

**Date:** Wednesday, February 02, 2022

**To:** DAVIDSON ARCHITECTURE & ENGINEERING  
4301 INDIAN CREEK PKWY  
OVERLAND PARK, KS 66207

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

**Application Number:** PL2022019

**Application Type:** Engineering Plan Review

**Application Name:** Town Centre Lot 1 - Mass Grading and Erosion and Sediment Control Plan

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The Development Services Department received plans for this project on January 20, 2022. 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**

1. Retaining walls appear to be slightly within public easements. Retaining wall or any portion of geogrid or tie-backs, and footings are a "Non-Alloweed" use of the easement according to the current Encroachment Policy adopted by the City.
2. Location, material, and sizing of the water transmission main existing along the west side of the project was missing. This transmission main shall be shown on the plans.
3. Transmission main location will be impacted by cut/fill. Maximum depth of cover is 7 feet, and minimum depth of cover is 3.5 feet. The vertical location in the form of a profile view shall be presented. Please provide the method used to determine the depth of the transmission main in the affected areas, as as-builts may not be the most suitable method. It is possible Water Utilities will require potholing or other direct methods for vertical location of the line. This is a critical transmission main to the City of Lee's Summit.
4. Sheet C2.1: Drainage swale 2-2 is shown in the plan view, but the typical section view at bottom of sheet does not match the callout. In addition, no other section views were shown for the swale despite the different geometry at different locations along the swale. Recommend several sections be called-out, with different section views for each. In any case, all must match what is called-out on the plan view versus the section view.

5. The water transmission main is crucial to Water Utilities. Ensure there is no conflict with the retaining walls, as Water Utilities will require a substantial buffer between the retaining walls and the transmission main. Please show the location of this transmission main on the plans.
6. General Note: The note concerning contacting Development Services Inspections 48 hours prior to construction commencement is not correct. Please revise to read "A pre-construction meeting shall be scheduled between Contractor and Development Services Inspections with a minimum of 48 hours notice. Please contact 816-969-1200 to schedule this pre-construction meeting."
7. Erosion Control Note #1: The erosion control note did not mention the construction of the basin. This is a critical element of the plan, and shall be discussed within the notes. A note shall also be provided indicating the basin to be constructed first, along with the other initial erosion and sediment control measures.
8. Are there any areas on this project where turf reinforcement mat (TRM) would be appropriate? It does not appear any TRM was called-out for this project, and it is unclear how this plan will limit off-site erosion and sediment from leaving the site without it.
9. All retaining wall designs with walls greater than 2.5 feet including the footing shall be submitted to Development Services for review and approval.
10. Sediment basin design is incomplete and based on "hunch" estimates of volume and flows. I see the summary design table on the last sheet of the plans, but no site-specific design parameters are presented. Please complete, and provide a new design if the calculations show a larger basin is necessary. Drainage area shall include any off-site contributors to flow.
11. Sheet C2.2: Why isn't the sediment basin being constructed first? I realize the pond needs to be removed, but shouldn't the sediment basin be installed as the first measure of erosion and sediment control?
12. The discharge location of the sediment basin appears to be lacking in terms of design. Sufficient energy dissipation measures shall be installed, and sufficient distance shall be maintained between the discharge point and the adjacent property. Provide design calculations for any energy dissipation measures, and ensure there is no adverse impact to adjacent property.
13. Two (2) separate swales are located toward the east side of the project, each in a north/south orientation. Neither swale was labeled, and neither swale included cross-sections at key locations. In addition, two (2) separate swales are also located toward the west side of the project in a north/south orientation. These additional swales were neither labeled nor detailed in the form of a section view. Please see previous comments concerning the other swale bisecting the project in an east/west fashion. The same comments apply to these swales.

14. It shall be noted that no review of a final stormwater detention report was conducted since no such report was provided. It is possible that the sediment basin shall require significant modification if being converted into a permanent stormwater detention facility after the skimmer assembly is removed. In other words, the volume of the basin as well as the allowable release rates may differ significantly than allowed by the proposed sediment basin design. Finally, no review was conducted on the 0.5 feet freeboard requirements of KCAPWA Section 5600 from the nominal 100 year WSE and the emergency spillway, and the 1.0 feet freeboard requirement between the clogged condition/zero available storage 100 year WSE and the top of dam because none of these elements were labeled or noted within the plans.
15. Public utilities such as water main near the southeast portion of the project may be affected by grading. It is difficult to determine, however, since the contours are crowded, and there are discrepancies in what is being showed for sanitary sewer sewer service versus what we are showing on GIS. Please review and revise as appropriate, as it is possible the water main along the road will be affected by grading activities. The City's requirements are no more than 7 feet of cover over water mains, and no less than 3.5 feet. Sanitary sewer requirements are different, but we are not showing the presence of a public sanitary sewer main along the roadway, and this conflicts with the drawings.

### **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 Feb. 2, 2022

Gene Williams  
Senior Staff Engineer  
(816) 969-1223

cc: Development Engineering Project File