

YCCD/DEP E&S Control Plan Technical Review Checklist*

Project Name _____

Date _____ **Municipality** _____

= Provided NA = not applicable

D = Provided on drawings **N** = Provided in narrative

102.4(b) (3) “The Erosion and Sediment Control Plan shall be prepared by a person trained and experienced in erosion and sediment control methods and techniques, and shall be designed to minimize the potential for accelerated erosion and sedimentation”.

_____ Plan preparer’s name, address, and telephone number. **D&N**

_____ Plan preparer’s qualifications in preparing erosion and sediment pollution control plans. **N**

102.4(b) (5) (I) “The existing topographic features of the project site and the immediate surrounding area.”

_____ Plan drawing is legible in all areas. **D**

_____ A plan scale of 1” = 50’ or larger scale. **D**

_____ Sheet match lines with adjoining sheet numbers. **D**

_____ Existing contours are on maximum 2’ intervals. **D**

_____ Existing contour elevations have been identified. **D**

_____ All existing improvements including roads, buildings, and utilities. **D**

_____ Property boundaries **D**

_____ Existing legal right-of-ways/utility/access easements **D**

_____ All landmarks including type and extent of existing vegetation (ex. tree lines, fencerows, pasture, field boundaries, and vacant structures). **D**

_____ All existing Waters of the Commonwealth including intermittent and perennial streams, springs, ponds, and wetlands. **D**

_____ Letter/statement documenting a wetland determination conducted by a qualified consultant. **N**

_____ Delineated wetlands boundary. **D**

_____ Copy of the wetlands delineation report (<5 years old) (or) stamped USACOE Jurisdictional Determination (JD) mapping and letter

_____	100-year floodway boundary.	D
_____	Sufficient surrounding area upslope and downslope of the project boundaries.	D
_____	Location map (ex. ADC Street Map)	D

102.4(b) (5) (ii) "The types, depth, slope, locations and limitations of the soils."

_____	Types and locations (boundaries) of all soil types.	D
_____	Soil survey map(s).	N
_____	Soils legend.	D
_____	All soil limitations (from the 1963 York County Soil Survey - Tables 5 & 6 or the 2002 York County Soil Survey – Tables 12, 14, 15, 16, 17, 18, 19, & 20)	D&N
_____	Means (resolutions) to address the identified soil limitations.	D

102.4(b)(5)(iii) "The characteristics of the earth disturbance activity, including the past, present, and proposed land uses and the proposed alteration to the project site."

_____	Limits of earth disturbance.	D
_____	Limits of earth disturbance includes disturbance necessary for all improvements including offsite utility connections and making final lawn.	D
_____	NPDES permit boundary labeled on the plan drawing or provided on a smaller scale project overview sheet.	D
_____	NPDES permit boundary includes the entire property boundaries and all offsite right-of-ways.	D
_____	Proposed contours are on maximum 2' intervals.	D
_____	Proposed contour elevations have been identified.	D
_____	Proposed contours tie into all existing contours.	D
_____	Individual lot proposed contours.	D
_____	Addresses where and how the excess fill material from the project will be disposed of.	D
_____	Final contours for removal/regrading of all basins/traps/ channels.	D
_____	All proposed stormwater management facilities/PCSM BMPs (ex. stormwater swales, pipes, infiltration trenches, and inlets) required by the municipal and/or necessary for proper drainage.	D
_____	An analysis demonstrating that the peak discharge of the 10 year 24 hour storm event from all permanent stormwater management basins/storm sewer outfall(s) will not create accelerated erosion (and flooding of any adjacent downstream improvements) from the discharge point to a point at least 150' downstream.	N
_____	Photocopy(s) of any and all required DEP and/or Army Corp of Engineers permits (or) photocopies of all completed permit applications (if earth disturbance is proposed within or along Waters of the Commonwealth and/or within the 100 year floodway).	D

_____	All proposed improvements.	D
_____	Lot/unit numbers.	D
_____	Inlet numbers	D
_____	Inlet rim elevations provided for inlets discharging to and located adjacent to basin(s)/trap(s). The inlet rim elevations should be at least equivalent with the top of basin/trap berm elevation.	D
_____	Phase boundaries.	D
_____	Proposed legal right-of-ways/utility/access easements	D
_____	Locations of topsoil stockpiles.	D
_____	Standard note #1 located with the E&S notes section.	D
_____	North arrow.	D
_____	All symbols shown on the plan drawing shown in the legend.	D
_____	Past (last 50 yrs), present, and proposed land uses addressed.	N
_____	The location(s) of soil samples taken to identify potential soil contaminants has/have not been provided on the plan drawings.	D
_____	The proposed measures to manage and control discharges of the identified soil contaminants have not been provided on the plan drawings.	D

102.4(b) (5) (iv) “The amount of runoff from the project area and its upstream watershed area.”

_____	<i>Maximum</i> during construction drainage area(s) for all basins, traps, and swales outlined and labeled.	D
_____	Maximum during construction drainage area(s) <i>acreage</i> for all basins, traps, and swales labeled on the plan drawing or on a separate drainage area sheet.	D
_____	Entire offsite drainage area to the project has been provided on the plan drawing or outlined on a separate smaller scale drainage area sheet (or) USGS quad map in the plan narrative.	D

102.4(b) (5) (v) “The location of waters of the Commonwealth which may receive runoff within or from the project site pursuant to Chapter 93 of this title.”

_____	Location of the receiving stream(s) or other watercourse(s) has not been provided on the plan drawing or on a copy of a USGS topographic quad map.	D&N
_____	PA Chapter 93 (Water Quality Standards) receiving stream designation(s) or existing use classification(s) (whichever is greater).	N

102.4(b) (5) (VI) “A written depiction of the location and type of perimeter and on-site BMP’s used before, during, and after the earth disturbance activity.”

_____	Standard note #2 located with the E&S notes section.	D
_____	Adequate perimeter BMPs for the entire downslope side of the project during all stages and phases of construction.	D
_____	Adequate perimeter BMPs for earth disturbance associated with the required initial clearing and grubbing of existing vegetation (ex. trees & brush).	D
_____	BMPs for earth disturbance activities associated with any proposed wetland mitigation area(s).	D
_____	BMPs provided for any in-stream work/stream or wetland crossings.	D
_____	BMP’s for earth disturbance associated with the proposed road widening and/or excavation of offsite utility trenches in right-of-way(s).	D
_____	BMPs provided for rough-graded street(s) down slope of the proposed broad-based dip(s)/inlet berm(s).	D
_____	BMPs provided for rough-graded streets and disturbed areas up slope of the streets prior to the inlets being installed and becoming functional.	D
_____	Installation of earthen, stone, and asphalt inlet berms until the streets receive the final wearing course.	D
_____	Sequence addresses adequate BMPs for excavation of all utility trenches.	D
_____	On-lot BMPs not proposed as primary BMP for higher density residential subdivisions.	D
_____	On-lot BMPs provided as a <u>secondary</u> BMP to minimize sedimentation to streets sidewalks, and neighboring downslope lots/properties. Please provide specific on-lot scenarios for each lot, including a list of lot numbers with each scenario.	D
_____	Addresses the installation of sediment control BMPs to keep sediment from clogging the post construction stormwater infiltration BMPs and/or underground storage facilities.	D

102.4(b) (5) (vii) “A sequence of BMP installation and removal in relation to the scheduling of earth disturbance activities, prior to, during and after earth disturbance activities.”

_____	Standard notes #3 & 4 located as stages 1 & 2 of the construction sequence respectively.	D
_____	Standard notes #5 & 6 located prior to the beginning of the construction sequence.	D
_____	Standard note #7 located with the E&S notes section.	D

Complete and site-specific sequence of BMPs installation

_____	A complete, detailed, site-specific construction sequence including installation and removal of <u>all</u> Best Management Practices (BMPs) during each stage of construction.	D
_____	Addresses stripping, stockpiling, installing silt fence and stabilization of the topsoil.	D

_____	All BMP maintenance/standard notes removed from the construction sequence.	D
_____	A separate detailed construction sequence for any in-stream work/stream crossings.	D
_____	Addresses placement of excess material excavated for construction of all sediment basins in an area with adequate BMP's installed and limited area of disturbance.	D
_____	Addresses where the material will come from construct all basin berms.	D
_____	Addresses installing a compacted stone base over the entire length any driveways and stabilizing the disturbed areas on both sides of the driveways immediately upon completion of grading.	D
_____	Addresses when rough-grading of the lots will take place.	D
_____	Sequence addresses replacing topsoil and stabilization of all disturbed areas upon completion of the streets, curbs, and utilities and prior to individual lot construction.	D

Activities planned to limit exposed areas

_____	Construction sequence addresses field-marking all Waters of the Commonwealth boundaries (ex. stream buffers, wetland boundaries, spring seeps, and floodway) prior to proposed earth disturbance.	D
_____	Construction sequence addresses field-marking the limits of disturbance.	D
_____	Construction sequence addresses field-marking all limits of disturbance within the interior of the site (ex. any steep slopes, infiltration areas and trees selected to be saved).	D
_____	Construction sequence limits the duration and extent of disturbance for each stage.	D

Removal of temporary BMPs

_____	Sequence addresses the removal and proper disposal/recycling of the BMPs.	D
_____	The BMPs may not be removed until a minimum uniform 70% perennial vegetative cover is well-established across the entire upslope project drainage area. All parking lots, driveways, and streets must be paved or have a compacted stone base in place.	D
_____	Sequence addresses how and when the lot(s) proposed in the location off all sediment basin/trap(s) will be completed and what BMP's will be used for construction of the lot(s).	D
_____	BMPs for conversion of the sediment basin to a permanent stormwater management basin.	D
_____	Sequence addresses repair and permanent stabilization of the areas disturbed during removal of the temporary BMP's.	D
_____	Standard note #8 & 9 located at the end of the construction sequence.	D

Installation of PCSM BMPs

_____	Sequence addresses installation & stabilization of all Post Construction Stormwater Management (PCSM) BMPs shown on the PCSM plan.	D
_____	Sequence addresses avoiding compaction of proposed post construction stormwater infiltration areas.	D
_____	Sequence proposes the PCSM BMPs to be installed after permanent stabilization of the upslope drainage areas.	D

102.4(b) (5) (viii) “Supporting calculations” 102.4(b) (5) (ix) “Plan Drawings”
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CHANNELS (pages 16-39 of April 15, 2000 E&S Manual)

_____	All diversion channels outlet to a stable area.	D
_____	All diversion channels are located up slope of all proposed disturbance.	D
_____	Collector channels are located down slope of all proposed disturbance.	D
_____	Perimeter channels <u>not</u> shown on top of proposed fill.	D
_____	All channels avoid running through areas of proposed improvements.	D
_____	All channels have been provided with adequate outlet protection.	D
_____	Check dams (for example, rock filters and strawbales) have <u>not</u> been shown in channels.	D
_____	An adequately sized pipe and clean rock fill or other stable crossing has been provided for any required channel crossings.	D
_____	Proposed contours have been provided for all channel/berm(s).	D
_____	Channel sections delineated (i.e. channel breaks).	D
_____	Top width for all channels provided in the design information is consistent with the top width provided on the plan drawing.	D&N
_____	Bed slope of all channel/berms(s) is 1% or more.	D
_____	All channels/stormsewer outfall(s) extend to the bottom elevation of all basin/trap(s) and at least 10 feet beyond the toe of slope.	D
_____	All channel/berm(s) bed slopes on the plan drawing are consistent with the bed slopes provided in the channel design information provided in the plan narrative.	D&N
_____	Channel cross-section detail(s)(Standard Construction Details #1 & #2) for all channels.	D
_____	Lining is extended to the top of the channel side slopes	
_____	Total depth	
_____	Bottom width	
_____	Side slopes	
_____	Type of lining	
_____	The rock-lined channel detail shows the depth of excavation required for proper placement of the rock lining..	
_____	The minimum channel(s) rip-rap thickness is at least 1.5X the maximum stone size (dmax).	
_____	The rock-lined channel detail shows underlying geotextile fabric	

_____	A construction detail and temporary erosion control blanket has been provided for all channels with a drainage area < 1 acre.	D
_____	<u>Standard channel maintenance note #10</u> located with the channel cross-section detail.	D
_____	<u>Standard channel installation note #11</u> with the channel cross-section detail.	D
_____	All channel(s) (with a drainage area of 1 acre or more) are <u>not</u> less than 1 foot total depth for practical considerations (ex. ease of construction and buildup of sediment, sod, leaves and other debris).	D
_____	All channels provided with an adequate temporary lining.	D
_____	Manufacturer's installation detail(s) and instructions (including staple pattern) for all proposed channel lining(s).	D
_____	Temporary and permanent channel design information (Standard Worksheets #18 & #21) for all channel/berms.	N
_____	Peak flow calculations (ex. Rational Method, TR-55, etc.)	N
_____	Channel design information in the plan narrative is consistent with the channel details provided on the plan drawings.	D&N
_____	The channel design software program utilized provides all the required channel design information. Please provide completed Standard Worksheets #18 & 21 for both temporary and permanent channel conditions.	N
_____	All channel(s) provide the required discharge capacity. If an alternative design (peak flow) method is used the standard worksheets for that method must be provided (ex. Rational Method – Standard Worksheets 19 & 20).	N
_____	Manning's "n" value is correct for all vegetated channels (See Figure 3B – page 29 of E&S Manual).	N
_____	The shear stress method has been used for all channel/berm(s) having a bed slope equal to or steeper than 10% slope.	N
_____	The long term manufacturer's specifications (ex. Manning's N, allowable velocity & shear stress) for all proposed channel linings.	N
_____	All channel/berm(s) designed for each significant change in bed slope.	N
_____	The design velocity or shear stress for all channel/berm(s) does not exceed the permissible velocity or shear stress for the proposed temporary or permanent lining.	N
_____	All channel/berm(s) provide the required discharge capacity.	N
_____	Minimum 6" freeboard provided for all channel/berm(s)	N
_____	The bottom width to depth ratio for all channel/berm(s) does not exceed the maximum 12:1.	N
_____	All areas of concentrated flows (for example, stormwater swales and roof downspouts) have a temporary erosion control blanket installed immediately upon completion of final grade. Roof leaders temporarily connected to the end of roof down spouts and extended to an undisturbed area until the grass is well-established.	D

SEDIMENT BASINS (pages 40-63 of April 15, 2000 E&S Manual)

_____	Sediment basin(s) <u>not</u> located within Waters of the Commonwealth.	D
_____	Sediment basin(s) clean out elevation is higher than the adjacent wetland, spring seep, stream, pond elevation. The plan addresses how a constant discharge will be eliminated from the lowest row of dewatering perforations.	D
_____	Access to sediment basin(s) for routine maintenance and for converting the sediment basin(s) to the permanent stormwater management facility or for filling in the temporary sediment basin(s).	D
_____	Sediment basin(s) principal and/or emergency spillway discharge(s) extend to waters of the Commonwealth, an adequately-sized stable channel, an adequately-sized storm sewer, or approved alternative.	D
_____	An analysis for basin(s) demonstrating that the greater of the 2 cfs. /acre sediment basin discharge (or) the peak discharge of the 10 year 24 hour storm event from the permanent stormwater management basin will not create accelerated erosion (and flooding of any adjacent downstream improvements) from the discharge point to a point at least 150' downstream. Photographs of the discharge area may be helpful to the plan reviewer.	D
_____	Existing/proposed ground elevation at the end of sediment basin barrel(s) allow for positive drainage of the basin(s).	D
_____	Sediment basin does not outlet to another sediment basin.	D
_____	Required total storage capacity.	N
_____	All sediment basin(s) storage information (Standard Worksheets #12, 13, & 14).	N
_____	Minimum 1,000 cu. ft. of sediment storage per disturbed acre	N
_____	Minimum 1 foot of sediment storage	N
_____	Minimum 3600 cu. ft. to 5,000 cu. ft. per acre settling volume	N
_____	Surface areas (at each contour elevation) provided on the plan drawing are consistent with the surface areas provided in the narrative stage storage information.	D&N
_____	Basin berm and outlet details (Standard Construction Details #3, 4, 5, & 6).	D
_____	Minimum 8' top of berm width	
_____	Top of berm elevation	
_____	Side slopes (Z1 + Z2 > or = 5, no steeper than 2:1)	
_____	Key trench	
_____	Clay core	
_____	Anti-seep collars including # and dimensions	
_____	Emergency spillway crest is minimum 6" above the temporary riser crest elevation	
_____	A note indicating watertight seals on all joints and connections.	
_____	A note indicating that all permanent riser orifices below the temporary riser crest elevation will be sealed watertight	
_____	Temporary riser diameter and/or type of material (min. 15")	
_____	The riser diameter is 1.25X the barrel diameter	
_____	Temporary riser crest elevation	
_____	Number and spacing of riser dewatering perforations	
_____	Clean out elevation	
_____	Basin bottom elevation	
_____	Permanent riser detail	

_____	Permanent riser crest elevation	
_____	Permanent riser has extended to the temporary riser crest elevation	
_____	Permanent riser opening length and width	
_____	Top of permanent riser not sealed off	
_____	Concrete riser base & dimensions	
_____	Trash rack & anti-vortex details & dimensions for the permanent and/or temporary risers	
_____	Permanent riser/outlet structure grate has <u>not</u> been shown. DEP requires the grate to be temporarily removed until the sediment basin is converted to the permanent stormwater management basin.	
_____	Barrel diameter and/or type of material (min. 12")	
_____	Barrel length	
_____	Barrel inlet invert and/or outlet invert elevation	
_____	Temporary stub barrel diameter and/or material	
_____	Temporary stub barrel length	
_____	Correct number of 1" dewatering perforations at each elevation	
_____	Minimum 2' freeboard above the 2 cfs/acre flow elevation	D&N
_____	<u>Standard basin maintenance note #12</u> located with the basin berm detail.	D
_____	Sediment basin dewatering facility detail (Standard Construction Detail #10).	D
_____	Photocopy of required PA DEP dam permit or a photocopy of the completed permit application for any basins with a berm constructed of 15' of fill or more.	D
_____	Sediment basin(s) elevation(s) on the construction detail is/are consistent with the elevation(s) provided on the plan drawing and/or in the plan narrative.	D
_____	Clean out marker locations halfway between <u>all</u> incoming channels/berms/storm sewer pipes and the basin outlet structure.	D
_____	Clean out marker detail for all sediment basins.	D
_____	<u>Standard note #13</u> located with the clean out marker detail.	D
_____	Clean out elevation(s) provided on the construction detail is/are consistent with the clean out elevation(s) provided in the plan narrative.	D&N
_____	Required discharge capacity (2 cfs/acre).	N
_____	Discharge information/calculations (Standard Worksheets #12 &17).	N
_____	Discharge of the sediment basin riser dewatering perforations or skimmer <u>not</u> included in the required 2 cfs/ac. discharge.	N
_____	Emergency spillway provided.	D
_____	Emergency spillway details.	D
_____	5' minimum width earthen plug for rip-rap spillways only	
_____	Lining trenched in	
_____	Underlying geotextile	
_____	Crest minimum 6" above the riser crest	
_____	Side slopes	
_____	Weir section with all dimensions	
_____	Outside embankment channel section with all dimensions	
_____	Outlet dissipater with all dimensions	
_____	Proposed channel grading for emergency spillway(s).	D

_____	Channel design information (capacity & protective lining) for emergency spillway channel (on outside slope of the basin berm).	N
_____	Emergency spillways constructed on fill material have an adequate riprap or other adequate permanent protective lining (for example, turf reinforcement mat).	D
_____	Dewatering information (Standard Worksheets 15 & 16).	N
_____	Dewatering information provides for dewatering of the settling volume from the crest of the temporary riser down to the required sediment-storage (clean-out) elevation within the required 2 to 7 day time frame (or) 4 to 7 day time frame.	N
_____	Sediment basin riser dewatering perforations <u>not</u> placed below the required sediment-storage (clean-out).	N
_____	18" (or greater) average deep permanent pool below the required sediment-storage (clean-out) elevation.	D&N
_____	Sediment basin(s) skims water from the top 6" of the dewatering zone.	D
_____	Skimmer detail.	D
_____	Orifice size	
_____	Arm length = 1.41 X (2 cfs elevation – skimmer stub invert elevation)	
_____	Arm diameter	
_____	Flexible pipe	
_____	Watertight connections	
_____	Stone berm to prop skimmer at clean out elevation	
_____	Skimmer rope	
_____	Skimmer stub invert elevation	
_____	Skimmer stub barrel length (max. 1')	
_____	Manufacturer not specified	
_____	Detail provided is not a Faircloth skimmer	
_____	Maintenance notes	
_____	Manufacturer's specifications and design information.	D
_____	<u>Standard note #14</u> located with the skimmer construction detail.	D
_____	Required flow length to basin width ratio of 2:1 or greater (or) 4:1 or greater.	D
_____	Sediment basin baffle detail	D
_____	7' or TRCE	
_____	Trenched in 1'	
_____	Marine grade plywood material	
_____	Type of geotextile	
_____	Chainlink fencing for geotextile baffle	
_____	Tied into embankment on one side (if applicable)	
_____	Located away from swale and pipe outfalls in basin dead zone.	D
_____	Permanent low flow channels located in the basin(s) removed from the E&S plan drawing.	D
_____	<u>Standard note #15</u> located with the sediment basin berm details.	D
_____	<u>Standard basin installation note #16</u> located with the basin berm detail.	D

SEDIMENT TRAPS (pages 64-69 of April 15, 2000 E&S Manual)

_____	Trap drainage areas do not exceed 5.0 acres.	N
_____	Discharge to waters of the Commonwealth, an adequately-sized stable channel, an adequately-sized storm sewer or approved alternative.	D
_____	Analysis demonstrating that the greater of the sediment trap discharge (1.5 cfs/acre) or the peak discharge of the permanent stormwater facility from the 10 year/ 24 hour storm event will not create accelerated erosion of the downstream area.	N
_____	Located down slope of all proposed disturbance.	D
_____	Sediment trap does not outlet to another sediment trap.	D
_____	Required storage capacity.	N
_____	Volume of the stone filter berm around the permanent trap outlet structure has been subtracted from the total storage volume provided.	N
_____	Minimum 2' storage depth.	D&N
_____	Minimum 1' sediment storage depth.	D&N
_____	Stage storage information.	N
_____	Surface areas at each contour elevation on the plan drawing are consistent with the surface areas provided in the narrative stage storage information.	D&N
_____	Berm and outlet details (Standard Construction Details # 11-14).	D
_____	Min. 5' top width	
_____	Top of berm minimum 1 foot above stone outlet crest	
_____	1-1" dewatering perforation per vertical foot of riser above the clean out elevation	
_____	Trash rack & anti-vortex details & dimensions for the permanent and/or temporary risers	
_____	The permanent riser/outlet structure grate has <u>not</u> been shown. DEP requires the grate to be temporarily removed until the sediment trap is converted to the permanent stormwater management basin.	
_____	Anti-seep collars	
_____	R-3 min. / min 6" of max #57 filter stone/filter cloth	
_____	Side slopes are no steeper than 2:1	
_____	Stone outlet width = 2 x # of drainage acres or 2 x spillway crest height whichever is greater	
_____	Stone outlet width = 6 x # of drainage acres	
_____	Embankment height does <u>not</u> exceed maximum 5' allowable.	
_____	<u>Standard trap installation note #16</u> located with the trap berm detail.	D
_____	<u>Standard trap maintenance note #12</u> is located with the trap berm detail.	D
_____	Elevation(s) provided on the construction detail is/are consistent with the elevation provided on the plan drawing and/or in the plan narrative.	D&N
_____	Clean out marker locations halfway between <u>all</u> incoming channels/berms/storm sewer pipes and the trap outlet structure.	D
_____	<u>Standard note #13</u> located with the clean out marker detail.	D
_____	Clean out marker detail.	D

_____	Required discharge capacity (minimum 1.5 cfs per acre).	N
_____	Riser sediment trap(s) discharge information/calculations.	N
_____	1' freeboard above the 1.5 cfs/ac. discharge elevation.	D&N
_____	Minimum flow length to trap width ratio of 2:1 or greater. Minimum length of flow through a trap is 10'.	D
_____	Standard Worksheet #8.	N

SILT FENCE (pages 86-92 of April 15, 2000 E&S Manual) & **COMPOST FILTER SOCKS**

_____	Silt fence type.	D
_____	Rock filters <u>not</u> shown on the plan drawings.	D
_____	Within the limits of disturbance.	D
_____	Downslope of all proposed disturbance.	D
_____	Placed at the toe of the fill slope above the end of any pipe entrances/outfalls and ties into the sides of any pipes or headwalls/endwalls.	D
_____	At least 8 feet from the toe of any fill slopes.	D
_____	Located at perimeter of project away from heavy construction areas	D
_____	<u>Not</u> located in an area(s) of concentrated flow (ex. channels, ditches, spillways, around storm inlets, and across pipe entrances and outfalls)	D
_____	<u>Not</u> located in rock or rocky soils preventing the full and uniform anchoring	D
_____	Existing and/or proposed slope length upslope the silt fence does <u>not</u> exceed the maximum allowable slope length (See Table 18 and 19 of E&S Manual).	D
_____	Multiple rows of silt fence <u>not</u> be placed across the slope.	D
_____	Parallel to the existing contours.	D
_____	Ends extended <u>at least</u> 8' upslope at 45 degrees to the main silt fence alignment.	D
_____	All applicable silt fence details (Standard Construction Details #19, 20, & 21)	D
_____	Correct fabric height	
_____	Maximum stake spacing	
_____	Stakes on down slope side	
_____	Stakes/posts type and size	
_____	Stakes minimum 18" in ground	
_____	Reinforcing mesh for 30" reinforced silt fence	
_____	Minimum 10 gauge reinforcement wire	
_____	Fabric trenched in 6" deep by 6" wide trench (or) 8" trench for super silt fence	
_____	Compacted backfill	
_____	Installation & maintenance notes	
_____	Type and spacing of fasteners for super silt fence	
_____	No. 7 Ga. tension wire for super silt fence	
_____	Ends sections wrapped together	

_____	Compost filter sock detail	
_____	Correct sock diameter	
_____	Maximum stake spacing	
_____	Stake type and size	
_____	Minimum depth of stakes	
_____	Compost mulch blown/wedged along upslope side of sock to prevent runoff from undermining sock.	
_____	Installation & maintenance notes (ex. clean out)	
_____	Sock shown placed on stable undisturbed ground	
_____	Filter sock netting type	
_____	Rock filter outlet (Standard Construction Detail #18) detail for silt fence blow out repair.	D
_____	Minimum 6" of #57 filter stone	
_____	R-3 rock	
_____	Rock filter height	
_____	Rock filter height is 5/6 th height of silt fence	
_____	Minimum 1' overlap with silt fence	
_____	Maintenance note	

OUTLET PROTECTION (pages 111-124 of April 15, 2000 E&S Manual)

_____	Outlet protection at all pipe discharge points/diversion channel outlets.	D
_____	All pipe discharge points labeled/identified.	D
_____	Outlet protection details (Standard Construction Detail #33 or Figure #23).	D
_____	0% level bottom	
_____	Rock extended up side slopes	
_____	Rock size	
_____	All required dimensions	
_____	Min. depth = to 1.5 dmax but not less than 6"	
_____	Outlet protection design calculations (Standard Worksheet 23 and Figures 21 or 22).	N
_____	Design velocity does not exceed the maximum allowable velocity for the rock size provided.	D&N
_____	Analysis provided demonstrating that the peak discharge of the 10 year 24 hour storm event from will not create accelerated erosion (and flooding of any adjacent downstream improvements) from any pipe discharge points to a point at least 150' downstream.	N

LEVEL SPREADERS (pages 97-99 of April 15, 2000 E&S Manual)

_____	Earthen level spreaders <u>not</u> proposed below basins, traps, and pipe outfalls.	D
_____	Maximum drainage area = 5 acres for earthen level spreaders.	D
_____	Discharges to undisturbed, well-established minimum uniform 90% perennial grass cover.	D
_____	Does <u>not</u> discharge to wooded areas.	D
_____	Maximum distance (at max. 5% slope) from earthen level spreader to drainageway is 100 feet unless very uniform and very stable conditions exist.	D

_____	Earthen level spreader is <u>not</u> constructed on fill.	D
_____	Shown parallel to existing contour i.e. 0% grade.	D
_____	Grade of last 20' of diversion channel to earthen level spreader has a smooth transition to level spreader and is less than or = to 1%.	D
_____	Construction details (Standard Construction Detail #25).	D
_____	Lip protected with a permanent turf reinforcement mat or concrete curbing	
_____	Total depth (6" minimum)	
_____	Minimum 6' width for earthen level spreaders	
_____	0% grade	
_____	Maximum design discharge to an earthen level spreader = 1 cfs per foot of length based on the peak rate of flow from a 10 year frequency storm (or) minimum 5 feet length per acre of drainage area not to be less than 5' and not to exceed 25' in length.	D&N
_____	Structural level spreader designed for the maximum discharge from the pipe spillway.	N

ROCK CONSTRUCTION ENTRANCES (pages 79-81 of April 15, 2000 E&S Manual)

_____	Rock construction entrance location(s).	D
_____	Rock construction entrance detail (Standard Construction Detail #16).	D
_____	AASHTO #1 rock size	
_____	Minimum 50' length	
_____	Minimum width	
_____	Minimum 8" stone depth	
_____	Underlying geotextile fabric	
_____	Maintenance note	

BROAD-BASED DIPS/WATERBARS

_____	Broad-based dip(s) shown across rough-graded roadways to direct runoff to sediment basin(s) or trap(s).	D
_____	Broad-based dip(s) shown on a 30 degree angle across street.	D
_____	Correct spacing of the broad-based dip/waterbar(s).	D
_____	Broad-based dip construction detail.	D
_____	Minimum 2' depth	
_____	Minimum 20' length	

INLET PROTECTION (pages 104-110 of April 15, 2000 E&S Manual)

_____	The inlets receiving the proposed inlet protection have been identified.	D
_____	Inlet protection used only as a <u>secondary</u> BMP between a disturbed area and waters of the Commonwealth.	D
_____	Inlet protection <u>not</u> shown on inlets draining to a sediment trap or basin.	D

_____	Inlet protection not proposed on/along major paved roadways where ponding may cause traffic hazards.	D
_____	The drainage areas to the inlet(s) receiving inlet protection outlined and labeled.	D
_____	Drainage areas to inlets do not exceed the maximum ½ to 1 acre allowable for inlet protection.	D
_____	Inlet protection construction details (Standard Construction Details #28-32).	D
_____	Sandbags over throat of inlet	
_____	Rebar	
_____	6" of #57 filter stone	
_____	Overflow pipe with minimum 4" head	
_____	Galvanized ¼" maximum opening wire mesh	
_____	Maintenance note requiring clean out or replacement after every runoff event	
_____	Compacted earthen, stone, and asphalt inlet berm details.	D
_____	Minimum 6" high above the grate	
_____	1' top width inlet berms for all inlets <u>not</u> located in a minimum 6" sump condition until the final wearing course is installed.	

PUMPED WATER FILTER BAGS (page 100 of April 15, 2000 E&S Manual)

_____	Pumped water filter bag construction detail (Standard Construction Detail #26).	D
_____	Pumping rate specified	
_____	Stable discharge area provided	
_____	Hose clamps shown	

VEGETATIVE FILTER STRIPS (page 82 of April 15, 2000 E&S Manual)

_____	Photo documentation to verify the suitability of all <i>existing</i> vegetative filter strips.	N
_____	Vegetative filter strips occur on the project site and are identified.	D
_____	Composed of well-established perennial grass.	D
_____	Upslope area does <u>not</u> exceed maximum slope length for required sheet flow conditions.	D
_____	The minimum filter strip width has been provided.	D

TEMPORARY SLOPE PIPES (pages 102-103 of April 15, 2000 E&S Manual)

_____	Temporary slope pipe location(s).	D
_____	Temporary slope pipe construction detail (See Standard Construction Detail #27).	D
_____	Minimum 10' wide top of slope berm.	
_____	Minimum berm height.	
_____	Minimum pipe diameter provided	
_____	Pipe securely staked to the slope.	
_____	Maximum distance between stakes is 10 feet.	
_____	Drainage area does <u>not</u> exceed 5 acres.	D
_____	Sized to convey anticipated peak flow from the design storm.	D&N

TEMPORARY STABILIZATION (pages 70-78 of April 15, 2000 E&S Manual)

	Seed	Lime	Fertilizer	Mulch	Straw Anchoring	Other	
Types	_____	_____	_____	_____	_____	_____	D
Rates	_____	_____	_____	_____	_____	_____	D
_____						Temporary seed and mulch application rates are adequate (See the “Erosion Control & Conservation Plantings on Noncropland” publication or the PennDOT 408 specs.). Clean straw mulch should be applied at a rate of 3 tons per acre.	D
_____						PennDOT 408 specifications referenced on the plan provide the specific seed type & rate (i.e. Table A – Formula E).	D
_____						Temporary fertilizer and lime application rates adequate in the absence of soil tests. (See the “Erosion Control & Conservation Plantings on Noncropland” publication or the PennDOT 408 specs.).	D
_____						Wood cellulose fiber hydromulch used in conjunction with a straw mulch.	D
_____						Anchoring of straw-mulch (See pages 76 & 77 of current E&S Manual).	D

PERMANENT STABILIZATION (pages 70-78 of April 15, 2000 E&S Manual)

	Seed	Lime	Fertilizer	Mulch	Straw Anchoring	Topsoil	
Types	_____	_____	_____	_____	_____	_____	D
Rates	_____	_____	_____	_____	_____	_____	D
_____						Standard note #17 located with the stabilization specifications.	D
_____						Permanent seed and mulch application rates are adequate (See the “Erosion Control & Conservation Plantings on Noncropland” publication or the PennDOT 408 specs.). Clean straw mulch should be applied at a rate of 3 tons per acre.	D
_____						Permanent seed types provided for all soil conditions (ex. acidic, low fertility, excessively dry, excessively wet, steep slope) (See Table 15, page 75 of the current E&S Manual).	D
_____						Permanent fertilizer and lime application rates adequate in the absence of soil tests. (See the “Erosion Control & Conservation Plantings on Noncropland” publication or the PennDOT 408 specs.).	D
_____						Wood cellulose fiber hydromulch used in conjunction with a straw mulch.	D
_____						Anchoring of straw-mulch (See pages 76 & 77 of current E&S Manual).	D
_____						Addresses replacing topsoil and the depth of topsoil to be placed (suggest <i>minimum</i> 6” to promote stormwater infiltration and permanent vegetative stabilization) on all disturbed areas to be permanently revegetated.	D

OTHER STABILIZATION

_____	All references to allowing 20 days to pass before stabilizing idle disturbed areas removed.	D&N
_____	Standard note #18 located with the stabilization specifications.	D
_____	Standard note #19 located with the stabilization specifications.	D

_____	Areas receiving an erosion control blanket shaded.	D
_____	Manufacturer's erosion control blanket slope installation detail.	D
_____	Surface roughening (ex. stair stepping, grooving, and tracking) instructions.	D
_____	Addresses permanent stabilization of the agricultural fields within the project boundaries that are not proposed to be developed or are part of a future phase of development.	D

OTHER BMPS

DYNAMIC/TOP-OF-SLOPE BERMS (page 101 of April 15, 2000 E&S Manual)
STILLING WELLS (page 122-124 of April 15, 2000 E&S Manual)

PIPELINE & UTILITY PROJECTS (page 125-130 of April 15, 2000 E&S Manual, "Avoiding Common Erosion & Sediment Control Plan Deficiencies – Pipe and Utility Line Projects" – July 2000-DEP, and "Underground Utility Line Construction – Typical Erosion & Sediment BMPs" – DEP-Bureau of Watershed Management – August 1, 2001)

IN-CHANNEL WORK (pages 131-135 of April 15, 2000 E&S Manual and, "Avoiding Common Erosion & Sediment Control Plan Deficiencies – Pipe and Utility Line Projects" – July 2000-DEP)

STREAM RESTORATION ("Recommended Minimal Guidelines for Erosion & Sediment Control at Stream Restoration Projects" – DEP-SCRO-S&W -Revised 2/29/00)

SINGLE LOTS (Page 137 of April 15, 2000 E&S Manual and YCCD's "A Guide to Developing an Effective Erosion & Sediment Control Plan – March 2003")

COMPOST FILTER BERMS & MULCH (Page 136a of April 15, 2000 E&S Manual)

102.4(b) (5) (x) "A maintenance program which provides for inspection of BMPs on a weekly basis and after each measurable rainfall event, including the repair of BMPs to ensure effective and efficient operation."

_____	Standard note #20 located in the maintenance program on the first sheet.	D
_____	Standard note #21 located in the maintenance program on the first sheet.	D
_____	BMP maintenance notes and clean out instructions located with each BMP's construction detail.	D
_____	Standard note #22 has been located with the standard E&S note section.	D

102.4(b)(5)(xi) "Procedures which ensure that the proper measures for the recycling or disposal of materials associated with or from the project site will be undertaken in accordance with Department regulations."

Directions for recycling/disposal of construction wastes

_____	Standard note #23 has been located with the standard E&S note section.	D
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Soil/rock disposal areas provided with BMPs

_____	Standard note #24 has been located with the standard E&S note section.	D
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_____ **Standard note #25** has been located with the standard E&S note section.

_____ **Standard note #26** has been located with the standard E&S note section.

_____ **Standard note #27** has been located with the standard E&S note section.

** This checklist is based upon the E&S Control Plan Technical Review Checklist in DEP's April 15, 2000 Erosion and Sediment Pollution Control Program Manual (pages 141-143). The information provided in this checklist includes standard notes, standard construction detail information, and other design requirements found in the April 15, 2000 Erosion and Sediment Pollution Control Program Manual as well as information presented at Conservation District/DEP Workshops and by DEP staff. This checklist is intended to assist plan preparers in submitting technically complete E&S plans and is not intended to include all BMPs and BMP design requirements, etc. set forth in the April 15, 2000 E&S Manual.*