

SECTION 01150 MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 SCOPE

- A. The scope of this section of the Contract Documents is to further define the items included in each Bid Item in the Bid Form section of the Contract Documents. Payment will be made based on the specified items included in the description in this section for each bid item.
- B. All contract prices included in the Bid Form section will be full compensation for all shop drawings, working drawings, labor, materials, tools, equipment and incidentals necessary to complete the construction as shown on the Drawings and/or as specified in the Contract Documents to be performed under this Contract. Actual quantities of each item bid on a unit price basis will be determined upon completion of the construction in the manner set up for each item in this section of the Specifications. Payment for all items listed in the Bid Form will constitute full compensation for all work shown and/or specified to be performed under this Contract.

1.02 ESTIMATED QUANTITIES

The quantities shown are approximate and are given only as a basis of calculation upon which the award of the Contract is to be made. The County does not assume any responsibility for the final quantities, nor shall the Contractor claim misunderstanding because of such estimate of quantities. Final payment will be made only for satisfactorily completed quantity of each item.

1.03 WORK OUTSIDE AUTHORIZED LIMITS

No payment will be made for work constructed outside the authorized limits of work.

1.04 MEASUREMENT STANDARDS

Unless otherwise specified for the particular items involved, all measurements of distance shall be taken horizontally or vertically.

1.05 AREA MEASUREMENTS

In the measurement of items to be paid for on the basis of area of finished work, the lengths and/or widths to be used in the calculations shall be the final dimensions measured along the surface of the completed work within the neat lines shown or designated.

1.06 LUMP SUM ITEMS

Where payment for items is shown to be paid for on a lump sum basis, no separate payment will be made for any item of work required to complete the lump sum items. Lump sum contracts shall be complete, tested and fully operable prior to request for

final payment. Contractor may be required to provide a break-down of the lump sum totals.

1.07

UNIT PRICE ITEM

Separate payment will be made for the items of work described herein and listed on the Bid Form. Any related work not specifically listed but required for satisfactory completion of the work shall be considered to be included in the scope of the appropriate listed work items.

No separate payment will be made for the following items and the cost of such work shall be included in the applicable pay items of work. Final payments shall not be requested by the Contractor or made by the County until as-built (record) drawings have been submitted and approved by the County.

1. Shop Drawings, Working Drawings.
2. Clearing, grubbing and grading except as hereinafter specified.
3. Trench excavation, including necessary pavement removal and rock removal, except as otherwise specified.
4. Dewatering and disposal of surplus water.
5. Structural fill, backfill, and grading.
6. Replacement of unpaved roadways, and shrubbery plots.
7. Replacement of fencing
8. Cleanup and miscellaneous work.
9. Testing and placing system in operation.
10. Any material and equipment required to be installed and utilized for the tests.
11. Pipe, structures, pavement replacement, asphalt and shell driveways and/or appurtenances included within the limits of lump sum work, unless otherwise shown.
12. Maintaining the existing quality of service during construction.
13. Maintaining erosion control.
14. Appurtenant work as required for a complete and operable system.
15. Seeding and hydro mulching.
16. As-built Record Drawings.
17. Temporary by-pass pumping and/or collection, hauling and disposal of wastewater.
18. Site layout/Survey.
19. Testing as specified.

A. BID ITEMS

BID ITEM NO. 1: MOBILIZATION/DEMOBILIZATION

Measurement and payment for this Bid Item shall include full compensation for the required 100 percent (100%) Performance Bond, 100 Percent (100%) Payment Bond, all required insurance for the project and the Contractor's mobilization and demobilization costs as shown in the Bid Form. Mobilization includes, but it not limited to: preparation and movement of personnel, equipment, supplies / construction videos, and for the establishment of temporary offices, storage buildings, staging areas, safety equipment and first aid supplies, sanitary and other facilities, as required by the Contract Documents and applicable laws and

regulations. The costs of permits and any other preconstruction expense necessary for the start of the work, excluding the cost of construction materials, shall also be included in this item. Demobilization shall be the work of removing temporary facilities, project signs, erosion control, temporary fencing, etc. from the site.

Payment for mobilization shall not exceed 10 percent (10%) of the total Contract cost unless the Contractor can prove to the County that his actual mobilization cost exceeds 10 percent (10%).

Partial payments for this Bid Item will be made in accordance with the following schedule:

Percent of Original Contract Amount:	Percent Allowable Payment of Mobilization/Demobilization Bid Item Price:
5	25
10	35
25	45
50	50
75	75
100	100

These payments will be subject to the standard retainage provided in the Contract. Payment of the retainage will be made after completion of the work and demobilization.

BID ITEM NO. 2: PVC (C-900 & C-905) FORCE MAINS

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per the schedule of prices for furnishing and installing the listed diameter PVC force main (AWWA C-900, CL-150 or C-905, CL-235) pipe and fittings by direct bury as shown on the Contract Drawings and listed on the Bid Form. Measurement and Payment shall be made for the actual length of the listed diameter pipe and installed and will represent full compensation for all labor, materials, excavation, including rock, dewatering, bedding, backfill, compaction, testing and equipment required to complete these Bid Items. No additional compensation shall be made for excavation below the bottom of the pipe, for rock removal or bedding and backfill material, or for repair of any trench settlement. Pavement repair and road restoration not a part of this Bid Item and are to be included elsewhere.

BID ITEM NO. 3: INSTALL FORCE MAIN BY AERIAL BRIDGE CROSSING

Payment for all work included in this Bid Item will be made at the applicable Contract lump sum price bid and shall represent full compensation for all labor, equipment and materials for fabricating, furnishing and installation of the proposed force main aerial bridge crossing and removal of the existing force main aerial crossing. Payment for elements called out in the Contract Documents not specifically included in the Bid Form are incidental to the listed items.

The work shall include, but is not limited to, ductile iron pipe (Special Thickness Class 53) force main bridge crossing installed above ground including the below ground limits of ductile iron pipe on either side of the aerial bridge crossing as shown on the Contract Drawings, all steel elements, bolting, pipe supports, wing wall penetrations and associated elements for the bracket, saddle assemblies, anchor systems, and welding.

Also included shall be removal of the existing 12" ductile iron force main and its supports, bridge repair associated with removal of the existing aerial pipe and its support system, and all other appurtenances and incidentals required or specified to complete the removal of the old force main aerial crossing and installation of the new aerial force main crossing and support system in accordance with FDEP requirements. Work shall include bypass pumping, linestops, temporary bypass piping, tapping sleeves and valves and any and all other items necessary for a complete bypass system to maintain uninterrupted lift station operations shall be included. All costs to protect the existing bridge, foundations, environment and associated improvements during construction shall also be included in this pay item. Contractor shall not remove, replace, or modify any part of the existing force main and its bridge supports until conducting a site meeting held with the County's Structural Engineer and Project Representative.

BID ITEM NO. 4: HDPE CASING

Payment for all work included, but is not limited to, under this Bid Item shall represent full compensation in accordance with the unit price bid per length foot of HDPE casing pipe installed by direct bury including HDPE casing, carrier pipe, casing spacers, and end seals as shown on the Contract Drawings. Payment shall represent full compensation for all labor, material, equipment, excavation, including rock, bedding, backfill, compaction, testing and disinfection required to complete this Bid Item.

BID ITEM NO. 5: DUCTILE IRON FITTINGS, WASTEWATER

Payment for all work included in these Bid Items will be made at the applicable Contract unit price bid for furnishing and installing each listed ductile iron fitting (Protecto 401 epoxy lined) as shown on the Contract Drawings and listed on the Bid Form. Payment will be made for each fitting installed and will represent full compensation for all labor, material, excavation, including rock, bedding, backfill, compaction, testing and equipment required to complete these Bid Items.

- (1) Pay Item 5a: 12-Inch 45° Bend
- (2) Pay Item 5b: 12-Inch 22.5° Bend
- (3) Pay Item 5c: 12-inch 11.25° Bend

BID ITEM NO. 6: JOINT RESTRAINTS

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price per each restraint required to restrain the piping required by the Contract Drawings. Payment shall represent full compensation for all labor, material, equipment, excavation, including rock, bedding, backfill, shoring, dewatering, backfill, compaction, and testing required to complete this Bid Item. This Bid Item includes

the installation of restraints used in restraining PVC and ductile iron pipe of the specified type acceptably furnished and installed as shown on the drawings or where directed by the Project Representative and in accordance with the pipe and restraint manufacturer's requirements. The work shall include, but is not limited to, all bolts, nuts, washers, gaskets, and all the other related and necessary materials, work and equipment required or associated with this item. Measurement will be based on each complete restraint assembly furnished and installed except where specifically included in another pay item.

BID ITEM NO. 7: PLUG VALVES

Payment for all work included in this Bid Item shall be made at the applicable Contract unit price bid per each valve for furnishing and installing the listed diameter valve, box, cover and concrete pad as shown on the Contract Drawings and listed on the Bid Form. Payment shall represent full compensation for all labor, material, excavation, including rock as necessary, bedding, backfill, compaction, testing and disinfection and equipment required to complete these Bid Items.

BID ITEM NO. 8: AUTOMATIC AIR RELEASE VALVE ASSEMBLIES

Payment for all work included in these Bid Items shall be at the applicable Contract unit price bid per each automatic air release valve assembly as shown on the Contract Drawings and listed on the Bid Form. The unit price amount for this Bid Item shall include all labor, material and equipment necessary to install the automatic air release valve assemblies for the force main including, but not limited to, the air release valves; tapping saddle; curb stop; ball valves; above grade enclosure; valve identification tags; concrete collar; small diameter piping; excavation; backfill; dewatering; bracing, sheeting and shoring; restoration; and all ancillary items unless indicated elsewhere.

Measurement will be on an individual basis according to the number and type of automatic air release valve assemblies acceptably furnished and installed where shown on the drawings or where directed by the Owner's Representative. Payment: Payment shall be the actual number of automatic air release valve assemblies installed.

BID ITEM NO. 9: CONNECTION TO EXISTING FORCE MAIN

Payment for all work included in this Bid Item shall be at the applicable Contract lump sum price for connection to the existing force main at Lift Station 14-A as shown on the Contract Drawings and listed on the Bid Form. The lump sum price amount for this Bid Item shall include all labor, material and equipment necessary to connect to the existing force main including exploratory excavation; isolation of force main; excavation; dewatering; cutting and removal of existing force main within the limits shown on the Contract Drawings and as required; force main replacement and connection; backfill; bracing, sheeting and shoring; disposal of wastewater; any and all bypass pumping and/or removal/hauling of wastewater from affected lift stations to a designated location; provision and operation of tanker trucks (minimum of five (5) trucks, each with 3,000 gallon minimum capacity), coordination and scheduling of the Work with the County; restoration; erosion control and all ancillary items unless indicated elsewhere. Fittings, and valves are not a part of this Bid Item and are to be included elsewhere.

BID ITEM NO. 10: GROUT FILL ABANDONED PIPE

Payment for all work under this Bid Item shall be made at the applicable Contract unit price bid per cubic yard of grout fill furnished, installed and accepted in any size of pipe, abandoned and left in place. Measurement shall be the volume in cubic yard of material acceptably used to grout fill pipe to be abandoned where shown on the drawings and specified or where directed by the County's Representative. Payment shall represent full compensation for all labor, materials, and equipment for bracing, sheeting and shoring; excavation; dewatering; cutting; draining pipe; collection and disposal of sewage in the force main; grouting; capping; backfill; compaction; removal of valve boxes and pads; and removal of air release valves and vaults; restoration; erosion control and all ancillary items unless indicated elsewhere.

BID ITEM NO. 11: UNSUITABLE SOIL REMOVAL AND REPLACEMENT

The unit price amount for this Bid Item shall include all labor, material and equipment necessary to remove and replace unsuitable soil including, but not limited to, excavation; disposal of unsuitable material; furnishing and compaction of select fill; dewatering; bracing, sheeting and shoring; and all ancillary items unless indicated elsewhere. Measurement will be the volume in cubic yards of material acceptably removed and measured in the truck where directed by the Owner's Representative. Payment shall be made for the actual number of cubic yards removed.

BID ITEM NO. 12: 2" WATER SERVICES

This Bid Item includes the construction of 2-inch potable water services including service line, meter box and appurtenances of the specified type acceptably furnished and installed as shown on the Drawings or where directed by the Project Representative. The work includes removal and disposal of the existing meter box and appurtenances, connection of the new water service to the existing water service line, and installation of new service line as required on private property from the existing box to the meter box installed by the Contractor. The Project Representative may require a plumber licensed in Manatee County to install the portions of the work on private property, including vacuum breakers on all exterior hose bibbs. Measurement will be according to the number of 2-inch water services acceptably furnished and installed where shown on the drawings or where directed by the Owner's Representative. Payment for all work under this Bid Item shall be made at the applicable Contract unit price bid. The work shall include, but is not limited to; service piping, excavation, directional drilling, restoration, compaction, casing pipe, meter box, tapping saddles, corporation stops, curb stops, curb or pavement location disks, 10 gauge copper clad steel tracer wire, complete meter assembly & yoke, all necessary fittings, all service connections, disinfection, coordination with service customers, removal and reinstallation of meters, and all other related and necessary materials, work and equipment associated with this item.

BID ITEM NO. 13: POLYMER CONCRETE MANHOLE

Payment for work under this Bid Item shall be made at the Contract lump sum price bid for the polymer concrete manhole shown at Master Lift Station (MLS) 13-A on the Contract Drawings, furnished and installed including frame and cover, construction of invert, all protective coatings, drop connections if applicable, existing and proposed sanitary sewer tie-ins, sealing of lift holes, rainwater protector, etc.

Measurement will be based on the acceptance of the work completed in full. Excavation, including rock as necessary, bedding, backfill, dewatering, sheeting, shoring, testing, protection of existing infrastructure at MLS 13-A, and any and all other items necessary for a completed system in accordance with the Contract Documents shall be included. Payment shall represent full compensation for all labor, materials, equipment and incidental items necessary to complete the polymer concrete manhole structure, ready for approval and service by the County.

BID ITEM NO. 14: CONCRETE MANHOLE REHABILITATION

The lump sum amount for this Pay Item shall include all labor, material and equipment necessary to refurbish the existing manhole the at the intersection of 63rd Avenue East and 9th Street East as shown on the Contract Drawings including, but not limited to, permanently sealing of existing manhole penetration associated with the existing 12-inch force main abandoned, by-pass pumping, ventilation, concrete repair, concrete liner application with secondary protective coating, new manhole frame and cover; excavating, including any sloping, sheeting, or shoring required to comply with OSHA and State trench safety laws; dewatering; protection of existing utilities; backfilling and compaction; all surface restoration and all ancillary items as indicated on the drawings unless indicated elsewhere. Measurement will be based on the acceptance of the work completed in full. Payment shall be made at the lump sum price.

BID ITEM NO. 15: CURB AND GUTTER

Payment for all work included in this Bid Item will be made at the applicable Contract unit price bid per linear foot for removal of existing curb and gutter and for furnishing and placing the curb and gutter in like-kind as shown on the Drawings and listed on the Bid Form. Measurement will be per actual number of linear feet acceptably furnished and installed where shown on the drawing or where directed by the County's Representative. Payment shall represent full compensation for removal of existing curb and gutter, all labor, material and equipment for compacting subgrade, forming, furnishing, placing the concrete, and finishing as specified and all incidentals necessary for completion of this Bid Item, ready for approval and acceptance by the County.

BID ITEM NO. 16: CONCRETE SIDEWALKS

The unit price amount for this Pay Item shall include all labor, material and equipment necessary to install the concrete sidewalk and accessible ramps including, but not limited to, labor; materials; form work; reinforcement; expansion joints; compaction; finishes; removal of existing sidewalk and proper disposal; and ancillary items as indicated on the drawings and specified unless indicated elsewhere. Measurement

shall be the area in square yards of concrete sidewalk installed where shown on the drawings or directed by the Project Representative. Payment shall be the actual number of square yards installed.

BID ITEM NO. 17: DRIVEWAY RESTORATION

Payment for all work included in these Bid Items will be made at the applicable Contract unit price bid per square yard of shell, asphaltic concrete, or concrete driveway restoration as listed on the Bid Form. Measurement of driveway restoration will be per the actual number of square yards replaced. Payment shall represent full compensation for all labor, materials and equipment for cutting the edges of existing driveways, compacting subgrade, furnishing and installing the shell, asphaltic concrete or concrete and all incidentals necessary to complete the driveway restoration as shown on the Contract Drawings and included in the Specifications, all ready for approval and acceptance by the County.

- (1) Pay Item 17a: Asphalt Driveway Restoration
- (2) Pay Item 17b: Concrete Driveway Restoration

BID ITEM NO. 18: PAVEMENT REPAIR AND ROAD RESTORATION

Payment for all work included under this Bid Item will be made at the Contract unit price bid per square yard of base, subbase and tonnage of asphalt for furnishing, installing and testing the road restoration pavement section within these Specifications and as listed on the Bid Form. Measurement will be based on the actual number of square yards of road restoration installed, tested, complete and approved. The measurement will be from the pipe trench width within the roadway or as specified. Payment will include complete restoration of the roadway section in accordance with the applicable details on the Contract Drawings, but not less than 1-1/2 inches of FDOT Type III asphaltic concrete, the necessary base, subbase or compacted suitable excavation material all in accordance with these Specifications. No payment for restoration of a private driveway within or outside the right-of-way shall be made under this Bid Item. Payment shall include all items and incidentals necessary to complete the road restoration in accordance with the requirements of Manatee County ready for approval and acceptance by the County.

BID ITEM NO. 19: ASPHALT MILL AND OVERLAY

Measurement and Payment shall be per square yards of mill and overlay as listed on the Bid Form and as shown on the Contract Drawings or where directed by the Project Representative. Payment will be for the actual square yards of milling and overlay installed and accepted as determined by field dimension or survey.

The unit bid price shall include, but is not limited to, all required items, including surface asphalt milling, asphaltic concrete, compaction, prime and tack coats, labor, materials and equipment, testing and incidentals necessary to complete these bid items, ready for approval and acceptance by the County.

Restoration shall be completed in accordance with the latest Manatee County Transportation Department Highway and Drainage Standards and FDOT Specifications for Road and Bridge Construction.

BID ITEM NO. 20: THERMOPLASTIC STRIPING

The lump sum amount for this Bid Item shall include all labor, material and equipment necessary to replace the existing thermoplastic striping including, but not limited to, lane striping, stop bars, turn arrows, raised reflective pavement markings and other pavement markings in accordance with SSRBC and FDOT Index 711-001 (Latest Edition) including all ancillary items unless indicated elsewhere. Payment shall be for percentage of thermoplastic striping installed compared to total required to execute Work under this Contract.

BID ITEM NO. 21: SODDING

Measurement shall be per square yards of sod installed, alive and growing.

Payment will be per actual quantity of square yards of sod installed and accepted.

The unit bid price shall include, but is not limited to, cutting down the existing ground to accept sod, installation, watering, and all labor, materials, necessary equipment, and incidentals necessary to complete this bid item, ready for approval and acceptance by the County.

Sod placed at the edge of the roadway shall not create a “dam” and impede storm water runoff from exiting the roadway and entering the stormwater conveyance system.

BID ITEM NO. 22: TREE AND SHRUB REPLACEMENT

Payment for all work under this Bid Item will be made at the applicable lump sum price bid for removal and replacing trees and shrubs in like-kind as shown on the Drawings or directed by the County. Payment shall represent full compensation for all labor, materials, necessary equipment, and incidentals necessary to complete the work, ready for approval and acceptance by the County.

BID ITEM NO. 23: GUARD RAIL REPLACEMENT

Measurement and payment for the removal and replacement of the existing guard rail shall be per linear foot of guard rail furnished, placed and installed per FDOT specifications. Payment for all work under this Bid Item will include all components specified in the Contract and/or FDOT Design Standards, Index No. 400.

BID ITEM NO. 24: REINFORCED CONCRETE SHOCK PAD

Measurement and reinforced concrete shock pad shall be per actual cubic yard of concrete furnished, placed and installed.

Payment for all work under this Bid Item shall be made at the applicable Contract unit price bid per cubic yard of 3,000 psi concrete needed for the installation of reinforced concrete shock pads were shown on the Contract Drawings, required by the Contract Drawings or where directed by the Owner's Representative.

BID ITEM NO. 25: WATER MAIN REPLACEMENT

Payment for all work included in this Bid Item shall be at the applicable Contract lump sum price for the replacement of the 6-inch PVC water main with a 6-inch DI water main as shown on the Contract Drawings and listed on the Bid Form. The lump sum price amount for this Bid Item shall include all labor, material and equipment necessary to furnish and install the listed diameter DI water main pipe including exploratory excavation; isolation of water main; connections; valves; fittings; insert valves; excavation; dewatering; backfill; bracing, sheeting and shoring; coordination and scheduling of the Work with the County; testing; disinfection; FDOH clearance; erosion control and all ancillary items unless indicated elsewhere. Measurement and payment shall represent the full compensation for all labor, material, excavation, including rock, required to complete this bid item. Pavement repair and road restoration, asphalt mill and overlay, curb and gutter replacement, sidewalk replacement and thermoplastic striping are not a part of this Bid Item and are to be included elsewhere.

BID ITEM NO. 26: RECORD DRAWINGS

Payment for all work included under this Bid Item shall be made at the Contract lump sum price bid listed in the Bid Form and shall represent full compensation for all labor, materials and equipment required to generate and provide record drawings approved and accepted by the County. Record drawings shall be in strict accordance with Section 1.14 of the Manatee County Public Work Utility Standards.

BID ITEM NO. 27: MAINTENANCE OF TRAFFIC

Payment for all work included in this Bid Item will be made at the applicable Contract lump sum price for maintenance of traffic. This item includes but is not limited to furnishing, installation, and maintaining all vehicular and pedestrian traffic control, corridors, detours, temporary signing, MOT devices, barricades, safety devices, way-finder signs, flaggers, coordination with County staff and residents, temporary concrete safety barriers, restoration of signal detector loops & leads, removal of existing thermoplastic markings and striping as required, temporary lighting, placement and removal of excavation plating or ramps, temporary striping and markings, temporary signal re-timings and adjustments, preparation of Temporary Traffic Control plan consistent with the Contractor's schedule and means and methods by an individual with advanced FDOT certification, updating the Temporary Traffic Control Plan as required due to changes during the performance of the work, all as required by FDOT standards and as shown on the Drawings or where directed by the Project Representative. Payment shall represent full compensation for all traffic control, and all associated tasks, including but not limited to all labor, materials and equipment and all incidentals necessary for completion of this Bid Item. Measurement will be based on the percent complete acceptance of the work completed in full.

BID ITEM NO. 28: CONTRACT CONTINGENCY

Payment for all work under this Bid Item shall be made only at the County's discretion. This Bid Item shall not exceed 10% of the Bidders Total Base Bid. The Bidder shall calculate and enter a dollar amount for this Bid Item.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION