

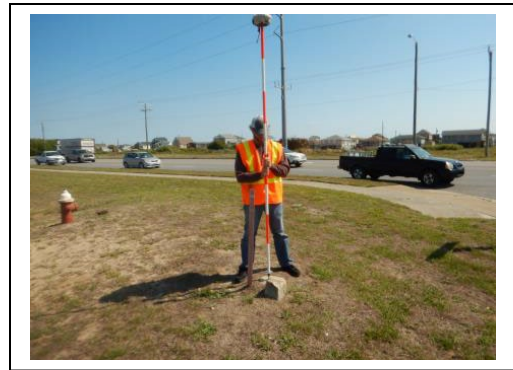
APPENDIX 1

MONUMENT INFORMATION REPORT

<b>CONTROL MONUMENT USED BY APTIM FOR 2020 TOWN OF DUCK TOPOGRAPHIC AND HYDROGRAPHIC SURVEY REPORT JUNE 2020</b>	
<b>DATUMS: NAD83(2011) - NAVD1988 (US SURVEY FEET)</b>	
<b>Designation</b>	KITTY
<b>Stamping</b>	KITTY 1962
<b>Northing</b>	859358.84
<b>Easting</b>	2977204.86
<b>Horizontal Root Mean Square Error</b>	0.11
<b>Elevation</b>	9.17
<b>Vertical Root Mean Square Error</b>	0.23
<b>Description</b>	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

<b>Mean of Inverse Shots – Published Versus APTIM Found</b>				
Monument	No. of Shots	$\Delta N$	$\Delta E$	$\Delta Z$
KITTY	33	0.00	-0.02	0.15

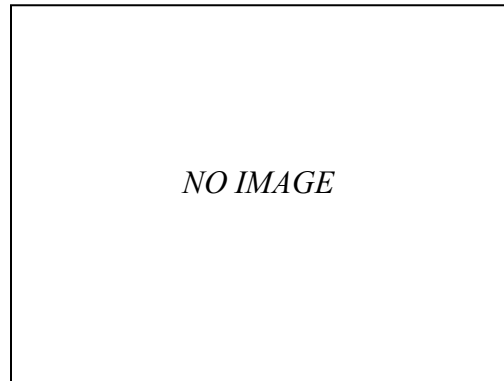
CONTROL MONUMENT USED BY APTIM FOR 2020 TOWN OF DUCK TOPOGRAPHIC AND HYDROGRAPHIC SURVEY REPORT JUNE 2020	
DATUMS: NAD83(2011) - NAVD1988 (US SURVEY FEET)	
<b>Designation</b>	Way
<b>Stamping</b>	Way
<b>Northing</b>	924642.81
<b>Easting</b>	2948590.66
<b>Horizontal Root Mean Square Error</b>	0.11
<b>Elevation</b>	4.88
<b>Vertical Root Mean Square Error</b>	0.05
<b>Description</b>	The mark is 18.9 MI SE of Currituck and 5.6 Mi. NE of Jarvisburg along NC 12 for 1.4 Mi. N from the Currituck/Dare county line on the centerline prolongation of an asphalt runway. Mark is about 3 Ft. lower than NC 12 and recessed 3 In. below the ground. Located 175.5 Ft. W of the centerline of NC 12, 168 Ft. S-SE of the S end of the private runway.

Mean of Inverse Shots – Published Versus APTIM Found				
Monument	No. of Shots	$\Delta N$	$\Delta E$	$\Delta Z$
WAY	6	0.07	0.04	-0.04

CONTROL MONUMENT USED BY APTIM FOR 2020 TOWN OF DUCK TOPOGRAPHIC AND HYDROGRAPHIC SURVEY REPORT JUNE 2020	
DATUMS: NAD83(2011) - NAVD1988 (US SURVEY FEET)	
<b>Designation</b>	CAFFEY
<b>Stamping</b>	CAFFEY 1935
<b>Northing</b>	915308.87
<b>Easting</b>	2952084.11
<b>Horizontal Root Mean Square Error</b>	0.09
<b>Elevation</b>	1.99
<b>Vertical Root Mean Square Error</b>	0.05
<b>Description</b>	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



Location Verification: CAFFEY

Mean of Inverse Shots – Published Versus APTIM Found				
Monument	No. of Shots	$\Delta N$	$\Delta E$	$\Delta Z$
CAFFEY	31	-0.05	-0.02	0.04

<b>CONTROL MONUMENT USED BY APTIM FOR 2020 TOWN OF DUCK TOPOGRAPHIC AND HYDROGRAPHIC SURVEY REPORT JUNE 2020</b>	
<b>DATUMS: NAD83(2011) - NAVD1988 (US SURVEY FEET)</b>	
<b>Designation</b>	X 254
<b>Stamping</b>	X 254
<b>Northing</b>	876428.61
<b>Easting</b>	2968761.03
<b>Horizontal Root Mean Square Error</b>	0.08
<b>Elevation</b>	9.93
<b>Vertical Root Mean Square Error</b>	0.02
<b>Description</b>	Proceed along NC 12 for 1.1 mi. N from the intersection of US 154 in Kitty Hawk to house number 92. The mark is in the NW corner of the property level with the centerline of NC 12 and flush with the ground. It is located 35.8 Ft. E of the centerline of NC 12, 54.0 Ft. S of the S edge of concrete drive to the house and 1 Ft. W of a witness post.

<b>Mean of Inverse Shots – Published Versus APTIM Found</b>				
Monument	No. of Shots	$\Delta N$	$\Delta E$	$\Delta Z$
X 254	4	-0.01	0.06	0.00

<b>CONTROL MONUMENT USED BY APTIM FOR 2020 TOWN OF DUCK TOPOGRAPHIC AND HYDROGRAPHIC SURVEY REPORT JUNE 2020</b>	
<b>DATUMS: NAD83(2011) - NAVD1988 (US SURVEY FEET)</b>	
<b>Designation</b>	Y 254
<b>Stamping</b>	Y 254
<b>Northing</b>	880716.27
<b>Easting</b>	2966184.93
<b>Horizontal Root Mean Square Error</b>	0.10
<b>Elevation</b>	12.15
<b>Vertical Root Mean Square Error</b>	0.05
<b>Description</b>	Proceed along NC 12 for 2.1 mi. N from the intersection of US 154 in Kitty Hawk to house number 160. Station is level with the centerline of NC 12 and flush with the ground. Located 31.5 Ft. E of the centerline of NC 12, 30 Ft. S-SW of the center of concrete drive to house, 8.4 Ft. S of a water meter, 1.2 SW of a witness sign, and 3.3 Ft. W-SW of a power pole with 2 guy wires and a reference tag.

<b>Mean of Inverse Shots – Published Versus APTIM Found</b>				
Monument	No. of Shots	$\Delta N$	$\Delta E$	$\Delta Z$
Y 254	27	-0.02	-0.03	0.03

**TOWN OF DUCK STATION INFORMATION****JUNE 2020****DATUMS: NAD83(2011) / NAVD88 (US SURVEY FEET)**

<b>STATION</b>	<b>NORTHING</b>	<b>EASTING</b>	<b>AZIMUTH</b>
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/-197+12	889616.10	2962839.60	70.00