LEE'S SUMMIT
MISSOURI

DEVELOPMENT SERVICES

Date: Tuesday, June 08, 2021

To: OLSSON ASSOCIATES
7301 W 133RD ST #200
OVERLAND PARK, KS 66213

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

Application Number:	PL2021129
Application Type:	Engineering Plan Review
Application Name:	LSR7 Middle School #4 - Off-Site Traffic Improvements, Traffic Signal, and Greenway Trail

The Development Services Department received plans for this project on May 25 , 2021. 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**. 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. Pipe collar is still shown on the profile view for line D. Please see previous applicant letter. The City does not allow this method for extension of existing storm lines.

2. Cape Dr. still does not agree with Schlagel's preliminary plan for roadway extension of Cape Dr. Schlagel's plans show an offset of the 60 foot right of way by approximately 29.5 feet from the south property line. According to your plans, Cape Dr. right of way will abut directly with the south property line, which would require the acquisition of a temporary grading easement on adjacent property owner for installation of the box culvert, and would likely require the relocation of the district water main along the property line. In addition, Cape Dr. should have been removed from the plan set as requested in the previous applicant letter. As shown, Cape Dr. is too short to serve the development and will need to be extended to a point where water service can be provided to the development without being installed overland. Please see previous applicant letter.

3. The design storm HGL shall be shown graphically on the profile view in all storm lines. In addition, receiving storm system (i.e., the existing storm system near the creek running north/south) shall be analyzed. If the receiving system cannot manage the increased flows, it is possible that separate discharge points are needed into the creek.

4. Sheet 45 Drainage Calculations Table: No consideration was given to the incoming flow from the north. HGL calculations were not shown.

5. Profile views are shown on Sheet 44 with no plan views associated with them. In addition, line C is connected to a box near the creek with what appears to be an erroneous assumption. We are showing the existence of two (2) pipes at this location, not one (1).

6. Gutter spread for the 10 year event at the easternmost curb inlet appears too high. Recommend an additional curb inlet at this location to capture the bypass flow.

7. Sheet 40 Northwest Corner ADA Ramp: There appears to be an unnecessary twist in the ramp between sta 56+28 to 56+41.

8. Sheet 40 Southwest Corner ADA Ramp: Ramp includes grade breaks which are not allowed. Twists are also shown which are not allowed.

9. Sheet 40 Northeast Corner of ADA Ramp: Grade breaks and twists are shown on the ADA which are not allowed.

10. Sheet 40 Southeast Corner of ADA Ramp: Turning space adjacent to parallel ramp does not comply with the 1.5% maximum slope rule. In addition, the panel to the west of the turning space has a twist which is not allowed in the ramp.

11. Sheet 41 Southwest Corner ADA Ramp: Curb opening is greater than 2.00% cross-slope which is greater than the 1.50% maximum design cross-slope. In addition, a grade break is evident, which is not allowed.

12. Sheet 41 Southeast Corner ADA Ramp: Ramp slope is too high. An 8% running slope does not appear to match existing roadway grade, and appears arbitrary. Maximum 7.5% longitudinal slope (design), preferably smaller. The bigger question is why the grade breaks on this ramp?

13. Sheet 42 SW Corner of ADA Ramp: Same comment applies concerning the 8.0% callout. Maximum design slope is 7.5%. The bigger question is why were grade breaks introduced? If using the panel to the west of this 8% sloped panel, is the gain worth the severe slope in this area? The City does not necessarily require a "transition area", unless it makes sense. It does not appear it makes sense in this area. Finally, the cross-slope at the curb opening is too high. Design slope shall be 1.5% or less.

14. Sheet 42: Please go through all of the details shown on this sheet since the same comments described above apply to all.

15. Sheet 43: North corner of Dalton Dr. detail does not comply with the cross-slope requirement of

maximum 1.5% cross-slope.

16. Sheet 43: South corner of Dalton Dr. is incomplete in terms of slope callouts.

17. Sheet 43: Northeast corner shows a cross-slope at curb cut greater than 1.5% cross-slope. In addition, there is a grade break shown on the plan which is not allowed in a ramp.

18. Future extension of Cape Dr. is shown on Sheet 33 with an alignment which does not match the future plans for the residential development to the east. Right of way for adjacent development is shown approximately 29.5 feet to the north of the property line to avoid the issue of obtaining off-site easements, and relocation of district water main along the south property line.

Traffic Review

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 developmrnt 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 mulit-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/ Gene Williams electronically signed June 8, 2021

Gene Williams, P.E.
Senior Staff Engineer
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cc: Development Engineering Project File