1. 7:00 P.M. Conservation Commission Agenda

   Documents:

   1-15-2026.PDF

2. 1199 West Central Street

   Documents:

   1199 WEST CENTRAL STREET NOI PEER REVIEW 2025-12-30.PDF
   2026-01-08 REVISED PLANS 1199 WEST CENTRAL STREET.PDF
   REVISED EROSION AND SEDIMENT CONTROL PLAN.PDF
   RESPONSE TO PEER REVIEW 2.PDF
   2026-01-08 REQUEST FOR VARIANCE.PDF

3. 80 Spring Street

   Documents:

   8757 - PEER REVIEW RESPONSE LETTER.PDF
   8757-NOI PLAN_REV1 STAMPED 20251219.PDF
   80 SPRING ST NOI REVIEW 2025-12-04.PDF

4. Symphony Drive/Tanglewood Estates II

   Documents:

   2026 NOI APPLICATION TANGLEWOOD ESTATES.PDF
   25-0108 STORMWATER 20251222.PDF
   25-0108B DEFINITIVE PLAN 20251222.PDF

Tel: (508) 520-4929 Fax: (508) 520 4906

Town of Franklin

Conservation Commission

AGENDA
January 15, 2026
7:00 PM

This Conservation Commission Meeting is available to be attended in person and via the ZOOM platform. In an effort to ensure citizen engagement and comply with open meeting law regulations, citizens will be able to dial into the meeting using the provided phone number (Cell phone or Landline Required) OR citizens can participate by copying the link (Phone, Computer, or Tablet required). Please click/**copy and paste the link** https://us02web.zoom.us/j/87146230719 or call on your phone at 929-205-6099, meeting number is 871 4623 0719. Attendees are muted until they use the 'raise hand' function to indicate that they wish to speak. If you are having trouble accessing through the link, please call on your phone and use *6 to toggle between mute/unmute and *9 to raise your hand. If you wish to attend in person, the meeting is held in the Council Chambers, second floor of the Municipal Building.

0.0 SCHEDULING

1. PUBLIC HEARINGS:

- **1.1.** 7:01 PM NOI – 444 East Central Street
- **1.2.** 7:02 PM NOI – Nicholas Drive/Prospect Street Culvert Repair
- **1.3.** 7:03 PM NOI – 1199 West Central Street
- **1.4.** 7:04 PM NOI – 80 Spring Street
- **1.5.** 7:05 PM NOI – Symphony Drive/Tanglewood Estates II

2. GENERAL BUSINESS

- **2.1 Friendly 40B Lip**
- **2.2 Minor Buffer Zone Activities**
  - **2.2.1** 860 West Central Street
  - **2.2.2** 912 Washington Street
- **2.3 Request for Determination of Applicability**
- **2.4 Permit Modifications/Extensions**
- **2.5 Certificates of Compliance**
- **2.6 Violations/Enforcement**
- **2.7 Minutes**
  - **2.7.1** December 4, 2025
  - **2.7.2** December 11, 2025
- **2.8 Discussions**
  - **2.8.1** 79 Hancock Road

Chair & Commission Comments

December 30, 2025

Breeka Li Goodlander, PWS, CERPIT
Conservation Director
Town of Franklin Conservation Commission
355 East Central Street
Franklin, MA 02038

Re: 1199 West Central Street – Garelick Farms
MassDEP File No. 159-1322
Notice of Intent Peer Review #2

Dear Ms. Goodlander:

BETA Group, Inc. (BETA) has reviewed revised documents and plans for the project entitled ***Garelick Farms Flood Resiliency Improvements*** (the Project), located at ***1199 West Central Street*** (the Site) in Franklin, Massachusetts. This letter is provided to present BETA's findings, comments and recommendations.

BASIS OF REVIEW

The following revised documents were received by BETA and will form the basis of the review:

- Peer Review Package entitled ***Response to Peer Review***; prepared by Tighe &Bond; dated December 4, 2025. Attachments include:
  - Peer Review Responses
  - Plans (9 Sheets) entitled ***Garelick Farms Flooding Resiliency Improvements – Permit Drawings;*** dated September 2025 and revised through December 2025; prepared by Tighe & Bond; stamped and signed by Jean Christy, MA PE No. 47080 and Wayne Edward Bates, MA PE No. 36402.
  - Memorandum entitled ***Monitoring and Invasive Species Management Protocol Garelick Farms Facility***; prepared by Jean Christy, PE; dated December 4, 2025.
  - Summary of Resource Area Impacts
  - Operations and Maintenance Plan entitled ***Long-Term Pollution Prevention and Stormwater Management System Operation and Maintenance Plan***; prepared by Dandreo Brothers General Contractors; dated September 2025 and revised December 2025.
  - Plan (4 Sheets) entitled ***Garelick Farms Flooding Resiliency Improvements***; prepared by Tighe and Bond and Dandreo Brothers General Contractors; undated; unstamped and unsigned.
  - Drainage Structures Calculations
  - Riprap Sizing Calculations

Review by BETA included the above items along with the following, as applicable:

- Site Visit on November 3, 2025
- ***Massachusetts Wetlands Protection Act 310 CMR 10.00*** effective October 24, 2014
- ***Massachusetts Stormwater Handbook*** effective January 2, 2008 by MassDEP

- ***Stormwater Management Chapter 153 From the Code of the Town of Franklin,*** Adopted May 2, 2007
- ***Wetlands Protection Chapter 181 From the Code of the Town of Franklin,*** dated August 20, 1997
- ***Town of Franklin Best Development Practices Guidebook***, dated September 2016

PEER REVIEW UPDATE—DECEMBER 30, 2025

The Applicant has provided revised materials and written comment responses pursuant to BETA's November 20, 2025 peer review letter. BETA's original comments from the November 20, 2025 peer review letter are included in plain text. Comment responses attributed to Tighe & Bond (TB), are provided in *italics* and are prefaced with "*TB:*" BETA's most recent responses are provided in **bold** and are prefaced with "**BETA2**:".

BETA's responses in this letter identify that the Applicant should provide additional (albeit minor) information to comply with the Act and the Bylaw. BETA has deferred to the Commission regarding multiple comments throughout the letter.

SITE AND PROJECT DESCRIPTION

The Site is 51.71-acre parcel identified by the Town of Franklin Assessor's Office as Assessor's Map 275 Lot 23 located at 1199 West Central Street in Franklin, Massachusetts. The Site is bounded to the north by a railroad right-of-way, to the west by an undeveloped lot and Maple Street, and to the south and east by West Central Street. Existing conditions at the Site include the Garelick Farms facility and associated site features, undeveloped wooded areas, and wetland complexes. Topographic relief at the Site generally follows an east-to-west orientation.

Resource Areas Subject to Protection or Jurisdiction under the Massachusetts Wetlands Protection Act (M.G.L. ch.131 s.40) and its implementing regulations at 310 CMR 10.00 (collectively "the Act") and the Town of Franklin Wetlands Protection Bylaw (Chapter 181) and its associated regulations (collectively "the Bylaw") are present at the Site and include:

- Bank;
- Bordering Vegetated Wetland (BVW);
- Land Under Water (LUW);
- Bordering Land Subject to Flooding (BLSF);
- Riverfront Area; and
- Buffer Zones (25-foot No Disturbance Zone, 50-foot No Build Zone and the 100-foot Buffer Zone).

The Site is not located within any Surface Water Protection Areas (Zone A, B, or C), or Zone I, Zone II, or Interim Wellhead Protection Areas. There are no Outstanding Resource Waters (ORWs) or Areas of Critical Environmental Concern (ACEC) present, and the most recent Natural Heritage and Endangered Species Program (NHESP) mapping does not depict any Priority Habitat of Rare Species or Estimated Habitat of Rare Wildlife at the Site. There are no NHESP-mapped Certified or Potential Vernal Pools located within 100 feet of the Site.

Natural Resource Conservation Service (NRCS) soil maps indicate the presence of the following soil type at the Site: Scarboro and Birdsall soils, 0 to 3 percent slopes with a Hydrologic Soil Group (HSG) rating of A/D, Swansea muck, 0 to 1 percent slopes with a HSG rating of B/D, Whitman find sandy loam, 0 to 3 percent slopes, extremely stony with a HSG rating of D, Charlton-Hollis-Rock outcrop complex, 3 to 8

percent slope with a HSG rating of A, Merrimac fine sandy loam, 0 to 3 percent slopes with a HSG rating of A, Merrimac find sandy loam, 3 to 8 percent slopes with a HSG rating of A, Windsor loamy sand with an HSG rating of A, Woodbridge fine sandy loam, 3 to 8 percent slopes with a HSG rating of A, Canton fine sandy loam with a HSG rating of B, and Udorthents, sandy with a HSG rating of A.

Work proposed as a part of the Project includes the following activities:

- Installation of erosion and sedimentation controls;
- Mobilization at the Site and staging of material;
- Installation of the 36" drainage pipe, deep sump catch basins, and manholes;
- Construction of the outfall;
- Backfilling of excavated trenches;
- Repaving and stabilization of trenches excavation limits;
- Construction of a headwall and outfall;
- Cleaning and testing of the drainage pipe;
- Stabilization/restoration of temporarily impacted areas;
- Installation of restoration plantings; and
- Demobilization and site cleanup.

The Project will result in the following impacts to Resource Areas:

- 6,605 square feet (sf) of temporary and 50 sf of permanent impacts to RA;
- 1,556 sf of temporary and 50 sf of permanent impacts to the 0-25-foot No Disturbance Zone;
- 2,903 sf of temporary impacts to the 25-50-foot No Build Zone; and
- 2,983 sf of temporary impacts to the 50-100-foot Buffer Zone.

BETA2: Impacts have been updated to include the following:

- **7,334 sf of temporary and 230 sf of permanent impacts to RA; and**
- **8,756 sf of temporary and 5,986 sf of permanent impacts to Buffer Zone.**

ADMINISTRATIVE AND PLAN COMMENTS

The plan set (as identified above) is missing information and requires additional information for clarity.

Table 1. NOI Plan

NOI Plan Requirements	Yes	No
Scale of 40'=1" or larger	✓	
North Arrow (with reference)	✓ **(BETA2)**	
Topographic contours (2' intervals)	✓	
Existing Conditions Topography (with source and date of survey)	✓	
Proposed Topography	✓	
Existing and Proposed Vegetation		✓ (See Comment A2.b)
Existing Structures and Improvements	✓	
Resource Areas and Buffer Zones labeled	✓	
Location of Erosion Controls	✓	
Details of Proposed Structures	✓	
Construction Sequence and Schedule	✓ **(BETA2)**	
Registered PLS Stamp (Existing Condition Plans Only)		✓ (See Comment A2.d.)

Assessors' Reference	✓	
Abutting Property Assessors' Reference	✓	
Survey Benchmark	✓ **(BETA2)**	
Accurate Plan Scale	✓	

PLAN AND GENERAL COMMENTS

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

TB: MassDEP issued a file number the same day as BETA's letter without comment. The File No. is CE 159-1322

A2. The following elements are missing from the provided Plan Set:

a. A north arrow reference should be provided on the plans per Bylaw Regulations Section 7.18.1.3.

TB: This information has been added to the plan set.

BETA2: Comment addressed.

b. Existing and proposed vegetation referenced in Bylaw Regulation Section 7.18.1.5 and 7.18.1.6 should be included on the plans, including individual trees/shrubs with a diameter greater than 1" proposed for removal. It is BETA's understanding that the Commission generally increases the size threshold for tree location based on the Project and therefore defers to the Commission on this matter. The existing and proposed tree line should be shown, and the proposed trees located along the limits of trenching should be qualified as being either removed or retained.

TB: This information has been added to the plan set.

BETA2: Comment remains. The existing/proposed conditions tree lines are not depicted along the northern portion of the Site adjacent to the 1A Wetland Series where trees are present. The existing conditions plan appears to show a tree line in this area, but it does not encompass the locations of the individual trees that are depicted. The site plans depict a tree line in this area with a proposed conditions line weight, but it does not appear to correlate with the proposed clearing for the headwall. The tree lines should be revised as appropriate.

c. A Construction Sequence with all proposed activities within Jurisdictional Areas should be provided on the plans per Bylaw Regulations Section 7.18.1.14.

TB: This information has been added to the plan set on sheet G-003.

BETA2: Comment addressed.

d. A PLS stamp should be provided on the existing conditions plan.

TB: The existing conditions plan was not based solely on a land survey provided by a Professional Land Surveyor. Additional data sources, including site plans provided by Garelick Farms, drone survey, partial survey of the existing drainage infrastructure, ground-penetrating radar information, and MassDOT plans were referenced in the development of site plans. We request a waiver of this requirement.

BETA2: BETA defers to the Commission on the requirement to include a PLS stamp on the existing conditions plan.

e. A survey benchmark should be provided on the plans.

TB: A benchmark has been added to sheets C-102 and C-201.

BETA2: Comment addressed.

WETLAND RESOURCE AREAS AND REGULATORY REVIEW

BETA has completed a regulatory review of the Site and the submitted documents and plans, focusing on compliance with jurisdictional regulations set forth in the Act and Bylaw. The Project proposes impacts to onsite areas Subject to Jurisdiction and Protection under the Act and Bylaw including Riverfront Areas, and the 0-25-foot, 25-50-foot, and the 50-100-foot Buffer Zone to Bank and BVW.

The NOI application includes narrative information describing the Project. A variance request has been submitted for work within the 0-25-foot and 25-50-foot Buffer Zones. For work with RA the Performance Standards at 310 CMR 10.58(5) - Redevelopment Within Previously Developed Riverfront Area - are being used. Proposed mitigation for impacts includes the installation of plantings within the 0-25-foot Buffer Zone in the southern and northern section of the Site, use of erosion controls, stabilization using native seed mix, restoration of 50 sf of RA, and stormwater management improvements.

For full compliance with the Bylaw and Act, revisions to the plans are required and information as detailed in this peer review should be submitted. The Applicant should also submit further information regarding the should provide plan revisions and further information as described in this letter to comply with the Act and Bylaw.

BETA2: The Applicant has provided additional/revised information on the Project pursuant to BETA's peer review letter. Information including updated plans, invasive species management, monitoring of restoration plantings, and proposed plantings and seed mixes have been provided. BETA has deferred to the Commission on select topics based on responses from the Applicant, including the requirement to include a PLS stamp on the plans, the location and type of proposed erosion controls, the seed mix that will be used to stabilize the Site, the invasive species control plan, and the proposed restoration approach.

At this time, it is recommended that the Applicant confirm that the RA restoration area is commensurate with the new area of reported RA impacts prior to the issuance of an Order of Conditions.

RESOURCE AREA BOUNDARY COMMENTS

W1. BETA completed a review of the onsite Bank/MAHW and BVW delineation. Bank/MAHW is apparent based on topographic relief and has been accurately delineated. In addition, BETA concurs with the BVW delineation depicted on the plans and located along the 1B/1C Series stream. Generally, the BVW was observed at the toe of slope, where vegetation communities changed from FACU/FAC species to FAC/FACW/Obligate species. Soils within the wetland were observed to have apparent depletions/redoximorphic concentrations and qualifies as a Depleted Under Dark Surface indicator. No other additional areas of BVW were observed at the Site within 100 feet of the proposed work.

TB: No response required.

CONSTRUCTION COMMENTS

W2. Erosion and sedimentation controls should be depicted on either side of the limits of work throughout the Buffer Zone / RA and downgradient of the proposed plantings within Buffer Zone / RA.

TB: Erosion and sediment controls have been added to the plan set per the above recommendations.

BETA2: Erosion controls are now depicted along the limits of work throughout the Buffer Zone/RA in locations that will prevent sedimentation to Resource Areas. The Commission could consider including a Special Condition requiring additional erosion controls to be kept on Site to ensure that additional controls can be installed if deemed necessary.

W3. Proposed erosion and sedimentation controls include use of silt fence and straw wattles. Silt fence and straw are not permitted erosion control measures in the Town of Franklin (Pg. 13 of Town of Franklin Best Development Practices Guidebook). The Applicant should coordinate with the Conservation Commission to determine the appropriate erosion control measures for the Site. Twelve (12)-inch diameter compost filter tubes may be an appropriate option commensurate with the scope of the Project.

TB: Page 13 of the Town of Franklin Best Development Practices Guidebook states that "The Conservation Commission only allows the use of straw wattles and filter mitts as erosion control barriers." The erosion control detail has been revised to remove the silt fence component of the erosion control system, as reflected on sheet C-501, and straw wattles are proposed for erosion and sediment control.

BETA2: BETA defers to the Commission on the approval of the use of straw wattles as erosion controls, as they have discouraged their use in recent years. The use of silt fence and hay/straw bales is referenced within the soil stockpile detail on page C-501 within Section 3.3 of the O&M Plan and should be revised accordingly.

W4. Resource Area impacts (both permanent and temporary) should be clearly depicted on the plans. The Applicant should confirm if Bank impacts are required as work (including limits of work/erosion and sedimentation control installation) appears to overlap with Bank along flag 1F-3.

TB: The project plans show all permanent and temporary work proposed within resource area buffer zones. Erosion controls are the only impacts proposed within 1 foot of the Bank in the area referenced above and impacts to the Bank itself are not anticipated as a result of erosion control installation and removal. Impacts associated with grading in the vicinity will be limited to areas upland of the resource area. Direct impacts to the Bank are not anticipated.

BETA2: This comment has been addressed with regard to potential Bank impacts. However, the depiction of Resource Area impacts on the plans has not been addressed. In lieu of callouts, the Applicant could consider including the impacts table from the comment response letter on the plans.

W5. The limit of existing pavement and vegetated shoulder should be labeled on the plans adjacent to the location where work is proposed.

TB: Labels have been added to the Site Plans for the limits of existing pavement and vegetative shoulders. See sheet C-102.

BETA2: Comment addressed.

MITIGATION COMMENTS

W6. The Applicant should state if vegetation will be removed within Resource Areas or Buffer Zone to complete the Project. Vegetation was observed in the locations where the headwall, outfall, and portions of the pipe are proposed.

TB: Selective clearing and grubbing of vegetation will be required within Buffer Zone for the installation of the proposed headwall, outfall, and portions of proposed pipe. Removal of trees is not anticipated to be required for this work. A callout has been added to the drawings on sheet C-201 to identify this work.

BETA2: Comment addressed.

W7. Provide specifications of the proposed seed mixture(s) for stabilization of disturbed areas within Buffer Zone and RA on the plans.

TB: The specifications of the proposed seed mixture for stabilization of disturbed areas within Buffer Zone and RFA are depicted on sheet C-201 of the revised site plans.

BETA2: Comment addressed.

W8. A Planting List with information including species of plantings and number of plantings proposed at the Site should be included on the plans.

TB: A Planting List with information including species and number of plantings proposed at the Site is depicted on sheet C-201 of the revised site plans.

BETA2: Comment addressed.

W9. A monitoring protocol should be submitted by the Applicant for the proposed mitigation plantings that includes monitoring frequency, corrective actions, metrics for success, and reporting schedule. These plantings (including areas of seeding) should be monitored for two (2) growing seasons to confirm successful establishment.

TB: A Monitoring Protocol has been prepared and is provided in Attachment 2.

BETA2: BETA recommends the Commission include a Special Condition requiring plantings to be replaced if observed as dead/dying for more than one growing season.

W10. Invasive species including Norway maple (*Acer platanoides*), bittersweet (*Celastrus orbiculatus*), Japanese stiltgrass (*Microstegium vimineum*), and callery pear (*Pyrus calleryana*) were observed within the area where the pipe and outfall are proposed within the 100-foot Buffer Zone. The Applicant should provide information on how invasive species will be managed to ensure no further spread occurs during and after construction, and that any post-construction restoration is successful.

TB: The proposed Monitoring Protocol provided in Attachment 2 addresses the proposed invasive species management within the footprint of the proposed pipe and outfall installation (within the 100-foot Buffer Zone).

BETA2: The Applicant has provided an invasive species control plan that outlines proposed control methods during and post-construction. The Applicant should confirm if herbicide treatment will be used. BETA defers to the Commission on the approval of this plan.

WPA Performance Standards Comments

The Project proposes permanent impacts to the onsite Riverfront Area and 100-foot Buffer Zone. The Performance Standards at 310 CMR 10.58(5) are being referenced for compliance with RA Performance Standards due to the Site's degraded/previously developed status.

W11. Erosion controls, grading, and the limit-of-work are depicted within 1 foot of the Banks delineated as 1F-1 through 1F-3 and 1E-4. The Applicant should state if Bank impacts are proposed as a result of construction of the headwall. If impacts are not proposed the Applicant should provide information on how Bank and LUW will be protected during construction.

TB: Erosion controls are the only impacts proposed within 1 foot of the Bank in the area referenced above and impacts to the Bank itself are not anticipated as a result of erosion control installation and removal. Earthwork and grading are proposed at a minimum distance of 3.5 feet from the Top of Bank in this area, and impacts associated with this work will be limited to areas upland of the resource area. Impacts to the Bank are not anticipated as a result of grading in the vicinity.

BETA2: The Applicant has provided reasonable surety with this response that Bank impacts will be avoided; comment addressed.

Riverfront Area (310 CMR 10.58)

W12. Work within RA includes the installation of the headwall and installation of plantings along the southern side of the stream and within the Buffer Zone Mitigation Area. The Applicant should confirm if impacts associated with installation of plantings have been quantified as a part of the RA and Buffer Zone impacts.

TB: The Massachusetts WPA Riverfront Area General Performance Standards 10.58(4)(d)(1)(d) states "the calculation of square footage of alteration shall exclude… any area of restoration within the riverfront area." We are of the opinion that restoration plantings themselves don't count against the maximum square footage threshold for work in RFA and aren't considered a new or net alteration. As such, impacts associated with the installation of plantings have not been quantified as a part of the RA impacts, but are included in the revised Buffer Zone impacts included herein as Attachment 3.

BETA2: Upon further review, BETA acknowledges and agrees with TB's approach to quantifying RA impacts. Comment addressed.

W13. The Applicant should provide further information regarding the location where restoration of RA is proposed, including existing conditions (e.g., vegetative community) to ensure that restoration is in-kind with existing conditions.

TB: The proposed RA restoration is located adjacent to the 1-F-F flag series. This portion of the site and existing RA is currently landscaped and mulched. Existing vegetation includes a mix of non-native and native small shrubs and perennials. The proposed installation of inkberry holly (Ilex glabra) in this area is intended to provide a more natural and native landscape. The proposed plantings have been selected due to the highly adaptable nature of the species, and the ecological

benefits related to the plant's berries (food source for wildlife). The plant is also a larval host plant for the Henry's elfin butterfly.

BETA2: Permanent impacts to RA have increased from 50 sf to 230 sf according to Table 5-1 Summary of Resource Area Impacts. The Applicant should provide the total area of restoration to ensure that sufficient restoration is being provided for the updated impact totals. In addition, BETA notes that the "New England Native Warm Season Grass Mix" or similar seed mix should be applied to all restoration areas.

W14. If the Commission determines the Project is permittable under 310 CMR 10.58(5) then a Special Condition within the Order of Conditions should be included as required under 310 CMR 10.58(5)h that prohibits further alteration within the restoration or mitigation areas, except as may be required to maintain the area in its restored or mitigate condition, and prior to requesting the issuance of the Certificate of Compliance, the Applicant shall demonstrate the restoration or mitigation area has been successfully completed for at least two growing seasons.

TB: The Applicant acknowledges this comment and is amenable to such a condition.

BETA2: No further comment required.

BYLAW REGULATORY COMMENTS

W15. A USGS Topographic Map, a Natural Heritage and Priority Habitats and Estimated Habitats Maps, and a FEMA Flood Plain map are required for NOI submissions to the Franklin Conservation Commission per Bylaw Section 7.17.1.

TB: A USGS Topographic Map, a Natural Heritage and Priority Habitats and Estimated Habitats Maps, and a FEMA Flood Plain map were all submitted as part of the NOI Application Package submitted to the Commission dated September 2025. Refer to Appendix A of the NOI for these materials.

BETA2: No further comment required.

W16. The Applicant should provide the Construction Sequence on the plans per Bylaw Section 7.15.

TB: This information has been added to the plan set on sheet G-003.

BETA2: Comment addressed.

W17. The Erosion and Sediment Control Plan should include a description of the measures that will be taken to properly install and maintain the erosion control devices used during the Project and include the requirement that the erosion control will be inspected weekly and all other criteria set forth in Bylaw Regulation Section 7.12.

TB: The Soil Erosion and Sediment Control (SESC) Plan has been revised to include all criteria set forth in Bylaw Regulation Section 7.12. A revised Soil Erosion and Sediment Control Plan is attached as Attachment 4.

BETA2: Comment addressed.

W18. The Applicant submitted a Variance request for the work proposed within the 0-25-foot Buffer Zone and the 25-50-foot Buffer Zone. BETA defers to the Commission on the issuance of this waiver.

TB: No response required.

BETA2: No further comment required.

STORMWATER MANAGEMENT REVIEW

The proposed stormwater management design consists of providing a redundant 36-inch drainpipe to supplement the existing 48-inch drainpipe that currently conveys stormwater to wetlands on the northeast side of the existing building. The additional pipe is designed to alleviate localized flooding that occurs during high-intensity rain events. The design also includes three (3) deep-sump, hooded catch basins that will tie into the proposed 36-inch RCP run. Runoff discharges to a new outfall and accompanying riprap on the northeast side of the existing building.

GENERAL

SW1. Provide a plan to accompany the hydraulic calculations (pipe sizing) showing the areas flowing to each catch basin/pipe.

TB: Existing and proposed drainage area maps are attached as Attachment 5.

BETA2: Existing and proposed drainage area maps were provided. Comment addressed.

SW2. The hydraulic analysis indicates that all proposed pipes are HDPE. Revise to indicate RCP.

TB: The hydraulic analysis has been revised to indicate RCP. A revised analysis is attached as Attachment 6.

BETA2: Hydraulic analysis revised. Comment addressed.

SW3. The flared end section at the end of the proposed 36-inch pipe run discharges to a 3:1 (±) slope. Additionally, the flared end section is oriented at an angle that is not perpendicular to the slope, which will render the riprap less effective. BETA recommends that the angle of the outlet pipe be reevaluated, and a concrete headwall be utilized to provide an effective flat area where the riprap can dissipate flows and prevent scouring.

TB: The location of the proposed outfall was selected based on the required outfall elevation and relative proximity of the nearby wetland resource area. A system outlet elevation of 220.0 is required based on upstream drainage system elevations, as well as hydraulic pipe capacities. A perpendicular orientation of the proposed flared end section cannot be achieved at elevation 220.0 without direct impacts to wetlands. However, a winged headwall has been added to the project plans to allow for a flatter grade at the outlet, and adjustments to the riprap outfall protection configuration have been made. See sheet C-201 for updated outfall information.

BETA2: The outfall design has been revised. Comment addressed.

SW4. Recommend providing a detail for the replacement of curb on site.

TB: A detail for the replacement of curbing has been added to sheet C-501.

BETA2: Detail provided. Comment addressed.

SW5. Provide an existing and proposed drainage area map showing drainage areas and stormwater flow paths (§153-15.A.(2)). Soil boundaries should also be displayed on the map.

TB: Existing and proposed drainage area maps, displaying soil boundaries, are attached as Attachment 5.

BETA2: Existing and proposed drainage area maps were provided. Comment addressed.

MassDEP Stormwater Standards

The Project as proposed must comply with the Massachusetts Stormwater Standards as outlined by MassDEP. Compliance with these standards is outlined below:

Low Impact Development (LID) Techniques

No LID measures are proposed.

TB: No response required.

No Untreated Stormwater (Standard Number 1): *No new stormwater conveyances (e.g., outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.*

The project proposes a new outlet to wetlands that is equipped with a riprap outfall to prevent scouring. Additional calculations are required; Standard 1 is outstanding.

SW6. Provide riprap/outfall sizing calculations.

TB: Riprap/outfall sizing calculations are attached as Attachment 7.

BETA2: Calculations were provided. Comment addressed.

Post-Development Peak Discharge Rates (Standard Number 2): *Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.*

The Project proposes to alleviate localized flooding during high intensity storm events by providing a redundant 36-inch drainpipe to supplement the existing system and provide backup conveyance to the wetlands north of the existing building. Calculations indicate a decrease in peak discharge rate to all points of analysis. Standard 2 is met.

TB: No response required.

Recharge To Groundwater (Standard Number 3): *Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to maximum extent practicable.*

NRCS soil maps indicate that soils in the location of the proposed work are Udorthents, sandy with a hydrologic group rating (HSGR) of A (high infiltration potential), Scarboro and Birdsall soils with a HSG of A/D, and Swansea muck with a HSG of B/D. The Applicant has conducted five (5) test borings at the Site indicating the subsurface soils are predominantly fill at varying depths overlying glacial till. Groundwater was not noted during the test borings.

Groundwater recharge is not proposed as part of the Project as the intent of the design is to alleviate localized flooding on the site. Standard 3 is met to the greatest extent practicable.

TB: No response required.

SW7. While the proposed 36-inch pipe is intended to convey floodwaters during high-intensity storm events, it will predominantly carry low flows from the parking areas under typical conditions. As the project includes a new outfall to a wetland resource area, BETA recommends that the Applicant evaluate the proposed system's ability to achieve the Total Suspended Solids (TSS) and

Total Phosphorus (TP) utilizing infiltration measures. Treatment area would be considered areas that flow to the basins and not the entirety of the project site.

TB: Infiltrative measures were considered as part of an alternatives analysis during preliminary design development. However, they were ultimately determined to be infeasible due to the highly developed nature of the project site. The complex subsurface utility system existing on-site would require utility relocation in order to site infiltrative features, which would interrupt routine plant operations and present an undue burden on the Applicant.

BETA2: Comment addressed.

TOTAL SUSPENDED SOLIDS (STANDARD NUMBER 4): *For new development, stormwater management systems must be designed to remove 80% of the annual load of Total Suspended Solids (TSS).*

The project includes the following treatment train:

Treatment Train	SCM 1	SCM 2	SCM 3	TSS Removal %
A	Deep Sump Catch Basin			25%

The project discharges stormwater runoff to wetlands northeast of the existing building, which discharges to Mine Brook. Mine Brook (segment MA72-14) is listed as a Category 5 water, which requires a Total Maximum Daily Load (TMDL) as listed in the Massachusetts Year 2022 Integrated List of Waters. The impairments for this segment of Mine Brook include E.coli and temperature – both impairments that do not require a TMDL reduction associated with them.

The Project has been designed to provide 25% TSS removal by replacing three (3) existing catch basins with new deep-sump hooded catch basins. Given that the project qualifies as a redevelopment as there is no increase in impervious area, Standard 4 is met to the greatest extent practicable.

TB: No response required.

HIGHER POTENTIAL POLLUTANT LOADS (STANDARD NUMBER 5): *Stormwater discharges from Land Uses with Higher Potential Pollutant Loads (LUHPPLs) require the use of specific stormwater management BMPs.*

The proposed use is considered a LUHPPL. Given the project qualifies as a redevelopment, Standard 5 is met to the greatest extent practicable.

TB: No response required.

CRITICAL AREAS (STANDARD NUMBER 6): *Stormwater discharges to critical areas must utilize certain stormwater management BMPs approved for critical areas.*

The project is located outside of any MassDEP wellhead protection areas, including Zone I, II, and any interim Wellhead Protection Areas. Standard 6 is not applicable.

TB: No response required.

REDEVELOPMENT (STANDARD NUMBER 7): *Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable.*

The project does qualify as a redevelopment as the pre- and post-development impervious areas will be the same. Standard 7 is met by improving existing conditions.

TB: No response required.

EROSION AND SEDIMENT CONTROLS (STANDARD NUMBER 8): *Erosion and sediment controls must be implemented to prevent impacts during construction or land disturbance activities.*

As the project proposes to disturb greater than one acre of land, a Notice of Intent with EPA and local Conservation Commission was submitted, and a Stormwater Pollution Prevention Plan (SWPPP) will be developed prior to construction beginning. Erosion controls are indicated on the plans including stockpile areas and construction tracking pad. A basic construction sequence and estimated dates are included in Section 2 of the Stormwater management report. Standard 8 requires minor revisions to be met.

SW8. Provide catch basin inlet protection and perimeter controls on the Existing Conditions & Site Preparation Plan.

TB: No response required.

BETA2: The plans have been revised as requested. Comment addressed.

SW9. Indicate that proposed catch basins will be equipped with inlet protection once installed until the end of construction.

TB: No response required.

BETA2: The plans have been revised as requested. Comment addressed.

OPERATIONS/MAINTENANCE PLAN (STANDARD NUMBER 9): *A Long-Term Operation and Maintenance Plan shall be developed and implemented to ensure that stormwater management systems function as designed.*

A Long-Term Stormwater Operation & Maintenance Plan was included in Appendix F of the Stormwater Management Report. The O&M Plan indicates responsible parties for the project, routine and non-routine maintenance tasks, and inspection criteria. The O&M Plan also provides guidance on long-term pollution prevention practices for the project. Standard 9 is met.

TB: No response required.

ILLICIT DISCHARGES (STANDARD NUMBER 10): *All illicit discharges to the stormwater management system are prohibited.* A signed Illicit Discharge Compliance Statement was not provided with the submission. The Stormwater checklist indicates that one will be provided prior to the commencement of construction. Standard 10 is met, pending receipt of the signed illicit discharge statement,

SW10. Provide a signed illicit discharge statement.

TB: We request that the Commission consider a condition of approval requiring that the signed Illicit Discharge Statement be provided prior to construction.

BETA2: BETA defers to the Commission on including this as a Condition of Approval.

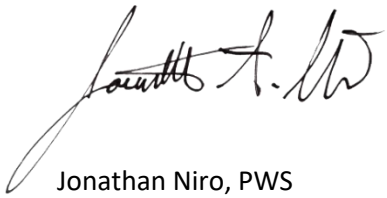
REVIEW SUMMARY

Based on our review of the NOI submittal and Project plans, the Applicant should provide minor additional information to comply with the Act and the Bylaw.

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,
BETA Group, Inc.

Anna Haznar
Staff Scientist



Jonathan Niro, PWS
Project Manager

Steven Lee, PE, SE
Senior Project Engineer

cc: Amy Love, Town Planner

FRANKLIN, MA

GARELICK FARMS
FLOODING RESILIENCY IMPROVEMENTS

PERMIT DRAWINGS

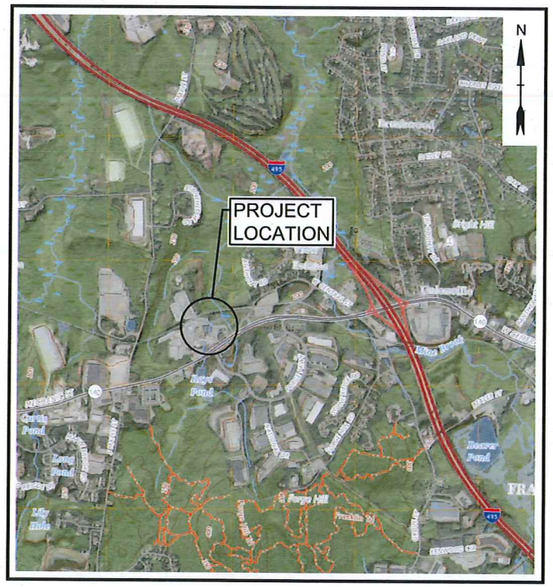
SEPTEMBER 2025

REVISED OCTOBER 2025

REVISED DECEMBER 2025

REVISED JANUARY 2026

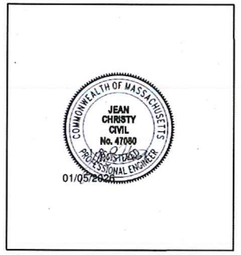
DRAWING NO.	DRAWING TITLE
G-001	COVER SHEET
G-002	LEGEND, ABBREVIATIONS & GENERAL NOTES
G-003	GENERAL NOTES
C-101	EXISTING CONDITIONS PLAN
C-102	SITE PREPARATION PLAN
C-201	DRAINAGE IMPROVEMENT PLAN
C-501	DETAILS - 1
C-502	DETAILS - 2
C-503	DETAILS - 3



SITE LOCATION MAP
SCALE: 1 = 2000'

PREPARED BY:

Tighe & Bond



JEAN CHRISTY, PE

TAYLOR LABBE, PE

PREPARED FOR:

DANDREO BROTHERS
GENERAL CONTRACTORS
AND GARELICK FARMS

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COMPLETE SET 9 SHEETS

Last Saved: 12/2/2025
Plotted On:Jan 07, 2026-3:14pm By: TLabbe
Tighe & Bond: J:\G\G5099 Garelick Farms\0003 Flood Mitigation Design and Permitting\Drawings\AutoCAD\Sheet\G5099-0003-G-001.dwg

LEGEND

DESCRIPTION	EXISTING	PROPOSED
PROPERTY LINE		
LIMIT OF WORK		
INTERMEDIATE CONTOURS		
INDEX CONTOURS	25	25
SPOT GRADE	x 141.2	+ 32.0
MAGNITUDE & DIRECTION OF SLOPE		0.0%
STORM DRAIN	SD SD	SD
STORM UNDERDRAIN		
GRAVITY SANITARY SEWER	SS SS	SS SS
SANITARY SEWER FORCE MAIN		
WATER SERVICE	W W	W W
FIRE SERVICE		
UNDERGROUND ELECTRIC	E E	E E
PRIMARY ELECTRIC SERVICE	OE OE	OE OE
OVERHEAD UTILITY (UNSPECIFIED)	OHW OHW	
CURB		
EDGE OF PAVEMENT		
FENCE - CHAIN LINK		
STORM DRAIN STRUCTURES	MANHOLE (D) CATCH BASIN	MANHOLE CATCH BASIN
SANITARY SEWER STRUCTURES	MANHOLE (S) TANK	MANHOLE TANK
WATER SERVICE STRUCTURES	HYDRANT MANHOLE (W) VALVE	HYDRANT MANHOLE (W) VALVE
GAS SERVICE STRUCTURES	MANHOLE (G) VALVE GG	MANHOLE (G) VALVE
ELECTRIC SERVICE STRUCTURES	UTILITY CO. POLE # MANHOLE (E) LIGHT	UTILITY CO. POLE # MANHOLE (E) LIGHT
TELECOMMUNICATIONS MANHOLE	(T)	(T)
TREELINE		
TREE	EVERGREEN DECIDUOUS	EVERGREEN DECIDUOUS
POTENTIAL SNOW STORAGE LOCATION	STUMP	
NHESP PRIORITY HABITAT OF RARE SPECIES		

LEGEND

DEMOLITION / GEOTECHNICAL	
EROSION & SEDIMENT CONTROL	
ITEM TO BE DEMOLISHED	
CLEAR AND GRUB VEGETATION	
TEST PIT	

LEGEND

RESOURCE AREAS	
VEGETATED WETLAND LIMIT	
TOP OF BANK	
100-FOOT WETLAND BUFFER	
50-FOOT WETLAND BUFFER	
25-FOOT NO-DISTURB BUFFER	
200' RIVERFRONT AREA	
BORDERING LANDS SUBJECT TO FLOODING	
WETLAND FLAG	W

ABBREVIATIONS

BIT	BITUMINOUS
BLDG	BUILDING
BC	BOTTOM OF CURB
CB	CATCH BASIN
CF	CUBIC FOOT
CI	CAST IRON
CLDI	CEMENT LINED DUCTILE IRON PIPE
CONC	CONCRETE
CY	CUBIC YARD
D	DEPTH
DI	DUCTILE IRON PIPE
DIA	DIAMETER
DMH	DRAIN MANHOLE
EFF	EFFECTIVE
EG	EXISTING GRADE
EL/ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EXIST	EXISTING
FFE	FINISHED FLOOR ELEVATION
FG	FINISH GRADE
GAL	GALLON
GPD	GALLONS PER DAY
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
IN	INCHES
INV	INVERT
L	LENGTH
LF	LINEAR FEET
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MPT	MALE PIPE THREAD
NTS	NOT TO SCALE
N/A	NOT APPLICABLE
N/F	NOW OR FORMERLY
OC	ON CENTER
OH	OVERHEAD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYLCHLORIDE
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
R&D	REMOVE AND DISPOSE
RD	ROOF DRAIN
REV	REVISION
R&R	REMOVE AND RESET
S	SLOPE
SCH	SCHEDULE
SF	SQUARE FOOT
SMH	SEWER MANHOLE
STA	STATION
STRM	STORM
TC	TOP OF CURB
TP	TEST PIT
TW	TOP OF WALL
TYP	TYPICAL
UP	UTILITY POLE
W	WIDTH
WV	WATER VALVE

BASE PLAN NOTES

1. THE EXISTING CONDITIONS INFORMATION SHOWN ON THE DRAWINGS IS BASED ON THE FOLLOWING:
   - ORIGINAL SITE PLAN WAS PROVIDED BY GARELICK FARMS DATED SEPTEMBER 8, 2006.
   - EXISTING TOPOGRAPHY WAS PROVIDED BY TIGHE & BOND VIA DRONE SURVEY ON JUNE 4, 2024.
   - PARTIAL SURVEY OF THE EXISTING DRAINAGE INFRASTRUCTURE WAS PERFORMED BY WSP IN MAY 2024.
   - THE RESOURCE AREA BOUNDARIES DEPICTED ON THE DRAWINGS WERE DELINEATED BY TIGHE & BOND, INC. ON MAY 1, 2025.
   - THE UTILITY INFORMATION SHOWN WAS LOCATED BY GROUND-PENETRATING RADAR PERFORMED BY UNDERGROUND SURVEYING, LLC. IN JUNE 2025.
   - EXISTING DRAINAGE INFRASTRUCTURE WITHIN WEST CENTRAL STREET WAS TAKEN FROM THE DESIGN PLAN SET TITLED "ROUTE 140 RELOCATION & I-495 INTERCHANGE 17 IMPROVEMENTS" PREPARED BY VHB AND MASSDOT DATED MARCH 20, 2002.
2. THE ACCURACY AND COMPLETENESS OF SUBSURFACE INFORMATION (E.G., EXISTING UTILITIES) SHOWN ON THESE DRAWINGS IS NOT GUARANTEED AND SOME SUBSURFACE INFORMATION MAY NOT BE SHOWN. DETERMINE THE LOCATIONS AND ELEVATIONS OF ALL SUBSURFACE FEATURES WHICH MAY AFFECT CONSTRUCTION OPERATIONS BY TEST PIT OR OTHER METHODS, AS NECESSARY TO PREVENT DAMAGE TO UTILITIES AND OTHER SUBSURFACE FEATURES, AND/OR INTERRUPTIONS IN UTILITY SERVICE. PROVIDE DATA COLLECTED THROUGH THESE INVESTIGATIONS TO THE ENGINEER PRIOR TO CONSTRUCTING THE PROPOSED IMPROVEMENTS.
3. SUB-SURFACE EXPLORATIONS ARE ANTICIPATED TO BE PERFORMED BY GEOLOGIC EARTH EXPLORATION, INC IN JULY 2025. TEST BORING LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND TESTING INFORMATION IS NOT GUARANTEED IN ANY WAY TO REPRESENT EXISTING CONDITIONS.
4. THE DRAWINGS ARE BASED ON THE FOLLOWING DATUMS: HORIZONTAL-NAD83; VERTICAL-NAVD88
5. THE EXISTING CONDITIONS SHOWN ARE APPROXIMATE. FIELD VERIFY EXISTING CONDITIONS.
6. THE PROPERTY LINES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND ARE NOT BASED ON DEED OR PLAN RESEARCH.

GENERAL NOTES

1. NOTIFY DIGSAFE AT 1-888-344-7233 AND OTHER UTILITY OWNERS IN THE AREA NOT ON THE DIGSAFE LIST AT LEAST 72 HOURS PRIOR TO ANY DIGGING, TRENCHING, ROCK REMOVAL, DEMOLITION, BORING, BACKFILLING, GRADING, LANDSCAPING, OR ANY OTHER EARTH MOVING OPERATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR SUPPORT OF EXISTING UTILITIES AND REPAIR OR REPLACEMENT COSTS OF UTILITIES DAMAGED DURING CONSTRUCTION, WHETHER ABOVE OR BELOW GRADE. REPLACE DAMAGED UTILITIES IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER AND AT NO COST TO THE PROPERTY OWNER
3. NOT ALL OF THE UTILITY SERVICES TO BUILDINGS ARE SHOWN. THE CONTRACTOR SHALL ANTICIPATE THAT EACH PROPERTY HAS SERVICE CONNECTIONS FOR THE VARIOUS UTILITIES.
4. BOLD TEXT AND LINES INDICATE PROPOSED WORK. LIGHT TEXT AND LINES INDICATE APPROXIMATE EXISTING CONDITIONS.
5. TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES, LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION FROM TIGHE & BOND.
6. EXCAVATE ADDITIONAL TEST PITS TO LOCATE EXISTING UTILITIES AS DIRECTED OR APPROVED BY THE ENGINEER.
7. NOTIFY THE ENGINEER OF ANY UTILITIES IDENTIFIED DURING CONSTRUCTION THAT ARE NOT SHOWN ON THE DRAWINGS OR THAT DIFFER IN SIZE OR MATERIAL.
8. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY; COORDINATION WITH THE OWNER, ALL SUBCONTRACTORS, AND WITH OTHER CONTRACTORS WORKING WITHIN THE LIMITS OF WORK, THE MEANS AND METHODS OF CONSTRUCTING THE PROPOSED WORK.
9. OBTAIN, PAY FOR AND COMPLY WITH PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK. ARRANGE AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE JURISDICTIONAL AUTHORITIES.
10. SHORE UTILITY TRENCHES WHERE FIELD CONDITIONS DICTATE AND/OR WHERE REQUIRED BY LOCAL, STATE AND FEDERAL HEALTH AND SAFETY CODES.
11. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. IF FIELD CONDITIONS ARE OBSERVED THAT VARY SIGNIFICANTLY FROM THOSE SHOWN ON THE DRAWINGS, IMMEDIATELY NOTIFY THE ENGINEER IN WRITING FOR RESOLUTION OF THE CONFLICTING INFORMATION.
12. PROTECT AND MAINTAIN ALL UTILITIES IN THE AREAS UNDER CONSTRUCTION DURING THE WORK. LEAVE ALL PIPES AND STRUCTURES WITHIN THE LIMITS OF THE CONTRACT IN A CLEAN AND OPERABLE CONDITION AT THE COMPLETION OF THE WORK. TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SAND AND SILT FROM DISTURBED AREAS FROM ENTERING THE DRAINAGE SYSTEM.
13. NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICT, ERROR, AMBIGUITY, OR DISCREPANCY WITH THE PLANS OR BETWEEN THE PLANS AND ANY APPLICABLE LAW, REGULATION, CODE, STANDARD SPECIFICATION, OR MANUFACTURER'S INSTRUCTIONS.
14. EXCAVATE WITH EQUIPMENT SELECTED TO MINIMIZE DAMAGE TO EXISTING UTILITIES OR OTHER FACILITIES. HAND EXCAVATE AS NECESSARY TO LOCATE UTILITIES AND AVOID DAMAGE.
15. TAKE NECESSARY MEASURES AND PROVIDE CONTINUOUS BARRIERS OF SUFFICIENT TYPE, SIZE, AND STRENGTH TO PREVENT ACCESS TO ALL WORK AND STAGING AREAS AT THE COMPLETION OF EACH DAYS WORK.
16. NO OPEN TRENCHES WILL BE ALLOWED OVER NIGHT. THE USE OF ROAD PLATES TO PROTECT THE EXCAVATION WILL BE CONSIDERED UPON REQUEST, BUT BACKFILLING IS PREFERRED.
17. THE CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY TRAFFIC CONTROL/SAFETY DEVICES TO ENSURE SAFE VEHICULAR AND PEDESTRIAN ACCESS THROUGH THE WORK AREA, OR FOR SAFELY IMPLEMENTING DETOURS AROUND THE WORK AREA. PERFORM TRAFFIC CONTROL IN ACCORDANCE WITH THE CONTRACTOR'S APPROVED TRAFFIC CONTROL PLAN.
18. MAINTAIN EMERGENCY ACCESS TO ALL PROPERTIES WITHIN THE PROJECT AREA AT ALL TIMES DURING CONSTRUCTION.
19. WHEN WORKING IN THE ROAD, PROVIDE THE OWNER AND LOCAL FIRE/POLICE/SCHOOL AUTHORITIES A DETAILED PLAN OF APPROACH INDICATING METHODS OF PROPOSED TRAFFIC ROUTING ON A DAILY BASIS. PROVIDE COORDINATION TO ENSURE COMMUNICATION AND COORDINATION BETWEEN THE OWNER, CONTRACTOR AND LOCAL FIRE/POLICE/SCHOOL AUTHORITIES THROUGHOUT THE CONSTRUCTION PERIOD.
20. REMOVE AND DISPOSE OF ALL CONSTRUCTION-RELATED WASTE MATERIALS AND DEBRIS IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS.
21. THE TERM "DEMOLISH" USED ON THE DRAWINGS MEANS TO REMOVE AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
22. THE TERM "ABANDON" USED ON THE DRAWINGS MEANS TO LEAVE IN PLACE AND TAKE APPROPRIATE MEASURES TO DECOMMISSION AS SPECIFIED OR NOTED ON THE DRAWINGS.
23. ALL PROPOSED WORK MAY BE ADJUSTED IN THE FIELD BY THE OWNER'S PROJECT REPRESENTATIVE TO MEET EXISTING CONDITIONS.
24. CONTRACTOR TO FOLLOW THE STERLING WATER DEPARTMENT RULES & REGULATIONS WHEN INSTALLING WATER SERVICE TO THE NEW BUILDING AND THE DEPARTMENT SHALL REVIEW PLANS FOR WATER SERVICE CONNECTION AS PART OF THE BUILDING PERMIT APPLICATION PROCESS.

Tighe&Bond
One University Avenue
Suite 100
Westwood, MA 02090
(781) 708-9820

COMMONWEALTH OF MASSACHUSETTS
WAYNE EDWARD BATES
36432
DISCIPLINE CIVIL
REGISTERED PROFESSIONAL ENGINEER
10/22/2025
Wayne E. Bates

COMMONWEALTH OF MASSACHUSETTS
JEAN CHRISTY
CIVIL
No. 47080
REGISTERED PROFESSIONAL ENGINEER
10/22/2025

PERMIT SET

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Garelick Farms Flooding Resiliency Improvements

Dandreo Brothers General Contractors

Franklin, MA

MARK	DATE	DESCRIPTION
1	10/2025	CONCOM COMMENTS

PROJECT NO:	G5099-0003
DATE:	SEPT 2025
FILE:	G5099-0003-G-002.dwg
DRAWN BY:	AJW
DESIGNED BY:	AJW
CHECKED BY:	JEC
APPROVED BY:	WEB

LEGEND, ABBREVIATIONS & GENERAL NOTES

SCALE: NO SCALE

G-002

Last Saved: 10/21/2025
Plotted: Oct 21, 2025 3:40pm By: TLabbe
Tighe & Bond:21\G\G5099 Garelick Farms\0003 Flood Mitigation Design and Permitting\Drawings\AutoCAD\Sheet\G5099-0003-G-002.dwg

EROSION CONTROL AND RESOURCE AREA PROTECTION NOTES

1. PROVIDE ALL EROSION CONTROL MEASURES SHOWN, SPECIFIED, REQUIRED BY PERMIT, AND/OR REQUIRED BY THE ENGINEER PRIOR TO ANY CONSTRUCTION OR IMMEDIATELY UPON REQUEST. MAINTAIN SUCH CONTROL MEASURES UNTIL FINAL SURFACE TREATMENTS ARE IN PLACE AND/OR UNTIL PERMANENT VEGETATION IS ESTABLISHED. INSPECT AFTER EACH RAINSTORM AND DURING MAJOR STORM EVENTS TO CONFIRM THAT ALL SEDIMENTATION AND EROSION CONTROL MEASURES REQUIRED ARE IN PLACE AND EFFECTIVE.
2. PRIOR TO STARTING WORK, CLEARLY STAKE WORK LIMITS. DO NOT DISTURB VEGETATION AND TOPSOIL BEYOND THE PROPOSED LIMITS. COORDINATE WITH THE ENGINEER FOR LOCATIONS OF TEMPORARY STOCKPILING OF TOPSOIL DURING CONSTRUCTION.
3. INSTALL SILT SACKS OR OTHER APPROVED SEDIMENTATION BARRIERS IN/AT ALL CATCH BASINS IN THE PROJECT AREA.
4. COMPACT, STABILIZE, AND LOAM AND SEED SIDE SLOPES, SHOULDER AREAS AND DISTURBED VEGETATED AREAS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND AS REQUIRED BY PERMITS. GRADE SIDE SLOPES, SHOULDER AREAS AND DISTURBED VEGETATED AREAS TO A MAXIMUM SLOPE OF 3 HORIZONTAL TO 1 VERTICAL (3H:1V), WHERE POSSIBLE. PROVIDE BIODEGRADABLE EROSION CONTROL BLANKETS TO PREVENT EROSION WHERE SLOPES ARE STEEPER THAN 3H:1V.
5. SETTLE OR FILTER ALL SILT-LADEN WATER FROM DEWATERING ACTIVITIES IN A SEDIMENTATION OR FILTER BAG TO REMOVE SEDIMENTS PRIOR TO RELEASE USING A SEDIMENTATION OR FILTER BAG LOCATED DOWN-GRADIENT OF THE DEWATERED AREA.
6. REMOVE AND PROPERLY DISPOSE OF SILT TRAPPED AT BARRIERS IN UPLAND AREAS OUTSIDE BUFFER ZONES. REMOVE MATERIALS DEPOSITED IN ANY TEMPORARY SETTLING BASINS AT THE COMPLETION OF THE PROJECT. RESTORE ALL DISTURBED AREAS TO THEIR PRECONSTRUCTION CONDITION.
7. SWEEP, COLLECT, REMOVE AND DISPOSE OF ANY SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS AT THE END OF EACH DAY.
8. LOAM AND SEED ALL DISTURBED VEGETATED AREAS TO ESTABLISH COVER AND STABILIZATION AS SOON AS POSSIBLE FOLLOWING DISTURBANCE.
9. MAINTAIN AN ADDITIONAL SUPPLY OF EROSION CONTROL MEASURES ON-SITE FOR EMERGENCY REPAIRS.
10. STORE FUEL, OIL, PAINT, OR OTHER HAZARDOUS MATERIALS IN A SECONDARY CONTAINER AND REMOVE TO A SECURE LOCKED AND COVERED AREA DURING NON-WORK HOURS.
11. PROVIDE A SUPPLY OF ABSORBENT SPILL RESPONSE MATERIALS SUCH AS BOOMS, BLANKETS, AND OIL ABSORBENT MATERIALS AT THE CONSTRUCTION SITE AT ALL TIMES TO CLEAN UP POTENTIAL SPILLS OF HAZARDOUS MATERIALS. IMMEDIATELY REPORT SPILLS OF HAZARDOUS MATERIALS TO THE STATE ENVIRONMENTAL AGENCY AND THE MUNICIPALITY WHERE THE WORK IS OCCURRING.
12. REMOVAL OF EROSION CONTROLS SHALL NOT OCCUR UNTIL ALL DISTURBED AREAS ARE FULLY STABILIZED AND APPROVAL FOR REMOVAL HAS BEEN GRANTED BY THE ENGINEER AND CONSERVATION COMMISSION. 2
13. EROSION CONTROL INSPECTIONS SHALL OCCUR WEEKLY AND AFTER SIGNIFICANT RAIN EVENTS, IN ACCORDANCE WITH THE TOWN OF FRANKLIN CONSERVATION COMMISSION REGULATIONS. INSPECTIONS AND MAINTENANCE ACTIVITIES SHALL BE LOGGED AND SUBMITTED WEEKLY TO THE CONSERVATION OFFICE, NOTING THE CONDITION OF THE CONTROLS AND ANY CORRECTIVE ACTIONS TAKEN.
14. PERIMETER CONTROL SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. THEY SHALL BE REPAIRED IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM, AND ANY REPAIRS SHALL BE MADE IMMEDIATELY. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM.
15. SHOULD THE FABRIC ON A BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL IS NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
16. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATED 1/3 THE HEIGHT OF THE BARRIER.
17. AT THE CONCLUSION OF THE PROJECT, THE EROSION CONTROL BARRIERS WILL BE REMOVED AND PROPERLY DISPOSED OFF-SITE FOLLOWING THE STABILIZATION OF DISTURBED AREAS.

DRAINAGE SYSTEM IMPROVEMENTS NOTES

1. LOCATIONS OF PROPOSED STORM DRAINS AND STRUCTURES ARE APPROXIMATE AND MAY BE ADJUSTED DURING CONSTRUCTION AFTER INVESTIGATIVE WORK. FINAL STORM DRAIN LOCATIONS, AND ASSOCIATED STRUCTURES, WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. ADJUSTMENTS TO THE PROPOSED STORM DRAIN LAYOUTS AND ELEVATIONS SHALL NOT BE CONSIDERED CAUSE FOR ADDITIONAL PAYMENTS. THE CONTRACTOR SHALL NOT MAKE PROPOSED STORM DRAIN LAYOUT AND ELEVATION ADJUSTMENTS WITHOUT APPROVAL FROM THE ENGINEER.
3. MANHOLES SHALL BE 48-INCH DIAMETER, UNLESS NOTED OTHERWISE.
4. DISTANCES AND SLOPES OF PROPOSED STORM DRAINS ARE BASED ON DISTANCES FROM CENTERLINE TO CENTERLINE OF STRUCTURES.
5. UNLESS OTHERWISE NOTED, PROPOSED CATCH BASIN LATERALS SHALL BE 12-INCH DIAMETER. WHERE THE MAINLINE STORM DRAIN IS SMALLER THAN 12-INCHES IN DIAMETER, THE CATCH BASIN LATERAL SHALL MATCH THE SIZE OF THE MAINLINE STORM DRAIN. MINIMUM COVER OVER CATCH BASIN LATERALS SHALL BE 4 FEET, UNLESS SHOWN OR APPROVED OTHERWISE.
6. ACTUAL LOCATION OF PROPOSED STORM DRAIN TERMINAL MANHOLES MAY BE ADJUSTED IN THE FIELD BASED ON THE LOCATION OF STORM DRAIN SERVICE CONNECTIONS.
7. MAINTAIN OPERATION OF DRAINAGE SYSTEM DURING CONSTRUCTION. PROVIDE BYPASS PUMPING OF DRAINAGE FLOWS AND/OR TEMPORARY CONNECTIONS, AS NECESSARY.
8. MAINTAIN A MINIMUM HORIZONTAL DISTANCE OF AT LEAST 10 FEET FROM ANY EXISTING OR PROPOSED WATER MAIN. IF SITE CONDITIONS PREVENT A HORIZONTAL SEPARATION OF 10 FEET, A LESSER DISTANCE WILL BE ALLOWED IF THE STORM DRAIN IS CONSTRUCTED IN A SEPARATE TRENCH WITH THE TOP OF THE STORM DRAIN AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN.
9. WHENEVER A PROPOSED STORM DRAIN MUST CROSS A WATER MAIN, CONSTRUCT THE STORM DRAIN SO THE TOP OF THE STORM DRAIN IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. THE STORM DRAIN JOINTS SHALL BE EQUIDISTANT AND LOCATED AS FAR AWAY AS POSSIBLE FROM THE WATER MAIN JOINTS. WHEN THE PROPOSED STORM DRAIN CANNOT MEET THE ABOVE REQUIREMENTS, ENCASE THE PROPOSED STORM DRAIN IN CONCRETE.
10. WHERE A PROPOSED UTILITY CROSSES BELOW AN EXISTING ASBESTOS CEMENT (AC) WATER MAIN, REPLACE THE AC WATER MAIN ABOVE THE CROSSING AND 10 FEET ON EACH SIDE OF THE CROSSING WITH NEW DI PIPE. HANDLE, REMOVE, TRANSPORT AND DISPOSE OF AC PIPE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

SURFACE RESTORATION NOTES

1. ALL PAVEMENT DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. PROVIDE SITE GRADING AT ACCESSIBLE SIDEWALK RAMPS, SIDEWALKS, AND BUILDING ENTRANCES THAT IS CONSISTENT WITH THE RELEVANT ACCESS REQUIREMENTS OF THE ARCHITECTURAL BARRIERS ACT (ABA), THE AMERICANS WITH DISABILITIES ACT (ADA), AND MA ARCHITECTURAL ACCESS BOARD REQUIREMENTS (AAB). SMALL CHANGES IN GRADE OVER RELATIVELY SHORT DISTANCES (E.G. AT PARKING SPACES, ACCESSIBLE ROUTES, AND RAMPS) MIGHT NOT BE CLEARLY DEPICTED WITHIN THE CONTOUR INTERVAL SHOWN. COMPLY WITH THE CRITERIA IN THESE STANDARDS. SELECT MAXIMUM SLOPE CRITERIA ARE REPRODUCED BELOW:
   - ACCESSIBLE PARKING STALL AND PASSENGER LOADING ZONE (ANY DIRECTION) SLOPE < 2.0%
   - LONGITUDINAL SLOPE ALONG ACCESSIBLE ROUTES < 5.0%
   - CROSS SLOPE ALONG ACCESSIBLE ROUTES < 2.0%
3. PROTECT PROJECT FEATURES (E.G., WALLS, FENCES, MAIL BOXES, SIGNS, SIDEWALKS, CURBING, STAIRS, WALKWAYS, TREES, ETC.) FROM DAMAGE DURING CONSTRUCTION, INCLUDING PROVIDING TEMPORARY SUPPORTS, WHEN APPROPRIATE.
4. IF REMOVAL OF PROJECT FEATURES IS REQUIRED IN ORDER TO PERFORM THE PROPOSED WORK, REMOVE THOSE SITE FEATURES ONLY UPON APPROVAL OF ENGINEER. REPLACE ALL REMOVED PROJECT FEATURES; NEW ITEMS SHALL BE EQUAL OR BETTER IN QUALITY AND CONDITION TO THE ITEMS REMOVED.
5. EXISTING SURVEY MONUMENTS DISTURBED BY THE CONTRACTOR SHALL BE REPLACED BY A LAND SURVEYOR LICENSED IN THE STATE IN WHICH THE WORK IS PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
6. COORDINATE THE ADJUSTMENT OF EXISTING UTILITY STRUCTURES WITH EACH RESPONSIBLE UTILITY OWNER PRIOR TO RECONSTRUCTION AND/OR PAVING OPERATIONS. RAISE ALL STRUCTURES TO FINISHED GRADES PRIOR TO THE END OF THE CONSTRUCTION SEASON AND PRIOR TO FINISHED PAVING.
7. REPAIR DISTURBED PAVED SURFACES AT THE END OF EACH WORK WEEK, UNLESS OTHERWISE APPROVED/REQUIRED BY THE OWNER.
8. PLACE TEMPORARY BITUMINOUS CONCRETE PAVEMENT AT DISTURBED PORTLAND CEMENT CONCRETE SIDEWALKS AND DRIVEWAYS AT THE END OF EACH WORK WEEK, UNLESS OTHERWISE APPROVED/REQUIRED BY THE OWNER.
9. TRANSFER ALL TEMPORARY BENCHMARKS, AS NECESSARY.
10. ACCOMMODATE PEDESTRIAN TRAFFIC WHERE A SIDEWALK IS TO BE CLOSED FOR SAFETY. "SIDEWALK CLOSED HERE" SIGNS SHALL BE USED AT THE NEAREST SAFE INTERSECTION. SEE TRAFFIC CONTROL DETAILS FOR SIGN INFORMATION.
11. RESTORE ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE PAYLINE LIMITS TO ORIGINAL CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
12. REGRADE ALL UNPAVED AREAS DISTURBED BY THE WORK AS REQUIRED. REPAIR/REPLACE PAVED SURFACES DISTURBED BY THE WORK IN-KIND, UNLESS OTHERWISE NOTED. RESTORE SURFACES TO EXISTING OR PROPOSED CONDITIONS AS INDICATED ON THE DRAWINGS.
13. PROVIDE A SMOOTH, FLUSH TRANSITION BETWEEN ALL NEW AND EXISTING PAVEMENTS AND WALKING SURFACES.

CONSTRUCTION SEQUENCE

2

1. CONSTRUCTION SEQUENCING IS ANTICIPATED TO OCCUR AS FOLLOWS:

- NOTIFY PERTINENT REGULATORY AGENCIES AND ABUTTERS OF THE CONSTRUCTION SCHEDULE.
- INSTALL SEDIMENTATION AND EROSION CONTROLS / PROTECTIVE MEASURES AT WORK SITE PERIMETER.
- SCHEDULE AND CONDUCT SITE WALKS WITH PERTINENT REGULATORY AGENCIES TO INSPECT CONSTRUCTION-PHASE BMPS.
- SITE MOBILIZATION AND MATERIAL STAGING.
- DEMARCATE INVASIVE SPECIES LOCATIONS AND AVOID OR REMOVE/CONTROL PRIOR TO SITE WORK.
- VEGETATION CLEARING/REMOVAL WITHIN LIMIT OF WORK.
- INSTALLATION OF DRAINAGE PIPING, CATCH BASINS AND OUTFALL. BACKFILL OF EXCAVATED TRENCHING. REPAVING AND STABILIZATION OF TRENCHED EXCAVATION LIMITS.
- INSTALLATION OF HEADWALL AND TIE-IN TO NEWLY INSTALLED DRAINAGE PIPING.
- CLEANING AND TESTING DRAINAGE PIPING.
- PERFORM FINAL STABILIZATION, RESTORATION AND MITIGATION OF TEMPORARY IMPACT AREAS, INCLUDING INSTALLATION OF RESTORATION PLANTINGS.
- WITH CONSERVATION COMMISSION AUTHORIZATION, REMOVE EROSION AND SEDIMENTATION CONTROLS / PROTECTIVE MEASURES AT WORK SITE PERIMETER AND ENTRANCE/EXIT LOCATIONS AND PROPERLY DISPOSE OFF-SITE.
- DEMOBILIZE AND PERFORM FINAL SITE CLEANUP.

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WAYNE EDWARD BATES
35402
DISCIPLINE CIVIL
REGISTERED PROFESSIONAL ENGINEER
12-03-2025
Wayne E. Bates

COMMONWEALTH OF MASSACHUSETTS
JEAN CHRISTY
CIVIL
No. 47080
REGISTERED PROFESSIONAL ENGINEER
12/03/2025

PERMIT SET

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Garelick Farms Flooding Resiliency Improvements

Dandreo Brothers General Contractors

Franklin, MA

MARK	DATE	DESCRIPTION
2	12/2025	PEER REVIEW COMMENTS

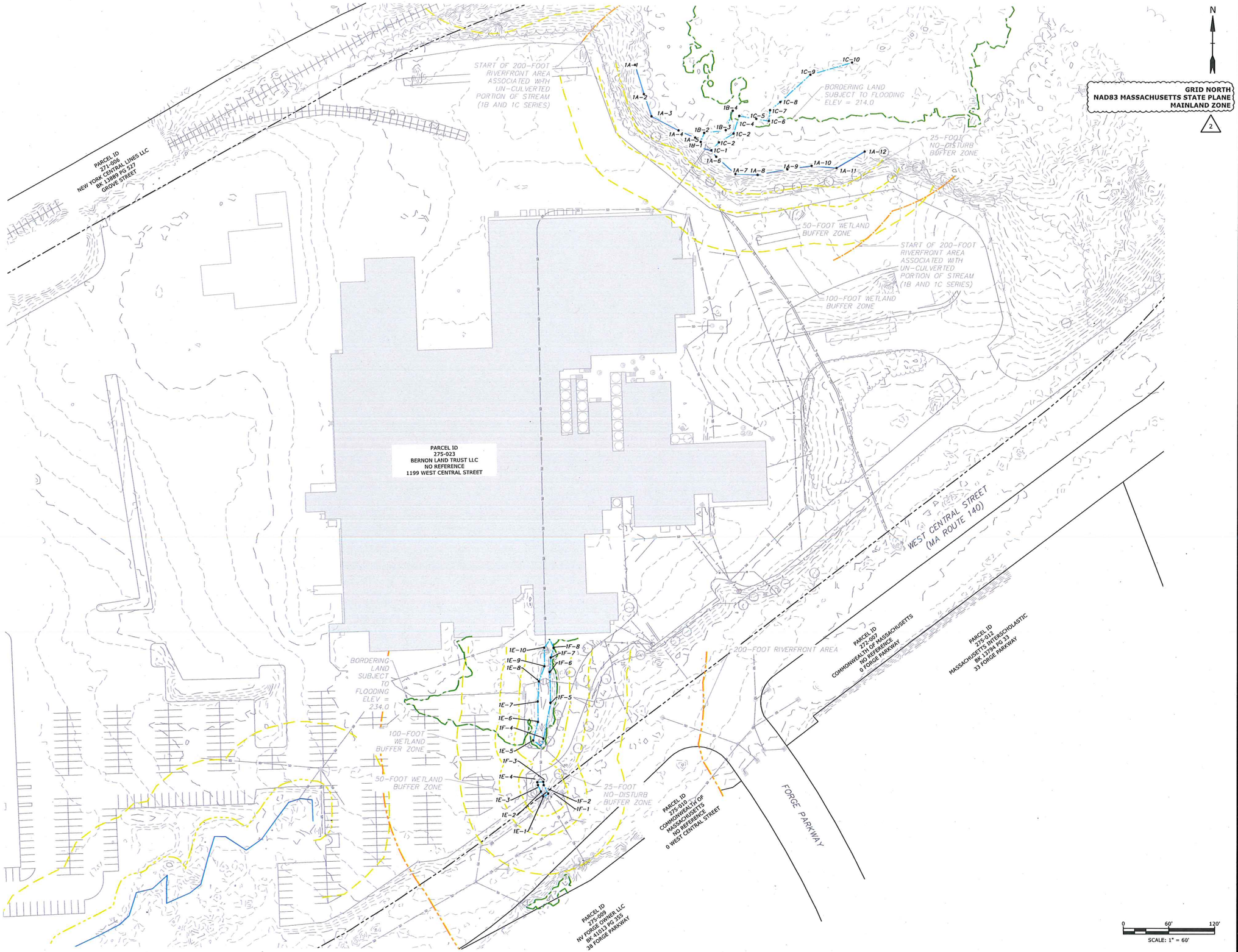
PROJECT NO:	G5099-0003
DATE:	SEPT 2025
FILE:	G5099-0003-G-002.dwg
DRAWN BY:	AJW
DESIGNED BY:	AJW
CHECKED BY:	JEC
APPROVED BY:	WEB

GENERAL NOTES

SCALE: NO SCALE

G-003

Last Saved: 12/2/2025
Plotted On: Dec 02, 2025 - 2:36pm By: TLabbe
Tighe & Bond: \\tighebond.com\data\Data\Projects\G\G5099 Garelick Farms\0003 Flood Mitigation Design and Permitting\Drawings\AutoCAD\Sheet\G5099-0003-G-002.dwg



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Garelick Farms Flooding Resiliency Improvements

Dandreo Brothers General Contractors

Franklin, MA

MARK	DATE	DESCRIPTION
2	12/2025	PEER REVIEW COMMENTS
1	10/2025	CONCOM COMMENTS

PROJECT NO:	G5099-0003
DATE:	SEPT 2025
FILE:	G5099-0003-C-101.dwg
DRAWN BY:	AJW
DESIGNED BY:	AJW
CHECKED BY:	JEC
APPROVED BY:	JEC

OVERALL EXISTING CONDITIONS PLAN

SCALE: 1" = 100'

C-101

Last Saved: 11/26/2025
Plotted On: Dec 02, 2025 - 1:16pm By: TLabbe
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N

GRID NORTH
NAD83 MASSACHUSETTS STATE PLANE
MAINLAND ZONE

200-FOOT RIVERFRONT AREA

CB
RIM= 232.07
DEPTH=224.87
INV.1=227.67
INV.2=227.47
INV.3=UTO-BLOCKED

CB
RIM= 231.40
INV.1=227.40

CB
RIM= 229.65
DEPTH=223.55
WL=226.65
NPV-FOW

CB
RIM= 230.39
INV.1=225.59
INV.2=224.89
INV.3=225.59

DMH
RIM= 231.67
INV.1=225.77
INV.2=226.37
INV.3=226.47
INV.4=226.17

DMH
RIM= 230.26
CNO-COVER CRACKED

MATCH LINE

ABANDON EXISTING PIPE

ABANDON EXISTING PIPE

LIMIT OF WORK (TYP)

SILT SACK

LIMITS OF SAWCUT (TYP)

R&D EXISTING CATCH BASIN

R&D EXISTING PAVEMENT

R&R EXISTING GRANITE CURB

REMOVE EXISTING PIPE. CUT AND CAP AT CATCH BASIN

R&D EXISTING CATCH BASIN

VEGETATED SHOULDER (TYP)

R&R EXISTING GRANITE CURB

LIMIT OF EXISTING PAVEMENT

LIMIT OF EROSION CONTROL BLANKET

PARCEL ID 275-010
COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS
NO REFERENCE
0 WEST CENTRAL STREET

BENCHMARK
ELEV: 241.03'
EASTING: 671370.214'
NORTHING: 2856719.895

CB-STORMCEPTOR
RIM= 232.24
INV.1=229.69
TOP=230.69
WL=229.99

INV 48" DIA. RCP = 228.48

INV 60"x36" BOX CULVERT = 231.20

BORDERING LAND SUBJECT TO FLOODING
ELEV = 234.0

12"PVC WITH TRAP

1E-10, 1E-9, 1E-8, 1E-7, 1E-6, 1E-5, 1E-4, 1E-3, 1E-2, 1E-1

1F-8, 1F-7, 1F-6, 1F-5, 1F-4, 1F-3, 1F-2, 1F-1

FORGE PARKWAY

NOTES
1. REFER TO SHEET G-003 FOR EROSION CONTROL AND RESOURCE AREA PROTECTION NOTES.

BORDERING LAND SUBJECT TO FLOODING
ELEV = 214.0

EXISTING TREELINE (TYP)

1A-4, 1A-5, 1B-1, 1C-2, 1C-2, 1C-1, 1A-6, 1A-7, 1A-8, 1A-9, 1A-10, 1A-11, 1A-12

BRUSH TO BE CLEARED WITHIN LOW

REMOVE AND REPAIR SEGMENT OF FENCE AS NECESSARY

SILT SACK

DMH
RIM= 228.19
INV.1=222.49
INV.2=222.54
INV.3=222.69
INV.4=224.34

AREA DRAIN
RIM= 228.13
INV.1=225.48

CB
RIM= 227.82
DEPTH=221.62
INV.1=224.47

DMH (TANK)
INFILTRATION SYSTEM
RIM= 229.40
DEPTH=222.80
INV.1=225.50

DMH
INFILTRATION SYSTEM
RIM= 230.22
DEPTH=222.42

CB
RIM= 228.32
DEPTH=221.42
INV.1=223.47
INV.2=223.47

CB
RIM= 228.45
DEPTH=223.30
INV.1=225.05
INV.2=224.95
INV.3=224.95

CONCRETE PAD SECTION REMOVAL

50-FOOT WETLAND BUFFER ZONE

25-FOOT NO-DISTURB BUFFER ZONE

START OF 200-FOOT RIVERFRONT AREA ASSOCIATED WITH UN-CULVERTED PORTION OF STREAM (1B AND 1C SERIES)

100-FOOT WETLAND BUFFER ZONE

CONSTRUCTION TRACKOUT AREA

SOIL STOCKPILE AREA

TRUCK SCALE

LIMITS OF SAWCUT

R&D EXISTING PAVEMENT

SILT SACK

R&D EXISTING BIT. CURB

R&D EXISTING CATCH BASIN

MATCH LINE

ABANDON EXISTING PIPE

ABANDON EXISTING PIPE

LIMIT OF WORK (TYP)

BENCHMARK
ELEV: 241.03'

0 30' 60'
SCALE: 1" = 30'

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Garelick Farms Flooding Resiliency Improvements

Dandreo Brothers General Contractors

Franklin, MA

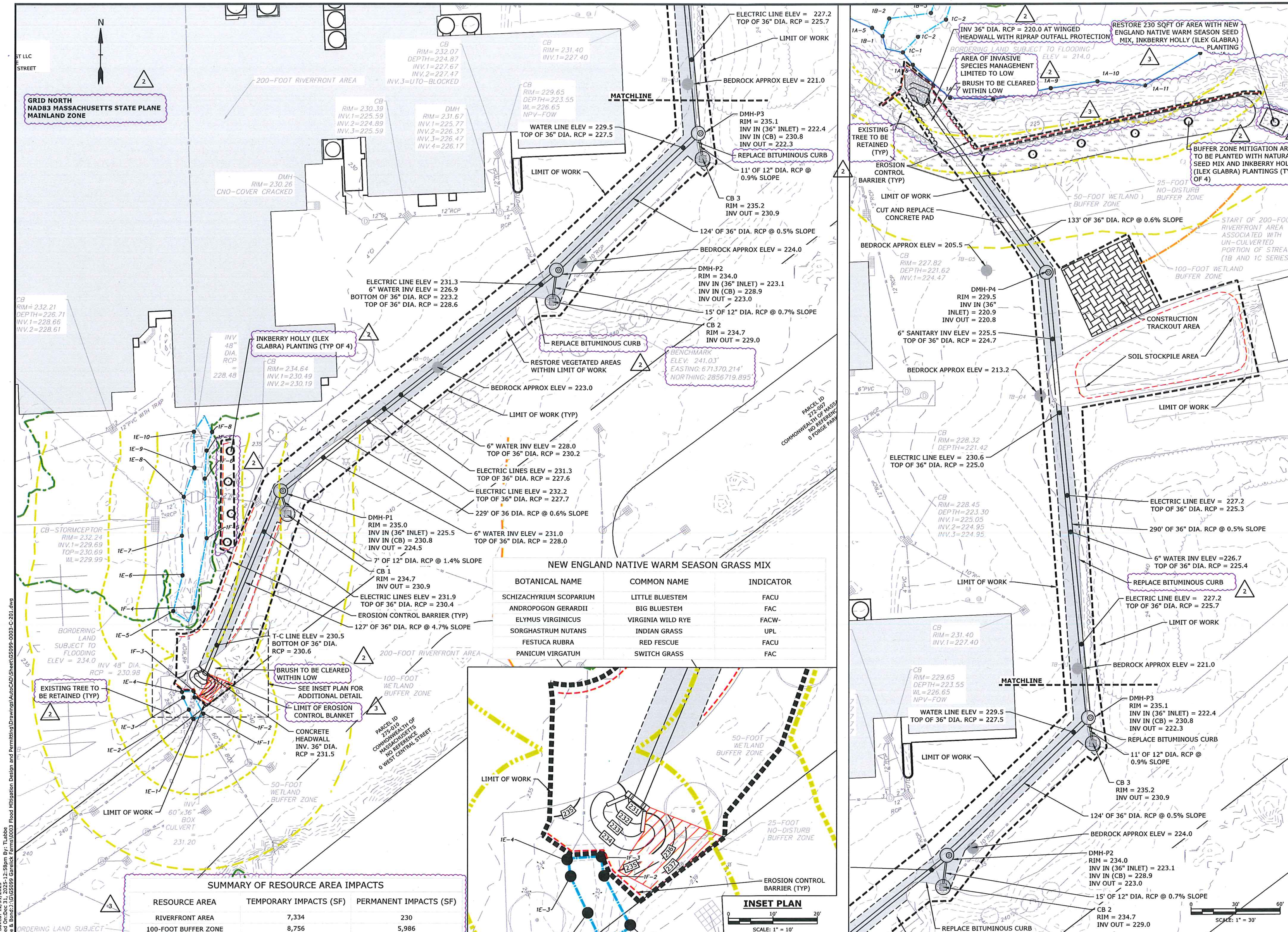
MARK	DATE	DESCRIPTION
3	01/2026	PEER REVIEW 2 COMMENTS
2	12/2025	PEER REVIEW COMMENTS
1	10/2025	CONCOM COMMENTS

PROJECT NO:	G5099-0003
DATE:	SEPT 2025
FILE:	G5099-0003-C-101.dwg
DRAWN BY:	AJW
DESIGNED BY:	AJW
CHECKED BY:	JEC
APPROVED BY:	JEC

EXISTING CONDITIONS AND SITE PREPARATION PLAN

SCALE: 1" = 30'

C-102


N
GRID NORTH
NAD83 MASSACHUSETTS STATE PLANE
MAINLAND ZONE
200-FOOT RIVERFRONT AREA
MATCHLINE
ELECTRIC LINE ELEV = 227.2
TOP OF 36" DIA. RCP = 225.7
LIMIT OF WORK
BEDROCK APPROX ELEV = 221.0
WATER LINE ELEV = 229.5
TOP OF 36" DIA. RCP = 227.5
DMH-P3
RIM = 235.1
INV IN (36" INLET) = 222.4
INV IN (CB) = 230.8
INV OUT = 222.3
REPLACE BITUMINOUS CURB
11' OF 12" DIA. RCP @ 0.9% SLOPE
CB 3
RIM = 235.2
INV OUT = 230.9
124' OF 36" DIA. RCP @ 0.5% SLOPE
BEDROCK APPROX ELEV = 224.0
DMH-P2
RIM = 234.0
INV IN (36" INLET) = 223.1
INV IN (CB) = 228.9
INV OUT = 223.0
15' OF 12" DIA. RCP @ 0.7% SLOPE
CB 2
RIM = 234.7
INV OUT = 229.0
ELECTRIC LINE ELEV = 231.3
6" WATER INV ELEV = 226.9
BOTTOM OF 36" DIA. RCP = 223.2
TOP OF 36" DIA. RCP = 228.6
INKBERRY HOLLY (ILEX GLABRA) PLANTING (TYP OF 4)
REPLACE BITUMINOUS CURB
BENCHMARK
ELEV. 241.03'
EASTING: 671370.214'
NORTHING: 2856719.895'
RESTORE VEGETATED AREAS WITHIN LIMIT OF WORK
BEDROCK APPROX ELEV = 223.0
LIMIT OF WORK (TYP)
6" WATER INV ELEV = 228.0
TOP OF 36" DIA. RCP = 230.2
ELECTRIC LINES ELEV = 231.3
TOP OF 36" DIA. RCP = 227.6
ELECTRIC LINES ELEV = 232.2
TOP OF 36" DIA. RCP = 227.7
229' OF 36 DIA. RCP @ 0.6% SLOPE
DMH-P1
RIM = 235.0
INV IN (36" INLET) = 225.5
INV IN (CB) = 230.8
INV OUT = 224.5
6" WATER INV ELEV = 231.0
TOP OF 36" DIA. RCP = 228.0
7' OF 12" DIA. RCP @ 1.4% SLOPE
CB 1
RIM = 234.7
INV OUT = 230.9
ELECTRIC LINES ELEV = 231.9
TOP OF 36" DIA. RCP = 230.4
EROSION CONTROL BARRIER (TYP)
127' OF 36" DIA. RCP @ 4.7% SLOPE
T-C LINE ELEV = 230.5
BOTTOM OF 36" DIA. RCP = 230.6
BRUSH TO BE CLEARED WITHIN LOW
SEE INSET PLAN FOR ADDITIONAL DETAIL
LIMIT OF EROSION CONTROL BLANKET
CONCRETE HEADWALL INV. 36" DIA. RCP = 231.5
EXISTING TREE TO BE RETAINED (TYP)
BORDERING LAND SUBJECT TO FLOODING ELEV = 234.0
100-FOOT WETLAND BUFFER ZONE
50-FOOT WETLAND BUFFER ZONE
25-FOOT NO-DISTURB BUFFER ZONE
LIMIT OF WORK
INSET PLAN
SCALE: 1" = 10'
INV 36" DIA. RCP = 220.0 AT WINGED HEADWALL WITH RIPRAP OUTFALL PROTECTION
AREA OF INVASIVE SPECIES MANAGEMENT LIMITED TO LOW
BRUSH TO BE CLEARED WITHIN LOW
RESTORE 230 SQFT OF AREA WITH NEW ENGLAND NATIVE WARM SEASON SEED MIX, INKBERRY HOLLY (ILEX GLABRA) PLANTING
EXISTING TREE TO BE RETAINED (TYP)
EROSION CONTROL BARRIER (TYP)
BUFFER ZONE MITIGATION AREA TO BE PLANTED WITH NATURAL SEED MIX AND INKBERRY HOLLY (ILEX GLABRA) PLANTINGS (TYP OF 4)
CUT AND REPLACE CONCRETE PAD
133' OF 36" DIA. RCP @ 0.6% SLOPE
BEDROCK APPROX ELEV = 205.5
START OF 200-FOOT RIVERFRONT AREA ASSOCIATED WITH UN-CULVERTED PORTION OF STREAM (1B AND 1C SERIES)
DMH-P4
RIM = 229.5
INV IN (36" INLET) = 220.9
INV OUT = 220.8
CONSTRUCTION TRACKOUT AREA
6" SANITARY INV ELEV = 225.5
TOP OF 36" DIA. RCP = 224.7
SOIL STOCKPILE AREA
BEDROCK APPROX ELEV = 213.2
ELECTRIC LINE ELEV = 230.6
TOP OF 36" DIA. RCP = 225.0
ELECTRIC LINE ELEV = 227.2
TOP OF 36" DIA. RCP = 225.3
290' OF 36" DIA. RCP @ 0.5% SLOPE
6" WATER INV ELEV = 226.7
TOP OF 36" DIA. RCP = 225.4
SCALE: 1" = 30'

NEW ENGLAND NATIVE WARM SEASON GRASS MIX

BOTANICAL NAME	COMMON NAME	INDICATOR
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	FACU
ANDROPOGON GERARDII	BIG BLUESTEM	FAC
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	FACW-
SORGHASTRUM NUTANS	INDIAN GRASS	UPL
FESTUCA RUBRA	RED FESCUE	FACU
PANICUM VIRGATUM	SWITCH GRASS	FAC

SUMMARY OF RESOURCE AREA IMPACTS

RESOURCE AREA	TEMPORARY IMPACTS (SF)	PERMANENT IMPACTS (SF)
RIVERFRONT AREA	7,334	230
100-FOOT BUFFER ZONE	8,756	5,986

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TAYLOR A LABBE CIVIL No. 60240 — 01/08/2026

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Garelick Farms Flooding Resiliency Improvements

Dandreo Brothers General Contractors

Franklin, MA

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3	01/2026	PEER REVIEW 2 COMMENTS
2	12/2025	PEER REVIEW COMMENTS
1	10/2025	CONCOM COMMENTS

PROJECT NO:	G5099-0003
DATE:	SEPT 2025
FILE:	G5099-0003-C-201.dwg
DRAWN BY:	AJW
DESIGNED BY:	AJW
CHECKED BY:	JEC
APPROVED BY:	JEC

PROPOSED SITE PLAN

SCALE: 1" = 30'

C-201

Last Saved: 12/31/2025
Plotted On: Dec 31, 2025-12:58pm By: TLabbe
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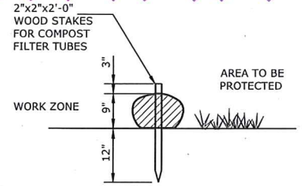
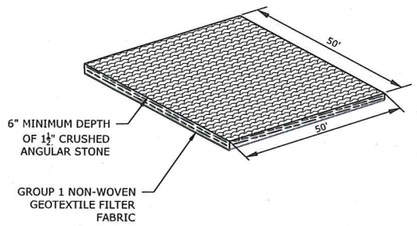


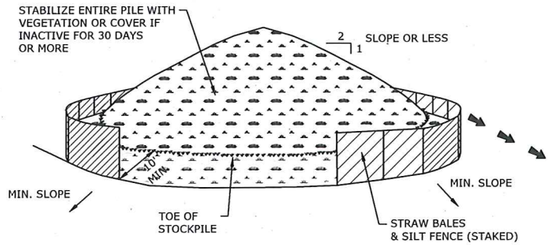
EROSION CONTROL BARRIER

NO SCALE



CONSTRUCTION TRACKOUT AREA

NO SCALE

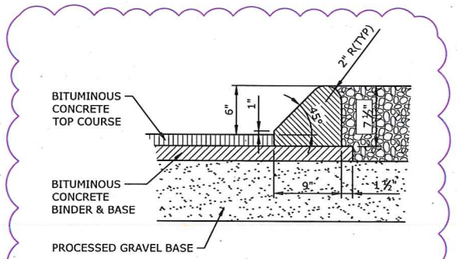


INSTALLATION NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAW BALES, THEN STABILIZED WITH VEGETATION OR COVERED.

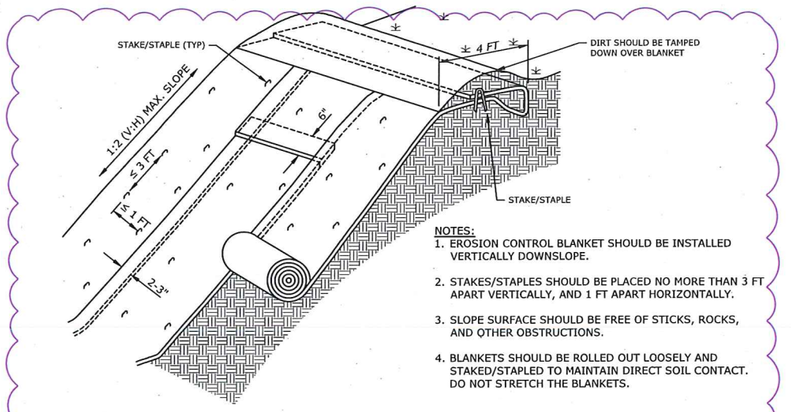
SOIL STOCKPILING

NO SCALE



BITUMINOUS CONCRETE BERM

NO SCALE

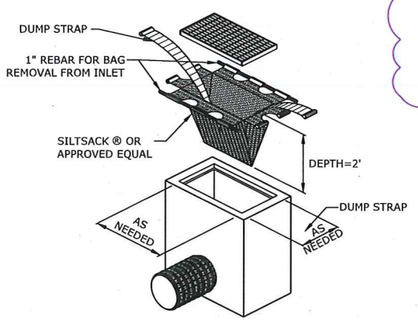


NOTES:

1. EROSION CONTROL BLANKET SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.
2. STAKES/STAPLES SHOULD BE PLACED NO MORE THAN 3 FT APART VERTICALLY, AND 1 FT APART HORIZONTALLY.
3. SLOPE SURFACE SHOULD BE FREE OF STICKS, ROCKS, AND OTHER OBSTRUCTIONS.
4. BLANKETS SHOULD BE ROLLED OUT LOOSELY AND STAKED/STAPLED TO MAINTAIN DIRECT SOIL CONTACT. DO NOT STRETCH THE BLANKETS.

EROSION CONTROL BLANKET

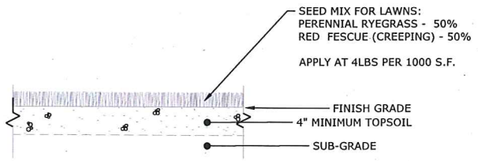
NO SCALE



SILTSACK MANUFACTURED BY:
ACF ENFIRONMENTAL
2831 CARDWELL ROAD
RICHMOND, VIRGINIA 23237

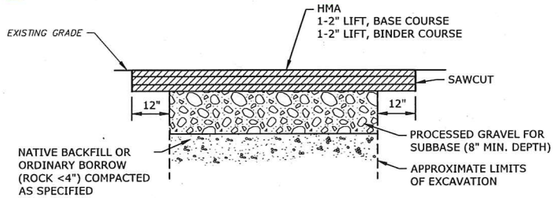
SILTSACK®

NO SCALE



LAWN AREA

NO SCALE



NOTES:

1. ROAD SECTION SHOWN SHALL BE CONSIDERED TYPICAL. FIELD MODIFICATIONS TO MATCH EXISTING CONDITIONS ARE ANTICIPATED.
2. TACK COAST SHALL BE APPLIED AT A RATE OF 0.07 GALLONS PER SQUARE YARD BETWEEN ALL PAVEMENT COURSES.

PERMANENT TRENCH REPAIR

NO SCALE

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01/05/2026

COMMONWEALTH OF MASSACHUSETTS
TAYLOR A LABBE
CIVIL
No. 60240
REGISTERED PROFESSIONAL ENGINEER
01/08/2026

PERMIT SET

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Garelick Farms Flooding Resiliency Improvements

Dandreo Brothers General Contractors

Franklin, MA

MARK	DATE	DESCRIPTION
3	01/2026	PEER REVIEW 2 COMMENTS
2	12/2025	PEER REVIEW COMMENTS

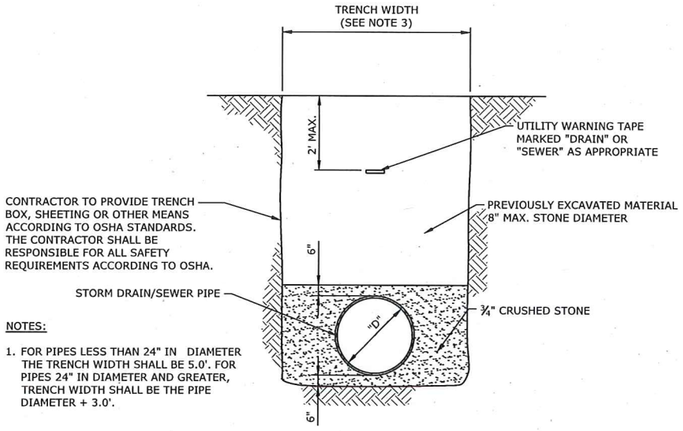
PROJECT NO:	G5099-0003
DATE:	SEPT 2025
FILE:	G5099-0003-C-DETL.dwg
DRAWN BY:	AJW
DESIGNED BY:	AJW
CHECKED BY:	JEC
APPROVED BY:	JEC

DETAILS - 1

SCALE: AS SHOWN

C-501

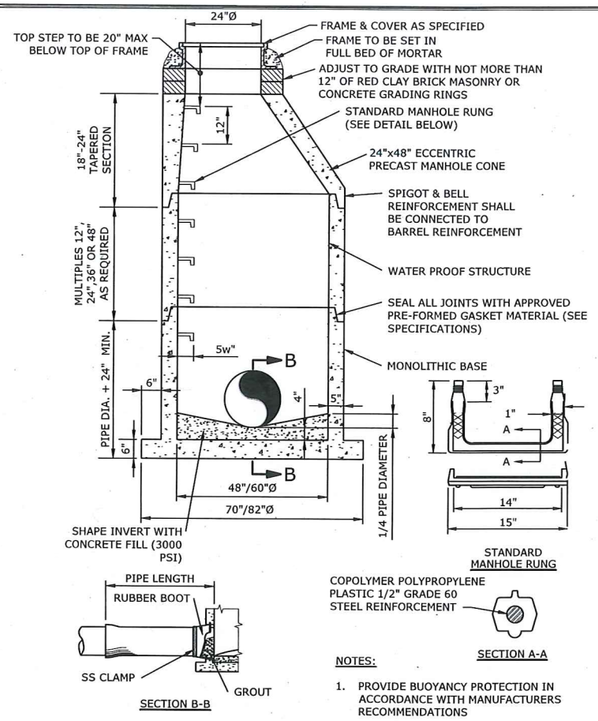
Last Saved: 12/31/2025
Plotted On:Dec 31, 2025-12:58pm By: TLabbe
Tighe & Bond:J:\G\G5099 Garelick Farms\0003 Flood Mitigation Design and Permitting\Drawings\AutoCAD\Sheet\G5099-0003-C-DETL.dwg



NOTES:

1. FOR PIPES LESS THAN 24" IN DIAMETER THE TRENCH WIDTH SHALL BE 5.0'. FOR PIPES 24" IN DIAMETER AND GREATER, TRENCH WIDTH SHALL BE THE PIPE DIAMETER + 3.0'.

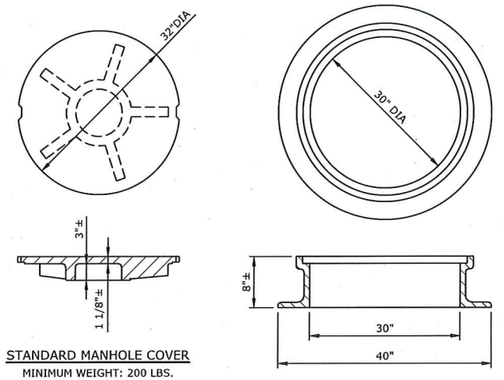
TYPICAL SEWER/DRAIN TRENCH SECTION



NOTES:

1. PROVIDE BUOYANCY PROTECTION IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS

60" PRECAST DRAIN MANHOLE (DMH)



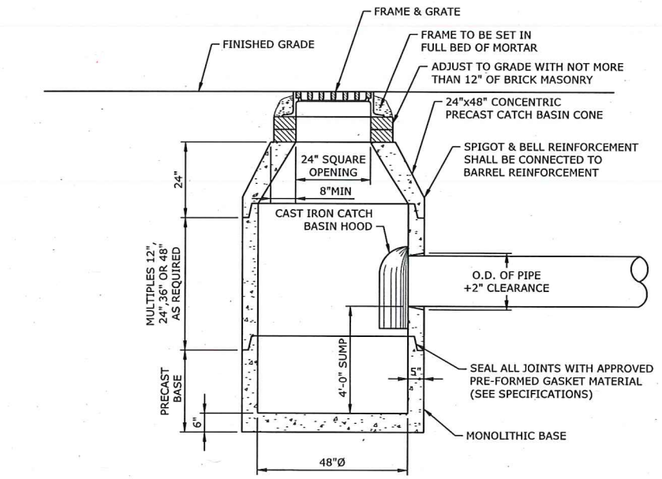
STANDARD MANHOLE COVER
MINIMUM WEIGHT: 200 LBS.

STANDARD MANHOLE FRAME
MINIMUM WEIGHT: 240 LBS.

NOTES:

1. FRAME AND COVER SHALL BE PROVIDED FROM THE SAME MANUFACTURER.
2. LETTERING SHALL BE CAST INTO COVERS AS SPECIFIED.

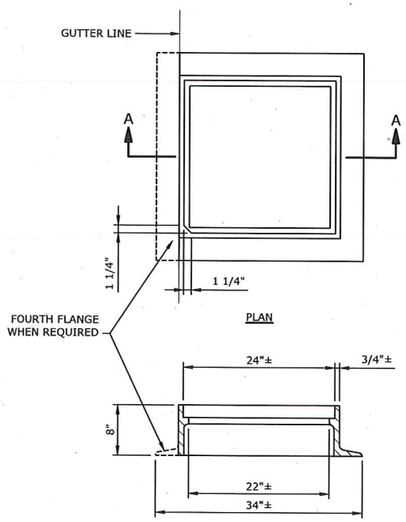
MANHOLE FRAME & COVER



NOTES:

1. FOR USE WITH PVC PIPE, PROVIDE RUBBER BOOT SIMILAR TO MANHOLE DETAIL.
2. FOR USE WITH OTHER TYPES OF PIPE, SEAL JOINT BETWEEN PIPE AND CATCH BASIN WITH GROUT.

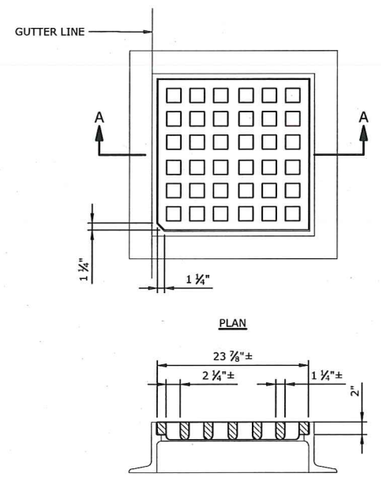
PRECAST CONCRETE CATCH BASIN



NOTES:

1. MINIMUM FRAME WEIGHT:
   4 FLANGE - 295± LBS
   3 FLANGE - 265± LBS
2. MATERIAL - CAST IRON, SEE SPECIFICATIONS
3. FOR ADDITIONAL INFORMATION SEE MHD 201.6.0

CATCH BASIN FRAME



NOTES:
1. MINIMUM WEIGHT OF GRATE - 190 LBS.
2. MATERIAL - CAST IRON, SEE SPECIFICATIONS.

CATCH BASIN GRATE

Tighe&Bond
One University Avenue
Suite 100
Westwood, MA 02090
(781) 708-9820

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09/30/2025

COMMONWEALTH OF MASSACHUSETTS
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09/30/2025

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Garelick Farms Flooding Resiliency Improvements

Dandreo Brothers General Contractors

Franklin, MA

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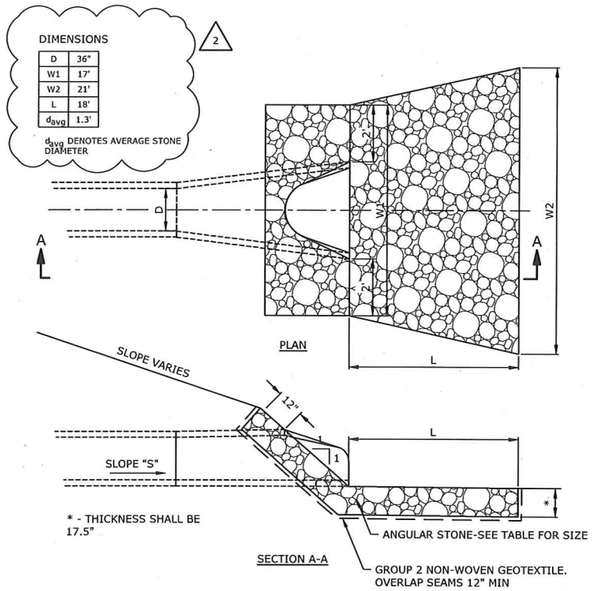
DRAWN BY:	AJW
DESIGNED BY:	AJW
CHECKED BY:	JEC
APPROVED BY:	JEC

DETAILS - 2

SCALE: AS SHOWN

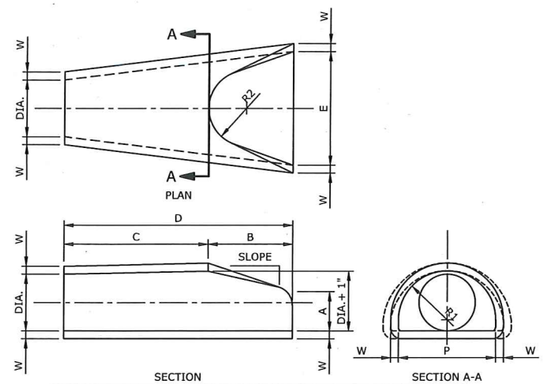
C-502

Last Saved: 9/29/2025
Printed: October 29, 2025 - 12:16pm By: JKby
Tighe & Bond:\\tighebond.com\data\Data\Projects\G\G5099 Garelick Farms\0003 Flood Mitigation Design and Permitting\Drawings\AutoCAD\Sheet\G5099-0003-C-DETL.dwg



STONE OUTLET PROTECTION

NO SCALE

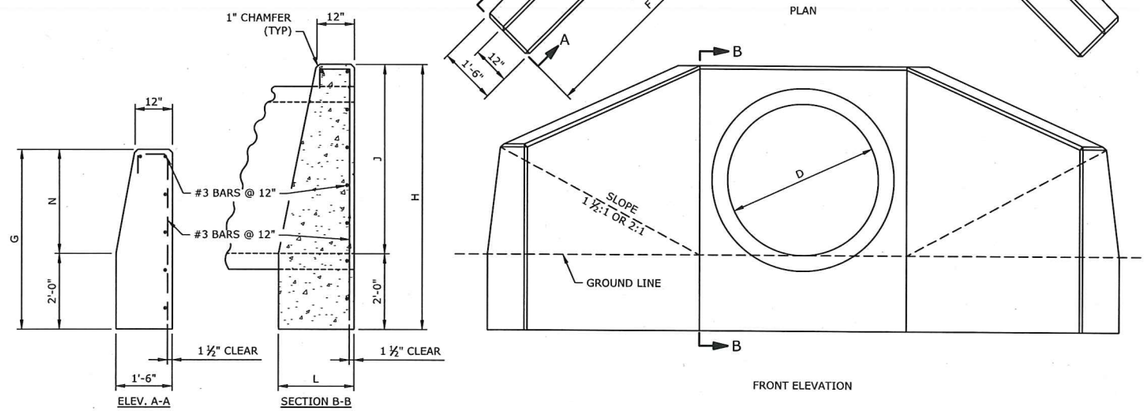


DIA	W	A	B	C	D	E	P	R1	R2	SLOPE
36"	4"	15"	63"	35"	98"	72"	48"	24 1/2"	20"	1V:3H

NOTES:
1. DIMENSIONS SHOWN ARE APPROXIMATE.
2. MATERIALS SHALL CONFORM TO AASHTO M-170 CLASS III PIPE UNLESS DESIGNATED OTHERWISE.
3. FOR ADDITIONAL DETAILS SEE MHD 206.8.0

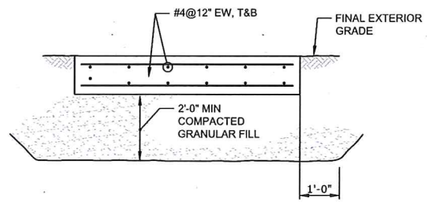
REINFORCED CONCRETE PIPE FLARED END

NO SCALE



CONCRETE ENDS FOR 30" TO 84" PIPE CULVERTS

-	**DETAIL**
-	SCALE:



CONCRETE PAD	24
NO SCALE	C-102

Tighe&Bond
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COMMONWEALTH OF MASSACHUSETTS
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12-03-2025
Wayne E. Bates

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12/03/2025

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Garelick Farms Flooding Resiliency Improvements

Dandreo Brothers General Contractors

Franklin, MA

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2	12/2025	PEER REVIEW COMMENTS

PROJECT NO:	G5099-0003
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DRAWN BY:	AJW
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APPROVED BY:	JEC

DETAILS - 3

SCALE: AS SHOWN

C-503

Erosion & Sediment Control Plan

Franklin, Massachusetts

Garelick Farms Stormwater Improvements

Dandreo Brothers General Contractors

September 2025
Revised December 2025
Revised January 2026

Table of Contents

Table of Contents

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Section 1
Introduction

Stormwater runoff from construction activities can have a significant impact on water quality. As stormwater flows over a construction site, it can pick up pollutants like sediment, debris, and chemicals and transport these to a nearby storm sewer system or directly to a river, lake, or coastal water. Polluted stormwater runoff can harm or kill fish and other wildlife. Sedimentation can destroy aquatic habitat, and high volumes of runoff can cause stream bank erosion. Debris can clog waterways and potentially reach the ocean where it can kill marine wildlife and impact habitat.

Standard 8 of the Massachusetts Stormwater Standards requires:

> "a plan to control construction-related impacts including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented".

The following Erosion and Sediment Control Plan (ESCP) identifies the requirements to comply with Standard 8.

Section 2
Project Information

2.1 Plan Contents

This ESCP was developed for the Garelick Farms Stormwater Improvements Project in Franklin, Massachusetts. This ESCP provides permit-related information to satisfy the requirements of Standard 8 of the Massachusetts Stormwater Handbook.

2.2 Project/ Site Information

Project Name and Address

Project/Site Name:	Garelick Farms Stormwater Improvements
Project Street/Location:	1199 West Central Street
City:	Franklin
State:	Massachusetts
ZIP Code:	02038
County or Similar Subdivision:	Norfolk

2.3 Nature of the Construction Activity

General Description of Project

The project will be performed within the eastern portion of the Garelick Farms property throughout the paved areas to install a 36" diameter stormwater pipe with associated manholes to convey stormwater from the southern portion of the site where flooding regularly occurs to the northeastern wetland located on the site. Two catch basins will be removed with existing piping abandoned and replaced. The two catch basins will be replaced and connected to the new stormwater system.

Size of Construction Project

Total size of the property: 52 acres

Total area expected to be disturbed by the construction activities: 0.5 acres

The maximum area expected to be disturbed at any one time (in acres): 0.5 acres

TABLE 2-4

Pollutant-Generating Activities

Pollutant-Generating Activity	Pollutants or Pollutant Constituents (that could be discharged if exposed to stormwater)
Site work	Soil particles and fines
Paving and construction areas	Petroleum, concrete, vehicle fluids, paints, solvents

Pollutant-Generating Activity	Pollutants or Pollutant Constituents (that could be discharged if exposed to stormwater)
Concrete construction	Concrete
Pavement marking	Paint
Solid waste storage	Construction debris, trash
Equipment use	Hydraulic Oils/fluids
Equipment use	Antifreeze/coolant
Portable toilets	Sewage
Staging areas	Sediment, gasoline, fuel oil, concrete, vehicle fluids, paints, solvents, fertilizers, adhesives, antifreeze/coolant, hydraulic oil/fluid, etc.

2.4 Sequence and Estimated Dates of Construction Activities

The following is an anticipated construction sequence identifying the major components of construction for the project.

2.4.1 Construction Sequence

Estimated Start Date of Construction Activities for this Phase	Spring 2026
Estimated End Date of Construction Activities for this Phase	Summer 2026
Estimated Date(s) of Application of Stabilization Measures for Areas of the Site Required to be Stabilized	Summer 2026
Estimated Date(s) when Stormwater Controls will be Removed	Fall 2026

2.5 Allowable Non-Stormwater Discharges

Water from non-stormwater sources are allowed when properly managed. The following identifies discharge sources anticipated with the project.

TABLE 2-5

List of Allowable Non-Stormwater Discharges Present at the Site

Type of Allowable Non-Stormwater Discharge	Likely to be Present at Your Site?	Location on Site
Discharges from emergency fire-fighting activities	☒ YES ☐ NO	Fire hydrants on site
Fire hydrant flushings	☐ YES ☒ NO	
Landscape irrigation	☒ YES ☐ NO	Vegetated areas on site

Waters used to wash vehicles and equipment[1]	☐ YES ☒ NO	
Water used to control dust	☐ YES ☒ NO	
Potable water including uncontaminated water line flushings	☐ YES ☒ NO	
External building wash down, provided soaps, solvents, and detergents are not used, and external surfaces do not contain hazardous substances (e.g. see Appendix A) (e.g. paint or caulk containing PCBs)	☐ YES ☒ NO	
Pavement wash waters[2]	☐ YES ☒ NO	
Uncontaminated air conditioning or compressor condensate	☐ YES ☒ NO	
Uncontaminated, non-turbid discharges of ground water or spring water	☐ YES ☒ NO	
Foundation or footing drains[3]	☐ YES ☒ NO	
Construction dewatering water[4]	☒ YES ☐ NO	Throughout site, from excavated trenches*

[1]provided that there is no discharge of soaps, solvents, or detergents used for such purposes

[2]provided spills or leaks of toxic or hazardous substances have not occurred (unless all spill material has been removed) and where soaps, solvents, and detergents are not used. You are prohibited from directing pavement wash waters directly into any water of the U.S., storm drain inlet, or stormwater conveyance, unless the conveyance is connected to a sediment basin, sediment trap, or similarly effective control;

[3]where flows are not contaminated with process materials sucks as solvents or contaminated ground water

[4]discharged in accordance with applicable regulations

* **No** untreated or contaminated groundwater will be discharged to wetlands or waterways. Excess water will be discharged overland in upland areas and allowed to naturally infiltrate in well-drained soils, or discharged to wetlands or streams only after passing through filtration sacks or similar devices.

2.6 Site Maps

Site plans have been prepared which provide the Contractor will the minimum requirements for the prevention of erosion and sedimentation due to construction impacts. Erosion controls are depicted on the site plans, provided under separate cover. The site plans provide locations of perimeter erosion controls, inlet controls, and construction-period stormwter management features such as sediment traps.

Section 3
Erosion and Sediment Controls

The Contractor must implement erosion and sediment controls in accordance with the following requirements to minimize the discharge of pollutants in stormwater from construction activities. This project also includes site specific controls and permit conditions which may take precedent and are not included in the following descriptions. The Contractor shall also comply with the requirements in the project's permits.

3.1 Perimeter Controls

Provide perimeter controls to prevent sediment from entering and compromising the adjacent storm drain system.

General

Roadways and storm drainage components adjacent to the proposed project area will be protected by a row of erosion control barriers. The erosion control barriers consist of compost filter tubes/socks placed in a fashion that restricts the contractor(s) to the areas necessary to conduct the work and will generally define the limits of work. The locations of these barriers are shown on the project drawings.

Specific Perimeter Controls

Perimeter Control Description

- Perimeter controls include the installation of a compost filter tubes around the perimeter of the site. Perform work in accordance with the ESCP.

Installation

- All erosion control measures shall be installed prior to the start of any earth-disturbing activities.
- The Contractor shall maintain a reserve supply of covered and protected erosion control devices on-site for emergency use.
- Removal of erosion controls shall not occur until all disturbed areas are fully stabilized and approval for removal has been granted by the Engineer and Conservation Commission.

Maintenance Requirements

- Erosion control inspections shall occur weekly and after significant rain events, in accordance with the Town of Franklin Conservation Commission Regulations. Inspections and maintenance activities shall be logged and submitted weekly to the Conservation Office, noting the condition of the controls and any corrective actions taken.
- The contractor(s) will be required to maintain a reserve supply of erosion control barriers on-site to make repairs, as necessary.
- Perimeter control shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any signs of erosion or sedimentation below them, and any repairs shall be made immediately. If there are signs

of undercutting at the center or the edges, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam.

- Should the fabric on a barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be replaced promptly.
- Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximated 1/3 the height of the barrier.

At the conclusion of the project, the erosion control barriers will be removed and properly disposed off-site following the stabilization of disturbed areas.

3.2 Sediment Track-Out

General

It is the Contractor's responsibility to take measures to prevent tracking of sediment from the project site. It is also the Contractor's responsibility to take measures to prevent tracking of sediment from any staging and material storage area. A stone tracking pad and street sweeping apparatus shall be used as necessary to minimize the track-out of sediment onto adjacent streets, other paved areas, and sidewalks from vehicles exiting the construction site.

Specific Track-Out Controls

Track-Out Controls Description

- Stone aggregate tracking pad
- Street sweeping

Installation

- Sediment track out controls to be installed by the Contractor include a stone aggregate tracking pad with an underlying geotextile fabric. The pad shall be constructed in accordance with the ESCP.

Maintenance Requirements

- The site exit shall be maintained in a condition which will prevent tracking of sediment onto public right-of-way. When washing is required, it shall be done in an area stabilized with aggregate which drains into a sediment trapping controls.
- If sediment is tracked out from the site to the surface of off-site streets, other paved areas, and sidewalks, the Contractor shall remove the deposited sediment by the end of the same work day in which the track-out occurs.

3.3 Stockpiled Sediment or Soil

General

Temporary soil stockpiles shall be surrounded by compost filter tubes and shall be stabilized by covering or temporary erosion control seeding. Stockpiles are to be located as far as possible from any surface water.

Specific Stockpile Controls

Description

- Temporary stockpiles of excavated soil may be present at the site as construction progresses.

Installation

- Install a sediment barrier consisting of compost filter tubes along downgradient perimeter areas of stockpiles.
- For piles that will be unused for 14 or more days, temporary stabilization with erosion control seeding shall be used if perimeter controls and/or temporary covering are not sufficient to prevent sediment migration.

Maintenance Requirements

- Do not hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance (unless connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or surface water.

3.4 Minimize Dust

General

The Contactor shall be responsible for the control of dust throughout the construction period. Dust control methods shall include, but be not limited to, sprinkling water or calcium chloride on exposed areas, covering loaded dump trucks leaving the site, and temporary mulching exposed soil areas. Dust control measures shall be utilized to prevent the migration of dust from the site to abutting areas.

Specific Dust Controls

Description

- Prevent dust from becoming a nuisance or hazard. During construction, excavated material and open or stripped areas are to be policed and controlled to prevent spreading of the material.
- Dust control measures shall be utilized to prevent the migration of dust from the site to abutting areas.
- Ensure that the existing equipment, facilities, and occupied space adjacent to or nearby areas of the work do not come in contact with dust or debris as a result of concrete demolition, excavation or surface preparation.

Installation

- Dust control methods shall include, but be not limited to, sprinkling water on exposed areas, using calcium chloride, covering loaded dump trucks leaving the site, and temporary mulching.
- Use a mechanical street sweeper daily.

Maintenance Requirements

- During the work on-site, daily all paved road and driveway surfaces shall be scraped and broomed free of excavated materials on a daily basis. Prior to sweeping, or as needed

during the work day, the surfaces shall be hosed down or otherwise treated to eliminate active or potential dust conditions and the natural road or wearing surface shall be exposed.

3.5 Minimize the Disturbance of Steep Slopes

General

All slopes greater than 15% during the regular construction season are to have slope stabilization measures. This applies to all slopes greater than 8% after October 1st.

Specific Steep Slope Controls

- Where slopes greater than 3:1 will be created, synthetic erosion control fabric is to be utilized in these areas to prevent erosion until permanent vegetation is established.

3.6 Topsoil/Loam Areas

General

All areas not to be paved or otherwise treated shall receive 4-inch loam and seed. The salvaging of existing loam and topsoil is not anticipated due to the urban nature of the site.

Specific Topsoil/Loam Area Controls

Description

- Erosion of topsoil/ loam areas will be controlled by providing temporary and perminant grass cover.
- Where slopes greater than 3:1 will be created, synthetic erosion control fabric will be utilized to prevent erosion until permanent vegetation is established.

Installation

- Temporary vegetative cover shall be provided to stabilize the site in areas where additional construction activity will not occur for more than 14 calendar days.

Maintenance Requirements

- Seeding shall be inspected periodically and at a minimum 95% of the soil surface should be covered by vegetation. If any evidence of erosion is apparent, repairs shall be made and additional measures shall be used to prevent further erosion.
- Compost filter tubes shall be applied immediately after seeding.

3.7 Soil Compaction

General

In areas where final vegetative stabilization is proposed, the Contractor shall prevent excessive compaction by:

- Restricting vehicle and equipment use in these locations to avoid excessive soil compaction; or

- Prior to seeding or planting areas of exposed soil that have been compacted, use techniques that aerates the soils resulting in conditions that will support vegetative growith.

3.8 Storm Drain Inlets

General

Provide catch basin inlet protection as per construction drawings and specifications in all catch basins within the vicinity of the earth disturbing activities to protect the stormwater management system from high sediment loads and high velocities, while disturbance due to construction is occurring in the drainage area.

Specific Storm Drain Inlet Controls

Description

- Storm Drain Inlet Controls include the installation of Silt Sacks
- Refer to the ESCP for inlet control locations.

Installation

- Refer to manufacturer recommended specifications and instillation instructions.

Maintenance Requirements

- Silt sacks shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired or replaced as needed immediately.
- Sediment deposits should be removed after each storm event. They must be cleaned when deposits reach approximated 1/3 the height of the barrier.
- The Contractor shall remove the deposited sediment and make any repairs by the end of the same work day in which the sediment is observed or by the end of the next work day if observation occurs on a non-work day.

3.9 Sediment Traps

General

Permanent sediment basins are not proposed as part of the final stormwater management system, however, temporary sediment basins or sediment traps may be used during construction to retain runoff and settle out particles prior to discharge from the site.

Specific Sediment Basin/Sediment Trap Controls

Description

- Temporary sediment basins or sediment traps may be excavations or bermed detention areas on site with stabilized discharges.

Installation

- As required due to site conditions and activities.

Maintenance Requirements

- Contractor shall periodically remove sediments and dispose of them in an appropriate location. Discharge locations shall be inspected regularly and stabilized as necessary.

3.10 Dewatering Practices

General

Dewatering is anticipated for this project. Standard dewatering measures will be employed. No untreated groundwater will be discharged to wetlands or waterways. Excess water will be discharged overland in upgradient areas and allowed to naturally infiltrate or discharged to the drainage system only after passing through filtration sacks or similar devices.

Specific Dewatering Practices

Dewatering Practice Description

- Provide, operate and maintain adequate pumping, diversion and drainage facilities in accordance with the approved dewatering plan to maintain the excavated area sufficiently dry from groundwater and/or surface runoff so as not to adversely affect construction procedures nor cause excessive disturbance of underlying natural ground. Locate dewatering system components so that they do not interfere with construction under this or other contracts.
- Install erosion/sedimentation controls for velocity dissipation at point discharges onto non-paved surfaces.

Installation

- Install sand and gravel, or crushed stone, filters in conjunction with sumps, well points, and/or deep wells to prevent the migration of fines from the existing soil during the dewatering operation.
- Transport pumped or drained water without interference to other work, damage to pavement, other surfaces, or property. Pump water through a silt filter bag prior to discharge to grade or drainage system.
- Do not discharge water into any separated sanitary sewer system.

Maintenance Requirements

- Repair any damage resulting from the failure of the dewatering operations and any damage resulting from the failure to maintain all the areas of work in a suitable dry condition.
- Take actions necessary to ensure that dewatering discharges comply with permits applicable to the Project. Dispose of water from the trenches and excavations in such a manner as to avoid public nuisance, injury to public health or the environment, damage to public or private property, or damage to the work completed or in progress.

3.11 Site Stabilization

General

Initiate site stabilization measures immediately whenever earth-disturbing activities have permanently ceased or will be temporarily suspended on any portion of the site for more than 14 days.

Complete the stabilization activities within 14 days after the permanent or temporary cessation of earth-disturbing activities. Temporary paving of disturbed areas of existing roads should be completed at a minimum at the end of each week.

Use the following stabilization practices to protect exposed soil from erosion and prevent sediment movement.

3.11.1 Seeding

Installation

- When construction has temporarily or permanently ceased, seeding shall occur immediately in accordance with the project specifications.

Maintenance Requirements

- Periodic inspections shall occur once a week and after every rainstorm of 0.25 inches or greater until a minimum of 70% of the soil surface is covered by vegetation.

3.11.2 Mulching

Installation

- When construction has temprorarily or permanently ceased, mulching shall occur immediately, as required, for erosion control while vegetation is being established.

Maintenance Requirements

- Periodic inspections shall occur once a week and after every rainstorm 0.25 inches or greater.

3.11.3 Erosion Control Mats or Blankets

Installation

- When construction has temprorarily or permanently ceased, erosion control blanket installation shall occur immediately on slopes greater than 3:1, or as required, for erosion control while vegetation is being established.

Maintenance Requirements

- Periodic inspections shall occur once a week and after every rainstorm 0.25 inches or greater.

Section 4
Pollution Prevention Standards

A clean and orderly construction site will reduce the opportunity for pollutants to enter the stormwater runoff stream. The following identifies sources of pollution anticipated on a typical construction site and preventative measures to avoid pollution.

4.1 Potential Sources of Pollution

TABLE 4-1

Construction Site Pollutants

Pollutant-Generating Activity	Pollutants or Pollutant Constituents	Location on Site
Site work	Soil particals and fines	Where disturbance is proposed
Paving and construction areas	Petroleum, concrete, vehicle fluids, paints, solvents	Where paving and construction is proposed
Disinfection of water mains	Chlorine, dechlorination chemicals	Where water mains are proposed
Concrete construction	Concrete	Where concrete is proposed
Pavement marking	Paint	Where pavement markings are proposed
Solid waste storage	Construction debris, trash	In dumpster locations
Fertilizing	Fertilizers	In areas of proposed seeding
Equipment use	Hydraulic Oils/fluids	Leaks/broken hoses from equipment
Equipment use	Antifreeze/coolant	Leaks/broken hoses from equipment
Portable toilets	Sewage	Where portable toilets are located
Staging areas	Sediment, gasoline, fuel oil, concrete, vehicle fluids, paints, solvents, fertilizers, adhesives, antifreeze/coolant, hydraulic oil/fluid, etc.	

4.2 Spill Prevention and Response

- Manufacturer's recommended methods for cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and clean up supplies.

- Materials and equipment necessary for spill cleanup will be kept in the material storage areas on site. Equipment and materials will include but not be limited to brooms, dustpans, mops, rags, gloves, goggles, kitty litter, sand, sawdust and plastic or metal trash containers specifically for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with hazardous substances.
- Spills of toxic or hazardous material will be reported to the appropriate state or local government agency regardless of size.
- The Spill Prevention Plan will be adjusted to include measures to prevent this type of spill from recurring and how to cleanup the spill if it recurs. A description of the spill, its cause and the cleanup measures will be included.
- The site superintendent responsible for day to day operations will be the Spill Response Coordinator (SRC). The SRC is responsible for decisive actions in the event of a spill at the facility. The SRC will supervise efforts to provide immediate containment of the spill to prevent a more difficult cleanup situation. Cleanup crews will utilize proper spill cleanup materials and employ safe work practices.

4.2.1 Federal and State Spill Notification

In accordance with 310 CMR 40.0333, the SRC shall notify the Massachusetts Department of Environmental Protection (Central Region) - (508)-792-7650, the Local Emergency Planning Committee (LEPC) and any other authorities or agencies within two hours if an accident or other type of incident results in a release to:

- Land
  - 10 Gallons for more Oils (PCB<500 ppm)
  - 1 Gallon or more Oils (PCB ≥500 ppm)
- Waterways
  - Any quantity of Oils
- Or, triggers the exposure to toxic chemical levels as listed in 301 CMR 40.1600, Revised Massachusetts Contingency Plan

The SRC shall notify the National Response Center (NRC) at **(800) 424-8802** where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with Part 2.3.3.4c and established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurs during a 24-hour period.

In either event, the SRC will work with state and federal agencies to ensure that all appropriate forms and reports are submitted in a timely manner.

- Note: Trigger volumes for other chemical spills vary. Contact the DEP or a Licensed Site Professional (LSP) for specific guidance on reporting thresholds and requirements for other chemicals.

4.2.2 Local Notification

The following local agencies will be called to provide emergency assistance at the facility on the judgment of the SRC:

TABLE 4-2

Emergency Assistance Notification

Fire Department 911 or (508) 528-2323	Police Department 911 or (508) 528-1212
Hospital: Milford Regional Medical Center (508) 473-1190	Department of Public Works: (508) 553-5500

4.3 Fueling and Maintenance of Equipment or Vehicles

General

Efforts shall be made to perform equipment/vehicle fueling and maintenance off-site. If fueling and/or maintenance of equipment of vehicles is performed on site, the following pollution prevention practices must be provided.

Specific Pollution Prevention Practices

- Site contractor/project manager shall provide an onsite vehicle fueling and maintenance area that is clean and dry.
- If possible keep area covered.
- Keep a spill kit at the fueling and maintenance area.
- Vehicles shall be inspected regularly for leaks and damage.
- Use drip pans, drip cloths or absorbent pads when replacing spent fluid.

4.4 Washing of Equipment and Vehicles

General

Efforts shall be made to perform equipment/vehicle washing and maintenance off-site. If washing of equipment and vehicles is performed on site, the following pollution prevention practices must be provided to minimize the discharge of pollutants.

Specific Pollution Prevention Practices

- Site contractor/project manager shall provide a proper washing area.
- Discharges from washing areas shall be infiltrated or diverted into sanitary sewer system unless no soaps or detergents are used.

- If soaps, detergents or solvents are stored onsite over must be provided to prevent these detergents from coming into contact with rainwater.

4.5 Storage, Handling, and Disposal of Construction Products, Materials, and Wastes

4.5.1 Building Products

- Site contractor/project manager shall designate a waste collection area on the site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a water body.
- Ensure that containers have lids so they can be covered before periods of rain, and keep containers in a covered area whenever possible.
- Schedule waste collection to prevent the containers from overfilling.
- Clean up spills immediately. For hazardous materials, follow cleanup instructions on the package. Use an absorbent material such as sawdust or kitty litter to contain the spill.
- During the demolition phase of construction, provide extra containers and schedule more frequent pickups.
- Collect, remove, and dispose of all construction site wastes at authorized disposal areas.

4.5.2 Pesticides, Herbicides, Insecticides, Fertilizers, and Landscaping Materials

- Store new and used materials in a neat, orderly manner in their appropriate containers in a covered area. If storage in a covered area is not possible, the materials shall be covered with polyethylene or polypropylene sheeting to protect them from the elements.
- Storage area should include precautions to contain any potential spills.
- Immediately contain and clean up any spills with absorbent materials.

4.5.3 Diesel Fuel, Oil, Hydraulic Fluids, Other Petroleum Products, and Other Chemicals

- Store new and used petroleum products for vehicles in a neat, orderly manner in their appropriate containers in a covered area. If storage in a covered area is not possible, the materials shall be covered with polyethylene or polypropylene sheeting to protect them from the elements.
- Storage area should include precautions to contain any potential spills.
- Immediately contain and clean up any spills with absorbent material.
- Have equipment available in fuel storage areas and in vehicles to contain and clean up any spills that occur.

4.5.4 Hazardous or Toxic Waste

- Store new and used materials in a neat, orderly manner in their appropriate containers in a covered area. If storage in a covered area is not possible, the materials shall be covered with polyethylene or polypropylene sheeting to protect them from the elements.

- Storage areas should include precautions to contain any potential spills.
- Immediately contain and clean up any spills with absorbent materials.
- Have equipment available in fuel storage areas and in vehicles to contain and clean up any spills that occur.
- To prevent leaks, empty and clean hazerdous waste containers before disposing of them.
- Never remove the original product label from the container because it contains important safety information. Follow the manufacturer's recommended method of disposal, which should be printed on the label.
- Never mix excess products when disposing of them, unless specifically recommended by the manufacturer.

4.5.5 Construction and Domestic Waste

- All materials shall be collected and stored in securely lidded receptacles, no construction waste materials will be buried. Clean up immediately if containers overflow.

4.5.6 Sanitary Waste

- Portable sanitary units will be provided throughout the course of the project for use by the site contractor/project manager's employees. A licensed sanitary waste management contractor will regularly collect all sanitary waste from the portable units. Position portable toilets so that they are secure and will not be tipped or knocked over.

4.6 Washing of Applicators and Containers used for Paint, Concrete or Other Materials

- The contractors should be encouraged where possible, to use washout facilities at their own plant or dispatch facility from stucco, paint, concrete, form release oils, curing compounds, and other construction materials.
- If washout of these materials in done on site:
  - Direct all washwater into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation.
  - Handle washout or cleanout wastes as follows:
    - Do not dump liquid wastes in the storm sewers
    - Dispose of liquid wastes in accordance with applicable regulations
    - Remove and dispose of hardened concrete waste consistent with your handling of other construction wastes in Section 5.5.
  - Attempts should be made to locate washout area as far away as possible from surface waters and storwmater inlets or conveyances, and to the extend practicable, designate areas to buse for these activities and conduct such activities only in these areas.
- Inspect washout facilities daily to detect leaks or tears and to identify when materials need to be removed.

4.7 Fertilizers

If fertilizers are to be used on site, the following requirements shall be followed:

- Store new and used materials in a neat, orderly manner in their appropriate containers in a covered area. If storage in a covered area is not possible, the materials shall be covered with polyethylene or polypropylene sheeting to protect them from the elements.
- Storage area should include precautions to contain any potential spills.
- Immediately contain and clean up any spills with absorbent materials.
- Apply at a rate and in amounts consistent with manufacturer's specifications, or document departures from the manufacturer's specifications.
- Apply at the appropriate time of year for the site, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth
- Avoid applying before heavy rains that could cause excessive nutrients to be discharged
- Never apply to frozen ground
- Never apply to stormwater conveyance channels with flowing water
- Follow all federal, state, tribal, and local requirements regarding fertilizer application.

January 8, 2025

Breeka Li Goodlander, PWS, CERPIT
Conservation Director
Town of Franklin Conservation Commission
355 East Central Street
Franklin, MA 02038

Re: 1199 West Central Street – Garelick Farms
MassDEP File No. CE 159-1322
Response to Peer Review 2

Dear Ms. Goodlander:

On behalf of the Applicant, Dandreo Brothers General Contractors, Tighe & Bond is submitting the following response to peer review comments in support of the proposed Drainage Resiliency Improvement Project at 1199 West Central Street in Franklin, Massachusetts at the existing Garelick Farms facility. The peer review of the Notice of Intent (NOI) submitted to the Franklin Conservation Commission was prepared by BETA, in a letter dated November 20, 2025. Tighe & Bond provided a response to comments, accompanied by supporting documentation and plan changes in a package to the Commission dated December 4, 2025. BETA provided a response to that package in correspondence dated December 30, 2025. The following letter identifies the comments presented in the follow-up peer review letter. Any comment requiring additional discussion is provided in bold lettering.

Plan and General Comments

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

Tighe & Bond Response (T&B): MassDEP issued a file number the same day as BETA's letter without comment. The File No. is CE 159-1322.

A2. The following elements are missing from the provided Plan Set:

a. A north arrow reference should be provided on the plans per Bylaw Regulations Section 7.18.1.3.

T&B: This information has been added to the plan set.

BETA2: Comment addressed.

b. Existing and proposed vegetation referenced in Bylaw Regulation Section 7.18.1.5 and 7.18.1.6 should be included on the plans, including individual trees/shrubs with a diameter greater than 1" proposed for removal. It is BETA's understanding that the Commission generally increases the size threshold for tree location based on the Project and therefore defers to the Commission on this matter. The existing and proposed tree line should be shown, and the proposed trees located along the limits of trenching should be qualified as being either removed or retained.

T&B: This information has been added to the plan set.

BETA2: Comment remains. The existing/proposed conditions tree lines are not depicted along the northern portion of the Site adjacent to the 1A Wetland Series where trees are present. The existing conditions plan appears to show a tree line in this area, but it does not encompass the locations of the individual trees that are depicted. The site plans depict a tree line in this area with a proposed conditions line weight, but it does not appear to correlate with the proposed clearing for the headwall. The tree lines should be revised as appropriate.

T&B2: The existing/proposed tree lines have been added to the project plans in the area of the proposed drainage pipe and outfall installation. A note has been added on sheet C-102 to indicate that brush will be cleared within the limit of work in the area. The proposed condition tree line referred to in BETA's second round review comment appears to be the revision cloud used to indicate changes throughout various iterations of plan sets. To clarify the difference, revision clouds have been changed to purple.

c. A Construction Sequence with all proposed activities within Jurisdictional Areas should be provided on the plans per Bylaw Regulations Section 7.18.1.14.

T&B: This information has been added to the plan set on sheet G-003.

BETA2: Comment addressed.

d. A PLS stamp should be provided on the existing conditions plan.

T&B: The existing conditions plan was not based solely on a land survey provided by a Professional Land Surveyor. Additional data sources, including site plans provided by Garelick Farms, drone survey, partial survey of the existing drainage infrastructure, ground-penetrating radar information, and MassDOT plans were referenced in the development of site plans. We request a waiver of this requirement.

BETA2: BETA defers to the Commission on the requirement to include a PLS stamp on the existing conditions plan.

e. A PLS stamp should be provided on the existing conditions plan.

T&B: The existing conditions plan was not based solely on a land survey provided by a Professional Land Surveyor. We request a waiver of this requirement.

No response from BETA.

f. A survey benchmark should be provided on the plans.

T&B: A benchmark has been added to sheets C-102 and C-201.

BETA2: Comment addressed.

Resource Area Boundary Comments

W1. BETA completed a review of the onsite Bank/MAHW and BVW delineation. Bank/MAHW is apparent based on topographic relief and has been accurately delineated. In addition, BETA concurs with the BVW delineation depicted on the plans and located along the 1B/1C Series stream. Generally, the BVW was observed at the toe of slope, where vegetation communities changed from FACU/FAC species to FAC/FACW/Obligate species. Soils within the wetland were observed to have apparent depletions/redoximorphic concentrations and qualifies as a Depleted Under Dark Surface indicator. No other additional areas of BVW were observed at the Site within 100 feet of the proposed work.

T&B: No response required.

Construction Comments

W2. Erosion and sedimentation controls should be depicted on either side of the limits of work throughout the Buffer Zone / RA and downgradient of the proposed plantings within Buffer Zone / RA.

T&B: Erosion and sediment controls have been added to the plan set per the above recommendations.

BETA2: Erosion controls are now depicted along the limits of work throughout the Buffer Zone/RA in locations that will prevent sedimentation to Resource Areas. The Commission could consider including a Special Condition requiring additional erosion controls to be kept on Site to ensure that additional controls can be installed if deemed necessary.

T&B2: The Applicant is amenable to such a condition.

W3. Proposed erosion and sedimentation controls include use of silt fence and straw wattles. Silt fence and straw are not permitted erosion control measures in the Town of Franklin (Pg. 13 of Town of Franklin Best Development Practices Guidebook). The Applicant should coordinate with the Conservation Commission to determine the appropriate erosion control measures for the Site. Twelve (12)-inch diameter compost filter tubes may be an appropriate option commensurate with the scope of the Project.

T&B: Page 13 of the Town of Franklin Best Development Practices Guidebook states that "The Conservation Commission only allows the use of straw wattles and filter mitts as erosion control barriers." The erosion control detail has been revised to remove the silt fence component of the erosion control system, as reflected on sheet C-501, and straw wattles are proposed for erosion and sediment control.

BETA2: BETA defers to the Commission on the approval of the use of straw wattles as erosion controls, as they have discouraged their use in recent years. The use of silt fence and hay/straw bales is referenced within the soil stockpile detail on page C-501 within Section 3.3 of the O&M Plan and should be revised accordingly.

T&B2: The detail on sheet C-501 has been revised to indicate the use of compost filter tubes, and the O&M Plan has been updated to remove references to straw wattles.

W4. Resource Area impacts (both permanent and temporary) should be clearly depicted on the plans. The Applicant should confirm if Bank impacts are required as work (including limits of work/erosion and sedimentation control installation) appears to overlap with Bank along flag 1F- 3.

T&B: The project plans show all permanent and temporary work proposed within resource area buffer zones. Erosion controls are the only impacts proposed within 1 foot of the Bank in the area referenced above and impacts to the Bank itself are not anticipated as a result of erosion control installation and removal. Impacts associated with grading in the vicinity will be limited to areas upland of the resource area. Direct impacts to the Bank are not anticipated.

BETA2: This comment has been addressed with regard to potential Bank impacts. However, the depiction of Resource Area impacts on the plans has not been addressed. In lieu of callouts, the Applicant could consider including the impacts table from the comment response letter on the plans.

T&B2: A summary of resource area impacts table has been added to the plans on sheet C-201.

W5. The limit of existing pavement and vegetated shoulder should be labeled on the plans adjacent to the location where work is proposed.

T&B: Labels have been added to the Site Plans for the limits of existing pavement and vegetative shoulders. See sheet C-102.

BETA2: Comment addressed.

Mitigation Comments

W6. The Applicant should state if vegetation will be removed within Resource Areas or Buffer Zone to complete the Project. Vegetation was observed in the locations where the headwall, outfall, and portions of the pipe are proposed.

T&B: Selective clearing and grubbing of vegetation will be required within Buffer Zone for the installation of the proposed headwall, outfall, and portions of proposed pipe. Removal of trees is not anticipated to be required for this work. A callout has been added to the drawings on sheet C-201 to identify this work.

BETA2: Comment addressed.

W7. Provide specifications of the proposed seed mixture(s) for stabilization of disturbed areas within Buffer Zone and RA on the plans.

T&B: The specifications of the proposed seed mixture for stabilization of disturbed areas within Buffer Zone and RFA are depicted on sheet C-201 of the revised site plans.

BETA2: Comment addressed.

W8. A Planting List with information including species of plantings and number of plantings proposed at the Site should be included on the plans.

T&B: A Planting List with information including species and number of plantings proposed at the Site is depicted on sheet C-201 of the revised site plans.

BETA2: Comment addressed.

W9. A monitoring protocol should be submitted by the Applicant for the proposed mitigation plantings that includes monitoring frequency, corrective actions, metrics for success, and reporting schedule. These plantings (including areas of seeding) should be monitored for two (2) growing seasons to confirm successful establishment.

T&B: A Monitoring Protocol has been prepared and is provided in Attachment 2.

BETA2: BETA recommends the Commission include a Special Condition requiring plantings to be replaced if observed as dead/dying for more than one growing season.

T&B2: The Applicant is amenable to such a condition; however, the Applicant respectfully requests that such a condition be limited to a defined establishment period. The Applicant proposes that replacement be required for plantings that fail within two (2) growing seasons following installation, as is consistent with standard practice for restoration plantings.

W10. Invasive species including Norway maple (Acer platanoides), bittersweet (Celastrus orbiculatus), Japanese stiltgrass (Microstegium vimineum), and callery pear (Pyrus calleryana) were observed within the area where the pipe and outfall are proposed within the 100-foot Buffer Zone. The Applicant should provide information on how invasive species will be managed to ensure no further spread occurs during and after construction, and that any post-construction restoration is successful.

T&B: The proposed Monitoring Protocol provided in Attachment 2 addresses the proposed invasive species management within the footprint of the proposed pipe and outfall installation (within the 100-foot Buffer Zone).

BETA2: The Applicant has provided an invasive species control plan that outlines proposed control methods during and post-construction. The Applicant should confirm if herbicide treatment will be used. BETA defers to the Commission on the approval of this plan.

T&B2: No response required.

WPA Performance Standards Comments

The Project proposes permanent impacts to the onsite Riverfront Area and 100-foot Buffer Zone. The Performance Standards at 310 CMR 10.58(5) are being referenced for compliance with RA Performance Standards due to the Site's degraded/previously developed status.

W11. Erosion controls, grading, and the limit-of-work are depicted within 1 foot of the Banks delineated as 1F-1 through 1F-3 and 1E-4. The Applicant should state if Bank impacts are proposed as a result of construction of the headwall. If impacts are not proposed the Applicant should provide information on how Bank and LUW will be protected during construction.

T&B: Erosion controls are the only impacts proposed within 1 foot of the Bank in the area referenced above and impacts to the Bank itself are not anticipated as a result of erosion control installation and removal. Earthwork and grading are proposed at a minimum distance of 3.5 feet from the Top of Bank in this area, and impacts associated with this work will be limited to areas upland of the resource area. Impacts to the Bank are not anticipated as a result of grading in the vicinity.

BETA2: The Applicant has provided reasonable surety with this response that Bank impacts will be avoided; comment addressed.

Riverfront Area (310 CMR 10.58)

W12. Work within RA includes the installation of the headwall and installation of plantings along the southern side of the stream and within the Buffer Zone Mitigation Area. The Applicant should confirm if impacts associated with installation of plantings have been quantified as a part of the RA and Buffer Zone impacts.

T&B: The Massachusetts WPA Riverfront Area General Performance Standards 10.58(4)(d)(1)(d) states "the calculation of square footage of alteration shall exclude… any area of restoration within the riverfront area." We are of the opinion that restoration plantings themselves don't count against the maximum square footage threshold for work in RFA and aren't considered a new or net alteration. As such, impacts associated with the installation of plantings have not been quantified as a part of the RA impacts, but are included in the revised Buffer Zone impacts included herein as Attachment 3.

BETA2: Upon further review, BETA acknowledges and agrees with TB's approach to quantifying RA impacts. Comment addressed.

W13. The Applicant should provide further information regarding the location where restoration of RA is proposed, including existing conditions (e.g., vegetative community) to ensure that restoration is in-kind with existing conditions.

T&B: The proposed RA restoration is located adjacent to the 1-F-F flag series. This portion of the site and existing RA is currently landscaped and mulched. Existing vegetation includes a mix of non-native and native

small shrubs and perennials. The proposed installation of inkberry holly (Ilex glabra) in this area is intended to provide a more natural and native landscape. The proposed plantings have been selected due to the highly adaptable nature of the species, and the ecological benefits related to the plant's berries (food source for wildlife). The plant is also a larval host plant for the Henry's elfin butterfly.

BETA2: Permanent impacts to RA have increased from 50 sf to 230 sf according to Table 5-1 Summary of Resource Area Impacts. The Applicant should provide the total area of restoration to ensure that sufficient restoration is being provided for the updated impact totals. In addition, BETA notes that the "New England Native Warm Season Grass Mix" or similar seed mix should be applied to all restoration areas.

T&B2: The total area of restoration has been revised to 230 sf on the project plans. As noted on the drawings, the restoration areas will be seeded with the New England Native Warm Season Grass Mix as noted on revised Sheet C-201.

W14. If the Commission determines the Project is permittable under 310 CMR 10.58(5) then a Special Condition within the Order of Conditions should be included as required under 310 CMR 10.58(5)h that prohibits further alteration within the restoration or mitigation areas, except as may be required to maintain the area in its restored or mitigate condition, and prior to requesting the issuance of the Certificate of Compliance, the Applicant shall demonstrate the restoration or mitigation area has been successfully completed for at least two growing seasons.

T&B: The Applicant acknowledges this comment and is amenable to such a condition.

BETA2: No further comment required.

Bylaw Regulatory Comments

W15. A USGS Topographic Map, a Natural Heritage and Priority Habitats and Estimated Habitats Maps, and a FEMA Flood Plain map are required for NOI submissions to the Franklin Conservation Commission per Bylaw Section 7.17.1.

T&B: A USGS Topographic Map, a Natural Heritage and Priority Habitats and Estimated Habitats Maps, and a FEMA Flood Plain map were all submitted as part of the NOI Application Package submitted to the Commission dated September 2025. Refer to Appendix A of the NOI for these materials.

BETA2: No further comment required.

W16. The Applicant should provide the Construction Sequence on the plans per Bylaw Section 7.15.

T&B: This information has been added to the plan set on sheet G-003.

BETA2: Comment addressed.

W17. The Erosion and Sediment Control Plan should include a description of the measures that will be taken to properly install and maintain the erosion control devices used during the Project and include the requirement that the erosion control will be inspected weekly and all other criteria set forth in Bylaw Regulation Section 7.12.

T&B: The Soil Erosion and Sediment Control (SESC) Plan has been revised to include all criteria set forth in Bylaw Regulation Section 7.12. A revised Soil Erosion and Sediment Control Plan is attached as Attachment 4.

BETA2: Comment addressed.

W18. The Applicant submitted a Variance request for the work proposed within the 0-25-foot Buffer Zone and the 25-50-foot Buffer Zone. BETA defers to the Commission on the issuance of this waiver.

T&B: No response required.

BETA2: No further comment required.

Stormwater Management Review

The proposed stormwater management design consists of providing a redundant 36-inch drainpipe to supplement the existing 48-inch drainpipe that currently conveys stormwater to wetlands on the northeast side of the existing building. The additional pipe is designed to alleviate localized flooding that occurs during high-intensity rain events. The design also includes three (3) deep-sump, hooded catch basins that will tie into the proposed 36-inch RCP run. Runoff discharges to a new outfall and accompanying riprap on the northeast side of the existing building.

General

SW1. Provide a plan to accompany the hydraulic calculations (pipe sizing) showing the areas flowing to each catch basin/pipe.

T&B: Existing and proposed drainage area maps are attached as Attachment 5.

BETA2: Existing and proposed drainage area maps were provided. Comment addressed.

SW2. The hydraulic analysis indicates that all proposed pipes are HDPE. Revise to indicate RCP.

T&B: The hydraulic analysis has been revised to indicate RCP. A revised analysis is attached as Attachment 6.

BETA2: Hydraulic analysis revised. Comment addressed.

SW3. The flared end section at the end of the proposed 36-inch pipe run discharges to a 3:1 (±) slope. Additionally, the flared end section is oriented at an angle that is not perpendicular to the slope, which will render the riprap less effective. BETA recommends that the angle of the outlet pipe be reevaluated, and a concrete headwall be utilized to provide an effective flat area where the riprap can dissipate flows and prevent scouring.

T&B: The location of the proposed outfall was selected based on the required outfall elevation and relative proximity of the nearby wetland resource area. A system outlet elevation of 220.0 is required based on upstream drainage system elevations, as well as hydraulic pipe capacities. A perpendicular orientation of the proposed flared end section cannot be achieved at elevation 220.0 without direct impacts to wetlands. However, a winged headwall has been added to the project plans to allow for a flatter grade at the outlet, and adjustments to the riprap outfall protection configuration have been made. See sheet C-201 for updated outfall information.

BETA2: The outfall design has been revised. Comment addressed.

SW4. Recommend providing a detail for the replacement of curb on site.

T&B: A detail for the replacement of curbing has been added to sheet C-501.

BETA2: Detail provided. Comment addressed.

SW5. Provide an existing and proposed drainage area map showing drainage areas and stormwater flow paths (§153-15.A.(2)). Soil boundaries should also be displayed on the map.

T&B: Existing and proposed drainage area maps, displaying soil boundaries, are attached as Attachment 5.

BETA2: Existing and proposed drainage area maps were provided. Comment addressed.

MassDEP Stormwater Standards

The Project as proposed must comply with the Massachusetts Stormwater Standards as outlined by MassDEP. Compliance with these standards is outlined below:

Low Impact Development (LID) Techniques

No LID measures are proposed.

T&B: No response required.

No Untreated Stormwater (Standard Number 1): No new stormwater conveyances (e.g., outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

The project proposes a new outlet to wetlands that is equipped with a riprap outfall to prevent scouring. Additional calculations are required; Standard 1 is outstanding.

SW6. Provide riprap/outfall sizing calculations.

T&B: Riprap/outfall sizing calculations are attached as Attachment 7.

BETA2: Calculations were provided. Comment addressed.

Post-Development Peak Discharge Rates (Standard Number 2): Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.

The Project proposes to alleviate localized flooding during high intensity storm events by providing a redundant 36-inch drainpipe to supplement the existing system and provide backup conveyance to the wetlands north of the existing building. Calculations indicate a decrease in peak discharge rate to all points of analysis. Standard 2 is met.

T&B: No response required.

Recharge To Groundwater (Standard Number 3): Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to maximum extent practicable.

NRCS soil maps indicate that soils in the location of the proposed work are Udorthents, sandy with a hydrologic group rating (HSGR) of A (high infiltration potential), Scarboro and Birdsall soils with a HSG of A/D, and Swansea muck with a HSG of B/D. The Applicant has conducted five (5) test borings at the Site indicating the subsurface soils are predominantly fill at varying depths overlying glacial till. Groundwater was not noted during the test borings.

Groundwater recharge is not proposed as part of the Project as the intent of the design is to alleviate localized flooding on the site. Standard 3 is met to the greatest extent practicable.

T&B: No response required.

SW7. While the proposed 36-inch pipe is intended to convey floodwaters during high-intensity storm events, it will predominantly carry low flows from the parking areas under typical conditions. As the project includes a new outfall to a wetland resource area, BETA recommends that the Applicant evaluate the proposed system's ability to achieve the Total Suspended Solids (TSS) and Total Phosphorus (TP) utilizing infiltration measures. Treatment area would be considered areas that flow to the basins and not the entirety of the project site.

T&B: Infiltrative measures were considered as part of an alternatives analysis during preliminary design development. However, they were ultimately determined to be infeasible due to the highly developed nature of the project site. The complex subsurface utility system existing on-site would require utility relocation in order to site infiltrative features, which would interrupt routine plant operations and present an undue burden on the Applicant.

BETA2: Comment addressed.

Total Suspended Solids (Standard Number 4): For new development, stormwater management systems must be designed to remove 80% of the annual load of Total Suspended Solids (TSS).

The project includes the following treatment train:

Treatment Train	SCM 1	SCM 2	SCM 3	TSS Removal %
A	Deep Sump Catch Basin			25%

The project discharges stormwater runoff to wetlands northeast of the existing building, which discharges to Mine Brook. Mine Brook (segment MA72-14) is listed as a Category 5 water, which requires a Total Maximum Daily Load (TMDL) as listed in the Massachusetts Year 2022 Integrated List of Waters. The impairments for this segment of Mine Brook include E.coli and temperature – both impairments that do not require a TMDL reduction associated with them.

The Project has been designed to provide 25% TSS removal by replacing three (3) existing catch basins with new deep-sump hooded catch basins. Given that the project qualifies as a redevelopment as there is no increase in impervious area, Standard 4 is met to the greatest extent practicable. An improvement to TSS removal is proposed as part of the proposed Project through the implementation of deep-sump, hooded catch basins, which will provide an opportunity for floatable and solids separation prior to runoff discharge at the proposed outfall. Through the replacement of three (3) catch basins, the Project has been designed to provide 25% TSS removal. Given that the project qualifies as a redevelopment as there is no increase in impervious area, Standard 4 of the Massachusetts Stormwater Standards is met to the greatest extent practicable.

T&B: No response required.

Higher Potential Pollutant Loads (Standard Number 5): Stormwater discharges from Land Uses with Higher Potential Pollutant Loads (LUHPPLs) require the use of specific stormwater management BMPs.

The proposed use is considered a LUHPPL. Given the project qualifies as a redevelopment, Standard 5 is met to the greatest extent practicable.

T&B: No response required.

Critical Areas (Standard Number 6): Stormwater discharges to critical areas must utilize certain stormwater management BMPs approved for critical areas.

The project is located outside of any MassDEP wellhead protection areas, including Zone I, II, and any interim Wellhead Protection Areas. Standard 6 is not applicable.

T&B: No response required.

Redevelopment (Standard Number 7): Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable.

The project does qualify as a redevelopment as the pre- and post-development impervious areas will be the same. Standard 7 is met by improving existing conditions.

T&B: No response required.

Erosion And Sediment Controls (Standard Number 8): Erosion and sediment controls must be implemented to prevent impacts during construction or land disturbance activities.

As the project proposes to disturb greater than one acre of land, a Notice of Intent with EPA and local Conservation Commission was submitted, and a Stormwater Pollution Prevention Plan (SWPPP) will be developed prior to construction beginning. Erosion controls are indicated on the plans including stockpile areas and construction tracking pad. A basic construction sequence and estimated dates are included in Section 2 of the Stormwater management report. Standard 8 requires minor revisions to be met.

SW8. Provide catch basin inlet protection and perimeter controls on the Existing Conditions & Site Preparation Plan.

T&B: No response required.

BETA2: The plans have been revised as requested. Comment addressed.

SW9. Indicate that proposed catch basins will be equipped with inlet protection once installed until the end of construction.

T&B: No response required.

BETA2: The plans have been revised as requested. Comment addressed.

Operations/Maintenance Plan (Standard Number 9): A Long-Term Operation and Maintenance Plan shall be developed and implemented to ensure that stormwater management systems function as designed.

A Long-Term Stormwater Operation & Maintenance Plan was included in Appendix F of the Stormwater Management Report. The O&M Plan indicates responsible parties for the project, routine and non-routine maintenance tasks, and inspection criteria. The O&M Plan also provides guidance on long-term pollution prevention practices for the project. Standard 9 is met.

T&B: No response required.

Illicit Discharges (Standard Number 10): All illicit discharges to the stormwater management system are prohibited. A signed Illicit Discharge Compliance Statement was not provided with the submission. The Stormwater checklist indicates that one will be provided prior to the commencement of construction. Standard 10 is met, pending receipt of the signed illicit discharge statement,

SW10. Provide a signed illicit discharge statement.

T&B: We request that the Commission consider a condition of approval requiring that the signed Illicit Discharge Statement be provided prior to construction.

BETA2: BETA defers to the Commission on including this as a Condition of Approval.

We trust this information will be satisfactory in your review of the Drainage Resiliency Improvements at the Garelick Farms facility. Should you need additional information, please contact me at 413.572.3238 or jechristy@tighebond.com.

Very truly yours,

Jean E. Christy

Jean Christy, PE
PRINCIPAL ENGINEER

Enclosures Revised Site Plans dated January 2026
Revised Stormwater Erosion and Sediment Control Plan dated January 2026

Copy: Dandreo Brothers General Contractors
MassDEP CERO Wetlands

G5096 0003

\\tighebond.com\data\Data\Projects\G\G5099 Garelick Farms\0003 Flood MItigation Design and Permitting\Permitting\Peer Review\1199 West Center Street Response to Comments 2.docx

January 8, 2026

Breeka Li Goodlander, PWS, CERPIT
Conservation Director
Town of Franklin Conservation Commission
355 East Central Street
Franklin, MA 02038

Re: 1199 West Central Street, Garelick Farms, Request for Variance

Dear Ms. Goodlander:

On behalf of the Applicant, Dandreo Brothers General Contractors, Tighe & Bond is submitting the following variance request in support of the proposed Drainage Resiliency Improvement Project at 1199 West Central Street in Franklin, Massachusetts at the existing Garelick Farms facility.

Pursuant to the Franklin Wetlands Protection Regulations, the Franklin Conservation Commission may grant a variance from the Regulations upon demonstration by the Applicant that the proposed work, or its natural and consequential impacts and effects, will not have any adverse effect upon any of the interests protected in Chapter 181 of the Town of Franklin Wetlands Protection Bylaw. In accordance with Section 5 of the Franklin Wetlands Regulations, the Applicant is seeking a variance from full compliance with the requirement that a property line survey (PSL) must be completed and incorporated into project drawings.

Existing site conditions for the project drawings were developed using multiple reliable and corroborating sources of information, including record drawings provided by the facility, limited survey of drainage infrastructure within the proposed work area, drone-based topographic data collection and contour generation, ground-penetrating radar information, record MassDOT plans, and supplemental site observations conducted by qualified engineering professionals. Data from these sources were integrated into project drawings to produce a comprehensive representation of existing conditions sufficient for stormwater management system design.

The site encompasses over 54 acres, and the cost associated with completing a full boundary survey by a Professional Land Surveyor (PLS) would be prohibitive relative to the scope and scale of the proposed work. Requiring a full survey in this instance would not materially improve the quality or accuracy of the information relied upon for regulatory review, nor would it enhance environmental protection or bylaw compliance.

We trust this information will be satisfactory in your review of the Drainage Resiliency Improvements at the Garelick Farms facility. Should you need additional information, please contact me at 413.572.3238 or jechristy@tighebond.com.

Very truly yours,

Jean E. Christy

Jean E. Christy, PE
PRINCIPAL ENGINEER

Copy: Robert Dandreo, Dandreo Brothers General Contractors
D5096-0003

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120 Front Street
Suite 700
Worcester, MA 01608

T 508.754.2201

TIGHEBOND.COM

DILLIS & ROY
CIVIL DESIGN GROUP
CIVIL ENGINEERS LAND SURVEYORS WETLAND CONSULTANTS

WWW.DILLISANDROY.COM
1 MAIN STREET, SUITE 1 • LUNENBURG, MA 01462
PH. 978.779.6091
F. 978.779.0260

December 16th, 2025
8757

Ms. Breeka Li Goodlander, PWS, CERPIT
Conservation Director
Town of Franklin Conservation Commission
355 East Central Street
Franklin, MA 02038

RE: 80 Spring Street
MassDEP File No. 159-1323
Notice of Intent Peer Review

Dear Ms. Goodlander:

We have received review comment responses from BETA Group, Inc. dated December 4, 2025, respectively, regarding the above-mentioned project. We have addressed all plan modifications in the latest revision of plans and have summarized the changes below. The review comments are *italicized* with the responses from Dillis & Roy below them in **bold**.

RESPONSES TO TOWN COMMENTS:

ADMINISTRATIVE AND PLAN COMMENTS:

PLAN AND GENERAL COMMENTS:

A1. MassDEP has not issued a file number as of this writing.

CDG Response:

As of December 11, 2025, MassDEP has issued NOI Number 159-1323 to the project site. Additionally, per the Executive Office of Energy and Environmental Affairs online portal detailing Wetlands NOI Project Information for the site, MassDEP lists no technical comments for the submittal.

A2. For The following elements are missing from the provided plan set:

a. A north arrow reference should be provided on the plans per Bylaw Regulations Section 7.18.1.3.

CDG Response:

The Plan has been updated showing the north arrow now refers to Massachusetts Coordinate System Grid North.

b. Existing and proposed vegetation referenced in Bylaw Regulation Section 7.18.1.5 and 7.18.1.6 should be included on the plans, including individual trees/shrubs with a diameter greater than 1" proposed for removal. It is BETA's understanding that the Commission generally increases the size threshold for tree location based on the Project and therefore defers to the Commission on this matter. The existing tree line should be depicted on the plans.

CDG Response:

The Plan has been updated to include the existing treeline. The entirety of the site is presently wooded.

c. A Construction Sequence with all proposed activities within Jurisdictional Areas should be provided on the plans per Bylaw Regulations Section 7.18.1.14.

CDG Response:

The Plan has been updated to include a construction sequence underneath the site disturbance notes on the lower left side.

d. A PLS stamp should be provided on the plans to verify existing conditions information as accurate.

CDG Response:

The Plan has been endorsed by a MA-registered PLS as requested.

e. A survey benchmark should be provided on the plans.

CDG Response:

A benchmark located on the northeast corner of the site has been shown in plan view.

A3. Impacts to both the 25-50-foot and 50-100-foot Buffer Zone should be quantified separately and noted on the plans.

CDG Response:

The Plan has been updated to include a tabulation of areas of disturbances on the site, listing areas altered in each buffer zone area, the amount of impervious area planned to be within each buffer zone area, and the percentage of each buffer zone area onsite that is planned to be impervious.

WETLAND RESOURCE AREAS AND REGULATORY REVIEW:

RESOURCE AREA AND BOUNDARY COMMENTS:

BETA conducted a Site visit on November 25, 2025, to assess existing conditions and to review Resource Area delineations, focusing on the definitions and methodologies referenced under the Act and the Bylaw. Review of Resource Area delineations included all flagged areas on the Site, with a focus on areas closest to where work is

proposed. BETA concurs with the Resource Area boundaries as flagged in the field based on the presence of hydrophytic vegetation including highbush blueberry (Vaccinium corymbosum), red maple (Acer rubrum), cinnamon fern (Osmunda cinnamomea), and sweet pepperbush (Clethra alnifolia); and indicators of hydrology including hydric soil characteristics and saturation. At select locations, FACW vegetation was observed upgradient of the flagged wetland boundary; however, hydric soils were not observed.

CDG Response:

Acknowledged.

CONSTRUCTION & MITIGATION COMMENTS:

W1. Proposed erosion controls include use of silt fence and straw wattles. Silt fence and straw are not permitted erosion control measures in the Town of Franklin (Pg. 13 of Town of Franklin Best Development Practices Guidebook). The Applicant should coordinate with the Conservation Commission to determine the appropriate erosion control measures for the Site. Twelve (12)-inch diameter compost filter tubes may be an appropriate option commensurate with the scope of the Project.

CDG Response:

The Plan has been updated to change the erosion control barrier to be a 12-inch diameter filter sock, and all references of said barrier have been updated to be consistent with this notation where specified.

W2. Provide specifications of the seed mixture(s) proposed for stabilization of disturbed areas within Buffer Zone, including any areas that are proposed to be lawn. All areas of proposed lawn should be demarcated on the Project plans. BETA recommends that native species with wildlife habitat value be proposed within Buffer Zone where lawn is not required as mitigation for Buffer Zone clearing.

CDG Response:

The Plan has been updated to include a seed mixture specification in the site disturbance notes on the left side of the page and notes have been added to the site plan demarcating lawn areas. Lawn areas are intended for all areas within the limit of work outside the 50-foot Buffer Zone unless otherwise occupied by other planned site features. Additionally, the area of the 50-foot Buffer Zone within the limit of work is planned to be reseeded with New England Wildflower Mix along with native shrubbery as listed in the restoration area planting schedule.

W3. Material storage and laydown areas should be depicted on the Project plans and located outside of jurisdictional areas to the extent feasible.

CDG Response:

The Plan has been updated to include a materials storage and laydown area within the front lawn of the project site, outside the 100-foot Buffer Zone.

W4. It is not anticipated that groundwater will be encountered when excavating for the pool; however, the Commission could include a Special Condition in the Order of Conditions requiring the submission and approval of a dewatering plan prior to discharge in the event that groundwater is encountered.

CDG Response:

Should groundwater be encountered upon excavation for the planned pool, the Contractor shall submit a dewatering plan to the Conservation Commission.

WPA PERFORMANCE STANDARDS COMMENTS:

The Project does not propose any work within Resource Areas Subject to Protection under the Act; therefore, the Project is not required to comply with Performance Standards under the Act.

CDG Response:

Acknowledged.

BYLAW REGULATORY COMMENTS:

W5. A Construction Sequence should also be provided on the Plans per Bylaw Regulation Section 7.15.1.

CDG Response:

As noted previously in response to comment A2. c, the Plan has been updated to include a construction sequence underneath the site disturbance notes on the lower left side.

W6. The Applicant should provide an Erosion & Sedimentation Control Plan which includes contact information of the person(s) responsible for inspecting and maintaining erosion controls, the requirement to inspect erosion controls weekly or following significant rain events, and all other requirements listed in Section 7.12.1 of the Bylaw Regulations. These notes could be included on the proposed conditions plan.

CDG Response:

The Plan has been updated to include the required contact information for all parties involved. It is intended for the Applicant or their designated agent to be responsible for inspecting and maintaining erosion controls.

W7. According to Section 7.9.1 of the Bylaw, the Project Narrative should include the following missing content:

a. All activities required to construct the Project;

b. The entity performing the work; and

c. When the proposed activities will be completed.

CDG Response (W7. a. – c. consolidated):

The requested items have been added to the Project Narrative as requested. The revised Project Narrative has been enclosed with this letter.

W8. Section 4.4.1 of the Bylaw states that "mitigation offsets may be required by the Commission when the applicant proposed that more than 30% of the 50-100-foot Buffer Zone Resource Area is proposed to be impervious surface." The Applicant should provide the Commission with calculations of proposed impervious area within the 50-100-foot Buffer Zone as it compares to existing conditions to allow the Commission to determine if additional mitigation measures are warranted.

CDG Response:

As noted previously in response to comment A3, a tabulation of areas of disturbances on the site has been included on the Plan, detailing this information for the percentage of impervious area that is planned to be within the 50–100-foot buffer zone area onsite.

STORMWATER MANAGEMENT:

The proposed Project is not subject to the MassDEP Stormwater Management Standards as a single-family home construction project.

CDG Response:

Acknowledged.

We trust this meets your needs at this time. If you have any questions or require any additional information. Please contact the undersigned.

Regards,

DILLIS & ROY

Civil Design Group, Inc.

Seth Donohoe
Vice President

PROJECT NARRATIVE

2.0 Project Narrative

2.1 Project Type

The proposed project is the construction of a single-family home with supporting infrastructure.

2.2 Site Description

The property (referred to herein as "the site") is located on the westerly side of Spring Street in Franklin, Massachusetts. The site is undeveloped woodland, and identified as lot 2 in Plan Book 732 Pg. 87. The site is abutted by vacant lots on all sides, with the exception of a large solar array on the western side. The site is identified as Franklin Assessor Parcel ID 310-002-003 which contains approximately 3.5 acres according to the record plan.

2.3 Proposed Project

The proposed project is the construction of a single-family home with supporting infrastructure, to include a private well, private sewage disposal system, pool and associated pool house. In accordance with local regulations, all structures are setback greater than 50-feet from the wetlands and a minimum of 25-feet of undisturbed native vegetation will remain between the project area and wetlands. The onsite sewage disposal system and private well are located outside of the 100-foot wetland buffer.

The activities within the Buffer Zone will include installing the proposed erosions controls, clearing within the approved limit of work constructing the proposed structures, completing the proposed native Buffer Zone planting area, and loaming/seeding the proposed lawn area.

It is anticipated that the applicant's contractor, Thompson Hill Associates, will be the entity performing the work. The estimated completion of the project is 1-year from the issuance of the Order of Conditions.

2.4 Resource Areas

The site includes Bordering Vegetated Wetlands (BVW) and an associated 100-foot Buffer Zone.

2.4.1 *Bordering Vegetated Wetland*

The project does not include the disturbance of any BVW on the site.

2.4.2 *Bordering Land Subject to Flooding*

Not applicable. The site does not contain Bordering Land Subject to Flooding per FIRM Panel 25021C0304F effective July 8, 2025.

2.4.3 Vernal Pools

MassMapper data does not show any certified or potential vernal pools on the project site.

2.5 Mitigation Measures

2.5.1 *Erosion Control*

Erosion and sediment controls have been incorporated in the design of the layout with the objective of retaining sediment on site, filtering and reducing storm water discharge and protecting wetland resource areas and undisturbed areas. A combination of stabilization and structural practices are included to meet the objective, as described in detail below. The following is a list of common temporary and permanent structural erosion control devices, which will be applied:

2.5.1.1 Straw wattles will be installed up gradient from areas of bordering vegetated wetlands that may receive runoff from areas disturbed by construction. The straw bales and silt fences will be installed according to the manufacturer's instructions and will be maintained throughout the construction process.

2.5.1.2 The sediment control barrier will be installed to prevent the migration of soil materials under, around, or over the fencing. Sediment will be removed from behind the barrier when the accumulated amount has reached approximately half of the original installed height of the barrier. The overall condition of the silt fence and straw wattles will be inspected and maintained by the general contractor to maintain the level of sufficiency.

2.5.1.3 Rock construction entry pads will be installed to reduce any off site tracking. Street sweeping will also be utilized in an effort to reduce pollutants in the stormwater. Areas that will not be constructed for some time should not be cleared until the area is ready for development.

Upon completion of construction, all disturbed areas shall be loamed and seeded, or landscaped. The erosion and sedimentation controls shall be removed only upon final stabilization of the site and/or after the Conservation Commission has issued a Certificate of Compliance for the project.

2.6 Regulatory Compliance

In accordance with 310 CMR 10.01(2), Dillis & Roy Civil Design Group, Inc. has outlined the proposed project's compliance with the Wetland Protection Act regarding the following eight (8) interests of the Act:

2.6.1 **Private and Public Water Supplies –** The site is to be serviced by a private well. The proposed alterations will meet or exceed the Town of Franklin Regulations for Private Wells. Mass Mapper shows there are no IWPAs, Zone Is, Zone IIs, or surface water protection areas within 1,000 feet of the site. Due to the site being removed from public wellhead and surface water protection areas along with the proposed well exceeding local regulations, the proposed project will not adversely impact this Interest of the Act.

2.6.2 **Groundwater Supply –** The proposed project is the construction of a single family home. The rear of the proposed dwelling is at grade and above the 3-foot deep estimated seasonal high groundwater table depicted on the sewage disposal system plan for the site. The construction of the single family home will not adversely impact the groundwater supply.

2.6.3 **Flood Control -** The project is located outside of the 100-year flood elevation and does not involve any placement of fill within Bordering Lands Subject to Flooding as defined in 310 CMR 10.57(2)(a).

2.6.4 **Storm Damage Prevention –** Erosion control barriers will be installed and maintained down gradient to all proposed work.

2.6.5 **Prevention of Pollution -** The proposed project does not intend to use, store, or generate any potentially toxic or hazardous materials

on the site. In the unlikely event that, toxic materials are uncovered unexpectedly during construction, disposal of all such materials will comply with applicable rules and regulations.

2.6.6 **Protection of land containing shellfish -** Not applicable. The site is not in proximity to land containing shellfish.

2.6.7 **Protection of Fisheries -** Not applicable.

Regulatory Compliance:

Bordering Vegetated Wetland (BVW) 310 CMR 10.55(4)
The general performance standards for a Bordering Vegetated Wetland have been met as the proposed activities do not involve the filling, dredging or alteration of a BVW. Siltation control barriers are provided upgradient of the BVW to prevent indirect alteration during construction.

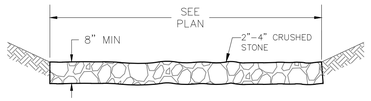
Compliance with Local Wetland Bylaw
The project has been designed in accordance with the Franklin Wetland Bylaw 25-foot no disturbance zone and the 50-foot no build zone.

Protection of Wildlife Habitat

The current Massachusetts Natural Heritage Atlas indicates that the site is not located within a Priority Habitats of Rare Species or Estimated Habitats of Rare Wildlife. A filing with NHESP is not required.

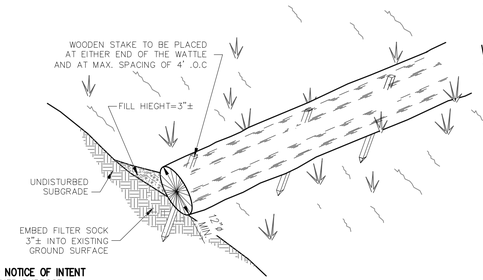
LEGEND

FEATURE	DESCRIPTION	SYMBOL	DESCRIPTION
	PROPERTY LINE		EXISTING EDGE OF WETLANDS
	EXISTING EDGE OF GRAVEL ROADWAY		EXISTING DECIDUOUS TREE
	ZONING ENVELOPE	A-XX	EXISTING WETLAND FLAG & NUMBER
	BUFFER ZONE		EXISTING BOULDER
	EXISTING TREELINE	W	EXISTING WELL
340	EXISTING CONTOUR (INDEX)		
339	EXISTING CONTOUR (INTERMEDIATE)		
	PROPOSED EROSION CONTROL BARRIER	W	PROPOSED WELL
	PROPOSED EDGE OF BIT. PAVEMENT		PROPOSED BUILDING/HOUSE
	PROPOSED EDGE OF WALKWAY		PROPOSED POOL
	PROPOSED STONE WALL		
W W	PROPOSED WATER LINE		
S S	PROPOSED SEWER LINE		
	PROPOSED TREELINE		
340	PROPOSED CONTOUR (INDEX)		
339	PROPOSED CONTOUR (INTERMEDIATE)		



TEMP. CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



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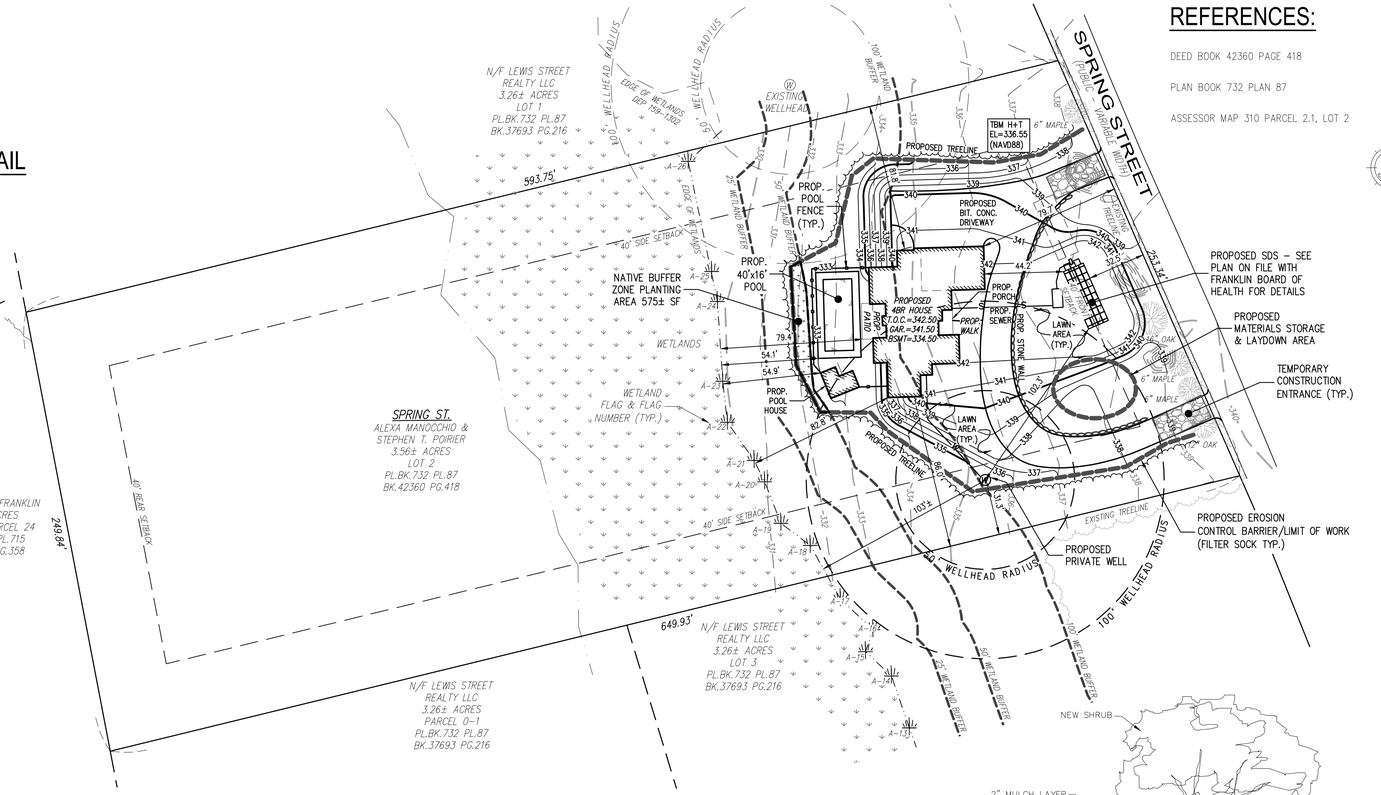

REFERENCES:

DEED BOOK 42360 PAGE 418

PLAN BOOK 732 PLAN 87

ASSESSOR MAP 310 PARCEL 2.1, LOT 2

MASSACHUSETTS COORDINATE SYSTEM GRID NORTH

SHRUB PLANTING DETAIL

NOT TO SCALE

PLAN INTENT:

THIS PLAN HAS BEEN PREPARED TO DETAIL ALTERATIONS WITHIN THE 100' BUFFER ZONE TO SUPPLEMENT A NOTICE OF INTENT SUBMITTED TO THE TOWN OF FRANKLIN CONSERVATION COMMISSION. IT SHALL NOT BE UTILIZED FOR ANY OTHER PURPOSE.

GENERAL NOTES:

1. EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN IS BASED UPON AN ON-THE-GROUND SURVEY COMPLETED BY DILLIS & ROY CIVIL DESIGN GROUP, INC. IN AUGUST OF 2025.
2. EXISTING RESOURCE AREAS DELINEATED ONSITE WERE FIELD LOCATED BY DILLIS & ROY CIVIL DESIGN GROUP, INC. IN AUGUST OF 2025.
3. ELEVATIONS REFER TO N.A.V.D 1988.
4. PROPERTY LINE INFORMATION SHOWN ON THIS PLAN WAS PREPARED BY DILLIS & ROY CIVIL DESIGN GROUP, INC. BASED UPON AN ON-THE-GROUND SURVEY AND RECORDED PLANS AND DEEDS.
5. EXISTING UTILITIES SHOWN ON THIS PLAN WERE COMPLIED FROM FIELD MEASUREMENT AND RECORD PLANS. THE UTILITIES SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY AND SHOULD NOT BE ASSUMED TO BE CORRECT NOR SHOULD IT BE ASSUMED THAT THE UTILITIES SHOWN ARE THE ONLY UTILITIES LOCATED ON OR NEAR THE SITE. THE CONTRACTOR SHALL CALL DIG SAFE 1-888-DIG-SAFE PRIOR TO CONSTRUCTION IN ACCORDANCE WITH STATE LAWS.
6. THE PROPOSED WORK AREA IS LOCATED OUTSIDE THE 100-YEAR FLOOD ZONE (FEMA ZONE X, UNSHADED) PER FRIM PANEL 25021C0304F WITH AN EFFECTIVE DATE OF JULY 8, 2025.

EROSION CONTROL NOTES:

1. CONTRACTOR TO INSTALL SEDIMENT AND EROSION CONTROL MEASURES PRIOR TO CONSTRUCTION.
2. CONTRACTOR TO MAINTAIN EROSION CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PROCESS. EROSION CONTROL MEASURES SHALL BE INSPECTED BY THE CONTRACTOR REGULARLY TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY.
3. CONTRACTOR SHALL MAINTAIN, REPAIR, OR REPLACE EROSION CONTROL MEASURE AS NEEDED DURING CONSTRUCTION.
4. NO WORK SHALL BE DONE WITHIN ANY RESOURCE AREA OR BEYOND THE LIMIT OF WORK. THE EROSION CONTROL BARRIER MARKS THE LIMIT OF PROPOSED WORK.
5. A SUFFICIENT NUMBER OF FILTER SOCK EROSION CONTROL BARRIERS SHALL BE STOCK PILED ON SITE FOR EMERGENCY EROSION CONTROL NEEDS, AND TO REPAIR AND REPLACE FENCING IN THE DESIGNATED EROSION CONTROL BARRIER LOCATION.
6. EXISTING VEGETATION SHALL BE RETAINED WHERE FEASIBLE.
7. CONTRACTOR TO REMOVE EROSION CONTROL MEASURES ONLY AFTER SITE HAS BEEN STABILIZED FOR A PERIOD OF NOT LESS THAN 2 WEEKS AND INSPECTED BY THE CONCORD NATURAL RESOURCES COMMISSION OR THEIR AGENT.
8. CONTRACTOR TO RESTORE AREAS AS INDICATED ON THE PLAN WITHIN 1-WEEK OF COMPLETION OF FINAL GRADING. CONTRACTOR TO MAINTAIN RESTORED AREAS DURING CONSTRUCTION.

SITE DISTURBANCE NOTES:

1. PURSUANT TO CH. 153 STORMWATER MANAGEMENT, ART. 1 GENERAL PROVISIONS §153-3 OF THE TOWN CODE OF FRANKLIN, THE LIMIT OF DISTURBANCE OF A PROPOSED WORK AREA SHALL BE LIMITED TO LESS THAN ONE ACRE (43,560 SF). THE PROJECT AS SHOWN IS PLANNED TO DISTURB AN APPROXIMATE AREA OF 33,000 SF.
2. TEMPORARY STABILIZATION OF DISTURBED AREAS SHALL BE ACCOMPLISHED WITH HYDROSEED OR WOODCHIPS.
3. DISTURBED AREAS SHALL BE STABILIZED WITHIN 2 MONTHS AND INSPECTED AND RE-STABILIZED AS NECESSARY.
4. STOCKPILES SHALL BE SURROUNDED BY 12" DIAMETER FILTER SOCK AND COVERED WITH TARPS OR EROSION CONTROL BLANKETS AT THE END OF EACH WORK DAY WHILE IN USE.
5. CONTRACTOR IS REQUIRED TO CLEAN UP ANY SAND, DIRT OR DEBRIS WHICH IS TRACKED FROM SITE INTO ANY PUBLIC STREET AND TO REMOVE SILTS OR DEBRIS THAT ENTERS INTO EXISTING DRAINAGE INCLUDING CATCH BASIN SUMPS, PIPE LINES, MANHOLES OR DITCHES.
6. LAWN AREAS ARE TO BE SEEDED WITH TALL FESCUE, KENTUCKY BLUEGRASS, AND PERENNIAL RYEGRASS MIX.

CONSTRUCTION SEQUENCE:

DURING THIS SEQUENCE ALL EROSION CONTROLS SHALL BE INSPECTED AND MAINTAINED. ALL DISTURBED AREAS SHALL BE STABILIZED BY SEEDING OR SODDING AS SOON AS POSSIBLE AFTER GRADING IS COMPLETE. EROSION CONTROL BARRIERS SHALL BE REMOVED AFTER SLOP STABILIZATION IS COMPLETE.

1. NOTIFY THE FRANKLIN CONSERVATION COMMISSION OF WORK COMMENCEMENT
2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES.
3. INSTALL TEMPORARY CONSTRUCTION ENTRANCES.
4. CLEAR AND GRUB SITE IN PREPARATION FOR EXCAVATION.
5. GRADE PORTIONS OF SITE TO APPROXIMATE FINISH GRADE.
6. EXCAVATE AND POUR NEW FOOTINGS AND FOUNDATION.
7. CONSTRUCT PROPOSED DWELLING, POOL HOUSE, & POOL.
8. INSTALL NATIVE BUFFER ZONE PLANTINGS AND SEED MIX.
9. INSTALL SEWAGE DISPOSAL SYSTEM & WELL.
10. PAVE DRIVEWAY AND INSTALL LANDSCAPING.
11. STABILIZE SITE WITH LOAM/SEED/MULCH AS REQUIRED.
12. SCHEDULE CERTIFICATE OF COMPLIANCE INSPECTION WITH THE FRANKLIN CONSERVATION COMMISSION AND REMOVE EROSION CONTROLS UPON APPROVAL OF THE CONSERVATION COMMISSION.

NOTE: NATIVE BUFFER ZONE PLANTINGS SHALL BE INSTALLED APRIL THROUGH JUNE OR SEPTEMBER THROUGH NOVEMBER. SEQUENCE FOR PLANTING INSTALLATION AND FENCING MAY BE ADJUSTED DEPENDING ON TIME OF YEAR CONSTRUCTION COMMENCES. ESTIMATED TIME OF COMPLETION FOR THE PROJECT IS 1 YEAR FROM THE START DATE.

CONTACT INFO:

CONTRACTOR: THOMPSON HILL ASSOCIATES
ADDRESS: 574 SUGAR HILL ROAD, BOLTON, MA 01740
PHONE No: 508-864-2223

OWNER/APPLICANT: ALEXA MANOCCHIO & STEPHEN POIRIER
ADDRESS: 544 SUMMER PLACE, BLACKSTONE, MA 01504
PHONE No: 774-571-9441

ENGINEER: DILLIS & ROY CIVIL DESIGN GROUP, INC.
ADDRESS: 1 MAIN STREET SUITE 1, LUNENBURG, MA 01462
PHONE No: 978-779-6091

TABULATION OF AREAS OF DISTURBANCE

DESCRIPTION	PROPOSED ALTERATION (SF)	PROPOSED IMPERVIOUS (SF)	PROPOSED PERCENT IMPERVIOUS
0'-25' BUFFER ZONE	0 SF	0 SF	0%
25'-50' BUFFER ZONE	575 SF	0 SF	0%
50'-100' BUFFER ZONE	6,975 SF	2,563 SF	19.3%

NATIVE BUFFER PLANTING SCHEDULE:

	COMMON NAME:	BOTANICAL NAME:	SIZE:	SPACING:	MIN. QUANTITY:
CA	SWEET PEPPERBUSH	CLETHRA ALNIFOLIA	3-4' HEIGHT	5-8' O.C.	6
IG	INKBERRY	ILEX GLABRA	3-4' HEIGHT	5-8' O.C.	6
HV	WITCHHAZEL	HAMAMELIS VIRGINIANA	3-4' HEIGHT	5-8' O.C.	6

NATIVE BUFFER ZONE AREA PLANTING NOTES:

1. GUARANTEE: ALL PLANT MATERIAL SHALL BE GUARANTEED FOR TWELVE (12) MONTHS FROM THE DAY OF FINAL APPROVAL BY THE ARBORIST OR ENGINEER. ANY PLANT MATERIAL TWENTY-FIVE (25%) OR MORE OF WHICH IS DEAD SHALL BE CONSIDERED DEAD. A TREE SHALL BE CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED OR TWENTY-FIVE (25%) OF THE CROWN IS DEAD. IF THE PLANT FAILS TO SURVIVE DURING THIS PERIOD, REPLACEMENT SHALL BE MADE AT THE BEGINNING OF THE FIRST SUCCESSIVE GROWING SEASON. ALL REPLACEMENTS SHALL HAVE A GUARANTEE EQUAL TO THAT STATED ABOVE. ANY DEAD PLANT MATERIAL SHALL BE REPLACED AND INSTALLED ACCORDING TO THE APPROVED PLAN.
2. PROPOSED PLANT MATERIAL MAY BE SUBSTITUTED WITH SIMILAR NATIVE PLANT PRIOR TO INSTALLATION BASED ON AVAILABILITY AND APPROVAL BY CONSERVATION COMMISSION. DESIRED SUBSTITUTIONS MAY INCLUDE LINDERA BENZOIN (NORTHERN SPICEBUSH), AMELANCHIER ARBOREA (SERVICEBERRY), & VACCINIUM CORYMBOSUM (HIGHBUSH BLUEBERRY).
3. IN THE EVENT THAT ANY DISCREPANCIES BETWEEN THE QUANTITIES OF PLANTS INDICATED ON THE PLANT SCHEDULE AND THOSE INDICATED ON THE PLAN, THE QUANTITIES INDICATED ON THE PLAN SHALL GOVERN.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT CORRECT GRADES AND ALIGNMENT.
5. THE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITION CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL.
6. QUALITY AND SIZE OF THE PLANTS, SPREAD OF ROOTS AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH "AMERICAN STANDARD FOR NURSERY STOCK" ANSI 260 (MOST RECENT EDITION) AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
7. PLANTS WITH BROKEN, SPLIT OR DAMAGED ROOT BALLS SHALL BE REJECTED.
8. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE. SPRING PLANTING SEASON SHALL BE: MARCH 21 TO MAY 30 FOR. FALL PLANTING SEASON SHALL BE: OCTOBER 1 TO DECEMBER 1.
9. ENTIRETY OF NATIVE BUFFER ZONE PLANTING AREA SHALL BE SEEDED WITH SPECIFIED NATIVE SEED. SEEDING MIX SHALL BE NEW ENGLAND WETLAND PLANTS WILDFLOWER MIX OR APPROVED EQUAL. SEED MIX SHALL BE APPLIED PER MANUFACTURER SPECIFICATIONS. SEED MIX SHALL BE HAND RAKED THROUGH ENTIRETY OF PLANTING AREA.

NEW ENGLAND WETLAND PLANTS, INC
14 Pearl Lane South Hadley, MA 01075
PHONE: 413-548-8000 FAX 413-549-4000
EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM

New England Wildflower Mix

Botanical Name	Common Name	Indicator
Schizachyrium scoparium	Little Bluestem	FACU
Sorghastrum nutans	Indian Grass	UPL
Chamaecrista fasciculata	Partridge Pea	FACU
Elymus virginicus	Virginia Wild Rye	FACW-
Elymus canadensis	Canada Wild Rye	FACU+
Festuca rubra	Red Fescue	FACU
Asclepias tuberosa	Butterfly Milkweed	NI
Vernonia noveboracensis	New York Ironweed	FACW+
Oenothera biennis	Evening Primrose	FACU-
Aster novae-angliae (Symphyotrichum novae-anglia	New England Aster	FACW-
Rudbeckia hirta	Black Eyed Susan	FACU-
Solidago juncea	Early Goldenrod	
Eupatorium fistulosum (Eutrochium fistulosum)	Hollow-Stem Joe Pye Weed	FACW
Aster lateriflorus (Symphyotrichum lateriflorum)	Starved/Calico Aster	FACW

APPLY: 23 LBS/ACRE :1900 sq ft/lb

New England Wetland Plants, Inc. may modify seed mixes at any time depending upon seed availability. The design criteria and ecological function of the mix will remain unchanged. Price is $/bulk pound, FOB warehouse, Plus SH and applicable taxes.

DILLIS & ROY CIVIL DESIGN GROUP

CIVIL ENGINEERS LAND SURVEYORS WETLAND CONSULTANTS

CORPORATE OFFICE:
1 MAIN STREET, SUITE 1
LUNENBURG, MA 01462
978-779-6091
www.dillisandroy.com

CONCORD OFFICE:
100 MAIN ST., SUITE 310
CONCORD, MA 01742

OWNER:
ALEXA MANOCCHIO & STEPHEN T. POIRIER
544 SUMMER PLACE
BLACKSTONE, MASSACHUSETTS 23824

APPLICANT:
ALEXA MANOCCHIO & STEPHEN T. POIRIER
544 SUMMER PLACE
BLACKSTONE, MASSACHUSETTS 23824

SCALE:
40 0 20 40 80 160
1 in. = 40 ft.
*SCALE 1 IN = 40 FT WHEN PRINTED ON 24"x36" SHEET

DIG SAFE 1-888-344-7233

COMMONWEALTH OF MASSACHUSETTS STANLEY R. DILLIS No. 33182 REGISTERED PROFESSIONAL ENGINEER

COMMONWEALTH OF MASSACHUSETTS FRANCIS M McPARTLAN CIVIL No. 49572 REGISTERED PROFESSIONAL ENGINEER

DATE: 8/26/2025
DESIGN BY: CRL
DRAWN BY: JB/CRL
CHECKED BY: FMM

NOTICE OF INTENT PLAN
SPRING STREET, LOT 2
FRANKLIN, MASSACHUSETTS 02038

NO.	DATE	DESCRIPTION	BY
1.	12/15/2025	REVISED PER PEER REVIEW COMMENTS	CRL

JOB NO. 8757
DRAWING NO. 8757-NOI
SHEET NO. 1 OF 1

December 4, 2025

Breeka Li Goodlander, PWS, CERPIT
Conservation Director
Town of Franklin Conservation Commission
355 East Central Street
Franklin, MA 02038

Re: 80 Spring Street
MassDEP File No. Not Yet Issued
Notice of Intent Peer Review

Dear Ms. Goodlander:

BETA Group, Inc. (BETA) has reviewed documents and plans for the proposed construction of a single-family dwelling (the Project) at ***80 Spring Street*** in Franklin, Massachusetts (the "Site"). This letter is provided to present BETA's findings, comments, and recommendations.

BASIS OF REVIEW

The following documents were received by BETA and will form the basis of the review:

- Notice of Intent entitled ***Notice of Intent***; prepared by Dillis & Roy Civil Design Group, dated August 28, 2025.
    - Attachments include:
        - WPA Form 3;
        - Local Forms;
        - Project Narrative;
        - Abutters Information;
        - Recorded Deed;
        - Wetland Delineation Report;
        - Figures (USGS Locus, Assessors Map, ACEC Map, NHESP Priority Habitat Map, and FEMA Flood Plain Map).
- Plans (1 Sheet) entitled ***Notice of Intent Plan Spring Street, Lot 2,*** dated August 26, 2025, prepared by Dillis & Roy Civil Design Group; stamped and signed by Francis M McPartlan MA PE No. 49572.

Review by BETA included the above items along with the following, as applicable:

- Site Visit on November 25, 2025
- ***Massachusetts Wetlands Protection Act 310 CMR 10.00*** effective October 24, 2014
- ***Wetlands Protection Chapter 181 From the Code of the Town of Franklin,*** dated August 20, 1997
- ***Conservation Commission Bylaws Chapter 271 From the Code of the Town of Franklin,*** dated July 11, 2019
- ***Town of Franklin Conservation Commission Regulations,*** dated October 3, 2019
- ***Town of Franklin Best Development Practices Guidebook***, dated September 2016

SITE AND PROJECT DESCRIPTION

The Site consists of a 3.56-acre parcel located at 80 Spring Street in Franklin, Massachusetts, further identified by the Franklin Assessor's Office as Assessor's Parcel 310-002-003. The Site is bounded to the north and west by undeveloped forested areas, to the east by Spring Street, and to the south by a solar field and undeveloped forest. Existing conditions at the Site consist of undeveloped/wooded upland and wetland complexes. The lot is generally flat with slight topographic relief to the west.

According to the Applicant, Resource Areas Subject to Protection and Jurisdiction under the Massachusetts Wetlands Protection Act (M.G.L. ch.131 s.40) and its implementing regulations at 310 CMR 10.00 (collectively "the Act"), as well as the Town of Franklin Wetlands Protection Bylaw (Chapter 181) and its associated regulations (collectively "the Bylaw") present at the Site include Bordering Vegetated Wetland (BVW), the 25-foot No Disturbance Zone, the 50-foot No Build Zone, and the 100-foot Buffer Zone.

The Site is not located within Zone I, Zone II, or Interim Wellhead Protection Areas, nor is it located within Surface Water Protection Areas (Zone A, B, or C) or Outstanding Resource Waters (ORWs). There are no Areas of Critical Environmental Concern (ACEC) present, and the most recent Natural Heritage and Endangered Species Program (NHESP) mapping does not depict Priority Habitat of Rare Species or Estimated Habitat of Rare Wildlife at the Site. There are no NHESP-mapped Certified Vernal Pools or Potential Vernal Pools (PVPs) mapped within 100 feet of the Site. According to the FEMA Flood Insurance Rate Map (FIRM) community panel number 25021C0304F, dated July 8, 2025, the Site is not located within a FEMA Flood Zone.

Natural Resource Conservation Service (NRCS) soil maps of the Site indicate the presence of Montauk fine sandy loam with a Hydrological Soil Group (HSG) rating of C, Ridgebury fine sandy loam with the HSG rating of D, and Woodbridge fine sandy loam with an HSG rating of C/D.

The Applicant seeks approval for the construction of a single-family dwelling and other associated Site features within the 100-foot Buffer Zone to BVW. Proposed work includes the following activities (collectively referred to as the "Project"):

- Installation of erosion controls;
- Installation of a temporary construction entrances;
- Clearing and grubbing to prepare site for excavation;
- Grading of portions of the Site;
- Construction of the proposed house and septic system;
- Installation of the well;
- Installation of a pool and pool house;
- Paving of the driveway; and
- Stabilization of the Site.

The Project proposes 7,550 square feet of temporary and permanent impacts to the 25-50- foot and the 50-100-foot Buffer Zone. Work proposed within Buffer Zones includes vegetation clearing, grading, installation of erosion controls, and construction of a pool, pool house, patio, and portions of the single-family home.

ADMINISTRATIVE AND PLAN COMMENTS

The plan set (as identified above) is missing information and requires additional information for clarity.

Table 1. NOI Plan

NOI Plan Requirements	Yes	No
Scale of 40'=1" or larger	✓	
North Arrow (with reference)		✓ (Comment A2.a)
Topographic contours (2' intervals)	✓	
Existing Conditions Topography (with source and date of survey)	✓	
Proposed Topography	✓	
Existing and Proposed Vegetation		✓ (Comment A2.b)
Existing Structures and Improvements	✓	
Resource Areas and Buffer Zones labeled	✓	
Location of Erosion Controls	✓	
Details of Proposed Structures	✓	
Construction Sequence and Schedule		✓ (Comment A2.c)
Registered PLS Stamp (Existing Condition Plans Only)		✓ (Comment A2.d)
Assessors' Reference	✓	
Abutting Property Assessors' Reference	✓	
Survey Benchmark		✓ (Comment A2.e)
Accurate Plan Scale	✓	

PLAN AND GENERAL COMMENTS

A1. MassDEP has not issued a file number as of this writing.

A2. The following elements are missing from the provided plan set:

a. A north arrow reference should be provided on the plans per Bylaw Regulations Section 7.18.1.3.

b. Existing and proposed vegetation referenced in Bylaw Regulation Section 7.18.1.5 and 7.18.1.6 should be included on the plans, including individual trees/shrubs with a diameter greater than 1" proposed for removal. It is BETA's understanding that the Commission generally increases the size threshold for tree location based on the Project and therefore defers to the Commission on this matter. The existing tree line should be depicted on the plans.

c. A Construction Sequence with all proposed activities within Jurisdictional Areas should be provided on the plans per Bylaw Regulations Section 7.18.1.14.

d. A PLS stamp should be provided on the plans to verify existing conditions information as accurate.

e. A survey benchmark should be provided on the plans.

A3. Impacts to both the 25-50-foot and 50-100-foot Buffer Zone should be quantified separately and noted on the plans.

WETLAND RESOURCE AREAS AND REGULATORY REVIEW

BETA has completed a regulatory review of the Site and the submitted documents and plans, focusing on compliance with jurisdictional regulations set forth in the Act and Bylaw. The Project is proposed within Buffer Zone only and is accordingly not subject to the Resource Area Performance Standards set forth by the Act.

The NOI application generally requires the submission of additional materials to meet all submission requirements of the Bylaw. In addition, the Applicant should clarify certain aspects of proposed conditions including the extent of proposed lawn and any Jurisdictional Areas that could potentially be re-naturalized following construction activities. At this time, the Applicant is required to provide the Conservation Commission with additional information to describe the Site, the work, and the effect of the work on the interests identified in the Act and the Bylaw.

RESOURCE AREA AND BOUNDARY COMMENTS

BETA conducted a Site visit on November 25, 2025, to assess existing conditions and to review Resource Area delineations, focusing on the definitions and methodologies referenced under the Act and the Bylaw. Review of Resource Area delineations included all flagged areas on the Site, with a focus on areas closest to where work is proposed. BETA concurs with the Resource Area boundaries as flagged in the field based on the presence of hydrophytic vegetation including highbush blueberry (*Vaccinium corymbosum*), red maple (*Acer rubrum*), cinnamon fern (*Osmunda cinnamomea*), and sweet pepperbush (*Clethra alnifolia*); and indicators of hydrology including hydric soil characteristics and saturation. At select locations, FACW vegetation was observed upgradient of the flagged wetland boundary; however, hydric soils were not observed.

CONSTRUCTION & MITIGATION COMMENTS

W1. Proposed erosion controls include use of silt fence and straw wattles. Silt fence and straw are not permitted erosion control measures in the Town of Franklin (Pg. 13 of *Town of Franklin Best Development Practices Guidebook*). The Applicant should coordinate with the Conservation Commission to determine the appropriate erosion control measures for the Site. Twelve (12)-inch diameter compost filter tubes may be an appropriate option commensurate with the scope of the Project.

W2. Provide specifications of the seed mixture(s) proposed for stabilization of disturbed areas within Buffer Zone, including any areas that are proposed to be lawn. All areas of proposed lawn should be demarcated on the Project plans. BETA recommends that native species with wildlife habitat value be proposed within Buffer Zone where lawn is not required as mitigation for Buffer Zone clearing.

W3. Material storage and laydown areas should be depicted on the Project plans and located outside of jurisdictional areas to the extent feasible.

W4. It is not anticipated that groundwater will be encountered when excavating for the pool; however, the Commission could include a Special Condition in the Order of Conditions requiring the submission and approval of a dewatering plan prior to discharge in the event that groundwater is encountered.

WPA Performance Standards Comments

The Project does not propose any work within Resource Areas Subject to Protection under the Act; therefore, the Project is not required to comply with Performance Standards under the Act.

Bylaw Regulatory Comments

W5. A Construction Sequence should also be provided on the Plans per Bylaw Regulation Section 7.15.1.

W6. The Applicant should provide an Erosion & Sedimentation Control Plan which includes contact information of the person(s) responsible for inspecting and maintaining erosion controls, the requirement to inspect erosion controls weekly or following significant rain events, and all other requirements listed in Section 7.12.1 of the Bylaw Regulations. These notes could be included on the proposed conditions plan.

W7. According to Section 7.9.1 of the Bylaw, the Project Narrative should include the following missing content:

a. All activities required to construct the Project;

b. The entity performing the work; and

c. When the proposed activities will be completed.

W8. Section 4.4.1 of the Bylaw states that "mitigation offsets may be required by the Commission when the applicant proposed that more than 30% of the 50-100-foot Buffer Zone Resource Area is proposed to be impervious surface." The Applicant should provide the Commission with calculations of proposed impervious area within the 50-100-foot Buffer Zone as it compares to existing conditions to allow the Commission to determine if additional mitigation measures are warranted.

Stormwater Management

The proposed Project is not subject to the MassDEP Stormwater Management Standards as a single-family home construction project.

Review Summary

Based on our review of the NOI submittal and Project plans, the Applicant is required to provide the Conservation Commission with additional information to describe the Site, the work, and the effect of the work on the interests identified in the Act and the Bylaw.

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,

BETA Group, Inc.

Anna Haznar
Staff Scientist

Jonathan Niro, PWS
Project Manager

cc: Amy Love, Town Planner
Matt Crowley, P.E., BETA

Bay Colony Group, Inc.
Professional Civil Engineers & Land Surveyors

4 School Street, PO Box 9136
Foxborough, Massachusetts 02035
Telephone (508) 543-3939 • Fax (508) 543-8866
E-mail: mailbox@baycolonygroup.com

NOTICE OF INTENT
WETLANDS PROTECTION ACT
MASS G.L.C. 131, SECTION 40

Tanglewood Estates II
Symphony Drive Extension
Franklin, MA

PREPARED FOR: Cypress Real Estates Development, LLC
3 Rothchild Drive
Foxborough, MA 02035

PREPARED BY: Bay Colony Group, Inc.
4 School Street
Foxborough, MA 02035

December, 2025

Bay Colony Group, Inc.
Professional Civil Engineers & Land Surveyors

4 School Street, PO Box 9136
Foxborough, Massachusetts 02035
Telephone (508) 543-3939 • Fax (508) 543-8866
E-mail: mailbox@baycolonygroup.com

December 16, 2025

Mr. Mark LePage, Chair
Franklin Conservation Commission
355 East Central Street
Franklin, MA 02038

RE: "Tanglewood Estates II" Symphony Drive Extension
Franklin, MA

Dear Mr. LePage,

On behalf of our client, Cypress Real Estate Development, LLC, we are submitting herewith a Notice of Intent pursuant to Article 181 of the Town of Franklin Wetlands Protection Regulations for the construction of a single-family home as part of a two-lot subdivision, including the associated driveway, grading, lawn, and utilities, portions of which are located within the local buffer zone to an isolated vegetated wetland (IVW). Under the Wetlands Protection Act (310 CMR 10.00), an IVW does not have a buffer zone, therefore, no application will be filed with the Massachusetts Department of Environmental Protection.

Enclosed please find two copies of the Notice of Intent (NOI) packet, two full-size sets and seven half-size sets of the Definitive Plan. All abutting property owners within 300 feet of the site have been notified of the proposed work by certified mail, and a check in the amount of $1,289.00, based on the local bylaw fee, is enclosed.

The site is located at the end of Symphony Drive on a 7.0± acre parcel of land identified as Assessors' Parcel 218-020-000 **(Appendix A)**. The property is currently undeveloped and consists primarily of wooded area. The site is situated on a hillside that generally slopes from west to east, with an approximate 90-foot change in elevation across the property. Two IVWs are located on the site, one in the western corner and one on the eastern portion of the property. The wetlands were flagged by Pare Corporation on March 13, 2025 and subsequently located by this firm during an on-the-ground survey conducted on March 21, 2025. A copy of the Pare Corporation Wetland Delineation Report is included in **Appendix B**.

The proposed project will involve the construction of a single-family home along with the associated driveway, grading, utilities, and yard area. A portion of the home, drainage basin, and yard will lie within the local buffer zone to an IVW. The home will be located approximately 51 feet from the wetland at its closest point, the drainage basin approximately 81 feet from the wetland at its closest point, and proposed clearing approximately 31 feet from

the wetland at its closest point. Approximately 164 square feet of buffer zone will be altered for the home, approximately 958 square feet for the drainage basin and approximately 13,438 square feet for the yard area. In total, approximately 14,560 square feet of buffer zone will be altered, with approximately 2,638 square feet of that alteration occurring within the 50-foot buffer zone. No structures or impervious surfaces are proposed within the 25–50-foot buffer zone, and no work is proposed within the 25-foot No Disturbance Zone.

The home will be serviced by municipal water and sewer. The project is not subject to the Massachusetts Stormwater Standards, as the subdivision consists of fewer than four lots, however, the project will meet all applicable standards in accordance with the Town of Franklin Stormwater Management Bylaws. The proposed stormwater management system will include stone trenches, sediment forebays, and above-ground drainage basins. A detention basin is proposed on Lot 1, and an infiltration basin is proposed on Lot 2. The system has been designed to manage all storm events up to and including the 100-year storm without increasing the rate or volume of off-site runoff. The system will comply with the DEP Stormwater Standards and the Franklin Stormwater Management Bylaw. A copy of the Stormwater Impact Report is included in Appendix C.

Erosion control measures for the project will consist of silt socks, which will be installed prior to the start of construction and maintained until construction is complete and stable ground cover has been reestablished.

Thank you for your consideration. Please feel free to contact me should you have any questions or concerns you would like us to address prior to the public hearing.

Very truly yours,

BAY COLONY GROUP, INC.

Cameron Gray
Project Engineer

William R. Buckley, Jr., P.E.
Project Manager

List of Documents

Previous Page – Letter to Conservation Commission

WPA Form 3 – Notice of Intent
- Local Filing Fee Calculation Worksheet
- Copies of Checks

Resource Area Impact Summary Form

Application Process Signature Form

Property Access Signature Form

Form of Notification to Abutters

List of Abutters

Affidavit of Service

Appendix A
- USGS Quadrangle Map Extract
- FEMA Flood Insurance Rate Map
- Extract from MassMapper

Appendix B
- Pare Corporation Wetland Delineation Report dated November 26, 2025

Appendix C
- Stormwater Management Report Tanglewood Estates II Symphony Drive Extension Franklin, MA December 2025

Attachments
- Private Definitive Plan of Land in Franklin, MA Tanglewood Estates II Symphony Drive Extension by Bay Colony Group, Inc dated December 4, 2024

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Franklin
City/Town

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

Note:
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

Symphony Drive	Franklin	02038
a. Street Address	b. City/Town	c. Zip Code

Latitude and Longitude:

42°07'27"	71°23'14"
d. Latitude	e. Longitude

218	020
f. Assessors Map/Plat Number	g. Parcel /Lot Number

2. Applicant:

a. First Name	b. Last Name

Cypress Real Development, LLC
c. Organization

3 Rothchild Drive
d. Street Address

Foxborough	MA	02035
e. City/Town	f. State	g. Zip Code

781.223.1188		cypressredevelopment@gmail.com
h. Phone Number	i. Fax Number	j. Email Address

3. Property owner (required if different from applicant): ☐ Check if more than one owner

a. First Name	b. Last Name

c. Organization

d. Street Address

e. City/Town	f. State	g. Zip Code

h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

William	Buckley, Jr.
a. First Name	b. Last Name

Bay Colony Group, Inc.
c. Company

4 School Street
d. Street Address

Foxborough	MA	02035
e. City/Town	f. State	g. Zip Code

508.543.3939		billbuckley@baycolonygroup.com
h. Phone Number	i. Fax Number	j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

$0.00	$0.00	$0.00
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Franklin
City/Town

A. General Information (continued)

6. General Project Description:

Construction of a single family home in a 2 lot subdivision along with the associated drainage and grading that lies within the buffer zone to an isolated vegetated wetland

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

1. ☐ Single Family Home
2. ☒ Residential Subdivision
3. ☐ Commercial/Industrial
4. ☐ Dock/Pier
5. ☐ Utilities
6. ☐ Coastal engineering Structure
7. ☐ Agriculture (e.g., cranberries, forestry)
8. ☐ Transportation
9. ☐ Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. ☐ Yes ☒ No

If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

a. County	b. Certificate # (if registered land)
Norfolk	
c. Book	d. Page Number
42455	104

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1. ☐ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
2. ☐ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Franklin
City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Bank	1. linear feet	2. linear feet
b. ☐ Bordering Vegetated Wetland	1. square feet	2. square feet
c. ☐ Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. ☐ Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. ☐ Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced
f. ☐ Riverfront Area	1. Name of Waterway (if available) - **specify coastal or inland**	

2. Width of Riverfront Area (check one):

☐ 25 ft. - Designated Densely Developed Areas only

☐ 100 ft. - New agricultural projects only

☐ 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: _____ square feet

4. Proposed alteration of the Riverfront Area:

a. total square feet _____ b. square feet within 100 ft. _____ c. square feet between 100 ft. and 200 ft. _____

5. Has an alternatives analysis been done and is it attached to this NOI? ☐ Yes ☐ No

6. Was the lot where the activity is proposed created prior to August 1, 1996? ☐ Yes ☐ No

3. ☐ Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f.** above.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Franklin
City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. ☐ Land Under the Ocean	1. square feet 2. cubic yards dredged	
c. ☐ Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. ☐ Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment
	Size of Proposed Alteration	Proposed Replacement (if any)
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. ☐ Land Under Salt Ponds	1. square feet 2. cubic yards dredged	
j. ☐ Land Containing Shellfish	1. square feet	
k. ☐ Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above 1. cubic yards dredged	
l. ☐ Land Subject to Coastal Storm Flowage	1. square feet	

4. ☐ Restoration/Enhancement

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW

b. square feet of Salt Marsh

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 3 – Notice of Intent
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Franklin
City/Town

C. Other Applicable Standards and Requirements

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

   a. ☐ Yes ☒ No

   If yes, include proof of mailing or hand delivery of NOI to:

   Natural Heritage and Endangered Species Program
   Division of Fisheries and Wildlife
   1 Rabbit Hill Road
   Westborough, MA 01581

   2025
   b. Date of map

   If *yes*, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

   c. Submit Supplemental Information for Endangered Species Review*

      1. ☐ Percentage/acreage of property to be altered:

         (a) within wetland Resource Area _____ percentage/acreage

         (b) outside Resource Area _____ percentage/acreage

      2. ☐ Assessor's Map or right-of-way plan of site

2. ☐ Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

   (a) ☐ Project description (including description of impacts outside of wetland resource area & buffer zone)

   (b) ☐ Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.

C. Other Applicable Standards and Requirements (cont'd)

(c) ☐ MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_fee_schedule.htm). Make check payable to "Commonwealth of Massachusetts - NHESP" and ***mail to NHESP*** at above address

*Projects altering **10 or more acres** of land, also submit:*

(d) ☐ Vegetation cover type map of site

(e) ☐ Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1. ☐ Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing. a. NHESP Tracking # b. Date submitted to NHESP

3. ☐ Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a. ☐ Not applicable – project is in inland resource area only b. ☐ Yes ☐ No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: DMF.EnvReview-North@state.ma.us

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Franklin
City/Town

C. Other Applicable Standards and Requirements (cont'd)

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

   a. ☐ Yes ☒ No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.

   b. ACEC

5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

   a. ☐ Yes ☒ No

6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?

   a. ☐ Yes ☒ No

7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

   a. ☐ Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:

      1. ☐ Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)

      2. ☐ A portion of the site constitutes redevelopment

      3. ☐ Proprietary BMPs are included in the Stormwater Management System.

   b. ☒ No. Check why the project is exempt:

      1. ☐ Single-family house

      2. ☐ Emergency road repair

      3. ☒ Small Residential Subdivision (less than or equal to 4 single-family houses or less than equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

      or

D. Additional Information

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. ☒ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)

2. ☒ Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

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Franklin
City/Town

D. Additional Information (cont'd)

3. ☒ Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. ☒ List the titles and dates for all plans and other materials submitted with this NOI.

Private Definitive Plan of Land in Franklin, MA Tanglewood Estates II Symphony Drive Extension
a. Plan Title

Bay Colony Group, Inc.
b. Prepared By

William Buckley, Jr #34813
c. Signed and Stamped by

December 4, 2025
d. Final Revision Date

1" = 40'
e. Scale

f. Additional Plan or Document Title

g. Date

5. ☐ If there is more than one property owner, please attach a list of these property owners not listed on this form.

6. ☐ Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7. ☐ Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8. ☐ Attach NOI Wetland Fee Transmittal Form

9. ☒ Attach Stormwater Report, if needed.

E. Fees

1. ☐ Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

6. Payor name on check: First Name

7. Payor name on check: Last Name

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

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Franklin
City/Town

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

Marie M

1. Signature of Applicant

12-17-25

2. Date

3. Signature of Property Owner (if different)

4. Date

5. Signature of Representative (if any)

6. Date

For Conservation Commission:
Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:
One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

Town of Franklin Conservation Commission

LOCAL FILING FEE CALCULATION WORKSHEET

1. NOTICE OF INTENT (NOI)

1.1. New Individual Single Family Home (SFH) $200.00 $ 200.00
This includes all projects associated with a SFH

1.2. Work Associated with Existing Residential Property
$100.00 $_____
Above-ground pools, fences or other incidental projects involving land disturbance that are not covered by the MBZA

1.3. Control of Nuisance Vegetation $50.00 $_____
This category shall not apply to any non-natural deposition of material e.g. vegetative debris

1.4. Subdivisions
(Resource Area includes Buffer Zone)

Base Fee $600.00 $ 600.00
Infrastructure in Buffer Zone **or** Resource Area
Roads ____ linear feet x $2.00 = $_____
*Drainage Structures 1 X $10.00 each = $ 10.00
Resource Area Disturbed 958 square feet x $0.50= $ 479.00

(If single family homes are proposed as part of a subdivision application, for each house in jurisdiction, individual NOI fees will apply.)

1.5. Multifamily Dwellings, including Condominium Units:
__ MFDU x $100.00 $_____

1.6. Commercial/Industrial (Resource Area includes Buffer Zone)

Base Fee		$600.00	$_____
Infrastructure in Buffer Zone **or** Resource Area			
Roads	___ linear feet x $2.00		= $_____
*Drainage Structures	___ X $25.00 each		=$_____
Resource Area Disturbed	___ square feet x $0.50		= $_____
Buildings	___ X $125 each		= $_____
All Accessory Improvements		$100.00	= $_____

2. REQUEST FOR DETERMINATION (RDA)

Existing single family residence	$50.00	$_____
Other	$100.00	$_____

3. MINOR BUFFER ZONE ACTIVITY (MBZA)

Restoration projects	*No charge*
All other projects	$50.00= $_____

4. ABBREVIATED NOTICE OF RESOURCE AREA DETERMINATION (ANRAD)

$0.50/foot/resource area: = $_____

5. CERTIFICATES OF COMPLIANCE

Residential Certificate of Compliance Request	$50.00	$_____
Residential Certificate Re-Inspection	$50.00	$_____
Commercial Certificate of Compliance Request	$100.00	$_____
Commercial Certificate Re-Inspection	$100.00	$_____

6. OTHER PERMITS/SERVICES

Project Extension (includes Order of Conditions)	$50.00	$_____
Status Letter for Financial Institution	$100.00	$_____
Permit Amendment	$100.00	$_____

7. FILING FEE CALCULATION

Town Share of State Fees (See NOI Wetland Fee Transmittal Form) **(Check No.1)**	$ 0.00
Local Filing Fee Calculated Above (Check No. 2)	$ 1,289.00
TOTAL Due Town of Franklin	$ 1,289.00
State Share of Filing Fee (See NOI Wetland Fee Transmittal Form)	
TOTAL Due DEP (Check No. 3)	$ 0.00

8. ADVERTISING FEE (Check No. 4) TBD

The fee will be the exact amount the newspaper charges for that specific advertisement. Once the advertisement is placed with the paper, by the Conservation Commission, the applicant will be notified of the cost and will be expected to submit a check for that exact amount, payable to the Town of Franklin, to the Conservation Department prior to the first hearing.

*Drainage structures: catch basins, manholes, leaching basins, gutter inlet or any other man-made structure (other than a pipe) for purposes of controlling drainage.

Town of Franklin Conservation Commission

RESOURCE AREA IMPACT SUMMARY FORM

The Franklin Wetlands Protection Bylaw
Franklin Town Code Section 181

Resource Area	Alteration Proposed	Mitigation Proposed
Bordering Vegetated Wetland (SF)	0	0
Bank (LF)	0	0
Land Under Water Bodies (SF)	0	0
Isolated Wetland (SF)	0	0
Vernal Pool (SF)	0	0
Buffer Zone (SF)	14,560	0
Riverfront (SF)	0	0
100-Year Floodplain (CF)	0	0
(SF) = Square Feet (LF) = Linear Feet (CF) = Cubic Feet Flood Storage		

Town of Franklin Conservation Commission

APPLICATION PROCESS SIGNATURE FORM

There are three different applications that can be submitted to undertake work in a jurisdictional area: a Notice of Intent (NOI), a Request for Determination (RDA) and a Minor Buffer Zone Activity (MBZA). All three applications have different criteria for submission and approval and the NOI and RDA are governed by both the state law and the local bylaw. The MBZA is issued under the local bylaw only.

When a potential applicant requests advice from the Conservation Agent on which application to file, the opinion of the Agent is based on the information given by the potential applicant and any other information available to the Agent, e.g. the town's GIS system. The Agent has no legal right to go onto private property at any time until after an application is filed or permission of the property owner is given.

It is important that all applicants understand that after an application is filed, additional information may come to light e.g. via a field inspection or a review of the application, that may impact the scope of the submitted application and the approval process. **Therefore, it is the ultimate responsibility of the applicant to decide which application to file.**

In light of the above, please sign below indicating an understanding of this policy and submit it with the application.

Signature of Property Owner

12-17-25
Date

Town of Franklin Conservation Commission

PROPERTY ACCESS SIGNATURE FORM

I hereby request that the Franklin Conservation Commission review this NOI/RDA/ANRAD application. I (we) grant authority to the Franklin Conservation Commission members and agents to go onto my (our) property solely for purposes directly related to the inspection and approval of this application and for follow-up compliance with the permit conditions.

Signature of Property Owner

12-17-25
Date

Town of Franklin Conservation Commission

NOTIFICATION TO ABUTTERS

Under the Massachusetts Wetlands Protection Act
And
The Franklin Wetlands Protection Bylaw

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following proposed project:

Cypress Real Estate Development, LLC has filed a Notice of Intent with the Franklin Conservation Commission for the construction of a single-family home in a two-lot residential subdivision on Assessors' Parcel 218-020-000 Symphony Drive, under the Wetlands Protection Act (M.G.L c.131 §40).

Copies of the Notice of Intent may be examined during regular office hours at Bay Colony Group, Inc. 4 School Street Foxborough, MA

Copies may also be examined by contacting the Franklin Conservation Department located at 355 East Central Street, Franklin, MA, (508) 520-4929.

Notice of the public hearing including the date, time, and place will be published at least five (5) days in advance in the Milford Daily News.

Notice of the public hearing including the date, time, and place will be posted in the Franklin Town Hall at least forty eight (48) hours in advance of the public hearing.

The public hearing will be held on Thursday, January 15, 2026, at 7 pm, at the Town Council Chambers, located on the Second Floor of the Municipal Building on 355 East Central Street. The meeting is also available via Zoom, and can be accessed through the Conservation Commission agenda for that night, which will be posted on the Town's website 48 hours prior to the meeting. Please call the Conservation Department at (508) 520-4929 if you have any questions.

You may also contact the Massachusetts Department of Environmental Protection, Central Regional Office, Worcester, MA at (508) 792-7650.

Town of Franklin, MA

December 15, 2025

Record No: 145097

Abutter's List Request Form

Status: Active

Submitted On: 12/15/2025

Primary Location

0 SYMPHONY DR Unit
OWNER UNKNOWN
FRANKLIN, MA 02038

Owner

CYPRESS REAL ESTATE DEVELOPMENT, LLC
3 ROTHCHILD DR
FOXBORO, MA 02035

Applicant

Christine Leslie
508-543-3939
cleslie@baycolonygroup.com
4 SCHOOL STREET
PO BOX 9136
Foxborough, MA 02035

Abutter's List Request Form

Which Board/Commission is requiring this list?*

Planning Board

What is the purpose for the request?*

Definitive Subdivision Plans

How would you like to receive this abutters list?*

Emailed

What email address should we use to send you the abutters list?*

cleslie@baycolonygroup.com

General Parcel Information

Assessor's Parcel ID*

218-020-000

Property Street Address*

0 Symphony Drive

Property Owner Information

Property Owner*

Cypress Real Estate Development LLC

Property Owner's Mailing Address*

3 Rothchild Drive

Town/City*

Foxborough

Zip/Postal Code*

02035

State*

MA

Property Owner Telephone Number*

(781)223-1188

Requestor's Information

Requestor/Applicant same as Property Owner Information?*

No

Requestor's Name *

Bay Colony Group, Inc

Requestor's Telephone Number

508-543-3939

Requestor's Address

4 School St PO Box 9136 Foxboro, MA 02035

Attachments

Record Activity

Christine Leslie started a draft Record	12/15/2025 at 9:44 am
Christine Leslie submitted Record 145097	12/15/2025 at 9:55 am
OpenGov system altered payment step Abutters List Fee, changed status from Inactive to Active on Record 145097	12/15/2025 at 9:55 am
OpenGov system completed payment step Abutters List Fee on Record 145097	12/15/2025 at 9:56 am
OpenGov system altered approval step Assessors Department Review , changed status from Inactive to Active on Record 145097	12/15/2025 at 9:56 am
OpenGov system assigned approval step Assessors Department Review to Kevin Doyle on Record 145097	12/15/2025 at 9:56 am

Timeline

Label	Activated	Completed	Assignee	Due Date	Status
Abutters List Fee	12/15/2025, 9:55:25 AM	12/15/2025, 9:56:32 AM	Christine Leslie	-	Completed
Assessors Department Review	12/15/2025, 9:56:33 AM	-	Kevin Doyle	-	Active
Abutters List- Email	-	-	-	-	Inactive

SYMPHONY DR - 300' ABUTTERS

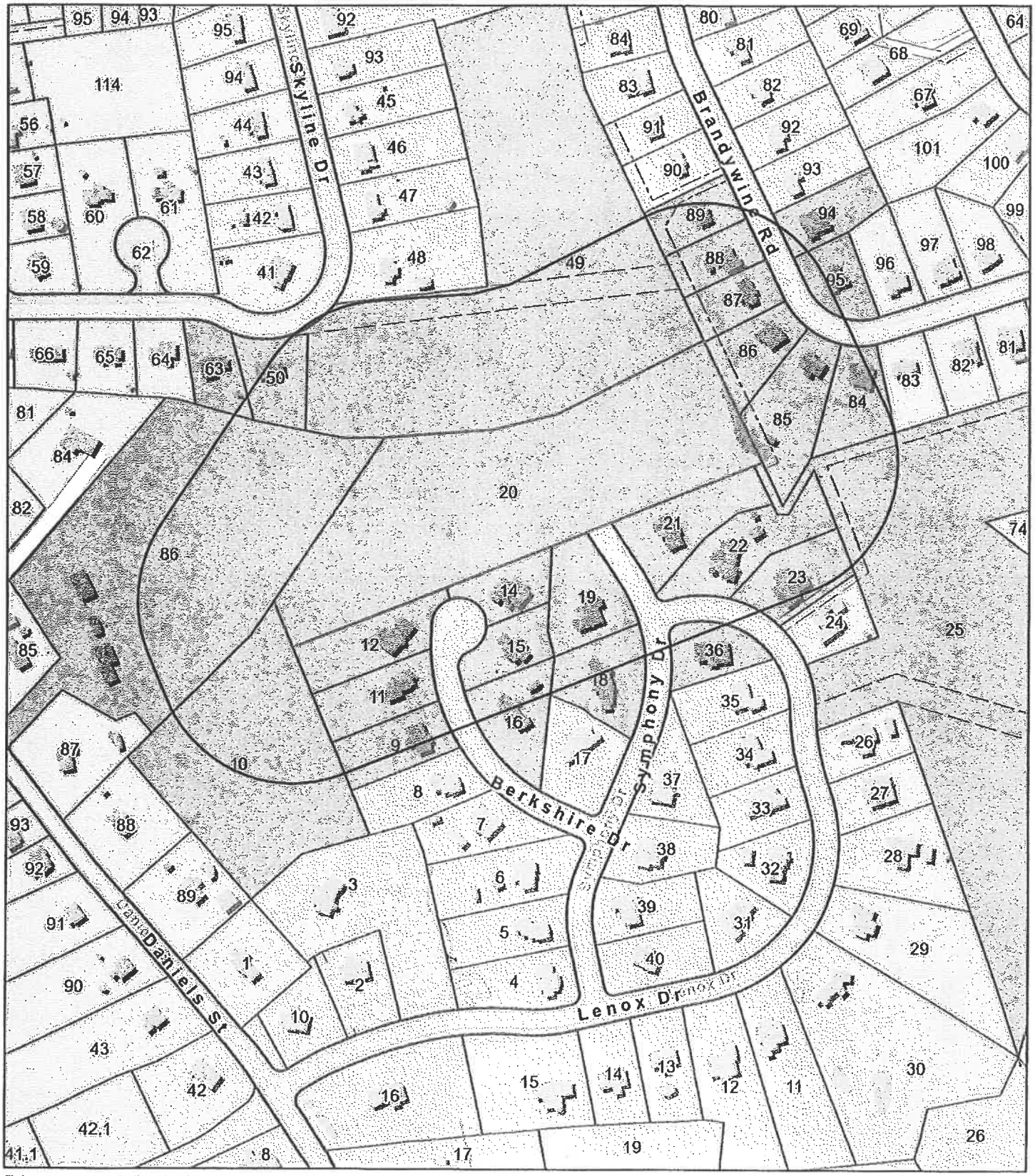
Town of Franklin, MA

1 inch = 300 Feet

0 300 600 900

December 17, 2025

CAI Technologies
Precision Mapping Geospatial Solutions
www.cai-tech.com



This information is believed to be correct but is subject to change and is not warrantied.

300 feet Abutters List Report

Franklin, MA
December 17, 2025

Subject Property:

Parcel Number:	218-020-000	Mailing Address:	CYPRESS REAL ESTATE DEVELOPMENT, LLC 3 ROTHCHILD DR FOXBORO, MA 02035
CAMA Number:	218-020-000-000		
Property Address:	SYMPHONY DR		

Abutters:

Parcel Number:	218-009-000	Mailing Address:	COLLETTE ANDREW R CHU CHRISTINE S 12 BERKSHIRE DR FRANKLIN, MA 02038
CAMA Number:	218-009-000-000		
Property Address:	12 BERKSHIRE DR		
Parcel Number:	218-010-000	Mailing Address:	FRANKLIN TOWN OF 355 EAST CENTRAL ST FRANKLIN, MA 02038
CAMA Number:	218-010-000-000		
Property Address:	BERKSHIRE DR		
Parcel Number:	218-011-000	Mailing Address:	MOELDERS NICHOLAS MOELDERS RENEE M 16 BERKSHIRE DR FRANKLIN, MA 02038
CAMA Number:	218-011-000-000		
Property Address:	16 BERKSHIRE DR		
Parcel Number:	218-012-000	Mailing Address:	BETRO, THOMAS A TR MOUSSEAU, AMY R TR T & A BETRO FAMILY TRUST 20 BERKSHIRE DR FRANKLIN, MA 02038
CAMA Number:	218-012-000-000		
Property Address:	20 BERKSHIRE DR		
Parcel Number:	218-014-000	Mailing Address:	ALSHAWABKEH AKRAM N & REHAM D TRS ALSHAWABKEH LIVING TRUST 21 BERKSHIRE DR FRANKLIN, MA 02038
CAMA Number:	218-014-000-000		
Property Address:	21 BERKSHIRE DR		
Parcel Number:	218-015-000	Mailing Address:	PICKLES DANE PICKLES JAIME 17 BERKSHIRE DRIVE FRANKLIN, MA 02038
CAMA Number:	218-015-000-000		
Property Address:	17 BERKSHIRE DR		
Parcel Number:	218-016-000	Mailing Address:	SHEAN PETER R II SHEAN ALLYSON R 11 BERKSHIRE DR FRANKLIN, MA 02038
CAMA Number:	218-016-000-000		
Property Address:	11 BERKSHIRE DR		
Parcel Number:	218-018-000	Mailing Address:	TRAN BAO Q LE LIEN T 20 SYMPHONY DR FRANKLIN, MA 02038
CAMA Number:	218-018-000-000		
Property Address:	20 SYMPHONY DR		
Parcel Number:	218-019-000	Mailing Address:	RODMAN CARYE RODMAN ANDREW 24 SYMPHONY DR FRANKLIN, MA 02038
CAMA Number:	218-019-000-000		
Property Address:	24 SYMPHONY DR		
Parcel Number:	218-020-000	Mailing Address:	CYPRESS REAL ESTATE DEVELOPMENT, LLC 3 ROTHCHILD DR FOXBORO, MA 02035
CAMA Number:	218-020-000-000		
Property Address:	SYMPHONY DR		

300 feet Abutters List Report

Franklin, MA
December 17, 2025

Parcel Number:	218-021-000	Mailing Address:	LEROY JAMES RAMANLAL SHRESHTHA
CAMA Number:	218-021-000-000		25 SYMPHONY DR
Property Address:	25 SYMPHONY DR		FRANKLIN, MA 02038
Parcel Number:	218-022-000	Mailing Address:	RITUCCI STEVEN P RITUCCI GAIL F
CAMA Number:	218-022-000-000		71 LENOX DR
Property Address:	71 LENOX DR		FRANKLIN, MA 02038
Parcel Number:	218-023-000	Mailing Address:	SOUZA JANE E
CAMA Number:	218-023-000-000		67 LENOX DR
Property Address:	67 LENOX DR		FRANKLIN, MA 02038
Parcel Number:	218-025-000	Mailing Address:	FRANKLIN TOWN OF
CAMA Number:	218-025-000-000		355 EAST CENTRAL ST
Property Address:	DANIELS ST		FRANKLIN, MA 02038
Parcel Number:	218-036-000	Mailing Address:	GONZALEZ JUAN & MARIA FOYE
CAMA Number:	218-036-000-000		FRANCISCA & GERARD
Property Address:	68 LENOX DR		68 LENOX DR
			FRANKLIN, MA 02038
Parcel Number:	218-049-000	Mailing Address:	FRANKLIN TOWN OF
CAMA Number:	218-049-000-000		355 EAST CENTRAL STREET
Property Address:	SKYLINE DR		FRANKLIN, MA 02038
Parcel Number:	218-050-000	Mailing Address:	BRAUNSTEIN JAMES L SHERIDAN
CAMA Number:	218-050-000-000		MARY
Property Address:	49 SKYLINE DR		49 SKYLINE DR
			FRANKLIN, MA 02038
Parcel Number:	218-084-000	Mailing Address:	REYNOLDS WARREN H K REYNOLDS
CAMA Number:	218-084-000-000		DEBRA Y
Property Address:	137 BRANDYWINE RD		137 BRANDYWINE RD
			FRANKLIN, MA 02038
Parcel Number:	218-085-000	Mailing Address:	AMANTE JOSEPH M AMANTE MELISSA
CAMA Number:	218-085-000-000		A
Property Address:	133 BRANDYWINE RD		133 BRANDYWINE RD
			FRANKLIN, MA 02038
Parcel Number:	218-086-000	Mailing Address:	HANLY RONAN D HANLY CHERYL A
CAMA Number:	218-086-000-000		129 BRANDYWINE RD
Property Address:	129 BRANDYWINE RD		FRANKLIN, MA 02038
Parcel Number:	218-087-000	Mailing Address:	JOSE JESTUS
CAMA Number:	218-087-000-000		125 BRANDYWINE RD
Property Address:	125 BRANDYWINE RD		FRANKLIN, MA 02038
Parcel Number:	218-088-000	Mailing Address:	YERED DAVID M REZZUTI LISA
CAMA Number:	218-088-000-000		121 BRANDYWINE RD
Property Address:	121 BRANDYWINE RD		FRANKLIN, MA 02038

300 feet Abutters List Report

Franklin, MA
December 17, 2025

Parcel Number:	218-089-000	Mailing Address:	BARTEK JOSEF S & CHERYL TRS BARTEK LIVING TRUST 117 BRANDYWINE RD FRANKLIN, MA 02038
CAMA Number:	218-089-000-000		
Property Address:	117 BRANDYWINE RD		
Parcel Number:	218-094-000	Mailing Address:	LANGEVIN TIMOTHY M 122 BRANDYWINE RD FRANKLIN, MA 02038
CAMA Number:	218-094-000-000		
Property Address:	122 BRANDYWINE RD		
Parcel Number:	218-095-000	Mailing Address:	MUNIKUNTLA SAI KUMAR MUDDAGOUNI APARAJITHA 138 BRANDYWINE RD FRANKLIN, MA 02038
CAMA Number:	218-095-000-000		
Property Address:	138 BRANDYWINE RD		
Parcel Number:	219-063-000	Mailing Address:	CAROSI CHRISTOPHER D CAROSI KRISTI L 45 SKYLINE DR FRANKLIN, MA 02038
CAMA Number:	219-063-000-000		
Property Address:	45 SKYLINE DR		
Parcel Number:	219-086-000	Mailing Address:	MCLAUGHLIN JAMES J MCLAUGHLIN PAULINE M 231 DANIELS ST FRANKLIN, MA 02038
CAMA Number:	219-086-000-000		
Property Address:	231 DANIELS ST		

Kevin M. Doyle, 12-17-2

ALSHAWABKEH AKRAM N & REH
ALSHAWABKEH LIVING TRUST
21 BERKSHIRE DR
FRANKLIN, MA 02038

AMANTE JOSEPH M
AMANTE MELISSA A
133 BRANDYWINE RD
FRANKLIN, MA 02038

BARTEK JOSEF S & CHERYL T
BARTEK LIVING TRUST
117 BRANDYWINE RD
FRANKLIN, MA 02038

BETRO, THOMAS A TR MOUSSE
T & A BETRO FAMILY TRUST
20 BERKSHIRE DR
FRANKLIN, MA 02038

BRAUNSTEIN JAMES L
SHERIDAN MARY
49 SKYLINE DR
FRANKLIN, MA 02038

CAROSI CHRISTOPHER D
CAROSI KRISTI L
45 SKYLINE DR
FRANKLIN, MA 02038

COLLETTE ANDREW R
CHU CHRISTINE S
12 BERKSHIRE DR
FRANKLIN, MA 02038

CYPRESS REAL ESTATE DEVEL
3 ROTHCHILD DR
FOXBORO, MA 02035

FRANKLIN TOWN OF
355 EAST CENTRAL ST
FRANKLIN, MA 02038

FRANKLIN TOWN OF
355 EAST CENTRAL STREET
FRANKLIN, MA 02038

GONZALEZ JUAN & MARIA
FOYE FRANCISCA & GERARD
68 LENOX DR
FRANKLIN, MA 02038

HANLY RONAN D
HANLY CHERYL A
129 BRANDYWINE RD
FRANKLIN, MA 02038

JOSE JESTUS
125 BRANDYWINE RD
FRANKLIN, MA 02038

LANGEVIN TIMOTHY M
122 BRANDYWINE RD
FRANKLIN, MA 02038

LEROY JAMES
RAMANLAL SHRESHTHA
25 SYMPHONY DR
FRANKLIN, MA 02038

MCLAUGHLIN JAMES J
MCLAUGHLIN PAULINE M
231 DANIELS ST
FRANKLIN, MA 02038

MOELDERS NICHOLAS
MOELDERS RENEE M
16 BERKSHIRE DR
FRANKLIN, MA 02038

MUNIKUNTLA SAI KUMAR
MUDDAGOUNI APARAJITHA
138 BRANDYWINE RD
FRANKLIN, MA 02038

PICKLES DANE
PICKLES JAIME
17 BERKSHIRE DRIVE
FRANKLIN, MA 02038

REYNOLDS WARREN H K
REYNOLDS DEBRA Y
137 BRANDYWINE RD
FRANKLIN, MA 02038

RITUCCI STEVEN P
RITUCCI GAIL F
71 LENOX DR
FRANKLIN, MA 02038

RODMAN CARYE
RODMAN ANDREW
24 SYMPHONY DR
FRANKLIN, MA 02038

SHEAN PETER R II
SHEAN ALLYSON R
11 BERKSHIRE DR
FRANKLIN, MA 02038

SOUZA JANE E
67 LENOX DR
FRANKLIN, MA 02038

TRAN BAO Q
LE LIEN T
20 SYMPHONY DR
FRANKLIN, MA 02038

YERED DAVID M
REZZUTI LISA
121 BRANDYWINE RD
FRANKLIN, MA 02038

Town of Franklin Conservation Commission

AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act

(To be submitted to the Massachusetts Department of Environmental Protection and the Franklin Conservation Commission when filing a Notice of Intent)

I, Cameron Gray hereby certify under the pains and penalties of perjury that on December 30, 2025, I gave Notification to Abutters in compliance with second paragraph of Massachusetts General Laws Chapter 131, Section 40 in connection with the following matter:

A Notice of Intent filed under the Massachusetts Wetlands Protection Act by Cypress Real Estate Development LLC with the Franklin Conservation Commission on December 30, 2025 for property located on Assessors' Parcel 218-020-000, Franklin, MA.

The Notification to Abutters form and list of the abutters to whom it was given and their addresses are attached to the Affidavit of Service.

Cameron Gray

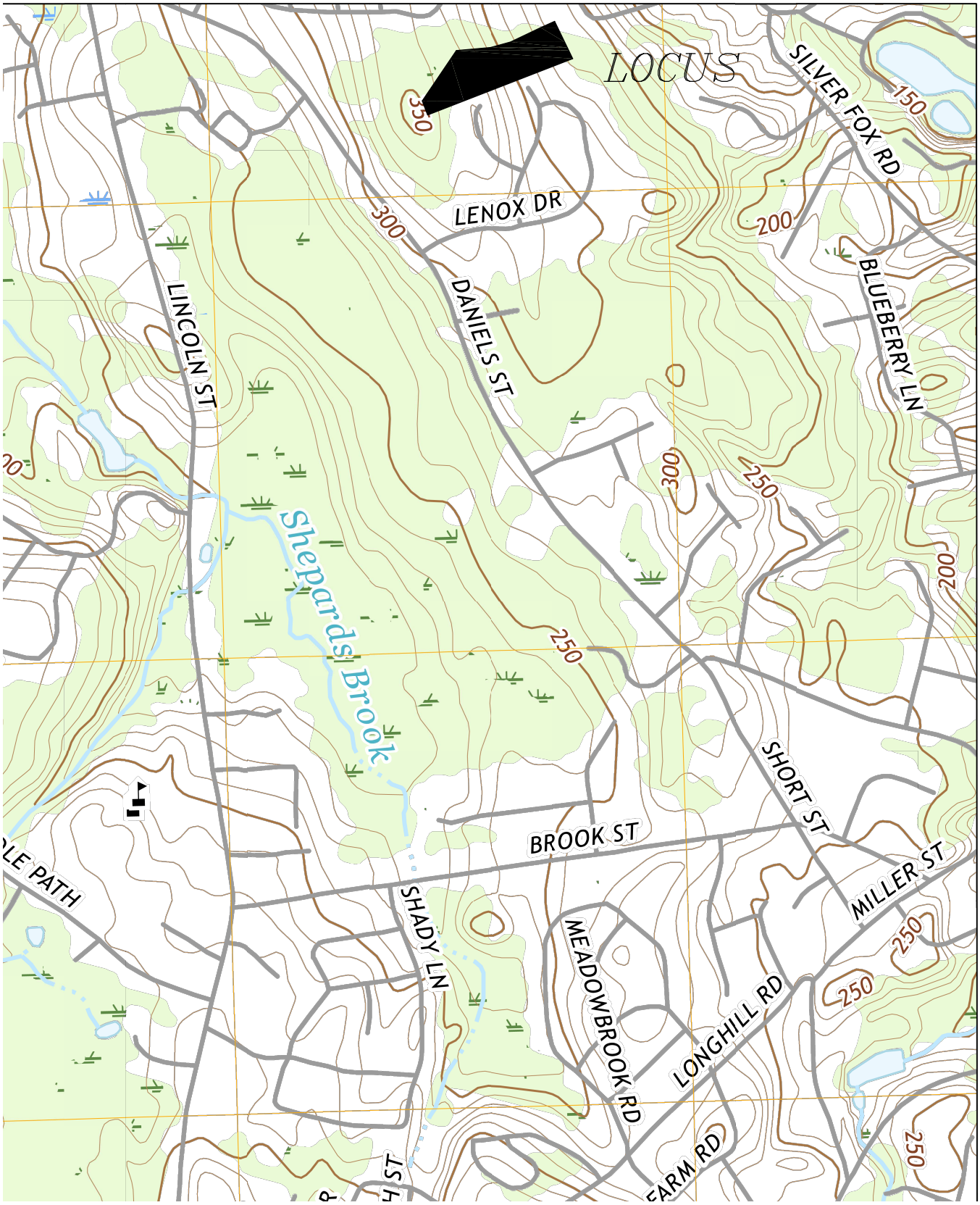
Signature

12/30/25

Date

APPENDIX A

*USGS Quadrangle Map
*FEMA Flood Insurance Rate Map
* Priority Habitat Map



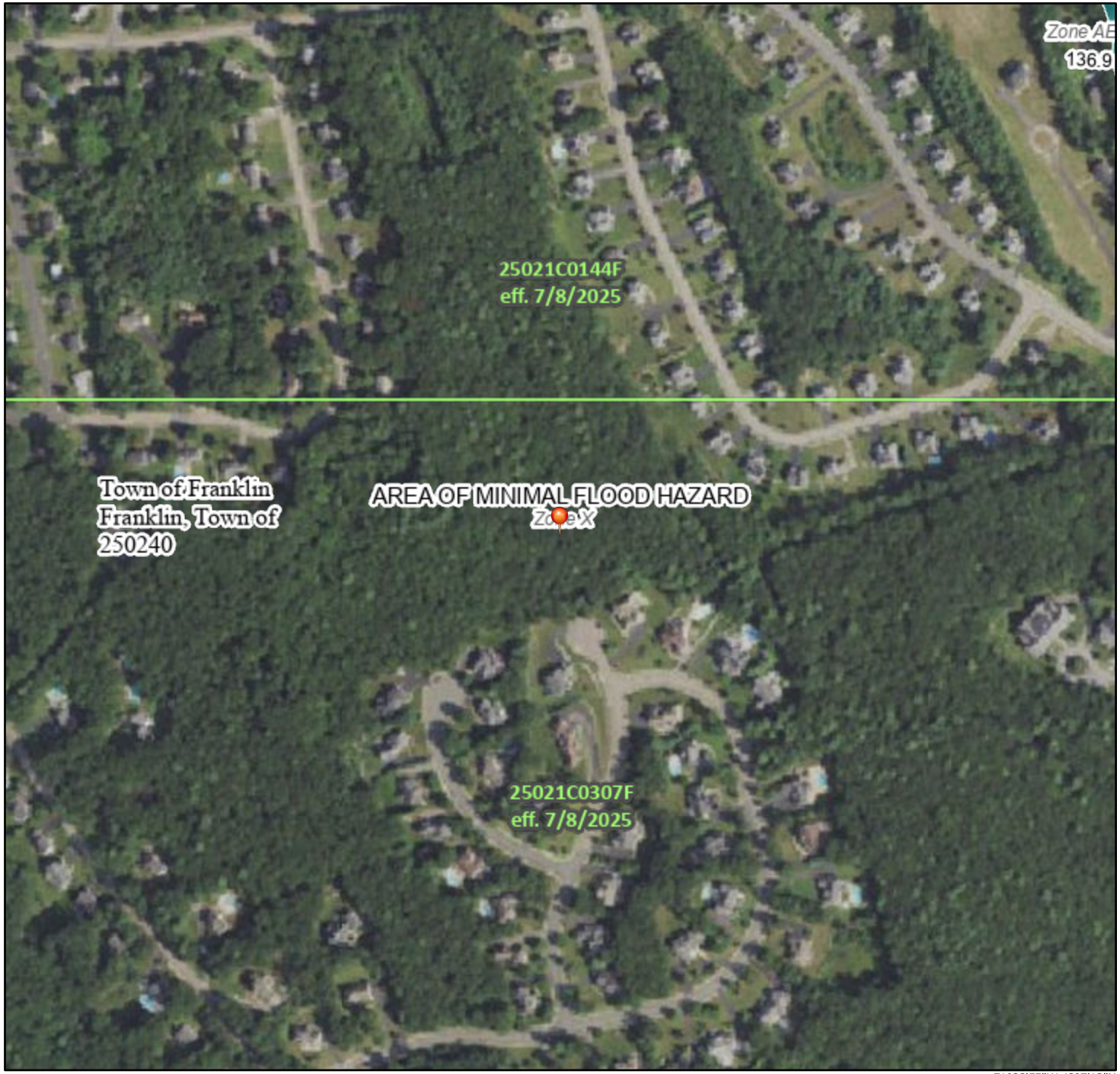
BAY COLONY GROUP, INC.
FOUR SCHOOL STREET
FOXBOROUGH, MA 02035
(508) 543-3939

USGS QUADRANGLE EXTRACT
SYMPHONY DRIVE
FRANKLIN, MA
FRANKLIN QUADRANGLE
SCALE: 1"= 1000'

National Flood Hazard Layer FIRMette

FEMA

71°23'32"W 42°7'40"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

71°22'55"W 42°7'13"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

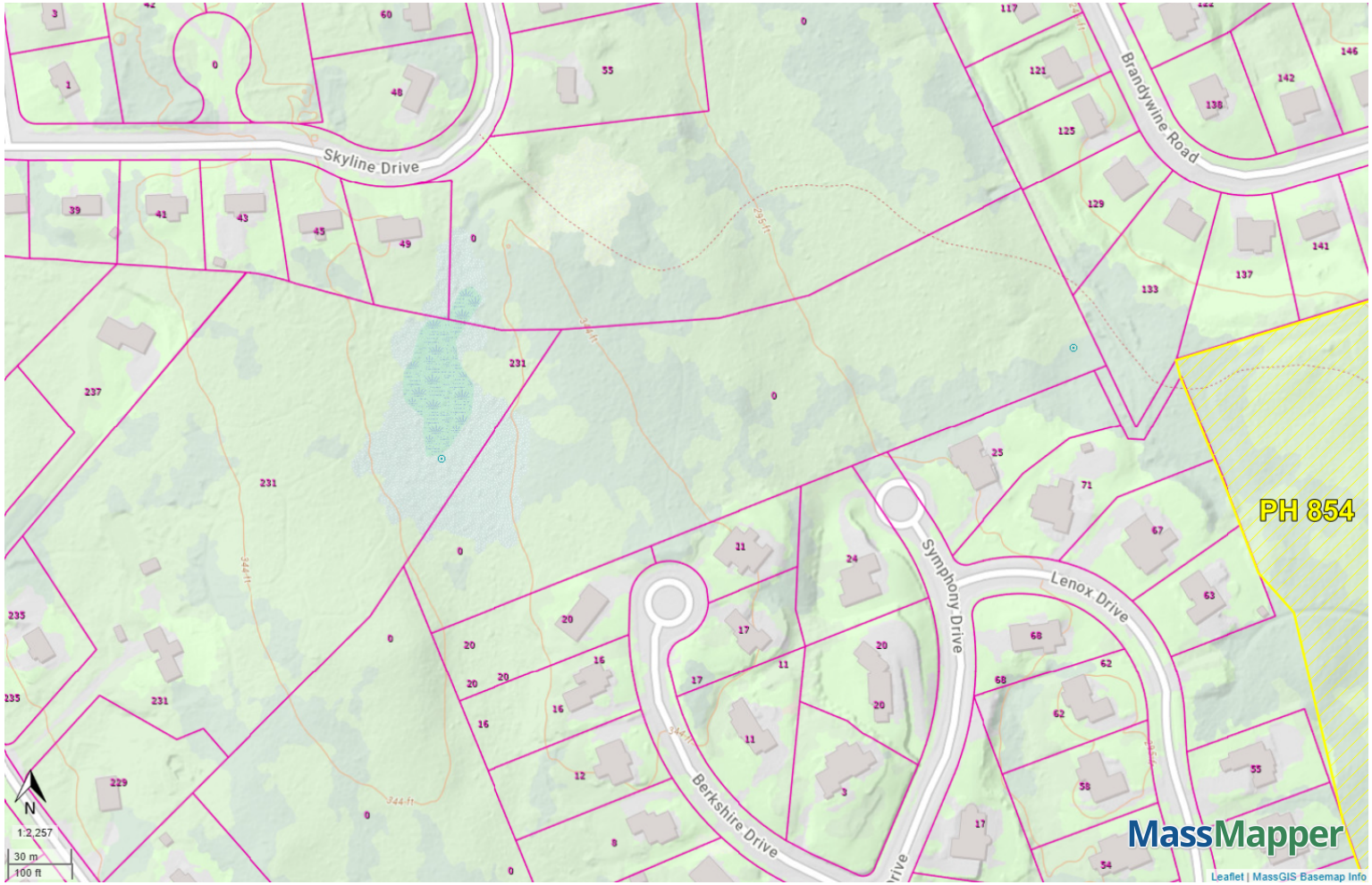
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/16/2025 at 8:03 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Symphony Drive Extension



Potential Vernal Pools

NHESP Certified Vernal Pools

NHESP Priority Habitats of Rare Species

NHESP Estimated Habitats of Rare Wildlife

Property Tax Parcels

Printed Dec 16, 2025

APPENDIX B

*Wetland Delineation Report

November 26, 2025

Mr. William Buckley, P.E.
Bay Colony Group, Inc.
4 School Street
Foxborough, MA 02035

Re: **Wetland Delineation**
Symphony Drive – Map 218, Parcel 020
Franklin, MA
Pare Project No. 18170.58

Dear Mr. Buckley,

Pare Corporation (Pare) delineated the wetland resource areas affecting an undeveloped parcel of land located on Symphony Drive in Franklin (the site). The site is approximately 7 acres in size and is designated as Parcel 020 on Foxborough Assessor's Map 218. The delineation was completed to establish the limits of wetland resource areas and buffer zones that may impact future development on the property. Pare's investigation and delineation of wetlands were on March 13, 2025.

The following report describes the delineated wetlands, discusses the delineation methodology, and summarizes our review of published mapping for the site. Attached to this report are the following materials: a Site Location Map, an Annotated Aerial Photograph, an excerpt from the FEMA Flood Insurance Rate Map, annotated photographs of the site wetlands, and completed BVW Data Forms for representative plots along wetland/upland borders.

METHODOLOGY

Wetland edges were delineated in accordance with the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.55, referred to as the WPA Regulations), and the methodology specified in the publication entitled Delineating Bordering Vegetated Wetlands under the Massachusetts Wetlands Protection Act (Jackson, 2022) and The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: North Central and Northeast Region, Version 2.0 (U.S. Army Corps of Engineers, January 2012).

Pink field flags were placed at appropriate intervals along wetland/upland borders. Primary parameters evaluated in wetland delineation included vegetation, hydric soil indicators, and visual indicators of wetland hydrology such as water-stained leaves and saturated soils. The ordinary high water mark of a Potential Vernal Pool bordering the site was flagged according to visual indicators of flooding, including water staining on the ground's surface and water marks on woody vegetation.During the delineation, BVW Data Forms were completed for representative plots along the wetland/upland border.

WETLAND DESCRIPTIONS

Isolated Vegetated Wetlands

Two (2) forested wetlands are present on the site. Neither of these areas possess surface connections to waterbodies or waterways and are therefore **Isolated Vegetated Wetlands (IVW)**. The Town of Franklin Wetlands Protection Bylaw (referred to herein as the Bylaw) protects all freshwater wetlands, regardless of size or connectivity with other wetlands. In addition, the Conservation Commission Rules and Regulations establish that freshwater wetlands have an associated **0-25 foot No Disturbance Zone**, a **25-50 foot Buffer Zone**, and a **50- 100 foot Buffer Zone**. Each of these areas is described below.

Wetland A

Flag series **A-1** to **A-25** defines the perimeter of an IVW at the east side of the site. This area consists of a shallow low-lying area in the slope approximately 0.29 acres in size that appears to be fed by a combination of groundwater seepage and overland runoff. An upland island, which was not delineated, is present in the central portion of the IVW. While most of the area has seasonally saturated hydrology, a shallow depression in the southwestern portion of the wetland interior appears to be seasonally flooded, holding 1 to 2 inches of standing water at the time of delineation. Observed indicators of flooding and site topography suggest that flooding within this area is limited to several inches. As such, the IVW does not appear to meet the depth and volume criteria of an Isolated Land Subject to Flooding (ILSF) under the WPA Regulations; however, as noted above, the Bylaw protects all freshwater wetlands and associated local buffer zones, regardless of size or connectivity with other wetlands.

According to MAGIS data layer PVP_PT.shp (2013), a mapped potential vernal pool (PVP) is located within the general area of this wetland. However, the area does not contain a basin-like depression with adequate depth to support vernal pool habitat and is unlikely to sustain flooding for two continuous months in any given year. Therefore, Pare has determined that the PVP does not meet the definition of a Vernal Pool under the Bylaw.

The IVW is dominated Red Maple (*Acer rubrum*), White Oak (*Quercus alba*), Red Oak (*Quercus rubra*), and American Beech (*Fagus grandifolia).* The understory was dominated by Sweet Pepperbush (*Clethra alnifolia*) with ground cover dominated by Cinnamon Fern (*Osmunda cinnamomea*). Other evidence of hydrology included water staining, standing water, trees with buttressed roots, saturation, and drainage patterns. Species of vegetation observed within the wetland included, but were not limited to, the following:

Common Name	Scientific Name	Indicator Status
Red Oak	*Quercus rubra*	FACU
White Oak	*Quercus alba*	FACU
White Pine	*Pinus strobus*	FACU
Red Maple	*Acer rubrum*	FAC
Green Ash	*Fraxinus pennsylvanica*	FACW
Birch	*Betula sp.*	FAC or Wetter
Highbush Blueberry	*Vaccinium corymbosum*	FACW
Black Huckleberry	*Gaylussacia baccata*	FACU
Sweet Pepperbush	*Clethra alnifolia*	FAC
Cinnamon Fern	*Osmunda cinnamomea*	FACW
Princess Pine	*Lycopodium obscurum*	FACU

Wetland B

An oblong-shaped isolated wetland bisects the southwest side of the site, extending offsite to the north and south. Flag series **B-1** to **B-14** and **B-100** to **B-106** define the east and west edges of the IVW, respectively, beginning at the south property boundary and extending north. Additional data is required to determine whether the area meets the depth and volume criteria of an Isolated Land Subject to Flooding (ILSF) under the WPA Regulations; however, as noted in previous sections, the Bylaw protects all freshwater wetlands and associated local buffer zones, regardless of size or connectivity with other wetlands.

According to MAGIS data layer PVP_PT.shp (2013), a PVP is present in the wetland interior offsite to the north. Pare reviewed this area and found a basin-like depression holding standing water 2 to 4 inches deep at the time of delineation, with visual indicators of flooding suggesting that the area may hold standing water for a sustained period. Additional investigation during the spring season is necessary to determine whether the area meets the physical and biological criteria of a certifiable **vernal pool**. However, given the possibility of vernal pool habitat, Pare placed flags PVP-1 to PVP-8 along the southeastern boundary to capture the extent of the PVP bordering the site.

The onsite portion of the wetland is dominated by Red Maple (*Acer rubrum*), Tupelo (*Nyssa sylvatica*), and Red Oak (*Quercus rubra*). A dense understory of Highbush Blueberry (*Vaccinium corymbosum*) and Huckleberry (*Gaylussacia baccata)* transitions into an interior dominated by Highbush Blueberry (*Vaccinium corymbosum*) and Sweet Pepperbush (*Clethra alnifolia*). Pronounced microtopographic relief was observed in the wetland interior. The hydrology of the wetlands were saturated to seasonally flooded. Species of vegetation observed within the wetland included, but were not limited to, the following:

Common Name	**Scientific Name**	**Indicator Status**
Red Oak	*Quercus rubra*	FACU
Black Tupelo	*Nyssa sylvatica*	FAC
Sassafras	*Sassafras albidum*	FACU
White Pine	*Pinus strobus*	FACU
Red Maple	*Acer rubrum*	FAC
Highbush Blueberry	*Vaccinium corymbosum*	FACW
Black Huckleberry	*Gaylussacia baccata*	FACU
Sweet Pepperbush	*Clethra alnifolia*	FAC
Cinnamon Fern	*Osmunda cinnamomea*	FACW
Princess Pine	*Lycopodium obscurum*	FACU

REVIEW OF PUBLISHED MAPPING

Review of published mapping and relevant MassGIS data layers on November 26, 2025 revealed the following:

- No Certified Vernal Pools are located on the subject property.
- One Potential Vernal Pool (PVP) is mapped on the subject property in the general area of Wetland A. which was not found to possess the physical characteristics of a vernal pool. A second PVP is located offsite to the northwest within the interior of Wetland B, and further study would be required to determine whether the area meets the criteria of a vernal pool. See “Wetland Descriptions” section.
- There is no mapped Priority or Estimated Habitat of state-listed species on the site.

- The site is not located within Outstanding Resource Waters.
- The site is not located within an Area of Critical Environmental Concern.
- According to the FEMA Flood Insurance Rate Map (FIRM) for the site (Community Panel No. 25021C0307F, effective July 8, 2025), the entire site is located within Zone X, Areas of Minimal Flood Hazard. . The FIRM is attached as Figure 3.

Thank you very much for the opportunity to assist you with this project. If you have any questions regarding project permitting or other issues, or require further assistance, please do not hesitate to call.

Sincerely,

Lauren H. Gluck, P.W.S.
Managing Environmental Scientist

LHG/TC

"Z:\JOBS\18 Jobs\18170.58 BCG - Symphony Drive Franklin - MA\Report\Wetland Report.docx"

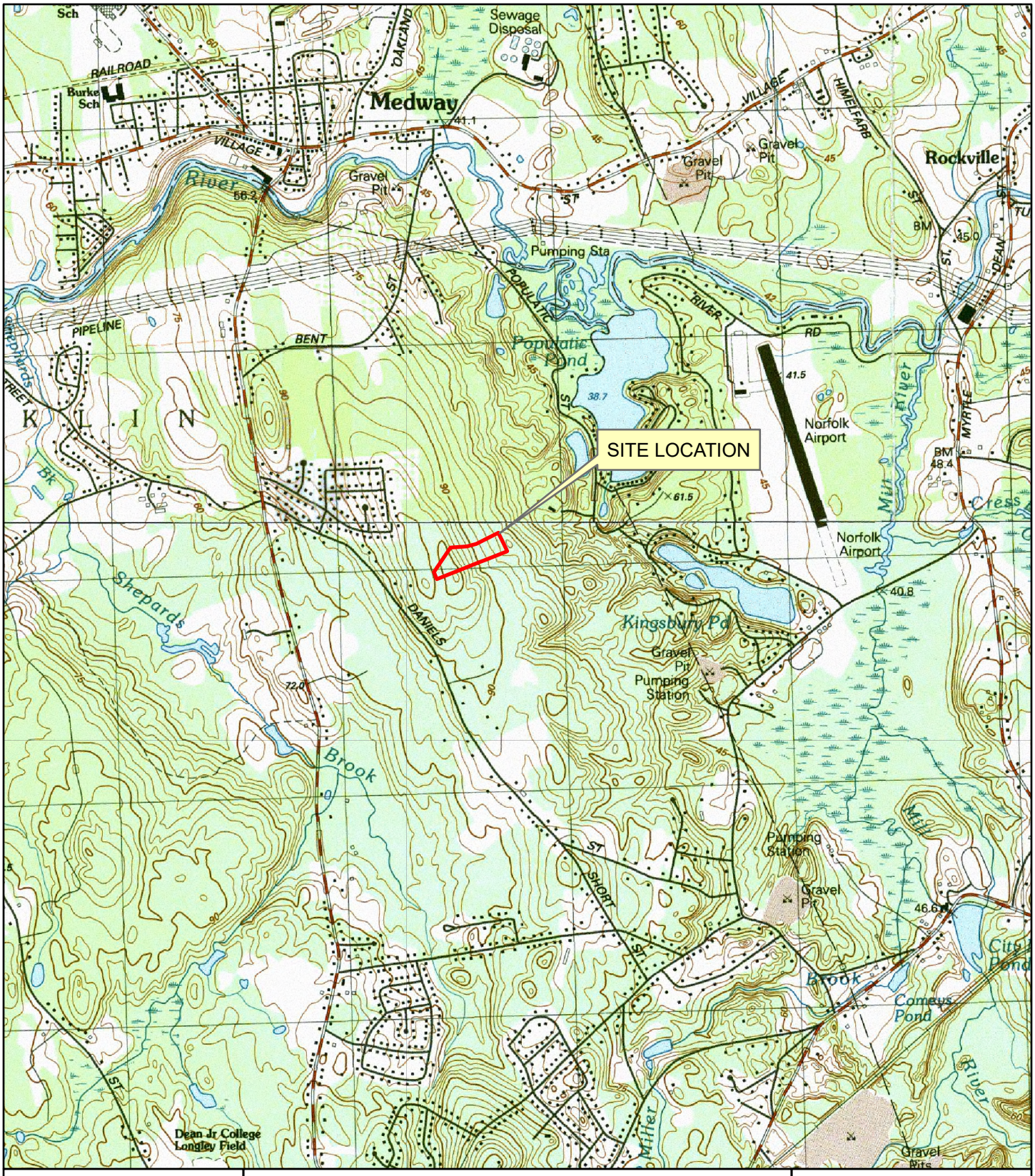


FIGURE 1

SITE LOCATION MAP

N

PARE

PARE CORPORATION

www.parecorp.com

SYMPHONY DRIVE
FRANKLIN, MA

MASS GIS

PARE PROJECT NO. 18170.58 NOVEMBER 2025

SCALE: 1" = 2,000'

PARE
PARE CORPORATION
www.parecorp.com

MASS GIS

1 INCH = 100 FEET
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

N
W E
S

SYMPHONY DRIVE
FRANKLIN, MA

PROJECT NO.: 18170.58
DATE: NOVEMBER 2025
SCALE: AS NOTED

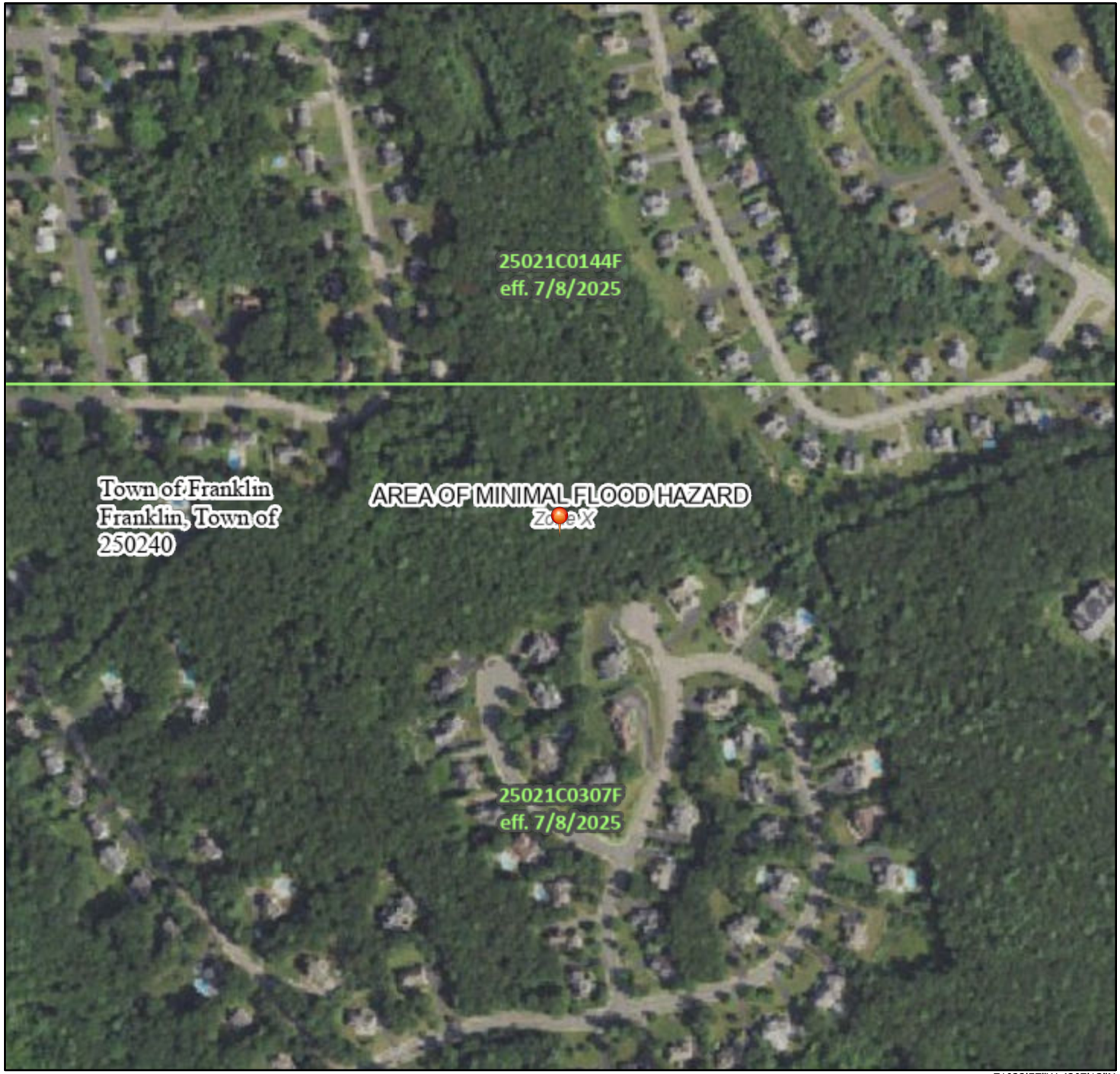
FIGURE 2:
ANNOTATED
AERIAL
PHOTOGRAPH

FIGURE 3

National Flood Hazard Layer FIRMette

FEMA

71°23'34"W 42°7'40"N



71°22'57"W 42°7'13"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/10/2025 at 7:52 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Photo No. 1: Northwest edge of Wetland A, facing southeast toward Symphony Drive.

Photo No. 2: Small area of shallow flooding in Wetland A interior, facing southeast toward Symphony Drive.

Photo No. 3: Typical view of Wetland B bisecting west end of property.

Photo No. 4: View of PVP in Wetland B interior, offsite to the northwest.

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: Symphony Drive City/Town: Franklin Sampling Date: 3/13/25

Applicant/Owner: Sampling Point or Zone: A6 UPLAND

Investigator(s): Lauren H. Gluck, P.W.S. Latitude / Longitude: 42.123863, -71.387700

Soil Map Unit Name: 302C—Montauk fine sandy loam, 8 to 15 percent slopes, extremely stony NWI or DEP Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks)

Are Vegetation [ ], Soil [ ] , or Hydrology [ ] significantly disturbed? (If yes, explain in Remarks)

Are Vegetation [ ], Soil [ ] , or Hydrology [ ] naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes [ ] No [✓]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✓]
Hydric Soils criterion met?	Yes [ ] No [✓]	
Wetlands hydrology present?	Yes [ ] No [✓]	

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes [ ]	No [✓]	Depth (inches)_____
Water Table Present?	Yes [ ]	No [✓]	Depth (inches)_____
Saturation Present (including capillary fringe)?	Yes [ ]	No [✓]	Depth (inches)_____

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
[ ] Water-stained leaves	[ ] Hydrological records	[ ] Direct observation of inundation
[ ] Evidence of aquatic fauna	[ ] Free water in a soil test hole	[ ] Drainage patterns
[ ] Iron deposits	[ ] Saturated soil	[ ] Drift lines
[ ] Algal mats or crusts	[ ] Water marks	[ ] Scoured areas
[ ] Oxidized rhizospheres/pore linings	[ ] Moss trim lines	[ ] Sediment deposits
[ ] Thin muck surfaces	[ ] Presence of reduced iron	[ ] Surface soil cracks
[ ] Plants with air-filled tissue (aerenchyma)	[ ] Woody plants with adventitious roots	[ ] Sparsely vegetated concave surface
[ ] Plants with polymorphic leaves	[ ] Trees with shallow root systems	[ ] Microtopographic relief
[ ] Plants with floating leaves	[ ] Woody plants with enlarged lenticels	[ ] Geographic position (depression, toe of slope, fringing lowland
[ ] Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Form Revised July 2023

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Red Oak	Quercus rubra	FACU	20.5	Yes	No
2. White Oak	Quercus alba	FACU	10.5	No	No
3. White Pine	Pinus strobus	FACU	20.5	Yes	No
4. Red Maple	Acer rubrum	FAC	20.5	Yes	Yes
5. American Beech	Fagus grandifolia	FACU	3.0	No	No
6.					
7.					
8.					
9.					

75.0 = Total Cover

Shrub/Sapling Stratum Plot size 15ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Highbush Blueberry	Vaccinium corymbosum	FACW	10.5	Yes	Yes
2. White Pine	Pinus strobus	FACU	10.5	Yes	No
3. Yellow Birch	Betula sp	FAC	3.0	No	Yes
4.					
5.					
6.					
7.					
8.					
9.					

24.0 = Total Cover

Herb Stratum Plot size 5ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Princess Pine	Lycopodium obscurum	FACU	10.5	Yes	No
2. Cinnamon Fern	Osmunda cinnamomea	FACW	10.5	Yes	Yes
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

21.0 = Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30ft				
Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1.					
2.					
3.					
4.					
			0.0 = Total Cover		

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?				Yes ☐ No ☑
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species? Yes ☐ No ☑
	7	3		
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	= 0.00
	FACW species	21	X 2	= 42.00
	FAC species	24	X 3	= 70.50
	FACU species	76	X 4	= 304.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 120.5		(B) 416.5
Prevalence Index		B/A = 3.46		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☑
Wetland vegetation criterion met?		**Yes** ☐	**No** ☑	

Definitions of Vegetation Strata

Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height

Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall

Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall

Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

Sampling Point A6 UPLAND

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-0.5	10YR 2/2	100.00					Hemic	Oe
0.5-2	10YR 2/1	100.00					FSL	A
2-12	7.5YR 3/3	100.00					FSL	Bw
12+							Refusal	Cr

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

Restrictive Layer (if observed) Type: Rock Depth (inches): 12.00

Remarks:

Hydric Soils criterion met? **Yes** ☐ **No** ☑

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: Symphony Drive City/Town: Franklin Sampling Date: 3/13/25

Applicant/Owner: Sampling Point or Zone: A6 WETLAND

Investigator(s): Lauren H. Gluck, P.W.S. Latitude / Longitude: 42.123863, -71.387700

Soil Map Unit Name: 302C—Montauk fine sandy loam, 8 to 15 percent slopes, extremely stony NWI or DEP Classification: PFO1E

Are climatic/hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? (If yes, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes [✓] No [ ]	**Is the Sampled Area within a Wetland?** Yes [✓] No [ ]
Hydric Soils criterion met?	Yes [✓] No [ ]	
Wetlands hydrology present?	Yes [✓] No [ ]	

Remarks, Photo Details, Flagging, etc.:

Isolated wetland at southeast corner of site. Mapped PVP nearby, but no basins found that appear to sustain flooding suitable for vernal pool habitat.

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes [ ]	No [✓]	Depth (inches) _____
Water Table Present?	Yes [ ]	No [✓]	Depth (inches) _____
Saturation Present (including capillary fringe)?	Yes [✓]	No [ ]	Depth (inches) 10.00

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
[✓] Water-stained leaves	[ ] Hydrological records	[✓] Direct observation of inundation
[ ] Evidence of aquatic fauna	[ ] Free water in a soil test hole	[ ] Drainage patterns
[ ] Iron deposits	[✓] Saturated soil	[ ] Drift lines
[ ] Algal mats or crusts	[ ] Water marks	[ ] Scoured areas
[ ] Oxidized rhizospheres/pore linings	[ ] Moss trim lines	[ ] Sediment deposits
[ ] Thin muck surfaces	[✓] Presence of reduced iron	[ ] Surface soil cracks
[ ] Plants with air-filled tissue (aerenchyma)	[✓] Woody plants with adventitious roots	[ ] Sparsely vegetated concave surface
[ ] Plants with polymorphic leaves	[ ] Trees with shallow root systems	[ ] Microtopographic relief
[ ] Plants with floating leaves	[ ] Woody plants with enlarged lenticels	[ ] Geographic position (depression, toe of slope, fringing lowland
[ ] Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

Pocket of standing water 1-2" deep at wetland interior. Most of area appears to have a saturated hydrology.

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Red Maple	Acer rubrum	FAC	20.5	Yes	Yes
2. Red Oak	Quercus rubra	FACU	20.5	Yes	No
3. White Oak	Quercus alba	FACU	10.5	No	No
4. White Pine	Pinus strobus	FACU	3.0	No	No
5.					
6.					
7.					
8.					
9.					

54.5 = Total Cover

Shrub/Sapling Stratum Plot size 15ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Green Ash	Fraxinus pennsylvanica	FACW	3.0	Yes	Yes
2. Highbush Blueberry	Vaccinum corymbosum	FACW	10.5	Yes	Yes
3.					
4.					
5.					
6.					
7.					
8.					
9.					

13.5 = Total Cover

Herb Stratum Plot size 5ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Cinnamon Fern	Osmunda cinnamomea	FACW	20.5	Yes	Yes
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

20.5 = Total Cover

VEGETATION – continued.

Woody Vine Stratum Plot size 30ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1.					
2.					
3.					
4.					
			0.0 = Total Cover		

Rapid Test: Do all dominant species have an indicator status of OBL or FACW? Yes ☐ No ☑

Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species?
	5	4		Yes ☑ No ☐
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	= 0.00
	FACW species		X 2	= 0.00
	FAC species		X 3	= 0.00
	FACU species		X 4	= 0.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 0		(B) 0
	Prevalence Index	B/A = 0.00		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☐

Wetland vegetation criterion met? Yes ☑ No ☐

Definitions of Vegetation Strata

Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height

Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall

Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall

Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

Sampling Point A6 WETLAND

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-1	10YR 2/2	100.00					Hemic	Oe
1-14	10YR 2/1	90.00	5YR 4/4	10.00	C	M	FSL	A
14+							Refusal	Cr

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☑ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

Restrictive Layer (if observed) Type: Rock Depth (inches): 14.00

Remarks:

Hydric Soils criterion met? **Yes** ☑ **No** ☐

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: Symphony Drive City/Town: Franklin Sampling Date: 3/13/25

Applicant/Owner: Sampling Point or Zone: A16 UPLAND

Investigator(s): Lauren H. Gluck, P.W.S. Latitude / Longitude: 42.123863, -71.387700

Soil Map Unit Name: 302C—Montauk fine sandy loam, 8 to 15 percent slopes, extremely stony NWI or DEP Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? (If yes, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes [ ] No [✓]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✓]
Hydric Soils criterion met?	Yes [ ] No [✓]	
Wetlands hydrology present?	Yes [ ] No [✓]	

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes [ ]	No [✓]	Depth (inches)_____
Water Table Present?	Yes [ ]	No [✓]	Depth (inches)_____
Saturation Present (including capillary fringe)?	Yes [ ]	No [✓]	Depth (inches)_____

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
[ ] Water-stained leaves	[ ] Hydrological records	[ ] Direct observation of inundation
[ ] Evidence of aquatic fauna	[ ] Free water in a soil test hole	[ ] Drainage patterns
[ ] Iron deposits	[ ] Saturated soil	[ ] Drift lines
[ ] Algal mats or crusts	[ ] Water marks	[ ] Scoured areas
[ ] Oxidized rhizospheres/pore linings	[ ] Moss trim lines	[ ] Sediment deposits
[ ] Thin muck surfaces	[ ] Presence of reduced iron	[ ] Surface soil cracks
[ ] Plants with air-filled tissue (aerenchyma)	[ ] Woody plants with adventitious roots	[ ] Sparsely vegetated concave surface
[ ] Plants with polymorphic leaves	[ ] Trees with shallow root systems	[ ] Microtopographic relief
[ ] Plants with floating leaves	[ ] Woody plants with enlarged lenticels	[ ] Geographic position (depression, toe of slope, fringing lowland
[ ] Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Form Revised July 2023

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Red Maple	Acer rubrum	FAC	10.5	No	No
2. Red Oak	Quercus rubra	FACU	38.0	Yes	No
3. White Oak	Quercus alba	FACU	10.5	No	No
4. White Pine	Pinus strobus	FACU	20.5	Yes	No
5.					
6.					
7.					
8.					
9.					

79.5 = Total Cover

Shrub/Sapling Stratum Plot size 15ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. White Pine	Pinus strobus	FACU	20.5	Yes	No
2. Highbush Blueberry	Vaccinum corymbosum	FACW	20.5	Yes	Yes
3. Black Huckleberry	Gaylussacia baccata	FACU	38.0	Yes	No
4.					
5.					
6.					
7.					
8.					
9.					

79.0 = Total Cover

Herb Stratum Plot size 5ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Princess Pine	Lycopodium obscurum	FACU	20.5	Yes	No
2. Spotted Wintergreen	Chimaphila maculata	FACU	3.0	No	No
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

23.5 = Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30ft				
Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1.					
2.					
3.					
4.					
			0.0 = Total Cover		

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?				Yes ☐ No ☑
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species? Yes ☐ No ☑
	6	2		
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	= 0.00
	FACW species	21	X 2	= 41.00
	FAC species	11	X 3	= 31.50
	FACU species	151	X 4	= 604.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 182		(B) 676.5
Prevalence Index		B/A = 3.72		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☑
Wetland vegetation criterion met?		**Yes** ☐ **No** ☑		

Definitions of Vegetation Strata

Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height

Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall

Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall

Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

Sampling Point A16 UPLAND

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-0.5	10YR 2/2	100.00					Hemic	Oe
0.5-3	10YR 2/1	100.00					FSL	A
3+							Refusal	Cr

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

Restrictive Layer (if observed) Type: Rock Depth (inches): 3.00

Remarks: Hit rock at 3"

Hydric Soils criterion met? **Yes** ☐ **No** ☑

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: Symphony Drive City/Town: Franklin Sampling Date: 3/13/25

Applicant/Owner: Sampling Point or Zone: A16 WETLAND

Investigator(s): Lauren H. Gluck, P.W.S. Latitude / Longitude: 42.123863, -71.387700

Soil Map Unit Name: 302C—Montauk fine sandy loam, 8 to 15 percent slopes, extremely stony NWI or DEP Classification: PFO1E

Are climatic/hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? (If yes, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes [✓] No [ ]	**Is the Sampled Area within a Wetland?** Yes [✓] No [ ]
Hydric Soils criterion met?	Yes [✓] No [ ]	
Wetlands hydrology present?	Yes [✓] No [ ]	

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes [ ]	No [✓]	Depth (inches)
Water Table Present?	Yes [ ]	No [✓]	Depth (inches)
Saturation Present (including capillary fringe)?	Yes [✓]	No [ ]	Depth (inches) 16.00

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
[✓] Water-stained leaves	[ ] Hydrological records	[ ] Direct observation of inundation
[ ] Evidence of aquatic fauna	[ ] Free water in a soil test hole	[✓] Drainage patterns
[ ] Iron deposits	[✓] Saturated soil	[ ] Drift lines
[ ] Algal mats or crusts	[ ] Water marks	[ ] Scoured areas
[ ] Oxidized rhizospheres/pore linings	[ ] Moss trim lines	[ ] Sediment deposits
[ ] Thin muck surfaces	[ ] Presence of reduced iron	[ ] Surface soil cracks
[ ] Plants with air-filled tissue (aerenchyma)	[ ] Woody plants with adventitious roots	[ ] Sparsely vegetated concave surface
[ ] Plants with polymorphic leaves	[ ] Trees with shallow root systems	[ ] Microtopographic relief
[ ] Plants with floating leaves	[ ] Woody plants with enlarged lenticels	[ ] Geographic position (depression, toe of slope, fringing lowland
[ ] Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Form Revised July 2023

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Red Maple	Acer rubrum	FAC	38.0	Yes	Yes
2. Red Oak	Quercus rubra	FACU	38.0	Yes	No
3. White Pine	Pinus strobus	FACU	10.5	No	No
4.					
5.					
6.					
7.					
8.					
9.					

86.5 = Total Cover

Shrub/Sapling Stratum Plot size 15ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Birch	Betula sp.	FAC	3.0	No	Yes
2. Highbush Blueberry	Vaccinium corymbosum	FACW	38.0	Yes	Yes
3. White Pine	Pinus strobus	FACU	10.5	No	No
4. Black Huckleberry	Gaylussacia baccata	FACU	3.0	No	No
5.					
6.					
7.					
8.					
9.					

54.5 = Total Cover

Herb Stratum Plot size 5ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Cinnamon Fern	Osmunda cinnamomea	FACW	10.5	Yes	Yes
2. Princess Pine	Lycopodium obscurum	FACU	3.0	Yes	No
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

13.5 = Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30ft				
Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1.					
2.					
3.					
4.					
			0.0 = Total Cover		

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?				Yes ☐ No ☑
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species? Yes ☑ No ☐
	5	3		
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	= 0.00
	FACW species		X 2	= 0.00
	FAC species		X 3	= 0.00
	FACU species		X 4	= 0.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 0		(B) 0
Prevalence Index		B/A = 0.00		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☐
Wetland vegetation criterion met?		**Yes** ☑ **No** ☐		

Definitions of Vegetation Strata

Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height

Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall

Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall

Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-2	5YR 2.5/2	100.00						O
2-6	10YR 2/1	100.00					SL	A
6-20	10YR 3/3	70.00	10YR 2/1	30.00	C	M	SL	B; very rocky

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☑ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

Restrictive Layer (if observed) Type: _____ Depth (inches): _____

Remarks: Dark streaking found throughout B-horzion; saturated at 16"

Hydric Soils criterion met? **Yes** ☑ **No** ☐

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: Symphony Drive City/Town: Franklin Sampling Date: 3/13/25

Applicant/Owner: Sampling Point or Zone: B6 UPLAND

Investigator(s): Lauren H. Gluck, P.W.S. Latitude / Longitude: 42.123863, -71.387700

Soil Map Unit Name: 302C—Montauk fine sandy loam, 8 to 15 percent slopes, extremely stony NWI or DEP Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks)

Are Vegetation [ ], Soil [ ] , or Hydrology [ ] significantly disturbed? (If yes, explain in Remarks)

Are Vegetation [ ], Soil [ ] , or Hydrology [ ] naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes [ ] No [✓]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✓]
Hydric Soils criterion met?	Yes [ ] No [✓]	
Wetlands hydrology present?	Yes [ ] No [✓]	

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes [ ]	No [✓]	Depth (inches)_____
Water Table Present?	Yes [ ]	No [✓]	Depth (inches)_____
Saturation Present (including capillary fringe)?	Yes [ ]	No [✓]	Depth (inches)_____

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
[ ] Water-stained leaves	[ ] Hydrological records	[ ] Direct observation of inundation
[ ] Evidence of aquatic fauna	[ ] Free water in a soil test hole	[ ] Drainage patterns
[ ] Iron deposits	[ ] Saturated soil	[ ] Drift lines
[ ] Algal mats or crusts	[ ] Water marks	[ ] Scoured areas
[ ] Oxidized rhizospheres/pore linings	[ ] Moss trim lines	[ ] Sediment deposits
[ ] Thin muck surfaces	[ ] Presence of reduced iron	[ ] Surface soil cracks
[ ] Plants with air-filled tissue (aerenchyma)	[ ] Woody plants with adventitious roots	[ ] Sparsely vegetated concave surface
[ ] Plants with polymorphic leaves	[ ] Trees with shallow root systems	[ ] Microtopographic relief
[ ] Plants with floating leaves	[ ] Woody plants with enlarged lenticels	[ ] Geographic position (depression, toe of slope, fringing lowland
[ ] Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Form Revised July 2023

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Red Oak	Quercus rubra	FACU	38.0	Yes	No
2. Red Maple	Acer rubrum	FAC	20.5	Yes	Yes
3. White Pine	Pinus strobus	FACU	20.5	Yes	No
4. Black Tupelo	Nyssa sylvatica	FAC	10.5	No	Yes
5. White Oak	Quercus alba	FACU	10.5	No	No
6.					
7.					
8.					
9.					

100.0 = Total Cover

Shrub/Sapling Stratum Plot size 15ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. White Pine	Pinus strobus	FACU	10.5	No	No
2. Highbush Blueberry	Vaccinum Corymbosum	FACW	20.5	Yes	Yes
3. Black Huckleberry	Gaylussacia baccata	FACU	20.5	Yes	No
4. Coastal Sweet Pepperbush	Clethra alnifolia	FAC	3.0	No	Yes
5.					
6.					
7.					
8.					
9.					

54.5 = Total Cover

Herb Stratum Plot size 5ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Princess Pine	Lycopodium obscurum	FACU	10.5	Yes	No
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

10.5 = Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30ft				
Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1.					
2.					
3.					
4.					
		0.0 = Total Cover			

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?				Yes ☐ No ☑
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species? Yes ☐ No ☑
	6	2		
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	= 0.00
	FACW species	21	X 2	= 41.00
	FAC species	34	X 3	= 102.00
	FACU species	111	X 4	= 442.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 165		(B) 585
Prevalence Index		B/A = 3.55		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☑
Wetland vegetation criterion met?		**Yes** ☐ **No** ☑		

Definitions of Vegetation Strata

Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height

Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall

Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall

Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

Sampling Point B6 UPLAND

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-0.5	5YR 5/5	100.00					Hemic	Oe
0.5-2	10YR 3/2	100.00					FSL	A
2-12	10YR 4/6	100.00					FSL	Bw
12+							Refusal	Cr

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

Restrictive Layer (if observed) Type: Rock Depth (inches): 12.00

Remarks:

Hydric Soils criterion met? **Yes** ☐ **No** ☑

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: Symphony Drive City/Town: Franklin Sampling Date: 3/13/25

Applicant/Owner: Sampling Point or Zone: B6 Wetland

Investigator(s): Lauren H. Gluck, P.W.S. Latitude / Longitude: 42.123863, -71.387700

Soil Map Unit Name: 302C—Montauk fine sandy loam, 8 to 15 percent slopes, extremely stony NWI or DEP Classification: PFO1E

Are climatic/hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? (If yes, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes [✓] No [ ]	**Is the Sampled Area within a Wetland?** **Yes [✓] No [ ]**
Hydric Soils criterion met?	Yes [✓] No [ ]	
Wetlands hydrology present?	Yes [✓] No [ ]	

Remarks, Photo Details, Flagging, etc.:
Isolated wetland extending offsite to north and south.

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes [ ]	No [✓]	Depth (inches)
Water Table Present?	Yes [ ]	No [✓]	Depth (inches)
Saturation Present (including capillary fringe)?	Yes [✓]	No [ ]	Depth (inches) 8.00

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
[✓] Water-stained leaves	[ ] Hydrological records	[ ] Direct observation of inundation
[ ] Evidence of aquatic fauna	[ ] Free water in a soil test hole	[ ] Drainage patterns
[ ] Iron deposits	[✓] Saturated soil	[ ] Drift lines
[ ] Algal mats or crusts	[ ] Water marks	[ ] Scoured areas
[ ] Oxidized rhizospheres/pore linings	[ ] Moss trim lines	[ ] Sediment deposits
[ ] Thin muck surfaces	[✓] Presence of reduced iron	[ ] Surface soil cracks
[ ] Plants with air-filled tissue (aerenchyma)	[ ] Woody plants with adventitious roots	[ ] Sparsely vegetated concave surface
[ ] Plants with polymorphic leaves	[ ] Trees with shallow root systems	[✓] Microtopographic relief
[ ] Plants with floating leaves	[ ] Woody plants with enlarged lenticels	[ ] Geographic position (depression, toe of slope, fringing lowland
[ ] Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Red Maple	Acer rubrum	FAC	38.0	Yes	Yes
2. White Pine	Pinus strobus	FACU	10.5	No	No
3. Black Tupelo	Nyssa sylvatica	FAC	20.5	Yes	Yes
4. Red Oak	Quercus rubra	FACU	10.5	No	No
5.					
6.					
7.					
8.					
9.					

79.5 = Total Cover

Shrub/Sapling Stratum Plot size 15ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Coastal Sweet Pepperbush	Clethra alnifolia	FAC	20.5	Yes	Yes
2. Highbush Blueberry	Vaccinum corymbosum	FACW	20.5	Yes	Yes
3. Red Maple	Acer rubrum	FAC	10.5	No	Yes
4. White Pine	Pinus strobus	FACU	10.5	No	No
5.					
6.					
7.					
8.					
9.					

62.0 = Total Cover

Herb Stratum Plot size 5ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Princess Pine	Lycopodium obscurum	FACU	3.0	Yes	No
2. Coastal Sweet Pepperbush	Clethra alnifolia	FAC	10.5	Yes	Yes
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

13.5 = Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30ft				
Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1.					
2.					
3.					
4.					
			0.0 = Total Cover		

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?				Yes ☐ No ☑
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species? Yes ☑ No ☐
	6	5		
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	= 0.00
	FACW species		X 2	= 0.00
	FAC species		X 3	= 0.00
	FACU species		X 4	= 0.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 0		(B) 0
Prevalence Index		B/A = 0.00		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☐
Wetland vegetation criterion met?		**Yes** ☑ **No** ☐		

Definitions of Vegetation Strata

Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height

Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall

Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall

Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-2	5YR 2.5/2	100.00					Hemic	Oe
2-6	10YR 2/1	100.00					SL	A
6-12	10YR 4/3	70.00	10YR 2/1	20.00	D	M	SL	Bwu
			5YR 4/3	10.00	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☑ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

Restrictive Layer (if observed) Type: _____ Depth (inches): _____

Remarks: Dark mottling and redox within B-horizon

Hydric Soils criterion met? **Yes** ☑ **No** ☐

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: Symphony Drive City/Town: Franklin Sampling Date: 3/13/25

Applicant/Owner: Sampling Point or Zone: B103 UPLAND

Investigator(s): Lauren H. Gluck, P.W.S. Latitude / Longitude: 42.123863, -71.387700

Soil Map Unit Name: 302C—Montauk fine sandy loam, 8 to 15 percent slopes, extremely stony NWI or DEP Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? (If yes, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes [✓] No [ ]	**Is the Sampled Area within a Wetland?** Yes [ ] No [✓]
Hydric Soils criterion met?	Yes [ ] No [✓]	
Wetlands hydrology present?	Yes [ ] No [✓]	

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes [ ]	No [✓]	Depth (inches)_____
Water Table Present?	Yes [ ]	No [✓]	Depth (inches)_____
Saturation Present (including capillary fringe)?	Yes [ ]	No [✓]	Depth (inches)_____

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
[ ] Water-stained leaves	[ ] Hydrological records	[ ] Direct observation of inundation
[ ] Evidence of aquatic fauna	[ ] Free water in a soil test hole	[ ] Drainage patterns
[ ] Iron deposits	[ ] Saturated soil	[ ] Drift lines
[ ] Algal mats or crusts	[ ] Water marks	[ ] Scoured areas
[ ] Oxidized rhizospheres/pore linings	[ ] Moss trim lines	[ ] Sediment deposits
[ ] Thin muck surfaces	[ ] Presence of reduced iron	[ ] Surface soil cracks
[ ] Plants with air-filled tissue (aerenchyma)	[ ] Woody plants with adventitious roots	[ ] Sparsely vegetated concave surface
[ ] Plants with polymorphic leaves	[ ] Trees with shallow root systems	[ ] Microtopographic relief
[ ] Plants with floating leaves	[ ] Woody plants with enlarged lenticels	[ ] Geographic position (depression, toe of slope, fringing lowland
[ ] Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Form Revised July 2023

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Red Oak	Quercus rubra	FACU	63.0	Yes	No
2. Red Maple	Acer rubrum	FAC	20.5	Yes	Yes
3. Black Tupelo	Nyssa sylvatica	FAC	3.0	No	Yes
4.					
5.					
6.					
7.					
8.					
9.					

86.5 = Total Cover

Shrub/Sapling Stratum Plot size 15ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Coastal Sweet Pepperbush	Clethra alnifolia	FAC	20.5	Yes	Yes
2. Highbush Blueberry	Vaccinium corymbosum	FACW	10.5	Yes	Yes
3. White Pine	Pinus strobus	FACU	10.5	Yes	No
4.					
5.					
6.					
7.					
8.					
9.					

41.5 = Total Cover

Herb Stratum Plot size 5ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Coastal Sweet Pepperbush	Clethra alnifolia	FAC	10.5	Yes	Yes
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

10.5 = Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30ft				
Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1.					
2.					
3.					
4.					
			0.0 = Total Cover		

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?				Yes ☐ No ☑
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species? Yes ☑ No ☐
	6	4		
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	= 0.00
	FACW species	11	X 2	= 21.00
	FAC species	65	X 3	= 195.00
	FACU species	74	X 4	= 294.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 149		(B) 510
Prevalence Index		B/A = 3.42		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☑
Wetland vegetation criterion met?		**Yes** ☑ **No** ☐		

Definitions of Vegetation Strata

Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height

Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall

Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall

Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-1	7.5YR 2.5/3	100.00					Hemic	Oe
0-3	10YR 3/3	100.00					FSL	A
3-12	10YR 3/2	100.00					FSL	B

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

Restrictive Layer (if observed) Type: _____ Depth (inches): _____

Remarks:

Hydric Soils criterion met? **Yes** ☐ **No** ☑

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: Symphony Drive City/Town: Franklin Sampling Date: 3/13/25

Applicant/Owner: Sampling Point or Zone: B103 WETLAND

Investigator(s): Lauren H. Gluck, P.W.S. Latitude / Longitude: 42.123863, -71.387700

Soil Map Unit Name: 302C—Montauk fine sandy loam, 8 to 15 percent slopes, extremely stony NWI or DEP Classification: PFO1E

Are climatic/hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? (If yes, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes [✓] No [ ]	**Is the Sampled Area within a Wetland?** Yes [✓] No [ ]
Hydric Soils criterion met?	Yes [✓] No [ ]	
Wetlands hydrology present?	Yes [✓] No [ ]	

Remarks, Photo Details, Flagging, etc.:

Isolated wetland extending offsite to north and south.

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes [ ]	No [✓]	Depth (inches)
Water Table Present?	Yes [ ]	No [✓]	Depth (inches)
Saturation Present (including capillary fringe)?	Yes [✓]	No [ ]	Depth (inches) 12.00

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
[✓] Water-stained leaves	[ ] Hydrological records	[ ] Direct observation of inundation
[ ] Evidence of aquatic fauna	[ ] Free water in a soil test hole	[ ] Drainage patterns
[ ] Iron deposits	[✓] Saturated soil	[ ] Drift lines
[ ] Algal mats or crusts	[ ] Water marks	[ ] Scoured areas
[ ] Oxidized rhizospheres/pore linings	[ ] Moss trim lines	[ ] Sediment deposits
[ ] Thin muck surfaces	[✓] Presence of reduced iron	[ ] Surface soil cracks
[ ] Plants with air-filled tissue (aerenchyma)	[ ] Woody plants with adventitious roots	[ ] Sparsely vegetated concave surface
[ ] Plants with polymorphic leaves	[ ] Trees with shallow root systems	[✓] Microtopographic relief
[ ] Plants with floating leaves	[ ] Woody plants with enlarged lenticels	[ ] Geographic position (depression, toe of slope, fringing lowland
[ ] Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Red Oak	Quercus rubra	FACU	20.5	Yes	No
2. Red Maple	Acer rubrum	FAC	20.5	Yes	Yes
3. White Pine	Pinus strobus	FACU	10.5	No	No
4. Black Tupelo	Nyssa sylvatica	FAC	10.5	No	Yes
5. Sasafras	Sassafras albidum	FACU	10.5	No	No
6.					
7.					
8.					
9.					

72.5 = Total Cover

Shrub/Sapling Stratum Plot size 15ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Coastal Sweet Pepperbush	Clethra alnifolia	FAC	20.5	Yes	Yes
2. Highbush Blueberry	Vaccinium corymbosum	FACW	20.5	Yes	Yes
3. Red Maple	Acer rubrum	FAC	10.5	No	Yes
4. Sassafras	Sassafras albidum	FACU	3.0	No	No
5. White Pine	Pinus stobus	FACU	10.5	No	No
6.					
7.					
8.					
9.					

65.0 = Total Cover

Herb Stratum Plot size 5ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Coastal Sweet Pepperbush	Clethra alnifolia	FAC	10.5	Yes	Yes
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

10.5 = Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30ft				
Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1.					
2.					
3.					
4.					
			0.0 = Total Cover		

Rapid Test: Do all dominant species have an indicator status of OBL or FACW?				Yes ☐ No ☑
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species? Yes ☑ No ☐
	6	5		
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	= 0.00
	FACW species		X 2	= 0.00
	FAC species		X 3	= 0.00
	FACU species		X 4	= 0.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 0		(B) 0
Prevalence Index		B/A = 0.00		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☐
Wetland vegetation criterion met?		**Yes** ☑	**No** ☐	

Definitions of Vegetation Strata

Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height

Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall

Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall

Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-1	10YR 2/2	100.00					Hemic	Oe
1-3	10YR 2/1	80.00	10YR 4/1	20.00	C	M	FSL	A
3-12	10YR 4/2	70.00	10YR 2/1	20.00	C	M	FSL	B
			7.5YR 3/4	10.00	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☑ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

Restrictive Layer (if observed) Type: _____ Depth (inches): _____

Remarks: Mottling through out A and B-horizon

Hydric Soils criterion met? **Yes** ☑ **No** ☐

APPENDIX C

*Stormwater Management Report

Bay Colony Group, Inc.
Professional Civil Engineers & Land Surveyors

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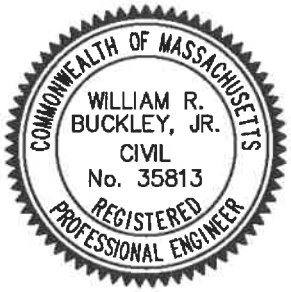
Foxborough, Massachusetts 02035
Telephone (508) 543-3939 • Fax (508) 543-8866
E-mail: mailbox@baycolonygroup.com

Storm Water Management Report
Tanglewood Estates II
Symphony Drive Extension
Franklin, MA



December, 2025

Prepared for:

Cypress Real Estate Development, LLC
3 Rothchild Drive
Foxborough, MA 02035

Table of Contents:

1.0 Introduction

The project involves the construction of a common driveway and two single-family homes on a 7.0 +/- acre parcel of land located beyond the end of the Symphony Drive cul-de-sac. The property is bordered by residential properties to the east, south and west and Town-owned land to the north. The property is located within the Rural Residential I Zoning District. **Figure 1** provides an extract from the USGS Franklin Quadrangle and shows the site locus.

Bay Colony Group, Inc. conducted a stormwater management study to ensure that the proposed project meets the stormwater standards outlined in the Town of Franklin Stormwater Management Bylaws and standard engineering practice. The project is not subject to the Massachusetts Stormwater Management Standards because the subdivision contains fewer than four lots, however, it will meet all applicable standards in accordance with the local Stormwater Management Bylaws. The scope of this study includes:

- Determining existing flood conditions and stormwater quality calculations and analysis;
- Developing proposed flood conditions and stormwater quality calculations and analysis;
- Designing a stormwater management system.

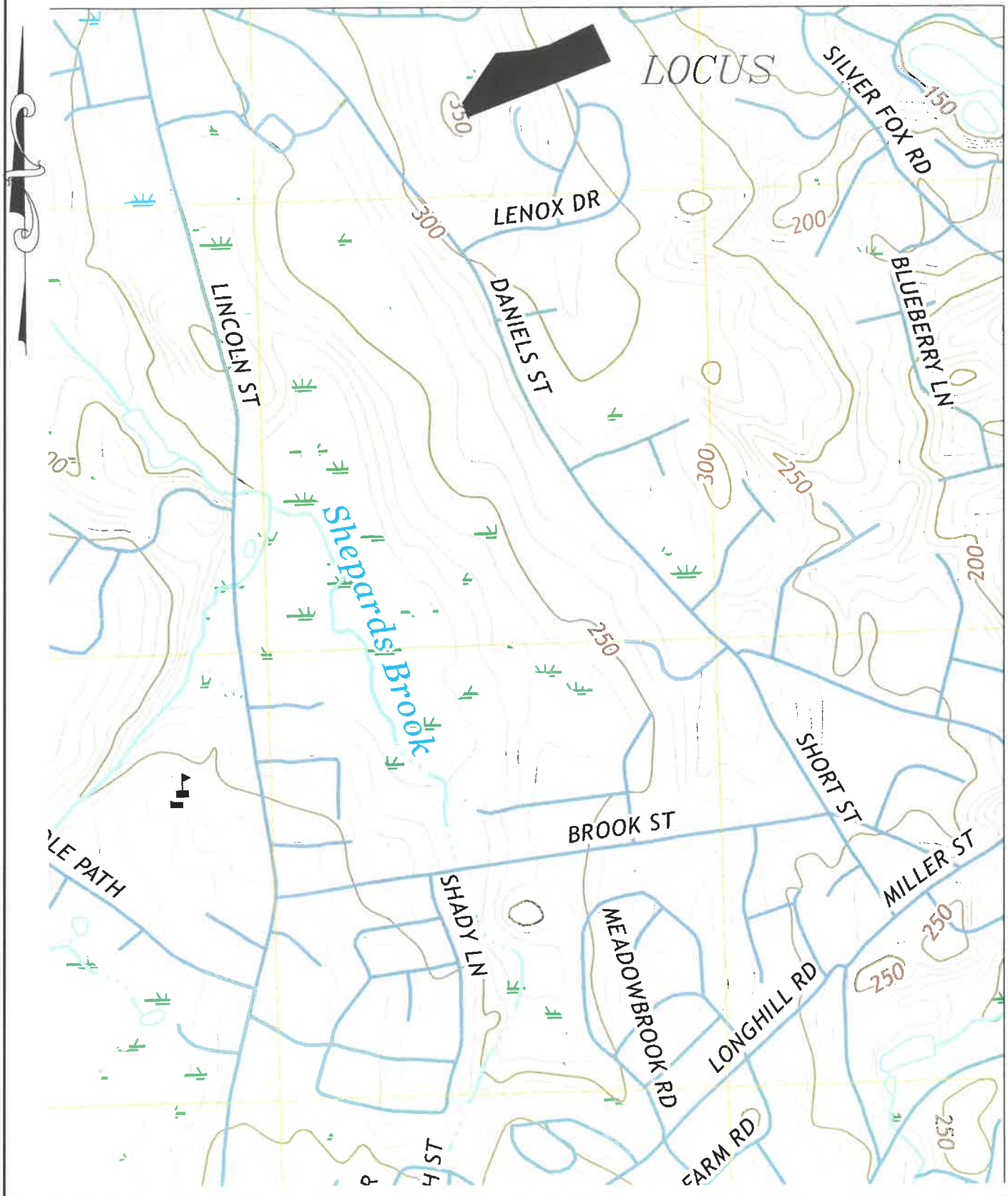
2.0 Existing Conditions

The site is located at the end of Symphony Drive and is listed as Assessor's Parcel No.218-020-00. The property is located on a hillside that generally slopes from west to east. The high point of the site is at approximately elevation 354 feet in the western portion of the property and slopes significantly to the east to approximately elevation 264 feet at the eastern property line. The property consists of an undeveloped wooded area. The site contains two Isolated Vegetated Wetlands (IVW) located in the eastern and western portions of the property.

The NRCS has mapped the soils on the site as Montauk fine sandy loam (**Appendix D**). Montauk soils are classified as Hydrologic Soil Group C. The wooded area on the site consists of a mixture of primary and secondary growth, including deciduous and coniferous trees. BCG conducted soil evaluations throughout the site to determine the general soil conditions, depth to groundwater and depth to refusal. The native soil identified at the proposed infiltration basin on Lot 2 is Loamy Sand. The RAWLS table provided in the DEP Stormwater Management Standards, Volume 3, Chapter 1 identifies an infiltration rate of 2.41 inches per hour for Loamy Sand. Copies of the basin soil logs and laboratory textural analyses are included in **Appendix D** and the locations of the test pits are shown on the existing conditions plan **Sheet 2.**

3.0 Flood Condition Analyses and Flood Control

The stormwater management system will consist of roof drainage, driveway drainage (runoff collection, pretreatment, and conveyance) and flood control and treatment. This report focuses on the stormwater basin design and the Town of Franklin performance standards. The proposed system will comply with all applicable requirements and will improve existing conditions.



BAY COLONY GROUP, INC.
FOUR SCHOOL STREET
FOXBOROUGH, MA 02035
(508) 543-3939

USGS QUADRANGLE EXTRACT
SYMPHONY DRIVE
FRANKLIN, MA
FRANKLIN QUADRANGLE
SCALE: 1"= 1000'

The proposed design will achieve runoff control through a multi-phase system that includes a detention basin (Drainage Basin #1) located in the western portion of the property and an infiltration basin (Drainage Basin #2) located in the eastern portion of the property. The basins will capture, treat and control runoff from the roof and driveway areas. All runoff from the pavement will be pretreated by stone trenches and sediment forebays before discharging to the basins. The basins have been designed to accommodate the 100-year storm event with six inches of freeboard. The system ensures that the post-development rate of runoff is less than the pre-development condition.

The current land uses consist of woodland and grass areas. The proposed land uses include single-family homes, driveways, lawns and remaining woods. The land uses for existing and proposed conditions are summarized in **Tables 1a** and **1b**. One study line was selected to develop the existing and proposed condition models. For the existing conditions, the watershed is molded as a single subarea. Subarea EA comprises the majority of the site and flows toward the eastern IVW. See the plan in **Appendix A – Existing Subareas**

Table 1a – Summary of Existing Land Uses

Subarea	Total Area (acre)	Land use	Area (acre)
EA	4.120	Woods, Good, HSG C	3.750
		>75% Grass cover, Good, HSG C	0.370
Total:	4.120	Total:	4.120

For proposed conditions, the watershed is divided into three separate subareas. Subarea PA represents the western portion of the site and drains to Drainage Basin #1. Subarea PB is located in the central portion of the site and drains to Drainage Basin #2. Subarea PC is located in the northern and eastern portion of the site and sheet flows to the IVW located in the eastern portion of the site. The proposed watershed area is larger than the existing watershed area due to changes in topography that direct more runoff toward the drainage system. See the plan in **Appendix A – Developed Subareas**

Table 1b – Summary of Proposed Land Uses

Subarea	Total Area (acre)	Land use	Area (acre)
PA	2.220	Roofs, HSG C	0.060
		Paved parking, HSG C	0.100
		>75% Grass cover, Good, HSG C	1.340
		Woods, Good, HSG C	0.720
PB	0.690	Roofs, HSG C	0.040
		Paved parking, HSG C	0.120
		>75% Grass cover, Good, HSG C	0.530
PC	1.380	Roofs, HSG C	0.040
		>75% Grass cover, Good, HSG C	0.760
		Woods, Good, HSG C	0.580
Total:	4.290	Total:	4.290

The runoff conditions derived from the land uses in **Tables 1a** and **1b** are summarized in **Table 2**. Detailed calculations are provided in **Appendix A**.

Table 2: Summary of Peak Runoff (cfs) at the Study Lines

Condition		2-year (cfs)	2-year (af)	10-year (cfs)	10-year (af)	100-year (cfs)	100-year (af)
Existing Conditions	Isolated Wetland	2.6	0.283	6.3	0.622	12.1	1.154
Proposed Conditions	Isolated Wetland	1.4	0.113	3.0	0.235	5.5	0.505

The detailed storm routing calculations are attached in **Appendix A.**

4.0 Stormwater Management

The site is not located within a groundwater protection district (Zone II). There are no private drinking water wells in proximity to the project site. There are no critical areas down-gradient of the project site based on 314 CMR 4.00 (Massachusetts Surface Water Quality Standards). There are no certified vernal pools in the vicinity of the site.

DEP STORMWATER MANAGEMENT STANDARDS

Standard #1: NO UNTREATED DISCHARGE OR EROSION TO WETLANDS

No untreated stormwater from the proposed project area will be discharged to a resource area. Runoff from all pavement will be discharged to stone trenches, then to sediment forebays and finally to the above-ground detention and infiltration basins. This treatment train will achieve a TSS removal rate of approximately 90%. The outfall has been designed to accept the 25-year storm flow from the basin without causing erosion in the wetlands or soils **Appendix B.**

Standard #2: PEAK RATE ATTENUATION

Stormwater controls have been designed for the 2-, 10-, and 100-year storms according with local regulations. Peak discharge rates are evaluated at a design point, typically the lowest point of discharge along the downgradient property line (Massachusetts Stormwater Handbook, Vol. 1, Ch. 1, P.5). The design ensures that the post-development peak runoff rates do not exceed pre-development rates at any design point. Proponents must also evaluate the impact of peak discharges from the 100-year storm event. If this evaluation shows that increased off-site flooding will result from peak discharge from the storm then BMPs must also attenuate that discharge (Massachusetts Stormwater Handbook, Vol. 1, Ch. 1, P.5). In this case, the post-development peak rates for the 100-year event are less than the pre-development condition everywhere **Table 2.**

Standard #3: STORMWATER RECHARGE

1) The project area is located on soils mapped as Hydrologic Soil Group C based on the NRCS soil survey. The target recharge depth for C soils is 0.25 inches. Due to the site consisting of C and D soils, the Required Recharge Volume (RRV) must be infiltrated to the maximum extent practicable. The RAWLS rate for Loamy Sand is 2.41 inches per hour and this rate will be used for the recharge calculations **Appendix B**.

2) The infiltration BMP that will be used will be the above ground infiltration basin **Appendix B**.

3) Using the RAWLS rates for the basin, the analysis shows that the drawdown time for the Required Recharge Volume is 0.3 hours, which meets the required 72 hours dewatering standard **Appendix B**.

4) A capture area adjustment is not necessary since 100% of the impervious area will be directed to the above-ground stormwater basin, which meets the 65% standard

5) A mounding analysis is not required because the Drainage Basin #1 as it is operating as a non-infiltrating BMP for the inflow and outflow analysis. A mounding analysis is necessary under Drainage Basin #2 per the DEP Stormwater standards since the vertical separation from the bottom of the basins and the estimated high ground water elevation is less than 4'. In accordance with the "Simple Dynamic" methodology, the RAWLS rate is used as the hydraulic conductivity and the mounding analysis assumes that the Required Recharge Volume is applied during a 2-hour period during the storm. The specific yield at the basins is based on the USDA Textural Analysis and USGS Water Supply Paper 1662-D **Appendix D**. The model used is the AQTESOLV V.4.50.002 program that uses the ground water mounding solution by Hantush (1967). The analysis found that the top of the mound is below the bottom of the basin. Therefore, the mound does not breach the bottom of the pond and will not impact the ability of the basin to drain within 72 hours as was previously discussed. **Appendix B**

Standard # 4: WATER QUALITY

1) The required water quality volume is based on 0.36 acres of impervious area and a 1.0-inch water quality depth, which yields a volume of 1,307cubic feet or 0.0300 ac-ft. The Drainage Basin #2 can accommodate a volume of 9,714 cubic feet or 0.223 ac-ft prior to discharge **Appendix B**.

2) The BMPs used for the proposed project to improve water quality include: stone trenches, sediment forebays and stormwater basins. The estimated overall TSS removal is 90% **Appendix B.**

3) Since Drainage Basin #2 is being used to fulfill the requirements of Standards 3 and 4, it must handle the greater of the volumes. The basin provides a storage volume of 0.223 ac-

ft below discharge. The required recharge volume is 0.0075 ac-ft and the water quality volume is 0.0300 ac-ft **Appendix B**

Standard # 5: LAND USES WITH HIGHER POTENTIAL POLLUTION LOADS

The site will consist of a typical residential property, which is not considered to have a high potential pollutant load. The site will be compatible with the surrounding environment, which is a residential area.

Standard #6: CRITICAL AREAS

According to 314 CMR 14.400 and MASS MAPPER the project site does not contain any critical resource areas

Standard #7: REDEVELOPMENT

Th proposed activity is not a redevelopment project

Standard #8: CONSTRUCTION PERIOD CONTROLS

Silt sock barriers will be installed at the downgradient limit of work before any excavation starts. A stone pad shall be spread at the entrance from the existing shared entrance to the project site to prevent mud from escaping the site during construction.

A Draft Stormwater Pollution Prevention Plan has been developed in accordance with the EPA General Permit for Construction Activities. A final SWPPP will be prepared once the construction schedule is finalized and the contractors are chosen. A copy of the Draft SWPPP is included in **Sheet 7.**

Standard #9: OPERATION AND MAINTENANCE PLAN

Pre- and Post-Development Operation and Maintenance Plans have been developed for the project **Appendix C**.

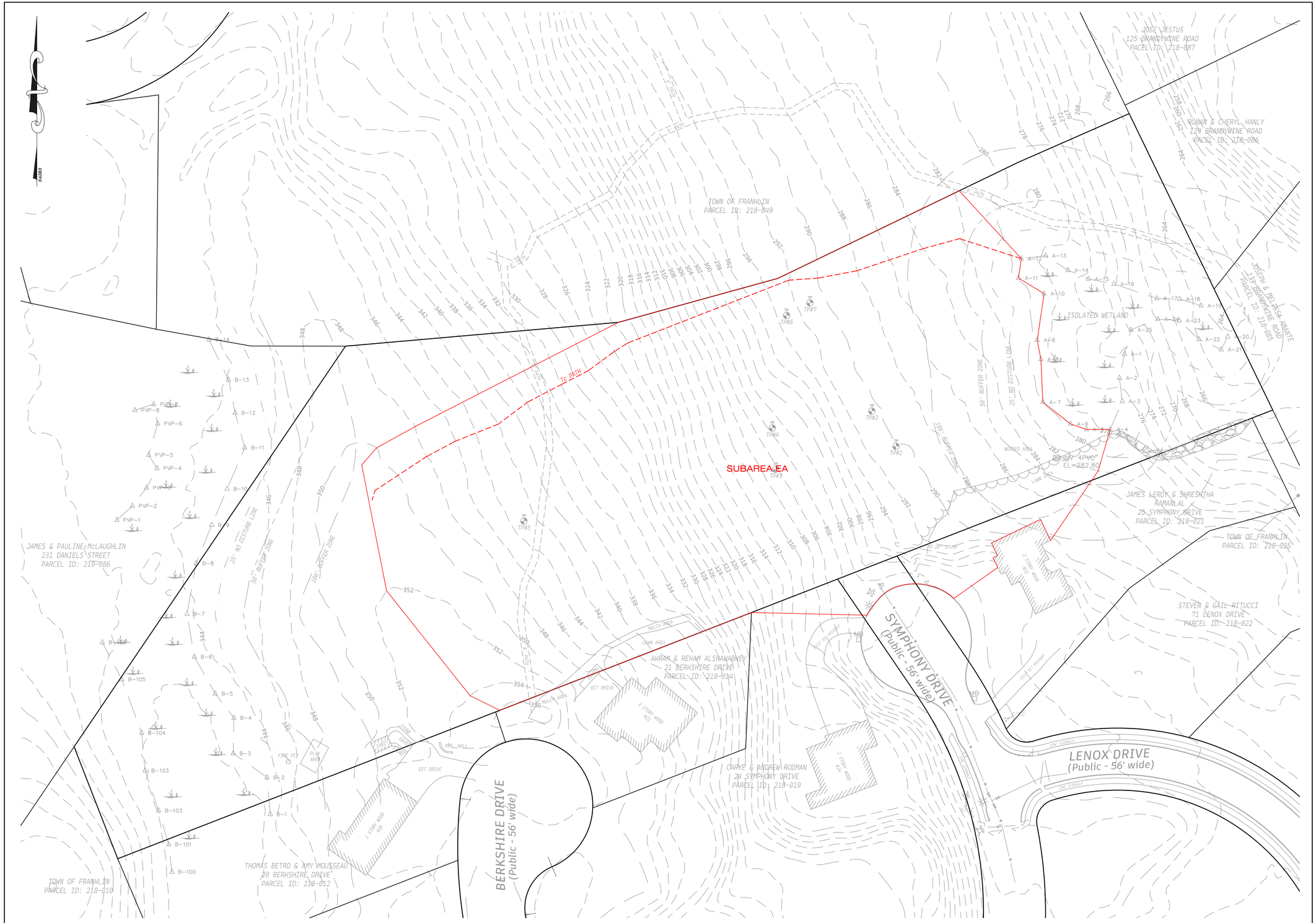
Standard # 10: ILLICIT DISCHARGES TO DRAINAGE SYSTEM

I certify to the best of my professional knowledge, information and belief that there are no illicit discharges to the stormwater management system, including wastewater discharges and discharges of stormwater contaminated by contact with process wastes, raw materials, toxic pollutants, hazardous substances, oil, or grease. The proposed systems as shown on the referenced plans do not allow entry of any illicit discharges into the system and there are no connections between the stormwater and wastewater management systems.

To be signed prior to construction _____ _____

Owner Date

APPENDIX A – Pre- and Post-DEVELOPMENT ANALYSIS AND STORM WATER POND DESIGNS



PROJECT:

Symphony Drive Extension

Franklin Massachusetts

OWNER/APPLICANT:

CYPRESS REAL ESTATE DEVELOPMENT LLC
3 ROTHCHILD DRIVE
FOXBOROUGH, MA 02035

Bay Colony Group, Inc.
Professional Civil Engineers & Professional Land Surveyors

FOUR SCHOOL STREET
P.O. BOX 9136
FOXBOROUGH, MA 02035
508-543-3939

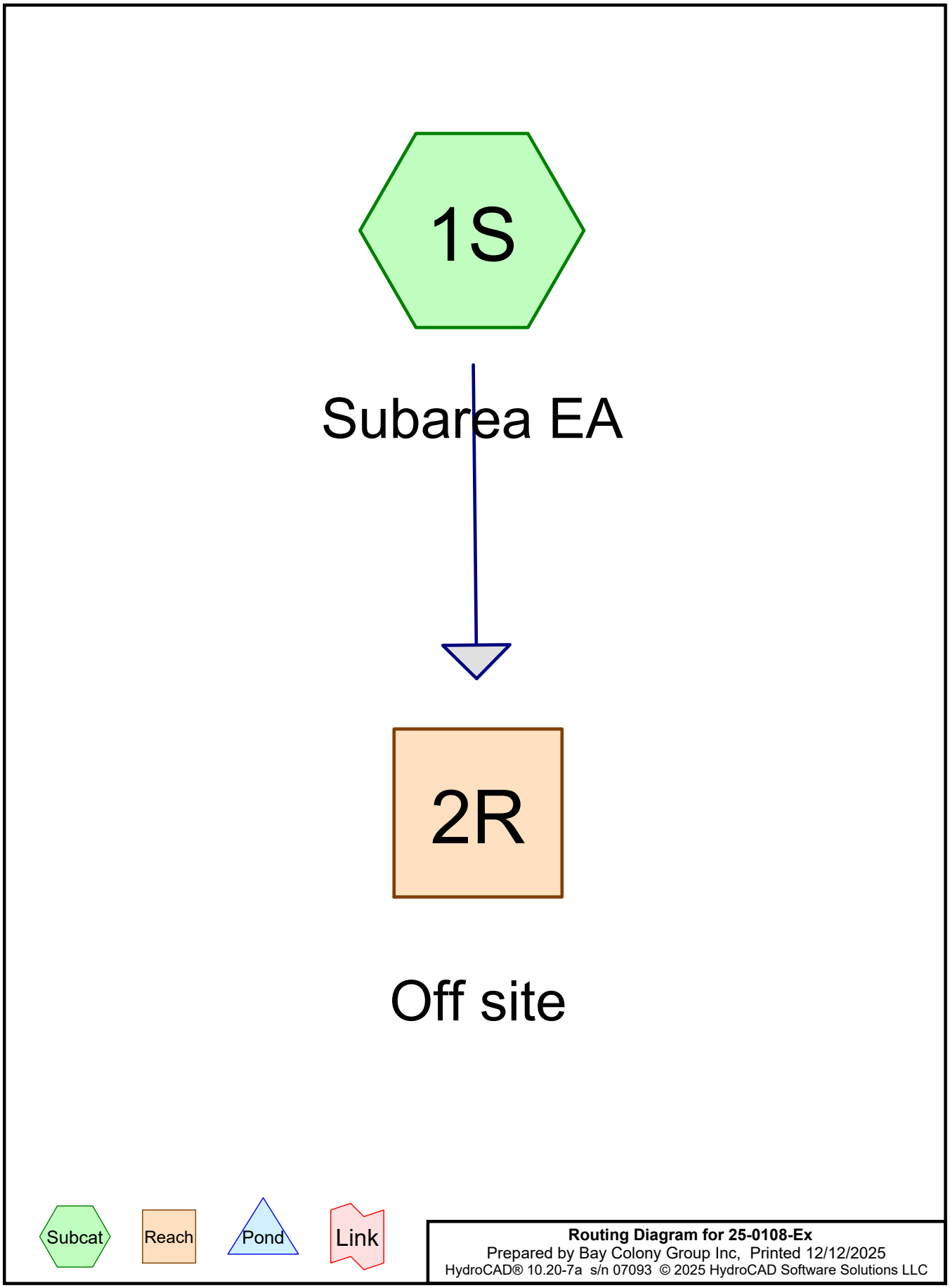
STAMP

DRAWING TITLE

Existing Subarea

SCALE: 1" = 40'

DEC. 4, 2025	SHEET NUMBER
25-0108B	**EX**



Routing Diagram for 25-0108-Ex
Prepared by Bay Colony Group Inc, Printed 12/12/2025

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.370	74	>75% Grass cover, Good, HSG C (1S)
3.750	70	Woods, Good, HSG C (1S)
4.120	**70**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
4.120	HSG C	1S
0.000	HSG D	
0.000	Other	
4.120		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subarea EA Runoff Area=4.120 ac 0.00% Impervious Runoff Depth>0.82"
Flow Length=648' Tc=15.6 min CN=70 Runoff=2.6 cfs 0.283 af

Reach 2R: Off site Inflow=2.6 cfs 0.283 af
Outflow=2.6 cfs 0.283 af

Total Runoff Area = 4.120 ac Runoff Volume = 0.283 af Average Runoff Depth = 0.82"
100.00% Pervious = 4.120 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: Subarea EA

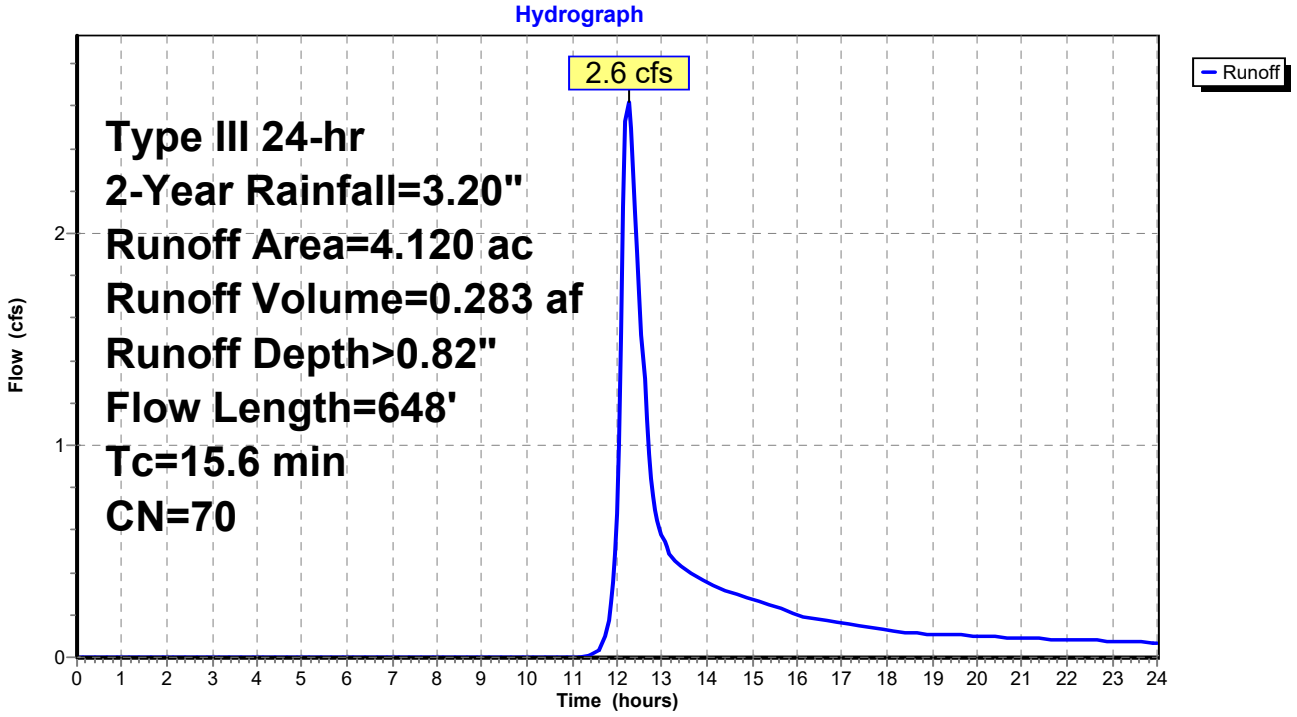
Runoff = 2.6 cfs @ 12.25 hrs, Volume= 0.283 af, Depth> 0.82"
Routed to Reach 2R : Off site

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
3.750	70	Woods, Good, HSG C
0.370	74	>75% Grass cover, Good, HSG C
4.120	70	Weighted Average
4.120		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0420	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
1.3	118	0.0920	1.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.7	223	0.1880	2.17		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.4	257	0.0650	1.27		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.6	648	Total			

Subcatchment 1S: Subarea EA

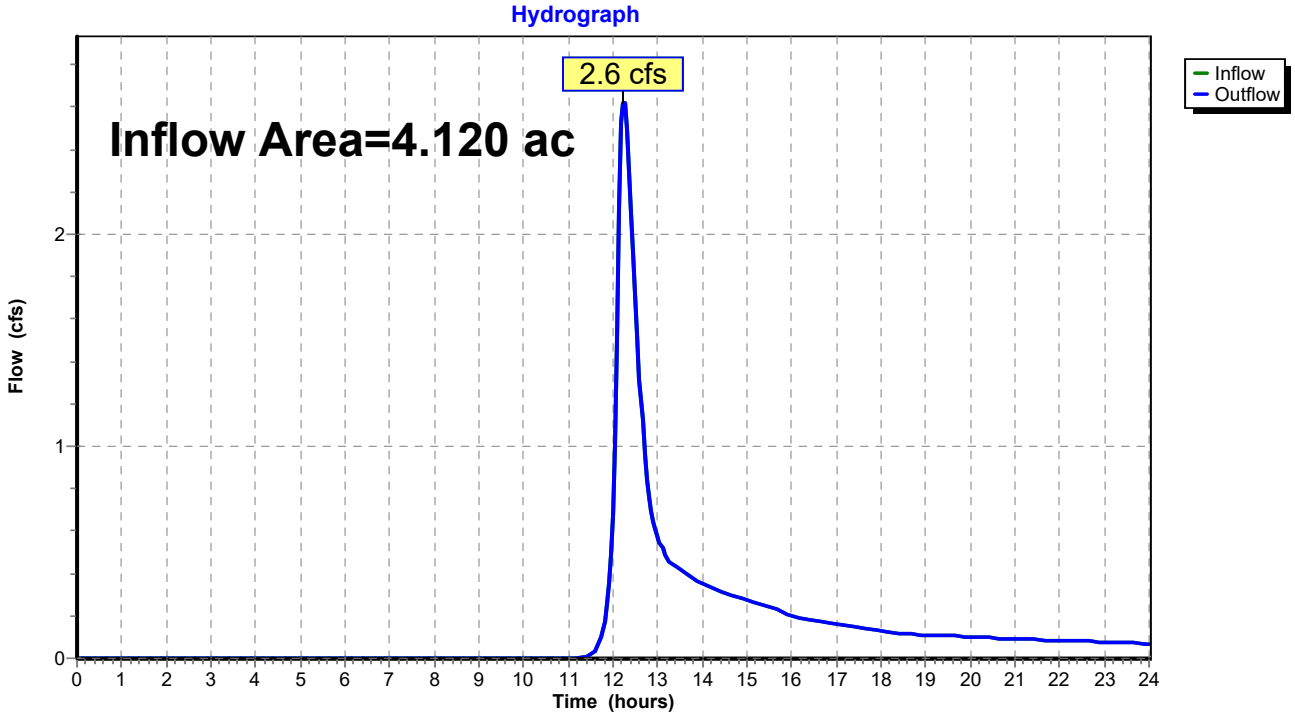


Summary for Reach 2R: Off site

Inflow Area = 4.120 ac, 0.00% Impervious, Inflow Depth > 0.82" for 2-Year event
Inflow = 2.6 cfs @ 12.25 hrs, Volume= 0.283 af
Outflow = 2.6 cfs @ 12.25 hrs, Volume= 0.283 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 2R: Off site



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subarea EA Runoff Area=4.120 ac 0.00% Impervious Runoff Depth>1.81"
Flow Length=648' Tc=15.6 min CN=70 Runoff=6.3 cfs 0.622 af

Reach 2R: Off site Inflow=6.3 cfs 0.622 af
Outflow=6.3 cfs 0.622 af

Total Runoff Area = 4.120 ac Runoff Volume = 0.622 af Average Runoff Depth = 1.81"
100.00% Pervious = 4.120 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: Subarea EA

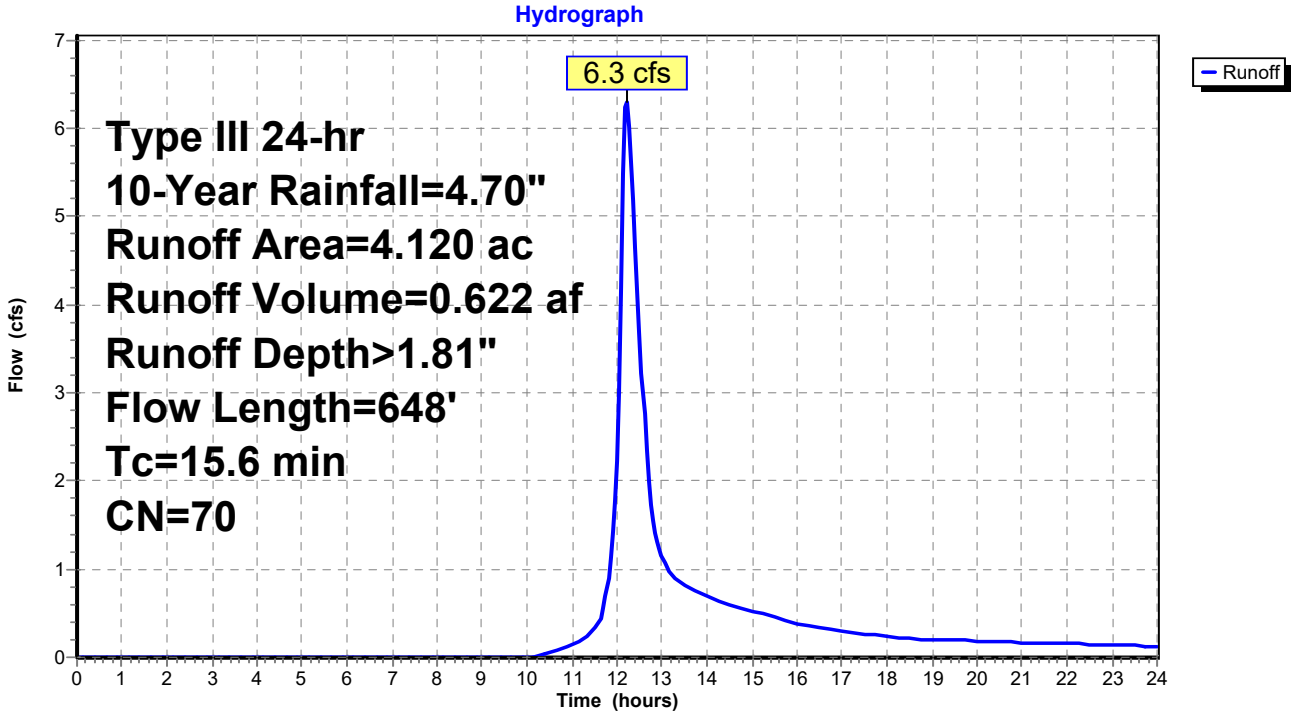
Runoff = 6.3 cfs @ 12.23 hrs, Volume= 0.622 af, Depth> 1.81"
Routed to Reach 2R : Off site

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.70"

Area (ac)	CN	Description
3.750	70	Woods, Good, HSG C
0.370	74	>75% Grass cover, Good, HSG C
4.120	70	Weighted Average
4.120		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0420	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
1.3	118	0.0920	1.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.7	223	0.1880	2.17		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.4	257	0.0650	1.27		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.6	648	Total			

Subcatchment 1S: Subarea EA

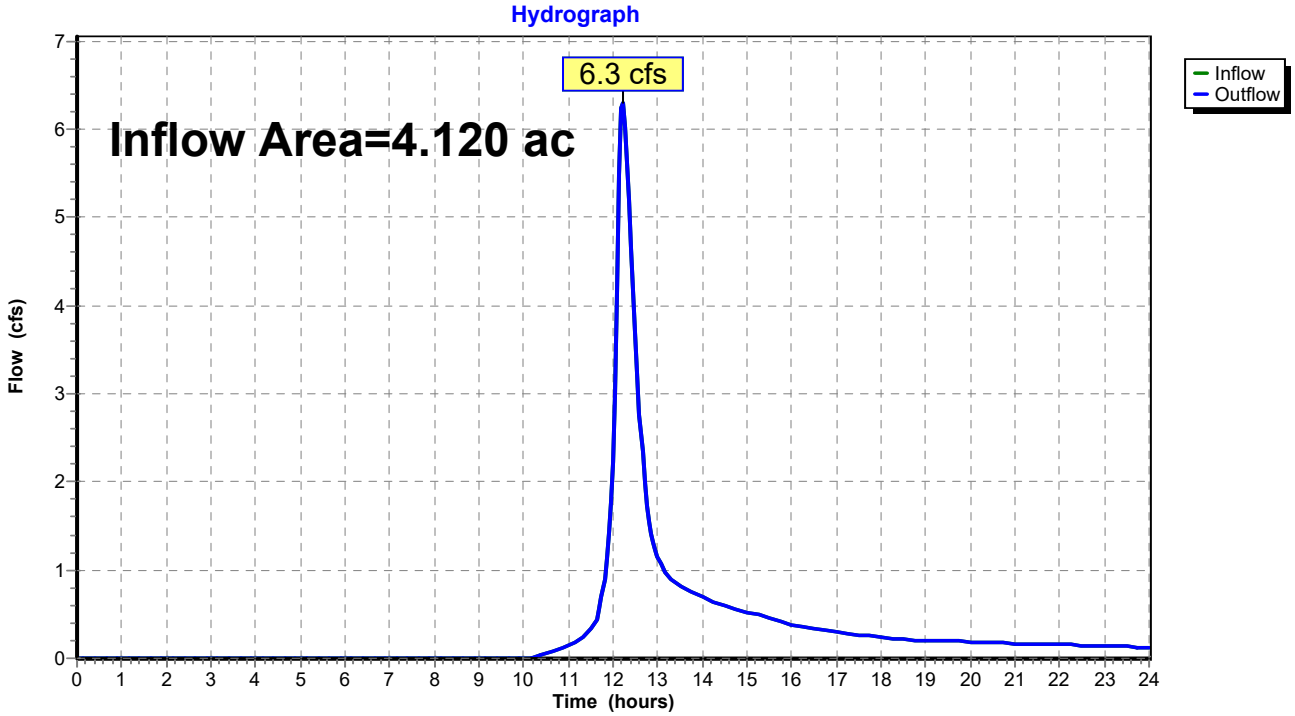


Summary for Reach 2R: Off site

Inflow Area = 4.120 ac, 0.00% Impervious, Inflow Depth > 1.81" for 10-Year event
Inflow = 6.3 cfs @ 12.23 hrs, Volume= 0.622 af
Outflow = 6.3 cfs @ 12.23 hrs, Volume= 0.622 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 2R: Off site



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subarea EA Runoff Area=4.120 ac 0.00% Impervious Runoff Depth>3.36"
Flow Length=648' Tc=15.6 min CN=70 Runoff=12.1 cfs 1.154 af

Reach 2R: Off site Inflow=12.1 cfs 1.154 af
Outflow=12.1 cfs 1.154 af

Total Runoff Area = 4.120 ac Runoff Volume = 1.154 af Average Runoff Depth = 3.36"
100.00% Pervious = 4.120 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: Subarea EA

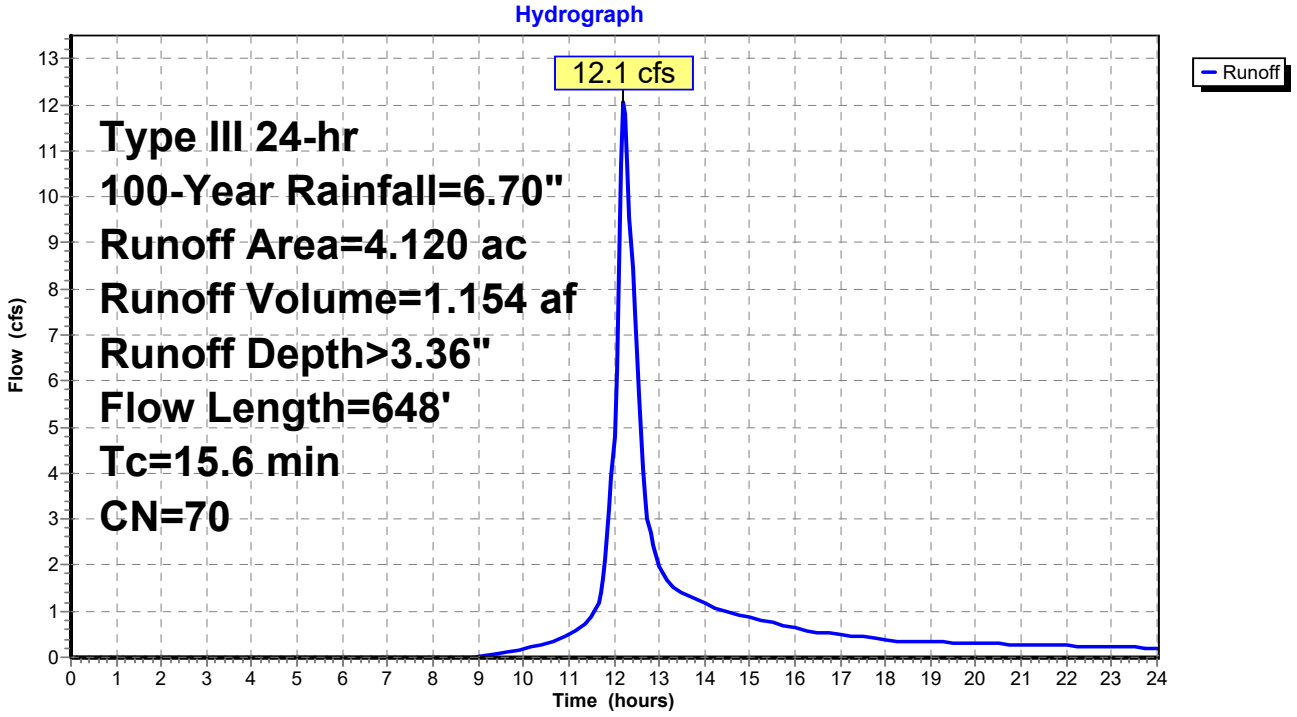
Runoff = 12.1 cfs @ 12.22 hrs, Volume= 1.154 af, Depth> 3.36"
Routed to Reach 2R : Off site

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.70"

Area (ac)	CN	Description
3.750	70	Woods, Good, HSG C
0.370	74	>75% Grass cover, Good, HSG C
4.120	70	Weighted Average
4.120		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0420	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
1.3	118	0.0920	1.52		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.7	223	0.1880	2.17		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.4	257	0.0650	1.27		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
15.6	648	Total			

Subcatchment 1S: Subarea EA

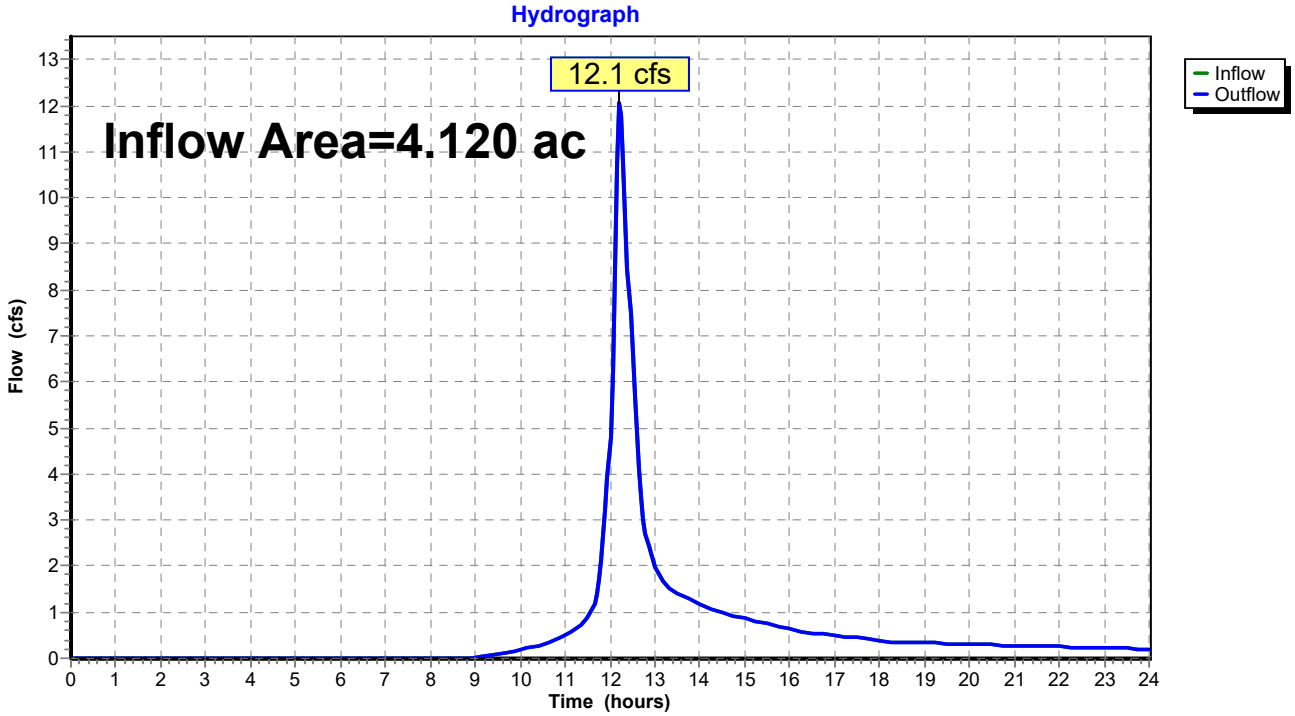


Summary for Reach 2R: Off site

Inflow Area = 4.120 ac, 0.00% Impervious, Inflow Depth > 3.36" for 100-Year event
Inflow = 12.1 cfs @ 12.22 hrs, Volume= 1.154 af
Outflow = 12.1 cfs @ 12.22 hrs, Volume= 1.154 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 2R: Off site



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PROJECT:

Symphony Drive Extension

Franklin Massachusetts

OWNER/APPLICANT:

CYPRESS REAL ESTATE DEVELOPMENT LLC
3 ROTHCHILD DRIVE
FOXBOROUGH, MA 02035

Bay Colony Group, Inc.
Professional Civil Engineers & Professional Land Surveyors

FOUR SCHOOL STREET
P.O. BOX 9136
FOXBOROUGH, MA 02035
508-543-3939

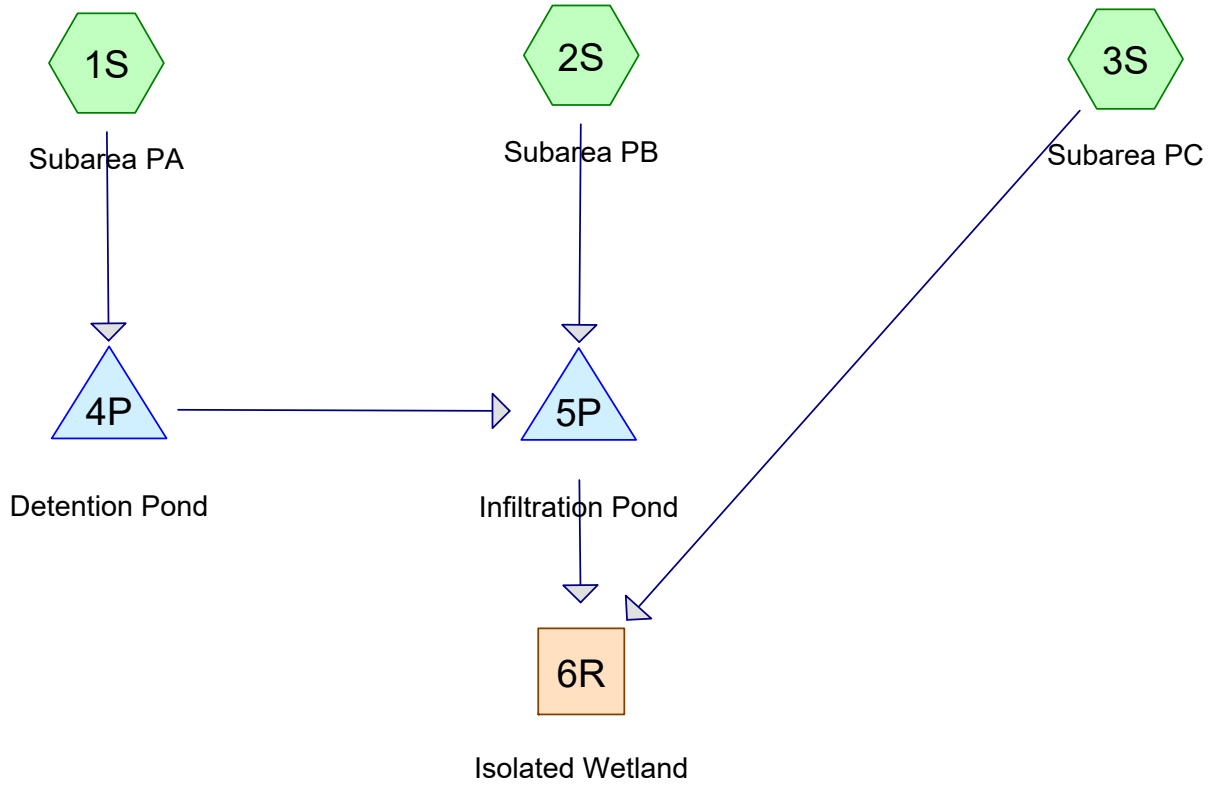
STAMP

DRAWING TITLE

Proposed Subarea

SCALE: 1" = 40'

DEC. 4, 2025	SHEET NUMBER
25-0108B	PR



Subcat Reach Pond Link

Routing Diagram for 25-0108-Pr
Prepared by Bay Colony Group Inc, Printed 12/12/2025

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.630	74	>75% Grass cover, Good, HSG C (1S, 2S, 3S)
0.220	98	Paved parking, HSG C (1S, 2S)
0.140	98	Roofs, HSG C (1S, 2S, 3S)
1.300	70	Woods, Good, HSG C (1S, 3S)
4.290	**75**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
4.290	HSG C	1S, 2S, 3S
0.000	HSG D	
0.000	Other	
4.290		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subarea PA Runoff Area=2.220 ac 7.21% Impervious Runoff Depth>1.04"
Flow Length=276' Tc=7.5 min CN=74 Runoff=2.4 cfs 0.192 af

Subcatchment 2S: Subarea PB Runoff Area=0.690 ac 23.19% Impervious Runoff Depth>1.40"
Flow Length=187' Tc=6.0 min CN=80 Runoff=1.1 cfs 0.081 af

Subcatchment 3S: Subarea PC Runoff Area=1.380 ac 2.90% Impervious Runoff Depth>0.98"
Flow Length=379' Tc=8.0 min CN=73 Runoff=1.4 cfs 0.113 af

Reach 6R: Isolated Wetland Inflow=1.4 cfs 0.113 af
Outflow=1.4 cfs 0.113 af

Pond 4P: Detention Pond Peak Elev=302.68' Storage=0.037 af Inflow=2.4 cfs 0.192 af
18.0" Round Culvert n=0.012 L=62.0' S=0.0661 '/' Outflow=1.5 cfs 0.182 af

Pond 5P: Infiltration Pond Peak Elev=290.32' Storage=0.036 af Inflow=2.1 cfs 0.262 af
Discarded=1.1 cfs 0.262 af Primary=0.0 cfs 0.000 af Outflow=1.1 cfs 0.262 af

Total Runoff Area = 4.290 ac Runoff Volume = 0.385 af Average Runoff Depth = 1.08"
91.61% Pervious = 3.930 ac 8.39% Impervious = 0.360 ac

Summary for Subcatchment 1S: Subarea PA

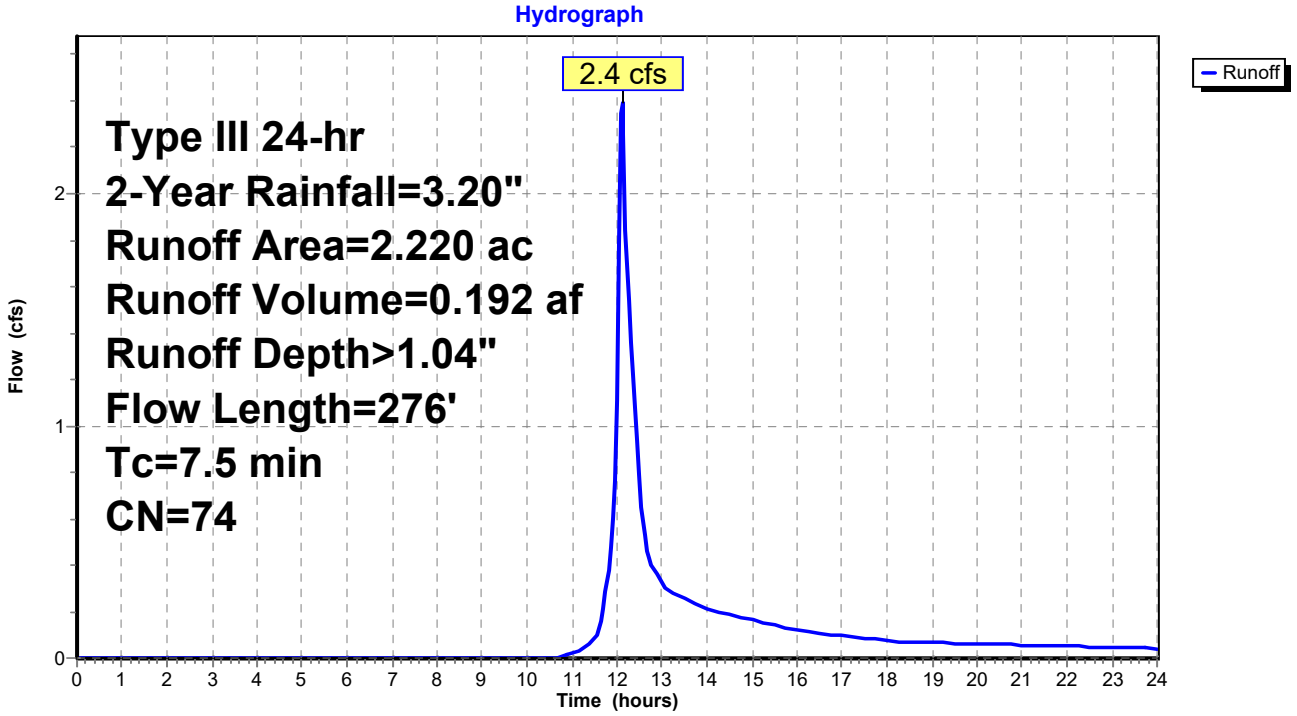
Runoff = 2.4 cfs @ 12.12 hrs, Volume= 0.192 af, Depth> 1.04"
Routed to Pond 4P : Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
0.060	98	Roofs, HSG C
0.100	98	Paved parking, HSG C
1.340	74	>75% Grass cover, Good, HSG C
0.720	70	Woods, Good, HSG C
2.220	74	Weighted Average
2.060		92.79% Pervious Area
0.160		7.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50	0.1220	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
1.0	107	0.1210	1.74		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.5	119	0.2770	3.68		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.5	276	Total			

Subcatchment 1S: Subarea PA



Summary for Subcatchment 2S: Subarea PB

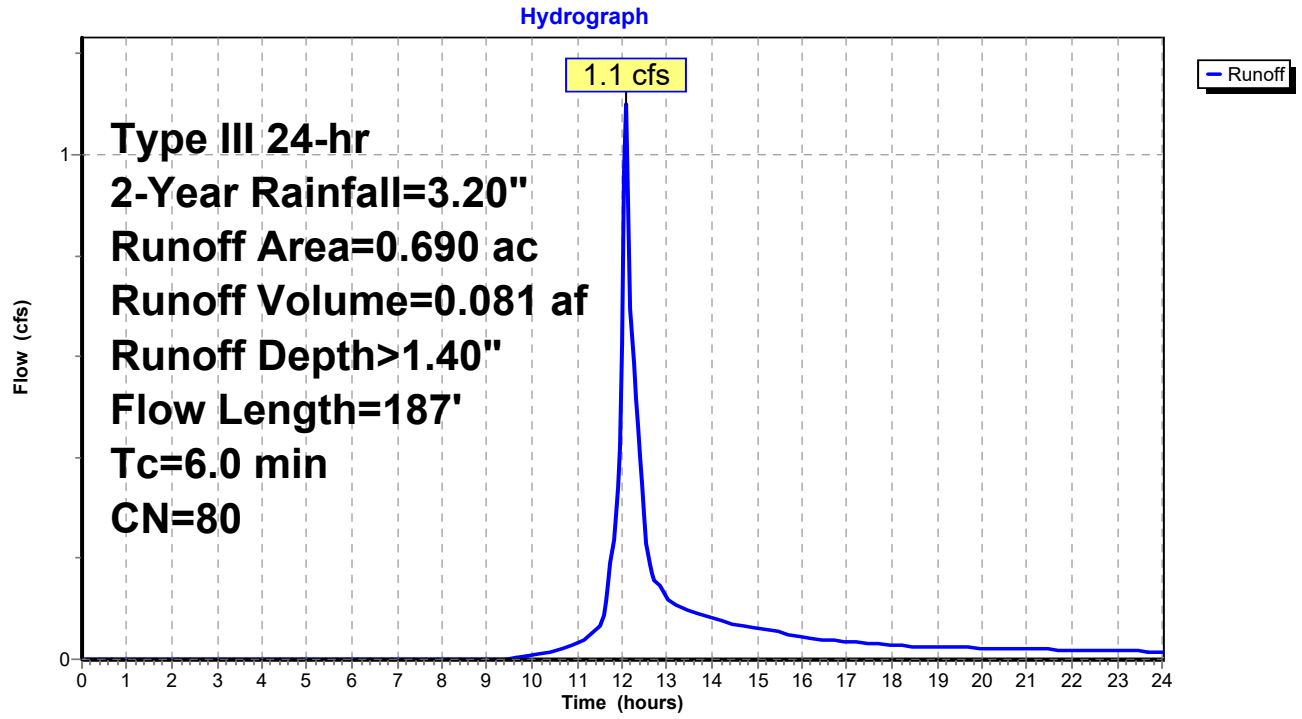
Runoff = 1.1 cfs @ 12.10 hrs, Volume= 0.081 af, Depth> 1.40"
Routed to Pond 5P : Infiltration Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
0.040	98	Roofs, HSG C
0.120	98	Paved parking, HSG C
0.530	74	>75% Grass cover, Good, HSG C
0.690	80	Weighted Average
0.530		76.81% Pervious Area
0.160		23.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.20		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.20"
0.5	85	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	52	0.1940	3.08		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.5	187	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 2S: Subarea PB



Summary for Subcatchment 3S: Subarea PC

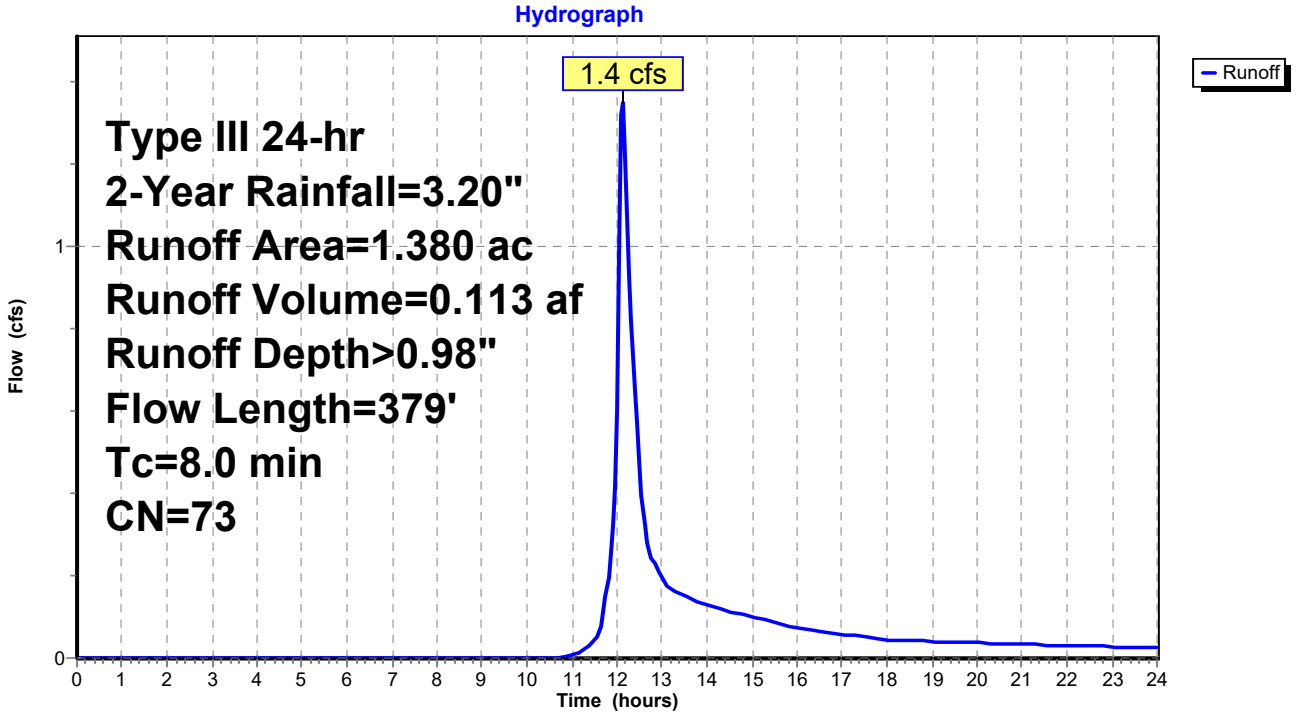
Runoff = 1.4 cfs @ 12.13 hrs, Volume= 0.113 af, Depth> 0.98"
Routed to Reach 6R : Isolated Wetland

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.20"

Area (ac)	CN	Description
0.040	98	Roofs, HSG C
0.760	74	>75% Grass cover, Good, HSG C
0.580	70	Woods, Good, HSG C
1.380	73	Weighted Average
1.340		97.10% Pervious Area
0.040		2.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	50	0.2220	0.18		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
0.9	110	0.1800	2.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.5	148	0.0540	1.63		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.9	71	0.0630	1.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
8.0	379	Total			

Subcatchment 3S: Subarea PC

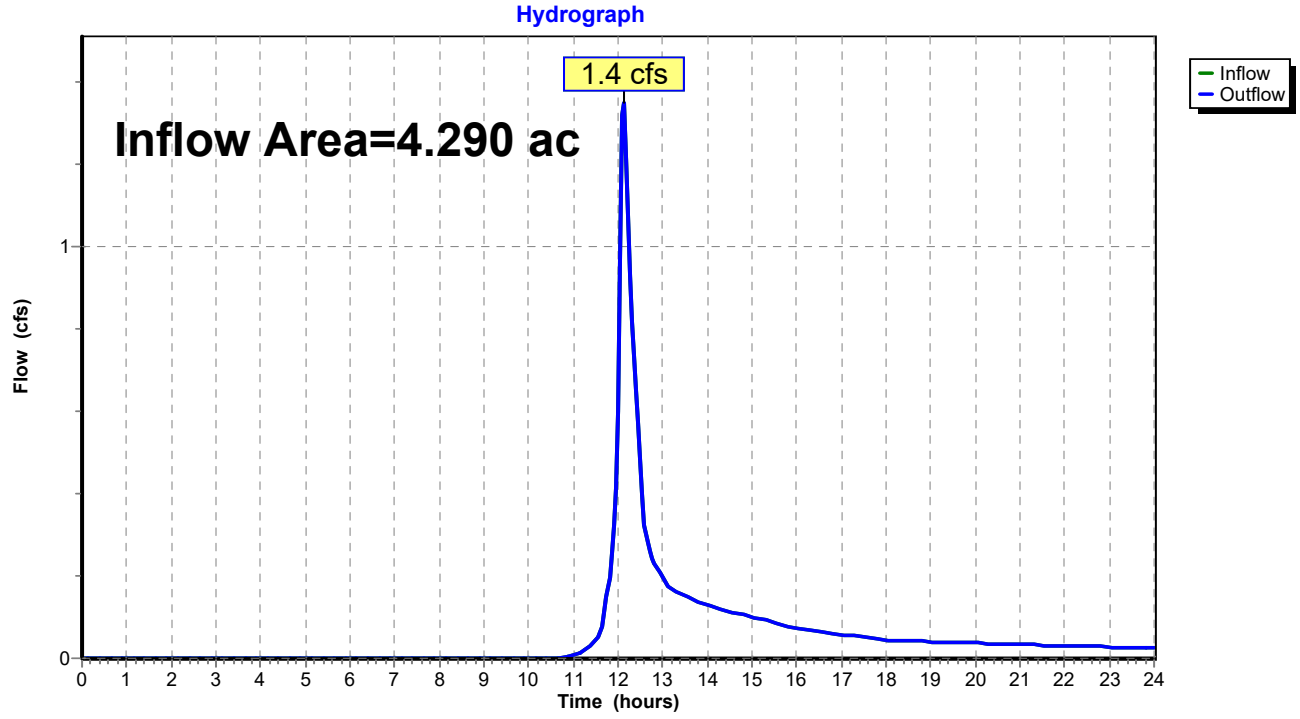


Summary for Reach 6R: Isolated Wetland

Inflow Area = 4.290 ac, 8.39% Impervious, Inflow Depth > 0.32" for 2-Year event
Inflow = 1.4 cfs @ 12.13 hrs, Volume= 0.113 af
Outflow = 1.4 cfs @ 12.13 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 6R: Isolated Wetland



Summary for Pond 4P: Detention Pond

Inflow Area = 2.220 ac, 7.21% Impervious, Inflow Depth > 1.04" for 2-Year event
Inflow = 2.4 cfs @ 12.12 hrs, Volume= 0.192 af
Outflow = 1.5 cfs @ 12.27 hrs, Volume= 0.182 af, Atten= 39%, Lag= 9.4 min
Primary = 1.5 cfs @ 12.27 hrs, Volume= 0.182 af
Routed to Pond 5P : Infiltration Pond

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 302.68' @ 12.27 hrs Surf.Area= 0.059 ac Storage= 0.037 af

Plug-Flow detention time= 52.9 min calculated for 0.181 af (95% of inflow)
Center-of-Mass det. time= 25.6 min (888.2 - 862.5)

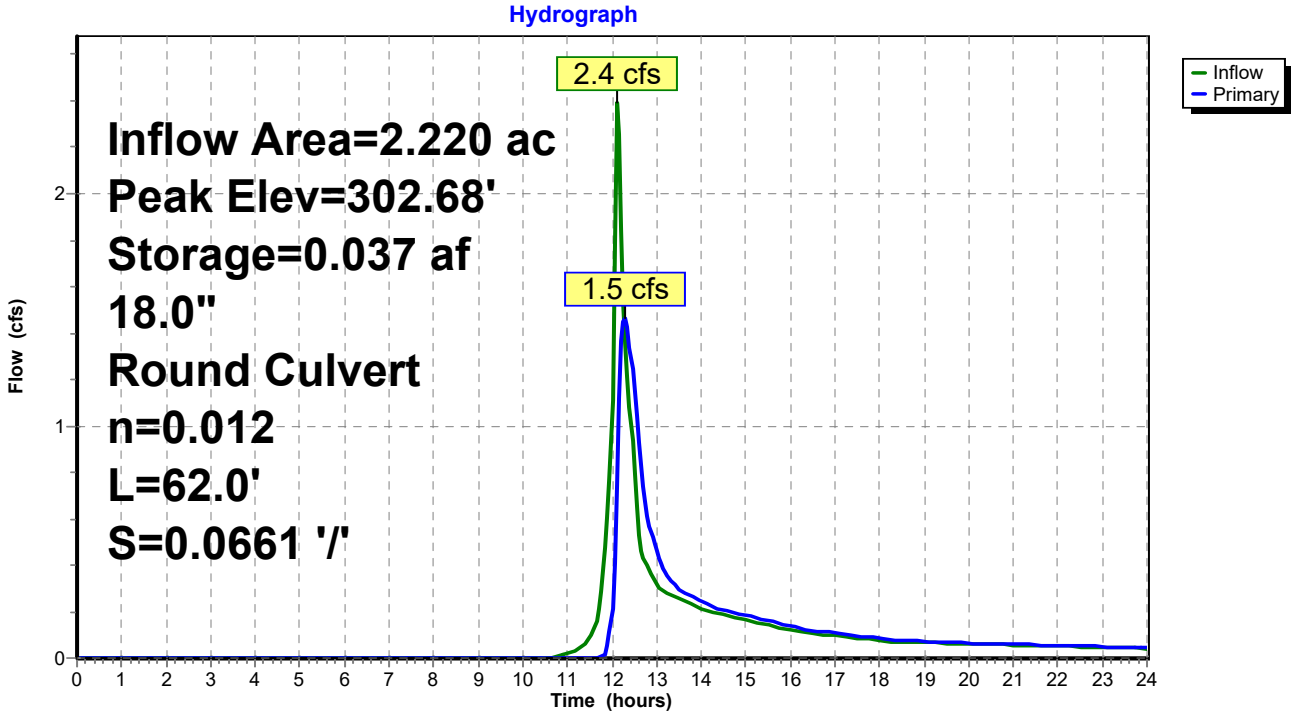
Volume	Invert	Avail.Storage	Storage Description
#1	302.00'	0.129 af	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
302.00	0.050	215.0	0.000	0.000	0.050
304.00	0.080	264.0	0.129	0.129	0.094

Device	Routing	Invert	Outlet Devices
#1	Primary	302.10'	**18.0" Round Culvert** L= 62.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 302.10' / 298.00' S= 0.0661 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=1.5 cfs @ 12.27 hrs HW=302.68' (Free Discharge)
1=Culvert (Inlet Controls 1.5 cfs @ 2.29 fps)

Pond 4P: Detention Pond



Stage-Area-Storage for Pond 4P: Detention Pond

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
302.00	0.050	0.000	303.04	0.065	0.059
302.02	0.050	0.001	303.06	0.065	0.061
302.04	0.051	0.002	303.08	0.065	0.062
302.06	0.051	0.003	303.10	0.066	0.063
302.08	0.051	0.004	303.12	0.066	0.065
302.10	0.051	0.005	303.14	0.066	0.066
302.12	0.052	0.006	303.16	0.067	0.067
302.14	0.052	0.007	303.18	0.067	0.069
302.16	0.052	0.008	303.20	0.067	0.070
302.18	0.052	0.009	303.22	0.067	0.071
302.20	0.053	0.010	303.24	0.068	0.073
302.22	0.053	0.011	303.26	0.068	0.074
302.24	0.053	0.012	303.28	0.068	0.075
302.26	0.054	0.013	303.30	0.069	0.077
302.28	0.054	0.015	303.32	0.069	0.078
302.30	0.054	0.016	303.34	0.069	0.080
302.32	0.054	0.017	303.36	0.070	0.081
302.34	0.055	0.018	303.38	0.070	0.082
302.36	0.055	0.019	303.40	0.070	0.084
302.38	0.055	0.020	303.42	0.071	0.085
302.40	0.055	0.021	303.44	0.071	0.087
302.42	0.056	0.022	303.46	0.071	0.088
302.44	0.056	0.023	303.48	0.072	0.089
302.46	0.056	0.024	303.50	0.072	0.091
302.48	0.057	0.026	303.52	0.072	0.092
302.50	0.057	0.027	303.54	0.072	0.094
302.52	0.057	0.028	303.56	0.073	0.095
302.54	0.057	0.029	303.58	0.073	0.097
302.56	0.058	0.030	303.60	0.073	0.098
302.58	0.058	0.031	303.62	0.074	0.100
302.60	0.058	0.032	303.64	0.074	0.101
302.62	0.059	0.034	303.66	0.074	0.103
302.64	0.059	0.035	303.68	0.075	0.104
302.66	0.059	0.036	303.70	0.075	0.106
302.68	0.059	0.037	303.72	0.075	0.107
302.70	0.060	0.038	303.74	0.076	0.109
302.72	0.060	0.040	303.76	0.076	0.110
302.74	0.060	0.041	303.78	0.076	0.112
302.76	0.061	0.042	303.80	0.077	0.113
302.78	0.061	0.043	303.82	0.077	0.115
302.80	0.061	0.044	303.84	0.077	0.116
302.82	0.061	0.046	303.86	0.078	0.118
302.84	0.062	0.047	303.88	0.078	0.119
302.86	0.062	0.048	303.90	0.078	0.121
302.88	0.062	0.049	303.92	0.079	0.122
302.90	0.063	0.051	303.94	0.079	0.124
302.92	0.063	0.052	303.96	0.079	0.126
302.94	0.063	0.053	303.98	0.080	0.127
302.96	0.064	0.054	304.00	**0.080**	**0.129**
302.98	0.064	0.056			
303.00	0.064	0.057			
303.02	0.064	0.058			

Summary for Pond 5P: Infiltration Pond

Inflow Area = 2.910 ac, 11.00% Impervious, Inflow Depth > 1.08" for 2-Year event
Inflow = 2.1 cfs @ 12.20 hrs, Volume= 0.262 af
Outflow = 1.1 cfs @ 12.62 hrs, Volume= 0.262 af, Atten= 48%, Lag= 24.7 min
Discarded = 1.1 cfs @ 12.62 hrs, Volume= 0.262 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 6R : Isolated Wetland

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 290.32' @ 12.62 hrs Surf.Area= 0.115 ac Storage= 0.036 af

Plug-Flow detention time= 8.9 min calculated for 0.261 af (100% of inflow)
Center-of-Mass det. time= 8.5 min (882.6 - 874.0)

Volume	Invert	Avail.Storage	Storage Description
#1	290.00'	0.339 af	**Custom Stage Data (Irregular)** Listed below (Recalc)

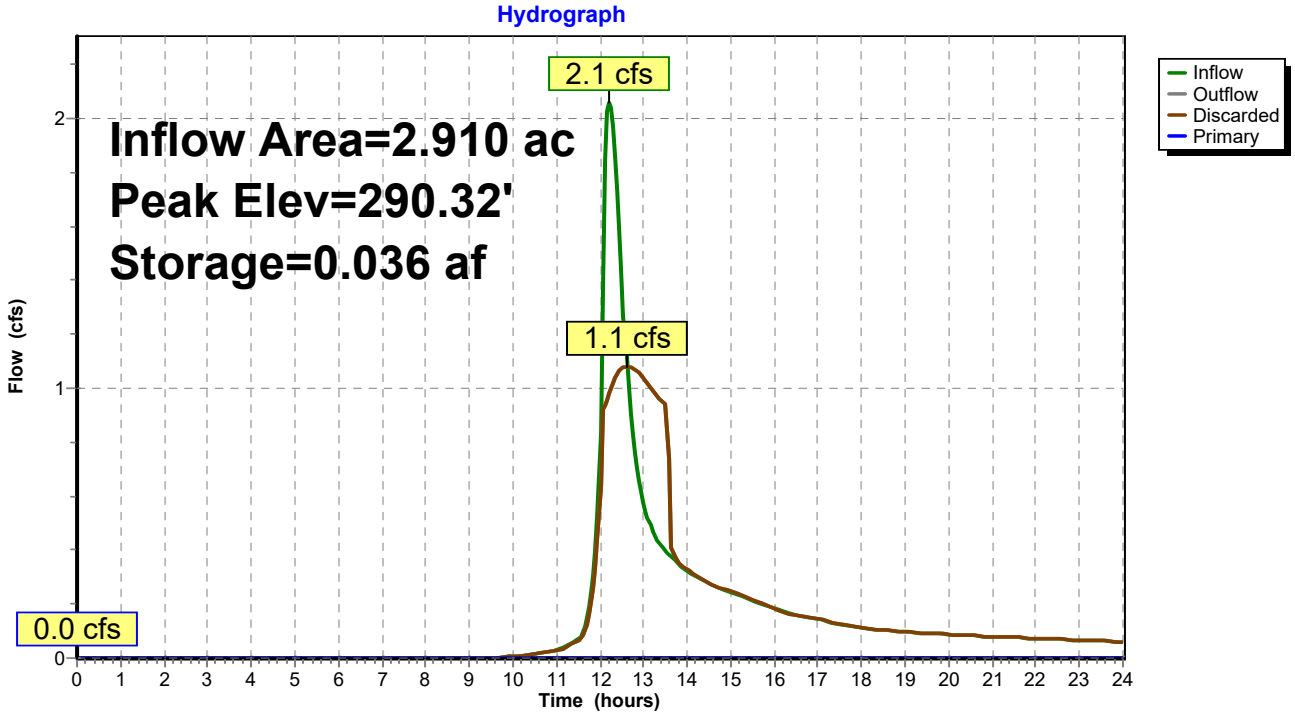
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
290.00	0.109	220.0	0.000	0.000	0.109
292.00	0.152	331.0	0.260	0.260	0.221
292.50	0.164	340.0	0.079	0.339	0.233

Device	Routing	Invert	Outlet Devices
#1	Discarded	290.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 287.50'
#2	Primary	291.75'	**10.0' long x 0.50' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Discarded OutFlow Max=1.1 cfs @ 12.62 hrs HW=290.32' (Free Discharge)
1=Exfiltration (Controls 1.1 cfs)

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=290.00' (Free Discharge)
2=Sharp-Crested Rectangular Weir (Controls 0.0 cfs)

Pond 5P: Infiltration Pond



Stage-Area-Storage for Pond 5P: Infiltration Pond

Elevation (feet)	Surface (acres)	Storage (acre-feet)
290.00	0.109	0.000
290.05	0.110	0.005
290.10	0.111	0.011
290.15	0.112	0.017
290.20	0.113	0.022
290.25	0.114	0.028
290.30	0.115	0.034
290.35	0.116	0.039
290.40	0.117	0.045
290.45	0.118	0.051
290.50	0.119	0.057
290.55	0.120	0.063
290.60	0.121	0.069
290.65	0.122	0.075
290.70	0.123	0.081
290.75	0.124	0.087
290.80	0.125	0.094
290.85	0.126	0.100
290.90	0.127	0.106
290.95	0.129	0.113
291.00	0.130	0.119
291.05	0.131	0.126
291.10	0.132	0.132
291.15	0.133	0.139
291.20	0.134	0.146
291.25	0.135	0.152
291.30	0.136	0.159
291.35	0.137	0.166
291.40	0.138	0.173
291.45	0.139	0.180
291.50	0.141	0.187
291.55	0.142	0.194
291.60	0.143	0.201
291.65	0.144	0.208
291.70	0.145	0.215
291.75	0.146	0.223
291.80	0.147	0.230
291.85	0.149	0.237
291.90	0.150	0.245
291.95	0.151	0.252
292.00	0.152	0.260
292.05	0.153	0.267
292.10	0.154	0.275
292.15	0.156	0.283
292.20	0.157	0.291
292.25	0.158	0.299
292.30	0.159	0.306
292.35	0.160	0.314
292.40	0.162	0.323
292.45	0.163	0.331
292.50	**0.164**	**0.339**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subarea PA Runoff Area=2.220 ac 7.21% Impervious Runoff Depth>2.12"
Flow Length=276' Tc=7.5 min CN=74 Runoff=5.1 cfs 0.393 af

Subcatchment 2S: Subarea PB Runoff Area=0.690 ac 23.19% Impervious Runoff Depth>2.63"
Flow Length=187' Tc=6.0 min CN=80 Runoff=2.1 cfs 0.151 af

Subcatchment 3S: Subarea PC Runoff Area=1.380 ac 2.90% Impervious Runoff Depth>2.04"
Flow Length=379' Tc=8.0 min CN=73 Runoff=3.0 cfs 0.235 af

Reach 6R: Isolated Wetland Inflow=3.0 cfs 0.235 af
Outflow=3.0 cfs 0.235 af

Pond 4P: Detention Pond Peak Elev=303.09' Storage=0.063 af Inflow=5.1 cfs 0.393 af
18.0" Round Culvert n=0.012 L=62.0' S=0.0661 '/' Outflow=3.7 cfs 0.381 af

Pond 5P: Infiltration Pond Peak Elev=291.16' Storage=0.140 af Inflow=5.1 cfs 0.533 af
Discarded=1.6 cfs 0.532 af Primary=0.0 cfs 0.000 af Outflow=1.6 cfs 0.532 af

Total Runoff Area = 4.290 ac Runoff Volume = 0.779 af Average Runoff Depth = 2.18"
91.61% Pervious = 3.930 ac 8.39% Impervious = 0.360 ac

Summary for Subcatchment 1S: Subarea PA

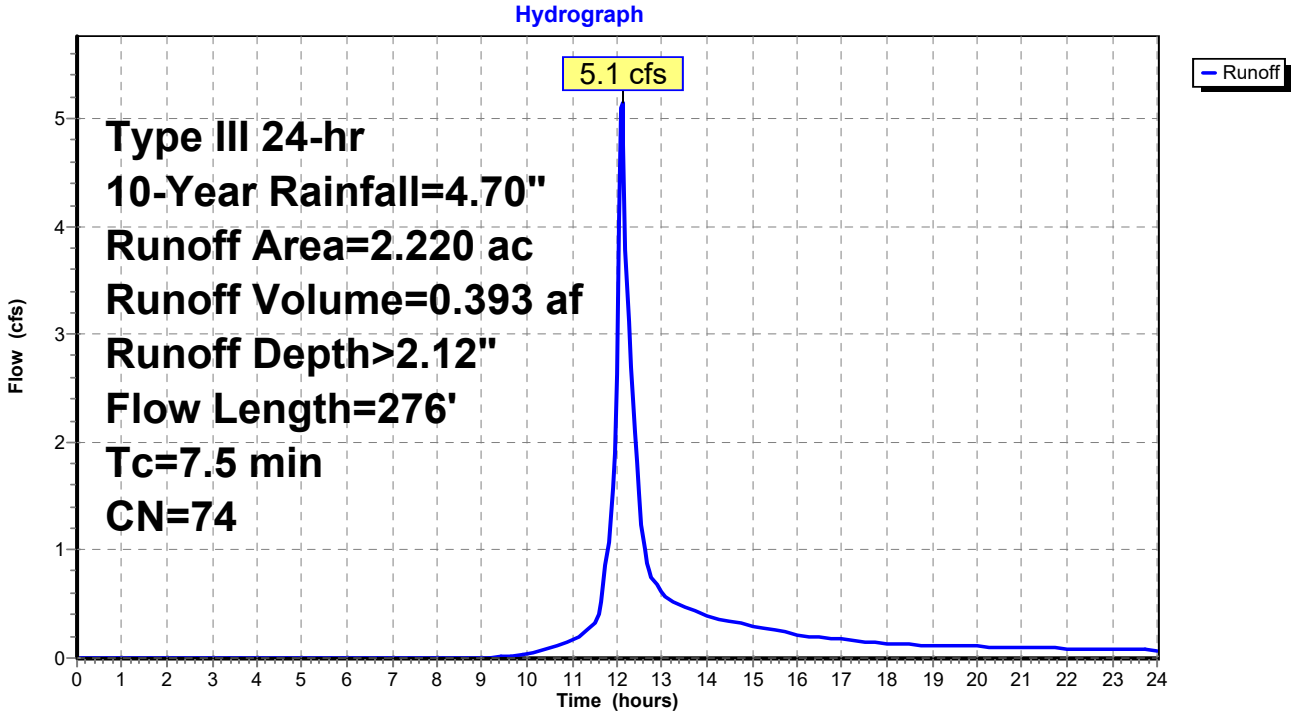
Runoff = 5.1 cfs @ 12.11 hrs, Volume= 0.393 af, Depth> 2.12"
Routed to Pond 4P : Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.70"

Area (ac)	CN	Description
0.060	98	Roofs, HSG C
0.100	98	Paved parking, HSG C
1.340	74	>75% Grass cover, Good, HSG C
0.720	70	Woods, Good, HSG C
2.220	74	Weighted Average
2.060		92.79% Pervious Area
0.160		7.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50	0.1220	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
1.0	107	0.1210	1.74		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.5	119	0.2770	3.68		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.5	276	Total			

Subcatchment 1S: Subarea PA



Summary for Subcatchment 2S: Subarea PB

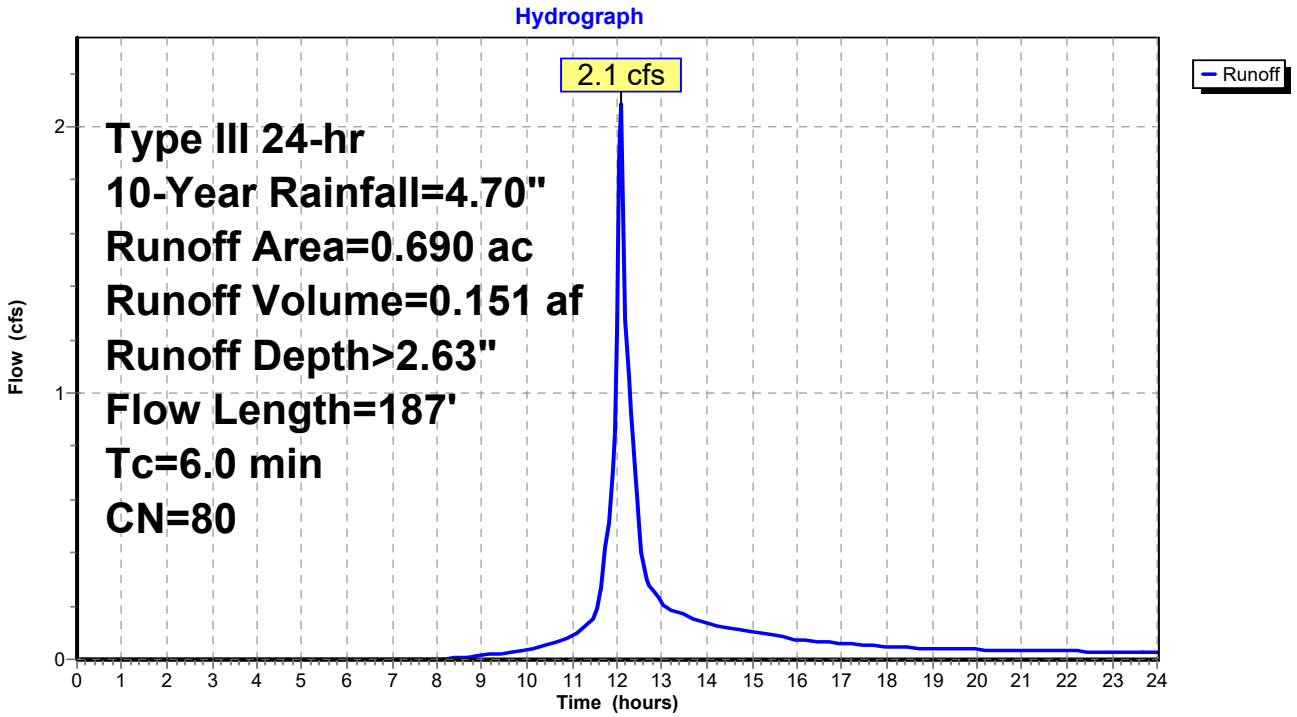
Runoff = 2.1 cfs @ 12.09 hrs, Volume= 0.151 af, Depth> 2.63"
Routed to Pond 5P : Infiltration Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.70"

Area (ac)	CN	Description
0.040	98	Roofs, HSG C
0.120	98	Paved parking, HSG C
0.530	74	>75% Grass cover, Good, HSG C
0.690	80	Weighted Average
0.530		76.81% Pervious Area
0.160		23.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.20		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.20"
0.5	85	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	52	0.1940	3.08		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.5	187	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 2S: Subarea PB



Summary for Subcatchment 3S: Subarea PC

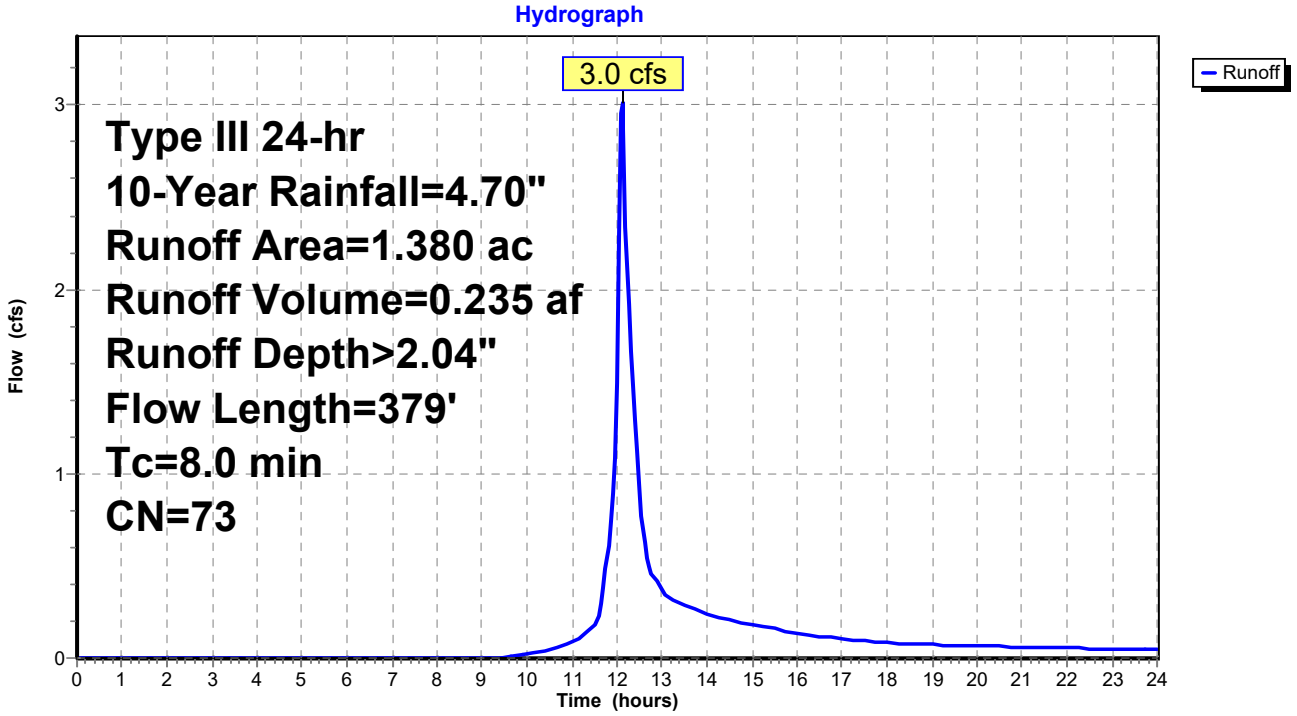
Runoff = 3.0 cfs @ 12.12 hrs, Volume= 0.235 af, Depth> 2.04"
Routed to Reach 6R : Isolated Wetland

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.70"

Area (ac)	CN	Description
0.040	98	Roofs, HSG C
0.760	74	>75% Grass cover, Good, HSG C
0.580	70	Woods, Good, HSG C
1.380	73	Weighted Average
1.340		97.10% Pervious Area
0.040		2.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	50	0.2220	0.18		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
0.9	110	0.1800	2.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.5	148	0.0540	1.63		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.9	71	0.0630	1.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
8.0	379	Total			

Subcatchment 3S: Subarea PC

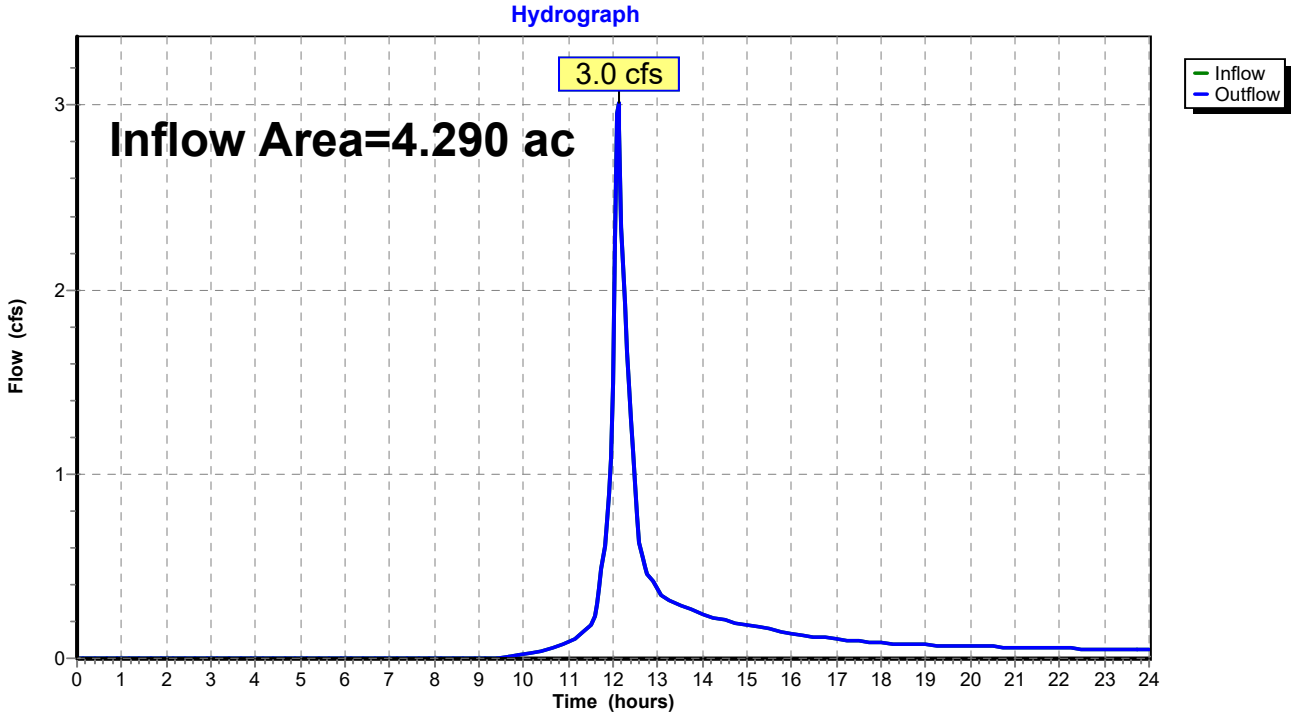


Summary for Reach 6R: Isolated Wetland

Inflow Area = 4.290 ac, 8.39% Impervious, Inflow Depth > 0.66" for 10-Year event
Inflow = 3.0 cfs @ 12.12 hrs, Volume= 0.235 af
Outflow = 3.0 cfs @ 12.12 hrs, Volume= 0.235 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 6R: Isolated Wetland



Summary for Pond 4P: Detention Pond

Inflow Area = 2.220 ac, 7.21% Impervious, Inflow Depth > 2.12" for 10-Year event
Inflow = 5.1 cfs @ 12.11 hrs, Volume= 0.393 af
Outflow = 3.7 cfs @ 12.21 hrs, Volume= 0.381 af, Atten= 28%, Lag= 6.0 min
Primary = 3.7 cfs @ 12.21 hrs, Volume= 0.381 af
Routed to Pond 5P : Infiltration Pond

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 303.09' @ 12.21 hrs Surf.Area= 0.066 ac Storage= 0.063 af

Plug-Flow detention time= 35.3 min calculated for 0.381 af (97% of inflow)
Center-of-Mass det. time= 18.9 min (859.9 - 841.1)

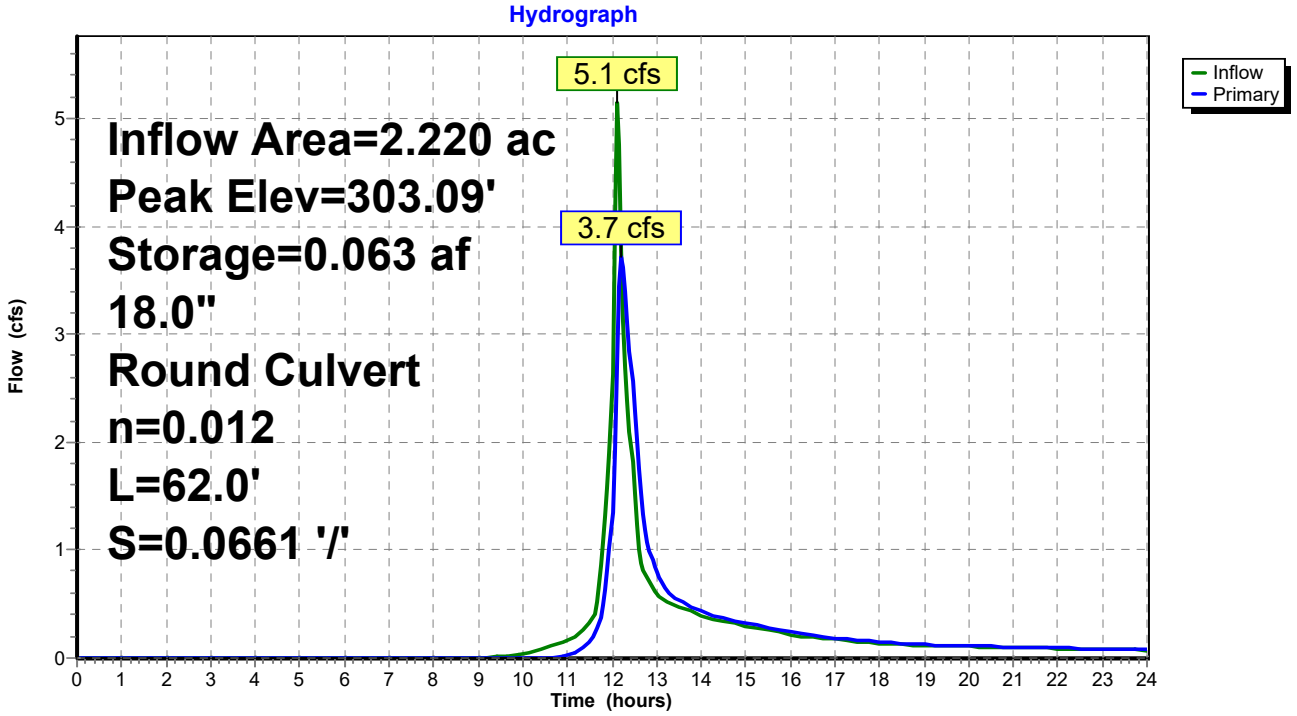
Volume	Invert	Avail.Storage	Storage Description
#1	302.00'	0.129 af	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
302.00	0.050	215.0	0.000	0.000	0.050
304.00	0.080	264.0	0.129	0.129	0.094

Device	Routing	Invert	Outlet Devices
#1	Primary	302.10'	**18.0" Round Culvert** L= 62.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 302.10' / 298.00' S= 0.0661 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=3.7 cfs @ 12.21 hrs HW=303.09' (Free Discharge)
1=Culvert (Inlet Controls 3.7 cfs @ 2.99 fps)

Pond 4P: Detention Pond



Stage-Area-Storage for Pond 4P: Detention Pond

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
302.00	0.050	0.000	303.04	0.065	0.059
302.02	0.050	0.001	303.06	0.065	0.061
302.04	0.051	0.002	303.08	0.065	0.062
302.06	0.051	0.003	303.10	0.066	0.063
302.08	0.051	0.004	303.12	0.066	0.065
302.10	0.051	0.005	303.14	0.066	0.066
302.12	0.052	0.006	303.16	0.067	0.067
302.14	0.052	0.007	303.18	0.067	0.069
302.16	0.052	0.008	303.20	0.067	0.070
302.18	0.052	0.009	303.22	0.067	0.071
302.20	0.053	0.010	303.24	0.068	0.073
302.22	0.053	0.011	303.26	0.068	0.074
302.24	0.053	0.012	303.28	0.068	0.075
302.26	0.054	0.013	303.30	0.069	0.077
302.28	0.054	0.015	303.32	0.069	0.078
302.30	0.054	0.016	303.34	0.069	0.080
302.32	0.054	0.017	303.36	0.070	0.081
302.34	0.055	0.018	303.38	0.070	0.082
302.36	0.055	0.019	303.40	0.070	0.084
302.38	0.055	0.020	303.42	0.071	0.085
302.40	0.055	0.021	303.44	0.071	0.087
302.42	0.056	0.022	303.46	0.071	0.088
302.44	0.056	0.023	303.48	0.072	0.089
302.46	0.056	0.024	303.50	0.072	0.091
302.48	0.057	0.026	303.52	0.072	0.092
302.50	0.057	0.027	303.54	0.072	0.094
302.52	0.057	0.028	303.56	0.073	0.095
302.54	0.057	0.029	303.58	0.073	0.097
302.56	0.058	0.030	303.60	0.073	0.098
302.58	0.058	0.031	303.62	0.074	0.100
302.60	0.058	0.032	303.64	0.074	0.101
302.62	0.059	0.034	303.66	0.074	0.103
302.64	0.059	0.035	303.68	0.075	0.104
302.66	0.059	0.036	303.70	0.075	0.106
302.68	0.059	0.037	303.72	0.075	0.107
302.70	0.060	0.038	303.74	0.076	0.109
302.72	0.060	0.040	303.76	0.076	0.110
302.74	0.060	0.041	303.78	0.076	0.112
302.76	0.061	0.042	303.80	0.077	0.113
302.78	0.061	0.043	303.82	0.077	0.115
302.80	0.061	0.044	303.84	0.077	0.116
302.82	0.061	0.046	303.86	0.078	0.118
302.84	0.062	0.047	303.88	0.078	0.119
302.86	0.062	0.048	303.90	0.078	0.121
302.88	0.062	0.049	303.92	0.079	0.122
302.90	0.063	0.051	303.94	0.079	0.124
302.92	0.063	0.052	303.96	0.079	0.126
302.94	0.063	0.053	303.98	0.080	0.127
302.96	0.064	0.054	304.00	**0.080**	**0.129**
302.98	0.064	0.056			
303.00	0.064	0.057			
303.02	0.064	0.058			

Summary for Pond 5P: Infiltration Pond

Inflow Area = 2.910 ac, 11.00% Impervious, Inflow Depth > 2.20" for 10-Year event
Inflow = 5.1 cfs @ 12.16 hrs, Volume= 0.533 af
Outflow = 1.6 cfs @ 12.72 hrs, Volume= 0.532 af, Atten= 69%, Lag= 33.4 min
Discarded = 1.6 cfs @ 12.72 hrs, Volume= 0.532 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach 6R : Isolated Wetland

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 291.16' @ 12.72 hrs Surf.Area= 0.133 ac Storage= 0.140 af

Plug-Flow detention time= 30.8 min calculated for 0.532 af (100% of inflow)
Center-of-Mass det. time= 30.4 min (880.2 - 849.7)

Volume	Invert	Avail.Storage	Storage Description
#1	290.00'	0.339 af	**Custom Stage Data (Irregular)** Listed below (Recalc)

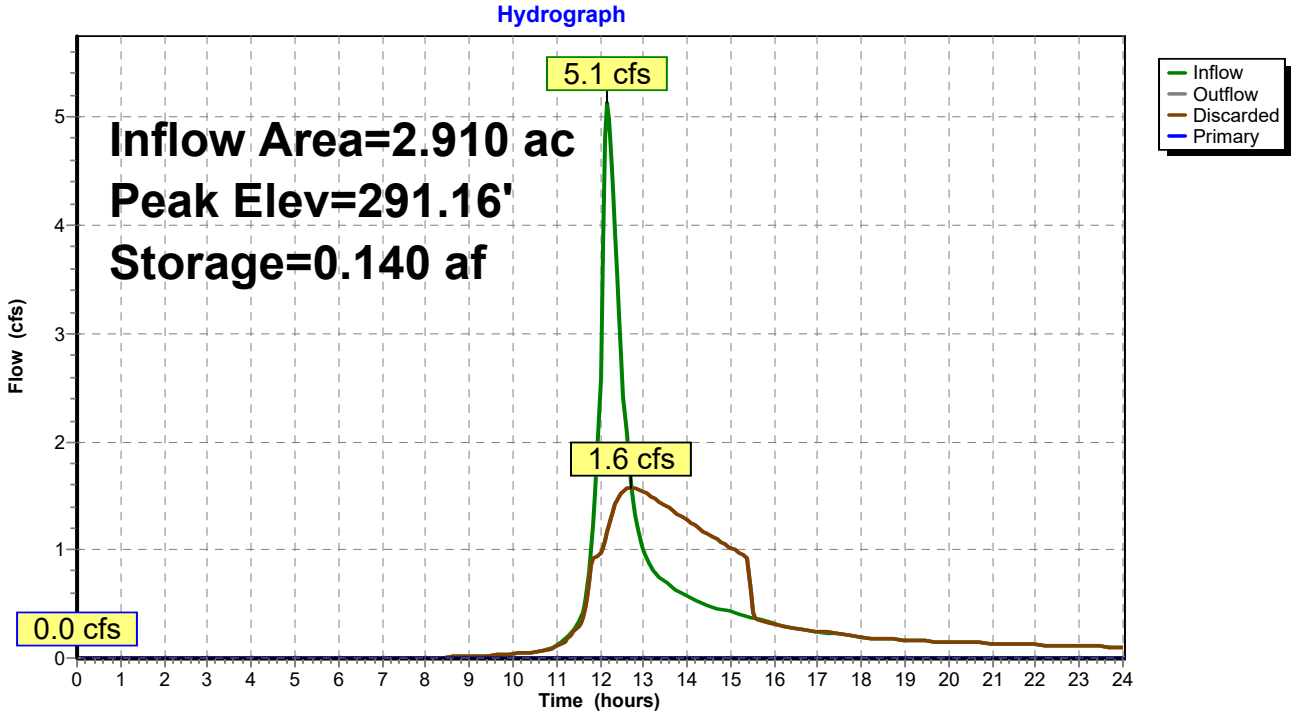
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
290.00	0.109	220.0	0.000	0.000	0.109
292.00	0.152	331.0	0.260	0.260	0.221
292.50	0.164	340.0	0.079	0.339	0.233

Device	Routing	Invert	Outlet Devices
#1	Discarded	290.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 287.50'
#2	Primary	291.75'	**10.0' long x 0.50' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Discarded OutFlow Max=1.6 cfs @ 12.72 hrs HW=291.16' (Free Discharge)
↑—**1=Exfiltration** (Controls 1.6 cfs)

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=290.00' (Free Discharge)
↑—**2=Sharp-Crested Rectangular Weir** (Controls 0.0 cfs)

Pond 5P: Infiltration Pond



Stage-Area-Storage for Pond 5P: Infiltration Pond

Elevation (feet)	Surface (acres)	Storage (acre-feet)
290.00	0.109	0.000
290.05	0.110	0.005
290.10	0.111	0.011
290.15	0.112	0.017
290.20	0.113	0.022
290.25	0.114	0.028
290.30	0.115	0.034
290.35	0.116	0.039
290.40	0.117	0.045
290.45	0.118	0.051
290.50	0.119	0.057
290.55	0.120	0.063
290.60	0.121	0.069
290.65	0.122	0.075
290.70	0.123	0.081
290.75	0.124	0.087
290.80	0.125	0.094
290.85	0.126	0.100
290.90	0.127	0.106
290.95	0.129	0.113
291.00	0.130	0.119
291.05	0.131	0.126
291.10	0.132	0.132
291.15	0.133	0.139
291.20	0.134	0.146
291.25	0.135	0.152
291.30	0.136	0.159
291.35	0.137	0.166
291.40	0.138	0.173
291.45	0.139	0.180
291.50	0.141	0.187
291.55	0.142	0.194
291.60	0.143	0.201
291.65	0.144	0.208
291.70	0.145	0.215
291.75	0.146	0.223
291.80	0.147	0.230
291.85	0.149	0.237
291.90	0.150	0.245
291.95	0.151	0.252
292.00	0.152	0.260
292.05	0.153	0.267
292.10	0.154	0.275
292.15	0.156	0.283
292.20	0.157	0.291
292.25	0.158	0.299
292.30	0.159	0.306
292.35	0.160	0.314
292.40	0.162	0.323
292.45	0.163	0.331
292.50	**0.164**	**0.339**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subarea PA Runoff Area=2.220 ac 7.21% Impervious Runoff Depth>3.78"
Flow Length=276' Tc=7.5 min CN=74 Runoff=9.2 cfs 0.699 af

Subcatchment 2S: Subarea PB Runoff Area=0.690 ac 23.19% Impervious Runoff Depth>4.41"
Flow Length=187' Tc=6.0 min CN=80 Runoff=3.5 cfs 0.254 af

Subcatchment 3S: Subarea PC Runoff Area=1.380 ac 2.90% Impervious Runoff Depth>3.67"
Flow Length=379' Tc=8.0 min CN=73 Runoff=5.5 cfs 0.422 af

Reach 6R: Isolated Wetland Inflow=5.5 cfs 0.505 af
Outflow=5.5 cfs 0.505 af

Pond 4P: Detention Pond Peak Elev=303.60' Storage=0.098 af Inflow=9.2 cfs 0.699 af
18.0" Round Culvert n=0.012 L=62.0' S=0.0661 '/' Outflow=6.5 cfs 0.685 af

Pond 5P: Infiltration Pond Peak Elev=291.95' Storage=0.253 af Inflow=9.1 cfs 0.939 af
Discarded=2.1 cfs 0.857 af Primary=3.0 cfs 0.082 af Outflow=5.1 cfs 0.939 af

Total Runoff Area = 4.290 ac Runoff Volume = 1.375 af Average Runoff Depth = 3.85"
91.61% Pervious = 3.930 ac 8.39% Impervious = 0.360 ac

Summary for Subcatchment 1S: Subarea PA

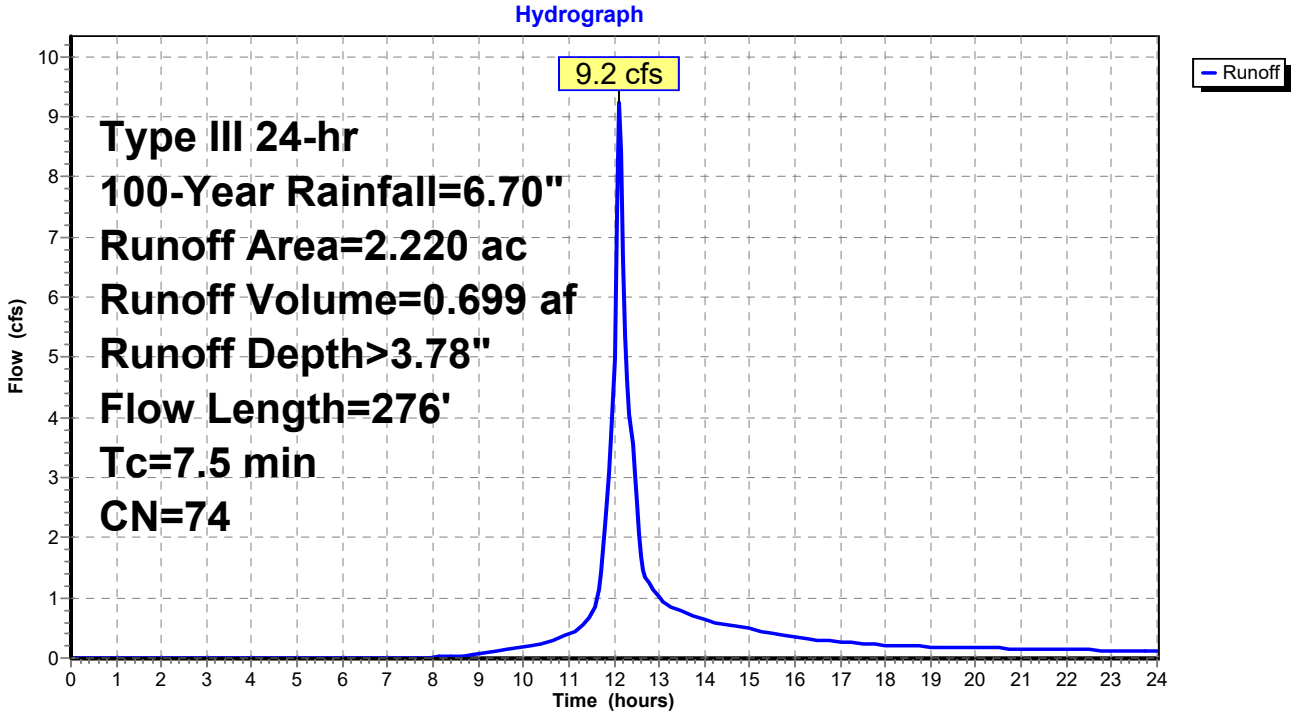
Runoff = 9.2 cfs @ 12.11 hrs, Volume= 0.699 af, Depth> 3.78"
Routed to Pond 4P : Detention Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.70"

Area (ac)	CN	Description
0.060	98	Roofs, HSG C
0.100	98	Paved parking, HSG C
1.340	74	>75% Grass cover, Good, HSG C
0.720	70	Woods, Good, HSG C
2.220	74	Weighted Average
2.060		92.79% Pervious Area
0.160		7.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50	0.1220	0.14		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
1.0	107	0.1210	1.74		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.5	119	0.2770	3.68		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.5	276	Total			

Subcatchment 1S: Subarea PA



Summary for Subcatchment 2S: Subarea PB

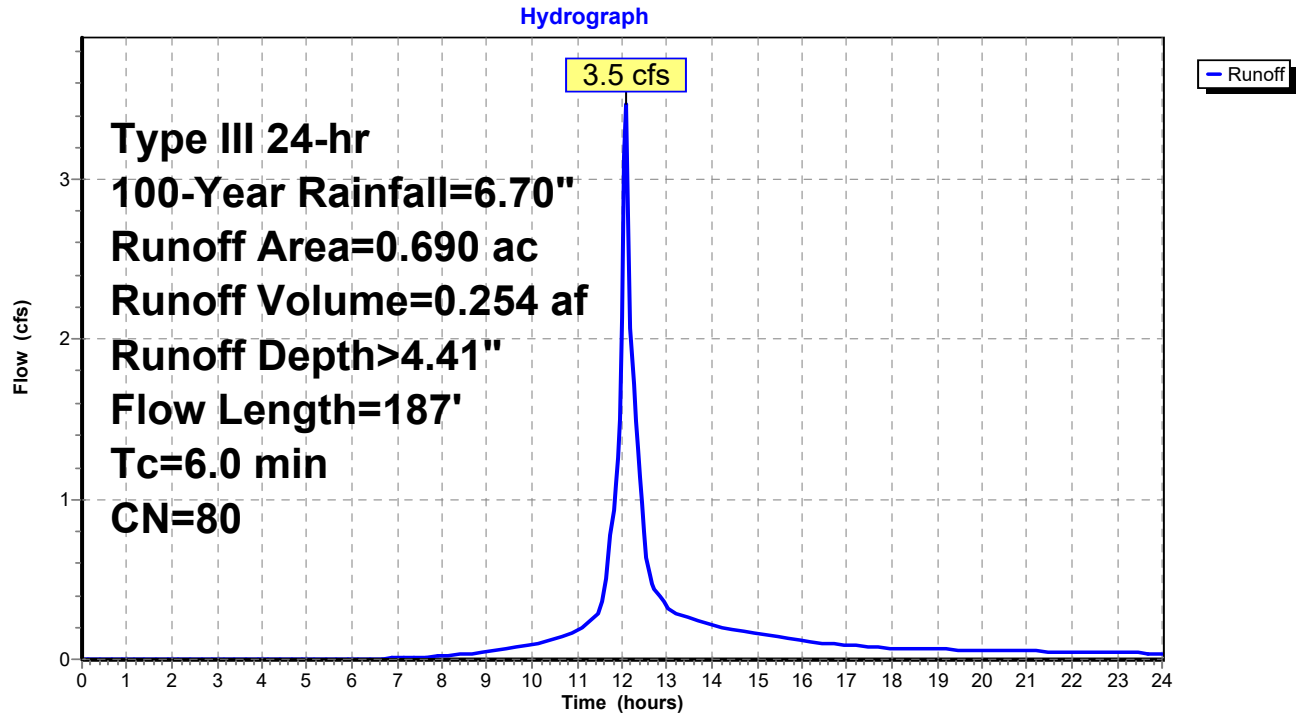
Runoff = 3.5 cfs @ 12.09 hrs, Volume= 0.254 af, Depth> 4.41"
Routed to Pond 5P : Infiltration Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.70"

Area (ac)	CN	Description
0.040	98	Roofs, HSG C
0.120	98	Paved parking, HSG C
0.530	74	>75% Grass cover, Good, HSG C
0.690	80	Weighted Average
0.530		76.81% Pervious Area
0.160		23.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.20		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.20"
0.5	85	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	52	0.1940	3.08		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.5	187	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 2S: Subarea PB



Summary for Subcatchment 3S: Subarea PC

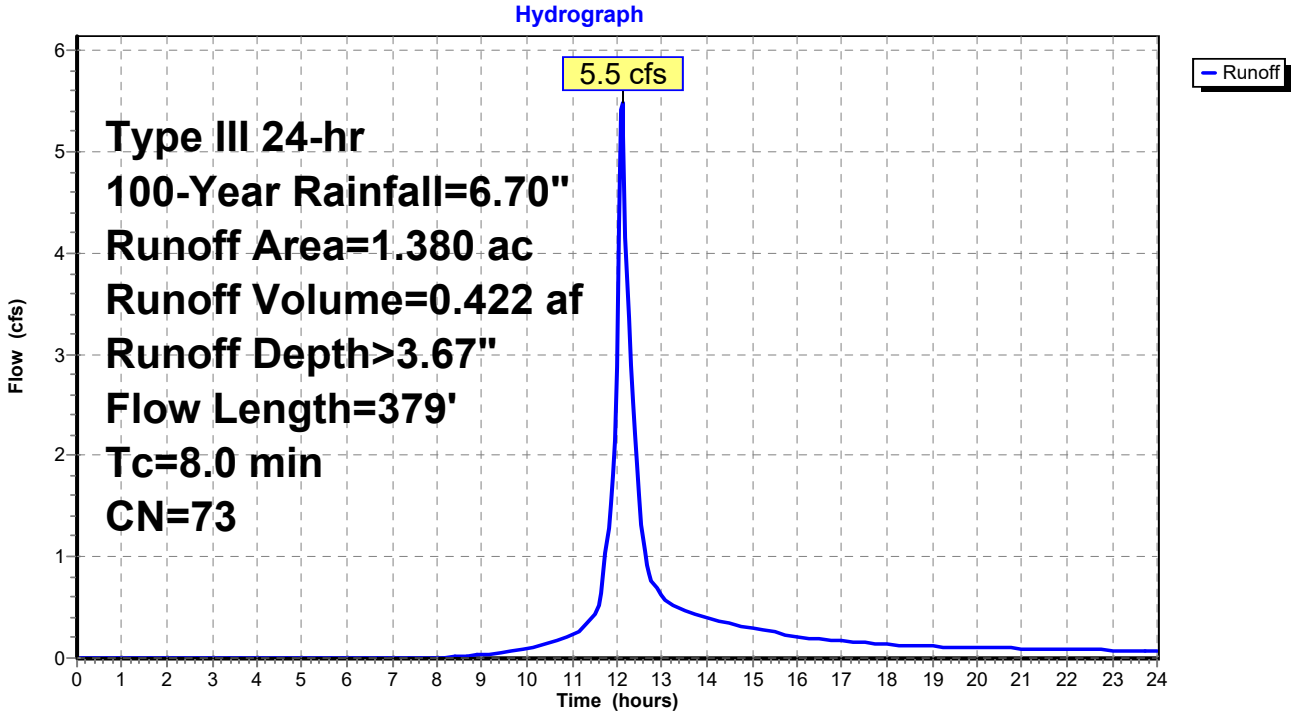
Runoff = 5.5 cfs @ 12.12 hrs, Volume= 0.422 af, Depth> 3.67"
Routed to Reach 6R : Isolated Wetland

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=6.70"

Area (ac)	CN	Description
0.040	98	Roofs, HSG C
0.760	74	>75% Grass cover, Good, HSG C
0.580	70	Woods, Good, HSG C
1.380	73	Weighted Average
1.340		97.10% Pervious Area
0.040		2.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.7	50	0.2220	0.18		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.20"
0.9	110	0.1800	2.12		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.5	148	0.0540	1.63		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.9	71	0.0630	1.25		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
8.0	379	Total			

Subcatchment 3S: Subarea PC

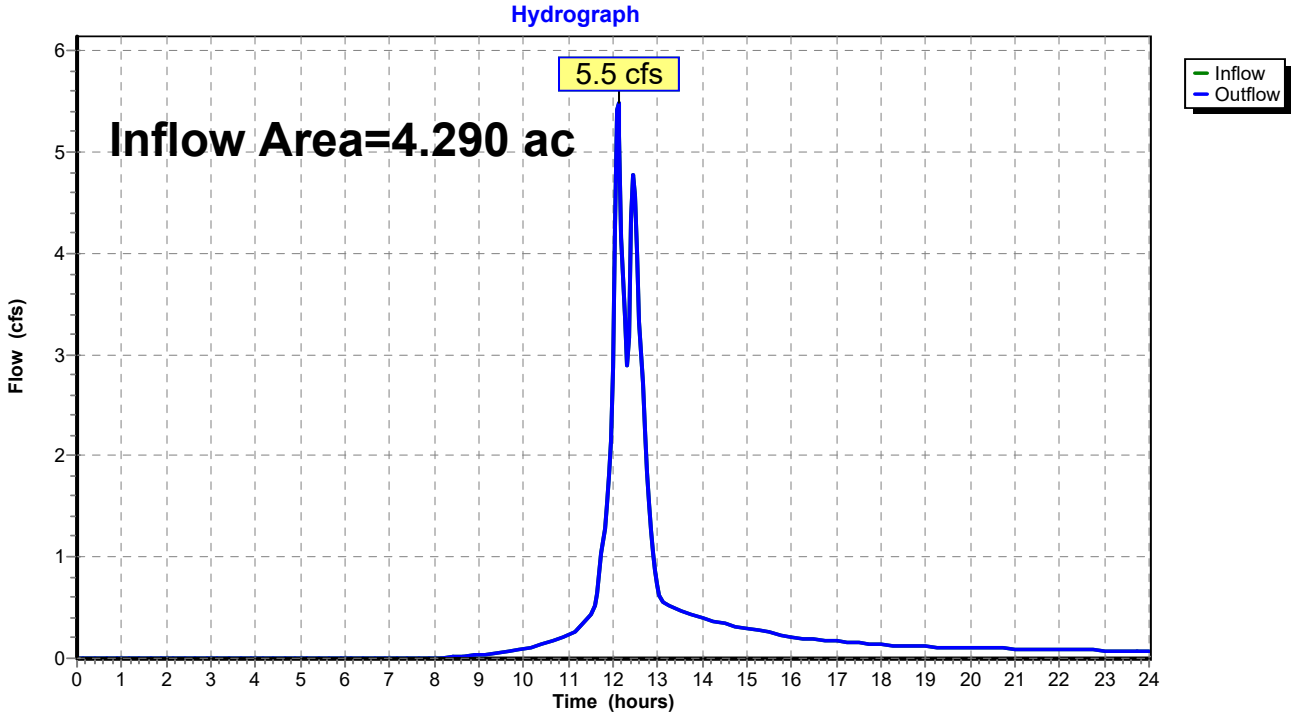


Summary for Reach 6R: Isolated Wetland

Inflow Area = 4.290 ac, 8.39% Impervious, Inflow Depth > 1.41" for 100-Year event
Inflow = 5.5 cfs @ 12.12 hrs, Volume= 0.505 af
Outflow = 5.5 cfs @ 12.12 hrs, Volume= 0.505 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 6R: Isolated Wetland



Summary for Pond 4P: Detention Pond

Inflow Area = 2.220 ac, 7.21% Impervious, Inflow Depth > 3.78" for 100-Year event
Inflow = 9.2 cfs @ 12.11 hrs, Volume= 0.699 af
Outflow = 6.5 cfs @ 12.21 hrs, Volume= 0.685 af, Atten= 29%, Lag= 6.1 min
Primary = 6.5 cfs @ 12.21 hrs, Volume= 0.685 af
Routed to Pond 5P : Infiltration Pond

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 303.60' @ 12.21 hrs Surf.Area= 0.073 ac Storage= 0.098 af

Plug-Flow detention time= 26.8 min calculated for 0.685 af (98% of inflow)
Center-of-Mass det. time= 15.7 min (840.2 - 824.5)

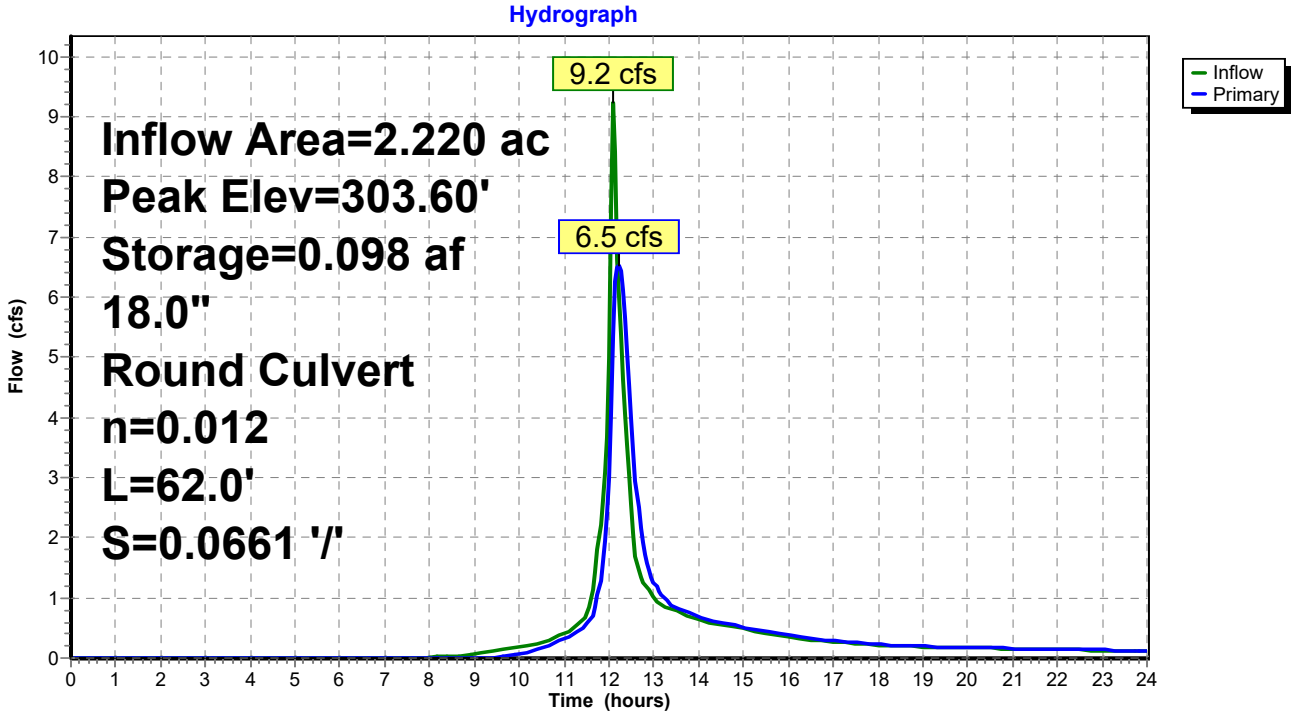
Volume	Invert	Avail.Storage	Storage Description
#1	302.00'	0.129 af	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
302.00	0.050	215.0	0.000	0.000	0.050
304.00	0.080	264.0	0.129	0.129	0.094

Device	Routing	Invert	Outlet Devices
#1	Primary	302.10'	**18.0" Round Culvert** L= 62.0' CPP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 302.10' / 298.00' S= 0.0661 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=6.5 cfs @ 12.21 hrs HW=303.60' (Free Discharge)
1=Culvert (Inlet Controls 6.5 cfs @ 3.67 fps)

Pond 4P: Detention Pond



Stage-Area-Storage for Pond 4P: Detention Pond

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
302.00	0.050	0.000	303.04	0.065	0.059
302.02	0.050	0.001	303.06	0.065	0.061
302.04	0.051	0.002	303.08	0.065	0.062
302.06	0.051	0.003	303.10	0.066	0.063
302.08	0.051	0.004	303.12	0.066	0.065
302.10	0.051	0.005	303.14	0.066	0.066
302.12	0.052	0.006	303.16	0.067	0.067
302.14	0.052	0.007	303.18	0.067	0.069
302.16	0.052	0.008	303.20	0.067	0.070
302.18	0.052	0.009	303.22	0.067	0.071
302.20	0.053	0.010	303.24	0.068	0.073
302.22	0.053	0.011	303.26	0.068	0.074
302.24	0.053	0.012	303.28	0.068	0.075
302.26	0.054	0.013	303.30	0.069	0.077
302.28	0.054	0.015	303.32	0.069	0.078
302.30	0.054	0.016	303.34	0.069	0.080
302.32	0.054	0.017	303.36	0.070	0.081
302.34	0.055	0.018	303.38	0.070	0.082
302.36	0.055	0.019	303.40	0.070	0.084
302.38	0.055	0.020	303.42	0.071	0.085
302.40	0.055	0.021	303.44	0.071	0.087
302.42	0.056	0.022	303.46	0.071	0.088
302.44	0.056	0.023	303.48	0.072	0.089
302.46	0.056	0.024	303.50	0.072	0.091
302.48	0.057	0.026	303.52	0.072	0.092
302.50	0.057	0.027	303.54	0.072	0.094
302.52	0.057	0.028	303.56	0.073	0.095
302.54	0.057	0.029	303.58	0.073	0.097
302.56	0.058	0.030	303.60	0.073	0.098
302.58	0.058	0.031	303.62	0.074	0.100
302.60	0.058	0.032	303.64	0.074	0.101
302.62	0.059	0.034	303.66	0.074	0.103
302.64	0.059	0.035	303.68	0.075	0.104
302.66	0.059	0.036	303.70	0.075	0.106
302.68	0.059	0.037	303.72	0.075	0.107
302.70	0.060	0.038	303.74	0.076	0.109
302.72	0.060	0.040	303.76	0.076	0.110
302.74	0.060	0.041	303.78	0.076	0.112
302.76	0.061	0.042	303.80	0.077	0.113
302.78	0.061	0.043	303.82	0.077	0.115
302.80	0.061	0.044	303.84	0.077	0.116
302.82	0.061	0.046	303.86	0.078	0.118
302.84	0.062	0.047	303.88	0.078	0.119
302.86	0.062	0.048	303.90	0.078	0.121
302.88	0.062	0.049	303.92	0.079	0.122
302.90	0.063	0.051	303.94	0.079	0.124
302.92	0.063	0.052	303.96	0.079	0.126
302.94	0.063	0.053	303.98	0.080	0.127
302.96	0.064	0.054	304.00	**0.080**	**0.129**
302.98	0.064	0.056			
303.00	0.064	0.057			
303.02	0.064	0.058			

Summary for Pond 5P: Infiltration Pond

Inflow Area = 2.910 ac, 11.00% Impervious, Inflow Depth > 3.87" for 100-Year event
Inflow = 9.1 cfs @ 12.14 hrs, Volume= 0.939 af
Outflow = 5.1 cfs @ 12.49 hrs, Volume= 0.939 af, Atten= 44%, Lag= 20.8 min
Discarded = 2.1 cfs @ 12.49 hrs, Volume= 0.857 af
Primary = 3.0 cfs @ 12.49 hrs, Volume= 0.082 af
Routed to Reach 6R : Isolated Wetland

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 291.95' @ 12.49 hrs Surf.Area= 0.151 ac Storage= 0.253 af

Plug-Flow detention time= 41.7 min calculated for 0.939 af (100% of inflow)
Center-of-Mass det. time= 41.4 min (873.2 - 831.8)

Volume	Invert	Avail.Storage	Storage Description
#1	290.00'	0.339 af	**Custom Stage Data (Irregular)** Listed below (Recalc)

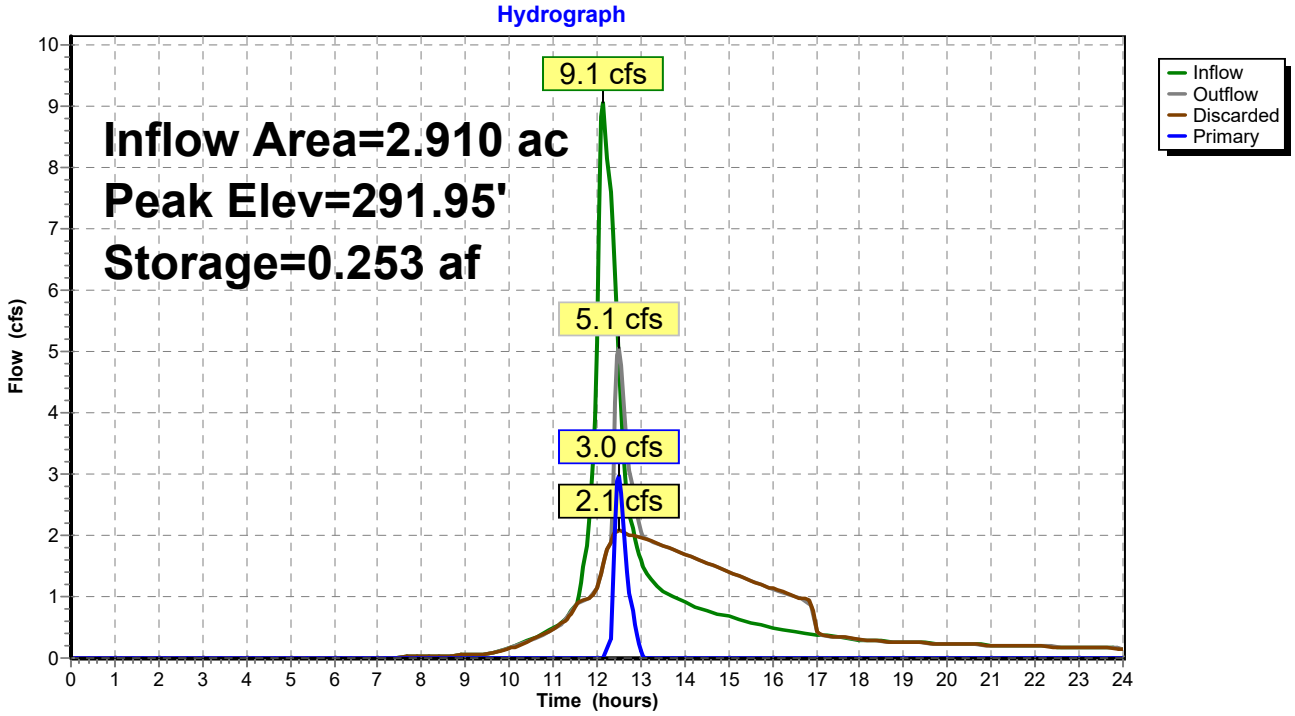
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
290.00	0.109	220.0	0.000	0.000	0.109
292.00	0.152	331.0	0.260	0.260	0.221
292.50	0.164	340.0	0.079	0.339	0.233

Device	Routing	Invert	Outlet Devices
#1	Discarded	290.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 287.50'
#2	Primary	291.75'	**10.0' long x 0.50' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Discarded OutFlow Max=2.1 cfs @ 12.49 hrs HW=291.95' (Free Discharge)
1=Exfiltration (Controls 2.1 cfs)

Primary OutFlow Max=2.9 cfs @ 12.49 hrs HW=291.95' (Free Discharge)
2=Sharp-Crested Rectangular Weir (Weir Controls 2.9 cfs @ 1.47 fps)

Pond 5P: Infiltration Pond



Stage-Area-Storage for Pond 5P: Infiltration Pond

Elevation (feet)	Surface (acres)	Storage (acre-feet)
290.00	0.109	0.000
290.05	0.110	0.005
290.10	0.111	0.011
290.15	0.112	0.017
290.20	0.113	0.022
290.25	0.114	0.028
290.30	0.115	0.034
290.35	0.116	0.039
290.40	0.117	0.045
290.45	0.118	0.051
290.50	0.119	0.057
290.55	0.120	0.063
290.60	0.121	0.069
290.65	0.122	0.075
290.70	0.123	0.081
290.75	0.124	0.087
290.80	0.125	0.094
290.85	0.126	0.100
290.90	0.127	0.106
290.95	0.129	0.113
291.00	0.130	0.119
291.05	0.131	0.126
291.10	0.132	0.132
291.15	0.133	0.139
291.20	0.134	0.146
291.25	0.135	0.152
291.30	0.136	0.159
291.35	0.137	0.166
291.40	0.138	0.173
291.45	0.139	0.180
291.50	0.141	0.187
291.55	0.142	0.194
291.60	0.143	0.201
291.65	0.144	0.208
291.70	0.145	0.215
291.75	0.146	0.223
291.80	0.147	0.230
291.85	0.149	0.237
291.90	0.150	0.245
291.95	0.151	0.252
292.00	0.152	0.260
292.05	0.153	0.267
292.10	0.154	0.275
292.15	0.156	0.283
292.20	0.157	0.291
292.25	0.158	0.299
292.30	0.159	0.306
292.35	0.160	0.314
292.40	0.162	0.323
292.45	0.163	0.331
292.50	**0.164**	**0.339**

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APPENDIX B – STORM WATER WORKSHEETS

Required Recharge Volume and Drawdown Worksheet
TSS Removal Worksheet
Checklist for Stormwater Report
Ground Water Mounding Summary Worksheet

Required Recharge Volume Worksheet

PROJECT LOCATION: **Symphony Drive Franklin, MA**
DATE: 12-Dec-25
PROJECT NUMBER: 25-0108

Subarea PA, PB & PC

SCS Soil Type Hydrologic Group	*Target Depth Factor (in)*	*Total Impervious Area (ac)*	*Required Volume to Recharge (ac-ft)*
HSG C - Pavement & Roofs	0.25	0.360	0.0075
		TOTAL:	**0.0075**

SITE TOTAL Rv:	**0.0075**

Drainage Basin #2

Volume Recharged	
Volume of pond between bottom and outlet (el=291.75)	0.223 ac-ft

Drawdown Within 72 hours	
Soil Type:	Loamy Sand
RAWLS Rate (in/hr):	2.41
Infiltration Area (sf):	4,761
Drawdown Time (hours):	0.3

TSS Phosphorous Removal Worksheet

PROJECT LOCATION: Symphony Drive Franklin, MA
DATE: 12-Dec-25
PROJECT NUMBER: 25-0108

TSS Removal

Subarea PA

Impervious Area =	0.360 acres			
Runoff depth to be treated =	1.00 inches			
Runoff volume to be treated =	0.0300 ac-ft			
BMP	*TSS Removal Rate*	*Starting TSS Load*	*Amount Removed*	*Remaining Load*
Detention Basin	0.50	1.00	0.50	0.50
Infiltration Basin	0.80	0.50	0.40	0.10
TOTAL TSS REMOVED =				**90 %**

Phosphorous Removal

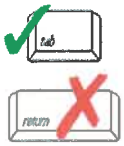
BMP	Phosphorous Removal Rate	Starting TSS Load	Amount Removed	Remaining Load
Detention Basin	0.1	1.00	0.10	0.90
Infiltration Basin	0.6	0.90	0.54	0.36
TOTAL PHOSPHOROUS REMOVED =				**64%**

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

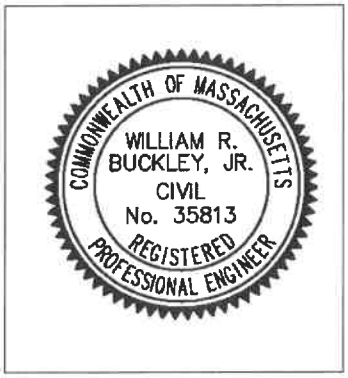
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

- [x] New development
- [ ] Redevelopment
- [ ] Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- [x] No disturbance to any Wetland Resource Areas
- [ ] Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- [ ] Reduced Impervious Area (Redevelopment Only)
- [x] Minimizing disturbance to existing trees and shrubs
- [ ] LID Site Design Credit Requested:
  - [ ] Credit 1
  - [ ] Credit 2
  - [ ] Credit 3
- [ ] Use of "country drainage" versus curb and gutter conveyance and pipe
- [ ] Bioretention Cells (includes Rain Gardens)
- [ ] Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- [ ] Treebox Filter
- [ ] Water Quality Swale
- [ ] Grass Channel
- [ ] Green Roof
- [ ] Other (describe): _____

Standard 1: No New Untreated Discharges

- [x] No new untreated discharges
- [x] Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- [x] Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

■ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

■ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

■ Soil Analysis provided.

■ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

■ Sizing the infiltration, BMPs is based on the following method: Check the method used.

■ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

■ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

- ■ Site is comprised solely of C and D soils and/or bedrock at the land surface
- ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
- ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
- ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

■ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

■ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.

☐ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☐ is within the Zone II or Interim Wellhead Protection Area
- ☐ is near or to other critical areas
- ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☐ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

■ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

- [x] The BMP is sized (and calculations provided) based on:
  - [x] The ½" or 1" Water Quality Volume or
  - [ ] The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
- [ ] The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.
- [ ] A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

- [ ] The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.
- [ ] The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.
- [ ] The NPDES Multi-Sector General Permit does ***not*** cover the land use.
- [ ] LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
- [ ] All exposure has been eliminated.
- [ ] All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.
- [ ] The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

- [ ] The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.
- [ ] Critical areas and BMPs are identified in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

☐ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

- ☐ Limited Project
- ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
- ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
- ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
- ☐ Bike Path and/or Foot Path
- ☐ Redevelopment Project
- ☐ Redevelopment portion of mix of new and redevelopment.

☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

■ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☐ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

■ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

■ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ■ Name of the stormwater management system owners;
- ■ Party responsible for operation and maintenance;
- ■ Schedule for implementation of routine and non-routine maintenance tasks;
- ☐ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☐ Description and delineation of public safety features;
- ■ Estimated operation and maintenance budget; and
- ☐ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

■ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☐ An Illicit Discharge Compliance Statement is attached;

■ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

Transient Water-Table Rise Beneath a Rectangular Recharge Area
Groundwater Mounding Solution by Hantush (1967)

Aquifer Properties:
Hydraulic conductivity, K = 4.82 ft/day
Specific yield, Sy = 0.23
Initial saturated thickness, h(0) = 10 ft

Recharge Area Properties:
Recharge rate, w = 0.8 ft/day
Simulation time, t = 1 day
Time when recharge stops, t(0) = 0.0833 day
X coordinate at center of recharge area, X = 0 ft
Y coordinate at center of recharge area, Y = 0 ft
Length in x direction, l = 75 ft
Length in y direction, a = 63.48 ft

Water-Table Rise at Center of Recharge Area:

t (day)	h (ft)
0.1	0.289739
0.2	0.289687
0.3	0.288865
0.4	0.286056
0.5	0.280992
0.6	0.274163
0.7	0.266207
0.8	0.257658
0.9	0.248898
1	0.240183

Note: recovery begins after 0.0833 day.

PROJECT LOCATION: **Symphony Drive**
DATE: 12-Dec-25
PROJECT NUMBER: 25-0108

Basin 2

Aquifer Properties:

Hydraulic Conductivity (K· ft/day):	4.82	RAWLS rate for LOAMY SAND
Specific Yield (Sy):	0.23	Medium Gravel (USGS Water Supply Paper 1662-
Initial Saturated Thickness (ft):	10	

Recharge Area Properties:

Required Recharge Volume (Rv-ft3):	327	See Required Recharge Volume Worksheet
Elevation of Estimated High Groundwater (ft):	287.50	
Bottom of Recharge System (ft):	290.00	Bottom basin el-290.0'
Bottom Area (ft2):	4,761	Bottom basin el-290.0'

Application Rate Calculation:

$$\frac{\text{Rv (ft3)}}{\text{Bottom Area (ft2)}} * \frac{\text{24 hrs/day}}{\text{(DEP stan}} =$$

$$\frac{327}{4{,}761} * \frac{24}{2} = 0.8 \text{ ft/day}$$

Length of Time to Generate Rv (days):	0.0833	assume Rv generated during a 2 hour period - see DEP Stormwater Handbook, Vol.3, Ch.1, p.20

Groundwater Mounding Solution by Hantush (1967)

Maximum Water Table Rise in Center of Recharge Area (ft)	0.29	See output run using AQTESOLV V4.50.002
Depth From Top of Mound to Bottom of Recharge Area (ft):	2.21	Mound does not breach bottom of system

APPENDIX C - OPERATION AND MAINTENANCE PLAN FOR STORM WATER BMPS

Construction Period O & M Plan
Post-Construction O & M Plan

Appendix C: LONG TERM OPERATION AND MAINTENANCE PLAN FOR STORMWATER BMPs
138 Washington Street Foxborough, MA

	During Construction	Post-construction
BMP Owner:	**Owner**	**Owner**
Party of Plan Responsibility:	**Owner**	**Owner**

References:

- Private Definitive Plan of Land of land in Franklin, MA Tanglewood Estates II Symphony Drive Extensions dated December 4, 2025
- Storm Water Report "Symphony Drive Extension" Franklin, MA dated December, 2025

Operation and Maintenance

Infiltration Basin: Once the infiltration system is in use, inspect it after every major storm (3.2 inches in 24 hours) for the first few months to ensure it is functioning properly and if necessary, take corrective action. Note how long water remains standing in the basin after a storm; standing water within the basin 72 hours after a storm indicates that there is an issue. If the ponding is due to clogging, immediately address the reasons for the clogging (such as upland sediment erosion). Thereafter, inspect the detention basin at least twice per year to ensure that it is dry.

Estimated Operations and Maintenance Budget

The following is an estimate of the O&M Budget, post construction.
Inspections (3 times per year): $200

CONSTRUCTION PERIOD MAINTENANCE PLAN
FOR STORMWATER BMPs
138 Washington Street Foxborough, MA

References:

- Private Definitive Plan of Land of land in Franklin, MA Tanglewood Estates II Symphony Drive Extensions dated December 4, 2025
- Storm Water Report "Symphony Drive Extension" Franklin, MA dated December, 2025

Operation and Maintenance

Item 1: During construction, **weekly** inspection of the crushed stone construction entrance pad and erosion control silt socks shall be conducted by a qualified staff member of the responsible party or an independent sediment and erosion control expert hired by the responsible party. Any displaced barriers shall be restored or repaired immediately.

Item 2: The infiltration system shall be inspected three times a year: once after leaf fall, once before the arrival of hurricane season, the third in the early or mid-spring after the snow melt. Any debris should be cleaned out.

Item 3: During construction every effort will be made to ensure that silt does not enter the stormwater basin. Additional silt socks shall be used as necessary. If silt does enter the basin, then the contractor shall be responsible for its removal.

Item 4: During construction, the stone pad at the entrance to the project shall be inspected **weekly** and replenished if siltation is impeding the cleaning of truck tires. Any materials tracked into the roadway shall be swept up within a day.

APPENDIX D – SOIL DATA

Soil Evaluation Forms
NRCS Soil Resource Report

No. 25-0108 Date: June 3, 2025

Commonwealth of Massachusetts

Franklin , Massachusetts

Soil Suitability Assessment for On-Site Sewage Disposal

Performed By: William Buckley, Jr. Date: June 3, 2025

Witnessed By: Steve Donatelli

Location Address or Lot #:	Owner's Name, Address, and , Telephone #:
Symphony Drive Extension, Lot 1 Franklin, MA 02038 New Construction: ☑ Repair ☐	Cypress Real Estate Development, LLC 3 Rothchild Drive Foxborough, MA 02035 781.223.1188

Office Review

Published Soil Survey Available: No ☐ Yes ☑

Year Published 1989 Publication Scale 1:25,000 Soil Map Unit Montauk FSL

Drainage Class C Soil Limitations Bedrock

Surficial Geology Report Available: No ☐ Yes ☑

Year Published 1992 Publication Scale 1:250,000

Geologic Material (Map Unit) Coarse Deposits

Landform Glacial Outwash Plain

Flood Insurance Rate Map:

Above 500 year flood boundary No ☐ Yes ☑

Within 500 year flood boundary No ☑ Yes ☐

Within 100 year flood boundary No ☑ Yes ☐

Wetland Area:

National Wetland Inventory Map (map unit) _____

Wetlands Conservancy Program Map (map unit) _____

Current Water Resource Conditions (USGS): Month June, 2025

Range: Above Normal ☑ Normal ☐ Below Normal ☐

Other References Reviewed: _____

Location Address or Lot No. Symphony Drive Extension, Lot 1

On-site Review

Deep Hole Number: 5 Date: 6/3/2025 Time: 1030 Weather: 60°/Sunny

Location (identify on site plan) See site plan

Land Use Vacant Slope (%) 5% Surface Stones Some

Vegetation Mixed Woods

Landform Glacial Outwash Plain

Position on landscape (sketch on back) See site plan

Distances from:

Open Water Body	>150'	Drainageway	>100'
Possible Wet Area	>100'	Property Line	25'+/-
Drinking Water Well	>100'	Other	

DEEP OBSERVATION HOLE LOG*

Depth from Surface (inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0" - 6"	A	SL	10YR3/2		
6" - 24"	B	SL	5YR4/6		
24" - 60"	B2	SL	5YR3/4		
60" - 120"	C	LS	7.5YR5/4		Gravelly, Cobbly, Coarse

*MINIMUM OF TWO HOLES REQUIRED AT EVERY DISPOSAL AREA

Parent Material (geologic) Glacial outwash Depth to Bedrock:

Depth to Groundwater Standing Water in Hole: 80" Weeping from Pit Face: 29"

Estimated Seasonal High Groundwater: 29"

Location Address or Lot No. Symphony Drive Extension, Lot 1

On-site Review

Deep Hole Number: 6 Date: 6/3/2025 Time: 1100 Weather: 60°/Sunny

Location (identify on site plan) See site plan

Land Use Vacant Slope (%) 5% Surface Stones Some

Vegetation Mixed Woods

Landform Glacial Outwash Plain

Position on landscape (sketch on back) See site plan

Distances from:

Open Water Body	>150'	Drainageway	>100'
Possible Wet Area	>100'	Property Line	25'+/-
Drinking Water Well	>100'	Other	

DEEP OBSERVATION HOLE LOG*

Depth from Surface (inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0" - 6"	A	SL	10YR3/2		
6" - 30"	B	SL	5YR4/6		
30" - 120"	C	LS	7.5YR5/4		Gravelly, Cobbly, Coarse

*MINIMUM OF TWO HOLES REQUIRED AT EVERY DISPOSAL AREA

Parent Material (geologic) Glacial outwash Depth to Bedrock:

Depth to Groundwater Standing Water in Hole: Weeping from Pit Face: 29"

Estimated Seasonal High Groundwater: 29"

No. 25-0108 Date: June 3, 2025

Commonwealth of Massachusetts

Franklin , Massachusetts

Soil Suitability Assessment for On-Site Sewage Disposal

Performed By: William Buckley, Jr. Date: June 3, 2025

Witnessed By: Steve Donatelli

Location Address or Lot #:	Owner's Name, Address, and , Telephone #:
Symphony Drive Extension, Lot 2 Franklin, MA 02038 New Construction: ☑ Repair ☐	Cypress Real Estate Development, LLC 3 Rothchild Drive Foxborough, MA 02035 781.223.1188

Office Review

Published Soil Survey Available: No ☐ Yes ☑

Year Published 1989 Publication Scale 1:25,000 Soil Map Unit Montauk FSL

Drainage Class C Soil Limitations Bedrock

Surficial Geology Report Available: No ☐ Yes ☑

Year Published 1992 Publication Scale 1:250,000

Geologic Material (Map Unit) Coarse Deposits

Landform Glacial Outwash Plain

Flood Insurance Rate Map:

Above 500 year flood boundary No ☐ Yes ☑

Within 500 year flood boundary No ☑ Yes ☐

Within 100 year flood boundary No ☑ Yes ☐

Wetland Area:

National Wetland Inventory Map (map unit) _____

Wetlands Conservancy Program Map (map unit) _____

Current Water Resource Conditions (USGS): Month June, 2025

Range: Above Normal ☑ Normal ☐ Below Normal ☐

Other References Reviewed: _____

Location Address or Lot No. Symphony Drive Extension, Lot 2

On-site Review

Deep Hole Number: 1 Date: 6/3/2025 Time: 0800 Weather: 60°/Sunny

Location (identify on site plan) See site plan

Land Use Vacant Slope (%) 5% Surface Stones Some

Vegetation Mixed Woods

Landform Glacial Outwash Plain

Position on landscape (sketch on back) See site plan

Distances from:

Open Water Body	>150'	Drainageway	>100'
Possible Wet Area	>100'	Property Line	25'+/-
Drinking Water Well	>100'	Other	

DEEP OBSERVATION HOLE LOG*

Depth from Surface (inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0" - 5"	A	SL	10YR3/2		
5" - 36"	B	SL	5YR4/6		
36" - 120"	C	LS	7.5YR5/4		Gravelly, Cobbly, Coarse

*MINIMUM OF TWO HOLES REQUIRED AT EVERY DISPOSAL AREA

Parent Material (geologic) Glacial outwash Depth to Bedrock:

Depth to Groundwater Standing Water in Hole: 80" Weeping from Pit Face: 32"

Estimated Seasonal High Groundwater: 32"

Location Address or Lot No. Symphony Drive Extension, Lot 2

On-site Review

Deep Hole Number: 2 Date: 6/3/2025 Time: 0830 Weather: 60°/Sunny

Location (identify on site plan) See site plan

Land Use Vacant Slope (%) 5% Surface Stones Some

Vegetation Mixed Woods

Landform Glacial Outwash Plain

Position on landscape (sketch on back) See site plan

Distances from:

Open Water Body	>150'	Drainageway	>100'
Possible Wet Area	>100'	Property Line	25'+/-
Drinking Water Well	>100'	Other	

DEEP OBSERVATION HOLE LOG*

Depth from Surface (inches)	Soil Horizon	Soil Texture (USDA)	Soil Color (Munsell)	Soil Mottling	Other (Structure, Stones, Boulders, Consistency, % Gravel)
0" - 5"	A	SL	10YR3/2		
5" - 42"	B	SL	5YR4/6		
42" - 120"	C	LS	7.5YR5/4		Gravelly, Cobbly, Coarse

*MINIMUM OF TWO HOLES REQUIRED AT EVERY DISPOSAL AREA

Parent Material (geologic) Glacial outwash Depth to Bedrock:

Depth to Groundwater Standing Water in Hole: 80" Weeping from Pit Face: 36"

Estimated Seasonal High Groundwater: 36"

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Norfolk and Suffolk Counties, Massachusetts

June 5, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,950 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 25 50 100 150

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Norfolk and Suffolk Counties, Massachusetts
Survey Area Data: Version 20, Aug 27, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 22, 2022—Jun 5, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
302B	Montauk fine sandy loam, 0 to 8 percent slopes, extremely stony	1.8	21.4%
302C	Montauk fine sandy loam, 8 to 15 percent slopes, extremely stony	6.6	78.6%
Totals for Area of Interest		**8.4**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series.* Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases.* Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas.* Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Norfolk and Suffolk Counties, Massachusetts

302B—Montauk fine sandy loam, 0 to 8 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2w80t
Elevation: 30 to 1,120 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Montauk, extremely stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Montauk, Extremely Stony

Setting

Landform: Ground moraines, drumlins, recessionial moraines, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 6 inches: fine sandy loam
Bw1 - 6 to 28 inches: fine sandy loam
Bw2 - 28 to 36 inches: sandy loam
2Cd - 36 to 74 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Scituate, extremely stony

Percent of map unit: 8 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Canton, extremely stony

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury, extremely stony

Percent of map unit: 2 percent
Landform: Depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

302C—Montauk fine sandy loam, 8 to 15 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2w80s
Elevation: 0 to 1,080 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Montauk, extremely stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Montauk, Extremely Stony

Setting

Landform: Hills, recessionial moraines, ground moraines, drumlins
Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 6 inches: fine sandy loam
Bw1 - 6 to 28 inches: fine sandy loam
Bw2 - 28 to 36 inches: sandy loam
2Cd - 36 to 74 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Scituate, extremely stony

Percent of map unit: 8 percent
Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Canton, extremely stony

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury, extremely stony

Percent of map unit: 2 percent
Landform: Depressions, ground moraines, hills, drainageways

Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

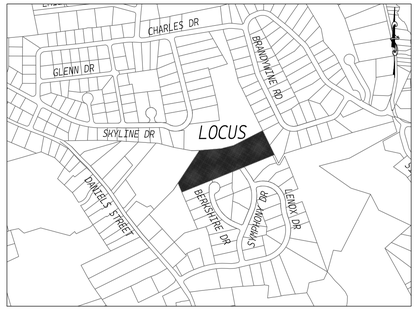
United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf



LOCUS 1"=800'

PRIVATE DEFINITIVE PLAN OF LAND IN

FRANKLIN, MA

TANGLEWOOD ESTATES II

SYMPHONY DRIVE EXTENSION

DECEMBER 4, 2025 — SCALE: AS NOTED

BAY COLONY GROUP, INC.
PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS
FOUR SCHOOL STREET, P.O. BOX 9136
FOXBOROUGH, MA 02035
(508) 543-3939

OWNER/APPLICANT: CYPRESS REAL ESTATE DEVELOPMENT LLC
3 ROTHCHILD DRIVE
FOXBOROUGH, MA 02035

ZONING:
RURAL RESIDENTIAL I

ASSESSORS REF:
218-020-000

ZONING DIMENSIONAL REQUIREMENTS:

ZONING DISTRICT: RURAL RESIDENTIAL I
MINIMUM AREA = 40,000sf
FRONTAGE - 200'
DEPTH - 200'
LOT WIDTH - 135'
FRONT YARD - 40'
SIDE YARD - 40'
REAR YARD - 40'
IMPERVIOUS COVER (STRUCTURES) - 20%
IMPERVIOUS COVER (STRUCTURE + PAVING) - 25%

SUBDIVISION DATA

- NEW HOMES - 2
- LENGTH OF COMMON DRIVE - 159FT.
- TOTAL AREA- 7.0± acres

WAIVERS REQUESTED

1. SECTION 300-8.C STREET PLAN AND PROFILE PLAN SET
   EXCLUDES PLAN AND PROFILE, AS THERE ARE NO PUBLIC UTILITIES PROPOSED
2. SECTION 300-10 STREETS (C)(1):
   TO REDUCE PAVEMENT WIDTH TO 20 FEET, WHERE 26 FEET IS REQUIRED.
3. SECTION 300-10 (E)(1) DEAD END STREETS:
   TO ALLOW FOR A TEE TURN-AROUND WHERE A 45 FOOT CUL-DE-SAC IS REQUIRED.
4. SECTION 300-10- (E) DEAD END STREETS (4):
   TO EXTEND THE ROADWAY 159'± BEYOND THE EXISTING SYMPHONY DRIVE WHICH HAS AN EXISTING LENGTH OF 1129'± WHERE 600 FEET MAXIMUM IS REQUIRED.
5. SECTION 300-10 STREETS (H) CURBING(1):
   TO ALLOW NO CURBING WHERE SLANT GRANITE CURB IS REQUIRED.
6. SECTION 300-11 STORMWATER MANAGEMENT (B) CONSTRUCTION (2):
   TO ALLOW ADS PIPE WHERE REINFORCED CONCRETE PIPE IS REQUIRED.
7. SECTION 300-12 UTILITIES (C) OTHER UTILITIES (2) STREET LIGHTING :
   TO ALLOW NO STREET LIGHTENING WHERE STREET LIGHTENING IS REQUIRED.
8. SECTION 300-13 OTHER IMPROVEMENTS (A) SIDEWALKS(1):
   TO INSTALL NO SIDEWALKS WHERE TWO SIDEWALKS ARE REQUIRED.
9. SECTION 300-13 OTHER IMPROVEMENTS (E) SHADE TREES:
   TO ALLOW NO SHADE TREES TO BE PLANTED ALONG THE RIGHT-OF-WAY.

REGULATORY APPROVALS

- SUBJECT TO A CERTIFICATE OF VOTE ISSUED BY THE FRANKLIN PLANNING BOARD ON XXXXX, XX, 2025 AND FILED WITH THE TOWN CLERK ON XXXXX, XX, 2025 - SEE SHEET XX.
- SUBJECT TO AN ORDER OF CONDITIONS (CE 159-XXXX) ISSUED BY THE FRANKLIN CONSERVATION COMMISSION ON XXXX, XX, 2025

LIST OF PLAN SHEETS

SHEET NO.	DESCRIPTION	LAST REVISED
SHEET 1	LEGEND	12-04-2025
SHEET 2	EXISTING CONDITIONS	12-04-2025
SHEET 3	PROPERTY LINE PLAN	12-04-2025
SHEET 4	TOPOGRAPHIC & UTILITY PLAN	12-04-2025
SHEET 5	CONSTRUCTION DETAILS	12-04-2025
SHEET 6	CONSTRUCTION DETAILS	12-04-2025
SHEET 7	SWPPP	12-04-2025

THE LAST REVISED DATE FOR PLANS IN THIS SET IS: **12-04-2025**

PROJECT:

Symphony Drive Extension

Franklin Massachusetts

OWNER/APPLICANT:

*CYPRESS REAL ESTATE DEVELOPMENT LLC
3 ROTHCHILD DRIVE
FOXBOROUGH, MA 02035*

Bay Colony Group, Inc.
Professional Civil Engineers & Professional Land Surveyors

FOUR SCHOOL STREET
P.O. BOX 9136
FOXBOROUGH, MA 02035
508-543-3939

DATE APPROVED: _____

DATE ENDORSED: _____

FRANKLIN PLANNING BOARD

I HEREBY CERTIFY THAT 20 DAYS HAVE ELAPSED SINCE PLANNING BOARD APPROVAL AND THAT NO APPEAL HAS BEEN FILED IN THIS OFFICE.

_____ DATE

_____ FRANKLIN TOWN CLERK

STAMP

COMMONWEALTH OF MASSACHUSETTS — WILLIAM R. BUCKLEY, JR. — CIVIL — No. 35813 — REGISTERED PROFESSIONAL ENGINEER

COMMONWEALTH OF MASSACHUSETTS — RICHARD J. LESLIE — No. 38384 — REGISTERED PROFESSIONAL LAND SURVEYOR

DRAWING TITLE

Cover Sheet

SCALE: 1" = 40'

DEC. 4, 2025	SHEET NUMBER
25-0108B	**CV**

GENERAL NOTES

- *ON SITE TOPOGRAPHICAL INFORMATION OBTAINED FROM AN ON-THE-GROUND SURVEY CONDUCTED BAY COLONY GROUP, INC. FROM MARCH, 2025 TO APRIL, 2025 AND NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) LIDAR. VERTICAL DATUM IS NAVD 88 AND HORIZONTAL DATUM IS NAD 83. OFF SITE DATA FROM TOWN OF FRANKLIN GIS.*
- *UNDERGROUND UTILITIES ARE SHOWN HEREON AS COMPILED FROM RECORD PLANS AND VISIBLE UTILITY STRUCTURES. BAY COLONY GROUP DOES NOTE WARRANT THE ACTUAL DEPTH AND LOCATIONS OF ANY UTILITIES SHOWN HEREON. CONTACT DIGSAFE AT 1-800-322-4844 AND THE TOWN DPW WHERE APPROPRIATE AT LEAST 72 HOURS, SATURDAYS, SUNDAYS AND HOLIDAYS EXCLUDED, PRIOR TO EXCAVATING AT ANY LOCATION. A COPY OF THE DIGSAFE PROJECT REFERENCE NUMBER(S) SHALL BE GIVEN TO THE OWNER PRIOR TO EXCAVATION.*
- *WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER IMMEDIATELY.*
- *TEST PITS TO LOCATE EXISTING UTILITIES MAY BE ORDERED BY THE ENGINEER.*
- *THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE RESPECTIVE COMPANIES.*
- *AREAS OUTSIDE THE LIMITS OF THE PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITIONS AT THE CONTRACTOR'S EXPENSE.*
- *STONE WALLS, FENCES, MAIL BOXES, SIGNS, CURBS, LIGHT POLES ETC. ALONG SYMPHONY DRIVE SHALL BE REMOVED AND REPLACED AS NECESSARY TO PERFORM THE WORK.*
- *ALL PAVEMENT DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS OR THE REQUIREMENTS OF THE TOWN OF FRANKLIN DPW.*
- *CONTRACTOR SHALL NOT STORE ANY EQUIPMENT, MATERIALS, SUPPLIES ON DRAINAGE STRUCTURES OR WITHIN 100 FEET OF WETLANDS.*
- *OPENINGS FOR PIPE IN PRECAST STRUCTURES SHALL BE CAST IN THE REQUIRED LOCATIONS DURING MANHOLE MANUFACTURE. FIELD CUT OPENINGS WILL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.*
- *IN PAVED AND GRAVELED AREAS THE TOP OF THE STRUCTURE COVERS SHALL BE SET FLUSH WITH THE PAVED SURFACE. IN CROSS-COUNTRY AREAS THE TOP OF THE COVER SHALL EXTEND 6 INCHES ABOVE FINISHED GRADE, OR AS SHOWN ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER.*
- *THE TERM "PROPOSED" (PROP or PR-) SHALL BE UNDERSTOOD TO MEAN WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED ON THE PLAN AS R&R (REMOVE AND RESET).*
- *THE LOCATIONS OF THE HOMES AND DRIVEWAYS ARE ESTIMATES ONLY AND WILL BE ADJUSTED BASED ON THE ACTUAL HOME TO BE BUILT. THIS WILL ALSO AFFECT LIMITS OF CLEARING FOR THE HOMES.*
- *THIS PLAN IS SUBJECT TO A CERTIFICATION OF VOTE BY THE FRANKLIN PLANNING BOARD DATED XXXXXXXXX SAID CERTIFICATION SHALL BE CONSIDERED PART OF THIS PLAN.*
- *THIS PLAN IS SUBJECT TO AN ORDER OF CONDITIONS ISSUED BY THE FRANKLIN CONSERVATION COMMISSION DATED XXXXXXXX, DEP FILE No. XXXXXXXX. SAID ORDER SHALL BE CONSIDERED APART OF THIS PLAN.*

PAVEMENT MARKINGS

SWL	SWL – SOLID WHITE LINE – 6" STATE HIGHWAY, 4" LOCAL STREETS
SYL	SYL – SOLID YELLOW LINE – 6" STATE HIGHWAY, 4" LOCAL STREETS
DWL	DWL – DOTTED WHITE LINE – 6" (2' STRIPE w/4' GAP) STATE HIGHWAY DOTTED WHITE LINE – 4" (2' STRIPE w/4' GAP) LOCAL STREETS
WLDL	WHITE LANE DELINEATION LINE – 6" (3' STRIPE w/9' GAP) STATE HIGHWAY WHITE LANE DELINEATION LINE – 4" (3' STRIPE w/9' GAP) LOCAL STREETS
DDYL	DOUBLE DOTTED YELLOW LINE – 6" (2' STRIPE w/4' GAP) STATE HIGHWAY DOUBLE DOTTED YELLOW LINE – 4" (2' STRIPE w/4' GAP) LOCAL STREETS
BWLL	BROKEN WHITE LANE LINE – 6" (10' STRIPE w/30' GAP) STATE HIGHWAY BROKEN WHITE LANE LINE – 4" (10' STRIPE w/30' GAP) LOCAL STREETS
SWLL	SOLID WHITE LANE LINE – 6" STATE HIGHWAY, 4" LOCAL STREETS
SWEL	SOLID WHITE EDGE LINE – 6" STATE HIGHWAY, 4" LOCAL STREETS
SWGL	SOLID WHITE GORE LINE – 12"
SYEL	SOLID YELLOW EDGE LINE – 6" STATE HIGHWAY, 4" LOCAL STREETS
SYGL	SOLID YELLOW GORE LINE – 12"
DYL	DOUBLE YELLOW LINE – 2-6" LINES STATE HIGHWAY DOUBLE YELLOW LINE – 2-4" LINES LOCAL STREETS
	PAVEMENT ARROW AND LEGEND

SYMBOLS & LEGEND

EXISTING

n.t.s.	NOT TO SCALE
T.B.M.	TEMPORARY BENCH MARK
⊡	BOUND (TYPE NOTED)
	STAKE & STONE
DH ◉	DRILL HOLE
IP ○	IRON PIPE/PIN
⊡MHB	MASS HIGHWAY BOUND
. s/n	STAKE & NAIL
(fd)	FOUND
(set)	SET IN PLACE
	UTILITY POLE
UPLP	UTILITY POLE/LIGHT POLE
UP	UTILITY POLE
Ⓦ	WELL
n/f	NOW OR FORMERLY
	TREE (SIZE NOTED)
(rec)	RECORD
Ⓓ	DRAIN MANHOLE
Ⓣ	TELEPHONE MANHOLE
Ⓔ	ELECTRIC MANHOLE
Ⓢ	SEWER MANHOLE
□	CATCH BASIN
WG ⋈	WATER GATE
WS ⋈	WATER SERVICE
GG ⋈	GAS GATE
	EXISTING HYDRANT
SGC	SLOPED GRANITE CURBING
VGC	VERTICAL GRANITE CURBING
PVC	POLYVINYL CHLORIDE PIPE
CMP	CORRUGATED METAL PIPE
VCP	VITREOUS CLAY PIPE
CLF	CHAIN LINK FENCE
OHW	OVERHEAD WIRE
SIGN	SIGN (SIZE & TYPE NOTED)
TP	TEST PIT
D	DRAIN PIPE (SIZE & TYPE NOTED)
S	SEWER PIPE (SIZE & TYPE NOTED)
E	ELECTRIC DUCT (SIZE & TYPE NOTED)
G	GAS MAIN (SIZE & TYPE NOTED)
W	WATER MAIN (SIZE & TYPE NOTED)
T	TELEPHONE DUCT
	STONE WALL
	EDGE OF TREELINE
	GUARD-RAIL (TYPE NOTED)
	RAILROAD TRACKS
	RETAINING WALL (SIZE & TYPE NOTED)
-x-x-x-x-x-x-	BARBED WIRE FENCE
	STOCKADE FENCE
	CHAIN-LINK FENCE

PROPOSED

n.t.s.	NOT TO SCALE
T.B.M.	TEMPORARY BENCH MARK
⊡	BOUND (TYPE NOTED)
	STAKE & STONE
DH ◉	DRILL HOLE
IP ○	IRON PIPE/PIN
⊡MHB	MASS HIGHWAY BOUND
. s/n	STAKE & NAIL
(fd)	FOUND
(set)	SET IN PLACE
	UTILITY POLE
UPLP	UTILITY POLE/LIGHT POLE
UP	UTILITY POLE
Ⓦ	WELL
n/f	NOW OR FORMERLY
	TREE (SIZE NOTED)
(rec)	RECORD
Ⓓ	DRAIN MANHOLE
Ⓣ	TELEPHONE MANHOLE
Ⓔ	ELECTRIC MANHOLE
Ⓢ	SEWER MANHOLE
□	CATCH BASIN
WG ⋈	WATER GATE
WS ⋈	WATER SERVICE
GG ⋈	GAS GATE
	PROPOSED HYDRANT
SGC	SLOPED GRANITE CURBING
VGC	VERTICAL GRANITE CURBING
PVC	POLYVINYL CHLORIDE PIPE
CMP	CORRUGATED METAL PIPE
VCP	VITREOUS CLAY PIPE
CLF	CHAIN LINK FENCE
OHW	OVERHEAD WIRE
HMA	HOT MIX ASPHALT
WCR	WHEELCHAIR RAMP
SIGN	SIGN (SIZE & TYPE NOTED)
D	DRAIN PIPE (SIZE & TYPE NOTED)
S	SEWER PIPE (SIZE & TYPE NOTED)
E	UNDERGROUND ELECTRIC
G	GAS MAIN (SIZE & TYPE NOTED)
W	WATER MAIN (SIZE & TYPE NOTED)
T	TELEPHONE DUCT
	STONE WALL
	EDGE OF TREELINE
	GUARD-RAIL (TYPE NOTED)
	RETAINING WALL (SIZE & TYPE NOTED)
-x-x-x-x-x-x-	BARBED WIRE FENCE
	STOCKADE FENCE
	CHAIN-LINK FENCE

PROJECT:

Symphony Drive Extension

Franklin Massachusetts

OWNER/APPLICANT:

CYPRESS REAL ESTATE DEVELOPMENT LLC 3 ROTHCHILD DRIVE FOXBOROUGH, MA 02035

Bay Colony Group, Inc.
Professional Civil Engineers & Professional Land Surveyors

FOUR SCHOOL STREET
P.O. BOX 9136
FOXBOROUGH, MA 02035
508-543-3939

DATE APPROVED: _____

DATE ENDORSED: _____

FRANKLIN PLANNING BOARD

I HEREBY CERTIFY THAT 20 DAYS HAVE ELAPSED SINCE PLANNING BOARD APPROVAL AND THAT NO APPEAL HAS BEEN FILED IN THIS OFFICE.

_____ _____

DATE *FRANKLIN TOWN CLERK*

STAMP

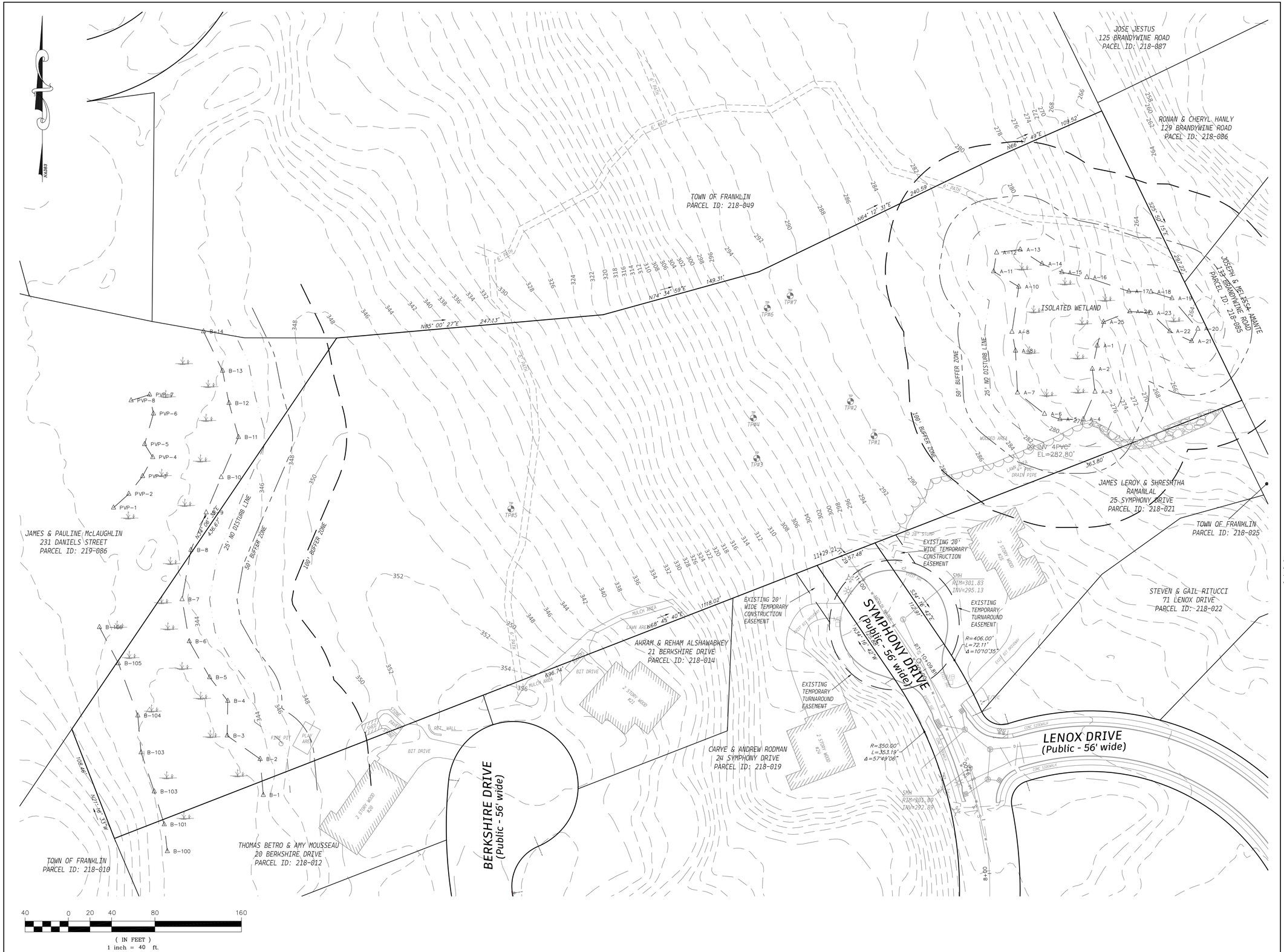
COMMONWEALTH OF MASSACHUSETTS
WILLIAM R. BUCKLEY, JR.
CIVIL
No. 35813
REGISTERED PROFESSIONAL ENGINEER

DRAWING TITLE

Legend

SCALE: 1" = 40'

DEC. 4, 2025	SHEET NUMBER
25-0108B	1



PROJECT:

Symphony Drive Extension

Franklin Massachusetts

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CYPRESS REAL ESTATE DEVELOPMENT LLC
3 ROTHCHILD DRIVE
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508-543-3939

DATE APPROVED: _____

DATE ENDORSED: _____

FRANKLIN PLANNING BOARD

I HEREBY CERTIFY THAT 20 DAYS HAVE ELAPSED SINCE PLANNING BOARD APPROVAL AND THAT NO APPEAL HAS BEEN FILED IN THIS OFFICE.

_____ _____

DATE FRANKLIN TOWN CLERK

STAMP

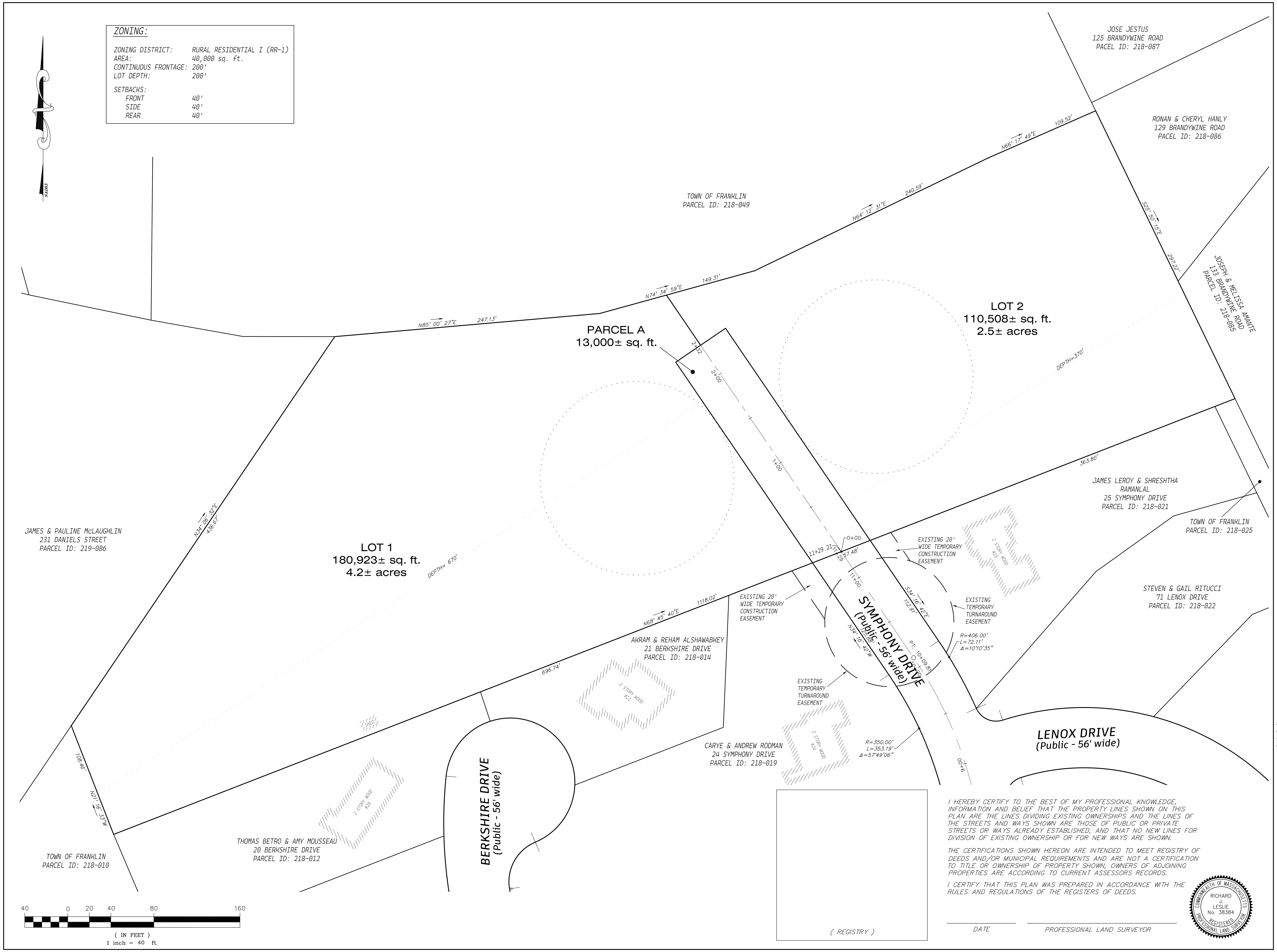
COMMONWEALTH OF MASSACHUSETTS
RICHARD J. LESLIE
No. 38384
REGISTERED PROFESSIONAL LAND SURVEYOR

DRAWING TITLE

Existing Conditions Plan

SCALE: 1" = 40'

DEC. 4, 2025	SHEET NUMBER
25-0108B	2



ZONING:

ZONING DISTRICT:	RURAL RESIDENTIAL I (RR-1)
AREA:	40,000 sq. ft.
CONTINUOUS FRONTAGE:	200'
LOT DEPTH:	200'
SETBACKS:	
FRONT	40'
SIDE	40'
REAR	40'

(REGISTRY)

I HEREBY CERTIFY TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF THAT THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE LINES DIVIDING EXISTING OWNERSHIPS AND THE LINES OF THE STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.

THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEEDS AND/OR MUNICIPAL REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN, OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT ASSESSORS RECORDS.

I CERTIFY THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

DATE ______ PROFESSIONAL LAND SURVEYOR

COMMONWEALTH OF MASSACHUSETTS — RICHARD J. LESLIE No. 38384 — REGISTERED PROFESSIONAL LAND SURVEYOR

PROJECT:

Symphony Drive Extension

Franklin Massachusetts

OWNER/APPLICANT:

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FOXBOROUGH, MA 02035
508-543-3939

DEED REF:

BK.4525, PG.319

PLAN REF:

PB.334, PLAN No.400-1986
PB.417, PLAN No.706-1993
PB.474, PLAN No.296-2000
PB.529, PLAN No.99-2004
PB.593, PLAN No.46-2009
PB.637, PLAN No.82-2015
PB.699, PLAN No.22-2021
PB.711, PLAN No.3-2022
BK.4215, PG.518, No.1130-1964
BK.4892, PG.466, No.1057-1972

ASSESSOR'S REF:

MAP 218, PARCEL 20

ZONING REF:

RURAL RESIDENTIAL I

DATE APPROVED: ______
DATE ENDORSED: ______
FRANKLIN PLANNING BOARD

I HEREBY CERTIFY THAT 20 DAYS HAVE ELAPSED SINCE PLANNING BOARD APPROVAL AND THAT NO APPEAL HAS BEEN FILED IN THIS OFFICE.

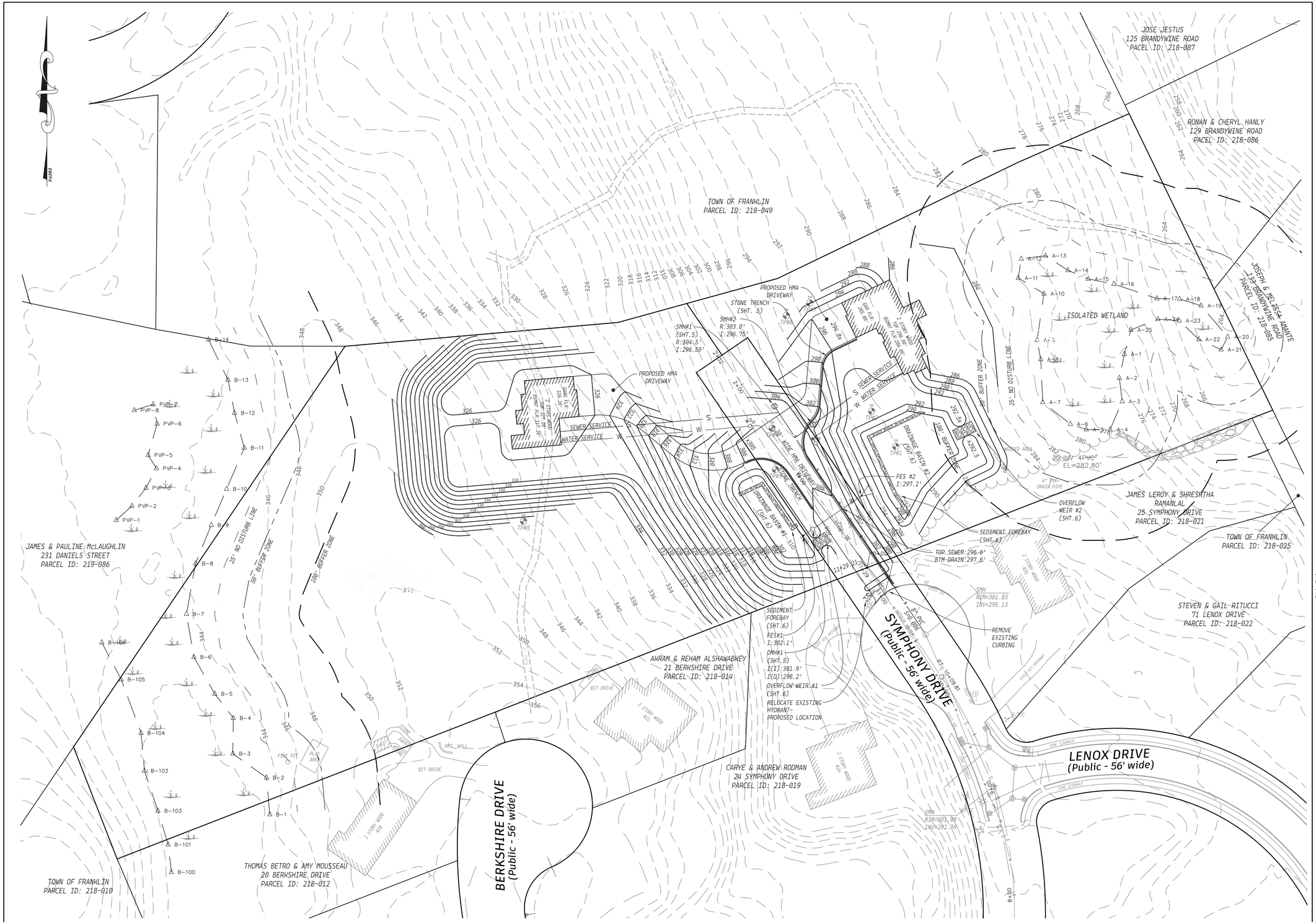
DATE ______ FRANKLIN TOWN CLERK

DRAWING TITLE

Property Line Plan

SCALE: 1" = 40'

DEC. 4, 2025	SHEET NUMBER
25-0108B	3



PROJECT:

Symphony Drive Extension

Franklin Massachusetts

OWNER/APPLICANT:

CYPRESS REAL ESTATE DEVELOPMENT LLC
3 ROTHCHILD DRIVE
FOXBOROUGH, MA 02035

Bay Colony Group, Inc.
Professional Civil Engineers & Professional Land Surveyors

FOUR SCHOOL STREET
P.O. BOX 9136
FOXBOROUGH, MA 02035
508-543-3939

DATE APPROVED: _____

DATE ENDORSED: _____

FRANKLIN PLANNING BOARD

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_____ _____

DATE *FRANKLIN TOWN CLERK*

STAMP

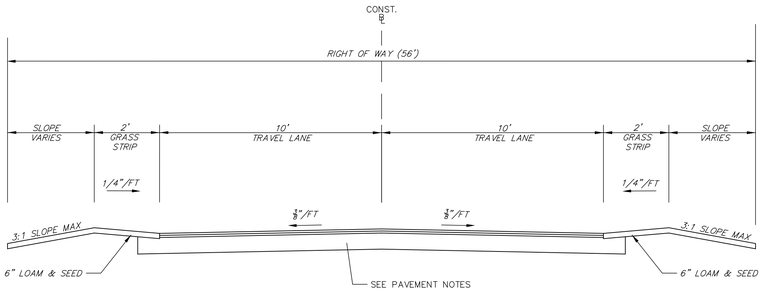
COMMONWEALTH OF MASSACHUSETTS
WILLIAM R. BUCKLEY, JR.
CIVIL
No. 35813
REGISTERED PROFESSIONAL ENGINEER

DRAWING TITLE

Topographic Plan

SCALE: 1" = 40'

DEC. 4, 2025	SHEET NUMBER
25-0108B	**4**



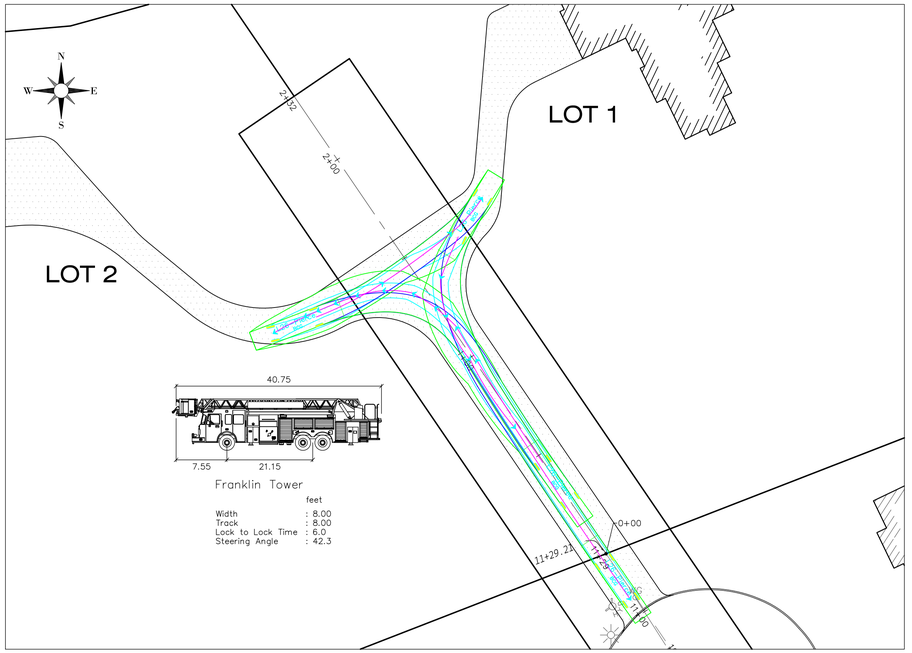
PAVEMENT NOTES

HOT MIX ASPHALT ROADWAY PAVEMENT

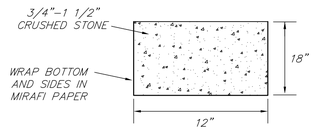
SURFACE: 1-1/2" TYPE I-1 HOT MIX ASPHALT TOP COURSE PLACED IN ONE COURSE

BASE: 2-1/2" HOT MIX ASPHALT BINDER COURSE MATERIAL PLACED IN ONE COURSE

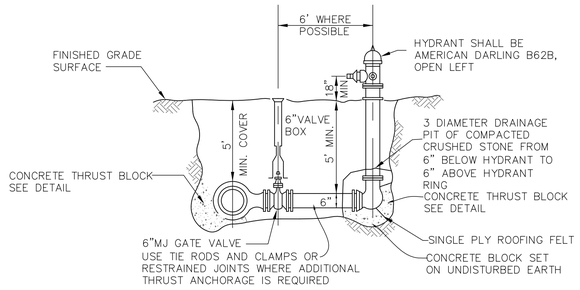
SUBBASE: 12" GRAVEL (MASSDOT SPEC M1.03.0 TYPE B) SPREAD IN 2 LAYERS OF EQUAL THICKNESS



TYPICAL CROSS SECTION
N.T.S.

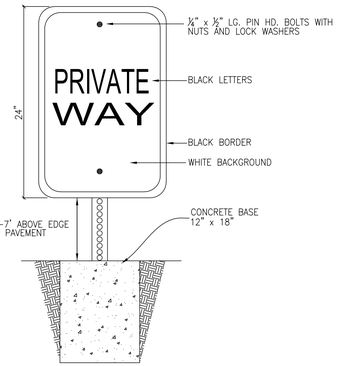


CRUSHED STONE SWALE
N.T.S.

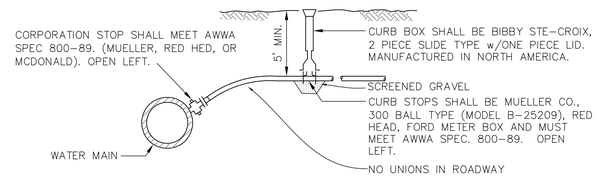


HYDRANT ASSEMBLY
N.T.S.

FIRE TRUCK TURNING PLAN
1"=30'



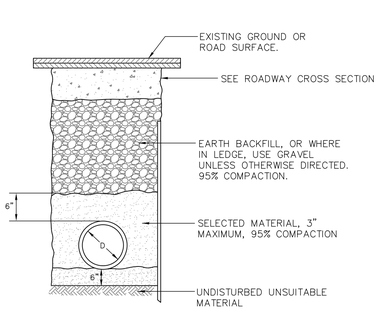
ROADWAY CROSS SECTION
N.T.S.



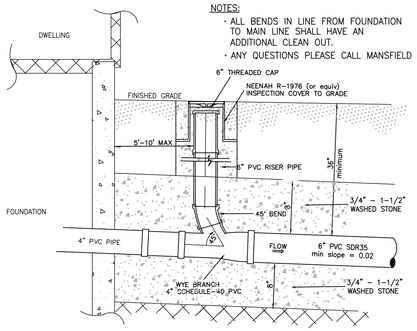
NOTE

TYPE K COPPER TUBING SHALL MEET ASTM B-88, BE SEAMLES, HAVE A MINIMUM DIAMETER OF 1 INCH, AND SHALL BE MANUFACTURED IN NORTH AMERICA

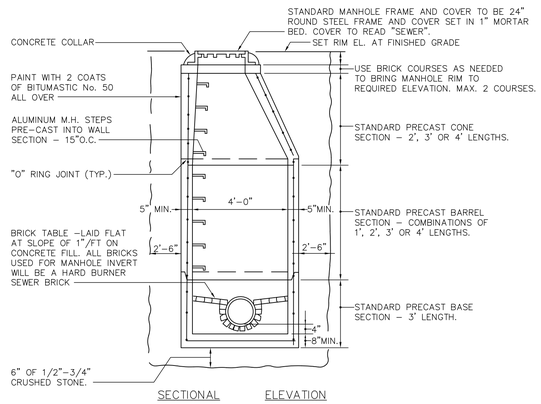
WATER SERVICE ASSEMBLY
N.T.S.



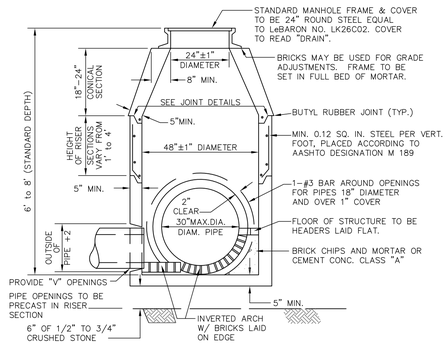
DRAINAGE TRENCH
N.T.S.



SEWER SERVICE CONNECTION
N.T.S.



PRECAST CONCRETE SEWER MANHOLE
N.T.S.



PRECAST CONCRETE DRAIN MANHOLE
N.T.S.

PROJECT:

Symphony Drive Extension

Franklin Massachusetts

OWNER/APPLICANT:

CYPRESS REAL ESTATE DEVELOPMENT LLC 3 ROTHCHILD DRIVE FOXBOROUGH, MA 02035

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FOUR SCHOOL STREET
P.O. BOX 9136
FOXBOROUGH, MA 02035
508-543-3939

DATE APPROVED: _____

DATE ENDORSED: _____

FRANKLIN PLANNING BOARD

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DATE FRANKLIN TOWN CLERK

STAMP

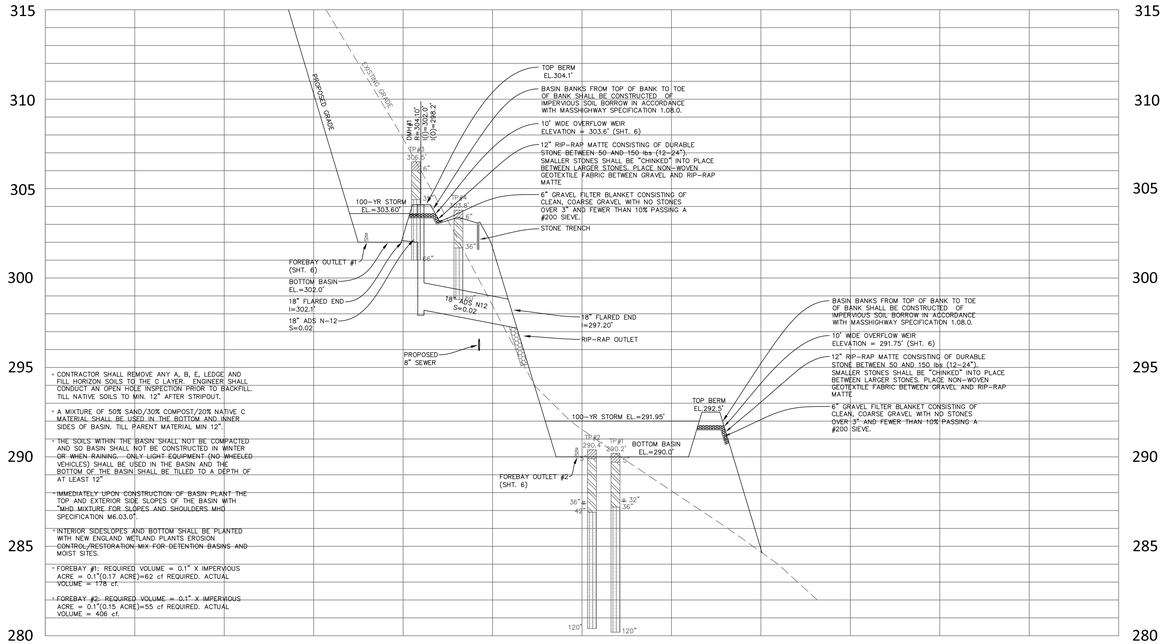
COMMONWEALTH OF MASSACHUSETTS
WILLIAM R. BUCKLEY, JR.
CIVIL
No. 35813
REGISTERED PROFESSIONAL ENGINEER

DRAWING TITLE

Detail Plan

SCALE: AS NOTED

DEC. 4, 2025	SHEET NUMBER
25-0108B	5



Basin #1 & #2

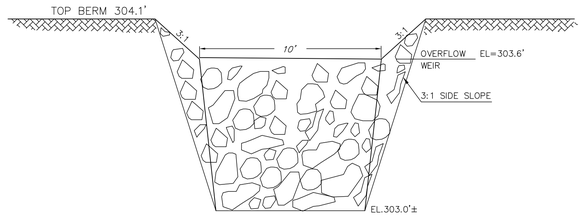
Horizontal Scale: 1" =40'
Vertical Scale: 1" = 4'

TEST PIT #1		
DATE: 6/3/2025	GND ELEV: 290.2'	TOP WELL EL:
Depth (Elevation)	Soil Description	
5" (289.8')	A SL; 10YR3/2	
36" (287.2')	B SL; 5YR4/6	
120" (280.2')	C LS; 7.5YR5/4 GRAVELLY, COBBLY, COARSE	
	WATER WEEPING @ 32" (287.5') WATER STANDING @ 80" (283.5')	
BASIS OF GNDWTR ADJUSTMENT:	DIRECT READING	
SCS SOIL TYPE:	MONTAUK FINE SANDY LOAM	
SOIL EVALUATOR:	WILLIAM BUCKLEY, JR.	
WITNESS:	STEVE DONATELLI	

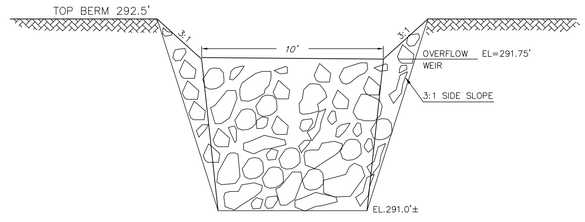
TEST PIT #2		
DATE: 6/3/2025	GND ELEV: 290.4'	TOP WELL EL:
Depth (Elevation)	Soil Description	
5" (290.0')	A SL; 10YR3/2	
42" (286.9')	B SL; 5YR4/6	
120" (280.4')	C LS; 7.5YR5/4 GRAVELLY, COBBLY, COARSE	
	WATER WEEPING @ 36" (287.4') WATER STANDING @ 80" (283.7')	
BASIS OF GNDWTR ADJUSTMENT:	DIRECT READING	
SCS SOIL TYPE:	MONTAUK FINE SANDY LOAM	
SOIL EVALUATOR:	WILLIAM BUCKLEY, JR.	
WITNESS:	STEVE DONATELLI	

TEST PIT #3		
DATE: 6/3/2025	GND ELEV: 306.5'	TOP WELL EL:
Depth (Elevation)	Soil Description	
6" (306.0')	A SL; 10YR3/2	
35" (303.6')	B SL; 10YR5/6	
66" (301.0')	B2 SL; 5YR4/6	
	REFUSAL @ 66" (301.0')	
BASIS OF GNDWTR ADJUSTMENT:	DIRECT READING	
SCS SOIL TYPE:	MONTAUK FINE SANDY LOAM	
SOIL EVALUATOR:	WILLIAM BUCKLEY, JR.	
WITNESS:	STEVE DONATELLI	

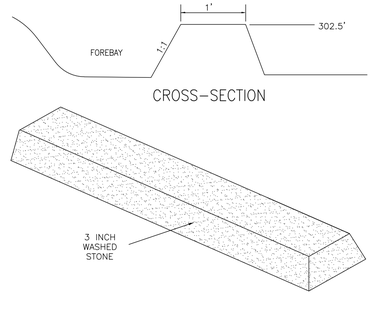
TEST PIT #4		
DATE: 6/3/2025	GND ELEV: 303.8'	TOP WELL EL:
Depth (Elevation)	Soil Description	
6" (303.3')	A SL; 10YR3/2	
36" (300.8')	B SL; 10YR5/6	
60" (298.8')	B2 SL; 5YR4/6	
	REFUSAL @ 60" (298.8')	
BASIS OF GNDWTR ADJUSTMENT:	DIRECT READING	
SCS SOIL TYPE:	MONTAUK FINE SANDY LOAM	
SOIL EVALUATOR:	WILLIAM BUCKLEY, JR.	
WITNESS:	STEVE DONATELLI	



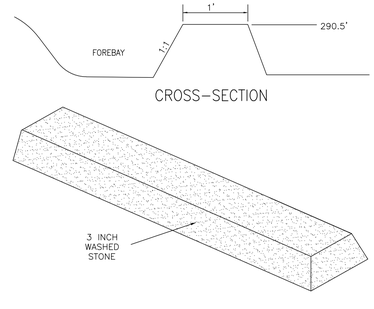
END VIEW OF OVERFLOW WEIR BASIN #1
N.T.S.



END VIEW OF OVERFLOW WEIR BASIN #2
N.T.S.



FOREBAY OUTLET BASIN #1
N.T.S.



FOREBAY OUTLET BASIN #2
N.T.S.

PROJECT:

Symphony Drive Extension

Franklin Massachusetts

OWNER/APPLICANT:

CYPRESS REAL ESTATE DEVELOPMENT LLC 3 ROTHCHILD DRIVE FOXBOROUGH, MA 02035

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Professional Civil Engineers & Professional Land Surveyors

FOUR SCHOOL STREET
P.O. BOX 9136
FOXBOROUGH, MA 02035
508-543-3939

DATE APPROVED: _____

DATE ENDORSED: _____

FRANKLIN PLANNING BOARD

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DATE FRANKLIN TOWN CLERK

STAMP

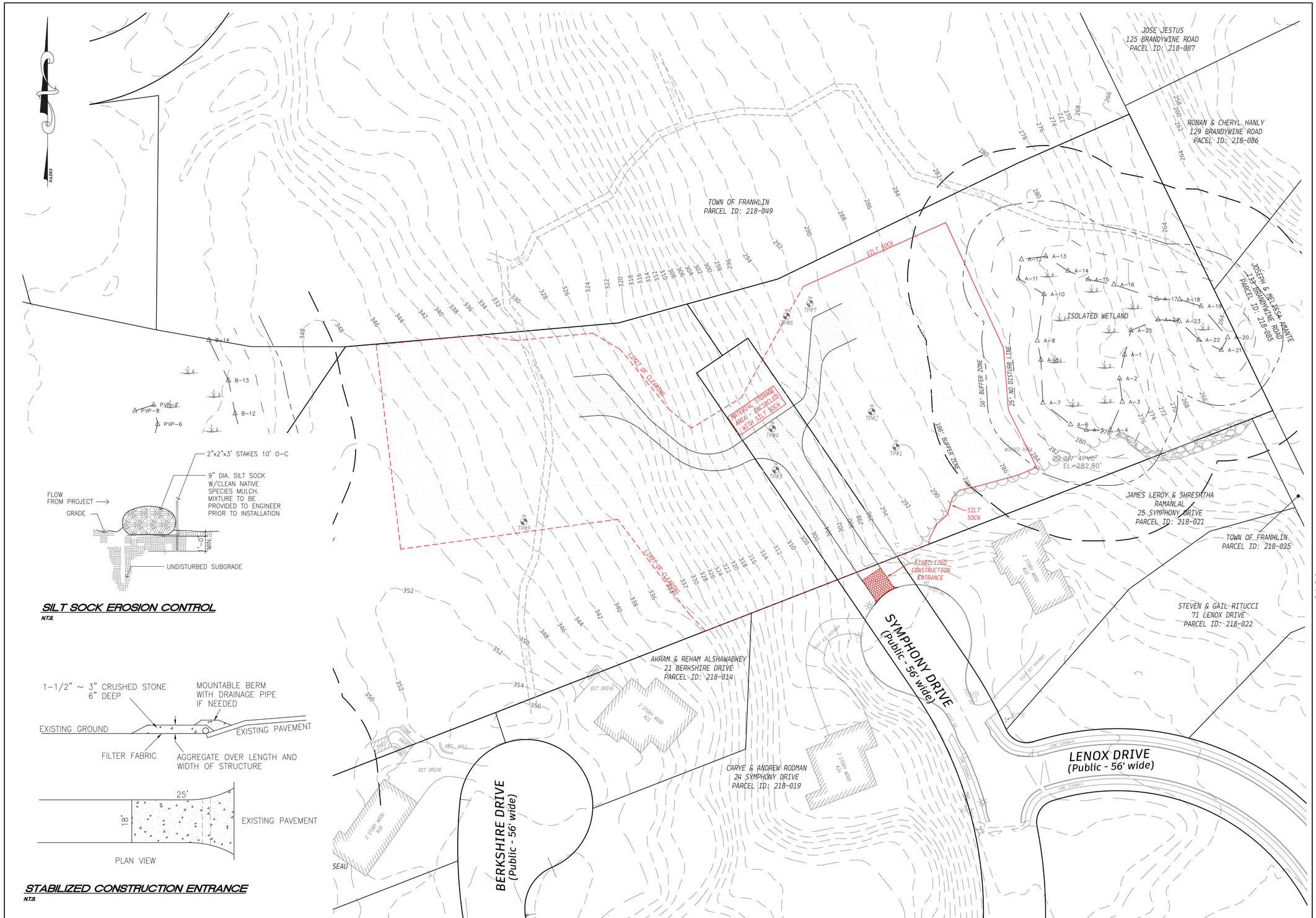
COMMONWEALTH OF MASSACHUSETTS
WILLIAM R. BUCKLEY, JR.
CIVIL
No. 35813
REGISTERED PROFESSIONAL ENGINEER

DRAWING TITLE

Detail Plan

SCALE: AS NOTED

DEC. 4, 2025	SHEET NUMBER
25-0108B	6



SILT SOCK EROSION CONTROL
N.T.S.

STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

PROJECT:

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Franklin Massachusetts

OWNER/APPLICANT:

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CIVIL
No. 35813
REGISTERED PROFESSIONAL ENGINEER

DRAWING TITLE

SWPPP

SCALE: 1" = 40'

DEC. 4, 2025	SHEET NUMBER
25-0108B	7