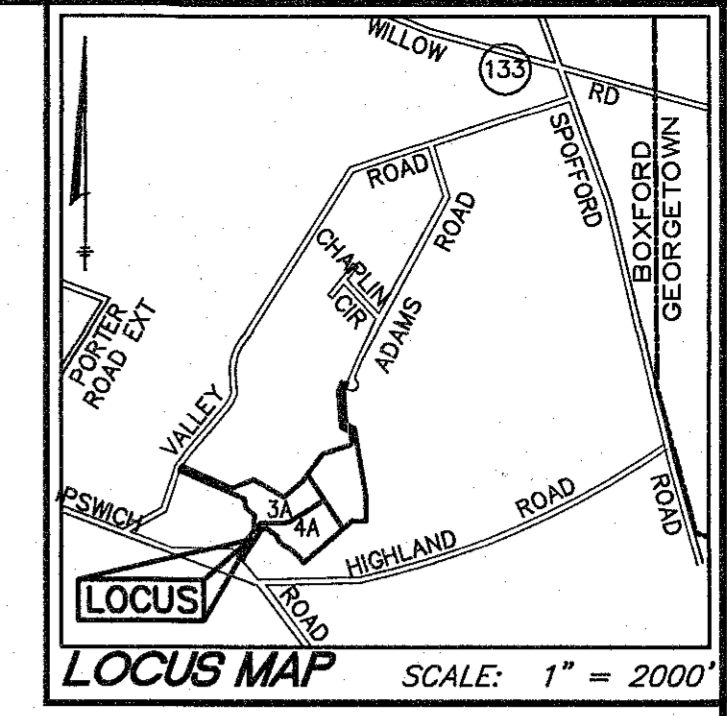


**CONSTRUCTION KEY NOTES:**  
(NOT A CONSTRUCTION SEQUENCE)

- 1. PORTION OF DRIVEWAY TO BE REMOVED AND VEGETATED
- 2. INSTALL COMMON DRIVEWAY
- 3. INSTALL 2' GRAVEL SHOULDER
- 4. REMOVE TREE
- 5. REMOVE STONE WALL AS NEEDED
- 6. LANDSCAPE AREA BETWEEN DRIVEWAYS WITH APPROXIMATE PLANTING ENVELOPES FOR NATIVE TREES AND SHRUBS
- 7. EXISTING PAVEMENT TO REMAIN
- 8. MATCH EXISTING AND PROPOSED PAVEMENT
- 9. TREE TO REMAIN AND BE PROTECTED
- 10. INSTALL SILTATION BARRIER
- 11. STONE PILLAR (TYP.)

**LEGEND**

- EXISTING**
- 12" RCP DRAINLINE WITH PIPE SIZE, MATERIAL & FLOW DIRECTION, CATCH BASIN MANHOLE & ROUND CATCH BASIN
  - PROPERTY LINE
  - EASEMENT LINE
  - LIGATURE TO INDICATE CONTINUOUS OWNERSHIP ACROSS LINES
  - 55.36° N120°46'23"E BEARING & DISTANCE ALONG BOUNDARY
  - << 249.56' >> TOTALED BOUNDARY FRONTAGE
  - #2 ELEVATION BENCH MARK
  - STONE WALL
  - EDGE OF PAVEMENT
  - 232.6 SPOT ELEVATION
  - 92 ELEVATION CONTOUR
  - WFH3 LIMIT OF BORDERING VEGETATED WETLAND (WITH FLAG NUMBER)
  - 26.8 12" M PROMINENT DECIDUOUS TREE WITH ELEVATION, SIZE AND SPECIES
  - 26.8 18" P PROMINENT DECIDUOUS TREE WITH ELEVATION, SIZE AND SPECIES
  - LIMIT OF 100-FOOT WETLAND BUFFER ZONE
  - LIMIT OF 75-FOOT NO-BUILD ZONE
  - LIMIT OF 30-FOOT WETLAND BUFFER ZONE
  - LIMIT OF 25-FOOT NO DISTURB ZONE
  - SILTATION BARRIER
  - BOULDER
  - PAVEMENT TO BE REMOVED
  - KL PLANTING ENVELOPE
  - PS PLANTING ENVELOPE
  - HV PLANTING ENVELOPE
- PROPOSED**
- 92
  - 21
  - KALMIA latifolia - MOUNTAIN LAUREL
  - PINUS strobus - WHITE PINE
  - HAMAMELIS virginiana - WITCH HAZEL



**427C  
IPSWICH ROAD  
COMMON  
DRIVEWAY  
RELOCATION**

Boxford, Massachusetts 01921

ASSESSORS:  
MAP 14 BLOCK 1 LOT 21

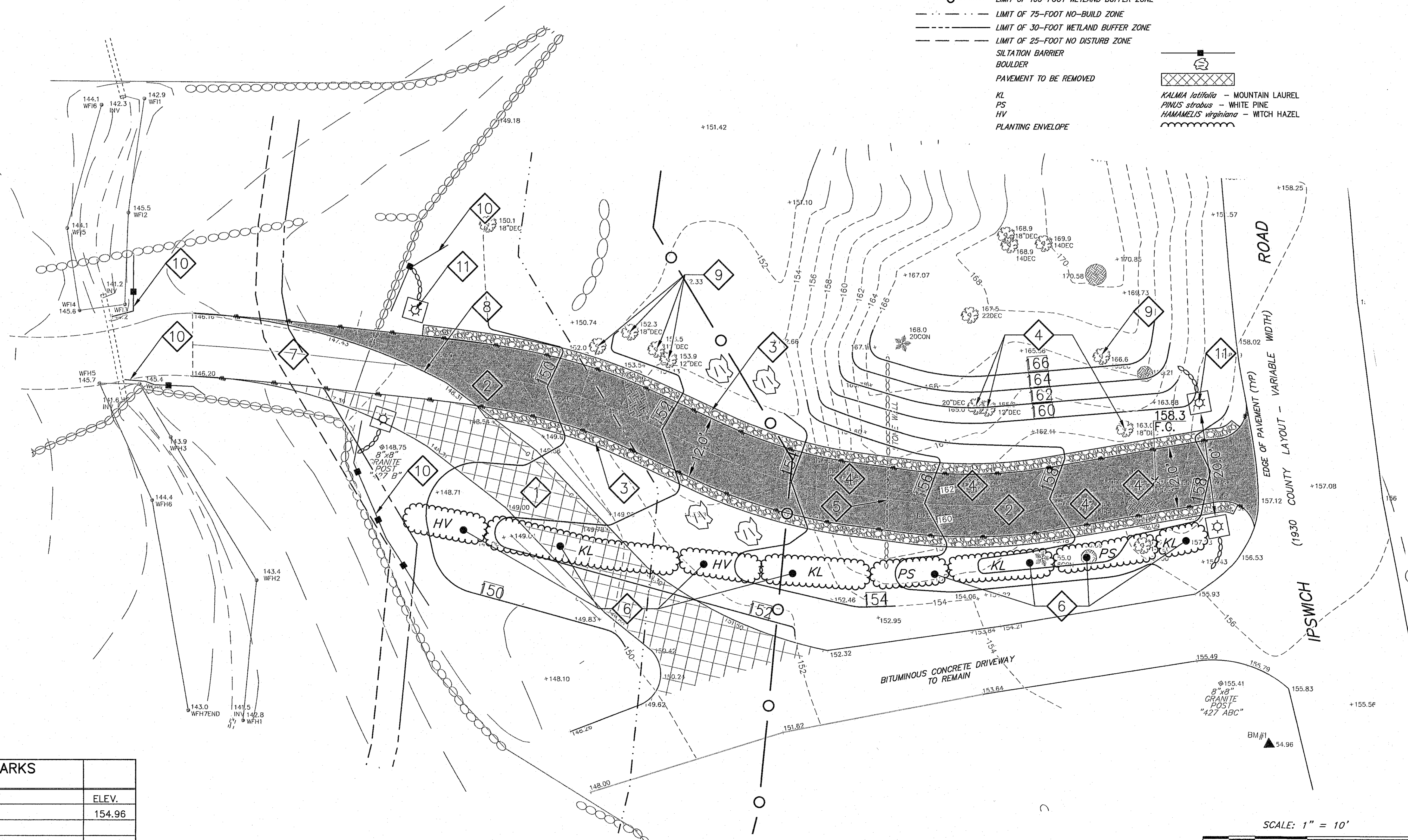
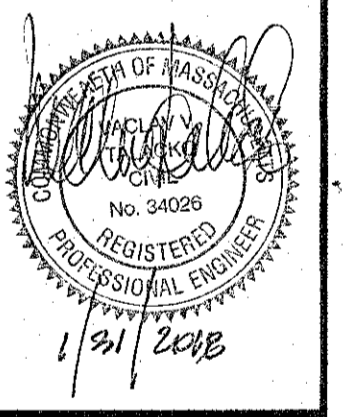
PREPARED FOR:  
**RODNEY &  
KARLA SMITH**

427B Ipswich Road  
Boxford, Massachusetts 01921

**HANCOCK  
ASSOCIATES**

Civil Engineers  
Land Surveyors  
Wetland Scientists

185 CENTRE STREET, DANVERS, MA 01923  
VOICE (978) 777-3050, FAX (978) 774-7816  
WWW.HANCOCKASSOCIATES.COM



ELEVATION BENCH MARKS		
DATUM: N.G.V.D. OF 1929		
NO.	DESCRIPTION	ELEV.
1.	SPIKE ON WOOD POST	154.96
2.		
3.		

NO.	BY	APP.	DATE	ISSUE/REVISION	DESCRIPTION
DATE:	1/30/18	DESIGN BY:	TJR		
SCALE:	AS SHOWN	DRAWN BY:	TJR		
APPRVD. BY:	VVT	CHECK BY:	VVT		

**DRIVEWAY  
CONCEPT  
PLAN**

PLOT DATE: Jan 31, 2018 2:58 pm  
PATH: F:\QW\3D Projects\17834 - Smith - Boxford\DWG\

DWG: 17834 Driveway2.dwg  
LAYOUT: SP  
SHEET: 1 OF 2

PROJECT NO.: **17834**

**SITE NOTES**

1. LOCATIONS OF EXISTING UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS SHOWN HEREON ARE APPROXIMATE ONLY. ALL UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS MAY NOT BE SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES/OBSTRUCTIONS/SYSTEMS, WHETHER OR NOT SHOWN HEREON.
2. UNLESS OTHERWISE SHOWN, ALL NEW UTILITIES SHALL BE UNDERGROUND.
3. CONTRACTOR SHALL FURNISH CONSTRUCTION LAYOUT OF SITE IMPROVEMENTS. THIS WORK SHALL BE PERFORMED BY A PROFESSIONAL LAND SURVEYOR.
4. SAFETY MEASURES, CONSTRUCTION METHODS AND CONTROL OF WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY EXISTING IMPROVEMENTS DAMAGED DURING CONSTRUCTION THAT ARE NOT DESIGNATED FOR DEMOLITION AND/OR REMOVAL HEREON. DAMAGED IMPROVEMENTS SHALL BE REPAIRED TO THE SATISFACTION OF THEIR RESPECTIVE OWNERS.
6. ANY INTENDED REVISION TO THE HORIZONTAL AND/OR VERTICAL LOCATION OF IMPROVEMENTS TO BE CONSTRUCTED AS SHOWN HEREON SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION.
7. WHERE EXISTING UTILITY LINES/STRUCTURES ARE TO BE CUT/BROKEN DOWN/ABANDONED, LINES/STRUCTURES SHALL BE PLUGGED/CAPPED/FILLED IN ACCORDANCE WITH OWNER REQUIREMENTS.
8. THE CONTRACTOR SHALL VERIFY THE LOCATION AND RELATIVE ELEVATION OF BENCH MARKS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER.

**REGULATORY NOTES**

1. CONTRACTOR SHALL CONTACT DIG-SAFE AT 811 FOR UNDERGROUND UTILITY MARKING AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY WORK.
2. CONTRACTOR SHALL MAKE HIMSELF AWARE OF ALL CONSTRUCTION REQUIREMENTS, CONDITIONS AND LIMITATIONS IMPOSED BY PERMITS AND APPROVALS ISSUED BY REGULATORY AUTHORITIES PRIOR TO COMMENCEMENT OF ANY WORK. CONTRACTOR SHALL COORDINATE AND OBTAIN ALL CONSTRUCTION PERMITS REQUIRED BY REGULATORY AUTHORITIES.

**LOT**

Driveway Area = 1930 S.F.

Infiltration Trench: 315' (long) x 2' (wide) x 2.5' (deep)

Infiltration Rate: 2.0 in/hr

24 hr infiltration volume = (315' x 2') x 2.0/12 x 24 = 2520 ft<sup>3</sup>

Volume runoff = (7.0 in)/12 x 1930 S.F. = 1126 ft<sup>3</sup> (100 year storm)

2520 > 1126 trench can infiltrate 100 year storm

**EROSION AND SEDIMENT CONTROL NOTES**

**1. GRUBBING, STRIPPING, AND GRADING.**

EROSION CONTROL DEVICES SHALL BE IN PLACE AS SHOWN ON THE DESIGN PLANS BEFORE GRADING COMMENCES. AS MUCH TOPSOIL AS POSSIBLE SHALL BE RECLAIMED FOR ON-SITE USE. NO TOPSOIL SHALL BE REMOVED FROM THE SITE. STRIPPING SHALL BE DONE IN A MANNER WHICH WILL NOT CONCENTRATE RUNOFF. IF PRECIPITATION IS EXPECTED, EARTHEN BERMS SHALL BE CONSTRUCTED AROUND THE AREA BEING STRIPPED.

IF INTENSE PRECIPITATION IS ANTICIPATED, HAY BALES, DIKES AND/OR SILT FENCES SHALL BE USED AS REQUIRED TO PREVENT EROSION AND SEDIMENT TRANSPORT. THE REQUIRED MATERIALS SHALL BE STORED ON SITE AT ALL TIMES. DUST SHOULD BE HELD AT A MINIMUM BY SPRINKLING EXPOSED SOIL WITH AN APPROPRIATE AMOUNT OF WATER.

**2. MAINTENANCE OF DISTURBED SURFACES.**

RUNOFF SHALL BE DIVERTED FROM DISTURBED SIDE SLOPES IN BOTH CUT AND FILL AREAS.

MULCH MAY BE USED FOR TEMPORARY STABILIZATION.

STRAW BALE DIKES OR SILT FENCES SHALL BE INSTALLED WHERE REQUIRED TO TRAP PRODUCTS OF EROSION AND SHALL BE MAINTAINED ON A CONTINUOUS BASIS DURING THE CONSTRUCTION PROCESS.

AN EMERGENCY SUPPLY OF STRAW BALES AND SILT FENCE SHALL BE STOCKPILED ON SITE UNDER A TARP.

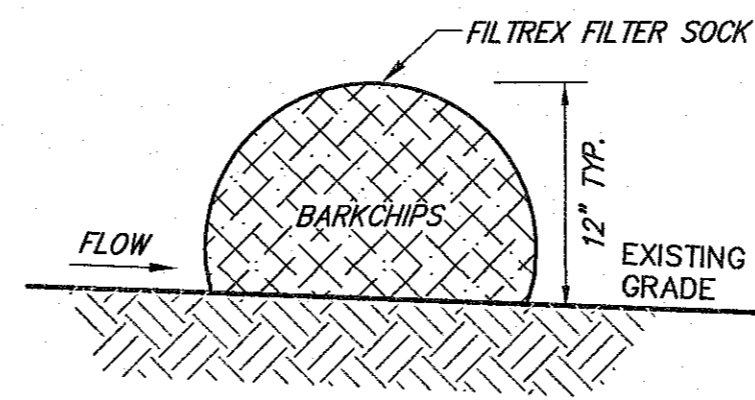
**3. LOAMING.**

IF IMPORTED LOAM IS USED IT SHALL CONSIST OF A FERTILE, FRIABLE NATURAL TOPSOIL TYPICAL OF THE LOCALITY, WITHOUT ADMIXTURE OF SUBSOIL, REFUSE, OR OTHER FOREIGN MATERIALS. IT SHALL BE SUCH A MIXTURE OF SAND, SILT, AND CLAY PARTICLES AS TO EXHIBIT SANDY AND CLAYEY PROPERTIES IN ABOUT EQUAL PROPORTIONS. IT SHALL BE REASONABLY FREE OF STUMPS, ROOTS, HEAVY OR STILL CLAY, STONES LARGER THAN 2 INCHES IN DIAMETER, LUMPS, COARSE SAND, NOXIOUS WEEDS, STICKS, BRUSH, OR OTHER LITTER.

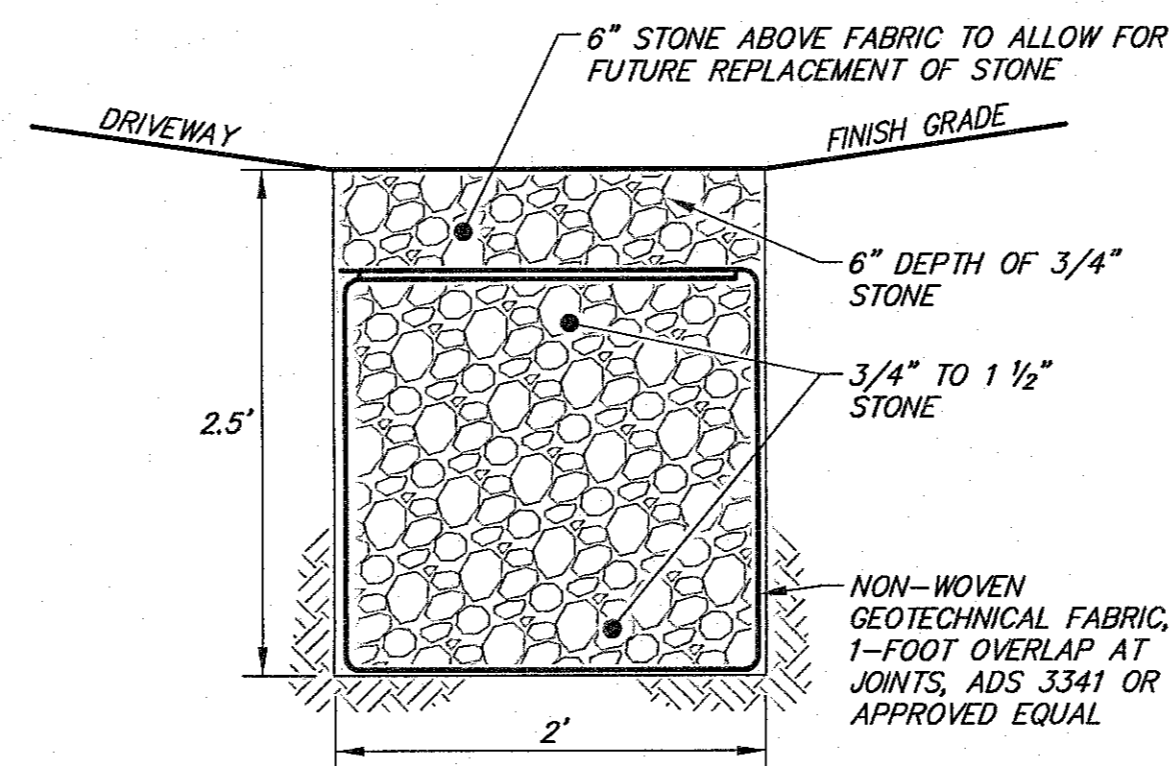
ALL DISTURBED AREAS SHALL HAVE A MINIMUM OF 4" COMPACTED DEPTH OF LOAM PLACED BEFORE BEING SEEDING AND MULCHED. CONSIDERATION SHOULD BE GIVEN TO HYDRO-SEEDING, ESPECIALLY ON SLOPES IN EXCESS OF 2 TO 1. LOAMED AND SEEDING SLOPES SHALL BE PROTECTED FROM WASHOUT BY INSTALLING EROSION CONTROL BLANKETS UNTIL VEGETATION BEGINS TO GROW.

**4. STABILIZATION OF SURFACES.**

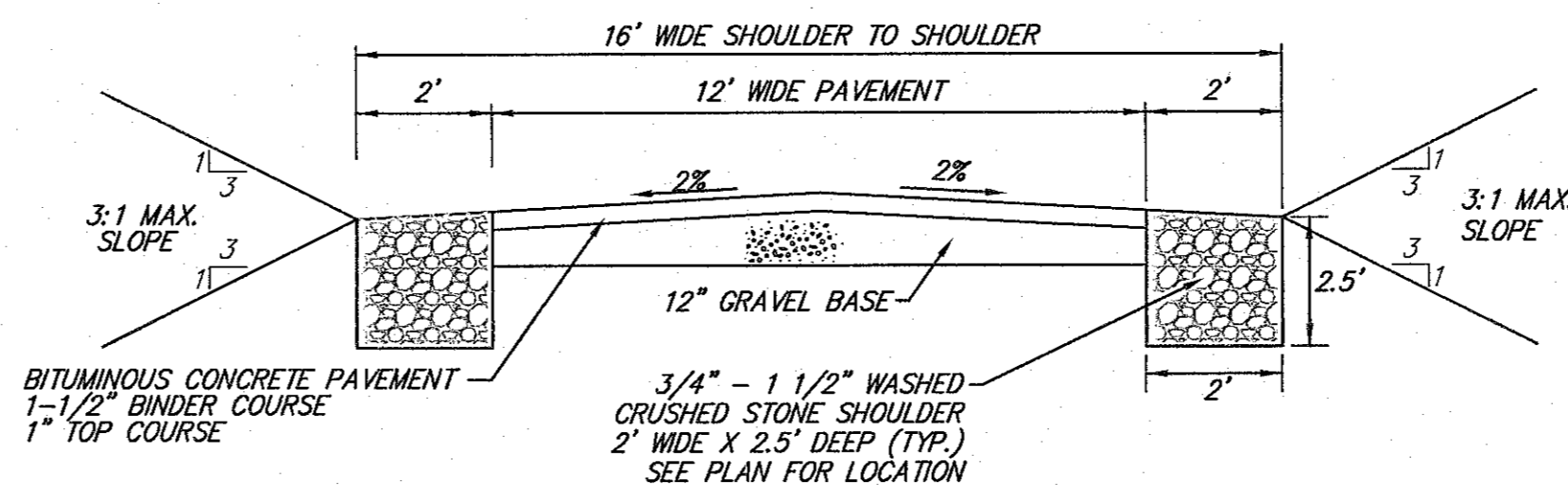
STABILIZATION OF SURFACES SHALL BE AN ONGOING PROCESS AND INCLUDES THE PLACEMENT OF EROSION CONTROL BLANKETS, PAVEMENT, RIP-RAP, WOOD CHIP MULCH, AND THE ESTABLISHMENT OF VEGETATED SURFACES. UPON THE COMPLETION OF CONSTRUCTION, ALL SURFACES SHALL BE STABILIZED EVEN IF IT IS APPARENT THAT FUTURE CONSTRUCTION EFFORTS WILL CAUSE THEIR DISTURBANCE. VEGETATED COVER SHALL BE ESTABLISHED DURING THE PROPER GROWING SEASON AND SHOULD BE ENHANCED BY SOIL ADJUSTMENT FOR PROPER PH, NUTRIENTS, AND MOISTURE CONTENT. SURFACES THAT ARE DISTURBED BY EROSION PROCESSES, VANDALISM, OR BY CONSTRUCTION SHALL BE STABILIZED AS SOON AS POSSIBLE. HYDRO-SEEDING OF GRASS SURFACES IS RECOMMENDED, ESPECIALLY IF SEEDING OF THE SURFACES IS REQUIRED OUTSIDE THE NORMAL GROWING SEASON.



**SILTATION BARRIER**  
CROSS SECTION  
NOT TO SCALE



**INFILTRATION TRENCH**  
NOT TO SCALE



**FINISHED DRIVEWAY**  
CROSS SECTION  
NOT TO SCALE

**427C  
IPSWICH ROAD  
COMMON  
DRIVEWAY  
RELOCATION**

Boxford, Massachusetts 01921

**ASSESSORS:**

MAP 14 BLOCK 1 LOT 21

**PREPARED FOR:**

**RODNEY &  
KARLA SMITH**

427B Ipswich Road  
Boxford, Massachusetts 01921

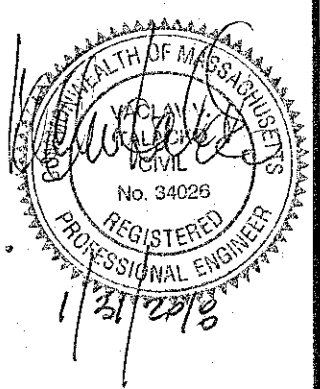
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NO.	BY	APP.	DATE	ISSUE/REVISION	DESCRIPTION

DATE: 1/30/18 DESIGN BY: TJR  
SCALE: AS SHOWN DRAWN BY: TJR  
APPRVD. BY: VWT CHECK BY: VWT

**DETAILS  
&  
NOTES**

PLOT DATE: Jun 31, 2018 2:55 pm  
PATH: F:\CAD 3D Projects\17834 - Smith - Boxford\DWG

DWG: 17834 Driveway2.dwg

LAYOUT: DETAILS

SHEET: 2 OF 2

**2**

PROJECT NO.: 17834