City of Lee's Summit

PUBLIC WORKS DEPARTMENT/ENGINEERING DIVISION
220 SE Green Street
Lee's Summit, Missouri 64063
(816) 969-1800 FAX (816) 969-1810

Friday, October 14, 2011

Applicant: Engineering Surveys & Services
1113 Fay Street
Columbia, MO 65201

Re: Engineering Plan Review
Wilshire Hills Street and Storm Sewer Improvements
PL2011067

Dear: Engineering Surveys & Services

The Public Works Department received drawings for this site dated August 30, 2011. These plans were received by our department on September 7, 2011. We have completed our review and offer the following comments.

Engineering Review

1. After reading the U.S. Army Corps of Engineers Permit for this project, it does not appear that the proposed plans will comply with the terms of the permit. For instance, the typical section view for the reconstructed Maybrook Creek show a 12' +/- channel with a floodplain shelf. We are measuring the channel width and showing a width of 20 to 25 feet for the bottom of the channel. To reiterate our concern, the City is of the opinion that the proposed wide channel will never overtop as intended and the floodplain shelf will not serve its intended use. Finally, there would be a conflict with the U.S. Army Corps of Engineers permit.

2. Sheet 25 of 31 shows the Grade Control Detail (i.e., Rock Cross Vane) keyed into the bank a minimum of 4 feet at the top of bank. It is our experience that this needs to be a minimum of one half the stream width or 10 feet, whichever is greater.

3. The various plan views of the Grade Control Detail (i.e., Rock Cross Vane) do not reflect the detail. The plan view merely shows their location without the keyed-in location. The City is concerned that a contractor will neglect to install these critical elements.

4. There are four instances where the proposed storm sewer is shown discharging (i.e., daylighting) onto rip rap. The first instance is located at the end of the 116 feet of 24" HDPE. Is there a swale planned for the remainder of this discharge channel? The other instances are the discharge locations for the HDPE along the east side of the project and near the stream bank. Are swales proposed for these discharges? Finally, it appears that the northernmost discharge location for the 36" HDPE will be discharging at a ninety degree angle to the creek and with no rip rap or erosion control along the bank. What will be done in that location to limit bank erosion?

5. Sheet 9 of 31 shows a Typical Permanent Stream Channel Section which appears to contradict the U.S. Army Corps of Engineers Permit because it is considerably wider than shown on the U.S. Army Corps permit. The permit shows a 12' bottom width on the channel.

6. The revised stormwater report dated August 30, 2011 still does not clearly summarize what is

being proposed at the site. The pre-developed (i.e., existing) peak flow rates for the 2, 10, and 100 year events versus the proposed peak flow rates from the site are not presented in an easy-to-read fashion. The narrative portion of the report again directs the reader to Appendix B, but it would be difficult for a person without knowledge of this particular software to evaluate the data. The City is asking for a narrative description of the existing peak flow rates for the 2, 10, and 100 year events versus the proposed peak flow rates for the 2, 10, and 100 year events. We are also asking for the Engineer's opinion on the effect to downstream properties (i.e., water quality, peak flow rates, flooding potential less than or greater than existing, etc.). Again, there are significant downstream issues concerning flooding potential and water quality which need to be discussed in a "summary report". We would be receptive to an addendum to the report.

7. As indicated in our previous comment letter, there are sections of the sanitary sewer which are greater than 15 feet in depth as measured from the ground surface to the top of pipe. The areas where the sanitary sewer exceeds the 15 foot depth rule are in the vicinity of the Wilshire Drive/Meadowview Drive intersection and extend well beyond these limits. If there are future utility problems with the sewer in these locations, the entire street would need to be reconstructed due to the 22 foot depth at the City's expense. At this time, the City cannot support a waiver to this requirement since it appears that adequate sewer service can be provided without the excessive depth.

8. The water line profile requested by the City in our last comment letter was not submitted. This will be required.

9. The City is highly recommending a separate water line plan view since it is not clear what is existing versus what is proposed. If this is not possible, then clearly show what is being proposed using appropriate shading, notes, or other means as deemed appropriate.

10. Sheet 13 of 31 shows a stub-off of Wilshire Drive to the south. The City is requesting that the stub-off be eliminated by extending a line to the west centered on the curb line of Meadowview Drive. This is being requested since the City is unsure how the future connection will be made, and it is possible that it will be removed and replaced with a different width and/or geometry.

11. Appropriate MUTCD end of roadway markers should be called out on the plans on the west end of Meadowview Drive.

12. A sidewalk will be required along the south side of Meadowview Drive and will need to be shown on the plans.

13. Signs (R1-1 and street names) should be called out at the northeast corner of Meadowview Drive and Manhatten Drive.

14. Sign R1-1 should be called out at the northwest corner of Meadowview Drive and Manhatten Drive.

15. Sheet 15 of 31: The font size is too small to read.

16. Will the proposed triple box culvert include handrails? Is guardrail being proposed along Meadowview Drive?

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Feel free to contact Gene Williams at (816) 969-1812 or e-mail to Gene.Williams@cityofls.net should you have any questions or comments.

Sincerely,

Gene Williams, P.E., Senior Staff Engineer