

SECTION 00405 - TRENCH EXCAVATION, BEDDING, AND BACKFILL

(Follow all instructions and make all edits with "Track Changes" turned on. If there are no instructions [purple text] above a subsection, paragraph, sentence, or bullet, then include it in the project. Delete all purple text before preparing the final document. All other modifications to this Section will require ODOT Technical Resource and State Specifications Engineer approval.)

Comply with Section 00405 of the Standard Specifications modified as follows:

00405.02 Definitions – Replace the definition "**Trench Foundation**" with the following definition:

Trench Foundation - The bottom of the trench where the Pipe Bedding is to lie and that provides support for the pipe.

00405.03 Lines, Grades, and Cross Sections - Replace this subsection, except for the subsection number and title, with the following:

Excavate trenches to the lines, depths, grades and Cross Sections as shown or as established. Variations are allowed only when necessary to ensure firm foundations and when such variations will not be detrimental to the Work.

00405.14 Trench Backfill - Replace the paragraph that begins "Furnish the following ..." with the following paragraph:

Furnish the following Materials as shown or required:

00405.14(b) Class B Backfill - Replace the paragraph that begins "Use Granular Material..." with the following paragraph:

Use Granular Material consisting of Gravel or crushed Rock meeting the requirements of Section 00641. Use 1" - 0 or 3/4" - 0 Aggregate.

00405.14(d) Class D Backfill - Replace the paragraph that begins "Use pit run or bar ..." with the following paragraph:

Use pit run or bar run Material, well-graded from coarse to fine. The maximum dimension is 3 inches.

(Use the following subsection .41(a) when the open excavation method for installing pipes transversely is not permitted.)

00405.41(a) Within Paved Areas to be Preserved - Add the following to the end of this subsection:

Do not use the open excavation method for installing pipes transversely.

00405.41(b) Open Trench Limit - Replace this subsection, except for the subsection number and title, with the following:

Limit the length of open trench to 100 feet, or as allowed. Complete related resurfacing within 800 feet of the open trench limit.

00405.41(f) Trench Protection - Replace the paragraph that begins "Provide the Materials ..." with the following paragraph:

Provide the Materials, labor and Equipment necessary to protect trenches at all times. Provide safe working conditions in the trench and protect the Work, existing property, utilities, Pavement, and the public. Design the method of protection. The Contractor may elect to use any combination of shoring, overbreak, tunneling, boring, sliding trench shields or other methods of accomplishing the Work, provided the method meets with the approval of the Engineer and complies with all applicable local, state, and federal safety codes.

00405.43 Dewatering - Replace the paragraph that begins "When dewatering near a ..." with the following paragraph:

When dewatering near a river, lake, or stream, meet the requirements of 00290.30(a) and Section 00280. When the presence of water or other conditions in the excavated area would be detrimental to the purpose of the Work, obtain approval of the Engineer for the temporary measures required to correct or care for the condition.

00405.44 Trench Foundation - Replace the paragraph that begins "When, in the judgment of ..." with the following paragraph:

When, in the judgment of the Engineer, the existing material in the bottom of the trench is unsuitable for supporting the pipe, excavate below grade, as directed. Replace the excavated material with imported Trench Foundation Material meeting the requirements of 00405.11. Place the Trench Foundation Material in 6-inch layers and compact according to 00330.43 except compact selected stone backfill material in 12-inch layers. Bring the Trench Foundation Material to the elevation established.

00405.45 Pipe Bedding - Replace this subsection, except for the subsection number and title, with the following:

Spread the bedding smoothly to the proper grade so that the pipe is uniformly supported along the barrel. Excavate bell holes at each joint to permit proper assembly and inspection of the joint. Furnish bedding under the pipe that provides a firm, unyielding support along the entire pipe length.

00405.46 Backfilling - Replace the paragraph that begins "Backfill with Material ..." with the following paragraph:

Backfill with Material meeting the requirements of 00405.13 and the details shown, or as directed.

00406.46(d) Ponding or Jetting of Backfill Materials - Replace the paragraph that begins "Ponding or jetting is ..." with the following paragraph:

Ponding or jetting is not allowed within Roadbed lateral limits. Ponding or jetting is allowed outside Roadbeds when approved by the Engineer in writing.

Replace the paragraph that begins "Furnish Equipment that provides ..." with the following paragraph:

Provide Equipment that provides a minimum gauge pressure of 35 psi at the discharge nozzle. Use a Rigid Pipe that will reach within 1 foot of the bottom of the backfill. Insert the pipe at intervals not exceeding 4 feet throughout the entire width and length of the Trench Backfill.

00406.46(e) Temporary Trench Plating - Replace this subsection, except for the subsection number and title, with the following:

When temporary steel plates are required over a street cut, install plates capable of carrying at least a minimum of MS-18 loading. Place steel plates with a minimum of 12 inches bearing on all sides of a cut. Anchor steel plates to minimize shifting. Shim the edges of all steel plates with cold mix asphalt.

00405.48(b) Topsoil - Replace the paragraph that begins "Where trenches cross lawns ..." with the following paragraph:

Where trenches cross lawns, garden areas, pastures, cultivated fields or other areas where Topsoil exists, remove the Topsoil to a minimum 12-inch depth and place the Material in a stockpile. Do not mix the Topsoil with other excavated material. After the trench has been backfilled, replace the Topsoil.

00405.90 Payment - Replace the paragraph that begins "Payment will be payment ..." with the following paragraph:

Payment will be payment in full for furnishing and placing all Materials, and for providing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

In the paragraph that begins "No separate or additional..." delete the following bullet:

- sawcutting

Add the following sentence to the end of the subsection:

Sawcutting will be paid for according to Section 00310.