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## Memorandum

**To:** Stacey Neger, Senior Planner  
**Date:** July 1, 2022  
**From:** Michael Walton, P.E., Project Engineer  
**Cc:** Alex Mestdagh, P.E., Engineering Services Manager  
Tom Williams, P.E., Director of Engineering/Public Works

**Subject:** SP21-133 Lincoln Professional Park F1 – Stormwater 3<sup>rd</sup> 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>
Site Plan	June 2022
Construction Plan	June 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 utilize the Town's standard labeling, nomenclature, and blocks to the extents feasible. **DCI Response: Revised CBMP labels to Town's standard.**
2. Omit all existing and proposed utilities from the CBMP Drawings, except those relating to stormwater. **DCI Response: Removed all utilities other than the stormwater.**

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3. Please consider connecting the Stabilized Staging Area (SSA) to the Vehicle Tracking Control (VTC) as shown on the Town's standard detail. This helps limit the amount of traffic required to cross the disturbed site and decreases overall tracking from the site. **DCI Response: Connected SSA to represent as shown in detail.**
4. Label and identify the ratio of all slopes that are 4:1 or greater. **DCI Response: Labeled all slopes**
5. Replace the Sediment Control Log (SCL) shown in the pond with one call out of Detention Pond Protection (DP). **DCI Response: revised detention pond protection and label**
6. Provide and identify Portable Toilet Protection (PTP). **DCI Response: Portable Toilet Protection located within the SSA per city detail.**
7. Utilize the four standard types of inlet protection provided in the Town's Standard details. **DCI Response: used the IPOG for the Type "r" inlet per Town's detail.**
8. Include within the plan set all of the town's 31 CBMP Notes & Details. **DCI Response: all of the town's CBMP Notes are locate on sheet 10 of 13 in the plan set.**
9. Provide a legend of symbols to correspond to the Town's 31 CBMP Notes & Details. **DCI Response: added CBMP legends, see sheet 9 of 13.**
10. 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. **DCI Response: Added DTC to the existing paved areas and proposed paved areas to the site.**
11. Add the following note to the initial and final CBMP plan sheets:  
"LOT PROTECTION (LP) IS REQUIRED ON COMMERCIAL LOTS WHEN LANDSCAPING IS NOT POSSIBLE." **DCI Response: added note to initial and final CBMP plans.**
12. Add the following note to the initial and final CBMP plan sheets:  
"TO REDUCE THE POTENTIAL FOR CLOGGING OF DEBRIS GRATES, NO STRAW MULCH SHALL BE USED WITHIN THE EXCESS URBAN RUNOFF VOLUME OF A DETENTION BASIN. INSTEAD, EROSION CONTROL BLANKET SHALL BE INSTALLED FOR A WIDTH OF AT LEAST 6-FEET ON BOTH SIDES OF THE CONCRETE LOW FLOW CHANNELS OR UP TO A DEPTH OF 1-FOOT IN SOIL RIPRAP OR BENCHED LOW FLOW CHANNELS. ADDITIONALLY, HYDRAULICALLY-APPLIED WOOD FIBER MULCH, STABILIZED FIBER MATRIX, BONDED FIBER MATRIX, OR FLEXIBLE GROWTH MEDIUM SHALL BE USED IN ALL OTHER AREAS WITHIN THE EXCESS URBAN RUNOFF VOLUME OF THE DETENTION BASIN. THE BLANKET AND HYDRAULICALLY-APPLIED MULCH SHALL COMPLY WITH THE MATERIALS AND INSTALLATION REQUIREMENTS FOR EROSION CONTROL BLANKETS AS REQUIRED BY THE TOWN'S CBMP PROGRAM, AND WHERE APPLICABLE, THE PRODUCT MANUFACTURER." **DCI Response: ."** **DCI Response: added note to initial and final CBMP plans.**

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#### **INITIAL CBMP PLANS**

13. Please utilize only one means of perimeter control along any single extents of the site. Perimeter control should be Silt Fence (SF) when downstream of disturbed areas and Construction Fence (CF) when upstream of disturbed areas. **DCI Response: Revised limits of SF and CF.**
14. Provide and identify the Vehicle Tracking Control (VTC) and Stabilized Staging Area (SSA) on the initial plan sheet as well. **DCI Response: added VTC and SSA to initial plan.**
15. Provide and identify Surface Roughening (SR) in all proposed landscaped areas. **DCI Response: Added surface roughening to all the landscape areas.**

#### **INTERIM CBMP PLANS**

16. Provide and identify sediment control logs (SCL) along all paved areas adjacent landscape/pervious areas. This includes landscape islands and all pedestrian walks. **DCI Response: Added sediment control logs to the interim plan**
17. Provide and identify Erosion Control Blanket (ECB) on all slopes steeper than 4:1. **DCI Response: added erosion control blanket to the sloped area west of the proposed building.**
18. Provide and identify Masonry Work Protection (MWP) for the site. **DCI Response: added masonry work protection to the patio area, north of the building.**

#### **FINAL CBMP PLANS**

19. Provide and identify Seeding Mulching and Crimping (SMC) in all proposed landscaped areas. **DCI Response: added seeding, mulching and crimping to the final stabilization.**

#### **CONSTRUCTION PLANS – 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. **DCI Response: 18-inch minimum pipe size is almost double the capacity required for the developed flows generated within this site. After reviewing Section 6.3.3 of the Town’s SDECM, the only mention of 18-inch minimum is in the vertical separation between utility crossings. There is a “18 to 36” reference of “vertical dimensions of pipe” in “Table 6.2”, titled “Storm Sewer Alignment Criteria” on page 6-7 but it does not indicate the minimum allowed RCP size is 18”. Please elaborate why the proposed 10” storm sewer pipe would not be adequate for this application.**
2. Provide a more unique line type for the proposed storm sewer in plan view. Currently the linework is easily lost on the plans. **DCI Response: revised storm sewer pipe to reflect the actual size of the pipe (10”).**
3. Provide a minimum of a 0.2-foot drop between any invert into a storm sewer structure and the invert out of the storm sewer structure. **DCI Response: all manhole structures include a vertical drop within the manhole of 0.2’.**
4. Provide CDOT standard details for all proposed storm sewer infrastructure. **DCI Response: added CDOT Type “R” inlet detail and Manhole detail.**
5. Provide the Town’s standard Manhole Cover detail. Reference RDCCM Appendix A for

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the most current form of the detail. **DCI Response: added Parker's Manhole Cover detail.**

6. Provide and identify the major and minor storms' hydraulic grade lines on all storm sewer profiles. **DCI Response: these calcs are currently being revised, they will be included in the final submittal.**

#### **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. **DCI Response: 18-inch minimum pipe size is almost double the capacity required for the developed flows generated within this site. After reviewing Section 6.3.3 of the Town's SDECM, the only mention of 18-inch minimum is in the vertical separation between utility crossings. There is a "18 to 36" reference of "vertical dimensions of pipe" in "Table 6.2", titled "Storm Sewer Alignment Criteria" on page 6-7 but it does not indicate the minimum allowed RCP size is 18". Please elaborate why the proposed 10" storm sewer pipe would not be adequate for this application.**

#### **DRAINAGE REPORT**

1. Provide a site-specific drainage conformance letter for this application showing conformance with the master developer's final drainage report. **DCI Response: Drainage letter included with submittal**

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.