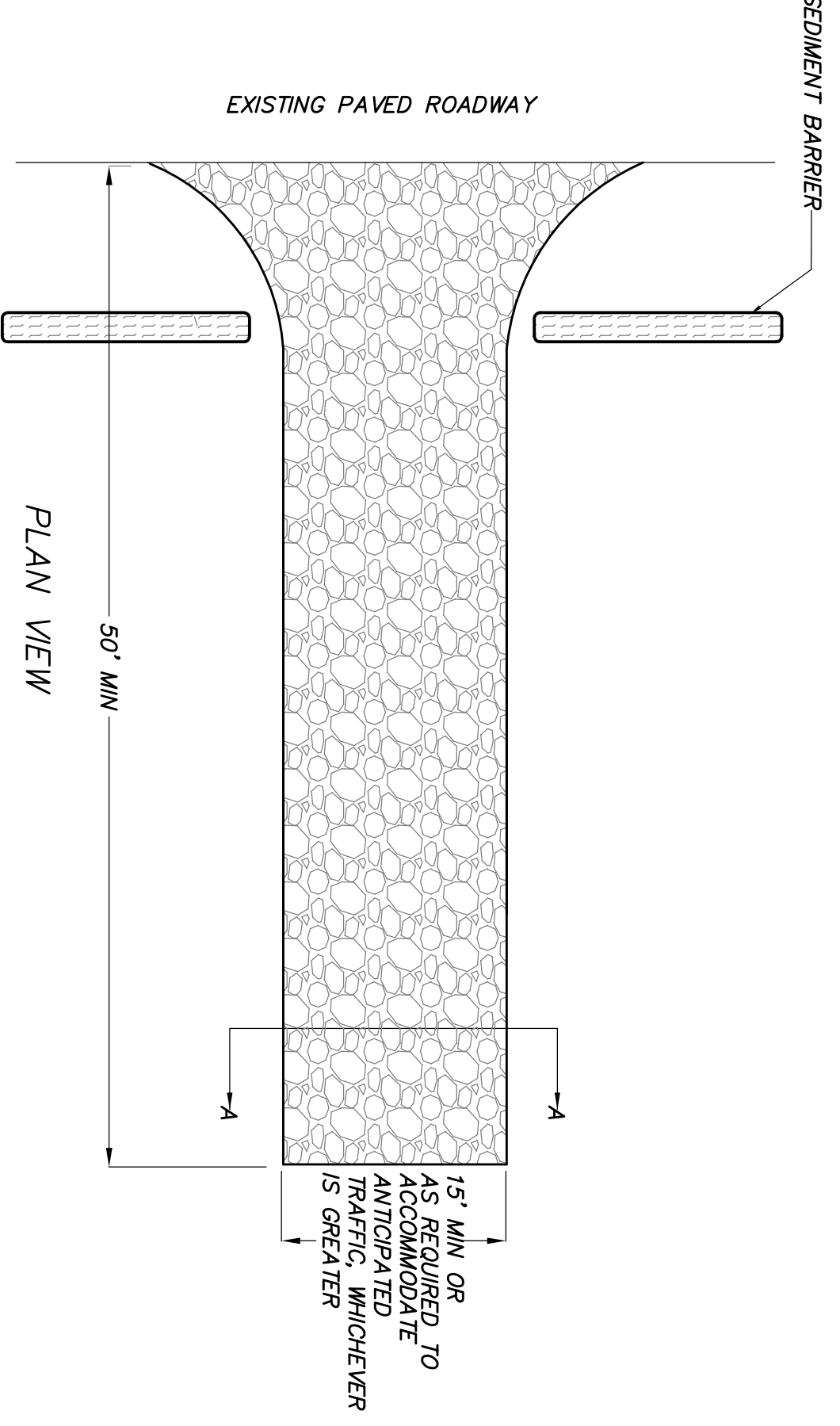


**EROSION CONTROL AND SEDIMENTATION NOTES:**

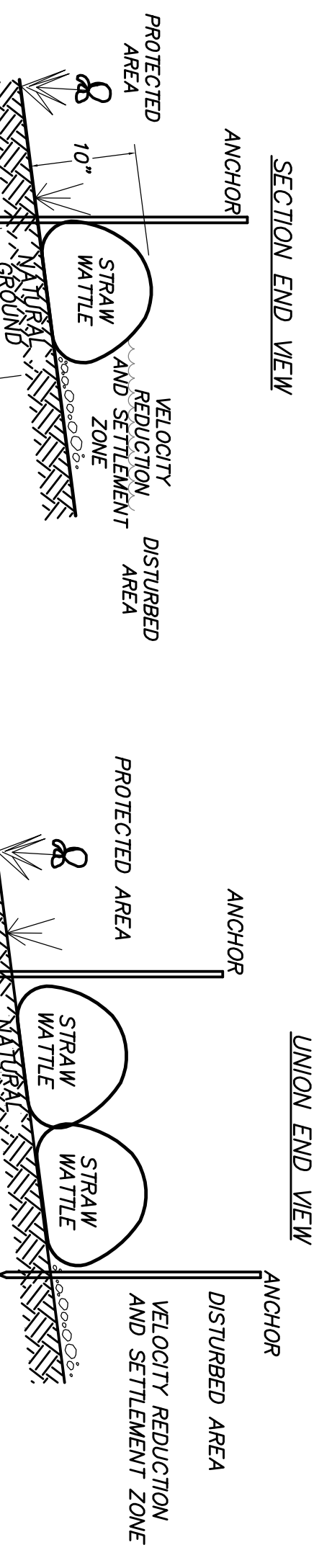
1. STRAW WATTLE SILTATION BARRIER: THE SILTATION BARRIER WILL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. AN ADDITIONAL SUPPLY OF STRAW WATTLES SHALL BE KEPT ON SITE TO REPLACE ANY WATTLES THAT ARE DISTURBED. ON A WEEKLY BASIS AND AFTER EVERY STORM EVENT, THE CONTRACTOR SHALL VERIFY THAT ALL EROSION CONTROL AND STABILIZING MEASURES ARE STILL IN PLACE AND INTACT. ANY BREAKS IN STRAW WATTLES WILL BE CORRECTED IMMEDIATELY.
2. CONSTRUCT "TEMPORARY CONSTRUCTION ENTRANCE" AS SHOWN ON DETAIL PLAN FROM THE BEGINNING OF CONSTRUCTION ACTIVITIES THROUGH CONSTRUCTION OF VEHICLES SHALL EXIT THE SITE OVER THIS "TEMPORARY CONSTRUCTION ENTRANCE." THE CONTRACTOR SHALL USE THIS AREA TO REMOVE SOIL FROM THE TIRES OF CONSTRUCTION VEHICLES. "TEMPORARY CONSTRUCTION ENTRANCE" SHALL CONSIST OF SIX TO TWELVE INCHES OF TWO TO THREE INCH STONE.
3. THE SURFACE OF ALL DISTURBED AREAS SHALL BE STABILIZED DURING AND AFTER CONSTRUCTION. TEMPORARY MEASURES SHALL BE TAKEN DURING CONSTRUCTION TO REDUCE EROSION AND SEDIMENTATION. PERMANENT EROSION CONTROL MEASURES SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION. MEASURES SHALL BE APPROVED BY THE ENGINEER. ALL DISTURBED SLOPES WILL BE STABILIZED WITH A 4 TO 6 INCHES OF TOP-SOIL AND A PERMANENT VEGETATIVE COVER SOME OR ALL OF THE FOLLOWING:
  - A. TEMPORARY MULCHING (STRAW)
  - B. TEMPORARY SEEDING
  - C. PERMANENT SEEDING
  - D. PLANTING OF SOY
  - E. PLANTING OF SOD
  - F. PLACEMENT OF HAY (WINTER MONTHS)
4. DUST CONTROL: IF DUST IS GENERATED DURING CONSTRUCTION, ACTIVITIES THEN THE USE OF WATER TRUCKS OR WATER SPRINKLING WILL BE IMPLEMENTED.
5. DEBRIS AND LITTER REMOVAL: DEBRIS AND LITTER SHALL BE KEPT TO A MINIMUM AT ALL TIMES.
6. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING ANY SAND, DIRT, OR DEBRIS WHICH ERODES FROM ROAD CONSTRUCTION THAT MAY REDUCE THE EFFICIENCY OF THE PROTECTIVE MEASURES (SILT BARRIERS, SWALES, PONDS, CHECK DAMS) AND TO PREVENT TRANSPORTING OF SILT OR DEBRIS ONTO PRIVATE PROPERTY OR AREAS BEYOND THE LIMIT OF WORK BOUNDARIES.
7. IF A DRAINAGE OR RUN-OFF PROBLEM OCCURS DURING CONSTRUCTION, THE APPLICANT SHALL TAKE IMMEDIATE CORRECTIVE MEASURES.
8. ANY SILT OR CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE ACCESS ROAD (GREAT ROAD) AND REMOVED FROM EXISTING DRAINAGE SYSTEM INCLUDING CATCH BASIN Sumps, PIPELINES, MANHOLES, AND DITCHES IMMEDIATELY UPON DISCOVERY, OR WITHIN 24-HOURS OF BEING NOTED BY THE TOWN. THE STREET SHALL BE SWEEP AS APPROPRIATE FOR DUST CONTROL.
9. ALL STUMPS SHALL BE EITHER GROUND ON SITE WITH A STUMP GRINDER OR REMOVED FROM SITE FOR PROPER DISPOSAL. NO STUMPS SHALL BE BURNED ON SITE.
10. ALL STOCKPILES SHALL HAVE EROSION CONTROL MEASURES AROUND THE PERIMETER AT ALL TIMES. STOCKPILES SHALL BE LOCATED ONLY WITHIN THE LIMIT OF WORK BOUNDARIES.
11. AT ALL TIMES DURING AND AFTER CONSTRUCTION, COMPACTION OF SOILS IN DESIGNATED RECHARGE AREAS MUST BE MINIMIZED.
12. CATCH BASIN INLET PROTECTION: A SILT SACK SHALL BE PLACED IN CATCH BASINS ONCE INSTALLED. THESE WILL REQUIRE A MINIMUM OF WEEKLY MAINTENANCE AND REPLACEMENT IF NECESSARY.
13. AT THE COMPLETION OF THE PROJECT ALL DISTURBED AREAS ARE TO BE PERMANENTLY LOAMED AND SEEDED OR PERMANENTLY STABILIZED WITH OTHER SUITABLE GROUND COVER APPROVED BY THE ENGINEER.
14. AFTER THE VEGETATION IS ESTABLISHED AND THE GRADED SLOPES ARE STABILIZED, THE CONTRACTOR WILL REMOVE ALL THE TEMPORARY EROSION CONTROL MEASURES.



SECTION A-A  
CONSTRUCTION ENTRANCE DETAIL

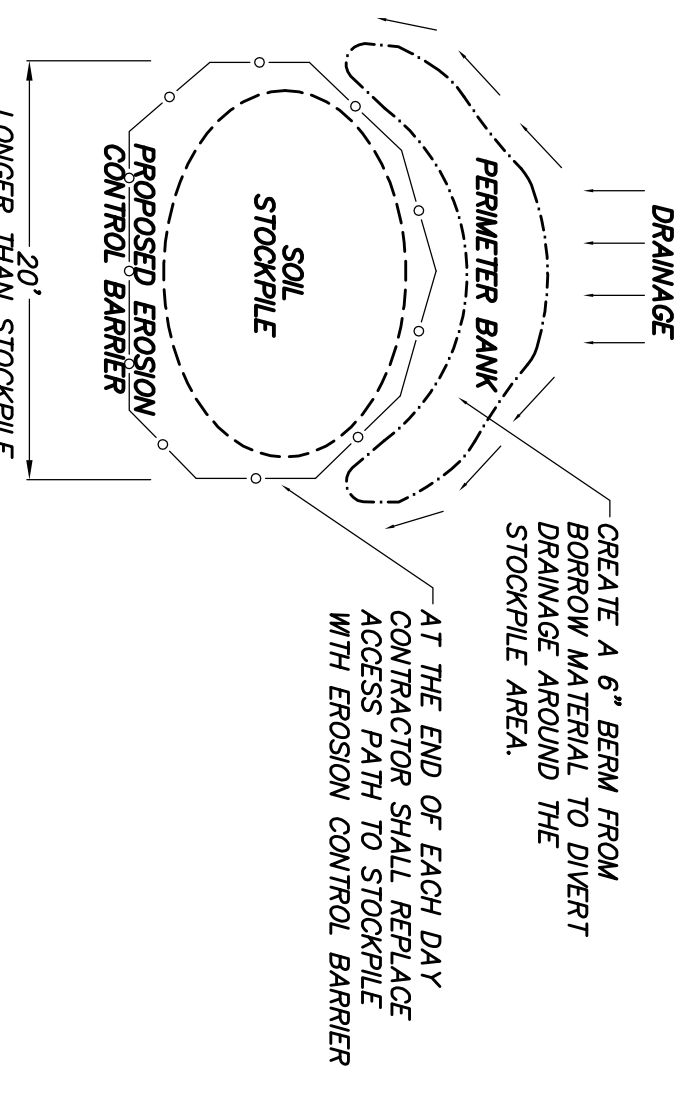
**CONSTRUCTION SEQUENCE:**

1. STAKE OUT LIMIT OF CLEARING, AND INSTALL EROSION CONTROL AS SHOWN ON THE PLANS.
2. REMOVE TREES, CLEAR AND STUMP SITE. STOCKPILE STUMPS AS SHOWN IN THE STOCKPILE AREAS. PROTECT STOCKPILES FROM EROSION AS SHOWN.
3. INSTALL CONSTRUCTION ENTRANCE.
4. REMOVE STUMPS FROM SITE OR GRIND STUMPS ON SITE WITH STUMP GRINDER.
5. STOCKPILE TOPSOILS FROM ROAD LOCATION AND ROUGH GRADE ROAD, INCLUDING IMPORTED FILL MATERIAL.
6. REMOVE AND STOCKPILE TOPSOILS FROM OUTER BERM AREA ON SITE (SEE PLAN E51).
7. ROUGH GRADE AND BUILD BERM IN OUTER BERM AREA INCLUDING INFILTRATION BASIN FOR RUNOFF CONTROL. STABILIZE OUTER SLOPES AND PROVIDE RIP-RAP OVERFLOW TO INFILTRATION BASIN.
8. INSTALL UTILITIES AND DRAINAGE STRUCTURES WITHIN THE ROADWAY.
9. PREPARE ROADWAY SUBBASE, COMPACT AND LAY BINDER COURSE OF PAVEMENT.
10. INSTALL DRAIN MANHOLE LIDS AND CATCH BASIN GRATES. PROVIDE SILT SACKS IN CATCH BASINS.
11. STOCKPILE REMAINING SITE TOPSOILS.
12. UNLOAD SITE FILL MATERIAL AND ROUGH GRADE. ENSURE RUNOFF REMAINS CONTROLLED INSIDE OF BERM AND INFILTRATION BASIN.
13. INSTALL REMAINING DRAINAGE STRUCTURES FROM DRAIN MANHOLES TO FLARED ENDS.
14. COMPLETE GRADING OF RETENTION POND AND SEDIMENT FOREBAY. LOAM AND SEED ALL FINAL CUT AND FILL SLOPES.
15. INSTALL SEWAGE COLLECTION SYSTEM, AND SEPTIC SYSTEMS.
16. START CONSTRUCTING HOUSES, FIRST COMPLETING ALL SITE REQUIREMENTS (UTILITIES, PAVED DRIVEWAY, SEWER LINES, FINAL GRADING AND LANDSCAPING).
17. LAY FINISH COURSE OF PAVEMENT.
18. UPON FINAL INSPECTION AFTER VEGETATION ON DISTURBED AREAS HAS BEEN ESTABLISHED, REMOVE EROSION CONTROL MEASURES.



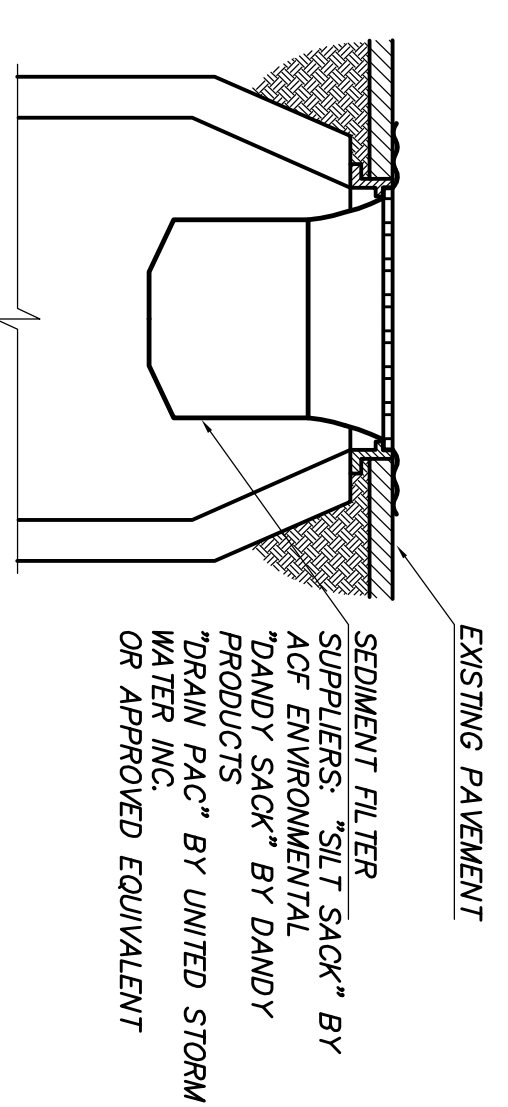
NO SCALE  
STRAW WATTLE DETAIL

1. WATTLES SHALL BE CONSTRUCTED OF BIODEGRADABLE TUBULAR PLASTIC OR SIMILAR MATERIAL, AND SHALL BE FILLED WITH STRAW OR MULCH.
2. INSTALL WATTLES IN LOCATIONS SHOWN ON THE PLAN.
3. INSTALL THE WATTLES SNUGLY INTO A 3-5" DEEP TRENCH AND OVERLAP AS SHOWN IN THE DETAIL.
4. INSTALL ANCHOR STAKES ON DOWNHILL SIDE OF THE WATTLES, AND AT 5' SPACING ALONG THE LENGTH OF THE WATTLE.
5. AT A MINIMUM, ANCHOR STAKES SHALL BE 3/4" SQUARE BY 24" LONG EXISTING VEGETATION GREATER THAN 2" DIAMETER MAY BE USED AS ANCHORS.
6. INSPECT WATTLES AFTER RAINFALL EVENTS TO ENSURE THEY ARE IN CONTACT WITH THE SOIL AND THOROUGHLY ENTRENCHED, AND REPAIR AS NEEDED.
7. INSPECT DOWNGRADIENT SLOPE AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE SCOUR IS NOT OCCURRING UNDER THE WATTLES, AND REPAIR AS NECESSARY.



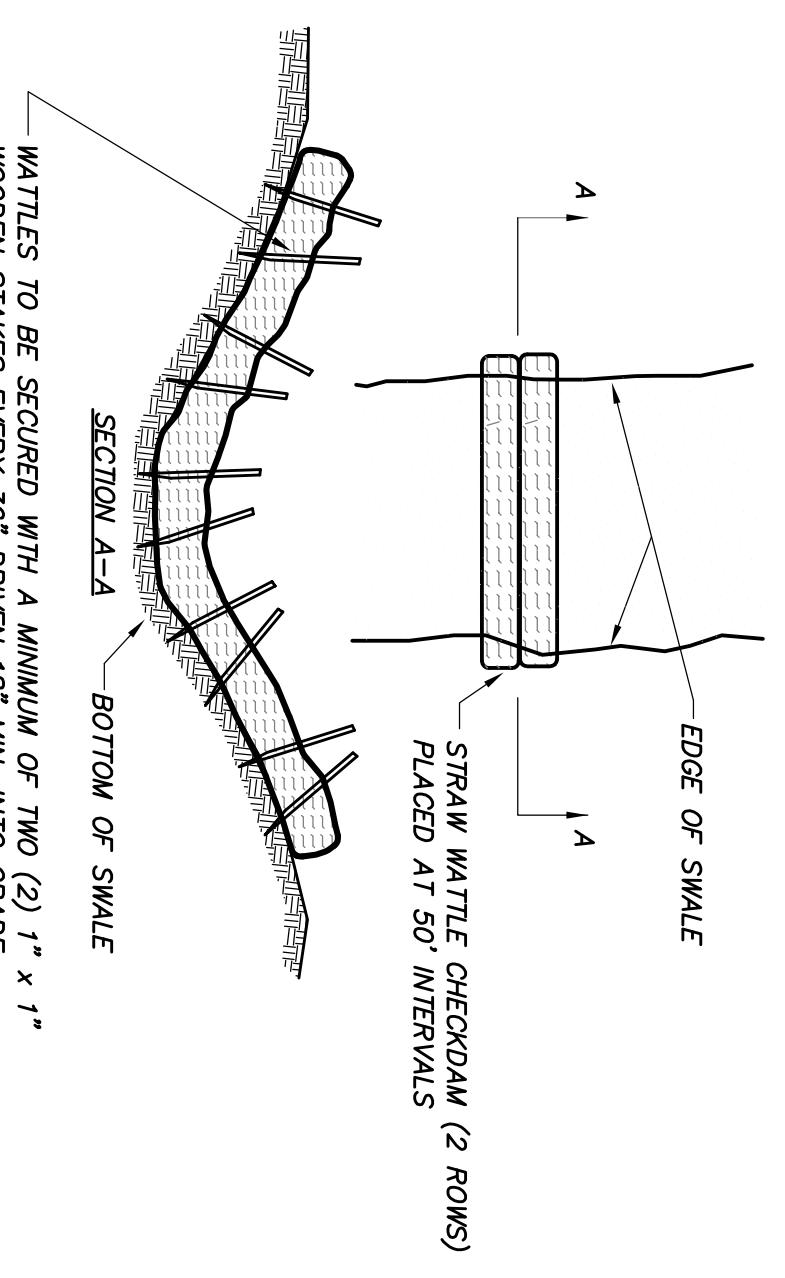
SOIL STOCKPILE DETAIL

1. SEE SITE PLAN FOR LOCATIONS OF STOCKPILES.
2. DO NOT PLACE SOIL STOCKPILE WITHIN 100' OF A WETLAND OR OTHER CONSERVATION JURISDICTIONAL AREA. DO NOT BE LEFT MORE THAN 6 MONTHS WITHOUT VEGETATIVE OR IMPERVIOUS COVER.



NO SCALE  
SEDIMENT FILTER INLET PROTECTION

NOTE:  
SEDIMENT FILTER SHALL BE PLACED IN ALL CATCH BASINS BEFORE THE DRAINAGE SYSTEM BEGINS IN OPERATION. THE FILTER SHALL REQUIRE WEEKLY MAINTENANCE, OR AS REQUIRED, AND REPLACED IF NECESSARY.



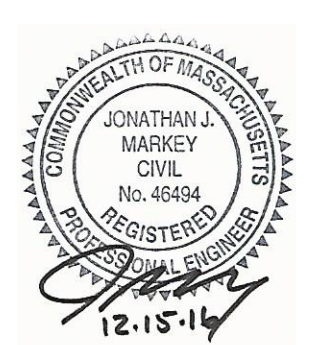
SECTION A-A

1. WATTLES SHALL BE Laid IN A ROW - PERPENDICULAR TO FLOW PATH.
2. WATTLES SHALL BE SECURELY ANCHORED IN PLACE BY (2) WOODEN STAKES (SEE DETAIL) DRIVEN THROUGH EACH BALE - EVERY 36".
3. INSPECTIONS SHALL BE WEEKLY AND FOLLOWING STORMS. REPAIR AND/OR REPLACE AS REQUIRED.
4. WATTLES & STAKES SHALL BE REMOVED ONCE A PERMANENT VEGETATIVE GROUND COVER HAS BEEN ESTABLISHED OR WHEN DIRECTED BY THE DESIGN ENGINEER.

STRAW WATTLE CHECKDAM  
(NOT TO SCALE)

#	DATE	REVISION COMMENT

DATE: 12/15/16  
COPYRIGHT 2016, MARKEY & RUBIN INC.



**EROSION & SEDIMENT CONTROL PLAN**  
**COUPER FARM ESTATES**  
LITTLETON, MASSACHUSETTS

CLIENT:  
**M+M REALTY TRUST**  
442 KING STREET  
LITTLETON, MASSACHUSETTS

360 MASSACHUSETTS AVE, SUITE 202  
ACTON, MASSACHUSETTS 01720  
P(978) 264-4600 F(978) 263-0447  
www.MarkeyAndRubin.com

**Markey & Rubin**  
CIVIL ENGINEERING

