

PUBLIC WORKS ENGINEERING DIVISION

Date: Thursday, September 28, 2017

To:

BHC RHODES

Patrick Joyce, P.E.

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From: Gene Williams, P.E.

Senior Staff Engineer

Application Number: PL2017110

Application Type: Engineering Plan Review

Application Name: The Grove - Mass Grading and Stormwater

The Development Services Department received plans for this project on Aug. 24, 2017. We have completed our review and offer the following comments:

Engineering Review

1. The plans call for the grading in the "cut-off" channel to be shown on separate plans for 16th Street Improvements. In our opinion, this is not a logical placement of the plans for regrading and providing adequate drainage (i.e., within the 16th Street Improvements Project). The 16th Street Improvement Project is related to the widening of 16th Street, and not re-grading outside the right of way. In addition, we are still awaiting a resubmittal of the 16th Street Improvement Plans, and these plans do not currently include any plans for managing the drainage within the "cut-off" channel. Please include the grading and drainage plans for the "cut-off" channel within the Mass Grading and Stormwater Plans.
2. Sheet C5.2: The profile view of the storm lines show what appear to be a single 42" PPP. Isn't the pipe system going to consist of three (3) 42" pipes? If so, please specify.
3. Sheet C5.2: The plan view still calls-out the installation of an RCB rather than three (3) 42" PPPs. Please review these errors, and correct as appropriate.
4. Sheet C5.2: "Refer to 16th Street Improvement Plans for Blockout Elevation from East and West". Please see previous comment related to this note. In our opinion, these plans should incorporate this design, since it is integral to the design of the junction boxes.
5. Sheet C5.2: Please call-out the retention pond outlet structure as "private", extending to the downstream junction box. The junction box shall be considered public, and all other aspects of the system upstream of this point shall be considered "private".

6. Sheet C7.2: Pedestrian guardrail is shown. Why is there a need for a pedestrian guardrail at this crossing? We do not see the necessity of providing this guardrail. It should also be noted that this particular design does not appear to meet City design standards for guardrail.
7. Sheet C7.2: Pavement trench repair detail appears to shown two (2) 48" pipes, and one (1) 42" pipe. Please reconcile with the other sheets, which appear to shown three (3) 42" PPPs.
8. A profile view of the relocated water line is required. The profile view should show the water line being DIP with restrained joints at the stream crossing, a minimum of 42" below the natural streambed, extending twenty (20) feet beyond the streambank, utility crossings such as sanitary sewer, and concrete encasement within the stream crossing. Gate valves shall be provided at each end of the stream crossing, so the section can be isolated for repair. The valves shall be easily accessible and not prone to flooding.
9. Sheet C7.2: The pavement trench repair detail should be revised to reflect our collector street standard for pavement replacement. This will require the use of geogrid or subgrade stabilization on to of 95% compacted subgrade, granular base, and a base and surface course of asphaltic concrete. If KCMMB concrete mix is used in lieu of asphalt, then please see the collector street standards listed in the Design and Construction Manual, Table LS-3.
10. Sheet C7.3: A permanent asphalt section is shown, but it is not clear where this is used. In general, this detail is not sufficient because it only shows a 2" surface course over a granular sub-base.
11. Sheet 7.4: Calculations should be provided for the energy dissipation (rip rap) proposed for the project. These calculations should be based on a recognized system for the design of the rip rap. The resulting dimensions for the rip rap should be based on these methods.
12. A revised cost estimate should be prepared for the work necessary to complete the project.
13. All necessary easements should be prepared and executed prior to approval of these plans. The easements should be on forms provided by the City. An exhibit is required for each easement. Prior to execution of the easement(s), please provide the City with a courtesy review copy. Following a short review (typically a day), you will be responsible for executing the easement, and recordation at the Jackson County Recorder of Deeds.

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

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) 969-1223 or e-mail to Gene.Williams@cityofls.net.

Sincerely,

Original Signed

Gene Williams, P.E.
Senior Staff Engineer

cc: Development Engineering Project File