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Memorandum

To: BrieAnna Simon, Associate Planner
Date: July 18, 2019
From: Tyler Sandt, Development Review Engineer
Michael Grabczyk, P.E. Project Engineer
Cc: Alex Mestdagh, P.E. Engineering Services Manager
Jacob James, P.E. Stormwater Manager

Subject: Horseshoe Ridge Block 1 Lot 1 – Learning Experience Site Plan – Engineering 1st Review

The Engineering Department has reviewed the documents submitted for Horse Shoe Ridge Lot 1 Block 1 Site Plan. The submittal consisted of the following documents:

<u>Document</u>	<u>Date Received</u>
Construction Plans	May 29, 2019
Drainage Report	May 29, 2019
Cost Estimate	May 29, 2019
Traffic Study	May 29, 2019

The site is located southwest of the intersection of Triple Crown Drive and Pardee Street. 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, July 2015. Additional regulatory and planning documents may have been utilized in the review, and are referenced in the comments where appropriate.

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Civil Construction Plans

1. Please consider revisiting the parking lot configuration. Cars backing out of the spaces at the southeast corner of the site may create an unsafe condition due to the proximity Pardee.
2. As mentioned in the Multi-Tenant review, the access on the east side of the access drive to the multi-tenant lot will need to be shifted west to preserve intersection sight distance.
3. The curb return radii shown at the site's north access are insufficient and need to be revised to at least 25-feet.

PWSD Construction Plans

4. Remove the Town's engineering signature block from all sheets with the exception of the Overall Utility Plan.
5. Add the following note to the overall utility plan:

"The proposed utility connection will require a Town right-of-way permit prior to commencing work. The Town prefers 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."

Public Improvements Cost Estimate

6. The public improvements associated with this project are less than \$5,000 and do not need to be secured.

Site Plan

7. The proposed drainage infrastructure will need to be covered by drainage easements. On future submittals, provide a legal description and exhibit for the entire pond area. Please also provide the legal descriptions and exhibits for the proposed storm pipe and structures.

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8. Show sight triangles on the landscape plan and ensure no trees, landscape, or solid structures above 2-feet are proposed within the sight triangles.
9. Show storm sewer on the landscape plan and ensure no trees are proposed within 7-feet of the storm sewer.
10. The applicant must provide a copy of the access easement covering the shared access road prior to approval.

Traffic Conformance Letter

11. On future submittals, provide a queuing analysis for the drive through.
12. This site is proposing 722 more trips than initially approved. The Town does not see this increase as “marginal”. The applicant will need to provide a more detailed analysis including intersection calculations as well as discussion on any mitigation required.
13. The Fast Casual Restaurant Land use does not appear to be appropriate for a building with a drive through. Please replace this with the Fast Food with Drive Through use and adjust the counts accordingly.

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.

Road and Storm Construction Plans

11. The Town would prefer that a Type R inlet be provided at the “Curb Scupper to Area Inlet”.
12. On future submittals, provide plan views for the storm profiles.
13. The minimum pipe size and material for storm sewer that carries developed runoff is 18-inch RCP. Please revise the plans accordingly.

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14. Storm Drainage Infrastructure Notes on sheet CV-1 appear to be out of date. Include current notes provided in the SDECM on the Town's website (<http://parkeronline.org/577/Storm-Drainage-and-Environmental-Criteri>)
15. Provide HGLs on the storm profiles for the minor and major storm events.
16. The off-site pond improvements are located within Tract C, owned by the Diocese of Colorado Springs. A temporary construction easement with the Diocese will be needed to perform the pond modifications. In the event that the proposed modifications extend the pond past the boundaries of Tract C, then a drainage easement will be needed over the encroachment to Lot 1 of Block 2.

Drainage Report

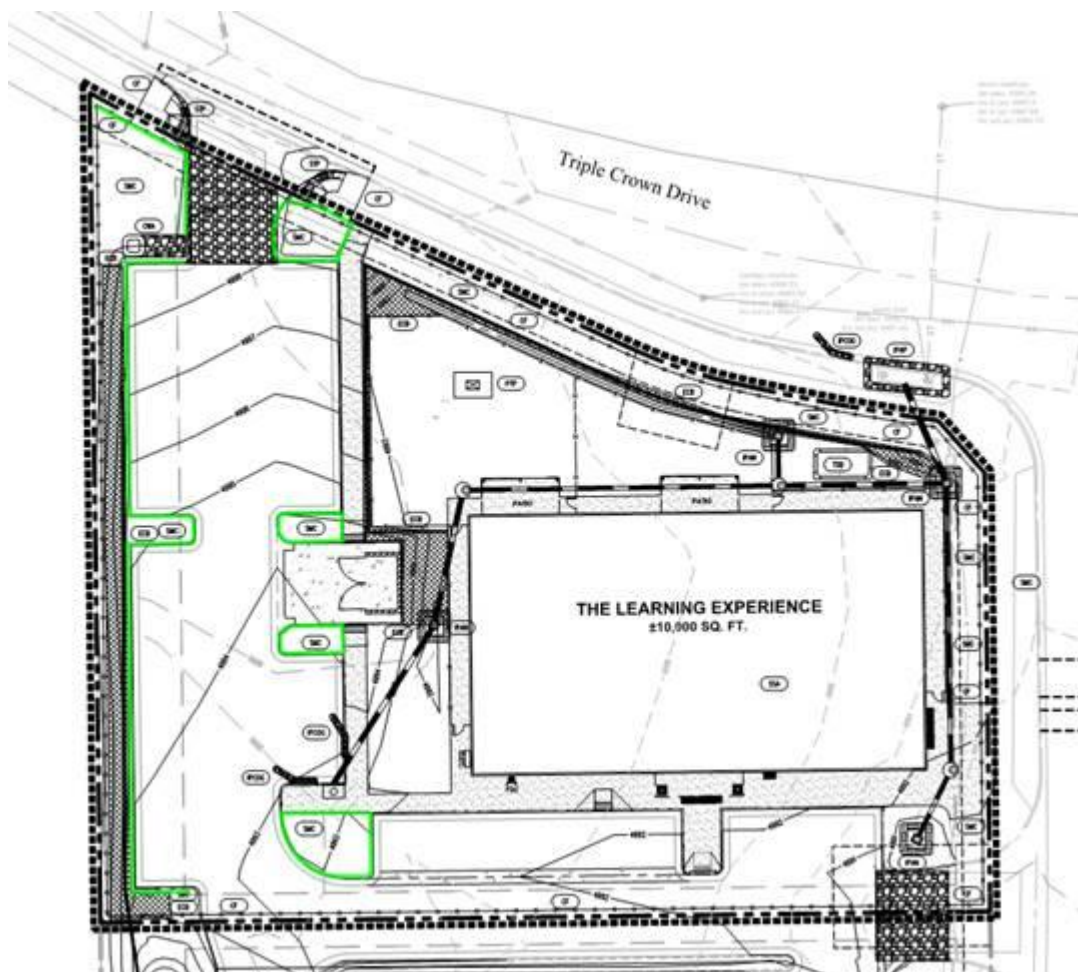
17. The length used in the Travel Time calculations for sub-basin 2.0 appears incorrect. Please revise as necessary.
18. The proposed analysis of the existing Pond III is insufficient. Please revise the UDFCD detention spreadsheet to include all contributing basins to Pond III (pull basin characteristics from Appendix D of the original drainage report). Complete the routing portion of the spreadsheet utilizing the existing outlet structure. Modifications to the outlet structure may be required to meet the current UDFCD release rates.
19. Provide a maintenance access road to the pond from the roadway stub of Tack Drive.

Grading and Erosion Control Plans

20. Due to the shared private drive with Lot 2 to the north, the Town recommends setting up a coordination meeting/call to discuss the erosion control and phasing coordination with the Town, contractors, and ownership of the two projects.
21. Include the off-site pond improvements as a part of the CBMP plans.
22. Omit all existing and proposed utilities from the CBMP Drawings, except those relating to stormwater.
23. Provide arrows to indicate the direction of flow.

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24. Show the ratio of all slopes that are 4:1 or greater.
25. Add a note on all land adjacent to the project stating that no work shall occur in these areas.
26. Add a note stating that lot protection (LP) is required on commercial lots when landscaping is not possible.
27. Provide sediment control log (SCL) along the back of curb around all landscape islands. Also provide along the back of curb where any adjacent landscape areas drain onto the pavement.



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28. Provide TSB sizing and drainage information on the plan. Also identify the location and outfall of the spillway and outlet pipe.
29. Extend the ECB along the west edge of the site farther north and then east through the CWA and to the end of the 4:1 slope.

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.

Link to Engineering Standards and Criteria:

<http://www.parkeronline.org/210/Standards-and-Criteria>

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.