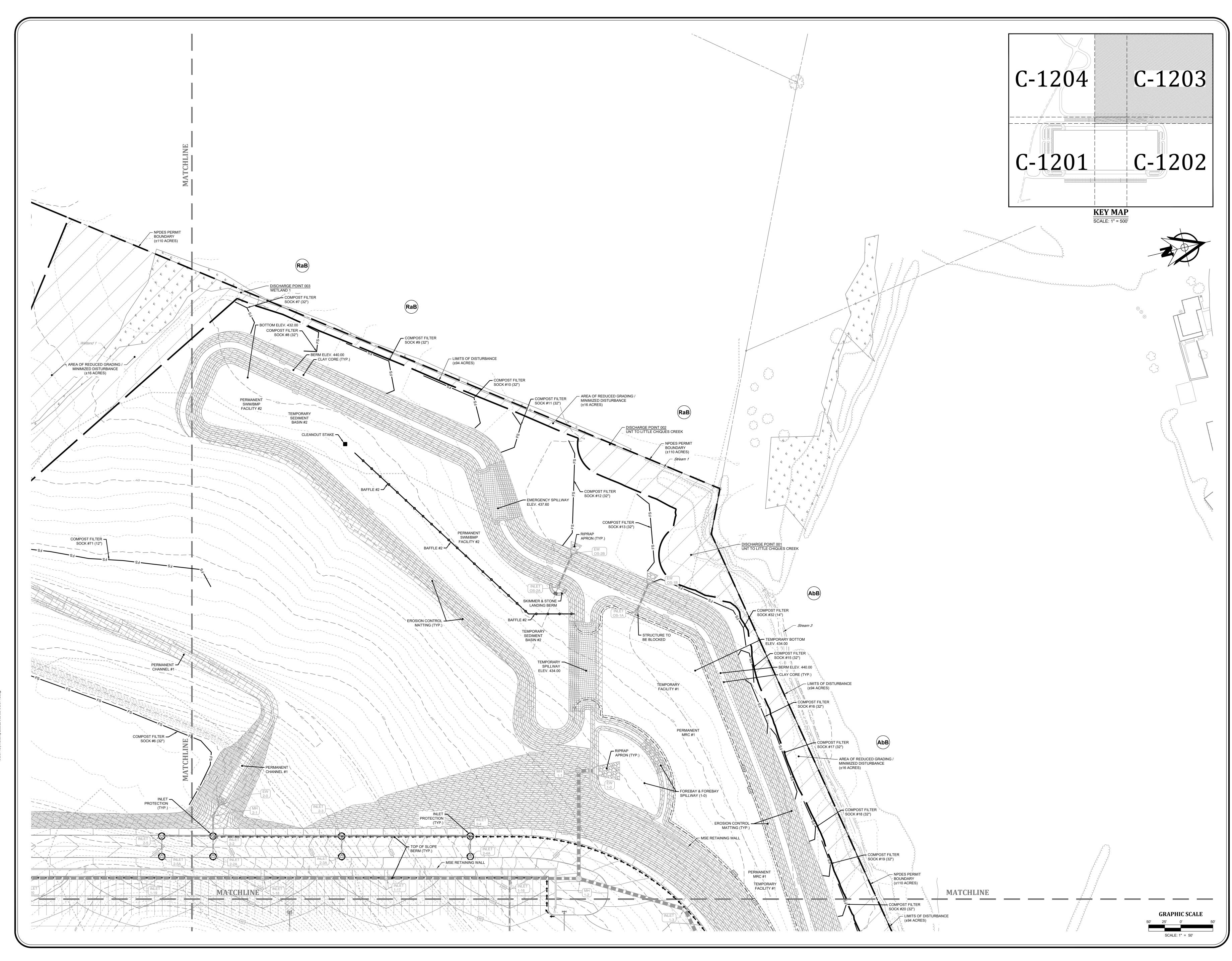


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> REFERENCE: L/Projects/22/22-0123-005/CADD/Plan Sheets/Final/22-0123-005-16-En/ PRINTED: 1/04/2023, 8:30AM Tim Fink

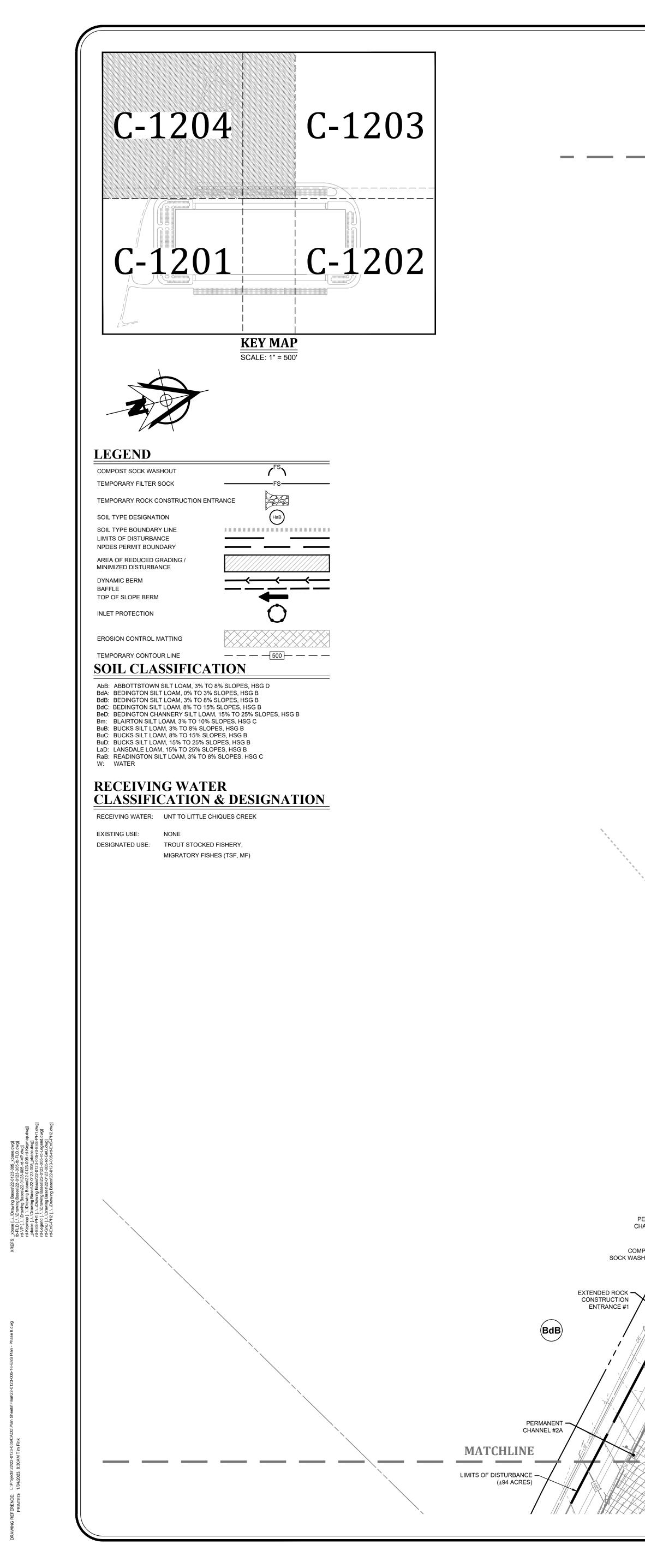




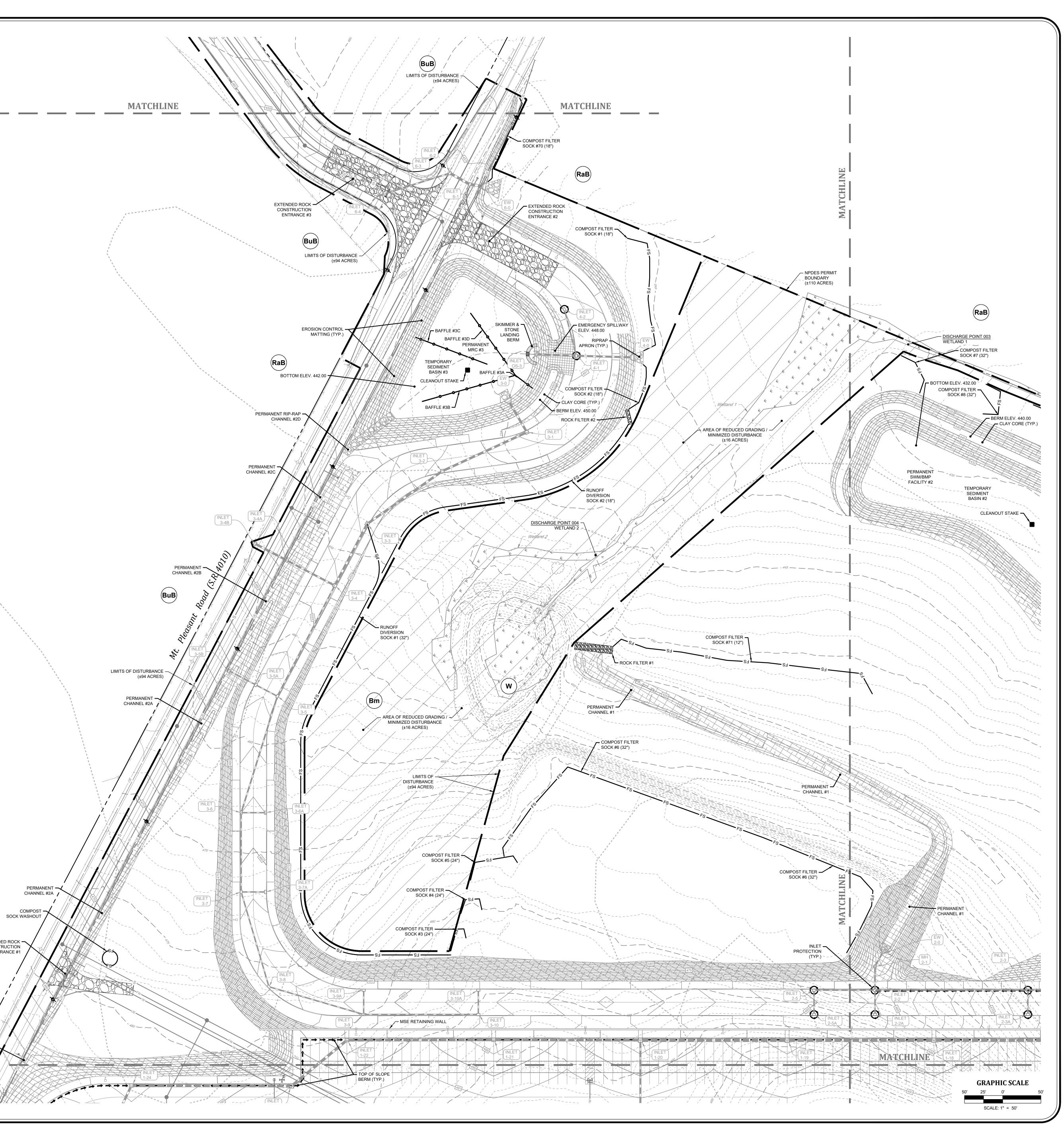
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 rd-Ens-PH [.A.\Drawing Bases/22
 rd-Ens-PH [.A.\Drawing Bases/22
 rd-Legend [.A.\Drawing Bases/23







1723-005, xbase.dwg] 123-005-tb-FLD.dwg] 23-005-td-VP-dwg] 23-005-dd-VP-dwg] 123-005-tbase.dwg] 1223-005-tbase.dwg] 122-0123-005-td-EntS-PH1.dwg] 122-0123-005-td-EntS-PH1.dwg] 122-005-3-005-td-EntS-PH1.dwg] S: \_xbase [...,Drawing Bases/22-01 B+FLD [...,Drawing Bases/22-01 rd-VP [...,Drawing Bases/22-01 rd-VP [...,Drawing Bases/22-01 pbase [...,Drawing Bases/22-07 rd-EnS-PHI [...,Drawing Bases/22-07 rd-Engend [...,Drawing Bases



CONSTRUCTION SEQUENCE	
ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE APEAS DESCRIPED IN FACIL STAGE. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE	COMPLETION CERTIFICATES ARE NEEDED TO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED E&S AND PCSM PLANS.
SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL COUNTY CONSERVATION DISTRICT. 1. AT LEAST SEVEN (7) SEVEN DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE	<u>STEEL WAY CONSTRUCTION</u> IF NECESSARY, THE IMPROVEMENTS AND EXTENSION TO STEEL WAY CAN BE COMPLETED IS A SEPARATE SEQUENCE FROM THE MAIN
OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE OF THE LOCAL COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING.	PROJECT SITE. COORDINATE WITH NEIGHBORING PROPERTY OWNERS TO MAINTAIN ACCESS TO THEIR SITE TO THE GREATEST EXTENT PRACTICABLE. 29. PERFORM STAGES #1-5 AS DESCRIBED ABOVE.
2. AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.	30. CLEAR AND GRUB, REMOVE TOPSOIL, PERFORM NECESSARY INITIAL GRADING IN ONLY THE AREA NEEDED FOR EXTENDED ROCK CONSTRUCTION ENTRANCE #3 ON MOUNT PLEASANT ROAD, AND INSTALL EXTENDED ROCK CONSTRUCTION ENTRANCE #3.
3. THE LIMITS OF DISTURBANCE (LOD) SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES (I.E. SURVEY STAKES, POSTS & ROPE, CONSTRUCTION FENCE, ETC.).	<ul> <li>31. INSTALL FILTER SOCKS #62-69 AS SHOWN ON THE PLAN.</li> <li>32. CONDUCT SITE DEMOLITION ACTIVITIES AND REMOVE ALL WASTE FROM THE SITE IN ACCORDANCE WITH THE DEP REGULATIONS.</li> </ul>
4. UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT.	VEHICULAR ACCESS FOR DEMOLITION ACTIVITIES (PAVEMENTS, BUILDINGS, TREES, UTILITIES, ETC.) SHALL BE FROM THE ESTABLISHED ROCK CONSTRUCTION ENTRANCE. 33. CRITICAL STAGE: CLEAR AND GRUB, REMOVE TOPSOIL, PERFORM NECESSARY INITIAL GRADING ONLY WITHIN THE AREAS DESIGNATED
<ol> <li>5. INITIAL EROSION AND SEDIMENTATION CONTROL MEASURES AND BMPS MUST BE CONSTRUCTED, STABILIZED, AND OPERATIONAL BEFORE ANY EARTH DISTURBANCE WHICH IS TRIBUTARY TO THOSE MEASURES BEGINS.</li> </ol>	FOR TEMPORARY SEDIMENT BASIN #4, ASSOCIATED INLET AND OUTLET CONVEYANCE SYSTEMS, AND PIPE RUN #9. STORE TOPSOIL DURING EXCAVATION OF THIS BMP IN THE MAIN SITE'S TEMPORARY TOPSOIL STOCKPILE.
PHASE 1	A. BEGIN EXCAVATION OF TEMPORARY SEDIMENT BASIN #4 AND USE EXCESS MATERIAL TO BEGIN BRINGING STEEL WAY TO SUBGRADE ELEVATIONS. MAINTAIN THE EXISTING CHANNEL NEXT TO TEMPORARY SEDIMENT BASIN #4 TO PREVENT OFFSITE STORMWATER FROM ENTERING THE BASIN.
6. CLEAR AND GRUB, REMOVE TOPSOIL, PERFORM NECESSARY INITIAL GRADING IN ONLY THE AREA NEEDED FOR EXTENDED ROCK CONSTRUCTION ENTRANCE #1 ON MOUNT PLEASANT ROAD, AND INSTALL EXTENDED ROCK CONSTRUCTION ENTRANCE #1. VEHICLES AND EQUIPMENT MAY NOT ENTER OR EXIT THE PROJECT SITE AT ANY OTHER LOCATION. THE EXISTING DRIVEWAY AND GRAVEL AREA MAY BE USED AS ACCESS INTO THE SITE AND AS A CONTRACTOR STAGING AREA.	B. CONSTRUCT CONVEYANCE SYSTEM 9-2 TO 9-0, BEGINNING AT THE DOWNSTREAM STRUCTURE AND RIPRAP APRON, AND PROCEEDING UPSTREAM. IMMEDIATELY INSTALL INLET PROTECTION ON INLET 9-2.
7. INSTALL FILTER SOCKS #1-61 & #70-71 AND ROCK FILTERS #1-2 THROUGHOUT THE SITE AS SHOWN ON THE PLAN.	C. CONSTRUCT OUTLET CONVEYANCE SYSTEM OS-4A TO OS-4C, BEGINNING AT THE DOWNSTREAM STRUCTURE AND RIPRAP APRON, AND PROCEEDING UPSTREAM. CONSTRUCT ANTI-SEEP COLLARS AND CONCRETE CRADLES ON THE OUTLET PIPES AS PER THE DETAILS PRESENTED ON THE PLAN.
8. CONDUCT SITE DEMOLITION ACTIVITIES AND REMOVE ALL WASTE FROM THE SITE IN ACCORDANCE WITH THE DEP REGULATIONS. VEHICULAR ACCESS FOR DEMOLITION ACTIVITIES (PAVEMENTS, BUILDINGS, TREES, UTILITIES, ETC.) SHALL BE FROM THE ESTABLISHED ROCK CONSTRUCTION ENTRANCE.	D. CONSTRUCT TEMPORARY SEDIMENT BASIN #4 IN ACCORDANCE WITH THE DESIGN DETAILS PRESENTED ON THE PLAN. INSTALL THE PERMANENT EMBANKMENT BERM AND IMPERVIOUS CORE TO THE DESIGN ELEVATIONS. CLAY CORE MATERIAL SHALL BE AVAILABLE
9. <u>CRITICAL STAGE:</u> CLEAR AND GRUB, REMOVE TOPSOIL, PERFORM NECESSARY INITIAL GRADING ONLY WITHIN THE AREAS DESIGNATED FOR TEMPORARY FACILITY #1, TEMPORARY SEDIMENT BASINS #2 & #3, THE FILL AREAS, ASSOCIATED INLET AND OUTLET CONVEYANCE SYSTEMS FOR EACH BMP, AND THE TEMPORARY TOPSOIL STOCKPILE. STORE TOPSOIL DURING EXCAVATION OF THESE BMPS IN THE TEMPORARY TOPSOIL STOCKPILE.	FOR PLACEMENT AS SOON AS EXCAVATION PERMITS. PLACE EXCESS FILL MATERIAL IN AREAS NEEDED FOR STEEL WAY. E. INSTALL THE SKIMMER CONFIGURATION WITH STONE LANDING BERM, BAFFLES, AND CLEANOUT MARKER AS SHOWN ON THE PLAN AND DETAILS. IMMEDIATELY STABILIZE THE FACILITIES' INTERNAL AND EXTERNAL SLOPES WITH THE PRESCRIBED SEED MIX, MULCH, MATTING, AND SLOPE PROTECTION, AS APPLICABLE. ATTACH THE SKIMMER TO THE UNDERDRAIN ORIFICE. DO NOT INSTALL THE
A. CONSTRUCT OUTLET CONVEYANCE SYSTEMS OS-1A TO OS-1B, OS-2A TO OS-2B, OS-3 TO 4-0, AND 4-2 TO 4-1, BEGINNING AT THE DOWNSTREAM STRUCTURE AND RIPRAP APRON, AND PROCEEDING UPSTREAM. CONSTRUCT ANTI-SEEP COLLARS AND CONCRETE CRADLES ON THE OUTLET PIPES AS PER THE DETAILS PRESENTED ON THE PLAN. WITH A STEEL PLATE OR SIMILAR DEVICE, BLOCK	GRATES ON THE OUTLET STRUCTURES AT THIS TIME. 34. FOLLOW THE CONSTRUCTION SEQUENCE DESCRIBED IN STAGES #12-28 FOR COMPLETION OF STEEL WAY, INCLUDING THE CRITICAL STAGE DESCRIBED IN STAGE #24 FOR BMP CONVERSION.
B. CONSTRUCT TEMPORARY FACILITY #1 AND TEMPORARY SEDIMENT BASINS #2 & #3 IN ACCORDANCE WITH THE DESIGN DETAILS	THERMAL IMPACTS ANALYSIS
PRESENTED ON THE PLAN. INSTALL THE PERMANENT EMBANKMENT BERM, IMPERVIOUS CORE, EMERGENCY SPILLWAY & CHANNEL, AND FOREBAYS & FOREBAY SPILLWAYS TO THE DESIGN ELEVATIONS. CLAY CORE MATERIAL SHALL BE AVAILABLE FOR PLACEMENT AS SOON AS EXCAVATION PERMITS. PLACE EXCESS FILL MATERIAL IN THE FILL AREAS AS SHOWN ON THE PLANS.	AS REQUIRED BY CHAPTER 102.4(b)(5)(xiii), MEASURES HAVE BEEN TAKEN IN ORDER TO IDENTIFY POTENTIAL THERMAL IMPACTS TO "SURFACE WATERS OF THE COMMONWEALTH" DURING EARTH DISTURBANCE, AND INCLUDING BMPS TO AVOID, MINIMIZE, OR MITIGATE POTENTIAL
C. AS APPLICABLE TO EACH BMP, INSTALL THE EMERGENCY SPILLWAY LINER, SKIMMER CONFIGURATION WITH STONE LANDING BERM, BAFFLE(S), AND CLEANOUT MARKER(S) AS SHOWN ON THE PLAN AND DETAILS. IMMEDIATELY STABILIZE THE FACILITIES' INTERNAL AND	POLLUTION FROM THERMAL IMPACTS. PLANNED SITE FEATURES FOR THE PROJECT HAVE BEEN SELECTED AND DESIGNED TO MINIMIZE THERMAL IMPACTS, TO THE GREATEST EXTENT PRACTICABLE, WITHIN THE PROJECT'S DISTURBED AREA.
EXTERNAL SLOPES WITH THE PRESCRIBED SEED MIX, MULCH, MATTING, AND SLOPE PROTECTION, AS APPLICABLE. ATTACH THE SKIMMER TO THE UNDERDRAIN OR DEWATERING ORIFICES. DO NOT INSTALL THE GRATES ON THE OUTLET STRUCTURES AT THIS TIME. D. CONSTRUCT INLET CONVEYANCE SYSTEMS 1-1 TO 1-0 AND 3-3 TO 3-0 AS SHOWN ON THE PLANS. BEGIN AT THE DOWNSTREAM	DURING CONSTRUCTION, EARTH DISTURBANCE ACTIVITIES WILL BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE AS A RESULT OF THE PROJECT'S SEQUENCE OF CONSTRUCTION WHICH WILL MINIMIZE THERMAL IMPACTS. INITIALLY, RUNOFF FROM A LARGE PORTION OF THE SITE IS CONTROLLED BY FILTER SOCK. THE FILTER SOCK WILL SLOW AND FILTER STORMWATER RUNOFF. ALLOWING FOR FURTHER INTERACTION TIME WITH UNDISTURBED GRASSED AREAS TO DECREASE STORMWATER TEMPERATURE. FURTHER, AS MAJOR CUT AND FILL OPERATIONS
STRUCTURE AND RIPRAP APRON AND PROCEED UPSTREAM. 10. CLEAR AND GRUB AND REMOVE TOPSOIL IN THE AREA OF DYNAMIC BERM #1. CONSTRUCT DYNAMIC BERM #1 AND PERMANENT RIP-RAP	OCCUR AND THE STORM SEWER IS INSTALLED, THE MAJORITY OF THE SITE, AND ALL IMPERVIOUS SURFACES, WILL BE CONTROLLED BY SEDIMENT BASINS WHERE STORMWATER WILL COLLECT AWAY FROM IMPERVIOUS SURFACES, ALLOWING FOR FURTHER THERMAL COOLING. AS PART OF THE CONSTRUCTION SEQUENCE, AS LARGE FILL SLOPES ARE FORMED ON THE EXTERIOR OF THE SITE, THE SLOPES ARE
CHANNEL #2D IN ACCORDANCE WITH THE PLAN'S DESIGN DETAILS. STORE TOPSOIL IN THE TEMPORARY TOPSOIL STOCKPILE. A. WHEN INLET 3-3 AND THE DOWNSTREAM CONVEYANCE SYSTEM IS INSTALLED AND FUNCTIONAL, DIRECT RUNOFF DIVERSION SOCK #1	REQUIRED BE IMMEDIATELY STABILIZED AND SEEDED, ALLOWING FOR THERMAL COOLING AS THE PLANTINGS GERMINATE. THIS COMBINATION OF INTERIOR SITE AREAS BEING CONTROLLED SEDIMENT BASINS AND EXTERIOR AREAS BEING IMMEDIATELY PLANTED
TO DISCHARGE INTO THIS INLET. 11. CONTACT THE LOCAL COUNTY CONSERVATION DISTRICT FOR AN INSPECTION AND VERIFICATION THAT ALL INITIAL E&S BMPS CONSTRUCTED IN PHASE 1 ARE FUNCTIONAL AND OPERATING PER THE DESIGN DRAWINGS PRIOR TO PROCEEDING TO PHASE 2.	WILL MITIGATE THERMAL IMPACTS TO THE DOWNSTREAM RECEIVING WATER TO THE GREATEST EXTENT PRACTICABLE. GEOLOGIC SOIL FORMATION & POTENTIAL POLLUTION
PHASE 2	ACCORDING TO THE GEOLOGIC MAP OF PENNSYLVANIA (1980), THE SITE IS UNDERLAIN BY THE NEW OXFORD FORMATION AND COCALICO FORMATION. IN MANY CASES, WHEN A SITE IS NEAR THE MEETING OF TWO OR MORE FORMATIONS, THE BEDROCK ENCOUNTERED DISPLAYS
12. CLEAR AND GRUB THE ENTIRE SITE. STRIP TOPSOIL AND STOCKPILE IN THE PERMANENT TOPSOIL BERMS OR DESIGNATED TEMPORARY AREA AS SHOWN ON THE PLAN. APPLY TEMPORARY SEEDING TO THE STOCKPILE. ALL EXCESS TOPSOIL NOT REQUIRED TO BE REAPPLIED TO DISTURBED AREAS AFTER CONSTRUCTION IS COMPLETED SHALL BE REMOVED FROM THE SITE. THE RECIPIENT SITE SHALL HAVE AN	CHARACTERISTICS OF BOTH FORMATIONS. BASED ON <b>ENGINEERING CHARACTERISTICS OF THE ROCKS OF PENNSYLVANIA</b> , THE NEW OXFORD FORMATION CONSISTS OF LIGHT COLORED ARKOSIC SANDSTONE AND CONGLOMERATE SANDSTONE. THE FORMATION IS WELL BEDDED, THIN. THE JOINTS HAVE A SEAMY TO PLATY
APPROVED EROSION & SEDIMENTATION CONTROL PLAN PRIOR TO RECEIVING ANY TOPSOIL. STAGES #13-15 MAY BE PERFORMED SIMULTANEOUSLY AS DIFFERENT AREAS OF THE SITE ARE BROUGHT TO SUBGRADE ELEVATIONS AND VARIOUS CONVEYANCE SYSTEMS, DYNAMIC BERMS, TOP OF SLOPE BERMS, AND OTHER BMPS ARE CONSTRUCTED.	PATTERN, ARE MODERATELY DEVELOPED, AND HIGHLY FRACTURED. THIS FORMATION IS SLIGHTLY RESISTANT TO WEATHERING AND CAN BE QUICKLY WEATHERED TO A MODERATE DEPTH. THE SURFACE DRAINAGE IS GOOD WITH PRIMARY POROSITY OCCURRING IN THE WEATHERED PORTION OF THE BEDROCK WITH SECONDARY POROSITY OCCURRING IN THE JOINTS AND BEDDING PLANES.
<ul> <li>13. PROCEED WITH BULK SITE EXCAVATION AND ROUGH GRADING ACTIVITIES ON THE ENTIRE SITE AND BRING THE SITE AREAS TO SUBGRADE ELEVATIONS WHILE MAINTAINING ALL DYNAMIC BERM, TEMPORARY SEDIMENT BASIN, AND TEMPORARY FACILITY ELEVATIONS AND</li> </ul>	THE COCALICO FORMATION CONSISTS OF GRAY PHYLLITIC SHALE, SILTSTONE, SILICEOUS SHALE, SOME INTERBEDDED ARGILLACEOUS AND QUARTZOSE SANDSTONE. BEDDING IS MODERATELY WELL DEVELOPED AND THIN. JOINTS HAVE A SEAMY TO PLATY PATTERN, ARE WELL
FUNCTIONALITY. CONTINUALLY ADJUST THE DYNAMIC BERM TO THE TOP OF FILL SLOPES TO INTERCEPT THE MAXIMUM AMOUNT OF SEDIMENT. REFER TO THE FILL PLACEMENT DETAIL PRESENTED ON THE PLAN. THE REMAINING STORM SEWER CONVEYANCE SYSTEMS MAY BEGIN TO BE INSTALLED. REGULARLY MONITOR AND MAINTAIN ALL SEDIMENT BASIN ELEVATIONS AND OUTLET STRUCTURE CONFIGURATIONS TO ENSURE THAT THE BASINS ARE FULLY FUNCTIONAL. ALSO, APPLY EROSION CONTROL MATTING TO THE INDICATED AREAS ON THE PLAN. AS AREAS OF THE SITE REACH SUBGRADE ELEVATION, APPROPRIATE STABILIZATION SHALL BE APPLIED TO FILL SLOPES, LAWN AREAS, LANDSCAPE BERMS, ETC, TO MINIMIZE ACCELERATED EROSION.	DEVELOPED, HIGHLY ABUNDANT, AND ARE OPEN AND STEEPLY DIPPING. THE FORMATION IS SLIGHTLY RESISTANT TO WEATHERING IS THUS MODERATELY TO HIGHLY WEATHERED IN THIN, PENCIL-LIKE FRAGMENTS. SURFACE DRAINAGE IS GOOD DUE TO JOINTING, FAULTING, AND BEDDING-PLANE OPENINGS PROVIDING SECONDARY POROSITY OF LOW MAGNITUDE.
A. EXTENDED ROCK CONSTRUCTION ENTRANCE #2 MAY BE CONSTRUCTED AT THIS TIME. IF CONSTRUCTED, EXTENDED ROCK CONSTRUCTION ENTRANCE #1 MAY BE REMOVED.	EROSION & SEDIMENATION CONTROL MEASURES THE PROPOSED SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SELECTED FOR THIS PROJECT WILL PRIMARILY CONSIST OF
B. RETAINING WALL CONSTRUCTION MAY BEGIN AT THIS TIME.	STABILIZED CONSTRUCTION ENTRANCES, FILTER SOCK, INLET PROTECTION, TEMPORARY SEDIMENT BASINS, EROSION CONTROL MATTING, PUMPED WATER FILTER BAGS, DIVERSION SWALES, PIPE OUTLET PROTECTION, AND TEMPORARY SEEDING AND MULCHING.
<ul> <li>C. WHEN THE FINAL FILL SLOPES ALONG THE PERIMETER OF THE SITE BEING TO OCCUR, CONVERT DYNAMIC BERM #1 TO TOP OF SLOPE BERMS AS SHOWN ON THE PLANS.</li> <li>14. WHILE THE TOP OF SLOPE BERMS ARE BEING CONSTRUCTED AND THE SITE IS BROUGHT TO SUBGRADE ELEVATIONS. CONSTRUCT THE</li> </ul>	<b>TEMPORARY CONTROL MEASURES:</b> 1. REVIEW AND AUTHORIZATION BY THE LOCAL COUNTY CONSERVATION DISTRICT SHALL BE OBTAINED PRIOR TO THE COMMENCEMENT OF
REMAINING STORM SEWER CONVEYANCE SYSTEMS, AS SHOWN ON THE PHASE 2 PLAN. THE STORM SEWER SYSTEMS SHOULD BE INSTALLED BEGINNING AT THE DOWNSTREAM STRUCTURE AND RIPRAP APRON AND PROCEEDING UPSTREAM. AFTER INLETS ARE INSTALLED, INLET TOPS SHALL REMAIN PROPPED UP WITH BRICKS TO ALLOW RUNOFF TO ENTER THE STORM SEWER CONVEYANCE	ANY EARTH DISTURBANCE ACTIVITIES. 2. TEMPORARY VEGETATION SHALL BE ESTABLISHED ON ALL SLOPES, ON STOCKPILED TOPSOIL AND ON ALL DISTURBED AREAS LEFT INVETABLISTED FOR REPORTED AND A DAY OF THE ACTIVITY OF
SYSTEMS TRIBUTARY TO THE SEDIMENT BASINS PRIOR TO CURB INSTALLATION AND PAVING OCCURRING. PROVIDE MASTIC OR EQUIVALENT IN ALL INLETS LOCATED WITHIN GRASSED AREAS TO PREVENT SOIL FROM WASHING INTO THE STORM SEWER THROUGH UNSEALED JOINTS IN THE INLET BOX AND TOP. ALL STORM SEWER PIPING SHALL BE PERIODICALLY FLUSHED TO PREVENT EXCESSIVE	UNSTABILIZED FOR PERIODS LONGER THAN 4 DAYS. AREAS OF DISCONTINUED EARTHMOVING ACTIVITY SHALL ALSO BE IMMEDIATELY STABILIZED. 3. DURING CONSTRUCTION, THE AMOUNT OF DISTURBED SOILS SHALL BE KEPT TO A MINIMUM AND, WHENEVER POSSIBLE, A SUITABLE
SEDIMENT AND DEBRIS ACCUMULATIONS FROM BUILDING UP WITHIN PIPES AND STRUCTURES. ANY WATER PUMPED FROM STORM SEWER TRENCHES SHALL BE DIRECTED TO A SEDIMENT REMOVAL FACILITY SUCH AS A FILTER BAG OR APPROVED EQUAL. AS THE REMAINING AREAS OF THE SITE REACH SUBGRADE ELEVATIONS, APPROPRIATE STABILIZATION SHALL BE APPLIED TO FILL SLOPES, LAWN AREAS,	<ul><li>VEGETATIVE BUFFER WILL BE MAINTAINED AROUND ALL CONSTRUCTION AREAS.</li><li>4. ALL EARTHMOVING ACTIVITIES SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE THE AMOUNT OF DISTURBED AREA.</li></ul>
LANDSCAPE BERMS, ETC. TO MINIMIZE ACCELERATED EROSION. A. INSTALL ROCK FILTERS #3 & #4 AROUND HW 5-1A & HW 5-3A, RESPECTIVELY, PRIOR TO EACH STRUCTURE RECEIVING STORMWATER FLOWS.	5. RESPONSIBILITY FOR IMPLEMENTING EROSION AND SEDIMENTATION CONTROL SHALL BE DESIGNATED TO A MINIMUM OF ONE INDIVIDUAL WHO WILL BE PRESENT AT THE PROJECT SITE DAILY.
<ul> <li>B. CONSTRUCT PERMANENT CHANNELS #2A, #2B, #2C, #3, #4, #5A, &amp; #5B AS THEIR RESPECTIVE RECEIVING CONVEYANCE SYSTEMS ARE COMPLETED. IMMEDIATELY INSTALL THE SPECIFIED STABILIZATION IN EACH CHANNEL.</li> </ul>	<ol> <li>ALL SOIL STOCKPILES ARE TO BE IMMEDIATELY SEEDED WITH A TEMPORARY GRASS COVER.</li> <li>WHENEVER POSSIBLE, PLACE ALL EXCAVATED MATERIAL UPSLOPE FROM DISTURBED AREAS. STOCKPILES SHALL BE SET PARALLEL TO</li> </ol>
C. ONCE ROCK FILTERS #3 & #4 ARE INSTALLED AND FUNCTIONAL, FILTER SOCKS #60 & #61 MAY BE REMOVED AND/OR ADJUSTED AS NEEDED TO COMPLETE INSTALLATION OF NEARBY CHANNELS.	<ol> <li>B. UPON GENERAL COMPLETION OF THE FINAL GRADING, TOPSOIL SHALL BE PLACED AND FINAL-GRADING PASSES SHALL BE MADE</li> </ol>
D. INSTALL INLET PROTECTION ON THE SPECIFIED INLETS IMMEDIATELY AFTER THEY ARE CONSTRUCTED. 15. ONCE THE SITE IS BROUGHT TO SUBGRADE ELEVATIONS, CONSTRUCT SANITARY SEWER MAIN LINES, MANHOLES, AND BUILDING SEWER	PERPENDICULAR TO THE DIRECTION OF RUNOFF. 9. RE-SEED AND REESTABLISH ANY BARREN AND DISTURBED AREAS NOT HAVING ESTABLISHED GROUND COVER.
LATERALS. ALSO, INSTALL ALL OTHER UTILITY SERVICE LINES AND OTHER RELATED UNDERGROUND WORK AT THIS TIME. ANY WATER PUMPED FROM UTILITY TRENCHES SHALL BE DIRECTED TO A SEDIMENT REMOVAL FACILITY SUCH AS A FILTER BAG OR APPROVED EQUAL. WHEN PERFORMING ANY OFFSITE UTILITY WORK, ONLY TRENCHING WORK THAT CAN BE COMPLETED AND PERMANENTLY STABILIZED	10. FILTER SOCK SHALL BE PLACED AT CRITICAL EROSION AREAS, AS SHOWN ON THE PLAN, IN ORDER TO PREVENT SEDIMENT FROM ENTERING INTO ADJACENT PROPERTIES, ROADWAY AND WATERWAYS.
EACH WORKING DAY SHALL BE PERFORMED IN ORDER TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE WORK AREA. DURING TRENCHING, STOCKPILE MATERIAL UPSLOPE OF THE TRENCH. PERMANENT STABILIZATION INCLUDES SEEDING, MULCHING, AND MATTING.	<ol> <li>FILTER SOCK SHALL BE PLACED END TO END, SECURELY STAKED IN PLACE, AND MAINTAINED UNTIL THE AREA IS STABILIZED.</li> <li>WHERE DUST OR WIND EROSION IS A PROBLEM, THE UNSTABLE SURFACE(S) SHALL BE SPRINKLED WITH WATER OR OTHER SUITABLE</li> </ol>
<ol> <li>ONCE THE BUILDING PAD IS BROUGHT TO SUBGRADE ELEVATIONS, BUILDING CONSTRUCTION MAY NOW COMMENCE AT ANY TIME.</li> <li>CONSTRUCT SITE CURBING AND PLACE SUBBASE MATERIAL TO STABILIZE THE SITE DRIVEWAYS, TRUCK COURTS, TRUCK STORAGE AREAS AND PARKING AREAS AS SOON AS PRACTICABLE. THIS WILL ELIMINATE THE ROCK CONSTRUCTION ENTRANCE AND THE NEED TO PROP UP</li> </ol>	DUST SUPPRESSOR; HOWEVER, WASHING OF ROADWAYS IS NOT PERMITTED. 13. ANY WATER PUMPED FROM ANY EXCAVATION, FOR ANY REASON, SHALL BE DIRECTED THROUGH A SEDIMENT FILTER BAG (DIRT BAG)
18. CONTINUE WITH GENERAL BUILDING CONSTRUCTION AND CONSTRUCTION OF OTHER LOCALIZED SITE ITEMS SUCH AS SITE LIGHTING,	CONFORMING TO PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS. 14. THE CONTRACTOR SHALL EMPLOY MEASURES DURING CONSTRUCTION TO PREVENT SPILLS OF FUELS OR LUBRICANTS. IF A SPILL OCCURS. IT SHALL BE CONTROLLED IMMEDIATELY TO PREVENT ITS ENTRY INTO NEARBY WATERWAYS.
SIDEWALK SYSTEMS, FENCING, UTILITY CONNECTIONS, ETC. 19. INSTALL BITUMINOUS BINDER COURSE ON THE SITE DRIVEWAYS, TRUCK COURTS, TRUCK STORAGE AREAS AND PARKING AREAS ONCE	15. WHEN THE ENGINEER, TOWNSHIP OFFICIAL, OR COUNTY CONSERVATION DISTRICT OFFICIAL DETERMINES THAT EROSION CONTROL MEASURES ARE NECESSARY, THAT WERE NOT FORESEEN IN THE DESIGN STAGE, SAID OFFICIAL SHALL ESTIMATE THE EROSION
MAJOR EXTERIOR BUILDING CONSTRUCTION AND ALL UTILITY CONSTRUCTION ARE SUBSTANTIALLY COMPLETED. 20. CONDUCT FINE GRADING ACTIVITIES AND PLACE TOPSOIL ON ALL REMAINING AREAS. APPLY PERMANENT SEEDING, SOIL SUPPLEMENTS, MULCHING, AND MATTING WHERE APPLICABLE IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS PRESENTED ON THE	POTENTIAL AND SELECT MEASURES ON THE BASIS OF BOTH COST EFFECTIVENESS AND THE CONSEQUENCES OF THE EROSION AND THE PERMITTEE SHALL IMMEDIATELY COMPLY WITH SAID DIRECTIVES.
PLAN. INSTALL FINAL LANDSCAPING AND PLANTINGS PER PROJECT REQUIREMENTS AND PROCEDURES PRESENTED ON THE APPROVED PCSM PLAN.	<ul> <li>16. ANY TEMPORARY EROSION CONTROL MEASURE APPLIED TO EXPOSED SOIL SURFACES SHALL REMAIN FUNCTIONAL UNTIL VEGETATED COVER IS SUFFICIENTLY ESTABLISHED.</li> <li>17. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE SUBJECT TO APPLICABLE REGULATIONS OF THE</li> </ul>
21. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S BMPS.	<ol> <li>ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE SUBJECT TO APPLICABLE REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, CHAPTER 102 RULES AND REGULATIONS.</li> <li>18. SHOULD ANY ADDITIONAL EROSION OR SEDIMENTATION OCCUR DURING CONSTRUCTION. OR QUESTIONS REGARDING THE MAINTENANCE</li> </ol>
22. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY E&S BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT PCSM BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS MUST BE STABILIZED IMMEDIATELY IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS PRESENTED ON THE PLAN. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED	CONTROL PRACTICES ARISE, CONTACT THE LOCAL COUNTY CONSERVATION DISTRICT. 19. PERMANENT SEEDING AND MULCHING WILL BE INCORPORATED INTO THE CONSTRUCTION PHASES DURING THE APPROVED PLANTING
AREAS, SUCH REMOVAL/CONVERSIONS SHOULD BE DONE ONLY DURING THE GERMINATING SEASON. 23. REMOVE ALL SECONDARY EROSION AND SEDIMENTATION CONTROL MEASURES ONCE THE SITE IS STABILIZED (70 PERCENT UNIFORM	SEASON. 20. ALL AREAS DISTURBED BY CONSTRUCTION, OTHER THAN THOSE RECEIVING CONCRETE OR BITUMINOUS PAVING OR OTHER TYPE OF IMPERVIOUS COVER, SHALL BE STABILIZED BY APPLYING A SEED MIXTURE TO ESTABLISH AN EROSION RESISTANT STAND OF VEGETATION.
STABILIZATION) SUCH AS DIVERSION SWALES/BERMS, FILTER SOCK, ROCK FILTER, INLET PROTECTION, AND THE LIKE. PERMANENTLY RE-SEED, MULCH AND MAT WHERE APPLICABLE ANY REMAINING AREAS WHICH REMAIN DISTURBED OR HAVE NOT BEEN ESTABLISHED FROM PREVIOUS SEEDING APPLICATIONS IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS PRESENTED ON THE PLAN.	TEMPORARY SEEDING SPECIFICATIONS ARE CONTAINED IN THIS REPORT.
24. <u>CRITICAL STAGE:</u> WHEN THE ENTIRE WATERSHED AREAS TO THEM ARE COMPLETELY STABILIZED, CONVERT ALL TEMPORARY SEDIMENT BASINS AND FACILITIES INTO THEIR RESPECTIVE PERMANENT MRC OR SWM/BMP FACILITIES AS PER THE DETAILS PROVIDED ON THE PCSM PLAN. AS APPLICABLE, REMOVE THE SKIMMER AND STONE LANDING BERMS, BAFFLES, AND CLEANOUT MARKERS. PLACE THE TOP INLET	1. PERMANENT SOIL PROTECTION WILL BE COMPLETED AS EARLY AS PRACTICAL.
GRATE ONTO EACH PERMANENT OUTLET STRUCTURE AND REMOVE ANY TEMPORARY STEEL PLATES. REMOVE ALL SEDIMENT FROM THE FACILITIES AND EITHER INCORPORATE INTO THE SITE OR DISPOSE OF IN ACCORDANCE WITH DEP REGULATIONS. INSTALL THE SOIL MIXTURES AND UNDERDRAINS IN EACH FACILITY PER THE DETAILS ON THE PLAN. RE-SEED AND STABILIZE ANY AREAS DISTURBED DURING	<ol> <li>ALL EXISTING STORMWATER DEVICES ARE TO BE INSPECTED DAILY AND CLEANED OUT AS NECESSARY.</li> <li>ALL SEDIMENT CONTROL DEVICES ARE TO REMAIN UNTIL ALL DISTURBED AREAS ARE FULLY STABILIZED.</li> </ol>
CONVERSION OF THE BASIN PER THE PROJECT'S SPECIFICATIONS. A. CONSTRUCT THE PERMANENT EMBANKMENT, CLAY CORE, AND EMERGENCY SPILLWAY BETWEEN MRC #1 AND SWM/BMP FACILITY #2.	<ol> <li>TEMPORARY AND PERMANENT SEEDING SHALL ADHERE TO THE SPECIFICATIONS PROVIDED IN THIS REPORT.</li> <li>EACH STAGE OF EARTHMOVING ACTIVITIES MUST BE COMPLETED PRIOR TO INITIATING SUBSEQUENT STAGES.</li> </ol>
25. <u>CRITICAL STAGE:</u> WHEN THE ENTIRE SITE HAS BEEN STABILIZED, INSTALL THE LANDSCAPE RESTORATION SEED MIXTURE. THE SEED FORMULA SHALL BE VERIFIED BEFORE BEING INSTALLED.	6. ALL EROSION AND SEDIMENTATION CONTROLS WILL BE INSPECTED WEEKLY AND AFTER ALL MEASURABLE PRECIPITATION EVENTS.
26. INSTALL SITE SIGNAGE, FINAL WEARING COURSE, PAVEMENT MARKINGS, AND OTHER INCIDENTAL CONSTRUCTION ITEMS AS NECESSARY. 27. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES, REMOVAL OF ALL TEMPORARY BMPS, INSTALLATION OF ALL PERMANENT	<ol> <li>THE PERMITTEE AND ANY CO-PERMITTEE SHALL TAKE ALL REASONABLE STEPS TO MINIMIZE OR PREVENT ANY DISCHARGE IN VIOLATION OF THIS PERMIT THAT HAS A REASONABLE LIKELIHOOD OF ADVERSELY AFFECTING HUMAN HEALTH OR THE ENVIRONMENT.</li> <li>APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLANS AND NARRATIVE REPORTS MUST BE AVAILABLE AT THE SITE OF THE</li> </ol>
PCSM BMP'S, AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATORS SHALL CONTACT THE LOCAL COUNTY CONSERVATION DISTRICT FOR A FINAL INSPECTION.	<ol> <li>APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLANS AND NARRATIVE REPORTS MUST BE AVAILABLE AT THE SITE OF THE CONSTRUCTION ACTIVITY AT ALL TIMES.</li> <li>IF FUEL OR OTHER DANGEROUS CHEMICALS ARE STORED ON SITE, THEN A PREPAREDNESS, PREVENTION AND CONTINGENCY (PPC) PLAN</li> </ol>
28. WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THIS PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PCSM BMPS IN ACCORDANCE WITH THE APPROVED PCSM PLAN, OR UPON SUBMISSION OF THE NOTICE OF TERMINATION (NOT) IF SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED E&S AND PCSM PLANS.	MUST BE DEVELOPED AND KEPT ON SITE.

THE IMPROVEMENTS AND EXTENSION TO STEEL WAY CAN BE COMPLETED IS A SEPARATE SEQUENCE FROM THE MAIN 1. A COPY OF THE APPROVED DRAWINGS (STAMPED SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT . COORDINATE WITH NEIGHBORING PROPERTY OWNERS TO MAINTAIN ACCESS TO THEIR SITE TO THE GREATEST EXTENT STAGES #1-5 AS DESCRIBED ABOVE.

## IAL IMPACTS ANALYSIS

### GIC SOIL FORMATION & POTENTIAL POLLUTION

## **N & SEDIMENATION CONTROL MEASURES**

#### ONTROL MEASURES

#### ONTROL MEASURES:

# **EROSION & SEDIMENATION CONTROL NOTES**

PROTECT DOWN GRADIENT AREAS FROM EROSION AND SEDIMENTATION DURING CONSTRUCTION.

- SITE AT ALL TIMES.
- 2. BEFORE IMPLEMENTING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS REVISIONS FROM THE BERKS COUNTY CONSERVATION DISTRICT.
- 3. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION ARE FUNCTIONING AS DESCRIBED IN THIS DOCUMENT.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF DEP.
- POTENTIAL TO CLOG THE BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATERS.
- WATERWAYS
- FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
- SWEPT INTO ANY ROADSIDE DITCH. STORM SEWER, OR SURFACE WATER
- 12. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO

ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.

- PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOI ATION
- DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE.).
- FILL. FORM FP-001 MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL.
- POLICY "MANAGEMENT OF CLEAN FILL."

#### MATERIAL NOTES:

- ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR DEP FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
- CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
- FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- 5. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- STABILIZATION NOTES:
- SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
- ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES."
- 4. STRAW MULCH MUST BE APPLIED AT RATES OF AT LEAST 3.0 TONS PER ACRE. STRAW MULCH SHOULD BE ANCHORED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN.
- DISPLACEMENT OF ROCKS SHALL BE IMMEDIATELY CORRECTED. THE FILTER SOCK SHALL BE MAINTAINED IN ITS DESIGNED POSITION AND ANY EXCESS SEDIMENT FROM THE SURFACE OF THE ROCK EMBANKMENT SHALL BE REMOVED AND THE ROCK REDRESSED. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT 6. THE SEDIMENT BASIN SHALL BE MONITORED AND SEDIMENT SHALL BE REMOVED FROM THE BASIN AND PROPERLY DISPOSED OF WHEN IT REACHES THE SPECIFIED CLEAN-OUT ELEVATION. BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED.
- ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND/OR DETAIL SHEETS. SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
- RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
- CHANNEL NOTES ACCUMULATED SEDIMENT. EXCESS VEGETATION, AND CONSTRUCTION MATERIAL/WASTES.
- AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
- DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING. NPDES PERMIT NOTES:
- DISTRICT AN ADMINISTRATIVELY COMPLETE AND ACCEPTABLE NOI, AT LEAST 180 DAYS PRIOR TO THE EXPIRATION DATE OF THE COVERAGE.
- COVERAGE.
- A.2.A.
- 5. THE DEP "VISUAL INSPECTION CHECKLIST" SHOULD BE COMPLETED FOR EACH INSPECTIONS AND SHOULD BE AVAILABLE ON-SITE FOR INSPECTION BY DEP OR COUNTY CONSERVATION DISTRICT PERSONNEL
- 6. AFTER ALL EARTHMOVING ACTIVITY HAS CEASED AND THE ENTIRE PERMITTED AREA IS PERMANENTLY STABILIZED, THE PERMITTEE MUST A NOTICE OF TERMINATION TO BERKS COUNTY CONSERVATION DISTRICT TO CLOSE OUT THE PERMIT. ALLOWING THE NPDES PERMIT TO EXPIRE IS DETERMINED TO BE A VIOLATION OF THE NPDES PERMIT.

WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE

#### SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE CONSTRUCTION SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND

AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.

SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BMPS TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT 6. SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING

7. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS, DISCHARGE POINTS SHOULD BE ESTABLISHED TO PROVIDE FOR MAXIMUM DISTANCE TO ACTIVE

UNTIL THE SITE IS STABILIZED. ALL E&S BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL E&S BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF E&S BMPS

A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED

10. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR

11. ALL EXCAVATION FOR UTILITY LINE INSTALLATION SHALL BE LIMITED TO THE AMOUNT THAT CAN BE EXCAVATED, INSTALLED, BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY. ALL EXCAVATED MATERIAL SHALL BE DEPOSITED ON THE UPSLOPE SIDE OF THE TRENCH.

13. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS DEFINED IN 5. SECTION 602 OF THE PENNSYLVANIA CLEAN STREAMS LAW. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL

14. CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL, THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT"

15. ANY PLACEMENT OF CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE FORM FP-001 2 TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN

16. ENVIRONMENTAL DUE DILIGENCE MUST BE PERFORMED TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL, ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY. SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS, ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF A REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S

ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE CHAPTER 260, §§260.1 ET SEQ., 271.1, AND 287.1 ET. SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE.

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND

#### STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2H:1V OR FLATTER.

AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 4 INCHES PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 6 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL 3:1 OR GREATER

DISTURBANCE ACTIVITIES EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED OR OTHERWISE PROTECTED FROM

EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER, WITHIN 50 FEET OF A SURFACE WATER AND ON

IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL RIP-RAP APRON: STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN 1 ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR

8. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF

ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS, LEAVES, WOODY DEBRIS,

UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK

CHANNELS HAVING RIPRAP. RENO MATTRESS. OR GABION LININGS MUST BE SUFFICIENTLY OVER-EXCAVATED SO THAT THE DESIGN

PERMITTEE'S REQUESTING A RENEWAL OF COVERAGE UNDER GENERAL PERMIT MUST SUBMIT TO THE BERKS COUNTY CONSERVATION

DISTRICT AN ADMINISTRATIVELY COMPLETE AND ACCEPTABLE NOI, AT LEAST 180 DAYS PRIOR TO THE EXPIRATION DATE OF THE DISPOSAL REGARDLESS OF THE SITE LOCATION.

# ALL EARTHMOVING CONTRACTORS MUST BE ADDED AS CO-PERMITTEES TO THE NPDES PERMIT.

## **MAINTENANCE OF E&S CONTROL DEVICES**

THESE PLANS INDICATE CRITICAL AREAS FOR EROSION AND SEDIMENT CONTROL PLACEMENT BUT DO NOT RELIEVE THE CONTRACTOR FROM THE SOIL EROSION AND SEDIMENTATION CONTROLS UTILIZED IN THE DEVELOPMENT OF THIS PLAN SHALL BE ROUTINELY MAINTAINED IN PROVIDING ADDITION CONTROLS AS SITE CONDITIONS WARRANT. THE ENVIRONMENTAL COMPLIANCE MANAGER FOR THE PROJECT AND/OR ORDER TO KEEP THEM FUNCTIONING PROPERLY UNTIL SITE STABILIZATION OCCURS. THE CONTRACTOR SHALL PERFORM CERTAIN PERIODIC CONSERVATION DISTRICT MAY REQUEST THE CONTRACTOR INSTALL E&S BMPS NOT DEPICTED ON THESE PLANS DRAWINGS IN ORDER TO DUTIES IN ORDER TO ASSURE PROPER CONTROL. MAINTENANCE OF THE VARIOUS EROSION AND SEDIMENTATION CONTROLS SHALL INCLUDE, AT A MINIMUM THE FOLLOWING GENERAL MAINTENANCE PROCEDURES OUTLINED BELOW

> MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION MEASURES AFTER EACH SIGNIFICANT RUNOFF EVENT AND ON A WEEKLY BASIS BY A QUALIFIED PERSON TRAINED AND EXPERIENCED IN EROSION AND SEDIMENTATION CONTROL AND WHO HAS SITE SUPERVISION RESPONSIBILITIES. TO ASCERTAIN THAT THE EROSION CONTROL MEASURES ARE OPERATIONAL AND EFFECTIVE IN PREVENTING SEDIMENT FROM LEAVING THE SITE. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT AND INCLUDE: A SUMMARY OF SITE CONDITIONS, BMPS AND COMPLIANCE, AND THE DATE, TIME, AND THE NAME OF THE PERSON CONDUCTING THE INSPECTION. ALL SITE INSPECTIONS WILL BE DOCUMENTED IN AN INSPECTION LOG KEPT FOR THIS PURPOSE INCLUDING THE COMPLIANCE ACTIONS. DATE, TIME AND NAME OF THE PERSON CONDUCTING THE INSPECTION. THE INSPECTION LOG SHALL BE KEPT ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE CONSERVATION DISTRICT UPON REQUEST.

> MISCELLANEOUS ADJUSTMENTS AND CORRECTIONS SHALL BE MADE TO ANY EROSION CONTROL STRUCTURE AS DEEMED NECESSARY BY THE ENGINEER, TOWNSHIP OFFICIAL, OR COUNTY CONSERVATION DISTRICT REPRESENTATIVE IN ORDER TO CORRECT UNFORESEEN PROBLEMS CAUSED BY A STORM PRIOR TO STABILIZATION.

EXTENDED ROCK CONSTRUCTION ENTRANCE:

- THE STRUCTURE'S THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSION BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL WILL BE MAINTAINED ON SITE FOR THIS PURPOSE. DRAIN SPACE UNDER WASH RACK SHALL BE KEPT OPEN AT ALL TIMES. DAMAGE TO THE WASH RACK SHALL BE REPAIRED PRIOR TO FURTHER USE OF THE RACK. ALL SEDIMENT DEPOSITED ON ROADWAYS SHALL BE REMOVED AND RETURN TO THE CONSTRUCTION SITE IMMEDIATELY. WASHING THE
- ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE
- ROCK CONSTRUCTION ENTRANCES SHALL BE CLEANED AND REDRESSED WHEN VOIDS BECOME CHOKED WITH MUD AND SEDIMENT. GEOTEXTILE FABRIC SHALL BE INSTALLED UNDER ALL ROCK CONSTRUCTION ENTRANCES TO KEEP SOIL FROM PUMPING AND PENETRATING INTO THE STRUCTURE.

PUMPED WATER FILTER BAG:

- 1. FILTER BAGS SHALL BE INSPECTED DAILY. IMMEDIATELY DISPOSE OF BAGS WHICH ARE SPLIT OR TORN.
- 2. DO NOT USE BAGS WHICH ARE GREATER THAN 1/2 FULL. WHEN BAGS REACH THAT CAPACITY, THEY SHALL BE REPLACED AND THE SEDIMENT SHALL BE PROPERLY DISPOSED. REGULARLY INSPECT THE OPERATION OF FILTER BAGS TO ENSURE THAT THEY ARE LOCATED ON RELATIVELY FLAT, WELL VEGETATED
- AREAS AND THAT THE OUTFLOW IS BEING DISCHARGED TO A STABLE. EROSION RESISTANT AREA.

COMPOST FILTER SOCK:

- THE FILTER SOCK SHALL BE INSPECTED AFTER EVERY PRECIPITATION EVENT. ANY NECESSARY REPAIRS WILL BE MADE IMMEDIATELY. ACCUMULATED SEDIMENT SHALL BE REMOVED AS REQUIRED TO KEEP THE DEVICES FUNCTIONAL. IN ALL CASES, REMOVE DEPOSITS WHERE ACCUMULATIONS REACH ½ ABOVE THE GROUND HEIGHT OF THE DEVICE. 3. ALL UNDERCUTTING OR EROSION OF THE TOE ANCHOR OR BASE SHALL BE REPAIRED IMMEDIATELY WITH COMPACTED BACKFILL MATERIAI
- ADHERE TO ANY MANUFACTURER'S RECOMMENDATIONS FOR REPLACING FILTER SOCK.
- ANY DEBRIS ACCUMULATED AT SILT SOCK BARRIERS SHALL BE REMOVED AND PROPERLY DISPOSED IN A RESPONSIBLE MANNER. BARRIERS SHALL BE CHECKED AND REALIGNED OR RESET AS REQUIRED. ANY DEBRIS OR SOLID WASTE MATERIAL ACCUMULATED FROM CONSTRUCTION ACTIVITIES SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN AN APPROVED LANDFILL. CONSTRUCTION WASTE SHALL NOT BE BURIED ON THE SUBJECT SITE.

OCK FILTER

- IF BERM BECOMES CLOGGED, IMMEDIATELY REPLACE WITH NEW STONE OR REMOVE, WASH, AND REPLACE STONE. FILTER CLEANING OR REPLACEMENT STONE SHALL BE DONE ON A DAY WHEN THERE IS NO PRECIPITATION. A SUPPLY OF STONE SHALL BE MAINTAINED ON THE SITE FOR REPLACEMENT
- REMOVE SEDIMENT WHEN IT ACCUMULATES A DEPTH OF 6" AGAINST THE BERM BASE, PLACE SEDIMENT ON THE TOPSOIL STOCKPILE. **INLET FILTER BAG:**
- FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT.
- FILTER BAGS SHALL BE CLEANED AND/OR REPLACED WHEN THE BAG IS HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. BAGS THAT WILL BE REUSED SHALL BE RINSED AT A LOCATION WHERE THE RINSE WATER WILL ENTER A SEDIMENT REMOVAL BMP.
- 4. REPLACE DAMAGED FILTER BAGS.

#### STONE INLET PROTECTION

- 1. STANDARD TYPE C AND TYPE M INLETS SHALL USE A WIRE MESH AND STONE INLET PROTECTION DEVICE AS PER THE STANDARD CONSTRUCTION DETAILS SHOWN ON THE APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLAN. INLET PROTECTION DEVICES SHALL BE INSPECTED REGULARLY AND AFTER EACH MEASURABLE PRECIPITATION EVENT.
- 3. SEDIMENT SHALL BE REMOVED FROM THE DEVICE WHEN THE DEPTH OF SEDIMENT IS 1/3 OF THE TOTAL HEIGHT. STONE WHICH BECOMES CHOKED WITH SEDIMENT AND IS NOT FUNCTIONAL SHALL BE REMOVED AND REPLACED WITH CLEAN STONE REMOVE INLET PROTECTION ONCE SUBBASE MATERIAL HAS BEEN INSTALLED AND PAVING OF THE SITE IS ABOUT TO OCCUR.

TOP OF SLOPE BERM

- TEMPORARY BERMS SHALL BE PLACED. MAINTAINED. AND ADJUSTED CONTINUOUSLY UNTIL 90% VEGETATIVE GROWTH IS ESTABLISHED ON THE EXTERIOR SLOPES WITH PERMANENT DRAINAGE FACILITIES FUNCTIONING. 2. BERMS SHALL OUTLET TO SLOPE PIPES, CHANNELS, STORM SEWER CONVEYANCE, OR OTHER APPROVED MEANS OF CONVEYING RUNOFF
- TO A SEDIMENT TRAP OR SEDIMENT BASIN.
- 3. CHANNEL BEHIND BERM SHALL HAVE POSITIVE GRADE TO OUTLET AND AN APPROPRIATE PROTECTIVE LINING. 4. BERM SHALL BE ADEQUATELY COMPACTED TO PREVENT FAILURE.
- 5. AN ACCEPTABLE ALTERNATIVE TO TOP OF SLOPE BERM IS TO CONTINUOUSLY GRADE THE TOP OF FILL TO DIRECT RUNOFF AWAY FROM THE FILL SLOPE TO A COLLECTOR CHANNEL, SEDIMENT TRAP, OR SEDIMENT BASIN.

SEDIMENT BASIN

- 1. A "CLEAN-OUT" ELEVATION WILL BE CLEARLY INDICATED ON THE PLAN DRAWINGS. THIS ELEVATION WILL BE IDENTIFIED BY APPROPRIATE STRUCTURE OR DEVICE WITHIN THE SEDIMENT BASIN TO INDICATE WHEN SEDIMENT REMOVAL OR DISPOSAL OPERATIONS ARE
- NECESSARY DIVERSION SWALES TRIBUTARY TO THE SEDIMENT BASIN SHALL BE REGULARLY CLEANED AND RE-SHAPED TO MAINTAIN THE DESIGN DIMENSION AND CAPACITY
- UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH 3. SEDIMENT WILL NOT BE ALLOWED TO ENTER THE WATERS OF THE COMMONWEALTH DURING EITHER SEDIMENT REMOVAL OR DISPOSAL OPERATIONS.
  - 4. SEDIMENT BASIN MUST BE PROTECTED FROM UNAUTHORIZED ACTS OF THIRD PARTIES. ROCK OUTLETS SHALL BE MAINTAINED IN THE POSITION AND TO THE DIMENSION AS SHOWN ON THE DETAIL. ANY SLIDING OR
  - 7. ALL EMBANKMENT CONSTRUCTION SHALL REMAIN WATERTIGHT AND FREE FROM EROSION OR PIPING OF SOILS. CLEAN-OUT MARKERS SHALL BE LOCATED AT HALFWAY POINTS WHERE RUNOFF ENTERS AND LEAVES THE CONTROL FACILITY

ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

EROSION CONTROL BLANKET

1. BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGH THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN FOUR (4) CALENDAR DAYS.

#### **RECYCLING OF BUILDING MATERIALS**

ALL BUILDING MATERIALS AND CONSTRUCTION WASTE SHALL BE REMOVED FROM THE SITE AND RECYCLED AND/OR PROPERLY DISPOSED IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS, 25 PA. CODE §260.1 ET SEQ., §271.1 ET SEQ., AND §287.1 ET SEQ. NO BUILDING MATERIAL OR CONSTRUCTION WASTE OR OTHER UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED OR DISCHARGED AT THE PROJECT SITE. ANTICIPATED PROJECT WASTES INCLUDE, BUT ARE NOT LIMITED, TO THE FOLLOWING: DEBRIS FROM ARIOUS PAVEMENTS (BITUMINOUS, CONCRETE, GRAVEL), DEBRIS FROM EXISTING STRUCTURES, TREE/SHRUBS TO BE REMOVED, ETC.

#### **OFF-SITE DISPOSAL AREAS**

O THE EXTENT THAT IT MAY BE NECESSARY TO EXPORT WASTE MATERIAL, EXCESS TOPSOIL, OR OTHER UNSUITABLE OR UNUSABLE MATERIAL FROM THE SITE, IT SHALL BE THE RESPONSIBILITY OF THE PERMITTEE AND ANY CO-PERMITTEE TO DISPOSE OF THE MATERIAL AT AN APPROVED AND PERMITTED SITE. OTHERWISE, A SOIL EROSION AND SEDIMENTATION CONTROL PLAN AND OTHER NECESSARY PERMIT PERMITTEE'S REQUESTING A RENEWAL OF COVERAGE UNDER INDIVIDUAL PERMIT MUST SUBMIT TO THE BERKS COUNTY CONSERVATION APPLICATIONS AND MATERIALS SHALL BE SUBMITTED TO THE APPROPRIATE COUNTY CONSERVATION DISTRICT FOR APPROVAL PRIOR TO

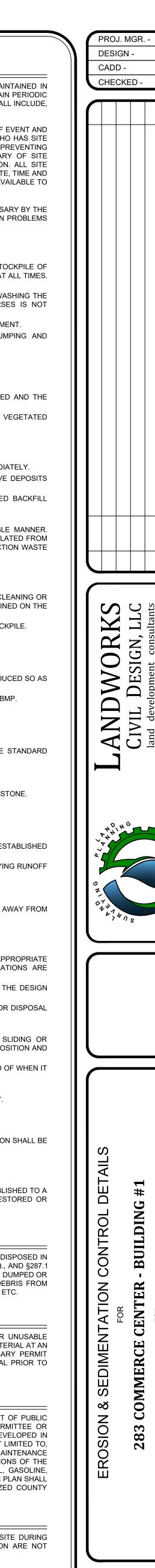
#### PREPAREDNESS, PREVENTION, AND CONTINGENCY PLANS

SITE INSPECTIONS AND MONITORING REPORTS - THE PERMITTEE AND CO-PERMITTEE(S) SHALL COMPLY WITH ALL OF THE MONITORING IF THE POTENTIAL EXISTS FOR CAUSING ACCIDENTAL POLLUTION OF AIR, LAND, OR WATER, OR FOR CAUSING ENDANGERMENT OF PUBLIC AND REPORTING REQUIREMENTS, AS OUTLINED IN PART A 2 OF THE NPDES PERMIT. THE PERMITTEE AND CO-PERMITTEE(S) SHALL HEALTH AND SAFETY THROUGH ACCIDENTAL RELEASE OF TOXIC, HAZARDOUS, OR OTHER POLLUTING MATERIALS, THE PERMITTEE OR ENSURE THAT SITE INSPECTIONS ARE CONDUCTED AT LEAST WEEKLY AND AFTER EACH MEASUREABLE PRECIPITATION EVENT BY CO-PERMITTEE MUST DEVELOP A PREPAREDNESS, PREVENTION AND CONTINGENCY (PPC) PLAN. THE PPC PLAN SHALL BE DEVELOPED IN QUALIFIED PERSONNEL. A WRITTEN REPORT SHALL BE KEPT FOR EACH INSPECTION IN ACCORDANCE WITH THE REQUIREMENTS OF PART ACCORDANCE WITH APPLICABLE DEP REGULATIONS. THE PPC PLAN SHALL IDENTIFY AREAS WHICH MAY INCLUDE, BUT ARE NOT LIMITED TO, WASTE MANAGEMENT AREAS, RAW MATERIAL STORAGE AREAS, TEMPORARY AND PERMANENT SPOILS STORAGE AREAS, MAINTENANCE AREAS, AND ANY OTHER AREAS THAT MAY HAVE THE POTENTIAL TO CAUSE NON-COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE NPDES PERMIT DUE TO THE STORAGE, HANDLING OR DISPOSAL OF ANY TOXIC OR HAZARDOUS SUBSTANCES SUCH AS OIL, GASOLINE, PESTICIDES. HERBICIDES. SOLVENTS. ETC. BMPS SHALL BE DEVELOPED AND IMPLEMENTED FOR EACH IDENTIFIED AREA. THE PPC PLAN SHALL BE MAINTAINED ON SITE AT ALL TIMES AND SHALL BE MADE AVAILABLE FOR REVIEW AT THE DEPARTMENT'S OR AUTHORIZED COUNTY CONSERVATION DISTRICT'S REQUEST

#### **CRITICAL STAGES OF CONSTRUCTION**

THE FOLLOWING STAGES OF CONSTRUCTION REQUIRE A LICENSED PROFESSIONAL OR DESIGNEE TO BE PRESENT ON THE SITE DURING CONSTRUCTION OF THE SPECIFIC ITEMS FOR INSPECTION AND FIELD VERIFICATION. ALL OTHER STAGES OF CONSTRUCTION ARE NOT NECESSARY TO BE OBSERVED BY A LICENSED PROFESSIONAL OR DESIGNEE.

- 1. WHEN TEMPORARY SEDIMENT BASINS #2, #3, & #4 AND TEMPORARY FACILITY #1 ARE BEING CONSTRUCTED. THIS INCLUDES THE TEMPORARY OUTLET STRUCTURE, EMERGENCY SPILLWAY, DIMENSIONS OF THE BASIN, SKIMMER ATTACHMENT, IMPERVIOUS CORE, AND ASSOCIATED APPURTENANCES
- 2. WHEN ALL TEMPORARY SEDIMENT BASINS AND FACILITIES ARE BEING CONVERTED TO THEIR PERMANENT CONDITIONS. THIS INCLUDES THE PERMANENT OUTLET STRUCTURE, UNDERDRAINS, FOREBAYS, FOREBAY SPILLWAYS, AND SOIL MIXTURE.
- 3. THE LANDSCAPE RESTORATION SEED MIXTURE SHALL BE VERIFIED BEFORE IT IS INSTALLED.



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**PROJECT NO.** 

22-0123-005

**DATE:** 01/03/23

SHEET 65 OF 54

SCALE: N.T.S.

# **SOIL LIMITATIONS & RESOLUTIONS**

IN GENERAL, THERE ARE NO KNOWN UNUSUAL SITE CHARACTERISTICS THAT ARE UNLIKE THOSE FOUND ELSEWHERE IN THE REGION WHERE VEGETATIVE STABILIZATION SIMILAR SOILS ARE PRESENT. HOWEVER, REFERENCE IS HEREBY MADE TO THE SITE'S GEOTECHNICAL ENGINEERING REPORT FOR ANY GEOTECHNICAL RECOMMENDATIONS PROVIDED SPECIFICALLY FOR THE SUBJECT PROJECT.

ANY ROCK ENCOUNTERED WILL BE RIPPED OR BLASTED AS NECESSARY, AND USED FOR COMPACTED FILL IN OTHER AREAS OR REMOVED FROM THE SITE.

IF BLASTING IS NECESSARY, USE CONTROLLED TECHNIQUES TO CONTAIN VIBRATIONS WITHIN THE REQUIRED BLASTING AREA. A CERTIFIED BLASTING PROFESSIONAL MUST OVERSEE ALL BLASTING ACTIVITIES. THE PROFESSIONAL SHALL BE FAMILIAR WITH BLASTING TECHNIQUES IN BEGINNING OF THE NEXT PLANTING SEASON. HOWEVER, THE AREA WILL NOT BE CONSIDERED STABILIZED UNTIL A MINIMUM UNIFORM 70% A KARST ENVIRONMENT AND THE PREVENTION OF SINKHOLES. AFTER BLASTING OPERATIONS, THE BLASTING PROFESSIONAL SHALL PERFORM VEGETATIVE COVER OF EROSION RESISTANT PERENNIAL SPECIES HAS BEEN ACHIEVED. INSPECTIONS TO LOCATE POSSIBLE AREAS OF CONCERN. IF ANY SINKHOLES ARE ENCOUNTERED, DIVERT SURFACE WATER AWAY FROM THE SINKHOLE AND IMMEDIATELY FOLLOW THE SINKHOLE REPAIR AND REMEDIATION PROCEDURES ALONG WITH ANY RECOMMENDATIONS OF THE AS DISTURBED AREAS WITHIN A PROJECT APPROACH FINAL GRADE, PREPARATIONS SHOULD BE MADE FOR SEEDING AND MULCHING TO BEGIN. BLASTING PROFESSIONAL. ADDITIONALLY, BEFORE PLACING THE FINAL ENGINEERED SOIL MIXTURE WITHIN EACH SWM / BMP FACILITY, WAITING UNTIL EARTHMOVING IS COMPLETED BEFORE MAKING PREPARATIONS FOR SEEDING AND MULCHING IS NOT ACCEPTABLE. INSPECT AND REPAIR THE SUBGRADE FOR SINKHOLES OR FRACTURES.

SLOPE WILL NOT BE AN ADVERSE FACTOR TO CONSTRUCTION. SLOPES WILL BE RE-SHAPED PER THE PROPOSED GRADING PLAN AND TYPICALLY WILL BE 3:1 OR FLATTER. ANY ACCELERATED RUNOFF OR EROSION FROM SLOPES WILL BE HANDLED BY EROSION CONTROL MATTING AND SILT SOCK ON THE SITE.

DRAINAGE WITHIN THE PROJECT AREA WILL BE ACCOMMODATED BY PROPOSED GRADING, STORM PIPING AND SWALES. THE GROUND SURFACE WILL BE RESHAPED, COMPACTED AND STABILIZED CONSISTENT WITH THE PROPOSED GRADING PLAN CONTAINED HEREIN.

SOIL STRENGTH SHALL BE ENSURED THOUGH PROPER COMPACTION TECHNIQUES, AS ADVISED BY THE GEOTECHNICAL REPORT FOR THE PROJECT. SHOULD CIRCUMSTANCES ARISE WHERE REQUIRED COMPACTION CANNOT BE ACHIEVED, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR CORRECTIVE MEASURES.

ROAD FILL SHALL BE PLACED IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED WITH THE GEOTECHNICAL REPORT. SHOULD CIRCUMSTANCES ARISE WHERE REQUIRED COMPACTION CANNOT BE ACHIEVED, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR CORRECTIVE MEASURES.

SHOULD EXCAVATION ACTIVITIES OCCUR DURING WINTER MONTHS WHEN FROST ACTION MAY OCCUR, THE CONTRACTOR SHALL REMOVE THE FROST-IMPACTED SOILS PRIOR TO PLACEMENT OF FILL MATERIAL AND ENSURE COMPACTION MEETS THE RECOMMENDATIONS CONTAINED WITHIN THE GEOTECHNICAL REPORT.

IN CUT AREAS, OVER-EXCAVATION SHALL BE PERFORMED TO ENSURE THAT PROPER SOIL ADHESION IS ACHIEVED IN AREAS OF SHALLOW BEDROCK.

AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL NEED TO HAVE APPROPRIATE E&S CONTROLS.

ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.

FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.

FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

SOIL NAME	CUTBANKS CAVE	CORROSIVE TO CONCRETE/ STEEL	DROUGHTY	EASILY ERODIBLE	FLOODING	DEPTH TO SATURATED ZONE/ SEASONAL HIGH WATER TABLE	HYDRIC/ HYDRIC INCLUSIONS	LOW STRENGTH/LANDSLIDE PRONE	SLOW PERCOLATION	DIIII	POOR SOURCE OF TOPSOIL	FROST ACTION	SHRINK/ SWELL	POTENTIAL SINKHOLE	PONDING	WETNESS
ABBOTTSTOWN	х	C/S		x		x	x	х	Х	х	х	х				х
BEDINGTON	Х	С	х	х			х		Х		Х	Х				
BLAIRTON	Х	C/S		x		x	x	х	х	x	х	Х				х
BUCKS	х	С						х	х	x	х	х	х			
LANSDALE	Х	С	x					х	Х		х	Х				
READINGTON	X	C/S		x		X	x	х	Х	x	x	Х				х

ONE OR MORE OF THE FOLLOWING DESIGNS:

. SLOPING THE GROUND TO REDUCE THE HEIGHT OF THE CUTBANK. BENCHING THE GROUND TO REDUCE THE HEIGHT OF THE CUTBANK. SHORING THE CUTBANK WITH SUPPORT (PLANKING OR HYDRAULIC JACKS)

	<ol> <li>SHORING THE CUTBANK WITH SUPPORT (PLANKING OR HYDRAULIC JACKS)</li> <li>SHIELDING THE CUTBANK (TRENCH BOX)</li> </ol>	_	
		5.	
CORROSIVE:	ALL UNDERGROUND PIPES, CONDUITS, AND STORAGE TANKS SHALL BE PROTECTIVE COATING OR SHALL BE MANUFACTURED FROM CORROSION RESISTANT MATERIALS TO PREVENT CORROSION DUE TO EXPOSURE TO CORROSIVE SOILS.	6.	I
EASILY ERODIBLE:	EROSION CONTROL MEASURES SHALL BE MONITORED AND ROUTINELY IN ACCORDANCE WITH PROVIDED SCHEDULE AND PROCEDURE UNTIL THE SITE IS COMPLETELY STABILIZED.	7.	
FLOODING:	CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AT ALL AREAS DURING AND AFTER CONSTRUCTION BY SLOPING ALL SURFACES, EXCEPT FOR THE BUILDING PAD AND BOTTOM SURFACES OF PCSM BMPS, A MINIMUM OF 1%. THE BOTTOM SURFACES OF PCSM BMPS SHALL BE SLOPED AS DESIGNED. WATER COLLECTED IN TRENCHES AND OTHER EXCAVATIONS DURING CONSTRUCTION SHALL BE REMOVED PRIOR TO CONTINUATION OR COMPLETION OF WORK WHERE WATER IS ENCOUNTERED.	8.	
DEPTH OF SATURATED ZONE:	CONTRACTOR SHALL PROVIDE NECESSARY PUMPS AND PIPES TO DRAIN ANY GROUNDWATER ENCOUNTERED DURING EXCAVATION. SATURATED SOILS SHALL BE DIRED PRIOR TO USE AS FILL.	9.	
HYDRIC INCLUSIONS:	CONTRACTOR SHALL UTILIZE CONSTRUCTION TECHNIQUES DESIGNED TO HANDLE ANY SATURATED SOILS DURING EXCAVATION.		ļ
LOW STRENGTH:	PRECAUTIONS SHOULD BE TAKEN TO PREVENT SLOPE FAILURE DUE TO IMPROPER CONSTRUCTION TECHNIQUES SUCH AS OVER-STEEPENING AND OVERLOADING OF SLOPES, REMOVAL OF LATERAL SUPPORT AND FAILURE TO PREVENT SATURATION OF SLOPES. AS DEFINED BY OSHA, PROTECTIVE SYSTEMS INCLUDE ONE OR MORE OF THE FOLLOWING DESIGNS:		
	<ol> <li>SLOPING THE GROUND TO REDUCE THE HEIGHT OF THE CUTBANK.</li> <li>BENCHING THE GROUND TO REDUCE THE HEIGHT OF THE CUTBANK.</li> <li>SHORING THE CUTBANK WITH SUPPORTS (PLANKING OR HYDRAULIC JACKS).</li> <li>SHEILDING THE CUTBANK (TRENCH BOX).</li> </ol>		
SLOW PERCOLATION:	CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AT ALL AREAS DURING AND AFTER CONSTRUCTION BY SLOPING ALL SURFACES, EXCEPT FOR THE BUILDING PAD AND BOTTOM SURFACES OF PCSM BMPS, A MINIMUM OF 1%. THE BOTTOM SURFACES OF PCSM BMPS SHALL BE SLOPES AS DESIGNED. WATER COLLECTED IN TRENCHES AND OTHER EXCAVATIONS DURING CONSTRUCTION SHALL BE REMOVED PRIOR TO CONTINUATION OR COMPLETION OF WORK WHERE WATER IS ENCOUNTERED.		
PIPING:	PRECAUTIONS SHOULD BE TAKEN, AS NECESSARY, TO PREVENT PIPING. CONSTRUCT ANTI-SEEP COLLARS AS DESIGNED FOR EACH PCSM BMP BASIN.	_	
POOR SOURCE OF TOPSOIL:	SOIL TESTS SHALL BE PERFORMED TO DETERMINE APPROPRIATE TOPSOIL FOR USE IN LAWN AREAS.		
FROST ACTION:	CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AT ALL AREAS DURING CONSTRUCTION AND AFTER CONSTRUCTION BY SLOPING ALL SURFACES, EXCEPT FOR THE BUILDING PAD AND BOTTOM SURFACES OF PCSM BMPS, A MINIMUM OF 1%. THE BOTTOM SURFACES OF PCSM BMPS SHALL BE SLOPED AS DESIGNED. WATER COLLECTED IN TRENCHES AND OTHER EXCAVATIONS DURING CONSTRUCTION SHALL BE REMOVED PRIOR TO CONTINUATION OR COMPLETION OF WORK WHERE WATER IS ENCOUNTERED.		
SHRINK/SWELL:	STRENGTHENED FOUNDATIONS MAY BE UTILIZED IF WARRANTED BY ACTUAL SITE INVESTIGATIONS.		
POTENTIAL SINKHOLES:	A SINKHOLE TREATMENT DETAIL IS PROVIDED ON THE PLAN. CONTRACTOR SHALL NOTIFY ENGINEER, TOWNSHIP AND CONSERVATION DISTRICT IMMEDIATELY IF SINKHOLES ARE ENCOUNTERED.		
PONDING:	CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AT ALL AREAS DURING CONSTRUCTION AND AFTER CONSTRUCTION BY SLOPING ALL SURFACES, EXCEPT FOR THE BUILDING PAD AND BOTTOM SURFACES OF PCSM BMPS, A MINIMUM OF 1%. THE BOTTOM SURFACES OF PCSM BMPS SHALL BE SLOPED AS DESIGNED. WATER COLLECTED IN TRENCHES AND OTHER EXCAVATIONS DURING CONSTRUCTION SHALL BE REMOVED PRIOR TO CONTINUATION OR COMPLETION OF WORK WHERE WATER IS ENCOUNTERED.		
WETNESS:	CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AT ALL AREAS DURING CONSTRUCTION AND AFTER CONSTRUCTION BY SLOPING ALL SURFACES, EXCEPT FOR THE BUILDING PAD AND BOTTOM SURFACES OF PCSM BMPS, A MINIMUM OF 1%. THE BOTTOM SURFACES OF PCSM BMPS SHALL BE SLOPED AS DESIGNED. WATER COLLECTED IN TRENCHES AND OTHER EXCAVATIONS DURING CONSTRUCTION SHALL BE REMOVED PRIOR TO CONTINUATION OR COMPLETION OF WORK WHERE WATER IS ENCOUNTERED.		

# **SEEDING SPECIFICATIONS**

ALL DISTURBED AREAS THAT HAVE NOT OTHERWISE BEEN STABILIZED AND HAVE SIGNIFICANT POTENTIAL FOR EROSION SHOULD BE STABILIZED WITH VEGETATION. THIS INCLUDES GRADED AREAS WHERE IT IS ANTICIPATED THAT FUTURE EARTHMOVING WILL TAKE PLACE WITHIN THE COMING YEAR. AREAS THAT WILL BE SUBJECT TO EARTHMOVING WITHIN 12 MONTHS MAY BE STABILIZED WITH TEMPORARY SEED MIXTURES, PREDOMINANTLY ANNUAL GRASSES. ALL OTHERS SHOULD BE STABILIZED WITH PERMANENT SEED MIXTURES, PREDOMINANTLY PERENNIAL GRASSES. WHEN FINAL GRADE IS ACHIEVED DURING NON-GERMINATING MONTHS, THE AREA SHOULD BE MULCHED UNTIL THE

TOPSOIL APPLICATION: TOPSOIL SHOULD BE UNIFORMLY DISTRIBUTED ACROSS THE DISTURBED AREA TO A DEPTH OF MINIMUM DEPTH OF 8". REQUIRED SOIL AMENDMENTS SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 8"-10". IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOIL PLACEMENT SHOULD BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS. TOPSOIL SHOULD NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

SOIL AMENDMENTS:

ACRE

ACRE.

SEEDING

TEMPORARY SEEDING SHALL CONSIST OF 100 PERCENT ANNUAL RYE GRASS AND SHALL CONFORM TO THE REQUIREMENTS OF THE PA DEPARTMENT OF TRANSPORTATION (PADOT) SPECIFICATIONS FOR FORMULA E SEED MIXTURE. SEED SHALL BE APPLIED AT A RATE OF 10 LBS./1,000 SQ. YDS. SEED SHALL BE APPLIED BETWEEN THE DATES OF MARCH 15TH TO OCTOBER 15TH.

MULCHING:

- TONS PER ACRE.
- COVERED.

- BE MOWED.

• TEMPORARY SEEDING - APPLY AGRICULTURAL LIME AT A RATE OF 1 TON PER ACRE AND 10-10-10 FERTILIZER AT A RATE OF 500 LBS. PER

• PERMANENT SEEDING - APPLY AGRICULTURAL LIME AT A RATE OF 6 TONS PER ACRE AND 10-20-20 FERTILIZER AT A RATE OF 1,000 LBS. PER

NOTE: A COMPOST BLANKET WHICH MEETS THE ABOVE STANDARDS MAY BE SUBSTITUTED FOR THE SOIL AMENDMENTS.

#### PERMANENT SEEDING SHALL CONSIST OF THE FOLLOWING:

 LAWN AREAS - SEED WITH 20% PERENNIAL RYEGRASS MIXTURE (A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NOT ONE VARIETY EXCEEDING 50% OF THE TOTAL RYEGRASS COMPONENT), 30% CREEPING RED FESCUE OR CHEWINGS FESCUE, AND 50% KENTUCKY BLUEGRASS MIXTURE (A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NOT ONE VARIETY EXCEEDING 25% OF THE TOTAL BLUEGRASS COMPONENT). SEED SHALL BE APPLIED AT A RATE OF 21 LBS./1,000 SQ. YDS. SEED SHALL BE APPLIED BETWEEN THE DATES OF MARCH 15TH TO JUNE 1ST AND AUGUST 16TH TO OCTOBER 15TH. LANDSCAPE RESTORATION MEADOW - AREA TO BE SEEDED WITH ERNST CONSERVATION SEEDS MESIC TO DRY NATIVE POLLINATOR

MIX (ERNMX-105) AT A RATE OF 40 LBS/ACRE WITH 30 LBS/ACRE WINTER RYE. • FOREBAY SEED MIX - AREA TO BE SEEDED WITH ERNST CONSERVATION SEEDS FACW MEADOW MIX (ERNMX-122) AT A RATE OF 20 LBS/ACRE WITH 30 LBS/ACRE WINTER RYE. • SWM/BMP FACILITY & MRC SEED MIX - AREA TO BE SEEDED WITH ERNST CONSERVATION SEEDS NATIVE DETENTION AREA MIX

(ERNMX-183) AT A RATE OF 20 LBS/ACRE WITH 30 LBS/ACRE WINTER RYE.

NOTE: FILL SLOPES SHOULD BE SEEDED AND MULCHED AT REGULAR VERTICAL INCREMENTS (15-25' MAXIMUM) AS THE FILL IS BEING CONSTRUCTED. THIS WILL ALLOW THE BOTTOM OF THE FILL TO PROGRESS TOWARD STABILIZATION WHILE WORK CONTINUES ON THE UPPER PORTION, MAKING FINAL STABILIZATION EASIER TO ACHIEVE AND PROVIDING SOME VEGETATIVE BUFFERING AT THE BOTTOM OF THE SLOPE.

MULCHING SHALL BE PROVIDED AS REQUIRED IN AREAS DIFFICULT TO VEGETATE, AND DURING OFF-SEASON OPERATIONS. MULCHING METHODS AND MATERIALS SHALL CONFORM TO THE FOLLOWING:

MULCH MATERIALS SHALL BE UNROTTED SALT HAY, HAY OR SMALL GRAIN STRAW APPLIED AT THE RATE OF 3 TONS PER ACRE. MULCH BLOWER SHALL NOT GRIND OR CHOP THE MATERIAL. WOODCHIPS, FREE OF INSECTS AND DISEASE ARE PERMITTED AT A RATE OF 4-6

2. MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85% TO 95% OF THE SOIL SURFACE WILL BE

3. MULCH ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE SLOPE.

4. PEG AND TWINE - DRIVE 8" TO 10" PEGS TO WITHIN 2" TO 3" OF THE SOIL SURFACE EVERY 4' IN ALL DIRECTIONS. TAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE THE MULCH TO THE SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS OR SQUARE PATTERN, AND SECURE THE TWIN AROUND EACH BEG WITH TWO OR MORE ROUND TURNS.

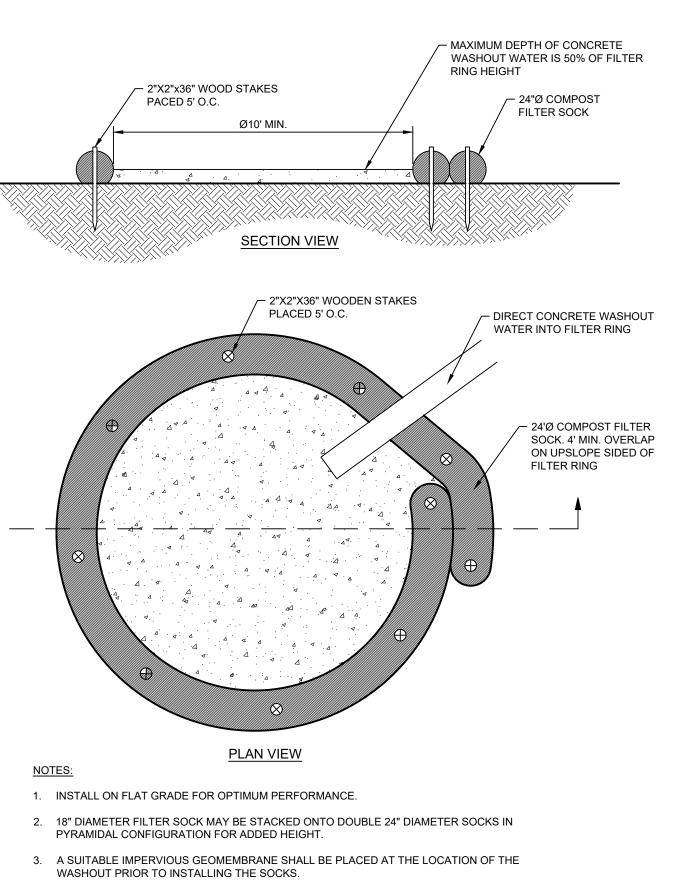
MULCH NETTING - STAPLE PAPER, JUTE, COTTON OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE DEGRADABLE NETTING IN AREAS TO

MULCH MATERIALS AND BINDERS SHALL BE ROLLED IN PLACE BY TRACKED VEHICLE OR OTHER SUITABLE EQUIPMENT

APPLICATIONS SHOULD BE HEAVIER AT EDGES WERE WIND CATCHES THE MULCH. IN VALLEYS AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.

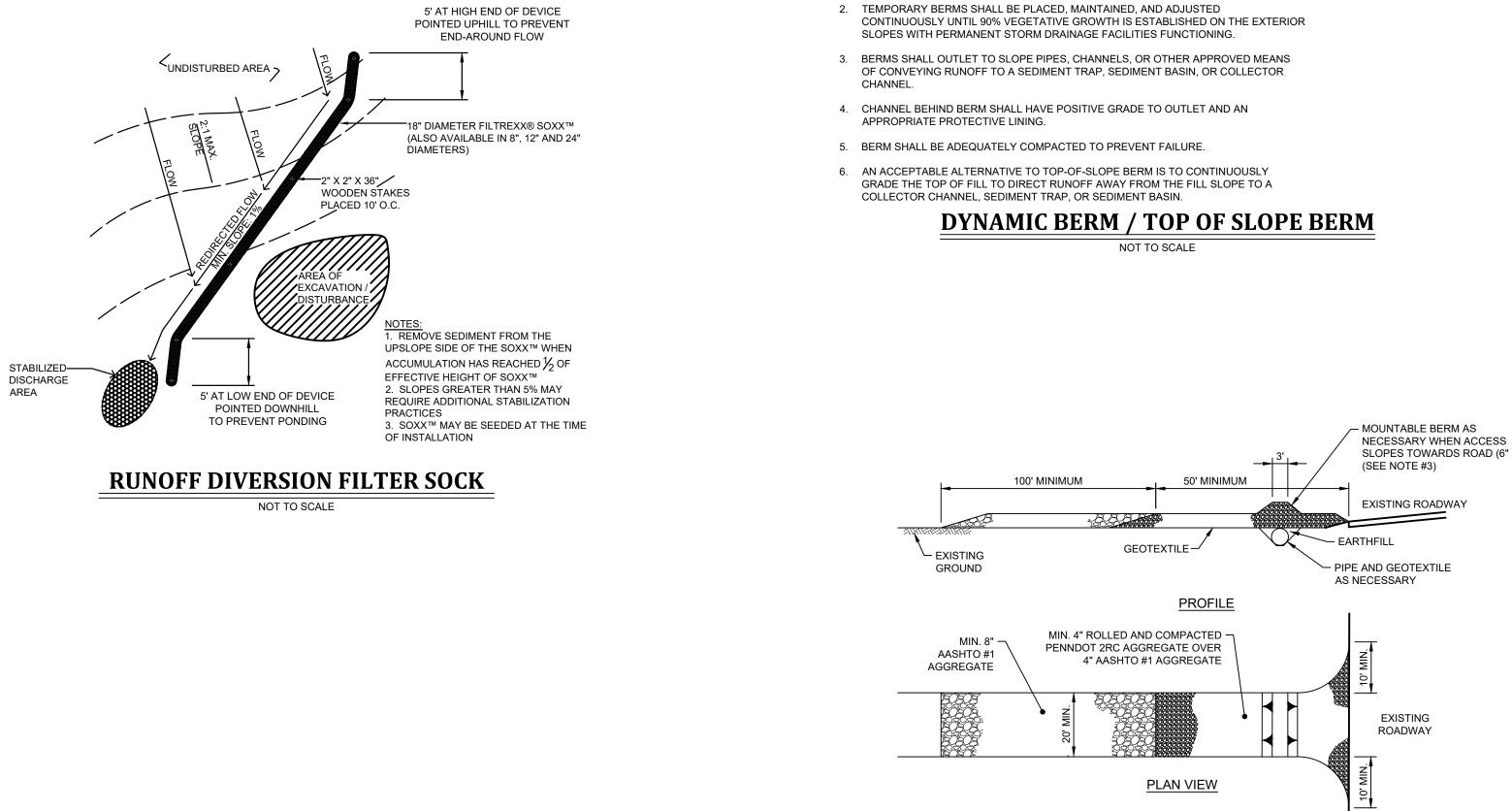
WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 LBS PER ACRE, OR PER MANUFACTURER RECOMMENDATION, MAY BE APPLIED BY A HYDROSEEDER. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

OTHER: WHERE EXCESSIVE SOIL EROSION, TRACKING OR FLOWING OF SEDIMENT IS EVIDENT OR ANTICIPATED, A MINIMUM OF 4" OF CRUSHED STONE SHALL BE PLACED WITHIN THE AFFECTED AREA AND MAINTAINED UNTIL PERMANENT STABILIZATION IS PROVIDED. ADDITIONAL STONE SHALL BE PLACED AS REQUIRED UNTIL STABILIZATION IS ACHIEVED. CRUSHED STONE SHALL CONFORM TO AASHTO DESIGNATION M43. SIZE NO. 2 (2-1/2" TO 1-1/2").



**COMPOST SOCK WASHOUT DETAIL** 

NOT TO SCALE



#### **EXTENDED ROCK CONSTRUCTION ENTRANCE** NOT TO SCALE

D (SEE CHAR

2.1 OR FLATTER

BLANKETED IN CRITICAL AREAS.

1. FILL SLOPE TRACKED, SEEDED & MULCHED IN 15' VERTICAL INCREMENTS,

GENERAL NOTES:

CHANNEL / DEPTH D

(FT)

2.5

BERM NO.

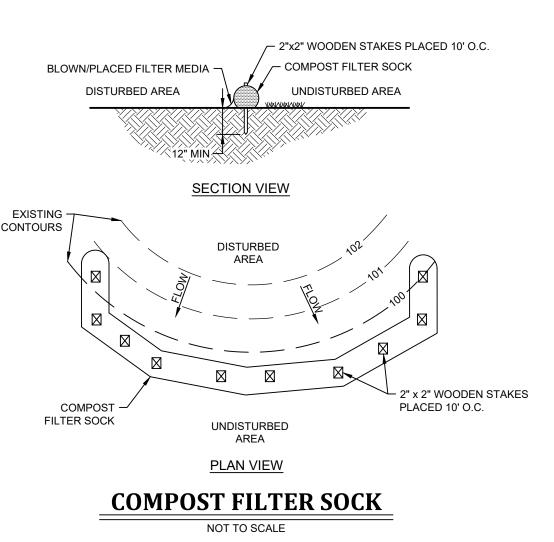
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GENERAL NOTES: 1. REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF

- ENTRANCE 2. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK
- CONSTRUCTION ENTRANCE. 3. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF
- DITCH BEING CROSSED.
- 4. MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE

	COMF	POST SOCK FAE	BRIC MINIMUM SP	ECIFICATIONS		
MATERIAL TYPE	3 MIL HDPE	5 MIL HDPE	5 MIL HDPE	MULTI-FILAMENT POLYPROPYLENE (MFPP)	HE MUL <sup>-</sup> POLY (ł	
MATERIAL CHARACTERISTICS	PHOTO- DEGRADABLE	PHOTO- DEGRADABLE	PHOTO- DEGRADABLE	PHOTO- DEGRADABLE	DE	
SOCK DIAMETERS	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"		
MESH OPENING	3/8"	3/8"	3/8"	3/8"		
TENSILE STRENGTH		26 PSI	26 PSI	44 PSI		
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% AT 1000 HR.	23% AT 1000 HR.		100% AT 1000 HR.		
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	:	
	I	TW	O-PLY SYSTEMS		I	
				HDPE BIAXIAL NET		
INNER CO	NTAINMENT NETT	ING		CONTINUOUSLY WOU	ND	
				FUSION-WELDED JUNCTU	JRES	
MATERIAL CHARACTERISTICSPHOTO- DEGRADABLEPHOTO- DEGRADABLESOCK DIAMETERS12" 18"12" 18"SOCK DIAMETERS12" 18"18" 24" 32"MESH OPENING3/8"3/8"TENSILE STRENGTH26 PSIULTRAVIOLET STABILITY % ORIGINAL STRENGTH23% AT 1000 HR.MINIMUM FUNCTIONAL LONGEVITY6 MONTHS9 MONTHS	3/4" X 3/4" MAX. APERTURE SIZE					
OUTER	FILTRATION MESH	4	COMPOSITE F NON-WOVEN FLE	POLYPROPYLENE FABRIC ( ECE MECHANICALLY FUSE	WOVEN LA ED VIA NEE	
MATERIAL CHARACTERISTICSPHOTO- DEGRADABLEPHOTO- DEGRADABLESOCK DIAMETERS12" 18"12" 18"SOCK DIAMETERS12" 18"12" 24" 32"MESH OPENING3/8"3/8"TENSILE STRENGTH26 PSIULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)23% AT 1000 HR.MINIMUM FUNCTIONAL LONGEVITY6 MONTHS9 MONTHSTVOUTER FILTRATION MESH	3/16" MAX. APERTURE SIZE					
SOCK	FABRICS COMPOS	ED OF BURLAP MA	Y BE USED ON PROJ	ECTS LASTING 6 MONTHS	OR LESS.	

COMPOST	STANDARDS
ORGANIC MATTER CONTENT	25% - 100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
PH	5.5 - 8.5
MOISTURE CONTENT	30% - 60%
PARTICLE SIZE	30% -50% PASS THROUGH 3/8" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 DS/M (MMHOS/CM) MAXIMUM



GENERAL NOTES 1. SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1. COMPOST SHALL MEET THE STANDARDS OF TABLE

2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 4.1). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4.2. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER. 3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.

4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN. 5. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

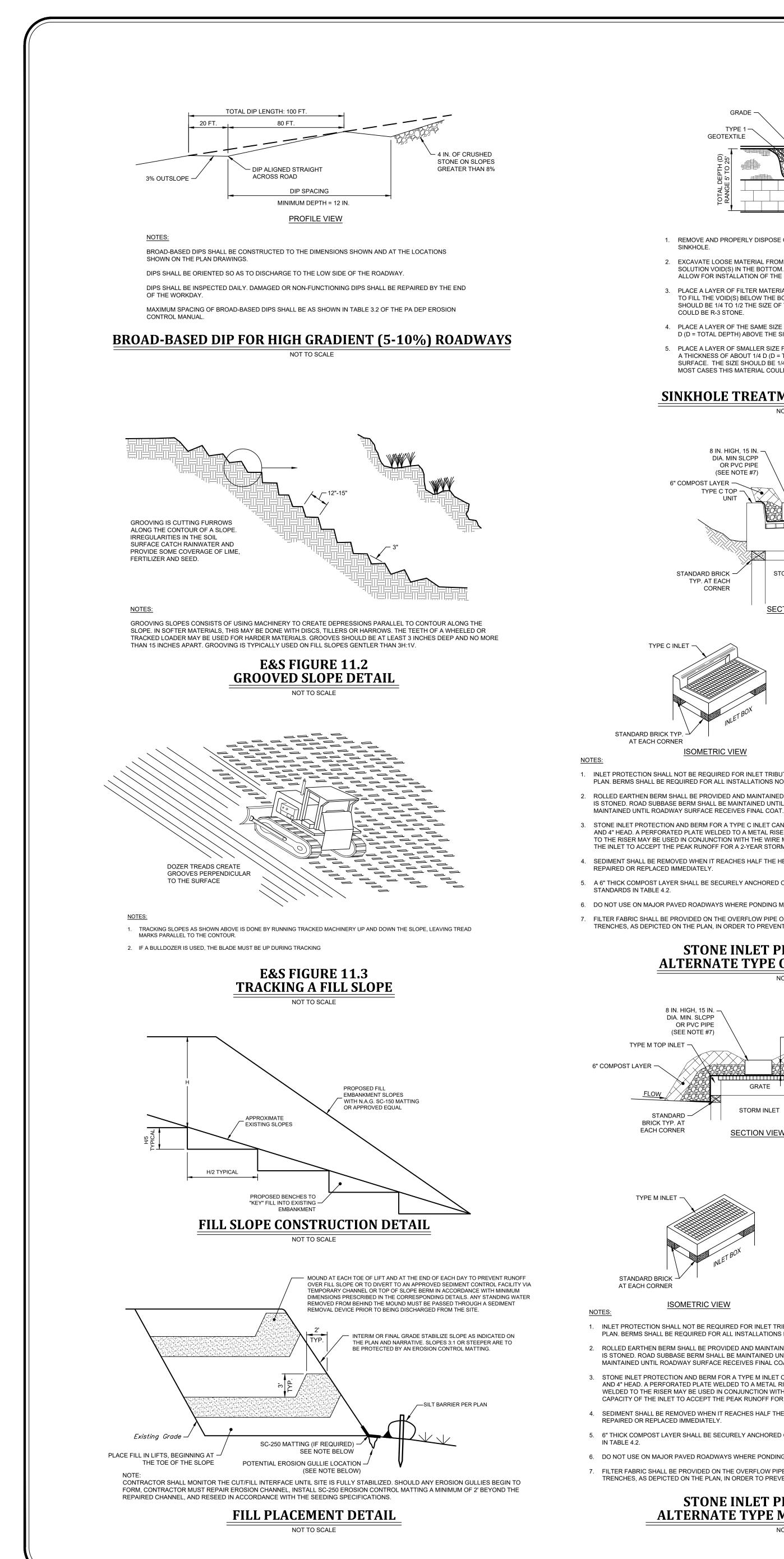
6. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

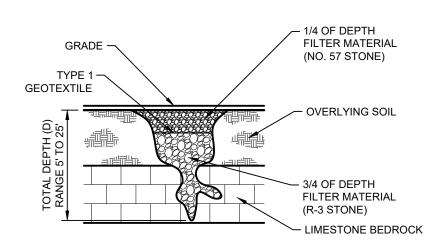
7. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

# SLOPES TOWARDS ROAD (6" MIN.)

EAVY DUTY LTI-FILAMENT YPROPYLENE (HDMFPP)
PHOTO- EGRADABLE
12" 18" 24" 32"
3/8"
202 PSI
100% AT 1000 HR.
2 YEARS
LAYER AND EEDLE PUNCH)
;)
VE
Λ

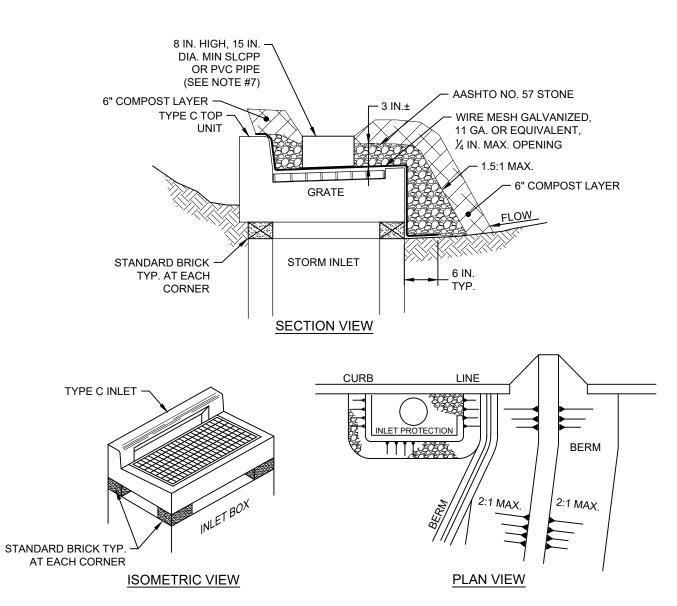






- REMOVE AND PROPERLY DISPOSE OF MATERIALS DUMPED IN AND AROUND THE SINKHOLE.
- EXCAVATE LOOSE MATERIAL FROM THE SINKHOLE AND TRY TO EXPOSE THE SOLUTION VOID(S) IN THE BOTTOM. ENLARGE THE SINKHOLE, AS NECESSARY TO ALLOW FOR INSTALLATION OF THE FILTER MATERIALS.
- 3. PLACE A LAYER OF FILTER MATERIAL INTO THE SINKHOLE ALLOWING THE STONE TO FILL THE VOID(S) BELOW THE BOTTOM OF EXCAVATED SINKHOLE. THE SIZE SHOULD BE 1/4 TO 1/2 THE SIZE OF THE VOID(S). IN MOST CASES THIS MATERIAL COULD BE R-3 STONE
- 4. PLACE A LAYER OF THE SAME SIZE FILTER MATERIAL AT A THICKNESS OF ABOUT 3/4 D (D = TOTAL DEPTH) ABOVE THE SINKHOLE BOTTOM.
- 5. PLACE A LAYER OF SMALLER SIZE FILTER MATERIAL OVER THE PREVIOUS LAYER AT A THICKNESS OF ABOUT 1/4 D (D = TOTAL DEPTH). BRING THIS LAYER TO THE SURFACE. THE SIZE SHOULD BE 1/4 TO 1/2 THE SIZE OF THE PREVIOUS LAYER. IN MOST CASES THIS MATERIAL COULD BE NO. 57 STONE.

#### SINKHOLE TREATMENT INVERTED FILTER NOT TO SCALE



1. INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP UNLESS OTHERWISE SPECIFIED ON THE PLAN. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT LOW POINTS. 2. ROLLED EARTHEN BERM SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. A 6" MINIMUM HEIGHT ASPHALT BERM SHALL BE

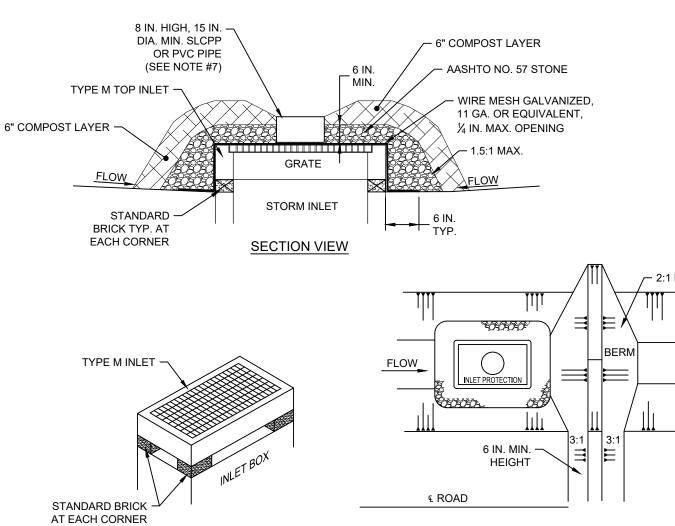
3. STONE INLET PROTECTION AND BERM FOR A TYPE C INLET CAN BE USED IN ONE ACRE MAXIMUM DRAINAGE AREA WITH 15" OVERFLOW PIPE AND 4" HEAD. A PERFORATED PLATE WELDED TO A METAL RISER MAY NOT BE SUBSTITUTED FOR THE WIRE MESH. A SLOTTED PLATE WELDED TO THE RISER MAY BE USED IN CONJUNCTION WITH THE WIRE MESH IF CALCULATIONS ARE PROVIDED TO SHOW SUFFICIENT CAPACITY OF THE INLET TO ACCEPT THE PEAK RUNOFF FOR A 2-YEAR STORM EVENT FROM THE TRIBUTARY DRAINAGE AREA. 4. SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

5. A 6" THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE

6. DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

7. FILTER FABRIC SHALL BE PROVIDED ON THE OVERFLOW PIPE OPENING FOR ALL INLETS TRIBUTARY TO SUBSURFACE INFILTRATION TRENCHES, AS DEPICTED ON THE PLAN, IN ORDER TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THESE SYSTEMS.

#### **STONE INLET PROTECTION & BERM ALTERNATE TYPE C INLET - NOT AT GRADE** NOT TO SCALE



**ISOMETRIC VIEW** 

PLAN VIEW

1. INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP UNLESS OTHERWISE SPECIFIED ON THE ROLLED EARTHEN BERM SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY

IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. A 6" MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT. 3. STONE INLET PROTECTION AND BERM FOR A TYPE M INLET CAN BE USED IN ONE ACRE MAXIMUM DRAINAGE AREA WITH 15" OVERFLOW PIPE

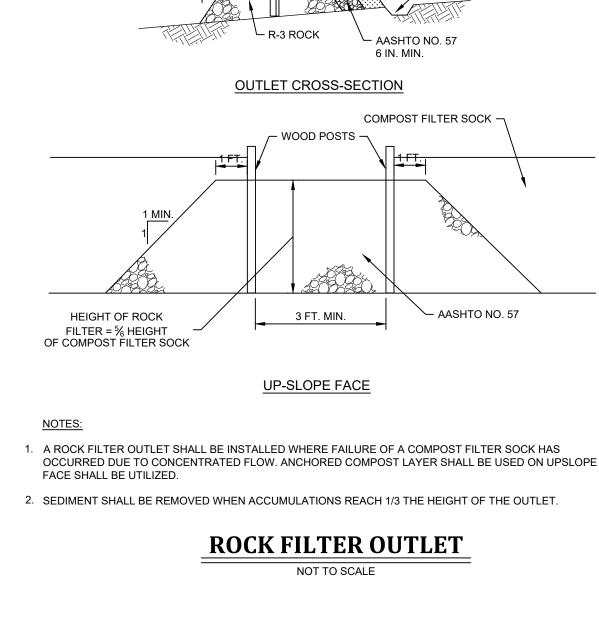
AND 4" HEAD. A PERFORATED PLATE WELDED TO A METAL RISER MAY NOT BE SUBSTITUTED FOR THE WIRE MESH. A SLOTTED PLATE WELDED TO THE RISER MAY BE USED IN CONJUNCTION WITH THE WIRE MESH IF CALCULATIONS ARE PROVIDED TO SHOW SUFFICIENT CAPACITY OF THE INLET TO ACCEPT THE PEAK RUNOFF FOR A 2-YEAR STORM EVENT FROM THE TRIBUTARY DRAINAGE AREA. 4. SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE

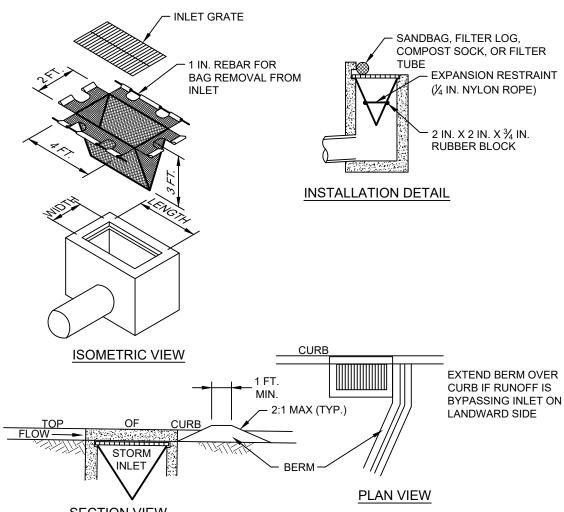
REPAIRED OR REPLACED IMMEDIATELY. 5. 6" THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS

6. DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

7. FILTER FABRIC SHALL BE PROVIDED ON THE OVERFLOW PIPE OPENING FOR ALL INLETS TRIBUTARY TO SUBSURFACE INFILTRATION TRENCHES, AS DEPICTED ON THE PLAN, IN ORDER TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THESE SYSTEMS.

#### **STONE INLET PROTECTION & BERM ALTERNATE TYPE M INLET - NOT AT GRADE** NOT TO SCALE





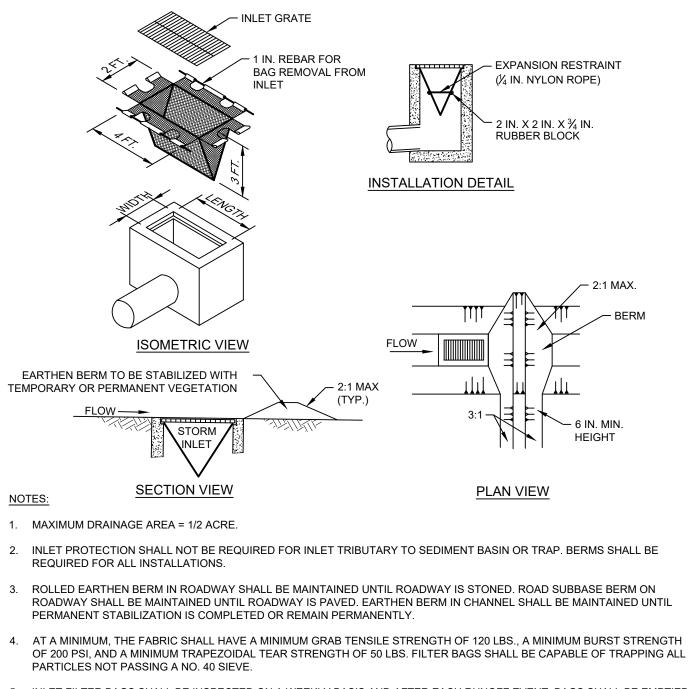
SECTION VIEW NOTES

- 1. MAXIMUM DRAINAGE AREA = 1/2 ACRE. 2. INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED
- FOR ALL INSTALLATIONS.
- FINAL COAT.
- 4. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS, A MINIMUM BURST STRENGTH OF 200 NOT PASSING A NO. 40 SIEVE.
- REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE OF
- ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

# **FILTER BAG INLET PROTECTION - TYPE C INLET**

6. DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

NOT TO SCALE



- 5. INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS, ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.
- 6. DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.
  - **FILTER BAG INLET PROTECTION TYPE M INLET** 
    - NOT TO SCALE

PLAN VIEW

# PUMP WATER FILTER BAG

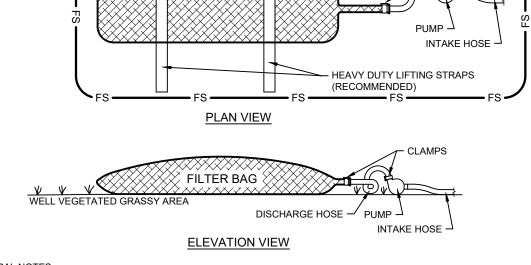
OT TO SCALE

- BE FLOATING AND SCREENED. 6. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.
- PVC PIPE IS RECOMMENDED FOR THIS PURPOSE. 5. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR ½ THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL
- LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE. 4. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF
- PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS. 3. NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS
- GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE
- 1. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME ½ FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED. 2. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA. AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE. A

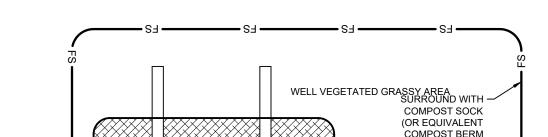
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%

GENERAL NOTES: LOW VOLUME FULTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:



FILTER BAG



INSTALL BEGINNING OF ROLL

BI ANKET

BEING BLANKETED.

STAPLE PATTERN:

 $\circ \circ \circ$ 

0 0 0

 $| \circ \circ \circ |$ 

9 - 0 - 0

3.4 STAPLES PER

SQUARE YARD

OR SUMP PIT

CLAMPS

C DISCHARGE HOSE

CHANNEL

OVERLAP BLANKET ENDS 6" (MIN.) WITH THE UPSLOPE

BLANKET OVERLYING THE DOWNSLOPE BLANKET

(SHINGLE STYLE). STAPLE SECURELY.

REFER TO MANUFACTURER'S

RECOMMENDED STAPLING PATTERN

FOR STEEPNESS AND LENGTH OF SLOPE

PREPARE SEED BED (INCLUDING

APPLICATION OF LIME. FERTILIZER. & SEED) PRIOR TO INSTALLATION OF

IN 6" x 6" ANCHOR TRENCH,

STAPLE, BACKFILL AND

COMPACT SOIL.

STARTING AT TOP OF SLOPE,

WATER FLOW

ROLL BLANKETS IN DIRECTION OF

BLANKET EDGES

AND STAPLED.

THE BLANKET SHOULD NOT BE

╼╢╼

GOOD SOIL CONTACT.

STRETCHED; IT MUST MAINTAIN

STAPLE PATTERN

3:1 SLOPE

1.15 STAPLES PER

SQUARE YARD

4. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.

RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

1. EROSION CONTROL MATTING SHALL BE NORTH AMERICAN GREEN S-75 OR APPROVED EQUAL.

AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.

6. THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

3. PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP SLOPE.

2. SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE

5. BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED

O A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE

**EROSION CONTROL BLANKET INSTALLATION** 

NOT TO SCALE

NOTES:

BLANKET

OVERLAPPED 4" (MIN.)

# ROADWAY IS PAVED. SIX INCH MINIMUM HEIGHT ASPHALT BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES

PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES 5. INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR

EXPANSION RESTRAINT

<sup>∙</sup> 2 IN. X 2 IN. X ¾ IN.

RUBBER BLOCK

**INSTALLATION DETAIL** 

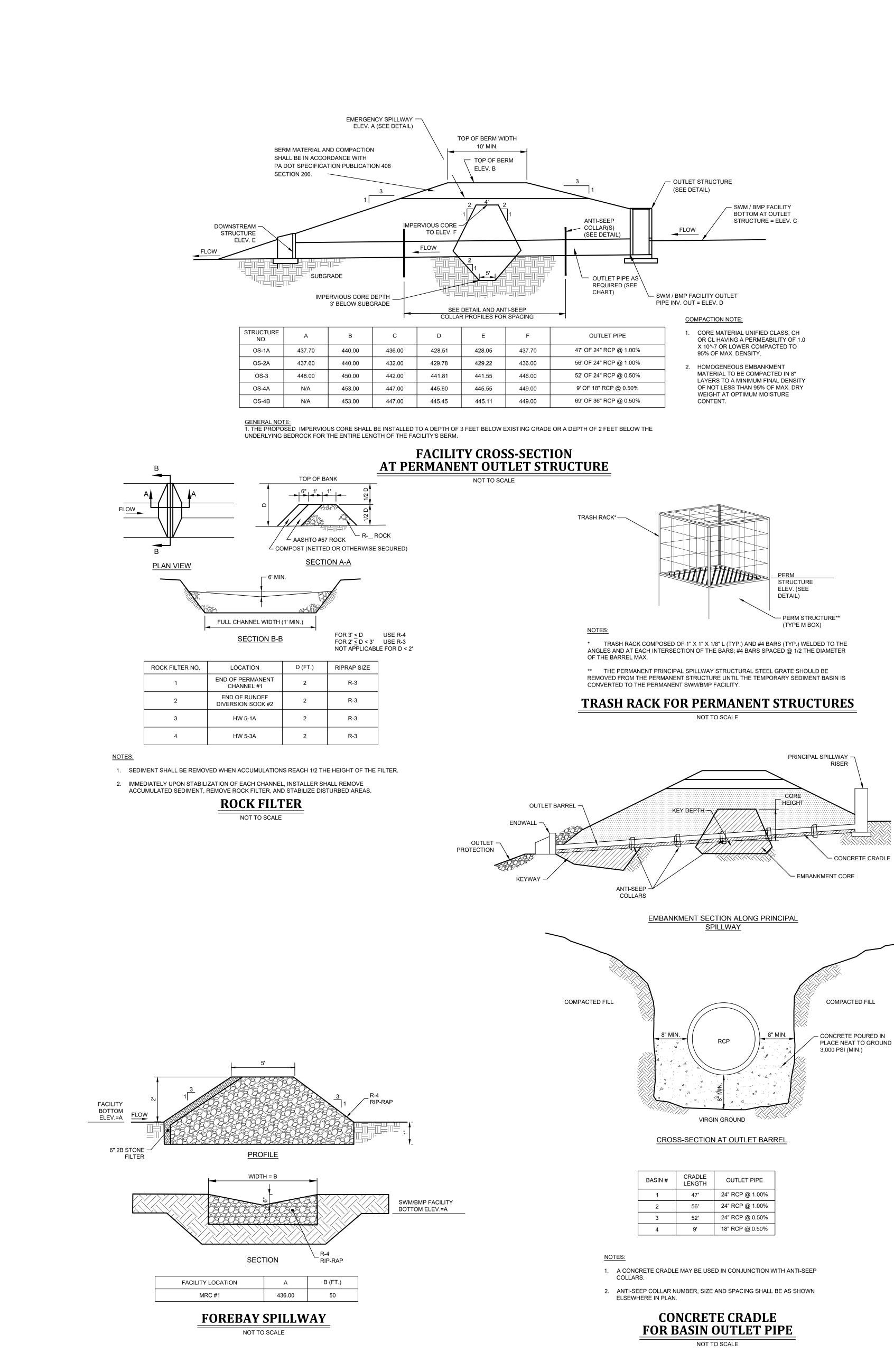
(1/4 IN. NYLON ROPE)

3. ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL

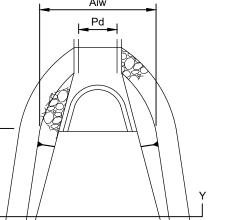
- 6 IN. COMPOST LAYER FIRMLY ANCHORED

PTIONAL 6 IN SUMP





BASIN #	CRADLE LENGTH	OUTLET PIPE				
1 47'		24" RCP @ 1.00%				
2	56'	24" RCP @ 1.00%				
3	52'	24" RCP @ 0.50%				
4	9'	18" RCP @ 0.50%				



MATCH RECEIVING CHANNELS.

SHALL BE REPLACED IMMEDIATELY.

# 2. SEE THE PLAN FOR PROPER LOCATION AND ORIENTATION.

4"x4" PRESSURE TREATED WOOD ----

POSTS OR EQUIVALENT METAL

BAFFLE

NUMBER

2

3A

3B

3C

3D

4A

4B

GENERAL NOTES:

LINERS.

BAFFLE

LENGTH Bal (FT)

440

30

126

100

100

144

180

\_\_\_\_\_

HEIGHT Bah

(FT)

4.0

4.0

4.0

4.0

4.0

3.0

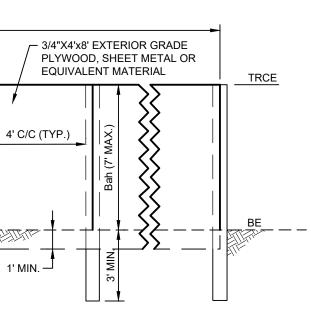
3.0

3. BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.

4. SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.

5. DAMAGE OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION. 6. BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS

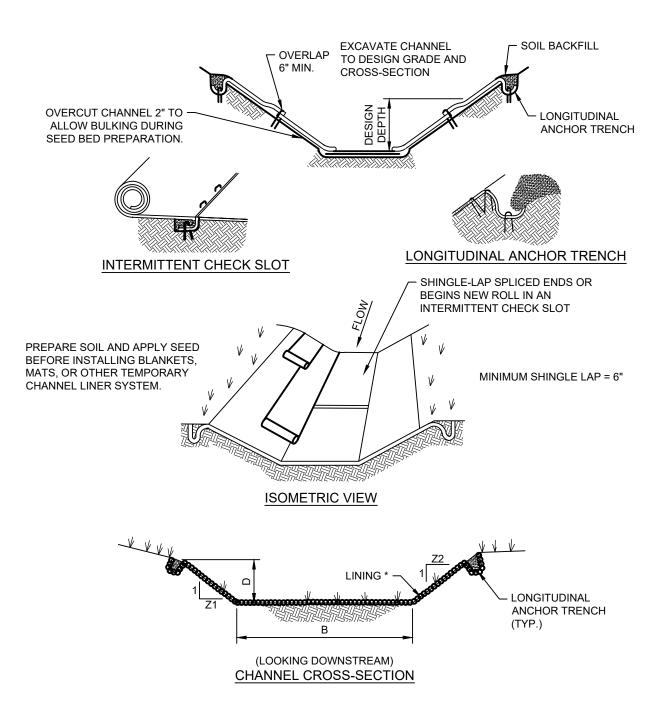
NOT TO SCALE



TEMPORARY RISER	BOTTOM
CREST ELEV TRCE (FT)	BOTTOM ELEV BE (FT)
436.00	432.00
442.00	446.00
442.00	446.00
442.00	446.00
442.00	446.00
446.00	449.00
446.00	449.00

1. AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION.

**TEMPORARY BAFFLE** 



#### \* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERS, AND VEGETATIVE STABILIZATION SPECIFICATIONS FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION.

CHANNEL NO.	BOTTOM WIDTH B (FT)	DEPTH D (FT)	Z1 (FT)	Z2 (FT)	LINING *	STAPLE PATTERN
1	10.0	2.0	3	3	N.A.G. S75	CHANNEL
2A	2.0	1.5	3	3	N.A.G. S75	CHANNEL
2B	2.0	1.5	3	3	N.A.G. S75	CHANNEL
2C	2.0	1.5	3	3	N.A.G. S75	CHANNEL
3	2.0	1.5	3	3	N.A.G. S75	CHANNEL
4	2.0	2.0	3	3	N.A.G. S75	CHANNEL
5A	2.0	1.5	3	3	N.A.G. S75	CHANNEL
5B	2.0	1.5	3	3	N.A.G. S75	CHANNEL

GENERAL NOTES:

- 1. N.A.G. INDICATES A NORTH AMERICAN GREEN PRODUCT AND S75 REPRESENTS THE PRODUCT #.
- ANCHOR TRENCHES. 3. CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

2. ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL

- 4. NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.
- 5. ALL CHANNELS MUST BE KEPT FREE OF OBSTRUCTIONS SUCH AS FILL GROUND, FALLEN LEAVES & WOODY DEBRIS, ACCUMULATED SEDIMENT, AND CONSTRUCTION MATERIALS/WASTES. CHANNELS SHOULD BE KEPT MOWED AND/OR FREE OF ALL WEEDY, BRUSHY, OR WOODY GROWTH. ANY UNDERGROUND UTILITIES RUNNING ACROSS/THROUGH THE CHANNEL(S) SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL(S) REPAIRED AND STABILIZED PER THE CHANNEL CROSS-SECTION DETAIL. 6. CHANNELS SHALL BE CONSTRUCTED FREE OF ROCKS, TREE ROOTS, STUMPS, OR OTHER PROJECTIONS THAT WILL IMPEDE NORMAL CHANNEL FLOW AND/OR PREVENT GOOD LINING TO SOIL CONTACT. THE CHANNEL SHALL BE INITIALLY

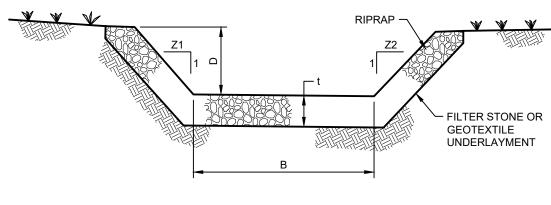
NOT TO SCALE

OVER-EXCAVATED TO ALLOW FOR THE PLACEMENT OF TOPSOIL. **PERMANENT CHANNEL** 

	Atw PLAN VIE				CTION Y-Y	GEOTEXTILE	LE				
		RIP	RAP		APRON						
UTLET NO.	PIPE DIA Pd (IN)	SIZE (R)	THICK. Rt (IN)	LENGTH Al (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)					
1-0	60	5	27	33	15	29					
2-0	18	3	9	8	5	13					
3-0	30	4	18	12	8	13					
4-0	24	3	9	12	6	18			CHANNEL	в	Τ
5-0	30	3	9	19	8	27			2D	2.0	╀
6-0	30	3	9	19	8	27			20	2.0	
7-0	15	3	9	6	4	7		NOTES:			
8-0	15	3	9	6	4	7		1. FILTE	R STONE UNDE	RLAYMEN	٩T
9-0	30	4	18	21	8	29			NEL DIMENSIO		
DS-1B	24	4	18	12	6	18			HED DIMENSION		
DS-2B	24	4	18	12	6	18					
DS-4C	36	4	18	20	9	29			DUCED BY 25% DIL CONDITIONS		
·	·							4. DAMA	GED LINING SH	IALL BE R	EF
						STED AS NECESSARY		5. THE M	INIMUM ROCK	THICKNE	SS

2. ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON

**RIPRAP APRON AT PIPE OUTLET WITH ENDWALL** NOT TO SCALE



(LOOKING DOWNSTREAM) CHANNEL CROSS-SECTION

CHANNEL	В	D	Z1	Z3	RIPRAP GRADATION	t	UNDERLAYMENT
2D	2.0	1.5	3	3	R-4	18"	CLASS 1 GEOTEXTILE

BED SLOPES 0.10 FT/FT SHALL BE USED.

- COMPLETED CHANNEL AFTER ROCK PLACEMENT. CHANNEL MUST BE OVER-EXCAVATED A THE VOLUME OF ROCK PLACED WITHIN THE CHANNEL WHILE PROVIDING THE SPECIFIED ISTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH
- . SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON TO CHANNEL WITHOUT FURTHER DAMAGE.
- O OR REPLACED WITHIN 48 HOURS OF DISCOVERY. HALL BE 1.5 TIMES THE MAX ROCK SIZE.

PERMANENT RIP-RAP CHANNEL

NOT TO SCALE



# **EMERGENCY SPILLWAY WITH TRM LINING**

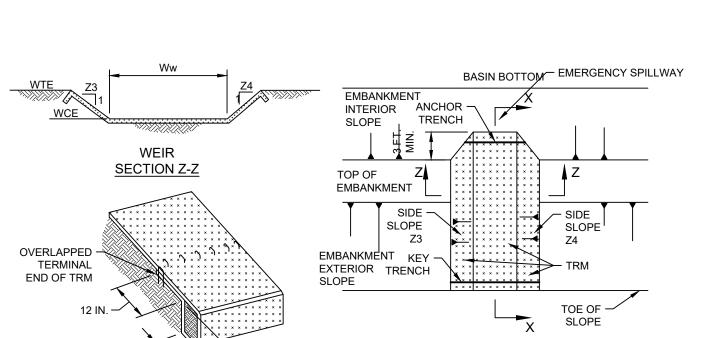
NOT TO SCALE

2. DISPLACED LINER WITHIN THE SPILLWAY AND/OR OUTLET CHANNEL SHALL BE REPLACED IMMEDIATELY 3. SEE EROSION CONTROL BLANKET INSTALLATION DETAIL FOR STAPLE PATTERN.

1. HEAVY EQUIPMENT SHALL NOT CROSS OVER SPILLWAY WITHOUT PRECAUTIONS TAKEN TO PROTECT TRM LINING.

		PE PER M NCHING D	BANKME			CH AIL ONG						
			WEIR		LIN	IING	CHA	NNEL				
BASIN NO.	Z3 (FT)	Z4 (FT)	TOP ELEV WTE (FT)	CREST ELEV WCE (FT)	WIDTH Ww (FT)	TRM TYPE	STAPLE PATTERN	Z5 (FT)	DEPTH Cd (FT)			
1	3	3	440.00	437.70	120	N.A.G. SC-250	CHANNEL	3	1.00			
2	3	3	440.00	437.60	70	N.A.G. SC-250	CHANNEL	3	1.00			
3	3	3	450.00	448.00	25	N.A.G. SC-250	CHANNEL	3	1.00			
4	SEE PERMANENT MRC OUTLET STRUCTURE DETAIL											

BAS NO	
2	
3	
4	
NOTE	S:
1.	the Shal Hosi Plat
	ANY ARO
2.	A RC
3.	SKIM
4.	ANY
5.	ICE (



8 IN. -

**KEY TRENCH AT TOE** 

OF SLOPE OF SPILLWAY

PLAN VIEW

ELEVATION (WSE) AT TOP OF DEWATERING ZONE

WATER SURFACE

CI FAN-OUT

TEMPORARY COUPLING

4.0 STEEL

MAT'L

STEEL

STEEL

INSIDE DIA

(IN.)

6.0

4.0

ELEVATION (COE)

ORIFICE PLATE -

ARM (DEWATERING TUBE) -

#### **PERMANENT MRC OUTLET STRUCTURE** NOT TO SCALE

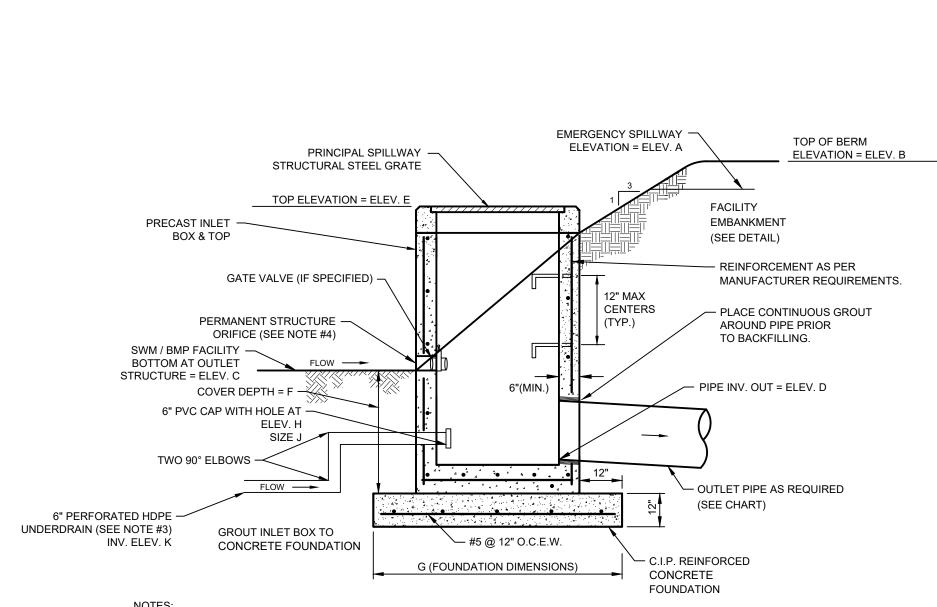
STRUCTURE NO.	A	В	С	D	E	F	G	н	J	к	PERMANENT STRUCTURE ORIFICE	INLET TYPE	INLET DIMENSIONS	BOX TYPE	OUTLET PIPE
OS-1A	437.70	440.00	436.00	428.51	437.70	8.0'	5' x 9'	434.00	Ø2.9"	433.00	6" GATE VALVE	TYPE M	24" x 45"	STANDARD	47' OF 24" RCP @ 1.00%
OS-3	448.00	450.00	442.00	441.81	446.00	0.7'	5' x 9'	441.00	Ø1.7"	440.00	Ø6" @ 442.00	TYPE M	24" x 45"	STANDARD	52' OF 24" RCP @ 0.50%
OS-4A	N/A	453.00	447.00	445.60	449.00	2.0'	5' x 9'	446.00	Ø0.7"	445.00	Ø6" @ 447.00	TYPE M	24" x 45"	STANDARD	9' OF 18" RCP @ 0.50%
OS-4B	N/A	453.00	447.00	445.45	451.00	2.0'	5.5' x 13'	N/A	N/A	N/A	NONE	TYPE DH LEVEL	24" x 93"	TYPE DH	69' OF 36" RCP @ 0.50%

FROM THE INSIDE THE OUTLET STRUCTURE. THE GATE VALVE SHALL CREATE A WATERTIGHT CONNECTION AND REMAIN CLOSED AT ALL TIMES UNLESS THE FACILITY NEEDS TO BE DEWATERED FOR MAINTENANCE PURPOSES. 5. WHEN CONVERTING THE FACILITY TO IT'S PERMANENT CONDITION, REMOVE TEMPORARY STEEL PLATES AND PLACE THE INLET TOP GRATE ON TOP OF THE STRUCTURE.

LENGTH AND CLEANOUT LOCATIONS. 4. WHERE SPECIFIED, PROVIDE A PERMANENT 6" GATE VALVE WITH STAINLESS STEEL PADDLES MANUFACTURED BY VALTERRA, OR APPROVED EQUAL AT THE BOTTOM OF THE FACILITY AT OUTLET STRUCTURE. THE OPERATOR FOR THE GATE VALVE SHALL BE OPERATED

2. CONSTRUCT THE REINFORCED CONCRETE FOUNDATION TO A DIMENSION 24 INCHES LARGER THAN THE OUTSIDE DIMENSIONS OF THE OUTLET STRUCTURE. 3. PROVIDE PERFORATED SLPEP UNDERDRAIN WITH CLEANOUTS WITHIN EACH FACILITY. SEE THE PLAN FOR LOCATION, SIZE, SLOPE, PIPE

NOTES: 1. PROVIDE FIELD PLACED CONCRETE FILL IN THE BOTTOM OF ALL OUTLET STRUCTURES. PROVIDE AN ADEQUATE FLOW CHANNEL FOR THE TRANSITION TO THE OUTLET PIPE. SHAPE BOX BOTTOM FOR POSITIVE DRAINAGE.



## **SKIMMER ATTACHEMENT TO PERMANENT OUT STRUCTURE** NOT TO SCALE

#### FUTURE PERMANENT ORIFICE ON THE PERMANENT OUTLET STRUCTURE SHALL UTILIZED FOR SKIMMER DISCHARGE. THE ORIFICE ALL BE COVERED WITH A BOLTED 12"x1/4" WATERTIGHT TEMPORARY STEEL PLATE IN THE TEMPORARY CONDITION. THE FLEXIBLE E SHOULD BE CONNECTED TO THE TEMPORARY COUPLING AND THE COUPLING SHOULD BE WELDED TO THE TEMPORARY STEEL TE CENTERED ON THE PERMANENT ORIFICE OPENING.

CREST TEMPORARY

RISER ELEV.

TRE (FT.)

N/A

N/A

N/A

OTHER ORIFICES SHALL BE COVERED WITH A BOLTED, WATERTIGHT STEEL PLATE WHICH EXTENDS AT LEAST 4" IN ALL DIRECTIONS OUND THE ORIFICE.

OPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED.

INSIDE

(FT.)

432.00

442.00

ELEV. POIE ELEV.

447.00 449.00

MMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

DIMENSIONS

(IN.)

6 H x 10 W

6.0

6.0

MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.

ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.

6. SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN OUT STAKE OR THE

# TOP OF THE STONE BERM. SEE SKIMMER & STONE LANDING BERM DETAIL FOR CONFIGURATION OF STONE BERM.

4 449.93 1.5 1.5 1.5 5 PVC 1.5 5.0 SLPEP PERM. OUTLET STRUCTURE PERMANENT ORIFICE BARREL CI FAN

LENGTH

(IN.)

45

45

45

HORIZ. OPENING

(SEE DET	AIL)	CONNECTED COUPLI	NG & WELDI NG & WELDI TE (SEE NO	RARY _/	TC AT	ORIFICE E MPORARY 1 PERMANEN PERMANEN EE NOTE #1)	NT OUTLET S		
	WATER SURFACE ELEV. WSE (FT.)				SKIM	1MER			
BASIN		ORI	FICE		ARM		FI	EXIBLE HOS	SE .
NO.		DIA SOd (IN)	HEAD SOh (IN.)	DIA SAd (IN.)	LENGTH SAI (FT.)	MAT'L	DIA SHd (IN.)	LENGTH SHI (FT.)	MAT'L
2	438.14	6	5	6	8	PVC	5	5.0	SLPEP
3	447 84	3	3	2	7	PVC	2	5.0	SLPEP

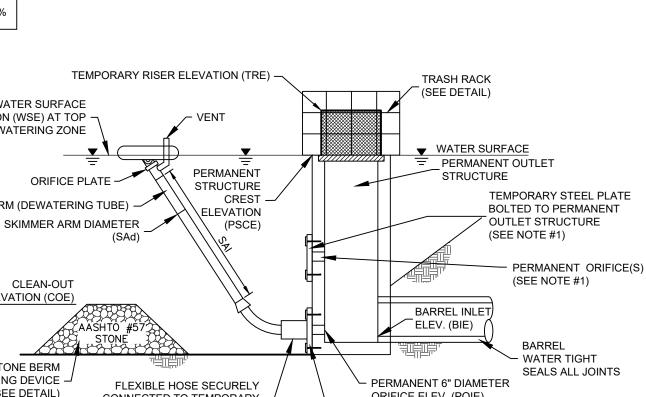
					(SI	EE NOTE #1)						
	WATER		SKIMMER									
BASIN	SURFACE			CE ARM				FLEXIBLE HOSE				
NO.	ELEV. WSE (FT.)	DIA SOd (IN)	HEAD SOh (IN.)	DIA SAd (IN.)	LENGTH SAI (FT.)	MAT'L	DIA SHd (IN.)	LENGTH SHI (FT.)	MAT'L			
2	438.14	6	5	6	8	PVC	5	5.0	SLPEP			
3	447.84	3	3	2	7	PVC	2	5.0	SLPEP			

PSCE (FT.)

436.00

446.00

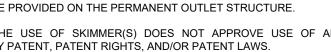
STONE BERM OR LANDING DEVICE - (SEE DETAIL) STONE BERM OR LANDING DEVICE - (SEE DETAIL) STEL PLATE (SEE NOTE #1)						ELEV. (BIE) BARREL WATER TIGHT SEALS ALL JOINTS ORIFICE ELEV. (POIE) TEMPORARY 12"x12"x1/4" STEEL PLATE BOLTED TO PERMANENT OUTLET STRUCTURE WITH AT PERMANENT ORIFICE (SEE NOTE #1)					
		WATER				SKIM	MER				
	BASIN	SURFACE	ORI	ORIFICE		ARM	ARM FLEXIBLE HOSE			SE .	
	NO.	ELEV. WSE (FT.)	DIA SOd (IN)	HEAD SOh (IN )	DIA SAd (IN.)	LENGTH SAI (FT.)	MAT'L	DIA SHd (IN.)	LENGTH SHI (FT.)	MAT'L	

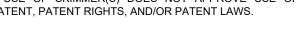


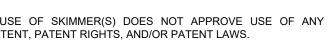
# NOT TO SCALE

# FAIRCLOTH SKIMME

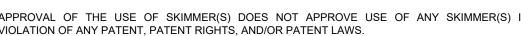
- 8. APPROVAL OF THE USE OF SKIMMER(S) DOES NOT APPROVE USE OF ANY SKIMMER(S) IN VIOLATION OF ANY PATENT, PATENT RIGHTS, AND/OR PATENT LAWS.

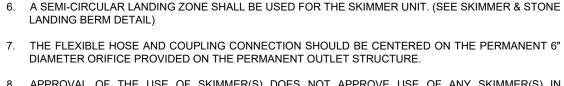
















- LANDING BERM DETAIL)

ARM ASSEMBLY

- PVC ELBOW

- PVC END CAP

ARM ORIFICE

6

1. A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER

3. ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF

4. ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO

5. SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE

| DIA. (IN) | SIZE (IN) |

FLEXIBLE -

HOSE

SCHEDULE 40 -

PVC PIPE

END VIEW

ARM

(FT)

45 8 6

45 7 2 3

45 5 1.5 1.5

2. SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.

SEDIMENT CLEAN OUT STAKE OR THE TOP OF THE LANDING DEVICE.

(DEG)

WATER

SURFACE

ELEV. (FT)

438.14

447.84

449.93

ONCE INSTALLED.

INSPECTION.

NO

NOTES:

PERSPECTIVE VIEW

WATER SURFACE

PVC VENT PIPE -

- SCHEDULE 40

SEDIMENT

STORAGE

ELEVATION

HOSE LENGTH ATTACHMENT

ELEVATION (FT

SEE NOTE #7

SEE NOTE #7

SEE NOTE #7

PVC PIPE

**ORIFICE PLATE** 

DEVICE

TOP OF LANDING FLEXIBLE FLEXIBLE HOSE

(FT)

5.0

5.0

5.0

BASIN BOTTOM

FRONT VIEW

DEVICE

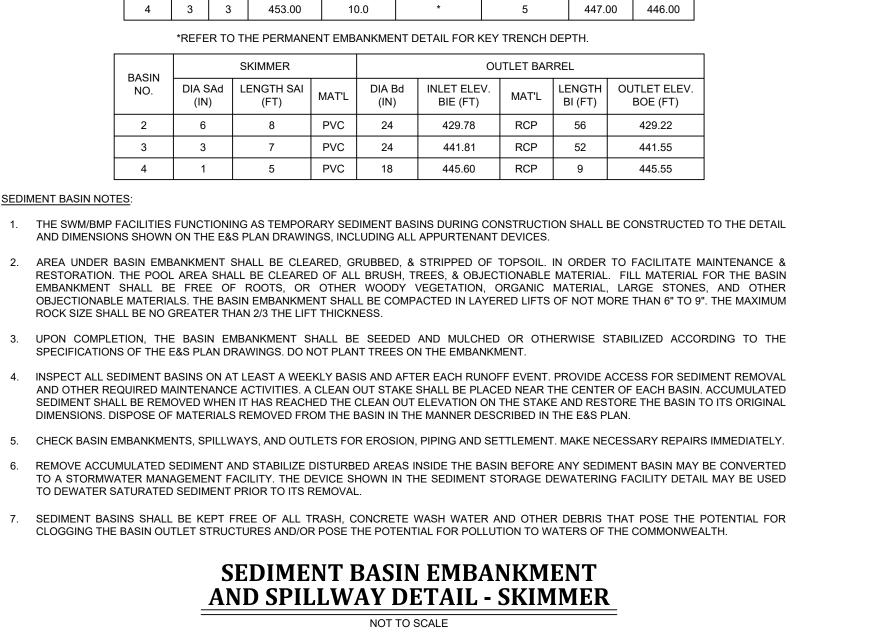
ELEVATION (FT)

433.00

443.00

447.00

- 7. THE FLEXIBLE HOSE AND COUPLING CONNECTION SHOULD BE CENTERED ON THE PERMANENT 6" DIAMETER ORIFICE PROVIDED ON THE PERMANENT OUTLET STRUCTURE.



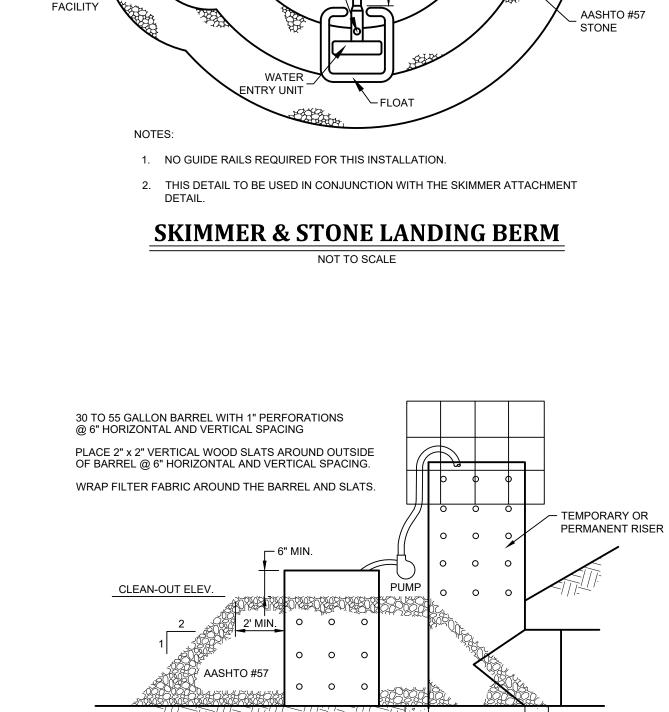
# SEDIMENT STORAGE DEWATERING FACILITY

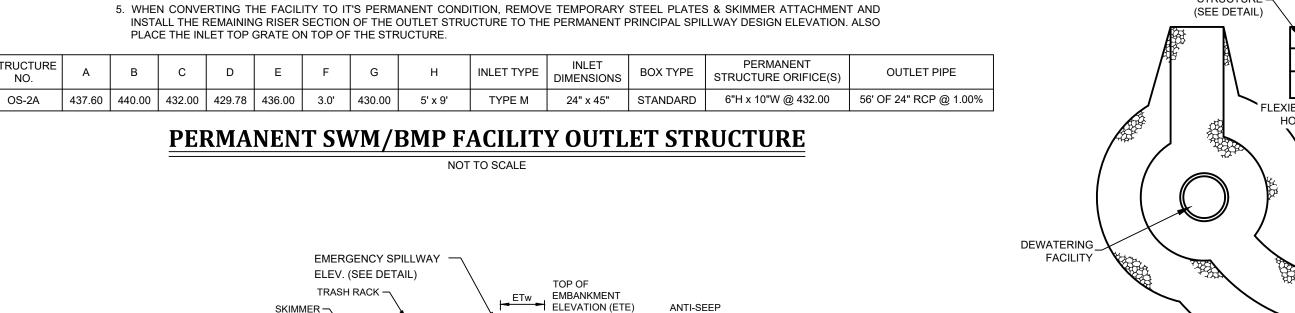
NOT TO SCALE

BASIN BOTTOM

4.4.

- CLEANED FROM THE INSIDE OF THE BARREL. 3. DEWATERING FACILITY SHALL BE CONTINUOUSLY MONITORED DURING OPERATION. IF FOR ANY REASON THE DEWATERING FACILITY CEASES TO FUNCTION PROPERLY, IT SHALL BE IMMEDIATELY SHUT DOWN AND NOT RESTARTED UNTIL THE PROBLEM HAS BEEN CORRECTED.
- NOTES: 1. DEWATERING FACILITY SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF BASIN/TRAP. 2. PRIOR TO INITIATING OPERATION OF DEWATERING FACILITY, ALL ACCUMULATED SEDIMENT SHALL BE





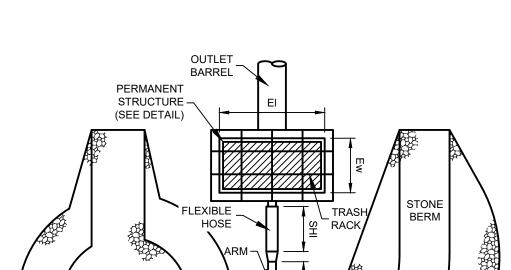
OUTLET STRUCTURE.

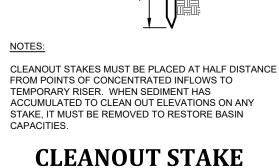
CONVERSION.

STRUCTURE

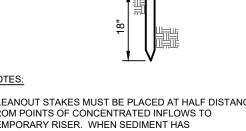
NO.

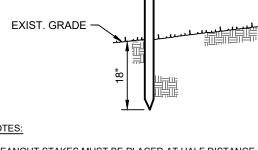
OS-1A

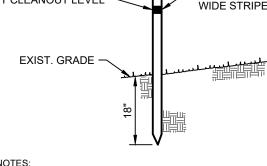




NOT TO SCALE







**TEMPORARY FACILITY OUTLET STRUCTURE** 

NOT TO SCALE

INLET

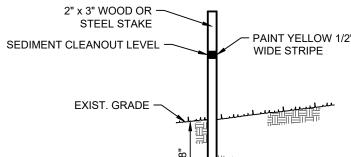
DIMENSIONS

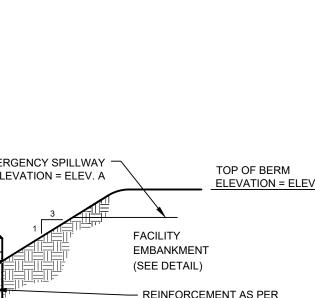
BOX TYPE

24" x 45" STANDARD 47' OF 24" RCP @ 1.00%

INLET TYPE

TYPE M





– OUTLET PIPE AS REQUIRED

(SEE CHART)

- CIP REINFORCED

CONCRETE

FOUNDATION

BOX TYPE

COLLARS

CLEAN

OUT

433.00 432.00

443.00 442.00

(SEE DETAIL)

- DOWNSTREAM STRUCTURE

BOTTOM

(FT)

ELEV. BE

COLLAR

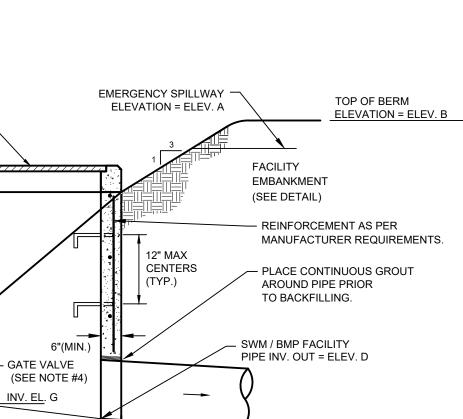
SPACING (FT.)

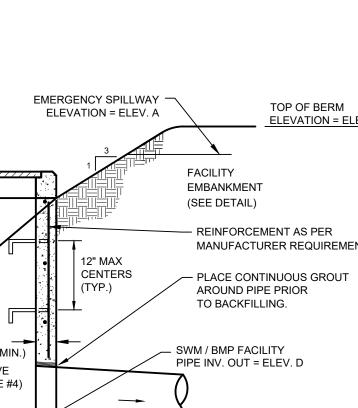
15

11

10

N/A





DISTANCE

**RISER TO 1ST** 

COLLAR (FT.

6.0000

15.0000

12.0000

15.0000

NO. OF

COLLARS

2

2

1

2

PROVIDE -WATER-TIGHT CONNECTION

> 12" THICK (MIN CAST-IN-PLACE

1. ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATER-TIGHT.

2. COLLAR SIZE AND SPACING SHALL BE AS INDICATED BELOW.

S (IN.)

92

74

52

76

**CONCRETE ANTI-SEEP** 

**COLLAR PERMANENT BASIN** 

NOT TO SCALE

── #5 @ 12" O.C.E.W.

1. PROVIDE FIELD PLACED CONCRETE FILL IN THE BOTTOM OF ALL OUTLET STRUCTURES. PROVIDE AN ADEQUATE FLOW CHANNEL FOR THE

2. CONSTRUCT THE REINFORCED CONCRETE FOUNDATION TO A DIMENSION 24 INCHES LARGER THAN THE OUTSIDE DIMENSIONS OF THE

3. PROVIDE PERFORATED SLPEP UNDERDRAIN WITH CLEANOUTS WITHIN EACH FACILITY. SEE THE PLAN FOR LOCATION, SIZE, SLOPE, PIPE

4. PROVIDE A PERMANENT 6" GATE VALVE WITH STAINLESS STEEL PADDLES MANUFACTURED BY VALTERRA, OR APPROVED EQUAL AT THE

н

OUTLET STRUCTURE PERFORATED SLPEP UNDERDRAIN OPENING. THE OPERATOR FOR THE GATE VALVE SHALL BE OPERATED FROM THE

INSIDE THE OUTLET STRUCTURE. THE GATE VALVE SHALL CREATE A WATERTIGHT CONNECTION AND REMAIN CLOSED AT ALL TIMES

INLET TYPE

NOT TO SCALE

INLET

TOP OF

WATER-TIGHT

TOP FLEV TOP WIDTH KEY TRENCH KEY TRENCH

\*

ETE (FT) ETW (FT) DEPTH (FT) WIDTH (FT) COE (FT)

**EMBANKMEN** 

10.0

10.0

SEALS ALL

JOINTS

EMBANKMEN

ELEVATION (ETE)

BARREL

5

5

OUTLET 🚽

(BOE)

DIMENSIONS

H (FOUNDATION DIMENSIONS)

OR PRECAST CONCRETE

NOTES:

PIPE SIZE (IN.)

24

24

24

24

PRINCIPAL SPILLWAY

STRUCTURAL STEEL GRATE

TOP ELEVATION = ELEV

FLOW -----

TRANSITION TO THE OUTLET PIPE. SHAPE BOX BOTTOM FOR POSITIVE DRAINAGE.

UNLESS THE FACILITY NEEDS TO BE DEWATERED FOR MAINTENANCE PURPOSES.

EMERGENCY SPILLWAY

ELEV. (SEE DETAIL)

HOSE

TEMP. STUB -

440.00

450.00

453.00

SKIMMER

(FT)

8

7

DIA SAd | LENGTH SAI |

PERM

STRUCTURE

(SEE DETAIL)

TRASH RACK

SKIMME

BASIN BOTTOM / FLEXIBLE

WSE 🔻

STONE

BERM

NO. (FT) (F1

3 3 3

4 3 3

(IN)

3

2 6

4 | 1 |

2 3

BASIN

NO

SEDIMENT BASIN NOTES:

ELEVATION (BE)

PLACE THE INLET TOP GRATE ON TOP OF THE STRUCTURE.

ORIFICE TRASH RACK -

(SEE DETAILS)

BASIN NO.

1

2

3

4

PRECAST INLET

SWM / BMP FACILITY -

BOTTOM AT OUTLET

STRUCTURE = ELEV. C

NOTES:

STRUCTURE

NO.

OUT ELEV

COE (FT.)

433.00

443.00

447.00

INLET

ELEV.

429.78

441.81

445.60

WIDTH (IN.) BIE (FT.)

24

24

24

OUTLET STRUCTURE.

LENGTH AND CLEANOUT LOCATIONS.

BOX & TOP

PERMANENT STRUCTURE ORIFICE(S)

PERFORATED SLF

(SEE NOTES #3 & #4)

UNDERDRAIN

GROUT INLET BOX TO

CONCRETE FOUNDATION

COLLAR (MIN. 2000 PSI)

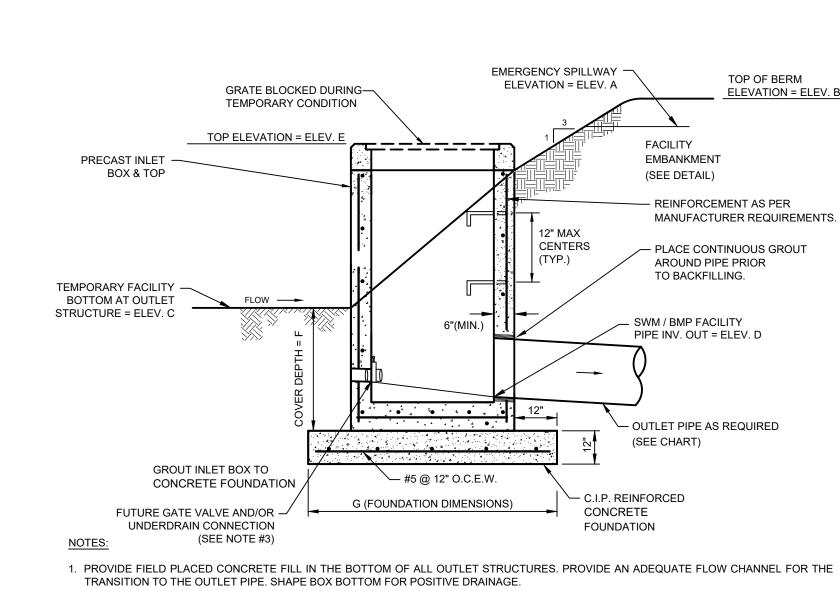


PLATE TO CREATE A WATERTIGHT SEAL TO PREVENT ITS USE UNTIL FINAL FACILITY CONVERSION.

437.70

434.00 440.00 434.00 428.51 437.70 6.0' 5' x 9'

