



May 3, 2021

Ms. Kerri Martinek, Chairman  
Northborough Planning Board  
63 Main Street  
Northborough, MA 01532

Re: 85-95 West Street, Common Driveway Special Permit Application  
Response to Town Engineer Comment

Dear Ms. Martinek,

The Town Engineer's comments regarding the subject project were provided on April 3, 2021 in a phone call with Greg Scotchie. WDA Design Group, on behalf of Brant L. Viner and Margaret Harling, have addressed the comments with the following (Town Engineer comments italicized and paraphrased, WDA response straight):

- 1. The existing time of concentration (Tc) flow paths have changed lengths from the revision dated 4/14/2021 to 4/26/21. The Tc flow path for drainage area EDA-100 is now sixty (60') longer and the Tc flow path for EDA-200 is fifty-eight (58') feet shorter in the current hydrology model. It would seem the change from sheet flow lengths from 100' to 50' would have only subtracted length from sheet flow and added 50' of length to the shallow concentrated flow paths.*

In response to the previous comments to revise the sheet flow length from 100' to 50', change the scale and sheet size of the drainage maps, and to include flow paths labels for clarity, a review of all time of concentration flow path segments were reevaluated.

#### EDA-100 Time of concentration

The fifty (50') feet of travel path has been removed from the sheet flow and added to the woodland shallow concentrated flow. The woodland shallow concentrated flow has increased from 634' to 684'. A correction to the shallow concentrated short grass pasture segment has been made. This third travel segment has been conservatively lengthened from 453' to 503'. Time of concentration has remained relatively the same. The Tc has been revised from 27.9 minutes to 27.7 minutes. Flows and volumes are unchanged.

#### EDA-200 Time of concentration

The Tc sheet flow segment has been revised to a length of (50') feet. The woodland shallow concentrated flow path has been slightly adjusted to better fit the existing contours. The shallow concentrated woodland segment has been increased from 896' to 935'. The total length of shallow concentrated woodland flow did not increase by the full 50' due to minor changes in the flow path location. Time of concentration has increased from 21.0 minutes to 21.7 minutes.

A revision to the stormwater management report and the construction plans has been made due to the delta in Tc of 0.7 minutes. This slight increase in Tc moved the existing storm flow event values lower. The impact to the proposed

Ms. Kerri Martinek, Chairman  
Northborough Planning Board  
May 3, 2021  
Page 2 of 2

conditions has been mitigated at INF-201. This infiltration chamber has increase from 70 to 88 underground SC-740 StormTech chambers.

Sincerely,

WDA DESIGN GROUP, INC.



Brian Waterman  
Wetlands Specialist



Gregory B. Scotchie, PE  
Project Engineer

Cc:

Brant L. Viner and Margaret Harling, Applicant  
Kathryn Joubert, Town Planner  
Scott Charpentier, Public Works Director

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