



9801 Renner Boulevard,
Suite 300
Lenexa, KS 66219

April 17, 2020

City of Lee's Summit, MO
220 SE Green Street
Lee's Summit, MO 64063

RE: PL2019333 – Paragon Star Public Off-Site Water Main Extension

We have received your comments dated March 11, 2020 for the above referenced project. Our responses follow each comment. The comment responses have been organized by the review section they pertain to.

Engineering Review

1. Sheet 2: Delete General Note 14, it is not applicable.

GBA Response: Note 14 has been removed.

2. Sheet 3: Revise the Air Relief Assembly at Sta. 11+90.80 to be flush with the proposed grade in the Profile view.

GBA Response: Air Relief Assembly has been adjusted. See the end of this letter for a note about proposed grade changes.

3. Sheet 5:

- Sta. 32+08.00 R/W Stationing in the Profile view appears incorrect. Please revise.
GBA Response: Stationing around MoDOT R/W has been updated.
- Review the different grade line types between Sta. 32+00 and the north end of the project, they appear to be different in parts of the section. Revise as required.
GBA Response: Surface profiles have been revised.

4. Sheet 6:

- Why is the Air Relief Assembly at Sta. 46+80 located in a section of pipe lower than sections each direction? Considering relocation.
GBA Response: Air Relief Assembly at Sta. 46+80 has been moved to St. 45+25.00.
- Please add casing pipe for the main under the waterway between 37+00 and Sta. 38+00.
GBA Response: Casing pipe has been added under the waterway.

5. Sheet 7:

- Replace the Air release Valve at Sta. 53+23.46 with a Fire Hydrant.
GBA Response: Air Release Valve has been changed to a fire hydrant.
- What is the concrete vault for that is shown in Plan view at Sta. 53+29.16?
GBA Response: The concrete vault was requested by KCMO Water Services in case a meter or backflow becomes required in the future.

6. Sheet 8: How will Line B connect to the existing 6" main?

GBA Response: Line B will connect to the existing 6" main by cutting the existing line, installing a T at the existing hydrant, and then a reducer and valve. Clarification has been made on Sheet 8.

7. General:

- Due to high pressure, a portion of this main will need to be C900 Class 305 rather than Class 200. Adding a Pressure release Valve could reduce the length of Class 305 pipe required.
GBA Response: Class 305 pipe has been added in the higher pressure sections of the water main.
- Please clarify that any deflection angles greater than 1 degree will need to be spread over multiple section of pipe so that no deflection is added to the pipe and no more than 1 degree of deflection is added within the joint.
GBA Response: Deflections greater than 1 degree have been clarified into multiple 1 degree deflections with 20 spacing.
- Revise the estimate to match all revisions to the plans.
GBA Response: Engineer's estimate of costs has been updated.
- Include Tees, Plugs, Bends, and Reducers in the estimate.
GBA Response: Tees, Plugs, Bends, and Reducers have been added to the estimate.

Due to changes in design, we are no longer proposing a new grade for the gravel drive in this plan set. The gravel drive will follow existing grades. The only proposed grading now is around the proposed culvert.

We believe we have addressed all comments on this project. If you have any additional questions or concerns, please feel free to contact us.

Sincerely,

GEORGE BUTLER ASSOCIATES, INC.

Clint Loumaster, P.E.