Engineering has reviewed the plans for the Carroll at the Avenue project submitted March 13, 2019 for TRC review and have the following comments:

- 1. This project is proposing the construction of on-site newly constructed impervious surface area greater than 10,000sf, therefore the project is subject to full stormwater review. Please submit the Stormwater Management Permit Application Form, a \$1,000 permit application processing fee, one full set of design plans, calculations and any other supporting documentation to Engineering for review. Please also submit a digital copy of the entire submittal package. Additional comments will be made once the full engineering submittal is reviewed. Please note our review times are approximately 30-45 days right now. Please factor this into your submittal schedule.
- 2. The Stormwater Management Plan Approval stamp must be added to every sheet in the plan set.
- 3. Identify all surface waters (delineate the normal pool elevation of impounded structures, the banks of streams and rivers, the MHW or NHW line of tidal waters, and any coastal wetlands landward of the MHW or NHW lines.
- 4. Provide a copy of USACE approved wetland maps and permits obtained for the project.
- 5. Provide a development phasing plan.
- 6. Determine if the project is associated with a conservation resource (Article 6; Division III of Chapter 18 (LDC)). Delineate all Conservation Resource Setbacks. It would appear that proposed impervious areas may be encroaching into what would be a CR setback.
- 7. Private Driveways: Lengths of private driveways shall be as follows:
  - I. If the private driveway accesses a through street, as defined in Section A Definitions, of this chapter, the total length shall not exceed five hundred linear feet (500 lf)
  - II. If the private driveway does not access a through street, the combination of the public street(s) and private driveway(s) shall not exceed eight-hundred linear feet (800 lf).

A variance may be requested if this standard cannot be met.

- 8. Sanitary sewer clean-outs, water meters, manholes and valve lids are to be located outside of sidewalk where feasible.
- 9. Minimum sidewalk width to be 6' minimum if placed at back of curb along a street.
- 10. Sidewalks Minimum grade for proper drainage is 1% in at least one direction. Maximum cross slope is 2%. Maximum longitudinal slope is 8.3%, 10% if limited by existing conditions, or no greater than the slope of the existing adjacent road. Street cross sections show ½" per foot slope across sidewalks.
- 11. Piped collection systems shall be designed for the 10-year frequency storm event and analyzed for the 50-year frequency storm event to check the system for flooding. Assign an appropriate tailwater to the analysis.
- 12. Provide a drainage area map for each SCM (labelled, delineated and listed).
- 13. Provide pre-development and post-development watershed drainage areas.
- 14. Provide an inlet drainage area map with each inlet area labelled, delineated and listed.
- 15. Provide sizes, lengths, inverts and slopes for all existing and proposed pipes.
- 16. Provide all appropriate details to support stormwater management systems.
- 17. Provide all appropriate city standard details. City details shall be the most recent pdf version downloaded from the city website. City details must have the City titleblock.

Please call or email if there are any questions. Thank you.