



May 19

Mr. Steven E. Masalin, PE
Public Works Director
Town of Ledyard
741 Colonel Ledyard Hwy.
Ledyard, CT 06339

RE: **Response to Department of Public Works Review of Supplemental Stormwater Design for Habitat for Humanity Residential Development | Colby Drive, Ledyard, CT**

Dear Mr. Masalin:

We are writing to respond to your email comments, dated April 11, 2025, regarding Alfred Benesch & Company's (Benesch) March 2025 submittal for the subject project. Our response immediately follows each of the items and is reproduced in *italics font*.

Stormwater Management Report

1. A peak flow comparison is given on page 12. I find the hydrographs, etc., for the existing peak flow calculations in Appendix A supporting this, but do not find the corresponding data/hydrographs in Appendix B for the proposed conditions.

Benesch Response: The stormwater report will be revised to include this missing information.

Plans

1. As discussed in the field, the Town is seeking for the outlet structure in the existing detention basin to be reconstructed/replaced to both achieve a suitable state of repair and improved hydraulic function as a detention basin discharge structure.

Benesch Response: We will replace the outlet structure at the existing detention basin. Additionally, riprap outlet protection will be provided at the inlet and outlets of the existing detention basin.

2. The Town will be seeking for the present cul-de-sac at the end of Colby Drive to be eliminated with the road in that area aligned with the existing curbline and extending into the new section of road. It is understood that some of this area is outside of the Town ROW. Thus, we are looking for only that area in the ROW to be brought into conformance with the new configuration. This will also require the existing CB's at the end of the cul-de-sac to be brought into conformance with this arrangement.

Benesch Response: We have re-aligned the roadway to achieve a single curve connecting to the existing portion of Colby Drive prior to the cul-de-sac. Limits of the Town ROW are now being shown, GIS shows that the ROW lines extend straight from the ROW shown on our property. A sawcut into the existing bituminous pavement and curbing approximately 1ft off the town ROW lines since they are approximate. The catch basins

are fairly aligned with our new layout; it is possible an offset structure may be required. Existing drainage lines and structures are to be maintained.

3. Type CL CB's are proposed for 209 and 210 because of driveway location proximity considerations. This is not a preferable measure for road rideability. Would there be the possibility of adjusting the relative locations there (it doesn't seem to be too far) to instead be able to use Type C?

Benesch Response: Catch basins 209 and 210 have been shifted out of driveways and converted to Type C tops. Associated utilities have been shifted to accommodate these adjustments to the drainage system.

Report/Plans

There are the following disparities/issues noted between the Storm Sewer Tabulation tables and the plans:

1. First Table (100 Series Structure)

- a. DCCB-110, Line 10: Discharge pipe elevation on the plans is 275.50, in the table 275.18.

Benesch Response: The hydraulic analysis has been revised to show correct outlet invert of DCCB-110 in the report.

- b. (Minor) CCB-111, Line 11: TOF elevation on the plans is 284.40, in the table 284.41.

Benesch Response: The hydraulic analysis has been revised to show the correct TOF elevation for CCB-111 in the report.

- c. CCB-113, Line 8: Discharge pipe elevation on the plans is 311.77, in the table 310.36.

Benesch Response: The discharge pipe elevation has been revised in the hydraulic analysis.

- d. (Minor) DMH-114, Line 13: The pipe slope is 5.85 on the plans, in the table 5.88.

Benesch Response: The hydraulic analysis has been revised to show the correct pipe slope of line 13 and outlet invert on DMH-114 in the report.

- e. (Minor) CLCB-118, Line 19: The pipe slope is 10.80 on the plans, in the table 10.84.

Benesch Response: The pipe slope has been revised in the hydraulic analysis.

- f. Line 4: Pipe data (i.e., length, size, slope) is given in the table but not shown on the plans.

Benesch Response: C3.1 Grading & Drainage Plan has been revised to unhide the pipe callout from under a contour label, located between CCB-104 and CCB-103.

2. Second Table (200 Series Structure)

- a. Full Capacity flows are not given for lines 5 thru 13 on the second table (200 series structures)

Benesch Response: The hydraulic analysis has been revised to show pipe flow capacities.

- b. EX-CLCB, Line 1: TOF elevation on the plans is 227.69, in the table 228.70.

Benesch Response: C3.1 Grading & Drainage Plan has been revised to show the correct top of frame elevation. Existing structure will need to be raised to meet proposed grade.

- c. (Confirmation) Lines 5 & 6: Pipe size indicated is 21"; this would seem unusual.

Benesch Response: Line 5 is a 24" RCP, the hydraulic analysis has been revised to correctly indicate this existing pipe to remain. Line 6 is a 21" RCP as called out in the survey sheet SV.03. C3.1 Grading & Drainage Plan has been revised to clearly call out the different sizes of these existing RCPs to remain.

- d. (Minor) CCB-207, Line 8: The pipe slope on the plans is 5.26, in the table 5.28.

Benesch Response: The hydraulic analysis has been revised to correctly indicate the top of frame elevation of CCB-207 and C3.1 Grading & Drainage Plan has been revised to show the correct pipe slope.

- e. OCS-1, Line 9: The pipe size, slope, and discharge elevation, respectively, are 24, 7.40, and 285.50 on the plans, in the table 18, 7.25, and 259.50.

Benesch Response: The hydraulic analysis has been revised to show the correct pipe size, slope and discharge elevation.

Benesch Notes:

- *Additional area drains have been added to the hydraulic model and some values for top of frame, invert, and pipe slope have been revised accordingly.*
- *Calculations for outlet protection into the existing detention basin have been sized based off of total discharge flow and velocity from the 200 series drainage network. The same size was used for a conservative approximation of the discharge from the existing detention basin.*
- *For clarity, C3.1 Grading & Drainage Plan has been split into two separate sheets. See C3.1 Drainage Plan and C3.3 Grading Plan.*
- *One additional detail sheet has been added to the set, see sheet C6.2 Site Details.*

Mr. Steven E. Masalin, PE

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Please feel free to call (860-494-4359) or email me at wwalter@benesch.com with any questions.

Respectfully Submitted,
Alfred Benesch & Company

A handwritten signature in black ink that reads "will walter". The signature is written in a cursive, flowing style.

William G. Walter, PE, LEED AP
Senior Project Manager