Date: November 23, 2020

City of Lee's Summit, MO
Development Services
220 SE Green Street
Lee's Summit, MO 64063

RE: Hawthorn Ridge 3rd Plat – 1st Review

We are responding to your comments dated October 15th, 2020 and October 16th, 2020 and are submitting with this letter revised plans, as well as other required documents. Please find the original comments below; our responses are below in ***bold italics***.

If you have any questions or need additional information, please do not hesitate to contact us.

Thank you,

Brock Worthley

Grading & Site Disturbance Plans – Engineering Review

1. Please include a FEMA National Flood Hazard information note.

   Note added.

2. Please show location of all oil/gas wells, or indicate none are present, and cite the source.

   Note added.

3. On sheet C403, one discharging storm pipe with FES and rip rap appears to look significantly larger than its counterpart on the plan; please revise. Unless there is a specific reason, feel free to use a similar icon size to represent FES + rip rap throughout the plans.

   The appearance of both structures was checked, and the correct scaling was confirmed. The illusion of one structure being abnormally larger than the other might be explained by different scales of riprap hatching. To solve the issue, scales of both hatches were matched.

4. Please revise staging chart activities to match the proposed work shown on the

1301 Burlington Street / Suite 100 / North Kansas City, MO 64116
O 816.361.1177 / **olsson.com**

plan(s) for each project stage. (e.g. A5 and A6 leaders on sheet C404 are misrepresented on the plan).

Staging chart revised.

5. As shown in ESC-03, J-hooks are required within the ESC plan. Given the silt fence 100' maximum runs for J-hooks, please locate the needed J-hooks on the plan.

J-hooks have been reflected in the plans.

6. Please remove non-applicable item from the legend.

Legend revised.

7. Please provide an Engineer's Opinion of Probable Construction Cost (EOOPCC) sheet, listing cost estimates for the proposed work shown on the ESC set of plans only.

Engineer's Opinion of Probable Construction Cost (EOOPCC) for each set of plans included with this resubmission.

8. The spillway width shown in the Sediment Trap 1 Design Summary does not match the Plan view. Please revise as needed.

The spillway width of Sediment Trap 1 was checked and confirmed.

9. Please show construction standard detail ESC-08, instead of ESC-02.

Standard detail ESC-02 replaced with standard detail ESC-08.

10. Comments on the Street, Stormwater, and Master Drainage Plan are being provided by separate cover. Please ensure the comments on the Street, Stormwater, and Master Drainage Plan are also reflected in the Mass Grading and Erosion and Sediment Control Plans for this project.

Acknowledged.

11. Please provide a Missouri DNR permit.

The MDNR Site Disturbance permit will be provided prior to pulling the city permit.

12. Please make sure to include a final restoration plan.

A final restoration plan was shown on sheets C407 and C408.

Sanitary Plans – Engineering Review

1. All Profile View Sheets: Please add a graphic representation of the limits of backfill and compaction that will take place prior to trenching and backfilling the sanitary sewer line. The note was provided concerning this requirement, but the City is now requiring a graphic representation of the limits of this work (e.g., cross-hatching, etc.).

Graphic representation of the limits of backfill and compaction added to all sanitary profiles.

Water Main Extension Plans – Engineering Review

1. Profile Views: Please add the limits of the backfill in selected areas in graphic format (e.g., cross-hatched, etc.) in addition to the note. The City is now requiring this be shown in graphic format, to ensure there is no misunderstanding on the limits of backfill, and subsequent trenching for the pipe where existing grade is lower than the top of the proposed grade of the pipe by less than 18 inches.

Graphic representation of the limits of backfill and compaction added to all sanitary profiles.

Street & Storm Plans – Engineering Review

1. A brief stormwater memorandum is required, which discusses the previous plats detention basin construction, and the applicability of this plat to the overall plan.

A storm memorandum has been included with this submittal. All required detention for the development was built with Hawthorn Ridge 1st plat and the development is still in compliance with that.

2. Sheet C104: The grading plan appears to show adverse impact to adjacent properties along the entire western edge of the development. Existing grades are altered, and drainage pathways are now directed toward the properties to the west.

Per discussions with Gene, there are no adverse impacts to the adjacent property owner. The plat grading is in compliance with the approved Marco Drainage study.

3. Please ensure there are sufficient notes that define the construction of ADA-accessible ramps being part of this project (i.e., not by the homebuilder).

Additional notes that define the construction of ADA-accessible ramps and sidewalk added.

4. Sheet C118: Buckthorn St. is a collector street, and therefore, HDPE is not allowed. Suitable alternatives include CPP and RCP.

The pipes crossing Buckthorn Street have been changed from HDPE to CPP or RCP.

5. Sheet C118: The crown of the incoming pipe at JB-1-2 is lower than the outgoing pipe. At a minimum, please ensure the crowns are matched.

Incoming and outgoing pipes at structure JB 1-2 revised.

6. Sheet C118: An odd dashed line is shown within JB 1-2. Is this a drafting remnant?

Those lines are the HGLs. Due to Storm Line 1A having a large drop at Structure JB 1-2, the HGL is much higher than the incoming pipe along Storm Line 1.

7. Drainage Calculations: The mannings n factor does not appear correct for any of the pipe calculations. The 0.010 was applied for all pipes, and does not appear to meet any of the City of Lee's Summit design standards. Please verify and reconcile.

Per discussions with Gene, we agreed that a Mannings factor of 0.010 is acceptable to use in the storm calculations for HDPE pipe.

8. Profile Views of Stormwater: Where fill is being placed prior to trenching and backfill of storm lines, please show in graphic format (e.g., cross-hatching, etc.) the limits of the fill and compaction that will be done prior to trenching and backfill of the pipe. The note is also required (which has already been done), but a graphic reference must also be provided.

Graphic representation of the limits of backfill and compaction added to all sanitary profiles.

9. Sheet C118: The hydraulic grade line for the design storm must be shown on all profile views. It would appear the storm line was designed for the 100 year event, and we would agree this is required in this case due to the fact the storm line is being placed in between homes. Please update the profile view as appropriate.

HGL for 100-year storm event added to all profiles.

10. Master Drainage Plan: Please show the locations of all swales that were detailed in the previous sheets, showing their location, and showing the sheet number where the details can be found.

A reference to the swale has been added to the master drainage plan.

11. Master Drainage Plan: The entire western edge of the development is being shown with grading that alters the existing condition. While that is acceptable if not impacting adjacent properties, it would appear the grading will have an adverse impact on them. Please determine the best way to manage this situation.

Per discussions with Gene, there are no adverse impacts to the adjacent property owner. The plat grading is in compliance with the approved Marco Drainage study.

12. Master Drainage Plan: A spot check of several of the proposed MBOEs appear to show the proposed MBOE is not 2.0 feet above the calculated 100 year water surface elevation within the rear yard swale. Please perform a thorough review, and ensure all MBOEs are a minimum of 2.0 feet above the calculated 100 year water surface elevation

Swale grading revised to ensure all MBOEs are at least 2.0' above 100-year water surface.