



Civil Engineers
 Structural Engineers
 Traffic Engineers
 Land Surveyors
 Landscape Architects
 Scientists



September 20, 2022

Beverly Mesa-Zendt, Planning Director
 City of Portsmouth Planning Department
 1 Junkins Avenue, 3rd Floor
 Portsmouth, NH 03801

via email: View Point

**RE: LU-22-61 – Response to TAC Comments
 77 Meredith Way – Randi & Jeff Collins – Tax Map 162 Lot 16
 TFM Project #47442-00**

Dear Ms. Mesa-Zendt:

On behalf of our clients, Randi & Jeff Collins, TFMoran, Inc. (TFM) respectfully submits the following letter in response to the comments made by the City of Portsmouth Technical Advisory Committee (TAC), via email dated September 6, 2022. The following materials are included in this revised submission:

- **Drainage Analysis Summary;**
- **Site Development Plan set entitled “Proposed 2 Lot Subdivision Plan, 77 Meredith Way, Portsmouth, New Hampshire”, prepared by TFMoran, Inc., dated July 1, 2022, revised September 20, 2022 (1 copy at 22”x34).**

To facilitate your review, we have provided your comments along with our responses, which are shown in ***bold italics***.

TAC REVIEW COMMENTS:

September 6, 2022 Comments

1. The existing sewer line for #77 is to be cut and capped at the main in Pine St.

Revised, see inset on Sheet C-02.

2. The existing water line is to be cut and capped at the main in Meredith Way, the rest of the service should be abandoned, not removed.

Revised, see label on Sheet C-02.

3. The driveway to lot ‘B’ should be at least a foot off of the side property line.

Revised, see Sheet C-03.



4. The roadway needs to be extended at least to the center of the garage proposed for Lot 'B' as previously stated. As shown that road is not long enough for our truck to actually turn around as the truck is almost 28' long.

Revised, see Sheet C-03.

5. The patios in the rear yards are to be porous so they do not encourage runoff.

Revised, see Sheet C-03 & detail on Sheet C-08.

6. Provide a test pit for Lot 'A' rain garden.

Test Pit #4 has been added, see Sheet C-04.

7. Both houses are to have gutters or French drains that divert the rain water into the associated rain gardens.

Added Note 10 on Sheet C-04.

8. Please remove the soil legend. This lot does not have hydrologic soil type 'A', it's more like a 'C'.

Soil legend removed, see Sheet C-04.

9. Use 2 -22 degree bends spaced 2' apart for the sewer lateral corners, not one 45 degree bend.

Revised, see Sheet C-05.

10. Sewer cleanouts will not be allowed in the City park.

Revised, see Sheet C-05.

11. Follow State standards for water service bury depth. Detail says insulation 'optional'. It may not be.

Detail updated, see Sheet C-07.

12. Warning tape does not need to be the metallic type. Specify sand for 6" over the pipe, crushed stone pipe bed to the haunch line

Detail updated, see Sheet C-07.

13. Specify that the road gets the heavy duty pavement section. 18" of 304.4 is acceptable for under the pavement.



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Detail updated, see Sheet C-07.

14. Specify a riser in each rain garden so that water can get down through the frozen media in winter to the stone below.

Notation added, see Sheet C-04.

15. Provide calculations for the rain garden footprint sizing based on the perc rate of the existing soil. Provide enough open voids in the stone above the ESHWT for at least 1” of rain. Make sure to specify removal of any clay or restrictive soils down to the bottom of the pond.

Enough room is provided within stone for 1” rain, see Sheet C-04. 1” rain event printouts are in the provided Drainage Summary.

16. Recommendation for approval will be contingent on successfully acquiring permission from the City Council for the sewer laterals.

Noted.

We trust that the above responses satisfy the concerns expressed in the City of Portsmouth’s TAC comments. Should you wish to further discuss any of the above please contact us so that we may meet and resolve any outstanding concerns.

Respectfully,
TFMoran, Inc.

Brenda Kolbow, LLS
Survey Department Manager

BMK/bmk

cc: Randi & Jeff Collins
Christopher Mulligan, Esquire

GENERAL INFORMATION

OWNER

MAP 162 LOT 16
RANDI & JEFF COLLINS
77 MEREDITH WAY
PORTSMOUTH, NH 03801
774-278-8676

APPLICANT

RANDI & JEFF COLLINS
77 MEREDITH WAY
PORTSMOUTH, NH 03801
774-278-8676

RESOURCE LIST

PLANNING/ZONING DEPARTMENT
1 JUNKINS AVENUE
PORTSMOUTH, NH 03801
603-610-7216
NICK CRACKNELL, PRINCIPAL PLANNER

PUBLIC WORKS
600 PEVERLY HILL ROAD
PORTSMOUTH, STATE 03801
603-472-1530
DAVE DEFOSSÉS, CONSTRUCTION TECHNICAL SUPERVISOR

POLICE DEPARTMENT
3 JUNKINS AVENUE
PORTSMOUTH, NH 03801
603-427-1510

FIRE DEPARTMENT
170 COURT STREET
PORTSMOUTH, NH 03801
603-427-1515

ASSOCIATED PROFESSIONALS

ATTORNEY
BOSEN & ASSOCIATES
266 MIDDLE STREET
PORTSMOUTH, NH 03801
603-427-5500
CHRISTOPHER P. MULLIGAN, ESQUIRE

PROPOSED 2 LOT SUBDIVISION

77 MEREDITH WAY
PORTSMOUTH, NEW HAMPSHIRE

JULY 1, 2022
LAST REVISED SEPTEMBER 20, 2022

INDEX OF SHEETS

SHEET	SHEET TITLE
C-00	COVER
C-01	NOTES & LEGEND
S-01	EXISTING CONDITIONS PLAN
S-02	SUBDIVISION PLAN
C-02	SITE PREPARATION & DEMOLITION PLAN
C-03	SITE LAYOUT PLAN
C-04	GRADING & DRAINAGE PLAN
C-05	UTILITY PLAN
C-06	ROAD PLAN AND PROFILE
C-07 THRU C-09	DETAILS

PERMITS/APPROVALS

	NUMBER	APPROVED	EXPIRES
CITY PLANNING BOARD SUBDIVISION APPROVAL	-	-	-
CITY ZONING BOARD VARIANCE REQUEST (ARTICLE 5 - SECTION 10.521)	LU-22-61	2022/06/22	2024/06/22

VARIANCE GRANTED

ON JUNE 22, 2022 THE CITY OF PORTSMOUTH ZONING BOARD OF ADJUSTMENT GRANTED RELIEF FROM THE FOLLOWING SECTION OF THE CITY OF PORTSMOUTH ZONING ORDINANCE:

ARTICLE 5 SECTION 10.521 - MINIMUM CONTINUOUS LOT FRONTAGE:
TO ALLOW THE CONTINUOUS STREET FRONTAGE TO BE 73.99' FOR PROPOSED LOT A & 31.61' FOR PROPOSED LOT B, WHERE 100' IS REQUIRED AND 31.7' EXISTS.

OWNER'S SIGNATURE

THE PROPERTY WILL BE DEVELOPED IN ACCORDANCE WITH THIS PLAN AND THE ORDINANCES OF THE CITY OF PORTSMOUTH, NEW HAMPSHIRE.

OWNER OR AUTHORIZED AGENT _____

DATE _____

APPROVED BY THE CITY OF PORTSMOUTH PLANNING BOARD

ON _____
BOARD MEMBER _____ AND
BOARD MEMBER _____

PROGRESS PRINT

date: 09/20/2022

VICINITY PLAN



HORIZONTAL SCALE 1"=500'
500 250 0 500

Sep 20, 2022 - 1:57 pm F:\MISC Projects\47442 - 77 Meredith Way - Portsmouth\47442-00 - Collins - 77 Meredith Way\Design\PRODUCTION DRAWINGS\47442-00_Cover.dwg

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THESE PLANS ARE PERMIT DRAWINGS ONLY AND HAVE NOT BEEN DETAILED FOR CONSTRUCTION OR BIDDING.

REV	DATE	DESCRIPTION	DR	CK
4	9/20/2022	REVISED PER TAC COMMENTS	JKC	JCC
3	8/31/2022	REVISED PER TAC COMMENTS	JKC	JCC
2	8/23/2022	REVISED PER TAC COMMENTS	JKC	JCC
1	7/21/2022	REVISED PER TAC COMMENTS	JKC	JCC

SITE DEVELOPMENT PLANS

TAX MAP 162 LOT 16

COVER

PROPOSED 2 LOT SUBDIVISION
77 MEREDITH WAY

OWNED BY

RANDI & JEFF COLLINS

PREPARED FOR

RANDI & JEFF COLLINS

SCALE: AS SHOWN

JULY 1, 2022

Seacoast Division



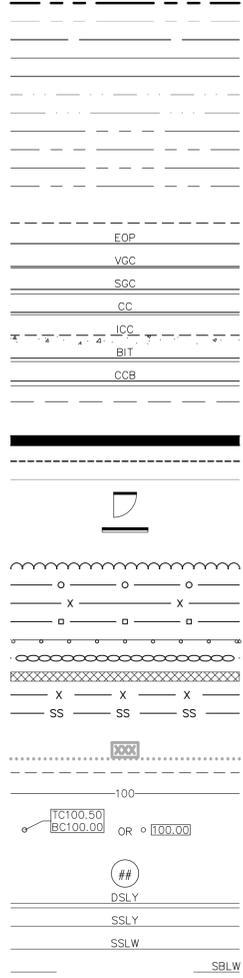
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FILE	47442-00	DR	BNK	FB	-	47442-00_COVER	C-00
		CK	CR	CADFILE			

LEGEND

PROPOSED



PROPERTY LINE
ZONING LINE
EASEMENT
BASELINE
FLOODPLAIN
EDGE OF WATERBODY
EDGE OF WETLAND
SETBACK (WETLAND)
SETBACK (STRUCTURE)
SETBACK (PARKING)
SETBACK (LANDSCAPE)

GRAVEL ROAD
EDGE OF PAVEMENT
VERTICAL GRANITE CURB
SLOPED GRANITE CURB
CONCRETE CURB
INTEGRATED CONCRETE CURB
BITUMINOUS ASPHALT CURB
CAPE COD BERM
SAWCUT

BUILDING
BUILDING ROOF OVERHANG
BUILDING FOUNDATION
BUILDING ENTRANCE
OVERHEAD DOOR

TREE LINE
FENCE (CHAIN LINK)
FENCE (WIRE)
FENCE (STOCKADE)
GUARDRAIL
STONE WALL
RETAINING WALL
SILT FENCE
SILT SOCK

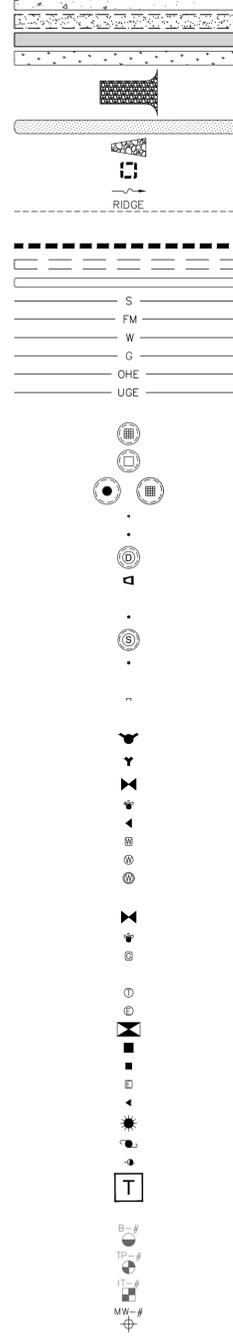
SOIL BOUNDARY
LIMIT OF GRADING
CONTOUR
SPOT GRADE

PARKING COUNT

YELLOW DOUBLE SOLID LINE
YELLOW SINGLE SOLID LINE
WHITE SINGLE SOLID LINE
WHITE SINGLE BROKEN LINE

STOP BAR
CROSSWALK
ACCESSIBLE PARKING SYMBOL
PAVEMENT ARROW
TRAFFIC FLOW ARROW (NOT PAINTED)
SIGN (SINGLE POST)
SIGN (DOUBLE POST)
SIGN (PYLON)
SIGN (MONUMENT)
BOLLARD
DUMPSTER PAD

PROPOSED



CONCRETE
GRAVEL
HEAVY DUTY PAVEMENT
CONSTRUCTION ENTRANCE
SNOW STORAGE
RIPRAP
INLET PROTECTION
FLOW ARROW
GRADE BREAK RIDGE
DRAIN LINE
DRAINAGE SWALE
STORMWATER BMP
SEWER LINE
SEWER FORCE MAIN LINE
WATER LINE
GAS LINE
OVERHEAD UTILITY LINE
UNDERGROUND UTILITY LINE
CATCH BASIN
DRAIN INLET
OUTLET CONTROL STRUCTURE
ROOF DRAIN
DRAIN CLEANOUT
DRAIN MANHOLE
FARED END SECTION
SEWER CLEAN OUT
SEWER MANHOLE
SEWER VENT
DRAIN/SEWER/WATER PLUG OR CAP
HYDRANT
FIRE DEPARTMENT CONNECTION
WATER GATE VALVE
WATER SHUTOFF
THRUST BLOCK
WATER METER
WATER MANHOLE
WELL
GAS GATE VALVE
GAS SHUT OFF
GAS METER
TELEPHONE MANHOLE
ELECTRIC MANHOLE
TRAFFIC CONTROL CABINET
ELECTRIC HANDHOLE
ELECTRIC PULL BOX
ELECTRIC METER
FLOOD LIGHT
LIGHT POLE
UTILITY POLE
GUY POLE
TRANSFORMER PAD
BORING LOCATION
TEST PIT LOCATION
INFILTRATION TEST LOCATION
MONITORING WELL

ABBREVIATIONS

GENERAL		UTILITIES	
ABAN	ABANDON	OC	ON CENTER
AC	ACRES	PAVE	PAVEMENT
ADJ	ADJUST	PERF	PERFORATED
APPROX	APPROXIMATE	PROP	PROPOSED
BC	BOTTOM OF CURB	R	RADIUS
BIT	BITUMINOUS	R&D	REMOVE AND DISPOSE
BK/PG	BOOK & PAGE	R&R	REMOVE AND RESET
BLDG	BUILDING	L	LENGTH
BMP	BEST MANAGEMENT PRACTICE	RET	RETAIN
BS	BOTTOM OF SLOPE	RIM	RIM ELEVATION
BW	BOTTOM OF WALL	ROW	RIGHT OF WAY
CONC	CONCRETE	S	SLOPE
COORD	COORDINATE	SF	SQUARE FEET
DIA	DIAMETER	TM	TEMPORARY BENCHMARK
ELEV	ELEVATION	TP	TEST PIT
		TW	TOP OF WALL
		TYP	TYPICAL
		UG	UNDERGROUND
		WCR	ACCESSIBLE WHEELCHAIR RAMP
		W/	WITH
		CB	CATCH BASIN
		CIP	CAST IRON PIPE
		CMP	CORRUGATED METAL PIPE
		CO	CLEANOUT
		COND	CONDUIT
		DCB	DOUBLE CATCH BASIN
		DIP	DUCTILE IRON PIPE
		DMH	DRAIN MANHOLE
		F&C	FRAME AND COVER
		F&G	FRAME AND GRATE
		FES	FLARED END SECTION
		GT	GREASE TRAP
		HDPE	HIGH DENSITY POLYETHYLENE PIPE
		HH	HANDHOLE
		HMW	HEADWALL
		HYD	HYDRANT
		LP	LIGHT POLE
		OCS	OUTLET CONTROL STRUCTURE
		PVC	POLYVINYL CHLORIDE PIPE
		RCP	REINFORCED CONCRETE PIPE
		RD	ROOF DRAIN
		SMH	SEWER MANHOLE
		SOS	SEDIMENT OIL SEPARATOR
		TSV	TAPPING SLEEVE, VALVE, AND BOX
		UP	UTILITY POLE



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- THESE PLANS WERE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. THE ENGINEER ASSUMES NO LIABILITY AS A RESULT OF ANY CHANGES OR NON-COMFORMANCE WITH THESE PLANS EXCEPT UPON THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
- THE SITE LAYOUT PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
- ALL IMPROVEMENTS SHOWN ON THE 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 CITY PLANNING BOARD.
- ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF PORTSMOUTH, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ALL WORK TO CONFORM TO CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS. ALL WORK WITHIN THE RIGHT-OF-WAY OF THE CITY AND/OR STATE SHALL COMPLY WITH APPLICABLE STANDARDS. COORDINATE ALL WORK WITHIN THE RIGHT-OF-WAY WITH APPROPRIATE CITY, COUNTY, AND/OR STATE AGENCY.
- THE SITE CONTRACTOR SHALL ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH APPLICABLE SECTIONS OF ENV-WQ 1500. THE SITE CONTRACTOR SHALL NOTIFY THE ENGINEER IN ADVANCE OF EACH STORMWATER FACILITY TO COORDINATE REQUIRED INSPECTIONS. THE CONTRACTOR SHALL TAKE PROGRESS PHOTOS DURING CONSTRUCTION OF ALL STORMWATER DRAINAGE COMPONENTS AND SEND TO THE ENGINEER.
- SEE EXISTING CONDITIONS PLAN FOR THE HORIZONTAL AND VERTICAL DATUM.
- SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION. VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION.
- CONTACT EASEMENT OWNERS PRIOR TO COMMENCING ANY WORK WITHIN THE EASEMENTS.
- PRIOR TO COMMENCING ANY SITE WORK, ALL LIMITS OF WORK SHALL BE CLEARLY MARKED IN THE FIELD.
- THE SITE WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS, NOT ALL FEATURES ARE DETAILED ON EVERY PLAN. THE ENGINEER IS TO BE NOTIFIED OF ANY CONFLICT WITHIN THIS PLAN SET.
- TFMORAN, INC. ASSUMES NO LIABILITY FOR WORK PERFORMED WITHOUT AN ACCEPTABLE PROGRAM OF TESTING AND INSPECTION AS APPROVED BY THE ENGINEER OF RECORD.
- TEMPORARY FENCING SHALL BE PROVIDED AND COVERED WITH A FABRIC MATERIAL TO CONTROL DUST MITIGATION.
- ALL DEMOLITION SHALL INSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKWAYS, AND ANY OTHER ADJACENT OPERATING FACILITIES. PRIOR WRITTEN PERMISSION FROM THE OWNER/DEVELOPER AND LOCAL PERMITTING AUTHORITY IS REQUIRED IF CLOSURE/OBSTRUCTIONS TO ROADS, STREET, WALKWAYS, AND OTHERS IS DEEMED NECESSARY. CONTRACTOR TO PROVIDE ALTERNATE ROUTES AROUND CLOSURES/OBSTRUCTIONS PER LOCAL/STATE/FEDERAL REGULATIONS.
- REFER TO ARCHITECTURAL PLANS FOR LAYOUT OF BUILDING FOUNDATIONS AND CONCRETE ELEMENTS WHICH ABUT THE BUILDING SUCH AS STAIRS, SIDEWALKS, LOADING DOCK RAMPS, PADS, AND COMPACTOR PADS. DO NOT USE SITE PLANS FOR LAYOUT OF FOUNDATIONS.
- IN THE EVENT OF A CONFLICT BETWEEN PLANS, SPECIFICATIONS, AND DETAILS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
- IF CONDITIONS AT THE SITE ARE DIFFERENT THAN SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH THE AFFECTED WORK.
- CONTRACTOR'S GENERAL RESPONSIBILITIES:
 - BID AND PERFORM THE WORK IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL CODES, SPECIFICATIONS, REGULATIONS, AND STANDARDS AND CONDITIONS OF ALL PROJECT-SPECIFIC PERMITS AND APPROVALS AS LISTED ON THE COVER SHEET TO THESE PLANS OR OTHERWISE REQUIRED.
 - NOTIFY ENGINEER IN WRITING OF ANY DISCREPANCIES OF PROPOSED LAYOUT AND/OR EXISTING FEATURES.
 - EMPLOY A LICENSED SURVEYOR TO DETERMINE ALL LINES AND GRADES AND LAYOUT OF SITE ELEMENTS AND BUILDINGS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE TO BECOME FAMILIAR WITH THE SITE AND ALL SURROUNDING CONDITIONS. THE CONTRACTOR SHALL ADVISE THE APPROPRIATE AUTHORITY OF INTENTIONS AT LEAST 48 HOURS IN ADVANCE.
 - TAKE APPROPRIATE MEASURES TO REDUCE, TO THE FULLEST EXTENT POSSIBLE, NOISE, DUST, AND UNSIGHTLY DEBRIS. CONSTRUCTION ACTIVITIES SHALL BE CARRIED OUT BETWEEN THE HOURS OF 7:00 AM AND 9:00 PM, MONDAY THROUGH FRIDAY IN ACCORDANCE WITH THE APPLICABLE MUNICIPAL ORDINANCES AND REGULATIONS OF THE CITY OF PORTSMOUTH, NEW HAMPSHIRE.
 - MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY WORK AT ALL TIMES.
 - IN ACCORDANCE WITH RSA 430:53 AND AGR 3800, THE CONTRACTOR SHALL NOT TRANSPORT INVASIVE SPECIES OFF THE PROPERTY, AND SHALL DISPOSE OF INVASIVE SPECIES ON-SITE IN A LEGAL MANNER.
 - COORDINATE WITH ALL UTILITY COMPANIES AND CONTACT DIGSAFE (811 OR 888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.
 - PROTECT NEW AND EXISTING BURIED UTILITIES DURING INSTALLATION OF ALL SITE ELEMENTS. DAMAGED UTILITIES SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY TFMORAN, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR OR ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE US OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
 - WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
 - VERIFY LAYOUT OF PROPOSED BUILDING FOUNDATIONS WITH ARCHITECT AND THAT PROPOSED FOUNDATION MEETS PROPERTY LINE AND/OR WETLAND SETBACKS PRIOR TO COMMENCING ANY FOUNDATION CONSTRUCTION.
 - PROVIDE AN AS-BUILT PLAN AT THE COMPLETION OF THE PROJECT TO THE PLANNING DIRECTOR AND PER CITY REGULATIONS.
 - IF ANY DEVIATIONS FROM THE APPROVED PLANS AND SPECIFICATIONS HAVE BEEN MADE, THE SITE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS STAMPED BY A LICENSED SURVEYOR OR QUALIFIED ENGINEER ALONG WITH A LETTER STAMPED BY A QUALIFIED ENGINEER DESCRIBING ALL SUCH DEVIATIONS, AND BEAR ALL COSTS FOR PREPARING AND FILING ANY NEW PERMITS OR PERMIT AMENDMENTS THAT MAY BE REQUIRED.
 - AT COMPLETION OF CONSTRUCTION, THE SITE CONTRACTOR SHALL PROVIDE A LETTER CERTIFYING THAT THE PROJECT WAS COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND A LETTER STAMPED BY A QUALIFIED ENGINEER THAT THEY HAVE OBSERVED ALL UNDERGROUND DETENTION SYSTEMS, INFILTRATION SYSTEMS, OR FILTERING SYSTEMS PRIOR TO BACKFILL, AND THAT SUCH SYSTEMS CONFORM TO THE APPROVED PLANS AND SPECIFICATIONS.

GRADING & DRAINAGE NOTES

- THE CONTRACTOR SHALL ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF NHDES ENV-WQ 1500 AS APPLICABLE.
- THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO SUBMIT AN eNOI AT LEAST 14 DAYS IN ADVANCE OF ANY EARTHWORK ACTIVITIES AT THE SITE.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK THE ACCURACY OF THE TOPOGRAPHY AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO ANY EARTHWORK BEING PERFORMED ON THE SITE. NO CLAIM FOR EXTRA WORK WILL BE CONSIDERED FOR PAYMENT AFTER EARTHWORK HAS COMMENCED.
- THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR INFORMATION ABOUT SOIL AND GROUNDWATER CONDITIONS. THE CONTRACTOR SHALL FOLLOW THE GEOTECHNICAL ENGINEER'S RECOMMENDED METHODS TO ADDRESS ANY SOIL AND GROUNDWATER ISSUES THAT ARE FOUND ON SITE, INCLUDING AND NOT LIMITED TO DEWATERING METHODS, PERIMETER DRAINS AND TIE INTO STORMWATER MANAGEMENT SYSTEM, ETC.
- COORDINATE WITH GEOTECHNICAL/STRUCTURAL PLANS FOR SITE PREPARATION AND OTHER BUILDING INFORMATION.
- COORDINATE WITH ARCHITECTURAL PLANS FOR DETAILED GRADING AT BUILDING, AND SIZE AND LOCATION OF ALL BUILDING SERVICES.
- COORDINATE WITH MECHANICAL AND PLUMBING PLANS FOR ROOF DRAIN INFORMATION.
- LIMITS OF WORK ARE SHOWN AS APPROXIMATE. THE CONTRACTOR SHALL COORDINATE ALL WORK TO PROVIDE SMOOTH TRANSITIONS. THIS INCLUDES GRADING AND PAVEMENT.
- THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS.
- THE SITE SHALL BE GRADED SO ALL FINISHED PAVEMENT HAS POSITIVE DRAINAGE AND SHALL NOT POND WATER DEEPER THAN 1/4" FOR A PERIOD OF MORE THAN 15 MINUTES AFTER FLOODING.
- ROAD AND DRAINAGE CONSTRUCTION SHALL CONFORM TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS AND SHALL MEET LOCAL STANDARDS AND THE REQUIREMENTS OF THE LATEST NHDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGE CONSTRUCTION AND THE NHDOT STANDARD STRUCTURE DRAWINGS UNLESS OTHERWISE NOTED.
- STORMWATER DRAINAGE SYSTEM SHALL BE CONSTRUCTED TO LINE AND GRADE AS SHOWN ON THE PLANS. CONSTRUCTION METHODS SHALL CONFORM TO NHDOT STANDARD SPECIFICATIONS, SECTION 603.
- NO FILL SHALL BE PLACED IN ANY WETLAND AREA.
- ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
- ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER, AND MULCH.
- DENSITY REQUIREMENTS:

MINIMUM DENSITY*	LOCATION
95%	BELOW PAVED OR CONCRETE AREAS
95%	TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL
90%	BELOW LOAM AND SEED AREAS

*ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C. FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM D-6938.

UTILITY NOTES

- LENGTH OF PIPE IS FOR CONVENIENCE ONLY. ACTUAL PIPE LENGTH SHALL BE DETERMINED IN THE FIELD.
- ALL PROPOSED UTILITY WORK, INCLUDING MATERIAL, INSTALLATION, TERMINATION, EXCAVATION, BEDDING, BACKFILL, COMPACTION, TESTING, CONNECTORS, AND CONSTRUCTION SHALL BE COORDINATED WITH AND COMPLETED IN ACCORDANCE WITH THE APPROPRIATE REQUIREMENTS, CODES, AND STANDARDS OF ALL CORRESPONDING UTILITY ENTITIES AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIGSAFE" (811) AT LEAST 72 HOURS BEFORE DIGGING.
- COORDINATE ALL WORK ADJACENT TO PROPOSED BUILDINGS WITH ARCHITECTURAL BUILDING DRAWINGS. CONFIRM UTILITY PENETRATIONS AND INVERT ELEVATIONS ARE COORDINATED PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE AS NECESSARY WITH THE UTILITY COMPANIES OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
- THE EXACT LOCATION OF NEW UTILITY CONNECTIONS SHALL BE DETERMINED BY THE CONTRACTOR IN COORDINATION WITH UTILITY COMPANY, COUNTY AGENCY, AND/OR PRIVATE UTILITY COMPANY.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER THE UTILITY INSTALLATION COMPLETE AND OPERATIONAL.
- ALL UTILITY COMPANIES REQUIRE INDIVIDUAL CONDUITS. CONTRACTOR TO COORDINATE WITH TELEPHONE, CABLE, AND ELECTRIC COMPANIES REGARDING NUMBER, SIZE, AND TYPE OF CONDUITS REQUIRED PRIOR TO INSTALLATION OF ANY CONDUIT.
- SANITARY SEWER SHALL BE CONSTRUCTED TO THE STANDARDS AND SPECIFICATIONS AS SHOWN ON THESE PLANS. ALL SEWER MAINS AND FITTINGS SHALL BE PVC AND SHALL CONFORM TO ASTM F 679 (SDR 35 MINIMUM). FORCE MAINS AND FITTINGS SHALL CONFORM TO NH CODE OF ADMINISTRATIVE RULES ENV-WQ 700. ALL SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH NH CODE OF ADMINISTRATIVE RULES ENV-WQ 700. SANITARY MANHOLES SHALL CONFORM TO NHDES WATER DIVISION WASTEWATER ENGINEERING BUREAU STANDARDS AND SPECIFICATIONS SHOWN HEREON.
- ON-SITE WATER DISTRIBUTION SHALL BE TO CITY OF PORTSMOUTH STANDARDS AND SPECIFICATIONS. WATER MAINS SHALL HAVE A MINIMUM OF 9.5" COVER. WHERE WATER PIPES CROSS SEWER LINES A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN THE TWO OUTSIDE PIPE WALLS SHALL BE OBSERVED. HORIZONTAL SEPARATION BETWEEN WATER AND SEWER SHALL BE 10' MINIMUM. WHERE A SANITARY LINE CROSSES A WATER LINE, SEWER LINE MUST BE CONSTRUCTED OF FORCE MAIN MATERIALS (PER ENV-WQ 704.08) FROM BUILDING OR MANHOLE TO MANHOLE, OR SUBSTITUTE RUBBER-GASKETED PRESSURE PIPE FOR THE SAME DISTANCE. WHEN SANITARY LINES PASS BELOW WATER LINES, LAY PIPE SO THAT NO JOINT IN THE SANITARY LINE WILL BE CLOSER THAN 6' HORIZONTALLY TO THE WATER LINE.
- THRUST BLOCKS SHALL BE PROVIDED AT ALL LOCATIONS WHERE WATER LINE CHANGES DIRECTIONS OR CONNECTS TO ANOTHER WATER LINE.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONDUIT AND WIRING TO ALL SIGNS AND LIGHTS. CONDUIT TO BE A MINIMUM OF 24" BELOW FINISH GRADE.
- ALL PROPOSED UTILITIES SHALL BE UNDERGROUND. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES.
- THE CONTRACTOR SHALL ARRANGE AND PAY FOR ALL INSPECTIONS, TESTING, AND RELATED SERVICES AND SUBMIT COPIES OF ACCEPTANCE TO THE OWNER, UNLESS OTHERWISE INDICATED.
- PROVIDE PERMANENT PAVEMENT REPAIR FOR ALL UTILITY TRENCHES IN EXISTING ROAD OR PAVEMENT TO REMAIN. SAW CUT TRENCH, PAVEMENT, AND GRANULAR BASE THICKNESS TO MATCH EXISTING PAVEMENT. OBTAIN ALL PERMITS REQUIRED FOR TRENCHING.
- UNLESS OTHERWISE SPECIFIED, ALL UNDERGROUND STRUCTURES, PIPES, CHAMBERS, ETC. SHALL BE COVERED WITH A MINIMUM OF 18" OF COMPACTED SOIL BEFORE EXPOSURE TO VEHICLE LOADS.
- THE PROPERTY WILL BE SERVICED BY THE FOLLOWING:

DRAINAGE	PRIVATE
SEWER	MUNICIPAL
WATER	MUNICIPAL
GAS	NOT AVAILABLE
ELECTRIC	EVERSOURCE
TELEPHONE	CONSOLIDATED COMMUNICATIONS FKA FAIRPOINT COMMUNICATIONS
CABLE	COMCAST

PROGRESS PRINT
date: 09/20/2022

SITE DEVELOPMENT PLANS

TAX MAP 162 LOT 16
NOTES & LEGEND
PROPOSED 2 LOT SUBDIVISION
77 MEREDITH WAY
OWNED BY
RANDI & JEFF COLLINS
PREPARED FOR
RANDI & JEFF COLLINS

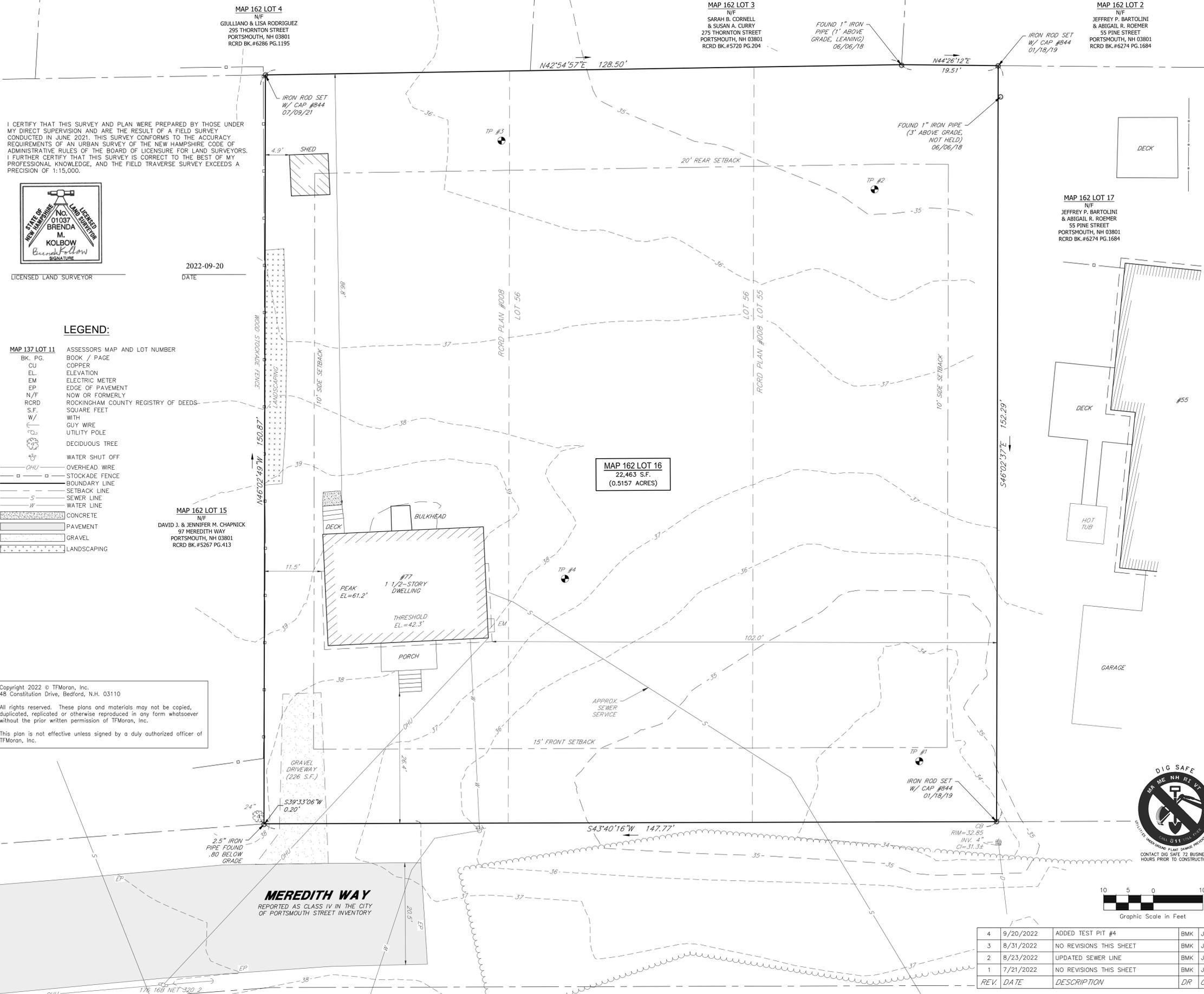
SCALE: NTS JULY 1, 2022

Seacoast Division		Civil Engineers	170 Commerce Way, Suite 102
TFM		Structural Engineers	Portsmouth, NH 03801
		Traffic Engineers	Phone (603) 431-2222
		Land Surveyors	Fax (603) 431-0910
		Landscape Architects	www.tfmoran.com
		Scientists	

4	9/20/2022	REVISED PER TAC COMMENTS	JKC	JCC
3	8/31/2022	REVISED PER TAC COMMENTS	JKC	JCC
2	8/23/2022	REVISED PER TAC COMMENTS	JKC	JCC
1	7/21/2022	REVISED PER TAC COMMENTS	JKC	JCC
REV	DATE	DESCRIPTION	DR	CK

F	47442-00	DR	BK	FB	-
E		CK	CR	CADFILE	47442-00_NOTES & LEGEND

C-01



I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY THOSE UNDER MY DIRECT SUPERVISION AND ARE THE RESULT OF A FIELD SURVEY CONDUCTED IN JUNE 2021. THIS SURVEY CONFORMS TO THE ACCURACY REQUIREMENTS OF AN URBAN SURVEY OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I FURTHER CERTIFY THAT THIS SURVEY IS CORRECT TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, AND THE FIELD TRAVERSE SURVEY EXCEEDS A PRECISION OF 1:15,000.



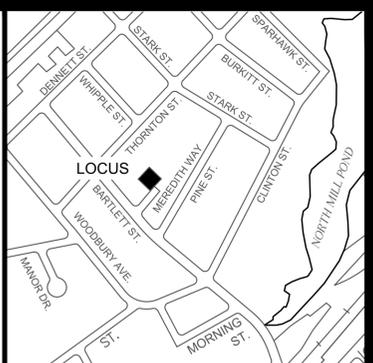
2022-09-20
DATE

LEGEND:

- MAP 137 LOT 11 ASSESSORS MAP AND LOT NUMBER
- BK. PG. BOOK / PAGE
- CU COPPER
- EL. ELEVATION
- EM ELECTRIC METER
- EP EDGE OF PAVEMENT
- N/F NOW OR FORMERLY ROCKINGHAM COUNTY REGISTRY OF DEEDS
- R/RD SQUARE FEET
- S.F. SQUARE FEET
- W/ WITH
- GUY WIRE
- UTILITY POLE
- DECIDUOUS TREE
- WATER SHUT OFF
- OHU OVERHEAD WIRE
- STOCKADE FENCE
- BOUNDARY LINE
- SETBACK LINE
- SEWER LINE
- WATER LINE
- CONCRETE
- PAVEMENT
- GRAVEL
- LANDSCAPING

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Sep 20, 2022 - 11:37am F:\MSC Projects\47442 - 77 Meredith Way - Portsmouth\47442-00 - Collins - 77 Meredith Way\Collison Survey\Drawings\47442-00 Survey.dwg



LOCATION PLAN

NOTES:

- THE PARCEL IS LOCATED IN THE GENERAL RESIDENCE A (GRA) ZONING DISTRICT.
- THE PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 162 AS LOT 16.
- THE PARCEL IS LOCATED IN ZONE X AS SHOWN ON NATIONAL FLOOD INSURANCE PROGRAM (NFIP); FLOOD INSURANCE RATE MAP (FIRM) ROCKINGHAM COUNTY, NEW HAMPSHIRE, PANEL 259 OF 681, MAP NUMBER 330150259F, MAP REVISED JANUARY 29, 2021.
- | MINIMUM LOT DIMENSIONS: | REQUIRED: | EXISTING: |
|-------------------------------|------------|-----------------|
| LOT AREA: | 7,500 S.F. | 22,463 S.F. |
| LOT AREA PER DWELLING UNIT: | 7,500 S.F. | 22,463 S.F. |
| CONTINUOUS STREET FRONTAGE: | 100' | 31.7' |
| DEPTH: | 70' | 151.6' |
| MINIMUM YARD DIMENSIONS: | | |
| FRONT SIDE: | 15' | 26.4' |
| REAR: | 10' | 11.5'/4.9' SHED |
| MAXIMUM STRUCTURE DIMENSIONS: | | |
| STRUCTURE HEIGHT: | 35' | <35' |
| SLOPED ROOF: | 30' | |
| FLAT ROOF: | 8' | |
| ROOF APPURTENANCE HEIGHT: | 25% | 3.5% |
| BUILDING COVERAGE: | 30% | 85.3% |
| MINIMUM OPEN SPACE: | | |
- OWNER OF RECORD:
MAP 162 LOT 16:
RANDI & JEFF COLLINS
77 MEREDITH WAY
PORTSMOUTH, NH 03801
RCRD BK.#6274 PG.#1666
- PARCEL AREA:
MAP 162 LOT 16:
22,463 S.F.
(0.5157 ACRES)
- THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION OF BOUNDARIES IN ACCORDANCE WITH THE CURRENT LEGAL DESCRIPTIONS. IT IS NOT AN ATTEMPT TO DEFINE THE EXTENT OF OWNERSHIP OR DEFINE THE LIMITS OF TITLE.
- THE PURPOSE OF THIS PLAN IS TO SHOW THE BOUNDARY LINES, TOPOGRAPHY AND CURRENT SITE FEATURES OF MAP 162 LOT 16.
- FIELD SURVEY COMPLETED BY TCE JUNE 2021 USING A TOPCON DS103 AND A TOPCON FC-5000 DATA COLLECTOR.
- HORIZONTAL DATUM IS NAD83 (2011) PER STATIC GPS OBSERVATIONS. THE VERTICAL DATUM IS NAVD88 PER STATIC GPS OBSERVATIONS. THE CONTOUR INTERVAL IS 1 FOOT.
- EASEMENTS, RIGHTS, AND RESTRICTIONS SHOWN OR IDENTIFIED ARE THOSE WHICH WERE FOUND DURING RESEARCH PERFORMED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS. OTHER RIGHTS, EASEMENTS, OR RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF SUBJECT PARCEL(S) WOULD DETERMINE.
- THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. TFMORAN, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UNDERGROUND UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE.
- THE EXISTING USE OF THIS PARCEL IS SINGLE-FAMILY RESIDENTIAL.

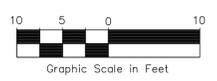
PLAN REFERENCES:

- "PLAN OF ELM PLACE, SITUATED IN PORTSMOUTH, N.H." DATED 1856. RCRD PLAN #008.
- "LOT LINE REVISION, PINE STREET, PORTSMOUTH, NEW HAMPSHIRE, FOR JOYCE M. MAYO & CITY OF PORTSMOUTH" PREPARED BY DURGIN, VERRA AND ASSOCIATES, INC., DATED 6/9/93 WITH REVISION 1 DATED 10/4/93. RCRD PLAN #0-22643.

TAX MAP 162 LOT 16
EXISTING CONDITIONS PLAN
2 LOT SUBDIVISION
77 MEREDITH WAY
PORTSMOUTH, NEW HAMPSHIRE
COUNTY OF ROCKINGHAM
OWNED BY
RANDI & JEFF COLLINS

SCALE: 1" = 10' (22x34)
1" = 20' (11x17)

JULY 1, 2022



REV.	DATE	DESCRIPTION	DR	CK
4	9/20/2022	ADDED TEST PIT #4	BMK	JCC
3	8/31/2022	NO REVISIONS THIS SHEET	BMK	JCC
2	8/23/2022	UPDATED SEWER LINE	BMK	JCC
1	7/21/2022	NO REVISIONS THIS SHEET	BMK	JCC

Seacoast Division

Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

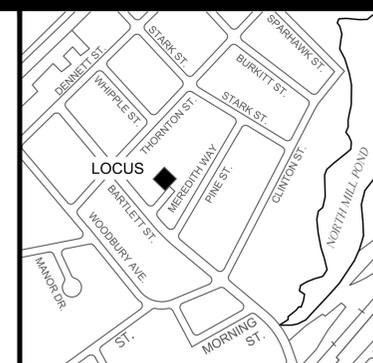
170 Commerce Way, Suite 102
Portsmouth, NH 03801
Phone (603) 431-2222
Fax (603) 431-0910
www.tfmoran.com

47442-00 DR CK FB CADFILE S-1

MAP 162 LOT 4
N/F
GIULLIANO & LISA RODRIGUEZ
295 THORNTON STREET
PORTSMOUTH, NH 03801
RCRD BK.#6286 PG.1195

MAP 162 LOT 3
N/F
SARAH B. CORNELL
& SUSAN A. CURRY
275 THORNTON STREET
PORTSMOUTH, NH 03801
RCRD BK.#5720 PG.204

MAP 162 LOT 2
N/F
JEFFREY P. BARTOLINI
& ABIGAIL R. ROEMER
55 PINE STREET
PORTSMOUTH, NH 03801
RCRD BK.#6274 PG.1684



LOCATION PLAN

LEGEND:

- MAP 137 LOT 11 ASSESSORS MAP AND LOT NUMBER
- BK. PG. BOOK / PAGE
 - CU COPPER
 - EL ELEVATION
 - EM ELECTRIC METER
 - EP EDGE OF PAVEMENT
 - N/F NOW OR FORMERLY
 - PEP PROPOSED EDGE OF PAVEMENT
 - RCRD ROCKINGHAM COUNTY REGISTRY OF DEEDS
 - S.F. SQUARE FEET
 - W/ WITH
 - STOCKADE FENCE
 - BOUNDARY LINE
 - SETBACK LINE
 - PROPOSED BOUNDARY LINE
 - PAVEMENT

VARIANCE GRANTED:

ON JUNE 22, 2022 THE CITY OF PORTSMOUTH ZONING BOARD OF ADJUSTMENT GRANTED RELIEF FROM THE FOLLOWING SECTION OF THE CITY OF PORTSMOUTH ZONING ORDINANCE:

ARTICLE 5 SECTION 10.521 - MINIMUM CONTINUOUS LOT FRONTAGE: TO ALLOW THE CONTINUOUS STREET FRONTAGE TO BE 73.99' FOR PROPOSED LOT A & 31.61' FOR PROPOSED LOT B, WHERE 100' IS REQUIRED AND 31.7' EXISTS.

MAP 162 LOT 15
N/F
DAVID J. & JENNIFER M. CHARNICK
97 MEREDITH WAY
PORTSMOUTH, NH 03801
RCRD BK.#5267 PG.413

I CERTIFY THAT THIS SURVEY AND PLAN WERE PREPARED BY THOSE UNDER MY DIRECT SUPERVISION AND ARE THE RESULT OF A FIELD SURVEY CONDUCTED IN JUNE 2021. THIS SURVEY CONFORMS TO THE ACCURACY REQUIREMENTS OF AN URBAN SURVEY OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS. I FURTHER CERTIFY THAT THIS SURVEY IS CORRECT TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, AND THE FIELD TRAVERSE SURVEY EXCEEDS A PRECISION OF 1:15,000.



2022-09-20
DATE

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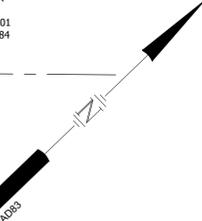
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CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

MEREDITH WAY
REPORTED AS CLASS IV IN THE CITY OF PORTSMOUTH STREET INVENTORY



NOTES:

- THE PARCEL IS LOCATED IN THE GENERAL RESIDENCE A (GRA) ZONING DISTRICT.
- THE PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 162 AS LOT 16.
- THE PARCEL IS LOCATED IN ZONE X AS SHOWN ON NATIONAL FLOOD INSURANCE PROGRAM (NFIP), FLOOD INSURANCE RATE MAP (FIRM) ROCKINGHAM COUNTY, NEW HAMPSHIRE, PANEL 259 OF 681, MAP NUMBER 33015C0259F, MAP REVISED JANUARY 29, 2021.
- MINIMUM LOT DIMENSIONS:

	REQUIRED:	PROPOSED:
LOT AREA:	7,500 S.F.	11,198 S.F./11,265 S.F.
LOT AREA PER DWELLING UNIT:	7,500 S.F.	11,198 S.F./11,265 S.F.
CONTINUOUS STREET FRONTAGE:	100'	73.99'/46.12'
DEPTH:	70'	151.4'/152.1'

 MINIMUM YARD DIMENSIONS:

	REQUIRED:	PROPOSED:
FRONT:	15'	22.0'/23.1'
SIDE:	10'	10.2'/16.7'
REAR:	20'	69.0'/69.4'

 MAXIMUM STRUCTURE DIMENSIONS:

	REQUIRED:	PROPOSED:
STRUCTURE HEIGHT:		<35' / <35'
SLOPED ROOF:	35'	
FLAT ROOF:	30'	
ROOF APPURTENANCE HEIGHT:	8'	
BUILDING COVERAGE:	25%	21.4%/18.0%
MINIMUM OPEN SPACE:	30%	70.4%/67.8%
- OWNER OF RECORD: MAP 162 LOT 16: RANDI & JEFF COLLINS, 77 MEREDITH WAY, PORTSMOUTH, NH 03801, RCRD BK.#6274 PG.#1666
- PARCEL AREA: MAP 162 LOT 16: 22,463 S.F. (0.5157 ACRES); PROPOSED LOT A: 11,198 S.F. (0.2571 ACRES); PROPOSED LOT B: 11,265 S.F. (0.2586 ACRES)
- THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION OF BOUNDARIES IN ACCORDANCE WITH THE CURRENT LEGAL DESCRIPTIONS. IT IS NOT AN ATTEMPT TO DEFINE THE EXTENT OF OWNERSHIP OR DEFINE THE LIMITS OF TITLE.
- THE PURPOSE OF THIS PLAN IS SUBDIVIDE MAP 162 LOT 16 INTO 2 LOTS.
- FIELD SURVEY COMPLETED BY TCE JUNE 2021 & JUNE 2022 USING A TOPCON DS103 AND A TOPCON FC-5000 DATA COLLECTOR.
- HORIZONTAL DATUM IS NAD83 (2011) PER STATIC GPS OBSERVATIONS.
- EASEMENTS, RIGHTS, AND RESTRICTIONS SHOWN OR IDENTIFIED ARE THOSE WHICH WERE FOUND DURING RESEARCH PERFORMED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS. OTHER RIGHTS, EASEMENTS, OR RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF SUBJECT PARCEL(S) WOULD DETERMINE.
- THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. TFMORAN, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UNDERGROUND UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE.
- THE PROPOSED USE OF THESE PARCELS ARE SINGLE-FAMILY RESIDENTIAL.

PLAN REFERENCES:

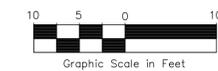
- "PLAN OF ELM PLACE, SITUATED IN PORTSMOUTH, N.H." DATED 1856, RCRD PLAN #008.
- "LOT LINE REVISION, PINE STREET, PORTSMOUTH, NEW HAMPSHIRE, FOR JOYCE M. MAYO & CITY OF PORTSMOUTH" PREPARED BY DURGIN, VERRA AND ASSOCIATES, INC., DATED 6/9/93 WITH REVISION 1 DATED 10/4/93, RCRD PLAN #0-22643.
- "SITE DEVELOPMENT PLANS, TAX MAP LOT 16, TWO LOT SUBDIVISION, 77 MEREDITH WAY, OWNED BY RANDI & JEFF COLLINS, PREPARED FOR RANDI & JEFF COLLINS" BY TFMORAN, INC. DATED JULY XX, 2022. ON FILE AT THE CITY OF PORTSMOUTH PLANNING DEPARTMENT.

TAX MAP 162 LOT 16

SUBDIVISION PLAN
2 LOT SUBDIVISION
77 MEREDITH WAY
PORTSMOUTH, NEW HAMPSHIRE
COUNTY OF ROCKINGHAM
OWNED BY
RANDI & JEFF COLLINS

SCALE: 1" = 10' (22x34)
1" = 20' (11x17)

JULY 1, 2022



REV.	DATE	DESCRIPTION	DR	CK	BMK	JCC
4	9/20/2022	REVISED ROAD EXTENSION & NOTE 4	BMK	JCC		
3	8/31/2022	NO REVISIONS THIS SHEET	BMK	JCC		
2	8/23/2022	NO REVISIONS THIS SHEET	BMK	JCC		
1	7/21/2022	NO REVISIONS THIS SHEET	BMK	JCC		
REV.	DATE	DESCRIPTION	DR	CK	BMK	JCC

Seacoast Division

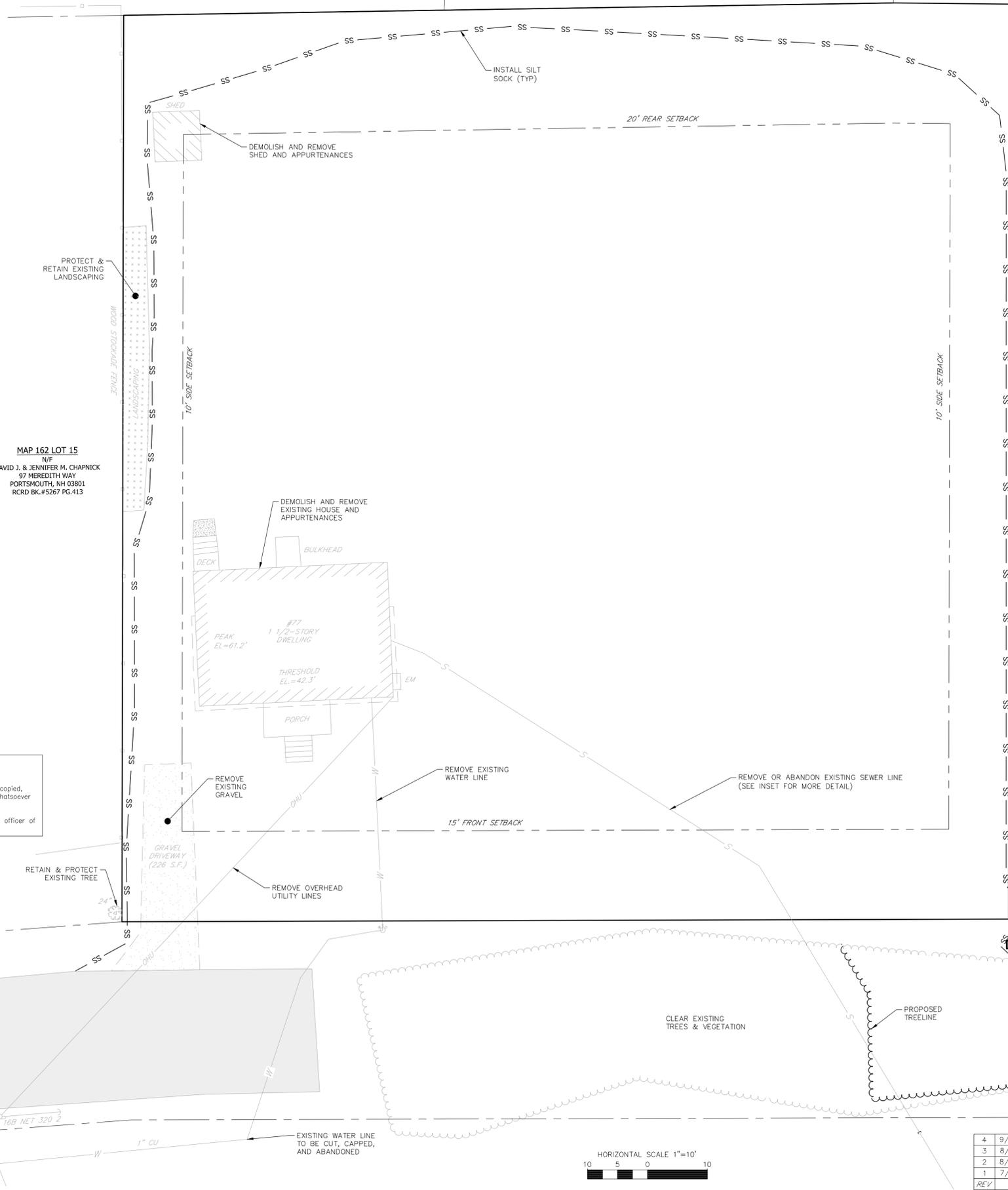
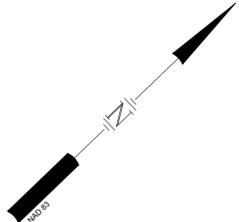
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Scientists

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47442-00

S-2

Sed 15 2022 - 3:42pm F:\MSC Projects\47442 - 77 Meredith Way - Portsmouth Survey\Collson Survey\Digs\47442-00 Survey.dwg



MAP 162 LOT 15
N/F
DAVID J. & JENNIFER M. CHAPNICK
97 MEREDITH WAY
PORTSMOUTH, NH 03801
RCRD BK.#5267 PG.413

MAP 162 LOT 17
N/F
JEFFREY P. BARTOLINI
& ABIGAIL R. ROEMER
55 PINE STREET
PORTSMOUTH, NH 03801
RCRD BK.#6274 PG.1684

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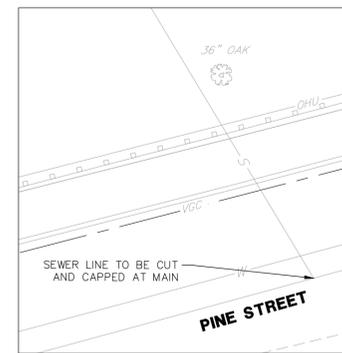
NOTES

- SEE NOTES ON SHEET C-01.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATIONS, SIZE, AND ELEVATIONS OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS PRIOR TO THE START OF ANY DEMOLITION. THE LOCATIONS SHOWN ON THESE PLANS ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED DEMOLITION TO DETERMINE APPROPRIATE ACTION TO BE TAKEN BEFORE PROCEEDING WITH THE WORK. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO ANTICIPATE CONFLICTS AND REPAIR EXISTING UTILITIES AS NECESSARY TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY WORK AT ALL TIMES.
- THE CONTRACTOR SHALL VERIFY ALL SURVEY INFORMATION IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.
- EXISTING UTILITY SERVICES TO BE DISCONTINUED ARE TO BE CAPPED AS REQUIRED BY THE RESPECTIVE UTILITY COMPANIES.
- CONSTRUCTION DEBRIS AND INVASIVE SPECIES SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER.
- PRIOR TO THE START OF WORK, THE CONTRACTOR SHALL PLACE ORANGE CONSTRUCTION FENCING AROUND EACH TREE TO BE RETAINED THROUGHOUT CONSTRUCTION. NO STOCKPILES OF MATERIAL ARE PERMITTED WITHIN THE DRIP LINE OF THE TREES TO BE SAVED.
- CONTACT THE LANDSCAPE ARCHITECT IMMEDIATELY IF ANY TREES ARE DAMAGED DURING CONSTRUCTION.

CONSTRUCTION SEQUENCE NOTES

TO MINIMIZE EROSION AND SEDIMENTATION DUE TO CONSTRUCTION, CONSTRUCTION SHALL FOLLOW THIS GENERAL CONSTRUCTION SEQUENCE.
MODIFICATIONS TO THE SEQUENCE NECESSARY DUE TO THE CONTRACTOR'S SCHEDULE SHALL INCLUDE APPROPRIATE TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL MEASURES.
THE CONTRACTOR SHALL SCHEDULE WORK SUCH THAT ANY CONSTRUCTION AREA IS STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE EXCEPT AS NOTED BELOW. NO MORE THAN 5 ACRES OF DISTURBED LAND SHALL BE UNSTABILIZED AT ANY ONE TIME.
THE PROJECT SHALL BE MANAGED SO THAT IT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER ARG 3800 RELATIVE TO INVASIVE SPECIES.
DO NOT TRAFFIC EXPOSED SOIL SURFACE OF INFILTRATION SYSTEMS WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.
DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO STORMWATER BMP'S. STORMWATER RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMP'S ARE STABILIZED.
DO NOT PLACE STORMWATER BMP'S INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.

- NOTIFY EASEMENT OWNERS PRIOR TO COMMENCEMENT OF WORK.
- INSTALL ALL PERIMETER EROSION PROTECTION MEASURES AS INDICATED ON THE PLANS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- STORMWATER TREATMENT PONDS AND SWALES SHALL BE INSTALLED BEFORE ROUGH GRADING THE SITE.
- DURING CONSTRUCTION EVERY EFFORT SHALL BE MADE TO MANAGE SURFACE RUNOFF QUALITY.
- DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT BARRIERS, SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED. (TEMPORARY SEED MIXTURE OF WINTER RYE APPLIED AT A RATE OF 2.5 LBS/1000 SF SHALL BE USED).
- CONDUCT MAJOR EARTHWORK, INCLUDING CLEARING AND GRUBBING, WITHIN THE LIMITS OF WORK. ALL CUT AND FILL SLOPES SHALL BE SEEDDED WITHIN 72 HOURS AFTER GRADING.
- ALL STRIPPED TOPSOIL AND OTHER EARTH MATERIALS SHALL BE STOCKPILED OUTSIDE THE IMMEDIATE WORK AND WETLAND AREAS. A SILT BARRIER SHALL BE CONSTRUCTED AROUND THESE PILES IN A MANNER TO PROVIDE ACCESS AND AVOID SEDIMENT OUTSIDE OF THE WORK AREA.
- CONSTRUCT BUILDING PAD AND COMMENCE NEW BUILDING CONSTRUCTION.
- CONSTRUCT TEMPORARY CULVERTS AND DIVERSIONS AS REQUIRED.
- BEGIN PERMANENT AND TEMPORARY INSTALLATION OF SEED AND MULCH.
- PERFORM EARTHWORK NECESSARY TO ESTABLISH ROUGH GRADING AROUND PARKING FIELDS AND ACCESS DRIVES. MANAGE EXPOSED SOIL SURFACES TO AVOID TRANSPORTING SEDIMENTS INTO WETLANDS. PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- INSTALL SUBSURFACE UTILITIES (WATER, SEWER, GAS, ELECTRIC, COMMUNICATIONS, DRAINAGE, DRAINAGE FACILITIES, ETC.).
- CONSTRUCT PROPOSED ROADWAY, RAIN GARDENS, GRAVEL WETLANDS AND DRAINAGE SWALES. ALL DITCHES, SWALES, AND GRAVEL WETLANDS SHALL BE FULLY STABILIZED PRIOR TO DIRECTING FLOW TO THEM.
- COMPLETE BUILDING AND ALL OFF-SITE IMPROVEMENTS.
- COMPLETE SEEDING AND MULCHING. SEED TO BE APPLIED WITH BROADCAST SPREADER OR BY HYDRO-SEEDING, THEN ROLLED, RAKED, OR DRAGGED TO ASSURE SEED/SOIL CONTACT.
- REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDED AREAS HAVE BECOME FIRMLY ESTABLISHED AND SITE IMPROVEMENTS ARE COMPLETE.
- DURING THE COURSE OF THE WORK AND UPON COMPLETION, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT DEPOSITS, EITHER ON OR OFF SITE, INCLUDING CATCH BASINS, AND SUMPS, DRAIN PIPES AND DITCHES, CURB LINES, ALONG SILT BARRIERS, ETC. RESULTING FROM SOIL AND/OR CONSTRUCTION OPERATIONS.
- SEE WINTER CONSTRUCTION SEQUENCE FOR WORK CONDUCTED AFTER OCTOBER 15TH.



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date: 09/20/2022

SITE DEVELOPMENT PLANS
TAX MAP 162 LOT 16
SITE PREPARATION & DEMOLITION PLAN
PROPOSED 2 LOT SUBDIVISION
77 MEREDITH WAY
OWNED BY
RANDI & JEFF COLLINS
PREPARED FOR
RANDI & JEFF COLLINS
1"=20' (11'X17')
SCALE: 1"=10' (22'X34') **JULY 1, 2022**

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Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

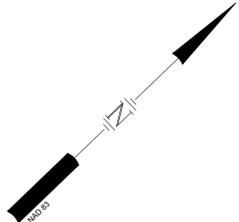
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REV	DATE	DESCRIPTION	DR	CK

FILE 47442-00 DR BK FB -
CK CK CADFILE 47442-00_SITE PREP C-02

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SITE DATA

OWNER OF RECORD OF MAP 162 LOT 16:
 RANDI & JEFF COLLINS
 77 MEREDITH WAY, PORTSMOUTH, NH 03801
 DEED REFERENCE TO PARCEL IS BK 6274 PG 1666
 AREA OF PARCEL = 22,463± SF OR 0.5157± ACRES
 ZONED: GENERAL RESIDENCE A (GRA)
 EXISTING USE: 1 LOT, SINGLE FAMILY DWELLING UNIT
 PROPOSED USE: 2 LOTS, 2 SINGLE FAMILY DWELLING UNITS
 THE PURPOSE OF THIS PLAN IS TO DEPICT TWO PROPOSED SINGLE FAMILY DWELLING UNITS WITH ACCESS ALONG MEREDITH WAY. ASSOCIATED IMPROVEMENTS INCLUDE AND ARE NOT LIMITED TO ACCESS, GRADING, STORMWATER MANAGEMENT SYSTEMS, UTILITIES.

DIMENSIONAL REQUIREMENTS (CURRENT ZONING)

	REQUIRED:	PROVIDED: LOT A:	LOT B:
MINIMUM LOT DIMENSIONS:			
LOT AREA	7,500 SF	11,198 SF	11,265 SF
LOT FRONTAGE	100 FT	73.99 FT	31.61 FT
DEPTH	70 FT	151.4 FT	152.1 FT
MINIMUM YARD DIMENSIONS:			
FRONT	15 FT	22.0 FT	23.1 FT
SIDE	10 FT	10.2 FT	16.7 FT
REAR	20 FT	69.0 FT	69.4 FT
MAXIMUM STRUCTURE DIMENSIONS:			
SLOPED ROOF	35 FT	<35 FT	<35 FT
FLAT ROOF	30 FT	NA	NA
ROOF APPURTENANCE HEIGHT	8 FT	>8 FT	>8 FT
BUILDING LOT COVERAGE	25% (MAX)	21.4%	18.0%
MINIMUM SETBACKS/BUFFER:			
BUILDING FRONT	15 FT	15 FT	15 FT
BUILDING SIDE	10 FT	10 FT	10 FT
BUILDING REAR	20 FT	20 FT	20 FT
MINIMUM OPEN SPACE	30%	70.4%	67.8%
PARKING REQUIREMENTS			
PARKING SPACES 1.3 SPACES/UNIT	2 SPACES	2 SPACES	2 SPACES

NOTES

- SEE NOTES ON SHEET C-01.
- ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS NOTED OTHERWISE.
- LIGHTING, SIGNAGE, LANDSCAPING, AND SCREENING SHALL MEET THE REQUIREMENTS OF THE PORTSMOUTH ZONING ORDINANCE AND SITE PLAN REGULATIONS.
- SNOW SHALL NOT BE STOCKPILED IN STORMWATER BMP'S, WETLAND BUFFERS, OR WETLANDS. SEE SNOW STORAGE LOCATIONS. IN THE EVENT THAT THE SNOW STORAGE AREAS PROVIDED ON THE SITE ARE COMPLETELY UTILIZED, EXCESS SNOW SHALL BE TRANSPORTED OFF SITE FOR DISPOSAL IN ACCORDANCE WITH NHDES REGULATION. IF SNOW IS STORED WITHIN PARKING AREA, KEEP CATCH BASINS CLEAR.
- ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO 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.

MAP 162 LOT 15
 N/F
 DAVID J. & JENNIFER M. CHAPNICK
 97 MEREDITH WAY
 PORTSMOUTH, NH 03801
 RCRD BK.#5267 PG.413

MAP 162 LOT 17
 N/F
 JEFFREY P. BARTOLINI
 & ABIGAIL R. ROEMER
 55 PINE STREET
 PORTSMOUTH, NH 03801
 RCRD BK.#6274 PG.1684

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 CONTACT THE STATE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

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SITE DEVELOPMENT PLANS

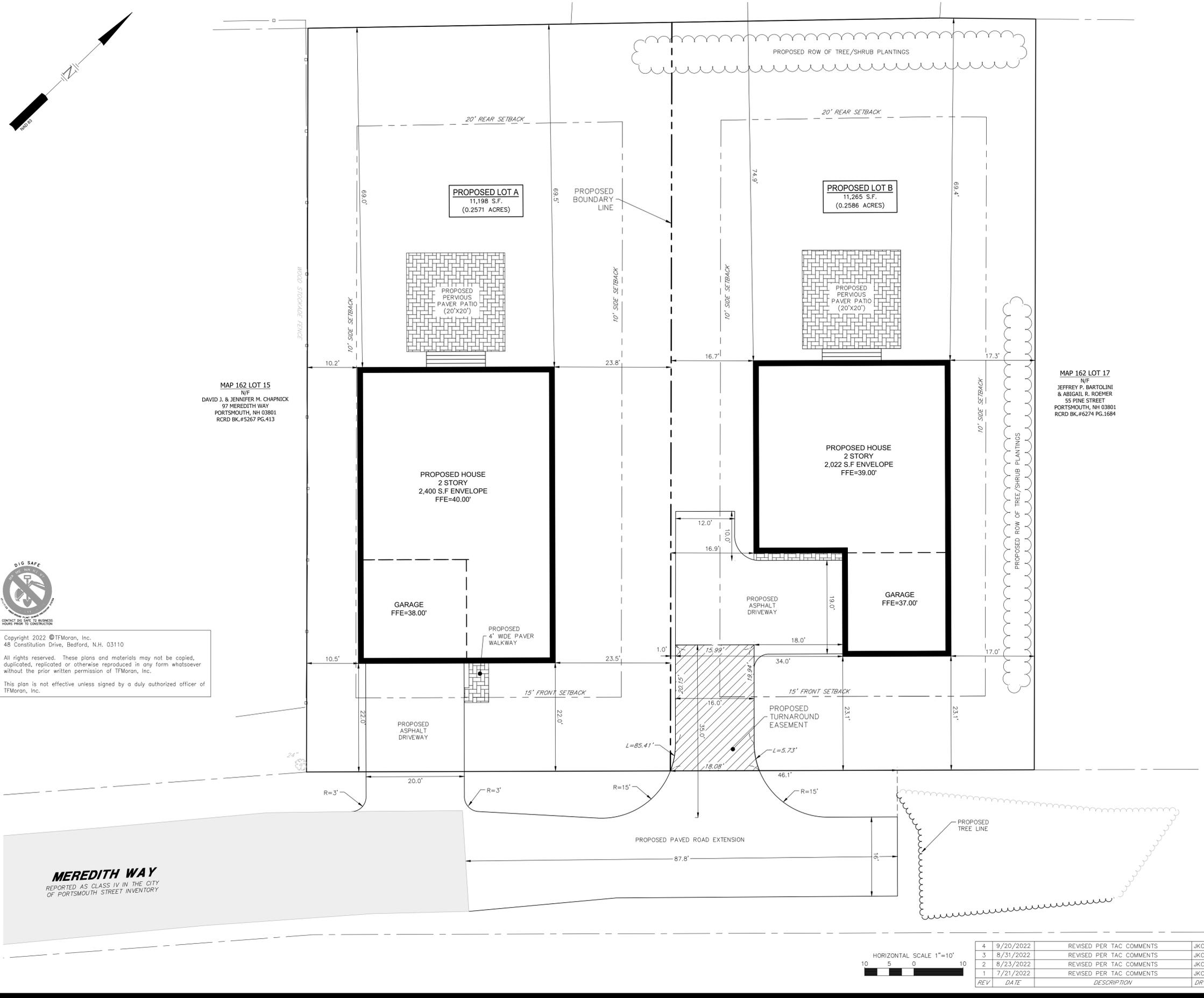
TAX MAP 162 LOT 16
SITE LAYOUT PLAN
PROPOSED 2 LOT SUBDIVISION
77 MEREDITH WAY
 OWNED BY
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 PREPARED FOR
RANDI & JEFF COLLINS
1"=20' (11"X17")
SCALE: 1"=10' (22"X34") **JULY 1, 2022**

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 Traffic Engineers
 Land Surveyors
 Landscape Architects
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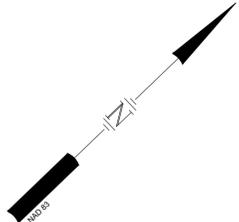
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REV	DATE	DESCRIPTION	DR	CK

47442-00 DR BK FB
 CK CR CADFILE 47442-00_SITE LAYOUT C-03



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NOTES

- SEE NOTES ON SHEET C-01.
- ALL DOORS AND GARAGE ENTRANCES SHALL BE AT FINISHED FLOOR ELEVATION UNLESS OTHERWISE NOTED.
- PROPOSED SPOT GRADES ARE PROVIDED TO THE NEAREST 0.05. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE FINISHED GRADES MEET ADA STANDARDS FOR WHEEL CHAIR RAMPS, HANDICAP SPACES AND ACCESS AISLES, CROSSWALKS, SIDEWALKS, ETC.
- ALL ELEVATIONS SHOWN AT CURB ARE TO THE BOTTOM OF CURB UNLESS OTHERWISE NOTED. CURBS HAVE A 6" REVEAL UNLESS OTHERWISE NOTED.
- LENGTH OF PIPE IS FOR CONVENIENCE ONLY. ACTUAL PIPE LENGTH SHALL BE DETERMINED IN THE FIELD.
- ALL PROPOSED DRAINAGE PIPES SHALL BE 12" AND HDPE, UNLESS OTHERWISE NOTED ON THE PLAN.
- DRAINAGE PIPES WITH LESS THAN 3' COVER SHALL BE INSULATED (SEE UTILITY TRENCH DETAIL) AND DRAINAGE CATCH BASINS WITH LESS THAN 3.5' OF COVER OVER INVERTS SHALL USE SLAB TOP CATCH BASIN (SEE DETAILS).
- THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT AND ARCHITECTURAL PLANS FOR SUBDRAINAGE SYSTEMS FOR THE BUILDING FOUNDATION. SUBDRAINAGE MUST DAYLIGHT OR TIE INTO THE STORMWATER MANAGEMENT SYSTEM. COORDINATE SUBDRAINAGE SYSTEM DESIGN WITH THE ENGINEER OF RECORD.
- EACH PROPOSED HOUSE TO HAVE GUTTERS OR FRENCH DRAINS THAT DIVERT THE RAIN WATER INTO THE ASSOCIATED RAIN GARDENS.

TEST PIT					
BMP	TEST PIT #	APPROX GROUND ELEV	BOTTOM OF POND ELEV	TEST PIT ELEV	TEST PIT DEPTH (MIN)
RAIN GARDEN #1	4	35.75	35.25	35	6.5'
RAIN GARDEN #2	1	35.00	34.25	33.50	4'

- NOTE:
- ALL TEST PITS ARE TO BE TESTED FOR INFILTRATION RATES AT THE GIVEN INFILTRATION ELEVATIONS.
 - TEST PITS ARE TO BE EXCAVATED UNTIL SEASONAL HIGH WATER TABLE OR THE LOCATION OF LEDGE IS ENCOUNTERED. TEST PIT DEPTHS LISTED ARE MINIMUM DEPTHS. IF SEASONAL HIGH WATER OR LEDGE ARE ENCOUNTERED, THE TEST PIT CAN BE STOPPED.
 - INFILTRATION TESTS ARE FOR INFILTRATION ONLY. THEY CAN BE DISCONTINUED IF SEASONAL HIGH WATER OR LEDGE IS ENCOUNTERED WITHIN THE TESTING RANGE FOR THE INFILTRATION.
 - INFILTRATION TESTS SHALL BE PERFORMED ACCORDING TO ENV-WQ 1504.14 (e) [AOT STANDARDS].

MAP 162 LOT 17
N/F
JEFFREY P. BARTOLINI
& ABIGAIL R. ROEMER
35 PINE STREET
PORTSMOUTH, NH 03801
RCRD BK.#6274 PG.1684

TEST PIT #4 LOGS	
SECTION DEPTH (IN)	SOIL DESCRIPTION
0-12"	10YR 2 DARK YELLOWISH BROWN, LOAM, MASSIVE, FIRM, FEW STONES, HOMOGENEOUS, FILL
12-25"	10YR 8 YELLOWISH BROWN, SANDY LOAM, MASSIVE, MANYU ANGULAR GRAVELS, SLIGHTLY FIRM, HOMOGENEOUS, FILL
12-38"	10YR 8 PALE BROWN, LOAM, MANY FINE SAND INTRUSIONS, MASSIVE, VERY FIRM, HETEROGENEOUS, MANY ANGULAR STONES
38-58"	10YR 8 LIGHT YELLOWISH BROWN, MEDIUM SAND, SINGLE GRAINED, LOOSE, REDOXIMORPHIC FEATURES (2.5YR 8 RED), MANY ROUNDED STONES
58-68"	10YR 8 BROWNISH YELLOW, FINE SAND, SINGLE GRAINED, LOOSE, MANY COBBLES
68-78"	10YR 8 DARK YELLOWISH BROWN, LOAMY SAND, WEAK BLOCKY, FRIABLE, MANY REDOXIMORPHIC FEATURES (2.5YR 8 RED)

ESHW: 3.85 FT

TEST PIT #1 LOGS	
SECTION DEPTH (IN)	SOIL DESCRIPTION
0 to 6	A5YR 2.5/2 - DRY, LOOSE, F-M SAND, LITTLE TO SOME SILT, LITTLE F. GRAVEL, LITTLE TO TRACE ORGANICS (TOPSOIL/FILL)
6 to 18	A7.5YR7/1 TO A7.5YR8/1 - DRY TO DAMP, LOOSE, F-M SAND, LITTLE F-C GRAVEL, LITTLE TO SOME SILT -DESICCATED CLUMPS IN STRATA INDICATED LIKELY REUSED MATERIAL. (FILL)
15 to 48	A5YR6/1 DAMP, FIRM, CLAYEY SILT/SILTY CLAY, LITTLE TO TRACE F. SAND B.O.E. @ 5 FT (GLACIOLACUSTRINE DEPOSITS)

ESHW: 4 FT 2 IN

TEST PIT #2 LOGS	
SECTION DEPTH (IN)	SOIL DESCRIPTION
0 to 8	A5YR 2.5/2 - DRY, LOOSE, F-M SAND, LITTLE TO SOME SILT, LITTLE F. GRAVEL, LITTLE TO TRACE ORGANICS (TOPSOIL/FILL)
8 to 24	A7.5YR4/6 TO A7.5YR3/2 - DRY TO DAMP, LOOSE, F-M SAND, LITTLE F-C GRAVEL, LITTLE TO SOME SILT, CLUMPS OF BURIED TOPSOIL AND ROOTS (FILL)
24 to 40	A5YR5/8 DAMP, FIRM, CLAYEY SILT/SILTY CLAY, LITTLE TO TRACE F. SAND B.O.E. @ 5 FT (GLACIOLACUSTRINE DEPOSITS)
40 to 60	A5YR5/8 DAMP, FIRM, CLAYEY SILT/SILTY CLAY, LITTLE TO TRACE F. SAND B.O.E. @ 5 FT (GLACIOLACUSTRINE DEPOSITS)

ESHW: 4 FT

TEST PIT #3 LOGS	
SECTION DEPTH (IN)	SOIL DESCRIPTION
0 to 8	A5YR 2.5/2 - DRY, LOOSE, F-M SAND, LITTLE TO SOME SILT, LITTLE F. GRAVEL, LITTLE TO TRACE ORGANICS (TOPSOIL/FILL)
8 to 18	A7.5YR4/6 - DRY TO DAMP, LOOSE, F-M SAND, LITTLE F-C GRAVEL, LITTLE TO SOME SILT, CLUMPS OF BURIED TOPSOIL AND ROOTS (FILL)
18 TO 60	A5YR5/8 DAMP, FIRM, CLAYEY SILT/SILTY CLAY, LITTLE TO TRACE F. SAND B.O.E. @ 5 FT (GLACIOLACUSTRINE DEPOSITS)

ESHW: 4.5 FT

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SITE DEVELOPMENT PLANS

TAX MAP 162 LOT 16
GRADING & DRAINAGE PLAN
PROPOSED 2 LOT SUBDIVISION
77 MEREDITH WAY

OWNED BY
RANDI & JEFF COLLINS
PREPARED FOR
RANDI & JEFF COLLINS

1"=20' (11"X17')
SCALE: 1"=10' (22"X34') **JULY 1, 2022**

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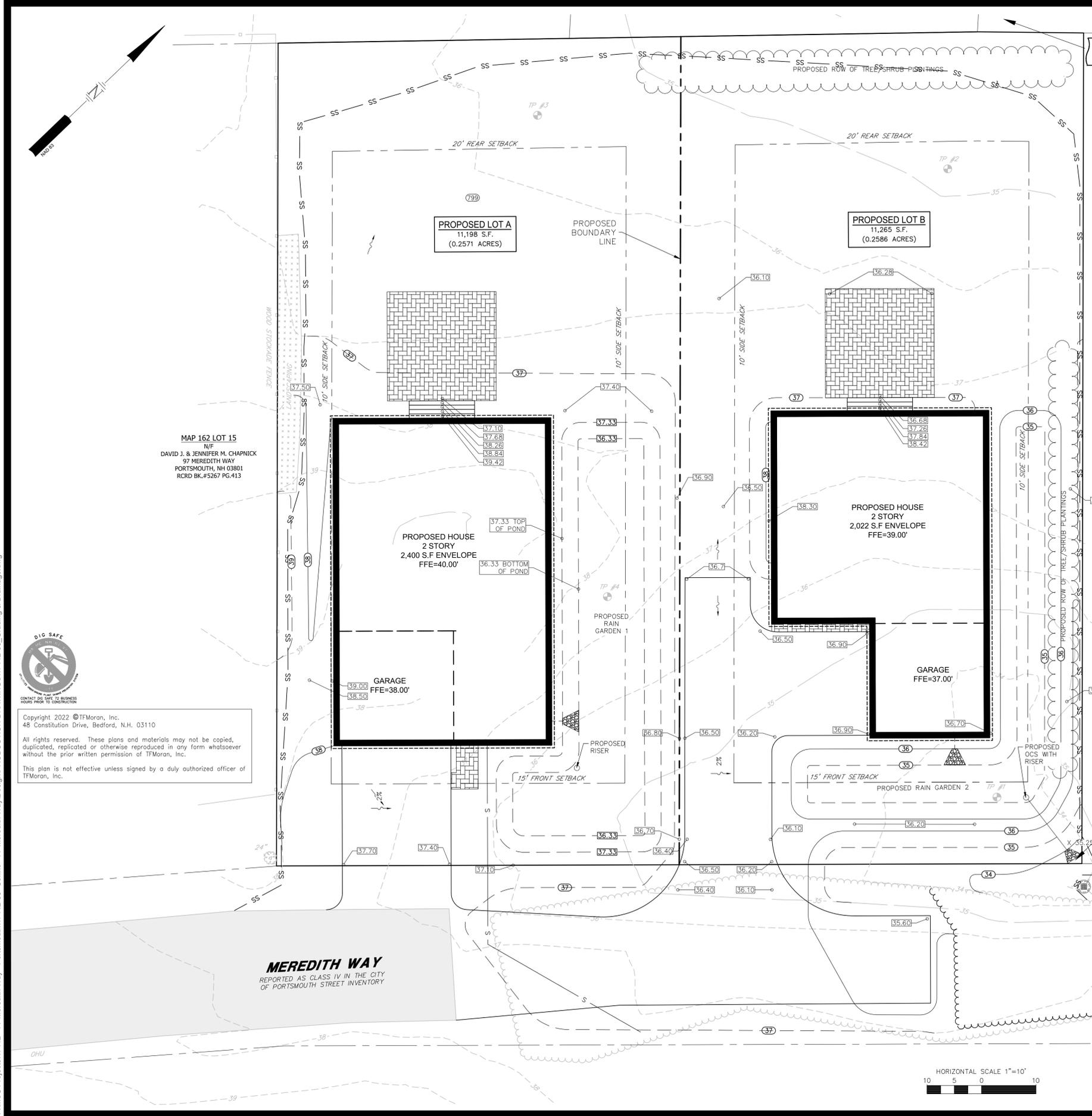
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REV	DATE	DESCRIPTION	DR	CK

FILE: 47442-00 DR: BK: FB: -
CK: CRR: CADFILE: 47442-00_GRADING & DRAINAGE C-04



MAP 162 LOT 15
N/F
DAVID J. & JENNIFER M. CHAPNICK
97 MEREDITH WAY
PORTSMOUTH, NH 03801
RCRD BK.#5267 PG.413



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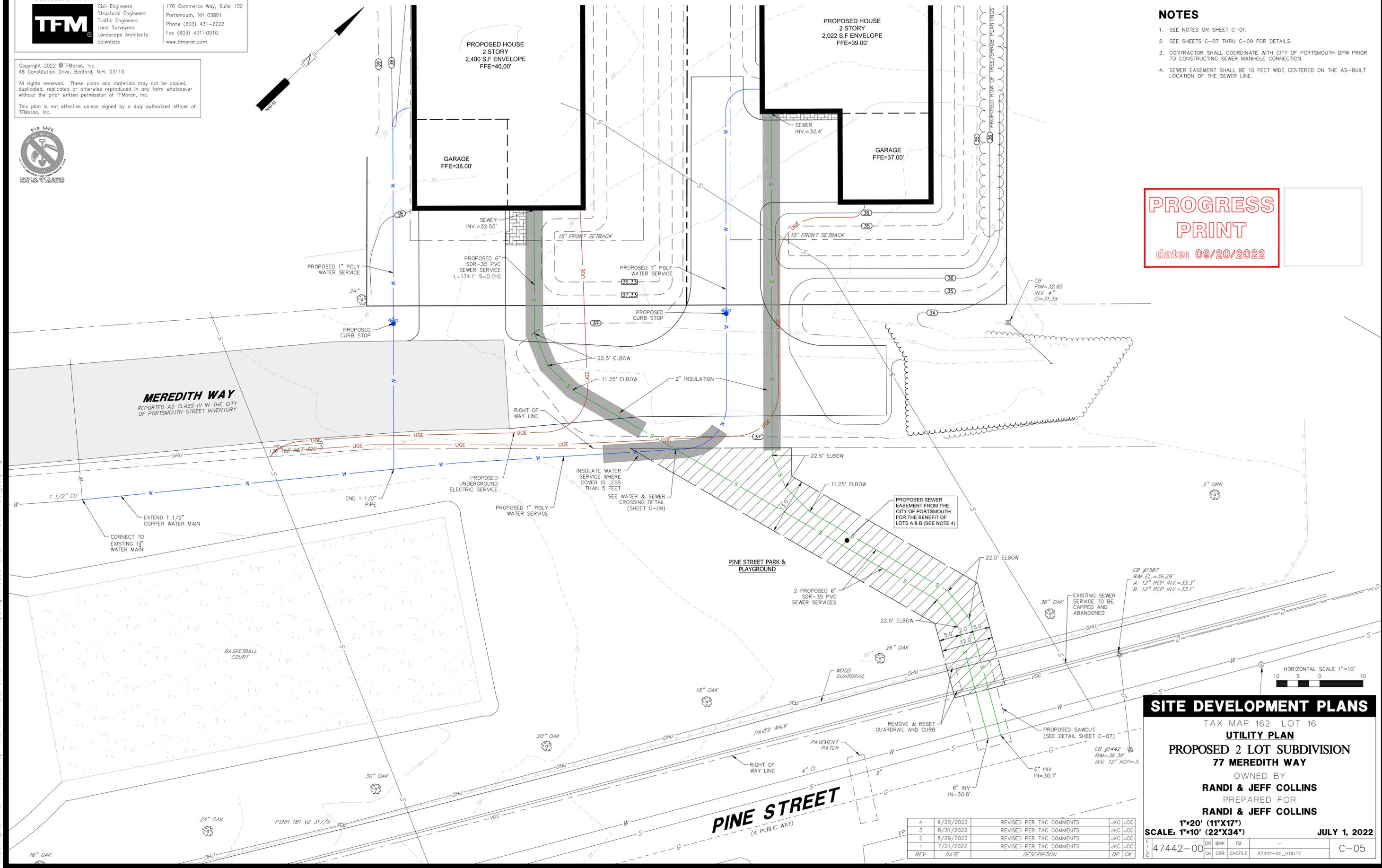
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- NOTES**
- SEE NOTES ON SHEET C-01.
 - SEE SHEETS C-07 THRU C-09 FOR DETAILS.
 - CONTRACTOR SHALL COORDINATE WITH CITY OF PORTSMOUTH DPW PRIOR TO CONSTRUCTING SEWER MANHOLE CONNECTION.
 - SEWER EASEMENT SHALL BE 10 FEET WIDE CENTERED ON THE AS-BUILT LOCATION OF THE SEWER LINE.

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SITE DEVELOPMENT PLANS

TAX MAP 162 LOT 16
UTILITY PLAN
PROPOSED 2 LOT SUBDIVISION
77 MEREDITH WAY
 OWNED BY
RANDI & JEFF COLLINS
 PREPARED FOR
RANDI & JEFF COLLINS

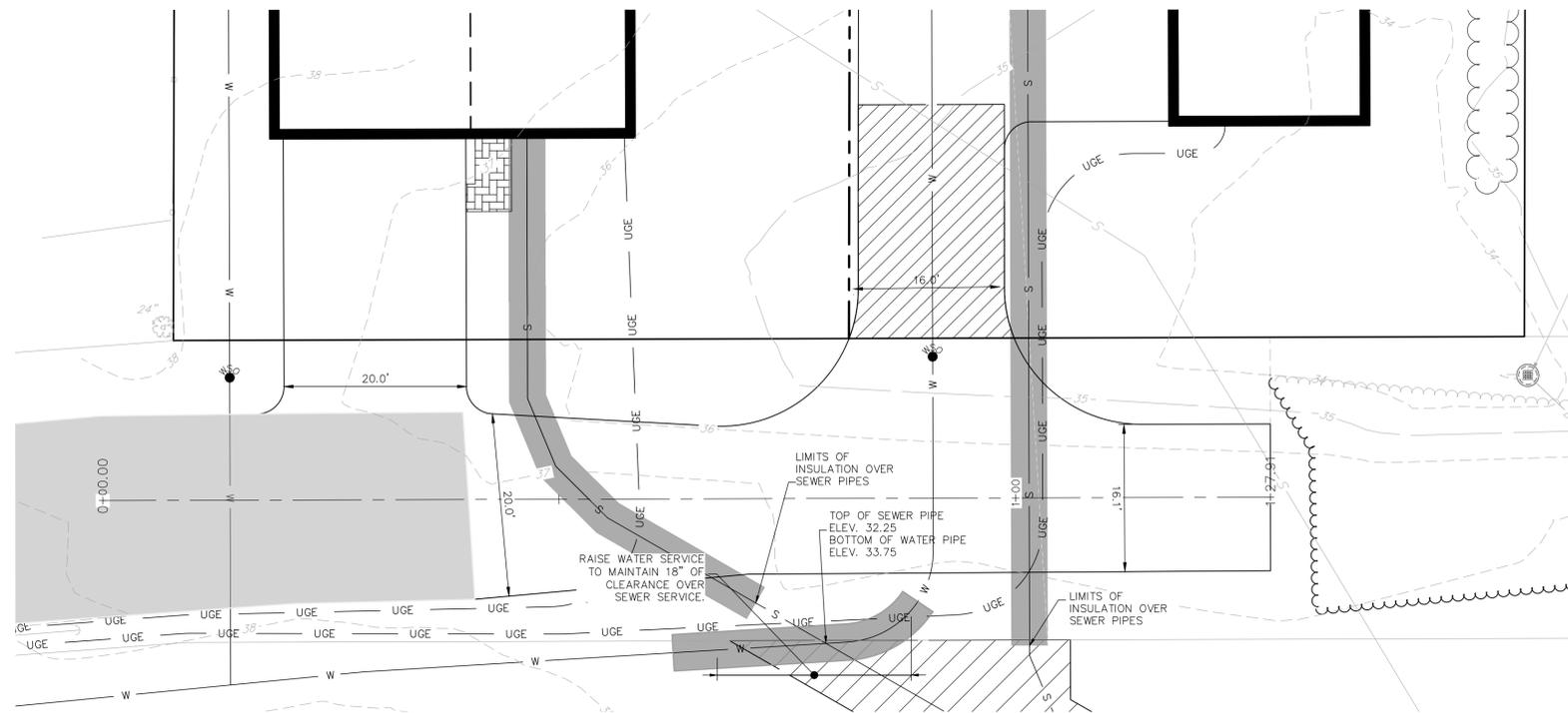
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C-05

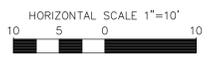
NOTES

1. SEE NOTES ON SHEET C-01.
2. SEE UTILITY PLAN ON SHEET C-05 FOR MORE INFORMATION.



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SITE DEVELOPMENT PLANS
TAX MAP 162 LOT 16
ROAD PLAN PROFILE
PROPOSED 2 LOT SUBDIVISION
77 MEREDITH WAY
OWNED BY
RANDI & JEFF COLLINS
PREPARED FOR
RANDI & JEFF COLLINS
1"=20' (11'X17')
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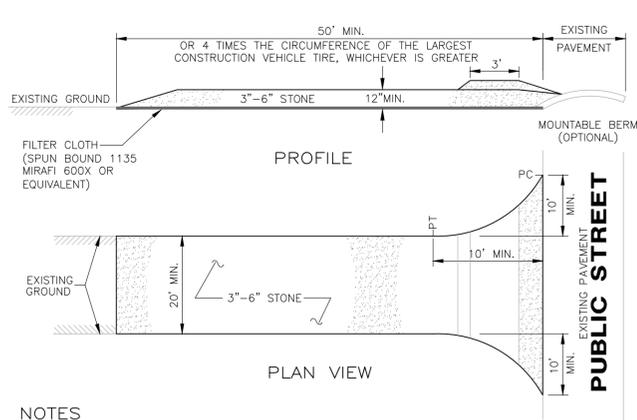
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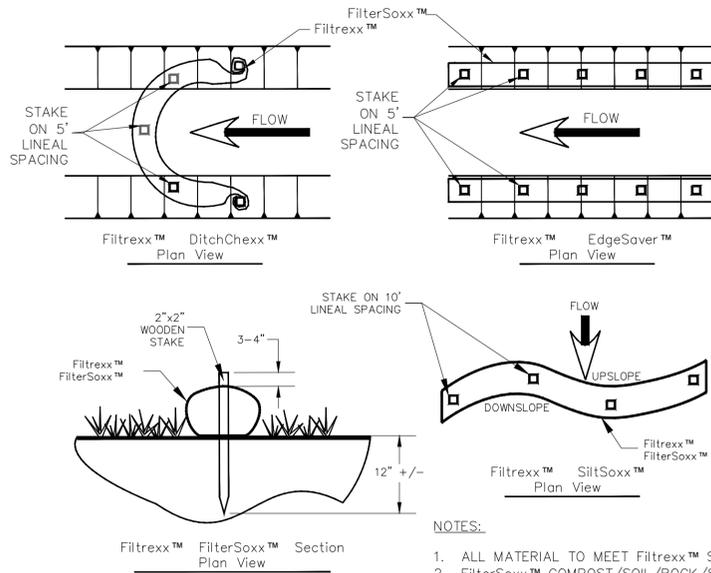
MEREDITH WAY



NOTES

1. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE SURFACE.
2. WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
3. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
4. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
5. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN STORM EVENT.

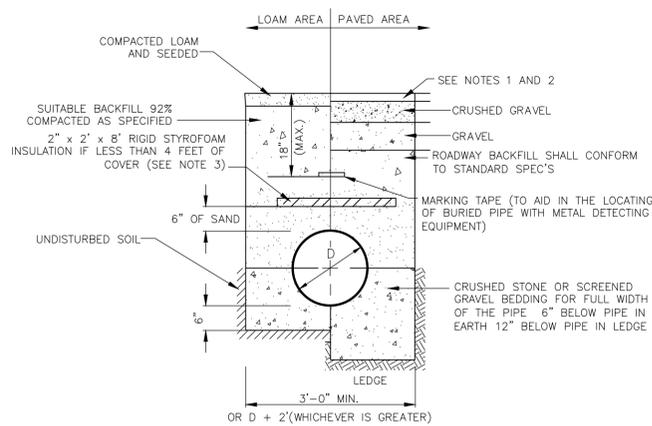
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



NOTES:

1. ALL MATERIAL TO MEET FilterSoxx™ SPECIFICATIONS
2. FilterSoxx™ COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
4. SIZE OF SOCK TO BE PER MANUFACTURER'S SPECIFICATIONS

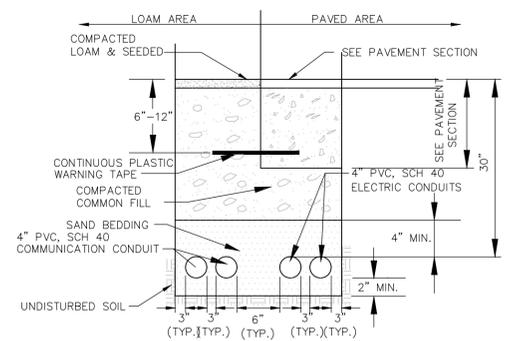
FILTREXX™ FILTERSOXX™ STAKING
NOT TO SCALE



NOTES

1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPEC'S.
3. GAPS BETWEEN SECTIONS OF INSULATION TO BE COVERED WITH 2' x 2' x 2' PIECE OF INSULATION CENTERED OVER GAP.

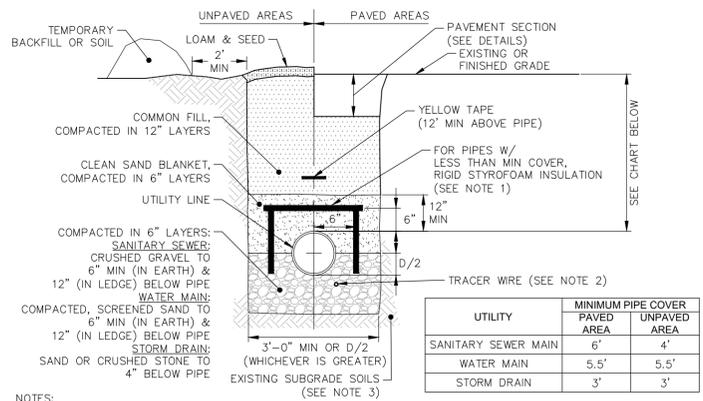
SEWER TRENCH WITH INSULATION
NOT TO SCALE



NOTES

1. ELECTRIC SERVICE INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL CODES.
2. COMMUNICATION SERVICE INSTALLATION SHALL MEET ALL CONSTRUCTION REQUIREMENTS.
3. ACTUAL NUMBER OF CONDUITS TO BE DETERMINED BY RESPECTIVE COMPANIES.
4. VERIFY INSTALLATION REQUIREMENTS WITH RESPECTIVE COMPANIES.

ELECTRIC/COMMUNICATIONS CONDUIT
NOT TO SCALE

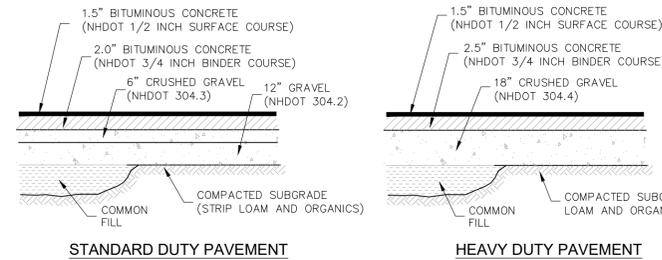


NOTES:

1. FOR TOP INSULATION, USE 2" THICK OF 2"x2"x8" RIGID STYROFOAM INSULATION (1 LAYER IF LESS THAN 5' COVER, 2 LAYERS IF GREATER THAN 5' COVER BUT LESS THAN 6' COVER). FOR SIDE INSULATION, USE 2" THICK OF 2"x2"x8" RIGID STYROFOAM INSULATION EXTENDING TO A MINIMUM DEPTH OF 5'.
2. TRACER WIRE SPECIFIED FOR NON-METALLIC WATER LINES SHALL BE INSTALLED BELOW AND TO THE SIDE OF THE PIPE AND PER THE MANUFACTURER REQUIREMENTS. TRACER WIRE PRODUCT SHALL BE SELECTED FOR OPEN CUT INSTALLATION TECHNIQUE.
3. IN LOCATIONS WITH EXISTING FILL SOILS, THE EXISTING SUBGRADE SOILS AT THE BOTTOM OF THE TRENCH SHALL BE OVER-EXCAVATED 2' DEEP AND RECOMPACTED IN 12" LIFTS TO 95% MAXIMUM DENSITY.

UTILITY TRENCH

FOR SEWER, WATER, AND STORM DRAIN LINES NOT TO SCALE

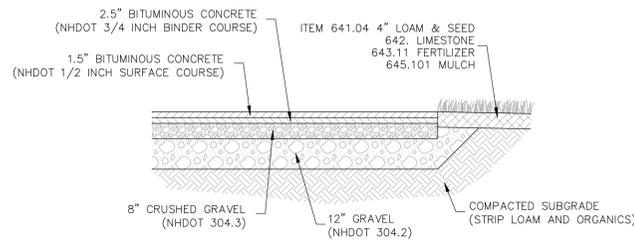


NOTES

1. SEE GRADING & EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
2. PROVIDE CLEAN BUTT TO EXISTING PAVEMENT- USE TACK COAT. A TACK COAT SHALL ALSO BE PLACED BETWEEN GRAVEL COURSE AND SUCCESSIVE LAYERS OF BITUMINOUS CONCRETE. SPECIFICALLY, A TACK COAT SHALL BE PLACED ATOP THE BINDER COURSE PAVEMENT PRIOR TO PLACING THE WEARING COURSE.
3. REMOVE ALL LOAM AND/OR YIELDING MATERIAL BELOW PAVEMENT.
4. BITUMINOUS MATERIALS SHALL CONFORM TO NHDOT SPECIFICATION SECTION 401.
5. BITUMINOUS CONCRETE SHALL BE COMPACTED TO AT LEAST 92.5% OF THEORETICAL MAXIMUM DENSITY AS DETERMINED BY ASTM D2041 OR AASHTO T209. PLACEMENT TEMPERATURES OF BITUMINOUS CONCRETE MIXES, IN GENERAL, RANGE BETWEEN 270 AND 310 DEGREES FAHRENHEIT.
6. PAVEMENT BASE COURSE AGGREGATE SHALL CONFORM TO NHDOT SPECIFICATION SECTION 304, ITEM 304.3 AND COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY.
7. PAVEMENT SUBBASE COURSE AGGREGATE AND AGGREGATE FOR SUBGRADE REPAIR AREAS SHALL BE SUITABLE FOR USE AS STRUCTURAL FILL AND BE PROOF ROLLED AND COMPACTED TO 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY.
8. THE EXPOSED SOIL SUBGRADE SHOULD BE PROOF ROLLED PRIOR TO THE PLACEMENT OF SUBBASE GRAVEL, AND SOFT AREAS SHOULD BE REPAIRED AND REPLACED.
9. ALL PARKING SPACES SHALL BE STANDARD DUTY. ALL OTHER LOCATIONS SHALL BE HEAVY DUTY.
10. HEAVY DUTY PAVEMENT TO BE USED FOR EXTENSION OF MEREDITH WAY.

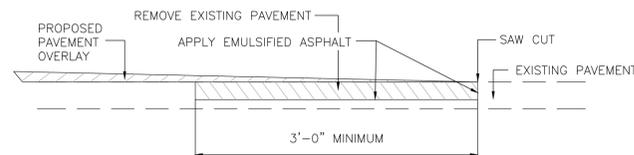
PAVEMENT SECTIONS

NOT TO SCALE



PAVEMENT SECTION/LOAM & SEED DETAIL

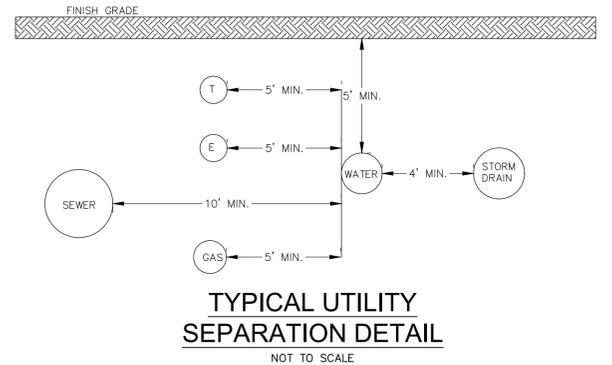
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PAVEMENT SAWCUT

NOT TO SCALE

REV	DATE	DESCRIPTION	DR	CK
4	9/20/2022	REVISED PER TAC COMMENTS	JKC	JCC
3	8/31/2022	REVISED PER TAC COMMENTS	JKC	JCC
2	8/23/2022	REVISED PER TAC COMMENTS	JKC	JCC
1	7/21/2022	REVISED PER TAC COMMENTS	JKC	JCC



TYPICAL UTILITY SEPARATION DETAIL
NOT TO SCALE

PROGRESS PRINT
date: 09/20/2022

SITE DEVELOPMENT PLANS

TAX MAP 162 LOT 16

DETAILS

**PROPOSED 2 LOT SUBDIVISION
77 MEREDITH WAY**

OWNED BY

RANDI & JEFF COLLINS

PREPARED FOR

RANDI & JEFF COLLINS

1"=20' (11'X17')

SCALE: **MTB'** (22'X34')

JULY 1, 2022

Seacoast Division



Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

170 Commerce Way, Suite 102
Portsmouth, NH 03801
Phone (603) 431-2222
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www.tfmoran.com

FILE	DR	BNK	FB	DATE	DESCRIPTION	DR	CK
47442-00	CK	CR	CADFILE	47442-00-DETAILS			

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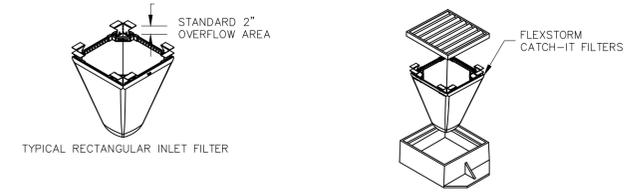
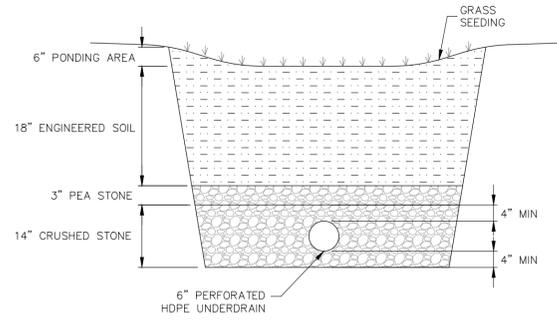
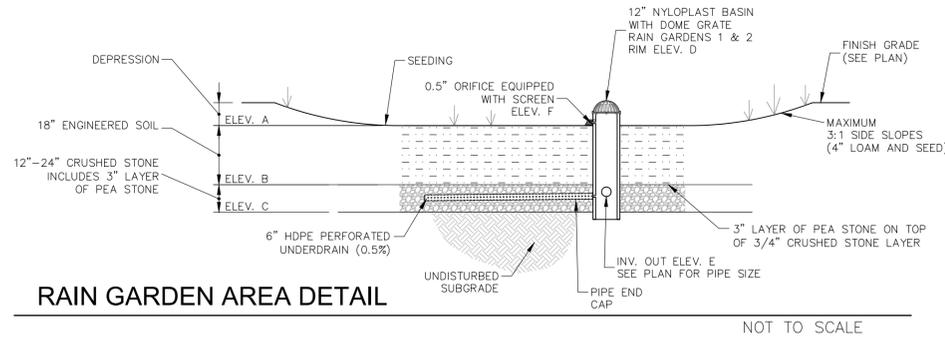
Sep 20, 2022 - 1:56pm F:\MISC Projects\47442-00 - Collins - 77 Meredith Way - Portsmouth\47442-00 - Collins - 77 Meredith Way\Design\PRODUCTION DRAWINGS\47442-00_Details.dwg

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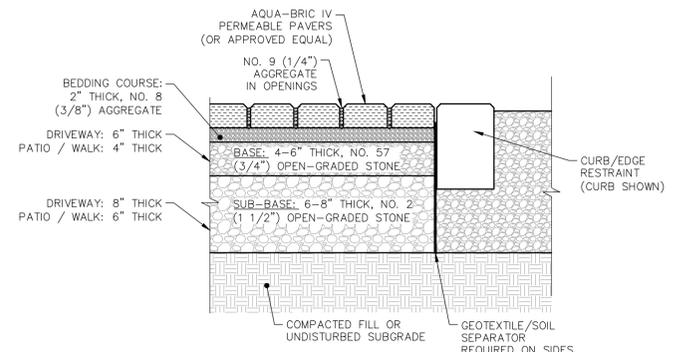




- NOTES:
1. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
 2. INSPECTION SHOULD OCCUR FOLLOWING ANY RAIN EVENT $> \frac{1}{2}$ ".
 3. EMPTY THE SEDIMENT BAG PER MANUFACTURER'S SPECIFICATIONS.
 4. REMOVED CAKED ON SILT FROM SEDIMENT BAG AND FLUSH WITH MEDIUM SPRAY WITH OPTIMAL FILTRATION.
 5. REPLACE BAG IF TORN OR PUNCTURED TO $> \frac{1}{2}$ " DIAMETER ON LOWER HALF OF BAG.

ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC. A DIVISION OF ADS, INC. WWW.INLETFILTERS.COM (866) 287-8655 INFO@INLETFILTERS.COM

INLET PROTECTION
NOT TO SCALE



- NOTES:
1. PERMEABLE PAVERS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
 2. INSTALLATION OF PERMEABLE PAVER SECTION SHALL BEGIN AT LOWEST GRADE AND END AT HIGHEST GRADE.

- MAINTENANCE:**
- PERMEABLE PAVERS FUNCTION AS AN EFFECTIVE STORMWATER TREATMENT SYSTEM AND REMAIN CLOG-FREE FOR YEARS WITH REASONABLE GOOD HOUSEKEEPING PRACTICES.
 - KEEP THE PAVEMENT FREE OF LEAVES, WEEDS, AND SEDIMENT.
 - AVOID THE USE OF SAND IN THE WINTER, IF USED, SPREAD SPARINGLY.
 - PERIODICALLY SWEEP THE OPENINGS TO REMOVE CRUST THAT FORMS ON THE SURFACE. A STIFF BRISTLE BROOM WORKS WELL FOR RESIDENTIAL WALKS AND DRIVEWAYS.
 - IF PUDDLES RESULT FROM CLOGGING, INFILTRATION RATES CAN BE RESTORED TO 100% CAPACITY BY REMOVING THE AGGREGATE FROM THE OPENINGS AND REPLACING IT WITH CLEAN MATERIAL.
 - DO NOT PRESSURE WASH.
 - MINIMIZE APPLICATION OF SALT FOR ICE CONTROL.
 - INSPECT ANNUALLY FOR PAVER DETERIORATION.
 - MONITOR PERIODICALLY TO ENSURE THAT THE PAVERS DRAIN EFFECTIVELY AFTER STORMS.
 - PERIODICALLY ADD JOINT MATERIAL TO REPLACE LOST MATERIAL.
 - MAJOR CLOGGING MAY NECESSITATE REPLACEMENT OF PAVERS AND POSSIBLY FILTER COURSE AND SUB-BASE COURSE.

PERMEABLE PAVER
NOT TO SCALE

PROGRESS PRINT
date: 09/20/2022

RAIN GARDEN CONSTRUCTION

1. CLEAR AND GRUB THE AREA WHERE THE RAIN GARDEN AREAS ARE TO BE LOCATED. STOCKPILE LOAM FOR REUSE ON SLOPES.
2. GRADE RAIN GARDEN AREAS ACCORDING TO PLAN AND DETAILS. SIDE SLOPES SHALL HAVE 4" LOAM AND SEED AND A SLOPE NOT TO EXCEED 3:1. BOTTOM OF RAIN GARDEN AREAS TO BE CONSTRUCTED WITH MANUFACTURED SOIL (SEE RAIN GARDEN CONSTRUCTION DETAIL). SPECIFIC PLANTINGS SHALL BE PLACED IN THE FACILITY ACCORDING TO THE LANDSCAPE PLAN PLANTING DETAIL.
3. RAIN GARDEN SOIL MIXTURE SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES EXCLUDING MULCH. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE RAIN GARDEN AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVIDE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATION.
4. THE USDA TEXTURAL CLASSIFICATION OF THE SANDY SOIL SHALL BE LOAMY SAND OR SANDY LOAM.
5. THE ENGINEERED SOIL - SEE ENGINEERED SOIL MIX NOTES.
 - A. SOILS TO BE TESTED AND APPROVED BY THE ENGINEER OF RECORD. ENGINEER SHALL SUBMIT LETTER OF VERIFICATION TO THE CITY.
6. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT EQUIPMENT & VEHICLE TRAFFIC FROM DRIVING IN THE AREA OF THE PROPOSED RAIN GARDEN AREA DURING CONSTRUCTION.
7. AFTER THE BASIN IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHOULD BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES. THE BASIN BOTTOM SHOULD BE LEVELED PRIOR TO BACKFILLING WITH CRUSHED STONE AND RAIN GARDEN SOIL MIXTURE.
8. AASHTO #57 STONE CAN BE USED IN PLACE OF 3/4" CRUSHED STONE.

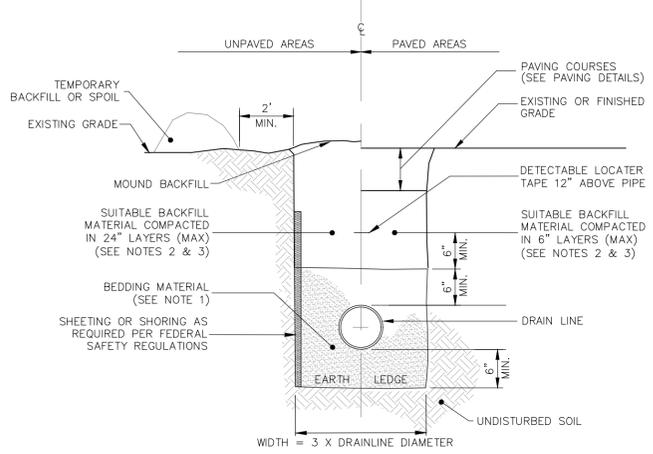
ENGINEERED SOIL MIX

1. THE ENGINEERED SOIL IS MADE OF IS 10% WOOD CHIPS, 35% LOAM, AND 55% SAND.
2. LOAM SHALL MEET THE USDA TEXTURAL CLASSIFICATION OF LOAMY FINE SAND.
3. SAND SHALL BE CONCRETE SAND MEETING ASTM C-33 SPECIFICATION.
4. WOOD CHIPS SHALL BE SHREDDED WOOD, WOOD CHIPS, GROUND BARK, OR WOOD WASTE; OF UNIFORM TEXTURE AND FREE OF STONES, STICKS, SOIL, OR TOXIC MATERIALS
5. SOIL REACTION: PH OF 6 TO 7.
6. CEC OF TOTAL SOIL: MINIMUM 10 MEQ/100 ML AT PH OF 7.0.
7. BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS INDICATED ON DRAWINGS
8. BASIC PROPERTIES: MANUFACTURED SOIL SHALL NOT CONTAIN THE FOLLOWING:
 - A. UNACCEPTABLE MATERIALS: CONCRETE SLURRY, CONCRETE LAYERS OR CHUNKS, CEMENT, PLASTER, BUILDING DEBRIS, ASPHALT, BRICKS, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE, TAR, ROOFING COMPOUND, ACID, SOLID WASTE, AND OTHER EXTRANEOUS MATERIALS THAT ARE HARMFUL TO PLANT GROWTH.
 - B. UNSUITABLE MATERIALS: STONES, ROOTS, PLANTS, SOD, CLAY LUMPS, AND POCKETS OF COARSE SAND THAT EXCEED A COMBINED MAXIMUM OF 5 PERCENT BY DRY WEIGHT OF THE MANUFACTURED SOIL.
 - C. LARGE MATERIALS: STONES, CLOGS, ROOTS, CLAY LUMPS, AND POCKETS OF COARSE SAND EXCEEDING 0.187 INCHES (4.76 MM) IN ANY DIMENSION.

ENGINEERED SOIL MIX PARTICLE SIZE DISTRIBUTION (PSD)			
PSD UPPER LIMIT		PSD LOWER LIMIT	
SIEVE #	% Passing	SIEVE #	% PASSING
4	100	4	100
10	95	10	95
40	40	40	15
200	20	200	15
<200	5	<200	5

RAIN GARDEN INSPECTION SCHEDULE

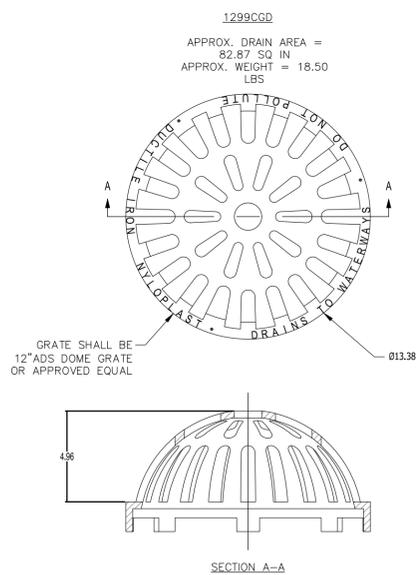
1. RAIN GARDEN TO BE INSPECTED BY THE DESIGN ENGINEER FOR EACH STAGE OF CONSTRUCTION.
2. PHASES OF CONSTRUCTION BEING:
 - A. EXCAVATION OF THE RAIN GARDEN BASIN, INCLUDING ROTOTILLING.
 - B. INSTALLATION OF THE CRUSHED STONE
 - C. INSTALLATION OF THE ENGINEERED SOIL
 - D. INSTALLATION OF THE OUTLET STRUCTURE AND UNDERDRAIN IN THE OUTLET STONE TRENCHES
3. SAMPLE OF THE INDIVIDUAL COMPONENTS OF THE ENGINEERED SOIL TO BE PROVIDED AND APPROVED PRIOR BEING COMBINED AND INSTALLED. SAMPLE CRUSHED STONE TO BE PROVIDED AND APPROVED PRIOR TO INSTALLATION.
4. ENGINEER TO VERIFY MIX RATIO OF ENGINEERED SOIL MIX.



NOTES:

1. BEDDING - BEDDING FOR PIPES SHALL CONSIST OF PREPARING THE BOTTOM OF THE TRENCH TO SUPPORT THE ENTIRE LENGTH OF THE PIPE AT A UNIFORM SLOPE AND ALIGNMENT. CRUSHED STONE SHALL BE USED TO BED THE PIPE TO THE ELEVATION SHOWN ON THE DRAWINGS. NORMAL PIPE BEDDING IS CRUSHED STONE TO THE HAUNCH OF THE PIPE AND SAND BEDDING 6" ABOVE THE CROWN. IF THE TOP OF THE PIPE IS LESS THAN 30" FROM FINISH GRADE, BED PIPE COMPLETELY IN STONE UP TO 6" ABOVE PIPE CROWN. UNDERDRAIN TO HAVE 4" MINIMUM OF STONE OVER PIPE OR AS NECESSARY TO BE IN CONTACT WITH GRAVEL LAYER OF SELECTS ABOVE.
2. COMPACTION - ALL BACKFILL SHALL BE COMPACTED AT OR NEAR OPTIMUM MOISTURE CONTENT BY PNEUMATIC TAMPERS, VIBRATORY COMPACTORS OR OTHER APPROVED MEANS. BACKFILL BENEATH PAVED SURFACES SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T99, METHOD C.
3. SUITABLE MATERIAL - IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS; PIECES OF PAVEMENT; ORGANIC MATTER; TOP SOIL; ALL WET OR SOFT MUCK, PEAT, OR CLAY; ALL EXCAVATED LEDGE MATERIAL; ROCKS OVER 6" IN LARGEST DIMENSION; FROZEN EARTH AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION.
4. BASE COURSE AND PAVEMENT - SHALL MEET THE REQUIREMENT OF THE NHDOT LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DIVISION 300 AND 400 RESPECTIVELY.

TRENCH FOR DRAIN LINE
NOT TO SCALE



12" DOME GRATE
NOT TO SCALE

DIMENSIONS ARE FOR REFERENCE ONLY ACTUAL DIMENSIONS MAY VARY DIMENSIONS ARE IN INCHES QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05 PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT LOCKING DEVICE AVAILABLE UPON REQUEST

RAIN GARDEN MAINTENANCE

MAINTENANCE SCHEDULE TO BEGIN AFTER CONSTRUCTION IS FINISHED AND BASIN STABILIZATION IS COMPLETE.

1. CONTRACTOR AND LAND OWNERS TO PERFORM SCHEDULED MAINTENANCE ON THE RAIN GARDENS.
2. REGULAR WATERING DURING THE FIRST FEW WEEKS AFTER PLANTING AND DURING HOT, DRY SPELLS, ESPECIALLY IN THE FIRST TWO YEARS AFTER PLANTING. AFTER THE FIRST TWO YEARS AND ONCE PLANTS ARE ESTABLISHED, WATERING SHOULD ONLY BE NECESSARY DURING DROUGHT CONDITIONS.
3. FOR THE FIRST YEAR, FREQUENT AND AGGRESSIVE WEEDING MONTHLY DURING GROWING SEASON. REMOVE ONLY INVASIVE SPECIES.
4. TWICE PER YEAR, INSPECT SPILLWAYS AND REMOVE ANY ACCUMULATED DEBRIS OR SEDIMENT TO ENSURE PROPER FUNCTIONALITY.
5. ONCE A YEAR TRIM AND PRUNE EXCESS VEGETATION. DEAD, DYING, DISEASED, OR HAZARDOUS BRANCHES SHOULD BE TRIMMED AND REMOVED AS THEY OCCUR.
6. ONCE A YEAR INSPECT RAIN GARDEN FOR DEAD OR DYING VEGETATION. REPLACE VEGETATION AS NEEDED. NEW PLANTS SHOULD BE PLACED IN THE SAME LOCATION AS THE OLD PLANT, OR AS NEAR AS POSSIBLE TO THE OLD LOCATION. NEW PLANTS SHOULD BE THE NATIVE AND SAME OR EQUIVALENT VARIETY.
7. DO NOT MOW GARDEN.
8. ONCE A YEAR, INSPECT BOTTOM OF RAIN GARDEN. MAINTAIN A 2-3" LAYER OF MULCH. REPLACE AS REQUIRED.
9. DURING INSPECTIONS, REMOVE ANY TRASH, ACCUMULATED DEBRIS OR SEDIMENT.
10. ONCE A YEAR INSPECT BERM FOR SETTLING. ADD COMPACTED SOIL AND REPLANT AS NEEDED.
11. ONCE A YEAR IN THE FALL THE SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME AFTER A RAINFALL EVENT THAT EXCEEDS 1.0 INCHES IN A 24-HOUR PERIOD. THE SYSTEM SHOULD BE CHECKED TO CONFIRM THAT IT COMPLETELY DRAINS IN 72-HOUR AFTER THE RAINFALL EVENT. IF THE GARDEN DOES NOT DRAIN, A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION OR INFILTRATION FUNCTIONS, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS.
12. ONCE A YEAR TEST PLANTING BED FOR PH. IF THE PH IS BELOW 5.2, LIMESTONE SHOULD BE APPLIED. IF THE PH IS ABOVE 8.0, IRON SULFATE AND SULFUR SHOULD BE APPLIED.

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SITE DEVELOPMENT PLANS
TAX MAP 162 LOT 16
DETAILS
PROPOSED 2 LOT SUBDIVISION
77 MEREDITH WAY
OWNED BY
RANDI & JEFF COLLINS
PREPARED FOR
RANDI & JEFF COLLINS
1"=20' (11"X17')
SCALE: MTB' (22"X34') **JULY 1, 2022**

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Portsmouth, NH 03801
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47442-00 DR BK FB
CK CR CADFILE 47442-00-DETAILS C-08

SEWER SERVICE NOTES

- MINIMUM SIZE PIPE FOR SEWER SERVICE SHALL BE FOUR INCHES.
 - PIPE AND JOINT MATERIALS:
 - PLASTIC SEWER PIPE
 - PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

ASTM STANDARDS	GENERIC PIPE MATERIAL	SIZES APPROVED
D3034	*PVC (SOLID WALL)	8" THROUGH 15" (SDR 35)
F679	PVC (SOLID WALL)	18" THROUGH 27" (T-1 & T-2)
F789	PVC (SOLID WALL)	4" THROUGH 18" (T-1 TO T-3)
F794	PVC (RIBBED WALL)	8" THROUGH 36"
D2680	*ABS (COMPOSITES WALL)	8" THROUGH 15"

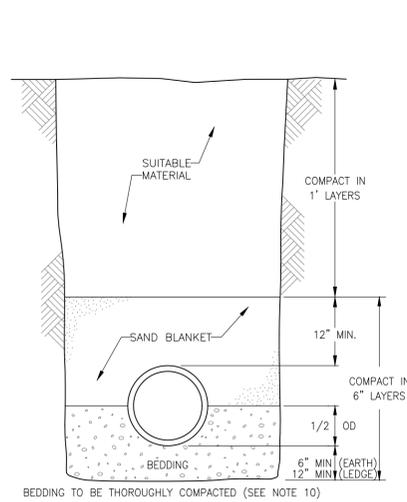
*PVC: POLY VINYL CHLORIDE
*ABS: ACRYLONITRILE-BUTADIENE-STYRENE
 - JOINTS SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL CONFORMING TO ASTM D-3212 AND SHALL BE PUSH-ON, BELL AND SPIGOT TYPE.
 - ABS TRUSS PIPE AND FITTINGS SHALL CONFORM TO ASTM D-2680, POLYMER COMPOUNDING SHALL BE TO ASTM D-1788 (CLASS 322).
 - JOINTS FOR ABS TRUSS PIPE SHALL BE CHEMICAL WELDED COUPLINGS TYPE SC IN ACCORDANCE WITH ASTM D-2680, FORMING A CHEMICAL WELDED JOINT.
 - DUCTILE-IRON PIPE, FITTINGS AND JOINTS.
 - DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE UNITED STATES OF AMERICA STANDARDS INSTITUTE:
 - A21.50 THICKNESS DESIGN OF DUCTILE IRON PIPE AND WITH ASTM A-536 DUCTILE IRON CASTINGS.
 - A21.51 DUCTILE IRON PIPE, CENTRIFUGALLY CAST IN METAL MOLDS OR SAND-LINED MOLDS FOR WATER OR OTHER LIQUIDS.
 - JOINTS SHALL BE OF THE MECHANICAL OR PUSH-ON TYPE. JOINTS AND GASKETS SHALL CONFORM TO:
 - A21.11 RUBBER GASKETS JOINTS FOR CAST IRON PRESSURE PIPE & FITTINGS
 - DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.
 - JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER-TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIALS USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER WYE OR AT THE FOUNDATION WALL, APPROPRIATE MANUFACTURED ADAPTERS SHALL BE USED.
 - TEES AND WYES: WHERE A TEE OR WYE IS NOT AVAILABLE IN THE EXISTING STREET SEWER, AN APPROPRIATE CONNECTION SHALL BE MADE, FOLLOWING MANUFACTURERS' INSTRUCTIONS USING A BOLTED, CLAMPED OR EPOXY-CEMENTED SADDLE TAPPED INTO A SMOOTHLY DRILLED OR SAWN OPENING IN THE SEWER. THE PRACTICE OF BREAKING AN OPENING WITH A SLEDGE HAMMER, STUFFING CLOTH OR OTHER SUCH MATERIAL AROUND THE JOINT, OR APPLYING MORTAR TO HOLD THE CONNECTION, AND ANY OTHER SIMILAR CRUDE PRACTICES OR INEPT OR HASTY IMPROVISATIONS WILL NOT BE PERMITTED. THE CONNECTION SHALL BE CONCRETE ENCASED AS SHOWN IN THE DETAIL UP TO AND INCLUDING 15" DIAMETER.
 - SEWER SERVICE INSTALLATION: THE PIPE SHALL BE HANDLED, PLACED AND JOINTED IN ACCORDANCE WITH INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER. IT SHALL BE CAREFULLY BEDDED ON A 6 INCH LAYER OF CRUSHED STONE AND/OR GRAVEL AS SPECIFIED IN NOTE 10. BEDDING AND RE-FILL FOR DEPTH OF 12 INCHES ABOVE THE TOP OF THE PIPE SHALL BE CAREFULLY AND THOROUGHLY TAMPED BY HAND OR WITH APPROPRIATE MECHANICAL DEVICES.

THE PIPE SHALL BE LAID AT A CONTINUOUS AND CONSTANT GRADE FROM THE STREET SEWER CONNECTION TO THE FOUNDATION AT A GRADE OF NOT LESS THAN 1/4" INCH PER FOOT. PIPE JOINTS MUST BE MADE UNDER DRY CONDITIONS. IF WATER IS PRESENT, ALL NECESSARY STEPS SHALL BE TAKEN TO DEWATER THE TRENCH.
 - TESTING: THE COMPLETED SEWER SERVICE SHALL BE SUBJECTED TO A THIRD PARTY LEAKAGE TEST IN ANY OF THE FOLLOWING MANNERS: (PRIOR TO BACKFILLING)
 - AN OBSERVATION TEE SHALL BE INSTALLED AS SHOWN AND WHEN READY FOR TESTING, AN INFLATABLE BLADDER OR PLUG SHALL BE INSERTED JUST UPSTREAM FROM THE OPENING IN THE TEE. AFTER INFLATION, WATER SHALL BE INTRODUCED INTO THE SYSTEM ABOVE THE PLUG TO A HEIGHT OF 5 FEET ABOVE THE LEVEL OF THE PLUG.
 - THE PIPE SHALL BE LEFT EXPOSED AND LIBERALLY HOSED WITH WATER, TO SIMULATE, AS NEARLY AS POSSIBLE, WET TRENCH CONDITIONS OR, IF TRENCH IS WET, THE GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. INSPECTIONS FOR LEAKS SHALL BE MADE THROUGH THE CLEANOUT WITH A FLASHLIGHT.
 - DRY FLUORESCENCE DYE SHALL BE SPRINKLED INTO THE TRENCH OVER THE PIPE. IF THE TRENCH IS DRY, THE PIPE SHALL BE LIBERALLY HOSED WITH WATER, OR IF THE TRENCH IS WET, GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. OBSERVATION FOR LEAKS SHALL BE MADE IN THE FIRST DOWN-STREAM MANHOLE.

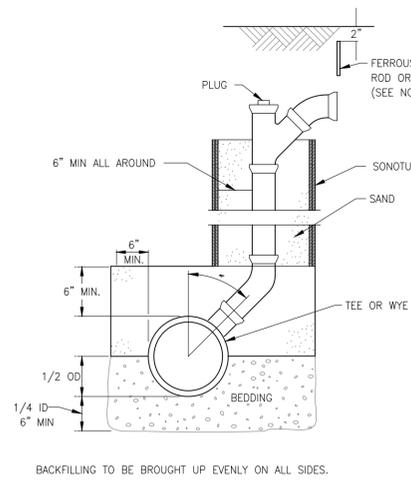
LEAKAGE OBSERVED IN ANY ONE OF THE ABOVE ALTERNATE TESTS SHALL BE CAUSE FOR NON-ACCEPTANCE AND THE PIPE SHALL BE DUG-UP IF NECESSARY AND RE-LAID SO AS TO ASSURE WATER TIGHTNESS.
- ILLEGAL CONNECTIONS: NOTHING BUT SANITARY WASTE FLOW FROM TOILETS, SINKS, LAUNDRY ETC. SHALL BE PERMITTED. ROOF LEADERS, FOOTING DRAINS, SUMP PUMPS OR OTHER SIMILAR CONNECTIONS CARRYING RAIN WATER, DRAINAGE OR GROUND WATER SHALL NOT BE PERMITTED.
- WATER SERVICE SHALL NOT BE LAID IN SAME TRENCH AS SEWER SERVICE.
- BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATERIAL AND MEETING ASTM C33-67.

100% PASSING	1 INCH SCREEN
90%-100% PASSING	3/4 INCH SCREEN
20%-55% PASSING	3/8 INCH SCREEN
0%-10% PASSING	#4 SIEVE
0%-5% PASSING	#8 SIEVE

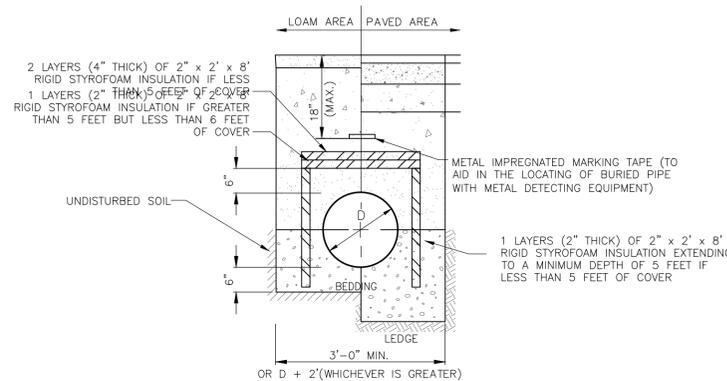
WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, SCREENED GRAVEL OR CRUSHED STONE 1/2 INCH TO 1 1/2 INCH SHALL BE USED.
- LOCATION: THE LOCATION OF THE TEE OR WYE SHALL BE RECORDED AND FILED IN THE MUNICIPAL RECORDS. IN ADDITION, A FERROUS METAL ROD OR PIPE SHALL BE PLACED OVER THE TEE OR WYE AS DESCRIBED IN THE TYPICAL "CHIMNEY" DETAIL, TO AID IN LOCATING THE BURIED PIPE WITH A DIP NEEDLE OR PIPEFINDER.
- CHIMNEYS: IF VERTICAL DROP INTO SEWER IS GREATER THAN 4 FEET, A CHIMNEY SHALL BE CONSTRUCTED FOR THE SEWER CONNECTION. CHIMNEY INSTALLATION AS RECOMMENDED BY THE PIPE MANUFACTURER MAY BE USED IF APPROVED BY THE ENGINEER.



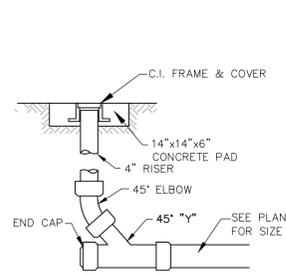
TRENCH CROSS-SECTION
NOT TO SCALE



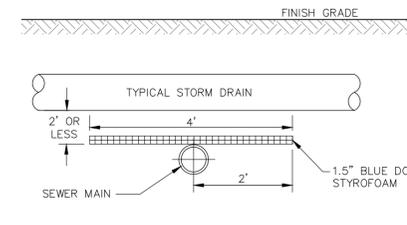
CHIMNEY (SEE NOTE 12)
NOT TO SCALE



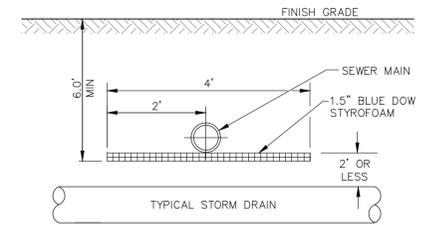
SEWER TRENCH WITH INSULATION
NOT TO SCALE



SEWER CLEAN OUT
NOT TO SCALE

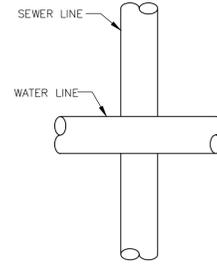


CONDITION I

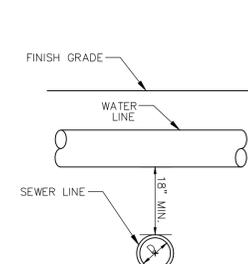


CONDITION II

INSULATION AT STORM DRAIN & SEWER MAIN CROSSINGS
NOT TO SCALE



PLAN VIEW



PROFILE VIEW

NOTES:

- A 10 FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18" MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER AND SANITARY SEWER CROSSINGS.
- PROTECTION OF WATER SUPPLIES:
 - THERE SHALL BE NO PHYSICAL CONNECTION BETWEEN A PUBLIC OR PRIVATE POTABLE WATER SUPPLY SYSTEM AND A SEWER OR SEWER APPURTENANCE WHICH WOULD PERMIT THE PASSAGE OF SEWAGE OR POLLUTED WATER INTO THE POTABLE SUPPLY. NO WATER PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SEWER OR SEWER MANHOLE.
 - NO SEWER SHALL BE LOCATED WITHIN THE WELL PROTECTED RADII ESTABLISHED IN ENV-WS 300 FOR ANY PUBLIC WATER SUPPLY WELLS OR WITHIN 100 FEET OF ANY PRIVATE WATER SUPPLY WELL.
 - SEWERS SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN.
 - A DEVIATION FROM THE SEPARATION REQUIREMENTS OF (B) OR (C) ABOVE SHALL BE ALLOWED WHERE NECESSARY TO AVOID CONFLICT WITH SUBSURFACE STRUCTURES, UTILITY CHAMBERS, AND BUILDING FOUNDATIONS, PROVIDED THAT THE SEWER IS CONSTRUCTED IN ACCORDANCE WITH THE FORCE MAIN CONSTRUCTION REQUIREMENTS SPECIFIED IN ENV-WQ 704.06.
 - WHENEVER SEWERS MUST CROSS WATER MAINS, THE SEWER SHALL BE CONSTRUCTED AS FOLLOWS:
 - VERTICAL SEPARATION OF THE SEWER AND WATER MAIN SHALL BE NOT LESS THAN 18 INCHES, WITH WATER ABOVE SEWER AND
 - SEWER PIPE JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM THE WATER MAIN.

WATER & SEWER CROSSING
NOT TO SCALE

PROGRESS PRINT
date: 09/20/2022

SITE DEVELOPMENT PLANS

TAX MAP 162 LOT 16

DETAILS

PROPOSED 2 LOT SUBDIVISION

77 MEREDITH WAY

OWNED BY

RANDI & JEFF COLLINS

PREPARED FOR

RANDI & JEFF COLLINS

1"=20' (11"X17")

SCALE: **MTB'** (22'X34')

JULY 1, 2022

Seacoast Division



Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

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Portsmouth, NH 03801
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REV	DATE	DESCRIPTION	DR	CK
4	9/20/2022	REVISED PER TAC COMMENTS	JKC	JCC
3	8/31/2022	REVISED PER TAC COMMENTS	JKC	JCC
2	8/23/2022	REVISED PER TAC COMMENTS	JKC	JCC
1	7/21/2022	REVISED PER TAC COMMENTS	JKC	JCC

FILE	DR	BNK	FB	SCALE	DATE
47442-00	CK	CR	CADFILE	47442-00-DETAILS	C-09

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SEWER SERVICE DETAILS
NOT TO SCALE

DRAINAGE ANALYSIS SUMMARY

F O R

Proposed 2-Lot Subdivision

**77 Meredith Way
Portsmouth, New Hampshire
Rockingham County**

Tax Map 162, Lot 16

**Owned by Randi & Jeff Collins
Prepared for Randi & Jeff Collins**

September 20, 2022

Prepared By:



Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

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2.0 - CALCULATION METHODS	1
3.0 - EXISTING SITE CONDITIONS	2
4.0 - PRE-DEVELOPMENT CONDITIONS	2
5.0 - POST-DEVELOPMENT CONDITIONS	2
6.0 - CONCLUSION	3
APPENDIX A - PRE-DEVELOPMENT DRAINAGE MAP	
APPENDIX B - POST DEVELOPMENT DRAINAGE MAP	
APPENDIX C - HYDROCAD ANALYSIS FOR 1" STORM EVENT	

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1.0 - SUMMARY & PROJECT DESCRIPTION

The project includes a subdivision and development of two single family residences on 77 Meredith Way in Portsmouth, NH. The existing Tax Map 162 Lot 16 is approximately .5157 acres and currently contains a single family residence. The site is within the General Residence A Zone and is adjacent to Pine Street Playground.

The proposed project is to construct two 2-story dwellings. Associated improvements include and are not limited to access, grading, utilities, stormwater management system, and landscaping. The project proposes a 2,400 SF and 2,022 SF building footprint and total 6,079 SF of impervious area within the property lines and approximately 26,535 SF of disturbance to facilitate the development.

This analysis has been completed to verify the project will not pose adverse stormwater effects on-site and off-site. Compared to the pre-development conditions, the post-development stormwater management system has been designed to reduce runoff volume, reduces the risk of erosion and sedimentation, and improves stormwater runoff quality. In addition, Best Management Practices are employed to formulate a plan that assures stormwater quality both during and after construction. The following summarizes the findings from the study.

2.0 - CALCULATION METHODS

The design storms analyzed in this study are the 2-year, 10-year, 25-year and 50-year 24-hour storm events. The software program, HydroCAD version 10.00¹ was utilized to calculate the peak runoff rates from these storm events. The program estimates the peak rates using the TR-20 method. A Type III storm pattern was used in the model. Rainfall frequencies for the analyzed region were also incorporated into the model. Rainfall frequencies from the higher of the Extreme Precipitation Rates from Cornell University's Northeast Regional Climate Center and Portsmouth Site Plan Review Regulations were used to determine the storm-event intensities, see Table 1. Due to the project's location within the Coastal/Great Bay Region community, the design rainfall increases the Cornell rates by 15% to address projected storm surge, sea level rise, and precipitation events per Env-Wq 1503.08(I). Design standards were taken from the New Hampshire Stormwater Manual, December 2008².

	24-HOUR RAINFALL RATES	
Storm-Event (year)	Northeast Regional Climate Center Extreme Precipitation (in)	Design Rainfall (in)
2	3.21	3.70
10	4.87	5.60
25	6.17	7.10
50	7.39	8.50

Table 1 – 24-Hour Rainfall Rates

Time of Concentration is the time it takes for water to flow from the hydraulically most remote point in the watershed (with the longest travel time) to the watershed outlet. This time is

¹ HydroCAD version 10.00, HydroCAD Software Solutions LLC, Chocorua, NH, 2013.

² New Hampshire Stormwater Manual: Volume One - Stormwater and Antidegradation, December 2008; Volume Two - Post-Construction Best Management Practices Selection and Design, December 2008; Volume Three Erosion and Sediment Controls During Construction, December 2008.

determined by calculating the time it takes runoff to travel this route under one of three hydrologic conditions: sheet flow, shallow concentrated flow, or channel flow. Because the Intensity-Duration-Frequency (IDF) curve is steep with short TC's, estimating the actual intensity is subject to error and overestimates actual runoff. Due to this, the TC's are adjusted to a minimum of 6 minutes.

3.0 – EXISTING SITE CONDITIONS

Per NRCS, soils on-site are Group A soils. Based on City comments, as well as test pits & infiltration testing the soils more closely resemble a Group C soil, which is what the drainage analysis is based on.

Four test pits and infiltration tests were conducted. In nearly all test pit locations, fill material was discovered. Infiltration tests were determined per Ksat testing using a Compact Constant Head Permeameter (Amoozemeter) per Env-Wq 1504.14(d). The highest Estimated Seasonal High-Water Table (ESWT) observed were: elevation 32.15' at Proposed Rain Garden #1, and elevation 29.85 at Proposed Rain Garden #2.

4.0 - PRE-DEVELOPMENT CONDITIONS

The pre-development condition is characterized by two subcatchments composing one watershed, which flows towards an existing catch basin, which ultimately discharges to the Piscataqua River. Pre-development subcatchment areas are depicted on the attached plan entitled "Pre-Development Drainage Map," Sheet HSG-01 in Appendix A.

Stormwater runoff from the site primarily infiltrates into the well-drained soils on-site. The remaining stormwater runoff discharges towards a localized pond area to the north of the site (POI-1), and the existing municipal stormwater drainage system (POI-3).

In the pre-development condition, the total impervious area is 20,504 SF over a total drainage analysis area of 91,950 SF.

5.0 - POST-DEVELOPMENT CONDITIONS

The post-development condition is characterized by one watershed divided into three subcatchment areas. Post-development subcatchment areas are depicted on the attached plan entitled "Post-Development Drainage Map," sheet HSG-02 in Appendix B.

In the post-development condition, the total impervious area is 28,118 SF over a total drainage analysis area of 91,950 SF. Impervious area from the project consists of a 7,613 SF footprint across two residences and associated improvements. Two rain gardens are proposed to treat and mitigate the stormwater runoff from the impact of the new impervious area from the proposed development.

Four test pits and infiltration tests, at least one in each basin area, were conducted. In nearly all test pit locations, fill material was discovered. Infiltration tests were determined per default published Ksat values for the design infiltration rates per Env-Wq 1504.14(c) and/or Ksat testing using a Compact Constant Head Permeameter (Amoozemeter) per Env-Wq 1504.14(d).

Table 2 summarizes the pre- and post-development peak runoff rates for the 2-year, 10-year, 25-year and 50-year 24-hour Type III storm events for all discharge.
 Table 3 summarizes the pre- and post-development peak runoff volumes for the 2-year, 10-year, 25-year, and 50-year 24-hour Type III storm events for all discharge.

TABLE 2 – SURFACE WATER PEAK RUNOFF RATE COMPARISON (CF)					
POINT OF INTEREST		DESIGN STORM			
		2-year	10-year	25-year	50-year
POI-1	Pre	1.4	3.5	4.9	6.3
	Post	1.2	2.5	3.5	4.5
POI-2	Pre	0.3	0.7	1.0	1.3
	Post	0.0	0.0	0.1	0.4
POI-3	Pre	0.8	0.8	0.9	0.9
	Post	0.9	0.9	0.9	1.0

Table 2 - Pre and Post- Development Peak Runoff Rate Comparison

TABLE 3 – SURFACE WATER PEAK RUNOFF VOLUME COMPARISON (CF)					
POINT OF INTEREST		DESIGN STORM			
		2-year	10-year	25-year	50-year
POI-1	Pre	4,661	9,322	13,242	17,076
	Post	4,487	8,930	12,676	16,335
POI-2	Pre	1,220	2,526	3,615	4,704
	Post	44	435	1,045	1,655
POI-3	Pre	8,843	16,291	22,346	27,835
	Post	7,754	14,375	19,646	24,306

Table 3 - Pre and Post- Development Peak Runoff Volume Comparison

The proposed project reduces peak rates of runoff compared to existing conditions for all storm events resulting from on-site runoff (POI-1 & POI-2) and Portsmouth stormwater regulations. Additionally, per NHDES, the 2-year 24-hour storm does not result in an increased peak flow rate and reduces or increases volume within the limits of Env-Wq 1507.05(b)(1) from the pre-development to post-development condition. There will be no adverse effects on the abutting properties from the proposed stormwater management system.

6.0 – CONCLUSION

There are three analysis points modeled in the drainage analysis for this project - POI (point on interest) 1 thru 3:

- POI 1 represents the northern portion of the property which discharges to the north. Comparing pre-development to post-development conditions shows that there is a decrease in the peak rate of runoff and volume for all storm events (2 through 50-year storms).

- POI 2 represents the southern portion of the property and the associated to discharge off-site (to Meredith Way). Comparing pre-development to post-development conditions shows that there is a decrease in the peak rate of runoff and volume for all storm events (2 through 50-year storms) from the site to Meredith Way.

- POI 3 represents the small impoundment/low lying depression area located at the north end of Meredith Way. The outlet from this area is an existing 4" diameter pipe, which DPW has noted may be disconnected. Comparing pre-development to post-development conditions shows that the peak rate of runoff matches for the 25-year storm event, with a minor increase (0.1 cfs) in the 2, 10, and 50-year storm events. The peak elevation of the pond area increases by 0.83 feet in the 2-year storm event down to 0.43 feet in the 50-year storm event. The drain-down time for this impoundment is approximately 15 hours, and the runoff volume is reduced during all storm events (2 through 50-year storms). The increase in peak elevation is due to the extension of the roadway into a portion of the existing impoundment storage. To replace this storage would require removal of the existing mature wooded buffer east of Meredith Way. Since the water elevation increase is minor, of short duration, and there is less runoff volume in the post-development condition, preserving the wooded buffer appears to be the better solution.

Respectfully,
TFMoran, Inc. Seacoast Division

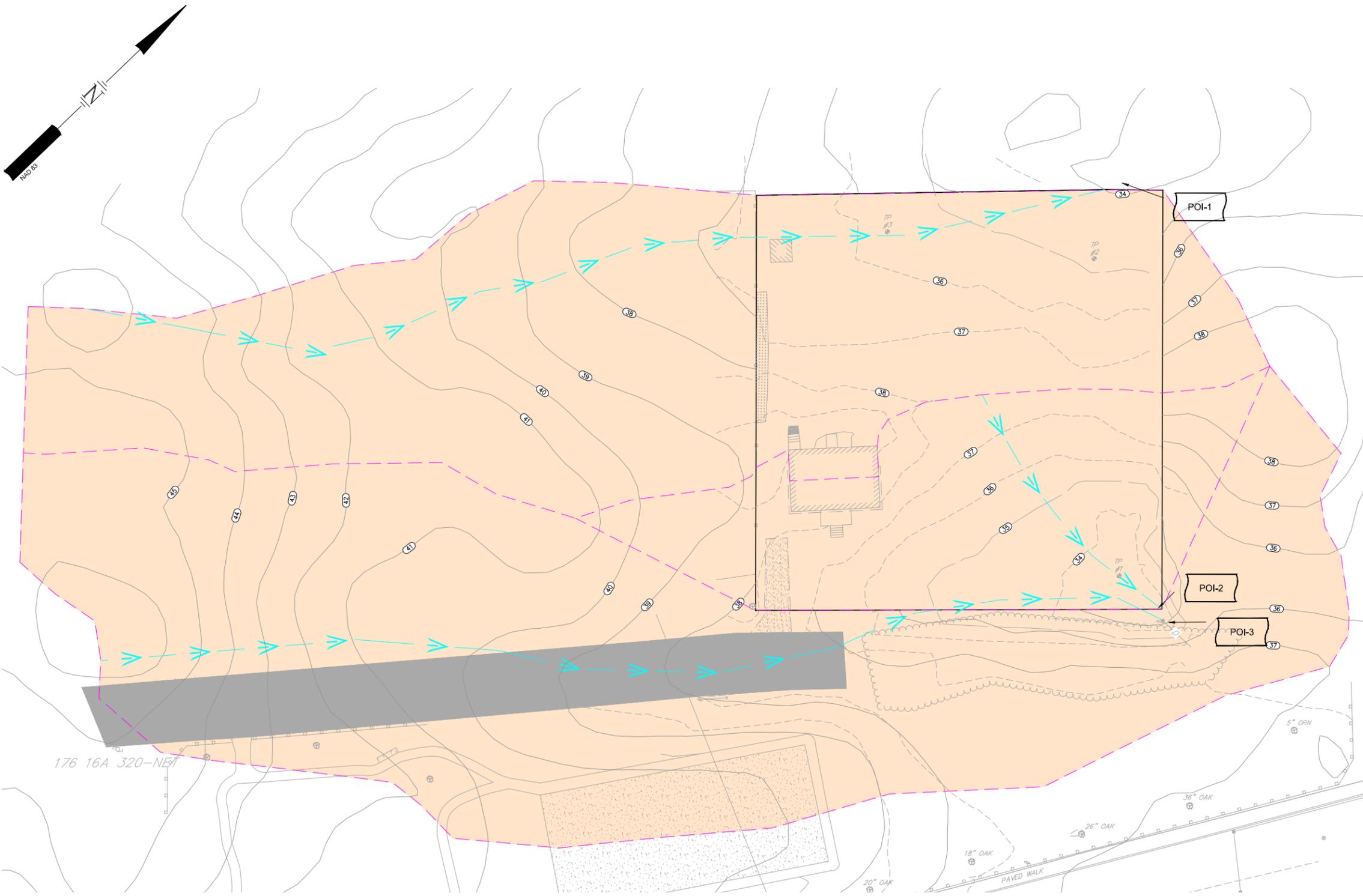


Jack McTigue, PE
Project Manager

JJM/crr

**APPENDIX A – PRE-DEVELOPMENT DRAINAGE
MAP**

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LEGEND	
	PROPERTY LINE
	LIMITS OF DRAINAGE SUBCATCHMENT
	SOIL GROUP BREAKLINE
	FLOW PATH (TO LINE)
	REACH
	POINT OF INTEREST
	SUBCATCHMENT AREA
	POND, CULVERT, OR CATCH BASIN
	REACH

LEGEND	
	HYDROLOGIC SOIL GROUP A
	HYDROLOGIC SOIL GROUP B
	HYDROLOGIC SOIL GROUP C
	HYDROLOGIC SOIL GROUP D
	IMPERVIOUS COVER
	OPEN WATER FEATURE

SOIL PHASE LEGEND (PERCENT)					
A	B	C	D	E	F
0-3	3-8	8-15	15-25	25-50	50+

SOIL LEGEND (PER USDA NRCS WEB SOIL SURVEY)			
SYMBOL	DESCRIPTION	HYDROLOGIC SOIL GROUP	DRAINAGE CLASS
799	URBAN LAND-CANTON COMPLEX, 3 TO 15% SLOPES	A	WELL DRAINED

SITE DEVELOPMENT PLANS

TAX MAP 162 LOT 16
PRE-DEVELOPMENT HYDROLOGIC SOIL GROUP PLAN
PROPOSED 2 LOT SUBDIVISION
77 MEREDITH WAY
 OWNED BY
RANDI & JEFF COLLINS
 PREPARED FOR
RANDI & JEFF COLLINS
1"=40' (11"X17")
SCALE: 1"=20' (22"X34') **JULY 1, 2022**

	Seacoast Division		170 Commerce Way, Suite 102 Portsmouth, NH 03801 Phone (603) 431-2222 Fax (603) 431-0910 www.tfmoran.com			
	Civil Engineers Structural Engineers Traffic Engineers Land Surveyors Landscape Architects Scientists					
FILE	47442-00	DR CK	FB BRR	CADFILE	47442-00 PRE DRAINAGE MAP	HSG-01

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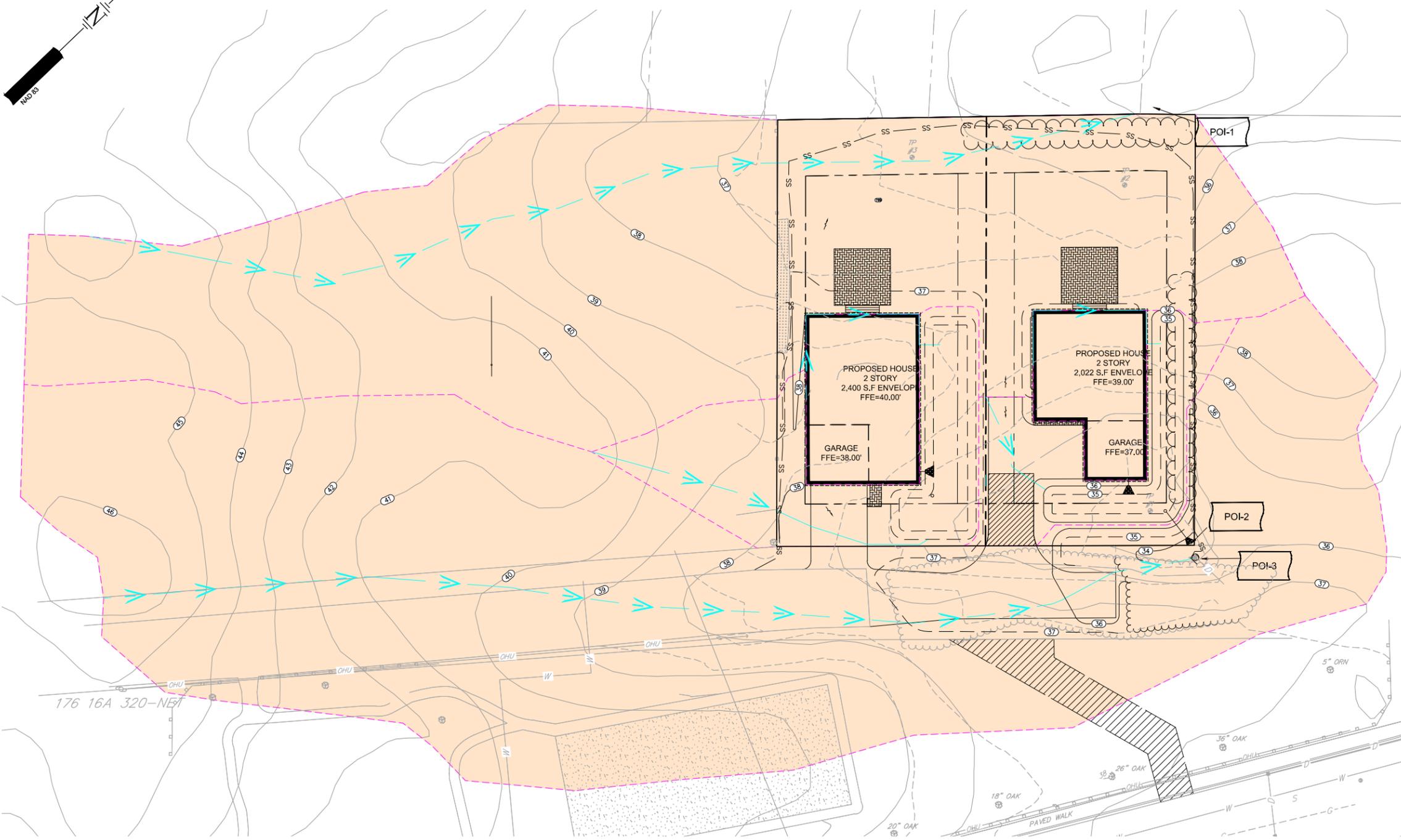
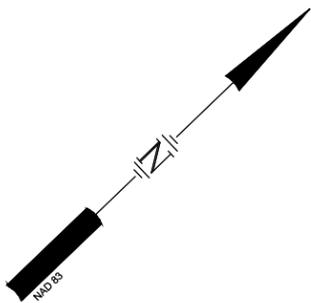
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REV	DATE	DESCRIPTION	DR	CK

APPENDIX B – POST DEVELOPMENT DRAINAGE
MAP

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LEGEND

- PROPERTY LINE
- LIMITS OF DRAINAGE SUBCATCHMENT
- SOIL GROUP BREAKLINE
- FLOW PATH (TO LINE)
- REACH
- POINT OF INTEREST
- SUBCATCHMENT AREA
- POND, CULVERT, OR CATCH BASIN
- REACH

LEGEND

- HYDROLOGIC SOIL GROUP A
- HYDROLOGIC SOIL GROUP B
- HYDROLOGIC SOIL GROUP C
- HYDROLOGIC SOIL GROUP D
- IMPERVIOUS COVER
- OPEN WATER FEATURE

SOIL PHASE LEGEND (PERCENT)

A	B	C	D	E	F
0-3	3-8	8-15	15-25	25-50	50+

SOIL LEGEND (PER USDA NRCS WEB SOIL SURVEY)

SYMBOL	DESCRIPTION	HYDROLOGIC SOIL GROUP	DRAINAGE CLASS
799	URBAN LAND-CANTON COMPLEX, 3 TO 15% SLOPES	A	WELL DRAINED

SITE DEVELOPMENT PLANS
 TAX MAP 162 LOT 16
POST-DEVELOPMENT HYDROLOGIC SOIL GROUP PLAN
PROPOSED 2 LOT SUBDIVISION
77 MEREDITH WAY
 OWNED BY
RANDI & JEFF COLLINS
 PREPARED FOR
RANDI & JEFF COLLINS
1"=40' (11"X17")
SCALE: 1"=20' (22"X34') **JULY 1, 2022**

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REV	DATE	DESCRIPTION	DR	CK

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FILE 47442-00 DR: BMK FB: -
 CK: BRR CADFILE 47442-00 POST DRAINAGE MAP HSG-02

Sep 19, 2022 - 4:55pm
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**APPENDIX C – HYDROCAD ANALYSIS FOR 1”
STORM EVENT**

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47442-00_Drainage-C SOILS-Small Pond C

Type III 24-hr 1-inch Rainfall=1.00"

Prepared by {enter your company name here}

Printed 9/20/2022

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Page 1

Summary for Pond RG-01: Rain Garden 1

Inflow Area = 0.180 ac, 38.46% Impervious, Inflow Depth = 0.26" for 1-inch event
 Inflow = 0.0 cfs @ 12.09 hrs, Volume= 0.004 af
 Outflow = 0.0 cfs @ 12.09 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.0 min
 Discarded = 0.0 cfs @ 12.09 hrs, Volume= 0.004 af
 Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach 5R : Front Lawn

Routing by Dyn-Stor-Ind method, Time Span= 0.00-100.00 hrs, dt= 0.05 hrs
 Peak Elev= 34.33' @ 12.10 hrs Surf.Area= 972 sf Storage= 0 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 0.0 min (807.7 - 807.7)

Volume	Invert	Avail.Storage	Storage Description
#1	36.33'	1,388 cf	Pond Storage (Irregular) Listed below (Recalc) -Impervious
#2	35.33'	194 cf	Filter Media (Irregular) Listed below (Recalc) -Impervious 972 cf Overall x 20.0% Voids
#3	34.33'	389 cf	Gravel & Pea Gravel (Irregular) Listed below (Recalc) 972 cf Overall x 40.0% Voids
		1,971 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
36.33	972	177.0	0	0	972
37.33	1,566	201.0	1,257	1,257	1,718
37.41	1,700	210.0	131	1,388	2,013

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
35.33	972	177.0	0	0	972
36.33	972	177.0	972	972	1,149

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
34.33	972	177.0	0	0	972
35.33	972	177.0	972	972	1,149

Device	Routing	Invert	Outlet Devices
#1	Discarded	34.33'	3.500 in/hr Exfiltration over Surface area
#2	Secondary	37.40'	80.0' long x 2.0' 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 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

47442-00_Drainage-C SOILS-Small Pond C

Type III 24-hr 1-inch Rainfall=1.00"

Prepared by {enter your company name here}

Printed 9/20/2022

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Page 2

Discarded OutFlow Max=0.1 cfs @ 12.09 hrs HW=34.33' (Free Discharge)

↳ **1=Exfiltration** (Exfiltration Controls 0.1 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=34.33' TW=37.40' (Dynamic Tailwater)

↳ **2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond RG-02: Rain Garden 2

Inflow Area = 0.306 ac, 46.57% Impervious, Inflow Depth = 0.15" for 1-inch event
 Inflow = 0.0 cfs @ 12.10 hrs, Volume= 0.004 af
 Outflow = 0.0 cfs @ 12.05 hrs, Volume= 0.004 af, Atten= 87%, Lag= 0.0 min
 Discarded = 0.0 cfs @ 12.05 hrs, Volume= 0.004 af
 Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link PPOI2 : PPOI2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-100.00 hrs, dt= 0.05 hrs
 Peak Elev= 31.70' @ 12.88 hrs Surf.Area= 620 sf Storage= 49 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 61.5 min (877.4 - 815.8)

Volume	Invert	Avail.Storage	Storage Description
#1	35.00'	1,245 cf	Pond Storage (Irregular) Listed below (Recalc) -Impervious
#2	33.50'	186 cf	Filter Media (Irregular) Listed below (Recalc) -Impervious 930 cf Overall x 20.0% Voids
#3	31.50'	496 cf	Pea Stone (Irregular) Listed below (Recalc) 1,240 cf Overall x 40.0% Voids
		1,927 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
35.00	620	219.9	0	0	620
36.00	1,308	238.7	943	943	1,343
36.20	1,728	270.0	303	1,245	2,611

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
33.50	620	219.9	0	0	620
35.00	620	219.9	930	930	950

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
31.50	620	219.9	0	0	620
33.50	620	219.9	1,240	1,240	1,060

Device	Routing	Invert	Outlet Devices
#1	Primary	33.25'	4.0" Round Culvert L= 15.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 33.25' / 33.00' S= 0.0167 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.09 sf

47442-00_Drainage-C SOILS-Small Pond C

Type III 24-hr 1-inch Rainfall=1.00"

Prepared by {enter your company name here}

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#2	Discarded	31.50'	0.400 in/hr Exfiltration over Horizontal area		
#3	Device 1	35.80'	12.0" Horiz. Grate	C= 0.600	Limited to weir flow at low heads
#4	Device 1	35.08'	0.5" Vert. Orifice 2	C= 0.600	Limited to weir flow at low heads

Discarded OutFlow Max=0.0 cfs @ 12.05 hrs HW=31.56' (Free Discharge)

↑ **2=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=31.50' TW=0.00' (Dynamic Tailwater)

↑ **1=Culvert** (Controls 0.0 cfs)

↑ **3=Grate** (Controls 0.0 cfs)

↑ **4=Orifice 2** (Controls 0.0 cfs)

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