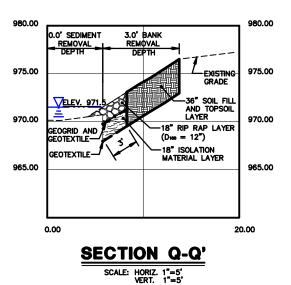
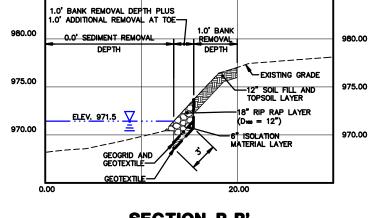


NOTE:

 SIMILAR FOR 2.0' SEDIMENT REMOVAL DEPTH EXCEPT INCREASE ISOLATION MATERIAL LAYER TO 12 INCHES.

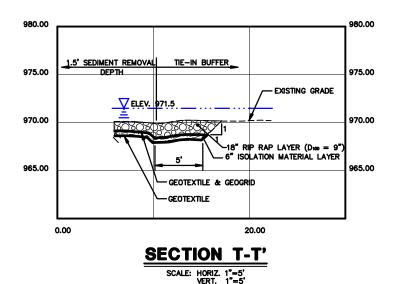
# SECTION S-S' SCALE: HORIZ. 1"=5' VERT. 1"=5'

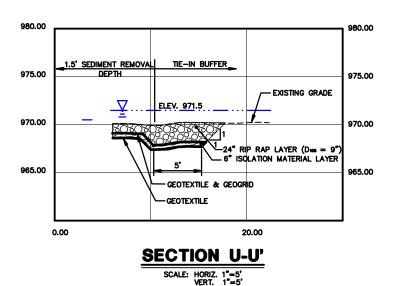




985.00

# SECTION R-R' SCALE: HORIZ. 1"=5' VERT. 1"=5'



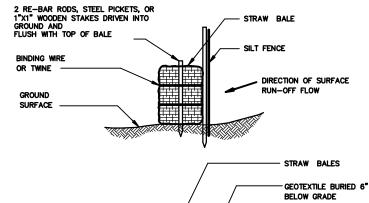


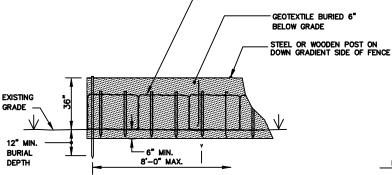
985.00

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
REMOVAL ACTION WORK PLAN UPPER 1/2-MILE REACH OF HOUSATONIC RIVER

**CROSS-SECTIONS** 







#### NOTES:

UNTIL SUCH TIME THAT ALL EXCAVATION ACTIVITIES HAVE BEEN COMPLETED AND BACKFILL HAS INITIALLY BEEN PLACED IN ALL AREAS, SILT ACCUMULATIONS ADJACENT TO EROSION CONTROL MEASURES SHALL BE IMMEDIATELY REMOVED AND DISPOSED WITH SOILS SUBJECT TO OFF-SITE TRANSPORT AND DISPOSAL.

ONCE BACKFILL HAS BEEN PLACED, THE CONTRACTOR SHALL REMOVE ACCUMULATIONS WHEN THE DEPOSIT REACHES APPROXIMATE ONE—HALF OF THE HEIGHT OF SILT FENCE.

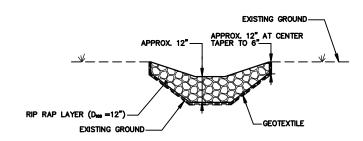
SILT FENCING WILL BE REMOVED BY THE CONTRACTOR WHEN REQUESTED BY GE.

SILT FENCE SHALL BE INSTALLED IN CONJUNCTION WITH STRAW BALES, UNLESS OTHERWISE SPECIFIED.

THE STRAW BALES/SILT FENCE WILL BE USED FOR TEMPORARY EROSION AND SEDIMENTATION CONTROL ONLY

# STRAW BALE/SILT FENCE DETAIL

NOT TO SCALE



# 9° MIN. 1.5' MIN. GEOTEXTILE GEOTEXTILE GEOTEXTILE A 24° MAX & CENTER

SECTION A-A

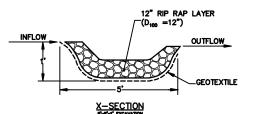
PROFILE

#### NOTES:

- 1. STONE WILL BE PLACED ON GEOTEXTILE AT THE LOCATION SHOWN ON FIGURE 8-2.
- EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
- 3. PROTECT THE CHANNEL DOWNSTREAM OF THE CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.

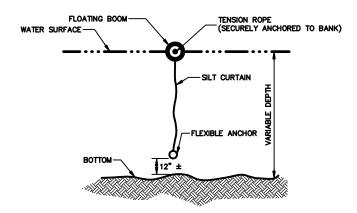
#### **CHECK DAM DETAIL**

NOT TO SCALE



### **SETTLING BASIN**

NOT TO SCALE



# **FLOTATION SILT CURTAIN**

OT TO SCALE

# RECONSTRUCTED SWALE DETAIL

NOT TO SCALE

#### GENERAL NOTES:

1. ALL MATERIALS SHALL BE FURNISHED AND INSTALLED TO MEET THE APPROPRIATE REQUIREMENTS OF THE LATEST EDITION OF MASSACHUSETTS HIGHWAY DEPARTMENT (MHD) STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS AND METHODS OF SAMPLING AND TESTING, CODES AND STANDARDS, ASSOCIATION FOR TESTING AND MATERIALS (ASTM) SPECIFICATIONS AND STANDARDS, AND AMERICAN WELDING SCIETY (AWS).

2. SILT FENCE FABRIC; FABRIC SHALL BE MANUFACTURED BY NICOLON MIRAFI, INC., AMOCO FABRICS, INC., OR OTHER APPROVED MANUFACTURER. THE FABRIC SHALL BE A WOVEN FABRIC WITH LESS THAN 50% ELONGATION (IN ACCORDANCE WITH ASTM D 4632) AND SHALL CONFORM TO THE TEMPORARY SILT FENCE REQUIREMENTS OF AASHTO M-288, SECTION 8, SUMMARIZED BELOW:

PROPERTY	TEST METHOD	REQUIREMENT
GRAB STRENGTH	ASTM D 4632	
MACHINE DIRECTION		> 550 N
X-MACHINE DIRECTION		> 450 N
PERMITTIVITY	ASTM D 4491	> 0.05 SEC -1
APPARENT OPENING SIZE	ASTM D 4751	< 0.60 MM
ULTRAVIOLET STABILITY	ASTM D 4355	70% AFTER 500
(RETAINED STRENGTH)		HOURS EXPOSURE.

- 3. BALED STRAW: STRAW BALES SHALL BE OATS, WHEAT, RYE GRAIN, BROOMSAGE OR OTHER STRAW, OR NATIVE GRASS HAY.
- 4. STAKES: STAKES FOR BALED STRAW FILTER BARRIERS SHALL BE A MINIMUM OF 1° X 1° WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET.
- 5. POSTS: STEEL OR WOODEN POSTS SHOULD BE USED FOR SILT FENCE CONSTRUCTION. THE MAXIMUM POST SPACING FOR SILT FENCING SHALL BE 8 FEET. PRE-FABRICATED SILT FENCE WITH ATTACHED WOODEN POSTS IS ACCEPTABLE PROVIDED THE FABRIC MEETS THE REQUIREMENTS.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING SURVEY CONTROL TO VERIFY EXISTING GRADES. GE WILL PROVIDE THE CONTRACT WITH SURVEY BASELINE AND COPIES OF ALL DRAWINGS IN ELECTRONIC FORMAT. THE CONTRACTOR WILL BE RESPONSIBLE FOR ESTABLISHING AND VERIFYING LIMITS IN THE FIELD.
- 7. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANIES FOR THE TEMPORARY REMOVAL AND REPLACEMENT OF ANY UTILITY POLES, GUY WIRES, UNDERGROUND UTILITIES, AND/OR OVERHEAD WIRES THAT FALL WITHIN THE LIMITS OF EXCAVATION.
- 8. THE CONTRACTOR SHALL TAKE ALL APPROPRIATE MEASURES TO AVOID DAMAGE TO STRUCTURES THAT ARE NOT SUBJECT TO REMOVAL AND REPLACEMENT AS PART OF THIS CONTRACT. THE CONTRACTOR SHALL REPAIR ANY STRUCTURAL OR EXTERNAL DAMAGES TO SUCH STRUCTURES AT NO ADDITIONAL COST TO GE.
- 9. THE CONTRACTOR WILL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING PERIMETER EROSION AND SEDIMENTATION CONTROLS (IN THE FORM OF SILT FENCING, HAY BALES, AND/OR SHEET PILING), RUN-OFF WATER COLLECTION, AND DUST SUPPRESSION IN ALL STOCKPILE AND DEWATERING AREAS. THE CONTRACTOR SHALL COVER THE STAGED MATERIALS WITH POLYETHYLENE WHEN NO ACTIVITIES ARE BEING PERFORMED IN THE STAGING AREA.
- 10. THE CONTRACTOR SHALL PROVIDE A WATER TRUCK AND APPROPRIATE EQUIPMENT FOR DUST SUPPRESSION WITHIN SOIL EXCAVATION, STAGING, AND LOADING AREAS. THESE AREAS SHALL BE WATERED BASED ON VISUAL OBSERVATIONS, THE RESULTS OF AIR MONITORING ACTIVITIES, AND/OR DIRECTION FROM GE.
- 11. THE CONTRACTOR SHALL NOT IMPLEMENT EXCAVATION OR OTHER SOIL HANDLING ACTIVITIES IF, FOR ANY REASON, PERIMETER AIR MONITORING IS NOT BEING PERFORMED.
- 12. ALL EQUIPMENT OPERATED WITHIN THE LIMITS OF EXCAVATION SHALL BE CLEANED AND TESTED PRIOR TO TRANSPORT OFF-SITE.
- 13. THE HORIZONTAL LIMITS OF EXCAVATION ACTIVITIES WILL BE PHYSICALLY DELINEATED IN THE FIELD BY THE CONTRACTOR. WITHIN THESE LIMITS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXECUTING AND VERIFYING THE SPECIFIED DEPTH OF EXCAVATION.
- 14. WHEN EXCAVATING MATERIALS FROM A GIVEN AREA CONTAINING BOTH TSCA AND NON-TSCA MATERIALS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEGRECATING THESE MATERIALS (ACCORDING TO THEIR TSCA OR NON-TSCA CLASSIFICATION) FOR THE PURPOSES OF MATERIAL HANDLING, TEMPORARY STAGING, TRANSPORT, AND DISPOSAL
- 15. LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES THAT MAY EXIST WITHIN THE PROJECT LIMITS PRIOR TO COMMENCEMENT
- 16. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL DEBRIS, BRUSH, LOGS, TREES, STUMPS, REFUSE, AND RUBBISH FROM WITHIN THE PROJECT LIMITS, AS REQUIRED TO PERFORM THE
- 17. THE CONTRACTOR SHALL COORDINATE SITE ACTIVITIES TO AVOID INFRINGEMENT UPON NORMAL TRAFFIC FLOW ON ADJACENT
- 18. THE SOILS SUBJECT TO EXCAVATION AND HANDLING AS PART OF THIS CONTRACT POTENTIALLY CONTAIN PCB3 AND OTHER HAZARDOUS CONSTITUENTS AND SHOULD BE HANDLED IN ACCORDANCE WITH APPLICABLE REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING AND IMPLEMENTING APPROPRIATE HEALTH AND SAFETY MEASURES FOR ITS EMPLOYEES AND SUPCONTRACTORS.
- 19. BACKFILL MATERIAL SPECIFICATIONS ARE AS FOLLOWS:
- A. GRANULAR FILL MATERIAL—GRANULAR FILL MATERIAL SHALL BE MI.04.0 TYPE A, OF THE MHD STANDARD SPECIFICATIONS (TESTED AT A FREQUENCY OF ONE SAMPLE/2000 CY), OR APPROVED EQUAL BY GE.
- B. SOIL FILL MATERIAL (BACKFILL AND TOPSOIL) —SOIL FILL MATERIALS SHALL BE LOAM OR SANDY LOAM FREE OF LARGE (GREATER THAN 3—INCHES) OBJECTS, STICKS, ROOTS, OR ANY OTHER DELETERIOUS MATERIALS.
- C. ISOLATION LAYER MATERIAL—ISOLATION LAYER MATERIAL SHALL CONSIST OF A 6—INCH MINIMUM SILTY SAND LAYER, CONTAIN A MINIMUM TOTAL ORGANIC CARBON (TOC) OF 0.5% (TESTED AT A FREQUENCY OF ONE SAMPLE/500 CY), AND HAVE THE FOLLOWING GRADATION TOLERANCE BY WEIGHT:

PERCENT PASSING	U.S. STANDARD SIEVE	TEST METHOD
95-100	#4	4071 0 400 07
30-40	#50	ASTM D 422-63 SAMPLE/500 CY
20-40	#200	Gram 122/000 01

D. <u>RIP RAP</u>-RIP RAP SHALL HAVE THE FOLLOWING GRADATION, TOLERANCE LIMITS

BY WEIGHT (W):		
D100 =9"	D <sub>100</sub> =12"	TEST METHOD
W100 (MAX) =60 lb.	W100 (MAG) = 90 lb.	
Wes =20−30 lb.	Wes = 30-45 lb.	ASTM D 5519-94
Wee =10−15 lb.	Wse =15-20 lb.	1 SAMPLE/ 2000 CY
W A F II	144 4 6 11	1

- E. TOPSOIL—SANDY LOAM CONTAINING APPROXIMATELY 3-5% ORGANIC MATTER. THE TARGET pH FOR THE SOIL IS 6 (+/- 1 STANDARD UNIT).
- 20. THE CONTRACTOR SHALL RESTORE TO PRE-REMEDIATION CONDITIONS ALL SUPPORT AREAS THAT ARE IMPACTED BY REMEDIATION ACTIVITIES, INCLUDING EQUIPMENT AND MATERIALS STORAGE AREAS, SOIL LOADING AND STAGING AREAS, PARKING AREAS, AND LOCATIONS OF OFFICE TRAILERS.
- 21. THE DRAWINGS MAY NOT INDICATE ALL SURFACE FEATURES SUBJECT TO REPLACEMENT AS PART OF SITE RESTORATION ACTIVITIES. THIS WILL NOT RELIEVE THE CONTRACTOR FROM REPLACING ANY AND ALL SUCH ITEMS AT NO ADDITIONAL COST TO GE.
- 22. BACKFILLED AND RESTORED AREAS WILL BE SUBJECT TO FINAL SURVEY VERFICATION (BY THE CONTRACTOR). THE CONTRACTOR SHALL REPAIR ANY ITEMS THAT WERE NOT RESTORED TO THE LOCATIONS AND/OR ELEVATIONS REQUIRED BY THIS CONTRACT.

#### 23. SEED:

TARGET SEED MIX (APPROXIMATE)		
SEED NAME	PERCENTAGE	
LITTLE BLUESTEM	30	
ANNUAL RYE-GRASS	10 (ADDED TO SEED MIX)	
BIG BLUESTEM	25	
SWITCHGRASS	10	
DEERTONGUE	10	
FOX SEDGE	5	
PENNSYLVANIA SMARTWEED	5	
CANADIAN WILD-RYE	5	
CANADIAN GOLDENROD	2	
GIANT GOLDENROD	2	
WHITE SNAKEROOT	2	
CUP-PLANT	1	
NODDING BUR-MARIGOLD	1	
SHOWY TICK-TREFOIL	1	
BUTTERFLY MILKWEED	1	

THE SEED SHALL BE DELIVERED IN BAGS WITH CERTIFIED TAGS OR LABELS ATTACHED TO EACH BAG SHOWING THE NAME (KIND AND VARIETY), PERCENT OF GERMINATION AND PURITY OF THE SEED, AND THE PERCENT OF NOXIOUS WEEDS AND INERT MATTER.

- 24. <u>FERTILIZER</u>: FERTILIZERS SHALL COMPLY WITH THE FERTILIZER LAWS OF THE STATE OF MASSACHUSETTS. UNLESS OTHERWISE DIRECTED, FERTILIZER SHOULD MEET THE REQUIREMENTS OF MHD ITEM 6.02.0. ALL FERTILIZERS SHALL BE TRANSPORTED IN CONTAINERS WHICH WILL ENSURE PROPER PROTECTION AND HANDLING.
- 25. MULCH: MULCHING MATERIALS SHALL BE OATS, WHEAT, RYE GRAIN, BROOMSAGE OR OTHER STRAW, NOT NATIVE GRASS HAY. IT SHALL BE REASONABLY FREE FROM JOHNSON GRASS AND OTHER NOXIOUS GRASSES AND WEEDS. VEGETATIVE MATERIAL THAT IS WET OR THAT HAS BEEN BALED GREEN SHALL NOT BE USED.
- 26. GEOTEXTILES: GEOTEXTILES USED FOR TEMPORARY OR PERMANENT EROSION CONTROL, INCLUDING PLACEMENT BELOW RIP RAP, WILL BE A WOVEN MONOFILAMENT GEOTEXTILE THAT MEETS THE FOLLOWING REQUIREMENTS:

PROPERTY	TEST METHOD	REQUIREMENT (MARV)
GRAB STRENGTH	ASTM D 4632	> 1100 N
TEAR STRENGTH	ASTM D 4533	> 250 N
PUNCTURE STRENGTH	ASTM D 4833	> 400 N
BURST STRENGTH	ASTM D 3786	> 2700 N
PERMITTIVITY	ASTM D 4491	> 0.2 SEC -1
APPARENT OPENING SIZE	ASTM D 4751	< 0.25 MM

- 27. GEOGRID: GEOGRID SHALL BE STRATAGRID 100 OR MIRAGRID 2XT OR APPROVED EQUAL.
- 28. ROLLED EROSION CONTROL PRODUCTS: EROSION CONTROL MATTING SHALL BE NORTH AMERICAN GREEN SC150 FIBER MAT, OR EQUIVALENT (70 PERCENT AGRICULTURAL STRAW AND 30 PERCENT COCONUT FIBER ENCASED IN A HEAVYWEIGHT TOP NET AND A PHOTODEGRADABLE BOTTOM NET).
- 29. GEOTEXTILE, GEOGRID AND ROLLED EROSION CONTROL PRODUCT PLACEMENT: GEOTEXTILES AND ROLLED EROSION CONTROL PRODUCTS WILL BE PLACED AND MAINTAINED IN ACCORDANCE WITH AASHTO M288 APPENDIX A4.
- 30. SILT CURTAIN: GEOMEMBRANE SHALL BE 30—MIL PVC HAVING THE MINIMUM PHYSICAL PROPERTIES INDICATED BELOW:

TEST METHOD	REQUIREMENT
ASTM D-882	>60 LB/IN
ASTM D-882	>300%
ASTM D-882	>9LB/IN
	ASTM D-882 ASTM D-882

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
REMOVAL ACTION WORK PLAN—
UPPER 1/2-MILE REACH OF HOUSATONIC RIVER

**GENERAL NOTES AND DETAILS** 



BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE **7-2** 

