



Financial Management Department
Purchasing Division
1112 Manatee Ave W Suite 803
Bradenton, FL 34205
Phone: (941) 749-3014
www.mymanatee.org

April 7, 2016

TO: All Interested Bidders
SUBJECT: Invitation for Bids #16-1005CD
63rd Avenue and 39th Street East Transmission Water Main Loop

ADDENDUM #2

Bidders are hereby notified that this Addendum shall be acknowledged on page Bid Form-1 of the Bid Form and made a part of the above named bidding and contract documents. Bids submitted without acknowledgment of the Addendum will be considered incomplete.

The following items are issued to add to, modify, and clarify the bid and contract documents. These items shall have the same force and effect as the original bidding and contract documents, and cost involved shall be included in the bid prices. Bids to be submitted on the specified bid date, shall conform to the additions and revisions listed herein.

1. **DELETE** Bid Form pages Bid Form-2 thru Bid Form-5 and **INSERT REVISED** Bid Form Pages Bid Form-2 thru Bid Form-5 that are attached to this Addendum #2.
2. **DELETE** all of Section 01150- Measurement and Payment from the Technical Specifications and **INSERT** the Revised Section 01150- Measurement and Payment that is attached to this Addendum #2.
3. **DELETE** page 113/168 from the Technical Specifications and **INSERT** Revised page 113/168 that is attached to this Addendum #2.
4. **DELETE** page 147/168 from the Technical Specifications and **INSERT** Revised page 147/168 that is attached to this Addendum #2.
5. **DELETE** Plan Sheets 3-10 and 13, and **INSERT** Revised Plan Sheets 3-10 and 13 that are attached to this Addendum #2.

The following questions have been presented by potential bidders:

Question 1: I do not find a detail in the plans for the air release valve, please provide.

Response 1: The plans have been revised to include details for the ARV. All the Manatee County details selected for use on various projects are available for download along with the Standards. We encourage all to have a copy for reference. The details and standards may downloaded from the below website:

<http://www.mymanatee.org/home/government/departments/public-works/engineering-services/engineering-standards.html>.

Question 2: Reference plan sheet 12, Detail UW-8, Fire Hydrant Blow Off Assembly for 12" Mains and Larger, is this what we are to provide for bid item number 19? Plan sheet 4 at approximately station 18+50 shows installing a 16"x6" tee with no mention of a tangential outlet. Please clarify.

Response 2: A 16"x6" tee shall be provided. The tangential offset is used in location of low points along the larger mains to assist in flushing accumulated sediment, note #2.

Question 3: The two (2) 6-inch reclaimed water main (RCWM) vertical deflections, beneath the new 16-inch water main that has to be made, where are the nearest valves to shut these 6-inch mains down located and how much reclaimed water will we have to handle?

Response 3: For the deflection approximately Sta. 11+20 there is a valve located near the ex. 30" RCWM in the 63rd Ave E ROW and a valve located +/- 803 LF north in the ROW of 35th Ct E within the Prospect Point Subdivision, (+/-2,100 gal). For the deflection approximately at Sta. 16+00 there is a valve located near the ex. 30" RCWM in the 63rd Ave E ROW and a valve located +/- 160 LF north in the ROW of 62nd Ave E within the Regal Oaks Subdivision, (+/-230 gal).

Question 4: Regarding the RCWM deflections, can the reclaimed water, that will be released once the pipes are cut, be discharged into adjacent drainage swales or pumped into the gravity sanitary sewer system?

Response 4: The water from these mains may be discharges into the adjacent drainage swales. Precaution to prevent erosion must be taken.

Question 5: Regarding the RCWM deflections, will the bell joints of the existing 6-inch pipe in each direction of the deflection have to be restrained? If so, how far? Please add a bid item for this.

Response 5: Yes. The fittings and approx. 12 LF on each side of the 45 degree bends. Detail UG-8 provides the requested lengths. Per Bid Item: Pipe, the restraints are to be included in the lineal footage price.

Question 6: Regarding the RCWM deflections, will an air release valve assembly have to be installed? If so, please add a bid item.

Response 6: No.

Question 7: Reference specifications Section 01150, MEASUREMENT AND PAYMENT, page 34/168, Bid Item Nos. 12 and 13, Water Services, fifth paragraph, this paragraph tells us that we are to directional bore or jack and bore these services under the roadway, due to the proximity of existing force main, reclaimed water main and other buried utilities, these services need to be installed by open cut. Please allow open cut installation.

Response 7: The service shall be installed per the contract documents.

Question 8: : Will the county require soft copper pipe for the water services (bid items 12/13) or will they allow the use of CTS poly tubing? Please advise?

Response 8: CTS poly tubing inside the 2" casing will be allowed, since the water main is not under pavement.

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Question 9: Will the county require stainless steel 304 bolts & nuts for the restraint accessories?

Response 9: Corten steel nuts and bolts or 304 stainless steel are allowed. Restraining tie-rods & nuts must be stainless steel. Shop drawings will be required.

Question 10: Is open cut an acceptable method of installation for the long water services?

Response 10: No.

Question 11: Will air release valves be required at the proposed dip locations on the existing reclaim mains?

Response 11: No.

Question 12: Will installation of bell joint restraints be required on the existing 6" reclaim mains at the dip locations?

Response 12: Yes. The fittings and approx. 12 LF on each side of the 45 degree bends. Detail UG-8 provides the requested lengths. Per Bid Item: Pipe, the restraints are to be included in the lineal footage price.

Question 13: What, if any are the restrictions for pumping reclaim water and where may we discharge to water to?

Response 13: The water from these mains may be discharges into the adjacent drainage swales. Precaution to prevent erosion must be taken.

Question 14: Reference plan sheet 4, at approximate station 18+50 plan view for the fire hydrant tells us to install a 16"x6" tee, the profile view directly below shows installing a 16"x8" tee, what are we to provide?

Response 14: A 16"x6" tee shall be provided. The tangential offset is used in location of low points along the larger mains to assist in flushing accumulated sediment, note #2.

Question 15: Reference plan sheet 12, Detail UW-8, this detail shows either an 8-inch or 6-inch tangential outlet, what are we providing? If we are to provide an 8-inch outlet, are we to install an 8-inch gate valve and then reduce or are we to reduce at the tangential outlet and install a 6-inch gate valve then the fire hydrant assembly? Please clarify.

Response 15: See response to Question 14 above.

Question 16: I have downloaded the 2011 Manatee County Utility Standards and find that Detail UW-9, ABOVE GROUND AIR RELEASE VALVE ASSY. FOR 12-INCH AND SMALLER MAINS, shows providing a 1" Golden Anderson, G.A. Industries Fig. 920 Compound Lever Air Release Valve, the specifications, Section 02640, VALVES AND APPURTENANCES, page 147, par. 2.07, AIR RELEASE VALVES, tells us the valves are to be Model 200A or 400A as manufactured by APCO Valve and Primer Corporation, what are we to provide?

Response 16: The Manatee County Public Works Utility Standards were updated and approved by the Board of County Commissioners in June 2015. The current manual should be referenced.

The G.A. Industries Fig 920 Compound Lever Air Release Valve should be provided.

Question 17: Reference bid form, Bid Item 4, DI FITTINGS, the quantity of 10,070 LBS, is this weight being derived from, AWWA C-110 or AWWA C-153 fittings? It appears to me that C-110 weights were used.

Response 17: The intended quantity was to be based off the weights for AWWA C-153 fittings. The bid item has been revised to correlate with the American Ductile Iron Pipe Manual, 20th ed. 2016.

Question 18: Reference plan sheet 10, the note to “RE-CONNECT ALL EX. WATER SERVICE (2 TYP)” it appears that there could be three (3) services, but there is no bid item to compensate us for this work, please add a bid item.

Response 18: Per the record drawings and parcel information, there are two services to be re-established. A bid item has been added.

Question 19: Reference plan sheet 10, the alignment of the new 8-inch water main is in conflict with the existing 2-inch water main and we are told to “REMOVE EX. 2” WM AND INSTALL +/-200LF 8” PVC WM (DIRECT BURY)” this 200LF of 8-inch main needs to be pressure tested and chlorinated before we can reconnect water services and make final connection to the existing 8-inch main. How are we to maintain service to the residents if we are to take the 2-inch main out to install the 8-inch main? Please clarify.

Response 19: We do not dictate means and methods, but an alternative could be, the existing 2” water line may lay in the same trench as the 8” water main. The 8” can be installed and all service stubbed up to the existing meter assemblies. Once the 8” water main has passed testing, the services can be re-connected.

Question 20: Reference plan sheet 3, at approximately station 10+70, the existing valve that is to be removed and replaced, where is the next up-stream valve? It would be nice to know how much water we will have to handle when removing the existing valve.

Response 20: There is an 8” valve +/-662 LF to the west. An estimated 7,000 gal of water between the valves.

We offer a public access web-based portal that offers a view of the Manatee County Infrastructure. If it may be of use, the web address is:

<http://www.mymanatee.org/gisapps/mobile/index.html?type=utilities-public>

Question 21: Sheet 7, call out for R&R sidewalk with no quantity or limits of removal. Please clarify.

Response 21: The plans and bid form have been updated.

Question 22: The only sod I see on the bid form is for Laurelwood Run. Is there sod required along both edges of the sidewalk being replaced? If so, bid form sod quantity is low. Please clarify.

Response 22: The contract documents have been revised to only allow sod for replacement and restoration.

Question 23: Going through the plans for the 16" DIP WM and I noticed in the detail pages that you are asking for a Tangential Outlet pipe for the fire hydrant connection. Will this be required or would a more typical hydrant tee be allowed for this application? (approx. Sta # 18+50)

Response 23: A 16"x6" tee shall be provided. The tangential offset is used in location of low points along the larger mains to assist in flushing accumulated sediment, note #2.

Question 24 Does the county allows locking gaskets as a form of restraint for the Tyton Joint DIP or if we needed to quote as a manufactured Restrained Joint?

Response 24: Yes the County allows locking gaskets. Locking gaskets shall be color coded differently from the standard EPDM gasket to visually know it is a locking gasket. American Cast Iron Pipe Company uses the color yellow, others use orange. Shop drawings shall be required.

Question 25: Reference plan sheet 12, Detail UW-8, one of our vendors is telling us that a tangential outlet on the pipe will require that particular piece of pipe to be a CL-53 pipe and will be very expensive and may even require a long lead time. Please clarify. We could install a 16"x6" or 16"x8" MJ tee rolled 45-degrees with a 45-degree bend on the outlet side of the tee to level out with prior to installing the valve and hydrant.

Response 25: A 16"x6" tee shall be provided. The tangential offset is used in location of low points along the larger mains to assist in flushing accumulated sediment, note #2.

Question 26: Reference plan sheets 4 and 5, along the route of the 16-inch water main are several trees that will be impacted by installation of the new pipe, some will have to be removed others will sustain damage to their root systems and eventually die, what are we to do about the trees?

Response 26: Tree removal and trimming is allowed, but shall be minimized as much as possible. The water main may be field adjusted to minimize impacts to the trees/roots keeping in mind required minimal separation from existing utilities. Tree limb/root trimming shall be considered incidental to the pipe installation and shall be included in the pipe bid item. Tree roots shall be hand trimmed to minimize damage and shock to the tree. A bid item for tree removal has been added to the Bid Form.

Question 27: Reference plan sheets 4, 5 and 6, there are existing sanitary sewer service laterals that could be in conflict with the new water main, what will be the disposition of these existing service laterals?

Response 27: According to the Collection Department, the sanitary sewer service laterals between Sta. 12+00 to Sta. 25+00 serving the north side of 63rd Ave E are not in service. These sanitary services may be cut back and capped if found in conflict.

Question 28: Are the sanitary sewer service laterals referenced in question 2 above connected to any of the homes in Regal Oaks?

Response 28: The sanitary sewer laterals referenced in question 2 above do not connect to any homes in Regal Oaks. There is a sewer main at approximately Sta. 17+42 that does connect to the sanitary system of Regal Oaks.

Question 29: I have just walked the job and cannot find any evidence of the existing valve at approximately station 10+70 that we are to remove and replace with a new butterfly valve. Can this valve be located prior to bid time? By the way, the existing mitered end section in the east/west north ditch at approximately station 10+40 is being undermined at the west end of the miter by a breach in the side slope of the treatment swale.

Response 29: County staff has confirmed the 16" valve at Sta 10+70 is not there, so much for record drawings. There is an existing 90 degree bend in place of the existing 16" valve that shall be removed and the existing 16" main connected to a proposed 16" butterfly valve after testing. The plans have been revised accordingly.

Question 30: Reference plan sheet 10, the topography needs to be updated along Laurelwood Run to show the ornamental pedestrian gate, and landscaping that will be impacted by the installation of the 8-inch water main. Please review.

Response 30: The water main can be field adjusted to be installed and to minimize impacts to the ornamental pedestrian gate. Direct bury or directional drilling is acceptable.

Question 31: Reference plan sheets 4, 5 and 6, I did not see any evidence of the gravity sanitary sewer laterals that these drawings show serving the north side of 63rd Avenue East. Please review.

Response 31: According to the Collection Department, the sanitary sewer service laterals between Sta. 12+00 to Sta. 25+00 serving the north side of 63rd Ave E are not in service. These sanitary services may be cut back and capped if found in conflict.

Question 32: Please confirm applicable permits/fees the contractor will be responsible for, (tree removal permit, right of way use, de-watering, etc.)

Response 32: Since this is a CIP utility project, a Right-of-way Use Permit will be required and the fee will be waived.

Question 33: Please confirm the density requirements for "Crushed Concrete Base". (99% T-180??) Normally 98% T-180 is standard protocol.

Response 33: The specifications have been revised to 98% T-180.

Question 34: Please confirm if pre-construction and post construction videos will be required.

Response 34: Only preconstruction pictures or videos are required per Section 01380.

Question 35: Will the county provide vertical/horizontal control for the contractor via electronic cadd file?

Response 35: The County is currently using AutoCAD 2016 Civil 3D. This version or back saved version can be made available.

Question 36: Are any soil borings available for this project?

Response 36: No.

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Question 37: The north side of 39th Street East at 63rd Ave. will be required to be closed to perform the utility crossings and jack & bore pit. What will be required procedure through the county for this work?

Response 37: The contractor shall have a MOT Plan prepared by an individual certified to prepare a MOT Plan in the state of Florida that meets or exceeds the requirements of the FDOT Series 600 and/or MUTCD. Any deviations must be signed and sealed by a Professional Engineer registered in the State of Florida and submitted to the County for approval. The MOT plan shall be submitted to the County for review and approval at least thirty (30) days prior to implementation.

Question 38: Please advise regarding the verbiage for "Pigging of Lines". The verbiage states the contractor will submit a plan for review/approval by county. Could the County provide more detailed information regarding the requirements for the "Pigging of Lines", (ports required, manual pulling of pig in lieu of water pressure, etc?)

Response 38: Pigging is required to ensure the mains are free of debris. The following criteria, taken from the M.C.P.W. Utility Standards shall be met and approved by the County Inspector:

"With the County Inspector present, new water and reclaimed water mains with diameters greater than or equal to 6 inches shall be pigged then flushed; and new water and reclaimed water mains with diameters smaller than 6 inches shall be either flushed or pigged and then flushed to clean all parts of the system and to remove any accumulation of construction debris, rocks, sand, gravel, silt and other foreign material. If necessary, also make use of mechanical rodding or bucketing equipment. Prior to construction of potable water mains and reclaimed water mains, the Contractor shall propose a flushing/pigging plan to the County Inspector showing on the drawings each location where each pig will be placed in the pipe and each location that the pig will be retrieved. A pig recommended by the pipe manufacturer for the type of pipe installed, shall run through pressure potable and reclaimed water main pipes greater than or equal to 6 inches. Pipes smaller than 6 inches shall be flushed. Inspectors must be notified 48 hours in advance of any pigging and flushing operations. Short pipe lengths (i.e. stubs) may be flushed without pigs with prior approval from County. If flushing of pipes smaller than 6 inches fails, or if the potable water main or reclaimed water main has a pipe diameter greater than or equal to 6 inches, or if the water supply is not sufficient to supply the quantity of water required for flushing a new main smaller than 6-inches, the pipe shall be cleaned with pigs recommended by the pipe manufacturer. For flushing, a minimum velocity of at least 3.0 ft/sec, preferably 3.5 ft/sec, shall be obtained in the pipe. This velocity shall be maintained long enough to allow three (3) complete pipe volume changes of water for proper flushing action. Successful flushing shall be determined visually by the County Inspector and may be deemed acceptable when the water is clear and free of debris."

Question 39: There are different types of pigs as in swabbing and/or cutting. Please advise?

Response 39: A pig recommended by the pipe manufacturer for the type of pipe installed.

Question 40: When discharging de-watering systems (pumps and or well points), will the contractor will be able to discharge into existing storm drains w/ best management practices?

Response 40: Yes.

Question 41: Will the county furnish water for construction?

Response 41: Yes, via the existing water distribution system/hydrants. Backflow preventers "jumpers" shall be required.

Question 42: The RPZ/Jumper to supply required to fill the newly constructed line is 2" not 4". Please advise?

Response 42: A 2" is typical, but a 4" jumper is recommended on this particular project.

Question 43: When the county shuts down the segment of main 63rd Ave. (approx. Sta. 10+70) for the contractor to install 16" Butterfly Valve, will the contractor be responsible for any re-testing of the evacuated main or notices to any that will be affected. Please advise.

Response 43: County staff has confirmed the 16" valve at Sta 10+70 is not there, so much for record drawings. There is an existing 90 degree bend in place of the existing 16" valve that shall be removed and the existing 16" main connected to a proposed 16" butterfly valve after testing. Re-testing will not be required. County inspector shall do a visual inspection. Contractor shall be responsible for "Water Off" and "Boil Water" notices; as determined by the M.C. Utility Department.

END OF ADDENDUM #2

Bids will be received at Manatee County Purchasing, 1112 Manatee Avenue West, Bradenton, Florida 34205 until **Friday, April 15, 2016 at 3:00 PM.**

Sincerely,



Melissa M. Wendel, CPPO
Purchasing Official

BID FORM

(Submit in Duplicate)

63RD AVENUE & 39TH STREET EAST TRANSMISSION WATER MAIN LOOP

Bid "A" Based on Completion Time of 210 Calendar Days

ITEM NO.	ITEM DESCRIPTION	EST. QTY.	U/M	UNIT PRICE	EXTENDED PRICE
1	CURB REPLACEMENT	20	LF	\$	\$
2	PAVEMENT REPAIR & ROAD RESTORATION (BASE & SURFACE)	63	SY	\$	\$
3	PAVEMENT REPAIR & ROAD RESTORATION (MILL & RESURFACE)	386	SY	\$	\$
4	SIDEWALK REPLACEMENT, CONC. (4" MIN. THICK)	1,209	SY	\$	\$
5	SODDING	6,487	SY	\$	\$
6	ABANDONED WATER MAINS, GROUT FILL	6	CY	\$	\$
7	6" PVC, DR-18, DIRECT BURY	50	LF	\$	\$
8	8" PVC, DR-18, DIRECT BURY	1,508	LF	\$	\$
9	16" DIP, DIRECT BURY	1,679	LF	\$	\$
10	18" STEEL CASING, (JACK & BORE)	67	LF	\$	\$
11	WATER SERVICE, 1" PE SINGLE SERVICE W/ 2" CASING	2	EA	\$	\$
12	WATER SERVICE, 1" PE DOUBLE SERVICE W/ 2" CASING	2	EA	\$	\$
13	RE-ESTABLISH EXISTING WATER SERVICE CONNECTIONS	2	EA	\$	\$
14	DI FITTINGS	5,010	LB	\$	\$
15	8" GATE VALVE, MJ	9	EA	\$	\$
16	16" BUTTERFLY VALVE, MJ	5	EA	\$	\$
17	AIR RELEASE VALVE	1	EA	\$	\$
18	AIR RELEASE VALVE CABINET, (FIBERGLASS)	1	EA	\$	\$
19	FIRE HYDRANT ASSEMBLY	1	EA	\$	\$

Bidder Name: _____

Authorized Signature: _____

REVISED BID FORM- 2

BID FORM

(Submit in Duplicate)

63RD AVENUE & 39TH STREET EAST TRANSMISSION WATER MAIN LOOP

Bid "A" Based on Completion Time of 210 Calendar Days

ITEM NO.	ITEM DESCRIPTION	EST. QTY.	U/M	UNIT PRICE	EXTENDED PRICE
20	BLOW-OFF ASSEMBLY	1	EA	\$	\$
21	TREE REMOVAL	7	EA	\$	\$
22	MOBILIZATION	1	LS	\$	\$
23	MISCELLANEOUS WORK & CLEAN UP	1	LS	\$	\$
24	RECORD DRAWINGS	1	LS	\$	\$
	TOTAL BASE BID "A" - Based on Completion Time of <u>210</u> Calendar Days				\$
25	CONTRACT CONTINGENCY WORK (USED ONLY WITH COUNTY APPROVAL)		10% OF TOTAL BASE BID		\$
	TOTAL OFFER FOR BID "A" with Contract Contingency - Based on Completion Time of <u>210</u> Calendar Days				\$

Bidder Name: _____

Authorized Signature: _____

REVISED BID FORM- 3

BID FORM

(Submit in Duplicate)

63RD AVENUE & 39TH STREET EAST TRANSMISSION WATER MAIN LOOP

Bid "B" Based on Completion Time of 270 Calendar Days

ITEM NO.	ITEM DESCRIPTION	EST. QTY.	U/M	UNIT PRICE	EXTENDED PRICE
1	CURB REPLACEMENT	20	LF	\$	\$
2	PAVEMENT REPAIR & ROAD RESTORATION (BASE & SURFACE)	63	SY	\$	\$
3	PAVEMENT REPAIR & ROAD RESTORATION (MILL & RESURFACE)	386	SY	\$	\$
4	SIDEWALK REPLACEMENT, CONC. (4" MIN. THICK)	1,209	SY	\$	\$
5	SODDING	6,487	SY	\$	\$
6	ABANDONED WATER MAINS, GROUT FILL	6	CY	\$	\$
7	6" PVC, DR-18, DIRECT BURY	50	LF	\$	\$
8	8" PVC, DR-18, DIRECT BURY	1,508	LF	\$	\$
9	16" DIP, DIRECT BURY	1,679	LF	\$	\$
10	18" STEEL CASING, (JACK & BORE)	67	LF	\$	\$
11	WATER SERVICE, 1" PE SINGLE SERVICE W/ 2" CASING	2	EA	\$	\$
12	WATER SERVICE, 1" PE DOUBLE SERVICE W/ 2" CASING	2	EA	\$	\$
13	RE-ESTABLISH EXISTING WATER SERVICE CONNECTIONS	2	EA	\$	\$
14	DI FITTINGS	5,010	LB	\$	\$
15	8" GATE VALVE, MJ	9	EA	\$	\$
16	16" BUTTERFLY VALVE, MJ	5	EA	\$	\$
17	AIR RELEASE VALVE	1	EA	\$	\$
18	AIR RELEASE VALVE CABINET, (FIBERGLASS)	1	EA	\$	\$

Bidder Name: _____

Authorized Signature: _____

REVISED BID FORM- 4

BID FORM

(Submit in Duplicate)

63RD AVENUE & 39TH STREET EAST TRANSMISSION WATER MAIN LOOP

Bid "B" Based on Completion Time of 270 Calendar Days

ITEM NO.	ITEM DESCRIPTION	EST. QTY.	U/M	UNIT PRICE	EXTENDED PRICE
19	FIRE HYDRANT ASSEMBLY	1	EA	\$	\$
20	BLOW-OFF ASSEMBLY	1	EA	\$	\$
21	TREE REMOVAL	7	EA	\$	\$
22	MOBILIZATION	1	LS	\$	\$
23	MISCELLANEOUS WORK & CLEAN UP	1	LS	\$	\$
24	RECORD DRAWINGS	1	LS	\$	\$
	TOTAL BASE BID "B" - Based on Completion Time of <u>270</u> Calendar Days				\$
25	CONTRACT CONTINGENCY WORK (USED ONLY WITH COUNTY APPROVAL)		10% OF TOTAL BASE BID		\$
	TOTAL OFFER FOR BID "B" with Contract Contingency - Based on Completion Time of <u>270</u> Calendar Days				\$

Bidder Name: _____

Authorized Signature: _____

CONTRACT DOCUMENTS

FOR

**63rd Ave E & 39th St E
16" DIP Transmission Water Main Loop**

PROJECT # 404-6031770

November 2015

rev. Mar 3, 2016

rev. Mar 28, 2016

PROJECT OWNER:

County of Manatee, Florida
c/o Manatee County Purchasing Division
1112 Manatee Avenue West
Bradenton, Florida 34205
(941) 748-4501

PREPARED BY:

Engineering Division
Manatee County Public Works Department
1022 26th Avenue East
Bradenton, Florida 34208
(941) 708-7450

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. Foundation and borrow materials, except as hereinafter specified.
8. Testing and placing system in operation.
9. Any material and equipment required to be installed and utilized for the tests.
10. Pipe, structures, pavement replacement, asphalt and shell driveways and/or appurtenances included within the limits of lump sum work, unless otherwise shown.
11. Maintaining the existing quality of service during construction.
12. Maintaining or detouring of traffic.
13. Erosion & Control
14. Appurtenant work as required for a complete and operable system.

BID ITEM NO. 1: CURB REPLACEMENT

Measurement shall be per linear feet of curb replacement.

Payment will be for the actual linear feet of curbing installed and accepted. Curb replacement shall match the existing curb and shall be constructed in accordance with the latest FDOT Specifications, Section 520, and the latest Manatee County Transportation Department Highway and Drainage Standards. Payment shall represent full compensation for all labor, material and equipment required for the curb replacement.

The unit bid price shall include, but is not limited to, removal, proper disposal, compaction, forming, reinforcement, furnishing, placing the concrete, finishing as specified and all incidentals necessary to complete these bid items, ready for approval and acceptance by the County.

BID ITEM NOS. 2 AND 3: ASPHALT PAVEMENT RESTORATION

Measurement shall be per square yards of asphalt pavement restoration, as listed. Payment will be for the actual square yards of pavement restoration installed and accepted.

Payment will include complete restoration of the roadway section in accordance with the latest Manatee County Transportation Department Highway and Drainage Standards and FDOT Specifications for Road and Bridge Construction.

The unit bid price shall include, but is not limited to, all required items, including base, subbase, milling, asphalt overlay, 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.

BID ITEM NO. 4: CONCRETE SIDEWALK REPLACEMENT

Measurement shall be per square yards of concrete sidewalk removed and replacement.

Concrete sidewalk replacement shall be replaced in accordance with the latest Manatee County Transportation Department Highway and Drainage Standards.

Payment will be for the actual square yards of concrete sidewalk installed and accepted.

The unit bid price shall include, but is not limited to, all labor, materials and equipment, cutting joints, reinforcing, finishing, testing and incidentals necessary to complete this bid item, ready for approval and acceptance by the County.

BID ITEM NO. 5: SODDING

Measurement shall be per square yards of sodding installed.

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

The unit bid price shall include, but is not limited to, all labor, materials, necessary equipment, and incidentals necessary to complete this bid item, ready for approval and acceptance by the County. Sod shall be pinned in place in ditches/swales and where slopes exceed 4:1.

BID ITEM NO. 6: ABANDONED WATER MAINS, GROUT FILL ABANDONED PIPE (FLOWABLE FILL)

Measurement shall be per cubic yard of grout fill.

Payment will be per actual quantity of cubic yards of grout fill furnished, installed and accepted in any size of pipe, abandoned and left in place.

The unit bid price shall include, but is not limited to, cleaning, labor, materials, sludge removal and disposal, equipment for mixing and placing the grout and all incidentals necessary to complete this bid item, ready for approval and acceptance by the County.

BID ITEM NOS. 7 THRU 9: PIPE

Measurement for the quantity of pipe to be paid for under these Bid Items shall be the length in linear feet of pipe measured along the centerline of pipe through valves, fittings and manholes, in place, completed and accepted. Installation shall be by open-cut or directional drill.

Payment will be according to the type of pipe installed (PVC, ductile iron or HDPE), and diameter of pipe as listed on the Bid Form.

The unit bid price shall include, but is not limited to, furnishing and installing all pipe; temporary blow-offs for disinfecting pipe; and materials above or below ground along pipeline alignment; joints and jointing materials; joint restraints; field layout; bracing, shoring and sheeting; excavation, including rock; dewatering, tree and root trimming, clearing, grubbing, stripping, and trenching, including exploratory excavation; detectable tape; detector wire; bedding, backfill and compaction; chlorinating; constructing the specified protection and adjusting of existing aboveground and underground utilities and service connections; polyethylene encasement; butt fusion welds; drilling fluid disposal; thrust blocking; disposal of spoil;

hydrostatic testing; labor, equipment and materials required and all other related and necessary items required to complete these bid items, ready for approval and acceptance by the County.

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.

BID ITEM NO. 10: STEEL CASING PIPE

Measurement shall be per linear feet of steel casing pipe.

Payment will be for the actual length of steel casing pipe installed and accepted, measured along the centerline of casing, and according to the diameter of casing pipe as listed on the Bid Form.

The unit bid price shall include, but is not limited to, labor, materials and equipment required for installation, dewatering, excavation, including rock excavation, jack and bore pit, welding, bedding, coating, blocking, sheeting, shoring, grout, backfill, compaction, testing, and any other related item necessary to complete this bid item, ready for approval and acceptance by the County. No additional compensation shall be made for repair of trench settlement.

BID ITEM NOS. 11 AND 12: WATER SERVICES

Measurement shall be for each type of water service installed as listed.

Payment will be according to the size and type of service pipe per each single or double service pipe as listed on the Bid Form.

It shall be the Contractor's responsibility to reconnect the new water service line to the existing meters. Services shall be installed using a directional bore or jack and bore method under the existing roadway using the appropriate size PVC casing pipe under the roadway.

Payment shall represent full compensation for all labor, material and equipment required to complete the work.

The unit bid price shall include, but is not limited to, dewatering, excavation, including rock excavation, service lines, directional bore or jack and bore, casing pipe, tapping saddles, corporation stops, curb stops, detector wire, all necessary fittings, all service connections, backfill, compaction, testing, disinfection and equipment required to complete these bid items, ready for approval and acceptance by the County.

BID ITEM NO. 13: RE-ESTABLISH EXISTING WATER SERVICE CONNECTIONS

Measurement and Payment shall be for each type of water service reconnected as listed.

It shall be the Contractor's responsibility to reconnect the new water service line to the existing meters.

Payment shall represent full compensation for all labor, material and equipment required to complete the work.

The unit bid price shall include, but is not limited to, dewatering, excavation, including rock excavation, service lines, casing pipe, tapping saddles, corporation stops, curb stops, detector

wire, all necessary fittings, all service connections, backfill, compaction, testing, disinfection and equipment required to complete these bid items, ready for approval and acceptance by the County.

BID ITEM NO. 14: DUCTILE IRON FITTINGS

Measurement shall be per pound in weight for Ductile Iron pipe fittings. The quantity to be paid for under this item is the weight in pounds of fittings as denoted in the manufacturer's catalogues.

Payment will be according to the weight of the total fittings as listed on the Bid Form.

The unit bid price shall include, but is not limited to, furnishing and installing tees, crosses, bends, sleeves, plugs, caps, reducers, increasers, couplings; all fittings and materials above or below ground along the pipeline alignment; restraints, and jointing materials; bolts, nuts, washers, gaskets, coating, lining, excavation, including rock; thrust blocking; bracing, shoring, and sheeting; dewatering, clearing, grubbing, and stripping; trenching, bedding and backfill; constructing the specified protection and adjusting of existing aboveground and underground utilities and service connections; disposal of spoil; hydrostatic testing; and all other related and necessary materials, labor and equipment required to complete these bid items, ready for approval and acceptance by the County.

BID ITEM NOS. 15 AND 16: VALVES

Measurement shall be per each valve, furnished and installed.

Payment will be according to the size and type of valve, as listed on the Bid Form.

The unit bid price shall include, but is not limited to, valves, valve boxes and covers, concrete pad, identification disc, extension stems, cutting, adapters, gaskets, jointing materials, connectors, pipe sleeves, detector wire, excavation, including rock, backfill, dewatering, sheeting, shoring, and any other related and necessary materials, labor and equipment required to complete these bid items, ready for approval and acceptance by the County.

BID ITEM NO. 17: AIR RELEASE VALVE

Measurement and Payment shall be per each air release valve furnished and installed, as listed.

The unit bid price shall include, but is not limited to, dewatering, excavation, including rock excavation, valve inclusive of tapping saddle, shutoff valve and nipples, concrete pad, bedding, backfill, compaction, testing, and any other related and necessary materials, labor, and equipment required to complete these bid items, ready for approval and acceptance by the County. ARV cabinets shall be paid under separate bid item.

BID ITEM NO. 18: AIR RELEASE VALVE CABINET

Measurement shall be per each stainless steel or fiberglass cabinet installed on aboveground air release valves, as listed on the Bid Form.

Payment will be according to the quantity of cabinets installed.

The unit bid price shall include, but is not limited to, all hardware, pad, anchorage, excavation,

and any other related and necessary materials, labor, and equipment required to complete this bid item, ready for approval and acceptance by the County.

BID ITEM NO. 19: FIRE HYDRANT ASSEMBLY

Measurement shall be per each fire hydrant assembly furnished and installed.

Payment will be according to the quantity of fire hydrant assemblies installed.

The unit bid price shall include, but is not limited to, furnishing and installing the main line tee, gate valve, valve box and valve cover, concrete valve collar, identification disc, the hydrant with locking device, hydrant pad, six-inch pipe between the center of the main and the hydrant, blow-off valve, valve box, threaded rods, detector wire, restrained joints, excavation, including rock, backfill, dewatering, sheeting, shoring, testing and any other related and necessary materials, labor, and equipment required to complete this bid item, ready for approval and acceptance by the County.

BID ITEM NO. 20: BLOW-OFF ASSEMBLY

Measurement shall be per each blow-off assembly.

Payment will be per the quantity of blow-off assemblies furnished, installed and accepted.

The unit bid price shall include, but is not limited to, testing, excavation, backfill, bracing, shoring, sheeting, dewatering, female quick coupling and cap, reducing flange, brass or copper pipe and fitting, restrained joints, meter box, gate valve with box and cover, concrete pad, and all incidentals necessary to complete this bid item, ready for approval and acceptance by the County.

BID ITEM NO. 21: TREE REMOVAL

Measurement and Payment shall be per each tree removed.

Tree removal shall be discussed and agreed upon by the County prior to removal.

The unit bid price shall include, but is not limited to, tree removal, stump removal, ground restoration, proper removal and disposal from the project site, and all incidentals necessary to complete this bid item, ready for approval and acceptance by the County.

BID ITEM NO. 22: MOBILIZATION

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 and incidentals such as safety and sanitary supplies/ facilities

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. 23: MISCELLANEOUS WORK AND CLEANUP

Payment for all work included under this Bid Item shall be made at the Contract lump sum price bid listed in the Bid Form for any other miscellaneous work not specifically included for payment under other Bid Items obviously necessary to complete the Contract. Partial payments will be based on the breakdown of the Bid Item in accordance with the Schedule of Values submitted by the Contractor and approved by the County. Payment shall also include, but not limited to, full compensation for project photographs, as-builts record drawings, project signs, traffic control, rubbish and spoil removal, repair, replacement or relocation of all signs, walls, private irrigation systems and related items and any and all other items required to complete the project in accordance with Contract Documents.

BID ITEM NO. 24: 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 & accepted by the County. Record drawings shall be in strict accordance with Section 1.14 of the Manatee County Public Work Standards, Part I. Utilities Standards Manual.

BID ITEM NO. 25: 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

compacted to 98% T-180 AASHTO density. Asphalt base and crushed concrete base are acceptable. Other bases shall be submitted for approval.

- C. Prime and tack will be required and applied in accordance with Section 300 - FDOT Specifications: Prime and Tack Coat for Base Courses.

PART 3 EXECUTION

3.01 CUTTING PAVEMENT

- A. The Contractor shall saw cut in straight lines and remove pavement as necessary to install the new pipelines and appurtenances and for making connections to existing pipelines.
- B. Prior to pavement removal, the Contractor shall mark the pavement for cuts nearly paralleling pipe lines and existing street lines. Asphalt pavement shall be cut along the markings with a rotary saw or other suitable tool. Concrete pavement shall be scored to a depth of approximately two (2) inches below the surface of the concrete along the marked cuts. Scoring shall be done by use of a rotary saw, after which the pavement may be broken below the scoring with a jackhammer or other suitable equipment.
- C. The Contractor shall not machine pull the pavement until it is completely broken and separated along the marked cuts.
- D. The pavement adjacent to pipe line trenches shall neither be disturbed or damaged. If the adjacent pavement is disturbed or damaged, irrespective of cause, the Contractor shall remove and replace the pavement. In addition, the base and sub-base shall be restored in accordance with these Specifications, Florida Dept. of Transportation Standard Specifications and as directed by the County.

3.02 PAVEMENT REPAIR AND REPLACEMENT

- A. The Contractor shall repair, to meet or exceed original surface material, all existing concrete or asphaltic pavement, driveways, or sidewalks cut or damaged by construction under this Contract. He shall match the original grade unless otherwise specified or shown on the Drawings. Materials and construction procedures for base course and pavement repair shall conform to those of the Florida Dept. of Transportation.
- B. The Contractor's repair shall include the preparation of the subbase and base, place and maintain the roadway surface, any special requirements whether specifically called for or implied and all work necessary for a satisfactory completion of this work. Stabilized roads and drives shall be finished to match the existing grade. Dirt roads and drives shall have the required depth of backfill material as shown on the Contract Drawings.
- C. The width of all asphaltic concrete repairs shall extend the full width and length of the excavation or to the limits of any damaged section. The edge of the pavement to be left in place shall be cut to a true edge with a saw or other approved method so as to provide a clean edge to abut the repair. The line of the repair shall be reasonably uniform with no unnecessary irregularities.

3.03 MISCELLANEOUS RESTORATION

Sidewalks or driveways cut or damaged by construction shall be restored in full sections or blocks to a minimum thickness of four inches. Concrete curb or curb and gutter shall be

6. Valve actuators shall be equipped with an integral reversing controller and three phase overload relays, Open-Stop-Close push buttons, local-remote-manual selector switch, control circuit transformer, three-phase thermal overload relays and two pilot lights in a NEMA 4X enclosure. In addition to the above, a close coupled air circuit breaker or disconnect switch shall be mounted and wired to the valve input power terminals for the purpose of disconnecting all underground phase conductors.
7. The valve actuator shall be capable of being controlled locally or remotely via a selector switch integral with the actuator. In addition, an auxiliary dry contact shall be provided for remote position feedback.
8. Valve A.C. motors shall be designed for operation on a 480 volt, 3-phase service. Valve control circuit shall operate from a fuse protected 120 volt power supply.
9. Motor operators shall be as manufactured by Limitorque Corporation, Type L120 or approved equal.

2.07 AIR RELEASE VALVES

The air release valves for use in water or force mains shall be installed as shown on the Drawings. The valves shall have a cast iron body cover and baffle, stainless steel float, bronze water diffuser, Buna-N or Viton seat, and stainless steel trim. The fittings shall be threaded. Refer to the Manatee County Public Works Utility Standards Manual for approved models.

2.08 VALVE BOXES

- A. Buried valves shall have cast-iron three piece valve boxes or HDPE adjustable valve boxes. Cast iron valve boxes shall be provided with suitable heavy bonnets and shall extend to such elevation at or slightly above the finished grade surface as directed by the County. The barrel shall be two-piece, screw type, having a 5-1/4 inch shaft. The upper section shall have a flange at the bottom with sufficient bearing area to prevent settling and shall be complete with cast iron covers. Covers shall have WATER, SEWER, or RECLAIM, as applicable, cast into the top. Lids will be painted "safety" blue for potable, purple for reclaimed, and green for sanitary sewer.
- B. All valves shall have actuating nuts extended to within four (4) feet of the top of the valve box. All valve extensions will have a centering guide plate two (2) inches maximum below the actuating nut. The valve extension shall be fastened to the existing nut with a set screw. Valve boxes shall be provided with a concrete base and a valve nameplate engraved with lettering 1/8-inch deep as shown on the Drawings.
- C. HDPE adjustable valve boxes shall be one complete assembled unit composed of the valve box and extension stem. All moving parts of the extension stem shall be enclosed in a housing to prevent contact with the soil. Valve box assembly shall be adjustable to accommodate variable trench depths.
- D. The entire assembly shall be made of heavy wall high density polyethylene. All exterior components shall be joined with stainless steel screws. The valve box top section shall be adaptable to fit inside a valve box upper section.
- E. The stem assembly shall be of a telescoping design that allows for variable adjustment length. The stem material shall be of plated steel square tubing. The stem assembly shall have a built-in device that keeps the stem assembly from disengaging at its fully extended length. The extension stem must be torque tested to 1000 foot pounds. Covers shall have WATER, SEWER or RECLAIMED clearly and permanently impressed into the top surface.