



Your kind of place.

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 2 – Multi-Tenant Commercial – Engineering 1st Review

The Engineering Department has reviewed the documents submitted for Horse Shoe Ridge Lot 1 Block 2 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.

July 18, 2019

Civil Construction Plans

1. In order to preserve intersection sight distance, the access at the northeast corner of the site (off of the private drive) will need to be at least 100-feet away from Pardee Street.
2. It is the Engineering Department's understanding that Planning will be requesting that the drive through be shifted to the southeast corner of the site. This would be preferable as this configuration would reduce the chances of the drive through traffic spilling into the access drive.

PWSD Construction Plans

3. Remove the Town's engineering signature block from all sheets with the exception of the Overall Utility Plan.
4. 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

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

Site Plan

6. 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.
7. Show sight triangles on the landscape plan and ensure no trees, landscape, or solid structures above 2-feet are proposed within the sight triangles.

July 18, 2019

8. Show storm sewer on the landscape plan and ensure no trees are proposed within 7-feet of the storm sewer.

Traffic Conformance Letter

9. On future submittals, provide a queuing analysis for the drive through.
10. 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.
11. 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

12. On future submittals, please provide a wall plan with pond water surface elevations and ensure the footing of the wall is above the EURV.
13. 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>)
14. The current pond design does not meet Town criteria. Provide a sediment forebay, trickle channel, and maintenance access road, overflow spillway, etc. for the pond. Refer to the Town’s SDECM Chapter 7 and Figures 7.1-7.9 for Town specifications and level of detail required in the construction documents.

July 18, 2019

15. The Town requires that developed runoff be conveyed to the ponds via inlets and storm pipe. Please add a Type 13 inlet to the downstream end of the concrete pan and a Type R inlet to the sump where the other rundown is proposed (within the curve of the access road). This configuration would require curb and gutter along the entirety of the access road which will convey flows more efficiently as well as increase the longevity of the asphalt.
16. Show and identify the pond's 100-year WSE elevation in plan view on the grading plan.

Drainage Report

17. The entirety of the 100-year storm needs to be contained within the pond.
18. Please remove one of the repeated paragraphs located at the end of page 7 and beginning of page 8.
19. The pond must drain 97% of the 5-year storm within 72-hours per Colorado State law. Please modify the outlet structure design accordingly.
20. Use an orifice plate design which utilizes three identical sized and evenly spaced orifices.
21. Once all comments are addressed, upload a signed and sealed copy of the drainage report.

Grading and Erosion Control Plans

22. 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.
23. Provide a legend of symbols to correspond to the Town's 27 CBMP Notes & Details.
24. Provide existing and proposed grading contours.
25. Omit/freeze all existing and proposed utilities from the CBMP Drawings, except those relating to stormwater.
26. Include within the plan set the notes and details associated with all 27 CBMPs.
27. Provide arrows to indicate the direction of flow.

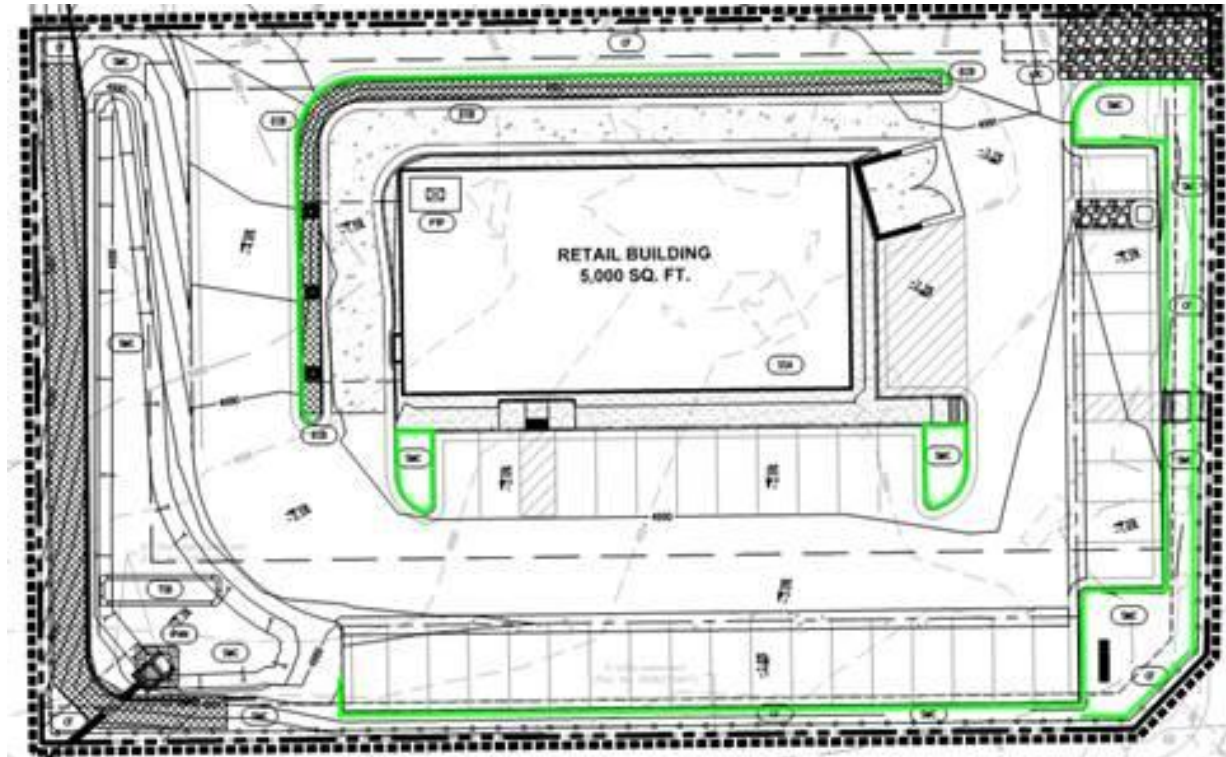
July 18, 2019

28. Show the ratio of all slopes that are 4:1 or greater.
29. Add a note on all land adjacent to the project stating that no work shall occur in these areas.
30. Label wetland habitat protection areas, jurisdictional status and other “Waters of the U.S.”
31. 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.”

32. Add a note stating that lot protection (LP) is required on commercial lots when landscaping is not possible.
33. Provide sediment control log (SCL) along the back of curb around all landscape islands. Also provide along the back of curb where any landscape areas drain onto the pavement.

July 18, 2019



34. Provide TSB sizing and drainage information on the plan.
35. Provide erosion control blanket (ECB) on all pond side slopes. Also provide along the trickle channel per the note referenced in comment 9.
36. Provide a call-out for the ECB currently shown along the western boundary of the site. Extend this ECB eastward along the edge of the parking where the 4:1 slope continues.
37. Provide inlet protection for each of the two existing inlets at the northwest corner of the Pardee Street and Hess Road intersection. The protections do not need to be located within the LOC.

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.

July 18, 2019

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.