

**NC DOT HIGHWAY DESIGN BRANCH  
PHOTOGRAMMETRY UNIT  
PROJECT DATA TRANSMITTAL FORM**

MEMORANDUM TO: Location & Surveys Unit  
TIP NUMBER: B-2500  
WBS NUMBER: 13201.1028025

ATTENTION: Andy Spielvogel, PLS  
ATTENTION: Casey Whitley - Div 1  
MISSION NUMBER: M-7250 and M-7252

ROUTE AND DESCRIPTION: Pea Island and Rodanthe Breach, Dare County

THE FOLLOWING PROJECT FILES ARE AVAILABLE AT:  
\\DOT\Dfsroot01\Proj\TIPProjects-B\B-2500\Photogrammetric

**FILES**

**COMMENTS**

b2500\_ph\_pps\_dtp\_meta\_111024.dgn

Meta Data Document

b2500\_ph\_pps\_111024.dgn

Preliminary Plan Sheet Mapping File

b2500\_ph\_pps\_dtp\_111024.dgn

DTP File

b2500\_ph\_pps\_tnp\_111024.tin

TNP File

b2500\_ph\_m\_lay\_111024.dgn

Orthophoto Tile Layout File

b2500\_ph\_m\_111015.sid

MrSid Raster File

b2500\_ph\_m\_111015.sdw

MrSid Ascii File

THE FOLLOWING PROJECT FILES ARE AVAILABLE AT:

**FILES**

**COMMENTS**

**ADDITIONAL COMMENTS:**

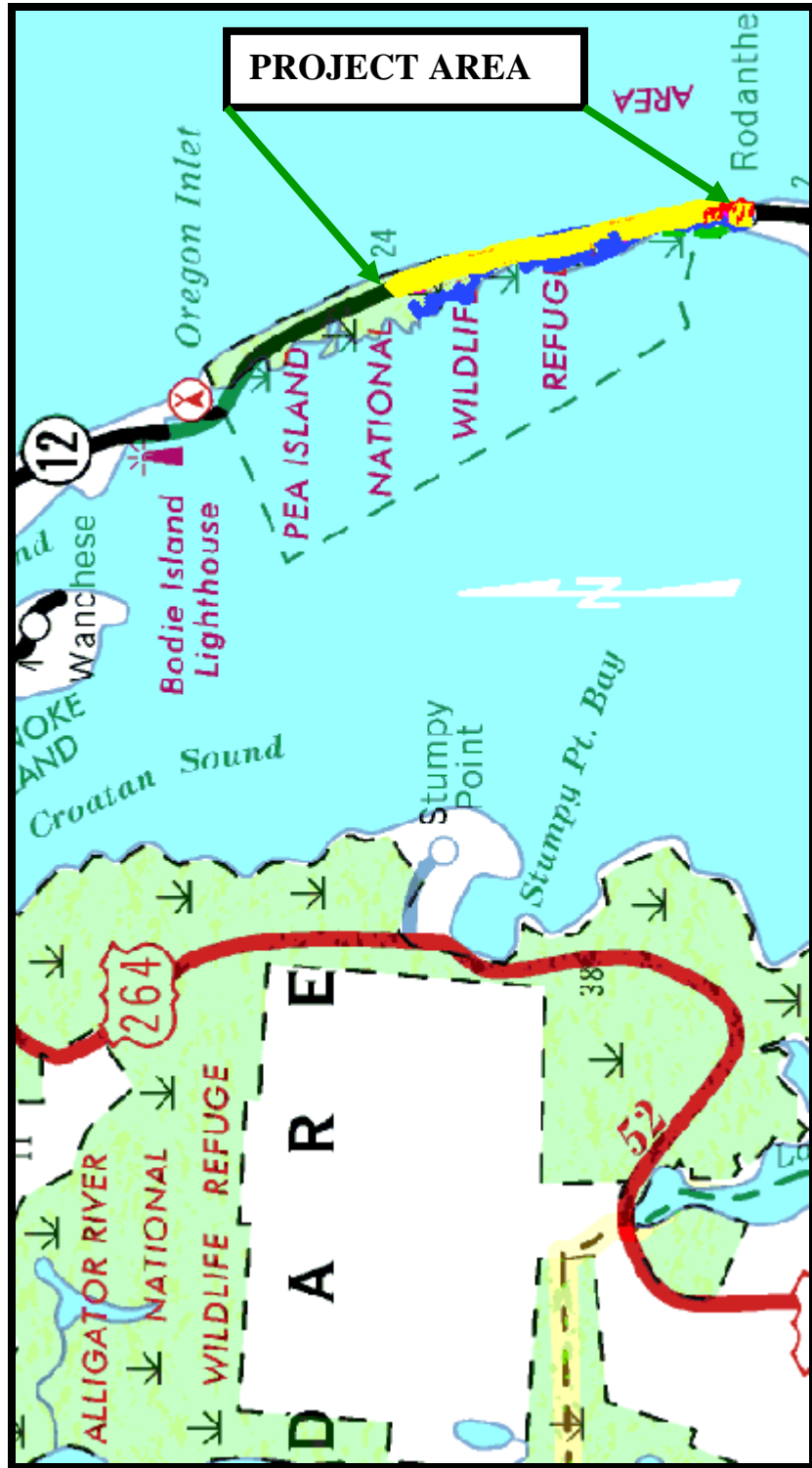
DTP Graphic Extraction Filters:  
PH Exist DTM Point, PH Exist DTM Breakline, PH Exist DTM NCFMP LIDAR Elevation Point.

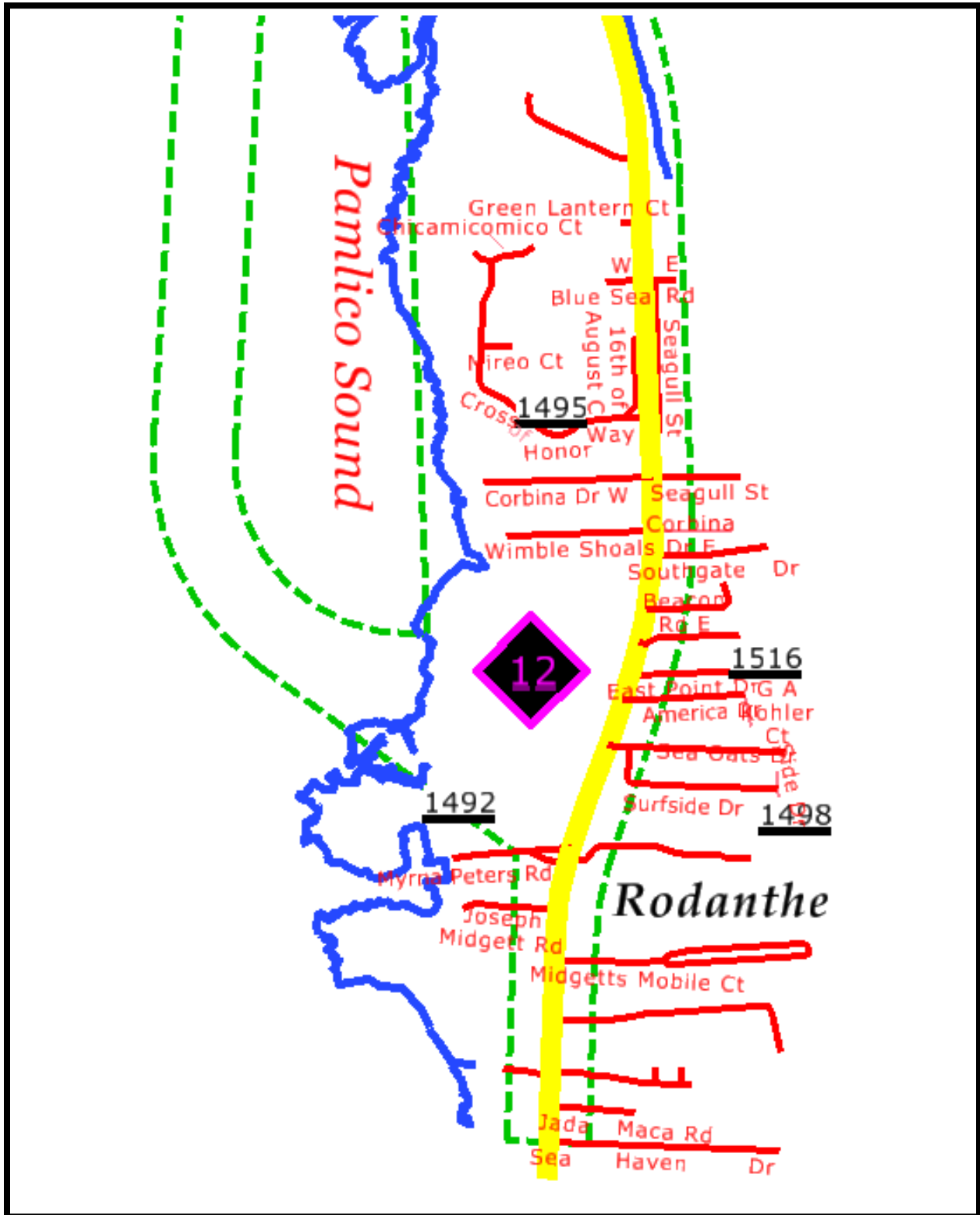
RECEIVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ UNIT: \_\_\_\_\_

CONTACT: Mark Hagwood, PLS  
NCDOT Photogrammetry Unit  
1585 Mail Service Center  
Raleigh, NC 27699-1585

E-MAIL: mhagwood@ncdot.gov  
Phone: 919-707-7099  
Created By: LM  
TRANSMITTAL DATE: 10-24-11

# B-2500 Vicinity Map

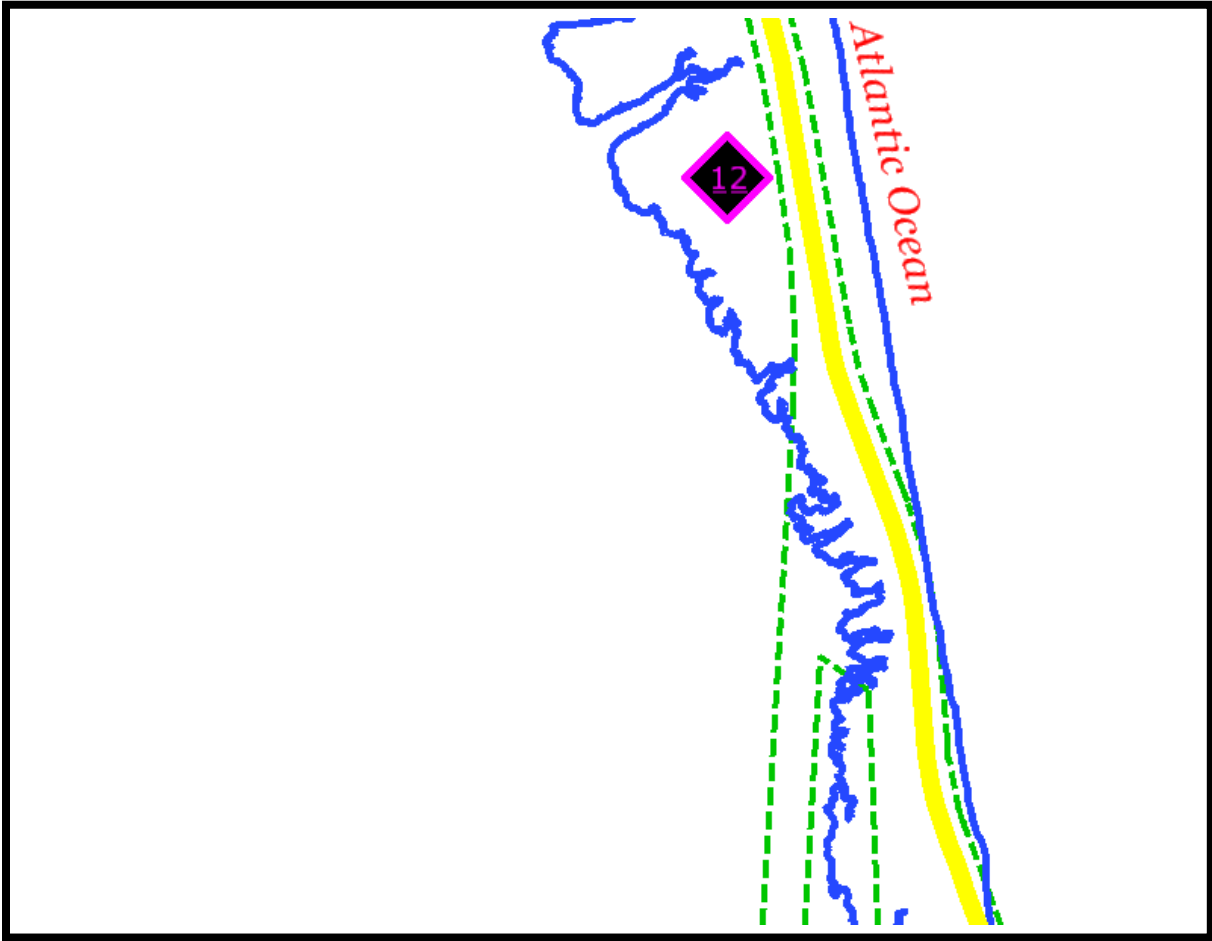




Preliminary Plan Sheet Mapping Limits

**B-2500 Vicinity Map**

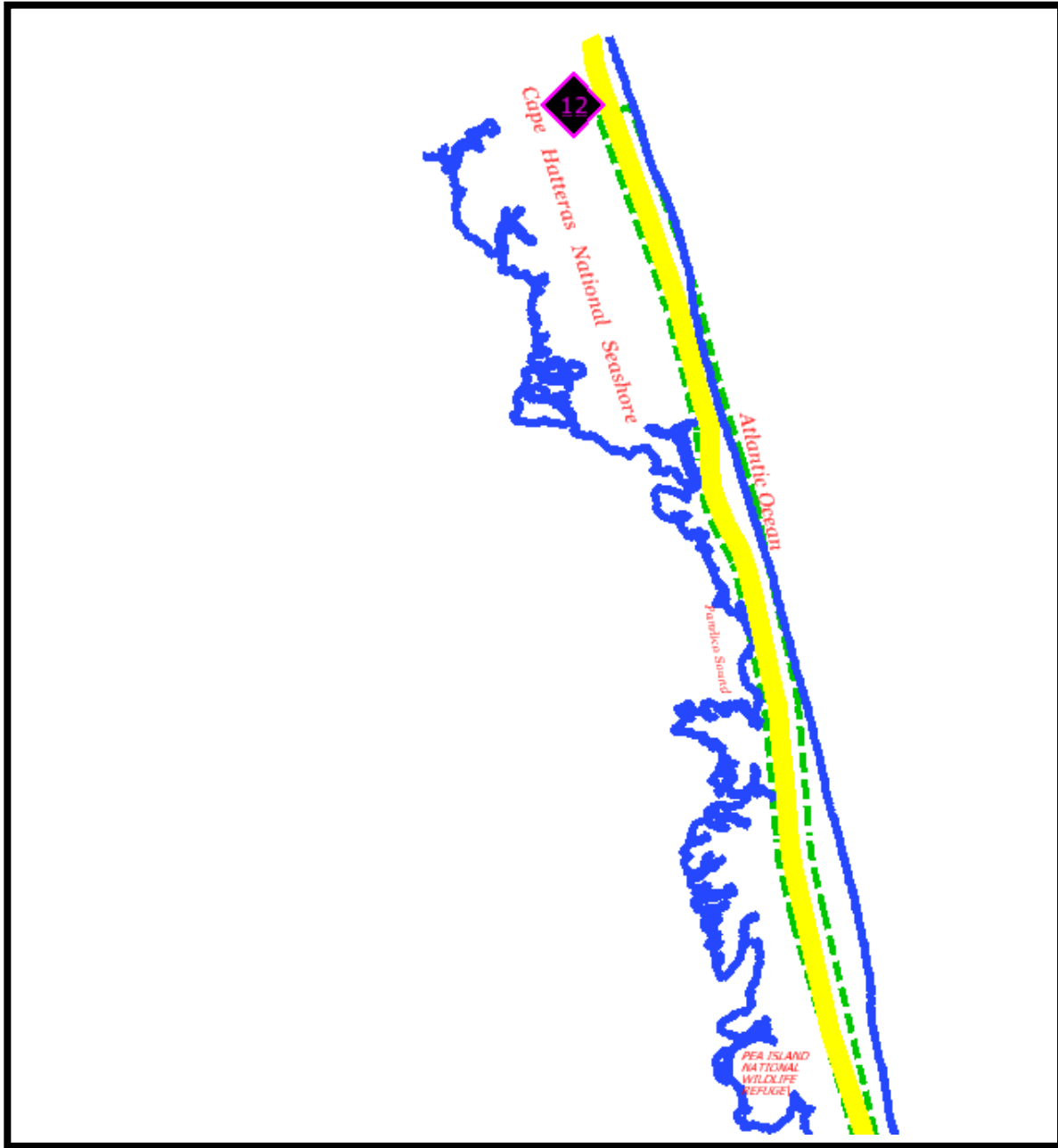
**B**



**----- Preliminary Plan Sheet Mapping Limits**

# B-2500 Vicinity Map

C



**Preliminary Plan Sheet Mapping Limits**

## META DATA REPORT

### CUSTOMER DATA

Branch/Unit: Location & Surveys Unit  
Engineer or Customer: Andy Spielvogel, PLS  
Delivery Date: 10-24-11

### DESCRIPTION

TIP Number: B-2500  
WBS Number: 13201.1028025  
County: Dare  
Division: 1  
Route and Description: Pea Island and Rodanthe Breach, Dare County  
Site Name: N/A  
Quad(s): Pea Island, Rodanthe

### PRODUCT

Type of Work: Preliminary Plan Sheet Mapping, DTP File, TNP File  
Units: English  
Recommended Plotting Scale: 1" = 50'  
Raster Mapping Format: N/A  
Raster Mapping Coverage Area (Acres): 831  
Pixel Resolution (Ground Space): N/A  
Design File Parameters: English V8i-Standard; GO= -1267113.6360, -122681.027, 0.0; MU=Survey Feet  
Tin Parameters: Curve Stroking Tolerance=0.15', Stroking Minimum Linear Distance=20', Triangle Side Length=100'  
Contour Interval: N/A  
Obscured Area Contours: N/A  
Compilation Date: 10-14-11 and 10-21-11  
Photogrammetric Consultant Firm: N/A

### PHOTO DATA

Mission: M-7250 and M-7252  
Type: Color  
Date: 09-30-11 and 10-14-11  
Scale: 1:4234  
Sensor Focal Length: 120 mm  
Sensor Altitude (Project Average): 1,677 ft  
Number of Flight Lines: 3  
Exposures: (M-7250) 0045-0100, 0001-0044 ( M-7252) 0001-0117  
Paneled: Yes

**VECTOR MAPPING CONTROL**

Horizontal Control Type: Ground Surveyed  
Horizontal Control Source: NCDOT Location & Surveys Unit  
Horizontal Datum: NAD 83 (CORS96)  
Grid / Local: Local and Grid  
Localization Point: Centroid1  
Vertical Control Type: Ground Surveyed  
Vertical Control Source: NCDOT Location & Surveys Unit  
Vertical Datum: NAVD88  
GPS Base Station(s): NCBX  
GPS Quality Factor: Q1

**RASTER MAPPING CONTROL**

Horizontal Control Type: Ground Surveyed and Airborne GPS-IMU  
Horizontal Control Source: NCDOT Location & Surveys Unit and Photogrammetry Unit  
Horizontal Datum: NAD83 (CORS96)  
Grid / Local: Local and Grid  
Localization Point: Centroid1  
Vertical Control Type: Ground Surveyed  
Vertical Control Source: Ground Surveyed and Airborne GPS-IMU  
Vertical Datum: NAVD88  
GPS Base Station(s): NCBX  
GPS Quality Factor: Q1  
Rectification Elevation Model Source: NC Floodplain Mapping Program (NCFMP)

**OTHER INCLUDED DATA**

Obscured Area Elevation Data Type: NCFMP LIDAR  
Obscured Area Elevation Data Source: NC Floodplain Mapping Program  
  
Pavement Elevation Data Type: N/A  
Pavement Elevation Data Source:  
  
Property Data Type: N/A  
Property Data Source:  
  
Utility Data Type: N/A  
Utility Data Source:  
  
Hydro Data Type: N/A  
Hydro Data Source:

**COMMENTS**

NC Department of Transportation  
Photogrammetry Unit  
1585 Mail Service Center  
Raleigh, NC 27699-1585

## M-7250 State Plane Coordinates

\*\*\* This text file was generated by TGO v1.63 \*\*\*

TIP Number      b2500ii  
User name        rstalls                      Date 8:16:00 AM 10/3/2011  
Coordinate System US State Plane 1983                      Zone North Carolina 3200  
Horizontal Datum NAD 1983(CORS96)  
Vertical Datum    NAVD88                      Geoid G09NC  
Coordinate Units   US survey feet

### LOCAL SITE INFORMATION

Localized around: N/A  
Latitude  
Longitude  
Site Scale Factor N/A  
Height            -121.307sft

Point	Easting	Northing	Elev.
P1	3049496.503	688295.925	4.117
P10	3049659.750	691773.012	2.756
P11	3050569.857	691933.531	5.405
P12	3049665.609	692716.725	3.787
P13	3050375.118	693005.794	3.517
P14	3050563.257	693001.504	6.444
P14A	3050592.582	693023.419	7.010
P15	3050210.038	693745.472	4.762
P16	3049374.614	693380.988	2.784
P17	3049401.847	694079.788	2.875
P18	3050131.041	694339.448	5.394
P19	3050301.556	694502.652	6.634
P2	3049829.038	688455.010	4.081
P20	3050157.571	694914.131	4.387
P21	3049129.398	695350.316	2.341
P22	3050091.793	695397.312	4.580
P23	3050095.576	695982.979	11.036
P24	3049874.917	696641.111	6.551
P25	3049680.911	696595.209	3.412
P26	3049566.253	697321.486	4.306
P27	3049196.178	698027.218	3.179
P28	3049455.693	698085.165	3.836
P29	3049426.407	698476.988	3.907
P3	3050265.832	688591.040	4.880
P30	3049371.047	699202.616	4.108
P31	3049246.469	700001.038	4.234
P32	3049205.731	700761.848	17.623
P33	3048750.746	701438.473	4.155
P34	3047989.840	702131.737	3.569
P35	3048534.940	702980.641	12.339
P36	3048186.369	703617.006	4.498
P37	3048042.945	704440.239	3.998
P38	3048248.322	704993.512	5.698
P39	3047536.951	705366.669	3.558
P4	3050201.876	689429.112	4.860
P40	3047719.108	706215.302	2.972
P41	3046966.382	706697.438	0.796



P42	3047521.731	706865.710	2.980
P43	3047871.107	706902.540	14.094
P44	3046177.730	711783.358	2.845
P45	3046642.039	711860.357	5.841
P46	3045989.950	712592.951	3.158
P47	3046356.649	713351.208	5.398
P48	3045759.772	713867.880	2.792
P49	3045664.062	714997.461	3.107
P5	3049186.281	690092.822	6.325
P50	3045978.890	715759.334	4.813
P51	3045064.123	716094.780	3.040
P52	3045483.727	716993.907	3.065
P53	3045611.997	718037.579	13.095
P54	3045163.674	718528.906	2.908
P55	3044914.817	719176.626	2.621
P56	3044845.711	720011.856	4.682
P57	3044623.501	720731.084	4.972
P58	3044704.087	721136.729	8.354
P59	3044468.374	721027.655	4.858
P6	3049014.760	690738.765	7.173
P60	3044339.210	720990.051	4.283
P62	3043582.981	722081.648	5.975
P63	3044266.512	722278.820	10.140
P64	3043772.114	722269.247	9.553
P65	3043739.781	722784.069	1.996
P66	3044150.854	723033.687	7.244
P67	3043968.282	724047.618	7.367
P68	3043455.416	723890.963	3.362
P69	3043028.658	723698.891	3.189
P7	3049993.741	690574.670	3.632
P70	3043631.652	724604.790	4.561
P71	3043455.944	725266.161	4.646
P72	3043676.548	725272.536	14.778
P73	3043267.530	726048.593	4.714
P74	3043197.092	726350.301	4.684
P75	3043107.736	726688.247	4.519
P76	3043203.683	726790.927	7.563
P77	3042892.746	727373.807	4.660
P78	3042979.820	727962.475	22.251
P79	3042522.483	728398.288	4.772
P8	3050589.760	690587.380	5.075
P80	3041836.030	728806.312	3.796
P81	3042149.756	729429.087	4.554
P82	3041806.504	730376.502	4.634
P83	3041856.734	731467.471	18.975
P84	3041447.254	731369.074	4.797
P85	3041320.925	731715.932	4.821
P9	3050956.407	690835.076	4.907

## M-7250 Localized Coordinates

\*\*\* This text file was generated by TGO v1.63 \*\*\*

TIP Number      b2500ii  
User name       rstalls                      Date 8:17:16 AM 10/3/2011  
Coordinate System US State Plane 1983(at ground) Zone North Carolina 3200  
Horizontal Datum NAD 1983(CORS96)  
Vertical Datum   NAVD88                      Geoid G09NC  
Coordinate Units US survey feet

### LOCAL SITE INFORMATION

Localized around: CENTROID1  
Latitude        35°39'01.47841"N  
Longitude       75°28'43.23932"W  
Site Scale Factor 1.0000974928  
Combined Factor 0.9999025167  
Height          -121.307sft

Point	Easting	Northing	Elev.
P1	3049496.854	688293.790	4.117
P10	3049660.117	691771.216	2.756
P11	3050570.312	691931.750	5.405
P12	3049665.976	692715.021	3.787
P13	3050375.554	693004.118	3.517
P14	3050563.712	692999.827	6.444
P14A	3050593.039	693021.744	7.010
P15	3050210.458	693743.868	4.762
P16	3049374.953	693379.348	2.784
P17	3049402.188	694078.216	2.875
P18	3050131.453	694337.902	5.394
P19	3050301.985	694501.122	6.634
P2	3049829.421	688452.890	4.081
P20	3050157.986	694912.641	4.387
P21	3049129.713	695348.868	2.341
P22	3050092.202	695395.869	4.580
P23	3050095.985	695981.593	11.036
P24	3049875.305	696639.789	6.551
P25	3049681.280	696593.883	3.412
P26	3049566.610	697320.230	4.306
P27	3049196.499	698026.031	3.179
P28	3049456.040	698083.984	3.836
P29	3049426.751	698475.845	3.907
P3	3050266.258	688588.933	4.880
P30	3049371.385	699201.544	4.108
P31	3049246.795	700000.044	4.234
P32	3049206.053	700760.928	17.623
P33	3048751.024	701437.619	4.155
P34	3047990.044	702130.950	3.569
P35	3048535.197	702979.937	12.339
P36	3048186.592	703616.364	4.498
P37	3048043.154	704439.677	3.998

P38	3048248.551	704993.004	5.698
P39	3047537.111	705366.198	3.558
P4	3050202.295	689427.087	4.860
P40	3047719.285	706214.914	2.972
P41	3046966.486	706697.097	0.796
P42	3047521.889	706865.385	2.980
P43	3047871.299	706902.219	14.094
P44	3046177.757	711783.513	2.845
P45	3046642.112	711860.518	5.841
P46	3045989.959	712593.184	3.158
P47	3046356.694	713351.515	5.398
P48	3045759.759	713868.237	2.792
P49	3045664.039	714997.929	3.107
P5	3049186.601	690090.862	6.325
P50	3045978.898	715759.876	4.813
P51	3045064.041	716095.355	3.040
P52	3045483.686	716994.570	3.065
P53	3045611.969	718038.343	13.095
P54	3045163.602	718529.718	2.908
P55	3044914.721	719177.501	2.621
P56	3044845.608	720012.812	4.682
P57	3044623.377	720732.111	4.972
P58	3044703.971	721137.796	8.354
P59	3044468.235	721028.711	4.858
P6	3049015.064	690736.868	7.173
P60	3044339.058	720991.103	4.283
P62	3043582.755	722082.806	5.975
P63	3044266.353	722279.998	10.140
P64	3043771.907	722270.424	9.553
P65	3043739.570	722785.295	1.996
P66	3044150.684	723034.939	7.244
P67	3043968.094	724048.968	7.367
P68	3043455.177	723892.297	3.362
P69	3043028.378	723700.207	3.189
P7	3049994.140	690572.757	3.632
P70	3043631.431	724606.194	4.561
P71	3043455.706	725267.630	4.646
P72	3043676.331	725274.005	14.778
P73	3043267.274	726050.138	4.714
P74	3043196.828	726351.876	4.684
P75	3043107.464	726689.854	4.519
P76	3043203.420	726792.545	7.563
P77	3042892.453	727375.481	4.660
P78	3042979.536	727964.207	22.251
P79	3042522.153	728400.062	4.772
P8	3050590.217	690585.468	5.075
P80	3041835.633	728808.126	3.796
P81	3042149.390	729430.961	4.554
P82	3041806.105	730378.469	4.634
P83	3041856.340	731469.544	18.975
P84	3041446.820	731371.138	4.797
P85	3041320.478	731718.030	4.821
P9	3050956.900	690833.188	4.907
CENTROID1	3045900.000	710200.000	6.000

## Photogrammetric Aerotriangulation Results

### Photography Data

TIP No: B-2500\_RODANTHE LOCALIZED  
Mission: M-7250  
DOP: 09-30-11  
Exposures: 0045-0100  
Camera: DMC01-0132 (Calibration Date: October 13, 2008)  
Focal Length: 120 mm

### Input Data

	<u>X(omega)</u>	<u>Y(phi)</u>	<u>Z(kappa)</u>
Ground Control Weights(f):	0.10	0.10	0.10
Camera Position Weights(f):			
Camera Attitude (decimal degrees):			
Image Coordinate Weights: 4 microns for both x and y			

### Output Data

	<u>X(omega)</u>	<u>Y(phi)</u>	<u>Z(kappa)</u>
RMS Ground Control (f):	0.04	0.06	0.03
RMS Camera Position Control (f):			
RMS Camera Attitude (decimal degrees):			
Overall Adjustment Sigma: 1.8 microns			

### Control Points not used in Aerotriangulation

All values in (feet)

<u>Point ID</u>	<u>Class</u>	<u>deltaX</u>	<u>deltaY</u>	<u>deltaZ</u>

All points used in adjustment

## Photogrammetric AeroTriangulation Results

### Photography Data

TIP No: B-2500 Pea Island  
Mission: M-7250  
DOP: 9-30-2011  
Exposures: 0001-0044  
Camera: DMC01-0132 (Calibration Date: October 13, 2008)  
Focal Length: 120 mm

### Input Data

	<u>X(omega)</u>	<u>Y(phi)</u>	<u>Z(kappa)</u>
Ground Control Weights(f):	0.10	0.10	0.10
Camera Position Weights(f):			
Camera Attitude (decimal degrees):			
Image Coordinate Weights: 4 microns for both x and y			

### Output Data

	<u>X(omega)</u>	<u>Y(phi)</u>	<u>Z(kappa)</u>
RMS Ground Control (f):	0.05	0.06	0.02
RMS Camera Position Control (f):			
RMS Camera Attitude (decimal degrees):			
Overall Adjustment Sigma: 1.6 microns			

### Control Points not used in Aerotriangulation

All values in (feet)

<u>Point ID</u>	<u>Class</u>	<u>deltaX</u>	<u>deltaY</u>	<u>deltaZ</u>
P65	Z			

Panel destroyed, used as vertical only

## Photogrammetric AeroTriangulation Results

### Photography Data

TIP No: B-2500  
Mission: M-7252  
DOP: 10-14-2011  
Exposures: 0001-0117  
Camera: DMC01-0132 (Calibration Date: October 13, 2008)  
Focal Length: 120 mm

### Input Data

	<u>X(omega)</u>	<u>Y(phi)</u>	<u>Z(kappa)</u>
Ground Control Weights(f):	0.10	0.10	0.10
Camera Position Weights(f):			
Camera Attitude (decimal degrees):			
Image Coordinate Weights: 4 microns for both x and y			

### Output Data

	<u>X(omega)</u>	<u>Y(phi)</u>	<u>Z(kappa)</u>
RMS Ground Control (f):	0.05	0.06	0.04
RMS Camera Position Control (f):			
RMS Camera Attitude (decimal degrees):			
Overall Adjustment Sigma: 2.0 microns			

### Control Points not used in Aerotriangulation

All values in (Feet)

<u>Point ID</u>	<u>Class</u>	<u>deltaX</u>	<u>deltaY</u>	<u>deltaZ</u>
P59	XYZ		Panel missing	
P64	XYZ		Panel missing	
P65	XYZ		Panel missing	
P78	XYZ		Panel missing	

\*\*\* This text file was generated by TGO v1.63 \*\*\*

TIP Number b2500ii  
User name rstalls Date 8:56:59 AM 10/13/2011  
Coordinate System US State Plane 1983(at ground) Zone North Carolina 3200  
Horizontal Datum NAD 1983(CORS96)  
Vertical Datum NAVD88 Geoid G09NC  
Coordinate Units US survey feet

LOCAL SITE INFORMATION

Localized around: CENTROID1  
Latitude 35°39'01.47841"N  
Longitude 75°28'43.23932"W  
Site Scale Factor 1.0000974928  
Combined Factor 0.9999025167  
Height -121.307sft

Point	Easting	Northing	Elev.
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P12	3049665.976	692715.021	3.787
P13	3050375.554	693004.118	3.517
P14	3050563.712	692999.827	6.444
P14A	3050593.039	693021.744	7.010
P15	3050210.458	693743.868	4.762
P16	3049374.953	693379.348	2.784
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P21	3049129.713	695348.868	2.341
P22	3050092.202	695395.869	4.580
P23	3050095.985	695981.593	11.036
P24	3049875.305	696639.789	6.551
P25	3049681.280	696593.883	3.412
P26	3049566.610	697320.230	4.306
P27	3049196.499	698026.031	3.179
P28	3049456.040	698083.984	3.836
P29	3049426.751	698475.845	3.907
P3	3050266.258	688588.933	4.880
P30	3049371.385	699201.544	4.108
P31	3049246.795	700000.044	4.234
P32	3049206.053	700760.928	17.623
P33	3048751.024	701437.619	4.155
P34	3047990.044	702130.950	3.569
P35	3048535.197	702979.937	12.339
P36	3048186.592	703616.364	4.498
P37	3048043.154	704439.677	3.998
P38	3048248.551	704993.004	5.698
P39	3047537.111	705366.198	3.558
P4	3050202.295	689427.087	4.860
P40	3047719.285	706214.914	2.972

P41	3046966.486	706697.097	0.796
P42	3047521.889	706865.385	2.980
P43	3047871.299	706902.219	14.094
P44	3046177.757	711783.513	2.845
P45	3046642.112	711860.518	5.841
P46	3045989.959	712593.184	3.158
P47	3046356.694	713351.515	5.398
P48	3045759.759	713868.237	2.792
P49	3045664.039	714997.929	3.107
P5	3049186.601	690090.862	6.325
P50	3045978.898	715759.876	4.813
P51	3045064.041	716095.355	3.040
P52	3045483.686	716994.570	3.065
P53	3045611.969	718038.343	13.095
P54	3045163.602	718529.718	2.908
P55	3044914.721	719177.501	2.621
P56	3044845.608	720012.812	4.682
P57	3044623.377	720732.111	4.972
P58	3044703.971	721137.796	8.354
P59	3044468.235	721028.711	4.858
P6	3049015.064	690736.868	7.173
P60	3044339.058	720991.103	4.283
P62	3043582.755	722082.806	5.975
P63	3044266.353	722279.998	10.140
P64	3043771.907	722270.424	9.553
P65	3043739.570	722785.295	1.996
P66	3044150.684	723034.939	7.244
P67	3043968.094	724048.968	7.367
P68	3043455.177	723892.297	3.362
P69	3043028.378	723700.207	3.189
P7	3049994.140	690572.757	3.632
P70	3043631.431	724606.194	4.561
P71	3043455.706	725267.630	4.646
P72	3043676.331	725274.005	14.778
P73	3043267.274	726050.138	4.714
P74	3043196.828	726351.876	4.684
P75	3043107.464	726689.854	4.519
P76	3043203.420	726792.545	7.563
P77	3042892.453	727375.481	4.660
P78	3042979.536	727964.207	22.251
P79	3042522.153	728400.062	4.772
P8	3050590.217	690585.468	5.075
P80	3041835.633	728808.126	3.796
P81	3042149.390	729430.961	4.554
P82	3041806.105	730378.469	4.634
P83	3041856.340	731469.544	18.975
P84	3041446.820	731371.138	4.797
P85	3041320.478	731718.030	4.821
P86	3047702.809	707644.872	14.718
P87	3047223.330	707769.827	2.895
P88	3047434.140	708697.266	16.192
P89	3046899.923	708752.345	3.354
P9	3050956.900	690833.188	4.907
P90	3047214.230	709723.543	14.646
P91	3046642.125	709768.927	3.059
P92	3046978.590	710700.725	13.199
P93	3046338.474	711086.866	3.063

P94	3045870.299	709524.018	3.046
P95	3046365.130	708107.928	2.478
CENTROID1	3045900.000	710200.000	6.000