

July 22, 2026
Peter Stith, TAC Committee Chair
City of Portsmouth
1 Junkins Avenue
Portsmouth, New Hampshire 03801

Re: Subdivision Review | 20 Central Avenue, Tax Map 209, Lot 30

Dear Mr. Stith and Technical Advisory Committee (TAC) Members:

On behalf of Copley Properties (Copley), we are pleased to submit these responses to comments received for the 20 Central Avenue subdivision project. These comments were from the Portsmouth TAC Meeting on July 7, 2026. Please see below for these comments, in bold, followed by updated responses of how they have been addressed, in plain text.

1. Your existing condition shows 5 lots. Please show a record of merger by right or include a merger application.

A Voluntary Merger Lot Application is in progress and will be completed prior to Planning Board submission.

2. Please provide an easement plan and include all easement required for drainage across adjacent lots.

A draft easement plan is in progress and will be included in our Planning Board Submission.

3. Please provide foundation profiles for proposed properties abutting existing stormwater easements.

Foundation profiles have been drafted to show proposed foundation and basement elevations.

4. Provide test pit information and locations.

The updated V101 – Existing Survey Plan and C101 – Existing Conditions Plan showing the test pit locations have been provided. The test pit data is included in the Stormwater Report.

5. Show existing water and sewer services to the lot. Reuse if possible.

The applicant is currently coordinating with the Public Works Department to identify the locations of existing services; these will be added to the drawing set when available.

6. The underdrains to the rain garden should be at least 6" in diameter.

The Drainage plans and Rain Garden typical details have been updated per this comment.



7. Additional screening and buffering should be provided between the site and abutting residential uses.

The L-01 Landscaping Plan has been updated to address this comment.

We look forward to TAC review of this submission and feedback on the proposed design.

Sincerely,
Haley Ward, Inc.

Drew Olehowski, PE
Project Manager

DJO-nmt



HALEY WARD®

STORMWATER MANAGEMENT AND EROSION CONTROL PLAN

**TO THE CITY OF PORTSMOUTH
FOR 20 CENTRAL AVENUE**

Map 209, Lot 30 | Portsmouth, NH

APPLICANT:

Copley Properties, LLC

94 Portsmouth Avenue, Stratham, NH 03885



July 22, 2026
JN: 5010658.001

REPORT PREPARED BY:

Haley Ward, Inc.

200 Griffin Road, Unit 14 | Portsmouth, NH 03801

EXECUTIVE SUMMARY

This drainage analysis examines the pre-development (existing) and post-development (proposed) stormwater drainage patterns for the proposed residential redevelopment project at 20 Central Avenue in Portsmouth, NH. The site is shown on the City of Portsmouth Assessor's Tax Map 209 as Lot 30. The total size of the existing lot is approximately 28,972 square feet.

The development will subdivide the existing lot and provide for the construction of three (3) single-family homes, with associated landscaping, utilities, and driveways. The new buildings will be serviced by public water and sewer. The development has the potential to increase stormwater runoff to adjacent properties and therefore must be designed in a manner to prevent that occurrence. This will be done primarily by capturing stormwater runoff and routing it through appropriate stormwater facilities, designed to ensure that there will be no significant increase in peak runoff from the site as a result of this project.

The intent of this stormwater design is to comply with the requirements of Section 7.6.1.4 of the City of Portsmouth Site Plan Review Ordinance as related to post-development peak rate of runoff reduction and to improve the overall stormwater system as part of the redevelopment.

INTRODUCTION / PROJECT DESCRIPTION

This drainage report is designed to assist the owner, planning board, contractor, regulatory reviewer, and others in understanding the impact of the proposed development project on local surface water runoff. Bounding the site to the north and east are developed residential properties. The site is bound to the south and west by Central Avenue and Beechwood Street, respectively.

The proposed development will include the construction of single-family homes, decks, driveways, and walkways causing an increase in impervious cover. To offset the increase, two rain gardens have been designed for Proposed Lot 2 and 3. The rain gardens will collect roof runoff from either drip strips or gutters with downspouts. The rain gardens will be equipped with a beehive grate to guide flow for filtration into the existing stormwater systems. The site layouts and drainage designs are preliminary and intended for planning purposes only to show compliance with the zoning ordinances.

The applicant shall submit final site/stormwater design plans with an Operations and Maintenance Plan for review and approval as part of the Building Permit application.

This report includes information about the existing site necessary to analyze stormwater runoff. The report includes maps of pre- development and post-development



watersheds, subcatchment areas and calculations of runoff. The report provides a narrative of the stormwater runoff and describes numerically and graphically the surface water runoff patterns for this site. Proposed stormwater structures and methods will also be described, as well as erosion and sediment control practices. Included within the submittal is an Inspection and Long-Term Maintenance Plan for the proposed project. To fully understand the proposed site development the reader should also review the complete site plan set in addition to this report.

METHODOLOGY

"Extreme Precipitation" values from The Northeast Regional Climate Center (Cornell University) have been used for modeling purposes. These values have been used in this analysis, with a 15% addition to comply with local ordinances.

This report uses the US Soil Conservation Service (SCS) Method for estimating stormwater runoff. The SCS method is published in The National Engineering Handbook (NEH), Section 4 "Hydrology" and includes the Technical Release No. 20, (TR-20) "Computer Program for Project Formulation Hydrology", and Technical Release No. 55 (TR-55) "Urban Hydrology for Small Watersheds" methods. This report uses the HydroCAD version 10.20 program, written by HydroCAD Software Solutions LLC, Chocorua, N.H., to apply these methods for the calculation of runoff and for pond modeling. Rainfall data and runoff curve numbers are taken from "The Stormwater Management and Erosion Control Handbook for Urban and Developing Areas in New Hampshire."

Time of Concentration (T_c) is calculated by entering measured flow path data such as flow path type, length, slope and surface characteristics into the HydroCAD program. For the purposes of this report, a minimum time of concentration of 5 minutes is used.

The storm events used for the calculations in this report are the 2-year, 10-year, 25-year, and 50-year (24-hour) storms. Watershed basin boundaries have been delineated using topographic maps prepared by Haley Ward and field observations to confirm.



SITE SPECIFIC INFORMATION

Based on the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), Soil Survey of Rockingham County, New Hampshire the site is made up of one soil type:

Soil Symbol	Soil Name and Slopes
799	Urban land-Canton complex (3-15% slopes)

The physical characteristics of the existing lot consist of slopes from 3 to 15%, with the lot generally sloping down from Northwest to Southeast towards Beechwood Street. Elevations on the site range from 14 to 24 feet above mean sea level. The surrounding stormwater collects in the two (2) existing stormdrain easements, located on the southerly portion of the property and flowing west to east.

Four test pits were performed on this site, as shown on the Site Plans and Test Pit Logs included in this report. The seasonal high-water table generally ranges from 10 to 32 inches below ground surface. The soil is generally described as granular, friable, sandy loam to massive clay and fill. Hydrologic Soil Group (HSG) D soil is used for drainage analysis.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, Panel 33015C0259F, the project site is not in a special flood hazard area.

There are no protected natural resources on or directly adjacent to the subject property.

PRE-DEVELOPMENT DRAINAGE

In the pre-development condition, the site has been analyzed as two (2) subcatchment watershed basins based on localized topography and discharge location. A Pre-Development Hydrology map and HydroCAD model results have been provided.

Subcatchment 1 represents majority of the flow and the undeveloped grass area of the site. The flow area is generally from northwest to southeast with the northerly abutting area draining onto the site and the flow connecting into the existing catch basin, a part of the City's stormwater system and noted as Summation Point 1 (SP1). SP1 represents the southerly easement that exists along the southern boundary of the lot, generally flowing west to east.

Subcatchment 2 represents the southwest area, including majority of the existing dwelling on site. The flow area leads south onto Beechwood Street and is collected in the City's



stormwater system, denoted as Summation Point 2 (SP2). SP2 represents the northerly easement that exists along the southern boundary of the lot that runs parallel with SP1.

POST-DEVELOPMENT DRAINAGE

The proposed development has been designed to match the pre-development drainage patterns to the greatest extent feasible. In the post-development condition, the site has been analyzed as two (2) subcatchment basins. A Post-Development Hydrology map and HydroCAD model results have been provided.

Subcatchment 1A continues to represent the stormwater flow from the northerly abutting properties.

Subcatchment 1B represents the proposed swale along the northerly boundary of the property leading to the existing catch basin within Proposed Lot 3.

Subcatchment 1C represents the proposed grass area between dwellings and draining to a rain garden and directly to the southerly stormwater easement.

Subcatchments 1D, 1E, and 1F represent the roof runoff from the proposed drip trench collection systems along the abutting edge of each property.

Subcatchment 2A continues to represent the reduced western half of the site which drains into a rain garden and directly into the northerly stormwater easement.

Subcatchment 2B represents the flow generally from the proposed driveway and southerly grassed area of Lot 2, leading to Beechwood Street and into the City's stormwater system.

RUNOFF COMPARISON

Table 1: Pre-Development to Post-Development Comparison

	Q2 (CFS)		Q10 (CFS)		Q25 (CFS)		Q50 (CFS)		
Design Point	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Description
SP1	2.15	1.37	4.09	3.21	5.68	4.43	7.17	5.44	Southern Stormwater System
SP2	0.50	0.41	0.92	0.75	1.25	1.01	1.56	1.24	Northern Stormwater System

As shown in Table 1, post-development runoff rates are similar or less than those observed under pre-development conditions.



EROSION AND SEDIMENT CONTROL PRACTICES

During construction, the potential for erosion exists due to stormwater runoff. The contractor will be required to inspect and maintain all necessary erosion control measures, as well as installing any additional measures as required. All erosion control practices shall conform to "The Stormwater Management and Erosion Control Handbook for Urban and Developing Areas in New Hampshire." Some examples of erosion and sediment control measures to be utilized for this project during construction may include:

- Silt Soxx (or approved alternative) located at the toe of disturbed slopes
- Stabilized construction entrance at access point to the site
- Temporary mulching and seeding for disturbed areas
- Spraying water over disturbed areas to minimize wind erosion

After construction, permanent stabilization will be accomplished by permanent seeding, landscaping, and surfacing the access drives and parking areas with asphalt paving and other areas with impervious walkways.

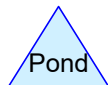
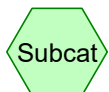
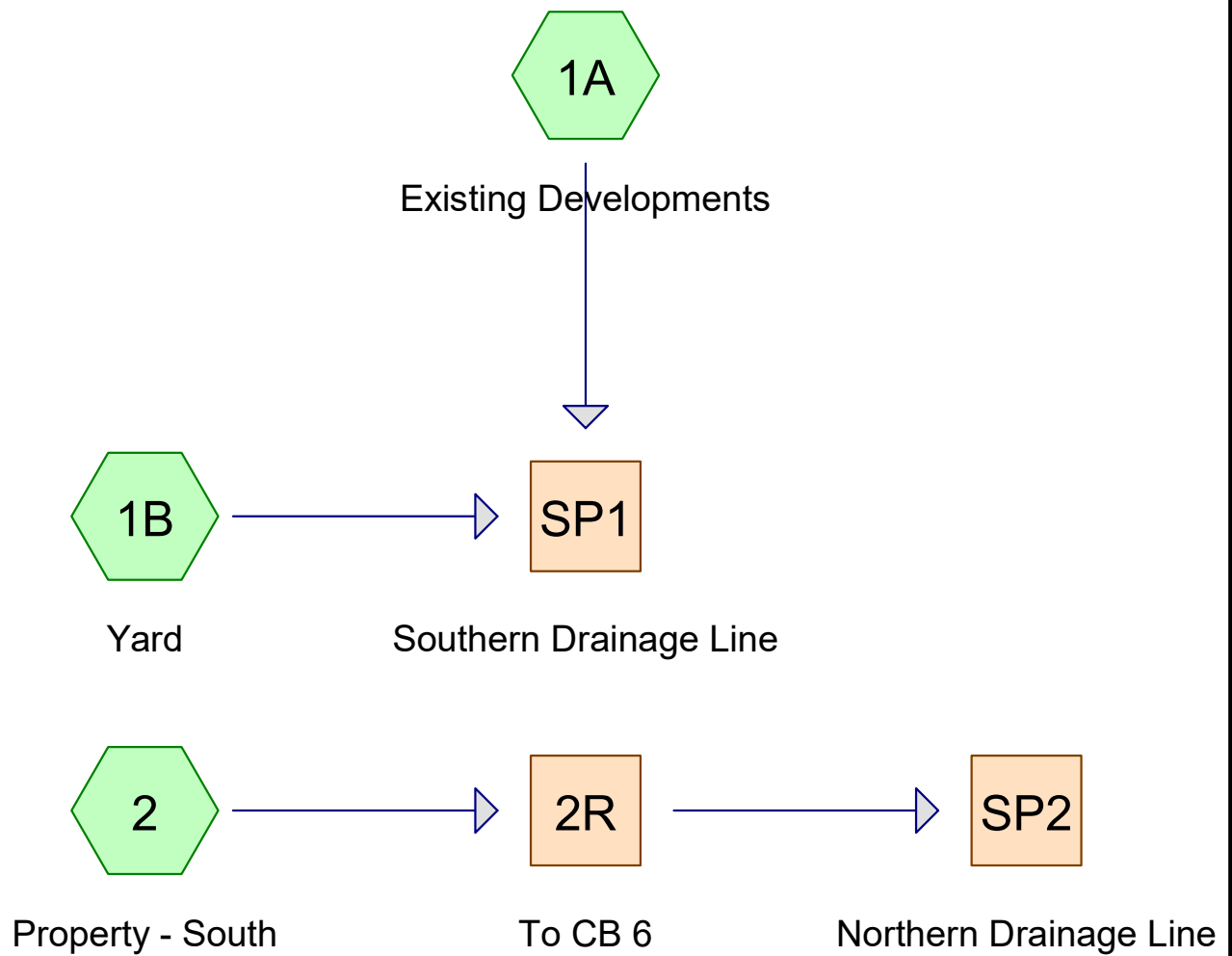
CONCLUSION

The proposed development has been designed to match the pre-development drainage patterns to the greatest extent feasible. With the design of the rain gardens connecting to the existing stormwater systems, the post-development runoff rates are effectively equivalent to or less than the pre-development runoff rates. Erosion and sediment control practices will be implemented for both the temporary condition during construction and for final stabilization after construction. Therefore, there are no negative impacts to downstream receptors or adjacent properties anticipated as a result of this project.



REFERENCES

1. UNH Stormwater Center, Comprehensive Environmental Inc., and NH Department of Environmental Services, "NH Stormwater Manual 2025" (2025). *UNH Stormwater Center*. 126.
2. Minnick, E.L. and H.T. Marshall. *Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire*, prepared by Rockingham County Conservation District, prepared for New Hampshire Department of Environmental Services, in cooperation with USDA Soil Conservation Service, August 1992.
3. HydroCAD Software Solution, LLC. *HydroCAD Stormwater Modeling System Version 10.20-9a* copyright 2026.



Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
48,695	80	>75% Grass cover, Good, HSG D (1A, 1B, 2)
525	73	Brush, Good, HSG D (2)
475	98	Paved parking, HSG D (2)
1,560	98	Roofs, HSG D (1B, 2)
2,130	98	Unconnected pavement, HSG D (1A, 1B, 2)
53,385	81	TOTAL AREA

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
0	HSG C	
53,385	HSG D	1A, 1B, 2
0	Other	
53,385		TOTAL AREA

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1A: Existing Developments Runoff Area=20,770 sf 1.64% Impervious Runoff Depth>1.78"
Tc=5.0 min CN=80 Runoff=0.99 cfs 3,079 cf

Subcatchment 1B: Yard Runoff Area=23,250 sf 8.39% Impervious Runoff Depth>1.85"
Tc=5.0 min UI Adjusted CN=81 Runoff=1.16 cfs 3,592 cf

Subcatchment 2: Property - South Runoff Area=9,365 sf 20.02% Impervious Runoff Depth>2.01"
Tc=5.0 min CN=83 Runoff=0.51 cfs 1,568 cf

Reach 2R: To CB 6 Avg. Flow Depth=0.01' Max Vel=2.04 fps Inflow=0.51 cfs 1,568 cf
n=0.013 L=25.0' S=0.1600 '/' Capacity=118.38 cfs Outflow=0.50 cfs 1,568 cf

Reach SP1: Southern Drainage Line Inflow=2.15 cfs 6,671 cf
Outflow=2.15 cfs 6,671 cf

Reach SP2: Northern Drainage Line Inflow=0.50 cfs 1,568 cf
Outflow=0.50 cfs 1,568 cf

Total Runoff Area = 53,385 sf Runoff Volume = 8,240 cf Average Runoff Depth = 1.85"
92.20% Pervious = 49,220 sf 7.80% Impervious = 4,165 sf

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1A: Existing Developments Runoff Area=20,770 sf 1.64% Impervious Runoff Depth>3.41"
Tc=5.0 min CN=80 Runoff=1.90 cfs 5,904 cf

Subcatchment 1B: Yard Runoff Area=23,250 sf 8.39% Impervious Runoff Depth>3.51"
Tc=5.0 min UI Adjusted CN=81 Runoff=2.19 cfs 6,800 cf

Subcatchment 2: Property - South Runoff Area=9,365 sf 20.02% Impervious Runoff Depth>3.71"
Tc=5.0 min CN=83 Runoff=0.93 cfs 2,896 cf

Reach 2R: To CB 6 Avg. Flow Depth=0.01' Max Vel=2.59 fps Inflow=0.93 cfs 2,896 cf
n=0.013 L=25.0' S=0.1600 '/' Capacity=118.38 cfs Outflow=0.92 cfs 2,895 cf

Reach SP1: Southern Drainage Line Inflow=4.09 cfs 12,705 cf
Outflow=4.09 cfs 12,705 cf

Reach SP2: Northern Drainage Line Inflow=0.92 cfs 2,895 cf
Outflow=0.92 cfs 2,895 cf

Total Runoff Area = 53,385 sf Runoff Volume = 15,600 cf Average Runoff Depth = 3.51"
92.20% Pervious = 49,220 sf 7.80% Impervious = 4,165 sf

Summary for Subcatchment 1A: Existing Developments

Runoff = 1.90 cfs @ 12.08 hrs, Volume= 5,904 cf, Depth> 3.41"
 Routed to Reach SP1 : Southern Drainage Line

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr Rainfall=5.59"

Area (sf)	CN	Description
340	98	Unconnected pavement, HSG D
20,430	80	>75% Grass cover, Good, HSG D
20,770	80	Weighted Average
20,430		98.36% Pervious Area
340		1.64% Impervious Area
340		100.00% Unconnected

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

Summary for Subcatchment 1B: Yard

Runoff = 2.19 cfs @ 12.08 hrs, Volume= 6,800 cf, Depth> 3.51"
 Routed to Reach SP1 : Southern Drainage Line

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr Rainfall=5.59"

Area (sf)	CN	Adj	Description
21,300	80		>75% Grass cover, Good, HSG D
1,580	98		Unconnected pavement, HSG D
370	98		Roofs, HSG D
23,250	82	81	Weighted Average, UI Adjusted
21,300			91.61% Pervious Area
1,950			8.39% Impervious Area
1,580			81.03% Unconnected

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

Summary for Subcatchment 2: Property - South

Runoff = 0.93 cfs @ 12.07 hrs, Volume= 2,896 cf, Depth> 3.71"
 Routed to Reach 2R : To CB 6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr Rainfall=5.59"

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Type III 24-hr 10-Yr Rainfall=5.59"

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Area (sf)	CN	Description
6,965	80	>75% Grass cover, Good, HSG D
210	98	Unconnected pavement, HSG D
525	73	Brush, Good, HSG D
475	98	Paved parking, HSG D
1,190	98	Roofs, HSG D
9,365	83	Weighted Average
7,490		79.98% Pervious Area
1,875		20.02% Impervious Area
210		11.20% Unconnected

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

Summary for Reach 2R: To CB 6

Inflow Area = 9,365 sf, 20.02% Impervious, Inflow Depth > 3.71" for 10-Yr event
 Inflow = 0.93 cfs @ 12.07 hrs, Volume= 2,896 cf
 Outflow = 0.92 cfs @ 12.08 hrs, Volume= 2,895 cf, Atten= 1%, Lag= 0.3 min
 Routed to Reach SP2 : Northern Drainage Line

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Max. Velocity= 2.59 fps, Min. Travel Time= 0.2 min
 Avg. Velocity= 0.91 fps, Avg. Travel Time= 0.5 min

Peak Storage= 9 cf @ 12.08 hrs
 Average Depth at Peak Storage= 0.01' , Surface Width= 26.05'
 Bank-Full Depth= 0.25' Flow Area= 6.6 sf, Capacity= 118.38 cfs

26.00' x 0.25' deep channel, n= 0.013 Asphalt, smooth
 Side Slope Z-value= 2.0 ' ' Top Width= 27.00'
 Length= 25.0' Slope= 0.1600 ' '
 Inlet Invert= 15.15', Outlet Invert= 11.15'

**Summary for Reach SP1: Southern Drainage Line**

Inflow Area = 44,020 sf, 5.20% Impervious, Inflow Depth > 3.46" for 10-Yr event
 Inflow = 4.09 cfs @ 12.08 hrs, Volume= 12,705 cf
 Outflow = 4.09 cfs @ 12.08 hrs, Volume= 12,705 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Reach SP2: Northern Drainage Line

Inflow Area = 9,365 sf, 20.02% Impervious, Inflow Depth > 3.71" for 10-Yr event
Inflow = 0.92 cfs @ 12.08 hrs, Volume= 2,895 cf
Outflow = 0.92 cfs @ 12.08 hrs, Volume= 2,895 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1A: Existing Developments Runoff Area=20,770 sf 1.64% Impervious Runoff Depth>4.77"
Tc=5.0 min CN=80 Runoff=2.65 cfs 8,248 cf

Subcatchment 1B: Yard Runoff Area=23,250 sf 8.39% Impervious Runoff Depth>4.88"
Tc=5.0 min UI Adjusted CN=81 Runoff=3.03 cfs 9,448 cf

Subcatchment 2: Property - South Runoff Area=9,365 sf 20.02% Impervious Runoff Depth>5.10"
Tc=5.0 min CN=83 Runoff=1.27 cfs 3,980 cf

Reach 2R: To CB 6 Avg. Flow Depth=0.02' Max Vel=2.92 fps Inflow=1.27 cfs 3,980 cf
n=0.013 L=25.0' S=0.1600 '/' Capacity=118.38 cfs Outflow=1.25 cfs 3,980 cf

Reach SP1: Southern Drainage Line Inflow=5.68 cfs 17,696 cf
Outflow=5.68 cfs 17,696 cf

Reach SP2: Northern Drainage Line Inflow=1.25 cfs 3,980 cf
Outflow=1.25 cfs 3,980 cf

Total Runoff Area = 53,385 sf Runoff Volume = 21,677 cf Average Runoff Depth = 4.87"
92.20% Pervious = 49,220 sf 7.80% Impervious = 4,165 sf

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1A: Existing Developments Runoff Area=20,770 sf 1.64% Impervious Runoff Depth>6.08"
Tc=5.0 min CN=80 Runoff=3.36 cfs 10,527 cf

Subcatchment 1B: Yard Runoff Area=23,250 sf 8.39% Impervious Runoff Depth>6.20"
Tc=5.0 min UI Adjusted CN=81 Runoff=3.82 cfs 12,017 cf

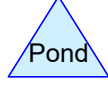
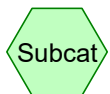
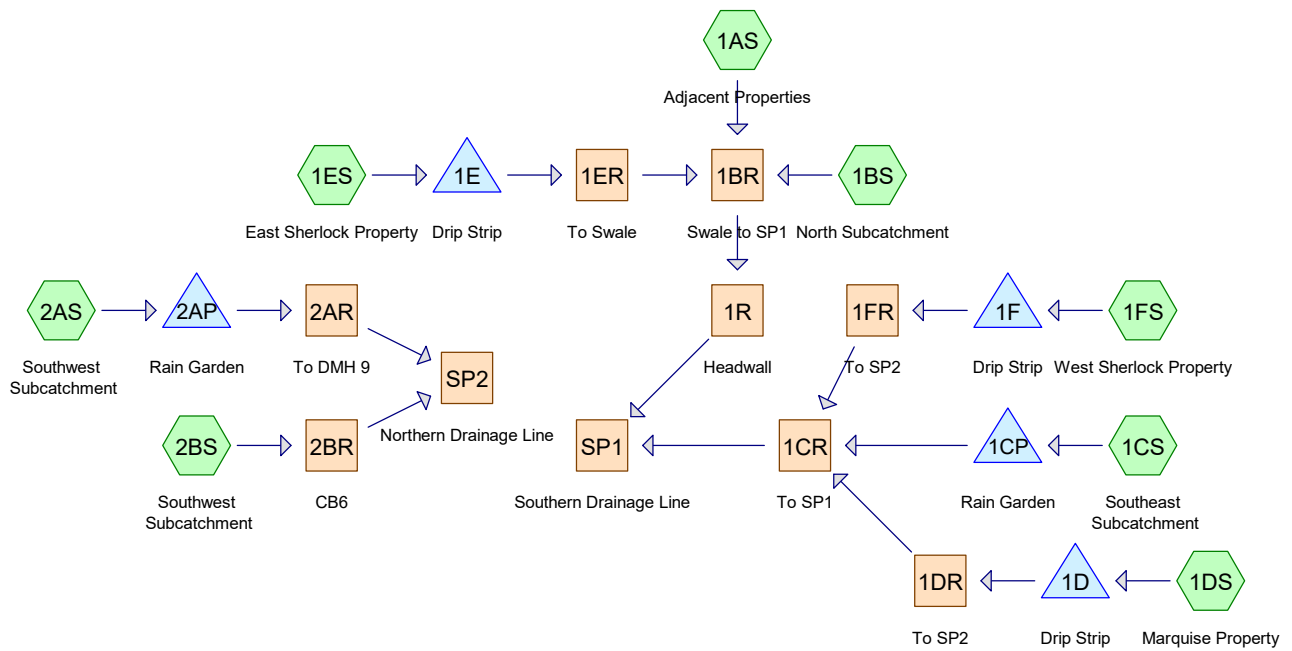
Subcatchment 2: Property - South Runoff Area=9,365 sf 20.02% Impervious Runoff Depth>6.44"
Tc=5.0 min CN=83 Runoff=1.58 cfs 5,028 cf

Reach 2R: To CB 6 Avg. Flow Depth=0.02' Max Vel=3.19 fps Inflow=1.58 cfs 5,028 cf
n=0.013 L=25.0' S=0.1600 '/' Capacity=118.38 cfs Outflow=1.56 cfs 5,027 cf

Reach SP1: Southern Drainage Line Inflow=7.17 cfs 22,544 cf
Outflow=7.17 cfs 22,544 cf

Reach SP2: Northern Drainage Line Inflow=1.56 cfs 5,027 cf
Outflow=1.56 cfs 5,027 cf

Total Runoff Area = 53,385 sf Runoff Volume = 27,572 cf Average Runoff Depth = 6.20"
92.20% Pervious = 49,220 sf 7.80% Impervious = 4,165 sf



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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
11,405	74	>75% Grass cover, Good, HSG C (1CS)
33,120	80	>75% Grass cover, Good, HSG D (1AS, 1BS, 2AS, 2BS)
1,865	98	Paved parking, HSG D (1AS, 1CS, 2BS)
3,200	98	Roofs, HSG D (1DS, 1ES, 1FS, 2AS)
3,795	98	Unconnected pavement, HSG D (1BS, 1CS, 2AS, 2BS)
53,385	82	TOTAL AREA

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Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
11,405	HSG C	1CS
41,980	HSG D	1AS, 1BS, 1CS, 1DS, 1ES, 1FS, 2AS, 2BS
0	Other	
53,385		TOTAL AREA

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1AS: Adjacent Properties	Runoff Area=20,770 sf 1.64% Impervious Runoff Depth>1.78" Tc=5.0 min CN=80 Runoff=0.99 cfs 3,079 cf
Subcatchment 1BS: North Subcatchment	Runoff Area=8,190 sf 11.36% Impervious Runoff Depth>1.85" Tc=5.0 min UI Adjusted CN=81 Runoff=0.41 cfs 1,265 cf
Subcatchment 1CS: Southeast	Runoff Area=14,290 sf 20.19% Impervious Runoff Depth>1.63" Tc=5.0 min UI Adjusted CN=78 Runoff=0.62 cfs 1,946 cf
Subcatchment 1DS: Marquise Property	Runoff Area=680 sf 100.00% Impervious Runoff Depth>3.44" Tc=5.0 min CN=98 Runoff=0.06 cfs 195 cf
Subcatchment 1ES: East Sherlock Property	Runoff Area=685 sf 100.00% Impervious Runoff Depth>3.45" Tc=0.0 min CN=98 Runoff=0.06 cfs 197 cf
Subcatchment 1FS: West Sherlock Property	Runoff Area=875 sf 100.00% Impervious Runoff Depth>3.44" Tc=5.0 min CN=98 Runoff=0.07 cfs 251 cf
Subcatchment 2AS: Southwest	Runoff Area=5,315 sf 40.92% Impervious Runoff Depth>2.34" Tc=5.0 min CN=87 Runoff=0.33 cfs 1,038 cf
Subcatchment 2BS: Southwest	Runoff Area=2,580 sf 11.24% Impervious Runoff Depth>1.93" Tc=5.0 min CN=82 Runoff=0.13 cfs 415 cf
Reach 1BR: Swale to SP1	Avg. Flow Depth=0.10' Max Vel=2.03 fps Inflow=1.45 cfs 4,397 cf n=0.030 L=227.0' S=0.0401 '/' Capacity=23.57 cfs Outflow=1.36 cfs 4,385 cf
Reach 1CR: To SP1	Avg. Flow Depth=0.02' Max Vel=0.49 fps Inflow=0.51 cfs 1,073 cf n=0.025 L=161.0' S=0.0093 '/' Capacity=64.03 cfs Outflow=0.42 cfs 1,073 cf
Reach 1DR: To SP2	Inflow=0.06 cfs 45 cf Outflow=0.06 cfs 45 cf
Reach 1ER: To Swale	Avg. Flow Depth=0.02' Max Vel=0.49 fps Inflow=0.07 cfs 53 cf n=0.033 L=60.0' S=0.0183 '/' Capacity=10.72 cfs Outflow=0.05 cfs 53 cf
Reach 1FR: To SP2	Avg. Flow Depth=0.00' Max Vel=0.13 fps Inflow=0.02 cfs 15 cf n=0.030 L=660.0' S=0.0079 '/' Capacity=21.43 cfs Outflow=0.00 cfs 15 cf
Reach 1R: Headwall	Avg. Flow Depth=0.39' Max Vel=4.71 fps Inflow=1.36 cfs 4,385 cf 12.0" Round Pipe n=0.025 L=58.3' S=0.0497 '/' Capacity=4.13 cfs Outflow=1.35 cfs 4,384 cf
Reach 2AR: To DMH 9	Avg. Flow Depth=0.16' Max Vel=2.66 fps Inflow=0.32 cfs 681 cf 24.0" Round Pipe n=0.012 L=158.0' S=0.0094 '/' Capacity=23.80 cfs Outflow=0.31 cfs 681 cf
Reach 2BR: CB6	Avg. Flow Depth=0.01' Max Vel=0.67 fps Inflow=0.13 cfs 415 cf n=0.013 L=158.0' S=0.0222 '/' Capacity=136.36 cfs Outflow=0.12 cfs 414 cf

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Type III 24-hr 2-Yr Rainfall=3.68"

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Reach SP1: Southern Drainage Line

Inflow=1.37 cfs 5,457 cf

Outflow=1.37 cfs 5,457 cf

Reach SP2: Northern Drainage Line

Inflow=0.41 cfs 1,095 cf

Outflow=0.41 cfs 1,095 cf

Pond 1CP: Rain GardenPeak Elev=11.93' Storage=389 cf Inflow=0.62 cfs 1,946 cf
Discarded=0.02 cfs 739 cf Primary=0.47 cfs 1,013 cf Outflow=0.49 cfs 1,752 cf**Pond 1D: Drip Strip**Peak Elev=22.25' Storage=56 cf Inflow=0.06 cfs 195 cf
Discarded=0.00 cfs 142 cf Primary=0.06 cfs 45 cf Outflow=0.06 cfs 188 cf**Pond 1E: Drip Strip**Peak Elev=16.56' Storage=51 cf Inflow=0.06 cfs 197 cf
Discarded=0.00 cfs 138 cf Primary=0.07 cfs 53 cf Outflow=0.07 cfs 191 cf**Pond 1F: Drip Strip**Peak Elev=18.62' Storage=99 cf Inflow=0.07 cfs 251 cf
Discarded=0.01 cfs 233 cf Primary=0.02 cfs 15 cf Outflow=0.02 cfs 248 cf**Pond 2AP: Rain Garden**Peak Elev=13.67' Storage=67 cf Inflow=0.33 cfs 1,038 cf
Discarded=0.01 cfs 348 cf Primary=0.32 cfs 681 cf Outflow=0.33 cfs 1,029 cf**Total Runoff Area = 53,385 sf Runoff Volume = 8,387 cf Average Runoff Depth = 1.89"**
83.40% Pervious = 44,525 sf 16.60% Impervious = 8,860 sf

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Type III 24-hr 10-Yr Rainfall=5.59"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1AS: Adjacent Properties	Runoff Area=20,770 sf 1.64% Impervious Runoff Depth>3.41" Tc=5.0 min CN=80 Runoff=1.90 cfs 5,904 cf
Subcatchment 1BS: North Subcatchment	Runoff Area=8,190 sf 11.36% Impervious Runoff Depth>3.51" Tc=5.0 min UI Adjusted CN=81 Runoff=0.77 cfs 2,395 cf
Subcatchment 1CS: Southeast	Runoff Area=14,290 sf 20.19% Impervious Runoff Depth>3.22" Tc=5.0 min UI Adjusted CN=78 Runoff=1.24 cfs 3,831 cf
Subcatchment 1DS: Marquise Property	Runoff Area=680 sf 100.00% Impervious Runoff Depth>5.35" Tc=5.0 min CN=98 Runoff=0.09 cfs 303 cf
Subcatchment 1ES: East Sherlock Property	Runoff Area=685 sf 100.00% Impervious Runoff Depth>5.35" Tc=0.0 min CN=98 Runoff=0.10 cfs 306 cf
Subcatchment 1FS: West Sherlock Property	Runoff Area=875 sf 100.00% Impervious Runoff Depth>5.35" Tc=5.0 min CN=98 Runoff=0.11 cfs 390 cf
Subcatchment 2AS: Southwest	Runoff Area=5,315 sf 40.92% Impervious Runoff Depth>4.12" Tc=5.0 min CN=87 Runoff=0.58 cfs 1,826 cf
Subcatchment 2BS: Southwest	Runoff Area=2,580 sf 11.24% Impervious Runoff Depth>3.61" Tc=5.0 min CN=82 Runoff=0.25 cfs 776 cf
Reach 1BR: Swale to SP1	Avg. Flow Depth=0.14' Max Vel=2.59 fps Inflow=2.76 cfs 8,430 cf n=0.030 L=227.0' S=0.0401 '/' Capacity=23.57 cfs Outflow=2.61 cfs 8,413 cf
Reach 1CR: To SP1	Avg. Flow Depth=0.04' Max Vel=0.66 fps Inflow=0.95 cfs 2,958 cf n=0.025 L=161.0' S=0.0093 '/' Capacity=64.03 cfs Outflow=0.91 cfs 2,957 cf
Reach 1DR: To SP2	Inflow=0.08 cfs 122 cf Outflow=0.08 cfs 122 cf
Reach 1ER: To Swale	Avg. Flow Depth=0.03' Max Vel=0.57 fps Inflow=0.09 cfs 130 cf n=0.033 L=60.0' S=0.0183 '/' Capacity=10.72 cfs Outflow=0.08 cfs 130 cf
Reach 1FR: To SP2	Avg. Flow Depth=0.01' Max Vel=0.17 fps Inflow=0.12 cfs 103 cf n=0.030 L=660.0' S=0.0079 '/' Capacity=21.43 cfs Outflow=0.02 cfs 103 cf
Reach 1R: Headwall	Avg. Flow Depth=0.58' Max Vel=5.53 fps Inflow=2.61 cfs 8,413 cf 12.0" Round Pipe n=0.025 L=58.3' S=0.0497 '/' Capacity=4.13 cfs Outflow=2.58 cfs 8,411 cf
Reach 2AR: To DMH 9	Avg. Flow Depth=0.21' Max Vel=3.13 fps Inflow=0.55 cfs 1,402 cf 24.0" Round Pipe n=0.012 L=158.0' S=0.0094 '/' Capacity=23.80 cfs Outflow=0.53 cfs 1,402 cf
Reach 2BR: CB6	Avg. Flow Depth=0.01' Max Vel=0.85 fps Inflow=0.25 cfs 776 cf n=0.013 L=158.0' S=0.0222 '/' Capacity=136.36 cfs Outflow=0.24 cfs 775 cf

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Type III 24-hr 10-Yr Rainfall=5.59"

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Reach SP1: Southern Drainage LineInflow=3.21 cfs 11,369 cf
Outflow=3.21 cfs 11,369 cf**Reach SP2: Northern Drainage Line**Inflow=0.75 cfs 2,177 cf
Outflow=0.75 cfs 2,177 cf**Pond 1CP: Rain Garden**Peak Elev=13.03' Storage=591 cf Inflow=1.24 cfs 3,831 cf
Discarded=0.02 cfs 823 cf Primary=0.89 cfs 2,733 cf Outflow=0.90 cfs 3,556 cf**Pond 1D: Drip Strip**Peak Elev=22.26' Storage=56 cf Inflow=0.09 cfs 303 cf
Discarded=0.00 cfs 165 cf Primary=0.08 cfs 122 cf Outflow=0.09 cfs 287 cf**Pond 1E: Drip Strip**Peak Elev=16.57' Storage=51 cf Inflow=0.10 cfs 306 cf
Discarded=0.00 cfs 161 cf Primary=0.09 cfs 130 cf Outflow=0.10 cfs 291 cf**Pond 1F: Drip Strip**Peak Elev=18.68' Storage=105 cf Inflow=0.11 cfs 390 cf
Discarded=0.01 cfs 271 cf Primary=0.12 cfs 103 cf Outflow=0.13 cfs 374 cf**Pond 2AP: Rain Garden**Peak Elev=13.89' Storage=84 cf Inflow=0.58 cfs 1,826 cf
Discarded=0.01 cfs 387 cf Primary=0.55 cfs 1,402 cf Outflow=0.56 cfs 1,789 cf**Total Runoff Area = 53,385 sf Runoff Volume = 15,732 cf Average Runoff Depth = 3.54"**
83.40% Pervious = 44,525 sf 16.60% Impervious = 8,860 sf

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Type III 24-hr 10-Yr Rainfall=5.59"

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Summary for Subcatchment 1AS: Adjacent Properties

Runoff = 1.90 cfs @ 12.08 hrs, Volume= 5,904 cf, Depth> 3.41"
 Routed to Reach 1BR : Swale to SP1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr Rainfall=5.59"

Area (sf)	CN	Description
340	98	Paved parking, HSG D
20,430	80	>75% Grass cover, Good, HSG D
20,770	80	Weighted Average
20,430		98.36% Pervious Area
340		1.64% Impervious Area

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

Summary for Subcatchment 1BS: North Subcatchment

Runoff = 0.77 cfs @ 12.08 hrs, Volume= 2,395 cf, Depth> 3.51"
 Routed to Reach 1BR : Swale to SP1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr Rainfall=5.59"

Area (sf)	CN	Adj	Description
7,260	80		>75% Grass cover, Good, HSG D
930	98		Unconnected pavement, HSG D
8,190	82	81	Weighted Average, UI Adjusted
7,260			88.64% Pervious Area
930			11.36% Impervious Area
930			100.00% Unconnected

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

Summary for Subcatchment 1CS: Southeast Subcatchment

Runoff = 1.24 cfs @ 12.08 hrs, Volume= 3,831 cf, Depth> 3.22"
 Routed to Pond 1CP : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr Rainfall=5.59"

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Type III 24-hr 10-Yr Rainfall=5.59"

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Area (sf)	CN	Adj	Description
11,405	74		>75% Grass cover, Good, HSG C
1,295	98		Paved parking, HSG D
1,590	98		Unconnected pavement, HSG D
14,290	79	78	Weighted Average, UI Adjusted
11,405			79.81% Pervious Area
2,885			20.19% Impervious Area
1,590			55.11% Unconnected

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

Summary for Subcatchment 1DS: Marquise Property

Runoff = 0.09 cfs @ 12.07 hrs, Volume= 303 cf, Depth> 5.35"
 Routed to Pond 1D : Drip Strip

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr Rainfall=5.59"

Area (sf)	CN	Description
680	98	Roofs, HSG D
680		100.00% Impervious Area

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

Summary for Subcatchment 1ES: East Sherlock Property

Runoff = 0.10 cfs @ 12.00 hrs, Volume= 306 cf, Depth> 5.35"
 Routed to Pond 1E : Drip Strip

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr Rainfall=5.59"

Area (sf)	CN	Description
685	98	Roofs, HSG D
685		100.00% Impervious Area

Summary for Subcatchment 1FS: West Sherlock Property

Runoff = 0.11 cfs @ 12.07 hrs, Volume= 390 cf, Depth> 5.35"
 Routed to Pond 1F : Drip Strip

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr Rainfall=5.59"

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Type III 24-hr 10-Yr Rainfall=5.59"

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Area (sf)	CN	Description
875	98	Roofs, HSG D
875		100.00% Impervious Area

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

Summary for Subcatchment 2AS: Southwest Subcatchment

Runoff = 0.58 cfs @ 12.07 hrs, Volume= 1,826 cf, Depth> 4.12"
 Routed to Pond 2AP : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr Rainfall=5.59"

Area (sf)	CN	Description
1,215	98	Unconnected pavement, HSG D
960	98	Roofs, HSG D
3,140	80	>75% Grass cover, Good, HSG D
5,315	87	Weighted Average
3,140		59.08% Pervious Area
2,175		40.92% Impervious Area
1,215		55.86% Unconnected

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

Summary for Subcatchment 2BS: Southwest Subcatchment

Runoff = 0.25 cfs @ 12.07 hrs, Volume= 776 cf, Depth> 3.61"
 Routed to Reach 2BR : CB6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr Rainfall=5.59"

Area (sf)	CN	Description
230	98	Paved parking, HSG D
60	98	Unconnected pavement, HSG D
2,290	80	>75% Grass cover, Good, HSG D
2,580	82	Weighted Average
2,290		88.76% Pervious Area
290		11.24% Impervious Area
60		20.69% Unconnected

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

Summary for Reach 1BR: Swale to SP1

Inflow Area = 29,645 sf, 6.59% Impervious, Inflow Depth > 3.41" for 10-Yr event
 Inflow = 2.76 cfs @ 12.08 hrs, Volume= 8,430 cf
 Outflow = 2.61 cfs @ 12.12 hrs, Volume= 8,413 cf, Atten= 5%, Lag= 2.6 min
 Routed to Reach 1R : Headwall

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Max. Velocity= 2.59 fps, Min. Travel Time= 1.5 min
 Avg. Velocity= 0.67 fps, Avg. Travel Time= 5.7 min

Peak Storage= 240 cf @ 12.10 hrs
 Average Depth at Peak Storage= 0.14' , Surface Width= 7.85'
 Bank-Full Depth= 0.50' Flow Area= 4.3 sf, Capacity= 23.57 cfs

7.00' x 0.50' deep channel, n= 0.030 Earth, grassed & winding
 Side Slope Z-value= 3.0 '/' Top Width= 10.00'
 Length= 227.0' Slope= 0.0401 '/'
 Inlet Invert= 24.00', Outlet Invert= 14.90'



Summary for Reach 1CR: To SP1

Inflow Area = 15,845 sf, 28.02% Impervious, Inflow Depth = 2.24" for 10-Yr event
 Inflow = 0.95 cfs @ 12.15 hrs, Volume= 2,958 cf
 Outflow = 0.91 cfs @ 12.26 hrs, Volume= 2,957 cf, Atten= 4%, Lag= 7.1 min
 Routed to Reach SP1 : Southern Drainage Line

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Max. Velocity= 0.66 fps, Min. Travel Time= 4.1 min
 Avg. Velocity= 0.21 fps, Avg. Travel Time= 12.5 min

Peak Storage= 222 cf @ 12.20 hrs
 Average Depth at Peak Storage= 0.04' , Surface Width= 35.24'
 Bank-Full Depth= 0.50' Flow Area= 18.3 sf, Capacity= 64.03 cfs

35.00' x 0.50' deep channel, n= 0.025 Earth, clean & winding
 Side Slope Z-value= 3.0 '/' Top Width= 38.00'
 Length= 161.0' Slope= 0.0093 '/'
 Inlet Invert= 14.50', Outlet Invert= 13.00'



Summary for Reach 1DR: To SP2

Inflow Area = 680 sf, 100.00% Impervious, Inflow Depth = 2.15" for 10-Yr event
 Inflow = 0.08 cfs @ 12.08 hrs, Volume= 122 cf
 Outflow = 0.08 cfs @ 12.08 hrs, Volume= 122 cf, Atten= 0%, Lag= 0.0 min
 Routed to Reach 1CR : To SP1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Reach 1ER: To Swale

Inflow Area = 685 sf, 100.00% Impervious, Inflow Depth = 2.28" for 10-Yr event
 Inflow = 0.09 cfs @ 12.01 hrs, Volume= 130 cf
 Outflow = 0.08 cfs @ 12.06 hrs, Volume= 130 cf, Atten= 10%, Lag= 3.1 min
 Routed to Reach 1BR : Swale to SP1

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Max. Velocity= 0.57 fps, Min. Travel Time= 1.7 min
 Avg. Velocity= 0.23 fps, Avg. Travel Time= 4.4 min

Peak Storage= 9 cf @ 12.03 hrs
 Average Depth at Peak Storage= 0.03', Surface Width= 5.18'
 Bank-Full Depth= 0.50' Flow Area= 3.3 sf, Capacity= 10.72 cfs

5.00' x 0.50' deep channel, n= 0.033 Earth, grassed & winding
 Side Slope Z-value= 3.0 ' / ' Top Width= 8.00'
 Length= 60.0' Slope= 0.0183 ' / '
 Inlet Invert= 17.10', Outlet Invert= 16.00'



Summary for Reach 1FR: To SP2

Inflow Area = 875 sf, 100.00% Impervious, Inflow Depth = 1.41" for 10-Yr event
 Inflow = 0.12 cfs @ 12.11 hrs, Volume= 103 cf
 Outflow = 0.02 cfs @ 13.63 hrs, Volume= 103 cf, Atten= 86%, Lag= 91.2 min
 Routed to Reach 1CR : To SP1

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Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Max. Velocity= 0.17 fps, Min. Travel Time= 66.7 min

Avg. Velocity = 0.13 fps, Avg. Travel Time= 84.3 min

Peak Storage= 65 cf @ 12.52 hrs

Average Depth at Peak Storage= 0.01' , Surface Width= 15.04'

Bank-Full Depth= 0.50' Flow Area= 8.3 sf, Capacity= 21.43 cfs

15.00' x 0.50' deep channel, n= 0.030 Earth, grassed & winding

Side Slope Z-value= 3.0 '/' Top Width= 18.00'

Length= 660.0' Slope= 0.0079 '/'

Inlet Invert= 19.20', Outlet Invert= 14.00'

**Summary for Reach 1R: Headwall**

Inflow Area = 29,645 sf, 6.59% Impervious, Inflow Depth > 3.41" for 10-Yr event

Inflow = 2.61 cfs @ 12.12 hrs, Volume= 8,413 cf

Outflow = 2.58 cfs @ 12.12 hrs, Volume= 8,411 cf, Atten= 1%, Lag= 0.3 min

Routed to Reach SP1 : Southern Drainage Line

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Max. Velocity= 5.53 fps, Min. Travel Time= 0.2 min

Avg. Velocity = 2.01 fps, Avg. Travel Time= 0.5 min

Peak Storage= 27 cf @ 12.12 hrs

Average Depth at Peak Storage= 0.58' , Surface Width= 0.99'

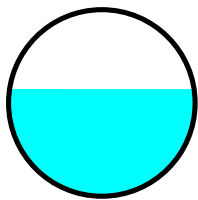
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 4.13 cfs

12.0" Round Pipe

n= 0.025 Earth, clean & winding

Length= 58.3' Slope= 0.0497 '/'

Inlet Invert= 14.90', Outlet Invert= 12.00'



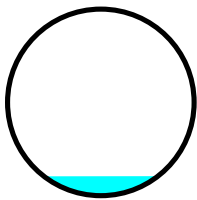
Summary for Reach 2AR: To DMH 9

Inflow Area = 5,315 sf, 40.92% Impervious, Inflow Depth = 3.17" for 10-Yr event
Inflow = 0.55 cfs @ 12.10 hrs, Volume= 1,402 cf
Outflow = 0.53 cfs @ 12.12 hrs, Volume= 1,402 cf, Atten= 4%, Lag= 1.4 min
Routed to Reach SP2 : Northern Drainage Line

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.13 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.04 fps, Avg. Travel Time= 2.5 min

Peak Storage= 28 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.21', Surface Width= 1.22'
Bank-Full Depth= 2.00' Flow Area= 3.1 sf, Capacity= 23.80 cfs

24.0" Round Pipe
n= 0.012 Corrugated PP, smooth interior
Length= 158.0' Slope= 0.0094 '/
Inlet Invert= 9.77', Outlet Invert= 8.28'

**Summary for Reach 2BR: CB6**

Inflow Area = 2,580 sf, 11.24% Impervious, Inflow Depth > 3.61" for 10-Yr event
Inflow = 0.25 cfs @ 12.07 hrs, Volume= 776 cf
Outflow = 0.24 cfs @ 12.16 hrs, Volume= 775 cf, Atten= 6%, Lag= 5.1 min
Routed to Reach SP2 : Northern Drainage Line

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.85 fps, Min. Travel Time= 3.1 min
Avg. Velocity = 0.50 fps, Avg. Travel Time= 5.2 min

Peak Storage= 44 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.01', Surface Width= 25.07'
Bank-Full Depth= 0.50' Flow Area= 13.3 sf, Capacity= 136.36 cfs

25.00' x 0.50' deep channel, n= 0.013 Asphalt, smooth
Side Slope Z-value= 3.0 '/' Top Width= 28.00'
Length= 158.0' Slope= 0.0222 '/
Inlet Invert= 19.00', Outlet Invert= 15.50'



Summary for Reach SP1: Southern Drainage Line

Inflow Area = 45,490 sf, 14.06% Impervious, Inflow Depth > 3.00" for 10-Yr event
 Inflow = 3.21 cfs @ 12.14 hrs, Volume= 11,369 cf
 Outflow = 3.21 cfs @ 12.14 hrs, Volume= 11,369 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Reach SP2: Northern Drainage Line

Inflow Area = 7,895 sf, 31.22% Impervious, Inflow Depth > 3.31" for 10-Yr event
 Inflow = 0.75 cfs @ 12.14 hrs, Volume= 2,177 cf
 Outflow = 0.75 cfs @ 12.14 hrs, Volume= 2,177 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Summary for Pond 1CP: Rain Garden

Inflow Area = 14,290 sf, 20.19% Impervious, Inflow Depth > 3.22" for 10-Yr event
 Inflow = 1.24 cfs @ 12.08 hrs, Volume= 3,831 cf
 Outflow = 0.90 cfs @ 12.16 hrs, Volume= 3,556 cf, Atten= 27%, Lag= 4.8 min
 Discarded = 0.02 cfs @ 9.60 hrs, Volume= 823 cf
 Primary = 0.89 cfs @ 12.16 hrs, Volume= 2,733 cf

Routed to Reach 1CR : To SP1

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 13.03' @ 12.16 hrs Surf.Area= 458 sf Storage= 591 cf

Plug-Flow detention time= 54.4 min calculated for 3,549 cf (93% of inflow)
 Center-of-Mass det. time= 17.7 min (838.5 - 820.8)

Volume	Invert	Avail.Storage	Storage Description			
#1	9.80'	1,111 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
9.80	458	85.0	0.0	0	0	458
10.20	458	85.0	40.0	73	73	492
14.50	458	85.0	40.0	788	861	858
15.00	545	91.0	100.0	250	1,111	952

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Type III 24-hr 10-Yr Rainfall=5.59"

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Device	Routing	Invert	Outlet Devices
#1	Primary	11.30'	6.0" Round Culvert L= 45.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 11.30' / 11.07' S= 0.0050 ' / - Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf
#2	Primary	14.50'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Discarded	9.80'	1.420 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.02 cfs @ 9.60 hrs HW=9.85' (Free Discharge)↑**3=Exfiltration** (Exfiltration Controls 0.02 cfs)**Primary OutFlow** Max=0.88 cfs @ 12.16 hrs HW=13.01' (Free Discharge)↑**1=Culvert** (Barrel Controls 0.88 cfs @ 4.50 fps)↑**2=Orifice/Grate** (Controls 0.00 cfs)**Summary for Pond 1D: Drip Strip**

Inflow Area = 680 sf, 100.00% Impervious, Inflow Depth > 5.35" for 10-Yr event
 Inflow = 0.09 cfs @ 12.07 hrs, Volume= 303 cf
 Outflow = 0.09 cfs @ 12.08 hrs, Volume= 287 cf, Atten= 1%, Lag= 0.8 min
 Discarded = 0.00 cfs @ 12.08 hrs, Volume= 165 cf
 Primary = 0.08 cfs @ 12.08 hrs, Volume= 122 cf
 Routed to Reach 1DR : To SP2

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 22.26' @ 12.08 hrs Surf.Area= 136 sf Storage= 56 cf

Plug-Flow detention time= 110.3 min calculated for 286 cf (94% of inflow)

Center-of-Mass det. time= 79.6 min (824.6 - 745.0)

Volume	Invert	Avail.Storage	Storage Description
#1	20.70'	83 cf	2.00'W x 23.50'L x 2.00'H Prismaoid Z=1.0 207 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	22.20'	2.0' long + 1.0 ' / SideZ x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Discarded	20.70'	1.000 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.00 cfs @ 12.08 hrs HW=22.26' (Free Discharge)↑**2=Exfiltration** (Exfiltration Controls 0.00 cfs)**Primary OutFlow** Max=0.08 cfs @ 12.08 hrs HW=22.26' (Free Discharge)↑**1=Broad-Crested Rectangular Weir** (Weir Controls 0.08 cfs @ 0.65 fps)

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Type III 24-hr 10-Yr Rainfall=5.59"

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Summary for Pond 1E: Drip Strip

Inflow Area = 685 sf, 100.00% Impervious, Inflow Depth > 5.35" for 10-Yr event
 Inflow = 0.10 cfs @ 12.00 hrs, Volume= 306 cf
 Outflow = 0.10 cfs @ 12.01 hrs, Volume= 291 cf, Atten= 2%, Lag= 0.4 min
 Discarded = 0.00 cfs @ 12.01 hrs, Volume= 161 cf
 Primary = 0.09 cfs @ 12.01 hrs, Volume= 130 cf
 Routed to Reach 1ER : To Swale

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 16.57' @ 12.01 hrs Surf.Area= 130 sf Storage= 51 cf

Plug-Flow detention time= 101.3 min calculated for 291 cf (95% of inflow)
 Center-of-Mass det. time= 74.0 min (814.6 - 740.7)

Volume	Invert	Avail.Storage	Storage Description
#1	15.10'	83 cf	2.00'W x 23.50'L x 2.00'H Prismatic Z=1.0 207 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	16.50'	2.0' long + 1.0 ' SideZ x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Discarded	15.10'	1.000 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.00 cfs @ 12.01 hrs HW=16.56' (Free Discharge)
 ↑**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.09 cfs @ 12.01 hrs HW=16.56' (Free Discharge)
 ↑**1=Broad-Crested Rectangular Weir** (Weir Controls 0.09 cfs @ 0.68 fps)

Summary for Pond 1F: Drip Strip

Inflow Area = 875 sf, 100.00% Impervious, Inflow Depth > 5.35" for 10-Yr event
 Inflow = 0.11 cfs @ 12.07 hrs, Volume= 390 cf
 Outflow = 0.13 cfs @ 12.11 hrs, Volume= 374 cf, Atten= 0%, Lag= 2.2 min
 Discarded = 0.01 cfs @ 12.11 hrs, Volume= 271 cf
 Primary = 0.12 cfs @ 12.11 hrs, Volume= 103 cf
 Routed to Reach 1FR : To SP2

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 18.68' @ 12.11 hrs Surf.Area= 246 sf Storage= 105 cf

Plug-Flow detention time= 134.7 min calculated for 373 cf (96% of inflow)
 Center-of-Mass det. time= 109.3 min (854.3 - 745.0)

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Volume	Invert	Avail.Storage	Storage Description
#1	17.10'	150 cf	2.00'W x 44.50'L x 2.00'H Prismaoid Z=1.0 375 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Primary	18.60'	2.0' long + 1.0 ' SideZ x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#2	Discarded	17.10'	1.000 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.01 cfs @ 12.11 hrs HW=18.67' (Free Discharge)↑**2=Exfiltration** (Exfiltration Controls 0.01 cfs)**Primary OutFlow** Max=0.11 cfs @ 12.11 hrs HW=18.67' (Free Discharge)↑**1=Broad-Crested Rectangular Weir** (Weir Controls 0.11 cfs @ 0.73 fps)**Summary for Pond 2AP: Rain Garden**

Inflow Area = 5,315 sf, 40.92% Impervious, Inflow Depth > 4.12" for 10-Yr event
 Inflow = 0.58 cfs @ 12.07 hrs, Volume= 1,826 cf
 Outflow = 0.56 cfs @ 12.10 hrs, Volume= 1,789 cf, Atten= 4%, Lag= 1.5 min
 Discarded = 0.01 cfs @ 12.10 hrs, Volume= 387 cf
 Primary = 0.55 cfs @ 12.10 hrs, Volume= 1,402 cf
 Routed to Reach 2AR : To DMH 9

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 13.89' @ 12.10 hrs Surf.Area= 202 sf Storage= 84 cf

Plug-Flow detention time= 20.2 min calculated for 1,786 cf (98% of inflow)

Center-of-Mass det. time= 8.1 min (804.0 - 795.9)

Volume	Invert	Avail.Storage	Storage Description
#1	12.80'	587 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
12.80	190	76.0	0.0	0	0	190
13.20	190	76.0	40.0	30	30	220
17.50	273	89.0	40.0	396	426	614
18.00	370	110.0	100.0	160	587	950

Device	Routing	Invert	Outlet Devices
#1	Primary	17.50'	8.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	13.30'	6.0" Round Culvert L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.30' / 13.00' S= 0.0150 ' / S= 0.0150 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#3	Discarded	12.80'	1.420 in/hr Exfiltration over Surface area

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Discarded OutFlow Max=0.01 cfs @ 12.10 hrs HW=13.88' (Free Discharge)

↑ **3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.55 cfs @ 12.10 hrs HW=13.88' (Free Discharge)

↑ **1=Orifice/Grate** (Controls 0.00 cfs)

↑ **2=Culvert** (Inlet Controls 0.55 cfs @ 2.79 fps)

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Type III 24-hr 25-yr Rainfall=7.08"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1AS: Adjacent Properties	Runoff Area=20,770 sf 1.64% Impervious Runoff Depth>4.77" Tc=5.0 min CN=80 Runoff=2.65 cfs 8,248 cf
Subcatchment 1BS: North Subcatchment	Runoff Area=8,190 sf 11.36% Impervious Runoff Depth>4.88" Tc=5.0 min UI Adjusted CN=81 Runoff=1.07 cfs 3,328 cf
Subcatchment 1CS: Southeast	Runoff Area=14,290 sf 20.19% Impervious Runoff Depth>4.54" Tc=5.0 min UI Adjusted CN=78 Runoff=1.75 cfs 5,412 cf
Subcatchment 1DS: Marquise Property	Runoff Area=680 sf 100.00% Impervious Runoff Depth>6.84" Tc=5.0 min CN=98 Runoff=0.11 cfs 387 cf
Subcatchment 1ES: East Sherlock Property	Runoff Area=685 sf 100.00% Impervious Runoff Depth>6.84" Tc=0.0 min CN=98 Runoff=0.12 cfs 390 cf
Subcatchment 1FS: West Sherlock Property	Runoff Area=875 sf 100.00% Impervious Runoff Depth>6.84" Tc=5.0 min CN=98 Runoff=0.14 cfs 499 cf
Subcatchment 2AS: Southwest	Runoff Area=5,315 sf 40.92% Impervious Runoff Depth>5.55" Tc=5.0 min CN=87 Runoff=0.77 cfs 2,460 cf
Subcatchment 2BS: Southwest	Runoff Area=2,580 sf 11.24% Impervious Runoff Depth>4.99" Tc=5.0 min CN=82 Runoff=0.34 cfs 1,072 cf
Reach 1BR: Swale to SP1	Avg. Flow Depth=0.17' Max Vel=2.92 fps Inflow=3.83 cfs 11,772 cf n=0.030 L=227.0' S=0.0401 '/' Capacity=23.57 cfs Outflow=3.62 cfs 11,752 cf
Reach 1CR: To SP1	Avg. Flow Depth=0.05' Max Vel=0.74 fps Inflow=1.24 cfs 4,622 cf n=0.025 L=161.0' S=0.0093 '/' Capacity=64.03 cfs Outflow=1.21 cfs 4,617 cf
Reach 1DR: To SP2	Inflow=0.11 cfs 186 cf Outflow=0.11 cfs 186 cf
Reach 1ER: To Swale	Avg. Flow Depth=0.03' Max Vel=0.63 fps Inflow=0.12 cfs 196 cf n=0.033 L=60.0' S=0.0183 '/' Capacity=10.72 cfs Outflow=0.11 cfs 196 cf
Reach 1FR: To SP2	Avg. Flow Depth=0.01' Max Vel=0.21 fps Inflow=0.13 cfs 179 cf n=0.030 L=660.0' S=0.0079 '/' Capacity=21.43 cfs Outflow=0.03 cfs 179 cf
Reach 1R: Headwall	Avg. Flow Depth=0.72' Max Vel=5.92 fps Inflow=3.62 cfs 11,752 cf 12.0" Round Pipe n=0.025 L=58.3' S=0.0497 '/' Capacity=4.13 cfs Outflow=3.59 cfs 11,750 cf
Reach 2AR: To DMH 9	Avg. Flow Depth=0.24' Max Vel=3.38 fps Inflow=0.71 cfs 2,009 cf 24.0" Round Pipe n=0.012 L=158.0' S=0.0094 '/' Capacity=23.80 cfs Outflow=0.69 cfs 2,009 cf
Reach 2BR: CB6	Avg. Flow Depth=0.01' Max Vel=0.97 fps Inflow=0.34 cfs 1,072 cf n=0.013 L=158.0' S=0.0222 '/' Capacity=136.36 cfs Outflow=0.32 cfs 1,071 cf

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Type III 24-hr 25-yr Rainfall=7.08"

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Reach SP1: Southern Drainage LineInflow=4.43 cfs 16,367 cf
Outflow=4.43 cfs 16,367 cf**Reach SP2: Northern Drainage Line**Inflow=1.01 cfs 3,080 cf
Outflow=1.01 cfs 3,080 cf**Pond 1CP: Rain Garden**Peak Elev=14.08' Storage=785 cf Inflow=1.75 cfs 5,412 cf
Discarded=0.02 cfs 873 cf Primary=1.17 cfs 4,257 cf Outflow=1.18 cfs 5,130 cf**Pond 1D: Drip Strip**Peak Elev=22.27' Storage=57 cf Inflow=0.11 cfs 387 cf
Discarded=0.00 cfs 179 cf Primary=0.11 cfs 186 cf Outflow=0.11 cfs 365 cf**Pond 1E: Drip Strip**Peak Elev=16.58' Storage=52 cf Inflow=0.12 cfs 390 cf
Discarded=0.00 cfs 175 cf Primary=0.12 cfs 196 cf Outflow=0.12 cfs 370 cf**Pond 1F: Drip Strip**Peak Elev=18.68' Storage=105 cf Inflow=0.14 cfs 499 cf
Discarded=0.01 cfs 294 cf Primary=0.13 cfs 179 cf Outflow=0.14 cfs 473 cf**Pond 2AP: Rain Garden**Peak Elev=14.13' Storage=104 cf Inflow=0.77 cfs 2,460 cf
Discarded=0.01 cfs 411 cf Primary=0.71 cfs 2,009 cf Outflow=0.72 cfs 2,420 cf**Total Runoff Area = 53,385 sf Runoff Volume = 21,797 cf Average Runoff Depth = 4.90"**
83.40% Pervious = 44,525 sf 16.60% Impervious = 8,860 sf

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1AS: Adjacent Properties	Runoff Area=20,770 sf 1.64% Impervious Runoff Depth>6.08" Tc=5.0 min CN=80 Runoff=3.36 cfs 10,527 cf
Subcatchment 1BS: North Subcatchment	Runoff Area=8,190 sf 11.36% Impervious Runoff Depth>6.20" Tc=5.0 min UI Adjusted CN=81 Runoff=1.34 cfs 4,233 cf
Subcatchment 1CS: Southeast	Runoff Area=14,290 sf 20.19% Impervious Runoff Depth>5.84" Tc=5.0 min UI Adjusted CN=78 Runoff=2.23 cfs 6,957 cf
Subcatchment 1DS: Marquise Property	Runoff Area=680 sf 100.00% Impervious Runoff Depth>8.25" Tc=5.0 min CN=98 Runoff=0.13 cfs 467 cf
Subcatchment 1ES: East Sherlock Property	Runoff Area=685 sf 100.00% Impervious Runoff Depth>8.25" Tc=0.0 min CN=98 Runoff=0.15 cfs 471 cf
Subcatchment 1FS: West Sherlock Property	Runoff Area=875 sf 100.00% Impervious Runoff Depth>8.25" Tc=5.0 min CN=98 Runoff=0.17 cfs 601 cf
Subcatchment 2AS: Southwest	Runoff Area=5,315 sf 40.92% Impervious Runoff Depth>6.92" Tc=5.0 min CN=87 Runoff=0.95 cfs 3,067 cf
Subcatchment 2BS: Southwest	Runoff Area=2,580 sf 11.24% Impervious Runoff Depth>6.32" Tc=5.0 min CN=82 Runoff=0.43 cfs 1,359 cf
Reach 1BR: Swale to SP1	Avg. Flow Depth=0.20' Max Vel=3.18 fps Inflow=4.83 cfs 15,021 cf n=0.030 L=227.0' S=0.0401 '/' Capacity=23.57 cfs Outflow=4.59 cfs 14,998 cf
Reach 1CR: To SP1	Avg. Flow Depth=0.06' Max Vel=0.85 fps Inflow=1.92 cfs 6,261 cf n=0.025 L=161.0' S=0.0093 '/' Capacity=64.03 cfs Outflow=1.71 cfs 6,251 cf
Reach 1DR: To SP2	Inflow=0.13 cfs 250 cf Outflow=0.13 cfs 250 cf
Reach 1ER: To Swale	Avg. Flow Depth=0.04' Max Vel=0.68 fps Inflow=0.15 cfs 261 cf n=0.033 L=60.0' S=0.0183 '/' Capacity=10.72 cfs Outflow=0.13 cfs 261 cf
Reach 1FR: To SP2	Avg. Flow Depth=0.01' Max Vel=0.25 fps Inflow=0.16 cfs 255 cf n=0.030 L=660.0' S=0.0079 '/' Capacity=21.43 cfs Outflow=0.05 cfs 255 cf
Reach 1R: Headwall	Avg. Flow Depth=1.00' Max Vel=5.95 fps Inflow=4.59 cfs 14,998 cf 12.0" Round Pipe n=0.025 L=58.3' S=0.0497 '/' Capacity=4.13 cfs Outflow=4.18 cfs 14,996 cf
Reach 2AR: To DMH 9	Avg. Flow Depth=0.26' Max Vel=3.56 fps Inflow=0.86 cfs 2,597 cf 24.0" Round Pipe n=0.012 L=158.0' S=0.0094 '/' Capacity=23.80 cfs Outflow=0.84 cfs 2,596 cf
Reach 2BR: CB6	Avg. Flow Depth=0.02' Max Vel=1.06 fps Inflow=0.43 cfs 1,359 cf n=0.013 L=158.0' S=0.0222 '/' Capacity=136.36 cfs Outflow=0.40 cfs 1,357 cf

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Type III 24-hr 50-Yr Rainfall=8.49"

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Reach SP1: Southern Drainage LineInflow=5.44 cfs 21,247 cf
Outflow=5.44 cfs 21,247 cf**Reach SP2: Northern Drainage Line**Inflow=1.24 cfs 3,954 cf
Outflow=1.24 cfs 3,954 cf**Pond 1CP: Rain Garden**Peak Elev=14.64' Storage=927 cf Inflow=2.23 cfs 6,957 cf
Discarded=0.02 cfs 915 cf Primary=1.83 cfs 5,756 cf Outflow=1.85 cfs 6,671 cf**Pond 1D: Drip Strip**Peak Elev=22.28' Storage=57 cf Inflow=0.13 cfs 467 cf
Discarded=0.00 cfs 190 cf Primary=0.13 cfs 250 cf Outflow=0.13 cfs 440 cf**Pond 1E: Drip Strip**Peak Elev=16.59' Storage=52 cf Inflow=0.15 cfs 471 cf
Discarded=0.00 cfs 185 cf Primary=0.15 cfs 261 cf Outflow=0.15 cfs 446 cf**Pond 1F: Drip Strip**Peak Elev=18.69' Storage=106 cf Inflow=0.17 cfs 601 cf
Discarded=0.01 cfs 312 cf Primary=0.16 cfs 255 cf Outflow=0.17 cfs 567 cf**Pond 2AP: Rain Garden**Peak Elev=14.41' Storage=128 cf Inflow=0.95 cfs 3,067 cf
Discarded=0.01 cfs 430 cf Primary=0.86 cfs 2,597 cf Outflow=0.86 cfs 3,027 cf**Total Runoff Area = 53,385 sf Runoff Volume = 27,683 cf Average Runoff Depth = 6.22"**
83.40% Pervious = 44,525 sf 16.60% Impervious = 8,860 sf

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point	
Smoothing State	Yes
Location	
Latitude	43.083 degrees North
Longitude	70.772 degrees West
Elevation	0 feet
Date/Time	Wed May 13 2026 13:43:21 GMT-0400 (Eastern Daylight Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.81	1.04	1yr	0.70	0.98	1.21	1.56	2.03	2.66	2.92	1yr	2.35	2.80	3.21	3.94	4.54	1yr
2yr	0.32	0.50	0.62	0.81	1.02	1.30	2yr	0.88	1.18	1.52	1.94	2.49	3.20	3.56	2yr	2.84	3.43	3.93	4.67	5.32	2yr
5yr	0.37	0.58	0.73	0.97	1.25	1.60	5yr	1.08	1.46	1.88	2.43	3.13	4.06	4.57	5yr	3.59	4.39	5.03	5.92	6.69	5yr
10yr	0.41	0.65	0.82	1.11	1.45	1.89	10yr	1.25	1.72	2.23	2.89	3.74	4.86	5.52	10yr	4.30	5.31	6.07	7.09	7.96	10yr
25yr	0.48	0.76	0.96	1.33	1.77	2.33	25yr	1.53	2.14	2.77	3.62	4.73	6.16	7.09	25yr	5.45	6.81	7.78	9.00	10.03	25yr
50yr	0.53	0.86	1.10	1.53	2.06	2.75	50yr	1.78	2.52	3.28	4.31	5.65	7.38	8.57	50yr	6.53	8.24	9.40	10.79	11.95	50yr
100yr	0.59	0.96	1.24	1.76	2.41	3.24	100yr	2.08	2.97	3.89	5.14	6.75	8.83	10.36	100yr	7.82	9.96	11.35	12.93	14.25	100yr
200yr	0.67	1.09	1.42	2.03	2.81	3.82	200yr	2.43	3.50	4.60	6.11	8.06	10.59	12.52	200yr	9.37	12.04	13.71	15.50	16.99	200yr
500yr	0.79	1.31	1.70	2.47	3.46	4.74	500yr	2.98	4.36	5.74	7.68	10.19	13.45	16.11	500yr	11.90	15.49	17.60	19.72	21.45	500yr

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.36	0.44	0.59	0.73	0.88	1yr	0.63	0.86	0.92	1.32	1.68	2.22	2.49	1yr	1.97	2.39	2.86	3.17	3.87	1yr
2yr	0.31	0.49	0.60	0.81	1.00	1.19	2yr	0.86	1.16	1.37	1.82	2.34	3.05	3.45	2yr	2.70	3.32	3.82	4.54	5.07	2yr
5yr	0.35	0.54	0.67	0.92	1.17	1.40	5yr	1.01	1.37	1.61	2.12	2.73	3.78	4.18	5yr	3.35	4.02	4.71	5.52	6.23	5yr
10yr	0.38	0.59	0.73	1.02	1.32	1.60	10yr	1.14	1.56	1.81	2.39	3.06	4.36	4.85	10yr	3.86	4.67	5.43	6.40	7.18	10yr
25yr	0.44	0.67	0.83	1.18	1.56	1.90	25yr	1.35	1.86	2.10	2.76	3.54	4.69	5.88	25yr	4.15	5.65	6.63	7.77	8.66	25yr
50yr	0.48	0.73	0.91	1.31	1.76	2.17	50yr	1.52	2.12	2.35	3.08	3.94	5.30	6.79	50yr	4.69	6.53	7.70	9.02	9.99	50yr
100yr	0.53	0.81	1.01	1.46	2.01	2.47	100yr	1.73	2.41	2.63	3.42	4.36	5.94	7.83	100yr	5.26	7.53	8.94	10.47	11.53	100yr
200yr	0.59	0.89	1.13	1.63	2.27	2.81	200yr	1.96	2.75	2.93	3.80	4.81	6.65	9.04	200yr	5.89	8.69	10.38	12.18	13.33	200yr
500yr	0.68	1.02	1.31	1.90	2.71	3.36	500yr	2.33	3.29	3.41	4.34	5.48	7.73	10.91	500yr	6.84	10.50	12.64	14.89	16.13	500yr

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.44	0.54	0.72	0.89	1.08	1yr	0.77	1.06	1.26	1.74	2.21	2.98	3.15	1yr	2.64	3.03	3.58	4.37	5.04	1yr
2yr	0.34	0.52	0.64	0.86	1.07	1.27	2yr	0.92	1.24	1.48	1.96	2.51	3.42	3.70	2yr	3.03	3.55	4.08	4.83	5.63	2yr
5yr	0.40	0.62	0.76	1.05	1.33	1.62	5yr	1.15	1.58	1.88	2.53	3.25	4.33	4.95	5yr	3.83	4.76	5.37	6.36	7.14	5yr
10yr	0.47	0.72	0.89	1.24	1.61	1.97	10yr	1.39	1.93	2.28	3.10	3.95	5.33	6.19	10yr	4.72	5.95	6.80	7.82	8.73	10yr
25yr	0.57	0.87	1.09	1.55	2.04	2.56	25yr	1.76	2.50	2.95	4.06	5.14	7.79	8.32	25yr	6.90	8.00	9.12	10.32	11.39	25yr
50yr	0.67	1.02	1.27	1.82	2.45	3.12	50yr	2.11	3.05	3.59	4.99	6.30	9.76	10.43	50yr	8.64	10.03	11.41	12.70	13.94	50yr
100yr	0.79	1.19	1.49	2.15	2.95	3.79	100yr	2.54	3.71	4.36	6.14	7.73	12.22	13.08	100yr	10.81	12.57	14.26	15.66	17.06	100yr
200yr	0.92	1.38	1.75	2.53	3.53	4.63	200yr	3.05	4.52	5.32	7.56	9.49	15.34	16.41	200yr	13.57	15.78	17.86	19.30	20.88	200yr
500yr	1.14	1.69	2.18	3.17	4.50	6.00	500yr	3.89	5.87	6.91	9.99	12.48	20.74	22.15	500yr	18.35	21.30	24.04	25.45	27.30	500yr



Custom Soil Resource Report Soil Map



Custom Soil Resource Report

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 1:24,000.

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: Rockingham County, New Hampshire
Survey Area Data: Version 28, Sep 9, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

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.

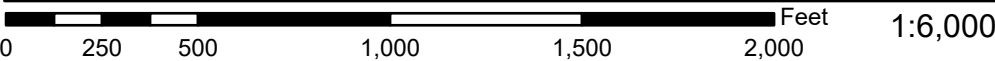
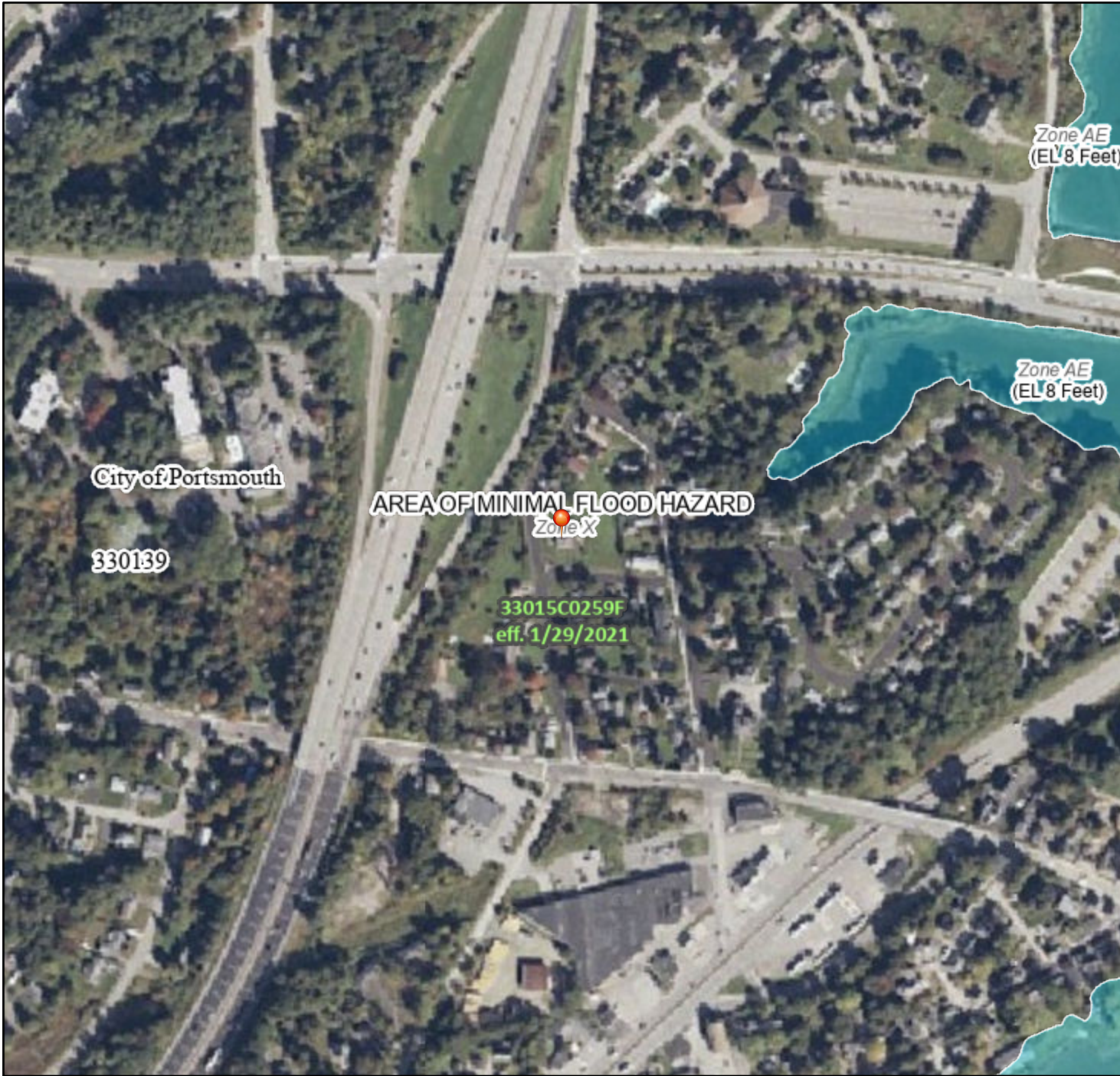
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
799	Urban land-Canton complex, 3 to 15 percent slopes	0.7	100.0%
Totals for Area of Interest		0.7	100.0%

National Flood Hazard Layer FIRMette



70°46'40"W 43°5'10"N



Basemap Imagery Source: USGS National Map 2023

Legend

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance 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
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
MAP PANELS		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 4/16/2026 at 5:40 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.



INSPECTION & LONG-TERM MAINTENANCE PLAN FOR RESIDENTIAL DEVELOPMENT

**20 Central Avenue
PORTSMOUTH, NH**

Introduction

The intent of this plan is to provide Marissa Valverde (herein referred to as the "Owner") with a list of procedures that document the inspection and maintenance requirements of the stormwater management system for proposed development at 20 Central Avenue. Specifically, the proposed roof Drip Strip Filter Systems, Rain Gardens, and the stormwater Catch Basins (collectively referred to as the "Stormwater Management System"). The contact information for the owner shall be kept current, and if there is a change of ownership of the property this plan must be transferred to the new owner.

The following inspection and maintenance program is necessary to keep the stormwater management system functioning properly and will help maintain a high quality of stormwater runoff to minimize potential environmental impacts. By following the enclosed procedures, the owner will be able to maintain the functional design of the stormwater management system and maximize its ability to remove sediment and other contaminants from site generated stormwater runoff.

Construction Inspections

During the construction period, inspections shall be conducted at least once every seven (7) calendar days or once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inch or greater.

Annual Report

Following construction, the owner shall prepare an annual Inspection & Maintenance Report. The report shall include a summary of the system's maintenance and repair by transmission of the Inspection & Maintenance Log and other information as required. A copy of the report shall be delivered annually to the Portsmouth DPW, if required.

Inspection & Maintenance Checklist/Log

The following pages contain the Stormwater Management System Inspection & Maintenance Requirements and a blank copy of the Stormwater Management System Inspection & Maintenance Log. These forms are provided to the owner as a guideline for performing the inspection and maintenance of the Stormwater Management System. This is a guideline and should be periodically reviewed for conformance with current practice and standards.

Stormwater Management System Components

The Stormwater Management System is designed to mitigate the quality of site-generated stormwater runoff. As a result, the design includes the following elements:

Non-Structural BMPs

Non-Structural best management practices (BMP's) include temporary and permanent measures that typically require less labor and capital inputs and are intended to provide protection against erosion of soils. Examples of non-structural BMP's on this project may include but are not limited to:

- Dust control
- Sediment barriers
- Stabilized construction entrance
- Catch basin basket
- Dewatering control

Structural BMPs

Structural BMPs are more labor and capital-intensive structures or installations that require more specialized personnel to install. Examples on this project include but are not limited to:

- Roof Drip Strip Filter System
- Closed Drainage System
- Rain Garden

Inspection and Maintenance Requirements

The following summarizes the inspection and maintenance requirements for the various BMP's that may be found on this project.

1. **Roof Drip Strip Filter:** Inspections and maintenance of roof dripline filters shall occur annually. Inspect and remove any debris within the reservoir layer. Renew basin media if filter fails to drain within 72 hours after a 1-inch rainfall event.
2. **Storm Drains:** Monitor accumulation of debris in drainage structures monthly or after significant rain events. Remove sediments when they accumulate within the outlet pipe. During construction, maintain inlet protection until all areas have been stabilized. Prior to the end of construction, inspect the drains and basins for accumulations and remove and clean by jet- vacuuming.
3. **Rain Garden:** After installation of the rain garden, perform the following inspections on a monthly basis:
 - a. Monitor for excessive or concentrated accumulations of debris, or excessive erosion below the various pipe inlets. Remove debris as required and replace or add inlet fabric strips or rip rap stones.
 - b. Monitor the outflow for problems with erosion. Repair as required.
 - c. After significant rainfalls, monitor rain garden surfaces for ponding of water. If water remains flooded over the surface 24 hours after a 1" rainfall, then investigate the cause, if not related to overflow blockage, then excavate and replace filter media.
 - d. Monitor vegetation on rain garden and replace dead or dying vegetation as required.
 - e. Monitor rain garden for rodent borrows and repair as required; remove persistent occupiers.
 - f. Monitor side slopes of rain garden for damage or erosion—repair, as necessary.

Pollution Prevention

The following pollution prevention activities shall be undertaken to minimize potential impacts on stormwater runoff quality. The Contractor is responsible for all activities during construction. The Owner is responsible thereafter.

Spill Procedures

Any discharge of waste oil or other pollutant shall be reported immediately to the New Hampshire Department of Environmental Services (NHDES). The Contractor/Owner will be responsible for any incident of groundwater contamination resulting from the improper discharge of pollutants to the stormwater

system and may be required by NHDES to remediate incidents that may impact groundwater quality. If the property ownership is transferred, the new owner will be informed of the legal responsibilities associated with operation of the stormwater system, as indicated above.

Sanitary Facilities

Sanitary facilities shall be provided during all phases of construction.

Material Storage

The contractors are required to remove trash from the site. Hazardous material storage is prohibited. Salt and other de-icing materials must remain under covered storage. Salt storage areas shall be covered using permanent or semi-permanent measures and loading/offloading areas shall be located and designed to not drain directly to receiving waters and be maintained with good housekeeping measures in accordance with NHDES guidance documents. Snow will not be stored onsite – it will be removed from the site by a licensed contractor as needed. There are no wetlands, waterbodies, or other protected natural resources directly adjacent to the development area. Down-gradient stormwater structures will be protected as outlined in this document.

Material Disposal

All waste material, trash, sediment, and debris shall be removed from the site and disposed of in accordance with applicable local, state, and federal guidelines and regulations. Removed sediments shall be if necessary dewatered prior to disposal.

CATCH BASIN BASKET CONSTRUCTION MAINTENANCE SHEET

INSPECTION REQUIREMENTS		
ACTION TAKEN	FREQUENCY	MAINTENANCE REQUIREMENTS
-Check for damage to basket -Remove sediment from basket	Within 24 hours of rainfall, Daily during extended rainfall	-Repair basket as necessary to prevent particles from reaching drainage system, or to prevent flooding. -Empty basket after every storm, or if clogged.

MAINTENANCE LOG	
PROJECT NAME	
INSPECTOR NAME	INSPECTOR CONTACT INFO
DATE OF INSPECTION	REASON FOR INSPECTION ☐ LARGE STORM EVENT ☐ PERIODIC CHECK-IN
IS CORRECTIVE ACTION NEEDED? ☐ YES ☐ NO	DESCRIBE ANY PROBLEMS, NEEDED MAINTENANCE
DATE OF MAINTENANCE	PERFORMED BY
NOTES	

CLOSED DRAINAGE STRUCTURE LONG-TERM MAINTENANCE SHEET

INSPECTION REQUIREMENTS		
ACTION TAKEN	FREQUENCY	MAINTENANCE REQUIREMENTS
-Outlet Control Structures -Drain Manholes -Catch Basins	Every other Month	<i>Check for erosion or short-circuiting</i> <i>Check for sediment accumulation</i> <i>Check for floatable contaminants</i>
-Drainage Pipes	1 time per 2 years	<i>Check for sediment accumulation/clogging, or soiled runoff.</i> <i>Check for erosion at outlets.</i>

MAINTENANCE LOG	
PROJECT NAME	
INSPECTOR NAME	INSPECTOR CONTACT INFO
DATE OF INSPECTION	REASON FOR INSPECTION ☐ LARGE STORM EVENT ☐ PERIODIC CHECK-IN
IS CORRECTIVE ACTION NEEDED? ☐ YES ☐ NO	DESCRIBE ANY PROBLEMS, NEEDED MAINTENANCE
DATE OF MAINTENANCE	PERFORMED BY
NOTES	

STABILIZED CONSTRUCTION ENTRANCE CONSTRUCTION MAINTENANCE SHEET

INSPECTION REQUIREMENTS		
ACTION TAKEN	FREQUENCY	MAINTENANCE REQUIREMENTS
ENTRANCE SURFACE -Check for sediment accumulation/clogging of stone -Check Vegetative filter strips	After heavy rains, as necessary	-Top dress pad with new stone. -Replace stone completely if completely clogged. -Maintain vigorous stand of vegetation.
WASHING FACILITIES (if applicable) -Monitor Sediment Accumulation	As often as necessary	-Remove Sediments from traps.

MAINTENANCE LOG	
PROJECT NAME	
INSPECTOR NAME	INSPECTOR CONTACT INFO
DATE OF INSPECTION	REASON FOR INSPECTION ☐ LARGE STORM EVENT ☐ PERIODIC CHECK-IN
IS CORRECTIVE ACTION NEEDED? ☐ YES ☐ NO	DESCRIBE ANY PROBLEMS, NEEDED MAINTENANCE
DATE OF MAINTENANCE	PERFORMED BY
NOTES	

Methods for Disposing Non-Native Invasive Plants

Prepared by the Invasives Species Outreach Group, volunteers interested in helping people control invasive plants. Assistance provided by the Piscataquog Land Conservancy and the NH Invasives Species Committee. Edited by Karen Bennett, Extension Forestry Professor and Specialist.



Tatarian honeysuckle

Lonicera tatarica

USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 282.

Non-native invasive plants crowd out natives in natural and managed landscapes. They cost taxpayers billions of dollars each year from lost agricultural and forest crops, decreased biodiversity, impacts to natural resources and the environment, and the cost to control and eradicate them.

Invasive plants grow well even in less than desirable conditions such as sandy soils along roadsides, shaded wooded areas, and in wetlands. In ideal conditions, they grow and spread even faster. There are many ways to remove these non-native invasives, but once removed, care is needed to dispose the removed plant material so the plants don't grow where disposed.

Knowing how a particular plant reproduces indicates its method of spread and helps determine the appropriate disposal method. Most are spread by seed and are dispersed by wind, water, animals, or people. Some reproduce by vegetative means from pieces of stems or roots forming new plants. Others spread through both seed and vegetative means.

Because movement and disposal of viable plant parts is restricted (see NH Regulations), viable invasive parts can't be brought to most transfer stations in the state. Check with your transfer station to see if there is an approved, designated area for invasives disposal. This fact sheet gives recommendations for rendering plant parts non-viable.

Control of invasives is beyond the scope of this fact sheet. For information about control visit www.nhinvases.org or contact your UNH Cooperative Extension office.

New Hampshire Regulations

Prohibited invasive species shall only be disposed of in a manner that renders them nonliving and nonviable. (Agr. 3802.04)

No person shall collect, transport, import, export, move, buy, sell, distribute, propagate or transplant any living and viable portion of any plant species, which includes all of their cultivars and varieties, listed in Table 3800.1 of the New Hampshire prohibited invasive species list. (Agr. 3802.01)

How and When to Dispose of Invasives?

To prevent seed from spreading remove invasive plants before seeds are set (produced). Some plants continue to grow, flower and set seed even after pulling or cutting. Seeds can remain viable in the ground for many years. If the plant has flowers or seeds, place the flowers and seeds in a heavy plastic bag “head first” at the weeding site and transport to the disposal site. The following are general descriptions of disposal methods. See the chart for recommendations by species.

Burning: Large woody branches and trunks can be used as firewood or burned in piles. For outside burning, a written fire permit from the local forest fire warden is required unless the ground is covered in snow. Brush larger than 5 inches in diameter can’t be burned. Invasive plants with easily airborne seeds like black swallow-wort with mature seed pods (indicated by their brown color) shouldn’t be burned as the seeds may disperse by the hot air created by the fire.

Bagging (solarization): Use this technique with softer-tissue plants. Use heavy black or clear plastic bags (contractor grade), making sure that no parts of the plants poke through. Allow the bags to sit in the sun for several weeks and on dark pavement for the best effect.

Tarping and Drying: Pile material on a sheet of plastic and cover with a tarp, fastening the tarp to the ground and monitoring it for escapes. Let the material dry for several weeks, or until it is clearly nonviable.

Chipping: Use this method for woody plants that don’t reproduce vegetatively.

Burying: This is risky, but can be done with watchful diligence. Lay thick plastic in a deep pit before placing the cut up plant material in the hole. Place the material away from the edge of the plastic before covering it with more heavy plastic. Eliminate as much air as possible and toss in soil to weight down the material in the pit. Note that the top of the buried material should be at least three feet underground. Japanese knotweed should be at least 5 feet underground!

Drowning: Fill a large barrel with water and place soft-tissue plants in the water. Check after a few weeks and look for rotted plant material (roots, stems, leaves, flowers). Well-rotted plant material may be composted. A word of caution- seeds may still be viable after using this method. Do this before seeds are set. This method isn’t used often. Be prepared for an awful stink!

Composting: Invasive plants can take root in compost. Don’t compost any invasives unless you know there is no viable (living) plant material left. Use one of the above techniques (bagging, tarping, drying, chipping, or drowning) to render the plants nonviable before composting. Closely examine the plant before composting and avoid composting seeds.



Japanese knotweed
Polygonum cuspidatum
USDA-NRCS PLANTS Database /
Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1: 676.

Be diligent looking for seedlings for years in areas where removal and disposal took place.

Suggested Disposal Methods for Non-Native Invasive Plants

This table provides information concerning the disposal of removed invasive plant material. If the infestation is treated with herbicide and left in place, these guidelines don't apply. Don't bring invasives to a local transfer station, unless there is a designated area for their disposal, or they have been rendered non-viable. This listing includes wetland and upland plants from the New Hampshire Prohibited Invasive Species List. The disposal of aquatic plants isn't addressed.

Woody Plants	Method of Reproducing	Methods of Disposal
Norway maple <i>(Acer platanoides)</i> European barberry <i>(Berberis vulgaris)</i> Japanese barberry <i>(Berberis thunbergii)</i> autumn olive <i>(Elaeagnus umbellata)</i> burning bush <i>(Euonymus alatus)</i> Morrow's honeysuckle <i>(Lonicera morrowii)</i> Tatarian honeysuckle <i>(Lonicera tatarica)</i> showy bush honeysuckle <i>(Lonicera x bella)</i> common buckthorn <i>(Rhamnus cathartica)</i> glossy buckthorn <i>(Frangula alnus)</i>	Fruit and Seeds 	Prior to fruit/seed ripening Seedlings and small plants ▪ Pull or cut and leave on site with roots exposed. No special care needed. Larger plants ▪ Use as firewood. ▪ Make a brush pile. ▪ Chip. ▪ Burn.
		After fruit/seed is ripe Don't remove from site. ▪ Burn. ▪ Make a covered brush pile. ▪ Chip once all fruit has dropped from branches. ▪ Leave resulting chips on site and monitor.
oriental bittersweet <i>(Celastrus orbiculatus)</i> multiflora rose <i>(Rosa multiflora)</i>	Fruits, Seeds, Plant Fragments 	Prior to fruit/seed ripening Seedlings and small plants ▪ Pull or cut and leave on site with roots exposed. No special care needed. Larger plants ▪ Make a brush pile. ▪ Burn.
		After fruit/seed is ripe Don't remove from site. ▪ Burn. ▪ Make a covered brush pile. ▪ Chip – only after material has fully dried (1 year) and all fruit has dropped from branches. Leave resulting chips on site and monitor.

Non-Woody Plants	Method of Reproducing	Methods of Disposal
garlic mustard (<i>Alliaria petiolata</i>) spotted knapweed (<i>Centaurea maculosa</i>) ▪ Sap of related knapweed can cause skin irritation and tumors. Wear gloves when handling. black swallow-wort (<i>Cynanchum nigrum</i>) ▪ May cause skin rash. Wear gloves and long sleeves when handling. pale swallow-wort (<i>Cynanchum rossicum</i>) giant hogweed (<i>Heracleum mantegazzianum</i>) ▪ Can cause major skin rash. Wear gloves and long sleeves when handling. dame's rocket (<i>Hesperis matronalis</i>) perennial pepperweed (<i>Lepidium latifolium</i>) purple loosestrife (<i>Lythrum salicaria</i>) Japanese stilt grass (<i>Microstegium vimineum</i>) mile-a-minute weed (<i>Polygonum perfoliatum</i>)	Fruits and Seeds 	Prior to flowering Depends on scale of infestation Small infestation ▪ Pull or cut plant and leave on site with roots exposed. Large infestation ▪ Pull or cut plant and pile. (You can pile onto or cover with plastic sheeting). ▪ Monitor. Remove any re-sprouting material. During and following flowering Do nothing until the following year or remove flowering heads and bag and let rot. Small infestation ▪ Pull or cut plant and leave on site with roots exposed. Large infestation ▪ Pull or cut plant and pile remaining material. (You can pile onto plastic or cover with plastic sheeting). ▪ Monitor. Remove any re-sprouting material.
common reed (<i>Phragmites australis</i>) Japanese knotweed (<i>Polygonum cuspidatum</i>) Bohemian knotweed (<i>Polygonum x bohemicum</i>)	Fruits, Seeds, Plant Fragments Primary means of spread in these species is by plant parts. Although all care should be given to preventing the dispersal of seed during control activities, the presence of seed doesn't materially influence disposal activities.	Small infestation ▪ Bag all plant material and let rot. ▪ Never pile and use resulting material as compost. ▪ Burn. Large infestation ▪ Remove material to unsuitable habitat (dry, hot and sunny or dry and shaded location) and scatter or pile. ▪ Monitor and remove any sprouting material. ▪ Pile, let dry, and burn.

January 2010

COPLEY PROPERTIES, LLC

PROPOSED 3 LOT SUBDIVISION

20 CENTRAL AVENUE, PORTSMOUTH NH

PROJECT INFORMATION

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ATTN: DOUG SPARKS
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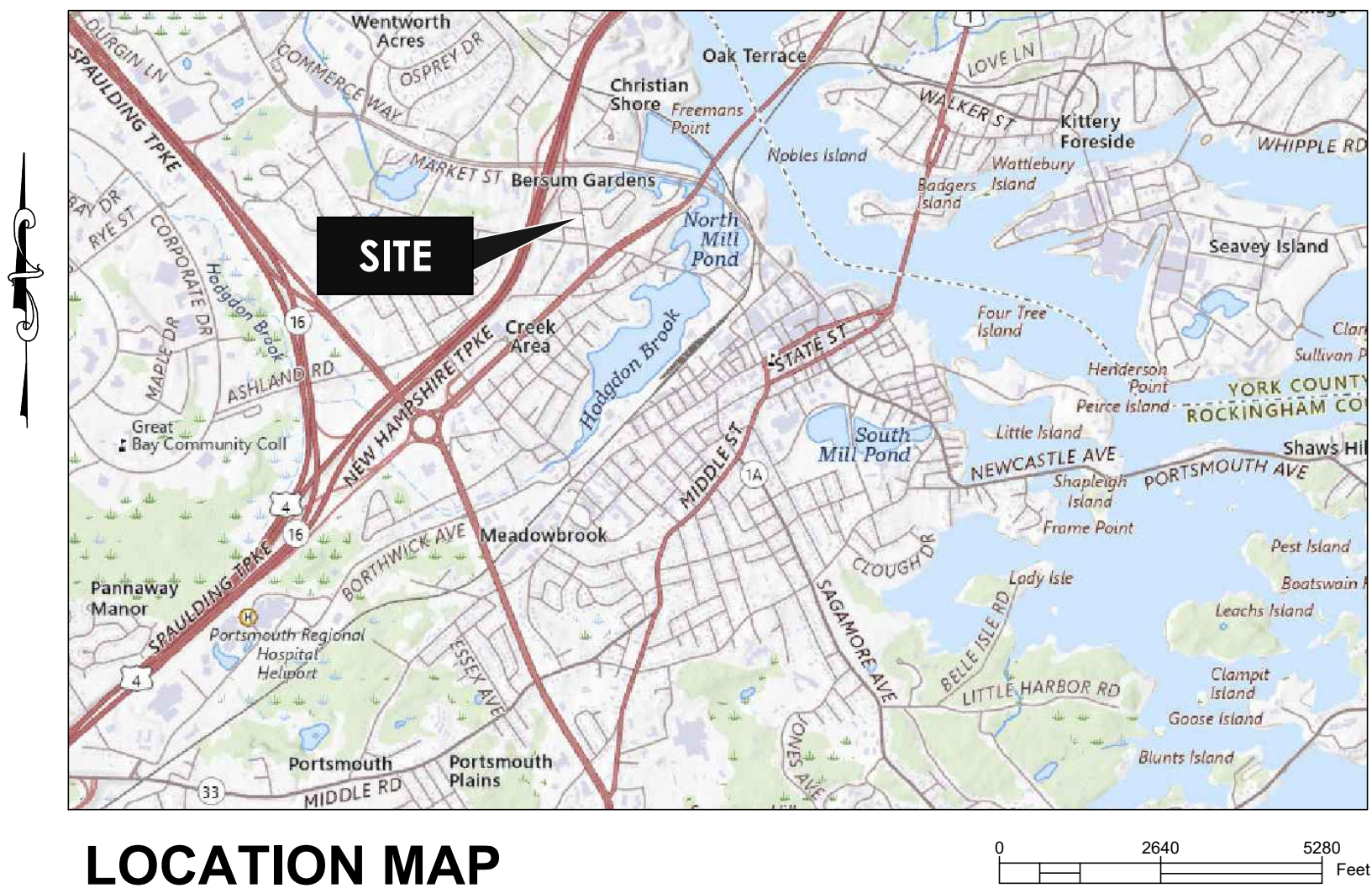
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ELECTRIC
EVERSOURCE
ATTN: NICHOLAS KOSKO
1700 LAFAYETTE ROAD
PORTSMOUTH, NH 03801
T: 603.436.7708, EXT. 3327565

COMMUNICATIONS
CONSOLIDATED COMMUNICATIONS
ATTN: BENJAMIN WILLS
1575 GREENLAND ROAD
GREENLAND, NH 03840
T: 603.427.5525



LOCATION MAP

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PERMITS & APPROVALS	PERMIT #	DATE
CITY OF PORTSMOUTH TAC REVIEW	TBD	PENDING
CITY OF PORTSMOUTH SITE PLAN/SUBDIVISION	TBD	PENDING
CITY OF PORTSMOUTH CONDITIONAL USE PERMIT	TBD	PENDING

ISSUED FOR TAC REVIEW
JULY 22, 2026



HALEY WARD

www.haleyward.com

FILE LOCATION: P:\NH4510658\CONLEY_PROPERTIES\301-20 CENTRAL AVE., PORTSMOUTH\SETTLED CAD FILES\DWG\15010658\301-20 CENTRAL AVE., PORTSMOUTH\SETTLED CAD FILES\DWG\2026.07.17.1.08 PM

CONSTRUCTION NOTES

CONSTRUCTION SEQUENCE

- DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
- INSTALL SILT SOXX TO CONTROL EROSION AND SEDIMENTATION PRIOR TO ANY EARTH MOVING ACTIVITIES.
- REMOVE EXISTING BUILDINGS AND SITE FEATURES AS REQUIRED.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
- CUT AND REMOVE ALL TREES, SHRUBS, AND OTHER DEBRIS AS REQUIRED.
- STRIP AND STOCKPILE LOAM FROM SITE. STOCKPILES SHALL BE SURROUNDED WITH SILT SOXX TO CONTROL SEDIMENT RUN OFF.
- ROUGH GRADE SITE AND CONSTRUCT DRAINAGE STRUCTURES. INSTALL AND MAINTAIN EROSION CONTROL DEVICES AS SHOWN ON THE PLANS. ALL PERMANENT DITCHES, AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM. CONSTRUCT BUILDING FOUNDATIONS.
- LOAM AND SEED DISTURBED AREAS. CUT AND FILL SLOPES SHALL BE SEEDED IMMEDIATELY AFTER THEIR CONSTRUCTION.
- CONSTRUCT UTILITIES, BUILDINGS AND PAVEMENT BASE COURSE.
- PLANT LANDSCAPING.
- CONSTRUCT PAVEMENT WEARING COURSE.
- REMOVE TRAPPED SEDIMENTS FROM COLLECTION DEVICES AS APPROPRIATE, AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

PROJECT DESCRIPTION

- THE PROJECT CONSISTS OF SUBDIVIDING A SINGLE LOT INTO THREE NEW LOTS, DEMOLISHING THE EXISTING BUILDINGS AND RELATED STRUCTURES, AND CONSTRUCTING THREE SINGLE FAMILY HOMES WITH DRIVEWAYS AND ASSOCIATED SITE IMPROVEMENTS.
- THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 25,500 SQUARE FEET.
- THE STORMWATER RUNOFF FROM THE SITE WILL FOLLOW EXISTING PATTERNS AND DISCHARGE OFFSITE TO THE INTO THE CITY STORMWATER SYSTEM IN CENTRAL AVENUE AND BEECHWOOD STREET.

GENERAL CONSTRUCTION NOTES

- THE EROSION CONTROL PROCEDURES SHALL CONFORM TO SECTION 645 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION" OF THE NHDOT, AND "STORM WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND SUBURBAN AREAS IN NEW HAMPSHIRE". THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
- DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED FOR MORE THAN 45 DAYS.
- ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION.
- THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
- DUST CONTROL MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ADJUTING AREAS. IF TEMPORARY STABILIZATION PRACTICES, SUCH AS TEMPORARY VEGETATION AND MULCHING, DO NOT ADEQUATELY REDUCE DUST GENERATION, APPLICATION OF WATER OR CALCIUM CHLORIDE SHALL BE APPLIED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES.
- SILT/SOXX SHALL BE PERIODICALLY INSPECTED DURING THE LIFE OF THE PROJECT AND AFTER EACH STORM. ALL DAMAGED SILT/SOXX SHALL BE REPAIRED. SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED IN A SECURED LOCATION.
- ALL FILLS SHALL BE PLACED AND COMPACTED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS.
- ALL NON-STRUCTURAL, SITE-FILL SHALL BE PLACED AND COMPACTED TO 90% MODIFIED PROCTOR DENSITY IN LAYERS NOT EXCEEDING 18 INCHES IN THICKNESS UNLESS OTHERWISE NOTED.
- FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIAL, TRASH, WOODY DEBRIS, LEAVES, BRUSH OR ANY DELETERIOUS MATTER SHALL NOT BE INCORPORATED INTO FILLS.
- FILL MATERIAL SHALL NOT BE PLACED ON FROZEN FOUNDATION SUBGRADE.
- DURING CONSTRUCTION AND UNTIL ALL DEVELOPED AREAS ARE FULLY STABILIZED, ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EACH ONE HALF INCH OF RAINFALL.
- THE CONTRACTOR SHALL MODIFY OR ADD EROSION CONTROL MEASURES AS NECESSARY TO ACCOMMODATE PROJECT CONSTRUCTION.
- ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - BASE COURSE GRAVELS HAVE BEEN INSTALLED ON AREAS TO BE PAVED
 - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED
 - A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLEDEROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
- IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM 304.2 HAVE BEEN INSTALLED.
- STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA.
- STABILIZATION MEASURES TO BE USED INCLUDE:
 - TEMPORARY SEEDED;
 - MULCHING.
- ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
- WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN THESE AREAS, SILT/SOXX, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.
- DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT/SOXX, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15.

MAINTENANCE AND PROTECTION

- THE SILT/SOXX BARRIER SHALL BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
- SILT/SOXX SHALL BE REMOVED ONCE SITE IS STABILIZED, AND DISTURBED AREAS RESULTING FROM SILT/SOXX REMOVAL SHALL BE PERMANENTLY SEEDED.
- THE CATCH BASIN INLET BASKET SHALL BE INSPECTED WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING EXTENDED PERIODS OF PRECIPITATION. REPAIRS SHALL BE MADE IMMEDIATELY, AS NECESSARY, TO PREVENT PARTICLES FROM REACHING THE DRAINAGE SYSTEM AND/OR CAUSING SURFACE FLOODING. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT, OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED.

WINTER NOTES

- ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATED GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING. ELSEWHERE, THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
- ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
- AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;

STOCKPILES

- LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS.
- ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.
- PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
- PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

CONCRETE WASHOUT AREA

THE FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE:

- THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY;
- IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
- CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
- INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

UTILITY NOTES

- SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION.
- COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY.
- SEE GRADING AND DRAINAGE PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
- ALL SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE STATED.
- ALL WORK WITHIN CITY R.O.W. SHALL BE COORDINATED WITH CITY OF PORTSMOUTH
- CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ABUTTING PROPERTIES THROUGHOUT CONSTRUCTION.
- EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE DEPARTMENT OF PUBLIC WORKS STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.
- ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
- THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH BUILDING DRAWINGS AND UTILITY COMPANIES.
- ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
- ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
- THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATED TO THE OWNER PRIOR TO THE COMPLETION OF PROJECT.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED IN THESE DRAWING TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
- CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES.
- A 10-FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18-INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS WATER ABOVE SEWER.
- SAWCUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVED AREAS.
- GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF PORTSMOUTH.
- COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF PORTSMOUTH.
- ALL SEWER PIPES WITH LESS THAN 6" COVER SHALL BE INSULATED.
- CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY.
- SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN ILLUMINATION SHALL BE PROVIDED BY THE PROJECT ELECTRICAL ENGINEER IN COORDINATION WITH THE SITE CIVIL ENGINEER.
- CONTRACTOR SHALL CONSTRUCT ALL UTILITIES AND DRAINS TO WITHIN 10' OF THE FOUNDATION WALLS AND CONNECT THESE TO SERVICE STUBS FROM THE BUILDING.
- FINAL REVIEW OF ALL UTILITIES SHALL BE MADE DURING THE REQUIRED SEWER CONNECTION PERMIT PROCESS IN COORDINATION WITH DEPARTMENT OF PUBLIC WORKS.
- ALL WORK PERFORMED IN THE PUBLIC RIGHT-OF-WAY SHALL BE BUILT TO DEPARTMENT OF PUBLIC WORKS STANDARDS.
- THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY WITHIN 100 FEET OF UNDERGROUND UTILITIES. THE EXCAVATOR IS RESPONSIBLE TO MAINTAIN MARKS. DIG SAFE TICKETS EXPIRE IN THIRTY DAYS.
- UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.
- IRRIGATION, IF SUPPLIED, WILL BE PROVIDED ON A SEPARATE METERED SERVICE. DESIGNS OF IRRIGATION WILL BE PROVIDED BY THE LANDSCAPE CONTRACTOR AT THE TIME OF CONSTRUCTION.

ALLOWABLE NON-STORMWATER DISCHARGES

- FIRE-FIGHTING ACTIVITIES;
- FIRE HYDRANT FLUSHING;
- WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
- WATER USED TO CONTROL DUST;
- POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
- ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
- PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
- UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
- UNCONTAMINATED GROUND WATER OR SPRING WATER;
- FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
- UNCONTAMINATED EXCAVATION DEWATERING;
- LANDSCAPE IRRIGATION.

WASTE DISPOSAL

- WASTE MATERIAL
 - ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
 - NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE.
 - ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
- HAZARDOUS WASTE
 - ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER;
 - SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
- SANITARY WASTE
 - ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

BLASTING NOTES

- CONTRACTOR SHALL CONTACT THE NHDES AND/OR LOCAL JURISDICTION PRIOR TO COMMENCING ANY BLASTING ACTIVITIES.
- FOR ANY PROJECT FOR WHICH BLASTING OF BEDROCK IS ANTICIPATED, THE APPLICANT SHALL SUBMIT A BLASTING PLAN THAT IDENTIFIES:
 - WHERE THE BLASTING ACTIVITIES ARE ANTICIPATED TO OCCUR;
 - THE ESTIMATED QUANTITY OF BLAST ROCK IN CUBIC YARDS; AND
 - SITE-SPECIFIC BLASTING BEST MANAGEMENT PRACTICES.

ABBREVIATIONS

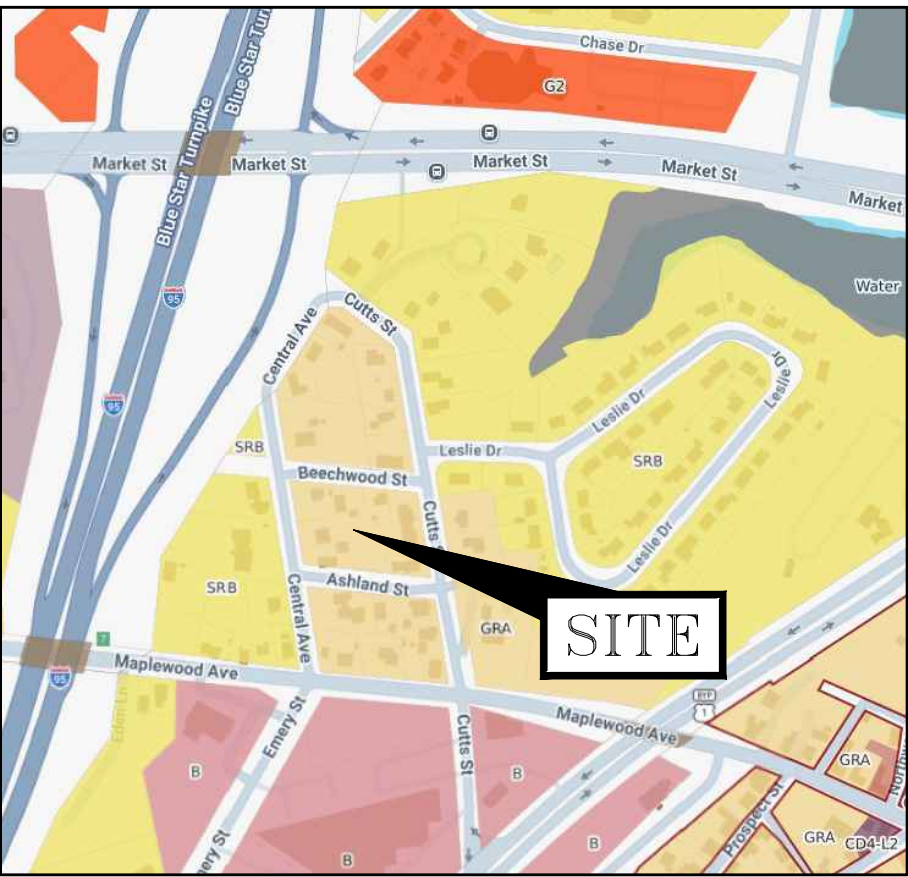
@ ANSI APPROX.±	AT AMERICAN NATIONAL STANDARDS INSTITUTE APPROXIMATELY	MAX. MH MIN	MAXIMUM MANHOLE MINIMUM
BLDG	BUILDING	N NE NHDOT N.T.S. NWT	NORTHING NORTH NH DEPT. OF TRANSPORTATION NOT TO SCALE NON WOVEN GEOTEXTILE
CL CB CMP CO CPE	CENTERLINE CATCH BASIN CLEAR CORRUGATED METAL PIPE CLEANOUT CORRUGATED POLYETHYLENE	OD O.C. OH OZ	OUTSIDE DIAMETER ON CENTER OVERHEAD OUNCES
DI DIA.	DUCTILE IRON DIAMETER	PERF	PERFORATED
E EL EFM EPS	EASTING ELEVATION EXISTING FORCE MAIN EXTRUDED POLYSTYRENE	PSF PSI PVC PL POH PUGE	POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POLYVINYL CHLORIDE PROPERTY LINE PROPOSED OVERHEAD ELECTRIC PROPOSED UNDERGROUND ELECTRIC
FGC FM	FLUSH GRANITE CURB FORCEMAIN	R R&D S SCL SCS SDR SE SHT SQ SS SY	RADIUS REMOVE AND DISPOSE SLOPE STORMWATER COLLECTION LINE STORMWATER COLLECTION SYSTEM STANDARD DIMENSION RATIO SOUTHEAST SHEET SQUARE STAINLESS STEEL SQUARE YARD
GAL GALV GPH GPM	GALLON GALVANIZED GALLONS PER HOUR GALLONS PER MINUTE	TBM TOC TYP	TEMPORARY BENCH MARK TOP OF CONCRETE TYPICAL
HDPE HP	HIGH DENSITY POLYETHYLENE HORSEPOWER	VGC	VERTICAL GRANITE CURB

LEGEND:

ITEMS SHOWN MAY NOT APPEAR ON PLANS

DESCRIPTION	EXISTING	PROPOSED
PROPERTY LINE		
BENCHMARK		
SURVEY STATION		
IRON PIN		
DRILL HOLE		
BOUND		
TEST PIT		
SEWER MANHOLE		
GAS VALVE		
UTILITY POLE		
GUY ANCHOR		
ELECTRICAL MANHOLE		
TRANSFORMER		
PULL BOX		
WELL		
WATER VALVE		
WATER SHUTOFF		
HYDRANT		
AIR RELIEF VALVE		
DRAINAGE MANHOLE		
CATCH BASIN		
CURB INLET		
PARKING LIGHT		
FLOOD LIGHT		
SITE LIGHT		
SIGN		
TRASH CAN		
FLAGPOLE		
MONITORING WELL		
EDGE OF GRAVEL		
EDGE OF PAVEMENT		
CURBING		
MAJOR FOOT CONTOUR		
MINOR FOOT CONTOUR		
WATERLINE		
STORM DRAIN		
UNDER DRAIN		
SANITARY SEWER		
FORCE MAIN		
OVERHEAD UTILITIES		
UNDERGROUND UTILITIES		
GAS LINE		
CHAIN LINK FENCE		
GUARDRAIL		
SILT FENCE		
TREE LINE		
GRAVEL SURFACE		
PAVED SURFACE		
CONCRETE SURFACE		
BUILDING FOOTPRINT		
WETLANDS		
RIPRAP		

ZONING MAP



Residential Districts	
R	Rural
SRA	Single Residence A
SRB	Single Residence B
GRA	General Residence A
GRB	General Residence B
GRC	General Residence C
GA/MH	Garden Apartment/Mobile Home Park
Mixed Residential Districts	
MRO	Mixed Residential Office
MRB	Mixed Residential Business
G1	Gateway Corridor
G2	Gateway Center

0	2026.07.22	ISSUED FOR TAC REVIEW	NMT	DJO
REV.	DATE	DESCRIPTION	BY	CHK.

DRAWING ISSUE STATUS

ISSUED FOR PERMITTING



HALEY WARD

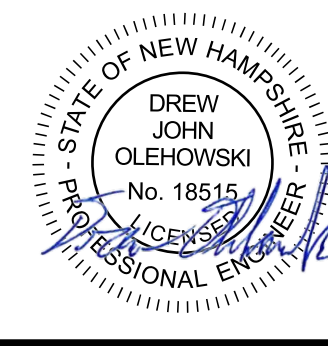
200 Griffin Rd., Unit 14
Portsmouth, New Hampshire 03801
603.430.9282

PROJECT

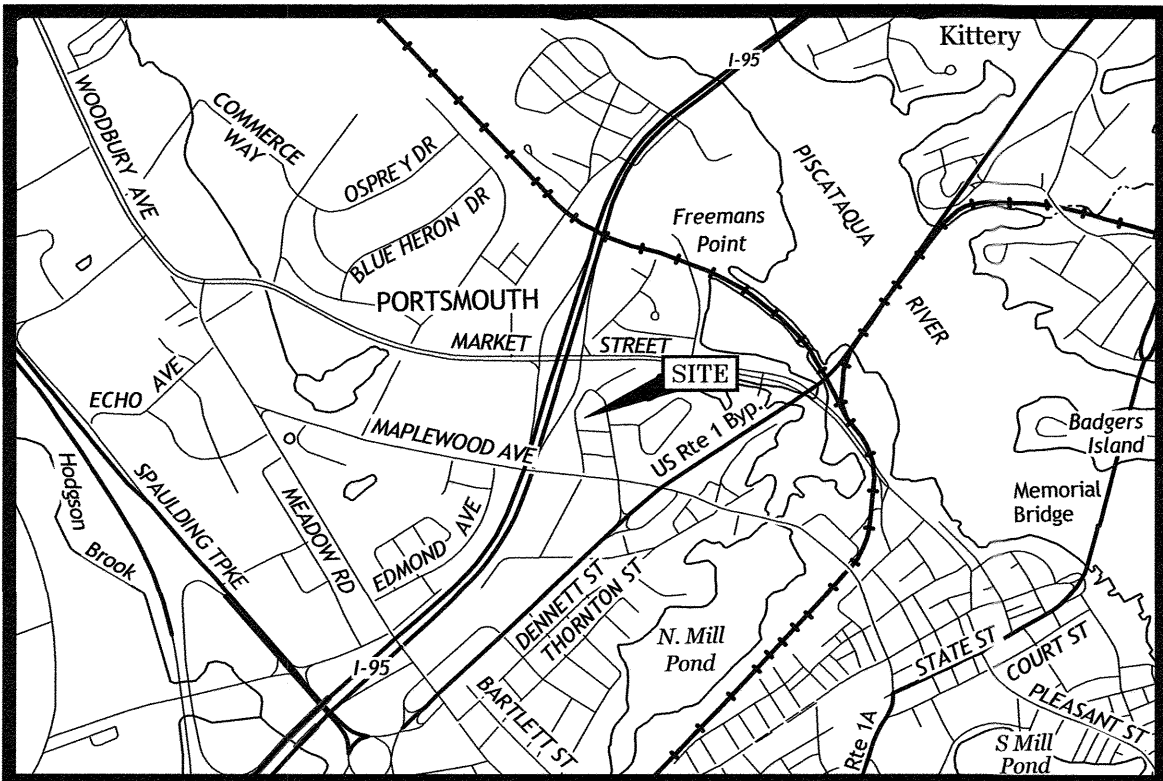
PROPOSED 3 LOT SUBDIVISION

20 CENTRAL AVENUE, PORTSMOUTH NH

GENERAL NOTES, LEGEND & ABBREVIATIONS



DATE	JUNE 2026	SCALE	NTS
DRAWN BY	SJR	DESIGNED BY	NMT
CHECKED BY	DJO		
PROJECT No.	5010658.001		
DRAWING No.	C001		
REV.	0		



LOCATION MAP

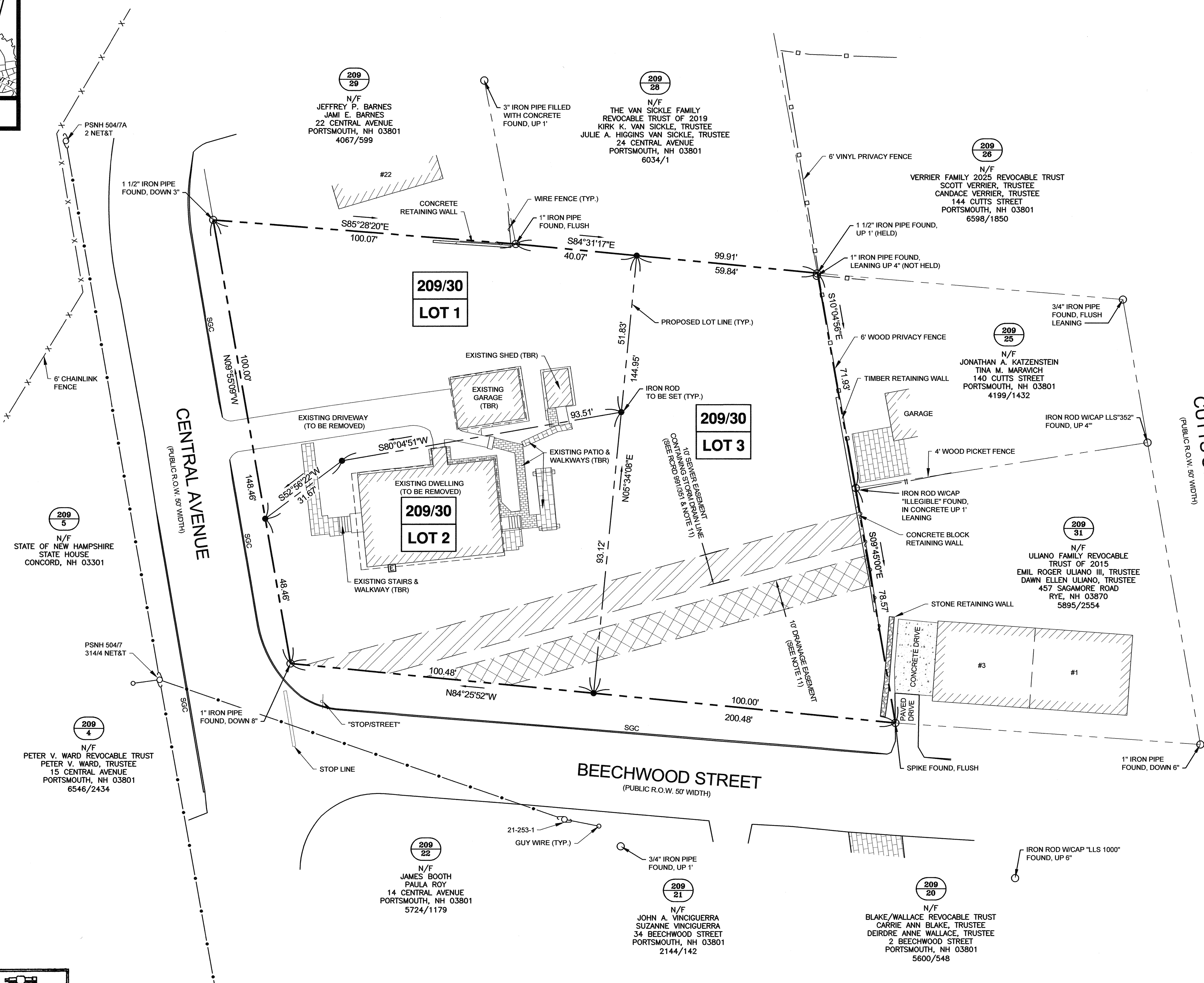
SCALE: 1"=2000'

LEGEND:

DESCRIPTION	EXISTING
RCRD 1234/123	ROCKINGHAM COUNTY REGISTRY OF DEEDS
N/F	DEED BOOK/PAGE
TYP	NOW OR FORMALLY
TBR	TYPICAL
TBS	TO BE REMOVED
SWL	TO BE SET
DYL	SINGLE WHITE LINE
SGC	DOUBLE YELLOW LINE
	SLOPED GRANITE CURB
MAP 21 LOT 8	
IRON ROD/PIPE FOUND	
UTILITY POLE	
ELECTRIC METER	
PROPERTY LINE	
APPROXIMATE EXTERIOR PROPERTY LINE	
EDGE OF PAVEMENT	
OVERHEAD UTILITY LINE	

PLAN REFERENCES:

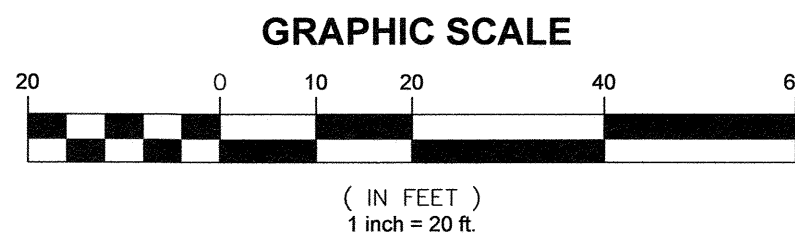
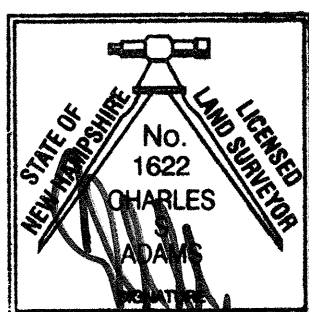
- 1) PLAN OF LAND PORTSMOUTH, N.H. FOR RAYMOND E. & IDELLE E. ST. LAURENT, PREPARED BY: JOHN W. DURGIN CIVIL ENGINEERS, DATED: AUG. 1970, SCALE: 1 IN = 20 FT., DURGIN FILE NO. 501 PLAN NO. 4160, NOT RECORDED.
- 2) PLAN OF LAND PORTSMOUTH, N.H. FOR JOSEPH LAMB, PREPARED BY: JOHN W. DURGIN CIVIL ENGINEERS, DATED: DEC. 1968, SCALE: 1 IN = 20 FT., DURGIN FILE NO. 501 PLAN NO. 465, RCRD C-1303.
- 3) PLAN OF LAND PORTSMOUTH, N.H., CAVARETTA TO COTTRELL, PREPARED BY: JOHN W. DURGIN CIVIL ENGINEERS, DATED: AUG 1975, SCALE: 1 IN = 20 FT., DURGIN FILE NO. 501 PLAN NO. 4384, RCRD C-5407.
- 4) PROPOSED LOT LINE ADJUSTMENT BETWEEN FRANCIS X. & MICHELLE QUINN & KEITH R. & LINDA MAHLER, CUTTS ST. PORTSMOUTH, NH, PREPARED BY: BARRETT ASSOCIATES, DATED: SEPT. 25, 1995, SCALE: 1"=10', RCRD C-24422.
- 5) PLAN OF THE SUBDIVISION OF A PART OF THE JACKSON FARM, PORTSMOUTH, NH, DATED: MARCH 1902, SCALE: 40 FEET TO AN INCH, RCRD 00226.
- 6) BOARD OF ASSESSORS LOT PLAN NO. 82, PORTSMOUTH, N.H. RCRD 01101.
- 7) PLAN OF PROPOSED FEDERAL AID PROJECT I-95-1(19)15 CONTRACT NO.1, N.H. PROJECT NO. P-3875-E, INTERSTATE ROUTE 95, DATED: 8-5-70, SCALE: 1"=50', FILE NO. P.O.4992, ON FILE AT N.H. D.O.T..



"I CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN ACCURACY OF THE CLOSED TRAVERSE THAT EXCEEDS THE PRECISION OF 1:15,000."

CHARLES S. ADAMS, LLS 1622

07-22-2026
DATE



HALEY WARD

ENGINEERING | ENVIRONMENTAL | SURVEYING
200 Griffin Rd. Unit 14
Portsmouth, New Hampshire 03801
603.430.9282

NOTES:

- 1) PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 209 AS LOT 30.
- 2) OWNER OF RECORD:
MARISSA VALVERDE
20 CENTRAL AVENUE
PORTSMOUTH, NH 03801
6478/1413
- 3) PARCEL IS NOT IN A SPECIAL FLOOD HAZARD AREA ZONE AS SHOWN ON FIRM PANEL 33015C0259F. EFFECTIVE JANUARY 29, 2021.
- 4) EXISTING LOT AREA:
28,881 S.F.
0.6653 ACRES
- PROPOSED LOT AREAS:
LOT 1: 9,074 S.F. 0.2083 ACRES
LOT 2: 8,302 S.F. 0.1908 ACRES
LOT 3: 11,605 S.F. 0.2684 ACRES
- 5) PARCEL IS LOCATED IN THE GENERAL RESIDENCE A (GRA) ZONING DISTRICT.
- 6) DIMENSIONAL REQUIREMENTS:
MINIMUM LOT AREA: 7,500 S.F.
MINIMUM STREET FRONTAGE: 100 FEET
MINIMUM LOT DEPTH: 70 FEET
SETBACKS: FRONT 15 FEET
SIDE 10 FEET
REAR 20 FEET
MAXIMUM BUILDING COVERAGE: 25%
MAXIMUM STRUCTURE HEIGHT: SLOPED ROOF 35 FEET
FLAT ROOF 30 FEET
ROOF APPURTENANCE HEIGHT: 8 FEET
MINIMUM OPEN SPACE: 30%
- 7) THE PURPOSE OF THIS PLAN IS TO SHOW A PROPOSED 3 LOT SUBDIVISION OF ASSESSOR'S MAP 209, LOT 30 IN THE CITY OF PORTSMOUTH.
- 8) ABUTTER INFORMATION TAKEN FROM THE CITY OF PORTSMOUTH ASSESSOR'S GIS WEBSITE.
- 9) THIS IS AN ABOVE THE GROUND SURVEY. THE UNDERGROUND UTILITIES, IF SHOWN, ARE BASED UPON BEST AVAILABLE EVIDENCE AND SURFACE FEATURES VISIBLE AT THE TIME OF THE SURVEY. THESE LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. THERE MAY BE ADDITIONAL UNDERGROUND UTILITIES NOT SHOWN ON THIS PLAN. IT IS RECOMMENDED THAT FIELD VERIFICATION OF THE TRUE LOCATION OF ANY UNDERGROUND UTILITIES IS PERFORMED PRIOR TO ANY EXCAVATION.
- 10) THIS PLAN IS THE RESULT OF AN ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY HALEY WARD, INC., 4/15/2026.
- 11) PARCEL IS SUBJECT TO A 10-FOOT WIDE SEWER EASEMENT AND A 10-FOOT WIDE DRAINAGE EASEMENT AS SHOWN ON PLANS OF PROPOSED FEDERAL AID R.O.W. PROJECT I-95-1(10)14 RECORDED IN ROCKINGHAM COUNTY REGISTRY OF DEEDS, PLAN NO. D-2498, SHEET 6. SEE ALSO, FOURTH EMENDATION TO COMMISSIONER'S RETURN OF HIGHWAY LAYOUT, PORTSMOUTH I-95(10)14-P-5875-B, DATED MARCH 27, 1969, RECORDED IN ROCKINGHAM COUNTY REGISTRY OF DEEDS, BOOK 1957, PAGE 162. SEE ALSO RCRD PLAN #01101 AND BOOK 991, PAGE 351.

1	07/22/2026	ISSUED FOR TAC	RJB	CSA
0	5/15/26	ISSUED FOR COMMENT	CSA	RJB
REV.	DATE	DESCRIPTION	BY	CHK.

DRAWING ISSUE STATUS

SITE SURVEY

SUBDIVISION PLAN
TAX MAP 209 - LOT 30

OWNER
MARISSA VALVERDE
20 CENTRAL AVENUE
CITY OF PORTSMOUTH
COUNTY OF ROCKINGHAM
STATE OF NEW HAMPSHIRE

SCALE: 1" = 20'

MAY 2026

FB 433 PG 37

5010658.001

LEGEND: DESCRIPTION

EXISTING

ROCKINGHAM COUNTY REGISTRY OF DEEDS

DEED BOOK/PAGE

NOW OR FORMALLY

TYPICAL

INVERT

ELEVATION

FINISHED FLOOR

LANDSCAPE AREA

SLOPED GRANITE CURB

MAP 21 LOT 8

BENCHMARK

IRON ROD/PIPE FOUND

SEWER MANHOLE

DRAIN MANHOLE

UTILITY POLE

CATCH BASIN

HYDRANT

GATE VALVE

TREES

GAS/ELECTRIC METER

SIGN

PROPERTY LINE

APPROXIMATE EXTERIOR PROPERTY LINE

EDGE OF PAVEMENT

MINOR FOOT CONTOUR

MAJOR FOOT CONTOUR

WATER LINE

STORM DRAIN LINE

SANITARY SEWER LINE

OVERHEAD UTILITY LINE

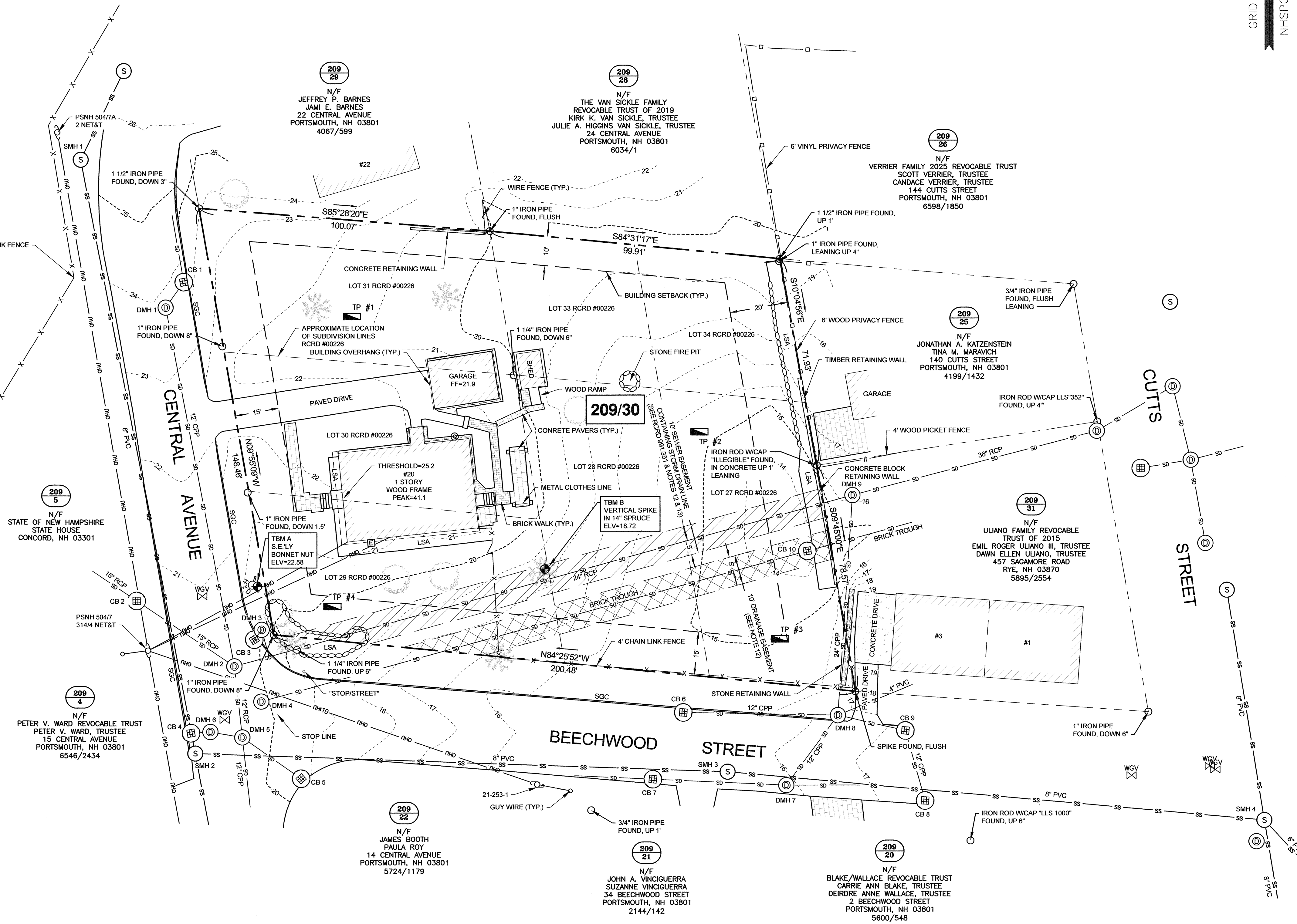
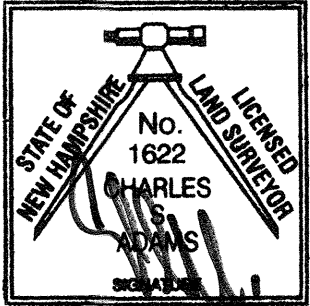
SEWER STRUCTURE TABLE						
STRUCTURE	PROP/EX	RIM	PIPE SIZE/TYPE	INVERT IN	INVERT OUT	DIRECTION
SMH 1	EX	25.13	6" PVC	17.43	17.43	NE
			8" PVC			SE
SMH 2	EX	20.26	8" PVC	10.76		NW
			8" PVC	13.66		NW
			8" PVC	10.81		SE
			8" PVC		10.71	E
SMH 3	EX	15.52	8" PVC	10.12		NW
			8" PVC		10.02	SE
SMH 4	EX	24.18	8" PVC	9.18		W
			8" PVC	17.63		S
			6" PVC	19.48		SE
			8" PVC		9.13	NW

DRAINAGE STRUCTURE TABLE						
STRUCTURE	PROP/EX	RIM	PIPE SIZE/TYPE	INVERT IN	INVERT OUT	DIRECTION
CB 1	EX	23.81	8" CPP	20.31	19.26	NW
			12" CPP		19.26	SW
DMH 1	EX	23.81	12" CPP	19.01		NE
			12" CPP		19.01	SE
CB 2	EX	18.81	15" RCP	16.11		NW
			15" RCP		16.06	SE
DMH 2	EX	20.43	12" CPP	13.58		NW
			15" CPP	13.03		SE
			12" CPP	13.08		SE
			24" RCP		13.03	E
DMH 3	EX	20.70	8" PVC	15.80		SW
			6" CLAY		15.80	SE
CB 3	EX	20.09	8" PVC	16.69		NE
DMH 4	EX	20.17	BRICK TROUGH	7.77		SW
			BRICK TROUGH		7.77	NE
DMH 5	EX	20.43	12" CPP	14.93		NW
			12" CPP	13.03		NE
			12" CPP	13.93		SE
			12" CPP		13.03	S
DMH 6	EX	20.36	12" CPP	15.61		W
			12" CPP		15.61	SE
CB 4	EX	20.17	12" CPP	16.37		E
CB 5	EX	19.32	12" CPP	14.62		NW
CB 6	EX	15.15	12" CPP	11.15		E
CB 7	EX	15.28	8" CPP	11.88		W
			12" CPP		11.58	E
DMH 7	EX	15.85	12" CPP	11.05		W
			4" PVC	11.75		NE
			12" CPP		10.85	NE
DMH 8	EX	16.73	12" CPP	11.33		W
			12" CPP	10.83		SW
			12" CPP	11.13		E
			4" PVC	13.13		NE
			24" RCP		10.23	N
CB 8	EX	17.71	12" CPP	13.11		NW
CB 9	EX	17.24	12" CPP	12.74		SE
			12" CPP		11.54	W
CB 10	EX	13.37	BRICK TROUGH	3.17		SE
			BRICK TROUGH		3.17	NW
DMH 9	EX	16.48	24" RCP	8.28		SW
			24" RCP	8.23		S
			36" RCP		8.18	NE

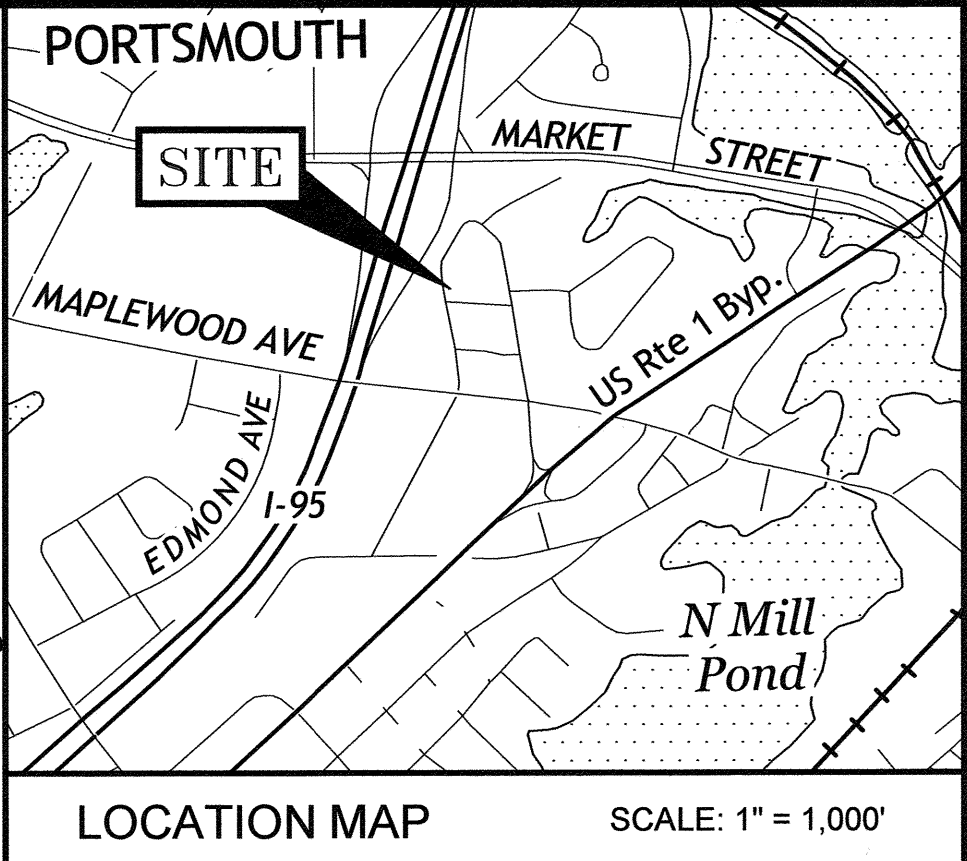
"I CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN ACCURACY OF THE CLOSED TRAVERSE THAT EXCEEDS THE PRECISION OF 1:15,000."

CHARLES S. ADAMS, LLS 1622

DATE



- PLAN REFERENCES:
- 1) PLAN OF LAND PORTSMOUTH, N.H. FOR RAYMOND E. & IDELLE E. ST. LAURENT, PREPARED BY: JOHN W. DURGIN CIVIL ENGINEERS, DATED: AUG. 1970, SCALE: 1 IN = 20 FT., DURGIN FILE NO. 501 PLAN NO. 4160, NOT RECORDED.
 - 2) PLAN OF LAND PORTSMOUTH, N.H. FOR JOSEPH LAMB, PREPARED BY: JOHN W. DURGIN CIVIL ENGINEERS, DATED: DEC. 1968, SCALE: 1 IN = 20 FT., DURGIN FILE NO. 501 PLAN NO. 465, RCRD C-1303.
 - 3) PLAN OF LAND PORTSMOUTH, N.H. CAVARETTA TO COTTELL, PREPARED BY: JOHN W. DURGIN CIVIL ENGINEERS, DATED: AUG 1975, SCALE: 1 IN = 20 FT., DURGIN FILE NO. 501 PLAN NO. 4384, RCRD C-5407.
 - 4) PROPOSED LOT LINE ADJUSTMENT BETWEEN FRANCIS X. & MICHELLE QUINN & KEITH R. & LINDA MAHLER, CUTTS ST., PORTSMOUTH, NH, PREPARED BY: BARRETT ASSOCIATES, DATED: SEPT. 25, 1995, SCALE: 1"=10', RCRD C-24422.
 - 5) PLAN OF THE SUBDIVISION OF A PART OF THE JACKSON FARM, PORTSMOUTH, NH, DATED: MARCH 1902, SCALE: 40 FEET TO AN INCH, RCRD 00226.
 - 6) BOARD OF ASSESSORS LOT PLAN NO. 82, PORTSMOUTH, N.H., RCRD 01101.
 - 7) PLAN OF PROPOSED FEDERAL AID PROJECT I-95-1(19)15 CONTRACT NO. 1, N.H. PROJECT NO. P-3875-E, INTERSTATE ROUTE 95, DATED: 8-5-70, SCALE: 1"=50', FILE NO. P.O.4992, ON FILE AT N.H. D.O.T..



- NOTES:
- 1) PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 209 AS LOT 30.
 - 2) OWNER OF RECORD: MARISSA VALVERDE, 20 CENTRAL AVENUE, PORTSMOUTH, NH 03801, 6478/1413.
 - 3) PARCEL IS NOT IN A SPECIAL FLOOD HAZARD AREA ZONE AS SHOWN ON FIRM PANEL 33015C0259F. EFFECTIVE JANUARY 29, 2021.
 - 4) EXISTING LOT AREA: 28,981 S.F., 0.6653 ACRES.
 - 5) PARCEL IS LOCATED IN THE GENERAL RESIDENCE A (GRA) ZONING DISTRICT.
 - 6) DIMENSIONAL REQUIREMENTS:

MINIMUM LOT AREA:	7,500 S.F.
MINIMUM STREET FRONTAGE:	100 FEET
MINIMUM LOT DEPTH:	70 FEET
SETBACKS:	
FRONT	15 FEET
SIDE	10 FEET
REAR	20 FEET
MAXIMUM BUILDING COVERAGE:	25%
MAXIMUM STRUCTURE HEIGHT:	
SLOPED ROOF	35 FEET
FLAT ROOF	30 FEET
ROOF APPURTENANCE HEIGHT:	8 FEET
MINIMUM OPEN SPACE:	30%
 - 7) THE PURPOSE OF THIS PLAN IS TO SHOW THE RESULTS OF AN EXISTING CONDITIONS SURVEY OF ASSESSOR'S MAP 209, LOT 30 IN THE CITY OF PORTSMOUTH.
 - 8) VERTICAL DATUM IS NAVD83. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GNSS OBSERVATIONS.
 - 9) BUTTER INFORMATION TAKEN FROM THE CITY OF PORTSMOUTH ASSESSORS GIS WEBSITE.
 - 10) THIS IS AN ABOVE THE GROUND SURVEY. THE UNDERGROUND UTILITIES, IF SHOWN, ARE BASED UPON BEST AVAILABLE EVIDENCE AND SURFACE FEATURES VISIBLE AT THE TIME OF THE SURVEY. THESE LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. THERE MAY BE ADDITIONAL UNDERGROUND UTILITIES NOT SHOWN ON THIS PLAN. IT IS RECOMMENDED THAT FIELD VERIFICATION OF THE TRUE LOCATION OF ANY UNDERGROUND UTILITIES IS PERFORMED PRIOR TO ANY EXCAVATION.
 - 11) THIS PLAN IS THE RESULT OF AN ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY HALEY WARD, INC., 4/15/2026.
 - 12) PARCEL IS SUBJECT TO A 10-FOOT WIDE SEWER EASEMENT AND A 10-FOOT WIDE DRAINAGE EASEMENT AS SHOWN ON PLANS OF PROPOSED FEDERAL AID R.O.W. PROJECT I-95-1(10)14 RECORDED IN ROCKINGHAM COUNTY REGISTRY OF DEEDS, PLAN NO. D-2498, SHEET 6. SEE ALSO, FOURTH EMENTATION TO COMMISSIONERS' RETURN OF HIGHWAY LAYOUT, PORTSMOUTH I-95(10)14-P-5875-B, DATED MARCH 27, 1989, RECORDED IN ROCKINGHAM COUNTY REGISTRY OF DEEDS, BOOK 1957, PAGE 162 SEE ALSO RCRD PLAN #01101 AND BOOK 991, PAGE 351.
 - 13) THE DRAIN LINE SHOWN HEREON WITHIN THE 10' WIDE SEWER EASEMENT APPEARS TO HAVE BEEN SEPARATED AND CONVERTED TO A DRAINAGE LINE.

2	7/22/26	ISSUED FOR TAC	RJB	CSA
1	7/2/26	DRAINAGE LABELS	RJB	CSA
0	4/21/26	ISSUED FOR COMMENT	RJB	CSA
REV.	DATE	DESCRIPTION	BY	CHK

DRAWING ISSUE STATUS

SITE SURVEY

HALEY WARD

ENGINEERING | ENVIRONMENTAL | SURVEYING

200 Griffin Road, Unit 14
Portsmouth, NH 03801
603-430-9282

PROJECT

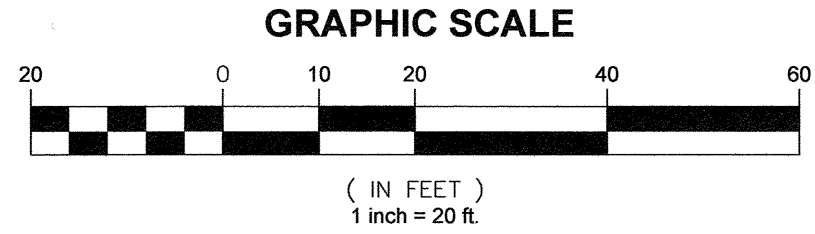
COPLEY PROPERTIES

20 CENTRAL AVENUE, PORTSMOUTH, NH

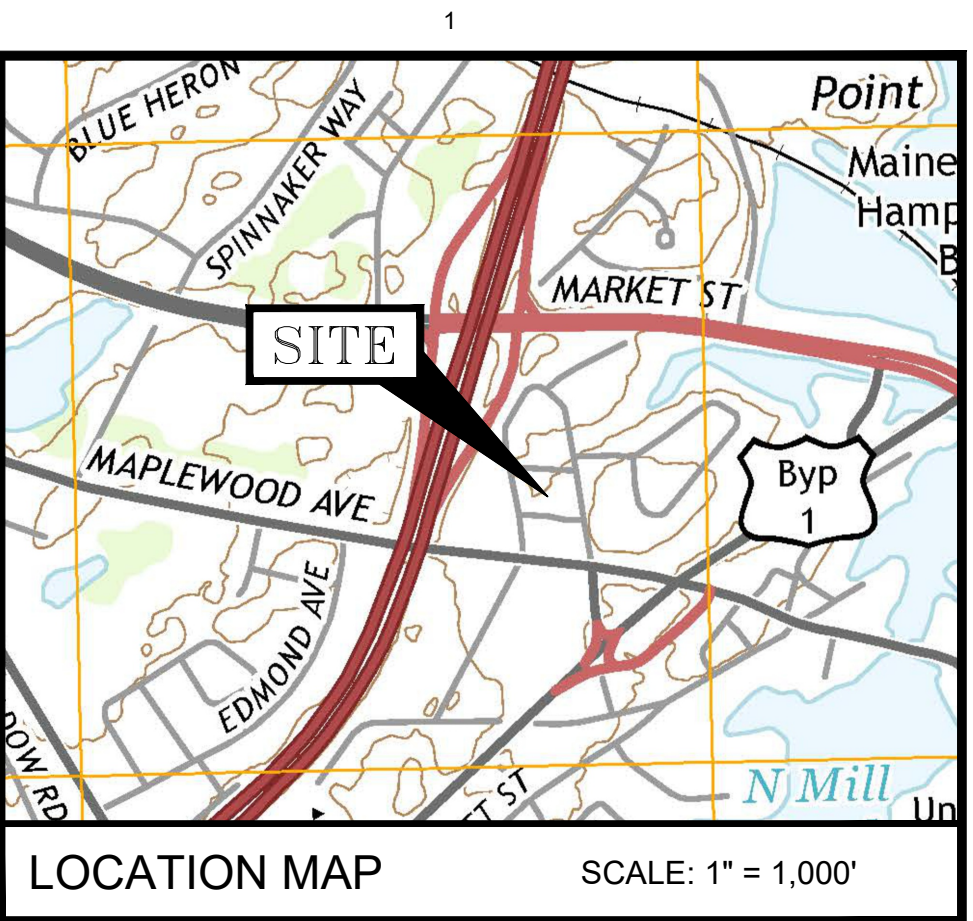
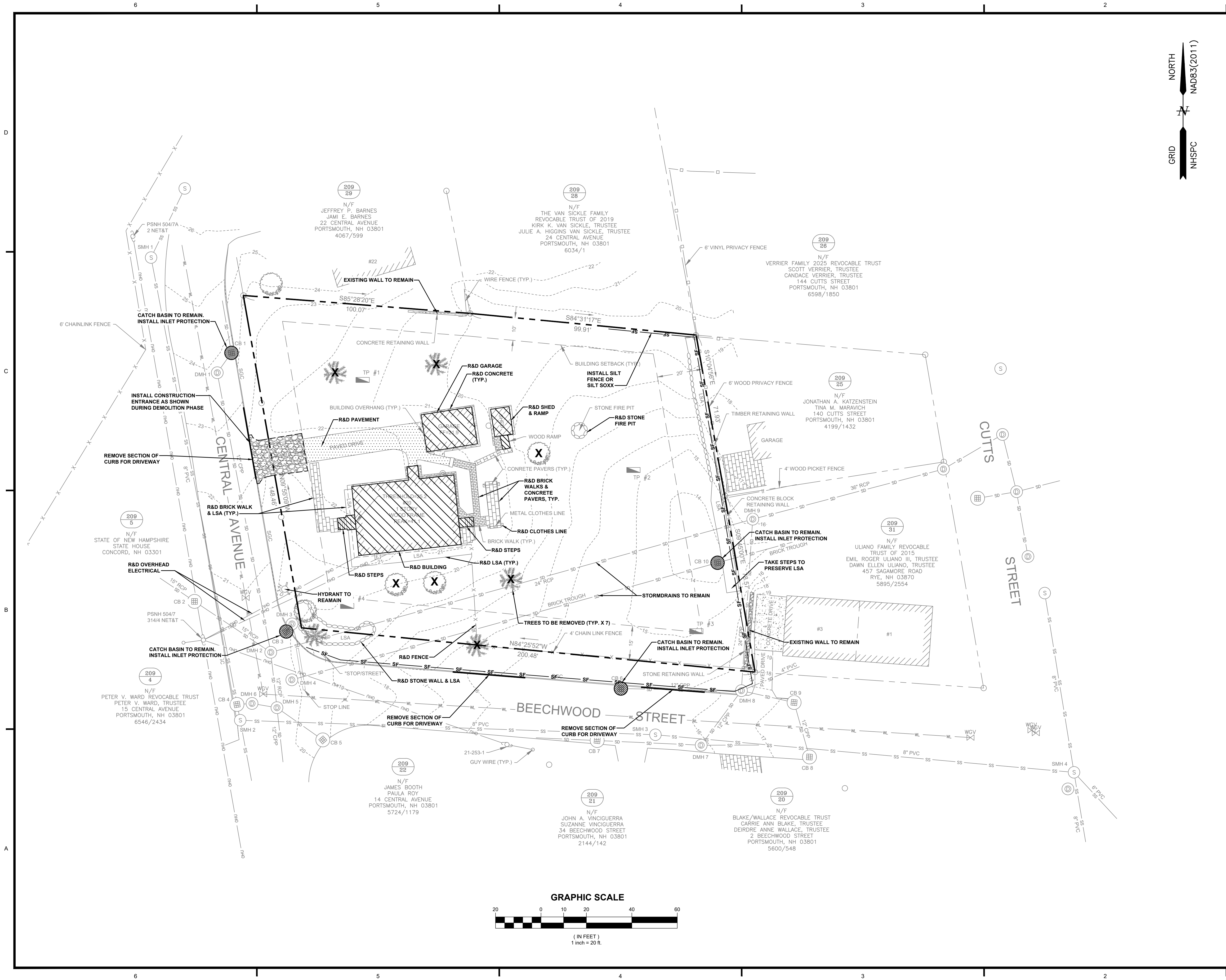
TITLE

EXISTING CONDITIONS PLAN

DATE	APRIL 2026	SCALE	1"=20'
DRAWN BY	RJB	DESIGNED BY	—
CHECKED BY	—	CSA	
PROJECT No.	5010658.001	FIELD BOOK / PAGE	FB 433 PG 37
DRAWING No.	V101	REV.	2



FILE LOCATION: P:\NH\6010658\CORREY_PROPERTIES\301-20 CENTRAL AVE. PORTSMOUTH\DWG\301-20 CENTRAL AVE. C-SP.DWG, 2026.07.22, 10:32 AM



- DEMOLITION NOTES:**
- REFER TO DWG C001 FOR NOTES, ABBREVIATIONS AND LEGEND.
 - REFER TO DWGS C501 & C502 FOR CONSTRUCTION DETAILS.
 - INSTALL ALL EROSION CONTROL MEASURES ON THIS SHEET PRIOR TO STARTING CONSTRUCTION.
 - THE CONTRACTOR SHALL OBTAIN ANY NECESSARY DEMOLITION PERMITS AND PAY ALL RELATED FEES.
 - THE CONTRACTOR SHALL REMOVE AND DISPOSE ALL ABANDONED ONSITE UTILITIES, MAINS AND SERVICES UNCOVERED DURING CUT OPERATIONS OR WITHIN 36" OF FINISHED GRADE. CUT AND CAP ABANDONED SERVICES AT THE RIGHT OF WAY.
 - THE CONTRACTOR SHALL COORDINATE WITH PORTSMOUTH WATER AND SEWER SERVICES TO CONFIRM SHOWN OR NOT SHOWN ON THIS PLAN.
 - THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL BUILDING FOUNDATIONS AND FOOTINGS.
 - THE CONTRACTOR SHALL CLEAR AND GRUB SITE AND REMOVE ALL DEMO DEBRIS PRIOR TO COMMENCING ANY GRADING ACTIVITIES.
 - ALL MATERIALS REMOVED DURING DEMOLITION, INCLUDING ASBESTOS CONCRETE PIPE, SHALL BE PROPERTY REMOVED AND DISPOSED OF IN ACCORDANCE WITH ALL GOVERNING AGENCIES / REGULATIONS.

0	2026.07.22	ISSUED FOR TAC REVIEW	NMT	DJO
REV.	DATE	DESCRIPTION	BY	CHK.
DRAWING ISSUE STATUS				
ISSUED FOR PERMITTING				
 HALEY WARD 200 Griffin Rd., Unit 14 Portsmouth, New Hampshire 03801 603.430.9282				
PROJECT PROPOSED 3 LOT SUBDIVISION 20 CENTRAL AVENUE, PORTSMOUTH, NH 03801				
TITLE DEMOLITION PLAN				
DATE JUNE 2026		SCALE 1" = 20'		
DRAWN BY SJR	DESIGNED BY NMT	CHECKED BY DJO		
PROJECT No. 5010658.001		REV.		
DRAWING No. C101		0		

TABLE OF DIMENSIONAL STANDARDS:

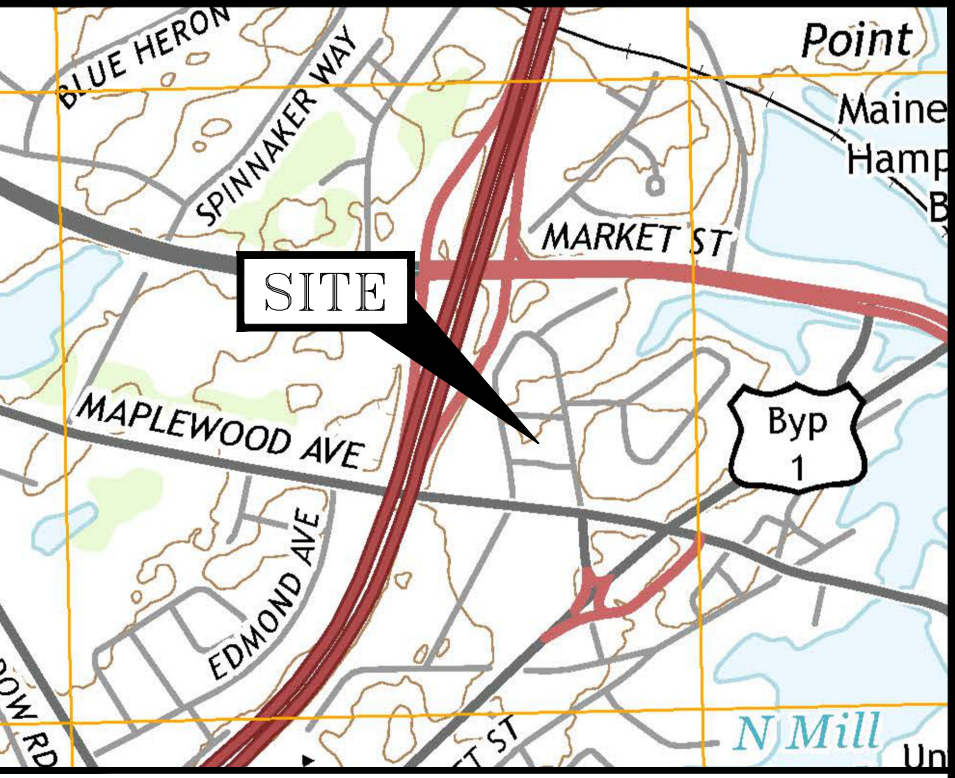
REGULATION	REQUIRED	LOT 1	LOT 2	LOT 3
MIN. LOT AREA	7,500 S.F.	9,074 S.F.	8,302 S.F.	11,805 S.F.
STREET FRONTAGE	100 FEET	100 FEET	148 FEET	100 FEET
MIN. FRONT SETBACK	15 FEET	27.5 FEET	19.3 FEET	51.6 FEET
MIN. SIDE SETBACK	10 FEET	10.4 FEET	11.8 FEET	10.6 FEET
MIN. REAR SETBACK	20 FEET	58.9 FEET	20.7 FEET	45.7 FEET
MAX. HEIGHT SLOPED ROOF	35 FEET	< 35 FEET	< 35 FEET	< 35 FEET
MAX. BUILDING COVERAGE	25%	19.8%	23.5%	15.5%
MIN. OPEN SPACE	30%	71.1%	63.6%	75.0%

TOTAL IMPERVIOUS SURFACE AREAS:
(TO PROPERTY LINES)

LOT 1	LOT 2	LOT 3	TOTAL
2,620 S.F.	3,018 S.F.	2,901 S.F.	8,539 S.F.

UTILITY NOTES:

- FULL PLAN SET ON FILE AT THE CITY OF PORTSMOUTH.
- REFER TO DWG C001 FOR GENERAL NOTES, LEGEND, & ABBREVIATIONS.
- REFER TO DWGS C501 FOR ALL CONSTRUCTION DETAILS.
- ALL PROPOSED SEWER LINES TO BE 6" PVC SDR 35 GASKETED.
- THE SPACING BETWEEN ELECTRICAL AND COMMUNICATION LINES ON THIS PLAN IS EXAGGERATED FOR CLARITY AND INTENDED TO SHOW THE GENERAL LOCATION OF PROPOSED UTILITIES. THE FINAL LOCATIONS AND SPACING MAY BE ADJUSTED TO RUN WITHIN THE SAME TRENCH PER THE CONSTRUCTION DETAILS.
- FIRE SUPPRESSION IS NOT PROPOSED FOR THIS DEVELOPMENT.
- THE CONTRACT SHALL ENSURE ALL SEWER SERVICES HAVE A MINIMUM OF 6" OF COVER. IF THE MINIMUM COVER CANNOT BE OBTAINED, INSULATION SHALL BE INSTALLED.
- ALL PROPOSED WATER LINES SHALL BE 1"



LOCATION MAP SCALE: 1" = 1,000'

NOTES:

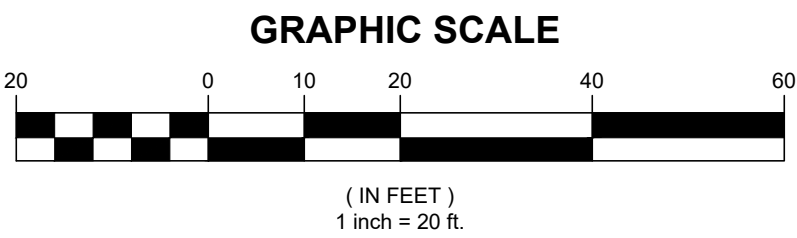
- PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 209 AS LOT 30.
- OWNER OF RECORD (MAP 209 LOT 30):
MARISSA VALVERDE
20 CENTRAL AVENUE
PORTSMOUTH, NH 03801
6478/1413
- APPLICANT:
COPLEY PROPERTIES, LLC
94 PORTSMOUTH AVENUE
STRATHAM, NH 03885
- REFER TO THE EXISTING CONDITIONS PLAN (DWG. NO. V101) FOR ADDITIONAL SITE INFORMATION.
- THE PURPOSE OF THIS PLAN IS TO PROPOSE A 3 LOT SUBDIVISION ON ASSESSOR'S MAP 209, LOT 30, IN THE CITY OF PORTSMOUTH.
- ALL EXISTING SITE FEATURES, STRUCTURES, AND BUILDINGS ON THE SUBJECT PARCEL ARE TO BE DEMOLISHED AND REMOVED AS PART OF THIS DEVELOPMENT. SEE DEMOLITION PLAN.
- TRASH DISPOSAL SHALL BE PORTSMOUTH CURBSIDE PICKUP.
- LIGHTING SHALL BE STANDARD RESIDENTIAL WALL MOUNTED ONLY AND DARK SKY COMPLIANT.

CONDITIONS OF APPROVAL:

- ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.
- THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
- ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.

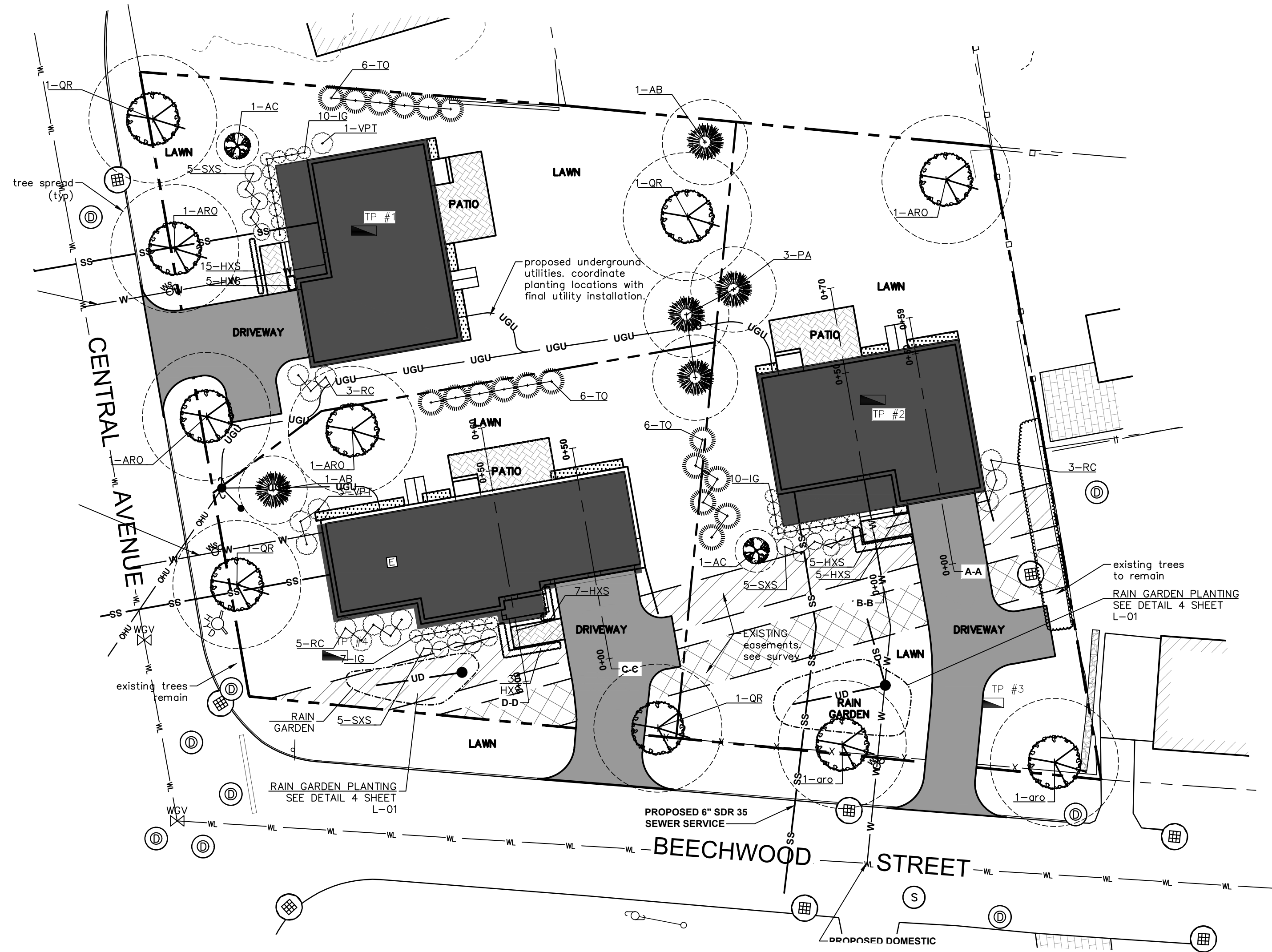
APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE



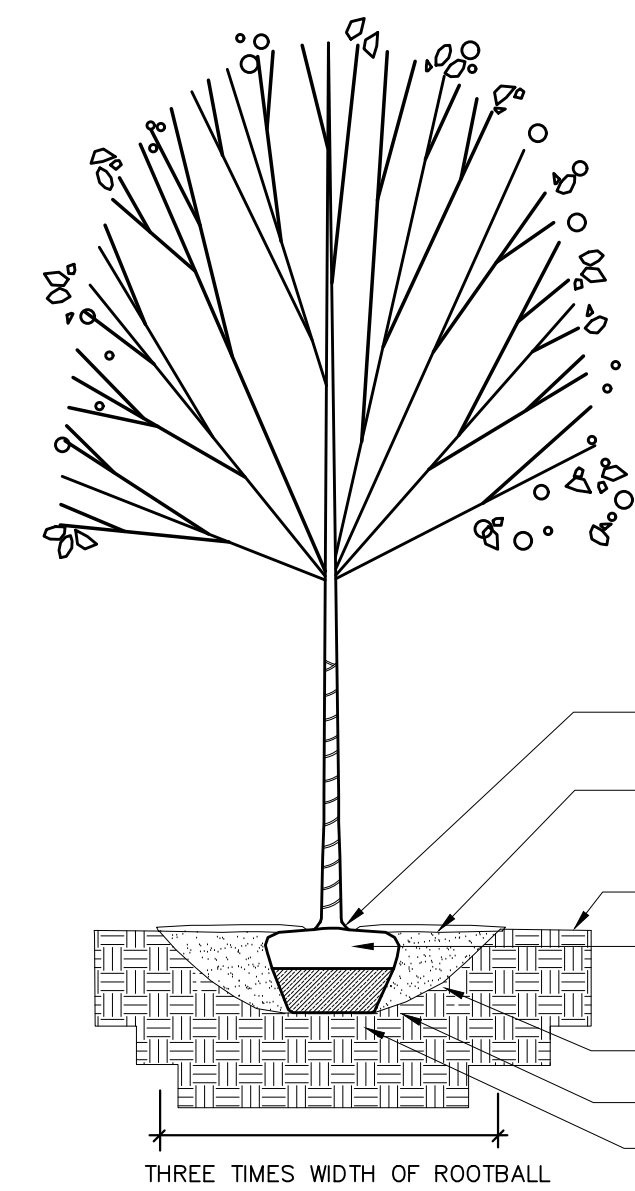
REV.	DATE	DESCRIPTION	BY	CHK.
0	2026.07.22	ISSUED FOR TAC REVIEW	NMT	DJO
DRAWING ISSUE STATUS				
ISSUED FOR PERMITTING				
				
200 Griffin Rd., Unit 14 Portsmouth, New Hampshire 03801 603.430.9282				
PROJECT				
PROPOSED 3 LOT SUBDIVISION 20 CENTRAL AVENUE, PORTSMOUTH, NH 03801				
TITLE				
SITE LAYOUT & UTILITY PLAN				
DATE JUNE 2026				
SCALE 1"=20'				
DRAWN BY SJR				
DESIGNED BY NMT				
CHECKED BY DJO				
PROJECT No. 5010658.001				
DRAWING No. C102				
REV. 0				

3. SEE SURVEY AND EXISTING CONDITIONS PLAN FOR ADDITIONAL INFORMATION. STAKE ALL PROPERTY LINES PRIOR TO START OF WORK.
2. CONTRACTOR IS REQUIRED TO REVIEW PROJECT GENERAL NOTES AND COMPLY WITH ALL CONDITIONS SET FORTH THEIR IN.
3. ALL PLANTING MATERIAL TO BE NURSERY GROWN STOCK SUBJECT TO ANSI Z60.2-2025 AMERICAN STANDARD FOR NURSERY STOCK
4. ALL PLANTINGS IN REGULATED AREAS SHALL BE ACCLIMATIZED TO NEW HAMPSHIRE. NO INVASIVE OR POTENTIALLY INVASIVE SHALL BE PLANTED ON THE PROPERTY PER NEW HAMPSHIRE INVASIVE SPECIES DATABASE.
5. ALL PLANT MATERIAL TO BE PROVIDED IN HEALTHY, VIABLE CONDITION FREE OF DAMAGE, PESTS, DISEASE OR WILT. UNSUITABLE MATERIALS MAY BE REJECTED AT THE SITE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUPPLY REJECTED MATERIALS WITH SUITABLE MATERIALS AT NO ADDITIONAL COST TO THE OWNER.
6. ALL DISTURBED AREAS OUTSIDE OF AREAS OF CONSTRUCTION OR SITE IMPROVEMENTS ARE TO BE LANDSCAPED, TOPSOILED AND SEED.
7. CONTRACTOR TO UTILIZE A "DROUGHT TOLERANT LOW GROWN FESCUE MIX" FOR ALL LAWN AREAS UNLESS OTHERWISE SPECIFIED.
8. STRIPPED TOPSOIL TO REMAIN ONSITE. SCREEN AND REUSE FOR LANDSCAPED AREA.
9. PROVIDE SOIL TEST RESULTS FOR EXISTING SITE SOIL AND ALL IMPORTED SOILS. LOAM TO BE 40% SAND, 40% SILT 20% CLAY. FINAL SOILS MIXTURE TO BE 3/4 NATIVE LOAM/TOPSOIL AND 1/4 COMPOST PER CITY OF PORTSMOUTH DPW "ATTACHMENT B" OR AMEND SOILS AS MAY BE INDICATED IN THE TEST RESULTS.
10. ALL GRAVEL, PAVEMENT & PAVEMENT BASE MATERIAL TO BE REMOVED FROM LANDSCAPED ISLANDS TO A DEPTH OF 18" PRIOR TO PLACEMENT OF TOPSOIL. DE-COMPACT BOTTOM OF ALL PLANTING BEDS AND PLANT FITS.
11. ALL TEMPORARY & FINAL HURDLE SEED MIXTURES SHALL UTILIZE A TACIFYER ADDITIVE TO PREVENT SEED MIGRATION.
12. ALL PLANTING BEDS TO RECEIVE 3" SHREDED BARK MULCH
13. THE CONTRACTOR SHALL SUPPLY ALL PLANTS IN QUANTITIES REQUIRED TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND LISTED IN THE PLANT LIST. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT LIST AND THOSE SHOWN ON THE DRAWINGS BY THE DRAWINGS, THE LARGER QUANTITY SHALL APPLY.
14. ALL PLANTS SHALL BE LOCATED ON SITE BY THE CONTRACTOR PRIOR TO LANDSCAPE ARCHITECT OR PROJECT ENGINEER ARRIVAL. FINAL LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT OR PROJECT ENGINEER PRIOR TO FINAL INSTALLATION. ANY INSTALLATIONS NOT APPROVED BY THE LANDSCAPE ARCHITECT OR PROJECT ENGINEER AND SUBSEQUENTLY REQUESTED TO BE MOVED WILL BE DONE AT THE CONTRACTOR'S EXPENSE.
15. PRECISE LOCATION OF ITEMS NOT DIMENSIONED ON THE PLAN ARE TO BE FIELD STAKED BY THE CONTRACTOR AND SHALL BE SUBJECT TO THE REQUIREMENTS SPECIFIED IN THE PREVIOUS NOTE.
16. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES IN THE FIELD, WHERE PLANT MATERIAL MAY INTERFERE WITH UTILITIES, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT TO COORDINATE THEIR INSTALLATION.
17. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DONE TO EXISTING VEGETATION WITHIN OR OUTSIDE OF THE LIMITS OF CONSTRUCTION AND SHALL REPLACE REPAIR ANY DAMAGE, AT HIS OWN EXPENSE.
18. PROVIDE 6" MIN TOPSOIL FOR ALL LAWN.
19. ALL SHRUB AND GROUND COVER PLANTING AREAS SHALL HAVE CONTINUOUS BEDS OF TOPSOIL, 12" DEEP.
20. CONTRACTOR SHALL MECHANICALLY DE-COMPACT ANY TEMPORARY ACCESS-WAYS, CONSTRUCTION ROADS AND ALL LANDSCAPE AREAS DISTURBED OR COMPACTED BY CONSTRUCTION ACTIVITIES TO A MINIMUM DEPTH OF 12" PRIOR TO PLACEMENT OF TOPSOIL.
21. PLANTINGS INSTALLED IN THE DRY SUMMER MONTHS AND/OR LAWN SEEDING OUT OF SPRING OR FALL PERIODS, IF ALLOWED BY OWNER, WILL REQUIRE IRRIGATION PROGRAM. IF AN AUTOMATIC IRRIGATION SYSTEM IS NOT SCHEDULED TO BE INSTALLED A TEMPORARY IRRIGATION SYSTEM SHALL BE PROVIDED AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE DIRECTED.
22. SUBSTITUTIONS PERMITTED ONLY UPON WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT. CONTRACTOR SHALL SUBMIT A LIST OF REQUESTED SUBSTITUTIONS AND GET APPROVAL PRIOR TO MATERIAL BEING DELIVERED TO THE SITE.
23. PLANT TAGS TO REMAIN ON ALL PLANT MATERIAL UNTIL FINAL ACCEPTANCE. AFTER ACCEPTANCE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL PLANT TAGS.
24. WHERE A SIZE RANGE IS GIVEN IN THE PLANT SCHEDULE, AT LEAST 50% OF THE PLANTS PROVIDED SHALL BE OF THE LARGER SIZE. ALL PLANT MATERIAL IN GROUPS OR HEDGES TO BE OF THE SAME SIZE.
25. CONTRACTOR TO GUARANTEE ALL PLANT MATERIAL FOR ONE YEAR AFTER DATE OF FINAL ACCEPTANCE. LANDSCAPE ARCHITECT SHALL DETERMINE IF INSTALLED MATERIALS ARE TO BE REPLACED. REPLACEMENTS SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
26. CONTRACTOR TO MAINTAIN ALL PLANT MATERIAL UNTIL 60 DAYS AFTER FINAL ACCEPTANCE.
27. THE LANDSCAPE CONTRACTOR SHALL SUPPLY OWNER WITH WATERING AND MAINTENANCE EXPECTATIONS AT PROJECT COMPLETION.
28. OWNER SHALL MAINTAIN ALL LAWNS AND PLANTINGS IN ACCORDANCE WITH GENERALLY ACCEPTED LANDSCAPE STANDARDS TO MAINTAIN WARRANTY.

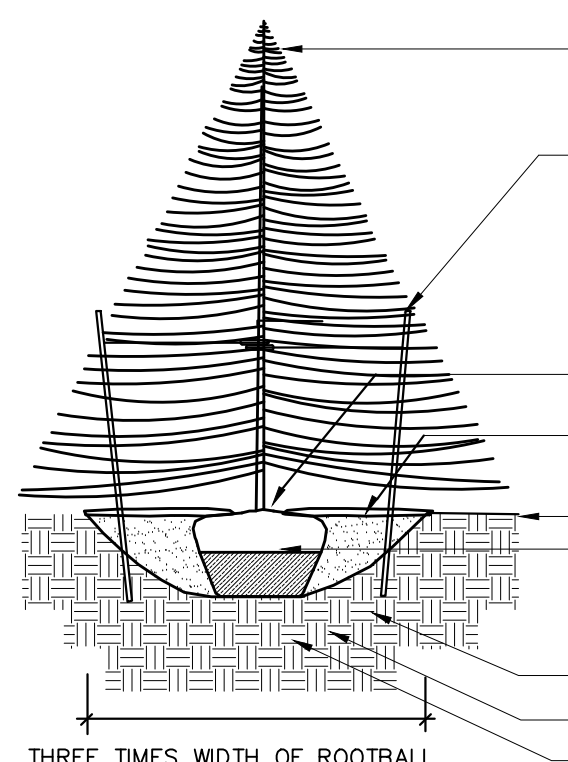


GRAPHIC SCALE

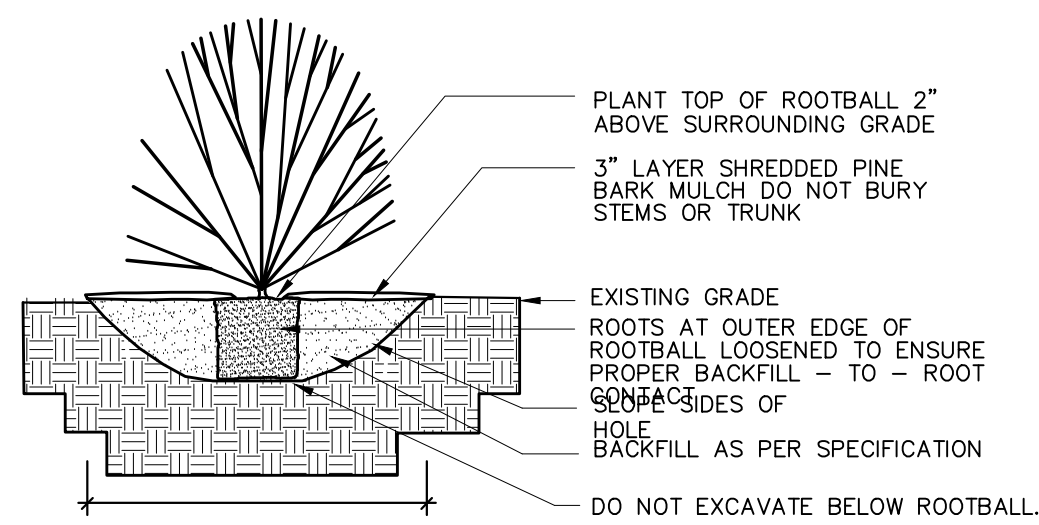
(IN FEET)
1 inch = 20 ft.



1
L-1

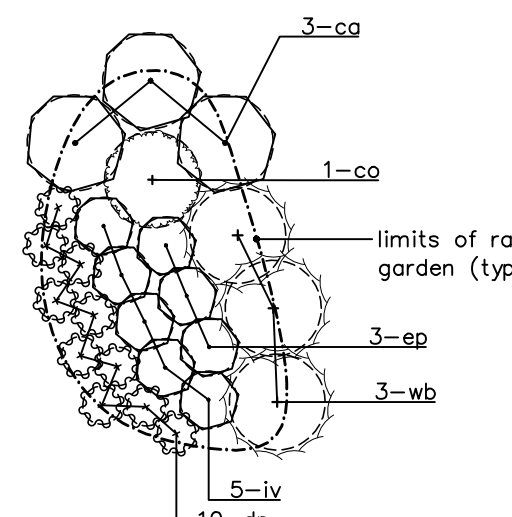


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L-1

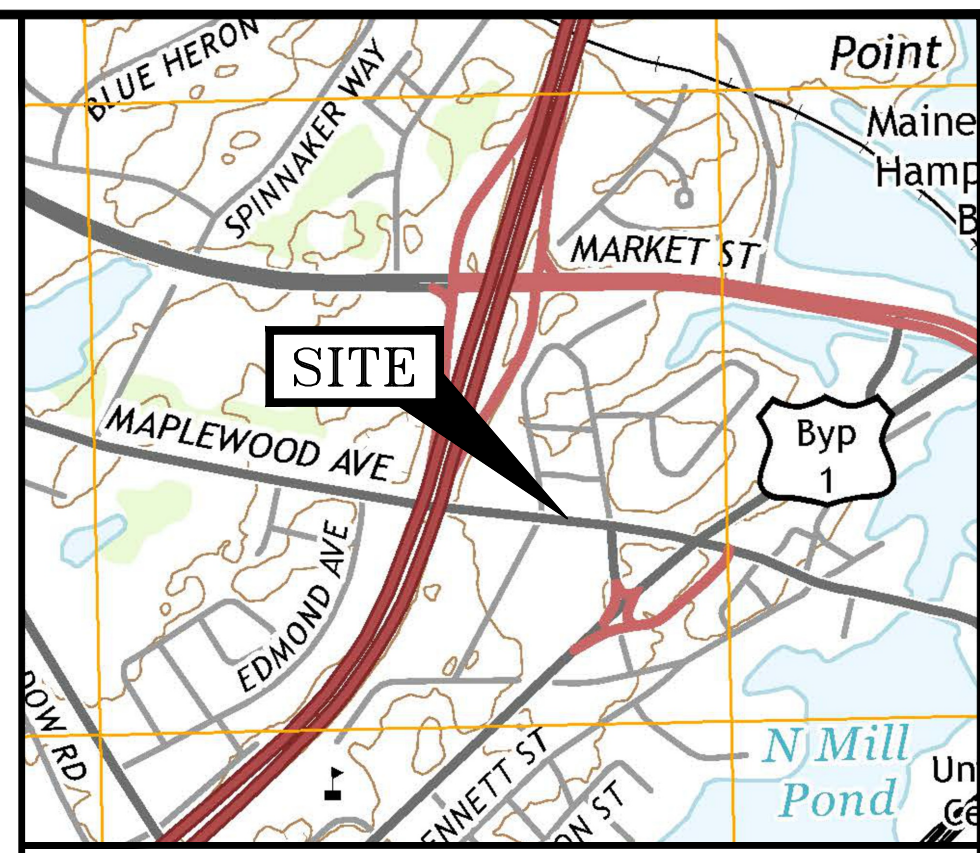


3 SHRUB PLANTING
L-1

- NOTES:
1. REFER TO DRAINAGE REPORT for percolation rates, ADDITIONAL RAIN GARDEN REQUIREMENTS AND VOLUME CALCULATIONS.
 2. ALLOW FOR 18-24" PLANTING MEDIUM IN BASIN
 3. SIDE SLOPES NOT TO EXCEED 1:3
 4. PLANTING MEDIUM TO CONSIST OF 1/3 sand, 1/3 compost and 1/3 topsoil, or as otherwise specified.
 5. see sheet c502 for rain garden construction detail



TYPICAL RAIN GARDEN PLANTING



LOCATION MAP SCALE: 1" = 1,000'

TREES						
CODE	LATIN NAME	COMMON NAME	HEIGHT	ROOT	QTY	SIZE
AB	Abeba balsamea var. <i>can.</i>	Can	6-7' HT.	B&B	2	G
AC	<i>Amelanchier canadensis</i>	Shadow Serviceberry FAC	7-8' HCLM	B&B	2	E
ARO	<i>Acer rubrum</i>	Ochoo Glory Red Maple	2-5.3' CH	B&B	6	E
PA	<i>Picea abies</i>	Norway Spruce	6-7' HT.	B&B	3	E
QR	<i>Quercus rubra</i>	Red Oak FACU	2-5.3' CH	B&B	4	E
TO	<i>Tuja occidentalis</i>	Northern White Cedar	2' HT.	B&B	18	G
SHRUBS						
CA	<i>Ceanothus</i>	Sweet Pepperbush FAC	2-3' HT	Cont	6	E
CO	<i>Cephalanthus occidentalis</i>	Bulbush OIL	2-3' H	Cont	2	G
IG	<i>Ilex glabra</i> 'Shamrock'	Shamrock Inkberry FACW	18"-24"	Cont	27	E
RO	<i>Rhododend. catesbaei</i> 'Dunningham's White'	Rhododendron's White Rhododendron var.	#3	Cont	11	G
SXS	<i>Sorbus domestica</i> 'Little Princess'	Little Princess Spirea	30"-36" Spd	Cont	15	E
WPT	<i>Wibornium punctatum</i> 'Watanabe'	Summer Snowflake/Fib.	30"-36"	Cont	4	G
VB	<i>Vib. vericillata</i>	Winterberry FACW	#5, 2.5 HT.	Cont	6	G
PERENNIALS						
EP	<i>Eupatorium maculatum</i>	Joe-Pye Weed FAC	2' plg	50/flat	6	P
DF	<i>Diarrhiza punctiloba</i>	Hairycent Fern	1 QT	1 Cont	20	P
HXS	<i>Hemerocallis</i> 'Happy Returns'	Day variety	1 QT	Cont	77	E
IV	<i>Iris versicolor</i>	Blue Flag Iris OB	2' plg	50/flat	10	P

LAWN SEED TO BE "DROUGHT TOLERANT" SEED MIX. SUBMIT MFG. SEED MIX SPECIFICATIONS FOR LANDSCAPE ARCHITECTS APPROVAL.

CHAIRMAN _____
DATE

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REV.	DATE	DESCRIPTION	BY	CHK.
DRAWING ISSUE STATUS				

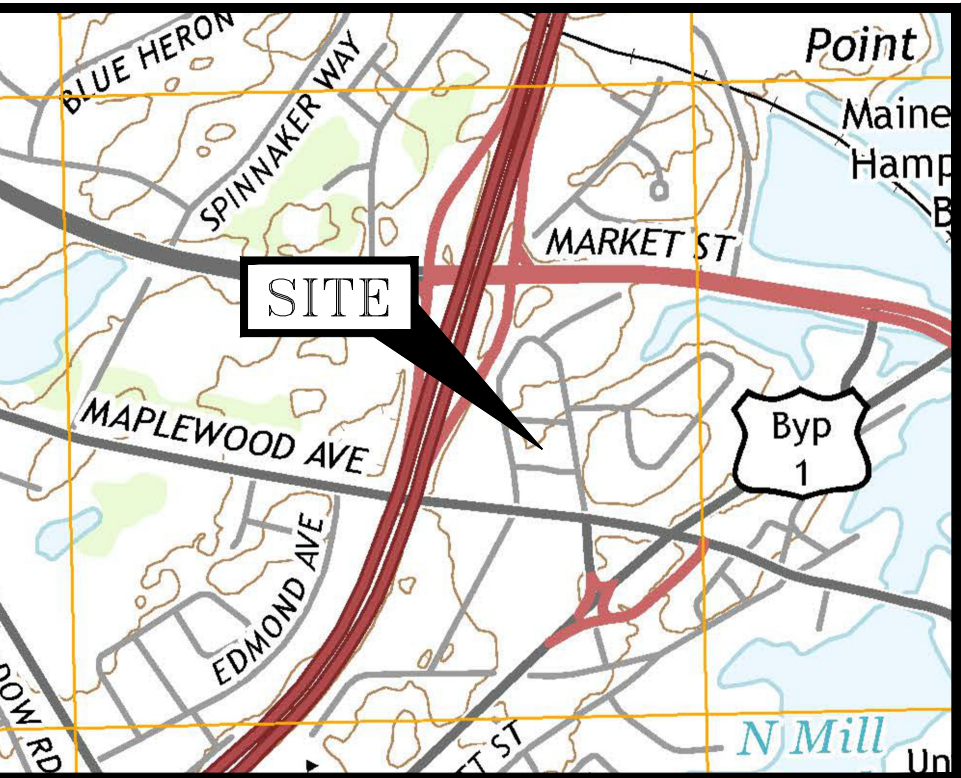
HALEY WARD
 200 Griffin Rd., Unit 14
 Portsmouth, New Hampshire 03801
WWW.HALEYWARD.COM

TITLE	
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	DATE	JUNE 2026		SCALE	AS SHOWN
	DRAWN BY	DWW	DESIGNED BY	DWW	CHECKED BY
					NY
	PROJECT No.		5010658.001		
00264	DRAWING No.				REV.
	L-01				0

NOTES:

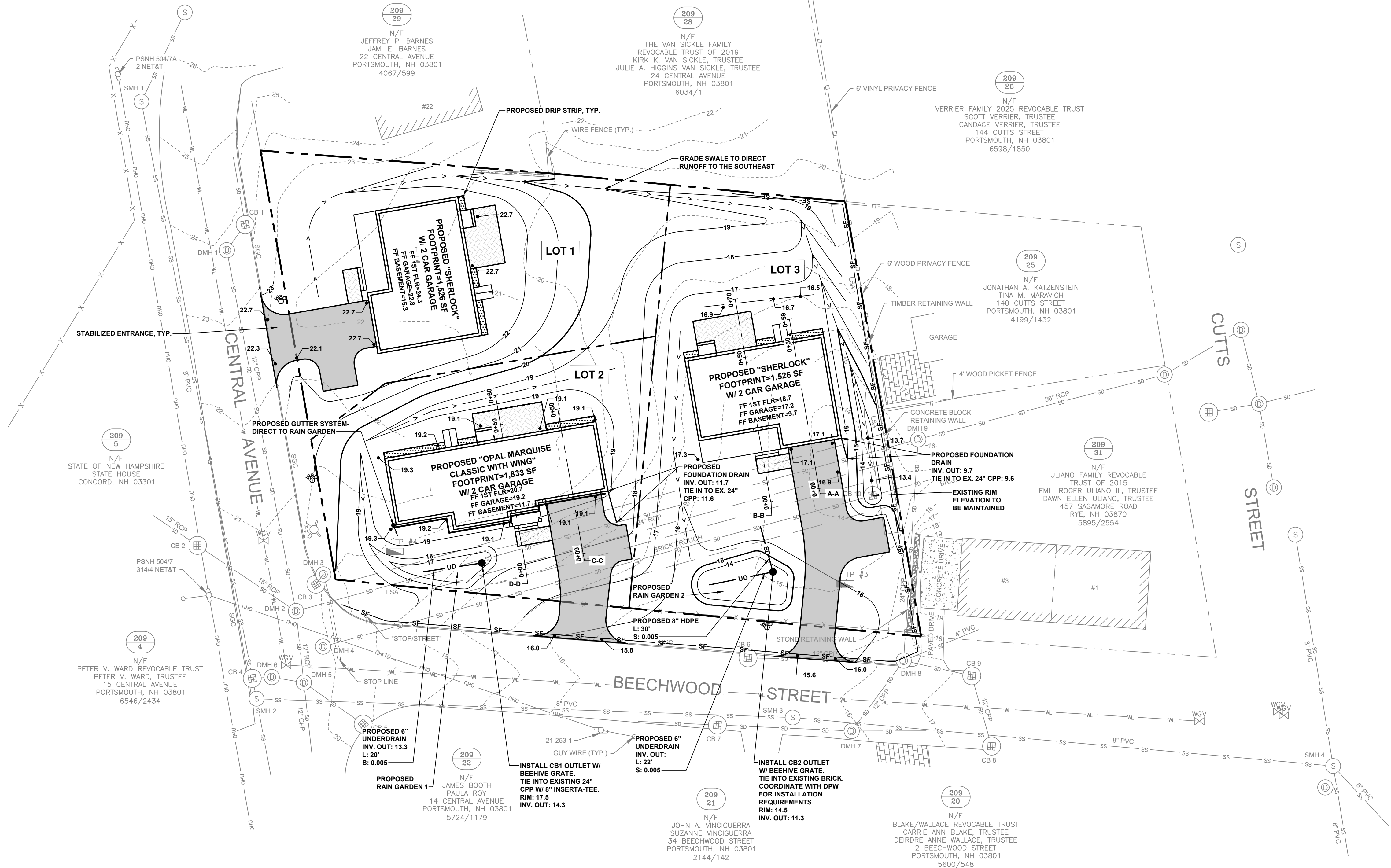
1. THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY WITHIN 100 FEET OF UNDERGROUND UTILITIES. THE EXCAVATOR IS RESPONSIBLE TO MAINTAIN MARKS. DIG SAFE TICKETS EXPIRE IN THIRTY DAYS.
2. UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.
3. CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).



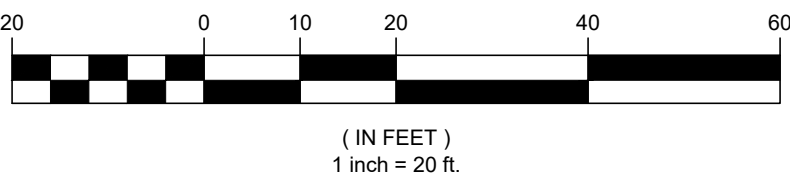
LOCATION MAP SCALE: 1" = 1,000'

DRAINAGE NOTES:

1. REFER TO DWG C001 FOR GENERAL NOTES, LEGEND, AND ABBREVIATIONS.
2. REFER TO DWGS C501-502 FOR ALL CONSTRUCTION DETAILS.
3. ROOF RUNOFF SHALL BE COLLECTED WITH DRIP STRIPS OR A GUTTER COLLECTION SYSTEM AND CONNECTED TO THE STORMWATER SYSTEM.
4. ALL FOOTING DRAINS SHALL BE CONNECTED TO THE STORMWATER SYSTEM WITH A PROVIDED AIR GAP.
5. VERTICAL DATUM IS NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GNSS OBSERVATIONS.
6. PORTSMOUTH STORMWATER CONNECTION PERMIT REQUIRED.



GRAPHIC SCALE



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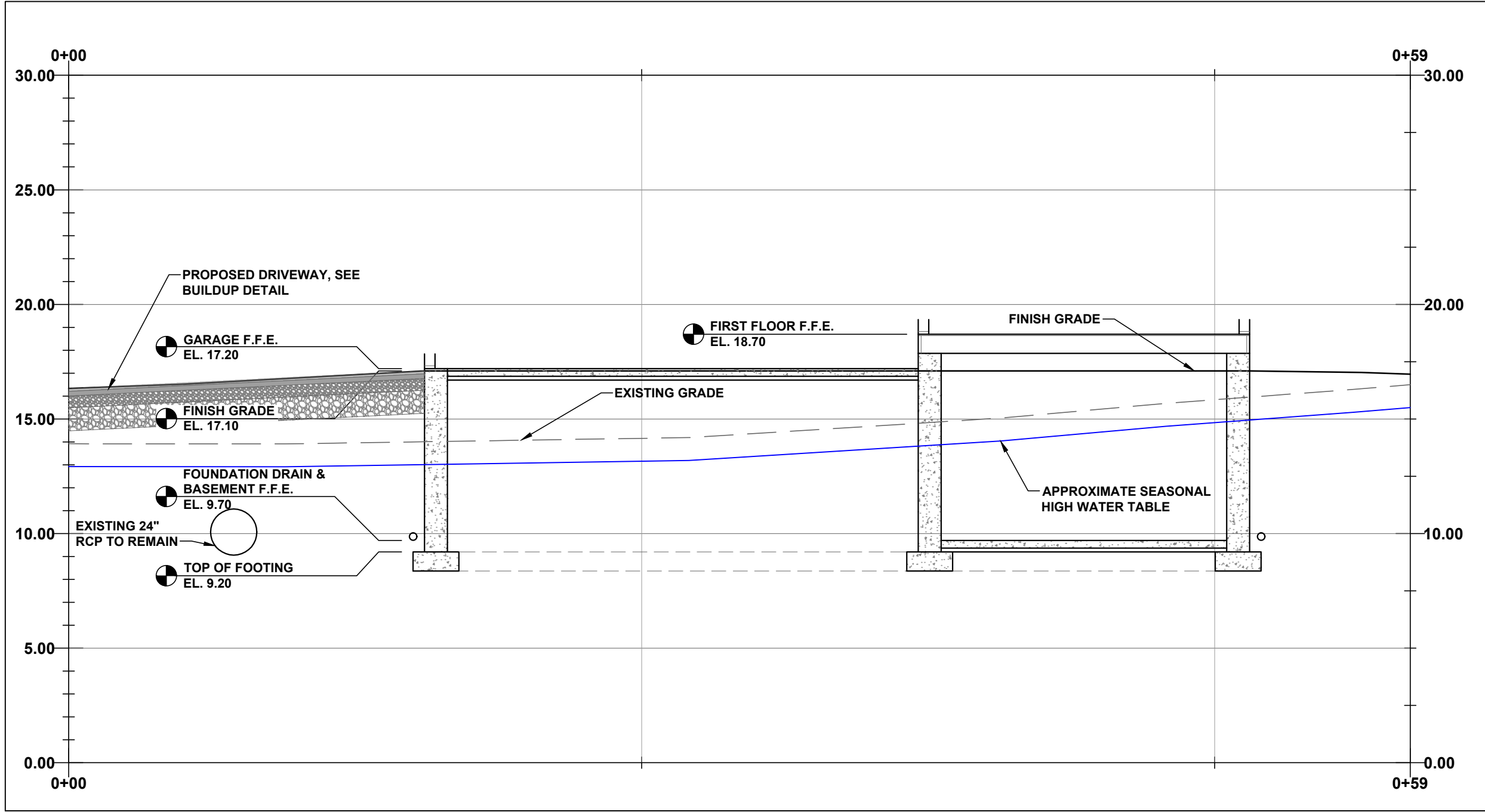
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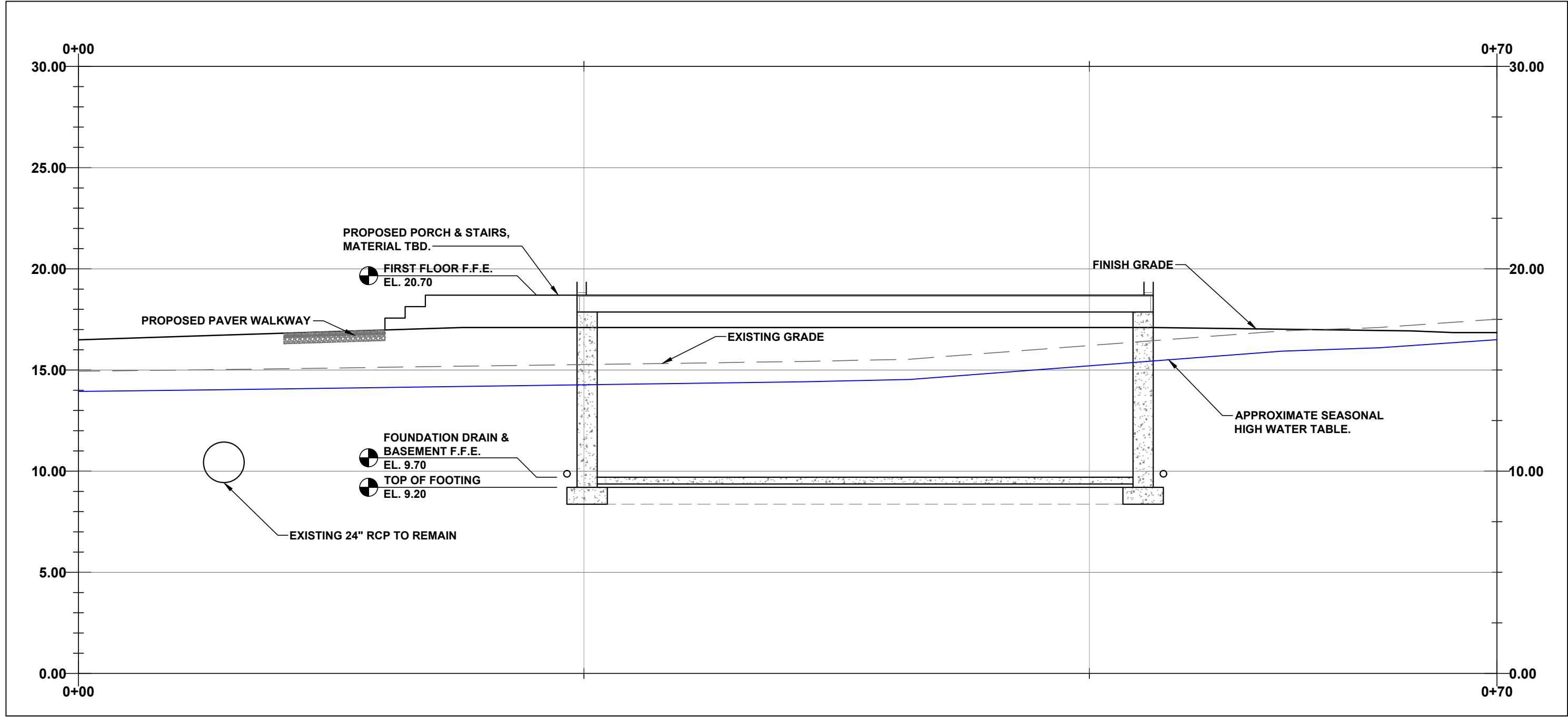
PROPOSED 3 LOT SUBDIVISION
20 CENTRAL AVENUE, PORTSMOUTH, NH 03801

GRADING & DRAINAGE
PLAN

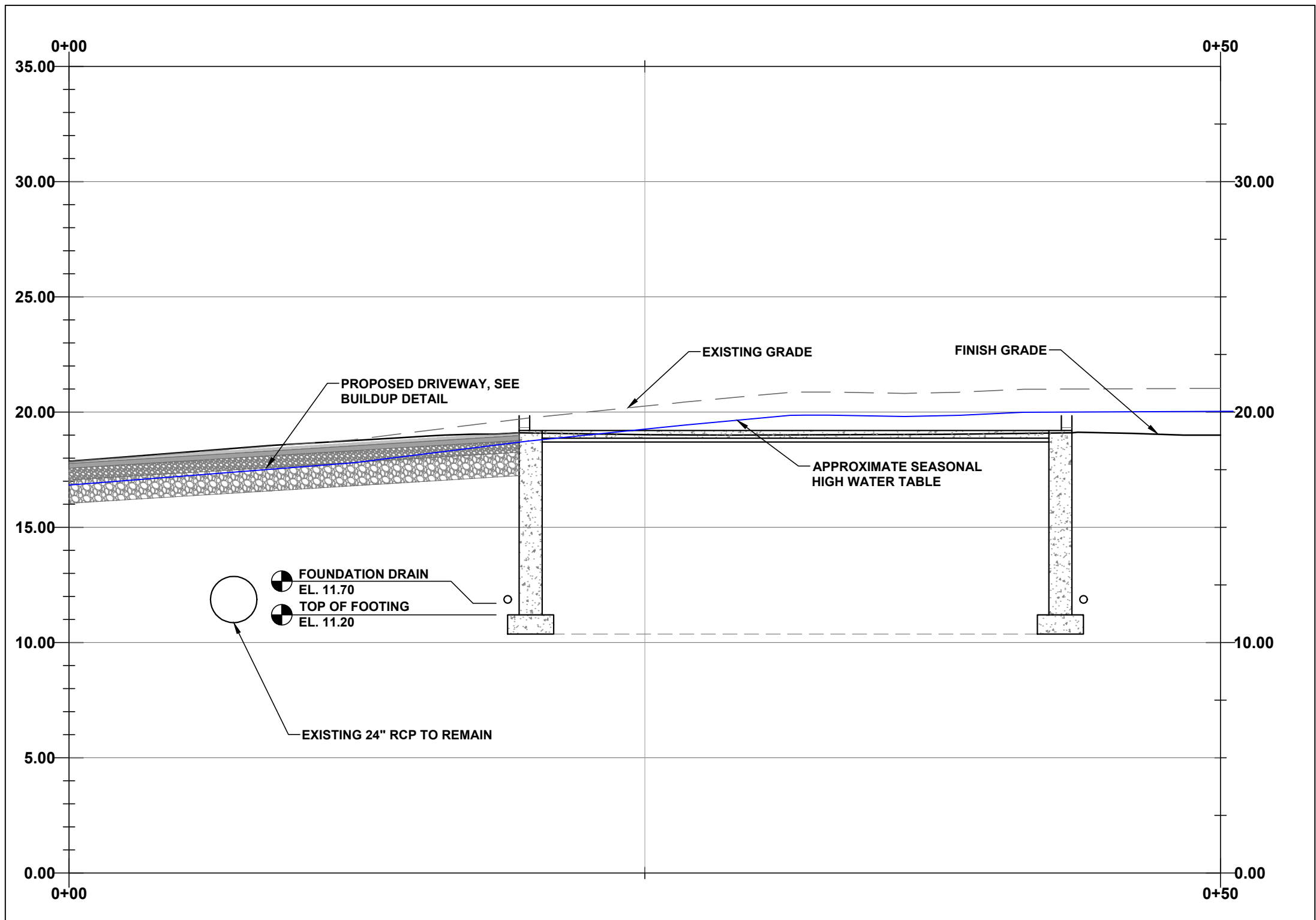
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PROJECT No. 5010658.001		REV. 0	
DRAWING No. C103			



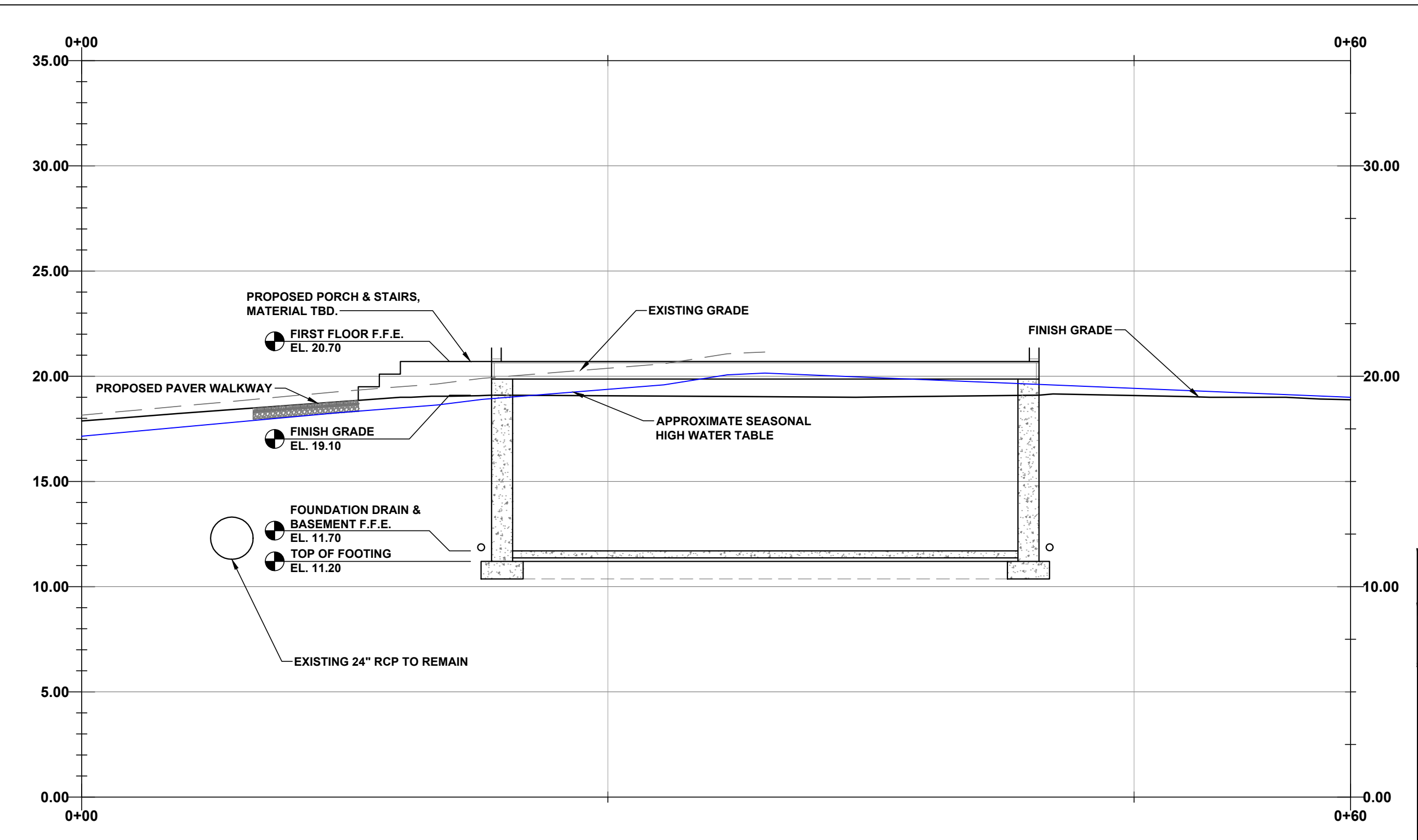
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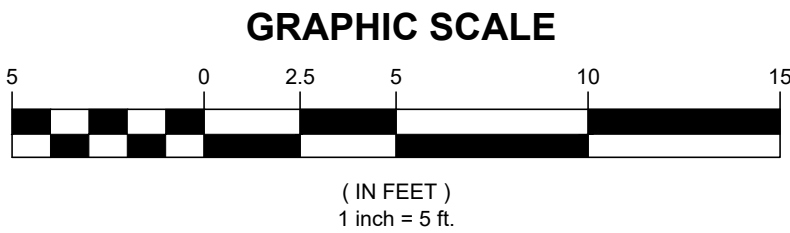
FOUNDATION SECTION B-B
SCALE: 1"=5'



FOUNDATION SECTION C-C
SCALE: 1"=5'



FOUNDATION SECTION D-D
SCALE: 1"=5'



NOTES:

- BUILDING FOUNDATION AND FRAMING SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. REFER TO DESIGN BY OTHERS.
- DRIP EDGE TRENCH NOT SHOWN ON SECTIONS B-B AND D-D FOR CLARITY PURPOSES. REFER TO C502 DETAIL FOR DESIGN.
- PATIO NOT SHOWN ON SECTIONS B-B AND D-D. REFER TO DESIGN BY OTHERS.

REV.	DATE	DESCRIPTION	BY	CHK.
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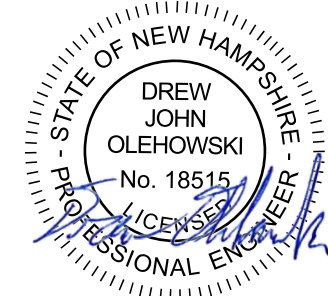
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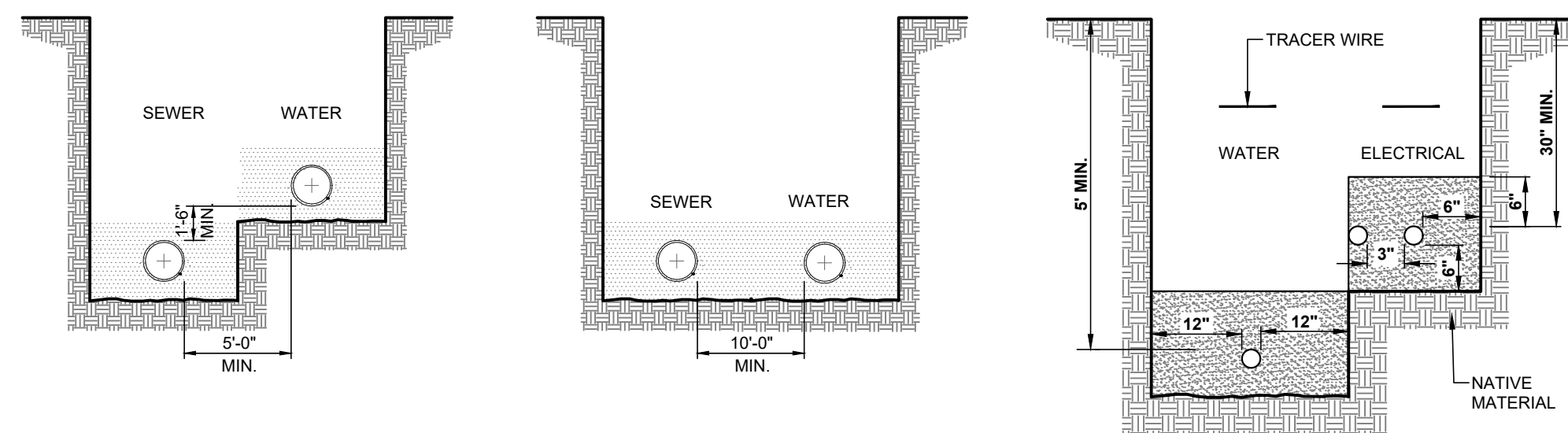


HALEY WARD
200 Griffin Rd., Unit 14
Portsmouth, New Hampshire 03801
603.430.9282

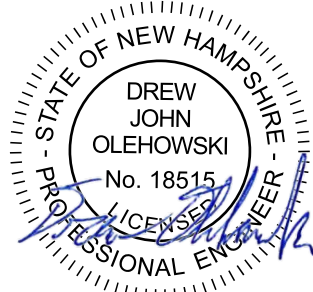
PROJECT
PROPOSED 3 LOT SUBDIVISION
20 CENTRAL AVENUE, PORTSMOUTH, NH 03801

TITLE
FOUNDATION SECTIONS

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	DRAWN BY	PJM	DESIGNED BY	NMT
	CHECKED BY	DJO	PROJECT No.	5010658.001
	DRAWING No.	C201	REV.	0



TEMPORARY STOCKPILE AREA
N.T.S.

0	2026.07.22	ISSUED FOR TAC REVIEW	SJR	DUO
REV.	DATE	DESCRIPTION	BY	CHK.
DRAWING ISSUE STATUS				
ISSUED FOR PERMITTING				
 HALEY WARD 200 Griffin Rd., Unit 14 Portsmouth, New Hampshire 03801 603.430.9722 WWW.HALEYWARD.COM				
PROJECT				
PROPOSED 3 LOT SUBDIVISION 20 CENTRAL AVENUE, PORTSMOUTH NH				
TITLE				
SITE DETAILS				
DATE JUNE 2026		SCALE NTS		
DRAWN BY SJR	DESIGNED BY NMT	CHECKED BY DJO		
PROJECT No. 5010658.001				
DRAWING No. C501		REV. 0		
				

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6

5

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3

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D

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6

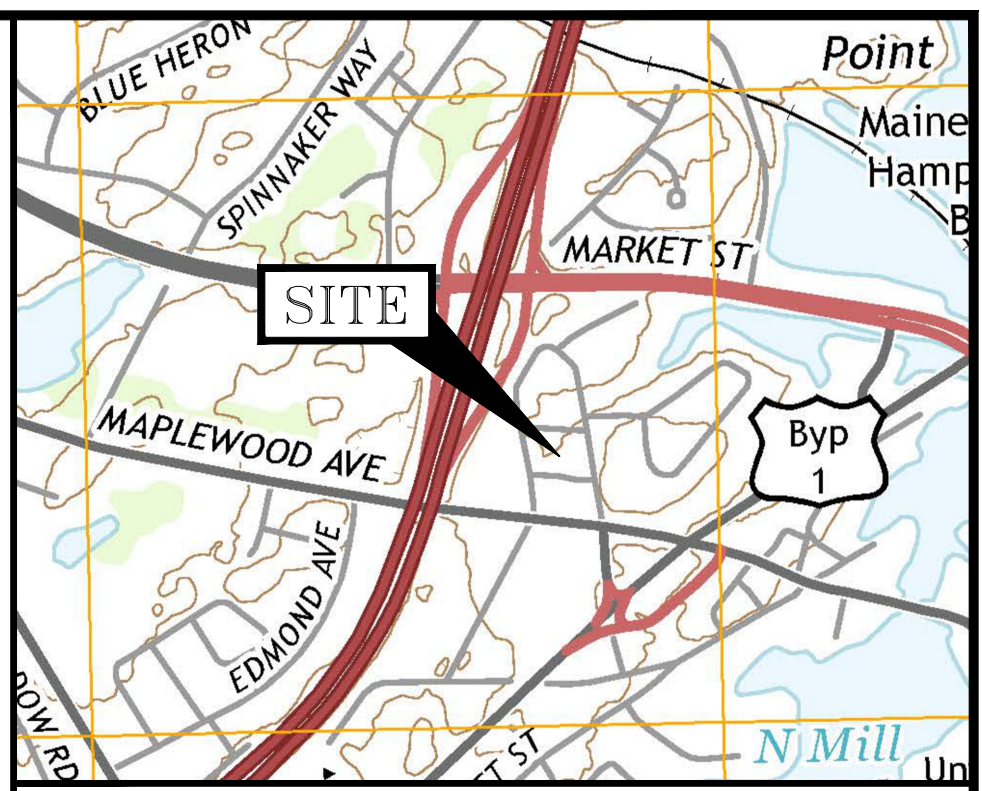
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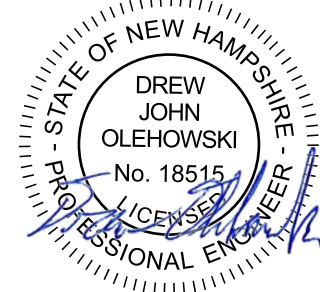
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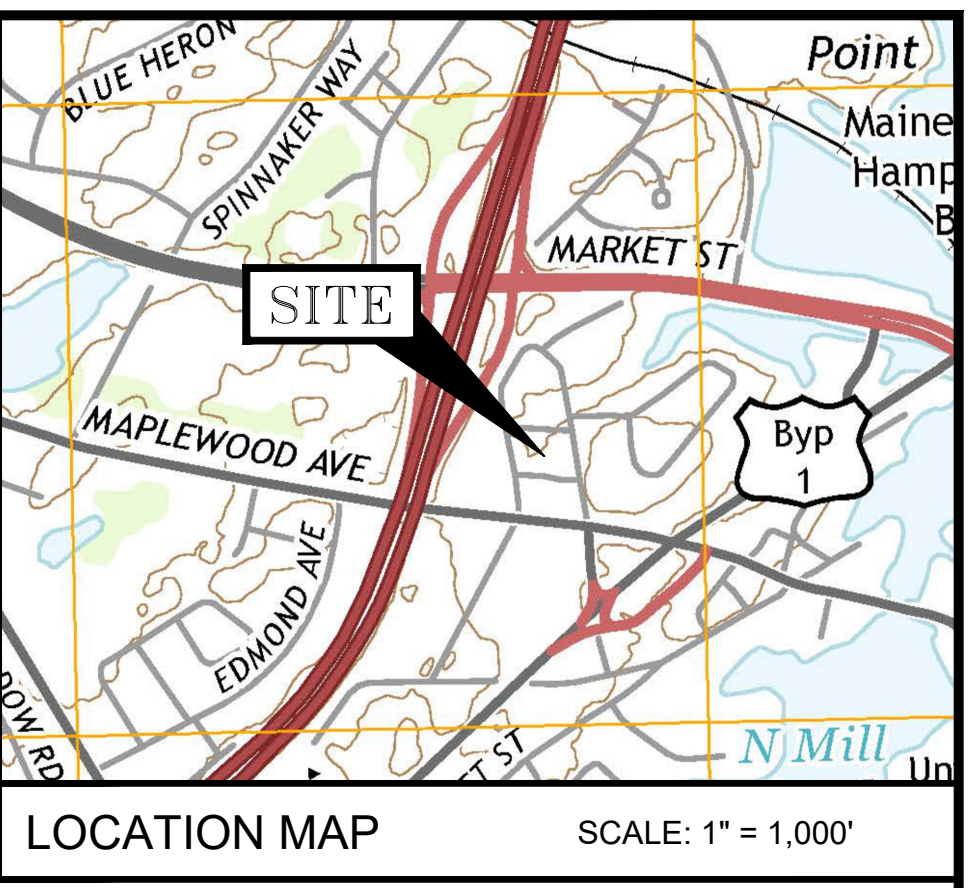
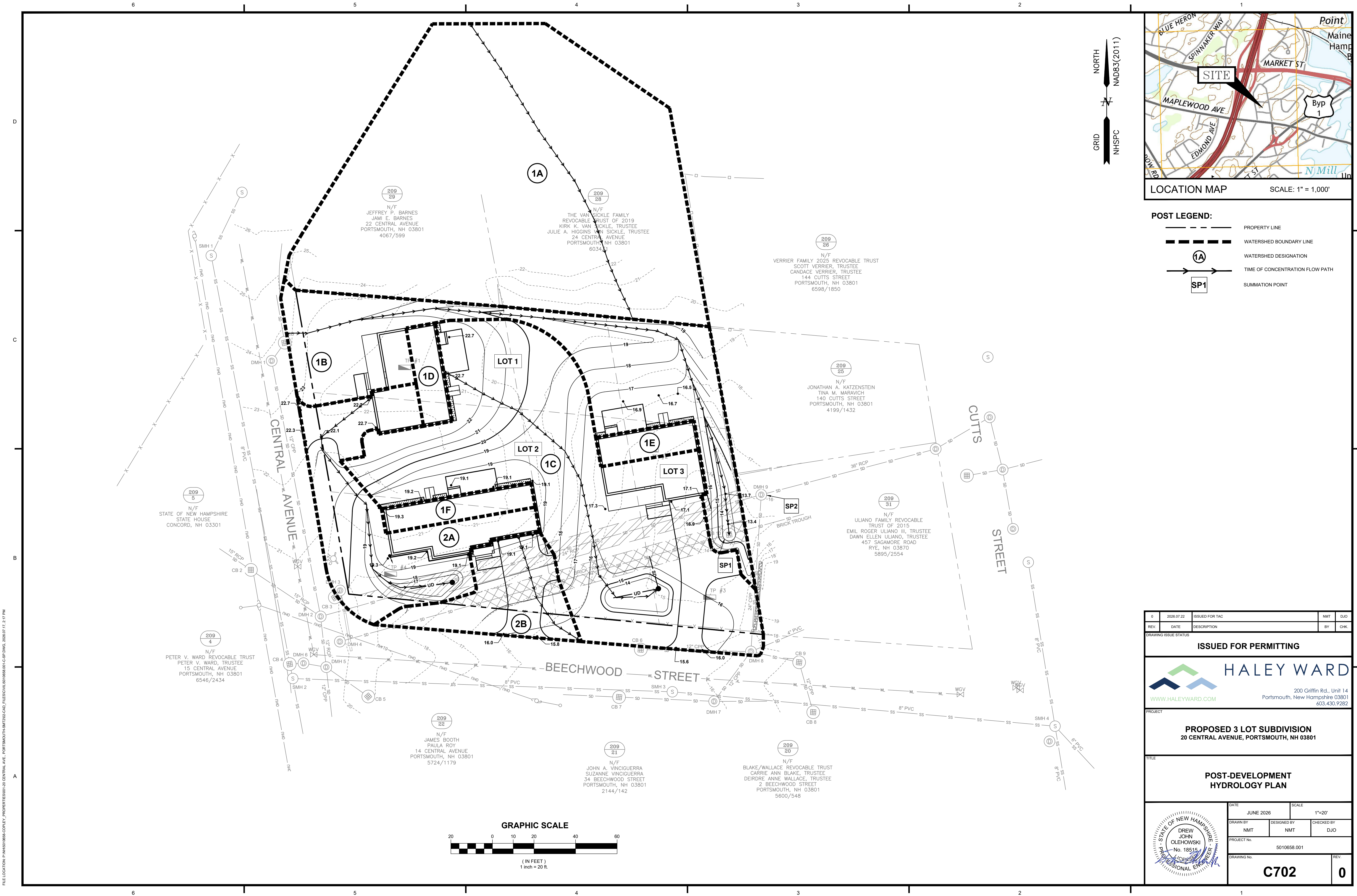
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LOCATION MAP SCALE: 1" = 1,000'

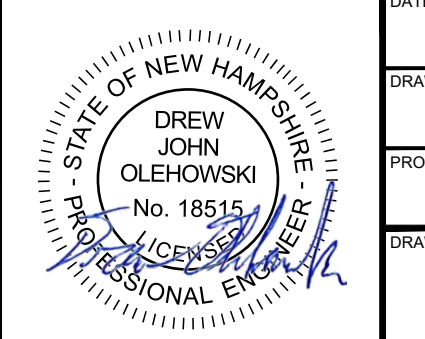
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	WATERSHED BOUNDARY LINE
	WATERSHED DESIGNATION
	TIME OF CONCENTRATION FLOW PATH
	SUMMATION POINT

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REV.	DATE	DESCRIPTION	BY	CHK.	
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ISSUED FOR PERMITTING					
 WWW.HALEYWARD.COM HALEY WARD 200 Griffin Rd., Unit 14 Portsmouth, New Hampshire 03801 603.430.9282					
PROJECT					
PROPOSED 3 LOT SUBDIVISION 20 CENTRAL AVENUE, PORTSMOUTH, NH 03801					
TITLE					
PRE-DEVELOPMENT HYDROLOGY PLAN					
		DATE	JUNE 2026	SCALE	1"=20'
DRAWN BY		DESIGNED BY		CHECKED BY	
NMT		NMT		DJO	
PROJECT No.		5010658.001			
DRAWING No.				REV.	
C701				0	



POST LEGEND:

---	PROPERTY LINE
---	WATERSHED BOUNDARY LINE
(1A)	WATERSHED DESIGNATION
→	TIME OF CONCENTRATION FLOW PATH
SP1	SUMMATION POINT

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REV.	DATE	DESCRIPTION	BY	CHK.
DRAWING ISSUE STATUS				
ISSUED FOR PERMITTING				
 200 Griffin Rd., Unit 14 Portsmouth, New Hampshire 03801 603.430.9282				
PROJECT PROPOSED 3 LOT SUBDIVISION 20 CENTRAL AVENUE, PORTSMOUTH, NH 03801				
TITLE POST-DEVELOPMENT HYDROLOGY PLAN				
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	DRAWN BY	NMT	DESIGNED BY	NMT
	CHECKED BY	DJO	PROJECT No.	5010658.001
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