

Date: Friday, February 28, 2020

To: OLSSON ASSOCIATES
Brian Worthley, P.E.
1301 BURLINGTON, SUITE 100
NORTH KANSAS CITY, MO 64116

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

Application Number: PL2020035

Application Type: Engineering Plan Review

Application Name: OSAGE 1ST - SANITARY SEWER

The Development Services Department received plans for this project on February 21, 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. These review comments reflect a review of the plans without regard to the engineering plans for the street, stormwater, Master Drainage Plan, or water line extension plans. As such, these comments should be considered preliminary, since the aforementioned plans have not yet been submitted for the project.
2. Proposed off-site easement widths appear to be sufficient. Applicant shall be responsible for the acquisition and execution of all off-site sanitary sewer easements, in a form acceptable to the City. Standard templates are available for sanitary sewer easements, and should be used. In addition, all off-site easements must also include an 8.5 inch by 11 inch exhibit, prepared by a licensed land surveyor, showing in graphic format the limits of the easement.
3. There are two (2) instances where "stub-outs" are proposed for future extension during future platting. This is not allowed in the City of Lee's Summit. All future connections must be core-drilled into the manhole. Please correct.
4. Without the Final Plat, it is difficult to determine the locations of the proposed sanitary sewer laterals. This will be formally evaluated at the time the Final Plat is submitted.
5. The geometry between manhole 1-7 and 1-5 conflicts with the dam and spillway. It appears there are

better routes for construction of this line. Would a route that runs almost north/south from manhole 1-7 be more appropriate? It appears this is a better option.

6. The City is currently revising its Design and Construction Manual. Currently, sanitary sewer is required to be outside of the paved areas, except where it crosses the street. With the new changes that have not taken effect, the desire is to place the sanitary sewer lines along the centerline of all streets, regardless of whether the change has officially taken place or not. Please change the geometry to reflect this new change (i.e., please move all sanitary sewers to the centerline of the streets, except where crossing the detention basin, etc.).
7. With the changes noted above concerning placement of the sanitary sewer along the centerline of all streets, this may affect the placement of water lines since there will be more options for placement of water line. The City will still require that water and storm lines be placed outside the limits of the paved surface, but there will now be additional options available for placement of the water main due to the placement of the sanitary sewer along the centerline of the street.
8. It appears Line 7 along Maryville Place can be shortened. Please look into the possibility of shortening this line to the minimum needed to serve each unit on Lot 13 and 11. It appears the line can be shortened to be less than 500 feet, which would also eliminate manhole 7-1.
9. It appears manhole 1-13 and 1-14 can be eliminated. In their place, a manhole could be placed between Lot 2 and 3?
10. It appears manhole 1-10 and 1-11 can be eliminated. In their place, a new manhole could be placed near the boundary of Tract E and Lot 9?
11. Sheet C204: Please label the existing grade as "existing/proposed" or equivalent language.
12. Sheet C205: Is there a water main crossing that is missing from the profile view between manhole 1-4 and 1-5?
13. Sheet C206: It appears the maximum twenty (20) foot depth (i.e., as measured to the flowline, not the top of pipe) is exceeded at station 23+00. However, with the realignment discussed earlier in this comment letter, this issue may no longer be relevant.
14. Sheet C206: It appears a water main was omitted from the profile view near station 22+50?
15. Sheet C213: An 8 inch water line appears to be shown near sta 10+50. Is this a typographical error?
16. In terms of showing the location of sanitary sewer manholes on the centerline, they will be slightly offset

due to the concentric cone. Ensure there are sufficient notes and location call-outs for the manholes, which place the actual frame and lid at the geometric center of the road. In other words, the frame and lid must be exactly centered on the centerline. It is essential that the "downslope" side of the lid (i.e., the part of the lid on the "downslope" side of the crown) be flush with the surface of the street. In other words, there will be a slight "flat spot" at the crown, where sanitary sewer manholes are located.

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

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,

Original Signed

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cc: Development Engineering Project File