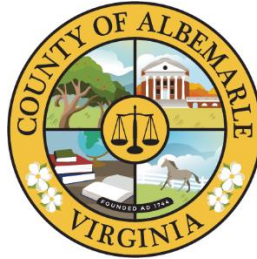


Albemarle County



Drainage Infrastructure Management Program Guidelines

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Albemarle County

Drainage Infrastructure Management Program Guidelines

Purpose and Objective

The purpose of the Drainage Infrastructure Management Program (the Program) is to proactively manage qualifying drainage infrastructure in designated areas of Albemarle County to reduce blockages, failures, flood risk, and long-term maintenance costs.

The Program aims to:

- Identify, assess, and maintain eligible drainage infrastructure.
- Address issues early to reduce the risk of blockages, flooding, and property damage.
- Support long-term cost-effective asset management through structured inspections, repairs, and information management.

Program Elements

Implementation of this program includes the following:

- **Mapping** – Maintaining a comprehensive geospatial inventory of drainage infrastructure and sharing with County staff, partner agencies, and relevant stakeholders.
- **Cleaning** – Removing sediment, debris, and other material which may inhibit system capacity.
- **Condition Assessment** – Documenting conditions of infrastructure using visual inspections, CCTV, or other methods.
- **Issue Identification and Repair** – Identifying, prioritizing, and performing repairs.
- **Information Management** – Managing records of assessments, repairs, and improvements.
- **Infrastructure Adequacy Improvements** – Identifying deficiencies and making improvements where appropriate and funded.

Applicability

These guidelines apply to drainage infrastructure included in the Program's **Extent of Service** and managed according to the **Level of Service** described below.

Definitions/Abbreviations

CIPP – cast-in-place-pipe is a method of repairing existing pipes through supplementing the integrity of the pipe “in situ”, or in its original place

County-owned properties – those properties owned by the County of Albemarle or Albemarle County Public Schools

Development Areas – those parts of Albemarle County designated as a Development Area on the Albemarle County Comprehensive Plan map adopted by the Board of Supervisors

dig work – repair work that is done from the ground surface, as opposed to repairs that are done underground, such as CIPP

drainage infrastructure – infrastructure designed and constructed with the intent to receive, manage, and convey stormwater runoff, including inlets, manholes, pipes, culverts, and channels; does not include natural channels

easement – reservation or grant by a property owner of the use of land for a specific purpose or purposes, other than a license revocable by the unilateral act of the grantor

extent of service (EOS) – describes the portions of the overall drainage infrastructure system that are to be managed as part of this program

level of service (LOS) – describes how the included portions of drainage infrastructure are to be managed

municipal separate storm sewer system (MS4) – a system or network of stormwater conveyances that is operated by a local government and separate from sanitary systems

municipal separate storm sewer system (MS4) jurisdictional area – the geographic area in which an MS4 program permittee is responsible for implementing its MS4 program

municipal separate storm sewer system (MS4) program – a program driven by the Clean Water Act requiring states and certain localities to reduce the amount of pollution in stormwater discharges through best management practices and measures

natural channel – a conveyance of stormwater that has formed over time through natural geological and geomorphic processes and without significant human alteration

right of entry (ROE) – legal permission to enter a property, typically to perform specific actions such as repairs or maintenance

street right-of-way (ROW) – the total width of the strip of land dedicated or reserved for travel, including pavement, and which also includes, but is not limited to, curbs and gutters, shoulders, ditches, sidewalks, bicycle paths, planting strips and, where necessary, utility easements

staff – employees of the County

State waters – all waters on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction, including wetlands

stormwater runoff – that portion of precipitation that is discharged across the land surface or through conveyances into waterways

underground infrastructure – drainage infrastructure that is mostly or entirely underground, including inlets, manholes, pipes, and culverts

Program Administration

- A. Designation: The Director of Facilities and Environmental Services is designated as the Program Administrator.
- B. Powers and Duties: The Program Administrator, or his designee, will administer the Program and has the following powers and duties:
 - 1. Establish reasonable and standard procedures and forms for the administration and implementation of the Program.

2. Conduct public outreach about the Program.
3. Make final determinations of eligibility based on the Extent of Service section below.
4. Determine prioritization of repairs.
5. Coordinate the activities described in the Level of Service section below.
6. Allocate budgetary and staffing support to implement the Program.
7. Pursue state, federal, and other grant programs for additional funding.

Program Scope

The scope and scale of the program is determined by the **Extent of Service (EOS)** and **Level of Service (LOS)**.

Extent of Service (EOS)

Drainage infrastructure must meet the following eligibility criteria to be included:

- 1) Located on County-owned properties, including those within the County's rural areas and the City of Charlottesville.
- 2) Located on private property receiving stormwater runoff from public property AND located within the Development Areas, or within approximately 500 feet of a Development Area boundary and conveying concentrated runoff from the Development Areas.
- 3) Located outside areas in which the drainage infrastructure is managed by another entity, including but not limited to the City of Charlottesville, the University of Virginia, the Commonwealth of Virginia, and property management associations.
- 4) Conveys concentrated runoff.
- 5) Not solely for the benefit of private properties, such as private driveway crossings of creeks or drainageways.

Exclusions: issues caused by poorly graded land, recent activities of individuals or entities, and inadequacies of natural channels.

Level of Service (LOS)

The Program will deliver the following LOS commitments, subject to funding and staffing.

- 1) **Mapping and Data Management** – maintaining geospatial information
 - a) Infrastructure will be added to the geodatabase as it is constructed or discovered:
 - i) Newly constructed infrastructure is mapped within 6 months of the completion of the development, per Community Development Department (CDD) regulatory processes (i.e. the applicable construction bond(s) are released).
 - ii) Older infrastructure is mapped when it is encountered in the field or through the discovery of old plan sets or construction drawings.
 - b) Attribute data of infrastructure is entered during the input of newly constructed infrastructure and, for older infrastructure, as data is discovered through field work, plan set discovery, or deliberate survey work.
 - c) Information associated with assessments and repairs are linked to the infrastructure immediately following the collection of this information.
- 2) **Assessments** – determining the general condition of infrastructure, and identifying recommended repairs
 - a) Underground infrastructure – cleaned and assessed via CCTV cameras.

- i) Newly constructed infrastructure is assessed by the owner prior to CDD determining that the construction is complete and releasing the construction bond.
 - ii) Existing infrastructure is assessed within 5 years of Program establishment.
 - iii) Reassessments are performed every 5 - 20 years depending on the condition and criticality determined in the initial assessment.
 - b) Channel assessments – documented via standardized parameters and photos. These assessments are targeted for every 10 years as resources permit.
- 3) **Drainage complaint response** – investigating and responding to issues raised by community members
 - a) Drainage complaints will be investigated within two business days, as resources permit.
 - b) Complaints and responses will be documented in a geodatabase the same day the investigation is completed.
- 4) **Repairs** – addressing identified issues, such as crushed or collapsed pipes, obstacles, corrosion, significant gaps, eroding channels, or other failures
 - a) Discovery – issues with infrastructure may be discovered via:
 - i) Proactive assessments as described above;
 - ii) Investigating drainage complaints, including failures such as sinkholes; or
 - iii) Staff observations.
 - b) Identification and prioritization
 - i) Issues found through assessment packages will be evaluated within three months; individual issues within three weeks of discovery.
 - ii) Issues will be prioritized on severity, cost of repair, risk to life or property, rate of deterioration, consequence of failure, and funding availability.
 - c) Repair scheduling
 - i) Repairs will be scheduled based on the severity of risks and how quickly the conditions could worsen.
 - ii) Critical: Infrastructure identified as a significant risk to public safety or property, and issues that may quickly worsen will be addressed as soon as possible.
 - iii) Noncritical: Less urgent maintenance items or repair needs will be bundled with other repairs for efficiency of resources and funding.
- 5) **Improvements** – Improvements to existing infrastructure or building new infrastructure to correct deficiencies.
 - a) Improvements are a secondary program goal and will be done based on need, as funding is available at the discretion of the Program Administrator.
 - b) Deficiencies may include:
 - i) Sections of infrastructure not having sufficient capacity, resulting in upstream flooding;
 - ii) Inadequate detention;
 - iii) Inadequate and unstable channels, resulting in property damage; or
 - iv) Lack of infrastructure, resulting in unmanaged concentrated runoff causing property damage or flooding.

Working on Private Property

The County will notify property owners of upcoming assessments and receive permission to enter the property for assessments and repairs.

- 1) **Cleaning and video assessments** – Prior to performing video assessments, notifications will be sent to the owners of all properties on which there is infrastructure to be assessed, regardless of whether the assessment will require entry on the property in order to perform the work.
- 2) **Repairs or improvements** – Prior to performing repairs or making improvements, staff will obtain a right-of-entry from the owners of all properties on which the crews or equipment will be entering, working, or otherwise impacting.
- 3) **Critical infrastructure** – For certain infrastructure improvements, a permanent drainage easement will be required to ensure future access for maintenance. Permanent drainage easements will be obtained prior to performing work. In emergency situations, a right of entry or temporary construction easement may be sufficient to perform repairs or improvements.

Coordination with Adjacent Localities and Maintenance Entities

The County will coordinate as needed with adjacent localities and/or community partner agencies responsible for drainage infrastructure management, including the Virginia Department of Transportation (VDOT), the City of Charlottesville, the University of Virginia (UVA), the Commonwealth of Virginia, Piedmont Virginia Community College (PVCC), the Town of Scottsville, and private entities.

Infrastructure within another entity's jurisdiction is generally excluded from the Program. The County will not consider infrastructure assessments, repairs, or improvements within the jurisdictions of adjacent localities or community partner agencies. Jurisdiction, in this context, refers to municipal and property boundaries and MS4 jurisdictional areas.

Exceptions to the Program exclusion will be made on a case-by-case basis, as determined by the Program Administrator.