

SU302002A Pipe Replacement**GUIDELINES – PROJECTS REQUIRING PIPE REPLACEMENT.****VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
PIPE REPLACEMENT**

February 28, 2013

I. DESCRIPTION

This work shall consist of the replacement of existing storm water, surface water pipe culverts and/or sanitary sewer lines by the method or methods specified at the designated locations described in the Contract using various standard and non-standard methodologies/technologies in accordance with the requirements of this provision and as directed by the Engineer.

II. MATERIALS

Cement grout shall conform to Section 218 of the Specifications except the grout shall be a non-shrink mix design.

Pipe used in replacement operations shall conform to Section 232 of the Specifications.

III. GENERAL PROCEDURES

All work shall be contained within the existing right-of-way. In the event a temporary construction easement is deemed necessary due to the selected method or product chosen by the Contractor, the Contractor shall obtain such additional easement for his convenience at no additional cost to the Department.

The Contractor shall maintain all lanes of traffic at all times in accordance with the Special Provision for **Section 512—Maintaining Traffic – Non-Schedules (Lump Sum)** unless otherwise directed by the Engineer. This maintenance of traffic shall include temporary detours if required by the Contractor's method of operations to facilitate construction and where permitted by the locality and the Department. When temporary detours are required the Contractor shall design and construct temporary detours in accordance with Sections 105.14 and 512 of the Specifications and Standard GS-10 of the Road and Bridge Standards respectively. The cost for maintenance of traffic including temporary detours shall be bid as a lump sum amount for the specific location of each pipe replacement as shown in the Contract in accordance with the Special Provision for **Section 512—Maintaining Traffic – Non-Schedules (Lump Sum)** unless otherwise specified in the Contract.

The Contractor shall contact Miss Utility prior to commencing any work that may conflict with existing utilities, and shall coordinate with the utility company(ies) and the Engineer for any adjustments deemed necessary to complete the work. The Contractor shall notify the VDOT Area Construction Engineer at least 48 hours prior to initiation of replacement operations at the site.

In the event the selected method of replacement requires disturbing existing surfaces, these surfaces shall be restored in kind to original pre-construction conditions after replacement operations have been completed. The cost shall be included in the price bid for Pipe Replacement for the specified location.

The Contractor shall obtain all required OSHA confined space entry permits where these are required by the Contractor's operations and the scope of work in the Contract.

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The Department has performed an inspection of the existing pipes in the Contract to determine the extent and nature of each pipe's deterioration or damage in each location so as to designate the allowable methods of replacement of the pipe at that specific site. Using the information collected from this inspection the Department has determined through its engineering analysis the best practical method(s) of replacement for each respective site (location) taking into account site specific conditions such as installation working space, hydraulic capacity before and after replacement, height of cover, soil density, and loading conditions, among other criteria. The Contractor shall select, according to the method or options of methods designated by the Department for each specified location or site indicated in the Contract, how he/she chooses to perform the work. Regardless of the final method selected, the Contractor shall provide the Engineer documentation of the procedures, materials, equipment, incidentals and resources he/she shall employ to ensure successful replacement of the existing culvert(s) and/or sewers to assist the Engineer in monitoring the Contractor's operations. The Contractor will not be permitted to substitute a different method(s), if designated, than that or those specified for the location described in the Contract.

Replacement procedures shall be performed according to the method specified in accordance with the requirements of Section 302.03 of the Specifications at the location shown or described in the Contract. Pipes shall be installed to the line and grade shown or derived from invert elevations specified in the plans. Unless otherwise specified, pipes abandoned in place shall be grouted to fill the entire inside void with flowable backfill conforming to the requirements of the Special Provision for Flowable Backfill.

The following methods of pipe replacement are approved by the Department; however, not all methods may be appropriate for each individual location. The Contractor shall consult the Contract to determine the method or methods that are permitted per the location cited. Individual methods shall conform to the criteria specified.

Method A – Jacked pipe installation shall be the jack and bore method in accordance with Section 302.03(a)1 of the Specifications.

Method B - Open trench pipe installation shall be the open trench method in accordance with Section 302.03(a)2 of the Specifications.

Post installation inspection shall be performed in accordance with Section 302.03(d) of the Specifications. The cost of such inspection will be considered incidental to the cost of the installation.

IV. MEASUREMENT AND PAYMENT

Pipe Replacement (Method A) will be measured and paid for in units of linear feet of "Jacked Pipe" in accordance with Section 302.04 of the Specifications.

Pipe Replacement (Method B) will be measured and paid for in units of linear feet of "Pipe" in accordance with Section 302.04 of the Specifications.

These prices shall also include excavating when not designated as a separate pay item attributable to this specific work; sheeting; shoring; dewatering; disposing of surplus and unsuitable material; backfilling and backfill material; compaction; restoring existing surfaces; clearing obstructions, and flowable backfill when not designated as a separate pay item attributable to this specific work.

Payment will be made under:

Pay Item

Pay Unit

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(Size) Pipe Replacement (Method A)
(Size) Pipe Replacement (Method B)

Linear Foot
Linear Foot

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