

**CITY OF VIRGINIA BEACH DEPARTMENT OF PUBLIC UTILITIES**

**PS #345 Aragona Witchduck Force Main Replacement**

**PUCN-20-0184**

| BID TABULATION (4-2-20)                  |      |   |      |               |              |                        |               |                        |              |                           |              |                                |               |                         |               |                         |              |                        |               |                        |
|--|------|---|------|---------------|--------------|------------------------|---------------|------------------------|--------------|---------------------------|--------------|--------------------------------|---------------|-------------------------|---------------|-------------------------|--------------|------------------------|---------------|------------------------|
|  |      | Engineer's Estimate                               |      | Trident Civil |              | East West Construction |               | Bridgeman Civil        |              | Gaston Brothers Utilities |              | Tidewater Utility Construction |               | Average (w/ Engineer's) |               | Average (no Engineer's) |              |                        |               |                        |
| Item #                                   | Spec | Description                                       | Unit | Qty           | Unit Cost    | Total Cost             | Unit Cost     | Total Cost             | Unit Cost    | Total Cost                | Unit Cost    | Total Cost                     | Unit Cost     | Total Cost              | Unit Cost     | Total Cost              | Unit Cost    | Total Cost             |               |                        |
| <b>Sanitary Gravity Sewer Line Items</b> |      |   |      |               |              |                        |               |                        |              |                           |              |                                |               |                         |               |                         |              |                        |               |                        |
| 1  | 802  | 18" PVC C-900 SDR-18 Gravity Sewer Pipe (12'-16') | LF   | 27            | \$ 600.00    | \$ 16,200.00           | \$ 1,400.00   | \$ 37,800.00           | \$ 3,690.00  | \$ 99,630.00              | \$ 2,000.00  | \$ 54,000.00                   | \$ 1,000.00   | \$ 27,000.00            | \$ 2,750.00   | \$ 74,250.00            | \$ 1,906.67  | \$ 51,480.00           | \$ 2,168.00   | \$ 58,536.00           |
| 2  | 811  | CCTV Sanitary Sewer (Post-Construction)           | LF   | 27            | \$ 5.00      | \$ 135.00              | \$ 40.00      | \$ 1,080.00            | \$ 75.00     | \$ 2,025.00               | \$ 10.00     | \$ 270.00                      | \$ 50.00      | \$ 1,350.00             | \$ 35.00      | \$ 945.00               | \$ 35.83     | \$ 967.50              | \$ 42.00      | \$ 1,134.00            |
| 3  | 822  | Manhole Rehabilitation                            | VF   | 41            | \$ 750.00    | \$ 30,750.00           | \$ 400.00     | \$ 16,400.00           | \$ 608.00    | \$ 24,928.00              | \$ 600.00    | \$ 24,600.00                   | \$ 800.00     | \$ 32,800.00            | \$ 425.00     | \$ 17,425.00            | \$ 597.17    | \$ 24,483.83           | \$ 568.60     | \$ 23,230.60           |
| 4  | 802  | Replace Manhole Frame & Cover                     | EA   | 2             | \$ 1,000.00  | \$ 2,000.00            | \$ 1,000.00   | \$ 2,000.00            | \$ 1,600.00  | \$ 3,200.00               | \$ 1,000.00  | \$ 2,000.00                    | \$ 2,400.00   | \$ 4,800.00             | \$ 1,250.00   | \$ 2,500.00             | \$ 1,375.00  | \$ 2,750.00            | \$ 1,450.00   | \$ 2,900.00            |
| 5  | 802  | Connection to Existing Sanitary Sewer Manhole     | EA   | 2             | \$ 5,000.00  | \$ 10,000.00           | \$ 5,000.00   | \$ 10,000.00           | \$ 6,000.00  | \$ 12,000.00              | \$ 2,000.00  | \$ 4,000.00                    | \$ 7,500.00   | \$ 15,000.00            | \$ 6,250.00   | \$ 12,500.00            | \$ 5,291.67  | \$ 10,583.33           | \$ 5,350.00   | \$ 10,700.00           |
| <b>Sanitary Force Main Line Items</b>    |      |   |      |               |              |                        |               |                        |              |                           |              |                                |               |                         |               |                         |              |                        |               |                        |
| 6  | 530  | Remove Existing 12" FM                            | LF   | 65            | \$ 100.00    | \$ 6,500.00            | \$ 200.00     | \$ 13,000.00           | \$ 380.00    | \$ 24,700.00              | \$ 100.00    | \$ 6,500.00                    | \$ 150.00     | \$ 9,750.00             | \$ 1,000.00   | \$ 65,000.00            | \$ 321.67    | \$ 20,908.33           | \$ 366.00     | \$ 23,790.00           |
| 7  | 530  | Abandon Existing 12" FM w/ Pumped Flowable Fill   | LF   | 2240          | \$ 15.00     | \$ 33,600.00           | \$ 25.00      | \$ 56,000.00           | \$ 28.00     | \$ 62,720.00              | \$ 30.00     | \$ 67,200.00                   | \$ 20.00      | \$ 44,800.00            | \$ 42.00      | \$ 94,080.00            | \$ 26.67     | \$ 59,733.33           | \$ 29.00      | \$ 64,960.00           |
| 8  | 803  | 12" DIP FM  | LF   | 3165          | \$ 225.00    | \$ 712,125.00          | \$ 225.00     | \$ 712,125.00          | \$ 235.00    | \$ 743,775.00             | \$ 320.00    | \$ 1,012,800.00                | \$ 395.00     | \$ 1,250,175.00         | \$ 350.00     | \$ 1,107,750.00         | \$ 291.67    | \$ 923,125.00          | \$ 305.00     | \$ 965,325.00          |
| 9  | 803  | 12" Gate Valve                                    | EA   | 1             | \$ 3,500.00  | \$ 3,500.00            | \$ 3,200.00   | \$ 3,200.00            | \$ 6,825.00  | \$ 6,825.00               | \$ 5,000.00  | \$ 5,000.00                    | \$ 3,500.00   | \$ 3,500.00             | \$ 4,200.00   | \$ 4,200.00             | \$ 4,370.83  | \$ 4,370.83            | \$ 4,545.00   | \$ 4,545.00            |
| 10                                       | 803  | 6" Gate Valve                                     | EA   | 1             | \$ 2,500.00  | \$ 2,500.00            | \$ 2,600.00   | \$ 2,600.00            | \$ 3,725.00  | \$ 3,725.00               | \$ 2,000.00  | \$ 2,000.00                    | \$ 1,500.00   | \$ 1,500.00             | \$ 3,000.00   | \$ 3,000.00             | \$ 2,554.17  | \$ 2,554.17            | \$ 2,565.00   | \$ 2,565.00            |
| 11                                       | 803  | Emergency Pump Connection                         | EA   | 1             | \$ 7,500.00  | \$ 7,500.00            | \$ 3,600.00   | \$ 3,600.00            | \$ 8,275.00  | \$ 8,275.00               | \$ 4,000.00  | \$ 4,000.00                    | \$ 9,500.00   | \$ 9,500.00             | \$ 9,000.00   | \$ 9,000.00             | \$ 6,979.17  | \$ 6,979.17            | \$ 6,875.00   | \$ 6,875.00            |
| 12                                       | 803  | 2" Air Release Valve & Box                        | EA   | 6             | \$ 2,500.00  | \$ 15,000.00           | \$ 3,000.00   | \$ 18,000.00           | \$ 3,400.00  | \$ 20,400.00              | \$ 2,000.00  | \$ 12,000.00                   | \$ 3,000.00   | \$ 18,000.00            | \$ 5,000.00   | \$ 30,000.00            | \$ 3,150.00  | \$ 18,900.00           | \$ 3,280.00   | \$ 19,680.00           |
| 13                                       | 803  | 36"x12" Tapping Sleeve & Valve                    | EA   | 1             | \$ 30,000.00 | \$ 30,000.00           | \$ 20,000.00  | \$ 20,000.00           | \$ 68,750.00 | \$ 68,750.00              | \$ 10,000.00 | \$ 10,000.00                   | \$ 195,000.00 | \$ 195,000.00           | \$ 32,000.00  | \$ 32,000.00            | \$ 59,291.67 | \$ 59,291.67           | \$ 65,150.00  | \$ 65,150.00           |
| 14                                       | 803  | Connection to Existing FM                         | EA   | 2             | \$ 7,500.00  | \$ 15,000.00           | \$ 20,000.00  | \$ 40,000.00           | \$ 7,275.00  | \$ 14,550.00              | \$ 5,000.00  | \$ 10,000.00                   | \$ 10,000.00  | \$ 20,000.00            | \$ 12,500.00  | \$ 25,000.00            | \$ 10,379.17 | \$ 20,758.33           | \$ 10,955.00  | \$ 21,910.00           |
| <b>Miscellaneous Line Items</b>          |      |   |      |               |              |                        |               |                        |              |                           |              |                                |               |                         |               |                         |              |                        |               |                        |
| 15                                       | Supp | Neoprene Pad                                      | EA   | 7             | \$ 500.00    | \$ 3,500.00            | \$ 260.00     | \$ 1,820.00            | \$ 475.00    | \$ 3,325.00               | \$ 100.00    | \$ 700.00                      | \$ 100.00     | \$ 700.00               | \$ 100.00     | \$ 700.00               | \$ 255.83    | \$ 1,790.83            | \$ 207.00     | \$ 1,449.00            |
| 16                                       | Supp | Turbidity Curtain                                 | LF   | 35            | \$ 30.00     | \$ 1,050.00            | \$ 60.00      | \$ 2,100.00            | \$ 150.00    | \$ 5,250.00               | \$ 40.00     | \$ 1,400.00                    | \$ 50.00      | \$ 1,750.00             | \$ 200.00     | \$ 7,000.00             | \$ 88.33     | \$ 3,091.67            | \$ 100.00     | \$ 3,500.00            |
| 17                                       | 301  | Tree Protection                                   | EA   | 3             | \$ 500.00    | \$ 1,500.00            | \$ 260.00     | \$ 780.00              | \$ 550.00    | \$ 1,650.00               | \$ 300.00    | \$ 900.00                      | \$ 150.00     | \$ 450.00               | \$ 500.00     | \$ 1,500.00             | \$ 376.67    | \$ 1,130.00            | \$ 352.00     | \$ 1,056.00            |
| 18                                       | 303  | Inlet Protection                                  | EA   | 39            | \$ 250.00    | \$ 9,750.00            | \$ 200.00     | \$ 7,800.00            | \$ 175.00    | \$ 6,825.00               | \$ 200.00    | \$ 7,800.00                    | \$ 250.00     | \$ 9,750.00             | \$ 500.00     | \$ 19,500.00            | \$ 262.50    | \$ 10,237.50           | \$ 265.00     | \$ 10,335.00           |
| 19                                       | 303  | Silt Fence  | LF   | 280           | \$ 3.00      | \$ 840.00              | \$ 6.00       | \$ 1,680.00            | \$ 5.50      | \$ 1,540.00               | \$ 5.00      | \$ 1,400.00                    | \$ 5.00       | \$ 1,400.00             | \$ 5.00       | \$ 1,400.00             | \$ 4.92      | \$ 1,376.67            | \$ 5.30       | \$ 1,484.00            |
| 20                                       | 303  | Select Fill                                       | CY   | 2433          | \$ 40.00     | \$ 97,320.00           | \$ 1.00       | \$ 2,433.00            | \$ 40.00     | \$ 97,320.00              | \$ 40.00     | \$ 97,320.00                   | \$ 40.00      | \$ 97,320.00            | \$ 125.00     | \$ 304,125.00           | \$ 47.67     | \$ 115,973.00          | \$ 49.20      | \$ 119,703.60          |
| 21                                       | 303  | Undercut Excavation                               | CY   | 119           | \$ 80.00     | \$ 9,520.00            | \$ 1.00       | \$ 119.00              | \$ 50.00     | \$ 5,950.00               | \$ 30.00     | \$ 3,570.00                    | \$ 150.00     | \$ 17,850.00            | \$ 25.00      | \$ 2,975.00             | \$ 56.00     | \$ 6,664.00            | \$ 51.20      | \$ 6,092.80            |
| 22                                       | 502  | Standard Curb and Gutter Replacement              | LF   | 22            | \$ 50.00     | \$ 1,100.00            | \$ 120.00     | \$ 2,640.00            | \$ 200.00    | \$ 4,400.00               | \$ 150.00    | \$ 3,300.00                    | \$ 150.00     | \$ 3,300.00             | \$ 100.00     | \$ 2,200.00             | \$ 128.33    | \$ 2,823.33            | \$ 144.00     | \$ 3,168.00            |
| 23                                       | 502  | Sawcut Remove and Replace Concrete Median Strip   | LF   | 16            | \$ 100.00    | \$ 1,600.00            | \$ 120.00     | \$ 1,920.00            | \$ 885.00    | \$ 14,160.00              | \$ 300.00    | \$ 4,800.00                    | \$ 200.00     | \$ 3,200.00             | \$ 250.00     | \$ 4,000.00             | \$ 309.17    | \$ 4,946.67            | \$ 351.00     | \$ 5,616.00            |
| 24                                       | 502  | Sawcut Remove and Replace Concrete Sidewalk       | LF   | 22            | \$ 50.00     | \$ 1,100.00            | \$ 120.00     | \$ 2,640.00            | \$ 160.00    | \$ 3,520.00               | \$ 100.00    | \$ 2,200.00                    | \$ 125.00     | \$ 2,750.00             | \$ 100.00     | \$ 2,200.00             | \$ 109.17    | \$ 2,401.67            | \$ 121.00     | \$ 2,662.00            |
| 25                                       | 315  | Surface Asphalt Overlay                           | TON  | 156           | \$ 140.00    | \$ 21,840.00           | \$ 225.00     | \$ 35,100.00           | \$ 223.00    | \$ 34,788.00              | \$ 160.00    | \$ 24,960.00                   | \$ 175.00     | \$ 27,300.00            | \$ 275.00     | \$ 42,900.00            | \$ 199.67    | \$ 31,148.00           | \$ 211.60     | \$ 33,009.60           |
| 26                                       | 315  | Base Asphalt                                      | TON  | 298           | \$ 160.00    | \$ 47,680.00           | \$ 180.00     | \$ 53,640.00           | \$ 200.00    | \$ 59,600.00              | \$ 200.00    | \$ 59,600.00                   | \$ 275.00     | \$ 81,950.00            | \$ 275.00     | \$ 81,950.00            | \$ 215.00    | \$ 64,070.00           | \$ 226.00     | \$ 67,348.00           |
| 27                                       | 309  | 21A Stone Base                                    | TON  | 560           | \$ 100.00    | \$ 56,000.00           | \$ 52.00      | \$ 29,120.00           | \$ 65.00     | \$ 36,400.00              | \$ 120.00    | \$ 67,200.00                   | \$ 140.00     | \$ 78,400.00            | \$ 150.00     | \$ 84,000.00            | \$ 104.50    | \$ 58,520.00           | \$ 105.40     | \$ 59,024.00           |
| 28                                       | 811  | CCTV Existing Storm Sewer (Pre-Construction)      | LF   | 415           | \$ 5.00      | \$ 2,075.00            | \$ 7.00       | \$ 2,905.00            | \$ 10.00     | \$ 4,150.00               | \$ 10.00     | \$ 4,150.00                    | \$ 15.00      | \$ 6,225.00             | \$ 5.00       | \$ 2,075.00             | \$ 8.67      | \$ 3,596.67            | \$ 9.40       | \$ 3,901.00            |
| 29                                       | 811  | CCTV Existing Storm Sewer (Post-Construction)     | LF   | 415           | \$ 5.00      | \$ 2,075.00            | \$ 7.00       | \$ 2,905.00            | \$ 10.00     | \$ 4,150.00               | \$ 10.00     | \$ 4,150.00                    | \$ 10.00      | \$ 4,150.00             | \$ 5.00       | \$ 2,075.00             | \$ 7.83      | \$ 3,250.83            | \$ 8.40       | \$ 3,486.00            |
| 30                                       | Supp | Maintenance of Traffic                            | LS   | 1             | \$ 75,000.00 | \$ 75,000.00           | \$ 40,000.00  | \$ 40,000.00           | \$ 98,950.00 | \$ 98,950.00              | \$ 50,000.00 | \$ 50,000.00                   | \$ 10,000.00  | \$ 10,000.00            | \$ 70,000.00  | \$ 70,000.00            | \$ 57,325.00 | \$ 57,325.00           | \$ 53,790.00  | \$ 53,790.00           |
| 31                                       | 900  | Flow Control                                      | LS   | 1             | \$ 30,000.00 | \$ 30,000.00           | \$ 70,000.00  | \$ 70,000.00           | \$ 72,335.00 | \$ 72,335.00              | \$ 50,000.00 | \$ 50,000.00                   | \$ 150,000.00 | \$ 150,000.00           | \$ 62,500.00  | \$ 62,500.00            | \$ 72,472.50 | \$ 72,472.50           | \$ 80,967.00  | \$ 80,967.00           |
| 32                                       | 513  | Mobilization/Demobilization                       | LS   | 1             | \$ 74,806.00 | \$ 74,806.00           | \$ 140,000.00 | \$ 140,000.00          | \$ 93,975.00 | \$ 93,975.00              | \$ 80,000.00 | \$ 80,000.00                   | \$ 79,500.00  | \$ 79,500.00            | \$ 130,125.00 | \$ 130,125.00           | \$ 99,734.33 | \$ 99,734.33           | \$ 104,720.00 | \$ 104,720.00          |
| <b>TOTAL</b>                             |      |   |      |               |              | <b>\$ 1,321,566.00</b> |               | <b>\$ 1,333,407.00</b> |              | <b>\$ 1,643,791.00</b>    |              | <b>\$ 1,677,820.00</b>         |               | <b>\$ 2,209,170.00</b>  |               | <b>\$ 2,298,875.00</b>  |              | <b>\$ 1,747,438.17</b> |               | <b>\$ 1,832,612.60</b> |