# *Pipe Inventory and Condition Assessment*

# Leveraging the Right Data for Precision Planning in Lynchburg, VA

## PROBLEM

VDOT Lynchburg lacked the personnel to obtain a comprehensive cross-pipe drainage inventory to not only justify their current work plans and short-term projected budgets but also populate their Highway Maintenance Management System (HMMS) for future tracking and planning.

## SOLUTION

VDOT Lynchburg hired PILLAR to complete inventory and assessment. Using two-man inspection teams, we inventoried and condition-assessed ## pipes in ## counties and entered them into VDOT's HMMS for identifying, developing, and justifying work plans and budgets. This inventory and condition assessment endeavor was completed using 8,200 man-hours in approximately 13 months spread over 3 years.

## APPROACH

PILLAR inspected and inventoried cross-pipe locations and corresponding attributes throughout the district for Route 29, Business Route 29, Route 460, and Route 58. Once the primary routes were completed, we began collecting secondary routes. Attributes were documented, including diameter, type, length, end protection type, and approximate cover.

Crews conducted visual inspections to document pipe conditions, end protection, and outfall and were related to a corresponding numbered value. Safety hazards were brought to VDOT's attention immediately.

Crews took pictures of the pipe ends, including end protection and outfall, along with pipe interiors wherever feasible without entering the pipe. Pictures of the interior of the pipe were collected, if feasible, without entering the pipe. Curb inlets and associated storm sewer pipe systems were not collected or inventoried. However, if a cross pipe ties into a storm system it will be noted. Driveway pipes were not collected or assessed.

PILLAR made every attempt to utilize HMMS directly in the field. However, there were occasions in which mobile use of this system proved unreliable or inefficient. In these cases, PILLAR collected data via spreadsheet and entered the data into HMMS upon returning to the office or in an area with adequate signal.

Deliverables included the populated HMMS inventory and condition of cross pipes including location and corresponding attributes.

PILLAR
OPERATIONS & MAINTENANCE ADVISORS
Wytheville • Richmond

**PillarOMA.com**

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**276.223.0500 or info@pillaroma.com**