

MIGHTY ROOTS WORLD HEADQUARTERS OFFICE/SHOP

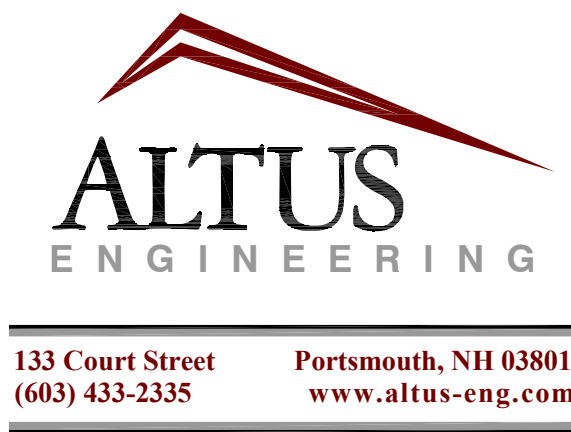
170 PORTSMOUTH AVENUE
STRATHAM, NH 03885

Owner/Applicant:

Packer Brook Holdings, LLC
13 Alden Avenue
Greenland, NH 03840
(603) 319-8095

OWNERS SIGNATURE BLOCK	
OWNER	DATE

Civil Engineer:



Surveyor:



Wetland Scientist:

Marc E. Jacobs
P.O. Box 417
Greenland, NH 03840
(603) 534-7645

Tax Map 17, Lot 86

ISSUED FOR COMPLIANCE HEARING

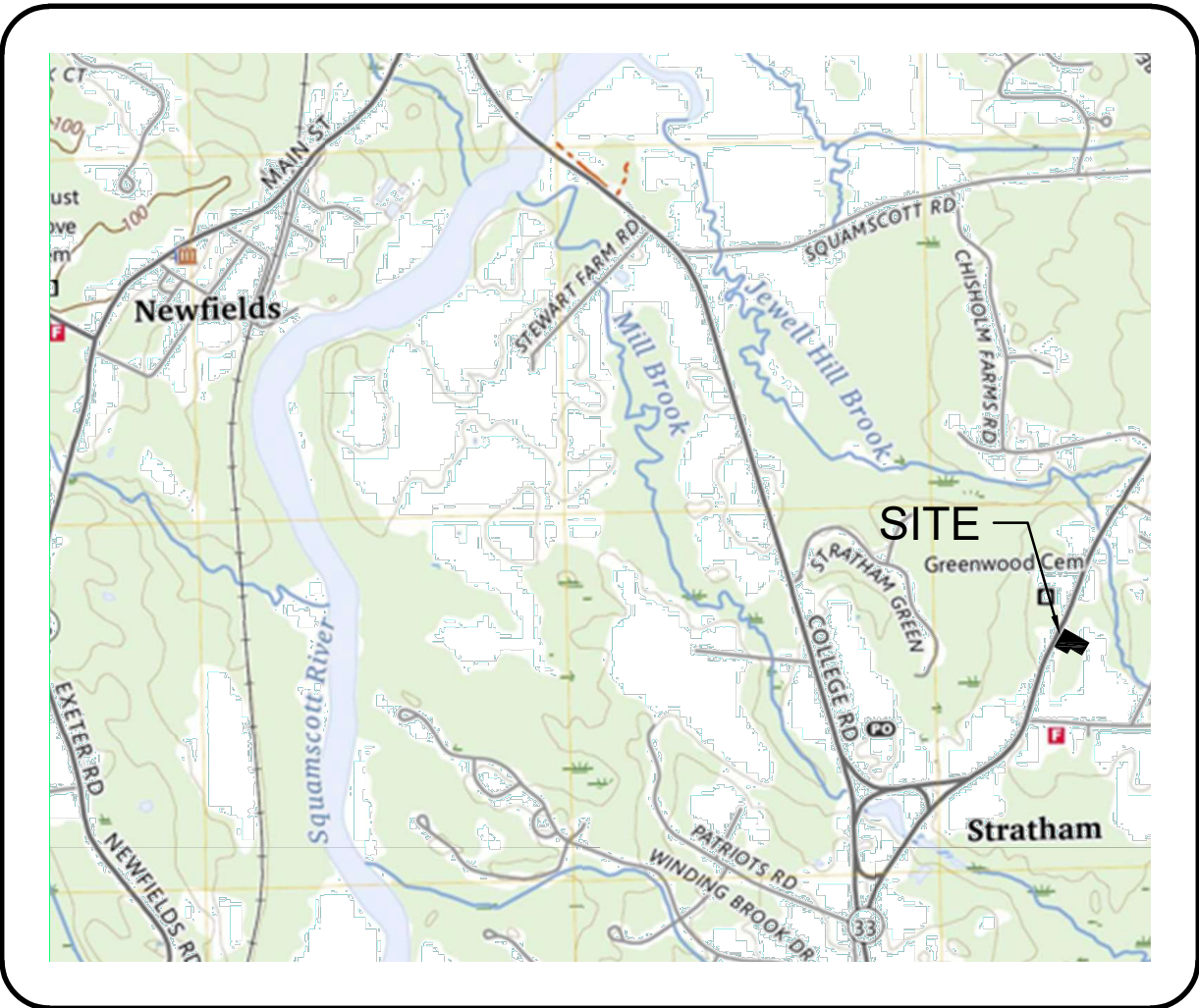
Plan Issue Date:

Site Plan Review	January 7, 2026
Revised Site Plan Review	March 31, 2026
Revised NHDOT Review	May 14, 2026
Compliance Hearing Review	August 6, 2026

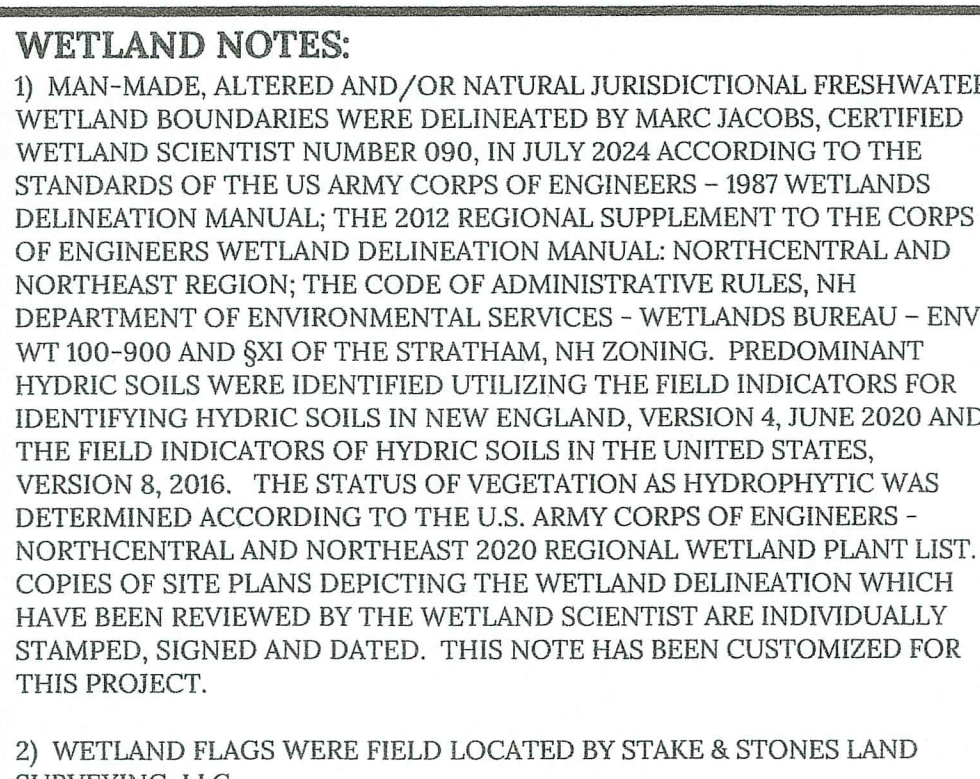
APPROVED BY THE STRATHAM PLANNING BOARD	
CHAIRMAN	DATE

Sheet Index			
Title	Sheet No.:	Rev.	Date
Existing Conditions Plan	S-1	1	08/13/25
Demolition & Site Preparation Plan	C-1	3	08/06/26
Site Plan	C-2	4	08/06/26
Vehicular Access Plan	C-3	2	08/06/26
Grading, Drainage & Conditional Use Plan	C-4	4	08/06/26
Erosion & Sedimentation Control Plan	C-5	3	08/06/26
Septic System & Utility Plan	C-6	2	06/26/26
Septic System Notes & Detail Sheet	C-6A	2	06/26/26
Septic System Notes & Detail Sheet	C-6B	0	06/26/26
Site Lighting Plan	1 of 1	0	12/17/26
Landscaping Plan	L-1	2	08/06/26
Details I & Erosion Control Notes	D-1	1	03/31/26
Detail Sheet II	D-2	0	01/07/26
Detail Sheet III	D-3	2	05/14/26
Detail Sheet IV	D-4	2	05/14/26
Detail Sheet V	D-5	1	03/31/26
Office Building – First & Second Floor Plans	A-1	0	03/27/26
Shop Building – First Floor Plan	A-2	0	03/27/26
Shop Building – Second Floor Plan	A-3	0	03/27/26
Office Building – Exterior Elevations	A-4	1	08/05/26
Shop Building – Exterior Elevations	A-5	0	03/27/26

Permit Summary	Submitted	Received
Stratham Site Plan Review	January 7, 2026	May 6, 2026
NHDOT Driveway Permit	April 1, 2026	July 20, 2026
NHDES-SSB Septic System App.	June 24, 2026	June 26, 2026
EPA DEP Notice of Intent	By Contractor 14 days prior to construction	



LOCUS NOT TO SCALE



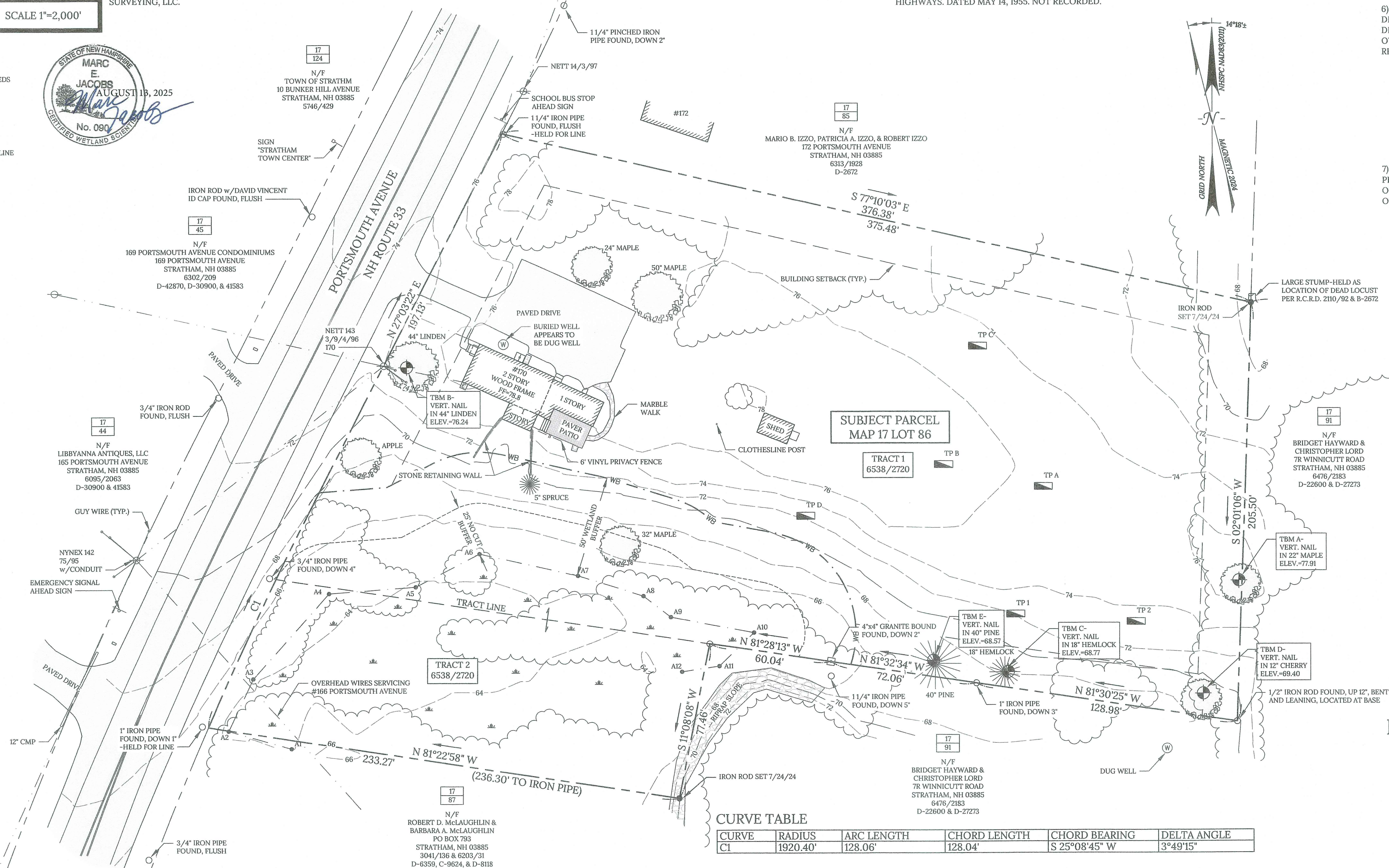
2) WETLAND FLAGS WERE FIELD LOCATED BY STAKE & STONES LAND SURVEYING, LLC

- 1) PLAN OF LOT STRATHAM, N.H. FOR CARL W. JR. & GRACE H. BARKER. PREPARED BY JOHN W. DURGIN CIVIL ENGINEERS. DATED OCTOBER 1971. R.C.R.D. PLAN B-2672.
- 2) LOT LINE ADJUSTMENT PLAN TAX MAP 11 LOTS 26, 27A, AND 27-2, PORTSMOUTH AVENUE/ROUTE 101 IN STRATHAM, NH, COUNTY OF ROCKINGHAM. PREPARED BY KIMBALL CHASE. DATED JANUARY 28, 1994. R.C.R.D. PLAN D-22718.
- 3) SUBDIVISION OF LAND, WINNICUT ROAD STRATHAM, NH FOR RALPH & LILY MARSTON. PREPARED BY EMANUEL COMPANIES, INC & R.G. MOYNIHAN CIVIL ENGINEER AND SURVEYOR. DATED SEPTEMBER 30, 1993, FINAL REVISION DATE NOVEMBER 15, 1993. R.C.R.D. PLAN D-22600.
- 4) SUBDIVISION OF LAND & LOT LINE ADJUSTMENT FOR THE DOLLOFF FAMILY TRUST OF 1997 IN STRATHAM, N.H. PREPARED BY PARKER SURVEY ASSOC., INC. DATED FEBRUARY 1999, FINAL REVISION DATE JUNE 1999. R.C.R.D. D-27273.
- 5) STRATHAM, N.H. SUBDIVISION PLAN FOR RALPH W. MARSTON. PREPARED BY BARRY W. KIMBALL, LAND SURVEYOR. DATED AUGUST 1978. R.C.R.D. D-8118.
- 6) STRATHAM, N.H. PLAN OF LOTS FOR RALPH W. MARSTON. PREPARED BY KIMBALL CHASE CO. INC. DATED JULY 15, 1980. R.C.R.D. PLAN C-9624.

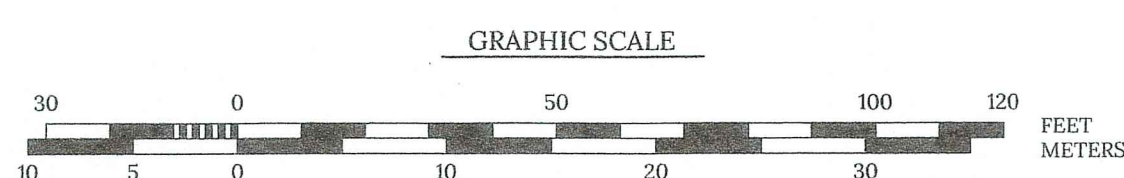
11) PLANS OF PROPOSED FEDERAL AID PRIMARY PROJECT F018-2(1) N.H. NO. P-2428 SOUTH SIDE ROAD. PREPARED BY THE STATE OF NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS. DATED MAY 14, 1955. NOT RECORDED.

7) BASIS OF BEARING & HORIZONTAL DATUM IS THE NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM NAD83(2011). VERTICAL DATUM IN NAVD88. BASIS OF HORIZONTAL AND VERTICAL DATUMS IS POST-PROCESSED STATIC GNSS OBSERVATIONS.

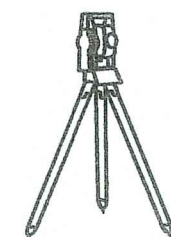
N/F	NOW OR FORMERLY
RCRCD	ROCKINGHAM COUNTY REGISTRY OF DEEDS
	ABUTTER TAX MAP & LOT NUMBER
	BOUNDARY LINE
	SETBACK LINE
	JURISDICTIONAL WETLAND LINE
	TOWN OF STRATHRAM WETLAND BUFFER LINE
	IRON ROD/PIPE FOUND
	STONE BOUND FOUND
	IRON ROD SET
	OVERHEAD ELECTRIC/WIRES
	EDGE OF PAVEMENT
	CONTOUR
	
	WOODS / TREE LINE
	WETLAND FLAG
	DECIDUOUS TREE
	CONIFEROUS TREE
	UTILITY POLE
	ELECTRIC METER
	
	TEST PIT LOCATION
	CORRUGATED METAL PIPE
	ELEVATION
	FINISHED FLOOR
	TEMPORARY BENCHMARK
	TYPICAL



CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	1920.40'	128.06'	128.04'	S 25°08'45" W	3°49'15"



REVISIONS		
NO.	DESCRIPTION	DATE
1	ADD ADDITIONAL BENCHMARKS, TEST PIT LOCATIONS, & WELL	8/13/25



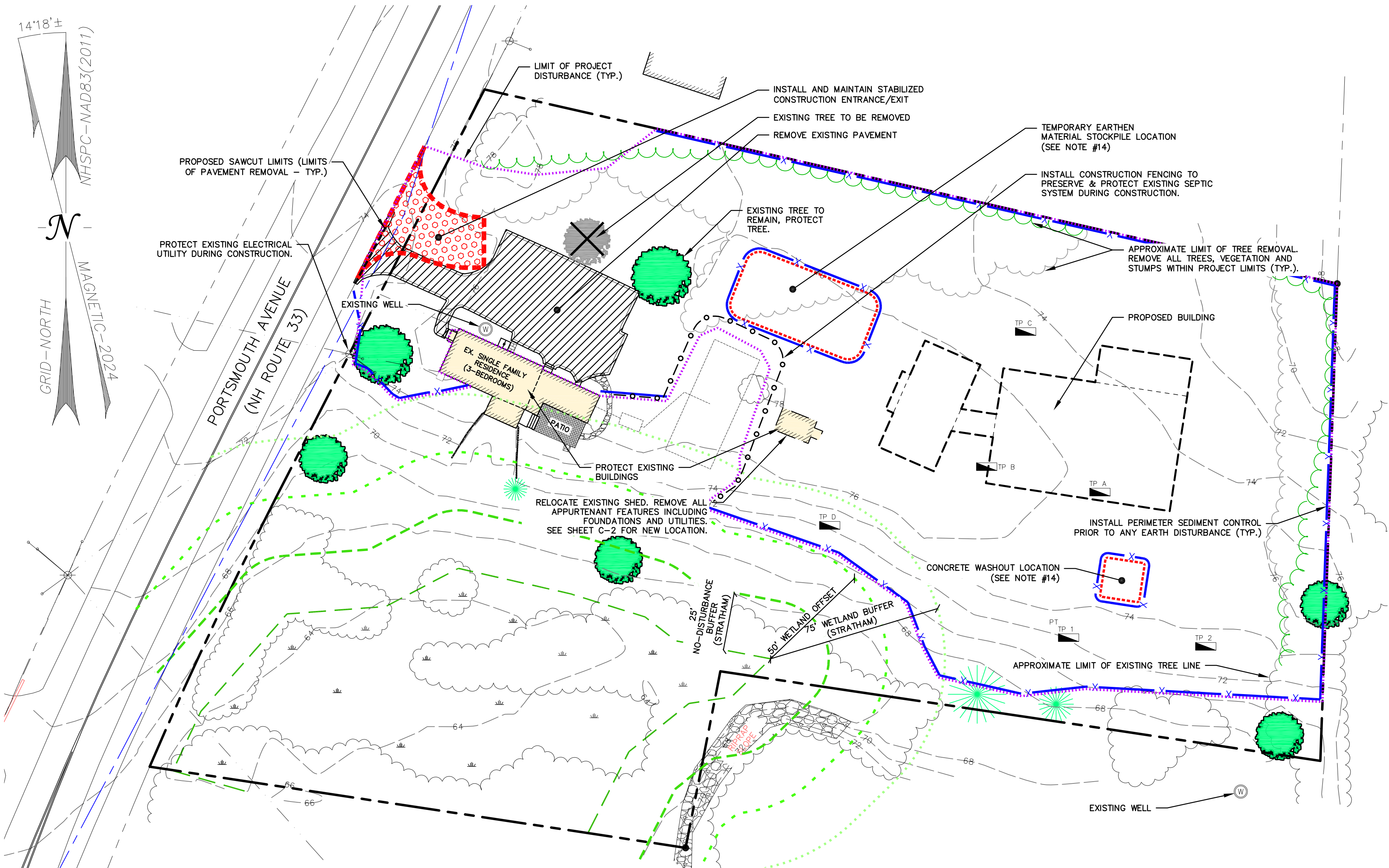
OWNER OF RECORD
PACKER BROOK
HOLDINGS, LLC
ASSESSOR'S MAP 17 LOT 86
170 PORTSMOUTH AVENUE
TOWN OF STRATHAM
ROCKINGHAM COUNTY
NEW HAMPSHIRE

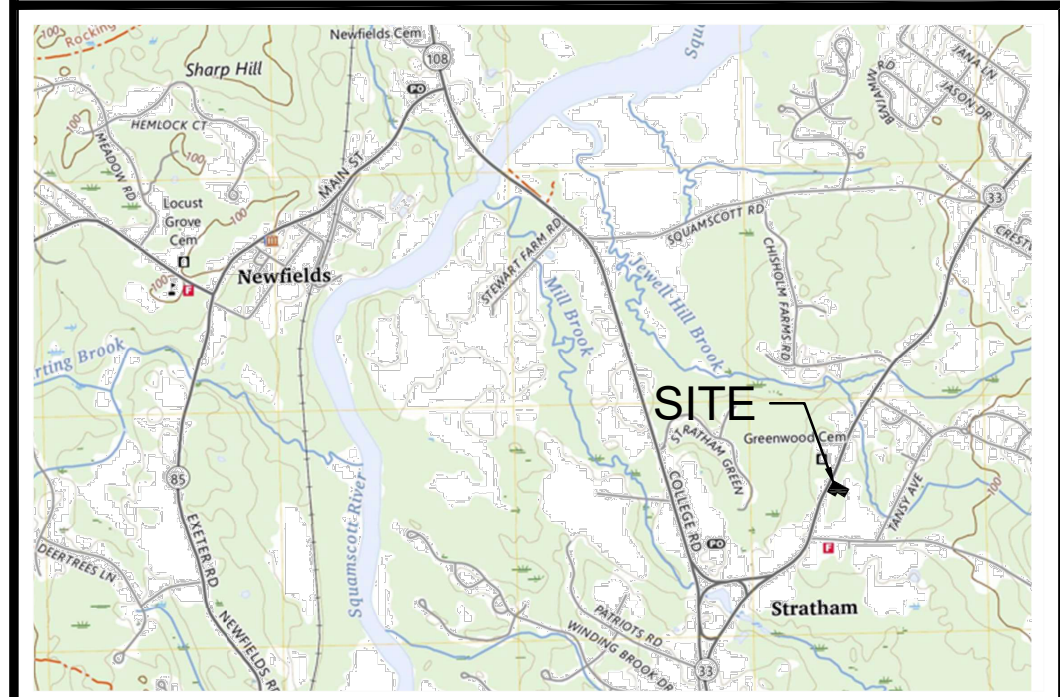
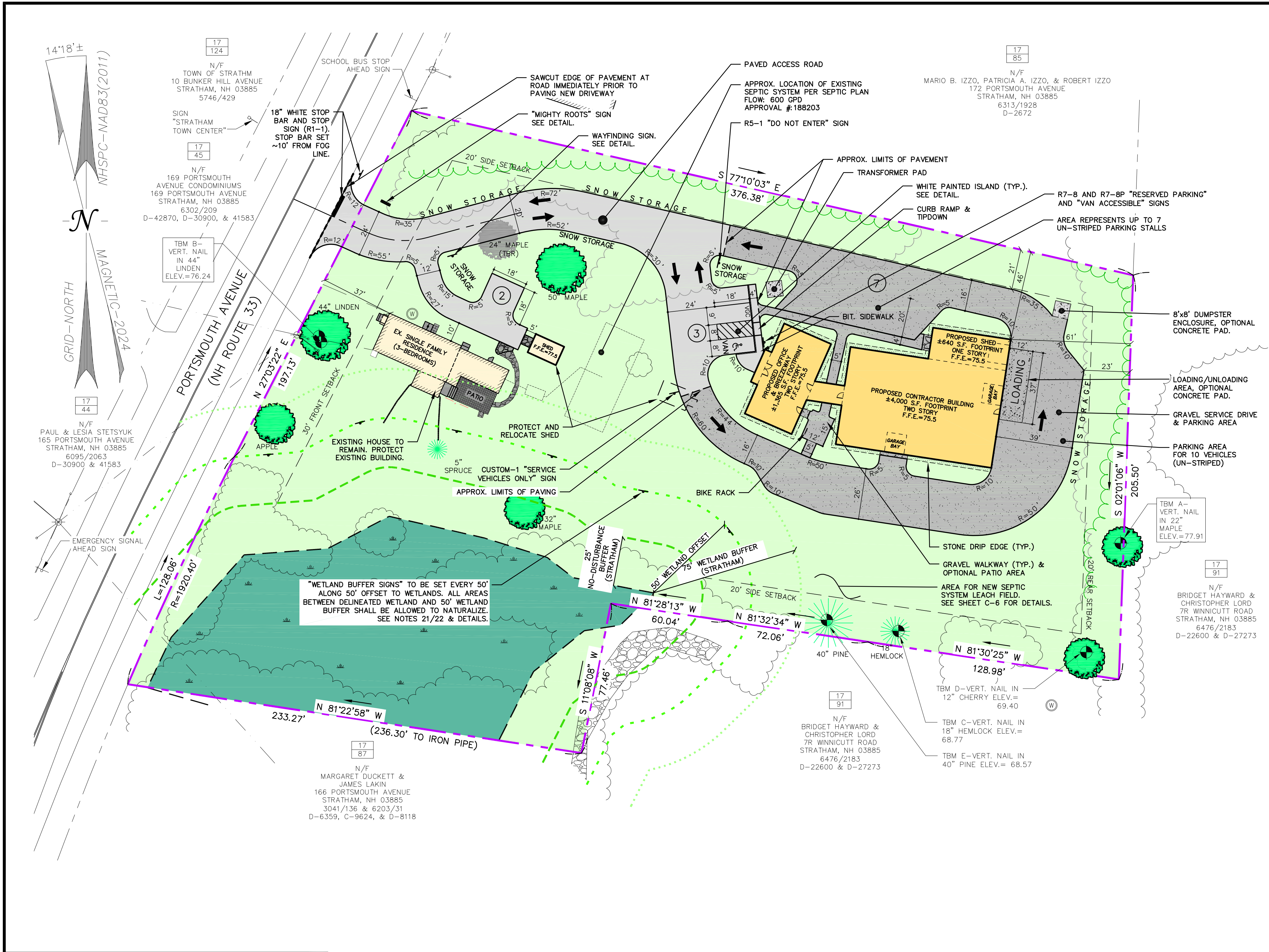
Stake & Stones Land Surveying, LLC
229 S Main Street Newmarket, NH 03857
603.292.5747 www.sslsnh.com

JOB #168


PAUL A DOBBERSTEIN, LLS

DATE 8/13/2025





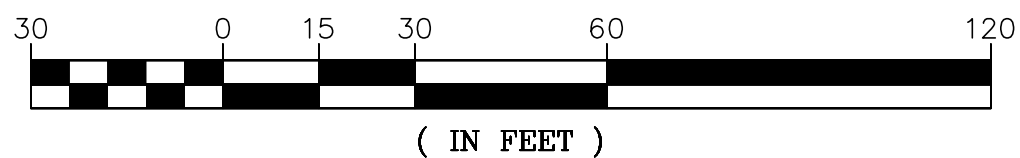
LOCUS
NOT TO SCALE

APPROVED BY THE STRATHAM PLANNING BOARD

CHAIRMAN

DATE

GRAPHIC SCALE



SITE NOTES

DESIGN INTENT - THIS PLAN SET IS INTENDED TO DEPICT THE ADDITION OF A NEW OFFICE/SHOP BUILDING AND ASSOCIATED SITE IMPROVEMENTS.

1. ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.

2. APPROXIMATE LOT AREA: 110,735 S.F. (±2.542 ACRES)

ZONING DISTRICT: ROUTE 33 LEGACY HIGHWAY HERITAGE DISTRICT

3. DIMENSIONAL REQUIREMENTS:	REQUIRED	PROPOSED
FRONT SETBACK:	±37'	±37'
SIDE SETBACK (BUILDING):	20'	±46'
SIDE SETBACK (PARKING):	20'	±21'
REAR SETBACK (BUILDING):	20'	±61'
REAR SETBACK (PARKING):	20'	±23'
MAX. BUILDING HEIGHT:	35'	
MAX. GROSS BUILDING FOOTPRINT:	10,000 S.F.	±7,700 S.F.
MAX. BUILDING COVERAGE:	20%	±7.0%
MIN. OPEN SPACE:	60%	±74.2%
NO-DISTURBANCE BUFFER:	25'	
WETLAND BUFFER:	75'	

DIMENSIONAL REQUIREMENT NOTES:

1. STRUCTURES SHALL BE CONSISTENT WITH STRUCTURES ON ABUTTING PROPERTIES ON THE SAME SIDE OF THE STREET. FRONT SETBACK SHALL BE WITHIN 10' OF THE AVERAGE OF THE EXISTING SETBACKS ON ABUTTING PROPERTIES. IN NO CASE SHALL THE FRONT SETBACK BE REQUIRED TO BE MORE THAN 35'.

2. PARKING MUST MEET SIDE AND REAR SETBACK REQUIREMENTS.

MAXIMUM BUILDING COVERAGE: 20%
EXISTING BUILDING: ±1,360 S.F. (±1.2%)
PROPOSED BUILDING: ±6,172 S.F. (±5.5%)
TOTAL: 7,532 S.F. (±6.8%)

MINIMUM OPEN SPACE: 60%
EXISTING: ±105,667 S.F. (95.4%)
PROPOSED: ±82,174 S.F. (±74.2%)

PARKING REQUIREMENTS:

SINGLE FAMILY RESIDENCE (EX. BUILDING): 2.0 SPACES PER DWELLING UNIT
SINGLE-FAMILY RESIDENCE: 1 D.U. X 2 SPACES/D.U. = 2.0 SPACES
PROVIDED: 2 PARKING SPACES

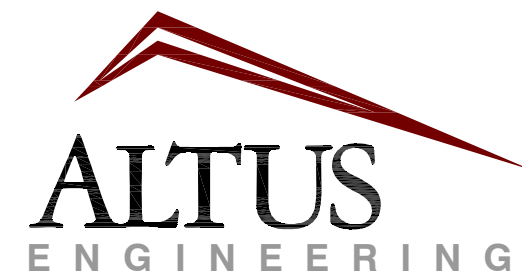
MANUFACTURING/LIGHT INDUSTRIAL (PROP. BUILDING): 1.5 PER 1,000 S.F. OF GROSS FLOOR AREA
MANUFACTURING: (6,107 S.F./1,000 S.F.) X 1.5 SPACES = 9.16 (~10) SPACES
PROVIDED: 3 STRIPED SPACES & 7 UN-STRIPED SPACES = 10 TOTAL PARKING SPACES

4. WAIVERS REQUESTED:

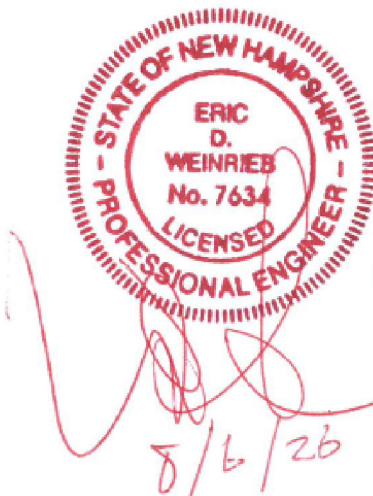
- SECTION 4.3.2.e. (SITE PLAN REVIEW REGULATIONS) - HIGH INTENSITY SOIL SURVEY (HISS).
- CHECKLIST ITEM E WAIVER GRANTED 2/4/2026
- SECTION 5.2.2.2 (SITE PLAN REVIEW REGULATIONS) - LANDSCAPING PLAN CERTIFICATION BLOCK - WAIVER GRANTED 5/6/2026

5. CONDITIONAL USE PERMITS:

- AT THE FEBRUARY 4, 2026, PLANNING BOARD MEETING, THE BOARD GRANTED A CONDITIONAL USE PERMIT FOR SECTION 11.6.1 FOR THE CONSTRUCTION WITHIN THE 50-FOOT WETLANDS SETBACK FOR A DISTURBANCE AREA NOT TO EXCEED 2,350 S.F. (0.05 ACRES). SEE SHEET C-4 FOR ADDITIONAL CONDITIONAL USE PERMIT INFORMATION.
- AT THE MAY 6, 2026 PLANNING BOARD MEETING, THE BOARD GRANTED A CONDITIONAL USE PERMIT PER STRATHAM ZONING ORDINANCE TABLE 3.6 TABLE OF USES FOR THE REQUEST FOR A MIXED-USE DEVELOPMENT TO INCLUDE LIGHT INDUSTRY FOR THE USE OF CUSTOM CABINET MAKING, WITH THE BUILDING SIZE NOT TO EXCEED A MAXIMUM OF 6,700 TOTAL S.F. ALLOWABLE.
- PARCEL IS NOT IN A FLOOD HAZARD ZONE
- ALL BONDS AND FEES SHALL BE PAID/POSTED PRIOR TO INITIATING CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY ALL BENCHMARKS AND TOPOGRAPHY IN THE FIELD PRIOR TO CONSTRUCTION.
- ALL CONSTRUCTION SHALL MEET THE MINIMUM STANDARDS OF THE TOWN OF STRATHAM & NHDOT'S STANDARD SPECIFICATION FOR ROAD & BRIDGE CONSTRUCTION, LATEST EDITIONS. THE MORE STRINGENT SPECIFICATION SHALL GOVERN.
- OVERALL AREA OF DISTURBANCE UNDER 100,000 S.F., NHDES ALTERATION OF TERRAIN PERMIT NOT REQUIRED.
- AREA OF DISTURBANCE OVER 43,560 SF, COVERAGE UNDER EPA NPDES PHASE II CONSTRUCTION GENERAL PERMIT REQUIRED (NOI TO BE PREPARED AND SUBMITTED BY CONTRACTOR, SWPPP AND INSPECTIONS TO BE PREPARED AND PERFORMED BY CONTRACTOR).
- NHDOT EXCAVATION PERMIT SHALL BE OBTAINED PRIOR TO ANY WORK IN THE STATE RIGHT OF WAY.
- WETLANDS WERE DELINEATED BY MARC E. JACOBS (NEW HAMPSHIRE LICENSED SOIL SCIENTIST #90) ON JULY 2024. FLAGS WERE LOCATED BY STAKE & STONES LAND SURVEYING, LLC.
- THE CONTRACTOR SHALL VERIFY ALL BUILDING DIMENSIONS WITH THE ARCHITECTURAL AND STRUCTURAL PLANS PRIOR TO CONSTRUCTION. ALL DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER FOR RESOLUTION. VERIFY LATEST ARCHITECTURAL DRAWINGS PRIOR TO ANY CONSTRUCTION ACTIVITIES.
- BUILDING AREA SHOWN IS BASED ON FOOTPRINT MEASURED TO THE EDGE OF FOUNDATIONS AND/OR SLABS. ACTUAL INTERIOR SPACE WILL DIFFER.
- ALL PARKING LOT LIGHTS SHALL BE BUILDING MOUNTED & "DARK SKY COMPLIANT". WALKWAYS WILL BE ILLUMINATED WITH BOLLARD LIGHTS.
- CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAWCUT LINES WITH RS-1 IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
- PAVEMENT MARKINGS SHALL BE CONSTRUCTED USING WHITE, YELLOW OR BLUE TRAFFIC PAINT (WHERE SPECIFIED) MEETING THE REQUIREMENTS OF AASHTO M248, TYPE F OR EQUAL. PAINTED ISLANDS AND LOADING ZONES SHALL BE 4"-WIDE DIAGONAL WHITE LINES 3'-0" O.C. BORDERED BY 4"-WIDE WHITE LINES. PARKING STALLS SHALL BE SEPARATED BY 4"-WIDE WHITE LINES. SEE DETAILS FOR HANDICAP SYMBOLS, SIGNS AND SIGN DETAILS.
- PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC DEVICES," "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" AND THE AMERICANS WITH DISABILITIES ACT (ADA), LATEST EDITIONS.
- SNOW SHALL BE STORED AT THE EDGE OF PAVEMENT, IN AREAS SHOWN HEREON, AND/OR TRUCKED OFF SITE AS APPROPRIATE. NO SAND SHALL BE USED FOR WINTER PARKING AREA MAINTENANCE. EXTERIOR SALT STORAGE IS PROHIBITED. WINTER MAINTENANCE CONTRACTOR SHALL BE NHDES GREEN SNOWPRO CERTIFIED.
- "WETLAND BUFFER SIGNS" SHALL BE SET ALONG THE 50' WETLAND BUFFER OFFSET INSTEAD OF THE 75' OFFSET AS THE EXISTING HOME, EXISTING LEACHFIELD AND PROPOSED STORMWATER MANAGEMENT AREA ARE WITHIN THE 75' OFFSET FROM THE DELINEATED WETLAND. IT IS NEITHER PRACTICAL NOR REASONABLE TO INSTALL SIGNAGE IN THOSE AREAS. WETLAND BUFFER SIGNAGE SHALL BE INSTALLED PRIOR TO SITE WORK.
- APPLICATION OF FERTILIZERS, PESTICIDES OR HERBICIDES IN THE 75' WETLAND BUFFER SHALL BE PROHIBITED.
- THE HOURS OF OPERATION FOR THE COMMERCIAL USE SHALL BE BETWEEN THE HOURS OF 7:00 AM & 9:00 PM.
- AS-BUILTS WILL BE PROVIDED TO THE TOWN IN ACCORDANCE WITH THE CONDITIONS OF APPROVAL.
- SEE SHEET C-1 FOR LEGEND.



133 Court Street
(603) 433-2335
Portsmouth, NH 03801
www.altus-eng.com



ISSUED FOR:

COMPLIANCE HEARING

ISSUE DATE:

AUGUST 6, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	PRELIMINARY REVIEW	EDW	09/03/25
1	CLIENT REVIEW	PMJ	01/07/26
2	REV. PER COMMENTS	PMJ	03/31/26
3	REV. NHDOT COMMENTS	PMJ	05/14/26
4	CON. OF APPROVAL	PMJ	08/06/26

DRAWN BY:

RLH/PMJ

APPROVED BY:

EDW

DRAWING FILE:

5613-SITE.DWG

SCALE:

22" x 34" - 1" = 30'

11" x 17" - 1" = 60'

OWNER/APPLICANT:

PACKER BROOK
HOLDINGS, LLC
13 ALDEN AVENUE
GREENLAND, NH 03840

PROJECT:

TAX MAP 17
LOT 86

MIGHTY ROOTS
170 PORTSMOUTH AVENUE
STRATHAM, NH 03850
BK 6538, PG 2720

WORLD
HEADQUARTERS
OFFICE/SHOP

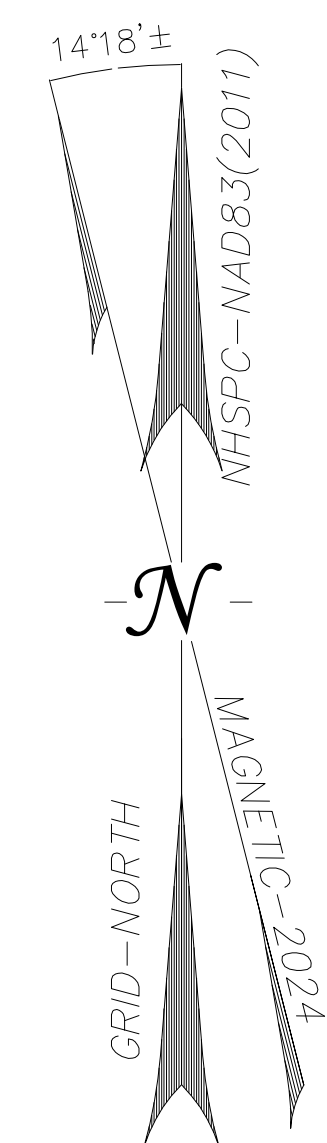
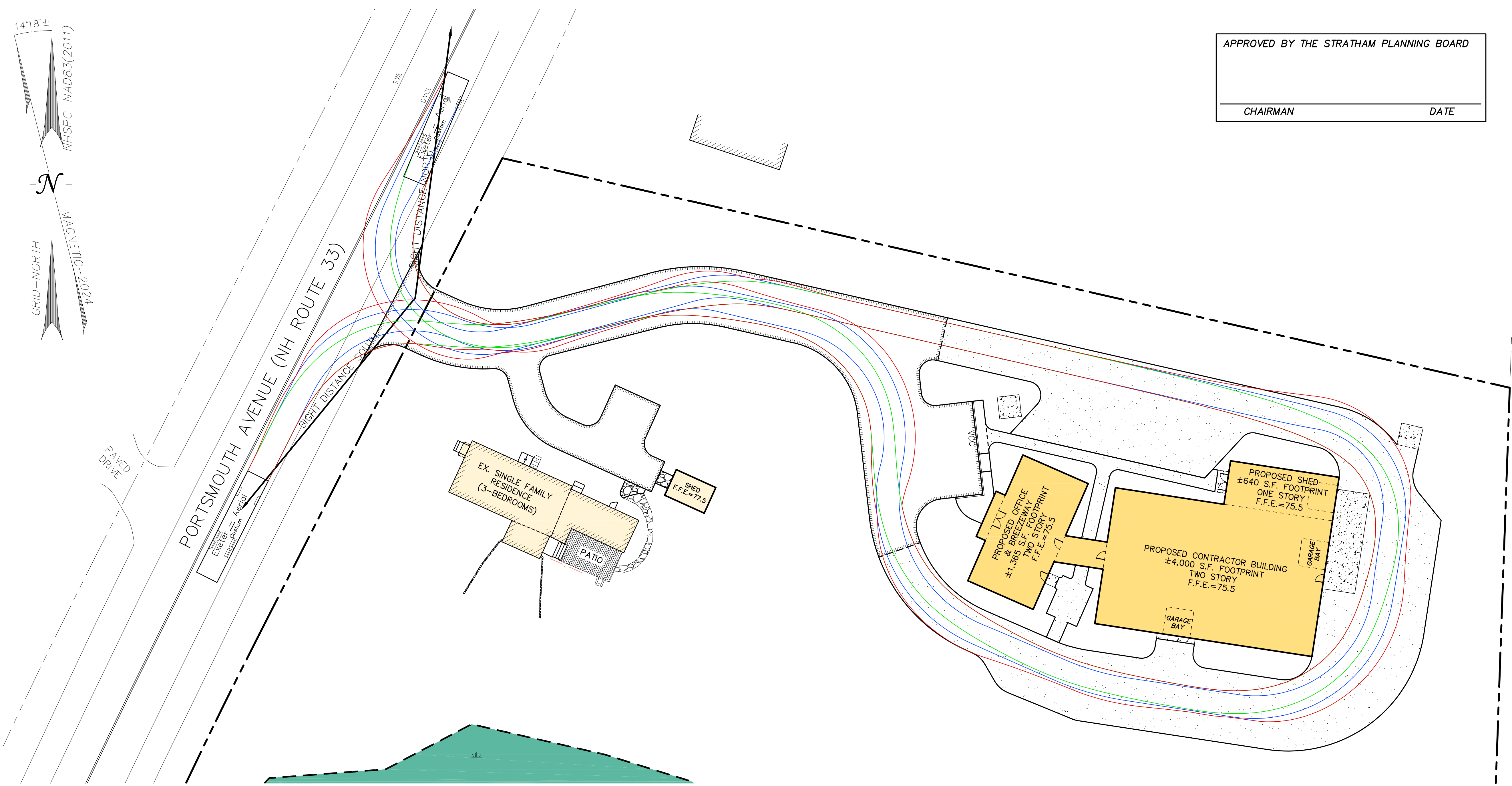
TITLE:

SITE PLAN

SHEET NUMBER:

C-2

P5613

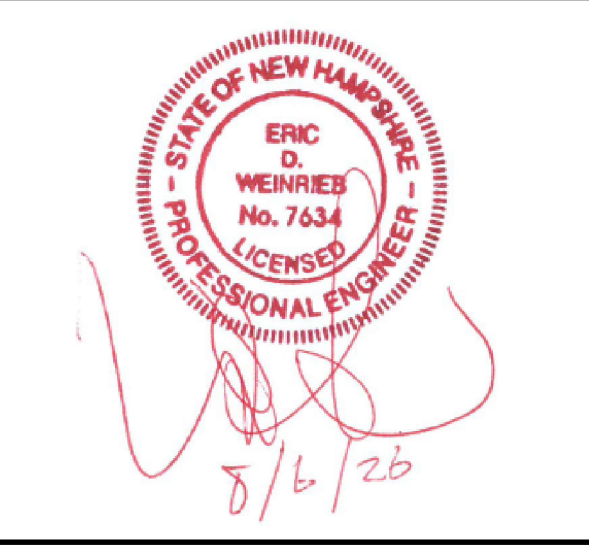


APPROVED BY THE STRATHAM PLANNING BOARD

CHAIRMAN _____ DATE _____

ALTUS
ENGINEERING

133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com



ISSUED FOR: COMPLIANCE HEARING

ISSUE DATE: AUGUST 6, 2026

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	01/07/26
1	REV. PER COMMENTS	PMJ	03/31/26
2	CON. OF APPROVAL	PMJ	08/06/26

DRAWN BY: _____ PMJ/EBJS
APPROVED BY: _____ EDW
DRAWING FILE: _____ 5613-SITE.DWG

SCALE:
22" x 34" - 1" = 20'
11" x 17" - 1" = 40'

OWNER/APPLICANT:
PACKER BROOK HOLDINGS, LLC
13 ALDEN AVENUE
GREENLAND, NH 03840

PROJECT:
TAX MAP 17 LOT 86

MIGHTY ROOTS
170 PORTSMOUTH AVENUE
STRATHAM, NH 03850
BK 6538, PG 2720

WORLD HEADQUARTERS OFFICE/SHOP

TITLE:

VEHICULAR ACCESS PLAN

SHEET NUMBER:
C-3



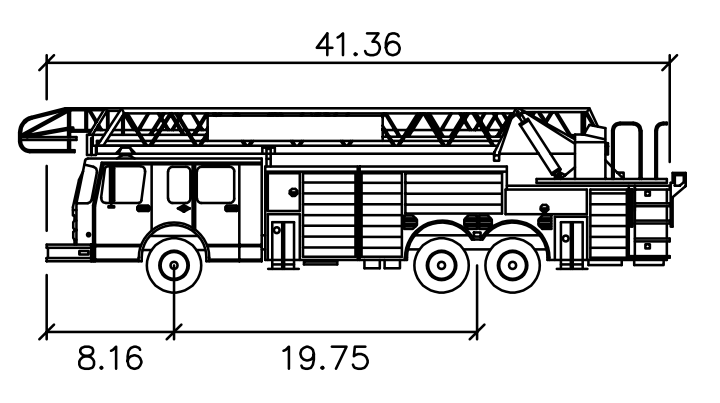
SIGHT DISTANCE-SOUTH



SIGHT DISTANCE-NORTH

LEGEND

- FRONT TRACK
- REAR TRACK
- VEHICLE BODY/OVERHANG

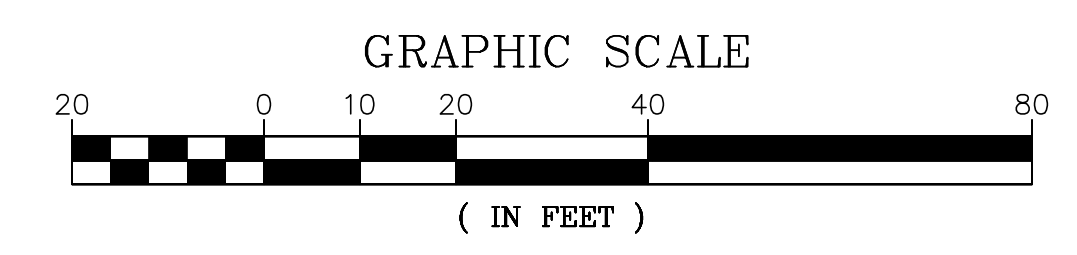


Exeter - Aerial

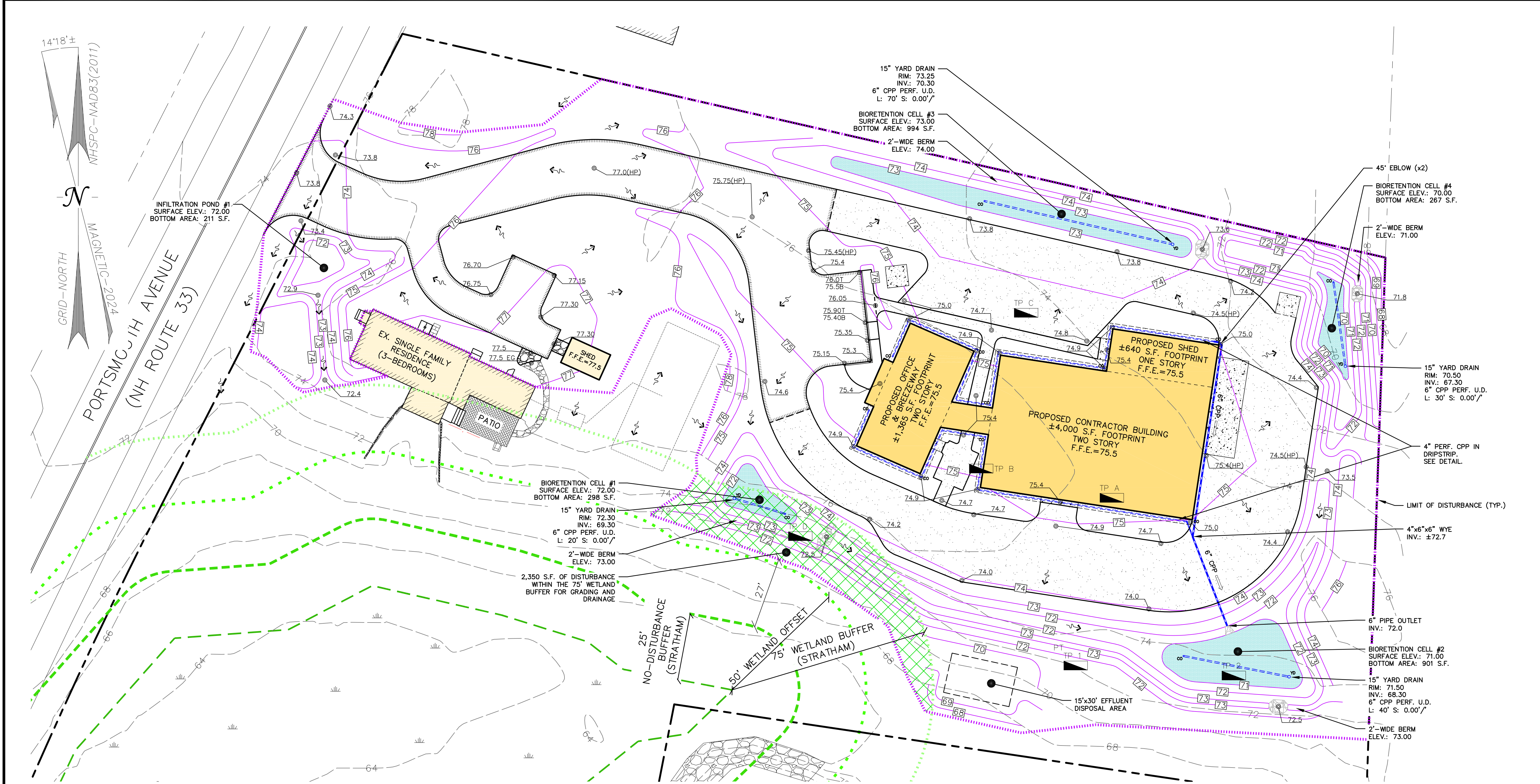
Width	: 8.33
Track	: 8.33
Lock to Lock Time	: 6.0
Steering Angle	: 42.0

TURNING MOVEMENT NOTES

- THE GRAPHIC VEHICLE PROFILE SHOULD NOT BE CONSIDERED A COMPLETELY ACCURATE VISUAL DEPICTION OF THE DESIGN VEHICLE AND IS ONLY INTENDED TO CONVEY A GENERIC REPRESENTATION OF ITS GENERAL APPEARANCE.
- THE EXETER - AERIAL WAS SELECTED AS THE DESIGN VEHICLE DUE TO IT MEETING OR EXCEEDING THE DIMENSIONS OF THE LARGEST VEHICLE EXPECTED TO ACCESS THE PROJECT SITE. THIS IS INTENDED TO DEMONSTRATE THAT THE PROJECT AS DESIGNED SHOULD BE ABLE TO ADEQUATELY ACCOMMODATE ANY VEHICLE UP TO AND INCLUDING THIS DESIGN VEHICLE.
- TURNING MOTIONS SHOWN WERE GENERATED USING AUTOTURN SOFTWARE BY TRANSOT SOLUTIONS, INC.
- DESIGN VEHICLE PROFILE:



P5613



GRADING & DRAINAGE NOTES

- DO NOT BEGIN CONSTRUCTION UNTIL ALL STATE AND LOCAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
- CONTRACTOR SHALL OBTAIN A "DIGSAFE" NUMBER AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE MUNICIPAL ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.
- ALL BENCHMARKS AND TOPOGRAPHY SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING CONSTRUCTION. UNLESS OTHERWISE AGREED IN WRITING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING TEMPORARY BENCHMARKS (TBMS) AND PERFORMING ALL CONSTRUCTION SURVEY LAYOUT.
- PRIOR TO CONSTRUCTION, FIELD VERIFY JUNCTIONS, LOCATIONS AND ELEVATIONS/INVERTS OF ALL EXISTING UTILITIES SCHEDULED TO REMAIN. PRESERVE AND PROTECT UTILITIES TO BE RETAINED.
- THE LIMITS OF CONSTRUCTION DISTURBANCE SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR TO ANY TREE CLEARING, STUMPING, GRUBBING OR EARTH MOVING OCCURS. WHERE CONSTRUCTION IS TO TAKE PLACE WITHIN 50' OF A PROPERTY LINE, THE PROPERTY LINE SHALL BE STAKED AT 50' MINIMUM INTERVALS.
- PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES FOR FOUNDATIONS, PAVEMENT AREAS, UTILITY TRENCHES, AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL. IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER, EXPOSED SUBGRADES ARE SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN GROUND. THIS WILL LIKELY REQUIRE REMOVAL OF

- A FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY'S OPERATIONS. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST FREEZING.
- IF SUITABLE, EXCAVATED MATERIALS SHALL BE PLACED AS FILL WITHIN UPLAND AREAS ONLY AND SHALL NOT BE PLACED WITHIN WETLANDS. PLACEMENT OF BORROW MATERIALS SHALL BE PERFORMED IN A MANNER THAT PREVENTS LONG TERM DIFFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION.
 - DEWATERING ACTIVITIES, IF REQUIRED, SHALL BE DONE IN ACCORDANCE WITH EPA AND NHDES REGULATIONS AND GUIDELINES.
 - DRAINAGE PIPE SHALL BE CORRUGATED POLYETHYLENE PIPE (CPP), TYPE ADS N-12 OR HANCOX HY-Q, OR PVC SDR 35 WHERE SPECIFIED. ALL STORMWATER PIPING REDUCERS, WYES AND TEES SHALL BE CONCENTRIC UNLESS OTHERWISE NOTED.
 - 2" RIGID INSULATION SHALL BE INSTALLED OVER DRAIN PIPES WHERE COVER IS < 2'.
 - ALL CATCH BASIN, MANHOLE AND OTHER DRAINAGE RISERS SHALL BE SET FLUSH WITH OR NO LESS THAN 0.1' BELOW FINISH GRADE. ANY RIM ABOVE SURROUNDING FINISH GRADE SHALL NOT BE ACCEPTED UNLESS OTHERWISE SPECIFIED. ALL DRAINAGE STRUCTURES WITHIN PAVED AREAS SHALL BE H-20 LOADING RATED.
 - ALL ROOF DRAIN RISERS SHALL BE LOCATED IN COORDINATION WITH THE ARCHITECTURAL PLANS TO MATCH DOWNSPOUT LOCATIONS. RISERS SHALL BE INSTALLED PER THE MANUFACTURERS SPECIFICATIONS AND SET TO FINISH GRADE PLUS 6" (MIN.).
 - IN ORDER TO PROVIDE VISUAL CLARITY ON THE PLANS, DRAINAGE AND OTHER UTILITY STRUCTURES MAY NOT BE DRAWN TO SCALE. SYMBOLS MAY NOT BE INDICATIVE OF THE CENTER OF A STRUCTURE, PARTICULARLY WHEN SHOWN ADJACENT TO A CURB LINE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER SIZING AND LOCATION OF ALL STRUCTURES AND IS DIRECTED TO RESOLVE ANY POTENTIAL DISCREPANCY WITH THE ENGINEER PRIOR TO CONSTRUCTION.
 - CONTRACTOR SHALL PROTECT ALL RAINGARDENS FROM CONSTRUCTION STORMWATER RUNOFF. TEMPORARY SEDIMENT BASINS SHALL BE INSTALLED DURING CONSTRUCTION. ALL SWALES,

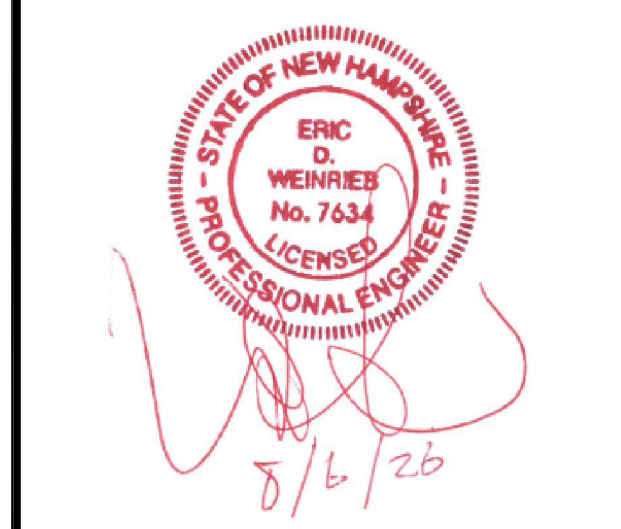
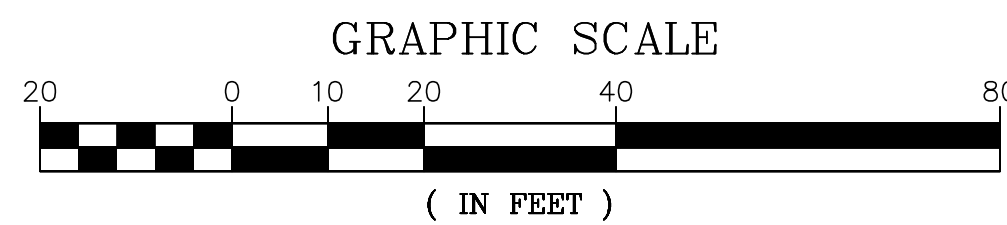
- STORMWATER PONDS AND THEIR CONTRIBUTING AREAS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- ALL SPOT GRADES ARE AT FINISH GRADE AND BOTTOM OF CURB WHERE APPLICABLE. ADJUST GRADING AT EMERGENCY BUILDING EXITS AS NECESSARY TO ENSURE CODE COMPLIANCE. COORDINATE WITH ARCHITECT IF RAILINGS ARE REQUIRED.
 - UNLESS OTHERWISE NOTED, THE CONTRACTOR MAY CONNECT BUILDING AND RETAINING WALL FOUNDATION DRAINS TO THE NEAREST DRAINAGE STRUCTURE PROVIDED A MINIMUM 1% SLOPE CAN BE MAINTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL FOUNDATION DRAINS WITH THE BUILDING AND WALL PLANS.
 - ANY INTERNAL FLOOR DRAINS SHALL BE EVAPORATIVE AND SHALL NOT TIE INTO THE EXTERNAL STORM DRAIN SYSTEM.
 - UPON COMPLETION OF CONSTRUCTION, ALL DRAINAGE INFRASTRUCTURE SHALL BE CLEANED OF ALL DEBRIS AND SEDIMENT.
 - NO SNOW SHALL BE STORED IN ANY STORMWATER POND OR ANY OTHER STORMWATER BMP.
 - THE APPLICANT SHALL SUBMIT A COPY OF A COMPLETED LAND USE DEVELOPMENT TRACKING FORM USING THE POLLUTANT TRACKING AND ACCOUNTABILITY PROGRAM (PTAP) ONLINE PORTAL CURRENTLY MANAGED BY THE UNH STORMWATER CENTER OR SIMILAR FORM APPROVED BY THE TOWN.
 - A STORMWATER INSPECTION AND MAINTENANCE REPORT SHALL BE COMPLETED ANNUALLY.
 - "WETLAND BUFFER SIGNS" SHALL BE SET ALONG THE 50' WETLAND BUFFER OFFSET INSTEAD OF THE 75' OFFSET AS THE EXISTING HOME, EXISTING LEACHFIELD AND PROPOSED STORMWATER MANAGEMENT AREA ARE WITHIN THE 75' OFFSET FROM THE DELINEATED WETLAND. IT IS NEITHER PRACTICAL NOR REASONABLE TO INSTALL SIGNAGE IN THOSE AREAS.
 - APPLICATION OF FERTILIZERS, PESTICIDES OR HERBICIDES IN THE 75' WETLAND BUFFER SHALL BE PROHIBITED.
 - SEE SHEET C-1 FOR LEGEND.

WETLAND BUFFER IMPACTS

- PROPOSED IMPERVIOUS AREA WITHIN THE 75' WETLAND BUFFER: 0 S.F.
- PROPOSED DISTURBANCE WITHIN THE 75' WETLAND BUFFER: 2,350 S.F.
- *NO DISTURBANCE IS PROPOSED WITHIN 50' OF THE DELINEATED WETLAND.

APPROVED BY THE STRATHAM PLANNING BOARD

CHAIRMAN DATE



ISSUED FOR: COMPLIANCE HEARING

ISSUE DATE: AUGUST 6, 2026

REVISIONS		
NO.	DESCRIPTION	BY DATE
0	PRELIMINARY REVIEW	EDW 09/03/25
1	CLIENT REVIEW	PMJ 01/07/26
2	REV. PER COMMENTS	PMJ 03/31/26
3	REV. NHDOT COMMENTS	PMJ 05/14/26
4	CON. OF APPROVAL	PMJ 08/06/26

DRAWN BY: RLH/PMJ
APPROVED BY: EDW
DRAWING FILE: 5613-SITE.DWG

SCALE:
22" x 34" - 1" = 20'
11" x 17" - 1" = 40'

OWNER/APPLICANT:
PACKER BROOK HOLDINGS, LLC
13 ALDEN AVENUE
GREENLAND, NH 03840

PROJECT:
TAX MAP 17 LOT 86

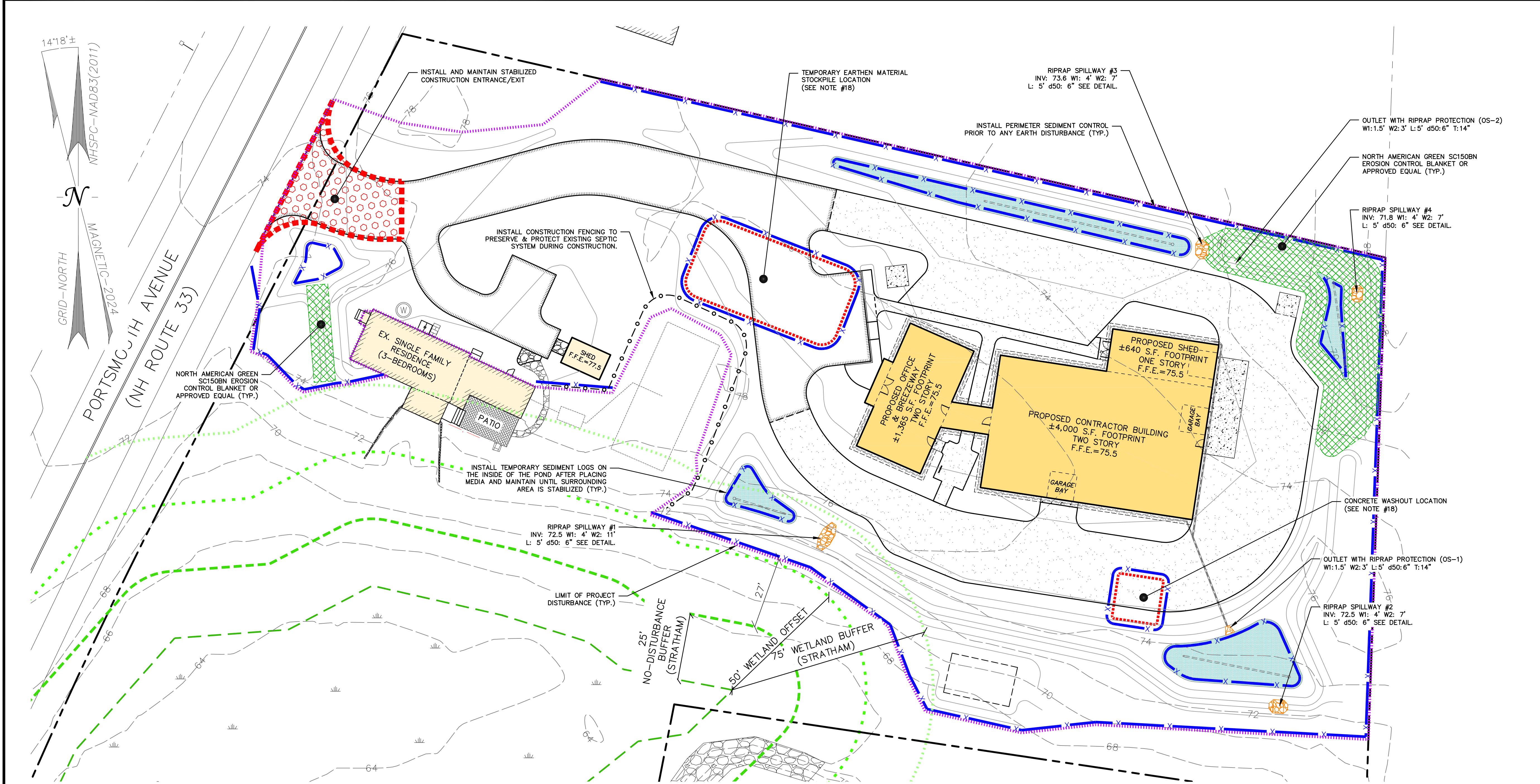
MIGHTY ROOTS
170 PORTSMOUTH AVENUE
STRATHAM, NH 03850
BK 6538, PG 2720

WORLD HEADQUARTERS OFFICE/SHOP

TITLE:
GRADING & DRAINAGE PLAN AND CONDITIONAL USE PLAN

SHEET NUMBER:
C-4

P5613



TEST PIT LOGS

LOGGED JULY 23, 2025
WITNESSED BY MICHAEL CUOMO

TEST PIT 1
0'-0" 2.5 YR 3/4 - DARK REDDISH BROWN GRASS MATT AND FINE LOAMY SAND, GRANULAR, FRIABLE, LOOSE
7'-16" 7.5 YR 4/8 - STRONG BROWN FINE SAND, SINGLE GRAIN, LOOSE
16'-34" 7.5 YR 4/2 - BROWN FINE SAND, SINGLE GRAIN, LOOSE
34'-90" 10 YR 5/8 YELLOWISH BROWN FINE SAND, SINGLE GRAIN, LOOSE
90" STOPPED

>96" - ESTIMATED SEASONAL HIGH WATER TABLE
0'-48" - ROOTS
NO LEUGE OR WATER OBSERVED
PERCOLATION RATE: 2 MINUTES PER INCH AT 40-INCH (30 IN/HR)

TEST PIT 2
0'-10" 2.5 YR 3/4 - DARK REDDISH BROWN GRASS MATT AND FINE LOAMY SAND, GRANULAR, FRIABLE
10'-21" 7.5 YR 5/8 - STRONG BROWN FINE SAND, SINGLE GRAIN
21'-31" 10 YR 5/8 - YELLOWISH BROWN LOAMY FINE SAND, FRIABLE, GRANULAR
31'-40" 10 YR 3/3 DARK BROWN LOAMY FINE SAND, FRIABLE, GRANULAR
40'-90" 10 YR 5/8 BROWNISH YELLOW FINE SAND, LOOSE, MASSIVE
90" STOPPED

>96" - ESTIMATED SEASONAL HIGH WATER TABLE
0'-48" - ROOTS
NO LEUGE OR WATER OBSERVED
PERCOLATION RATE: 2 MINUTES PER INCH AT 40-INCH (30 IN/HR)

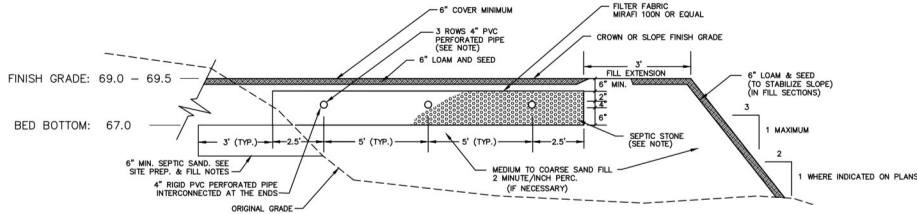
TEST PITS A-D LOGGED FOR STORMWATER MANAGEMENT DESIGN.
NOT WITNESSED BY MICHAEL CUOMO.

TEST PIT A
0'-84" - SAND
-84" - ESTIMATED SEASONAL HIGH WATER TABLE
NO LEUGE OR WATER OBSERVED
PERCOLATION RATE: 2 MINUTES PER INCH AT 40-INCH (30 IN/HR)

TEST PIT B
0'-92" - SAND
-92" - ESTIMATED SEASONAL HIGH WATER TABLE
NO LEUGE OR WATER OBSERVED
PERCOLATION RATE: 2 MINUTES PER INCH AT 40-INCH (30 IN/HR)

TEST PIT C
0'-70" - SAND
-70" - ESTIMATED SEASONAL HIGH WATER TABLE
NO LEUGE OR WATER OBSERVED
PERCOLATION RATE: 2 MINUTES PER INCH AT 40-INCH (30 IN/HR)

TEST PIT D
0'-80" - SAND
-80" - ESTIMATED SEASONAL HIGH WATER TABLE
NO LEUGE OR WATER OBSERVED
PERCOLATION RATE: 2 MINUTES PER INCH AT 40-INCH (30 IN/HR)



LEACHFIELD CROSS SECTION

NOT TO SCALE

SITE PREPARATION AND FILL:

- CHECK DESIGN INTENT AND VERIFY THE ELEVATION OF EXISTING GROUND BEFORE DISTURBING SITE. THE "DESIGN INTENT" OF THE SYSTEM MUST BE MAINTAINED.
- REMOVE ALL TREES, LOAM, BRUSH, BOULDERS, AND DEBRIS FROM THE AREA TO BE FILLED.
- REMOVE TOPSOIL. LEAVE SUBSOIL IN PLACE. DO NOT COMPACT SUBSOIL WITH MACHINERY. SCARIFY AS NEEDED, BEFORE FILLING. THIS IS BEST DONE WITH THE TEETH OF AN EXCAVATOR. SCARIFY PARALLEL TO CONTOURS, WORKING FROM THE CENTER OUTWARD. LARGER EXCAVATORS CAN REMOVE TOPSOIL AND SCARIFY IN THE SAME PROCESS. SITES CANNOT BE PROPERLY PREPARED UNLESS THE SOIL IS DRY.
- SAND FILL SHALL BE PUSHED ONTO PREPARED SURFACE FROM THE SIDE. DO NOT ALLOW EQUIPMENT ON THE SCARIFIED SOIL SURFACE.
- FILL FOR BACKFILLING SHALL BE CLEAN, PERMEABLE FILL, FREE OF ORGANICS AND STONES LARGER THAN 6". SAND IS ACCEPTABLE.
- BACKFILL DEPTH OVER SYSTEM SHALL BE 6" - 12". CROWN SLIGHTLY TO PROMOTE RUNOFF.
- PLACE FILL IN 12" LOOSE LAYERS USING A TRACK TYPE TRACTOR WITH BLADE. ALWAYS KEEP A MINIMUM OF 9" OF FILL MATERIAL BENEATH TRACKS OF TRACTOR TO MINIMIZE COMPACTION OF NATURAL SOIL. EACH LAYER SHALL BE SPREAD IN UNIFORM THICKNESS PRIOR TO PLACING NEXT LAYER. CONTINUOUS GRADING AND SHAPING SHALL BE CARRIED OUT TO ASSURE UNIFORM DENSITY THROUGHOUT EACH LAYER.
- ENTIRE DISTURBED AREA INCLUDING FIELD AND SLOPES (IF APPLICABLE) SHALL BE COVERED WITH 6" (MIN) LOT TOPSOIL AND SEeded AS SOON AS POSSIBLE AFTER BACKFILLING TO PREVENT EROSION.
- FILL UNDER LEACHING AREA AND FOR SHOULDERS, TO BE A MEDIUM TO COARSE TEXTURED SAND.

SIZE	PERCENT RETAINED
2 1/4"	0 - 5%
#8	0 - 10%
#12	0 - 10%
#100	40 - 65%
#200	0 - 0.5%

APPROVED FOR Stratham.
Basal area inspection required.
Call CEO 48 hours in advance to schedule.

Michael Cuomo

Date: 23 June 2026

GENERAL NOTES:

- THE FACILITY WILL BE SERVED WITH AN ON-SITE WELL.
- THIS SUBSURFACE DISPOSAL SYSTEM PLAN DOES NOT REPRESENT A PROPERTY BOUNDARY.
- PROJECT MEETS ALL TOWN OF STRATHAM ZONING REGULATIONS OR VARIANCES HAVE BEEN GRANTED.
- FOUNDATION/PERIMETER DRAIN OUTFALLS WILL NOT BE CONSTRUCTED WITHIN 25' OF THE LEACHFIELD OR SEPTIC TANK. FOUNDATION/PERIMETER DRAIN PIPE (SOLID) WILL NOT BE CONSTRUCTED WITHIN 5' OF THE LEACHFIELD OR SEPTIC TANK.
- ANY DISCREPANCY BETWEEN THE PLAN AND APPARENT FIELD CONDITIONS SHALL BE REPORTED TO THE DESIGNER PRIOR TO CONSTRUCTION.
- WRITTEN DIMENSIONS SUPERSEDE SCALED DIMENSIONS. ANY DISCREPANCY IN DIMENSIONS SHALL BE BROUGHT TO THE DESIGNER'S ATTENTION.
- SHOULD FAILURE OCCUR, SYSTEM SHALL BE REBUILT IN THE SAME LOCATION, A NEW PERMIT FROM NHDES SSB IS NOT REQUIRED.
- CONTRACTOR SHALL BE LICENSED BY THE NHDES SUBSURFACE SYSTEMS BUREAU TO INSTALL SEPTIC SYSTEMS.
- THERE ARE NOT ANY SURFACE WATERS OR VERY POORLY DRAINED WETLANDS WITHIN 75 FEET OF THE SYSTEM. THERE ARE NO POORLY DRAINED WETLANDS WITHIN 75 FEET OF THE SYSTEM. WETLAND INVESTIGATION WAS PERFORMED ON MAY 7, 2025. IN ACCORDANCE WITH ENV-WQ 1014.06, WETLANDS DELINEATED BY MARC JACOBS, NEW HAMPSHIRE CERTIFIED WETLAND SCIENTIST BORE, SEE EXISTING CONDITIONS PLAN WETLAND NOTE.
- THIS SYSTEM IS NOT DESIGNED FOR USE WITH A GARBAGE GRINDER.
- THIS SYSTEM IS NOT DESIGNED FOR USE WITH A WATER SOFTENER.
- THERE ARE NO LEUGE OUTCROPS WITHIN 75' OF THE EFFLUENT DISPOSAL AREAS.
- THE LOT DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD AREA, FIRMETTE MAP 38015C02458 DATED JANUARY 29, 2021 SHOWS THAT THE PARCEL IS LOCATED IN X ZONE.
- THE PROPERTY IS NOT LOCATED IN THE PROTECTED SHORELAND BUFFER (250 FEET).
- THE PROPERTY IS NOT SUBJECT TO DEED RIGHTS OF FLOWAGE.
- THE LOT AREA IS 2.542 ACRES ±. NHDES SSB SUBDIVISION APPROVAL IS NOT REQUIRED. THE PARCEL HAS EXISTED SINCE AT LEAST 1963. THE RESIDENCE WAS CONSTRUCTED IN 1900 PER TOWN ASSESSOR'S RECORDS.
- THE SYSTEM IS NOT DESIGNED TO HANDLE DISCHARGE FROM A HOT TUB OR SIMILAR.
- THERE ARE NO PROPOSED DREDGE AND FILL AREAS ON THE SITE.
- ALL WORK IS TO COMPLY WITH THE LATEST NHDES SSB REGULATIONS AND SPECIFICATIONS.
- THERE ARE NO KNOWN CEMETARIES WITHIN 100-FEET OF THE SIDS COMPONENTS.
- THERE ARE NO KNOWN WELLS WITHIN 75-FEET OF THE SIDS COMPONENTS.
- THIS PLAN IS NOT A PROPERTY BOUNDARY SURVEY.

CONSTRUCTION NOTES:

- ALL CONCRETE PRODUCTS SHALL BE AS MANUFACTURED BY SHEA CONCRETE OR APPROVED EQUAL.
- SEPTIC TANK AND DISTRIBUTION BOX JOINTS, INLETS, OUTLETS AND RISERS SHALL BE SEALED WITH NON-SHRINK GROUT "WATER PLUG", "BOND BLOCK" OR EQUAL. ALL CONCRETE STRUCTURES SHALL BE ASPHALT SEALED.
- IF ANY PART OF THIS DESIGN IS ALTERED IN ANY WAY, THE DESIGNER AND APPROVING AUTHORITIES SHALL BE NOTIFIED IN WRITING BEFORE CONSTRUCTION. NEW PLANS MAY BE REQUIRED TO REFLECT THE CHANGES.
- SYSTEM SHALL BE INSPECTED PER REQUIREMENTS OF ENV-WQ 1004.07 WHICH STATES "AS REQUIRED BY RSA 485-A:29, IF THE CONSTRUCTED SIDS SHALL NOT BE COVERED OR PLACED IN OPERATION WITHOUT FINAL INSPECTION AND APPROVAL BY THE DEPARTMENT (NHDES-SSB) OR AN AUTHORIZED AGENT OF THE DEPARTMENT. ADDITIONALLY, THE TOWN INSPECTOR & THE DESIGNER SHALL INSPECT THE SYSTEM PRIOR TO BACKFILLING.
- THE CONTRACTOR SHALL OBTAIN A "DISSAFE" NUMBER AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE THE OWNER, ENGINEER & TOWN OF STRATHAM WITH AS BUILT PLANS IN DIGITAL FORMAT, DETAILING LEACHFIELD CORNERS, DISTRIBUTION BOX AND SEPTIC TANK LOCATION & ELEVATIONS.
- DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL AND STATE PERMITS HAVE BEEN OBTAINED.
- THE LOCATION OF THE EXISTING UNDERGROUND UTILITIES IS APPROXIMATE. THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL PERFORM TEST PITS AS NECESSARY TO VERIFY LOCATION AND DEPTH OF UTILITIES.
- SEPTIC TANK MUST BE 5' MIN. FROM FOUNDATION. LEACH FIELD TO BE 15' MINIMUM FROM FOUNDATION.
- ALL CONCRETE STRUCTURES SHALL BE PLACED ON A COMPACTED SUBSURFACE OF 6" STONE MEETING THE FOLLOWING GRADATION:

SIZE	MAXIMUM PERCENT PASSING (BY WEIGHT)
2"	100
1 1/2"	90-100
3/4"	0-20
NO. 4	0-5
NO. 200	0-1.5

- AT OWNER'S DISCRETION, CONTRACTOR SHALL INSTALL CREATEX STONE SEPTIC VENT COVER OR APPROVED EQUAL. (VENT IS REQUIRED WITH A PUMP SYSTEM OR IF THERE IS GREATER THAN 18" COVER OVER LEACHFIELD).
- BENCHMARK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL BENCHMARKS AND ELEVATIONS SHOWN ON THE EXISTING CONDITIONS PLAN AND FOR ACCURATELY ESTABLISHING ANY NEW BENCHMARKS REQUIRED TO COMPLETE THE WORK. CONTACT THE SURVEYOR & SEPTIC DESIGNER WITH ANY DISCREPANCIES FOR RESOLUTION PRIOR TO PROCEEDING WITH CONSTRUCTION.
- SEPTIC SYSTEM BED BOTTOM PREPARATION SHALL BE INSPECTED AND APPROVED BY THE TOWN PRIOR TO THE PLACEMENT OF FILL.
- MAINTAIN 18" VERTICAL SEPARATION BETWEEN WATER AND SEWER LINES. SEWER BELOW WATER, IF CROSSINGS ARE REQUIRED.
- APPROVED SEPTIC STONE FOR THE LEACHFIELD SHALL MEET THE SPECIFICATIONS OF NHDES-SSB. THE STONE SHALL BE WASHED CRUSHED STONE MEETING THE FOLLOWING GRADATION:

SIZE	MAXIMUM PERCENT PASSING (BY WEIGHT)
2"	100
1 1/2"	90-100
3/4"	0-20
NO. 4	0-5
NO. 200	0-1.5
- LEACH LINES SHALL BE FOUR (4) INCH DIAMETER RIGID PVC PERFORATED PIPE. THE PIPES SHALL BE LAID LEVEL. THE PERFORATIONS SHALL BE POSITIONED AT THE SAND 7" CLOSURE POSITIONS.
- ALL LEACH LINES WITHIN THE LEACHFIELD SHALL BE INTERCONNECTED AT THE ENDS.
- MINIMUM PIPE SLOPES:

BUILDING TO SEPTIC TANK: 1/2" INCH PER FOOT
SEPTIC TANK TO D-BOX: 1/4" INCH PER FOOT
- EXISTING CONTOURS ARE FROM AN ON THE GROUND SURVEY BY STAKE & STONES LAND SURVEYING, LLC DATED JULY 25, 2024, LATEST REVISION 6/13/25.

LOT LOADING CAPACITY CALCULATION

NRCS CUSTOM SOIL RESOURCE REPORT FOR ROCKINGHAM COUNTY
SOIL: 26B - WINSDOR LOAMY SAND, 3 TO 8%
SOIL: GROUP 1 LOT LOADING FACTOR = 1.0 (BASED ON SOIL MAP & TESTPITS)

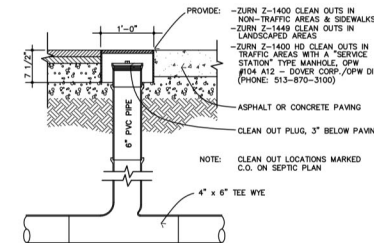
LOT AREA ±2.542 AC. OF GROUP 1 SOILS
SUBTRACT 0.82 AC. (0.41 AC./WELL x 2 WELLS)
SUBTRACT 0.07 AC. (PORTION OF OFF-SITE WELL RADIUS)
SUBTRACT 0.40 AC. (ON-SITE WETLANDS)
USE AREA ±1.252 AC. OF GROUP 1 SOILS

MAX. LOT FLOW = 1.252 AC x 2,000 GPD/ACRE /1.0 = 2,504 GPD
300 GPD PROPOSED + 600 GPD EXISTING = 900 GPD PROPOSED

WATER SUPPLY: TWO ON-SITE WELLS (ONE EXISTING, ONE PROPOSED)

OPERATION AND MAINTENANCE:

- SEPTIC TANK SHALL BE PUMPED EVERY YEAR OR MORE FREQUENTLY IF THERE IS A SIGNIFICANT BUILDUP OF SLUDGE OR GREASE. KEEP RECEIPTS AS PROOF OF PUMPING.
- EVERY SYSTEM'S DESIGN CAPACITY IS DIFFERENT. CAREFUL AND RESPONSIBLE WATER USE IS REQUIRED TO MAXIMIZE THE SYSTEM'S LIFE.
- DO NOT DISPOSE OF GREASE, FOOD SCRAPS, CHEMICALS, SOLVENTS, ETC. INTO THIS SYSTEM.
- DO NOT ALLOW VEHICULAR TRAFFIC OVER ANY COMPONENT OF THE SYSTEM UNLESS THAT STRUCTURE IS DESIGNED TO WITHSTAND AN H-20 WHEEL LOAD.
- KEEP DEEP ROOTED TREES AND BUSHES AWAY FROM THE LEACHING SYSTEMS.
- DO NOT FLUSH CIGARETTE BUTTS, COTTON SWABS, CAT LITTER, SANITARY NAPKINS, TAMPONS, DISPOSABLE DIAPERS, DISPOSABLE WIPES, CONDOMS, UNUSED MEDICINE AND OTHER NON-Biodegradable PRODUCTS INTO YOUR SYSTEMS.
- DO NOT CONTAMINATE YOUR SYSTEM BY DUMPING SOLVENTS, OILS, PAINTS, THINNERS, DISINFECTANTS, PESTICIDES OR POISONS DOWN THE DRAIN WHICH CAN KILL BACTERIA THAT HELP PURIFY SEWAGE AND CAN CONTAMINATE GROUNDWATER.
- DO NOT DIG INTO YOUR LEACHFIELD OR BUILD ANYTHING OVER IT.
- DO NOT PLANT ANYTHING OVER YOUR LEACHFIELD EXCEPT GRASS OR NON-EDIBLE CROPS.
- DO NOT DISPOSE OF FLOOR WAX OR FLOOR WAX STRIPPER INTO ANY DRAIN OR FUTURE CONNECTED TO THE SEPTIC SYSTEM
- SYSTEM IS NOT DESIGNED TO HANDLE DISCHARGE FROM A HOT TUB OR SIMILAR.

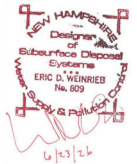


SEWER CLEANOUT

NOT TO SCALE



133 Court Street Portsmouth, NH 03801
(603) 433-2355 www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR: PERMITTING

ISSUE DATE: JUNE 22, 2026

REVISIONS
NO. DESCRIPTION BY DATE
0 INITIAL SUBMISSION EDW 01/07/26
1 REV. PER COMMENTS PMJ 03/31/26
2 SEPTIC SYSTEM APPLS. EDW 06/22/26

DRAWN BY: RLH/PMJ

APPROVED BY: EDW

DRAWING FILE: 5613-SITE.DWG

SCALE: 22' x 34' - 1' = NTS
11' x 17' - 1' = NTS

OWNER/APPLICANT:

PACKER BROOK HOLDINGS, LLC
13 ALDEN AVENUE
GREENLAND, NH 03840

PROJECT:

TAX MAP 17
LOT 86

MIGHTY ROOTS
70 PORTSMOUTH AVENUE
STRATHAM, NH 03850
BK 6538, PG 2720

WORLD HEADQUARTERS OFFICE/SHOP

TITLE:

SEPTIC SYSTEM NOTES AND DETAILS

SHEET NUMBER:

C-6A

P5613

NHDES-SSB APPROVAL BLOCK

REVIEWED AND APPROVED
IN ACCORDANCE WITH THE
REQUIREMENTS OF THE
NH DEP OF ENVIRONMENTAL SERVICES
WATER DIVISION

Eric D. Weinrieb

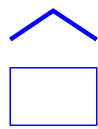
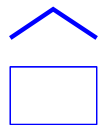
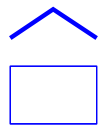
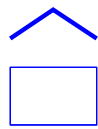
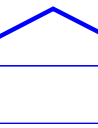
Date: 6/26/2026

#ECA2026062620



MIGHTY ROOTS
Stratham, NH
Site Lighting Layout

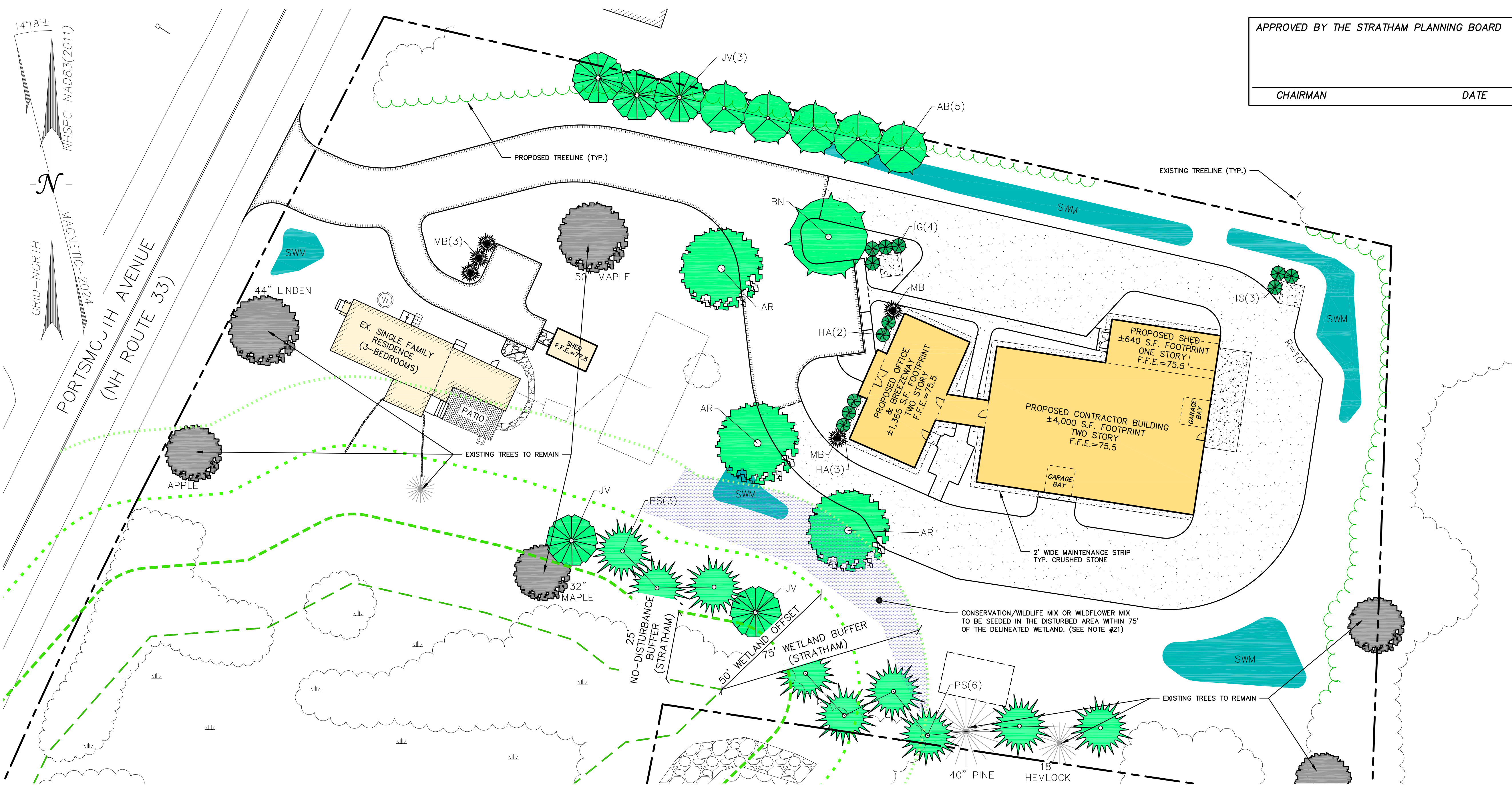
Schedule

Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lamp	Lumens per Lamp	LLF	Wattage
	W1	2	Acuity Brands	WDGE2 LED P1 30K 80CRI T3M MVOLT SRM DBLXD	WDGE2 LED Wallpack; mounted at 10ft	LED	1205	0.9	11.1658
	W2	1	Acuity Brands	WDGE2 LED P2 30K 80CRI T3M MVOLT SRM DBLXD	WDGE2 LED Wallpack; mounted at 10ft	LED	1964	0.9	18.9815
	W3	2	Acuity Brands	WDGE2 LED P2 30K 80CRI TFTM MVOLT SRM DBLXD	WDGE2 LED Wallpack; mounted at 10ft	LED	1934	0.9	18.9815
	W4	3	Acuity Brands	WDGE2 LED P4 30K 80CRI TFTM MVOLT SRM DBLXD	WDGE2 LED Wallpack; mounted at 12ft	LED	4002	0.9	46.6589
	W5	2	Acuity Brands	WDGE3 LED P1 80CRI R3 30K MVOLT SRM DBLXD	WDGE3 LED Wallpack; mounted at 16ft	LED	6933	0.9	51.1717

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Gravel, Service Drive, & Parking Are	+	1.0 fc	3.9 fc	0.1 fc	39.0:1	10.0:1
Outside of Parking/Drive	+	0.2 fc	3.4 fc	0.0 fc	N/A	N/A
Reserved Parking	+	0.9 fc	2.4 fc	0.0 fc	N/A	N/A

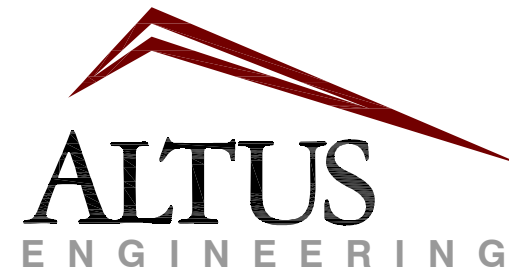
Designer
Heidi G. Connors
Visible Light, Inc.
24 Stickney Terrace
Suite 6
Hampton, NH 03842
Date
12/17/2025
Scale
1"=20'
Drawing No.
Summary



APPROVED BY THE STRATHAM PLANNING BOARD

CHAIRMAN

DATE



133 Court Street
(603) 433-2335
Portsmouth, NH 03801
www.altus-eng.com

ISSUED FOR:

COMPLIANCE HEARING

ISSUE DATE:

AUGUST 6, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	01/14/26
1	REV. PER COMMENTS	PMJ	03/31/26
2	CON. OF APPROVAL	PMJ	08/06/26

DRAWN BY: _____ PMJ

APPROVED BY: _____

DRAWING FILE: _____ 5613-SITE.DWG

SCALE:

22" x 34" - 1" = 20'

11" x 17" - 1" = 40'

OWNER/APPLICANT:

PACKER BROOK
HOLDINGS, LLC
13 ALDEN AVENUE
GREENLAND, NH 03840

PROJECT:

TAX MAP 17
LOT 86

MIGHTY ROOTS
170 PORTSMOUTH AVENUE
STRATHAM, NH 03850
BK 6538, PG 2720

WORLD
HEADQUARTERS
OFFICE/SHOP

TITLE:

LANDSCAPING PLAN

SHEET NUMBER:

L-1

LANDSCAPING PLAN NOTES

- SITE CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL UNDERGROUND UTILITIES, DRAINAGE AND OTHER INFRASTRUCTURE BEFORE INSTALLING LANDSCAPING.
- COORDINATE WITH SITE AND ARCHITECTURAL PLANS FOR ALL LANDSCAPING.
- THIS LANDSCAPING DESIGN PROVIDED IS BASED ON LIMITED INFORMATION PROVIDED BY RYE BEACH LANDSCAPING, LLC., 8 PERENNIAL PLACE, EXETER, NH 03833. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO ANY PLANTINGS, CRITICAL SITE INFORMATION (SPECIES, MATURITY, LOCATION, ETC.) SHALL BE COORDINATED BETWEEN THE CONTRACTOR, ARCHITECT AND SPECIFIER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE LANDSCAPING MEETS THE PLAN SHOWN HERE.
- THE CONTRACTOR SHALL FOLLOW BEST MANAGEMENT PRACTICES DURING CONSTRUCTION AND SHALL TAKE ALL MEANS NECESSARY TO STABILIZE AND PROTECT THE SITE FROM EROSION.
- TREES TO REMAIN IN THE CONSTRUCTION ZONE SHALL BE PROTECTED FROM DAMAGE FOR THE DURATION OF THE PROJECT BY SNOW FENCE OR OTHER SUITABLE MEANS OF PROTECTION TO BE APPROVED BY THE LANDSCAPE ARCHITECT OR CLIENT'S REPRESENTATIVE. SNOW FENCE SHALL BE LOCATED AT THE DRIP LINE AT A MINIMUM AND SHALL INCLUDE ANY AND ALL SURFACE ROOTS. DO NOT FILL OR MULCH ON THE TRUNK FLARE. DO NOT DISTURB ROOTS. IN ORDER TO PROTECT THE INTEGRITY OF THE ROOTS, BRANCHES, TRUNK AND BARK OF THE TREE(S) NO VEHICLES OR CONSTRUCTION EQUIPMENT SHALL DRIVE OR PARK IN OR ON THE AREA WITHIN THE DRIP LINE(S) OF THE TREE(S). DO NOT STORE ANY REFUSE OR CONSTRUCTION MATERIALS WITHIN THE TREE PROTECTION AREAS.
- IDENTIFY AND REMOVE ALL INVASIVE PLANT SPECIES ENCOUNTERED WITHIN THE LIMIT OF WORK AS PER NHDES STANDARDS.
- PRIOR TO ANY LANDSCAPE CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL TEST ALL EXISTING LOAM AND LOAM FROM OFF-SITE INTENDED TO BE USED FOR LAWNS AND PLANT BEDS USING A THROUGH SAMPLING THROUGHOUT THE SUPPLY. SOIL TESTING SHALL INDICATE LEVELS OF pH, NITRATES, MACRO AND MICRO NUTRIENTS, TEXTURE, SOLUBLE SALTS AND ORGANIC MATTER. CONTRACTOR SHALL PROVIDE LANDSCAPE ARCHITECT WITH TEST RESULTS AND RECOMMENDATIONS FROM THE TESTING FACILITY ALONG WITH THE SOIL AMENDMENT PLANS AS NECESSARY FOR THE PROPOSED PLANTINGS TO THRIVE. ALL LOAM TO BE USED ON SITE SHALL BE AMENDED AS APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO THE PLACEMENT.
- CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE IMMEDIATELY IF AT ANY POINT DURING THE DEMOLITION OR CONSTRUCTION A SITE CONDITION IS DISCOVERED WHICH MAY NEGATIVELY IMPACT THE COMPLETED PROJECT. THIS INCLUDES, BUT IS NOT LIMITED TO, UNFORESEEN DRAINAGE PROBLEMS, UNKNOWN SUBSURFACE CONDITIONS AND DISCREPANCIES BETWEEN THE PLAN AND THE SITE. IF A CONTRACTOR IS AWARE OF A POTENTIAL ISSUE AND DOES NOT BRING IT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OWNER'S REPRESENTATIVE IMMEDIATELY, THEY MAY BE RESPONSIBLE FOR THE LABOR AND MATERIALS ASSOCIATED WITH CORRECTING THE PROBLEM.
- THE CONTRACTOR SHALL FURNISH AND PLANT ALL PLANTS SHOWN ON THE DRAWINGS AND LISTED THEREON. ALL PLANTS SHALL BE NURSERY-GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. PLANTS SHALL CONFORM TO THE BOTANICAL NAMES AND STANDARDS OF SIZE, CULTURE AND QUALITY FOR THE HIGHEST GRADES AND STANDARDS AS ADOPTED BY THE AMERICAN ASSOCIATION OF NURSEYMEN, INC. IN THE AMERICAN STANDARD OF NURSERY STOCK, AMERICAN STANDARDS INSTITUTE, INC. 230 SOUTHERN BUILDING, WASHINGTON, D.C. 20005.
- A COMPLETE LIST OF PLANTS, INCLUDING A SCHEDULE OF SIZES, QUANTITIES AND OTHER REQUIREMENTS IS SHOWN ON THE DRAWINGS. IN THE EVENT THAT QUANTITY DISCREPANCIES OR MATERIAL OMISSIONS OCCUR IN THE PLANT MATERIALS LIST, THE PLANTING PLANS SHALL GOVERN.
- ALL PLANS SHALL BE LEGIBLY TAGGED WITH PROPER BOTANICAL NAME.
- THE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR NOT LESS THAN ONE YEAR FROM TIME OF ACCEPTANCE.
- OWNER OR OWNER'S REPRESENTATIVE WILL INSPECT PLANTS UPON DELIVERY FOR CONFORMITY TO SPECIFICATION REQUIREMENTS. SUCH APPROVAL SHALL NOT AFFECT THE RIGHT OF INSPECTION AND REJECTION DURING OR AFTER THE PROGRESS OF THE WORK. THE OWNER RESERVES THE RIGHT TO INSPECT AND/OR SELECT ALL TREES AT THE PLACE OF GROWTH AND RESERVES THE RIGHT TO APPROVE A REPRESENTATIVE SAMPLE OF EACH TYPE OF SHRUB AND GROUND COVER AT THE PLACE OF GROWTH. SUCH SAMPLE WILL SERVE AS A MINIMUM STANDARD FOR ALL PLANTS OF THE SAME SPECIES USED IN THIS WORK.
- NO SUBSTITUTIONS OF PLANTS MAY BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER OR THE OWNER'S REPRESENTATIVE FOR ANY REASON. ALL LANDSCAPING SHALL BE PROVIDED WITH EITHER

OF THE FOLLOWING:

- AN UNDERGROUND SPRINKLING SYSTEM
- AN OUTSIDE HOSE ATTACHMENT WITHIN 150 FEET
- THE CONTRACTOR IS RESPONSIBLE FOR ALL PLANT MATERIAL FROM THE TIME THEIR WORK COMMENCES UNTIL FINAL ACCEPTANCE. THIS INCLUDES BUT IS NOT LIMITED TO MAINTAINING ALL PLANTS IN GOOD CONDITION, THE SECURITY OF THE PLANT MATERIAL ONCE DELIVERED TO THE SITE AND WATERING OF PLANTS. PLANTS SHALL BE APPROPRIATELY WATERED PRIOR TO, DURING AND AFTER PLANTING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WATER FROM OFF SITE, SHOULD IT NOT BE AVAILABLE ON SITE. ALL DISTURBED AREAS WILL BE DRESSED WITH 6" OF TOPSOIL AND PLANTED AS NOTED ON THE PLANS OR SEEDED EXCEPT PLANT BEDS. PLANT BEDS SHALL BE PREPARED TO A DEPTH OF 12" WITH 75% LOAM AND 25% COMPOST.
- TREES, GROUND COVER AND SHRUB BEDS SHALL BE MULCHED (NO COLOR ENHANCED) TO A DEPTH OF 3" WITH ONE-YEAR-OLD, WELL-COMPOSTED, SHREDDED NATIVE BARK NOT LONGER THAN 4" IN LENGTH AND 3" IN WIDTH. FREE OF WOODCHIPS AND SAWDUST. TREES IN LAWN AREAS SHALL BE MULCHED IN A 5' DIAMETER MINIMUM SAUCER. COLOR OF MULCH SHALL BE DETERMINED BY OWNER OR OWNER'S REPRESENTATIVE. IN NO CASE SHALL MULCH TOUCH THE STEMS OF A PLANT NOR SHALL MULCH EVER BE MORE THAN 3" THICK TOTAL (INCLUDING PREVIOUSLY APPLIED MULCH) OVER THE ROOT BALL OF ANY PLANT.
- SECONDARY LATERAL BRANCHES OF DECIDUOUS TREES OVERHANGING VEHICULAR AND PEDESTRIAN TRAVEL WAYS SHALL BE PRUNED UP TO A HEIGHT OF 6' TO ALLOW CLEAR AND SAFE PASSAGE OF VEHICLES AND PEDESTRIANS UNDER TREE CANOPY.
- SNOW SHALL BE STORED A MINIMUM OF 5' FROM SHRUBS AND TRUNKS OF TREES.
- MAINTAIN 5' TURF GRASS ALONG DRIVEWAYS AND PARKING AREAS OR AS OTHERWISE MARKED.
- SEED ALL BIORETENTION CELLS WITH NATIVE WET MEADOW MIX (NE WETMIX BY NEWP) AND TO BE MAINTAINED TWICE A YEAR.
- DISTURBED AREAS WITHIN 75' OF THE DELINEATED WETLAND SHALL BE SEEDED WITH CONSERVATION/WILDLIFE MIX OR WILDFLOWER MIX.
- ALL OTHER DISTURBED AREAS ONSITE THAT ARE NOT PAVED OR GRAVEL WILL BE LOAMED, SEEDED AND STABILIZED.

PLANTING LISTS

TREES

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	COMMENTS
AR	ACER RUBRUM	RED MAPLE	3	3-3.5"(CAL)	B+B
AB	ABIES BALSAMEA	BALSAM FIR	5	7-8'	B+B
JV	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	5	6-7'	B+B
BN	BETULA NIGRA	RIVER BIRCH	1	8-10'	B+B
PS	PINUS STROBUS	EASTERN WHITE PINE	9	8-10'	B+B
MB	JUNIPERUS MOUNTBATTEN	MOUNTBATTEN JUNIPERUS	5	6-7'	B+B

SHRUBS

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	COMMENTS
HA	HYDRANGEA ARBORESCENS	SMOOTH HYDRANGEA	5	#3	-
IG	ILEX GLABRA	INKBERRY	7	#3	-

GRAPHIC SCALE



(IN FEET)

P5613

SEDIMENT AND EROSION CONTROL NOTES

PROJECT NAME AND LOCATION

MIGHTY ROOTS WORLD HEADQUARTERS OFFICE SHOP
170 PORTSMOUTH AVENUE
STRATHAM, NH 03885
TAX MAP 17, LOT 86

LONGITUDE: 71°54'37" W
LATITUDE: 43°01'39" N

OWNER / APPLICANT:

PACKER BROOK HOLDINGS, LLC
13 ALDEN AVENUE
GREENLAND, NH 03840

DESCRIPTION

The project consists of the construction of a office/storage building with a loading area, a new septic system, and associated site improvements.

DISTURBED AREA

The total area to be disturbed for the redevelopment improvements is approximately 62,300 S.F. (±1.43 acres).

PROJECT PHASING

The proposed project will be completed in one phase.

NAME OF RECEIVING WATER

The site drains overlaid to wetland areas on and around the property.

SEQUENCE OF MAJOR ACTIVITIES

1. Prepare SWPPP and file NOI at least two weeks prior to initiating earthwork.
2. Attend a pre-construction meeting with Town and Owner.
3. Cut trees but do not remove stumps.
4. Install temporary erosion control measures including perimeter sediment controls, stabilized construction exit and stockpile area as noted on the plan. All temporary erosion control measures shall be maintained in good working condition for the duration of the project.
5. Relocate existing shed as noted on Sheet C-1.
6. Stump, grub, strip loam and stockpile loam.
7. Begin rough grading of the site including placement of borrow materials. Excavate areas for the proposed concrete foundation, septic system and detention pond.
8. Construct concrete foundation and building.
9. Install new septic system and other applicable utilities.
10. Construct drainage structures and utilities.
11. Construct concrete pads.
12. Fine grade site.
13. Install pavement subgrade and base course paving.
14. Install landscaping.
15. Loam (6" min) and seed all disturbed areas not paved or otherwise stabilized.
16. Install top course paving.
17. Install signage and pavement striping.
18. When all construction activity is complete and site is stabilized, remove all temporary erosion control measures and any sediment that has been trapped by these devices.

TEMPORARY EROSION & SEDIMENT CONTROL AND STABILIZATION PRACTICES

All work shall be in accordance with state and local permits. Work shall conform to the practices described in the "New Hampshire Stormwater Manual, Volumes 1 – 3", issued February 2025, as amended. As indicated in the sequence of Major Activities, the silt fences shall be installed prior to commencing any clearing or grading of the site. Structural controls shall be installed concurrently with the applicable activity. Once construction activity ceases permanently in an area, silt fences and any earth/dikes will be removed once permanent measures are established.

During construction, runoff will be diverted around the site with stabilized channels where possible. Sheet runoff from the site shall be filtered through hay bale barriers, stone check dams, and silt fences. All storm drain inlets shall be provided with hay bale filters or stone check dams. Stone rip rap shall be provided at the outlets of drain pipes and culverts where shown on the drawings.

Stabilize all ditches, swales, & level spreaders prior to directing flow to them.

Temporary and permanent vegetation and mulching is an integral component of the erosion and sedimentation control plan. All areas shall be inspected and maintained until vegetative cover is established. These control measures are essential to erosion prevention and also reduce costly rework of graded and shaped areas.

Temporary vegetation shall be maintained in these areas until permanent seeding is applied. Additionally, erosion and sediment control measures shall be maintained until permanent vegetation is established.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

A. GENERAL

These are general inspection and maintenance practices that shall be used to implement the plan:

1. The smallest practical portion of the site shall be denuded at one time.
2. All control measures shall be inspected at least once each week and following any storm event of 0.25 inches or greater.
3. All measures shall be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours.
4. Built-up sediment shall be removed from silt fence or other barriers when it has reached one-third the height of the fence or bale, or when "bulges" occur.
5. All diversion dikes shall be inspected and any breaches promptly repaired.
6. Temporary seeding and planting shall be inspected for bare spots, washouts, and unhealthy growth.
7. The owner's authorized engineer shall inspect the site on a periodic basis to review compliance with the Plans.
8. An area shall be considered stable if one of the following has occurred:
 - a. Base coarse gravels have been installed in areas to be paved;
 - b. A minimum of 85% vegetated growth as been established;
 - c. A minimum of 3 inches of non-erosive material such as stone of riprap has been installed; – or –
 - d. Erosion control blankets have been properly installed.
9. The length of time of exposure of area disturbed during construction shall not exceed 45 days.

B. MULCHING

Mulch shall be used on highly erodible soils, on critically eroding areas, on areas where conservation of moisture will facilitate plant establishment, and where shown on the plans.

1. Timing – In order for mulch to be effective, it must be in place prior to major storm events. There are two (2) types of standards which shall be used to assure this:
 - a. Apply mulch prior to any storm event. This is applicable when working within 100 feet of wetlands. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.
 - b. Required Mulching within a specified time period. The time period can range from 21 to 28 days of inactivity on a area, the length of time varying with site conditions. Professional judgment shall be used to evaluate the interaction of site conditions (soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc.) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CON'T)

2. Guidelines for Winter Mulch Application –

Type	Rate per 1,000 s.f.	Use and Comments
Hay or Straw	70 to 90 lbs.	Must be dry and free from mold. May be used with plantings.
Wood Chips or Bark Mulch	460 to 920 lbs.	Used mostly with trees and shrub plantings.
Jute and Fibrous Matting (Erosion Control Blanket)	As per manufacturer Specifications	Used in slope areas, water courses and other areas
Crushed Stone 1/4" to 1-1/2" dia.	Spread more than 1/2" thick	Effective in controlling wind and water erosion.
Erosion Control Mix	2" thick (min)	• The organic matter content is between 80 and 100%, dry weight basis. • Particle size by weight is 100% passing a 6" screen and a minimum of 70 %, maximum of 85%, passing a 0.75" screen. • The organic portion needs to be fibrous and elongated. • Large portions of silt, clay or fine sands are not acceptable in the mix. • Soluble salts content is less than 4.0 mmhos/cm. • The pH should fall between 5.0 and 8.0.

3. Maintenance – All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.

C. TEMPORARY GRASS COVER

1. Seedbed Preparation – Apply fertilizer at the rate of 600 pounds per acre of 10–10–10. Apply limestone (equivalent to 50 percent calcium plus magnesium oxide) at a rate of three (3) tons per acre.

2. Seeding –
 - a. Utilize annual ryegrass at a rate of 40 lbs./acre.
 - b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.
 - c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer). Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.
3. Maintenance – Temporary seedings shall be periodically inspected. At a minimum, 95% of the soil surface should be covered by vegetation. If any evidence of erosion or sedimentation is apparent, repairs shall be made and other temporary measures used in the interim (mulch, filter barriers, check dams, etc.).

D. FILTERS

1. Sequence of Installation – Sediment barriers shall be installed prior to any soil disturbance of the contributing up-slope drainage area.
2. Maintenance –
 - a. Silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any signs of erosion or sedimentation below them. Any required repairs shall be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water, the sediment barriers shall be replaced with a temporary stone check dam.
 - b. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be replaced promptly.
 - a. Sediment deposits must be removed when deposits reach approximately one-third (1/3) the height of the barrier.
 - b. Any sediment deposits remaining in place after the silt fence or other barrier is no longer required shall be removed. The area shall be prepared and seeded.
 - c. Additional stone may have to be added to the construction entrance, rock barrier and riprap lined swales, etc., periodically to maintain proper function of the erosion control structure.

E. PERMANENT SEEDING –

1. Bedding – stones larger than 1 1/2", trash, roots, and other debris that will interfere with seeding and future maintenance of the area should be removed. Where feasible, the soil should be tilled to a depth of 5" to prepare a seedbed and mix fertilizer into the soil.
2. Fertilizer – lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and fertilizer should be based on an evaluation of soil tests. When a soil test is not available, the following minimum amounts should be applied:

Agricultural Limestone @ 100 lbs. per 1,000 s.f.
10–20–20 fertilizer @ 12 lbs. per 1,000 s.f.

3. Seed Mixture (recommended):

Type	Lbs. / Acre	Lbs. / 1,000 sf
Tall Fescue	24	0.55
Creeping Red Fescue	24	0.55
Total	48	1.10

Seed Mixture (For slope embankments):
Grass Seed: Provide fresh, clean, new-crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America. Provide seed mixture composed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified:

Type	Min. Purity (%)	Min. Germination (%)	Kg./Hectare (Lbs./acre)
Creeping Red Fescue (c)	96	85	45 (40)
Perennial Rye Grass (a)	98	90	35 (30)
Redtop	95	80	5 (5)
Alsike Clover	97	90(e)	5 (5)
			Total 90 (80)

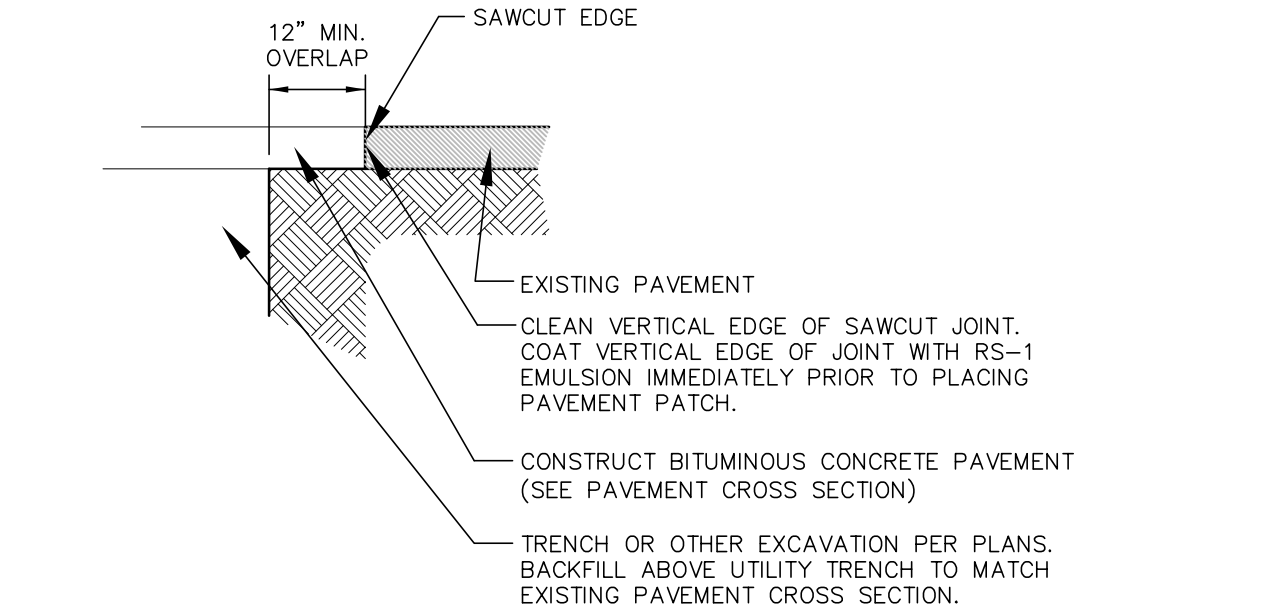
- a. Ryegrass shall be a certified fine-textured variety such as Pennfine, Fiesta, Yorktown, Diplomat, or equal.
- b. Fescue varieties shall include – Creeping Red and/or Hard Reliant, Scaldis, Koket, or Jamestown.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CON'T)

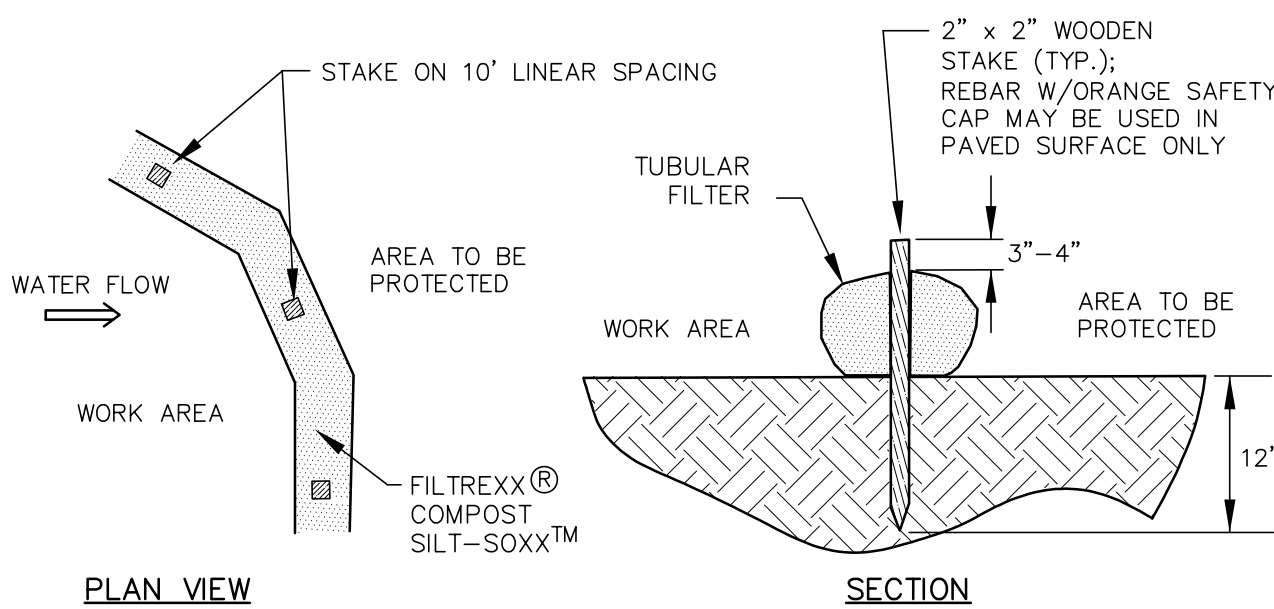
4. Sodding – sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding on area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook. Sodding is recommended for steep sloped areas, areas immediately adjacent to sensitive water courses, easily erodible soils (fine sand/silt), etc.

WINTER CONSTRUCTION NOTES

1. All proposed vegetated areas which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and elsewhere seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting. The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events;
2. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions; and
3. After November 15th, incomplete road or parking surfaces where work has stopped for the winter season shall be protected with a minimum of 3 inches of crushed gravel per NHDOT Item 304.3.

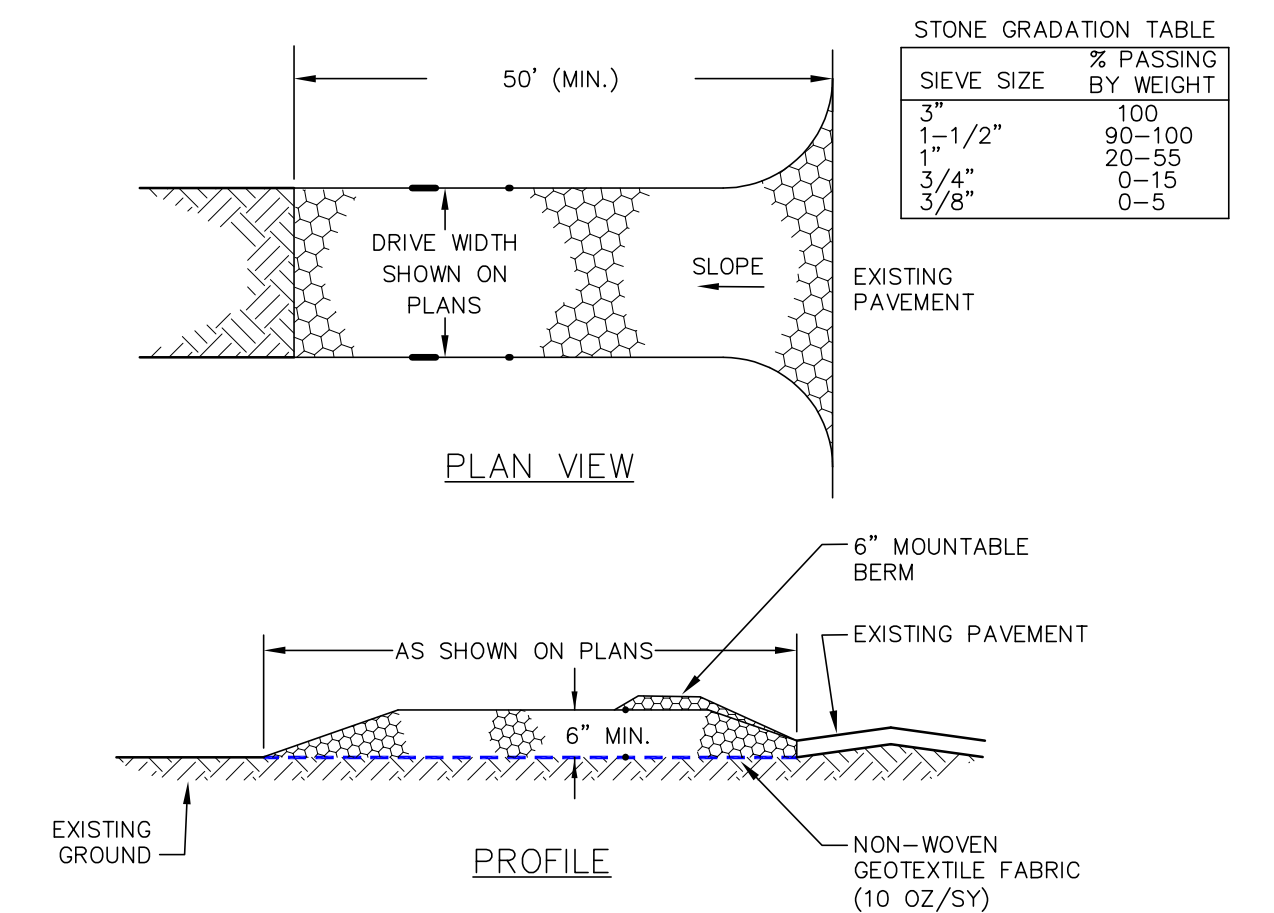


TYPICAL PAVEMENT SAWCUT NOT TO SCALE



- NOTES:
1. SILT SOXX OR APPROVED EQUAL SHALL BE USED FOR TUBULAR SEDIMENT BARRIERS.
 2. ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS.
 3. COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIREMENTS OF THE SPECIFIC APPLICATION.
 4. ALL SEDIMENT TRAPPED BY BARRIER SHALL BE DISPOSED OF PROPERLY.

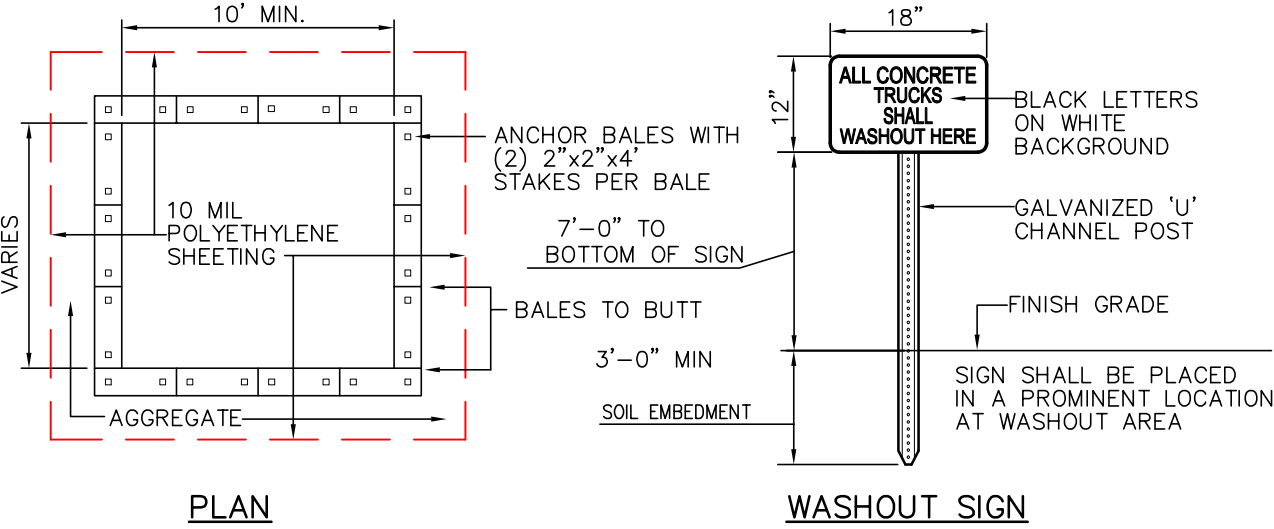
TUBULAR SEDIMENT BARRIER DETAIL NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

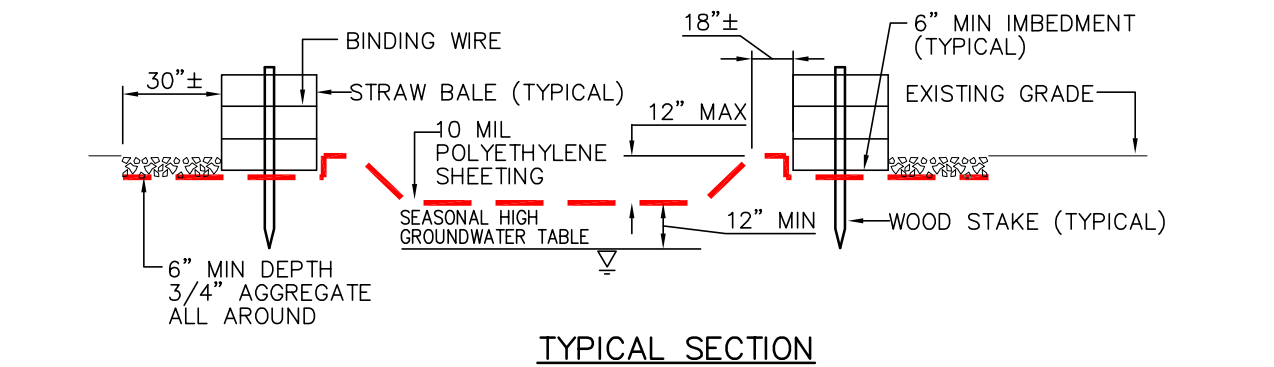
1. **STONE SIZE** – NHDOT STANDARD STONE SIZE #4 – SECTION 703 OF NHDOT STANDARD.
2. **LENGTH** – DETAILED ON PLANS (50 FOOT MINIMUM) OR AS SHOWN ON PLANS.
3. **THICKNESS** – SIX (6) INCHES (MINIMUM).
4. **WIDTH** – FULL DRIVE WIDTH UNLESS OTHERWISE SPECIFIED.
5. **FILTER FABRIC** – MIRAFI 600X OR EQUAL APPROVED BY ENGINEER.
6. **SURFACE WATER CONTROL** – ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. **MAINTENANCE** – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH 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.
8. **WHEELS** SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. **STABILIZED CONSTRUCTION EXITS** SHALL BE INSTALLED AT ALL ENTRANCES TO PUBLIC RIGHTS-OF-WAY, AT LOCATIONS SHOWN ON THE PLANS, AND/OR WHERE AS DIRECTED BY THE ENGINEER.

STABILIZED CONSTRUCTION EXIT NOT TO SCALE



PLAN

WASHOUT SIGN

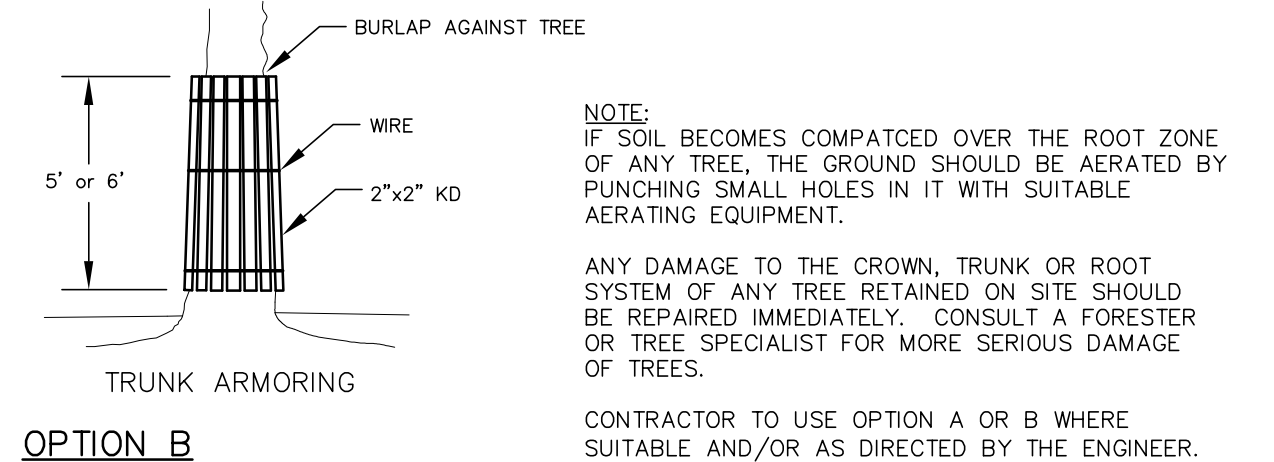


TYPICAL SECTION

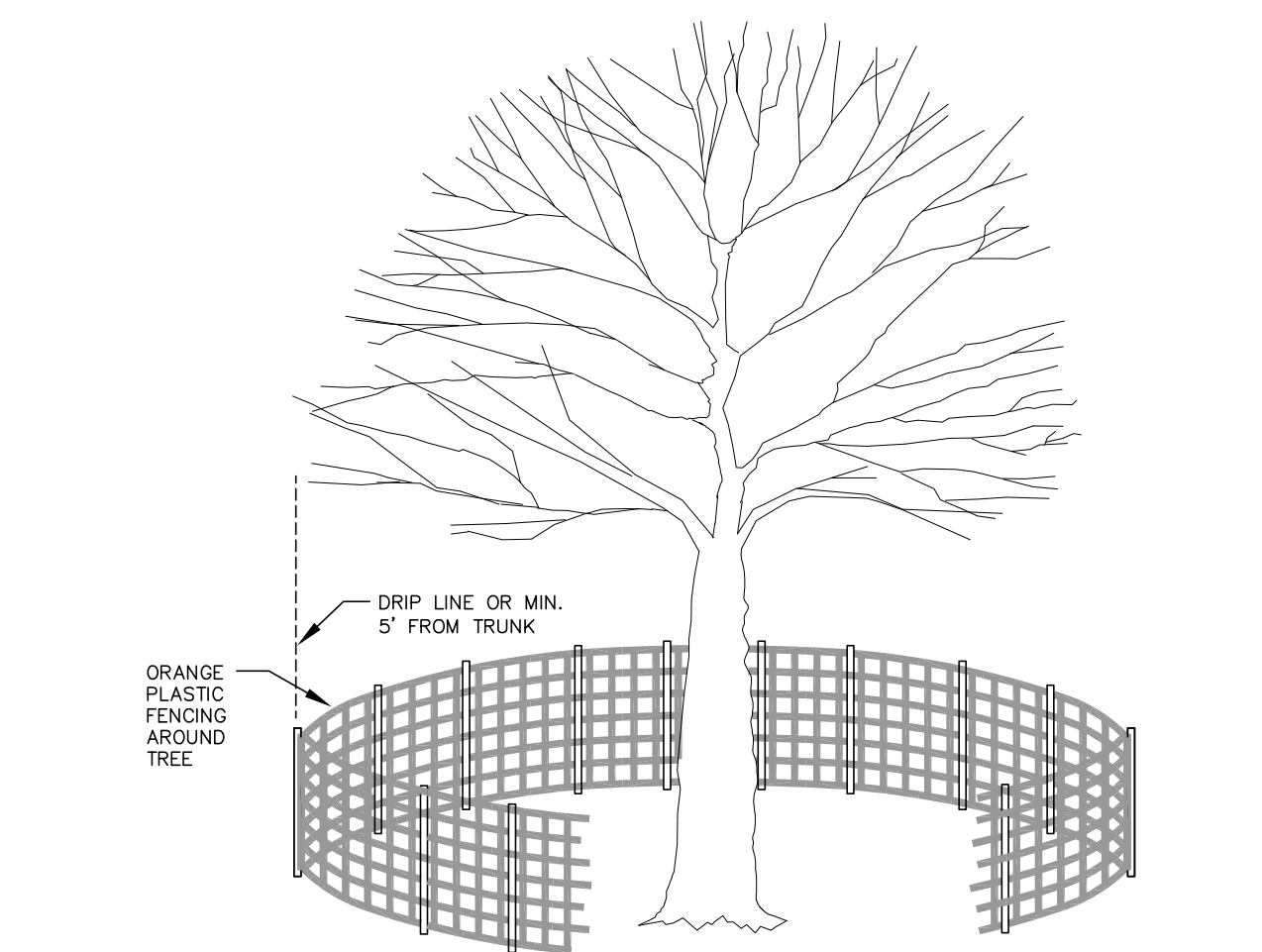
NOTES

1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

CONCRETE WASHOUT NOT TO SCALE

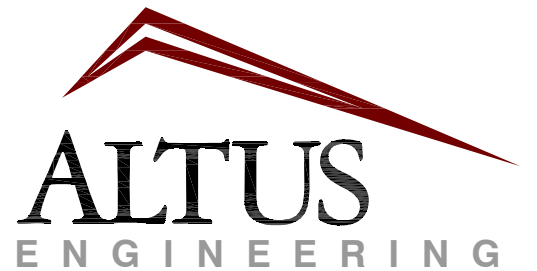


OPTION B

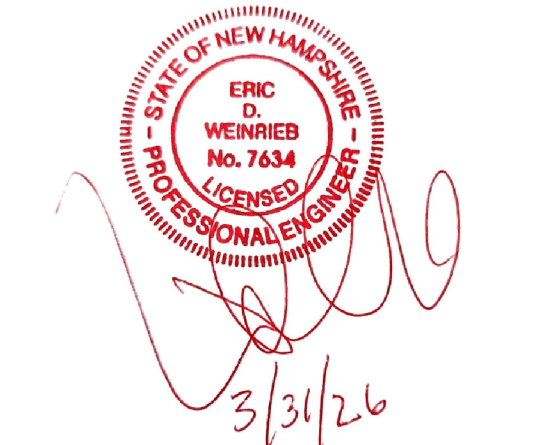


OPTION A

TREE PROTECTION DETAILS NOT TO SCALE



133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR:

SITE PLAN REVIEW

ISSUE DATE:

MARCH 31, 2026

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	01/07/26
1	REV. PER COMMENT	PMJ	03/31/26

DRAWN BY: _____ PMJ

APPROVED BY: _____ EDW

DRAWING FILE: _____ 5613-SITE.DWG

SCALE:

22" x 34" - 1" = NTS

11" x 17" - 1" = NTS

OWNER/APPLICANT:

PACKER BROOK HOLDINGS, LLC
13 ALDEN AVENUE
GREENLAND, NH 03840

PROJECT:

TAX MAP 17
LOT 86

MIGHTY ROOTS
170 PORTSMOUTH AVENUE
STRATHAM, NH 03850
BK 6538, PG 2720

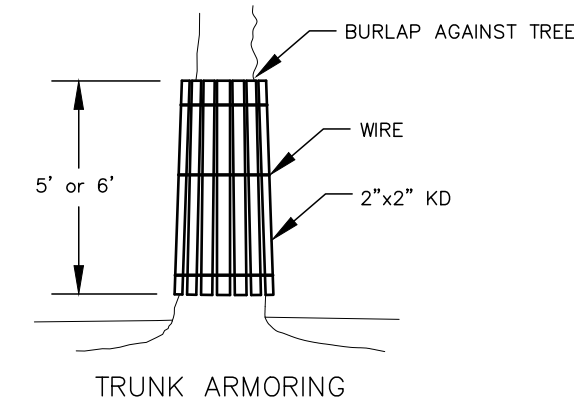
WORLD HEADQUARTERS
OFFICE/SHOP

TITLE:

DETAILS I & EROSION
CONTROL NOTES

SHEET NUMBER:

D-1

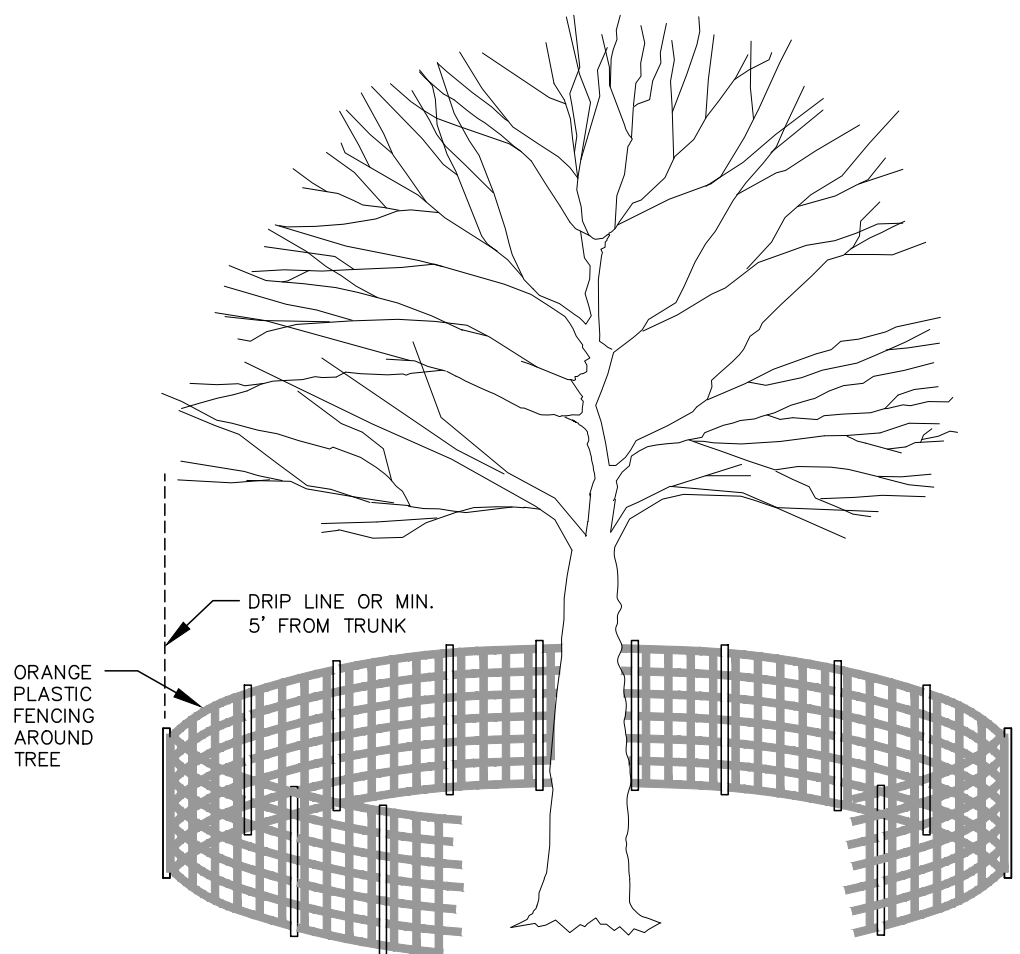


OPTION B

NOTE:
IF SOIL BECOMES COMPACTED OVER THE ROOT ZONE OF ANY TREE, THE GROUND SHOULD BE AERATED BY PUNCHING SMALL HOLES IN IT WITH SUITABLE AERATING EQUIPMENT.

ANY DAMAGE TO THE CROWN, TRUNK OR ROOT SYSTEM OF ANY TREE RETAINED ON SITE SHOULD BE REPAIRED IMMEDIATELY. CONSULT A FORESTER OR TREE SPECIALIST FOR MORE SERIOUS DAMAGE OF TREES.

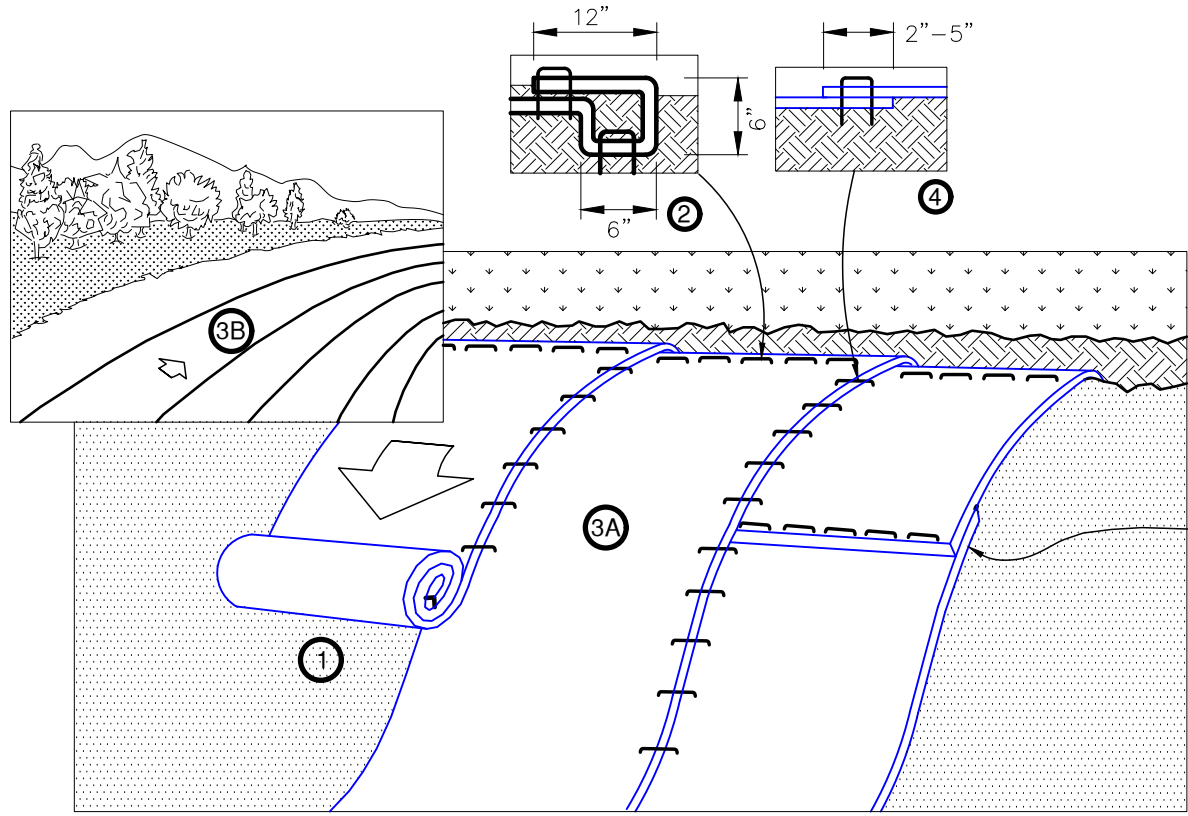
CONTRACTOR TO USE OPTION A OR B WHERE SUITABLE AND/OR AS DIRECTED BY THE ENGINEER.



OPTION A

TREE PROTECTION DETAILS

NOT TO SCALE

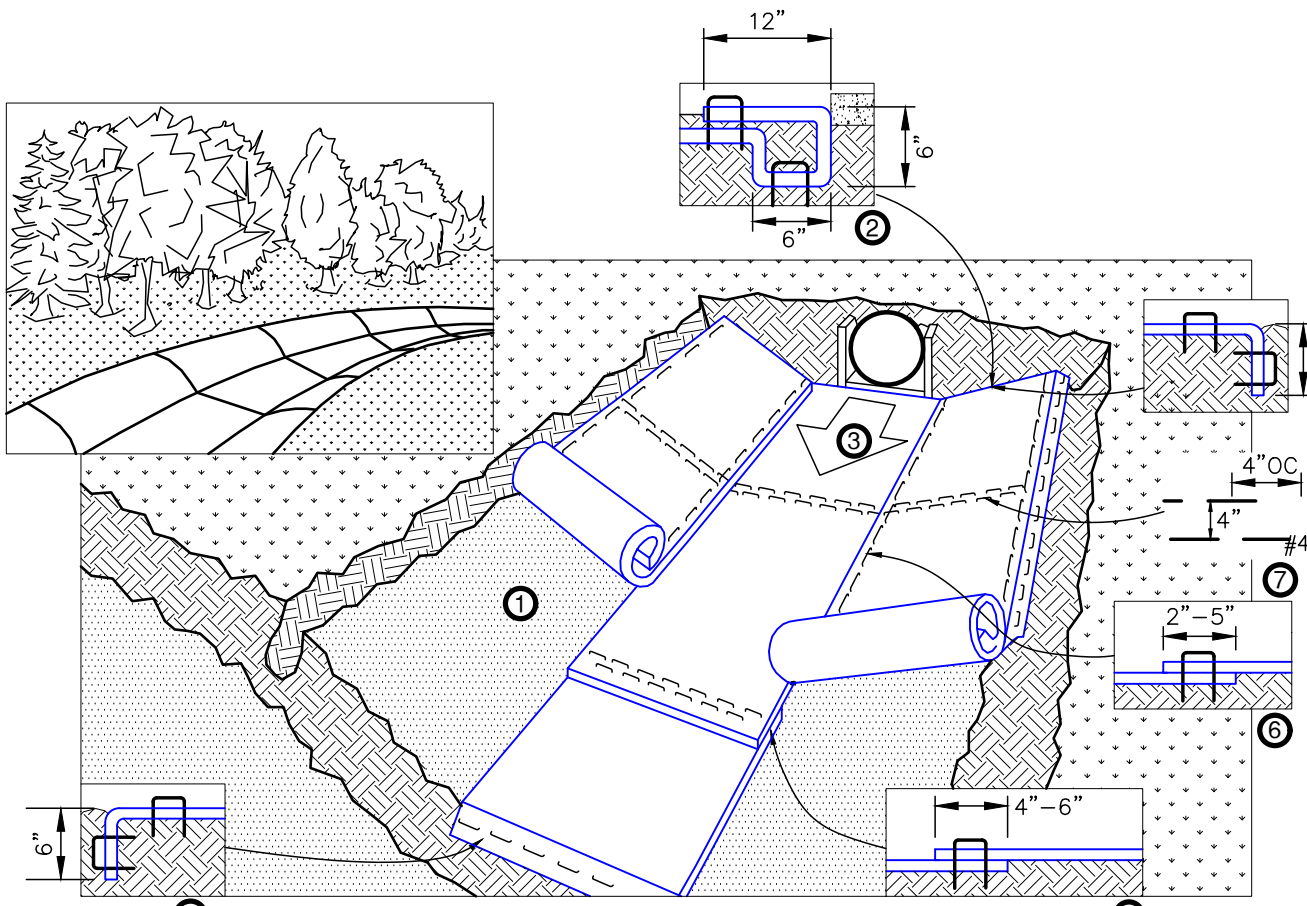


NOTES

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP BY 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

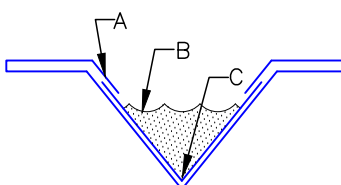
EROSION CONTROL BLANKET - SLOPE

NOT TO SCALE



NOTES

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP BY 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"-6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP BY 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"-5" (DEPENDING ON BLANKET TYPE) AND STAPLED. TO INSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP BY 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



CRITICAL POINTS:

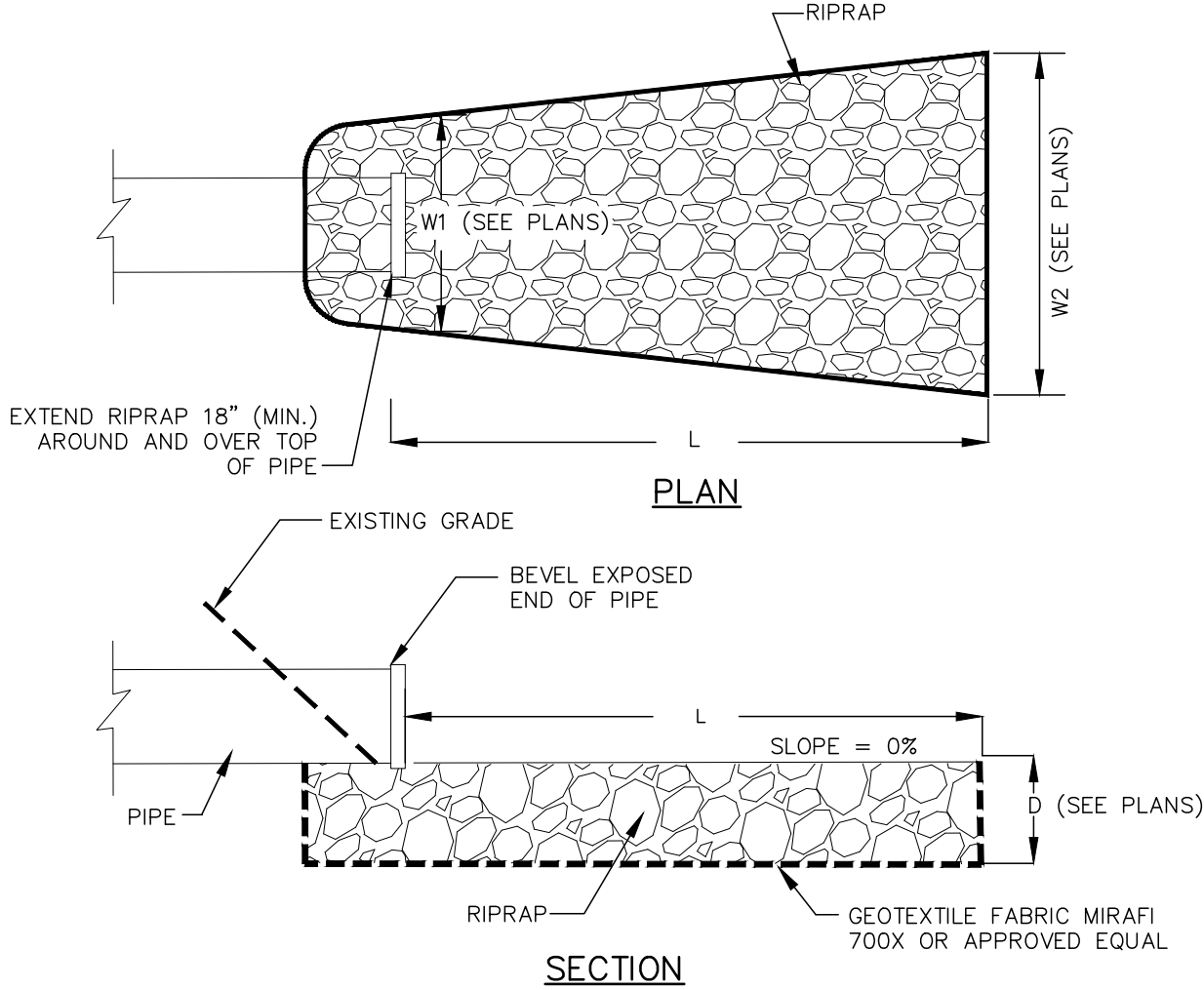
- A. OVERLAPS AND SEAMS
- B. PROJECTED WATER LINE
- C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTES:

- HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
- IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

EROSION CONTROL BLANKET - SWALE

NOT TO SCALE



MAINTENANCE

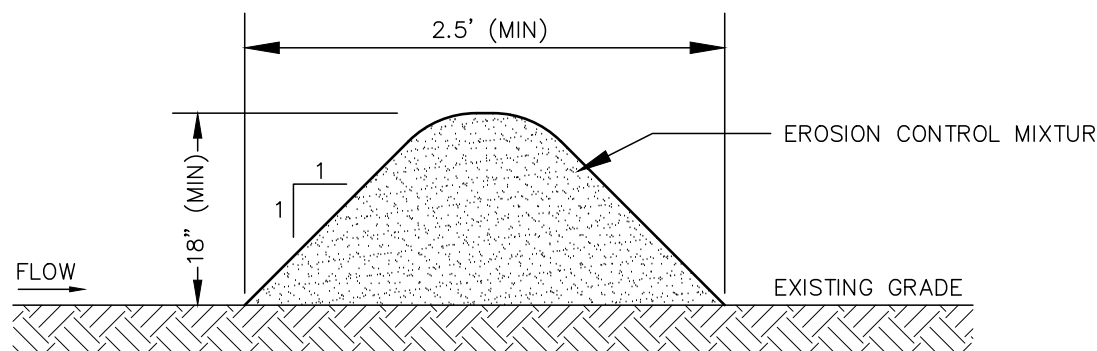
THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD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

CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIPRAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK/RIPRAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
3. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
4. BEVEL EXPOSED END OF PIPE FLUSH WITH GRADE.

RIPRAP OUTLET PROTECTION

NOT TO SCALE

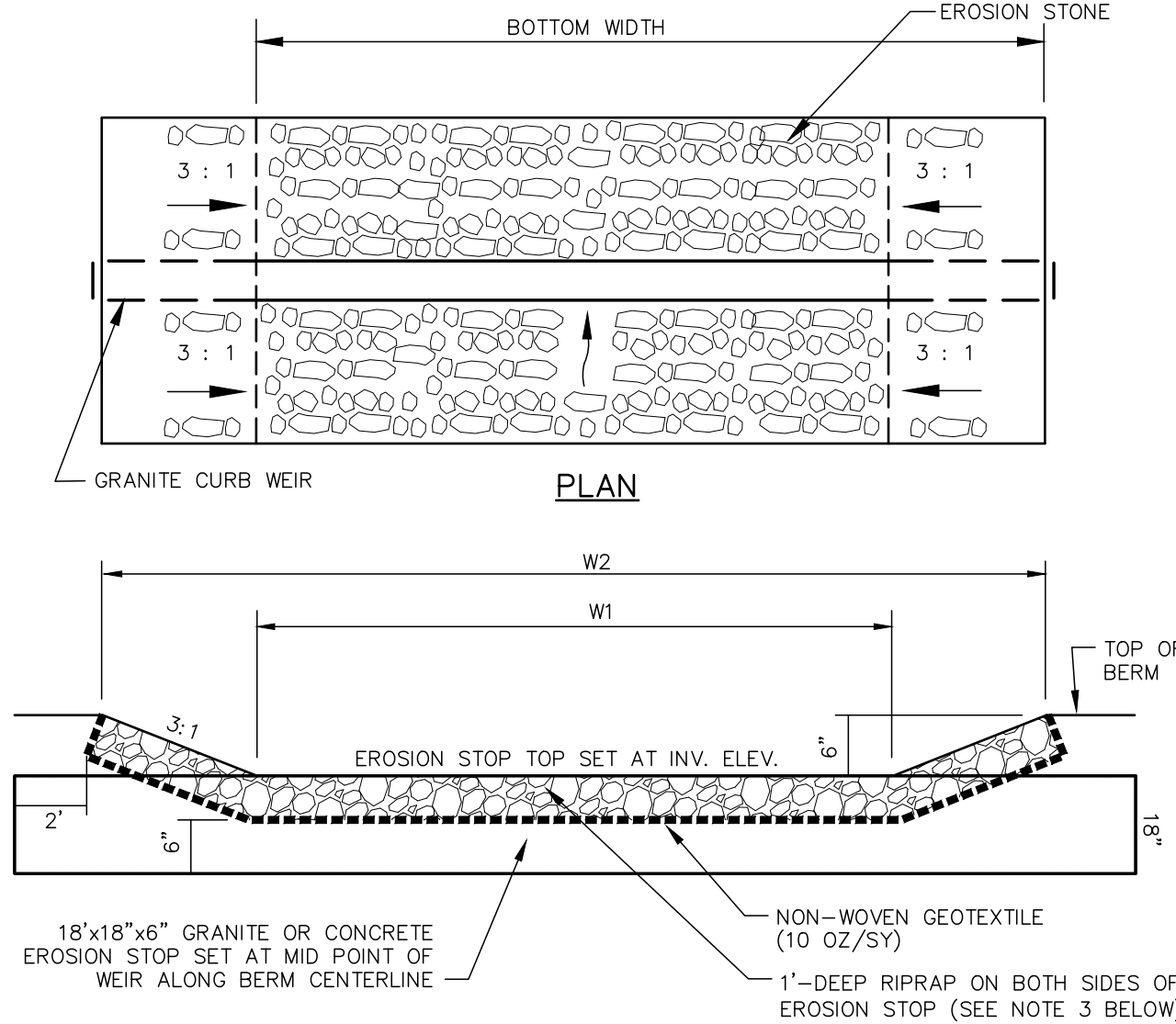


NOTES

1. ORGANIC FILTER BERMS MAY BE UTILIZED IN LIEU OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
2. THE EROSION CONTROL MIXTURE USED IN FILTER BERMS SHALL BE A WELL-GRADED MIX OF PARTICLE SIZES THAT MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER, STUMP GRINDINGS, SHREDDED OR COMPOSTED BARK, AND/OR ACCEPTABLE MANUFACTURED PRODUCTS AND SHALL BE FREE OF REFUSE, PHYSICAL CONTAMINANTS AND MATERIAL TOXIC TO PLANT GROWTH. EROSION CONTROL MIXTURE SHALL MEET THE FOLLOWING STANDARDS:
 - a) THE ORGANIC CONTENT SHALL BE 80-100% OF DRY WEIGHT.
 - b) PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN, AND 70-85% PASSING A 0.75" SCREEN.
 - c) THE ORGANIC PORTION SHALL BE FIBROUS AND ELONGATED.
 - d) LARGE PORTIONS OF SILTS, CLAYS, OR FINE SANDS SHALL NOT BE INCLUDED IN THE MIXTURE.
 - e) SOLUBLE SALTS CONTENT SHALL BE >4.0mmhos/cm.
 - f) THE PH SHALL BE BETWEEN 5.0 AND 8.0.
3. ORGANIC FILTER BERMS SHALL BE INSTALLED ALONG A RELATIVELY LEVEL CONTOUR. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BERM.
4. ON SLOPES LESS THAN 5%, OR AT THE BOTTOM OF SLOPES NO STEEPER THAN 3:1 AND UP TO 20' LONG, THE BERM SHALL BE A MINIMUM OF 12" HIGH (AS MEASURED ON THE UPHILL SIDE) AND A MINIMUM OF 36" WIDE. ON LONGER AND/OR STEEPER SLOPES, THE BERM SHALL BE TALLER AND WIDER TO ACCOMMODATE THE POTENTIAL FOR ADDITIONAL RUNOFF (MAXIMUM HEIGHT SHALL NOT EXCEED 2').
5. FROZEN GROUND, OUTCROPS OF BEDROCK, AND VERY ROOTED FORESTED AREAS PRESENT THE MOST PRACTICAL AND EFFECTIVE LOCATIONS FOR ORGANIC FILTER BERMS. OTHER BMP'S SHOULD BE USED AT LOW POINTS OF CONCENTRATED RUNOFF, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS, AND AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT HAVE A LARGE CONTRIBUTING AREA.
6. SEDIMENT SHALL BE REMOVED FROM BEHIND THE FILTER BERMS WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE BERM.
7. ORGANIC FILTER BERMS MAY BE LEFT IN PLACE ONCE THE SITE IS STABILIZED PROVIDED ANY SEDIMENT DEPOSITS TRAPPED BY THEM ARE REMOVED AND DISPOSED OF PROPERLY.
8. FILTER BERMS ARE PROHIBITED AT THE BASE OF SLOPES STEEPER THAN 8% OR WHERE THERE IS FLOWING WATER WITHOUT THE SUPPORT OF ADDITIONAL MEASURES SUCH AS SILT FENCE.

ORGANIC FILTER BERM

NOT TO SCALE

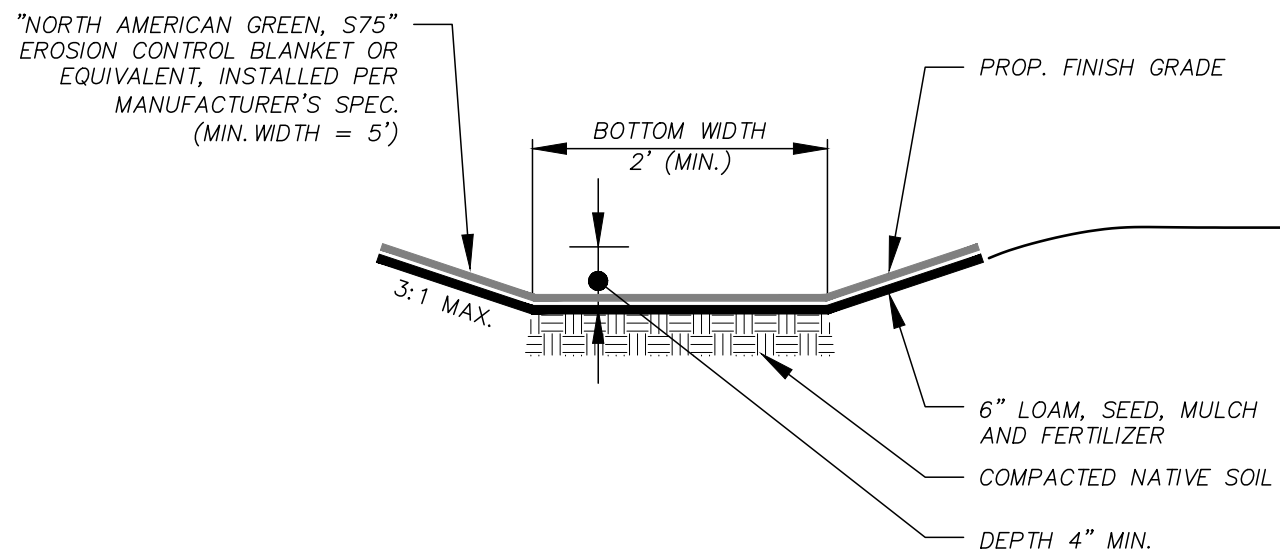


1. CONSTRUCT EMERGENCY OVERFLOW WEIR TO THE WIDTHS AND LENGTHS SHOWN ON THE PLAN.
2. THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIPRAP SHALL BE PREPARED TO LINES AND GRADES SHOWN ON THE PLANS.
3. UNLESS OTHERWISE SPECIFIED OR DIRECTED, RIPRAP USED FOR THE EMERGENCY OVERFLOW WEIR SHALL MEET THE FOLLOWING GRADATION:

SIZE	PERCENT PASSING BY WEIGHT
4"	90-100
2"	0-15
4. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE EROSION STONE. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 18 INCHES.
5. THE EROSION STONE MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

RIPRAP SPILLWAY / OVERFLOW WEIR

NOT TO SCALE

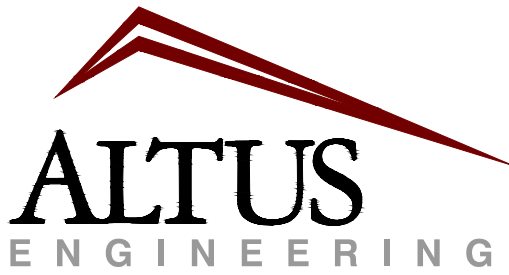


NOTES:

1. THE FOUNDATION AREA OF THE WATERWAY SHALL BE CLEARED AND GRUBBED OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. MATERIALS REMOVED SHALL BE DISPOSED OF SO THEY WILL NOT INTERFERE WITH THE CONSTRUCTION OR PROPER FUNCTIONING OF THE WATERWAY.
2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE DESIGN CRITERIA. THE WATERWAY SHALL BE FREE OF IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
3. EARTH FILLS REQUIRED TO MEET SUBGRADE REQUIREMENTS BECAUSE OF OVER EXCAVATION OR TOPOGRAPHY SHALL BE COMPACTED TO THE SAME DENSITY AS THE SURROUNDING SOIL TO PREVENT UNEQUAL SETTLEMENT THAT COULD CAUSE DAMAGE TO THE COMPLETED WATERWAY. EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE WATERWAY.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE EROSION AND AIR AND WATER POLLUTION. ALL APPROPRIATE STATE AND LOCAL LAWS AND REGULATIONS SHALL BE COMPLIED WITH FOR INSTALLATION.
5. VEGETATION SHALL BE ESTABLISHED IN THE SWALE OR AN EROSION CONTROL MATTING INSTALLED PRIOR TO ALLOWING STORMWATER RUNOFF TO FLOW THROUGH THE SWALE.
6. MAINTENANCE OF THE VEGETATION IN THE GRASSED WATERWAY IS EXTREMELY IMPORTANT IN ORDER TO PREVENT RILLING, EROSION, AND FAILURE OF THE WATERWAY. MOWING SHALL BE DONE FREQUENTLY ENOUGH TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION AND TO KEEP THE GRASSES IN A VIGOROUS CONDITION. THE VEGETATION SHALL NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE EROSION RESISTANCE IN THE WATERWAY.
7. THE WATERWAY SHOULD BE INSPECTED PERIODICALLY AND AFTER ANY STORM GREATER THAN 0.5" OF RAINFALL IN 24 HOURS TO DETERMINE THE CONDITION OF THE WATERWAY. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND REVEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.
8. APPLY LIME AND FERTILIZER AS NEEDED TO MAINTAIN VIGOROUS GROWTH.

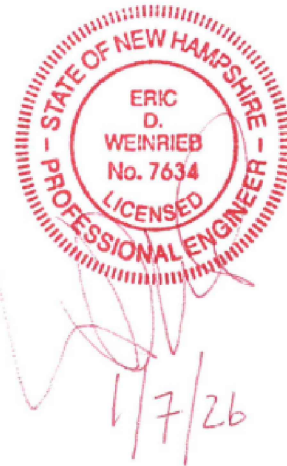
GRASSED SWALE

NOT TO SCALE



133 Court Street
(603) 433-2335

Portsmouth, NH 03801
www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR:

SITE PLAN REVIEW

ISSUE DATE:

JANUARY 7, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	01/07/26

DRAWN BY: _____ PMJ

APPROVED BY: _____ EDW

DRAWING FILE: _____ 5613-SITE.DWG

SCALE:

22" x 34" - 1" = NTS

11" x 17" - 1" = NTS

OWNER/APPLICANT:

PACKER BROOK
HOLDINGS, LLC
13 ALDEN AVENUE
GREENLAND, NH 03840

PROJECT:

TAX MAP 17
LOT 86

MIGHTY ROOTS
170 PORTSMOUTH AVENUE
STRATHAM, NH 03850
BK 6538, PG 2720

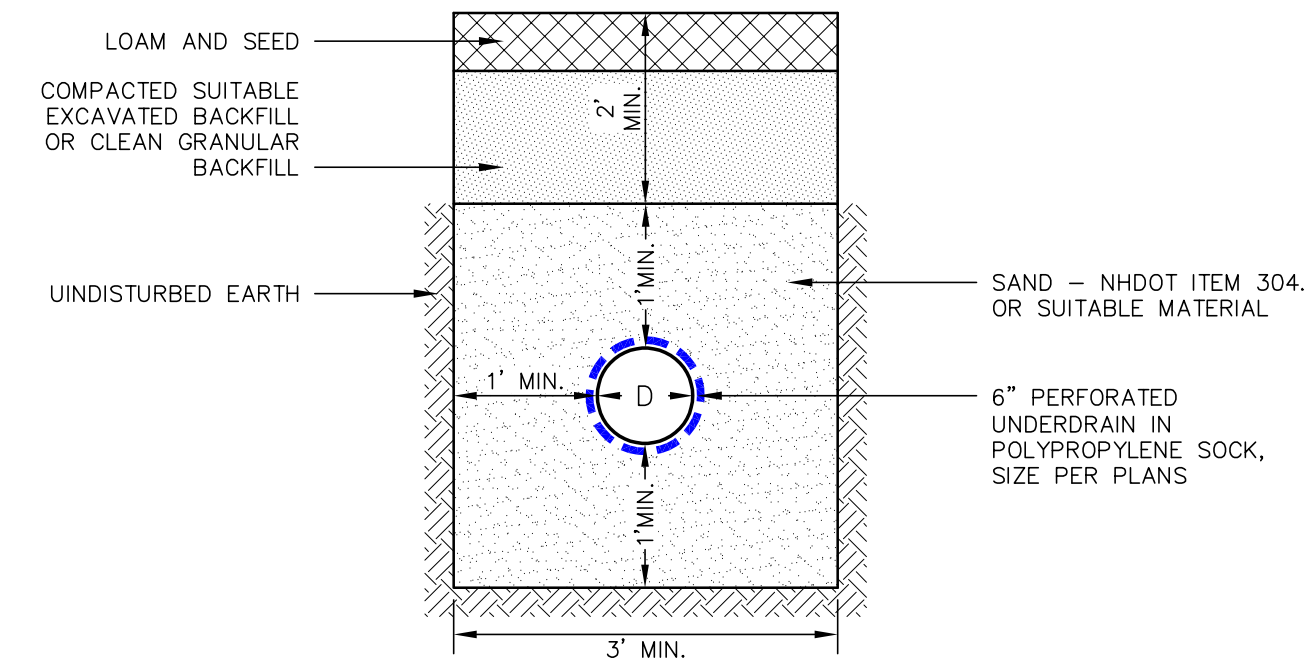
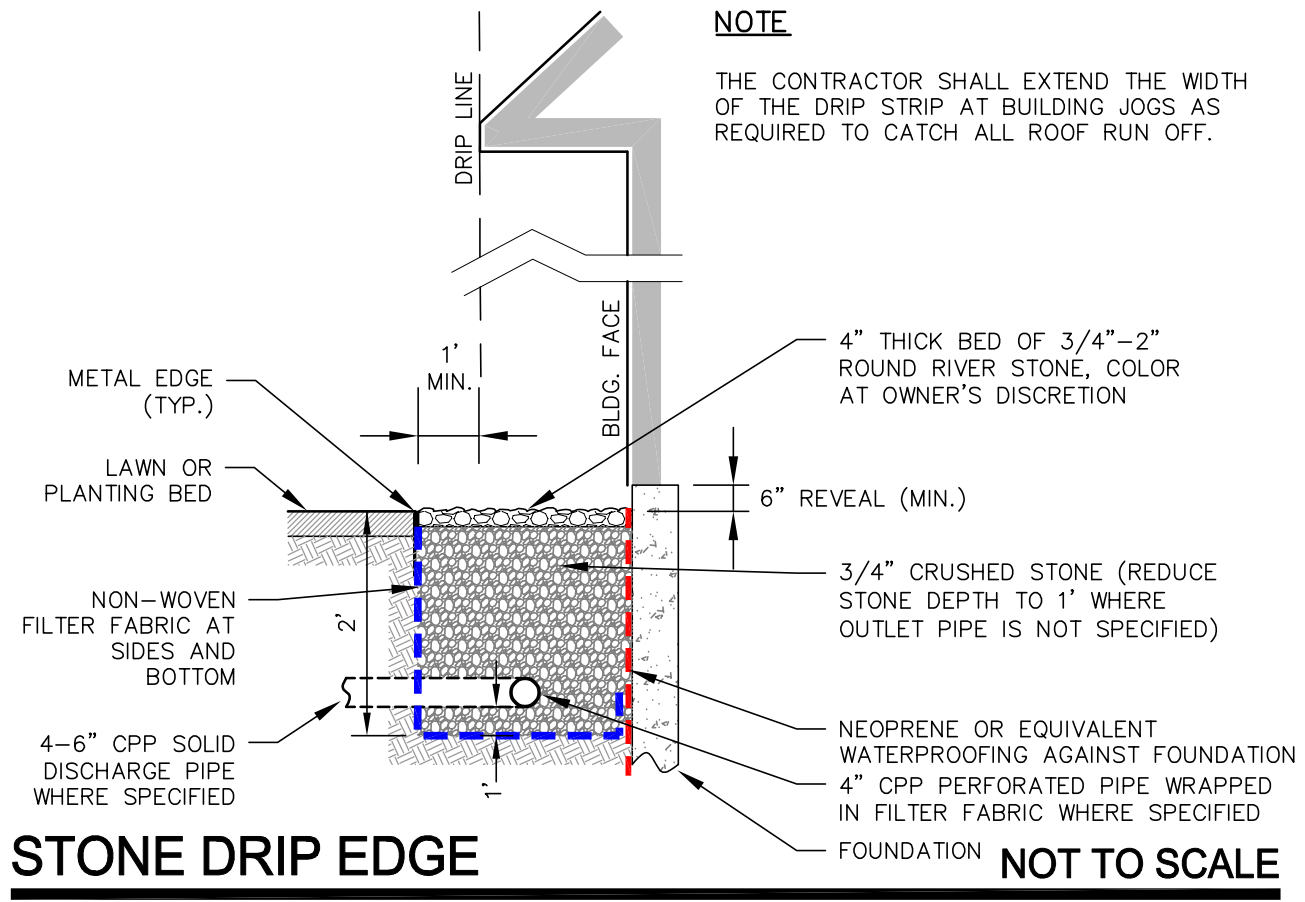
WORLD
HEADQUARTERS
OFFICE/SHOP

TITLE:

DETAILS II

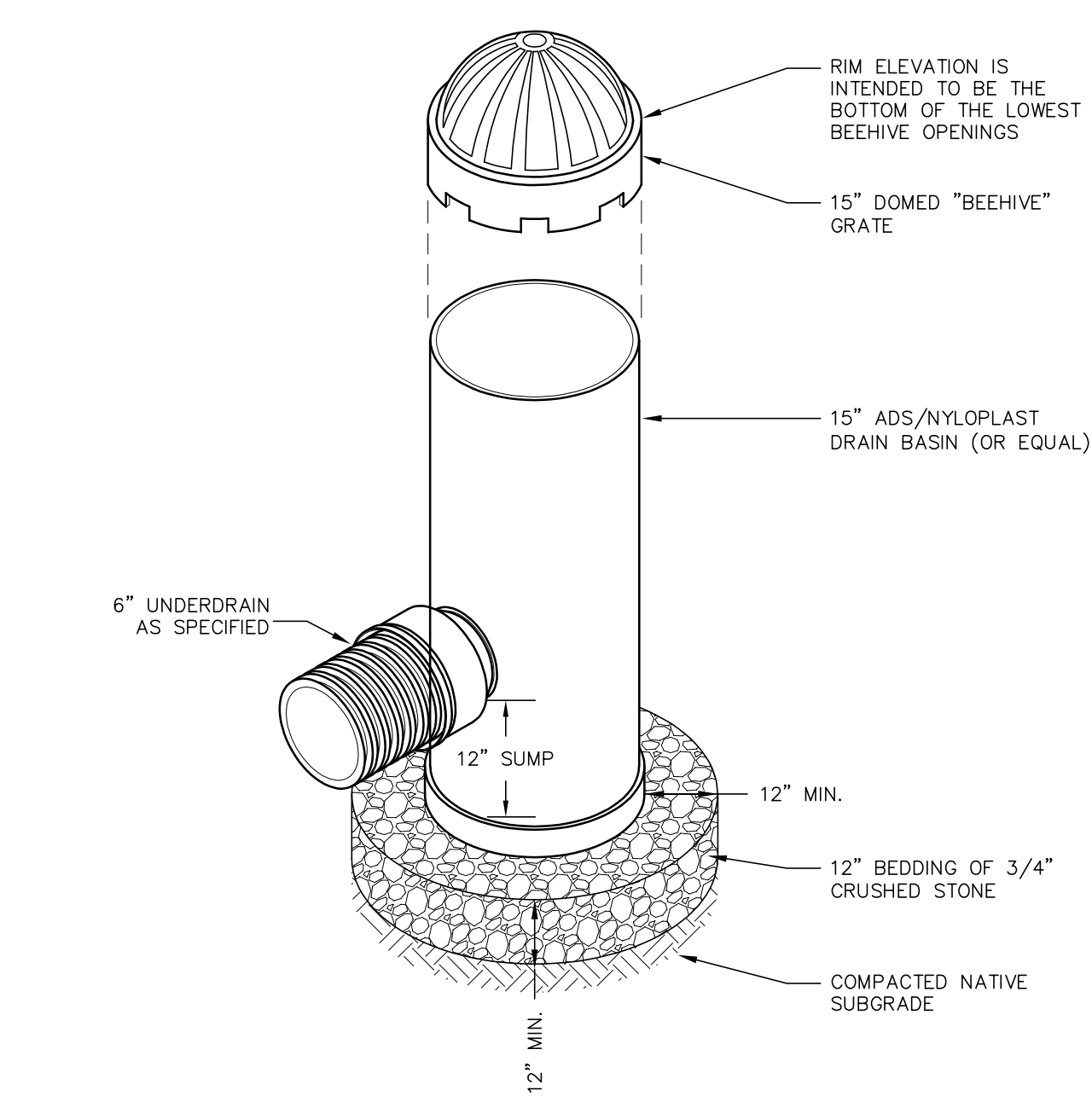
SHEET NUMBER:

D-2



NOTES:

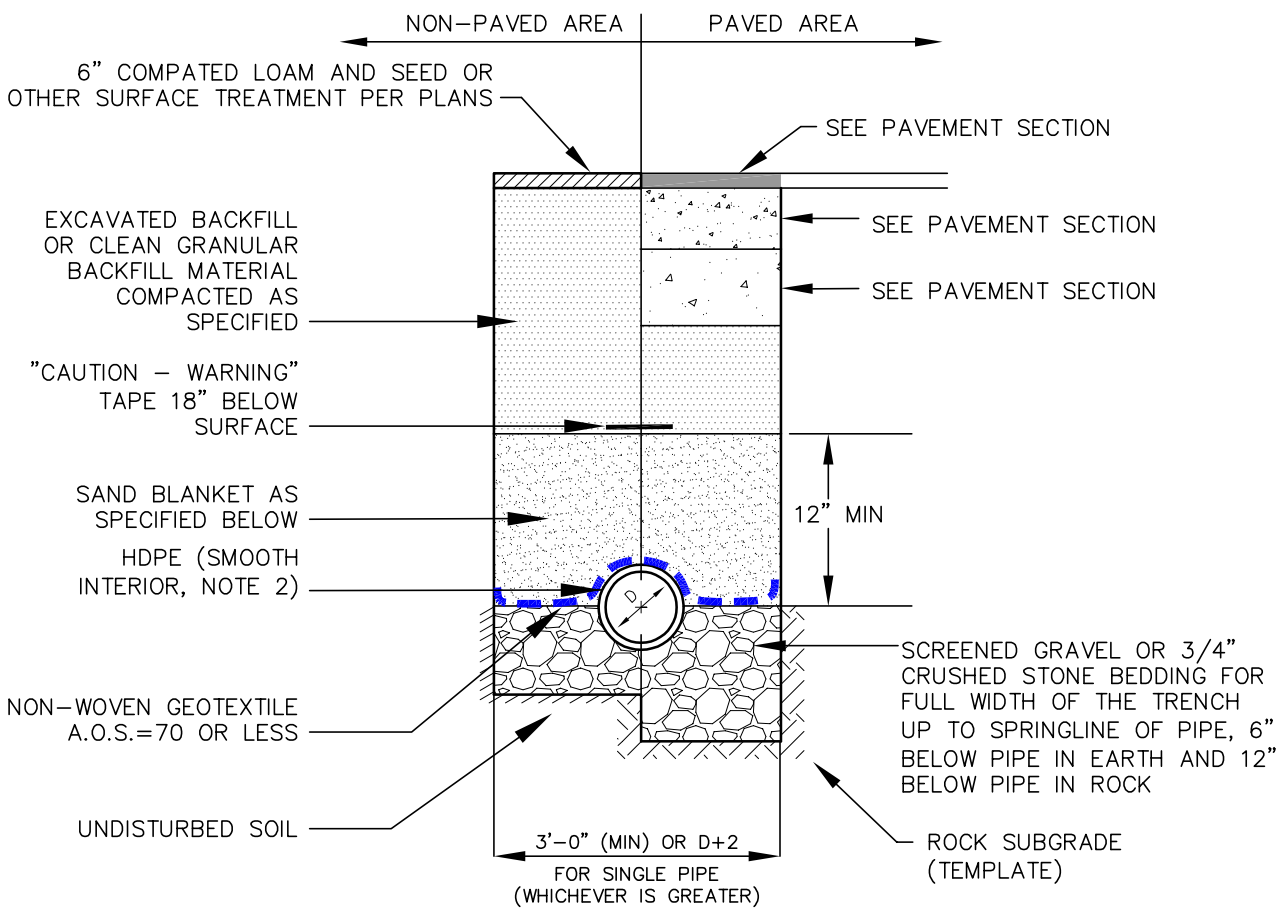
1. ALL MATERIALS ARE TO BE COMPACTED TO 95% OF ASTM D-1557.



NOTES:

1. FRAMES AND GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN AND DETAILS.
3. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE, N-12HP AND PVC SEWER.
4. INLINE DRAIN TO BE PVC DIAMETER AS SPECIFIED AND AS MANUFACTURED BY ADS OR APPROVED EQUAL.
5. THE CONTRACTOR SHALL INSTALL THE DRAIN BASIN PER THE MANUFACTURER'S RECOMMENDATIONS AND AS SHOWN ON THE DRAWINGS.
6. INLET AND OUTLET GEOMETRY MAY NOT BE SYMMETRICAL. ALL INLETS AND OUTLET LOCATIONS SHALL CONFORM TO THE LINES AND ANGLES SHOWN ON THE PLANS.

YARD DRAIN ("YD") **NOT TO SCALE**



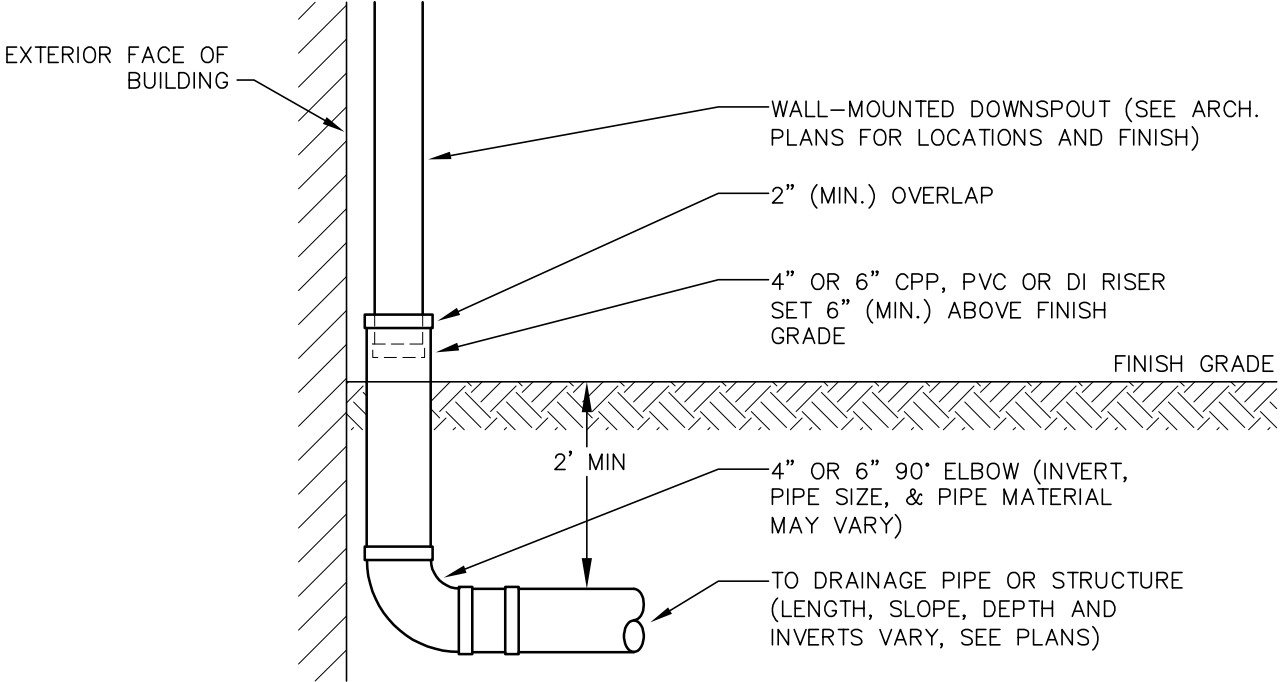
NOTES:

1. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.
2. INSULATE GRAVITY SEWER AND FORCEMAINS WHERE THERE IS LESS THAN 5'-0" OF COVER WITH 2" THICK CLOSED CELL RIGID BOARD INSULATION, 18" ON EACH SIDE OF PIPE.
3. MAINTAIN 12" MINIMUM HORIZONTAL SEPARATION AND WIDEN TRENCH ACCORDINGLY IF MULTIPLE PIPES ARE IN TRENCH.

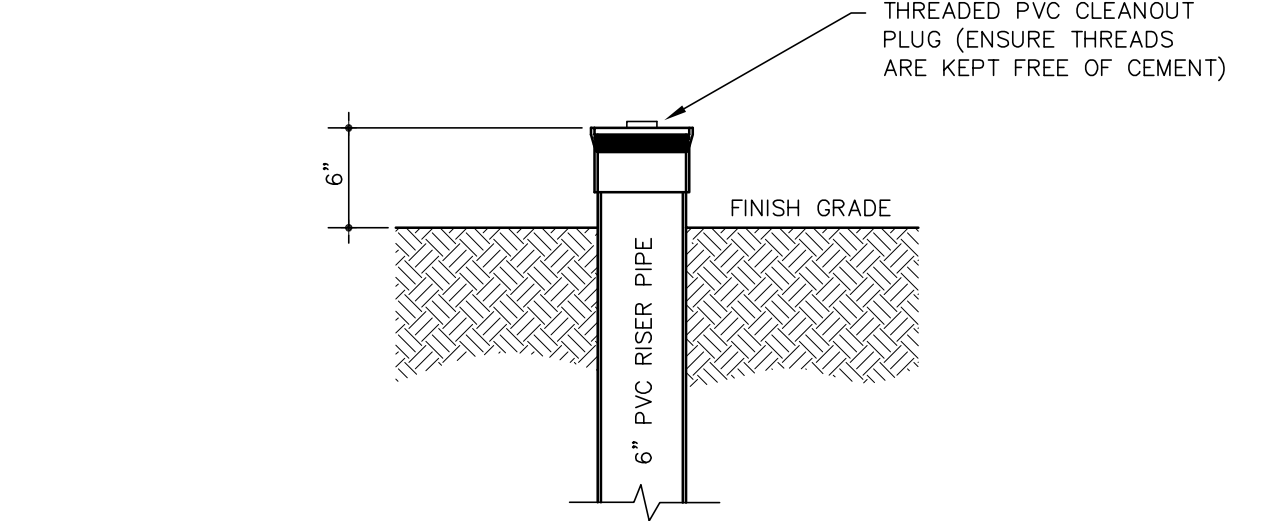
SAND BLANKET/BARRIER		SCREENED GRAVEL OR CRUSHED STONE BEDDING*	
SIEVE SIZE	% FINER BY WEIGHT	SIEVE SIZE	% PASSING BY WEIGHT
1/2"	90 - 100	1"	100
200	0 - 15	3/4"	90 - 100
		3/8"	20 - 55
		# 4	0 - 10
		# 8	0 - 5

* EQUIVALENT TO STANDARD STONE SIZE #67 - SECTION 703 OF NHDOT STANDARD SPECIFICATIONS

DRAINAGE TRENCH **NOT TO SCALE**



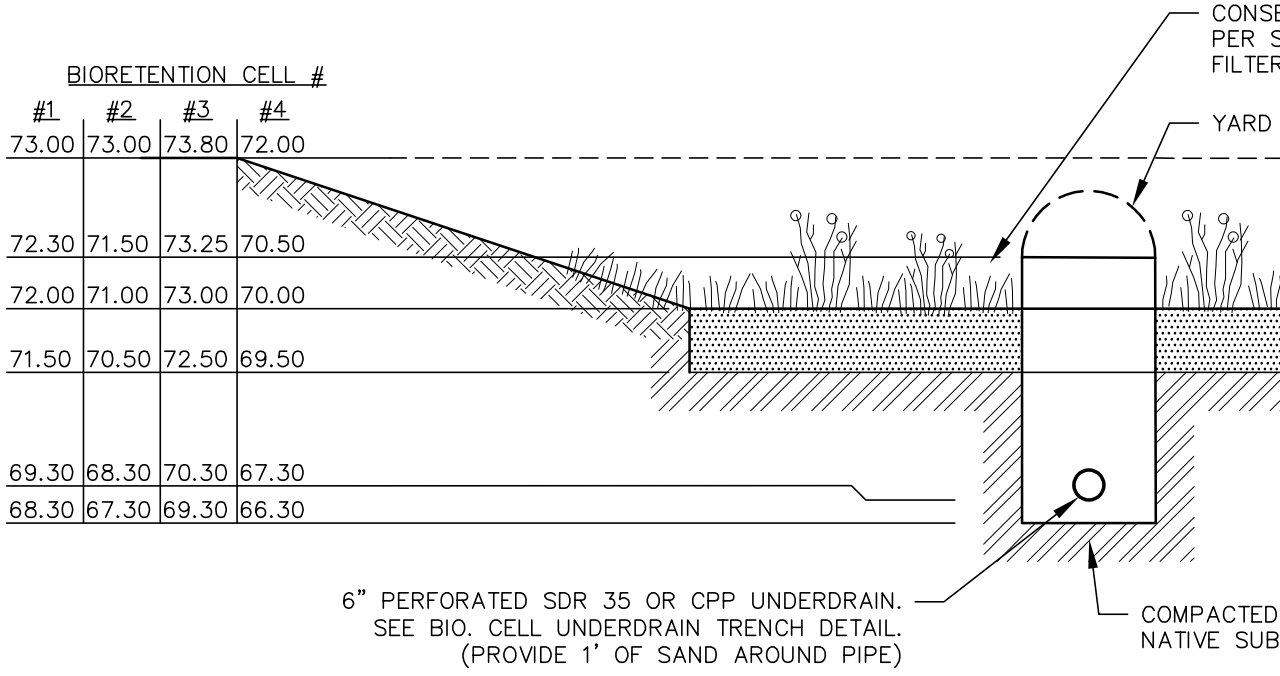
EXTERIOR ROOF DRAIN CONNECTION **NOT TO SCALE**



NOTES:

1. THIS DETAIL IS INTENDED FOR USE WITH BIORETENTION POND UNDERDRAINS ONLY. SEE OTHER DETAILS FOR CLEANOUTS IN OTHER AREAS.
2. CLEANOUT LOCATIONS ARE MARKED "CO" ON STORMWATER MANAGEMENT PLANS.
3. CLEANOUTS MAY NOT BE SET TO FINISH GRADE WITHOUT APPROVAL FROM THE ENGINEER.

BIORETENTION U.D. CLEANOUT ("CO") **NOT TO SCALE**



NOTES:

1. WHEN CONTRACTOR EXCAVATES BIORETENTION POND AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL.
2. SOIL FILTER MEDIA SHALL EITHER OPTION A OR OPTION B AT CONTRACTOR'S DISCRETION.
3. DO NOT PLACE BIORETENTION POND INTO SERVICE UNTIL ITS SIDE SLOPES AND CONTRIBUTING AREAS HAVE BEEN STABILIZED.
4. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES TO THE BIORETENTION POND DURING ANY STAGE OF CONSTRUCTION.
5. DO NOT TRAFFIC EXPOSED SURFACES OF BIORETENTION POND WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATION ACTIVITIES WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE BASIN.
6. POND BERMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STORMWATER POND BERM DETAIL.

MAINTENANCE REQUIREMENTS

- SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS A WARRANTED BY SUCH INSPECTION.
- PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
- AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF BIORETENTION SYSTEM DOES NOT DRAIN WITHIN 72-HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION OR INFILTRATION FUNCTION (AS APPLICABLE), INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
- VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING, WEED WHACKING, REMOVAL, AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES. BERM AREAS ARE TO BE MOWED TWICE ANNUALLY.

DESIGN REFERENCES

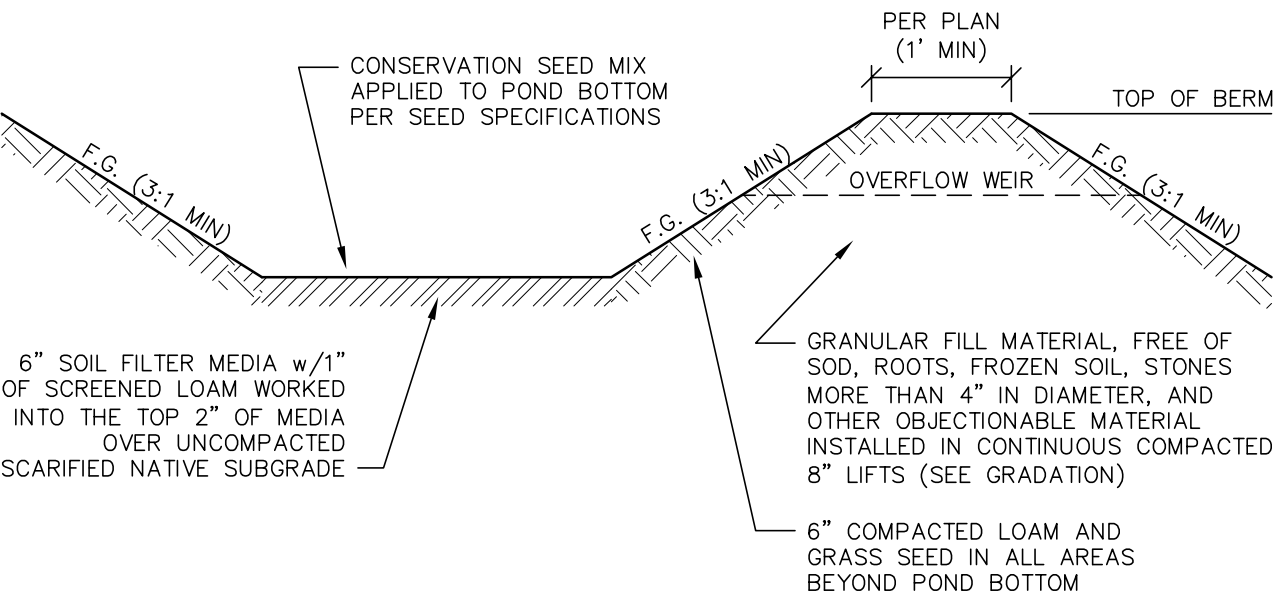
- UNH STORMWATER CENTER
- EPA (1999A)
- NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL VOLUME 2, DECEMBER 2008 AS AMENDED.

BIORETENTION POND **NOT TO SCALE**

SOIL FILTER MEDIA		
FILTER MEDIA	MIXTURE BY VOLUME	SPECIFICATION
SAND	50-55%	ASCM C-33 CONCRETE SAND
TOPSOIL	20-30%	SANDY LOAM TOPSOIL WITH MINIMAL CLAY CONTENT AND BETWEEN 15-25% PASSING THE #200 SIEVE
MULCH	20-30%	MODERATELY FINE, SHREDDED BARK OR WOOD FIBER MULCH WITH LESS THAN 5% PASSING #200 SIEVE

SEEDING (CONSERVATION MIX)	
TYPE	LB/AC
CREeping RED FESCUE	20
TALL FESCUE	20
BIRD'S FOOT TREFOIL	8
ANNUAL RYE	20
TOTAL	68

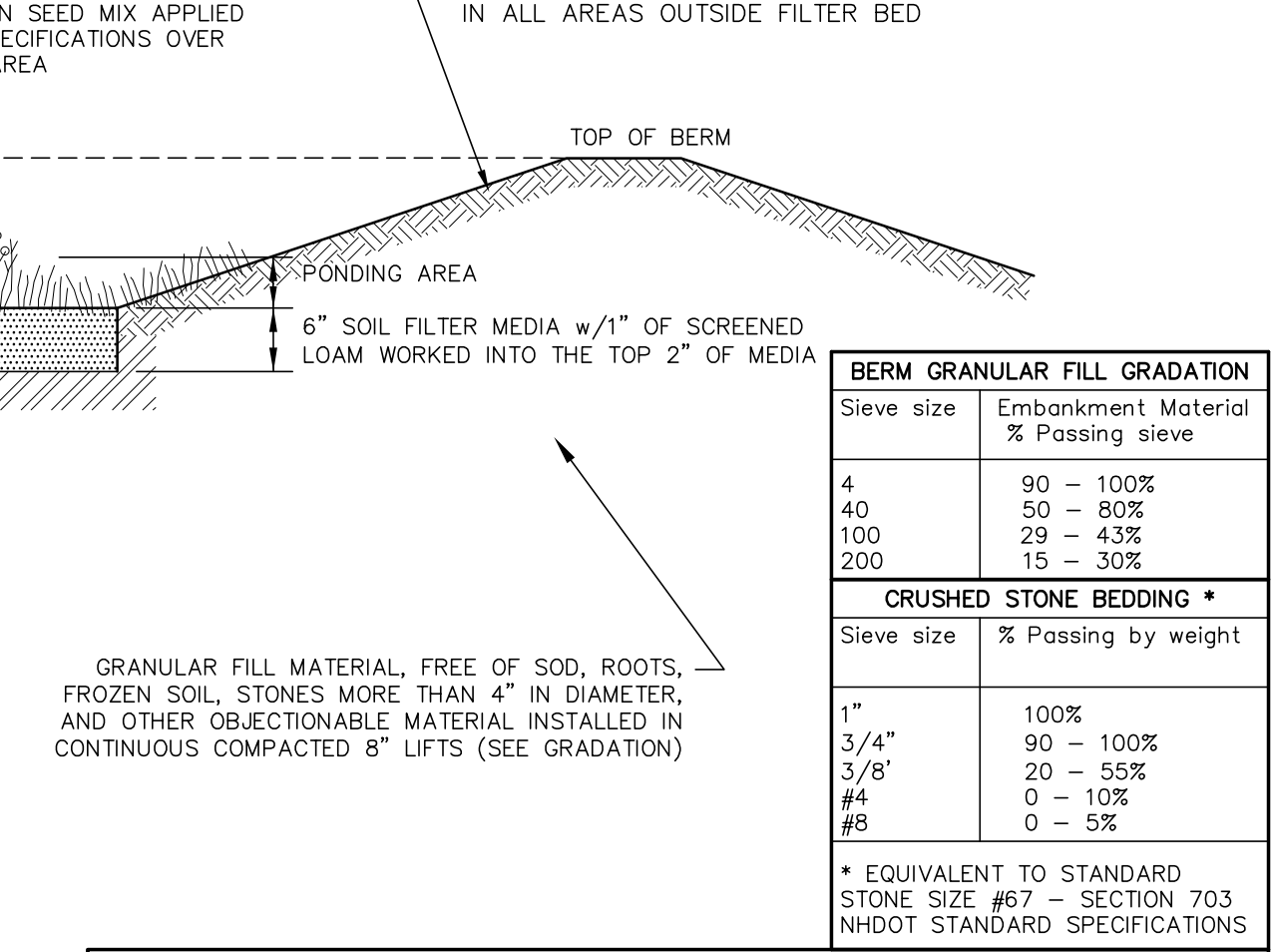
BERM GRANULAR FILL GRADATION	
Sieve size	Embankment Material % Passing sieve
4	90-100%
40	50-80%
100	29-43%
200	15-30%



NOTES:

1. SOIL FILTER MEDIA SHALL BE AS SPECIFIED BY THE NHDES.
2. DO NOT PLACE INFILTRATION POND INTO SERVICE UNTIL ITS SIDE SLOPES AND CONTRIBUTING AREAS HAVE BEEN STABILIZED.
3. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES TO THE INFILTRATION POND DURING ANY STAGE OF CONSTRUCTION.
4. DO NOT TRAFFIC EXPOSED SURFACES OF INFILTRATION POND WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATION ACTIVITIES WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE BASIN.
5. POND BERMS SHALL BE CONSTRUCTED OF GRANULAR FILL AS SPECIFIED ABOVE. MATERIAL SHALL BE PLACED IN 8" MAXIMUM LIFTS AND COMPACTED TO AT LEAST 95 PERCENT OF THEIR MAXIMUM DRY DENSITIES AS DETERMINED BY ASTM D-1557.
6. FILTER MEDIA SHALL BE COMPACTED TO 90-92% STANDARD PROCTOR.

INFILTRATION POND **NOT TO SCALE**



FILTER MEDIA MIXTURES			
Component Material	Percent of Mixture by Volume	Gradation of material	
		Sieve No.	Percent by Weight Passing Standard Sieve
Filter Media Option A			
ASTM C-33 concrete sand	50 – 55%		
Loamy sand topsoil, with fines as indicated	20 – 30%	200	15 to 25%
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 – 30%	200	< 5%
Filter Media Option B			
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 – 30%	200	< 5%
Loamy coarse sand	70 – 80%	10	85 – 100%
		20	70 – 100%
		60	15 – 40%
		200	8 – 15%

BERM GRANULAR FILL GRADATION	
Sieve size	Embankment Material % Passing sieve
4	90 - 100%
40	50 - 80%
100	29 - 43%
200	15 - 30%
CRUSHED STONE BEDDING *	
Sieve size	% Passing by weight
1"	100%
3/4"	90 - 100%
3/8"	20 - 55%
#4	0 - 10%
#5	0 - 5%
* EQUIVALENT TO STANDARD STONE SIZE #67 - SECTION 703 NHDOT STANDARD SPECIFICATIONS	

ALTUS ENGINEERING
133 Court Street
(603) 433-2335
Portsmouth, NH 03801
www.altus-eng.com

STATE OF NEW HAMPSHIRE
ERIC D. WEINRIEB
No. 6658
PROFESSIONAL ENGINEER
5/14/26

NOT FOR CONSTRUCTION

ISSUED FOR: NHDOT PERMIT

ISSUE DATE: MAY 14, 2026

REVISIONS		
NO.	DESCRIPTION	BY DATE
0	INITIAL SUBMISSION	PMJ 01/07/26
1	REV. PER COMMENTS	PMJ 03/31/26
2	REV. NHDOT COMMENTS	PMJ 05/14/26

DRAWN BY: PMJ

APPROVED BY: EDW

DRAWING FILE: 5613-SITE.DWG

SCALE:
22" x 34" - 1" = NTS
11" x 17" - 1" = NTS

OWNER/APPLICANT:

PACKER BROOK HOLDINGS, LLC
13 ALDEN AVENUE
GREENLAND, NH 03840

PROJECT:

TAX MAP 17
LOT 86

MIGHTY ROOTS
170 PORTSMOUTH AVENUE
STRATHAM, NH 03850
BK 6538, PG 2720

WORLD HEADQUARTERS
OFFICE/SHOP

TITLE:

DETAILS III

SHEET NUMBER:

D-3

OFFICE BUILDING



13 ALDEN AVE.
GREENLAND, NH 03840
603-319-8095
www.mightyroots.com

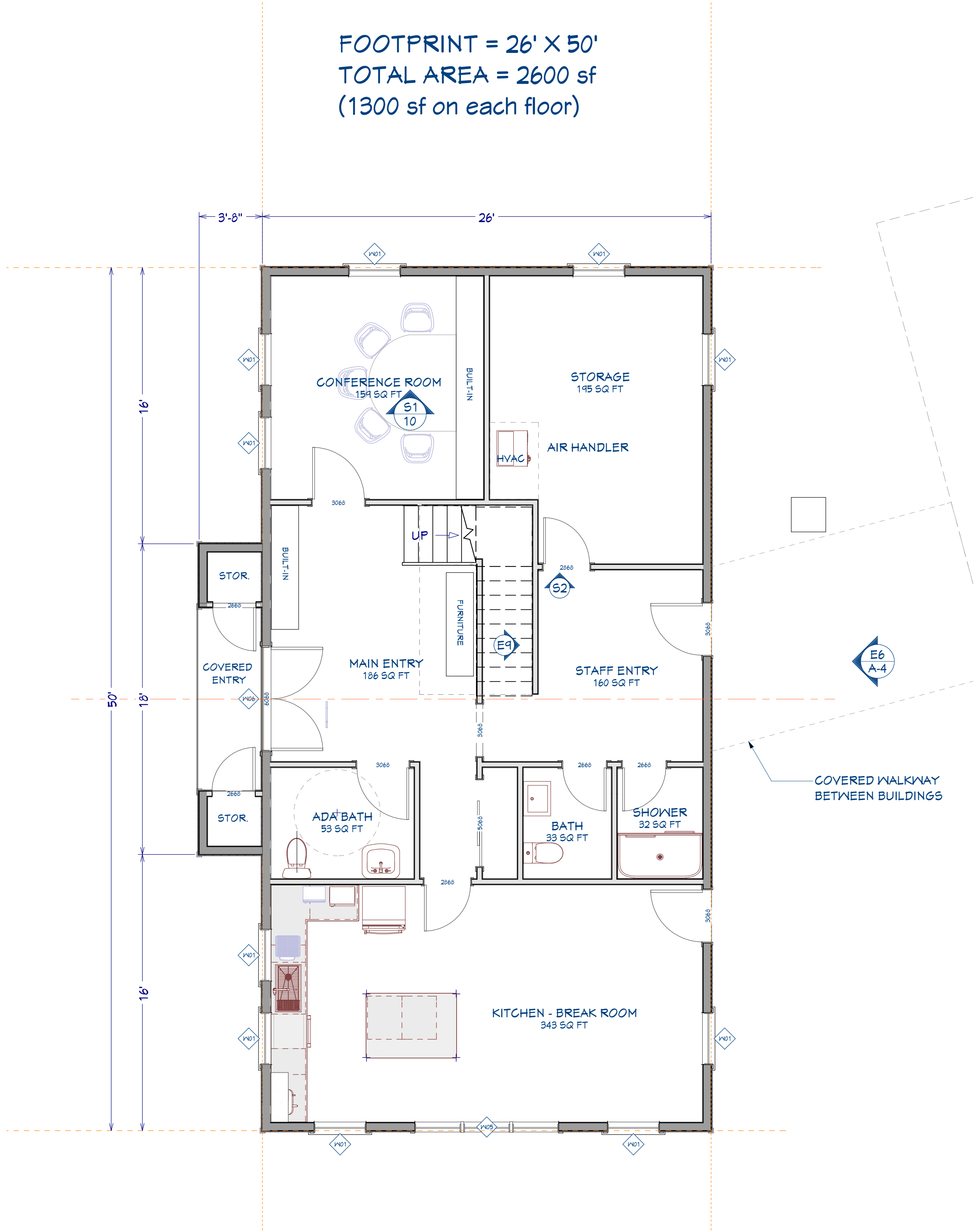
PROJECT:
DATE:
REVISED 1:
REVISED 2:
DRAWN BY:
PHASE:

MIGHTY ROOTS, LLC
13 ALDEN AVE.
GREENLAND, NH 03840

FLOOR PLANS

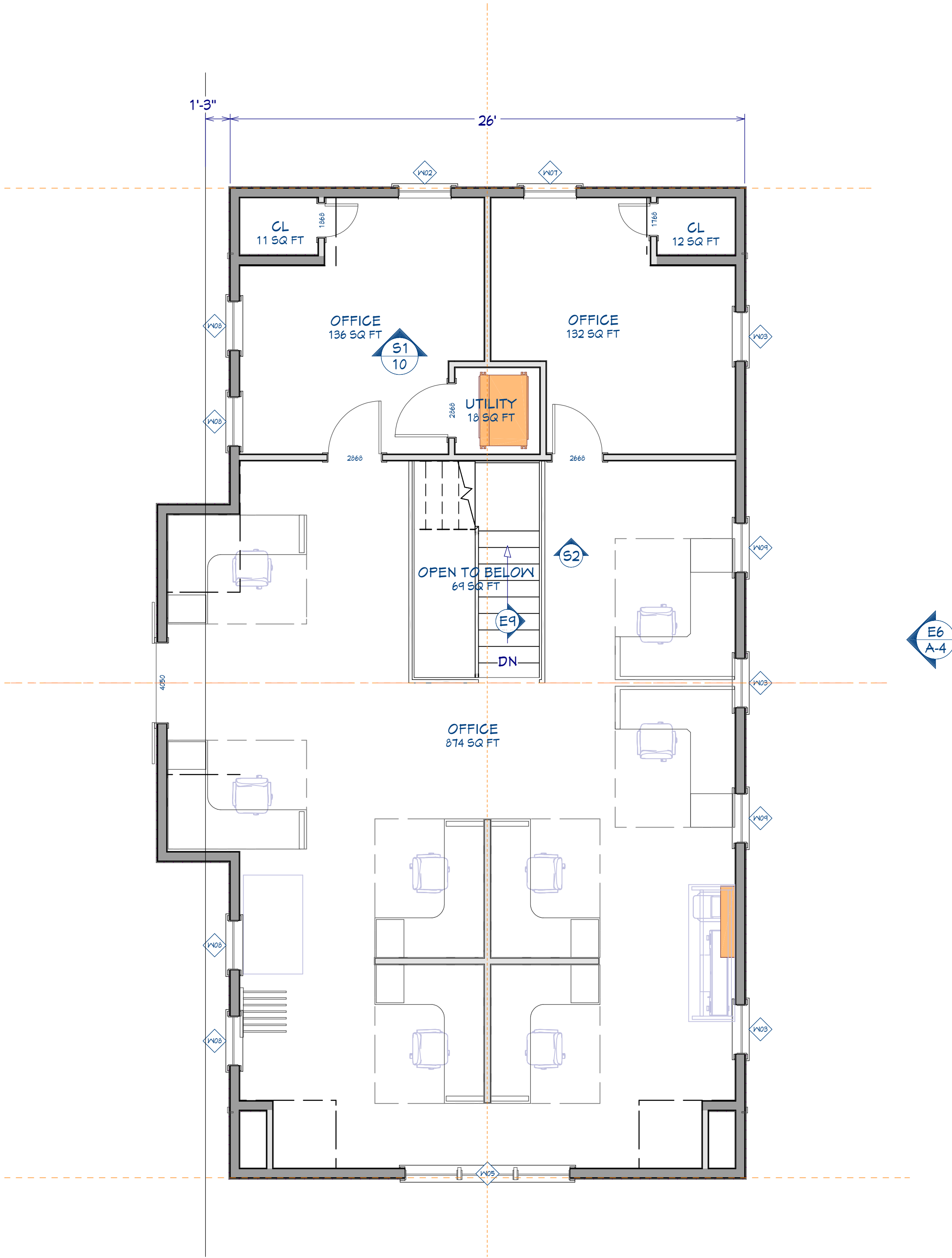
A-1

FOOTPRINT = 26' X 50'
TOTAL AREA = 2600 sf
(1300 sf on each floor)



FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"



SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"

SHOP BUILDING



**MIGHTY
ROOTS**

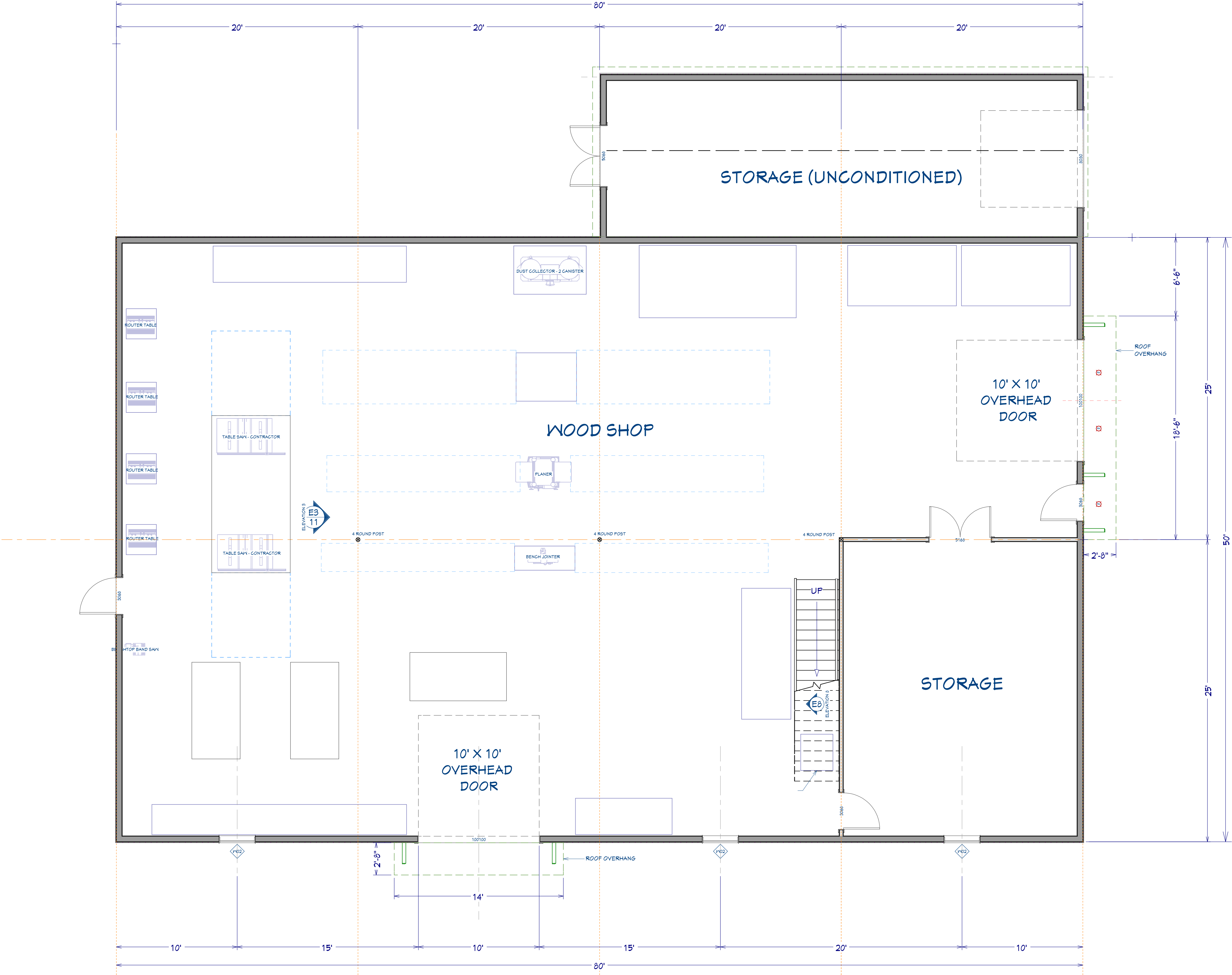
13 ALDEN AVE.
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FLOOR PLANS - SHOP BUILDING

A-2



SHOP BUILDING

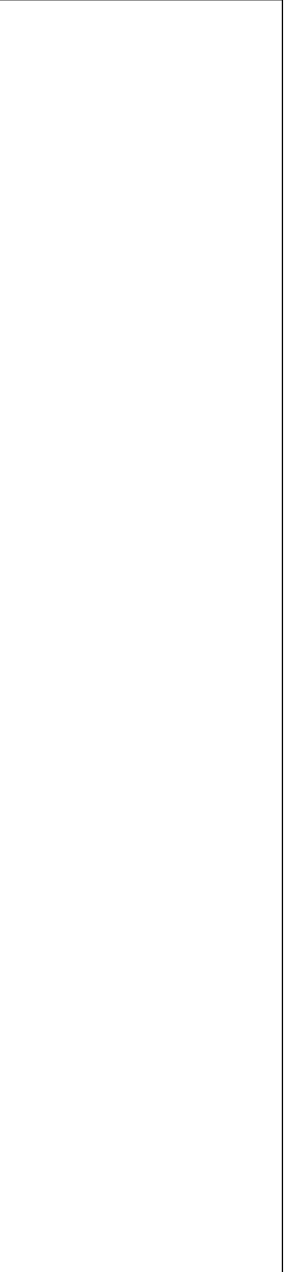


**MIGHTY
ROOTS**

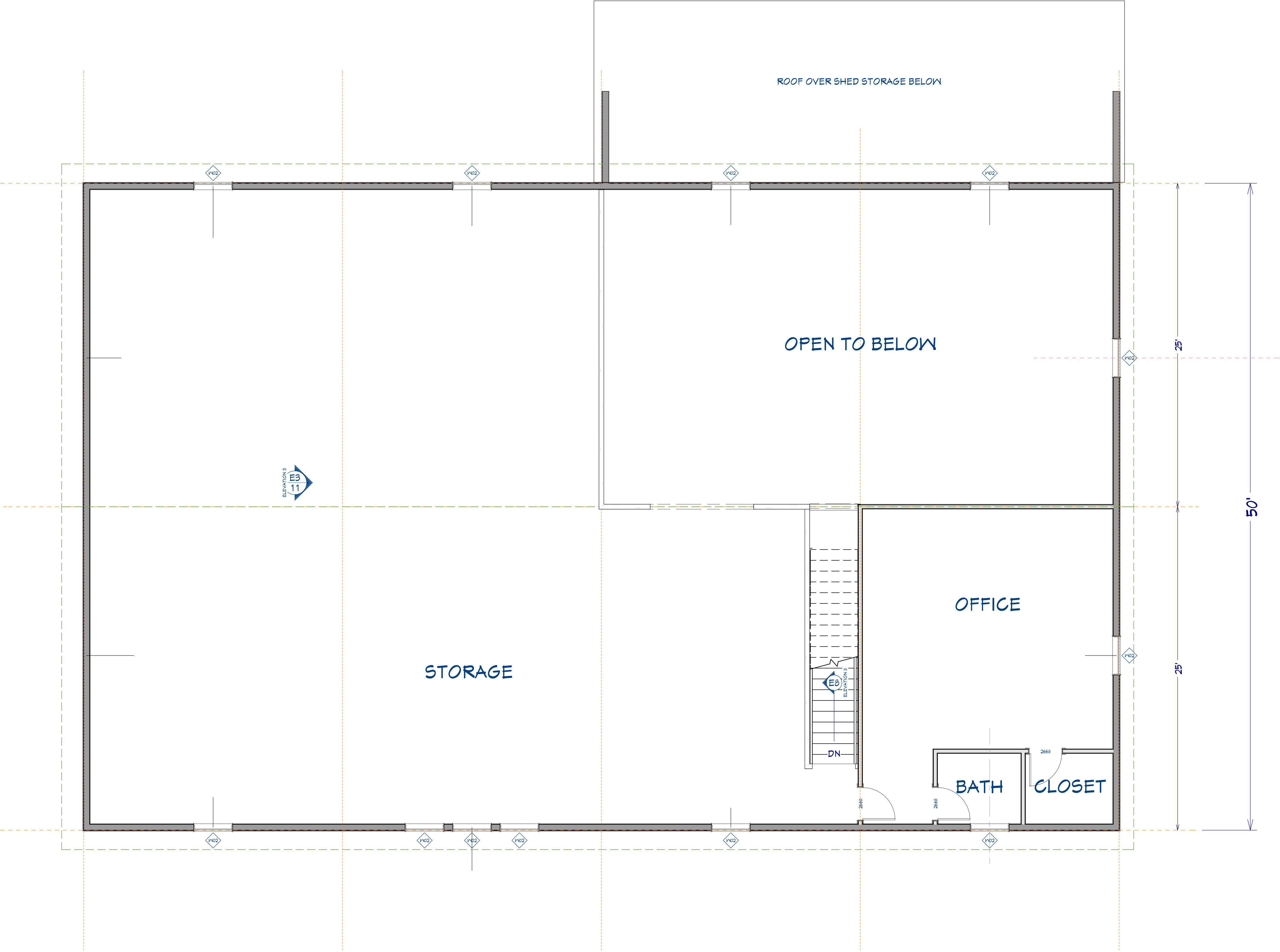
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PROJECT:
DATE:
REVISED 1:
REVISED 2:
DRAWN BY:
PHASE:

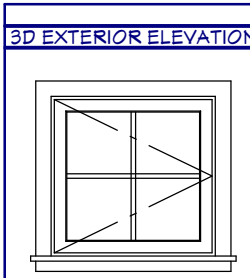
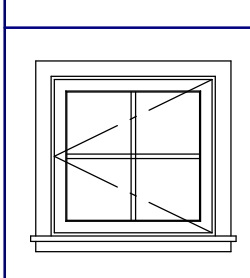
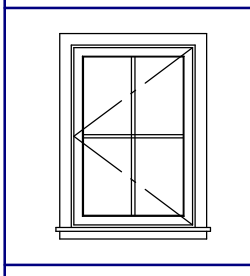
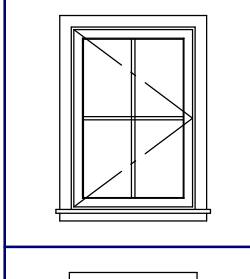
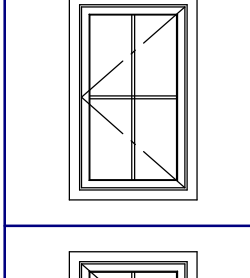
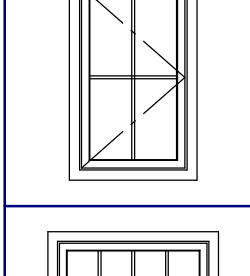
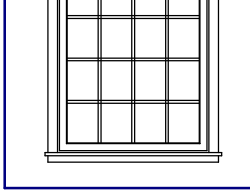
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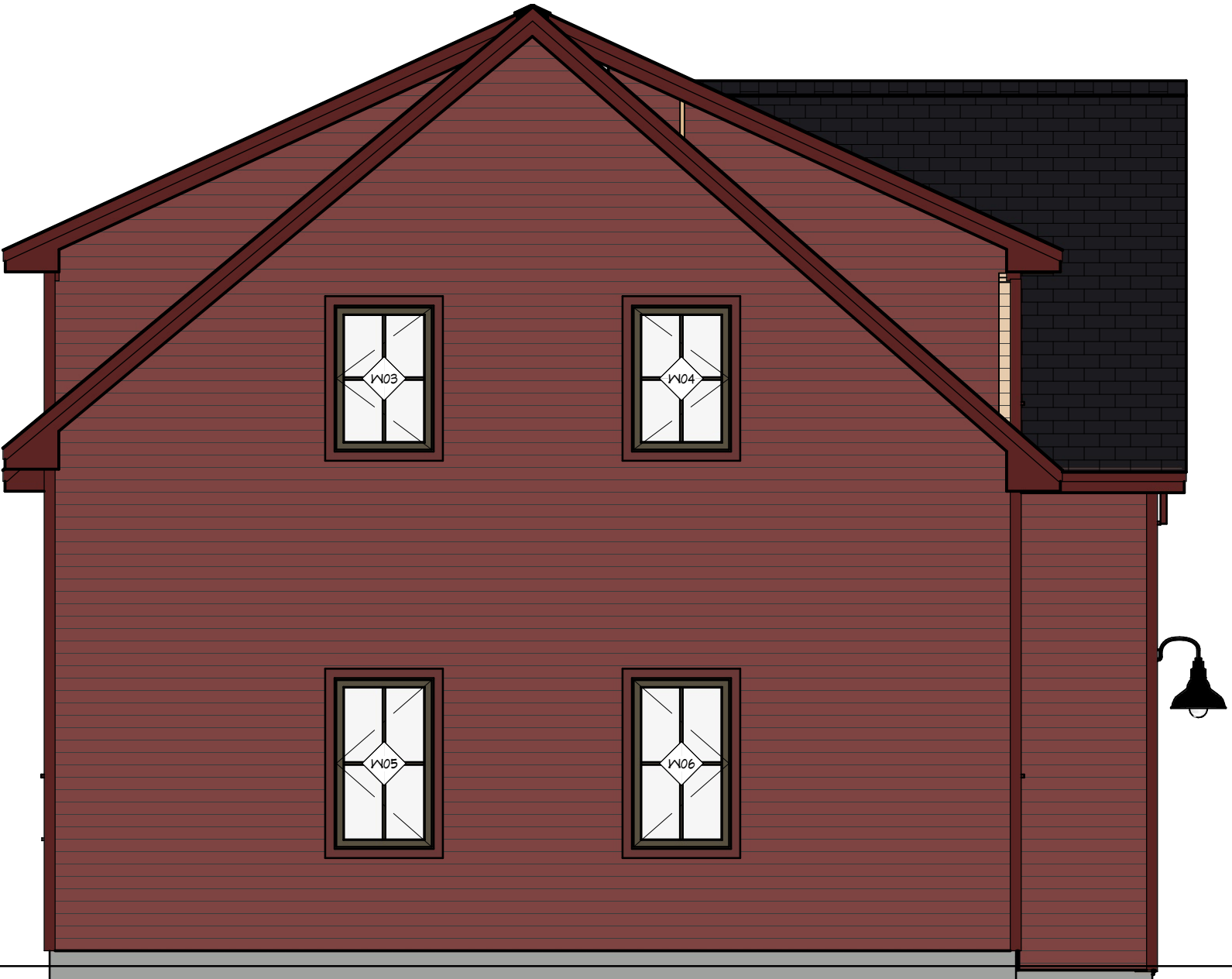


A-3



OFFICE BUILDING

WINDOW SCHEDULE							EGRESS	DESCRIPTION
3D EXTERIOR ELEVATION	NUMBER	QTY	WIDTH	HEIGHT	R/O			
	W01	4	32"	31 1/8"	33"x31 5/8"			SINGLE CASEMENT-HR
	W02	7	32"	31 1/8"	33"x31 5/8"			SINGLE CASEMENT-HL
	W03	5	32"	41 1/8"	33"x41 5/8"			SINGLE CASEMENT-HL
	W04	3	32"	41 1/8"	33"x41 5/8"			SINGLE CASEMENT-HR
	W05	2	32"	55 1/8"	33"x55 5/8"			SINGLE CASEMENT-HL
	W06	2	32"	55 1/8"	33"x55 5/8"			SINGLE CASEMENT-HR
	W07	1	48"	54 1/8"	44"x54 5/8"			FIXED GLASS



NORTH ELEVATION

SCALE: 1/4" = 1'-0"



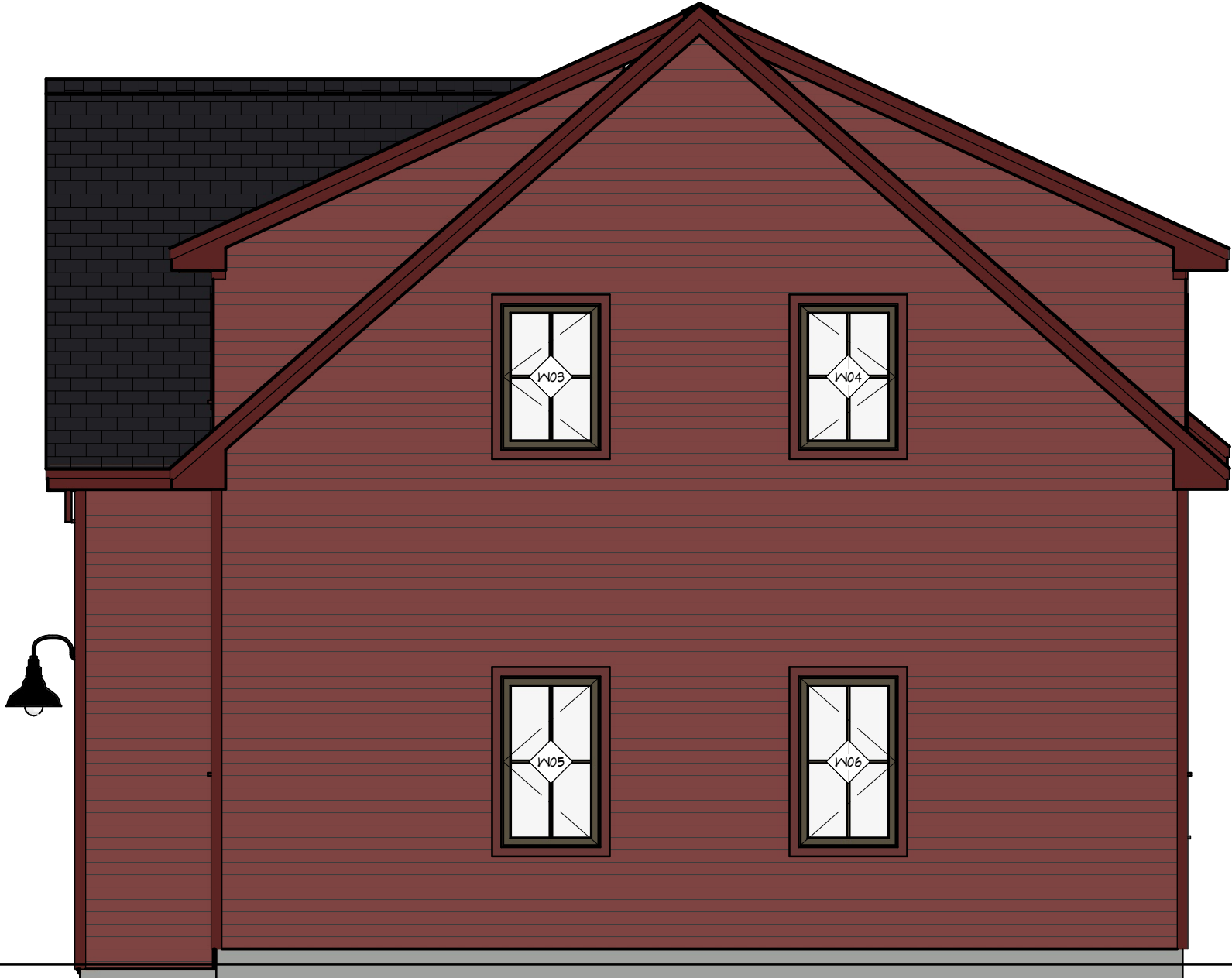
WEST ELEVATION

SCALE: 1/4" = 1'-0"



EAST ELEVATION

SCALE: 1/4" = 1'-0"



SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

WINDOWS:
MARVIN: ELEVATE
COLOR: BRONZE

TRIM:
WOOD OR BORAL
COLOR: REDWOOD

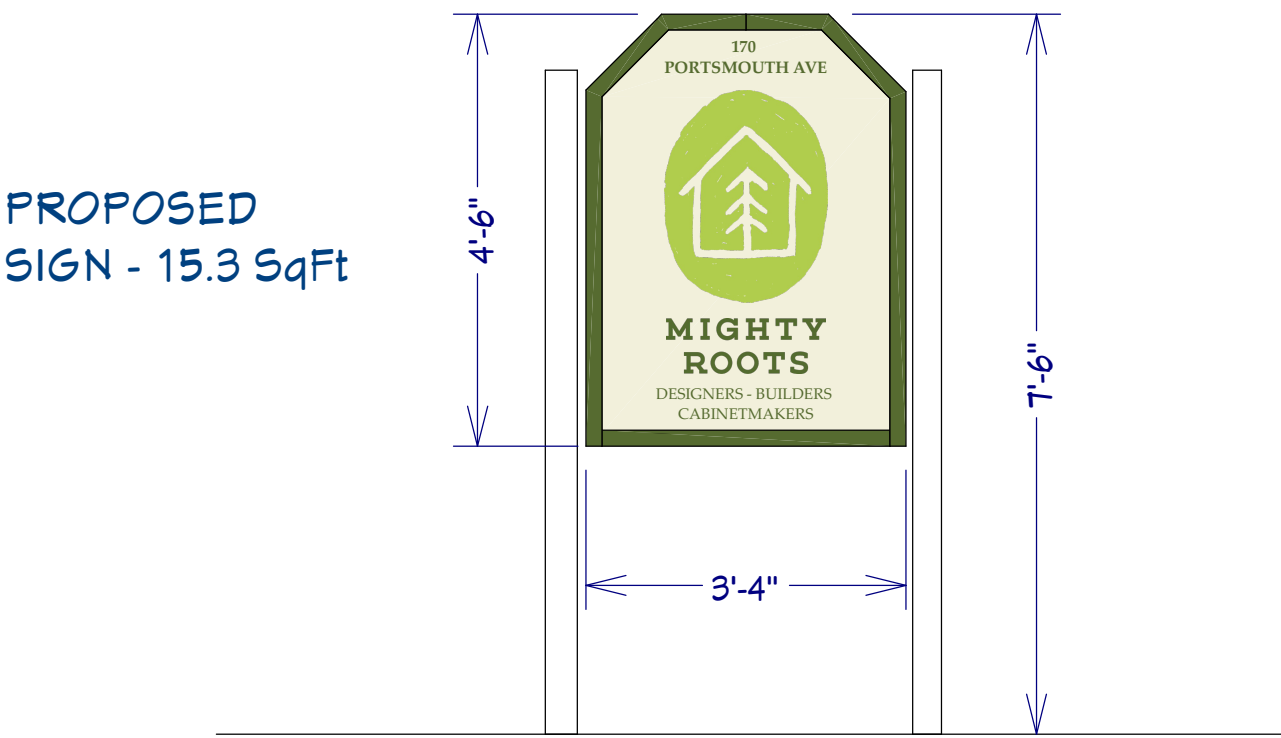
SIDING:
4" CLAPBOARDS
COLOR: REDWOOD

ROOFING:
ASPHALT SHINGLES
COLOR: TBD

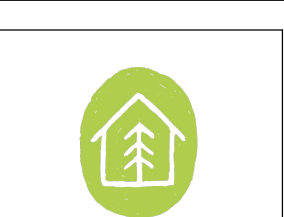
WINDOWS:
MARVIN ESSENTIAL
COLOR: BRONZE

SIDING:
VERTICAL ROUGH-
SAWN PINE 1X10

ROOFING:
CORRUGATED METAL
COLOR: CHARCOAL GREY



SHOP BUILDING



**MIGHTY
ROOTS**

13 ALDEN AVE.
GREENLAND, NH 03840
603-319-8095
www.mightyroots.com

PROJECT:
DATE:
REVISED 1:
REVISED 2:
DRAWN BY:
PHASE:

MIGHTY ROOTS, LLC
13 ALDEN AVE.
GREENLAND, NH 03840

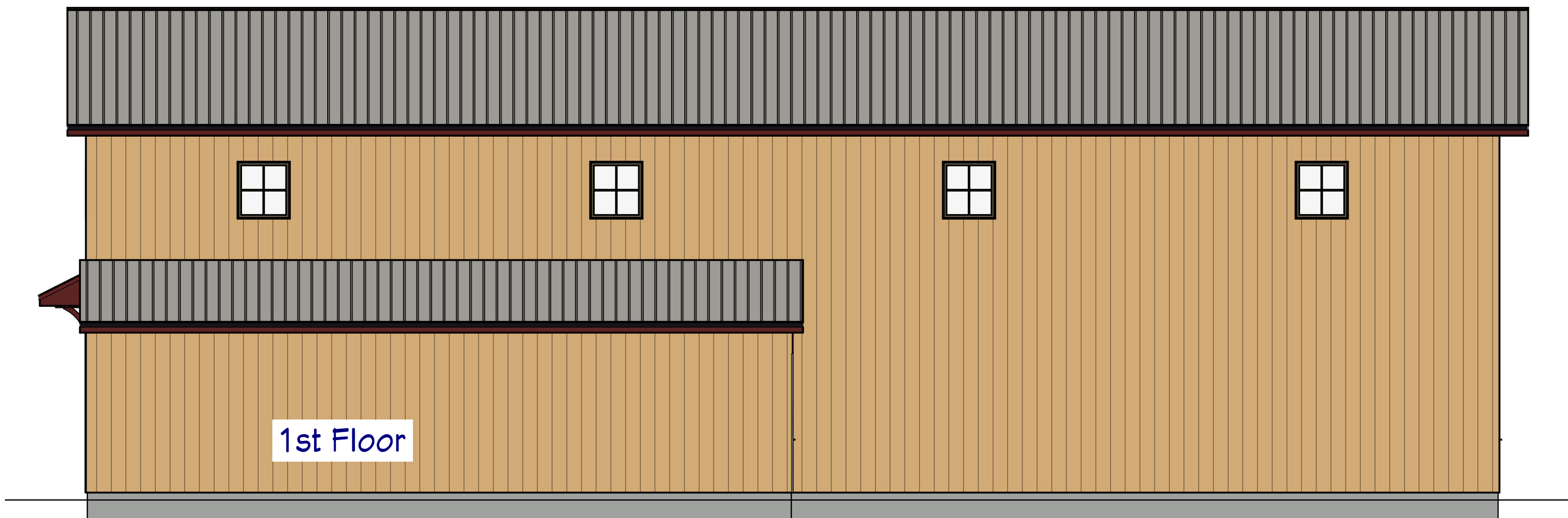
ELEVATIONS - SHOP BUILDING

A-5



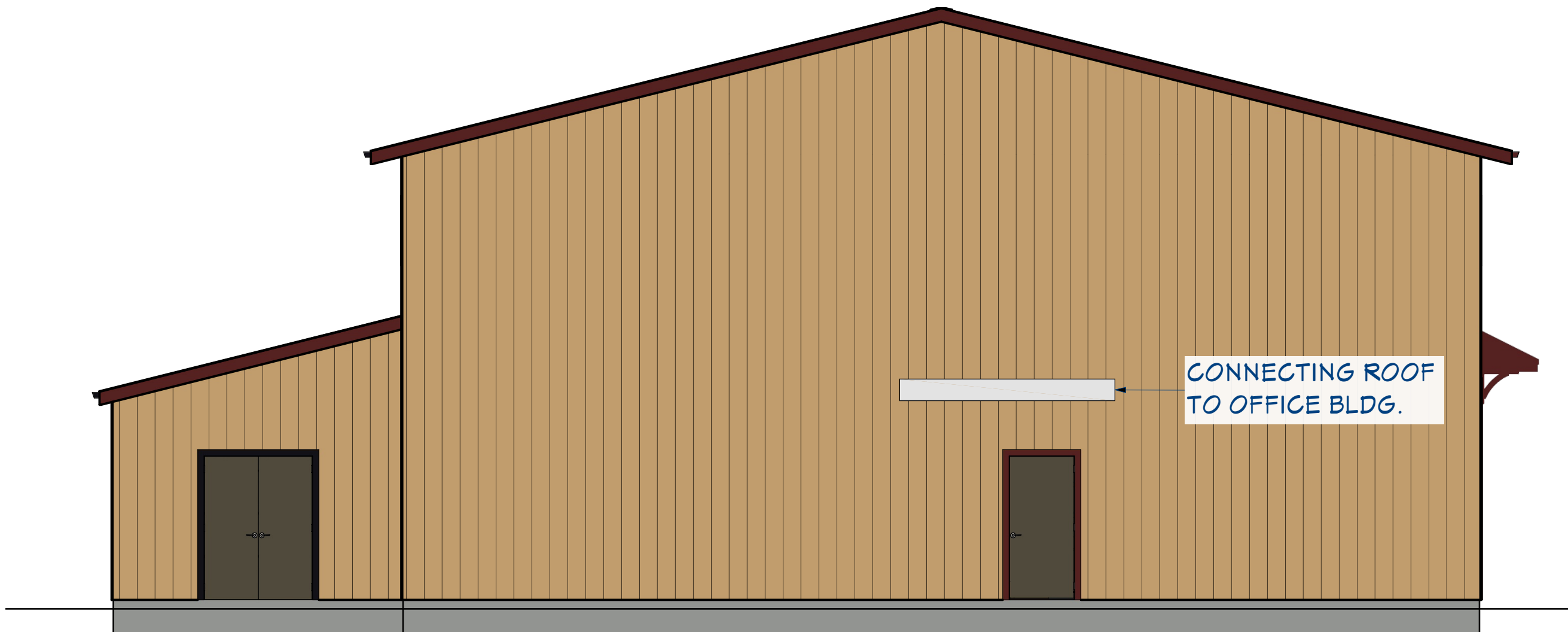
EAST ELEVATION

SCALE: 3/16" = 1'-0"



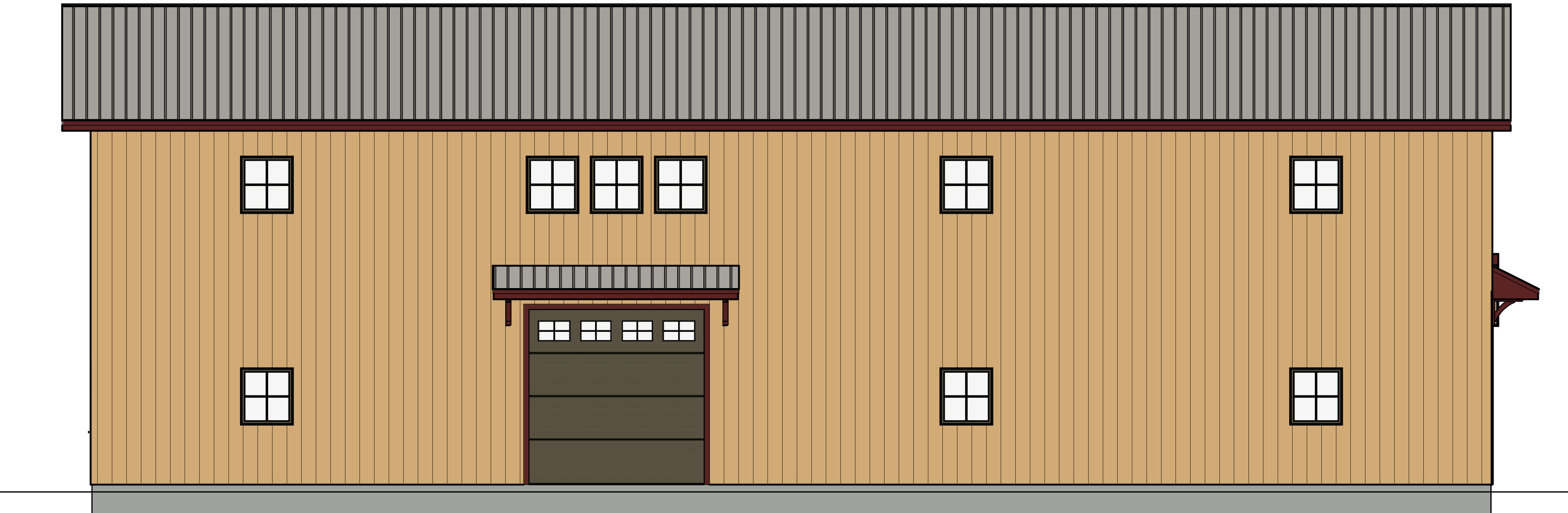
NORTH ELEVATION

SCALE: 3/16" = 1'-0"



WEST ELEVATION

SCALE: 3/16" = 1'-0"



SOUTH ELEVATION

SCALE: 3/16" = 1'-0"