



Department of Public Works

GRADING PERMIT

No grading activity shall commence on any site without obtaining a grading permit from the City of Crestwood Department of Public Works. Such activities include clearing, excavation, fill, or any combination thereof within the limits of the property. These activities must be shown on an approved grading plan and in accordance with an approved Stormwater Pollution Prevention Plan (if site is larger than one acre in size).

Procedures for Obtaining a Grading Permit

1. Submit a completed Grading Permit application to the Department of Public Works. The grading permit application form can be obtained from the City of Crestwood Department of Public Works or from the City's web site at www.ci.crestwood.mo.us
2. Included with the completed Grading Permit application, the applicant should submit a site plan detailing the areas to be excavated, filled, and/or cleared.
3. If the site is larger than one (1) acre, a permit from the State of Missouri Department of Natural Resources will need to be submitted with the Grading Permit. This requirement applies to sites of less than one (1) acre that are part of a proposed development that will ultimately disturb one (1) acre or more.
4. Prior to the issuance of a grading permit, the applicant shall deposit a surety with the City. The surety is to be a sum equal to that which would be required to guarantee the performance, restoration, maintenance and/or rehabilitation of the site. The deposit will be refunded when the grading operation is completed and the soil and drainage conditions are stabilized to the satisfaction of the City.
5. An inspection shall be performed to ensure the site complies with the submitted plans. The Code Enforcement Officer (314-729-4724) is to be notified each time the following steps are completed: clearing, rough grading, finish grading before seeding, turf reestablishment, and construction work.
6. Should applicant have any questions about Grading Permits, please contact the Code Enforcement Officer at 314-729-4724.

A complete description of the Grading Permit requirements can be found in the Erosion and Sediment Control Manual, located on the City's web site.



DEPARTMENT OF PUBLIC WORKS

One Detjen Dr. Crestwood, MO 63126
Telephone: 314-729-4724 Fax: 314-729-4729

APPLICATION FOR GRADING PERMIT

Application Date _____

Work Site Address (Location): _____

Applicant Name and Address: _____

_____ Phone #: _____

Business Name and Address: _____

_____ Phone #: _____

Commencement Date: _____

Completion Date: _____

Type of Construction: New Existing

Type of Development: Commercial Residential

Purpose for which application is made _____

Site Area (sq. ft.) _____

Estimated Grading Quantity (cubic yards) _____

Applicant Signature: _____ Date: _____

All work shall be safeguarded and protected by the person causing the grading to be done to avoid all danger to life or limb. All backfilling, restoration, cleanup and other regulations shall be in accordance with Ordinances of the City of Crestwood.

===== **OFFICE USE ONLY** =====

Permit #: _____ Approval Date: _____

Amount of Payment: _____ Date Paid: _____

Army Corps of Engineers Approval (Section 404 of Clean Water Act)

Yes Waived N/A

Approved By: _____ Title: _____

Comments: _____

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CITY OF CRESTWOOD

SEDIMENT & EROSION CONTROL MANUAL

I. GENERAL PROVISIONS

A. Purpose

The purpose of this document is to set forth minimum requirements, and provide guidance and additional resources to facilitate control of soil erosion on land that is undergoing development for nonagricultural uses, and to preserve the natural terrain and waterways within the incorporated limits of the City of Crestwood. The guidelines will assist designers in development of storm water pollution prevention plans, but are not intended to act as a sole source regarding acceptable methods. Engineering professionals are encouraged to design innovative ways to address site-specific conditions. Soil erosion scars the land and creates sediment that clogs storm sewers and road ditches, chokes streams and creates silt lakes, all of which pose a threat to public health and safety. The provisions in this manual are intended to provide a natural community environment, to prevent soil erosion and to reduce costly repairs to gullies, washed out fills, storm water conveyance systems, roads and embankments. Application of the requirements of this manual will mitigate the negative impacts development can have on storm water quality.

1. The primary requirement of the sediment and erosion control manual is the development of a plan outlining grading activities (Grading Plan), and the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that:
 - a. Incorporates the required practices identified
 - b. Incorporates sediment and erosion control practices specific to site conditions
 - c. Provides for maintenance and adherence to the plan
2. Prior to removing any site vegetation or disturbing earth, the permittee shall develop a Grading Plan and SWPPP that is specific to the land disturbance activities proposed at the site. This plan must be approved by the Department of Public Works before a grading permit can be issued.
3. The purpose of the SWPPP is to ensure the design, implementation, management, and maintenance of "Best Management Practices" (BMPs) in order to reduce the amount of sediment and other pollutants in storm water discharges associated with the land disturbance activities, and ensure compliance with the terms and conditions stated in this manual.
4. The permittee shall select, install, operate, and maintain the BMPs required to adequately control erosion, capture sediment and prevent pollution. Guidance in the concepts and methods of erosion and pollution control can be found in the following documents:
 - a. The details and standards contained in this manual.

- i. Appendix A – Chapter 7, Article III, Grading and Excavating, of the Crestwood Municipal Code,
- ii. Appendix B - Typical Erosion Control BMPs
- iv. Appendix C - Typical Pollution Prevention BMPs
- v. Appendix D - Typical Runoff Management BMPs
- vi. Appendix E - Typical Sediment Capture BMPs
- vii. Appendix F – Typical Tracking Control BMPs
- b. *Stormwater Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices*, Document number EPA 832-R-92-005 published by the United States Environmental Protection Agency (USEPA)
- c. *Protecting Water Quality: A field guide to erosion, sediment and stormwater best management practices for development sites in Missouri* published by the Missouri Department of Natural Resources
- d. USEPA Menu of Best Management Practices for NPDES Stormwater,
http://cfpub.epa.gov/npdes/stormwater/menuofbmps/bmp_files.cfm

The permittee is not limited to the use of these guidance manuals. Other commonly accepted publications may be used for guidance and must be referenced in the SWPPP if used. In addition, the permittee is not limited to the use of BMPs identified in these manuals. However, any alternative BMPs should be justified by site conditions, described in the SWPPP, and approved by the Department of Public Works.

B. Scope of Authority

Any person, firm, corporation or business proposing to clear or grade land within the incorporated limits of the City of Crestwood shall apply to the Department of Public Works for approval of a grading plan and a SWPPP, and issuance of a grading permit as required under Chapter 7, Article III, Grading and Excavation, of the Crestwood Municipal Code.

1. Exceptions

- a. A SWPPP shall not be required for any land disturbance activity involving less than one (1) acre of land, unless requested by the Director of Public Works. This exception does not apply to sites of less than one acre that are part of a proposed development that will ultimately disturb one acre or more.
- b. A Grading Permit is not required for activities described on section 7-84 of the Crestwood Municipal Code.

C. Surety

Prior to approval of the required grading plan and SWPPP, and prior to the Issuance of a grading permit, the Department of Public Works shall require the applicant to post surety, as required by Chapter 7 Article III of the Crestwood Municipal Code, in an amount required to guarantee the performance, restoration, maintenance and/or rehabilitation of the site, including all work to be

done under the SWPPP. Fifty (50) percent of the funds will be released after all erosion control measures are in place and approved by the Department of Public Works. The remainder will be held until the permitted improvements are complete and approved by the City to insure that the sediment and erosion control measures are maintained.

II. STANDARDS

A. A grading permit shall be issued and shall remain in force only upon compliance with the following requirements:

1. *Surface waters; damage:* Adequate provision shall be made to prevent any surface waters from damaging the cut face of an excavation or the sloping surface of a hill.
2. *Retaining walls:* Retaining walls shall be required wherever necessary to prevent the surface of any excavation or fill from exceeding at any point the maximum allowable slopes as set forth herein and for preservation of significant trees as determined by the Director of Public Works. All walls shall not exceed (6) feet in height, unless an appropriate safety barrier, approved by the Director, is provided along the top edge of the wall. Retaining walls shall be constructed of reinforced concrete or decorative, interlocking masonry blocks. Timber or creosote treated tie walls are specifically prohibited. Other materials may be approved by the Director of Public Works on a case by case basis.
3. *Drainage:* All drainage provisions shall be of such design to carry surface waters, without detriment to adjacent properties, to the nearest practical storm drain, natural water course or street as approved by the Director of Public Works as a suitable place to deposit and receive such waters.
4. *Protection of streets, property:* No excavation shall be made so close to the property line to endanger any adjoining public or private street or property without supporting and protecting such public or private street or property from settling, cracking or other damage.
5. *Fill-location:* No fill shall be made so as to cause or to allow the same to be deposited upon or to roll, flow or wash upon or over the premises of another without the express written consent of the owner of such premises so affected; or upon or over any public street, walk, place or way, nor so close to the top of a bank of a channel as to create the possibility of bank failure and sliding.
6. *Materials:* Materials for fills shall consist of material obtained from excavation of banks, borrow pits or other approved source. Material shall be free of vegetative matter and deleterious material and shall not contain large rocks or lumps except as certified by a registered professional engineer to be acceptable fill material.
7. *Minimum standards:* Minimum standards of excavations and fills shall be as follows:
 - a. No excavation shall be made with a cut face steeper in slope than three (3) horizontal to one vertical, unless as provided for in (7c).
 - b. No fill shall be made which creates an exposed embankment face steeper in slope than three (3) horizontal to one vertical, unless as

provided for in (7c). The embanked end of the fill shall be uniformly compacted as provided in subsection (8) hereof and stable under the proposed conditions.

- c. Individual and isolated slopes, rock dikes, undisturbed natural slopes and slopes blending with the natural terrain may be steeper than the requirements in (7a) and (7b) based on the design of a registered professional engineer, including recommendations covering construction and recommendations on maintenance of the slope, and as approved by the Director of Public Works.
8. *Excavation and fill under pavements:* Such excavations shall be made in accordance with the requirements of Chapter 24 of the Crestwood Municipal Code.
9. *Compaction:* All fills intended to support buildings or structures, sewers and conduits shall be compacted to a minimum of ninety (90) percent compaction as determined by Modified Proctor, ASTM D-1557. Compaction of fills for these uses must be certified by a registered professional engineer at the owners expense. Compaction of other fills shall be required where necessary as a safety measure to aid in preventing the saturation, slipping or erosion of the fill.
10. *Rock:* Solid rock, shale or similar materials shall be removed to a depth below the subgrade for paved areas. In those circumstances where rock is within two (2) feet of the proposed pavement subgrade, the engineer shall design a system, acceptable to the Director of Public Works, to prevent pavement migration.
11. *Removal of timber, rubbish, etc:* Timber, logs, trees, brush, vegetative matter and rubbish of any description shall be removed and disposed of so as to leave the disturbed area with a neat and finished appearance as directed by the registered professional engineer. Tree stumps, masonry and other obstructions, within lawn areas shall be removed to a minimum depth of two (2) feet below finished grade.
12. *Demolition of existing structure.* A demolition permit shall be obtained from the St. Louis County Department of Public Works. Authorization from the City of Crestwood will be required commencing work. Septic tanks shall be removed and abandoned cisterns filled. Wells shall be capped in accordance with requirements of the Missouri Department of Natural Resources.

B. Quality

Total settleable solids from a storm water outfall shall not exceed 0.5 ml/L/hr if the discharge is within the prescribed proximity of a "Valuable Resource Water" as established by the Department of Natural Resources in MDNR General Permit MO-R109000. Total settleable solids for any other outfall shall not exceed 2.5ml/L/hr. For additional information see Appendix G – Valuable Resource Waters and Missouri Water Quality Standards 10 CSR 20-7.031.

C. Sampling

The Department of Public Works may sample, and/or may require sampling and reporting as a result of illegal discharges, compliance issues, complaint investigations, or such other evidence of off-site contamination from activities at

the site. If such an action is needed, the Department will specify in writing any additional sampling requirements, including such information as location, extent, and parameters.

III. REGULATIONS

A. Grading Plan Requirements:

1. Existing and proposed contours shall be shown at intervals of no more than two (2) feet. Also indicate existing and proposed elevations at buildings, walks, drives and streets.
2. Location and estimated quantities of grading and fill.
3. Description of soil types, based on soil test borings.
4. Location of all clearing and grubbing, including removal of existing structures or other existing site improvements.
5. Identification of any significant trees [trunk diameter of eight (8) inches or greater as measured five (5) feet above grade] that are designated to be saved or as required to be saved.
6. Owner, Developer, and Engineer information.
7. Benchmark information.
8. Location of any underground utility lines, any part of which is located within fifty (50) feet of the proposed excavation or filling area.
9. Floodplain and floodway delineated.
10. Off-site grading.
11. Construction access to site.
12. Location of temporary off-street parking.
13. Estimated schedule of operations.
14. Location of any sewage disposal system or above ground or under ground utilities, any part of which is located within fifty (50) feet of the proposed excavation, grading or filling area.
15. Location and present status of any geological features which may affect the use of the site (e.g. ponds, sink holes, subsurface rock, high water table).

B. SWPPP Requirements:

1. Site Description
2. Drainage areas
3. Description of Best Management Practices
4. Erosion and sediment control plans
5. The proposed phasing of development of the site
6. Construction waste and hazardous substance control

C. Grading Plan and SWPPP Approval:

Comments/Approvals may be required from the following agencies:

1. All requirements of the Metropolitan St. Louis Sewer District shall be met where applicable.

2. Conservation District Comments: If a plan is submitted by the Department of Public Works to the USDA Natural Resources Conservation Service, the NRCS District may make comments and recommendations. Such comments may pertain but need not be limited to:
 - a. Erosion and sedimentation control
 - b. Soil use limitations
 - c. Environmental considerations
3. The Federal Emergency Management Agency (FEMA) and U.S. Army Corps of Engineers guidelines shall be followed where applicable.

D. Modifications and Changes

1. Amending/Updating the SWPPP: The permittee shall amend and update the SWPPP as appropriate during the term of the land disturbance activity. The permittee shall amend the SWPPP, at a minimum, whenever the:
 - a. Design, operation, or maintenance of BMPs is changed.
 - b. Design of the construction project is changed such that it could significantly affect the quality of the stormwater discharges.
 - c. Permittee's inspections indicate deficiencies in the SWPPP or any BMP.
 - d. MoDNR and/or the City of Crestwood notifies the permittee of deficiencies in the SWPPP.
 - e. The Department of Public Works, or other responsible party determines the SWPPP to be ineffective in significantly minimizing or controlling erosion and sedimentation (e.g., there is visual evidence, such as excessive site erosion or excessive sediment deposits in streams or lakes).
 - f. The Department of Public Works, or other responsible party determines the SWPPP to be ineffective in preventing pollution of waterways from construction wastes, chemicals, fueling facilities, concrete truck washouts, toxic or hazardous material, site litter or other substances or wastes likely to have an adverse impact on water quality.
 - g. Total Settleable Solids from a stormwater outfall exceed 2.5 ml/L/hr. unless the disturbed area is near a Valuable Resource Water as defined under "Applicability to Valuable Resource Waters". Total Settleable Solids from a stormwater outfall in these areas shall not exceed 0.5 ml/L/hr.
 - h. MoDNR, or other responsible party determines violations of Water Quality Standards may occur or have occurred.

E. Permittee's Responsibilities Regarding SWPPP

The permittee shall:

1. Notify all contractors and other entities who will perform work at the site, of the existence of the SWPPP and what actions or precautions shall be taken while on site to minimize the potential for erosion and the potential for damaging any BMP.

2. Establish training programs to ensure that all site workers have been trained, as a minimum, in erosion control, material handling and storage, and housekeeping.
3. Provide copies of the SWPPP to all parties who are responsible for installation, operation or maintenance of any BMP.
4. Maintain a current copy of the SWPPP on the site at all times.

IV. INSPECTION AND MAINTENANCE OF SWPPP

A. Site Inspections

The permittee shall ensure the land disturbance site is inspected on a regular schedule and within a reasonable time period (not to exceed 24 hours) following heavy rains. Regularly scheduled inspections shall be conducted bi-weekly, at a minimum. For disturbed areas that have not been finally stabilized, all installed BMP's and other pollution control measures shall be inspected for proper installation, operation and maintenance. Locations where stormwater leaves the site shall be inspected for evidence of erosion or sediment deposition. Any deficiencies shall be noted in a report of the inspection and corrected within four calendar days of the inspection. The permittee shall promptly notify the site contractors responsible for operation and maintenance of BMPs of deficiencies.

B. Record Retention

The permittee shall retain copies of this permit, the SWPPP and all amendments for the site named in the permit, results of any monitoring and analysis, and all site inspection records required by this permit. The permittee shall retain these records at a site which is readily accessible from the permitted site until final stabilization of a site is achieved. The local office of the permittee, their contractor or consultant is considered to be readily available if it is located in the same county as the project site. The records shall be accessible during normal business hours. After final stabilization, the records may be maintained at the location of the permittee's main office or other designated storage location. The records shall be retained for a period of at least three years from project completion.

V. CITY INSPECTION AND VIOLATIONS

A. Inspections

By applying for a grading permit, the applicant consents to the City inspecting the proposed development site and all work in progress.

B. Violations

In the event of a violation, the surety may be used by the City to complete and/or maintain the planned sediment and erosion control measures and/or restore the site.

VI. TRANSFER OF OWNERSHIP

Individual Lot, Lots, or Entire tracts: A permit is required, as well as sediment and erosion control measures for disturbed areas in accordance with Chapter 7, Article III Grading and Excavating of the Crestwood Municipal Code. The lot(s) (commercial, industrial, or residential) when sold to an entity for construction is (are) also subject to these regulations. The existing permittee who intends to transfer ownership of a lot or parcel of the overall permitted area is still responsible for the terms of the SWPPP and erosion control on that site unless the new owner applies for and receives other permits for land disturbance activities.