

---

**PUBLIC WORKS ENGINEERING DIVISION**

**Date:** Thursday, June 21, 2018

**To:**

BRAD BURTON

Email: BBURTON@GBATEAM.COM

Fax #: (913) 577-8306

PARAGON STAR LLC

Email: PARAGONSTARLS.COM

Fax #: <NO FAX NUMBER>

<NO CONTACT NAME AVAILABLE>

Email:

Fax #: <NO FAX NUMBER>

**From:** Sue Pyles, P.E.

Senior Staff Engineer

**Application Number:** PL2018092

**Application Type:** Engineering Plan Review

**Application Name:** Paragon Star Storm Sewer and Mass Grading

---

The Development Services Department received plans for this project on June 01, 2018. We have completed our review and offer the following comments listed below.

- Resubmit three (3) full size sets of plans (no larger than 24"x36") folded to 8-½"x11", 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**

1. Some comments in this review are general in nature. A more in-depth review of the plan set will be completed once additional information is provided.
2. The following reports are required:
  - a. Stream Assessment – Required for the unnamed tributary realignment for the RCB construction as well as the Little Blue River for the crossings.
  - b. Final Stormwater Study - As previously indicated, Water Quality, the 40-hour extended detention of the 90% mean annual event, or BMPs in lieu of 40-hour extended detention (i.e., volumetric controls), has not been provided. This requirement cannot be waived. Please note that Lee's Summit does not use Level of Service calculations, only volumetric controls.
  - c. Culvert Analysis – For drainage thru the RCB.

3. The following additional information is required on the plans:
  - a. Include an additional sheet that clearly shows the stream buffer limits, ordinary high water mark, existing floodway, and proposed floodway (per proposed CLOMR) as the focal points of the sheet with other features scaled back.
  - b. Label all existing sanitary sewers in the same manner as the Little Blue Valley Sewer District sewers.
  - c. Show and label the limits of the stream buffer throughout the plan set.
  - d. Clearly indicate what portion of the proposed storm sewer will be temporary (i.e., 703A).
4. General Sanitary Sewer Comments:
  - a. The plans show encasement and MH adjustments to existing sanitary sewers owned by both KCMO and Little Blue Valley Sewer District. Written documentation of concurrence of those owners, as well as inclusion of any information into this plan set that they request, will be required prior to approval of this plan set. If the KCMO review contact provided, Kevin Rohner, will not be reviewing the sanitary as well as the site work, please provide contact info for the sanitary reviewer.
  - b. Structure 1201 seems to be directly over the existing 42" sanitary sewer. Please revise.
5. General Storm Sewer Comments:
  - a. Placement of fill in Line 500 is shown on the plans. What is the purpose of this fill, what material will be used, how is it to be placed? Provide additional information.
  - b. The storm sewer enlargements include notes to replace existing streambed. I don't see any information indicating the depth of streambed to be replaced or the method/material with which to do so. Please provide additional information.
  - c. Existing flow offsite to the east is currently sheet flow, but the proposed drainage is shown leaving the property via pipe discharge at 3 points. No information about how the energy from this discharge will be dissipated, or if the adjacent property owner is in agreement with this design, has been provided. Please provide additional information.
  - d. The USACE regional condition 1 for all Nation Wide Permits requires allowance of "safe passage of fish and other small aquatic organisms" for all culverts greater than 48". Please address how this requirement is being met.
  - e. The plans call for drainage gates on Structures 700 & 1200. Please provide additional information regarding the reasoning for these drainage gates and how they will function.
6. General RCB Comments:
  - a. Will the RCB be cast-in-place or precast?
  - b. Indicate the design load used.
  - c. Include complete construction details for construction of the RCB within the plan set.
7. A cursory review of the plans has been completed. These comments follow:
  - Sheet 1: Revise the "Mass Grading Plans" to "Storm Sewer Improvements and Mass Grading" in the Project Title and in the title block on all plan sheets.
  - Sheet 3: Update the FEMA FIRM information.

- Sheet 8: More clearly show and label the beginning and end of each section in Plan view, not just Profile, for the Line 300 Channel.
- Sheet 9: The Str 100 label indicates Riprap but none is shown in Plan view or elsewhere in the plan set. Please reconcile.
- Sheet 9: The Str 700 label indicates Riprap Basin but none is shown in Plan view or elsewhere in the plan set. Please reconcile.
- Sheets 10-12: The proposed contours do not tie back into existing contours in many instances on these sheets. In addition, it appears that many of the transitions from existing to proposed contours are very unrealistic (i.e., 90 degree bends). Please revise.
- Sheet 13: Please show proposed riprap in Profile views.
- Sheet 13: Show the sanitary sewer crossing in the Line 1200 Profile.
- Sheet 14: Show the same information for each drainage area for consistency.
- Sheet 15: The calculations for HGL (allowable) in the Drainage Calculation Table appear to be incorrect. The allowable HGL must be 0.5 feet below any openings to the ground or street. For a curb inlet, the opening to the ground or street is 1.33 feet below the top of the structure.
- Sheet 16: Provide documentation that encasement of the existing sanitary sewer is acceptable to the owner of the sewer and that the Cage Reinforced Concrete Encasement standard detail included in the plan set is acceptable.
- Sheet 17: Remove the APWA MH detail, no MHs are included.
- Sheet 23: Current Lee's Summit standard details are required for all storm structures.
- Sheets 24-29: Verify BMP Plan Reference #3 and #4, they appear to be used interchangeably.

## **Traffic Review**

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,

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

cc: Development Engineering Project File