

Hardwick Development Review Board
Conditional Use Review Request
O'Brien, David & Gail
35 Main Street, East Hardwick
Application #2021-010
April 7, 2021

To consider a Conditional Use Review request by David and Gail O'Brien for the renovation of an existing Accessory Structure (Garage) in the Central Business zoning district. Development would occur at 35 Main Street in East Hardwick, VT. Site is in the Floodway in the Flood Hazard Area Overlay.

The application requires a review under the following sections of the Hardwick Unified Development Bylaws: Table 2.1 Central Business District; 2.8 Flood Hazard Area Overlay; Section 3.9 Nonconforming Structures & Nonconforming Uses; 3.11 Performance Standards; 3.12 Protection of Water Resources; Section 3.13 Parking and Loading Requirements; Section 5.2 Conditional Use Review; Section 5.2 G1 Central Business District Standards and 5.3 Flood Hazard Review.

Warnings were posted on Monday, March 22, 2021 outside the Hardwick Memorial Building, at the Hardwick Post Office and the East Hardwick Post Office. The warning was sent to the following neighboring property owners: Meredith Holch; Barbara Cieslicki; James Teuscher Trust; Erich Stephens; Farm Connection Ltd; Jeffery Montgomery; Phyllis and Jean Cloutier; and Lanny and Mary Hill on Wednesday March 24, 2021. It was also published in The Hardwick Gazette on Wednesday, March 24, 2021.

Development Review Board members present: Ed Keene; Helm Nottermann; Kate Brooke; John Mandeville, Chair; and Ruth Gaillard.

Development Review Board members absent: None

Others present: Kristen Leahy, Zoning Administrator (acting clerk); John Svagzdys from DeWolfe Engineering; and Gail and David O'Brien, the applicants.

During the course of the hearing and prior to the hearing the following exhibits were submitted:

1. Email letter from Sacha Pealer, Floodplain Manager dated April 2, 2021.
2. Floodway Certification from DeWolfe Engineering, dated April 6, 2021.

Summary of Discussion

Chair John Mandeville began the hearing at 7:19. He noted that the hearing was quasi-judicial, explained the hearing procedure, asked board members for any disclosures of conflict of interest, and swore in all those who wished to speak at the hearing. It was noted for the record that four members of the Development Review Board are from East Hardwick and are familiar with the applicants. The relationships do not meet the threshold of conflicts of interest but were disclosed as courtesy.

Mr. Mandeville invited the applicants to present their proposal. Mr. Svagzdys testified that the existing structure will be renovated and utilized as an accessory building to a Single Family Dwelling (garage and personal workshop). A portion of the building will be removed. The submitted application indicated that 25' would be removed. The current plan would remove nearly 35 feet. The portion which will no longer exist is on the westerly side – closer to Main Street. The entire structure is located in the Floodway of the Lamoille River.

During the engineering phase, a possible issue was identified in that tax maps indicate that a portion of the structure was actually located on land owned by the Town of Hardwick. The applicant has entered into a

purchase and sales agreement with the Town and will be closing on that transaction in the near future. The section of the structure which will be removed was the section that allegedly existed across boundary lines. The O'Briens will be cleaning up this portion of the property after the transfer and will be replanting the green space.

The structure that will remain will be 25 feet by 50 feet. This will have three bays with garage doors (which can be opened in the event of a flood to allow water to exit the building). The fourth bay (which is on the westerly side of the building) will have an elevated floor to above Base Flood Elevation – 1046.7 which is approximately 4.6 feet above the ground elevation. This will be a small workshop for personal use.

The building is currently “drifting” and the foundation and the structure need to be addressed or the entire building will be rendered unusable.

The remaining structure will not have a slab underneath but rather packed ground in the garage section and gravel in the raised floor/shop section.

The hearing ended at 7:56 pm. Helm Nottermann made the motion to enter into deliberative session after the hearing and Ruth Gaillard seconded. All members were in favor.

Findings of Fact:

Based on the application and testimony, the Development Review Board makes the following findings:

2.1 Central Business District – An Accessory Structure to a conditional use (Garage) and Single Family Dwellings are listed as Conditional Uses in the district. Applicant is requesting to renovate their existing Accessory Structure. Location must be 25 feet from the centerline of Main Street and 5 feet from the side and rear setbacks. **These setbacks are pre-existing and meet the dimensional standards.**

2.8 Flood Hazard Area Overlay District – The Flood Hazard Area Overlay District lists “Substantial improvements to existing structures” and “Non-substantial improvements to existing structures (in floodway)” as Conditional Uses. **The proposal was reviewed by the Floodplain manager, Sacha Pealer (See Exhibit #1). Ms. Pealer made several recommendations for the proposal.**

3.9 Nonconforming Structures & Nonconforming Uses – The existing structure is within the dimensional standard established in 3.12 Protection of Water Resources. The garage is within the 75 feet setback from the Lamoille River. However, this section allows nonconforming structures to be restored if the reconstruction does not increase the degree of nonconformity which existed prior to any damage. **The restoration will not increase the nonconformity and will remove approximately 35 feet of the building.**

3.11 Performance Standards – review was made of the performance standards by the DRB. **No adverse aspects were identified.**

3.12 Protection of Water Resources – the property is located in the Flood Hazard Area Overlay. The pre-existing structure is located within the 75 feet setback from the Lamoille River. **The applicants intend to coordinate with VT ANR to install tree plantings to help stabilize the river bank and enhance the new greenspace created by the demolition. This section allows for the expansion of any structure in existence prior to the effective date of these bylaws and not in compliance with the Section with approval from the Development Review Board. The structure will be reduced rather than expanded. No concerns were voiced regarding the possible impacts on the quality of the Lamoille River water.**

5.2 Conditional Use Review

E) General Review Standards

The proposed conditional use will/ will not result in an undue adverse effect on any of the following:

1. **The capacity of existing or planned community facilities and services.** The proposed use will not affect either capacity.
2. **Character of the area affected.** The renovation and building removal matches the purpose of the Central Business district and the character of the surrounding area.
3. **Traffic on roads and highways in the vicinity.** The circulation and traffic patterns on Main Street will not be impacted by the existing use. No adverse effect was identified. The same driveway will be utilized and no increase in traffic will be created by the proposal.
4. **Bylaws in effect.** N/A
5. **The utilization of renewable energy resources.** N/A. The applicants will examine the possibility of including a solar installation at a later time.

F) Specific Review Standards shall include:

1. **Siting & Dimensional Standards.** All conditional uses shall meet minimum applicable dimensional and density standards as specified for the district in which the use is located (Article 2), the particular use (Article 4), and for the protection of surface waters (Section 3.12). **Except as mentioned earlier, all standards are met by the proposal.**
2. **Performance Standards.** All conditional uses shall meet performance standards as specified in Section 3.11. **The performance standards were reviewed. See Condition #2.**
3. **Access & Circulation Standards.** All conditional uses shall meet applicable access management standards as specified in Section 6.6. **Standards will be met by the proposed changes.**
4. **Landscaping & Screening Standards.** The Board may require landscaping, fencing, screening or site grading as necessary to maintain the character of the area, or to screen unsightly or incompatible uses from town highways, other public rights-of-way, or adjoining properties. **Landscaping was not indicated as necessary. New plantings will be incorporated after the removal of the westerly section.**
5. **Stormwater Management & Erosion Control Standards.** All conditional uses shall incorporate accepted stormwater management and erosion control practices as appropriate for the setting, scale and intensity of the existing and planned development. **No additional plans were indicated as necessary. The applicants are decreasing their impervious surface area on the site and will be adding beneficial plantings.**

5.2 G1 Central Business District Standards.

A) The use of front yards shall be limited to landscaping, pedestrian paths and associated pedestrian amenities (e.g. street furniture, pedestrian scale lighting and signs) and driveways. Outdoor storage, parking, and loading areas shall not be located within front yards unless the Board finds that the property is a pre-existing building or that no other practical alternative exists. **The proposed development will not require any new structures.**

B) Buildings should be oriented toward and relate to, both functionally and visually, public streets and/or common greens, parks or plazas, and not be oriented toward parking lots. The front façade should include a main entry-way and pedestrian access to the street. Buildings located on corner lots shall either be oriented toward the major street or include a corner entrance. The Board may impose a maximum setback, relative to

adjacent buildings, to achieve a consistent streetscape. **The proposal is for the reduction and the renovation of an accessory structure. A consistent streetscape will be achieved by this proposal.**

C) New buildings and additions to existing buildings shall be designed to be compatible with, and not stand in contrast to, historic structures located within the district with regard to building scale, massing, materials, orientation, and rhythm of openings. **Neither new buildings nor additions are being proposed with this renovation.**

5.3 Flood Hazard Review

(G) Development Standards – Special Flood Hazard Area.

- (1) All development shall be:
 - a. reasonably safe from flooding;
 - b. designed, operated, maintained, modified, and adequately anchored to prevent flotation, collapse, or lateral movement of the structure; **The applicants intend to retrofit the existing frame of the accessory structure. See Condition #3.**
 - c. constructed with materials resistant to flood damage; **A materials list will be submitted prior to construction. See Condition #4.**
 - d. constructed by methods and practices that minimize flood damage;
 - e. constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding; **See Condition #6.**
 - f. adequately drained to reduce exposure to flood hazards;
 - g. located so as to minimize conflict with changes in channel location over time and the need to intervene with such changes; and
 - h. required to locate any fuel storage tanks (as needed to serve a building in the Special Flood Hazard Zone) a minimum of one foot above the base flood elevation and be securely anchored to prevent flotation, or storage tanks may be placed underground, if securely anchored as certified by a qualified professional. **No fuel storage tanks are planned at this time but if and when they are installed, they will be located as required (minimum of 1 foot above the bfe & anchored).**
- (3) All new or substantially improved structures in Zones A, A1-30, AE, and AH shall be located such that the lowest floor is at or above the base flood elevation, and this must be documented, in as-built condition, with a FEMA Elevation Certificate. **The proposed workshop floor will be one foot above the BFE, at elevation 1046.7’.**
- (4) New or substantially improved non-residential structures shall:
 - a. Meet the standards in 5.3(G)(3); or, **See Above**
 - b. Have the lowest floor, including basement, together with attendant utility and sanitary facilities be designed so that at or above the base flood elevation, the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; A permit for flood proofing shall not be issued until a registered professional engineer or architect has reviewed the structural design, specifications and plans, and has certified that the design and proposed methods of construction are in accordance with accepted standards of practice for meeting the provisions of this subsection. **N/A**

- (5) Fully enclosed areas below grade on all sides (including below grade crawlspaces and basements) are prohibited. **No spaces are below grade.**
 - (6) Fully enclosed areas that are above grade, below the lowest floor, below the base flood elevation, that are subject to flooding shall:
 - a. be solely used for parking of vehicles, storage, or building access, and such condition shall be clearly stated on any permits; and **This aspect must be a condition of the permit. See Condition # 5.**
 - b. be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria: a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other cover coverings or devices provided that they permit the automatic entry and exit of floodwaters. **The square footage is approximately 1225 square feet. With 9 vents proposed, this will provide 1,800 square feet coverage - 9 x 200 square feet per vent = 1,800sf). In addition, the 3 garage doors can be raised.**
 - (9) New and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate the infiltration of flood waters into the systems and discharges from the systems into flood waters. **The structure will not have water or sewer.**
- (H) Development Standards – Floodway Areas
- (1) Encroachments or development above grade and less than one foot above the base flood elevation, are prohibited unless hydrologic and hydraulic analyses are performed in accordance with standard engineering practice, by a registered professional engineer, certifying that the proposed development will:
 - a. Not result in any increase in flood levels (0.00 feet) during the occurrence of the base flood;
 - b. Not increase any risk to surrounding properties, facilities, or structures from erosion or flooding. **Sacha has recommended an engineer’s floodway certification be required to ensure the project will “not increase any risk to surrounding properties, facilities, or structures from erosion or flooding.” Furthermore, this letter will need to include a stamped certification from a registered professional engineer that clearly states the project meets both a & b and provides a little more detail on how the site specific Lamoille River flood conditions published in the FEMA study were evaluated as part of that certification.” See Exhibit #2.**

Decision and Conditions

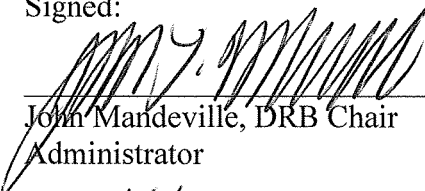
Based upon these findings, the Development Review Board voted 5-0 to approve the O’Brien conditional use application as presented and amended with the following conditions:

Conditions:

1. Any and all necessary state and federal permits must be in place before development can commence.
2. The Applicant will adhere to the Performance Standards as detailed in the Hardwick Unified Development Bylaws, Section 3.11 (Attached).
3. Prior to the commencement of development, additional details will be submitted to and approved by the zoning office regarding the anchoring designs.

4. Prior to the commencement of development, a list of materials to be utilized will be submitted to the zoning office. All materials must be listed by FEMA as "acceptable" in Table 2 of Technical Bulletin 2: Flood Damage-Resistant Materials Requirements.
5. The enclosed space below the lowest floor (the garage) must be limited in use to parking, building access or storage.
6. Prior to the commencement of development, the applicant will provide assurances that all utility system components (mechanicals, fixtures, and connections) will be located above BFE or otherwise protected according to FEMA guidance in FEMA P-348, Protecting Building Utility Systems from Flood Damage.
7. A FEMA Elevation Certificate for the finished building must be submitted to the zoning office upon project completion. The Elevation Certificate will be completed and stamped by a licensed professional engineer or land surveyor. The Elevation Certificate will also be recorded with the Hardwick Town Clerk's office.

Signed:


_____, Chair
John Mandeville, DRB Chair
Administrator


_____, acting clerk
Kristen Leahy, Zoning

Date 4/14/21

Date 4/14/21

NOTICE:

This decision may be appealed to the Vermont Environmental Court by an interested person who participated in the proceeding (in person or in writing) before the Development Review Board. Such appeal must be made within 30 days of the date of this decision, pursuant to 24 V.S.A. #4471 and Rule 5(b) of the Vermont Rules for Environmental Court Proceedings.

Hardwick Unified Development Standards

Section 3.11 Performance Standards

(A) The following performance standards must be met and maintained for all Conditional Uses and Home Occupation uses in all districts, except for agriculture and forestry, as measured at the property line. In determining ongoing compliance, the burden of proof shall fall on the applicant, property owner, and/or all successors and assigns; in the case of appeals to the Zoning Administrator alleging a violation of one or more of the following standards, the burden of proof shall rest with the appellant. No Conditional Uses or Home Occupation uses, under normal conditions, shall cause, create or result in:

(1) **regularly occurring noise**, which:

represents a significant increase in noise levels in the vicinity of the use so as to be incompatible with the surrounding area; or

in excess of 65 decibels, or 70 decibels within the Industrial District.

(2) **releases of heat, cold, moisture, mist, fog** or condensation which are detrimental to neighboring properties and uses, or the public health, safety, and welfare;

(3) **any electromagnetic disturbances or electronic transmissions or signals** which will repeatedly and substantially interfere with the reception of radio, television, or other electronic signals, or which are otherwise detrimental to public health, safety and welfare (except from telecommunications facilities which are specifically licensed and regulated through the Federal Communications Commission);

(4) **glare, lumen, light or reflection** which constitutes a nuisance to other property owners or tenants, which impairs the vision of motor vehicle operators, or which is otherwise detrimental to public health safety and welfare;

(5) **liquid or solid waste or refuse** in excess of available capacities for proper disposal which cannot be disposed of by available existing methods without undue burden to municipal or public disposal facilities; which pollute surface or ground waters; or which is otherwise detrimental to public health, safety and welfare;

(6) **undue fire, safety, explosive, radioactive emission or other hazard** which endangers the public, public facilities, or neighboring properties; or which results in a significantly increased burden on municipal facilities and services.

(7) **clearly apparent vibration** which, when transmitted through the ground, is discernable at property lines without the aid of instruments; or

(8) **smoke, dust, noxious gases, or other forms of air pollution** which constitute a nuisance or threat to neighboring landowners, businesses or residents; which endanger or adversely affect public health, safety or welfare; which cause damage to property or vegetation; or which are offensive and uncharacteristic of the affected area;

Flood Hazard Review - 35 Main Street, East Hardwick

Inbox

Pealer, Sacha

Fri, Apr 2, 9:41 AM (4 days ago)

Hi Kristen,

Thank you for sending the zoning application for the proposed garage rehabilitation at 35 Main Street, East Hardwick. I reviewed the application materials and offer the following comments relating to Hardwick's flood hazard regulations (Unified Development Bylaws).

The project involves substantial improvement of an existing garage in the Special Flood Hazard Area (Zone AE) of the Lamoille River. The project is also within the regulatory floodway of the Special Flood Hazard Area.

The proposal generally involves removal of one end of the existing structure, construction of a workshop space with lowest floor at 1' above base flood elevation (BFE), and the remainder of the structure being kept as garage space. No fill is proposed, and the structure's footprint will be reduced.

In the cover letter from Brian Lane-Karnas of DeWolfe Engineering, several aspects of the flood hazard areas regulations are mentioned in relation to the project; however, the town still needs some key details (listed below) to help evaluate *how* the project addresses these regulations.

Designing for Site-Specific Flood Conditions: In general, it is unclear from the application materials whether the engineer evaluated the specific flood conditions expected for the site, to ensure the proposed design fits the situation and meets the requirements of the bylaws Section 5.3. Particularly because the project is in the floodway, this evaluation is recommended to make sure the project will minimize flood damage (5.3 G.1.d) and be "adequately anchored to prevent flotation, collapse, or lateral movement" (5.3 G.1.b). Further, an engineer's floodway certification is required as part of ensuring the project will "not increase any risk to surrounding properties, facilities, or structures from erosion or flooding" (5.3 H. 1.b) (see below for more on floodway certification).

In the floodway, the flood depths and velocities are expected to be significant during the base flood. The effective FEMA Flood Insurance Study for Hardwick (dated 7/17/02) and the ground elevations on the site plan prepared by DeWolfe Engineering tell us that during the base flood:

1. Floodwater is about 3-5 feet deep at the garage, and
2. Average flood velocity is 6.2 feet per second at river cross-section "BF" of the FEMA flood study, which intersects the parcel.

FEMA guidance¹ considers velocities over 5 feet per second to be high and cautions that not all floodproofing techniques are effective in these locations. High velocity flooding and deep floodwater means greater forces act on the building during a flood, including both flood currents and debris impacts, which increases the potential for the building to be swept downstream.

(¹For examples, see *Floodproofing Non-Residential Buildings FEMA P-936/2013* and *Protecting Manufactured Homes FEMA P-85/2009*.)

Floodway Certification: Projects in the floodway must address 5.3 H.1, which requires that a professional engineer demonstrate and certify the project:

- a. Will “not result in any increase flood levels (0.00 feet) during the occurrence of the base flood”
- b. Will “not increase any risk to surrounding properties, facilities, or structures from erosion or flooding.”

As noted in the DeWolfe Engineering letter, the community need not require a full Hydrologic and Hydraulic modelling analysis as is typical to meet 5.3 H. 1., because the building footprint is being reduced in place, and it is readily apparent that the project will not create a new obstruction to flood flows that would raise floodwaters. However, it would be best if the letter included a **stamped certification** from a registered professional engineer that clearly states the project meets both “a” and “b” of 5.3 H. 1 and provides a little more detail on *how* the site-specific Lamoille River flood conditions published in the FEMA study were evaluated as part of that certification. FEMA looks for good documentation of floodway certification as an important part of the community’s NFIP compliance.

Anchoring: See 5.3 G.1.b, which states, “All development shall be...designed, operated, maintained, modified, and adequately anchored to prevent flotation, collapse, or lateral movement of the structure.” The application materials I saw did not include design details for how anchoring of the garage structure would be achieved and how the anchoring methods were chosen considering the anticipated flood forces at the site. It is unclear if the proposal includes rebuilding the framing of the structure with a new foundation slab or if the plan is to retrofit the existing frame. Either way, the town will want more details on anchoring designs. Likewise, if a fuel tank is planned to connect to the garage, it should be included in the project description and be designed to meet 5.3 G.1.h.

Flood damage resistant materials: See 5.3 G.1.c. The cover letter states that flood damage-resistant materials will be used below BFE but does not provide details of what materials will be used (apart from the flood vent product). Although the specific materials may not yet be fully selected, the town will need assurance that all materials will be those listed by FEMA as “acceptable” in Table 2 of *Technical Bulletin 2: Flood Damage-Resistant Materials Requirements*.

Floodable enclosure / Flood vents: As stated in 5.3 G.1.6, enclosed spaces below the lowest floor must have flood openings that provide at least 1 square inch of wall opening for every 1 square foot of enclosed space (footprint) or, in the case of a specialized flood vent product, be designed by the manufacturer to provide enough coverage for the square footage of the enclosure. I suggest the town confirm the square footage of the proposed enclosure (below workshop, within garage parking area, etc.) to make sure the 9 flood vents proposed provide enough coverage (i.e., 9 vents x 200 square feet per vent = coverage for 1,800 square feet of coverage). Enclosed spaces below the lowest floor must also be limited in use to parking, building access or storage. 5.3 G.1.6 specifies that this limitation on use be clearly stated in the permit conditions.

Utilities: See 5.3 G.1.e. I recommend the town seek more information on what utilities will serve the rehabilitated structure. The town will need assurance that all utility system components (mechanicals, fixtures, and connections) will be located above BFE or otherwise protected according to FEMA guidance in *FEMA P-348, Protecting Building Utility Systems From Flood Damage* (2017).

Elevation Certificate: See 5.3 G.3. To ensure the project is built as proposed, be sure to require a FEMA Elevation Certificate for the finished building be submitted to your office upon project completion (e.g., before issuing a Certificate of Compliance). The Elevation Certificate should be completed and stamped by a licensed professional engineer or land surveyor.

Please let me know if you have any questions. You may consider this email as ANR flood hazard review to assist with the local permit process per 24 V.S.A. §4424.

Best wishes,

Sacha Pealer, CFM|Northeastern River Scientist & Floodplain Manager (she, her)
Vermont Agency of Natural Resources | Department of
Environmental Conservation
Watershed Management Division, Rivers Program
1 National Life Drive, Davis 3 | Montpelier, VT 05620-3522
802-490-6162 office & cell
Sacha.Pealer@vermont.gov
<http://dec.vermont.gov/watershed/rivers>

*Due to the coronavirus (COVID-19) we are taking additional safety measures to protect our employees and customers and are now working remotely while focusing on keeping our normal business processes fully functional. Please communicate with our staff electronically or via phone to the greatest extent possible since our processing of postal mail may be slowed during this period. **Flood Hazard Area & River Corridor Permit Applications** are available here: <https://dec.vermont.gov/watershed/rivers/river-corridor-and-floodplain-protection/state-permits>. **You may now submit permit applications, compliance reports, and fee payments through our new online form to expedite its receipt and review:** https://anronline.vermont.gov/?format=WSMD_Intake. Division staff contact information can be found online here: <https://dec.vermont.gov/watershed/contacts>.*

Thank you for your patience during this challenging time. We wish you and your family the best.



April 6, 2021

Kristen Leahy, Zoning Administrator
Town of Hardwick
20 Church Street
Hardwick, Vermont 05843

Reference: **Floodway Certification, 35 Main Street, East Hardwick**

Dear Kristen,

We are writing to provide written Floodway Certification as is required by section (H)(1) of the Town of Hardwick Unified Development Bylaws. The project is the renovation of an existing garage located at the top of the existing bank of the Lamoille River. The proposed renovations include removing an approximately 24'-3" portion of the westerly end of the building. The remaining portion of the building will house a two-bay garage and a workshop for personal use. There will be no building expansion or construction outside the original building footprint.

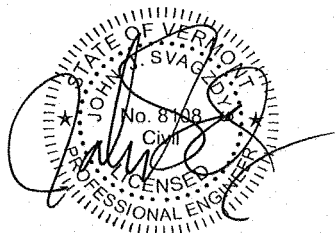
Typically, hydrologic and hydraulic calculations would compare existing and proposed cross sections through the proposed development using HEC-RAS or other approved modelling software. However, because there is no change to the river cross section as a result of this development, and the structure in question existed prior to the first effective flood study, there is no change to be modelled. The existing cross section would be identical to the proposed cross section, therefore there would be no change to the modelled flood elevation.

Based on the fact that there is no change to the river cross section as a result of this project, DeWolfe Engineering certifies that the proposed development will not result in any increase in flood levels during the occurrence of the base flood.

DeWolfe Engineering also certifies that the proposed project will not increase any risk to surrounding properties, facilities or structures from erosion or flooding.

Sincerely,

John Svagzdys
John Svagzdys, PE



- Surveying
- Permitting
- Site Design
- Subdivisions
- Timber Design
- Expert Testimony
- Site Development
- Act 250 Permitting
- Forensic Engineering
- Environmental Permitting
- Transportation Engineering
- Structural Inspection Services
- Commercial Building Design
- Construction Oversight
- Building Assessment
- Pedestrian Bridges
- Stream Alterations
- Sewer Design
- Water Supply
- Storm Water
- Hydrology
- Grading

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