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Memorandum

To: Paul Workman, Senior Planner
Carolyn Parkinson, Associate Planner

Date: July 7, 2018

From: Alex Mestdagh, P.E. Engineering Services Manager
David Aden, P.E. Traffic Engineer
Jacob James, P.E. Stormwater Manager
Kurt Patrick, P.E. Stormwater Engineer
Tyler Sandt, Development Review Engineer

Cc: Tom Williams, P.E. Director of Public Works and Engineering

Subject: Parker Pointe Minor Development Plat – Engineering 3rd Review

The Engineering Department has reviewed the documents submitted for the Parker Pointe Minor Development Plat. The submittal consisted of the following documents:

<u>Document</u>	<u>Date Received</u>
Drainage Report	June 25, 2018
Minor Development Plat	June 25, 2018
Construction Documents	June 27, 2018
Traffic Study	June 25, 2018
Landscape Plans	June 25, 2018

The site is located at the southeast corner of the intersection of Parker Road and Stroh Road. 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 7, 2018

General Comments

1. As previously discussed with the applicant, all necessary offsite easements and agreements must be executed and provided to the Town prior to approval.
2. It is the Town's understanding that Douglas County is requiring that the applicant be responsible for improvements to Kinney Creek. The triggers for the design and construction of these improvements will need to be discussed between the Town, County, and applicant and incorporated into the subdivision agreement.
3. All necessary permits, including the CDOT Access Permit for the new RIRO from Parker Road, must be obtained prior to the issuance of any construction permits. Please note that because the Parker Road right-of-way will remain in Douglas County, the County will be the local agency through which the permit will be submitted to CDOT.

Plat

4. Plat notes referencing the offsite easements and agreements will need to be added to the plat prior to approval. Please coordinate these with the Town.
5. Per previous review, please show the sight triangle at the access on Parker Rd.
6. Please coordinate with the Town regarding the drainage easements.

Public Improvements Cost Estimate

7. Revise the soft costs to those shown in the Standard Cost Estimate Template in Appendix B of the RDCCM.

Landscape Plans

8. Please show the sight triangle at the site's east access onto Stroh and relocate any trees proposed within the sight triangle.
9. It appears there is one tree proposed within the Parker Rd sight triangle; please relocate.
10. Relocate the tree proposed at the southeast end of the site to be at least 7 feet from the storm sewer.

Construction Plans

July 7, 2018

11. Per previous discussions, the lane drop taper for eastbound Stroh Road should adhere to the MUTCD formula that yields 320 feet. If this taper length and the associated spacing for advance warning signage and striping cannot be accommodated between the two access points, a continuous lane may be necessary.
12. Remove the hatched striping from the median areas of Stroh Road, and leave these areas outlined with solid double yellow striping.
13. Please include the restriping of the eastbound thru lane of Stroh Road west of Parker Road that will tie into the improvements proposed with this project.
14. Please see uploaded "Signing and Striping Redlines" for additional comments.
15. Provide a curb ramp crossing Parker Rd within the new pork chop. Include any necessary crosswalk modifications or other pedestrian improvements to complete this crossing.
16. Install a roll-over curb porkchop island within the RIRO access to Stroh to direct traffic in the absence of a raised median. Please also add a "No Left Turn" sign to the stop sign.
17. The storm sewer crossing at STA 14+04 on Sheet C4.12 needs to have at least 1.5' of vertical clearance.
18. Please label the vertical spacing at the crossing at STA 5+61 on Sheet C4.13 and ensure the spacing requirements are met.
19. The storm sewer detail sheets have the outdated engineering signature block.
20. Provide a forebay detail with reinforcement callouts. Please ensure the ramps comply with the criteria outlined in Figure 7.1 in the SDECM.
21. The emergency spillway should have 2 feet of Type M riprap.
22. The 100-year orifice plate detail does not match what is shown in the outlet structure profile.
23. Town criteria does not permit bends in storm sewer outside of structures. The tie into the existing storm culvert under Stroh will need to be at a structure or the proposed condition needs to be realigned. Modified structures will likely be required; please provide details on future submittals.

Stormwater Review Comments

July 7, 2018

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.

Final Drainage Report

24. It appears that prior to the individual lots developing, there will be some drainage issues in the interim condition. Please discuss with Town staff.
25. The areas leaving the site undetained are subject to compensatory storage requirements per Town criteria. Please coordinate compensatory storage requirements with Town staff.
26. The orifice hole values shown in the UD detention workbook do not match those shown in the construction plans. Note that the workbook uses area and the detail in the plans is showing diameter.
27. Per discussions with the engineer, the pond spillway should be redesigned to have a spill elevation at or above the 100-year water surface elevation of Kinney Creek. Please show the Kinney Creek WSE in the plans for reference.

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. All submittals should be through the Town Community Development Department, accompanied by a letter that responds to each comment herein. Direct submittals to the Engineering Department will not be accepted.

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.

July 7, 2018