



# Arthur F. Borden & Associates, Inc.

*Professional Land Surveyors & Civil Engineers*

January 16, 2023

Conservation Commission

Town of Franklin

Franklin, Ma

Re: File #CE 159-1262

803 Washington Street

Dear Members of the Commission,

We are in receipt of the Peer review letter from Beta, dated December 9, 2022 and offer the following information:

- 1) Table 1. NOI Plan .....
  - a. All of the requested information has been added to the site plan.
- 2) Plan and General Comments .....
  - a. Items A1 thru A9 have been addressed on the plan.
- 3) Construction Comments .....
  - a. Items W2 thru W8 have been addressed on the plan.
- 4) Wetland Performance Standards and By-law Regulatory Review .....

A review of the property record card (attached) indicates that the existing dwelling on this property was constructed about 1900, clearly prior to the Wetlands Protection Act and the Town Wetland By-law.

(W11) The proposed project is to replace the existing structure with a “pre-constructed” modular home. The proposed site work is within the “existing developed footprint” of the property. A small portion (172 sf) of the new dwelling is within the 25’ – 50’ buffer zone. However, that corner of the dwelling is within an existing lawn area. We respectfully request the Commission’s discretion to allow this activity.

(W12) To mitigate the increase in impervious cover we are suggesting that the proposed walkway from the garage to the rear of the dwelling be constructed with concrete pavers (see detail on plan). Likewise, we have added an infiltration system for the roof runoff (see detail on plan and attached calculations in support of the system)

(W13) The report from our wetland scientist contains a statement regarding vernal pools. A construction sequence and schedule has been added to the plans. The requested maps are attached.

(W14) The erosion and sedimentation controls have been updated to require the biodegradable compost wattles. We are also suggesting that they be backed up by a staked in place siltation fence, for a visual limit of work.

On behalf of our client, Washington 803 Nominee Trust, we respectfully request that this project be added to your next meeting agenda, January 26<sup>th</sup>, for discussion with the Commission.

Sincerely,

  
Arthur F. Borden, PLS

President

Cc: Client



| Assessors Record Card | Summary Record Card |  
 Previous Assessment | Cards Info | Sales | Zoning |

WebPro

Card 1 of 1

Location 803 WASHINGTON ST	Property Account Number 022-001	Parcel ID 322-061-000-000
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Old Parcel ID -

Current Property Mailing Address

Owner IPACS JOSEPH J PATETE CAROLE Address 417 EAST CENTRAL ST	City FRANKLIN State MA Zip 02038 Zoning
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Current Property Sales Information

Sale Date 10/9/1981 Sale Price 45,000	Legal Reference 568-191 Grantor(Seller)
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Current Property Assessment

	<u>Card 1 Value</u>
Year 2021	Building Value 65,600
	Xtra Features Value 500
Land Area 1.360 acres	Land Value 212,800
	Total Value 278,900

Narrative Description

This property contains 1.360 acres of land mainly classified as ONE FAMILY with a(n) N  
 style building, built about 1900 , having N/A exterior and N/A roof cover, with 1 unit(s),

# Massachusetts Interactive Property Map

Details

### To access parcel information:

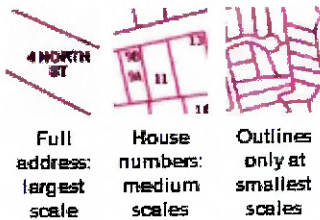
- Enter an address or zoom in by using the +/- tools or your mouse scroll wheel. Parcels will draw when zoomed in.
- Click on a parcel to display a popup with information about that parcel.

Click the "Basemap" button to display background aerial imagery.

From the "Layers" button you can turn map features on and off. Check on 'Download Parcel Data by City/Town' and click in the map for links to download all parcel data for that municipality.

[Complete Help](#) (PDF)

### Parcel Legend:



[Full Map Legend](#)

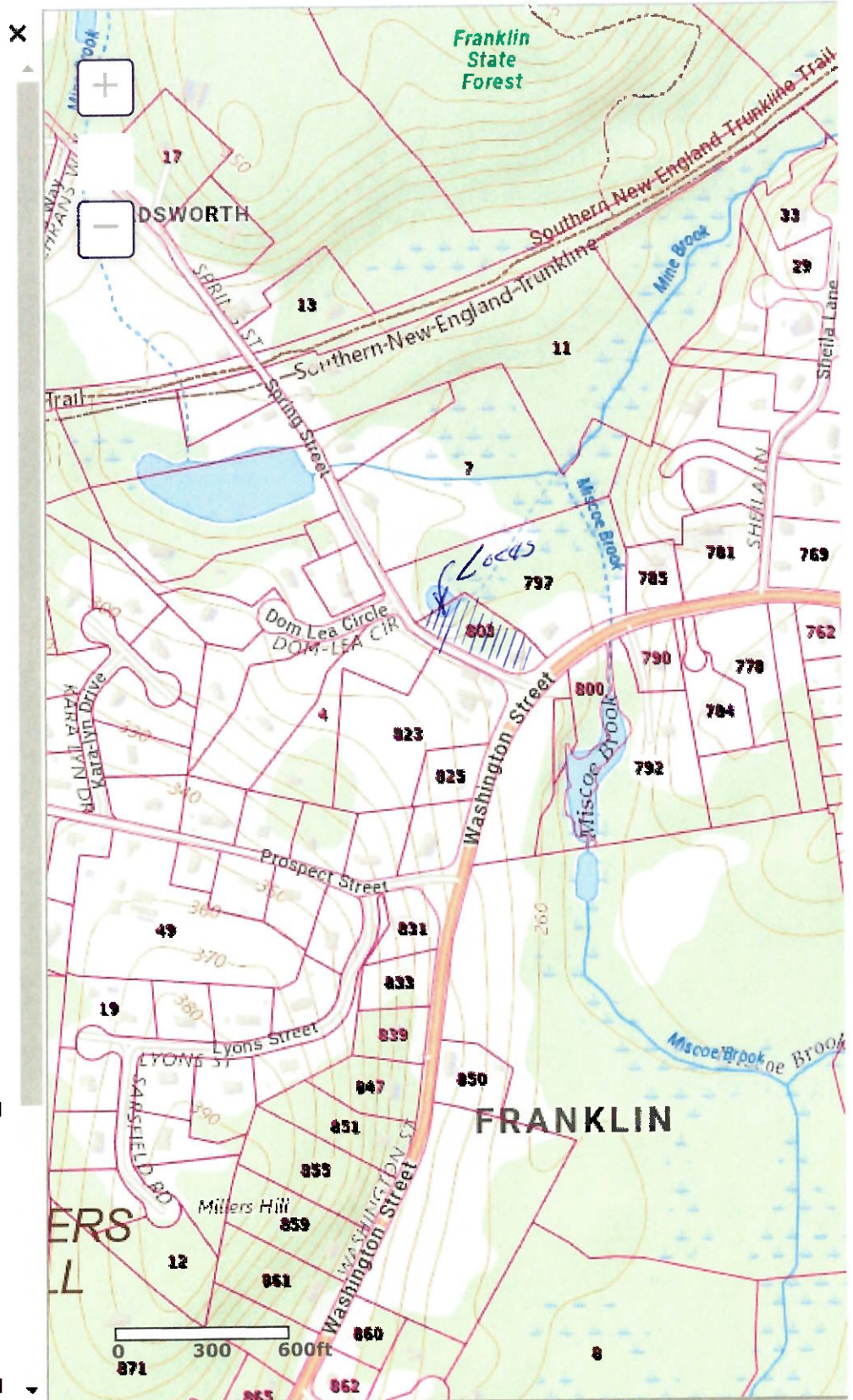
### About this Viewer

The map displays land property boundaries from assessor parcel maps across Massachusetts. Parcel information is from local assessor databases. [More...](#)

[Read about and download parcel data](#)

Also available: an accessible, non-map-based [Property Information Finder](#)

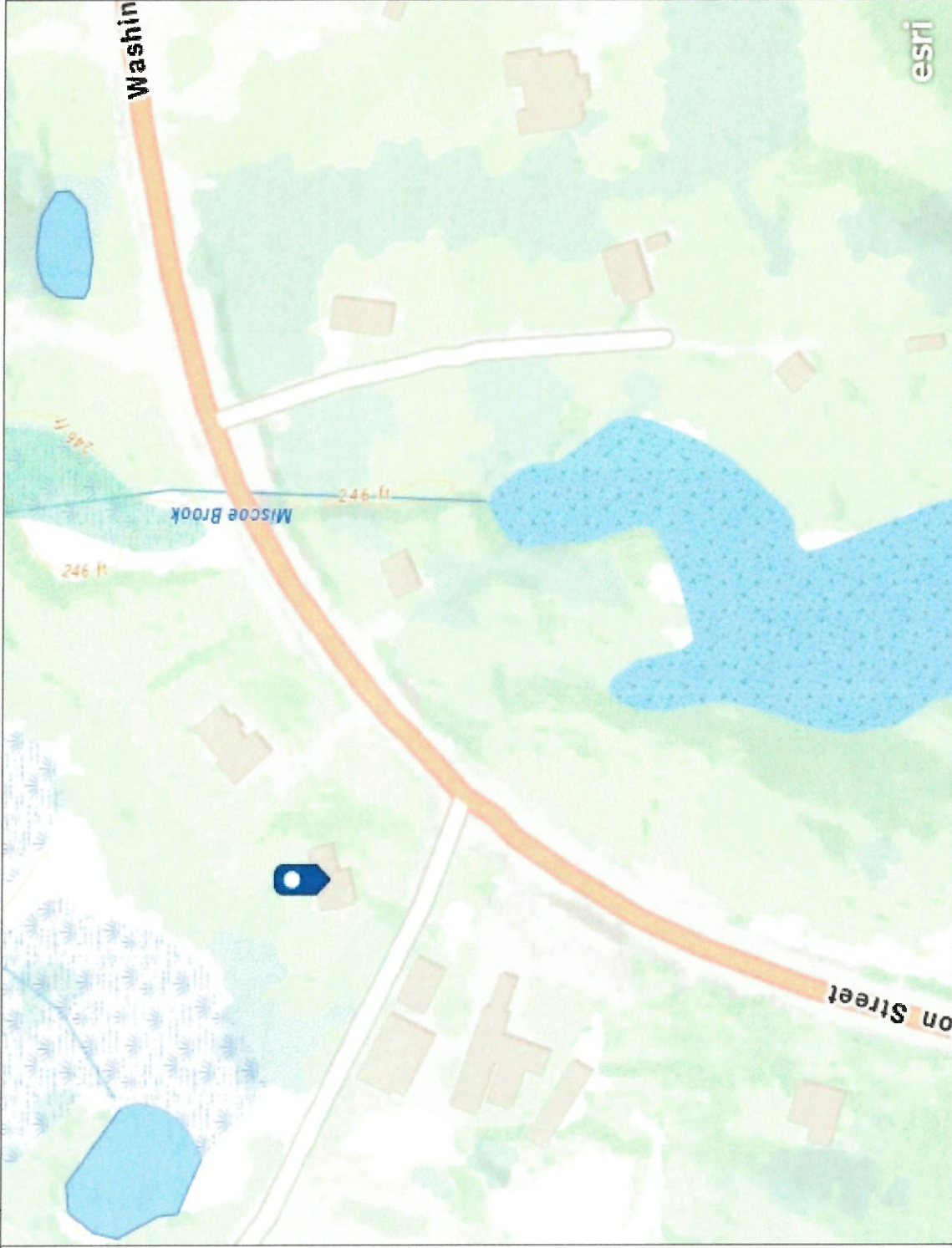
**DISCLAIMER: Assessor's parcel**



### NHESP Priority Habitats of Rare Species

NHESP Priority Habitats of Rare Species

NHESP Priority Habitats of Rare Species



Areas delineated as Priority Habitats in Massachusetts are protected and can include wetlands, uplands, and marine habitats. Published as a map service by MassGIS.

MassGIS | MassGIS, NHESP

### NHESP Estimated Habitats of Rare Wildlife

- NHESP Estimated Habitats of Rare Wildlife
- NHESP Estimated Habitats of Rare Wildlife



The Estimated Habitats of Rare Wildlife datalayer contains polygons in Massachusetts that are a subset of the Priority Habitats of Rare Species. Published as a map service by MassGIS.

MassGIS

# 803 Washington St



## FEMA National Flood Hazard Layer Polygons

- A: 1% Annual Chance of Flooding, no BFE
- AE: 1% Annual Chance of Flooding, with BFE
- AE: Regulatory Floodway
- AH: 1% Annual Chance of 1-3ft. Ponding, with BFE
- AC: 1% Annual Chance of 1-3ft. Sheet Flow Flooding, with BFE
- VE: High Risk Coastal Area
- D: Possible But Undetermined Hazard
- X: 0.2% Annual Chance of Flooding
- X: 1% Drainage Area < 1 Sq. Mi.
- X: Reduced Flood Risk due to Levee
- Area Not Included
- Area with no DFIRM - Paper FIRMs in Effect

## NHESP Priority Habitats of Rare Species



## NHESP Natural Communities



## NHESP Estimated Habitats of Rare Wildlife



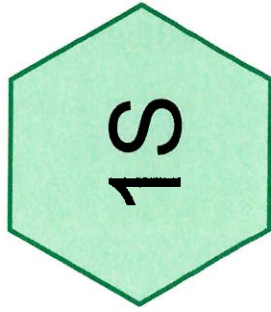
## NHESP Certified Vernal Pools



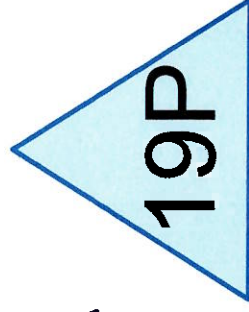
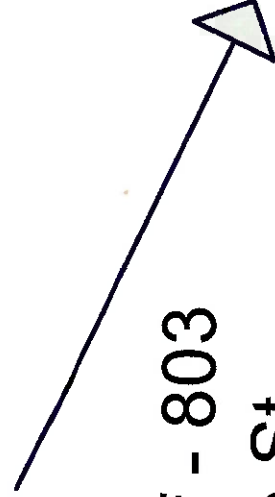
## Property Tax Parcels

MassMapper

Leaflet | Mapbox



Proposed Roof - 803  
Washington St



## Roof Infiltration



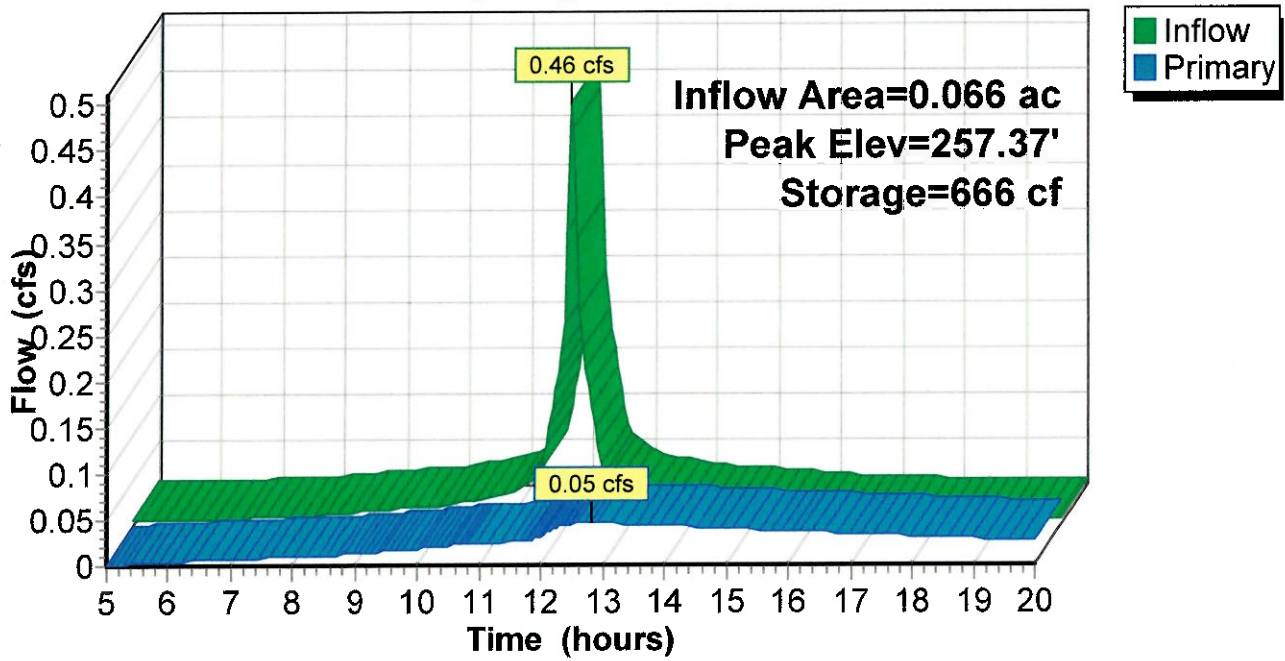
Routing Diagram for 803 Washington St-Franklin

Prepared by {enter your company name here}, Printed 1/16/2023  
HydroCAD® 10.00-26 s/n 09119 © 2020 HydroCAD Software Solutions LLC



Pond 19P: Roof Infiltration

Hydrograph



### 803 Washington St-Franklin

Type III 24-hr 100-Yr Rainfall=7.00"

Prepared by {enter your company name here}

Printed 1/16/2023

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### Summary for Pond 19P: Roof Infiltration

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.066 ac, 100.00% Impervious, Inflow Depth > 6.24" for 100-Yr event  
 Inflow = 0.46 cfs @ 12.07 hrs, Volume= 0.034 af  
 Outflow = 0.05 cfs @ 12.81 hrs, Volume= 0.031 af, Atten= 90%, Lag= 44.6 min  
 Primary = 0.05 cfs @ 12.81 hrs, Volume= 0.031 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 Peak Elev= 257.37' @ 12.81 hrs Surf.Area= 352 sf Storage= 666 cf

Plug-Flow detention time= 153.0 min calculated for 0.031 af (91% of inflow)  
 Center-of-Mass det. time= 122.8 min ( 855.6 - 732.8 )

Volume	Invert	Avail.Storage	Storage Description
#1A	254.50'	322 cf	<b>11.17'W x 31.50'L x 3.54'H Field A</b> 1,246 cf Overall - 440 cf Embedded = 806 cf x 40.0% Voids
#2A	255.00'	440 cf	<b>Cultec R-330XLHD x 8 Inside #1</b> Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap Row Length Adjustment= +1.50' x 7.45 sf x 2 rows
		762 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	254.50'	<b>2.410 in/hr Exfiltration over Surface area</b> Conductivity to Groundwater Elevation = 252.30' Phase-In= 0.50'

**Primary OutFlow** Max=0.05 cfs @ 12.81 hrs HW=257.37' (Free Discharge)

↑1=Exfiltration ( Controls 0.05 cfs)

**803 Washington St-Franklin**

Type III 24-hr 100-Yr Rainfall=7.00"

Prepared by {enter your company name here}

Printed 1/16/2023

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**Pond 19P: Roof Infiltration - Chamber Wizard Field A**

**Chamber Model = Cultec R-330XLHD (Cultec Recharger® 330XLHD)**

Effective Size= 47.8"W x 30.0"H => 7.45 sf x 7.00'L = 52.2 cf

Overall Size= 52.0"W x 30.5"H x 8.50'L with 1.50' Overlap

Row Length Adjustment= +1.50' x 7.45 sf x 2 rows

52.0" Wide + 6.0" Spacing = 58.0" C-C Row Spacing

4 Chambers/Row x 7.00' Long +1.50' Row Adjustment = 29.50' Row Length +12.0" End Stone x 2 = 31.50' Base Length

2 Rows x 52.0" Wide + 6.0" Spacing x 1 + 12.0" Side Stone x 2 = 11.17' Base Width

6.0" Base + 30.5" Chamber Height + 6.0" Cover = 3.54' Field Height

8 Chambers x 52.2 cf +1.50' Row Adjustment x 7.45 sf x 2 Rows = 439.6 cf Chamber Storage

1,245.8 cf Field - 439.6 cf Chambers = 806.2 cf Stone x 40.0% Voids = 322.5 cf Stone Storage

Chamber Storage + Stone Storage = 762.1 cf = 0.017 af

Overall Storage Efficiency = 61.2%

Overall System Size = 31.50' x 11.17' x 3.54'

8 Chambers

46.1 cy Field

29.9 cy Stone

