
PUBLIC WORKS ENGINEERING DIVISION

Date: Monday, April 02, 2018

To:

PHOENIX ENGINEERING & SURVEYING LLC

Brian Glenn, P.E.

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Fax #: (660) 429-1801

From: Gene Williams, P.E.

Senior Staff Engineer

Application Number: PL2017194

Application Type: Engineering Plan Review

Application Name: Whispering Woods 1st Plat - On-Site Sanitary

The Development Services Department received plans for this project on Mar. 26, 2018. We have completed our review and offer the following comments:

Engineering Review

1. Sheet 5: A note is provided concerning the abandonment of the private school connection. The note refers the user (i.e., contractor and inspector) to the Design and Construction Manual). The specific method for abandonment must be shown on the plans rather than referring the user to a document that might not be on-site, or may not be available in the field. If the line is being abandoned in place, then the following action should be performed: 1) the private sewer line connection at the manhole must be abandoned by plugging the incoming line with a 1-foot thick plug of non-shrink grout sealed with a Portland cement grout, and 2) the opposite end must also be plugged as described above. Please provide specific notes on the plans concerning this procedure.
2. Sheet 5: Two sanitary sewer manholes are shown within pavement, as allowed by discussions with Water Utilities. These two (2) manholes within pavement must be flush with the surface, and include an 8" thick square-shaped cap of KCMMB concrete, one (1) foot around the manhole frame and lid, with a final 2" layer of surface course asphaltic concrete. The 8" thick cap must extend a minimum of one (1) foot beyond the trench, to provide a "bridging" support. The KCMMB concrete should be constructed with deformed #5 bars around the manhole frame and lid. This method will ensure a frame and lid with long-term resistance to settling. Please provide a plan and section view showing this method of construction on the street, stormwater, and Master Drainage Plan, but provide specific references in the sanitary sewer plans concerning this feature (e.g., a note is sufficient, referencing the construction of KCMMB diamonds around the frame and lids, see Street, Stormwater, Master Drainage Plan for details).
3. Sheet 5: The private sanitary sewer service for Lot 5 is too close to the outside of the manhole. Four (4) feet minimum distance is required.

4. Sheet 4: The general overview sheet is showing "SAN LINE A" pointing to the unapproved route for the sewer. Please correct, and show the correct route of SAN LINE A. Also, correct the STM LINE A label in the lower left hand corner of the sheet (i.e., should be SAN LINE H?).

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

Development engineering plan resubmittals shall include an electronic copy of the documents as well as the required number of paper copies.

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 me if you have any questions or comments.

Sincerely,

Original Signed

Gene Williams, P.E.
Senior Staff Engineer
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cc: Development Engineering Project File