

PUBLIC WORKS ENGINEERING DIVISION

Date: Tuesday, July 03, 2018

To:

SCHLAGEL & ASSOCIATES

Mark Breuer, P.E.

Email: mab@schlagelassociates.com

Fax #: (913) 492-8400

From: Gene Williams, P.E.

Senior Staff Engineer

Application Number: PL2018049

Application Type: Engineering Plan Review

Application Name: Winterset Valley 12th Plat - Sanitary Sewer

The Development Services Department received plans for this project on June 29, 2018. We have completed our review and offer the following comments listed below.

- Resubmit three (3) full size sets of plans (no larger than 24"x36") folded to 8-½"x11", one (1) comment response letter, and one (1) digital copy following the electronic plan submittal guides as stated below.
- Revised plans will be reviewed within five (5) business days of the date received.

Engineering Review

1. Sheet 1: Please add the following to Note 7: "...After approval of shop drawings, a copy of the approved and signed shop drawing shall be provided to the City inspector upon request", or equivalent language.
2. Sheet 2: It appears the scale is incorrect. Shouldn't this be 1 inch equals 50 feet rather than 1 inch equals 100 feet?
3. Sheet 2: Sanitary sewers must be no closer to storm sewers than 10 feet as measured horizontally. It appears this is violated at the intersection of Carson Dr. and Thoreau Dr., and near manhole A8 on Audubon Ln.
4. Sheet 3: Please label the existing City manhole as #27-276.
5. Our records indicate the off-site portion of the sanitary sewer shall be installed across land owned by a different entity than the developer. It is our understanding that this land shall be purchased by the developer. As such, either: 1) evidence that this land purchase is completed, or 2) execution of an off-site easement prior to approval of the plans is required. Please see below comment for further information concerning this sanitary sewer easement.

6. Prior to issuance of a Certificate of Substantial Completion, easement(s) in a form acceptable to the City must be executed, and recorded with the Jackson County Recorder of Deeds office. Prior to execution, please submit a courtesy review copy to the Development Services Department for a quick review to ensure the appropriate language and exhibits are provided. Please contact the City Right of Way Agent Curt Powelson at 816-969-1800 for the most up-to-date template for a dedicated sanitary sewer easement. We will also need exhibits showing the easement(s) in graphical format. The easement must be a sanitary sewer easement, and not a general utility easement, dedicated to the City of Lee's Summit.
7. Sheet 3: Please define the "BASE FLOOD PLAIN". Isn't this the limit of the regulatory floodway?
8. Sheet 4: In two (2) separate locations, it appears the sanitary sewer is too close to the storm sewer at the intersection of Carson and Thoreau, on both the north side and the south side of Thoreau Dr. The MDNR and the City of Lee's Summit require a minimum horizontal distance of 10 feet.
9. Sheet 5: The sanitary sewer is too close to the storm sewer at manhole A8. A minimum of 10 feet is required.
10. Sheet 5: As an aid to inspectors and contractors, please show the short cul-de-sac street extending to the east from Nutall Dr. in Winterset Valley 8th (NW Nutall Ct.). As shown, it is not shown. This will hopefully provide a frame of reference for inspectors and contractors.
11. Sheet 6: Please define "BASE FLOOD PLAIN". Isn't this the regulatory floodway?
12. Sheet 6: Provide the City manhole number for EX A-2. This number is #27-276.
13. Sheet 6: Manhole A1 and manhole A2 are shown within the regulatory floodplain. There are two (2) methods that can be used to design these manholes within the floodplain: 1) raise the manhole so the top is a minimum of 1.0 feet above the base flood elevation, with no greater than 4.0 feet from the top to the finish grade, or 2) providing a watertight ring and bolt down cover with neoprene gaskets. Either method may be utilized.
14. Sheet 6: Show the interpolated base flood elevations at each of the above manholes if utilizing the above-grade method to adjust the tops of the manholes. Ensure the previously-provided design criteria is followed (i.e., 1.0 above the base flood elevation, with no more than 4.0 feet above the base flood elevation allowed). If using the watertight ring and bolt down cover method, these elevations need not be provided.
15. Sheet 6: If using the bolt-down option for manholes within the floodplain, ensure the tops of the manholes are a minimum of 6 inches above grade as an aid in future field location.
16. Sheet 6: It appears manhole A1 is a shallow manhole. Please call out a shallow manhole.

17. Sheet 7: The sanitary sewer between manholes A5 and A6 is beneath a creek. The sewer line must be specified as ductile iron between the two manholes. Concrete encasement as per the City standard drawing is required from bank to bank. The length of the concrete encasement must be specified on Sheet 7, along with sufficient notes referencing the standard drawing.
18. All Profile Views: The hydraulic grade line for the design flows must be shown on the profile views. The as-built Record Drawings shall be updated after construction to reflect the actual as-built hydraulic grade line.
19. All Profile Views: The locations of crossing locations for water lines and storm sewer lines were lacking on the profile views. We did not see any indication of the location of these features on the plans. Without this information, it is difficult to determine whether adequate separation has been provided. Ensure a minimum of 18 inches separation is provided between these features.

In order to calculate the Engineering Plan Review and Inspection Fee, a sealed Engineer's Opinion of Probable Construction Costs shall accompany your final submittal copies. The itemized estimate (material and installation) shall be sufficiently broken down and shall include the following items, as applicable.

- Public infrastructure, both onsite and offsite.
- Private street construction, including parking lots and driveways.
- Sidewalks located within the right-of-way.
- ADA accessible ramps.
- Sanitary sewer manholes and piping between manholes, including private mains.
- Connection of the building sanitary sewer stub to the public main.
- Waterlines larger than 2 inches in diameter, valves, hydrants, and backflow preventer with vault, if outside the building.
- Stormwater piping greater than 6 inches in diameter, structures, and detention / retention facilities - public or private.
- Water quality features installed to meet the 40-hour extended duration detention requirements.
- Grading for detention / retention ponds.
- Grading to establish proper site drainage.
- Utility infrastructure adjustments to finished grade (i.e. manhole lids, water valves, etc.).
- Erosion and sediment control devices required for construction.
- Re-vegetation and other post-construction erosion and sediment control activities.

Electronic Plans for Resubmittal

Development engineering plan resubmittals shall include an electronic copy of the documents as well as the required number of paper copies.

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 me if you have any questions or comments.

Sincerely,

Original Signed

Gene Williams, P.E.
Senior Staff Engineer
(816) 969-1223
Gene.Williams@cityofls.net

cc: Development Engineering Project File