



CITY OF MARTIN, TENNESSEE
STORMWATER DRAINAGE SYSTEMS
INSTALLATION, MAINTENANCE, AND IMPROVEMENT POLICY

1. Purpose

This policy of the City of Martin (City) provides guidelines for the City's Public Works Department employees to identify, evaluate, and resolve existing and future drainage problems. This policy defines installation, maintenance, and/or improvement responsibilities for the various stormwater drainage systems described herein. The guidelines in this policy only apply to existing or hereafter constructed stormwater drainage systems. The Mayor and City Board of Aldermen may make amendments or changes hereto, amendments for new stormwater drainage system designs, as well as enact or change stormwater and street ordinances when necessary or desired.

2. Drainage Channels

This policy includes drainage channels, which are natural or man-made drainage ditches, swales, creeks, and wet or dry open culverts.

The City may install, maintain, and/or improve drainage channels only upon City property or within the public right-of-way when such action is primarily for the clearly defined public welfare and corporate purpose. The City is not responsible for installation, maintenance, and/or improvement of drainage channels located on private property. In instances where a drainage easement exists in favor of the City, the City may construct, maintain, and/or improve drainage channels at its option when it is primarily for the clearly defined general public welfare and corporate purpose. Engineers and technicians employed by the City are authorized to act on behalf of the City within these guidelines.

3. Storm Drains

The City may install, maintain, and/or improve storm drains and systems on City property and within the public right-of-way when such action is primarily for the clearly defined general public welfare and corporate purpose. The minimum diameter of pipes installed by the City will be no less than fifteen inches unless an abnormal condition exists.

The City is not responsible for the installation, maintenance, and/or improvement of storm drains or systems on City property or the public right-of-way as follows:

- Storm drains desired by the adjacent property owner for aesthetics purposes;
- Storm drains desired by a property owner or required by the City to allow street access

or to aid development; or

- Storm drains desired by an adjacent property owner as an alternative to a properly functioning existing ditch or proposed ditch or other drainage channel.

The City is not responsible for the installation, maintenance, and/or improvement of pipes or storm drains or systems on private property. Where a drainage easement exists in favor of the City, the City may construct, maintain, and/or improve a storm drain or system at its option when it is primarily for the clearly defined general public welfare and corporate purpose. Any such maintenance, improvement, and/or installation on private property must be approved by the Public Works Director after presentation to and approval by the Mayor and City Board of Aldermen, and an easement in favor of the City must be obtained before any such approved project shall commence.

Any project that requires the installation or replacement of pipes more than one hundred feet or requires pipes with an equivalent diameter greater than thirty-six inches may be considered beyond the scope of the City's Public Works Department.

4. Curbing

The City may install, maintain, and/or improve asphalt or concrete curbing and asphalt or concrete rollover curbs only upon City property or within the public right-of-way when such action is primarily for the clearly defined public welfare and corporate purpose to help correct structure flooding or drainage issues. The City is not responsible for installation, maintenance, and/or improvement of curbing located on private property. Asphalt or concrete curbing will not be installed in, but not limited to, the following situations:

- Where a drainage channel, as described in Section 2, can be installed, or re-established to provide the same amount of flooding or drainage relief;
- Where the curbing will cause a safety hazard; or
- Where the curbing will cause flooding issues to other properties.

Asphalt or concrete rollover curbs will not be installed in, but not limited to, the following situations:

- Along concrete or gravel driveways;
- Along gravel, dirt, or grass pull-offs; or
- Where the addition of the curb may cause damage to vehicles passing over it.

5. Priority of Stormwater Maintenance Activities

The priority of stormwater drainage projects or maintenance will be based on the date of the work order submitted to the Public Works Department, as well as the type of drainage or flooding issues. The four categories of drainage or flooding issues are prioritized as follows:

1. Structural flooding (of finished floor);
2. Structural flooding (other structures);
3. Roadway flooding or safety hazards; and
4. Non-structural flooding.

The period for completion of each work order is dependent upon many factors, including the scope of each project, availability of resources and funds, and the total number of work orders written by the inspectors to the City's Public Works Department during any given period.

6. Stormwater Facilities

Stormwater facilities refer to any device designed to reduce stormwater flows or to reduce the pollutant loads in stormwater. Stormwater facilities include, but are not limited to: detention basins, retention basins, infiltration ponds, oil/water separators, and grit chambers. The City is not responsible for the maintenance, installation, and/or improvement of stormwater facilities located on private property. Stormwater facilities located on private property are the responsibility of the property owner(s). In some cases, a neighborhood association may have legally accepted the responsibilities of the stormwater facility.

7. Design Criteria for Stormwater Improvements

Determination of stormwater flow rates within the City shall be in accordance with the Natural Resources Conservation Service (NRCS) method described in Technical Release 55 (TR-55). The use of standard well-known software programs, such as HEC-1 or REC-HMS from the U.S. Army Corps of Engineers, are typically beneficial for most computations. In addition, Average antecedent moisture conditions (AMC II) are used for further calculations. NRCS methods must be performed in a 24-hour duration storm with NRCS Type II rainfall distribution for the design frequency. These rainfalls apply to the Martin area:

| Frequency | 1-year | 2-year | 5-year | 10-year | 25-year | 50-year | 100-year | 500-year |
|---------------|--------|--------|--------|---------|---------|---------|----------|----------|
| NRCS rainfall | 2.5" | 3.3" | 4.1" | 4.8" | 5.5" | 6.1" | 6.5" | 7.6" |

In selecting the design frequency storm, the following criteria will be used (listed in order as being progressively more restrictive):

1. Longitudinal side drains shall be designed for a 10-year frequency flood, provided that no residential or commercial structures are flooded by a 100-year flood, except as noted below;
2. Roadway cross-drains for all but arterial streets shall be designed for a 25-year frequency flood, providing that no residential or commercial structures are flooded by a 100-year flood, except as noted below;

3. Roadway cross-drains for arterial streets or a higher street classification shall be designed for a 50- year flood, provided that no structures are flooded by a 100-year flood, except as noted below; and
4. All bridges, structures, or embankments in floodways designated as part of the Federal Flood Insurance Study shall be designed to pass a 500-year frequency flood without raising the existing 500-year flood profile.

These guidelines provide a uniform basis for design projects; however, many retrofit projects have limitations as to the benefits that are produced by the project. Therefore, the City will endeavor to follow the guidelines to the maximum extent practicable, both economically and physically.

Date Passed: March 11, 2024.

Attest:

Kelly Wilson
City Recorder, Kelly Wilson

Randy Brundige
Mayor, Randy Brundige