ALABAMA DEPARTMENT OF TRANSPORTATION

DATE: June 10, 2021 Special Provision No. 18-0699(3)

EFFECTIVE DATE: TBD

SUBJECT: Temporary Erosion and Sediment Control.

Alabama Standard Specifications, 2018 Edition, SECTION 665 shall be revised as follows:

SECTION 665
TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

665.02 Materials.

Article 665.02 shall be replaced with the following:

665.02 Materials.

(a) Temporary Seeding.

Seeds shall be furnished in accordance with the requirements given in Item 860.01(a)1. Seed mixes used for temporary seeding shall be in accordance with the following table:

TEMPORARY SEEDING	
September through December	
Annual Ryegrass	25 pounds per acre {28 kg per hectare}
Kentucky 31 Fescue	30 pounds per acre {34 kg per hectare}
Reseeding Crimson Clover	10 pounds per acre {11 kg per hectare}
January through April 15	
Kentucky 31 Fescue	30 pounds per acre {34 kg per hectare}
Reseeding Crimson Clover	30 pounds per acre {34 kg per hectare}
Annual Ryegrass	15 pounds per acre {18 kg per hectare}
April 16 through August	
Brown Top Millet	30 pounds per acre {34 kg per hectare}
Kentucky 31 Fescue	30 pounds per acre {34 kg per hectare}
Hulled Bermuda Grass	10 pounds per acre {11 kg per hectare}

(b) Temporary Mulching.

Temporary mulching materials shall conform to the requirements given in Article 860.03 for Mulching Material.

(c) Temporary Pipe.

Temporary pipe may be constructed of any type of material that will be suitable for the required work. The inside diameter of the pipe shall be selected by the Contractor based on expected flows and shall be a minimum of 12 inches {300 mm} or as shown on the plans. End treatments, joint sections, and tees shall also be of materials and sizes that are suitable for the required work. Anchors shall be installed when required to keep the pipe in place.

(d) Polyethylene.

Polyethylene sheets may be of any size or color capable of serving the purpose intended provided it is of at least 4 mil {0.1 mm} in thickness.

(e) Temporary Coarse Aggregate.

Temporary coarse aggregate shall be either stone or concrete from the demolition of structures on the Right of Way.

Stone aggregate for stabilized construction entrances and temporary access roads to sedimentation basins shall meet the requirements for ALDOT Number 1 coarse aggregate given in Section 801. Concrete from the demolition of structures shall meet the gradation requirements for ALDOT Number 1 coarse aggregate given in Section 801. Reinforcing steel shall be removed from the concrete used for temporary coarse aggregate.

Stone aggregate for other erosion and sediment control purposes shall be the size shown on the plans and shall meet the requirements given in Section 801.

(f) Temporary Riprap.

Unless shown otherwise on the plans, temporary riprap shall be either stone or concrete from the demolition of structures on the Right of Way. Stone riprap shall meet the requirements for Class 2 riprap given in Section 814. Concrete from the demolition of structures shall meet the size and weight requirements given for Class 2 riprap in Section 814. Reinforcing steel shall be cut flush with the surfaces of the demolished concrete. The geotextile used for both underlayment and as a choker shall meet the requirements of AASHTO M288 for Permanent Erosion Control Geotextile, Class 1. A list of geotextile materials acceptable for use in this application (List II-3 “GEOTEXTILES”) is given in the ALDOT manual titled “Materials, Sources, and Devices with Special Acceptance Requirements”. Choker stone shall meet the requirements of Section 801.

(g) Hay Bales.

Bales may be either hay or straw containing 5 cubic feet {0.14 m^3} of material and having a weight {mass} of not less than 35 pounds {16 kg} with a minimum length of 3 feet {0.9 m}.

(h) Sand Bags.

Bags may be cotton, burlap, woven polypropylene, polyethylene, polyamide fabric or other material that will adequately confine the aggregate content for the duration of the use of the bag. Bags shall be filled with sand, limestone screenings or aggregate that is smaller than ALDOT #78. Fill material shall be selected by the Contractor based on the required bag application. Each filled bag shall have minimum dimensions of 18” x 12” x 3” {450 mm x 305 mm x 75 mm} and shall have a minimum weight {mass} of 30 pounds {13 kg}.

(i) Silt Fence.

Silt fence shall be a geotextile filter supported between metal posts with a woven wire mesh backing as shown on the plans. Posts shall be strong enough to provide and retain the fence configuration shown on the plans while being subjected to loading of silt, water and debris.

Silt fence shall meet the requirements given in Section 810 and AASHTO M 288 as supplemented by the following requirements:

- The minimum fence height shall be 24 inches {61.0 cm} with a T-post weight of at least 1.25 lbs/ft {1.9 kg/m}, and trenches should be offset by 6 in. {15.2 cm}. At the toe of a slope, silt fence(s) should be installed at a minimum distance of 6 ft {1.8 m} to provide an adequate storage volume. For concentrated

impoundments, T-post spacing should be reduced to 5 ft {1.5 m} with the incorporation of a dewatering weir. The dewatering weir and all associated items and labor shall be a subsidiary obligation of the silt fence.

- The support backing for the geotextile shall be 14 gage steel woven wire mesh. The vertical spacing of the wire in the mesh shall be 6 {150 mm} inches. The minimum horizontal spacing of the wires shall be 6 inches {150 mm} and the maximum horizontal spacing shall be 12 inches {300 mm}. Geotextile ring fasteners shall have a spacing of 1 ft {0.3 m} on-center, and the filter fabric must be looped over the T-posts.
- The geotextile filter shall be either a non-woven geotextile or a woven geotextile composed of monofilament yarns.

A list of geotextile materials acceptable for use in this application (List II-3 “GEOTEXTILES”) is given in the ALDOT manual titled “Materials, Sources, and Devices with Special Acceptance Requirements”.

(j) Wattles.

A wattle shall be a tubular shaped product specifically manufactured for erosion and sediment control. Biodegradable wattles shall be manufactured using interwoven biodegradable plant material such as straw, coir, or wood shavings in biodegradable or photodegradable netting that is of sufficient strength to resist damage during handling, installation and use. Wattles manufactured using non-biodegradable materials shall be completely removed from the project when no longer required or useful. Disposal shall be in accordance with recommendations from the wattle manufacturer.

The required minimum diameter of the wattle shall be determined based upon its intended application and shall be as follows unless shown otherwise on the plans. When installed for the purposes of slowing sheet flow or by interrupting the lengths of longer slopes (slopes longer than 50 feet {15 m}), the minimum diameter of the wattle shall be 9 inches {230 mm}. For all other applications including perimeter sediment barriers the minimum diameter of the wattle shall be 20 inches {500 mm}. Wattles of smaller than required diameter may be provided as a stacked installation in accordance with manufacturer recommendations for stacking if the total height of the installation is at least 20 inches {500 mm}. The diameter or height will be verified by measuring the wattle after installation. Wattles installed in a ditch check application shall have a geotextile underlayment that shall meet the requirements of AASHTO M288 for Permanent Erosion Control Geotextile, Class 1. A list of geotextile materials acceptable for use in this application (List II-3 “GEOTEXTILES”) is given in the ALDOT manual titled “Materials, Sources, and Devices with Special Acceptance Requirements”. A geotextile underlayment is not required if the ditch is otherwise lined with materials such as rolled erosion control product, sod, or established permanent vegetation.

A list of acceptable manufactured wattle products (LIST II-24 “TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRODUCTS”) is given in the ALDOT manual titled “Materials, Sources, and Devices with Special Acceptance Requirements”.

(k) Silt Dikes.

Silt dikes shall be a triangular shaped cross section with a height of at least 8" {200 mm} in the center with equal length sides and a 16" to 20" {400 mm to 500 mm) base. The triangular shape shall be urethane foam. The outer cover shall be a woven geotextile fabric placed around the urethane foam. The geotextile shall also extend beyond both sides of the triangle at least 2 feet {600 mm}. Dikes shall be attached to the ground with wire staples in accordance with the silt dike manufacturer's recommendations.

(l) Brush Barrier.

Brush Barriers shall be constructed of selected brush, limbs and small trees from the clearing operations. The geotextile used for both underlayment and as a choker shall meet the requirements of AASHTO M288 for Permanent Erosion Control Geotextile, Class 1. A list of geotextile materials acceptable for use in this application (LIST II-3 “GEOTEXTILES”) is given in the ALDOT manual titled “Materials, Sources, and Devices with Special Acceptance Requirements”.

(m) Manufactured Inlet Protection Device.

Manufactured Inlet Protection Devices shall be provided in accordance with requirements shown on the plans. Manufactured inlet protection devices shall consist of filter fabric held in place by a rigid frame. The frame shall be strong enough to support the stormwater flow and weight of any sediment that accumulates on the filter. The manufactured inlet protection device shall have an overflow feature to allow the passage of water during high flow conditions. The filter fabric shall have the following properties:

- Minimum Tensile Strength (Machine Direction) of 80 pounds {355 Newtons} (ASTM D 4632);
- Minimum Permittivity of 0.05 sec^{-1} (ASTM D 4491);
- Maximum Apparent Opening Size of US Std #30 sieve {0.60 mm} (ASTM D 4751);
- Minimum UV Stability of 70% (ASTM D 4355 at 500 hours).

A list of acceptable manufactured inlet protection devices (LIST II-24 "TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRODUCTS") is given in the ALDOT manual titled "Materials, Sources, and Devices with Special Acceptance Requirements".

(n) Floating Basin Boom.

Floating basin booms shall consist of a reinforced fabric attached on the upper side to floatation members and ballasted on the lower side with chains or weights to form a bottom-tensioned floating curtain boom. Floating basin booms shall be devices manufactured specifically for use in containing sediment suspended in water.

All materials used in the floating basin boom shall comply with the requirements shown on the plan details and the manufacturer's recommendations for the intended application.

The floatation members shall be made of foam with a minimum diameter of 6 inches {150 mm} or as shown on the plans. The skirt depth below the foam floatation shall be a minimum of 5 feet {1.5 meters} or as shown on the plans. The ballast shall be galvanized proof coil chains or other acceptable weights capable of retaining the skirt in a vertical position. The boom shall be Yellow or International Orange in color.

Anchors capable of holding the floating basin boom in place shall be made of a material recommended by the manufacturer.

(o) Sedimentation Basins.

Components of sedimentation basins shall meet the requirements shown on the plans. Materials for the construction of the sedimentation basins shall be selected from the lists in the Department's "Materials, Sources and Devices with Special Acceptance Requirements" if lists are available for the materials. If lists are not available, materials shall be provided in accordance with all applicable Department specifications and shall be of a quality that enables the sedimentation basin to function as intended for the duration of the need of the sedimentation basin.

The Contractor shall submit a description of all of the materials proposed for the construction of the sedimentation basins. The proposed list of materials shall be submitted with the submittal of the Stormwater Management Plan (SWMP) that is described in Subarticle 108.04(b).

(p) Flow Baffles.

Flow Baffles shall be a rolled erosion control product supported between posts with a wire mesh backing as shown on the plans. The posts and wire mesh shall meet the same requirements as given for silt fence. The rolled erosion control product shall consist of 100 % coconut (coir) fibers and meet the following requirements:

- Minimum Weight of 20 ounces per square yard {678 grams per square meter} (ASTM D 5261);
- Open Area of 50% as determined by physical measurement.

A list of materials acceptable for use in this application (List II-24 "TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRODUCTS") is given in the ALDOT manual titled "Materials, Sources, and Devices with Special Acceptance Requirements".

(q) Basin Dewatering Devices.

Basin Dewatering Devices shall be a product or structure that withdraws water from the surface of the basin and meets the requirements that are shown on the plans. A list of acceptable basin dewatering devices- (List II-24 "TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRODUCTS") is given in the ALDOT manual titled "Materials, Sources, and Devices with Special Acceptance Requirements".

665.03 Construction Requirements.

(a) Erosion Control and Runoff Conveyance.

1. Temporary Seeding and Mulching.

a. Inspection to Evaluate Temporary Stabilization.

Subitem 665.03(a)1a shall be replaced with the following:

a. Inspection to Evaluate Temporary Stabilization.

The project shall be inspected in accordance with the requirements given in Item 107.21(e)2. Areas of the project not undergoing active construction shall be evaluated for temporary stabilization requirements.

b. Temporary Mulching Only.

Subitem 665.03(a)1b shall be replaced with the following:

b. Temporary Mulching Only.

At locations where final grading should be completed within 60 calendar days, all bare ground shall be stabilized with temporary mulching applied by either hydraulic or conventional methods at a rate of no less than 3.0 tons per acre. Temporary stabilization measures shall be initiated by the end of the next business day, following the day when construction activities will temporarily cease for more than 7 days.

c. Temporary Seeding and Mulching.

Subitem 665.03(a)1c shall be replaced with the following:

c. Temporary Seeding and Mulching.

At locations where final grading will not be completed within 60 calendar days, all bare ground shall be stabilized with temporary seeding and mulching. Temporary stabilization measures shall be initiated by the end of the next business day, following the day when construction activities will temporarily cease for more than 60 days.

Ground preparation will not be required for temporary seeding and temporary mulching except as follows. Areas to be seeded temporarily shall be left in a rough graded condition. Areas that are smooth or hard shall be lightly scarified with scarifying teeth or some other acceptable method, running perpendicular to the direction of water flow. The intent of this scarifying is to obtain a rough area to hold seed and prevent the formation of rills and gulleys. Areas where sight distances must be maintained shall be bladed smooth. All debris in these areas shall be removed to allow mowing.

Application of 1000 pounds {1120 kg} of 8-8-8 fertilizer per acre {hectare} shall be applied by either hydraulic or conventional methods. Seeding and mulching shall also be applied by either hydraulic or conventional methods at a rate of no less than 2.0 tons per acre, separately or concurrently with fertilizer.

(c) Maintenance and Removal Requirements.

The Contractor shall be responsible for daily inspection, daily preventative maintenance and immediate repairs of all temporary soil erosion and sediment control items. The Contractor shall maintain on-site, or have readily available, sufficient erosion and sediment control devices and materials to perform maintenance, repairs, and prepare the site for impending rain events. All BMPs which capture sediment shall be cleaned by the removal and disposal of sediment when the holding capacity reaches one third full and when necessary for the BMP to remain functional. Any offsite sediment loss shall be removed as directed by the Engineer. Any offsite tracking of sediment onto

public roadways shall be removed by the end of the same business day, and construction entrances shall be stabilized as needed. Sediment removed during the maintenance of BMPs or collected from off-site cleanup should be reincorporated into the site or disposed of as approved by the Engineer.

All temporary soil erosion and sediment control BMPs shall be removed from the project when no longer needed unless shown otherwise on the plans, the accepted SWMP, or directed or permitted by the Engineer. Removal of temporary controls shall be only after permanent controls are in place and functioning properly. The removal of all controls shall be followed by the immediate stabilization of the area as directed by the Engineer.