GODDARD CONSULTING
Strategic Ecological Consulting

September 25, 2025

Franklin Conservation Commission
355 East Central Street
Franklin MA 02038

Re: Response to BETA Comments – Notice of Intent Peer Review #2
444 East Central Street, Franklin MA
(DEP File No. not yet issued)

Dear Franklin Conservation Commission,

Goddard Consulting, LLC (Goddard) is pleased to submit this letter on behalf of the Applicant, AJ Alevizos of TAG Central LLC, providing revised materials and responses to the peer review letter issued by BETA, dated August 21, 2025, in regard to the Notice of Intent (NOI) filed for 444 East Central Street, Franklin MA (Parcel ID: 284-66).

A list of attached documents is as follows:

- Re: Peer Review #2, Comprehensive Permit, 444 East Central Street, Franklin, MA, Allen & Major Associates, Inc., 9/23/2025
- Regulatory Compliance Analysis, Goddard Consulting LLC, revised through 9/25/2025, inclusive of:
    - Existing Conditions in Riverfront Area, Goddard Consulting LLC, 9/19/2025
    - Proposed Conditions in Riverfront Area, Goddard Consulting LLC, 9/19/2025
    - Proposed Restoration of Riverfront Area, Goddard Consulting LLC, 9/19/2025
    - Existing Flood Plain Volume Exhibit, Allen & Major Associates, Inc., 9/16/2025
    - Proposed Flood Plain Volume Exhibit, Allen & Major Associates, Inc., 9/16/2025
- Restoration, Replication and Mitigation Plan, Goddard Consulting LLC, revised through 9/25/2025
- Drainage Report, Allen & Major Associates, Inc., revised through 9/18/2025
- Civil Site Plans For: 40B Multi-Family Site Development, 444 East Central Street, Franklin MA, Allen & Major Associates, Inc., revised through 9/18/2025
- Invasive Species Management Coordination Plan, Kyle Zick Landscape Architecture, Inc., revised through 9/11/2025

Sincerely,
Goddard Consulting, LLC

Chris Frattaroli
Lead Wetland Scientist

CC:
AJ Alevizos, TAG Central LLC

Goddard and the project team have reviewed the comments provided by BETA and offer the following responses. Comments that have been sufficiently addressed are omitted for brevity. The most recent comments from BETA are indicated with "BETA2", and subsequent responses from Goddard are indicated with "GC2".

Comment A1:
The Massachusetts Department of Environmental Protection (MassDEP) has not issued a DEP file number as of this writing.

Response:
Goddard has reached out to MassDEP Central Regional Office to confirm that they have received all necessary materials and to inquire about the status of the issuance of a file number.
BETA2:
MassDEP has not issued a DEP file number as of this writing.
GC2:
Goddard has continued to inquire with MassDEP CERO regarding the issuance of a file number, and MassDEP has confirmed a file number is forthcoming.

Comment A3:
Resource Area impacts (both permanent and temporary) should be clearly labeled on the Project plans.

Response:
A Resource Area Impacts plan sheet has been added to the plan set to illustrate impacts to resource areas proposed.
BETA2:
Proposed impacts to IVWs and some impacts to BLSF have been depicted on Sheet EXH-5; however, Riverfront Area impacts; all BLSF impacts; LUW, Bank, and BVW impacts associated with the dock; and impacts associated with invasive species removal have not been depicted or quantified. The Applicant should confirm if impacts associated with invasive species removal have been quantified and included on the WPA Form 3 and within any provided impact summary. With regard to BLSF impacts, the Applicant appears to show alteration to some areas that are not currently designated as BLSF. As noted later in this letter, the boundary of BLSF may change upon further analysis of the floodplain. Comment remains.
GC2:
The Resource Area Impacts plan sheet has been updated to include impacts to BLSF, incorporating the newly updated BLSF boundary, and LUW/Bank/BVW associated with the dock. Riverfront Area impacts are quantified in the Regulatory Compliance Analysis. Invasive species management impacts are quantified separately on the attached Landscape Plan sheet.

All resource area impacts, both temporary and permanent, have been clearly labeled and depicted on updated project plans and materials as included in this submittal.

Comment W1:
The Project, as currently depicted, will disturb more than one (1) acre of land; therefore, a Notice of Intent (NOI) must be submitted to the Environmental Protection Agency (EPA) under the Construction General Permit (CGP) and a Stormwater Pollution Prevention Plan (SWPPP) must be prepared. The Commission could consider a Special Condition within the Order of Conditions that requires the submission of the SWPPP for review and approval prior to the commencement of work.

Response:
The Applicant is aware that the project, as proposed, will be subject to jurisdiction under the EPA CGP and a SWPPP must be prepared. As noted by BETA, there are specific federal regulations already in place that the Applicant must adhere to, so the Applicant does not think this special condition is necessary, but ultimately defers to the Commission.
BETA2:
BETA defers to the Commission on including a Special Condition within the Order of Conditions that requires the submission of the SWPPP for review and approval prior to the commencement of work. The Commission has historically required this on large development projects.
GC2:
Acknowledged, please see previous response to this comment. The SWPPP is under the jurisdiction of the United States Environmental Protection Agency and outside of the jurisdiction of the MA Wetlands Protection Act.

Comment W3:
The Applicant should provide further information on the proposed construction of the dock within the perennial stream including how the dock will be constructed and details on the structures proposed within the stream/LUW; any permanent and temporary impacts to Resource Areas (Bank, LUW, and BVW) associated with the construction of the dock; and how the dock will be maintained. Sufficient information has not been provided to permit the construction of the dock.

Response:
Landscape Plans have been updated to provide all requested information as it relates to the design and construction of the dock including details illustrating the structures proposed within the stream/LUW and impacts to the Resource Areas (Bank, LUW and BVW). The dock and gangway are planned to be a prefabbed product similar or equal to the product line offered by the manufacturer, EZ-Dock (image included for illustrative purposes). The dock is low-maintenance, durable, and slip-resistant made of polyethylene. As such, maintenance is limited to sweeping the surface of the dock clean, and as it's a modular system, can be easily dissembled and stored as/if necessary during winter months.

Figure 1: Representative photo of proposed dock.

BETA2:
The Applicant provided sufficient information on the proposed dock. Proposed Resource Area impacts associated with the dock should be shown on Sheet EXH-5. Should the Commission approve the construction of the dock, it is recommended that a Special Condition

requiring the removal and appropriate storage of the dock during winter months be included in the Order of Conditions. Although not directly under the Conservation Commission's purview, the onsite stream may qualify as a "navigable waterway" per the Massachusetts Public Waterfront Act (Chapter 91) and therefore require a Chapter 91 license. It is recommended that a Special Condition be included in the Order of Conditions that requires the Applicant to either provide the Commission with a copy of the Chapter 91 License prior to construction of the dock or to provide written confirmation from MassDEP that the waterway does not qualify as "navigable". MassDEP is the only entity that can make the determination of navigability under the Chapter 91 program.

GC2:

The proposed Resource Area impacts associated with the dock have been shown on Sheet EXH-5. The applicant is amenable to a Special Condition requiring the removal and appropriate storage of the dock during the winter months. The applicant must follow all State and Federal laws and regulations, including with respect to Chapter 91 licensing, if applicable. The Massachusetts Public Waterfront Act (Chapter 91) is outside the purview of the Conservation Commission as noted by BETA. The Applicant will conduct thorough due diligence to confirm the proper permits are obtained prior to the installation of the dock, as is done for every aspect of the project. As such, a special condition is unnecessary in the Applicant's opinion. Regardless, the Applicant is happy to accept a Special Condition stating: "Should a Chapter 91 License be required for the dock, the Applicant shall submit a copy of the License to the Commission prior to construction of the dock."

Comment W6:

The Project will require a significant area of earthwork. Provide a phasing plan to supplement the erosion control plan that limits the total area of disturbance at the Site at any time, with provisions to temporarily stabilize previous phases as appropriate before further advancing work.

Response:

Detail regarding construction sequencing has been added to plan sheet C-002.

BETA2:

Comment remains. Phasing to limit disturbance was not provided within the construction sequence. The Applicant notes that the schedule of work will be completed by the site contractor. The Commission could consider including a Special Condition requiring the chosen site contractor to provide a final construction sequence with phasing of construction, including temporary stabilization measures, prior to the commencement of work.

GC2:

Acknowledged. The Applicant is amenable to providing a phasing plan to the Commission prior to the commencement of work.

Comment W8:

The work proposed over the existing southern stream crossing (i.e., north of flag C50) depicts proposed linework that appears to denote a new culvert. The Applicant should clarify the intent at this location. If no new crossing is proposed, provide a cross section that demonstrates that proposed utilities can be installed without conflicting with the existing pipe. Should the Applicant propose a new crossing, documentation of compliance with the Massachusetts Stream Crossing Standards to the extent practicable is required, and the plans will need to be supplemented with additional details, water control provisions, etc.

Response:
No new stream crossing culverts are proposed, nor do the plans indicate such – perhaps the linework in the previous plan set was unclear. Regardless, a cross section of the stream crossing has been added to the plans illustrating utilities can be installed without conflicts with the existing pipe.
BETA2:
Comment addressed. As noted on the provided profile, a Structural Engineer will be required to confirm the foundation, which will need to be constructed with the existing pipe placed through it. BETA recommends that a Special Condition be included in the Order of Conditions that requires the Applicant to secure an Amended Order of Conditions in the event that replacement of the pipe (or a section thereof) is required.
GC2:
Acknowledged. The Applicant is amenable to this being included as a condition of approval, if necessary, and suggests that this be completed prior to the issuance of the final certificate of occupancy.

Comment W9:
The northern stream crossing is proposed to be reused, and the existing piping will remain in place. BETA recommends that the engineer of record provide a statement certifying the condition of the pipe and the structural capacity to support the loading of the pavement courses, vehicular traffic, and construction equipment

Response:
The Applicant is amenable to a condition of approval requiring a statement from a structural engineer indicating the structural capacity of the northern stream crossing can support the loads. This can be provided prior to the commencement of construction.
BETA2:
Comment addressed; see GC Response and W8 BETA2 for the recommended Special Conditions.
GC2:
Acknowledged. The Applicant is amenable to this being included as a condition of approval.

Comment W11:
The Applicant has stated that invasive species including common reed (*Phragmites australis*), glossy buckthorn (*Frangula alnus*), Japanese knotweed (*Fallopia japonica*), and bittersweet (*Celastrus orbiculatus*) are present at the Site. During BETA's Site visit, these species and the following additional species were observed: purple loosestrife (*Lythrum salicaria)*, multiflora rose (*Rosa multiflora*), garlic mustard (*Alliaria petiolata)*, Norway maple (*Acer platanoides)*, autumn olive (*Elaeagnus umbellate),* winged euonymus (*Euonymus alatus)*, and bush honeysuckle (*Lonicera spp.*). These species were observed in areas proposed for development, but no formal invasive species removal plan has been provided for these species. The Applicant should provide information regarding the removal of all invasive species at the site to ensure further spread does not occur during construction.

Response:
The management methods proposed are applicable to all identified invasive species on site. The Restoration, Replication and Mitigation Plan has been updated to reflect this and to provide additional detail regarding preferred management techniques and access considerations. An Invasive Species Management Coordination Plan (sheet L0) has also been

added to the Landscape Plans which depicts the areas in which invasive species management is proposed.

BETA2:

The Applicant should state if excavation is proposed within Resource Areas as a method to remove invasive species; if so, these impacts should be quantified. Within the ongoing management section, it is stated that mowing is a viable management option for continued maintenance. Japanese knotweed is a species that can vegetatively sprout by any fragment of the plant. This plant should not be mowed as it can cause the spread of the species. This should be detailed in any ongoing maintenance plans. With regard to the invasive species management plan as a whole, it does not appear that Site-specific recommendations for treatment are provided for specific areas of the Site. For example, there are general note about herbicide use, but it is anticipated that the Conservation Commission would want the Applicant to avoid herbicide use within wetlands to the extent feasible. In addition, it does not appear that the landscape plans capture all areas of the Site with invasive species populations (i.e., directly along the Bank of the onsite stream). The Commission could consider requiring the Applicant to prepare a more Site-specific invasive species management plan during the public hearing process. Alternatively, the Commission could consider including a Special Condition in the Order of Conditions that requires this to be prepared prior to construction for review and approval.

GC2:

The Restoration, Replication and Mitigation Plan has been updated to specify that (1) excavation of invasive species is not to occur within Bank, BVW or LUWW resource areas, (2) any cutting of Japanese knotweed must be done stalk-by-stalk, rather than by mowing, and all vegetative material must be removed from the site, and that (3) chemical treatment will not occur unless mechanical treatment has been demonstrated to be ineffective. The Applicant does **not** propose applying herbicide to open water, but because of the potential for application to occur close to water, herbicides that are approved for such use have been selected. Additionally, the specific landscape plan sheet in question has been revised to better depict the extents of existing invasive vegetation and those areas proposed for ongoing management and is attached to this submittal. A complete, final Landscape Plan Set including all sheets properly updated and coordinated will be submitted for review prior to the end of the public hearing process. The areas proposed for management comprise 86,205 square feet, of which 59,672 square feet is located within proposed planting areas and 23,187 square feet is located outside of the proposed planting areas.

Comment W12:

The Applicant should provide the locations and areal extent of invasive species proposed for removal and provide additional details on the means and methods of removal in the submitted invasive species management plan. Dense stands of common reed are present along the Banks of the River and will require specific access and treatment considerations. Significant invasive species control efforts will be required along the River to ensure that the adjacent native plantings and restoration areas are not compromised. It is recommended that areas subject to invasive species management be monitored for at least three (3) growing seasons to document the efficacy of the control efforts.

Response:

Additional details regarding invasive species management methods, especially with regard to the Phragmites and Japanese knotweed along the Banks of the River, have been added to the

Restoration, Replication and Mitigation Plan. An Invasive Species Management Coordination Plan (sheet L0) has also been added to the Landscape Plans. The applicant is amenable to monitoring for three (3) growing seasons.

BETA2:

See BETA2 response to Comment W11.

GC2:

See GC2 response to Comment W11.

Comment W14:

A monitoring protocol should be submitted by the Applicant to address the recommendations above for the Commission's review and approval. This protocol should include monitoring frequency, methodologies, corrective actions, metrics for success, and reporting schedule.

Response:

The above monitoring protocols have been incorporated into the Restoration, Replication and Mitigation Plan.

BETA2:

The Applicant should provide specific contents of the monitoring reports and metrics for determining success as it relates to the invasive species management plan. Comment remains.

GC2:

Specific items to be included in monitoring reports, and clearer metrics for determining success, have been added to the Restoration, Replication and Mitigation Plan.

Comment W15:

It is recommended that areas subject to native plantings/restoration be mowed only once per year during late fall; this could be included as a Special Condition. If so, it is recommended that signage be required to demarcate these areas and this requirement in the field.

Response:

The Applicant is amenable to the inclusion of a Special Condition prohibiting the wholesale mowing of naturalized areas more than once per year in late fall; however, mechanical removal of invasive species in these areas, including mowing, may be implemented for invasive species management purposes in limited portions of these areas. Due to these areas not being contiguous, installing signage is not practical.

BETA2:

To ensure the success of native species and to support native fauna, mowing should not occur as a removal method for invasive species within naturalized areas. Invasive species found throughout naturalized areas should either be hand removed or treated with herbicide using a cut and treat method. Signage could still be installed to demarcate the extents of naturalized areas, even if fragmented. BETA defers this to the Commission.

GC2:

The Restoration, Replication and Mitigation Plan has been updated to stipulate that mowing of naturalized areas is not proposed. Rather, mechanical removal in these areas should be completed by targeted cutting performed by hand-operated tools or equipment. Signage indicating that mowing is only intended to occur once per year in late fall has been added to the landscape plan sheets.

Comment W18:
Provide additional information on the preservation of land at the Site, including the legal means of preserving the land; the responsible entity for monitoring compliance with any deed restrictions or conservation restrictions; and an Operation and Maintenance Plan that ensures protection of Areas Subject to Protection/Jurisdiction under the Act. Any related Project facets that may be required to support this endeavor (i.e., establishing trails and posting signage) should also be disclosed.

Response:
The southern portion of the site as depicted on the exhibit in the NOI submittal will be divided off as its own unbuildable lot and deeded to the Town of Franklin under the ANR process, to be approved by the ZBA under the Comprehensive Permit. As the Applicant will no longer own the land, future management of the property is at the discretion of the Town. The Applicant is amenable to post signage along the southerly edge of the parking lot in front of the land to be deeded. Details for this signage can be coordinated with the Commission and can be added to the Plans in the next resubmission.

BETA2:
BETA recommends the Commission include Special Conditions within the Order of Conditions stating that the transfer of property must occur prior to the commencement of work and that the Applicant must provide the Commission with a signage plan for review and approval, which the Applicant will then implement at their expense.

GC2:
The Applicant is amenable to a condition requiring that the land transfer occur prior to the commencement of work. Landscape plans have been updated to include locations and details for the signage. The Applicant seeks the Commission's approval of the signage as a part of this Order of Conditions rather than as a condition. A final landscape plan set will be submitted with this updated information prior to the end of the public hearing process for the review and approval of BETA and the Commission.

Comment W20:
Invasive species proposed for removal including common reed and Japanese knotweed are present within the BVW and Bank associated with the onsite perennial stream. The Applicant should clarify if temporary impacts to Resource Areas will occur as a result of removing this vegetation. The Applicant should also clarify if supplemental plantings are proposed within Resource Areas where vegetation is removed.

Response:
Temporary impacts in the form of invasive species management are likely to occur with the management of invasive vegetation. The Restoration, Replication and Mitigation plan has been updated to specify that native potted plants and/or native seed mix shall be placed in these areas if invasive vegetation is sufficiently managed that areas become unvegetated; however, the likelihood of this being a problem is believed to be low.

BETA2:
Impacts related to the removal of invasive species should be quantified. The Applicant should determine if excavation of invasive species, specifically those that spread via rhizome, will occur within Resource Areas.

GC2:
Impacts related to invasive species management have been better quantified on the landscape plans; the singular sheet is provided as an attachment to this submittal. A final landscape plan

set will be coordinated, compiled and submitted prior to the end of the public hearing process for the review and approval of BETA and the Commission. The Restoration, Replication and Mitigation plan has been updated to specify that excavation is acceptable within Riverfront Area, Bordering Land Subject to Flooding, and the 100-foot buffer zone, and that excavation shall not impact Bank, Bordering Vegetated Wetlands, or Land Under Water Bodies and Waterways.

Comment W21:
Impacts to Bank associated with the installation of the proposed dock should be quantified and details regarding how the Project complies with the Performance Standards set forth in Act should be provided. Construction of a dock is considered a Limited Project under 10.53(3)j if all applicable standards are met.

Response:
Proposed impacts to Bank for the installation of the dock amount to 4 lf (i.e. the width of the gangway). The impact does not consist of direct alteration, only the overhanging dock walkway. Nevertheless, this aspect of the project is eligible to be treated as a Limited Project under 10.53(3)j. The dock has been selected to ensure that its minimal width does not materially effect the amount of light reaching below, such that vegetation is maintained. 310 CMR 10.53(j) states that limited projects may be permitted, such as, "*[t]he construction and maintenance of catwalks, footbridges, wharves, docks, piers, boathouses, boat shelters, duck blinds, skeet and trap shooting decks and observation decks; provided, however, that such structures are constructed on pilings or posts so as to permit the reasonably unobstructed flowage of water and adequate light to maintain vegetation,"* among others.

BETA2:
The Applicant did not provide information on how the project complies with the Performance Standards set forth in 310 CMR 10.54(4). The Limited Project provisions are at the discretion of the Commission and require the Applicant to demonstrate that the Performance Standards are met to the maximum extent practicable. Comment remains.

GC2:
Discussion of compliance with the Performance Standards at 310 CMR 10.54(4) has been added to Section 5.0 of the Regulatory Compliance Analysis, and a section has been added documenting compliance with the Limited Project provisions. The Resource Area Impact Exhibit (Sheet EXH-5) has been updated to depict this impact.

Comment W22:
Impacts to BVW for the installation of the proposed dock should be quantified and details regarding how the Project complies with the Performance Standards set forth in Act should be provided. Construction of a dock is considered a Limited Project under 10.53(3)j if all applicable standards are met.

Response:
Proposed impacts to BVW for the installation of the dock amount to 32 sf. The impact consists primarily of the overhanging dock gangway, and a minor direct impact for the installation of piles. Nevertheless, this aspect of the project is eligible to be treated as a Limited Project under 10.53(3)j as described in our response to comment W21.

BETA2:
The Applicant states in the BVW Performance Standards narrative that 40 square feet of BVW impacts are proposed associated with improvements on the stream crossing; however, impacts associated with the installation of the dock are not mentioned. All proposed impacts should be quantified and discussed within the Performance Standard narrative and shown on the Resource Area Impact Exhibit.
GC2:
Discussion of compliance with the Performance Standards at 310 CMR 10.55(4) has been added to Section 3.0 of the Regulatory Compliance Analysis, and a section has been added documenting compliance with the Limited Project provisions. The Resource Area Impact Exhibit (Sheet EXH-5) has been updated to depict this impact.

Comment W23:
Impacts to LUW for the installation of the proposed dock should be quantified and details regarding how the Project complied with the Performance Standards set forth in the Act should be provided. Construction of a dock is consider a Limited Project under 10.53(3)j if all applicable standards are met.

Response:
Proposed impacts to LUW for the installation of the dock amount to 160 sf. The impact consists only of shading caused by the dock float. This impact is unlikely to have any adverse impact, as no significant amount of aquatic vegetation is present within LUW in this area. Nevertheless, this aspect of the project is eligible to be treated as a Limited Project under 10.53(3)j as described in our response to comment W21.
BETA2:
The Applicant did not provide information on how the project complies with the Performance Standards set forth in 310 CMR 10.56(4) and has not depicted proposed LUW impacts on the Resource Area Impact Exhibit.
GC2:
Discussion of compliance with the Performance Standards at 310 CMR 10.56(4) has been added to Section 6.0 of the Regulatory Compliance Analysis, and a section has been added documenting compliance with the Limited Project provisions. The Resource Area Impact Exhibit (Sheet EXH-5) has been updated to depict this impact.

Comment W24:
The Applicant should provide further information regarding how the extent of BLSF at the Site was determined, as the ORAD only approved portions of the BLSF at the Site. Given the number of stream crossings / hydraulic restrictions present at the Site, this evaluation should be prepared by a Professional Engineer with experience in hydraulics. The Commission may require more up to date engineering information than what is provided by FEMA per (310 CMR 10.57(2)(a)3., particularly given the presence of a Zone A with no published base flood elevation.

Response: *[previous response omitted for brevity]*

BETA2:
Regarding the Applicant's assertion of recorded/observed flood events, no tangible evidence has been provided to depict conditions related to any storm event at the Site. Therefore, a conflict exists in that no credible data of Site conditions relevant to the floodplain has been

provided to support the Applicant's stance of the extent of flooding in a Zone A. It is BETA's position that the Commission reserves the right to require a floodplain analysis to accurately confirm the extents of BLSF at the Site. In addition, the Applicant mentions that a Zone X was present at the Site at the time of their writing, which is used as a basis to claim that the 100-year floodplain cannot also be present in that area. As noted in the Applicant's response, there was no NFIP data in that portion of the Site; therefore, it is not accurate to accept the Zone X designation as a matter of fact. As of July 8, 2025, FEMA has updated the map panel 25021C0309F to depict that a Zone A with no Base Flood Elevation (BFE) is present throughout the Site. Therefore, it is BETA's opinion that the change in floodplain mapping further supports the request for an analysis to accurately determine a BFE for the Site. It is BETA's understanding that the Applicant indicated to the Town via email on August 20, 2025 that this analysis would be performed in the coming weeks.

GC2:

The Applicant retained a second civil engineering firm with experience in hydrology and establishing a base flood elevation (BFE) in a Zone A, Beals Associates, Inc., to provide further engineering analysis, in accordance with MA WPA regulations, of hydraulic restrictions and floodplain conditions to establish a base flood elevation in the northern portion of the site. This analysis corroborates the use of elevation 271' in the southern portion of the site, as confirmed in the ORAD, and establishes elevation 271.5' as the flood elevation in the northern portion of the site based on hydraulic modeling. Civil plans have been updated to reflect the additional BLSF, including a compensatory flood storage and riverfront naturalization area located in the northwest corner of the site.

Comment W25:

The Applicant stated that no significant wildlife habitat is present in the area of proposed work within BLSF. However, according to 310 CMR 10.57(1)(a)3, areas of BLSF located within the 10-year floodplain or within 100 feet of a Bank or BVW (whichever is further away) are presumed to be significant to the protection of wildlife, unless they have been extensively altered by human activity as defined in the regulations. While some portions of the BLSF within 100 feet of the Bank and BVW appear to meet the definition of "altered", portions of BLSF where work is proposed do not. Therefore, the Applicant should depict the 10-year floodplain boundary and quantify impacts to BLSF as appropriate to determine if a wildlife habitat evaluation is warranted.

Response:

As is necessary for human safety and vehicular access, the existing southern stream crossing needs to be bolstered. This area is the only location where fill is proposed within BLSF. Figure 3 below, dated 3/7/2025, depicts the approximate location of fill within BLSF in yellow. Goddard believes that this work clearly is proposed in an extensively human-altered area. The majority of this work area is comprised of a hardpacked gravel access roadway. Vegetation is limited, but the dominant vegetation in this area is common reed (*Phragmites australis*) and Japanese knotweed (*Fallopia japonica),* both invasive species that provide little habitat value. *[Figure 3 is now rendered inaccurate and has been omitted from this document for brevity]*

BETA2:

As of July 8, 2025, FEMA has updated the map panel 25021C0309F showing a Zone A with no Base Flood Elevation (BFE) is present throughout the Site. The Applicant should

provide an updated regulatory review of work proposed within BLSF, which should reflect the floodplain analysis that is anticipated to be performed by the Applicant.

GC2:

The Regulatory Compliance Analysis has been updated to provide a regulatory review of work within BLSF based on the previously mentioned hydraulic analysis provided by Beals Associates, Inc. This analysis was submitted to the Commission previously and site plans have been updated accordingly.

Comment W26:

The Applicant should provide further information regarding the assertion that 153,170 square feet of the existing RA is degraded. BETA agrees that some areas of the RA are considered degraded as pavement, debris piles, and absence of topsoil were observed; however, several areas that are shown as degraded by the Applicant were determined to be non-developed/not degraded, as topsoil and vegetation are present. It is recommended that the Applicant reassess vegetated areas of the RA to determine if topsoil is present in all areas currently depicted as degraded. MassDEP precedent has established that the presence of topsoil can be a primary determining factor of whether RA is degraded. BETA has attached a field sketch with photographs to this letter for reference. Compliance with Performance Standards should be reevaluated once these revisions are complete.

Response:

While the presence or absence of topsoil can be a factor for determining whether riverfront area is degraded, it is not the only consideration. The WPA regulations at 310 CMR 10.58(5) state that degraded riverfront area can be comprised of "*impervious surfaces from existing structures or pavement, absence of topsoil, junkyards,* ***or*** *abandoned dumping grounds*." Here, junkyards and abandoned dumping grounds define much of the area of degradation. Therefore, such areas are considered degraded by virtue of being junkyards or abandoned dumping grounds, regardless of the presence or absence of topsoil therein.

At this juncture, Goddard has not yet performed a follow-up site visit to review BETA's recommendations regarding existing degraded areas. This will be completed in the coming weeks. Regardless, the total square footage of the degraded areas in question would not amount to enough to impact whether the project remains compliant with the Performance Standards under 310 CMR 10.58(5).

BETA2:

Comment remains. Areas of dumping are present throughout the site; however, areas determined as degraded by the Applicant on both the eastern and western side of the stream were not observed to, in BETA's opinion, qualify as "junkyards". Further, impervious surfaces are not present in these areas, and the presence of topsoil was observed. The Applicant should reassess the delineation of degraded versus non-degraded areas at the Site prior to completing their analysis of RA Performance Standards compliance.

GC2:

Goddard has conducted a thorough site walk to review the areas in question and concurs with BETA's assertion that certain areas initially depicted as degraded are not in fact degraded. These areas are depicted on the field sketch in BETA's previous review letter and are identified as follows:

- Photo 1 (between A-series MAHW flags and long greenhouse building)
- Photo 2 (grass parking area in eastern portion near site's frontage)

- Photo 3 (vegetated areas to the west of A-series MAHW flags)
- Photo 5 (portions, but not all, of the cart path on the west side of the stream)

Goddard maintains that other areas mentioned by BETA in the previous review letter are in fact degraded. These areas are depicted on the field sketch in BETA's previous review letter and are identified as follows:

- Photo 4 (compost/dump pile in proximity of BVW flags A85-A95)
  - This area is comprised of dump piles and clearly constitutes "junkyards and abandoned dumping grounds" despite the fact that there is topsoil present.
- Photo 5 (portions, but not all, of the cart path on the west side of the stream)
  - Some of this cart path has regenerated topsoil, but other portions still lack topsoil.
- Photo 6 (a location was not provided by BETA in the field sketch, but this area was assumed to be the dump piles to the west of the stream near the southern property boundary)
  - This area is comprised of dump piles and clearly constitutes "junkyards and abandoned dumping grounds" despite the fact that there is topsoil present.

Graphics depicting the existing onsite degraded areas have been revised accordingly, as well as the tabulations of square footage measurements for existing and proposed conditions in the regulatory analysis.

Comment W27:

Areas of the RA that are not considered degraded are subject to the Performance Standards at 310 CMR 10.58(4). Details regarding how the Project complies with these Performance Standards set forth in the Act should be provided. As noted in the Superseding Order of Conditions referenced in Comment W26, a single Site can be evaluated under both 310 CMR 10.58(4) and (5) depending on the degraded status of different areas.

Response: *[previous response omitted for brevity]*

BETA2:

Comment remains. The Applicant states in their response that RA at the site "consists predominantly of junkyards, absence of topsoil and dumping grounds." However, the figure provided by the Applicant shows that 178,830 sf of RA is degraded and 191,000 sf of RA is vegetated and considered non-degraded. BETA conducted a Site visit to specifically review RA, and it was determined based on field observations that several areas delineated by the Applicant as degraded RA are vegetated, have topsoil, and do not consist of junkyards or impervious surfaces (See W26, BETA2). Further, several of the Applicant's submitted documents provide different values for RA areas and impacts at the Site and should be corrected to the accurate values.

The disagreement between BETA and the Applicant on the RA Performance Standards provision is based in application. While BETA has specifically been asked by MassDEP to evaluate Sites under both sets of RA Performance Standards, the Applicant could elect to evaluate the Site under 310 CMR 10.58(5) if performed correctly. BETA's initial review recommended the use of both provisions at the Site due to several key issues identified with the Applicant's assessment of compliance under 310 CMR 10.58(5):

The Applicant will be required to re-delineate the extents of degraded RA at the Site and depict these areas on the Project plans, as the delineation currently shown is incorrect based on

BETA's Site observations. The proposed work and supporting calculations should be overlaid onto this plan as previously requested to confirm that impacts are being quantified correctly.

According to the Applicant's documentation, the majority of the RA on the west side of the Site is non-degraded, while BETA found the entire area to be non-degraded. In either scenario, the Project plans depicts work within 100 feet of the MAHW of the River where no degraded areas are currently present, which is non-compliant with the provisions of 310 CMR 10.58(5)(c).

In reviewing the plans, it is clear that essentially the entirety of the outer 100-foot RA on the western side of the River (which BETA identified to be entirely non-degraded) will be subject to the proposed work. This would likely require far more restoration of RA than is currently proposed, and it is critical that the Applicant note that conducting restoration of RA in the interest of getting "credits" to alter non-degraded areas must consist of the restoration of currently degraded areas. Several areas of restoration are sited within non-degraded areas, and several areas of degraded RA are not proposed for restoration. The "Proposed Conditions in Riverfront Area" figure should be revised to include all areas of proposed work per 310 CMR 10.58(5)(d). Per this provision, the allowable area of proposed work does not only include proposed degraded areas.

It is recommended that the Applicant reevaluate compliance with RA Performance Standards, regardless of if one or both sets of Performance Standards are applied.; however, the reassessment of the delineation of degraded versus non-degraded areas should be completed first.

GC2:

The Applicant has re-delineated the extent of existing degraded Riverfront Area as mentioned in the response to comment W26 above. The Regulatory Compliance Analysis has been updated to further address compliance with the Riverfront Area performance standards, specifically, correcting the key issues BETA identified with the Applicant's assessment of compliance under 310 CMR 10.58(5), including re-delineating the extents of degraded Riverfront Area at the site and overlaying the proposed work onto the plans to confirm impacts are being quantified correctly. Work is proposed within 100 feet of the MAHW, which is non-compliant with 310 CMR 10.58(5)(c); however, this provision goes on to read "except in accordance with 310 CMR 10.58(5)(f-g)", with which the proposed work does comply.

Goddard and the project team believe that the responses and revised materials provided sufficiently address BETA's comments and enable the Commission's complete review of the proposed work. If you have any questions, please feel free to contact us at (508) 393-3784.

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ALLEN & MAJOR ASSOCIATES, INC.

September 23, 2025

Tyler Paslaski Permitting Specialist Town of Franklin Conservation Commission 355 East Central Street Franklin, MA 02038	**A&M Project #:**	3317-01
	Re:	Peer Review #2 Comprehensive Permit 444 East Central Street Franklin, MA

Dear Mr. Paslaski,

On behalf of our client, TAG Central LLC, Allen & Major Associates, Inc. (A&M) is providing the following responses to a letter dated August 21, 2025. The responses below are only for the stormwater (SW) comments from the letter. Responses to other comments will be submitted under a separate cover.

The final response to comments is shown below in **bold** preceded by the original comments shown in *italics*.

Key Issues/Concerns:

SW1: *Identify rim elevations on drain structure tables and ensure that adequate separation is provided between the rim and invert elevations.*

A&M Response 1: *The grading and drainage plan was revised to include rim elevations on the drain structure table.*

BETA2: BETA recommends that the designer review the structure table. Several catch basins have less than 2.5' to the invert (CB Nos. 1, 2, 4C, 9A, 9B, 9D, 18), which may not be buildable.

A&M Response 2: **The structure table has been reviewed, and the drainage design has been updated to incorporate stepped water quality units and a flat-top catch basin with a profile frame and grate/rim. Due to the site's relatively high water table, these design elements are necessary. Stepped manholes provide a 1-foot rise between inlet and outlet inverts. A detail for the flat-top catch basin and low-profile frames has been added to the plans for clarity.**

SW3: *Review hydraulic calculations for drainage pipes. Several pipe spans appear to be absent from the calculations. Ensure that drain pipes conveying stormwater runoff from offsite locations are adequately sized to prevent flooding of adjacent properties.*

A&M Response 1: *All drainage piping has been added to the HydorCAD model. All drain pipes conveying stormwater runoff from abutters have been proposed to meet existing pipe capacities (size and slope) or have been included in the pipe sizing analyses.*

BETA2: The drainage piping design has been presented in the Hydro-CAD analysis. The calculations demonstrate that for most of the piping, the water surface elevations in the manholes are controlled by the tailwater conditions created by the proposed subsurface infiltration systems. Submergence of the collection system during a 100 Year frequency storm is normally anticipated, however in this design this situation occurs during the 10-year storm. In some instances, the tailwater effects are so significant that the velocities are less than 1.0 ft/sec (DMH 27) yet for a 2-year storm velocities in the same manhole are 3.35 ft/sec. BETA recommends that the collection system be designed to convey the 10 year design event similar to the 2 year storm flow conditions where the flows through the culverts are not controlled by the tailwater conditions.

A&M Response 2:	**Given the site's high groundwater table, the stormwater infrastructure has been designed with minimal cover, resulting in the system operating under tailwater conditions for short periods during larger storm events. These conditions are primarily influenced by the outlet control structures of the proposed subsurface infiltration systems, which are intentionally designed to promote groundwater recharge.** **Under normal conditions, including the "first flush" of the 10-year design event, the design achieves pipe velocities that meet or exceed self-cleaning criteria, as documented in the pipe sizing table. However, during peak flow periods of the 10-year storm, tailwater effects reduce velocities in some pipes, as observed at DMH 27.** **Eliminating tailwater effects entirely during the 10-year storm would require raising the site by approximately 1 to 2 feet—an option that is not economically feasible given current site constraints and not required for the system to be compliant.** **To address these challenges, the proposed Stormwater Operation & Maintenance (O&M) Plan includes measures to mitigate the impacts associated with tailwater conditions. Overall, the stormwater management system has been designed in accordance with accepted engineering standards and regulatory requirements, balancing site limitations with long-term functionality, sustainability, and compliance.**
SW4:	*Review hydraulic calculation for the pipe segment between DMH21WQU to DMH20. The required capacity is greater than the provided capacity.*
A&M Response 1:	*Hydraulic calculations for pipe segments have been reviewed to confirm adequate capacity.*
BETA2:	See SW3 above.
A&M Response 2:	**The pipe sizing table has been updated to reflect plan revisions and confirm adequate capacity.**
SW6:	*Identify the existing invert for the existing catch basin upstream of DMH25. Confirm that the outlet invert for DMH25 has been selected to maintain positive drainage from this existing catch basin to the new outfall.*
A&M Response 1:	*The existing invert has been identified on the plans, and the proposed design maintains positive drainage from the existing catch basin to the new outfall.*
BETA2:	Provide calculations which document the hydraulic capability of the existing catch basin is not impacted by the extension. In addition, BETA recommends that the watershed data for these 2 culverts be developed and routed through SP-2.
A&M Response 2:	**The existing pipe sizes and slopes have been maintained in proposed conditions. Both discharge points are below the flood elevation in existing and proposed conditions. There is no impact on the hydraulic capability of the existing catch basin.**
SW8:	*Provide catchbasin catchment and pipe size calculations to determine adequacy of grate inlet capacity and pipe sizes to accommodate 25-year storm event.*
A&M Response 1:	*A grate inlet capacity has been provided in the drainage report.*
BETA2:	See SW3 above.
A&M Response 2:	**Grate inlet capacity calculations have been updated to reflect current plan revisions.**
SW10:	*Provide details for trench drain.*

A&M Response 1: *A detail for the gravel trench drain has been provided.*

BETA2: Trench drain detail has been provided; however, BETA recommends that surface elevations be shown on sheet C-103A for the trench at the northeast property line. It is difficult to see if the trench works with the grades on the abutting parcel.

A&M Response 2: **Surface elevations for the trench drain at the northeast property line have been added to Sheet C-103A, allowing verification that the trench aligns with existing grades and functions as intended.**

SW14: *Indicate any existing or proposed easements for the conveyance of stormwater across property lines. The proposed stormwater management system includes piped connections from the abutting lot to the west, and the perennial stream and culverts carry stormwater runoff from offsite properties.*

A&M Response 1: *There are no existing or proposed drainage easements on the site.*

BETA2: There are 2 pipes that discharge onto the site from the abutting parcel at 440 East Central Street. As indicated by the response, there are no existing or proposed easements associated with either culvert. In addition, there are no calculations which indicate what the flow characteristics through these culverts will be. BETA recommends that calculations be provided which show that the proposed improvements will not impact the hydraulic capacity of the existing culverts. (See SW6 above)

A&M Response 2: **See response to SW6.**

SW15: *Provide calculations for sizing of riprap aprons, including stone sizing.*

A&M Response 1: Riprap sizing calculations have been provided.

BETA2: Calculations not found and detail on page C-504 does not call out the size and/or pad dimensions. Comment remains.

A&M Response 2: **Flared end details for the overflow pipes have been revised to call out size and pad dimensions on page C-504. Rip Rap sizing spreadsheet is included in the drainage report.**

SW21: *Provide ponding analysis at 2nd culvert crossing also to ensure that the wetlands are not providing any attenuation capability more than the existing conditions. In addition, flood levels associated with Uncas Brook should be considered in the hydraulic calculations associated with the culverts.*

A&M Response 1: The stream crossings have been added to the model and provide ponding elevations.

BETA2: The ponding analysis is not complete because it does not include any flow from the watershed on the north side of East Central Street, nor does the calculation account for the potential flood levels in Uncas Brook. The calculations assume free discharge on LP2 and the real issue is that there are 2-24' culverts at the first crossing and only 1 at the second. In addition, there is no data shown on the plans relative to any of the existing structures at either location, including the outfall from East Central Street.

BETA has queried the USGS StreamStats for this site. The peak flow rates from the hydro cad analysis when compared with the StreamStats results are:

Storm frequency	2-year	10-year	100-year
Peak flow rates from HydroCAD Analysis			
1st crossing	0.83 cfs	2.24 cfs	6.88 cfs
2nd crossing	0.78 cfs	2.08 cfs	7.42 cfs
Peak flow rate crossing East Central Street from StreamStats			
Inlet from East Central	11.7 cfs	26.9 cfs	54.8 cfs

Based on StreamStats, the watershed tributary to the East Central Street culvert is 109± acres. Based upon the statistics, the contribution from the shite to the peak flood flows through the site are not significant. However, the potential impact of the backwater effects of the flooding in the stream on the proposed stormwater improvements and/or the project itself must be reviewed. This is extremely important because the proposed grading at the 2 crossings has elevated the roadways sufficiently that they now have the capability of raising flood levels to Elevation 278.0. This would inundate the entire site above the second crossing, a few of the abutters, and East Central Street. A copy of the StreamStats report for the crossing at East Central Street is attached hereto.

A&M Response 2: **A stream flow of 54.7 cfs has been added to HydroCAD model at the Northerly Culvert Crossing #1 (SP-1) node, to model the 100 year stream flow, which would create ponding at the crossing as noted. Six-36" RCP's have been added to this area to allow any flooding events to pass under both crossings**

SW30: *Provide calculations for time of concentration for all subcatchments, rather than assuming a minimum TC of 6 minutes or other "direct entry" values. The designer is reminded that the Tc for a watershed is the greatest travel time, not distance, especially in the existing conditions analysis.*

A&M Response: *The time of concentration values for each of the subcatchments are revised.*

BETA2 Review the Tc flow paths for E-1 & E-6 which would apply also for P-5 & P-6.

A&M Response 2: **The time of concentration values have been reviewed and verified to accurately reflect existing site conditions. Subcatchment E-1 drains along a flow path to the stream at Low Point 1, which is mirrored in the proposed Subcatchment P-5. However, since P-5 is captured by a trench drain, the flow path segment from Points G to H is not included in the model. A similar condition exists between Subcatchment E-2 and its proposed counterpart, Subcatchment P-6. Additionally, Subcatchment P-7 is directed into the trench drain system, whereas Subcatchment E-6 continues to discharge directly to the stream.**

SW31: *Identify the weir elevation for proposed outlet controls structures on the plans to ensure consistency between the HydroCAD model and the design.*

A&M Response 1: *Weir elevations for the proposed outlet control structures have been added to the plans.*

BETA2: Comment partially addressed. Review DMH14OCS, the weir elevation is noted on sheet C-103B as 1.0' higher than the rim.

A&M Response 2:	**The outlet control structure (DMH14OCS) has been revised to ensure the weir elevation is at or below the rim elevation, consistent with HydroCAD modeling.**
SW33:	*Clarify outlet design for UIS-3, UIS-4, and UIS-5. The models for each system identify two 9.0" vertical orifices/grates for each system. These orifices must be identified on the plans to ensure consistency between the model and the design.*
A&M Response 1:	*The outlet control design has been added to the plan set.*
BETA2:	The plan view does not identify the size of the orifices at these outlets. Comment remains.
A&M Response 2:	**Plan labels have been updated to include the size and elevation of each orifice and outlet, ensuring consistency with the HydroCAD model.**
SW34:	*Provide calculations for sizing of trench drain to ensure that offsite runoff will be captured, rather than bypassing the drain and flowing into UIS-1.*
A&M Response 1:	The gravel trench drain outlet pipe has been added to the HydroCAD model to ensure proper sizing.
BETA2:	See SW10 above.
A&M Response 2:	**See SW10 response. The trench drain outlet pipe has been modeled in HydroCAD and confirmed to be adequately sized.**
SW42:	*Provide required mounding analysis where infiltration SCMs have less than 4 feet of separation to estimated seasonal high groundwater.*
A&M Response 1:	Mounding analysis has been provided for all drainage systems and can be found in the appendix of the drainage report.
BETA2:	The mounding shows that the mound is greater than 2': however, BETA recommends that the designer review the input data for the analysis. The discharge volumes do not correlate with the hydro-cad printout and the saturated thickness hydraulic conductivity appear off. In addition, all the tables are labeled UIS-1.
A&M Response 2:	**The mounding analysis was reviewed and confirmed to be consistent with HydroCAD input data. It was completed per MassDEP Stormwater Handbook guidelines. All systems demonstrate drawdown within 72 hours.**
SW44:	*Recommend providing separate infiltration systems for roof runoff. These typically will require less maintenance and have a longer life span.*
A&M Response 1:	*Separate infiltration systems for roof runoff are not economically feasible on this project and are not required.*
BETA2:	BETA defers to the Commission on the use of the Site drainage infiltration areas for roof leader connections. However, the plans should depict the connection from the roof leaders at the rear of each building to the infiltration system if this approach is approved.
A&M Response 2:	**The buildings will have flat roofs with internal drainage coordinated with discharge points that are shown on the civil plans. Final coordination with plumbing engineer will need to be coordinated prior to building permit.**
SW53:	*Indicate means of emergency shut-off or containment prior to discharge to an infiltration SCM.*
A&M Response 1:	*A shutoff valve has been added to the inlet pipes of UIS-1. All other parking areas are not considered a LUHHPL.*

BETA2:	BETA does not agree with the interpretation being made by the applicant that only those portions of the site that qualify as a LUHHPL need to comply with the requirements of the standards. It is BETA's opinion that the entire site qualifies, therefore the entire site is subject. BETA recommends that shut off valves be added to all UIS inlets from the paved surfaces. Comment remains.
A&M Response 2:	**The project consists of two separate parking areas, each generating ~705 VTPD. Although the total site exceeds 1,000 VTPD, the runoff from the parking lots does not mix with LUHPPL areas. Per the MassDEP Stormwater Handbook, only areas discharging LUHPPL are subject to Standard 5. Therefore, shutoff valves have been provided at UIS-1 (serving the driveway) and are not required for the parking lots.**
SW58:	Provide map, drawn to scale, that shows the location of all stormwater SCMs in each treatment train and snow storage areas.
A&M Response 1:	The BMP plan (EXH-2) was added to the plan set to display all stormwater SCMS in each treatment train, as well as snow storage areas.
BETA2:	The exhibit will need to be incorporated into the O & M Manual.
A&M Response 2:	**The BMP plan (EXH-2) was added to the O & M Manual.**

A&M believes these responses will provide sufficient information for the continued review of this application.

If you require additional information, please feel free to contact me.

Very Truly Yours,

ALLEN & MAJOR ASSOCIATES, INC.

Carlton M. Quinn, PE
Principal

Copy: TAG Central LLC (by email)

Enclosure: Civil Site Plans, revised September 18, 2025
Drainage Report, revised September 18, 2025

REGULATORY COMPLIANCE ANALYSIS

444 East Central Street, Franklin MA
Prepared by: Goddard Consulting LLC
Prepared for: TAG Central LLC
Date: 4/16/2025, Revised 6/19/2025, 7/28/2025, 9/25/2025

1.0 INTRODUCTION

On behalf of TAG Central LLC (the Applicant), Goddard Consulting, LLC (Goddard) is pleased to submit this Regulatory Compliance Analysis as a supplement to the Notice of Intent. This analysis describes existing conditions, proposed conditions and project compliance with relevant performance standards contained within 310 CMR 10.00 et seq.

The project site is located at 444 East Central Street in Franklin (Map: 284, Lot: 66) and totals approximately 15 acres. The site is comprised of previously degraded and disturbed riverfront area consisting of the two existing buildings and outbuildings, variety of compost/brush piles, construction and landscaping supplies, abandoned vehicles and other anthropogenic impacts. One perennial stream is located centrally within the parcel with associated Bordering Vegetated Wetlands (BVW) and Bordering Land Subject to Flooding (BLSF).

According to Natural Heritage Endangered Species Program (NHESP) mapping, the Project Site is not within an area mapped as Priority Habitat of Rare Species, Estimated Habitat of Rare Wildlife, or an Area of Critical Environmental Concern. There are no mapped certified or potential vernal pools on the site. The site is not located within an Outstanding Resource Waters (ORW) area. A central portion of the site along the perennial stream is located within a FEMA Flood Zone A, which constitutes the resource area Bordering Land Subject to Flooding (BLSF).

Photo 1: View of existing degraded area onsite east of the stream.

2.0 RIVERFRONT AREA

The Mean Annual High-Water (MAHW) line of the perennial stream on site was delineated by Goddard and confirmed with an Order of Resource Area Delineation. Massachusetts WPA Regulations define the Riverfront Area as "the area of land between a river's mean annual high-water line measured horizontally outward from the river and a parallel line located 200 feet away." A total of 370,970 square feet of Riverfront Area is present on the locus site. The following table summarizes the cover types within the 200-foot and 100-foot Riverfront Areas on site under existing conditions. See also the included graphic titled *Existing Conditions in Riverfront Area*, Goddard Consulting LLC, 9/5/2025.

Riverfront Area Existing Conditions		
Degraded 0-100' RFA	106,490 sf	157,315 sf
Degraded 100-200' RFA	50,825 sf	
Non-Degraded 0-100' RFA	108,860 sf	213,300 sf
Non-Degraded 100-200' RFA	104,440 sf	

The applicant proposes to develop the site as a multifamily housing development. The project will reuse existing degraded Riverfront Area and will restore existing degraded Riverfront Area with native vegetation to the greatest extent practicable. The following table summarizes the cover types within the 200-foot Riverfront Areas on site under proposed conditions. See also the included graphic titled *Proposed Conditions in Riverfront Area*, Goddard Consulting LLC, 9/11/2025.

Riverfront Area Proposed Conditions		
Degraded 0-100' RFA	52,945 sf	146,695 sf
Degraded 100-200' RFA	93,750 sf	
Non-Degraded 0-100' RFA	162,250 sf	224,580 sf
Non-Degraded 100-200' RFA	62,330 sf	

Riverfront Area Net Change		
Degraded 0-100' RFA	- 53,945 sf	- 11,020 sf
Degraded 100-200' RFA	+42,925 sf	
Non-Degraded 0-100' RFA	+ 53,390 sf	+ 11,280 sf
Non-Degraded 100-200' RFA	- 42,110 sf	

The project has been designed to meet the Wetlands Protection Act's performance standards for work within the 200-foot Riverfront Area and to minimize impacts to the greatest extent practicable. This project constitutes Riverfront Area redevelopment because it consists of the replacement and expansion of existing structures in a previously developed Riverfront Area. The project also proposes removal and rehabilitation of areas that have historically been negatively impacted by the presence of surfaces from existing structures or pavement, absence of topsoil, junkyards, and abandoned dumping grounds. An explanation of how the project meets the applicable performance standards follows.

§ 10.58	**Riverfront Area:** **The area of land between a river's mean annual high-water line and a parallel line measured horizontally outward from the river and a parallel line located 200 feet away.**
Performance Standard	**Compliance**
10.58 (5)	*Notwithstanding the provisions of 310 CMR 10.58(4)(c) and (d), the issuing authority may allow work to redevelop a previously developed riverfront area, provided the proposed work improves existing conditions. Redevelopment means replacement, rehabilitation or expansion of existing structures, improvement of existing roads, or reuse of degraded or previously developed areas. A previously developed riverfront area contains areas degraded prior to August 7, 1996 by impervious surfaces from existing structures or pavement, absence of topsoil, junkyards, or abandoned dumping grounds. Work to redevelop previously developed riverfront areas shall conform to the following criteria:*	The proposed project has been designed as a Riverfront Area (RFA) redevelopment project. The existing buildings on site have been present within the RFA since the mid-1990s. The site has been in use as a nursery operation, including clearing, grading, cultivation and access roadways since at least the 1960s. Proposed work shall conform to the following criteria as outlined below.
10.58 (5)(a)	*At a minimum, proposed work shall result in an improvement over existing conditions of the capacity of the riverfront area to protect the interests identified in M.G.L. c. 131 § 40. When a lot is previously developed but no portion of the riverfront area is degraded, the requirements of 310 CMR 10.58(4) shall be met.*	The proposed work will result in an improvement of the capacity of the RFA to protect the interests of the WPA. This will be achieved by removing impacted and developed areas from within feet of resource areas and replanting with appropriate vegetation, by providing stormwater management where there is currently none, and by managing invasive species.

10.58 (5)(b)	*Stormwater management is provided according to standards established by the Department.*	Stormwater management has been designed to comply with the MassDEP Stormwater Standards.
10.58 (5)(c)	*Within 200 foot riverfront areas, proposed work shall not be located closer to the river than existing conditions or 100 feet, whichever is less, or not closer than existing conditions within 25 foot riverfront areas, except in accordance with 310 CMR 10.58(5)(f) or (g).*	Proposed work is not situated any closer to the river than existing conditions. Presently, degraded areas and anthropogenic debris are located immediately along the resource area boundary, and in some locations, debris can be found within the resource areas on site. With the exception of the two reused/improved stream crossings, proposed work is located farther from the river than under existing conditions.
10.58 (5)(d)	*Proposed work, including expansion of existing structures, shall be located outside the riverfront area or toward the riverfront area boundary and away from the river, except in accordance with 310 CMR 10.58(5)(f) or (g).*	One of the five proposed buildings is located entirely outside of the RFA, one is located nearly entirely outside of the RFA, and one is located entirely outside of the inner riparian zone (100' RFA). Proposed work has been sited to be outside of the RFA to the greatest extent practicable, but some proposed work is slightly closer to the river than existing conditions. Therefore, the project must comply with 310 CMR 10.58(f) and/or (g) as described below.
10.58 (5)(e)	*The area of proposed work shall not exceed the amount of degraded area, provided that the proposed work may alter up to 10% if the degraded area is less than 10% of the riverfront area, except in accordance with 310 CMR 10.58(5)(f) or (g).*	The total square footage of RFA onsite is 370,970 square feet, 10% of which is 37,097 square feet. Existing degraded RFA totals 157,315 square feet, which exceeds the 10% threshold. Therefore, the project must comply with 310 CMR 10.58(f) and/or (g) as described below.
10.58 (5)(f)	*When an applicant proposes restoration on-site of degraded riverfront area, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58(5)(c), (d), and (e) at a ratio in square feet of at least 1:1 of restored area to area of alteration not conforming to the criteria. Areas immediately along the river shall be selected for restoration. Alteration not conforming to the criteria shall begin at the riverfront area boundary. Restoration shall include:* 1. *removal of all debris, but retaining any trees or other mature vegetation;* 2. *grading to a topography which reduces runoff and increases infiltration;* 3. *coverage by topsoil at a depth consistent with natural conditions at the site; and*	Restoration of approximately 79,090 sf of existing degraded riverfront area is proposed. All existing degraded areas not to be reused for development will be revegetated with a native planting scheme. The proposed restoration will result in a net reduction of over 11,000 sf of degraded riverfront area, thereby exceeding a 1:1 ratio of restoration. Please refer to the landscape sheets of the plan set for details regarding the native planting scheme. See also the attached graphic *Proposed Restoration of Riverfront Area*, Goddard Consulting LLC, 9/19/2025.

	4. *seeding and planting with an erosion control seed mixture, followed by plantings of herbaceous and woody species appropriate to the site;*	
10.58 (5)(g)	*When an applicant proposes mitigation either on-site or in the riverfront area within the same general area of the river basin, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58(5)(c), (d), or (e) at a ratio in square feet of at least 2:1 of mitigation area to area of alteration not conforming to the criteria or an equivalent level of environmental protection where square footage is not a relevant measure. Alteration not conforming to the criteria shall begin at the riverfront area boundary. Mitigation may include off-site restoration of riverfront areas, conservation restrictions under M.G.L. c. 184, §§ 31 through 33 to preserve undisturbed riverfront areas that could be otherwise altered under 310 CMR 10.00, the purchase of development rights within the riverfront area, the restoration of bordering vegetated wetland, projects to remedy an existing adverse impact on the interests identified in M.G.L. c. 131, § 40 for which the applicant is not legally responsible, or similar activities undertaken voluntarily by the applicant which will support a determination by the issuing authority of no significant adverse impact. Preference shall be given to potential mitigation projects, if any, identified in a River Basin Plan approved by the Secretary of the Executive Office of Energy and Environmental Affairs.*	Invasive species management is included in the proposal, both within the planting areas and in areas that will otherwise remain unimpacted by the proposed site work. Invasive species management proposed for mitigation purposes totals approximately 23,187 square feet. Additional invasive management within the areas proposed for planting (i.e. within the restoration areas quantified under subsection [f] above) measures approximately 59,672 square feet. This invasive species management is an additional environmental benefit intended to allow the areas proposed for revegetation to thrive with reduced invasive species pressure, and to reduce invasive pressure in adjoining portions of the land. Additionally, the Applicant proposes preserving a portion of the locus site's wetlands and buffer zones by conveying over 1.5 acres of land to the Town of Franklin as conservation land. This conveyance contributes to the protection of the interests of the Act. Please refer to previously submitted plan entitled *Preservation Land Exhibit*, Allen & Major Associates, Inc., 6/9/2025.
10.58 (5)(h)	*The issuing authority shall include a continuing condition in the Certificate of Compliance for projects under 310 CMR 10.58(5)(f) or (g) prohibiting further alteration within the restoration or mitigation area, except as may be required to maintain the area in its restored or mitigated condition. Prior to requesting the issuance of the Certificate of Compliance, the applicant shall demonstrate the restoration or mitigation has been successfully completed for at least two growing seasons.*	The Applicant is amenable to such a condition. The Restoration, Replication and Mitigation Plan also outlines monitoring protocols to ensure success of the restoration areas for at least three growing seasons. This monitoring program consists of documenting a variety of items to demonstrate the health of the restoration and mitigation areas including assessment of invasive species growth, survival and establishment of native vegetation, stabilization of soils and more.

Alternatives Analysis

The alternatives analysis below has been provided to demonstrate that the Applicant has evaluated options to avoid and minimize impacts to wetland resource areas per Section 310 CMR 10.55(4)(b). The alternatives presented include the 1) No-Build Alternative, 2) Five Story Building Alternative, and 3) Parking Alternative.

No-Build Alternative
The site would not be developed under the No-Build Alternative. The proposed buildings could not be built. The No-Build Alternative's effects make it impossible to build sizable upland areas and disregards the necessity for mixed-income housing development on a local and regional level. A no-build alternative also would preclude cleanup of the site, installation of stormwater management, control of invasive species, and native plantings as proposed.

Five Story Building Alternative
This alternative proposes increasing the building heights to five stories to achieve a similar unit density and parking count, which would in turn yield less impact to the 100-foot Riverfront Area and the 200-foot Riverfront Area. This alternative would not be feasible due to conflicts with previously granted approvals based on lower maximum building heights. The proposed project as designed currently requires a zoning waiver due to the 4-story height. Increasing the maximum height of the buildings to five stories would make the project even more zoning-nonconforming and would be inconsistent with local neighborhood character, aesthetics and prior project approvals.

Parking Alternative
This alternative proposes placing parking at the ground floor of the proposed buildings and elevating the buildings by one story to achieve the same required density. This alternative would allow for less impervious surface on-site as well as less impact to the Riverfront Area. As mentioned above, the additional height required in this alternative would conflict with Franklin's Zoning Bylaw and impact the neighborhood aesthetics. Locating the parking below grade underneath the buildings is similarly not feasible due to shallow depth to estimated seasonal high groundwater.

3.0 BORDERING VEGETATED WETLAND

A small amount of fill (40 square feet) is proposed within the delineated Bordering Vegetated Wetland (BVW) along the proposed improved southern stream crossing. Impacts to BVW associated with the installation of the dock totals 32 square feet. Other than a *de minimis* impact for the installation of pilings, this impact otherwise consists only of shading caused by the overhanging dock gangway, not a direct impact. ECB will be installed around the limit of work in accordance with approved site plans prior to any earth disturbance to limit the potential for any erosion or sedimentation to leave the work area and travel offsite or towards resource areas on site.

§10.55	**Bordering Vegetated Wetlands (BVW)**	
Performance Standard		**Compliance**
10.55 (4)	*(a) Where the presumption set forth in 310 CMR 10.55(3) is not overcome, any proposed work in a Bordering Vegetated Wetland shall not destroy or otherwise impair any portion of said area.*	An improved wetland crossing is required to safely allow the travel of people and vehicles to the western portion of the site. Retaining walls will be constructed to limit the impact to the greatest extent possible. The proposed work around the southern improved stream crossing results in the direct impact of 40 square feet of BVW; the proposed work for the dock amounts to 32 square feet of shading impact to BVW and a *de minimis* impact associated with the installation of support pilings. A 7,145 square foot wetland replication area is proposed in the southeast corner of the site.
	(b) Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an Order of	The proposed work around the southern improved stream crossing results in the direct

	Conditions permitting work which results in the loss of up to 5000 square feet of Bordering Vegetated Wetland when said area is replaced in accordance with the following general conditions and any additional, specific conditions the issuing authority deems necessary to ensure that the replacement area will function in a manner similar to the area that will be lost *1. the surface of the replacement area to be created ("the replacement area") shall be equal to that of the area that will be lost ("the lost area");* *2. the ground water and surface elevation of the replacement area shall be approximately equal to that of the lost area;* *3. The overall horizontal configuration and location of the replacement area with respect to the bank shall be similar to that of the lost area;* *4. the replacement area shall have an unrestricted hydraulic connection to the same water body or waterway associated with the lost area;* *5. the replacement area shall be located within the same general area of the water body or reach of the waterway as the lost area;* *6. at least 75% of the surface of the replacement area shall be reestablished with indigenous wetland plant species within two growing seasons, and prior to said vegetative reestablishment any exposed soil in the replacement area shall be temporarily stabilized to prevent erosion in accordance with standard U.S. Soil Conservation Service methods;* *and 7. the replacement area shall be provided in a manner which is consistent with all other General Performance Standards for each resource area in Part III of 310 CMR 10.00.*	impact of 40 square feet of BVW, far below the allowable 5,000 square foot threshold. Similarly, the shading impact from the dock of 32 square feet is far below the 5,000 square foot threshold (the dock is eligible to be considered as a limited project; see section 8.0 below). The replacement area is far greater than the area that will be lost, resulting in an increase of BVW on site of 7,105 square feet. The surface and groundwater elevations have been designed to approximate that of the adjacent BVW, and is situated at a similar location with respect to the bank. The replication area will have an unrestricted hydraulic connection to the same BVW within the same reach of the wetland. As outlined in the Replication, Restoration and Mitigation Plan, the replication area will be reestablished with at least 75% cover by native vegetation and the establishment of wetland hydrology/soil conditions. If this standard is not reached, the Applicant shall prepare a plan that will meet these goals. The replication area does not interfere with compliance with other performance standards for other resource areas.
	(c) Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an Order of Conditions permitting work which results in the loss of a portion of Bordering Vegetated Wetland when; *1. said portion has a surface area less than 500 square feet;* *2. said portion extends in a distinct linear configuration ("finger-like") into adjacent uplands; and* *3. in the judgment of the issuing authority it is not reasonable to scale down, redesign or otherwise change the proposed work so that it could be completed without loss of said wetland.*	Not applicable.
	(d) Notwithstanding the provisions of 310 CMR 10.55(4)(a),(b) and (c), no project may be permitted which will have any adverse effect on specified habitat sites of rare	This site contains no Estimated or Priority Habitat, nor any mapped potential or certified vernal pools. Generally, much of the site is

	vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.	disturbed or degraded, with limited natural vegetation.
	(e) Any proposed work shall not destroy or otherwise impair any portion of a Bordering Vegetated Wetland that is within an Area of Critical Environmental Concern […]	There are no mapped Areas of Critical Environmental Concern (ACECs) according to MassGIS data layers.

4.0 BORDERING LAND SUBJECT TO FLOODING

Bordering Land Subject to Flooding (BLSF) is present on site as depicted on the site plans. Massachusetts WPA Regulations define BLSF as "an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds, or lakes."

In sum, the existing flood storage capacity of the Bordering Land Subject to Flooding (BLSF) on site totals 41,129.75 cubic feet. The proposed capacity of BLSF to contain floodwater will be 55,885 cubic feet. Therefore, the project proposes an increase in flood storage capacity of 15,669.75 cubic feet. An increase is provided at each contour interval. This means that the site will be capable of storing a greater volume of floodwater than under existing conditions. Please refer to attached engineering drawings entitled as follows:

- *Existing Flood Plain Volume Exhibit* (8 sheets), Allen & Major Associates, Inc., 9/16/2025
- *Proposed Flood Plain Volume Exhibit* (8 sheets), Allen & Major Associates, Inc., 9/16/2025

A summary of existing and proposed flood storage capacities is provided in the tables below:

North Portion of Site (BLSF Elevation 271.5')			
Contour Interval	**Existing Volume**	**Proposed Volume**	**Net Change**
268'-269'	107 cf	107 cf	0 cf
269'-270'	1,013.5 cf	1,281 cf	+267.5 cf
270'-271'	7,250.5 cf	9,615.5 cf	+2,365 cf
271'-271.5'	8,476.75 cf	8,760.5 cf	+283.75 cf
Total:	**16,847.75 cf**	**19,764 cf**	**+2,916.25 cf**

South Portion of Site (BLSF Elevation 271')			
Contour Interval	**Existing Volume**	**Proposed Volume**	**Net Change**
267'-268'	25.5 cf	25.5 cf	0 cf
268'-269'	640 cf	2,922.5 cf	+2,282.5 cf
269'-270'	5,134.5 cf	10,970.5 cf	+5,836 cf
270'-271'	18,482 cf	23,117 cf	+4,635 cf
Total:	**24,282 cf**	**36,121 cf**	**+12,753.5 cf**

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An analysis of the BLSF performance standards is provided below.

§ 10.57	**Bordering Land Subject to Flooding:** **An area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds, or lakes.**	
	Performance Standard	**Compliance**
10.57 (4)(a)(1)	*Compensatory storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows.* *(1) Compensatory storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Further, with respect to waterways, such compensatory volume shall be provided within the same reach of the river, stream or creek.*	Some fill of BLSF is proposed, primarily around the existing crossing to be improved at the center of the site, as well as along the site entrance driveway. The project's engineer, Allen & Major Associates, Inc. has incorporated compensatory flood storage in the grading plan design. Please refer to attached engineering drawings, which graphically and numerically depict the existing and proposed flood storage capacity at each 1-foot contour interval. In all, the project will result in an increase of 15,669.75 cubic feet of flood storage capacity. Compensatory flood storage will have an unrestricted hydraulic connection to the perennial stream on site. Compensatory storage is provided immediately adjacent to areas where flood storage is lost.
10.57 (4)(a)(2)	*(2) Work within Bordering Land Subject to Flooding, including that work required to provide the above-specified compensatory storage, shall not restrict flows so as to cause an increase in flood stage or velocity.*	No work within BLSF will restrict flows to increase flood stage or velocity. Under proposed conditions, floodwater will be able to fill a slightly larger space, serving to reduce flood stage and velocity.
10.57 (4)(a)(3)	*(3) Work in those portions of bordering land subject to flooding found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife habitat functions. Except for work which would adversely affect vernal pool habitat, a project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold, or altering vernal pool habitat, may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.*	In the area of proposed work within BLSF, no significant wildlife habitat is present. No vernal pools or NHESP mapped habitats exist therein. Furthermore, the areas of BLSF to be impacted are comprised primarily of degraded riverfront area (i.e. lacking topsoil and vegetation), turfgrass, or a near monoculture of invasive species in areas that do contain vegetation.

5.0 BANK

§ 10.54	**Bank:** A Bank is the portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a vegetated bordering wetland and adjacent flood plain, or, in the absence of these, it occurs between a water body and an upland. A Bank may be partially or totally vegetated, or it may be comprised of exposed soil, gravel or stone.	
Performance Standard		**Compliance**
10.54(a)	*Where the presumption set forth in 310 CMR 10.54(3) is not overcome, any proposed work on a Bank shall not impair the following:*	The presumption set forth in 310 CMR 10.54(3) is not overcome; therefore, proposed work will adhere to the following:
10.54(a)(1)	*the physical stability of the Bank;*	The proposed stream crossing work will consist of an engineered retaining wall to ensure stability. After the installation of the walls, the bank will be rebuilt in kind at the foot of the walls. The proposed floating dock's impact to the bank consists only of shading and will not alter the stability of the bank.
10.54(a)(2)	*the water carrying capacity of the existing channel within the Bank;*	The proposed work will not alter the bankfull width.
10.54(a)(3)	*ground water and surface water quality;*	The impact to bank caused by the proposed stream crossing improvements will not impair ground or surface water quality by providing management and treatment of runoff and recreating a vegetated bank in kind. The impact to bank caused by the dock will not alter the existing form of the bank and therefore will not alter the existing interface between the landform and groundwater or surface water
10.54(a)(4)	*the capacity of the Bank to provide breeding habitat, escape cover and food for fisheries;*	The improved stream crossing work will recreate the impacted bank in kind and not alter the capacity of the landform to provide these functions. Similarly, the impact to bank associated with the dock will not alter the existing bank except by overhanging it.
10.54(a)(5)	*the capacity of the Bank to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 50 feet (whichever is less) of the length of the bank found to be significant to the protection of wildlife habitat, shall not be*	Total impacts to the bank associated with the stream crossing is approximately 12.5lf. This impact is temporary and the bank will be reconstructed at the foot of the new wall.

	deemed to impair its capacity to provide important wildlife habitat functions. In the case of a bank of a river or an intermittent stream, the impact shall be measured on each side of the stream or river. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.	Impact to the bank associated with the dock is approximately 4lf and is comprised only of shading. These two areas combine for a total of approximately 16.5 linear feet of bank impacts, less than the 10% or 50 feet allowable per this provision.
10.54(a)(6)	*Work on a stream crossing shall be presumed to meet the performance standard set forth in 310 CMR 10.54(4)(a) provided the work is performed in compliance with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the bottom of a span structure or the upper surface of an embedded culvert is above the elevation of the top of the bank, and the structure spans the channel width by a minimum of 1.2 times the bankfull width. This presumption is rebuttable and may be overcome by the submittal of credible evidence from a competent source. Notwithstanding the requirement of 310 CMR 10.54(4)(a)5., the impact on bank caused by the installation of a stream crossing is exempt from the requirement to perform a habitat evaluation in accordance with the procedures contained in 310 CMR 10.60.*	While a portion of the work is on a stream crossing, the actual stream crossing itself is proposed to remain. The work proposed on this stream crossing is to improve the roadway, not to alter the stream crossing itself. Not applicable.
10.54(b)	*Notwithstanding the provisions of 310 CMR 10.54(4)(a), structures may be permitted in or on a Bank when required to prevent flood damage to facilities, buildings and roads constructed prior to the effective date of 310 CMR 10.51 through 10.60 or constructed pursuant to a Notice of Intent filed prior to the effective date of 310 CMR 10.51 through 10.60 (April 1, 1983), including the renovation or reconstruction (but not substantial enlargement) of such facilities, buildings and roads, provided that the following requirements are met:*	Not applicable.
10.54(b)(1)	*The proposed protective structure, renovation or reconstruction is designed and constructed using best practical measures so as to minimize adverse effects on the characteristics and functions of the resource area*	Not applicable.
10.54(b)(2)	*The applicant demonstrates that there is no reasonable method of protecting, renovating or rebuilding the facility in question other than the one proposed.*	Not applicable.
10.54(c)	*Notwithstanding the provisions of 310 CMR 10.54(4)(a) or (b), no project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.59.*	The proposed work is not within specified habitat sites of Rare Species.

6.0 LAND UNDER WATER BODIES AND WATERWAYS

§ 10.56	**Land Under Water Bodies and Waterways:** Land under Water Bodies and Waterways is the land beneath any creek, river, stream, pond or lake. Said land may be composed of organic muck or peat, fine sediments, rocks or bedrock.	
Performance Standard		**Compliance**
10.56(4)(a)	*Where the presumption set forth in 310 CMR 10.56(3) is not overcome, any proposed work within Land under Water Bodies and Waterways shall not impair the following:*	The presumption set forth in 310 CMR 10.56(3) is not overcome; therefore, work impacting LUWW (i.e. shading caused by the proposed seasonal floating dock) shall adhere to the following:
10.56(4)(a)(1)	*The water carrying capacity within the defined channel, which is provided by said land in conjunction with the banks;*	The proposed floating dock will not alter the water carrying capacity of the channel as it floats on the water's surface
10.56(4)(a)(2)	*Ground and surface water quality;*	The proposed floating dock will not create any pollutants or alter any drainage patterns and therefore will not impact ground or surface water quality.
10.56(4)(a)(3)	*The capacity of said land to provide breeding habitat, escape cover and food for fisheries; and*	The proposed floating dock will not impair breeding habitat or escape cover and food for fisheries. In fact, the addition of the dock may represent a small increase in the availability of escape cover for aquatic organisms.
10.56(4)(a)(4)	*The capacity of said land to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures established under 310 CMR 10.60.*	The total impact to LUWW from the proposed floating dock is comprised only of shading impacts and measures approximately 32 square feet, far below the 10% or 5000 square foot threshold.
10.56(4)(a)(5)	*Work on a stream crossing shall be presumed to meet the performance standard set forth in 310 CMR 10.56(4)(a) provided the work is performed in compliance with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the bottom of a span structure or the upper surface of an embedded culvert is above the elevation of the top of the bank, and the structure spans the channel width by a minimum of 1.2 times the bankfull width. This presumption is rebuttable and may*	The proposed work is not a stream crossing. Not applicable.

	be overcome by the submittal of credible evidence from a competent source. Notwithstanding the requirements of 310 CMR 10.56(4)(a)4., the impact on Land under Water Bodies and Waterways caused by the installation of a stream crossing is exempt from the requirement to perform a habitat evaluation in accordance with the procedures established under 310 CMR 10.60.	
10.56(4)(b)	*Notwithstanding the provisions of 310 CMR 10.56(4)(a), the issuing authority may issue an Order in accordance with M.G.L. c. 131, § 40 to maintain or improve boat channels within Land under Water Bodies and Waterways when said work is designed and carried out using the best practical measures so as to minimize adverse effects such as the suspension or transport of pollutants, increases in turbidity, the smothering of bottom organisms, the accumulation of pollutants by organisms or the destruction of fisheries habitat or nutrient source areas.*	The proposed work is not for the purpose of maintaining or improving boat channels. Not applicable.
10.56(4)(c)	*Notwithstanding the provisions of 310 CMR 10.56(4)(a) or (b), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.*	The proposed work is not within specified habitat sites of Rare Species. Not applicable.

7.0 BUFFER ZONE (100-FOOT)

Work in the buffer zone is proposed. The WPA Regulations do not contain performance standards for Buffer Zone alteration (310 CMR 10.02(2)(b)). All reasonable efforts to avoid, minimize and mitigate adverse impacts on the Buffer Zone have been considered. Work within the 0-25' buffer zone consists primarily of grading, revegetation, and stormwater management as well as pedestrian and vehicle paths required for access. None of the five buildings on site are located within 25' of the BVW boundary. Only small portions of two buildings are located within 50' of the BVW boundary. Work has been limited to the outer extents of the buffer zone to the greatest extent possible. The majority of work in the inner portions of the buffer zone have been laid out to reuse existing degraded areas.

8.0 LIMITED PROJECTS

The proposed dock is eligible to be treated as a limited project pursuant to 310 CMR 10.53(3)j. The WPA reads:

> "Notwithstanding the provisions of 310 CMR 10.54 through 10.58 and 10.60 [the regulations for Bank, BVW, LUWW, BLSF, ILSF and RFA], the Issuing Authority may issue an Order of Conditions and impose such conditions as will contribute to the interests identified in M.G.L. c. 131, § 40 permitting the following limited projects (although no such project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.59). In determining whether to exercise its discretion to approve the limited projects listed in 310 CMR 10.53(3), the Issuing Authority shall consider the following factors: the magnitude of the alteration and the significance of the project site to the interests identified in M.G.L. c. 131, § 40, the availability of reasonable alternatives to the proposed activity, the extent to which

> adverse impacts are minimized, and the extent to which mitigation measures, including replication or restoration, are provided to contribute to the protection of the interests identified in M.G.L. c. 131, § 40…"

The specific limited project type under which the proposed dock may be allowed reads:

> "(j) The construction and maintenance of catwalks, footbridges, wharves, docks, piers, boathouses, boat shelters, duck blinds, skeet and trap shooting decks and observation decks; provided, however, that such structures are constructed on pilings or posts so as to permit the reasonably unobstructed flowage of water and adequate light to maintain vegetation."

The proposed dock has been designed to meet these requirements, and compliance with applicable performance standards to the maximum extent practicable has been outlined above. Specifically, the dock has been kept to a minimal size (only a 4-foot wide walkway) in order to limit shading to the maximum extent practicable. Vegetation in this area consists almost entirely of invasive Phragmites reeds, and thus any limited impact to the existing vegetation does not significantly impact the value of the area or its ability to contribute to the interests of the WPA. Additionally, only two pilings are proposed to limit direct impacts to resource areas to the maximum extent practicable. These pilings are proposed as helical piles, which can be driven into the ground like a screw, eliminating the need for excavation and consequent erosion potential. Similarly, the fact that the dock is supported on pilings will allow nearly unobstructed flowage of water. The dock can also be easily removed by hand in winter.

9.0 FUNCTIONS AND VALUES ASSESSMENT

An assessment of the impact of the project on the functions and values protected by the Wetlands Protection Act is provided below:

1. **Protection of Public and Private Water Supplies** – The nearest domestic well is located at 409 East Central Street. No septic system or wells are proposed as part of the project, and it is proposed that sewer and water will be tied into existing infrastructure. The project will result in substantial improvements over existing conditions with regard to stormwater management, which directly affects groundwater infiltration and ultimately water quality. Existing stormwater runoff conditions exhibit unmitigated, direct, sheet-flowing surface runoff towards wetland resources, whereas the proposed project will provide a modern stormwater management and infiltration system in compliance with MassDEP Stormwater Management Standards.

2. **Protection of Groundwater Supply** – No discharges are proposed to the groundwater supply other than infiltration of stormwater. This is an improvement over existing conditions on site. As mentioned above and described in the Drainage Report, the project satisfies all of the Massachusetts Stormwater Management Standards.

3. **Flood Control** –Work proposed in FEMA Flood Zones is limited to areas that are presently disturbed or degraded. Compensatory storage is provided for fill proposed in the Flood Zone/BLSF, resulting in no loss in flood storage capacity.

4. **Storm Damage Prevention** – As mentioned above and described in the Drainage Report, the project satisfies all of the Massachusetts Stormwater Management Standards. Infiltrating stormwater in this way serves to reduce runoff from the site, reducing the potential for flooding of downstream properties and infrastructure. Similarly, ensuring no loss of flood storage capacity also makes certain that potential floodwaters are not redirected elsewhere or offsite. The project will therefore not have a negative impact in terms of storm damage prevention.

5. **Pollution Prevention** – As mentioned above and described in the Stormwater Report, the project satisfies the Stormwater Management Standards. The proposed stormwater treatment train includes components designed to remove potential pollutants such as oil from treated stormwater. The project will therefore not have a negative impact on the on-site resource areas in terms of pollution protection.

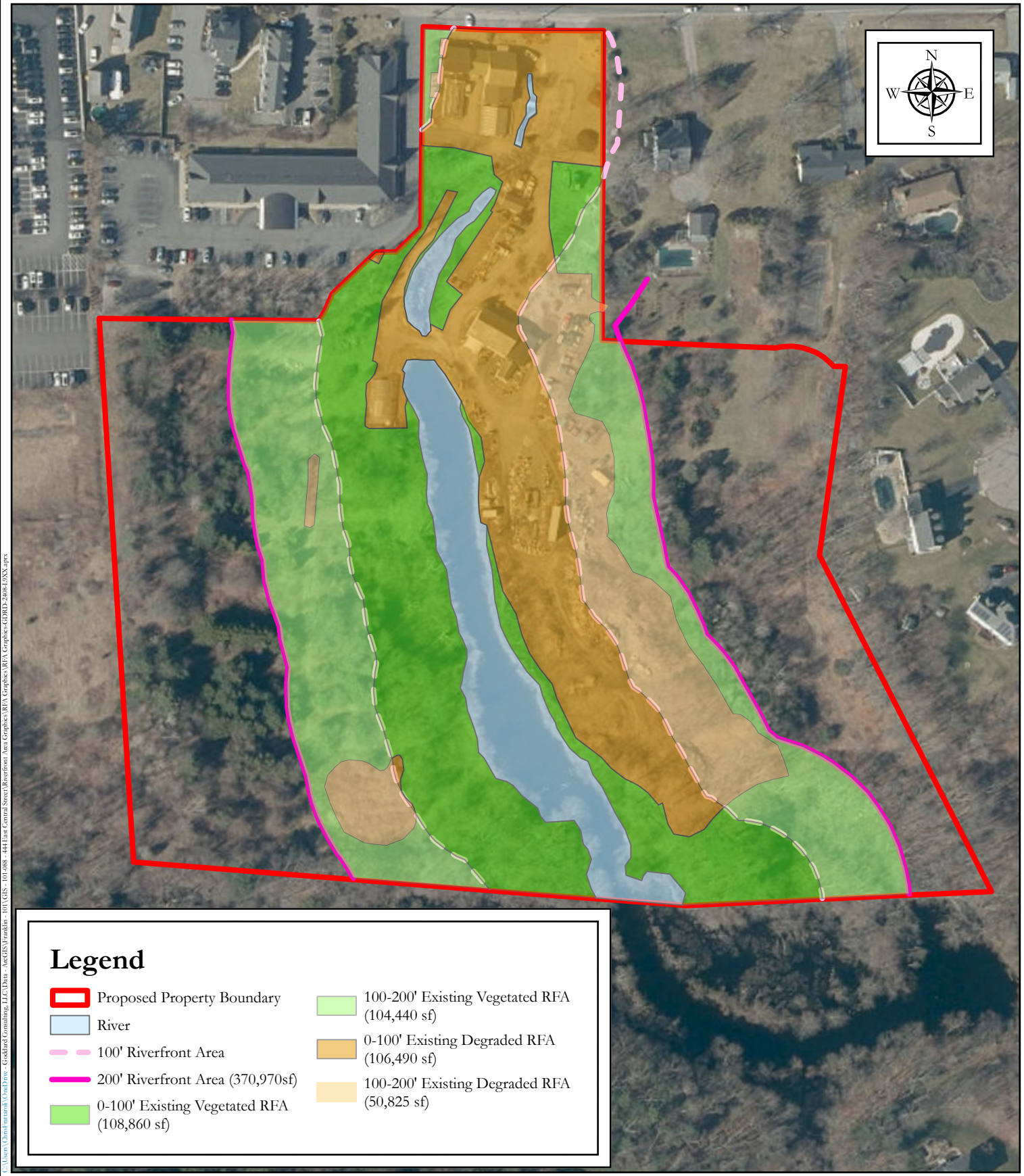
6. **Fisheries** – The water bodies in proximity to the site are not fisheries. No alteration to Land Under Waterbodies and Water Ways that could impact potential fishery habitat is proposed.

7. **Shellfish** - Not applicable in Franklin.

8. **Wildlife Habitat** – According to MassWildlife's BioMap, the work area is not considered either Core Habitat (areas that are critical for the long-term persistence of rare species, exemplary natural communities, and resilient ecosystems) or Critical Natural Landscape (large landscape blocks that are minimally impacted by development and buffers to core habitats and coastal areas). No NHESP habitat areas are mapped onsite, nor are any potential or certified vernal pools. In general, the site is comprised largely of invasive or nonnative species that provide minimal wildlife habitat value.

10.0 CONCLUSION

The project has been designed with sensitivity to the resource areas on site. Proposed construction has been located as far from wetland resources as possible and new stormwater management is provided, along with rehabilitation of degraded and otherwise low-quality buffer zones and riverfront area. The Applicant will also be conveying over 1.5 acres of land to the Town to be preserved in perpetuity. In summary, Goddard Consulting believes that the proposed project meets all applicable regulatory performance standards and will not have any adverse impacts on the interests identified in the Wetlands Protection Act as outlined herein.



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Existing Conditions in Riverfront Area

444 East Central Street
Franklin, MA 02038

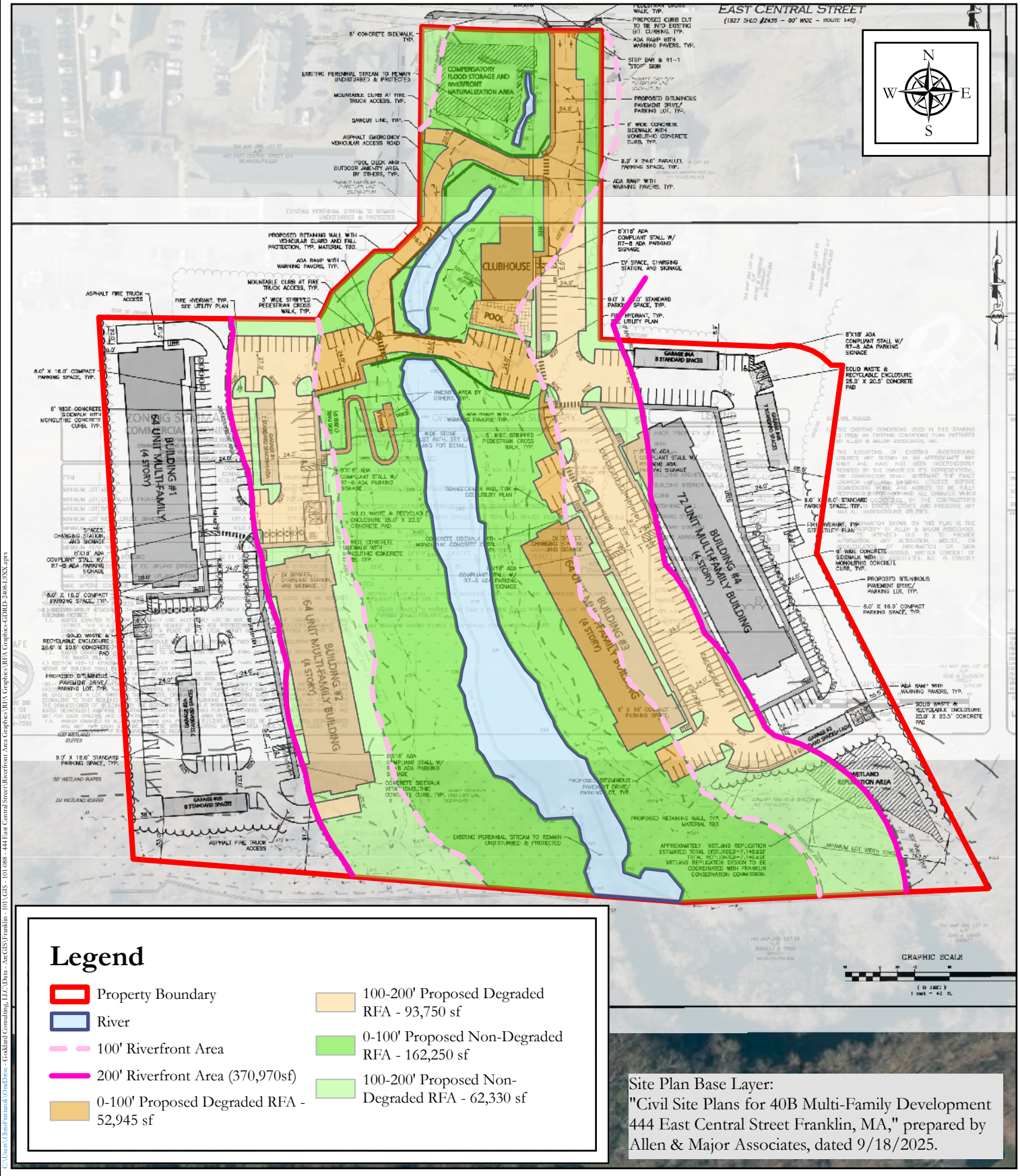
0 100 200 Feet

1" = 200'

71.3771102°W, 42.0778722°N

Date: 09/19/2025

Parcel ID: 284-66



Legend

- Property Boundary
- River
- 100' Riverfront Area
- 200' Riverfront Area (370,970sf)
- 0-100' Proposed Degraded RFA - 52,945 sf
- 100-200' Proposed Degraded RFA - 93,750 sf
- 0-100' Proposed Non-Degraded RFA - 162,250 sf
- 100-200' Proposed Non-Degraded RFA - 62,330 sf

Site Plan Base Layer:
"Civil Site Plans for 40B Multi-Family Development 444 East Central Street Franklin, MA," prepared by Allen & Major Associates, dated 9/18/2025.

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GODDARD CONSULTING
Strategic Ecological Consulting

Proposed Conditions in Riverfront Area

444 East Central Street
Franklin, MA 02038

0 100 200 Feet

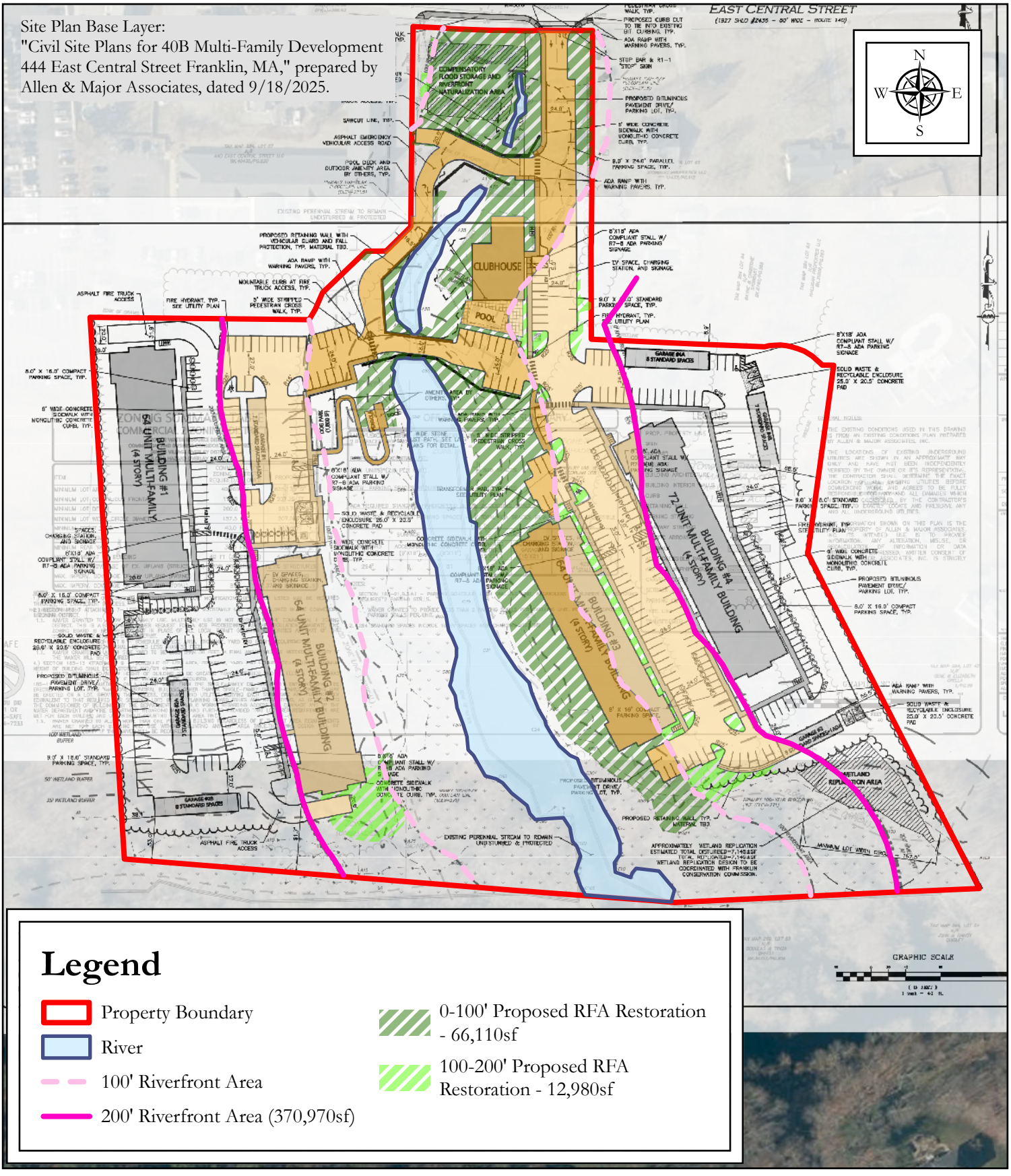
1" = 200'

71.3771102°W, 42.0778722°N

Date: 09/19/2025

Parcel ID: 284-66

Site Plan Base Layer:
"Civil Site Plans for 40B Multi-Family Development
444 East Central Street Franklin, MA," prepared by
Allen & Major Associates, dated 9/18/2025.



Legend

- Property Boundary
- River
- 100' Riverfront Area
- 200' Riverfront Area (370,970sf)
- 0-100' Proposed RFA Restoration - 66,110sf
- 100-200' Proposed RFA Restoration - 12,980sf

GODDARD CONSULTING
Strategic Ecological Consulting

Proposed Restoration of Riverfront Area

444 East Central Street
Franklin, MA 02038

0 100 200 Feet

1" = 200'

71.3771102°W, 42.0778722°N

Date: 09/19/2025

Parcel ID: 284-66

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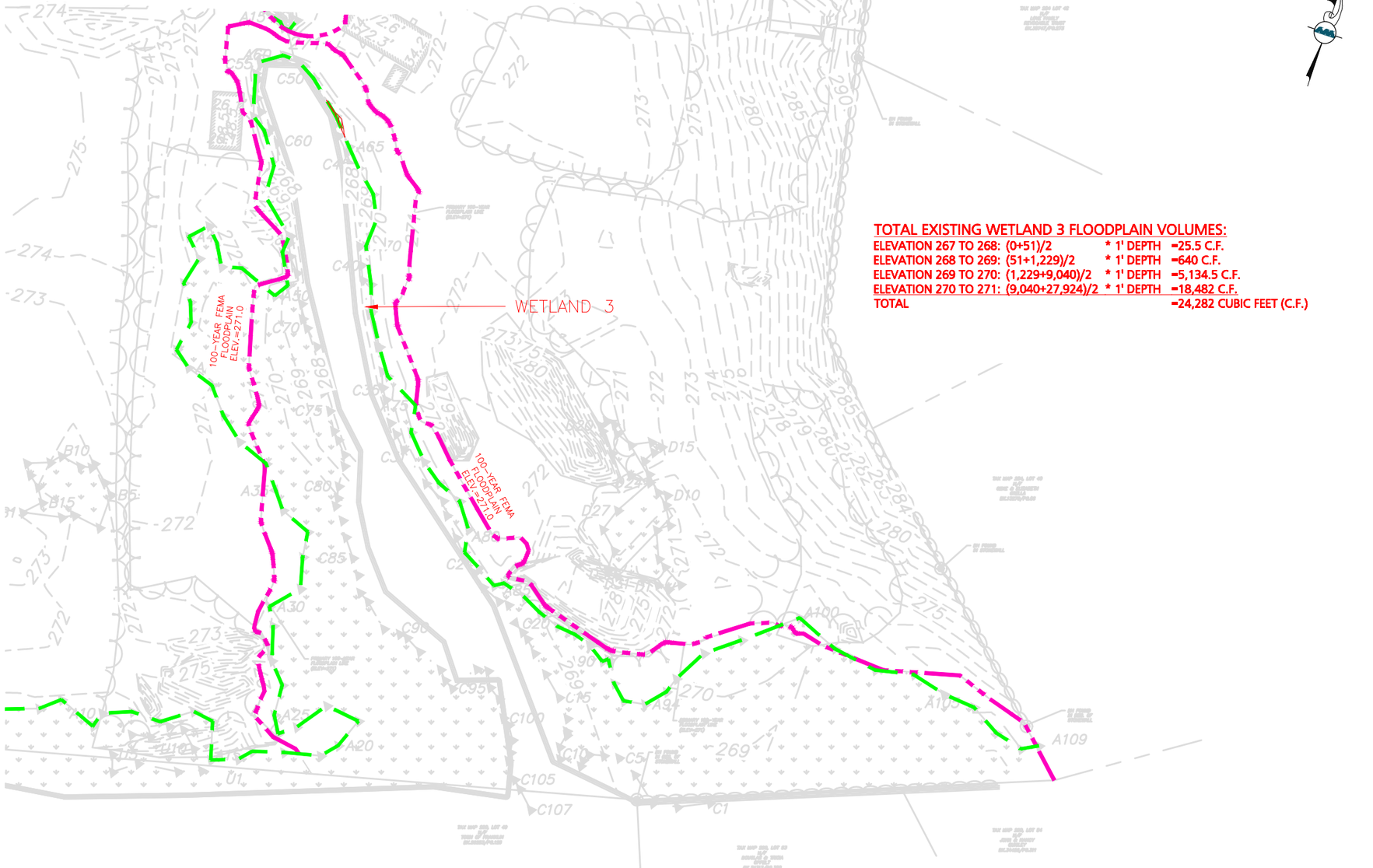


TOTAL EXISTING WETLAND 3 FLOODPLAIN VOLUMES:

ELEVATION 267 TO 268:	(0+51)/2	* 1' DEPTH	=25.5 C.F.
ELEVATION 268 TO 269:	(51+1,229)/2	* 1' DEPTH	=640 C.F.
ELEVATION 269 TO 270:	(1,229+9,040)/2	* 1' DEPTH	=5,134.5 C.F.
ELEVATION 270 TO 271:	(9,040+27,924)/2	* 1' DEPTH	=18,482 C.F.
TOTAL			=24,282 CUBIC FEET (C.F.)

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

1 inch = 100 ft.

100-YEAR FLOODPLAIN BASE FLOOD ELEVATION (BFE) BASED UPON MassDOT ORAD # 159-1306 AND BLSF STUDY BY BEALS ASSOCIATES, DATED AUGUST 27, 2025. REFERENCE FEMA FLOOD INSURANCE STUDY, NORFOLK COUNTY, MASSACHUSETTS, FEMA PLAN MAP NUMBER 25021C0309fE, EFFECTIVE JULY 8, 2025.

N:\PROJECTS\3317-01\CIVIL\DRAWINGS\FLOODPLAIN CALCULATIONS\3317-01 - FLOODPLAIN CALCULATIONS - EXISTING.DWG

APPLICANT/OWNER:

TAG CENTRAL LLC
275 REGATTA DRIVE
JUPITER, FL 33477

PROJECT:

RESIDENCES AT 444 CENTRAL
444 EAST CENTRAL STREET
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	9/16/2025
SCALE:	1" = 100'	DWG. NAME:	FLOODPLAIN
DESIGNED BY:	CMQ	CHECKED BY:	CMQ

PREPARED BY:

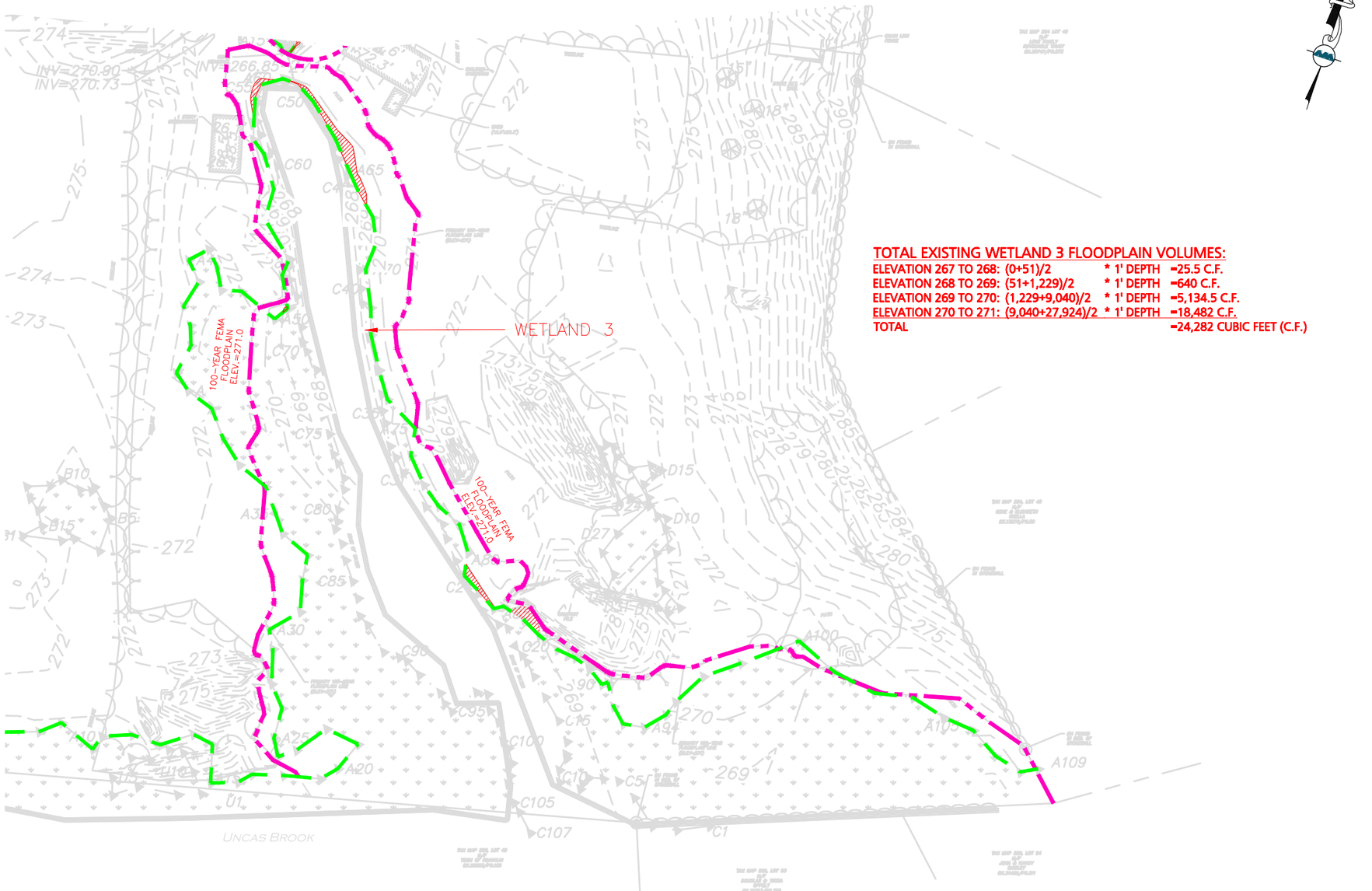
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
100 COMMERCE WAY, SUITE 5
WOBURN MA 01801-8501
TEL: (781) 935-6889
FAX: (781) 935-2896
WOBURN, MA◆LAKEVILLE, MA◆MANCHESTER, NH

DRAWING TITLE:

EXISTING SOUTH FLOOD PLAIN VOLUME EXHIBIT

SHEET No.

EL. 268



TOTAL EXISTING WETLAND 3 FLOODPLAIN VOLUMES:

ELEVATION 267 TO 268:	(0+51)/2	* 1' DEPTH	=25.5 C.F.
ELEVATION 268 TO 269:	(51+1,229)/2	* 1' DEPTH	=640 C.F.
ELEVATION 269 TO 270:	(1,229+9,040)/2	* 1' DEPTH	=5,134.5 C.F.
ELEVATION 270 TO 271:	(9,040+27,924)/2	* 1' DEPTH	=18,482 C.F.
TOTAL			=24,282 CUBIC FEET (C.F.)

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

1 inch = 100 ft.

100-YEAR FLOODPLAIN BASE FLOOD ELEVATION (BFE) BASED UPON MassDOT ORAD # 159-1306 AND BLSF STUDY BY BEALS ASSOCIATES, DATED AUGUST 27, 2025. REFERENCE FEMA FLOOD INSURANCE STUDY, NORFOLK COUNTY, MASSACHUSETTS, FEMA PLAN MAP NUMBER 25021C0309fE, EFFECTIVE JULY 8, 2025.

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JUPITER, FL 33477

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DESIGNED BY:	CMQ	CHECKED BY:	CMQ

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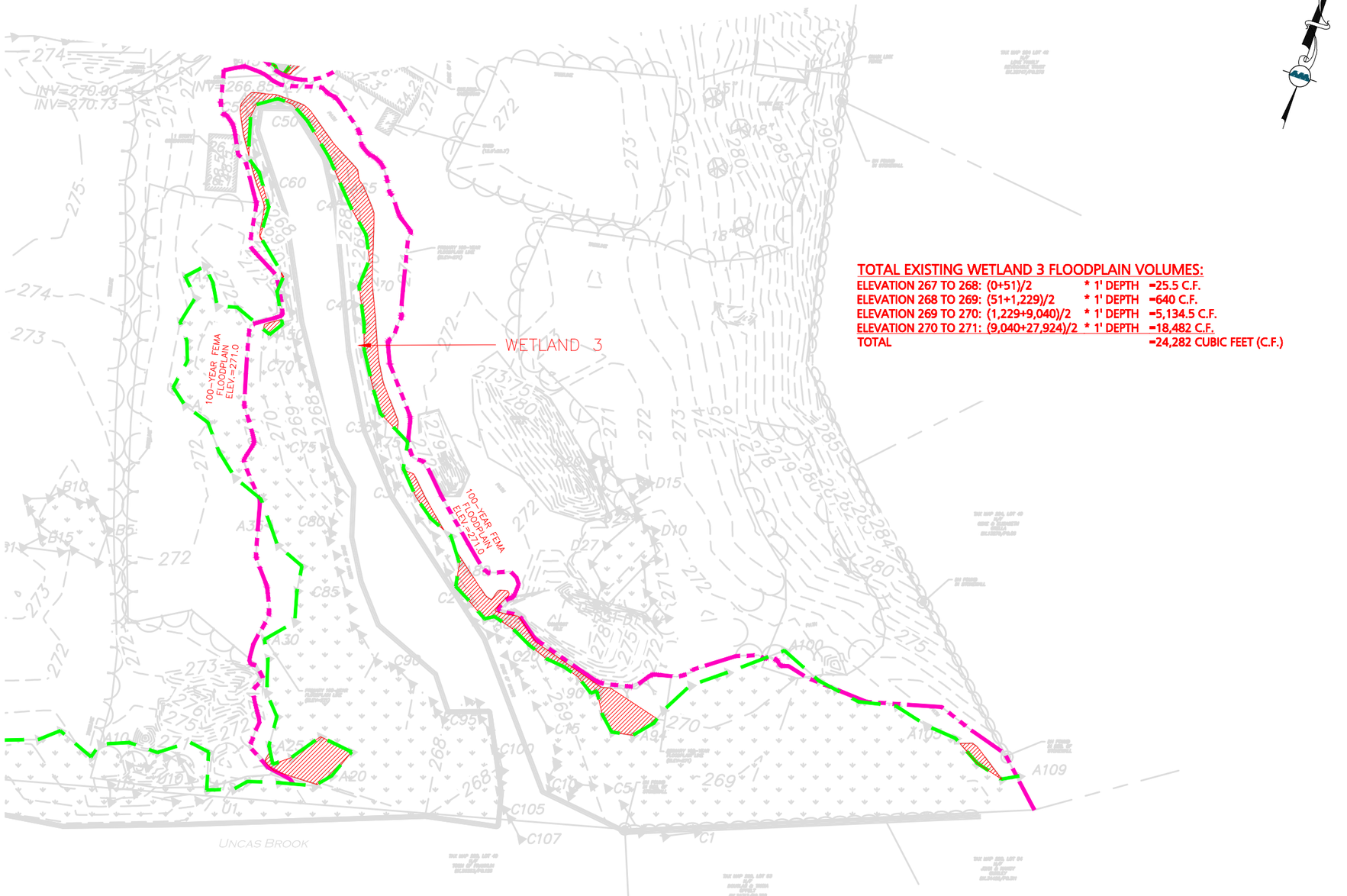
DRAWING TITLE:

EXISTING SOUTH FLOOD PLAIN VOLUME EXHIBIT

SHEET No.

EL. 269



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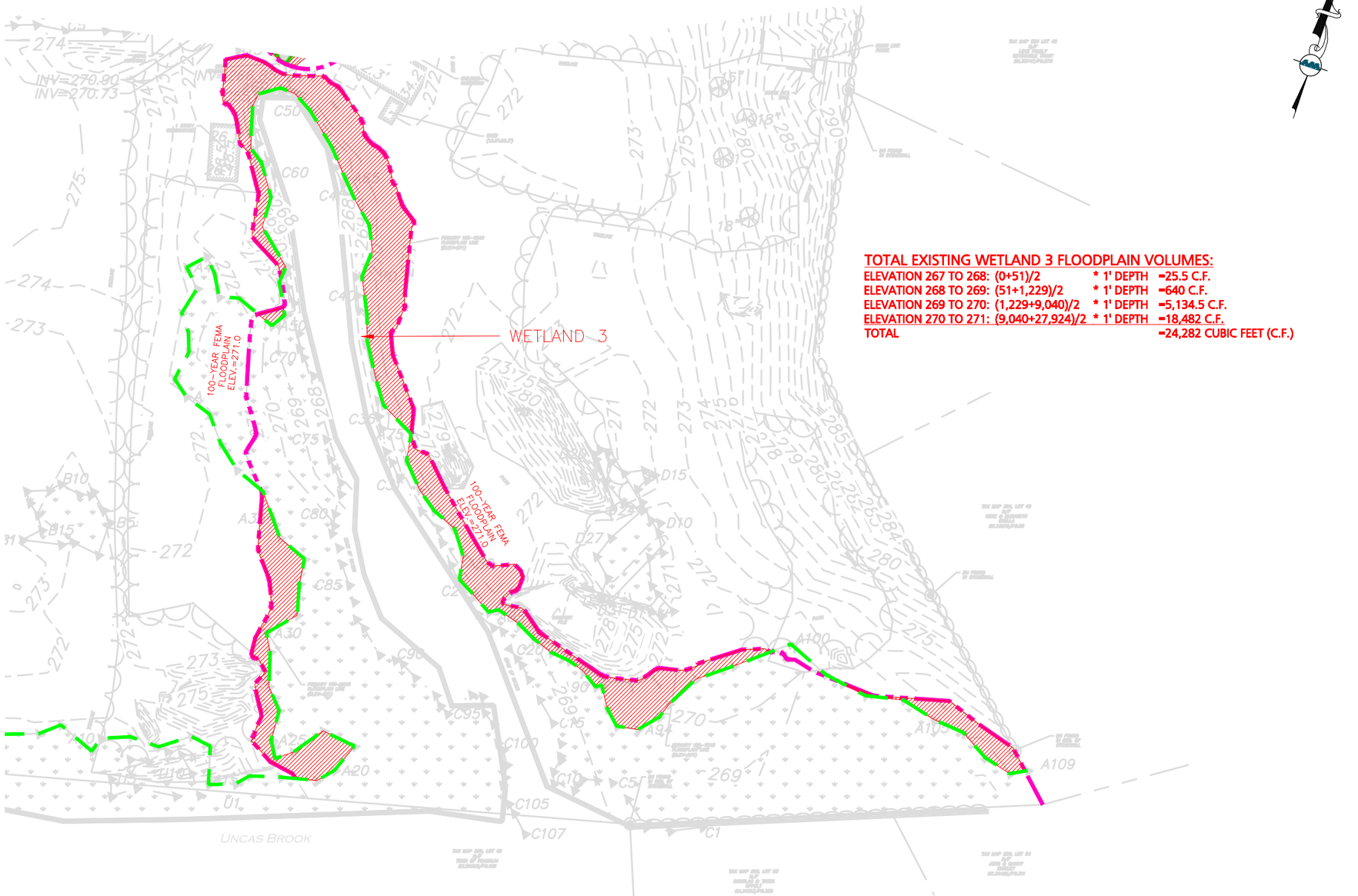
EXISTING SOUTH FLOOD PLAIN VOLUME EXHIBIT

SHEET No.

EL. 270



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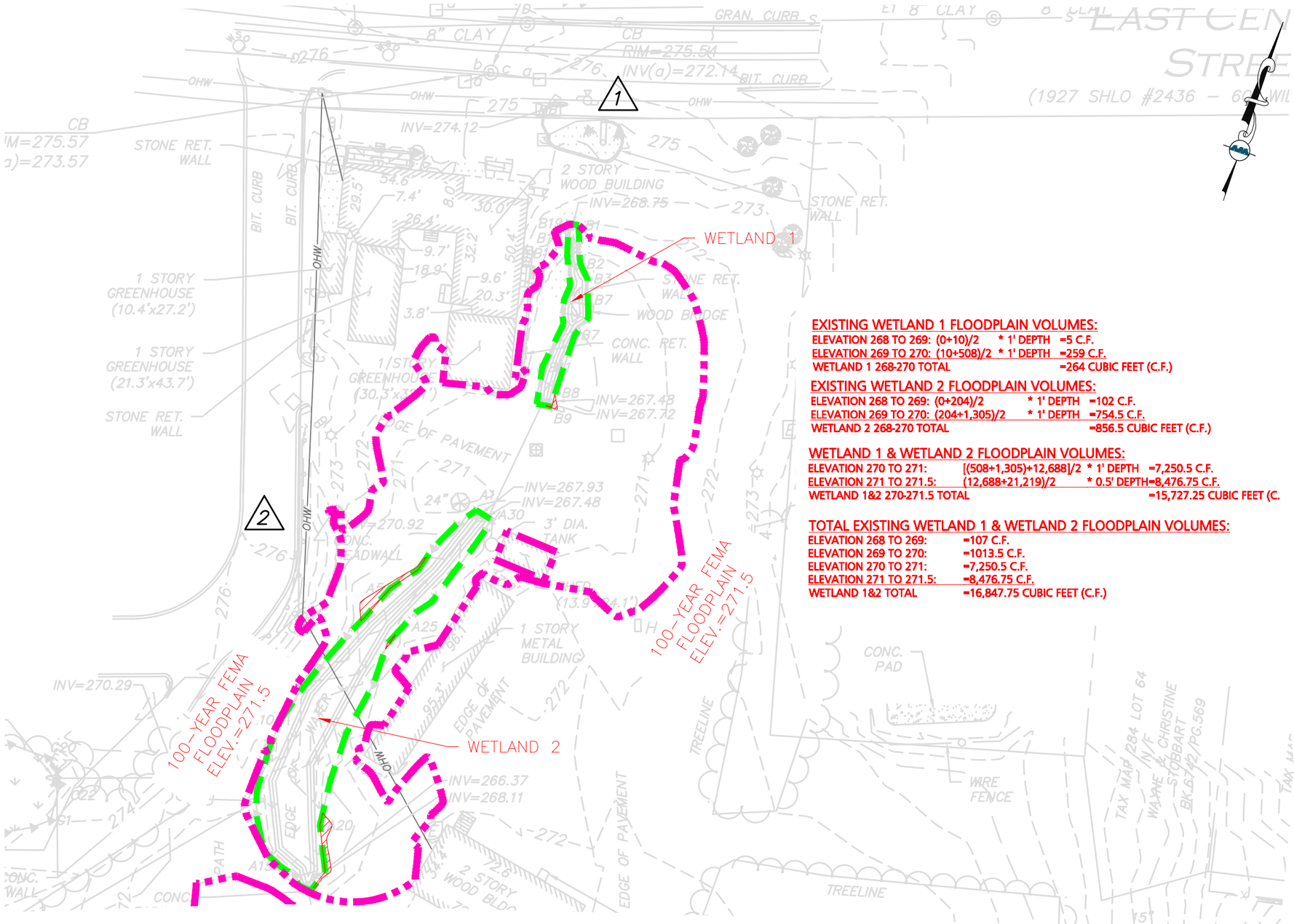
DRAWING TITLE:

EXISTING SOUTH FLOOD PLAIN VOLUME EXHIBIT

SHEET No.

EL. 271



EXISTING WETLAND 1 FLOODPLAIN VOLUMES:

ELEVATION 268 TO 269:	(0+10)/2	* 1' DEPTH	=5 C.F.
ELEVATION 269 TO 270:	(10+508)/2	* 1' DEPTH	=259 C.F.
WETLAND 1 268-270 TOTAL			=264 CUBIC FEET (C.F.)

EXISTING WETLAND 2 FLOODPLAIN VOLUMES:

ELEVATION 268 TO 269:	(0+204)/2	* 1' DEPTH	=102 C.F.
ELEVATION 269 TO 270:	(204+1,305)/2	* 1' DEPTH	=754.5 C.F.
WETLAND 2 268-270 TOTAL			=856.5 CUBIC FEET (C.F.)

WETLAND 1 & WETLAND 2 FLOODPLAIN VOLUMES:

ELEVATION 270 TO 271:	[(508+1,305)+12,688]/2	* 1' DEPTH	=7,250.5 C.F.
ELEVATION 271 TO 271.5:	(12,688+21,219)/2	* 0.5' DEPTH	=8,476.75 C.F.
WETLAND 1&2 270-271.5 TOTAL			=15,727.25 CUBIC FEET (C.

TOTAL EXISTING WETLAND 1 & WETLAND 2 FLOODPLAIN VOLUMES:

ELEVATION 268 TO 269:	=107 C.F.
ELEVATION 269 TO 270:	=1013.5 C.F.
ELEVATION 270 TO 271:	=7,250.5 C.F.
ELEVATION 271 TO 271.5:	=8,476.75 C.F.
WETLAND 1&2 TOTAL	=16,847.75 CUBIC FEET (C.F.)

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

1 inch = 100 ft.

100-YEAR FLOODPLAIN BASE FLOOD ELEVATION (BFE) BASED UPON MassDOT ORAD # 159-1306 AND BLSF STUDY BY BEALS ASSOCIATES, DATED AUGUST 27, 2025. REFERENCE FEMA FLOOD INSURANCE STUDY, NORFOLK COUNTY, MASSACHUSETTS, FEMA PLAN MAP NUMBER 25021C0309fE, EFFECTIVE JULY 8, 2025.

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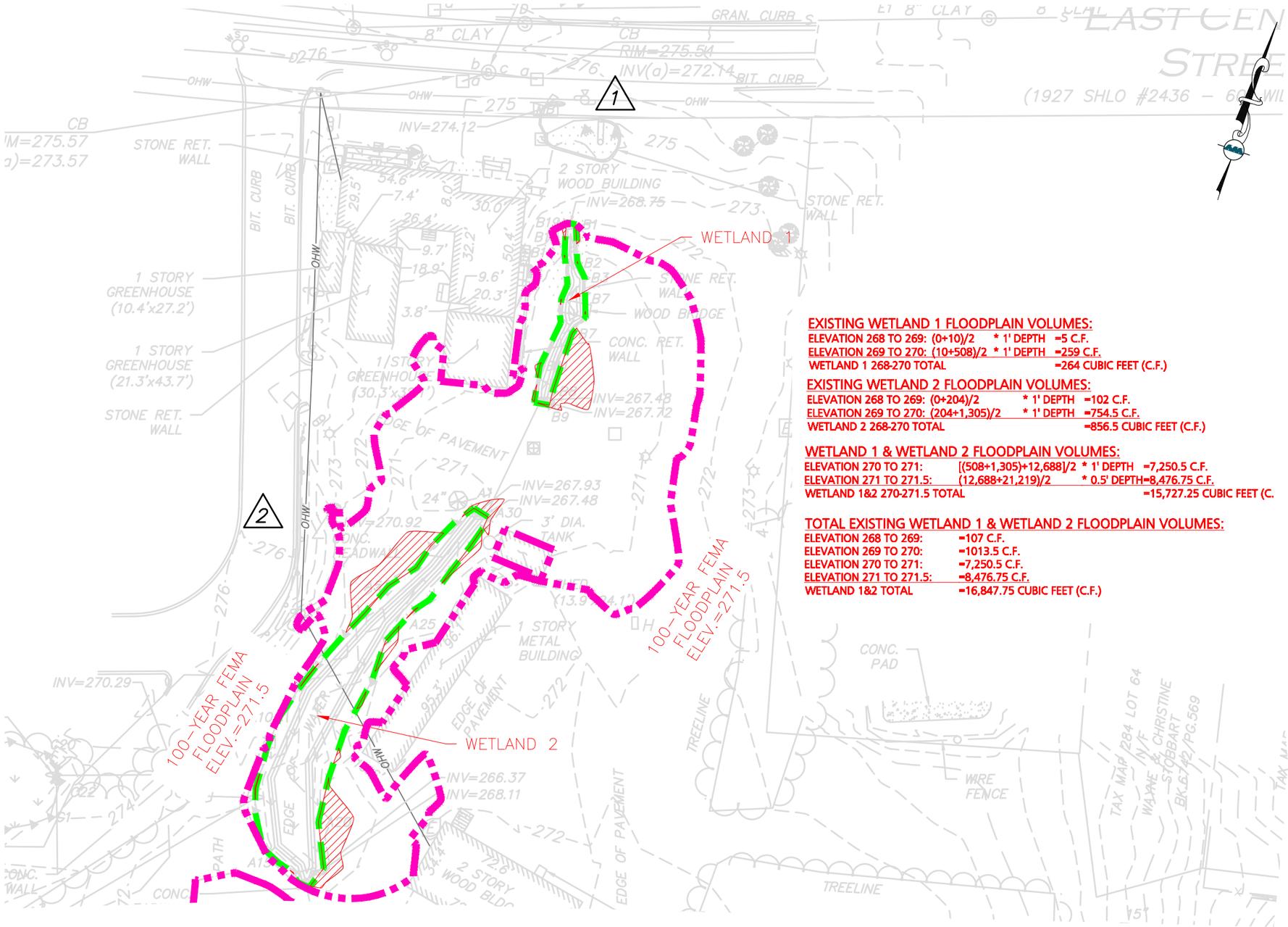
DRAWING TITLE:
EXISTING NORTH FLOOD PLAIN VOLUME EXHIBIT

SHEET No.
EL. 269



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WETLAND 1 268-270 TOTAL =264 CUBIC FEET (C.F.)

EXISTING WETLAND 2 FLOODPLAIN VOLUMES:

ELEVATION 268 TO 269: (0+204)/2 * 1' DEPTH =102 C.F.
ELEVATION 269 TO 270: (204+1,305)/2 * 1' DEPTH =754.5 C.F.
WETLAND 2 268-270 TOTAL =856.5 CUBIC FEET (C.F.)

WETLAND 1 & WETLAND 2 FLOODPLAIN VOLUMES:

ELEVATION 270 TO 271: [(508+1,305)+12,688]/2 * 1' DEPTH =7,250.5 C.F.
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275 REGATTA DRIVE
JUPITER, FL 33477

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PROJECT NO.	3317-01	DATE:	9/16/2025
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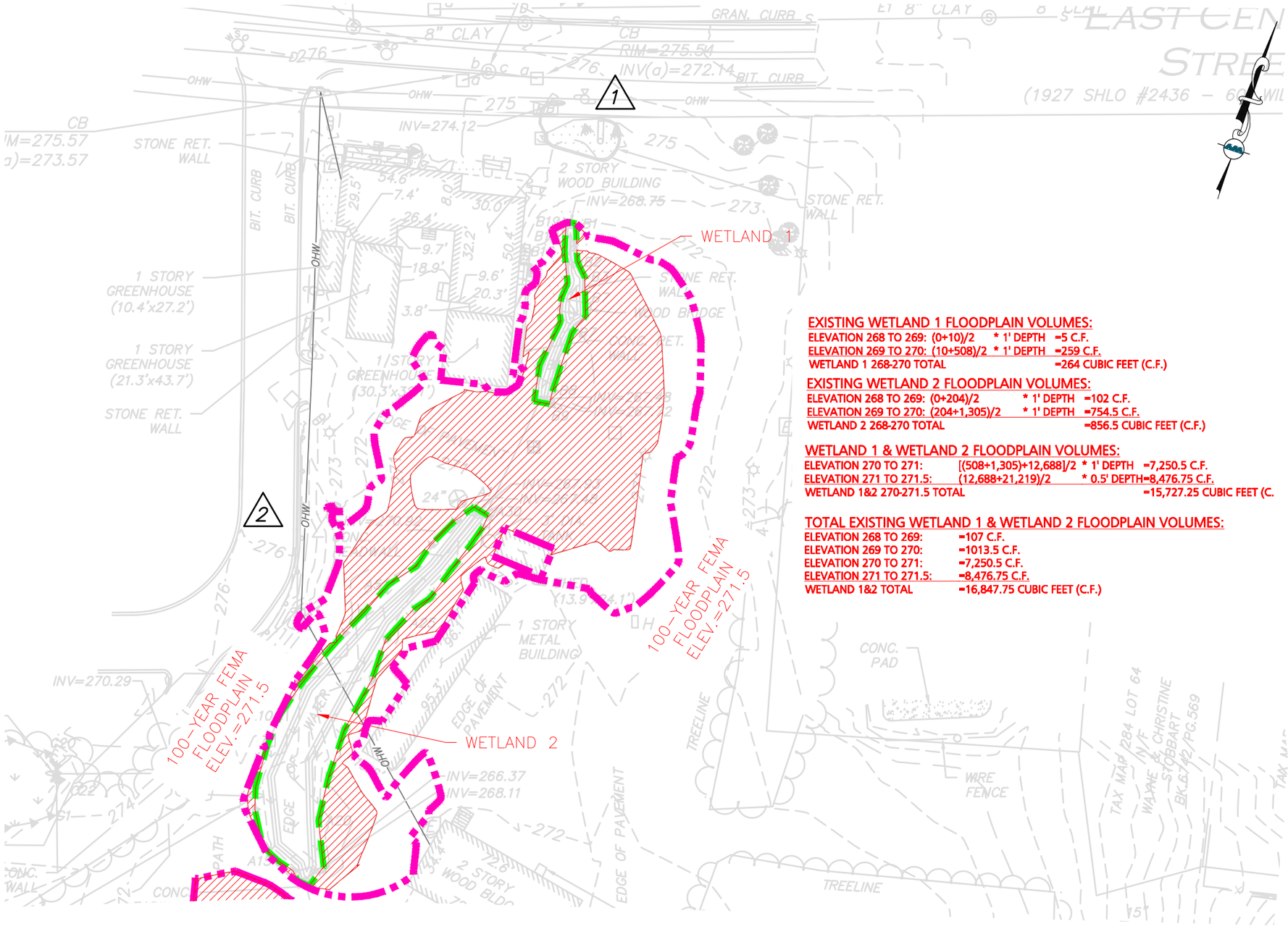
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

DRAWING TITLE:
EXISTING NORTH FLOOD PLAIN VOLUME EXHIBIT

SHEET No.
EL. 270



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GRAPHIC SCALE

100 0 50 100 200 400

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APPLICANT/OWNER:
TAG CENTRAL LLC
275 REGATTA DRIVE
JUPITER, FL 33477

PROJECT:
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444 EAST CENTRAL STREET
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	9/16/2025
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EXISTING NORTH FLOOD PLAIN VOLUME EXHIBIT

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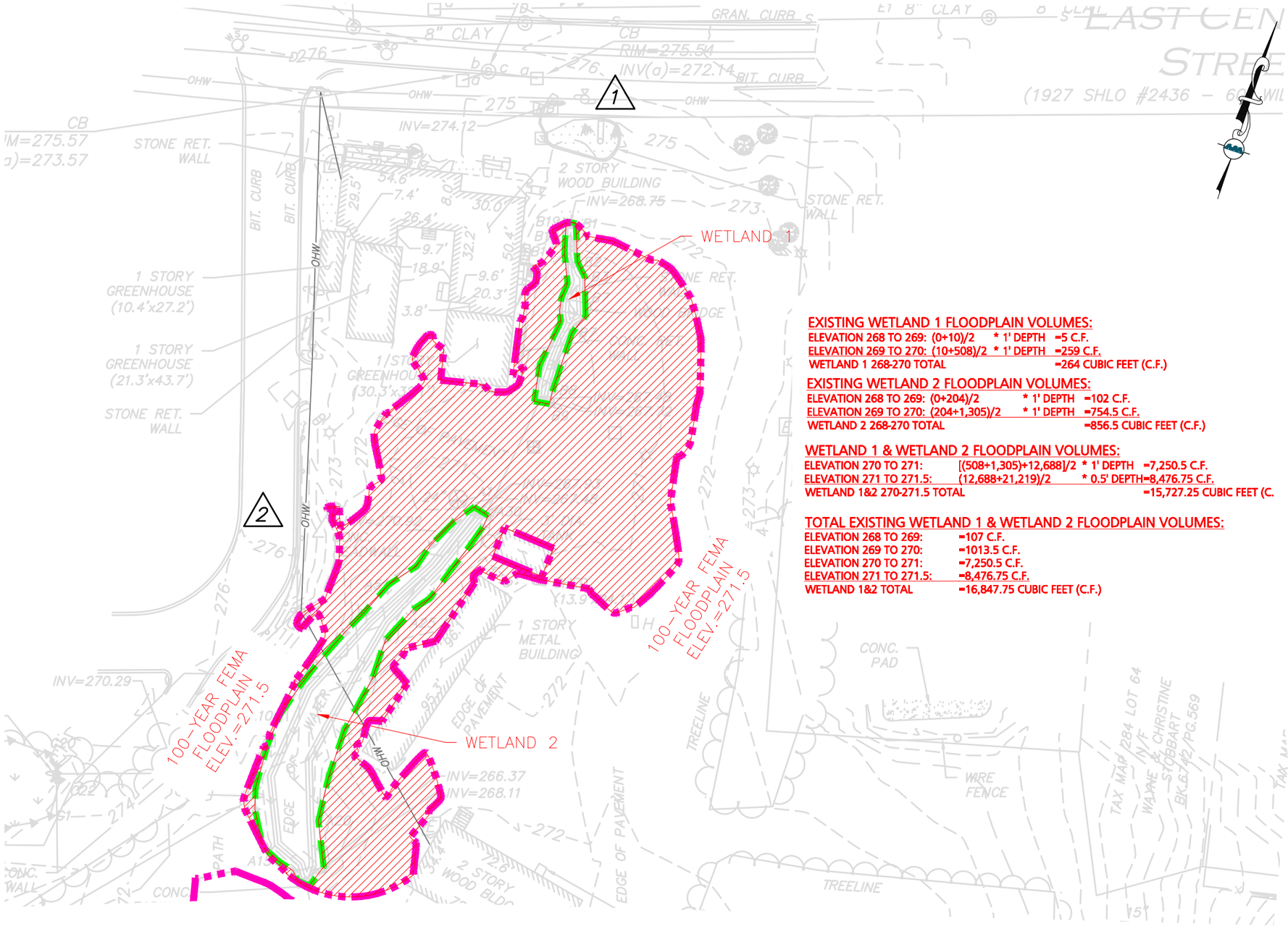

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DRAWING TITLE:

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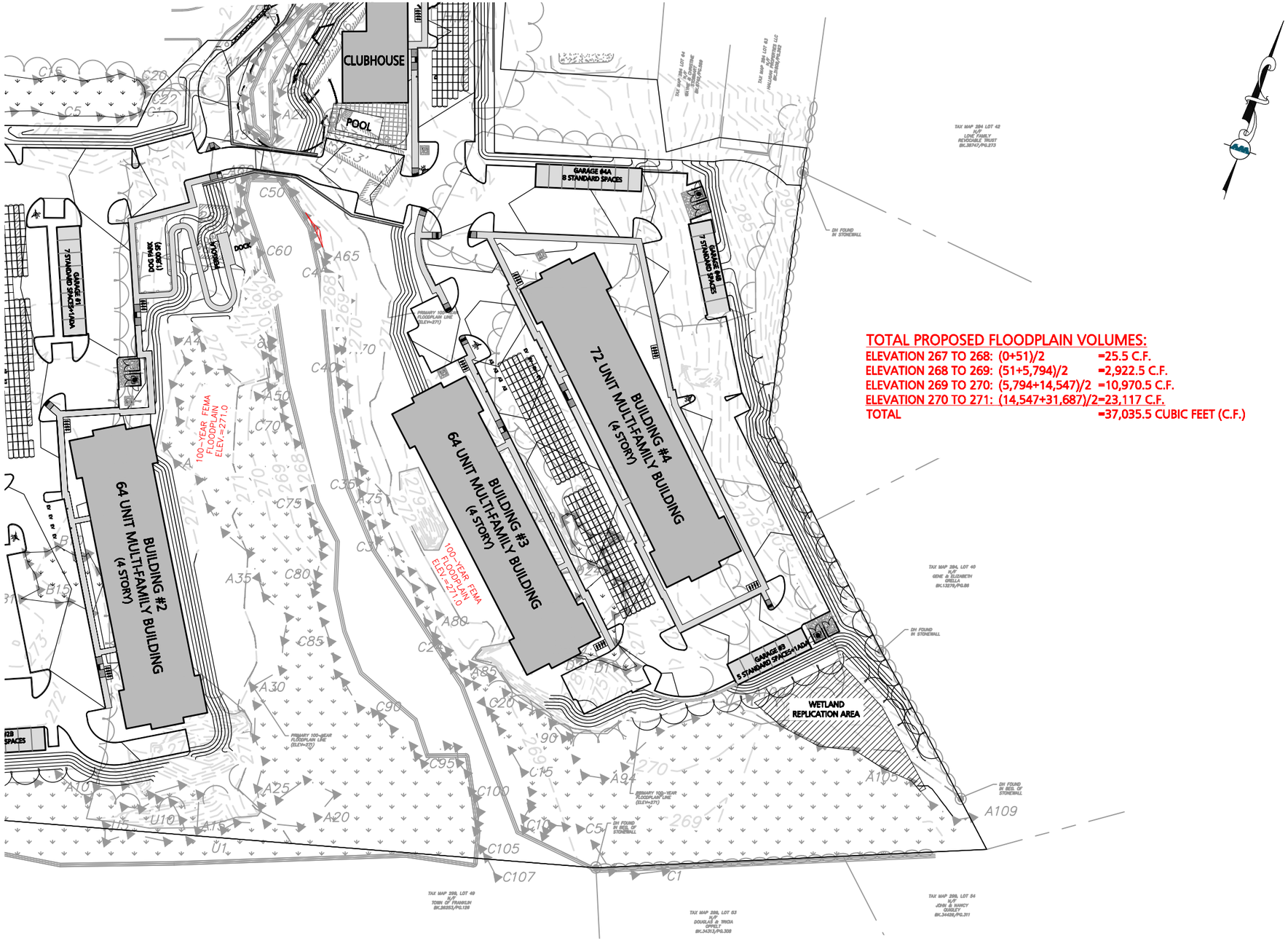
SHEET No.

EL. 271.5



TOTAL PROPOSED FLOODPLAIN VOLUMES:

ELEVATION 267 TO 268: (0+51)/2	=25.5 C.F.
ELEVATION 268 TO 269: (51+5,794)/2	=2,922.5 C.F.
ELEVATION 269 TO 270: (5,794+14,547)/2	=10,970.5 C.F.
ELEVATION 270 TO 271: (14,547+31,687)/2	=23,117 C.F.
TOTAL	=37,035.5 CUBIC FEET (C.F.)

GRAPHIC SCALE

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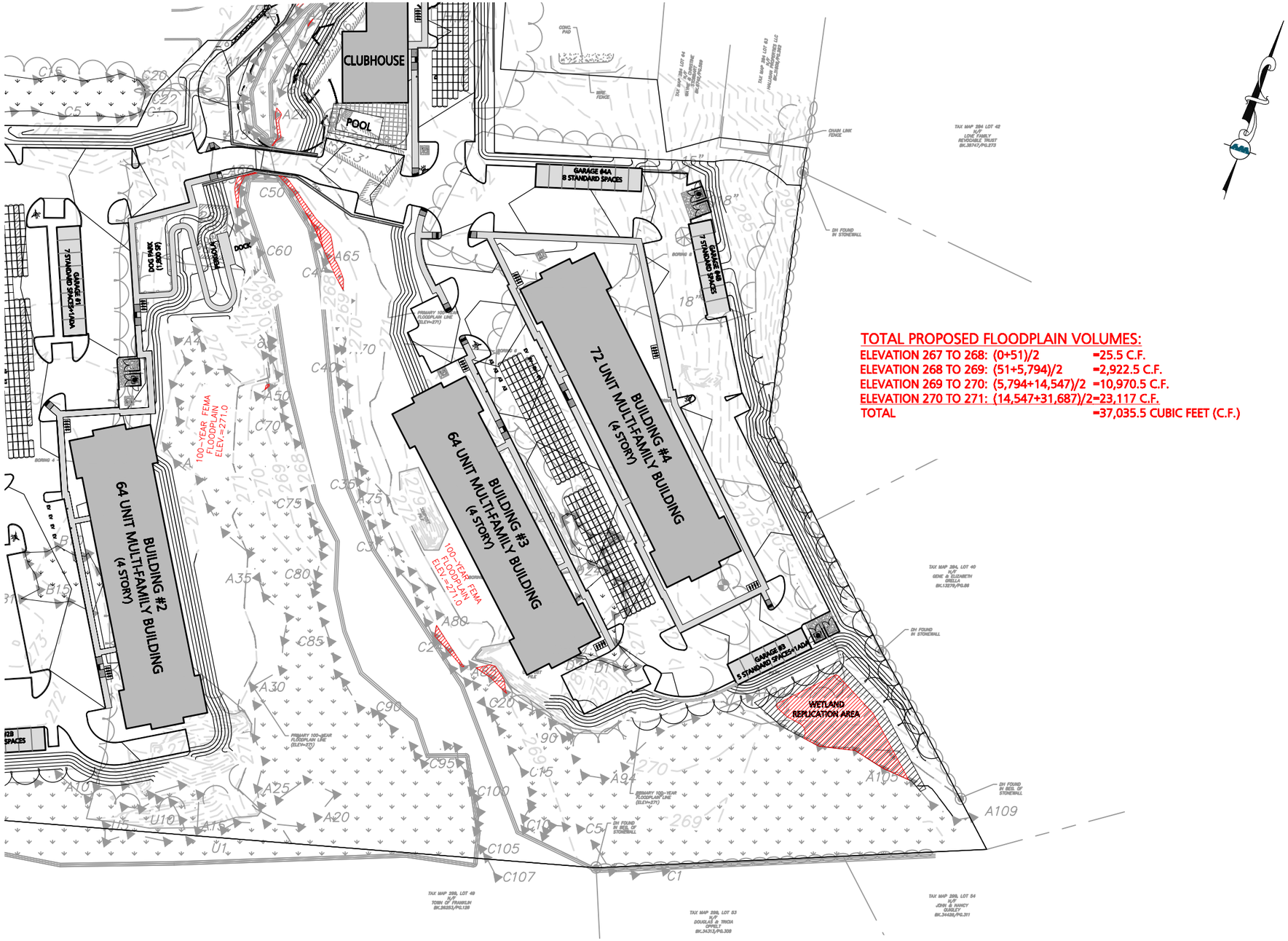

TOTAL PROPOSED FLOODPLAIN VOLUMES:

ELEVATION 267 TO 268: (0+51)/2	=25.5 C.F.
ELEVATION 268 TO 269: (51+5,794)/2	=2,922.5 C.F.
ELEVATION 269 TO 270: (5,794+14,547)/2	=10,970.5 C.F.
ELEVATION 270 TO 271: (14,547+31,687)/2	=23,117 C.F.
TOTAL	=37,035.5 CUBIC FEET (C.F.)

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

1 inch = 100 ft.

100-YEAR FLOODPLAIN BASE FLOOD ELEVATION (BFE) BASED UPON MassDOT ORAD # 159-1306 AND BLSF STUDY BY BEALS ASSOCIATES, DATED AUGUST 27, 2025. REFERENCE FEMA FLOOD INSURANCE STUDY, NORFOLK COUNTY, MASSACHUSETTS, FEMA PLAN MAP NUMBER 25021C0309fE, EFFECTIVE JULY 8, 2025.

N:\PROJECTS\3317-01\CIVIL\DRAWINGS\FLOODPLAIN CALCULATIONS\3317-01 - FLOODPLAIN CALCULATIONS - PROPOSED.DWG

APPLICANT/OWNER:

TAG CENTRAL LLC
275 REGATTA DRIVE
JUPITER, FL 33477

PROJECT:

RESIDENCES AT 444 CENTRAL
444 EAST CENTRAL STREET
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	9/16/2025
SCALE:	1" = 100'	DWG. NAME:	FLOODPLAIN
DESIGNED BY:	CMQ	CHECKED BY:	CMQ

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
100 COMMERCE WAY, SUITE 5
WOBURN MA 01801-8501
TEL: (781) 935-6889
FAX: (781) 935-2896
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

DRAWING TITLE:

PROPOSED SOUTH FLOOD PLAIN VOLUME EXHIBIT

SHEET No.

EL. 269

TOTAL PROPOSED FLOODPLAIN VOLUMES:

ELEVATION 267 TO 268: (0+51)/2	=25.5 C.F.
ELEVATION 268 TO 269: (51+5,794)/2	=2,922.5 C.F.
ELEVATION 269 TO 270: (5,794+14,547)/2	=10,970.5 C.F.
ELEVATION 270 TO 271: (14,547+31,687)/2	=23,117 C.F.
TOTAL	=37,035.5 CUBIC FEET (C.F.)

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

1 inch = 100 ft.

100-YEAR FLOODPLAIN BASE FLOOD ELEVATION (BFE) BASED UPON MassDOT ORAD # 159-1306 AND BLSF STUDY BY BEALS ASSOCIATES, DATED AUGUST 27, 2025. REFERENCE FEMA FLOOD INSURANCE STUDY, NORFOLK COUNTY, MASSACHUSETTS, FEMA PLAN MAP NUMBER 25021C0309fE, EFFECTIVE JULY 8, 2025.

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APPLICANT/OWNER:

TAG CENTRAL LLC
275 REGATTA DRIVE
JUPITER, FL 33477

PROJECT:

RESIDENCES AT 444 CENTRAL
444 EAST CENTRAL STREET
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	9/16/2025
SCALE:	1" = 100'	DWG. NAME:	FLOODPLAIN
DESIGNED BY:	CMQ	CHECKED BY:	CMQ

PREPARED BY:

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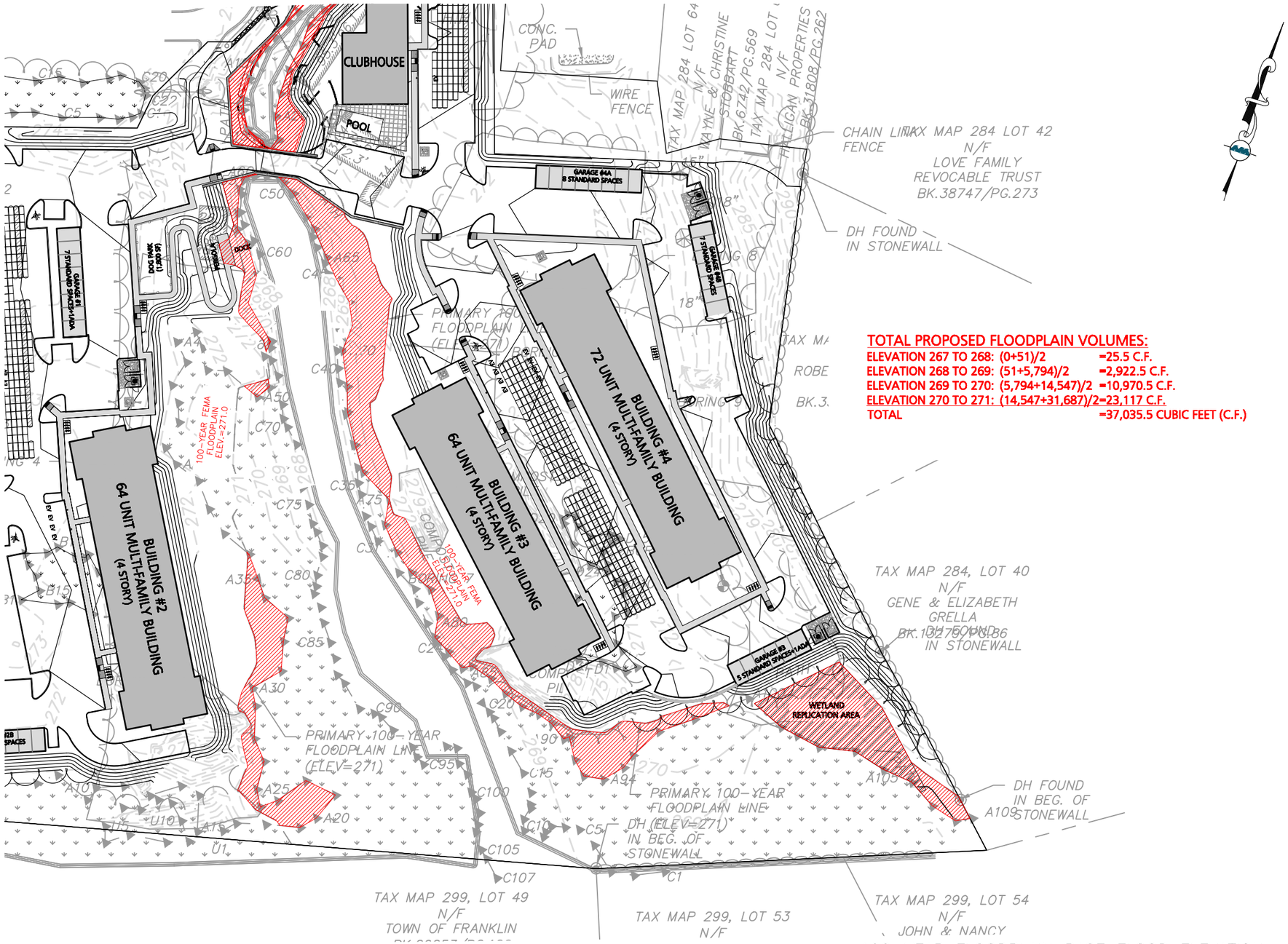
WOBURN, MA◆LAKEVILLE, MA◆MANCHESTER, NH

DRAWING TITLE:

PROPOSED SOUTH FLOOD PLAIN VOLUME EXHIBIT

SHEET No.

EL. 270



TOTAL PROPOSED FLOODPLAIN VOLUMES:

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ELEVATION 268 TO 269: (51+5,794)/2	=2,922.5 C.F.
ELEVATION 269 TO 270: (5,794+14,547)/2	=10,970.5 C.F.
ELEVATION 270 TO 271: (14,547+31,687)/2	=23,117 C.F.
TOTAL	=37,035.5 CUBIC FEET (C.F.)

GRAPHIC SCALE

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1 inch = 100 ft.

100-YEAR FLOODPLAIN BASE FLOOD ELEVATION (BFE) BASED UPON MassDOT ORAD # 159-1306 AND BLSF STUDY BY BEALS ASSOCIATES, DATED AUGUST 27, 2025. REFERENCE FEMA FLOOD INSURANCE STUDY, NORFOLK COUNTY, MASSACHUSETTS, FEMA PLAN MAP NUMBER 25021C0309fE, EFFECTIVE JULY 8, 2025.

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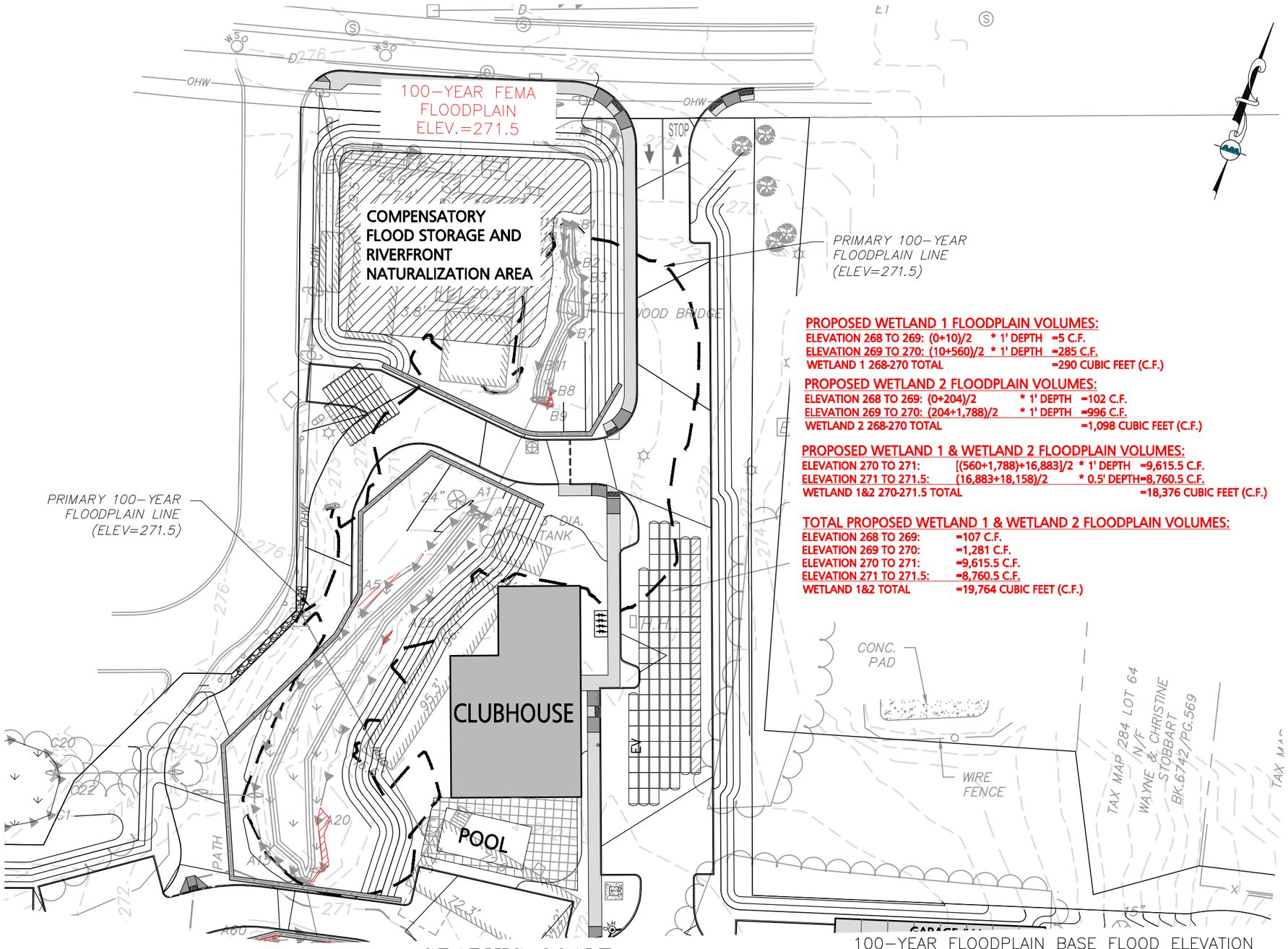
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

DRAWING TITLE:

PROPOSED SOUTH FLOOD PLAIN VOLUME EXHIBIT

SHEET No.

EL. 271



PROPOSED WETLAND 1 FLOODPLAIN VOLUMES:
ELEVATION 268 TO 269: (0+10)/2 * 1' DEPTH =5 C.F.
ELEVATION 269 TO 270: (10+560)/2 * 1' DEPTH =285 C.F.
WETLAND 1 268-270 TOTAL =290 CUBIC FEET (C.F.)

PROPOSED WETLAND 2 FLOODPLAIN VOLUMES:
ELEVATION 268 TO 269: (0+204)/2 * 1' DEPTH =102 C.F.
ELEVATION 269 TO 270: (204+1,788)/2 * 1' DEPTH =996 C.F.
WETLAND 2 268-270 TOTAL =1,098 CUBIC FEET (C.F.)

PROPOSED WETLAND 1 & WETLAND 2 FLOODPLAIN VOLUMES:
ELEVATION 270 TO 271: [(560+1,788)+16,883]/2 * 1' DEPTH =9,615.5 C.F.
ELEVATION 271 TO 271.5: (16,883+18,158)/2 * 0.5' DEPTH=8,760.5 C.F.
WETLAND 1&2 270-271.5 TOTAL =18,376 CUBIC FEET (C.F.)

TOTAL PROPOSED WETLAND 1 & WETLAND 2 FLOODPLAIN VOLUMES:
ELEVATION 268 TO 269: =107 C.F.
ELEVATION 269 TO 270: =1,281 C.F.
ELEVATION 270 TO 271: =9,615.5 C.F.
ELEVATION 271 TO 271.5: =8,760.5 C.F.
WETLAND 1&2 TOTAL =19,764 CUBIC FEET (C.F.)

100-YEAR FLOODPLAIN BASE FLOOD ELEVATION (BFE) BASED UPON MassDOT ORAD # 159-1306 AND BLSF STUDY BY BEALS ASSOCIATES, DATED AUGUST 27, 2025. REFERENCE FEMA FLOOD INSURANCE STUDY, NORFOLK COUNTY, MASSACHUSETTS, FEMA PLAN MAP NUMBER 25021C0309fE, EFFECTIVE JULY 8, 2025.

N:\PROJECTS\3317-01\CIVIL\DRAWINGS\FLOODPLAIN CALCULATIONS\3317-01 - FLOODPLAIN CALCULATIONS - PROPOSED.DWG

APPLICANT/OWNER:
TAG CENTRAL LLC
275 REGATTA DRIVE
JUPITER, FL 33477

PROJECT:
RESIDENCES AT 444 CENTRAL
444 EAST CENTRAL STREET
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	9/16/2025
SCALE:	1" = 100'	DWG. NAME:	FLOODPLAIN
DESIGNED BY:	CMQ	CHECKED BY:	CMQ

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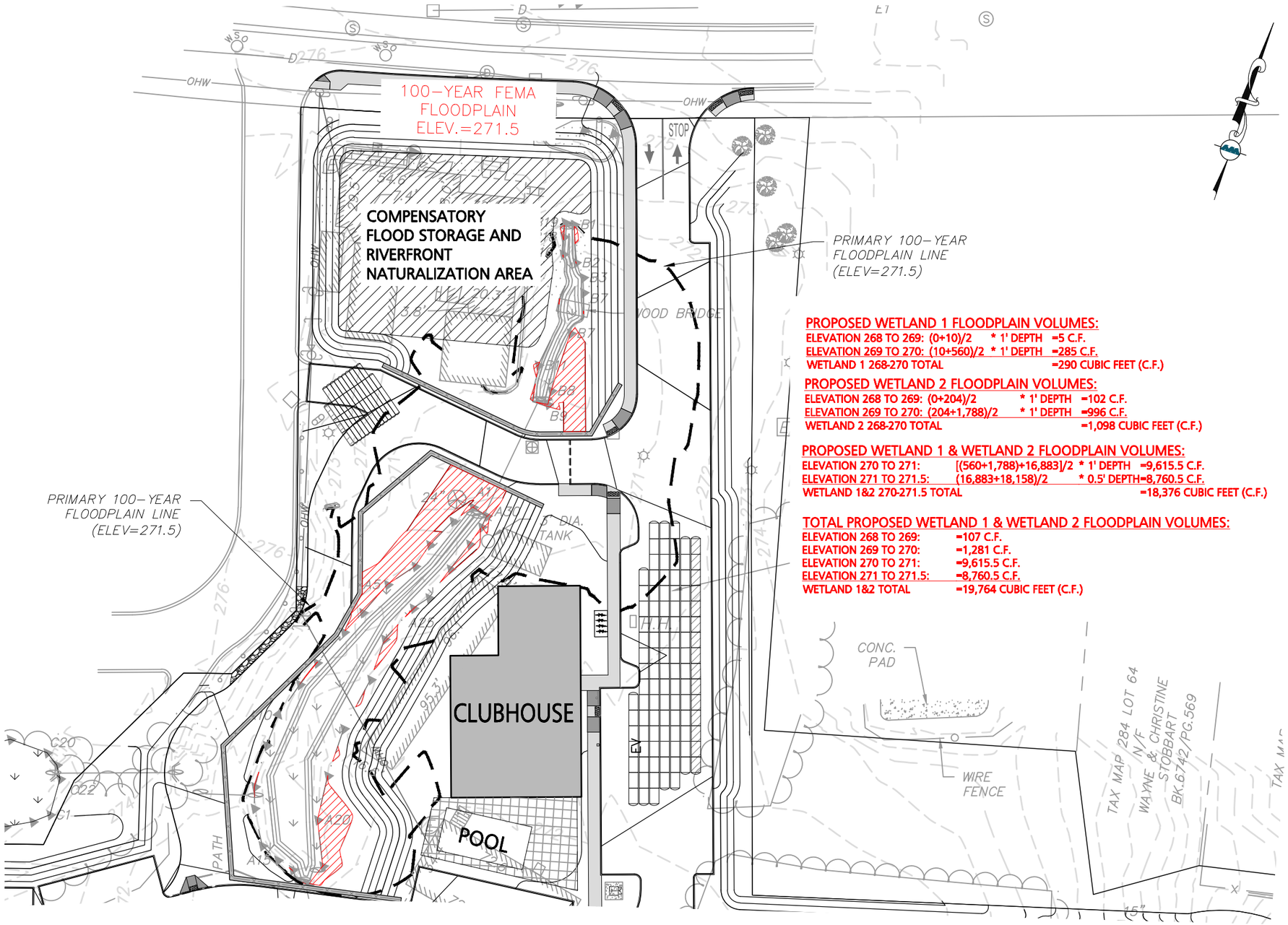
TEL: (781) 935-6889
FAX: (781) 935-2896
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

DRAWING TITLE:
PROPOSED NORTH FLOOD PLAIN VOLUME EXHIBIT

SHEET No.
EL. 269



PROPOSED WETLAND 1 FLOODPLAIN VOLUMES:

ELEVATION 268 TO 269: (0+10)/2 * 1' DEPTH =5 C.F.
ELEVATION 269 TO 270: (10+560)/2 * 1' DEPTH =285 C.F.
WETLAND 1 268-270 TOTAL =290 CUBIC FEET (C.F.)

PROPOSED WETLAND 2 FLOODPLAIN VOLUMES:

ELEVATION 268 TO 269: (0+204)/2 * 1' DEPTH =102 C.F.
ELEVATION 269 TO 270: (204+1,788)/2 * 1' DEPTH =996 C.F.
WETLAND 2 268-270 TOTAL =1,098 CUBIC FEET (C.F.)

PROPOSED WETLAND 1 & WETLAND 2 FLOODPLAIN VOLUMES:

ELEVATION 270 TO 271: [(560+1,788)+16,883]/2 * 1' DEPTH =9,615.5 C.F.
ELEVATION 271 TO 271.5: (16,883+18,158)/2 * 0.5' DEPTH=8,760.5 C.F.
WETLAND 1&2 270-271.5 TOTAL =18,376 CUBIC FEET (C.F.)

TOTAL PROPOSED WETLAND 1 & WETLAND 2 FLOODPLAIN VOLUMES:

ELEVATION 268 TO 269: =107 C.F.
ELEVATION 269 TO 270: =1,281 C.F.
ELEVATION 270 TO 271: =9,615.5 C.F.
ELEVATION 271 TO 271.5: =8,760.5 C.F.
WETLAND 1&2 TOTAL =19,764 CUBIC FEET (C.F.)

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

100-YEAR FLOODPLAIN BASE FLOOD ELEVATION (BFE) BASED UPON MassDOT ORAD # 159-1306 AND BLSF STUDY BY BEALS ASSOCIATES, DATED AUGUST 27, 2025. REFERENCE FEMA FLOOD INSURANCE STUDY, NORFOLK COUNTY, MASSACHUSETTS, FEMA PLAN MAP NUMBER 25021C0309fE, EFFECTIVE JULY 8, 2025.

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APPLICANT/OWNER:
TAG CENTRAL LLC
275 REGATTA DRIVE
JUPITER, FL 33477

PROJECT:
RESIDENCES AT 444 CENTRAL
444 EAST CENTRAL STREET
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	9/16/2025
SCALE:	1" = 100'	DWG. NAME:	FLOODPLAIN
DESIGNED BY:	CMQ	CHECKED BY:	CMQ

PREPARED BY:
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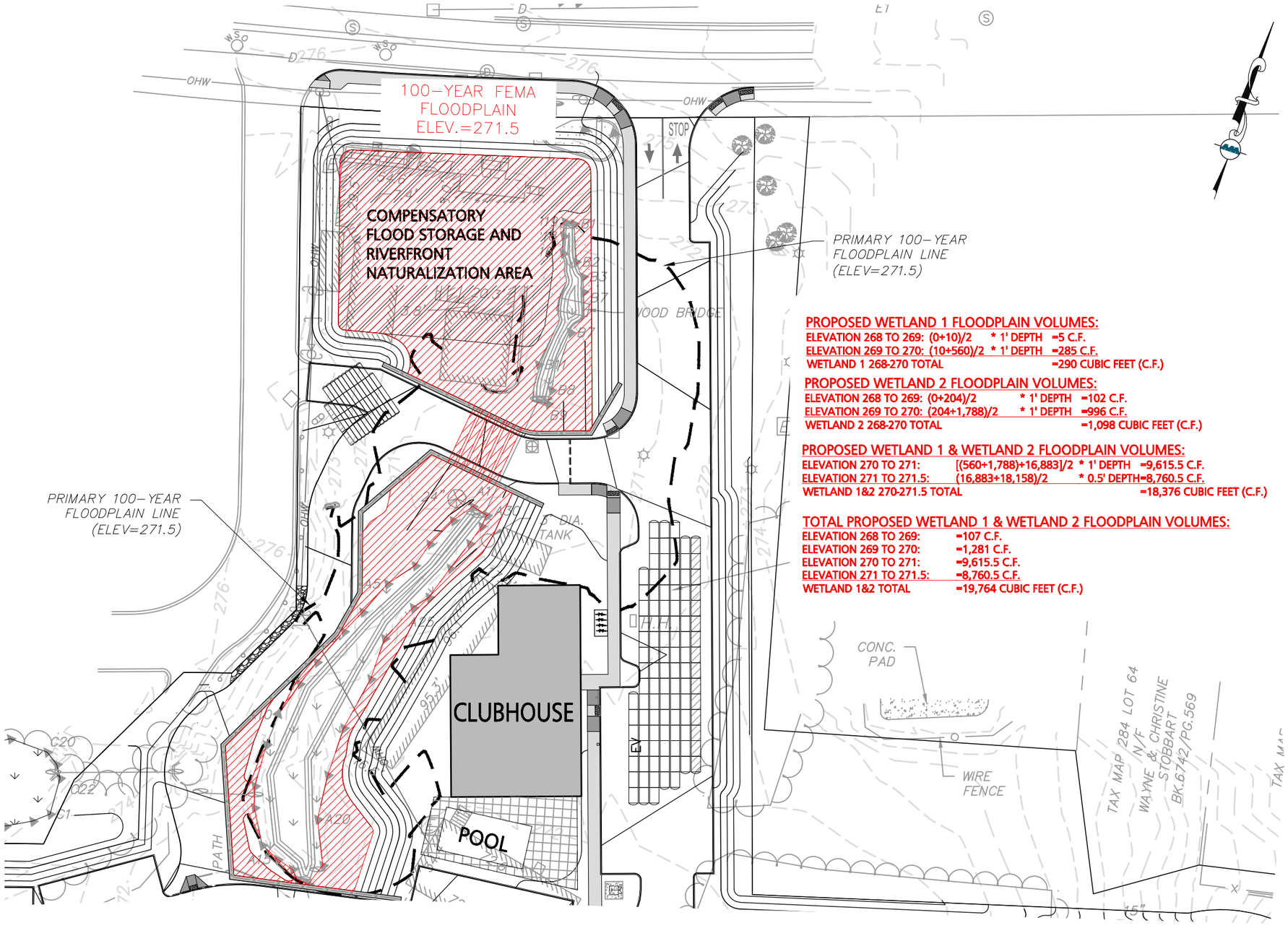
FAX: (781) 935-2896
WOBURN, MA◆LAKEVILLE, MA◆MANCHESTER, NH

DRAWING TITLE:
PROPOSED NORTH FLOOD PLAIN VOLUME EXHIBIT

SHEET No.
EL. 270



PROPOSED WETLAND 1 FLOODPLAIN VOLUMES:

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ELEVATION 269 TO 270:	(10+560)/2	* 1' DEPTH	=285 C.F.
WETLAND 1 268-270 TOTAL			=290 CUBIC FEET (C.F.)

PROPOSED WETLAND 2 FLOODPLAIN VOLUMES:

ELEVATION 268 TO 269:	(0+204)/2	* 1' DEPTH	=102 C.F.
ELEVATION 269 TO 270:	(204+1,788)/2	* 1' DEPTH	=996 C.F.
WETLAND 2 268-270 TOTAL			=1,098 CUBIC FEET (C.F.)

PROPOSED WETLAND 1 & WETLAND 2 FLOODPLAIN VOLUMES:

ELEVATION 270 TO 271:	[(560+1,788)+16,883]/2	* 1' DEPTH	=9,615.5 C.F.
ELEVATION 271 TO 271.5:	(16,883+18,158)/2	* 0.5' DEPTH	=8,760.5 C.F.
WETLAND 1&2 270-271.5 TOTAL			=18,376 CUBIC FEET (C.F.)

TOTAL PROPOSED WETLAND 1 & WETLAND 2 FLOODPLAIN VOLUMES:

ELEVATION 268 TO 269:	=107 C.F.
ELEVATION 269 TO 270:	=1,281 C.F.
ELEVATION 270 TO 271:	=9,615.5 C.F.
ELEVATION 271 TO 271.5:	=8,760.5 C.F.
WETLAND 1&2 TOTAL	=19,764 CUBIC FEET (C.F.)

GRAPHIC SCALE

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(IN FEET)

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100-YEAR FLOODPLAIN BASE FLOOD ELEVATION (BFE) BASED UPON MassDOT ORAD # 159-1306 AND BLSF STUDY BY BEALS ASSOCIATES, DATED AUGUST 27, 2025. REFERENCE FEMA FLOOD INSURANCE STUDY, NORFOLK COUNTY, MASSACHUSETTS, FEMA PLAN MAP NUMBER 25021C0309fE, EFFECTIVE JULY 8, 2025.

N:\PROJECTS\3317-01\CIVIL\DRAWINGS\FLOODPLAIN CALCULATIONS\3317-01 - FLOODPLAIN CALCULATIONS - PROPOSED.DWG

APPLICANT/OWNER:
TAG CENTRAL LLC
275 REGATTA DRIVE
JUPITER, FL 33477

PROJECT:
RESIDENCES AT 444 CENTRAL
444 EAST CENTRAL STREET
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	9/16/2025
SCALE:	1" = 100'	DWG. NAME:	FLOODPLAIN
DESIGNED BY:	CMQ	CHECKED BY:	CMQ

PREPARED BY:
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civil engineering ◆ land surveying
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WOBURN MA 01801-8501
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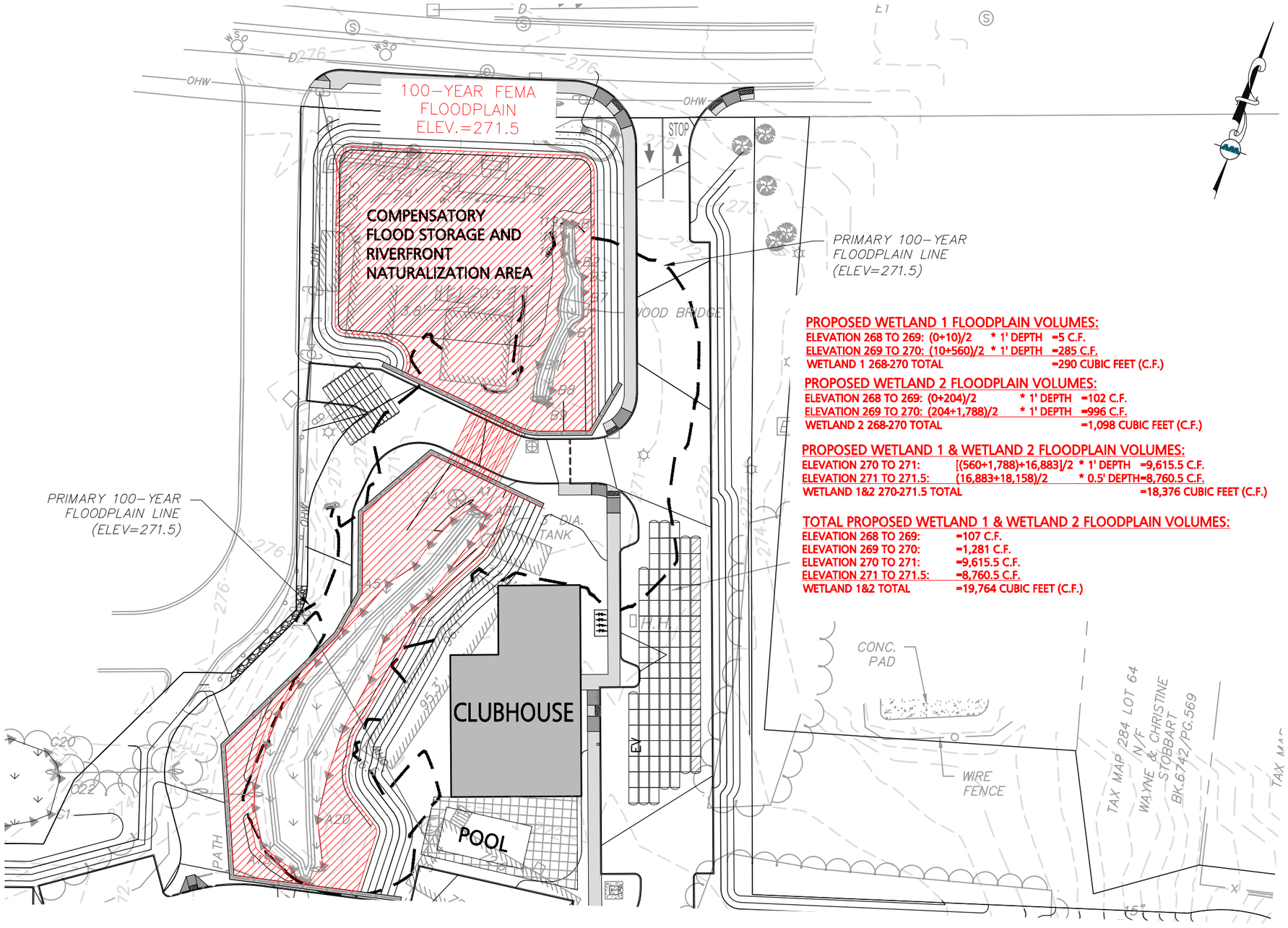
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

DRAWING TITLE:
PROPOSED NORTH FLOOD PLAIN VOLUME EXHIBIT

SHEET No.
EL. 271



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ELEVATION 268 TO 269: (0+10)/2 * 1' DEPTH =5 C.F.
ELEVATION 269 TO 270: (10+560)/2 * 1' DEPTH =285 C.F.
WETLAND 1 268-270 TOTAL =290 CUBIC FEET (C.F.)

PROPOSED WETLAND 2 FLOODPLAIN VOLUMES:
ELEVATION 268 TO 269: (0+204)/2 * 1' DEPTH =102 C.F.
ELEVATION 269 TO 270: (204+1,788)/2 * 1' DEPTH =996 C.F.
WETLAND 2 268-270 TOTAL =1,098 CUBIC FEET (C.F.)

PROPOSED WETLAND 1 & WETLAND 2 FLOODPLAIN VOLUMES:
ELEVATION 270 TO 271: [(560+1,788)+16,883]/2 * 1' DEPTH =9,615.5 C.F.
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WETLAND 1&2 270-271.5 TOTAL =18,376 CUBIC FEET (C.F.)

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WETLAND 1&2 TOTAL =19,764 CUBIC FEET (C.F.)

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
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APPLICANT/OWNER:
TAG CENTRAL LLC
275 REGATTA DRIVE
JUPITER, FL 33477

PROJECT:
RESIDENCES AT 444 CENTRAL
444 EAST CENTRAL STREET
FRANKLIN, MA

PROJECT NO.	3317-01	DATE:	9/16/2025
SCALE:	1" = 100'	DWG. NAME:	FLOODPLAIN
DESIGNED BY:	CMQ	CHECKED BY:	CMQ

PREPARED BY:
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WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

DRAWING TITLE:
PROPOSED NORTH FLOOD PLAIN VOLUME EXHIBIT

SHEET No.
EL. 271.5

GODDARD CONSULTING
Strategic Ecological Consulting

Restoration, Replication and Mitigation Plan

for
444 East Central Street
Franklin, MA
(Assessor's Map 284, Parcel 66)

DATE:
April 17, 2025
Revised July 28, 2025
Revised September 25, 2025

ADDRESSED TO:
Franklin Conservation Commission
355 East Central Street
Franklin, MA 02038

PREPARED BY:
Goddard Consulting LLC
291 Main Street, Suite 8
Northborough, MA 01532

PREPARED FOR:
TAG Central LLC
275 Regatta Drive
Jupiter, FL 33477

A. Site History

The locus site, 444 East Central Street in Franklin, is presently in use as a nursery and landscape facility known as Stobbart's Nursery. The site has been used as such for several decades. The Franklin Assessor's records indicate that the main building on the site was built in 1950, and historic aerial imagery corroborates that the site has been used for farming, nursery, and/or landscape operations since at least the mid-1960s. The site has been used, cultivated and altered repeatedly over the last 75 or more years.

The land had historically been used primarily as a nursery grow operation, cultivating plants for sale. Over time, as nursery cultivation and sale operations dwindled, portions of the site went unmaintained. This has resulted in the presence of large stands of nonnative species that were never harvested for sale. In addition to the nonnative landscape plants that have been allowed to grow to maturity, the site contains a significant contingent of both invasive species, and nonnative species that have escaped from cultivation.

While the storefront remains active, the nursery no longer cultivates plants for sale on the site. However, portions of the site do continue to be used sporadically as a construction and landscape yard, primarily on the eastern half of the property. Large brush, compost and fill piles are present variously throughout the site, along with laydown areas for construction materials, equipment and abandoned vehicles.

Photo 1: View of contractor yard area in eastern portion of the site.

B. Proposed Development

As part of the construction of a residential development on the site as a "friendly 40B," consisting of multiple residential buildings and one clubhouse building with associated interior and exterior amenities, parking, and open areas, this document has been prepared to outline proposed restoration, replication and mitigation efforts. Because much of the site is encompassed by wetland resource areas and their buffer zones, extensive restoration of the site is proposed as part of the project.

C. Restoration Programs

Based on Goddard's detailed observation of the site on multiple occasions, there are four components of proposed restoration, replication and mitigation activities. These programs are as follows:

- Brush, Fill and Compost Pile Removal
    - This program consists of the removal of several large piles consisting of brush, compost and fill materials, which have accumulated over years of activities on the site. These piles are located primarily in the southeastern quadrant of the site.
- Contractor Laydown Yard Cleanup
    - This program consists of the removal of the abandoned vehicles, construction materials and various equipment that are present scattered throughout the site. This work will be focused on the north-central portion of the site and will continue southerly along the eastern side of the river.
- Invasive Species Management
    - This program consists of the management of large stands of invasive species by mechanical, chemical and cultural practices.
- Wetland Replication
    - This program consists of the replication of impacted isolated vegetated wetlands (IVWs) as a Bordering Vegetated Wetland in the southeast corner of the site, with associated grading and planting.

Large portions of the above restoration programs will be addressed through site preparation, grading, and demolition required for the proposed development. However, additional restoration activities will be undertaken to ensure that the site is satisfactorily restored and, in fact, improved over existing conditions. Restored areas that are intended to naturalize will be planted and seeded with appropriate native species to aid in the protection of the interests of the Wetlands Protection Act.

D. General Procedures

Supervision:
Work specific to carrying out the Restoration Programs outlined in Sections E through H shall be supervised by a qualified wetland scientist with experience in ecological restoration and invasive species management. The supervisor shall submit monitoring reports to the Conservation Commission as described below. Reports shall contain written details of all work performed and photographs of completed work.

Timing:
Removal of brush, fill and compost piles may be accomplished at any time of year but should be coordinated such that the area can be stabilized, if necessary, either temporarily or permanently, shortly after the

completion of removal. Similarly, wetland replication should also be executed such that the replication area can be stabilized with vegetation shortly after completion of grading.

The timing of invasive species management activities will be dependent on the target species and means of management as outlined in section G.

Seeding and installation of plantings should ideally be accomplished during the spring or fall growing seasons (i.e approximately between April 16 and May 31 or between September 16 and October 30). Work outside of these windows is acceptable, but plant mortality may be greater.

E. Brush, Fill and Compost Removal

Brush, fill and compost piles are present sporadically throughout the site. Materials in these piles will be removed with machinery. This work can be largely accomplished simultaneously with site preparation and grading. Access will be obtained via upland routes to the greatest extent practicable. Any debris or intact brush will be exported from all wetland resource areas.

Some of these piles are present in very close proximity to wetland resource areas. Care shall be taken to ensure that erosion control barriers remain intact and functional throughout this work. In areas to be revegetated, loam will be spread to provide a suitable medium for planting and seeding.

F. Contractor Laydown Yard Cleanup

Similarly to the brush, fill and compost pile removal, the majority of the cleanup of the existing contractor yard will be accomplished in tandem with site preparation and grading. This effort will consist of the removal of all abandoned and dilapidated vehicles and machinery, construction materials such as masonry stone and pallets, and other scattered anthropogenic debris. All of these items shall be disposed of offsite in accordance with any applicable local, state and federal laws. In areas to be revegetated, loam will be spread to provide a suitable medium for planting and seeding.

G. Invasive Species Management

Invasive species management is proposed as part of restoration and mitigation activities for the project. Invasive species present on site consist primarily of common reed (*Phragmites australis),* Japanese knotweed (*Reynoutria japonica*), buckthorn (*Rhamnus cathartica*) and Asiatic bittersweet (*Celastrus orbiculatus*). These four species will be the primary targets of the invasive species management program. Additional invasive species present on site also include purple loosestrife (*Lythrum salicaria)*, multiflora rose (*Rosa multiflora*), garlic mustard (*Alliaria petiolata)*, Norway maple (*Acer platanoides)*, autumn olive (*Elaeagnus umbellate),* winged euonymus (*Euonymus alatus)*, and honeysuckle (*Lonicera spp.*). These seven additional species will also be targets of the invasive species management program.

<u>MANAGEMENT GOALS:</u>

The invasive plant species onsite have varying densities, distributions, and effects on the natural ecosystem. As a result, we will have different management goals for each species and area. Due to the massive extent of invasive species pressure on site and on neighboring sites, total eradication of invasive species is likely not feasible. Therefore, the goal of this management plan is to control invasive species on site. Control consists

of the reduction of a species' density and abundance to a level that does not compromise the integrity of the ecosystem and allows native species to repopulate and thrive. For invasive plant populations which are large and pervasive, eradication is not feasible. In this situation, the more realistic management goal is to control the invasive species, primarily to deter the spread into new areas and reduce invasive species pressure in existing areas.

INVASIVE SPECIES DESCRIPTIONS:

Common Reed (*Phragmites australis*):
Common reed is a tall (up to 15 ft.), densely growing, perennial grass with purple or golden flowers in bushy panicles. It was likely introduced to North America from Europe by accident in ballast material in the late 1700s or early 1800s. It is similar to a native North American subspecies, *Phragmites australis* ssp. *americanus*. Common reed is a vigorous growing plant that forms dense stands that push out other plants including the native subspecies. It also alters wetland hydrology and degrades wetland wildlife habitat due in part to its very dense growth habit.

Glossy Buckthorn (*Rhamnus frangula*, aka *Frangula alnus*):
Glossy buckthorn is a perennial understory shrub or a small tree that can reach heights of 20 ft. It has oval, smooth, glossy, toothless, leaves that stay green late into the fall. Its berries transition from green to red before finally ripening to a dark purple in August and September. This species was introduced to North America as an ornamental shrub and used for living fence rows and wildlife habitat. It has spread aggressively and become a threat to the degradation of native forest habitats where it out-competes native plant species.

Japanese Knotweed (*Fallopia japonica*, aka *Polygonum cuspidatum* & *Reynoutria japonica*):
Japanese knotweed is a shrubby, herbaceous perennial which grows 4-10 ft. tall. It is often compared to bamboo, with smooth hollow stems, and stem leaf junctures with a membranous sheath. Its leaves are approximately 6 in by 4 in and range from oval to triangular with a tapered tip. In the summer it produces clusters of small white flowers. It was introduced to North America from East Asia in the 1800s as an ornamental plant and is now invasive throughout the northeastern and northwestern United States. It forms dense monotypic thickets which displace native vegetation. In addition to reproducing by seed, it also spreads through long rhizomes that can be challenging to remove completely.

Oriental Bittersweet (*Celastrus orbiculatus*):
Oriental bittersweet is a deciduous, woody vine, sometimes occurring as a trailing shrub, with alternate, rounded, finely toothed leaves. It has globular, green to yellow fruits which split open at maturity to reveal fleshy red-orange arils that cover the seeds. Originally from east Asia, it was introduced into the United States in the 1860s as an ornamental plant and has been widely dispersed by the many bird species who consume its fruit. Oriental bittersweet is a vigorous growing plant that threatens native vegetation from the ground to the canopy. Thick masses of vines sprawl over shrubs, small trees, and other plants, producing dense shade that weakens and kills them. Oriental bittersweet also appears to be displacing the native American bittersweet (*Celastrus scandens*).

DESCRIPTIONS OF TREATMENT METHODS:

When treating invasive vegetation on site, mechanical removal methods will be prioritized over herbicidal treatment whenever it can be practicable and effective. However, due to the aggressive and pervasive nature of invasive plants, herbicide treatment may be necessary. Herbicide treatment will selectively target invasive

vegetation, taking care to avoid impact to surrounding native vegetation. More detailed information on the appropriate removal methods that may be utilized as part of the proposed work are as follows:

Mechanical Treatment Methods

- *Cutting*: Cutting entails the gross removal of above ground plant material, either by manual cutting, mechanical cutting, or mowing. This method only removes the surface vegetation, and, in most circumstances, invasive plants regrow from the rootstock or latent seeds. Treatments using only this method will usually require repeated follow-up treatments. The timing of cutting should occur and be species specific to avoid inadvertent spread of any mature seed (i.e. cutting shall not occur when viable seeds are present on target species). It is anticipated that mechanical cutting will comprise the majority of post-construction invasive management activities, particularly in addressing Phragmites. Cutting of Japanese knotweed shall only be done by hand, in a stalk-by-stalk manner, and all cut material must be exported from the site, as this species is capable of resprouting from small amounts of vegetative material.

  Mowing may be conducted with hand-operated power tools or a walk-behind brush mower in any locations where target vegetation is located. Alternatively, target vegetation may be mowed with a brush-cutting attachment on a machine such as an excavator or bobcat; however, such machinery shall not drive into or otherwise track through or across any BVW, Bank, or LUW in any manner which would compact or destabilize soils.

- *Weed Wrench*: The weed wrench is a tool which is used to uproot saplings of woody plants. The weed wrench grasps the base of the plant and uses a lever to uproot the entire plant including the roots. Using the weed wrench results in minimal disturbance to the surrounding soil and plants and is usually successful at removing the majority of the target plant's roots. Invasive plants to be targeted using this method include any woody species. This method will be used on scattered woody individuals of relatively small size.

- *Deadheading*: Deadheading is the removal of a plant's seed head before it goes to seed. This will not kill the plant but can prevent it from reproducing and spreading. It is also useful in depleting the plant's energy reserves for future herbicide applications. This method is useful primarily for herbaceous plants. At the moment this plan does not include deadheading, but it may be recommended during post-management monitoring.

- *Excavation*: In cases where the invasive species are particularly dense, the most efficient way to remove the bulk of the invasive plant species will be to remove the topsoil and root mass. Further, site work that is otherwise required for development can additionally serve this purpose. Removal of soil containing invasive species also removes the latent seed stock, thereby reducing the need for follow-up treatments of newly sprouting invasive plants. Any topsoil removed will be replaced with an equal amount of topsoil imported from off-site and inspected for evidence of invasive species prior to use.

  Excavation will be employed heavily during construction-phase activities. Within the limit of work, dense stands of invasive species will be excavated along with their root masses and associated topsoil. These excavated materials will be exported offsite and disposed of in accordance with any applicable regulations.

Excavation is acceptable within Riverfront Area, Bordering Land Subject to Flooding, and the 100-foot buffer zone. Excavation shall not impact Bank, Bordering Vegetated Wetlands, or Land Under Water Bodies and Waterways.

Chemical Treatment Methods

Herbicide application is the most effective way to ensure the long-term removal of target species. All use of this method would be conducted by a licensed herbicide applicator with specific herbicide and concentrations as outlined on the herbicide's label. Deviation from the stipulations of the herbicide's label is a violation of federal law. The herbicides recommended for the target species in this management plan include Glyphosate (RoundUp Custom or equivalent) and Triclopyr (Garlon 4 or equivalent). Glyphosate is recommended for most cut-stem applications and as a foliar application for phragmites, knotweed, and oriental bittersweet. Triclopyr is preferred for foliar applications of most invasive trees and shrubs because it primarily affects broadleaf plants and not grasses or conifers. These herbicides are effective and have a short half-life. Both are registered by the US EPA and MA Department of Agricultural Resources for aquatic use and are proposed for use here for this reason. Appropriate use by a licensed herbicide applicator will have a limited impact on surrounding non-target vegetation. Herbicide treatment will not be employed until it has been demonstrated that mechanical treatment methods have not been sufficient. It is not anticipated that chemical treatment will occur often or regularly.

- *Cutting and Dabbing with Herbicide*: Cutting & dabbing involves removing most of the above-ground plant material as described above, and then immediately treating the remaining cut surface with herbicide. This is the easiest and most efficient method to remove invasive trees and shrubs with woody stems. It is also effective against Phragmites reeds. It is a very controlled treatment method, leaving the surrounding non-target native vegetation unaffected. This method also decreases the likelihood of regrowth and the need for repeated treatments.

- *Bundle, Cut, & Treat*: This method is similar to the Cut & Dab treatment method, but is used exclusively on densely clustered vegetation with tall, narrow stems/canes. In this management plan, it will be used to target Phragmites. Treatment involves bundling large groups of phragmites canes and tying them together with twine at approximately waist height. Then the canes are cut just above the twine. Finally, an appropriate herbicide is painted directly onto the cut surfaces of the canes. Applying herbicide directly to the cut surface of the stems is a very controlled treatment method and limits potential herbicide exposure to non-target vegetation. Bundling the canes prior to treatment allows for greater efficiency.

- *Stem Injection Herbicide Application*: Stem injection involves the use of an injector gun with a hollow needle to inject herbicide directly into the inside of plants with hollow stems. Examples of these injector guns include JK Injector Systems. Injecting herbicide directly inside the plant stem is a very controlled method of herbicide application and significantly limits risk of herbicide exposure to non-target plants. This treatment method may be used on Japanese Knotweed.

- *Foliar Herbicide Application (Spray)*: Foliar herbicide application is a method of control which involves a tank-mixed solution of herbicide diluted with water to a concentration specified by the herbicide's label. This treatment method will be used as a last resort only, after all other treatments are considered and eliminated as viable options. A non-ionic surfactant is added to improve coverage

and penetration of the herbicide. A non-toxic forestry dye is also added to allow for visibility of treated areas. This solution is sprayed from a backpack tank sprayer to thoroughly wet the majority of the target plants' leaves. Application will be carefully targeted to invasive vegetation and will cease before herbicide drips from leaves. The herbicide is absorbed through the leaves and transported into the plant's tissues. This treatment method will be conducted by an herbicide applicator trained to use foliar spray appropriately and will have limited impact on surrounding non-target vegetation. All invasive plant species in this management plan will likely by targeted using foliar spray, primarily for repeat or follow-up treatments.

ONGOING MANAGEMENT:

All areas within the limit of work will be subject to ongoing invasive species management activities while native vegetation becomes established. All management techniques described above may continue to be used after the completion of construction to manage any regrowth of invasive species. Monitoring, as outlined below in Section I, will evaluate the effectiveness of invasive management activities and make recommendations for continued management. Repeated mechanical removal/cutting of invasive species is an acceptable method of control. However, it should be noted that naturalized areas should not be mowed in a wholesale fashion. If mechanical management is to be employed in these areas, it should be done by targeted cutting with hand-operated tools or equipment. Targeted herbicide application is also acceptable if mechanical removal is exhausted as a viable option. Again, any mechanical removal of Japanese knotweed shall only be done by hand, in a stalk-by-stalk manner, and all cut material must be exported from the site

If necessary, additional native seed mix shall be spread, and/or potted specimens planted, within areas cleared of invasive species that are not otherwise specified to be planted as part of landscaping plans. Only native species (no cultivars) with an appropriate wetland indicator status for the area shall be planted in areas where invasive species have been thoroughly removed.

H. Wetland Replication

The Isolated Vegetated Wetlands (IVWs) proposed to be impacted will be replicated contiguous with the BVW system onsite in the southeastern corner of the property. Grading of the replication area shall be overseen by a qualified wetland scientist with authority to make field decisions in order to ensure sufficient wetland hydrology and a successful replication area. Wetland replication protocols shall adhere to the following sequence.

Step 1: Stake Limits of Work, confirm wetland flags in place & install ECB
Stake out limits of work for replication areas and confirm wetland flags are in place on site. Erosion control barriers shall then be installed in the form of straw wattles (or similar invasive-free barrier) placed at the limit of work for the replication area. These will remain in place and be maintained until the areas are completely stabilized and then may be removed after approval of the Conservation Commission or its Agent.

Step 2: Remove trees and vegetation
Save woody debris specimens and stockpile for reuse. Clear and remove all remaining vegetation as necessary within the replication areas and the IVW alteration areas in preparation for excavation and grading. If native vegetation can be retained, it shall. Access to the replication area will be obtained via an existing cart path, which will avoid the destruction of vegetation to the greatest extent possible.

Step 3: Excavation of IVW Alteration Areas
Pull all invasive plants and shrubs prior to transporting soils. Excavate IVW alteration areas and transport organic-rich topsoils to the wetland replication area for reuse if possible. Topsoil originating from areas known to contain invasive species shall not be reused.

Step 4: Excavation of new BVW Replication Area
An excavator or backhoe shall remove existing soils up to the edge of the staked BVW replication area boundary. Excavation will continue until redoximorphic features are reached in the soil profile. Once redoximorphic features are reached, excavation will cease. Subsoil of the C-horizon shall be loosened prior to Step 5 to ensure soils are not compacted prior to topsoil placement. Care will be taken to remove any invasive roots and plants within the area to ensure soils used in the replication area are uncontaminated.

Step 5: Final Grading of Replication Area
The target finished elevation of the replication area is anticipated to be approximately 270', subject to final grading plans and observed field conditions. Upon removal of existing soils down to the proper depth (as determined by the wetland scientist based on the presence of redoximorphic features in the soil profile), 6-12" of organic rich topsoil will be spread throughout the replication area. Soil excavated from the IVW impact areas may be reused for this purpose. If necessary, supplemental material to be added to the replication area shall consist of a 50:50 mix of loam and organic material with an organic content between 12 and 20%. This material shall be placed within the replication area to a total depth 6-12" and even with the surrounding proposed elevation on design plan, to be determined by the supervising wetland scientist. Final grade shall be confirmed to be proper by the wetland scientist prior to plantings. Placement of soil shall be such that no equipment drives over, or compacts placed soils. Final grading will result in microtopographic relief of pits and mounds. Topography will create areas that pool and flood during heavy rain events and see water near the surface during the wet seasons. Slopes around the replication area shall be graded to less than 2H:1V where practical and shall have erosion control mats installed as necessary. The wetland scientist onsite has authority to adjust grade based on field observations during construction in order to ensure sufficient wetland hydrology within the replication area.

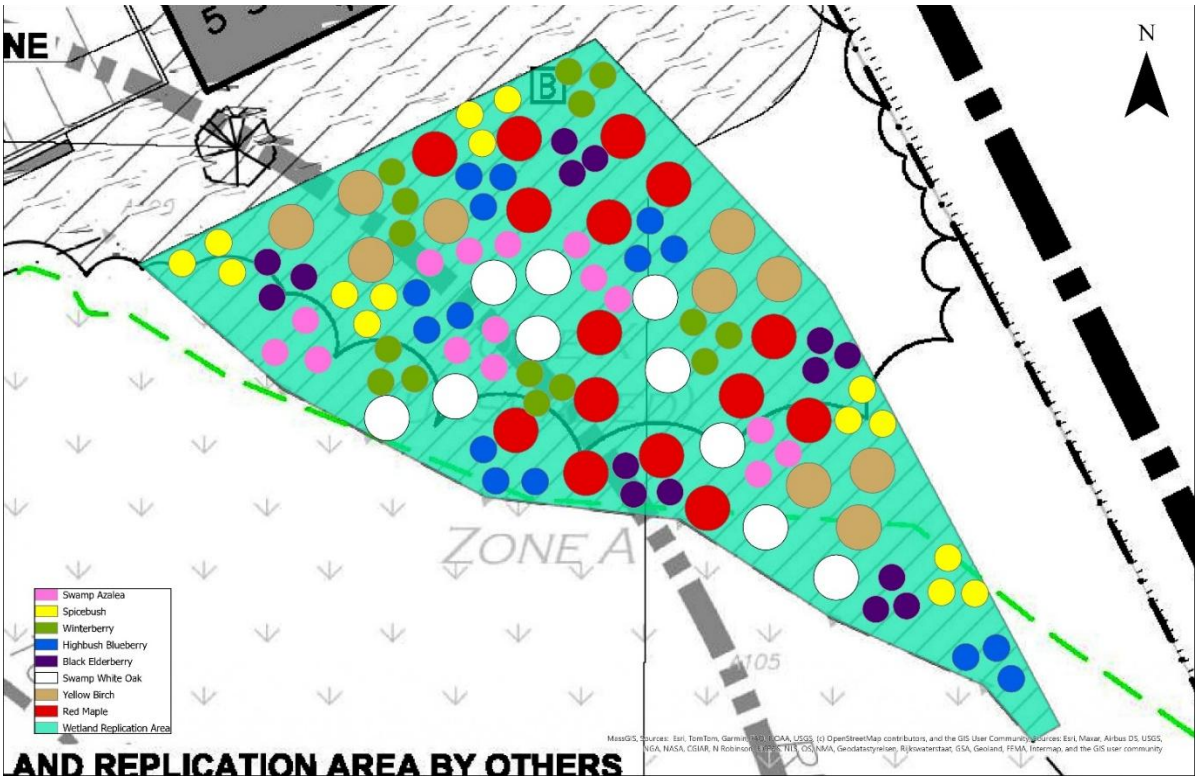
Step 6: Call for inspection
After grading activities are complete, the supervising wetland scientist shall contact the Commission for an inspection and approval of final grades and proposed planting stock prior to planting.

Step 7: Place woody debris and boulders
Woody debris and boulders, if available, shall be randomly placed throughout the replication area to provide cover for wildlife.

Step 8: Planting
Precise siting of plants may be determined by the wetland scientist in the field prior to installation. All plantings shall be distributed throughout the area according to the attached planting plan; trees spaced at 10-15' on center; shrubs spaced at 6-10' on center. All plantings will be removed from burlap sacks, wire cages and plastic containers prior to planting. Each plant will have it roots loosened prior to planting to encourage root growth away from the planting bulb. After woody plantings are installed, seed will be spread evenly throughout the planting and lightly raked in to ensure sufficient seed-to-soil contact. Seed will be applied at the manufacturer's recommended application rate. Leaf litter shall be spread throughout area if available. The erosion control barrier shall remain in place until the disturbed soils have been stabilized.

Step 9: Erosion Controls Removal

Once the replication area is stable, a request shall be submitted to the Conservation Commission's Agent to remove the erosion controls around wetland replication area. Upon approval of stabilization, erosion controls shall be removed promptly and any significant disturbance seeded with a wetland seed mix as specified above.



Proposed Plantings for Replication Area (+/- 7,145 s.f.)

Common Name	Scientific Name	Number	Minimum Size
Trees (n= 35)*			
Red Maple (FAC)	*Acer rubrum*	15	3'
Yellow Birch (FAC)	*Betula allegheniensis*	10	3'
Swamp White Oak (FACW)	*Quercus bicolor*	10	3'
Shrubs (n=75)*			
Black Elderberry (FACW)	*Sambucus nigra*	15	1-2 gal. pot
Highbush Blueberry (FACW)	*Vaccinium corymbosum*	15	1-2 gal. pot
Winterberry (FACW)	*Ilex verticillata*	15	1-2 gal. pot
Spicebush (FACW)	*Lindera benzoin*	15	1-2 gal. pot
Swamp Azalea (FACW)	*Rhododendron viscosum*	15	1-2 gal. pot
Seed Mix- New England Wetland Plants WetMix			6 lbs.

*Planting species and seed mixes may be substituted with similar native species with the same wetland indicator status if certain species are unavailable at the discretion of the supervising wetland scientist.

I. Monitoring

Annual monitoring reports will be prepared by a qualified wetland scientist for a period of 3 growing seasons after completion of restoration activities for the areas that will be left to naturalize. This monitoring program will consist of early summer and early fall inspections and will include photographs and details about the vitality of the mitigation and restoration areas. Monitoring reports shall describe, using narratives, plans, and color photographs, the physical characteristics of the areas with respect to stability, survival of vegetation and plant mortality, areal extent and distribution, species diversity and vertical stratification (i.e. herb, shrub and tree layers). The monitoring program may utilize sampling plots or transects representative of the site to document species diversity, cover, etc. for snapshots of site conditions and/or for documenting change over time.

All areas will be monitored for invasive species to ensure the success of native plantings. Reports shall be submitted to the Commission by the end of each calendar year. Specifically, monitoring reports shall document the status of the following:

- Invasive species management success
    - Upon completion of the initial implementation of the project, three monitoring plots shall be established in areas representative of the site; a data sheet (comparable to the DEP Bordering Vegetated Wetland Determination Data Form) shall be completed at each monitoring plot during each monitoring event
- Regrowth and/or spread of invasive species
    - To include specific locations of focus identified with photos and/or graphics
- Establishment of native vegetation (plantings, seeded areas, and volunteers) in all planted areas
- Development of hydrology and hydric soils within the replication area
    - To include documentation of a soil profile within the replication area
- Overall soil stability and any observed erosion control concerns
    - To include an attestation that the entire limit of work has been inspected

Monitoring reports shall also recommend corrective actions to be taken if:

- Invasive species regrowth and/or spread appears problematic
    - (i.e. if invasive vegetation has spread to new areas or if control methods have been ineffective)
- Establishment of plantings or seed appears insufficient
    - (i.e. if significant die-off of plantings or areas devoid of herbaceous cover are noted)
- Soil stabilization is poor or if erosion issues are noted
    - (i.e. if erosion or sedimentation is observed)
- The replication area does not exhibit sufficient hydrology
    - (i.e. the replication area does not exhibit indicators of wetland hydrology)

The revegetation and naturalization proposed as part of this project will be deemed a success if all areas that were planted and/or seeded exhibit at least 75% cover by native vegetation.