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Memorandum

To: Stacey Nerger, Senior Planner

Date: October 26, 2020

From: Tyler Sandt, Development Review Engineer
Michael Grabczyk, P.E. Project Engineer

Cc: Alex Mestdagh, P.E. Engineering Services Manager

Subject: Parker and Pine Multifamily Filing 1 AMD2 Lots 1-3 – Engineering 1st Review

The Engineering Department has reviewed the documents submitted for Parker and Pine Filing 1 AMD2 Lots 1-3 Multifamily Development. The submittal consisted of the following documents:

<u>Document</u>	<u>Date Received</u>
Final Plat	August 28, 2020
Drainage Report	August 28, 2020
Road and Storm Plans	August 28, 2020
Utility Plans	August 28, 2020
Traffic Study	August 28, 2020

The site is located near the southwest corner of Parker Road and Pine Lane. 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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Road and Storm Construction Plans

1. Please line up the southern access into Lot 2 and the northern Lot 3 access.

Replat

2. On future submittals, include a tract summary table.

Landscape Plans

3. On future submittals, please use a different line type to delineate the storm sewer. The current linework is difficult to review.

Stormwater Review Comments

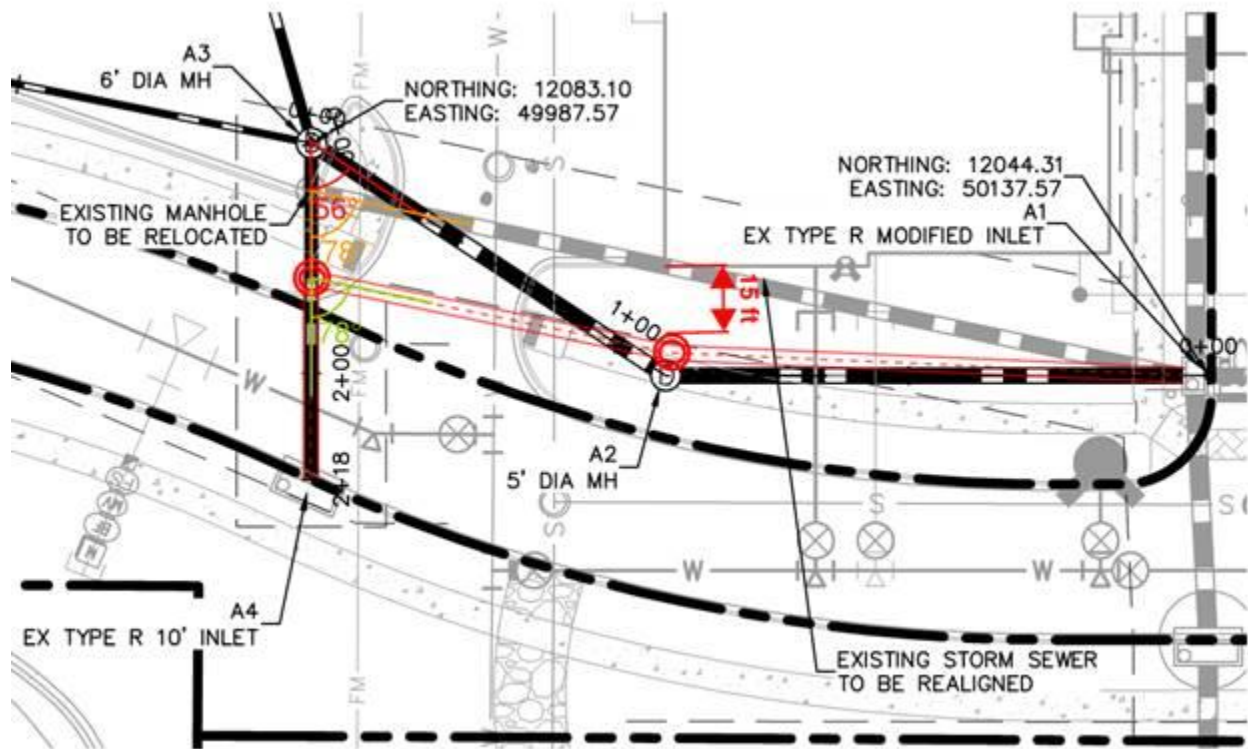
The following comments concern drainage, erosion and sediment control, and non-point source pollution control issues for the subject property. They are based upon our review of the submittal documents against the criteria presented in the Town of Parker's, *Storm Drainage and Environmental Criteria Manual (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

4. 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 RCP and dedication of drainage easements. Landscape drains, roof drains, and leaders for these systems are considered private and may be constructed with plastic pipe and catch basins. These private systems must connect to the public storm sewer system at an inlet or manhole structure.
5. Provide and identify HGLs for the minor and major events on all public storm sewer profiles.
6. A full review of the storm layout will be performed once the above two items have been addressed.
7. Ensure that all storm pipes penetrate inlets at the face of the structures and not the corners. Verify mitered angles at all inlets for constructability.

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8. **SHT C5.4:** The revised location of MH A3 exacerbates the acute angle between incoming flows from Inlet A4 and the downstream connection to MH A2 – from $\approx 78^\circ$ to $\approx 56^\circ$. Reconfigure to at least match the existing acute angle. One possible reconfiguration is shown below.



Drainage Report

9. The Town of Parker's MS4 permit falls under general permit COR080000 for basins within the Cherry Creek watershed. Please update the narrative section accordingly.
10. Sub-basins OS-2 and OS-3 appear to be conveyed to the F1 water quality and detention pond and the contributing flows have been accounted for according to the sub-basin imperviousness presented within this report. Revise the COR090000 permit and sub-basins narratives accordingly.
11. Update the F1 inlet A02 and B03 calculations to reflect the contributing areas from OS-2 and OS-3 respectively.

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12. Sub-basin OS-3 contains approximately 6,000 SF of proposed imperviousness and therefore must be provided Tier 3 treatment for the water quality capture volume Per SDECM 8.3. The downstream pond serving Twenty Mile Road and Parker Auto Plaza F3 may have sufficient capacity for this sub-basin.

Grading and Erosion Control Plans

GENERAL COMMENTS

13. Please note that the CBMP estimate will be reviewed with the Grading Permit after all CBMP comments have been addressed and the site plan is near approval.
14. Provide arrows to indicate the direction of flow.
15. Label and identify the ratio of all slopes that are 4:1 or greater.
16. Add a callout/label on all properties adjacent to the project stating that no work shall occur in these areas.
17. Provide sidewalk transition protection (STP) for all of the existing and proposed curb ramps within the limits of construction (LOC).
18. On both of the CBMP plans, remove Note 13 which references Stroh Gulch.
19. Remove Drainage Infrastructure Note 18.
20. 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.”

INITIAL CBMP PLANS

21. Remove the pond from the LOC if no improvements or disturbance is proposed in this area.
22. Align the northern vehicle tracking control (VTC) in Lot 1 horizontally or provide access control which ensures the entire length of the VTC is driven. If leaving in a vertical configuration, increase the turn radius.
23. Shift the southern VTC in Lot 1 approximately 50' east so it is farther away from the low-point of the site in order to avoid site runoff from flowing over the VTC and into the street.

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24. Shift the eastern VTC in Lot 3 to the north so it connects to a paved area.
25. Use silt fence (SF) in lieu of construction fence (CF) along the northern boundary of Lot 2.
26. Place SF on the upstream sidewalk edge along the western boundary of Lot 2 to ensure site flows do not bypass or overtop the diversion ditch.

INTERIM/FINAL CBMP PLANS

27. Provide and identify sediment control logs (SCL) along all paved areas adjacent landscape/pervious areas. This includes landscape islands and all pedestrian walks.
28. Identify Surface Roughening (SR) over all the seeding mulching crimping (SMC) areas.
29. Provide masonry work protection (MWP) for each of the buildings.

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.