



Your kind of place.

Memorandum

To: Stacey Nerger, Senior Planner
Date: December 20, 2022
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: SUB21-055 Lincoln Professional Park Filing No. 1 MDP – Engineering 1st 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 Documents	November 2022
Drainage Report	November 2022
Cost Estimate	November 2022

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 consider potential alternatives to consolidate the access points provided along the existing access drive off Lincoln Avenue. There are concerns with the safety impacts of providing the limited spacing proposed between access points along this private access drive and if feasible combining these into a single access point or having the secondary access provided along the proposed rather than existing access road would greatly decrease the safety risk at this intersection.

December 20, 2022

2. Provide a horizontal control plan for all roadways including the private drives to ensure adequate radii are provided around all proposed curves.
3. Please note a cross pan will be required at the Dransfeldt intersection. Please ensure this is clearly called out and detailed on the plans.
4. Please provide additional details on the roadway plan and profile sheets for how the proposed drive is intended to tie into the existing grades along Dransfeldt.
5. Provide all necessary details as shown on Town standard detail 31 for the provided intersection detail sheets.
6. Provide cross slope labels at regular intervals along the Dransfeldt widening on the flowline plan and profile sheets.
7. SHT 20: Revise note 3 to state that “The Town Requires Connections to Be Bored...” rather than prefers.
8. SHT 38: Remove the diagonal striping identified within striped medians in Dransfeldt.
9. SHT 38: Remove the Chevrons identified in the northern striped median on Dransfeldt and have the end of the median mimic the adjacent striped rounded median.
10. SHT 38: Extend the viewport to include the other side of the intersection at Lincoln Ave to ensure the through lanes are adequately shown and aligned.
11. Ensure all pedestrian ramps and approaching walks proposed meet all applicable ADA requirements.
12. SHT 39: Please consider use of Town standard detail 18 for the curb ramp proposed in the Dransfeldt Rd Site Access NE intersection plan. The attached walk would then need to be bumped out slightly to tee bone into the other walk just above the pedestrian ramp.

PUBLIC IMPROVEMENT COST ESTIMATE

1. Please note that all interior site improvements (ie. the detention pond, on site storm sewer, demolition of existing infrastructure interior to the site,...etc.) will not be considered public and will not be eligible for maintenance assistance through the Town. These items do not need to be financially secured and can be removed from the public improvement cost estimate. Please also note while these improvements will not need to be secured, they will still be required to be designed in constructed in accordance with all Town criteria.

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 add notes stating – “The VTC pad for a CWA does not need to conform to the formal VTC detail”, and “The true location of the CWA may be determined by the Town and the ECS”.
2. Show additional Portable Toilets (PTP) on the site, a site this size needs at least 3 Portable Toilets. Additionally, provide a note stating “The True location of the PTP may be determined by the Town and the ECS”.
3. The legend identifies hatching for the Debris and Trash Control (DTC) but no hatching is provided on the plans. Please either remove the hatching from the legend and increase number of labels provided in the plans or provide hatching in the areas where DTC will be required.
4. Provide text block callouts on the adjacent properties to identify “NO WORK SHALL OCCUR IN THIS AREA” to ensure that the note provided is not unintentionally overlooked by the contractor during construction.

INITIAL CBMP PLANS

5. Remove the proposed roadway, stormwater infrastructure, and lotting linework from the Initial CBMP sheet.
6. Provide and identify a Temporary Sediment Basin (TSB) at the northwest corner of the site and provide all necessary design information within a callout in accordance with UDFCD Vol. 3 as amended. Additionally, provide a Diversion Ditch (DD) along the western extents of the site to route the disturbed flows to the TSB through the overlot grading of the site.
7. Show Jersey Barriers or Construction Fence on the sides of the VTC to ensure use of the entire 50-foot pad. Make sure the 50-foot VTC is shown to the scale.

INTERIM/FINAL CBMP PLANS

8. Provide all notes to the Interim CBMP plan sheet as well.
9. Show ECB along both sides of the channel in the Detention Pond drawings.
10. Revise slope labels on the Final CBMP sheet to reflect the ratio rather than percentage to match those shown on the Interim sheet.
11. Please note that the Erosion Control Blanket (ECB) will be left in place following installation in the interim phase. Please remove shading from the ECB on the Final CBMP sheet to avoid potential confusion in the field on whether it should be left in place at final.

CONSTRUCTION PLANS – STORMWATER

1. Provide a minimum of 7-feet from any existing or proposed tree to the edge of any existing or proposed storm sewer. Specifically noted 4 trees at the northwest corner of the site as conflicting with this criterion.
2. Please note that all trees proposed within the extents of the detention facility must be planted above the 100-year water surface elevation to avoid drowning of the proposed landscape elements. Two trees appear to be proposed below this elevation on either side of the Forebay.
3. Provide a minimum of 1-foot from finished grade down to the major storm's HGL along all extents of the storm sewer proposed.
4. SHT 21: Manhole structure A1 missing from profile view.
5. SHT 21: Please upsize MH A3 to a 5-foot diameter structure to better accommodate the elliptical pipe size proposed.
6. SHT 21: Please consider alternatives to the 7-foot MH proposed for MH A1 as this will be potentially difficult and costly for the contractor to procure.
7. SHT 24: Provide a minimum of 0.2-feet of drop between any invert into a structure and the invert out of the structure. Specifically noted as not provided at Inlet F1.
8. SHT 26: Minor and major storm hydraulic grade lines missing from Storm Line I profile. The response stating that the inlet is simply being replaced and the design team does not see this as their responsibility to analyze was noted, but please note that the inlet is being replaced due to the expansion of Dransfeldt Road which will increase the flows generated to the system at this location. Given this and the fact that both the inlet and storm sewer are being replaced in the process, the hydraulic capacity should be reanalyzed to ensure adequate capacity is provided in the system as part of the overall improvements in this area. It is Town Staff's understanding that the existing basin information has already been provided for these areas and that only minor modifications will be needed to analyze the hydraulics, but please coordinate with staff if this information has not yet been provided.
9. Please consider utilizing only one trickle channel section and simply increasing the slope as needed to meet the top of the trickle channel curb line. Please note that the 4-percent slope noted on the Town's standard detail is a minimum requirement and steeper slopes are allowed.
10. Please consider revising the outlet structure provided to more closely reflect the standard outlet structure details provided in the Town's SDECM. Please also replace the trash rack proposed for the orifice plate with MHFD's standard well screen and provide all relevant MHFD well screen details.
11. Please note that the freeboard appears to be mislabeled in the profile view of the spillway. The freeboard is adequately shown and labeled on the section view. Please revise to

December 20, 2022

match. Please also note that only 1-foot of freeboard is required in this case and embankments should be adjusted as applicable to help minimize the embankment height around the pond.

DRAINAGE REPORT

1. Provide hydrologic and hydraulic analysis for all offsite Dransfeldt Road improvements. Please note this analysis should include evaluation of the ponding and spread at the two inlets receiving flow within Dransfeldt Road and Lincoln Avenue. It is Town Staff's understanding that the existing basin information has already been provided for these areas and that only minor modifications will be needed to analyze the hydrology and hydraulics, but please coordinate with staff if this information has not yet been provided.

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.