APPENDIX 1 MONUMENT INFORMATION REPORT

TOWN OF DUCK STATION INFORMATION

June 2018

| DATUMS: NAD83/2011 & NAVD88 | | | | | | |
|-----------------------------|-----------|------------|---------|--|--|--|
| STATION | NORTHING | EASTING | AZIMUTH | | | |
| PI-17 | 920098.86 | 2950657.32 | 70 | | | |
| PI-18 | 919175.36 | 2951025.99 | 70 | | | |
| D-01 | 918267.75 | 2951387.52 | 70 | | | |
| D-02 | 917384.44 | 2951733.76 | 70 | | | |
| D-03 | 916429.37 | 2952102.95 | 70 | | | |
| D-04 | 915495.29 | 2952464.03 | 70 | | | |
| D-05 | 914597.97 | 2952849.30 | 70 | | | |
| D-06 | 913696.93 | 2953224.38 | 70 | | | |
| D-07 | 912798.76 | 2953607.33 | 70 | | | |
| D-08 | 911897.95 | 2953983.04 | 70 | | | |
| D-09 | 910994.82 | 2954356.65 | 70 | | | |
| D-10 | 910066.74 | 2954759.12 | 70 | | | |
| D-11 | 909133.14 | 2955158.05 | 70 | | | |
| D-12 | 908412.53 | 2955461.41 | 70 | | | |
| D-13 | 907478.35 | 2955874.29 | 70 | | | |
| D-14 | 906578.33 | 2956252.15 | 70 | | | |
| D-15 | 905677.78 | 2956628.57 | 70 | | | |
| D-16 | 904767.65 | 2956978.72 | 70 | | | |
| D-17 | 903863.92 | 2957333.66 | 70 | | | |
| D-18 | 902886.47 | 2957718.79 | 70 | | | |
| D-19 | 902331.03 | 2957932.45 | 70 | | | |
| D-20 | 901760.74 | 2958139.73 | 70 | | | |
| D-21 | 900958.69 | 2958472.08 | 70 | | | |
| D-22 | 900228.83 | 2958754.03 | 70 | | | |
| D-23 | 899515.64 | 2958992.70 | 70 | | | |
| D-24 | 898739.78 | 2959267.16 | 70 | | | |
| D-25 | 897824.26 | 2959601.68 | 70 | | | |
| D-26 | 896902.26 | 2959928.60 | 70 | | | |
| D-27 | 895981.88 | 2960250.61 | 70 | | | |
| D-28 | 895072.97 | 2960604.07 | 70 | | | |
| D-29 | 894166.25 | 2960963.56 | 70 | | | |
| D-30 | 893257.57 | 2961317.69 | 70 | | | |
| D-31 | 892350.69 | 2961676.73 | 70 | | | |
| D-32 | 891379.42 | 2962078.13 | 70 | | | |
| D-33 | 890553.16 | 2962439.37 | 70 | | | |
| D-34 | 889616.07 | 2962839.65 | 70 | | | |



CONTROL MONUMENT USED BY APTIM FOR 2018 DARE COUNTY ANNUAL MONITORING TOPOGRAPHIC AND HYDROGRAPHIC SURVEY REPORT **JUNE 2018 DATUMS:** NAD83/2011 - NAVD1988 **Designation** | C255 **Stamping** | C255 1981 **Northing** | 900856.11 **Easting** | 2958600.06 **Horizontal Root Mean Square Error** | 0.230 Elevation 16.89 Vertical Root Mean Square Error 0.114 **Description** A National Geodetic Survey pin inside a protective casing with lid approximately 3 inches below ground and located between the two steps on the West side of the Army Corp of Engineer's Field Research Facility (1261 Duck Road), approximately 355 feet East of the main parking lot gate, 15 feet South of the Northerly steps, 15 feet



NO IMAGE

North of the Southerly steps, and 2.7 feet West of

Monument: C255 Location Verification: C255

the flag pole.

| Mean of Inverse Shots - Published Versus APTIM Found | | | | | | |
|--|--------------|-------|-------|------------|--|--|
| Monument | No. of Shots | ΔΝ | ΔΕ | ΔZ | | |
| C255 | 10 | -0.10 | -0.04 | 0.09 | | |



A National Ocean Survey disk protected by an open

pipe approximately 6 inches above ground and located on the Army Corp of Engineer's Field Research Facility property (1261 Duck Road) approximately 600 feet East of Duck Road, 300 feet West of the gazebo, and 100 feet North of the

NO IMAGE



CONTROL MONUMENT USED BY APTIM FOR 2018 DARE COUNTY ANNUAL MONITORING TOPOGRAPHIC AND HYDROGRAPHIC SURVEY REPORT JUNE 2018 DATUMS: NAD83/2011 - NAVD1988 Designation TIDAL C Stamping 865 1370 1977 Northing 900621.51 Easting 2957662.02 Horizontal Root Mean Square Error 0.229 Elevation 18.46 Vertical Root Mean Square Error 0.015

access road.



Monument: TIDAL C Location Verification: TIDAL C

Description

| Mean of Inverse Shots – OPUS Solution Versus APTIM Found | | | | | | | |
|--|--------------|------|------|------------|--|--|--|
| Monument | No. of Shots | ΔΝ | ΔΕ | ΔZ | | | |
| TIDAL C | 10 | 0.05 | 0.12 | 0.00 | | | |

