



## Chapter 13 CONSTRUCTION ADMINISTRATION

### 13.1 Preconstruction Assistance Conference

A preconstruction assistance conference is required, prior to the issuance of a Site Development Permit, for all projects for which a construction bond has been collected by the Stormwater Engineering Division during the design review process. The construction bond (also called a Performance and Indemnity Agreement) certifies that the specified portion of the project will be constructed in agreement with city standards and regulations. In addition, a preconstruction assistance conference may be requested by Stormwater Engineering Division personnel for projects with unusual requirements or conditions that may require extra care or some measure of environmental sensitivity.

The preconstruction assistance conference may take place either in the Stormwater Engineering Division offices (4<sup>th</sup> floor of the City County Building) or in the field, depending on the type of construction and the nature of the project site. The Stormwater Engineering Division will coordinate the time and location of the preconstruction assistance conference with the developer and contractor. A typical meeting will include: review of erosion and drainage concerns, as-built requirements, procedure for renewing construction bonds, inspection schedules, etc.

### 13.2 Required Submittals and Notifications

In general, the contractor/developer is not required to make regular submittals or progress reports to the Stormwater Engineering Division inspectors. However, the contractor is encouraged to notify the inspector of significant changes to the construction schedule. A construction schedule is recommended as part of the erosion and sediment control plan (ESCP) narrative as described in Section 7.3. A construction schedule, for the purposes of the ESCP narrative, should indicate the duration of activities such as initial placement of erosion controls, clearing and grubbing, earthwork, trenching, drainage installation, and seeding/sodding.

Certain types of construction activities will require submittals and field inspections by Stormwater Engineering Division personnel. Submittals and field inspections help to ensure that streets, sidewalks, graded slopes, streetlights, detention basins and drainage systems will meet city standards for safety and durability. Inspection activities for a typical project are listed below (assuming that the project will have asphalt pavement for any proposed public streets):

#### Pavement Subgrade and Aggregate Base

- Submit aggregate gradation report (in TDOT format) at least 2 days prior to placement.
- Notify city inspector at least 2 days prior to construction.

#### Asphalt Binder and Asphalt Surface Coat

- Submit an asphalt job mix formula (in TDOT format) from approved asphalt plant at least 2 days prior to placement.
- Notify city inspector at least 2 days prior to construction.



- Submit density and gradation reports from materials analysis laboratory as required.

#### Curbs and Sidewalks

- Notify city inspector at least 2 days prior to placement for inspection of lines and grades. Methods, materials and locations for construction and expansion joints, and steel reinforcement where shown on plans, should also be reviewed.

#### Retaining Wall Footers

- Notify city inspector at least 2 days prior to pouring concrete for inspection of lines and grades. Other review items include adequate foundation conditions, joints, and correct amount of steel reinforcement.

#### Storm Drain Pipes Within the Right-of-Way

- Notify city inspector at least 2 days prior to backfilling. Manufacturer's certificates may be required by the city inspector for materials which appear to be substandard.

#### Water Quality Structures

- Submit manufacturer's specifications for the structure at least 7 days prior to backfilling for final approval. Specifications must agree with approved construction plans and any other documents (such as a Special Pollution Abatement Permit or a NDPEs application).
- Notify city inspector at least 2 days prior to installation.

Other types of construction, located on private property and not affecting the public interest, may be spotchecked by the Stormwater Engineering Division personnel for general conformance with the plans. However, it is not the Stormwater Engineering Division's responsibility to inspect constructed project work on private property.

Retaining walls will not be allowed on public right-of-way as part of a site development project, and any retaining walls inadvertently built on public right-of-way must be completely removed. See Policy 10 in Appendix C for more information concerning retaining walls.

### **13.3 Erosion and Sediment Control**

Proper sequencing of construction activities is essential to maximize the effectiveness of erosion and sediment control measures. A construction schedule is recommended as part of the erosion and sediment control plan (see Section 7.3), with typical schedule formats described in AM-02 of the Knoxville BMP Manual. The following erosion control activities provide a simplified outline that applies to the initial phase of most site developments:

1. Install a stabilized construction entrance and exit.
2. Flag and mark the project boundaries. Flag the construction buffer zones, sediment traps or basins, construction storage areas, and equipment travel lanes.
3. Clear a path for the installation of perimeter erosion and sediment controls.



4. Install perimeter erosion and sediment controls. Evaluate effectiveness and adjust as needed.
5. Excavate any temporary sediment traps or sediment basins. For most small project sites, the proposed detention basin will also function as a temporary sediment basin with slight modifications.
6. Install outlet structures and channel stabilization measures for temporary sediment traps or sediment basins. Install slope stabilization measures such as grass sod or turf reinforcement mats.
7. Proceed with site grading and construction work. Establish either temporary or permanent vegetation on all disturbed areas within 14 days of completion of grading at the disturbed area. Provide temporary seeding on temporary soil stockpiles.
8. The Stormwater Engineering Division will conduct routine inspections for erosion and sediment control throughout the construction phase. The Stormwater Engineering Division will also respond to complaints of erosion or sediment. In addition, TDEC may investigate complaints of erosion or sediment anywhere within the City of Knoxville.

A final as-built inspection and review will be performed at the project site prior to release or reduction of a construction bond. See Appendix A for the Final Site Inspection Checklist and for the Development Certification Checklist. All disturbed areas must support a thick and healthy stand of vegetation, with no evidence of erosion or slope instability.

Throughout the construction phase of a project, erosion and sediment control measures are required to be inspected at least weekly and also after any significant rainfall event. During periods of prolonged rainfall, the erosion and sediment control measures should be inspected daily. It is recommended that an inspection checklist, either generic or project-specific, should be used to perform the inspections and to record any needed maintenance tasks. See Appendix A for a generic erosion control inspection checklist.

Failure to install or maintain the required erosion and sediment control measures will result in enforcement action from the Stormwater Engineering Division inspectors. Authority for the enforcement of erosion and sediment controls is provided by Section 22.5-8 of the Knoxville Stormwater and Street Ordinance. Any person violating the provisions of the ordinance may be assessed a civil penalty of not less than \$50 per day and not more than \$5000 per day for each day of violation, in addition to any damages or expenses incurred by the City of Knoxville in controlling or investigating violations.

#### **13.4 Development Certification**

An approved development certification is one of the items required prior to the release of any bond (also called Performance and Indemnity Agreement) that has been collected by the Stormwater Engineering Division. The development certification is issued by the Stormwater Engineering Division after all construction has been completed in accordance with the design plans and requirements of the Knoxville Stormwater and Street Ordinance. An accurate as-built drawing must be submitted and sealed by the design engineer.



Appendix A contains a site review checklist for final approval of a constructed site development project and the associated as-built drawing. Plats, maintenance covenants, and easements are field-checked to ensure that the locations are approximately correct. Sizes and configurations for detention basins, oil/water separators or other water quality structures are inspected. Adequate vegetation cover is required for all areas disturbed by construction activity. Due to the difficulty of establishing vegetation on sloped surfaces and grades (such as detention basins), it is highly recommended that grass sod or turf reinforcement mats should be used for these areas.

Every as-built drawing must be properly certified by the appropriate design professional engineer and the registered land surveyor. The land surveyor must provide certification as shown to the right, in addition to the surveyor's seal with an original signature and date across the seal

I hereby certify that I have surveyed the land boundaries and easements shown hereon in accordance with the accuracy requirements for a Category I survey and that the ratio of precision of the unadjusted survey is not less than 1:10,000.

I further certify that I have located all natural and manmade features shown hereon in accordance with the current Standards of Practice as adopted by the Tennessee State Board of Examiners for Land Surveyors. I certify the location, elevation, and description of these features.

### 13.5 Bond Release

Minimum requirements for release of the performance bonds include:

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Printed Name	Date	RLS No.
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1. Development Certification Approval -- Follow checklist in Appendix A for submittal of as-built drawings to the Stormwater Engineering Division by the design engineer as required by the Knoxville Stormwater and Street Ordinance in Section 22.5-28(e).
2. Recorded Documents -- All necessary survey plats, maintenance covenants (CPMSF), and easements must be recorded at the Knox County Register of Deeds by following official procedures. It is the responsibility of the property owner to see that all necessary documents are properly recorded, including easements for detention basins, oil/water separators and all other stormwater facilities.
3. Good Cover of Vegetation -- All areas disturbed by construction activity must be stabilized for the purpose of erosion control. Due to the difficulty in establishing vegetation on sloped surfaces, it is highly recommended that detention basins should have grass sod or turf reinforcement mats on all slopes.

Basic timetables for bond extension/reduction/release are shown in Figure 2-4. The contractor or developer should contact the Stormwater Engineering Division at least 30 days prior to the bond expiration date in order to arrange a site inspection and to discuss requirements for bond release. As a courtesy, the Stormwater Engineering Division may send a notice letter to both the Principal and Guarantor 60 days prior to bond expiration. The Stormwater Engineering Division may send a second courtesy letter 21 days prior to bond expiration, with a more urgent warning. The Principal is required to notify the Stormwater Engineering Division of his intentions at least 14 days prior to the bond expiration with regard to the specific form of surety and the proposed Guarantor. Original signed documents must be submitted to the Stormwater Engineering Division at least 10 days prior to the bond expiration, in order to forestall the initiation of collection procedures by the Stormwater Engineering Division.