

# **COMPILATION OF APPROVED SPECIFICATIONS**

**RHODE ISLAND DEPARTMENT OF TRANSPORTATION  
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION**

**REVISIONS  
SUPPLEMENTAL SPECIFICATIONS  
SPECIAL PROVISIONS**

**SUPPLEMENT NO. 21**

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## SECTION 206

### EROSION, SEDIMENT, AND POLLUTION PREVENTION CONTROLS

**206.01 DESCRIPTION.** This work consists of the provision of erosion, sediment, and pollution prevention controls in reasonably close conformity with the dimensions and details indicated on the plans or as directed by the Engineer, all in accordance with these Specifications. Erosion, sediment, and pollution prevention controls consist of the following four types. All erosion, sediment, and pollution prevention controls and devices shall be in place prior to the start of excavation when required by the SWPPP/SESC and other contract documents.

**206.01.1 Baled Straw Erosion Checks.** Baled straw erosion checks shall consist of baled straw, each bale of which is embedded and attached to the ground with wood stakes, constructed as indicated on the Plans. This method is typically only appropriate for short-term and/or emergency applications.

**206.01.2 Silt Fence.** Silt fencing shall consist of oak fence posts to which are attached industrial support netting and sediment control filter fabric, constructed as indicated on the Plans.

**206.01.3 Baled Straw Erosion Check and Silt Fence Combined.** Baled straw erosion checks and silt fence combined shall consist of baled straw erosion check installed abutting the filter fabric side of a silt fence, with a minimum of six (6) inches along the bottom edge of the silt fence toed in under the baled straw erosion check as indicated on the Plans.

**206.01.4 Compost Filter Sock.** Compost filter socks shall consist of a flexible mesh tube filled with composted material and staked to the ground with wooden stakes, constructed as indicated on the plans.

### 206.02 MATERIALS.

**206.02.1 Baled Straw Erosion Checks.** Baled straw shall be baled within twelve months of use. Bindings shall be sufficiently strong to act as handles when placing bales in position by hand. The minimum dimension of any bale shall be 18 inches. Wood stakes shall be oak, 1-inch by 1-inch in section, and at least 3 feet in length.

**206.02.2 Silt Fence.** The filter fabric shall be a material suitable for erosion control applications and shall be one of those included on the Department's Approved Materials List. Wood posts shall be oak, 2-inch by 2-inch in section, and at least 4.5 feet in length. Support netting shall be heavy-duty plastic mesh. For prefabricated silt fences, 1-inch by 1-inch wood posts will be permitted.

**206.02.3 Baled Straw Erosion Check and Silt Fence Combined.** Baled straw shall conform to the requirements of **Subsection 206.02.1** above. Silt fencing shall conform to the requirements of **Subsection 206.02.2** above.

**206.02.4 Compost Filter Sock.** Compost filter sock material shall contain composted organic matter in accordance with AASHTO Designation R 51-13. Compost material shall also meet all applicable Federal and State Regulations. For compost filter socks 18 inches or less in diameter, wooden stakes shall be 1 inch by 1 inch, at 10-foot intervals on center, and of a length that shall project into the soil 1 foot leaving 3 inches to 4 inches protruding above the filter sock. For compost filter socks greater than 18 inches in

diameter, wooden stakes shall be 2 inches by 2 inches at 10-foot intervals on center, and of a length that shall project into the soil 1 foot, leaving 3 inches to 4 inches protruding above the filter sock. Filter sock netting materials are also available in biodegradable plastics for areas where removal and disposal are not planned.

**206.03 CONSTRUCTION METHODS.** Those erosion and pollution controls indicated on the Plans shall be installed by the Contractor and approved by the Engineer before the commencement of any drainage, roadway, bridge construction, or the disturbance of any soils.

**206.03.1 Baled Straw Erosion Checks.**

**a. Installation.** Baled straw erosion checks shall be constructed at the locations, and in accordance with the details indicated on the Plans, or as directed by the Engineer. The following stipulations also apply:

1. Bales shall be placed in a single row, lengthwise on the contour, with ends of adjacent bales tightly abutting one another.

2. The erosion check shall be entrenched and backfilled. The trench shall be excavated the width of the bale and the length of the check to a minimum depth of 3 inches. After the bales are staked and chinked, the excavated soil shall be backfilled against the check. Backfill shall conform to the ground level on the downhill side and shall be built up to 4 inches against the uphill side.

3. The bales are to be installed so that the bindings are oriented around the sides of the bales rather than along their tops and bottoms.

4. Each bale shall be securely anchored by at least two stakes driven through the bale. The first stake in each bale shall be driven toward the previously laid bale to force the bales together.

5. The gaps between bales shall be chinked (filled by wedging) with straw to prevent water from escaping between bales. Loose straw shall be scattered over the area immediately uphill from the bale erosion check to increase efficiency.

6. At approximate intervals of 100 feet, one bale is to be placed against those bales positioned along the limit of clearing. This bale is to be placed at a right angle to the line of the toe of slope.

**b. Removal.** Before removal, all accumulated sediment and debris on the both sides shall be removed and legally disposed. Erosion controls shall not be removed until the adjacent exposed areas are free from future uncontrolled discharges. All baled straw erosion checks must be removed from the bales at a time designated by the Engineer. The erosion check shall be removed only when the adjacent exposed area has been stabilized, i.e., the area has an established grass or stone cover or has been paved and is free from future uncontrolled discharges. Immediately upon removal of the bales, the remaining exposed areas (under the bales) shall be backfilled with plantable soil, raked, and graded as necessary to match the surrounding grade and then seeded.

**206.03.2 Silt Fence.**

**a. Installation.** Silt fences shall be constructed at the locations and in accordance with the details indicated on the Plans, or as directed by the Engineer. The following stipulations shall apply:

1. A 6-inch deep by 1-foot wide minimum trench shall be dug where the fence is to be installed.
2. The fence shall be positioned in the trench with the fence posts set at 8 feet on center (maximum) in wetland areas and 4 feet on center (maximum) in wetland ravine, gully or drop-off areas, as indicated on the plans.
3. The sedimentation control fabric and the industrial netting shall be stapled to each post. When joints are necessary, filter fabric shall be spliced together only at support posts. Splices shall consist of a 6-inch overlap, and shall be securely sealed.
4. Each wood post with industrial support netting and filter fabric attached shall be driven into the undisturbed soil in the trench as indicated on the Plans.
5. The trench shall be backfilled and the soil compacted over the filter fabric.
6. The installed height of the fence shall be 2½ feet (minimum). However, height shall not exceed 36 inches since higher barriers impound volumes of water sufficient to cause failure of the fence structure.

**b. Removal.** This work includes the removal of the silt fence erosion checks and posts. Silt fences shall not be left in place. Before removal, all accumulated sediment and debris on the upstream side shall be removed and legally disposed. Erosion, sediment, and pollution prevention controls shall not be removed until the adjacent exposed areas are free from future uncontrolled discharges. A silt fence shall be removed only when the adjacent exposed area is stabilized, i.e., the area has an established grass or stone cover or has been paved, and is free from future uncontrolled discharges. Immediately upon removal of the silt fence, the remaining exposed areas shall be finished as specified above in **Para. b of Subsection 206.03.1**.

### **206.03.3 Baled Straw Erosion Check and Silt Fence Combined.**

**a. Installation.** Baled Straw Erosion Check and Silt Fence Combined shall be installed in accordance with the requirements of **Para. a of Subsections 206.03.1 and 206.03.2**, with the following additional provisions:

1. Silt fencing shall be installed prior to the installation of the baled straw.
2. The trench shall be a minimum of 6-inches deep and a width wide enough to accommodate the baled straw as it abuts the filter fabric side of the silt fence.
3. Prior to backfilling the trench, the baled straw shall be installed tight against the filter fabric side of the silt fence, with a minimum of six (6) inches of the bottom edge of the silt fence toed in under the baled straw within the trench.

**b. Removal.** This work includes the removal of the combined baled straw erosion check and silt fence in accordance with **Para. b of Subsections 206.03.1 and 206.03.2**, with the exception that the baled straw erosion checks shall not be left to rot in place. Before removal, all accumulated sediment and

debris on the upstream side shall be removed and legally disposed. Erosion, sediment, and pollution prevention controls shall not be removed until the adjacent exposed areas are free from future uncontrolled discharges.

#### **206.03.4 Compost Filter Sock.**

**a. Installation.** Compost filter socks shall be constructed at the locations and in accordance with the details indicated on the plans, or as directed by the Engineer. The following stipulations also apply:

1. Compost filter socks may be either fabricated on-site or delivered to the site.
2. Trenching is not required. Compost filter socks shall be placed over the top of ground, wooden stakes shall be driven in pairs on each side of the filter socks to secure them to the ground. To ensure optimum performance, heavy vegetation shall be cut down or removed, and extremely uneven surfaces shall be graded to ensure that the compost filter sock uniformly contacts the ground surface.
3. Filter socks shall be placed in a continuous line. Where ends intersect, they shall be sleeved to create an interlock with a two (2) foot overlap. After one section is filled and the ends tied off, the next section shall be pulled over the tied-off end of the previous section, to create a 2-foot overlap. The overlap shall be staked. The intersecting overlaps shall be constructed to ensure that stormwater does not break through at these intersection points.
4. Filter sock netting materials are also available in biodegradable plastics for areas where removal and disposal are not planned.

**b. Removal.** This work shall include the removal of the compost filter sock and stakes. Before removal, all accumulated sediment and debris shall be removed and legally disposed. Erosion, sediment, and pollution prevention controls shall not be removed until the adjacent exposed areas are free from future uncontrolled discharges. The mesh filter sock material shall be cut open and the mesh removed, and the compost material shall be raked out level to surrounding grades, then seeded. Immediately upon removal of the compost filter socks, the remaining exposed areas shall be finished as specified in **Para. b of Subsection 206.03.1**. For biodegradable filter sock netting material, the materials may be left in place.

#### **206.04 METHOD OF MEASUREMENT.**

##### **206.04.1 Baled Straw Erosion Checks.**

**a. Installation.** "Baled Straw Erosion Checks" will be measured by the number of linear feet installed in accordance with the Plans and/or as directed by the Engineer.

**b. Removal.** If required by the Contract, "Removal of Baled Straw Erosion Checks" will be measured by the number of linear feet removed in accordance with the Plans and/or as directed by the Engineer.

**206.04.2 Silt Fence.** "Silt Fence" erosion checks will be measured by the number of linear feet installed in accordance with the Plans and/or as directed by the Engineer.

**206.04.3 Baled Straw Erosion Check and Silt Fence Combined.** “Baled Straw Erosion Check and Silt Fence Combined” will be measured by the number of linear feet of combined baled straw erosion check and silt fence installed in accordance with the Plans and/or as directed by the Engineer.

**206.04.4 Compost Filter Sock.** “Compost Filter Sock” of the various sizes as indicated on the plans will be measured by the number of linear feet of continuous runs of such compost filter sock installed in accordance with the Plans and/or as directed by the Engineer. No payment shall be made for biodegradable filter sock if left in place.

## **206.05 BASIS OF PAYMENT.**

### **206.05.1 Baled Straw Erosion Checks.**

**a. Installation.** The accepted quantity of "Baled Straw Erosion Checks" will be paid for at the contract unit price per linear foot as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, and equipment, including excavation, bales, stakes, removal of stakes, and all incidentals required to finish the work, complete and accepted by the Engineer.

**b. Removal.** If required by the Contract, the accepted quantity of "Removal of Baled Straw Erosion Checks" will be paid for at the contract unit price per linear foot as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, and equipment including removal and disposal of entrapped material, removal of straw, grading, raking, and seeding necessary to match the surrounding area, and all incidentals required to finish the work complete and accepted by the Engineer.

**206.05.2 Silt Fence.** The accepted quantity of "Silt Fence" erosion checks will be paid for at the contract unit price per linear foot as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, and equipment including excavation, filter fabric, industrial netting, posts, removal and disposal of entrapped material, removal of fence, grading, raking and seeding necessary to match the surrounding area, and all incidentals required to finish the work complete and accepted by the Engineer.

**206.05.3 Baled Straw Erosion Check and Silt Fence Combined.** The accepted quantity of “Baled Straw Erosion Check and Silt Fence Combined” will be paid for at the contract unit price per linear foot as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, and equipment, including excavation; filter fabric, baled straw, stakes, industrial netting, posts, , removal and disposal of entrapped material, removal of baled straw, removal of fence, backfill material, grading, raking and seeding as necessary to match the surrounding area, and all incidentals required to finish the work complete and accepted by the Engineer.

**206.05.4 Compost Filter Sock.** The accepted quantity of “Compost Filter Sock” will be paid for at the contract unit prices per linear foot as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials , and equipment, including mesh filter socks, removal of mesh filter socks, compost filter material, stakes, removal of stakes, removal and disposal of entrapped material, grading, raking and seeding as necessary to match the surrounding area, and all incidentals required to finish the work complete and accepted by the Engineer.

**206.05.5 Cleaning and Maintenance.** The cleaning and maintenance of Baled Straw Erosion Checks, Silt Fence Erosion Checks, Baled Straw Erosion Check and Silt Fence Combined, and Compost Filter

Sock will be paid for under the provisions of **SECTION 212; MAINTENANCE AND CLEANING OF EROSION, SEDIMENT AND POLLUTION PREVENTION CONTROLS.**



## SECTION 207

### CHECK DAMS

**207.01 DESCRIPTION.** This work consists of the provision of check dams and dikes in reasonably close conformity with the dimensions and details indicated on the Plans or as directed by the Engineer, all in accordance with these Specifications. All erosion, sediment, and pollution prevention controls and devices shall be in place prior to the start of excavation when required by the SWPPP/SESC and other contract documents. Check dams consist of the following three types:

**207.01.1 Sand Bag Erosion Dikes.** This work consists of the placement of sandbags across either riprap or earth ditches, thereby forming a dike, to create temporary sediment basins for pollution control, constructed as indicated on the Plans.

**207.01.2 Stone Check Dams.** This work consists of the placement of stone in ditches or drainage swales, constructed as indicated on the Plans.

**207.01.3 Compost Filter Sock Check Dams.** Compost filter sock check dams shall consist of a flexible mesh tube filled with composted material and staked to the ground with wooden stakes, constructed as indicated on the plans.

### 207.02 MATERIALS.

**207.02.1 Sand Bag Erosion Dikes.** The sand bags and the sand material shall be of a quality acceptable to the Engineer. Dumped stone, when required, shall meet the requirements of **Subsection M.10.03.2** for Modified NSA Class R-4 riprap. The filled sand bags will weigh a minimum of 60 pounds.

**207.02.2 Stone Check Dams.** The stone shall meet the requirements of **Subsection M.01.09, Table I, Column V** for Filter Stone.

**207.02.3 Compost Filter Sock Check Dams.** Compost filter sock material shall be in accordance with AASHTO Designation R 51-13. Compost material shall also meet all applicable Federal and State Regulations. For compost filter socks 18 inches or less in diameter, wooden stakes shall be 1 inch by 1 inch, and of a length that shall project into the soil 1 foot leaving 3 inches to 4 inches protruding above the filter sock. For compost filter socks greater than 18 inches in diameter wooden stakes shall be 2-inch by 2-inch and of a length that shall project into the soil 1 foot leaving 3 inches to 4 inches protruding above the filter sock. Stakes shall be placed at the ends and at 5-foot intervals, on center.

**207.03 CONSTRUCTION METHODS.** Those erosion and pollution controls indicated on the Plans shall be installed by the Contractor and approved by the Engineer before the commencement of any drainage, roadway, bridge construction, or the disturbance of any soils.

**207.03.1 Sand Bag Erosion Dikes.**

**a. Installation.** Sand bag erosion dikes shall be constructed as indicated on the Plans. The sand bags will be placed a minimum of four layers high. Over the center of the ditch the top layer of sand bags will have a weir opening equal to one half the bottom ditch width. The sand bags shall be extended such a length that the bottom of the end sand bags are higher in elevation than the top of the lowest middle sand bag.

When the sand bag dike is constructed across an earth ditch, the down-stream side of the dike at the weir opening is to be protected with Modified NSA Class R-4 dumped riprap.

**b. Removal.** Sand bag erosion dikes shall be removed prior to the completion of the project at a time designated by the Engineer. Before removal, all accumulated sediment and debris on the upstream side shall be removed and legally disposed. Check dams shall not be removed until the adjacent exposed areas are free from future uncontrolled discharges. Immediately upon removal of the sand bag erosion dikes the remaining exposed areas shall be backfilled, raked, and graded as necessary to match the surrounding grade and then seeded.

#### **207.03.2 Stone Check Dams.**

**a. Installation.** Stone check dams shall be constructed as indicated on the Plans. The stone shall be placed across the ditch or swale to achieve complete coverage and shaped to the required configuration using hand tools. The stone shall be sloped from the sides of the ditch/swale towards the center such that the center is 6 inches lower than the stone at the sides of the ditch/swale. The check dam shall have 2 horizontal to 1 vertical side slopes and shall not exceed 2 feet in height.

**b. Removal.** Stone check dams shall be removed prior to the completion of the project at a time designated by the Engineer. Removal shall not occur until the adjacent exposed areas are free from future uncontrolled discharges. Before removal, all accumulated sediment on the upstream side shall be removed and legally disposed. Immediately upon removal of the Stone Check Dams, the remaining exposed areas shall be backfilled, raked, and graded as necessary to match the surrounding grade and then seeded.

#### **207.03.3 Compost Filter Sock Check Dams.**

**a. Installation.** Compost filter sock check dams shall be constructed at the locations, and in accordance with the details indicated on the plans, or as directed by the Engineer. The following stipulations also apply:

1. Compost filter sock check dams may be either fabricated on site or delivered to the site.
2. Trenching is not required. Compost filter sock check dams shall be placed over the top of ground, wooden stakes shall be driven in pairs on each side of the filter socks to anchor them to the ground. To ensure optimum performance, heavy vegetation shall be cut down or removed, and extremely uneven surfaces should be graded to ensure that the compost filter sock uniformly contacts the ground surface. These may be placed over the top of rolled erosion controls mats or turf re-enforcement mats. These may also be stacked if additional height is needed.
3. Compost filter sock check dams shall be installed perpendicular to flow. The check dams shall extend to such a length that the bottoms of each end are higher in elevation than the lowest middle part or the top of the banks (maximum flow line) are reached.

**b. Removal.** This work, if required, shall include the removal of the compost filter sock and stakes. Before removal, all accumulated sediment and debris on the upstream side shall be removed and legally disposed. Compost filter sock check dams shall not be removed until the adjacent exposed areas are relatively free from future uncontrolled discharges. Unless biodegradable, the mesh filter sock material shall be cut open and the mesh removed. In general, the compost filter material may be left in place, however the material shall be raked out leveled to surrounding grades, then seeded.

#### **207.04 METHOD OF MEASUREMENT.**

**207.04.1 Sand Bag Erosion Checks.** "Sand Bag Erosion Checks" will be measured by the number of sand bags installed in accordance with the Plans and/or as directed by the Engineer.

**207.04.2 Stone Check Dams.** "Stone Check Dams" will be measured by the number of cubic feet of stone placed in accordance with the Plans and/or as directed by the Engineer.

**207.04.3 Compost Filter Sock Check Dams.** "Compost Filter Sock Check Dams" of the various sizes as indicated on the plans will be measured by the number of linear feet of continuous runs of such compost filter sock installed in accordance with the Plans and/or as directed by the Engineer.

#### **207.05 BASIS OF PAYMENT.**

**207.05.1 Sand Bag Erosion Checks.** The accepted quantity of "Sand Bag Erosion Checks" will be paid for at the contract unit price per each bag as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, equipment and materials, including bags, sand, the subsequent removal of sand bags, removal and disposal of entrapped material, and all other incidentals required to finish the work, complete and accepted by the Engineer.

**207.05.2 Stone Check Dams.** The accepted quantity of "Stone Check Dams" will be paid for at the contract unit price per cubic foot as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, and equipment, the subsequent removal of the stone, removal and disposal of entrapped material, and all incidentals required to finish the work, complete and accepted by the Engineer.

**207.05.3 Compost Filter Sock Check Dams.** The accepted quantity of "Compost Filter Sock Check Dams" will be paid for at the contract unit prices per linear foot as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, and equipment, including mesh filter socks, removal of mesh filter socks, compost filter material, stakes, removal of stakes, removal and disposal of entrapped material, backfill material, grading, raking and seeding as necessary to match the surrounding area, and all incidentals required to finish the work, complete and accepted by the Engineer.

**207.05.4 Cleaning and Maintenance.** The cleaning and maintenance of Sand Bag Erosion Checks, Stone Check Dams and Compost Filter Sock Ditch and Erosion checks will be paid for under the provisions of **SECTION 212; MAINTENANCE AND CLEANING OF EROSION, SEDIMENT AND POLLUTION PREVENTION CONTROLS.**

## SECTION 208

### TEMPORARY DEWATERING BASINS

**208.01 DESCRIPTION.** This work consists of the provision of temporary dewatering basins for the purpose of avoiding water pollution caused by sediment-laden discharge from excavation sites. The basins shall be constructed in reasonably close conformity with the dimensions and details indicated on the Plans or as directed by the Engineer, all in accordance with these Specifications. All erosion, sediment, and pollution prevention controls and devices shall be in place prior to the start of excavation when required by the SWPPP/SESC and other contract documents. Traditional temporary dewatering basins consist of the following two types:

**208.01.1 Dewatering Basin.** The basin consists of a rectangular concrete barrier enclosure, the bottom and sides of which are lined with filter fabric. The bottom fabric is stabilized with filter stone. The basin is divided into the required number of 12-foot sections by stone berms approximately 18 inches high. The entire unit is constructed as indicated on the Plans.

**208.01.2 Filter Fabric Retention Basin.** The basin consists of a rectangular enclosure formed by a 2-foot high chain link fence. Both the fence and the bottom of the enclosure are lined with filter fabric which is stabilized by a layer of rock riprap. The entire unit is constructed as indicated on the Plans.

### 208.02 MATERIALS.

**208.02.1 Dewatering Basins.** Precast concrete barrier units shall conform to details indicated on the Plans and to the applicable requirements of **SECTION 909** of these Specifications. Filter fabric shall conform to the applicable requirements of **Subsection 206.02.2; Silt Fence**, of these Specifications. Filter stone shall conform to the requirements of **Subsection M.01.09, Table I, Column V** of these Specifications. Sand bags shall be of a quality acceptable to the Engineer. Straw bales and wood stakes shall conform to the requirements of **Subsection 206.02.1** of these Specifications.

**208.02.2 Filter Fabric Retention Basins.** The fence shall conform to the requirements for Type I Chain Link Fence as set forth in **SECTION 903** of these Specifications. Wood posts shall be 2-inch by 2-inch oak and at least 3 feet in length. Filter fabric shall conform to the requirements for same as set forth in **Subsection 206.02.2** of these Specifications. The layer of stone over the bottom of the basin shall meet the requirements of **Subsection M.10.03.2** for Modified NSA Class R-4 riprap.

**208.03 CONSTRUCTION METHODS.** Those erosion and pollution controls indicated on the Plans shall be installed by the Contractor and approved by the Engineer before the commencement of any drainage, roadway, bridge construction, or the disturbance of any soils.

### 208.03.1 Dewatering Basin.

**a. Installation.** Dewatering basins shall be constructed at the locations, and in accordance with the details indicated on the Plans, or as directed by the Engineer. The following stipulations shall also apply:

1. The precast concrete barrier units shall be placed on level, or nearly level ground.
2. Filter fabric shall be placed on the bottom of the entire area enclosed by the concrete barrier units. If more than one sheet of fabric is required, the adjacent section shall be overlapped a minimum of 12 inches to insure full coverage. Filter fabric shall be turned up along the inside face of the concrete barriers to the top of same, there to be folded across the top of the barriers. The fabric will be maintained in position by the placement of sand bags, end-to-end, along the top of the concrete barrier enclosure.
3. A minimum layer of 6 inches of filter stone shall be spread over the bottom of the basin. Stone berms shall be constructed at 12-foot intervals along the length of the basin.

**b. Removal.** The dewatering basin will not be removed until all dewatering operations are complete. Prior to such removal, however, all accumulated sediment within the basin shall be removed and legally disposed of in accordance with the applicable requirements of **SECTION 212** of these Specifications. The area covered by the basin shall be seeded and mulched immediately after the basin is removed.

#### **208.03.2 Filter Fabric Retention Basin.**

**a. Installation.** Filter fabric retention basins shall be constructed at the locations, and in accordance with the details indicated on the Plans, or as directed by the Engineer. The following stipulations shall also apply:

1. The filter fabric retention basin shall be placed on stabilized, and level or nearly level ground to prevent erosion by water exiting the basin.
2. A 6-inch by 6-inch minimum trench shall be dug where the basin is to be constructed.
3. The filter fabric and wire backing shall be 3 feet wide (minimum) positioned in the trench and secured to metal posts positioned 4 feet on center (maximum).
4. The metal posts shall be driven into undisturbed soil next to the trench to a minimum depth of 12 inches.
5. Place fill material in the trench and compact.
6. The installed height of the fence shall be 2 feet (minimum).
7. A minimum layer of 6 inches of filter stone (Modified NSA Class R-4 riprap) shall be spread evenly over the bottom of the basin.

**b. Removal** requirements for the filter fabric retention basin are the same as set forth for the dewatering basin in **Para. b** of **Subsection 208.03.1**.

**208.04 METHOD OF MEASUREMENT.** "Dewatering Basins" and "Filter Fabric Retention Basins" will be measured by the number of square feet of each such basin constructed in accordance with the Plans and/or as directed by the Engineer. Area will be computed based on the outside dimensions of the basin enclosures.

**208.05 BASIS OF PAYMENT.** The accepted quantities of "Dewatering Basins" and "Filter Fabric Retention Basins" will be paid for at their respective contract unit prices per square foot as listed in the Proposal. The prices so-stated constitute full and complete compensation for all labor, materials, and equipment, including installation, subsequent removal, and restoration of basin areas, and all incidentals required to finish the work, complete and accepted by the Engineer.

**208.05.1 Cleaning and Maintenance.** The cleaning and maintenance of Dewatering Basins and Filter Fabric Retention Basins will be paid for under the provisions of **SECTION 212; MAINTENANCE AND CLEANING OF EROSION, SEDIMENT AND POLLUTION PREVENTION CONTROLS.**

## SECTION 209

### STORM DRAIN INLET PROTECTION

**209.01 DESCRIPTION.** This work consists of the provision of temporary storm drain inlet protection facilities constructed in reasonably close conformity with the dimensions and details indicated on the Plans or as directed by the Engineer, all in accordance with these Specifications. All erosion, sediment, and pollution prevention controls and devices shall be in place prior to the start of excavation when required by the SWPPP/SESC and other contract documents. Storm drain inlet protection facilities consist of the following three types:

**209.01.1 Silt Fence Inlet Protection.** This work consists of placing a temporary filter fabric fence around inlet grates. Silt fence inlet protection shall be constructed as indicated on the Plans.

**209.01.2 Baled Straw Inlet Protection.** This work consists of placing baled straw around storm drain inlets. Baled straw inlet protection shall be constructed as indicated on the Plans.

**209.01.3 Sack Insert Inlet Protection and High Flow Sack Insert Inlet Protection.** This work consists of placing a reusable geotextile sack to be installed in drainage structures for the protection of wetlands and other resource areas and the prevention of silt and sediment from the construction site from entering the storm water collection system. Sack insert inlet protection and high flow sack insert inlet protection shall be constructed as indicated on the Plans.

### 209.02 MATERIALS.

**209.02.1 Silt Fence Inlet Protection.** The filter fabric shall be a material suitable for sediment control applications and shall be one of those included on the Department's Approved Materials List. Wood posts shall be oak, 2-inch by 2-inch in section, and at least 4½ feet in length. Support netting shall be heavy-duty plastic mesh. For prefabricated silt fence, 1-inch by 1-inch wood posts will be permitted.

**209.02.2 Baled Straw Inlet Protection.** Baled straw and wood stakes shall conform to the requirements of **Subsection 206.02.1** of these Specifications.

**209.02.3 Sack Insert Inlet Protection.** Shall be made of a permeable geotextile that allows water to pass but prevents silt, sediment and trash from passing. Sacks shall be woven polypropylene geotextile and sewn by a double needle machine using high strength nylon. Sacks shall include overflow holes to make the silt sack effective even in the most extreme weather events.

1. Sacks must meet the following:
  - a. Minimum Puncture Strength, ASTM D4533 of 130 lbs.
  - b. Minimum sieve size of 20
  - c. Minimum flow rate, ASTM D4491 of 100 gpm/ ft<sup>2</sup>

**209.03 CONSTRUCTION METHODS.** Those erosion and pollution controls indicated on the Plans shall be installed by the Contractor and approved by the Engineer before the commencement of any drainage, roadway, bridge construction, or the disturbance of any soils.

**209.03.1 Silt Fence Inlet Protection.**

**a. Installation.** The silt fence inlet protection shall be constructed as indicated on the Plans. The following stipulations shall also apply:

1. Posts shall extend at least 1 foot below grade.
2. The filter fabric shall extend to a height at least 12 inches above the top of the inlet grate but shall not exceed 3 feet in height.
3. The support netting shall extend to the full height of the filter fabric.
4. A trench shall be excavated approximately 6 inches wide and 6 inches deep around the outside perimeter of the stakes. The filter fabric and support netting shall extend at least 6 inches into the trench. After the fabric and support netting are fastened to the stakes the trench should be backfilled and compacted to original grade.
5. The filter fabric and support netting fence shall be securely fastened to the stakes using heavy duty wire staples at least 1-inch long. Ends of the filter fabric must meet at a stake, be overlapped, folded and stapled to the stake.

**b. Removal.** The silt fence inlet protection shall be removed, and the area prepared for pavement construction once the contributing drainage area is free from future uncontrolled discharges. Prior to such removal, however, all silt, mud, and debris entrapped by the silt fence shall be removed and the area properly cleaned in accordance with the applicable provisions of **SECTION 212** of these Specifications.

**209.03.2 Baled Straw Inlet Protection.**

**a. Installation.** The baled straw inlet protection shall be constructed as indicated on the Plans. The following stipulations shall also apply:

1. The bales shall be entrenched and backfilled. The trench shall be excavated the width of the bale and the length of the check to a minimum depth of 3 inches. After the bales are staked and chinked, the excavated soil shall be backfilled against the check. Backfill shall conform to the ground level on the inside and shall be built up to 4 inches around the outside.
2. The bales are to be installed so that the bindings are oriented around the sides of the bales rather than along their tops and bottoms.
3. Each bale shall be securely anchored by at least two stakes driven through the bale. The first stake in each bale should be driven toward the previously laid bale to force the bales together.



4. The gaps between bales shall be chinked (filled by wedging) with straw to prevent water from escaping between bales.

**b. Removal.** The baled straw inlet protection shall be removed, and the area prepared for pavement construction the contributing drainage area is free from future uncontrolled discharges. Prior to such removal, however, all silt, mud, and debris entrapped by the baled straw shall be removed and the area cleaned up in accordance with the applicable provisions of **SECTION 212** of these Specifications.

### **209.03.3 Sack Insert Inlet Protection.**

**a. Installation.** The insert sack shall be constructed as indicated on the Plans and as required by the Engineer. The device shall be manufactured to fit the opening of the drainage structure and shall be mounted under the grate. The insert sack shall be secured from the surface such that the grate can be removed without the insert discharging or falling into the drainage structure. All curb inlets shall be blocked to prevent stormwater from bypassing the device. The sack (geosynthetic filter material) shall be installed and maintained in accordance with the manufacturer's written literature and as directed by the Engineer.

**b. Removal.** The insert sack shall be removed when surface borne sediment has been stabilized upon completion of final pavement and sidewalk placement, and the adjacent grade areas have become permanently stabilized by vegetative growth. When emptying the sack, the Contractor shall take all due care to prevent the captured material from entering the structure. Silt, sediment, and other debris found in the drainage system at the end of construction shall be removed at the Contractor's expense. The silt and sediment from the sack shall be legally disposed of offsite. Under no condition shall silt and sediment from the insert be deposited on site or used in construction. Prior to such removal, however, all silt, mud, and debris entrapped by the sack shall be removed and the area cleaned up in accordance with the applicable provisions of **SECTION 212** of these Specifications.

### **209.04 METHOD OF MEASUREMENT.**

**209.04.1 Silt Fence Inlet Protection.** "Silt Fence Inlet Protection" will be measured by the number of linear feet of such protection installed in accordance with the Plans and/or as directed by the Engineer.

**209.04.2 Baled Straw Inlet Protection.** "Baled Straw Inlet Protection" will be measured by the number of linear feet of straw bales installed in accordance with the Plans and/or as directed by the Engineer.

**209.04.3 Sack Insert Inlet Protection.** "Sack Insert Inlet Protection " will be measured by the number of inlets protected with sacks in accordance with the Plans and/or as directed by the Engineer.

### **209.05 BASIS OF PAYMENT.**

**209.05.1 Silt Fence Inlet Protection.** The accepted quantity of "Silt Fence Inlet Protection" will be paid for at the contract unit price per linear foot as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, and equipment, including excavation, stakes, support netting, filter fabric, backfill, the subsequent removal of the entire temporary facility, removal and

disposal of entrapped material, and all incidentals required to finish the work, complete and accepted by the Engineer.

**209.05.2 Baled Straw Inlet Protection.** The accepted quantity of "Baled Straw Inlet Protection" will be paid for at the contract unit price per linear foot as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, and equipment, including excavation, straw bales, stakes, backfill, the subsequent removal of the entire temporary facility, removal and disposal of entrapped material, and all incidentals required to finish the work, complete and accepted by the Engineer.

**209.05.3 Sack Insert Inlet Protection and High Flow Sack Insert Inlet Protection .** The accepted quantity of "Sack Insert Inlet Protection" and "High Flow Sack Insert Inlet Protection" will be paid for at the contract unit price per EACH as listed in the Proposal. The price so-stated constitutes full and complete compensation for all materials, including sacks, labor, equipment, and all incidentals required to complete the work, including final removal of inlet protection device and removal and disposal of entrapped material.

**209.05.4 Cleaning and Maintenance.** The cleaning and maintenance of Silt Fence Inlet Protection, Baled Straw Inlet Protection and Sack Insert Inlet Protection will be provided and paid for under the provisions of **SECTION 212; MAINTENANCE AND CLEANING OF EROSION, SEDIMENT AND POLLUTION PREVENTION CONTROLS.**

## SECTION 210

### TEMPORARY SEDIMENT BASIN

**210.01 DESCRIPTION.** This work consists of the provision of temporary sediment basin for water pollution prevention in reasonably close conformity with the dimensions and details indicated on the Plans, or as directed by the Engineer, all in accordance with these Specifications. All erosion, sediment, and pollution prevention controls and devices shall be in place prior to the start of excavation when required by the SWPPP/SESC and other contract documents.

**210.02 MATERIALS.** The various materials required for the construction of temporary sediment basin will be indicated on the Plans.

**210.03 CONSTRUCTION METHODS.** The temporary sediment basin will be constructed in such a manner to allow any material, which may cause a natural water course or the surrounding environment to be damaged, to be retained in the basin. If the basin is temporary, the Contractor will be required to restore the area in which the basin was located to either its original condition or to the requirements of the Contract.

Excavation for temporary sediment basin is to take place from the downstream end of the basin and to proceed upstream. Prior to the start of excavation, temporary baled straw ditch erosion checks and/or straw log check dams are to be constructed immediately beyond the downstream end of the basin. When the work requiring the temporary basin is complete the control measures are to be removed.

**210.04 METHOD OF MEASUREMENT.** "Temporary Sediment Basin" will not be measured by a single unit of measurement usually associated with a specific Proposal item. Rather, each individual item of work required to provide such basins will be measured by their respective units of measurement for the quantity provided in accordance with the Plans and/or as directed by the Engineer.

**210.05 BASIS OF PAYMENT.** "Temporary Sediment Basin" will not be paid for as completed facilities. Rather, such basins will be paid for at the contract unit prices listed in the Proposal for those various items of work required to construct the facility, and in the case of temporary basins, those items of work necessary to remove the basin and restore the area to its original or proposed condition, and all incidentals required to finish the work, complete and accepted by the Engineer.

**210.05.1 Cleaning and Maintenance.** The cleaning and maintenance of "Temporary Sediment Basin" will be paid for under the provisions of **SECTION 212; MAINTENANCE AND CLEANING OF EROSION, SEDIMENT AND POLLUTION PREVENTION CONTROLS.**

**SECTION 211  
CONSTRUCTION ACCESSES**

**211.01 DESCRIPTION.** This work consists of the provision of stabilized stone pads located at points of vehicular and equipment ingress and egress—to and from construction sites to prevent track out of sediment. All erosion, sediment, and pollution prevention controls and devices shall be in place prior to the start of excavation when required by the SWPPP/SESC and other contract documents.

**211.01.1 Planning Considerations.** Public roads adjacent to a construction site shall be clean of any sediment and debris at the end of each day. This **SECTION 211** provides for an area where sediment can be removed from the tires or tracks of construction vehicles and equipment before such vehicles and equipment enter a public road. Construction accesses shall be used in conjunction with the stabilization of construction roads to reduce the amount of sediment tracked out by construction vehicles and equipment.

**211.02 MATERIALS.** Crushed stone shall conform to the requirements of **Subsection M.01.09, Table I, Column II** of these Specifications. Geosynthetic materials shall conform to the requirements for same as set forth in **Subsection 206.02.2** of these Specifications.

**211.03 CONSTRUCTION METHODS.** Stabilized stone pads employed as construction entrances shall be constructed as indicated on the Plans.

**211.03.1 Dimensions.**

- a. Thickness.** The thickness of the stabilized stone pad shall be a minimum of 5 inches.
- b. Width.** The width shall not be less than the full width of the respective points of ingress or egress.
- c. Length.** The length of construction accesses shall be at least 50 feet where the soils are sands or gravels, except where the traveled length is less than 50 feet. Where soils are clays or silts, the length of construction accesses shall be at least 100 feet except where the traveled length is less than 100 feet.

**211.03.2 Installation Requirements.** The area of the construction accesses shall be cleared of all vegetation, roots, stumps, or other objectionable material. The area shall then be excavated to subgrade and graded. Appropriate geosynthetic material shall be placed on the prepared subgrade prior to the placement of the stone pad. The stone shall be placed according to the specified dimensions.

**211.04 METHOD OF MEASUREMENT.** "Construction Accesses" will be measured by the number of square yards of stabilized stone pads installed for this purpose in accordance with the Plans and/or as directed by the Engineer.

**211.05 BASIS OF PAYMENT.** The accepted quantity of "Construction Accesses" will be paid for at the contract unit price per square yard as listed in the Proposal. The price so stated constitutes full and

complete compensation for all labor, material, and equipment, including excavating, geosynthetic materials, stabilized stone pad, and subsequent removal of same, and all incidentals required to finish the work complete and accepted by the Engineer.

**211.05.1 Cleaning and Maintenance.** The cleaning and maintenance of Construction Accesses will be paid for under the provisions of **SECTION 212 MAINTENANCE AND CLEANING OF EROSION, SEDIMENT AND POLLUTION PREVENTION CONTROLS.**

## SECTION 212

### MAINTENANCE AND CLEANING OF EROSION, SEDIMENT, AND POLLUTION PREVENTION CONTROLS

**212.01 DESCRIPTION.** This work consists of the maintenance and cleaning of erosion, sediment, and pollution prevention control items as well as performing inspection and documentation of RIDOT Small Site Stormwater Pollution Prevention Plan (SWPPP) and/or RIDOT Soil Erosion and Sediment Control (SESC) reports year-round in accordance with these Specifications and as directed by the Engineer and the Office of Stormwater Management. All erosion, sediment, and pollution prevention controls and devices shall be in place prior to the start of excavation when required by the SWPPP/SESC and other contract documents. There is no winter shutdown period associated with this **SECTION 212.**

**212.01.1 Applicable Controls.** The specific erosion, sediment, and pollution prevention controls to be cleaned and maintained under this Section consist of the following:

- a. Erosion, Sediment, and Pollution Prevention Controls.**
  - 1. Baled Straw Erosion Checks; Subsection 206.01.1
  - 2. Silt Fence; Subsection 206.01.2
  - 3. Baled Straw Erosion Checks and Silt Fence Combined; Subsection 206.01.3
  - 4. Compost Filter Sock Subsection 206.01.4
  
- b. Check Dams.**
  - 1. Sand Bag Erosion Dikes; Subsection 207.01.1
  - 2. Stone Check Dams; Subsection 207.01.2
  - 3. Compost Filter Sock Check Dams Subsection 207.01.3
  
- c. Temporary Dewatering Basins.**
  - 1. Dewatering Basins; Subsection 208.01.1
  - 2. Filter Fabric Retention Basins; Subsection 208.01.2
  
- d. Storm Drain Inlet Protection.**
  - 1. Silt Fence Inlet Protection; Subsection 209.01.1
  - 2. Baled Straw Inlet Protection; Subsection 209.01.2
  - 3. Sack Insert Inlet Protection Subsection 209.01.3
  
- e. Temporary Sediment Basin** Subsection 210.01
  
- f. Construction Accesses.** Subsection 211.01

#### 212.01.2 Definitions.

- a. Cleaning.** Cleaning consists of removing debris and accumulated sediment-laden

deposits from the upstream side of perimeter controls, check dams, storm drain inlet protection, construction accesses, and from the bottom of temporary dewatering basins and sediment basins. All material so-removed shall be legally disposed of.

**b. Maintenance.** Maintenance consists of the restoration and repair of damage sustained by erosion and pollution controls from “normal” rainfall events and the work necessary to prepare for forecasted events (Abnormal weather events are defined in **Subsection 212.03.4; Failure of Erosion, Sediment, and Pollution Controls due to Abnormal Weather**).

**c. Inspection.** Inspection consists of the required environmental permit inspections plans, reports, and procedures including but not limited to the SWPPP and/or SESC plan.

- d. Corrective Action Log.** A Corrective Action Log shall be completed by the Contractor to:
1. Document, within 24 hours of identification, the specific condition and the datetime is/was identified;
  2. Document, within 24 hours of completing the action, the action taken to address the condition;
  3. Is kept at the site or at an easily accessible location.

**212.02 MATERIALS.** Materials required to repair and restore damaged erosion, sediment, and pollution prevention controls shall meet the applicable requirements of **Subsections 206.02; 207.02; 208.02; 209.02; 210.02; and 211.02 for Erosion, Sediment, and Pollution Prevention Controls, Check Dams, Temporary Dewatering Basins, Storm Drain Inlet Protection, and Temporary Sediment Basins, and Construction Accesses**, respectively, of these Specifications.

**212.03 CONSTRUCTION METHODS.** Erosion, sediment, and pollution prevention controls shall be maintained by the Contractor to the satisfaction of the Engineer and the Office of Stormwater Management. Erosion, sediment, and pollution prevention controls must be able to prevent, under normal weather conditions, both the movement of soil materials and the intrusion of sediment-laden discharges into environmentally sensitive areas.

Construction shall not commence or continue until all specified erosion, sediment, and pollution controls are in place, properly installed, and accepted by the Engineer and the Office of Stormwater Management.

Erosion, sediment, and pollution prevention controls shall be routinely inspected by the Contractor’s certified inspector in accordance with the SWPPP or SESC. These inspections shall occur at a minimum of every seven (7) calendar days, within 24 hours of corrective actions occurring, and within 24 hours of the site receiving 0.25 inches of rainfall from an individual storm event. After each inspection, the Contractor shall take corrective actions and perform all necessary cleaning, maintenance, and repairs whenever maintenance of the erosion, sediment, and pollution controls is required. The Contractor shall commence with the requisite cleaning, maintenance, and repairs no later than the next consecutive calendar day after the SWPPP or SESC inspection was conducted **and** shall aggressively and expeditiously perform such cleaning, maintenance, and repair work until the original issue is remedied to the complete satisfaction of the Engineer and/or Office of Stormwater Management. In the event of a holiday or weekend storm event, the Contractor must have resources available to restore and, if necessary, to replace any damaged erosion controls.

**SWPPP or SESC inspections shall be performed until the following criteria are met:**

- a) All disturbed areas are permanently stabilized, including storage/laydown areas;
- b) All project specific regulatory permits requirements have been met.

**212.03.1 Threshold for Cleaning Erosion, Sediment, and Pollution Prevention Controls.** Erosion, sediment, and pollution controls shall be cleaned when directed by the Engineer and/or Office of Stormwater Management; after a rainstorm; or when sediment deposits reach the heights indicated in the following table:

Control Type	Threshold for Cleaning (Minimal)
<b>a. Erosion, Sediment, and Pollution Prevention Controls.</b>	
1. Baled Straw Erosion Checks	½ Bale Height
2. Silt Fence	6 inches
3. Baled Straw Erosion Checks and Silt Fence Combined	½ Bale Height
4. Compost Filter Sock	½ Sock Height
<b>b. Check Dams</b>	
1. Sand Bag Erosion Dike	½ Dike Height
2. Stone Check Dam	½ Dam Height
3. Compost Filter Sock Check Dam	½ Sock Height
<b>c. Temporary Dewatering Basins</b>	
1. Dewatering Basins	½ Original Basin Height
2. Filter Fabric Retention Basin	½ Original Basin Height
<b>d. Storm Drain Inlet Protection</b>	
1. Silt Fence Inlet Protection	6 inches
2. Baled Straw Inlet Protection	½ Bale Height
3. Sack Insert Inlet Protection	⅓ Sack Height or per manufacturer's requirements
<b>e. Temporary Sediment Basin</b>	½ Depth Below Outlet Elevation
<b>f. Construction Accesses</b>	When track out is occurring

**212.03.2 Other Requirements.**



a. **Certifications.** The Contractor shall provide a certified SWPPP/SESC inspector at the Contractor's own expense to perform and report on SWPPP/SESC inspections. A certified SWPPP/SESC inspector shall be an individual that is a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Professional in Stormwater Quality (CPSWQ), or RI Registered Professional Engineer.

1. A Certified Professional in Erosion and Sediment Control (CPESC) and/or Certified Professional in Stormwater Quality (CPSWQ) is intended to ensure inspectors meet the Federal requirements including the US Environmental Protection Agency's National Pollutant Discharge Elimination System definition of "Qualified Personnel" and also ensure that the projects they oversee meet the requirements of all contract permits and State/Local regulations.

2. A Professional Engineer may be considered certified to perform and report on SWPPP/SESC inspections if the Professional Engineer is claiming competency equal to a CPESC or CPSWQ.

3. Certified Inspectors shall include their valid, applicable certification number and type of certification on each report. Professional Engineers must seal (stamp) and sign each report.

4. Certifications and Professional Engineer registrations may be rejected by the Engineer or the Office of Stormwater Management if:

(a) SWPPP/SESC reports from the inspector are incomplete/inaccurate as determined by the Engineer or the Office of Stormwater Management more than twice in a calendar year.

(b) It is determined by the Office of Stormwater Management that the certifying agency/organization does not meet the requirements in **Subsection 212.03.2.a.1**.

(c) A SWPPP/SESC report is intentionally incorrect, inaccurate or missing important information of any kind as determined by the Engineer or the Office of Stormwater Management.

5. If the Office of Stormwater Management rejects a Certification or Professional Engineers registration, the Office of Stormwater Management, at its' discretion may contact the certifying agency/organization to inform them of the reason for the Department's rejection of the certificate.

6. If a Certification or Professional Engineers registration is rejected, due to sections 4(a) or 4(b) above, the inspector will be required to submit a new certification. There is no time restriction.

7. If a Certification or Professional Engineers registration is rejected, due to section (c) above, the inspector will be required to submit a new certification after a period no sooner than 3 months after rejection of certification. In extreme cases the Office of Stormwater Management will forward the falsified documentation to RIDEM and/or EPA under RIDOT Consent Decree reporting requirements.

**b. Erosion, Sediment, and Pollution Prevention Controls, Check Dams, Temporary Dewatering Basins, Storm Drain Inlet Protection, Temporary Sediment Basin, and Construction Accesses.** The following requirements apply:

1. Non-compliant, damaged, and/or controls requiring maintenance as identified in a SWPPP or SESC plan report shall be cleaned, repaired or replaced within 24 hours of identification. The Contractor shall designate a qualified person, experienced in stormwater management and erosion to be available on site throughout the duration of the project. This person shall have the authority to direct Contractor's personnel and/or subcontractor's personnel in carrying out corrective actions as needed. The Contractor's designated SWPPP or SESC contact person will be responsible to perform inspection of erosion and pollution controls in accordance with RIDOT special provisions and environmental permits of the Contract. Documentation of the inspections shall be submitted by the Contractor in the form of signed SWPPP or SESC plan report, in accordance with RIDOT's templates, or as provided in the Contract to RIDOT's Project Manager, Resident Engineer, and Office of Stormwater Management. Templates can be found on RIDOT website.

2. The Engineer and the Office of Stormwater Management each have the authority to verify, enforce, and to specify maintenance activities and to ensure that erosion, sediment, and pollution prevention controls have been properly maintained.

**c. Temporary Dewatering Basins and Temporary Sediment Basin.** The following requirements apply:

1. The basins will be periodically inspected for signs of erosion around the basin and downslope area.

2. Repairs will be promptly carried out as directed by the Engineer.

3. The Engineer and the Office of Stormwater Management has the authority to verify, enforce, and to specify maintenance activities and to ensure that controls have been properly maintained.

**212.03.3 Failure to Maintain Erosion, Sediment, and Pollution Prevention Controls.** If the Engineer and/or the Office of Stormwater Management decides on any given day that those erosion, sediment, and pollution controls specified in the Contract, SWPPP, and/or SESC Plan are not in place or have not been adequately maintained as specified in this Section or per permit requirements, the daily charge will be deducted from monies due the Contractor as a charge for failure to comply set forth below and/or as revised in **Special Provision Code 212.1000**. The stated daily charge per incident will continue each consecutive calendar day thereafter until the deficiencies noted have been corrected to the complete satisfaction of the Engineer and/or the Office of Stormwater Management. Failure to comply charges are independent of other charges assessed by other agencies and/or entities.

**a. General Permit Violation.** A General Permit Violation shall be considered issues such as, but not limited to:

- (1) Failure by the Contractor to ensure that all stormwater controls are maintained and remain in effective operating condition;
- (2) Working without a permit;
- (3) Land disturbance, permit non-compliance, performing work without proper sediment, erosion, and pollution controls in place;
- (4) Nonperformance of or falsification of SWPPP/SESC inspection or

- documentation; and/or,  
(5) Non-installed BMP or unmaintained BMP.

b. **Erosion, Sediment, and Pollution Prevention Controls Violation.** The Contractor shall ensure that all stormwater and non-stormwater pollution prevention controls are maintained and remain in effective operating condition. A Stormwater or Non-Stormwater Pollution Prevention Controls Violation shall be considered issues such as, but not limited to:

- (1) Failure to comply with any specific maintenance requirements listed in the Contract, SWPPP, or SESC Plan and/or recommended by the manufacturer;
- (2) Failure to prevent non-authorized discharges from leaving the site;
- (3) Failure to install sediment controls along all perimeter areas of the site that will receive pollutant discharges (or, for linear construction sites where such controls are infeasible, to implement other appropriate practices);
- (4) Failure to minimize sediment track-out in accordance with the Contract Documents, SWPPP and/or SESC;
- (5) Failure to properly manage stockpiles or land clearing debris piles composed of sediment and/or soil;
- (6) Failure to minimize dust through appropriate application of water or other dust suppression techniques;
- (7) Failure to minimize soil compaction in areas where final vegetative stabilization will occur or where infiltration practices will be installed;
- (8) Failure to protect storm drain inlets by installing inlet protection measures that remove sediment from discharges prior to entry into a storm drain inlet;
- (9) Failure to use erosion controls and velocity dissipation devices within and along the length of any stormwater conveyance channel and at any outlets to slow down runoff to minimize erosion;
- (10) Failure to initiate and complete stabilization measures within the required deadlines;
- (11) Other necessary control measures not properly selected or installed;
- (12) Failure to provide effective controls for equipment and vehicle fueling and maintenance activities;
- (13) Failure to effectively minimize the discharge of pollutants from equipment and vehicle washing;
- (14) Failure to implement appropriate controls to prevent/minimize the discharge of pollutants from any of the following: building materials/products; landscaping chemicals and materials; petroleum products and other chemicals; hazardous and toxic waste; construction and domestic wastes; and/or sanitary wastes;
- (15) Failure to provide effective controls for concrete washout;
- (16) Failure to provide effective control for washing applicators/containers for stucco, paint, form release oils, curing compounds or other materials;
- (17) Failure to comply with requirements for construction dewatering in order to minimize the discharge of pollutants

c. **Improper Documentation Violation.**

- (1) Failure to complete an Inspection or Corrective Action Log when required;

- (2) Failure to properly sign/certify an Inspection or Corrective Action Logs;
- (3) False Corrective Action Logs
- (4) All required inspections were not conducted and timely documented;
- (5) Inspections not conducted by qualified personnel;
- (6) Failure to inspect all required areas;
- (7) Failure to include all required information;

**d. Adjustment for Repeat Violations.** A Repeat Violator is an operator of a construction site (Contractor) who has been assessed for Failure to Maintain Erosion and Pollution Controls previously on the same project. This includes any of the violations stated previously in Section 212 or otherwise identified in previously filed SWPPP and/or SESC reports. Prior formal enforcement actions also include both EPA and state actions against the Contractor on the same project. An escalation factor of 25% shall be applied the second time Failure to Comply Charges are assessed; an escalation factor of 50% shall be applied the third or subsequent time a Failure to Comply Charge is assessed.

Stormwater violation schedule for Construction and Maintenance activities:

Blue Book Section		Failure to Comply Charge		Schedule
		Minor Violation	Major Violation	
212.03.3.a	General Permit Violation	\$500.00	\$5,000.00	Per day per non-conformance and/or per violation
212.03.3.b	Failure to ensure that all stormwater controls are properly maintained and remain in effective operating condition and all pollution prevention requirements have been met	\$500.00	\$5,000.00	
212.03.3.c	Improper documentation	\$500.00	\$1,000.00	
212.03.3.d	Adjustment for Repeat Violation	25%	50%	

**212.03.4 Failure of Erosion and Pollution Controls due to Abnormal Weather.** Maintenance and Cleaning of Erosion and Pollution Controls for normal weather is based on the concept that erosion, sediment, and pollution controls will essentially remain intact under normal weather related events and that any damage sustained by said controls under normal weather related events shall be repaired under the applicable provisions of **SECTIONS 212**.

a. However, under abnormal weather events it is possible that erosion, sediment, and pollution controls may be damaged to the extent that the Engineer may direct that they be replaced in part or their entirety. Under such abnormal weather conditions, the Contractor shall replace the controls and be compensated for same under the applicable provisions of **SECTIONS 206, 207, 208, 209 and 210** of these Specifications if the current SWPPP/SESC

inspection indicates the control was in place and maintained in a good state of repair and the Contractor can exhibit that all reasonable preventative measures to protect the site were made to the satisfaction of the Engineer and/or Office of Stormwater Management.

b. For the purpose of this **Subsection 212.03.4**, an abnormal weather event is defined as follows:

- (1) Rainfall equal to or greater than one (1.0) inch within 1-hour;
- (2) Rainfall equal to or greater than two and one half (2.5) inches within 12-hours;
- (3) Rainfall equal to or greater than three (3.0) inches within 24-hours;
- (4) Extreme weather-related events as defined in **Subsection 104.14**.

The claim of abnormal weather events shall be supported by data records from the National Weather Service.

**212.04 METHOD OF MEASUREMENT.** This work does not require a measurement for payment.

**212.05 BASIS OF PAYMENT.** Maintenance and Cleaning of Erosion, Sediment, and Pollution Prevention Controls will be paid for at the contract lump sum price as listed in the Proposal. The price so-stated constitutes full and complete compensation for all labor, materials, equipment, cleaning, maintenance, disposal, replacement and incidentals to **Subsections 206, 207, 208, 209, 210, and 211; for Erosion, Sediment, and Pollution Prevention Controls, Check Dams, Temporary Dewatering Basins, Storm Drain Inlet Protection, Temporary Sediment Basins, and Construction Accesses**, respectively, of these Specifications, including the inspection and development of SWPPP and SESC reports.

Monthly progress payments under this item will be made at a rate determined by dividing the contract lump sum price by the number of months allocated for completion of the contract plus three (3) or  $[LS/(months + 3)]$ . Said number of months shall be equal to the difference between the contract completion date and the date of the Notice to Proceed.

At the discretion of the Engineer, payment for authorized contract time extensions will be made at either the calculated monthly rate as defined above or on a Force Account basis in accordance with **Subsection 109.04**; of these specifications.

If the contract is completed prior to the authorized completion date, the final monthly payment will be authorized after completion of the punch list and will consist of the remaining balance of the contract lump sum price.

No payment will be made for unauthorized contract time extensions.