

TO: Beverly Mesa-Zendt, AICP

Planning Director City of Portsmouth, NH 1 Junkins Avenue Portsmouth, NH 03801

DATE: 6/22/2022

RE: Map 283, Lot 11

Wetland Conditional Use Permit

Dear Beverly,

The following is a supplemental to accompany the project plans that demonstrates compliance with the conditional use criteria for the proposed wetland buffer impacts. It is our hope that returning to the Planning Board to re-approve the expired CUP is the only step necessary given that the Conservation Commissions recommendations have not expired and the plans remain unchanged.

Project Overview:

The property's sole access is via the existing old roadway off Martha Terrace. This roadway is paved with 20-24 feet of pavement width terminating in a cul-de-sac. There is no other alternative access to this buildable area of the lot without utilizing the roadway. The plans call for the removal of the existing failing asphalt surface and its non-functioning catch basins and the replacement of an 18 foot paved roadway that will be curbed to direct stormwater runoff to a small bio-retention area. The existing mature trees along the roadway will remain although there are a few trees proximate to the existing cul-de-sac that will be removed for the creation of stormwater features. The existing impervious coverage in the wetland buffer is 5,718 s.f. and the proposed permanent impacts to the buffer are 4,283 s.f., for the roadway, representing a 25% reduction in permanent buffer impact. Temporary impacts to the buffer are for the creation of the stormwater treatment areas (detention area and level spreader). These impacts require 1,738 s.f. of temporary impact in the buffer which result in stormwater treatment for the roadway.

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10.1017.40 Conditional Use Approval - 10.1017.50 Criteria for Approval

Any proposed development, other than installation of utilities within a right-of-way, shall comply with all of the following criteria:

(1) The land is reasonably suited to the use, activity or alteration.

The property is presently zoned for single-family residential development and consists of 3.16 acres in the SRA District. The property has over 400 feet of frontage on an existing roadway that has not been maintained for many years other than being plowed by the abutting landowners for access. The property has suitable upland soils outside of the 100-foot wetland buffer for residential development.

(2) There is no alternative location outside the wetland buffer that is feasible and reasonable for the proposed use, activity or alteration.

There is no other alternative access to the buildable area of the lot without utilizing and improving the existing right-of-way.

(3) There will be no adverse impact on the wetland functional values of the site or surrounding properties;

Given that there will be a reduction in permanent impact to the buffer by 25% and that new stormwater treatment will be introduced, the proposal will be a net positive impact on the wetlands. Therefore, no adverse impact on the wetland functional values will result.

(4) Alteration of the natural vegetative state or managed woodland will occur only to the extent necessary to achieve construction goals; and

The existing mature trees along the roadway will remain. Some brush will be removed along the roadway to establish the curbing to direct stormwater to the detention area. The detention pond proximate to the existing cul-de-sac is proposed in an area that is presently disturbed area where the existing catch basin and outfall pipe are located. (See photos attached)

(5) The proposal is the alternative with the least adverse impact to areas and environments under the jurisdiction of this Section.

There is no other alternative access to the buildable area of the lot without utilizing and improving the existing right-of-way.

(6) Any area within the vegetated buffer strip will be returned to a natural state to the extent feasible.

There is no work proposed within the vegetated buffer strip. The vegetated buffer strip shall remain uncut and undisturbed.

PHOTO A: Looking west towards the proposed detention pond from the existing roadway.



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PHOTO B: Looking westerly upslope towards the existing roadway cul-de-sac at proposed detention pond location.



GARREPY PLANNING CONSULTANTS, LLC

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PHOTO C: Looking south toward the existing cul-de-sac. Existing mature trees along the westerly side of the roadway to remain. Broken pavement to be removed and replaced. Curbing to be installed along the westerly side of the roadway.



GARREPY PLANNING CONSULTANTS, LLC

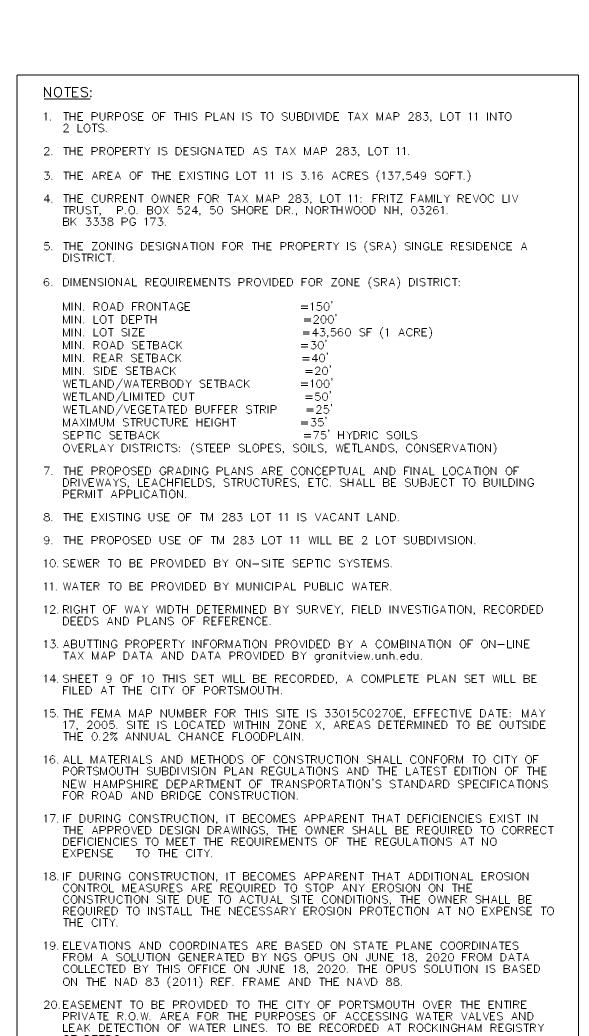
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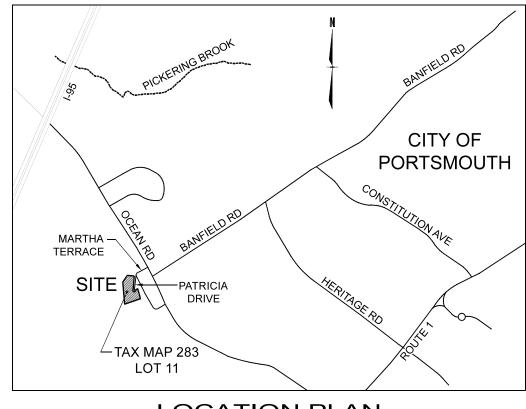
2 LOT SUBDIVISION PLAN FOR

DUBE PLUS CONSTRUCTION,

TAX MAP 283, LOT 11

HEMLOCK WAY, PORTSMOUTH, NH 03801 ROCKINGHAM CO.



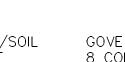


LOCATION PLAN

SCALE: 1"=2,000'

PROFESSIONAL CONSULTANTS LIST

NEW HAMPSHIRE LAND CONSULTANTS, PLLC. NORTHWOOD, NH 03261 PH:(603) 942-9220



WETLAND/SOIL GOVE ENVIRONMENTAL SERVICES, INC. SCIENTIST 8 CONTINENTAL DR., BLDG. 2, UNIT H, EXETER, NH 03833 PH: (603) 778-0644

ENGINEER:

JEFF BURD, RJB ENGINEERING, 2 GLENDALE ROAD, CONCORD NH, 03301 PH: (603) 219-0194

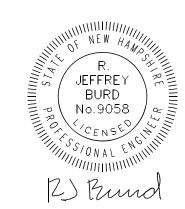
INITIAL PLAN SET SUBMISSION DATE

SEPTEMBER 23, 2020

Latest revision date:

MARCH 16, 2022





OWNER: HEMLOCK WAY REALTY INVESTMENTS, LLC 10 BRICKETTS MILL ROAD, SUITE C HAMPSTEAD, NH 03841 BK 6330 PG 796

APPLICANT:

DUBE PLUS CONSTRUCTION, 10 BRICKETTS MILL ROAD, HAMPSTEAD, NH 03841

AGENCY APPROVALS

#eSA2021100607 APPROVED 10/6/2021 NHDES SUBDIVISION

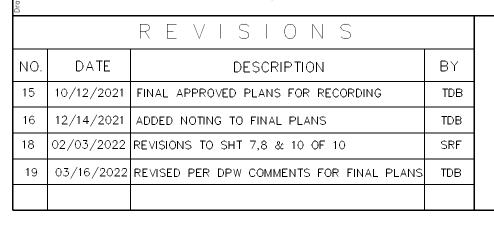


CONTACT DIG SAFE 72 HOURS PRIOR TO CONSTRUCTION

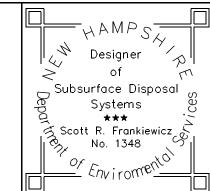
THE LOCATION OF ANY UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. NEW HAMPSHIRE LAND CONSULTANTS, PLLC MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ANY UTILITIES WHETHER THEY BE ABOVE OR BELOW GROUND. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233).

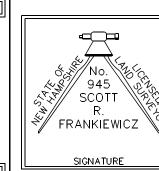
NOTE:

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE CITY OF PORTSMOUTH REGULATIONS AND THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.









SHEET INDEX

4 OF 10

5 OF 10

DESCRIPTION

DEMOLITION PLAN

EXISTING CONDITIONS PLAN

PROPOSED GRADING PLAN

PROPOSED UTILITY PLAN

PROPOSED SUBDIVISION

PROPOSED CONDITIONS PLAN

PROPOSED DRIVEWAY PLAN & PROFILE

PROPOSED BUFFER IMPACT PLAN

COVER SHEET

COVER SHEET TAX MAP 283 LOT 11 **DUBE PLUS CONSTRUCTION**

HEMLOCK WAY, PORTSMOUTH NH 03801 OWNED BY

HEMLOCK WAY REALTY INVESTMENTS, LLC 10 BRICKETTS MILL ROAD, SUITE C, HAMPSTEAD, NH 03841

BOOK 6330 PAGE 796

CVR

JOB NO: 258.00

ROCKINGHAM CO.

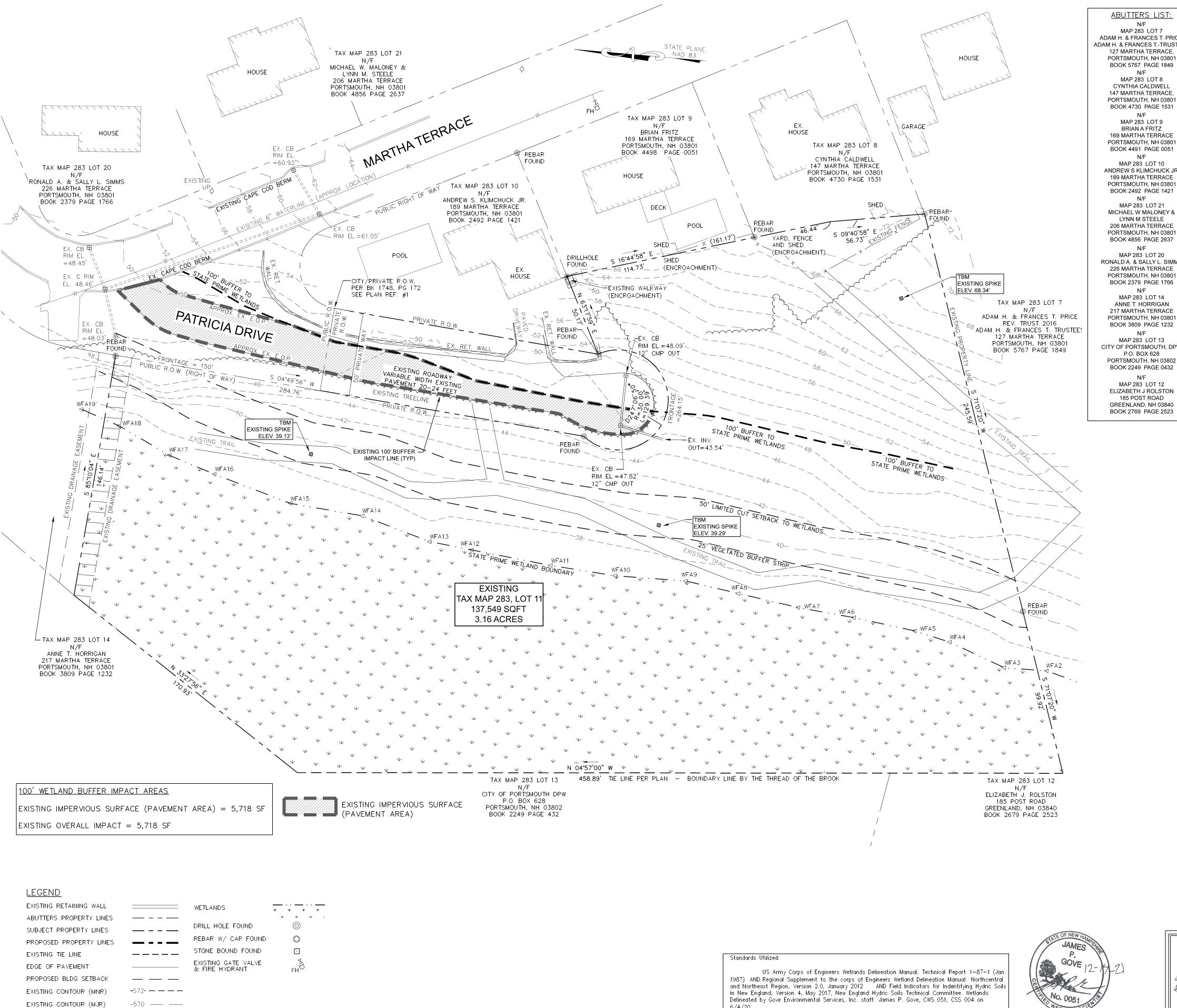
DATE: SEPTEMBER 23, 2020

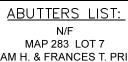
SHT. 1 of 10



683C FIRST NH TURNPIKE, NORTHWOOD, NH 03261 PH. 603-942-9220 WEBSITE: NHLANDCONSULTANTS.COM

FRANKIEWICZ





ADAM H & FRANCES T PRICE ADAM H. & FRANCES T.-TRUSTEES 127 MARTHA TERRACE, PORTSMOUTH, NH 03801 BOOK 5767 PAGE 1849

MAP 283 LOT 8 CYNTHIA CALDWELL 147 MARTHA TERRACE PORTSMOUTH, NH 03801 BOOK 4730 PAGE 1531

MAP 283 LOT 9 BRIAN A FRITZ 169 MARTHA TERRACE PORTSMOUTH, NH 03801

MAP 283 LOT 10 ANDREW S KLIMCHUCK JR 189 MARTHA TERRACE PORTSMOUTH, NH 03801 BOOK 2492 PAGE 1421

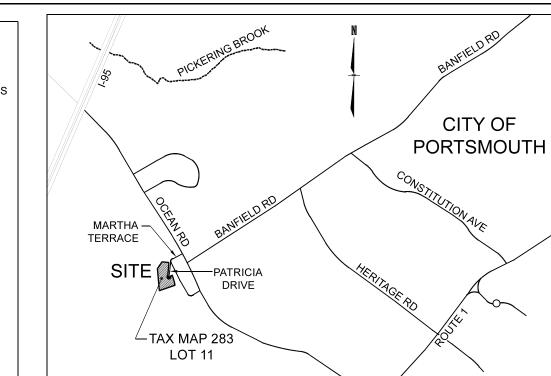
MICHAEL W MALONEY & LYNN M STEELE 206 MARTHA TERRACE PORTSMOUTH, NH 03801 BOOK 4856 PAGE 2637

RONALD A. & SALLY L. SIMMS 226 MARTHA TERRACE PORTSMOUTH, NH 03801 BOOK 2379 PAGE 1766

ANNE T. HORRIGAN 217 MARTHA TERRACE PORTSMOUTH, NH 03801 BOOK 3809 PAGE 1232 MAP 283 LOT 13

CITY OF PORTSMOUTH, DPW P.O. BOX 628 PORTSMOUTH, NH 03802 BOOK 2249 PAGE 0432

MAP 283 LOT 12 ELIZABETH J ROLSTON 185 POST ROAD GREENLAND, NH 03840 BOOK 2769 PAGE 2523



LOCATION PLAN SCALE: 1"=2,000'

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- DIMENSIONAL REQUIREMENTS PROVIDED FOR ZONE (SRA) DISTRICT:

MIN. ROAD FRONTAGE MIN. LOT DEPTH =43,560 SF (1 ACRE)MIN. LOT SIZE MIN. ROAD SETBACK MIN. REAR SETBACK

MIN. SIDE SETBACK WETLAND/WATERBODY SETBACK WETLAND / LIMITED CUT WETLAND/VEGETATED BUFFER STRIP MAXIMUM STRUCTURE HEIGHT

SEPTIC SETBACK

OVERLAY DISTRICTS: (STEEP SLOPES, SOILS, WETLANDS, CONSERVATION)

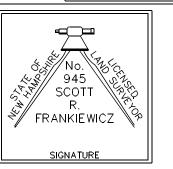
=75' HYDRIC SOILS

THE PROPOSED GRADING PLANS ARE CONCEPTUAL AND FINAL LOCATION OF DRIVEWAYS, LEACHFIELDS, STRUCTURES, ETC. SHALL BE SUBJECT TO BUILDING PERMIT APPLICATION.

- THE EXISTING USE OF TM 283 LOT 11 IS VACANT LAND.
- THE PROPOSED USE OF TM 283 LOT 11 WILL BE 2 LOT SUBDIVISION.
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- 11. WATER TO BE PROVIDED BY MUNICIPAL PUBLIC WATER.
- 2. RIGHT OF WAY WIDTH DETERMINED BY SURVEY, FIELD INVESTIGATION, RECORDED DEEDS AND PLANS OF REFERENCE.
- 13. ABUTTING PROPERTY INFORMATION PROVIDED BY A COMBINATION OF ON—LINE TAX MAP DATA AND DATA PROVIDED BY granitview.unh.edu.
- 4. SHEET 9 OF 10 THIS SET WILL BE RECORDED, A COMPLETE PLAN SET WILL BE FILED AT THE CITY OF PORTSMOUTH.
- 5. THE FEMA MAP NUMBER FOR THIS SITE IS 33015C0270E, EFFECTIVE DATE: MAY 17, 2005. SITE IS LOCATED WITHIN ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.
- 16. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO CITY OF PORTSMOUTH SUBDIVISION PLAN REGULATIONS AND THE LATEST EDITION OF THE NEW HAMPSHIRE DEPARTMENT OF THE SERVICE CONSTRUCTION. FOR ROAD AND BRIDGE CONSTRUCTION.
- I7. IF DURING CONSTRUCTION, IT BECOMES APPARENT THAT DEFICIENCIES EXIST IN THE APPROVED DESIGN DRAWINGS, THE OWNER SHALL BE REQUIRED TO CORRECT DEFICIENCIES TO MEET THE REQUIREMENTS OF THE REGULATIONS AT NO
- 18. IF DURING CONSTRUCTION, IT BECOMES APPARENT THAT ADDITIONAL EROSION CONTROL MEASURES ARE REQUIRED TO STOP ANY EROSION ON THE CONSTRUCTION SITE DUE TO ACTUAL SITE CONDITIONS, THE OWNER SHALL BE REQUIRED TO INSTALL THE NECESSARY EROSION PROTECTION AT NO EXPENSE TO THE OUT?
- 9. ELEVATIONS AND COORDINATES ARE BASED ON STATE PLANE COORDINATES FROM A SOLUTION GENERATED BY NGS OPUS ON JUNE 18, 2020 FROM DATA COLLECTED BY THIS OFFICE ON JUNE 18, 2020. THE OPUS SOLUTION IS BASED ON THE NAD 83 (2011) REF. FRAME AND THE NAVD 88.
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PLAN REFERENCES:

- R.C.R.D PLAN #195, RECORDED APRIL 10, 1964, TITLED: "PARCIAL PLAN OF OCEAN MANOR, PORTSMOUTH, NH", PREPARED FOR: HILTON HOMES, INC., GREENLAND NH, DATED, JANUARY, 1964, PREPARED BY: JOHN DURGIN CIVIL ENGINEERS, SCALE: 1"=40', PLAN APPROVED BY PORTSMOUTH PLANNING BOARD ON MARCH 20, 1964.
- R.C.R.D. PLAN #D5967, RECORDED MAY 21, 1976, TITLED: "RESUBDIVISION OF OCEAN MANNER", PREPARED FOR: ANDREWS PROPERTIES, INC., PORTSMOUTH NH, DATED: MARCH 1976, REVISED MAY 1976, PREPARED BY: JOHN DURGIN CIVIL ENGINEERS, SCALE: 1"=50', PLAN APPROVED BY PORTSMOUTH PLANNING BOARD DURING 1976.
- B. R.C.R.D. PLAN #C8102, RECORDED SEPTEMBER 18, 1978, TITLED: "LOT LINE REVISION, LAND OF LEVESQUE AND GERACI, PORTSMOUTH NH", PREPARED BY: JOHN W. DURGIN ASSOCIATES INC., ENGINEERS, SURVEYORS & DESIGNERS OF PORTSMOUTH AND ROCHESTER, DATED SEPTEMBER 1978, SCALE: 1"=50', APPROVED BY PORTSMOUTH PLANNING BOARD ON SEPTEMBER 18, 1978.
- R.C.R.D. PLAN #D33328, RECORDED DECEMBER 6, 2005, TITLED: "SUBDIVISION AND LOT LINE RELOCATION PLAN, MAP 283 - LOTS 7 & 11", PREPARED FOR: ADAM H. & FRANCES PRICE AND ADAM H. PRICE & FRITZ FAMILY REV. LIVING TRUST, 127 MARTHA TERRACE & PATRICIA DRIVE, PORTSMOUTH NH, PREPARED BY: AMBIT ENGINEERING, INC., CIVIL ENGINEERS & LAND SURVEYORS, PORTSMOUTH NH., SCALE: 1"=50', DATED MARCH 2005, APPROVED BY PORTSMOUTH PLANNING BOARD ON OCTOBER 24, 2005.



I CERTIFY THAT THIS PLAT IS BASED UPON THE PLAN REFERENCES AND A FIELD SURVEY CONDUCTED ON THE GROUND IN SPRING OF 2020, MEETING THE MINIMUM REQUIREMENTS FOR ACCURACY, 1:10,000 AND COMPLETENESS PER THE STATE OF NEW HAMPSHIRE AND THE CITY OF PORTSMOUTH, NH.

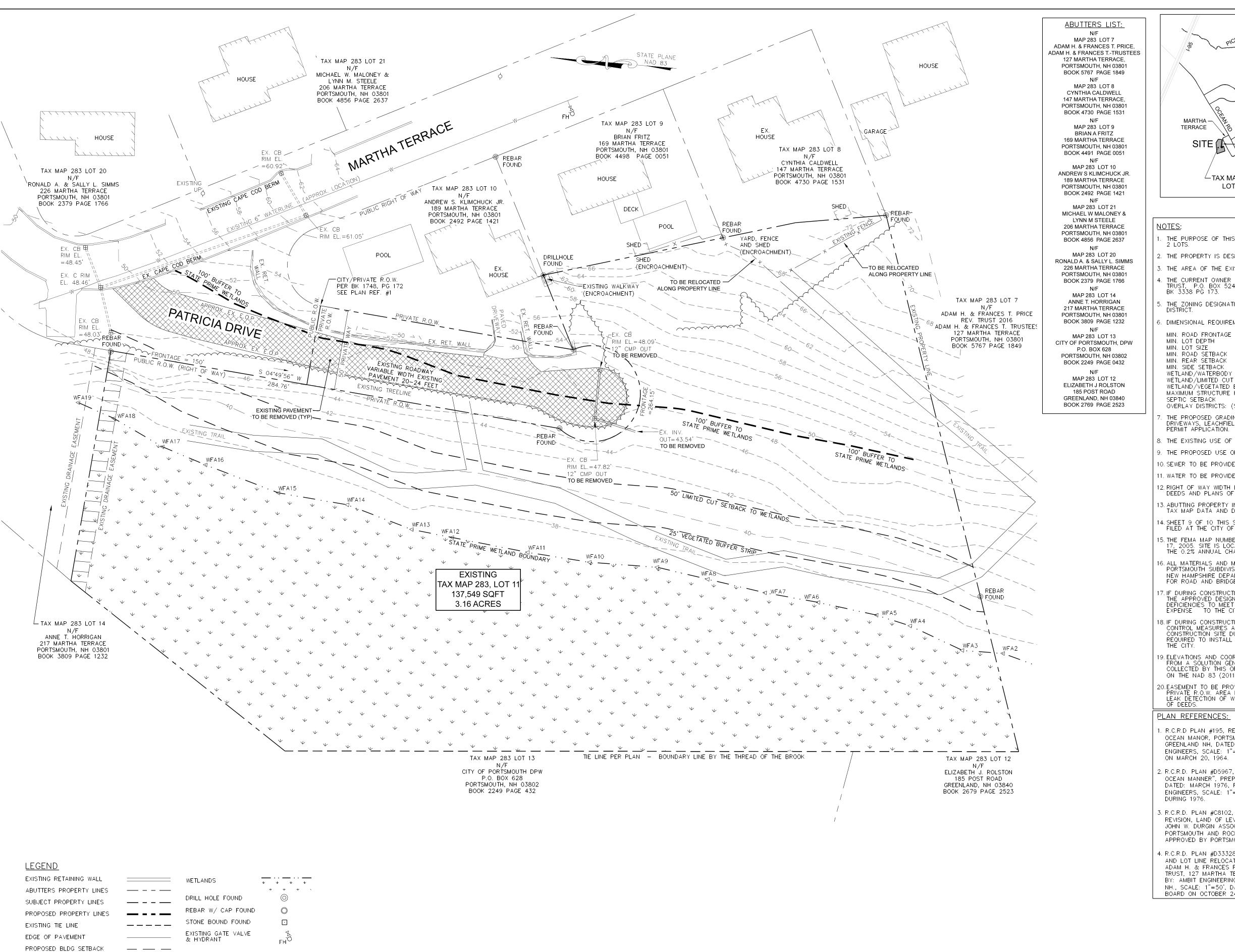
12/14/2021 SCOTT R. FRANKIEWICZ, LLS DATE:

CONDITIONS PI 283 LOT 1 CONSTRUC PORTSMOUTH NH

ROCKINGHAM CO. JOB NO: 258.00 DATE: SEPTEMBER 23, 2020

> **ECP** SHT. 2 of 10

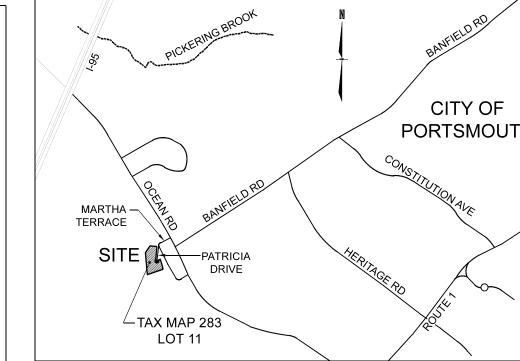
GRAPHIC SCALE SCALE: 1"=30'



EXISTING CONTOUR (MNR)

EXISTING CONTOUR (MJR)

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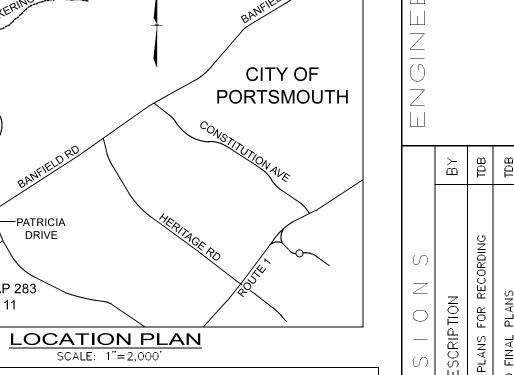


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MIN. ROAD FRONTAGE	=150
MIN. LOT DEPTH	=200'
MIN. LOT SIZE	=43,560 SF (1 ACRE
MIN. ROAD SETBACK	=30'
MIN. REAR SETBACK	= 40'
MIN. SIDE SETBACK	=20'
WETLAND/WATERBODY SETBACK	=100'
WETLAND/LIMITED CUT	=50'

- MAXIMUM STRUCTURE HEIGHT SEPTIC SETBACK MAXIMUM STRUCTURE HEIGHT = 35'
 SEPTIC SETBACK = 75' HYDRIC SOILS
 OVERLAY DISTRICTS: (STEEP SLOPES, SOILS, WETLANDS, CONSERVATION)

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I MIIN. NOAD INONTAGE	-130
MIN. LOT DEPTH	=200'
MIN. LOT SIZE	=43,560 SF (1 ACRE)
MIN. ROAD SETBACK	=30'
MIN. REAR SETBACK	= 40'
MIN. SIDE SETBACK	=20'
WETLAND/WATERBODY SETBACK	=100'
WETLAND/LIMITED CUT	=50'
WETLAND/VEGETATED BUFFER STRIP	=25'
MAXIMUM STRUCTURE HEIGHT	= 35'

- THE PROPOSED GRADING PLANS ARE CONCEPTUAL AND FINAL LOCATION OF DRIVEWAYS, LEACHFIELDS, STRUCTURES, ETC. SHALL BE SUBJECT TO BUILDING PERMIT APPLICATION.

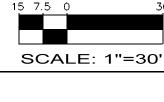
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GRAPHIC SCALE

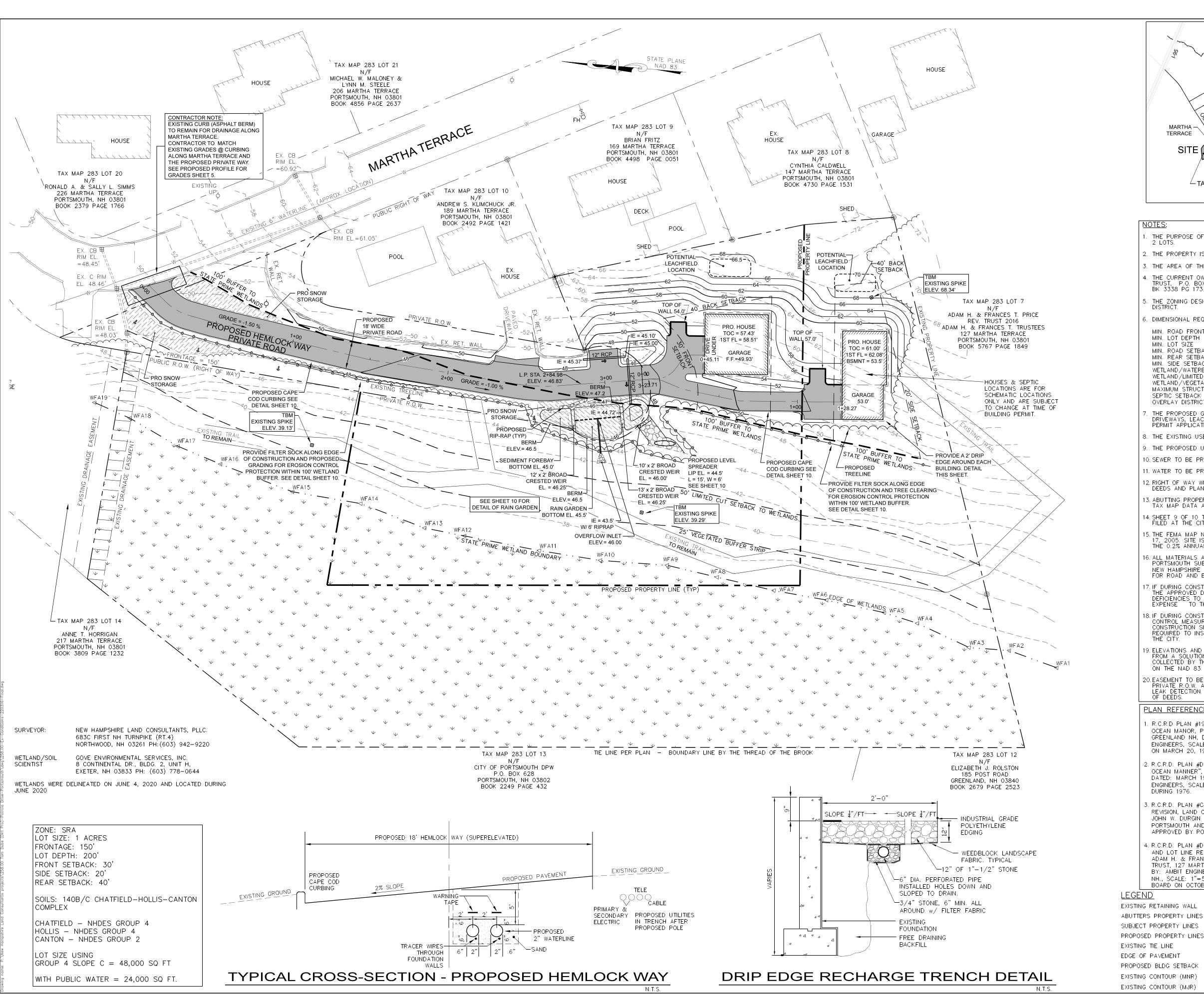


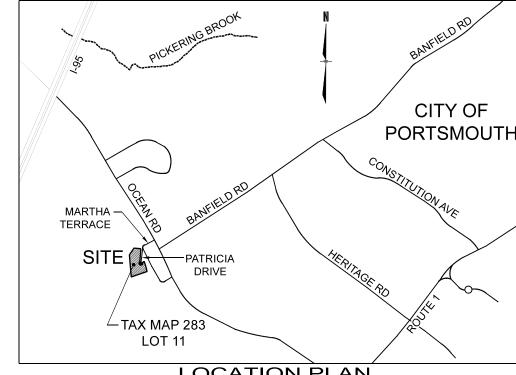


EMOLITION PLAN
AAP 283 LOT
JS CONSTRI
AY, PORTSMOUTH N HEMLOCK WAY **∑** ⊃ :

ROCKINGHAM CO. JOB NO: 258.00







LOCATION PLAN SCALE: 1"=2,000

- 1	<u> </u>	-												
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SEPTIC SETBACK

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- WETLAND / LIMITED CUT WETLAND/VEGETATED BUFFER STRIP MAXIMUM STRUCTURE HEIGHT
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=75' HYDRIC SOILS

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- 18. IF DURING CONSTRUCTION, IT BECOMES APPARENT THAT ADDITIONAL EROSION CONTROL MEASURES ARE REQUIRED TO STOP ANY EROSION ON THE CONSTRUCTION SITE DUE TO ACTUAL SITE CONDITIONS, THE OWNER SHALL BE REQUIRED TO INSTALL THE NECESSARY EROSION PROTECTION AT NO EXPENSE TO
- 9. ELEVATIONS AND COORDINATES ARE BASED ON STATE PLANE COORDINATES FROM A SOLUTION GENERATED BY NGS OPUS ON JUNE 18, 2020 FROM DATA COLLECTED BY THIS OFFICE ON JUNE 18, 2020. THE OPUS SOLUTION IS BASED ON THE NAD 83 (2011) REF. FRAME AND THE NAVD 88.
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PLAN REFERENCES:

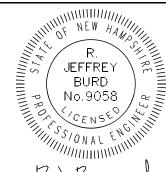
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- 4. R.C.R.D. PLAN #D33328, RECORDED DECEMBER 6, 2005, TITLED: "SUBDIVISION AND LOT LINE RELOCATION PLAN, MAP 283 - LOTS 7 & 11", PREPARED FOR: ADAM H. & FRANCES PRICE AND ADAM H. PRICE & FRITZ FAMILY REV. LIVING TRUST, 127 MARTHA TERRACE & PATRICIA DRIVE, PORTSMOUTH NH, PREPARED BY: AMBIT ENGINEERING, INC., CIVIL ENGINEERS & LAND SURVEYORS, PORTSMOUTH NH., SCALE: 1"=50', DATED MARCH 2005, APPROVED BY PORTSMOUTH PLANNING

-570 ----

<u>EGEND</u>	
XISTING RETAINING WALL	
ABUTTERS PROPERTY LINES	
SUBJECT PROPERTY LINES	
PROPOSED PROPERTY LINES	
XISTING TIE LINE	
DGE OF PAVEMENT	
PROPOSED BLDG SETBACK	
XISTING CONTOUR (MNR)	- 572 - — — —

BOARD ON OCTOBER 24, 2005.

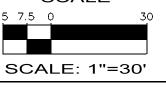
WETLANDS	*	·· — ·
DRILL HOLE FOUND		\bigcirc
REBAR W/ CAP FOUND		
STONE BOUND FOUND		$\overline{\cdot}$
EXISTING GATE VALVE & HYDRANT		FHO



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/12/2021	10/12/2021 FINAL APPROVED PLANS FOR RECORDING	10B
/14/2021	12/14/2021 ADDED NOTING TO FINAL PLANS	TDB
,/16/2022	03/16/2022 REVISED PER DPW COMMENTS FOR FINAL PLANS TDB	1DB

GRAPHIC SCALE







D GRADING PLAI

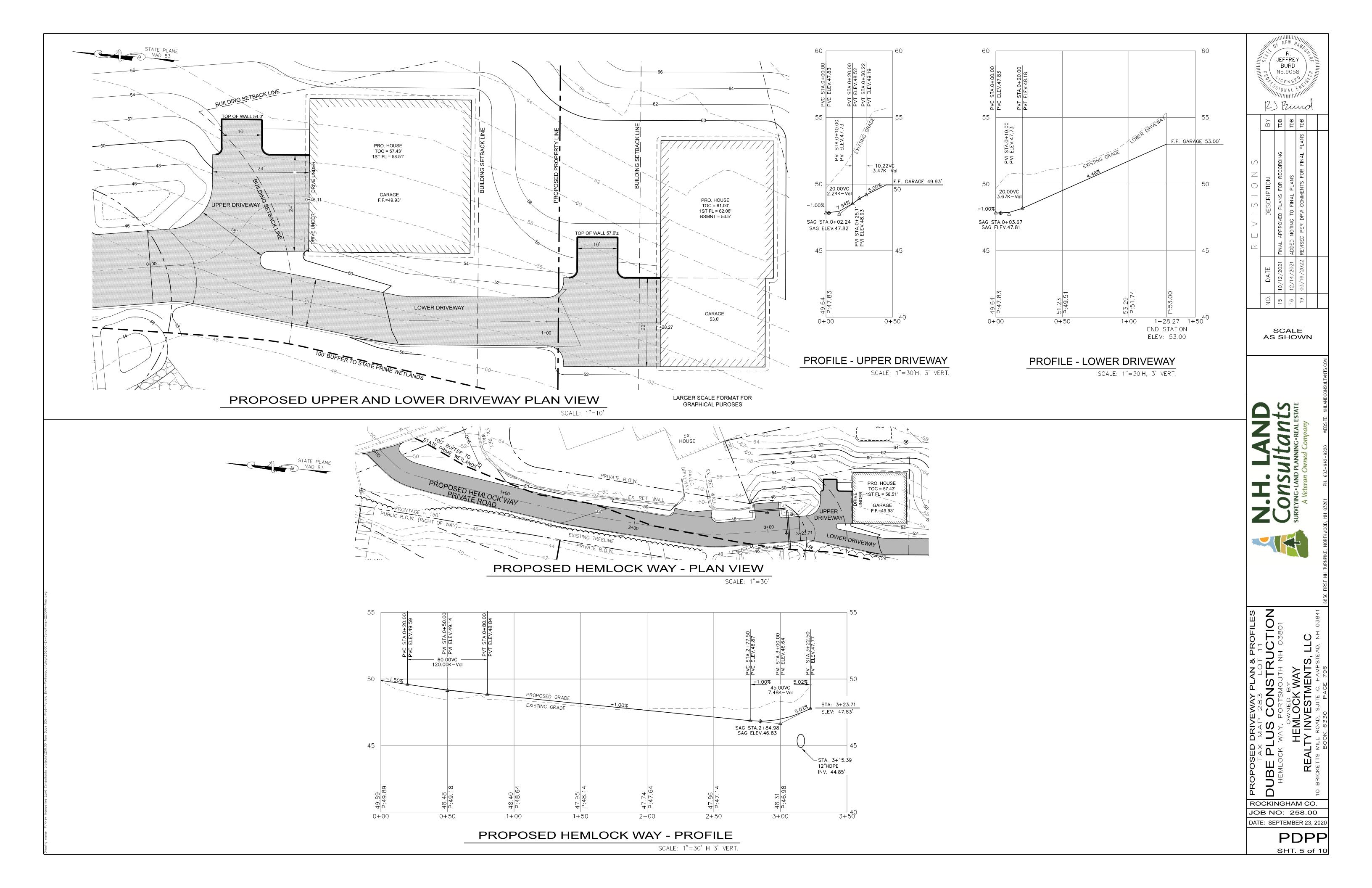
283 LOT 11

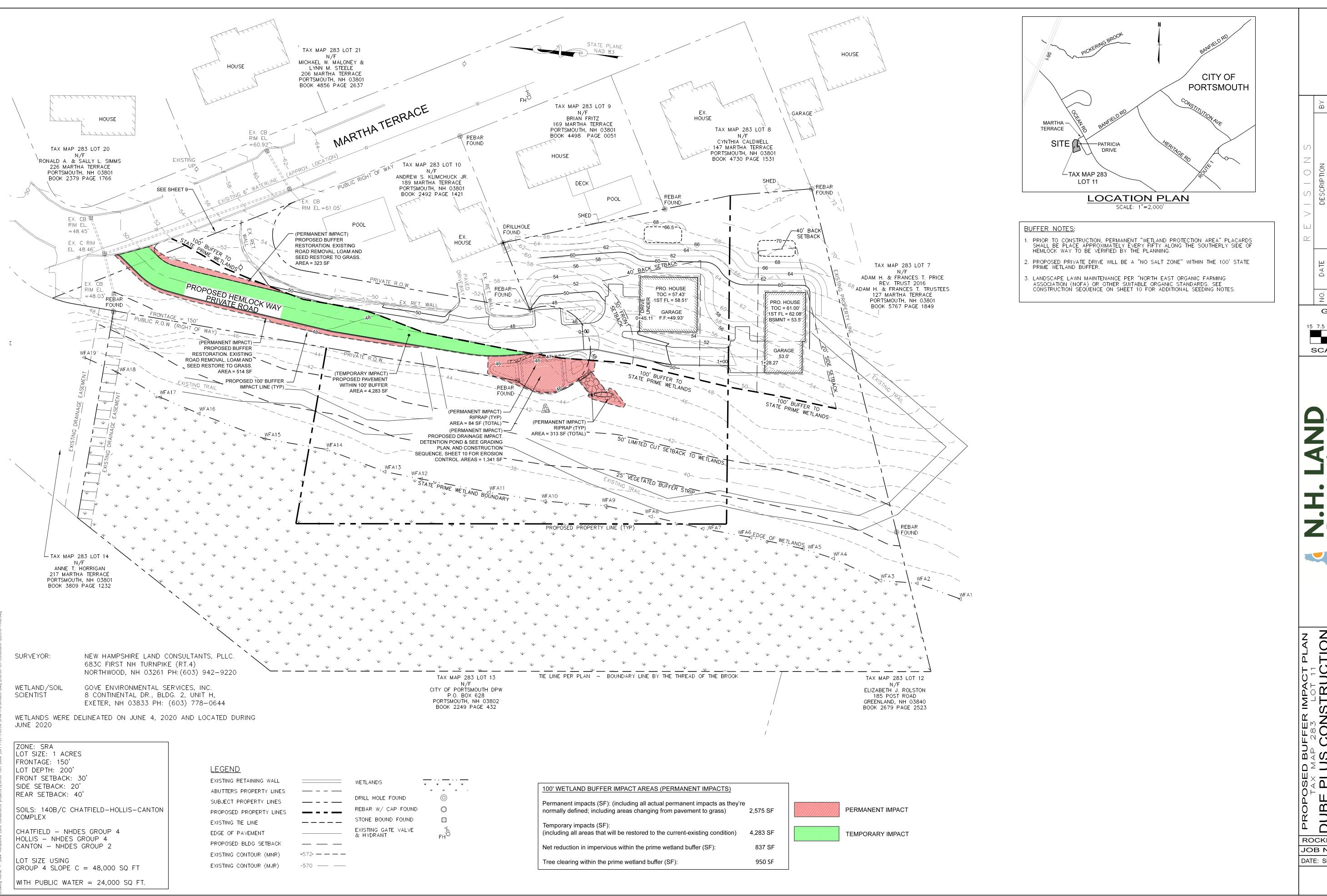
CONSTRUCT

PORTSMOUTH NH 03

ROCKINGHAM CO. JOB NO: 258.00 DATE: SEPTEMBER 23, 2020

> **PGP** SHT. 4 of 10





DATE

DATE

DESCRIPTION

0/12/2021 FINAL APPROVED PLANS FOR RECORDING

2/14/2021 ADDED NOTING TO FINAL PLANS

13/16/2022 REVISED PER DPW COMMENTS FOR FINAL PLANS

TOB

GRAPHIC SCALE 5 7.5 0

15 7.5 0 30 SCALE: 1"=30'

N.H. LAND
Consultants
SURVEYING-LAND PLANNING-REAL ESTATE
A Veteran Owned Company



CONSTRUCTION
PORTSMOUTH NH 03801
WNED BY
LOCK WAY

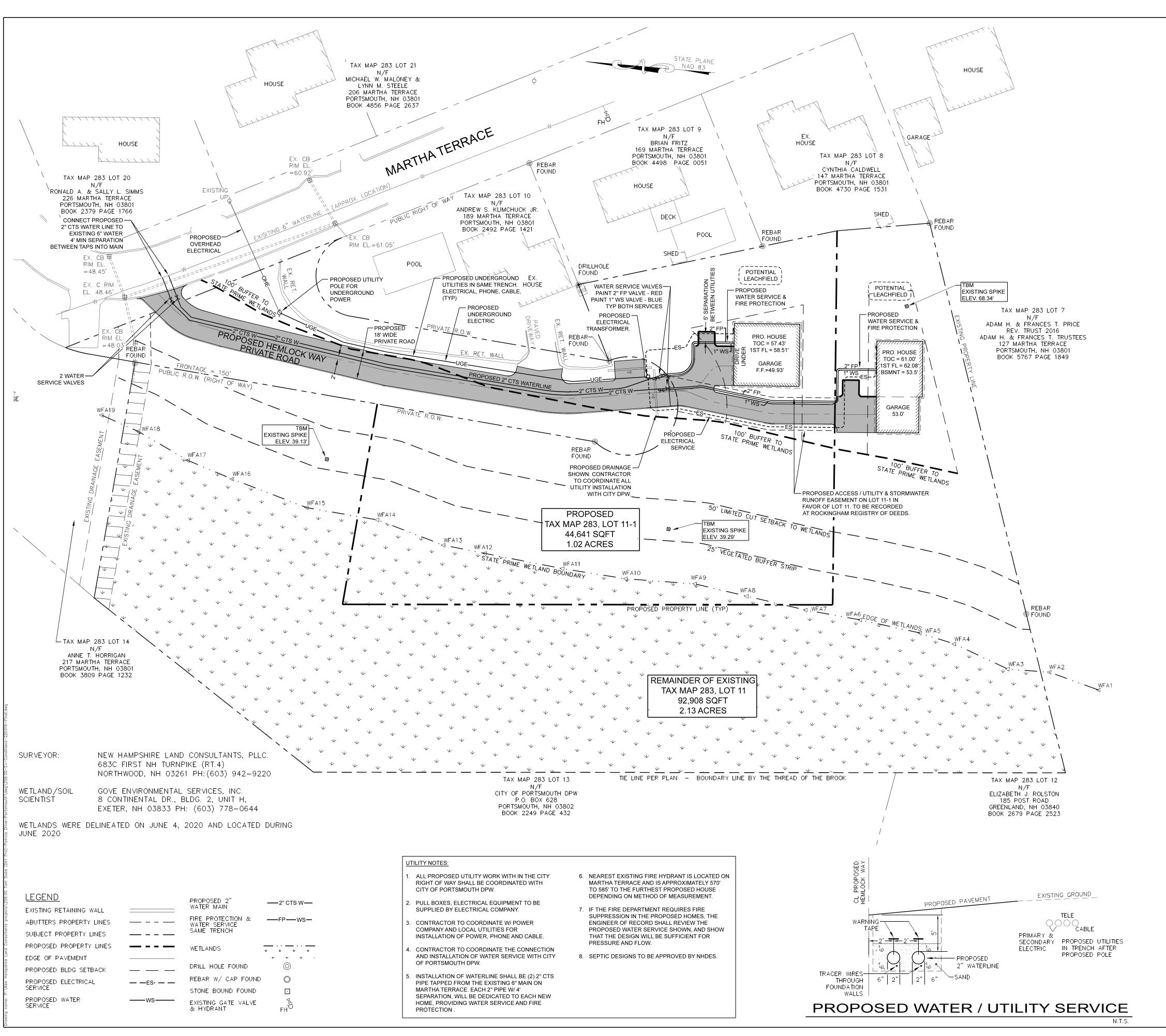
HEMLOCK WAY, PC OWN HEMLO HEMLO

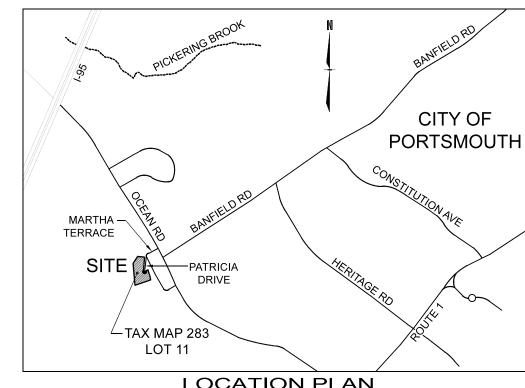
ROCKINGHAM CO.

JOB NO: 258.00

DATE: SEPTEMBER 23, 2020

PBIP SHT. 6 of 10





LOCATION PLAN SCALE: 1"=2,000'

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- . THE PROPERTY IS DESIGNATED AS TAX MAP 283, LOT 11.
- THE AREA OF THE EXISTING LOT 11 IS 3.16 ACRES (137,549 SQFT.)
- THE CURRENT OWNER FOR TAX MAP 283, LOT 11: FRITZ FAMILY REVOC LIV TRUST, P.O. BOX 524, 50 SHORE DR., NORTHWOOD NH, 03261.
 BK 3338 PG 173.
- THE ZONING DESIGNATION FOR THE PROPERTY IS (SRA) SINGLE RESIDENCE A DISTRICT.
- DIMENSIONAL REQUIREMENTS PROVIDED FOR ZONE (SRA) DISTRICT:
- MIN. ROAD FRONTAGE MIN. LOT DEPTH =43,560 SF (1 ACRE) MIN. LOT SIZE MIN. ROAD SETBACK MIN. REAR SETBACK MIN. SIDE SETBACK WETLAND/WATERBODY SETBACK WETLAND/LIMITED CUT
- WETLAND VEGETATED BUFFER STRIP MAXIMUM STRUCTURE HEIGHT SEPTIC SETBACK =75' HYDRIC SOILS OVERLAY DISTRICTS: (STEEP SLOPES, SOILS, WETLANDS, CONSERVATION)
- THE PROPOSED GRADING PLANS ARE CONCEPTUAL AND FINAL LOCATION OF DRIVEWAYS, LEACHFIELDS, STRUCTURES, ETC. SHALL BE SUBJECT TO BUILDING PERMIT APPLICATION.
- B. THE EXISTING USE OF TM 283 LOT 11 IS VACANT LAND.
- . THE PROPOSED USE OF TM 283 LOT 11 WILL BE 2 LOT SUBDIVISION.
- 10. SEWER TO BE PROVIDED BY ON-SITE SEPTIC SYSTEMS.
- 11. WATER TO BE PROVIDED BY MUNICIPAL PUBLIC WATER.
- 2. RIGHT OF WAY WIDTH DETERMINED BY SURVEY, FIELD INVESTIGATION, RECORDED DEEDS AND PLANS OF REFERENCE.
- 3. ABUTTING PROPERTY INFORMATION PROVIDED BY A COMBINATION OF ON-LINE TAX MAP DATA AND DATA PROVIDED BY granitview.unh.edu.
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- 16. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO CITY OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS
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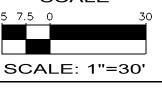
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	REVISIONS	
TE	DESCRIPTION	ВҮ
21	2021 FINAL APPROVED PLANS FOR RECORDING	TDB
21	2021 ADDED NOTING TO FINAL PLANS	TDB
,22	/2022 REVISED PER DPW COMMENTS FOR FINAL PLANS TDB	TDB

GRAPHIC SCALE



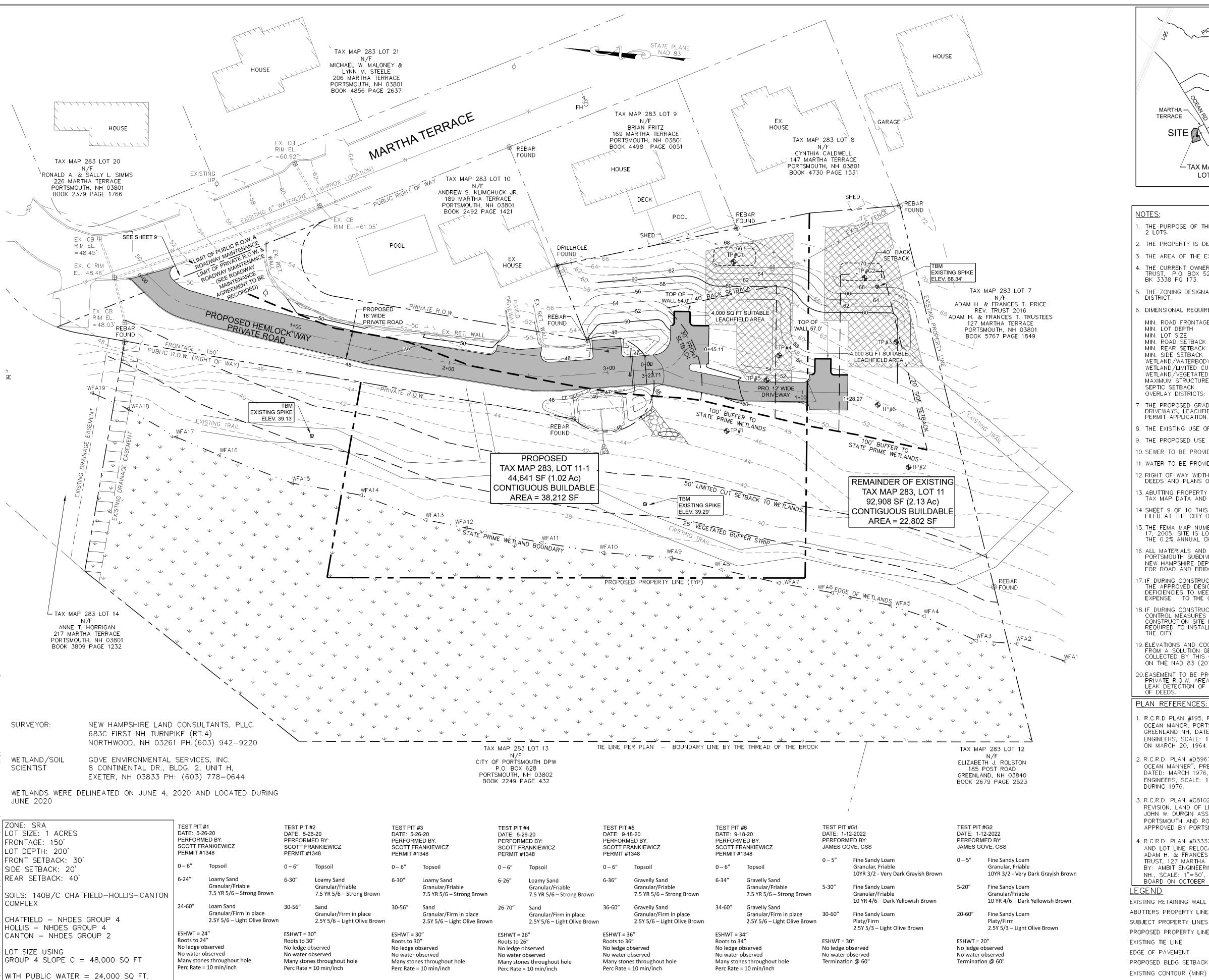


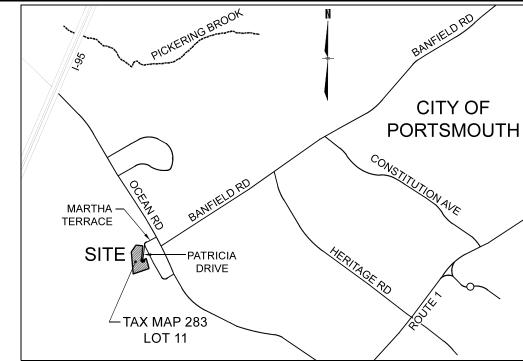


UTILITY PLAZES LOT 1
ONSTRUCTOR NH

EMLOCH INVEST

ROCKINGHAM CO. JOB NO: 258.00 DATE: SEPTEMBER 23, 2020





LOCATION PLAN SCALE: 1"=2,000"

THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE TAX MAP 283, LOT 11 INTO

- 2. THE PROPERTY IS DESIGNATED AS TAX MAP 283, LOT 11.
- THE AREA OF THE EXISTING LOT 11 IS 3.16 ACRES (137,549 SQFT.)
- THE CURRENT OWNER FOR TAX MAP 283, LOT 11: FRITZ FAMILY REVOC LIV TRUST, P.O. BOX 524, 50 SHORE DR., NORTHWOOD NH, 03261.
 BK 3338 PG 173.
- . THE ZONING DESIGNATION FOR THE PROPERTY IS (SRA) SINGLE RESIDENCE A DISTRICT.

=200'

=43,560 SF (1 ACRE)

- DIMENSIONAL REQUIREMENTS PROVIDED FOR ZONE (SRA) DISTRICT
- MIN. LOT DEPTH MIN. LOT SIZE
- MIN. ROAD SETBACK
- MIN. REAR SETBACK
- MIN. SIDE SETBACK WETLAND/WATERBODY SETBACK
- WETLAND/LIMITED CUT WETLAND/VEGETATED BUFFER STRIP
- MAXIMUM' STRUCTURE HEIGHT SEPTIC SETBACK
- =75' HYDRIC SOILS OVERLAY DISTRICTS: (STEEP SLOPES, SOILS, WETLANDS, CONSERVATION)
- THE PROPOSED GRADING PLANS ARE CONCEPTUAL AND FINAL LOCATION OF DRIVEWAYS, LEACHFIELDS, STRUCTURES, ETC. SHALL BE SUBJECT TO BUILDING PERMIT APPLICATION.
- THE EXISTING USE OF TM 283 LOT 11 IS VACANT LAND.
- THE PROPOSED USE OF TM 283 LOT 11 WILL BE 2 LOT SUBDIVISION.
- 10. SEWER TO BE PROVIDED BY ON-SITE SEPTIC SYSTEMS
- 1. WATER TO BE PROVIDED BY MUNICIPAL PUBLIC WATER.
- 2. RIGHT OF WAY WIDTH DETERMINED BY SURVEY, FIELD INVESTIGATION, RECORDED

- NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS
- 17. IF DURING CONSTRUCTION, IT BECOMES APPARENT THAT DEFICIENCIES EXIST IN
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- 18. IF DURING CONSTRUCTION, IT BECOMES APPARENT THAT ADDITIONAL EROSION CONTROL MEASURES ARE REQUIRED TO STOP ANY EROSION ON THE CONSTRUCTION SITE DUE TO ACTUAL SITE CONDITIONS, THE OWNER SHALL BE REQUIRED TO INSTALL THE NECESSARY EROSION PROTECTION AT NO EXPENSE TO
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<u>LEGEND</u>

EXISTING CONTOUR (MJR)

IND	
IG RETAINING WALL	
RS PROPERTY LINES	
CT PROPERTY LINES	
SED PROPERTY LINES	
IG TIE LINE	
OF PAVEMENT	
SED BLDG SETBACK	

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WETLANDS	Α.	. •	Ψ Ψ
DRILL HOLE FOUND			\bigcirc
REBAR W/ CAP FOUND			\bigcirc
STONE BOUND FOUND			⊡
EXISTING GATE VALVE & HYDRANT			FH

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_	Ö.	DATE	DESCRIPTION	$\overset{\prec}{B}$
	15	10/12/2021	FINAL APPROVED PLANS FOR RECORDING	TDB
	16	12/14/2021	16 12/14/2021 ADDED NOTING TO FINAL PLANS	TDB
116	19	03/16/2022	19 03/16/2022 REVISED PER DPW COMMENTS FOR FINAL PLANS TDB	TDB

GRAPHIC SCALE

SCALE: 1"=30'

DEEDS AND PLANS OF REFERENCE.

- 13. ABUTTING PROPERTY INFORMATION PROVIDED BY A COMBINATION OF ON-LINE TAX MAP DATA AND DATA PROVIDED BY granitview.unh.edu.
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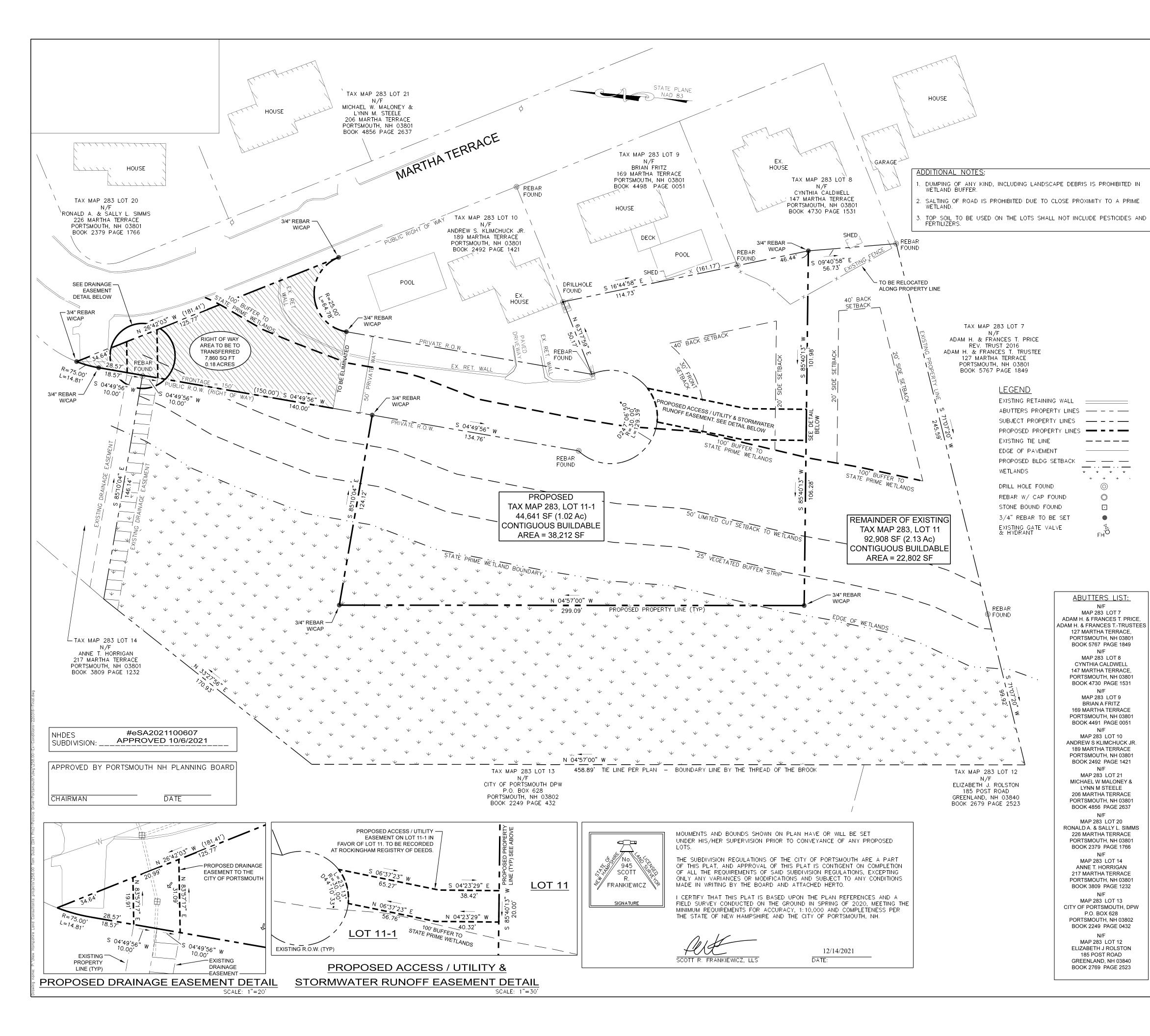
-570 ----

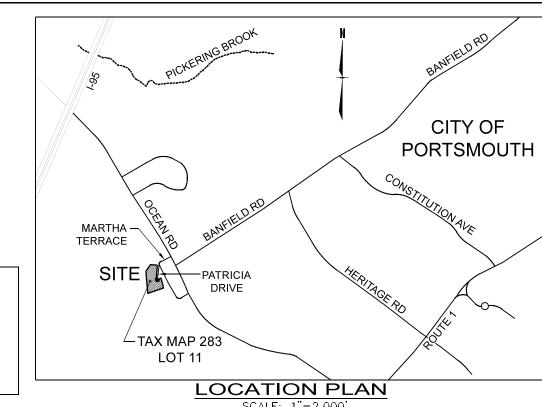
AINING WALL	WETLANDS	<u> </u>
OPERTY LINES		Ψ.
PERTY LINES	 DRILL HOLE FOUND	
OPERTY LINES	 REBAR W/ CAP FOUND	
LINE	 STONE BOUND FOUND	

ROCKINGHAM CO. JOB NO: 258.00 DATE: SEPTEMBER 23, 2020

CONDITIONS F 283 LOT 1 CONSTRUC PORTSMOUTH NH

PCP SHT. 8 of 10





<u>NOTES:</u>

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- THE ZONING DESIGNATION FOR THE PROPERTY IS (SRA) SINGLE RESIDENCE A DISTRICT.
- DIMENSIONAL REQUIREMENTS PROVIDED FOR ZONE (SRA) DISTRICT:
- MIN. ROAD FRONTAGE =150'
 MIN. LOT DEPTH =200'
 MIN. LOT SIZE =43,560 SF (1 ACRE)
 MIN. ROAD SETBACK =30'
 MIN. REAR SETBACK =40'
 MIN. SIDE SETBACK =20'
 WETLAND/WATERBODY SETBACK =100'
 WETLAND/LIMITED CUT =50'
 WETLAND/VEGETATED BUFFER STRIP =25'
- WETLAND/VEGETATED BUFFER STRIP = 25'

 MAXIMUM STRUCTURE HEIGHT = 35'

 SEPTIC SETBACK = 75' HYDRIC SOILS

 OVERLAY DISTRICTS: (STEEP SLOPES, SOILS, WETLANDS, CONSERVATION)
- THE PROPOSED GRADING PLANS ARE CONCEPTUAL AND FINAL LOCATION OF DRIVEWAYS, LEACHFIELDS, STRUCTURES, ETC. SHALL BE SUBJECT TO BUILDING PERMIT APPLICATION.
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- R.C.R.D. PLAN #D5967, RECORDED MAY 21, 1976, TITLED: "RESUBDIVISION OF OCEAN MANNER", PREPARED FOR: ANDREWS PROPERTIES, INC., PORTSMOUTH NH, DATED: MARCH 1976, REVISED MAY 1976, PREPARED BY: JOHN DURGIN CIVIL ENGINEERS, SCALE: 1"=50', PLAN APPROVED BY PORTSMOUTH PLANNING BOARD DURING 1976.
- R.C.R.D. PLAN #C8102, RECORDED SEPTEMBER 18, 1978, TITLED: "LOT LINE REVISION, LAND OF LEVESQUE AND GERACI, PORTSMOUTH NH", PREPARED BY: JOHN W. DURGIN ASSOCIATES INC., ENGINEERS, SURVEYORS & DESIGNERS OF PORTSMOUTH AND ROCHESTER, DATED SEPTEMBER 1978, SCALE: 1"=50', APPROVED BY PORTSMOUTH PLANNING BOARD ON SEPTEMBER 18, 1978.
- R.C.R.D. PLAN #D33328, RECORDED DECEMBER 6, 2005, TITLED: "SUBDIVISION AND LOT LINE RELOCATION PLAN, MAP 283 LOTS 7 & 11", PREPARED FOR: ADAM H. & FRANCES PRICE AND ADAM H. PRICE & FRITZ FAMILY REV. LIVING TRUST, 127 MARTHA TERRACE & PATRICIA DRIVE, PORTSMOUTH NH, PREPARED BY: AMBIT ENGINEERING, INC., CIVIL ENGINEERS & LAND SURVEYORS, PORTSMOUTH NH., SCALE: 1"=50", DATED MARCH 2005, APPROVED BY PORTSMOUTH PLANNING BOARD ON OCTOBER 24, 2005.

BUFFER NOTES:

- . PRIOR TO CONSTRUCTION, PERMANENT "WETLAND PROTECTION AREA" PLACARDS SHALL BE PLACE APPROXIMATELY EVERY FIFTY ALONG THE SOUTHERLY SIDE OF HEMLOCK WAY TO BE VERIFIED BY THE PLANNING.
- 2. PROPOSED PRIVATE DRIVE WILL BE A "NO SALT ZONE" WITHIN THE 100' STATE PRIME WETLAND BUFFER.
- LANDSCAPE LAWN MAINTENANCE PER "NORTH EAST ORGANIC FARMING ASSOCIATION (NOFA) OR OTHER SUITABLE ORGANIC STANDARDS. SEE CONSTRUCTION SEQUENCE ON SHEET 10 FOR ADDITIONAL SEEDING NOTES.

	ВҮ	TDB	TDB	TDB				
) -) -	DESCRIPTION	15 10/12/2021 FINAL APPROVED PLANS FOR RECORDING	16 12/14/2021 ADDED NOTING TO FINAL PLANS	19 03/16/2022 REVISED PER DPW COMMENTS FOR FINAL PLANS TDB				
	DATE	10/12/2021	12/14/2021	03/16/2022				
	NO.	15	16	19				
	GRAPHIC							

GRAPHIC SCALE 5 7.5 0 30 SCALE: 1"=30'

Santa ESTATE

N.H. LAND
Sonsultants
URVEYING LAND PLANNING REAL ESTATE



OSED SUBDIVISION PLAN
AX MAP 283 LOT 11
PLUS CONSTRUCTION
XX WAY, PORTSMOUTH NH 03801
OWNED BY
HEMLOCK WAY

ROCKINGHAM CO.

JOB NO: 258.00

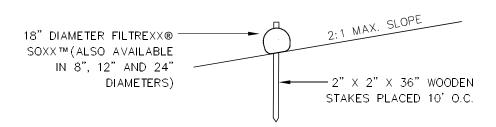
DATE: SEPTEMBER 23, 2020

CONSTRUCTION SEQUENCE:

- 1. CUT AND CLEAR TREES, REMOVE EXISTING PAVEMENT WITHIN LIMIT OF WORK (PROPOSED TREELINE), UNLESS OTHERWISE NOTED. ALL STUMPS, BRANCHES, TOPS AND BRUSH TO BE PROPERLY DISPOSED OF, PREFERABLY OFF SITE.
- 2. CONSTRUCT TEMPORARY AND PERMANENT EROSION CONTROL FACILITIES (DETENTION BASIN, DIVERSION BERM, GRASS SWALE) PRIOR TO ANY EARTH MOVING OPERATION.
- 3. ALL AREAS SHALL BE PROTECTED FROM EROSION. SIDE SLOPES AND DETENTION POND SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- 4. POND SHALL BE INSTALLED EARLY ON IN THE CONSTRUCTION SEQUENCE (BEFORE ROUGH GRADING THE SITE).
- 5. ALL STORM DRAINAGE SYSTEMS SUCH AS DETENTION/RETENTION BASINS, LEVEL SPREADERS SHALL BE PROTECTED FROM EROSION. ALL STORM DRAINAGE SYSTEMS SHALL BE STABILIZED PRIOR TO DIRECTING FLOW INTO THEM
- 6. CONSTRUCT TEMPORARY CULVERTS, DIVERSION DITCHES/SWALES OR BERMS AS REQUIRED TO MINIMIZE THE EROSIVE AFFECTS OF STORMWATER RUNOFF DURING ALL CONSTRUCTION ACTIVITIES. TEMPORARY WATER DIVERSION (SWALES, BASINS, ETC.) MUST BE USED AS NECESSARY UNTIL AREAS STABILIZED.
- ALL MATERIAL SUITABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED IN UPLANDS AREAS. ALL STOCKPILES SHALL BE SEEDED WITH WINTER RYE AND IF NECESSARY, SURROUNDED WITH SILT FENCE, AND/OR STRAW BALES, IN ORDER TO PREVENT OR CONTAIN SOIL EROSION.
- 8. ALL MATERIAL SUITABLE FOR FILL OR SELECT MATERIAL SHALL BE STOCKPILED IN UPLANDS AREAS. ALL STOCKPILES SHALL BE SURROUNDED WITH SILT FENCE, AND/OR STRAW BALES, IN ORDER TO CONTAIN SOIL EROSION.
- REMOVE ALL IMPROPER ROADWAY MATERIAL WITHIN 18" OF SUBGRADE. REPLACE WITH COMPACTED GRANULAR FILL ACCEPTABLE TO THE STATE/TOWN SPECIFICATIONS. ALL SUITABLE FILL MATERIAL SHALL BE COMPACTED TO AT LEAST 95% OF THE DRY WEIGHT AS DETERMINED BY MODIFIED PROCTOR TESTING (ASTM D-1556) REQUIREMENTS.
- 10. CONSTRUCT ALL UNDERGROUND UTILITIES INCLUDING, BUT NOT LIMITED TO DRAIN, DATA, CABLE AND POWER.
- 11. ROUGH GRADE SITE WITHIN LIMIT OF WORK AND COMMENCE CONSTRUCTION OF ROADWAY
- 12. SITE SHALL BE STABILIZED WITHIN 72 HOURS OF FINISHED GRADE.
- 13. COMPLETE ROADWAY SLOPE GRADING/EMBANKMENT CONSTRUCTION. ALL SLOPES SHALL BE STABILIZED AND SEEDED IMMEDIATELY AFTER GRADING. THE CONTRACTOR SHALL STABILIZE SLOPES WITH APPROPRIATE SEEDING PROGRAM OR JUTE MAT, WHEREVER SPECIFIED. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.
- 14. APPLY TOPSOIL TO SITE SLOPES AND OTHER AREAS DISTURBED BY CONSTRUCTION, TOPSOIL USED SHALL BE NATIVE ORGANIC MATERIAL SCREENED AS TO BE FREE FROM ROOTS, BRANCHES, STONES, AND OTHER DELETERIOUS MATERIALS. TOPSOIL SHALL BE APPLIED SO AS TO PROVIDE A MINIMUM OF A 4-INCH COMPACTED THICKNESS. UPON COMPLETION OF TOPSOILING, FINISHED SECTIONS ARE TO BE LIMED, SEEDED, AND MULCHED. CONSERVATION SEED MIX SHALL BE USED ALONG "PROPOSED PRIVATE DRIVE" AND WILDFLOWER MIX TO BE USED IN DETENTION BASIN AND OTHER OPEN AREAS. THE CONTRACTOR SHALL INSPECT COMPLETED SECTIONS OF WORK ON A REGULAR BASIS AND REMEDY ANY PROBLEM AREAS UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
- 15. MAINTAIN, REPAIR, AND REPLACE TEMPORARY EROSION CONTROL MEASURES AS NECESSARY FOR A MINIMUM PERIOD OF 12 MONTHS FOLLOWING SUBSTANTIAL COMPLETION.
- 16. AFTER STABILIZATION (12 MONTHLY FOLLOWING SUBSTANTIAL COMPLETION), REMOVE AND PROPERLY DISPOSE OF TEMPORARY EROSION CONTROL MEÀSURES, PREFERABLY OFF SITE.
- 17. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.

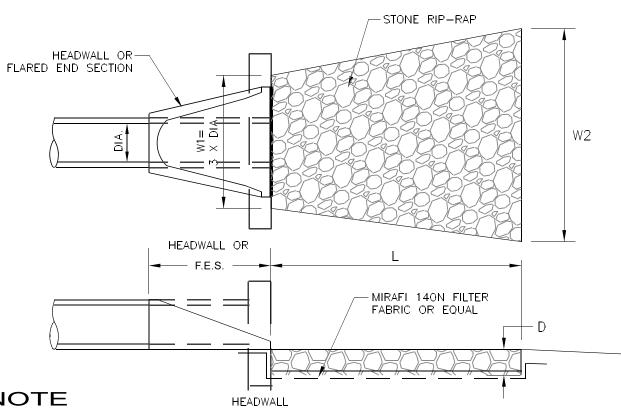
DEFINITION OF THE WORD STABLE: AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED

- A: BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
- B: A MINIMUM OF 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED
- C: A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED
- D: OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERTY INSTALLED.
- 18. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.



FILTER SOCK DETAIL

FILTREXX ® OR APPROVED EQUAL



NOTE

THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIP-RAP SHALL BE PREPARED TO THE LINES AND GRADES

SHOWN ON THE PLANS. THE ROCK USED FOR RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION.

GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 11 INCHES

STONE FOR THE RIP-RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

MAINTENANCE

THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS AND SEDIMENT THAT COULD CHANGE THE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TÓ AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

RIP-RAP OUTLET PROTECTION APRON

NOTES:

- 1. THE INLET/OUTLET APRON SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
- 2. THE RIP-RAP SHALL CONFORM TO THE SPECIFIED GRADATION
- GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES (ALL SIDES).
- RIP-RAP MAY BE PLACED BY EQUIPMENT (AS TO PREVENT SEGREGATION OF THE STONE SIZES) AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION.

MAINTENANCE:

THE OUTLET PROTECTION SHALL BE CHECKED AT LEAST BI-ANNUALLY AND AFTER EVERY SIGNIFICANT RAIN EVENT. IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHALL BE REPAIRED OR REPLACED IMMEDIATELY

THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING.

THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS AND SEDIMENT THAT COULD CHANGE THE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES.

ALL REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID DAMAGE TO THE OUTLET PROTECTION APRON.

6" CRUSHED GRAVEL ITEM 304.3 (95 % MIN. COMPACTION) 12" BANK RUN GRAVEL ITEM 304.2 (95 % MIN. COMPACTION) COMPACTED SUBGRADE CONSTRUCTION NOTES:

1" FINISH WEARING COURSE ITEM 403.11

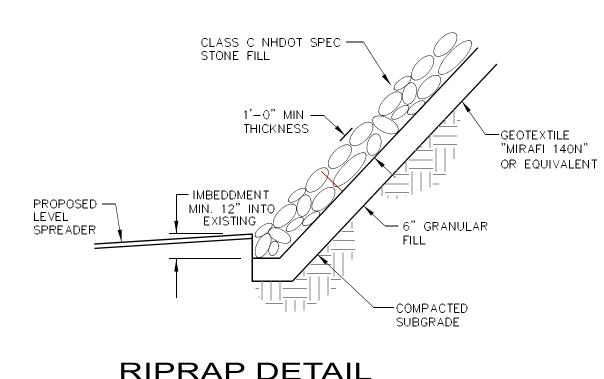
2" HOT BITUMINOUS CONCRETE BASE (BINDER

REMOVE ALL LOAM, CLAY, MUCK, STUMPS, AND OTHER IMPROPER ROAD FOUNDATION MATERIAL WITHIN 2' OF SUBGRADE. REPLACE WITH COMPACTED GRANULAR FILL MATERIAL ACCEPTABLE TO APPROVING AGENCY. COMPACTION TO BE AT LEAST 95% OF STANDARD PROCTOR.

ALL PAVEMENT, BASE MATERIALS AND WORKMANSHIP TO BE IN COMPLIANCE WITH N.H.D.O.T. "STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION, AND THE CITY OF PORTSMOUTH PUBLICS WORKS DIVISION.

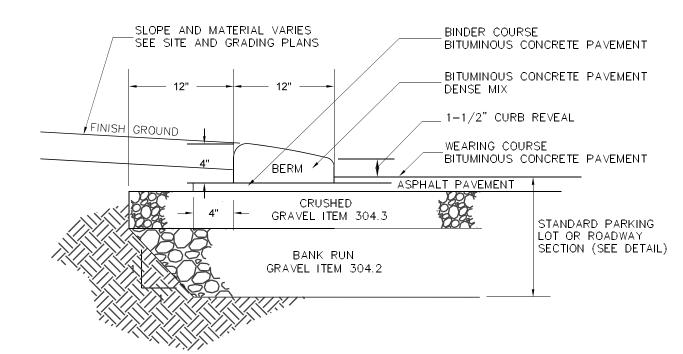
PAVEMENT SECTION

NOT TO SCALE



LEVEL SPREADER DETAIL

DIVERSION-



ISOMETRIC VIEW

- EROSION STOP

CROSS SECTION

-LAST 50' OF DIVERSION

- 0% CHANNEL GRADE

- PROPOSED RIPRAP

-OVERLAP BOTH STRIPS OF PROTECTIVE

SECOND STRIP OF

PROTECTIVE MATERIAL

- PROPOSED RIPRAP

NOT TO SCALE

MATERIAL OVER EROSION STOP A MIN. OF

NOT TO EXCEED 1% GRADE

CAPE COD CURB (ASPHALT) DETAIL

PROPOSED-

RIP-RAP (TYP)

-FOR STAPLE REQUIREMENTS

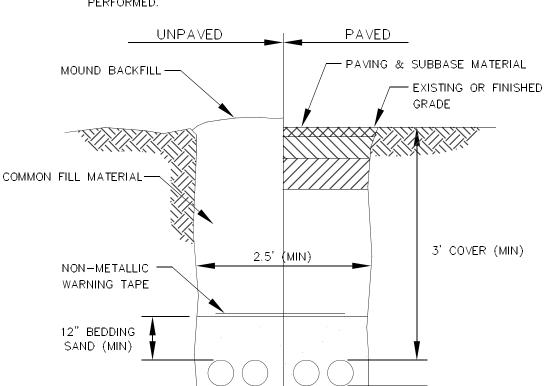
SEE MULCHING BMP

MAINTENANCE

THE LEVEL SPREADER SHOULD BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE LIP HAS BEEN DAMAGED AND TO DETERMINE THAT THE DESIGN CONDITIONS HAVE NOT CHANGED. ANY DETRIMENTAL SEDIMENT ACCUMULATION SHOULD BE REMOVED. IF RILLING HAS TAKEN PLACE ON THE LIP, THEN THE DAMAGE SHOULD BE REPAIRED AND RE?VEGETATED. THE VEGETATION SHOULD BE MOWED OCCASIONALLY TO CONTROL WEEDS AND THE ENCROACHMENT OF WOODY VEGETATION. CLIPPINGS SHOULD BE REMOVED AND DISPOSED OF OUTSIDE THE SPREADER AND AWAY FROM THE OUTLET AREA. FERTILIZATION SHOULD BE DONE AS NECESSARY TO KEEP THE VEGETATION HEALTHY AND DENSE.

CONSTRUCTION SPECIFICATIONS

- 1) CONSTRUCT THE LEVEL SPREADER LIP ON A ZERO GRADE TO INSURE UNIFORM SPREADING RUNOFF.
- 2) LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL.
- 3) AN EROSION STOP SHALL BE PLACED VERTICALLY A MINIMUM OF SIX INCHES DEEP IN A SILT TRENCH ONE FOOT BACK OF THE LEVEL LIP AND PARALLEL TO THE LIP. THE EROSION STOP SHALL EXTEND THE ENTIRE LENGTH OF THE LEVEL LIP.
- 4) THE ENTIRE LIP AREA SHALL BE PROTECTED BY PLACING TWO STRIPS OF JUTE OR EXCELSIOR MATTING ALONG THE LIP. EACH STRIP SHALL OVERLAP THE EROSION STOP BY AT LEAST SIX INCHES.
- 5) THE ENTRANCE CHANNEL TO THE LEVEL SPREADER SHALL NOT EXCEED A 1 PERCENT GRADE FOR AT LEAST 50 FEET BEFORE ENTERING INTO THE SPREADER.
- 6) THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS, WATER SHOULD NOT RE-CONCENTRATE IMMEDIATELY BELOW THE SPREADER.
- 7) PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PÉRFORMED.



12"

CONDUIT PER UTILITY SPECIFICATIONS PRIMARY ELECTRIC -SECONDARY ELECTRIC— TELEPHONE -

CABLEVISION — UTILITY TRENCH DETAIL

NOT TO SCALE

JEFFREY

BURD

No.9058

(CENSED)

S/ONAL

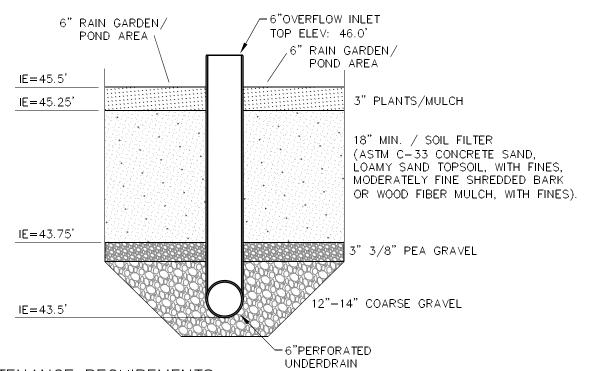
2) Buno

SCALE

AS SHOWN

DATE: SEPTEMBER 23, 202

DET SHT. 10 of 10



FIRST STRIP -

MATERIAL

LEVEL LIP -

OF SPREADER

OF PROTECTIVE

MAINTENANCE REQUIREMENTS:

NOT TO SCALE

- 1. SYSTEMS SHOULD INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENT EXCEEDING 2.5 INCHES IN A 24 HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS WARRANTED BY SUCH INSPECTION.
- 2. PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAT ONCE ANNUALLY.
- 3. TRASH AND DEBRIS SHOULD BE REMOVED AT EACH INSPECTION.
- 4. AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWN DOWN TIME. IF BIORETENTION SYSTEM DOES NOT DRAIN WITHIN 72 HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION (AS APPLICABLE), INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
- 5. VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING PRUNING, REMOVAL AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.
- 6. PROPOSED STORM WATER BASIN SHALL BE SEEDED WITH WITH WILD FLOWER SEED MIX.

TYPICAL SECTION - RAIN GARDEN DETAIL

└IE = 44.72' OVERFLOW INLET -10' x 2' BROAD ELEV.= 46.00 CRESTED WEIR SEDIMENT FOREBAY \+===========+; BOTTOM EL. 45.0' RAIN GARDEN BOTTOM EL. 45.5' ELEV.=46.5' 12' x 2' BROAD --13' x 2' BROAD -CRESTED WEIR CRESTED WEIR EL. = 46.25' PROPOSED LEVÉL SPREADER -BERM LIP EL. = 44.5' ELEV.=46.5' L = 15', W = 6' IE = 43.5' A SEE SHEET 10

-46.5

RAIN GARDEN DETAIL

NOT TO SCALE

ROCKINGHAM CO. JOB NO: 258.00

DRAINAGE ANALYSIS

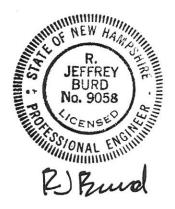
Prepared for:

DUBE PLUS CONSTRUCTION
TAX MAP 283 LOT 11
PATRICIA DRIVE
PORTSMOUTH, NH

Prepared by:

New Hampshire Land Consultants, PLLC 683C First NH Turnpike
Northwood, NH 03261
&
RJB Engineering
Jeffrey Burd, P.E.

Project Number: 258.00



1. Table of Contents

- 1. Narrative of the project with summary table of peak discharge rates
- 2. Drainage analysis-Full Pre & Post summary of the 10-YR
- 3. Conclusion

PROJECT NARATIVE

Narrative

Introduction

This drainage analysis details the surface water drainage patterns on a parcel located at Patricia Drive in Portsmouth, NH. Using HydroCAD to model storm events this analysis estimates the amount of storm water surface runoff from this site before and after the proposed parking lot and sidewalk. The design of this project will decrease the runoff.

The proposed improvements are on Patricia Drive and Tax Map 283 Lot 11. The applicant, Dube Plus Construction wishes to rebuild Patricia Drive and construct 2 single family homes. We are proposing 2 small detention basins to control the runoff from the reconstructed road, driveways and yards. The houses will be constructed with drip edges and all roof runoff will be infiltrated via the drip edge.

The area that has been analyzed is all upland, Chatfield-Hollis-Canton, Sandy Loam soils (Hydro group B soils) as categorized by the Soil Conservation District.

The following section explains the methods used to determine the runoff quantities generated by the existing conditions site. The objective of this analysis is to obtain surface storm water runoff flow data. This information is compared to evaluate whether there may be an impact to existing drainage system in the area.

Methodology

The drainage analysis performed utilizes nationally recognized techniques developed by the USDA, Soil Conservation Service (SCS). The techniques and models used for this analysis are described in "Urban Hydrology for Small Watersheds, Technical Release Number 55" dated 1986 and in USDOT Federal Highway Administration (FHA) "Hydraulic Design of Highway Culverts" dated September 1985.

Design computations were based on a Type III 24-hour storm event as recommended for New Hampshire. 10 year – 24-hour event of 4.92 inches of precipitation respectively was analyzed. Pre and Post-development conditions were analyzed by the same method. An investigation was conducted to confirm published watershed soil and vegetative characteristics that were used for the input program "HydroCAD Storm water Modeling System, Version 10.00-25". Tabulated summaries of the results are shown in the results section of this report.

Procedure

To begin the stormwater study, the limits and areas of the watershed for this development were identified. The existing watershed area is treated as 1 sub-catchment. The proposed development watershed area is treated as 5 sub-catchments. Weighted runoff curve numbers (CN) were calculated for each sub-catchment watershed area. Runoff curve numbers were chosen based on site investigation, TR-55, USDA Agriculture Handbook 590 (1997), and USDA Soil Conservation Service Soil Survey, issued October 1994. The value of CN depends on soil type, vegetative cover and hydraulic conditions of the land surface. Surface water run off rate and total volume during and after a storm event is also influenced by: slope of the land, area of the watershed, hydraulic length of watershed, and ponds and swamps. In addition, the amount of surface runoff produced by a given storm event is a function of the duration and intensity of the storm.

Patricia Drive, Portsmouth, NH Drainage Analysis December 22, 2020 Page 4

Pre-development and post-development conditions for the watershed were analyzed by the method outlined in USDA Soil Conservation Service Soil Survey, issued October 1994. Using this post-development information, computer generated hydrographs were calculated and peak runoff rates determined for each specific storm event.

The entire area to be developed will disturb approximately 34,000 square feet. Re-graded areas along the edge of construction will ultimately become stabilized and generally resume their predevelopment characteristics.

RAINFALL CHARACTERISTICS

This drainage report includes proposed conditions analysis for the site. The model was constructed using the USDA SCS TR-20 Method within the HydroCAD Stormwater Modeling System. The curve numbers were developed using the SCS TR-55 Runoff Curve numbers for Urban Areas. A Type III SCS 24-hour rainfall distribution was utilized in analyzing the data for a 10 Yr - 24 Hr (4.92") storm-event, to assure the adequacy of the proposed structure.

RAINFALL CHARACTERISTICS

This drainage report includes proposed conditions analysis for the site. The model was constructed using the USDA SCS TR-20 Method within the HydroCAD Stormwater Modeling System. The curve numbers were developed using the SCS TR-55 Runoff Curve numbers for Urban Areas.

SEDIMENT & EROSION CONTROL PLANS BEST MANAGEMENT PRACTICES (BMP's)

Reference: Sheet - Proposed Conditions Plan

General Details

The proposed site development is protected from erosion and the roadways and abutting properties are protected from sediment by the use of Best Management Practices as outlined in the Stormwater Management & Erosion & Sediment Control Handbook for Urban & Developing Areas in New Hampshire. Any area disturbed by construction will be re-stabilized within 45 days and abutting properties and wetlands will not be adversely affected by this development. All swales and drainage structures will be constructed and stabilized prior to having run-off directed to them.

1 Filtrexx sock/Construction Fence

The plan set demonstrates the location of filtrexx sock for sediment control. In areas where the limits of construction need to be emphasized to operators, construction fence for added visibility will be installed. The Erosion and Sediment Control Details, has the specifications for installation and maintenance of the silt fence. Orange construction fence will be VISI Perimeter Fence by Conwed Plastic Fencing, or equal. The four-foot fencing is to be installed using six-foot posts at least two feet in the ground with six to eight feet spacing.

2 Drainage Swales / Stormwater Conveyance Channels

Drainage swales will be stabilized with vegetation for long term cover as outlined below, and using seed mixture C. As a general rule, velocities in the swale should not exceed 3.0 feet per second for a vegetated swale although velocities as high as 4.5 FPS are allowed under certain soil conditions. The use of jute matting will aid in the stabilization of vegetation.

3 Vegetated Stabilization

All areas that are disturbed during construction will be stabilized with vegetated material within 45 days of breaking ground. Construction will be managed in such a manner that erosion is prevented and that no abutter's property will be subjected to any siltation, unless otherwise permitted. All areas to be planted with grass for long-term cover will follow the specification and on Sheet E-1 using seeding mixture C, as follows:

Mixture	Pounds	Pounds per
	per Acre	1,000 Sq. Ft.
Tall Fescue	20	0.45
Creeping Red Fescue	20	0.45
Birdsfoot Trefoil	_8	0.20
Total	48	1.10

4 Stabilized Construction Entrance

A temporary gravel construction entrance provides an area where mud can be dislodged from tires before the vehicle leaves the construction site to reduce the amount of mud and sediment transported onto paved municipal and state roads. The stone size for the pad should be between 1 and 2-inch coarse aggregate, and the pad itself constructed to a minimum length of 50' for the full width of the access road. The aggregate should be placed at least six inches thick. A plan view and profile are shown on Sheet E1 - Sediment and Erosion Control Detail Plan.

5 Environmental Dust Control

Dust will be controlled on the site by the use of multiple Best Management Practices. Mulching and temporary seeding will be the first line of protection to be utilized where problems occur. If dust problems are not solved by these applications, the use of water and calcium chloride can be applied. Calcium chloride will be applied at a rate that will keep the surface moist but not cause pollution.

7 Construction Sequence

- 1. Cut and remove trees and pavement in construction areas as directed or required.
- 2. Construct and/or install temporary and permanent sediment erosion and detention control facilities, as required (swales, berms, level spreaders, etc. Erosion, sediment and detention control facilities shall be installed and stabilized prior to any earth moving operation, and prior to directing run-off to them.
- 3. Clear, cut, grub, and dispose of debris in approved facilities.
- 4. Excavate and stockpile topsoil / loam. All disturbed areas shall be stabilized immediately after grading.
- 5. Begin permanent and temporary seeding and mulching. All cut and fill slopes and disturbed areas shall be seeded and mulched as required, or directed.

- 6. Daily, or as required, construct temporary berms, drainage ditches, check dams, sediment traps, etc. to prevent erosion on the site and prevent any siltation of abutting waters or property.
- 7. Inspect and maintain all erosion and sediment control measures during construction.
- 8. Complete permanent seeding and landscaping.
- Remove temporary erosion control measures after seeding areas have established themselves and site improvements are complete. Smooth and re-vegetate all disturbed areas.
- 10. All drainage structures will be constructed and stabilized prior to having run-off being directed to them.

9 Temporary Erosion Control Measures

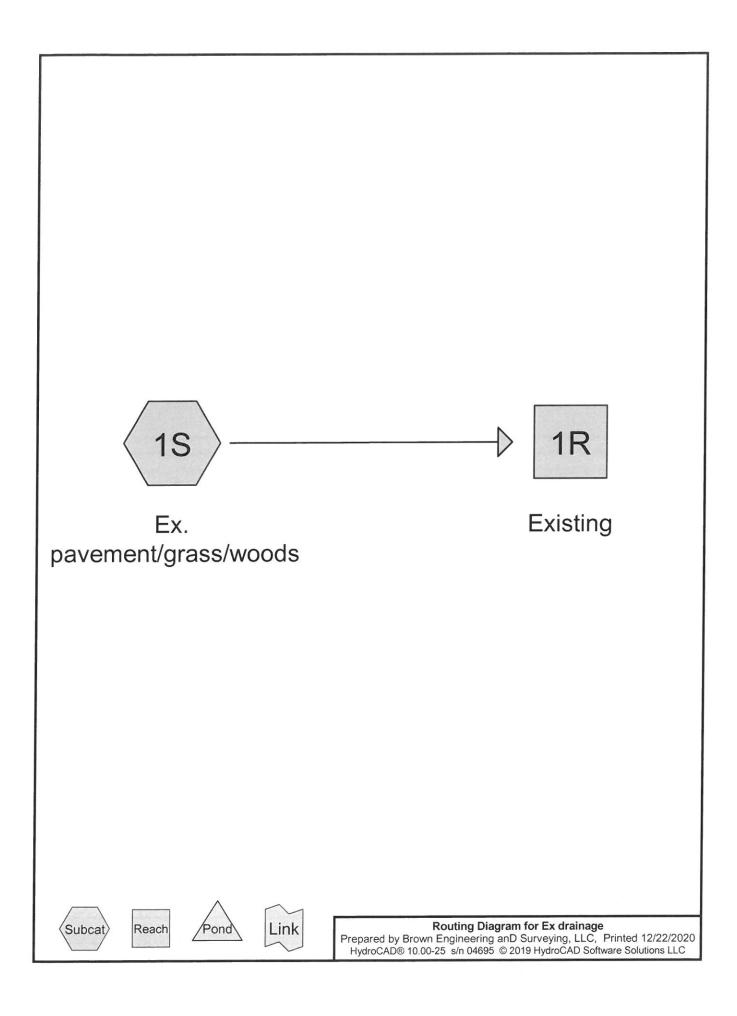
- 1. The smallest practical area of land shall be exposed at any one time.
- 2. Erosion, sediment and detention measures shall be installed as shown on the plans and at locations as required, or directed by the engineer.
- 3. All disturbed areas shall be returned to original grades and elevations. Disturbed areas shall be loamed with a minimum of 4" of loam and seeded with not less than 1.10 pound of seed per 1,000 square feet (48 pounds per acre) of area.
- 4. Silt fences and other barriers shall be inspected periodically and after every rainstorm during the life of the project. All damaged areas shall be repaired, sediment deposits shall periodically be removed and properly disposed of.
- 5. After all disturbed areas have been stabilized, the temporary erosion control measures are to be removed and the area disturbed by the removal smoothed and revegetated.
- 6. Areas must be seeded and mulched within 5 days of final grading, permanently stabilized within 15 days of final grading, or temporarily stabilized within 45 days of initial disturbance of soil.

10 Inspection and Maintenance Schedule

Fencing will be inspected during and after storm events to ensure that the fence still has integrity and is not allowing sediment to pass. Sediment build-up will be removed if it is deeper than six inches.

DRAINAGE ANALYSIS PRE & POST

Pre-Conditions Drainage Analysis
Full summary
10 YR – 24 HR rainfall = 4.92"



Ex drainage
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Area Listing (all nodes)

Area	CN	Description
(acres)		(subcatchment-numbers)
0.158	61	>75% Grass cover, Good, HSG B (1S)
0.180	98	Pavement (1S)
0.438	55	Woods, Good, HSG B (1S)
0.775	66	TOTAL AREA

Soil Listing (all nodes)

Area	Soil	Subcatchment
(acres)	Group	Numbers
0.000	HSG A	
0.596	HSG B	1S
0.000	HSG C	
0.000	HSG D	
0.180	Other	1S
0.775		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.158	0.000	0.000	0.000	0.158	>75% Grass cover, Good	1S
0.000	0.000	0.000	0.000	0.180	0.180	Pavement	1S
0.000	0.438	0.000	0.000	0.000	0.438	Woods, Good	1S
0.000	0.596	0.000	0.000	0.180	0.775	TOTAL AREA	

Ex drainage

Type III 24-hr 10 yr 24 hr Rainfall=4.92"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Ex.

Runoff Area=33,769 sf 23.17% Impervious Runoff Depth>1.53" Tc=5.0 min CN=66 Runoff=1.46 cfs 0.099 af

Reach 1R: Existing

Inflow=1.46 cfs 0.099 af Outflow=1.46 cfs 0.099 af

Total Runoff Area = 0.775 ac Runoff Volume = 0.099 af Average Runoff Depth = 1.53" 76.83% Pervious = 0.596 ac 23.17% Impervious = 0.180 ac

Ex drainage

Type III 24-hr 10 yr 24 hr Rainfall=4.92"

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Summary for Subcatchment 1S: Ex. pavement/grass/woods

Runoff

1.46 cfs @ 12.09 hrs, Volume=

0.099 af, Depth> 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 10 yr 24 hr Rainfall=4.92"

	Area (sf)	CN	Description	ľ					
*	7,823	98	Pavement	Pavement					
	19,073	55	Woods, Go	Voods, Good, HSG B					
	6,873	61	>75% Gras	s cover, Go	ood, HSG B				
	33,769	769 66 Weighted Average							
	25,946		76.83% Pervious Area						
	7,823		23.17% Imp	pervious Ar	rea				
(mi	Γc Length n) (feet)	Slope (ft/ft)		Capacity (cfs)	Description				
5	.0				Direct Entry, 1				

Summary for Reach 1R: Existing

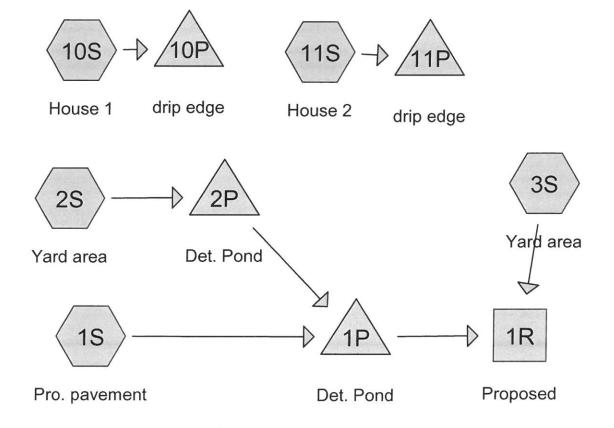
Inflow Area = 0.775 ac, 23.17% Impervious, Inflow Depth > 1.53" for 10 yr 24 hr event

Inflow = 1.46 cfs @ 12.09 hrs, Volume= 0.099 af

Outflow = 1.46 cfs @ 12.09 hrs, Volume= 0.099 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Pro-Conditions Drainage Analysis Full summary 10 YR – 24 HR rainfall = 4.92"











Area Listing (all nodes)

Area	CN	Description
(acres)		(subcatchment-numbers)
0.498	61	>75% Grass cover, Good, HSG B (1S, 2S, 3S)
0.074	98	Impervious (house) (10S, 11S)
0.150	98	Pavement (1S)
0.054	55	Woods, Good, HSG B (2S, 3S)
0.775	71	TOTAL AREA

Soil Listing (all nodes)

Area	Soil	Subcatchment
(acres)	Group	Numbers
0.000	HSG A	
0.552	HSG B	1S, 2S, 3S
0.000	HSG C	
0.000	HSG D	
0.223	Other	1S, 10S, 11S
0.775		TOTAL AREA

Ground Covers (all nodes)

HSG-A	HSG-B	HSG-C	HSG-D	Other	Total	Ground	Subcatchment
(acres)	(acres)	(acres)	(acres)	(acres)	(acres)	Cover	Numbers
0.000	0.498	0.000	0.000	0.000	0.498	>75% Grass cover, Good	1S, 2S,
							3S
0.000	0.000	0.000	0.000	0.074	0.074	Impervious (house)	10S,
							11S
0.000	0.000	0.000	0.000	0.150	0.150	Pavement	1S
0.000	0.054	0.000	0.000	0.000	0.054	Woods, Good	2S, 3S
0.000	0.552	0.000	0.000	0.223	0.775	TOTAL AREA	

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Pipe Listing (all nodes)

Line#	Node	In-Invert	Out-Invert	Out-Invert Length Slope		n	Diam/Width	Height	Inside-Fill
Was a	Number	(feet)	(feet)	(feet)	(ft/ft)		(inches)	(inches)	(inches)
1	2P	45.00	44.72	28.0	0.0100	0.012	12.0	0.0	0.0

Type III 24-hr 10 yr 24 hr Rainfall=4.92"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pro. pavement	Runoff Area=19,758 sf	33.02% Impervious	Runoff Depth>2.05"
--------------------------------	-----------------------	-------------------	--------------------

Tc=5.0 min CN=73 Runoff=1.17 cfs 0.078 af

Subcatchment 2S: Yard area Runoff Area=6,223 sf 0.00% Impervious Runoff Depth>1.13"

Tc=5.0 min CN=60 Runoff=0.19 cfs 0.013 af

Subcatchment 3S: Yard area Runoff Area=4,583 sf 0.00% Impervious Runoff Depth>1.07"

Tc=5.0 min CN=59 Runoff=0.13 cfs 0.009 af

Subcatchment 10S: House 1 Runoff Area=1,680 sf 100.00% Impervious Runoff Depth>4.35"

Tc=5.0 min CN=98 Runoff=0.19 cfs 0.014 af

Subcatchment 11S: House 2 Runoff Area=1,524 sf 100.00% Impervious Runoff Depth>4.35"

Tc=5.0 min CN=98 Runoff=0.17 cfs 0.013 af

Reach 1R: Proposed Inflow=0.21 cfs 0.051 af

Outflow=0.21 cfs 0.051 af

Pond 1P: Det. Pond Peak Elev=46.54' Storage=2,190 cf Inflow=1.35 cfs 0.091 af

Outflow=0.19 cfs 0.041 af

Pond 2P: Det. Pond Peak Elev=45.21' Storage=22 cf Inflow=0.19 cfs 0.013 af

12.0" Round Culvert n=0.012 L=28.0' S=0.0100 '/' Outflow=0.18 cfs 0.013 af

Pond 10P: drip edge Peak Elev=55.45' Storage=208 cf Inflow=0.19 cfs 0.014 af

Outflow=0.02 cfs 0.014 af

Pond 11P: drip edge Peak Elev=58.37' Storage=114 cf Inflow=0.17 cfs 0.013 af

Outflow=0.04 cfs 0.013 af

Total Runoff Area = 0.775 ac Runoff Volume = 0.127 af Average Runoff Depth = 1.97" 71.19% Pervious = 0.552 ac 28.81% Impervious = 0.223 ac

Type III 24-hr 10 yr 24 hr Rainfall=4.92"

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Summary for Subcatchment 1S: Pro. pavement

Runoff

1.17 cfs @ 12.08 hrs, Volume=

0.078 af, Depth> 2.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 10 yr 24 hr Rainfall=4.92"

	Area (sf)	CN	Description								
*	6,525	98	Pavement	Pavement							
	13,233	61	>75% Gras	s cover, Go	ood, HSG B						
	19,758	73	Weighted A	Veighted Average							
	13,233		66.98% Per	66.98% Pervious Area							
	6,525		33.02% Imp	ervious Ar	rea						
	Tc Length	Slop	e Velocity	Capacity	Description						
(m	nin) (feet)	(ft/f	(ft/sec)	(cfs)	000000000000 ■ 00000000000						
	5.0				Direct Entry, 1						

Summary for Subcatchment 2S: Yard area

Runoff

0.19 cfs @ 12.09 hrs, Volume=

0.013 af, Depth> 1.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 10 yr 24 hr Rainfall=4.92"

A	rea (sf)	CN	Description					
	5,186	61	>75% Gras	s cover, Go	ood, HSG B			
	1,037	55	Woods, Go	od, HSG B	3			
	6,223	60	Weighted Average					
	6,223		100.00% Pervious Area					
Tc	Length	Slope	,	Capacity	Description			
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
5.0					Direct Entry, 1			

Summary for Subcatchment 3S: Yard area

Runoff

0.13 cfs @ 12.09 hrs, Volume=

0.009 af, Depth> 1.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 10 yr 24 hr Rainfall=4.92"

 Area (sf)	CN	Description
1,310	55	Woods, Good, HSG B
3,273	61	>75% Grass cover, Good, HSG B
4,583	59	Weighted Average
4,583		100.00% Pervious Area

Pr	O	d	rai	n	ao	10
	-	~	-		u	

Type III 24-hr 10 yr 24 hr Rainfall=4.92"

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					Description
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	

5.0 Direct Entry, 1

Summary for Subcatchment 10S: House 1

Runoff = 0.19 cfs @ 12.07 hrs, Volume=

0.014 af, Depth> 4.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 10 yr 24 hr Rainfall=4.92"

_	Α	rea (sf)	CN [Description							
*		1,680	98 I	Impervious (house)							
		1,680	1	100.00% Im	pervious A	Area					
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description					
	5.0					Direct Entry, 1					

Summary for Subcatchment 11S: House 2

Runoff = 0.17 cfs @ 12.07 hrs, Volume=

0.013 af, Depth> 4.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs Type III 24-hr 10 yr 24 hr Rainfall=4.92"

_	Α	rea (sf)	CN I	Description						
*		1,524	98 I	Impervious (house)						
		1,524	•	100.00% Im	pervious A	Area				
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
	5.0					Direct Entry, 1				

Summary for Reach 1R: Proposed

Inflow Area = 0.702 ac, 21.35% Impervious, Inflow Depth > 0.87" for 10 yr 24 hr event

Inflow = 0.21 cfs @ 12.75 hrs. Volume = 0.051 af

Outflow = 0.21 cfs @ 12.75 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Det. Pond

Inflow Are	ea =	0.596 ac, 25.11% Impervious, I	nflow Depth > 1.8	33" for 10 yr 24 hr event
Inflow	=			,
Outflow	=	0.19 cfs @ 12.76 hrs. Volume=	0.041 af	Atten= 86% Lag= 40.3 mil

Primary = 0.19 cfs @ 12.76 hrs, Volume= 0.041 af

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Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3 Peak Elev= 46.54' @ 12.76 hrs Surf.Area= 1,165 sf Storage= 2,190 cf Flood Elev= 47.00' Surf.Area= 1,238 sf Storage= 2,746 cf

Plug-Flow detention time= 191.9 min calculated for 0.041 af (46% of inflow)

Center-of-Mass det. time= 103.1 min (908.8 - 805.8)

Volume	Inv	∕ert Avail.Sto	orage Storage D	Description	
#1	44.	00' 2,7	746 cf Custom S	Stage Data (Pri	ismatic) Listed below (Recalc)
Elevation (fee		Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	
44.0 46.0 47.0	00	507 1,080 1,238	0 1,587 1,159	0 1,587 2,746	
Device	Routing	Invert	Outlet Devices		
#1	Primary	46.50'	Head (feet) 0.2 2.50 3.00 3.50	20 0.40 0.60 () 2.54 2.61 2.6	ad-Crested Rectangular Weir 0.80 1.00 1.20 1.40 1.60 1.80 2.00 61 2.60 2.66 2.70 2.77 2.89 2.88

Primary OutFlow Max=0.18 cfs @ 12.76 hrs HW=46.54' (Free Discharge) 1=Broad-Crested Rectangular Weir (Weir Controls 0.18 cfs @ 0.49 fps)

Summary for Pond 2P: Det. Pond

0.143 ac, 0.00% Impervious, Inflow Depth > 1.13" for 10 yr 24 hr event Inflow Area = 0.19 cfs @ 12.09 hrs, Volume= 0.013 af Inflow = 0.013 af, Atten= 4%, Lag= 1.1 min 0.18 cfs @ 12.11 hrs, Volume= Outflow = 0.18 cfs @ 12.11 hrs, Volume= 0.013 af Primary =

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3 Peak Elev= 45.21' @ 12.11 hrs Surf.Area= 114 sf Storage= 22 cf Flood Elev= 47.00' Surf.Area= 327 sf Storage= 407 cf

Plug-Flow detention time= 5.0 min calculated for 0.013 af (99% of inflow) Center-of-Mass det. time= 2.9 min (831.2 - 828.3)

Volume	Inv	ert Avail	.Storage	Storage Description				
#1	45.0	00'	407 cf	Custon	n Stage Data (Prisr	natic) Listed below (Recalc)		
Elevation (fee		Surf.Area (sq-ft)		.Store c-feet)	Cum.Store (cubic-feet)			
45.0	00	91		0	0			
46.0	00	198		145	145			
47.0	00	327		263	407			
Device	Routing	Inv	ert Outle	et Device	es			
#1	Primary	45.	00' 12.0 '	" Round	Culvert L= 28.0'	Ke= 0.500		

Type III 24-hr 10 yr 24 hr Rainfall=4.92"

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Inlet / Outlet Invert= 45.00' / 44.72' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.18 cfs @ 12.11 hrs HW=45.21' (Free Discharge) 1=Culvert (Barrel Controls 0.18 cfs @ 2.26 fps)

Summary for Pond 10P: drip edge

Inflow Area = 0.039 ac,100.00% Impervious, Inflow Depth > 4.35" for 10 yr 24 hr event

Inflow = 0.19 cfs @ 12.07 hrs, Volume= 0.014 af

Outflow = 0.02 cfs @ 11.50 hrs, Volume= 0.014 af, Atten= 89%, Lag= 0.0 min

Discarded = 0.02 cfs @ 11.50 hrs, Volume= 0.014 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3 Peak Elev= 55.45' @ 12.73 hrs Surf.Area= 144 sf Storage= 208 cf

Flood Elev= 56.00' Surf.Area= 144 sf Storage= 288 cf

Plug-Flow detention time= 72.6 min calculated for 0.014 af (100% of inflow)

Center-of-Mass det. time= 71.8 min (806.2 - 734.5)

Volume	Inve	rt Avail.Sto	orage Stor	e Storage Description		
#1	54.00)' 2	88 cf Custom Stage Data (Prismatic) Listed below (Recalc)			
Elevation (feet		Surf.Area (sq-ft)	Inc.Store (cubic-feet			
54.00	0	144	(0		
56.00	0	144	288	3 288		
Device	Routing	Invert	Outlet Dev	vices		
#1 Discarded		54.00'	6.000 in/h	0 in/hr Exfiltration over Surface area		

Discarded OutFlow Max=0.02 cfs @ 11.50 hrs HW=54.02' (Free Discharge) 1=Exfiltration (Exfiltration Controls 0.02 cfs)

Summary for Pond 11P: drip edge

Inflow Area = 0.035 ac,100.00% Impervious, Inflow Depth > 4.35" for 10 yr 24 hr event

Inflow = 0.17 cfs @ 12.07 hrs, Volume= 0.013 af

Outflow = 0.04 cfs @ 11.80 hrs, Volume= 0.013 af, Atten= 75%, Lag= 0.0 min

Discarded = 0.04 cfs @ 11.80 hrs, Volume= 0.013 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 3 Peak Elev= 58.37' @ 12.43 hrs Surf.Area= 306 sf Storage= 114 cf

Flood Elev= 60.00' Surf.Area= 306 sf Storage= 612 cf

Plug-Flow detention time= 14.6 min calculated for 0.013 af (100% of inflow)

Center-of-Mass det. time= 13.9 min (748.4 - 734.5)

Type III 24-hr 10 yr 24 hr Rainfall=4.92"

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Volume	Inve	ert Avail.St	orage :	Storage D	escription		
#1	58.0	00'	612 cf (Custom S	tage Data (Pr	ismatic) Listed below (Recalc)	
Elevatio (fee 58.0 60.0	et) 00	Surf.Area (sq-ft) 306 306	Inc.S (cubic-	Store feet) 0 612	Cum.Store (cubic-feet) 0 612		
Device	Routing	Invert	Outlet	Devices			
#1 Discarded		d 58.00'	6.000	000 in/hr Exfiltration over Surface area			

Discarded OutFlow Max=0.04 cfs @ 11.80 hrs HW=58.02' (Free Discharge) 1=Exfiltration (Exfiltration Controls 0.04 cfs)

CONCLUSION

December 22, 2020 Page 10

Pre vs Pro comparison Discharge Point 1R

Storm Yr/24 hr 10 Existing CFS 1.46

Proposed CFS 0.21

Difference -1.25

Conclusion

The intent of this report is to evaluate the re-construction of Patricia Drive and the improvement to two proposed parcels. We have evaluated the watersheds area on the property. We have determined that two small basins will control all stormwater run-off from the reconstruction of Patricia Drive and new construction area.

A Site Specific, Terrain Alteration Permit (RSA 485: A-17) is **not** required for this site plan due to the area of disturbance is less than 100,000 square feet for AOT and a SWPPP is **not** required as the disturbance is less than 1 acre.

Respectfully Submitted,

New Hampshire Land Consultants, PLLC

Scott R Frankiewicz, LLS Project Manager

Jeff Burd, PE Project Engineer

PRE & POST WATERSHED PLANS

