

**PUBLIC WORKS ENGINEERING DIVISION**

**Date:** Thursday, March 23, 2017

**To:**

ENGINEERING SOLUTIONS

Matt Schlicht, P.E.

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**From:** Gene Williams, P.E.

Senior Staff Engineer

**Application Number:** PL2016138

**Application Type:** Engineering Plan Review

**Application Name:** View High Dr. to Chipman Road Sanitary Sewer (off-site Village at View High)

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The Public Works Department received plans for this project on Mar. 15, 2017. We have completed our review and offer the following comments:

**Engineering Comments:**

1. Sheet C.402: It appears the sanitary sewer manhole frame and lid is not correct. This appears to be a frame and cover for a slab top installation. Wouldn't this frame and cover be a Clay and Bailey 2014OR or equivalent?
2. Sheet C.402: Please label the typical "Gravel Parking" as "Gravel Parking Area Restoration Detail" to match the note included in the plan view.
3. Sheet C.402: Manhole A-0 appears to be shown 9 inches above grade. Please revise as appropriate to meet the request of the property owner concerning the installation of all manholes "at grade".

4. Sheet C.402: Please show the existing City manhole which is buried beneath ground level on the profile view, with a note stating that this manhole will be raised to grade. Depending on the required distance needed to raise this manhole to grade, it may be necessary to install a new cone section if adjusting rings are greater than 12" in height.
5. Sheet C.403: Manhole A-4 and A-5 are now shown 2 to 5 feet below grade. Please correct.
6. Sheet C.403: The 100 year hydraulic grade line at manhole A-6 to points downstream does not appear to be correct. The line is shown beneath the pipe, and there is another curious lines shown beneath the pipe between manhole A-5 and manhole A-4.
7. Sheet C.404: Please drop the flowline in/out elevation of manhole A-9 by 0.20 feet. Also, please drop the flowline in/out elevation of manhole A-10 by 0.10 feet. This will help achieve a greater slope in the pipe, greater than the minimum slope of 0.24%.
8. Sheet C.404: Please raise manhole A-12 slightly, as shown on the previous drawing received on Mar. 2nd. It appears this version has changed slightly to the point where the manhole is slightly buried beneath proposed grade.
9. Sheet C.404: What is the plan for "bank stabilization" at station 26+00? A note is provided, but no supporting design is supplied. A detailed design should be supplied, including any turf reinforcement mat, etc.
10. Sheet C.406: This sheet was provided in order to show details for construction of the Coir Log stream stabilization measures at the Cedar Creek sanitary sewer crossing. The upper detail "Coir Log Alignment (Plan)" does not appear to be a plan view. It is unknown how far the turf reinforcement mat will be installed. Erosion control blanket is called-out in some instances, where turf reinforcement mat is called-out in others. In other words, we need a site-specific plan for installation of the Coir Logs, the TRM or ECB, a plan view showing a plan view of the design, and any other views necessary to show a contractor and inspector what they are expected to construct and inspect.
11. Sheet C.404: The same comment above would apply to streambank stabilization near station 25+66. Simply providing a note stating "bank stabilization area" with no supporting design or lacking a separate sheet for a detail is not adequate.
12. It appears the Engineer's Estimate of Probable Construction Costs is missing the following items: 1) manhole adjustment to grade (see comments concerning the buried manhole), 2) please separate-out the two (2) different concrete encasements, 3) turf reinforcement mat, erosion control blanket, etc., 4) streambank stablization measures using Coir Logs, TRM, ECB, etc., 5) all other streambank stabilization measures installed upstream, and 6) any diversion dikes to enable construction of the crossing at Cedar Creek.

Beginning Monday, May 23, 2016, all Planning application and development engineering plan resubmittals shall include an electronic copy of the documents as well as the required number of paper copies. Electronic copies will not be required for initial application submittals at this time as the plans are subject to change.

Electronic copies shall be provided on CD in the following formats

- Plats – All plats shall be provided in Tagged Image Format File (TIFF) Group 4 compression.
- Engineered Civil Plans – All engineered civil plans shall be provided in Tagged Image Format File (TIFF) Group 4 compression. All sheets shall be individually saved and titled with the sheet title.
- Architectural and other plan drawings – Architectural and other plan drawings, such as site electrical and landscaping, shall be provided in Portable Document Format (PDF).
- Studies – Studies, such as stormwater and traffic, shall be provided in Portable Document Format (PDF).
- It is requested that each plan sheet be a maximum of 2MB.

Please contact Staff with any questions or concerns you may have.

If you have any questions or comments, please contact me, Gene Williams either at (816) 969-1812 or e-mail to [Gene.Williams@cityofls.net](mailto:Gene.Williams@cityofls.net).

Sincerely,

Gene Williams, P.E.  
Senior Staff Engineer

cc: Development Engineering Project File