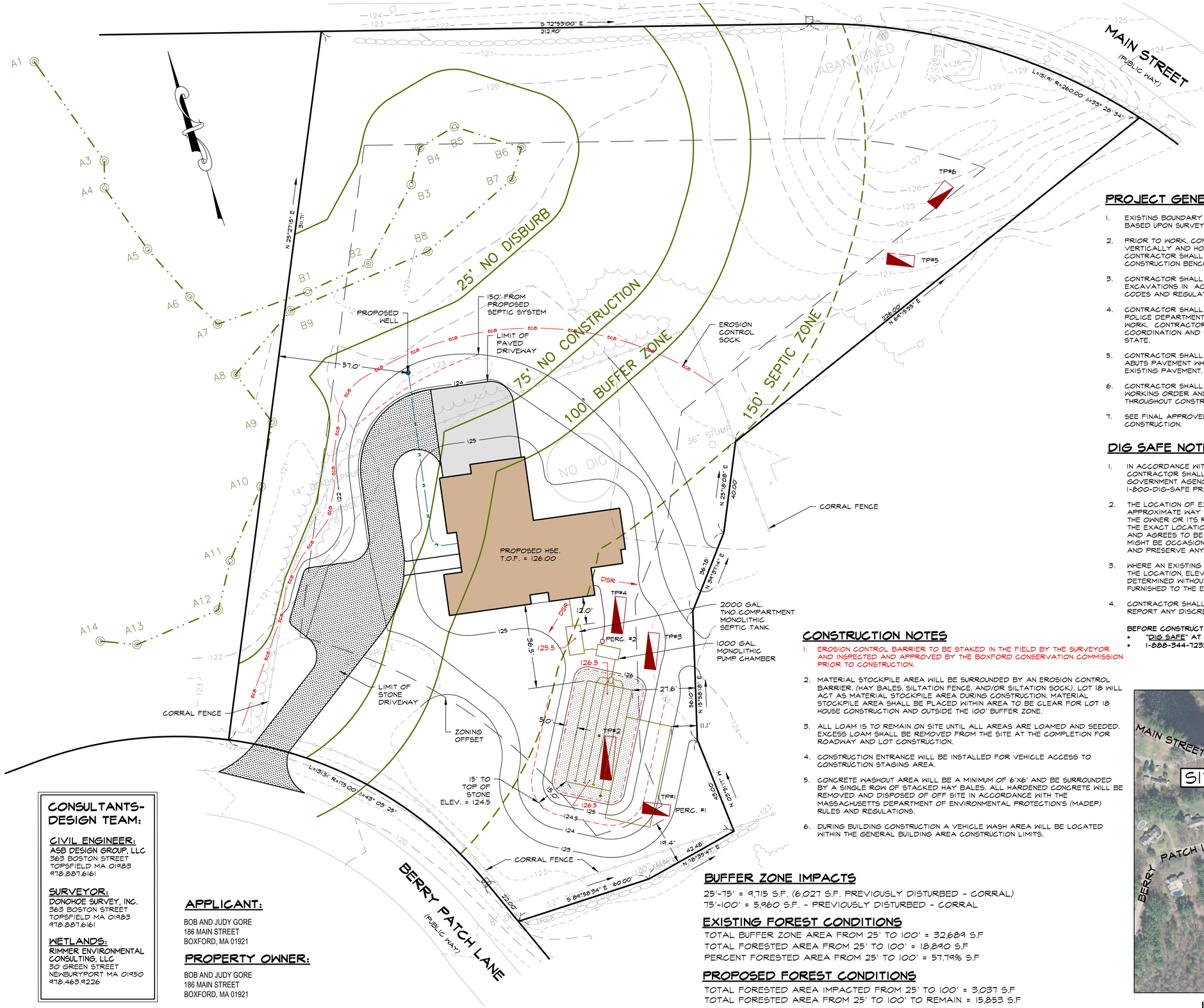


INDEX OF SHEETS

PROJECT BENCHMARKS:

BENCHMARK: CUT-SPIKE IN 14" DEAD SPRUCE
ELEV. = 123.23'

CUT-SPIKE IN GATE POST
ELEV. = 124.16'

PROJECT GENERAL NOTES

1. EXISTING BOUNDARY LINE, TOPOGRAPHIC, AND SITE UTILITY INFORMATION IS BASED UPON SURVEY PERFORMED BY DONOHOE SURVEY, INC.
2. PRIOR TO WORK, CONTRACTOR SHALL HAVE THE PROPOSED SITE LAID OUT VERTICALLY AND HORIZONTALLY BY A PROFESSIONAL LAND SURVEYOR. CONTRACTOR SHALL COORDINATE WITH PROFESSIONAL LAND SURVEYOR FOR CONSTRUCTION BENCHMARK.
3. CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND SHORING OF ALL EXCAVATIONS IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GOVERNING CODES AND REGULATIONS.
4. CONTRACTOR SHALL COORDINATE WITH THE STATE POLICE AND/OR THE LOCAL POLICE DEPARTMENT FOR TRAFFIC RELATED ISSUES PRIOR TO COMMENCING WORK. CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC COORDINATION AND POLICE DETAILS AS REQUIRED BY THE CITY, TOWN OR STATE.
5. CONTRACTOR SHALL SAW-CUT PAVEMENT WHERE PAVEMENT TO BE REMOVED ABUTS PAVEMENT WHICH IS TO REMAIN AND WHERE NEW PAVEMENT ABUTS EXISTING PAVEMENT.
6. CONTRACTOR SHALL MAINTAIN ALL NEW AND EXISTING UTILITIES IN GOOD WORKING ORDER AND SHALL PROTECT THEM FROM DAMAGE AT ALL TIMES THROUGHOUT CONSTRUCTION UNTIL WORK IS COMPLETED AND ACCEPTED.
7. SEE FINAL APPROVED SEPTIC SYSTEM PLANS PRIOR TO THE START OF CONSTRUCTION.

DIG SAFE NOTES

1. IN ACCORDANCE WITH CHAPTER 82 SECTION 40 INCLUDING AMENDMENTS, THE CONTRACTOR SHALL NOTIFY IN WRITING ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES PRIOR TO EXCAVATION WORK AND CALL DIG-SAFE AT 1-800-DIG-SAFE PRIOR TO COMMENCING WORK.
2. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVES. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATIONS, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
4. CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL EXISTING UTILITIES AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCING WORK.

BEFORE CONSTRUCTION CALL (72 HOURS IN ADVANCE):
- "DIG SAFE" AT 1-888-DIG SAFE
- 1-888-344-7233

DIG SAFE

CONSTRUCTION NOTES

1. EROSION CONTROL BARRIER TO BE STAKED IN THE FIELD BY THE SURVEYOR AND INSPECTED AND APPROVED BY THE BOXFORD CONSERVATION COMMISSION PRIOR TO CONSTRUCTION.
2. MATERIAL STOCKPILE AREA WILL BE SURROUNDED BY AN EROSION CONTROL BARRIER. (HAY BALES, SILTATION FENCE, AND/OR SILTATION SOCK). LOT 18 WILL ACT AS MATERIAL STOCKPILE AREA DURING CONSTRUCTION. MATERIAL STOCKPILE AREA SHALL BE PLACED WITHIN AREA TO BE CLEAR FOR LOT 18 HOUSE CONSTRUCTION AND OUTSIDE THE 100' BUFFER ZONE.
3. ALL LOAM IS TO REMAIN ON SITE UNTIL ALL AREAS ARE LOAMED AND SEEDED. EXCESS LOAM SHALL BE REMOVED FROM THE SITE AT THE COMPLETION FOR ROADWAY AND LOT CONSTRUCTION.
4. CONSTRUCTION ENTRANCE WILL BE INSTALLED FOR VEHICLE ACCESS TO CONSTRUCTION STAGING AREA.
5. CONCRETE WASHOUT AREA WILL BE A MINIMUM OF 6'X6' AND BE SURROUNDED BY A SINGLE ROW OF STACKED HAY BALES. ALL HARDENED CONCRETE WILL BE REMOVED AND DISPOSED OF OFF SITE IN ACCORDANCE WITH THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION'S (MADEP) RULES AND REGULATIONS.
6. DURING BUILDING CONSTRUCTION A VEHICLE WASH AREA WILL BE LOCATED WITHIN THE GENERAL BUILDING AREA CONSTRUCTION LIMITS.

BUFFER ZONE IMPACTS

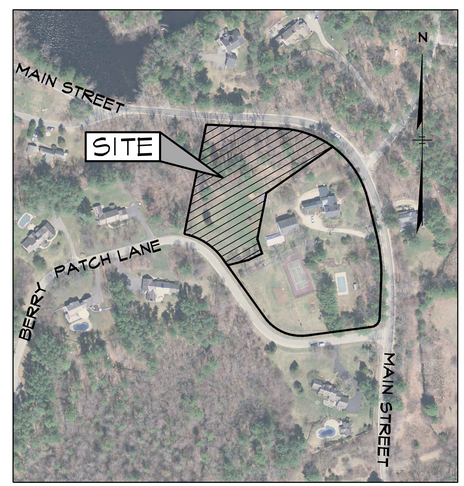
25'-75' = 9,715 S.F. (6,027 S.F. PREVIOUSLY DISTURBED - CORRAL)
75'-100' = 5,960 S.F. - PREVIOUSLY DISTURBED - CORRAL

EXISTING FOREST CONDITIONS

TOTAL BUFFER ZONE AREA FROM 25' TO 100' = 32,689 S.F
TOTAL FORESTED AREA FROM 25' TO 100' = 18,890 S.F
PERCENT FORESTED AREA FROM 25' TO 100' = 57.79% S.F

PROPOSED FOREST CONDITIONS

TOTAL FORESTED AREA IMPACTED FROM 25' TO 100' = 3,037 S.F
TOTAL FORESTED AREA FROM 25' TO 100' TO REMAIN = 15,853 S.F
PERCENT FORESTED AREA FROM 25' TO 100' POST CONSTRUCTION = 48.50% S.F



LOCATION PLAN

SCALE: 1" = 200' ±
SOURCE: MA GIS DIGITAL RASTER GRAPHIC (DRG)

CONSULTANTS-DESIGN TEAM:

CIVIL ENGINEER:
ASB DESIGN GROUP, LLC
363 BOSTON STREET
TOPSFIELD MA 01983
978.887.6161

SURVEYOR:
DONOHOE SURVEY, INC.
363 BOSTON STREET
TOPSFIELD MA 01983
978.887.6161

WETLANDS:
RIMMER ENVIRONMENTAL CONSULTING, LLC
30 GREEN STREET
NEWBURYPORT MA 01950
978.463.9226

APPLICANT:

BOB AND JUDY GORE
186 MAIN STREET
BOXFORD, MA 01921

PROPERTY OWNER:

BOB AND JUDY GORE
186 MAIN STREET
BOXFORD, MA 01921

SCALE BAR 0 20' 40' SCALE: 1"=20' 60'

ASB
design group, LLC
civil engineering
traffic engineering
architecture
landscape design & construction
363 boston street, route 1
topsfield, ma 01983

project title:
BERRY PATCH LANE
SEPTIC SYSTEM

prepared for:
BOB AND JUDY GORE
186 MAIN STREET
BOXFORD MA. 01921

parcel identification:
map: 27
block: 1
parcel: N.A.
lot: 15.6

revisions

no.	date	description
0	06/12/17	ISSUED FOR REVIEW

plan submission
NOTICE OF INTENT

date: 06.12.2017
scale: 1"=20'
job no: 2017-01 / 3264
DEP no: T.B.D.

COMMONWEALTH OF MASSACHUSETTS
Thad D Berry
No. 41258
CIVIL
REGISTERED PROFESSIONAL ENGINEER

drawing name
SITE PLAN

drawing number
NO. 1

sheet 1 of 2

EROSION CONTROL NOTES

EROSION CONTROL PRINCIPLES

A. THE FOLLOWING EROSION CONTROL PRINCIPLES SHALL APPLY TO THE LAND GRADING AND CONSTRUCTION PHASES:

1) STRIPPING OF VEGETATION, GRADING, OR OTHER SOIL DISTURBANCE SHALL BE DONE IN A MANNER WHICH WILL MINIMIZE SOIL EROSION.

2) WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED.

3) EXTENT OF AREA WHICH IS EXPOSED AND FREE OF VEGETATION AND DURATION OF ITS EXPOSURE SHALL BE KEPT WITHIN PRACTICAL LIMITS.

4) TEMPORARY SEEDING, MULCHING, OR OTHER SUITABLE STABILIZATION MEASURES SHALL BE USED TO PROTECT EXPOSED CRITICAL AREAS DURING PROLONGED CONSTRUCTION OR OTHER LAND DISTURBANCE.

5) DRAINAGE PROVISIONS SHALL ACCOMMODATE INCREASED RUNOFF RESULTING FROM MODIFICATIONS OF SOIL AND SURFACE CONDITIONS DURING AND AFTER DEVELOPMENT OR DISTURBANCE. SUCH PROVISIONS SHALL BE IN ADDITION TO EXISTING REQUIREMENTS.

6) SEDIMENT SHALL BE RETAINED ON-SITE.

7) EROSION CONTROL DEVICES SHALL BE INSTALLED AS EARLY AS POSSIBLE IN THE CONSTRUCTION SEQUENCE PRIOR TO START OF CLEARING AND GRUBBING OPERATIONS AND EXCAVATION WORK.

B. CUT AND FILL SLOPES AND STOCKPILED MATERIALS SHALL BE PROTECTED TO PREVENT EROSION. SLOPES SHALL BE PROTECTED WITH PERMANENT EROSION PROTECTION WHEN EROSION EXPOSURE PERIOD IS GREATER THAN OR EQUAL TO SIX MONTHS, AND TEMPORARY EROSION PROTECTION WHEN EROSION EXPOSURE PERIOD IS EXPECTED TO BE LESS THAN SIX MONTHS (SEE NOTE 18).

1) PERMANENT EROSION PROTECTION SHALL BE ACCOMPLISHED BY SEEDING WITH GRASS AND COVERING WITH AN EROSION PROTECTION MATERIAL, AS APPROPRIATE FOR PREVAILING CONDITIONS.

2) EXCEPT WHERE SPECIFIED SLOPE IS INDICATED ON DRAWINGS, FILL SLOPES SHALL BE LIMITED TO A GRADE OF 3:1 (HORIZONTAL:VERTICAL) AND CUT SLOPES SHALL BE LIMITED TO A GRADE OF 3:1.

EROSION CONTROL BARRIE

EROSION CONTROL BARRIE SHALL BE INSTALL BE INSTALL IN ACCORDANCE WITH DETAILS SHOWN ON SHEET NO1 2 AND THE ORDER OF CONDITIONS ISSUED BY THE BOXFORD CONSERVATION COMMISSION. EROSION CONTROL SHALL BE INSPECTED AND APPROVED BY THE BOXFORD CONSERVATION COMMISSION PRIOR TO THE START OF CONSTRUCTION.

MAINTENANCE AND REMOVAL OF CONTROL DEVICES

A. WETLAND AREAS, WATER COURSES, AND DRAINAGE SWALES ADJACENT TO CONSTRUCTION ACTIVITIES SHALL BE MONITORED TWICE EACH MONTH FOR EVIDENCE OF SILT INTRUSION AND OTHER ADVERSE ENVIRONMENTAL IMPACTS, WHICH SHALL BE CORRECTED IMMEDIATELY UPON DISCOVERY.

B. CULVERTS AND DRAINAGE DITCHES SHALL BE KEPT CLEAN AND CLEAR OF OBSTRUCTIONS DURING CONSTRUCTION PERIOD.

C. EROSION CONTROL DEVICES:

1) SEDIMENT BEHIND THE EROSION CONTROL DEVICE SHALL BE CHECKED TWICE EACH MONTH AND AFTER EACH HEAVY RAIN. SILT SHALL BE REMOVED IF GREATER THAN 6-INCHES DEEP.

2) CONDITION OF EROSION CONTROL DEVICE SHALL BE CHECKED TWICE EACH MONTH OR MORE FREQUENTLY AS REQUIRED. DAMAGED AND/OR DETERIORATED ITEMS SHALL BE REPLAGED. EROSION CONTROL DEVICES SHALL BE MAINTAINED IN-PLACE AND IN EFFECTIVE CONDITION.

3) EROSION CONTROL BARRIER SHALL BE INSPECTED FREQUENTLY AND MAINTAINED OR REPLACED AS REQUIRED TO MAINTAIN BOTH EFFECTIVENESS AND INSTALLED CONDITION. UNDERSIDE OF BALES SHALL BE KEPT IN CLOSE CONTACT WITH THE EARTH BELOW AT ALL TIMES, AS REQUIRED TO PREVENT WATER FROM WASHING BENEATH BALES.

4) SEDIMENT SHALL BE REMOVED FROM THE RETENTION PONDS AT THE COMPLETION OF THE PROJECT AND PERIODICALLY DURING CONSTRUCTION. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN SEDIMENT HAS ACCUMULATED TO A DEPTH OF 6 INCHES, OR AS DIRECTED.

5) SEDIMENT DEPOSITS SHALL BE DISPOSED OF OFF-SITE, IN A LOCATION AND MANNER WHICH WILL NOT CAUSE SEDIMENT NUISANCE ELSEWHERE.

D. REMOVAL OF EROSION CONTROL DEVICES:

1) EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL ALL DISTURBED EARTH HAS BEEN PAVED OR VEGETATED, AT WHICH TIME THEY SHALL BE REMOVED. AFTER REMOVAL, AREAS DISTURBED BY THESE DEVICES SHALL BE RE-GRADED AND SEEDED.

2) EROSION CONTROL NETTING SHALL BE KEPT SECURELY ANCHORED UNTIL START OF PERMANENT TURF CONSTRUCTION.

3) EROSION PROTECTION MATERIAL SHALL BE KEPT SECURELY ANCHORED UNTIL ACCEPTANCE OF COMPLETED SLOPE OR ENTIRE PROJECT, WHICHEVER IS LATER.

GENERAL NOTES

1. CONTRACTOR SHALL INSTALL EROSION CONTROL SOCK PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL STOCKPILE ALL LOAM AND SURROUND AREA WITH EROSION CONTROL SOCK.

LOAM & SEEDING NOTES

LOAMING, SEEDING AND FERTILIZING

1. IF REQUIRED THE CONTRACTOR SHALL FURNISH ALL TOPSOIL OR ADDITIONAL TOPSOIL NEEDED TO COMPLETE THE JOB. IF THE EXISTING TOPSOIL IS SUFFICIENT TO COMPLETE THE JOB, ANY EXCESS TOPSOIL WILL REMAIN ON SITE. AN AREA WILL BE PROVIDED ON SITE FOR FINAL STORAGE.
2. THE TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED ON THE DESIGNATED AREAS AND IT SHALL BE A MINIMUM DEPTH OF SIX INCHES AFTER FIRMING. SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS. TOPSOIL SHALL NOT BE PLACED WHILE IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBGRADE IS EXCESSIVLY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING OR PROPOSED SEEDING.
3. AFTER LOAM HAS BEEN PLACED, LIME AND FERTILIZER SHALL BE UNIFORMLY MIXED INTO THE TOP FOUR INCHES OF SOIL BY DISCING, HARROWING OR USING OTHER APPROVED METHODS.
4. ANY UNDULATIONS OR IRREGULARITIES IN THE SURFACE RESULTING FROM FERTILIZING, LIMING, SURFACE ROUGHINING OR OTHER CAUSES SHALL BE LEVELED PRIOR TO SEEDING. FLOODED, WASHED-OUT OR OTHERWISE DAMAGED AREAS SHALL BE RECONSTRUCTED AND ALL GRADES RE-ESTABLISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE DRAWINGS AND/ OR OTHER APPLICABLE SPECIFICATIONS.
5. PRIOR TO SEEDING THE SURFACE SHALL BE CLEARED OF ALL TRASH, DEBRIS AND STONES LARGER THAN ONE AND ONE-HALF INCHES IN DIAMETER, AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING OR MAINTENANCE OPERATIONS.
6. BROADCAST SEED AND MULCH. PLACE STRAW AND ANCHOR IT TO TOPSOIL. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDLINGS WITH ADEQUATE WATER FOR PLANT GROWTH. (1/2"-1" EVERY 3-4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED.

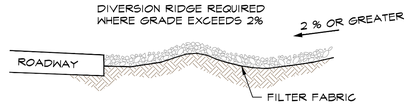
REPAIRS AND MAINTENANCE

INSPECT ALL SEEDED AREAS FOR FAILURES AND MAKE NECESSARY REPAIRS, REPLACEMENTS AND RESEEDINGS WITHIN THE PLANTING SEASON.

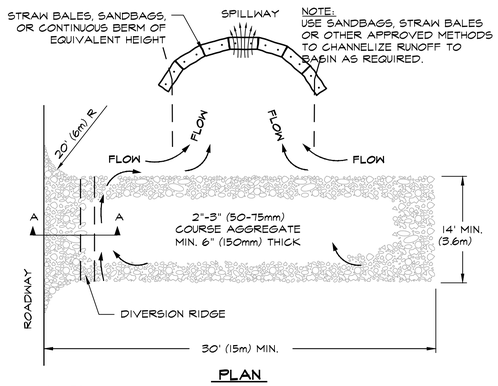
1. ONCE THE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUNDCOVER TO BE CONSIDERED ADEQUATELY STABILIZED.
2. IF THE STAND PROVIDES LESS THAN 40% GROUND COVERAGE, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER, SEEDBED PREPARATION AND SEEDING RECOMMENDATIONS.
3. IF THE STAND PROVIDES BETWEEN 40% AND 94% GROUND COVER AGE, OVERSEEDING AND FERTILIZING USING HALF OF THE RATES ORIGINALLY APPLIED MAY BE NECESSARY.

SURFACE PREPARATION

1. STRIP AND STOCKPILE ALL EXISTING LOAM FROM PROPOSED WORK AREAS. PROTECT LOAM FROM EROSION. ALL LOAM WILL REMAIN ON SITE UNLESS THE OWNER APPROVES OF OFF SITE REMOVAL.
2. SET FIELD GRADES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. PROVIDE PROPER SURVEY CONTROL AND MAINTAIN THROUGHOUT CONSTRUCTION. PROVIDE ENGINEER WITH COPIES OF ALL SURVEY NOTES AND LOCATIONS OF BOTH VERTICAL AND HORIZONTAL CONTROL.
3. BRING BASE MATERIAL TO FINISH GRADE. PROVIDE ENGINEER WITH AS-BUILT DRAWINGS SHOWING FINISH ELEVATIONS AND CONTOURS PRIOR TO PLACEMENT OF LOAM.
4. SOIL TESTS SHALL BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR BOTH LIME AND FERTILIZER. SOIL TESTS SHALL BE CONDUCTED BY A STATE LABORATORY OR RECOGNIZED COMMERCIAL LABORATORY. PROVIDE ENGINEER WITH COPY OF TEST RESULTS AND RECOMENDATIONS FOR LIMING AND FERTILIZING.
5. AFTER THE AREAS TO BE TOPSOILED HAVE BEEN APPROVED BY THE OWNER OR ENGINEER, AND IMMEDIATLY PRIOR TO DUMPING AND SPREDDING THE TOPSOIL, THE SUBGRADE SHALL BE LOOSENED BY ROUSHENING TO THE DEPTH OF AT LEAST TWO INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SUBSOIL AND TO INCORPORATE THE LIME.
6. ACCEPTANCE SHALL BE GIVEN BY THE OWNER OR ENGINEER UPON SATISFACTORY COMPLETION OF EACH SECTION OR AREA AS INDICATED ON THE DRAWINGS OR AS OTHERWISE SPECIFIED BEFORE PLACEMENT OF TOPSOIL.



SECTION A - A

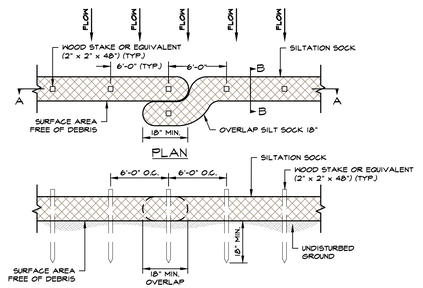


PLAN

NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. ADJACENT STREETS SHALL BE SWEPT AS REQUIRED BY OMI (SHEET 10 OF 12).

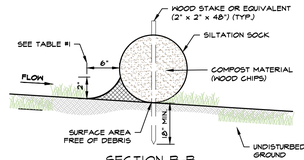
TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE



PLAN

SECTION A-A



SECTION B-B

INSTALLATION NOTES:
1. INSTALL SILT SOCK ON A SURFACE CLEAR OF DEBRIS.
2. OVERLAP ENDS BY A MINIMUM OF 18-INCHES.
3. END OF SILT SOCK TO BE DIRECTED UP SLOPE.
4. PLACE STAKES THROUGH SILT SOCK OR ON DOWNSTREAM SIDE.
5. ON SLOPES GREATER THAN 2:1 (2:1) SEED COMPOST SOCK IS RECOMMENDED.

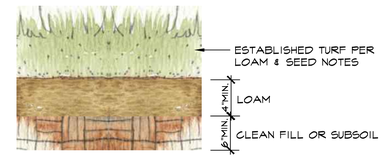
TABLE #1

SLOPE	SOCK DIAMETER (MIN.)	STAKING	2" COMPOST BARRIER (WOOD CHIPS)
< 50:1	9"	6' O.C.	---
50:1 TO 10:1	9"	6' O.C.	---
10:1 TO 5:1	12"	6' O.C.	---
5:1 TO 2:1	12"	4' O.C.	---
> 2:1	18"	4' O.C.	RECOMMENDED

USE 9" DIA. SOCK

SILTATION SOCK DETAIL

NOT TO SCALE



LOAM & SEED DETAIL

NOT TO SCALE

SCALE BAR
HORIZ: 0 20' 40' 60'
VERT: 0 2' 4' 6'

ASB
design group, LLC
civil engineering
traffic engineering
architecture
landscape design & construction
363 boston street, route 1
topsfield, ma 01983

project title:
BERRY PATCH LANE
SEPTIC SYSTEM

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COMMONWEALTH OF MASSACHUSETTS
Thad D Berry
No. 41258
CIVIL
REGISTERED PROFESSIONAL ENGINEER

drawing name
DETAILS & NOTES

drawing number
NO1 2

sheet 2 of 2