

MEMORANDUM FOR THE RECORD
APPLICATION# 23 IWC 7
REGULAR MEETING – THURSDAY, JUNE 15, 2023

Prepared by Meredith Badaluca, Asst. Planner, Interim Zoning & Wetlands Officer

Applicant/Property Owner: Andrew Petrowski
Engineering Info: Green Site Design, LLC, Ellen Bartlett PE, CPSWQ
Address: 69 Fitch Hill Road (Parcel ID: 062-036-000)
Meeting Date: June 15, 2023
Date Received by IWC: May 18, 2023 (*Decision Required Date – July 21, 2023*)

Applicant Request: Temporary disturbance within the upland review area for proposed site development of warehousing facilities.

Activity Description:

Wetland Disturbance Area	0 SF
Watercourse/Waterbody Disturbance Area	0 LF
Temporary Upland Review Area Disturbance	14,400 SF

IN REVIEW:

The site consists of approximately 33.9 acres located in the Light Industrial Zoning District with about 206 feet of frontage on Fitch Hill Road and about 53 feet of frontage on Leffingwell Road. This site contains approximately 8.9 acres of wetlands. The property was previously developed as a gravel excavation site and has areas of previous excavation, stockpiles and cleared land. Currently, there is an existing building on the south of the site adjacent to Fitch Hill Road.

The Applicant is proposing to develop the site with three warehouse buildings. One will be used by A&B Excavation and the other two will be rental space. The rental spaces will potentially be used for multiple start-up businesses. An addition to the existing building is also proposed. This building will contain office space for A&B Excavation along with rental office space and storage space.

The proposed temporary disturbance in the URA during construction will include installation of E&S Controls as shown on site plan titled “A&B Excavation, 69 Fitch Hill Rd & Leffingwell Rd, Montville, CT, Prepared by Green Site Design, LLC, Dated April 2023”. The Applicant states this area will be loamed, seeded and mulched once construction is completed.

The wetlands were delineated by Joseph R. Theroux and his report dated March 22, 2022 is included with the application for review.

The drainage report states in part, “There will be two main on-site drainage areas for the proposed development. Drainage area 1 will handle runoff from the Building 1 area, and northern halves of

Buildings 2 & 3. The runoff from these areas will flow to the wetlands, after flowing through Stormwater basin 1, resulting in a decrease in peak flows to the wetlands system. Drainage area 2 will handle runoff from the southern halves of Buildings 2 & 3 and their associated areas. The runoff from these areas will flow to the wetlands, after flowing through Stormwater Basin 2, resulting in a decrease in peak flows to the existing wetlands system.” The report further states in part, “The soils on the site are extremely well drained gravel and sand. Numerous test holes were done on the site, and showed the soils and groundwater levels to be very consistent. The rainwater during most storm events will infiltrate into the ground with little runoff.”

STAFF COMMENTS:

A site walk was conducted on June 9, 2023 by myself, Liz Burdick, Ellen Bartlett, Dave McKay and Bob Russo. Members of the IWC conducted a site walk on June 10, 2023.

The application and supporting documents have been referred to the following for their review:

City Clerk of Norwich – No comments received.

City of Norwich Inland Wetlands Agent – No comments received.

Norwich Public Utilities – Applicant response to comments attached.

WPCA – Comments attached to last staff report.

Uncas Health – Comments attached to last staff report.

Town Soil Scientist – All comments addressed.

Consulting Engineer - All comments addressed.

WEO Comments – All comments addressed.

Considerations for Action:

If the Commission is inclined to approve the request of the Applicant for a permit for proposed activity, the following language for a motion of approval is suggested:

After giving due consideration to all relevant factors including those in Section 10 and/or Section 6 of the Montville Inland Wetland Regulations and Section 22a-41 of the Connecticut General Statutes, I move to approve application number 23 IWC 7, Owner/Applicant: Andrew Petrowski for temporary disturbance within the URA in conjunction with the proposed site development of proposed warehousing facilities at 69 Fitch Hill Road, Uncasville, CT, per the application and associated documents dated May 2, 2023 and as shown on plans entitled “A&B Excavation, 69 Fitch Hill Rd & Leffingwell Rd, Montville, CT, Prepared by Green Site Design, LLC, Dated April 2023, Revised May 25, 2023”. Standard reasons for approval and standard conditions of approval apply.

May 22, 2023

Norwich Public Utilities
Attn: Alisa Morrison
16 South Golden Street
Norwich, CT 06360

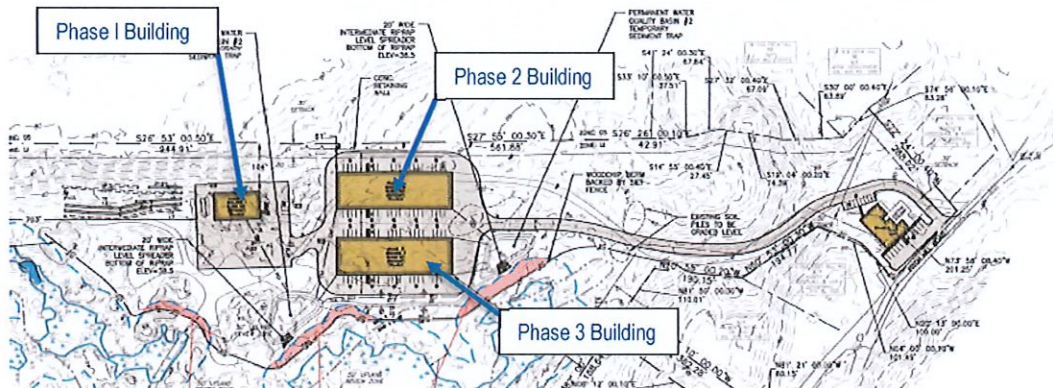
**Subject: Hydraulic Modeling/Analysis Letter Report for
69 Fitch Hill Road Development
Montville, CT**

Dear Ms. Morrison:

Per the request of Norwich Public Utilities (NPU), Dewberry Engineers Inc. (Dewberry) has prepared this letter report summarizing the results of the hydraulic analysis of the subject project utilizing NPU's existing water system computerized model. The information provided by your office was used to estimate the system's ability to deliver adequate flow for fire protection and evaluate any service impacts that the proposed development may impose on the existing water system.

Hydraulic Analysis

The proposed development is at 69 Fitch Hill Road and is expected to consist of three individual warehouse/storage type buildings with two at approximately 19,920 sf each and one at approximately 6,000 sf. There is also a planned addition of approximately 4,566 sf for office space to the existing building located on the property. Below is a screenshot of the site plan taken from the set of drawings prepared by Green Site Design LLC that was provided to Dewberry to perform the analysis.



To serve the new development, it is being proposed to extend the existing 12-inch main at the intersection of Old Fitch Hill Road and Fitch Hill Road up to the entrance of the property. From here, a new 8-inch main is proposed to connect to the new 12-inch main and extend up into the property to serve the new buildings and site (see attached Figure 1). It is proposed to construct the new development in three (3) phases with each phase to include a new building as shown above. From an

Norwich Public Utilities
Alisa Morrison
May 22nd, 2023

email sent to NPU from Green Site Design LLC on 05/19/23, the estimated domestic water usage and fire flow needs for the new development is as follows:

Domestic Water Usage:

- Phase 1 Building:
 - 600 GPD /8 hours = 75 GPH/ 60 minutes = 1.25 GPM x 6 safety factor = 7.5 GPM
- Phase 2 Building:
 - 1,992 GPD /8 hours = 249 GPH/ 60 minutes = 4.15 GPM x 6 safety factor = 25 GPM
- Phase 3 Building:
 - 1,992 GPD /8 hours = 249 GPH/ 60 minutes = 4.15 GPM x 6 safety factor = 25 GPM

Total Domestic Peak Water Usage for Phases 1, 2 & 3 = 57.5 gpm

Fire Flow Needs:

- Phase 1 Building:
 - Needed Fire Flow (NFF) = 1,063 gpm
- Phase 2 Building:
 - NFF = 1,700 gpm
- Phase 3 Building:
 - NFF = 1,700 gpm

Total NFF for Phases 1, 2 & 3 = 4,463 gpm

To evaluate the impacts of the proposed Fitch Hill Road development to NPU's water system, we first added the proposed water main connection and supporting infrastructure to the model. We then imposed the estimated total peak water usage of 57.5 gpm for all 3 phases to the development to identify any possible loss in system pressure in the adjacent area. As shown in **attached Figure 1**, under existing maximum day demand conditions, system pressure at the intersection of Old Fitch Hill Road and Fitch Hill Road was predicted to be 94 psi. With imposing a peak demand of 57.5 gpm within the development, system pressure at the intersection of Old Fitch Hill Road and Fitch Hill Road was predicted to remain at 94 psi. This suggests that the existing system infrastructure within the area of the development can supply the domestic water needs of the proposed development.

We then estimated the available fire flows at the proposed connection to NPU's water system under existing maximum day conditions without the development and with the estimated peak water usage for the development while maintaining a system residual pressure of 20 psi. As shown in **attached Figure 1**, without the development, the available fire flow at the connection to the proposed development as represented by junction NJ-1285 was predicted to be about 2,800 gpm. With adding the proposed development's peak water usage to the model, the available fire flow at junction NJ-1285 was predicted to be about 2,750 gpm. Given this minimal reduction in fire flow, the model suggests that NPU's water system should be able to maintain similar fire protection within the area when serving the proposed development.

Lastly, we estimated the available fire flows that NPU's existing water system can provide at three locations along the proposed 8-inch water main being installed to supply each of the buildings under existing maximum day conditions while maintaining a system residual pressure of 20 psi. As shown in **attached Figure 1**, the available fire flows at the three modeled locations as represented by junctions

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Alisa Morrison
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FHJ-002, FHJ-003 and FHJ-004 were predicted to be 2,300 gpm, 2,075 gpm and 2,050 gpm, respectively. Based on the modeled results, NPU's existing water system should be able to effectively deliver the individual fire flows needed for each building.

Conclusions

Based on the results of our analysis, the proposed development at 69 Fitch Hill Road is predicted to have minimal system impact on service pressures and available fire flows within the area. The model also shows that NPU's existing system is predicted to satisfy the estimated individual fire flow requirements for each of the buildings to be constructed in phases. As such, the existing system should be able to support the domestic and fire protection needs of the proposed development.

It should be noted that in the email dated 05/19/23, the total needed fire flow for the fully phased development was indicated to be 4,463 gpm which represents the total needed fire flow for each individual building on the property. This would be a worst-case scenario as it assumes that all three buildings would be on fire concurrently. The NPU should verify how the fire flow needs of the fully phased development should be assessed with the Norwich Fire Department. Based on the results of the analysis, the water system was predicted to provide a maximum available fire flow of 2,300 gpm which is obviously less than the noted total of 4,463 gpm.

Depending on the final criteria to be used for determining adequate fire protection, additional fire protection measures such as building sprinkler systems, or a fire pump may need to be installed by the developer. Given the type and size of buildings to be constructed, it is likely that these structures are already being provided with sprinkler systems which may reduce the needed fire flows to be provided on-site by NPU's water system.

If there are any questions or further evaluation necessary, please feel free to contact me at pcalderazzo@dewberry.com

Sincerely,



Peter Calderazzo, PE
Associate

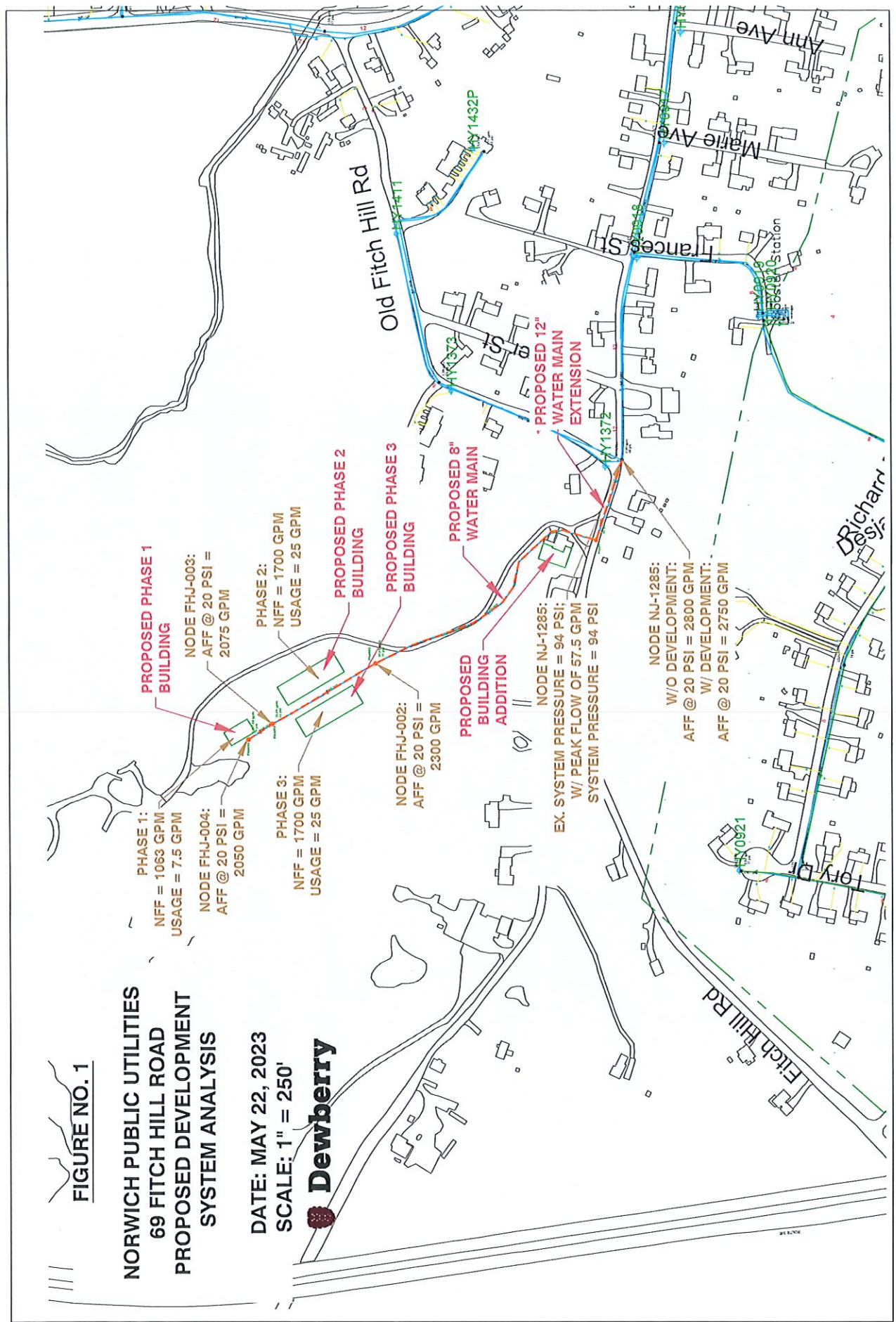
Attachments

Figure 1 – 69 Fitch Hill Road Development

FIGURE NO. 1

**NORWICH PUBLIC UTILITIES
69 FITCH HILL ROAD
PROPOSED DEVELOPMENT
SYSTEM ANALYSIS**

**DATE: MAY 22, 2023
SCALE: 1" = 250'**



CLA Engineers, Inc.

Civil • Structural • Survey

317 MAIN STREET • NORWICH, CT 06360 • (860) 886-1966 • (860) 886-9165 FAX

June 12, 2023

Meredith Badalucca
Zoning & Wetlands Officer
Town of Montville
310 Norwich New London Tpke
Uncasville, CT 06382

RE: 69 Fitch Hill Rd
CLA-7387 N

Dear Ms. Badalucca:

We have reviewed the revised materials submitted to the Montville Inland Wetlands Commission for the referenced application. These materials include:

1. Site plans revised to 5/25/2023.
2. A response letter from Ellen Bartlett P.E. of Green Site Design dated June 1, 2023

CLA has no further comments regarding the application and notes that during the field walk conducted by staff on June 9, 2023 the area, mentioned in the soil scientist report of 3/22/2022, in the vicinity of flags ## 117 to 127 is vegetatively stable. CLA also notes that the water quality basins are now proposed to intercept the water table and function as wetlands which is a preferable alternative and suitable given the site conditions.

Please contact me with any questions.

Very truly yours,

Robert C Russo

Robert C. Russo CSS

John U. Faulise, Jr., L.S.
Gerald J. Stefon, L.S. (1952-2021)

David C. McKay, P.E.
Jacob S. Faulise, E.I.T.



Boundaries LLC
179 Pachaug River Drive
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www.boundariesllc.net

June 12, 2023

Ms. Liz Burdick
Director, Land Use and Development Department
Town of Montville
310 Norwich-New London Turnpike
Uncasville, CT 06382

**Re: 23IWC7 – A&B Excavation
69 Fitch Hill Rd & Leffingwell Rd
Montville, CT
Site Development Plan and Stormwater Management Report Review**

Dear Ms. Burdick,

Per your request Boundaries, LLC. has completed a review of the revised site development plans and stormwater management report for the proposed commercial development located at 69 Fitch Hill Road and Leffingwell Road (Map 062, Lot 036-000) prepared by Green Site Design, LLC. The revised plans were accompanied by a letter prepared by Green Site Design, LLC. addressing comments and responding to questions provided by Boundaries LLC. We also completed a site walk to review the proposed development on June 9, 2023.

Based on the additional information provided and the results of the site walk, the review questions and comments regarding the wetlands application and supporting materials have been addressed.

Please do not hesitate to contact me with any questions.

Sincerely,

David C. McKay, P.E.

