

Indian Springs Phase I Sewer & Water Systems Extensions

To:	Bidders
From: Company: Email:	Eric Worrell, EOR Alday-Howell Engineering, Inc. eric@aldayhowell.com
Date:	02/23/2018
Number of Pages (Including Cover):	7
Regarding:	Indian Springs Phase I Sewer & Water Systems Extensions – Bidder Questions 1

The following questions were posed by potential bidders. Answers are provided by the Engineer of Record:

Some questions are associated with a request for the approval of certain products as an "Or Equal" per Article 10 – Substitute and "Or-Equal" Items. The language of paragraph 10.1 is quoted at the end of this document for reference purposes.

Question #1: Does the terminology "UTILITY PIPE – TRENCHLESS" include HDPE pipe for all of the following sizes? Item Numbers: 1050-102-3015 (i.e. 1¹/₂")

1050-102-302 (i.e. 2") 1050-102-3025 (i.e. 2½") 1050-102-303 (i.e. 3") 1050-102-304 (i.e. 4") 1050-102-306 (i.e. 6")

Yes. Pay Item Note "1050-102-XXXX INCLUDES COST OF CARRIER PIPE AND CONDUIT OR CASING AS REQUIRED BY CONSTRUCTION METHOD SPECIFICATIONS, MANUFACTURER RECOMMENDATIONS AND LOCAL CODE" has been added to the associated Tabulation of Quantities Tables and Basis of Bid.

Question #2: As Section 02620, Part 2, 2.01 "HDPE Pipe" makes no reference to specific pipe manufacturers, may it be interpreted that the selection of pipe will be accomplished via an open bid? That is, that bids will be accepted from all pipe suppliers that comply with the project specification? Yes.

Question #3: Relative to any HDPE used on this project, is there a preference for pipe/tubing using 100% virgin material due to the superior mechanical properties and long-term performance offered thereby? In particular, this question applies to Item Number 1050-42-2015 (i.e. 1.5") and 1050-102-308 (i.e. 8").

No. The pipe just needs to be stamped by the manufacturer that it meets the specified requirements.

Question #4: In the Pre-bid Meeting, it was stated that materials supplied for the Indian Springs project must comply with the "American Iron & Steel Act" (AIS). Please confirm that this applies to the entire project. Is any part of this project exempt from AIS.

The AIS requirements only apply to the items within the Tabulation of Water Quantities and Unit Price Work – Water System Improvements tables within the Bid Plans and Basis of Bid.

Question #5: May poly Meter Boxes manufactured by MacLean Highline be approved for use on the Indian Springs project?

Yes. The Jumbo Utility Box by MacLean Highline may be used since a manufacturer was not specified; however, all meter boxes associated with water <u>shall</u> have metal reader lids.

Table 1: Meter Box	Per Indian Springs Spec	MacLean Highline Equivalent	Other Highline Box Alternative
Top of Box Opening	13" x 19.88"	13-15/16" x 20½"	10¼" x 16"
Box Footprint	18½" x 25¼"	20-7/8" X 26-7/8"	13¼" x 18½"
Box Height	12"	12"	12"
Valve Box Material	Poly	Superflexon (polyolefin based material)	Superflexon (polyolefin based material)
Box Lid Type	Appears to be "Drop-in	Available as either "Drop-in" or "T-Top"	Available as either "Drop-in" or "T-Top"
Lid Compressive Strength	Unknown	3,350 psi	3,350 psi
Lid Texture	Non-Skip	Non-Skip	Non-Skip
Lid Colors	Unknown	Green, Black	Green, Blue or Black
Lid Label	"Sewer"	"Sewer" or "Water" or blank	"Sewer" or "Water"
No. of Cut-Outs (for pipe entry)	2	2	2
Box Model Name	-	Jumbo Utility Box	Standard Utility Box

Box details per the Contract Plans are as indicated in Table 1. Note that box sizes vary with manufacturer.

The above is offered relative to Item Number 1080-21-100. May it be assumed that all meter boxes are to be the same size?

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For consistency it is requested that all sewer meter boxes be the same size, manufacturer and labeled "sewer" appropriately. The water meter boxes shall have a metal reader lid.

Ruffin requests the approval of MacLean Highline boxes as an "Or Equal" for the Indian Springs project per Section 7.04 "Or Equals" of the General Conditions. That is, that Highline boxes are "functionally equal to that [box] named", and that it is believed to satisfy the approval criteria of Section 7.04.A.1.a, paragraphs 1) through 4).

Approved.

<u>Question #6</u>: Is the county interested in an alternative to cast iron valve boxes as described by the Project Specification?

No.

The spec indicates, "Valve boxes shall consist of cast iron base and adjustable top section with cover"?

Correct. That's what will be required.

Poly valve boxes may be offered that can include the following features at the county's request.

- 1. Cast iron covers labeled "Sewer" or "Water"
- 2. Polyiron top sections that are 1/3 the weight of comparable cast iron boxes but still magnetically locatable

MacLean Highline offers a 2-piece "screw type" poly valve box accommodating depths from 15" to 51" using non- cast iron materials. Ruffin requests that Highline valve boxes be approved for use on this project. Although the proposed valve box is made from materials not mentioned in the project specification, Ruffin requests that Highline valve boxes be considered an "Or Equal" for the Indian Springs project per Section 7.04 "Or Equals" of the General Conditions. That is, that Highline boxes are "functionally equal to that [valve box] named", and that it is believed to satisfy the approval criteria of Section 7.04.A.1.a, paragraphs 1) through 4).

The all poly valve box complies with AIS Act requirements.

The Poly valve boxes mentioned above are not approved as an "or equal" item for purposes of this Contract.

Question #7: Should the county prefer to use cast iron valve boxes rather than the option presented in Question #6, an alternative value-added poly valve box lid is proposed. The poly, or "Non-Pop" Lid replaces a standard cast iron box lid. The following advantages are provided.

As pictured here, a "Non-Pop" Lid discourages valve lid misplacement or loss, is highway rated, discourages theft, and greatly reduces foreign matter such as litter, soil, and water from entering the valve box. In short, the box does not fill with debris requiring cleaning to get to a valve. They are also available in colors making the location of potable water valves and wastewater valves an easier task.

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This option adds material cost to valve box installations associated with the added value provided. Ruffin requests that Non-Pop Lids be considered for inclusion in the project specification for standard 7¼ inch OD valve boxes.

No, the lid must be cast iron as specified in the plans and specifications and therefore the "Non-Pop" lid is not an approved alternative.

Question #8: As check valves are used in cleanout assemblies, may ball-check valves manufactured by Flomatic Valves be used on the Indian Springs project?

The Indian Springs project specification does not address ball-check valves. However, ball-check technology was created in the 20th century specifically for wastewater applications. They are simple valves with a single replaceable moving part, a ball. A ball-check can provide both the functionality of a flow checking device and the functionality of a cleanout port. To this product may be added a curb stop to create a valve/cleanout station.





Details on the poly ball-check valve are provided hereafter in Table 2.

Although the proposed check valve is made from materials other than those listed for check valves in the project specification, Ruffin requests that Flomatic ball-check valves be considered an "Or Equal" for the Indian Springs project per Section 7.04 "Or Equals" of the General Conditions. That is, that Flomatic poly ball-check valves are "functionally equal to that [check valve] named", and that it is believed to satisfy the approval criteria of Section 7.04.A.1.a, paragraphs 1) through 4).

Poly ball-check valves proposed are made in the USA, and comply with AIS Act requirements.

No. They must be stainless steel and as specified in the Bid Plans and Specifications

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Table 2: Flomatic Ball-	Per Indian Springs Project Specification	208T Flomatic Ball Check Valve Specification
Size	1 to 2-inches	1 to 2-inches
Connection		Female NPS threads on inlet & outlet
Weight	ct	1 to 2 lbs.
Valve Design	rof	Sinking Ball; one moving part
Installation Orientation	Js Pl	Horizontal or Vertical
Seal	ring	Nitrile (Buna-N) Seal on clean-out port
Ball Design	ın Sp	Self cleaning ball with access port (i.e. clean-out)
Valve Flow Area	for the Indic eck Valves	<u>Open</u> : Ball moves automatically out of the path of flow <u>Closed</u> : Ball automatically rolls back to closed position; ball provides positive seal against back-pressure & back flow
Valve Port Area	y exists Ball Che	Allows unobstructed smooth flow through valve body
Body Material	ent for	Corrosion resistant PVC body
Ball Material	nre	Nitrile (Buna-N) spherical ball
Valve Maintenance	tion cu	Valve may be serviced without physically removing from service
Ball Replacement	ci fica	Removal of clean-out cover shall allow removal or replacement of ball
Rated Working Pres	sp ^e	100 psi
Back Pressure Req'd	°Z	Horizontal Orientation: 20' head (8.7 psi) Vertical Orientation: 10' head (4.3 psi)
Approved Suppliers	None	Flomatic
Regulatory Reqmt		AIS Act Conformance

Question #9: On Sheet UTDTUW01 – Detail 1, a detail entitled "2" AIR/VAC VALVE ASSEMBLY" refers to the use of "2" SST GATE VALVE" with each A.R.I. D-020 Combination Air/Vac Valve. Is the county interested in the use of a ¼-turn SST ball valve in this location?

Yes.

Question #10: Confirmation is requested on the supplier of Air/Vacuum Valves. On Sheet UTDTUW01 – Detail 1, a detail entitled "2" AIR/VAC VALVE ASSEMBLY" specifies the use of "2" A.R.I. COMBINATION AIR/VAC VALVE CATALOG NO. D-020 OR APPROVED EQUAL".

Contact Information: 3017 Hwy. 71 North Marianna, FL 32446 info@aldayhowell.com Post Office Box 494 Marianna, FL 32447

1. The project specification, however, lists the following as approved suppliers of "AIR/VACUUM VALVES": "GA; APCO; Val-Matic or equal".

ARI Model D-020, GA Industries Fig. 942, APCO Model 443 and Val-Matic 801A are acceptable <u>DI or SST body</u> combination AIR/VAC valves for wastewater.

 It also lists the following as the approved supplier of "COMBINATION AIR AND AIR/VACUUM OR VACUUM RELIEF VALVES": Val-Matic Valve & Mfg. Corporation [or] engineer approved equal." ARI Model D-020, GA Industries Fig. 942, APCO Model 443 and Val-Matic 801A are acceptable <u>DI or SST body</u> combination AIR/VAC valves for wastewater.

May it be interpreted that air valves supplied for this project will be per the direction given in the site plans rather than the project specification document? No. Feel free to use any of the approved manufactures and models mentioned above.

Furthermore, may it be interpreted that A.R.I air release valves are considered "equal" or

"engineer approved equal" to the other manufacturers listed.

Yes.

Question #11: Clarification is requested on the combination air/vac valve specified for this project. The A.R.I. D-020 valve specified in the site plans uses a steel or stainless steel valve body that does not conform to the AIS Act. However, A.R.I manufactures an equivalent nylon body valve that is equivalent in operation to the model D-020 valve. That is, it is a combination air/vac valve intended for both lower volume air release, and for higher volume air/vacuum protection. I refer to the model D-025 PT02 valve offering a 2-inch threaded connection.

Ruffin requests that the A.R.I. D-025 combination air valve be considered an "Or Equal" for the Indian Springs project per Section 7.04 "Or Equals" of the General Conditions. That is, that the D-025 valve is "functionally equal to that [air valve] named", and that it is believed to satisfy the approval criteria of Section 7.04.A.1.a, paragraphs 1) through 4).

No. The combination air/vac valve does not need to conform to the AIS Act. Therefore, we only approve the use of the D-020 DI or SST valve specified in the plans.

Question #12: Will the county require air release valves for any of the potable water lines associated with this project? If yes, can the equivalent A.R.I. air valve for potable water be approved for this project? The A.R.I. part number is D-040PT02 NSF. This is a nylon body valve with 2-inch threaded connection. It is also NSF approved for use in potable water. No. Air release valves are not proposed for the potable water mains.

Question #13: As no reference was found for specific PVC pipe fitting manufacturers in the project specification, may it be assumed that bidders are free to use a supplier that manufactures fittings per applicable industry standards and specifications?

Specifically, Ruffin requests that Tigre ADS be accepted as a supplier of PVC Schedule 40 pressure fittings. Tigre fittings are available in sizes 3/8" to 12" allowing them to

accommodate the Indian Springs project requirements of 6" to 12". All fittings are manufactured in the USA to exceed ASTM D-2466 Standards, and are certified by NSF 14 and 61. All fittings are manufactured from virgin PVC compound classification 12454, Type 1, Grade 1 as described in ASTM D-1784. Fittings conform to the geometrics and patterns as defined in ASTM D-3311 for fittings to be used in "Drain, Waste, and Vent" applications.

Tigre fittings are manufactured in the USA and satisfy the requirements of the AIS Act.

No. As stated in Section 15060 Part 3, 3.03(A) "PVC fittings will not be used on pressure pipe larger than 3 inches in diameter"

ARTICLE 10 – SUBSTITUTE AND "OR-EQUAL" ITEMS

10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an "or-equal" or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions.

If you have any questions, please feel free to contact me.

Sincerely,

Eric Worrell, P.E. Engineer of Record