

**Date:** Tuesday, October 18, 2022

**To:** OLSSON ASSOCIATES  
1301 BURLINGTON, SUITE 100  
NORTH KANSAS CITY, MO 64116

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

**Application Number:** PL2021226

**Application Type:** Engineering Plan Review

**Application Name:** East Trails Middle School - Cape Drive Extension

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The Development Services Department has completed its review of the preliminary plans (undated and unsealed) 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. Please refer to the previous applicant letter comment #2. No signed and sealed hydraulic analysis was provided in accordance with the terms of comment #2. Please provide the requested analysis of the culvert to prove the 10 by 5 double box culvert will be sufficient to limit the headwater effect to areas within the right of way, or if not, suitable inundation easements have been acquired.
2. Grading plan was missing in the vicinity of the new box culvert. A grading plan is needed to determine the extent and nature of grading in this area. Please provide a grading plan.
3. The north end of the box culvert is designed to accept stormwater from the creek in a skewed manner. Why was this alignment selected? As previously commented, a grading plan shall be required prior to moving forward with the escrow agreement, and the rationale for such an alignment shall be justified at that time.
4. Public drainage easements shall be dedicated for the proposed box culvert prior to execution of the escrow agreement. Please show the limits of the easement on the preliminary plan for the box culvert. The limits of the easement shall include the energy dissipation measures installed, such as rip rap.
5. The water line plan and profile was missing. It appears insufficient cover will be provided at the box

culvert, and a re-design is necessary.

6. Water main is shown too close to a curb inlet. A redesign is necessary.
7. Water main is called-out as ductile iron. The City does not desire ductile iron pipe. Please specify C900 pipe for the water line, and show on plan and profile view.
8. Embankment costs shall likely increase in relation to what is shown on your cost estimate due to increased vertical clearance needed at the box culvert. Please review and revise as appropriate.

### **Traffic Review - No Comments**

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 Oct. 18, 2021

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

cc: Development Engineering Project File