



# Engineering Department

## Construction Division

### Standard Operating Procedures

**Purpose: To outline procedures for inspection of Public Infrastructure and Development projects to achieve more uniform and consistent standards.**

- I. Pre-Construction Activities
  1. Pre-Construction meeting- Contractor, Developer and EPSC Certified Technician will meet with Engineering Dept., R.O.W and Water & Sewer Dept. to verify proper permits and to outline construction activities.
  2. Initial EPSC inspection-
    - A. Silt fence is installed per plans and other measures in place.
    - B. Construction Entrance installed properly
    - C. Outfalls identified and protected per plans and any other existing drainage not shown on plans.
    - D. SWPPP box and/or board in place and organized if multiple phases exist.
    - E. Copy of Plans onsite signed by the City of Murfreesboro Engineering Dept. Representative.
  3. ROW Permits- If a cut is required to install the Construction Entrance per the EPSC plan then a ROW

permit must be obtained prior to installing the Construction Entrance. More information regarding this procedure is provided at:

<http://www.murfreesborotn.gov/index.aspx?NID=26>

4. Traffic Control- If a lane closure or disruption of traffic patterns is required during any part of construction you must submit a "Traffic Control Plan" to the City Traffic Engineer for his approval.
5. Utility Coordination- It is the responsibility of the Contractor/Developer to coordinate with all utilities for the installation/relocation of all utilities.
6. Disposal of Materials- If materials leave a City of Murfreesboro jobsite we have an obligation to ensure that the material goes to a permitted site if it is in Rutherford County.
7. One Call- It is the Contractors responsibility to contact TN One Call at 811
  - A. **Very Important- Our Traffic Signal Loops are not covered under One Call and they must call our Traffic Dept. at (615)-893-6441 if they are working within 500 feet of a traffic signal.**

## II. Construction Activities

1. Inspection and Acceptance of Work- The City Engineer will assign a Public Works Inspector to all projects within the City of Murfreesboro. The assigned inspector will inspect and approve at each stage of the project. This includes but is not limited to Installation of EPSC measures, Storm drainage systems, subgrade, utility conduits, base stone, curb and gutter, and asphalt courses. The Contractor will not proceed to the next stage of construction until the Inspector has approved said stage.

### 2. Clearing and Grubbing

A. Burning- Burning may take place if allowed, and must be approved daily by the Fire Marshall at (615)893-1422 M-F and (615)849-2661 on weekends, you must also notify the Department of Agriculture Forestry Division at (877)350-2876.

**It may also be restricted if it causes a nuisance to adjacent property owners.**

B. Blasting- The Engineering Dept. does not regulate blasting, it is under the jurisdiction of the City of Murfreesboro Fire & Rescue and can be contacted at (615)893-1422.

C. Debris from Site- Any debris from site such as mud, stone, or waste material generated from site that is in an existing street, the contractor will be asked to remove immediately and an

alternate plan will be discussed to insure this will not happen in the future. Also, if this continues then the next step is to have the Murfreesboro Police Dept. hand out citations for any vehicle leaving the site. The final action will be a Stop Work Order served by the City Engineer.

### 3. Utility Installation

#### A. Storm Drain Installation-

- Prior to beginning construction the inspector needs to be contacted to inspect pipe stockpiles.
- A 24-hour notice for storm pipe installation is required
- Inspector will inspect pipe for quality assurance, means and methods i.e. bedding, grades, connections and backfill.
- No HDPE or Corrugated metal pipe will be allowed in the roadway without approval from the City Engineer.

#### B. Conduit Installation

- It is the responsibility of the contractor to ensure that no conduit, pull box, transformer, light pole or any other pod will conflict with the sidewalk.

#### 4. Roadway Construction

A. Subgrade Inspection- After the installation of all utilities, and prior to the installation of curb and gutter, the subgrade shall be proof rolled with a fully loaded dump truck and any areas that fail shall be marked and repaired to the satisfaction of the assigned inspector prior to the placement of base stone. **If conditions change whether it be from rain or any other issue, the subgrade will be proof rolled again prior to placing base stone. A 24 hour notice shall be given for inspection.**

B. Base Stone Placement- May or may not be complete prior to curb and gutter installation.

C. Curb and Gutter Installation

- Concrete Curb and Gutter shall have a minimum 28 day strength of 4000 psi.
- We would like to inspect the string line for grade prior to pouring. **A 24 hour notice shall be given for inspection.**
- At any time the inspector notices an alignment, grade, or finish defect the contractor will be asked to replace defective area.

- Tie-ins to structures should not be poured with the main curb and gutter. A 6-10 ft. gap on each side of structure should be left and tie-in/casting adjustments should be inspected for height/alignment and only be poured after the inspector has approved them. **A 24 hour notice shall be given for inspection.**

D. Final Base Stone Inspection- Prior to paving, the base stone will be checked for proper depth, proper profile and cross slopes (Crown), once these have been checked and approved by the inspector then a proof roll will be performed and any defective area identified will be repaired prior to paving. **A 24 hour notice shall be given for inspection.**

E. Paving

- All castings must be adjusted properly.
- If there is any lane closures or traffic disruptions the contractor will need to notify the assigned inspector 7-10 days prior to starting. The inspector will need to notify our Traffic Engineer which may require a detailed Traffic Control Plan.

### III. Building Permit Release

- A. Roadway must be to binder.
- B. All utilities must in place and tested.
- C. The area from back of curb to ROW must be graded for sidewalk.
- D. Any ditches or detention ponds must be stabilized.
- E. Another inspection must be made to insure that no pull boxes, transformers, light poles, or any other pods are located in the sidewalk location.
- F. All signage must be in place, please contact Traffic Engineer to request the city of Murfreesboro to install signage.
- G. All lot fills must be in place according to plans.
- H. All lots must be clear of any construction debris or stockpiles.
- I. Any temporary turn-a-arounds must be in place and able to support emergency vehicles.
- J. Engineering Certifications must be turned in.
- K. Engineer's estimate must be turned in.

### IV. Warranty Period

- A. Warranty bonds shall be posted in a **minimum** amount of 10% of the certified cost of constructing the infrastructure (Engineer's Estimate).

The warranty bond for the public infrastructure shall cover a period of 3 years for all construction elements except for the final asphalt surface course. A separate warranty bond for a minimum of 1 year shall be required for the final asphalt surface course.

The warranty bond shall warrant the construction against defects in construction and failures of the infrastructure. At any time during the warranty period, the City Engineer may demand that an identified defect be corrected within a defined period of time. Failure to correct the defect within the defined period of time will allow the City to call the bond and make repairs.

Within 90 days of the expiration of the warranty period the Developer may request release of warranty bonds. Within 14 working days of receipt of such request, the City Engineer shall inspect the infrastructure for failures due to defects. If defects are identified, the Developer shall be required to repair such defects prior to expiration of the warranty bond. Failure to correct any defect prior to the expiration of the warranty bond will allow the City to call the bond. If there are no defects,

the warranty bond shall be released on the date of expiration.

B. At the end of the warranty period but prior to release of bonds the section of subdivision must be 75% occupied.

### Helpful Resources

- Murfreesboro Subdivision Regulations:  
<http://www.murfreesborotn.gov/index.aspx?nid=215>
- Murfreesboro Street Specifications:  
<http://www.murfreesborotn.gov/documentcenter/view/189>
- One Call: <http://www.tn811.com/>
- Noise Ordinance:  
<http://www.murfreesborotn.gov/documentcenter/view/746>