

**EROSION & SEDIMENT CONTROL NARRATIVE**

**PROJECT DESCRIPTION**

The purpose of this plan is to provide for filling, grading, and seeding of the first new soccer field to be located in Phase 2 of Smithland Road Park. This project will include consist of filling and grading the area for a new soccer field playing surface. The area will be permanently seeded and mulched so that no additional imperviousness is created. The existing gravel access road will be used for construction access. Disturbed area is estimated to be approximately 7.5 acres.

**EXISTING SITE CONDITIONS**

The existing site exhibits rolling terrain, which is cultivated annually with feed corn. The site drains by sheet flow to the northwest toward the railroad tracks.

**ADJACENT AREAS**

The site is bordered on the northwest by the Chesapeake and Western railroad line, southwest by City property that is wooded, and northeast and southeast by City property that is leased annually for the planting of feed corn.

**SOILS**

The soils on the site are identified by the USDA Soil Conservation Service Soil Survey of Rockingham County as Frederick and Lodi silt loams, of varying slopes. This unit consists of sloping, well drained soils on knolls and ridges. The soil is silt loam to a shallow depth of about 13 inches, underlain with variable clay soils. Permeability is lower in the deeper sections, resulting in high runoff potential as slopes increase. Soil is suitable for use as a subsoil base for the proposed soccer field. Typical erosion control practices will be sufficient to control sediments as erosion potential is low in compacted condition.

**CRITICAL AREAS**

There are no critical areas on the site.

**EROSION AND SEDIMENT CONTROL MEASURES**

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices shall be constructed and maintained according to the minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook, latest edition.

**STRUCTURAL PRACTICES**

**Stone Construction Entrance - 3.02**

The existing gravel access road will serve as the construction entrance for the site. If this measure becomes covered with soil or pushed into the soil by construction traffic, it shall be replaced with a depth of stone equal to the original. During muddy conditions, drivers of construction vehicles may be required to clean off their wheels before entering the highway. Runoff created during this procedure shall pass through an approved sediment removing process.

**Silt Fence - 3.05**

A temporary silt fence barrier shall be constructed where shown on the plan. The silt fence barrier shall be checked regularly for undermining or deterioration of the fabric. Sediment shall be removed when the level of sediment deposition reaches halfway to the top of the barrier. Grading of the soccer field will minimize the amount of sediment runoff reaching the silt fence. Most runoff from the grading activities will be directed toward the sediment traps on either side of the field. The silt fence should still be well trenched and secured into the ground.

**Temporary Diversion Dike - 3.09**

A temporary ridge of compacted soil shall be placed at the base of sloping disturbed areas on each side of the soccer field. On the southwest side the dike will direct flow from the channelized area next to the field into Sediment Trap #1. The second dike will be placed at the northwest corner of the field to assure that any runoff from this area is caught by either the silt fence or by Sediment Trap #2.

**Temporary Sediment Trap - 3.13**

Temporary sediment traps will be placed on each side of the soccer field. Their purpose will be to capture any runoff during construction of the soccer field. Runoff may be generated from the slope areas around the field and from the flatter field itself. The field and the surrounding slopes are graded to drain to generally channelized areas on either side of the field. The sediment traps are placed toward the base of these areas to capture any sediment laden runoff. Diversion dikes are also placed in such a way as to direct drainage from outside of the channels into the sediment traps. Sediment shall be removed from the traps when it has accumulated to one half of the wet storage volume. Accumulated sediment shall be passed through a dewatering device and placed on site.

**VEGETATIVE PRACTICES**

**Temporary Seeding - 3.31**

Temporary seeding shall be applied to diversion dikes and to sediment trap embankments and within 7 days to denuded areas that may not be at final grade but will remain dormant for longer than 30 days. Selection of temporary seeding shall be in accordance with Section 3.31 of the Virginia Erosion and Sediment Control Handbook, latest edition, for the appropriate season. Temporary seeding shall be fertilized and mulched in accordance with Section 3.31 of the Virginia Erosion and Sediment Control Handbook, latest edition.

**Permanent Seeding - 3.32**

All disturbed areas outside the entrance road shall be permanently seeded in accordance with Section 3.32 of the Virginia Erosion and Sediment Control Handbook, latest edition. Seeding selection shall be in accordance with the specifications for the project, which is designed to establish a playable surface for soccer.

**Mulching - 3.35**

Area which cannot be seeded because of the season shall be mulched using straw and mulch anchoring. Rates for straw shall be two tons per acre minimum.

**MANAGEMENT STRATEGIES**

1. Sediment trapping measures to be installed prior to any excavation on site.
2. Construction shall be sequenced so that grading operations can begin and end as quickly as possible.
3. After achieving adequate stabilization to the satisfaction of the E&S Administrator, the temporary erosion and sediment controls shall be cleaned up.

**PERMANENT STABILIZATION**

All areas disturbed by construction shall be stabilized with permanent seeding within 7 days following finish grading. For seedbed preparation, lime and fertilizer according to the soil test. Compacted, crusted or hardened soils shall be loosened by disking, raking, harrowing or other means. Apply necessary thickness of topsoil (2-4 inches). Immediately after seeding is completed, all areas shall be mulched. Use straw at a rate of 2 tons per acre and anchor. Also apply permanent soil stabilization to areas that may not be at final grade but will remain dormant for longer than one year. Seeding of the soccer field shall follow the specifications for the project.

**STORMWATER MANAGEMENT**

No additional impervious areas are proposed, so no permanent stormwater management is necessary. A gravel access road is already existing on the site.

Future phases of the Park will add parking and spectator facilities. At that time a proposed stormwater detention basin will be added to assure that post-construction runoff is controlled to pre-construction levels. The future impervious area of the Park will be less than 16% of the total area encompassed by the Park. Accordingly, no water quality BMP's will be required for the project or the future phases.

**MAINTENANCE**

In general, all erosion and sediment control measures shall be checked weekly and after each significant rainfall, and shall be maintained according to the guidelines set forth in the Virginia Erosion and Sediment Control Handbook, latest edition.

All seeded areas shall be checked regularly to see that a good stand is maintained. Areas should be fertilized and reseeded as necessary.

**EROSION & SEDIMENT CONTROL NOTES**

MS-1 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.

MS-2 During construction of the project, soil stockpiles 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.

MS-4 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 land disturbance takes place.

MS-5 Stabilizations measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.

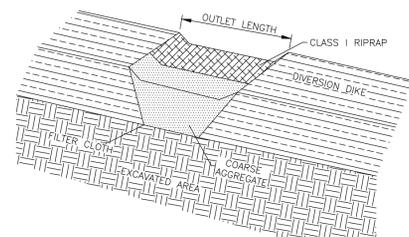
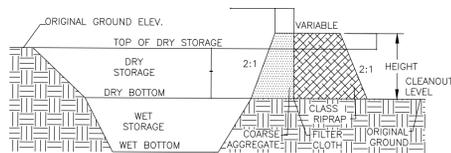
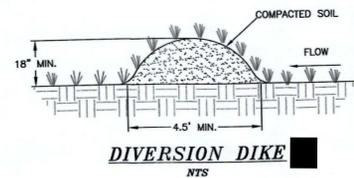
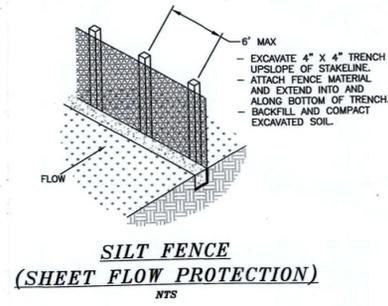
MS-16 Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:

- 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 these regulations.
- f. Applicable safety regulations shall be complied with.

MS-17 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 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.

MS-18 All temporary erosion and sediment control measures shall 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.

No temporary erosion and sediment control measures shall be removed without the approval of the local program administrator.

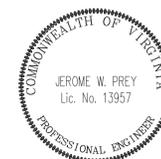


**TEMPORARY SEDIMENT TRAP TABLE**

	ST1	ST2
AREA (AC)	2.7	3.0
WET VOLUME (CY)	184	204
DRY VOLUME (CY)	184	204
TOTAL VOLUME (CY)	368	408
WET BOTTOM	1375	1370
DRY BOTTOM	1376	1371
TOP OF DRY STORAGE	1377	1372

**E&S LEGEND**

- SEDIMENT TRAP
- DIVERSION DIKE
- SILT FENCE
- CONSTRUCTION ENTRANCE



REV	DATE	DESCRIPTION	BY	SCALE:	HORZ.	N/A
				DRAWN BY	JRS	DATE
				CHECKED BY	JWP	DATE
				DESIGN BY	JWP	DATE
				TAX MAP		

SMITHLAND ROAD  
PARK PHASE 2  
E & S  
STORM

DIVISION OF ENGINEERING  
CITY OF HARRISONBURG  
409 SOUTH MAIN STREET  
HARRISONBURG, VIRGINIA

SHEET  
THREE OF THREE