TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243
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Stormwater Pollution Prevention Plan (SWPPP) for Single Family Residential Homebuilding Sites
General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

PART I

Subdivision Name: _____

CGP Tracking No.: _____

Subdivision Location: _____

Builder Name: _____

Builder Mailing Address: _____

Site Description:
(List all Lot numbers) _____

Description of Project: _____

☐ Plat Map Attached (Attach a plat map that shows the location of your lot(s), and proposed Best Management Practices (BMP)).

Name of Receiving Waters: _____

Soil Disturbing Activities: Clearing and grubbing; installing perimeter and other erosion and sediment controls; grading for preparation of final planting, sod and seeding; digging of foundations and trenching for sewer, water and utility extensions, and leveling building pad. **This SWPPP is only for at grade lots and is NOT applicable if any mass grading of the site is required.**

Site BMPs: List all the relevant BMPs (Best Management Practices) as described in Part II and III below that will be utilized at this site (attach additional sheets if necessary). ***NOTE:*** *None of these BMPs shall disturb, limit, or otherwise conflict with other BMPs that may be in use at this site by other site operators.*

BMP 1	
BMP 2	
BMP 3	
BMP 4	
BMP 5	
BMP 6	

CERTIFICATIONS

Owner or Developer Certification (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)		
I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.		
Owner or Developer name; print or type	Signature:	Date:

Contractor(s) Certification (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)		
I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.		
Contractor name; print or type	Signature:	Date:

PART II

INTRODUCTION

Construction activities near streams, rivers and lakes have the potential to cause water pollution and stream degradation if erosion and sediment controls are not properly installed and maintained. In order to effectively reduce erosion and sedimentation impacts, appropriate, site-specific Best Management Practices (BMPs) must be designed, installed, and maintained on construction sites. In addition, coverage under the Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activities (CGP) must be obtained for all construction sites that meet permitting criteria. One of the requirements for obtaining this permit coverage is the preparation of a SWPPP that details the erosion prevention and sediment control BMPs to be installed and maintained at the site.

The Tennessee Department of Environment and Conservation, Division of Water Resources has determined that siltation is one of the leading causes of impairment of streams, rivers and lakes in Tennessee. While not the only source of sediment discharge, construction and development activities continue throughout Tennessee, and have been shown to contribute large quantities of sediment to water bodies during precipitation events, if BMPs are not properly used. Pollution due to siltation can have physical, chemical, biological, and economic impacts to waters. Siltation causes changes in flow patterns, increased water treatment costs, hindrances to navigation, and the increased possibility of flooding. Sediment can also restrict light penetration, transport other pollutants into the water body, smother eggs and nests of fish, and cover stream substrates that provide habitat for fish and aquatic life.

The proper use of BMPs can be effective in preventing erosion and controlling sediment on construction sites. The Tennessee Erosion and Sediment Control Handbook (the Handbook) is designed to provide information to planners, developers, engineers, and contractors on the proper selection, installation, and maintenance of BMPs. The handbook is intended for use during the design and construction of projects that require erosion prevention and sediment controls to protect waters of the state. It also aids in the development of SWPPPs and other reports, plans, or specifications required by Tennessee's water quality regulations. *Excerpts from the Handbook are referenced in this SWPPP for single family residential homebuilding.*

Typical Sequence of Major Home Building Activities:

1. Clearing and grubbing (site-wide)
2. Digging/trenching for foundations
3. Install utilities, sanitary sewer and water service (site-wide)
4. Leveling pad for house site
5. Install utilities, sanitary sewer and water service (for individual house connections)
6. Home construction
7. Complete grading and install permanent sod, seeding and mulching
8. Remove construction debris and sediment
9. When all construction activity is complete and the site is stabilized, remove all erosion control measures and seed/sod any areas disturbed by their removal.

Please note: This SWPPP is not applicable to items 1 and 3, above, and may not be applicable to item 2, depending on site-specific circumstances.

For more information on available Best Management Practices for erosion prevention and sediment control, and for detailed specifications, refer to the Tennessee Erosion Prevention and Sediment Control Handbook (the handbook), Fourth Edition, August 2012. This handbook is provided to those who attend the Fundamentals of Erosion Prevention & Sediment Control Workshop that is sponsored by the Tennessee Department of Environment and Conservation and the University of Tennessee. It is also available for download from the Tennessee Erosion Prevention & Sediment Control Training Program for Construction Sites website at: http://www.tnepsc.org/handbook.asp.

PART III

The appropriate combination of the following BMPs will be used at all building lots until home construction is complete and all bare soil is stabilized with perennial vegetation or impervious cover. Some of the common BMPs appropriate to home building are described below. Information on other BMPs that are mentioned, that may or may not be applicable to home building, can be found in the full Handbook.

EROSION PREVENTION AND SEDIMENT CONTROL BMPS

1. STABILIZATION PRACTICES

Stabilization of topsoil stockpiles and disturbed portions of the site shall be initiated as soon as possible on the site where construction activities have temporarily or permanently ceased, but not later than 14 days after construction activity has

ceased in that area or phase. pH control, fertilization and seeding will be performed in accordance with accepted landscaping practices for the project location.

a. Stabilization with Straw Mulch

Definition: Application of a temporary protective blanket of straw to the soil surface.

Purpose: To protect the soil surface from the forces of raindrop impact and overland flow. Mulch reduces runoff and erosion, conserves soil moisture, promotes seed germination, insulates soil, suppresses weed growth, and prevents surface crusting.

Conditions Where Practice Applies:

Mulch seeded areas immediately. Areas that cannot be seeded because of the season should be mulched to provide temporary protection of the soil surface.

Planning Considerations:

A surface mulch is considered the most effective, practical means of controlling runoff and erosion on disturbed land prior to vegetative establishment. Mulch reduces soil moisture loss by evaporation, prevents crusting and sealing of the soil surface, moderates soil temperatures, provides a suitable microclimate for seed germination, and may increase the infiltration rate of soil.

Straw mulch is the most common type of mulch used in conjunction with seeding or providing a temporary groundcover. The straw should come from wheat or oats ("small grains"), and may be spread by hand or with a mulch blower. Note that straw may be lost to wind and must be tacked down. The recommended application rate for straw mulch is 2 tons per acre, dry unchopped, unweathered.

Note that the goal is 70% uniform coverage over 100% of the site. Straw mulch is often used in conjunction with some channel liners.

Construction Specifications: *(See Chapter 7.6 of the Handbook)*

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b. Stabilization with Other Mulch Materials

Definition: Application of a protective blanket of plant residues, wood chips, or other organic material, produced on the site if possible, to the soil surface.

Purpose: To protect the soil surface from the forces of raindrop impact and overland flow. Mulch reduces runoff and erosion, conserves soil moisture, promotes seed germination, insulates soil, suppresses weed growth, and prevents surface crusting.

Conditions Where Practice Applies:

This practice is applicable for areas that require temporary stabilization until permanent vegetation can establish. These mulches should be applied on areas that are not to be mowed. In addition, do not use in drainages or areas of concentrated flow.

Specific applications include:

- Exposed areas that cannot be seeded due to seasonal conditions.
- On areas that are not to be mowed, such as trees, shrubs, or ground covers to stabilize the soil between plants.

Planning Considerations:

Woody plant residue, wood chips and mulches that cannot be anchored down are susceptible to floating and movement by water. These materials should not be used in areas of concentrated flow or high sheet flow.

Design Criteria:

The choice of materials for mulching should be based on soil conditions, season, type of vegetation, and size of the area:

- **Wood Chips:**

Wood chips are suitable for areas that will not be closely mowed, and around ornamental plantings. Chips do not require tacking. Because they decompose slowly they must be treated with 12 lbs of nitrogen per ton to prevent nutrient deficiency in plants. This can be an inexpensive mulch if chips are obtained from trees cleared on the site.

- **Bark Chips and Shredded Bark:**

Bark chips and shredded bark are byproducts of timber processing that are often used in landscape plantings. Bark is also suitable mulch for areas planted to grasses and not closely mowed. It may be applied by hand or with a mulch blower; do not use a tackifier. Unlike the use of wood chips, bark does not require additional nitrogen fertilizer.

- **Wood Fiber:**

Wood fiber refers to short cellulose fibers applied as a slurry in hydroseeding operations. Wood fiber does not require tacking, although tacking agents or soil binders could be easily added to the slurry. Wood fiber hydroseeder slurries may be used to tack straw mulch on steep slopes, critical areas, and where harsh climatic conditions exist. Wood fiber does not provide sufficient erosion protection to be used alone.

Construction Specifications: *(See Chapter 7.7 of the Handbook)*

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c. Temporary Vegetation

Definition: The establishment of temporary vegetative cover with fast growing species for seasonal protection on disturbed or denuded areas.

Purpose: To temporarily stabilize denuded areas that will not be brought to final grade for a period of more than 14 days.

Temporary seeding controls runoff and erosion until permanent vegetation or other erosion control measures can be established. Seeding with a temporary groundcover provides temporary stabilization until permanent stabilization can be achieved. In addition, it provides residue for soil protection and seedbed preparation, and reduces problems of mud and dust production from bare soil surfaces during construction.

Conditions Where Practice Applies:

On any cleared, unvegetated, or sparsely vegetated soil surface where vegetative cover is needed for less than 1 year. For permanent seeding specifications, see Section 7.9 of the Handbook.

Planning Considerations:

Annual plants that sprout and grow rapidly and survive for only one season are suitable for establishing initial or temporary vegetative cover. Temporary seeding preserves the integrity of earthen sediment control structures such as dikes, diversions, and the banks of dams and sediment basins. It can also reduce the amount of maintenance associated with these devices. For example, the frequency of sediment basin cleanouts will be reduced if the watershed areas outside the active construction zone are stabilized. Proper seedbed preparation, selection of appropriate species, and the use of quality seed are important. Failure to follow established guidelines and recommendations carefully may result in an inadequate or short-lived stand of vegetation that will not control erosion. Temporary seeding provides protection for no more than 1 year, during which time permanent stabilization should be initiated.

Design Criteria:

Complete grading before preparing seedbeds, and install all necessary erosion control practices such as dikes, waterways, and basins. Minimize steep slopes because they make seedbed preparation difficult and increase the erosion hazard. If soils become compacted during grading, loosen them to a depth of 6-8 inches using a ripper, harrow, or chisel plow.

Construction Specifications: *(See Chapter 7.8 of the Handbook)*

Additional Stabilization Practices may be found in Chapter 7 of the Handbook

2. RUNOFF CONTROL AND MANAGEMENT

a. Check Dams

Definition: A small temporary barrier, grade control structure or dam constructed across a swale, drainage ditch, or area of concentrated flow.

Purpose: To minimize the erosion rate by reducing the velocity of stormwater in areas of concentrated flow. While check dams are primarily erosion control devices, they provide limited sediment control by slowing velocities and ponding runoff. Note that wattles and tubes installed as check dams are addressed in Section 7.25.

Conditions Where Practice Applies:

This practice is applicable for use in ditches and small open channels and **is not to be used in a stream**. Specific applications include:

- Temporary or permanent swales or ditches in need of protection during establishment of grass linings.
- Temporary or permanent swales or ditches that, due to their short length of service or for other reasons, cannot receive a permanent non-erodible lining for an extended period of time.
- Other locations where small localized erosion and sedimentation problems exist in areas of concentrated flow.

Planning Considerations:

Check dams are an expedient way to reduce gullying in the bottom of channels that will be filled or stabilized at a later date. The dams should only be used while permanent stabilization measures are being put into place.

Check dams installed in grass-lined channels may kill the vegetative lining if submergence after it rains is too long and/or silting is excessive. All stone and riprap must be removed if mowing is planned as part of vegetative maintenance.

The main function of a check dam is to decrease velocity, not to collect sediment, although sediment capture is an added benefit.

Design Criteria:

The channel and check dam must be designed to adequately convey the design storm for the associated drainage area.

- **Spacing:** Maximum spacing between dams should be such that the toe of the upstream dam is at the same elevation as the top of the downstream dam. Two or more check dams in series should be used when the drainage area exceeds the limitation for one dam.
- **Height:** The height of the check dam from the bottom of the channel to the bottom of the weir should be a minimum of 1 foot above the ditch bottom.
- **Weir:** The depth of flow on the center of the structure (weir) shall be computed for the peak flow rate generated by the 2-year, 24-hour storm in order to ensure that the top of the structure will not be overtopped. For sites draining to waters with unavailable parameters for siltation and habitat alterations due to in-channel erosion (previously known as impaired) or Exceptional Tennessee Waters, the depth must be determined for the 5-year, 24-hour peak flow rate. The weir must be at least 9 inches deep.
- **Side Slopes:** The side slopes should be 2:1 or flatter.
- **Materials:** A geotextile should be used as a separator between the graded stone and the soil base and abutments. The geotextile will prevent the migration of soil particles from the subgrade into the graded stone. Geotextiles should be "set" into the subgrade soils. The geotextile should be placed immediately adjacent to the subgrade without any voids and extend three feet beyond the downstream toe of the dam to prevent scour.

Construction Specifications: *(See Chapter 7.20 of the Handbook)*

3. SEDIMENT CONTROL PRACTICES

a. Construction Exit

Definition: A stone pad on geotextile fabric or a rumble strip located at any point where traffic will be moving from a construction site onto a public roadway or other paved area.

Purpose: To reduce or eliminate the transport of material from the construction area onto a public roadway by providing an area where mud and soil can be removed from the tires of construction vehicles.

Conditions Where Practice Applies:

This practice is applicable wherever construction traffic leaves a construction site and enters a public right of way.

***Planning Considerations*:**

Construction exits should be planned and installed at any point that construction traffic exits the project. These stone pads should not be placed in areas with hydric or saturated soils. Stormwater management must be considered around the construction exit as well. Avoid steep grades and exits in or near curves in public roads.

Design Criteria:

Calculations are not required; however, a typical construction exit should conform to the specifications listed below.

- A layer of geotextile fabric is required to stabilize and support the aggregate. The geotextile fabric should extend the full length and width of the construction exit. The fabric should meet the requirements of the standard specifications for geotextiles, AASHTO designated M-288, erosion control.
- The stone pad should be constructed from clean, washed stone with a 2 inch to 4 inch gradation at a minimum thickness of 8 inches. At a minimum, the stone pad should be 50 feet long and 20 feet wide. In addition a turning radius of 20 feet should be provided on each side of the pad where it intersects with the public roadway. See Figures 7.28-1 and -2 (in the Handbook).
- The area where the pad is to be installed must be undercut at least 3 inches, and then the geotextile fabric should be installed before placing the stone.
- Stormwater management around the construction exit must be taken into consideration. If stormwater runoff flows across the stone pad and onto the public right of way, mud on the pad can be washed into the ROW as well. Diversions or waterbars should be installed at the upgradient end of the pad, directing runoff into sediment traps for treatment prior to discharging runoff into the ROW.

Construction Specifications *(See also Part 7.28 of the Handbook)*

- Excavate areas where construction exits are to be constructed to a depth of at least 3 inches and clear the area of all vegetation, roots, and other objectionable material.
- Construction exit areas should be at minimum 50 feet in length by 20 feet in width.
- Install a geotextile underliner across the full width and depth of the construction exit to separate the rock from underlying soil.
- Provide clean, washed stone to a depth of 8 inches. Stone should vary in size from 2 to 4 inches. Rock must be clean rock with no fines. Crusher run and road base are not acceptable materials for a construction exit, as the fines can be tracked out onto the road.

Waterbar Diversion:

On sites where the grade toward the public roadway is greater than 2%, a waterbar diversion 6 to 8 inches in depth with 3:1 side slopes should be constructed at the upper end of the construction exit to prevent stormwater from washing sediment off the construction exit and into the public roadway or storm drain system. See Figure 7.28-1 (in the Handbook). Other devices, such as berms also may be used to divert stormwater from flowing down the construction exit and onto the pubic ROW.

Maintenance and Inspection Points:

The exit must be maintained in a condition that will prevent tracking or flow of material onto public rights-of-way or into the storm drain system. This may require periodic top dressing with fresh stone or full replacement of stone as conditions demand, and repair and/or cleanout of any related diversions and sediment traps. All materials spilled, dropped, washed, or tracked from vehicles or site onto roadways or into storm drains must be removed by the end of the day.

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b. Temporary Sediment Trap

Definition: A temporary sediment storage area with a permanent pool, formed by an embankment or excavation, or combination.

Purpose: To detain sediment-laden runoff from small, disturbed areas, allowing larger sediment particles to settle out of runoff.

Conditions Where Practice Applies:

Sediment traps, along with other controls intended to retain sediment, should be constructed as a first step in any land disturbing activity and should be made functional before upslope land disturbance takes place. The sediment trap may be constructed either independently or in conjunction with a diversion. Sediment should be periodically

removed from the trap to maintain the required volume. The SWPPP should detail how excavated sediment is to be disposed of, such as by use in fill areas on site or removal to an approved off-site location.

This practice is applicable for use in applications such as:

- At the outlets of diversions, channels, slope drains, or other runoff
- Conveyances that discharge sediment-laden runoff.
- Below areas that are draining < 5 acres.
- Where access can be maintained for sediment removal and proper disposal.
- In the approach to a stormwater inlet location below a disturbed area as part of an inlet protection system.

Sediment traps are **not** to be located in a stream.

Planning Considerations:

Select locations for sediment traps during site evaluation. Note natural drainage divides and select trap sites so that runoff from potential sediment producing areas can easily be diverted into traps. Diversion berms and ditches should be installed to direct runoff into traps as needed. Ensure the drainage areas for each trap does not exceed 5 acres.

Sediment traps must be readily accessible for periodic sediment removal and other necessary maintenance. Locations should be planned for sediment disposal as part of trap site selection; disposal areas should be clearly designated in the SWPPP and on construction plans.

The maximum usable life of a sediment trap should be no longer than 2 years. Traps should be installed in the first stages of project development before any land disturbance activity upslope takes place.

Design Criteria Storage Capacity:

The trap shall have an initial storage volume of 3618 cubic feet (134 cubic yards) per acre of **drainage** area. The required storage volume may also be determined by modeling soil loss using RUSLE or other approved methods. Half of the storage volume must be in the form of a permanent pool or wet storage to provide better settling efficiency. To provide the wet storage area, the sediment storage zone will have to be over excavated below the surrounding ground elevation. The other half of the sediment storage is in the form of a draw down or dry storage that provides extended settling time during storm events. The volume of the wet storage area is measured from the low point of the excavated area to the base of the outlet structure. The volume for dry storage is measured from the base of the outlet to the crest of the outlet overflow.

See Handbook for equations.

Construction Specifications: *(See Chapter 7.32 of the Handbook)*

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c. Silt Fence

Definition: A temporary sediment control measure, composed of woven geotextile fabric supported by steel or wood posts, used to intercept sediment transported from areas where runoff occurs as sheet flow.

Purpose: To prevent sediment carried by sheet flow from leaving the site and entering natural drainage ways or storm drainage systems by slowing stormwater runoff, causing ponding and the deposition of sediment at the structure. Silt fence does not filter sediment.

Conditions Where Practice Applies:

Silt fence may be used in a variety of locations including:

- at the toe of, or on, an exposed slope
- around the perimeter of an exposed construction site
- along the banks of ditches or swales
- around the perimeter of a soil stockpile
- around buffer areas

Silt fence shall not be installed across streams, ditches, waterways, or other concentrated flow areas.

Planning Considerations:

Silt fence is a system to retain sediment on the construction site. The fence retains sediment primarily by retarding flow and promoting deposition. In operation, the geotextile silt fence material ponds runoff behind it, as the flow rate through the geotextile is often much lower than the flow rate of the runoff coming to the silt fence. Ponding behind the silt fence is necessary to encourage sediment settling. The designer should anticipate ponding and provide sufficient storage areas and overflow outlets to prevent flows from overtopping the fence. Since silt fence is not designed to withstand high water levels, locate them so that only shallow pools can form. Tie the ends of silt fence into higher ground to prevent flow around the end of the fence before the pool reaches design level. Silt fence should be curled uphill on each end of the fence in a "J" pattern to prevent end flow and scour. Provide stabilized outlets to protect the fence system and release storm flows that exceed the design storm.

Deposition occurs as the storage pool forms behind the fence. The designer can direct flows to specified deposition areas through appropriate positioning of the fence or by providing an excavated area behind the fence. Plan deposition areas at accessible points to promote routine cleanout and maintenance.

Silt fence serves no function along ridges or near drainage divides where there is little movement of water. Confining or diverting runoff unnecessarily with a sediment fence may create erosion and sedimentation problems that would not otherwise occur.

Anchoring of silt fence is critical. The toe of the fabric must be anchored in a trench backfilled with compacted earth. Mechanical compaction must be provided in order for the fence to effectively pond runoff.

Design Criteria:

Silt fence should be installed along the contour, never up or down a slope. This is essential to ensure that the fence will not accidentally concentrate stormwater flows, thus creating worse erosion problems. Silt fence can be installed without backing or with wire backing.

- The maximum drainage area for a continuous fence without backing shall be 1/4 acre per 100 linear feet of fence length, up to a maximum area of 2 acres. The maximum slope length behind the fence on the upslope side should be 110 feet (as measured along the ground surface).
- The maximum drainage area for a continuous silt fence with backing shall be 1 acre per 150 linear feet of fence length. The slope length above the silt fence with backing should be no more than 300 feet.

Silt fence should be installed so as to be as close as possible to the ground contour. The bottom of the fence at the ground line should be on a 0% grade, plus or minus 0.5%.

When used at the bottom of a slope, silt fence should be installed 5 feet to 7 feet away from the toe to allow extra space for the ponding of water and collection of sediments.

The expected life span of the silt fence is 6 to 12 months. Therefore, projects of long duration may require a complete replacement of the silt fence. The quantity for silt fence to be in place for a long period of time should be based on the assumption that the material will be replaced every 9 months, on the average.

Construction Specifications: *(See Chapter 7.34 of the Handbook)*

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d. Inlet Protection *(all references to figures in this section are those in the appropriate section of the Handbook)*

Definition: A temporary protective device formed around a storm drain drop inlet to trap sediment.

Purpose: To prevent sediment from entering the storm drainage system, prior to temporary or permanent stabilization of the disturbed area.

Conditions Where Practice Applies:

Many different types of inlet protection devices are available. The types highlighted in this section are non-manufactured. Manufactured inlet protection devices are allowable alternatives, provided the following:

- At least 3600 ft3/acre of drainage is available to store sediment.
- No more than 1 acre of drainage to each measure - 0.5 acre drainage area per each measure is preferable.
- An overflow is provided to safely pass storm events larger than the 5-yr storm.

Non-manufactured inlet protection devices:

Excavated Drop Inlet Protection is applicable where relatively heavy flows are expected and overflow capability is needed.

Hardware Cloth and Gravel Inlet Protection is applicable where the flow is light to moderate. This method is effective where the inlet is expected to drain shallow sheet flow. The immediate land area around the inlet should be relatively flat (less than 1 percent) and located so that accumulated sediment can be easily removed.

Block and Gravel Inlet Protection is applicable to both drop inlets and curb inlets where heavy flows are expected, and an overflow capacity is necessary to prevent excessive ponding around the structure. Shallow temporary flooding after rainfall however, should be expected.

Sod Drop Inlet Protection is applicable where the drainage area of the drop inlet has been permanently seeded and mulched, and the immediate surrounding area is to remain in dense vegetation. This practice is well suited for lawns adjacent to large buildings.

Rock Ring Inlet Protection is applicable at drop inlets with large drainage areas or at drop inlets that receive high velocity water flows, possibly from many directions.

Rock Pipe Inlet Protection is applicable at pipes with a maximum diameter of 36 inches. This inlet protection may be used to supplement additional sediment traps or basins at the pipe outlet, or used in combination with an excavated sediment storage area to serve as a temporary sediment trap.

Silt fence inlet protection is not allowed, as the failure rate for this type of inlet protection is very high.

Planning Considerations:

Inlet protection should be installed at or around all storm drain drop inlets that receive runoff from disturbed areas. Inlet protection should not be used in streams or other natural water resources. It should also not be placed in ditches, swales or other depressions with a depth greater than 1 foot. Due to the high maintenance requirements, inlet protection should be considered secondary sediment controls and not primary sediment controls. These measures should be used in conjunction with other erosion prevention and sediment control measures to be effective. Exercise installation caution so that stormwater runoff cannot back up out adjacent traffic lanes.

Design Criteria: *(See Chapter 7.3 of the Handbook)*

Construction Specifications *(See Chapter 7.35 of the Handbook)*

PART IV

TIMING OF CONTROL MEASURES

As indicated in the sequence of major activities, construction entrances will be constructed and stabilized prior to clearing or grading of any other portion of the site. Temporary structural practices will also be installed throughout the project prior to the commencement of site disturbance for building lot or roadway construction. Areas where construction activity temporarily ceases for more than 14 days will be stabilized with temporary stabilization. Once construction activity ceases permanently in an area, that area shall be stabilized with permanent stabilization. After the entire site is stabilized, any sediment that has accumulated will be removed and embankments re-sodded as necessary. After all permanent stabilization measures have been completed, temporary structural practices will be removed and any disturbed areas repaired.

PART V

MAINTENANCE AND INSPECTION PROCEDURES

- All control measures will be inspected at least twice per week as detailed in Part 3.5.8 of the CGP or, if applicable, Part 5.4.1. The Construction Stormwater Inspection Certification (Twice-Weekly Inspections) form is available on our NPDES Stormwater Construction Permit website.
- Qualified personnel, as defined in section 3.5.8.1, shall inspect disturbed areas of the construction site that have not beenfinally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, locations where vehicles enter or exit the site, and each outfall. Inspectors must have successfully completed the “Fundamentals of Erosion Prevention and Sediment Control” course, or equivalent. A copy of the certification or training record for inspector certification should be kept on site.
- A maintenance inspection report will be made after each inspection of the erosion prevention and sediment control measures.

- All measures will be maintained in good working order; if repairs are necessary they shall be accomplished before the next storm event, but in no case more than seven days after the need is identified.
- Temporary and permanent landscaping, sodding and /or seeding and mulching will be inspected for bare spots, washouts and healthy growth.
- Litter, construction debris, and construction chemicals exposed to stormwater shall be picked up prior to anticipated storm events or before being carried off site by wind, or otherwise prevented from becoming a pollutant source for stormwater discharges.

PART VI

MATERIAL MANAGEMENT AND SPILL PREVENTION

1. **Materials Inventory:** Circle the materials or substances listed below that are expected to be present onsite during construction:

Concrete	Fertilizers
Masonry Block	Detergents
Roofing Shingles	Cleaning Solvents
Petroleum based products	Paints
Wood	Metal Connectors

2. **Material Management Practices:** The following are the management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substance to stormwater runoff.
   - Only enough material required for the job will be stored onsite.
   - All materials stored onsite will be in a neat and orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
   - Materials will be kept in their original containers with original manufacturer's label.
   - Substances will not be mixed with one another unless recommended by the manufacturer.
   - All of a material will be used up before disposing of container whenever possible.
   - Manufacturer's recommendations for proper use and disposal will be followed.
   - The site superintendent will inspect daily to ensure proper use and disposal practices are followed.
3. **Spill Control Practices:** Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
   - Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite.
   - All spills will be cleaned up immediately after discovery.
   - The spill area will be kept ventilated & personnel will wear appropriate protective clothing.
   - The spill prevention plan will be adjusted to include measures to prevent a particular type of spill from re-occurring. A description of each spill, what caused it, and the cleanup measures will be included.
   - The site superintendent, who is responsible for the day- to- day onsite construction operations, will be the spill prevention and cleanup coordinator and will assign other personnel, whose names will be posted in the onsite office trailer or other accessible place suitable for the purpose, to receive spill prevention and cleanup training.

Part VII.

CONCLUSION

The Tennessee Erosion and Sediment Control Handbook referenced in this example SWPPP for home builders has been developed in loose-leaf format with the intention of allowing periodic updates. The handbook is available by attending one of the Erosion Prevention and Sediment Control courses offered by the Department (http://tnepsc.org/indexNew.asp).

Disclaimer

The erosion prevention and sediment control measures presented in this manual represent those that are currently being recommended; however, their effectiveness is dependent on proper selection, combination, installation and maintenance. No guarantee is implied by the Tennessee Department of Environment and Conservation either by inclusion in this document or acceptance of a Stormwater Pollution Prevention Plan (SWPPP) containing these measures. The General Permit for the Discharge of Stormwater from a Construction Activity (CGP) requires that when one of these measures is specified in the SWPPP, it be installed as presented in the Handbook.