



REVISED January 29, 2026

May 8, 2025

**Application for Project Review - Stormwater Management**

**Submitted To: Town of Hingham**

**Proposed Residential Development  
18 Elm Street, Hingham MA**

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Stormwater Application  
Revised 1/29/25

# **SECTION I**

## *STORMWATER REPORT*

### **Existing and Proposed Conditions**

Falconeiri Construction, Inc. requests permission to develop the property at 18 Elm Street as a single-family residence.

The lot is approximately 72,800 sf and is located in the Residence A District. It is an irregularly shaped lot bound by Main Street to the north, Elm Street and private properties to the west, town and state properties to the south, and private residential properties on the remaining sides. The lot is accessed from Elm Street, and there is no street access along Main Street. It is currently developed with a hard packed gravel driveway, A hard packed gravel parking area and lawn, with wooded areas around the perimeter. Most of the lot slopes down to a low area in the eastern corner (rear portion) of the lot. A small portion of the lot slopes down to Elm Street. The entire lot lies within FEMA Zone X. No wetland areas or their buffer zones and no overlay districts have been identified within the lot.

The proposed work includes the construction of a single-family dwelling and attached garage, a paved driveway and paved parking court, a rear patio and retaining wall, sport court and other hardscape and landscape features. The proposed work increases the impervious area by approximately 11,905 sf. The overall topography is maintained, with most of the lot sloping down to the low area in the eastern corner, and a small area sloping down to Elm Street.

NRCS Soil Survey online data identifies the soils on site as excessively drained/very low runoff Quonset sandy loams, with 0-3% or 8-15% slopes. On site test pit data indicate several feet of fill with coarse sand below under the existing parking area, where the dwelling and paved parking are proposed. A second test pit determined loamy sands with medium sands and coarse sand and gravel beyond the parking area. A soils were used for modeling purposes.

Approximately 50,140 sf of the lot was modelled for stormwater analysis. This area includes the limit of work as well as undisturbed areas to understand runoff and drainage patterns onsite. Two subcatchment areas were modeled for the existing and proposed conditions to determine runoff conditions to Elm Street and to the low point in the rear yard. The HydroCAD results and subcatchment areas are provided in Section IV of this report.

The proposed project complies with the MA Stormwater Management Guidelines as follows:

#### **Standard 1: No New Stormwater Conveyances of Untreated Stormwater or Erosion Offsite**

The proposed modifications include new stormwater treatment that will improve the quality of the existing stormwater drainage. A portion of the roof leaders from the proposed dwelling and the runoff from the auto court are directed to a 10'X25' subsurface infiltration system located in the rear yard. A portion of the driveway runoff is directed to another 10'X18' subsurface infiltration system located in front of the dwelling. Runoff from the sport court and some of the surrounding area is directed to a 2'X2' gravel trench that partially surrounds the sport court, and runoff that is not exfiltrated from the trench is directed to another 10'X25' subsurface infiltration system. This results in matched or reduced peak flow and volume for the for all design storms under the proposed conditions. The gravel trenches that line the paved driveway were not modelled in hydroCAD, but will provide additional storage and exfiltration, which is expected to further reduce peak flow and volume offsite.

**Standard 2: Peak Rate Attenuation**

The existing and proposed site conditions were modelled in HydroCad for the 2, 10 and 100 year, 24-hour design storm events. The intensity of these rain events is 3.20", 4.65" and 6.80" respectively.

The overall peak rate and volume of runoff is matched reduced for both subcatchments for all design storm events in the proposed design. This data is summarized below, and the HydroCAD report can be found in section IV:

**Subcatchment 1 (740 sf) – to Elm St**

Storm	Existing Conditions (cfs, af)	Post-Development Conditions (cfs, af)
2-Year-24 Hour (3.2")	0.01 cfs , 0.001 af	0.01 cfs , 0.001 af
10-Year-24 Hour (4.65")	0.03 cfs , 0.002 af	0.03 cfs , 0.002 af
100-Year-24 Hour (6.80")	0.06 cfs , 0.004 af	0.06 cfs , 0.004 af

**Subcatchment 2 (49,400 sf) – to rear yard**

Storm	Existing Conditions (cfs, af)	Post-Development Conditions (cfs, af)
2-Year-24 Hour (3.2")	0.00 cfs , 0.001 af	0.00 cfs , 0.000 af
10-Year-24 Hour (4.65")	0.05 cfs , 0.018 af	0.02 cfs , 0.010 af
100-Year-24 Hour (6.80")	0.65 cfs , 0.079 af	0.65 cfs , 0.060 af

**Standard 3: Recharge and Discharge Volume**

The applicant proposes adequate infiltration for the lot as required by the Massachusetts Stormwater Handbook as follows:

Existing Impervious Area = 0 ft<sup>2</sup>  
 Proposed Impervious Area = 11,905 ft<sup>2</sup>  
 Increase in impervious area = 11,905 ft<sup>2</sup>

A soils require 0.60" x impervious area of runoff to be recharged:  
 (0.60"/12" per ft)(11,905 ft<sup>2</sup>) = 595 ft<sup>3</sup>

The three subsurface infiltration systems have a combined storage capacity of 180+252+252= 684 cf, which exceeds the required volume. The runoff stored in the gravel trenches along the driveway and the sports court below the inverts of the outlet pipes will provide additional recharge.

**Standard 4: Water Quality**

The required Water Quality Volume (WQV) is calculated as follows:

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Existing impervious vehicular areas: 0 sf Proposed  
impervious vehicular areas: 4,010 sf  
Net increase of pavement: 4,010 sf

WQV is calculated by multiplying 0.5 inch of runoff by the net increase in paved areas as follows:

$$WQV = (4,010 \text{ ft}^2)(0.5\text{in})/(12 \text{ in/ft}) = 167 \text{ ft}^3$$

Quarterly driveway and auto court sweeping will be performed, according to the long-term O&M plan. The gravel trenches along the driveway and autocourt provide pretreatment prior to discharge into the infiltration systems. The storage volume of the gravel trenches is:

$$(170'L + 66'L) \times 1.25'W \times 1.5' D^* (40\% \text{ voids}) = 177 \text{ ft}^3 \text{ This standard is met.}$$

### **Standard 5: Land Uses with Higher Pollutant Loads (LUHPPLs)**

The use of the property (residential) does not constitute a higher potential pollutant load use. This Standard 5 does not pertain to this project.

### **Standard 6: Critical Areas**

The locus site is not located in a critical area.

### **Standard 7: Redevelopment**

This project is considered redevelopment of an existing, residential lot.

### **Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control**

The Operation and Maintenance Plan included with this submittal will ensure proper maintenance of the proposed pollution, erosion and sedimentation measures proposed during construction.

### **Standard 9: Long Term Operation and Maintenance Plan**

The Long-Term Operation and Maintenance Plan is included within the Operation and Maintenance Plan enclosed in this submittal to ensure the proposed drainage improvements are maintained as intended.

### **Standard 10: Prohibition of Illicit Discharges**

Routine visual inspections are scheduled as part of the Operations and Maintenance Plan to prevent illicit discharges into the stormwater system. Furthermore, an Illicit Compliance Statement is included in this submittal.

## **SECTION II**

### *STORMWATER OPERATION AND MAINTENANCE PLAN*

## ***Construction Period Sequencing and Stormwater Operation and Maintenance Plans***

***Proposed Residential Improvements  
18 Elm Street, Hingham, MA 02043***

***Stormwater Management System's Owner: Gregory and Laura Weibley  
System Owner's Address: 18 Elm Street, Hingham, MA 02043***

***Party responsible for Operations and Maintenance: Owner(s) of 18 Elm Street***

As part of any infrastructure improvement, the system must be maintained to work properly. The following Construction Sequencing Guideline and Operation and Maintenance plans are provided to upkeep the existing non-structural and structural best performance practices as outlined in the Massachusetts Department of Environmental Protection's Stormwater Management Policy.

### **Emergency Contact Information:**

Gregory and Laura Weibley  
107 Main Street  
Hingham, MA 02043  
617-699-8407  
**Emergency Telephone: 617-699-8407**  
Email: lauradweibley79@gmail.com

### **Construction Sequencing:**

The following section provides construction details and highlights the construction sequence and timing of earth moving activities.

#### ***1. Installation of Erosion Controls***

Erosion and sedimentation controls (i.e., silt sock, construction entrance) will be installed as shown on the Site Plan and inspected at the limits of the work area prior to the commencement of earth moving activities.

#### ***2. Utility Identification & Clearing***

All utilities (including stubs) must be identified and marked in the field prior to disturbance. No large boulders or building materials will be buried on the site. All cleared vegetation, apart from any vegetation that may be deemed appropriate to be replanted, will be removed from the project site or mulched and stockpiled for future use on the site.

**3.     *Rough Grading***

During this phase of construction, rough grades will be established for the project site. If suitable topsoil is found, it will be removed and stockpiled in an upland area. The stockpiled topsoil will be stored until ready for re-use on site.

**4.     *Construction of Dwelling and Attached Garage***

During this phase of construction, the proposed dwelling and the attached garage will be constructed.

**6.     *Installation of Infiltration Systems and Buried Drainage Pipes***

The infiltration systems and connecting pipes shall be installed once the dwelling is constructed. If the contractor prefers to install the infiltration system, leaching basin and/or drainage pipe system before the dwelling construction is completed, then the area above the subsurface infiltration system and the drainage pipes should be roped off to avoid heavy equipment load on top of the infiltration and pipe system and to avoid disturbance of the infiltration materials.

**7.     *Utility Installation***

In this phase of construction, utilities will be connected.

**8.     *Driveway and Hardscape Installation***

The existing driveway will be replaced, and the rear patio and any other accessory features will be constructed at this time. Once the proposed driveway is installed, the gravel trench along the driveway will be constructed.

**9.     *Site Stabilization***

The final phase of the project is the restoration and stabilization of all exposed surfaces. Disturbed areas will be landscaped or seeded as necessary only after all other construction is final. In the event that weather conditions prevent final restoration, temporary erosion and sedimentation measures will be employed until the weather is suitable for final cleanup. Should the final ground stabilization be postponed due to winter conditions, the exposed ground shall be covered in an erosion control blanket to prevent erosion. A final inspection will ensure that the project site is cleared of all project debris and that erosion and sedimentation controls are functioning properly. Erosion and sedimentation controls will not be removed until the site is stabilized, and the final inspection is completed.

**Stormwater Operation and Maintenance During Construction:**

***Sediment and Erosion Control***

- Silt socks shall be inspected at least once a week and after each rainfall event. Make any required repairs immediately. Repair damaged areas of the sock at this time to prevent future problems.
- Should the fabric of the silt sock tear, decompose or otherwise become ineffective, replace it within 24 hours of discovery.
- Remove silt deposits once they reach 20 to 30 percent of the height of the silt sock to provide adequate storage volume for the next rain event and to reduce pressure on the fence. Care should be taken to avoid undermining the fence during cleanout process.
- Silt socks are to be removed upon stabilization of the contributing drainage area. Accumulated sediment may be spread to form a surface for turf or other vegetation establishment or disposed of elsewhere. The area should be reshaped to permit natural drainage.
- Any sediment tracked from the construction site onto the street during construction shall be removed immediately.

***Infiltration Systems and Gravel Trenches***

Per MA DEP Stormwater Guidelines, the following work shall be done to stabilize the site prior to installing the subsurface structures:

- Do not allow runoff from any disturbed areas on the site to flow to the exposed subsurface structures.
- Accomplish any required excavation with equipment placed just outside the area. If the size of the area intended for exfiltration is too large to accommodate this approach, use trucks with low-pressure tires to minimize compaction. Do not allow any other vehicles within the area to be excavated.
- Keep the area above and immediately surrounding the subsurface system roped off to all construction vehicles until the final top surface is installed.
- At no time shall the area for the infiltration system be used as a temporary sediment basin. Stockpiles shall be placed away from the subsurface infiltration system and silt socks shall be placed around the perimeter of the infiltration area to prevent the accumulation of sediment within the native soils.

***Dust Control***

Sprinkle water as necessary to control dust during construction.

***Material Stockpiling***

Stockpiles of material must be placed within the area confined by the silt sock. If left overnight, material stockpiling must be protected from the weather.

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### ***Good Housekeeping***

The following good housekeeping BMP's will be implemented in order to prevent pollution during construction:

- Petroleum products will be stored in tightly sealed containers which are clearly labeled.
- Any asphalt substances on site will be applied according to the manufacturer's specifications.
- If portable sanitary units are used, sanitary waste will be removed as necessary to avoid overfilling.
- All paint and other hazardous waste materials will be tightly sealed and stored when not in use. Excess material will not be discharged into the public stormwater system but will be properly disposed of according to the manufacturer's specifications. If spray guns are used, they will be cleaned on a removable tarp.

## ***Long-Term Pollution Prevention Plan***

### ***Proposed Residential Raze and Rebuild 18 Elm Street, Hingham, MA 02043***

***Stormwater Management System's Owner: Gregory and Laura Weibley***

***System Owner's Address: 18 Elm Street, Hingham, MA 02043***

***Party responsible for Operations and Maintenance: Owner(s) of 18 Elm Street***

As part of any infrastructure improvement the system must be maintained in order to work properly. The following is an Operation and Maintenance plan to upkeep the proposed non-structural and structural best performance practices as outlined in the Massachusetts Department of Environmental Protection's Stormwater Management Policy and in accordance with the approved design drawing. The following is an Operation and Maintenance plan to follow after construction activities have been completed.

### **Emergency Contact Information:**

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### **Stormwater Operation and Maintenance After Construction:**

#### **Subsurface Infiltration Systems:**

Inspect inspection ports at least quarterly and after every major storm event during the first year. Inspections after every major storm event shall take notice of any water standing after 72 hours after the storm ended. After the first year, inspections must be done at least twice yearly. Remove any debris or sediment within reach that may be clogging the system. Visually inspect the ground above at least twice a year, looking for depressions, changes in vegetation above, and puddling. Address and concerns in a timely manner.

#### **Buried Pipes/Drains/Splash Pad:**

Visually inspect the ground above the buried drains at least twice a year, in Spring and Fall, looking for depressions, changes in vegetation above. Visually inspect the pipe outlet splash pad at the same time, removing any debris that may be clogging the pad and pipe. Look for signs of outlet pipe collapse or failure. Address any concerns in a timely manner.

#### **Roof Drains:**

All roof drains and gutters shall be cleaned and inspected at least twice a year, in Spring and Fall. Inspections of roof drains should include the gutters, downspouts and all accessible piping. Remove any debris that may be clogging the system. If standing water or other concerns are noted, address them in a timely manner.

#### **Gravel Trenches:**

Visually inspect the gravel trenches at least quarterly and after every major storm event during the first year. Look for standing water, depressions, and other signs of potential clogging.

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Remove leaves and debris from the trenches. Inspect the lawn around the basin for depressions/gravel loss. After the first year, inspections shall be done at least twice yearly. Address any concerns in a timely manner.

### **Reinforced Grass Area**

Visually inspect the area where grass reinforced to support an emergency vehicle turnaround at least twice a year, in spring and in fall. Look for buckling, breaks and other damage. Remove debris and replace damaged sections in a timely manner.

### **Sweeping:**

The driveway and auto court should be swept at least quarterly, to remove snow and debris. Debris and snow collected shall be removed from the driveway and the gravel trenches.

### **Snow Management:**

Any snow and ice buildup on the proposed roof drains will be removed in a timely fashion. Snow plowed from the driveways or parking area will be temporarily stored in available lawn areas and not on the trenches.

### **Estimated Operation and Maintenance Budget:**

Maintenance cost is estimated to be around \$1,200.00 per year.

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### **Estimated Operation and Maintenance Budget:**

Maintenance cost is estimated to be around \$1,200.00 per year.

Illicit Discharges:

At no time will the owner or any other individual utilize the stormwater management system for any purpose other than its intended use. The stormwater management system as shown on the attached site plan at no time shall receive discharges other than stormwater, this includes "wastewater discharges and discharges of stormwater contaminated by contact with process wastes, raw materials, raw materials, toxic pollutants, hazardous substances, oil or grease."



Property Owner (Signature)

LAURA WEIBLEY

Property Owner (Print)

## **SECTION III**

### *FIGURES*

# 18 Elm Street, Hingham, MA



- IWPAs
- Zone IIs
- Zone Is
- Zone C
- Zone B
- Zone A
- Potential Vernal Pools
- NHESP Priority Habitats of Rare Species
- NHESP Natural Communities
- NHESP Estimated Habitats of Rare Wildlife
- NHESP Certified Vernal Pools
- NHESP Ecoregions
- Areas of Critical Environmental Concern  
ACECs Boundaries
- Areas of Critical Environmental Concern  
ACECs Transparent Green

IWPAs



Zone IIs



Zone Is



Zone C



Zone B



Zone A



Potential Vernal Pools



NHESP Priority Habitats of Rare Species



NHESP Natural Communities



NHESP Estimated Habitats of Rare Wildlife



NHESP Certified Vernal Pools



NHESP Ecoregions



Areas of Critical Environmental Concern  
ACECs Boundaries

ROAD/RAIL BASED



RIVER BASED



WETLAND BASED



FLOODPLAIN BASED



TIDAL BASED



CONTOUR BASED



POLITICAL BOUNDARY



PROPERTY LINE BASED



OTHER

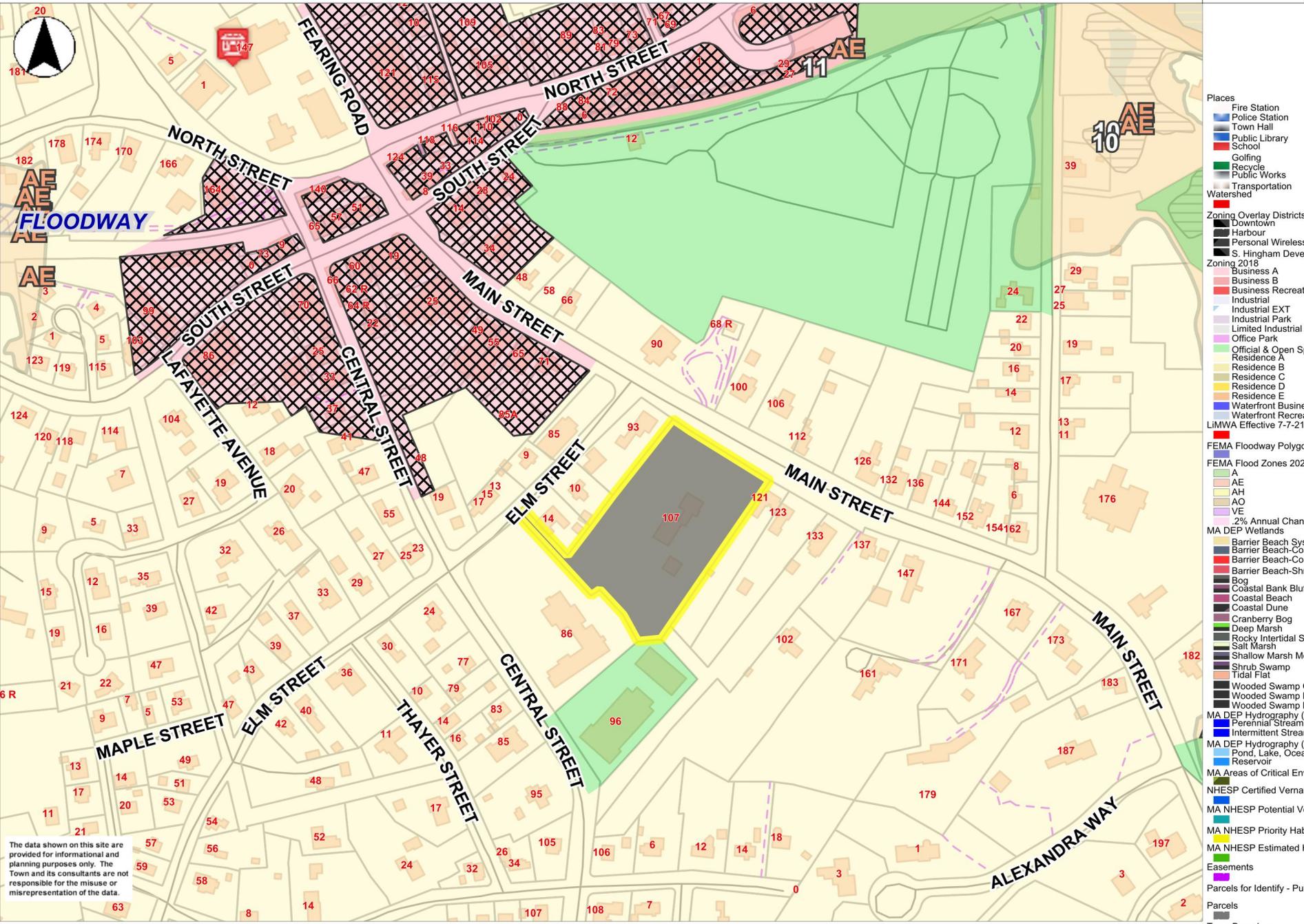


NOT DEFINED



Areas of Critical Environmental Concern  
ACECs Transparent Green





The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.



Printed on 03/14/2025 at 05:20 PM

- Places
  - Fire Station
  - Police Station
  - Town Hall
  - Public Library
  - School
  - Golfing
  - Recycle
  - Public Works
  - Transportation
- Watershed
- Zoning Overlay Districts 2018
  - Downtown
  - Harbour
  - Personal Wireless Service
  - S. Hingham Development
- Zoning 2018
  - Business A
  - Business B
  - Business Recreation
  - Industrial
  - Industrial EXT
  - Limited Industrial Park
  - Office Park
  - Official & Open Space
  - Residence A
  - Residence B
  - Residence C
  - Residence D
  - Residence E
  - Waterfront Business
  - Waterfront Recreation
- LIMWA Effective 7-7-21
  - FEMA Floodway Polygon 2018
- FEMA Flood Zones 2024
  - A
  - AE
  - AH
  - AO
  - VE
  - .2% Annual Chance Flood
- MA DEP Wetlands
  - Barrier Beach System
  - Barrier Beach-Coastal
  - Barrier Beach-Coastal
  - Barrier Beach-Shrub
  - Bog
  - Coastal Bank Bluff or
  - Coastal Beach
  - Coastal Dune
  - Cranberry Bog
  - Deep Marsh
  - Rocky Intertidal Shore
  - Salt Marsh
  - Shallow Marsh Meadow
  - Shrub Swamp
  - Tidal Flat
  - Wooded Swamp Corridor
  - Wooded Swamp Deciduous
  - Wooded Swamp Mixed
- MA DEP Hydrography (Line)
  - Perennial Stream
  - Intermittent Stream
- MA DEP Hydrography (Polygon)
  - Pond, Lake, Ocean Reservoir
- MA Areas of Critical Environmental Concern
- NHESP Certified Vernal Pools
- MA NHESP Potential Vernal Pools
- MA NHESP Priority Habitats
- MA NHESP Estimated Habitats
- Easements
  - Parcels for Identify - Public
- Parcels
  - Town Boundary
- MA Highways
  - Interstate
  - US Highway
  - Numbered Routes

Areas of Critical Environmental Concern  
ACECs

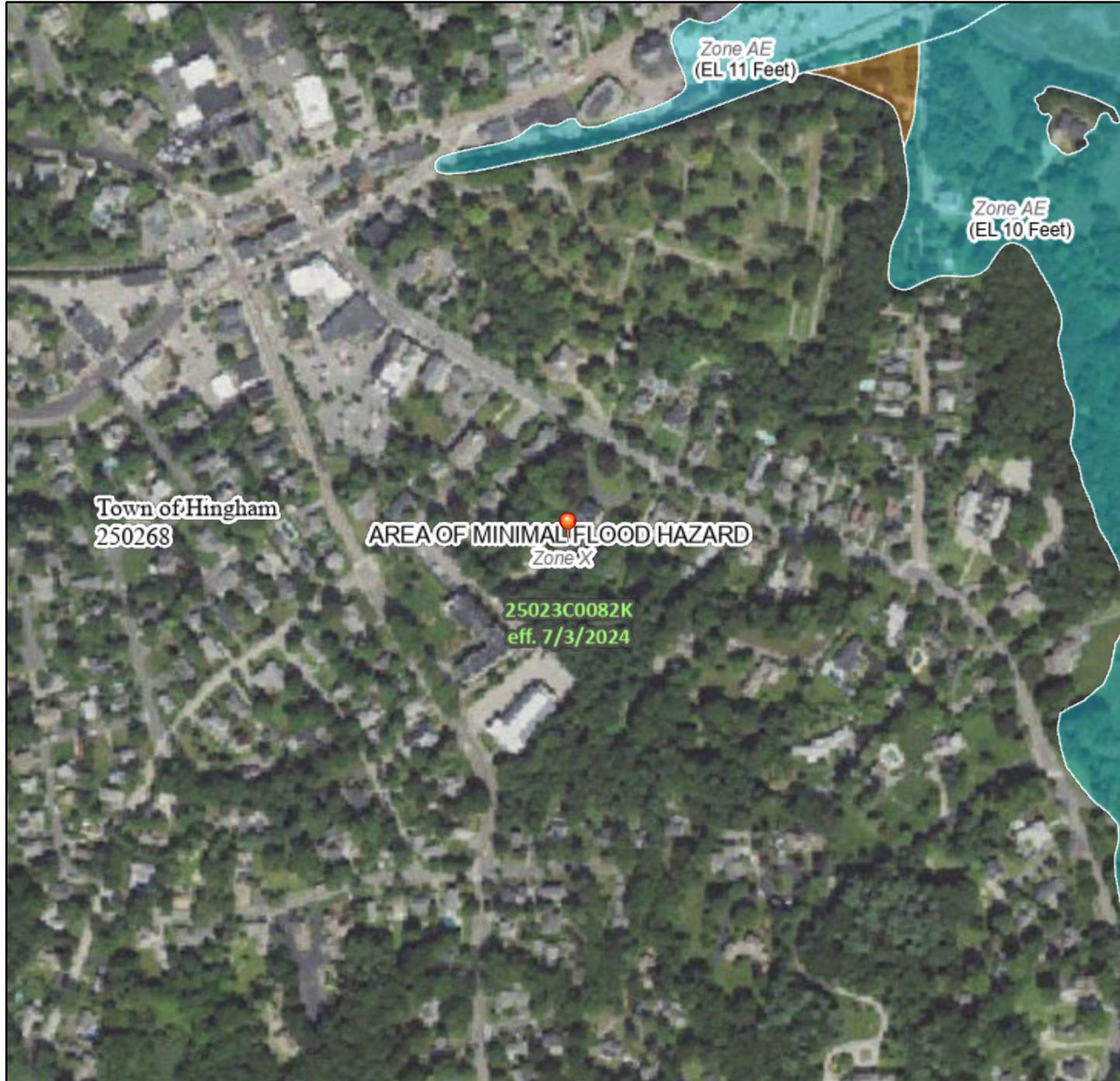


Property Tax Parcels

# National Flood Hazard Layer FIRMMette



70°53'32"W 42°14'37"N



1:6,000

70°52'54"W 42°14'11"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) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		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 <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped
		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 **3/14/2025 at 9:31 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.

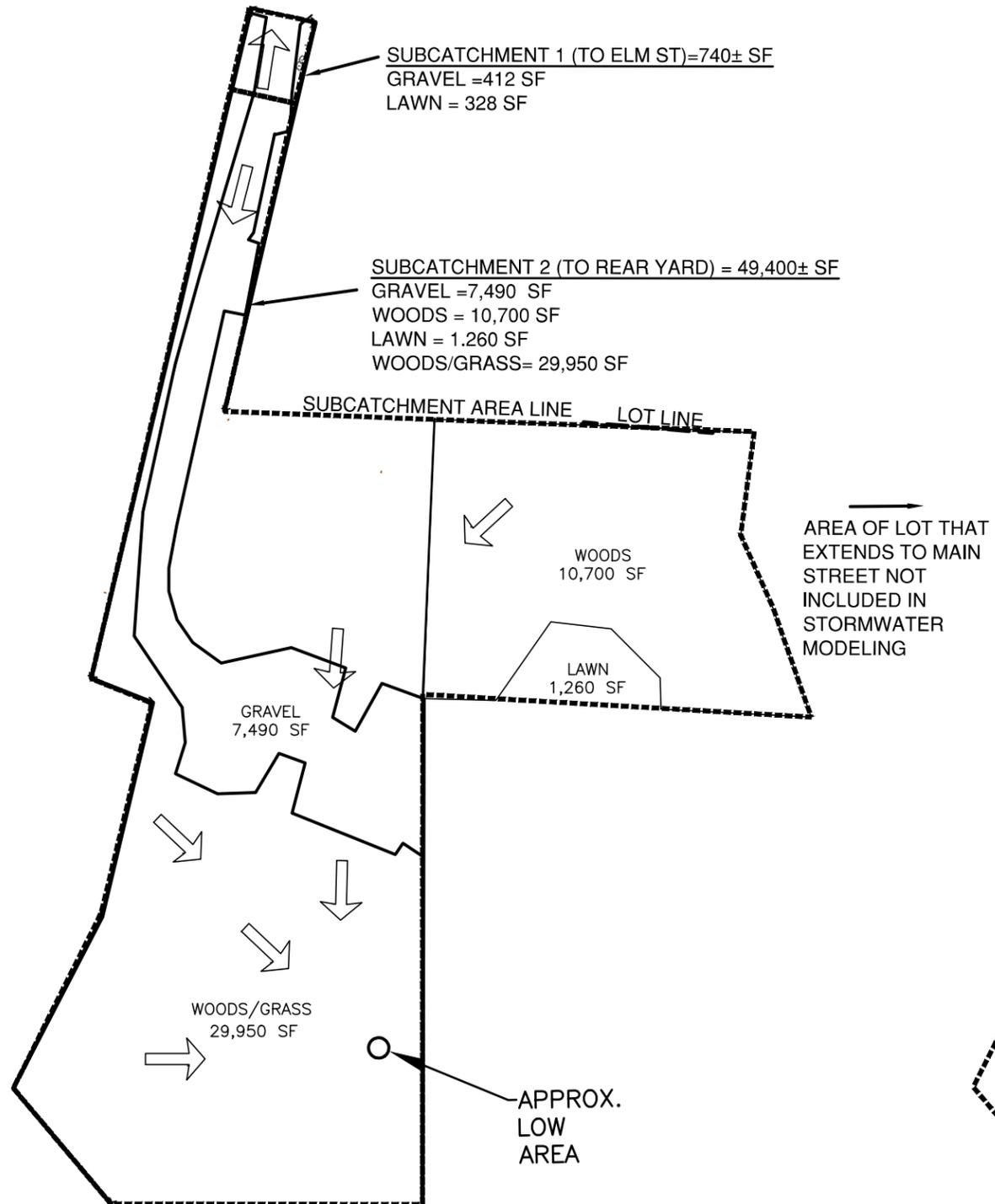
## **SECTION IV**

*DRAINAGE CALCULATIONS &  
SUPPLEMENTAL DRAINAGE  
INFORMATION*

# HYDROCAD MODELLING AREAS REVISED FOR SPORTS COURT 12/30/25

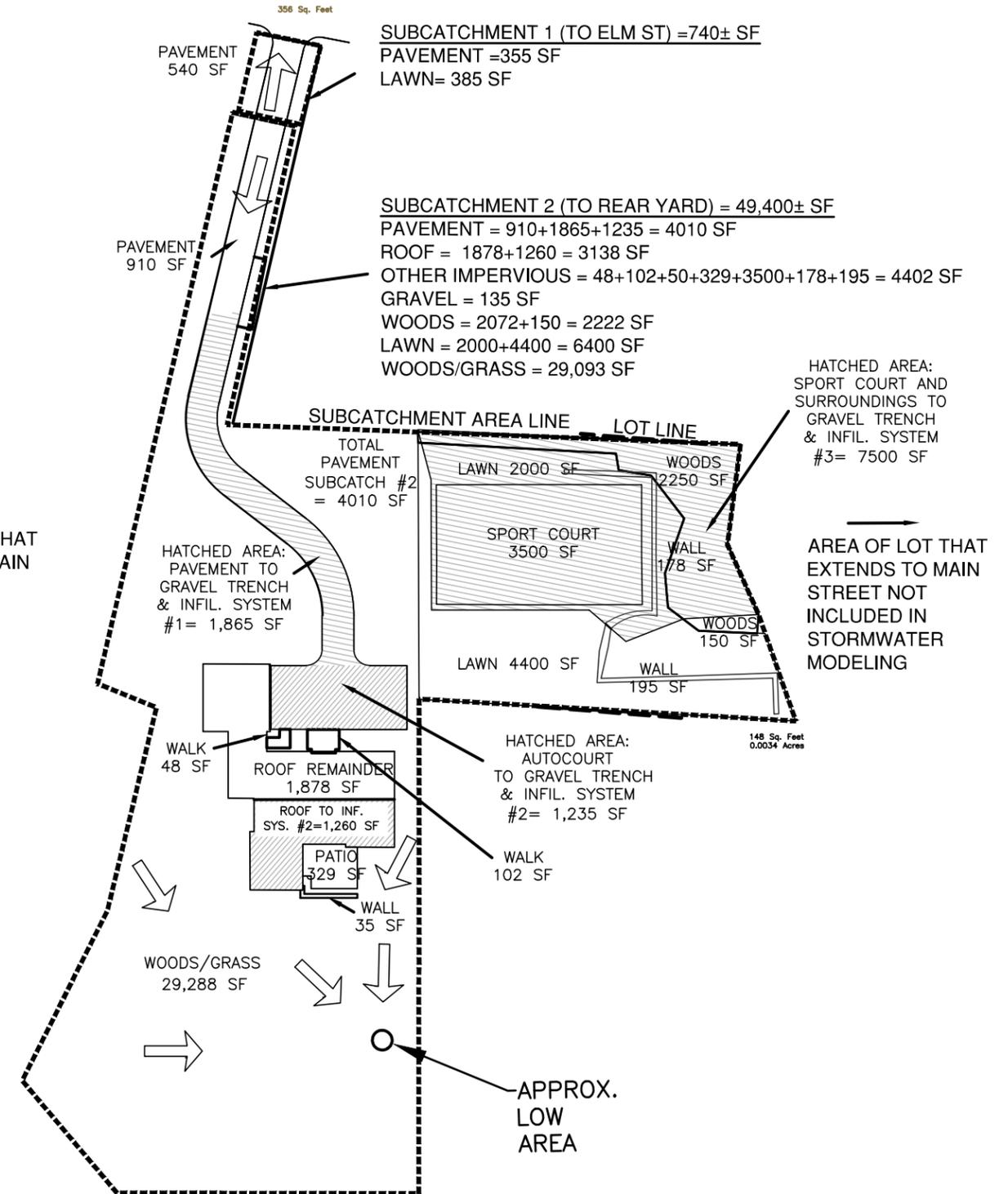
## EXISTING CONDITIONS - LOT 2 ELM ST.

TOTAL LOT AREA = 72,777± SF  
AREA FOR STORMWATER ANALYSIS = 50,140 SF

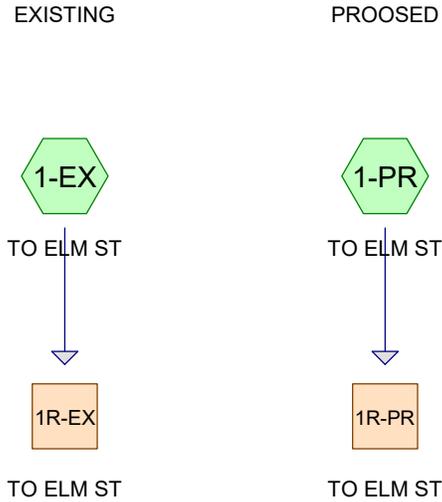


## PROPOSED CONDITIONS - LOT 2 ELM ST.

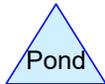
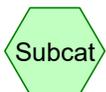
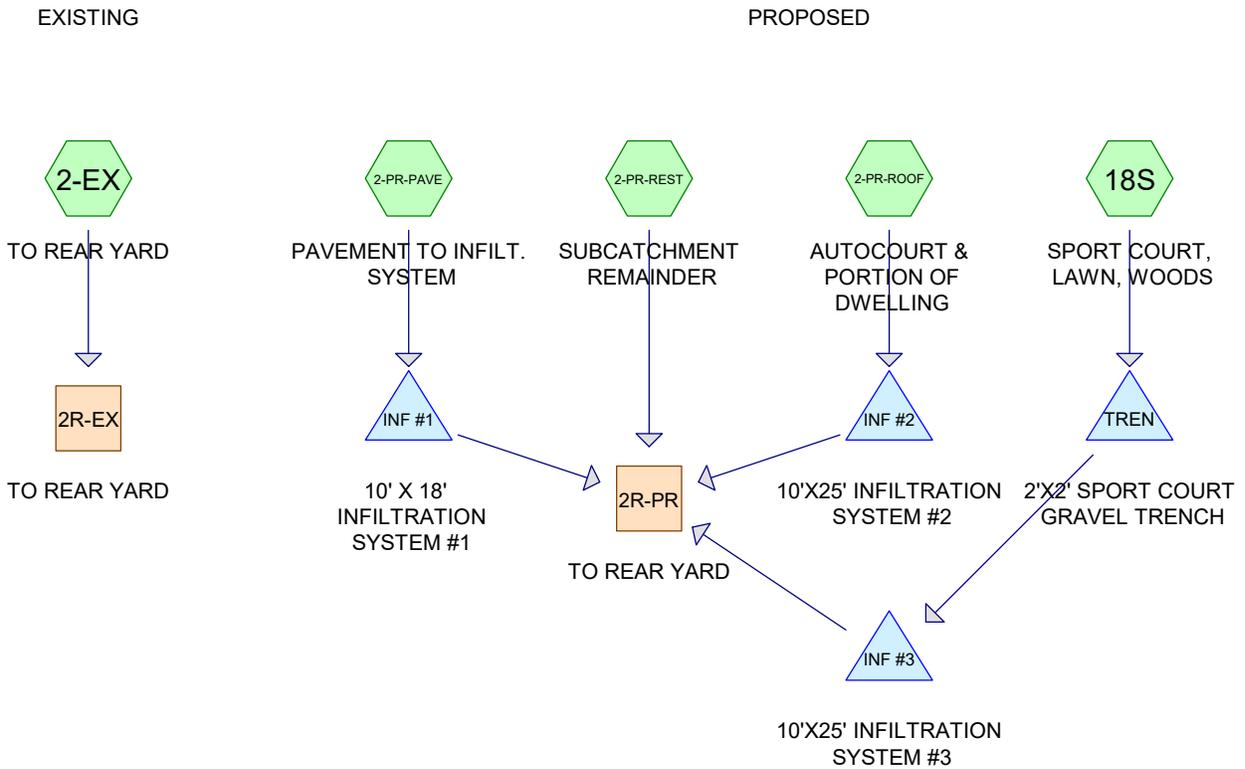
TOTAL LOT AREA = 72,777± SF  
AREA FOR STORMWATER ANALYSIS = 50,140 SF



SUBCATCHMENT 1  
(740 SF) - TO ELM ST.



SUBCATCHMENT 2  
(49,400 SF) - TO REAR YARD



Routing Diagram for LOT 2 ELM St hydro + ret wall rev 2 1.28.26

Prepared by Merrill Associates Inc, Printed 1/29/2026

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**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

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**Rainfall Events Listing**

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2 Year Event	Type III 24-hr		Default	24.00	1	3.20	2
2	10 Year Event	Type III 24-hr		Default	24.00	1	4.65	2
3	100 Year Event	Type III 24-hr		Default	24.00	1	6.80	2

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18 Elm rev 1.29.26

Type III 24-hr 2 Year Event Rainfall=3.20"

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Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 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 1-EX: TO ELM ST** Runoff Area=740 sf 0.00% Impervious Runoff Depth=0.69"  
Tc=5.0 min CN=67 Runoff=0.01 cfs 0.001 af

**Subcatchment 1-PR: TO ELM ST** Runoff Area=740 sf 47.97% Impervious Runoff Depth=0.69"  
Tc=5.0 min CN=67 Runoff=0.01 cfs 0.001 af

**Subcatchment 2-EX: TO REAR YARD** Runoff Area=49,400 sf 0.00% Impervious Runoff Depth=0.01"  
Tc=5.0 min CN=41 Runoff=0.00 cfs 0.001 af

**Subcatchment 2-PR-PAVE: PAVEMENT TO** Runoff Area=1,865 sf 100.00% Impervious Runoff Depth=2.97"  
Tc=0.0 min CN=98 Runoff=0.16 cfs 0.011 af

**Subcatchment 2-PR-REST:** Runoff Area=37,290 sf 9.42% Impervious Runoff Depth=0.00"  
Tc=5.0 min CN=39 Runoff=0.00 cfs 0.000 af

**Subcatchment 2-PR-ROOF: AUTOCOURT** Runoff Area=2,495 sf 100.00% Impervious Runoff Depth=2.97"  
Tc=5.0 min CN=98 Runoff=0.18 cfs 0.014 af

**Subcatchment 18S: SPORT COURT, LAWN,** Runoff Area=7,750 sf 47.46% Impervious Runoff Depth=0.60"  
Tc=5.0 min CN=65 Runoff=0.10 cfs 0.009 af

**Reach 1R-EX: TO ELM ST** Inflow=0.01 cfs 0.001 af  
Outflow=0.01 cfs 0.001 af

**Reach 1R-PR: TO ELM ST** Inflow=0.01 cfs 0.001 af  
Outflow=0.01 cfs 0.001 af

**Reach 2R-EX: TO REAR YARD** Inflow=0.00 cfs 0.001 af  
Outflow=0.00 cfs 0.001 af

**Reach 2R-PR: TO REAR YARD** Inflow=0.00 cfs 0.000 af  
Outflow=0.00 cfs 0.000 af

**Pond INF #1: 10' X 18' INFILTRATION SYSTEM** Peak Elev=106.73' Storage=86 cf Inflow=0.16 cfs 0.011 af  
Discarded=0.03 cfs 0.011 af Primary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.011 af

**Pond INF #2: 10'X25' INFILTRATION SYSTEM** Peak Elev=101.16' Storage=110 cf Inflow=0.18 cfs 0.014 af  
Discarded=0.05 cfs 0.014 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.014 af

**Pond INF #3: 10'X25' INFILTRATION SYSTEM #3** Peak Elev=111.00' Storage=0 cf Inflow=0.00 cfs 0.000 af  
Discarded=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

**Pond TREN: 2'X2' SPORT COURT GRAVEL** Peak Elev=113.45' Storage=41 cf Inflow=0.10 cfs 0.009 af  
Discarded=0.04 cfs 0.009 af Primary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.009 af

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

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Type III 24-hr 2 Year Event Rainfall=3.20"

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**Summary for Subcatchment 1-EX: TO ELM ST**

Runoff = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af, Depth= 0.69"  
Routed to Reach 1R-EX : TO ELM ST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2 Year Event Rainfall=3.20"

	Area (sf)	CN	Description
*	412	90	GRAVEL
	328	39	>75% Grass cover, Good, HSG A
	740	67	Weighted Average
	740		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, direct

**Summary for Subcatchment 1-PR: TO ELM ST**

Runoff = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af, Depth= 0.69"  
Routed to Reach 1R-PR : TO ELM ST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2 Year Event Rainfall=3.20"

	Area (sf)	CN	Description
*	355	98	PAVEMENT
	385	39	>75% Grass cover, Good, HSG A
	740	67	Weighted Average
	385		52.03% Pervious Area
	355		47.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, direct

**Summary for Subcatchment 2-EX: TO REAR YARD**

Runoff = 0.00 cfs @ 22.65 hrs, Volume= 0.001 af, Depth= 0.01"  
Routed to Reach 2R-EX : TO REAR YARD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
Type III 24-hr 2 Year Event Rainfall=3.20"

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

18 Elm rev 1.29.26  
 Type III 24-hr 2 Year Event Rainfall=3.20"

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Area (sf)	CN	Description
* 7,490	90	GRAVEL
29,950	32	Woods/grass comb., Good, HSG A
1,260	39	>75% Grass cover, Good, HSG A
10,700	30	Woods, Good, HSG A
49,400	41	Weighted Average
49,400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, direct

**Summary for Subcatchment 2-PR-PAVE: PAVEMENT TO INFILT. SYSTEM**

Runoff = 0.16 cfs @ 12.00 hrs, Volume= 0.011 af, Depth= 2.97"  
 Routed to Pond INF #1 : 10' X 18' INFILTRATION SYSTEM #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 2 Year Event Rainfall=3.20"

Area (sf)	CN	Description
* 1,865	98	PAVEMENT
1,865		100.00% Impervious Area

**Summary for Subcatchment 2-PR-REST: SUBCATCHMENT REMAINDER**

Runoff = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Depth= 0.00"  
 Routed to Reach 2R-PR : TO REAR YARD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 2 Year Event Rainfall=3.20"

Area (sf)	CN	Description
* 1,878	98	ROOF REMAINDER
* 910	98	PAVEMENT
* 529	98	OTHER IMP
* 135	90	GRAVEL PARKING
29,093	32	Woods/grass comb., Good, HSG A
4,400	39	>75% Grass cover, Good, HSG A
150	30	Woods, Good, HSG A
* 195	98	Ret Wall
37,290	39	Weighted Average
33,778		90.58% Pervious Area
3,512		9.42% Impervious Area

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Type III 24-hr 2 Year Event Rainfall=3.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					<b>Direct Entry, direct</b>

**Summary for Subcatchment 2-PR-ROOF: AUTOCOURT & PORTION OF DWELLING**

Runoff = 0.18 cfs @ 12.07 hrs, Volume= 0.014 af, Depth= 2.97"  
 Routed to Pond INF #2 : 10'X25' INFILTRATION SYSTEM #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 2 Year Event Rainfall=3.20"

Area (sf)	CN	Description
* 1,260	98	ROOF
* 1,235	98	PAVEMENT (AUTOCOURT)
2,495	98	Weighted Average
2,495		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					<b>Direct Entry, direct</b>

**Summary for Subcatchment 18S: SPORT COURT, LAWN, WOODS**

Runoff = 0.10 cfs @ 12.09 hrs, Volume= 0.009 af, Depth= 0.60"  
 Routed to Pond TREN : 2'X2' SPORT COURT GRAVEL TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 2 Year Event Rainfall=3.20"

Area (sf)	CN	Description
* 3,500	98	SPORT COURT
2,000	39	>75% Grass cover, Good, HSG A
2,072	30	Woods, Good, HSG A
* 178	98	Retaining Wall
7,750	65	Weighted Average
4,072		52.54% Pervious Area
3,678		47.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					<b>Direct Entry, direct</b>

**Summary for Reach 1R-EX: TO ELM ST**

Inflow Area = 0.017 ac, 0.00% Impervious, Inflow Depth = 0.69" for 2 Year Event event  
Inflow = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af  
Outflow = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

**Summary for Reach 1R-PR: TO ELM ST**

Inflow Area = 0.017 ac, 47.97% Impervious, Inflow Depth = 0.69" for 2 Year Event event  
Inflow = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af  
Outflow = 0.01 cfs @ 12.09 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

**Summary for Reach 2R-EX: TO REAR YARD**

Inflow Area = 1.134 ac, 0.00% Impervious, Inflow Depth = 0.01" for 2 Year Event event  
Inflow = 0.00 cfs @ 22.65 hrs, Volume= 0.001 af  
Outflow = 0.00 cfs @ 22.65 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

**Summary for Reach 2R-PR: TO REAR YARD**

Inflow Area = 1.134 ac, 23.38% Impervious, Inflow Depth = 0.00" for 2 Year Event event  
Inflow = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af  
Outflow = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

**Summary for Pond INF #1: 10' X 18' INFILTRATION SYSTEM #1**

Inflow Area = 0.043 ac, 100.00% Impervious, Inflow Depth = 2.97" for 2 Year Event event  
Inflow = 0.16 cfs @ 12.00 hrs, Volume= 0.011 af  
Outflow = 0.03 cfs @ 11.68 hrs, Volume= 0.011 af, Atten= 79%, Lag= 0.0 min  
Discarded = 0.03 cfs @ 11.68 hrs, Volume= 0.011 af  
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routed to Reach 2R-PR : TO REAR YARD

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 106.73' @ 12.35 hrs Surf.Area= 180 sf Storage= 86 cf

Plug-Flow detention time= 11.8 min calculated for 0.011 af (100% of inflow)

Center-of-Mass det. time= 11.8 min ( 762.6 - 750.8 )

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

Type III 24-hr 2 Year Event Rainfall=3.20"

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Volume	Invert	Avail.Storage	Storage Description
#1	105.80'	121 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc) 360 cf Overall - 58 cf Embedded = 302 cf x 40.0% Voids
#2	106.30'	58 cf	<b>Cultec C-100</b> x 4 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
#3	107.80'	1 cf	<b>0.50'D x 1.50'H Vertical Cone/Cylinder</b> x 3
		180 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
105.80	180	56.0	0	0	180
107.80	180	56.0	360	360	292

Device	Routing	Invert	Outlet Devices
#1	Discarded	105.80'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	109.20'	<b>6.0" Horiz. Orifice/Grate X 2.00</b> C= 0.600 Limited to weir flow at low heads

**Discarded OutFlow** Max=0.03 cfs @ 11.68 hrs HW=105.84' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.03 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=105.80' (Free Discharge)

↑2=Orifice/Grate ( Controls 0.00 cfs)

**Summary for Pond INF #2: 10'X25' INFILTRATION SYSTEM #2**

Inflow Area = 0.057 ac, 100.00% Impervious, Inflow Depth = 2.97" for 2 Year Event event  
 Inflow = 0.18 cfs @ 12.07 hrs, Volume= 0.014 af  
 Outflow = 0.05 cfs @ 11.77 hrs, Volume= 0.014 af, Atten= 74%, Lag= 0.0 min  
 Discarded = 0.05 cfs @ 11.77 hrs, Volume= 0.014 af  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
 Routed to Reach 2R-PR : TO REAR YARD

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 101.16' @ 12.42 hrs Surf.Area= 250 sf Storage= 110 cf

Plug-Flow detention time= 10.8 min calculated for 0.014 af (100% of inflow)

Center-of-Mass det. time= 10.7 min ( 766.2 - 755.5 )

Volume	Invert	Avail.Storage	Storage Description
#1	100.30'	166 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc) 500 cf Overall - 86 cf Embedded = 414 cf x 40.0% Voids
#2	100.80'	86 cf	<b>Cultec C-100</b> x 6 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
#3	102.30'	1 cf	<b>0.50'D x 1.30'H Vertical Cone/Cylinder</b> x 3
		252 cf	Total Available Storage

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18 Elm rev 1.29.26  
 Type III 24-hr 2 Year Event Rainfall=3.20"

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Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
100.30	250	70.0	0	0	250
102.30	250	70.0	500	500	390

Device	Routing	Invert	Outlet Devices
#1	Discarded	100.30'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	103.70'	<b>6.0" Horiz. Orifice/Grate X 3.00</b> C= 0.600 Limited to weir flow at low heads

**Discarded OutFlow** Max=0.05 cfs @ 11.77 hrs HW=100.33' (Free Discharge)  
 ↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=100.30' (Free Discharge)  
 ↑**2=Orifice/Grate** ( Controls 0.00 cfs)

**Summary for Pond INF #3: 10'X25' INFILTRATION SYSTEM #3**

Inflow Area = 0.178 ac, 47.46% Impervious, Inflow Depth = 0.00" for 2 Year Event event  
 Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min  
 Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
 Routed to Reach 2R-PR : TO REAR YARD

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3  
 Peak Elev= 111.00' @ 0.00 hrs Surf.Area= 250 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)  
 Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	111.00'	166 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc) 500 cf Overall - 86 cf Embedded = 414 cf x 40.0% Voids
#2	111.50'	86 cf	<b>Cultec C-100</b> x 6 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
		251 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
111.00	250	70.0	0	0	250
113.00	250	70.0	500	500	390

Device	Routing	Invert	Outlet Devices
#1	Discarded	111.00'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	112.40'	<b>4.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

Type III 24-hr 2 Year Event Rainfall=3.20"

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**Discarded OutFlow** Max=0.00 cfs @ 0.00 hrs HW=111.00' (Free Discharge)

↳ **1=Exfiltration** (Passes 0.00 cfs of 0.05 cfs potential flow)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=111.00' (Free Discharge)

↳ **2=Orifice/Grate** ( Controls 0.00 cfs)

**Summary for Pond TREN: 2'X2' SPORT COURT GRAVEL TRENCH**

Inflow Area = 0.178 ac, 47.46% Impervious, Inflow Depth = 0.60" for 2 Year Event event  
 Inflow = 0.10 cfs @ 12.09 hrs, Volume= 0.009 af  
 Outflow = 0.04 cfs @ 12.02 hrs, Volume= 0.009 af, Atten= 58%, Lag= 0.0 min  
 Discarded = 0.04 cfs @ 12.02 hrs, Volume= 0.009 af  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
 Routed to Pond INF #3 : 10'X25' INFILTRATION SYSTEM #3

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 2  
 Peak Elev= 113.45' @ 12.43 hrs Surf.Area= 225 sf Storage= 41 cf

Plug-Flow detention time= 4.3 min calculated for 0.009 af (100% of inflow)  
 Center-of-Mass det. time= 4.3 min ( 898.7 - 894.4 )

Volume	Invert	Avail.Storage	Storage Description
#1	113.00'	171 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc) 450 cf Overall - 24 cf Embedded = 426 cf x 40.0% Voids
#2	114.30'	24 cf	<b>6.0" Round Pipe Storage</b> Inside #1 L= 120.0'
		194 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
113.00	225	260.0	0	0	225
115.00	225	260.0	450	450	745

Device	Routing	Invert	Outlet Devices
#1	Discarded	113.00'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	114.30'	<b>6.0" Vert. Orifice/Grate X 2.00</b> C= 0.600 Limited to weir flow at low heads

**Discarded OutFlow** Max=0.04 cfs @ 12.02 hrs HW=113.02' (Free Discharge)

↳ **1=Exfiltration** (Exfiltration Controls 0.04 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=113.00' (Free Discharge)

↳ **2=Orifice/Grate** ( Controls 0.00 cfs)

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**18 Elm rev 1.29.26  
Type III 24-hr 10 Year Event Rainfall=4.65"

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Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 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 1-EX: TO ELM ST** Runoff Area=740 sf 0.00% Impervious Runoff Depth=1.56"  
 Tc=5.0 min CN=67 Runoff=0.03 cfs 0.002 af

**Subcatchment 1-PR: TO ELM ST** Runoff Area=740 sf 47.97% Impervious Runoff Depth=1.56"  
 Tc=5.0 min CN=67 Runoff=0.03 cfs 0.002 af

**Subcatchment 2-EX: TO REAR YARD** Runoff Area=49,400 sf 0.00% Impervious Runoff Depth=0.19"  
 Tc=5.0 min CN=41 Runoff=0.05 cfs 0.018 af

**Subcatchment 2-PR-PAVE: PAVEMENT TO** Runoff Area=1,865 sf 100.00% Impervious Runoff Depth=4.41"  
 Tc=0.0 min CN=98 Runoff=0.24 cfs 0.016 af

**Subcatchment 2-PR-REST:** Runoff Area=37,290 sf 9.42% Impervious Runoff Depth=0.13"  
 Tc=5.0 min CN=39 Runoff=0.02 cfs 0.010 af

**Subcatchment 2-PR-ROOF: AUTOCOURT** Runoff Area=2,495 sf 100.00% Impervious Runoff Depth=4.41"  
 Tc=5.0 min CN=98 Runoff=0.27 cfs 0.021 af

**Subcatchment 18S: SPORT COURT, LAWN,** Runoff Area=7,750 sf 47.46% Impervious Runoff Depth=1.43"  
 Tc=5.0 min CN=65 Runoff=0.29 cfs 0.021 af

**Reach 1R-EX: TO ELM ST** Inflow=0.03 cfs 0.002 af  
 Outflow=0.03 cfs 0.002 af

**Reach 1R-PR: TO ELM ST** Inflow=0.03 cfs 0.002 af  
 Outflow=0.03 cfs 0.002 af

**Reach 2R-EX: TO REAR YARD** Inflow=0.05 cfs 0.018 af  
 Outflow=0.05 cfs 0.018 af

**Reach 2R-PR: TO REAR YARD** Inflow=0.02 cfs 0.010 af  
 Outflow=0.02 cfs 0.010 af

**Pond INF #1: 10' X 18' INFILTRATION** Peak Elev=107.69' Storage=170 cf Inflow=0.24 cfs 0.016 af  
 Discarded=0.03 cfs 0.016 af Primary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.016 af

**Pond INF #2: 10'X25' INFILTRATION SYSTEM** Peak Elev=102.00' Storage=221 cf Inflow=0.27 cfs 0.021 af  
 Discarded=0.05 cfs 0.021 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.021 af

**Pond INF #3: 10'X25' INFILTRATION SYSTEM #3** Peak Elev=111.57' Storage=62 cf Inflow=0.14 cfs 0.003 af  
 Discarded=0.05 cfs 0.003 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.003 af

**Pond TREN: 2'X2' SPORT COURT GRAVEL** Peak Elev=114.46' Storage=135 cf Inflow=0.29 cfs 0.021 af  
 Discarded=0.04 cfs 0.018 af Primary=0.14 cfs 0.003 af Outflow=0.19 cfs 0.021 af

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

Type III 24-hr 10 Year Event Rainfall=4.65"

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**Summary for Subcatchment 1-EX: TO ELM ST**

Runoff = 0.03 cfs @ 12.08 hrs, Volume= 0.002 af, Depth= 1.56"  
 Routed to Reach 1R-EX : TO ELM ST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 10 Year Event Rainfall=4.65"

	Area (sf)	CN	Description
*	412	90	GRAVEL
	328	39	>75% Grass cover, Good, HSG A
	740	67	Weighted Average
	740		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, direct

**Summary for Subcatchment 1-PR: TO ELM ST**

Runoff = 0.03 cfs @ 12.08 hrs, Volume= 0.002 af, Depth= 1.56"  
 Routed to Reach 1R-PR : TO ELM ST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 10 Year Event Rainfall=4.65"

	Area (sf)	CN	Description
*	355	98	PAVEMENT
	385	39	>75% Grass cover, Good, HSG A
	740	67	Weighted Average
	385		52.03% Pervious Area
	355		47.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, direct

**Summary for Subcatchment 2-EX: TO REAR YARD**

Runoff = 0.05 cfs @ 12.45 hrs, Volume= 0.018 af, Depth= 0.19"  
 Routed to Reach 2R-EX : TO REAR YARD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 10 Year Event Rainfall=4.65"

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

Type III 24-hr 10 Year Event Rainfall=4.65"

18 Elm rev 1.29.26

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Area (sf)	CN	Description
* 7,490	90	GRAVEL
29,950	32	Woods/grass comb., Good, HSG A
1,260	39	>75% Grass cover, Good, HSG A
10,700	30	Woods, Good, HSG A
49,400	41	Weighted Average
49,400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, direct

**Summary for Subcatchment 2-PR-PAVE: PAVEMENT TO INFILT. SYSTEM**

Runoff = 0.24 cfs @ 12.00 hrs, Volume= 0.016 af, Depth= 4.41"  
 Routed to Pond INF #1 : 10' X 18' INFILTRATION SYSTEM #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 10 Year Event Rainfall=4.65"

Area (sf)	CN	Description
* 1,865	98	PAVEMENT
1,865		100.00% Impervious Area

**Summary for Subcatchment 2-PR-REST: SUBCATCHMENT REMAINDER**

Runoff = 0.02 cfs @ 13.78 hrs, Volume= 0.010 af, Depth= 0.13"  
 Routed to Reach 2R-PR : TO REAR YARD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 10 Year Event Rainfall=4.65"

Area (sf)	CN	Description
* 1,878	98	ROOF REMAINDER
* 910	98	PAVEMENT
* 529	98	OTHER IMP
* 135	90	GRAVEL PARKING
29,093	32	Woods/grass comb., Good, HSG A
4,400	39	>75% Grass cover, Good, HSG A
150	30	Woods, Good, HSG A
* 195	98	Ret Wall
37,290	39	Weighted Average
33,778		90.58% Pervious Area
3,512		9.42% Impervious Area

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

Type III 24-hr 10 Year Event Rainfall=4.65"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					<b>Direct Entry, direct</b>

**Summary for Subcatchment 2-PR-ROOF: AUTOCOURT & PORTION OF DWELLING**

Runoff = 0.27 cfs @ 12.07 hrs, Volume= 0.021 af, Depth= 4.41"  
 Routed to Pond INF #2 : 10'X25' INFILTRATION SYSTEM #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 10 Year Event Rainfall=4.65"

	Area (sf)	CN	Description
*	1,260	98	ROOF
*	1,235	98	PAVEMENT (AUTOCOURT)
	2,495	98	Weighted Average
	2,495		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					<b>Direct Entry, direct</b>

**Summary for Subcatchment 18S: SPORT COURT, LAWN, WOODS**

Runoff = 0.29 cfs @ 12.08 hrs, Volume= 0.021 af, Depth= 1.43"  
 Routed to Pond TREN : 2'X2' SPORT COURT GRAVEL TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 10 Year Event Rainfall=4.65"

	Area (sf)	CN	Description
*	3,500	98	SPORT COURT
	2,000	39	>75% Grass cover, Good, HSG A
	2,072	30	Woods, Good, HSG A
*	178	98	Retaining Wall
	7,750	65	Weighted Average
	4,072		52.54% Pervious Area
	3,678		47.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					<b>Direct Entry, direct</b>

**Summary for Reach 1R-EX: TO ELM ST**

Inflow Area = 0.017 ac, 0.00% Impervious, Inflow Depth = 1.56" for 10 Year Event event  
Inflow = 0.03 cfs @ 12.08 hrs, Volume= 0.002 af  
Outflow = 0.03 cfs @ 12.08 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

**Summary for Reach 1R-PR: TO ELM ST**

Inflow Area = 0.017 ac, 47.97% Impervious, Inflow Depth = 1.56" for 10 Year Event event  
Inflow = 0.03 cfs @ 12.08 hrs, Volume= 0.002 af  
Outflow = 0.03 cfs @ 12.08 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

**Summary for Reach 2R-EX: TO REAR YARD**

Inflow Area = 1.134 ac, 0.00% Impervious, Inflow Depth = 0.19" for 10 Year Event event  
Inflow = 0.05 cfs @ 12.45 hrs, Volume= 0.018 af  
Outflow = 0.05 cfs @ 12.45 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

**Summary for Reach 2R-PR: TO REAR YARD**

Inflow Area = 1.134 ac, 23.38% Impervious, Inflow Depth = 0.10" for 10 Year Event event  
Inflow = 0.02 cfs @ 13.78 hrs, Volume= 0.010 af  
Outflow = 0.02 cfs @ 13.78 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

**Summary for Pond INF #1: 10' X 18' INFILTRATION SYSTEM #1**

Inflow Area = 0.043 ac, 100.00% Impervious, Inflow Depth = 4.41" for 10 Year Event event  
Inflow = 0.24 cfs @ 12.00 hrs, Volume= 0.016 af  
Outflow = 0.03 cfs @ 11.59 hrs, Volume= 0.016 af, Atten= 85%, Lag= 0.0 min  
Discarded = 0.03 cfs @ 11.59 hrs, Volume= 0.016 af  
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routed to Reach 2R-PR : TO REAR YARD

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 107.69' @ 12.44 hrs Surf.Area= 180 sf Storage= 170 cf

Plug-Flow detention time= 25.8 min calculated for 0.016 af (100% of inflow)

Center-of-Mass det. time= 25.8 min ( 769.5 - 743.7 )

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

Type III 24-hr 10 Year Event Rainfall=4.65"

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Volume	Invert	Avail.Storage	Storage Description
#1	105.80'	121 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc) 360 cf Overall - 58 cf Embedded = 302 cf x 40.0% Voids
#2	106.30'	58 cf	<b>Cultec C-100</b> x 4 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
#3	107.80'	1 cf	<b>0.50'D x 1.50'H Vertical Cone/Cylinder</b> x 3
		180 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
105.80	180	56.0	0	0	180
107.80	180	56.0	360	360	292

Device	Routing	Invert	Outlet Devices
#1	Discarded	105.80'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	109.20'	<b>6.0" Horiz. Orifice/Grate X 2.00</b> C= 0.600 Limited to weir flow at low heads

**Discarded OutFlow** Max=0.03 cfs @ 11.59 hrs HW=105.84' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.03 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=105.80' (Free Discharge)

↑2=Orifice/Grate ( Controls 0.00 cfs)

**Summary for Pond INF #2: 10'X25' INFILTRATION SYSTEM #2**

Inflow Area = 0.057 ac, 100.00% Impervious, Inflow Depth = 4.41" for 10 Year Event event  
 Inflow = 0.27 cfs @ 12.07 hrs, Volume= 0.021 af  
 Outflow = 0.05 cfs @ 11.67 hrs, Volume= 0.021 af, Atten= 82%, Lag= 0.0 min  
 Discarded = 0.05 cfs @ 11.67 hrs, Volume= 0.021 af  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
 Routed to Reach 2R-PR : TO REAR YARD

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 102.00' @ 12.51 hrs Surf.Area= 250 sf Storage= 221 cf

Plug-Flow detention time= 23.8 min calculated for 0.021 af (100% of inflow)

Center-of-Mass det. time= 23.8 min ( 772.1 - 748.3 )

Volume	Invert	Avail.Storage	Storage Description
#1	100.30'	166 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc) 500 cf Overall - 86 cf Embedded = 414 cf x 40.0% Voids
#2	100.80'	86 cf	<b>Cultec C-100</b> x 6 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
#3	102.30'	1 cf	<b>0.50'D x 1.30'H Vertical Cone/Cylinder</b> x 3
		252 cf	Total Available Storage

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

18 Elm rev 1.29.26  
Type III 24-hr 10 Year Event Rainfall=4.65"

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Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
100.30	250	70.0	0	0	250
102.30	250	70.0	500	500	390

Device	Routing	Invert	Outlet Devices
#1	Discarded	100.30'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	103.70'	<b>6.0" Horiz. Orifice/Grate X 3.00</b> C= 0.600 Limited to weir flow at low heads

**Discarded OutFlow** Max=0.05 cfs @ 11.67 hrs HW=100.33' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=100.30' (Free Discharge)

↑**2=Orifice/Grate** ( Controls 0.00 cfs)

**Summary for Pond INF #3: 10'X25' INFILTRATION SYSTEM #3**

Inflow Area = 0.178 ac, 47.46% Impervious, Inflow Depth = 0.22" for 10 Year Event event  
 Inflow = 0.14 cfs @ 12.18 hrs, Volume= 0.003 af  
 Outflow = 0.05 cfs @ 12.15 hrs, Volume= 0.003 af, Atten= 67%, Lag= 0.0 min  
 Discarded = 0.05 cfs @ 12.15 hrs, Volume= 0.003 af  
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
 Routed to Reach 2R-PR : TO REAR YARD

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 111.57' @ 12.48 hrs Surf.Area= 250 sf Storage= 62 cf

Plug-Flow detention time= 13.4 min calculated for 0.003 af (100% of inflow)

Center-of-Mass det. time= 13.4 min ( 752.6 - 739.2 )

Volume	Invert	Avail.Storage	Storage Description
#1	111.00'	166 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc) 500 cf Overall - 86 cf Embedded = 414 cf x 40.0% Voids
#2	111.50'	86 cf	<b>Cultec C-100</b> x 6 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
		251 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
111.00	250	70.0	0	0	250
113.00	250	70.0	500	500	390

Device	Routing	Invert	Outlet Devices
#1	Discarded	111.00'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	112.40'	<b>4.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

Type III 24-hr 10 Year Event Rainfall=4.65"

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**Discarded OutFlow** Max=0.05 cfs @ 12.15 hrs HW=111.04' (Free Discharge)  
 ↑1=Exfiltration (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=111.00' (Free Discharge)  
 ↑2=Orifice/Grate ( Controls 0.00 cfs)

**Summary for Pond TREN: 2'X2' SPORT COURT GRAVEL TRENCH**

Inflow Area = 0.178 ac, 47.46% Impervious, Inflow Depth = 1.43" for 10 Year Event event  
 Inflow = 0.29 cfs @ 12.08 hrs, Volume= 0.021 af  
 Outflow = 0.19 cfs @ 12.18 hrs, Volume= 0.021 af, Atten= 35%, Lag= 5.6 min  
 Discarded = 0.04 cfs @ 11.80 hrs, Volume= 0.018 af  
 Primary = 0.14 cfs @ 12.18 hrs, Volume= 0.003 af  
 Routed to Pond INF #3 : 10'X25' INFILTRATION SYSTEM #3

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 2  
 Peak Elev= 114.46' @ 12.18 hrs Surf.Area= 225 sf Storage= 135 cf

Plug-Flow detention time= 15.7 min calculated for 0.021 af (100% of inflow)  
 Center-of-Mass det. time= 15.6 min ( 880.2 - 864.6 )

Volume	Invert	Avail.Storage	Storage Description
#1	113.00'	171 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc) 450 cf Overall - 24 cf Embedded = 426 cf x 40.0% Voids
#2	114.30'	24 cf	<b>6.0" Round Pipe Storage</b> Inside #1 L= 120.0'
		194 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
113.00	225	260.0	0	0	225
115.00	225	260.0	450	450	745

Device	Routing	Invert	Outlet Devices
#1	Discarded	113.00'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	114.30'	<b>6.0" Vert. Orifice/Grate X 2.00</b> C= 0.600 Limited to weir flow at low heads

**Discarded OutFlow** Max=0.04 cfs @ 11.80 hrs HW=113.02' (Free Discharge)  
 ↑1=Exfiltration (Exfiltration Controls 0.04 cfs)

**Primary OutFlow** Max=0.14 cfs @ 12.18 hrs HW=114.46' (Free Discharge)  
 ↑2=Orifice/Grate (Orifice Controls 0.14 cfs @ 1.35 fps)

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

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*Type III 24-hr 100 Year Event Rainfall=6.80"*

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Time span=0.00-30.00 hrs, dt=0.01 hrs, 3001 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 1-EX: TO ELM ST** Runoff Area=740 sf 0.00% Impervious Runoff Depth=3.15"  
 Tc=5.0 min CN=67 Runoff=0.06 cfs 0.004 af

**Subcatchment 1-PR: TO ELM ST** Runoff Area=740 sf 47.97% Impervious Runoff Depth=3.15"  
 Tc=5.0 min CN=67 Runoff=0.06 cfs 0.004 af

**Subcatchment 2-EX: TO REAR YARD** Runoff Area=49,400 sf 0.00% Impervious Runoff Depth=0.84"  
 Tc=5.0 min CN=41 Runoff=0.65 cfs 0.079 af

**Subcatchment 2-PR-PAVE: PAVEMENT TO** Runoff Area=1,865 sf 100.00% Impervious Runoff Depth=6.56"  
 Tc=0.0 min CN=98 Runoff=0.35 cfs 0.023 af

**Subcatchment 2-PR-REST:** Runoff Area=37,290 sf 9.42% Impervious Runoff Depth=0.70"  
 Tc=5.0 min CN=39 Runoff=0.32 cfs 0.050 af

**Subcatchment 2-PR-ROOF: AUTOCOURT** Runoff Area=2,495 sf 100.00% Impervious Runoff Depth=6.56"  
 Tc=5.0 min CN=98 Runoff=0.40 cfs 0.031 af

**Subcatchment 18S: SPORT COURT, LAWN,** Runoff Area=7,750 sf 47.46% Impervious Runoff Depth=2.95"  
 Tc=5.0 min CN=65 Runoff=0.63 cfs 0.044 af

**Reach 1R-EX: TO ELM ST** Inflow=0.06 cfs 0.004 af  
 Outflow=0.06 cfs 0.004 af

**Reach 1R-PR: TO ELM ST** Inflow=0.06 cfs 0.004 af  
 Outflow=0.06 cfs 0.004 af

**Reach 2R-EX: TO REAR YARD** Inflow=0.65 cfs 0.079 af  
 Outflow=0.65 cfs 0.079 af

**Reach 2R-PR: TO REAR YARD** Inflow=0.64 cfs 0.060 af  
 Outflow=0.64 cfs 0.060 af

**Pond INF #1: 10' X 18' INFILTRATION** Peak Elev=109.30' Storage=180 cf Inflow=0.35 cfs 0.023 af  
 Discarded=0.03 cfs 0.021 af Primary=0.33 cfs 0.003 af Outflow=0.37 cfs 0.023 af

**Pond INF #2: 10'X25' INFILTRATION SYSTEM** Peak Elev=103.70' Storage=252 cf Inflow=0.40 cfs 0.031 af  
 Discarded=0.05 cfs 0.028 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.028 af

**Pond INF #3: 10'X25' INFILTRATION SYSTEM** Peak Elev=112.97' Storage=248 cf Inflow=0.58 cfs 0.016 af  
 Discarded=0.05 cfs 0.009 af Primary=0.27 cfs 0.007 af Outflow=0.31 cfs 0.016 af

**Pond TREN: 2'X2' SPORT COURT GRAVEL** Peak Elev=114.64' Storage=158 cf Inflow=0.63 cfs 0.044 af  
 Discarded=0.04 cfs 0.028 af Primary=0.58 cfs 0.016 af Outflow=0.62 cfs 0.044 af

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

Type III 24-hr 100 Year Event Rainfall=6.80"

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**Summary for Subcatchment 1-EX: TO ELM ST**

Runoff = 0.06 cfs @ 12.08 hrs, Volume= 0.004 af, Depth= 3.15"  
 Routed to Reach 1R-EX : TO ELM ST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 100 Year Event Rainfall=6.80"

	Area (sf)	CN	Description
*	412	90	GRAVEL
	328	39	>75% Grass cover, Good, HSG A
	740	67	Weighted Average
	740		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, direct

**Summary for Subcatchment 1-PR: TO ELM ST**

Runoff = 0.06 cfs @ 12.08 hrs, Volume= 0.004 af, Depth= 3.15"  
 Routed to Reach 1R-PR : TO ELM ST

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 100 Year Event Rainfall=6.80"

	Area (sf)	CN	Description
*	355	98	PAVEMENT
	385	39	>75% Grass cover, Good, HSG A
	740	67	Weighted Average
	385		52.03% Pervious Area
	355		47.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, direct

**Summary for Subcatchment 2-EX: TO REAR YARD**

Runoff = 0.65 cfs @ 12.11 hrs, Volume= 0.079 af, Depth= 0.84"  
 Routed to Reach 2R-EX : TO REAR YARD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 100 Year Event Rainfall=6.80"

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

Type III 24-hr 100 Year Event Rainfall=6.80"

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Area (sf)	CN	Description
* 7,490	90	GRAVEL
29,950	32	Woods/grass comb., Good, HSG A
1,260	39	>75% Grass cover, Good, HSG A
10,700	30	Woods, Good, HSG A
49,400	41	Weighted Average
49,400		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, direct

**Summary for Subcatchment 2-PR-PAVE: PAVEMENT TO INFILT. SYSTEM**

Runoff = 0.35 cfs @ 12.00 hrs, Volume= 0.023 af, Depth= 6.56"  
 Routed to Pond INF #1 : 10' X 18' INFILTRATION SYSTEM #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 100 Year Event Rainfall=6.80"

Area (sf)	CN	Description
* 1,865	98	PAVEMENT
1,865		100.00% Impervious Area

**Summary for Subcatchment 2-PR-REST: SUBCATCHMENT REMAINDER**

Runoff = 0.32 cfs @ 12.13 hrs, Volume= 0.050 af, Depth= 0.70"  
 Routed to Reach 2R-PR : TO REAR YARD

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 100 Year Event Rainfall=6.80"

Area (sf)	CN	Description
* 1,878	98	ROOF REMAINDER
* 910	98	PAVEMENT
* 529	98	OTHER IMP
* 135	90	GRAVEL PARKING
29,093	32	Woods/grass comb., Good, HSG A
4,400	39	>75% Grass cover, Good, HSG A
150	30	Woods, Good, HSG A
* 195	98	Ret Wall
37,290	39	Weighted Average
33,778		90.58% Pervious Area
3,512		9.42% Impervious Area

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

Type III 24-hr 100 Year Event Rainfall=6.80"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, direct

**Summary for Subcatchment 2-PR-ROOF: AUTOCOURT & PORTION OF DWELLING**

Runoff = 0.40 cfs @ 12.07 hrs, Volume= 0.031 af, Depth= 6.56"  
 Routed to Pond INF #2 : 10'X25' INFILTRATION SYSTEM #2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 100 Year Event Rainfall=6.80"

	Area (sf)	CN	Description
*	1,260	98	ROOF
*	1,235	98	PAVEMENT (AUTOCOURT)
	2,495	98	Weighted Average
	2,495		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, direct

**Summary for Subcatchment 18S: SPORT COURT, LAWN, WOODS**

Runoff = 0.63 cfs @ 12.08 hrs, Volume= 0.044 af, Depth= 2.95"  
 Routed to Pond TREN : 2'X2' SPORT COURT GRAVEL TRENCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 100 Year Event Rainfall=6.80"

	Area (sf)	CN	Description
*	3,500	98	SPORT COURT
	2,000	39	>75% Grass cover, Good, HSG A
	2,072	30	Woods, Good, HSG A
*	178	98	Retaining Wall
	7,750	65	Weighted Average
	4,072		52.54% Pervious Area
	3,678		47.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, direct

**Summary for Reach 1R-EX: TO ELM ST**

Inflow Area = 0.017 ac, 0.00% Impervious, Inflow Depth = 3.15" for 100 Year Event event  
Inflow = 0.06 cfs @ 12.08 hrs, Volume= 0.004 af  
Outflow = 0.06 cfs @ 12.08 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

**Summary for Reach 1R-PR: TO ELM ST**

Inflow Area = 0.017 ac, 47.97% Impervious, Inflow Depth = 3.15" for 100 Year Event event  
Inflow = 0.06 cfs @ 12.08 hrs, Volume= 0.004 af  
Outflow = 0.06 cfs @ 12.08 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

**Summary for Reach 2R-EX: TO REAR YARD**

Inflow Area = 1.134 ac, 0.00% Impervious, Inflow Depth = 0.84" for 100 Year Event event  
Inflow = 0.65 cfs @ 12.11 hrs, Volume= 0.079 af  
Outflow = 0.65 cfs @ 12.11 hrs, Volume= 0.079 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

**Summary for Reach 2R-PR: TO REAR YARD**

Inflow Area = 1.134 ac, 23.38% Impervious, Inflow Depth = 0.63" for 100 Year Event event  
Inflow = 0.64 cfs @ 12.19 hrs, Volume= 0.060 af  
Outflow = 0.64 cfs @ 12.19 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs

**Summary for Pond INF #1: 10' X 18' INFILTRATION SYSTEM #1**

Inflow Area = 0.043 ac, 100.00% Impervious, Inflow Depth = 6.56" for 100 Year Event event  
Inflow = 0.35 cfs @ 12.00 hrs, Volume= 0.023 af  
Outflow = 0.37 cfs @ 12.03 hrs, Volume= 0.023 af, Atten= 0%, Lag= 1.9 min  
Discarded = 0.03 cfs @ 12.03 hrs, Volume= 0.021 af  
Primary = 0.33 cfs @ 12.03 hrs, Volume= 0.003 af

Routed to Reach 2R-PR : TO REAR YARD

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 109.30' @ 12.03 hrs Surf.Area= 181 sf Storage= 180 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 24.8 min ( 762.6 - 737.8 )

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Volume	Invert	Avail.Storage	Storage Description
#1	105.80'	121 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc) 360 cf Overall - 58 cf Embedded = 302 cf x 40.0% Voids
#2	106.30'	58 cf	<b>Cultec C-100</b> x 4 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
#3	107.80'	1 cf	<b>0.50'D x 1.50'H Vertical Cone/Cylinder</b> x 3
		180 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
105.80	180	56.0	0	0	180
107.80	180	56.0	360	360	292

Device	Routing	Invert	Outlet Devices
#1	Discarded	105.80'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	109.20'	<b>6.0" Horiz. Orifice/Grate X 2.00</b> C= 0.600 Limited to weir flow at low heads

**Discarded OutFlow** Max=0.03 cfs @ 12.03 hrs HW=109.30' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.03 cfs)

**Primary OutFlow** Max=0.30 cfs @ 12.03 hrs HW=109.29' (Free Discharge)

↑2=Orifice/Grate (Weir Controls 0.30 cfs @ 1.00 fps)

**Summary for Pond INF #2: 10'X25' INFILTRATION SYSTEM #2**

Inflow Area = 0.057 ac, 100.00% Impervious, Inflow Depth = 6.56" for 100 Year Event event  
 Inflow = 0.40 cfs @ 12.07 hrs, Volume= 0.031 af  
 Outflow = 0.05 cfs @ 12.24 hrs, Volume= 0.028 af, Atten= 88%, Lag= 10.2 min  
 Discarded = 0.05 cfs @ 12.12 hrs, Volume= 0.028 af  
 Primary = 0.00 cfs @ 12.24 hrs, Volume= 0.000 af  
 Routed to Reach 2R-PR : TO REAR YARD

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 103.70' @ 12.24 hrs Surf.Area= 251 sf Storage= 252 cf

Plug-Flow detention time= 82.3 min calculated for 0.028 af (89% of inflow)

Center-of-Mass det. time= 29.5 min ( 771.9 - 742.4 )

Volume	Invert	Avail.Storage	Storage Description
#1	100.30'	166 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc) 500 cf Overall - 86 cf Embedded = 414 cf x 40.0% Voids
#2	100.80'	86 cf	<b>Cultec C-100</b> x 6 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
#3	102.30'	1 cf	<b>0.50'D x 1.30'H Vertical Cone/Cylinder</b> x 3
		252 cf	Total Available Storage

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Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
100.30	250	70.0	0	0	250
102.30	250	70.0	500	500	390

Device	Routing	Invert	Outlet Devices
#1	Discarded	100.30'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	103.70'	<b>6.0" Horiz. Orifice/Grate X 3.00</b> C= 0.600 Limited to weir flow at low heads

**Discarded OutFlow** Max=0.05 cfs @ 12.12 hrs HW=103.48' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.00 cfs @ 12.24 hrs HW=103.70' (Free Discharge)

↑**2=Orifice/Grate** (Weir Controls 0.00 cfs @ 0.03 fps)

**Summary for Pond INF #3: 10'X25' INFILTRATION SYSTEM #3**

Inflow Area = 0.178 ac, 47.46% Impervious, Inflow Depth = 1.08" for 100 Year Event event  
 Inflow = 0.58 cfs @ 12.09 hrs, Volume= 0.016 af  
 Outflow = 0.31 cfs @ 12.21 hrs, Volume= 0.016 af, Atten= 46%, Lag= 7.2 min  
 Discarded = 0.05 cfs @ 11.99 hrs, Volume= 0.009 af  
 Primary = 0.27 cfs @ 12.21 hrs, Volume= 0.007 af  
 Routed to Reach 2R-PR : TO REAR YARD

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 3

Peak Elev= 112.97' @ 12.21 hrs Surf.Area= 250 sf Storage= 248 cf

Plug-Flow detention time= 28.0 min calculated for 0.016 af (100% of inflow)

Center-of-Mass det. time= 28.0 min ( 767.2 - 739.2 )

Volume	Invert	Avail.Storage	Storage Description
#1	111.00'	166 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc) 500 cf Overall - 86 cf Embedded = 414 cf x 40.0% Voids
#2	111.50'	86 cf	<b>Cultec C-100</b> x 6 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
		251 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
111.00	250	70.0	0	0	250
113.00	250	70.0	500	500	390

Device	Routing	Invert	Outlet Devices
#1	Discarded	111.00'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	112.40'	<b>4.0" Vert. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads

**LOT 2 ELM St hydro + ret wall rev 2 1.28.26**

Type III 24-hr 100 Year Event Rainfall=6.80"

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**Discarded OutFlow** Max=0.05 cfs @ 11.99 hrs HW=111.04' (Free Discharge)

↳ **1=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.27 cfs @ 12.21 hrs HW=112.97' (Free Discharge)

↳ **2=Orifice/Grate** (Orifice Controls 0.27 cfs @ 3.04 fps)

**Summary for Pond TREN: 2'X2' SPORT COURT GRAVEL TRENCH**

Inflow Area = 0.178 ac, 47.46% Impervious, Inflow Depth = 2.95" for 100 Year Event event  
 Inflow = 0.63 cfs @ 12.08 hrs, Volume= 0.044 af  
 Outflow = 0.62 cfs @ 12.09 hrs, Volume= 0.044 af, Atten= 2%, Lag= 0.8 min  
 Discarded = 0.04 cfs @ 11.59 hrs, Volume= 0.028 af  
 Primary = 0.58 cfs @ 12.09 hrs, Volume= 0.016 af  
 Routed to Pond INF #3 : 10'X25' INFILTRATION SYSTEM #3

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.01 hrs / 2  
 Peak Elev= 114.64' @ 12.09 hrs Surf.Area= 225 sf Storage= 158 cf

Plug-Flow detention time= 15.3 min calculated for 0.044 af (100% of inflow)  
 Center-of-Mass det. time= 15.3 min ( 857.8 - 842.5 )

Volume	Invert	Avail.Storage	Storage Description
#1	113.00'	171 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc) 450 cf Overall - 24 cf Embedded = 426 cf x 40.0% Voids
#2	114.30'	24 cf	<b>6.0" Round Pipe Storage</b> Inside #1 L= 120.0'
		194 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
113.00	225	260.0	0	0	225
115.00	225	260.0	450	450	745

Device	Routing	Invert	Outlet Devices
#1	Discarded	113.00'	<b>8.270 in/hr Exfiltration over Surface area</b>
#2	Primary	114.30'	<b>6.0" Vert. Orifice/Grate X 2.00</b> C= 0.600 Limited to weir flow at low heads

**Discarded OutFlow** Max=0.04 cfs @ 11.59 hrs HW=113.02' (Free Discharge)

↳ **1=Exfiltration** (Exfiltration Controls 0.04 cfs)

**Primary OutFlow** Max=0.58 cfs @ 12.09 hrs HW=114.64' (Free Discharge)

↳ **2=Orifice/Grate** (Orifice Controls 0.58 cfs @ 2.00 fps)

**LOT 2 ELM St hydro 5.6.25**

Type III 24-hr 100 Year Event Rainfall=6.80"

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**Stage-Area-Storage for Pond INF #1: 10' X 18' INFILTRATION SYSTEM #1**

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
105.80	180	0	108.40	181	179
105.85	180	4	108.45	181	179
105.90	180	7	108.50	181	179
105.95	180	11	108.55	181	179
106.00	180	14	108.60	181	179
106.05	180	18	108.65	181	179
106.10	180	22	108.70	181	179
106.15	180	25	108.75	181	179
106.20	180	29	108.80	181	179
106.25	180	32	108.85	181	179
106.30	180	36	108.90	181	179
106.35	180	42	108.95	181	179
106.40	180	48	109.00	181	179
106.45	180	54	109.05	181	179
106.50	180	60	109.10	181	179
106.55	180	66	109.15	181	179
106.60	180	72	109.20	181	179
106.65	180	77	109.25	181	179
106.70	180	83	109.30	181	180
106.75	180	89			
106.80	180	94			
106.85	180	100			
106.90	180	105			
106.95	180	111			
107.00	180	116			
107.05	180	121			
107.10	180	126			
107.15	180	131			
107.20	180	135			
107.25	180	139			
107.30	180	143			
107.35	180	146			
107.40	180	150			
107.45	180	153			
107.50	180	157			
107.55	180	161			
107.60	180	164			
107.65	180	168			
107.70	180	171			
107.75	180	175			
107.80	181	179			
107.85	181	179			
107.90	181	179			
107.95	181	179			
108.00	181	179			
108.05	181	179			
108.10	181	179			
108.15	181	179			
108.20	181	179			
108.25	181	179			
108.30	181	179			
108.35	181	179			

**LOT 2 ELM St hydro 5.6.25**

Type III 24-hr 100 Year Event Rainfall=6.80"

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**Stage-Area-Storage for Pond INF #2: 10'X25' INFILTRATION SYSTEM #2**

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
100.30	250	0	102.90	251	252
100.35	250	5	102.95	251	252
100.40	250	10	103.00	251	252
100.45	250	15	103.05	251	252
100.50	250	20	103.10	251	252
100.55	250	25	103.15	251	252
100.60	250	30	103.20	251	252
100.65	250	35	103.25	251	252
100.70	250	40	103.30	251	252
100.75	250	45	103.35	251	252
100.80	250	50	103.40	251	252
100.85	250	59	103.45	251	252
100.90	250	67	103.50	251	252
100.95	250	76	103.55	251	252
101.00	250	84	103.60	251	<b>252</b>
101.05	250	92	103.65	251	252
101.10	250	101	103.70	251	252
101.15	250	109	103.75	251	252
101.20	250	117	103.80	251	252
101.25	250	125			
101.30	250	133			
101.35	250	141			
101.40	250	149			
101.45	250	157			
101.50	250	164			
101.55	250	171			
101.60	250	178			
101.65	250	185			
101.70	250	191			
101.75	250	196			
101.80	250	201			
101.85	250	206			
101.90	250	211			
101.95	250	216			
102.00	250	221			
102.05	250	226			
102.10	250	231			
102.15	250	236			
102.20	250	241			
102.25	250	246			
102.30	<b>251</b>	251			
102.35	251	251			
102.40	251	251			
102.45	251	251			
102.50	251	251			
102.55	251	252			
102.60	251	252			
102.65	251	252			
102.70	251	252			
102.75	251	252			
102.80	251	252			
102.85	251	252			

**Stage-Area-Storage for Pond INF #3: 10'X25' INFILTRATION SYSTEM #3**

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
111.00	250	0	112.04	250	140
111.02	250	2	112.06	250	143
111.04	250	4	112.08	250	146
111.06	250	6	112.10	250	149
111.08	250	8	112.12	250	152
111.10	250	10	112.14	250	155
111.12	250	12	112.16	250	158
111.14	250	14	112.18	250	161
111.16	250	16	112.20	250	164
111.18	250	18	112.22	250	167
111.20	250	20	112.24	250	170
111.22	250	22	112.26	250	173
111.24	250	24	112.28	250	175
111.26	250	26	112.30	250	178
111.28	250	28	112.32	250	181
111.30	250	30	112.34	250	183
111.32	250	32	112.36	250	186
111.34	250	34	112.38	250	188
111.36	250	36	112.40	250	191
111.38	250	38	112.42	250	193
111.40	250	40	112.44	250	195
111.42	250	42	112.46	250	197
111.44	250	44	112.48	250	199
111.46	250	46	112.50	250	201
111.48	250	48	112.52	250	203
111.50	250	50	112.54	250	205
111.52	250	53	112.56	250	207
111.54	250	57	112.58	250	209
111.56	250	60	112.60	250	211
111.58	250	64	112.62	250	213
111.60	250	67	112.64	250	215
111.62	250	71	112.66	250	217
111.64	250	74	112.68	250	219
111.66	250	77	112.70	250	221
111.68	250	81	112.72	250	223
111.70	250	84	112.74	250	225
111.72	250	87	112.76	250	227
111.74	250	91	112.78	250	229
111.76	250	94	112.80	250	231
111.78	250	97	112.82	250	233
111.80	250	101	112.84	250	235
111.82	250	104	112.86	250	237
111.84	250	107	112.88	250	239
111.86	250	111	112.90	250	241
111.88	250	114	112.92	250	243
111.90	250	117	112.94	250	245
111.92	250	120	112.96	250	247
111.94	250	124	112.98	250	249
111.96	250	127	113.00	250	<b>251</b>
111.98	250	130			
112.00	250	133			
112.02	250	136			

**SECTION V**

*ADDITIONAL INFORMATION*

## **Easement Statement**

There are no proposed or known existing **stormwater** easements on the locus site.

Soil Map—Plymouth County, Massachusetts  
(16 Elm Street, Hingham)



Map Scale: 1:779 if printed on A landscape (11" x 8.5") sheet.



## 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 1:12,000.

**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: Plymouth County, Massachusetts

Survey Area Data: Version 17, 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
262B	Quonset sandy loam, 3 to 8 percent slopes	0.1	8.3%
262C	Quonset sandy loam, 8 to 15 percent slopes	1.0	91.7%
<b>Totals for Area of Interest</b>		<b>1.1</b>	<b>100.0%</b>

## Plymouth County, Massachusetts

### 262B—Quonset sandy loam, 3 to 8 percent slopes

#### Map Unit Setting

*National map unit symbol:* bqtk

*Elevation:* 0 to 400 feet

*Mean annual precipitation:* 41 to 54 inches

*Mean annual air temperature:* 43 to 54 degrees F

*Frost-free period:* 145 to 240 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Quonset and similar soils:* 80 percent

*Minor components:* 20 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Quonset

##### Setting

*Landform:* Eskers, deltas, terraces, outwash plains, kames

*Landform position (two-dimensional):* Summit, shoulder

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Convex

*Across-slope shape:* Convex

*Parent material:* Sandy and gravelly glaciofluvial deposits

##### Typical profile

*O<sub>i</sub> - 0 to 1 inches:* slightly decomposed plant material

*O<sub>a</sub> - 1 to 2 inches:* highly decomposed plant material

*A - 2 to 4 inches:* sandy loam

*Bw<sub>1</sub> - 4 to 7 inches:* channery sandy loam

*Bw<sub>2</sub> - 7 to 14 inches:* channery loamy sand

*BC - 14 to 22 inches:* very channery loamy sand

*C - 22 to 65 inches:* extremely channery sand

##### Properties and qualities

*Slope:* 3 to 8 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Excessively drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (K<sub>sat</sub>):* High  
(1.98 to 5.95 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Very low (about 2.0 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3s

*Hydrologic Soil Group:* A  
*Ecological site:* F144AY022MA - Dry Outwash  
*Hydric soil rating:* No

### Minor Components

#### Warwick

*Percent of map unit:* 8 percent  
*Landform:* Deltas, terraces, outwash plains  
*Landform position (two-dimensional):* Summit, shoulder  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

#### Deerfield

*Percent of map unit:* 5 percent  
*Landform:* Deltas, terraces, outwash plains  
*Landform position (two-dimensional):* Shoulder, footslope  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Hydric soil rating:* No

#### Hinckley

*Percent of map unit:* 4 percent  
*Landform:* Outwash deltas, terraces, kames, eskers  
*Landform position (two-dimensional):* Summit, shoulder  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

#### Canton

*Percent of map unit:* 3 percent  
*Landform:* Till plains, ridges, hills  
*Landform position (two-dimensional):* Summit, shoulder  
*Landform position (three-dimensional):* Interfluve  
*Down-slope shape:* Convex  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Plymouth County, Massachusetts

Survey Area Data: Version 17, Aug 27, 2024

## Plymouth County, Massachusetts

### 262C—Quonset sandy loam, 8 to 15 percent slopes

#### Map Unit Setting

*National map unit symbol:* bqtl

*Elevation:* 0 to 400 feet

*Mean annual precipitation:* 41 to 54 inches

*Mean annual air temperature:* 43 to 54 degrees F

*Frost-free period:* 145 to 240 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Quonset and similar soils:* 80 percent

*Minor components:* 20 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Quonset

##### Setting

*Landform:* Terraces, outwash plains, kames, eskers, deltas

*Landform position (two-dimensional):* Shoulder, backslope

*Landform position (three-dimensional):* Riser

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Sandy and gravelly glaciofluvial deposits

##### Typical profile

*O<sub>i</sub> - 0 to 1 inches:* slightly decomposed plant material

*O<sub>a</sub> - 1 to 2 inches:* highly decomposed plant material

*A - 2 to 4 inches:* sandy loam

*Bw<sub>1</sub> - 4 to 7 inches:* channery sandy loam

*Bw<sub>2</sub> - 7 to 14 inches:* channery loamy sand

*BC - 14 to 22 inches:* very channery loamy sand

*C - 22 to 65 inches:* extremely channery sand

##### Properties and qualities

*Slope:* 8 to 15 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Excessively drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (K<sub>sat</sub>):* High  
(1.98 to 5.95 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Very low (about 2.0 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 4e

\*\*\* Electronic Recording \*\*\*

Doc#: 00008281

Bk: 57655 Pg: 174 Page: 1 of 4

Recorded: 02/03/2023 03:30 PM

ATTEST: John R. Buckley, Jr. Register

Plymouth County Registry of Deeds

When recorded, return to:

GOLDSTEIN & HERNDON, LLP  
Attorneys at Law  
822 Boylston Street, Suite 300  
Chestnut Hill, MA 02467

\*\*\*\*\*  
MASSACHUSETTS EXCISE TAX  
Plymouth District ROD #11 001  
Date: 02/03/2023 03:30 PM  
Ctrl# 163265 00578  
Fee: \$10,716.00 Cons: \$2,350,000.00  
\*\*\*\*\*

QUITCLAIM DEED

THE FIRST PARISH IN HINGHAM, MASSACHUSETTS, a Massachusetts corporation ("Grantor"), having an address at 107 Main Street, Hingham, Massachusetts 02043, for good and valuable consideration paid in the amount of Two Million Three Hundred Fifty Thousand and 00/100 Dollars (\$2,350,000.00), grants to GREG WEIBLEY AND LAURA WEIBLEY ("Grantee"). as tenants by the entirety, having an address at 107 Main St, Hingham, MA, with QUITCLAIM COVENANTS, the land, with the buildings and improvements thereon, commonly known and numbered as 107 Main Street, Hingham, County of Plymouth, Commonwealth of Massachusetts, as more particularly described on Exhibit A attached hereto and incorporated herein (the "Property").

The Property is conveyed with the benefit of and subject to all leases, easements, restrictions and other agreements currently of record or entered into in connection with any zoning exception or special permit or permitted to be created hereunder, so far as the same may be in force and effect.

The sale does not constitute all or substantially all of the Grantor's assets in the Commonwealth of Massachusetts.

[REMAINDER OF PAGE BLANK; SIGNATURE(S) ON NEXT PAGE]

Property Address: 107 Main Street, Hingham, Massachusetts 02043

EXECUTED as an instrument under seal as of this 1<sup>ST</sup> day of Feb, 2023.

THE FIRST PARISH IN HINGHAM,  
MASSACHUSETTS,  
a Massachusetts corporation

By: *Maureen Butler*  
Maureen Butler, President

COMMONWEALTH OF MASSACHUSETTS

Plymouth ss

On this 1<sup>st</sup> day of February, 2023, before me, the undersigned Notary Public, personally appeared Maureen Butler, President of The First Parish in Hingham, Massachusetts, as aforesaid, proved to me through satisfactory evidence of identification, which was Massachusetts driver's license, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as the free act and deed of The First Parish in Hingham, Massachusetts.

*Susana Otero*

Notary Public

My Commission expires: June 27, 2025



EXECUTED as an instrument under seal as of this 28<sup>th</sup> day of January, 2023.

**THE FIRST PARISH IN HINGHAM,  
MASSACHUSETTS,**  
a Massachusetts corporation

By: [Signature]  
Name: John Gomez  
Title: Treasurer

**COMMONWEALTH OF MASSACHUSETTS**

Plymouth, ss

On this 28<sup>th</sup> day of January, 2023, before me, the undersigned Notary Public, personally appeared John Gomez, Treasurer of The First Parish in Hingham, Massachusetts, as aforesaid, proved to me through satisfactory evidence of identification, which was Massachusetts driver's license, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose as the free act and deed of The First Parish in Hingham, Massachusetts.

[Signature]  
Notary Public  
My Commission expires: 2/1/25



**EXHIBIT A**

A certain parcel of land with the buildings thereon situated in said Hingham on the Southwesterly side of Main Street as shown on "Plan of Land in Hingham, Mass." dated September 11, 1922, by Walter B. Foster, C.B., recorded with Plymouth Deeds, Book of Plans No. 4, Plan No. 823, being bounded and described as follows:

NORTHEASTERLY: by said Main Street by two, measurements, fifty and  $18/100$  (50.18) feet, and two hundred and eighteen and  $32/100$  (218.32) feet, respectively;

SOUTHEASTERLY: by land now or formerly of Anna F. Lincoln, four hundred and thirteen and  $10/100$  (413.10) feet; again

SOUTHEASTERLY: by land now or formerly of Charles W. Hoyt, thirty-seven and  $45/100$  (37.45) feet;

SOUTHERLY: by land now or formerly of the Commonwealth of Massachusetts, fifty-five and  $95/100$  (55.95) feet);

SOUTHWESTERLY: by land of the Town of Hingham, seventy and  $40/100$  (70.40) feet, again

SOUTHWESTERLY: but more Southerly, eighty and  $25/100$  (80.25) feet by land of the Town of Hingham;

SOUTHEASTERLY: by land of the Town of Hingham, twenty-four and  $22/100$  (24.22) feet, again

SOUTHWESTERLY: by land of the Town of Hingham, two hundred and fifty and  $93/100$  (250.93) feet, again

NORTHWESTERLY: by Elm Street, twenty-four (24) feet;

NORTHEASTERLY: by land by land now or formerly of Bertha U. Dykeman, one hundred and forty-four and  $56/100$  (144.56) feet;

NORTHWESTERLY: by land now or formerly of said Dykeman and land now or formerly of Cronin , one hundred and seventy-five and  $86/100$  (175.86) feet, again

NORTHWESTERLY: by land now or formerly of Harriet A. Cushing, Trustee, two hundred and twenty-six and  $91/100$  (226.91) feet;

Containing in all 129,764 square feet according to said plan, be all of said measurements and area, more or less.

For title, see deed dated October 10, 1956 and recorded with Plymouth County Registry of Deeds in Book 2531, Page 172.

*Hydrologic Soil Group:* A  
*Ecological site:* F144AY022MA - Dry Outwash  
*Hydric soil rating:* No

### Minor Components

#### Warwick

*Percent of map unit:* 8 percent  
*Landform:* Terraces, outwash plains, deltas  
*Landform position (two-dimensional):* Shoulder, backslope  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

#### Deerfield

*Percent of map unit:* 5 percent  
*Landform:* Deltas, terraces, outwash plains  
*Landform position (two-dimensional):* Shoulder, footslope  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Concave  
*Hydric soil rating:* No

#### Hinckley

*Percent of map unit:* 4 percent  
*Landform:* Outwash deltas, terraces, kames, eskers  
*Landform position (two-dimensional):* Shoulder, backslope  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

#### Canton

*Percent of map unit:* 3 percent  
*Landform:* Hills, till plains, ridges  
*Landform position (two-dimensional):* Shoulder, backslope  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Convex  
*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Plymouth County, Massachusetts

Survey Area Data: Version 17, Aug 27, 2024

