

- d) Watershed maps delineating pre-development and post-development watershed boundaries, as well as the flow path and segments used to determine time of concentrations for each watershed.
  - e) All hydrologic and hydraulic computations associated with the stormwater management plan, appended and referenced in the narrative.
  - f) Storm sewer calculations and watershed map delineating all sub-areas used to size and compute flows for storm sewer system.
  - g) Operation and Maintenance Program: The report shall contain a proposed maintenance plan for all stormwater control facilities, in accordance with the following:
    - i. Identify the proposed ownership entity (e.g. Township, property owner, homeowner's association, other management entity.)
    - ii. A maintenance program for all facilities, outlining the type of maintenance activities, probably frequencies, personnel and equipment requirements, and estimated annual maintenance costs.
    - iii. A note shall be placed on the recorded plan: "As per the approved Stormwater Management Plan, the Township shall have right of access to the on-site detention facility for the right of maintenance in the event the owner, assigns or heirs do not adequately maintain the facility. The owner, assigns or heirs shall reimburse the Township for all costs associated with said maintenance. The aforementioned rights granted the Township in no way diminish the responsibility of the owner, assigns or heirs of said maintenance, and no liability will be assumed by the Township associated with required access for maintenance purposes."
3. A copy of the proposed Erosion and Sedimentation Control narrative and plans shall be submitted. The narrative and accompanying plans shall also be submitted to the Beaver County Conservation District for review and approval.
4. Stormwater Controls: All proposed stormwater runoff control measures must be shown on the development site plans, including methods for collecting, conveying and storing stormwater runoff on-site. The preliminary plan should provide information on the general type, location, sizing, etc. of all proposed facilities and their relationship to the existing watershed drainage system.
5. Easements, Rights-of-Way, Deed Restrictions: All existing and proposed easements and rights-of-way for drainage and/or

access to stormwater control facilities shall be shown, and the proposed owner identified. Drainage easements shall be delineated and recorded for all permanent facilities, swales and storm sewers to identify their permanency and provide maintenance access. Show any areas subject to special deed restrictions relative to or affecting stormwater management on the development site.

6. Permits/Approvals: A list of any approvals/permits relative to stormwater management that will be required from other governmental agencies (e.g., an obstructions permit from the Pennsylvania Department of Environmental Protection) and anticipated dates of submission/receipt should be included with the plan submission. Copies of applications may be requested by the Township. All stormwater or drainage-related computations or reports associated with these permit applications shall be submitted to the Township for reference and for review.
7. 100-Year Floodplain Delineation:
  - a) Stormwater management facilities located with or affecting the floodplain of any watercourse shall also be subject to the requirements of the Township "Floodplains" **Ordinance** as amended from time to time, which regulates construction and development within areas of the Township subject to flooding.
  - b) The 100-year floodplain must be delineated on all plans for all watercourses which have a watershed area of one hundred and fifty (150) acres or greater. Where, in the judgment of the Township, private property or public facilities may be adversely affected by the proposed activity, the 100-year floodplain shall be established for any watercourse.
  - c) The 100-year floodplain shall be delineated by one of the following methods:
    - i. The FIS study by the Federal Emergency Management Agency (FEMA).
    - ii. A hydrologic report prepared by an individual registered in the Commonwealth of Pennsylvania to perform such duties. Calculations and channel hydraulic characteristics used to determine floodplain limits shall be provided.
8. Municipal Liability Disclaimer: Approval of a stormwater management plan by the Township shall not be construed as an indication that said plan complies with the requirements, laws, or standards of any agency of the Commonwealth which may or may not govern said activity.



- D. Design Criteria for Stormwater Detention Facilities: The following criteria shall be utilized for the design of proposed detention facilities.
1. Detention facility(s) shall be designed such that the post-development peak runoff rates from the developed site are controlled at levels consistent with the allowable release rates determined for the 2, 10, and 100-year design storms.
  2. All detention facilities shall be equipped with outlet structures to provide discharge control for the 2, 10, and 100-year storm events. Provisions shall also be made for auxiliary structures that are capable of passing the post-development 100-year storm peak runoff flows, presuming blockage of all lower flow controls, without damaging the facilities.
  3. Shared storage facilities, which provide stormwater detention for more than one (1) development site, will be encouraged. Such facilities shall meet the design criteria contained in this Section. Runoff from the development sites involved shall be conveyed to the facility in a manner so as to void adverse impacts, such as flooding or erosion, to channels and properties located between the development site and the shared storage facilities.
  4. Where detention facilities are used, the design of multiple-use facilities, such as ball fields or similar recreational uses, are encouraged wherever feasible.
  5. As a general rule, detention facilities will be designed as dry basins, although wet facilities will be considered in specific situations where they can be shown to represent a significant amenity to the development and/or the Township. Facilities should be designed to induce water depths as shallow as possible.
  6. Except in approved wet basins, stormwater detention basins will be designed to drain completely. A low-flow channel shall be installed to facilitate the conveyance of storm sewer flows to the basin outlet during frequent storm events. All interior portions of the basin will slope toward the outlet or low flow channel at a minimum slope of one percent (1%). (Drawing No. 200.7.46)(SW-04). All impoundment areas shall be adequately under drained to prevent long term ponding of water.
  7. Detention facility outfall pipes shall have a minimum of two (2) anti-seepage collars installed along the profile of the pipe. Anti-seepage collars shall be constructed of reinforced concrete. (Drawing No. 200.7.4.7)(SW-05).
  8. All detention facilities designed with an earthen dam shall provide a minimum of one foot (1') of freeboard between the peak emergency spillway design flow elevation and the top of the embankment.

9. Emergency spillways not excavated in existing ground shall be designed with a suitable erosion protection lining approved by the Township. Rip rap spillways shall provide a concrete cutoff wall at the spillway design crest elevation. (Drawing No. 200.7.4.9)(SW-06).
10. All embankments will be designed according to sound engineering practice for such structures and must meet the approval of the Township **Engineer**. Facilities with a design water depth in excess of ten feet (10') may require a supporting report from a geotechnical engineer. In general, impoundment areas shall be designed to be contained within areas excavated within existing ground, rather than fill, whenever possible. Impoundment areas designed within fill shall require a supporting report from a geotechnical engineer addressing potential infiltration concerns and recommended solutions.
11. The outside slopes of the embankment shall not exceed two (2) horizontal to one (1) **foot** vertical. The interior slopes of the structure within the pool area should not exceed a slope of three (3) horizontal to one (1) vertical. Design of facilities with flatter slopes for aesthetics and as a maintenance consideration are encouraged. (Drawing No. 200.7.4.11)(SW-01).
12. Except where special erosion protection measures are provided, all disturbed areas will be graded evenly, topped with four inches (4") of topsoil, fertilized, seeded and mulched by methods consistent with Pennsylvania Department of Transportation Publication 408.
13. All outfalls to and from the facility shall be provided with end walls and erosion control measures as per Section 22-808.10. (Drawing No. 200.10) (SW-02).
14. Outlet control structures shall be constructed of reinforced concrete (cast-in-place or precast) and shall be recessed into the embankment wherever practical. (Drawing No. 200.7.4.14a) (SW-02). Trash racks for low-flow control openings should be designed to provide four to ten (4-10) times the area of the low-flow opening, and facilitate debris removal and maintenance. (Drawing No. 200.7.4.14b) (SW-03).
15. Access to all detention facilities shall be provided to the Township for maintenance purposes. This access shall be via a ten foot (10') wide access road at a maximum of fifteen percent (15%) if necessary to access the facility location, and by a written statement on recorded plans from the owner/operator of the facility granting access to the Township as noted in this Section.
16. Detention facilities that are designed as sedimentation facilities during construction operations shall be desilted and regraded to original design dimensions and have all temporary

sedimentation control devices removed prior to their conversion to detention facilities. Low-flow channels and under drains should be installed with the conversion of the facility.

17. In subdivision or projects that are constructed in phases with individual detention facilities employed as sedimentation basins, said facilities shall be converted to their ultimate use as stormwater management facilities as soon as their tributary areas are stabilized per Beaver County Conservation District standards. This conversion may be requested by the Township, with supportive corroboration from the Beaver County Conservation District, and shall be implemented as outlined in this Section and the approved Erosion and Sedimentation Control Plan.
18. An as-built drawing shall be required for each stormwater detention facility constructed. The drawing shall represent certification of the volume of the facility and the depth vs. storage relationship, as well as the elevational relationships and dimensions of flow controls, including emergency spillways as appropriate. These relationships shall be shown on the drawing in table form or in report form. In the event that these relationships vary from the computations provided in the approved plan, revised storm routings may be required at the discretion of the Township. The drawing shall be stamped by a Registered Profession Engineer or **Professional Land** Surveyor and submitted to the Township within sixty (60) days of the completion of the facility. No facility will be accepted until this requirements has been fulfilled.

E. Design Criteria for Collection/Conveyance Facilities:

1. As a general rule, no stormwater may be discharged to unprotected areas such as hillsides or fills without special erosion and/or energy dissipation controls being installed. Stormwater shall either be conveyed to the nearest established stream channel as approved by the Township, or provided with an approved energy dissipation device. Conveyance shall be by pipe or erosion protected ditch.
2. The design for culverts, pipes, and other stormwater conveyance structure shall be consistent with the design of the other stormwater management facilities. In the event that these structures are to be permitted by the Pennsylvania Department of Environmental Protection or Department of Transportation, the design criteria required by the state agency shall be utilized.
3. All sites shall be graded to provide drainage away from and around structures to prevent potential flooding damage.
4. Collection/conveyance facilities should not be installed parallel and close to the top or bottom of major embankments to avoid the possibility of embankment failure, with the exception of

those facilities specifically designed to prohibit stormwater runoff from eroding slopes or preventing runoff from damaging downstream properties.

5. Stormwater shall be collected and conveyed from upslope areas in a manner designed to prevent damage to downslope property(s) consistent with appropriate engineering standards. This system shall be identified by permanent easements with the party responsible for maintenance identified.

F. Disposal of Stormwater from Roof, Foundation and Driveway Drains:

1. Individual lots that are required to provide for on-lot stormwater management facilities per the stormwater management plan shall be identified on the recorded plan(s) for the subdivision.
2. No roof, driveway or foundation drains shall be discharged onto the right-of-way of any street or the pavement of any street. They may be connected to the street stormwater collection system of pipes or inlets. All residential dwellings not connected to a private or public stormwater collection and management system shall install a stormwater containment and disposal system at the direction of the Township in accordance with Drawing No. 200.7.6.2 (SS-13).
3. Other acceptable methods of disposal include underground tanks, infiltration devices, storm sewers, large diameter pipe chamber systems and grassed or other ground surfaces provided adequate consideration is given to erosion protection, or any other method approved by the Township.
4. At no time will any roof, driveway or foundation drains be allowed to be connected to the sanitary sewer line.
5. The use of splash blocks are permitted. The location of the splash block discharge must be a minimum of five feet (5') from foundations and ten feet (10') from the property line. Exceptions to this method may be permitted in the instance of townhouses or similar structures where common property lines exist. No stormwater runoff may be directed in such a manner as to disturb or damage neighboring properties.
6. Houses located on the low side of the road can use a solid pipe or corrugated pipe (minimum of 4" diameter) to the rear of the lot to a point of discharge onto a rock apron (size and dimensions to be specified) not less than ten feet (10') from the adjacent neighboring property line, provided said discharge has been accounted for within the approved stormwater management plan and the discharge does not impact downstream property owners.
7. Lots shall be graded in such a manner as to divert stormwater runoff away from adjacent property and structures consistent with appropriate engineering standards.

G. Pre-Development Conditions:

1. For the purpose of calculating pre-development peak flow rates, all sites will be considered to be in a heavily forested cover type at the time of development.
2. For the purposes of calculating pre-development peak flow rates, all lands shall be considered to be in good hydrologic condition.

H. Methods of Calculations of Runoff:

1. The methods of computation used to determine peak discharge and runoff shall be:
  - a) The USDA Soil Conservation Service Soil-Cover-Complex Method as set forth in the latest edition or Urban Hydrology for Small Watershed, Technical Release No. 55, as published by SDCS; or the Rational Method when approved by the engineer for small sites.
  - b) The Rational Method of  $Q=CIA$  where  $Q$  is the peak discharge of the watershed in cubic feet per second,  $C$  is the coefficient of runoff as per Runoff Coefficients Appendix No. 1.  $I$  is the intensity of rainfall in inches per hour, and  $A$  is the area of watershed in acres. If the Rational Method is used the attached Overland Velocity vs. Water Course Slope Chart shall be used to determine the average overland velocity.
  - c) If the SCS 24-hour, Type II Rainfall Distribution is used, the rainfall depths in inches for each of the design storms is shown below:

Design Storm Frequency	Rainfall Depth in Inches
2-year	2.38
10-year	3.42
100-year	4.86

- d) For additional information or data on other return periods, consult "Rainfall Duration Frequency Tables for Pennsylvania," published by the Pennsylvania Department of Environmental Protection, Office of Resource Management, Bureau of Dams and Waterways Management, Division of Stormwater Management, Harrisburg, Pennsylvania, February 1983 or its most recent update.
- e) If the Rational method is used, the Region No. 1, Pennsylvania Rainfall Intensity - Duration - Frequency Chart shown in the Pennsylvania Department of Transportation, Design Manual, Part 2, July 1986 shall be used to determine the rainfall intensity in inches per hour. See chart in the Appendix.
- f) Runoff calculations shall include a hydrologic and hydraulic analysis indicating volume and velocities of flow and the

grades, sizes, and capacities of water carrying structures, sediment basins, retention and detention structures and sufficient design information to construct such facilities. Runoff calculations shall also indicate both pre-development and post-development rates for peak discharge of stormwater runoff from the project site.

I. Design Standards - Water Carrying Facilities:

1. All storm sewer pipes, culverts and bridges (excluding detention and detention basin outfall structures) conveying water originating only from within the boundaries of the project site shall be designed for a 10-year storm event. All storm sewer pipes, culverts and bridges (excluding detention and retention basin outfall structures) conveying water originating from off-site be designed for 100-year storm event, unless it can be demonstrated that said facilities will not create a hazard. Natural drainage easement shall be provided to contain and convey the 100-year frequency flood throughout the project site. Easements shall begin at the furthest upstream property line of the proposed development in a watershed.
2. The capacities of storm sewers and open swales or channels shall be computed from the Manning Equation.
3. Additional engineering analysis may be required by the Township Engineer.
4. Discharging stormwater off the property to an existing facility will require supporting calculations to prove the adequacy of the downstream facilities. The developer, subject to Township approval, may elect to upgrade downstream facilities to accommodate the generated runoff.
5. All storm sewer pipes, culverts, bridges, outlet structures and emergency spillways shall include a satisfactory means of dissipating the energy of flow at its outlet to assure conveyance of flow without endangering the safety and integrity of the downstream drainage area.

J. Design Standards - Detention Facilities:

1. All detention facilities shall be equipped with outlet structures capable of providing discharge control for the 2, 10 and 100-year storm frequencies. Provisions shall also be made for auxiliary structures, spillways and pipe that are capable of passing the post-development 100-year storm runoff flows without endangering the detention facilities.
2. All detention facilities constructed with earth embankments shall be designed and constructed with a minimum freeboard elevation of one foot (1') between the peak emergency spillway design flow elevation and the top of the embankment.

3. All detention facility embankments shall have a minimum top width of levee of ten feet (10'), interior slopes of not less than three to one (3:1) and exterior slopes of not less than two to one (2:1).
  4. If the Rational Method is used the design storm duration will be the one which requires the maximum storage. Such a storm will be determined by analyzing various rainfall durations to determine the maximum storage required.
  5. Provide a stage/discharge table for the detention facilities.
  6. Provide a storage/elevation table for the detention facilities.
  7. Provide calculations, planimeter readings or other **data** to document the storage/elevation table.
  8. All outlet structures and emergency spillways shall include a satisfactory means of dissipating the energy of flow at its outlet to assure conveyance of flow without endangering the safety and integrity of the basin and the downstream drainage area.
  9. To ensure that the detention system will not become a health hazard or public nuisance, means shall be provided to drain the pond completely.
- K. Stormwater Management Plan Contents: The following items shall be included as part of the stormwater management plan:
1. Written and bound report including the following information:
    - a) Proposed name or identifying title or project.
    - b) Name and address of the landowner and developer of the project site.
    - c) Name, address and telephone number of the consultant who prepared the stormwater management plan.
    - d) Stormwater management report date and date of the latest revision to the report.
    - e) Typewritten narrative outlining the objectives of the proposed stormwater management plan.
    - f) Stormwater runoff calculations for both pre-development and post-development conditions.
    - g) Maintenance responsibility for the detention system shall remain with the developer and his successor in title. A legal agreement will be recorded with the Final Plat to that effect.
    - h) An ownership and maintenance program that clearly sets forth the ownership and maintenance **responsibilities** of all temporary and permanent stormwater management facilities and erosion and sedimentation control facilities, including:



- i. Description of temporary and permanent maintenance requirements.
  - ii. Identification of a responsible individual, corporation, association or other entity for ownership and maintenance of both temporary and permanent stormwater management and erosion sedimentation control facilities.
  - iii. Establishment of suitable easements for access to all facilities.
  - iv. Establishment of a graded roadway from public sewers to the detention facilities suitable for maintenance equipment.
- i) Plans showing the following information:
- i. Proposed name or identifying title of project.
  - ii. Name of the landowner and developer of the project site.
  - iii. Name and address of consultant who prepared the stormwater management plan.
  - iv. Plan date and date of the latest revision to the plan.
  - v. Location Map - provide a key map showing the development site location at a minimum scale of two thousand feet (2,000') to the inch.
  - vi. The names, locations and dimensions of streets, buildings, water courses, bodies of water, swales, drainage facilities, tree masses, significant trees, wetlands and other existing or proposed features on the site or which will be affected by runoff from the development.
  - vii. Existing and final contours with sufficient details to show all stormwater surface drainage. The location of the benchmark and the datum used shall also be indicated.
  - viii. The boundaries of the watershed(s) and (where applicable) sub-basin(s) as they are located on the development site and identify name(s) or number(s).
  - ix. The watershed and sub-basin areas.
  - x. Tract boundaries showing distances and bearings.
  - xi. Soil types and boundaries as designated by the USDA SCS Soil Survey of Beaver County.
  - xii. Show the location of the flow path utilized to estimate the pre-development and post-development time of concentration and identify each flow segment on the topographic plan.



2. 100-Year Floodplain Delineation:

- a) Stormwater management facilities located within or affecting the floodplain of any watercourse shall also be subject to the requirements of Township Code "Floodplains," as amended from time to time, which regulates construction and development within areas of the Township subject to flooding.
- b) The 100-year floodplain must be delineated on all plans for all watercourses which have a watershed area of one hundred and fifty (150) acres or greater. Where, in the judgment of the Township Engineer, private property or public facilities may be adversely affected by the proposed activity, the 100-year floodplain shall be established for any watercourse.
- c) The 100-year floodplain shall be delineated by one of the following methods:
  - i. A hydrologic report prepared by the Federal Emergency Management Agency (FEMA).
  - ii. A hydrologic report prepared by an individual registered in the Commonwealth of Pennsylvania to perform such duties.
- d) Municipal Liability Disclaimer: Approval of a stormwater management plan by the Township shall not be construed as an indication that said plan complies with the requirements, laws or standards of any agency of the Commonwealth which may or may not govern said activity.
- e) Outlet Structures in Detention Basins (SD-08): Outlet structures in detention basins shall be constructed with reinforced concrete, Drawing No. 200.7.5.
- f) Detention Basin Low Flow Channels (SD-07): Detention basin low flow channels shall be constructed in accordance with Detention Basin Low Flow Channel, Drawing o. 200.7.6.
- g) Detention Basin Outlet Pipes (SW-01): Detention basin outlet pipes shall have two (2) or more anti-seep collars.

22-808.8. Storm Sewer Trench (SS-01): All storm sewer pipe shall be installed in accordance with the standard in Drawing No. 200.8, Typical Storm Trench Detail where located under all proposed pavements.

22-808.9. Cradles and Reinforcements for Sewers: All cradles and reinforcements for sewers shall be approved by the Engineer.

22-808.10. Headwall/End Wall (SS-02): Concrete headwalls and splash aprons shall be constructed in accordance with the construction standard in Drawing No. 200.10a Standard Type D-2 End Wall Detail, at the outfall of all storm sewers. Where watercourses are piped and filled, concrete

headwall and splash aprons shall be constructed at both ends of the pipe. Rip rap shall be placed at end walls in accordance with Drawing No. 200.10b, Rip Rap Detail (SS-04).

- A. Rip Rap: All rip rap used for outlet protection, bank stabilization or other means of protection shall be designed and installed in accordance with specifications outlined in the Pennsylvania Department of Transportation Publications 408 and 72.
- 22-808.11. Concrete Encasement and Anchors for Sewers: All concrete encasement and anchors for sewers shall be approved by the **Township Engineer**.
- 22-808.12. Construction for Drop Manholes: All connections for drop manholes shall be approved by the Engineer.
- 22-808.13. Design Criteria for Stormwater Collection/Conveyance Facilities: For the purpose of designing storm sewers, open swales and other stormwater runoff collection and conveyance facilities, the Rational Method shall be applied. Rainfall intensities for design should be obtained from the Pennsylvania Department of Transportation Rainfall Charts. The design storm for storm sewers is ten (10) years. The design storm for storm sewer outfall channels is ten (10) years. Calculation sheets must be submitted.
- A. Where it is required to collect and convey the 100-year event to the detention facilities, the storm sewers shall be sized as required to accommodate such an event without overflowing onto the ground surface and in compliance with Drawing No. **200.10b**, Rip Rap Detail SS-04.
- 22-808.14. Location of Collection/Conveyance Facilities: Collection/conveyance facilities should not be installed parallel and close to the top or bottom of a major embankment to avoid the possibility of damage to the facility due to embankment failure or of damage to the embankment due to facility failure.
- 22-808.15. Storm Sewer Outfall Channels and Drainage Swales: Permissible velocities of various channel linings (vegetation, rock lined, rip-rap, gabions [Drawing No. 200.14 {SD-04}] etc.) shall be in accordance with Chapter 4 of the Erosion and Sediment Pollution Control Program Manual published by the Pennsylvania Department of Environmental Protection. Storm sewer outfall channels shall be trapezoidal or triangular shape with side slopes not to exceed two (2) horizontal to one (1) vertical (Ratio). Storm sewer outfall channels shall be designed in accordance with Chapter 13 of the Pennsylvania Department of Transportation Design Manual Part 2 - Publication 13, Section 13.3 titled Watercourse Erosion Protection. Where drainage swales or open channels are used, they shall be suitably designed for ease of maintenance.

- 22-808.16. Springs: Any springs encountered during construction shall be piped and connected to the storm sewer system or extended to a natural watercourse as may be approved by the **Township** Engineer.
- 22-808.17. Roof and Foundation Drains: No roof or foundation drains shall be discharged onto the right-of-way of any street or the pavement of any street. They may be connected to the street stormwater collection system of pipes or inlets. All residential dwellings not connected to a private or public stormwater collection and management system shall install a stormwater containment and disposal system in accordance with Drawing No. 200.7.6.2 (SS-13 and SS-14).
- 22-808.18. Erosion and Sediment Control: Measures shall be designed and used during construction as per approved plans from the Beaver County Conservation District (Section ) and in accordance with the details presented herein and the Pennsylvania Department of Environmental Protection, Chapter 102, Erosion and Sedimentation Control Program Manual.
- A. Straw Bale Barrier (ES-01) - See Drawing No. 200.18.1
  - B. Silt Barrier Fence (ES-02) - See Drawing No. 200.18.2
  - C. Rock Construction Entrance (ES-03) - See Drawing No. 200.18.3
  - D. Diversion Swale (ES-04) - See Drawing No. 200.18.4
  - E. Sediment Trap Outlet (ES-05) - See Drawing No. 200.18.5
  - F. Rock Filter (ES-06) - See Drawing No. 200.18.6
  - G. Sediment Basin (ES-07) - See Drawing No. 200.18.7
  - H. Soil Erosion Matting (ES-08) - See Drawing No. 200.18.8

## **22-809. EROSION AND SEDIMENTATION CONTROL**

- 22-809.1. No earth movement or removal of trees or ground cover in any development plan, except a minor subdivision or an earth disturbance of less than thirty thousand (30,000) square feet, shall commence until an erosion and sedimentation control plan has been reviewed by the County Conservation District and the Township Planning Commission, and approved.
- 22-809.2. The plan shall be prepared by a Registered Professional Engineer or **Professional** Land Surveyor using as his guide the "Handbook for Earthmoving Activities and Erosion and Sedimentation Control in Beaver County." The Engineer is urged to consult with the Beaver County Conservation District on the plan's requirements and his responsibilities.
- 22-809.3. If the site proposed for development contains twenty-five (25) acres or more to be disturbed by earth movement and/or vegetation removal or involves realignment of a stream or drainageway the developer shall

secure an Earth Disturbance Permit from the Department of Environmental Protection.

- 22-809.4. Evidence that a plan has been prepared and approved by the Soil Conservation District, or that a special earth disturbance permit has been issued, shall be provided before final approval can be granted by the Township on a subdivision or development plan.
- 22-809.5. The approved erosion and sedimentation control plan shall be kept on the construction site available for inspection by public officials until the work covered by it has been completed.

## **22-810. MISCELLANEOUS IMPROVEMENTS**

- 22-810.1. Sidewalks, if recommended by the Planning Commission and required by the Board of Supervisors, shall be at least four feet (4') wide and shall be either four inches (4") of concrete or two inches (2") of ID-2 asphalt on a four inch (4") base of crushed stone. Concrete shall be reinforced with six foot by six foot (6' x 6') Number 9 welded wire fabric with cut joints every six (6) running feet and expansion joints every thirty feet (30'). The surface shall be treated to provide traction. No sidewalks shall have a grade over twelve percent (12%). Sidewalks may be required to connect large development plans to schools or other public facilities.
- 22-810.2. Street lights may be recommended by the Planning Commission and required by the Board of Supervisors for installation by a developer at street intersections where a hazard exists. Street lights shall be on their own standard and served from an underground source. Luminaires and standards shall be acceptable to the Board of Supervisors and electric utility company before installation. The Township shall not assume the cost or electric power for any installation within a subdivision plan.
- 22-810.3. All electric, telephone and cable TV lines serving any subdivision, land development plan, mobilehome park or recreational vehicle park that are not to be located in rights-of-way existing prior to the plan development shall be placed underground in street rights-of-way or other recorded easements in accordance with Public Utility Commission orders of July 8, 1970, or amendments thereto. Any exceptions shall be made only after successful appeal to the P.U.C.
- 22-810.4. Where easements or rights-of-way are shared by several utilities, each shall be placed with respect to the requirements of the other relative to depth and separation. Transformers, switch gear and other appurtenances to electric and telephone systems shall be placed either in secured vaults in the ground or pad mounted in secured steel containers made as inconspicuous as possible by evergreen landscaping.

## **22-811. PROVISION FOR A DEVELOPERS AGREEMENT**

An executed agreement/contractual commitment may be required in writing signed by the applicant and approved by the Township Solicitor. Such agreement/contractual commitment may include, but not be limited to, requirements that the applicant or developer is bound not to cause any physical change in the land or to any structure which requires prior approval or the issuance of a permit, or both, from any governmental body or agency until such permits or approvals are actually obtained and specifying among other things that the subdivision or land development shall be completed and maintained in the manner approved in the final plan within the time schedule agreed upon and the hours within which construction take place, the maintenance of existing and proposed roads and facilities and authorizing the Township to obtain an immediate ex parte injunction, the withdrawal of permits and such other remedies as the Township deems appropriate against the applicant, its agents and contractors in the Court of Common Pleas of Beaver County, if work is commenced without such permits or approvals or violation of other terms in the agreement and specifying any other remedies for failure of the developer to comply.

## **PART 9**

### **CERTIFICATES, AFFIDAVITS, APPROVALS**

#### **22-901. CERTIFICATES, AFFIDAVITS, APPROVALS**

The applicable certificates quoted herein shall be inscribed on the final plan **or plat** and shall be properly signed and attested when the final plan is submitted to the Planning Commission and the Board of Supervisors. All certificates shall be placed on **the** final plan **or plat** in an arrangement suitable for placement of all required seals and stamps.

**22-812. MANDATORY LAND DEDICATION REQUIREMENTS  
OR FEE IN LIEU THEREOF** (Added by Ord. 229, 1/17/07)

**22-812.1. Definitions.**

The following definitions shall apply for the purposes of this section:

Active Recreation: Baseball/Softball fields, tennis courts, basketball courts, playgrounds, and other similar facilities, that offer an opportunity to play or observe an active sport, and are constructed in conformance with national standards, including those of the National Recreation and Parks Administration (NRPA).

Passive Recreation: Picnic shelters and pavilions, libraries and reading/internet rooms, observation facilities at active recreation sites.

Dedication: The act of the development owner to give by deed of general warranty, a portion of the real property being developed, either to the Township of Chippewa for general public active/passive recreational use, or to a non-profit homeowner's association for private active/passive recreational use within the development.

**22-812.2. Applicability.**

The provisions and requirements of this Section 812 shall apply to all Final Land Developments and Final Subdivisions, which would upon buildout, result in the creation of three (3) or more dwelling units. The provision of this Section 812 shall not apply to any plan of residential development currently in the preliminary or final plan process at the time of the adoption of these provisions.

**22-812.3. Land Dedication Requirement.**

The developer of the residential subdivision shall dedicate land within the Plan to be used for active/passive recreation and open space for single-family and multi-family units as specified in sections 812.4 and 812.12 of this ordinance.

**22-812.4. Land Dedication Requirements.**

The land offered by the developer for dedication to active/passive recreation, shall meet the following criteria:

- A. The land shall be physically and legally accessible to all residents of the proposed development. The land may be an integrated part of the development, or within the recreation service area of the development.
- B. At least 75% of the land offered for dedication to active recreation shall have a slope of not more than 5%.
- C. At least 50% of the land offered for dedication shall be developed as active recreation with, where possible, at least two (2) types of active recreation facilities offered. Additional facilities may be required by the Board of Supervisors, depending upon the population of the development. The Board shall apply national standards including those of the National Recreation and Parks Administration to determine the needs of the assumed population of new developments and shall require corresponding facilities.

- 22-812.5. Land Dedication Setback Requirements.  
All playing fields and associated structures shall be set back at least twenty (20) feet from all property lines.
- 22-812.6. Dedication of Trails.  
A walking or non-motorized-bike riding trail system, if accepted by the Township Board of Supervisors, may be substituted for one of the required active recreation types required in the plan of subdivision.
- 22-812.7. Land Dedication Linkage Requirements.  
Land offered for dedication shall, where possible, be situated such that the recreation parcel abuts open space and/or other recreational facilities, thus creating an integrated network of open space, trails, and recreational areas and facilities.
- 22-812.8. Minimum Contiguous Accepted Land Dedication for a Plan.  
The minimum total acreage of contiguous tracts of land to be offered shall be equal to the minimum lot size per the Zoning Ordinance in the District where the plan is located.
- 22-812.9. Street Frontage.  
Land offered for dedication shall have at least fifty (50) feet of frontage along a public or private street.
- 22-812.10. Maintenance of Dedicated Lands.  
The Township hereby declares all rights granted to it in Section 705(f) of the *Municipalities Planning Code*, 53 P.S. §10705(f), regarding the maintenance of common open space, including the right of the Township to maintain property which the owner of the homeowner's association fails to maintain, and to file liens against all properties having an interest in said association, shall be applicable to all land dedicated by the developer under this Section 812.
- 22-812.11. Land Dedication Ownership.  
Land dedicated to the Township shall be by general warranty deed free and clear of all liens, encumbrances, easements and rights-of-way, oil and gas leases, except those which may be specifically agreed to by the Township. In lieu of dedicating the land to the Township, the Township Board of Supervisors, at its discretion, may require the developer to create a homeowner's association, or similar entity, for the purpose of owning, operating and maintaining the facilities of active/passive recreation to be created on said land. The Board of Supervisors may also grant the developer permission to retain ownership. In all cases, ownership by any entity other than the Township shall require deed restrictions requiring maintenance of the approved facilities on the site, and a conveyance to the Township should the homeowner's association, or developer, fail to perform the maintenance obligations and needs of the active or passive recreation or similar facilities.
- 22-812.12. Calculation of Mandatory Land Dedication and Fee in Lieu Thereof.  
The amount of land to be dedicated for active recreation within the plan shall be:



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- A. .049 acres per single-family dwelling unit.
  - B. .034 acres per multi-family dwelling unit.
  - C. The fee in lieu of any land dedication required per dwelling unit shall be calculated based upon the current average market value of one acre of undeveloped land in Chippewa Township, which is hereby set at \$6,300.00. This value may be changed from time to time by amendment hereto as the value of undeveloped land in the Township changes.
  - D. Example: Single-Family Home Fee in Lieu Thereof Determination  
The estimated value of undeveloped land is multiplied by .049. The product of that calculation is then multiplied by 3, which represents the average household size for a single-family dwelling. Based upon this equation, the fee in lieu thereof for one (1) single-family dwelling within the development is \$847.00.
  - E. Example: Multi-Family Unit Fee in Lieu Thereof Determination:  
The estimated value of undeveloped land is multiplied by .034. The product of that calculation is then multiplied by 2, which represents the average household size for a multi-family unit. Based upon this equation, the fee in lieu for one (1) multi-family unit dwelling within the development is \$428.00.
- 22-812.13. Fee in Lieu Thereof Payment Methods.  
Where the fee in lieu thereof is elected by the developer or owner, it shall be paid in the form of cash, cashier's or certified check. Payment of said funds shall be a condition of final approval of the plan, and its release for recordation.
- 22-812.14. Fee in Lieu Thereof Accounting.  
All such fees collected shall, upon receipt by the Township, be deposited in an interest-bearing account clearly identifying the specific recreation facilities for which the fee was received. Interest earned on such accounts shall become funds of that account. Funds from such accounts shall be expended only in properly allocable portions of the cost incurred to plan, design and construct the specific recreation facilities for which the funds were collected.
- 22-812.15. Fee in Lieu Thereof Time Limits.  
In the case of developments in which the fees were paid to the Township prior to the recordation of the plan, any person who paid any fee under this ordinance shall be entitled to a refund of such fee, plus interest accumulated thereon, from the date of payment, if the Township has failed to utilize the fee paid for the purposes set forth in this ordinance within three (3) years from the date such fees were paid.
- 22-812.16. Uses of Collected Fees.  
The Township shall use the fees collected under this Section 812 for the purpose of purchasing, planning, developing and constructing land, equipment, structures, courts and fields for all types of active or passive recreational facilities, as more fully set forth in the aforesaid Comprehensive Recreation, Park and Open Space Plan. All improvements purchased and made for such facilities shall be open to all residents of the Township.

- 22-812.17. Allocation of Fees.  
The allocation of all fees collected shall be based upon recommendations of the Comprehensive Recreation, Park and Open Space Plan.

CHAPTER 22  
Subdivision and Land Development Ordinance

**SECTION 813 MS-4 STORMWATER OPERATION AND  
MAINTENANCE (Added by Ord. 249, 5/20/15)**

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## **ARTICLE I - GENERAL PROVISIONS**

### **Section 813.101. Short Title**

This Ordinance shall be known and may be cited as the "Chippewa Township Stormwater Operation and Maintenance MS4 Prohibited Discharge Ordinance".

### **Section 813.102. Statement of Findings**

The Board of Supervisors of Chippewa Township finds that:

- A. Inadequate maintenance of stormwater facilities contributes to erosion and sedimentation, overtaxes the carrying capacity of streams and storm sewers, increases the cost of public facilities to carry and control stormwater, undermines flood plain management and flood control efforts in downstream communities, reduces groundwater recharge, threatens public health and safety, and increases pollution of water resources.
- B. Reasonable regulation of connections and discharges to municipal separate stormsewer systems is fundamental to the public health, safety and welfare and the protection of people of the Commonwealth, their resources, and the environment.
- C. Stormwater is an important water resource which provides groundwater recharge for water supplies and base flow of streams, which also protects and maintains surface water quality.
- D. Federal and state regulations require certain municipalities to obtain a permit for stormwater discharges from their separate storm sewer systems under the National Pollutant Discharge Elimination System (NPDES). Permittees are required to enact, implement and enforce a prohibition of non-stormwater discharges to the Permittee's regulated small municipal separate stormsewer systems (MS4s).

### **Section 813.103. Purpose**

The purpose of this Ordinance is to promote health, safety, and welfare within Chippewa Township and its watershed by minimizing the harms and maximizing the benefits described in Section 813.102 of this Ordinance, through provisions designed to:

- A. Provide standards to meet NPDES permit requirements.
- B. Meet legal water quality requirements under state law, including regulations at 25 Pa. Code 93 to protect, maintain, reclaim, and restore the existing and designated uses of the waters of this Commonwealth.
- C. Preserve the natural drainage systems as much as possible.

- D. Maintain groundwater recharge to prevent degradation of surface and groundwater quality and to otherwise protect water resources.
- E. Prevent scour and erosion of stream banks and streambeds.
- F. Provide proper operation and maintenance of all facilities and all SWM BMPs that are implemented within the municipality.

#### **Section 813.104. Statutory Authority**

The Township of Chippewa also is empowered to regulate land use activities that affect runoff by the authority of the Act of July 31, 1968, P.L. 805, No. 247, The Pennsylvania Municipalities Planning Code, as amended.

#### **Section 813.105. Applicability**

All activities related to proper operation and maintenance of approved stormwater management BMPs, and all activities that may contribute non-stormwater discharges to a regulated small MS4, are subject to regulation by this Ordinance.

#### **Section 813.106. Repealer**

Any other ordinance provision(s) or regulation of Chippewa Township inconsistent with any of the provisions of this Ordinance is hereby repealed to the extent of the inconsistency only.

#### **Section 813.107. Severability**

In the event that a court of competent jurisdiction declares any section or provision of this Ordinance invalid, such decision shall not affect the validity of any of the remaining provisions of this Ordinance.

#### **Section 813.108. Compatibility with Other Requirements**

Actions taken under this Ordinance do not affect any responsibility, permit or approval for any activity regulated by any other code, law, regulation or ordinance.

### **ARTICLE II - DEFINITIONS**

For the purposes of this Ordinance, certain terms and words used herein shall be interpreted as follows:

- A. Words used in the present tense include the future tense; the singular number includes the plural, and the plural number includes the singular; words of masculine gender include feminine gender; and words of feminine gender include masculine gender.

- B. The word “includes” or “including” shall not limit the term to the specific example but is intended to extend its meaning to all other instances of like kind and character.
- C. The words “shall” and “must” are mandatory; the words “may” and “should” are permissive.

**Best Management Practice (BMP)** – Activities, facilities, designs, measures, or procedures used to manage stormwater impacts from regulated activities, to meet state water quality requirements, to promote groundwater recharge, and to otherwise meet the purposes of this Ordinance. Stormwater BMPs are commonly grouped into one of two broad categories or measures: “structural” or “nonstructural.” In this Ordinance, nonstructural BMPs or measures refer to operational and/or behavior-related practices that attempt to minimize the contact of pollutants with stormwater runoff whereas structural BMPs or measures are those that consist of a physical device or practice that is installed to capture and treat stormwater runoff. Structural BMPs include, but are not limited to, a wide variety of practices and devices, from large-scale retention ponds and constructed wetlands, to small-scale underground treatment systems, infiltration facilities, filter strips, low impact design, bioretention, wet ponds, permeable paving, grassed swales, riparian or forested buffers, sand filters, detention basins, and manufactured devices. Structural stormwater BMPs are permanent appurtenances to the project site.

**Conservation District** – A conservation district, as defined in Section 3(c) of the Conservation District Law (3 P. S. § 851(c)) that has the authority under a delegation agreement executed with DEP to administer and enforce all or a portion of the regulations promulgated under 25 Pa. Code 102.

**DEP** – The Pennsylvania Department of Environmental Protection.

**Earth Disturbance Activity** – A construction or other human activity which disturbs the surface of the land, including but not limited to: clearing and grubbing; grading; excavations; embankments; road maintenance; building construction; and the moving, depositing, stockpiling or storing of soil, rock, or earth materials. Earth disturbance activity is subject to regulation under 25 Pa. Code 92, 25 Pa. Code 102 or the Clean Streams Law.

**Municipality** – Township of Chippewa, Beaver County, Pennsylvania, or Chippewa Township or Township.

**NRCS** – USDA Natural Resources Conservation Service (previously SCS).

**Regulated Activities** – Any activities that may affect stormwater runoff and any activities that may contribute non-stormwater discharges to a regulated small MS4.

**State Water Quality Requirements** – The regulatory requirements to protect, maintain, reclaim, and restore water quality under Title 25 of the Pennsylvania Code and the Clean Streams Law.

**Stormwater** – Drainage runoff from the surface of the land resulting from precipitation or snow or ice melt.

**USDA** – United States Department of Agriculture.

**Waters of this Commonwealth** – Any and all rivers, streams, creeks, rivulets, impoundments, ditches, watercourses, storm sewers, lakes, dammed water, wetlands, ponds, springs, and all other bodies or channels of conveyance of surface and underground water, or parts thereof, whether natural or artificial, within or on the boundaries of this Commonwealth.

### **ARTICLE III - STORMWATER MANAGEMENT STANDARDS**

#### **Section 813.301. General Requirements**

- A. For all regulated earth disturbance activities, erosion and sediment control BMPs shall be designed, implemented, operated and maintained during the regulated earth disturbance activities (e.g., during construction) to meet the purposes and requirements of this Ordinance, and to meet all requirements under Title 25 of the Pennsylvania Code and the Clean Streams Law. Various BMPs and their design standards are listed in the *Erosion and Sediment Pollution Control Program Manual* (E&S Manual)<sup>2</sup>, No. 363-2134-008 (April 15, 2000), as amended and updated.
- B. Stormwater flows onto adjacent property shall not be created, increased, decreased, relocated or otherwise altered without written notification of (sic) the adjacent property owner(s) by the developer. Such stormwater flows shall be subject to the requirements of this Ordinance.
- C. For all regulated activities, SWM BMPs shall be implemented, operated and maintained to meet the purposes and requirements of this Ordinance and to meet all requirements under Title 25 of the Pennsylvania Code, the Clean Streams Law and the Storm Water Management Act.
- D. Various BMPs and their design standards are listed in the BMP Manual<sup>1</sup>.

### **ARTICLE IV – OPERATION AND MAINTENANCE**

#### **Section 813.401. Responsibilities of Developers and Landowners**

- A. Facilities, areas, or structures used as Stormwater Management BMPs shall be enumerated as permanent real estate appurtenances and recorded as deed restrictions or conservation easements that run with the land.

- B. O&M Plans for stormwater management approved pursuant to 25 Pa. Code §102 after the date of this Ordinance shall be recorded as a restrictive deed covenant that runs with the land.
- C. The Township may take enforcement actions against an owner for any failure to satisfy the provisions of this Ordinance.

#### **Section 813.402. Operation and Maintenance Agreements**

- A. Prior to completing construction of a SWM Site Plan, the property owner shall sign and record an Operation and Maintenance (O&M) Agreement (see Appendix A) covering all stormwater control facilities which are to be privately owned.
  - 1. The owner, successor and assigns shall operate and maintain all facilities in accordance with the approved maintenance schedule(s) in the O&M Plan.
  - 2. The owner shall convey to the Township conservation easements to assure access for periodic inspections by Chippewa Township and maintenance, as necessary.
  - 3. The owner shall keep on file with Chippewa Township the name, address, and telephone number of the person or company responsible for operation and maintenance activities; in the event of a change, new information shall be submitted by the owner to the Township within ten (10) working days of the change.
- B. The owner is responsible for operation and maintenance (O&M) of the SWM BMPs. If the owner fails to adhere to the O&M Agreement, the Township may perform the services required and charge the owner appropriate fees. Nonpayment of fees may result in a lien against the property.

### **ARTICLE V - PROHIBITIONS**

#### **Section 813.501. Prohibited Discharges and Connections**

- A. Any drain or conveyance, whether on the surface or subsurface, that allows any non-stormwater discharge including sewage, process wastewater, and wash water to enter a regulated small MS4 or to enter the waters of this Commonwealth is prohibited.
- B. No person shall allow, or cause to allow, discharges into a regulated small MS4, or discharges into waters of this Commonwealth, which are not composed entirely of stormwater, except (1) as provided in Subsection C below and (2) discharges allowed under a state or federal permit.
- C. The following discharges are authorized unless they are determined to be significant contributors to pollution (sic) a regulated small MS4 or to the waters of



this Commonwealth:

- Discharges from firefighting activities	- Flows from riparian habitats and wetlands
- Potable water sources including water line flushing	- Uncontaminated water from foundations or from footing drains
- Irrigation drainage	- Lawn watering
- Air conditioning condensate	- Dechlorinated swimming pool discharges
- Springs	- Uncontaminated groundwater
- Water from crawl space pumps	- Water from individual residential car washing
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spill material has been removed) and where detergents are not used	- Routine external building wash down (which does not use detergents or other compounds)
Diverted stream flows	

- D. In the event that Chippewa Township or DEP determines that any of the discharges identified in Subsection C significantly contribute pollutants to a regulated small MS4 or to the waters of this Commonwealth, the Township or DEP will notify the responsible person(s) to cease the discharge.

### **Section 813.502. Roof Drains and Sump Pumps**

Roof drains and sump pumps shall discharge to infiltration or vegetative BMPs.

## **ARTICLE VI - ENFORCEMENT AND PENALTIES**

### **Section 813.601. Right-of-Entry**

Upon presentation of proper credentials, the Township of Chippewa may enter at reasonable times upon any property within the Township to inspect the condition of the stormwater structures and facilities in regard to any aspect regulated by this Ordinance.

### **Section 813.602. Inspection**

SWM BMPs should be inspected by the landowner, or the owner's designee (including the Township for dedicated and owned facilities), according to the following list of minimum frequencies:

1. Annually for the first 5 years.
2. Once every 3 years thereafter.
3. During or immediately after the cessation of a 10-year or greater storm.

### **Section 813.603. Enforcement**

It is unlawful for any person to modify, remove, fill, landscape or alter any approved SWM BMPs, facilities, areas or structures without the written approval of DEP or a delegated County Conservation District and the Township of Chippewa.

### **Section 813.604. Suspension and Revocation**

- A. Any approval or permit issued by the Township may be suspended or revoked for:
  - 1. Non-compliance with or failure to implement any provision of an approved SWM Site Plan or O&M Agreement.
  - 2. A violation of any provision of this Ordinance or any other applicable law, ordinance, rule or regulation relating to a Regulated Activity.
  - 3. The creation of any condition, or the commission of any act which constitutes or creates a hazard, nuisance, pollution or endangers the life of property of others.
- B. A suspended approval may be reinstated by the Township when:
  - 1. The Township has inspected and approved the corrections to the violations that caused the suspension.
  - 2. The Township is satisfied that the violation has been corrected.
- C. An approval that has been revoked by the Township cannot be reinstated. The applicant may apply for a new approval under the provisions of this Ordinance.
- D. If a violation causes no immediate danger to life, public health or property, at its sole discretion, the Township may provide a limited time period for the owner to correct the violation. In these cases, the Township will provide the owner, or the owner's designee, with a written notice of the violation and the time period allowed for the owner to correct the violation. If the owner does not correct the violation within the allowed time period, the Township may revoke or suspend any, or all, applicable approvals and permits pertaining to any provision of this Ordinance.

### **Section 813.605. Penalties**

- A. Anyone violating the provisions of this Ordinance (Chapter 22, Part 8, Section 808.101 et seq.) shall be guilty of a summary offense, and upon conviction, shall be subject to a fine of not more than \$1,000.00 for each violation, recoverable with costs. Each day that the violation continues shall be a separate offense and penalties shall be cumulative.

- B. In addition, the Township may institute injunctive, mandamus, or any other appropriate action or proceeding at law or in equity for the enforcement of this Ordinance. Any court of competent jurisdiction shall have the right to issue restraining orders, temporary or permanent injunctions, mandamus or other appropriate forms of remedy or relief.

#### **Section 813.606. Appeals**

- A. Any person aggrieved by any action of Chippewa Township or its designee, relevant to the provisions of this Ordinance, may appeal to the Township within 30 days of that action.
- B. Any person aggrieved by any decision of Chippewa Township relevant to the provisions of this Ordinance, may appeal to the County Court of Common Pleas in the county where the activity has taken place within 30 days of the Township's decision.

### **ARTICLE VII - REFERENCES**

- 1. Pennsylvania Department of Environmental Protection. No. 363-0300-002 (December 2006), as amended and updated. *Pennsylvania Stormwater Best Management Practices Manual*. Harrisburg, PA.
- 2. Pennsylvania Department of Environmental Protection. No. 363-2134-008 (April 15, 2000), as amended and updated. *Erosion and Sediment Pollution Control Program Manual*. Harrisburg, PA.

## APPENDIX A

### OPERATION AND MAINTENANCE (O&M) AGREEMENT STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES (SWM BMPs)

THIS AGREEMENT, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between \_\_\_\_\_, (hereinafter the "Landowner"), and CHIPPEWA TOWNSHIP, Beaver County, Pennsylvania, (hereinafter "Township");

#### WITNESSETH

**WHEREAS**, the Landowner is the owner of certain real property as recorded by deed in the land records of Beaver County, Pennsylvania, Deed Book \_\_\_\_\_, page \_\_\_\_\_, or Document No. \_\_\_\_\_ (hereinafter "Property").

**WHEREAS**, the Landowner is proceeding to build and develop the Property; and

**WHEREAS**, the SWM BMP Operation and Maintenance (O&M) Plan approved by the Township of Chippewa (hereinafter referred to as the "O&M Plan") for the property identified herein which is attached hereto as Appendix A and made part hereof, as approved by the Township, provides for management of stormwater within the confines of the Property through the use of BMPs; and

**WHEREAS**, the Township and the Landowner, his successors and assigns, agree that the health, safety, and welfare of the residents of the Township, and the protection and maintenance of water quality require that on-site SWM BMPs be constructed and maintained on the Property; and

**WHEREAS**, the Township requires, through the implementation of the SWM Site Plan, that SWM BMPs as required by said SWM Site Plan and the Chippewa Township Stormwater Management Ordinance be constructed and adequately operated and maintained by the Landowner, successors, and assigns.

**NOW, THEREFORE**, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The Landowner shall construct the BMPs in accordance with the plans and specifications identified in the SWM Site Plan.
2. The Landowner shall operate and maintain the BMPs as shown on the SWM Plan in good working order in accordance with the specific operation and maintenance requirements noted on the approved O&M Plan.
3. The Landowner hereby grants permission to Chippewa Township, its authorized agents and employees, to enter upon the property at reasonable times and upon presentation of proper credentials, to inspect the BMPs whenever necessary. Whenever possible, the Township shall notify the Landowner prior to entering the property.
4. In the event the Landowner fails to operate and maintain the BMPs per paragraph 2, the Township or its representatives may enter upon the Property and take whatever action is deemed necessary to maintain said BMP(s). It is expressly understood and agreed that the Township is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on Chippewa Township.
5. In the event the Township, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials and the like, the Landowner shall reimburse the Township for all expenses (direct and indirect) incurred within 10 days of receipt of invoice from the Township.

6. The intent and purpose of this Agreement is to ensure the proper maintenance of the onsite BMPs by the Landowner; provided, however, that this Agreement shall not be deemed to create or effect any additional liability of any party for damage alleged to result from or be caused by stormwater runoff.
7. The Landowner, his executors, administrators, assigns and other successors in interests, shall release Chippewa Township from all damages, accidents, casualties, occurrences, or claims which might arise or be asserted against said employees and representatives from the construction, presence, existence, or maintenance of the BMP(s) by the Landowner or Township.
8. The Township intends to inspect the BMPs at a minimum of once every three years to ensure their continued functioning.

This Agreement shall be recorded at the Office of the Recorder of Deeds of Beaver County, Pennsylvania, and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Landowner, his administrators, executors, assigns, heirs, and any other successors in interests, in perpetuity.

ATTEST:

**CHIPPEWA TOWNSHIP BOARD OF  
SUPERVISORS**

By: \_\_\_\_\_  
Mark Taylor, Secretary

By: \_\_\_\_\_  
James R. Bouril, Chairman

By: \_\_\_\_\_  
Nancy W. Lamey, Supervisor

By: \_\_\_\_\_  
Mark Hoenig, Supervisor

WITNESS:

\_\_\_\_\_

\_\_\_\_\_

Landowner

\_\_\_\_\_

\_\_\_\_\_

Landowner

COMMONWEALTH OF PENNSYLVANIA :  
: ss  
COUNTY OF BEAVER :

I, \_\_\_\_\_, a Notary Public in and for the county and state aforesaid, whose  
commission expires on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, do hereby certify that  
\_\_\_\_\_ whose name(s)  
is/are signed to the foregoing Agreement bearing date of the \_\_\_\_\_ day \_\_\_\_\_, 20\_\_\_\_,  
has acknowledged the same before me in my said county and state.

GIVEN UNDER MY HAND THIS \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

COMMONWEALTH OF PENNSYLVANIA :  
: ss  
COUNTY OF BEAVER :

I, \_\_\_\_\_, a Notary Public in and for the county and state aforesaid, whose  
commission expires on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, do hereby certify that  
\_\_\_\_\_ whose name(s)  
is/are signed to the foregoing Agreement bearing date of the \_\_\_\_\_ day \_\_\_\_\_, 20\_\_\_\_,  
has acknowledged the same before me in my said county and state.

GIVEN UNDER MY HAND THIS \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

**TOWNSHIP OF CHIPPEWA**

**2568 DARLINGTON ROAD, BEAVER FALLS, PA 15010**

**TELEPHONE (724) 843-8177**

**OWNERS ADOPTION**

Know All Men By These Presents, that (I or We) \_\_\_\_\_ of the \_\_\_\_\_  
(Name of Owner or Owners)  
(City, Borough, Township) of \_\_\_\_\_, County of \_\_\_\_\_  
\_\_\_\_\_

Commonwealth of (or State) \_\_\_\_\_, for (myself, ourselves), (my, our) heirs, executors, administrators and assign, do hereby adopt this as (my, our) Plan of Subdivision of (my, our) property, situate in the Township of Chippewa, County of Beaver, Commonwealth of Pennsylvania, and for divers advantages accruing to (me, us) do hereby dedicate forever, for public use for highway, drainage, sewage and utility purposes, all drives, roads, lands, rights-of-way, easements, ways and other public ways shown upon the plan, with the same force and effect as if the same had been opened through legal proceedings and in consideration of the approval of said plan and any future acceptance of said public highways, rights-of-way and easements by said County of Beaver or Township of Chippewa (I or We), \_\_\_\_\_, hereby agree

(Name of Owner or Owners)

to and by these presents do release and forever discharge said County of Beaver or said Township of Chippewa, their successors or assigns from any liability for damages arising and to arise from the appropriation of said ground for public highways, and other public uses and the physical grading thereof to any grades that may be established. This dedication and release shall be binding upon \_\_\_\_\_, and assigns and purchasers of lots in this plan.

(Name of Owner or Owners)

IN WITNESS WHEREOF, (I or We) hereunto set (my, our) hands(s) and seal(s) this \_\_\_\_ day of \_\_\_\_\_, A.D., 20\_\_.

ATTEST:

\_\_\_\_\_  
(Owner of  
Owners)

\_\_\_\_\_  
(Owner or  
Owners)

The foregoing adoption and dedication is made by \_\_\_\_\_  
(Name of Individual)

with the full understanding and agreement that \_\_\_\_\_  
(Owner or Owners)

the approval of the Board of Supervisors of the Township of Chippewa, if hereto attached, will become null and void unless this plan is recorded in the Recorder of Deeds Office of Beaver County, County Courthouse, Beaver, Pennsylvania within ninety (90) days of said approval.

(SEAL)

MY COMMISSION EXPIRES THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_.

TOWNSHIP OF CHIPPEWA  
2568 DARLINGTON ROAD, BEAVER FALLS, PA 15010  
TELEPHONE (724) 843-8177

INDIVIDUAL ACKNOWLEDGMENT

COMMONWEALTH OF PENNSYLVANIA        }  
  } ss:  
COUNTY OF BEAVER                                }

Before me, the subscriber, a Notary Public in and for said County and Commonwealth, personally appeared the above named \_\_\_\_\_

(Owner or Owners)

who acknowledged the foregoing release and dedication and plan of subdivision to be (his, her, their) act and deed and desired the same to be recorded as such:

WITNESS MY HAND AND NOTARIAL SEAL this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

(SEAL)

\_\_\_\_\_  
(Notary Public)

My Commission Expires the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.



**TOWNSHIP OF CHIPPEWA**

**2568 DARLINGTON ROAD, BEAVER FALLS, PA 15010**

**TELEPHONE (724) 843-8177**

**CORPORATION ADOPTION**

KNOW ALL MEN BY THESE PRESENTS:

That \_\_\_\_\_, by virtue of a  
Resolution

(Name of Corporation)

of the Board of Directors, thereof does hereby adopt this as its Plan of Subdivision of its Property situate in the Township of Chippewa, County of Beaver, Commonwealth of Pennsylvania, and for divers advantages accruing to it, does hereby dedicate forever, for public use for highway, drainage, sewage and utility purposes, all drives, roads, streets, lanes, rights-of-way, easements, ways and other public ways shown upon the plan, with the same force and effect as if the same had been opened through legal proceedings and in consideration of the approval of said plan and any future acceptance of said public highways, rights-of-way and easements by said County of Beaver or Township of Chippewa \_\_\_\_\_, hereby covenants and

( Name of Corporation)

agrees to and by these presents does release and forever discharge said County of Beaver or said Township of Chippewa, their successors or assigns from any liability for damages arising and to arise from the appropriation of said ground for public highways and other public uses and the physical grading thereof to any grades that may be established. This dedication and release shall be binding upon \_\_\_\_\_, its

( Name of Corporation)

successors and assigns and purchasers of lots in this plan.

In Witness whereof, the said Corporation has caused its Corporate Seal to be affixed by the hand of its President and same to be attested by its secretary, this \_\_\_\_\_ day of \_\_\_\_\_ A.D. 20\_\_\_\_

(SEAL)

(Name of Corporation)

ATTEST;

\_\_\_\_\_(SEAL)

(SEAL)

( Secretary)

(President)

The foregoing Adoption and Dedication is made by \_\_\_\_\_  
(Name of Corporation)

with full understanding and agreement that the approval of the Board of Supervisors of the Township of Chippewa, if hereto attached, will become null and void unless this plan is recorded in the Recorder of Deeds of Beaver County, Courthouse, Beaver, Pennsylvania, within ninety (90) days of date of said approval.

(SEAL)

(Name of Corporation)

\_\_\_\_(SEAL)

(President)

## 2568 DARLINGTON ROAD, BEAVER FALLS, PA 15010

**CORPORATION ACKNOWLEDGMENT**

COMMONWEALTH OF PENNSYLVANIA               }  
  }ss:  
COUNTY OF BEAVER                             }

On this \_\_\_\_ day of \_\_\_\_\_ A.D. 20\_\_ before me, a Notary Public in and for said County and Commonwealth, personally appeared \_\_\_\_\_

\_\_\_\_\_  
(Name and Title of Officer)

(Name of Corporation)

who being duly sworn, deposeth and saith that he was personally present at the execution of the adoption, release and dedication and saw the common and corporate seal of the said Corporation duly signed and sealed by and as

for the act and deed of the said \_\_\_\_\_  
\_\_\_\_\_, (Name of Corporation)  
for the uses and purposes therein mentioned, and that the name of this deponent subscribed to the said  
release and

dedication as \_\_\_\_\_  
(Title of Officer)

of \_\_\_\_\_ in attestation  
of the \_\_\_\_\_  
(Name of Corporation)

due execution and delivery of said release and dedication of this deponent's own and proper and respective handwriting.

\_\_\_\_\_(SEAL)  
(Name of Officer)

(Title of Officer)

Sworn to and subscribed before me the day and date above written.

WITNESS MY HAND AND NOTARIAL SEAL this \_\_\_\_\_ day of \_\_\_\_\_ A. D., 20\_\_\_\_\_

(SEAL)

(Notary Public)

My commission expires the \_\_\_\_\_ day of \_\_\_\_\_ A.D., 20\_\_\_\_\_.

TOWNSHIP OF CHIPPEWA  
2568 DARLINGTON ROAD, BEAVER FALLS, PA 15010  
TELEPHONE (724) 843-8177

**SURVEYOR'S CERTIFICATE**

I, \_\_\_\_\_, a Registered Professional Land Surveyor of the Commonwealth of Pennsylvania, do hereby certify that this plan correctly represents the lots, lands, streets, alleys rights-of-way and highways as surveyed and plotted by me for the Owners, developers or agents.

(SEAL)

\_\_\_\_\_(SEAL)  
(Surveyor)

\_\_\_\_\_  
(Registration Number)

\_\_\_\_\_  
(Date)

**TOWNSHIP OF CHIPPEWA**

**2568 DARLINGTON ROAD, BEAVER FALLS, PA 15010**

**TELEPHONE (724) 843-8177**

**TOWNSHIP PLANNING COMMISSION APPROVAL**

This plat of subdivision has been approved by the Planning Commission of the Township of Chippewa, Beaver County, Pennsylvania on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

ATTEST:

\_\_\_\_\_  
(Secretary)

\_\_\_\_\_  
(Chairman)

**APPROVAL BY TOWNSHIP OF CHIPPEWA**

The Board of Supervisors of the Township of Chippewa, Beaver County, Pennsylvania, hereby gives public notice that it is approving this plan of subdivision for recording purposes only. The approval of this subdivision plat by the Township of Chippewa does not constitute an acceptance of the roads, streets, alleys, storm water and sanitary sewage drainage facilities, easements or rights-of-way, water mains or any other services or improvements shown on this plan nor an assumption of maintenance responsibility, nor will the same be accepted or maintained until constructed in accordance with all Township Specifications and requirements and officially accepted by action of the Board of Supervisors.

This plat of subdivision approved by resolution of the Board of Supervisors of the Township of Chippewa, Beaver County, Pennsylvania on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

ATTEST:

\_\_\_\_\_  
(Secretary of Board)

\_\_\_\_\_  
(Chairman of Board)

SEAL:



**TOWNSHIP OF CHIPPEWA**

**2568 DARLINGTON ROAD, BEAVER FALLS, PA 15010**

**TELEPHONE (724) 843-8177**

**OWNERS ACCEPTANCE OF RESPONSIBILITY FOR PROVIDED STORMWATER DRAINAGE  
FACILITIES AND CONTROL OF STORMWATER WATER DRAINAGE**

Know All Men by These Presents, that (I, We) \_\_\_\_\_

of the Township of Chippewa, County of Beaver, Commonwealth of Pennsylvania, for ourselves, our heirs, executors, administrators and assigns, and for our grantees and their subsequent purchasers, do hereby accept full and complete responsibility, liability, expense and provision of facilities for the control of stormwater drainage over, across and through this Subdivision of land until such time as (I or We), our heirs, executors, administrators and assigns construct stormwater drainage facilities in accordance with Township's specifications and requirements and the same is officially accepted by action of the Township Board of Supervisors, Chippewa Township, and until such formal acceptance (I or We) for ourselves, our heirs, executors, administrators, and assigns do hereby release the Township of Chippewa from any responsibility in connection therewith.

This acceptance of responsibility shall be binding upon \_\_\_\_\_

our heirs, executors, administrators and assigns, and all purchasers of lots in this plan of subdivision.

IN WITNESS WHEREOF, WE HEREUNTO SET OUR HANDS AND SEALS THIS \_\_\_\_\_

day of \_\_\_\_\_, A.D. 20\_\_\_\_.

SEAL

\_\_\_\_\_  
(Owner or Owners)

SEAL

\_\_\_\_\_  
(Owner or Owners)

WITNESS MY HAND AND NOTARIAL SEAL THIS \_\_\_\_\_ day of \_\_\_\_\_,  
A. D., 20\_\_\_\_.

SEAL

\_\_\_\_\_  
(Notary Public)

MY COMMISSION EXPIRES THE \_\_\_\_ DAY OF \_\_\_\_\_ A.D., 20\_\_\_\_.



**TOWNSHIP OF CHIPPEWA**

**2568 DARLINGTON ROAD, BEAVER FALLS, PA 15010**

**TELEPHONE (724) 843-8177**

**PRIVATE STREETS AND EASEMENTS**

Notice is hereby given that the streets, roads and all easements as shown on this plan are not to be dedicated to the Township for public use. As such the obligation for the maintenance and repair of all such private streets, roads and easements shall remain with the applicant/developer and the owners of the property in this plan and the Township shall have not responsibility whatsoever for the maintenance and repair of said roads, streets and easements.

Furthermore, under no circumstances in the future shall the Township become or be required to accept ownership and/or maintenance and repair responsibility for the private roads, streets and easements unless and until the same meet the then existing Township standards and specifications and a maintenance bond for a period of eighteen (18) months has been placed with the Township.

## PART 10

### SEVERABILITY, REPEALER AND ENACTMENT

#### 22-1001. SEVERABILITY

- 22-1001.1. Should any section, clause, provision or portion of this **Chapter** be declared by a court of competent jurisdiction to be invalid or unconstitutional, such decision shall not affect or impair the validity of any other section, clause, provision or portion of this **Chapter**.
- 22-1001.2. It is hereby declared to be the intent of the Board of Supervisors that this **Chapter** would have been adopted by the Board had such invalid or unconstitutional provisions not been included herein, and the remaining portions of this **Chapter** shall remain in effect as though the portion declared invalid or unconstitutional had never been a part hereof.

#### 22-1002. REPEALER

All resolutions, ordinances or part of resolutions or ordinances inconsistent herewith are hereby repealed and specifically Chippewa Township Ordinance No. 70 is hereby repealed.

#### 22-1003. CHIPPEWA TOWNSHIP ZONING ORDINANCE

Nothing herein contained shall be interpreted to permit any waiver of the restriction or requirements of the Chippewa Township Zoning Ordinance.

**22-1004. ENACTMENT**

ENACTED AND ORDAINED into an **Chapter** by the Board of Supervisors this \_\_\_\_\_ day of \_\_\_\_\_, 200\_\_, and to become effective on \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

ATTEST:

TOWNSHIP OF CHIPPEWA  
BOARD OF SUPERVISORS

\_\_\_\_\_  
Township Secretary

\_\_\_\_\_  
Chairman, Board of Supervisors

\_\_\_\_\_  
Supervisor

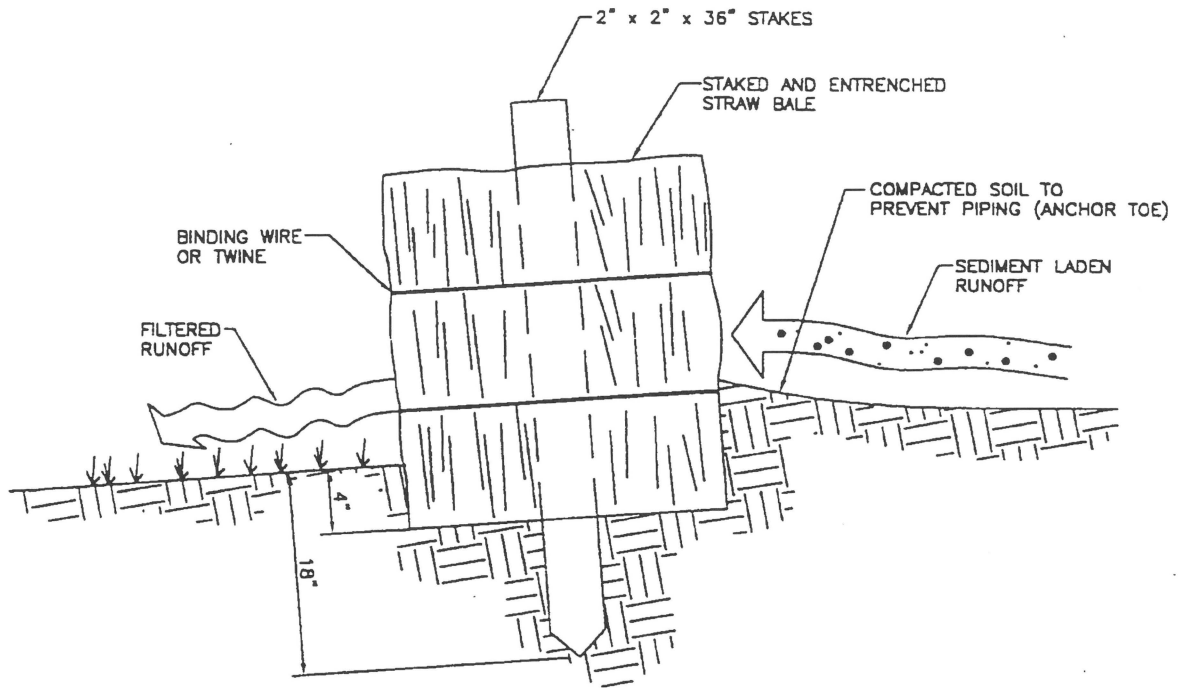
\_\_\_\_\_  
Supervisor

# **CHIPPEWA TOWNSHIP**

**BEAVER COUNTY, PENNSYLVANIA**

## **APPENDIX A**

### **SUBDIVISION AND LAND DEVELOPMENT DETAILS**



NOT TO SCALE

**CHIPPEWA TOWNSHIP**  
Beaver County

2568 Darlington Road  
Beaver Falls, PA 15010

## STRAW BALE BARRIER CROSS-SECTION

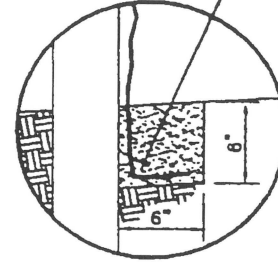
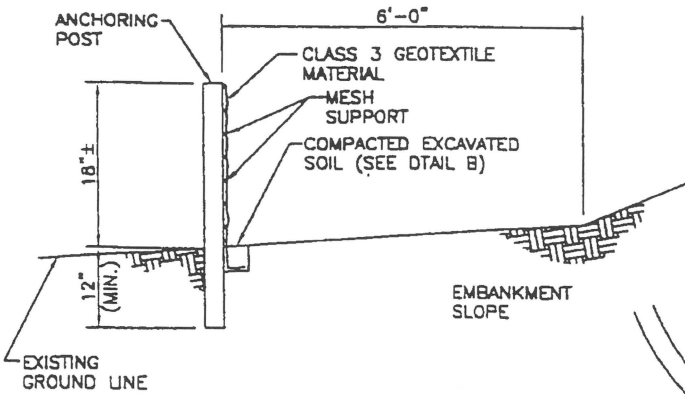
REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				<b>ES-01</b> Date: 06/13/00

**NOTE:**

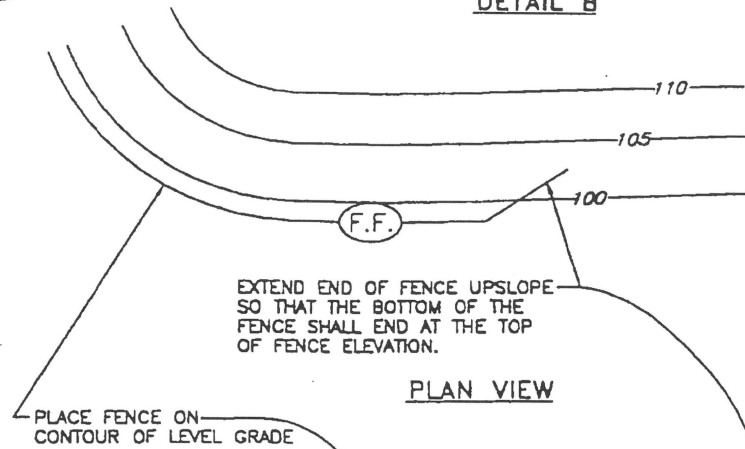
THE SILT FENCE SHOULD BE TURNED UP AT EACH END TO TRAP SURFACE RUNOFF. CONSTRUCT FENCE OF SUFFICIENT LENGTH TO ELIMINATE END FLOW.

Drawing No. 200.18.2

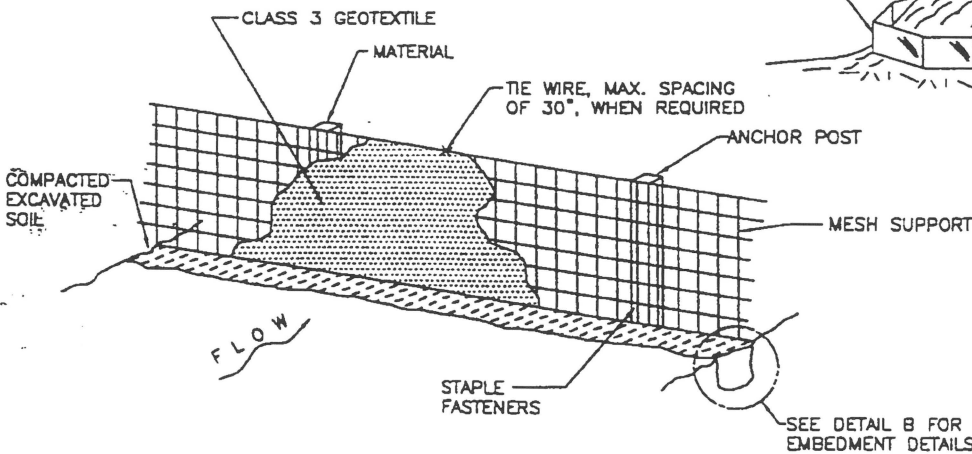
EXTEND FABRIC 6" MIN. INTO EXCAVATED TRENCH AS SHOWN.



**DETAIL B**



**PLAN VIEW**



**ILLUSTRATION**

NOT TO SCALE

**CHIPPEWA TOWNSHIP**  
Beaver County

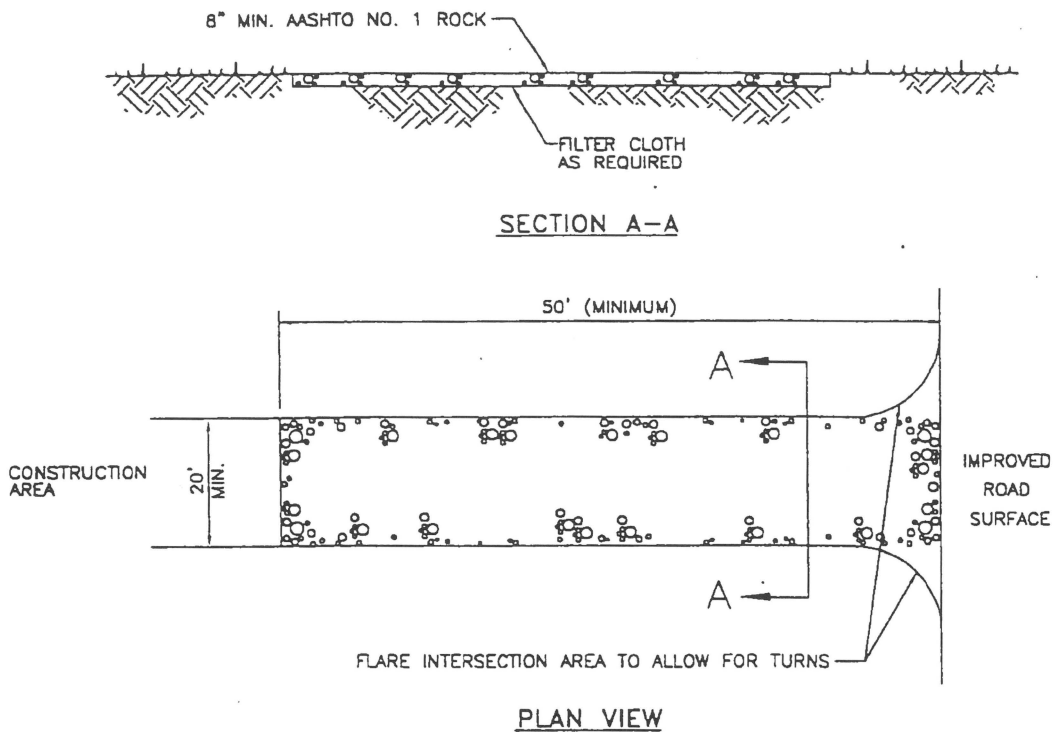
2568 Darlington Road  
Beaver Falls, PA 15010

**SILT BARRIER  
FENCE**

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				ES-02

Date: 06/13/00

Drawing No. 200.18.3



1. ROCK CONSTRUCTION ENTRANCES WILL BE CONSTRUCTED TO THE MINIMUM WIDTH, LENGTH AND THICKNESS DIMENSIONS SHOWN.
2. ROCK WILL BE AASHTO NO.1 AS SPECIFIED IN SECTION 703.2 OF THE PENNDOT PUBLICATION 408.
3. FOR INSTALLATION ON CLAYEY OR POOR DRAINED SOILS, A GEOTEXTILE FABRIC UNDERLAYMENT, OF A TYPE RECOMMENDED FOR SUCH APPLICATIONS BY THE MANUFACTURER, WILL BE USED.
4. MAINTENANCE: THE STRUCTURE'S THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE OF ROCK MATERIAL WILL BE MAINTAINED ON THE SITE FOR THIS PURPOSE. AT THE END OF EACH CONSTRUCTION DAY, ALL SEDIMENT DEPOSITED ON PUBLIC ROADWAYS, WILL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. WASHING OF THE ROADWAY WITH WATER IS NOT PERMITTED.

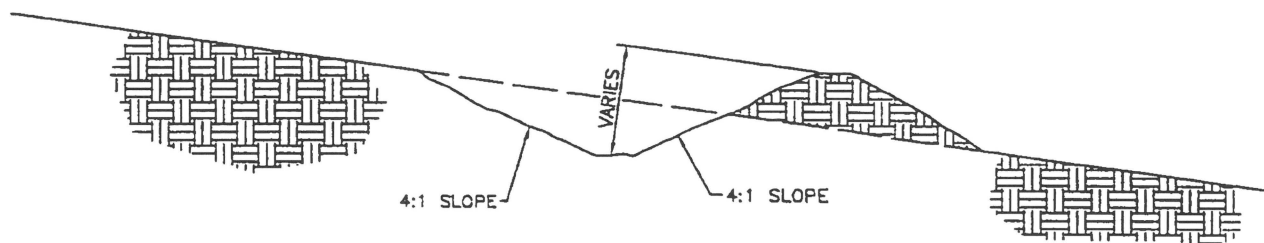
NOT TO SCALE.

**CHIPPEWA TOWNSHIP**  
Beaver County

2568 Darlington Road  
Beaver Falls, PA 15010

## ROCK CONSTRUCTION ENTRANCE

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				<b>ES-03</b>  Date: 06/13/00



SWALE SECTION

NOTE:

DIVERSION SWALES MAY BE USED AS A  
TEMPORARY EROSION AND SEDIMENTATION  
MEASURE DURING SITE CONSTRUCTION.  
(CONTRACTOR'S OPTION).

REFERENCE EROSION AND SEDIMENT CONTROL PROGRAM MANUAL—  
BUREAU OF SOIL AND WATER CONSERVATION

**CHIPPEWA TOWNSHIP**  
Beaver County

2568 Darlington Road  
Beaver Falls, PA 15010

**DIVERSION SWALE  
DETAIL**

REVISIONS				DRAWING
NO.	DATE	NO.	DATE	
				<b>ES-04</b>  Date: 06/14/00