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June 16, 2022

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

Attn: Shannon McGuire, Planner

RE: Response to City Comments for FDP dated May 12, 2022
Application Number: PL2022056
Application Type: Commercial Final Development Plan
Application Name: SUMMIT POINT 2ND PHASE FINAL DEVELOPMENT PLAN
Location: 520 NE ENGLISH MANOR DR, LEES SUMMIT, MO 64086

Dear Shannon:

Following are the responses to comments, we are resubmitting plans, revised storm study and SWPPP with this submittal.

Planning Review

1. For the trash enclosure a Portland cement concrete approach 30 feet in length, measured from the enclosure opening is required. The pad and approach shall be improved with a minimum six inches of full depth unreinforced Portland cement concrete constructed on a sub-grade of four inches of granular base course. As show you are only providing an approach of 8'.

Also, to empty these types of trash containers the trucks servicing them need to be able to back straight to them. Given the close proximity of the adjacent parking stalls across from the trash enclosure, will the proposed layout work with the trash truck's turning movements?

The angle of the trash enclosure has been revised to allow for backing straight to the dumpster. The concrete pad has been extended to 30'.

Fire Review

2. IFC 903.3.7 - Fire department connections. The location of fire department connections shall be approved by the fire code official. Connections shall be a 4 inch Storz type fitting and located within 100 feet of a fire hydrant, or as approved by the code official.

Action required- Show the location of the FDC's on all of the buildings and the hydrant within 100-feet.
The fire hydrant has been added at the NW corner of the site to meet the 100 ‘ at all buildings.

Engineering Review

1. Please refer to comment #28 in the previous applicant letter. A SWPPP was requested and received in the resubmittal package. It was missing key items, however, and is insufficient for this particular site. Please visit https://www.epa.gov/sites/default/files/2015-10/documents/sw_swppp_guide.pdf for a guide to prepare an adequate SWPPP.

Per the link provided
Your SWPPP should contain the following elements:

- Cover/title page ✅
- Project and SWPPP contact information ✅
- Site and activity description, including a site map✅
- Identification of potential pollutant sources ✅
- Description of controls to reduce pollutants ✅
- Maintenance/inspection procedures ✅
- Records of inspections and follow-up maintenance of BMPs ✅ - Added sample forms
- SWPPP amendments - Added
- SWPPP certification - Added

2. The SWPPP did not discuss the temporary sediment basin, and shall be included within same. It shall also discuss the measures to be taken to remove silt as it accumulates, and final restoration of the sediment basin to a permanent stormwater management facility. Added

3. The SWPPP discussed endangered species without specifically stating what measures would be taken if endangered species (i.e., bats?) are encountered during tree removal. These shall be discussed within the report, including who and when to report the encounter. You will be responsible for determining who and when to report these encounters. For purposes of the City, we are primarily concerned with dislocation of these species to attics or other areas in close proximity to humans and adjacent homeowners, and possible rabies transmission that has occurred in Texas over the past 2 years due to lax enforcement of new developments. - Added in Appendix

4. A schedule of inspection appeared to be missing from the SWPPP showing dates of inspection, what was done during the inspection, who performed the inspection, and any notes concerning the

inspection such as corrective action taken. This shall be required of the SWPPP, and revisions are warranted. - Added in Appendix

5. The SWPPP includes a list of attachments which were not included. Please include any attachements within the SWPPP. - The attachments shown on the original submittal are to be included by the contractor. We have added other attachments requested.

6. If requested, the City can provide an example of an acceptable SWPPP from a different project with similar scope. Please let me know if this is needed. - It was provided.

7. Please see comment #8 in previous applicant letter. Pavement section for standard parking aisles does not comply with the Unified Development Ordinance (UDO) Article 8 "Parking" in terms of asphalt thickness, aggregate base, or subgrade stabilization either by chemical treatment or by use of geogrid. For vehicle parking aisles and drive aisles not designed for heavy vehicles, the minimum is 1.5 inch surface course over 4 inch base course, over 6 inch granular base over geogrid or chemically-stabilized subgrade compacted to 95% proctor. For fire lanes and truck access, the minimum requirements are the same, except the base course asphaltic concrete is 5 inches rather than 4 inches. The City Engineer may consider a different design if it can be shown that your design is equal to or better than the standard design described in the UDO. This is contingent upon a geotechnical report using parameters established by the City Engineer.
The pavement section has been modified to match the UDO on page C600.

8. The "Geotechnical Exploration and Subgrade Recommendations" Feb. 2021 did not include the parameters needed by the City Engineer to review your request. I had asked whether you wanted to review those parameters in comment #8 within the last applicant letter, but no such request was received. The parameters shall be transmitted to you separately from this applicant letter.
The pavement section has been modified to match the UDO on page C600.

9. Sheet C601: The 4 inch orifice elevation flowline does not match the stormwater report dated Apr. 21, 2022 pond setup sheet within the appendix. Appendix shows 995.0, but the plans show 994.85. Please re-run the calculations, reconcile, review, and revise as appropriate.
The report was changed to match the 994.85 for the 4” orifice and re-run. The results are included in the revised storm water study.

10. Sheet C601: The 33 inch rectangular weir is easily confused with 38 inches. Please move the 33 inch dimension so it is not obscured by the centerline.
The dimension was relocated on the sheet.

11. Sheet C601: The open top weir on the outlet structure elevation does not match what is shown in the stormwater report dated Apr. 21, 2022. The plans show 1001.31, but the stormwater report shows

1001.0. Please review and revise as appropriate, including a re-run of any routing calculations and a recalculation of the emergency flow conditions within the emergency spillway.
The report was changed to match the 1001.31 for the emergency overflow. The results are included in the revised storm water study.

12. Sheet C601: The rock ditch check detail is being used at the end of the pipe near the discharge to the creek. There are doubts this will be effective in managing the energy from stormwater discharge at this point. Wouldn't a depressed area (i.e., a stilling basin) within the rip rap be more appropriate and more robust? As shown, this feature will likely be washed-away within a year.
We have increased the rock size to 18" nominal for the Rock Energy Dissipation Device. There is not enough room for a depressed area nor is there the need as the velocity exiting the basin in the 100 year storm event is 7.77 ft/s at the pipe and 4.07 ft/s at the end of the end section which according to APWA could be protected with light riprap.

13. Sheet C601: Font size is too small to read for top of berm, spillway elevation, peak 100 year WSEL, and spillway elevation. Please enlarge these labels.
We have added sheet C601A and enlarged the labels.

14. Sheet C601: Spillway is called-out in upper right hand corner inset view, but this is referring to the emergency spillway. It is not utilized for anything other than clogging of primary outlet works or peak flows in excess of the 100 year event. Please relabel as "Emergency Spillway".
These callouts have been relabeled on C601A

15. Sheet C601: Please refer to previous applicant letter. Comment #12 requested the dimensions from the property lines and buildings to ensure the 20 foot setback is maintained from the respective 100 year water surface elevations. Please review this comment, and revise as appropriate.
The distance to the property lines has been added, the building dimension was already shown.

16. Sheet C601: Please refer to comment #12 in the previous applicant letter. No design storage volumes were shown on the plans for the 2, 10, or 100 year event or the water quality event. This is needed because prior to occuapancy, there will be a rush to have the as-graded and as-built detention basin approved. Without a clear set of construction plans with this information on Sheet C601, there will be considerable delay in issuing the occupancy permit. Please include this information so the future review of the as-built detention basin plan can be made in a timely fashion.
A table was added to C601 showing the Elevation and water surface volume of the 3 storm events.

17. Sheet C601: The entire detention basin shall be shown on the detail, not just the northwest portion of the basin. Please revise as appropriate.
Sheet C601 was revised to show the entire detention basin, Sheet 601A was added for the details.

18. Sheet C601: The outlet structure is shown in the plan view as a "Lee's Summit Standard 24 inch Sewer Manhole". This is not a manhole. It is a box. Please revise as appropriate.
The callout was changed to read "Lee's Summit Standard 24 inch Sewer Manhole Lid" on C601A

19. Sheet C601: No construction details are provided on the outlet structure, other than showing a box. Need steel reinforcement, thickness, frame and lids, internal steps and internal step locations, and any other information necessary to construct or pre-fabricate the box.
The box will be precast. A note has been added for the precaster to provide sealed shop drawings for review by the City and Engineer prior to fabrication. This will need to be a deferred submittal.

20. Rip rap is shown abruptly ending in a skew. It would appear the rip rap needs to be extended to the property line at a minimum
Rip rap has been extended to the property line.

21. Storm line exiting the detention basin appears to be missing a profile view. This shall be required, and shall be laid at a slope appropriate for the energy dissipation method used.
A profile has been added.

22. Sheet C601: Design allowable release rate and design proposed release rates for the 2, 10, and 100 year events should be placed on this sheet. This is required since it is possible the basin will not be built to plan, and it is possible a re-run of the calculations shall be required prior to issuance of an occupancy permit. Placing this information on Sheet C601 will help facilitate a timely review.
Added to the table on C601

23. Please refer to comment #13 within the previous applicant letter (comment related to the note about submittal and acceptance by the City of an as-graded and as-built detention basin prior to issuance of an occupancy permit, and possible re-run or modification to the basin if release rates and/or storage volumes are not within tolerance). No notation was shown on Sheet C601, despite the response to comments stating that it had been placed on Sheet C601.
A note was added.

24. Sheet C200: Please refer to the previous applicant letter comment #18. Despite the response to comments stating this comment had been addressed on Sheet C200, I am seeing no such update. A clear distinction shall be made on the paving of the parking lot, in particular, fire or truck access paving, versus drive aisle/parking stall paving. Please be aware the City makes no differentiation between parking stalls and drive aisles in terms of pavement design under the UDO. If no such notation is made, the assumption will be all paving meeting the heavier-duty standard for fire truck and heavy truck access.
We have added a note on C200.

25. Two (2) 8 inch water meters are being proposed for this project, each near Chipman Rd. at the backflow vaults. These meters are costly, and want to ensure this was taken into account. Meter setup and tap fees are nearly $800,000 for both meters, and require the design and construction of a special 8 inch meter vault at the developer's expense (which has not yet been completed). Although this is acceptable, I wanted to make you aware of the cost and the need for additional engineering to design an 8 inch vault box for the water meter, as this is a special design that is not available off-the-shelf.

The other option is to meter each building individually with a public water meter, but this will require payment of meter and setup fees for each meter albeit at a much lower cost. Just for reference, a 1 inch meter is about $10,300 for tap fees and meter setup fees including the pit, and a 2 inch meter is about $42,000 for meter setup and tap fees including the pit. Please consider the ramifications of each decision. If you decide to meter as shown, this will add $800,000+ to the cost for meter setup, tap fees, and special vault. If you decide to meter with public water meters internally, the location of these meters shall be shown internally, and individual tap fees and meter setup fees will apply. Please revise as appropriate.
Per email, we are removing the 8" full flow meters and installing meters off of the private line

26. Please refer to the previous applicant letter comment #22. If using ductile iron pipe, it shall be zinc-coated. No such update was included on the plans regarding this requirement. Please revise, or alternatively, remove the ductile iron pipe option.
A note was added on sheet C400.

27. Please refer to the previous applicant letter comment 26. The fire hydrant was moved, but the private water line is still within the easement. Also, the private fire hydrant connection point to the private water line is within the easement. Please revise.
The water line was removed from the easement.

30. Please refer to the previous applicant letter comment #43. Despite the response to comments stating the outlet pipe was included on Sheet C601, no such profile exists for the outlet pipe to the creek. Please provide the profile view for this pipe.
A profile view has been added on Sheet C404

31. Please see previous applicant letter. Despite the response to comments stating otherwise, the plans did not appear to show how the backflow vaults will be drained. How will the backflow vaults be drained? A method of draining the two (2) backflow vaults shall be shown on the plan view for the fire line, and shall specify how this will be achieved (i.e., daylighting, sump pump, connection to a storm box, or construction of an infliltration gallery). Please revise as appropriate.
A note was added under the detail on C604 that the vault will be drained using a portable sump pump when required.

32. Several private sanitary sewer callouts show tees rather than wyes. The City does not allow tees for private sanitary sewer connections. Please revise.
The connections have been changed to wye fittings on sheet C405 and C406

33. Please see previous applicant letter comment #57. A trenching and backfill detail was requested, but was not included. Please ensure the new standard of 12 inch aggregate over top of pipe is shown.
A detail was added on sheet C604

34. Please refer to previous applicant letter comment #58. Notes were added, but no details were provided anywhere in the plan set. Please provide details in the plan set for these drainage structures,

and please show callouts on the plan view with sufficient notation specifying where they are located within the plan set.
A note was added to sheets C401 and C402 referencing the details for storm structures are shown on Sheet C606. On C606 storm drainage structure details are shown with a note that the contractor shall provide shop drawings for all storm structures for approval by the engineer and the City prior to fabrication.

35. Please refer to previous applicant letter comment #60. It did not appear that a toe wall detail was included in the plans. Please provide a toe wall detail as requested.
A toe wall detail was included on sheet C601A.

36. Sheet 200: The 100 year water surface elevation within the detention basin contradicts what is shown elsewhere within the plans and the stormwater report. Please reconcile.
Removed, it is shown on Sheet C601

37. Please refer to previous applicant letter comment #64. I did not see anywhere within the plans where the backflow vault method of draining was shown on Sheet C400, or anywhere else in the plans. Please show how the backflow vaults will drain using either of the methods discussed previously.
A note was added under the detail on C604 that the vault will be drained using a portable sump pump when required.

38. Stormwater Report dated Apr. 12, 2022: The appendix is missing key items, such as the: 1) inflow hydrographs for all design storms, 2) routing curves for all design storms with time plotted as the abscissa and the cumulative inflow volume, cumulative discharge, stage elevation, and cumulative storage plotted as the ordinate.
These items were added to the appendix.

39. Sheet C400: Please provide callouts on the private domestic service lines from the private main to the individual buildings. If metering each building internally, show the location of the internal "public" water meter on Sheet C400. The location of all internal public water meters (if choosing to go with this method) shall be accessible to Water Utilities personnel and not within parking stalls, drive aisles, or fire lanes.
Meter locations have been added and callouts revised.

40. Elevation certificate shall be required for all habitable structures, and is currently in review.
Noted.

Respectfully,
Cook Flatt & Strobel Engineers, P.A.

Lance W. Scott, P.E.
Sr. Vice President