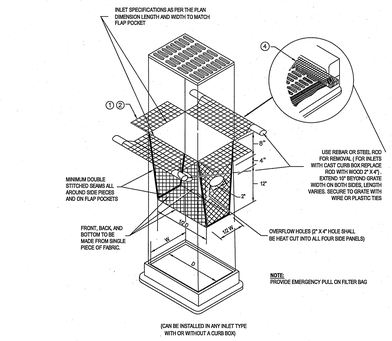
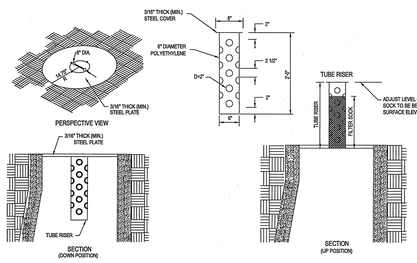


FILTER BAG INLET PROTECTION
SCALE=N.T.S.



POP-UP HEAD INLET PROTECTION
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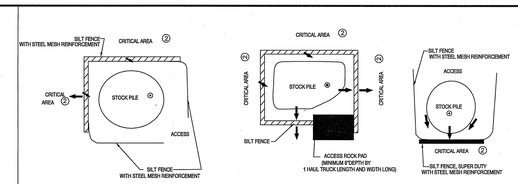
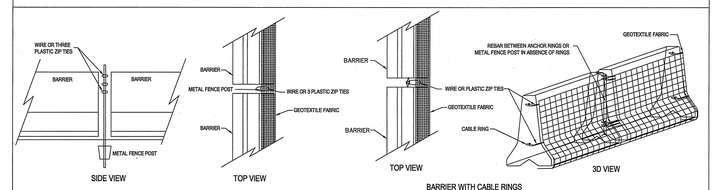
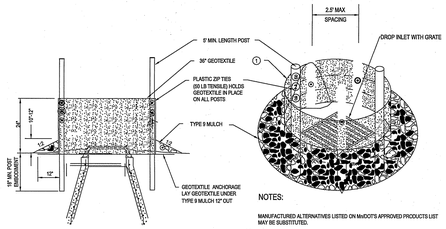


STOCK PILE CONTAINMENT
SCALE=N.T.S.

1. PLACING STOCK PILES NEXT TO AN ENVIRONMENTALLY SENSITIVE AREA IS NOT RECOMMENDED. WHEN THERE ARE NO FEASIBLE ALTERNATIVES, THE SILT FENCE IS TO BE USED AS SHOWN ON AS DIRECTED BY THE ENGINEER.
2. CRITICAL AREAS INCLUDE WETLANDS, JUDICIAL DITCHES, STREAMS, WATER BODIES, AND OTHER AREAS REQUIRING PROTECTION.



BARRIER PROTECTION
SCALE=N.T.S.

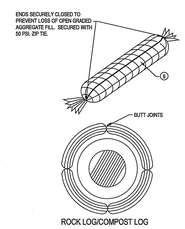


NOTES:

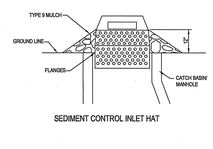
MANUFACTURED ALTERNATIVES LISTED ON MnDOT'S APPROVED PRODUCTS LIST MAY BE SUBSTITUTED.

1. ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS.
2. FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 18 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
3. INSTALLATION NOTES:
   DO NOT INSTALL FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCH SIDE CLEARANCE.
4. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 INCH X 4 INCH OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE FLAP POCKETS.
5. SOCK HEIGHT MUST NOT BE SO HIGH AS TO SLOW DOWN WATER FILTRATION TO CAUSE FLOODING OF THE ROADWAY.
6. GEOTEXTILE SOCK BETWEEN 4-10 FEET LONG AND 4-6 INCH DIAMETER. SEAM TO BE JOINED BY TWO ROWS OF STITCHING WITH A PLASTIC MESH BACKING OR PROVIDE A HEAT BONDED SEAM (OR APPROVED EQUIVALENT). FILL ROCK LOG WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE

SILT FENCE RING AND ROCK FILTER BERM
SCALE=N.T.S.



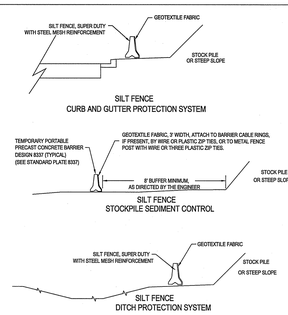
ROCK LOG/ COMPOST LOG INLET PROTECTION
SCALE=N.T.S.



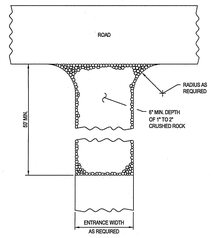
SEDIMENT CONTROL INLET HAT

NOTE:
THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE. HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION, HAVE AN OVERFLOW OPENING, FLANGES AND A LID/COVER.

SEDIMENT CONTROL INLET HAT PROTECTION
SCALE=N.T.S.

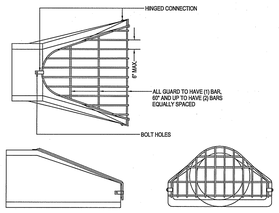


SILT FENCE PROTECTION SYSTEMS
SCALE=N.T.S.



ROCKS AT ENTRANCE CLEAN WORKSITE MUD OFF OF TRUCK TIRES BEFORE TRUCKS ENTER MAIN ROAD. KEEPING MUD OFF THE ROAD WILL PREVENT AUTO DAMAGE AND KEEP CONSTRUCTION SEDIMENT OUT OF DRAINAGE SYSTEMS AND WETLANDS. GEOTEXTILE MAY BE PLACED UNDER THE ROCK TO KEEP ROCKS SEPARATE FROM SOIL.

ROCK CONSTRUCTION ENTRANCE
SCALE=N.T.S.



BOLT HOLES STANDARD DESIGN				
	PIPE SIZE	HOLE DIA REQ'D.	BOLT DIA.	BAR SIZE
ROUND	12"-24"	3/4"	5/8"	5/8"

BOLT LG.= PIPE WALL THK. + 2 1/2"

TRASH GUARD FOR CONCRETE FLARED ENDS
SCALE=N.T.S.

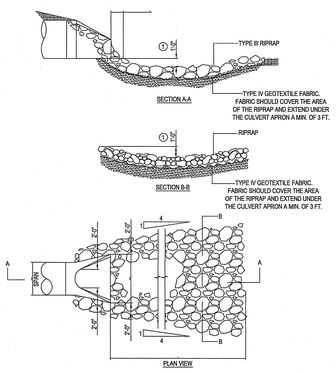
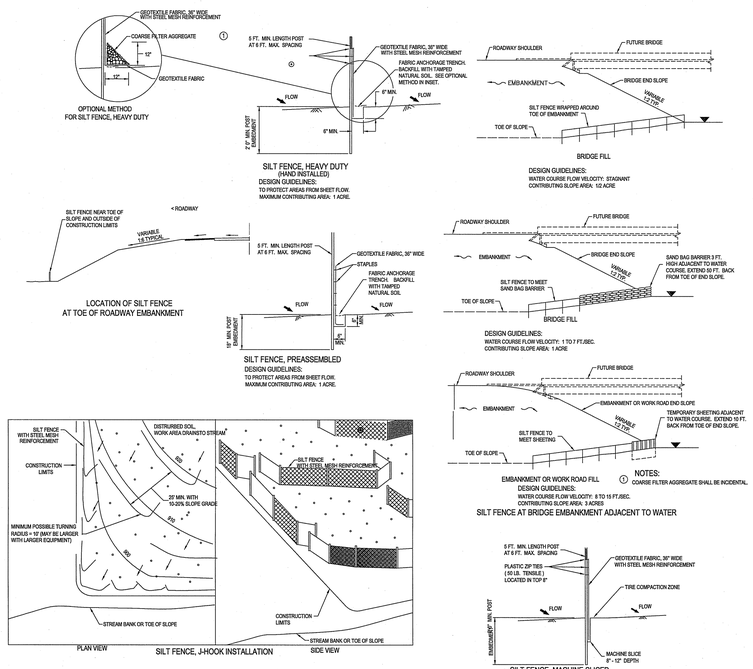


TABLE OF QUANTITIES RIPRAP AT RCP OUTLETS			
		CLASS III d50=9"	
DIA. OF ROUND PIPE (IN.)	L (FT.)	18" DEPTH RIPRAP (CU. YDS.)	9" DEPTH GRANULAR FILTER (CU. YDS.)
12	8	4.1	2.1
24	12	8.3	4.2

RIPRAP AT OUTLET DETAIL
SCALE=N.T.S.



NOTES:
1. COARSE FILTER AGGREGATE SHALL BE INCIDENTAL.

SILT FENCE DETAILS
SCALE=N.T.S.

EROSION NOTES

1. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE CODES AND BE CONSTRUCTED AS SUCH. WHERE A CONFLICT EXISTS BETWEEN LOCAL JURISDICTIONS STANDARD SPECIFICATIONS AND DESIGN TREE ENGINEERING STANDARD SPECIFICATIONS, THE MORE STRINGENT SHALL APPLY.

2. THE CONTRACTOR IS CAUTIONED THAT THE LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND THE V.A. THE SUBSURFACE UTILITY INFORMATION SHOWN IS LEVEL D. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES. THE LOCATIONS OF UTILITIES SHALL BE OBTAINED BY CALLING MINNESOTA GOPHER STATE ONE CALL AND THE VA.

3. THE DESIGN SHOWN IS BASED UPON THE ENGINEERS UNDERSTANDING OF THE EXISTING CONDITIONS. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY, IT WILL BE CONTRACTORS RESPONSIBILITY AND EXPENSE TO HAVE TOPOGRAPHIC SURVEY DONE BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO OWNER FOR REVIEW.

4. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES. CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES THAT MAY OCCUR.

5. THE SWPPP IS COMPRISED OF THE ESC PLAN, THE STANDARD DETAILS, THE SWPPP NARRATIVE, PLUS THE PERMIT AND ALL RELATED DOCUMENTS.

6. THE CONTRACTOR WILL BE RESPONSIBLE FOR COMPLETING AND SUBMITTING THE APPLICATION FOR THE MPCA GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE SWPPP AND NPDES PERMIT AND BECOME FAMILIAR WITH THEIR CONTENTS. THE SWPPP AND ALL OTHER RELATED DOCUMENTS MUST BE KEPT ON SITE DURING CONSTRUCTION. CONTRACTOR MUST PROVIDE CERTIFIED PERSONNEL FOR SWPPP RECORDS.

7. CONTRACTOR SHALL IMPLEMENT BMP'S AS REQUIRED BY THE SWPPP AND PERMITS. THE CONTRACTOR SHALL OVERSEE THE INSPECTION AND MAINTENANCE OF THE BMP'S AND EROSION AND SEDIMENT PREVENTION FROM BEGINNING OF CONSTRUCTION TO COMPLETION OF CONSTRUCTION, AND NOTICE OF COMPLETION HAS BEEN FILED WITH THE MPCA BY EITHER THE OWNER OR THE OPERATOR ON THE PERMIT. ADDITIONAL BMP'S AND MAINTENANCE SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.

8. BMP'S SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

9. ESC PLAN MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.

10. THE CONTRACTOR SHALL MINIMIZE CLEARING AS REQUIRED BY THE GENERAL PERMIT. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY DELINEATED ON THE SITE BEFORE WORK BEGINS.

11. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AREA, EMPLOYEE PARKING AREA, AND AREA FOR PORTABLE FACILITIES. NO VEHICLE CLEANING ALLOWED ON SITE.

12. NO TRUCK WASHOUT ALLOWED ON SITE.

13. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS SHALL BE MAINTAINED ON SITE AND READILY AVAILABLE FOR USE.

14. DUST ON THE SITE SHALL BE CONTROLLED.

15. SOLID WASTE: CONSTRUCTION WASTE MUST BE DISPOSED OF PROPERLY, AND IN COMPLIANCE WITH MPCA REQUIREMENTS.

16. HAZARDOUS MATERIALS MUST BE PROPERLY STORED IN CONTAINERS, AND PROTECTED FROM ELEMENTS.

17. ALL STORM WATER POLLUTION PREVENTIONS MEASURES ON THIS PLAN, AND IN THE SWPPP SHALL BE INITIATED PRIOR TO ANY SITE WORK.

18. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED SHALL BE TEMPORARILY SEEDED. SEEDING WILL BE IN ACCORDANCE WITH MNDOT SPEC. 2575.

19. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY ESTABLISHED.

20. CONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM CONVEYANCES AND FROM TEMPORARY SEDIMENT BASINS.

21. ON AND OFF SITE SOIL STOCK PILES AND BORROW AREAS SHALL BE PROTECTED WITH BMP'S.

22. TEMPORARY STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT AND EROSION CONTROLS.

23. SLOPES SHALL BE LEFT IN A ROUGH CONDITION TO HELP ELIMINATE RILLING.

24. DUE TO GRADE CHANGES DURING THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE ESC MEASURES TO PREVENT EROSION AND SEDIMENTATION.

25. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH DAY. THIS INCLUDES BACKFILLING OF TRENCHES AND PLACEMENT OF GRAVEL OR BITUMINOUS.

26. NO STOCKPILE OF MATERIALS NOT TO BE USED ON SITE.

27. ALL EXCESS MATERIALS TO BE REMOVED FROM SITE DAILY.

28. NO CONCRETE WASHOUT ALLOWED ON V.A. PROPERTY-TRUCKS TO BE TAKEN OFF SITE.

29. ALL SILT FENCE SHALL BE HEAVY DUTY WITH STEEL MESH REINFORCEMENT.

MAINTENANCE

ALL MEASURES STATED ON THIS ESC PLAN, AND IN THE SWPPP SHALL BE MAINTAINED UNTIL NO LONGER REQUIRED. ALL ESC MEASURES SHALL BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. ALL STORM DRAIN INLETS MADE OPERABLE DURING CONSTRUCTION MUST BE PROTECTED BY BMP'S UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED.

2. ALL SODDED AREAS SHALL BE CHECKED TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE WATERED AND FERTILIZED AS NEEDED.

3. SILT FENCE SHALL BE REPAIRED OR REPLACED TO ORIGINAL CONDITION IF DAMAGED.. SEDIMENT MUST BE REMOVED WHEN IT REACHES ONE THIRD THE HEIGHT OF THE SILT FENCE. THIS WORK MUST BE DONE WITHIN 24 HOURS OF DISCOVERY.

4. VEHICLE TRACKING OF SEDIMENT FROM THE CONSTRUCTION SITE MUST BE MINIMIZED BY BMP'S. STREET SWEEPING MUST BE USED IF BMP'S ARE NOT ADEQUATE TO PREVENT TRACKING. TRACKED SEDIMENT MUST BE REMOVED WITHIN 24 HOURS.

5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION.

6. OUTLET STRUCTURES IN THE TEMPORARY AND PERMANENT SEDIMENTATION BASINS SHALL BE MAINTAINED AND OPERATIONAL AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS WHEN THE DESIGN CAPACITY REACHES ONE HALF THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY, OR AS SOON AS CONDITIONS PERMIT.

SITE STAGING

1. CONTRACTOR TO PROVIDE A FINALIZED PLAN FOR V.A. APPROVAL SHOWING PARKING, STAGING, CONSTRUCTION FENCES, AND STORAGE AREAS PRIOR TO ANY WORK TAKING PLACE.

2. CONTRACTOR PARKING, STORAGE, AND INITIAL STAGING CAN BE LOCATED EAST OF BUILDING 57.

3. MAINTAIN STAFF AND PATIENT ACCESS TO ALL BUILDINGS.

4. WORK TO BE DONE IN STREETS MUST BE APPROVED BY V.A. STAFF. WORK MUST BE DONE BETWEEN THE HOURS OF 5:00 P.M. AND 6:OO A.M. ROADS MUST BE OPENED TO TRAFFIC BY 6:00 A.M. THE FOLLOWING DAY. CONTRACTOR MUST PROVIDE A TRAFFIC CONTROL AND DETOUR PLAN TO V.A. ALLL EMERGENCY SERVICES MUST BE NOTIFIED.

100% CDs - FOR CONSTRUCTION

Revisions:	Date

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Drawing Title: Erosion Control/ SWPPP Details

Project Title: Replace Parking Lost Due To Construction

Project Number: 656-12-214

Building Number:

Approved: Daniel J. Folsom, License# 23897 — April 4, 2012 (Date)

Location: St. Cloud VA Health Care System

Date: April 4, 2012 | Checked: DJF | Drawn: RJK

Drawing Number: C5.1

Dwg. 7 of 9

VAMC SAINT CLOUD MN

VA FORM 08-6231