

The City of Fountain has generally limited our focus on the proposed main channel improvements located just upstream of the Venetucci bridge. Since the report and design is at a 60% phase, the plans and report are not complete enough to provide a technical review, so our comments are more geared towards information that is missing, rather than technical review. Due to the concerns stated herein, we would like to be able to review the next phase of design if that is planned. (e.g. – 90%).

1. The report indicates that the project is located within unincorporated El Paso County and will be maintained by the County. The City of Fountain limit has not been shown in the improvement plans, so it is difficult to determine, but we believe that some of or all of the proposed main channel improvements are located within the City of Fountain. The City of Fountain Limits need to be added to the plans so that jurisdiction over the improvements can be determined.
2. The vicinity map contained in the hydraulic report shows a very large project area extending well beyond the limits of the channel, but we were not able to find any information on the proposed development outside of the channel. At a minimum, proposed development setback lines on both sides of the channel along with proposed maintenance access through the proposed development should be provided on the plans.
3. The proposed drop structure above Venetucci appears to have been sited based only on the approximate location shown in the 33-year-old DBPS. The Venetucci Bridge has been added since the DBPS was prepared and it is likely that the channel has degraded or otherwise been modified since the DBPS was prepared. We recommend that an evaluation of the existing channel from the upstream side of I-25 to the confluence of the tributary channel be done to determine if the proposed drop structure vertical and horizontal locations are still appropriate.
4. The proposed drop structure design should consider future channel improvements through the existing Venetucci bridge. The bridge, associated topographic mapping, and conceptual future channel improvements through the bridge should be provided in the plans to demonstrate drop structure compatibility with future channel improvements.
5. The proposed drop structure grading does not provide a smooth transition with reasonable side slopes to the existing channel grading at the downstream end. Please provide that in future design submittals.
6. The existing bed profile shown on the plans for the proposed drop structure is only slightly above the bottom of the proposed boulders a short distance downstream of the proposed structure. Additional cutoff measures or documentation that that the channel bed is not subject to future erosion needs to be provided with the design.
7. Calculations that demonstrate the adequacy of the proposed drop structure and its proposed materials need to be provided with the design.
8. The datum of all topographic information utilized in the analysis should be provided.
9. It is our recollection that the culvert under I-25 impacts the 100-year water surface in the Fishers Canyon Creek for a considerable distance upstream of I-25. This should be considered in modeling of the creek and its associated floodplain.
10. The report indicates that USGS topographic data has been utilized in the hydraulic modeling of the channels. Given the deep incision of the channel with steep side slopes and tree and shrub vegetation, a verification field survey of the channel invert is recommended.
11. While outside our area of focus, we noted with interest that the 33-year-old DBPS design flow rate was being utilized in the design of the tributary channel. Should this design rate be conformed through a new hydrologic analysis? Perhaps EPC has knowledge that this flow rate is still appropriate. Please confirm.