

Date: Monday, April 26, 2021

To: Eric Byrd, P.E.
BHC Rhodes
7101 College Blvd. Suite 400
Overland Park, KS 66210

From: Gene Williams, P.E.
Senior Staff Engineer

Application Number: PL2021150

Application Type: Engineering Plan Review

Application Name: John Knox Village - Meadows Phase 2 - Public Water Main Upgrades

The Development Services Department received plans for this project on April 26, 2021. We have completed our review and offer the following comments listed below.

- See comments below to determine the required revisions and resubmit to the Development Services Department public portal located at devservices.cityofls.net. Digital documents shall follow the electronic plan submittal guides as stated below.
- Revised plans will be reviewed within five (5) business days of the date received.

Engineering Review

1. Separate engineering plans shall be submitted for the public water main improvements. No MDNR permit is required for this upgrade if installed in the same general location and trench.
2. A profile view of the public water main improvements is required. Air release valves may be required at high points of any 12 inch line. Please contact me prior to placement of any potential air release valves as this will need to be reviewed by Water Utilities for placement.
3. Valve locations for the new public water main were not shown. Two (2) valves are required at a tee, and three (3) valves are required at a cross.
4. Recommend the note concerning 85 feet of restrained joint pipe (i.e., note W08) in the public water main plans be modified to include an asterick, or some other prominent designator to alert the contractor and inspector. This has not typically been performed in the past, and need to ensure the contractor and inspector are aware of these requirements. Possibly include a typical detail of what is being described? On the profile view?
5. Recommend the list of notes on Sheet C6.4 of the public water main plans be updated to include the all

three (3) scenarios as separate list items.

6. What is the phasing plan for this work? Individual water users shall not be out of water service per the requirements contained in the Design and Construction Manual. Sufficient notice must also be made to water customers prior to shutting down water to them. Is the intent to lay the line parallel to the existing line, and make the final connections at that time? A clear and concise plan shall be developed for this work, with sufficient notes concerning shut down times, work at night, notice to water customers before shut down is made, notification to Development Services Inspections prior to performing any shut-downs, notes about City only allowed to turn valves on or off, and maximum amount of time allowed for the shut down.
7. A standard detail for the domestic water service, valve and valve box was not provided in the public water main plans.
8. It is assumed the existing water main will be removed and disposed. Please provide notes concerning the disposition of the existing water main on the public water main plans.
9. It is assumed there will be work within streets during the removal and replacement of the public water main. Restoration would therefore need to be performed. Please include GEN-5 "Trenching/Patching Roadways Detail" in the plans. It may also be necessary to temporarily plate the street, so please consider adding GEN-6.
10. If air release valve is needed at the high points of public 12 inch water main, please provide the standard detail WAT-10 in the plans, and show its location on the plan view.
11. Fire hydrant standard detail sheets shall be provided in the public water main plans (i.e., WAT-7 and WAT-8 as appropriate for the hydrant to be relocated and reconnected).
12. Thrust block and straddle block standard details were missing from the public water main plans. This would include WAT-1, WAT-2, and WAT-3.
13. Fire hydrant locations appear to have been omitted in the public water main plans. Please show their location, and ensure the maximum distance between fire hydrants is followed in the design.
14. Proposed water main on the public plans appear to be very light in contrast to the existing water mains. Recommend slightly darkening or thickening the proposed water main to make it easier to distinguish for contractor and inspector.
15. Provide sufficient notes concerning the removal and replacement of ADA-accessible ramps, curb and gutter, sidewalk, driveways, landscaping, grass, etc. on the public water main plans.

16. Revision to the cost estimate for this work shall be provided prior to approval of the plans. Water main shown on FDP cost estimate was subtracted from the fee worksheet for that portion of the work.

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

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 shall be provided in the following formats

- Plats – All plats shall be provided in multi-page Portable Document Format (PDF).
- Engineered Civil Plans – All engineered civil plans shall be provided in multi-page Portable Document Format (PDF).
- Studies – Studies, such as stormwater and traffic, shall be provided in Portable Document Format (PDF).

Please contact me if you have any questions or comments.

Sincerely,

/s/ Gene Williams electronically signed Apr. 26, 2021

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