



February 26, 2018

Stacey Nерger Associate Planner
Town of Parker
Community Development Department
Town Hall
20120 East Mainstreet
Parker, CO 80138

RE: **Trails at Crowfoot Filing No. 1 – Final Plat**

[Application Sub17-039]

Dear Ms. Nерger:

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

**TRAILS AT CROWFOOT MIXED USE PRELIMINARY PLAN, Stacey Nерger, Associate Planner, snерger@parkeronline.org
Final Plat**

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

Complied: Yes No

Response: All redlines have been addressed.

2. Comment: The original submittal identified 101.532 acres of open space. The current plat identified 91.934 acres of open space. Why is there a reduction in open space?

Complied: Yes No

Response: There were several changes. Tract T was added, ROW at intersections was widened, lots were added and the overall boundary changed.

3. Comment: Please ensure that all tracts are identified on the plat. I am unable to locate Tract G.

Complied: Yes No

Response: Tract G is the pond detail and can be found on sheets 3 & 5.

4. Comment: Please ensure that all open space tracts meet the requirements outlined within the Amended and Restated Stroh Ranch/Hess Ranch Annexation Agreement (Southern Property). Based on the Annexation Agreement there are a couple of areas within Filing No. 1 which do not meet the minimum acreage. Please explain.

Complied: Yes No

Response: Per conversations with Planning, Tract Acreages will be revised with the subdivision agreements to match the plat acreages.

Landscaping Plan

5. 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 L0.0- These plans do not get signed by Engineering or Fire Life Safety. Please remove.

Response: Signature blocks have been removed from plans.

Sheet L1.0

Please show the proposed 12’ wide trail as described in the comments response.

Response: The trail was originally meant to be a 12’ wide soft surface access road. The trail has been revised to show a 10’ wide concrete trail.

Streetscape and Landscaping shall be designed and installed with this development outside of the future ROW.

Response: Trees have been added along Crowfoot Valley Road outside of the future ROW.

Please include a legend to define the different symbols that are on this page.

Response: A legend has been added.

Please add a note to this page and the next for open space tracts that will be returned to their natural stating the following: “These tracts will be re-seeded and returned to their natural state”.

Response: This note has been added.

Please add the width and surface type of all trails to be constructed with this filing.

Response: Notes have been added to show surface widths and materials of all trails.

Please add a note as to when this landscaping will be completed including the street trees.

Response: A note has been added that the ultimate streetscape landscaping to be developed with construction of ultimate bayou gulch road build-out (n.i.c.). Trees will be installed outside of the ROW so when the future road gets widened the trees will not be damaged.

As this sidewalk continues south along Bayou Gulch Rd. when will it be constructed.

Response: A sidewalk has been added to continue along Bayou Gulch to Scarlett Sage Ave.

This area looks to be within the Filling 1 landscape area. If so, please show proposed landscaping. If not, please remove from the landscape area or add a note as to when this landscaping will be completed.

Response: The landscape in this area was part of Filing 9. This has been revised to be part of Filing 1.

Sheet L1.1

Please add a label identifying the type of trail with width and construction material.

Response: This label has been added.

Please see previous page for note to be added regarding natural state vegetation.

Response: *a note has been added to this page that “These tracts will be re-seeded and returned to their natural state”.*

Sheet L1.2

What is this weird area? Is this part of Filing No. 1 or outside of it?

Response: *Areas that don’t have a hatch are areas that are undisturbed. This label has been added to all the sheets.*

All landscaping proposed outside of the future ROW will need to be planned. In addition, seeding will be required to be installed in the areas within the ROW that are disturbed.

Response: *Landscape outside of the ROW has been added. The landscape in this area was part of Filing 9. This has been revised to be part of Filing 1.*

Per the Town of Parker Construction Specifications and Design Considerations for Parks, Trails and Streetscapes, the street tree area should consist of trees and traditional turf grasses. The Town understands that the streetscape area along Bayou Gulch has been expanded. Traditional turf grass should be used adjacent to the roadway to create a consistent edge with seed used after a certain distance.

Response: *Per the Annexation agreement; section e) Design and Construction of Chambers Road South of Crowfoot Valley Road. (vi.) Separation Buffer “The separation buffer described herein may be left in a natural, non-landscaped, non-irrigated condition.”, however, we have added irrigated sod in some areas along the streetscape along with irrigated native seed, trees and shrubs in the buffer area.*

What seed mix will this consist of?

Response: *The seed mix that will be temporarily irrigated has been added to sheet L0.1 and is an approved seed mix from the Town of Parker.*

Sheet L1.7

The required streetscape standards will need to be satisfied within this area. Please revise plans.

Response: *Streetscape trees have been added where the future ultimate tree lawn will be located, however there is no certainty that the trees will not be damaged when the ultimate Bayou Gulch expansion happens.*

Sheet L1.8

All landscaping along the future Bayou Gulch Road shall be installed to meet the Town of Parker streetscape design requirements and shall be placed at the location intended at time of full buildout.

Response: *Streetscape trees have been added where the future ultimate tree lawn will be located, however, there is no certainty that the trees will not be damaged when the ultimate Bayou Gulch expansion happens.*

Sheet L1.11

Is a Parker style light also being proposed in this median?

Response: *A light has been added in this median. See engineering plans.*

Sheet L1.12

Please identify all light poles within the island.

Response: *All light poles have been labeled in medians.*

Sheet L1.13

When is this section of landscaping to be completed? Please add a note similar to previous notes on the landscape plan which state the filing to be completed within.

Response: *A portion of this section of landscaping will be installed with filing 1 outside of the ROW The additional landscape will be installed when the Ultimate buildout is constructed along Crowfoot Valley Rd.*

Are these Parker Light Poles?

Response: *These are Parker Light Poles and are now labeled.*

Sheet L1.14

Are there any trees, shrubs, grasses, etc to be located within this open space/trail area?

Response: *There won't be any trees, shrubs, grasses, etc. to be located within this specific area except for existing trees and shrubs that will be preserved. All open space tracts have been landscaped in accordance with Town's open space landscape requirements with the exception of tracts with passive open space. These tracts with passive open space that are disturbed by construction are to be re-seeded with native seed and returned to their "original natural state where possible and appropriate" per Goal 10 of the town's Open Space, Trails and Greenway's Master Plan.*

Sheet L1.15

Will there be any trees, shrubs, grasses, etc located within these open space/trail areas?

Response: *There won't be any trees, shrubs, grasses, etc. to be located within this specific area except for existing trees and shrubs that will be preserved. All open space tracts have been landscaped in accordance with Town's open space landscape requirements with the exception of tracts with passive open space. These tracts with passive open space that are disturbed by construction are to be re-seeded with native seed and returned to their "original natural state where possible and appropriate" per Goal 10 of the town's Open Space, Trails and Greenway's Master Plan.*

Cost Estimate:

This cost estimate will need to be broken down into 2 separate estimate, 1 for open space and tracts and the 2nd for streetscapes and medians.

Response: *The cost estimate for filing 1 has been broken out into 2 separate estimates.*

The Monuments and signage do not need to be included within the landscape cost estimate.

Response: *The monuments and signage have been removed from the landscape cost estimate.*

Per the SIA, the total after contingency will need to be 110%.

Response: *The contingency has been changed from 15% to 10%.*

6. Comment: Per the Town of Parker Construction Specification and Design Considerations of Parks, Trails and Streetscapes traditional turf grass is required within the streetscape areas. The Town understands that in some areas the streetscape areas have been expanded. Traditional turf grass should be used along the edge of all roads to create a consistent look and then seed can be used to fill in those areas that exceed the streetscape minimum area.

Complied: Yes No

Response: *Turf grass is used along all internal streetscapes. The amount of turf grass used along N. Pinery Parkway has been expanded. Per the Annexation agreement; section e) Design and Construction of Chambers Road South of Crowfoot Valley Road. (vi.) Separation Buffer "The separation buffer described herein may be left in a natural, non-landscaped, non-irrigated condition.", however, we have added irrigated sod in some areas along the*

streetscape along with irrigated native seed, trees and shrubs in the buffer area.

7. Comment: All open space tracts which are dedicated as part of Filing No. 1 shall be landscaped. Town staff understands that the majority of the open space tracts will be re-seeded with native seed and returned to their original state, but any areas which will not be returned to their original state will need to be included on the landscape plan.

Complied: Yes No

Response: All open space areas that will be enhanced with landscape have been added to the landscape plans.

8. Comment: Please note that all proposed signs will require a separate permit through the Town of Parker prior to installation. Signage is not approved as part of a Final Plat.

Complied: Yes No

Response: Acknowledged.

Crowfoot Valley Road

9. Comment: Your comment response states that a 12 foot wide trail has been added along Crowfoot Valley Road for the interim instead of construction and 8 foot wide sidewalk. What plans is the 12 foot trail located on? What surface material will this trail be constructed of?

- A sidewalk/trail will be required to be constructed with Filing No. 1 along Crowfoot Valley Road to provide access for this subdivision as well as others within the area along Crowfoot Road. Once the Town has reviewed your proposal additional comments on this trail may be submitted.

Complied: Yes No

Response: The trail was originally meant to be a 12' wide soft surface access road along Crowfoot Gulch doubling as a maintenance access. The trail has been revised to show a 10' wide concrete trail.

10. Comment: Streetscape will need to be provided along Crowfoot Valley Road 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: Trees have been added along Crowfoot Valley Road outside of the future ROW.

General

11. Comment: Attached to this memo is the standard Subdivision Agreement Form with the Financial Guarantee. Please review this agreement and let us know if you have any questions.

Complied: Yes No

Response: Acknowledged.

12. Comment: Attached to this memo are the additional conditions that will be added to the Subdivision Agreement that will be required to be satisfied. Please review these conditions and let us know if you have any questions.

Complied: Yes No

Response: Acknowledged.

OUTSIDE REFERRAL AGENCY COMMENTS

13. 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: Acknowledged. All outside referral agency comments have been addressed. Written responses are below.

PARKER COLORADO ENGINEERING DEPARTMENT – Engineering 2nd Review

Alex Mestdagh, P.E. Engineering Services Manager

David Aden, P.E. Traffic Engineer

Jacob James, P.E. Stormwater Manager

Kurt Patrick, P. E. Stormwater Engineer

Tyler Sandt, Development Review Engineer

Cc: Tom Williams, P.E. Director of Public Works and Engineering

TRAFFIC AND ROADWAY REVIEW COMMENTS

General Comments:

1. Comment: Per previous comments, please provide all applicable federal 404 permits required for work within Lemon Gulch.

Response: Pre-construction Notification (PCN) has been submitted to USACE. Permits have been obtained and included with this submittal.

Final Plat

2. Comment: Per previous review, please dedicate sidewalk easements over any sidewalk not within the right-of-way.

Response: Per conversations with the town, Tract language has been added to allow sidewalks in tracts where this condition exists.

Public Improvements Cost Estimate

3. Comment: Update the cost estimate with any changes to the plans.

Response: Cost estimate has been updated.

4. Comment: Please clarify what the “Special Sign” line item corresponds to.

Response: Special signs are various signs other than stop and street signs. This has been clarified in the estimate.

Landscape Plans

5. Comment: Remove the Town’s engineering signature block from the cover sheet.

Response: Town’s engineering signature block has been removed.

Traffic Study

Comment: See Traffic Study comments on eTrakit.

Response: Per conversation with Alex Mestdagh, there are no traffic comments.

Construction Plans

6. Comment: The auxiliary lanes on Crowfoot Valley Road do not comply with CDOT access code. The required acceleration and deceleration lane lengths for a 50 MPH NR-B are 760 feet and 500 feet respectively. A taper transition ration of 15:1 is also required.

Response: Acceleration and deceleration lane lengths have been modified to 760 and 500 feet respectively.

7. Comment: Please revise the crosswalks at Bayou Gulch and Scarlet Sage to be continental with 2'x10' bars.

Response: Colored concrete crosswalks have been revised to continental crosswalks per discussions with engineering and planning.

8. Comment: Add crosswalks to the north side of the Scarlet Sage Ln – Scarlet Sage Ave intersection, the north and south sides of the Scarlet Sage Street – Scarlet Sage Ave intersection, and the east side of the Shasta Daisy St – Scarlet Sage Ave intersection.

Response: Crosswalks have been added to the plans in Filing 1.

9. Comment: Please clarify how flows on the unbuilt portion of Bayou Gulch will be accommodated in the interim.

Response: Two (2) 12" Nyloplast yard drains have been added to the storm drain system near the corner of N Crowfoot Valley RD and Bayou Gulch road. These drains will capture flow from sub basin A15 during the interim and ultimate conditions. Manhole SDMH-126 will be replaced with a 15' inlet during the ultimate condition. The 12" yard drains will remain to collect flow from the sidewalk and sub basin A15.

10. Comment: Per previous review, include 2 and 100-year HGL's on all storm sewer profiles. Several profiles are missing the 100-year.

Response: Missing HGL's have been added to storm sewer profiles. All storm sewer infrastructure designed only for the 2-year storm will not display a 100-year HGL. See note #18 on Sheet 2. Notes have also been added to the plan sheets.

11. Comment: Show the RCP on the Bayou Gulch storm lateral (Sheet 65).

Response: RCP is now shown on the lateral.

12. Comment: The triangular forebay in Pond A does not comply with Town criteria. However, the Town will accept the forebay if access can be provided per Figure 7.1 in the SDECM.

Response: A forebay access ramp has been detailed on Sheet 92.

13. Comment: Revise the Pond A trickle channel to not have such an extreme turn near the initial surcharge area.

Response: Trickle channel has been revised.

14. Comment: Please revise the forebays so that the wingwalls tie directly into the forebay walls and there is no wall between the baffles and the rest of the forebay.

Response: Forebay has been revised.

15. Comment: Shift the east forebay in Pond B so that the eastern leg of the trickle channel does not change direction at such an extreme angle.

Response: Forebay has been revised per conversation with the town.

16. Comment: On the Outlet Structure and Initial Surcharge Plan, show the minimum 3.5" by 18" minimum opening in the standard bar grating as shown in Figure 7.5.

Response: The outlet structure plan has been revised.

17. Comment: The slope on the outlet structure profile view is being shown as 3:1 or 4:1. Please revise to only show 4:1.

Response: Slope has been revised.

18. Comment: Label orifice hole elevations on X-Section B-B.

Response: Elevations have been revised.

19. Comment: Show the pond slopes adjacent to the trickle channel as 4% minimum per Figure 7.3 in the SDECM.

Response: Slope callouts have been revised.

20. Comment: Revise the riprap in the Pond B emergency spillway to be type M and adjust the depth accordingly.

Response: Riprap has been revised.

21. Comment: Please consider revising the dimensions of the Pond B outlet structure to make compliance with Town's maximum grate size (3' x 4') more feasible. For example, the grating over the secondary chamber might be difficult since it's being shown as 4' x 4' and the maximum grate size is 3' x 4'.

Response: Per revised grate detail, maximum grate size is 3'x4'. The contractor will use two 2'x4' grates.

22. Comment: The flows conveyed by the swale on the south end of the property, south of Rose Mallow Ave, should be collected by an area inlet and conveyed to the pond.

Response: Manhole has been modified to an area inlet and grading has been revised to capture flows.

23. Comment: Please clarify the drainage patterns of the northern trail.

Response: Two (2) 12" Nyloplast yard drains have been added to the storm drain system near the corner of N Crowfoot Valley RD and Bayou Gulch road. These drains will capture flow from sub basin A15 during the interim and ultimate conditions. Manhole SDMH-126 will be replaced with a 15' inlet during the ultimate condition. The 12" yard drains will remain to collect flow from the sidewalk and sub basin A15.

24. Comment: Access must be provided at the Pond A outfall.

Response: Access has been provided to the area downstream of the Pond A emergency overflow.

25. Comment: Access must be provided to the outlet structures at Ponds B and D.

Response: Per meeting with the Town of Parker, the pond embankment will serve as the maintenance path along the top of the pond. The soil riprap at the emergency overflow was deemed an acceptable surface for maintenance vehicles to travel upon.

26. Comment: Micropool appears to extend beyond the outlet structure into the trickle channel, the micropool WSE should be kept completely within the outlet structure.

Response: Outlet structure has been adjusted to keep the micropool WSE within the outlet structure.

27. Comment: Please note that handrails are not required on outlet structures unless deemed necessary by the engineer. Are handrails needed on all the outlet structures?

Response: Handrails are not needed on the outlet structures and have been removed from the outlet structure detail.

28. Comment: Dimensions on Section B-B are not the same as the plan view of the outlet structure.

Response: Dimensions have been updated.

29. Comment: Add details for all grating on the outlet structure. The close mesh grate doesn't appear to be the correct size for the structure. The close mesh grate also does not meet our coarse bar grate standards.

Response: A course and standard bar grate detail has been added to the pond sheets.

30. Comment: Ensure all grates are set into the walls flush with the top of the wall of the outlet structure instead of bolted to the top of the walls.

Response: Additional detail has been provided adjacent to the outlet structure detail showing the grate level with the top of the wall. Bolts have been removed.

31. Comment: The emergency spillway protection needs to extend down to the bottom of the embankment, please show this on the plan view.

Response: Spillway protection has been extended.

32. Comment: Show the cutoff wall location on the plan view of the pond.

Response: Cutoff wall locations have been added.

33. Comment: Show the limits of, and clarify the material being used in the initial surcharge areas. Only Pond A should have a hard bottom.

Response: Pond A initial surcharge area has been specified to have a concrete bottom. Ponds B and D initial surcharge basin are to have a vegetated bottom. Please refer to the additional notes added to the pond sheets discussing the specific material to be used.

34. Comment: Show detail of trickle channel connection to initial surcharge area in Pond A.

Response: Connection detail has been added to the Pond A detail sheet.

35. Comment: It appears the Pond A outlet pipe is a box culvert, however, the drawings have some references to a circular pipe. Please clarify which is proposed and why a box is necessary rather than an equivalent sized pipe. The Town and District prefer circular pipe.

Response: A 4'x4' box culvert is being proposed because it will allow for a smaller headwall at the outfall in comparison to using a pipe with an equivalent cross sectional area.

36. Comment: Add a concrete apron at the entrance to the 6' x6' RCBC under Crowfoot Road.

Response: Concrete Apron has been added.

37. Comment: Show the proposed grade in the storm profile for North Pinery Parkway North Channel Outfall on page 67. Also show utilities in the profile such as the proposed water line.

Response: Proposed grade and utility crossings have been added to the profile.

38. Comment: Call out the toe wall on the FES for Wild Lupine Street Outfall profile on page 73. Also call out proposed riprap limits extended from FES to the drop structure edge eliminating the "gap" between the FES and the drop.

Response: FES and riprap have been revised.

39. Comment: All sculpted concrete drops need to be wider to accommodate adequately sized stilling basins. The proposed layout does not provide 2' of elevation containment around the entire stilling basin. The drop structure layout tables also do not appear to have correct elevations, for example point #12 shows an elevation of 6026.095 in the table, however, the grading suggests the elevation is between elevation 6027 and 6028. This appears to be the case for numerous points on every drop structure.

Response: The stilling basin width has been widened to match the width of the drop crest. The grading and table elevations have been updated to reflect the modified drop structures.

40. Comment: Call out staining and stamping as the concrete finish for all sculpted concrete drop structures.

Response: Staining and stamping has been called out.

41. Comment: Please provide length call outs for leading riprap and trailing riprap for sculpted concrete drop structures. There should be 8 feet of riprap upstream and 10 feet of riprap downstream per UDCD Volume 2 Criteria.

Response: Riprap length callouts have been added to the drop structure plan view and are also displayed in the typical cross section detail on Sheet 88.

42. Comment: Per UDFCD Volume 2 Criteria section 2.2.1, drop structures shall be located within tangential sections of drainageways. Please revisit drop 6 as it relates to UDFCD Criteria and look into placing the drop downstream at the entrance to the 6'x6' RCBC. This will also alleviate the need for an apron at the box culvert entrance as this will be stabilized with a sculpted concrete drop structure.

Response: SCDS #6 has been relocated to the entrance of the 6'X6' RCBC.

Stormwater Review Comments

Final Drainage Report

43. Comment: Neither Town staff nor Urban Drainage could verify the detention pond calculations. Per previous review, it appears an outdated version of UD Detention is being used. The basin information can be filled out directly in the workbook and the developed hydrograph obtained from the CUHP/SWMMM model should be imported into UD-Detention. This methodology allows the user to calculate the 100-year volume with CUHP/SWMMM; while the workbook calculates historic flows and orifice sizing.

Response: Basin information has been entered into UD-Detention to calculate historic flows and orifice sizing. The hydrograph from the CUHP/SWMM model has been imported into UD-Detention to be used to calculate the 100-year volume and WSEL.

44. Comment: Clarify the emergency overflow path of Pond B.

Response: Pond B sheet updated to show overflow riprap and outfall details.

45. Comment: Update the drainage map and calculations to include the new cul-de-sac at the southwest edge of the property.

Response: Drainage map and calculation updated for cul-de-sac.

46. Comment: Please update the major basin lines to specify which areas are draining to Ponds C and D.

Response: Major basin lines updated to represent each basin

47. Comment: Delineate basins for all areas of the development that release flows from the site undetained and adjust the pond calculations per the compensatory storage requirements outlined in Section 7.2.4 of the SDECM.

Response: Detention provided for all developed areas from project site.

Sediment and Erosion Control

48. Comment: Show silt fence or sediment control log down-gradient of all disturbance.

Response: Silt fence or sediment control log have been shown down-gradient of all disturbance.

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

Response: Debris and trash control is now shown on all roadways.

50. Comment: Add a note that sediment control BMPs may be necessary along lot lines during home construction.

Response: Note has been added.

51. Comment: Please show the TSBs on the initial plan, as we will require they be installed immediately after construction begins.

Response: TSBs have been added to the initial plan.

52. Comment: Final plan needs to show exactly which streets and sidewalks will be completely installed and which will be only rough graded.

Response: Roads that will be completely installed are now shown. Roads that will rough graded have been frozen.

53. Comment: Add a note stating that lot protection is required on all residential lots prior to issuing a certificate of occupancy.

Response: Note has been added.

54. Comment: Show erosion control blanket on both sides of the trickle channel in the detention ponds.

Response: Erosion control blanket has been added to both sided of the trickle channel.

55. Comment: Show outlet structure protection in the detention ponds.

Response: Outlet structure protection has been added.

56. Comment: Show rough cut street control on all streets that will not be paved.

Response: Rough cut street control has been added.

57. Comment: Show erosion control blanket on all slopes steeper than 4:1.

Response: Erosions control blanket has been added to all slopes steeper than 4:1 on all areas other than temporary lot grading.

PARKER WATER & SANITATION DISTRICT

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 wet stamped and signed Engineers Estimate with a 20% contingency must be submitted for verification and District approval. The approved document will be an Exhibit for the Standard Improvement Agreement and Letter of Credit. This has been submitted but will need to be revised based on the latest comments.

Response: A wet stamped Engineers Estimate with 20% contingency has been submitted with this submittal.

- 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 agreement, Irrigation tap fees, and mylars signed by a Town of Parker life safety official are required to be submitted for plan approval.

Response: Acknowledged.

- Comment: All wellsite documentation must be deeded to PWSD before approval. Please callout all proposed wellsite's on the plans.

Response: Acknowledged. Well sites have been called out in the plans per coordination with Jarod Baylie.

Plan Review Design Comment

- Comment: On sheet 4 please extend the water main by stubbing it out into Future Chambers Road. Also for the sanitary sewer please change the two 45 degree manholes to a one 90 degree manhole and stub out a sanitary sewer line to future Chambers Road.

Response: The water main and sanitary main have been stubbed for future chambers road.

- Comment: On sheet 4 call out in bold future PWSD wellsite.

Response: All PWSD wellsites have been shown and called out in bold.

- Comment: On sheet 5 please call out the sanitary sewer mains size. Please call out each tie in location to PWSD existing mains.

Response: Main sizes and tie ins have been called out.

- Comment: On sheet 6 please call out a 16X1X16 tee with a 16x12 reducer. Please stub out to the west to future Chambers Road with a blow off valve at the end of the stub. Also change the two 45 degree invert manholes to one 90 degree manhole and add a stub out to future Chambers Road.

Response: Call out has been modified and stubs to future Chambers Road have been added.

- Comment: On sheet 6 the proposed sanitary sewer main is mislabeled. Please relabel the main as sanitary sewer not water line (WL).

Response: Callout has been modified.

- Comment: Please call out all fire hydrants as FH rather than HA.

Response: All Hydrant call outs have been modified.

- Comment: On sheet 7 please add a gate valve between TC-HA6 and TC-BO1.

Response: Gate Valve has been added.

- Comment: On sheet 8 at the North side of Bayou Gulch Rd. callout match line/connection to sheet 10 for the proposed sanitary sewer line.

Response: These sheets do not match up. Matchlines on sheet 7 have been modified to show relation between these 3 sheets.

- Comment: On sheet 8 in the Southside of the intersection of Rose Mallow Ave and Birds Foot Ave please number the gate valve.

Response: Number has been called out.

- Comment: On sheet 9 there are multiple manhole callouts missing along Rose Mallow Ave.

Response: Callouts are now shown.

- Comment: On sheet 9 gate valve TC-GV123 needs to move to the south approximately near the 8" 11.25 degree bend to prevent more than 15 houses being put out of service. TC-GV124 will need to be moved north to right after (north side) the 8" x 8" tee to prevent more than one fire hydrant being put out of service.

Response: Valves have been moved.

- Comment: On sheet 10 please show and callout connection to sheet 8. PWSD does not understand how sheet 8 and 10 are connected, it seems like some plans are missing.

Response: These sheets do not match up. Matchlines on sheet 7 have been modified to show relation between these 3 sheets.

- Comment: On sheet 10 please ensure all manholes are called out on the proposed sanitary sewer main. Several manholes are not called out on sheet 10.

Response: Manhole callouts have been added.

- Comment: On sheet 10 the gate valve just north of TC-CBO33 is not numbered please number the gate valve. Please also callout the gate valve between TC-HA50 and TC-HA51. Please call out all sanitary sewer stub outs with caps to future development.

Response: Gate valve callouts have been added.

- Comment: On sheet 10 please explain what the callout structure 613 is. The callout is located just north of TC-GV211.

Response: Callout has been modified.

- Comment: On sheet 10 the match line sheet 12 callout is incorrect. Please revise the callout to the correct callout sheet 15.

Response: Callout has been modified.

- Comment: On sheet 11 please add a 16x16x16 tee, a gate valve and stub-out to future Chambers Road. Please move manhole TC-SSMH-1 to the south to eliminate the 45 degree invert and stub out from the manhole an inlet to Future Chambers Road.

Response: Callout has been modified and stubs added for future chambers road.

- Comment: On sheet 11 in the bottom plan of Crowfoot from STA 72+00 to STA 82+00 why does the proposed 30' PWSD Easement overlap the 133.2 existing ROW?

Response: Callout has been modified to show only ROW.

- Comment: On sheet 11 please call out the pipe size of the proposed sanitary sewer main South of TC-SSMH-OS-19. Also please call out the catch-line to the South for this main.

Response: Pipe size and matchline have been called out.

- Comment: On sheet 12 bottom plan near Stroh Rd. please show and call out PWSD existing 30" WL and 48" WL on the plans. Please call out the Tee as a 16"16"x16"

Response: Existing waterlines have been called out on the plan and callout for Tee modified.

- Comment: On sheet 13 please call out all the proposed 50' PWSD easement as 50'PWSD Non-Exclusive Easements. On the plans they are called out as exclusive easements.

Response: Callouts have been modified to 50' Non-exclusive easements.

- Comment: On sheet 13 the match-line (match-line-sheet 14) is callout in the center plan view incorrectly, it should say, see below.

Response: Matchline has been modified.

- Comment: On sheet 16 as the previous comments indicated, please stub out and extend both the proposed water main and sanitary sewer main into the future Chambers Road. To do this on the sanitary sewer main extend TC-SSMHO1 to the South.

Response: Stub outs have been added for Future Chambers Road.

- Comment: On sheet 16 please show and callout the water and storm line crossing with pipe size in the profile.

Response: Crossings have been added.

- Comment: On sheet 17 please profile the sanitary sewer stub-out running out of SSMH-120 for future filing.

Response: Future Filing stub has been profiled.

- Comment: On sheet 18 please callout encasement of sanitary sewer line in the plan view.

Response: Encasement of Sanitary Sewer has been shown in plan view.

- Comment: On sheet 19 SSMH-82 callout shows Hop Clover St, please correct the call to show Hop Clover Ave.

Response: Callout has been modified.

- Comment: On sheet 19 in the profile please explain to PWSD what PVC STA & PVC ELEV means it is called out two times on this sheet.

Response: PVC has been modified to BVC for begin vertical curve.

- Comment: On sheet 20 please place the profile of Hop Clover Street STA 16+50 to 18+00 on sheet 19 if there is enough space.

Response: Profile has been moved.

- Comment: On sheet 21 please callout in the profile for SSMH-18, SSMH-19, and SSMH-20 see sheet 25 for lateral stub outs.

Response: Note added to manhole labels for lateral stub out profiles.

- Comment: On sheet 21 the Storm crossing shown in the profile are called out as SS crossings. Please revise to call them out as storm crossings not SS (sanitary sewer crossings).

Response: Crossing labels have been revised.

- Comment: On sheet 22 please callout SSMH-25 in the plan view.

Response: Callout has been added.

- Comment: On sheet 24 please call out both encasements on the sanitary sewer main in the plan view. Also please callout block numbers in the plans to avoid confusion.

Response: Encasements and block numbers have been added to the plans.

- Comment: On sheet 26 please call out the 2nd storm crossing in the Shasta Daisy St. profile.

Response: Crossing label has been added.

- Comment: On sheet 27 in Bayou Gulch Rd. please callout the South match-line sheet.

Response: Matchline has been added.

- Comment: On sheet 28 please profile the lateral stub out coming out of SSMH-183. Also callout the water line stub-out crossing in the profile.

Response: Stub has been profiled and crossing has been called out.

- Comment: Please redo sheet 29 it is missing the plan view. Also PWSD no PWSD no longer will require an intermediate platform for SSMH-242.

Response: Plan view has been recreated and intermediate platform has been removed.

- Comment: On sheet 29 storm crossings are called out in the profile but not in the plan view. Please ensure that all relevant crossings are shown in both the plans view and profile view. Also the water line crossing at approximately STA 22+10 is not called out.

Response: Filing 9 storm drain and water crossing have been added.

- Comment: On sheet 30 in plain view place callout match-lines. Also there seems to be plot issues on the right side of the plan view, please revise.

Response: Matchlines have been added.

- Comment: On sheet 31 are SSMH-75 and SSMH-196 necessary? PWSD feels these manholes may not be needed.

Response: SSMH-75 and SSMH-196 have been removed.

- Comment: On sheet 32 in the plan view please show the storm crossing at STA 18+18.36. Please profile each sanitary sewer stub out to future fillings or call out the sheet number of the profile.

Response: Filing 9 Storm drain has been shown in the plan view. Sheet numbers of the stub profiles have been added.

- Comment: On sheet 32 in the profile please explain what PVC STA & PVC ELV mean. Why is stub-out from SSMH-157 and the pipe it is attached to called out as existing, please revise. Please profile each of the stub-outs or call out what sheet the stub-out profile is on.

Response: PVC STA and PVC ELV refer to the vertical curves of the roadway. These have been changed to BVC for begin vertical curve to avoid confusion.

- Comment: On sheet 35 as mentioned on the earlier sheets please extend and stub-out the sanitary sewer main into Future Chambers Rd.

Response: Water and Sanitary have been stubbed out to Future Chambers Rd.

- Comment: On sheet 36 what is the dashed line running north to south between STA 22+00 and 23+00?

Response: The dashed line is the south 1/2 Section line, Section 4.

- Comment: On sheet 37 please callout the existing easement as PWSD easements and if possible show the record number.

Response: Easement has been called out as existing and a line left for the record number to be filled in when known.

- Comment: On sheet 37 & 38 please remind PWSD why a 50' non-exclusive easement is necessary for the single 18" sanitary sewer main.

Response: A 50 non-exclusive is needed for potential phasing of development of the Meadowlark site.

- Comment: On sheet 38 please explain what the dashed line in the plan view running East to West between STA 44+00 and 45+00 is.

Response: The line is the east ½ Section line, Section 4.

- Comment: On sheets 39 and 40 why is the 50 PWSD easement called out as an exclusive easement. All PWSD 50' easements should be called out as non-exclusive.

Response: Callout has been changed to 50' non-exclusive.

- Comment: On sheet 41 please callout the north easement callout as a 50' PWSD non-exclusive easement.

Response: Callout has been added.

- Comment: On sheet 41 callout all manhole numbers in the plan view, some are missing. Please call out the size of the proposed sanitary sewer main running south out of SSMH-OS42.

Response: Callouts and proposed size have been added.

- Comment: On sheet 41 and 42 it does not appear there is PWSD's required 4.5' of cover on the proposed main South of SSMH-OS-46. Please confirm cover depth.

Response: Pipe has been lowered to ensure 4.5' of cover.

- Comment: On sheet 44 please remove intermediate platform callouts PWSD no longer requires them for manholes less than 30' deep. Please callout SSMH-OS-56 in the plan view.

Response: Intermediate platforms have been removed.

- Comment: On sheet 45 please profile the stub-out.

Response: A callout for the sheet with the stub-out has been added.

- Comment: PWSD water quality sampling stations will be installed at PWSD discretion in this project. Please add PWSD water detail W6.2

Response: Detail has been added to the plans.

- Comment: On sheet 49 please extend the main to the West and stub-out into future Chambers Rd. Please add a gate valve to the stub-out.

Response: Main has been extended.

- Comment: On sheet 49 please call out TC-HA1 in the profile. Please callout all fire hydrants as FH rather than HA.

Response: Fire Hydrants are now called out as FH in the plan and profile.

- Comment: On sheet 50 please callout GV-256 in the profile.

Response: Gate Valve callout has been added to the profile.

- Comment: On sheet 50 please move TC-GV1 out of the curb and gutter.

Response: TC-GV1 has been moved out of the gutter.

- Comment: On sheet 50 please call out the match-line –sheet for the South side of Scarlet Sage Ave. On sheet 50 please show and call out the sheet number for the stub out from the 12"x 8" cross to the East is on. CBO6 is attached to this stub-out.

Response: Matchline and profile callout added.

- Comment: On sheet 51 please move both gate valves out of the curb and gutter.

Response: Gate valves have been moved out of the curb and gutter.

- Comment: On sheet 51 please callout the sheet number and match-line in N Pinery PKWY to the West.

Response: Matchline has been added.

- Comment: On sheet 52 call out the fire hydrant # in the profile. Please show storm crossing in the profile between STA 48+50 and STA 49+00.

Response: Fire hydrant number and storm crossing have been added.

- Comment: On sheet 52 please call-out the match-line sheet for the West side of Shasta Daisy Street.

Response: Matchline has been added.

- Comment: On sheet 52 it appears the sidewalk and curb and gutter shading shown in Bayou Gulch Rd. is not plotted correctly, please revise.

Response: Sidewalk and curb and gutter is shown correctly. The east half of Bayou Gulch will be built along the Cielo development. Only the sidewalk will be built on the west half in the interim condition.

- Comment: On sheet 53 an 8" x 12" tee is called out in the profile yet in the plan view it calls out a 12" cap with blow off. Please remove the tee callout, add a 12" gate valve and callout a blow off valve and 12" cap.

Response: Callouts have been modified.

- Comment: On sheet 54 please call out the Storm crossing between STA 12+50 and STA 13+00 in the profile. Please callout FH-05 in the profile.

Response: Storm crossing has been added and hydrant labeled in the profile.

- Comment: On sheet 54 please call out concrete encasement of the 8" proposed sanitary sewer line STA 16+79.47 also.

Response: Callout has been added for concrete encasement of sanitary line.

- Comment: On sheet 55 please callout on the plans what sheet the profile for the stub-out to filing 2 is on? Please callout FH7 in the profile.

Response: Sheet with profile and FH-7 called out.

- Comment: On sheet 56 please callout match-line sheet numbers for Bayou Gulch Rd. and Alpine Phlox St. Call out FH# in the profile.

Response: Matchlines added and FH called out.

- Comment: On sheet 56 please callout the storm crossing in the profile between STA 36+00 and STA 36+50.

Response: Crossing called out.

- Comment: On sheet 57 there are multiple storm crossings missing in the profile. Show and callout all crossings. Call out SS crossing at approximately STA 12+47 it is shown in the profile but not called out.

Response: Storm crossings have been added.

- Comment: On sheet 57 please callout match-line sheet # for the East and West side of N Pinery PKWY.

Response: Matchlines have been added.

- Comment: On sheet 58 please add a service line stationing table for the water service lines. Please call-out the fire hydrant number (FH#) in the profile.

Response: Service table and FH numbers have been added.

- Comment: On sheet 58 in the profile please show and callout 8"x8" tee at STA 27+89.93.

Response: Stationing has been changed to Rose Mallow Ave.

- Comment: On sheet 59 in plan view please call out the 22.5 degree bend at STA 28+63.08 Please call out FH# in the profile. Add a service line table for the water service lines on this sheet.

Response: Bend callout and FH numbers have been added.

- Comment: On sheet 60 add a water service line stationing table. Callout FH# in the profile.

Response: Service table and FH numbering has been added.

- Comment: On sheet 60 add a 8" gate valve at approximately STA 26+10. More than 15 house will be out of service if one is not added.

Response: Gate valve has been added.

- Comment: On sheet 62 please call out gate valve 213 in the profile.

Response: Callout has been added.

- Comment: On sheet 64 call-out N Pinery PKWY match-line sheet#. Call-out SS crossing in the profile between STA 31+50 and STA 32+00.

Response: Matchlines and crossing have been added.

- Comment: On sheet 65 call-out appropriate match-lines sheet#. Call-out FH#11 in the profile.

Response: Matchlines and FH number have been added.

- Comment: On sheet 66 Hop Clover St. please show and call-out the SS crossing. Call out FH#26 in the Shasta Daisy LN profile.

Response: There is no sanitary sewer crossing. FH number has been added.

- Comment: On sheet 67 call out storm line in the profile near STA 15+00. Please profile or call-out sheet# where profile is located for all water line stub-outs on this sheet. Please call-out and add gate valves to each stubbed-out water line. Call-out FH#'s in the profile. Call-out gate valve 291 in the plan view.

Response: Storm crossing called out. Stub profiles are called out. Gate valves have been added with callouts.

- Comment: On sheet 68 please add gate valves right after the 8" x 8" cross at STA 27+21.91 on the two stub-outs to future filing.

Response: Gate Valves have been added.

- Comment: On sheet 69 call-out FH#'s in the profile.

Response: FH numbers have been added.

- Comment: On sheet 70 please show 18” SD crossing at STA 18+18.36 in the plan view. Call out the Storm crossing shown in the profile. The crossing is shown but not called out. Call out FH#’s in the profile. Add a gate valve to the two proposed stub-outs on this sheet.

Response: Filing 9 Storm drain is now shown and called out and FH numbers are called out. Gate valves have been added to the stubs and called out.

- Comment: On sheet 71 show and call-out all storm lines in the plan view. Some crossings are shown in the profile but not in the plan view.

Response: Filing 9 Storm drain now shown in plan view.

- Comment: On sheet 71 all stub-outs to future filings will require gate valves to be added on them. Call out FH# in the profile.

Response: Gate Valves have been added to stubs.

- Comment: On sheet 73 please extend the 16” water to the NW side of the intersection in Bayou Gulch and Crowfoot and add a blow off valve for future line extension.

Response: Line has been extended.

- Comment: On sheet 73 please add an air-vac valve at approximately STA 10+10.

Response: Air Vac Valve has been added.

- Comment: On sheet 75 please add a temporary blow off valve to the stub-out at STA 37 +56.74.

Response: A valve and a temporary cap with blow off have been added.

- Comment: On sheet 76 is it possible to remove the two 90 degree bends at STA 41+44 & STA 42+09 and replace them with a 45 degree bend at STA 41+44.03 and a 45 degree bend near/before STA 43+00. PWSD prefers two 45 degree bends VS two 90 degree bends due to head loss.

Response: 90° bends have been revised to two 45° bends.

- Comment: On sheet 78 please verify the locations of the existing 30” water line and 48” water line. PWSD recommends pot holing.

Response: 30’ and 48” waterlines have been shown on the plans based on as built provided by the district. A callout to field verify prior to any construction has been added.

- Comment: On sheet 79 show and call out existing water line crossings in the profile.

Response: Existing waterline crossings have been shown. A callout to field verify prior to any construction has been added.

- Comment: On sheet 79 call out GV261 in the plan view.

Response: Gate valve has been called out.

- Comment: On sheet 83 profile the proposed water line between STA 28+16.52 and STA 27+71.52.

Response: Waterline is profiled on sheet 72. Note has been added.

- Comment: Please add PWSD water details sheets W5.8, W5.10, W5.11, W5.12, W5.14, W5.18 and 6.12.

Response: Details have been added to the plans. Note 6.2 not 6.12 per Drayton Sanderson.

- Comment: Please send a full size paper copy of the plans for PWSD to review on the next submittal.

Response: A full size paper copy of the plans has been sent to PWSD.

- Comment: On the profile sheets there are multiple instances where the storm sewer line crossing is miss labeled as a water line (WL). Please refer to sheet 18 profile view as an example. Please ensure all lines are correctly called-out.

Response: All profile crossings have been modified.

DOUGLAS COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT

Addressing Comments

Comment: I failed to state previously that all irrigation addresses will be 1/2 addresses when finalized (i.e., 17650-1/2 N. Pinery Pkwy).

Response: 1/2 addresses have been added to all irrigation meters.

Engineering Comments

Comment: No comment.

Response: Acknowledged.

Planner Comments

Thank you for providing the opportunity for Douglas County Community Development to provide comment. Douglas County Planning Services has reviewed the project for consistency with the Town of Parker and Douglas County Intergovernmental Agreement (IGA) and Comprehensive Development Plan. The proposal is within Region 1 of the Town Urban Growth Area and is required to comply with Section 5.0 of the IGA. Following review of the development requirements within Section 5.1, the proposal appears compliant with the IGA requirements for development within the Urban Growth Area adjacent to a community Separation Buffer Area.

Response: Acknowledged.

URBAN DRAINAGE AND FLOOD CONTROL DISTRICT, Morgan Lynch, PE, CFM

1. Comment: Please specify if the riprap located at the Pond A outfall is exposed or soil riprap. We would recommend soil riprap for this application. Please clearly call out the depth of riprap and provide a detail for the riprap being placed.

Response: Type M soil riprap has been specified. A general soil riprap detail has been added below the profile for the Pond A outfall.

2. Comment: Riprap placed in Lemon Gulch should be sized per UDFCD Criteria located in Volume 1, Chapter 8, Section 8.1 – Open Channels, Riprap Sizing.

Response: Acknowledged. See drainage report for calculations.

3. Comment: The typical sheet pile detail provided is not sufficient for construction. The cross-section should accurately display existing grade and dimension the structure based on site conditions.

Response: A separate plan/profile has been added to the Pond A details sheet.

4. Comment: At a minimum please place soil riprap downstream of the check structure. If future degradation occurs, the riprap may act as an interim condition to limit erosion at the structure.

Response: Soil riprap has been added.

5. Comment: Please provide a north arrow on the Pond A Outlet Structure Plan.

Response: North arrow has been added.

6. Comment: Please include a maintenance site plan for Pond A.

Response: Maintenance site plan to be provided upon Pond approval.

7. Comment: For the Pond A design table in the Final Drainage Report, please document surcharge volume.

Response: Surcharge volume has been documented.

8. Comment: The engineer is using an outdated version of UD-Detention. Benefits of updating to the new version include calculation of drain times for all events including calculation of drain time requirements for the new stormwater law. The workbook also develops a stage discharge table which will be required as part of notification via the portal. Please note that review of the calculations within the drainage report was not completed as part of this review.

Response: Basin information has been entered into UD-Detention to calculate historic flows and orifice sizing. The hydrograph from the CUHP/SWMM model has been imported into UD-Detention to be used to calculate the 100-year volume and WSEL.

9. Comment: Please provide stage, storage, discharge information for Pond A on the plans.

Response: Information has been added to the plans

10. Comment: Please extend the riprap protection along the emergency spillway to the toe of the embankment. Please call out the embankment slope.

Response: Riprap protection and callouts have been added.

11. Comment: On the emergency spillway section, please show how the soil riprap ties into the embankment.

Response: Soil riprap has been detailed on the plans.

12. Comment: Please show the maintenance access and any necessary easements to the forebay, micropool, well screen and Pond A outfall. Currently the detail for the forebay shows maintenance access, but this is not reflected in the grading and plan view.

Response: Information has been added to the plan. Easement encompasses the entire pond.

13. Comment: Please provide a design slope of at least 3% in the vegetated bottom of the basin (either toward the trickle channel or micropool).

Response: Per offline discussion following Town of Parkers standards is satisfactory.

14. Comment: Please place soil riprap downstream of the Pond A proposed forebay to provide overflow protection.

Response: Soil riprap has been added.

15. Comment: Please include a profile along the main flow path through the detention basin that includes information about the upstream pipe into the basin, the trickle channel, the outlet structure, and the culvert to Lemon Gulch.

Response: Each segment has been profiled separately. Upstream pipe to forebay and the outlet structure to Lemon Gulch are separate profiles. The initial surcharge basin has been hand graded with elevations portrayed via callouts on the Initial Surcharge Basin Plan View.

16. Comment: It appears that QEURV should be VEURV on Sheet 92.

Response: Callout has been modified.

17. Comment: Please update Q100 on Sheet 92 to state that this flow is the designed outflow of the pond.

Response: Q100 has been updated.

18. Comment: Please clearly label the micropool and initial surcharge basin on Pond A.

Response: Labels have been added.

19. Comment: Please verify the elevations labeled on the Initial Surcharge Basin and the cross-section A-A.

Response: Elevations have been verified.

20. Comment: Please clearly call out and detail the material proposed for the initial surcharge basin.

Response: Callout has been added for the proposed material.

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