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1. THE CONTRACTOR SHALL PREPARE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP), SPECIFIC TO THE PROJECT, IN ACCORDANCE WITH THE REQUIREMENTS OF MODNR. AT A MINIMUM, THE SWPPP SHALL IDENTIFY ALL SIGNIFICANT CONSTRUCTION ACTIVITIES SUCH AS CLEARING, GRUBBING, STRIPPING, EXCAVATING, GRADING OR OTHER ACTIVITIES THAT RESULT IN THE DISPLACEMENT OR DESTRUCTION OF THE ROOT ZONE. THE SWPPP SHALL IDENTIFY BEST MANAGEMENT PRACTICES (BMP'S) TO BE USED TO REDUCE THE AMOUNT OF SEDIMENT AND OTHER POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE LAND DISTURBANCE ACTIVITIES.

2. THE ENGINEER WILL PROVIDE ELECTRONIC FILES OF THE CONSTRUCTION DOCUMENTS FOR USE BY THE CONTRACTOR IN PREPARING THE SWPPP. THE ELECTRONIC FILES WILL BE PROVIDED TO THE CONTRACTOR AT NO COST. THE ENGINEER WILL ASSIST THE CONTRACTOR IN THE PREPARATION OF THE SWPPP, ONLY AT THE CONTRACTORS REQUEST. ALL COSTS FOR ASSISTANCE BY THE ENGINEER IN PREPARING OR UPDATING THE SWPPP SHALL BE BORNE BY THE CONTRACTOR, AND SHALL BE INCLUDED IN HIS COSTS FOR THE PROJECT.

3. NON-STORM WATER DISCHARGES SHALL BE CLEARLY IDENTIFIED IN THE STORM WATER PREVENTION PLAN. NON-STORM DISCHARGES INCLUDE BUT ARE NOT LIMITED TO DE-WATERING ACTIVITIES, FLUSHING HYDRANTS AND POTABLE WATER LINES, RINSING OF STREETS AND BUILDINGS, SITE WATERING AND IRRIGATION TO ESTABLISH VEGETATION.

4. THE SWPPP SHALL IDENTIFY MEASURES TO BE TAKEN TO PREVENT NON-STORM WATER DISCHARGES SUCH AS HAZARDOUS SUBSTANCES, PETROLEUM PRODUCTS FROM ON-SITE SPILLS AND RE-FUELING OPERATIONS, WASH AND/OR RINSE WATERS FROM CONCRETE MIXING EQUIPMENT INCLUDING READY MIX CONCRETE TRUCKS (UNLESS SUCH DISCHARGES ARE ADEQUATELY TREATED AND ADDRESSED IN THE SWPPP), AND DOMESTIC WASTEWATERS INCLUDING GRAY WATERS.

5. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF COUNTY AND LOCAL AGENCIES HAVING JURISDICTION OVER THE PROJECT, WHERE LOCAL REGULATIONS ARE MORE STRINGENT THAN STATE WATER QUALITY STANDARDS.

6. THE CONTRACTOR SHALL EMPLOY BEST MANAGEMENT PRACTICES (BMP'S) TO MINIMIZE THE TRANSPORT OF SEDIMENT FROM THE SITE AND TO CONTROL EROSION. BMP'S SHOWN ON THIS SHEET ARE EXAMPLES ONLY, AND ARE NOT INTENDED TO BE ALL-INCLUSIVE. THE CONTRACTOR SHALL EMPLOY ADDITIONAL MEASURES AS REQUIRED TO COMPLY WITH STATE WATER QUALITY STANDARDS

7. DISCHARGES SHALL BE FREE FROM SUBSTANCES IN SUFFICIENT AMOUNTS TO CAUSE FORMATION OF PUTRESCENT, UNSIGHTLY OR HARMFUL BOTTOM DEPOSITS OR PREVENT FULL MAINTENANCE OF BENEFICIAL USES OF STATE WATERS.

8. DISCHARGES SHALL BE FREE FROM OIL, SCUM, AND FLOATING DEBRIS IN SUFFICIENT AMOUNTS TO CAUSE UNSIGHTLY TURBIDITY, OFFENSIVE ODOR, OR PREVENT FULL MAINTENANCE OF BENEFICIAL USES OF STATE WATERS.

9. DISCHARGES SHALL BE FREE FROM SUBSTANCES OR CONDITIONS IN SUFFICIENT AMOUNTS TO HAVE A HARMFUL EFFECT ON HUMAN, ANIMAL, OR AQUATIC LIFE.

10. THERE SHALL BE NO SIGNIFICANT HUMAN HEALTH HAZARD FROM INCIDENTAL CONTACT WITH DISCHARGES.

11. THERE SHALL BE NO ACUTE TOXICITY TO LIVESTOCK OR WILDLIFE WATERING.

12. DISCHARGES SHALL BE FREE FROM PHYSICAL, CHEMICAL OR HYDROLOGIC CHANGES THAT WOULD IMPAIR THE NATURAL BIOLOGICAL COMMUNITY.

13. ALL FUELING FACILITIES PRESENT ON THE SITE SHALL ADHERE TO APPLICABLE FEDERAL AND STATE REGULATIONS CONCERNING UNDERGROUND AND ABOVE GROUND STORAGE AND DISPENSERS, INCLUDING SPILL PREVENTION, CONTROL, AND COUNTER MEASURES.

14. THE CONTRACTOR SHALL DESIGNATE AN ON-SITE REPRESENTATIVE WHO SHALL BE RESPONSIBLE FOR ALL MATTERS PERTAINING TO WATER QUALITY OF STORM DISCHARGE FROM THE SITE. THE CONTRACTOR SHALL INSPECT AND MAINTAIN ALL STRUCTURES THAT FUNCTION TO PREVENT POLLUTION OF STORM WATER OR TO REMOVE POLLUTANTS FROM STORM WATER AND OF THE FACILITY IN GENERAL TO ENSURE THAT BMP'S ARE CONTINUALLY IMPLEMENTED AND EFFECTIVE.

15. ALL PAINTS, SOLVENTS, PETROLEUM PRODUCTS AND PETROLEUM WASTE PRODUCTS, AND STORAGE CONTAINERS (SUCH AS DRUMS, CANS, OR CARTONS) SHALL BE STORED SO THAT THESE MATERIALS ARE NOT EXPOSED TO STORM WATER. SUFFICIENT PRACTICES OR SPILL PREVENTION, CONTROL, AND/OR MANAGEMENT SHALL BE PROVIDED TO PREVENT ANY SPILLS OF THESE POLLUTANTS FROM ENTERING WATERS OF THE STATE. ANY CONTAINMENT SYSTEM USED TO IMPLEMENT THIS REQUIREMENT SHALL BE CONSTRUCTED OF MATERIALS COMPATIBLE WITH THE SUBSTANCE CONTAINED AND SHALL ALSO PREVENT THE CONTAMINATION OF GROUND WATER.

16. THE SWPPP SHALL CONTAIN INFORMATION TO IDENTIFY THE SITE, FACILITY, AND OUTFALL INFORMATION. THE SWPPP SHALL HAVE SUFFICIENT INFORMATION TO BE OF PRACTICAL USE TO CONTRACTORS AND SITE CONSTRUCTION WORKERS TO GUIDE THE INSTALLATION AND MAINTENANCE OF BMP'S.

17. CLEARING AND GRUBBING WITHIN 50 FEET OF A DEFINED DRAINAGE COURSE SHALL BE AVOIDED. WHERE CHANGES TO DEFINED DRAINAGE COURSES OCCUR AS PART OF THE PROJECT, CLEARING AND GRUBBING WITHIN 50 FEET OF THE DEFINED DRAINAGE COURSE SHALL BE DELAYED UNTIL ALL MATERIALS AND EQUIPMENT NECESSARY TO PROTECT THE COMPLETE DRAINAGE CHANGE ARE ON SITE. CHANGES TO DEFINED DRAINAGE COURSES SHALL BE COMPLETED AS QUICKLY AS POSSIBLE ONCE THE WORK HAS BEEN INITIATED. THE AREA IMPACTED BY THE LAND DISTURBANCE OF THE DRAINAGE COURSE CHANGE SHALL BE REVEGETATED OR PROTECTED FROM EROSION AS SOON AS POSSIBLE. AREAS WITHIN 50 FEET OF DEFINED DRAINAGE WAYS SHALL BE RECONTOURED AS NEEDED AND REVEGETATED, SEEDED, OR OTHERWISE PROTECTED WITHIN FIVE (5) WORKING DAYS AFTER GRADING HAS CEASED.

18. THE SWPPP SHALL INCLUDE A DESCRIPTION OF ALL BMP'S TO BE IMPLEMENTED AT THE SITE. THE SWPPP SHALL INCLUDE A PHYSICAL DESCRIPTION OF THE BMP; THE LOCATION OF THE BMP WITH RESPECT TO THE OTHER SITE FEATURES; WHEN THE BMP WILL BE INSTALLED WITH RESPECT TO THE TIMING OF CONSTRUCTION ACTIVITIES; AND SITE CONDITIONS THAT MUST BE MET PRIOR TO REMOVAL OF THE BMP, IF THE BMP IS NOT A PERMANENT FEATURE.

19. SLOPES FOR DISTURBED AREAS MUST BE IDENTIFIED IN THE SWPPP. WHERE SOIL DISTURBING ACTIVITIES CEASE IN AN AREA FOR MORE THAN FOURTEEN (14) DAYS, THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE EROSION CONTROL BMP'S. IF THE SLOPE OF THE AREA IS GREATER THAN 3:1 OR IF THE SLOPE IS GREATER THAN 3 PERCENT AND GREATER THAN 150 FEET IN LENGTH, THE DISTURBED AREA SHALL BE PROTECTED WITH MULCH OR OTHER SIMILARLY EFFECTIVE EROSION CONTROL BMP'S IF ACTIVITIES CEASE FOR MORE THAN SEVEN (7) DAYS. THESE REQUIREMENTS DO NOT APPLY TO THE SLOPES OF A SEDIMENT BASIN OR THE AREAS THAT CLEARLY DRAIN THERETO.

20. THE CONTRACTOR SHALL ENSURE THAT BMP'S ARE PROPERLY INSTALLED AT THE LOCATIONS AND RELATIVE TIMES SPECIFIED IN THE SWPPP. PERIPHERAL OR BORDER BMP'S TO CONTROL RUNOFF FROM DISTURBED AREAS SHALL BE INSTALLED AND MARKED FOR PRESERVATION BEFORE GENERAL SITE CLEARING IS STARTED. STORM WATER DISCHARGES FROM DISTURBED AREAS, WHICH LEAVE THE SITE, SHALL PASS THROUGH AN APPROPRIATE IMPEDIMENT TO SEDIMENT MOVEMENT, SUCH AS A SEDIMENTATION BASIN, SEDIMENT TRAPS, SILT FENCES, OR OTHER BMP'S PRIOR TO LEAVING THE LAND DISTURBANCE SITE. PROJECT BENCHMARKS SHALL BE REFERENCED FOR PROPER INSTALLATION, OPERATION, AND MAINTENANCE OF DRAINAGE COURSE CHANGES.

21. THE SWPPP SHALL REQUIRE EXISTING VEGETATION TO BE PRESERVED WHERE PRACTICAL. THE TIME PERIOD FOR DISTURBED AREAS TO BE WITHOUT VEGETATIVE COVER SHALL BE MINIMIZED TO THE EXTENT POSSIBLE. EXAMPLES OF NON-STRUCTURAL BMP'S INCLUDE, BUT ARE NOT LIMITED TO: PRESERVATION OF TREES AND MATURE VEGETATION, PROTECTION OF EXISTING VEGETATION FOR BUFFER STRIPS, MULCHING, SODDING, TEMPORARY SEEDING, FINAL SEEDING, GEOTEXTILES, STABILIZATION OF DISTURBED AREAS, PRESERVING EXISTING STREAM CHANNELS AS OVERFLOW AREAS WHEN CHANNEL STRAIGHTENING OR SHORTENING IS ALLOWED, SOIL STABILIZING EMULSIONS AND TACKIFIERS, MULCH TACKIFIERS, STABILIZED SITE ENTRANCES/EXITS, AND OTHER APPROPRIATE BMP'S.

22. EXAMPLES OF STRUCTURAL BMP'S THAT MAY BE IMPLEMENTED IN THE SWPPP INCLUDE BUT ARE NOT LIMITED TO: FLOW DIVERSION SWALES, SILTATION FENCES (STRAW BALES OR FILTER FABRIC), EARTHEN DIVERSION DIKES, DRAINAGE SWALES, SEDIMENT TRAPS, ROCK CHECK DAMS, SUBSURFACE DRAINS, PIPE SLOPE DRAINS, STORM DRAIN INLET AND OUTLET PROTECTION, REINFORCED SOIL RETAINING SYSTEMS, GABIONS, TEMPORARY OR PERMANENT SEDIMENT BASINS, OR OTHER APPROPRIATE BMP'S.

23. WHERE THE USE OF SEDIMENT BASINS OF THE REQUIRED SIZE BECOME IMPRACTICAL, THE CONTRACTOR SHALL EVALUATE AND CONSTRUCT OTHER SIMILARLY EFFECTIVE BMP'S TO CONTROL EROSION AND SEDIMENT DELIVERY. ALL ALTERNATIVE BMP'S SHALL BE CLEARLY IDENTIFIED ON THE SWPPP FOR APPROVAL.

24. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SITE MANAGEMENT BMP'S TO PREVENT CONTACT OF STORM RUNOFF. SUCH BMP'S INCLUDE, BUT ARE NOT LIMITED TO: SOLID AND HAZARDOUS WASTE MANAGEMENT INCLUDING TRASH CONTAINERS, REGULAR SITE CLEANUP OF SCRAP BUILDING MATERIALS, FOOD CONTAINERS, SHIPPING AND PACKING MATERIALS; PROPER DISPOSAL OF WASTE PAINTS, SOLVENTS, AND CLEANING COMPOUNDS; PROVISIONS FOR PORTABLE TOILETS; STORAGE OF CONSTRUCTION MATERIALS AWAY FROM DRAINAGE COURSES OR LOW AREAS; INSTALLATION OF CONTAINMENT BERMS AND USE OF DRIP PANS AT PETROLEUM PRODUCT AND LIQUID STORAGE TANKS AND CONTAINERS.

25. THE CONTRACTOR SHALL AMEND AND UPDATE THE SWPPP DURING THE TERM OF THE LAND DISTURBANCE WHENEVER THE FOLLOWING OCCURS: DESIGN OR OPERATION OF BMP'S ARE CHANGED; THE DESIGN OF THE PROJECT IS CHANGED SUCH THAT SIGNIFICANT AFFECTS ON THE QUALITY OF STORM WATER DISCHARGE WILL OCCUR; INSPECTIONS INDICATE DEFICIENCIES IN THE SWPPP OR BMP'S; NOTIFICATION BY THE MODNR OF DEFICIENCIES IN THE SWPPP; THE SWPPP IS DETERMINED TO BE INEFFECTIVE IN SIGNIFICANTLY MINIMIZING OR CONTROLLING EROSION AND SEDIMENTATION; VISUAL EVIDENCE OF EXCESSIVE EROSION OR SEDIMENT DEPOSITS IN STREAMS OR LAKES; TOTAL SETTLEABLE SOLIDS FROM STORM WATER OUTFALLS EXCEED 2.5 ML/L/HR; MODNR DETERMINES THAT VIOLATIONS OF WATER QUALITY STANDARDS MAY OCCUR, OR HAVE OCCURRED.

26. THE CONTRACTOR SHALL INSPECT ALL DISTURBED AREAS ON A REGULAR SCHEDULE (AT A MINIMUM OF ONCE PER WEEK) AND WITHIN 72 HOURS FOLLOWING PERIODS OF HEAVY RAINFALL. ALL BMP'S AND OTHER POLLUTION CONTROL MEASURES SHALL BE INSPECTED FOR PROPER INSTALLATION, OPERATION, AND MAINTENANCE. LOCATIONS WHERE STORM WATER LEAVES THE SITE SHALL BE INSPECTED FOR EVIDENCE OF EROSION OR SEDIMENT DEPOSITION. ANY DEFICIENCIES SHALL BE NOTED IN A WEEKLY REPORT OF THE INSPECTION(S) AND CORRECTED WITHIN SEVEN (7) DAYS. THE CONTRACTOR SHALL KEEP A LOG OF ALL INSPECTIONS AND CORRECTIVE ACTION TAKEN IN ACCORDANCE WITH THE REQUIREMENTS OF MODNR.

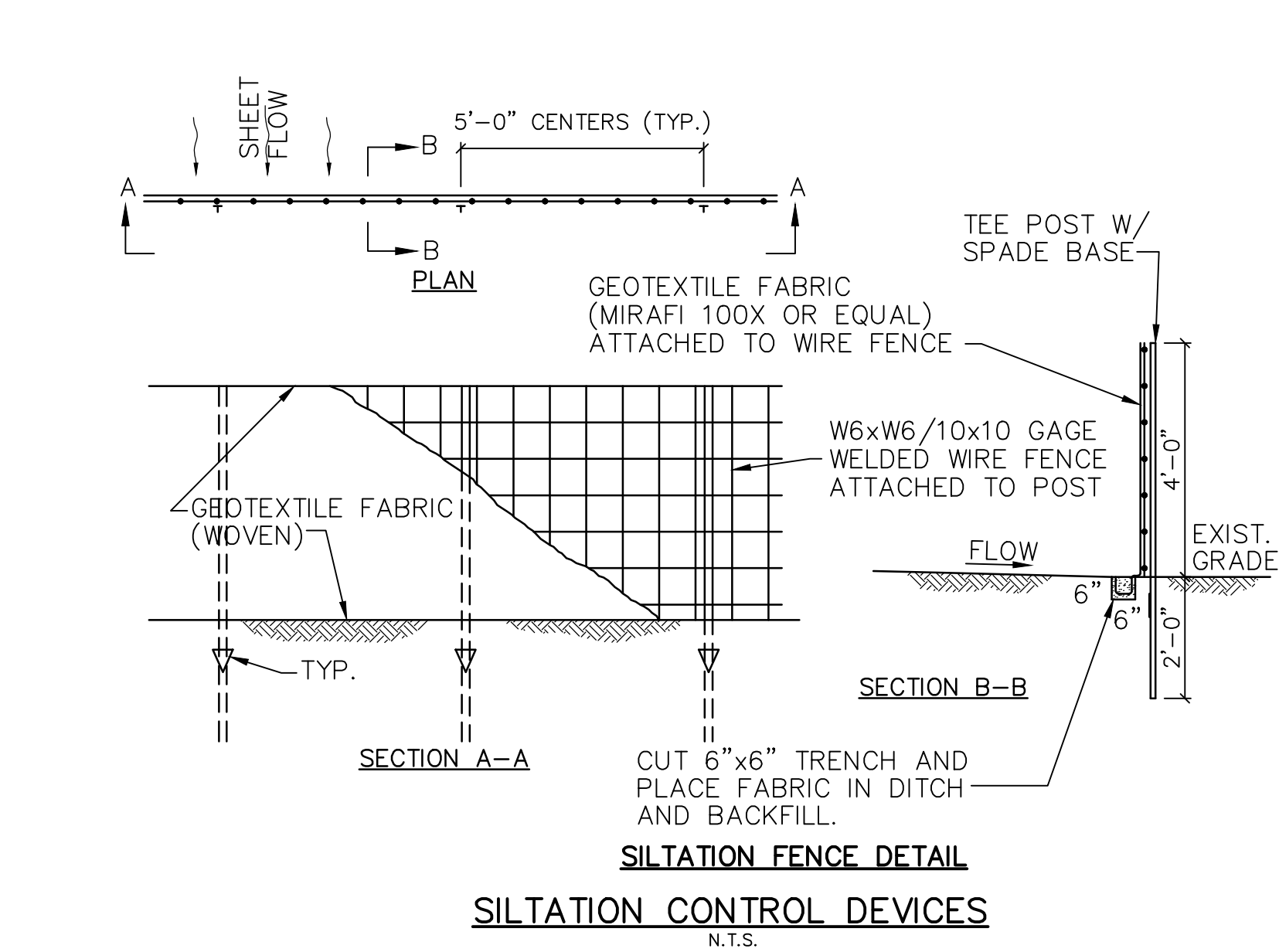
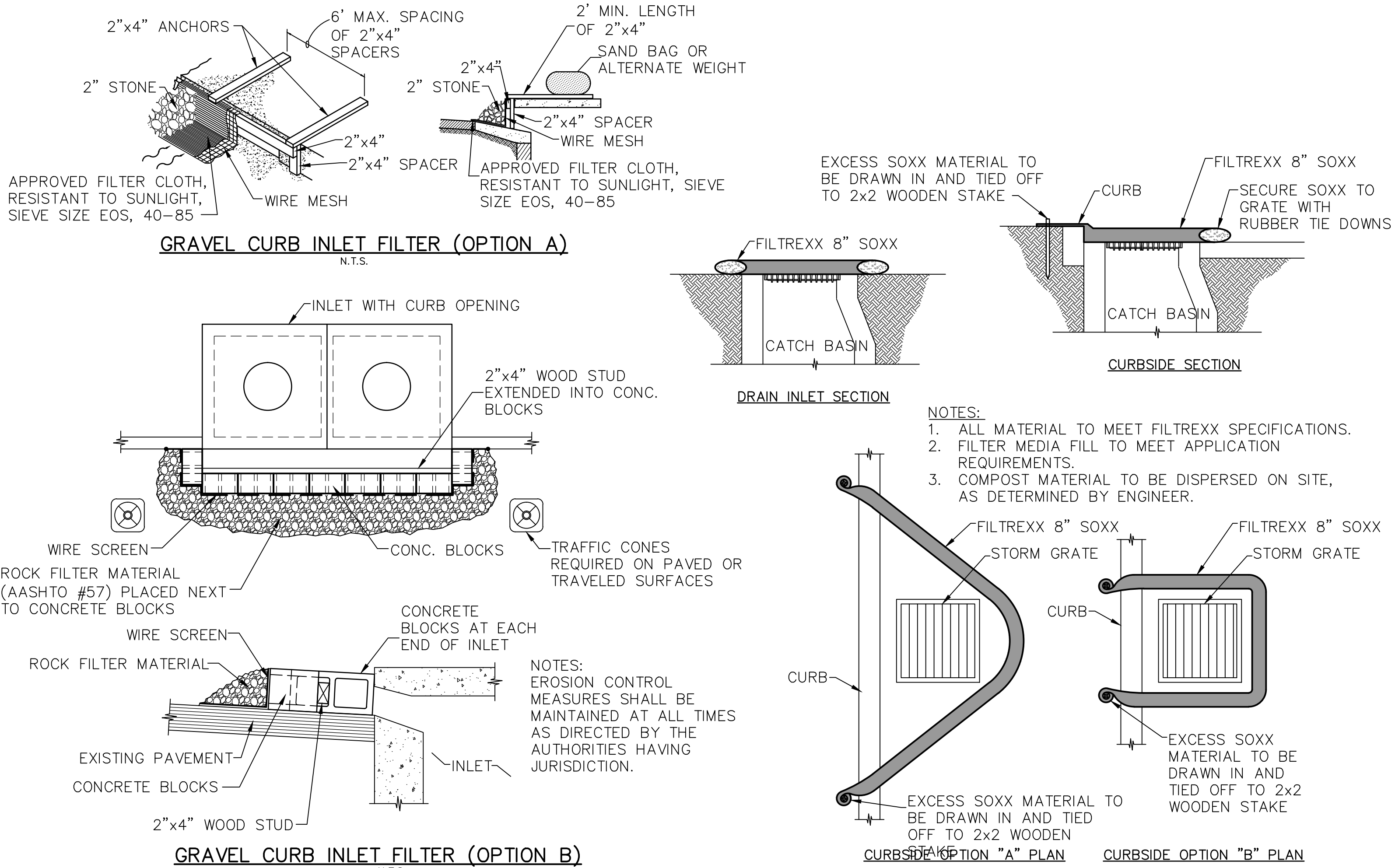
27. THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN ALL POLLUTION CONTROL MEASURES AND SYSTEMS IN GOOD ORDER TO ACHIEVE COMPLIANCE WITH THE TERMS OF THE MODNR LAND DISTURBANCE PERMIT.

28. THE CONTRACTOR SHALL NOTIFY ALL SUBCONTRACTORS, SUPPLIERS, PRIVATE OR PUBLIC UTILITY AGENCIES, AND OTHER AUTHORIZED PARTIES PERFORMING WORK AT THE SITE OF THE EXISTENCE OF THE SWPPP AND WHAT ACTIONS AND PRECAUTIONS TO BE TAKEN WHILE ON SITE TO MINIMIZE THE POTENTIAL FOR EROSION OR POTENTIAL DAMAGE TO ANY BMP. IF ADDITIONAL LAND IS DISTURBED OR ANY BMP DAMAGED, THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE THE DAMAGE REPAIRED.

29. DISCHARGES FROM THE SITE SHALL NOT VIOLATE STATE WATER QUALITY STANDARDS. SETTLEABLE SOLIDS SHALL NOT EXCEED A MAXIMUM OF 2.5 ML/L/HR FOR EACH STORM WATER OUTFALL.

30. REGULAR SAMPLING IS NOT REQUIRED UNLESS THE FOLLOWING OCCURS: SAMPLING IS REQUIRED AS A CONDITION OF THE MODNR LAND DISTURBANCE PERMIT; COMPLIANCE ISSUES, COMPLAINT INVESTIGATIONS, OR EVIDENCE OF OFF-SITE CONTAMINATION FROM ACTIVITIES AT THE SITE.

31. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE SWPPP AT THE SITE AT ALL TIMES. ADDITIONAL COPIES SHALL BE PROVIDED TO THOSE WHO ARE RESPONSIBLE FOR THE IMPLEMENTATION OF THE SWPPP AND THE INSTALLATION AND MAINTENANCE OF BMP'S.



THE CONTRACTOR AND ALL SUBCONTRACTORS ARE TO PERFORM THE WORK THEY ARE RESPONSIBLE FOR IN ACCORDANCE WITH ST LOUIS COUNTY HIGHWAYS & TRAFFIC PUBLIC WORKS "SEDIMENT AND EROSION CONTROL MANUAL" DATED NOVEMBER 1, 2014. MOST PERTINENT EXCERPTS FROM THE MANUAL ARE INCLUDED IN SHEETS C802 - C804 FOR CONVENIENCE.



Webster University
Interdisciplinary Science
Building

CANNONDESIGN

1100 Clark Avenue
St. Louis, Missouri 63102
T: 314.241.6250
F: 314.241.2570

William Tao & Associates, Inc.
ME/PE/PP Engineer
7955 Manchester Road, Suite 125
St. Louis, MO 63143
314.884.7600

David Mason & Associates, Inc.
Structural & Civil Engineer
MO Civil Cert of Authority # 001103
800 South Vandeventer Avenue
St. Louis, MO 63110
314.534.1053

Faith Group
Technology
3101 S. Hanley Rd, Suite 100
St. Louis, MO 63143
314.991.2228

Kuhlmann Leavitt, Inc.
Environmental Graphics & Signage
7400 Pershing Ave
St. Louis, MO 63130
314.725.6616

KVA Architects
Architecture
9721 Lezinger Road
St. Louis, MO 63124
314.962.2560

Spellman Brady & Company
Interior Designer
8251 Maryland Avenue, Suite 300
St. Louis, MO 63105
314.862.0070

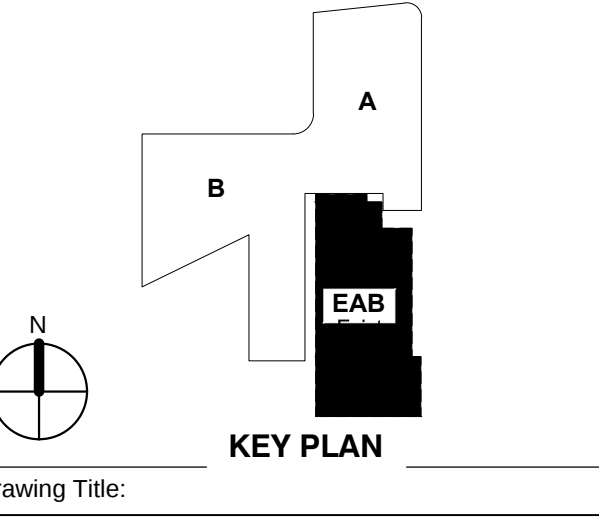
SWT Design
Landscape Architect
7722 Big Bend Blvd
St. Louis, MO 63119
314.644.5700

Webb Engineering Services, Inc.
Planning & Fire Protection
1400 S. 3rd Street, Suite 201
St. Louis, MO 63104
314.588.0600



CONFORMED SET 01 JUL 2016

1 ADDENDUM 1-10 5 MAY 2016
ISSUED FOR CONSTRUCTION (BP1) 15 JAN 2016



EROSION
CONTROL
DETAILS

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