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**DEVELOPMENT SERVICES**

**Date:** Tuesday, November 07, 2023

**To:** David Eickman, P.E.  
Olsson Associates  
North Kansas City, MO 64116

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

**Application Number:** PL2023145

**Application Type:** Engineering Plan Review

**Application Name:** THE VILLAGE AT DISCOVERY PARK - PUBLIC SANITARY and FORCE MAIN  
RELOCATION

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The Development Services Department has completed its review of the above-referenced plans dated Oct. 24, 2023. We have completed our review and offer the following comments listed below.

- See comments below to determine the required revisions and resubmit to the Development Services Department public portal located at [devservices.cityofls.net](https://devservices.cityofls.net). Digital documents shall follow 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. As requested in the previous applicant letter, further engineering work was recommended to lessen the depth issues related to the sanitary sewer. Although this was addressed on the connection point to the south of Colbern Rd., it appears no other effort was expended in lessening the impact. I found the following locations where this impact can be lessened by using a different pipe slope, adjusting flowline elevations, or a combination of both. The following are examples: 1) the segment between manhole Z2 and Z1 could be decreased significantly, 2) the segment between the existing manhole being replaced at 16-008 and manhole Z2 could be decreased slightly, recommend no less than 0.40% (0.33% is the minimum required by the Design and Construction Manual), 3) manhole A1 to existing manhole 16-010 (to be replaced) is shown with excessive slope for no apparent reason, and appears slope can be lessened significantly with an outside drop manhole, 4) manhole C1 is deep for no apparent reason. Please revise.
2. Sheet 660: Flowline in at Z3 has zero fall across the invert. Minimum fall across inverts at this angle is 0.20 feet. Please revise.
3. Sheet 656: It does not appear sufficient fall was provided across the invert at manhole 16-010. Minimum slope for this angle of entry and exit is 0.50 feet. Please revise.
4. Please revise the Design Criteria Modification Request (i.e., the waiver) as appropriate after making

revisions. Please ensure the waiver request is submitted as one (1) pdf document which includes 1) the form, 2) the summary sheet, and 3) the exhibit.

5. Sheet 652: Please label each manhole on the general overview sheet. Many manhole labels were missing for existing manholes to be removed and replaced, and makes the interpretation in the field difficult for the contractor and the inspector.
6. Stub Locations: There are numerous references to marking the end of the line for future location. Tracer wire and box will be required as per the City of Lee's Summit standard detail. Recommend the plan view of the sanitary stubs be revised to reference the standard detail for tracer wire and other design requirements for a wye connection (i.e., SAN-1).

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/ electronically signed Nov. 7, 2023

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

cc: Development Engineering Project File