

MEMO

To: Town of Parker
From: Amie Drucker
Date: July 26, 2021
Re: MHFD Referral Review Comments

Project Name:	SP21-028 Compark Village South Belford Avenue
Location:	South of E-470 at Happy Canyon Creek
Drainageway:	Happy Canyon Creek

This letter is a response to the July 20, 2021 2nd submittal review comments. Please see our responses to the comments below:

- 1) With respect to the pipe outfall:
 - a. Please extend the profile to the invert of Happy Canyon Creek to better understand the outfall conditions.
The profile has been extended to show the entire HCC cross-section.
 - b. Verify the HGL's on the profile and add a label to the profile that lists the Q, V, and Fr.
The HGL's on the profile have been verified. A label with the Q and v has been added to the profile. The pipe is under pressure during the 100 yr storm so no Fr was added.
- 2) Provide supporting calculations associated with the outfall protection and energy dissipation for the proposed outfall. Note that shear stresses from flow in receiving stream may dictate the riprap size for the outfall.
The MHFD-Culvert spreadsheet has been added to the Final Drainage Report to show calculations for the minimum rip rap size for the detention basin outlet pipe (Type VL). However, considering the Happy Canyon Stream characteristics during a 100 yr storm event and the detention basin's outlet pipe's proximity to proposed Drop No. 1, the rip rap will be upsized to Type M to match the proposed rip rap size determined by FHU for the creek improvements. Calculations for HCC revetment stone sizing from FHU's report as well as, the plan for Drop No. 1 showing the proposed rip rap size have been added to the detention basin outlet portion of this Final Drainage Report, (See Appendix C, pages 83-87)