

Date: Tuesday, September 13, 2022

To: POWELL CWM INC
3200 S STATE ROUTE 291 BLDG 1
INDEPENDENCE, MO 64057

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

Application Number: PL2022163

Application Type: Engineering Plan Review

Application Name: Lakewood Business Center on I-470 Plat S - Public Sanitary

The Development Services Department has completed its 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 ten (10) business days of the date received.

Engineering Review - Corrections

1. The alignment of the sanitary sewer still does not follow what was shown in the approved Preliminary Plat in terms of serving future lots. The Preliminary Plat proposed to place the sanitary sewer beneath Maguire north of Lot 3, and proceeding to the east under Maguire. There was additional line to be installed beneath Cargo Dr. Please see the approved Preliminary Plat for the approved alignment. Although changes or revisions to the Preliminary Plat may be allowed, this will require further discussions with Water Utilities, and the proposal to place the sanitary sewer between Lots 3 and 4 and Lots 2 and 5 was not approved by Water Utilities and would not be desired by Water Utilities. Recommend a meeting with Water Utilities, Development Engineering, and your group to discuss why these changes are being proposed, and why the future lots need to be served with another sideyard sanitary sewer to the south of Maguire Blvd.
2. Manhole AA1 is shown connecting to the existing manhole to the northeast. This existing manhole shall be labeled with the City manhole number 14-041. The line and its associated easement appears to encroach-upon an existing Southwestern Bell easement, which is not acceptable. There shall be no overlap of existing easements in this instance.
3. Manhole locations within pavement are shown in the center, which is not feasible. Recommend an offset to account for crown, and placement of the frame and lid within the middle of either driving lane to avoid wheel contact. Please revise.

4. Manhole locations within pavement are missing the concrete collar design. Please contact this office for an example to utilize, as the collar is required to be installed around the manhole frame and lid with KCMMB concrete and 2 inch asphaltic-concrete cap on top. Please update and revise as appropriate, and provide sufficient details on the concrete collar.
5. Sheet 422: Manhole AA5 is showing a future extension with flowline elevations. This implies a stub and hole will be provided. As discussed in previous comment letter, this is not allowed. Please provide bold notes stating "flowlines shown for reference only: future connections to be core-drilled" or equivalent language at dead end manholes with the intent to be extended in the future. However, please see comments concerning the placement of manhole AA5, as this is not desirable nor was approved at the Preliminary Plat phase of the project.
6. A trenching and backfill detail was missing from the details section. Please provide a trenching and backfill detail, and ensure it includes the new standard of providing a minimum of 12 inches aggregate cover over the top of pipe. Please update and revise.
7. For planning and revision purposes, future lots 4, 5, 8, 7, and 6 as identified on the approved Preliminary Plat are intended to be served from sanitary sewer lines installed along future Leinweber Rd., and future Cargo Dr. There were no plans at that time to serve any of those lots via a sidelot sanitary sewer as you are proposing. The City made an allowance to allow the installation of a sideyard sanitary sewer to the west of Lot 1 if proper procedures were followed, but we did not agree to allow for the continuation of this policy for the future lots discussed above. Please review, evaluate, and revise as appropriate. This may require a meeting to discuss further with City staff, including Water Utilities.
8. Private sanitary sewer laterals were not shown on the plans. Please show their location either on the plan view with appropriate notation and stationing, or in table format. Please revise as appropriate.
9. The crossing at Jones Industrial Dr. shall be bored and cased. Provide a plan for the boring with appropriate notes, and provide the casing pipe material, the diameter, wall thickness, and all other information specified in the standard detail that is also required (and missing) from the plans. Please be aware this is not required at Maguire, as this is a new road and not an existing road. Please revise and update as appropriate.
10. Are there sufficient easements needed to connect to sanitary sewer manhole 14-041? There were none shown on the plans, and there are doubts there is a continuous easement needed to make the connection. It is possible that additional easement(s) shall be required. Please evaluate and revise as appropriate, and show all existing and proposed easements.
11. According to our limited research, there are no platted easements for sanitary sewer in the vicinity of manhole 14-041 either to the east or west. It appears the only easements are for electric in the vicinity of this manhole and sanitary sewer line. Do you have additional information from your ownership and encumbrance records which indicate the existence of additional easements? If so, please provide them

and show them on the plans. Please review, update, and revise as appropriate.

12. It would appear there are significant issues with this plan. The connection point appears to be absent the required easement(s), the line and proposed easement encroaches into an existing Southwestern Bell easement which is not allowed, and the geometry and layout continues to show significant issues when compared to what was approved during the Preliminary Plat phase of this project. Finally, the cost estimate was not reviewed due to the likelihood of substantial changes. Therefore, no further review shall be conducted at this time.

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/ electronically signed Sep. 13, 2022

Gene Williams, P.E.
Senior Staff Engineer
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Gene.Williams@cityofls.net

cc: Development Engineering Project File