

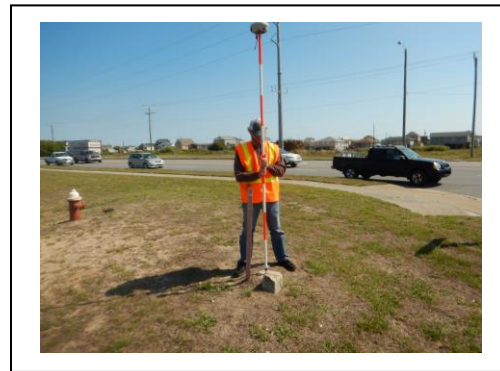
APPENDIX 1

MONUMENT INFORMATION REPORT

| CONTROL MONUMENT USED BY APTIM FOR 2019 TOWN OF DUCK TOPOGRAPHIC AND HYDROGRAPHIC SURVEY REPORT MAY 2019 | |
|---|--|
| DATUMS: NAD83(2011) / NAVD1988 (U.S. SURVEY FEET) | |
| Designation | KITTY |
| Stamping | KITTY 1962 |
| Northing | 859358.84 |
| Easting | 2977204.86 |
| Horizontal Root Mean Square Error | 0.130 |
| Elevation | 9.17 |
| Vertical Root Mean Square Error | 0.060 |
| Description | Station is located about 0.65 miles east of the post office in Kitty Hawk. The station is a standard disk set in a 12x12 inch concrete monument. It is 126 feet east-southeast of the intersection, 17 feet east of a power line pole and 2.7 feet northeast of a metal witness post with sign. The mark is flush with the ground. |



Monument: KITTY



Location Verification: KITTY

| Mean of Inverse Shots – Published Versus APTIM Found | | | | |
|---|--------------|------------|------------|------------|
| Monument | No. of Shots | ΔN | ΔE | ΔZ |
| KITTY | 47 | 0.01 | -0.06 | 0.10 |

| CONTROL MONUMENT USED BY APTIM FOR 2019 TOWN OF DUCK TOPOGRAPHIC AND HYDROGRAPHIC SURVEY REPORT MAY 2019 | |
|---|---|
| DATUMS: NAD83(2011)/NAVD1988 (U.S. SURVEY FEET) | |
| Designation | 865 1370 C TIDAL |
| Stamping | 865 1370 C 1977 |
| Northing | 900621.51 |
| Easting | 2957662.02 |
| Horizontal Root Mean Square Error | 0.098 |
| Elevation | 18.46 |
| Vertical Root Mean Square Error | 0.005 |
| Description | The mark is above level with road. In Duck, 1 mile north along county road 1152 from the United Methodist church to the junction of a paved access road leading east to the U.S. Army Corp of Engineers Coastal Engineering research facility, 0.15 miles east of the junction of the roads, 0.05 miles west of the west entrance of the visitors parking area, 600 feet east of the line of county road 1152, 500 feet east of tidal mark 865-1370 D and 100 feet north of the center of the access road. The mark is 0.5 m South from a witness post. |



Monument: 1370 865 C TIDAL



Location Verification: 1370 865 C TIDAL

| Mean of Inverse Shots – Published Versus APTIM Found | | | | |
|--|--------------|------------|------------|------------|
| Monument | No. of Shots | ΔN | ΔE | ΔZ |
| 865 1370 C TIDAL | 14 | 0.00 | 0.01 | 0.01 |

| CONTROL MONUMENT USED BY APTIM FOR 2019 TOWN OF DUCK TOPOGRAPHIC AND HYDROGRAPHIC SURVEY REPORT MAY 2019 | |
|---|---|
| DATUMS: NAD83(2011) / NAVD1988 (U.S. SURVEY FEET) | |
| Designation | CAFFEY |
| Stamping | CAFFEY 1935 |
| Northing | 915308.87 |
| Easting | 2952084.11 |
| Horizontal Root Mean Square Error | 0.149 |
| Elevation | 1.99 |
| Vertical Root Mean Square Error | 0.025 |
| Description | Station is about 350 feet W of Caffey Inlet Coast Guard Station, on a small sand neck which extends into the marsh on the E shore of Currituck Sound. This neck is just S of an old can buoy lying in the marsh and is just N of a small gut which the road crosses on a small bridge. The station is about 225 feet W of a flagpole at the fence line W of the coast guard station, a point in line with the S fence, and 179 feet NW of the center of the bridge. |



Monument: CAFFEY

| Mean of Inverse Shots – Published Versus APTIM Found | | | | |
|--|--------------|------------|------------|------------|
| Monument | No. of Shots | ΔN | ΔE | ΔZ |
| CAFFEY | 22 | -0.02 | -0.02 | 0.07 |

TOWN OF DUCK STATION INFORMATION**MAY 2019****DATUMS: NAD83(2011) / NAVD88 (U.S SURVEY FEET)**

| STATION | NORTHING | EASTING | AZIMUTH |
|----------------|-----------------|----------------|----------------|
| PI-17 | 920098.90 | 2950657.30 | 70.00 |
| PI-18 | 919175.40 | 2951026.00 | 70.00 |
| D-01 | 918267.70 | 2951387.50 | 70.00 |
| D-02 | 917384.40 | 2951733.80 | 70.00 |
| D-03 | 916429.40 | 2952103.00 | 70.00 |
| D-04 | 915495.30 | 2952464.00 | 70.00 |
| D-05 | 914598.00 | 2952849.30 | 70.00 |
| D-06 | 913696.90 | 2953224.40 | 70.00 |
| D-07 | 912798.80 | 2953607.30 | 70.00 |
| D-08 | 911897.90 | 2953983.00 | 70.00 |
| D-09 | 910994.82 | 2954356.65 | 70.00 |
| D-10 | 910066.74 | 2954759.12 | 70.00 |
| D-11 | 909133.14 | 2955158.05 | 70.00 |
| D-12 | 908412.53 | 2955461.41 | 70.00 |
| D-13 | 907478.35 | 2955874.29 | 70.00 |
| D-14 | 906578.33 | 2956252.15 | 70.00 |
| D-15 | 905677.78 | 2956628.57 | 70.00 |
| D-16 | 904767.65 | 2956978.72 | 70.00 |
| D-17 | 903863.92 | 2957333.66 | 70.00 |
| D-18 | 902886.47 | 2957718.79 | 70.00 |
| D-19 | 902331.03 | 2957932.45 | 70.00 |
| D-20 | 901760.74 | 2958139.73 | 70.00 |
| D-21 | 900958.70 | 2958472.10 | 70.00 |
| D-22 | 900228.80 | 2958754.00 | 70.00 |
| D-23 | 899515.60 | 2958992.70 | 70.00 |
| D-24 | 898739.80 | 2959267.20 | 70.00 |
| D-25 | 897824.30 | 2959601.70 | 70.00 |
| D-26 | 896902.30 | 2959928.60 | 70.00 |
| D-27 | 895981.90 | 2960250.60 | 70.00 |
| D-28 | 895073.00 | 2960604.10 | 70.00 |
| D-29 | 894166.20 | 2960963.60 | 70.00 |
| D-30 | 893257.60 | 2961317.70 | 70.00 |
| D-31 | 892350.70 | 2961676.70 | 70.00 |
| D-32 | 891379.40 | 2962078.10 | 70.00 |
| D-33 | 890553.20 | 2962439.40 | 70.00 |
| D-34 | 889616.10 | 2962839.60 | 70.00 |