

EROSION CONTROL SUMMARY:

Approximately 0.98 +/- acres will be disturbed during the development. The site is relatively level, with a southwest-to-northeast drainage slope. Compost filter sock will control the vast majority of disturbed area. Other controls include rock construction entrance, inlet filter bags, pumped water filter bags, and bark mulching of finished perimeter grades. The majority of site development will be paved.

All disturbed areas on which activity has ceased for a period to exceed 4 days shall be seeded with PennDOT Formula E grass mix or mulched during winter months in accordance with Sections 804 and 805 of PennDOT Publication 408.

STANDARD EROSION & SEDIMENTATION CONTROL NOTES

- All earth disturbances, including clearing and grubbing as well as cuts and fills shall be done in accordance with the approved E&S plan. A copy of the approved drawings (stamped, signed and dated by the reviewing agency) must be available at the project site at all times. The reviewing agency shall be notified of any changes to the approved plan prior to implementation of those changes. The reviewing agency may require a written submittal of those changes for review and approval at its discretion.
- At least 7 days prior to starting any earth disturbance activities, including clearing and grubbing, the owner and/or operator shall coordinate and invite all contractors, the landowner, appropriate municipal officials, the E&S plan preparer and a representative from the local conservation district to an on-site preconstruction meeting. The purpose of the pre-construction meeting is to clarify the intended erosion control aspects required of the project, identification of the responsible parties for the execution of work, understanding the sequence of construction that is expected.
- At least 3 days prior to starting any earth disturbance activities, or expanding into an area previously unmarked, the Pennsylvania One Call System Inc. shall be notified by the contractor (or owner), at 1-800-242-1776 for the marking of locations of existing underground utilities. Do not disturb or excavate until One Call has responded.
- All earth disturbance activities shall proceed in accordance with the sequence provided on the plan drawings. Deviation from that sequence must be approved in writing from the County Conservation District, or by the PA Department of Environmental Protection, prior to implementation.
- Areas to be filled are to be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots and other objectionable material.
- Clearing, grubbing, and topsoil stripping shall be limited to those areas described in each stage of the construction sequence. General site clearing, grubbing and topsoil stripping may not commence in any stage or phase of the project until the E&S controls specified by the sequence for that stage or phase have been installed and are functioning as described in this E&S plan. To the extent possible, limit topsoil stripping of areas until time of absolute need, to avoid large areas of bare soil.
- At no time shall dirty construction vehicles be allowed to enter areas outside the limit of disturbance boundaries shown on the plan maps. These areas must be clearly marked and fenced off before clearing and grubbing operations begin.
- Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, (ie hidden groundwater spring exposed, etc) the operator shall implement appropriate best management practices to minimize the potential for erosion and sediment pollution and notify the County Conservation District or the PA Department of Environmental Protection local office.
- All building materials and wastes shall be removed from the site and recycled or disposed of in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et 271.1, and 287.1 et. seq. No building materials or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site. Stumps shall be ground/shipped, or land-filled. Do no bury or burn at site.
- All off-site waste and borrow areas must have an E&S plan approved by the County Conservation District or the PA Department of Environmental Protection fully implemented prior to being activated. Contractor is responsible for all off-site waste/borrow site permitting.
- The contractor is responsible for ensuring that any material brought on site is clean fill. Contractor shall execute a Form FP-001 (Clean Fill) for all offsite material imported to site. Form FP-001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as clean fill due to analytical testing. Testing lab results shall be retained and supplemented to the appropriate Form FP-001.
- All pumping of water from any work area shall be done according to the procedure described in this plan, over undisturbed vegetated areas.
- Construction vehicles and equipment must enter and exit the site directly only using the designated rock construction entrances where shown on the plans.
- Until the site is stabilized, all erosion and sediment controls shall be maintained properly. Maintenance shall include inspections of all erosion and sediment controls after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, regrading, reseedling, remulching and renetting must be performed immediately. If the E&S controls fail to perform as expected, replacement controls, or modifications of those installed will be required. Any areas where sediment water is leaving the site shall be corrected by installation of silt sock(s).
- A log showing dates that E&S controls were inspected, as well as any deficiencies found, and the date they were corrected, shall be maintained on the site and be made available to regulatory agency officials at the time of inspection.
- Sediment tracked onto any public roadway or sidewalk shall be returned to the construction site by the end of each work day and disposed in the manner described in this plan. In no case shall the sediment be washed, shoveled, or swept into any roadside ditch, storm sewer, or surface water.
- All sediment removed from BMPs shall be disposed of in the manner described on the plan drawings.
- Areas which are to be top-soiled shall be scarified to a minimum depth of 3 to 5 inches -- 6 to 12 inches on compacted soils -- prior to placement of topsoil. Areas to be vegetated shall have a minimum 4 inches of topsoil in place prior to seeding and mulching. Fill outcrops shall have a minimum of 2 inches of topsoil.
- All fills shall be placed at 8" vertical lifts, rolled, and compacted to a minimum of 95% modified proctor density (or to geotechnical report requirements), to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc. shall be compacted in accordance to any site-specific geotechnical report (at least 95% modified proctor density).
- All earthen fills shall be placed in compacted layers not to exceed 8 inches in thickness.
- Fill materials shall be free of frozen particles, brush, roots, sod, or other foreign or objectionable materials that would interfere with or prevent construction of satisfactory fills.
- Frozen materials or soft, mucky, or highly compressible materials shall not be incorporated into fills.
- Fill shall not be placed on saturated or frozen surfaces.
- Seeps or springs encountered during construction shall be handled by the site contractor in accordance with the standard and specification for subsurface drain or other approved method. Generally, a perforated underdrain, with rock backfill and geotechnical fabric encasement, daylighted to a stabilized outfall is the minimum remedial action.
- All graded areas shall be permanently stabilized immediately upon reaching finished grade. Cut slopes in competent bedrock and rock fills need not be vegetated. Seeded areas within 50 feet of a surface water, or as otherwise shown on the plan drawings, shall be blanketed according to the standards of this plan.
- Immediately after earth disturbance activities cease in any area or subarea of the project, the operator shall stabilize all disturbed areas. During non-germinating months, mulch or protective blanketing shall be applied as described in the plan. Areas not at finished grade, which will be reactivated within 1 year, may be stabilized in accordance with the temporary stabilization specifications. Those areas which will not be reactivated within 1 year shall be stabilized in accordance with the permanent stabilization specifications.
- Permanent stabilization is defined as a minimum uniform, perennial 70% vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated erosion. Cut and fill slopes shall be capable of resisting failure due to slumping, sliding, or other movements.
- E&S controls shall remain functional as such until all areas tributary to them are permanently stabilized or until they are replaced by another E&S control approved by the local conservation district or the Department.
- Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district for an inspection prior to removal/conversion of the E&S controls.
- After final site stabilization has been achieved, temporary erosion and sediment controls must be removed. Areas disturbed during removal or conversion of the controls shall be stabilized immediately. In order to ensure rapid revegetation of disturbed areas, such removal/conversions are to be done only during the germinating season.
- Upon completion of all earth disturbance activities and permanent stabilization of all disturbed areas, the owner and/or operator shall contact the local conservation district to schedule a final inspection.
- Failure to correctly install E&S controls, failure to prevent sediment-laden runoff from leaving the construction site, or failure to take immediate corrective action to resolve failure of E&S controls may result in administrative, civil, and/or criminal penalties being instituted by the Department as defined in Section 602 of the Pennsylvania Clean Streams Law. The Clean Streams Law provides for up to \$10,000 per day in civil penalties, up to \$10,000 in summary criminal penalties, and up to \$25,000 in misdemeanor criminal penalties for each violation.
- Concrete wash water shall be handled in the manner described on the plan drawings. In no case shall it be allowed to enter any surface waters or groundwater systems.
- Underground utilities cutting through any active channel shall be immediately backfilled and the channel restored to its original cross-section and protective lining. Any base flow within the channel shall be conveyed past the work area in the manner described in this plan until such restoration is complete.
- Any damage that occurs in whole or in part as a result of basin or trap discharge shall be immediately repaired by the permittee in a permanent manner satisfactory to the municipality, County Conservation district, and the owner of the damaged property.

CLEAN FILL NOTE:

The owner and contractor must use environmental due diligence to ensure that the fill material associated with this project qualifies as Clean Fill. Definitions of Clean Fill and Environmental Due Diligence are provided below. All fill material must be used in accordance with Pennsylvania Department of Environmental Protection ("the department") policy "Management of Fill," document number 258-2182-773. Form FP-001 must be retained by the property owner for any fill material affected by a spill or release of a regulated substance but qualifying as clean fill due to analytical testing.

Clean Fill is defined as: Uncontaminated, non-water soluble, non-decomposable, inert, solid material. The term includes soil, rock, stone, dredged material, used asphalt, and brick, block or concrete from construction and demolition activities that is separate from other waste and is recognizable as such. The term does not include materials placed in or on the waters of the commonwealth unless otherwise authorized. (The term "used asphalt" does not include milled asphalt or asphalt that has been processed for re-use.)

Environmental due diligence: Investigative techniques, including, but not limited to, visual property inspections, electronic data base searches, review of property ownership, review of property use history, Sanborn maps, environmental questionnaires, transaction screens, analytical testing, environmental assessments or audits. Analytical testing is not a required part of due diligence unless visual inspection and/or review of the past land use of the property indicates that the fill may have been subjected to a spill or release of regulated substance. If the fill may have been affected by a spill or release of a regulated substance, it must be tested to determine if it qualifies as clean fill. Testing should be performed in accordance with Appendix A of the department's policy "Management of Fill."

Fill material that does not qualify as clean fill is regulated fill. Regulated fill is waste and must be managed in accordance with the department's municipal or residual waste regulations based on 25 Pa. Code Chapters 287 Residual Waste Management or 271 Municipal Waste Management, whichever is applicable.

PIPELINE AND UTILITY LINE EXCAVATION NOTES:

Pipelines with joints that allow a manufactured length of pipe to be placed in the trench with the pipe joint assembled/made in the trench require an open pipeline trench that is only slightly longer than the length of pipe being installed. The total length of excavated trench open at any one time should not be greater than the total length of the pipeline/utility line that can be placed in the trench and back-filled in one working day. No more than 50 lineal feet of open trench should exist when pipeline/utility line installation ceases at the end of the workday. Soil supplements, seed and mulch should be applied within seven days after the pipeline/utility line is installed.

It should be noted that no utility line stream crossings are proposed for this development.

General Erosion and Sediment Control Requirements for Pipeline and Utility Installation

- Limit advance clearing and grubbing operations to a distance equal to two times the length of pipe installation that can be completed in one day.
- Work crews and equipment for trenching, placement of pipe and backfilling will be self-contained and separate from clearing and grubbing, and site restoration and stabilization operations.
- Limit daily trench excavation to the length of pipe placement and backfilling that can be completed the same day. No more than 50 linear feet of open trench shall exist when pipeline/utility line installation ceases at the end of the workday.
- Water that accumulates in the open trench will be completely removed by pumping before pipe placement and/or backfilling begins. Pumped water shall be discharged through a commercially available filter bag as per Standard Detail #3-16.
- If wetter soil conditions are encountered, trench plugs are to be utilized as per Standard Detail #13-4, in order to prevent flow along the pipe either prior to or after backfilling the trench.
- On the day following pipe placement and trench backfilling, the disturbed area will be graded to final contours, and appropriate permanent/temporary erosion and sediment pollution control measures/facilities will be installed. Seeding and mulching all disturbed areas shall be completed within seven days after the pipeline/utility line is installed.

RECYCLING OR DISPOSAL OF MATERIALS

The BMPs will be continually inspected per the approved maintenance plan. The developer will maintain written documentation of inspection and repair/replacement of bmps. The developer shall be responsible for the monitoring and maintenance of all bmps. Sediment removed from bmps will be mixed with other soils on the site or spread to dry in an area protected with filter fence and then seeded per permanent seeding specifications when dry.

Any waste generated by the bmps and site demolition which is not biodegradable will be recycled or properly disposed of per all applicable laws and regulations. This could require the material be trucked from the site and disposed of at a DEP approved landfill site. Mechanics shall be in place during maintenance of the bmps to control construction wastes..

These wastes may include, but are not limited to: building demolition material, excess soil material, concrete wash water, sanitary wastes, etc. that could adversely impact water quality.

Good housekeeping and material management shall be implemented. Ultimately the recycling of waste materials is preferred rather than the disposal where it is feasible.

All building materials and wastes shall be removed from the site and recycled or disposed of in accordance with the Department's solid waste management regulations at 25 Pa. Code 260.1 et seq., 271.1, and 287.1 et. seq. No building materials or wastes or unused building materials shall be burned, dumped, or discharged at the site.

IDENTIFICATION OF NATURALLY OCCURRING GEOLOGICAL FORMATIONS OR SOIL CONDITIONS

The site soils are of sedimentary rock origin, as residuum derived from sandstone, shale and siltstone. The typical soil limitation is bedrock encountered at 5' deep. No acidic soils, carboniferous soils are presented. There are no expected environmental issues with the soils. Refer to soil limitations and resolutions to any limitations.

IDENTIFICATION OF POTENTIAL THERMAL IMPACTS

Potential thermal impacts are associated with stormwater runoff over hot rooftops and pavement areas. This site proposes roof top downspouts connected and collected by the storm sewer system. Road surface runoff is collected by inlets and contained in the storm sewer system. Pipe flows are discharged into underground SWM tank systems. Detained waters within the tanks are cooled by heat interchange with the earth fill, as a heat sink, to cool discharge waters prior to entering the receiving stream.

During construction, earth disturbance areas are to be minimized and immediately stabilized with mulch or aggregate, to mitigate thermal impacts to the immediate surface water runoff.

MAINTENANCE PROGRAM

Maintenance of Temporary Controls

Temporary erosion and sedimentation controls shall be maintained throughout the project period as outlined below:

It shall be the responsibility of the Contractor to inspect all temporary and permanent erosion and sedimentation control measures to ensure that they are working properly. This inspection shall include, but not be limited to:

- Inspection of compost filter socks, repair or replace as needed. Accumulated sediments shall be cleaned from socks when it reaches half the aboveground height of the sock and mixed with topsoil or disposed of at a permitted facility. Damaged socks must be repaired or replaced within 24 hours of inspection.
- Check all inlet protection. If bags are filled to ½ capacity with silt, remove bag, dispose of silt on upslope stabilized areas, wash bag and re-install.
- Inspection of all slopes for signs of erosion and sedimentation. All maintenance checks shall occur once weekly and immediately after any significant runoff event. An adequate supply of additional erosion and sedimentation control materials (including compost filter socks, erosion netting, plastic covering, wire mesh, sand and burlap, sand bags, rocks and gravel) shall be stockpiled on-site to be used in the event that emergency repairs of existing soil erosion and sedimentation controls are required.

Clearing Frequency and Ultimate Disposal of Waste

Anticipated construction wastes include soil, rock, silt, compost-filter socks, wooden stakes, asphalt, concrete and PVC pipe. All building materials and wastes shall be removed from the site and recycled or disposed of in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code 260.1 et seq., 271.1, and 287.1 et. seq. No building materials or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site.

Sediment material removed from the various control facilities will be transported to and deposited in an area adjacent to the topsoil stockpile as shown on the plans. Material deposited in this area will be allowed to dry before being integrated with other excavated material. Stockpile heights shall not exceed 35 feet. Stockpile slopes shall be 2H: 1V or flatter. The area designated for this purpose will be protected with compost filter socks to prevent sediment from entering existing waterways.

CONSTRUCTION / MAINTENANCE SCHEDULE

It shall be the sole responsibility of the owner to execute the control, inspection, maintenance and repair of the various sediment control facilities according to the guidelines prescribed below.

All control measures will be inspected on a weekly basis, and in all cases within 24 hours after each runoff event. Any damaged controls shall be repaired promptly. Inspections shall be logged onto DEP form 3150-FM-BWEW0083 (dated 2/2012) and shall be kept on site at all times. The following maintenance shall be performed on the specified controls:

Compost Filter Socks

Maintenance checks shall include inspecting filter socks for undercutting, tears, and damage of filter sock and depths of sediment accumulations, and repairs of damaged filter sock shall be performed immediately to ensure the compost filter sock meets design specifications.

Sediment shall be removed periodically, and in all cases should accumulation attain depths equal to half of the height of the sock. Sediment deposits removed from the filter sock shall be disposed of as prescribed in the Maintenance Program. Additional compost filter sock shall be installed immediately above the damaged portion or the sock shall be replaced as field conditions warrant.

Inlet Protection

Inlet filter bags shall be inspected on a weekly basis and after each runoff event. Bags shall be emptied and rinsed or replaced when half full or when flow capacity has been reduced so as to cause flooding or bypassing of the inlet. Damaged or clogged bags shall be replaced.

Concrete Washout Facility

All concrete washout facilities should be inspected daily for damage and/or leaks and should be deactivated and repaired or replaced immediately. Accumulated materials reaching 50% of the capacity or more should be removed and disposed of as described previously. The facility shall be lined with a plastic liner and should be replaced with each cleaning.

Erosion Control Blanket

All blankets/nettings shall be inspected weekly and after each runoff event until perennial vegetation is established to a minimum uniform 70% coverage throughout the blanketed area. Damaged or displaced blankets shall be restored or replaced within 4 calendar days.

Vegetation

All areas to be stabilized by vegetation shall be inspected for rills or gullies, bare soil patches or accumulation of sediment at toe of slopes. Eroded areas shall be re-graded, and substandard vegetated areas shall be re-seeded and mulched as specified in the plans.

Construction Entrance

The stabilized construction entrance will be maintained so as to ensure a constant rock thickness. This will be achieved by the placement of additional rock to the specified dimensions as required. A stockpile of rock will be maintained on-site for this purpose. At the completion of each work day, all sediment deposited on public roadways will be removed and returned to the construction site. Washing, shoveling, or sweeping the sediment into any roadside ditch, storm sewer, or surface water will be unacceptable.

Interim Stabilization

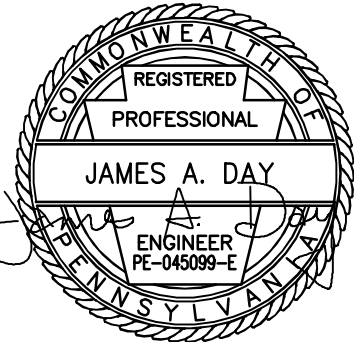
All non-paved areas will be immediately seeded with PennDOT Formula E grass mix, or alternative design grass mixture, after final grade or earthmoving has been completed. The rates of application are presented on the attached plans, and are also included in the PennDOT 408 Specifications appended with this narrative. In the event that permanent stabilization is not possible or practical and activity is expected to cease for a period to exceed 4 days, the disturbed area shall be promptly seeded with PennDOT Formula E grass mixture and mulched. All ditches that are proposed to be lined will be completed and lined immediately upon completion of design geometry's.

All disturbed areas shall be seeded with PennDOT Formula E and mulched prior to October 15 to establish stabilization during winter months. During winter months, November through March, all disturbed areas will be immediately seeded with PennDOT Formula E and mulched upon completion of earthmoving or establishment of final grades to establish vegetation during spring months. All stabilization measures cited above shall be applied at rates consistent with PennDOT 408 Specifications and as specified on plans.

Stabilization of vegetated areas as referred to in the narrative requires that a uniform 70%, perennial vegetative cover is established across the disturbed areas. No temporary control measures designed to control sediment runoff from seeded areas shall be removed until this criteria is met.

DATE	BY	REVISION

DATE	SCALE
02-26-2024	NTS
FILE NUMBER	
15609.655	
DRAWN BY	CHECKED BY
PDP	JAD
DRAWING NO.	
	C-7



EROSION CONTROL DETAILS

MUNICIPAL STORAGE GARAGE

SITUATE IN

SHIREMANSTOWN BOROUGH,
CUMBERLAND Co., PENNSYLVANIA

MADE FOR

SHIREMANSTOWN BOROUGH



GIBSON - THOMAS ENGINEERING CO.

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