

PUBLIC WORKS ENGINEERING DIVISION

Date: Tuesday, November 15, 2016

To:

ENGINEERING SOLUTIONS

Matt Schlicht. P.E.

Email: MSCHLICHT@ES-KC.COM

Fax #: (816) 623-9849

From: Gene Williams, P.E.

Senior Staff Engineer

Application Number: PL2016150

Application Type: Engineering Plan Review

Application Name: Village at View High Drive Street, Storm, Master Drainage Plan, and ESC

The Public Works Department received plans for this project on July 26, 2016. The final plat was received on October 21, 2016, thereby initiating the review time. We have completed our review and offer the following comments:

Engineering Review

1. The typical street section does not conform to the standards set forth in the Design and Construction Manual. This is a commercial collector street, and as such, the pavement thickness and subgrade need to be updated on the typical section.
2. The typical street section shows sidewalk on both sides of the street, with a cross slope of 2% to 4%. The maximum slope of the sidewalk should be shown at 1.5%.
3. An erosion and sediment control plan, along with a temporary sediment basin, appeared to be missing from the plan set.
4. Sheet C.100: The lot numbering scheme does not match what is shown on the plat.
5. All Sheets: Please label the lot numbers.
6. A final stormwater detention report was not provided. Please provide a final stormwater detention report, keeping in mind that the calculations should also include the water quality element (i.e., 40 hour extended detention), and routing within the detention basin along with elevations of the elements within the outlet structure.

7. Underdrains should be specified and clearly shown at each sag location.
8. Sheet C.203: A temporary turnaround appears to be warranted at the end of Street B.
9. Sheet C.205: The scale appears to be incorrect on this sheet.
10. Sheet C.205: Is the basin a retention basin with a permanent pool, or is it a dry detention basin?
11. Sheet C.205: The design shown on this sheet cannot be checked at this time. A final stormwater detention report was not included in the submittal package.
12. Sheet C.205: Section views are shown of the outlet structure, but no other details are provided. Materials, steel reinforcement, manhold frame and lids, etc. should be clearly shown either on this sheet or elsewhere in the plans.
13. The water quality element of the stormwater detention system should be shown.
14. Sheet C.300: Proposed easements should be clearly labeled on this sheet, as well as other sheets in the submittal package.
15. Sheet C.300: P/S is shown without any definition in the plan set. Is this a parking setback? Where are the easements for the sanitary sewer along the east side of Lot 1?
16. It appears several off-site drainage easements are required for this project. This would include the public portion of the stormwater line discharging into the detention basin, and the stormwater line running north/south along the east side of Lot 1.
17. Sheet C.301: We are unable to review this sheet due to QA/QC issues. Field inlets are shown out of the ground, in "sump" conditions that contradict the profile view.
18. Sheet C.301: Storm Line 1 is shown discharging into the tract with an unacceptable method for energy dissipation. The 7.5' by 15' rip rapped area will be insufficient to manage the energy from a 60" HDPE pipe. Provide calculations of velocity and a revised design to manage the energy of this system.
19. All Sheets Related to Stormwater: The hydraulic grade line for the design storm must be shown on the profile view.
20. General Comment: Ensure that the proposed contours on the profile view of the stormwater system match what is shown on the grading plan and Master Drainage Plan.

21. Sheet C.302: Crowns do not appear to match at curb inlet 2-3.
22. Sheet C.302: Where are the easements near curb inlet 2-3? It appears the storm line is outside the limits of the easement.
23. An itemized and sealed Engineer's Estimate of Probable Construction Costs should accompany your final submittal drawings.

Traffic Review

1. Add centerline alignment information (horizontal radii, PC, PT, dimensions, etc.)
2. Add curb return and curve dimensions (radius information, PC, PT, etc).
3. Add signing and marking plans.
4. Off-Site Road Improvement Plans are needed for turn lanes along View High Drive.
5. Change references "Street B" to the proposed street name.

In order to calculate the Public Works' 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

Beginning Monday, May 23, 2016, 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 will not be required for initial application submittals at this time as the plans are subject to change.

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 Staff with any questions or concerns you may have.

If you have any questions or comments, please contact me, Gene Williams either at (816) 969-1800 or e-mail to Gene.Williams@cityofls.net.

Sincerely,

Original Signed

Gene Williams, P.E.
Senior Staff Engineer

cc: Development Engineering Project File