



P.O. BOX 1167
21 JEFFREY DRIVE
SOUTH WINDSOR, CT 06074
PHONE: 860.291.8755
FAX: 860.291.8757
www.designprofessionalsinc.com

CIVIL & TRAFFIC ENGINEERS / LAND SURVEYORS / PLANNERS / LANDSCAPE ARCHITECTS
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June 21, 2023

Jeffrey Doolittle
Town Engineer
Town of South Windsor

Dear Mr. Doolittle:

In response to your comments dated June 12, 2023, we offer the following comments. For ease of reference, your comments are noted in *italics*, and our responses are noted in **bold**.

1. *The elevation of the rip rap spillway from the north Detention Basin 2 should be lowered to the 100 year flood elevation of about 70.5 and the outlet structure TF set to elevation 71.0 or less.*
Sheets C-DU1 & C-GD1 have been revised to these elevations.
2. *Revised the Storm Drainage System Maintenance and Operation notes to say the Outlet Structures to be inspected 4 times per year when the water quality basins are inspected.*
Sheet C-ES2 was revised per this comment.
3. *What is the condition of the adjacent wetlands on this property and the drainage channel and other detention basins to the west? These need to be maintained in good condition for the on-site drainage to work as designed.*
Per IWA approval letter dated May 17, 2023, Phragmites will be removed from the existing drainage channel and maintained per the existing Storm Drainage & Maintenance agreement. A note was added to Sheet C-DU1.
4. *WPCA review and approval is needed for this application.*
WPCA application will be filed once P&Z and IWC approvals are granted, per the WPCA application checklist.
5. *The 3 leak-offs from the paved parking areas to the detention basins have low spots in them where water will pond before and after spilling into the basins.*
The 1' deep low spots in the leak-offs are designed to catch sediment and debris before it enters the basins.
6. *According to the stormwater management report, the water from both detention basins will back up into the pipes from FE-1 to CB-1 and CB-2 and from FE-4 to YD-1 during the 25-100 year storms. This may reduce surface drainage on site and allow sediment and debris to accumulate in these pipes during large storms.*
DPI acknowledges this comment.
7. *All of the developed site is discharging to the Newberry Brook watershed. DPI's analysis of the peak flows and times of concentration in Newberry Brook at the Main Street culvert before and after this developed site shows no increase in peak flows at the Main Street Culvert for the 2, 10, 25, 50 and 100 year storms. Also the model shows peak flows arriving at the Main Street culvert in about*

3 hours for Newberry Brook and in more than 15 hours from this developed site. They conclude that the site stormwater flows will not increase peak stormwater flows in Newberry Brook at the Main Street culvert.

DPI acknowledges this comment.

8. *The photos showing both the upstream downstream sides of the twin culverts under Main Street all or mostly submerged during and immediately after a recent inch storm event do not indicate any specific issues with these culverts, in my opinion. If there was a blockage or restriction in these culverts, the water level would be visibly lower at the downstream (west) end. I believe these photos, old aerial photographs, and my recent observations of Newberry Brook downstream of Main Street indicate that this section of Newberry Brook is prone to flooding because it flattens out downstream of Main Street and there is significant vegetation growing in and around it. I think these conditions contribute to the poor flows seen in Newberry Brook downstream of Main Street and through the Main Street culverts.*

DPI acknowledges this comment.



James J Luczak, P.E,
DESIGN PROFESSIONALS, INC

Cc: Jeffrey Folger
Michele Lipe