
PUBLIC WORKS ENGINEERING DIVISION

Date: Monday, February 26, 2018

To:

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From: Gene Williams, P.E.

Senior Staff Engineer

Application Number: PL2017049

Application Type: Engineering Plan Review

Application Name: Hawthorn Ridge 1st Plat Street, Stormwater, Master Drainage Plan, and
Erosion and Sediment Control

The Development Services Department received plans for this project on Feb. 16, 2018. We have completed our review and offer the following comments:

Engineering Review

1. A final quality assurance check was performed to determine whether the "First Plat Drainage Study" dated Mar. 3, 2017 meets the criteria listed in Section 5600 of the Design and Construction Manual. It appears only the areas upstream of D1 and D2 meet the criteria listed in Section 5600 for allowable release rates. The areas upstream of points A1, B1, and C1 do not appear to meet the criteria. The area upstream of point A1 appears to exceed the 2 year maximum release rate for the 2 year event, while all of the events are exceeded for the areas upstream of B1 and C1. This appears to be a significant issue, and will likely affect the design of the detention basins. It should be noted that the pre-development versus post-development analysis is no longer allowed in the City of Lee's Summit.
2. Sheet C124: The small detail "D.B. 15-2" does not appear to make sense. The FL in elevation is called-out as 935.50, which does not match what is shown on the larger detail "D.B. 15-2 and D.B. 15-3 Detail", nor the profile view of storm line 15.
3. Sheet C124: There appears to be no additional grading between the flared end section entering the detention basin, and the outlet structure, beyond leaving the area between these two points at existing grade. This does not appear to be equal to or greater than 2% slope.
4. Both Detention Basins: The MARC manual requires that a sediment forebay be constructed for utilizing a detention basin for 40 hour extended detention. This does not appear to have been included in the design.
5. Sheet C124: Where is the remainder of the plan view for the detention basin? Only a portion of the

detention basin is shown. Please show the entire limits of the detention basin in plan view, along with the 100 year water surface elevation.

6. Sheet C124: There appears to be an encroachment to the 20 foot rule in the northernmost portion of the basin (i.e., a minimum of 20 feet between the 100 year water surface elevation in the basin, and any adjacent property). It is unclear if this rule is violated for those portions of the detention basin that are not shown on the plan view (see above comment).
7. Sheet C125: The detail for "D.B. 16-2" does not appear to make sense. The FL In elevation is called-out as 1022.00, contradicting the profile view.
8. Sheet C125: The profile view shows the flowline in elevation of 1012.00. If this is the case, why does the grading plan (shown on the same sheet) within the basin show it to be 1022 +/-? It appears there is a significant issue with the plans.
9. Sheet C125: A non-clogging outlet design was provided for the basin shown on Sheet C124. Why was none provided for this basin? A 4" orifice will likely clog during the first few rain events. The Design and Construction Manual requires the construction of non-clogging outlet structures, and this design appears to be deficient.
10. Sheet C125: Please show the extent of the 100 year water surface elevation within the detention basin. It appears the 20 foot rule will be met, but it is unclear without the extent of the design pool shown in plan view.
11. Sheet C125: At least 1/4 of the detention basin perimeter should be at a slope of no more than 5:1. It does not appear this condition is met for any portion of the detention basin, except perhaps in the northeast portion of the basin. This rule would also pertain to the detention basin shown on Sheet C124, but it appears this is met. Without the entire extent of the basin shown on Sheet C124, however, it is difficult to determine with certainty.
12. A Stormwater Pollution Prevention Plan (SWPPP) is required prior to approval of the plans. Two (2) copies are required.

Electronic Plans for Resubmittal

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 on CD in the following formats

- Plats – All plats shall be provided in Tagged Image Format File (TIFF) Group 4 compression.
- Engineered Civil Plans – All engineered civil plans shall be provided in Tagged Image Format File (TIFF) Group 4 compression. All sheets shall be individually saved and titled with the sheet title.

- Architectural and other plan drawings – Architectural and other plan drawings, such as site electrical and landscaping, shall be provided in Portable Document Format (PDF).
- Studies – Studies, such as stormwater and traffic, shall be provided in Portable Document Format (PDF).
- It is requested that each plan sheet be a maximum of 2MB.

Please contact me if you have any questions or comments.

Sincerely,

Original Signed

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cc: Development Engineering Project File