

MEMORANDUM

To: Town of Fraser
Attn: Catherine Trotter, Town Planner
From: Tim Gagnon, P.E.
Date: July 3, 2019
RE: Riverview Townhomes – Preliminary Plat Submittal Review

Per your request, Bowman Consulting has reviewed portions of the Preliminary Plat Packet received from Rendezvous for the above referenced project, including:

1. Preliminary Plat, dated 5/29/19, from Tim Shenk Land Surveying
2. Landscape Plan, dated 5/24/19, from JVA Consulting Engineers
3. Preliminary Construction Plans, Preliminary Plat, dated 5/29/19, from JVA Consulting Engineers
4. Preliminary Drainage Report, dated 5/29/2019, from JVA Consulting Engineers
5. Geotechnical Investigation, dated, 5/17/19, from CTL Thompson
6. Auxiliary Turn Lane Assessment, dated, 05/28/19, from McDowell Engineering

Based on review of this information the following comments shall be addressed by the Applicant:

General

1. A variance request will be required for proposing no stormwater detention.
2. Landscape and Lighting plans are missing and are required per Fraser Town Code Section 14-5-30 and 14-5-40, respectively.
3. Some of the plans appear to show pedestrian connections between the parking lot and the building, while others do not. The review comments below assume that the Applicant intends to install hard-surface sidewalks in these areas, which meets the requirements in Section 14-3-80.
4. It appears that vehicular site access for the existing and proposed developments is proposed at the existing highway entrance to the north (in front of the existing Grand Valley Flooring store), but there is also a gravel road indicated to a separate southerly highway access point, that appears to be intended for emergency access. But it is unclear how emergency access will be accomplished while prohibiting homeowners from using this southerly access and maintaining the existing fence and gate at the pond entrance.
5. An agreement will need to be in place with Grand County No. 1 for the proposed location of the water quality pond prior to final plat approval.
6. Previous discussions between the Town and Applicant included a new trail connection between this proposed development and the existing Town trail system, but this appears to be missing from the current plans.

Construction Plans

7. The following information is missing and shall be added to the plans:
 - a) Engineer certification and approval signature block, per Section 14-2-110(d)
 - b) Water and sanitary sewer profile, per Section 14-2-110(f)
 - c) Horizontal road alignment information, per Section 14-2-110(e)

- d) Location of sewer service clean outs and water service valves, per Section 14-2-110(e)
 - e) Shallow utilities that are required to service the site, per Section 14-2-110(e)
 - f) Signage and Striping plan, per Section 14-2-110(j)
 - g) A concrete pan or a concrete ribbon curb, per Section 14-3-30(5)
 - h) A detail for the proposed water quality outlet structure
 - i) Water and sewer services for Units 19/20
8. The following information should be clarified:
- a) The existing waterline in the site is 8" and new watermain shall be 8".
 - b) The existing contours are not visible on the construction plans.
 - c) There is a 9'-10' cut from the existing ground down to the bottom of the proposed pond and potential issues/interference with groundwater should be addressed.
 - d) Update Agency List with proper spelling of Russell Pennington.
 - e) Eliminate VTC shown on EC plans as construction traffic should not be using this access point off US Highway 40.
 - f) The EC details are not legible.
 - g) Water Quality treatment is not provided for impervious areas around Units 19/20.
 - h) The numerous crossings of the proposed drainage swales and the proposed sidewalks lack detail on how these interact as many of the proposed swales between the buildings indicated on the plans are in the same location as the proposed sidewalks.
 - i) Fire hydrants shall be located at the dead-end of all proposed water mains.
 - j) There is a sewer cleanout indicated in the trash enclosure area.
 - k) Further detail is needed to ensure that the proposed emergency access is constructed so that emergency vehicles have sufficient, unimpeded space to use this for site access, including AutoTurn analysis and confirmation from the Fire Department.
 - l) Sanitary sewer manhole design should indicate a 0.2' drop between inverts.
 - m) Shared water and sewer easements require a minimum width of 36', per Section 14-3-430, or as defined in Town Code Detail A-5.
 - n) There is only 5'-6' of cover designed for the proposed sanitary sewer main which will likely make the sanitary sewer service cover less than 5 feet in areas.
 - o) Verify that water service size is sufficient to provide fire sprinkler flows to each unit.
 - p) A retaining wall typical section should be included, per Section 14-3-130(b), to ensure proper costs, and that the proposed site grading, structural stability, drainage, heights, setbacks, and adjacent building grading is feasible and accounted for in the plans.
 - q) Water and sewer shall be designed with a 10' separation from edge of pipe to edge of pipe, per Section 14-3-260(a)(5).
 - r) It is unclear on the construction plans where the proposed asphalt parking ends and the gravel parking begins.
 - s) It would appear that at least one van accessible ADA parking spot is required, per Chapter 19, Table 4.2.
 - t) The proposed grading depicted behind buildings 11/12 and 17/18 appears to maintain swale depths of only 6" in areas from the top of the wall, which does not seem sufficient to carry the site flows and offer some free board.
 - u) There are many areas around the buildings that are graded with less than the minimum 6"-12" vertical drop away from the edge of the building, as recommended in the Geotechnical Report.

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- v) Positive drainage conveying runoff around the buildings should be indicated between the proposed asphalt parking area and Buildings 11/12, 13/14 and 17/18.
- w) Proposed flowline grades for the proposed grass swales should be indicated on the plans.

Preliminary Plat

- 9. It does not appear that the minimum snow storage area requirements have been met, per Section 19-4-185, which also requires that snow storage is "not designated in drainage courses or swales" which would include the proposed and existing water quality ponds.
- 10. The following plat note shall be clarified: "Hard surface area do not include trails." It is unclear why these concrete walks are not included in the snow storage and open space calculations.

Drainage Report

- 11. The drainage report is missing calculation information including: a developed flow spreadsheet, and a detention pond volume calculation spreadsheet.
- 12. The offsite basin OS1 conveyed to the proposed water quality pond does not appear to account for the actual size of the offsite basin that could potentially drain towards this pond. Consideration should be given to route this offsite flow around the proposed water quality facility.
- 13. The drainage calculations appear to be missing impervious areas for the proposed concrete walk.
- 14. Capacity calculations shall be shown for on-site drainage infrastructure, including grass swales.