



BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION

December 22, 2020

**PROJECT: INVITATION FOR BID NO. 21-013 2016 SPLOST NORTH
MAINLAND PHASE III FORCE MAIN IMPROVEMENTS
PROJECT NO. 702**

ADDENDUM: Two (2)

DUE DATE: Tuesday, January 12, 2021 12:00PM, NOON

**THIS ADDENDUM IS FOR THE PURPOSE OF ANSWERING THE FOLLOWING
QUESTIONS:**

- 1) QUESTION: Should HDPE DR 11 be decreased to DR 9 to be more comparable to direct bury DR 18 PVC Pipe?**
 - a. DR 18 PVC is PC 235 with safety factor equal to 2 while DR 11 is PC 160 with safety factor equal to 1.6**
 - b. AWWA minimum quick burst for DR 18 PVC is 755 PSI while AWWA minimum quick burst for DR 11 is 580 PSI and DR 9 HDPE is 725 PSI**
 - c. Pipe stiffness for DR 18 PVC pipe is 364 PSI while DR 11 HDPE is 126 PSI and DR 9 HDPE is 246 PSI**
 - d. Long term critical buckling for DR 18 PVC pipe is 190 PSI while DR 11 HDPE pipe is 70 PSI and DR 9 HDPE is 137 PSI**
 - e. DR 11 HDPE pipe is more comparable to DR 25 PVC pipe**

ANSWER: The design of the forcemain was based, as a minimum, around the JWSC standards. Section 4.7.6 Materials, of the JWSC Standards for Water and Sewer Design and Construction, dictates the material and associated pipe ratings for forcemains installed in the JWSC system. The standard notes:

4.7.6 Materials

4.7.6.1 Pipe

Force main piping shall be color coded green. Force main piping shall be fused joint DR 17.0 HDPE meeting the requirements of ASTM D3035 - DIP size with butt fused joints; or, SDR 21 Class 200 PVC meeting the requirement of ASTM D2241, with elastomeric integral bell gasketed joints meeting the requirements of ASTM D-3036; or, AWWA C-900 and C-905 DR-18 PVC. Where specifically approved by the JWSC for special conditions on short runs, interior coated CL52 DIP meeting the requirements of ASTM A-746, with elastomeric push-on joints, mechanical joints conforming to ANSI A-21.11, or flange joints conforming to ANSI 21.1. All bolts and bolt studs associated with flange joint pipe connections shall conform to ANSI B-16.1.

The open cut sections of the forcemain design adhere to the requirements of this standard by requiring PVC piping with a DR18 rating. The pipe rating for the horizontal directional drill HDPE sections of the forcemain were increased from the minimum required DR17 to DR11 to accommodate the proposed design. The design meets the JWSC standards and the design conditions.



All applicants under this Invitation for Bid are kindly requested to acknowledge receipt of this Addendum in original only.

**ACKNOWLEDGEMENT
ADDENDUM: TWO (2)**

DATE: _____

The above Addendum is hereby acknowledged:

(NAME OF BIDDER)

Signature

Title