

COLUMBIA WATER • STORMWATER STANDARD OPERATING PROCEDURES

City of Columbia Extents of Service Policy			
PURPOSE OF SOP:	The purpose of this policy is to provide an overview of the various stormwater conveyance system components and provide guidance regarding operation and maintenance obligations of the City of Columbia and private landowners for each component of the stormwater conveyance system.		
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1. Applicability/Scope

This policy is written to support City Engineering and Public Works staff in making maintenance and capital improvement project decisions related to the stormwater system. Specifically, this document provides guidance on which stormwater assets are owned, operated, and/or maintained by the City and when it may be appropriate to perform work on assets not currently owned by the City.

2. SUMMARY

In general, the City will perform maintenance on the stormwater system when the system component lies within a City road right of way, City owned property, or within a properly dedicated easement. The City does not perform work on assets located within another entity's right of way such as, the South Carolina Department of Transportation (SCDOT) or railroad rights of way. There may be some exceptions to these rules that are described in the policy. In those instances where it is not clear as to maintenance responsibility or when the City otherwise is compelled to work on a privately-owned system this policy provides guidance on the issues to be considered during the decision-making process.

3. DEFINITIONS

For the purposes of this policy, definitions of stormwater system components are consistent with definitions being used in other City planning documents and with the asset management practices.

Pipe systems: Pipes include a variety of materials, shapes, and sizes conveying stormwater runoff. Typically, pipe systems are "closed" systems; meaning one or more end(s) of the pipe system contains a junction box or inlet box. There may be additional junction or inlet boxes contained within the system and the system outlet generally discharges to a stormwater control measure or receiving stream.

Culverts: Culverts include a variety of materials, shapes, and sizes conveying stream flow, but may also contain inlets for stormwater runoff. Both ends of the culvert are open (i.e., pipe ends are not a box). In most cases, culverts convey stream flow underneath a road, path, or railroad crossing.

Inlets/junction boxes: Structures typically built of concrete or brick that serve as endpoints or junctions for pipes. Inlets are designed to allow stormwater to enter through a variety of openings (e.g., grates, curb inlets, etc.). Typically, junction boxes serve as a transition for pipe direction, size, or material and may or may not be designed to allow for stormwater entry.

Ditches: Ditches are generally small man-made, grass-lined stormwater conveyances, but may also be lined with concrete, asphalt, or other protective surfaces.

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Streams: Streams are typically natural, defined waterways that range considerably in size. Rocky Branch, Smith Branch, Penn Branch, Gills Creek, the Broad River, Congaree River and their tributaries are all examples of streams.

Driveway Culverts: Culverts under private driveways (either residential or commercial properties) designed to convey stormwater runoff that may or may not lie within City right of way.

Curbs and Gutters: Typically, concrete or asphalt poured in place or extruded as roadside edging intended to convey stormwater parallel to the street centerline.

Best Management Practices (BMPs): Devices constructed or installed to control either the quantity or quality of stormwater runoff. BMPs may include detention/retention basins, bioretention cells, pervious/porous pavements, catch basin inserts, manufactured treatment devices, etc.

City Right of Way: Right of Way (ROW) includes City owned road rights of way and other rights of way that are properly dedicated to the City. City right of way does not include rights of way dedicated to other entities such as the SCDOT or a railroad.

Easements: Easements refer to stormwater, utility, and other easements properly dedicated to the City.

4. SERVICE BOUNDARIES AND MAINTENANCE RESPONSIBILITIES

Table 1, Service Boundaries and Maintenance Responsibilities describes the limits of the City's stormwater system (i.e., where and under what circumstances the City will and will not perform work).

There may be circumstances when a continuous stormwater system crosses multiple jurisdictions or ROWs. In those instances, it may not be clear exactly where City ownership of the stormwater system begins and ends. Prior to performing maintenance or repair work, a thorough review of existing ROW documentation will be conducted to further asses ownership. Where ownership is still in question, contact will be made with the adjacent jurisdiction and, when appropriate, a joint field visit will be made with the adjacent jurisdiction. Maintenance and repair actions may begin after agreement is made regarding ownership with the adjacent jurisdiction.

All decisions made regarding ownership should be documented and the stormwater GIS should reflect the ownership decision.



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Table 1: Service Boundaries and Maintenance Responsibilities

System Component	City Asset	Non-City Asset	Additional Comments
Pipe Systems	Responsible for maintenance within City ROW, City easements, and City owned property.	Property owner is responsible for operation and maintenance. Under special circumstances, the City <u>may</u> assist with maintenance of these systems (See Special Circumstances and Emergency Maintenance Sections).	Except under certain emergency situations, the City will require the property owner to provide a "Right of Entry" to the City prior to the City beginning any work on non-City assets and may require the owner to sign an agreement specifying the work is a "one time only" repair. For new systems being constructed outside of the City ROW, the City may accept ownership and maintenance responsibilities provided the following criteria are met: a. A dedicated drainage easement is provided for the pipe system. b. The pipe system directly connects to the City system at a ROW. c. The pipe system has been designed and installed in accordance with the City's Engineering Regulations. d. Stormwater design plans have been previously reviewed and approved by the City. e. The pipe system serves a minimum of 2 properties. It should be noted that simply meeting the above criteria, does not imply the City will automatically accept the system for operation and maintenance. In general, it is the City's policy to accept only those systems within City road ROW for ownership.
Inlets/ Junction Boxes	Responsible for maintenance within City ROW, City easements, and City owned property.	Property owner is responsible for operation and maintenance. Under special circumstances, the City <u>may</u> assist with maintenance of these systems (See Special Circumstances and Emergency Maintenance Sections).	
Ditches	Responsible for maintenance within City ROW, City easements, and City owned property. (See additional comments)	Property owner is responsible for maintaining ditches through their property and keeping them clear of obstructions that would reduce capacity, negatively impact the City's stormwater conveyance system, or cause flooding on surrounding properties. The City may assume maintenance responsibilities for a ditch outside of City ROW that directly receives runoff water from a City owned street or stormwater system. Before maintenance responsibilities are assumed by the City, a drainage easement in accordance with City policy and standards will be prepared and dedicated to the City.	a. Should a private property owner request a ditch within an existing City ROW or easement be piped (enclosed), the City will determine if the request is justified based on public safety issues. If an extreme hazard to public safety exists, then the City may install or contract to install a drainage pipe and enclose the ditch at no expense to the property owner. b. Should a private property owner request that a ditch within an existing City ROW or easement be piped (enclosed) for purposes other than public safety (e.g., aesthetics) and the request is determined to be of primary benefit to the property owner, then the City will determine whether to allow the property owner to obtain an encroachment permit and hire an independent contractor at the owner's expense to install the pipe system in accordance with the City's engineering standards and design.
Streams	Responsible for maintenance within City ROW, City easements, or streams that are entirely on City property. All maintenance activities are subject to appropriate state and federal permitting requirements.	Property owner is responsible for maintaining the stream through their property and keeping it clear from obstructions that would reduce capacity, negatively impact the City's stormwater conveyance system, or cause flooding on properties in accordance with the City ordinance and state and federal requirements. City will acquire drainage easements or accept maintenance responsibility for stream systems on private property only if it is necessary for City road projects, drainage improvement projects, or other City projects.	Under certain circumstances the City may consider partnering with the local property owner to perform maintenance work on a stream. In general, the project must meet the following criteria: a. There must be a significant City benefit (e.g., water quality improvement, utility line protection, etc.). b. The property owner must provide a temporary construction easement. c. The property owner will assume long term maintenance.
Driveway Culverts	City is not responsible for maintenance of driveway culverts.	City is not responsible for maintenance of driveway culverts.	
Curbs and Gutters	Responsible for maintenance within City ROW.	City is not responsible for maintenance outside of City ROW.	The developer, contractor, or property owner must obtain a City encroachment permit before making a curb cut or installing a new driveway apron on the City's ROW. The City will not rework a driveway entrance to prevent road drainage from entering private property unless the problem is a direct result of a City road improvement or repaving project. The City is not responsible for curb overtopping problems caused by the increased runoff from land clearing, development, or building activities.
Best Management Practices (BMPs)	Responsible for maintenance when the BMP is installed as part of a City project, located on City ROW, easement, or property, or the City has otherwise accepted maintenance responsibility for the BMP.	Inspection and maintenance is the responsibility of the property owner, HOA, or business. Schedule or frequency for routine inspections and maintenance is set forth in the recorded maintenance agreement and must be at least once per year. The maintenance agreement is reviewed by the City and recorded. After recording, the property owner, HOA, or business is bound to terms of agreement.	City Inspections: City inspections of structural BMPs are conducted pursuant to the requirements of the SCDHEC MS4 Stormwater Permit No. SCS790001 (mandated by EPA) and City ordinance. The City may inspect BMPs several times during construction and again at project completion to ensure compliance with the approved plans. The City may conduct post-construction inspections periodically or as stipulated in the MS4 stormwater permit.



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5. Special Circumstances

This policy provides a uniform methodology and approach for maintaining the various stormwater conveyance systems in the City. The City Engineer/Public Works Director or their designees may use their own discretion in following these guidelines for all situations. Where special circumstances exist, the City Engineer/Public Works Director or their designees may modify these guidelines as appropriate. The justification and conditions associated with special circumstances should be documented and filed with the associated work orders.

Items typically considered during the decision-making process are:

- 1. Public safety
- 2. Impact on water quality
- 3. Flood risk
- 4. Impact to other properties
- 5. Impact on upstream and downstream hydraulic structures (e.g., bridges and culverts)
- 6. Erosion risk
- 7. Availability of funds
- 8. Future operation and maintenance requirements
- 9. Public access
- 10. Other engineering and construction issues
- 11. Aesthetics

6. Emergency Maintenance

The City may conduct emergency maintenance on any portion of the stormwater conveyance system (public or private) to protect the common good. Emergency maintenance includes maintenance necessary to remedy a condition which is potentially damaging to life, property, public roads and right of way or other infrastructure. Emergency maintenance shall not be construed as constituting an acceptance of a continuing maintenance obligation by the City, nor prevent the City from seeking reimbursement for expenses from the property owner(s) of the land that generated the condition. In cases of emergency maintenance, the City is not obligated to replace structures and/or plantings located within a drainage easement.

7. Drainage Easements

Properly dedicated drainage easements must be established for the City to perform maintenance on stormwater conveyance systems on private property. The easement(s) shall be drawn on a plat and shall be recorded as a descriptive easement whereby a verbal description is provided and referenced to a particular plat, deed, or tax parcel.

Drainage easements shall meet the criteria listed below.

- Provide adequate access to the conveyance system.
- Provide sufficient area for equipment and personnel to efficiently maintain the system.
- Provide restrictions prohibiting structures which would interfere with access to the easement and/or function of the conveyance.

The City does not routinely accept ownership or maintenance responsibilities on drainage systems associated with new development outside of the new right-of-way. In those cases where it is deemed to be in the City's best interest to own, operate, and/or maintain a drainage facility outside of the right-of-

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way, then an easement must be provided by the developer or property owner. Other documents, such as a Deed, may also be required for the City to accept ownership.

The following criteria will be considered in reviewing requests for City ownership and easements:

- 1. Source of runoff entering the system (e.g., Is the overwhelming quantity of runoff originating from City property?)
- 2. System interdependence (i.e., Do both ends of the proposed system connect to City maintained systems?)
- 3. Regional benefit (i.e., Does the system provide benefit to properties beyond the proposed project?)
- 4. Other factors to be considered:
 - a. Impact of ownership on other properties
 - b. Impact on upstream and downstream hydraulic structures (e.g., bridges and culverts)
 - c. Flood risk
 - d. Erosion risk
 - e. Impact on water quality
 - f. Future operation and maintenance requirements
 - g. Availability of funds
 - h. Public access

8. Revision History