



ST. MARY'S COUNTY METROPOLITAN COMMISSION

STANDARD PROCEDURES & POLICIES

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SUBJECT: UTILITY TRENCH SETTLEMENT EVALUATIONS

PURPOSE

From time to time, appearances of trench settlement either inside or outside of public road right-of-ways are encountered. There have been instances where determining the party or parties responsible for the repairs has been questioned.

BACKGROUND

For work within public road right-of-ways, the Metropolitan Commission (*the Authorized Public Utility*) maintains a Utility Permit with both the St. Mary's County Department of Public Works & Transportation (DPW&T) and the Maryland Department of Transportation State Highway Administration (SHA). Both permits contain General Provisions and require job specific permits which are issued to MetCom. These permits provide permission for the installation, construction, relocation, removal, replacement, adjustment; and major maintenance of utility infrastructure as needed, which includes all excavations, trenching / open cutting, and trenchless / directional drill, and jacking and boring operations associated with water and sewer facilities and their associated appurtenances.

Both the County and State inspectors are authorized to and reserve the right to inspect all work performed and all material furnished under these permits which may impact safety, integrity of the roadway or restoration of the right-of-way “to their complete satisfaction”. Both entities may also assign third party inspection forces while work is being accomplished within the right-of-way at the expense of MetCom (*permittee*). The permits specifically state that MetCom will be responsible for the cost of any repairs to roadway embankments, drainage facilities, or any other facilities owned or maintained by the DPW&T and SHA should they become necessary or as caused by the construction, existence or failure of this utility or utility facility. MetCom strives to perform all utility trench construction in accordance with established standard specifications for construction and materials.

Likewise, local permits (*i.e. Grading and Right-Of-Way Construction Permits*) are issued to developers by MetCom and DPW&T for the installation of new roadways and associated water and sewer infrastructure. A similar inspection process is in place by both entities to ensure the underground utilities and roadways are constructed to meet all applicable standards. Maintenance bonds are also posted to ensure there are no latent defects that can be attributable to the initial construction by the developer(s). For private development, once the construction is accepted and the maintenance bond(s) are released, the DPW&T and MetCom are responsible for the maintenance of their respective infrastructure.

TESTING RESPONSIBILITY

In accordance with the permit provisions, MetCom is required to perform all testing required for all work performed under the job specific permit in accordance with all appropriate regulations and current applicable industry codes. The Permittee shall make available all test data and results to the DPW&T and SHA upon request of the inspector. Depending on the type of work and site conditions, additional tests or testing may be required by DPW&T / SHA such as compaction or pavement surface profile testing or geophysical surveys to detect subsurface voids, etc. To assist in this process, MetCom inspects, oversees third party construction management services, and pays for testing as may be required on each project.

In accordance with the permits related to utility work within existing public right-of-ways, the Permittee (*MetCom*) assumes responsibility in the event of any roadway failure to replace any or all pavement as required in the opinion of the DPW&T and/or the SHA. However, potential failures or trench settlements must be found to be directly attributable to the installation of the water or sewer facility. Therefore, in order to help determine whether the MetCom has full, partial or no responsibility for any repairs, the following evaluation shall be performed:

EVALUATION GUIDELINES

1. Ensure all subsurface work was conducted in accordance with approved plans and specifications. Review daily inspection logs or other available reports, if available. Note the date of the original installation.
2. Verify if MetCom or their contractor performed compaction testing using a licensed geotechnical engineer / tester within the trenches to certify it met the required compaction

requirements. This would include the testing of subbase materials for permanent pavement patching.

3. Determine if trench backfill was properly placed and that any remaining backfill was performed using appropriate materials and compacted / approved by DPW&T or SHA prior to any road construction or repair. Note: settlements of ½ inch or less in paved surfaces is tolerable.
4. Perform a visual inspection of the subject area to determine the extent (*i.e. depth, width, length*) / type of the settlement and proximity to MetCom infrastructure. Note any other potential sources of failure such as storm drains and inlets. Determine if there is any surface water or other visible signs that may be attributable to a public water or sewer discharges
5. Not if the location in an area of now inflow & infiltration issues, high groundwater, intermittent streams or storm drain culvert headwaters. Note: Reductions in water table levels can cause trench settlement.
6. Televis the line(s) to determine the condition of sewer lines and lateral connections (*breaks, joint failures, corrosive burst / collapses, breaches by other construction, etc.*). Ensure that manholes and risers / rings / collars are not evidencing any signs of groundwater or surface water infiltration that may be creating localized voids. Additional testing (*i.e. smoke testing on sewer lines or chorine testing on water lines*) may be warranted, especially where the settlement is in close proximity to another utility that may be an underlying cause.
7. Determine if the incident was a first time event / occurrence or recurring and over what time period the settlement developed.
8. Evaluate whether the settlement may be attributable to other pavement surface deficiencies such as cracking, shoving, wash-boarding, etc.
9. Invasive testing by a geotechnical engineer of the in situ conditions may be a method utilized by MetCom to help determine the possible cause of settlement.

REMEDIES

Remedies may include, but are not limited to: MetCom initiating no repairs, MetCom performing the necessary temporary or permanent repairs at its own expense (*permanent patching, re-compaction, flowable fill, etc.*), development of a cost share arrangement between parties, remittance of payment by any party based on estimated or actual pro rata share of the costs, calling a bond to repair latent defects, processing of damage claims thru the Local Government Insurance Trust (LGIT), etc. Note: 3-4 inches of settlement is not uncommon in non-pavement areas and can be easily remedied with the addition of topsoil.

NOTE: LGIT has reviewed this procedure