



April 10, 2018

Stacey Nerger Associate Planners
Town of Parker
Community Development Department
20120 East Mainstreet
Parker, CO 80138

RE: **Trails at Crowfoot Filing No. 1 – Final Plat [Application
SUB17-039]**

Dear Ms. Nerger:

CVL Consultants of Colorado, Inc. has considered comments from Town of Parker Planning Department, Town of Parker Engineering Department, IREA, Parker Water and Sanitation District and Urban Drainage for the referenced project. We have restated the comments below and addressed them per the italicized responses.

**TRAILS AT CROWFOOT FILING 1, Stacey Nerger, Associate Planner, snerger@parkeronline.org
Preliminary Plan:**

1. Comment: Please refer to the attached “redline” comments within the Final Plat for staff’s requested changes.

Complied: Yes No

Response: Redlines have been addressed.

2. Comment: Please move the Town of Parker Town Council signature blocks to page 1 to be on the same page as the Planning Commission signature block.

Complied: Yes No

Response: Signatures have been moved to page 1.

3. Comment: Please delete Note 9 on Page 2 as this note states the same thing as Note 8

Complied: Yes No

Response: Note 9 has been removed.

4. Comment: Please change the last part of Note 10 from “as park of Trails at Crowfoot...” to “as part of Trails at Crowfoot...”

Complied: Yes No

Response: Park has been changed to part.

5. Comment: Please ensure that the title used within the Land Use Summary Chart “Future Residential Development” matches the wording used in the Tract Summary Table “Future Mixed Use Land”. Choose which title best describes the land and make them consistent within both tables.

Complied: Yes No

Response: The wording has been changed to Future Residential Development.

6. Comment: Please add the square foot and acreage of Tract A on page 5.

Complied: Yes No

Response: Tract Area has been added.

7. Comment: Please ensure that all matchlines are correct on each page. Page 9 on the south side references page 12 when this should be page 11.

Complied: Yes No

Response: Matchlines have been updated.

8. Comment: Please ensure that all tracts are identified on each page of the plat. Pate 11, 14 and 15 have tracts which are not identified (please see redlines for which tracts need to be identified).

Complied: Yes No

Response: All Tracts have been identified.

Landscaping Plan

9. Comment: Please refer to the attached “redline” comments within the Landscape Plan for staff’s requested changes.

Complied: Yes No

Response: Revisions to plans were made per staff’s request. Please see individual sheet responses below:

Sheet L0.1

Please ensure that these numbers match the cost estimates. The deciduous trees, perennials, evergreen shrubs and ornamental grass numbers do not match.

Response: The numbers have been checked and the cost estimates match the landscape plans.

Sheet L1.0

Streetscape standards will be required to be satisfied in this area outside of the future ROW.

Please add trees to meet this standard (1 tree per 40 linear feet).

Response: Additional trees have been provided to meet the streetscape standards and are shown on the plans outside of the ROW. They are placed in this location so they won’t be damaged when Crowfoot Valley Road is widened in the future. These trees are counted as part of the open space calculations because they are in outside of the ROW.

This sidewalk will be required to be constructed to the northern boundary of the development.

Please show the continuation of this trail north to the property line.

Response: An additional sheet has been provided to show the portion of the property where the sidewalk continues to the north.

This landscaping will need to be identified and included on the cost estimates.

Response: This landscaping has been identified and has been provided on the cost estimates.

The landscaping which is located outside of the future ROW will be the responsibility of the Filing No.1 builder. Streetscape requirements will be required to be satisfied. Based on the criteria, a minimum of 63 trees will be required to be installed adjacent to Crowfoot outside of the future ROW areas.

Response: Additional trees have been provided to meet the streetscape standards and are shown on the plans outside of the ROW. They are placed in this location so they won’t be damaged when Crowfoot Valley Road is widened in the future. These trees are counted as part of the open space calculations because they are in outside of the ROW.

Sheet L1.1

Please add multiple arrows to show that this note applies to all trails within this area.

Response: Multiple arrows and labels have been added to the plans.

This fence is proposed through the middle of this lot?

Response: The fence line has been moved out of the middle of the lot.

Please provide streetscape within this area consistent with the landscaping proposed on the east side of Bayou Gulch road on page 1.

Response: Per our meeting, we determined that landscape in this area should not be added until plans for the commercial have been determined at a future date.

Sheet L1.2

The streetscape within this area will be the responsibility of the Filing No. 1 developer. Please show all streetscape on this plan for this area.

Response: Additional trees have been provided to meet the streetscape standards and are shown on the plans outside of the ROW. The note that states that the ultimate streetscape landscaping to be developed with construction of the ultimate Crowfoot Valley Road build out (N.I.C.) has been removed.

Sheet L1.6

Please add trees to this area outside of any future ROW.

Response: Per our meeting, we determined that landscape in this area should not be added until plans for the commercial have been determined at a future date. A note has been added to the plans labeling the future commercial area.

Sheet L1.7

Please add landscaping to this area outside of any future ROW

Response: Per our meeting, we determined that landscape in this area should not be added until plans for the commercial have been determined at a future date. A note has been added to the plans labeling the future commercial area.

Sheet L1.20

Please add the street trees to this sheet.

Response: Street trees have been added to this sheet. An additional sheet has been added to show the trees that have been added further to the south along Crowfoot Valley Road.

Cost Estimate:

Please ensure that these numbers match the cost estimate and are updated to reflect the comments.

Response: This has been checked to ensure the numbers on the cost estimate and landscape plans match.

Please include all lights which will be installed in the medians to this cost estimate. Also a cost estimate for any taps required in the medians needs to be added.

Response: The lights for the medians and taps for irrigation are included in the engineers cost estimate and this note is provided.

Crowfoot Valley Road

10. Comment: Please ensure that all streetscape requirements along Crowfoot Valley Road is in accordance with the Town’s Landscape requirements. This landscaping shall be placed outside of the future expansion of Crowfoot Valley Road in what will be the final location for sidewalk and streetscape.

Complied: Yes No

Response: Additional trees have been provided to meet the streetscape standards and are shown on the plans outside of the ROW. These trees are counted as part of the open space calculations in the cost estimates because they are outside of the ROW.

General

11. Comment: A draft Subdivision Agreement has been forwarded to the applicant for review. Please review this agreement and let us know if you have any questions.

Complied: Yes No

Response: Acknowledged.

12. Comment: Please address all outside referral agency comments with a written response. Copies of these comments can be found within the case file in TRAKiT.

Complied: Yes No

Response: All outside referral agency comments have been addressed with written responses. See below.

TOWN OF PARKER ENGINEERING DEPARTMENT

Filing 1 Comments

Tyler Sandt – CONSTRUCTION PLANS - Civil

1. Comment: Per discussions with the applicant, all trees and landscape above two feet shown within the sight triangles must be relocated or removed. Please also remove the note stating that tree canopies within sight triangles will be no lower than 8’.

Response: All trees and landscape above 2’ in height shown in the sight triangles have been removed or relocated. The note stating that tree canopies within sight triangles will be no lower than 8’ has also been removed.

2. Comment: Please clarify how flows near the trail north of the future school site will be accommodated.

Response: Per conversations with Tyler Sandt and Alex Mestdagh, 12” Nyloplast landscape drains have been added to the Filing 9 storm plans to capture these flows.

3. Comment: Due to long-term maintenance issues, all 15-foot Type R inlet pairs must be separated by at least 15 feet of RCP.

Response: All pairs of 15’ inlets have been separated by 15’.

4. Comment: Show ultimate median trench drains on the Bayou Gulch RD cross sections.

Response: Ultimate median trench drains have been shown on the cross section.

5. Comment: Remove the “plug storm for future” callout on sheet 44.

Response: Callout has been removed.

6. Comment: Clarify what the interceptor drain outfall shown on sheet 68 is.

Response: Interceptor drain has been removed. Per discussions with the town, the private over-excavation underdrain will daylight outside of the ROW.

7. Comment: The Town requires minor and major HGL's on all storm sewer profiles. Per discussion with the applicant, please include both HGL's on all storm profiles.

Response: HGLs have been added to all storm drain profiles.

8. Comment: Per previous review, the trickle channel detail should show 4% minimum slopes adjacent to the channel as shown in Figure 7.3 of the SDECM.

Response: Trickle channel detail has been updated.

9. Comment: The elevations shown in the Pond A "Elevations Table" are not correct.

Response: Elevations have been updated.

10. Comment: Please show V-100, Q-100, V-WQCV, and V-EURV on the Pond B, C, and D plans.

Response: Callouts have been added to the plan.

11. Comment: The cost estimate is approved provided there are no significant changes to the plans.

Response: Equalizer pipes between 15' inlets that were shifted 15' have been added to the estimate.

Tyler Sandt – DRAINAGE REPORT - Civil

1. Comment: The ratio of peak outflow to predevelopment Q needs to be 0.9 or less per UDFCD criteria.

Response: Per discussion with the town, previous UDFCD release rates are okay.

2. Comment: Town staff understands there will be some variation in volume calculations in the UD-Detention workbook for Pond A. Please provide a summary table in the Pond A section of the drainage report that details the results of the CUHP-SWMM model so Town staff can verify the results.

Response: Inflow hydrographs for each pond included. See UDFCD 2.a. below.

3. Comment: Per discussions with the applicant, Ponds B, C, and D were to be sized using the UD-Detention workbook. Please discuss the inconsistencies between the approximate 100-year volume, stage-storage volume, and routed hydrograph results with Town staff prior to next submittal.

Response: UD-Detention sizing based on modified routing pulse method for approximate which is superseded by User CUHP/SWMM inflow hydrographs for design.

4. Comment: The imperviousness values shown on the Pond A UD-Detention and Design procedure forms do not match.

Response: Impervious values taken from major basins. CUHP/SWMM map included and tables added to report.

5. Comment: Please clarify how the "100-year Peak Allowable" values were obtained in the Pond Summary tables shown in the drainage map file. The allowable release should be 0.9 of Q-Historic.

Response: Per discussion with the town, previous UDFCD release rates are okay.

6. Comment: Add design points and inlet calculations for the inlets collecting the flows generated from the north side of Bayou Gulch and the north trail in the interim condition.

Response: Per discussion with the town, this comment can be disregarded.

7. Comment: Please discuss inconsistencies in the inlet calculations with Town staff.

Response: This was answered offline via email to Tyler Sandt on 3/26/2018

Tyler Sandt - PLAT - CIVIL

Comment: It is staff's understanding that in order to avoid having multiple signatories to the plat, the drainage easement for Pond A is to be dedicated by separate document. If this is the case, please ensure the plat reflects this by removing that area from the plat, tract table, and notes.

Response: Pond A has been removed from the plat. A drainage easement has been obtained (Record # 2018010385). A copy of this easement has been uploaded to E-trakit.

Kurt Patrick - CONSTRUCTION PLANS - ENVIRONMENTAL

1) Comment: Show silt fence instead of construction fence along Crowfoot down-gradient of disturbance. Sheet 18.

Response: Construction fence has been changed to silt fence down gradient of all disturbance.

2) Comment: Show SCL behind curb in all locations where curb and gutter will be installed.

Response: SCL has been added behind curb in all locations where the curb and gutter will be installed.

3) Comment: Show silt fence across all proposed access locations where rough cut street control will drain into an existing roadway.

Response: Silt fence has been added at all locations where RCS will drain into existing roadway.

4) Comment: Show debris and trash control on all roadways, existing and proposed.

Response: Debris and Trash control has been shown on all streets existing and proposed that will be built in this phase.

BROOKS KAUFMAN - IREA

Comment: The Association has advisory comments to state that no permanent structures (Monuments, Retaining Walls and their components) will be allowed within the platted utility easements.

Response: Acknowledged.

PARKER WATER AND SANITATION DISTRICT

Drayton Sanderson, Engineering Technician

Documents and Fee Required Before Plan Approval

- Comment: Submit an executed Standard Improvement Agreement with all required exhibits.

Response: Acknowledged. An executed SIA will be submitted.

- Comment: A letter of credit or Cash in Lieu based on the approved Engineers Estimate must be submitted before final approval is granted.

Response: Acknowledged.

- Comment: Easements with PWSD agreements, Irrigation tap fees, and mylars signed by a Town of Parker life safety official are required to be submitted for plan approval.

Response: Acknowledged.

Plan Review Design Comment

- Comment: On sheet 10 TC-SC18 is called out with an 8" cap with blow off valve. This stub-out is a sanitary sewer stub-out no blow off valves are required, please revise.

Response: This has been modified in the plans.

- Comment: Please call out all existing easement record numbers in the plans.

Response: *Easements have been called out as existing. Per conversations with Drayton Sanderson, a line has been shown that will be filled in on the Mylar set once plat recordation numbers have been obtained.*

- Comment: On sheet 45 please callout TC-SSMH-OS-55 in the plan view.

Response: *A callout has been added.*

- Comment: On sheet 58 profile of Rose Mallow Ave. please callout what sheet number the profile for the stub-out running into filing 3 is on.

Response: *Callout for the sheet with the profile of the stub out has been added to the profile.*

- Comment: On the cover sheet six 2" irrigation taps are called out on the materials list. In the plans 5 irrigation taps are shown and called out (four 2" taps and one 1" tap). Please revise.

Response: *There are 5-2" irrigation taps proposed. Material list and plan callouts have been modified in the PWSD construction plans and in the irrigation plans.*

- Comment: The irrigation plans show 6 PWSD irrigation worksheets for 6 taps (five 2" and one 1") yet the irrigation plans only callout 5 taps. Please ensure irrigation plans, PWSD irrigation worksheets and IRR taps called out in the construction plans match each other.

Response: *5-2" irrigation tap worksheets are now shown.*

- Comment: PWSD's construction inspector and lab technician may request developer install PWSD water quality sampling station at their discretion.

Response: *Acknowledged.*

URBAN DRAINAGE AND FLOOD CONTROL DISTRICT, Richard Borchardt

1. Construction Drawings.

- a. Comment: Please provide a maintenance site plan for Pond A. Guidelines and an example are on our website. The path is: <http://udfcd.org/wp-content/uploads/uploadsworking%20withus/maintenance%20eligibility/guideline%20for%20UDFCD%20Maintenance%20Site%20Plan.pdf>

Response: *A maintenance site plan has been completed and submitted.*

- b. Comment: On sheet 4, easement for Pond Outfall to Lemon Gulch should include energy dissipation.

Response: *Energy dissipation has been added.*

- c. Comment: On Sheets 4 and 93, replace horizontal bend in trickle channel with curve.

Response: *Horizontal bend has been replaced with a curve.*

- d. Comment: On Sheet 93, pull outfall energy dissipater back into bank of Lemon Gulch, so not to impact flow and floodplain.

Response: *Please see profile of outfall. Outfall does not add fill to Lemon Gulch. Permit was issued by Army Corp for work in Lemon Gulch.*

- e. Comment: On Sheet 93, revise the check structure cross-section to have side slopes flatter than 2.5H:1V. Provide and the low spot of the crest in the center of the stream. It is ok, to bury sides and crest of check to match into existing grade.

Response: *The side slopes have been revised and the crest bottom has been buried.*

- f. Comment: On sheet 94, label the toe elevation of the spillway riprap. Riprap should be keyed in to protect embankment with a top of riprap elevation at the toe at Outlet Box invert Elevation 5587.50.

Response: riprap has been extended to the toe of the embankment at the outlet box invert.

- g. Comment: On Sheet 94, update stage storage curve to match final drainage study.

Response: The curve has been updated.

2. Drainage Study

- a. Comment The Pond A design has a 50-year peak inflow that is greater than the 100-year peak inflow. It appears that the designer input the values for the 100-year hydrograph. The input values for time-steps 35-47 are less than the 50-year. The time interval is 5.92 minutes versus 5 minutes (see below). Please provide model for User Defined Hydrograph and check input into UD-Detention Workbook.

Response:

Time step issue: Inflow hydrograph for Pond A was developed using a CUHP/SWM model with a 5.92 minute interval time step. Pond B, C, and D all have different time steps. Inflow Hydrographs for the 5 and 100-year event from the CUHP/SWM model added to the drainage report for the specific time interval shown in the UD-Detention spreadsheet for each pond. CUHP/SWM model summary for Pond A with 5.92 minute time step included in appendix.

Hydrograph differences: The Workbook hydrograph is developed from the modified pulse puls method in the UD-Detention spreadsheet. The User hydrograph is developed from the CUHP/SWMM methodology described in the USDCM. The User hydrograph is developed from the more accurate methodology and supersedes the Workbook hydrograph.

If you have any additional questions please do not hesitate to contact me directly at 720-249-3588

Sincerely,

CVL Consultants of Colorado, Inc.



Brian Wilson PE
Senior Project Manager