http://www.cityofrochester.gov/Specifications/>)

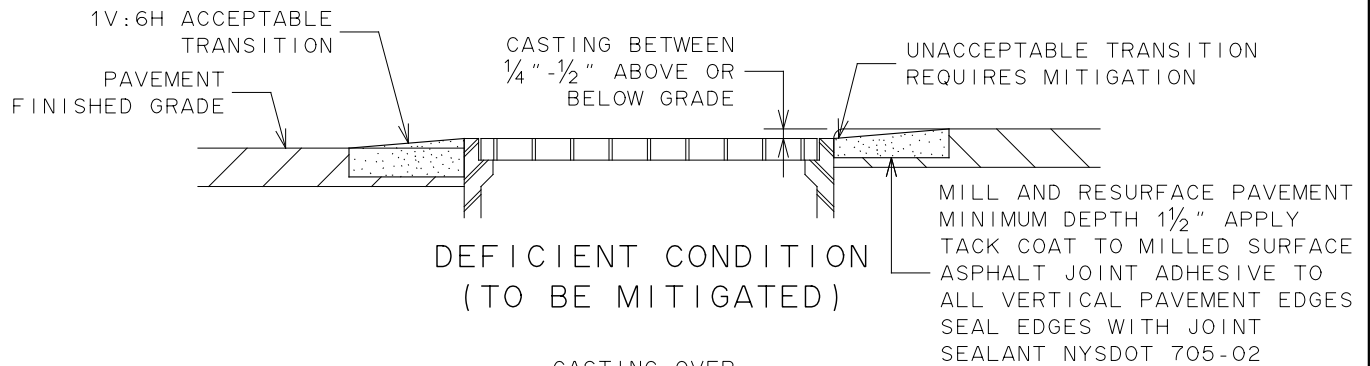
Manhole castings and assemblies are to be rated heavy-duty designed for AASHTO HS-20-44 highway loading plus 30 percent impact, minimum at the discretion of the City Engineer. Utility manhole appurtenances are to be installed in the same horizontal plane as the surrounding elevation (within ¼"), true to line and grade, and with the cover/grate having full continuous and uniform bearing contact with its corresponding frame. The cover/grate is to be stable and immovable when in place and when under the influence of traffic or any other type of load bearing stress. The top of the cover/grate is to be level with the top of the corresponding frame, within ¼" (Refer to Detail S604-90 and S604-91).

Utility manholes appurtenances within the roadway are to be installed with a round concrete collar. Round collars are required however square collars may be allowed at the discretion of the City Engineer. Depth of concrete collar to be a minimum depth of 8" and extending to finished grade. Concrete collar is to be Class D concrete reinforced with Synthetic Micro-Fiber as follows:

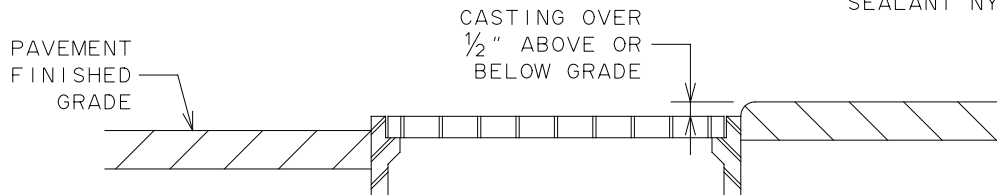
- 100% Virgin Fibrillated polypropylene micro-fibers engineered and designed for use in concrete, complying with ASTM C 1116, Type III, 1/2 to 1-1/2 inches.
- Application Rate shall be per manufacturer's written instruction, but not less than 1.5 lb./CY.



ACCEPTABLE CONDITION



DEFICIENT CONDITION
(TO BE MITIGATED)



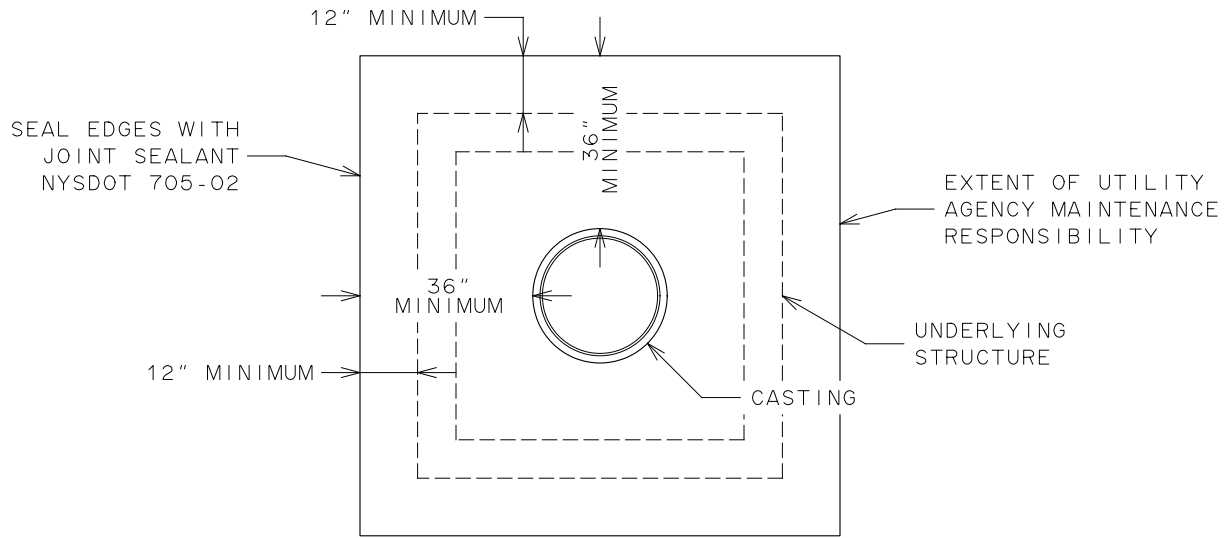
UNACCEPTABLE DEFICIENT CONDITION
(APPURTENANCE TO BE RESET)

VERTICAL DIFFERENCE	CORRECTIVE ACTION
UP TO BUT NOT EXCEEDING $\frac{1}{4}$ INCH	NO CORRECTIVE ACTION REQUIRED
OVER $\frac{1}{4}$ INCH UP TO $\frac{1}{2}$ INCH	DEFICIENT CONDITION - TAKE CORRECTIVE ACTION TO MITIGATE DEFICIENCY - MILL AND RESURFACE SURROUNDING PAVEMENT TO MINIMUM DEPTH $1\frac{1}{2}$ " - CONTINUE TO MONITOR DEFICIENCY
OVER $\frac{1}{2}$ INCH	DEFICIENT CONDITION IS TO BE MITIGATED WITHIN 30 CALENDAR DAYS OF HAVING BEEN IDENTIFIED - RESET EXISTING CASTING PER DETAIL S604-90 UTILITY MANHOLE INSTALLATION - ROUND COLLAR

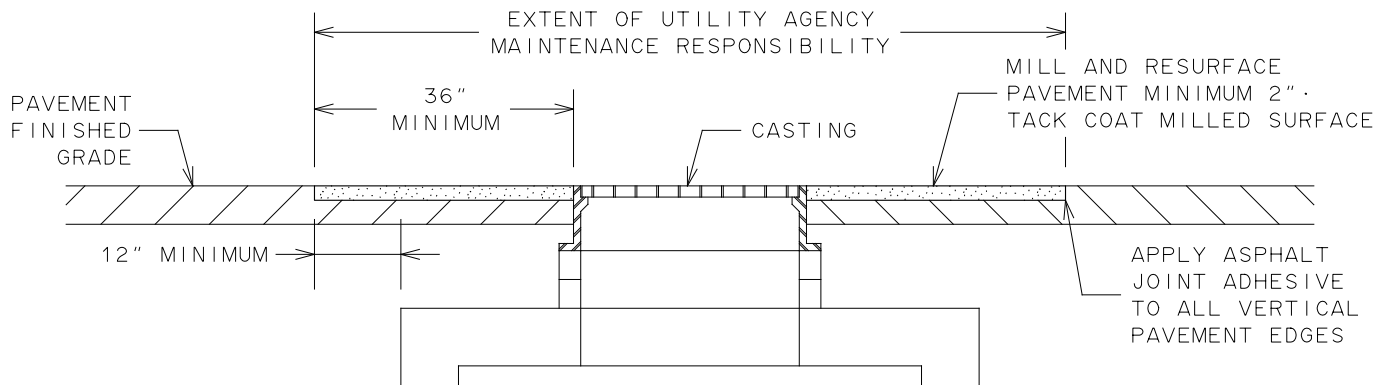
NOTES:

1. CASTINGS ARE TO BE INSTALLED PLANAR, TRUE TO LINE AND GRADE OF SURROUNDING PAVEMENT. COVER/GRATE TO HAVE FULL CONTINUOUS AND UNIFORM BEARING CONTACT WITH CORRESPONDING FRAME.
2. TOP OF COVER/GRATE IS TO BE LEVEL WITH TOP OF CORRESPONDING FRAME. IF COVER/GRATE IS BELOW/ ABOVE TOP OF FRAME GREATER THAN $\frac{1}{4}$ INCH, IT IS DEFICIENT CONDITION THAT MUST BE MITIGATED WITHIN 30 CALENDAR OF HAVING BEEN IDENTIFIED.
3. COVER/GRATE IS TO BE STABLE AND IMMOVABLE WHEN IN PLACE AND WHEN UNDER INFLUENCE OF TRAFFIC OR ANY OTHER TYPE OF LOAD BEARING STRESS.

CITY OF ROCHESTER		
GRADE LEVEL UTILITY APPURTENANCE CONDITION EVALUATION		
ISSUED	11-14-18	NON-STANDARD DWG.NO.S100-1
REVISED		



PLAN



SECTION

CONDITION	CORRECTIVE ACTION
VERY GOOD PCI 100-86	NO ACTION REQUIRED
GOOD PCI 85-71	SEAL ALL CRACKS AND JOINTS
FAIR - POOR PCI 70-26	MILL AND RESURFACE PAVEMENT MINIMUM 2" - APPLY TACK COAT TO MILLED SURFACE AND ASPHALT JOINT ADHESIVE TO ALL VERTICAL PAVEMENT EDGES
SERIOUS - FAILED PCI 25-0	RECONSTRUCT PAVEMENT SECTION IN KIND - APPLY TACK COAT BETWEEN ALL HMA COURSES AND ASPHALT JOINT ADHESIVE TO ALL VERTICAL PAVEMENT EDGES - RESET MANHOLE CASTING PER DETAIL S604-90

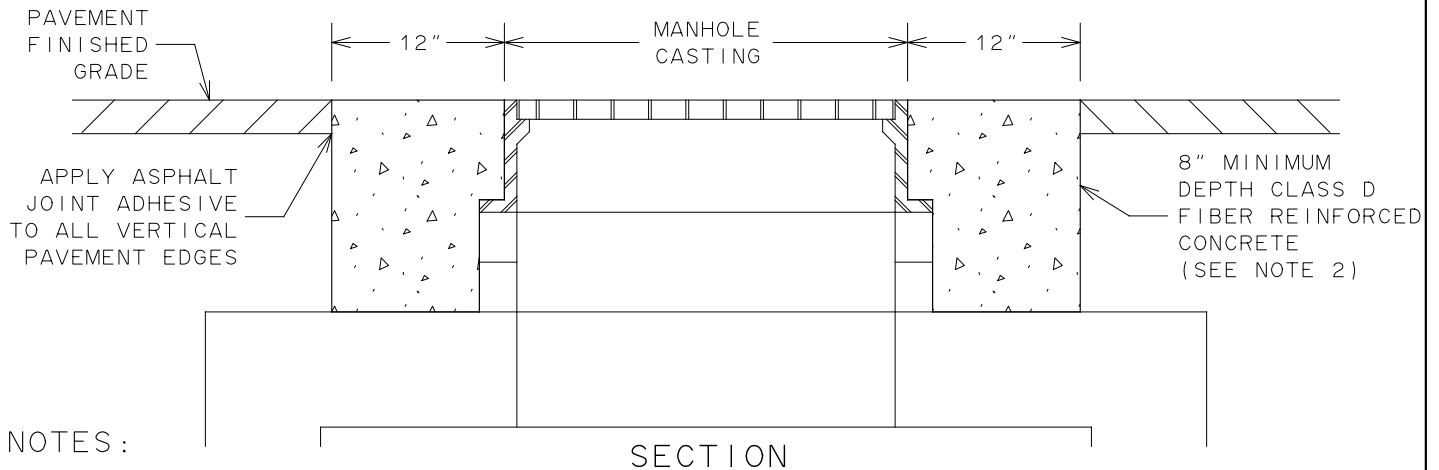
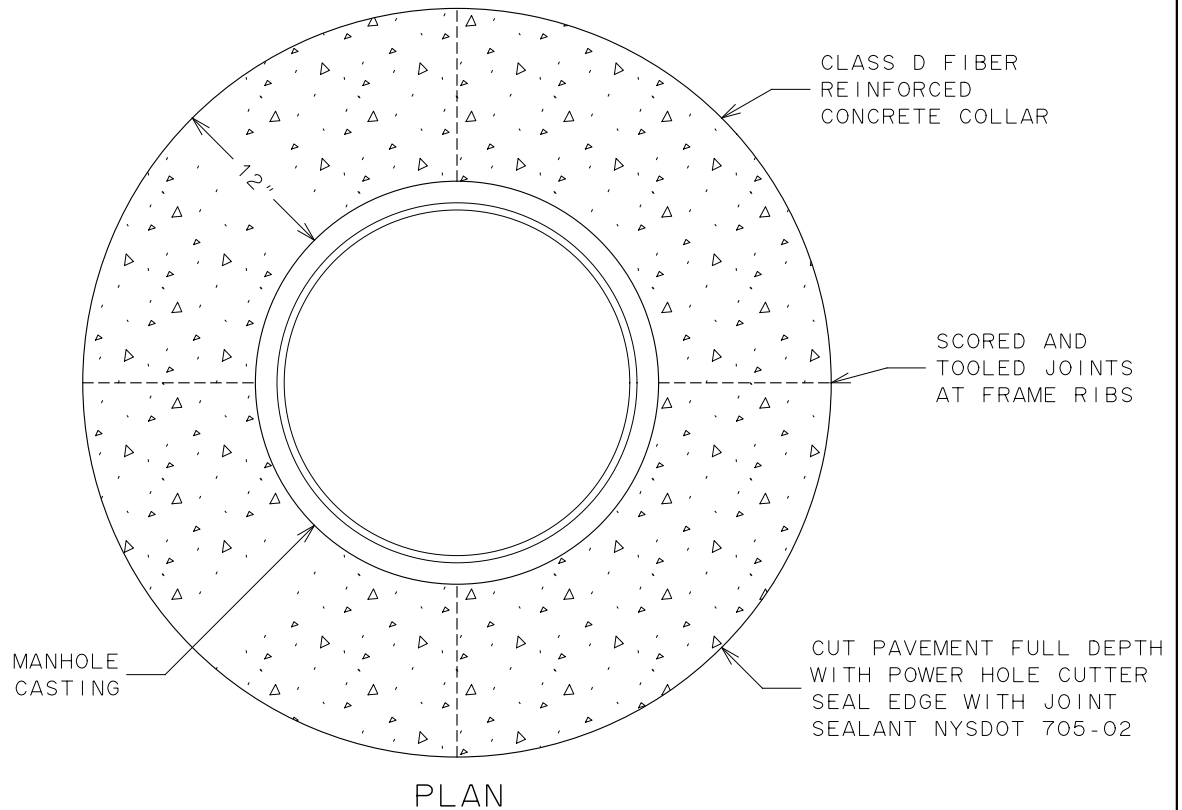
NOTES :

1. UTILITY AGENCY IS RESPONSIBLE TO MAINTAIN PAVEMENT AREA AROUND UTILITY APPURTENANCE IN GOOD CONDITION 36 INCHES FROM OUTER EDGE OF CASTING, OR 12 INCHES FROM OUTSIDE EDGE OF UNDERLYING STRUCTURE, WHICHEVER IS GREATER.
2. PAVEMENT CONDITION INDEX (PCI) IS TO BE RATED IN ACCORDANCE WITH ASTM D6433.
3. WHERE CASTINGS ARE IN DEFICIENT CONDITION AND/OR PAVEMENT AREA IS TO BE RECONSTRUCTED, RESET OR REPLACE EXISTING CASTING PER DETAIL S604-90.

CITY OF ROCHESTER

PAVEMENT CONDITION
AT UTILITY
APPURTENANCE

ISSUED	11-14-18	NON-STANDARD DWG.NO.S100-2
REVISED		



NOTES:

1. CASTINGS ARE TO BE INSTALLED PLANAR, TRUE TO LINE AND GRADE OF SURROUNDING PAVEMENT. COVER TO HAVE FULL CONTINUOUS AND UNIFORM BEARING CONTACT WITH CORRESPONDING FRAME.
2. DEPTH OF CONCRETE COLLAR TO BE MINIMUM 8 INCHES. ACTUAL DEPTH TO BE EITHER TO EXISTING CONSTRUCTION JOINT, TOP SLAB OR SOUND CONCRETE/BRICK.
3. TOP OF COVER IS TO BE LEVEL WITH TOP OF CORRESPONDING FRAME. IF COVER IS BELOW/ABOVE TOP OF FRAME GREATER THAN $\frac{1}{4}$ INCH, IT IS DEFICIENT CONDITION THAT MUST BE MITIGATED WITHIN 30 CALENDAR DAYS OF HAVING BEEN IDENTIFIED.
4. COVER IS TO BE STABLE AND IMMOVABLE WHEN IN PLACE AND WHEN UNDER INFLUENCE OF TRAFFIC OR ANY OTHER TYPE OF LOAD BEARING STRESS.
5. ROUND COLLAR IS REQUIRED HOWEVER SQUARE COLLAR MAY BE ALLOWED AT DISCRETION OF CITY ENGINEER.

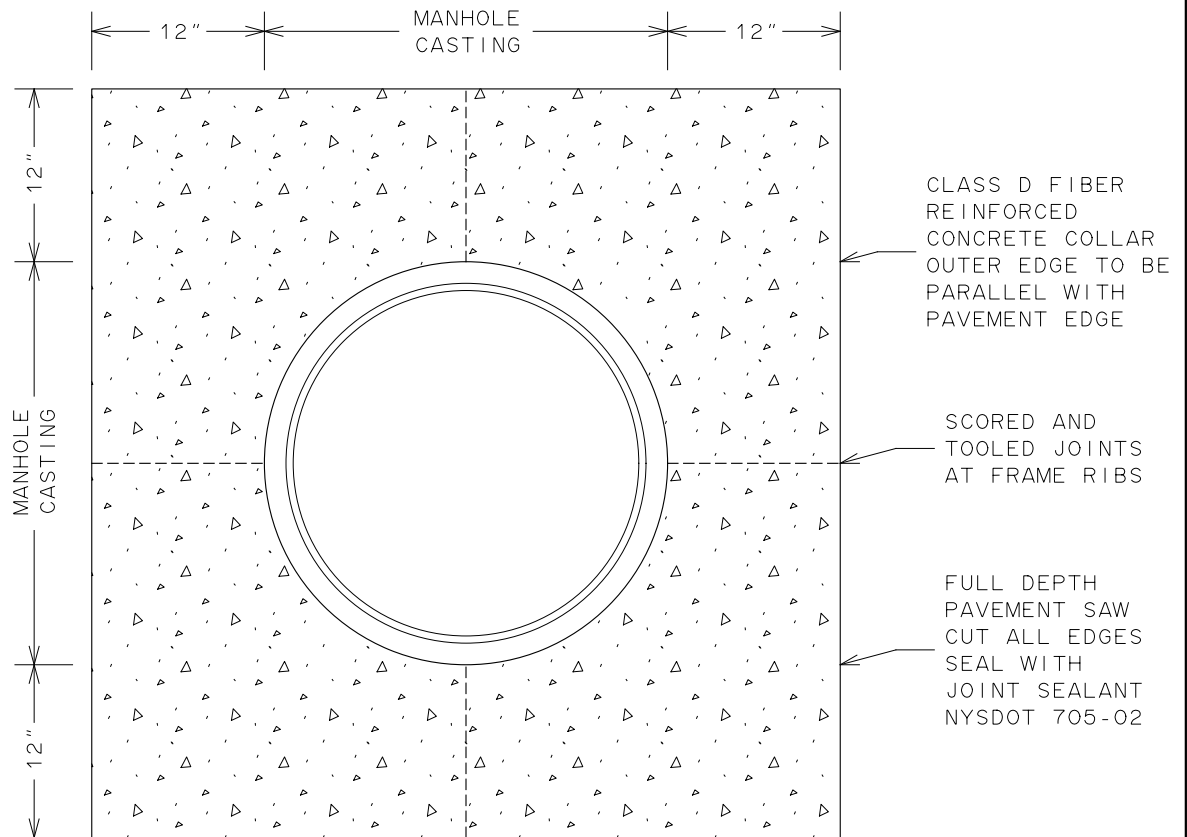
CITY OF ROCHESTER

UTILITY MANHOLE INSTALLATION - ROUND COLLAR

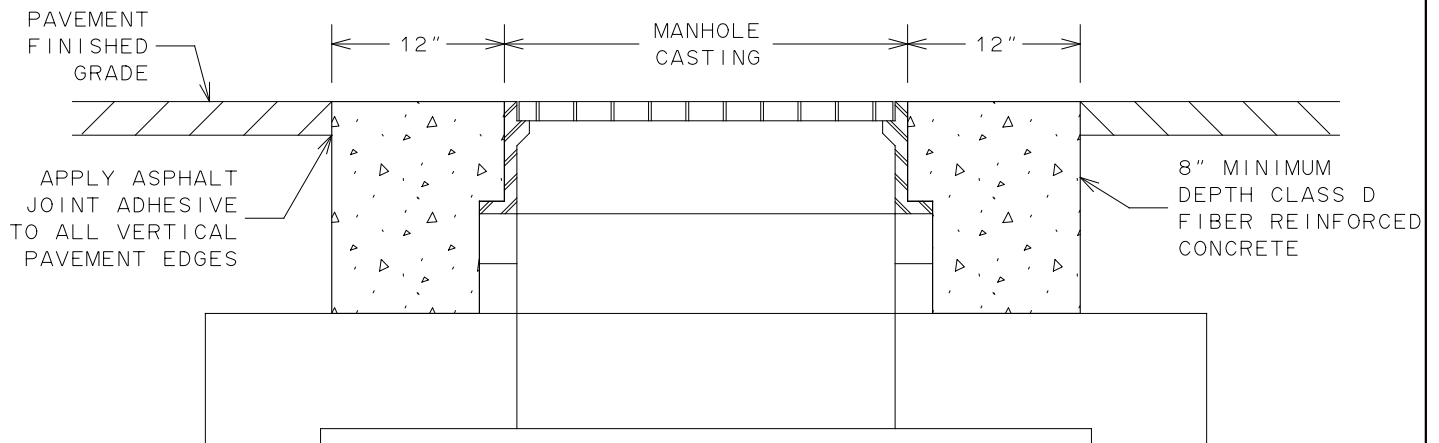
ISSUED 11-14-18

REVISED

NON-STANDARD
DWG.NO.S604-90



PLAN



SECTION

NOTES :

1. CASTINGS ARE TO BE INSTALLED PLANAR, TRUE TO LINE AND GRADE OF SURROUNDING PAVEMENT. COVER TO HAVE FULL CONTINUOUS AND UNIFORM BEARING CONTACT WITH CORRESPONDING FRAME.
2. DEPTH OF CONCRETE COLLAR TO BE MINIMUM 8 INCHES. ACTUAL DEPTH TO BE EITHER TO EXISTING CONSTRUCTION JOINT, TOP SLAB OR SOUND CONCRETE/BRICK.
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4. COVER IS TO BE STABLE AND IMMOVABLE WHEN IN PLACE AND WHEN UNDER INFLUENCE OF TRAFFIC OR ANY OTHER TYPE OF LOAD BEARING STRESS.

THIS DETAIL MAY ONLY
BE USED AT DISCRETION
OF CITY ENGINEER

CITY OF ROCHESTER

ALTERNATE
UTILITY MANHOLE
INSTALLATION -
SQUARE COLLAR

ISSUED 11-14-18

REVISED

NON-STANDARD
DWG.NO.S604-9I