



Your kind of place.

Memorandum

To: Stacey Nerger, Senior Planner
Date: September 23, 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: SP21-133 Lincoln Professional Park L1 - Maverik – Stormwater 5th 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 Plans	July 2022
Site Plan	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. Please verify the extents of the Limits of Construction (LOC). Specifically, several proposed utility tie ins, linework for the proposed improvements, and proposed grading contours appear to fall outside the extents of the LOC.

2. Please remove the break in the Construction Fence (CF) provided along the southern extents of the site. This entrance will need to remain blocked until at least the bottom lift of pavement is provided. Alternatively, provide an additional Vehicle Tracking Control (VTC) at this entrance to allow a secondary point of access to the disturbed site.
3. Please ensure the most current version of the storm sewer and roadway layout proposed for the spine infrastructure in Filing/Phase 1 are provided with the plan set.
4. Utilize the four standard types of inlet protection provided in the Town's Standard details. Please ensure these are consistently used throughout the set, specifically noted the labelling appears to revert back to IP on the interim sheet.
5. Provide and identify the appropriate form of inlet protection for the two inlets at the southern entrance to the site and the two inlets just south of the northern entrance to the site as well on the initial and interim phase plan sheets.
6. Include within the plan set all of the town's 31 CBMP Notes & Details. Please note this includes all of the standard details, even those not currently proposed for the site. This allows for more efficient implementation of future control measures if additional measures are deemed necessary during the progression of construction.

INITIAL CBMP PLANS

7. Please note a previous comment unintentionally referenced the inappropriate sheet for the necessary Surface Roughening (SR). Please only show the SR on the interim and not the initial sheet.
8. Provide and identify the Portable Toilet Protection (PTP) on the initial CBMP plan sheet as well.

INTERIM CBMP PLANS

9. Provide and identify Debris and Trash Control (DTC) on all existing paved areas adjacent to the site and on all proposed paved areas interior to the site. The addition of several labels noted, but please ensure that at least one call out of DTC is provided along every existing roadway bordering the site.
10. Provide and identify sediment control logs (SCL) along all paved areas adjacent landscape/pervious areas. This includes landscape islands and all pedestrian walks. The SCL extents were still noted to not fall full extents of back of walk and top back of curb throughout the overall extents of the site.

CONSTRUCTION PLANS – STORMWATER

1. All storm sewer systems collecting drainage from the proposed drive aisles and parking areas must adhere to the standards and specifications outlined within Section 6.3.3 of the Town's SDECM, including the use of 18-inch minimum RCP, approved concrete inlet structure types, and dedication of drainage easements. Please note that the minimum pipe size, required material, and necessary drainage easements were not addressed on the plans. A comment requested further clarification. Please reference section 6.3.3.3 and Table 6.3 for minimum allowable pipe size. Please reference the last paragraph in section 6.3.3 for the material requirement. Please note these three criteria are to ensure the proposed system is built to last with minimal anticipated clogging and ensure adequate access is maintained in the case of a system failure. A variance to these criteria will not be provided.
2. There appears to be a proposed trench drain system around the proposed gas pumps. Please note it is the Town's preference for this trench drain system to be removed and for these flows to be routed to the proposed Type R inlets on site. The reason for this is in the Town's experience trench drains are subject to clogging more quickly and causing nuisance ponding issues. Nuisance ponding within this area would pose a significant risk of icing over in the winter and generate unnecessary safety issues around the use of the gas pumps.
3. Please evaluate opportunities to provide an additional sump inlet along the southern site boundary to optimize the amount of capture provided on site and minimize the amount of stormwater required to utilize the adjacent roadway for conveyance.
4. Provide and identify the proposed drainage easement on the plan and profile sheets.
5. Provide and identify the major and minor storms' hydraulic grade lines on all storm sewer profiles.
6. Provide the CDOT standard detail for Reinforced Concrete Pipe.
7. Provide and identify all inverts in and out of "existing" MH-1.

SITE PLAN – STORMWATER

1. All storm sewer systems collecting drainage from the proposed drive aisles and parking areas shall be considered public and must adhere to the standards and specifications outlined within Section 6.3.3 of the Town's SDECM, including the use of 18-inch minimum RCP and dedication of drainage easements.
2. Provide and identify the existing and proposed storm sewer infrastructure on the proposed landscaping plans. Please ensure that a minimum of 7-feet is provided from any existing or proposed tree to the edge of any existing or proposed storm sewer.

September 23, 2022

DRAINAGE REPORT

1. Provide a direct comparison between the imperviousness and flow rates calculated in the conformance letter to those assumed with the master drainage report. Provide all applicable narrative and calculations as referenced from the master report within the appendix of the conformance letter. Please note if either value exceeds those originally assumed in the master development's drainage report, additional information will be needed to identify how these increases will be addressed through the proposed improvements.
2. Please note any areas discharging offsite without being routed to the existing regional facility adjacent to the site for water quality and flood control must be accounted for through compensatory storage in accordance with SDECM section 7.2.4 of the SDECM. If this compensatory storage was not accounted for within the master drainage report, pond modifications may be necessary with these proposed improvements to accommodate for these offsite releases.
3. Please directly state that the Town's Tier 3 water quality requirements will be met by the adjacent regional detention facility within the narrative of the report.
4. Provide MHFD inlet capacity calculations for all inlets proposed to receive flows from the developed site.
5. Please note it is unclear to Town staff how the drainage basins were delineated based on the proposed drainage and grading plans provided. There appears to be duplicative basins delineated for surface flows which should be directed to the same design point and the ultimate receiving infrastructure for each basin is unclear. Please also note that the drainage plan should be its own unique sheet and all autoturn calculations should be removed. Lastly the proposed contours should be provided and identified on the drainage plan.

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.