

**DEVELOPMENT SERVICES**

**Date:** Monday, August 02, 2021

**To:** OLSSON ASSOCIATES  
Terry Parsons, P.E.  
1301 BURLINGTON, SUITE 100  
NORTH KANSAS CITY, MO 64116

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

**Application Number:** PL2021227

**Application Type:** Engineering Plan Review

**Application Name:** LSR7 Middle #4 - Sanitary Sewer Upgrades Downstream Segment #2

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The Development Services Department has completed its 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**

1. Railroad concurrence shall be required prior to installation of the railroad crossing. For purposes of approval, the railroad portion is acceptable to the City, and it is recommended this portion of the plans be submitted to the railroad.
2. Is a USACE permit being acquired for the project? Is it required? If so, a copy of the permit shall be submitted prior to approval.
3. Floodwater Elevation: tops of manholes shall extend a minimum 1'-0" above the calculated 100-year floodwater elevation, provided that such extension shall not exceed 4 feet above final finish grade. Where these requirements result in a manhole with a rim at or below the 100-year floodwater elevation, the manhole shall be equipped with watertight ring and bolt-downcover assembly with neoprene gaskets. It appears some of the manholes are extended as high as desired by Water Utilities, but are below the 100 year water surface elevation, or do not extend the minimum distance of 1.0 feet. This would include manholes 56-006, 007, 008, 009, 010, and 011.
4. Anywhere ductile iron pipe is specified, it shall conform to the ductile iron specifications contained within the Design and Construction Manual. Currently, the City only allows zinc-coated ductile iron pipe.

5. It is unclear whether the stream channel flowline is being altered in terms of elevation. Is rock liner being installed beneath the existing stream flowline? This will have a direct bearing on the location of the sanitary line in order to achieve minimum depth of cover. If the dashed line represents the existing stream flowline, the depth of cover appears sufficient.
6. Manhole 47-069 is shown with insufficient drop across the manhole. A minimum of 0.5 feet is required.
7. Are there other manhole rims that do not meet the 1.0 feet of freeboard requirement between the calculated 100 year water surface elevation and the top of the rim? If so, please see previous comment for guidance.
8. Recommend evaluating the casing carrier pipe requirement prior to submittal to the railroad. A portion is "x'ed" out, and might generate additional delays by the railroad. The City is ok with the alignment under the railroad, but shall yield to any requirements mandated by them.

### **Traffic Review - Not Required**

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 Aug. 2, 2021 Gene Williams

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cc: Development Engineering Project File