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Memorandum

To: Stacey Nerger, Senior Planner

Date: August 22, 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– Stormwater 4th Review

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

Document	Dated
Construction Plans	July 2022
Drainage Report	July 2022

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

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. Label and identify the ratio of all slopes that are 4:1 or greater. A response stated this had been addressed, but please note slope labels do not appear on the CBMP plan sheets. Specifically, several slopes 4:1 or steeper noted within the extents of the proposed pond.

INITIAL CBMP PLANS

2. Please note the Diversion Ditches (DD) to the proposed inlets will not be viable until the interim phase. Please remove said control measure from the initial CBMP plan.

INTERIM CBMP PLANS

3. Provide and identify Erosion Control Blanket (ECB) on all slopes steeper than 4:1. Specifically noted slopes of 3:1 along the western bank of the proposed pond as missing ECB.
4. Provide an additional Diversion Ditch (DD) to direct the flows from Basin C (Lot 1) to design point 7 to help mitigate against erosion along the proposed access road stub out.
5. Please note it was previously assumed by Town staff that Diversion Ditches (DD) would be provided to route the flows from Basin A (Lot 3) and Basin F (Lot 6) to design point 8 where they would be received by the temporary inlet and conveyed across the site through the proposed storm sewer system. With the extension to the proposed roadways, this is no longer a feasible option. Please either provide stubs with temporary inlets for these basins, or alternatively provide chase drains across the proposed sidewalks at each basin's respective design point and then size the receiving roadway inlets to accommodate these lots' flows.
6. Please note the Sediment Control Log (SCL) extents appear to reflect a previous revision of the design extents for the road stubs to the east and south of the project. Please adjust the SCL extents to reflect the full extents of the proposed roadways.

CONSTRUCTION PLANS – STORMWATER

1. Provide and identify the storm sewer on the proposed landscaping plan. Provide a minimum of 7-feet from any existing or proposed tree to the edge of any existing or proposed storm sewer.
2. SHT 25: The invert out of Manhole E1 is higher than the inverts into the structure. Please revise such that a minimum of a 0.2-foot drop is provided from any invert into a structure down to the invert out of the structure.
3. SHT 25: Minor and major storm hydraulic grade lines missing from Storm Line I profile.
4. Please note it is the Town's preference for the maintenance access path to come off Private Drive Road A rather than Lincoln Avenue. Lincoln Avenue is a very busy road with limited access from the east to the proposed maintenance access location. The Town's maintenance staff also prefers entering along a frontage with attached rather than detached walks to minimize impacts to landscaping while performing maintenance activities. Please consider revising the access path location to Private Drive Road A.
5. SHT 28: Please update notes 5 and 6 from the general notes to match those provided on SHT 27.
6. Please verify that the proposed retaining wall meets the requirements of SDECM section 7.3.13. Specifically noted the bottom of wall elevation falls below the EURV, adequate spacing is not provided to the adjacent sidewalk based on the wall height, and safety

railing is not identified for the portions of wall taller than 30-inches in height. Please note the previous response regarding the adjustments to Dransfeldt was noted, but this alone is not enough to grant a variance to the criteria. Please coordinate directly with Town Staff on what additional measures must first be evaluated to provide the variance requested.

DRAINAGE REPORT

1. Provide 100-year storm event rational calculations for basins OS1 and OS2 and provide compensatory storage for these flows in accordance with SDECM section 7.2.4. Provide narrative detailing the required compensatory storage release rate calculations and update the MHFD Detention worksheet to reflect the appropriate release rate once compensatory storage is accounted for. Please note that the pond release should be decreased by the sum of these two flow rates to meet the compensatory storage requirements. Please also note if either offsite flow rate exceeds 1 cfs, updated inlet capacity calculations will be needed for the receiving existing infrastructure.
2. Provide all proposed basins within the Direct Runoff Summary Table. Specifically noted OS2 as missing from the table.
3. Update the Inlet Management worksheet to reflect the anticipated design flows for the inlets and identify the quantity of proposed bypass flows for any inlet. Please also ensure all proposed design flow rates provided in the Inlet Capacity Calculations match the flow rates provided with the rational calculations.
4. Please note the outlet tab of the MHFD detention worksheet identifies a top of spillway stage of 8.75-feet, but the basin tab only identifies contours up to the 6.93-feet stage. Please provide additional stage/area information in the basin tab up to the top of the proposed spillway.
5. Please note that in the Storm Sewer System section of the narrative it states no carry over flows are anticipated for any proposed inlet. This directly conflicts with the inlet calculations which states Inlet A1 is to receive bypass flows. Please verify and revise to match.

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.