

Date: June 16, 2023

Re: Responses to City Comments – Street and Storm Sewer
Orchard Woods
PEI #211142

We have received your comments and have addressed each with the enclosed plans and comment responses in *red italics* below. Please let us know if you have any questions during your review.

Thank you,
Doug

Engineering Review - Corrections

1. Sheet 2: Please revise General Note 7 to remove “upon request” from the last sentence.

Response: Revised General Note 7.

2. The Grading Plan on Sheet 4 and the Master Drainage Plan on Sheet 20 each include portions of what the City requires for a “Master Drainage Plan.” Please review Design and Construction Manual LS Section 5600. The City’s added subparagraphs to APWA Section 5601.8.A provides a specific list of requirements. Sometimes we see all of the information placed on one sheet in a plan set, and sometimes we see it multiple sheet (e.g. Master Drainage Plan Sheets 1-3 within the overall plan set). Please revise the plans to provide a Master Drainage Plan (MDP) that meets City requirements.

Response: Revised Master Drainage Plan to meet requirements.

3. Sheet 11: What is the “Driveway Asphalt Paving Section” detail specifically in reference to?

Response: This is in reference to the drive to be constructed from NE Orchard Valley Drive to the “Water Tower Entrance”.

4. Sheets 13-15:

- Please label the street names in Plan views.

Response: Acknowledged and labeled.

- The 10-year HGL must be contained within the pipe. If the 100-year HGL is not 6” or more from the opening of an inlet, an overflow path must be provided.

Response: The storm sewer system has been revised to contain all 10-yr HGL’s within the pipe.

- CMP end sections are not allowed Please revise Structures 10, 18, and 52 accordingly.

Response: Revised end sections to RCP.

- NE Apple Grove Court does not require RCP storm sewer pipe for the Structure 12-13 street crossing. It is allowed, just not required by the City.

Response: Acknowledged and revised to HDPE.

5. Sheet 16: The Outlet Control Detail on this sheet doesn’t match the Special Outlet Structure #60 shown on Sheet 17. Please revise as needed.

Response: Revised Special Outlet Structure detail.

6. Sheet 18:

- How will the area shown on the drainage map all get into Structure 50? The grading doesn't indicate that it will be possible. Please clarify.

Response: Per TOPO shots, a natural berm occurs at the tree line located along the property line. Therefore, it will capture the drainage area shown.

- With the storm sewer alignment as shown, there are several areas of concern which are listed below. Please review and revise as necessary:

Response: Acknowledged.

o Structure 30, as the upstream end of the storm sewer, has a large drainage area. This would better be handled by adding an additional inlet upstream.

Response: Per the gutter spread calculations provided, an additional inlet is not required.

o Bypass from inlets upstream of the sump at Structures 16 & 17 is likely to pond enough to be dangerous. Please revise the drainage directed to these inlets and provide calculations to show the extent of the maximum ponding. The calculations can be separate from the plan set.

Response: An analysis of the ponding at these inlets during the 100-year storm event has been provided as a separate document and has shown that the ponding that will occur is allowable.

o Structure 40 does not seem likely to capture all of the flow directed to it. Please address.

Response: A 6" berm will be provided directly downstream of the inlet to water enters the structure.

o Please review the swales shown with respect to 100-year flow depth. For swales that go between houses, please try to minimize depth of flow.

Response: Acknowledged. Swales have been revised to decrease depth of flow.