

Date: Wednesday, February 17, 2021

To: SM ENGINEERING
919 W STEWART RD
COLUMBIA, MO 65203

Responses are below in red

From: Sue Pyles, P.E.
Senior Staff Engineer

Application Number: PL2020322

Application Type: Engineering Plan Review

Application Name: LOT 11 AND 12 STREETS OF WEST PRYOR GRADING

The Development Services Department received plans for this project on October 30, 2020. We have completed our review and offer the following comments listed below.

- Resubmit one (1) comment response letter and one (1) digital copy following the electronic plan submittal guides as stated below.
- Revised plans will be reviewed within five (5) business days of the date received.

Engineering Review - Corrections

1. General:
 - Submit an Engineer's Estimate of Probable Construction Costs. **Estimate attached.**
 - Show location of all oil/gas wells, or indicate none are present, and cite the source. **Note added to title sheet.**
 - Show and label the location and limits of the one percent annual chance flood, as set forth on the current FEMA maps, with reference to the panel number and effective date. Elevations shall be provided if shown on the FEMA map. **Flood plain note has been to title sheet.**
 - Include the following note: "The contractor shall contact the City's Development Services Engineering Inspection to schedule a pre-construction meeting with an inspector prior to any land disturbance work at (816) 969-1200". **Note added to title sheet**
 - Please scale back future building and site elements throughout the plan set, as they are not included in this review. **All elements not being constructed by these plans have been faded back.**
 - Please note that only mass grading and storm sewer are being reviewed at this time. **Noted. Have also revised title to more accurately reflect plan scope**
 - Grading Note 9 references ADA slope requirements that are not a part of this review. **Note removed**
2. The existing 991 contour line type at the NE portion of the site is still partially dashed and partially solid. Please revise. **This has been corrected**
3. Please include a more robust erosion and sediment control. This is a very large amount of earthwork that has the potential to cause big erosion problems east and south of this lot. Include a phased plan that

includes prior to, during, and post construction stages. Include storm structure protection for the
Additional erosion control measures have been added along with construction schedule

4. Storm Sewer:

- The storm sewer design calls for curb inlets. These cannot be completed until the future development is done. Please provide an interim drainage solution. The throats are shown to not be constructed at this time. The inlet opening will be left open with erosion control measures left in place.
- The drop thru Structures A-2 & A-3 don't meet the City's minimum drop requirement. Please revise. Drop revised
- Please label A-1 in the Profile view. Done
- The proposed grade line does not tie into the existing grade line between Structures A-1 & A-2 in the Profile view. Please revise. Done
- The proposed grade line implies that the Line A grate inlets will be covered. Please revise. Grades revised
- Include the design HGL in the storm sewer profiles. Removal of the hatching will make it easier to see. HGL's shown
- Include rip-rap construction dimensions and design information. Include shear stress calculations to show the rip-rap is adequate. Rip rap dimensions are shown. Hydrology software computes rip parameters per FHWA HEC-14, 3rd Edition methods and are shown in the calculation table.
- Include storm sewer calculations in the plan set. Calcs are shown on sheet C7.0
- Please include a trench backfill detail and end section standard detail. Trench and bedding detail added to Sheet C8.0

Traffic Review - Not Required

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,

Sue Pyles, P.E.
Senior Staff Engineer
(816) 969-1245
Sue.Pyles@cityofls.net

cc: Development Engineering Project File