

Date: Wednesday, May 26, 2021

To: OLSSON ASSOCIATES
Julie Sellers, P.E.
1301 BURLINGTON, SUITE 100
NORTH KANSAS CITY, MO 64116

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

Application Number: PL2021165

Application Type: Engineering Plan Review

Application Name: The Retreat at Hook Farms 2nd Plat - Street, Storm and Master Drainage Plan

The Development Services Department received plans for this project on May 05, 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

1. What is the purpose of Sheet C106? Is this mass grading on areas off-site?
2. Tract N appears to include an existing swale draining Monarch View subdivision. Fill is shown at the end of the cul-de-sac extending into Tract N, and may present a drainage issue to Monarch View. Recommend consideration of a re-design in this area to manage the stormwater.
3. CLOMR-F shall be required prior to approval of the plans. LOMR-F shall be required prior to issuance of a Certificate of Substantial Completion.
4. Stream buffers should be shown on affected lots, and should mirror what is shown on the approved PDP. At a minimum, it must be shown on the Master Drainage Plan.
5. Sidewalk is shown along Hook Rd. Is this a private sidewalk serving the subdivision?
6. Please see plat comments concerning sidewalk along Crown Dr. Wouldn't it be better to place the sidewalk on the opposite side of the street?

7. Sheet C115: Distance from the truncated domes to the gutter is just over 5.0 feet for both ramps. It would appear the domes need to be skewed to meet standards of less than or equal to 5 feet.
8. Sheet C115: The curb opening on the west side of the street appears to be greater than 1.5%.
9. Sheet C116: Turning spaces for both parallel ramps should be identified with elevation and slope callouts.
10. Sheet C117: The same comment applies to these two (2) parallel ramps. Slope and elevation callouts were missing on the turning space.
11. Sheet C116 and C117: A note is provided stating "max cross-slope of 4.5%" on the ADA routes across the roads. It would appear the slope of the roads is less than 1.5% in both cases. It might be better to refer the reader to the street profiles for actual slope rather than show a 4.5% max slope.
12. Sheet C129 contains a note about stream buffers not applying to this plat. This does not reconcile with the approved PDP.
13. It is our understanding that MBOEs will be established during the as-graded MDP phase of the project. Please be aware that as a general rule, 1 acre maximum upstream drainage area would be considered the cutoff before an MBOE is required for a particular lot, or adjacent to a emergency overflow swale. Overflow swale in this instance would be defined as a channel designed to manage the excess flow from an underground pipe system which surcharges less than 0.5 feet from the throat of a field inlet. If the underground system can manage the 100 year flows without surcharging less than 0.5 feet from the throat of the inlet, the upstream drainage area to that particular inlet can be subtracted, which may eliminate the need for an MBOE for those particular lots adjacent to the field inlet.
14. Recommend that all pipes be sized as described above, with the 100 year HGL no more than 0.5 feet from the throat of the inlet. This will help eliminate MBOEs (if desired) on some lots using the rationale described above.
15. The City has experienced several incidents where vegetation cannot be established in a timely manner. Is there a need for turf reinforcement mat in select locations, such as swales? Inexpensive options exist in terms of TRM, and we would recommend consideration to providing in select locations.

Traffic Review

1. Can the street name Heartland Circle be changed to Heartland Road as a continuation of street in conformance with the Street Name Policy?

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 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/ Gene Williams electronically signed May 26, 2021

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cc: Development Engineering Project File