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Memorandum

To: Ashley Chasez, Planner I

Date: April 28, 2023

From: Michael Walton, P.E., Senior Development Review Engineer

Cc: Alex Mestdagh, P.E., Engineering Services Manager
Tom Williams, P.E., Director of Engineering/Public Works

Subject: SP22-119 Trails at Crowfoot F9 AMD1 L1 - Gas Station– Engineering 2nd Review

The Engineering Department has reviewed the documents submitted with this application. The submittal consisted of the following documents:

<u>Document</u>	<u>Dated</u>
Construction Plan	March 2023
Site Plan	March 2023
Plat	March 2023
Traffic Study	March 2023
Drainage Report	March 2023

Thank you for the opportunity to review this application. Based on our review we have the following comments:

Traffic and Roadway Review Comments

The following comments concern traffic, access, roadway design, and construction standard issues for the subject property. They are based upon our review of the submittal documents in accordance with the criteria presented in the Town of Parker’s *Roadway Design and Construction Criteria Manual* (RDCCM), as revised, November 2020. Additional regulatory and planning documents may have been utilized in the review and are referenced in the comments where appropriate.

CONSTRUCTION PLANS – CIVIL

1. Please verify the scale on all sheets. Review Staff noted discrepancy between scale posted and scale measured on several sheets across the various plan sets.
2. Please show the construction of the Bayou Gulch Road sidewalk through the Lot 1 frontage. Please note while the response and labeling on the plans was noted for the original comment on this, the information provided does not reflect Town Staff’s understanding of what was discussed. While the full extents are not required to be built as part of this application, the extents along the frontage of Lot 1 are anticipated to be

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constructed as part of this application. Please clearly identify the extents required as part of this application's improvements on the plan. Please ghost in all other extents faded back to continue to show how the future walk is anticipated to tie-in to the extents required with this project.

3. Please ensure that adequate taper and storage lengths per the CDOT access code are provided for the proposed right turn lane for the access point along Bayou Gulch Road. Please note, this road is anticipated to be signed as 40 mph in the ultimate condition. Based on this there appears to potentially be additional storage provided but not enough taper length. While the additional storage length will be beneficial, some of said storage length may need to be transitioned into taper length to meet the necessary requirements.
4. The proposed access point along Alpine Phlox Street appears to still potentially conflict with the existing Type R inlet and necessary curb transition. While the shift in location was noted, it appears that the shift only provides 2.5-feet for the curb transition. Please note per the CDOT standard detail 3-feet of transition is required. If the existing conditions on site for said transition are a 2.5 rather than 3 feet transition, please let Town Staff know this. If this is not based on site verified values, please either verify the necessary separation on site or provide the minimum spacing required per the standard detail.
5. Provide signing and striping labeling on the appropriate preferred sheet. Response noting this was provided with the Site Plan noted, but please note that these callouts must be provided within the construction document set. Please also note that all signage should be labeled in accordance with MUTCD standard nomenclature.
6. Provide and identify street signage for all stop signs proposed at access points to public roadways.
7. Provide a do not enter sign on the site side of the right in only access point from North Pinery Parkway to ensure the intent of said access is clear to all drivers.
8. The response stating note was added noted, but the note was not located on the construction documents. Please ensure that the overall utility plan is provided in the Town CD set as well as the PWSD set and ensure the note is provided on both sheets. Provide the following note on the Overall Utility plan sheet in the PWSD construction set:

"The proposed utility connection within Town right-of-way will require a Town right-of-way permit prior to commencing work. The Town requires connections to be bored to the extent possible, and any street cut allowed by the Town will be required to be patched according to the Town's construction standards and details. The limits of patching will be determined by the Town at the time of construction. The Town of Parker does not allow roadway closures for utility work."

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SITE PLAN – CIVIL

1. Addition of sight triangles noted, but the sheet they are provided on is not adequately scaled to show the full sight triangle extents. Please provide a landscaping sheet scaled appropriately such that the full extents of the proposed sightlines are clear. Additionally, identify removal of any trees within the sight triangle extents, whether proposed as part of this project or not.

PLAT – CIVIL

1. Revised Plat documents noted as missing from this submittal. Please ensure all previous comments have been addressed and provide updated plat documents with the next submittal.

TRAFFIC IMPACT STUDY

1. Please add analysis for the left turns from the Douglas County intersection to the south of the site (Bayou Gulch Road/Vista Arroyo Street) as this is anticipated to be a full movement in the ultimate condition.

PUBLIC IMPROVEMENT COST ESTIMATE

1. Provide a public improvement cost estimate for review once the site plan gets closer to being finalized. Please note this comment will continue to be provided until receipt of a cost estimate to ensure this item does not unintentionally get overlooked in later reviews.

Stormwater Review Comments

The following comments concern drainage, erosion and sediment control, and non-point source pollution control issues for the subject property. They are based upon our review of the submittal documents against the criteria presented in the Town of Parker's, *Storm Drainage and Environmental Criteria Manual* (SDECM), as revised, February 2014. Additional regulatory and planning documents were utilized in the review and are referenced in the comments where appropriate.

CONSTRUCTION PLANS – ENVIRONMENTAL

GENERAL COMMENTS

1. Please note that the **CBMP Estimate** will be **required** and **reviewed** with the Grading Permit after all CBMP comments have been addressed and the final site plan is near approval.
2. Please add a note to **ALL** Erosion Control plan sheets stating:
“ANY ONSITE BULK FUEL STORAGE REQUIRES A FIRE LIFE SAFETY PERMIT FROM THE TOWN OF PARKER PRIOR TO INSTALLATION”. Contact Randy Capra at rcapra@parkeronline.org or 303-805-3163 for FLS Permit questions.

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3. Please provide the Town of Parker's legend of keys and symbols to correspond to the Town's 31 CBMP Notes & Details on the initial and interim/final Erosion Control plan sheets.

INTERIM/FINAL CBMP PLANS

4. Sediment Control Log (SCL) is required at back of curb and back of sidewalk immediately after installation of asphalt in roadways and parking areas. This includes landscape islands and all pedestrian walks. Please provide and identify (SCL) on the plans where needed. Note: if tree lawn/landscape areas are graded to final grade, Erosion Control Blanket (ECB) may be used to cover the entire tree lawn/landscape area instead of using SCL at back of sidewalk/curb.

CONSTRUCTION PLANS – STORMWATER

1. Please either move the screening wall a minimum of 5-feet back from the proposed storm sewer infrastructure or consider alternative locations for the storm sewer infrastructure to accommodate the potential future need for maintenance and repair of the storm sewer system. The response stating this had been addressed was noted, but please note that the screening wall along the northern extents of the property still appears to fall too close to the proposed storm sewer system.
2. Provide a section for the proposed swale to inlet 1 and identify the anticipated 100-year water surface elevation on the section. The response stating this has been provided within the report was noted, but please note that the detail should be provided on the plan sheets as well.
3. Please consider replacing the proposed stub into Lot 3 with an area inlet and identify diversion ditches (DD) to said inlet on the CBMP plan sheets to capture and convey flows from the lot in the interim condition. Please also identify said diversion ditches on the respective plan and profile sheet with a callout to the CBMP sheet to ensure this is appropriately coordinated on site. Lastly, while it is noted that the Master Report did not provide a separate means of conveyance for the flows in Lot 3, it would be the Town's preference to capture and convey the full extent of feasible flows to the requested interim inlet to help mitigate potential icing and erosion maintenance concerns along the extents of the sidewalk.
4. Two invert outs identified on the existing inlet profile label. Please verify all invert labeling.
5. Provide a separate plans and profiles for the storm sewer downstream of receiving flows from paved driving surfaces as this is the only extents of the system which will be reviewed and inspected by Town staff. Specifically, everything upstream of Inlet 1 on sheet C4.1 should be provided on either sheet C4.2 or its own independent sheet.
6. Provide the existing invert out of EX. STM MH-2 on the profile.

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7. Provide CDOT standard details for all proposed concrete storm sewer infrastructure. Response stating these had been provided noted, but please note review staff was unable to locate said details within the Construction Plan set provided.
8. Provide the Town's standard detail for manhole covers. The response stating these had been provided noted, but please note review staff was unable to locate said details within the Construction Plan set provided.

SITE PLAN – STORMWATER

1. Provide a minimum of 7-feet from any existing or proposed tree to the edge of any existing or proposed storm sewer infrastructure. Specifically noted as not provided between the existing tree and proposed storm sewer tie-in to the Existing Inlet along Alpine Phlox.

DRAINAGE REPORT

1. Provide the inlet management tab of the MHFD inlet calculation worksheet as well within the appendix of the letter.
2. Provide inlet calculations or highlighted and noted references for any existing inlets proposed to receive flows from the site. While this may have been assumed within the master study, actual values should be recorded with all drainage reports which anticipate impacting said infrastructure to provide the most accurate information possible for future designers.
3. Provide either additional inlets, an adequately sized sump, or a larger inlet to capture the full developed flow from the proposed access road prior to said flows being discharged offsite. Please coordinate with Town staff if this is not feasible and provide adequate calculations to show downstream capacity exists within the existing infrastructure.
4. Provide an additional basin for the proposed discharge offsite from the portion of the proposed access road along the southwest extents of the site. Additionally, provide inlet calculations or references showing capacity in the existing infrastructure proposed to receive these flows.

The submittal is not in general conformance with the Town of Parker's *Roadway Design and Construction Criteria Manual* and *Storm Drainage and Environmental Criteria Manual*. The submittal must be revised and re-submitted for review.

An attempt has been made to identify all of the items that do not meet the Town of Parker's design criteria; however, it remains the developer's responsibility to ensure that all criteria are met.

If you have any questions regarding the comments, please do not hesitate to contact the Engineering Department at (303) 840-9546.