

ORINATION FORM

Date: May 14, 2012

Originator: Rudy Powell

Contact Information: 850-414-4280

Specification Title: Excavation for Structures and Pipe

Specification Section, Article, or Subarticle Number: Articles 125-1, -13, and -14

Why does the existing language need to be changed? See comments in the attached Word file.

Summary of the changes: See comments in the attached Word file.

Are these changes applicable to all Department jobs? If not, what are the restrictions? Yes

Will these changes result in an increase or decrease in project costs? If yes, what is the estimated change in costs? Neutral

With who have you discussed these changes? Structures Design and D6 Construction Office

What other offices will be impacted by these changes? n/a

Are changes needed to the PPM, Design Standards, SDG, CPAM or other manual? No

Is a Design Bulletin, Construction Memo, or Estimates Bulletin needed? No

Contact the State Specifications Office for assistance in completing this form.
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Florida Department of Transportation

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ANANTH PRASAD, P.E.
SECRETARY

MEMORANDUM

DATE: May 29, 2012
TO: Specification Review Distribution List
FROM: Trey Tillander, State Specifications Engineer
SUBJECT: Proposed Specification: **1250100 Excavation for Structures and Pipe.**

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

This change was proposed by Rudy Powell of the State Construction Office to address Contractor responsibility when excavating near existing structures and to clarify measurement of, and payment for, protection of those existing structures.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or to my attention via e-mail at SP965TT or trey.tillander@dot.state.fl.us. Comments received after **June 27, 2012**, may not be considered. Your input is encouraged.

TT/dt
Attachment

EXCAVATION FOR STRUCTURES AND PIPE.
(REV 5-14-12)

SUBARTICLE 125-1 (Page 181) is deleted and the following substituted:

125-1 Description.

Excavate for bridge foundations, box culverts, pipe culverts, storm sewers and all other pipe lines, retaining walls, headwalls for pipe culverts and drains, catch basins, drop inlets, manholes, and similar structures. Construct and remove cofferdams, sheeting, bracing, etc.; pump or otherwise dewater foundations; remove and dispose of any existing structures or portions of structures not covered by other items in the Contract, including foundations, abutments, piers, wings, and all other materials, obstructions, etc., found necessary to clear the site for the proposed work; backfill, dispose of surplus material, and perform final cleaning, as may be necessary for the proper execution of the work. **Protect existing structures in accordance with 455-1.1.** This Section does not include excavation for bases or pavements, curbs, curb and gutter, valley gutter, ditch pavement, or rubble gutter. Perform work in accordance with an approved Quality Control Plan meeting the requirements of 105-3.

Comment [Rudy1]: To address concerns with deep excavations near existing structures. Some districts are currently using a plan note so this will eliminate the note and establish consistency.

125-1.1 Trench Excavation Safety System and Shoring, Special (Trench Excavation): When performing trench excavation in excess of 5 feet in depth, comply with the Occupational Safety and Health Administration's (OSHA) trench safety standards, 29 C.F.R., s. 1926.650, Subpart P, and all subsequent revisions or updates adopted by the Department of Labor and Employment Security. Ensure that trench boxes are wide enough to accommodate compaction and density testing.

Submission of bid and subsequent execution of the Contract will serve as certification that all trench excavation in excess of 5 feet in depth will be in compliance with Section 553.62, Florida Statutes.

Consider all available geotechnical information available when designing the trench excavation safety system.

Consider these and any more stringent trench safety standards as minimum Contract requirements.

ARTICLE 125-13 (Page 189) is deleted and the following substituted:

125-13 Method of Measurement.

When direct payment for Excavation for Structures is provided in the proposal, and such payment is on a unit basis, such excavation will be measured in its original position by the cross-section method to determine the amount of material. The cubic yard volume of excavation used as a basis of payment will then be that material actually removed below the original ground line or stream bed, but not including that shown on the plans to be paid for either as Regular Excavation, Subsoil Excavation, Lateral Ditch Excavation or Channel Excavation, or which is included in the item for Grading, and except that no payment will be made for material removed in excavating for footings or foundations outside of an area which is bounded by vertical planes 12 inches outside of the limits of the footing and parallel thereto. For pipe trenches the width used to be in the calculation shall be the diameter of the pipe, plus 24 inches.

When included in the Contract Documents, the quantity to be paid for the Protection of Existing Structures will be at the Contract lump sum price.

Comment [Rudy2]: To allow the designer discretion of whether to include the costs for Protection of Existing Structures with the excavation or pay separately. This is how Protection of Existing Structures is handled for spread footings (piles and shafts are handled similarly)- see 455-37.1.

ARTICLE 125-14 (Pages 189 - 191) is deleted and the following substituted:

125-14 Basis of Payment.

125-14.1 When No Direct Payment Provided: When direct payment for Excavation for Structures is not provided for in the proposal, all work specified in this Section, other than as specified in 125-14.3 through 125-14.7, shall be included in the Contract price for the concrete or for other items covering the applicable structure.

125-14.2 Direct Payment: When direct payment for work under this Section is provided, the Contract price per cubic yard (measured as provided in 125-13), as shown in the proposal, shall be full compensation for all the work specified in this Section, except such work as is specifically stipulated to be paid for separately, in 125-14.3 through 125-14.7.

125-14.3 Excavation Below Plan Grade: When excavation of material below plan grade is called for in the plans or authorized by the Engineer, and payment for Excavation for Structures is on a cubic yard basis, the material excavated below plan grade will be included in the measurement for this item.

Payment for the material used for the backfill will be made as specified in 125-14.7.

125-14.4 Strengthening Foundations: The work of strengthening the foundations (as provided in 125-4.2) shall be paid for as provided in 4-4, unless such work is covered by a bid item.

125-14.5 Backfilling for Additional Support: The work of providing additional support by backfilling with sand or other satisfactory material, where called for by the Engineer (as specified in 125-8), shall be paid for as provided in 4-4.

125-14.6 Removal and Replacement of Existing Pavement: For pavement, curb, etc., which is removed only in order to construct pipe culverts or storm sewers, as specified in 125-11, all costs of such removal and replacement shall be included in the costs of the pipe or other structure for which it is removed, unless otherwise provided for in the contract.

125-14.7 Removal and Replacement of Material Unsuitable for Backfill: When it cannot reasonably be anticipated from information contained in the plans, that material excavated for the structure will be unsuitable for use as backfill, and such material proves to be unsuitable for this use, the work of disposing of such material away from the site will be paid for as unforeseeable work, and the work of bringing in substitute material for the backfill will be paid for as specified for the particular case shown below:

(a) No additional payment will be made for backfill materials obtained from surplus material available from the normal excavation or grading operations.

(b) When the necessary material is not available from the normal excavation or grading operations, and the Contract includes an item for Borrow Excavation, backfill material authorized to be obtained from designated borrow areas will be included in the volume of Borrow Excavation to be paid for.

(c) When the necessary material is not available from the normal excavation or grading operations and no separate item for Borrow Excavation is included in the Contract, any backfill material obtained by increasing the volume of excavation within the roadway right of way will be measured and paid for as regular excavation subject to the provisions of 9-3.2.2.

(d) When authorization is given for obtaining the material from outside the right of way and from other than designated borrow areas, such excavation will be paid for as unforeseeable work.

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All Jobs

(e) Where pipe bedding is provided, as specified in 125-8, by the use of select granular material, the quantity of such select material obtained either as commercial material or from material from the grading operations other than in the immediate vicinity of the pipe to be bedded, as authorized by the Engineer, will be paid for at the Contract price per cubic yard for Select Bedding Material. No payment for this material will be made for material available from the excavation for the pipe culvert or from other material available from the grading operations at a location not sufficiently remote as to require loading on trucks.

125-14.8 Protection of Existing Structures: *When separate payment for Protection of Existing Structures is provided, price and payment will be full compensation for all work necessary to evaluate the need for, design of, and to provide the necessary features to protect existing structure.*

When separate payment for Protection of Existing Structures is not provided, price and payment will be as per 125-14.1 or 125-14.2, as applicable.

125-14.9 Pay Items: Payment for the work under this Section, when provided for directly, shall be made under:

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|----------|---------|---|
| Item No. | 125- 1- | Excavation for Structures - per cubic yard. |
| Item No. | 125- 3- | Select Bedding Material - per cubic yard. |

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