

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

Monday, December 19, 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 December 1, 2011. These plans were received by our department on December 6, 2011. We have completed our review and offer the following comments:

Traffic Review

1. Remove the proposed Stop Sign shown at the NE corner of Wilshire Drive and Meadowview Drive. Add Street Name signs on a standard sign post on this corner.
2. Remove the proposed Stop Sign and post from the NW corner of Wilshire Drive and Meadowview Drive.
3. Prove the guard rail along Meadowview Drive is necessary. Unnecessary guard rail is less safe, being an obstruction within the clear zone, and maintenance expense. It does not appear to be required based on the 25 mph speed limit and curb and gutter road section, since the unrecoverable slope and open box is so far from the travel lane (at least 10-12 feet including C&G). The pedestrian protection fence is needed.

Engineering Review

1. Final approval of the plans shall be contingent upon a modification to the United States Army Corps of Engineers permit.
2. Sheet 12 of 31 (Sanitary Sewer Profiles) shows a manhole at station 1+80. The rim elevation appears to be nearly a foot above finish grade. Please revise the drawing to show the manhole flush with the finish grade.
3. Due to the depth, please specify SDR 21 sanitary sewer pipe for the run between manhole A and manhole B, and manhole B and manhole D.
4. Supplemental Sheet 1: Please add a fire hydrant to the end of the line where the "cap" is

shown (southwest corner of the intersection of Meadowview Drive and Wilshire Drive).

5. Supplemental Sheet S1: The water line is shown reversed (i.e., flip-flopped) from what is needed. Please show the water lines within utility easements fronting the road, with fire hydrants shown in the green space between the sidewalk and the street.
6. Supplemental Sheet S1: It may be necessary to move the sanitary sewer manhole slightly to accommodate the water line at station 9+58.
7. Supplemental Sheet S1: The water line is proposed to be laid on top of the triple box culvert. There is not sufficient cover below the proposed water line to make this practical. Please re-route the water line around the triple box culvert to the north with no more than 45 degree bends (i.e., if a 90 degree bend is needed, please show two 45 degree bends). Please show the water line no more than 15 feet from the toe wall of the triple box culvert or wing wall of the triple box culvert.
8. Supplemental Sheet S1: Please show appropriate drainage easements for the triple box culvert to facilitate future maintenance. In general, we will require a 12 foot easement on each side of the box (both sides of the roadway) and extending 10 feet beyond the toe wall.
9. Supplemental Sheet S1: Please label all general utility easements.
10. Supplemental Sheet S1: Please specify ductile iron pipe for the stream crossing extending a minimum of ten feet beyond the low flow stream bank. The ductile iron pipe must be installed a minimum of 42" below the flowline of the stream.
11. Supplemental Sheet S1: Please specify a water valve with straddle blocks on each side of the stream bank for the stream crossing.
12. Supplemental Sheet S1: Please specify an additional fire hydrant along Meadowview Drive roughly in the vicinity of station 2+50.
13. Sheet 13 and 14: Sidewalk ramps shown at Meadowview and Wilshire are shown as Type B ramps. These should be Type A since there is no sidewalk on the west side of Wilshire Drive to receive them.
14. An ADA-accessible sidewalk ramp is shown on the north side of Meadowview Drive at the intersection of Manhattan Drive. Since there is no receiving ramp on the east side of Manhattan Drive, this ramp needs to be changed to a Type A ramp directed toward the south side of Meadowview Drive.
15. Sanitary sewer stub-offs (i.e., private laterals) need to be shown on the plans.

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) 969-1800 or e-mail to Gene.Williams@cityofls.net should you have any questions or comments.

Sincerely,

Gene Williams, Senior Staff Engineer