

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, July 01, 2011

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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 April 22, 2011. These plans were received by our department on May 9, 2011. We have completed our review and offer the following comments.

Engineering Review

1. Plan set should be no larger than 22" by 34".
2. Provide a note on Sheet 1 which states that all construction shall be in accordance with the City of Lee's Summit Design and Construction Manual, City Ordinance No. 5813.
3. Provide a note on Sheet 1 which states that the contractor shall contact the City of Lee's Summit Public Works Inspections at (816) 969-1829 within 48 hours of commencement of construction.
4. Provide a note on Sheet 1 which states that the contractor shall contact the City of Lee's Summit Public Works Right of Way Inspector at (816) 969-1838 48 hours prior to any construction within right of way. These activities may require a permit.
5. There are several instances where the proposed stream channel alignment is shown to conflict with the sanitary sewer line running generally north/south. This can be mitigated by moving the proposed alignment slightly to minimize the amount of sanitary sewer line which will lie beneath the stream banks. For instance, the first bend on the south end of the alignment could be moved slightly to the east so the sanitary sewer does not lie beneath the stream bank. The bend where the existing manhole is located could possibly be moved to the west so the existing sanitary line lying beneath the stream bank is minimized. This would also remove the manhole from the stream bank which is not allowed (see specific comment concerning this issue). Finally, the bend located near FES 10 might be moved to the east so the existing sanitary sewer line does not lie beneath the new stream bank.
6. Grade Control within the new channel is called out on several Sheets, but there is no specific detail concerning Grade Control. Is it going to be temporary or permanent? We are assuming it will be permanent, and we are assuming it will be properly keyed into the new stream bank, but there is no way to be sure of this from the plans.

7. The existing sanitary sewer manhole located near the end of the new cul-de-sac is shown within the limits of the new stream bank alignment. This is not allowed. Please see comment concerning movement of the alignment to minimize the amount of sanitary sewer line which lies beneath the new stream bank.
8. The note on Sheet 1 discusses that "the final planting design for the stream restoration area will be design/build..." When will this plan be made available?
9. Grade control structures, if permanent as assumed, will need to be designed to be keyed into the adjacent stream bank with a sufficient distance to prevent bypass.
10. Grade control structures within the stream may need to be adjusted in terms of geometric alignment, spacing, and in relation to the existing sanitary sewer. It may be beneficial to discuss this issue during next weeks applicants meeting for the preliminary plat.
11. The note on Sheet 1 discusses that "the contractor shall design/build the bridge structure..." The City cannot approve of the street plans without the full design being made available for the bridge. Is this to be a reinforced box culvert? This new bridge structure must also be shown to not create any backwater effect which raises the 100 year water surface elevation behind (i.e., upstream) of the structure.
12. Sheet 13 of 29 shows a 30' Sanitary Sewer Easement. This should be a general utility easement.
13. Sheet 7 of 29 shows a 10 foot utility easement for the sanitary sewer. Is this mislabeled? It scales to 20 feet.
14. Manhole A and B will be greater than 15 feet in depth from the top of the lid to the top of the pipe. In addition, it appears that most of the proposed sanitary sewer will be greater than 15 feet in depth which is not allowed.
15. The "Storm Water Report" dated April 22, 2011 appears to consist of appendices without any explanation of purpose, methodology, or conclusions. This report will need to provide an explanation for the purpose of the report, a discussion of the current retention and how the dismantling of the current retention pond will not have a negative impact on downstream properties, and any other significant conclusions which are relevant to the dismantling of the retention pond. It is likely that downstream property owners or other affected parties will ask for copies of this report due to historical flooding issues, and it is important that the report be written so that a person can clearly understand any issues.
16. The Missouri Department of Natural Resources (MDNR) will need to provide their approval of the proposed sanitary sewer plan following concurrence from the city. This approval by MDNR is required before the city can issue a permit for any of the work included in the infrastructure plans.
17. An ADA ramp detail will need to be provided showing key elevations of the proposed ramp. It appears there will be three (3) ADA ramps at Hagan Road/Meadowview Drive and at the intersection of Meadowview Drive and Manhattan Drive. Please see the standard APWA detail included in your plan set submittal for specific elevations needed.
18. A water line plan and profile will need to be provided. It appears that a plan view was provided, but not a profile view.
19. Provide a note which states that the retention basin will be drained over a period of 48 hours to minimize downstream impacts, and that under no circumstances will draining begin during

wet weather.

20. Sanitary sewer laterals (i.e., private stub offs) did not appear to be included on the sanitary sewer plan. These locations should be clearly marked, and the location of the wye connection shown.
21. All construction within the jurisdictional waters of the United States will need a permit prior to any activity within the limits of the stream. This will include a Section 404 permit from the United States Corps of Engineers, a 401 Water Quality Certification from the Missouri Department of Natural Resources (MDNR), and their approval of the mitigation plan.

Traffic Review

1. The engineering plans and plat require significant revision to coordinate with the design of Strother Road. Strother Road alignment, ROW, access and lot lines to the project will be impacted. Hagan Road will align near the western property line of the property, consequently at least two of the proposed streets and potentially the reserved ROW for street connectivity will be impacted (may not require collector standard - less ROW). The proposed Hagan Road location is incompatible with current plans (and should not be named Hagan Road in the plat).

A sealed Engineer's Opinion of Probable Construction Costs should accompany your final submittal copies. Public Works' review and inspection fee is based on that cost. The following items, both materials and installation, should be included in the itemized estimate.

- Any water line larger than 2" in diameter, valves, hydrants, and backflow preventer with vault, if outside the building
- All storm water piping, structures, and detention/retention facilities
- All sanitary sewer manholes and piping between manholes, including private mains
- All public infrastructure, both onsite and offsite
- All grading for detention/retention ponds
- All erosion control devices
- The connection of the building sewer stub to the public main
- All private street construction, excluding parking lots, drive approaches and sidewalks

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, Senior Staff Engineer

C: Bill Lyon, Public Works Inspections