



Planning & Development
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Memo

Date: March 30, 2023

To: Planning Board
Platz Associates, CivilX

From: Michael G. Livingston, Town Engineer/Planner

Re: Bulrush Retail Plaza – Preliminary Drainage Review Memo – Tax Map 108, Lot 33-15

Drainage Analysis/ Model Review/Plan Review

Information Provided

- Stormwater Management Report dated March 2023 by Travis A. Letellier PE #13920 of CivilX
- Sheet C-1 Grading and Drainage Plan
- Sheet C-2 Erosion Control Notes and Details

Methodology:

HydroCad utilized – good
Storm event to be 25 year vs 10 year
Type III storm used to be verified
Pre vs Post Areas – good
Need full size pdf of Sheet S-1

Pre- Development

Basins: Limits, good
Areas and surface types, good
Flow paths, good

Analysis Point: Good

Post- Development Total area equal to Pre of 0.79 acre, good

Basins: Basin limits appear well modelled
Surface areas appear accurate for the proposed development
Flow paths appear appropriate for each basin.

Ponds: Drywell and Dripline Filter as ponds, good

- Exfiltration rate of 15 in./hr. used is high. Soils information indicates 1.42 to 14.17 in./hr. for Adams and 1.42 to 6.0 in./hr. for Naumburg.

- Portion of surface flow will bypass the drywell and flow directly into CB-1
- Drywell outlet in model is 6" at 38.0, Plan has as 12" at 37.0
- Drywell storage needs clarity: top 20" is pavement and gravel base materials; Stone area 40% voids; stone VF vs stone & drywell VF will have different storage. Lowest elev. 31.0, 31.0 to 32.5 32.5 to 38.7+/-
- Dripline is half in Naumburg and half in Adams soils per soils map
- Perforated drain pipe in Dripline detail. Not in model. Where would it outlet? Is it needed for a foundation drain?

Comments:

- Analysis to be done at 25 year event and re-evaluated
- Exfiltration rate to be revised
- An additional drywell or two may be needed
- Dripline may need to be widened
- Barrier between dripline and foundation drain may be needed