

TIM & CINDY CARLSON

293 LAMSON LANE

NEW LONDON, NEW HAMPSHIRE

MAY 2017

OWNER:

TIM & CINDY CARLSON
6 IRONWOOD ROAD
SANDY HOOK, CT 06482
(203) 767-9068

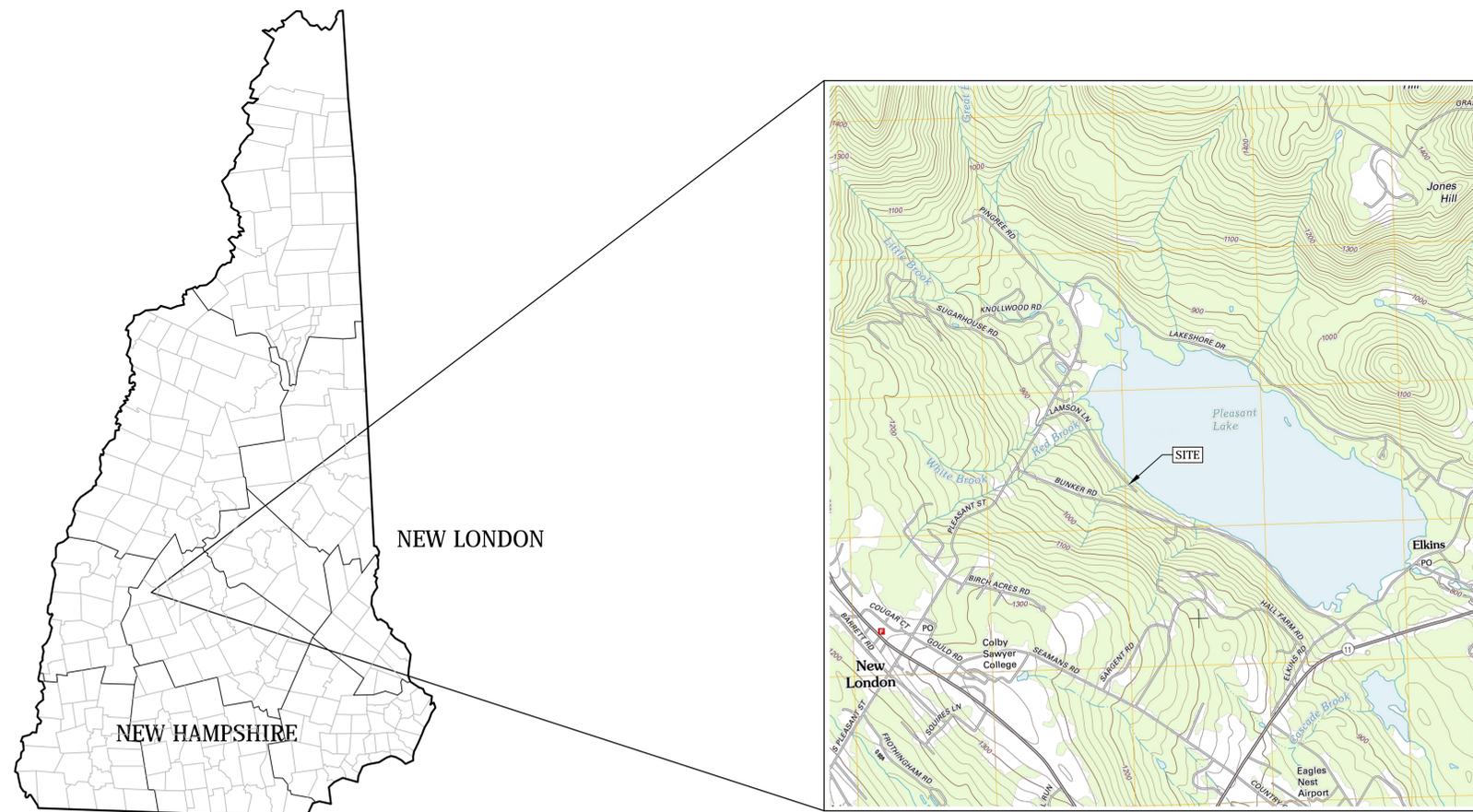
ENGINEER:

horizons
Engineering Inc.

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NEW LONDON, NH 03257
(603) 877-0116

ARCHITECT:

BONIN ARCHITECTS & ASSOCIATES PLLC
210 MAIN STREET, PO BOX 2571
NEW LONDON, NH 03257
(603) 526-6200



LOCATION PLAN

SCALE: 1" = 2000'

SHEET LIST

	COVER
C 101	EXISTING CONDITIONS PLAN
C 201	SITE PLAN
C 301	DETAILS
C 302	DETAILS
C 401	ENVIROFIN SYSTEM (SEPTIC PLAN)

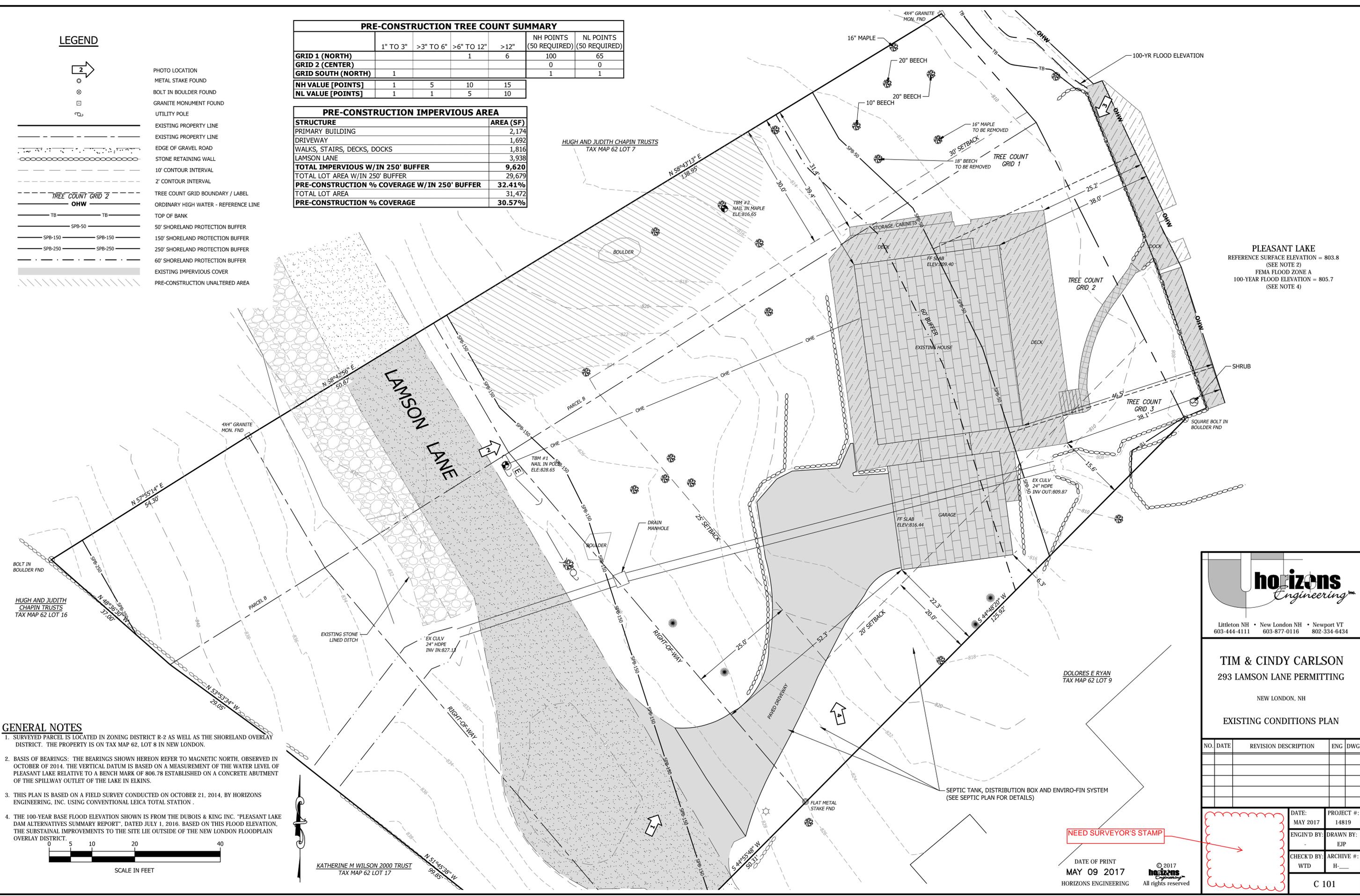
DATE OF PRINT
MAY 09 2017
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LEGEND

- PHOTO LOCATION
- METAL STAKE FOUND
- BOLT IN BOULDER FOUND
- GRANITE MONUMENT FOUND
- UTILITY POLE
- EXISTING PROPERTY LINE
- EXISTING PROPERTY LINE
- EDGE OF GRAVEL ROAD
- STONE RETAINING WALL
- 10' CONTOUR INTERVAL
- 2' CONTOUR INTERVAL
- TREE COUNT GRID BOUNDARY / LABEL
- ORDINARY HIGH WATER - REFERENCE LINE
- TOP OF BANK
- 50' SHORELAND PROTECTION BUFFER
- 150' SHORELAND PROTECTION BUFFER
- 250' SHORELAND PROTECTION BUFFER
- 60' SHORELAND PROTECTION BUFFER
- EXISTING IMPERVIOUS COVER
- PRE-CONSTRUCTION UNALTERED AREA

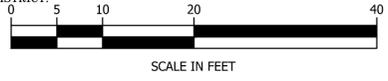
PRE-CONSTRUCTION TREE COUNT SUMMARY						
	1" TO 3"	>3" TO 6"	>6" TO 12"	>12"	NH POINTS (50 REQUIRED)	NL POINTS (50 REQUIRED)
GRID 1 (NORTH)			1	6	100	65
GRID 2 (CENTER)					0	0
GRID SOUTH (NORTH)	1				1	1
NH VALUE [POINTS]	1	5	10	15		
NL VALUE [POINTS]	1	1	5	10		

PRE-CONSTRUCTION IMPERVIOUS AREA	
STRUCTURE	AREA (SF)
PRIMARY BUILDING	2,174
DRIVEWAY	1,692
WALKS, STAIRS, DECKS, DOCKS	1,816
LAMSON LANE	3,938
TOTAL IMPERVIOUS W/IN 250' BUFFER	9,620
TOTAL LOT AREA W/IN 250' BUFFER	29,679
PRE-CONSTRUCTION % COVERAGE W/IN 250' BUFFER	32.41%
TOTAL LOT AREA	31,472
PRE-CONSTRUCTION % COVERAGE	30.57%



PLEASANT LAKE
 REFERENCE SURFACE ELEVATION = 803.8
 (SEE NOTE 2)
 FEMA FLOOD ZONE A
 100-YEAR FLOOD ELEVATION = 805.7
 (SEE NOTE 4)

- GENERAL NOTES**
1. SURVEYED PARCEL IS LOCATED IN ZONING DISTRICT R-2 AS WELL AS THE SHORELAND OVERLAY DISTRICT. THE PROPERTY IS ON TAX MAP 62, LOT 8 IN NEW LONDON.
 2. BASIS OF BEARINGS: THE BEARINGS SHOWN HEREON REFER TO MAGNETIC NORTH, OBSERVED IN OCTOBER OF 2014. THE VERTICAL DATUM IS BASED ON A MEASUREMENT OF THE WATER LEVEL OF PLEASANT LAKE RELATIVE TO A BENCH MARK OF 806.78 ESTABLISHED ON A CONCRETE ABUTMENT OF THE SPILLWAY OUTLET OF THE LAKE IN ELKINS.
 3. THIS PLAN IS BASED ON A FIELD SURVEY CONDUCTED ON OCTOBER 21, 2014, BY HORIZONS ENGINEERING, INC. USING CONVENTIONAL LEICA TOTAL STATION.
 4. THE 100-YEAR BASE FLOOD ELEVATION SHOWN IS FROM THE DUBOIS & KING INC. "PLEASANT LAKE DAM ALTERNATIVES SUMMARY REPORT", DATED JULY 1, 2016. BASED ON THIS FLOOD ELEVATION, THE SUBSTANTIAL IMPROVEMENTS TO THE SITE LIE OUTSIDE OF THE NEW LONDON FLOODPLAIN OVERLAY DISTRICT.



KATHERINE M WILSON 2000 TRUST
 TAX MAP 62 LOT 17

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TIM & CINDY CARLSON
 293 LAMSON LANE PERMITTING
 NEW LONDON, NH
 EXISTING CONDITIONS PLAN

NO.	DATE	REVISION DESCRIPTION	ENG.	DWG.

DATE: MAY 2017	PROJECT #: 14819
ENGINE'D BY: EJP	DRAWN BY: EJP
CHECK'D BY: WTD	ARCHIVE #: H-___
C 101	

NEED SURVEYOR'S STAMP

DATE OF PRINT
 MAY 09 2017
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LEGEND

- METAL STAKE FOUND
- ⊗ BOLT IN BOULDER FOUND
- GRANITE MONUMENT FOUND
- UTILITY POLE
- EXISTING PROPERTY LINE
- - - EXISTING PROPERTY LINE
- EDGE OF GRAVEL ROAD
- STONE RETAINING WALL
- 10' CONTOUR INTERVAL
- 2' CONTOUR INTERVAL
- TREE COUNT GRID 2
- TREE COUNT GRID BOUNDARY / LABEL
- FLOATING TURBIDITY BARRIER
- OHW
- TB
- SPB-50
- SPB-150
- SPB-250
- TREE COUNT GRID 2
- TREE COUNT GRID BOUNDARY / LABEL
- EXISTING IMPERVIOUS COVER
- PROPOSED IMPERVIOUS COVER
- POST-CONSTRUCTION UNALTERED AREA
- (RD) RED OSIER DOGWOOD
- (WH) WITCHHAZEL
- (HB) HIGH BUSH BLUEBERRY

POST-CONSTRUCTION TREE COUNT SUMMARY						
	1" TO 3"	>3" TO 6"	>6" TO 12"	>12"	NH POINTS (50 REQUIRED)	NL POINTS (50 REQUIRED)
GRID 1 (NORTH)					70	45
GRID 2 (CENTER)				4	0	0
GRID SOUTH (NORTH)	1	5	10	15	1	1
NH VALUE [POINTS]	1	5	10	15		
NL VALUE [POINTS]	1	1	5	10		

POST-CONSTRUCTION IMPERVIOUS AREA	
STRUCTURE	AREA (SF)
PRIMARY BUILDING	3,216
DRIVEWAY (PERVIOUS)	0
WALKS, STAIRS, DECKS, DOCKS	1,632
LAMSON LANE	3,684
TOTAL IMPERVIOUS W/IN 250' BUFFER	8,532
TOTAL LOT AREA W/IN 250' BUFFER	29,679
POST-CONSTRUCTION % COVERAGE W/IN 250' BUFFER	28.75%
TOTAL LOT AREA	31,472
POST-CONSTRUCTION % COVERAGE	27.11%

STREAM OUTLET INSET
SCALE: 1" = 10'

PLEASANT LAKE
REFERENCE SURFACE ELEVATION (OHW) = 803.8
(SEE NOTE 2, SHEET 1)
100-YEAR FLOOD ELEVATION = 805.7
(SEE NOTE 4, SHEET 1)

WITHIN 50' OF REFERENCE LINE

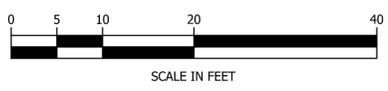
	EXISTING	PROPOSED	NET AREA
HOUSE	358 SF	263 SF	-95 SF
DECK	766 SF	464 SF	-302 SF

NO DISTURBANCE OF JURISDICTIONAL WETLANDS SHALL OCCUR WITHIN 20' OF THE PROPERTY LINE ABUTTING TAX MAP 62, LOT 9. CULVERT REMOVAL AND MODIFICATIONS TO THE STONE WALLS IN THIS AREA MAY BE COMPLETED AFTER THE STREAM HAS BEEN REROUTED TO THE PROPOSED CHANNEL AND THE AREA IS NO LONGER A WETLAND.

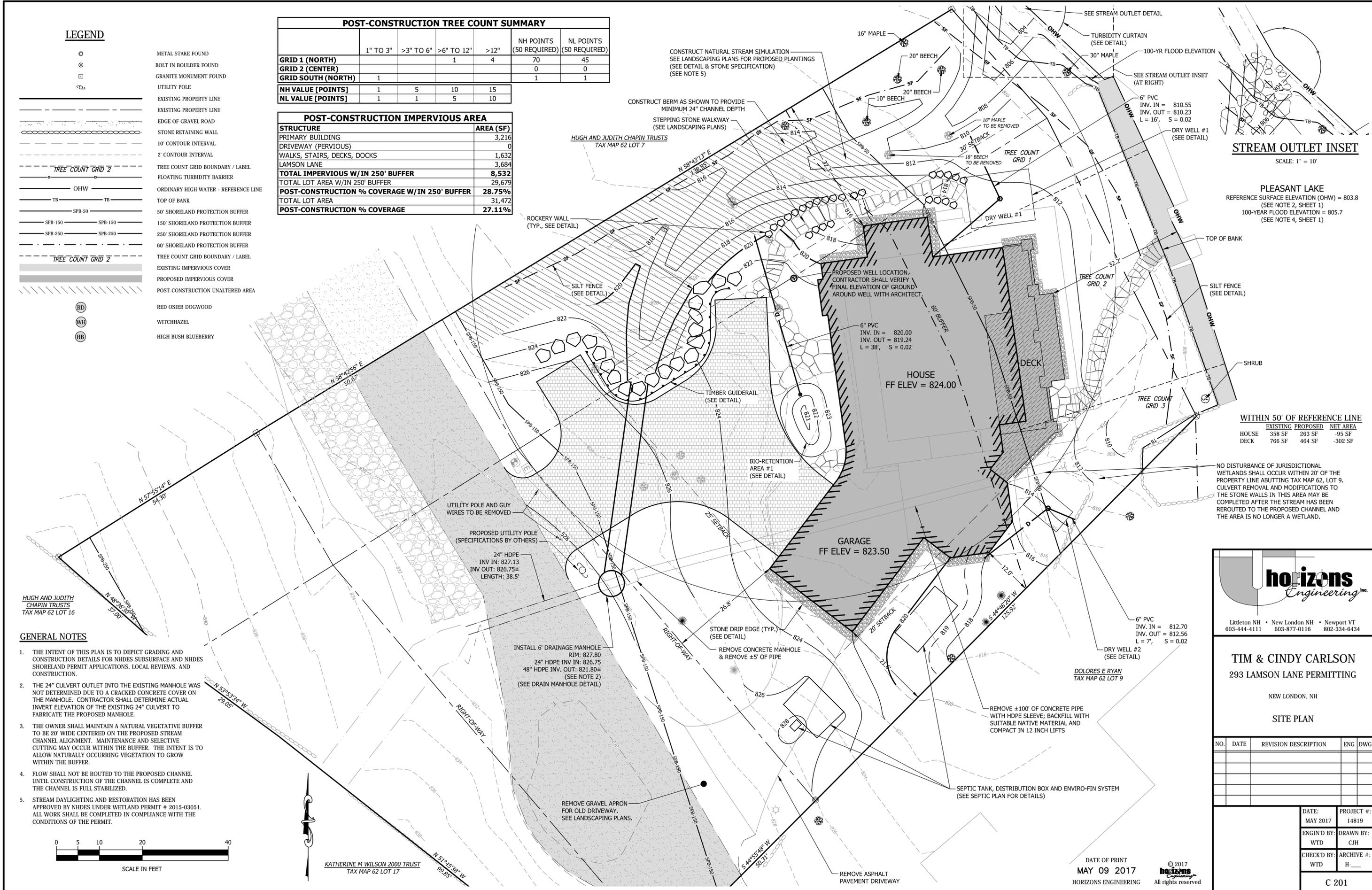
HUGH AND JUDITH CHAPIN TRUSTS
TAX MAP 62 LOT 16

GENERAL NOTES

- THE INTENT OF THIS PLAN IS TO DEPICT GRADING AND CONSTRUCTION DETAILS FOR NHDES SUBSURFACE AND NHDES SHORELAND PERMIT APPLICATIONS, LOCAL REVIEWS, AND CONSTRUCTION.
- THE 24" CULVERT OUTLET INTO THE EXISTING MANHOLE WAS NOT DETERMINED DUE TO A CRACKED CONCRETE COVER ON THE MANHOLE. CONTRACTOR SHALL DETERMINE ACTUAL INVERT ELEVATION OF THE EXISTING 24" CULVERT TO FABRICATE THE PROPOSED MANHOLE.
- THE OWNER SHALL MAINTAIN A NATURAL VEGETATIVE BUFFER TO BE 20' WIDE CENTERED ON THE PROPOSED STREAM CHANNEL ALIGNMENT. MAINTENANCE AND SELECTIVE CUTTING MAY OCCUR WITHIN THE BUFFER. THE INTENT IS TO ALLOW NATURALLY OCCURRING VEGETATION TO GROW WITHIN THE BUFFER.
- FLOW SHALL NOT BE ROUTED TO THE PROPOSED CHANNEL UNTIL CONSTRUCTION OF THE CHANNEL IS COMPLETE AND THE CHANNEL IS FULL STABILIZED.
- STREAM DAYLIGHTING AND RESTORATION HAS BEEN APPROVED BY NHDES UNDER WETLAND PERMIT # 2015-03051. ALL WORK SHALL BE COMPLETED IN COMPLIANCE WITH THE CONDITIONS OF THE PERMIT.



KATHERINE M WILSON 2000 TRUST
TAX MAP 62 LOT 17



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TIM & CINDY CARLSON
293 LAMSON LANE PERMITTING

NEW LONDON, NH

SITE PLAN

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

DATE:	PROJECT #:
MAY 2017	14819
ENGIN'D BY:	DRAWN BY:
WTD	CJH
CHECK'D BY:	ARCHIVE #:
WTD	H-___

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EROSION CONTROL GENERAL NOTES

- A. KEEP SITE MODIFICATION TO A MINIMUM
 1. CONSIDER FITTING THE BUILDINGS AND STREETS TO THE NATURAL TOPOGRAPHY. THIS REDUCES THE NEED FOR CUTS AND FILLS. AVOID EXTENSIVE GRADING THAT WOULD ALTER DRAINAGE PATTERNS OR CREATE VERY STEEP SLOPES.
 2. EXPOSE AREAS OF BARE SOIL TO EROSION ELEMENTS FOR THE SHORTEST TIME POSSIBLE.
 3. SAVE AND PROTECT DESIRABLE EXISTING VEGETATION WHERE POSSIBLE. ERECT BARRIERS TO PREVENT DAMAGE FROM CONSTRUCTION EQUIPMENT.
 4. LIMIT THE GRADES OF SLOPES SO VEGETATION CAN BE EASILY ESTABLISHED AND MAINTAINED.
 5. AVOID SUBSTANTIAL INCREASE IN RUNOFF LEAVING THE SITE.
- B. MINIMIZE POLLUTION OF WATER DURING CONSTRUCTION ACTIVITIES
 1. STOCKPILE TOPSOIL REMOVED FROM CONSTRUCTION AREA AND SPREAD OVER ANY DISTURBED AREAS PRIOR TO REVEGETATION. TOPSOIL STOCKPILES MUST BE PROTECTED FROM EROSION.
 2. PROTECT BARE SOIL AREAS EXPOSED BY GRADING ACTIVITIES WITH TEMPORARY VEGETATION OR MULCHES.
 3. USE SEDIMENT BASINS TO TRAP DEBRIS AND SEDIMENT WHICH WILL PREVENT THESE MATERIALS FROM MOVING OFF SITE.
 4. USE DIVERSIONS TO DIRECT WATER AROUND THE CONSTRUCTION AREA AND AWAY FROM EROSION PRONE AREAS TO POINTS OF SAFE DISPOSAL.
 5. USE TEMPORARY CULVERTS OR BRIDGES WHEN CROSSING STREAMS WITH EQUIPMENT.
 6. PLACE CONSTRUCTION FACILITIES, MATERIALS, AND EQUIPMENT STORAGE AND MAINTENANCE AREAS AWAY FROM DRAINAGE WAYS.
- C. PROTECT AREA AFTER CONSTRUCTION.
 1. ESTABLISH GRASS OR OTHER SUITABLE VEGETATION ON ALL DISTURBED AREAS. SELECT SPECIES ADAPTED TO THE SITE CONDITIONS AND THE FUTURE USE OF THE AREA. FINAL GRADES SHALL BE SEDED WITHIN 72 HOURS. STABILIZATION SHALL BE DEFINED AS 85% VEGETATIVE COVER.
 2. MAINTAIN VEGETATED AREAS USING PROPER VEGETATIVE 'BEST MANAGEMENT PRACTICES' DURING THE CONSTRUCTION PERIOD.
 3. MAINTAIN NEEDED STRUCTURAL 'BEST MANAGEMENT PRACTICES' AND REMOVE SEDIMENT FROM DETENTION PONDS AND SEDIMENT BASINS AS NEEDED.
 4. DETERMINE RESPONSIBILITY FOR LONG TERM MAINTENANCE OF PERMANENT 'BEST MANAGEMENT PRACTICES'.
 5. IF CONSTRUCTION IS ANTICIPATED DURING WINTER MONTHS, GRADED AREAS ARE TO BE STABILIZED WITH NORTH AMERICAN GREEN DS150 MATTING OR EQUAL.

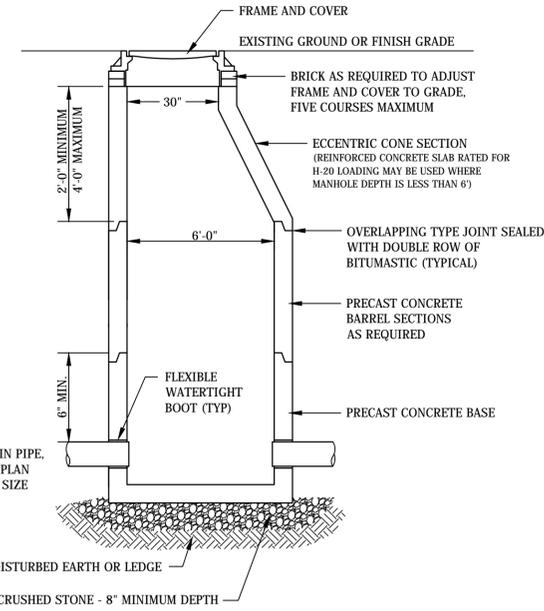
COLD WEATHER SITE STABILIZATION REQUIREMENTS

TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE FOLLOWING ADDITIONAL STABILIZATION TECHNIQUES SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 1:

1. THE AREA OF EXPOSED, UNSTABILIZED SOIL SHALL BE LIMITED TO ONE ACRE AND SHALL BE PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT. THE ALLOWABLE AREA OF EXPOSED SOIL MAY BE INCREASED IF A WINTER CONSTRUCTION PLAN, DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, IS REVIEWED AND APPROVED BY NHDES.
2. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE SECURED WITH ANCHORED NETTING OR TACKIFIER, OR 2 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(D) THROUGH (H).
3. ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEDED AND COVERED WITH A PROPERLY INSTALLED AND ANCHORED EROSION CONTROL BLANKET OR WITH A MINIMUM 4 INCH THICKNESS OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(D) THROUGH (H).
4. INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX, MEETING THE CRITERIA OF ENV-WQ 1506.05(D) THROUGH (H), SHALL NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH.
5. INSTALLATION OF EROSION CONTROL BLANKETS SHALL NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH OR ON FROZEN GROUND.
6. ALL PROPOSED STABILIZATION IN ACCORDANCE WITH NOTES 2 OR 3 ABOVE, SHALL BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.
7. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS, AS DETERMINED BY THE OWNER'S ENGINEERING CONSULTANT.
8. AFTER NOVEMBER 15, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION OF THE ROAD OR PARKING AREA HAS STOPPED FOR THE WINTER SEASON SHALL BE PROTECTED WITH A MINIMUM 3 INCH LAYER OF BASE COURSE GRAVELS MEETING THE GRADATION REQUIREMENTS OF NHDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2006, ITEM NO. 304.1 OR 304.2.

CONSTRUCTION SEQUENCE

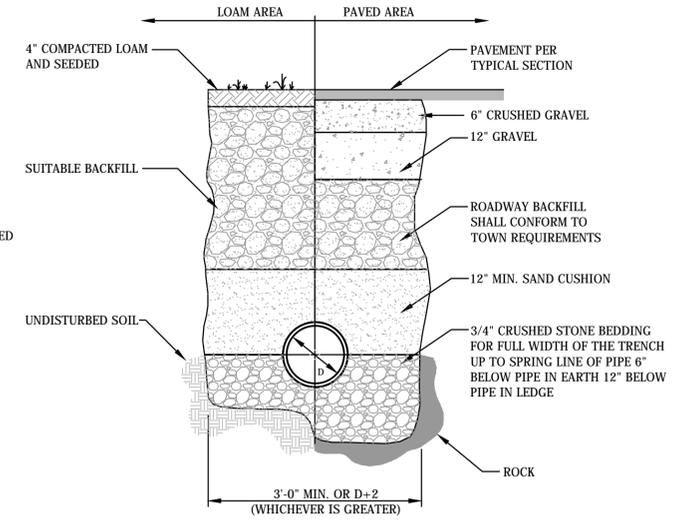
1. PREPARE AN EROSION CONTROL PLAN IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
 2. CUT AND CLEAR TREES WITHIN THE CLEARING LIMITS.
 3. INSTALL SILT FENCES, ROCK CHECK DAMS, AND OTHER APPROPRIATE EROSION CONTROL MEASURES AT LOCATIONS SHOWN ON THE PLANS AND AS NEEDED.
 4. GRUB SITE WITHIN GRADING LIMITS.
 5. STRIP AND STOCKPILE TOPSOIL AND INSTALL ADDITIONAL EROSION CONTROL MEASURES AS NEEDED.
 6. PROCEED WITH DEMOLITION WORK, LIMITING THE DURATION OF DISTURBANCE. THE MAXIMUM LENGTH OF TIME THAT A WORK UNIT MAY BE LEFT UNSTABILIZED IS 30 DAYS.
 7. CONSTRUCT PROPOSED STREAM CHANNEL PRIOR TO DEMOLITION OF EXISTING CULVERT.
 8. CONSTRUCT PERMANENT DRAINAGE FEATURES AS SOON AS POSSIBLE TO ALLOW STABILIZATION BEFORE DIRECTING FLOWS TO FEATURES.
 9. BEGIN SEEDING AND MULCHING IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED WITH APPROVED METHODS WITHIN 14 DAYS OF ACHIEVING FINISHED GRADE.
- AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
- A) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - B) A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - C) A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
 - D) EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
10. INSPECT ALL EROSION CONTROL MEASURES ON A DAILY BASIS AND AFTER EVERY 0.5 INCHES OF PRECIPITATION. MAINTAIN SILT FENCE, SEDIMENT TRAPS, HAY BALES, ETC., AS NECESSARY.
 11. PAVE DRIVEWAY AND/OR PARKING AREAS.
 12. PLACE TOPSOIL, SEED AND MULCH.
 13. COMPLETE ALL REMAINING PERMANENT EROSION CONTROL STRUCTURES.
 14. MONITOR THE SITE AND MAINTAIN STRUCTURES AS NEEDED UNTIL FULL VEGETATION IS ESTABLISHED.



NOTE:
CONTRACTOR SHALL PROVIDE SHOP DRAWINGS TO CONFIRM ADEQUATE DIAMETER AND INVERTS.

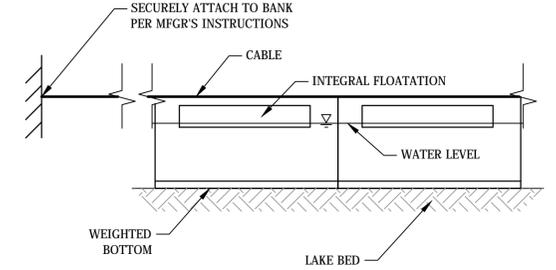
DRAIN MANHOLE DETAIL

NOT TO SCALE



TYPICAL DRAINAGE TRENCH DETAIL

NOT TO SCALE



- NOTES:
1. FLOATING TURBIDITY BARRIER SHALL BE TYPE I FLOATING TURBIDITY BARRIER AS MANUFACTURED BY ACF ENVIRONMENTAL OR APPROVED EQUAL.
 2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
 3. TURBIDITY BARRIER SHALL BE DEPLOYED DURING ACTIVITIES WHICH HAVE THE POTENTIAL TO CAUSE TURBIDITY. BARRIER SHALL BE TEMPORARILY REMOVED WHEN SIGNIFICANT ICE OR FLOATING DEBRIS IS EXPECTED AND NO WORK IS TAKING PLACE.

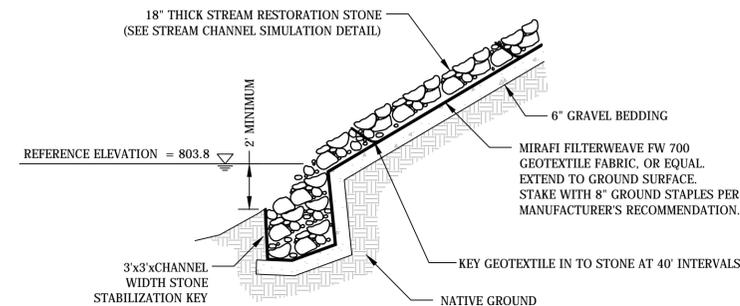
FLOATING TURBIDITY BARRIER DETAIL

NOT TO SCALE

STONE SPECIFICATIONS FOR STREAM RESTORATION

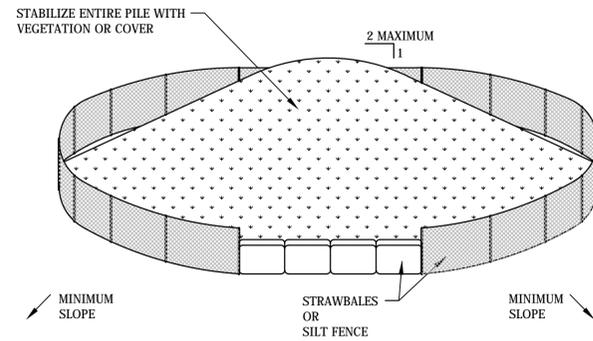
STONE FOR STONE FILL SHALL BE AN APPROVED COMBINATION OF QUARRY STONE, ROUNDED STONE OR BROKEN ROCK OF A HARD, SOUND, AND DURABLE QUALITY. THE STONES AND SPALLS SHALL BE SO GRADED AS TO PRODUCE A DENSE FILL WITH A MINIMUM OF VOIDS.

1. STREAM RESTORATION STONE SHALL BE IRREGULAR IN SHAPE WITH AT LEAST 75% OF THE MASS HAVING A MINIMUM DIMENSION OF 8-INCHES. STONE SIZE SHOULD VARY FROM A MINIMUM OF 6 INCHES TO 24 INCHES. STONE SHALL BE A COMBINATION OF ROUNDED AND ANGULAR STONE. STONE SHALL MATCH THE STONE FOUND IN THE STREAM CHANNEL UPSTREAM FROM THE LAMSON LANE CULVERT TO THE GREATEST EXTENT POSSIBLE. CONTRACTOR MAY USE EXISTING STONE AND BOULDERS ON SITE INCLUDING RETAINING WALL STONE. LARGE STONE VOIDS SHOULD BE FILLED WITH SPALLS. STONE SHALL BE PLACE 18" THICK. STONES LARGER THAN 18" ARE INTENDED TO PROJECT INTO CHANNEL SECTION. THE INTENT IS TO MIMIC THE UPSTREAM CHANNEL.
2. SPALLS FOR FILLING VOIDS SHALL CONSIST OF A MIXTURE OF STONES OR ROCK FRAGMENTS AND PARTICLES WITH 95 TO 100% PASSING THE 3-INCH SIEVE AND 25 TO 70% PASSING THE NO. 4 SIEVE.



STONE LINED OUTLET DETAIL

NOT TO SCALE



SOIL STOCKPILING IS TO BE USED WHERE TOPSOIL IS NECESSARY FOR REGRADING AND VEGETATING DISTURBED AREAS.

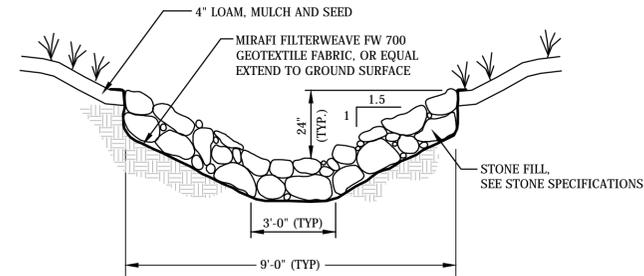
TEMPORARY STOCKPILE STABILIZATION MEASURES INCLUDE VEGETATIVE COVERS, MULCH, NON-VEGETATIVE COVERS, AND PERIPHERAL SEDIMENT TRAPPING BARRIERS. THE STABILIZATION MEASURE(S) SELECTED SHOULD BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, AND REQUIRED PERIOD OF USE.

INSTALLATION NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES AND THEN STABILIZED WITH VEGETATION OR COVERED.

SOIL STOCKPILING DETAIL

NOT TO SCALE

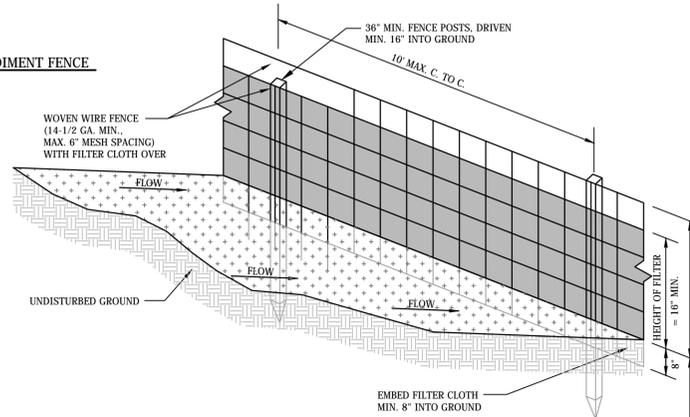


STREAM CHANNEL SIMULATION

NOT TO SCALE

CONSTRUCTION NOTES FOR SEDIMENT FENCE

1. WOVEN WIRE FENCE, IF REQUIRED, TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP, MID SECTION, AND BOTTOM.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR 50% OF ITS STORAGE IS USED.



SEDIMENT FENCE

NO SCALE

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TIM & CINDY CARLSON
293 LAMSON LANE PERMITTING

NEW LONDON, NH

DETAILS

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

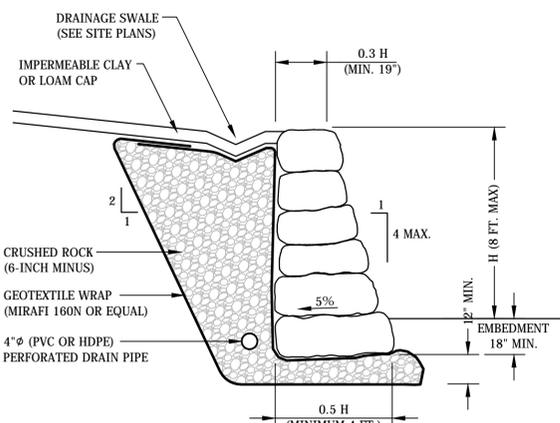
DATE: MAY 2017	PROJECT #: 14819
ENGIN'D BY: WTD	DRAWN BY: CJH
CHECK'D BY: WTD	ARCHIVE #: H-___

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GENERAL NOTES - ROCKERY WALL

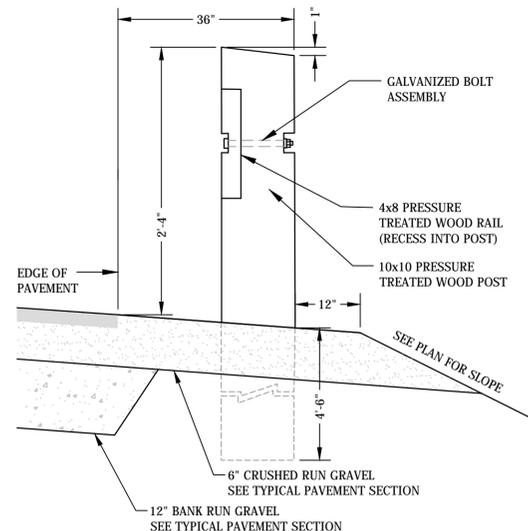
- THE WALL DETAIL(S) DEPICTED ON THESE PLANS ARE CONCEPTUAL. SITE SPECIFIC DESIGN SHOULD BE COMPLETED BY A GEOTECHNICAL ENGINEER BASED ON SITE SPECIFIC SOIL AND GROUNDWATER CONDITIONS AT THE WALL LOCATIONS.
- WALL CONSTRUCTION AND INSPECTION SHOULD BE COMPLETED IN ACCORDANCE WITH ROCKERY DESIGN AND CONSTRUCTION GUIDELINES, FHWA-CPLD-06-006, NOVEMBER 2006.
- EXCAVATIONS SHALL BE EXTENDED TO AT LEAST 2.5 FEET BELOW FINISH GRADE TO ALLOW FOR WALL EMBEDMENT AND LEVELING COURSE. THE BASE OF THE EXCAVATION SHALL BE INCLINED BACK AWAY FROM THE FACE OF THE ROCKERY AT 5 PERCENT.
- ROCKS SHOULD BE PLACED IN ROWS SUCH THAT BASE ROCKS CONSIST OF LARGEST DIAMETER AND WEIGHT ROCKS AND EACH SUCCEEDING ROW CONSISTS OF SMALLER DIAMETER ROCKS. BASE ROCKS SHALL BE EQUAL TO ABOUT 1/2 THE WALL HEIGHT AND NOT LESS THAN 4 FEET IN DIAMETER. CAP ROCKS SHALL BE EQUAL TO ABOUT 1/3 THE WALL HEIGHT AND NOT LESS THAN 19 INCHES IN DIAMETER.
- ROCKS SHALL BE HARD, ANGULAR AND DURABLE. THEY MUST BE ABLE TO RESIST PHYSICAL, CLIMATIC, AND CHEMICAL DECOMPOSITION. ROCKS SHOULD BE ROUGHLY RECTANGULAR, TABULAR OR CUBIC IN SHAPE. ROUNDED COBBLES OR BOULDERS MUST NOT BE USED.
- ROCKS SHOULD BE PLACED WITH LONGEST DIMENSION PERPENDICULAR TO ROCKERY FACE. THE ROCKS SHOULD BE PLACED SUCH THAT THEY SLOPE DOWNWARD AT LEAST 5 PERCENT TOWARDS THE BACK OF THE ROCKERY.
- THE ROCKERY FACE BATTER SHOULD BE 4V:1H OR FLATTER.
 - EACH ROCK SHOULD BEAR ON AT LEAST TWO OTHER ROCKS.
 - EACH ROCK SHOULD HAVE AT LEAST THREE BEARING POINTS - TWO IN FRONT AND ONE IN BACK.
 - THE FRONT MOST BEARING POINTS FOR EACH ROCK SHOULD BE WITHIN 150MM (6IN) OF THE AVERAGE FACE OF THE ROCKERY.
 - THE REAR OF THE ROCKS SHOULD BE ALIGNED ALONG AN IMAGINARY VERTICAL PLANE. IF ROCKS LARGER THAN THE MINIMUM SPECIFIED BASE WIDTH (B) ARE USED, THEY CAN EXTEND BEYOND THIS IMAGINARY PLANE PROVIDED THEY DO NOT INTERFERE WITH ROCKERY DRAINAGE OR REINFORCED ZONE.
- THERE SHOULD BE NO VERTICAL COLUMNS OF ROCK OR CONTINUOUS VERTICAL JOINTS BETWEEN MULTIPLE ROWS OF ROCKS.
- ROCK WIDTH SHALL BE LARGE ENOUGH TO EXTEND FROM THE FRONT FACE TO THE BACK OF THE ROCKERY AT EACH LEVEL.
- PLACE BASE, FACING AND CAP ROCKS SO THAT THEIR HEIGHT DIMENSION IS NOT GREATER THAN THEIR WIDTH. THE LONGEST DIMENSION OF THE BASE, FACING, AND CAP ROCKS IS PERPENDICULAR TO FACE OF ROCKERY.
- VOIDS BETWEEN ROCKS SHOULD BE AVOIDED AS MUCH AS POSSIBLE. HOWEVER, IN AREAS WHERE VOIDS EXIST, THE VOIDS SHALL BE CHINKED. CHINK ROCKS SHOULD CONSIST OF SPALLS FROM THE PARENT (FACING) ROCK. CHINK ROCKS SHOULD NOT BE MOVABLE BY HAND AND SHOULD BE GROUTED IN PLACE WHERE APPROPRIATE. CHINKING ROCKS SHOULD NOT BE USED AS A MEANS OF SUPPORT FOR OVERLYING FACING ROCKS.
- CAP ROCKS ARE THE TOP ROW OF FACING ROCKS FOR ROCKERIES. CAP ROCKS ARE TYPICALLY SMALLER AND FLATTER THAN THE OTHER FACING ROCKS USED IN THE ROCKERY. CAP ROCKS SHALL HAVE A WEIGHT OF AT LEAST 200 POUNDS. CAP ROCKS SHOULD NOT BE MOVABLE BY HAND. REGARDLESS OF SIZE, CAP ROCKS SHALL BE GROUTED IN PLACE TO REDUCE THE POTENTIAL FOR DISLODGING.
- CRUSHED ROCK SHOULD CONSIST OF CRUSHED, WASHED, HARD, DURABLE ROCK MEETING THE FOLLOWING GRADATION REQUIREMENTS:

CRUSHED ROCK	PERCENT FINER BY WEIGHT
SIEVE SIZE	
150MM (6IN)	100
100MM (4 IN)	0.0 - 25
19.0MM (3/4 IN)	0.0 - 15
4.75MM (NO. 4)	0.0 - 5.0
75MM (NO. 200)	0.0 - 2.0
- WHERE LOOSE, SOFT, OR OTHERWISE UNSUITABLE FOUNDATION SOIL CONDITIONS ARE ENCOUNTERED, CONTACT THE ENGINEER FOR SUPPLEMENTAL RECOMMENDATIONS.
- DISCHARGE OUTLET PIPES TO A PROTECTED OUTLET OR OTHER PERMANENT DRAINAGE STRUCTURE AT LOW POINTS IN THE ROCKERY. DRAIN OUTLETS SHOULD NOT EMPTY INTO STORM DRAINS THAT ARE DESIGNED TO BACK-UP DURING HEAVY FLOWS.
- STABILITY OF TEMPORARY CUT SLOPES IS THE RESPONSIBILITY OF THE CONTRACTOR.
- DO NOT CONSTRUCT ROCKERIES OR SLOPES EXCEEDING THE HEIGHTS SHOWN ON THE PLAN.



ROCKERY WALL DETAIL

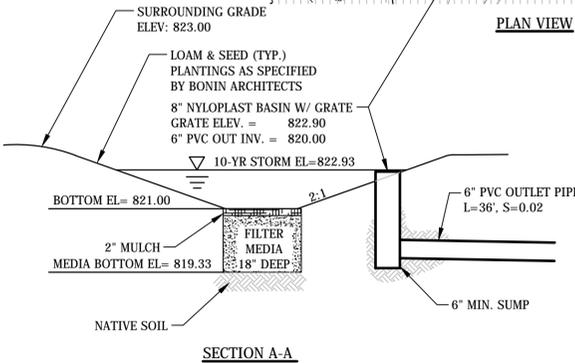
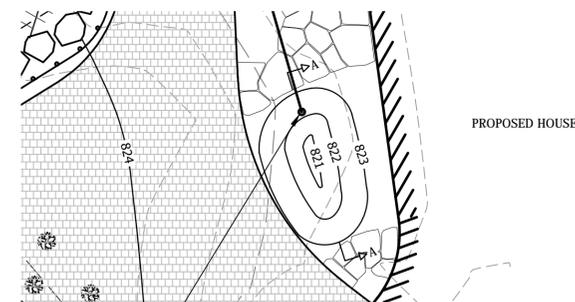
NOT TO SCALE



BEAM GUIDE RAIL / WOOD POSTS

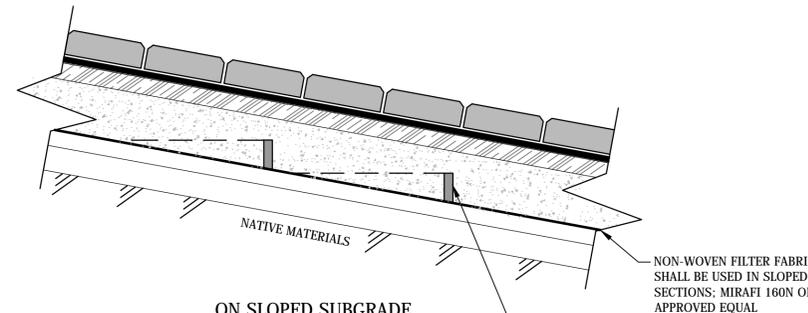
NOT TO SCALE

- NOTES:
- WOOD POST SHALL BE SPACED 6'-3" CENTER TO CENTER ROUGH CUT LUMBER
 - SEE ROUGH CUT CARPENTRY AND HEAVY TIMBER CONSTRUCTION SPECIFICATIONS
 - CONTRACTOR SHALL SUBMIT SHOP DRAWING PRIOR TO FABRICATION.

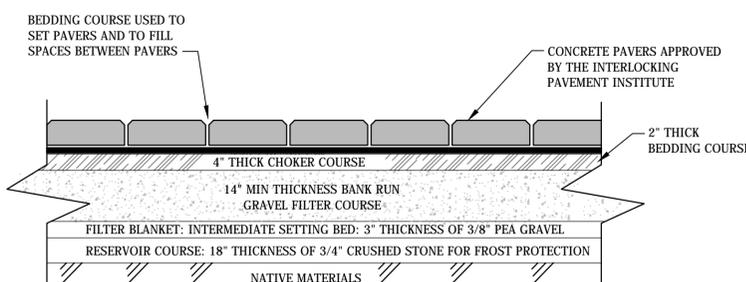


BIORETENTION AREA #1

- NOTES:
- BIORETENTION AREA PLANTINGS SHALL BE SPECIFIED BY BONIN ARCHITECTS IN COMPLIANCE WITH NEW HAMPSHIRE STORMWATER MANUAL GUIDANCE FOR BIORETENTION AREAS.
 - FILTER MEDIA SHALL MEET ONE OF THE FOLLOWING SPECIFICATIONS:
 - A. 50% TO 55% BY VOLUME SAND ALSO IDENTIFIED AS ASTM C-33 CONCRETE SAND, 20% TO 30% BY VOLUME OF LOAMY SAND TOPSOIL WITH 15% TO 25% FINES PASSING THE NUMBER 200 SIEVE, AND 20% TO 30% BY VOLUME MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH WITH LESS THAN 5% PASSING THE NUMBER 200 SIEVE:
 - B. 20% TO 30% BY VOLUME OF MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH THAT HAS NO MORE THAN 5% FINES PASSING THE NUMBER 200 SIEVE, WITH 70 TO 80% BY VOLUME LOAMY COARSE SAND USED IN THE MIXTURE MEETING THE FOLLOWING SIEVE ANALYSIS SPECIFICATION:
 - 1. FROM 85 TO 100 PERCENT BY WEIGHT SHALL PASS THE NUMBER 10 SIEVE;
 - 2. FROM 70 TO 100 PERCENT BY WEIGHT SHALL PASS THE NUMBER 20 SIEVE;
 - 3. FROM 15 TO 40 PERCENT BY WEIGHT SHALL PASS THE NUMBER 60 SIEVE; AND
 - 4. FROM 8 TO 15 PERCENT BY WEIGHT SHALL PASS THE NUMBER 200 SIEVE
 - DIRECT ROOF DOWNSPOUTS TO BIO-RETENTION AREA.
 - THE BIORETENTION AREA FUNCTIONS BY INFILTRATING STORMWATER. ENSURE THAT ADJACENT FOUNDATION WALLS ARE ADEQUATELY WATERPROOFED FOR CONTINUAL CONTACT WITH SATURATED SOIL. SEE PLANS AND DETAILS BY OTHERS



ON SLOPED SUBGRADE



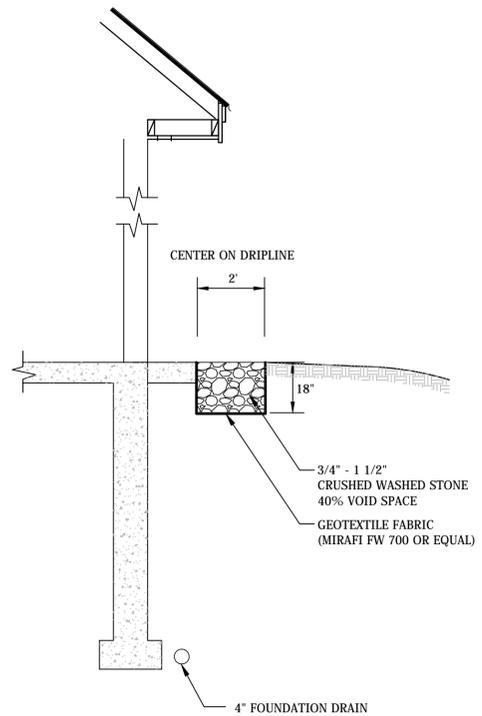
U.S. STANDARD SIEVE SIZE	PERCENT PASSING (%)				
	BEDDING COURSE (ASTM No. 8)	CHOKER COURSE (AASHTO No. 57)	FILTER COURSE (NHDOT 304.1)	RESERVOIR COURSE (AASHTO No. 3)	RESERVOIR COURSE ALT.* (AASHTO No. 5)
6" (150mm)	-	-	100	100	-
2 1/2" (63mm)	-	-	-	90-100	-
1 1/2" (37.5mm)	-	100	-	35-70	100
1" (25mm)	-	95-100	-	0-15	90-100
3/4" (19mm)	-	-	-	0-5	20-55
1/2" (12.5mm)	100	25-60	-	0-5	0-10
3/8" (9.5mm)	85 TO 100	-	-	-	0-5
#4 (4.75mm)	10 TO 30	0-10	75-100	-	-
#8 (2.36mm)	0 TO 10	0-5	0-12	-	-

*ALTERNATE GRADATION (e.g. AASHTO No. 5) FOR RESERVOIR COURSE MAY BE ACCEPTED ENGINEER'S APPROVAL.

NOTE:
THE CONTRACTOR AND OWNER ARE ADVISED TO REFERENCE THE "UNHSC DESIGN SPECIFICATIONS FOR POROUS ASPHALT PAVEMENT AND INFILTRATION BEDS" FOR CONSTRUCTION AND MAINTENANCE OF THE PAVEMENT SECTION.

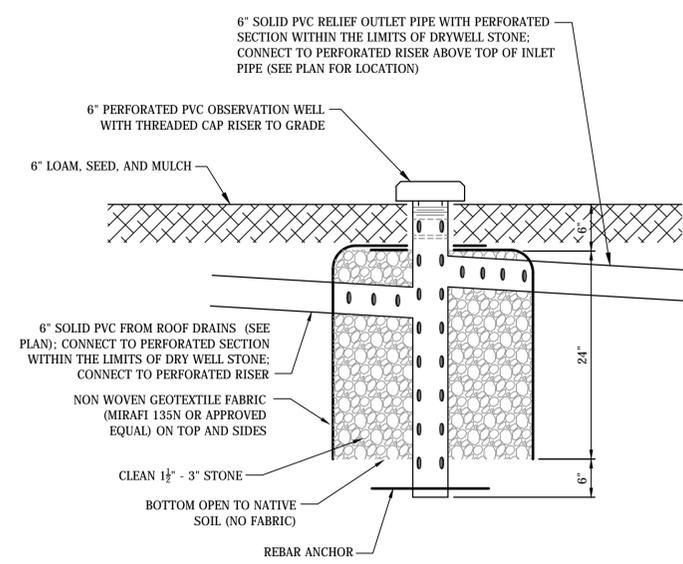
TYPICAL PATIO SECTION - PERVIOUS PAVERS

NOT TO SCALE



STONE DRIP EDGE DETAIL

NOT TO SCALE



DRY WELL DETAIL

NOT TO SCALE

NOTES:

- SEE PLAN FOR LOCATION OF DRYWELLS.
- PLACE ONE OBSERVATION WELL IN THE CENTER OF EACH DRYWELL.

	LENGTH	WIDTH	STONE BOTTOM	STONE TOP	E.S.H.W.T	INLET INV.	OUTLET INV.
DRY WELL #1	15'	12"	809.60	811.60	809.10	810.00	810.85
DRY WELL #2	10'	6"	811.45	813.45	810.75	812.00	812.70

DATE OF PRINT
MAY 09 2017
HORIZONS ENGINEERING

Littleton NH • New London NH • Newport VT
603-444-4111 603-877-0116 802-334-6434

TIM & CINDY CARLSON
293 LAMSON LANE PERMITTING

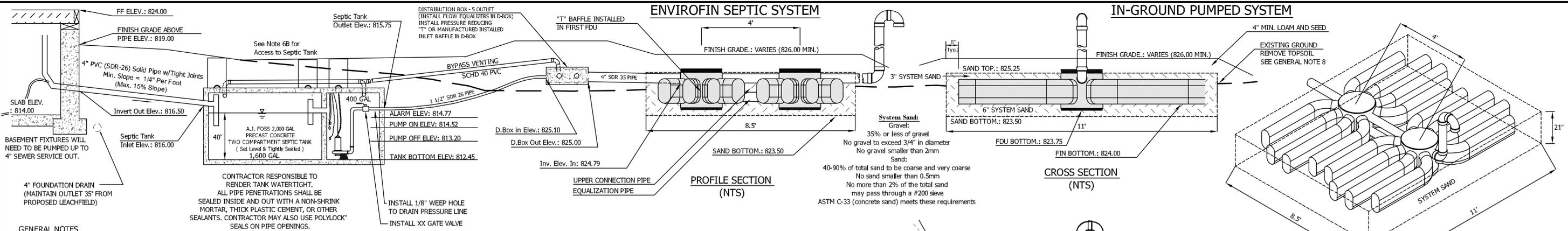
NEW LONDON, NH

DETAILS

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

DATE: MAY 2017	PROJECT #: 14819
ENGIN'D BY: WTD	DRAWN BY: CJH
CHECK'D BY: WTD	ARCHIVE #: H-___

R:\14819 Carlson - Permitting\DWGS\Final\14819 Carlson Final 06_22x34.dwg, Detail (2), 5/9/2017 3:01:15 PM, CHemick



GENERAL NOTES

- THE CONTRACTOR SHALL ADHERE STRICTLY TO THESE PLANS AND THE REGULATIONS SET FORTH IN THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES MANUAL - "SUBDIVISION AND INDIVIDUAL SEWAGE DISPOSAL SYSTEM DESIGN RULES", CHAPTER ENV-WQ 1000, DATED OCTOBER 1, 2016, CURRENT EDITION, AS WELL AS "THE PRESBY WASTEWATER TREATMENT SYSTEM, NEW HAMPSHIRE DESIGN AND INSTALLATION MANUAL FOR ENVIROFIN", CURRENT EDITION. THE DESIGNER AND INSTALLER OF THIS SYSTEM MUST BE CERTIFIED IN THE NH ENVIROFIN ONLINE CERTIFICATION.
- CALL DIG-SAFE PRIOR TO INSTALLATION.
- SEPTIC SYSTEM SHALL BE INSTALLED BY A NHDES LICENSED INSTALLER.
- THIS PLAN IS NOT MEANT TO REPRESENT A PROPERTY BOUNDARY SURVEY.
- ENVIROFIN SYSTEM AS MANUFACTURED BY PRESBY ENVIRONMENTAL, INC., SUGAR HILL, NH.
- COVER OVER PROPOSED SYSTEM:
 - 24" MINIMUM COVER SHALL BE PROVIDED OVER THE PIPE FROM THE HOUSE TO THE SEPTIC TANK OR THE PIPE SHALL BE INSULATED.
 - IF THE FINISH GRADE OVER THE SEPTIC TANK IS GREATER THAN 24" PROVIDE ACCESS WITH RISERS OVER TANK OPENINGS FOR FUTURE ACCESS TO THE TANK COVERS FOR MAINTENANCE.
 - EFFLUENT DISPOSAL AREA: MAXIMUM COVER OVER THE SYSTEM TO BE 18" UNLESS A LOW VENT IS INSTALLED. MINIMUM COVER TO BE 6" WITH AVERAGE COVER BEING 12". THE FINISH GRADE IS TO BE SLOPED TO DRAIN OFF THE TOP OF THE SYSTEM AT MINIMUM OF 1%.
 - MAINTAIN 2' OF COVER OVER THE PIPE FROM THE SEPTIC TANK TO THE DISTRIBUTION BOX OR THE PIPE SHALL BE INSULATED.
- IF THE CONTRACTOR DETERMINES THAT EXISTING FIELD CONDITIONS ARE OTHER THAN SHOWN ON THESE PLANS, HE SHALL STOP WORK IMMEDIATELY AND NOTIFY THE OWNER AND DESIGNER FOR DIRECTIONS.
- ALL TREES, ROOTS, LOAM AND OTHER ORGANIC MATTER SHALL BE REMOVED FROM UNDER LEACHFIELD AND SLOPE EXTENSIONS PRIOR TO PLACING FILL. PLACE FILL IN 16" LIFTS, CONSOLIDATE AND RAKE BACKFILL. SCARIFY SUBGRADE SOIL.
- FILL USED TO RAISE THE EFFLUENT DISPOSAL AREA SHALL BE CLEAN BANK RUN SAND, FREE FROM TOPSOIL, HUMUS, DREDGINGS, OR STONES OR MATERIAL MORE THAN 6" IN DIAMETER.
- ALL DISTURBED AREA SHALL BE LOAMED, SEED, FERTILIZED AND MULCHED (GRADE LOAM TO DRAIN 1% MIN SLOPE ON TOP OF LEACHFIELD).
- RECOMMENDED OPERATING PROCEDURES:
 - PUMP SEPTIC TANKS ONCE EVERY TWO YEARS.
 - USE BIODEGRADABLE DETERGENTS.
 - WATER SAVING DEVICES AND PROCEDURES ARE RECOMMENDED.
 - ANY FUTURE REPLACEMENT SYSTEM, IF NEEDED, SHALL BE LOCATED IN THE SAME LOCATION AS THIS DESIGN UNLESS CONDITIONS AT THE TIME OF REPLACEMENT DICTATE OTHERWISE.
 - THE TANK SIZE SHALL BE INCREASED BY 50% IF A GARBAGE GRINDER IS TO BE INSTALLED.
- PIPES AND CONNECTIONS OUTSIDE OF THE LEACHING AREA SHALL BE WATER TIGHT. THE CONNECTIONS SHALL BE SEALED WITH NON-SHRINK HYDRAULIC CEMENT.
- THE DISTRIBUTION BOX SHALL HAVE S.S.I. INC. FLOW EQUALIZERS INSTALLED IN THE OUTLET PORTS.
- THIS SYSTEM HAS NOT BEEN DESIGNED FOR VEHICULAR TRAFFIC. THEREFORE, THE SYSTEM SHOULD BE PROTECTED FROM ANY WHEEL VEHICLES.
- THE SITE IS LOCATED WITHIN THE NHDES PROTECTIVE SHORELAND.

TO BE FILLED IN AFTER RECORDING

RECORDED WELL RELEASE
 BK XXXX PAGE XXXXX
 NHDES WETLANDS PERMIT
 #2015-03051
 NHDES SHORELAND PERMIT
 PENDING

TEST PIT #1

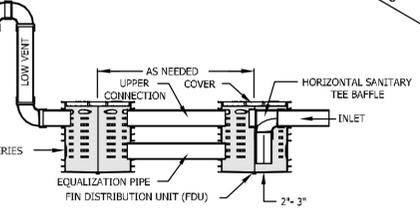
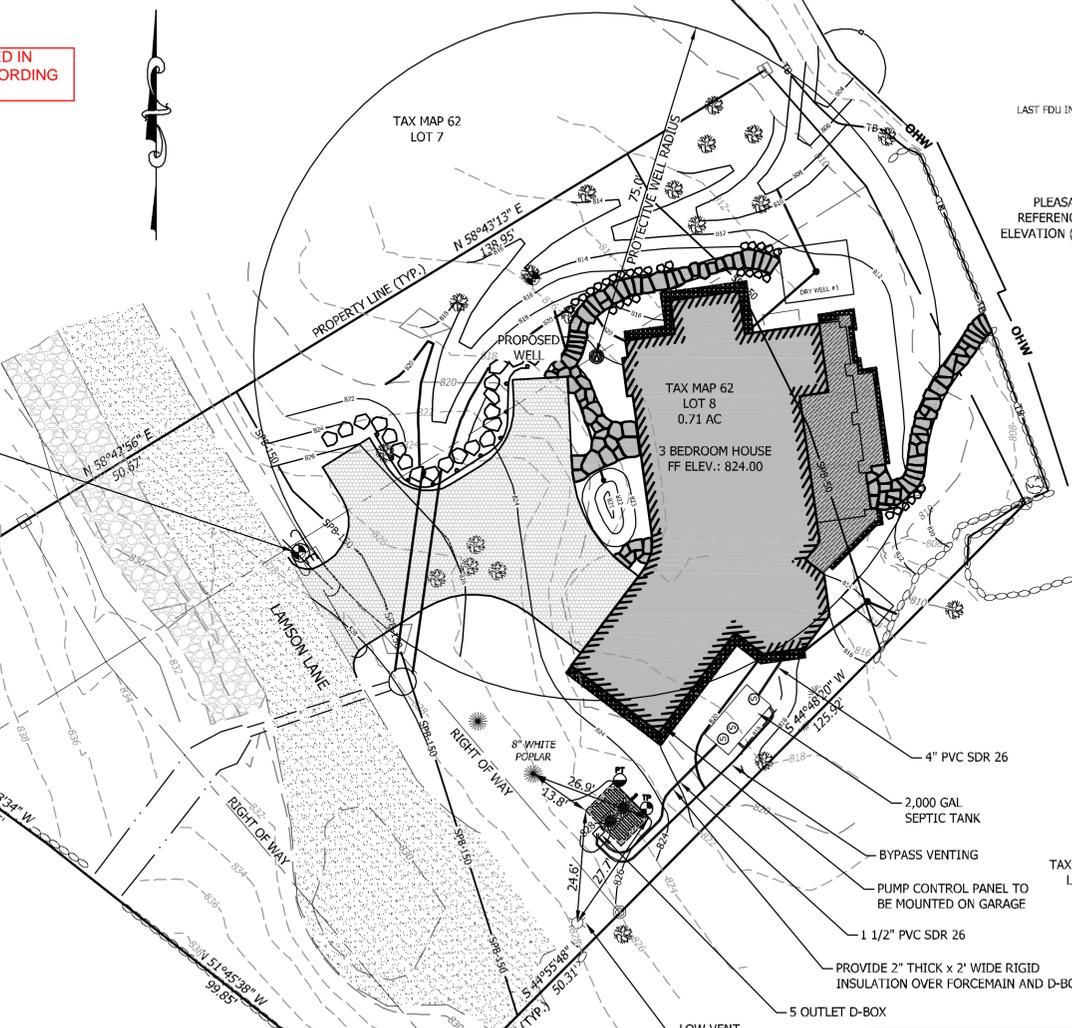
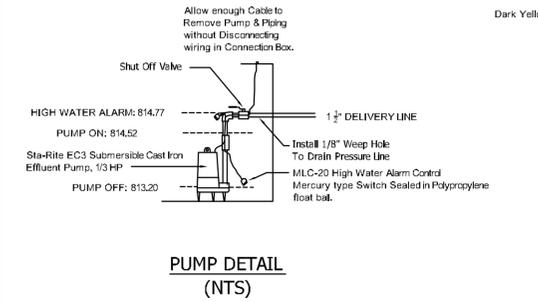
Soil Color	Soil Description	Depth	Notes
Very Dark Grayish Brown	Sandy Loam, Granular, Friable, Roots	10 YR 3/2 8"	
Dark Yellowish Brown	Sandy Loam, Granular, Friable, Roots	10 YR 4/8 16"	
Dark Yellowish Brown	Loam, Granular, Friable, Roots	10 YR 4/6 20"	
Brown	Loam, Granular, Friable, Roots to 36"	7.5 YR 4/4 36"	
Olive Brown	Fine Loamy Sand, Firm in Place, Single Grains, Loose	2.5 Y 4/4 48"	

E.S.H.W.T.: 36" Restrictive Layer
 WATER OBSERVED: Seepage @ 48"
 LEDGE ENCOUNTERED: None

INSPECTED BY: D. DAGNEAULT
 DATE: 04/27/2017

SOILS TYPE: 5590 Skerry Fine Sandy Loam
 REFERENCE: NRCS WEB SOILS SURVEY

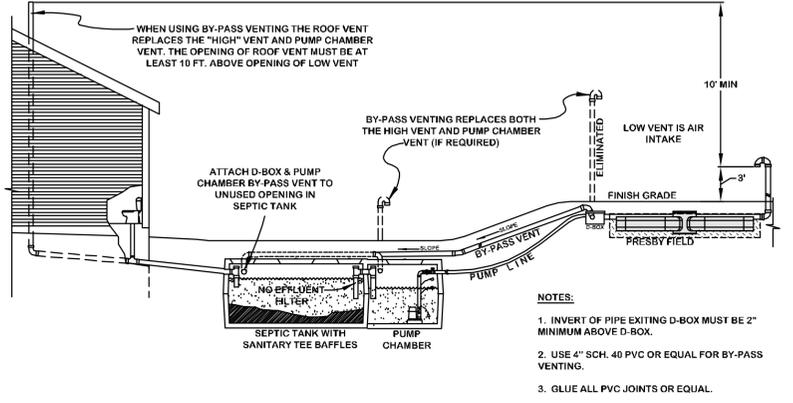
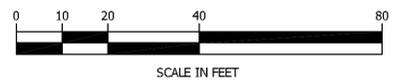
PERCOLATION TEST
 DEPTH: 27"
 RATE: 7 min/inch



THE PURPOSE OF THIS PLAN IS TO DEMOLISH THE EXISTING 3 BEDROOM HOUSE, CONSTRUCT THE PROPOSED 3 BEDROOM HOUSE, AND INSTALL A NEW SEPTIC SYSTEM MEETING CURRENT NHDES SUBSURFACE REQUIREMENTS.

MIN. SETBACKS RELEVANT TO THIS DESIGN:

SEPTIC TANK -	5' FROM PROPERTY LINE
	5' FROM GARAGE
	50' FROM WELL
	50' FROM LAKE
ENVIROFIN LEACH FIELD -	75' FROM LAKE
	75' FROM WELL
	15' FROM GARAGE
	75' FROM OPEN WATER
	75' FROM CULVERT INLET
	35' FROM CATCHBASIN
	10' FROM PROPERTY LINE



PUMPED SYSTEM:
 TOTAL DYNAMIC HEAD OF 16 FT
 450 GPD / 150 GAL DOSE VOLUME = PUMP ON 3 TIMES PER DAY
 150 GAL / 5.4 MIN. PUMP RUN TIME = 28 GPM
 USE STA-RITE EC3 1/2 HP OR EQUAL TO MEET CAPACITY OF 28 GPM AT 16 FT OF TDH.

DESIGN CRITERIA
 NUMBER OF BEDROOMS: 3
 SEWAGE LOADING: 3 x 150 GPD = 450 GPD
 PERCOLATION RATE: 7 MINS/INCH
 EF SOIL LOADING RATE (SLR) = 6.74 GPD/FT2
 MIN. NUMBER OF ENVIROFINS = 2
 MINIMUM TREATMENT AREA REQUIRED = 67 SF
 AREA PROVIDED = 93.5 SF

BOTTOM OF ENVIROFIN ELEVATION: 824.00
 THE ELEVATION OF THE HIGH CONTOUR OF THE DESIGNED BED: 825.00

DESIGN INTENT
 BOTTOM OF THE BED SHALL BE CONSTRUCTED AT ELEV.: 824.00
 THE ELEVATION OF THE HIGH CONTOUR OF THE DESIGNED BED IS APPROXIMATELY 12 INCHES BELOW EXISTING GROUND LEVEL. BENCH MARK AND ELEVATION DATA TO BE USED TO DETERMINE THE ACTUAL ELEVATION OF THE FIELD FOR GREATER ACCURACY.

BENCHMARKS USED FOR THE POINTS TO BE LEFT IN PLACE AND VISIBLE UNTIL THE NHDES INSPECTION HAS BEEN COMPLETED AND APPROVED.

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TIMOTHY & LUCINDA CARLSON
 6 IRONWOOD ROAD
 SANDY HOOK, CT 06482

ENVIROFIN SYSTEM PUMPED SYSTEM 3 BEDROOM DESIGN
 293 LAMSON LANE, NEW LONDON, NH

COUNTY: MERRIMACK
 SUBDIVISION APPROVAL # N/A PRE 67
 REGISTRY BOOK: 3016 PAGE: 268

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

DATE: 05/03/2017	PROJECT #: 14819
ENGINEER BY: JCD	DRAWN BY: JCD
CHECKED BY: ARCHIVE #:	H-

SHEET C401