



Planning & Development
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Memo

Date: April 1, 2026

To: Planning Board

From: Michael G. Livingston, Town Engineer/Planner

Re: 526 Post Road/Arundel Lane –Drainage Review Memo – Tax Map 27, Lot 10

Drainage Analysis/ Model Review/Plan Review

Information Provided

- Stormwater Management Report dated February 10, 2026 by William R. Walsh, III PE #8204 and Leyna L. Tobey, PE # 18772 of Walsh Engineering, Parts 1 and 2.
- Sheet C1.0 Existing Conditions Plan
- Sheets C3.1 Grading and Drainage Plans
- Sheets C3.2 and C3.3 Erosion Control Plan
- Sheets C4.0, C4.1 thru C4.8 Details
- Sheet D1.0 Pre Development Conditions
- Sheet D2.0 Post Development Conditions

Methodology:

HydroCad utilized – good

Storm event 50 year - good

Type III storm used - good

Analysis Points – Revisions needed

Pre- Development: See markup of Pre-Dev Conditions

Basins: Limits to be adjusted based on contours vs property lines
Additional basin needed for additional analysis point.

Areas and surface types, good, to be adjusted with basin limit changes

Flow paths: Paths must be from highest to lowest points or the longest travel path and must be a continuous downward slope. Revisions needed.

Ponds: Elevations referenced below are based on the 50 yr storm event.

C1: 16" outlet invert into DP1 may be lower than proposed pond bottom, to be verified.

Top of pipe visible but invert is buried.

No volumes are modelled for pond C1 and must be to establish the current level of flooding that occurs on the abutting property to the north.

Flood Elev. 54.00; Peak 54.73.

CB1: Catch basin good to be included in model. Volume in CB could be added to model, but minimal impact.

Flood Elev. 53.50; Peak 50.85, good.

DP1: Outlet elev. not noted on Exist Cond Plan

Model has outlet at 48.00/44.58

Flood Elev. 52.00; Peak at 50.65.

1P: Elev. unknown; possible 12" culvert vs CB with 15" outlet. Existing is buried and needs to be verified.

Post- Development: See markup of Post-Dev Conditions

Basins: Basin limits to be adjusted, see recommended from plan markup
Surface areas appear accurate for the proposed development, to be revised based on basin changes

Flow paths: Paths must be from highest to lowest points or the longest path and must be a continuous downward slope. Revisions needed.

Ponds: Elevations referenced below are based on the 50 yr storm event.

C8: Same as C1 Pre, 16" outlet invert into DP1 may be lower than proposed pond bottom, to be verified. Top of pipe visible but invert is buried.
No volumes are modelled for pond C8 and must be to establish the level of flooding that may occur on the abutting property to the north.
Peak Post Elev. 57.36; Peak Pre 54.73.

CB14: Flood 50.90; Peak 50.95 (overflows grate). Increase outlet from 12" to 15"?

CB13: Flood 50.90; Peak 50.13, OK. Plan has rim at 49.80 though. Increase outlet from 12" to 15"?

CH1: Flood Elev. 50.50; Peak at 48.63. Top chamber 48.73, Top stone 49.23. Good.
Inflow = 2.9 cfs; Outflow = 2.9 cfs, no reduction?
Details on outlet control structure needed.

S2.2: Existing culvert not modelled, pond needed, culvert to be replaced? If flooding occurs would impact entrance and flow into Rte 1.

CB: Modelled as CB1 in Pre, not modelled in Post and should be. Outflow is being redirected to C8 and outlet size is being reduced from a 12" to a 6".

1P: Flood Elev. 55.50; Peak 54.01; Rim of outlet 55.50; highest contour 55.0; Pond volume should stop at 55.00 in model. Impacts to C8, surcharge. CB to be redirected to P1 vs C8?

SF1: Flood Elev. 66.25; Peak 65.22; Top of berm 66.0 vs 66.25 and volume modelled to 66.00.
Emergency overflow at 65.75, berm at 66.0, overflow should be lowered to 65.25 or berm raised.
Outlet should be to AP#4 or relocated to AP#6, Outlet to be a level lip spreader design.

CB3 to CB8: Peak elevations within inches of Flood elev.(rims). Increase pipe diameters from 12" to 15" where needed. Also could model CB's with volumes to reduce Peaks.

SF2: Flood Elev. 64.00; Peak 63.58: Top of berm 64.00; overflow at 63.50. OK.

Comments:

- Existing drainage structure and elevation at Route 1 needs to be verified. See attached plans with varying information.

- If SF1 outlet is combined at AP#4, an increase in peak flow will result. Shortening the culvert, adding a LLS and including at AP#6 may resolve impacts. SF1 could also be enlarged to accommodate the stormwater.
- Proposed grading at Rte. 1 needed. Modelling the existing culvert at the entrance will affect AP#2 results.
- Ponding onto the lot on the north needs to be analyzed as it is a direct impact to the abutter. The existing 16" culvert is not proposed to be changed and additional stormwater from the existing CB is being added to the location of the inlet at the property line.

Erosion and Sedimentation Control:

- Good Erosion Control Plan, Sheet C3.3 (Subdiv)
- Good Erosion Control Notes and Details on Sheet C4.0 (Subdiv)
- Good stabilized entrance location and detail
- Silt sack and matting details on Sheet C4.1 (Subdiv)

Operation and Maintenance Plan:

Provided with Stormwater Report – Good narratives and Sample inspection Logs

Conclusions:

The proposed stormwater analysis needs revisions. (resubmission as pdf's, new hardcopy not needed)

The proposed erosion control plan meets BMP's and Town requirements.

Once the analysis comments are addressed, the review can be updated and final design evaluated.