

## SECTION 01 57 13

### TEMPORARY EROSION AND SEDIMENT CONTROL

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Managing storm water runoff and other Project related water discharges to minimize sediment pollution during construction.

##### 1.02 REFERENCES

- A. North Dakota Department of Health Public Notice Issue of an NPDES Permit.
- B. North Dakota Department of Transportation “Standard Specifications for Road and Bridge Construction”.

##### 1.03 SUBMITTALS

- A. Completed “Notice of Intent to Obtain Coverage Under NPDES General Permit for Stormwater Discharges Associated with Construction Activity”.
  1. NPDES permit inspection log resulting from weekly Site inspections.
  2. Amendments to the Stormwater Pollution Prevention Plan for the Project.
  3. “Notice of Termination to Cancel Coverage Under NPDES General Permit for Stormwater Discharges Associated with Construction Activity”.

##### 1.04 Quality Assurance

- A. Erosion Control Supervisor: Provide an Erosion Control Supervisor to direct the erosion control operations and insure compliance with NPDES permit.

##### 1.05 SEQUENCING AND SCHEDULING

- A. Install sediment control measures prior to grading activities.
- B. Schedule and coordinate the Work so that permanent erosion and sediment control BMPs, such as basin construction, rip rap placement, and permanent seeding are directly incorporated into the supplement permanent erosion and sediment control BMPs with temporary BMPs. Place temporary BMPs when permanent erosion control cannot be achieved. Coordinate construction operations so that erosion and sediment control measures (permanent or temporary) are installed and maintained concurrently with the rest of the Work of the Project.

- C. Coordinate and schedule the Work of subcontractors such that erosion and sediment control measures are fully executed for each operation and in a timely manner over the duration of the Project. Develop a chain of responsibility for all subcontractors and operators on the Project to ensure that permit provisions are adhered to.
- D. Stabilization timeframes shall conform to the NPDES General Stormwater Permit for Construction Activity.
- E. Prior to Project shutdown for the winter or other periods of a week or more, the Site shall be adequately protected from erosion and off Site damage by covering exposed soils with mulch and establishing perimeter controls.
- F. If the Contractor fails to comply with the requirements of the NPDES permit future pay applications will be withheld until project is brought into compliance with the NPDES permit.

## **PART 2 PRODUCTS**

### **2.01 SILT FENCE**

- A. Silt fence shall be a woven monofilament product have a water flow rate of 100-110 gpm/sf.

### **2.02 TEMPORARY CONSTRUCTION ENTRANCE**

- A. Rock Construction Entrance:
  1. 2 inch minimum washed rock
  2. Geotextile Fabric shall be placed below the rock.
  3. Minimum depth of rock placed shall be six inches.

### **2.03 MULCH**

- A. Clean grain straw.
- B. Hydraulic soil stabilizer may be used in lieu of mulch.

### **2.04 HYDRO-MULCH**

- A. Hydro-mulch shall meet the requirements of NDDOT Spec 708.02

### **2.05 STORM DRAIN INLET PROTECTION**

- A. Inlet protection for paved streets with concrete curb and gutter: The following inlets are acceptable:

1. Catch basin inserts:
  - a. Road Drain by Wimco, LLC ([www.roadrain.com](http://www.roadrain.com))
  - b. Lange Industries ([www.langeindustries.com](http://www.langeindustries.com))
  - c. Rock Log
  - d. Approved Equal
  
- B. Inlet protection for non-paved surfaces without curb or areas where vegetation will be established. The following methods are acceptable:
  1. Silt fence ring:
    - a. Place wire mesh cage in a circular or square confirmation to form a minimum 5 foot diameter zone of protection.
    - b. Geotextile shall be monofilament having a water flow rate of 100 to 110 gpm/sf.
    - c. Loose aggregate or a rock log around perimeter of ring to anchor geotextile.
  2. Sediment Control Hat such as the InfrSAFE Sediment Control Barrier by Royal Enterprises, or equal.

#### 2.06 FILTER LOGS:

- A. Straw or wood fiber biorolls, 6 to 7 inches in diameter.
- B. Compost or rock logs, 6 to 8 inches in diameter.

### **PART 3 EXECUTION**

#### 3.01 GENERAL

- A. Implement the Project's NPDES Stormwater Pollution Prevention Plan (SWPPP) and take necessary actions to prevent off site damage resulting from Work conducted on the Project or Project related stormwater runoff.
- B. Minimize the amount of disturbed land that is susceptible to erosion at any time. Delineate areas not to be disturbed.

#### 3.02 INSTALLATION

- A. Install temporary stormwater management and sediment control devices in conformance with the details, typical sections, and elevations shown on the Drawings.
- B. The location of temporary stormwater and sediment control devices may be adjusted from that shown on the Drawings to accommodate actual field conditions and increase the effectiveness of the installation.
- C. Silt Fence:

1. Install where shown on the drawings using the machine sliced installation method, unless directed otherwise by the Engineer.
  2. Use additional measures, such as rock aggregate, placed along the base of the silt fence, if silt fence can't be trenched.
- D. Temporary Construction Entrance:
1. Install where shown on the drawings.
  2. Construct construction entrance before grading begins on the Site.
  3. Inspect construction entrance daily for mud accumulation to minimize vehicle tracking of sediment. Remove daily, rock that has been picked up from rock construction entrance and deposited on adjacent roadways.
- E. Mulch:
1. For seeded Sites, apply at a rate of 2 tons per acre.
  2. For unseeded Sites, apply at a rate of 2 to 3 tons per acre, covering the entire soil surface.
  3. Site to be covered at a uniform depth.
  4. Mulch shall be disc anchored immediately to minimize loss of the mulch.
- F. Hydraulic Soil Stabilizer (Hydromulch)
1. Apply hydromulch in at least 2 opposing directions so that a shadowing effect leaving the back side of a soil clod unprotected is minimized.
  2. Raking or harrowing of soil/seed and slope (cat) tracking shall be done before installation of hydromulch.
- G. Storm Drain Inlet Protection:
1. Provide effective storm drain inlet protection over the life of the Project until all sources with potential for discharging to inlets have been stabilized.
  2. Place devices so that driving hazards or obstructions are not created. The devices must be cleaned out regularly and all devices must have an emergency overflow to reduce flooding potential.
- H. Temporary Sediment Traps:
1. Temporary sediment traps are approximately 2 feet or less in depth with a length to width ratio of 2:4.
  2. Rock weeper shall be placed at outlet of sediment trap.
- I. Concrete Waste Management:
1. Contractor shall discuss with Concrete supplier concrete wash water management techniques before concrete deliveries are made.
  2. Designate an area for concrete washout containment. The structure shall contain all wash water. All liquid and solid wastes generated by concrete washout operations must be contained in a leak-proof containment facility or impermeable liner. Stormwater shall not carry wastes from washout location.

3. Concrete washout containment structure must be located a minimum of fifty feet from waters of the state.
4. Waste material from concrete washout operations must be removed and legally disposed of when it has accumulated two-thirds of the wet storage capacity of the structure.

### 3.03 MAINTENANCE

- A. Inspect, maintain, and repair any washouts or accumulations of sediment that occur as a result of construction. Restoration consists of grade repair, turf re-establishment, and street sweeping of mud and debris tracked from the site.
- B. Inspect all erosion and sediment control measures after each runoff event and daily during prolonged rainfall.
- C. Contractor shall maintain the temporary sediment control devices until they are no longer necessary and are removed by the Contractor.
- D. Upon final acceptance of the Project and establishment of permanent erosion control measures, the Contractor shall remove all temporary erosion control measures.
- E. Control dust blowing and movement on Site and roads as directed by Engineer.