STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

SUPPLEMENTAL SPECIFICATION 832
TEMPORARY SEDIMENT AND EROSION CONTROL

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832.01 Description. This work consists of locating, furnishing, installing, and maintaining temporary sediment and erosion control Best Management Practices (BMP) for earth disturbing activity areas, developing a Storm Water Pollution Prevention Plan (SWPPP), performing SWPPP Storm Water Pollution Prevention Inspections, filing a Co-Permittee form as required. Furnish a SWPPP if required prior to any earth disturbing activity. Furnish and install temporary sediment and erosion control BMPs in compliance with all National Pollutant Discharge Elimination System (NPDES) and surface water permits. Amend the SWPPP in accordance with the Ohio Environmental Protection Agency (Ohio EPA) General Construction Stormwater NPDES Permit. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other Federal, State, or local agencies, adhere to the more restrictive laws, rules, or regulations.

832.02 Definitions

Alternative BMP. Temporary structural BMP recommended for use by the SWPPP Designer when traditional BMP listed in Appendix F are determined to be "not-appropriate" based on design considerations listed in 832.05. Alternative BMP selected by the SWPPP Designer must be compliant with the OEPA NPDES Permit and be accepted for use by the Engineer.

BMP. Temporary structural sediment and erosion control best management practices designed and installed by methods compliant with the Ohio EPA NPDES Permit (Appendix E of this specification Part III. G. 2.), by this specification and location shown on the SWPPP.

C&MS. Construction and Material Specifications of the Ohio Department of Transportation dated as shown on the plans.

CECI. Contractor's Erosion Control Inspector. Must have active CESSWI or CPESC certification.

CESSWI. Certified Erosion, Sediment, and Storm Water Inspector sponsored by the Soil and Water Conservation Society and International Erosion Control Association. Information on certified individuals is available at *www.cesswi.org*.

CPESC. Certified Professional in Erosion and Sediment Control as sponsored by the Soil and Water Conservation Society and International Erosion Control Association. Information on certified individuals is available at *www.cpesc.net*.

Co-Permittee. A requirement of OEPA NPDES Permit (Appendix E of this specification, Part I. F. Notice of Intent Requirements).

EDA. Earth Disturbing Activity is any activity that exposes bare ground or an erodible material to storm water, including any "Disturbance" as defined in OEPA NPDES Permit, Part VII, Definition H.

Contractor EDA. Any EDA that is <u>not</u> shown on the plans as part of the project. EDA not shown on the plans and occurring within the project limits is also Contractor EDA.

Project EDA. Any EDA that is shown on the plans as part of the project.

Total EDA. Combined Project EDA and Contractor EDA.

EPA. Environmental Protection Agency.

Isolated Wetland Permit. OEPA permit allowing the discharge of fill material into an isolated wetland.

NOI. Notice of Intent.

NOT. Notice of Termination.

NPDES. National Pollutant Discharge Elimination System.

OEPA. Ohio Environmental Protection Agency.

OEPA NPDES Permit. OEPA Storm Water Construction General Permit (OHC000005) Appendix E of this specification.

OES. Office of Environmental Services-ODOT.

OHWM. The line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas or defined in accordance with the most current version of 33 CFR 328.

Operator. As defined in OEPA NPDES Permit (Appendix E of this specification, Part VII. Definitions, Q.)

OWPCA. Ohio Water Pollution Control Act (Ohio Revised Code 6111.01 et seq.).

Post-Construction BMP. Permanent water quality or water quantity best management practices required by the EPAOEPA NPDES Permit.

PCN. Pre-Construction Notification for 404 permit.

SCD. Standard Construction Drawing.

SWPPP. Storm Water Pollution Prevention Plan.

SWPPP Designer. The Ohio licensed Professional Engineer that also maintains a current CPESC certification who developed the Storm Water Pollution Prevention Plan.

SWPPPTrack. Software subscription service version SWPPPTrack LTIS OH developed and provided by Storm Water Simplified Ltd. for use on construction projects that require coverage under the OEPA NPDES Permit.

USACE. United States Army Corps of Engineers.

404 Permit. USACE permit authorizing discharge of fill material into Waters of the US, per Section 404 of the Clean Water Act.

401 Water Quality Certification (401 WQC). OEPA permit authorizing discharge of fill material, per Section 401 of the Clean Water Act.

Waters of the United States. Defined in Code of Federal Regulations, 33 CFR Part 328.

832.03 SCD References. Construct the following features according to the SCDs as listed on the plan title sheet.

Construction Fence..... DM-4.3
Dikes..... DM-4.3
Filter Fabric Ditch Check DM-4.4
Inlet Protection..... DM-4.4
Perimeter Filter Fabric Fence DM-4.4
Rock Channel Protection Type C or D with/without Filter
..... DM-4.3/4.4
Sediment Basins and Dams DM-4.3
Slope Drains..... DM-4.3
Construction Entrance (Type 1 Driveway)..... BP 4.1

832.04 Requirements and Provisions. Furnish a SWPPP meeting all the requirements of this specification and that maintains compliance with OEPA NPDES Permit (See Appendix E), related rules, specifications, SCD, and permits. The Department will furnish the Contractor a copy of the NOI and the OEPA approval letter at or before the Pre-Construction meeting.

Locate, furnish, install, and maintain temporary sediment and erosion control Best Management Practices (BMP) that maintain compliance with the OEPA NPDES Permit, Clean Water Act (33 USC Section 1251 et seq.), the OWPCA, the 404 permit, the 401 WQC, the Isolated Wetland Permit, local government agency requirements, specifications, SCD, and other related rules and permits.

File a Co-Permittee form when the project requires a Notice of Intent (NOI) to the OEPA. Information about electronic filing of the Co-Permittee notice can be found at http://www.epa.state.oh.us/dsw/permits/gpfact#137794352-applying-for-coverage Submit a copy of the Contractor's OEPA Co-Permittee approval notice or a copy of the submitted application to the Engineer at or before the Pre-Construction meeting.

The following provisions survive the completion and/or termination of the contract.

Provision 1. If a governmental agency or a local governmental authority finds a violation of the above noted requirements, or that the BMP are incomplete, or that the SWPPP is incomplete or that the implementation of the SWPPP is not being performed correctly or completely, full responsibility is borne by the Contractor to make all corrections.

Provision 2. If a governmental agency or a local governmental authority furnishes an assessment, damage judgment or finding, fine, penalty, or expense for a violation of the above noted requirements, or that the BMP are incomplete, or that the SWPPP is incomplete or that the implementation of the SWPPP is not being performed correctly or completely, the Contractor will reimburse the Department within 10 Calendar Days of the amount for any of the above. The Department may withhold the amount of money requested for the above from the Contractor's next pay estimate and deliver that sum to the governmental agency or local governmental authority issuing the assessment, damage judgment or finding, fine, penalty or expense.

Provision 3. The Contractor agrees to indemnify and hold harmless the Department, and will reimburse the Department for any assessments, damage judgment or finding, fine, penalty, or expense as a result of the failure of performing this portion of the Contract. The Department may withhold the amount of any assessments, damage judgment or finding, fine, penalty or expense from the Contractor's next pay estimate.

Provision 4. If a governmental agency or a local governmental authority furnishes a stop work order for any of the following: a violation of the above noted requirements; BMP are incomplete; SWPPP is incomplete; implementation of the SWPPP is not being performed correctly or completely, the Department will find the Contractor in default.

Provision 5. If the Department or any government regulatory agency finds a violation of the above noted requirements, or that the BMP are incomplete, or that the SWPPP is incomplete or that the implementation of the SWPPP is not being performed correctly or completely, the Contractor shall correct and mitigate the conditions within 48 hours of notification by the Department or regulatory agency. Failure to correct non-compliant site conditions may result in the Department suspending work for the entire project until the corrections are performed. Repeated non-compliance with the SWPPP or failure to regularly update the SWPPP as needed to match the site conditions may result in removal of the Contractor's Superintendent in accordance with C&MS 108.05.

EDA Requirements. Furnish appropriate BMP for all EDA. Unless otherwise indicated, BMP will be compensated provided that the BMP are designed, installed and maintained appropriately. For projects that do not require a SWPPP as indicated in the table below, furnish a written plan for acceptance by the Engineer that identifies the location, extent and purpose of the BMP proposed. Compensation will not be provided for the written plan.

An estimated amount is established in the proposal for BMP to be used for project EDA and estimated Contractor EDA as outlined below:

Scenarios for Routine Maintenance Projects (as identified on the Plan Title Sheet)			
Project EDA (acres)	Estimated Contractor EDA (acres) [1]		
	EDA = 0	0 < EDA < 1	1 ≤ EDA < 5
EDA = 0	A	B	C
0 < EDA < 5	B	B	C

Scenarios for Non-Routine Maintenance Projects			
Project EDA (acres)	Estimated Contractor EDA (acres) [1]		
	EDA = 0	0 < EDA < 1	EDA ≥ 1
EDA = 0	A	B	D
0 < EDA < 1	E	[2]	F
EDA ≥ 1	F	F	F

[1] If the actual Contractor EDA in the SWPPP exceeds the estimated Contractor EDA on the Title Sheet resulting in a Total EDA > 1 acre (0.4 ha), use Scenario D.

[2] If project EDA and estimated Contractor EDA are less than 1 acre (0.4 ha), use Scenario E. If Project EDA and Estimated Contractor EDA are greater than 1 acre (0.4 ha), use Scenario F. If the actual Contractor EDA exceeds the estimated Contractor EDA and results in the Total EDA exceeding 1 acre (0.4 ha), use Scenario D.

Scenario A:	No requirements for SWPPP, NOI and NOT. Furnish written to plan Engineer.
Scenario B:	Provide BMP for Contractor EDA. No SWPPP, NOI or NOT are required. BMP used for Contractor EDA will not be compensated. Furnish written plan to Engineer.
Scenario C:	Furnish a BMP, SWPPP, NOI, and NOT for Contractor EDA only. BMP used for Contractor EDA, SWPPP, NOI and NOT will not be compensated.
Scenario D:	Furnish a NOI, SWPPP with BMP, and a NOT for all EDA areas. The NOI, SWPPP, BMP, and the NOT will not be compensated.
Scenario E:	Furnish BMP for all EDA. No SWPPP, NOI or NOT are required. BMP used for the Project EDA will be compensated. Furnish written plan to Engineer.
Scenario F:	Furnish a SWPPP with BMP for all EDA areas and file a Co-Permittee form. The SWPPP and these BMP will be compensated. The Department will furnish a NOI and NOT.

832.05 Locate and Furnish BMP. Locate and furnish the BMP in accordance with the OEPA NPDES Permit requirements and the Accepted SWPPP.

The Contractor's SWPPP Designer is responsible for selecting appropriate BMP that are designed in compliance with the OEPA NPDES Permit. SWPPP Designers shall utilize BMP listed in Appendix F as the first option when selecting BMP. If the SWPPP designer determines that the BMP listed in Appendix F are not appropriate based on design limitations, constructability constraints or if the BMP may cause a safety hazard, the Department may accept other materials (Alternative BMP) recommended by the SWPPP Designer. Provide design criteria supporting the selection of Alternative BMP on the SWPPP. Utilize cost effective Alternative BMP that meet each location's design requirements.

All Alternative BMP must be evaluated through the Office of Materials Management New Product Development Standard Procedure 515-001(SP) Appendix 2 and be accepted by the Office of Construction Administration prior to being used on ODOT projects. The Department may reject any Alternative BMP determined to be inappropriate, cost excessive or not effective based on the opinion of ODOT's Office of Construction Administration.

ODOT's Office of Construction Administration maintains compensation rates for commonly used and accepted Alternative BMP. For all other Alternative BMP accepted by the Engineer, the Department will compensate the Contractor at agreed unit prices based on material cost, labor and equipment costs as outlined in C&MS 109.05 B.

Furnish filter fabric ditch checks, inlet protection, perimeter filter fabric fence, sediment basins and dams, dikes, slope drains, construction entrances, erosion control mat and rock channel protection materials as specified on the SCD.

Post-Construction BMP as defined in 832.02 are not temporary erosion control features. Construction requirements and compensation for Post-Construction BMP are detailed in the project plans. Provide protective measures that ensures sediment, debris and any contamination will not enter the Post-Construction BMP.

A. Sediment Controls. Install sediment controls immediately prior to earth disturbing activities. Ensure that ponding of water from sediment controls will not damage property or threaten human health or safety. All stormwater from disturbed areas is required to pass through a sediment control prior to being discharged from the project. Remove sediment controls when their tributary areas have been stabilized with at least 70% permanent vegetation.

1. Perimeter Filter Fabric Fence. Provide perimeter filter fabric fence to pond stormwater and trap sediment from sheet flow runoff. Use perimeter filter fabric fence as prescribed in the OEPA NPDES Permit.

2. Inlet Protection. Provide inlet protection on storm sewer inlets to pond stormwater and trap sediment from entering the storm system. Install inlet protection for new inlets once the inlet has potential to accept runoff. Utilize BMP that are capable of bypassing high flow events to avoid flooding of public streets or private properties.

3. Curb Inlet Protection. Utilize Alternative BMP for Curb Inlet Protection in accordance with this Section and 832.10 SWPPP Acceptance. Provide curb inlet protection on storm sewer inlets to pond stormwater and trap sediment from entering the storm system. Install inlet protection for new inlets once the inlet has potential to accept runoff. Utilize BMP that are capable of bypassing high flow events to avoid flooding of public streets or private properties. Use

accepted below grade inlet protection products as Alternative BMP when ponding water onto public streets may cause hazardous conditions or snow and ice equipment may damage the BMP.

4. Excavated Drop Inlet Protection. Provide excavated drop inlets as appropriate for phased construction. Construct per the Ohio Rainwater and Land Development manual with weep holes and #57 gravel filter. Provide stormwater ponding storage at 135 CY per acre of tributary drainage area. Do not use this control next to open traffic without a traffic control barrier.

5. Sediment Trap/Dam. Provide sediment traps/dams where feasible to intercept and treat concentrated runoff from tributary areas of 5 acres or less. Sediment traps/dams contain a dewatering zone, sediment storage zone and a rock filter outlet. Design the sediment trap/dam to meet the requirements of the OEPA NPDES Permit.

6. Sediment Basin. Provide sediment basins where feasible to intercept and treat concentrated runoff from tributary areas of 5 acres or more. Sediment basins contain a dewatering zone, sediment storage zone and a designed outlet with surface dewatering device. Design the sediment basin to meet the requirements of the OEPA NPDES Permit. Sediment traps/dams may be used to treat runoff from tributary areas of 5 acres or less.

7. Filter Fabric Ditch Check. Provide filter fabric ditch checks where feasible to intercept and treat concentrated runoff from tributary areas of 2 acres or less. Filter fabric ditch checks contain geotextile fabric with stone backing (or straw bales only when allowed by the Engineer per SCD DM-4.4). Use this control only when sediment traps/dams are impractical or may cause safety hazards. A maximum of two filter fabric ditch checks may be placed in series for a maximum treatment area up to 4 acres.

B. Erosion Controls. Install erosion controls concurrent with the work areas to protect against surface erosion and sediment loss. Erosion controls are not intended to remove sediment suspended in stormwater. All stormwater discharges from erosion controls are required to be directed to an appropriate sediment control.

1. Construction Seed and Mulch. Furnish commercial fertilizer, seed, and mulch materials conforming to C&MS 659. Apply seed and straw mulch materials according to C&MS 659 as modified below.

Apply straw mulch at a rate of 3 tons per acre (0.7 metric ton/1000 m^2). This BMP may only be installed after March 15 and before October 15. Use wood fiber or compost mulch only with concurrence of the Department. Fertilize construction seeding areas at one-half the application rate specified in C&MS 659. If project conditions prevent fertilizing the soil, then the fertilizing requirements of C&MS 659 may be waived. Do not place construction seed or fertilizer on frozen ground. Apply seed and mulch for this BMP at the rates shown below.:

Seed Mixture	Number of Bales
Annual Ryegrass 2 lb./1000 ft^2 (10 kg/1000 m^2)	2 / 1000 ft^2 (0.01 ha)

2. Winter Seed and Mulch. Apply seed and straw mulch materials according to C&MS 659 as modified below. Apply straw mulch at a rate of 3 tons per acre (0.7 metric ton/1000 m^2). Winter Seed and Mulch is required for EDA operations occurring between October 15 and

March 15 and can only be installed during that time. When straw mulch is used in this BMP, it is required to be crimped in place. Crimped mulch is required to be anchored into the soil surface with a mechanical crimping implement or other suitable implement accepted by the Engineer. Bonded Fiber Matrix (BFM) may be used instead of straw mulch. BFM product and application rates should be selected to ensure extended periods of stabilization protection during winter months. Select BFM or alternative mulch products with an expected functional longevity of 6 months or more. Provide maintenance of the BMP throughout the winter seed and mulch period. Utilize slope drains, stormwater diversions or other erosion control BMP with winter seed and mulch to provide appropriate protection of the winter seed and mulch areas. The Department will not compensate for repairs or reapplication of winter seed and mulch resulting from inappropriate application or failure to appropriately protect the winter seed and mulch areas. The use of other seed and/or mulch materials in this time period requires specific Department approval. The use of winter seeding and mulching is not an acceptable practice for protecting the subgrade surface where pavement is anticipated.

Seed Mixture	Number of Bales
Fawn Tall Fescue 3.0 lb./1000 ft^2 (15 kg/1000 m^2) and Annual Ryegrass 2 lb./1000 ft^2 (10 kg/1000 m^2)	2 / 1000 ft^2 (0.01 ha)

3. Construction Mulch. Construction Mulch is the application of straw mulch applied directly to the disturbed soil surface. Use straw according to C&MS 659. C&MS 659 wood fiber or compost mulch may only be used with concurrence of the Department. Apply Construction Mulch to areas that require temporary stabilization and where temporary vegetation is not considered desirable. Use a mechanical crimping implement or other suitable implement accepted by the Engineer when installing Construction Mulch on exposed subgrade. Apply Construction Mulch at a rate of 3 tons per acre (0.7 metric ton/1000 m^2).

4. Slope Drain. Provide slope drains to temporarily convey stormwater and protect cut and fill slopes from surface erosion. Use earthen dikes/berms to direct stormwater to the slope drains. Design the slope drains to adequately convey stormwater for a 10-year storm event where practicable.

5. Earthen Dike/Berm. Provide earthen dikes/berms to temporarily divert and convey stormwater. Construct earthen dikes/berms prior to cut slope construction and concurrently with fill slope construction.

6. Construction Entrance. Furnish Construction Entrance materials conforming to C&MS 712.09 Type D Filter Blankets for Rock Channel Protection and C&MS 703.01, Size Number 1 and 2, CCS aggregate. Furnish Construction Entrance protection at the locations shown on the SWPPP and as required below:

a. At locations where construction vehicles enter or leave EDA areas.

b. At all points of egress to public roads.

c. At all access locations where runoff from the construction access road is not protected by sediment controls.

Provide the appropriate size culvert as needed to prevent water from flowing onto paved surfaces and from overtopping the construction entrance surface. Identify the culvert size on the SWPPP. Install a maximum of three Construction Entrances per mile along the length of the project. The length of the project is the plan length along the project's longest axis. Additional construction entrances in excess of the maximum require acceptance from the Engineer.

Provide a configuration consisting of 6 inches of aggregate over geotextile fabric. Provide geometry according to a Type 1 Driveway as shown in the SCD. Provide a minimum 10 foot width and length measuring a minimum of 150 feet and not exceeding 200 feet from edge of pavement.

Construction Entrance removal includes the appropriate disposal of geotextile fabric and pipe. Aggregate may be incorporated into embankment work in accordance with C&MS 203 when approved by the Engineer.

7. Rock Ditch Check. Provide rock ditch checks in open channel conveyances for velocity control and to protect against surface erosion of the channel. Install rock ditch checks concurrently with channel grading. Remove rock ditch checks once 70% permanent vegetation has established in the channel.

8. Rock Channel Protection. Provide rock channel protection without fabric for rock ditch checks. Provide rock channel protection with fabric for all other BMP. Provide rock channel protection as recommend by the SWPPP Designer and accepted by the Engineer for other applications to prevent surface erosion.

9. Temporary Stabilization Matting. Provide temporary matting on permanent slopes and permanent open channel conveyances for temporary stabilization and for the establishment of permanent vegetation. Provide temporary matting per C&MS 671. Install temporary matting on slopes and open channel conveyances after final surface preparation within timeframes listed in the OEPA NPDES Permit for permanent stabilization.

C. Aquatic and Environmental Resource Protection. Provide construction fence for demarcation of aquatic and environmental resources when shown on the SWPPP and accepted by the Engineer. Alternative types of demarcation may be allowed when accepted by the Engineer. Provide appropriate sediment and erosion control protection to all environmental and aquatic resources on and, adjacent to the project. Aquatic and environmental resource protection may include diverting project water flow using dikes and slope protection and using sediment controls to intercept project runoff. The Contractor may use a combination of BMP as appropriate. Show all aquatic and environmental resources located within & adjacent to the Project and all Contractor EDA on the SWPPP.

D. Stream Relocation, Temporary Diversion Channels that carry Waters of the United States. Perform this work in compliance with the OEPA NPDES Permit and in conformance with all contract requirements (Waterway Special Provisions). Stabilize Stream Relocation, Temporary Diversion Channels with appropriate stabilization BMP or 70 percent vegetative growth before diverting flow into the new channel.

E. Concrete Washout Area BMP. Compensation for this BMP is incidental to the concrete work.

F. Dewatering BMP. Compensation for this BMP is incidental to the corresponding work. This BMP does not include a Surface Dewatering Device installed as part of a Sediment Basin.

G. Project fueling and refueling BMP locations. Compensation for this BMP is incidental to the project.

The SWPPP shall include BMP to prevent and respond to spills or leaks as required by the OEPA NPDES Permit.

The Contractor will provide a separate Spill Prevention Control & Countermeasure Plan (SPCC) if required as described in 40 CFR Part 112. The Contractor will not be compensated for the SPCC Plan. Spill response protocols are to be included in the SWPPP when not included in a SPCC.

H. All other BMP that are required and not specifically referenced in Appendix F or not accepted as an Alternative BMP in accordance with this section will not be paid as a separate item, but will be included by the Contractor as part of the total project cost.

832.06 Temporary Access Fills (Causeways and Access Fills). Fording of jurisdictional waters, including all streams and rivers is not allowed. Evaluate the Waterway Special Provisions to determine whether or not temporary access fills are permitted in the contract. If temporary access fills have been permitted by the Department, construct fill(s) consistent with the Waterway Special Provisions and additional contract requirements. Only the footprint area (acreage), linear impact limits and volume of temporary fill as permitted and contained in the Waterway Special Provisions will be allowed. If the Contractor proposes temporary access fill(s) which has not been permitted by the Department, the Contractor will coordinate procurement of the permits with the appropriate regulatory agency/agencies. All costs and time associated with the procurement of the permits are incidental to the Work. If the Contractor requests modification of the Department procured permits, coordinate the request with the Engineer and OES. The Department makes no guarantee to grant the permit modification request.

832.07 Temporary Access Fills Construction. Begin planning and installing temporary access fills as early in construction as possible to avoid conflicts with the Waterway Special Provisions or other environmental commitments that have been included in the contract documents.

Temporary access fills in aquatic resources may include, but are not limited to, causeways, cofferdams, access pads, sheet piling, temporary bridges, access fills, etc.

Make every attempt to minimize disturbance to aquatic resources during construction, maintenance and removal of the temporary access fills. The Contractor must make every attempt to minimize disturbance to waterbodies, stream banks, stream beds and riparian zones during the construction, maintenance, and removal of the temporary access fills. Construct the temporary access fills as narrow as practical and perpendicular to the stream banks. Make the temporary access fills in shallow areas rather than deep pools where possible. Minimize clearing, grubbing,

and excavation of stream banks, bed, and approach sections. Construct the temporary access fills as to not erode stream banks or allow sediment deposits in the channel.

Prior to the initiation of any in-stream work, establish a monument upstream of proposed temporary access fill to visually monitor the water elevation in the waterway where the fill is permitted. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation 1 foot above the Ordinary High Water Mark (OHWM). If the OHWM is not shown on the plans, the Department will establish the OHWM based on the definition of OHWM (832.02) or the peak discharge from the 2 year event, using the method described in the most current version of the Department's Location and Design Manual Volume II. Ensure that the monument can be read from the bank of the waterway. Ensure that this work is supervised by an Ohio Registered Surveyor. All costs associated with furnishing and maintaining the above referenced monument is incidental to the Work.

Construct the temporary access fills to a water elevation at least 1 foot (0.3 m) above the OHWM. If more than one-third of the width of the waterway is filled, then use culvert pipes to allow the movement of aquatic life. Maintain normal downstream flows. Ensure that any ponding of water behind the causeway and access fills will not damage property or threaten human health and safety.

The following minimum requirements apply to causeways where culverts are used.

A. Furnish culverts on the existing stream bottom.

B. Avoid a drop in water elevation at the downstream end of the culvert.

C. Furnish a sufficient number of culverts in addition to stream openings to providing a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the OHWM.

D. Furnish culverts with a minimum diameter of 18 inches (0.5 m)

All temporary access fills must be constructed of suitable materials. Causeways and access fills must be encapsulated with clean, non-erodible, nontoxic Dumped Rock Fill, Type A, B, C, or D, as specified in C&MS 703.19.B. Extend rock fill up the slope from original stream bank for 50 feet (10 m) to catch and remove erodible material from equipment.

All portions of the temporary access fills will be removed in its entirety. Do not dispose of temporary access fill material in other aquatic resources or where erosion into another aquatic resource is possible. The stream bottom affected by the temporary access fills will be restored to its pre-construction elevations. The temporary access fills will not be paid as a separate item but will be included by the Contractor as part of the total project cost.

All environmental protection and sediment and erosion controls associated with the Waterway Special Provisions or Contractor procured permits are incidental to the work within the boundaries of the permits.

832.08 Maintenance. Properly maintain all BMP throughout all phases and sequencing of construction activities. Dispose of silt removed from BMP according to C&MS 105.16. When the

Contractor properly places the erosion control Items then the Department will pay for the cost to maintain or replace these items of work by the following:

If a recorded rain event is greater than 0.5 inches (13mm), the Department will pay to replace all BMP that have been damaged as a result of the rain event at the unit price for those BMP including Sediment Removal as described in Appendix F. Record BMP replacement quantities using the SWPPPTrack software inspection software application. Replacement quantities not recorded in the SWPPPTrack software inspection software application will not be compensated. Restoration maintenance necessary to restore the BMP as a result of a rain event is included in the unit price for the BMP.

If a recorded rain event is less than or equal to 0.5 inches (13mm), the Department will pay to remove the sediment per the unit price for Sediment Removal as described in Appendix F. No compensation will be provided for BMP that are damaged as a result of rain events less than or equal to 0.5 inches (13mm).

Example: *A 0.6 inch rain event damaged a 300 ft. segment of filter fabric fence. A 200 ft. segment was knocked over but was still functional and could be restored. The 300 ft. damaged segment was replaced and the sediment was removed. The 200 ft. segment was picked up, retrenched and the sediment removed. How do we pay for the 300 ft. damaged segment and the 200 ft. restored segment and the sediment removal?*

Pay for 300 ft. of new Item Perimeter Filter Fabric Fence and Item Miscellaneous Sediment Removal. Do not pay for restoration of the 200 ft. segment of restored filter fabric fence. Pay for Item Miscellaneous Sediment Removal for the 200 ft. segment.

For all Perimeter Filter Fabric Fence, Filter Fabric Ditch Checks, Rock Checks, and Inlet Protection, Dikes, remove trapped sediment and any other debris which has accumulated when sediment reaches a height of one-half the BMP. Compensation will be paid at the unit price for Miscellaneous Sediment Removal as described in Appendix F.

When the sediment fills the sediment storage zone (as described in the OEPA NPDES Permit) of a Sediment Basin or Sediment Trap/Dam, remove deposited sediment per the unit price for Basin Sediment Removal as described in Appendix F. Remove Sediment Basins and Sediment Traps/Dams after the contributing drainage area has been stabilized.

When erodible materials accumulate at the surface of the construction entrance, furnish additional stone as needed to prevent tracking. Compensation for additional stone needed to maintain the Construction Entrance will be paid at the unit price for Construction Entrance. If tracking occurs, restore and clean the affected roadway surface at no additional cost to the Department.

Maintain the BMP until 70% permanent vegetation is established in the EDA portion of the tributary area contributing runoff to the BMP in accordance with the OEPA NPDES Permit (See Appendix E, Part VII, J). Remove BMP after 70% permanent vegetation is established. The Engineer may allow early removal of BMP, when necessary, due to BMP inaccessibility. Dispose of the removed materials including sediment according to C&MS 105.16 and C&MS 105.17.

832.09 Storm Water Pollution Prevention Plan. If required, prepare the SWPPP as outlined in this specification. Submit the SWPPP to the Engineer for acceptance using the SWPPPTrack software web platform. Allow 14 days for the initial review of the SWPPP. Address all comments from the Engineer and submit any required revisions, modifications, phases and updates using the SWPPPTrack software web platform. Allow an additional 7 days for subsequent reviews. All activity identified by the SWPPP that is not specifically identified as a pay item elsewhere shall be included in the Lump Sum price bid for the Storm Water Pollution Prevention Plan. At a minimum, the design and information requirements that must be included in the SWPPP are as follows:

A. Include the following general information:

1. Provide a site specific SWPPP designed and sealed by a Professional Engineer who holds a current CPESC certification.

2. Furnish the names of the individuals on site who will serve as the PE/CPESC SWPPP designer and CECI.

3. Describe the type of construction activities that will be taking place.

4. Furnish signatures of all contractors and subcontractors involved in BMP practices (see Appendix B).

5. Furnish the total EDA areas in acres and identify the immediate receiving stream or surface water for each drainage area.

6. Furnish installation details of all proposed Alternative BMP.

7. Provide construction and grading details for all Sediment Trap/Dam and Basins.

B. Include Existing Condition Plan sheets (maximum 1” = 50’ scale) showing the following information at a minimum:

1. Temporary sediment control BMP to be installed prior to or concurrent with early earth disturbing activities (including but not limited to clearing and grubbing, mobilization, staging areas, demolition, grading activities, etc.)

2. Existing contours shown at a 2-foot maximum interval for all Project and Contractor EDA areas

3. Stormwater runoff tributary areas to all sediment controls intercepting concentrated flows (Tributary areas for sheet flow sediment controls are not required to be shown on the plan.)

4. Existing conditions of the Project and Contractor EDA including drainage patterns, ditches, drainage system, utilities

5. Project construction limits

6. All Contractor EDA areas

7. Labels of all direct discharge locations receiving runoff from Project and Contractor EDA to waters of the State or U.S throughout the Project and Contractor EDA. Direct discharges may include but are not limited to, storm sewer outfalls, open channel conveyances, direct sheet flow.

8. Provide a table of existing condition BMP and direct discharge locations in tabular format on the plan which can be exported to .csv file and is consistent with SWPPPTrack software

C. Include Proposed Condition Plan sheets (maximum 1" = 50' scale) showing the following information at a minimum:

1. Temporary sediment and erosion control BMP based on modified drainage patterns as needed to represent construction phasing prior to reaching final buildout conditions.

2. Temporary sediment and erosion control BMP based on final buildout conditions and drainage patterns. Include BMP to be installed during previous phasing which is intended to be left in place through final buildout.

3. Proposed contours shown at a 2-foot maximum interval for all Project and Contractor EDA areas. If proposed surfaces cannot be obtained from the Department provided electronic files, provide clear representation of the proposed drainage patterns in sufficient detail to select, design and locate appropriate BMP.

4. Stormwater runoff tributary areas to all sediment controls intercepting concentrated flows (Tributary areas for sheet flow sediment controls are not required to be shown on the plan.)

5. Project construction limits

6. All Contractor EDA areas

7. Label existing, relocated and proposed direct discharge locations

8. Provide a table of proposed condition and interim BMP in tabular format on the plan which can be exported to .csv file and is consistent with SWPPPTrack software

D. Include BMP estimated quantities in BMP tables.

E. Show the location of the following support activities. Ensure the following activities are located a minimum of 100 feet (30 m) from any aquatic resource:

1. Concrete or asphalt plant areas

2. Material and equipment staging or storage areas

3. Dewatering Areas

4. Concrete truck wash out BMP areas

5. Construction access BMP locations

6. Vehicle fueling and refueling locations

F. Provide an implementation schedule for BMP based on the Contractor's proposed construction sequence.

G. Show locations of Post-Construction BMP. Include Post-Construction BMP in the schedule of construction sequence.

H. Include a schedule of cover practices meeting the requirements of the Ohio NPDES Permit.

I. Include erosion control BMP to be installed for protecting erosive areas, provide temporary or permanent stabilization and control stormwater. Stormwater erosion control BMP shall be sized based on tributary runoff area and consistent with Ohio's Rainwater and Land Development Manual.

J. Show all environmental preservation areas, wetlands and waterways within or adjacent to the Project and Contractor EDA as illustrated in the Plans.

K. Furnish an estimated quantity for Basin Sediment Removal and Miscellaneous Sediment Removal for removing sediment from sediment controls.

L. Include project area soil types and identify any potentially highly erodible locations.

M. Label all sediment Trap/Dam and Basins with tributary area, sediment storage zone volume, dewatering zone volume, outlet size and type, etc.

Electronic design files, necessary to develop the SWPPP with the required information listed in this section, shall be made available to the awarded Contractor upon request.

832.10 SWPPP Acceptance. Furnish the SWPPP to the Department for acceptance. The Department will allow work to begin upon receiving an acceptable SWPPP. See Appendix C for a sample acceptance checklist. The Department may assess critically the following:

A. The type and location of BMP with totals.

B. The SWPPP is specific for this project.

C. There is no language in the SWPPP about any BMP being directed for use by the Engineer.

D. The total estimated BMP quantities agree with the (per Each) "Erosion Control" amount identified in the proposal.

E. The SWPPP accounts for the various phases of construction and the associated degree of earthwork disturbance over the life of the project.

F. The SWPPP delineates overall watershed areas and individual BMP watersheds. Enough detail is shown in the SWPPP to verify that the BMP are appropriate for the application. If topographic mapping contained in the plans is not sufficient to identify and delineate the watersheds associated with the work, provide the appropriate mapping.

G. The SWPPP identifies the locations and specific geometry of the required Sediment Traps/Dams, Basins and related control structures. Provide the following information for each Sediment Trap/Dam and Basin:

1. Calculations demonstrating compliance with the 48 hour draw down time (if required by the OEPA NPDES Permit),

2. Size of the contributing drainage area,

3. Volume of the Sediment Storage Zone

4. Volume of the Dewatering Zone

5. Basin excavation quantity or dam embankment quantity

6. Quantity of rock channel protection

7. Riser Pipe, outlet structure details and surface dewatering device

Revise the accepted SWPPP as needed to maintain compliance with OEPA NPDES Permit. Revisions and amendments (See Appendix E, Part III, D) to the accepted SWPPP will be at no additional cost to the Department.

832.11 Inspections and SWPPP Updates. Perform the OEPA NPDES Permit required inspections utilizing a mobile device capable of running the latest version of the SWPPPTrack LTIS inspection software application developed by Storm Water Simplified Ltd. Contact Storm Water Simplified Ltd. at (888) 401-1993 or OHSupport@SWPPPTrack.com for project setup coordination, payment, and for mobile device requirements.

Perform OEPA NPDES Permit required inspections with the SWPPPTrack inspection application and populate all inspection fields accurately to represent current project conditions until final stabilization.

The inspections must be performed by one of the following parties:

A. The PE/CPESC who signed and sealed the SWPPP.

B. The CPESC inspector who is under the supervision of the Engineer who signed and sealed the SWPPP.

C. The CESSWI inspector who is under the supervision of the Engineer who signed and sealed the SWPPP.

Prepare the inspection reports for projects that require a SWPPP. Utilize the SWPPPTrack inspection software application to prepare and submit inspection reports to the Engineer every 7 days and within 24 hours of a 0.5 inch (13 mm) or greater rainfall event until final stabilization has been established with a minimum of 70 percent permanent vegetation. The inspection occurrence may be delayed or the inspection frequency may be reduced per the OEPA NPDES Permit Part III.G.2.i.

The reporting CECI, under supervision of the PE/CPESC, will update, amend and revise the SWPPP as the contractor's operations and site conditions warrant. Identify all revisions and updates to the SWPPP and indicate what measures will be taken to maintain OEPA NPDES Permit compliance. Record BMP condition, modifications, installations, additions, removals and SWPPP modifications with the SWPPPTrack inspection software application. Record all BMP locations utilizing the SWPPPTrack inspection software application.

Document BMP inspections utilizing photos as required by the SWPPPTrack inspection software application. Perform a monthly inspection of the project utilizing the SWPPPTrack inspection software application. The monthly inspection is required to be performed by the PE/CPESC who maintains responsibility over the SWPPP. The monthly inspection may be performed by an individual employed by the PE/CPESC company who is under the direct supervision of the PE/CPESC. If the inspection is performed by an individual other than the PE/CPESC, the individual shall maintain an active CPESC certification. The PE/CPESC is required to review and certify all monthly inspections through the SWPPPTrack software inspection application. The PE/CPESC shall review the weekly and rainfall event inspections and all CECI changes to the SWPPP. The PE/CPESC is required to re-sign and seal the SWPPP when significant changes warrant an updated SWPPP be developed. Submit the latest SWPPP update to the SWPPPTrack software web platform.

The CECI is required to notify the Department within 24 hours of any compliance deficiencies or verified complaints related to the SWPPP or OEPA NPDES Permit. Weekly, rainfall event and monthly inspections will document BMP deficiencies as Open Work Items in the SWPPPTrack inspection software application. Within 48 hours of the Department's or CECI's notice of deficiency/Open Work Item, the contractor is required to construct, install, repair or correct the BMP measures needed to close the deficiency/Open Work Items. The CECI will close Open Work Items only after the BMP measures have been appropriately addressed and inspected utilizing the SWPPPTrack inspection software application.

832.12 Compensation. The Department will furnish Item 832 Each, Erosion Control with an amount in the proposal to pay for BMP work. The fixed amount shown in the proposal is included (as any other bid items) in the Total Bid Amount. This fixed amount is the Department's estimate of the total cost of BMP work required to be performed for the project. If the BMP work exceeds this amount, the BMP work will still be paid at the pre-determined prices. All BMP work will be paid at the proposal pre-determined unit price times the correctly installed BMP number of units. The payment due will be deducted from Item 832 Each, Erosion Control. C&MS Table 104.02-2 does not apply to reductions in this contract item. Compensation for BMP will not be provided until the BMP location and quantity is recorded in the SWPPPTrack inspection software application and an initial inspection is performed by the CECI indicating that the BMP meets the installation requirements.

The Lump Sum amount bid for the SWPPP includes all work associated with development, design, revisions, modifications, amendments and submittals of the SWPPP. Changes made to the SWPPP, but not caused by the Department, are the financial responsibility of the Contractor. Additional compensation will only be permitted for Department accepted amendments to the SWPPP resulting from revisions to the contract documents as per sections 104.02.B, 104.02.D and 104.02.F. Provide the additional costs for the amended SWPPP to the Department prior to

beginning the associated revised work. The Department will only pay for one accepted SWPPP regardless of the number of Construction phases, revisions, amendments or project redesigns.

The Lump Sum amount bid for the Storm Water Pollution Prevention Inspections includes all work associated with NPDES required inspections, monthly inspections, and reporting. All costs associated with providing and maintaining the required CPESC and CESSWI personnel, conducting the NPDES required inspections utilizing the SWPPPTrack inspection software application and support engineering services are included in the contract Lump Sum bid for Storm Water Pollution Prevention Inspections.

The Lump Sum amount bid for the Storm Water Pollution Prevention Inspection Software includes all costs for the SWPPPTrack inspection software and services. The Contractor is responsible for purchasing and contracting with Storm Water Simplified Ltd. for the use of the SWPPPTrack software application and services until final stabilization.

832.13 Method of Measurement.

The Department will measure the SWPPP as a Lump Sum.

The Department will measure the Storm Water Pollution Prevention Inspections as a Lump Sum.

The Department will measure the Storm Water Pollution Prevention Inspection Software services as Lump Sum.

The Department will measure Construction Seeding and Mulching by the number of square yards (square meters).

The Department will measure Slope Drains by the number of feet (meters) of conduit.

The Department will measure Sediment Basins by the number of cubic yards (cubic meters) of excavation or embankment.

The Department will measure Sediment Basin surface dewatering device by each.

The Department will measure Sediment Traps/Dams by the number of cubic yards (cubic meters) of excavation or embankment.

Any pipe required for the outlet structure of a Sediment Basin or Trap/Dam is incidental to the unit price paid for Sediment Basins and Traps/Dams.

The Department will measure Perimeter Filter Fabric Fence, and Construction Fence by the number of feet (meters).

The Department will measure Filter Fabric Ditch Check by the number of feet (meters).

The Department will measure Excavated Drop Inlet Protection by the number of cubic yards (cubic meters) of excavation.

The Department will measure Inlet Protection by the number of feet (meters).

The Department will measure Curb Inlet Protection by each or feet (meters).

The Department will measure Earthen Dike/Berm by the number of cubic yards (cubic meters) of embankment.

The Department will measure Temporary Stabilization Matting by the number of square yards (square meters).

The Department will measure Rock Ditch Check, Type C or D (without filter) by the number of cubic yards (cubic meters).

The Department will measure Rock Channel Protection, Type C or D (with or without filter) by the number of cubic yards (cubic meters).

The Department will measure Sediment Removal by the number of cubic yards (cubic meters).

The Department will measure Construction Mulching by the number of square yards (square meters) regardless if the application is crimped or not.

The Department will measure Winter Seeding and Mulching by the number of square yards (square meters).

The Department will measure Construction Entrance protection by the number of cubic yards (cubic meters)

832.14 Basis of Payment. The Department will pay the contract Lump Sum price bid for the Storm Water Pollution Prevention Plan. The Department will make partial payments for the Storm Water Pollution Prevention Plan according to C&MS Section 109.09 and as modified by the following schedule:

A. The Department will release 60 percent of the lump sum amount bid for Storm Water Pollution Prevention Plan to the Contractor with the first regular estimate payable after the Engineer has accepted the Storm Water Pollution Prevention Plan submission.

B. The Department will release 30 percent of the lump sum amount bid for Storm Water Pollution Prevention Plan to the Contractor with the first regular estimate payable after 50 percent of the project is complete.

C. The Department will release the remaining 10 percent of the lump sum amount bid for Storm Water Pollution Prevention Plan to the Contractor with the first regular estimate payable after 90 percent of the project is complete.

The Department will make partial payment for the Storm Water Pollution Prevention Inspections according to C&MS Section 109.09.

The Department will make partial payments for the Storm Water Pollution Prevention Inspection Software services according to C&MS Section 109.09 and as modified by the following schedule:

A. The Department will pay 60 percent of the lump sum amount bid for the Storm Water Pollution Prevention Inspection Software with the first regular estimate.

B. The Department will pay the remaining 40 percent of the lump sum amount bid for the Storm Water Pollution Prevention Inspection Software services according to 109.09.

The Department will pay for appropriately selected, designed, properly installed and accepted BMP per Item 832 Each, Erosion Control. BMP compensation will be based on the unit prices shown in Appendix F or accepted unit prices for Alternative BMP by the Engineer.

The Department will not pay for BMP Items which are required as a result of the Contractor's negligence, carelessness, or failure to install permanent controls.

The Department will not pay for any causeway and access fills.

The Department will not pay to replace BMP that have failed as a result of improper maintenance or installation.

The Department will not pay for concrete washout area BMP. Concrete washout area BMP are considered incidental to the concrete work.

The Department will not pay for BMP which are required as a part of the work and are not specifically identified as a separate item. Compensation for BMP that are required for NPDES Permit compliance and are not included in Appendix F or not accepted as an Alternative BMP in accordance with Section 832.05 are considered incidental to the work.

The Department will not pay for Post-Construction BMP as a part of this specification.

Item	**Unit**	**Description**
832	Lump Sum	Storm Water Pollution Prevention Plan
832	Lump Sum	Storm Water Pollution Prevention Inspections
832	Lump Sum	Storm Water Pollution Prevention Inspection Software
832	Each	Erosion Control

Appendix A

BMPBMP Inventory Naming Validation

Ohio Department Of Transportation, SS 832 – *BMP ID and Naming Validation Form*

Sediment Control BMP

BMP ID Type	BMP ID Type (Extended Name)	Standard BMP Description	Alternative BMP Description	Unit of Measure
IP	Inlet Protection	Filter Fabric Inlet Protection		LF
CIP	Curb Inlet Protection	Alternative BMP	Dandy Curb Bag for 3A inlet	EA
EDIP	Excavated Drop Inlet Protection	Drop Inlet Excavation W/gravel		EA
PFFF	Perimeter Filter Fabric Fence	Filter Fabric Fence		LF
FFDC	Filter Fabric Ditch Check	Filter Fabric Ditch Check		LF
SB	Sediment Basin	Sediment Basin w/ Surface Dewatering		CY
ST	Sediment Trap	Sediment Trap		CY
DWT	Dewatering Discharge	Dewatering Sediment Control		EA
SDWTD	Sediment Basin Surface Dewatering Device	Surface Dewatering Device		EA

Erosion Control BMP

BMP ID Type	BMP ID Type (Extended Name)	Standard BMP Description	Alternative BMP Description	Unit of Measure
SD	Slope Drain	Slope Drain		LF
DI	Dike	Earthen Dike		CY
CE	Construction Entrance	Rock Construction Entrance		CY
RDC	Rock Ditch Check	Rock Ditch Check		CY
ECM	Erosion Control Matting	Erosion Matting, Type___		SY
RCP	Rock Channel Protection	Rock with Geotextile Fabric		CY
TS	Temporary Stabilization	Construction Seed and Mulch		SY
PS	Permanent Stabilization	Permanent Stabilization		SY

Miscellaneous Control BMP

BMP ID Type	BMP ID Type (Extended Name)	Standard BMP Description	Alternative BMP Description	Unit of Measure
CF	Construction Fence	Construction Fence		LF
CWO	Concrete Washout	Concrete Washout		EA
TAF	Temporary Access Fill	Causeway, Cofferdam, Dewatering Fill, etc.		EA

Outfalls

BMP ID Type	BMP ID Type (Extended Name)	Standard BMP Description	Alternative BMP Description	Unit of Measure
DSWD	Direct Surface Water Discharge	Direct Surface Water Discharge		

Designer Note: SWPPP Designers should utilize the BMP ID Type (short) naming conventions for BMP callouts and populating the BMP Inventory Tables shown in this appendix. BMP ID's should be numbered sequentially by Type (PFFF1, PFFF2, IP1, SB1, etc.). BMP ID Type (Extended Names) are not used in the BMP Inventory Tables and are included for reference only.

BMP ID Type and Standard BMP Descriptions will be used for validation when uploading the tables to SWPPPTrack. Ensure BMP Types and Standard BMP Descriptions above are used to create the BMP Inventory Tables. When Alternative BMP materials are proposed, the Alternative BMP Description name should be filled in with the proprietary device proposed on the SWPPP. The Alternative BMP Description should accurately describe the BMP with appropriate units. (i.e. 12" Compost Filter Sock, LF).) Curb Inlet Protection only utilize Alternative BMP and will always require an alternative description. Coordinate uploading of the inventory table with SWPPPTrack. BMP Inventory Table templates can be downloaded on ODOT's Office of Construction Administration website: http://www.dot.state.oh.us/Divisions/ConstructionMgt/Admin/Pages/InspectionForms.aspx

Appendix A

Existing Conditions BMP Inventory Table

Ohio Department Of Transportation, SS 832 - *Existing Conditions* - BMP Inventory Table			
Name:		Date Created:	
Company Name:			

Contract#	Part Code	BMP	Standard BMP Description	Alternative BMP Description	Plan Page	Quantity	Unit Of Measure	Roadway Name	Location Station	Road Orientatio	Project Discharge
		PFFF1	Perimeter Filter Fabric Fence		4	375	LF	SR 7	145+32	RT	Y
		PFFF2	Perimeter Filter Fabric Fence		4	235	LF	SR 7	145+85	LT	Y
		PFFF3	Alternative BMP	12" Compost Filter Sock	11	305	LF	SR 14	96+50	RT	N
		IP1	Inlet Protection		5, 10	20	LF	SR 14	94+00	RT	Y
		IP2	Inlet Protection		5, 10	20	LF	SR 14	94+00	LT	Y
		CIP1	Alternative BMP	Dandy Curb Bag (3A Inlet)	5, 10	1	EA	SR 14	93+00	LT	Y
		CIP2	Alternative BMP	FlexStorm Catch It	6	1	EA	SR 14	155+55	LT	Y
		CIP3	Alternative BMP		6	1	EA	SR 14	155+50	RT	Y
		FFDC1	Filter Fabric Ditch Check		8	15	LF	SR 14	86+50	RT	Y

Proposed BMP Inventory Table

Ohio Department Of Transportation, SS 832 - *PROPOSED* - BMP Inventory Table			
Name:		Date Created:	
Company Name:			

Contract#	Part Code	BMP ID	Standard BMP Description	Alternative BMP Description	Plan Page	Quantity	Unit Of Measure	Roadway Name	Location Station	Road Orientation	Project Discharge
		PFFF4	Perimeter Filter Fabric Fence		6,7	250	LF	SR 7	155+00	RT	Y
		CF1	Construction Fence		4	100	LF	SR 7	145+32	RT	N
		CF2	Construction Fence		4	230	LF	SR 7	145+85	LT	N
		CIP4	Alternative BMP	Dandy Curb Bag (3A Inlet)	4	1	EA	SR 7	146+25	LT	N
		CIP5	Alternative BMP	Dandy Curb Bag (3A Inlet)	4	1	EA	SR 7	146+40	LT	N
		CIP6	Alternative BMP	Dandy Curb Bag (3A Inlet)	4	1	EA	SR 7	146+60	LT	N
		CIP7	Alternative BMP	Dandy Curb Bag (3A Inlet)	4	1	EA	SR 7	146+40	RT	N
		CIP5	Alternative BMP	Dandy Curb Bag (3A Inlet)	4	1	EA	SR 7	146+60	RT	N
		CIP6	Alternative BMP	FlexStorm Catch It	4	1	EA	SR 7	148+35	LT	N
		CIP7	Alternative BMP	FlexStorm Catch It	4	1	EA	SR 7	148+40	LT	N
		CIP8	Alternative BMP	FlexStorm Catch It	4	1	EA	SR 7	148+35	RT	N
		CIP9	Alternative BMP	FlexStorm Catch It	4	1	EA	SR 7	148+35	RT	N
		CIP10	Alternative BMP	FlexStorm Catch It	5	1	EA	SR 7	150+35	RT	N
		CIP11	Alternative BMP	FlexStorm Catch It	5,10	1	EA	SR 14	94+40	RT	N
		CIP12	Alternative BMP	Dandy Curb	5,10	1	EA	SR 7	150+70	RT	N
		CIP13	Alternative BMP	Dandy Curb	5,10	1	EA	SR 7	150+85	LT	N
		CIP15	Alternative BMP	Dandy Curb	5,10	1	EA	SR 14	94+50	LT	N
		IP3	Alternative BMP	42" SedCatch SedCage	5,10	1	EA	SR 7	92+85	LT	Y
		IP4	Filter Fabric Inlet Protection		5,10	1	LF	SR 7	152+50	LT	N

Appendix B

SIGNATURE LIST

NPDES and Surface Water Pollution Prevention Plan
Contractors and Sub-contractors responsible for any Earth Disturbing Activity
Duty to inform contractors and subcontractors
(OEPA Permit No.:OHC000005 Part III. E)

Signature	Printed Name	Title	Company	Date

OHIO DEPARTMENT OF TRANSPORTATION	**Appendix C SWPPP Review Form**	ODOT Project Ct.-Rt.-Sec:_____ Proj. #/PID:_____ Date:_____

Question #	Question	YES	NO	N/A	Comments
1	Is the SWPPP specific to the purposed project?				
2	Has the Contractor filed for a Co-Operator's notice to OPEA?				
3	Does the SWPPP list "Operators" and contain signatures of responsible parties? (Any Contractor or sub who has day-to-day operational control over sediment and erosion control activities)				
4	Was the plan developed by a P.E./CPESC qualified individual?				
5	Does the SWPPP list the CECI?				
6	Does the SWPPP show installation details of all proposed Alternative BMP?				
7	Have the proposed Alternative BMP been accepted for use by the Engineer?				
8	Does the SWPPP include existing conditions plan sheets identifying BMP's to be installed with early earth disturbing activities? (i.e. mobilization, clearing and grubbing, tree clearing, contractor staging, demolition, etc.) (Ref. 832.09 B.)				
9	Does the SWPPP include proposed conditions plan sheets identifying BMP's to be installed based on final buildout drainage patterns? (Ref. 832.09 C.)				

Question #	Question	YES	NO	N/A	Comments
10	Have all discharge points, having a direct connection to a waterway, been labeled on the SWPPP? (Direct connections include ditches, channels, storm sewer outlets, direct sheet flow.)				
11	Have sediment controls been included on the SWPPP, intercepting all potential runoff from project and contractor disturbed areas?				
12	Have drainage tributary areas been identified for all sediment controls intercepting concentrated flows? (i.e. sediment traps/basins, FFDC, inlet protection) (Verify tributaries for existing condition BMP and tributaries for proposed condition BMP, Ref. 832.09)				
13	Are the selected sediment control BMP's appropriate for their tributary area? (i.e. 5 Ac max for sediment traps, 2 Ac max for FFDC, 1 Ac max for inlet protection)				
14	Are sediment traps/basin used for tributary areas exceeding 2 acres? (Sediment traps and basins should be used for larger drainage areas unless ponding water may cause a safety hazard to the public. Sediment traps/basins should be a SWPPP Designer's first option for sediment treatment.)				
15	Are volume sizing calculations shown on the SWPPP for all sediment traps/basins? (Traps/basins require a minimum 67 CY per acre dewatering zone plus 37 CY per acre sediment storage zone.)				
16	Does the SWPPP show preservation areas, wetlands, waterways within and adjacent to the project?				

Question #	Question	YES	NO	N/A	Comments
17	Does the SWPPP include all contractor EDA? (i.e. borrow/waste, staging areas, etc.)				
18	Does the SWPPP include a BMP implementation schedule that aligns with the Contractor's construction sequence?				
19	Does the SWPPP show fuel storage locations and list procedures for spill prevention and countermeasures?				
20	Are concrete washouts, fuel storage, staging areas shown on the plan? (Ensure these activities are a minimum 100-feet away from a waterway.)				
21	Are construction entrances shown at all points of egress?				
22	Does the SWPPP show a schedule of stabilization practices? (i.e. temporary and permanent seeding based on dormant areas)				
23	Does the SWPPP show soil types and identify any highly erodible areas? (i.e. steep slopes requiring additional erosion control BMP)				
24	Do all BMP include adequate details for installation? (Ensure all BMP can be appropriately installed as shown on the plans)				

Appendix D

Co-Permittee Notice of Intent for Coverage Under Ohio EPA Storm Water Construction General Permit

Submission of this NOI constitutes notice that the party identified in Section I of this form intends to be authorized by Ohio's NPDES general permit for storm water associated with construction activity. Becoming a permittee obligates a discharger to comply with the terms and conditions of the permit. NOTE: All necessary information must be provided on this form. Read the accompanying instructions *carefully* before completing the form. Do not use correction fluid on this form. Forms transmitted by fax will not accepted. There is no fee associated with submitting this form.

I. Applicant Information/Mailing Address

Company (Applicant) Name: _____

Mailing (Applicant) Address: _____

City: _____ State: _____ Zip Code: _____

Contact Person: _____ Phone: _____ Fax: _____

Contact E-Mail Address: _____

II. Facility/Site Location Information

Existing Ohio EPA Facility Permit Number: __ GC __ __ __ __ __ * __ G OR OHR1 __ __ __ __ __

Initial Permittee Name: _____ Phone: _____

Facility/Site Name: _____

City: _____ Township(s): _____

County(ies): _____ State: Ohio Zip Code: _____

Facility Contact Person: _____ Phone: _____ Fax: _____

Facility Contact E-Mail Address: _____

III. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Applicant Name: _____ Title: _____

Applicant Signature: _____ Date: _____

EPA 4496 (Rev. 4/03) Click to clear all entered information CLEAR

Information available at *https://epa.ohio.gov/dsw/permits/gpfact#137794352-applying-for-coverage*

Appendix E
http://www.epa.state.oh.us/portals/35/permits/OHC000005/Final_OHC000005.pdf

Issuance Date: April 23, 2018
Effective Date: April 23, 2018
Expiration Date: April 22, 2023

Ohio EPA APR 23 '18
Entered Directors Journal

OHIO ENVIRONMENTAL PROTECTION AGENCY

GENERAL PERMIT AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the federal Water Pollution Control Act, as amended (33 U.S.C. Section 1251 et. seq. hereafter referred to as "the Act") and the Ohio Water Pollution Control Act [Ohio Revised Code ("ORC") Chapter 6111], dischargers of storm water from sites where construction activity is being conducted, as defined in Part I.B of this permit, are authorized by the Ohio Environmental Protection Agency, hereafter referred to as "Ohio EPA," to discharge from the outfalls at the sites and to the receiving surface waters of the state identified in their Notice of Intent ("NOI") application form on file with Ohio EPA in accordance with the conditions specified in Parts I through VII of this permit.

It has been determined that a lowering of water quality of various waters of the state associated with granting coverage under this permit is necessary to accommodate important social and economic development in the state of Ohio. In accordance with OAC 3745-1-05, this decision was reached only after examining a series of technical alternatives, reviewing social and economic issues related to the degradation, and considering all public and intergovernmental comments received concerning the proposal.

This permit is conditioned upon payment of applicable fees, submittal of a complete NOI application form, development (and submittal, if applicable) of a complete Storm Water Pollution Prevention Plan (SWP3) and written approval of coverage from the director of Ohio EPA in accordance with Ohio Administrative Code ("OAC") Rule 3745-38-02.

Craig W. Butler
Director

Total Pages: 60

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

By: Date: 4-23-18

Appendix F

Temporary Sediment and Erosion Control Best Management Practices (BMP)
Unit Price Schedule, October 2018

EROSION CONTROL PRICES

			Project Identified EDA (acres)					Fixed Price ($)	Comment
			<5	5 to 10	10 to 15	15 to 20	>20		
Item	**Unit**	**Description**	Price ($)						
832	Sq. Yd.	Construction Seeding and Mulching	1.00	0.92	0.83	0.75	0.74		Based on NOI acres
832	Feet	Slope Drains						12.00	
832	Cu. Yd.	Sediment Basins and Dams						13.50	[3]
832	Cu. Yd.	Excavated Drop Inlet Protection						13.50	
832	Feet	Perimeter Filter Fabric Fence	4.05	3.10	2.85	2.55	2.30		Based on NOI acres
832	Feet	Filter Fabric Ditch Check						11.00	
832	Feet	Inlet Protection						11.25	
832	Cu. Yd.	Earthen Dike/Berm						3.00	
832	Sq. Yd.	Temporary Stabilization Matting						2.50	
832	Cu. Yd.	Rock Ditch Check, Type C or D without Filter						50.00	[1]
832	Cu. Yd.	Rock Channel Protection, Type C or D with Filter						55.00	[1]
832	Cu. Yd.	Rock Channel Protection, Type C or D without Filter						50.00	[1]
832	Cu. Yd.	Basin Sediment Removal						10.00	
832	Cu. Yd.	Miscellaneous Sediment Removal						15.50	
832	Feet	Construction Fence						5.75	
832	Sq. Yd.	Construction Mulching	0.79	0.71	0.58	0.56	0.54		Based on NOI acres
832	Sq. Yd.	Winter Seeding and Mulching	1.08	1.00	0.92	0.85	0.81		Based on NOI acres
832	Cu. Yd.	Construction Entrance						75.25	

[1] Add the following amount per cubic yard for the cost of Type C or D Rock materials.
[3] Add the amount for the appropriately sized surface dewatering device for sediment basin outlet.

Appendix F

BMP ROCK MATERIAL SCHEDULE

District [2]	Purchase & Delivered to Job		Produced on Job	
	Type C	Type D	Type C	Type D
1	$ 60.00	$ 58.00	$ 27.50	$ 27.50
2	$ 60.00	$ 58.00	$ 27.50	$ 27.50
3	$ 67.00	$ 65.00	$ 27.50	$ 27.50
4	$ 71.00	$ 68.00	$ 27.50	$ 27.50
5	$ 63.00	$ 60.00	$ 27.50	$ 27.50
6	$ 65.00	$ 63.00	$ 27.50	$ 27.50
7	$ 65.00	$ 63.00	$ 27.50	$ 27.50
8	$ 65.00	$ 63.00	$ 27.50	$ 27.50
9	$ 66.00	$ 65.00	$ 27.50	$ 27.50
10	$ 70.00	$ 68.00	$ 27.50	$ 27.50
11	$ 65.00	$ 63.00	$ 27.50	$ 27.50
12	$ 71.00	$ 68.00	$ 27.50	$ 27.50

[2] Based on the District in which the project is administered.

SEDIMENT BASIN SURFACE DEWATERING DEVICE

Device Size	Purchase & Delivered to Job
1 1/2”	$598.00
2”	$750.00
2 1/2”	$915.00
3”	$1,100.00
4”	$1,590.00
5”	$2,375.00
6”	$3,650.00
8”	$6,000.00

[3] Surface dewatering device sized appropriately for sediment basin

Designer Note:

Provide this Supplemental Specification on all plans.

Under the Erosion Control heading, provide the following Reference Items:

> Item 832 Each Erosion Control - Provide an encumbered dollar value to be placed in the proposal for Item: 832 Each Erosion Control. This amount is for both the "quantity" and "total" fields. This amount should only be provided in the C2 Estimate, the Special Considerations Field on the Plan Package Submittal Form, and in the Plans.
>
> Example: $10,000 set up for Item 832 Each Erosion Control then 10,000 placed in the "quantity" and "total" fields.
>
> Item 832 Lump Sum Storm Water Pollution Prevention Plan - Provide a Lump Sum item for Storm Water Pollution Prevention Plan for projects that have 1 or more acres of estimated Total EDA.
>
> Item 832 Lump Sum Storm Water Pollution Prevention Inspections – Provide a Lump Sum item for Storm Water Pollution Prevention Inspections which includes the anticipated weekly, rainfall event and monthly inspections.
>
> Item 832 Lump Sum Storm Water Pollution Prevention Inspection Software services. Include costs for the SWPPPTrack software based on Contractor duration to achieve 70% permanent vegetation establishment.

For additional guidance on the NPDES process for ODOT projects, see the NPDES Construction Permit Implementation Plan flowchart on the Office of Hydraulic Engineering website.

For help estimating the encumbered dollar value for the Item 832 - Erosion Control, see the BMP Estimator on the DRRC website (*http://www.dot.state.oh.us/drrc/*).

Latest version of the OEPA NPDES Permit (OHC000005) combines Big Darby and Olentangy specific watershed requirements. Provide plan notes on the Preliminary SWPPP related to watershed specific requirements such as testing of stormwater discharge. Modify the Storm Water Pollution Prevent Inspection Lump Sum item of this specification to include all permit required stormwater testing.