



October 6, 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 a letter dated October 5, 2022. The following materials are included in this revised submission:

- Updated Drainage 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, last revised October 6, 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:

October 5, 2022 Comments

1. POI-3 of Sheet C-04 will be corrected and amended to DPW satisfaction.

After discussing this with DPW, it was determined that the pipe from POI-2 was the pipe that needed to be removed. The pipe from POI-2 has been removed. Updated calculations are included.

2. A note will be added to sheet C-07 detailing easement turnaround area will be constructed with Heavy Duty Pavement.

Revised Note 10 on Sheet C-07, also added Note 8 to Sheet C-03, Note 15 to Sheet S-02 & Note 14 to Sheet S-03.





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3. Applicant will add an Easement Plan to the plan set (indicated as S3).

An Easement Plan has been added to the plan set, see Sheet S-03.

4. Prior to recordation the proposed easements in which the City is a party will be approved by the City Council.

Draft deeds will be provided for legal review prior to recording.

5. A note to sheet C-03 will be added to the plans stating that the proposed principal structures will be located in substantial compliance with siting depicted in the plan set.

Added Note 9 to Sheet C-03.

6. Raingarden detail shall reflect direction provided by Public Works at the 10-4-2022 Technical Advisory Committee meeting and be updated and resubmitted for approval by Public Works prior to consideration by the Planning Board.

Rain garden detail on Sheet C-08 has been revised removing the outlet pipe, it was confirmed that the stone for both raingardens had enough storage volume to hold a 1" storm event. Outlet structure was changed to a riser.

7. All runoff from the structures is to be directed towards the appropriate rain gardens.

Revised Note 10 on Sheet C-04.

8. A letter detailing plan changes and updates will be submitted with the plan resubmission.

Provided.

Additional Revisions since 9/20/2022 TAC submittal:

- 1. Sheet S-02 Subdivision Plan:
 - a. Added Turnaround Easement and Note 15.
 - b. Added Sewer Easement and Note 14
 - c. Added Plan Reference 4 (S-03 Easement Plan).

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.



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

October 6, 2022

Respectfully, **TFMoran, Inc.**

Brenda Kolbow, LLS

Bund Follow

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 DEFOSSES, 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

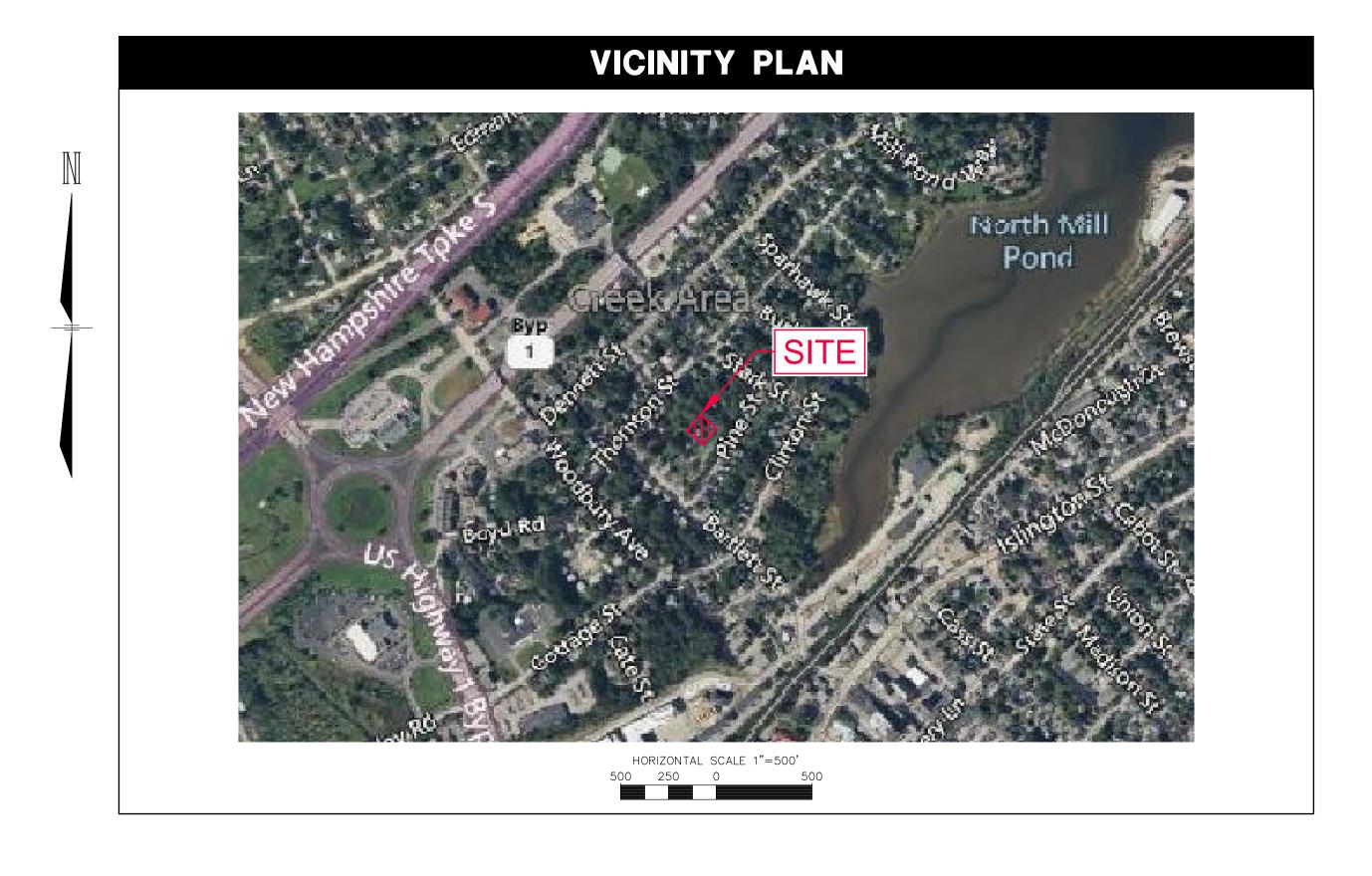
ATTORNEY
BOSEN & ASSOCIATES
266 MIDDLE STREET
PORTSMOUTH, NH 03801
603-427-5500
CHRISTOPHER P. MULLIGAN, ESQUIRE

R

PROPOSED 2 LOT SUBDIVISION

77 MEREDITH WAY
PORTSMOUTH, NEW HAMPSHIRE

JULY 1, 2022 LAST REVISED OCTOBER 6, 2022



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This plan is not effective unless signed by a duly authorized officer of



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

6	10/6/2022	REVISED PER TAC COMMENTS BM	K JCC
5	9/27/2022	REVISED LOT #'S BM	< JCC
4	9/20/2022	REVISED PER TAC COMMENTS JK	JCC
3	8/31/2022	REVISED PER TAC COMMENTS JK	JCC
2	8/23/2022	REVISED PER TAC COMMENTS JK	JCC
1	7/21/2022	REVISED PER TAC COMMENTS JKG	JCC
RFV	DATE	DESCRIPTION DA	CK

INDEX OF SHEETS

	INDEX OF CHEETO
SHEET	SHEET TITLE
C-00	COVER
C-01	NOTES & LEGEND
S-01	EXISTING CONDITIONS PLAN
S-02	SUBDIVISION PLAN
S-03	EASEMENT 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 (MAP 162 LOT 16) & 31.61' FOR PROPOSED LOT B
(MAP 162 LOT 16-1), WHERE 100' IS REQUIRED AND 31.7' EXISTS.

OWNER'S SIGNATURE

OWNER OR AUTHORIZED AGENT

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

APPROVED BY THE CITY OF PORTSMOUTH	PLANNING BOARD
W	
OARD MEMBER	AND
OARD MEMBER	

DATE

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

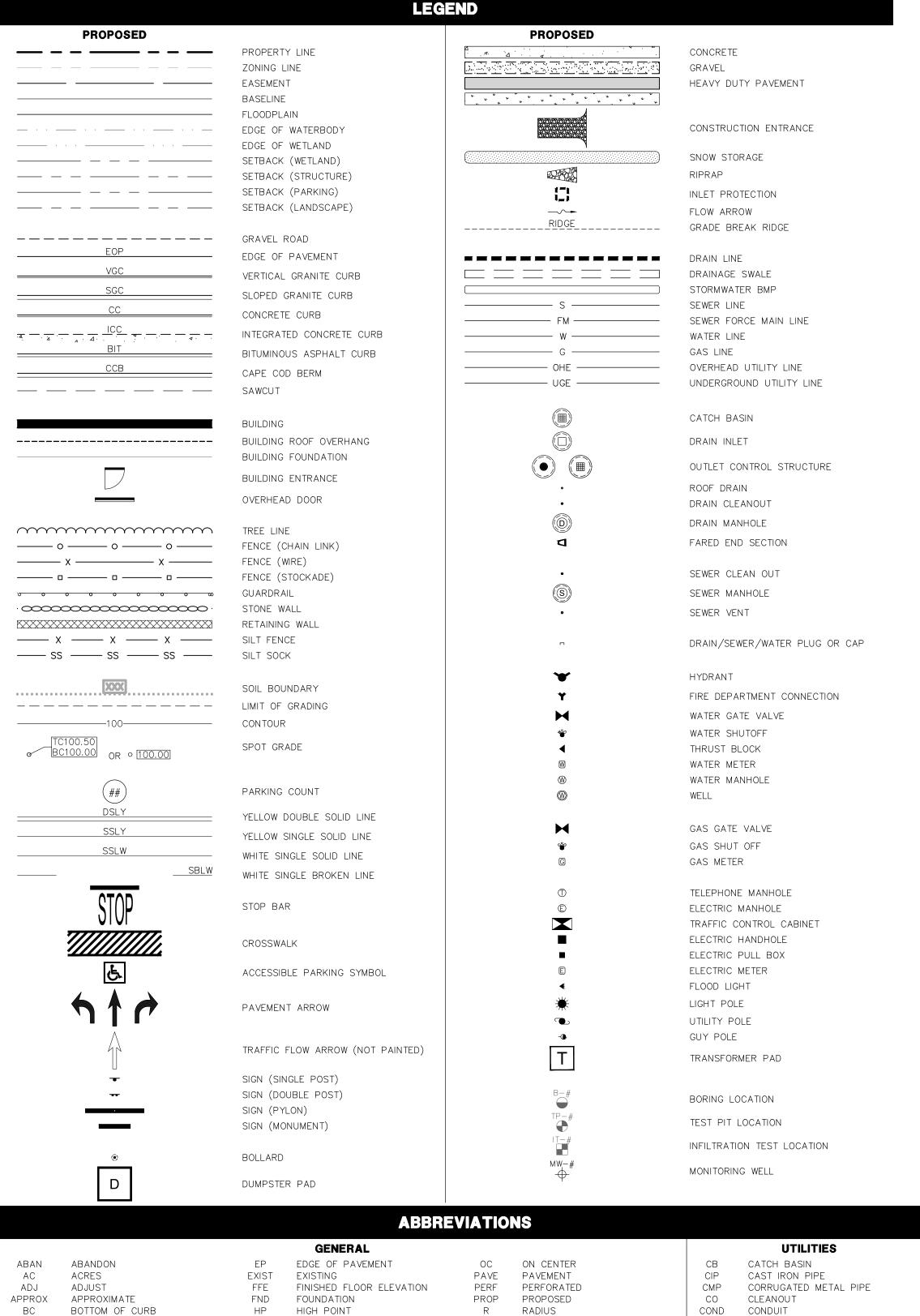
SCALE: AS SHOWN

JULY 1, 2022



Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects

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



GENERAL NOTES

- 1. THESE PLANS ARE PERMIT DRAWINGS ONLY AND HAVE NOT BEEN DETAILED FOR CONSTRUCTION OR BIDDING.
- 2. THESE PLANS WERE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. TFMORAN, INC. ASSUMES NO LIABILITY AS A RESULT OF ANY CHANGES OR NON-CONFORMANCE WITH THESE PLANS EXCEPT UPON THE WRITTEN APPROVAL OF THE
- 3. THE SITE LAYOUT PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF
- 4. 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.
- 5. 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.
- 6. 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 CONSTRUCTION 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.
- 7. SEE EXISTING CONDITIONS PLAN FOR THE HORIZONTAL AND VERTICAL DATUM.
- 8. SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION. VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION.
- 9. CONTACT EASEMENT OWNERS PRIOR TO COMMENCING ANY WORK WITHIN THE EASEMENTS.
- 10. PRIOR TO COMMENCING ANY SITE WORK, ALL LIMITS OF WORK SHALL BE CLEARLY MARKED IN THE FIELD.
- 11. 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
- 12. TFMORAN, INC. ASSUMES NO LIABILITY FOR WORK PERFORMED WITHOUT AN ACCEPTABLE PROGRAM OF TESTING AND INSPECTION AS APPROVED BY THE ENGINEER OF RECORD.
- 13. TEMPORARY FENCING SHALL BE PROVIDED AND COVERED WITH A FABRIC MATERIAL TO CONTROL DUST MITIGATION.
- 14. 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
- 15. 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.
- 16. IN THE EVENT OF A CONFLICT BETWEEN PLANS, SPECIFICATIONS, AND DETAILS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.

CLOSURES/OBSTRUCTIONS PER LOCAL/STATE/FEDERAL REGULATIONS.

- 17. IF CONDITIONS AT THE SITE ARE DIFFERENT THAN SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH THE AFFECTED WORK.
- 18. CONTRACTOR'S GENERAL RESPONSIBILITIES:
- A. 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.
- B. NOTIFY ENGINEER IN WRITING OF ANY DISCREPANCIES OF PROPOSED LAYOUT AND/OR EXISTING FEATURES.
- C. EMPLOY A LICENSED SURVEYOR TO DETERMINE ALL LINES AND GRADES AND LAYOUT OF SITE ELEMENTS AND BUILDINGS.
- D. 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.
- E. 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.
- F. MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY WORK AT ALL TIMES.
- G. 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.
- H. COORDINATE WITH ALL UTILITY COMPANIES AND CONTACT DIGSAFE (811 OR 888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.
- I. PROTECT NEW AND EXISTING BURIED UTILITIES DURING INSTALLATION OF ALL SITE ELEMENTS. DAMAGED UTILITIES SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL
- J. 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.
- K. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
- L. 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.
- M. PROVIDE AN AS-BUILT PLAN AT THE COMPLETION OF THE PROJECT TO THE PLANNING DIRECTOR AND PER CITY REGULATIONS.
- N. 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.
- O. 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

- 1. THE CONTRACTOR SHALL ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF NHDES ENV-WQ 1500 AS APPLICABLE.
- 2. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO SUBMIT AN eNOI AT LEAST 14
- DAYS IN ADVANCE OF ANY EARTHWORK ACTIVITIES AT THE SITE. 3. 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. 4. 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.
- 5. 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.
- 7. COORDINATE WITH MECHANICAL AND PLUMBING PLANS FOR ROOF DRAIN INFORMATION.
- 8. I IMITS OF WORK ARE SHOWN AS APPROXIMATE. THE CONTRACTOR SHALL COORDINATE ALL WORK TO PROVIDE SMOOTH TRANSITIONS. THIS INCLUDES GRADING AND PAVEMENT.
- 9. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS.
- 10. 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.
- 11. 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
- 12. 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.
- 13. NO FILL SHALL BE PLACED IN ANY WETLAND AREA.
- 14. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
- 15. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER, AND MULCH.
- 16. DENSITY REQUIREMENTS: MINIMUM DENSITY*
 - 95% BELOW PAVED OR CONCRETE AREAS
 - TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL 95% 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

- 1. LENGTH OF PIPE IS FOR CONVENIENCE ONLY. ACTUAL PIPE LENGTH SHALL BE DETERMINED
- 2. ALL PROPOSED UTILITY WORK, INCLUDING MATERIAL, INSTALLATION, TERMINATION, EXCAVATION, BEDDING, BACKFILL, COMPACTION, TESTING, CONNECTIONS, 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.
- 3. 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.
- 4. COORDINATE ALL WORK ADJACENT TO PROPOSED BUILDINGS WITH ARCHITECTURAL BUILDING DRAWINGS. CONFIRM UTILITY PENETRATIONS AND INVERT ELEVATIONS ARE COORDINATED PRIOR TO INSTALLATION.
- 5. 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.
- 6. THE EXACT LOCATION OF NEW UTILITY CONNECTIONS SHALL BE DETERMINED BY THE CONTRACTOR IN COORDINATION WITH UTILITY COMPANY, COUNTY AGENCY, AND/OR PRIVATE
- 7. 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
- 8. 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.

STANDARDS AND SPECIFICATIONS SHOWN HEREON.

9. 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

- 10. ON-SITE WATER DISTRIBUTION SHALL BE TO CITY OF PORTSMOUTH STANDARDS AND SPECIFICATIONS. WATER MAINS SHALL HAVE A MINIMUM OF 5.5' 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
- 11. THRUST BLOCKS SHALL BE PROVIDED AT ALL LOCATIONS WHERE WATER LINE CHANGES DIRECTIONS OR CONNECTS TO ANOTHER WATER LINE.
- 12. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONDUIT AND WIRING TO ALL SIGNS AND LIGHTS. CONDUIT TO BE A MINIMUM OF 24" BELOW FINISH GRADE.
- 13. ALL PROPOSED UTILITIES SHALL BE UNDERGROUND. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES.
- 14. THE CONTRACTOR SHALL ARRANGE AND PAY FOR ALL INSPECTIONS. TESTING, AND RELATED SERVICES AND SUBMIT COPIES OF ACCEPTANCE TO THE OWNER, UNLESS OTHERWISE
- 15. 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.
- 16. UNLESS OTHERWISE SPECIFIED, ALL UNDERGROUND STRUCTURES, PIPES, CHAMBERS, ETC. SHALL BE COVERED WITH A MINIMUM OF 18" OF COMPACTED SOIL BEFORE EXPOSURE TO
- 17. THE PROPERTY WILL BE SERVICED BY THE FOLLOWING:

DRAINAGE PRIVATE SEWER MUNICIPA WATER MUNICIPAL NOT AVAILABLE GAS

ELECTRIC **EVERSOURCE** CONSOLIDATED COMMUNICATIONS FKA FAIRPOINT COMMUNICATIONS TELEPHONE

CABLE COMCAST

SITE DEVELOPMENT PLANS

TAX MAP 162 LOT 16

NOTES & LEGEND PROPOSED 2 LOT SUBDIVISION

> 77 MEREDITH WAY OWNED BY

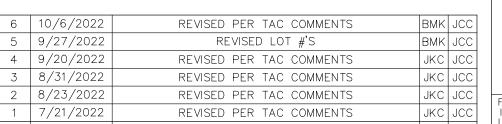
RANDI & JEFF COLLINS PREPARED FOR

RANDI & JEFF COLLINS

SCALE: NTS

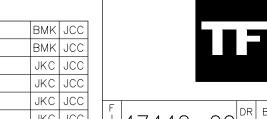
Seacoast Division

JULY 1, 2022



DESCRIPTION

REV DATE



DR CK

ivil Engineers Structural Engineers affic Engineers and Surveyors andscape Architects cientists

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

DR BMK FB 47442-00 CK CRR CADFILE 47442-00_NOTES & LEGEND





BITUMINOUS

BUII DING

CONCRETE

COORDINAT

DIAMETER

ELEVATION

48 Constitution Drive, Bedford, N.H. 03110

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BOOK & PAGE

BOTTOM OF SLOPE

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BOTTOM OF WALL

BEST MANAGEMENT PRACTICE

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BK/PG

BLDG

BMP

BW

CONC

COORD

ELEV

FMoran, Inc.

INVERT ELEVATION

INFILTRATION TEST

LANDSCAPE AREA

NOW OR FORMERLY

NOT TO SCALE

NEW HAMPSHIRE FISH & GAME

LENGTH

MAXIMUM

MINIMUM

LSA

MAX

N/F

NTS

LINEAR FEET

R&D

R&R

REM

RET

RIM

ROW

SW

TYP

UG

WCR

REMOVE AND DISPOSE

TEMPORARY BENCHMARK

ACCESSIBLE WHEELCHAIR RAMP

REMOVE AND RESET

RFMOVF

RETAIN

SLOPE

RIM ELEVATION

RIGHT OF WAY

SQUARE FEET

TOP OF CURB

TOP OF WALL

UNDERGROUND

SIDEWALK

TEST PIT

TYPICAL

WITH

DCB

DIP

DMH

F&C

F&G

FES

GT

HDPE

НН

HW

HYD

OCS

PVC

RCP

RD

SMH

SOS

DOUBLE CATCH BASIN

DUCTILE IRON PIPE

FRAME AND COVER

FRAME AND GRATE

FLARED END SECTION

HIGH DENSITY POLYETHYLENE PIPE

OUTLET CONTROL STRUCTURE

POLYVINYL CHLORIDE PIPE

SEDIMENT OIL SEPARATOR

REINFORCED CONCRETE PIPE

TAPPING SLEEVE, VALVE, AND BOX

DRAIN MANHOLF

GREASE TRAP

HANDHOLE

HEADWALL

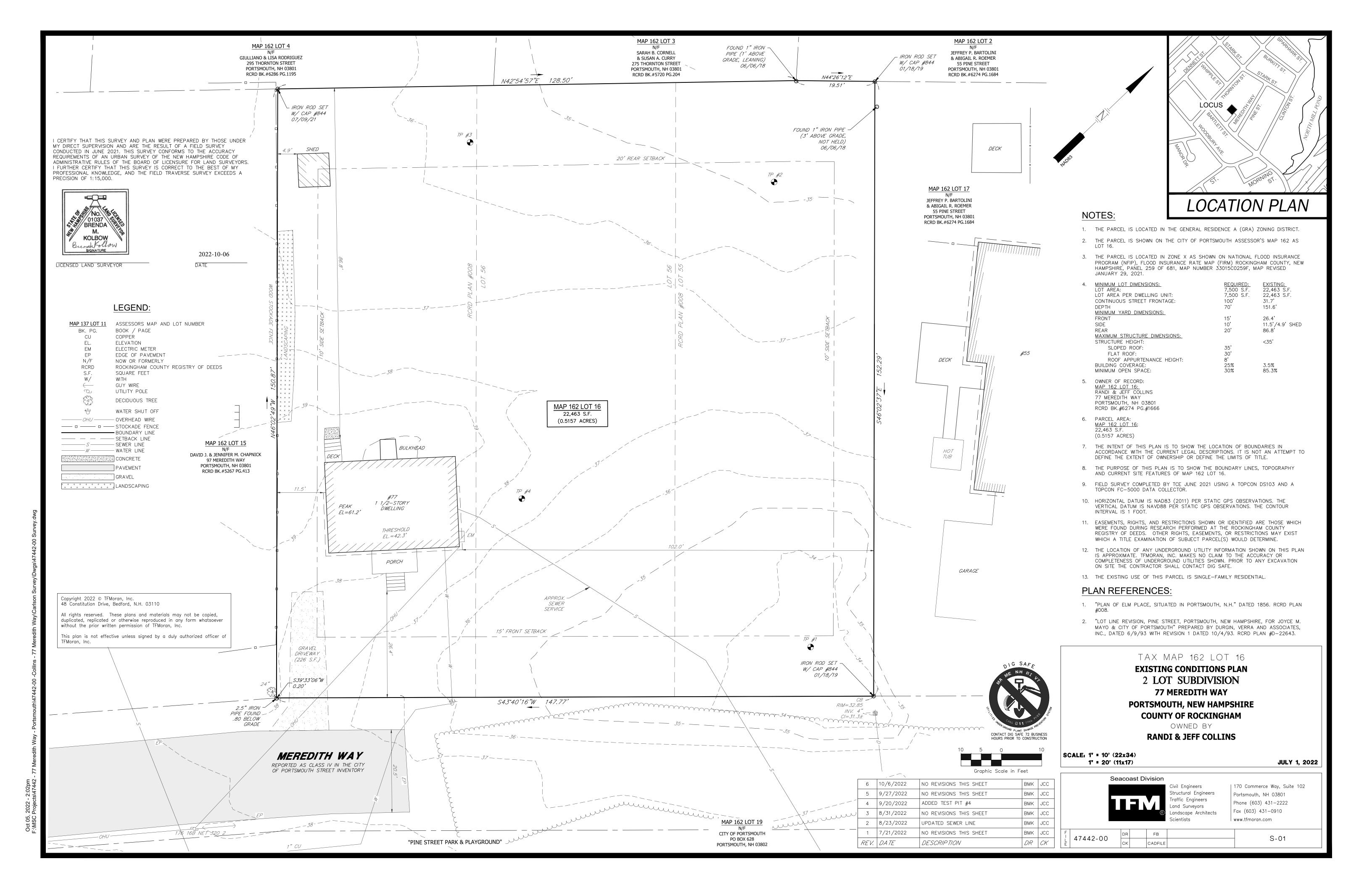
LIGHT POLE

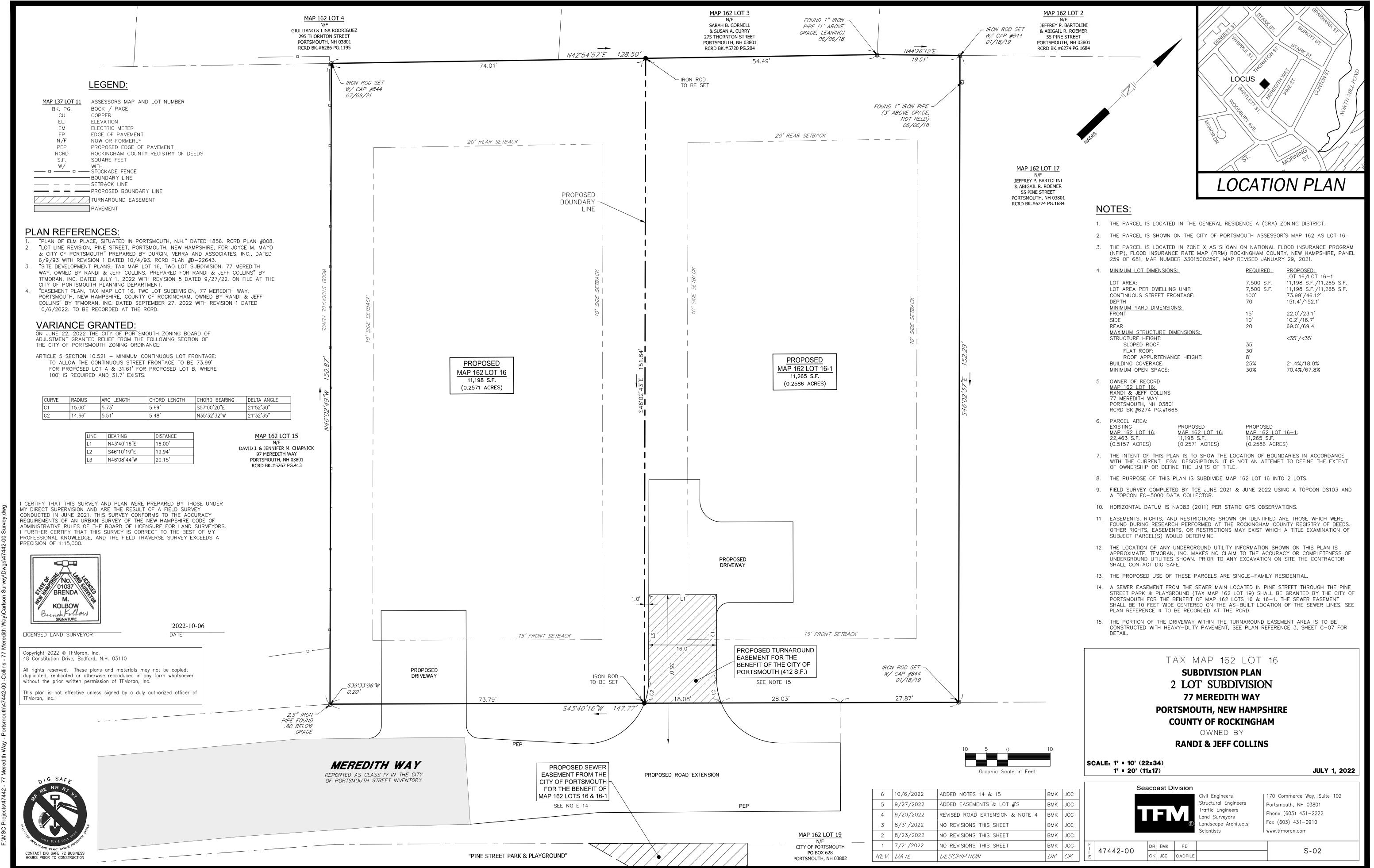
ROOF DRAIN

LITHITY POLE

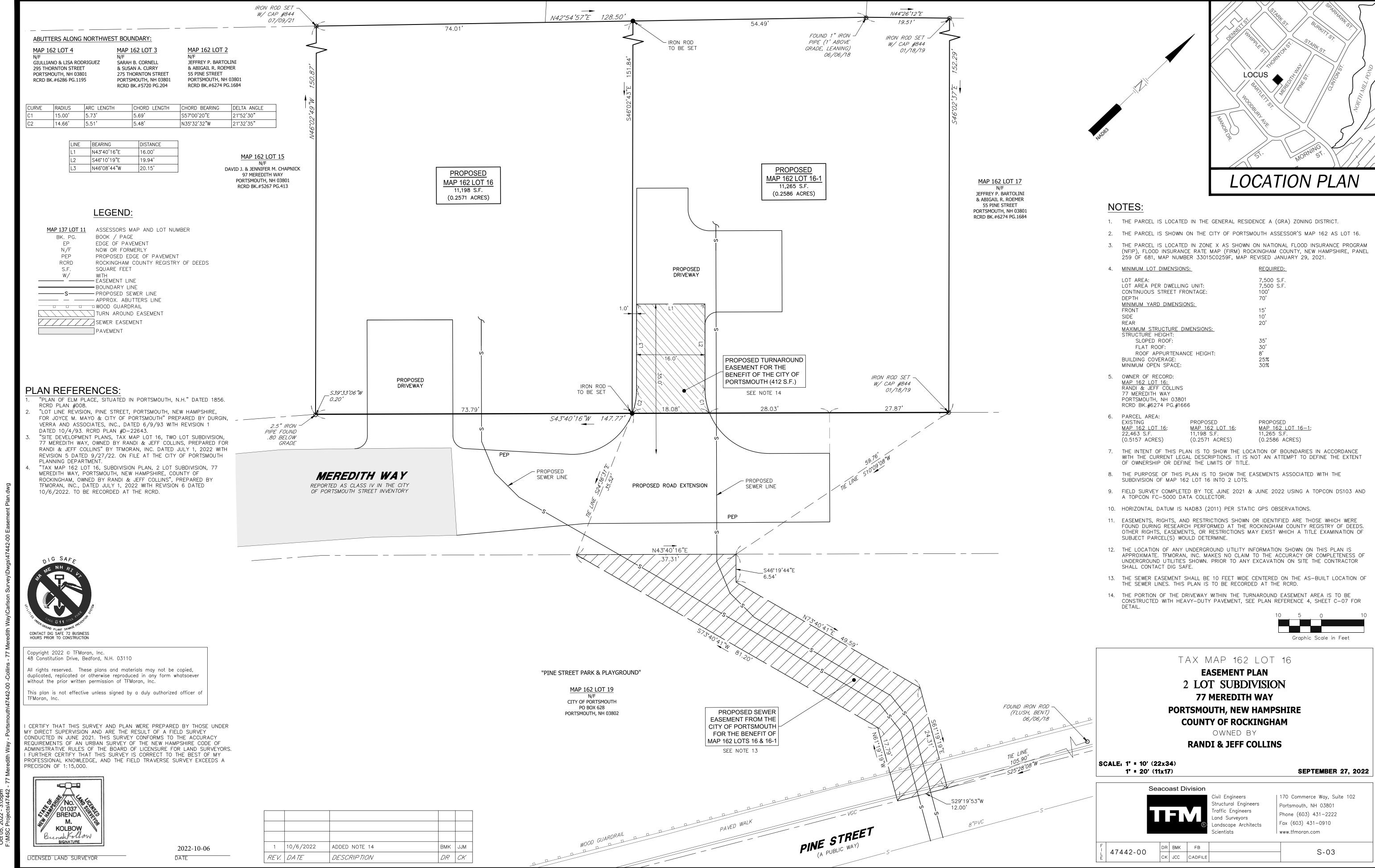
SEWER MANHOLE

HYDRANT

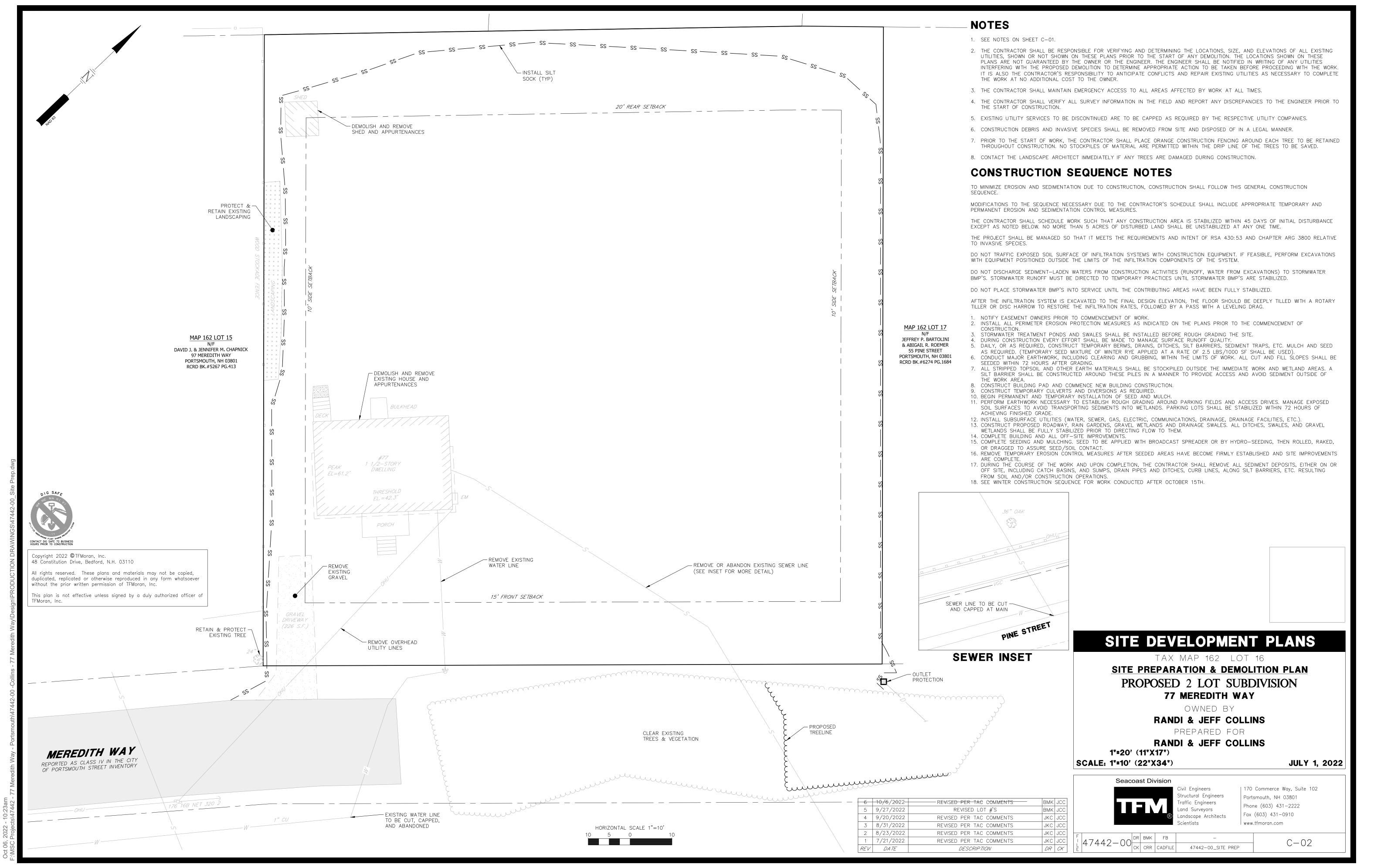


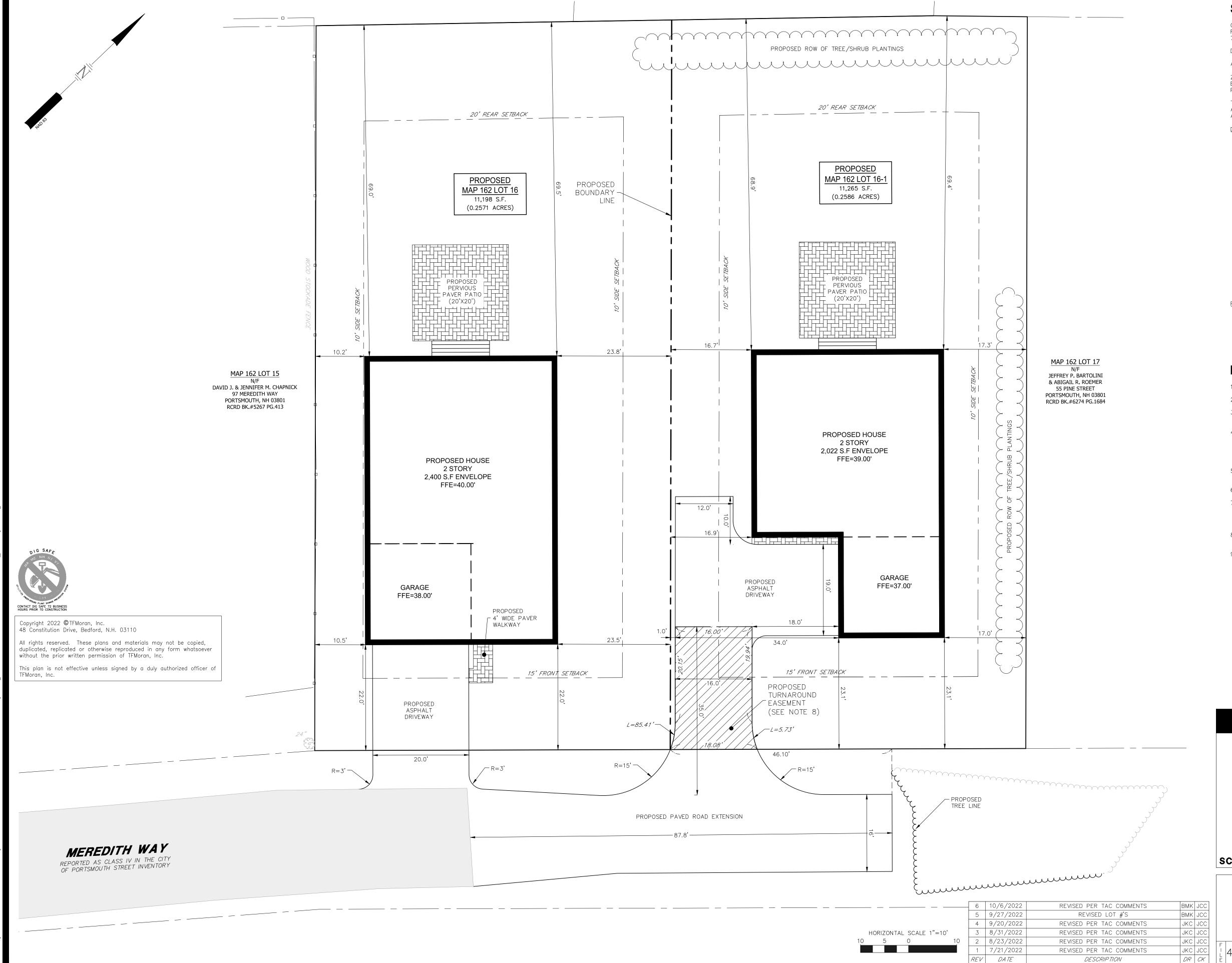


Oct 05, 2022 - 3:06pm



O+ 0F 2022 3:0Fpm





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 = $22,463\pm$ SF OR $0.5157\pm$ 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 SING 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 16:	LOT 16-1:
	MINIMUM LOT DIMENSIONS: LOT AREA LOT FRONTAGE DEPTH	7,500 SF 100 FT 70 FT	11,198 SF 73.99 FT 151.4 FT	11,265 SF 31.61 FT 152.1 FT
	MINIMUM YARD DIMENSIONS: FRONT SIDE REAR	15 FT 10 FT 20 FT	22.0 FT 10.2 FT 69.0 FT	23.1 FT 16.7 FT 68.9 FT
	MAXIMUM STRUCTURE DIMENSIONS: SLOPED ROOF FLAT ROOF ROOF APPURTENANCE HEIGHT BUILDING LOT COVERAGE	35 FT 30 FT 8 FT 25% (MAX)	<35 FT NA >8 FT 21.4%	<35 FT NA >8 FT 18.0%
	MINIMUM SETBACKS/BUFFER: BUILDING FRONT BUILDING SIDE BUILDING REAR	15 FT 10 FT 20 FT	15 FT 10 FT 20 FT	15 FT 10 FT 20 FT
	MINIMUM OPEN SPACE	30%	70.4%	67.8%
<u>PAR</u>	KING REQUIREMENTS			
	PARKING SPACES 1.3 SPACES/UNIT	2 SPACES	2 SPACES	2 SPACES

NOTES

- 1. SEE NOTES ON SHEET C-01.
- 2. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS NOTED OTHERWISE.
- 3. LIGHTING, SIGNAGE, LANDSCAPING, AND SCREENING SHALL MEET THE REQUIREMENTS OF THE PORTSMOUTH ZONING ORDINANCE AND SITE PLAN REGULATIONS.
- 4. 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.
- 5. ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.
- 6. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
- 7. 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.
- 8. THE PORTION OF THE DRIVEWAY WITHIN THE TURNAROUND EASEMENT AREA IS TO BE CONSTRUCTED WITH HEAVY-DUTY PAVEMENT, SEE SHEET C-07 FOR DETAIL.
- 9. THE PROPOSED PRINCIPAL STRUCTURES SHALL BE LOCATED IN SUBSTANTIAL COMPLIANCE WITH THE SITING AS SHOWN HEREON AND REQUIRED BY THE CITY OF PORTSMOUTH TECHNICAL ADVISORY COMMITTEE.

SITE DEVELOPMENT PLANS

TAX MAP 162 LOT 16

SITE LAYOUT 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")

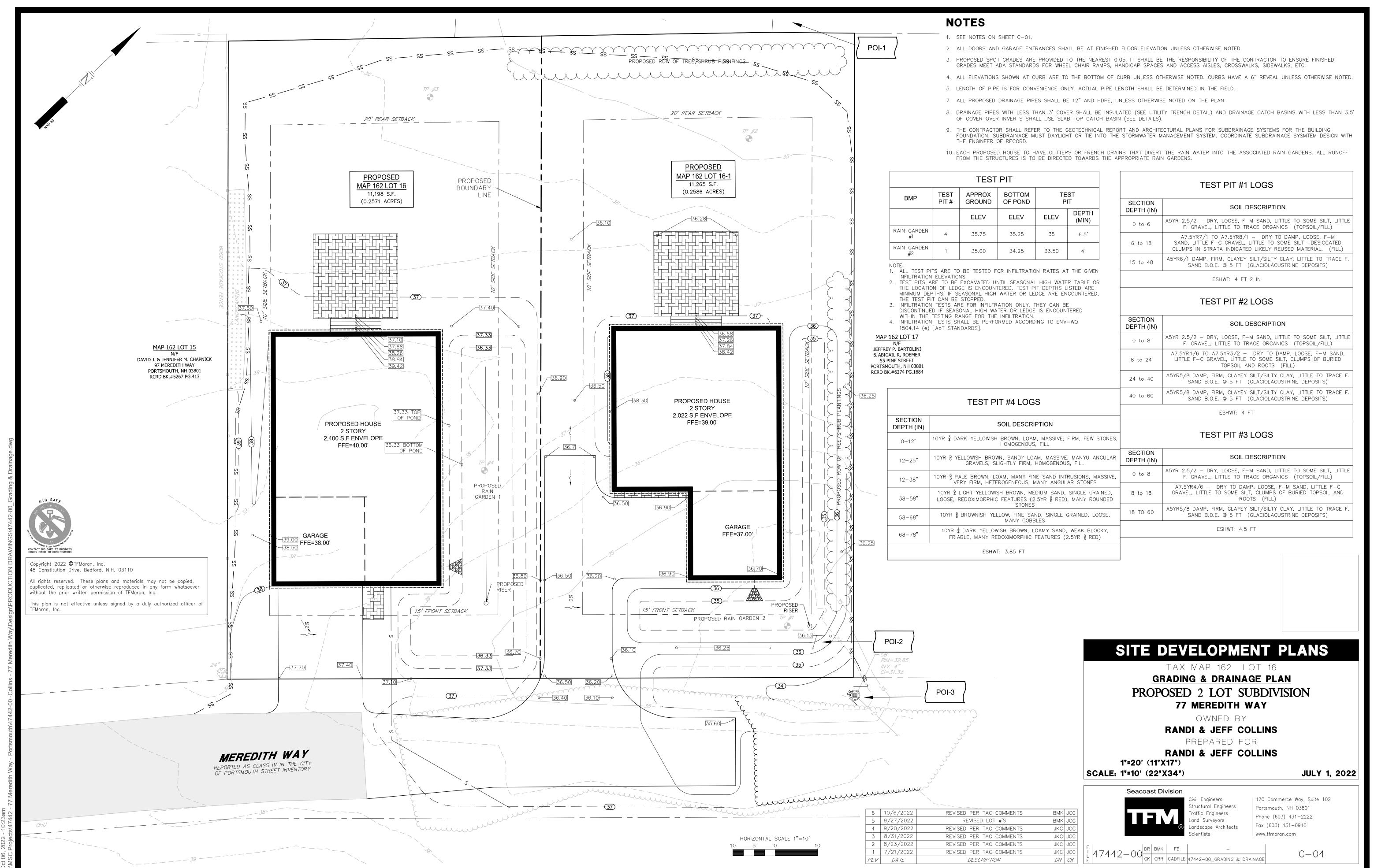
JULY 1, 2022

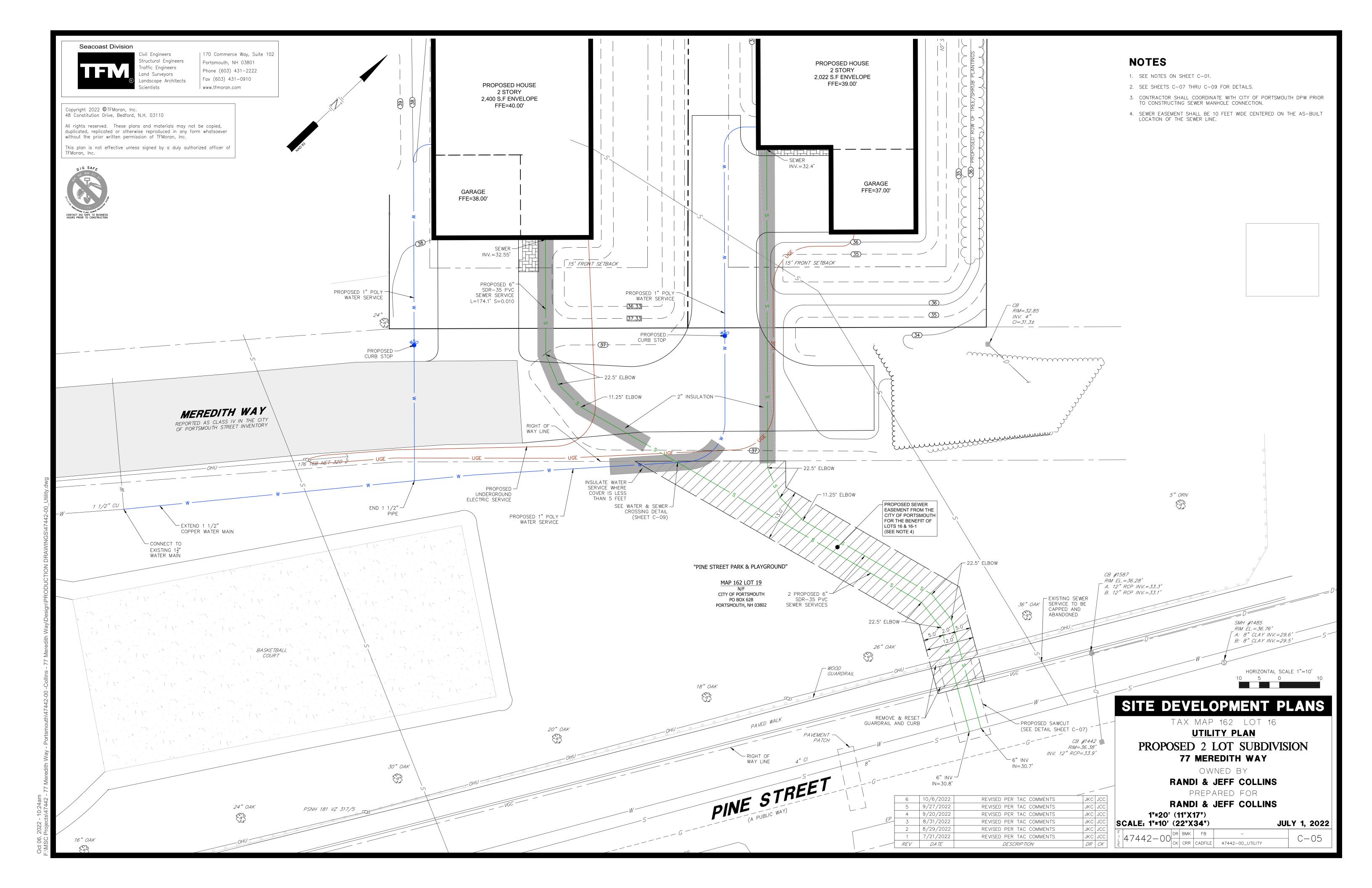


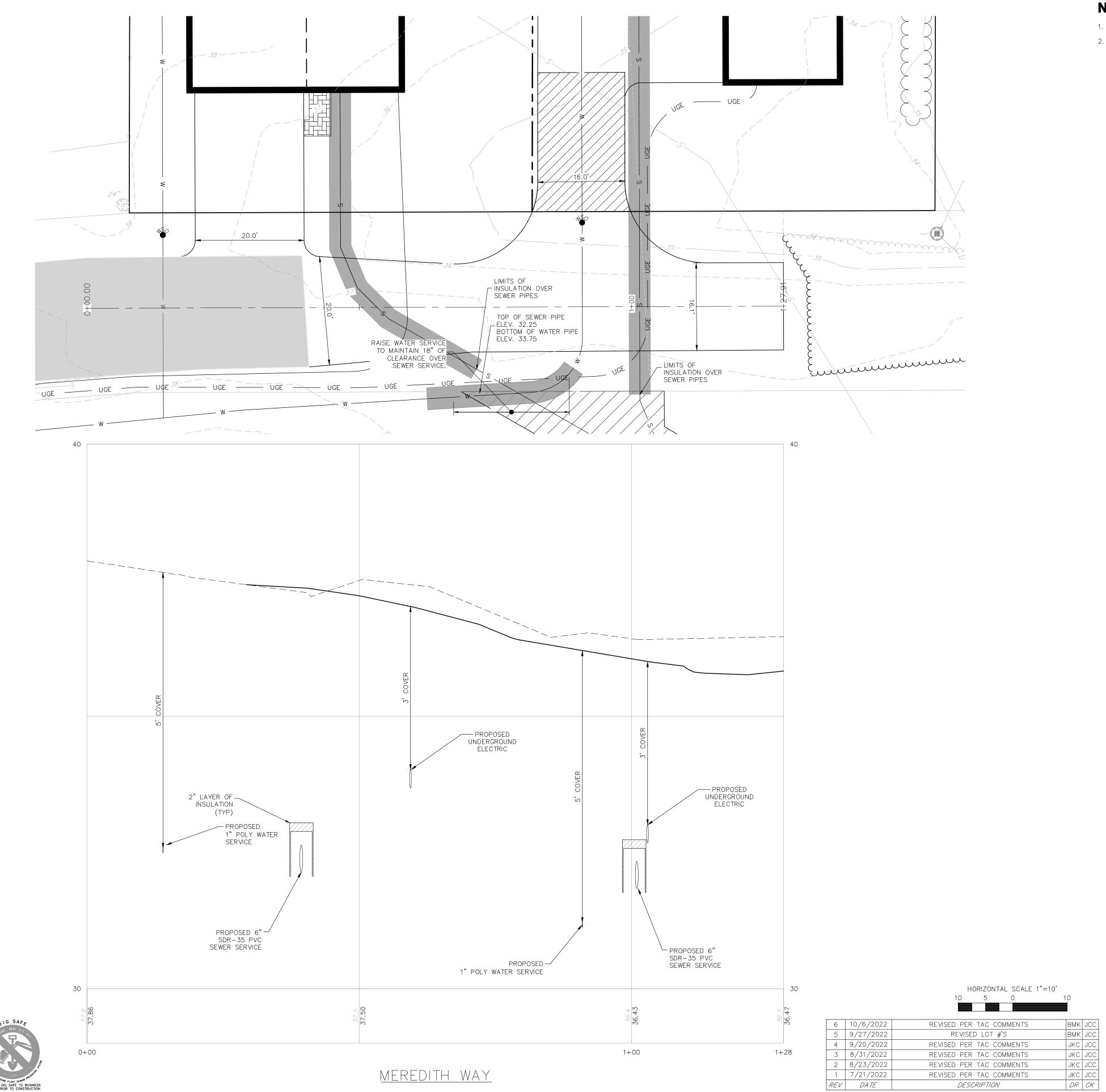
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

ers Portsmouth, NH 03801
Phone (603) 431-2222
ects Fax (603) 431-0910
www.tfmoran.com

47442-00 DR BMK FB - C-03







NOTES

1. SEE NOTES ON SHEET C-01.

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

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") SCALE: 1"=10' (22"X34")

JULY 1, 2022

Seacoast Division

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

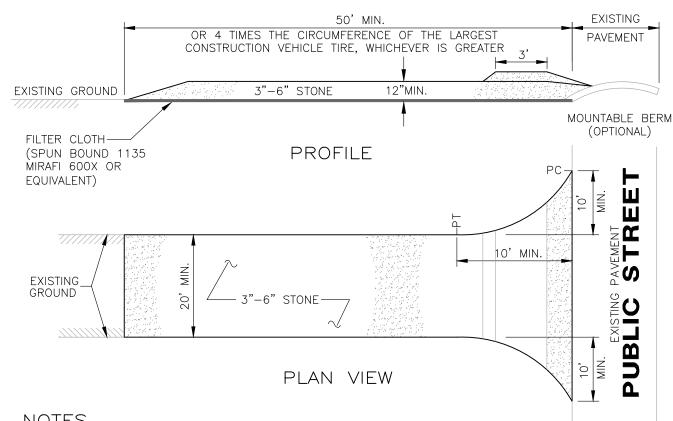
47442-00 DR BMK FB - CK CRR CADFILE 47442-00_ROAD PROFILE C - 06

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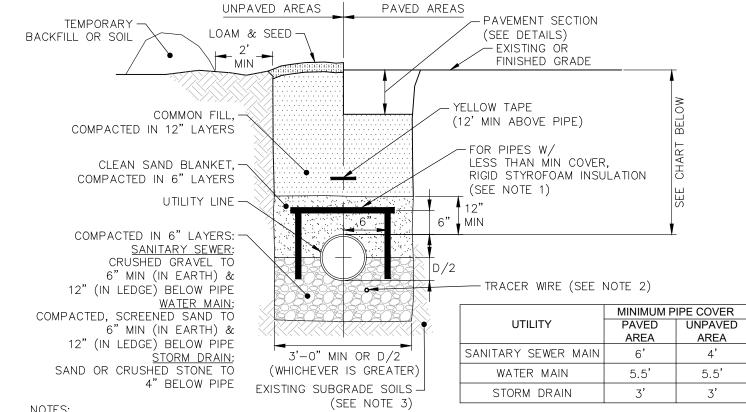




NOTES

- 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
- 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

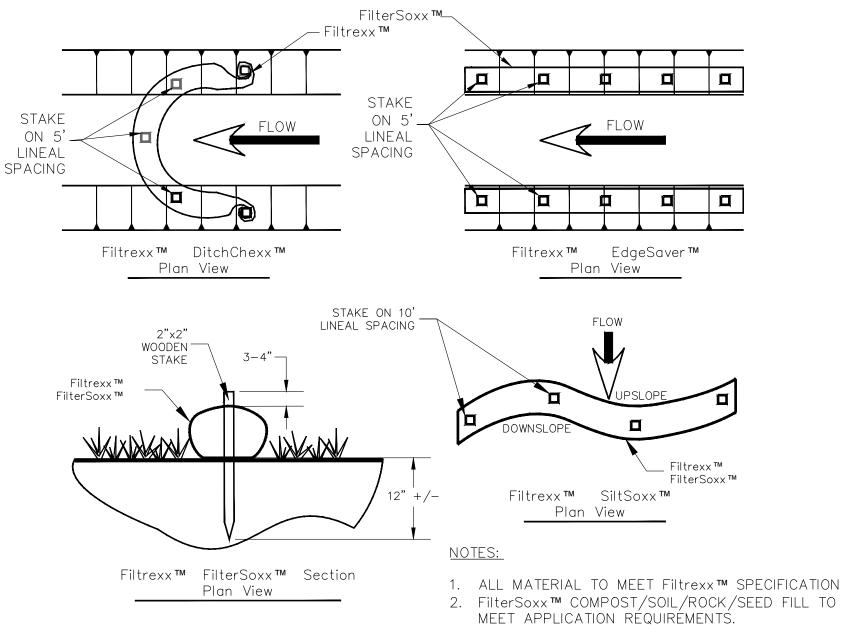


- 1. FOR TOP INSULATION, USE 2" THICK OF 2"X2"X8" RIGID STYROFOAM INSULATION (1 LAYER IF LESS THAN 5' COVER, 2 LAYERS IF GREATER THAN 5' COVER BUT LESS THAN 6' COVER). FOR SIDE INSULATION, USE 2" THICK OF 2"X2"X8" RIGID STYROFOAM INSULATION EXTENDING TO A MINIMUM DEPTH OF 5'
- 2. TRACER WIRE SPECIFIED 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 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



1. ALL MATERIAL TO MEET FILTREXX M SPECIFICATIONS

3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

4. SIZE OF SOCK TO BE PER MANUFACTURER'S SPECIFICATIONS

LOAM AREA PAVED AREA COMPACTED LOAM AND SEEDED. SEE NOTES 1 AND 2 SUITABLE BACKFILL 92% -CRUSHED GRAVEL COMPACTED AS SPECIFIED -GRAVEL 2" x 2' x 8' RIGID STYROFOAM INSULATION IF LESS THAN 4 FEET OF ROADWAY BACKFILL SHALL CONFORM COVER (SEE NOTE 3). TO STANDARD SPEC'S MARKING TAPE (TO AID IN THE LOCATING OF BURIED PIPÈ WITH METAL DETECTING 6" OF SAND EQUIPMENT) UNDISTURBED SOIL-CRUSHED STONE OR SCREENED GRAVEL BEDDING FOR FULL WIDTH OF THE PIPE 6" BELOW PIPE IN EARTH 12" BELOW PIPE IN LEDGE LEDGE OR D + 2'(WHICHEVER IS GREATER)

<u>NOTES</u>

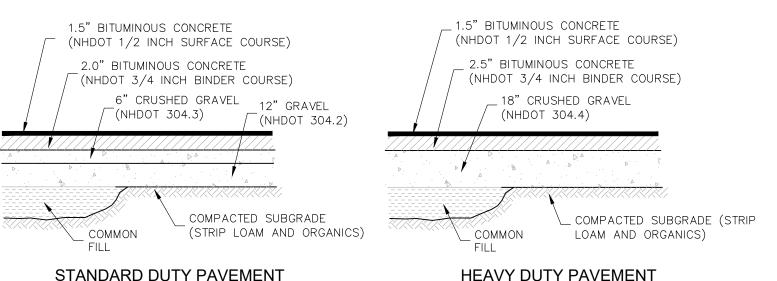
- 1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
- 2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPEC'S.
- 3. GAPS BETWEEN SECTIONS OF INSULATION TO BE COVERED WITH 2" x 2' x 2' PIECE OF INSULATION CENTERED OVER GAP.

SEWER TRENCH WITH INSULATION NOT TO SCALE

FILTREXX™ FILTERSOXX™ STAKING

NOT TO SCALE

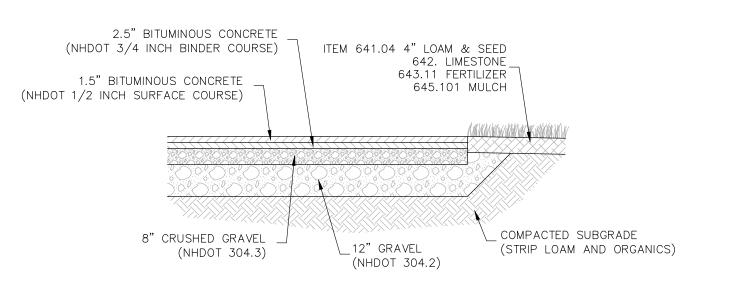
<u>NOTES</u>



STANDARD DUTY PAVEMENT

- 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 AND THE PORTION OF THE DRIVEWAY WITHIN THE TURNAROUND EASEMENT AREA.

PAVEMENT SECTIONS



NOT TO SCALE

REMOVE EXISTING PAVEMENT ---PROPOSED SAW CUT PAVEMENT APPLY EMULSIFIED ASPHALT -OVERLAY - EXISTING PAVEMENT _____ 3'-0" MINIMUM

PAVEMENT SAWCUT

NOT TO SCALE

6	10/6/2022	REVISED PER TAC COMMENTS	ВМК	JCC	
5	9/27/2022	REVISED LOT #'S	ВМК	JCC	
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	DA TE	DESCRIPTION	DR	CK	

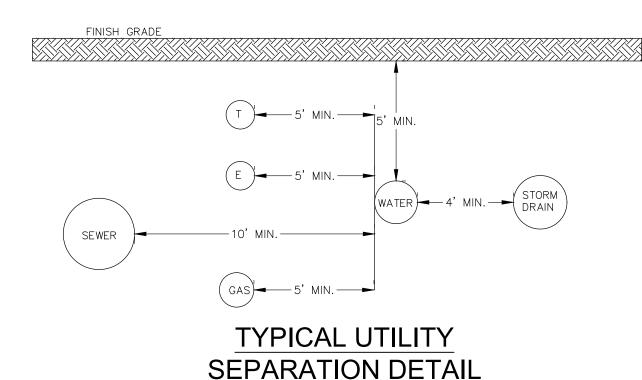
LOAM AREA PAVED AREA COMPACTED LOAM & SEEDED-SEE PAVEMENT SECTION CONTINUOUS PLASTIC WARNING TAPE -ELECTRIC CONDUITS COMPACTED COMMON FILL SAND BEDDING 4" PVC, SCH 40 4" MIN. COMMUNICATION CONDUIT MIN. UNDISTURBED SOIL -(TYP.)(TYP.) (TYP.)(TYP.)

NOTES

- 1. ELECTRIC SERVICE INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH FEDERAL, STATE AND
- 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



SITE DEVELOPMENT PLANS

TAX MAP 162 LOT 16

DETAILS

PROPOSED 2 LOT SUBDIVISION

77 MEREDITH WAY OWNED BY

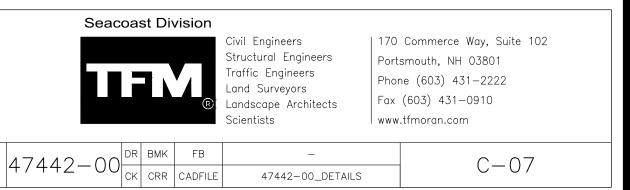
RANDI & JEFF COLLINS

PREPARED FOR

RANDI & JEFF COLLINS

1"=20' (11"X17")

SCALE: NTBO' (22"X34") JULY 1, 2022



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PAVEMENT SECTION/LOAM & SEED DETAIL

SEEDING

- 1. USE NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR MOIST SITES BY NEW ENGLAND WETLAND PLANTS, INC. OR EQUIVALENT.
- 2. SEED AT A RATE OF 1LB/1250SF. APPLY TO BARE SOIL. LIGHTLY MULCH WITH CLEAN WEED FREE STRAW.

RAIN GARDEN CONSTRUCTION

- CLEAR AND GRUB THE AREA WHERE THE RAIN GARDEN AREAS ARE TO BE LOCATED. STOCKPILE LOAM FOR REUSE ON SLOPES.
- 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
- 4. THE USDA TEXTURAL CLASSIFICATION OF THE SANDY SOIL SHALL BE LOAMY SAND OR SANDY LOAM.
- 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.
- 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.

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.
- 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.
- 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.
- 7. DO NOT MOW GARDEN.

AS NEEDED.

8. ONCE A YEAR, INSPECT BOTTOM OF RAIN GARDEN. MAINTAIN A 2-3" LAYER OF MULCH. REPLACE AS REQUIRED.

NEW PLANTS SHOULD BE THE NATIVE AND SAME OR EQUIVALENT VARIETY:

- 9. DURING INSPECTIONS, REMOVE ANY TRASH, ACCUMULATED DEBRIS OR SEDIMENT. 10. ONCE A YEAR INSPECT BERM FOR SETTLING. ADD COMPACTED SOIL AND REPLANT
- 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
- 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.

INFILTRATION FUNCTIONS, INCLUDING BUT NOT LIMITED TO REMOVAL OF

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*NOTE: >1.0' SEPARATION FROM BOTTOM OF FILTER LAYER TO ESHWT. RAIN GARDEN #2 IS NOT BEING ANALYZED FOR INFILTRATION.

NOT TO SCALE

35.00

33.50

31.50

35.92

TP-1

ELEV.

RG #1 | RG #2

36.33

35.33

34.33

*TEST PIT TP-4

37.2<u>5</u>

USED FOR ELEV. 33.33 ELEV. 29.85

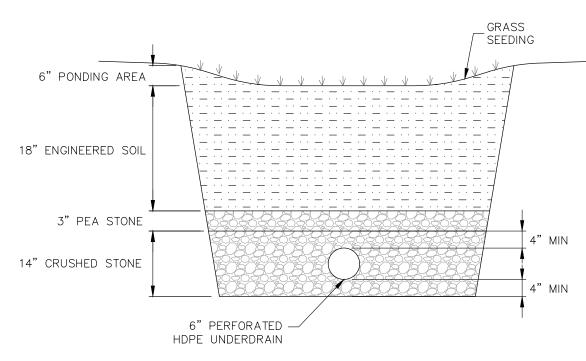
ENGINEERED SOIL MIX

- 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
- 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, CLODS, ROOTS, CLAY LUMPS, AND POCKETS OF COARSE SAND EXCEEDING 0.187 INCHES (4.76 MM) IN ANY DIMENSION.

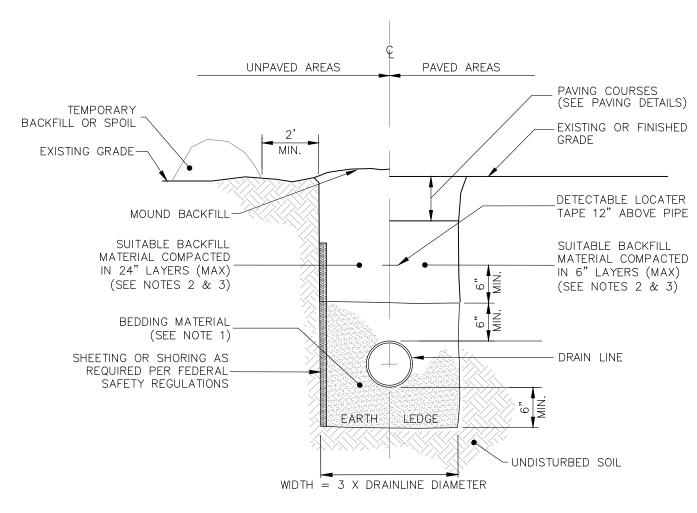
ENGINEERED SOIL MIX PARTICLE SIZE DISTRIBUTION (PSD)						
PSD UPPER LIMIT PSD LOWER LIMIT						
SIEVE #	% Passing	SIEVE % # PASSIN				
4	100	4	100			
10	95	10	95			
40	40	40	15			
200	20	200	15			
<200	5	<200	5			

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.



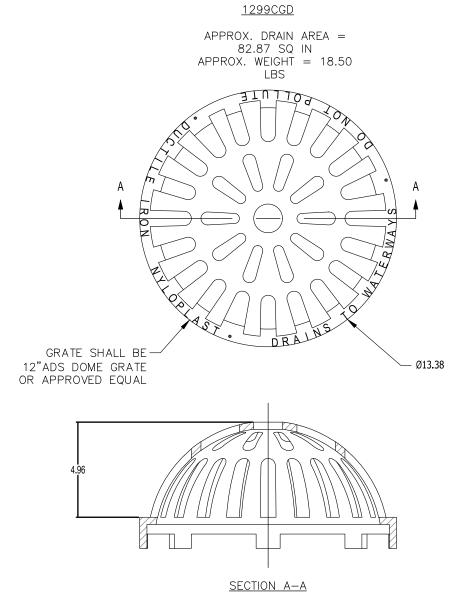
RAIN GARDEN TYPICAL SECTION



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
- 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.

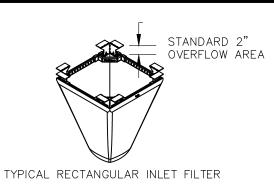
TRENCH FOR DRAIN LINE NOT TO SCALE

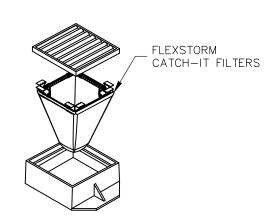


DIMENSIONS ARE FOR REFERENCE ONLY ACTUAL DIMENSIONS MAY VARY DIMENSIONS ARE IN INCHES QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05 PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT LOCKING DEVICE AVAILABLE UPON REQUEST

12" DOME GRATE

NOT TO SCALE





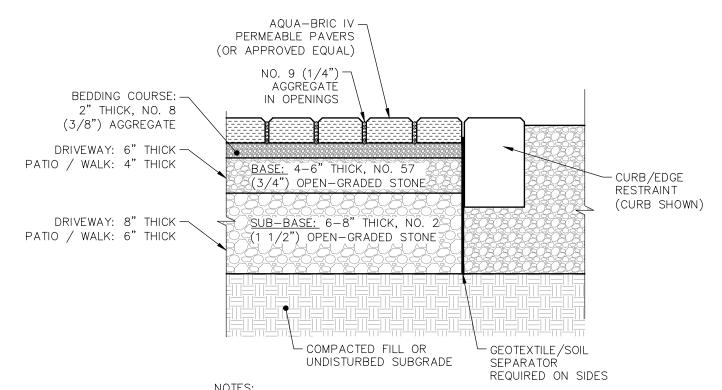
NOTES:

- 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.

PROFILE VIEW

- 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

SITE DEVELOPMENT PLANS

TAX MAP 162 LOT 16 **DETAILS**

PROPOSED 2 LOT SUBDIVISION

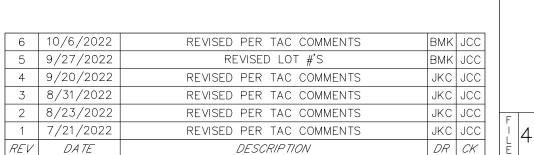
77 MEREDITH WAY

OWNED BY RANDI & JEFF COLLINS

PREPARED FOR RANDI & JEFF COLLINS

1"=20' (11"X17") SCALE: NTBO' (22"X34")

JULY 1, 2022





ivil Engineers Structural Engineers raffic Engineers and Surveyors andscape Architects cientists

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

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48 Constitution Drive, Bedford, N.H. 03110

ACCUMULATED SEDIMENTS.

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PIPE AND JOINT MATERIALS

A. PLASTIC SEWER PIPE 1. PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

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

*PVC: POLY VINYL CHLORIDE *ABS: ACRYLONITRILE-BUTADIENE-STYRENE

2. JOINTS SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL CONFORMING TO ASTM D-3212 AND SHALL BE PUSH-0N, 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.

B. DUCTILE-IRON PIPE, FITTINGS AND JOINTS.

1. 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. 2. 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

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)

A. 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.

B. 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.

C. DRY FLUORESCENE 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.

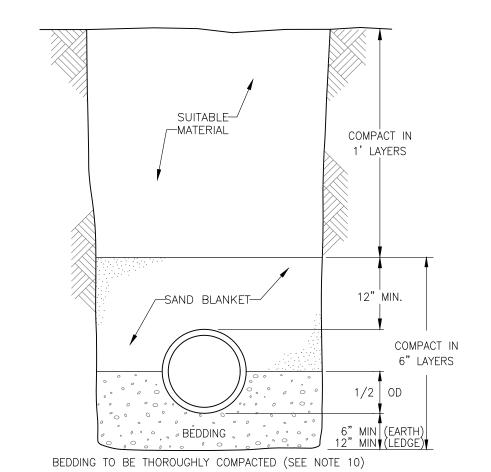
. BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATERIAL AND MEETING ASTM C33-67.

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.

2. 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.

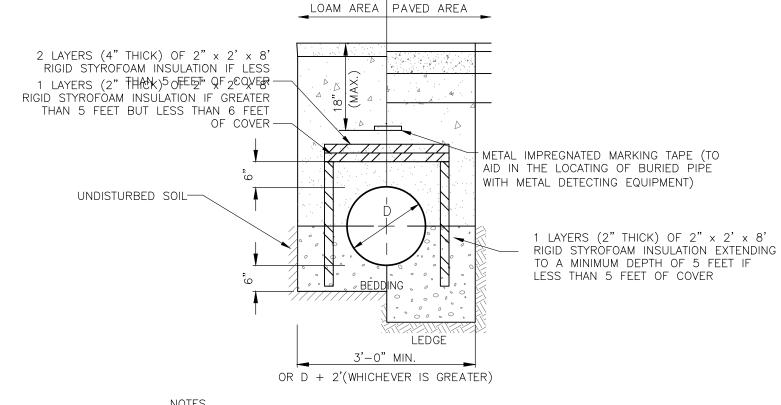


- FERROUS METAL ROD OR PIPE (SEE NOTE 11) 6" MIN ALL AROUND -SONOTUBE 6" MIN. TEE OR WYE 1/4 ID-6"MIN

BACKFILLING TO BE BROUGHT UP EVENLY ON ALL SIDES.

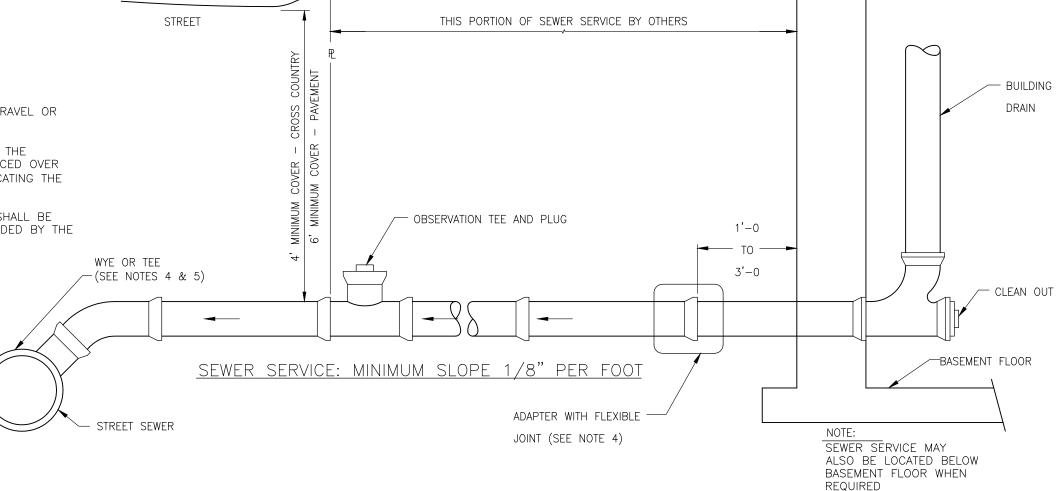
TRENCH CROSS-SECTION

CHIMNEY (SEE NOTE 12) NOT TO SCALE



1. GAPS BETWEEN SECTIONS OF INSULATION TO BE COVERED WITH 2" x 2' x 2' PIECE OF INSULATION CENTERED OVER GAP.

SEWER TRENCH WITH INSULATION

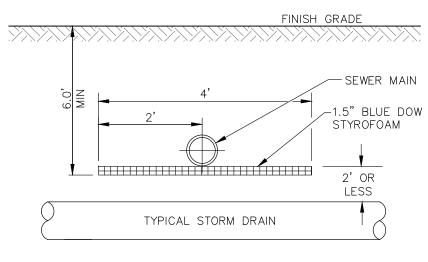


SEWER SERVICE DETAILS

-C.I. FRAME & COVER ⊂ 14"×14"×6" CONCRETE PAD 'RISER − 45° "Y" ∠SEE PLAN END CAP-FOR SIZE



TYPICAL STORM DRAIN LESS -1.5" BLUE DOW STYROFOAM SEWER MAIN



CONDITION I

CONDITION II

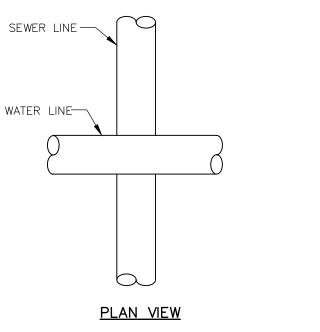
1. THE LENGTH OR WIDTH OF INSULATION SHALL EXTEND 1 STORM DRAIN PIPE DIAMETER BEYOND THE EDGE OF STORM DRAIN PIPE IN EACH DIRECTION OR A MINIMUM OF 2' BEYOND THE CENTERLINE OF THE STORM DRAIN PIPE, WHICHEVER IS GREATER.

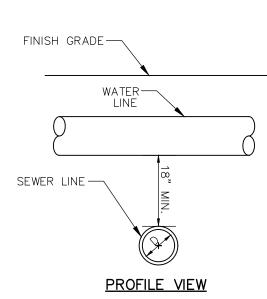
2. ALL BUTT JOINT SEAMS TO BE OVERLAPPED WITH A 1' PIECE OF INSULATION CENTERED OVER SEAM.

3. 18" VERTICAL CLEARANCE SHALL BE PROVIDED BETWEEN WATER MAIN/SERVICES AND SEWER MAIN/SERVICES, WATER OVER SEWER.

INSULATION AT STORM DRAIN & SEWER MAIN CROSSINGS

NOT TO SCALE





- 1. 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
- 2. PROTECTION OF WATER SUPPLIES:
- A. 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.
- B. 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.
- C. SEWERS SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN.
- D. 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.
- E. WHENEVER SEWERS MUST CROSS WATER MAINS, THE SEWER SHALL BE CONSTRUCTED AS FOLLOWS:
- a. VERTICAL SEPARATION OF THE SEWER AND WATER MAIN SHALL BE NOT LESS THAN 18 INCHES. WITH WATER ABOVE
- b. SEWER PIPE JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM THE WATER MAIN.

WATER & SEWER CROSSING

SITE DEVELOPMENT PLANS

TAX MAP 162 LOT 16

DETAILS

PROPOSED 2 LOT SUBDIVISION

77 MEREDITH WAY OWNED BY

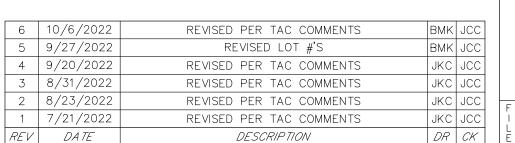
RANDI & JEFF COLLINS PREPARED FOR

RANDI & JEFF COLLINS

1"=20' (11"X17") | SCALE: **N**TBD' (22"X34")

Seacoast Division

JULY 1, 2022





ivil Engineers Structural Engineers Traffic Engineers Land Surveyors andscape Architects cientists

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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 Last Revised October 06, 2022

Prepared By:



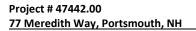
September 20, 2022

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77 Meredith Way, Portsmouth, NH	September 20, 2022
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3.0 – EXISTING SITE CONDITIONS	2
4.0 - PRE-DEVELOPMENT CONDITIONS	2
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September 20, 2022

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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, 25year 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	Northeast Regional Climate Center	Design Rainfall		
(year)				
	(in)	(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 <u>3</u> 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		DESIGN STORM				
INTEREST		2-year	10-year	25-year	50-year	
DOI 4	Pre	1.7	3.5	4.9	6.3	
POI-1	Post	1.2	2.5	3.5	4.5	
POI-2	Pre	0.3	0.7	1.0	1.3	
POI-2	Post	0.0	0.0	0.0	0.1	
DOL 2	Pre	0.8	0.8	0.9	0.9	
POI-3	Post	0.9	0.9	0.9	0.9	

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

	TABLE 3 – SURFACE WATER PEAK RUNOFF VOLUME COMPARISON (CF)					
POINT OF			DESIGN	STORM		
INTEREST		2-year	10-year	25-year	50-year	
DOL 4	Pre	4,680	9,319	13,257	17,062	
POI-1	Post	4,479	8,918	12,686	16,328	
DOL 2	Pre	1,234	2,527	3,637	4,716	
POI-2	Post	0	0	343	17,062 16,328	
POI-3	Pre	8,849	16,309	20,353	23,359	
FUI-3	Post	7,730	11,698	14,998	17,062 16,328 4,716 947 23,359	

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).

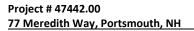
- POI 2 represents the southern portion of the property and the associated to discharge off-site (to Meredith Way). Comparing pre-development to post-development conditions shows that there is a decrease in the peak rate of runoff and volume for all storm events (2 through 50-year storms) from the site 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 and 50-year storm event, with a minor increase (0.1 cfs) in the 2, and 10-year storm events. The peak elevation of the pond area increases by 0.83 feet in the 2-year storm event down to 0.10 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

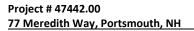
APPENDIX A – PRE-DEVELOPMENT DRAINAGE MAP



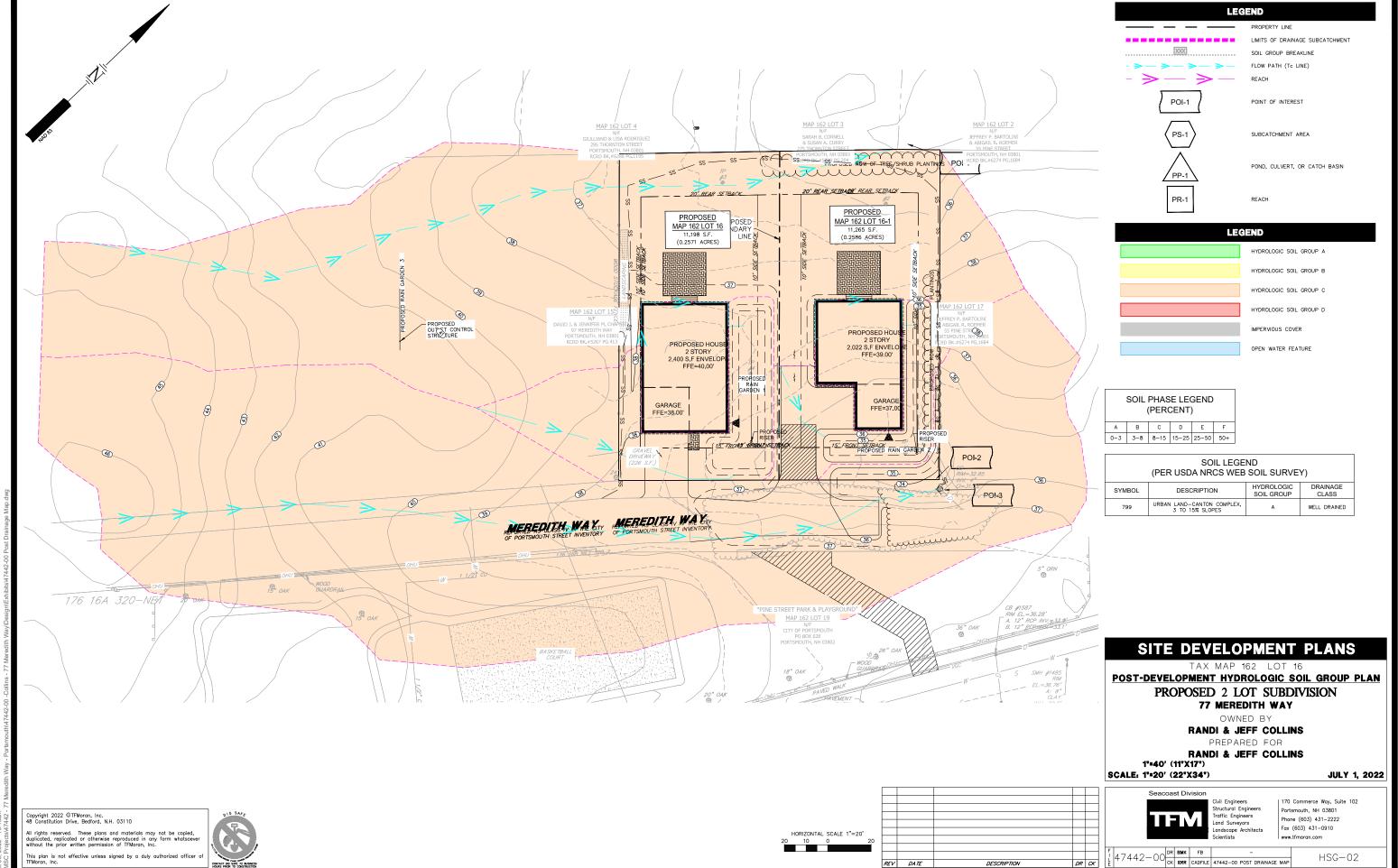
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APPENDIX B – POST DEVELOPMENT DRAINAGE MAP



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City of Portsmouth, New Hampshire Subdivision Application Checklist

This subdivision application checklist is a tool designed to assist the applicant in the planning process and for preparing the application for Planning Board review. A pre-application conference with a member of the planning department is strongly encouraged as additional project information may be required depending on the size and scope. The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all subdivision review requirements. Please refer to the Subdivision review regulations for full details.

Applicant Responsibilities (Section III.C): Applicable fees are due upon application submittal along with required number of copies of the Preliminary or final plat and supporting documents and studies. Please consult with Planning staff for submittal requirements.

Owner: Randi and Jeffrey Collins	Date Submitted: 8-16-2022
Applicant: Randi and Jeff Collins	
Phone Number: 7742788676	E-mail: jeffreycollins@yahoo.com
Site Address 1: 77 Meredith Way	Map: 162 Lot: 16
Site Address 2:	Map: <u>162</u> Lot: <u>16-1</u>

	Application Requirements					
Ø	Required Items for Submittal	Item Location (e.g. Page or Plan Sheet/Note #)	Waiver Requested			
~	Completed Application form. (III.C.2-3)	Viewpoint Cloud	N/A			
V	All application documents, plans, supporting documentation and other materials provided in digital Portable Document Format (PDF) on compact disc, DVD or flash drive. (III.C.4)	Attached to submittal	N/A			

Requirements for Preliminary/Final Plat				
Ø	Required Items for Submittal	Item Location (e.g. Page/line or Plan Sheet/Note #)	Required for Preliminary / Final Plat	Waiver Requested
V	Name and address of record owner, any option holders, descriptive name of subdivision, engineer and/or surveyor or name of person who prepared the plat. (Section IV.1/V.1)	SUBDIVISION PLAN PAGE1	☑ Preliminary Plat ☑ Final Plat	N/A

	Requirements for Pr	eliminary/Final Plat		
Ŋ	Required Items for Submittal	Item Location (e.g. Page/line or Plan Sheet/Note #)	Required for Preliminary / Final Plat	Waiver Requested
\	Preliminary Plat Names and addresses of all adjoining property owners. (Section IV.2) Final Plat Names and addresses of all abutting property owners, locations of buildings within one hundred (100) feet of the parcel, and any new house numbers within the subdivision. (Section V.2)	Subdivision plan page 2 existing conditions	☑ Preliminary Plat ☑ Final Plat	N/A
\	North point, date, and bar scale. (Section IV.3/V3)	Required on all Plan Sheets	☑ Preliminary Plat ☑ Final Plat	N/A
'	Zoning classification and minimum yard dimensions required. (Section IV.4/V.4)	Subdivision plan page 2 existing conditions	☑ Preliminary Plat ☑ Final Plat	N/A
	Preliminary Plat Scale (not to be smaller than one hundred (100) feet = 1 inch) and location map (at a scale of 1" = 1000'). (Section IV.5) Final Plat Scale (not to be smaller than 1"=100'), Location map (at a scale of 1"=1,000') showing the property being subdivided and its relation to the surrounding area within a radius of 2,000 feet. Said location map shall delineate all streets and other major physical features that my either affect or be affected by the proposed development. (Section V.5) Location and approximate dimensions of all existing and proposed property lines including	Subdivision plan page 2 existing conditions Subdivision plan page	✓ Preliminary Plat ✓ Final Plat ✓ Preliminary Plat ✓ Final Plat	N/A
	the entire area proposed to be subdivided, the areas of proposed lots, and any adjacent parcels in the same ownership. (Section IV.6)	3	EJ Filiai Piat	
	Dimensions and areas of all lots and any and all property to be dedicated or reserved for schools, parks, playgrounds, or other public purpose. Dimensions shall include radii and length of all arcs and calculated bearing for all straight lines. (Section V.6/ IV.7)	Subdivision plan page 3	☑ Preliminary Plat ☑ Final Plat	N/A
\	Location, names, and present widths of all adjacent streets, with a designation as to whether public or private and approximate location of existing utilities to be used. Curbs and sidewalks shall be shown. (Section IV.8/V.7)	Subdivision plan page 2 existing conditions	☑ Preliminary Plat ☑ Final Plat	

Requirements for Preliminary/Final Plat					
Ø	Required Items for Submittal	Item Location (e.g. Page/line or Plan Sheet/Note #)	Required for Preliminary / Final Plat	Waiver Requested	
\	Location of significant physical features, including bodies of water, watercourses, wetlands, railroads, important vegetation, stone walls and soils types that my influence the design of the subdivision. (Section IV.9/V.8)	Subdivision plan page 2 existing conditions	☑ Preliminary Plat ☑ Final Plat		
>	Preliminary Plat Proposed locations, widths and other dimensions of all new streets and utilities, including water mains, storm and sanitary sewer mains, catch basins and culverts, street lights, fire hydrants, sewerage pump stations, etc. (Section IV.10) Final Plat Proposed locations and profiles of all proposed streets and utilities, including water mains, storm and sanitary sewer mains, catchbasins and culverts, together with typical cross sections. Profiles shall be drawn to a horizontal scale of 1"=50' and a vertical scale of 1"=5', showing existing centerline grade, existing left and right sideline grades, and proposed centerline grade. (Section V.9)	Subdivision plan page 5 Site Layout plan and Page 8 Road plan profile	☑ Preliminary Plat ☑ Final Plat		
V	When required by the Board, the plat shall be accompanied by profiles of proposed street grades, including extensions for a reasonable distance beyond the subject land; also grades and sizes of proposed utilities. (Section IV.10)	Subdivision plan page 7 Utility plan and Page 8 Road plan profile	☑ Preliminary Plat ☑ Final Plat		
'	Base flood elevation (BFE) for subdivisions involving greater than five (5) acres or fifty (50) lots. (Section IV.11)	N/A	☑ Preliminary Plat ☑ Final Plat		
>	For subdivisions of five (5) lots or more, or at the discretion of the Board otherwise, the preliminary plat shall show contours at intervals no greater than two (2) feet. Contours shall be shown in dotted lines for existing natural surface and in solid lines for proposed final grade, together with the final grade elevations shown in figures at all lot corners. If existing grades are not to be changed, then the contours in these areas shall be solid lines. (Section IV.12/ V.12)	N/A	☑ Preliminary Plat ☑ Final Plat		

Requirements for Preliminary/Final Plat				
A	Required Items for Submittal	Item Location (e.g. Page/line or Plan Sheet/Note #)	Required for Preliminary / Final Plat	Waiver Requested
х	Dates and permit numbers of all necessary permits from governmental agencies from which approval is required by Federal or State law. (Section V.10)	N/A	☐ Preliminary Plat ☑ Final Plat	
х	For subdivisions involving greater than five (5) acres or fifty (50) lots, the final plat shall show hazard zones and shall include elevation data for flood hazard zones. (Section V.11)	N/A	☐ Preliminary Plat ☑ Final Plat	
х	Location of all permanent monuments. (Section V.12)	Subdivision plan page 3, Subdivision	☐ Preliminary Plat ☐ Final Plat	

	General Requiremen	nts ¹	
Ø	Required Items for Submittal	Item Location (e.g. Page/line or Plan Sheet/Note #)	Waiver Requested
2222	 1. Basic Requirements: (VI.1) a. Conformity to Official Plan or Map b. Hazards c. Relation to Topography d. Planned Unit Development 	Subdivision plan Page2	
2222	2. Lots: (VI.2)a. Lot Arrangementb. Lot sizesc. Commercial and Industrial Lots	Subdivision plan Page2	
>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	a. Relation to adjoining Street System b. Street Rights-of-Way c. Access d. Parallel Service Roads e. Street Intersection Angles f. Merging Streets g. Street Deflections and Vertical Alignment h. Marginal Access Streets i. Cul-de-Sacs j. Rounding Street Corners k. Street Name Signs l. Street Names m. Block Lengths n. Block Widths o. Grade of Streets p. Grass Strips	Subdivision plan Pages 7, 8, 9	
~	4. Curbing: (VI.4)	N/A	
V	5. Driveways: (VI.5)	Page 5 permit required	
レレ	6. Drainage Improvements: (VI.6)	Page 6	
V	7. Municipal Water Service: (VI.7)	Page 7	
V	8. Municipal Sewer Service: (VI.8)	Page 7	
\ \ \ \	9. Installation of Utilities: (VI.9)a. All Districtsb. Indicator Tape	Page 7-9	
	10. On-Site Water Supply: (VI.10)	N/A	
~	11. On-Site Sewage Disposal Systems: (VI.11)	N/A	
\ \ \ \ \ \ \ \ \ \	12. Open Space: (VI.12)a. Natural Featuresb. Buffer Stripsc. Parksd. Tree Planting	N/A	
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	 13. Flood Hazard Areas: (VI.13) a. Permits b. Minimization of Flood Damage c. Elevation and Flood-Proofing Records d. Alteration of Watercourses 	N/A	
~	14. Erosion and Sedimentation Control (VI.14)	pages 7, 9	

A	Required Items for Submittal	Item Location (e.g. Page/line or Plan Sheet/Note #)	Waiver Requested
222	15. Easements (VI.15) a. Utilities b. Drainage	Page 7	
	16. Monuments: (VI.16)		
	17. Benchmarks: (VI.17)		
~	18. House Numbers (VI.18)	tbd	

		Design Standards		
		Required Items for Submittal	Indicate compliance and/or provide explanation as to alternative design	Waiver Requested
V	1.	Streets have been designed according to the design standards required under Section (VII.1). a. Clearing b. Excavation c. Rough Grade and Preparation of Sub-Grade d. Base Course e. Street Paving f. Side Slopes g. Approval Specifications h. Curbing i. Sidewalks j. Inspection and Methods	Page 9	
V	2.	Storm water Sewers and Other Drainage Appurtenances have been designed according to the design standards required under Section (VII.2). a. Design b. Standards of Construction	Page 9	
\	3.	Sanitary Sewers have been designed according to the design standards required under Section (VII.3). a. Design b. Lift Stations c. Materials d. Construction Standards	Page 9	
V	4.	Water Mains and Fire Hydrants have been designed according to the design standards required under Section (VII.4). a. Connections to Lots b. Design and Construction c. Materials d. Notification Prior to Construction	Page 9	

Applicant's/Representative's Signature:_	Jeffrey Collins	8-16-2022
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 $^{^{1}}$ See City of Portsmouth, NH Subdivision Rules and Regulations for details. Subdivision Application Checklist/January 2018

AUTHORIZATION 77 Meredith Way, Portsmouth Map 162, Lot 16

The undersigned hereby authorize representatives of Bosen & Associates, PLLC, and TFMoran, Inc. to represent our interests before the Portsmouth land use boards and to submit any and all applications and materials related thereto on its behalf.

Date: 3-23-2022

Jeffrey Collins

Randi Collins

Randi Collins

