I:\2014\2014169\0 Civil\0-Phase 2\2014169d-2.dwg, ARCH FULL BLEED D (36.00 X 24.00 INCHES), SCHEME PMLSTB, DWG TO PDF.PC3, MICHAEL LETSON, 01.11.2018 2:38:11 PM

DCR PLAN REVIEW MINIMUM STANDARD CHECKLIST

YES NO NA

[X] [ ] [ ] MS-1 Have temporary and permanent stabilization been addressed in narrative?
[ ] [ ] [ ] Are practices shown on the plan?
[ ] [ ] [ ] Seed specifications?
[ ] [ ] [ ] Mulching?
[ ] [ ] [ ] Gravel?
(Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 30 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.)

[X] [ ] [ ] MS-2 Has stabilization of soil stockpiles been addressed in narrative?
[X] [ ] [ ] Are sediment trapping measures provided?
(During construction of the project, soil stock piles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site.)

[X] [ ] [ ] MS-3 Has maintenance of permanent stabilization been addressed?
(A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, mature enough to survive and will inhibit erosion.)

[X] [ ] [ ] MS-4 Are sediment-trapping facilities to be constructed as a first step in LDA?
[X] [ ] [ ] Has maintenance of practices been addressed? (i.e. repair of structures and removal of accumulated sediment)
(Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place.)

[ ] [ ] [X] MS-5 Has stabilization of earthen structures been addressed?
(Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.)

[X] [ ] [ ] MS-6 Are sediment basins required where needed?
(Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.
a. The minimum storage capacity of a sediment trap shall be 134 cubic yards per acre of drainage area and the trap shall only control drainage areas less than three acres.
b. Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The minimum storage capacity of sediment basin shall be 134 cubic yards per acre of drainage area. The outfall system shall, at minimum, maintain the structural integrity of the basin during a 25-year storm of 24-hour duration. Runoff coefficients used in

runoff calculations shall correspond to a bare earth condition or those conditions expected to exist while the sediment basin is utilized.)

[ ] [ ] [X] MS-7 Has stabilization of cut and fill slopes been adequately addressed?
(Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.)

[ ] [ ] [X] MS-8 Are paved flumes, channels, or slope drains required where necessary?
(Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.)

[ ] [ ] [X] MS-9 Have water seeps from slope face, adequate drainage or other protection addressed?
(Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.)

[X] [ ] [ ] MS-10 Is adequate inlet protection required on all operational storm sewer inlets?
(All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.)

[ ] [X] [ ] MS-11 Are channel lining and/or outlet protection required on stormwater conveyance channels?
(Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.)

[ ] [ ] [X] MS-12 Are in-stream construction measures required so that channel damage is minimized?
(When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials.)

[ ] [ ] [X] MS-13 Are temporary stream crossings of non-erodible material required where necessary?
(When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary vehicular stream crossing constructed of nonerodible material shall be provided.)

[ ] [ ] [X] MS-14 Are all applicable federal, state and local regulations pertaining to working it or crossing live watercourses being met?
(All applicable federal, state and local chapters pertaining to working in or crossing live watercourses shall be met.)

[ ] [ ] [X] MS-15 Has re-stabilization of areas subject to in-stream construction been adequately addressed?
(The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.)

[X] [ ] [ ] MS-16 Has stabilization of utility trenches been addressed?
(Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
a. No more than 500 linear feet of trench may be opened at one time.
b. Excavated material shall be placed on the uphill side of trenches.
c. Effluent from dewatering operations shall be filtered or passed through an approved sediment-trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.
d. Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.
e. Restabilization shall be accomplished in accordance with this chapter.
f. Applicable safety chapters shall be complied with.)

[X] [ ] [ ] MS-17 Has the prevention of transporting of soil and mud onto public roadways been adequately addressed? (i.e. Construction entrances, wash racks, daily cleaning of roadways, transport of sediment to a trapping facility.)
(Where construction vehicle access routes intersect paved or public roads provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual development lots as well as to larger land-disturbing activities)

[X] [ ] [ ] MS- 18 Has the removal of temporary practices been addressed?
(All temporary erosion and sediment control measures shall all be removed within 30 days after final site stabilization or after the temporary measures are no longer needed unless otherwise authorized by the local program authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.)

[X] [ ] [ ] MS-19 Are properties and waterways downstream from the development adequately protected from erosion and sediment deposition due to increases in peak stormwater runoff?
(Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration in accordance with the following standards and criteria:

a. Concentrated stormwater runoff leaving a development site shall be discharged directly into an adequate natural or man-made receiving channel, pipe or storm sewer system. For those sites where runoff is discharged into a pipe or pipe system, downstream stability analyses at the outfall of the pipe or pipe system shall be

performed.

b. Adequacy of all channels and pipes shall be verified in the following manner:

(1) The applicant shall demonstrate that the total drainage area to the point of analysis within the channel is one hundred times greater than the contributing drainage area of the project in question; or

(2) (a) Natural channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overtop channel banks nor cause erosion of channel bed or banks.

(b) All previously constructed man-made channels shall be analyzed by the use of a ten-year storm to verify that stormwater will not overtop its banks and by the use of a two-year storm to demonstrate that stormwater will not cause erosion of channel bed or banks; and

(c) Pipes and storm sewer systems shall be analyzed by the use of a ten-year storm to verify that stormwater will be contained within the pipe or system.

c. If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, the applicant shall:

(1) Improve the channels to a condition where a ten-year storm will not overtop the banks and a two-year storm will not cause erosion to channel the bed or banks; or

(2) Improve the pipe or pipe system to a condition where the ten-year storm is contained within the appurtenances;

(3) Develop a site design that will not cause the pre-development peak runoff rate a two-year storm to increase when runoff outfalls into a natural channel or will not cause the pre-development peak runoff rate from a ten-year storm to increase when runoff outfalls into a man-made channel; or

(4) Provide a combination of channel improvement, stormwater detention or other measures which is satisfactory to the plan approving authority to prevent downstream erosion.

d. The applicant shall provide evidence of permission to make the improvements.

e. All hydrologic analyses shall be based on the existing watershed characteristics and the ultimate development condition of the subject project.

f. If the applicant chooses an option that includes stormwater detention, he shall obtain approval from the locality of a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the person responsible for performing the maintenance.

g. Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipators shall be placed at the outfall of all detention facilities as necessary to provide a stabilized transition from the facility to the receiving channel.

h. All on-site channels must be verified to be adequate.

i. Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility.

j. In applying these stormwater management criteria, individual lots or parcels in a residential, commercial or industrial development shall not be considered to be separate development projects. Instead, the development, as a whole, shall be considered a single development project. Hydrologic parameters that reflect the ultimate development condition shall be used in all engineering calculations.

k. All measures used to protect properties and waterways shall be employed in a manner which minimizes impacts on the physical, chemical and biological integrity of rivers, streams and other waters of the state.

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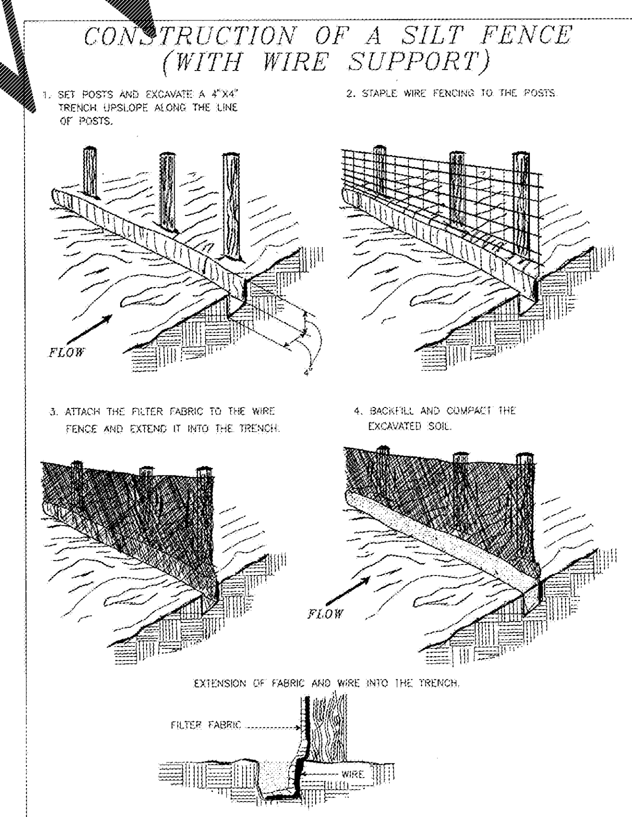

Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant Plate 3.05-1

SILT FENCE (SF) NOT TO SCALE C-641 3

TABLE 3.32-E
(Revised June 2003)
PERMANENT SEEDING SPECIFICATIONS FOR COASTAL PLAIN AREA

SEED		
LAND USE	SPECIES	APPLICATION RATES
Minimum Care Lawn (Commercial or Residential)	Tall Fescue[1] or Bermudagrass[1]	175 - 200 lbs. / 75 lbs.
High-Maintenance Lawn	Tall Fescue[1] or Bermudagrass[1] (seed) or Bermudagrass[1] (by other vegetative establishment method, see Std. & Spec. 3.34)	200-250 lbs. / 40 lbs. (unhulled) 30 lbs. (hulled)
General Slope (3:1 or less)	Tall Fescue[1] / Red Top Grass or Creeping Red Fescue / Seasonal Nurse Crop[2]	128 lbs. / 2 lbs. / 20 lbs. / TOTAL: 150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue[1] / Bermudagrass[1] / Red Top Grass or Creeping Red Fescue / Seasonal Nurse Crop[2] / Sericea Lespedeza[3]	93-108 lbs. / 0-15 lbs. / 2 lbs. / 20 lbs. / 20 lbs. / TOTAL: 150 lbs.

1 - When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCIA. A current turfgrass variety list is available at the local County Extension office or through VCIA at 804-746-4884 or at http://sudan.cses.vt.edu/html/Turf/turf/publications/publications2.html

2 - Use seasonal nurse crop in accordance with seeding dates as stated below:

February, March - April	Annual Rye
May 1st - August	Foxtail Millet
September, October - November 15th	Annual Rye
November 16th - January	Winter Rye

3 - May through October, use hulled seed. All other seeding periods, use unhulled seed. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30 -40 lbs/acre.

FERTILIZER & LIME

- Apply 10-20-10 **fertilizer** at a rate of **500** lbs. / acre (or 12 lbs. / 1,000 sq. ft.)
- Apply **Pulverized Agricultural Limestone** at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by disking or by other means.
- When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/sw/e&s.htm#pubs

PERMANENT SEEDING (PS) NOT TO SCALE C-641 1

TABLE 3.31-B
(Revised June 2003)
TEMPORARY SEEDING SPECIFICATIONS
QUICK REFERENCE FOR ALL REGIONS

SEED		
APPLICATION DATES	SPECIES	APPLICATION RATES
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (lolium multi-florum) & Cereal (Winter) Rye (Secale cereale)	50 -100 (lbs/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (lolium multi-florum)	60 - 100 (lbs/acre)
May 1 - Aug. 31	German Millet	50 (lbs/acre)

FERTILIZER & LIME

- Apply 10-10-10 **fertilizer** at a rate of 450 lbs. / acre (or 10 lbs. / 1,000 sq. ft.)
- Apply **Pulverized Agricultural Limestone** at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
1 - A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
2 - Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by disking or by other means.
3 - When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/sw/e&s.htm#pubs

TEMPORARY SEEDING (TS) NOT TO SCALE C-641 1

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PROJECT:

RIVERPOINTE PLAZA PHASE 2

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HAMPTON, VIRGINIA 23666

FOR:

KB RIVERDALE, LLC

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BLDG. 100, SUITE 370
AUGUSTA, GA 30909
PH. (706) 854-6714

REVISIONS

3	08.19.16	CITY COMMENTS
4	10.04.16	CITY COMMENTS
6	10.13.16	CITY COMMENTS

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EROSION CONTROL DETAILS

SHEET **C-641**

SP 2016-0020

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