

DIVISION 31 - EARTHWORK

SECTION 31 25 13 – EROSION AND SEDIMENTATION CONTROL

PART 1: GENERAL

1.01 Definitions

- A. BMP – Best Management Practices means physical facilities schedules of activities prohibition of practices, maintenance procedures, and other management practices, when properly designed, installed, and maintained, will be effective to prevent or reduce the discharge of pollution associated with construction activities.
- B. CSN – Construction Site Notice – (NOI-CSN for Large sites; CSN for Small sites).
- C. EHSREM – Environmental, Health, Safety, Risk and Emergency Management
- D. NOI & NOT – Notice of Intent and Notice of Termination for TPDES permits.
- E. SWPPP – Storm Water Pollution Prevention Plan
- F. TCEQ – Texas Commission on Environmental Quality
- G. TPDES – Texas Pollutant Discharge Elimination System
- H. Large Construction Activities – Construction activities including clearing, grading and excavating that result in land disturbance of equal to or greater than five (5) acres.
- I. Small Construction Activities - Construction activities including clearing, grading and excavating that result in land disturbance of equal to or greater than one (1) and less than five (5) acres of land.
- J. FPDC – Facilities Planning, Design and Construction
- K. Final Stabilization – All soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of at least 70% of ground cover has been established on all unpaved areas and areas not covered by permanent structures.

1.02 Scope of Standard

- A. This standard pertains to the provisions for the control of erosion in the construction areas and in stockpile areas.
- B. Texas State University designs all projects to meet LEED Silver design criteria. Construction activity pollution prevention is a mandatory requirement.
- C. Contractor is responsible for meeting all local, state and federal regulations regarding erosion control including the applicable provisions of the National Pollution Discharge Elimination System, regulations from the Clean Water Act, and shall implement in accordance with Texas State University MS4 plan.

1.03 Related Work

- A. Drawings and general provisions of the contract, including Procurement and Contracting Requirements, Division 00 and Division 01 of the project specifications.
- B. Design Standards, Section 31 11 00 Clearing and Grubbing.
- C. Design Standards, 31 22 13 Site Grading
- D. Design Standards, 31 23 33 Trenching, Backfilling, and Compaction
- E. Design Standards, 33 40 00 Drainage
- F. Design Standards, 33 01 00 Utilities

1.04 Contractor Responsibilities

- A. The contractor will adhere to the construction portions of the Texas State University Stormwater Management Plan as filed with the TCEQ under the University's MS4 permit. The University is considered a Level 2 MS4 operator under TPDES General Permit No. TXR040000 for University property within the City of San Marcos limits.
- B. This project requires implementation of storm water “Best Management Practices” (BMP) for control devices and monitoring by the Contractor to comply with all provisions of the Storm Water Pollution Prevention Plan (SWPPP) developed for the project by the contractor. The Contractor must fulfill all TCEQ Texas Pollutant Discharge Elimination System (TPDES) regulatory requirements in the General Permit No. TXR 150000, including the filing of a NOI, and NOT or signing and posting of the Construction Site Notice (CSN).
- C. The Contractor shall provide signatures of a corporate officer for the NOI, NOI-CSN, CSN and NOT and any other forms or applications as required by the TCEQ General Permit No. TXR 150000. The Contractor shall also provide delegated authorization to sign reports per 30 TAC305.128. Individuals conducting storm water inspections shall be qualified to the satisfaction of the Owner.
- D. When the Contractor receives approval of the SWPPP from EHSREM, the Contractor signs that NOI and /or CSN and sends the application fee and NOI to the TCEQ. The Contractor shall insert a copy of the signed NOI or CSN into the SWPPP booklet to be kept at the jobsite. The application fee is not required for Small Construction Sites or CSN sites.
- E. The SWPPP notebook kept at the jobsite shall also contain the following:
 - 1. A copy of signed NOI
 - 2. A copy of the Construction Site Notice (Large or Small)
 - 3. Owner CSN for small sites or large CSN-Secondary Operator for large sites.
 - 4. Cover letters or proof that the signed NOI was submitted to Texas State University 7 days prior to commencing construction for large construction sites or that the CSN was submitted to EHSREM/FPDC 2 days prior to commencing construction activities for small construction sites.

5. A regularly updated site map reflecting the conditions of the site.
 6. Copies of completed weekly or biweekly inspections conducted by the designated SWPPP inspector.
- F. The Contractor shall review the SWPPP and verify existing conditions at the site before determining scope of implementation of site controls. Site survey and site plan drawings shall be used for additional reference. The Contractor shall notify EHSREM & FPDC, in advance, of this site review to allow for Owner participation.
- G. The Contractor shall construct a Project SWPPP sign and place it at the main entrance to the project site. This sign shall include the NOI and TPDES permit along with the TCEQ TPDES Large Construction Site Notice (NOI-CSN); or the Construction Site Notice (CSN) for small construction projects. The sign shall be constructed as detailed in the sample SWPPP sign drawing.
- H. Contractor shall contact EHSREM & FPDC for review of initial site controls in place prior to commencing site-disturbing activities, to ensure that any unusual circumstances or unforeseen site conditions with regard to erosion and sedimentation have been addressed.
- I. The Contractor shall provide all material, labor, equipment and services required to implement, maintain and monitor all erosion and sedimentation controls in compliance with the SWPPP. All controls implemented by the Contractor shall comply with TCEQ General Storm Water Permit TXR 150000. These controls shall remain in operation until project completion and reestablishment of the site or longer as directed by EHSREM & FPDC. The work shall include, but not be limited to the following:
1. All earthwork as required to implement swales, dikes, basins and other excavations for temporary routing of utilities, to protect against erosion or sediment-laden ("polluted") storm water runoff.
 2. All structural controls as shown or specified, including silt fences, sediment traps, stabilized construction entrance, subsurface drains, pipe slope drains, inlet/outlet protection, reinforced soil retention, gabions, rock berms, etc.
 3. All non-structural controls as shown or specified, including temporary or permanent vegetation, mulching, geotextiles, sod stabilization, preservation of vegetative buffer strips, preservation/protection of existing trees and other mature vegetation.
 4. All modifications and revisions of SWPPP necessary to meet changing site conditions and to address new sources of storm water discharges, as the work progresses.
 5. All maintenance and repair of structural and non-structural controls in place shall continue until final stabilization is achieved or as directed by EHSREM & FPDC.
 6. Site inspections, as required by the SWPPP, of pollutant sources, including hazardous sources, structural and non-structural controls, and all monitoring of SWPPP revisions and maintenance of inspection records.
 7. BMP maintenance or noncompliance issues reported to the Contractor by EHSREM or FPDC should be corrected the day the maintenance or noncompliance issue is reported.

8. Keep records of inspections current in the SWPPP (in field office), available for review by EPA, TCEQ, FPDC, and Owner.
9. Removal of all structural and non-structural controls as necessary upon completion, and only after final stabilization is achieved and determined by EHSREM and FPDC. A Final Stabilization Checklist and Contractor Certificate of Compliance form must be completed and signed by the Contractor.
10. Filing of Notice of Termination (NOT) with the TCEQ (original) and Texas State University (copy) for sites that required a NOI (i.e. > 5 acres) within 30 days of final stabilization being achieved and is approved by the Owner, or of another Operator assuming control of the unstabilized portions of the site. Provide Owner with a copy of this filing. For small construction sites, the Contractor will remove the CSN, date the lower right hand corner, as indicated, and send the CSN to the MS4 operator. A copy will be given to the Owner.

PART 2: EXECUTION

2.01 General

Specific site control devices are identified in the SWPPP. Where such devices are indicated, their material composition shall comply with these sections.

SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

- 1.1 Project/Site Information
- 1.2 Contact Information/Responsible Parties
- 1.3 Nature and Sequence of Construction Activity
- 1.4 Soils, Slopes, Vegetation, and Current Drainage Patterns
- 1.5 Construction Site Estimates
- 1.6 Receiving Waters
- 1.7 Site Features and Sensitive Areas to be protected
- 1.8 Potential Sources of Pollution
- 1.9 Historic Preservation
- 1.10 Maps

SECTION 2: EROSION AND SEDIMENT CONTROL BMPS

- 2.1 Minimize Disturbed Area and Protect Natural Features and Soil
- 2.2 Phase Construction Activity
- 2.3 Control Stormwater Flowing onto and through the Project
- 2.4 Stabilize Soils

- 2.5 Protect Slopes
- 2.6 Protect Storm Drain Inlets
- 2.7 Establish Perimeter Controls and Sediment Barriers
- 2.8 Retain Sediment On-Site
- 2.9 Establish Stabilized Construction Exits
- 2.10 Additional BMPs

SECTION 3: GOOD HOUSEKEEPING BMPs

- 3.1 Material Handling and Waste Management
- 3.2 Establish Proper Building Material Staging Areas
- 3.3 Designate Washout Areas
- 3.4 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices
- 3.5 Control Equipment/Vehicle Washing
- 3.6 Spill Prevention and Control Plan
- 3.7 Any Additional BMPs
 - Mortar Mix Areas
 - Paint Rinsewater Management
 - Dewatering Procedures
- 3.8 Allowable Non-Stormwater Discharge Management

SECTION 4: SELECTING POST-CONSTRUCTION BMPs

- 4.1 Water Quality
- 4.2 Detention

SECTION 5: INSPECTIONS

- 5.1 Inspections
- 5.2 Delegation of Authority
- 5.3 Corrective Action Log

SECTION 6: RECORDKEEPING AND TRAINING

- 6.1 Recordkeeping
- 6.2 Log of Changes to the SWPPP

6.3 Training

SECTION 7: FINAL STABILIZATION

SECTION 8: CERTIFICATION AND NOTIFICATION

SWPPP APPENDICES

Appendix A- General Location Map

Appendix B - Site Maps

Appendix C -Construction General Permit

Appendix D- NOI and Acknowledgement Letter from EPA/State

Appendix E - Inspection Reports

Appendix F- Corrective Action Log (or in Part 5.3) Appendix G - SWPPP Amendment Log (or in Part 6.2)

Appendix H - Subcontractor Certifications/Agreements

Appendix G – SWPPP Amendment Log (or in Part 6.2)

Appendix H – Subcontractor Certifications/Agreements

Appendix I – Grading and Stabilization Activities Log (or in Part 6.1)

Appendix J -Training Log

Appendix K- Delegation of Authority

Appendix L- Construction Site Notice

2.02 Inspections and Record-Keeping

- A. Contractor shall inspect all BMP's daily and coordinate inspections with EHSREM & FPDC, who will also regularly inspect the site. Record all deficiencies of site controls and take appropriate action to correct any deficiencies recorded. Exception is rock berms located in a streambed. Any rock berm located in a streambed shall be inspected on a daily basis.
- B. Contractor shall keep records of all Contractor inspections on file with SWPPP notebook at project site and make available for review by Owner's Representative/s or EPA, TCEQ or MS4 operator officials requesting review of SWPPP inspection records.
- C. Finalized and completed Construction Site Notices, Notice of Intent, Notice of Termination, SWPPP inspection records, and all other applicable records must be digitized and submitted to EHSREM & FPDC at the end of the project for record keeping purposes.

2.03 Maintenance

- A. All erosion and sediment control measures and other protective measures identified in the SWPPP must be maintained in effective operating condition. Maintenance issues found during an inspection must be replaced or corrected immediately upon discovery.

END OF SECTION 31 25 13