

**Date:** Friday, August 21, 2020

**To:** Snyder & Associates  
802 Francis St  
St. Joseph, MO 64501

**From:** Gene Williams, P.E.  
Senior Staff Engineer

**Application Number:** PL2020228

**Application Type:** Engineering Plan Review

**Application Name:** Whispering Woods 2nd Plat - Streets, Storm and Master Drainage Plan

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The Development Services Department received plans for this project on August 10, 2020. 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 ten (10) business days of the date received.

**Engineering Review - Corrections**

1. Please see Traffic Engineering comments related to the sidewalk, collector versus residential local access road, end of road treatment, and geometry issues with k vales and slope issues.
2. Please provide a stormwater memorandum or abbreviated study which provides a briefing of the stormwater issues for the project, including past activities related to the construction of 40 hour extended detention basins, the waiver to the stormwater peak attenuation requirements, and how this particular portion of Whispering Woods fits within the overall plan for the entire subdivision. In particular, the stormwater memorandum should specifically discuss the lack of detention along the rear lots of 34 through 51, and how the new grading in accordance with the Master Drainage Plan will reduce the drainage area converging toward the south off-site properties. and how the peak runoff will be reduced to "at or below" existing peak runoff after grading so the off-site properties will not be negatively-impacted.
3. A Master Drainage Plan was not provided within the plans. The Master Drainage Plan has specific requirements, and we would recommend the applicant review the previous approved plans for Whispering Woods 1st Plat for specific details required for a Master Drainage Plan.
4. If the above plan is not available to the applicant, we can supply a copy if needed. Please ensure that all swales are properly detailed, along with all off-site grading to construct the swales during construction of other improvements. Also ensure that all existing and finish grades are provided for lot corners, and

basement type is specified for each lot, and the Minimum Building Opening Elevation (MBOE) is specified for each lot, or multiple MBOEs shown with a note specifying that interpolation be used along the lot line where multiple MBOEs are shown.

5. Sheet 5: The grading plan is unclear how drainage from upstream areas will be managed at the near the north end of SW Swan Creek Rd. It would appear additional stormwater control measures are needed in this area, such as additional field inlets, curb inlets, pipe, etc.
6. Sheet 5: The same comment above applies to the east end of SW 27th St.
7. Sheet 5: The same comment applies to the south end of SW Swan Cir. It appears this configuration will have an adverse impact on the adjacent property to the south of SW Swan Creek Rd.
8. Sheet 9: This is not a four way stop controlled intersection, and as such, these details must be revised. SW Swan Creek Rd. is a collector, and is not under stop control. As such, the ADA-accessible route across SW Swan Creek Rd. may match the proposed road grade up to 5.0%. The ADA-accessible route across SW 27th St., however, is limited to a 1.5% design slope with a minimum width of 5.0 feet across the entire road. Please make appropriate changes to this sheet, and also make appropriate changes to the street plan and profile to reflect these standards, especially in regard to the location of the ADA-accessible route across the stop-controlled intersection at SW 27th St.
9. Sheet 9: There are several references to a running slope of the ADA-accessible ramps as over 7.5%. The City of Lee's Summit has adopted a more stringent standard of 7.5% rather than 8.33%. Please revise.
10. Sheet 9: Sidewalk is only required along one (1) side of SW 27th St. since this is a local access road. Sidewalk is required on both sides of SW Swan Creek Rd., however, since this is a residential collector.
11. Sheet 15: The typical section views need to be revised to residential collector on Swan Creek Rd., and residential local access on SW 27th St. Please see the latest Design and Construction Manual requirements for each. Please be aware that CG-1 straight back curb and gutter is required for residential collector streets, and CG-2 curb and gutter is required for local access roads.
12. Sheet 15: In addition to pavement requirements, the City requires the use of chemically-stabilized subgrade or geogrid in addition to compacted subgrade to 95% proctor.
13. Standard Detail Sheets: It appeared the end of road treatment detail was missing. Please see Traffic Engineering comments related to this requirement.
14. A separate erosion and sediment control plan is required, with a separate cover sheet and separate drawings.

## **Traffic Review - Corrections**

1. Update Typical Section for Swan Creek Rd description to Residential Collector from Local and revise curb to CG-1 for Swan Creek Rd.
2. Remove the Stop Sign & Street Name Sign installations from SW Swan Creek Rd at SW 27th Street. Only 27th Street should have stop signs and only one set of street name signs required (not necessary above both stop signs).
3. Add end of road sign treatment (object markers); set of 4 evenly spaced object markers per City standards, at the end of all dead end streets.
4. Maximum grade on Swan Creek Rd shall not exceed 8%, per collector standards in Design and Construction Manual.
5. K value on Swan Creek Rd shall be at least 12 for all vertical crests.

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**

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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 shall be provided in the following formats

- Plats – All plats shall be provided in multi-page Portable Document Format (PDF).
- Engineered Civil Plans – All engineered civil plans shall be provided in multi-page Portable Document Format (PDF).
- Studies – Studies, such as stormwater and traffic, shall be provided in Portable Document Format (PDF).

Please contact me if you have any questions or comments.

Sincerely,

/s/ Gene Williams Aug. 21, 2020

Gene Williams, P.E.  
Senior Staff Engineer  
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cc: Development Engineering Project File