**Delaware County Regional Sewer District (DCRSD)**

**Standard Sanitary Notes**

Revised April, 2017

*The general notes provided below are considered guidance for meeting the minimum requirements of the DCRSD. The design engineer shall be responsible for reviewing all notes and providing additional notes specific to their site where warranted.*

General Notes:

1. The current County of Delaware requirements, together with the specifications of the State of Ohio, Department of Transportation, including all supplements thereto, and the DCRSD Construction and Material Specifications (CMS) and Standard Drawings shall govern all materials, methods of construction and workmanship involved in the improvements that are a part of this plan.
2. Approval of these plans is contingent upon all required sanitary sewer easements being approved by the DCRSD and recorded with the project final plat or as directed by the Sanitary Engineer prior to construction.
3. The contractor shall notify the Sanitary Engineer’s Office forty-eight (48) hours prior to construction.
4. Any modifications to the work as shown on these drawings shall have prior written approval by the Sanitary Engineer.
5. The contractor is responsible for the investigation, location, support, protection, and restoration of all existing utilities and appurtenances whether shown on these plans or not. The contractor shall expose all utilities or structures prior to construction to verify the vertical and horizontal effect on proposed construction. The contractor shall call, toll free, the Ohio Utilities Protection Service (1-800-362-2764) forty-eight (48) hours prior to construction and shall notify all utility companies at least forty-eight (48) hours prior to work in the vicinity of their underground lines. The identity and location of the existing underground utility facilities known to be located in the construction area have been shown on the plans as accurately as provided by the owner of the underground utility. The County of Delaware and the Sanitary Engineer assume no responsibility as to the accuracy of the underground facilities shown on the plans.
6. The following utilities and/or owners are located within the work limits of this project and do not subscribe to a registered underground utility protection service. (Utility Owner-Provide Names and Phone Numbers: Telephone, Water, Storm Sewers, Sanitary Sewers, etc.).
7. The Contractor shall confine his activities to the Project Site under development, existing rights-of-way, construction easements and permanent easements, and shall not trespass upon other private property without the written consent of the property owner.
8. Compliance with the Occupational Safety and Health Act of 1970, as amended, and applicable OSHA regulations is required of all contractors on the project. Each contractor and subcontractor is responsible for implementing, maintaining, and supervising all safety requirements, precautions, and programs in connection with the work.
9. The tracking of mud, dirt, and debris upon any public roadway is prohibited and any such occurrence shall be cleaned up immediately by the Contractor. The Contractor shall clean up all debris and materials resulting from construction operations and restore all surfaces, structures, ditches, and property to its original condition and to the satisfaction of the Sanitary Engineer.
10. Any trees or landscaping in existing easements or public right-of-way shall be protected and not impacted by construction activities unless prior approval is obtained by the Sanitary Engineer. Any trees or landscaping that are approved to be removed are required to be replaced to the satisfaction of the Sanitary Engineer.
11. The Contractor shall obtain any and all necessary permits prior to beginning construction. All work shall be performed in accordance with the applicable federal, state, and local regulations and requirements.
12. Where it is anticipated that the utility work will close a street, the Contractor shall inform residents to be affected, the County Sheriff’s Office or local Police Department, the Fire Department, the Sanitary Engineer, the County Engineer, the applicable School District, and other applicable entities as to the extent, nature, and time of the anticipated work.
13. Prohibited Construction Activities: The following construction activities are prohibited on the project:

* Using any substance other than water to control dust.
* Tracking of mud, dirt and debris onto any public roadway.
* Open burning of project debris without a permit. The Contractor is responsible for obtaining the permit or disposing of trees and stumps.
* Pumping of sediment-laden water from trenches or other excavations into any surface waters, any stream corridors, any wetlands, or storm sewers.
* Discharging pollutants, such as chemicals, fuels, lubricants, bituminous materials, raw sewage, and other harmful waste into or alongside rivers, streams, impoundments, or into natural or man-made channels leading thereto.
* Storing construction equipment and vehicles and/or stockpiling construction materials on property, public or private, not previously specified for said purposes.
* Disposing of excess or unsuitable excavated material in wetlands or floodplains, even with the permission of the property owner.
* Indiscriminate, arbitrary, or capricious operation of equipment in any stream corridors, wetlands, surface waters, or outside the easement area.
* Permanent or unspecified alteration of the flow line of a stream.
* Removal of trees and shrubs, or damaging vegetation outside the limits of the construction area.
* Disposal of trees, brush and other debris in stream corridors, wetlands, surface waters, or at unspecified locations.

14. Sediment and Erosion Control. The Contractor shall submit a copy of the Stormwater Pollution Prevention Plan (SWPPP) to the Sanitary Engineer that has been approved by the governing storm water authority (i.e., Delaware County Engineer’s Office, City of Powell, Village of Sunbury, etc.) prior to the pre-construction meeting for the sanitary sewer. Additional erosion and sedimentation controls may be required at the discretion of the Sanitary Engineer before and/or during construction activities.

Sanitary Sewer Notes:

1. All sanitary sewers shall be separated a minimum of 10 feet horizontally and 1.5 feet vertically from all water mains.
2. Wherever a sanitary sewer must cross an existing water main, the elevation of the crown of the sewer shall be at least 1.5 feet minimum, measured between the outside pipe walls, below the bottom of the water main.
3. All gravity sanitary mains (8 inches through 15 inches) and services (6 inch) shall be PVC pipe meeting the requirements of ASTM D-3034, SDR 35, cell class 12454, unless otherwise noted. PVC sewer joints shall meet ASTM 3212 specifications. For pipe sizes 18 inches and larger, PVC pipe shall conform to ASTM F 679, with a cell classification of 12454. Pipe and fittings shall be SDR 26 or PS 115 for depths greater than 20 feet. For pipes with depths greater than 28 feet, please see the District CMS.
4. There shall be no storm or clean water connections to the sanitary sewer (roof drains, footer drains, etc.)
5. All sanitary sewer wye fittings shall have a 10-foot minimum service extension installed prior to the service being capped and backfill being placed over the mainline and lateral sewer.
6. Trench dams are required for all sanitary services and shall be constructed of native clay or impervious soil across and along the trench upstream of the main line sewer to retard and resist the movement of groundwater through the trench bedding or backfill material. Compact the trench dams to 6 feet in length, as measured along the service centerline to a limit of 36 inches above the top of pipe.
7. Sewer trenches shall be de-watered to 2 inches below the bell of pipe prior to installation of pipe.
8. The contractor shall provide and install wye poles at all wye locations as constructed. Wye poles shall extend above the existing or proposed grade, whichever is higher, a minimum of 2 feet.
9. Any field tile disturbed during construction shall be replaced as directed by the Sanitary Engineer with PVC pipe spanning the trench. The trench shall be filled with compacted granular backfill.
10. Finish grade at all sanitary manholes shall be at least 6 inches below top of casting to avoid unnecessary infiltration into the sanitary sewer system.
11. All sanitary services shall be installed with a minimum 2.08% slope unless otherwise noted on plans.
12. Backfill shall be installed per typical trench detail Sa.S-2.
13. Service risers shall be installed where depths from the wye to the existing or proposed elevation exceeds 12 feet. The tops of risers shall be no more than 10 feet below existing or proposed surface elevation, whichever is higher, unless otherwise noted.
14. Contractor shall install plugs in the upstream and downstream inverts of the connection manhole. The plugs shall be inspected by the contractor on a weekly basis and after rainfall events.
15. Sanitary sewers shall be tested by air testing method. Air testing shall be made in accordance with ASTM F1417-92. Allowable leakage shall not exceed the limits as shown in CMS Item 409.01. Contractor shall cooperate with the Sanitary Engineer and provide all necessary equipment to perform the testing.
16. Sanitary manholes shall be tested using vacuum test methods per CMS Item 409.02.
17. When PVC pipe is used a deflection test shall be performed. Pipe deflection shall not exceed 5 percent if tested after 30 days, or 7.5 percent if tested after 90 days from the trench being backfilled to finish grade. The method of testing shall be subject to the approval of the Sanitary Engineer. If rigid balls or mandrels are used to test the pipe deflection, no mechanical pulling devices shall be used. Any lines which fail the test must be repaired and retested by the Contractor at no cost to the DCRSD.
18. All sanitary manholes shall be stamped “Delaware County Regional Sewer District”. All watertight manholes shall have a T-gasket and concealed pick holes. All sanitary manholes shall be Neenah R-1760A with “Delaware County Regional Sewer District” cast in the manhole.
19. The following set of tools and spare parts shall be delivered to the Sanitary Engineer’s office prior to final acceptance of the project: five (5) concrete grade rings; one (1) manhole lifting hook; and one (1) complete manhole casting (frame and lid). An additional set of spare parts shall be provided for every ten (10) manholes.