

TITLE SHEET  
 DEVELOPMENT PLANS  
 OF LAND OF  
**WILLIAM J. GELINAS**  
 PREPARED FOR  
**ADVANCED EXCAVATING**  
 1 GILBERT ROAD  
 ALLENSTOWN, NEW HAMPSHIRE  
 SITUATED IN THE TOWN OF  
 ALLENSTOWN, NEW HAMPSHIRE

INDEX OF SHEETS:

- SHEET 1 TITLE SHEET
- SHEET 2 EXISTING CONDITIONS
- SHEET 3 SITE PLAN
- SHEET 4 DETAILS SHEET
- SHEET 5 DETAILS SHEET
- SHEET 6 DETAILS SHEET

ADJUTERS:

ALLENSTOWN  
 TAX MAP 407  
 LOT 31  
 JACQUELIN MASON  
 14 BOURQUE ROAD  
 ALLENSTOWN, NH 03275

ALLENSTOWN  
 TAX MAP 407  
 LOT 31  
 TIMOTHY & PETER COFRAN  
 P.O. BOX 305  
 PITTSFIELD, NH 03263

ALLENSTOWN  
 TAX MAP 409  
 LOT 17  
 JACQUI-LYN & DWAYNE GILMAN  
 #6 GILBERT ROAD  
 ALLENSTOWN, NH 03275

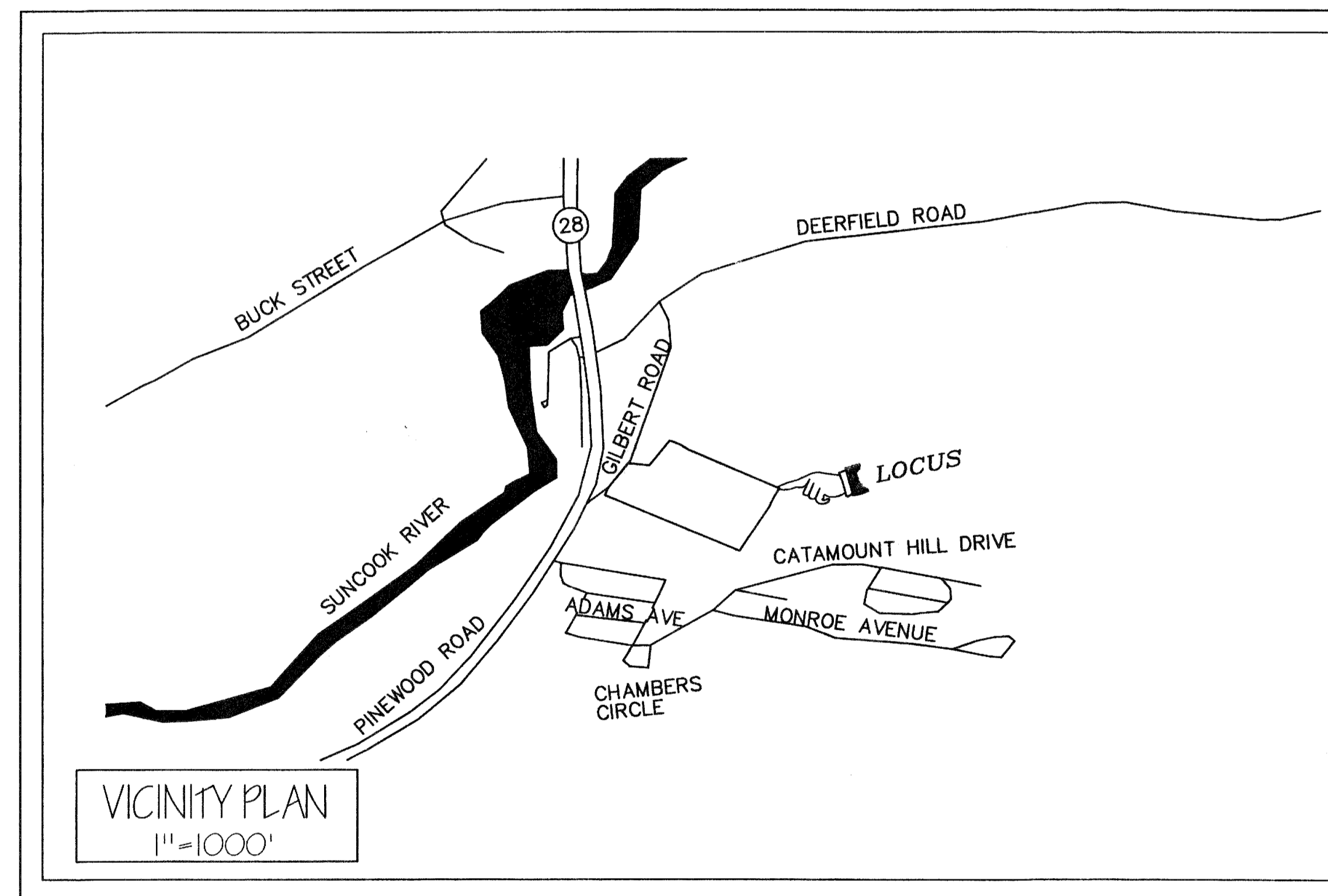
ALLENSTOWN  
 TAX MAP 409  
 LOT 32.1  
 MATTHEW BAILEY  
 #287 PINWOOD ROAD  
 ALLENSTOWN, NH 03275

ALLENSTOWN  
 TAX MAP 409  
 LOT 33  
 PENRICH, INC.  
 BEARBROOK VILLA  
 P.O. BOX 39  
 SUNCOOK, NH 03275

ALLENSTOWN  
 TAX MAP 407  
 LOT 28  
 STATE OF NEW HAMPSHIRE  
 #172 PEMBROKE RD  
 CONCORD, NH 03301

ALLENSTOWN  
 TAX MAP 409  
 LOT 30  
 GARY & THERESA GLADU  
 #5 GILBERT ROAD  
 ALLENSTOWN, NH 03275

ALLENSTOWN  
 TAX MAP 409  
 LOT 32  
 ARTHUR & ANASTASIA JOHNSON  
 #83 HIGH STREET  
 CANDIA, NH 03034



NOTES:

1. AN EFFORT HAS BEEN MADE TO LOCATE AND SHOW APPROXIMATE LOCATIONS OF UNDERGROUND UTILITIES. ALL BURIED UTILITIES ARE NOT NECESSARILY SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PRESERVE ALL UTILITY SERVICES.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION.
3. BENCHMARK ELEVATIONS ARE BASED ON AN ASSUMED ELEVATION.
4. ALL WORK MUST CONFORM WITH THE STANDARD CONSTRUCTION SPECIFICATIONS OF THE TOWN OF ALLENSTOWN CONSTRUCTION SPECIFICATIONS.

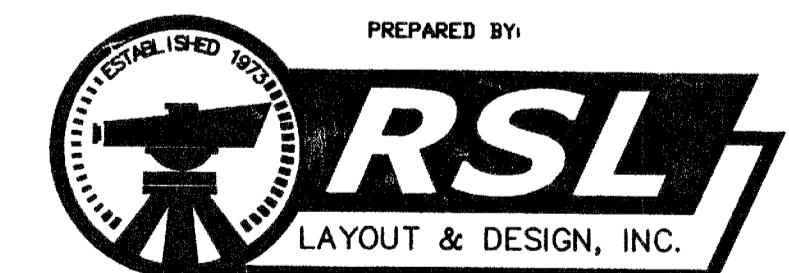
SHEET 1 OF 6  
 A SURVEY AND PLAT OF A  
**EXCAVATION PLAN**  
 OF LAND OF  
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**Dig Safe Systems, Inc.**

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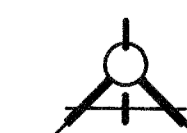


77 Main Street - Raymond, NH 03077  
 PH: 603-895-3986 - www.rslsurvey.com

DATE: 04-19-09  
 DWG. NAME: 4490.DWG

DRAWN BY: C.W.W.

FD NO. 469  
 JOB NO. 4490



AND  
**R.G. Moynihan**  
 CIVIL ENGINEER AND SURVEYOR

18 CAPTAIN PARKER DRIVE  
 LEBE, N.H. 03824  
 (603) 659-2596

**LEGEND**

- DENOTES SET DRILL HOLE IN STONE WALL.
- DENOTES NOT FOUND MONUMENT PER PLAN REFERENCE #1
- DENOTES FOUND IRON PIPE
- ◻ DENOTES GRANITE FOUND FOUND
- ⊕ DENOTES EXISTING UTILITY POLE.
- ∞ DENOTES STONEWALL
- ⌋ DENOTES EDGE OF WOODS

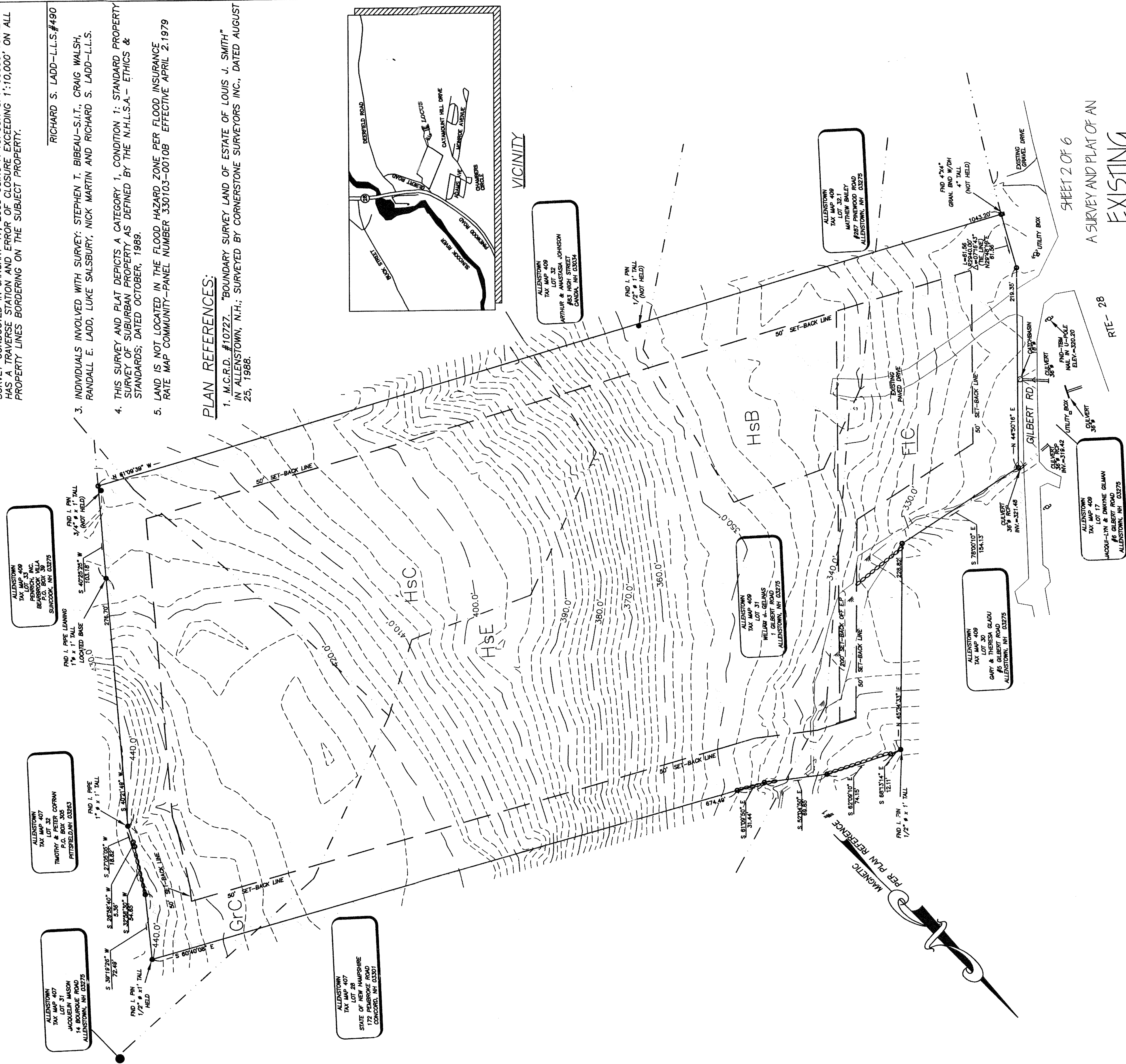
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**NOTES:**

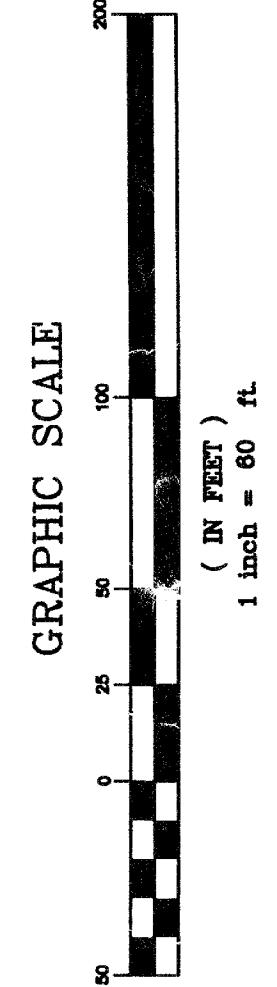
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2. I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND IS THE RESULT OF AN ACTUAL FIELD SURVEY CONDUCTED IN JANUARY 17, 2005 USING A TOPCON GPT-6003C TOTAL STATION. A TRAVERSE STATION AND ERROR OF CLOSURE EXCEEDING 1":10,000' ON ALL PROPERTY LINES BORDERING ON THE SUBJECT PROPERTY.
3. INDIVIDUALS INVOLVED WITH SURVEY: STEPHEN T. BIBEAU-S.I.T., CRAIG WALSH, RANDALL E. LADD, LUKE SALSBUURY, NICK MARTIN AND RICHARD S. LADD-L.L.S.
4. THIS SURVEY AND PLAT DEPICTS A CATEGORY 1, CONDITION 1: STANDARD PROPERTY SURVEY OF SUBURBAN PROPERTY AS DEFINED BY THE N.H.L.S.A. - ETHICS & STANDARDS, DATED OCTOBER, 1989.
5. LAND IS NOT LOCATED IN THE FLOOD HAZARD ZONE PER FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 330103-0010B EFFECTIVE APRIL 2, 1979

**PLAN REFERENCES:**

1. M.C.R.D. #10727, "BOUNDARY SURVEY LAND OF ESTATE OF LOUIS J. SMITH" IN ALLENSTOWN, N.H.; SURVEYED BY CORNERSTONE SURVEYORS INC., DATED AUGUST 25, 1988.



SHEET 2 OF 6  
 A SURVEY AND PLAT OF AN  
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 CONDITIONS PLAN  
 OF LAND OF  
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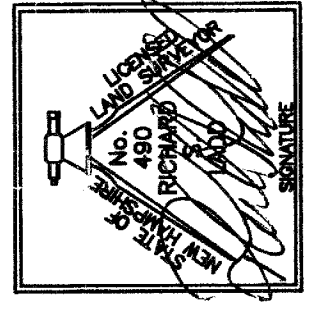
REVISIONS

| NO. | DATE | DESCRIPTION | BY |
|-----|------|-------------|----|
|     |      |             |    |

APPROVED BY THE ALLENSTOWN PLANNING BOARD CERTIFIED BY \_\_\_\_\_  
 ON \_\_\_\_\_, CHAIRMAN, AND/OR \_\_\_\_\_  
 SECRETARY, AND/OR \_\_\_\_\_  
 OTHER MEMBERS \_\_\_\_\_

THIS PLAN IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. IT REPRESENTS CONDITIONS PRESENT AS OF PLAN DATE AS SHOWN AND DOES NOT INCLUDE ANY CHANGES TO THE SITE AFTER THAT DATE. THIS PLAN SHALL NOT BE USED FOR REPRESENTATION, PRESENTATION OR SUBMITTAL TO ANY TOWN, OR FOR ANY OTHER PURPOSES WITHOUT THE WRITTEN CONSENT OF THE ORIGINAL PREPARER UNLESS IT IS BEING PRESENTED BY R.S.L. LAYOUT & DESIGN, INC. OR ITS AGENT. FOR ADDITIONAL INFORMATION OR REVISIONS TO THIS PLAN, PLEASE CONTACT R.S.L. LAYOUT & DESIGN, INC.

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DATE: 04-19-05 DRAWN BY: C.W.W. JOB NO. 4495  
 DWG. NAME: 4495-4-19-05  
 77 Main Street - Raymond, NH 03077  
 PH: 603-895-3886 - www.rslsurvey.com

**LEGEND**

- ⊗ DENOTES SET DRILL HOLE IN STONE WALL.
- DENOTES MONUMENT NOT FOUND PER REFERENCE PLAN #1
- DENOTES FOUND IRON PIPE
- ◐ DENOTES GRANITE BOUND FOUND
- ⊕ DENOTES EXISTING UTILITY POLE.
- ⊖ DENOTES STONEWALL
- ⊘ DENOTES EDGE WOODS
- Gc DENOTES SOIL TYPE

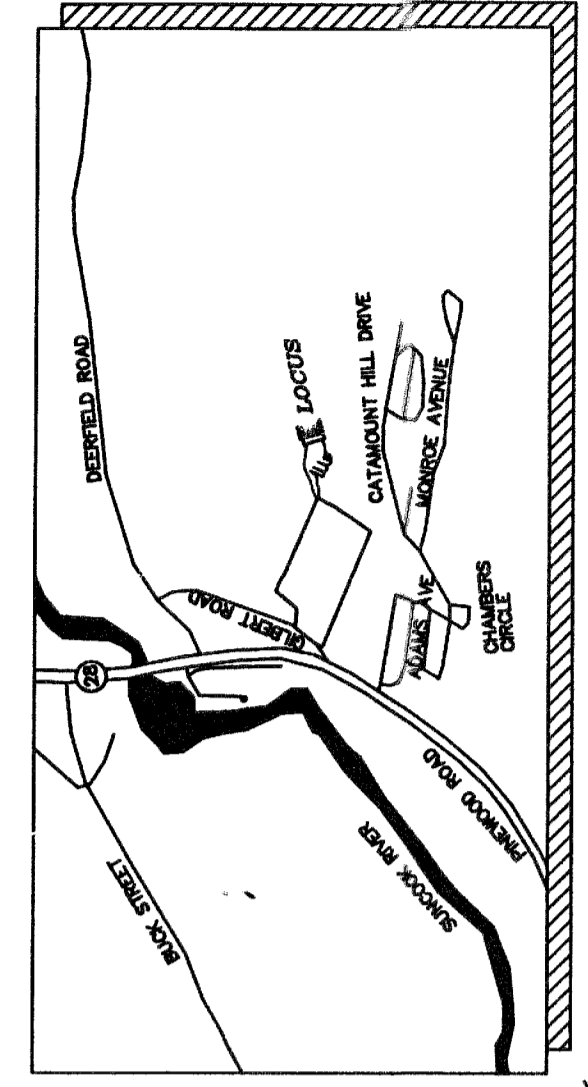
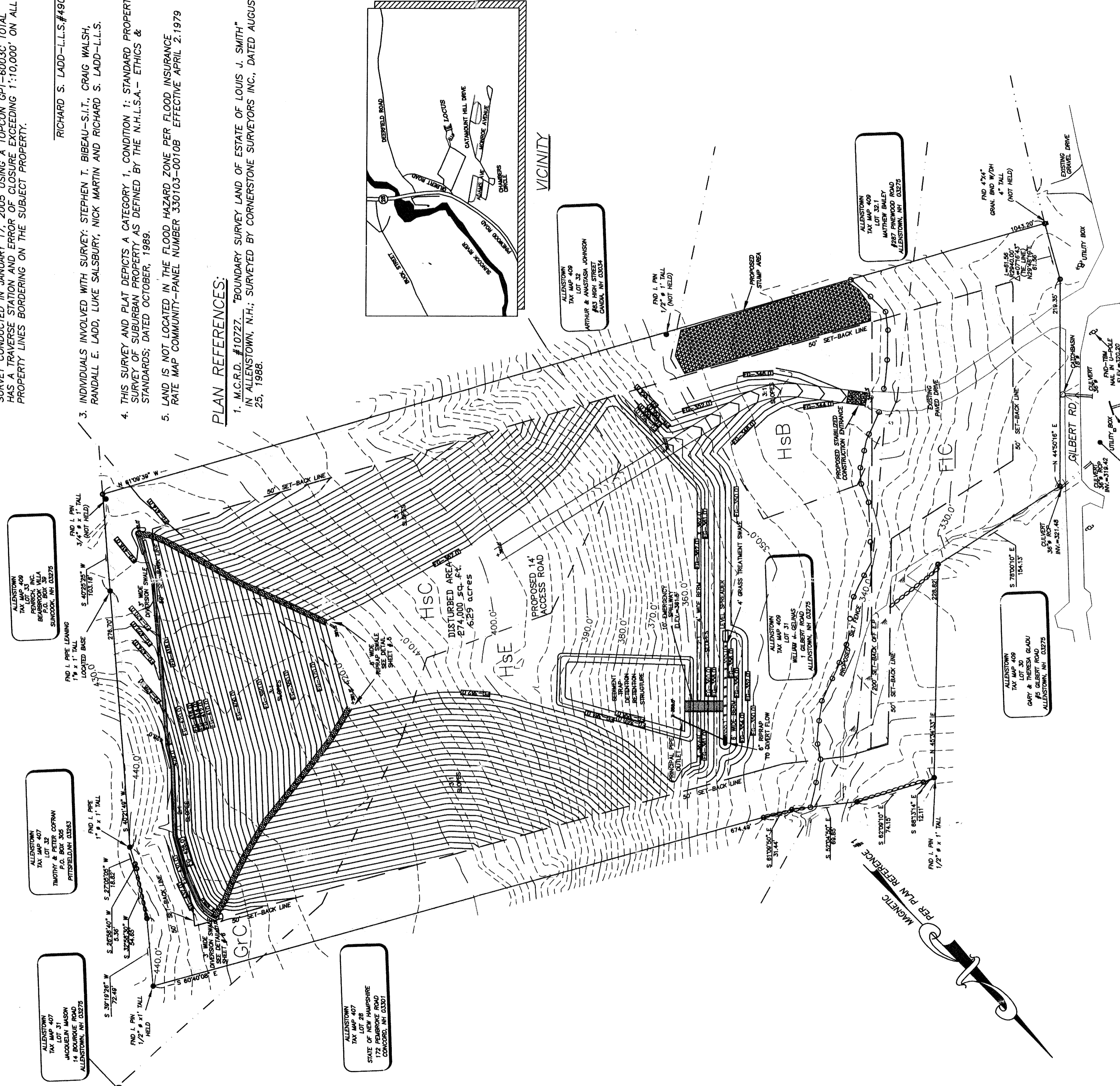
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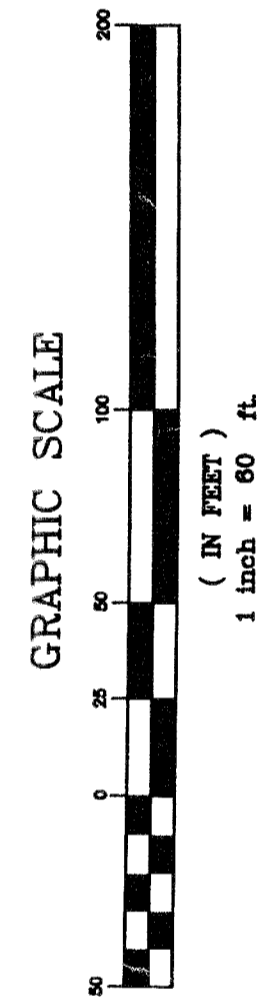
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- RICHARD S. LADD-L.L.S.#490
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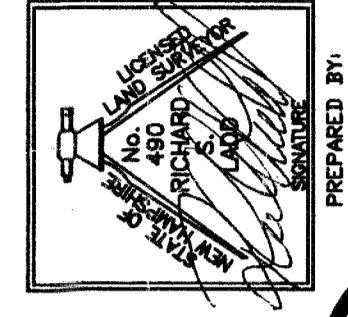


SHEET 3 OF 6  
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APPROVED BY THE PLANNING BOARD  
ON \_\_\_\_\_ CERTIFIED BY \_\_\_\_\_  
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DATE: 04-19-05 77 Main Street - Ferrisburgh, NH 03077  
DWG. NAME: 4495-4-19-05 DRAWN BY: C.W.W. JOB NO. 4495  
FB NO. 465

**CONSTRUCTION NOTES:**

- EROSION CONTROL AND WETLANDS PROTECTION MEASURES SHALL BE USED IN ACCORDANCE WITH NRCS STANDARDS FOR THE DURATION OF THE PROJECT.
- EXISTING UTILITIES- ALL INFORMATION ON AND LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND BASED ON FIELD INFORMATION AND AVAILABLE PLANS. EXACT LOCATIONS AND DEPTHS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- THE CONTRACTOR IS REQUIRED UNDER NEW HAMPSHIRE LAW TO CONTACT "DIG-SAFE" AT 1-800-225-4977, 72 HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN THE "DIG-SAFE" LOCATIONS THROUGHOUT THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL BEAR THE COST TO REPAIR ANY UTILITIES DAMAGED DURING THE COURSE OF THE WORK.
- ALL EARTHWORK ACTIVITIES SHALL CONFORM TO THE APPLICABLE PRACTICES OUTLINED IN THE USDA NATURAL RESOURCE CONSERVATION SERVICE, STORM WATER MANAGEMENT & EROSION & SEDIMENT CONTROL DESIGN HANDBOOK. CONSTRUCTION CRITERIA AND MAINTENANCE NOTES ATTACHED.
- GRASS AREAS SHALL BE LOOMED (4"), SEEDED (48 lbs. PER ACRE, SCS MIXTURE "C"), LIMED (2 TON PER ACRE), FERTILIZE WITH 10-20-20, (500 lbs. PER ACRE) AND MULCHED (1.5 TONS PER ACRE). ALL TEMPORARY LOAM STOCKPILES SHALL RECEIVE TEMPORARY EROSION CONTROL MEASURES. TEMPORARY HAY BALE BARRIERS SHALL BE INSTALLED DOWN SLOPE OF ALL DISTURBED AREA AND SHALL BE EMBEDDED AND ANCHORED IN ACCORDANCE WITH SCS STANDARDS.
- MATERIAL & CONSTRUCTION METHODS SHALL CONFORM TO THE STATE OF NEW HAMPSHIRE STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION. FILL UNDER PAVED AREAS SHALL BE COMPACTED IN 6" LIFTS TO 95% OPTIMUM DENSITY, AND SHALL BE FREE OF ORGANIC MATERIALS. BANK RUN GRAVEL SHALL BE 100% PASSING THE 6" SIEVE. CRUSHED GRAVEL SHALL BE 100% PASSING THE 1-1/2" SIEVE. PAVEMENT SHALL CONSIST OF A 2" BASE LAYER (225 lbs./SQ. YD.) WITH 3/4" DIA. TYPE 1-1 HOT BITUMINOUS CONCRETE AND A 1" WEARING LAYER (115 lbs./SQ. YD.) WITH 1/2" DIA. TYPE 1-1 HOT BITUMINOUS CONCRETE.

**TEMPORARY SEEDING**

\*WELL TO MODERATELY WELL DRAINED SOILS  
FOR CUT AND FILL AREA AND FOR WATERWAYS AND CHANNELS

|  | #/ACRE | #/1000 S.F. |
|--|--------|-------------|
| FOR APRIL 1 - AUGUST 15 ANNUAL RYE GRASS | 40     | 1           |
| FOR FALL SEEDING WINTER RYE              | 112    | 2.5         |

LIME: AT 1 TON PER ACRE OR 100 LBS PER 1,000 S.F.  
FERTILIZER: 10 10 10 (NITROGEN, PHOSPHATE POTASH) AT 1000# / ACRE  
MULCH: HAY OR STRAW; 2 TONS/ACRE OR TONS OR 2 BALES/1000 S.F.  
OR STAPLED JUTE MATTING. APPLY LIME, SEED AND FERTILIZER WITH A HYDROSEEDER\*\*

**GRADING AND SHAPING:**  
Slopes shall not be steeper than 2 to 1. 3 to 1 or flatter slopes are preferred.

**SEEDBED PREPARATION:**  
Surface and seepage water should be drained or diverted from the site to prevent drowning or winter killing of the plants.  
Stones larger than four inches and trash should be removed.  
Sod should be tilled to a depth of four inches to prepare seedbed and mix fertilizer and lime into the soil.  
The seedbed should be left in a reasonably firm and smooth condition.  
The last tillage operation should be performed across the slope wherever practical.

\* From Storm water Management and Erosion and Sedimentation Control Handbook for Urban and Developing Areas in New Hampshire, August 1992.

\*\* VEGETATING NEW HAMPSHIRE SAND AND GRAVEL PITS APRIL 1991, USDA TECHNICAL NOTE PM NH-24

**LONG TERM SEEDING**

\*WELL TO MODERATELY WELL DRAINED SOILS  
FOR CUT AND FILL AREA AND FOR WATERWAYS AND CHANNELS  
SEEDING MIXTURE C

|                     | #/ACRE | #/100 S.F. |
|---------------------|--------|------------|
| TALL FESCUE         | 20     | 0.45       |
| CREeping RED FESCUE | 20     | 0.45       |
| BIRDFOOT TREFoil    | 8      | 0.20       |
| TOTAL               | 48     | 1.10       |

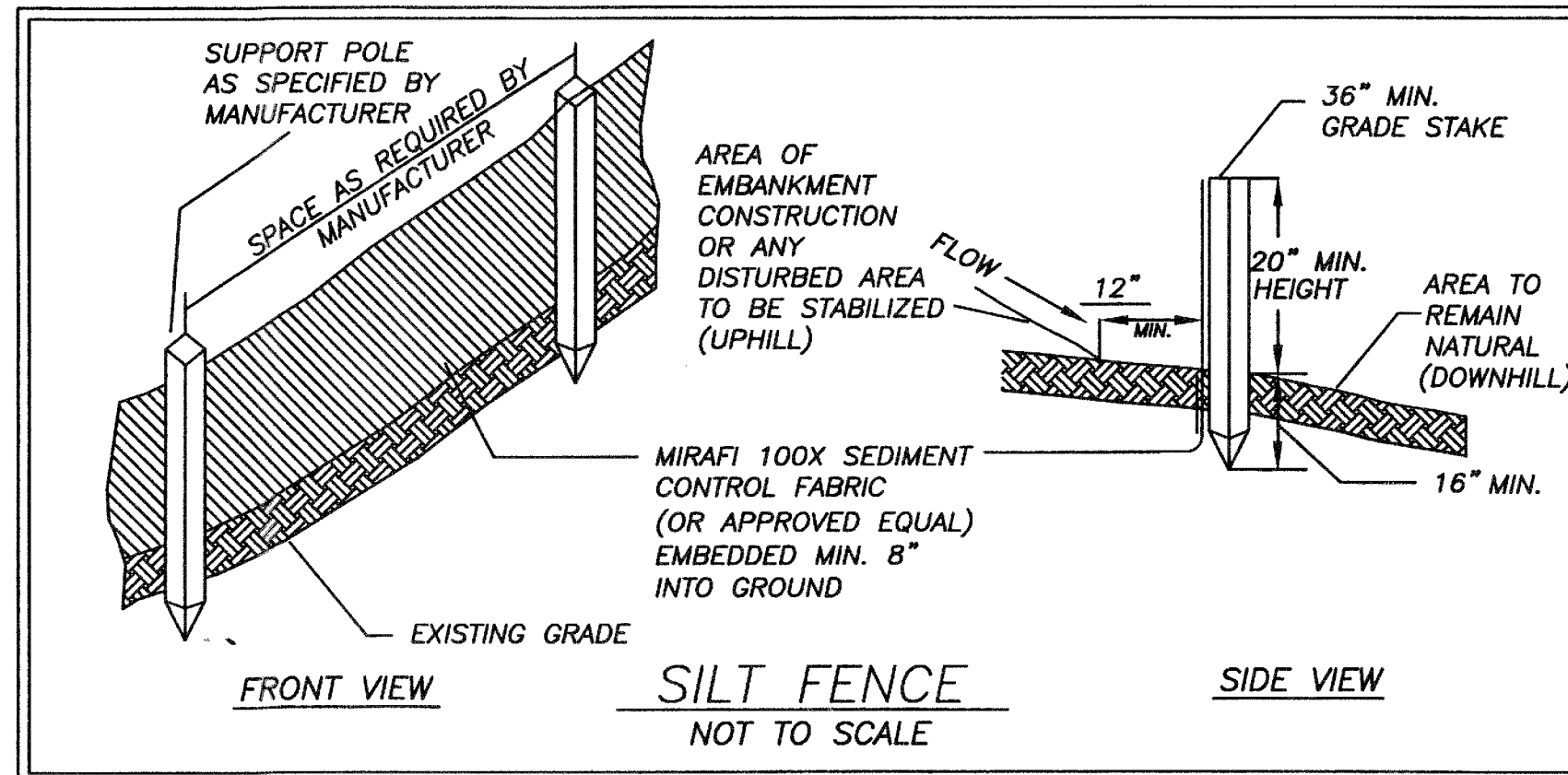
LIME: AT 2 TONS PER ACRE OR 100 LBS PER 1,000 S.F.  
FERTILIZER: 10 20 20 (NITROGEN, PHOSPHATE POTASH) AT 500# / ACRE  
MULCH: HAY OR STRAW; 2 TONS/ACRE OR TONS OR 2 BALES/1000 S.F.  
OR STAPLED JUTE MATTING. APPLY LIME, SEED AND FERTILIZER WITH A HYDROSEEDER\*\*

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The seedbed should be left in a reasonably firm and smooth condition.  
The last tillage operation should be performed across the slope wherever practical.

\* From Storm water Management and Erosion and Sedimentation Control Handbook for Urban and Developing Areas in New Hampshire, August 1992.

\*\* VEGETATING NEW HAMPSHIRE SAND AND GRAVEL PITS APRIL 1991, USDA TECHNICAL NOTE PM NH-24



- CONSTRUCTION SPECIFICATIONS**
- THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
  - THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
  - WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
  - FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MIDDLE-SECTION, AND BOTTOM.
  - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED.
  - FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3 SQUARE INCHES.
  - MAINTENANCE SHALL BE PERFORMED AS NEEDED TO PREVENT BULGES IN THE SILT FENCE DUE TO DEPOSITION OF SEDIMENT.

- MAINTENANCE**
- 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.
  - 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.
  - SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
  - 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.

**EROSION AND SEDIMENTATION CONTROL GENERAL NOTES**

- CONDUCT ALL CONSTRUCTION IN A MANNER AND SEQUENCE THAT CAUSES THE LEAST PRACTICAL DISTURBANCE OF THE PHYSICAL ENVIRONMENT. ALL DITCHES, SWALES AND PONDS MUST BE STABILIZED PRIOR TO DIRECTING FLOW TO THEM.
- ALL GROUND AREAS OPENED UP FOR CONSTRUCTION WILL BE REGRADED, SEEDED AND MULCHED IN THE SHORTEST PRACTICAL TIME. NO AREA MAY BE DISTURBED AND LEFT UN-STABILIZED FOR MORE THAN THIRTY DAYS. NO AREA IN EXCESS OF 2 ACRES SHALL BE EXPOSED AT ANY ONE TIME. ALL SOILS FINISH GRADED MUST BE STABILIZED WITHIN 72 HOURS OF DISTURBANCE. ALL TEMPORARY OF LONG TERM SEEDING MUST BE APPLIED PRIOR TO OCTOBER 1ST. EMPLOY TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES AS DETAILED ON THIS PLAN AS NECESSARY UNTIL ADEQUATE STABILIZATION HAS BEEN ASSURED.

TEMPORARY SEEDING: SEE "TEMPORARY SEEDING SPECIFICATIONS" IN PLANS.  
LONG TERM SEEDING: SEE "LONG TERM SEEDING SPECIFICATIONS" IN PLANS.

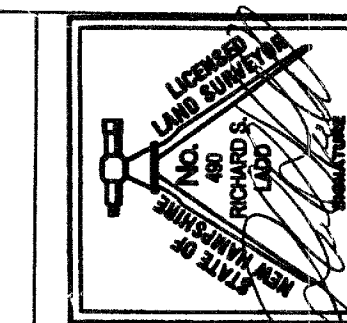
FOR EARTH MOVING OPERATIONS THAT OCCUR AFTER OCTOBER 1ST, MATTING (NAG S75 EROSION CONTROL BLANKET OR EQUAL) AND SEEDING PER TEMPORARY SEEDING SPECIFICATIONS OR OTHER STABILIZATION WILL BE REQUIRED FOR DISTURBED AREAS DURING WINTER MONTHS.

- STRAW OR HAY BALE BARRIERS AND SILTATION FENCING TO BE SECURELY EMBEDDED AND STAKED AS DETAILED. WHEREVER POSSIBLE A VEGETATED STRIP OF AT LEAST TWENTY FIVE FEET IS TO BE KEPT BETWEEN SILT FENCE AND ANY EDGE OF WET AREA.
- SEEDED AREAS WILL BE FERTILIZED AND RESEDED AS NECESSARY TO ENSURE VEGETATIVE ESTABLISHMENT.
- SEDIMENT BASIN(S), IF REQUIRED, TO BE CHECKED AFTER EACH SIGNIFICANT RAINFALL AND CLEANED AS NEEDED TO RETAIN DESIGN CAPACITY.
- STRAW BALE AND/OR SILT FENCE BARRIERS WILL BE CHECKED REGULARLY AND AFTER EACH SIGNIFICANT RAINFALL. NECESSARY REPAIRS WILL BE MADE TO CORRECT UNDERMINING OR DETERIORATION OF THE BARRIER AS WELL AS CLEANING, REMOVAL AND PROPER DISPOSAL OF TRAPPED SEDIMENT.
- TREATMENT SWALES WILL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY UNTIL ADEQUATE VEGETATIVE COVER HAS BEEN ESTABLISHED.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES IN THE PLAN SHALL MEET THE DESIGN STANDARDS AND SPECIFICATION SET FORTH IN THE STORM WATER MANAGEMENT AND EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE (AUGUST 1992 OR LATEST) PREPARED BY THE ROCKINGHAM COUNTY CONSERVATION DISTRICT, N.H. DES AND NRCS.
- PROVIDE SILT FENCING ON THE DOWN SLOPE SIDES OF EARTH STOCK PILES.
- A LOG/JOURNAL IS TO BE KEPT DOCUMENTING THE REGULAR INSPECTION AND MAINTENANCE OF THE EROSION AND SEDIMENTATION CONTROL PRACTICES REQUIRED ON THE SITE.
- NOTIFICATION OF INTENT (NOI) TO THE US EPA (STORMWATER NOTICE PROCESSING CENTER FOR A NPDES PHASE 2 STORMWATER PERMIT IS REQUIRED BY SITE OPERATOR AND OWNER AT LEAST 7 DAYS PRIOR TO ANY CONSTRUCTION ACTIVITY DISTURBING 1 ACRE OR MORE OF LAND. A COPY OF THE NOI WILL BE POSTED AT THE FOLLOWING SITE: [HTTP://CFPUBL.EPA.GOV/NPDES/STORMWATER/NOI/NOISEARCH.CFM](http://cfpub.epa.gov/npdes/stormwater/noi/noisearch.cfm)

**EROSION AND SEDIMENTATION CONTROL CONSTRUCTION PHASING AND SEQUENCING**

- SEE "EROSION AND SEDIMENTATION CONTROL - GENERAL NOTES" WHICH ARE TO BE AN INTEGRAL PART OF THIS PROCESS.
- INSTALL CONSTRUCTION ENTRANCE.
- INSTALL SILT FENCING AS PER DETAILS AND AT LOCATIONS SHOWN ON THE DRAWINGS. MAINTAIN REGULARLY TO PREVENT SEDIMENT MIGRATION.
- STRIP AND STOCKPILE TOPSOIL. STABILIZE STOCKPILES OF SOIL CONSTRUCTION MATERIAL BY PROVIDING SILT FENCING ON DOWNSLOPE SIDES.
- CONSTRUCT TREATMENT SWALES, LEVEL SPREADER. NO DRAINAGE WILL BE DIRECTED TO THE STRUCTURES UNTIL THEY ARE STABILIZED
- CONSTRUCT HAUL ROAD
- CONSTRUCT SEDIMENT TRAP/DETENTION AREA WITH SEDIMENT DEPTH MARKER.
- NO MORE THAN TWO ACRES IS TO BE OPENED AT ANY ONE TIME.
- FINISH GRADE AND COMPACT SITE.
- CONSTRUCT UPPER DIVERSION SWALES AND CONSTRUCT RIP-RAP CHUTES AS BANK DEVELOPS.
- MAINTAIN NEGATIVE SITE SLOPE OF PIT FLOOR (1% FRONT TO BACK) DURING EXCAVATION TO DIRECT MOST RUNOFF TO PIT WALL AREA.
- AS AREAS ARE COMPLETED, RE-SPREAD AND ADD TOPSOIL TO ALL SIDE SLOPES. TOTAL TOPSOIL THICKNESS TO BE A MINIMUM OF FOUR INCHES.
- FINISH GRADE AND COMPACT SITE.
- RESEED PER "LONG TERM SEEDING SPECIFICATIONS SHOWN IN PLANS.
- SITE CLOSEOUT.
- SILT FENCING AND OTHER TEMPORARY EROSION CONTROL MEASURES ARE TO BE MAINTAINED FOR TWELVE MONTHS AFTER CONSTRUCTION TO INSURE ESTABLISHMENT OF ADEQUATE SOIL STABILIZATION AND VEGETATIVE COVER. ALL SILT FENCING AND TRAPPED SILT ARE THEN TO BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
- SEDIMENT BASINS MUST BE CLEANED OUT AND RE-STABILIZED USING EROSION CONTROL MATTING FOLLOWING STABILIZATION OF THIS SITE.
- CLEAN SITE AND DRAINAGE STRUCTURES OF ALL SILTS AND DEBRIS.
- NOTIFY ALL PERMITTING AGENCIES WHEN CONSTRUCTION HAS FINISHED.

SCALE: AS NOTED



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DETAILS SHEET OF AN  
**EXCAVATION PLAN**  
 PREPARED FOR  
**ADVANCED EXCAVATING**  
 SITUATED IN THE TOWN OF  
**ALLENSTOWN, NEW HAMPSHIRE**

PREPARED BY:  
**R.G. Moynihan**  
 CIVIL ENGINEER AND SURVEYOR

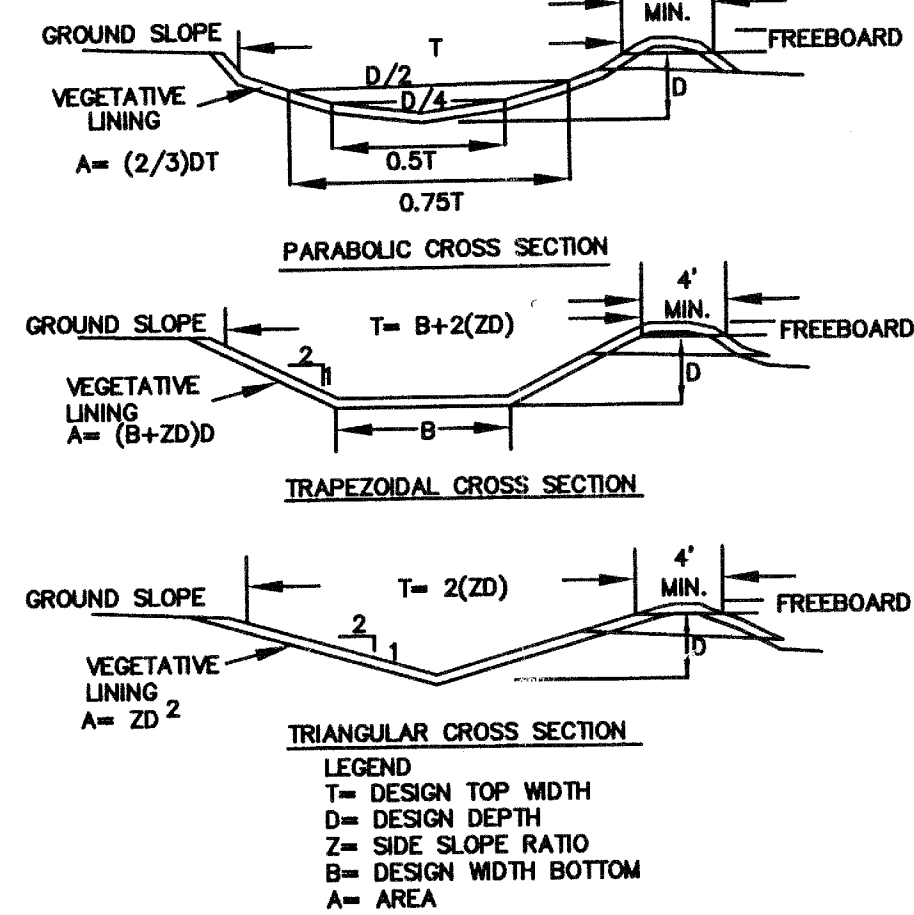
AND

**RS&L**  
 LAYOUT & DESIGN, INC.  
 18 CAPTAIN PARKER DRIVE  
 LEE, N.H. 03864  
 (603) 856-8586

DATE: 04-19-2009  
 DWG. NAME: #PONDING

77 Main Street - Raymond, NH 03077  
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 www.rslsurvey.com  
 DESIGN: CMW

FD NO. 465  
 JOB NO. 4492



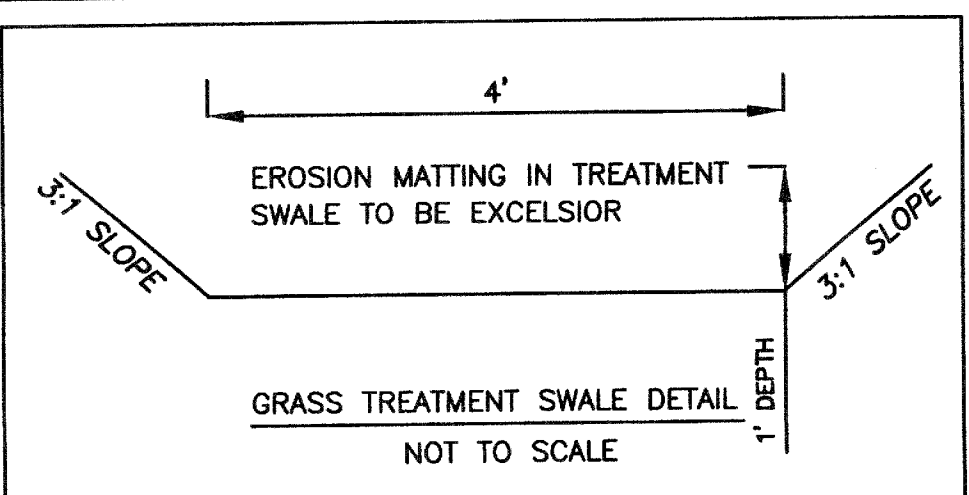
TYPICAL DIVERSION CROSS SECTIONS

## Construction Specifications

1. THE FOUNDATION AREA OF THE DIVERSION SHALL BE CLEARED AND GRUBBED OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL.
2. MATERIALS REMOVED FROM THE FOUNDATION AREA SHALL BE DISPOSED OF SO THEY WILL NOT INTERFERE WITH THE CONSTRUCTION OF THE DIVERSION.
3. THE DIVERSION SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS-SECTION AS REQUIRED TO MEET THE DESIGN CRITERIA. THE DIVERSION SHALL BE FREE OF IRREGULARITIES WHICH MAY CAUSE PONDING OR IMPEDE NORMAL FLOW.
4. ALL FILLS SHALL BE COMPACTED AS NECESSARY TO PREVENT UNEQUAL SETTLEMENT IN DIVERSION.
5. ALL EARTH EXCAVATED AND NOT USED FOR THE CONSTRUCTION OF THE DIVERSION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIVERSION.
6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE EROSION AND AIR AND WATER POLLUTION. ALL APPROPRIATE STATE AND LOCAL LAWS AND REGULATIONS SHALL BE COMPLIED WITH DURING CONSTRUCTION.
7. ALL DISTURBED AREAS SHALL BE STABILIZED ACCORDING TO APPROPRIATE BMP'S FOR VEGETATION AND MULCHING.

## Maintenance

DIVERSIONS SHOULD BE INSPECTED AFTER EVERY MAJOR RAINFALL. SEDIMENT AND DEBRIS SHOULD BE REMOVED FROM THE CHANNEL AND REPAIRS MADE AS NECESSARY. VEGETATION THAT HAS BEEN DAMAGED SHOULD BE RESEEDING AS NECESSARY.



### Construction Specifications

The foundation area of the waterway shall be cleared and grubbed of all trees, brush, stumps, and other objectionable material. Materials removed shall be disposed of so they will not interfere with the construction or proper functioning of the waterway.

The waterway shall be excavated or shaped to line, grade and cross section as required to meet the design criteria. The waterway shall be free of irregularities which will impede normal flow.

Earth fills required to meet sub grade requirements because of over excavation or topography shall be compacted to the same density as the surrounding soil to prevent unequal settlement that could cause damage to the completed waterway. Earth removed and not needed in construction shall be spread or disposed of so it will not interfere with the functioning of the waterway.

Stone and bedding for rock lined waterways shall meet the gradation requirements of the design and shall be durable and free of soil and other debris.

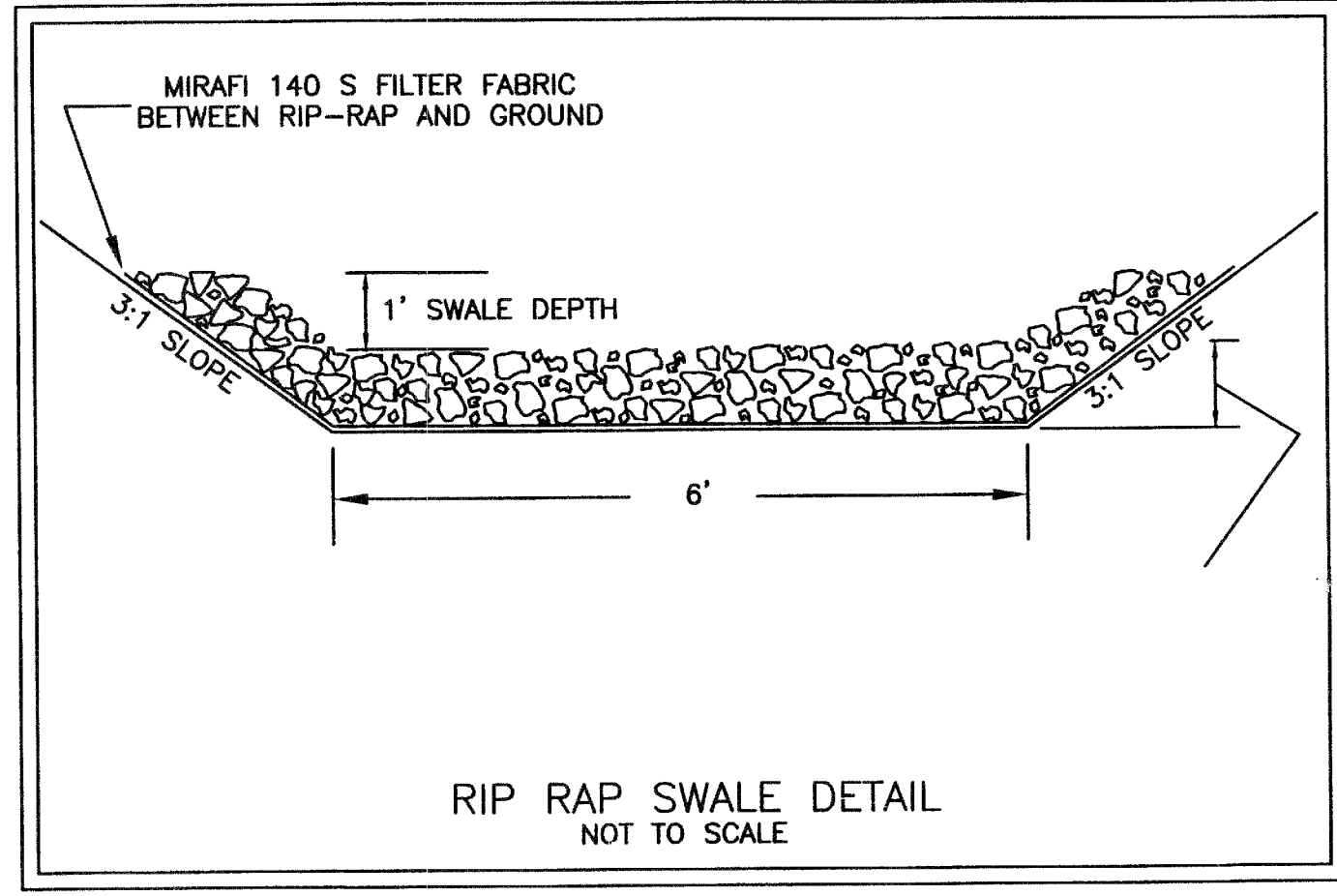
Construction operations shall be carried out in such a manner as to minimize erosion and air pollution. All appropriate state and local laws and regulations shall be complied with for design and installation.

The waterway shall be stabilized using the appropriate Best Management Practices for vegetative measures or stone center.

### Maintenance

Timely maintenance is important to keep the vegetation in the swale in good condition. Mowing should be done frequently enough to keep the vegetation in vigorous condition and to control encroachment of weeds and woody vegetation, however it should not be mowed too closely so as to reduce the filtering effect. Fertilize on an "as needed" basis to keep the grass healthy. Over fertilization can result in the swale becoming a source of pollution.

The swale should be inspected periodically and after every major storm to determine the condition of the swale. Rills and damaged areas should be promptly repaired and re-vegetated as necessary to prevent further deterioration.



### CONSTRUCTION SPECIFICATIONS

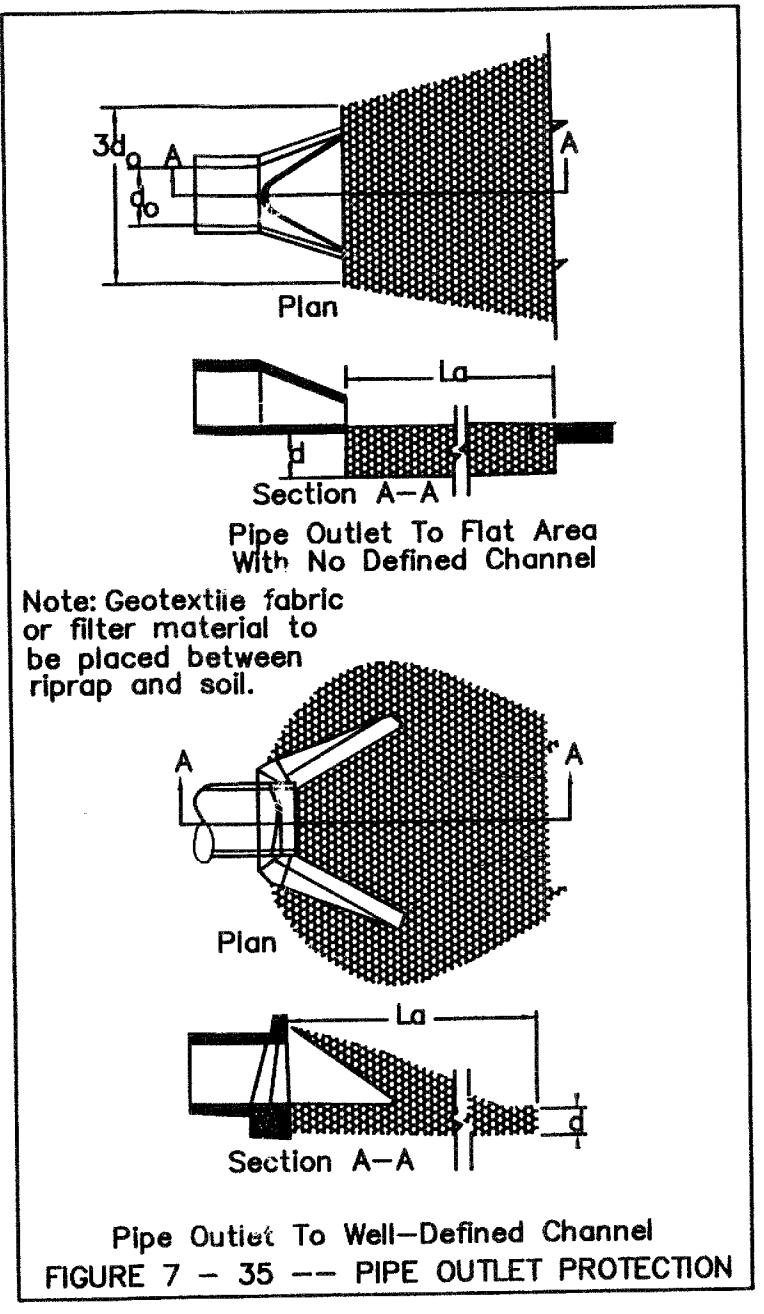
1. The sub grade for the filter material, geotextile fabric or rip rap shall be cleared and grubbed to remove all roots, vegetation, and debris and prepared to the lines and grades shown on the plans.
2. The rock and/or gravel used for filter and rip rap shall conform to the specified gradation.
3. Geotextile fabrics shall be protected from puncture or tearing during placement of the rock rip rap by placing a cushion of sand and gravel over the fabric. 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 displacement of the underlying materials. Hand placement may be required to prevent damage to any permanent structures.
5. Stones for rip rap 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. Flat rocks shall not be used for rip rap.
6. Voids in the rock rip rap should be filled with spalls and smaller rocks.

### MAINTENANCE

Rock rip rap 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 before further damage can take place. Woody vegetation should be removed from the rock rip rap annually because tree roots will eventually dislodge the rock rip rap. If the rip rap is on a channel bank, the stream should be kept clear of obstructions such as fallen trees, debris, and sediment bars that may change flow patterns, which could damage or displace the rip rap. Repairs must be carried out immediately to avoid additional damage to the rip rap.

GRADATION CHART FOR RIP RAP D50

| % OF WEIGHT SMALLER THAN THE GIVEN SIZE | SIZE OF STONE |            | BLANKET THICKNESS | D50 = |
|---|---------------|------------|-------------------|-------|
|   | FROM          | TO         | 18.5"             | 8"    |
| 100                                     | 12" INCHES    | 17" INCHES |                   |       |
| 85                                      | 11" INCHES    | 15" INCHES |                   |       |
| 50                                      | 8" INCHES     | 12" INCHES |                   |       |
| 15                                      | 2" INCHES     | 4" INCHES  |                   |       |



Source: Virginia Soil & Water Conservation Commission

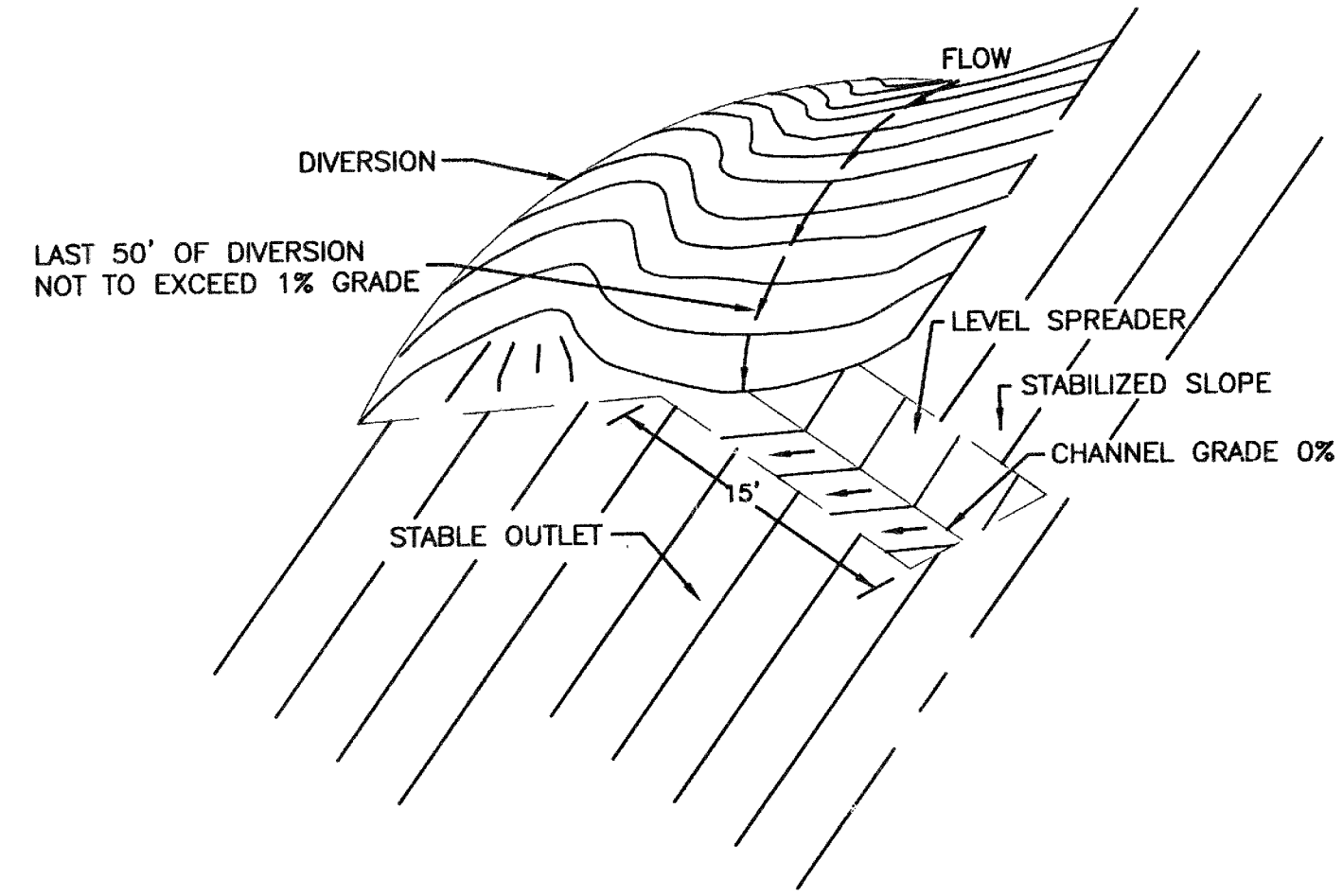
### PIPE OUTLET PROTECTION

#### CONSTRUCTION SPECIFICATIONS

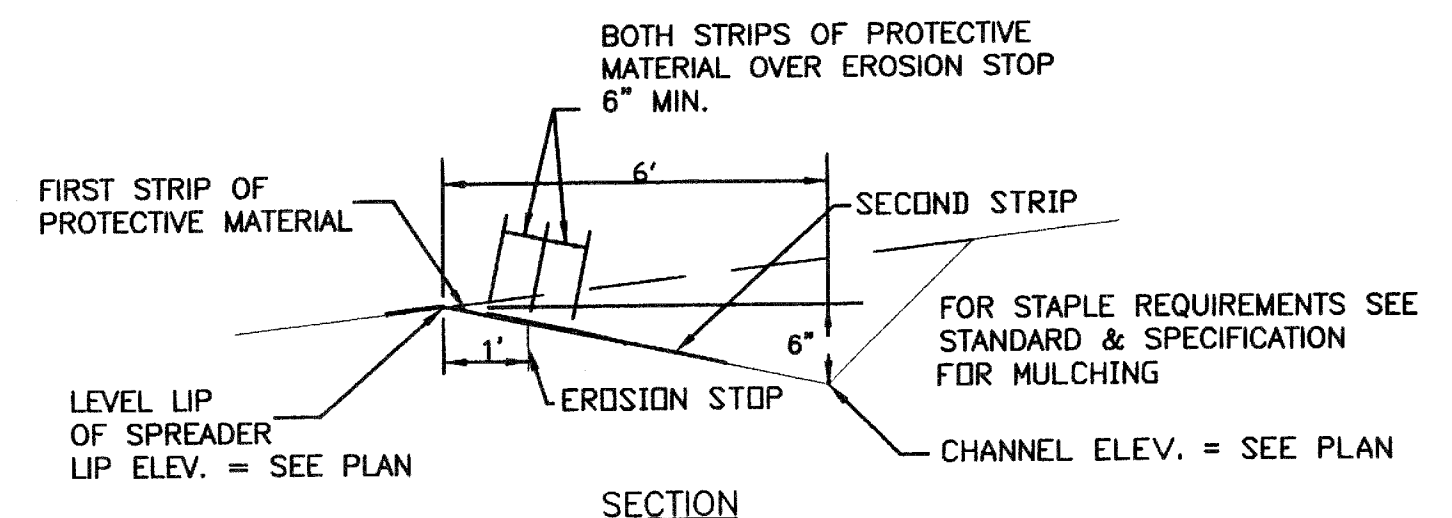
1. The sub grade for the filter material, geotextile fabric and rip rap shall be prepared to the lines and grades shown on the plans.
2. The rock or gravel used for filter or rip rap shall conform to the specified gradation.
3. Geotextile fabrics shall be protected from puncture or tearing during the 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.

#### MAINTENANCE

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 kept clear of obstructions such as fallen trees, debris, and sediment that could change flow patterns and/or tall water depths on the pipes. Repairs must be carried out immediately to avoid additional damage to the outlet protection apron.

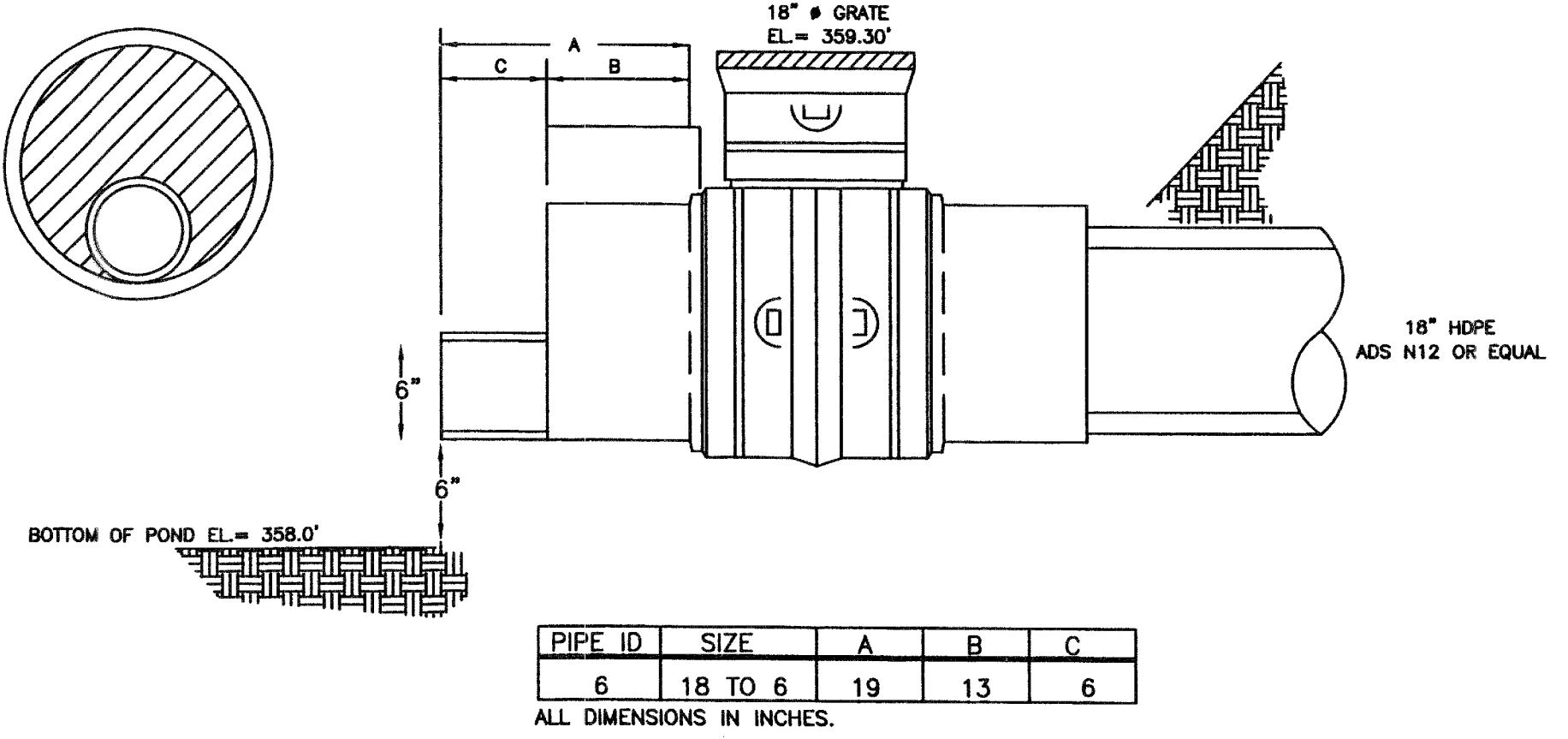


PERSPECTIVE VIEW



SECTION

5 LEVEL SPREADER NOT TO SCALE



DETENTION POND'S INLET END CAP NOT TO SCALE

| PIPE ID | SIZE    | A  | B  | C |
|---------|---------|----|----|---|
| 6       | 18 TO 6 | 19 | 13 | 6 |

ALL DIMENSIONS IN INCHES.

SCALE: AS NOTED

PREPARED BY:  
**R. G. Moynihan**  
 CIVIL ENGINEER AND SURVEYOR

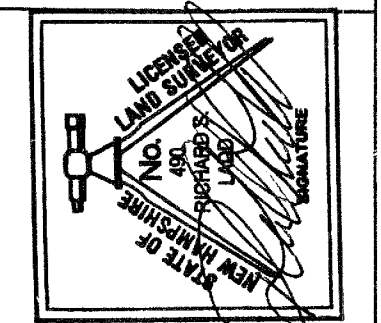
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77 Main Street - Raymond, NH 03077  
 Ph: 603-895-3986 - www.rsurvey.com  
 DATE: 04-19-2005  
 DWG. NAME: 44PDDING  
 DRAWN BY: CMW

PD NO. 465  
 JCP NC 44PPS

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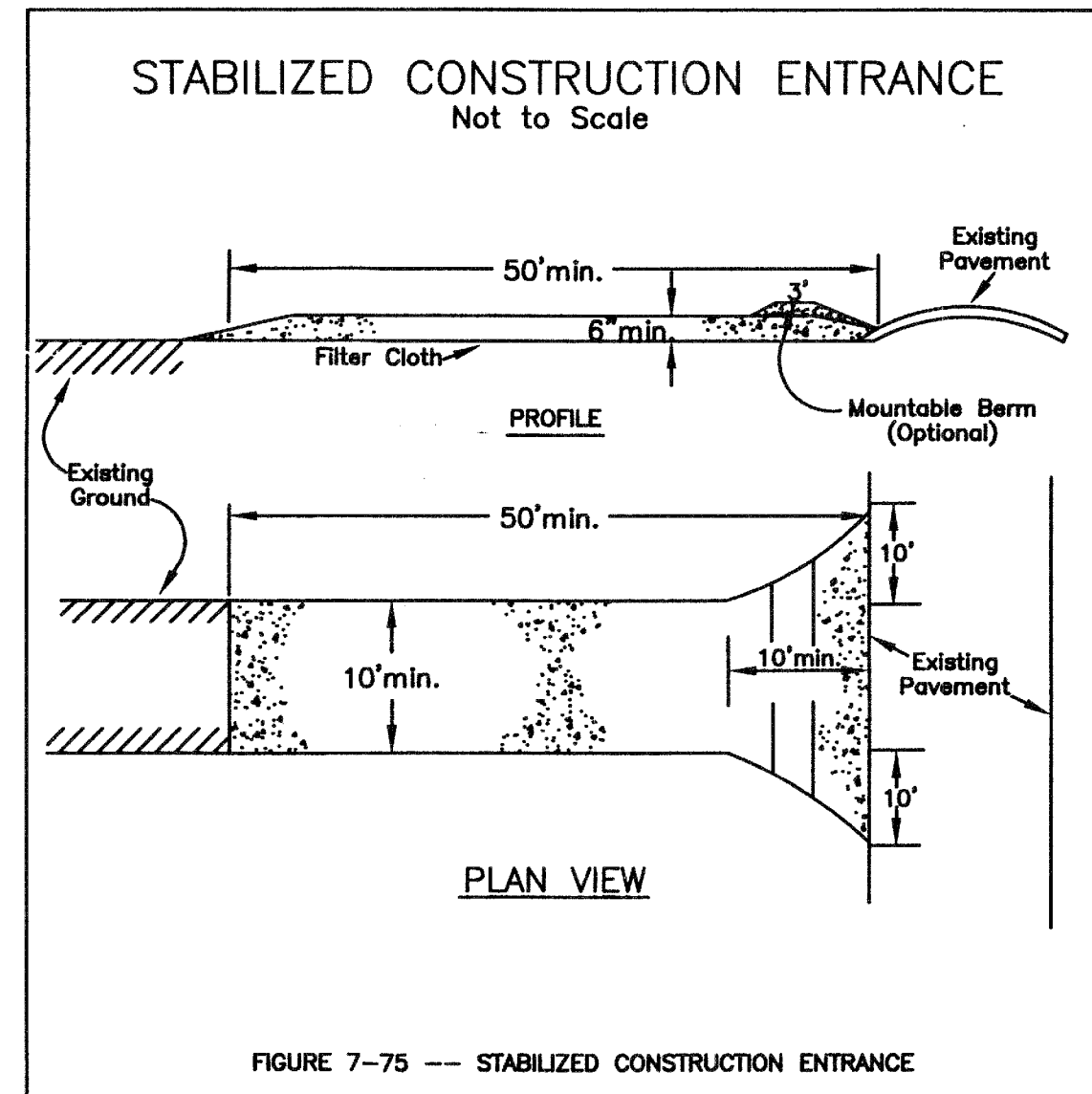


FIGURE 7-75 -- STABILIZED CONSTRUCTION ENTRANCE

Source: USDA Soil Conservation Service

**Construction Specifications**

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 construction 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 whichever 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 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 promptly.
8. Wheels shall be cleaned to remove mud prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone which drains into an approved sediment trapping device.

**Maintenance**

Mud and soil particles will eventually clog the voids in the gravel and the effectiveness of the gravel pad will not be satisfactory. When this occurs, the pad should be top dressed with new stone. Complete replacement of the pad may be necessary when the pad becomes completely clogged.

If washing facilities are used, the sediment traps should be cleaned out as often as necessary to assure that adequate trapping efficiency and storage volume is available. Vegetative filter strips should be maintained to insure a vigorous stand of vegetation at all times.

**SEDIMENT TRAP DETENTION  
RETENTION STRUCTURE**

**Construction Criteria**

1. Foundation Preparation -- The foundation area shall be cleared of trees, logs, stumps, roots, brush, boulders, sod, and rubbish. If needed to establish vegetation, the topsoil and sod shall be stockpiled and spread on the completed dam and spillways. Foundation surfaces shall be sloped no steeper than 1:1. The foundation area shall be thoroughly scarified before placement of the 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 foundations.

The cutoff trench and any other required excavations shall be dug to the lines and grades shown on the plans or as staked in the field. If they are suitable, excavated materials shall be used in the permanent fill.

Existing stream channels in the foundation area shall be sloped no steeper than 1:1 and deepened and widened as necessary to remove all stones, gravel, sand, stumps, roots, and other objectionable material and to accommodate compaction equipment.

2. Fill Placement -- The material placed in the fill shall be free of detrimental amounts of sod, roots, frozen soil, stones more than 6 inches in diameter (except for rock fills), and other objectionable matter.

Selected back fill material shall be placed around structures, pipe conduits and anti seep collars at about the same rate on all sides, to prevent damage from unequal loading.

The placing and spreading of fill material shall be started at the lowest point of the foundation and the fill brought up in horizontal layers of such thickness that the required compaction can be obtained. The fill shall be constructed in continuous horizontal layers except where openings or sectionalized fills are required. In those cases, the slope of the bonding surfaces between the embankment in place and the embankment to be placed shall not be steeper than 3 horizontal to 1 vertical. The bonding surface shall be treated the same as that specified for the foundation so as to insure a good bond with the new fill.

The distribution and gradation of materials shall be such that no lenses, pockets, streaks, or layers of material differ substantially in texture or gradation from the surrounding material. If it is necessary to use materials of varying texture and gradation, the more impervious material shall be placed in the center and upstream parts of the fill. If zoned fills of substantially differing materials are specified, the zones shall be placed according to the lines and grades shown on the drawings. The complete work shall conform to the lines, grades, and elevations shown on the drawings or as staked in the field.

3. Moisture Control -- The moisture content of the fill material shall be adequate for obtaining the required compaction. Material that is too wet shall be dried to meet this requirement, and material that is too dry shall have water added and mixed until the requirement is met.
4. Compaction -- Construction equipment shall be operated over the areas or each layer of fill to insure that the required compaction is obtained. Special equipment shall be used if needed to obtain the required compaction.

If a minimum required density is specified, each layer of fill shall be compacted as necessary to obtain that density.

Fill adjacent to structures, pipe conduits, and anti seep collars shall be compacted to a density equivalent to that of the surrounding fill by means of hand tamping or manually directed power tamper or plate vibrators. Fill adjacent to concrete structures shall not be compacted until the concrete is strong enough to support the load.

5. Protection -- A protective cover of vegetation shall be established on all exposed surfaces of the embankment, spillway, and borrow area if soil and climatic conditions permit. If soil or climatic conditions preclude the use of vegetation and protection is needed, non-vegetative means such as mulches or gravel may be used. In some places, temporary vegetation may be used until conditions permit establishment of permanent vegetation. The embankment and spillway shall be fenced if necessary to protect the vegetation.

Seedbed preparation, seeding, fertilizing, and mulching shall comply with the appropriate vegetative BMP's.

6. Concrete -- The mix design and testing of concrete shall be consistent with the strength requirements of the job. Mix requirements or necessary strength shall be specified. The type of cement, air entrapment, slump, aggregate, or other properties shall be specified if necessary. All concrete is to consist of a workable mix that can be placed and finished in an acceptable manner. Necessary curing shall be specified. Reinforcing steel shall be placed as indicated on the plans and shall be held securely in place during concrete placement. Sub grades and forms shall be installed to line and grade, and the forms shall be mortar tight and unyielding as the concrete is placed.

**SAFETY**

Ponds that are easily accessible in populated areas should incorporate all possible safety precautions. Steep side slopes should be avoided. It is recommended that side slopes of 4:1 (horizontal to vertical) or flatter be used where the topography permits. If the topography will not allow such slopes, then the perimeter of the basin should be fenced. Warning signs and lifesaving equipment should be available at each structure.

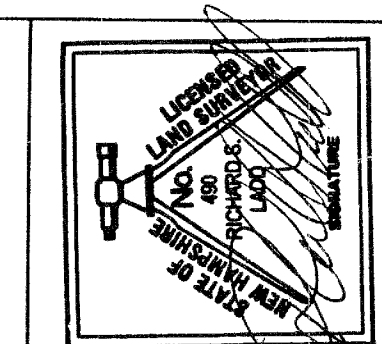
**MAINTENANCE**

Maintenance is necessary if detention/retention basins are to continue to function as originally designed. A local government, a designated group such as a homeowners' association or some individual must be assigned responsibility for maintaining the structures and the basin area. A maintenance plan should be developed that outlines the maintenance operations and a schedule for carrying out the procedures.

The following are some items which should be considered in formulating a maintenance plan:

1. Embankment -- The embankment should be inspected annually to determine if rodent burrows, wet areas, or erosion of the fill is taking place.
2. Vegetation -- The vegetated areas of the structure should be protected from damage by fire, grazing, traffic, and dense weed growth. Lime and fertilizer should be applied as necessary as determined by soil tests. Trees and shrubs should be kept off the embankment and emergency spillway areas.
3. Inlets -- Pipe inlets and spillway structures should be inspected annually and after every major storm. Accumulated debris and sediment should be removed. If pipes are coated, the coating should be checked and repaired as necessary.
4. Outlets -- Pipe outlets should be inspected annually and after every major storm. The condition of the pipes should be noted and repairs made as necessary. If erosion is taking place, measures should be taken to stabilize and protect the affected area of the outlet.
5. Sediment -- Sediment should be continually checked in the basin. When sediment accumulations reach the predetermined design elevation, then sediment should be removed and properly disposed of.
6. Safety inspections -- All permanent impoundments should be inspected by a qualified professional engineer on a periodic basis. If there is potential for significant damage or loss of life downstream, then the inspection should be carried out annually. The designated individual or group should also make inspections after every major storm event.

SCALE: AS NOTED



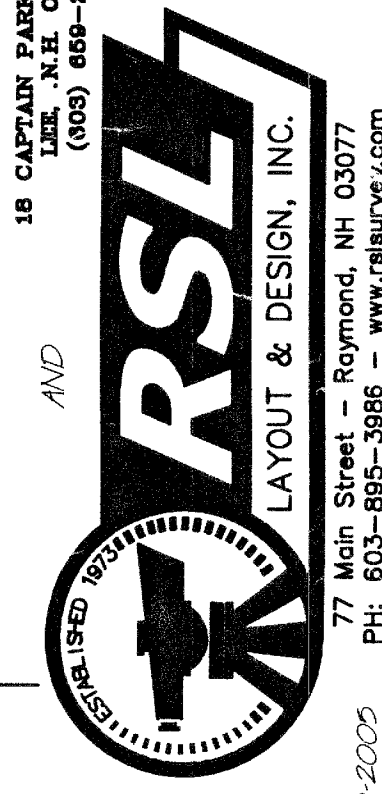
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