

**Section 001760****SURVEYING AND RECORD DRAWINGS****PART 1 - GENERAL****1.1 SCOPE****1.1.1 General:**

The following specifications defines the requirements for the utility survey preparation, selection of materials, surveying for the utility construction, surveying of CCU approved installed utility locations and the preparation and submittal of the project Record Drawings.

1.1.2 Work Included

The Contractor shall, unless specified otherwise, provide all materials, equipment, tools, and labor necessary to mark the construction area for surveying, surveying as-built utility installations, and preparation and submittal of Record Drawings in accordance with the current Charlotte County Utilities (CCU) Minimum Drawing and Submittal Requirements for Potable Water, Wastewater, and Reclaimed Water Projects and CCU CADD Standards. All surveying and Record preparation must be done by a Professional Surveyor and Mapper (PSM) licensed in the State of Florida.

1.1.3 Location of the Work

The location of this work is as shown in the Contract Documents.

1.1.4 Coordination of the Work

The Contractor shall be responsible for the satisfactory coordination of the surveying activities with other construction and activities in the area. Delays in work resulting from lack of such harmony shall not in any way be a cause for extra compensation by any of the parties.

1.1.5 Working Hours

The work shall be carried out in accordance with local ordinance and not to cause any unreasonable nuisance to affected residents. Under emergency conditions, this limitation may be waived by the consent of Charlotte County Utilities (CCU).

1.2 METHOD OF MEASUREMENT & PAYMENT

All surveying and Record preparation must be done by a Professional Surveyor and Mapper (PSM) licensed in the State of Florida.

The work shall be measured and the compensation determined in the following manner:

1.2.1 Surveying

Surveying shall be paid for on a lump sum basis including providing all materials, equipment, tools, and labor necessary to provide the utility survey preparation, mark the construction area for surveying, surveying as-built CCU approved installed utility locations, in accordance with the current version of the CCU Minimum Drawing and Submittal Requirements for Potable Water, Wastewater, and Reclaimed Water Projects and CCU CADD Standards and Details.

1.2.2 Record Drawings

The preparation and submittal of the record drawings shall be paid for on a lump sum basis including preparing and submitting the PSM signed and sealed set of Record Drawings in accordance with the current version of the CCU Minimum Drawing and Submittal Requirements for Potable Water, Wastewater, and Reclaimed Water Projects and CCU CADD Standards and Details.

1.3 **REFERENCED STANDARDS** (Not used)

1.4 **PARTIAL LIST OF RELATED SECTIONS**

- 002320 – Gravity Sewer System
- 002325 – Force Mains
- 002330 – Low Pressure Sewer Systems
- 002335 – Potable Water and Reclaimed Water Mains
- 002340 – Valves
- 002345 – Fire Hydrants

Note: This is only a partial listing of related sections. The Contractor shall be responsible to review the entire contract documents.

1.5 **SUBMITTALS**

- 1.5.1 The contractor shall submit the Record Drawings in accordance with the current CCU Minimum Drawing and Submittal Requirements for Potable Water, Wastewater, and Reclaimed Water Projects and CCU CADD Standards and Details.
- 1.5.2 The contractor submittals shall include the statement that the submittals have been reviewed and the materials meet the contract specifications and/or design details.

PART 2 - PRODUCTS

2.1 **MATERIALS**

The contractor shall furnish all materials of adequate quality for the purpose intended, including all stakes, pipes, paint, and all other materials necessary to properly perform the required work.

Stakes and pipes shall be suitable for general field construction staking and shall be durable enough to last from installation of the utility to the surveying for the preparation of the Record Drawings. Any stakes and pipes damaged during the duration of the contract shall be replaced and re-set at their proper location with no additional compensation being made therefore.

PART 3 - EXECUTION

3.1 GENERAL

3.1.1 The Engineer of Record will provide the CADD Drawings to the project's contractor for use by the PSM for the construction stake out and for the production of the Record Drawings.

3.2 SURVEYING REQUIREMENTS

All surveying for the project shall be done by or under the supervision of a Florida licensed PSM experienced and competent in utility construction surveying. The PSM shall review the work, resolve problems, and make decisions in a timely manner.

3.3 SURVEYING PREPARATION

3.3.1 The contractor's surveyor shall set all property corners and stake out the limits of all permanent and temporary easements in those areas where utilities are being installed. The survey points shall be left in place and/or replaced and remain visible for County use until contract close out.

3.3.2 The Contractor shall survey and lay out the construction site before the start of construction and provide construction staking for all utility installations. The work shall consist of physically marking and placing stakes/piping necessary for the contractor to properly install all utilities in accordance with the approved engineering drawings.

3.3.3 The re-use of stakes that have been previously marked shall not be allowed.

3.4 SURVEYING FOR RECORD DRAWINGS

3.4.1 All newly installed potable and reclaimed water mains, gravity sanitary sewers, vacuum sewers, wastewater low pressure force mains, wastewater force mains, valves, blow-off assemblies, clean-outs, service connections, meters, fire hydrants, lift stations, fittings, manholes, reclaimed water meter assemblies, in-ground electrical conduit, and related items shall be located, surveyed, and shown on the Record Drawings in accordance with the current CCU Minimum Drawing and Submittal Requirements for Potable Water, Wastewater, and Reclaimed Water Projects and CCU CADD Standards and Details.

END OF SECTION