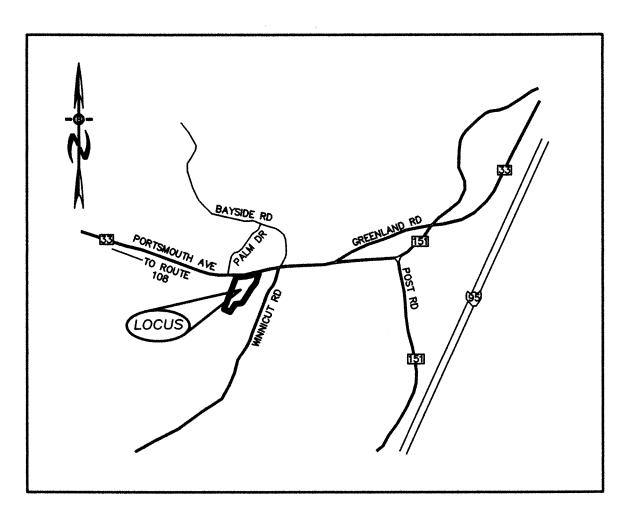
TAX MAP R-10 LOT 26 RESIDENTIAL DEVELOPMENT FOR TWELVE MONTH LLC

RECORD OWNER/APPLICANT:

STRATHAM, N.H. 03885 BOOK 5350 PAGE 2581

REQUIRED PERMITS

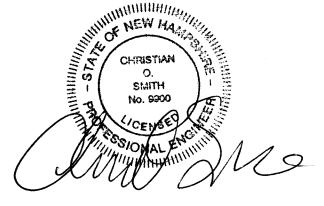
NHDES SUBDIVISION APPROVAL NUMBER: SA 2011 NPDES APPROVAL NUMBER: NHDOT DRIVEWAY PERMIT



LOCATION MAP 1"=1500"

INDEX

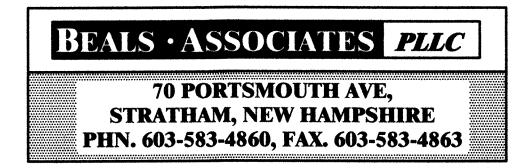
TITLE SHEET	
EXISTING CONDITIONS	1
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SUBDIVISION SITE PLANS	3-
PLAN & PROFILES	5-
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GENERAL DETAILS	8
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WETLAND / SOIL CONSULTANT:

GOVE ENVIRONMENTAL SERVICES INC. 8 CONTINENTAL DRIVE, BLDG 2 UNIT H EXETER, NH 03833 1-603-778-0644

CIVIL ENGINEERS:



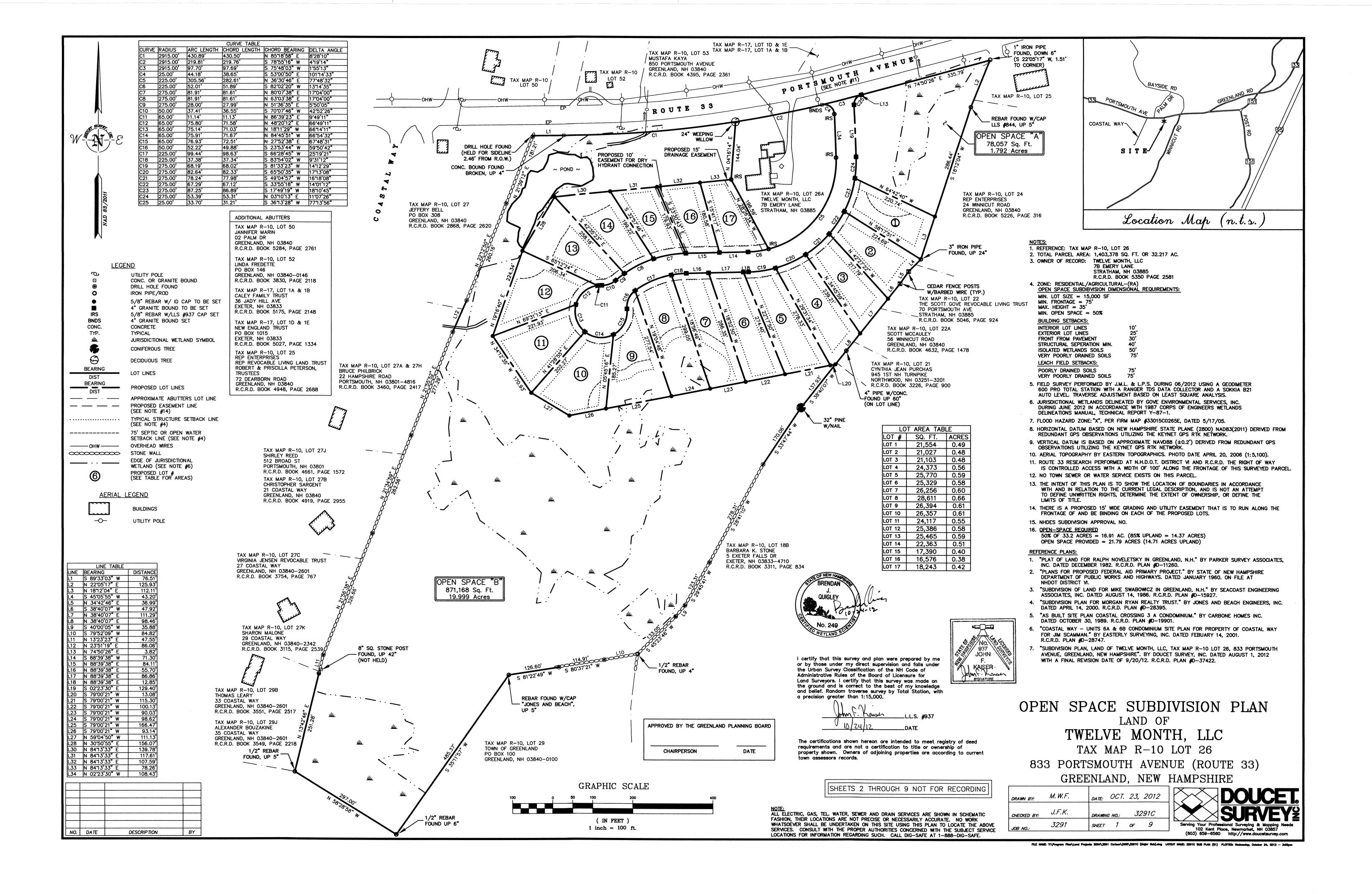
LAND SURVEYORS:

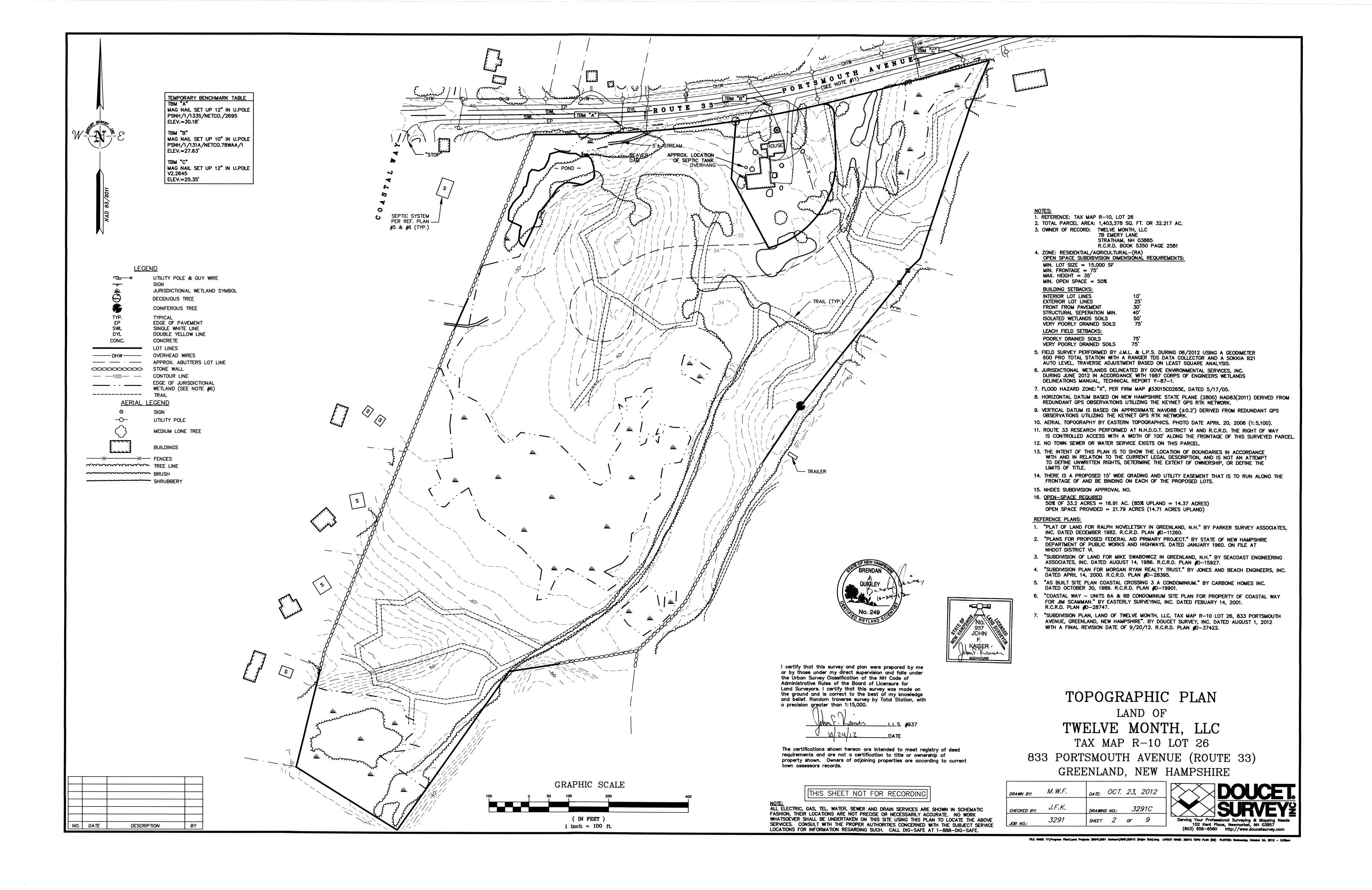


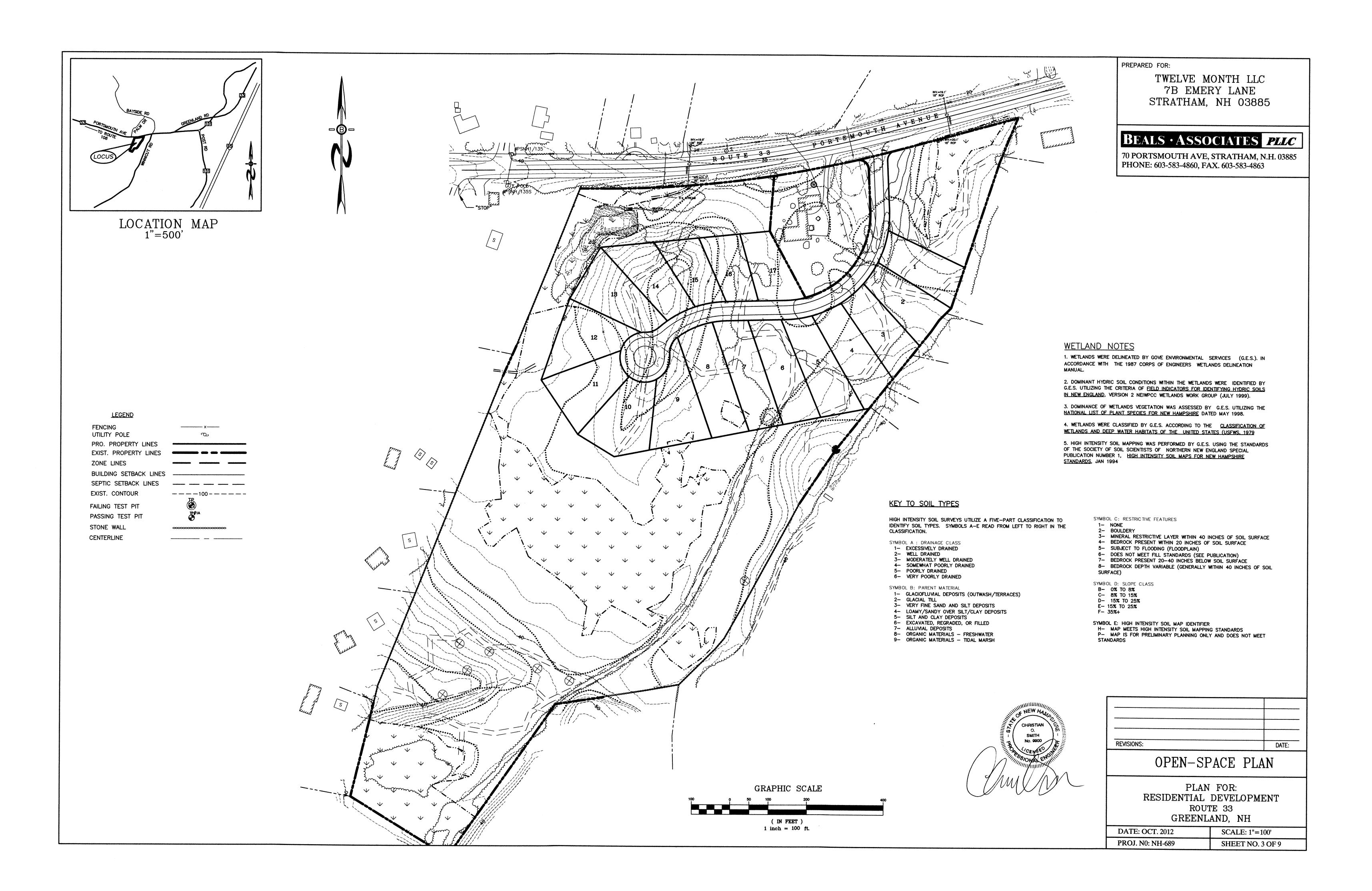
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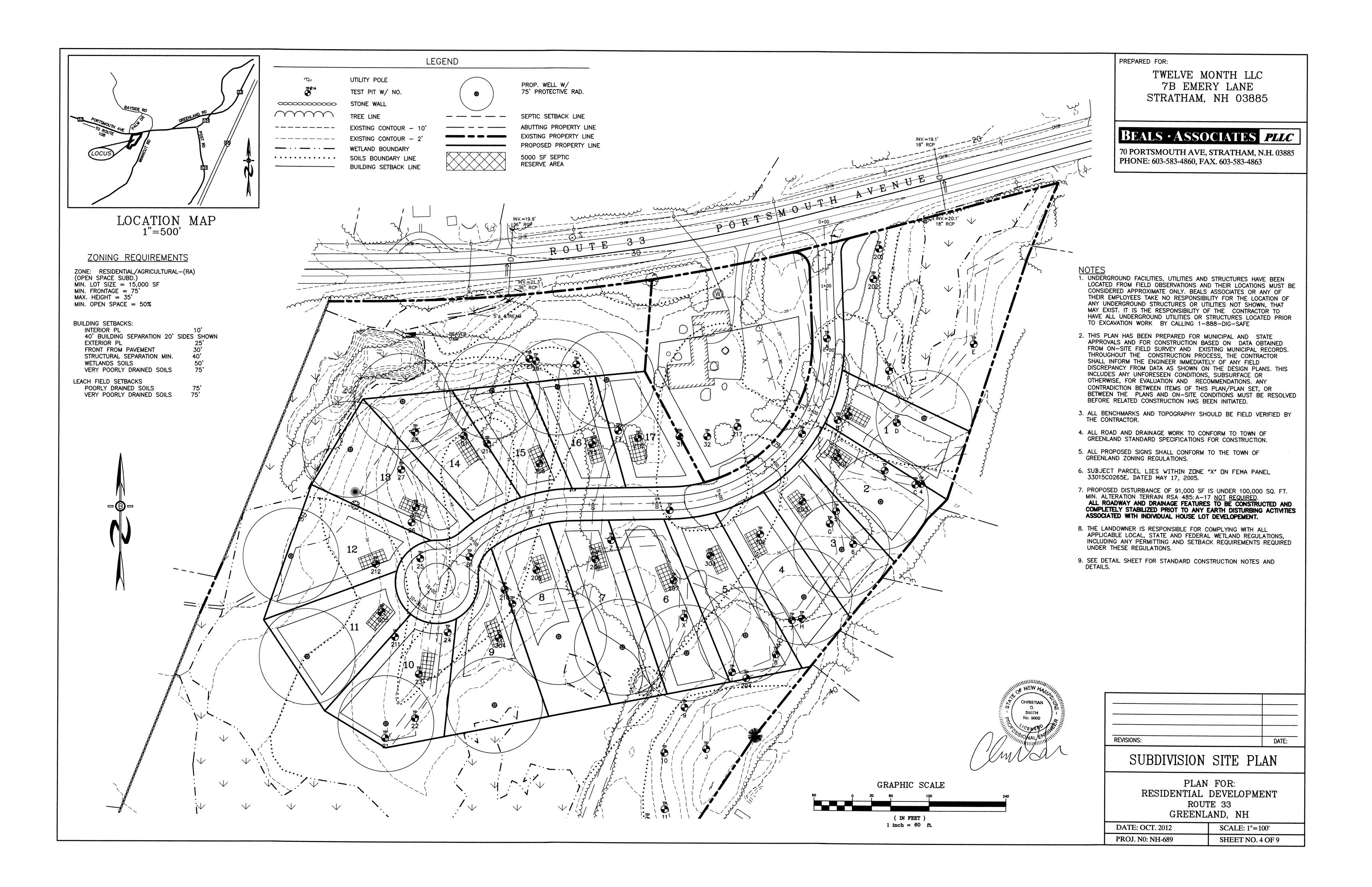
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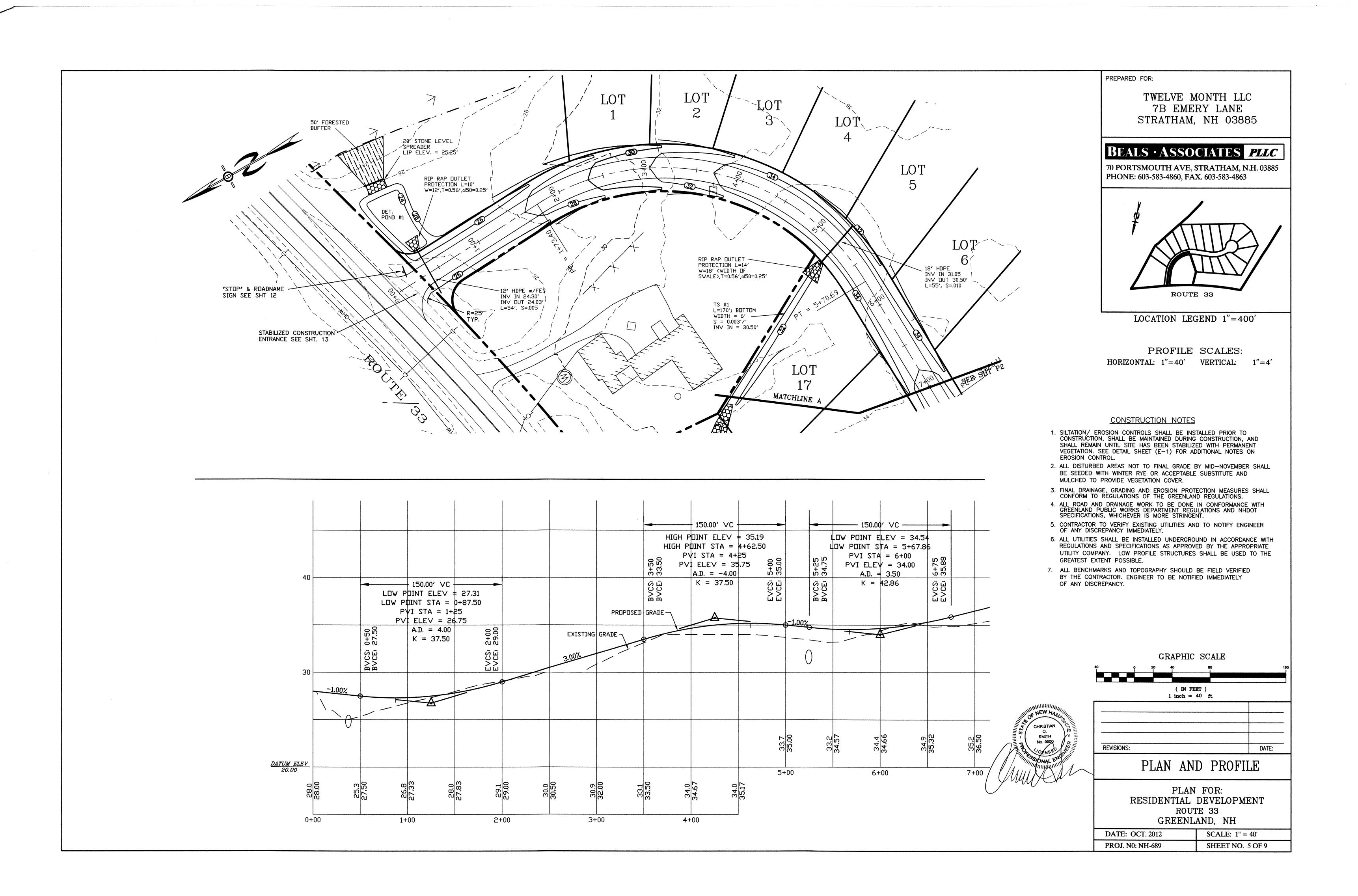
TILITY POLE	Q	FENCING	**************************************
XISTING LIGHT POLE	\$	DRAINAGE LINE	D
XISTING CATCH BASIN		STONE WALL	∞
XISTING HYDRANT	苹	TREE LINE	.~~~~.
NGLE POST SIGN		ABUT. PROPERTY LINES	
NES, ETC.	**	EXIST. PROPERTY LINES	
APLES, ETC.	£43	BUILDING SETBACK LINES	
KIST. SPOT GRADE	96×69	EXIST. CONTOUR	
ROP. SPOT GRADE	96x69	PROP. CONTOUR	100
EST PIT	₽₽₽1A	SOIL LINES	• • • • • • • • • • • • • • • • • • • •

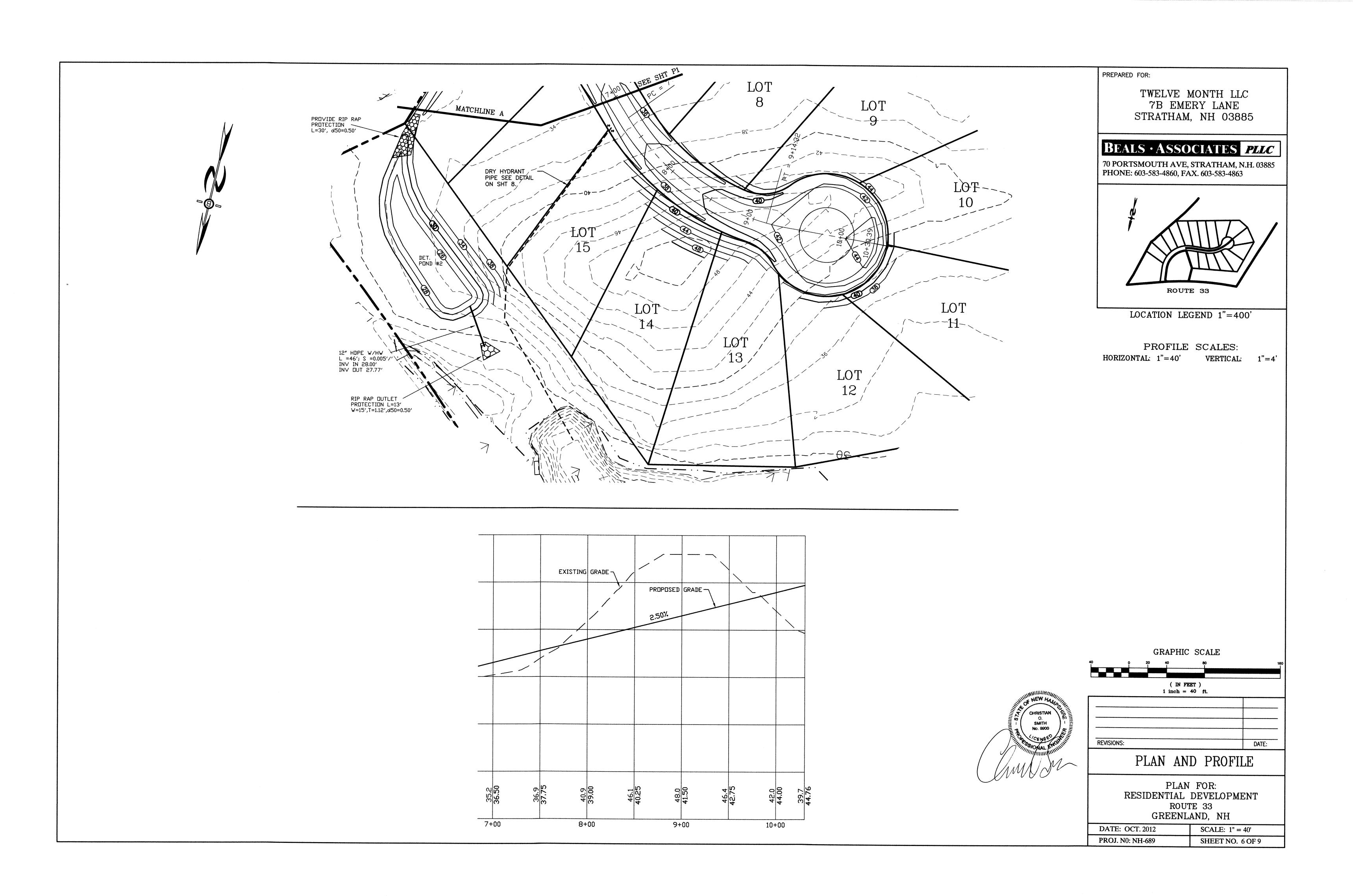


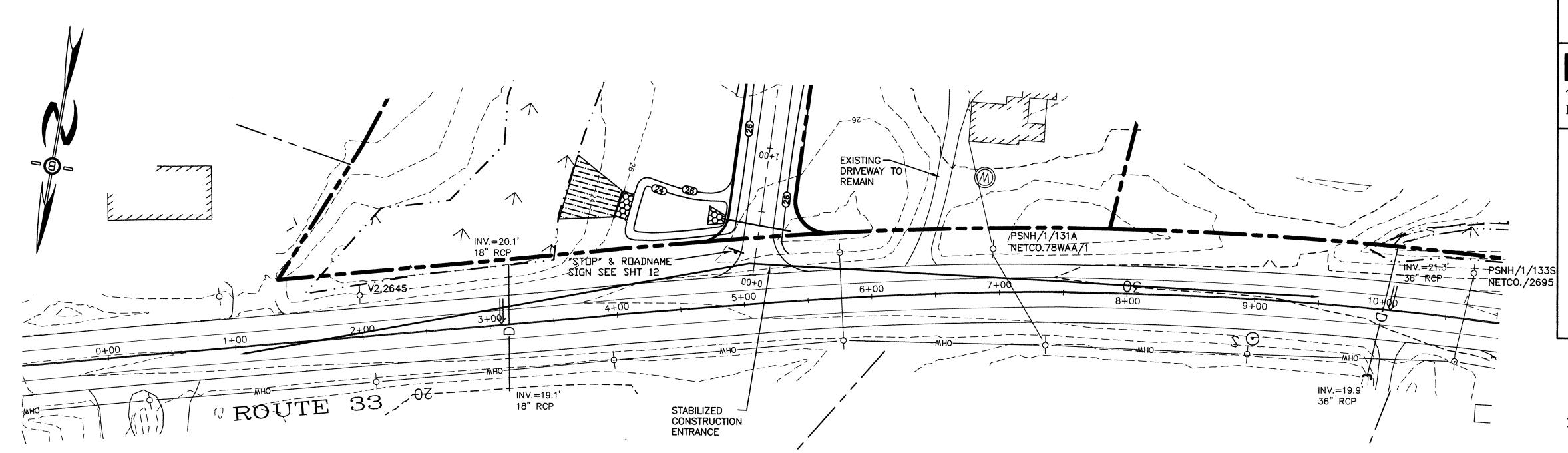










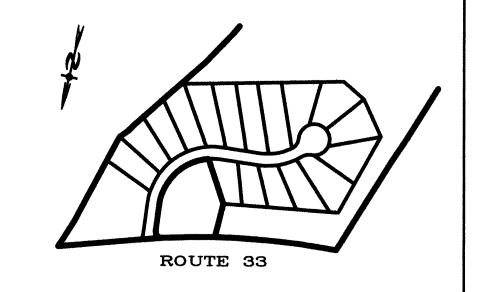


PREPARED FOR:

TWELVE MONTH LLC 7B EMERY LANE STRATHAM, NH 03885

BEALS · ASSOCIATES PLLC

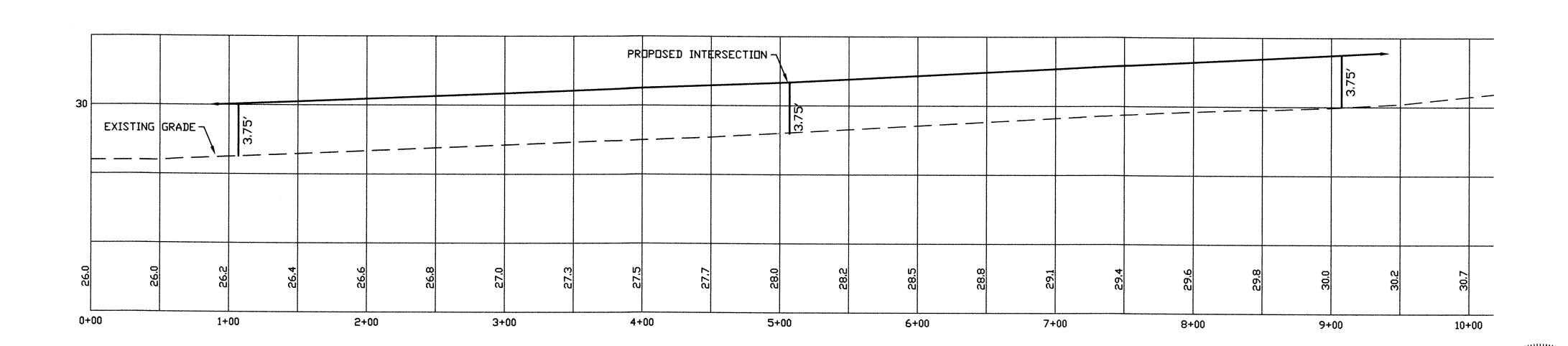
70 PORTSMOUTH AVE, STRATHAM, N.H. 03885 PHONE: 603-583-4860, FAX. 603-583-4863

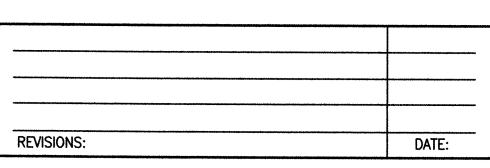


LOCATION LEGEND 1"=400'

PROFILE SCALES:
HORIZONTAL: 1"=50' VERTICAL: 1"=5'

* PROPOSED DRIVEWAY HAS A SAFE SIGHT DISTANCE OF 400+ FEET.



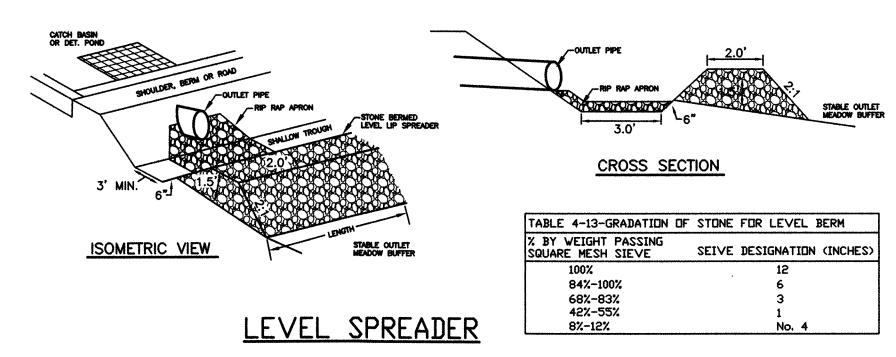


HIGHWAY ACCESS PLAN

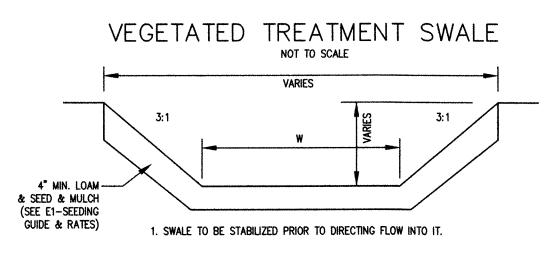
PLAN FOR:
RESIDENTIAL DEVELOPMENT
ROUTE 33
GREENLAND, NH

DATE: OCT. 2012	SCALE: 1" = 40'
PROJ. N0: NH-689	SHEET NO. 7 OF 9



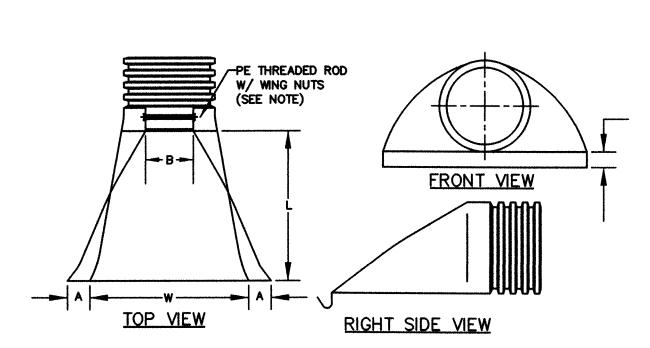


- 1. CONSTRUCT THE LEVEL SPREADER LIP ON A 0% GRADE TO INSURE UNIFORM SPREADING OF RUNOFF.
- 2. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL.
- 3. THE ENTIRE LEVEL LIP AREA SHALL BE PROTECTED BY PLACING EXCELSIOR ENFORCER MATTING BENEATH THE STONE. EACH STRIP SHALL OVERLAP BY AT LEAST SIX INCHES.
- 4. THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS. WATER SHOULD NOT RE-CONCENTRATE IMMEDIATELY BELOW THE SPREADER.
- 5. MAINTENANCE: THE LEVEL SPREADER SHOULD BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE LIP HAS BEEN DAMAGED AND THE DESIGN CONDITIONS HAVE NOT CHANGED. ANY DETRIMENTAL SEDIMENT ACCUMULATION SHOULD BE REMOVED. IF STONE REMOVAL HAS TAKEN PLACE ON THE LIP, THEN THE DAMAGE SHOULD BE REPAIRED.



MAINTENANCE

VEGETATED CHANNELS
DURING THE INITIAL ESTABLISHMENT PERIOD, FLOW SHOULD BE DIVERTED OUT OF THE
CHANNEL IF AT ALL POSSIBLE TO ALLOW FOR A GOOD STAND OF GRASS. IF THIS IS NOT
POSSIBLE USE MATTING. IN ANY CASE DURING THE ESTABLISHMENT PERIOD, THE
CHANNEL SHOULD BE CHECKED PERIODICALLY TO DETERMINE IF THE GRASS IS STILL IN
GOOD CONDITION AND IN PLACE. THE VEGETATION SHOULD BE FERTILIZED ON AN
"AS—NEEDED" BASIS. THE CHANNEL SHOULD BE MOWED FREQUENTLY ENOUGH TO KEEP
THE VEGETATION VIGOROUS AND TO CONTROL THE ENCROACHMENT OF WEEDS AND WOODY
VEGETATION. AFTER THE VEGETATION HAS BECOME ESTABLISHED, THE CHANNEL SHOULD BE
CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO SEE IF DAMAGE HAS
OCCURRED. ANY DAMAGED AREAS SHOULD BE REPAIRED AND RE—VEGETATED
IMMEDIATELY.

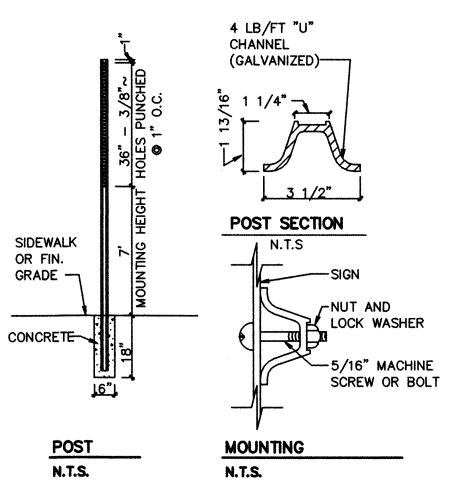


PART No.	PIPE SIZE	A	B(MAX)	Н	L	W
1510-NP	15" 375 mm	6.5" 165 mm	10* 254 mm	6.5" 165 mm	25" 635 mm	29" 735 mm
1810-NP	18" 450 mm	7.5" 190 mm	15" 380 mm	6.5" 165 mm	32" 812 mm	35" 890 mm
2410-NP	24" 600 mm	7.5" 190 mm	18 * 450 mm	6.5" 165 mm	36" 900 mm	45" 1140 mm
3010-NP	30" 750 mm	10.5" 266 mm	N/A	7.0" 178 mm	53" 1345 mm	68" 1725 mm
3610-NP	36" 900 mm	10.5" 266 mm	N/A	7.0" 178 mm	53" 1345 mm	68" 1725 mm

NOTE: PE THREADED ROD W/ WING NUTS PROVIDED FOR END SECTIONS 15"-24".
30" & 36" END SECTIONS TO BE WELDED PER MANUFACTURER'S RECOMMENDATIONS.

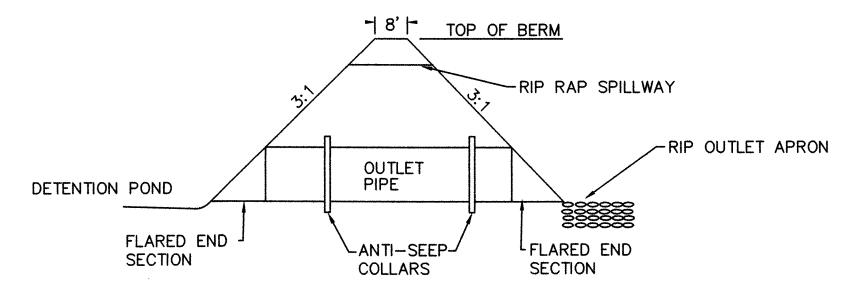
ADS N-12 FLARED END SECTIONS

NOT TO SCALE (ALL DIMENSIONS ARE NOMINAL)

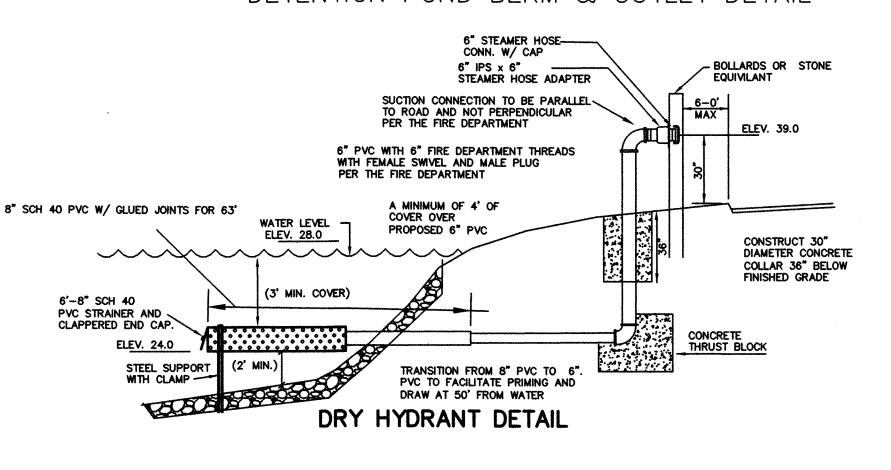


STREET SIGN DETAIL
STOP SIGN (R1-1) 30' × 30'

SPEED LIMIT SIGN (R2-1) 24" x 30"



DETENTION POND BERM & OUTLET DETAIL



PIPE DUTLET PROTECTION

TABLE 7-24-RECOMMENDED	RIP RAP GR	ADATION RANGES
d50 SIZE= 0.25	FEET	3 INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE		STONE(INCHES)
100%	5	6
85%	4	5
50%	3	5
15%	1	2

TABLE 7-24RECOMMENDED	RIP RAP (GRADATION	RANGES
d50 SIZE= 0.50	FEET	6	INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE	SIZE (FROM	OF STONE	(INCHES) TO
100%	9		12
85%	8		11
50%	6		9
15%	2		3

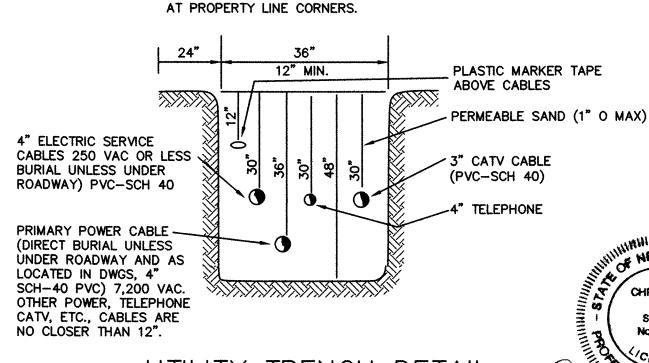
SHOULDER SHOULDER -UNDERGROUND ELEC, CABLE, TELE. SLOPE 1/4' PER FT. 4:1 SIDE SLOPES -4" MIN. LOAM & SEED 4" CRUSHED GRAVEL-NHDOT ITEM 304.3 6" HDPE PERF. 16" GRAVEL MINIMUM ¹ NHDOT ITEM 304.2 2 COURSES BITUMINOUS CONCRETE-* ROADWAY PAVEMENT TO GEOTEXTILE FABRIC WRAP BE 2" BASE COURSE ROLLED, NHDOT TYPE "B" - ROADWAY UNDER DRAIN 6" SAND BACKFILL-AS REQUIRED & ORDERED 1' TOP COURSE ROLLED, NHDOT TYPE 'E' ALL MATERIALS TO BE INSPECTED AND APPROVED BY TOWN ENGINEER BY PROJECT ENGINEER AND AND MEET NHDOT STANDARDS. APPROVED BY TOWN TOWN MAY REQUIRE UNDERDRAIN OR ADDITIONAL DRAINAGE TO INCLUDE ENGINEER. OVER EXCAVATION OF UNSUITABLE MATERIALS AND INSTALLATION OF GEOTEXTILE FABRIC. SEE ADDITIONAL NOTES ON SHEETS P2 & P4.

TYPICAL CROSS SECTION

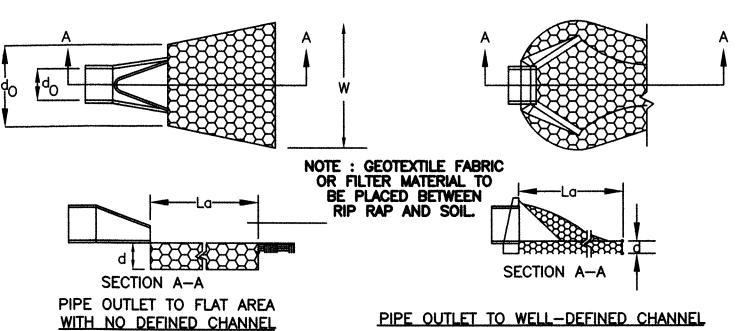
BACKFILL MATERIAL SHALL CONSIST OF STONES, ROCK FRAGMENTS AND FINE HARD DURABLE PARTICLES FREE FROM HARMFUL AMDUNTS OF ORGANIC MATTER. THE WEAR SHALL NOT EXCEDD 60 PERCENT. 2.1.1. GRANULAR BACKFILL (SAND) SHALL CONSIST PRIMARILY OF PARTICLES WITH 100% PASSING THE 3' SIEVE AND 70% PASSING THE NO. 4 SIEVE. 2.1.2. GRANULAR BACKFILL (GRAVEL) SHALL CONSIST OF A MIXTURE OF STONES AND ROCK FRAGMENTS AND PARTICLES WITH 95-100% PASSING THE 3' SIEVE AND 25-70% PASSING THE NO. 4 SIEVE.

NOTE: ALL UTILITIES SHALL BE REVIEWED AND APPROVED BY APPROPRIATE UTILITY COMPANY.

SERVICE BOX CONNECTIONS SHALL BE "FLUSH MOUNT"
TO GREATEST EXTENT POSSIBLE AND LOCATED
AT PROPERTY LINE CORNERS



UTILITY TRENCH DETAIL



CONSTRUCTION SPECIFICATIONS

1. THE SUB GRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.

2. THE ROCK OR GRAVEL USED FOR FILTER OF RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION.

3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.

4. 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.

5. STONE FOR RIRAP SHALL BE ANGULAR OR SUBANGULAR. THE STONES SHOULD BE SHAPED SO THAT THE LEAST DIMENSION OF THE STONE FRAGMENT SHALL BE NOT LESS THAN ONE—THIRD OF THE GREATEST DIMENSION OF THE FRAGMENT.

6. FLAT ROCKS SHALL NOT USED FOR RIP RAP. VOIDS IN THE ROCK RIPRAP SHOULD BE FILLED WITH SPALLS AND SMALLER ROCKS.

MAINTENANCE

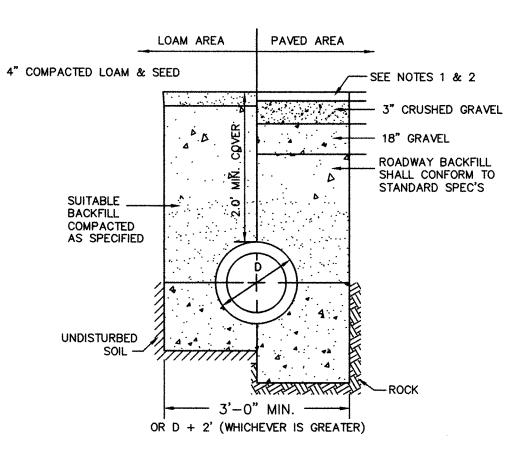
1. THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL 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 OUTLET PROTECTION.

PREPARED FOR:

TWELVE MONTH LLC 7B EMERY LANE STRATHAM, NH 03885

BEALS · ASSOCIATES PLLC

70 PORTSMOUTH AVE, STRATHAM, N.H. 03885 PHONE: 603-583-4860, FAX. 603-583-4863



NOTES:

1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.

2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPECIFICATIONS.

TYPICAL DRAINAGE TRENCH
NOT TO SCALE

CONSTRUCTION CRITERIA

CHRISTIAN

No. 9900

SUBGRADE PREPARATION: AREA SHALL BE CLEARED OF TREES, LOGS, STUMPS, ROOTS, BRUSH, BOULDERS, SOD AND RUBBISH. SUBGRADE SURFACE TO BE ROLLED BEFORE PLACEMENT OF FILL MATERIAL. THE SURFACE SHALL HAVE MOISTURE ADDED OR IT SHALL BE COMPACTED IF NECESSARY SO THAT THE FIRST LAYER OF FILL MATERIAL CAN BE COMPACTED AND BONDED TO THE SUBBASE MATERIAL.

FILL PLACEMENT: FILL SHALL BE FREE OF SOD, ROOTS, FROZEN SOIL, STONES MORE THAN 6 INCHES IN DIA., AND OTHER OBJECTIONABLE MATERIAL.

-FILL TO PLACED EQUALLY AROUND SUBSURFACE STRUCTURES & PIPES TO PREVENT DAMAGE FROM UNEQUAL LOADING.

-PLACING AND SPREADING OF FILL MATERIAL SHALL BE STARTED AT SUBGRADXE ELEVATION AND BROUGHT UP IN HORIZONTAL LAYERS OF THICKNESS' ALLOWING ADEQUATE COMPACTION.

-DISTRIBUTION AND GRADATION OF MATERIALS SHALL BE SUCH THAT NO LENSES, DOCUMENTS.

-DISTRIBUTION AND GRADATION OF MATERIALS SHALL BE SUCH THAT NO LENSES, POCKETS, STREAKS, OR LAYERS OF MATERIAL DIFFER SUBSTANTIALLY IN TEXTURE OF GRADATION FROM SURROUNDING MATERIAL.

-MAXIMUM THICKNESS OF GRAVEL LIFTS TO 1 FOOT (12 INCHES).

MOISTURE CONTROL: MOISTURE CONTENT OF THE FILL SHALL BE ADEQUATE FOR OBTAINING THE REQUIRED COMPACTION. IF THE MATERIAL IS TOO WET IT SHALL BE DRIED TO MEET THIS REQUIREMENT, IF THE MATERIAL IS TOO DRY IT SHALL HAVE WATER ADDED AND MIXED UNTIL REQUIREMENT IS MET.

COMPACTION: CONSTRUCTION EQUIPMENT SHALL BE OPERATED OVER THE AREAS OR EACH LAYER OF FILL TO INSURE THAT THE REQUIRED COMPACTION IS OBTAINED.

-EACH LAYER SHALL BE COMPACTED TO OBTAIN 95% OF THE PROTOR VALUE (ASTM 1557 OR AASHTO T180).

-FILL ADJACENT TO STRUCTURES, PIPES, ETC SHALL BE COMPACTED TO A DENSITY EQUIVALENT TO THAT OF THE SURROUNDING FILL BY THE MEANS OF HAND TAMPERING OR MANUALLY DIRECTED POWER TAMPER OR PLATE VIBRATORS.

EROSION PROTECTION: A PROTECTIVE COVER OF VEGETATION SHALL BE ESTABLISHED ON ALL EXPOSED SURFACES OF THE EMBANKMENT (CUT/FILL)SLOPE, SPILLWAY, AND BORROW AREA IF SOIL AND CLIMATIC CONDITIONS PERMIT. IF CONDITIONS PRECLUDE THE USE OF VEGETATION AND PROTECTION IS NEEDED, NON-VEGETATION MEANS, SUCH AS EROSION BLANKETS OR RIPRAP SLOPE PROTECTION, MAY BE USED.

-SEEDING, FERTILIZING, AND MULCHING SHALL COMPLY WITH THE APPROPRIATE

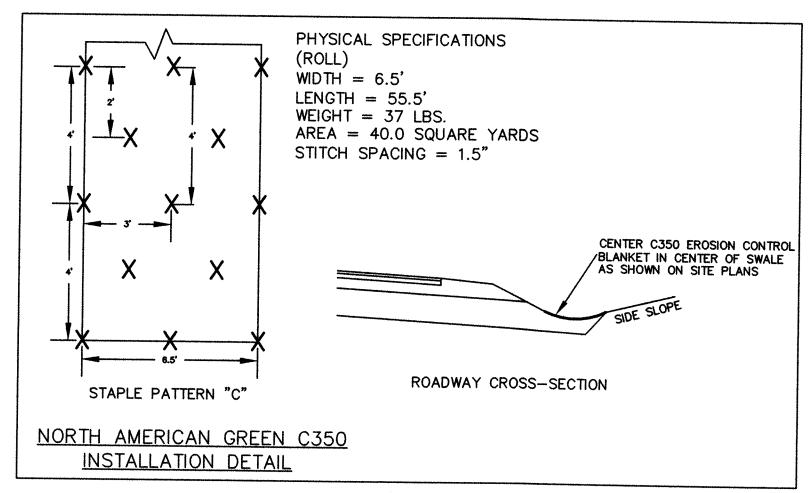
VEGETATIVE BMP'S.

REVISIONS: DATE:

CONSTRUCTION DETAILS

PLAN FOR:
RESIDENTIAL DEVELOPMENT
ROUTE 33
GREENLAND, NH

DATE: OCT. 2012	SCALE: AS NOTED
PROJ. N0: NH-689	SHEET NO. 8 OF 9



TEMPORARY EROSION CONTROL MEASURES

1. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT NO MORE THAN 5 ACRES OF LAND SHALL BE EXPOSED BEFORE DISTURBED AREAS ARE

2. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED OR DIRECTED BY THE ENGINEER ALL DISTURBED AREAS SHALL BE RETURNED TO ORIGINAL GRADES AND ELEVATIONS. 3. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 4" OF LOAM AND SEEDED WITH NOT LESS THAN 1.10 POUNDS OF SEED PER 1000 SQUARE FEET OF AREA. (48 POUNDS PER ACRE) SEE SEED SPECIFICATIONS THIS SHEET.

4. SILT FENCES AND OTHER EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY RAIN EVENT GREATER THAN 0.5" DURING THE LIFE OF THE PROJECT. ALL DAMAGED AREAS SHALL BE REPAIRED, SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.

5. AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.

6. AREAS MUST BE SEEDED AND MULCHED WITHIN 3 DAYS OF FINAL GRADING, PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF SOIL.

* AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE

- A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED. - A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS RIPRAP HAS BEEN INSTALLED.
- EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

CONSTRUCTION SPECIFICATIONS

STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.

2. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED.

3. WHEN HAY BALES ARE USED, THE BALES SHALL BE EMBEDDED AT LEAST 4 INCHES INTO THE SOIL. WHEN TIMBER STRUCTURES ARE USED, THE TIMBER SHALL EXTEND AT LEAST 18" INTO THE SOIL.

4. HAY OR STRAW BALES SHALL BE ANCHORED INTO THE SOIL USING 2" X 2" STAKES DRIVEN THROUGH THE BALES AND AT LEAST 18 INCHES IN TO THE SOIL.

5. SEEDING, FERTILIZING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS IN THE APPROPRIATED VEGETATIVE BMP.

6. STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.

7. THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES THE CONTRACTOR SHALL TAKE PRECAUTIONS IN ORDER TO PREVENT, ABATE AND CONTROL THE EMISSION OF FUGITIVE DUST INCLUDING BUT NOT LIMITED TO WETTING, COVERING. SHIELDING. OR VACUUMING.

8. THE NH COMMISSIONER OF AGRICULTURE PROHIBITS THE COLLECTION, POSSESSION, IMPORTATION. TRANSPORTATION, SALE, PROPAGATION, TRANSPLANTATION, OR CULTIVATION OF PLANTS BANNED BY NH LAW RSA 430:53 AND NH CODE ADMINISTRATIVE RULES AGR 3800. THE PROJECT SHALL MEET ALL REQUIREMENTS AND THE INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.

CONSTRUCTION SEQUENCE

1. CUT AND REMOVE TREES IN CONSTRUCTION AREAS AS REQUIRED OR DIRECTED 2. CONSTRUCT AND/OR INSTALL TEMPORARY AND PERMANENT SEDIMENT EROSION AND DETENTION CONTROL FACILITIES AS REQUIRED. EROSION, SEDIMENT AND DETENTION CONTROL FACILITIES SHALL BE INSTALLED AND STABILIZED PRIOR TO ANY EARTH MOVING OPERATION AND PRIOR TO DIRECTING RUNOFF TO THEM. 3. CLEAR, CUT, GRUB AND DISPOSE OF DEBRIS IN APPROVED FACILITIES. STUMPS AND DEBRIS ARE TO BE REMOVED FROM SITE AND DISPOSED OF PER STATE AND LOCAL REGULATIONS.

4. EXCAVATE AND STOCKPILE TOPSOIL /LOAM. ALL AREAS SHALL BE STABILIZED IMMEDIATELY AFTER GRADING. 5. CONSTRUCT TEMPORARY CULVERTS ÁS REQUIRED OR DIRECTED.

6. CONSTRUCT THE ROADWAY/DRIVEWAYS AND ITS ASSOCIATED DRAINAGE STRUCTURES. ALL ROADWAYS, PARKING AREAS, AND CUT/FILL SLOPES SHALL BE STABILIZED AND/OR LOAMED AND SEEDED WITHIN 72-HOURS OF ACHIEVING FINISH GRADE AS APPLICABLE.

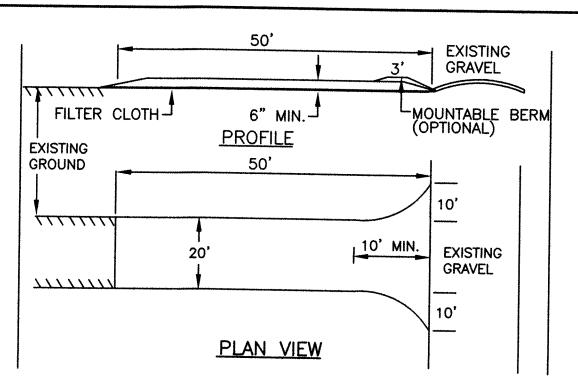
7. INSTALL PIPE AND CONSTRUCTION ASSOCIATED APPURTENANCES AS REQUIRED OR DIRECTED. ALL DISTURBED AREAS SHALL STABILIZED IMMEDIATELY AFTER GRADING. 8. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES AND DISTURBED AREAS SHALL BE SEEDED OR MULCHED AS REQUIRED, OR DIRECTED.

9. DAILY OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINAGE CHECK DAMS, DITCHES, SEDIMENT TRAPS, ETC. TO PREVENT EROSION ON THE SITE AND PREVENT ANY SILTATION OF ABUTTING WATERS OR PROPERTY.

10. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION 11. COMPLETE PERMANENT SEEDING AND LANDSCAPING

12. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE ESTABLISHED THEMSELVES AND SITE IMPROVEMENTS ARE COMPLETE. SMOOTH AND REVEGETATE ALL DISTURBED AREAS. 13. ALL SWALES AND DRAINAGE STRUCTURES WILL BE CONSTRUCTED AND STABILIZED PRIOR TO HAVING RUNOFF DIRECTED TO THEM.

14. FINISH PAVING ALL ROADWAYS/DRIVEWAYS. 15. LOT DISTURBANCE OTHER THAN THAT SHOWN ON THE APPROVED PLANS SHALL NOT COMMENCE UNTIL THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.



1. STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.

2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY. 3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES 4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER. 5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENCE LOT

6. 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. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL

STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED

STABILIZED CONSTRUCTION ENTRANCE

WINTER MAINTENANCE

1. ALL DISTURBED AREAS THAT DO NOT HAVE AT LEAST 85% VEGETATIVE COVERAGE PRIOR TO OCTOBER 15TH, SHALL BE STABILIZED BY APPLYING MULCH AT A RATE OF 3-4 TONS PER ACRE. ALL SIDE SLOPES, STEEPER THAN 4:1, THAT ARE NOT DIRECTED TO SWALES OR DETENTION BASINS, SHALL BE LINED WITH BIODEGRADABLE/PHOTODEGRADABLE "JUTE MATTING" (EXCELSIOR'S CURLEX II OR EQUAL). ALL OTHER SLOPES SHALL BE MULCHED AND TACKED AT A RATE OF 3-4 TONS PER ACRE. THE APPLICATION OF MULCH AND/OR JUTE MATTING SHALL NOT OCCUR OVER EXISTING SNOW COVER. IF THE SITE IS ACTIVE AFTER NOVEMBER 15TH, ANY SNOW THAT ACCUMULATES ON DISTURBED AREAS SHALL BE REMOVED. PRIOR TO SPRING THAW ALL AREAS WILL BE STABILIZED, AS DIRECTED ABOVE.

2. ALL SWALES THAT DO NOT HAVE FULLY ESTABLISHED VEGETATION SHALL BE EITHER LINED WITH TEMPORARY JUTE MATTING OR TEMPORARY STONE CHECK DAMS (APPROPRIATELY SPACED). STONE CHECK DAMS WILL BE MAINTAINED THROUGHOUT THE WINTER MONTHS. IF THE SWALES ARE TO BE MATTED WITH PERMANENT LINERS OR RIPRAP WITH ENGINEERING FABRIC, THIS SHALL BE COMPLETED PRIOR TO WINTER SHUTDOWN OR AS SOON AS THEY ARE PROPERLY

PRIOR TO NOV. 15TH ALL ROADWAY AND PARKING AREAS SHALL BE BROUGHT UP TO AND THROUGH THE BANK RUN GRAVEL APPLICATION. IF THESE AREAS' ELEVATIONS ARE PROPOSED TO REMAIN BELOW THE PROPOSED SUBGRADE ELEVATION, THE SUBGRADE MATERIAL SHALL BE ROUGHLY CROWNED AND A 3" LAYER OF CRUSHED GRAVEL SHALL BE PLACED AND COMPACTED. THIS WILL ALLOW THE SUBGRADE TO SHED RUNOFF AND WILL REDUCE ROADWAY EROSION. THIS CRUSHED GRAVEL DOES NOT HAVE TO CONFORM TO NH DOT 304.3, BUT SHALL HAVE BETWEEN 15-25% PASSING THE #200 SIEVE AND THE LARGEST STONE SIZE SHALL BE 2". IF THE SITE IS ACTIVE AFTER NOVEMBER 15TH, ANY ACCUMULATED SNOW SHALL BE REMOVED FROM ALL ROADWAY AND PARKING AREAS.

4. AFTER OCTOBER 15TH, THE END OF NEW HAMPSHIRE'S AVERAGE GROWING SEASON, NO ADDITIONAL LOAM SHALL BE SPREAD ON SIDE SLOPES AND SWALES. THE STOCKPILES THAT WILL BE LEFT UNDISTURBED UNTIL SPRING SHALL BE SEEDED BY THIS DATE. AFTER OCTOBER 15TH, ANY NEW OR DISTURBED PILES SHALL BE MULCHED AT A RATE OF 3-4 TONS PER ACRE. ALL STOCKPILES THAT WILL REMAIN THROUGHOUT THE WINTER SHALL BE SURROUNDED WITH SILT

SEEDING SPECIFICATIONS

1. GRADING AND SHAPING

A. SLOPES SHALL NOT BE STEEPER THAN 2:1;3:1 SLOPES OR FLATTER ARE PREFERRED. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED. 2. SEEDBED PREPARATION

A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.

B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.

3. ESTABLISHING A STAND A. LIME AND FERTILIZER SHOULD BE APPLIED 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, 2 TONS PER ACRE OR 100 LBS PER 1,000 SQ. FT.. NITROGEN(N), 50 LBS PER ACRE OR 1. 1 LBS PER 1,000 SQ.FT.

PHOSPHATE(P205), 100 LBS PER ACRE OR 2. 2 LBS PER 1,000 SQ.FT.

POTASH(K2O), 100 LBS PER ACRE OR 2. 2 LBS PER 1,000 SQ.FT.

(NOTE: THIS IS THE EQUIVALENT OF 500 LBS PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS PER ACRE OF 5-10-10.)

B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS. BY CULTIPACKING OR RAKING.

C. REFER TO TABLE(G-E1 THIS SHEET) FOR APPROPRIATE SEED MIXTURES AND TABLE(H-E1 THIS SHEET) FOR RATES OF SEEDING. ALL LEGUMES (CROWN VETCH, BIRDS FOOT TREFOIL, AND FLAT PEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT

D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1

4. MULCH

A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING. B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90 LBS PER 1000 SQ. FT.

5. MAINTENANCE TO ESTABLISH A STAND

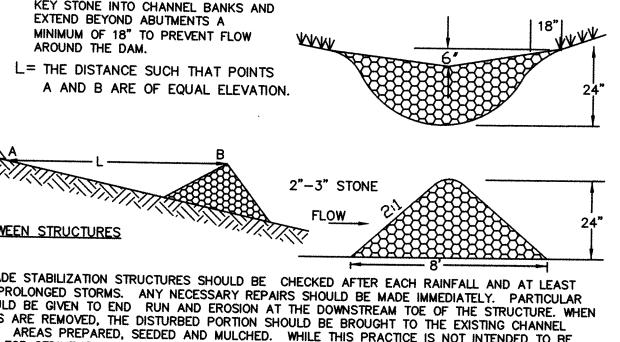
A. PLANTED AREA SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH. B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIAL STAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.

C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

KEY STONE INTO CHANNEL BANKS AND EXTEND BEYOND ABUTMENTS A MINIMUM OF 18" TO PREVENT FLOW AROUND THE DAM. L= THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION. 2"-3" STONE SPACING BETWEEN STRUCTURES

TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED STORMS. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE. WHEN THE STRUCTURES ARE REMOVED, THE DISTURBED PORTION SHOULD BE BROUGHT TO THE EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED AND MULCHED. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE STRUCTURES. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE STRUCTURE.

AFTER VEGETATION HAS STABILIZED, THESE TEMPORARY STRUCTURES SHALL BE REMOVED WITH SPECIAL CARE AS TO AVOID DISTURBING ANY UNDERLYING EROSION CONTROL FABRIC AND/OR EXISTING VEGETATION TEMPORARY STONE CHECK DAM



CONSTRUCTION OR ANY DISTURBED AREA TO BE STABILIZED (UPHILL) WOVEN WIRE FENCE W\ - PROPEX-SILT STOP Section A - A SEDIMENT CONTROL FABRIC OR APPROVED EQUAL -HARDWOOD POST SILT FENCE

CONSTRUCTION SPECIFICATIONS 1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES AND FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP MID AND BOTTOM SECTIONS AND BE EMBEDDED INTO GROUND A MINIMUM OF 8". 2. THE FENCE POSTS SHALL BE A MINIMUM 48" LONG, SPACED A MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND

3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED BY SIX INCHES, FOLDED AND STAPLED TO PREVENT SEDIMENT FROM 4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN "BULGES"

DEVELOP IN THE SILT FENCE AND PROPERLY DISPOSED OF. 5. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE. 6. SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND RE-VEGETATED

MAINTENANCE

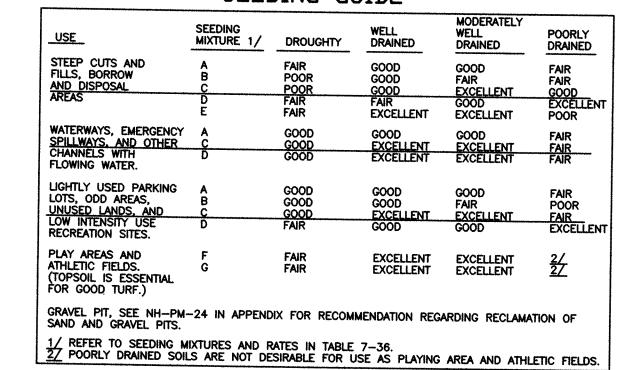
COVER

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY. 2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING

THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY. 3. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE 4. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN

REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

SEEDING GUIDE



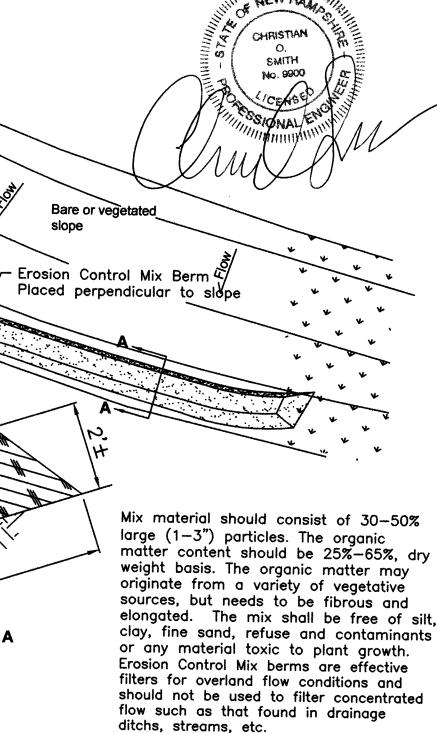
NOTE: TEMPORARY SEED MIX FOR STABILIZATION OF TURF SHALL BE WINTER RYE OR DATS AT A RATE OF 2.5 LBS. PER 1000 S.F. AND SHALL BE PLACED PRIOR TO OCT. 15, IF PERMANENT SEEDING NOT YET COMPLETE.

PREPARED FOR:

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Erosion Control Mix Berm

SEEDING RATES POUNDS PER ACRE POUNDS PER 1.000 Sq. Ft. MIXTURE A. TALL FESCUE CREEPING RED FESCUE RED TOP 0.05 0.95 B. TALL FESCUE CREEPING RED FESCUE FLAT PEA 0.75 0.95 OR 1.35 40 OR 55 . TALL FESCUE 0.45 CREEPING RED FESCUE BIRDS FOOT TREFOIL D. TALL FESCUE FLAT PEA E. CREEPING RED FESCUE 1/ KENTUCKY BLUEGRASS 1/ F. TALL FESCUE 1 3.60 1/ FOR HEAVY USE ATHLETIC FIELDS CONSULT THE UNIVERSITY OF NEW HAMPSHIRE COOPERATIVE EXTENSION TURF SPECIALIST FOR CURRENT VARIETIES AND SEEDING RATES.

REVISIONS:

EROSION & SEDIMENTATION

PLAN FOR: RESIDENTIAL DEVELOPMENT ROUTE 33 GREENLAND, NH

DATE: OCT. 2012 SCALE: AS NOTED PROJ. NO: NH-689 SHEET NO. 9 OF 9