

**FEDERAL EMERGENCY MANAGEMENT AGENCY  
REGION 1  
Boston, Massachusetts**

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**CONNECTICUT COASTLINE  
FIELD SURVEY DATA COLLECTED  
TO QA/QC LIDAR DATA  
FAIRFIELD, NEW HAVEN, MIDDLESEX  
AND NEW LONDON COUNTIES, CONNECTICUT**

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TO QA/QC LIDAR DATA

Fairfield, New Haven, Middlesex  
and New London Counties, Connecticut

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SURVEY REPORT

Field and Post Processing Crew

Michael K. Wilson was the survey party chief collecting control and LIDAR check points and was assisted by Bob Catino. Mr. Wilson was responsible for post processing and adjusting the data. Salvatore Longo was the project manager coordinating and overseeing the survey.

Project Time Frame

Field work started March 13, 2007 and was completed April 24, 2007.

Established Control Monuments

Various established NGS monuments and several CORS stations were used for this project. The published datasheets for the established monuments and CORS station are included in Appendix V.

### Vertical Datum and Coordinate System

The field survey for the LIDAR check points was performed using coordinates in Connecticut State Plane, North American Datum of 1983 (NAD83) and the elevations are referenced to the North American Vertical Datum of 1988 (NAVD88). GEOID03 was used to transform ellipsoidal heights to orthometric.

### Equipment and Software Used

GPS Base – Topcon Legacy-E receiver with LegAnt-2 flat ground plane antenna on 2 meter fixed pole. GPS/GLONASS L1/L2.

GPS Rover – Topcon Hiper GGD on 2 meter fixed pole.

Data Collector – TDS Ranger

Total Station – Topcon GTS-603

Data Collection and point adjustment software – TDS Survey Pro V.4.2.1.

Post Processing Software – Topcon Pinnacle V.02.05.31.

### Field Survey Procedure

A total of 80 check points were established along the Connecticut coastline to act as quality control for the LIDAR flight conducted by Terrapoint USA in December 2006. The survey check points are in one of the four land use categories: 1) Urban, 2) Mixed Vegetation, 3) Bare Earth, and 4) Forest. The check points are distributed throughout the area in 20 clusters with each cluster consisting of a total of four points, one for each of the land use categories. Figure 1, enclosed, shows the limits of the LIDAR mapping, the flight lines, and the location of the check points and base stations.

Six clusters were surveyed in Fairfield, New Haven, and New London Counties and two clusters were surveyed in Middlesex County. A total of 20 clusters and 80 check points were collected for the Connecticut Coastline as follows:

- At least one check point was surveyed twice within each cluster. The calculated elevations for these points differed less than 5 cm.
- Forest checkpoints were surveyed conventionally from points set using GPS.
- Digital photographs were taken to document all check points and control, see Appendix VI.

*Cluster Field Survey Procedure (Field):*

RTK Base Station was placed in open public area; get autonomous base position from receiver and simultaneously record static information at base station for a minimum of two hours. Set RTK Rover using base station autonomous position; set checkpoints using 60D spikes, PK nails, or wooden hubs with PK nails and collected position using RTK Rover. Collect NGS control points as a check for accuracy using a minimum of one horizontal and one vertical and/or one 3D monument.

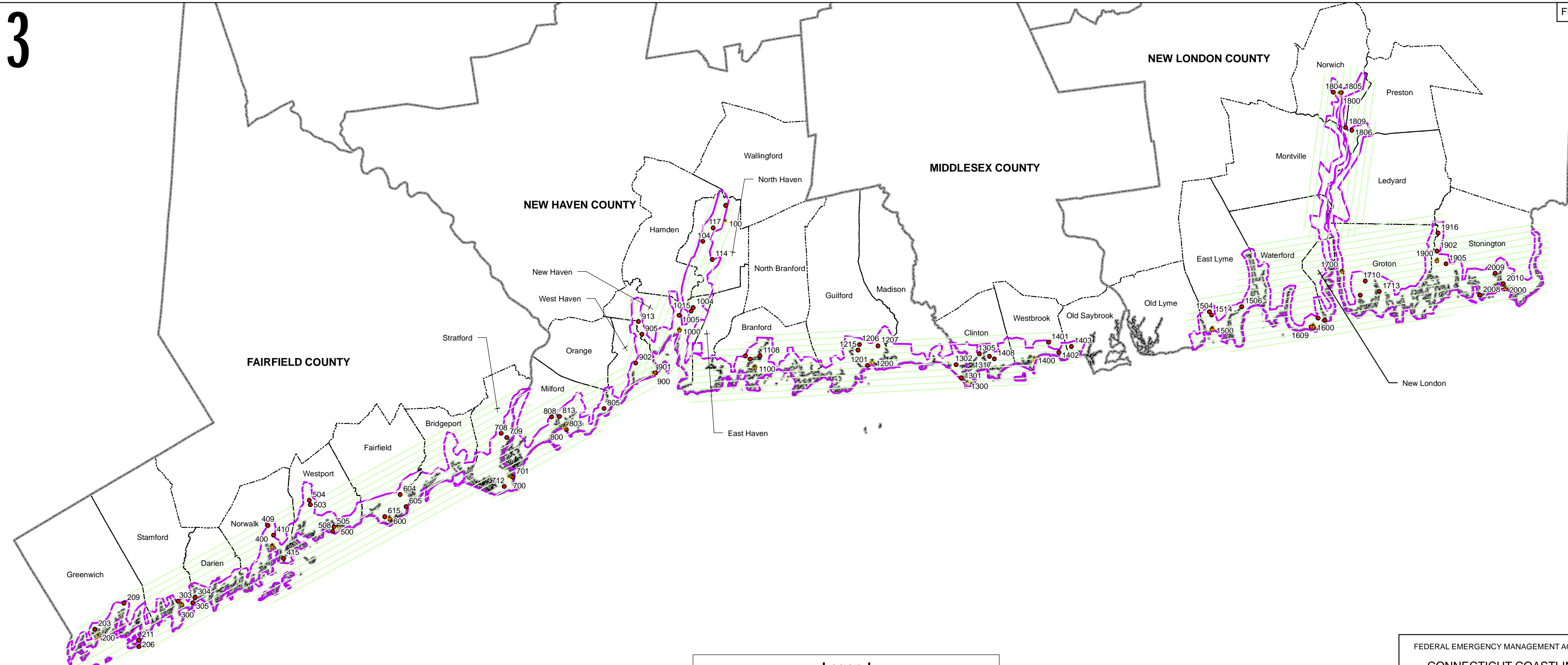
*Cluster Post-Processing Procedures (Office):*

Downloaded static collection from base station; downloaded data from a minimum of three CORS stations for the same time period. Post processed the base station data holding the published value of the CORS station's L1 phase centers fixed. Results give position of base station with average rms errors of s (N) 1.6 mm, s (E) 1.2 mm, and s (U) 3.3 mm; see Appendix II for the Pinnacle Software post processing output for each cluster. The base station static collection data was also uploaded to OPUS for post processing as a check to the Pinnacle Solution. Average deltas between Pinnacle Software and OPUS solutions are s (N) 0.01 sft, s (E) 0.01 sft, and s (Ellipsoid

*Roald Haestad, Inc.*

Height) 0.09 sft; see Appendix IV for the OPUS Solution and Summary Table comparing the results from Pinnacle and OPUS. The last step in the process was to adjust the check points and NGS control points in data collection software holding the processed base station position as horizontal and vertical control. Compare the published NGS values to that of the RTK adjusted values. Average deltas between published values and adjusted surveyed values for the established control monuments are s (N) 0.15 sft, s (E) 0.14 sft, and s (Z orthometric) 0.076 sft; see Appendix I for all the values.

All of the information in the Appendices of this report are also provided in digital format in the enclosed DVD labeled "Connecticut Coastline, Field Survey Data Collected to QA/QC LIDAR Data." See readme.txt file for a listing of contents within each of the folders on the DVD.



**Legend**

- Survey Base Stations
- Survey Check Points
- CT Flight Lines
- CT Project Boundary
- Town Boundary
- County Boundary

FEDERAL EMERGENCY MANAGEMENT AGENCY  
**CONNECTICUT COASTLINE**  
 FIELD SURVEYED QA/QC  
 CHECK POINTS  
 SCALE: 1" = 24,000'  
 ROALD HAESTAD, INC. MAY 2007

**APPENDIX I**

**CONNECTICUT COASTLINE  
FIELD SURVEYED QA/QC CHECK POINTS**



**CONNECTICUT COASTLINE LIDAR CHECK SURVEY  
FINAL QA/QC CHECK POINTS**

Horizontal Datum = Connecticut State Plane, North American Datum of 1983

Vertical Datum = North American Vertical Datum of 1988, Geoid 2003

<b>Point</b>	<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>	<b>Description</b>
104	701,024.59	965,956.87	13.84	MXDVGTN
114	694,849.29	969,128.43	30.92	FOREST
116	713,381.25	973,691.03	37.06	BITLOT
117	705,690.67	969,445.46	15.79	GRASS
203	568,459.23	758,201.28	11.55	GRASS
206	562,532.70	773,218.10	13.13	MXDVEG
209	577,390.57	768,116.70	17.84	BIT_PAVEMNT
211	564,782.14	773,123.04	7.27	FOREST
303	578,077.71	786,572.07	7.47	GRASS
304	579,334.78	792,315.50	7.59	BITLOT
305	577,508.78	791,636.64	5.99	MIXEDVEG
315	576,799.01	787,927.88	6.33	FOREST
401	596,776.31	818,733.75	4.18	MIXEDVEG
409	604,015.24	817,315.50	28.06	BITLOT
410	600,621.06	819,219.86	37.83	GRASS
415	592,670.90	822,624.28	8.72	FOREST
503	610,999.80	831,802.00	5.21	MIXEDVEG
504	612,533.33	831,467.39	8.87	BITLOT
505	603,394.70	839,858.69	13.87	GRASS
508	601,928.85	839,494.63	14.35	FOREST
601	606,093.49	858,934.41	2.46	MIXEDVEG
604	614,524.30	862,472.95	8.67	BITLOT
605	610,400.08	864,465.96	4.45	GRASS
615	606,949.07	857,181.94	5.54	FOREST
701	620,482.65	901,090.01	8.37	MIXEDVEG
708	635,428.93	896,949.22	26.49	GRASS
709	634,021.86	898,858.70	15.95	BITLOT
712	617,264.96	898,009.36	25.69	FOREST
803	636,745.09	919,182.87	6.35	MIXEDVEG
805	643,883.29	932,151.07	19.49	BITLOT
808	641,023.41	914,264.36	29.35	GRASS
813	641,219.40	916,862.68	28.59	FOREST
901	656,129.96	949,672.47	6.76	MIXEDVEG
902	659,464.27	943,002.69	15.94	BITLOT
905	669,273.86	945,128.86	7.38	GRASS
913	673,679.69	943,955.54	11.42	FOREST
1001	670,674.99	957,847.23	5.76	GRASS
1004	678,426.97	962,587.41	4.88	MIXEDVEG
1005	675,725.63	957,773.11	17.76	BITLOT
1015	677,197.89	961,898.12	7.65	FOREST
1101	657,915.56	983,723.20	15.12	GRASS
1102	660,756.86	982,046.79	10.32	MIXEDVEG

**CONNECTICUT COASTLINE LIDAR CHECK SURVEY  
FINAL QA/QC CHECK POINTS**

Horizontal Datum = Connecticut State Plane, North American Datum of 1983

Vertical Datum = North American Vertical Datum of 1988, Geoid 2003

<b>Point</b>	<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>	<b>Description</b>
1103	661,912.70	980,396.86	32.61	BITLOT
1108	661,874.45	985,390.34	7.50	FOREST
1201	658,594.06	1,022,184.07	4.92	BAREEARTHGRAVLOT
1206	665,780.55	1,019,445.26	23.94	BITLOT
1207	665,391.65	1,025,776.04	71.62	MIXEDVEG
1215	663,883.11	1,018,873.48	17.19	FOREST
1301	654,358.43	1,054,184.01	7.11	MIXEDVEG
1302	658,892.80	1,052,424.09	8.45	GRASS
1305	662,640.60	1,060,382.41	22.97	BITLOT
1317	661,752.62	1,063,852.76	14.81	FOREST
1401	666,561.91	1,083,987.05	33.34	GRASS
1402	663,081.23	1,087,496.58	6.77	MIXEDVEG
1403	665,119.18	1,091,832.44	21.72	BITLOT
1408	660,845.99	1,065,521.98	12.31	FOREST
1501	671,003.55	1,139,839.99	10.46	GRASS
1504	676,933.19	1,139,000.53	12.70	MIXEDVEG
1506	678,704.43	1,150,038.58	19.83	BITLOT
1514	675,866.22	1,139,803.27	16.43	FOREST
1603	674,816.96	1,176,087.21	33.04	GRASS
1604	674,073.36	1,178,421.20	5.23	BITLOT
1609	671,800.56	1,173,737.63	2.61	MIXEDVEG
1610	671,652.24	1,174,624.17	31.45	FOREST
1701	690,752.92	1,184,348.72	126.41	GRASS
1704	682,644.82	1,190,514.58	3.83	MIXEDVEG
1710	687,506.54	1,192,221.21	17.06	BITLOT
1713	683,881.16	1,197,067.68	9.44	FOREST
1804	752,011.06	1,181,279.81	93.81	BITLOT
1805	751,929.63	1,184,095.01	6.64	GRASS
1806	739,021.00	1,187,683.25	59.11	MIXEDVEG
1809	739,930.43	1,185,513.18	76.66	FOREST
1901	694,331.59	1,216,767.08	54.41	GRASS
1902	697,746.44	1,216,699.63	19.54	BITLOT
1905	693,373.62	1,219,832.62	12.73	MIXEDVEG
1916	703,923.71	1,217,076.71	4.97	FOREST
2001	684,767.06	1,240,006.07	2.29	MIXEDVEG
2008	682,624.15	1,231,429.72	4.91	BITLOT
2009	690,122.33	1,236,671.22	5.41	GRASS
2010	686,532.86	1,239,477.00	33.73	FOREST

**CONNECTICUT COASTLINE LIDAR CHECK SURVEY  
ALL POINTS COLLECTED**

Horizontal Datum = Connecticut State Plane, North American Datum of 1983

Vertical Datum = North American Vertical Datum of 1988, Geoid 2003

Point	Northing	Easting	Elevation	Description	Δ N	Δ E	Δ Z
100	707,518.79	973,518.51	47.46				
102	696,030.96	960,028.72	195.17	LX6542	0.10	0.05	
103	696,030.95	960,028.72	195.20	LX6542_CHK	0.00	0.01	0.03
104	701,024.59	965,956.87	13.84	MXDVGTN			
105	700,776.91	965,779.31	17.36	LX1627			-0.02
106	700,776.96	965,779.30	17.26	LX1627_CHK	0.05	-0.02	-0.10
107	702,534.34	971,785.08	43.20	LX2863			0.02
108	702,534.33	971,785.08	43.29	LX2863_CHK	0.00	-0.01	0.09
109	694,711.78	969,145.89	31.63	FORSTCONV1			
110	694,614.85	969,051.13	31.56	FORSTCONV2			
111	701,024.59	965,956.86	13.87	CHK_PT104	0.00	-0.01	0.03
114	694,849.29	969,128.43	30.92	FOREST			
115	694,849.30	969,128.43	30.94	FORESTCHK	0.01	0.00	0.01
116	713,381.25	973,691.03	37.06	BITLOT			
117	705,690.67	969,445.46	15.79	GRASS			
118	701,024.58	965,956.87	13.86	PT104CHK4_11_07	-0.01	0.00	0.02
119	700,776.91	965,779.28	17.46	LX1627CHK4_11_07	0.00	-0.03	0.09
120	694,711.76	969,145.86	31.61	PT109CHK4_11_07	-0.02	-0.03	-0.02
121	694,614.80	969,051.11	31.56	PT110CHK4_11_07	-0.05	-0.02	-0.01
200	565,945.49	759,245.29	7.30				
201	570,500.43	755,254.72	80.86	LX1147			0.06
202	570,500.40	755,254.71	80.86	LX1147CHK	-0.03	-0.01	0.00
203	568,459.23	758,201.28	11.55	GRASS			
204	562,516.02	772,841.34	10.22	LX7439	-0.05	-0.61	
205	562,516.03	772,841.33	10.20	LX7439CHK	0.00	-0.01	-0.02
206	562,532.70	773,218.10	13.13	MXDVEG			
207	564,725.14	773,214.46	5.84	FORSTCONV1			
208	564,703.74	773,320.59	6.52	FORSTCONV2			
209	577,390.57	768,116.70	17.84	BIT_PAVEMNT			
210	568,459.21	758,201.26	11.58	CHKPT203	-0.02	-0.02	0.03
211	564,782.14	773,123.04	7.27	FOREST			
212	564,782.13	773,123.06	7.27	FORESTCHK	-0.01	0.02	-0.01
300	576,876.17	787,710.10	6.18				
301	576,832.69	787,800.71	6.47	FORSTCONV1			
302	576,971.54	787,757.66	6.12	FORSTCONV2			
303	578,077.71	786,572.07	7.47	GRASS			
304	579,334.78	792,315.50	7.59	BITLOT			
305	577,508.78	791,636.64	5.99	MIXEDVEG			
306	583,984.24	797,416.67	59.01	LX0771			-0.07
307	583,984.26	797,416.64	59.05	LX0771CHK	0.01	-0.03	0.04
308	581,429.17	789,343.67	130.20	LX7428	-0.16	-0.15	
309	581,429.13	789,343.66	130.18	LX7428CHK	-0.04	-0.01	-0.02
310	576,832.70	787,800.70	6.45	PT301CHK	0.01	-0.01	-0.01
311	576,971.54	787,757.63	6.05	PT302CHK	0.00	-0.02	-0.07
312	578,077.71	786,572.04	7.45	PT303CHK	0.00	-0.02	-0.02
313	579,334.82	792,315.50	7.51	PT304CHK	0.04	0.00	-0.08
314	577,508.79	791,636.68	5.98	PT305CHK	0.01	0.04	-0.01
315	576,799.01	787,927.88	6.33	FOREST			
316	576,799.03	787,927.90	6.33	FORESTCHK	0.02	0.02	0.00
400	596,713.40	818,648.70	6.15				

**CONNECTICUT COASTLINE LIDAR CHECK SURVEY  
ALL POINTS COLLECTED**

Horizontal Datum = Connecticut State Plane, North American Datum of 1983

Vertical Datum = North American Vertical Datum of 1988, Geoid 2003

Point	Northing	Easting	Elevation	Description	Δ N	Δ E	Δ Z
401	596,776.31	818,733.75	4.18	MIXEDVEG			
402	592,613.79	822,496.52	8.30	FORESTCONV1			
403	592,589.10	822,366.23	8.79	FORESTCONV2			
404	603,805.44	816,759.44	40.74	LX1857			0.03
405	603,805.41	816,759.46	40.73	LX1857CHK	-0.02	0.01	0.00
406	599,401.45	812,526.28	123.29	LX0782			-0.10
407	581,429.10	789,343.61	130.10	LX7428	-0.23	-0.21	
408	581,429.04	789,343.59	130.41	LX7428CHK	-0.07	-0.02	0.31
409	604,015.24	817,315.50	28.06	BITLOT			
410	600,621.06	819,219.86	37.83	GRASS			
411	592,613.82	822,496.53	8.22	PT402CHK	0.03	0.01	-0.08
412	592,589.08	822,366.16	8.81	PT403CHK	-0.03	-0.07	0.02
413	592,613.83	822,496.53	8.24	PT402CHK2	0.04	0.01	-0.06
414	596,776.31	818,733.75	4.22	PT401CHK	0.00	0.00	0.03
415	592,670.90	822,624.28	8.72	FOREST			
416	592,670.91	822,624.28	8.73	FORESTCHK	0.00	0.00	0.01
500	602,985.99	840,800.10	10.29				
501	602,187.72	839,662.38	24.04	FORESTCONV1			
502	601,863.32	839,788.25	15.79	FORESTCONV2			
503	610,999.80	831,802.00	5.21	MIXEDVEG			
504	612,533.33	831,467.39	8.87	BITLOT			
505	603,394.70	839,858.69	13.87	GRASS			
506	601,489.88	840,076.01	11.45	LX7472	0.01	0.09	
507	605,880.51	839,653.17	33.86	LX0813			-0.01
508	601,928.85	839,494.63	14.35	FOREST			
509	601,928.80	839,494.59	14.35	FORESTCHK	-0.05	-0.03	0.00
510	602,187.83	839,662.32	24.03	FORESTCONV1CHK	0.11	-0.06	-0.01
511	601,863.39	839,788.18	15.72	FORESTCONV2CHK	0.07	-0.07	-0.07
512	610,999.77	831,802.00	5.29	MIXEDVEGCHK	-0.04	0.00	0.08
513	612,533.25	831,467.46	8.84	BITLOTCHK	-0.08	0.07	-0.04
514	603,394.59	839,858.74	13.89	GRASSCHK	-0.12	0.04	0.02
515	601,489.79	840,076.09	11.44	LX7472CHK	-0.09	0.08	-0.01
600	606,408.92	858,756.91	8.00				
601	606,093.49	858,934.41	2.46	MIXEDVEG			
602	606,857.00	857,146.30	5.72	FORESTCONV1			
603	606,734.72	857,099.84	6.15	FORESTCONV2			
604	614,524.30	862,472.95	8.67	BITLOT			
605	610,400.08	864,465.96	4.45	GRASS			
606	601,489.85	840,076.06	11.47	LX7472	-0.02	0.14	
607	601,489.85	840,076.05	11.50	LX7472CHK	0.00	-0.01	0.03
608	613,203.34	860,851.11	18.40	LX0829			0.04
609	613,203.38	860,851.07	18.43	LX0829CHK	0.04	-0.03	0.03
610	606,856.98	857,146.30	5.67	FORESTCONV1CHK	-0.02	0.00	-0.05
611	606,734.74	857,099.86	6.18	FORESTCONV2CHK	0.01	0.02	0.03
612	606,093.44	858,934.26	2.43	MIXEDVEGCHK	-0.06	-0.15	-0.04
613	606,093.47	858,934.25	2.42	MIXEDVEGCHK2	-0.03	-0.16	-0.04
614	606,093.47	858,934.25	2.43	MIXEDVEGCHK3	-0.03	-0.16	-0.03
615	606,949.07	857,181.94	5.54	FOREST			
616	606,949.08	857,181.95	5.54	FORESTCHK	0.01	0.00	0.00
700	619,988.28	899,634.36	11.59				

**CONNECTICUT COASTLINE LIDAR CHECK SURVEY  
ALL POINTS COLLECTED**

Horizontal Datum = Connecticut State Plane, North American Datum of 1983

Vertical Datum = North American Vertical Datum of 1988, Geoid 2003

Point	Northing	Easting	Elevation	Description	Δ N	Δ E	Δ Z
701	620,482.65	901,090.01	8.37	MIXEDVEG			
702	616,349.62	902,746.02	20.39	LX3693	-0.14	0.04	
703	616,349.62	902,746.03	20.39	LX3693CHK	0.00	0.01	0.00
704	617,231.19	898,135.26	27.52	FORESTCON1			
705	617,325.42	898,194.93	29.45	FORESTCON2			
706	620,424.40	895,691.21	10.56	LX0868			0.17
707	620,424.46	895,691.29	10.42	LX0868CHK	0.06	0.08	-0.14
708	635,428.93	896,949.22	26.49	GRASS			
709	634,021.86	898,858.70	15.95	BITLOT			
710	620,482.65	901,089.97	8.26	PT701CHK	0.01	-0.04	-0.11
711	620,482.64	901,089.96	8.28	PT701CHK2	-0.01	-0.05	-0.09
712	617,264.96	898,009.36	25.69	FOREST			
713	617,264.96	898,009.39	25.69	FORESTCHK	-0.01	0.03	0.00
800	637,559.74	918,472.53	10.46				
801	637,623.87	918,359.23	7.27	LX0900	-0.01	0.08	0.01
802	637,621.22	918,360.02	7.23	LX0901			0.03
803	636,745.09	919,182.87	6.35	MIXEDVEG			
805	643,883.29	932,151.07	19.49	BITLOT			
806	641,475.81	916,939.13	29.54	FORSTCONV1			
807	641,475.41	917,278.11	29.81	FORSTCONV2			
808	641,023.41	914,264.36	29.35	GRASS			
809	643,883.17	932,151.09	19.55	PT805CHK	-0.11	0.02	0.07
810	636,745.10	919,182.88	6.47	PT803CHK	0.01	0.00	0.12
811	636,745.10	919,182.89	6.53	PT803CHK2	0.01	0.01	0.18
812	636,745.11	919,182.89	6.45	PT803CHK3	0.01	0.02	0.10
813	641,219.40	916,862.68	28.59	FOREST			
814	641,219.40	916,862.67	28.59	FORESTCHK	0.00	0.00	0.00
900	655,638.52	948,899.33	9.21				
901	656,129.96	949,672.47	6.76	MIXEDVEG			
902	659,464.27	943,002.69	15.94	BITLOT			
903	659,779.05	942,166.75	36.64	VERTCONV1			
904	659,673.90	942,208.81	32.72	VERTCONV2			
905	669,273.86	945,128.86	7.38	GRASS			
906	673,605.08	943,850.71	5.63	FORESTCONV1			
907	673,481.99	943,856.49	3.50	FORESTCONV2			
908	651,924.18	957,691.96	19.75	LX7598	0.40	0.18	
909	656,129.99	949,672.51	6.70	PT901CHK	0.03	0.04	-0.06
910	659,464.26	943,002.69	15.94	PT902CHK	-0.01	0.01	0.01
911	659,777.31	942,038.12	36.36	LX0369DWN2.48FT			-0.03
912	659,777.30	942,038.09	36.36	LX0369DWN2.48FT	-0.01	-0.03	0.00
913	673,679.69	943,955.54	11.42	FOREST			
914	673,679.68	943,955.53	11.42	FORESTCHK	-0.01	-0.01	0.00
1000	670,632.77	957,820.37	5.11				
1001	670,674.99	957,847.23	5.76	GRASS			
1002	677,040.14	961,946.87	11.60	FORESTCONV1			
1003	676,959.16	962,055.14	12.44	FORESTCONV2			
1004	678,426.97	962,587.41	4.88	MIXEDVEG			
1005	675,725.63	957,773.11	17.76	BITLOT			
1006	675,982.55	957,645.17	16.50	VERTCONV1			
1007	651,924.20	957,691.97	19.79	LX7598	0.42	0.19	

**CONNECTICUT COASTLINE LIDAR CHECK SURVEY  
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1008	651,924.19	957,691.96	19.79	LX7598CHK	-0.01	-0.01	-0.01
1009	670,675.02	957,847.23	5.74	PT1001CHK	0.03	0.00	-0.02
1010	677,040.21	961,946.90	11.65	PT1002CHK	0.06	0.03	0.05
1011	676,959.21	962,055.17	12.45	PT1003CHK	0.05	0.03	0.01
1012	678,426.98	962,587.42	4.86	PT1004CHK	0.02	0.01	-0.02
1013	675,725.61	957,773.10	17.78	PT1005CHK	-0.01	-0.01	0.02
1014	675,982.53	957,645.17	16.44	PT1006CHK	-0.03	-0.01	-0.06
1015	677,197.89	961,898.12	7.65	FOREST			
1016	677,197.88	961,898.13	7.65	FORESTCHK	-0.01	0.00	0.00
1017	676,043.80	957,320.97	12.68	LX1621			-0.02
1018	676,043.80	957,320.97	12.69	LX1621CHK	0.00	0.00	0.00
1100	657,906.34	983,654.50	14.79				
1101	657,915.56	983,723.20	15.12	GRASS			
1102	660,756.86	982,046.79	10.32	MIXEDVEG			
1103	661,912.70	980,396.86	32.61	BITLOT			
1104	661,992.67	985,088.45	12.70	LX0413			0.15
1105	661,945.26	985,456.80	10.48	FORESTCONV1			
1106	656,644.92	993,629.19	6.08	LX6423	-0.09	-0.14	
1107	656,644.90	993,629.19	6.12	LX6423CHK	-0.02	0.00	0.04
1108	661,874.45	985,390.34	7.50	FOREST			
1109	661,874.46	985,390.35	7.50	FORESTCHK	0.01	0.01	0.00
1110	657,915.49	983,723.22	15.14	PT1101CHK	-0.07	0.02	0.02
1111	660,756.85	982,046.78	10.28	PT1102CHK	-0.01	-0.01	-0.04
1112	661,912.68	980,396.89	32.55	PT1103CHK	-0.02	0.02	-0.06
1113	661,992.65	985,088.47	12.61	LX0413CHK	-0.01	0.02	-0.09
1114	661,945.30	985,456.78	10.54	PT1105CHK	0.04	-0.02	0.06
1200	659,759.24	1,023,709.11	4.68				
1201	658,594.06	1,022,184.07	4.92	BAREEARTHGRAVLOT			
1202	657,734.31	1,022,654.76	7.71	LX6270	-0.11	0.05	
1203	657,734.28	1,022,654.79	7.71	LX6270CHK	-0.02	0.02	0.00
1204	663,804.33	1,018,765.56	16.13	FORESTCONV1			
1205	663,685.14	1,018,803.63	14.42	FORESTCONV2			
1206	665,780.55	1,019,445.26	23.94	BITLOT			
1207	665,391.65	1,025,776.04	71.62	MIXEDVEG			
1208	666,060.15	1,025,284.31	85.36	LX0438			-0.21
1209	666,060.15	1,025,284.34	85.33	LX0438CHK	0.01	0.03	-0.03
1210	658,594.05	1,022,184.06	4.98	PT1201CHK	-0.01	-0.01	0.06
1211	663,804.26	1,018,765.55	16.32	PT1204CHK	-0.06	-0.01	0.18
1212	663,804.24	1,018,765.54	16.34	PT1204CHK2	-0.08	-0.02	0.21
1213	663,685.15	1,018,803.64	14.50	PT1205CHK	0.02	0.01	0.08
1214	665,780.59	1,019,445.30	23.99	PT1206CHK	0.04	0.04	0.05
1215	663,883.11	1,018,873.48	17.19	FOREST			
1216	663,883.12	1,018,873.50	17.19	FORESTCHK	0.01	0.01	0.00
1300	652,551.35	1,056,139.26	11.24				
1301	654,358.43	1,054,184.01	7.11	MIXEDVEG			
1302	658,892.80	1,052,424.09	8.45	GRASS			
1303	661,374.24	1,056,095.71	15.95	LX0466	-0.01	0.06	0.20
1304	662,249.70	1,058,973.18	27.19	LX0467			0.12
1305	662,640.60	1,060,382.41	22.97	BITLOT			
1306	661,658.11	1,063,872.54	16.02	FORESTCONV1			

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1307	661,634.44	1,063,970.28	15.32	FORESTCONV2			
1308	660,770.87	1,079,027.35	7.27	BASE1400SS	-0.01	0.00	0.02
1309	661,634.47	1,063,970.27	15.34	PT1307CHK	0.03	-0.02	0.02
1310	661,658.10	1,063,872.51	16.03	PT1306CHK	-0.01	-0.03	0.01
1311	662,640.61	1,060,382.43	22.92	PT1305CHK	0.01	0.02	-0.05
1312	662,249.67	1,058,973.22	27.23	PT1304CHK	-0.03	0.03	0.05
1313	661,374.27	1,056,095.73	15.87	PT1303CHK	0.02	0.02	-0.08
1314	661,374.27	1,056,095.71	15.88	PT1303CHK2	0.03	0.01	-0.08
1315	658,892.79	1,052,424.08	8.39	PT1302CHK	-0.01	-0.01	-0.05
1316	654,358.48	1,054,183.99	7.10	PT1301CHK	0.05	-0.02	-0.02
1317	661,752.62	1,063,852.76	14.81	FOREST			
1318	661,752.60	1,063,852.77	14.81	FORESTCHK	-0.02	0.00	0.00
1400	660,770.88	1,079,027.35	7.25				
1401	666,561.91	1,083,987.05	33.34	GRASS			
1402	663,081.23	1,087,496.58	6.77	MIXEDVEG			
1403	665,119.18	1,091,832.44	21.72	BITLOT			
1404	660,890.40	1,065,580.15	13.04	FORESTCONV1			
1405	661,030.50	1,065,395.45	14.54	FORESTCONV2			
1406	661,374.20	1,056,095.70	15.86	LX0466	-0.05	0.05	0.11
1407	661,374.25	1,056,095.68	15.92	LX0466CHK	0.05	-0.02	0.05
1408	660,845.99	1,065,521.98	12.31	FOREST			
1409	660,846.01	1,065,521.98	12.31	FORESTCHK	0.02	0.01	0.00
1410	666,561.91	1,083,987.07	33.35	PT1401CHK	0.00	0.02	0.01
1411	663,081.19	1,087,496.57	6.77	PT1402CHK	-0.03	-0.01	0.00
1412	665,119.18	1,091,832.40	21.76	PT1403CHK	0.00	-0.05	0.04
1500	670,980.97	1,139,975.14	7.77				
1501	671,003.55	1,139,839.99	10.46	GRASS			
1502	676,023.74	1,139,756.29	19.95	FORESTCONV1			
1503	676,230.49	1,139,740.20	22.07	FORESTCONV2			
1504	676,933.19	1,139,000.53	12.70	MIXEDVEG			
1505	669,386.09	1,135,120.20	23.53	LX0121			0.08
1506	678,704.43	1,150,038.58	19.83	BITLOT			
1507	669,546.35	1,138,318.46	25.93	LX5421	-0.31	0.12	
1508	669,546.35	1,138,318.46	25.92	LX5421CHK	0.00	0.00	-0.01
1509	671,003.55	1,139,840.00	10.45	PT1501CHK	0.00	0.01	-0.01
1510	676,023.72	1,139,756.28	20.03	PT1502CHK	-0.01	-0.01	0.08
1511	676,230.47	1,139,740.20	22.12	PT1503CHK	-0.02	-0.01	0.05
1512	676,933.18	1,139,000.54	12.65	PT1504CHK	-0.02	0.00	-0.05
1513	669,386.05	1,135,120.21	23.46	PT1505CHK	-0.04	0.01	-0.07
1514	675,866.22	1,139,803.27	16.43	FOREST			
1515	675,866.21	1,139,803.25	16.43	FOREST	-0.01	-0.02	0.00
1600	671,962.02	1,174,321.89	32.11				
1601	671,759.20	1,174,480.19	33.50	FORESTCIN1			
1602	671,882.44	1,174,308.60	31.07	FORESTCONV2			
1603	674,816.96	1,176,087.21	33.04	GRASS			
1604	674,073.36	1,178,421.20	5.23	BITLOT			
1605	686,046.28	1,175,525.96	125.33	LX0146			-0.02
1606	686,046.26	1,175,525.96	125.28	LX0146CHK	-0.02	0.00	-0.05
1607	670,581.97	1,169,263.73	3.53	LX5416	0.03	0.34	
1608	670,581.99	1,169,263.75	3.53	LX5416CHK	0.02	0.01	0.00

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1609	671,800.56	1,173,737.63	2.61	MIXEDVEG			
1610	671,652.24	1,174,624.17	31.45	FOREST			
1611	671,652.23	1,174,624.18	31.45	FORESTCHK	-0.01	0.01	0.00
1612	671,759.19	1,174,480.18	33.48	PT1601CHK	-0.02	-0.01	-0.02
1613	671,882.47	1,174,308.62	31.02	PT1602CHK	0.03	0.02	-0.04
1614	674,816.96	1,176,087.19	32.99	PT1603CHK	0.00	-0.02	-0.05
1700	690,659.69	1,184,219.58	130.11				
1701	690,752.92	1,184,348.72	126.41	GRASS			
1702	676,636.79	1,187,848.97	29.82	LX5210	-0.02	0.00	
1703	676,636.78	1,187,848.95	29.84	LX5210CHK	0.00	-0.02	0.02
1704	682,644.82	1,190,514.58	3.83	MIXEDVEG			
1705	683,800.26	1,196,813.65	7.87	FORESTCONV1			
1706	683,948.80	1,196,623.77	1.90	FORESTCONV2			
1707	687,563.89	1,196,604.37	18.00	LX3421			-0.10
1708	687,564.02	1,196,604.42	18.09	LX3421CHK	0.12	0.05	0.09
1709	687,564.01	1,196,604.41	18.11	LX3421CHK2	0.12	0.03	0.11
1710	687,506.54	1,192,221.21	17.06	BITLOT			
1711	690,752.94	1,184,348.71	126.29	PT1701CHK	0.02	0.00	-0.12
1712	690,752.94	1,184,348.73	126.37	PT1701CHK2	0.03	0.01	-0.03
1713	683,881.16	1,197,067.68	9.44	FOREST			
1714	683,881.13	1,197,067.66	9.45	FORESTCHK	-0.02	-0.02	0.01
1800	751,310.18	1,183,237.90	30.60				
1801	751,296.63	1,183,244.55	30.07	LX3397			0.03
1802	742,746.87	1,182,767.35	2.40	LX7637	-0.51	-0.02	
1803	742,746.87	1,182,767.37	2.46	LX7637CHK	0.00	0.02	0.06
1804	752,011.06	1,181,279.81	93.81	BITLOT			
1805	751,929.63	1,184,095.01	6.64	GRASS			
1806	739,021.00	1,187,683.25	59.11	MIXEDVEG			
1807	740,169.86	1,185,587.84	77.32	FORESTCONV1			
1808	740,173.94	1,185,230.87	77.33	FORESTCONV2			
1809	739,930.43	1,185,513.18	76.66	FOREST			
1810	739,930.41	1,185,513.17	76.66	FORESTCHK	-0.02	-0.01	0.00
1811	752,011.04	1,181,279.82	93.87	PT1804CHK	-0.02	0.01	0.05
1812	751,929.65	1,184,095.04	6.71	PT1805CHK	0.02	0.03	0.07
1813	751,296.60	1,183,244.54	30.05	PT1801CHK	-0.03	-0.01	-0.02
1900	694,388.85	1,216,781.58	53.98				
1901	694,331.59	1,216,767.08	54.41	GRASS			
1902	697,746.44	1,216,699.63	19.54	BITLOT			
1903	704,057.08	1,217,041.31	6.75	FORESTCONV1			
1904	704,285.27	1,217,110.55	8.22	FORESTCONV2			
1905	693,373.62	1,219,832.62	12.73	MIXEDVEG			
1906	689,400.60	1,217,029.88	10.81	LW0720			-0.07
1907	689,400.59	1,217,029.89	10.81	LW0720CHK	-0.01	0.01	0.00
1908	685,135.58	1,222,630.00	27.42	LW3409	0.32	0.11	
1909	685,135.31	1,222,629.95	26.92	LW3409CHK	-0.26	-0.05	-0.50
1910	693,373.61	1,219,832.58	12.72	PT1905CHK	-0.01	-0.04	-0.01
1911	704,056.98	1,217,041.37	6.68	PT1903CHK	-0.10	0.07	-0.07
1912	704,285.26	1,217,110.57	8.15	PT1904CHK	-0.01	0.02	-0.07
1913	697,746.37	1,216,699.64	19.44	PT1902CHK	-0.07	0.02	-0.10
1914	697,746.40	1,216,699.63	19.48	PT1902CHK2	-0.04	0.00	-0.05



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1915	694,331.57	1,216,767.07	54.39	PT1901CHK	-0.02	-0.02	-0.02
1916	703,923.71	1,217,076.71	4.97	FOREST			
1917	703,923.70	1,217,076.72	4.97	FORESTCHK	-0.01	0.00	0.00
2000	684,829.25	1,240,021.33	4.04				
2001	684,767.06	1,240,006.07	2.29	MIXEDVEG			
2002	686,437.04	1,239,458.21	34.57	FORESTCONV1			
2003	686,667.08	1,239,402.99	31.15	FORESTCONV2			
2004	689,001.56	1,229,870.26	12.76	LW0726			0.12
2005	689,001.60	1,229,870.27	12.71	LW0726CHK	0.04	0.01	-0.06
2006	683,095.39	1,225,273.58	1.25	LW3405	0.02	-0.24	
2007	683,095.31	1,225,273.57	1.29	LW3405CHK	-0.08	-0.01	0.04
2008	682,624.15	1,231,429.72	4.91	BITLOT			
2009	690,122.33	1,236,671.22	5.41	GRASS			
2010	686,532.86	1,239,477.00	33.73	FOREST			
2011	686,532.86	1,239,477.00	33.74	FORESTCHK	0.00	0.00	0.01
2012	686,437.09	1,239,458.20	34.51	PT2002CHK	0.06	-0.01	-0.06
2013	686,667.08	1,239,403.03	31.16	PT2003CHK	-0.01	0.05	0.00
2014	684,767.11	1,240,006.07	2.32	PT2001CHK	0.05	0.00	0.03

**MONUMENTS**

PID	Northing	Easting	Elevation
LX1627			17.38
LX2863			43.18
LX6542	696,030.86	960,028.67	
LX1147			80.80
LX7439	562,516.07	772,841.95	
LX0771			59.08
LX7428	581,429.33	789,343.82	
LX1857			40.71
LX0782			123.39
LX7472	601,489.87	840,075.92	
LX0813			33.87
LX0829			18.36
LX3693	616,349.76	902,745.98	
LX0868			10.39
LX0900	637,623.88	918,359.15	7.26
LX0901			7.20
LX7598	651,923.78	957,691.78	
LX0369			36.39
LX1621			12.70
LX0413			12.55
LX6423	656,645.01	993,629.33	
LX6270	657,734.42	1,022,654.71	
LX0438			85.57
LX0466	661,374.25	1,056,095.65	15.75
LX0467			27.07
LX5421	669,546.66	1,138,318.34	
LX0121			23.45

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<b>Point</b>	<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>	<b>Description</b>	<b>Δ N</b>	<b>Δ E</b>	<b>Δ Z</b>
LX5416	670,581.94	1,169,263.39					
LX0146			125.35				
LX5210	676,636.81	1,187,848.97					
LX3421			18.10				
LX3397			30.04				
LX7637	742,747.38	1,182,767.37					
LW0720			10.88				
LW3409	685,135.26	1,222,629.89					
LW0726			12.64				
LW3405	683,095.37	1,225,273.82					

**CONNECTICUT COASTLINE  
EXISTING MONUMENTS  
USED IN QA/QC FIELD SURVEY**

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DATE	CLUSTER	LOCATION	PID	H order	V order	PUBLISHED VALUES		Elev.(sFt)
						Northing(sFt)	Easting(sFt)	
3/13/2007	1	North Haven	LX1627					17.38
			LX2863					43.18
			LX6542	1st		696,030.86	960,028.67	
4/2/2007	2	Greenwich	LX1147					80.80
			LX7439	2nd		562,516.07	772,841.95	
4/3/2007	3	Stamford	LX0771					59.08
			LX7428	1st		581,429.33	789,343.82	
4/5/2007	4	Norwalk	LX1857					40.71
			LX0782					123.39
			LX7428	1st		581,429.33	789,343.82	
4/5/2007	5	Westport	LX7472	B				
			LX0813			601,489.87	840,075.92	33.87
4/6/2007	6	Fairfield	LX7472	B				
			LX0829			601,489.87	840,075.92	18.36
4/6/2007	7	Stratford	LX3693	1st				
			LX0868			616,349.76	902,745.98	10.39
4/9/2007	8	Milford	LX0900	A				7.26
			LX0901			637,623.88	918,359.15	7.20
4/10/2007	9	West Haven	LX7598	1st				
			LX0369			651,923.78	957,691.78	36.39
4/11/2007	10	New Haven	LX7598	1st				
			LX1621			651,923.78	957,691.78	12.70
4/13/2007	11	Branford	LX0413					12.55
			LX6423	3rd		656,645.01	993,629.33	
4/13/2007	12	Guilford	LX6270	1st				
			LX0438			657,734.42	1,022,654.71	85.57
4/18/2007	13	Madison	LX0466	1st				15.75
			LX0467			661,374.25	1,056,095.65	27.07
4/18/2007	14	Westbrook	LX0466	1st				15.75
						661,374.25	1,056,095.65	
4/19/2007	15	East Lyme	LX5421	3rd				
			LX0121			669,546.66	1,138,318.34	23.45
4/20/2007	16	Waterford	LX5416	3rd				
			LX0146			670,581.94	1,169,263.39	125.35
4/20/2007	17	Groton	LX5210	A				
			LX3421			676,636.81	1,187,848.97	18.10
4/23/2007	18	Norwich	LX3397					30.04
			LX7637	3rd		742,747.38	1,182,767.37	
4/24/2007	19	Mystic	LW0720					10.88
			LW3409	2nd		685,135.26	1,222,629.89	
4/24/2007	20	Stonington	LW0726					12.64
			LW3405	3rd		683,095.37	1,225,273.82	

## **APPENDIX II**

### **NETWORK ADJUSTMENTS CLUSTERS 1 THROUGH 20**

ADJUSTMENT SUMMARY

Item Name	Item Value
SubNet	
Name	New Subnet
Number of points	6
Number of unknowns	3
Degree of freedom	42
Declared adjustment type	with fixed and weighted points
Aposteriori standard error of unit weight	0.294
Adjustment Date and Time	3.May.07 12:37:21
Reference points	
Number	5
Plane coordinates - fixed	10
Heights - fixed	5
Plane coordinates - weighted	0
Heights - weighted	0
Apriori standard error of unit weight	1.000
Processed vectors	
Total number	15
Unused vectors	0
Rejected vectors	0
Downweighted vectors	0
Apriori standard error of unit weight	1.000
Aposteriori standard error of unit weight	0.062
Vectors' VPV test	
Confidence level (%)	95
Lower bound	16.79
Upper bound	46.98
Degree of freedom	30
VPV	0.12
VPV test	failed
Vectors' Tau test	
Confidence level (%)	95
Tau critical value	3.06
Number of flagged observations	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTBR		41°29'49.86446"N	73°25'05.67398"W	53.4200	0.0	0.0	0.0	0	0	0
2	CTDA		41°03'57.06991"N	73°30'25.94231"W	-13.1600	0.0	0.0	0.0	0	0	0
3	CTGU		41°17'21.74249"N	72°40'04.44445"W	-18.0000	0.0	0.0	0.0	0	0	0
4	CTNE		41°40'24.71766"N	72°42'52.25227"W	41.8500	0.0	0.0	0.0	0	0	0
5	log0313a_IRY8		41°24'10.19998"N	72°50'47.49812"W	-15.1281	1.3	0.9	2.5	22	-15	-27
6	NYRH		40°55'24.08901"N	72°42'50.56086"W	-7.8400	0.0	0.0	0.0	0	0	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTBR		742590.80193	816940.51688	175.26212	0.000	0.000	0.000	0	0	0
2	CTDA		585635.43431	791193.15386	-43.17577	0.000	0.000	0.000	0	0	0
3	CTGU		666173.46667	1022562.42746	-59.05500	0.000	0.000	0.000	0	0	0
4	CTNE		806142.80905	1009694.65733	137.30288	0.000	0.000	0.000	0	0	0
5	log0313a_IRY8		707518.79087	973518.50929	-49.63291	0.004	0.003	0.008	22	-15	-27

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

#	Stations from - to	Coordinates (m)				Sigmas (mm)			Corr.(%)		
		X	Y	Z	Length	s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z
1	CTBR-CTDA	1837.0164	-32370.8648	-36042.2821	48479.8270	10.6	24.9	18.2	-31	32	-63
2	CTBR-CTGU	64459.9674	3756.1526	-17361.5414	66862.6891	12.2	30.1	21.3	-22	26	-66
3	CTBR-CTNE	52348.2286	29536.2618	14642.2251	61863.7418	12.8	27.0	22.3	-32	33	-66
4	CTBR-log0313a_IRY8	47715.2143	7272.7827	-7899.6914	48908.4877	10.8	24.6	19.0	-28	30	-58
5	CTBR-NYRH	68712.9413	-22918.5125	-47982.7178	86885.3712	14.7	32.5	26.2	-28	32	-68
6	CTDA-CTGU	62622.9515	36127.0106	18680.7453	74671.0465	13.1	31.3	23.1	-34	24	-64
7	CTDA-CTNE	50511.2122	61907.1280	50684.5060	94619.2063	15.4	34.5	26.5	-34	30	-63
8	CTDA-log0313a_IRY8	45878.1991	39643.6478	28142.5887	66846.3407	11.4	29.6	22.5	-25	23	-58
9	CTDA-NYRH	66875.9254	9452.3519	-11940.4358	68587.9753	12.5	30.3	21.8	-28	25	-67
10	CTGU-CTNE	-12111.7382	25780.1109	32003.7643	42843.3104	9.4	21.6	16.4	-29	29	-62
11	CTGU-log0313a_IRY8	-16744.7516	3516.6333	9461.8460	19551.9806	4.0	9.7	8.1	-29	27	-57
12	CTGU-NYRH	4252.9743	-26674.6656	-30621.1776	40832.3657	8.5	21.1	15.4	-23	26	-66
13	CTNE-log0313a_IRY8	-4633.0136	-22263.4791	-22541.9157	32019.7639	6.7	15.7	13.2	-31	33	-54
14	CTNE-NYRH	16364.7129	-52454.7728	-62624.9444	83313.8085	14.6	31.4	26.0	-29	29	-65
15	NYRH-log0313a_IRY8	-20997.7257	30191.2948	40083.0242	54397.3124	10.5	26.3	20.7	-26	27	-56
Mean weight matrix's estimations:						9.1	21.5	17.0	-29	28	-60

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)				Sigmas (mm)			Corr.(%)		
		N	E	U	Length	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTBR-CTDA	-47899.0375	-7477.4799	-251.2425	48479.8270	13.0	10.4	27.9	22	-30	-23
2	CTBR-CTGU	-22807.0699	62851.2454	-421.5554	66862.6891	14.8	12.8	33.5	26	-33	-33
3	CTBR-CTNE	19824.6962	58600.4018	-311.2636	61863.7418	14.2	12.2	32.3	13	-16	-16
4	CTBR-log0313a_IRY8	-10320.8265	47806.4353	-255.8385	48908.4877	13.8	10.8	27.9	23	-23	-22
5	CTBR-NYRH	-63485.3460	59314.8516	-653.4180	86885.3712	16.4	14.5	38.4	18	-18	-21
6	CTDA-CTGU	25161.6964	70302.6265	-441.5111	74671.0465	16.5	12.7	35.3	10	-28	-26
7	CTDA-CTNE	67788.7274	66008.0587	-647.1662	94619.2063	18.5	14.7	39.7	13	-24	-19
8	CTDA-log0313a_IRY8	37633.4805	55245.1841	-352.1859	66846.3407	16.6	12.0	33.0	23	-22	-34
9	CTDA-NYRH	-15520.7580	66807.8187	-363.0295	68587.9753	15.0	12.6	34.1	17	-30	-30
10	CTGU-CTNE	42667.0240	-3881.6482	-84.3493	42843.3104	11.5	9.5	24.6	20	-24	-26
11	CTGU-log0313a_IRY8	12616.3062	-14936.8012	-27.0896	19551.9806	5.7	4.1	11.2	20	-12	-28
12	CTGU-NYRH	-40646.7766	-3886.7776	-120.8446	40832.3657	10.5	9.0	23.7	25	-28	-35
13	CTNE-log0313a_IRY8	-30056.4009	-11038.9826	-137.5098	32019.7639	9.5	6.6	18.2	25	-13	-23
14	CTNE-NYRH	-83311.6736	39.5756	-595.1118	83313.8085	16.6	14.4	37.3	15	-15	-22
15	NYRH-log0313a_IRY8	53256.7559	-11078.2696	-239.7618	54397.3124	15.3	11.0	29.6	27	-18	-31
Mean weight matrix's estimations:						11.9	9.1	24.6	21	-19	-27

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTBR-CTDA	48479.8270	188°52'22.02"	- 0°17'48.96"	13.3	10.0	28.0	14	31	18
2	CTBR-CTGU	66862.6891	109°56'40.23"	- 0°21'40.47"	11.9	15.7	33.5	-11	-21	39
3	CTBR-CTNE	61863.7418	71°18'32.99"	- 0°17'17.82"	13.0	13.5	32.3	-20	-21	11
4	CTBR-log0313a_IRY8	48908.4877	102°10'56.97"	- 0°17'58.97"	10.3	14.2	27.8	-11	-18	25
5	CTBR-NYRH	86885.3712	136°56'42.40"	- 0°25'51.22"	14.1	16.7	38.4	13	-1	26
6	CTDA-CTGU	74671.0465	70°18'26.76"	- 0°20'19.60"	13.7	15.7	35.3	-24	-35	20
7	CTDA-CTNE	94619.2063	44°14'15.04"	- 0°23'30.80"	17.9	15.5	39.6	-22	-30	6
8	CTDA-log0313a_IRY8	66846.3407	55°44'13.14"	- 0°18'06.73"	15.2	13.8	33.0	-38	-37	6



cluster1

CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -4581509.8999
		h -59.0550	Z = 4186611.9309
		H _**_	
-----			
Pt# 0 COORDINATES	N = 742590.8019	N 41°29'49.86446"	X = 14696313.3007
CTBR	E = 816940.5169	W 73°25'05.67398"	Y = -49355195.3560
		h 175.2621	Z = 45251012.6735
		H _**_	
	Az = 71°45'08.91172"	NSFA = 71°18'32.98957"	D X= -43564963.4967
	O = - 0°26'35.10489"	NSBA = 251°46'34.52387"	D Y= +146979579.9928
	t-T Con = +0.81727"	Ell Dist = 202963.0919	D Z= -134620455.7860
	Dist = 665879.9917	Delta h = -37.9592	S D= 204018553.3116
	Scale= 0.999983341915	Delta H = _**_	
		Gnd Dist= 202964.6078	
		Rad(A) = 6385051.1049	
		Skew Con = +0.00154"	
		GsFA = 71°18'32.99323"	
		Gsc Dist = 202963.0919	
		GsBA = 251°46'34.52753"	
-----			
Pt# 4 COORDINATES	N = 806142.8090	N 41°40'24.71766"	X = 1417685.8696
CTNE	E = 1009694.6573	W 72°42'52.25227"	Y = -4555729.7752
		h 137.3029	Z = 4218615.6851
		H _**_	
-----			
Pt# 0 COORDINATES	N = 742590.8019	N 41°29'49.86446"	X = 14696313.3007
CTBR	E = 816940.5169	W 73°25'05.67398"	Y = -49355195.3560
		h 175.2621	Z = 45251012.6735
		H _**_	
	Az = 102°37'31.44221"	NSFA = 102°10'56.98775"	D X= -43580163.6319
	O = - 0°26'35.10489"	NSBA = 282°33'39.43943"	D Y= +146906537.2109
	t-T Con = -0.65042"	Ell Dist = 160459.9511	D Z= -134694412.0443
	Dist = 526435.3815	Delta h = -224.8950	S D= 204018004.0424
	Scale= 0.999983341915	Delta H = _**_	
		Gnd Dist= 160460.4328	
		Rad(A) = 6386454.9507	
		Skew Con = +0.00038"	
		GsFA = 102°10'56.98618"	
		Gsc Dist = 160459.9511	
		GsBA = 282°33'39.43786"	
-----			
Pt# 1 COORDINATES	N = 707518.7909	N 41°24'10.19998"	X = 1413052.8591
log0313a_IRY8	E = 973518.5093	W 72°50'47.49812"	Y = -4577993.2597
		h -49.6329	Z = 4196073.7725
		H _**_	
-----			
Pt# 0 COORDINATES	N = 742590.8019	N 41°29'49.86446"	X = 14696313.3007
CTBR	E = 816940.5169	W 73°25'05.67398"	Y = -49355195.3560
		h 175.2621	Z = 45251012.6735
		H _**_	
	Az = 137°23'14.83498"	NSFA = 136°56'42.42018"	D X= -43511273.5898
	O = - 0°26'35.10489"	NSBA = 317°24'32.65100"	D Y= +146807484.5973



cluster1

t-T Con = -2.69008"	Ell Dist = 285055.3269	D Z= -134825917.7617
Dist = 935229.1444	Delta h = -200.9839	S D= 204018863.2541
Scale= 0.999983341915	Delta H = _**_	
	Gnd Dist= 285056.3455	
	Rad(A) = 6374662.1446	
	Skew Con = +0.00048"	
	GsFA = 136°56'42.40816"	
	Gsc Dist = 285055.3269	
	GsBA = 317°24'32.63897"	

Pt# 5 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 1434050.5860
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -4608184.5567
		h -25.7217	Z = 4155990.7497
		H _**_	

Pt# 2 COORDINATES	N = 585635.4343	N 41°03'57.06991"	X = 14716086.6882
CTDA	E = 791193.1539	W 73°30'25.94231"	Y = -49703631.0288
		h -43.1758	Z = 44863058.3368
		H _**_	

Az = 70°48'35.25743"	NSFA = 70°18'26.75972"	D X= -43590100.0768
O = - 0°30'07.46183"	NSBA = 250°51'36.12382"	D Y= +148038159.0705
t-T Con = +1.03588"	Ell Dist = 244983.8404	D Z= -133452641.2500
Dist = 803758.0691	Delta h = -15.8792	S D= 204022059.6463
Scale= 1.000016261299	Delta H = _**_	
	Gnd Dist= 244983.2420	
	Rad(A) = 6384592.7159	
	Skew Con = -0.00070"	
	GsFA = 70°18'26.76538"	
	Gsc Dist = 244983.8404	
	GsBA = 250°51'36.12948"	

Pt# 3 COORDINATES	N = 666173.4667	N 41°17'21.74249"	X = 1429797.6122
CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -4581509.8999
		h -59.0550	Z = 4186611.9309
		H _**_	

Pt# 2 COORDINATES	N = 585635.4343	N 41°03'57.06991"	X = 14716086.6882
CTDA	E = 791193.1539	W 73°30'25.94231"	Y = -49703631.0288
		h -43.1758	Z = 44863058.3368
		H _**_	

Az = 44°44'25.76747"	NSFA = 44°14'15.02371"	D X= -43629836.6856
O = - 0°30'07.46183"	NSBA = 224°45'41.11707"	D Y= +148122739.3627
t-T Con = +3.28193"	Ell Dist = 310429.0761	D Z= -133347642.2663
Dist = 1018467.1070	Delta h = +180.4786	S D= 204023288.5322
Scale= 1.000016261299	Delta H = _**_	
	Gnd Dist= 310429.7742	
	Rad(A) = 6374833.9953	
	Skew Con = +0.00256"	
	GsFA = 44°14'15.03792"	
	Gsc Dist = 310429.0761	
	GsBA = 224°45'41.13129"	

Pt# 4 COORDINATES	N = 806142.8090	N 41°40'24.71766"	X = 1417685.8696
CTNE	E = 1009694.6573	W 72°42'52.25227"	Y = -4555729.7752
		h 137.3029	Z = 4218615.6851

cluster1

		H	-**-	
Pt#	2 COORDINATES	N = 585635.4343	N 41°03'57.06991"	X = 14716086.6882
CTDA		E = 791193.1539	W 73°30'25.94231"	Y = -49703631.0288
			h -43.1758	Z = 44863058.3368
			H	-**-
		Az = 56°14'23.10300"	NSFA = 55°44'13.13412"	D X= -43645036.8208
		O = - 0°30'07.46183"	NSBA = 236°10'20.87912"	D Y= +148049696.5808
		t-T Con = +2.50705"	Ell Dist = 219312.1738	D Z= -133421598.5246
		Dist = 719528.6220	Delta h = -6.4571	S D= 204021873.4587
		Scale= 1.000016261299	Delta H =	-**-
			Gnd Dist= 219311.6874	
			Rad(A) = 6379623.3993	
			Skew Con = -0.00086"	
			GsFA = 55°44'13.14075"	
			Gsc Dist = 219312.1738	
			GsBA = 236°10'20.88575"	
Pt#	1 COORDINATES	N = 707518.7909	N 41°24'10.19998"	X = 1413052.8591
log0313a_IRY8		E = 973518.5093	W 72°50'47.49812"	Y = -4577993.2597
			h -49.6329	Z = 4196073.7725
			H	-**-
Pt#	2 COORDINATES	N = 585635.4343	N 41°03'57.06991"	X = 14716086.6882
CTDA		E = 791193.1539	W 73°30'25.94231"	Y = -49703631.0288
			h -43.1758	Z = 44863058.3368
			H	-**-
		Az = 103°34'50.80610"	NSFA = 103°04'44.12866"	D X= -43576146.7787
		O = - 0°30'07.46183"	NSBA = 283°35'57.24288"	D Y= +147950643.9672
		t-T Con = -0.78439"	Ell Dist = 225026.0769	D Z= -133553104.2420
		Dist = 738296.7451	Delta h = +17.4540	S D= 204021335.3330
		Scale= 1.000016261299	Delta H =	-**-
			Gnd Dist= 225025.7064	
			Rad(A) = 6386117.2934	
			Skew Con = +0.00021"	
			GsFA = 103°04'44.12533"	
			Gsc Dist = 225026.0769	
			GsBA = 283°35'57.23954"	
Pt#	5 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 1434050.5860
NYRH		E = 1009936.7522	W 72°42'50.56086"	Y = -4608184.5567
			h -25.7217	Z = 4155990.7497
			H	-**-
Pt#	3 COORDINATES	N = 666173.4667	N 41°17'21.74249"	X = 15390151.8510
CTGU		E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
			h -59.0550	Z = 45064135.5161
			H	-**-
		Az = 354°44'50.06756"	NSFA = 354°48'06.49985"	D X= -45841332.1405
		O = 0°03'15.97091"	NSBA = 174°46'15.34642"	D Y= +146846934.3258
		t-T Con = -0.46138"	Ell Dist = 140561.3670	D Z= -134007342.9789
		Dist = 461152.5645	Delta h = +196.3579	S D= 204018180.1349

cluster1

	Scale= 0.999992181193	Delta H =	__**_	
		Gnd Dist=	140561.6298	
		Rad(A) =	6363438.9335	
		Skew Con =	-0.00046"	
		GsFA =	354°48'06.49932"	
		Gsc Dist =	140561.3670	
		GsBA =	174°46'15.34590"	
Pt# 4 COORDINATES	N = 806142.8090	N	41°40'24.71766"	X = 1417685.8696
CTNE	E = 1009694.6573	W	72°42'52.25227"	Y = -4555729.7752
		h	137.3029	Z = 4218615.6851
		H	__**_	
Pt# 3 COORDINATES	N = 666173.4667	N	41°17'21.74249"	X = 15390151.8510
CTGU	E = 1022562.4275	W	72°40'04.44445"	Y = -49314764.8758
		h	-59.0550	Z = 45064135.5161
		H	__**_	
	Az = 310°07'53.62925"	NSFA = 310°11'09.50139"	D X= -45856532.2757	
	O = 0°03'15.97091"	NSBA = 130°04'04.69573"	D Y= +146773891.5439	
	t-T Con = +0.09876"	Ell Dist = 64146.9569	D Z= -134081299.2372	
	Dist = 210453.1642	Delta h = +9.4221	S D= 204017625.7004	
	Scale= 0.999992181193	Delta H =	__**_	
		Gnd Dist=	64146.7903	
		Rad(A) =	6377349.3933	
		Skew Con =	+0.00091"	
		GsFA =	310°11'09.50079"	
		Gsc Dist =	64146.9569	
		GsBA =	130°04'04.69513"	
Pt# 1 COORDINATES	N = 707518.7909	N	41°24'10.19998"	X = 1413052.8591
log0313a_IRY8	E = 973518.5093	W	72°50'47.49812"	Y = -4577993.2597
		h	-49.6329	Z = 4196073.7725
		H	__**_	
Pt# 3 COORDINATES	N = 666173.4667	N	41°17'21.74249"	X = 15390151.8510
CTGU	E = 1022562.4275	W	72°40'04.44445"	Y = -49314764.8758
		h	-59.0550	Z = 45064135.5161
		H	__**_	
	Az = 185°24'28.39180"	NSFA = 185°27'43.91796"	D X= -45787642.2336	
	O = 0°03'15.97091"	NSBA = 5°25'54.70280"	D Y= +146674838.9303	
	t-T Con = +0.44474"	Ell Dist = 133964.4444	D Z= -134212804.9546	
	Dist = 439521.2453	Delta h = +33.3333	S D= 204017385.4609	
	Scale= 0.999992181193	Delta H =	__**_	
		Gnd Dist=	133964.1730	
		Rad(A) =	6363459.4944	
		Skew Con =	-0.00009"	
		GsFA =	185°27'43.91847"	
		Gsc Dist =	133964.4444	
		GsBA =	5°25'54.70330"	
Pt# 5 COORDINATES	N = 532803.4044	N	40°55'24.08901"	X = 1434050.5860
NYRH	E = 1009936.7522	W	72°42'50.56086"	Y = -4608184.5567
		h	-25.7217	Z = 4155990.7497
		H	__**_	

cluster1

Pt# 4 COORDINATES	N = 806142.8090	N 41°40'24.71766"	X = 15259782.6604
CTNE	E = 1009694.6573	W 72°42'52.25227"	Y = -49037271.0338
		h 137.3029	Z = 45408619.6821
		H -**-	
	Az = 200°08'36.33537"	NSFA = 200°10'01.37500"	D X= -45428812.6897
	O = 0°01'24.70434"	NSBA = 20°04'46.22724"	D Y= +145863480.4973
	t-T Con = -0.33530"	Ell Dist = 105051.1255	D Z= -135211494.3716
	Dist = 344650.1073	Delta h = -186.9358	S D= 204014901.8464
	Scale= 0.999986112756	Delta H = -**-	
		Gnd Dist= 105051.3456	
		Rad(A) = 6366502.0814	
		Skew Con = -0.00060"	
		GsFA = 200°10'01.37605"	
		Gsc Dist = 105051.1255	
		GsBA = 20°04'46.22829"	
Pt# 1 COORDINATES	N = 707518.7909	N 41°24'10.19998"	X = 1413052.8591
log0313a_IRY8	E = 973518.5093	W 72°50'47.49812"	Y = -4577993.2597
		h -49.6329	Z = 4196073.7725
		H -**-	
Pt# 4 COORDINATES	N = 806142.8090	N 41°40'24.71766"	X = 15259782.6604
CTNE	E = 1009694.6573	W 72°42'52.25227"	Y = -49037271.0338
		h 137.3029	Z = 45408619.6821
		H -**-	
	Az = 179°56'57.94901"	NSFA = 179°58'22.01827"	D X= -45359922.6476
	O = 0°01'24.70434"	NSBA = 359°58'23.13460"	D Y= +145764427.8836
	t-T Con = +0.63508"	Ell Dist = 273337.9389	D Z= -135343000.0891
	Dist = 896781.3819	Delta h = -163.0246	S D= 204015976.5605
	Scale= 0.999986112756	Delta H = -**-	
		Gnd Dist= 273338.6676	
		Rad(A) = 6363667.3950	
		Skew Con = +0.00000"	
		GsFA = 179°58'22.01826"	
		Gsc Dist = 273337.9389	
		GsBA = 359°58'23.13459"	
Pt# 5 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 1434050.5860
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -4608184.5567
		h -25.7217	Z = 4155990.7497
		H -**-	
Pt# 5 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 15435930.2966
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -49601887.3439
		h -25.7217	Z = 44734533.1834
		H -**-	
	Az = 348°13'31.61840"	NSFA = 348°14'56.85354"	D X= -46006723.7260
	O = 0°01'25.82585"	NSBA = 168°09'42.92855"	D Y= +147715892.5080
	t-T Con = +0.59071"	Ell Dist = 178468.8383	D Z= -132999928.9172
	Dist = 585532.2901	Delta h = -23.9112	S D= 204023490.3618
	Scale= 1.000039473120	Delta H = -**-	
		Gnd Dist= 178468.5170	

cluster1

Rad(A) = 6363847.0405  
 Skew Con = +0.00037"  
 GsFA = 348°14'56.85165"  
 Gsc Dist = 178468.8383  
 GsBA = 168°09'42.92666"

Pt# 1 COORDINATES N = 707518.7909 N 41°24'10.19998" X = 1413052.8591  
 E = 973518.5093 W 72°50'47.49812" Y = -4577993.2597  
 log0313a\_IRY8 h -49.6329 Z = 4196073.7725  
 H \_\*\*\_

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTBR-CTDA		1.1	-6.7	3.4	0.10	-0.27	0.19	1.73
2	CTBR-CTGU		0.0	17.2	-13.4	0.00	0.57	-0.63	2.26
3	CTBR-CTNE		3.7	6.5	-5.0	0.29	0.24	-0.22	2.12
4	CTBR-log0313a_IRY8		-0.3	9.3	-6.2	-0.03	0.38	-0.33	2.09
5	CTBR-NYRH		0.1	4.9	-5.1	0.00	0.15	-0.19	2.28
6	CTDA-CTGU		-0.6	17.1	-12.3	-0.05	0.55	-0.53	2.29
7	CTDA-CTNE		2.6	14.6	-9.6	0.17	0.42	-0.36	2.36
8	CTDA-log0313a_IRY8		-0.2	16.3	-11.7	-0.02	0.55	-0.52	2.23
9	CTDA-NYRH		-0.6	11.2	-8.6	-0.05	0.37	-0.40	2.04
10	CTGU-CTNE		4.3	-9.1	6.3	0.46	-0.42	0.38	2.05
11	CTGU-log0313a_IRY8		1.2	-4.7	3.1	0.30	-0.49	0.38	0.80
12	CTGU-NYRH		0.4	-12.9	7.2	0.05	-0.61	0.47	1.70
13	CTNE-log0313a_IRY8		-3.3	2.8	-0.5	-0.50	0.18	-0.04	1.49
14	CTNE-NYRH		-3.5	-0.1	-1.6	-0.24	0.00	-0.06	2.35
15	NYRH-log0313a_IRY8		0.9	4.0	-3.4	0.09	0.15	-0.16	2.21
R.M.S.			2.1	10.6	7.5	0.22	0.40	0.37	( 2.00)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTBR-CTDA		-1.9	-0.9	7.3	-0.15	-0.08	0.26	1.73
2	CTBR-CTGU		0.9	4.9	-21.3	0.06	0.38	-0.63	2.26
3	CTBR-CTNE		-0.3	5.4	-7.1	-0.02	0.44	-0.22	2.12
4	CTBR-log0313a_IRY8		1.3	2.4	-10.9	0.09	0.22	-0.39	2.09

					cluster1			
5	CTBR-NYRH	-0.7	1.5	-6.9	-0.04	0.10	-0.18	2.28
6	CTDA-CTGU	1.7	4.3	-20.6	0.10	0.34	-0.58	2.29
7	CTDA-CTNE	1.5	6.7	-16.3	0.08	0.45	-0.41	2.36
8	CTDA-log0313a_IRY8	1.4	4.4	-19.5	0.09	0.37	-0.59	2.23
9	CTDA-NYRH	0.7	2.6	-13.9	0.04	0.21	-0.41	2.04
10	CTGU-CTNE	-1.9	1.4	11.6	-0.16	0.15	0.47	2.05
11	CTGU-log0313a_IRY8	-0.9	-0.2	5.7	-0.15	-0.06	0.51	0.80
12	CTGU-NYRH	-2.8	-3.4	14.1	-0.27	-0.38	0.59	1.70
13	CTNE-log0313a_IRY8	2.1	-2.3	-3.1	0.22	-0.35	-0.17	1.49
14	CTNE-NYRH	-0.6	-3.3	-1.8	-0.04	-0.23	-0.05	2.35
15	NYRH-log0313a_IRY8	-0.2	2.1	-4.9	-0.02	0.19	-0.17	2.21
R.M.S.		1.4	3.5	12.6	0.12	0.29	0.42 (	2.00)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTBR-CTDA		2.0	0.6	7.3	0.15	0.06	0.26	1.73
2	CTBR-CTGU		4.4	-2.5	-21.2	0.37	-0.16	-0.63	2.26
3	CTBR-CTNE		5.1	2.0	-7.1	0.39	0.15	-0.22	2.12
4	CTBR-log0313a_IRY8		2.1	-1.8	-10.9	0.20	-0.12	-0.39	2.09
5	CTBR-NYRH		1.5	-0.6	-6.9	0.11	-0.04	-0.18	2.28
6	CTDA-CTGU		4.7	-0.1	-20.6	0.34	-0.01	-0.58	2.29
7	CTDA-CTNE		5.8	3.8	-16.3	0.33	0.24	-0.41	2.36
8	CTDA-log0313a_IRY8		4.6	1.3	-19.5	0.30	0.09	-0.59	2.23
9	CTDA-NYRH		2.5	-1.2	-13.9	0.20	-0.08	-0.41	2.04
10	CTGU-CTNE		-2.0	1.3	11.6	-0.18	0.13	0.47	2.05
11	CTGU-log0313a_IRY8		-0.4	-0.8	5.7	-0.09	-0.15	0.51	0.80
12	CTGU-NYRH		3.1	3.2	14.1	0.29	0.36	0.59	1.70
13	CTNE-log0313a_IRY8		-1.1	2.9	-3.1	-0.11	0.46	-0.17	1.49
14	CTNE-NYRH		0.6	3.3	-1.8	0.04	0.23	-0.05	2.35
15	NYRH-log0313a_IRY8		-0.6	2.0	-4.9	-0.04	0.16	-0.17	2.21
R.M.S.			3.2	2.1	12.6	0.24	0.20	0.42 (	2.00)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.06)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTBR-CTDA		48479.8	0.4	-0.8	0.1	10.6	24.9	18.2	0.03	0.03	0.01	1.73
2	CTBR-CTGU		66862.7	0.6	2.1	-2.3	12.2	30.1	21.3	0.05	0.07	0.11	2.26
3	CTBR-CTNE		61863.7	0.0	-0.2	0.7	12.8	27.0	22.3	0.00	0.01	0.03	2.12
4	CTBR-log0313a_IRY8		48908.5	-0.8	-0.6	1.2	10.8	24.6	19.0	0.08	0.03	0.07	2.09
5	CTBR-NYRH		86885.4	0.1	0.4	-0.2	14.7	32.5	26.2	0.01	0.01	0.01	2.28
6	CTDA-CTGU		74671.0	0.7	-4.0	2.1	13.1	31.3	23.1	0.05	0.13	0.09	2.29
7	CTDA-CTNE		94619.2	-0.4	1.9	-0.7	15.4	34.5	26.5	0.02	0.06	0.02	2.36
8	CTDA-log0313a_IRY8		66846.3	0.0	0.3	-0.9	11.4	29.6	22.5	0.00	0.01	0.04	2.23
9	CTDA-NYRH		68588.0	0.2	0.7	-0.5	12.5	30.3	21.8	0.02	0.02	0.02	2.04
10	CTGU-CTNE		42843.3	0.0	-0.7	0.8	9.4	21.6	16.4	0.00	0.03	0.05	2.05
11	CTGU-log0313a_IRY8		19552.0	0.1	0.4	-0.5	4.0	9.7	8.1	0.03	0.04	0.06	0.80
12	CTGU-NYRH		40832.4	-0.1	-2.3	0.9	8.5	21.1	15.4	0.01	0.11	0.06	1.70
13	CTNE-log0313a_IRY8		32019.8	-0.1	-0.4	1.3	6.7	15.7	13.2	0.01	0.03	0.10	1.49
14	CTNE-NYRH		83313.8	0.4	2.1	-2.4	14.6	31.4	26.0	0.02	0.07	0.09	2.35
15	NYRH-log0313a_IRY8		54397.3	0.3	-1.5	-0.8	10.5	26.3	20.7	0.03	0.06	0.04	2.21

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.06)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTBR-CTDA		48479.8	-0.4	0.1	0.7	13.0	10.4	27.9	0.03	0.01	0.03	1.73
2	CTBR-CTGU		66862.7	-0.5	1.1	-2.9	14.8	12.8	33.5	0.03	0.09	0.09	2.26
3	CTBR-CTNE		61863.7	0.4	-0.1	0.6	14.2	12.2	32.3	0.03	0.01	0.02	2.12
4	CTBR-log0313a_IRY8		48908.5	0.7	-1.0	1.1	13.8	10.8	27.9	0.05	0.09	0.04	2.09
5	CTBR-NYRH		86885.4	0.1	0.3	-0.4	16.4	14.5	38.4	0.00	0.02	0.01	2.28
6	CTDA-CTGU		74671.0	-1.0	-0.5	4.4	16.5	12.7	35.3	0.06	0.04	0.12	2.29
7	CTDA-CTNE		94619.2	0.8	0.2	-1.9	18.5	14.7	39.7	0.04	0.01	0.05	2.36
8	CTDA-log0313a_IRY8		66846.3	-0.5	0.1	-0.9	16.6	12.0	33.0	0.03	0.01	0.03	2.23
9	CTDA-NYRH		68588.0	0.1	0.4	-0.8	15.0	12.6	34.1	0.01	0.03	0.02	2.04
10	CTGU-CTNE		42843.3	0.2	-0.2	1.0	11.5	9.5	24.6	0.02	0.02	0.04	2.05
11	CTGU-log0313a_IRY8		19552.0	-0.1	0.2	-0.6	5.7	4.1	11.2	0.02	0.06	0.05	0.80
12	CTGU-NYRH		40832.4	-0.7	-0.8	2.2	10.5	9.0	23.7	0.07	0.08	0.09	1.70
13	CTNE-log0313a_IRY8		32019.8	0.7	-0.2	1.1	9.5	6.6	18.2	0.08	0.03	0.06	1.49
14	CTNE-NYRH		83313.8	-0.5	1.0	-3.0	16.6	14.4	37.3	0.03	0.07	0.08	2.35
15	NYRH-log0313a_IRY8		54397.3	-1.6	-0.1	0.6	15.3	11.0	29.6	0.10	0.01	0.02	2.21

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.06)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTBR-CTDA		48479.8	0.4	-0.2	0.7	10.1	7.6	21.3	0.04	-0.03	0.03	1.73
2	CTBR-CTGU		66862.7	1.3	0.1	-2.9	10.4	13.6	29.3	0.12	0.00	-0.10	2.26
3	CTBR-CTNE		61863.7	0.0	-0.4	0.6	10.9	11.2	27.3	0.00	-0.04	0.02	2.12
4	CTBR-log0313a_IRY8		48908.5	-1.1	-0.5	1.1	8.6	12.0	23.0	-0.13	-0.04	0.05	2.09
5	CTBR-NYRH		86885.4	0.1	-0.2	-0.4	12.3	14.4	33.7	0.01	-0.02	-0.01	2.28
6	CTDA-CTGU		74671.0	-0.8	0.8	4.4	11.9	13.8	30.9	-0.07	0.06	0.14	2.29
7	CTDA-CTNE		94619.2	0.7	-0.4	-1.9	15.7	13.8	35.1	0.04	-0.03	-0.05	2.36
8	CTDA-log0313a_IRY8		66846.3	-0.2	0.5	-0.9	13.2	12.0	28.4	-0.01	0.04	-0.03	2.23
9	CTDA-NYRH		68588.0	0.4	-0.2	-0.8	10.2	12.6	28.3	0.04	-0.01	-0.03	2.04
10	CTGU-CTNE		42843.3	0.2	-0.2	1.0	9.3	8.1	20.4	0.02	-0.02	0.05	2.05
11	CTGU-log0313a_IRY8		19552.0	-0.3	0.1	-0.6	2.3	2.9	5.7	-0.11	0.02	-0.11	0.80
12	CTGU-NYRH		40832.4	0.8	0.7	2.3	8.0	6.8	18.1	0.10	0.10	0.12	1.70
13	CTNE-log0313a_IRY8		32019.8	-0.6	0.4	1.1	7.2	4.2	12.6	-0.09	0.10	0.09	1.49
14	CTNE-NYRH		83313.8	0.6	-1.0	-3.0	14.5	12.8	33.1	0.04	-0.08	-0.09	2.35
15	NYRH-log0313a_IRY8		54397.3	-1.5	-0.4	0.6	12.7	10.3	25.2	-0.12	-0.04	0.02	2.21

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status		Coordinates			Sigmas (mm)		
		Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTBR	Fixed	Fixed	41°29'49.86446"N	73°25'05.67398"W	53.4200			
2	CTDA	Fixed	Fixed	41°03'57.06991"N	73°30'25.94231"W	-13.1600			
3	CTGU	Fixed	Fixed	41°17'21.74249"N	72°40'04.44445"W	-18.0000			
4	CTNE	Fixed	Fixed	41°40'24.71766"N	72°42'52.25227"W	41.8500			
5	NYRH	Fixed	Fixed	40°55'24.08901"N	72°42'50.56086"W	-7.8400			

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;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT__
;Linear Units: USFeet
;Geoid: g2003u04
;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTBR, 742590.8019, 816940.5169, 175.2621, 0.0000, 0.0000, 0.0000, ""

```

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cluster1
;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTDA, 585635.4343, 791193.1539, -43.1758, 0.0000, 0.0000, 0.0000, ""
log0402a_IRY8, 565945.4937, 759245.2938, -93.1077, 0.0040, 0.0030, 0.0085, ""
NYQN, 460070.6705, 728306.2926, -0.9186, 0.0000, 0.0000, 0.0000, ""
NYVH, 592526.2329, 705618.1310, 208.0705, 0.0000, 0.0000, 0.0000, ""
```



ADJUSTMENT SUMMARY

Item Name	Item Value
SubNet	
Name	New Subnet
Number of points	4
Number of unknowns	3
Degree of freedom	15
Declared adjustment type	with fixed and weighted points
Apriori standard error of unit weight	0.471
Adjustment Date and Time	3.May.07 12:56:14
Reference points	
Number	3
Plane coordinates - fixed	6
Heights - fixed	3
Plane coordinates - weighted	0
Heights - weighted	0
Apriori standard error of unit weight	1.000
Processed vectors	
Total number	6
Unused vectors	0
Rejected vectors	0
Downweighted vectors	0
Apriori standard error of unit weight	1.000
Apriori standard error of unit weight	0.134
Vectors' VPV test	
Confidence level (%)	95
Lower bound	2.70
Upper bound	19.02
Degree of freedom	9
VPV	0.16
VPV test	failed
Vectors' Tau test	
Confidence level (%)	95
Tau critical value	3.00
Number of flagged observations	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA		41°03'57.06991"N	73°30'25.94231"W	-13.1600	0.0	0.0	0.0	0	0	0
2	log0402a_IRY8		41°00'39.55854"N	73°37'20.39554"W	-28.3793	1.2	0.9	2.6	15	-12	-14
3	NYQN		40°43'10.26198"N	73°43'48.26704"W	-0.2800	0.0	0.0	0.0	0	0	0
4	NYVH		41°04'56.22121"N	73°49'04.12592"W	63.4200	0.0	0.0	0.0	0	0	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA		585635.43431	791193.15386	-43.17577	0.000	0.000	0.000	0	0	0
2	log0402a_IRY8		565945.49368	759245.29383	-93.10772	0.004	0.003	0.008	15	-12	-14
3	NYQN		460070.67049	728306.29262	-0.91863	0.000	0.000	0.000	0	0	0
4	NYVH		592526.23287	705618.13097	208.07045	0.000	0.000	0.000	0	0	0

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

#	Stations from - to	Coordinates (m)				Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z	s(X)		s(Y)	s(Z)	X-Y	X-Z	Y-Z	
1	CTDA-log0402a_IRY8	-8156.3478	-6564.8312	-4605.6946	11438.3321	2.7	5.7	4.8	-39	37	-61	
2	CTDA-NYQN	-10915.1243	-29462.4134	-29065.7439	42801.7665	9.2	21.3	17.0	-40	32	-61	
3	CTDA-NYVH	-25370.7127	-6247.7273	1425.9144	26167.5446	5.7	13.1	10.3	-43	32	-63	
4	NYQN-log0402a_IRY8	2758.7782	22897.5792	24460.0533	33618.5097	7.2	16.1	14.2	-34	32	-61	
5	NYVH-log0402a_IRY8	17214.3662	-317.1083	-6031.6042	18243.2237	3.8	9.1	7.5	-28	28	-63	
6	NYVH-NYQN	14455.5885	-23214.6864	-30491.6581	40958.8442	8.5	19.9	17.0	-29	24	-61	
Mean weight matrix's estimations:						4.6	10.2	8.5	-36	33	-62	

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA-log0402a_IRY8	-6086.5135	-9684.4796	-25.4787	11438.3321	3.2	2.4	6.8	14	-13	-10
2	CTDA-NYQN	-38436.9058	-18830.2503	-130.9868	42801.7665	11.9	8.4	24.8	12	-20	-17
3	CTDA-NYVH	1871.2330	-26100.5431	22.9690	26167.5446	7.2	5.1	15.2	6	-22	-15
4	NYQN-log0402a_IRY8	32373.5428	9063.3471	-116.8770	33618.5097	9.3	6.9	19.5	13	-5	-16
5	NYVH-log0402a_IRY8	-7899.2007	16443.9639	-117.8605	18243.2237	4.9	3.8	10.7	18	-15	-25
6	NYVH-NYQN	-40281.9386	7413.1041	-195.5149	40958.8442	11.3	8.4	23.6	12	-10	-26
Mean weight matrix's estimations:						5.7	4.3	12.1	14	-14	-15

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTDA-log0402a_IRY8	11438.3321	237°51'05.08"	- 0°07'39.45"	2.9	2.9	6.8	-31	14	-8
2	CTDA-NYQN	42801.7665	206°06'00.89"	- 0°10'31.24"	11.7	8.7	24.8	-20	23	3
3	CTDA-NYVH	26167.5446	274°06'02.54"	0°03'01.06"	5.1	7.2	15.2	-2	13	-22
4	NYQN-log0402a_IRY8	33618.5097	15°38'24.74"	- 0°11'57.10"	9.4	6.8	19.5	-5	-9	-14
5	NYVH-log0402a_IRY8	18243.2237	115°39'29.78"	- 0°22'12.59"	3.7	5.0	10.7	9	-17	21
6	NYVH-NYQN	40958.8442	169°34'21.01"	- 0°16'24.60"	11.1	8.8	23.6	21	5	27
Mean weight matrix's estimations:					4.7	5.0	11.9	-13	3	1

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 585635.4343 E = 791193.1539	N 41°03'57.06991" W 73°30'25.94231" h -43.1758 H **	X = 14716086.6882 Y = -49703631.0288 Z = 44863058.3368
CTDA	Az = 238°21'11.48918" O = - 0°30'07.46183" t-T Con = -1.06807" Dist = 123123.4953 Scale = 1.000016261299	NSFA = 237°51'05.09542" NSBA = 57°46'32.97902" Ell Dist = 37527.3499 Delta h = -49.9320 Delta H = ** Gnd Dist = 37527.2277 Rad(A) = 6380448.9072	D X = -43822315.1654 D Y = +147898094.3008 D Z = -133529040.1985 S D = 204020210.2259

cluster2

Skew Con = -0.00158"  
 GsFA = 237°51'05.09561"  
 Gsc Dist = 37527.3499  
 GsBA = 57°46'32.97921"

Pt# 1 COORDINATES | N = 565945.4937 | N 41°00'39.55854" | X = 1359018.3117  
 | E = 759245.2938 | W 73°37'20.39554" | Y = -4624201.7271  
 log0402a\_IRY8 | | h -93.1077 | Z = 4163325.4848  
 | | H \*\* |

Pt# 0 COORDINATES | N = 585635.4343 | N 41°03'57.06991" | X = 14716086.6882  
 CTDA | E = 791193.1539 | W 73°30'25.94231" | Y = -49703631.0288  
 | | h -43.1758 | Z = 44863058.3368  
 | | H \*\* |

Az = 206°36'00.94402" | NSFA = 206°06'00.90415" | D X= -43831366.2579  
 O = - 0°30'07.46183" | NSBA = 25°57'15.66469" | D Y= +147822971.1472  
 t-T Con = -7.42197" | Ell Dist = 140425.5982 | D Z= -133609289.5331  
 Dist = 460735.3955 | Delta h = +42.2571 | S D= 204020248.3000  
 Scale= 1.000016261299 | Delta H = \*\* |  
 Gnd Dist= 140425.4503  
 Rad(A) = 6367696.7934  
 Skew Con = -0.00001"  
 GsFA = 206°06'00.90648"  
 Gsc Dist = 140425.5982  
 GsBA = 25°57'15.66702"

Pt# 2 COORDINATES | N = 460070.6705 | N 40°43'10.26198" | X = 1356259.5331  
 NYQN | E = 728306.2926 | W 73°43'48.26704" | Y = -4647099.3101  
 | | h -0.9186 | Z = 4138865.4387  
 | | H \*\* |

Pt# 0 COORDINATES | N = 585635.4343 | N 41°03'57.06991" | X = 14716086.6882  
 CTDA | E = 791193.1539 | W 73°30'25.94231" | Y = -49703631.0288  
 | | h -43.1758 | Z = 44863058.3368  
 | | H \*\* |

Az = 274°36'10.44448" | NSFA = 274°06'02.55080" | D X= -43878792.6289  
 O = - 0°30'07.46183" | NSBA = 93°53'47.86433" | D Y= +147899134.6559  
 t-T Con = +0.43186" | Ell Dist = 85850.6535 | D Z= -133509251.4848  
 Dist = 281666.1366 | Delta h = +251.2462 | S D= 204020152.6971  
 Scale= 1.000016261299 | Delta H = \*\* |  
 Gnd Dist= 85850.9918  
 Rad(A) = 6387245.0088  
 Skew Con = -0.00056"  
 GsFA = 274°06'02.55064"  
 Gsc Dist = 85850.6535  
 GsBA = 93°53'47.86417"

Pt# 3 COORDINATES | N = 592526.2329 | N 41°04'56.22121" | X = 1341803.9463  
 NYVH | E = 705618.1310 | W 73°49'04.12592" | Y = -4623884.6262  
 | | h 208.0705 | Z = 4169357.0968  
 | | H \*\* |

Pt# 2 COORDINATES | N = 460070.6705 | N 40°43'10.26198" | X = 14598597.7220

cluster2

NYQN	E = 728306.2926	W 73°43'48.26704"	Y = -50020760.5874
		h -0.9186	Z = 44550198.6073
		H _**_	
-----			
	Az = 16°17'30.46395"	NSFA = 15°38'24.74663"	D X= -43436853.4487
	O = - 0°38'59.45083"	NSBA = 195°42'38.52404"	D Y= +148938543.5278
	t-T Con = +6.26650"	Ell Dist = 110296.9287	D Z= -132502599.5696
	Dist = 361884.9884	Delta h = -92.1891	S D= 204025461.3484
	Scale= 1.000083288693	Delta H = _**_	
		Gnd Dist= 110296.6809	
		Rad(A) = 6364393.7155	
		Skew Con = -0.00091"	
		GsFA = 15°38'24.74757"	
		Gsc Dist = 110296.9287	
		GsBA = 195°42'38.52499"	
-----			
Pt# 1 COORDINATES	N = 565945.4937	N 41°00'39.55854"	X = 1359018.3117
log0402a_IRY8	E = 759245.2938	W 73°37'20.39554"	Y = -4624201.7271
		h -93.1077	Z = 4163325.4848
		H _**_	
-----			
Pt# 3 COORDINATES	N = 592526.2329	N 41°04'56.22121"	X = 14442999.7030
NYVH	E = 705618.1310	W 73°49'04.12592"	Y = -49770880.8093
		h 208.0705	Z = 44878406.7711
		H _**_	
-----			
	Az = 116°21'57.05261"	NSFA = 115°39'29.78913"	D X= -42926362.2813
	O = - 0°42'28.88405"	NSBA = 295°47'11.91474"	D Y= +148118729.6223
	t-T Con = -1.62057"	Ell Dist = 59852.0597	D Z= -133579395.8534
	Dist = 196368.4488	Delta h = -301.1782	S D= 204022757.6526
	Scale= 1.000013977933	Delta H = _**_	
		Gnd Dist= 59852.2241	
		Rad(A) = 6382793.8259	
		Skew Con = +0.00137"	
		GsFA = 115°39'29.78871"	
		Gsc Dist = 59852.0597	
		GsBA = 295°47'11.91432"	
-----			
Pt# 1 COORDINATES	N = 565945.4937	N 41°00'39.55854"	X = 1359018.3117
log0402a_IRY8	E = 759245.2938	W 73°37'20.39554"	Y = -4624201.7271
		h -93.1077	Z = 4163325.4848
		H _**_	
-----			
Pt# 3 COORDINATES	N = 592526.2329	N 41°04'56.22121"	X = 14442999.7030
NYVH	E = 705618.1310	W 73°49'04.12592"	Y = -49770880.8093
		h 208.0705	Z = 44878406.7711
		H _**_	
-----			
	Az = 170°16'41.18166"	NSFA = 169°34'21.01741"	D X= -42935413.3739
	O = - 0°42'28.88405"	NSBA = 349°37'47.82933"	D Y= +148043606.4687
	t-T Con = -8.71980"	Ell Dist = 134378.3056	D Z= -133659645.1880
	Dist = 440893.5724	Delta h = -208.9891	S D= 204022694.5455
	Scale= 1.000013977933	Delta H = _**_	
		Gnd Dist= 134378.9707	
		Rad(A) = 6363806.5613	
		Skew Con = +0.00001"	
		GsFA = 169°34'21.01645"	

cluster2

Gsc Dist = 134378.3056  
 GsBA = 349°37'47.82837"

```

Pt# 2 COORDINATES | N = 460070.6705 | N 40°43'10.26198" | X = 1356259.5331
                  | E = 728306.2926 | W 73°43'48.26704" | Y = -4647099.3101
NYQN              |                   | h -0.9186         | Z = 4138865.4387
                  |                   | H                | **_
  
```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTDA-log0402a_IRY8		-0.7	3.6	-4.0	-0.26	0.64	-0.84	0.48
2	CTDA-NYQN		1.2	1.5	-4.5	0.13	0.07	-0.27	2.07
3	CTDA-NYVH		-0.5	8.4	-8.0	-0.09	0.64	-0.77	1.85
4	NYQN-log0402a_IRY8		-0.2	-1.0	4.5	-0.03	-0.06	0.32	1.62
5	NYVH-log0402a_IRY8		1.2	-9.2	8.7	0.30	-1.01	1.16	1.05
6	NYVH-NYQN		1.9	-7.2	3.6	0.22	-0.36	0.21	1.94
R.M.S.			1.1	6.1	5.9	0.20	0.57	0.69	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTDA-log0402a_IRY8		-0.6	0.4	-5.4	-0.19	0.15	-0.80	0.48
2	CTDA-NYQN		-2.7	1.6	-3.8	-0.23	0.19	-0.15	2.07
3	CTDA-NYVH		-0.6	1.9	-11.4	-0.09	0.37	-0.75	1.85
4	NYQN-log0402a_IRY8		2.8	-0.4	3.6	0.30	-0.06	0.18	1.62
5	NYVH-log0402a_IRY8		0.5	-1.4	12.6	0.11	-0.38	1.18	1.05
6	NYVH-NYQN		-2.1	-0.2	8.0	-0.19	-0.03	0.34	1.94
R.M.S.			1.9	1.2	8.3	0.20	0.24	0.68	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTDA-log0402a_IRY8		0.0	-0.7	-5.4	0.02	-0.25	-0.80	0.48
2	CTDA-NYQN		1.7	-2.6	-3.8	0.15	-0.30	-0.15	2.07

	cluster2							
3	CTDA-NYVH	-1.9	-0.5	-11.4	-0.38	-0.07	-0.75	1.85
4	NYQN-log0402a_IRY8	2.6	-1.2	3.6	0.28	-0.18	0.18	1.62
5	NYVH-log0402a_IRY8	-1.6	0.1	12.6	-0.43	0.03	1.18	1.05
6	NYVH-NYQN	2.0	0.6	8.0	0.18	0.07	0.34	1.94

R.M.S. 1.8 1.3 8.2 0.28 0.18 0.68 ( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)	from - to			( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTDA-log0402a_IRY8		11438.3	-0.3	0.6	-0.7	2.7	5.7	4.8	0.10	0.11	0.15	0.48
2	CTDA-NYQN		42801.8	0.8	-1.7	2.0	9.2	21.3	17.0	0.09	0.08	0.12	2.07
3	CTDA-NYVH		26167.5	0.8	-2.5	2.6	5.7	13.1	10.3	0.14	0.19	0.25	1.85
4	NYQN-log0402a_IRY8		33618.5	0.6	-0.7	1.2	7.2	16.1	14.2	0.09	0.05	0.09	1.62
5	NYVH-log0402a_IRY8		18243.2	0.3	-1.3	1.4	3.8	9.1	7.5	0.08	0.14	0.19	1.05
6	NYVH-NYQN		40958.8	0.2	0.5	-0.3	8.5	19.9	17.0	0.02	0.02	0.02	1.94

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
	from - to			(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTDA-log0402a_IRY8		11438.3	-0.1	-0.1	-1.0	3.2	2.4	6.8	0.04	0.03	0.15	0.48
2	CTDA-NYQN		42801.8	0.3	0.3	2.8	11.9	8.4	24.8	0.02	0.04	0.11	2.07
3	CTDA-NYVH		26167.5	0.2	0.0	3.7	7.2	5.1	15.2	0.03	0.01	0.24	1.85
4	NYQN-log0402a_IRY8		33618.5	0.3	0.4	1.5	9.3	6.9	19.5	0.04	0.06	0.08	1.62
5	NYVH-log0402a_IRY8		18243.2	0.2	-0.1	1.9	4.9	3.8	10.7	0.04	0.02	0.18	1.05
6	NYVH-NYQN		40958.8	0.0	0.3	-0.6	11.3	8.4	23.6	0.00	0.03	0.02	1.94

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)	from - to			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTDA-log0402a_IRY8		11438.3	0.1	-0.1	-1.0	1.2	1.1	2.7	0.11	-0.06	-0.37	0.48
2	CTDA-NYQN		42801.8	-0.4	-0.2	2.8	9.8	7.2	20.7	-0.04	-0.02	0.13	2.07
3	CTDA-NYVH		26167.5	0.0	0.2	3.7	4.0	5.7	12.0	-0.01	0.04	0.31	1.85
4	NYQN-log0402a_IRY8		33618.5	0.4	0.3	1.5	6.9	5.0	14.3	0.06	0.06	0.10	1.62
5	NYVH-log0402a_IRY8		18243.2	-0.2	-0.1	1.9	2.2	3.0	6.3	-0.07	-0.05	0.30	1.05
6	NYVH-NYQN		40958.8	0.0	-0.3	-0.6	8.9	7.1	18.9	0.00	-0.04	-0.03	1.94

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status	Coordinates			Sigmas (mm)		
	Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTDA	Fixed	Fixed	41°03'57.06991"N	73°30'25.94231"W	-13.1600		
2	NYQN	Fixed	Fixed	40°43'10.26198"N	73°43'48.26704"W	-0.2800		
3	NYVH	Fixed	Fixed	41°04'56.22121"N	73°49'04.12592"W	63.4200		

```

;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

```

cluster2

```
;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTDA, 585635.4343, 791193.1539, -43.1758, 0.0000, 0.0000, 0.0000, ""
log0402a_IRY8, 565945.4937, 759245.2938, -93.1077, 0.0040, 0.0030, 0.0085, ""
NYQN, 460070.6705, 728306.2926, -0.9186, 0.0000, 0.0000, 0.0000, ""
NYVH, 592526.2329, 705618.1310, 208.0705, 0.0000, 0.0000, 0.0000, ""
```

ADJUSTMENT SUMMARY

Item Name	Item Value
SubNet	
Name	New Subnet
Number of points	4
Number of unknowns	3
Degree of freedom	15
Declared adjustment type	with fixed and weighted points
Aposteriori standard error of unit weight	1.286
Adjustment Date and Time	3.May.07 13:05:28
Reference points	
Number	3
Plane coordinates - fixed	6
Heights - fixed	3
Plane coordinates - weighted	0
Heights - weighted	0
Apriori standard error of unit weight	1.000
Processed vectors	
Total number	6
Unused vectors	0
Rejected vectors	0
Downweighted vectors	0
Apriori standard error of unit weight	1.000
Aposteriori standard error of unit weight	0.913
Vectors' VPV test	
Confidence level (%)	95
Lower bound	2.70
Upper bound	19.02
Degree of freedom	9
VPV	7.51
VPV test	passed
Vectors' Tau test	
Confidence level (%)	95
Tau critical value	3.00
Number of flagged observations	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA		41°03'57.06991"N	73°30'25.94231"W	-13.1600	0.0	0.0	0.0	0	0	0
2	log0403a_IRY8		41°02'30.22458"N	73°31'10.39229"W	-28.4947	1.5	1.1	2.5	4	8	-7
3	NYQN		40°43'10.26198"N	73°43'48.26704"W	-0.2800	0.0	0.0	0.0	0	0	0
4	NYVH		41°04'56.22121"N	73°49'04.12592"W	63.4200	0.0	0.0	0.0	0	0	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA		585635.43431	791193.15386	-43.17577	0.000	0.000	0.000	0	0	0
2	log0403a_IRY8		576876.16561	787710.10266	-93.48643	0.005	0.003	0.008	4	8	-7
3	NYQN		460070.67049	728306.29262	-0.91863	0.000	0.000	0.000	0	0	0
4	NYVH		592526.23287	705618.13097	208.07045	0.000	0.000	0.000	0	0	0

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)



#	Stations from - to	Coordinates (m)				Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z	s(X)		s(Y)	s(Z)	X-Y	X-Z	Y-Z	
1	CTDA-log0403a_IRY8	-499.2590	-1970.6526	-2030.3246	2873.1427	0.9	1.6	1.6	-31	22	-47	
2	CTDA-NYQN	-10915.1257	-29462.3972	-29065.7475	42801.7581	10.3	19.3	18.8	-42	33	-61	
3	CTDA-NYVH	-25370.7111	-6247.7278	1425.9212	26167.5435	6.1	12.1	11.4	-38	29	-63	
4	NYQN-log0403a_IRY8	10415.8775	27491.7117	27035.4563	39939.9627	9.2	17.1	18.7	-29	25	-57	
5	NYVH-log0403a_IRY8	24871.4636	4277.0432	-3456.2121	25472.1064	5.8	11.4	11.6	-29	21	-59	
6	NYVH-NYQN	14455.5851	-23214.6701	-30491.6675	40958.8407	9.1	17.9	18.9	-33	28	-61	
Mean weight matrix's estimations:						2.1	3.8	3.9	-31	22	-48	

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA-log0403a_IRY8	-2678.9711	-1038.1751	-15.9852	2873.1427	1.2	0.8	2.0	5	8	-7
2	CTDA-NYQN	-38436.8980	-18830.2471	-131.0013	42801.7581	12.0	9.1	24.6	0	4	-1
3	CTDA-NYVH	1871.2375	-26100.5417	22.9742	26167.5435	7.2	5.6	15.2	0	0	-9
4	NYQN-log0403a_IRY8	35803.0038	17700.9040	-153.4012	39939.9627	12.0	8.7	22.5	5	19	-10
5	NYVH-log0403a_IRY8	-4460.8830	25078.0457	-142.6599	25472.1064	7.4	5.6	14.6	1	10	-15
6	NYVH-NYQN	-40281.9348	7413.1053	-195.5336	40958.8407	11.6	8.5	23.5	3	15	-11
Mean weight matrix's estimations:						2.8	2.0	4.7	4	8	-7

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTDA-log0403a_IRY8	2873.1427	201°10'57.81"	- 0°19'07.60"	1.2	0.9	2.0	-21	-7	10
2	CTDA-NYQN	42801.7581	206°06'00.89"	- 0°10'31.31"	11.5	9.7	24.6	-22	-4	3
3	CTDA-NYVH	26167.5435	274°06'02.58"	0°03'01.10"	5.6	7.2	15.2	4	9	0
4	NYQN-log0403a_IRY8	39939.9627	26°18'27.58"	- 0°13'12.23"	11.6	9.2	22.5	-23	14	-19
5	NYVH-log0403a_IRY8	25472.1064	100°05'10.60"	- 0°19'15.22"	5.6	7.4	14.6	9	-19	-8
6	NYVH-NYQN	40958.8407	169°34'21.00"	- 0°16'24.70"	11.5	8.7	23.5	14	-18	7
Mean weight matrix's estimations:					2.7	2.1	4.7	-19	-6	10

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 585635.4343 E = 791193.1539	N 41°03'57.06991" W 73°30'25.94231"	X = 14716086.6882 Y = -49703631.0288
CTDA		h -43.1758 H **	Z = 44863058.3368
	Az = 201°41'04.83316" O = - 0°30'07.46183" t-T Con = -0.43596" Dist = 30926.3459 Scale= 1.000016261299	NSFA = 201°10'57.80729" NSBA = 21°10'28.61336" Ell Dist = 9426.1994 Delta h = -50.3107 Delta H = ** Gnd Dist= 9426.1686 Rad(A) = 6366165.4763	D X= -43797193.5341 D Y= +147913167.0428 D Z= -133520590.8499 S D= 204020213.0354

cluster3

			Skew Con = -0.00118"		
			GsFA = 201°10'57.80730"		
			Gsc Dist = 9426.1994		
			GsBA = 21°10'28.61337"		
Pt# 1 COORDINATES	N = 576876.1656	N 41°02'30.22458"	X = 1366675.4002		
	E = 787710.1027	W 73°31'10.39229"	Y = -4619607.5461		
log0403a_IRY8		h -93.4864	Z = 4165900.8514		
		H _**_			
Pt# 0 COORDINATES	N = 585635.4343	N 41°03'57.06991"	X = 14716086.6882		
	E = 791193.1539	W 73°30'25.94231"	Y = -49703631.0288		
CTDA		h -43.1758	Z = 44863058.3368		
		H _**_			
	Az = 206°36'00.94402"	NSFA = 206°06'00.90415"	D X= -43831366.2579		
	O = - 0°30'07.46183"	NSBA = 25°57'15.66469"	D Y= +147822971.1472		
	t-T Con = -7.42197"	Ell Dist = 140425.5982	D Z= -133609289.5331		
	Dist = 460735.3955	Delta h = +42.2571	S D= 204020248.3000		
	Scale= 1.000016261299	Delta H = _**_			
		Gnd Dist= 140425.4503			
		Rad(A) = 6367696.7934			
		Skew Con = -0.00001"			
		GsFA = 206°06'00.90648"			
		Gsc Dist = 140425.5982			
		GsBA = 25°57'15.66702"			
Pt# 2 COORDINATES	N = 460070.6705	N 40°43'10.26198"	X = 1356259.5331		
	E = 728306.2926	W 73°43'48.26704"	Y = -4647099.3101		
NYQN		h -0.9186	Z = 4138865.4387		
		H _**_			
Pt# 0 COORDINATES	N = 585635.4343	N 41°03'57.06991"	X = 14716086.6882		
	E = 791193.1539	W 73°30'25.94231"	Y = -49703631.0288		
CTDA		h -43.1758	Z = 44863058.3368		
		H _**_			
	Az = 274°36'10.44448"	NSFA = 274°06'02.55080"	D X= -43878792.6289		
	O = - 0°30'07.46183"	NSBA = 93°53'47.86433"	D Y= +147899134.6559		
	t-T Con = +0.43186"	Ell Dist = 85850.6535	D Z= -133509251.4848		
	Dist = 281666.1366	Delta h = +251.2462	S D= 204020152.6971		
	Scale= 1.000016261299	Delta H = _**_			
		Gnd Dist= 85850.9918			
		Rad(A) = 6387245.0088			
		Skew Con = -0.00056"			
		GsFA = 274°06'02.55064"			
		Gsc Dist = 85850.6535			
		GsBA = 93°53'47.86417"			
Pt# 3 COORDINATES	N = 592526.2329	N 41°04'56.22121"	X = 1341803.9463		
	E = 705618.1310	W 73°49'04.12592"	Y = -4623884.6262		
NYVH		h 208.0705	Z = 4169357.0968		
		H _**_			
Pt# 2 COORDINATES	N = 460070.6705	N 40°43'10.26198"	X = 14598597.7220		

cluster3

NYQN	E = 728306.2926	W 73°43'48.26704"	Y = -50020760.5874
		h -0.9186	Z = 44550198.6073
		H _**_	
-----			
	Az = 26°57'33.44012"	NSFA = 26°18'27.59837"	D X= -43411731.8174
	O = - 0°38'59.45083"	NSBA = 206°26'43.61702"	D Y= +148953616.2698
	t-T Con = +6.39092"	Ell Dist = 131036.6364	D Z= -132494150.2209
	Dist = 429931.0999	Delta h = -92.5678	S D= 204025630.9928
	Scale= 1.000083288693	Delta H = _**_	
		Gnd Dist= 131036.3408	
		Rad(A) = 6367432.9999	
		Skew Con = -0.00140"	
		GsFA = 26°18'27.60041"	
		Gsc Dist = 131036.6364	
		GsBA = 206°26'43.61907"	
-----			
Pt# 1 COORDINATES	N = 576876.1656	N 41°02'30.22458"	X = 1366675.4002
log0403a_IRY8	E = 787710.1027	W 73°31'10.39229"	Y = -4619607.5461
		h -93.4864	Z = 4165900.8514
		H _**_	
-----			
Pt# 3 COORDINATES	N = 592526.2329	N 41°04'56.22121"	X = 14442999.7030
NYVH	E = 705618.1310	W 73°49'04.12592"	Y = -49770880.8093
		h 208.0705	Z = 44878406.7711
		H _**_	
-----			
	Az = 100°47'38.59522"	NSFA = 100°05'10.59531"	D X= -42901240.6500
	O = - 0°42'28.88405"	NSBA = 280°16'55.90745"	D Y= +148133802.3643
	t-T Con = -0.88414"	Ell Dist = 83568.9670	D Z= -133570946.5047
	Dist = 274180.6456	Delta h = -301.5569	S D= 204022884.9967
	Scale= 1.000013977933	Delta H = _**_	
		Gnd Dist= 83569.1958	
		Rad(A) = 6386626.1664	
		Skew Con = +0.00061"	
		GsFA = 100°05'10.59495"	
		Gsc Dist = 83568.9670	
		GsBA = 280°16'55.90709"	
-----			
Pt# 1 COORDINATES	N = 576876.1656	N 41°02'30.22458"	X = 1366675.4002
log0403a_IRY8	E = 787710.1027	W 73°31'10.39229"	Y = -4619607.5461
		h -93.4864	Z = 4165900.8514
		H _**_	
-----			
Pt# 3 COORDINATES	N = 592526.2329	N 41°04'56.22121"	X = 14442999.7030
NYVH	E = 705618.1310	W 73°49'04.12592"	Y = -49770880.8093
		h 208.0705	Z = 44878406.7711
		H _**_	
-----			
	Az = 170°16'41.18166"	NSFA = 169°34'21.01741"	D X= -42935413.3739
	O = - 0°42'28.88405"	NSBA = 349°37'47.82933"	D Y= +148043606.4687
	t-T Con = -8.71980"	Ell Dist = 134378.3056	D Z= -133659645.1880
	Dist = 440893.5724	Delta h = -208.9891	S D= 204022694.5455
	Scale= 1.000013977933	Delta H = _**_	
		Gnd Dist= 134378.9707	
		Rad(A) = 6363806.5613	
		Skew Con = +0.00001"	
		GsFA = 169°34'21.01645"	

cluster3

Gsc Dist = 134378.3056  
 GsBA = 349°37'47.82837"

```

Pt# 2 COORDINATES | N = 460070.6705 | N 40°43'10.26198" | X = 1356259.5331
                  | E = 728306.2926 | W 73°43'48.26704" | Y = -4647099.3101
NYQN              |                   | h -0.9186        | Z = 4138865.4387
                  |                   | H _**_          |
  
```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTDA-log0403a_IRY8		-0.3	1.2	-0.9	-0.38	0.72	-0.55	0.05
2	CTDA-NYQN		-0.2	17.7	-8.2	-0.02	0.92	-0.43	2.00
3	CTDA-NYVH		1.1	7.8	-1.2	0.18	0.65	-0.10	1.67
4	NYQN-log0403a_IRY8		10.8	-49.4	40.6	1.18	-2.88	2.18	1.90
5	NYVH-log0403a_IRY8		10.2	-38.8	33.9	1.75	-3.39	2.93	1.65
6	NYVH-NYQN		-1.6	9.2	-5.8	-0.17	0.51	-0.31	1.73
R.M.S.			6.1	27.1	22.0	0.88	1.91	1.52	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTDA-log0403a_IRY8		0.1	0.0	-1.5	0.09	0.01	-0.76	0.05
2	CTDA-NYQN		5.1	4.8	-18.2	0.42	0.53	-0.74	2.00
3	CTDA-NYVH		3.9	3.3	-6.2	0.54	0.59	-0.41	1.67
4	NYQN-log0403a_IRY8		-2.1	-3.5	64.8	-0.18	-0.40	2.88	1.90
5	NYVH-log0403a_IRY8		-0.8	-1.0	52.5	-0.11	-0.18	3.60	1.65
6	NYVH-NYQN		1.7	1.0	-10.8	0.15	0.12	-0.46	1.73
R.M.S.			2.8	2.8	35.2	0.30	0.37	1.95	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTDA-log0403a_IRY8		-0.1	0.0	-1.5	-0.08	0.03	-0.76	0.05
2	CTDA-NYQN		-6.6	-2.1	-18.2	-0.58	-0.22	-0.74	2.00

					cluster3			
3	CTDA-NYVH	-3.0	4.1	-6.2	-0.53	0.57	-0.41	1.67
4	NYQN-log0403a_IRY8	-3.7	-2.2	64.8	-0.32	-0.24	2.88	1.90
5	NYVH-log0403a_IRY8	-1.2	0.9	52.5	-0.21	0.13	3.60	1.65
6	NYVH-NYQN	-1.4	-1.3	-10.8	-0.13	-0.15	-0.46	1.73

R.M.S. 3.4 2.2 35.2 0.36 0.28 1.95 ( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)	from - to			( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTDA-log0403a_IRY8		2873.1	-0.2	0.4	-0.4	0.9	1.6	1.6	0.18	0.24	0.26	0.05
2	CTDA-NYQN		42801.8	6.5	-17.7	16.8	10.3	19.3	18.8	0.63	0.92	0.90	2.00
3	CTDA-NYVH		26167.5	6.3	-17.2	17.0	6.1	12.1	11.4	1.03	1.42	1.50	1.67
4	NYQN-log0403a_IRY8		39940.0	4.3	-14.8	16.1	9.2	17.1	18.7	0.46	0.86	0.86	1.90
5	NYVH-log0403a_IRY8		25472.1	5.1	-14.5	16.2	5.8	11.4	11.6	0.88	1.27	1.40	1.65
6	NYVH-NYQN		40958.8	-0.1	-1.2	1.0	9.1	17.9	18.9	0.01	0.07	0.05	1.73

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
	from - to			(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTDA-log0403a_IRY8		2873.1	-0.1	0.0	-0.6	1.2	0.8	2.0	0.05	0.05	0.30	0.05
2	CTDA-NYQN		42801.8	0.4	1.2	25.2	12.0	9.1	24.6	0.03	0.13	1.03	2.00
3	CTDA-NYVH		26167.5	0.8	1.2	25.0	7.2	5.6	11.5	0.12	0.21	2.17	1.67
4	NYQN-log0403a_IRY8		39940.0	2.2	-0.1	22.2	12.0	8.7	22.5	0.18	0.01	0.99	1.90
5	NYVH-log0403a_IRY8		25472.1	2.1	0.9	22.2	7.4	5.6	10.7	0.28	0.16	2.07	1.65
6	NYVH-NYQN		40958.8	0.0	-0.5	1.5	11.6	8.5	23.5	0.00	0.05	0.06	1.73

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)	from - to			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTDA-log0403a_IRY8		2873.1	0.1	0.0	-0.6	0.2	0.1	0.2	0.44	0.15	-2.69	0.05
2	CTDA-NYQN		42801.8	-0.9	-0.9	25.2	9.3	8.0	20.2	-0.10	-0.12	1.25	2.00
3	CTDA-NYVH		26167.5	-1.1	0.9	25.0	4.2	5.3	11.5	-0.26	0.17	2.17	1.67
4	NYQN-log0403a_IRY8		39940.0	1.8	-1.0	22.2	9.4	7.4	17.7	0.20	-0.14	1.26	1.90
5	NYVH-log0403a_IRY8		25472.1	0.4	-2.2	22.2	4.2	5.5	10.7	0.09	-0.40	2.08	1.65
6	NYVH-NYQN		40958.8	-0.1	0.4	1.5	8.7	6.6	18.0	-0.01	0.07	0.08	1.73

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status	Coordinates			Sigmas (mm)		
	Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTDA	Fixed	Fixed	41°03'57.06991"N	73°30'25.94231"W	-13.1600		
2	NYQN	Fixed	Fixed	40°43'10.26198"N	73°43'48.26704"W	-0.2800		
3	NYVH	Fixed	Fixed	41°04'56.22121"N	73°49'04.12592"W	63.4200		

```

;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

```

cluster3

```
;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTDA, 585635.4343, 791193.1539, -43.1758, 0.0000, 0.0000, 0.0000, ""
log0403a_IRY8, 576876.1656, 787710.1027, -93.4864, 0.0050, 0.0035, 0.0083, ""
NYQN, 460070.6705, 728306.2926, -0.9186, 0.0000, 0.0000, 0.0000, ""
NYVH, 592526.2329, 705618.1310, 208.0705, 0.0000, 0.0000, 0.0000, ""
```

ADJUSTMENT SUMMARY

```

-----
Item Name                      Item Value
-----
SubNet
  Name                          New Subnet
  Number of points              4
  Number of unknowns           3
  Degree of freedom             15
  Declared adjustment type     with fixed and weighted points
Aposteriori standard error of unit weight 0.850
  Adjustment Date and Time     3.May.07 13:13:34
  Reference points
    Number                      3
  Plane coordinates - fixed    6
    Heights - fixed             3
  Plane coordinates - weighted 0
    Heights - weighted          0
Apriori standard error of unit weight 1.000
  Processed vectors
    Total number               6
    Unused vectors             0
    Rejected vectors           0
    Downweighted vectors       0
  Apriori standard error of unit weight 1.000
Aposteriori standard error of unit weight 0.774
  Vectors' VPV test
    Confidence level (%)       95
    Lower bound                2.70
    Upper bound                19.02
    Degree of freedom          9
    VPV                        5.40
    VPV test                   passed
  Vectors' Tau test
    Confidence level (%)       95
    Tau critical value         3.00
  Number of flagged observations 0
-----

```

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA		41°03'57.06991"N	73°30'25.94231"W	-13.1600	0.0	0.0	0.0	0	0	0
2	log0403b_IRY8		41°05'48.74167"N	73°24'28.63032"W	-28.2142	2.1	1.7	4.2	-5	-5	-8
3	NYCI		40°45'38.23714"N	73°11'51.78743"W	-13.7500	0.0	0.0	0.0	0	0	0
4	NYVH		41°04'56.22121"N	73°49'04.12592"W	63.4200	0.0	0.0	0.0	0	0	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA		585635.43431	791193.15386	-43.17577	0.000	0.000	0.000	0	0	0
2	log0403b_IRY8		596713.39841	818648.69755	-92.56625	0.007	0.006	0.014	-5	-5	-8
3	NYCI		473828.01320	875960.02804	-45.11146	0.000	0.000	0.000	0	0	0
4	NYVH		592526.23287	705618.13097	208.07045	0.000	0.000	0.000	0	0	0

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

cluster4											
#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z
1	CTDA-log0403b_IRY8	7347.3938	4555.6606	2586.8087	9023.8472	2.4	4.3	3.9	-36	24	-60
2	CTDA-NYCI	31339.4801	-13798.9557	-25616.0580	42763.9641	10.4	20.6	17.1	-41	29	-64
3	CTDA-NYVH	-25370.7080	-6247.7551	1425.9369	26167.5479	6.4	12.4	10.7	-41	29	-65
4	NYCI-log0403b_IRY8	-23992.0725	18354.5945	28202.8975	41326.9175	10.4	19.2	17.2	-38	19	-62
5	NYVH-log0403b_IRY8	32718.1153	10803.3936	1160.9022	34475.1516	8.5	16.0	14.6	-34	21	-63
6	NYVH-NYCI	56710.1875	-7551.2009	-27041.9942	63279.8187	14.0	25.6	23.9	-37	18	-62
Mean weight matrix's estimations:						5.0	9.2	8.3	-36	24	-61

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA-log0403b_IRY8	3449.6618	8338.4167	-21.4345	9023.8472	2.6	2.2	5.3	-5	-5	-7
2	CTDA-NYCI	-33850.0234	26132.5806	-144.1036	42763.9641	11.4	9.3	24.7	-2	-16	-9
3	CTDA-NYVH	1871.2316	-26100.5465	23.0050	26167.5479	6.9	5.7	15.1	-5	-12	-7
4	NYCI-log0403b_IRY8	37362.3382	-17662.0421	-148.5319	41326.9175	11.5	9.4	23.5	-13	-6	-11
5	NYVH-log0403b_IRY8	1701.1251	34432.6611	-184.6617	34475.1516	9.5	7.9	19.8	-7	-3	-11
6	NYVH-NYCI	-35534.9034	52358.8883	-391.0470	63279.8187	15.6	12.7	32.0	-15	-1	-9
Mean weight matrix's estimations:						5.5	4.6	11.2	-6	-6	-8

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTDA-log0403b_IRY8	9023.8472	67°31'29.19"	- 0°08'09.95"	2.2	2.6	5.3	-10	-9	2
2	CTDA-NYCI	42763.9641	142°19'53.31"	- 0°11'35.06"	10.8	10.0	24.7	19	9	18
3	CTDA-NYVH	26167.5479	274°06'02.53"	0°03'01.34"	5.8	6.9	15.1	8	6	-12
4	NYCI-log0403b_IRY8	41326.9175	334°41'55.74"	- 0°12'21.34"	11.7	9.2	23.5	8	-2	-13
5	NYVH-log0403b_IRY8	34475.1516	87°10'17.89"	- 0°18'24.84"	7.8	9.5	19.8	5	-12	3
6	NYVH-NYCI	63279.8187	124°09'50.16"	- 0°21'14.66"	14.6	13.8	32.0	24	-7	6
Mean weight matrix's estimations:					4.6	5.4	11.2	-5	-7	0

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 585635.4343 E = 791193.1539	N 41°03'57.06991" W 73°30'25.94231"	X = 14716086.6882 Y = -49703631.0288
CTDA		h -43.1758 H **	Z = 44863058.3368
	Az = 68°01'37.14298" O = - 0°30'07.46183" t-T Con = +0.49750" Dist = 97133.0682 Scale= 1.000016261299	NSFA = 67°31'29.18365" NSBA = 247°35'23.98349" Ell Dist = 29605.7981 Delta h = -49.3905 Delta H = ** Gnd Dist= 29605.7020 Rad(A) = 6383796.0164	D X= -43771449.9698 D Y= +147934578.7894 D Z= -133505442.8005 S D= 204020299.7043



cluster4

Skew Con = -0.00123"  
 GsFA = 67°31'29.18374"  
 Gsc Dist = 29605.7981  
 GsBA = 247°35'23.98359"

Pt# 1 COORDINATES | N = 596713.3984 | N 41°05'48.74167" | X = 1374522.0543  
 | E = 818648.6976 | W 73°24'28.63032" | Y = -4613081.2327  
 log0403b\_IRY8 | | h -92.5662 | Z = 4170517.9861  
 | | H \_\*\*\_

Pt# 0 COORDINATES | N = 585635.4343 | N 41°03'57.06991" | X = 14716086.6882  
 CTDA | E = 791193.1539 | W 73°30'25.94231" | Y = -49703631.0288  
 | | h -43.1758 | Z = 44863058.3368  
 | | H \_\*\*\_

Az = 142°49'56.75609" | NSFA = 142°19'53.30853" | D X= -43692735.9345  
 O = - 0°30'07.46183" | NSBA = 322°32'02.98938" | D Y= +147874360.3432  
 t-T Con = -4.01427" | Ell Dist = 140301.7282 | D Z= -133597971.6909  
 Dist = 460327.0173 | Delta h = -1.9357 | S D= 204020341.2904  
 Scale= 1.000016261299 | Delta H = \_\*\*\_  
 | Gnd Dist= 140301.4323  
 | Rad(A) = 6372074.5511  
 | Skew Con = +0.00082"  
 | GsFA = 142°19'53.30568"  
 | Gsc Dist = 140301.7282  
 | GsBA = 322°32'02.98653"

Pt# 2 COORDINATES | N = 473828.0132 | N 40°45'38.23714" | X = 1398514.1402  
 NYCI | E = 875960.0280 | W 73°11'51.78743" | Y = -4631435.8518  
 | | h -45.1115 | Z = 4142315.1239  
 | | H \_\*\*\_

Pt# 0 COORDINATES | N = 585635.4343 | N 41°03'57.06991" | X = 14716086.6882  
 CTDA | E = 791193.1539 | W 73°30'25.94231" | Y = -49703631.0288  
 | | h -43.1758 | Z = 44863058.3368  
 | | H \_\*\*\_

Az = 274°36'10.44448" | NSFA = 274°06'02.55080" | D X= -43878792.6289  
 O = - 0°30'07.46183" | NSBA = 93°53'47.86433" | D Y= +147899134.6559  
 t-T Con = +0.43186" | Ell Dist = 85850.6535 | D Z= -133509251.4848  
 Dist = 281666.1366 | Delta h = +251.2462 | S D= 204020152.6971  
 Scale= 1.000016261299 | Delta H = \_\*\*\_  
 | Gnd Dist= 85850.9918  
 | Rad(A) = 6387245.0088  
 | Skew Con = -0.00056"  
 | GsFA = 274°06'02.55064"  
 | Gsc Dist = 85850.6535  
 | GsBA = 93°53'47.86417"

Pt# 3 COORDINATES | N = 592526.2329 | N 41°04'56.22121" | X = 1341803.9463  
 NYVH | E = 705618.1310 | W 73°49'04.12592" | Y = -4623884.6262  
 | | h 208.0705 | Z = 4169357.0968  
 | | H \_\*\*\_

Pt# 2 COORDINATES | N = 473828.0132 | N 40°45'38.23714" | X = 15053420.7081

cluster4

NYCI	E = 875960.0280	W 73°11'51.78743"	Y = -49852161.2004
		h -45.1115	Z = 44587330.5614
		H _**_	
-----			
	Az = 334°59'49.10497"	NSFA = 334°41'55.69374"	D X= -44878186.6667
	O = - 0°17'48.71090"	NSBA = 154°33'39.86910"	D Y= +148421881.5274
	t-T Con = +4.70033"	Ell Dist = 135587.1494	D Z= -132600825.9241
	Dist = 444857.3670	Delta h = -47.4548	S D= 204024718.0867
	Scale= 1.000073449441	Delta H = _**_	
		Gnd Dist= 135586.7034	
		Rad(A) = 6367134.6609	
		Skew Con = +0.00135"	
		GsFA = 334°41'55.69162"	
		Gsc Dist = 135587.1494	
		GsBA = 154°33'39.86697"	
-----			
Pt# 1 COORDINATES	N = 596713.3984	N 41°05'48.74167"	X = 1374522.0543
log0403b_IRY8	E = 818648.6976	W 73°24'28.63032"	Y = -4613081.2327
		h -92.5662	Z = 4170517.9861
		H _**_	
-----			
Pt# 3 COORDINATES	N = 592526.2329	N 41°04'56.22121"	X = 14442999.7030
NYVH	E = 705618.1310	W 73°49'04.12592"	Y = -49770880.8093
		h 208.0705	Z = 44878406.7711
		H _**_	
-----			
	Az = 87°52'47.04006"	NSFA = 87°10'17.93982"	D X= -42875497.0857
	O = - 0°42'28.88405"	NSBA = 267°26'27.69367"	D Y= +148155214.1109
	t-T Con = +0.21619"	Ell Dist = 113106.4908	D Z= -133555798.4554
	Dist = 371088.8110	Delta h = -300.6367	S D= 204023104.1320
	Scale= 1.000013977933	Delta H = _**_	
		Gnd Dist= 113106.8029	
		Rad(A) = 6387316.6796	
		Skew Con = -0.00017"	
		GsFA = 87°10'17.94001"	
		Gsc Dist = 113106.4908	
		GsBA = 267°26'27.69385"	
-----			
Pt# 1 COORDINATES	N = 596713.3984	N 41°05'48.74167"	X = 1374522.0543
log0403b_IRY8	E = 818648.6976	W 73°24'28.63032"	Y = -4613081.2327
		h -92.5662	Z = 4170517.9861
		H _**_	
-----			
Pt# 3 COORDINATES	N = 592526.2329	N 41°04'56.22121"	X = 14442999.7030
NYVH	E = 705618.1310	W 73°49'04.12592"	Y = -49770880.8093
		h 208.0705	Z = 44878406.7711
		H _**_	
-----			
	Az = 124°52'13.99829"	NSFA = 124°09'50.17404"	D X= -42796783.0504
	O = - 0°42'28.88405"	NSBA = 304°34'12.42720"	D Y= +148094995.6646
	t-T Con = -5.05980"	Ell Dist = 207609.5745	D Z= -133648327.3458
	Dist = 681163.1785	Delta h = -253.1819	S D= 204023449.1001
	Scale= 1.000013977933	Delta H = _**_	
		Gnd Dist= 207610.3829	
		Rad(A) = 6379672.5873	
		Skew Con = +0.00079"	
		GsFA = 124°09'50.16805"	

cluster4

Gsc Dist = 207609.5745  
 GsBA = 304°34'12.42120"

```

Pt# 2 COORDINATES | N = 473828.0132 | N 40°45'38.23714" | X = 1398514.1402
                  | E = 875960.0280 | W 73°11'51.78743" | Y = -4631435.8518
NYCI              |                   | h -45.1115       | Z = 4142315.1239
                  |                   | H              | _**_
  
```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTDA-log0403b_IRY8		-1.4	1.0	-2.7	-0.58	0.24	-0.69	0.21
2	CTDA-NYCI		-0.7	-1.1	-3.8	-0.07	-0.05	-0.22	1.77
3	CTDA-NYVH		4.2	-19.4	14.6	0.65	-1.56	1.37	1.20
4	NYCI-log0403b_IRY8		13.2	-19.8	31.9	1.27	-1.03	1.86	1.74
5	NYVH-log0403b_IRY8		8.0	-1.6	13.1	0.93	-0.10	0.89	1.95
6	NYVH-NYCI		-5.5	18.1	-17.7	-0.39	0.71	-0.74	2.13
R.M.S.			6.9	13.6	17.0	0.75	0.82	1.09	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTDA-log0403b_IRY8		-1.1	-1.0	-2.8	-0.43	-0.47	-0.54	0.21
2	CTDA-NYCI		-3.4	-1.0	-1.9	-0.30	-0.11	-0.08	1.77
3	CTDA-NYVH		-2.0	-1.5	24.5	-0.29	-0.26	1.62	1.20
4	NYCI-log0403b_IRY8		9.3	6.9	38.0	0.81	0.74	1.62	1.74
5	NYVH-log0403b_IRY8		7.3	7.2	11.4	0.77	0.91	0.58	1.95
6	NYVH-NYCI		-0.9	-0.3	-25.9	-0.06	-0.02	-0.81	2.13
R.M.S.			5.1	4.2	21.8	0.52	0.53	1.04	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTDA-log0403b_IRY8		-1.4	0.7	-2.8	-0.62	0.25	-0.54	0.21
2	CTDA-NYCI		2.1	2.9	-1.9	0.19	0.29	-0.08	1.77

cluster4								
3	CTDA-NYVH	1.4	-2.1	24.5	0.24	-0.31	1.62	1.20
4	NYCI-log0403b_IRY8	5.3	10.2	38.1	0.45	1.11	1.62	1.74
5	NYVH-log0403b_IRY8	7.5	-7.0	11.5	0.95	-0.73	0.58	1.95
6	NYVH-NYCI	0.5	0.9	-25.9	0.03	0.06	-0.81	2.13

R.M.S. 3.9 5.3 21.9 0.52 0.58 1.04 ( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTDA-log0403b_IRY8		9023.8	-1.0	1.4	-2.1	2.4	4.3	3.9	0.40	0.32	0.54	0.21
2	CTDA-NYCI		42764.0	6.5	-10.1	13.6	10.4	20.6	17.1	0.62	0.49	0.80	1.77
3	CTDA-NYVH		26167.5	4.9	-8.2	10.6	6.4	12.4	10.7	0.76	0.66	0.99	1.20
4	NYCI-log0403b_IRY8		41326.9	6.4	-10.4	15.1	10.4	19.2	17.2	0.61	0.54	0.88	1.74
5	NYVH-log0403b_IRY8		34475.2	7.7	-12.5	17.7	8.5	16.0	14.6	0.90	0.78	1.21	1.95
6	NYVH-NYCI		63279.8	1.0	-2.2	3.7	14.0	25.6	23.9	0.07	0.08	0.16	2.13

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTDA-log0403b_IRY8		9023.8	-0.5	-0.5	-2.6	2.6	2.2	5.3	0.20	0.25	0.49	0.21
2	CTDA-NYCI		42764.0	2.6	3.4	17.6	11.4	9.3	24.7	0.23	0.36	0.71	1.77
3	CTDA-NYVH		26167.5	1.9	2.4	13.9	6.9	5.7	15.1	0.27	0.41	0.92	1.20
4	NYCI-log0403b_IRY8		41326.9	3.7	3.1	18.8	11.5	9.4	23.5	0.32	0.33	0.80	1.74
5	NYVH-log0403b_IRY8		34475.2	4.0	3.9	22.3	9.5	7.9	19.8	0.42	0.49	1.13	1.95
6	NYVH-NYCI		63279.8	1.2	0.3	4.2	15.6	12.7	32.0	0.08	0.03	0.13	2.13

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTDA-log0403b_IRY8		9023.8	-0.7	0.3	-2.6	0.6	0.7	1.3	-1.16	0.42	-1.93	0.21
2	CTDA-NYCI		42764.0	-0.1	-4.3	17.6	8.1	7.8	19.3	-0.01	-0.54	0.92	1.77
3	CTDA-NYVH		26167.5	-2.2	2.0	13.9	3.6	4.3	9.8	-0.62	0.47	1.42	1.20
4	NYCI-log0403b_IRY8		41326.9	2.0	4.4	18.8	9.0	6.9	17.7	0.22	0.63	1.06	1.74
5	NYVH-log0403b_IRY8		34475.2	3.9	-3.8	22.3	6.4	7.7	15.8	0.62	-0.50	1.41	1.95
6	NYVH-NYCI		63279.8	-0.4	-1.2	4.2	12.5	11.5	26.8	-0.04	-0.11	0.16	2.13

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status		Coordinates			Sigmas (mm)		
		Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTDA	Fixed	Fixed	41°03'57.06991"N	73°30'25.94231"W	-13.1600			
2	NYCI	Fixed	Fixed	40°45'38.23714"N	73°11'51.78743"W	-13.7500			
3	NYVH	Fixed	Fixed	41°04'56.22121"N	73°49'04.12592"W	63.4200			

```

;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

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cluster4

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;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTDA, 585635.4343, 791193.1539, -43.1758, 0.0000, 0.0000, 0.0000, ""
log0403b_IRY8, 596713.3984, 818648.6976, -92.5662, 0.0069, 0.0057, 0.0138, ""
NYCI, 473828.0132, 875960.0280, -45.1115, 0.0000, 0.0000, 0.0000, ""
NYVH, 592526.2329, 705618.1310, 208.0705, 0.0000, 0.0000, 0.0000, ""
```

ADJUSTMENT SUMMARY

Item Name	Item Value
SubNet	
Name	New Subnet
Number of points	4
Number of unknowns	3
Degree of freedom	15
Declared adjustment type	with fixed and weighted points
Aposteriori standard error of unit weight	0.443
Adjustment Date and Time	3.May.07 13:20:37
Reference points	
Number	3
Plane coordinates - fixed	6
Heights - fixed	3
Plane coordinates - weighted	0
Heights - weighted	0
Apriori standard error of unit weight	1.000
Processed vectors	
Total number	6
Unused vectors	0
Rejected vectors	0
Downweighted vectors	0
Apriori standard error of unit weight	1.000
Aposteriori standard error of unit weight	0.338
Vectors' VPV test	
Confidence level (%)	95
Lower bound	2.70
Upper bound	19.02
Degree of freedom	9
VPV	1.03
VPV test	failed
Vectors' Tau test	
Confidence level (%)	95
Tau critical value	3.00
Number of flagged observations	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA		41°03'57.06991"N	73°30'25.94231"W	-13.1600	0.0	0.0	0.0	0	0	0
2	log0405a_IRY8		41°06'52.28029"N	73°19'39.86772"W	-26.8611	2.1	1.2	3.6	-21	-1	1
3	NYCI		40°45'38.23714"N	73°11'51.78743"W	-13.7500	0.0	0.0	0.0	0	0	0
4	NYVH		41°04'56.22121"N	73°49'04.12592"W	63.4200	0.0	0.0	0.0	0	0	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA		585635.43431	791193.15386	-43.17577	0.000	0.000	0.000	0	0	0
2	log0405a_IRY8		602985.99008	840800.09878	-88.12670	0.007	0.004	0.012	-21	-1	1
3	NYCI		473828.01320	875960.02804	-45.11146	0.000	0.000	0.000	0	0	0
4	NYVH		592526.23287	705618.13097	208.07045	0.000	0.000	0.000	0	0	0

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

cluster5											
#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z
1	CTDA-log0405a_IRY8	13434.7583	7717.9683	4064.6207	16018.1431	3.9	7.5	7.4	-58	20	-49
2	CTDA-NYCI	31339.4840	-13798.9598	-25616.0479	42763.9621	9.4	20.8	17.5	-44	32	-57
3	CTDA-NYVH	-25370.7048	-6247.7403	1425.9268	26167.5408	5.7	12.6	11.0	-46	30	-59
4	NYCI-log0405a_IRY8	-17904.7221	21516.9128	29680.6828	40798.2787	9.4	18.3	18.3	-57	14	-47
5	NYVH-log0405a_IRY8	38805.4708	13965.6900	2638.7057	41326.3576	9.3	19.7	17.3	-54	19	-52
6	NYVH-NYCI	56710.1894	-7551.2188	-27041.9744	63279.8141	11.5	27.5	23.1	-41	27	-58
Mean weight matrix's estimations:						6.6	13.3	12.5	-54	24	-53

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA-log0405a_IRY8	5420.5138	15073.0818	-33.7975	16018.1431	5.5	3.0	9.3	-21	1	3
2	CTDA-NYCI	-33850.0191	26132.5832	-144.0932	42763.9621	12.6	8.3	24.5	7	-14	-10
3	CTDA-NYVH	1871.2328	-26100.5392	22.9883	26167.5408	7.6	5.0	15.1	2	-9	-11
4	NYCI-log0405a_IRY8	39309.3220	-10920.4419	-143.8538	40798.2787	13.9	7.4	22.5	-25	2	-3
5	NYVH-log0405a_IRY8	3695.9478	41160.1463	-223.9637	41326.3576	13.2	7.6	23.3	-17	-11	-6
6	NYVH-NYCI	-35534.9002	52358.8851	-391.0206	63279.8141	16.4	10.6	32.3	7	-13	-19
Mean weight matrix's estimations:						9.1	5.3	16.3	-13	-3	-2

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTDA-log0405a_IRY8	16018.1431	70°13'14.27"	- 0°07'15.21"	3.1	5.5	9.3	-24	3	0
2	CTDA-NYCI	42763.9621	142°19'53.29"	- 0°11'35.01"	10.8	10.5	24.5	40	7	17
3	CTDA-NYVH	26167.5408	274°06'02.54"	0°03'01.21"	5.0	7.6	15.1	5	10	-9
4	NYCI-log0405a_IRY8	40798.2787	344°28'27.43"	- 0°12'07.29"	14.0	7.2	22.5	13	2	-2
5	NYVH-log0405a_IRY8	41326.3576	84°52'08.13"	- 0°18'37.84"	7.4	13.2	23.3	6	-10	11
6	NYVH-NYCI	63279.8141	124°09'50.16"	- 0°21'14.57"	12.2	15.2	32.3	37	-5	19
Mean weight matrix's estimations:					5.5	8.0	16.3	-4	2	1

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 585635.4343 E = 791193.1539	N 41°03'57.06991" W 73°30'25.94231"	X = 14716086.6882 Y = -49703631.0288
CTDA		h -43.1758 H **	Z = 44863058.3368
	Az = 70°43'22.45488" O = - 0°30'07.46183" t-T Con = +0.71879" Dist = 172419.9116 Scale= 1.000016261299	NSFA = 70°13'14.27426" NSBA = 250°20'18.90402" Ell Dist = 52553.0006 Delta h = -44.9509 Delta H = ** Gnd Dist= 52552.8357 Rad(A) = 6384569.1699	D X= -43751478.3453 D Y= +147944953.7879 D Z= -133500594.3491 S D= 204020366.3859

cluster5

Skew Con = -0.00105"  
 GsFA = 70°13'14.27452"  
 Gsc Dist = 52553.0006  
 GsBA = 250°20'18.90428"

Pt# 1 COORDINATES | N = 602985.9901 | N 41°06'52.28029" | X = 1380609.4176  
 | E = 840800.0988 | W 73°19'39.86772" | Y = -4609918.9268  
 log0405a\_IRY8 | | h -88.1267 | Z = 4171995.7970  
 | | H \*\* |

Pt# 0 COORDINATES | N = 585635.4343 | N 41°03'57.06991" | X = 14716086.6882  
 | E = 791193.1539 | W 73°30'25.94231" | Y = -49703631.0288  
 CTDA | | h -43.1758 | Z = 44863058.3368  
 | | H \*\* |

Az = 142°49'56.75609" | NSFA = 142°19'53.30853" | D X= -43692735.9345  
 O = - 0°30'07.46183" | NSBA = 322°32'02.98938" | D Y= +147874360.3432  
 t-T Con = -4.01427" | Ell Dist = 140301.7282 | D Z= -133597971.6909  
 Dist = 460327.0173 | Delta h = -1.9357 | S D= 204020341.2904  
 Scale= 1.000016261299 | Delta H = \*\* |  
 Gnd Dist= 140301.4323  
 Rad(A) = 6372074.5511  
 Skew Con = +0.00082"  
 GsFA = 142°19'53.30568"  
 Gsc Dist = 140301.7282  
 GsBA = 322°32'02.98653"

Pt# 2 COORDINATES | N = 473828.0132 | N 40°45'38.23714" | X = 1398514.1402  
 | E = 875960.0280 | W 73°11'51.78743" | Y = -4631435.8518  
 NYCI | | h -45.1115 | Z = 4142315.1239  
 | | H \*\* |

Pt# 0 COORDINATES | N = 585635.4343 | N 41°03'57.06991" | X = 14716086.6882  
 | E = 791193.1539 | W 73°30'25.94231" | Y = -49703631.0288  
 CTDA | | h -43.1758 | Z = 44863058.3368  
 | | H \*\* |

Az = 274°36'10.44448" | NSFA = 274°06'02.55080" | D X= -43878792.6289  
 O = - 0°30'07.46183" | NSBA = 93°53'47.86433" | D Y= +147899134.6559  
 t-T Con = +0.43186" | Ell Dist = 85850.6535 | D Z= -133509251.4848  
 Dist = 281666.1366 | Delta h = +251.2462 | S D= 204020152.6971  
 Scale= 1.000016261299 | Delta H = \*\* |  
 Gnd Dist= 85850.9918  
 Rad(A) = 6387245.0088  
 Skew Con = -0.00056"  
 GsFA = 274°06'02.55064"  
 Gsc Dist = 85850.6535  
 GsBA = 93°53'47.86417"

Pt# 3 COORDINATES | N = 592526.2329 | N 41°04'56.22121" | X = 1341803.9463  
 | E = 705618.1310 | W 73°49'04.12592" | Y = -4623884.6262  
 NYVH | | h 208.0705 | Z = 4169357.0968  
 | | H \*\* |

Pt# 2 COORDINATES | N = 473828.0132 | N 40°45'38.23714" | X = 15053420.7081



cluster5

NYCI	E = 875960.0280	W 73°11'51.78743"	Y = -49852161.2004
		h -45.1115	Z = 44587330.5614
		H _**_	
-----			
	Az = 344°46'20.64560"	NSFA = 344°28'27.44411"	D X= -44858215.0423
	O = - 0°17'48.71090"	NSBA = 164°23'20.73978"	D Y= +148432256.5258
	t-T Con = +4.49060"	Ell Dist = 133852.7715	D Z= -132595977.4727
	Dist = 439166.2718	Delta h = -43.0152	S D= 204024722.7080
	Scale= 1.000073449441	Delta H = _**_	
		Gnd Dist= 133852.3454	
		Rad(A) = 6364411.6332	
		Skew Con = +0.00086"	
		GsFA = 344°28'27.44273"	
		Gsc Dist = 133852.7715	
		GsBA = 164°23'20.73840"	
-----			
Pt# 1 COORDINATES	N = 602985.9901	N 41°06'52.28029"	X = 1380609.4176
log0405a_IRY8	E = 840800.0988	W 73°19'39.86772"	Y = -4609918.9268
		h -88.1267	Z = 4171995.7970
		H _**_	
-----			
Pt# 3 COORDINATES	N = 592526.2329	N 41°04'56.22121"	X = 14442999.7030
NYVH	E = 705618.1310	W 73°49'04.12592"	Y = -49770880.8093
		h 208.0705	Z = 44878406.7711
		H _**_	
-----			
	Az = 85°34'37.51273"	NSFA = 84°52'08.12503"	D X= -42855525.4613
	O = - 0°42'28.88405"	NSBA = 265°11'27.87074"	D Y= +148165589.1093
	t-T Con = +0.50365"	Ell Dist = 135584.1905	D Z= -133550950.0039
	Dist = 444835.1596	Delta h = -296.1972	S D= 204023268.5397
	Scale= 1.000013977933	Delta H = _**_	
		Gnd Dist= 135584.5791	
		Rad(A) = 6387180.6071	
		Skew Con = -0.00029"	
		GsFA = 84°52'08.12552"	
		Gsc Dist = 135584.1905	
		GsBA = 265°11'27.87123"	
-----			
Pt# 1 COORDINATES	N = 602985.9901	N 41°06'52.28029"	X = 1380609.4176
log0405a_IRY8	E = 840800.0988	W 73°19'39.86772"	Y = -4609918.9268
		h -88.1267	Z = 4171995.7970
		H _**_	
-----			
Pt# 3 COORDINATES	N = 592526.2329	N 41°04'56.22121"	X = 14442999.7030
NYVH	E = 705618.1310	W 73°49'04.12592"	Y = -49770880.8093
		h 208.0705	Z = 44878406.7711
		H _**_	
-----			
	Az = 124°52'13.99829"	NSFA = 124°09'50.17404"	D X= -42796783.0504
	O = - 0°42'28.88405"	NSBA = 304°34'12.42720"	D Y= +148094995.6646
	t-T Con = -5.05980"	Ell Dist = 207609.5745	D Z= -133648327.3458
	Dist = 681163.1785	Delta h = -253.1819	S D= 204023449.1001
	Scale= 1.000013977933	Delta H = _**_	
		Gnd Dist= 207610.3829	
		Rad(A) = 6379672.5873	
		Skew Con = +0.00079"	
		GsFA = 124°09'50.16805"	

cluster5

Gsc Dist = 207609.5745  
 GsBA = 304°34'12.42120"

Pt#	2	COORDINATES	N =	473828.0132	N	40°45'38.23714"	X =	1398514.1402
			E =	875960.0280	W	73°11'51.78743"	Y =	-4631435.8518
NYCI					h	-45.1115	Z =	4142315.1239
					H	__**__		

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTDA-log0405a_IRY8		-0.1	2.8	-1.8	-0.03	0.37	-0.24	0.50
2	CTDA-NYCI		3.1	-5.1	6.3	0.33	-0.25	0.36	1.76
3	CTDA-NYVH		7.4	-4.6	4.5	1.29	-0.37	0.41	0.99
4	NYCI-log0405a_IRY8		0.3	-7.4	6.1	0.03	-0.41	0.34	1.63
5	NYVH-log0405a_IRY8		0.2	-11.2	5.5	0.02	-0.57	0.32	2.04
6	NYVH-NYCI		-3.6	0.2	2.1	-0.31	0.01	0.09	2.07
R.M.S.			3.6	6.3	4.8	0.56	0.37	0.31	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTDA-log0405a_IRY8		0.4	0.7	-3.2	0.07	0.22	-0.34	0.50
2	CTDA-NYCI		1.0	1.5	8.5	0.08	0.19	0.35	1.76
3	CTDA-NYVH		-0.9	5.7	7.9	-0.12	1.15	0.52	0.99
4	NYCI-log0405a_IRY8		-0.1	-1.8	9.5	0.00	-0.25	0.42	1.63
5	NYVH-log0405a_IRY8		-2.9	-2.9	11.8	-0.22	-0.38	0.50	2.04
6	NYVH-NYCI		2.4	-3.4	0.5	0.14	-0.32	0.01	2.07
R.M.S.			1.6	3.1	7.9	0.13	0.54	0.40	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTDA-log0405a_IRY8		0.8	-0.2	-3.2	0.26	-0.03	-0.34	0.50
2	CTDA-NYCI		0.2	-1.8	8.5	0.01	-0.17	0.35	1.76

		cluster5						
3	CTDA-NYVH	-5.8	-0.5	7.9	-1.16	-0.06	0.52	0.99
4	NYCI-log0405a_IRY8	0.4	-1.8	9.5	0.03	-0.25	0.42	1.63
5	NYVH-log0405a_IRY8	-3.2	2.7	11.7	-0.43	0.20	0.50	2.04
6	NYVH-NYCI	-4.2	0.0	0.4	-0.34	0.00	0.01	2.07

R.M.S. 3.2 1.5 7.9 0.53 0.15 0.40 ( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)	from - to			( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTDA-log0405a_IRY8		16018.1	-1.1	2.7	-2.2	3.9	7.5	7.4	0.27	0.36	0.29	0.50
2	CTDA-NYCI		42764.0	1.3	-6.8	5.4	9.4	20.8	17.5	0.14	0.33	0.31	1.76
3	CTDA-NYVH		26167.5	1.8	-4.7	3.4	5.7	12.6	11.0	0.32	0.37	0.31	0.99
4	NYCI-log0405a_IRY8		40798.3	1.1	-5.7	6.6	9.4	18.3	18.3	0.12	0.31	0.36	1.63
5	NYVH-log0405a_IRY8		41326.4	4.8	-11.2	6.2	9.3	19.7	17.3	0.51	0.57	0.36	2.04
6	NYVH-NYCI		63279.8	0.1	-1.5	2.3	11.5	27.5	23.1	0.01	0.05	0.10	2.07

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
	from - to			(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTDA-log0405a_IRY8		16018.1	0.3	-0.3	-3.6	5.5	3.0	9.3	0.05	0.08	0.39	0.50
2	CTDA-NYCI		42764.0	-0.5	-0.6	8.8	12.6	8.3	24.5	0.04	0.08	0.36	1.76
3	CTDA-NYVH		26167.5	-0.7	0.4	6.0	7.6	5.0	15.1	0.09	0.08	0.40	0.99
4	NYCI-log0405a_IRY8		40798.3	1.2	-0.6	8.7	13.9	7.4	22.5	0.09	0.08	0.39	1.63
5	NYVH-log0405a_IRY8		41326.4	-3.2	1.5	13.2	13.2	7.6	23.3	0.25	0.20	0.57	2.04
6	NYVH-NYCI		63279.8	0.8	-0.3	2.6	16.4	10.6	32.3	0.05	0.03	0.08	2.07

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)	from - to			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTDA-log0405a_IRY8		16018.1	-0.1	-0.3	-3.6	1.2	2.4	3.8	-0.12	-0.14	-0.95	0.50
2	CTDA-NYCI		42764.0	0.0	0.8	8.8	7.8	8.3	19.0	-0.01	0.10	0.46	1.76
3	CTDA-NYVH		26167.5	-0.5	-0.7	6.0	2.9	4.2	8.8	-0.16	-0.16	0.68	0.99
4	NYCI-log0405a_IRY8		40798.3	1.3	-0.2	8.7	11.1	4.9	16.3	0.12	-0.04	0.54	1.63
5	NYVH-log0405a_IRY8		41326.4	1.1	3.4	13.2	6.1	11.1	19.1	0.19	0.30	0.69	2.04
6	NYVH-NYCI		63279.8	-0.7	-0.5	2.6	9.9	12.7	27.2	-0.07	-0.04	0.10	2.07

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status	Coordinates			Sigmas (mm)		
	Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTDA	Fixed	Fixed	41°03'57.06991"N	73°30'25.94231"W	-13.1600		
2	NYCI	Fixed	Fixed	40°45'38.23714"N	73°11'51.78743"W	-13.7500		
3	NYVH	Fixed	Fixed	41°04'56.22121"N	73°49'04.12592"W	63.4200		

```

;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

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cluster5

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;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTDA, 585635.4343, 791193.1539, -43.1758, 0.0000, 0.0000, 0.0000, ""
log0405a_IRY8, 602985.9901, 840800.0988, -88.1267, 0.0070, 0.0038, 0.0117, ""
NYCI, 473828.0132, 875960.0280, -45.1115, 0.0000, 0.0000, 0.0000, ""
NYVH, 592526.2329, 705618.1310, 208.0705, 0.0000, 0.0000, 0.0000, ""
```

ADJUSTMENT SUMMARY

Item Name	Item Value
SubNet	
Name	New Subnet
Number of points	4
Number of unknowns	3
Degree of freedom	15
Declared adjustment type	with fixed and weighted points
Aposteriori standard error of unit weight	0.191
Adjustment Date and Time	3.May.07 13:29:15
Reference points	
Number	3
Plane coordinates - fixed	6
Heights - fixed	3
Plane coordinates - weighted	0
Heights - weighted	0
Apriori standard error of unit weight	1.000
Processed vectors	
Total number	6
Unused vectors	0
Rejected vectors	0
Downweighted vectors	0
Apriori standard error of unit weight	1.000
Aposteriori standard error of unit weight	0.100
Vectors' VPV test	
Confidence level (%)	95
Lower bound	2.70
Upper bound	19.02
Degree of freedom	9
VPV	0.09
VPV test	failed
Vectors' Tau test	
Confidence level (%)	95
Tau critical value	3.00
Number of flagged observations	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTBR		41°29'49.86446"N	73°25'05.67398"W	53.4200	0.0	0.0	0.0	0	0	0
2	CTDA		41°03'57.06991"N	73°30'25.94231"W	-13.1600	0.0	0.0	0.0	0	0	0
3	log0406b_IRY8		41°07'27.21863"N	73°15'45.54209"W	-27.5324	1.0	0.6	2.0	6	-1	-11
4	NYCI		40°45'38.23714"N	73°11'51.78743"W	-13.7500	0.0	0.0	0.0	0	0	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTBR		742590.80193	816940.51688	175.26212	0.000	0.000	0.000	0	0	0
2	CTDA		585635.43431	791193.15386	-43.17577	0.000	0.000	0.000	0	0	0
3	log0406b_IRY8		606408.91374	858756.90658	-90.32917	0.003	0.002	0.006	6	-1	-11
4	NYCI		473828.01320	875960.02804	-45.11146	0.000	0.000	0.000	0	0	0

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

cluster6											
#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z
1	CTBR-CTDA	1837.0117	-32370.8484	-36042.2935	48479.8242	10.8	23.6	19.6	-39	29	-56
2	CTBR-log0406b_IRY8	20303.6763	-22402.2302	-31166.1518	43421.5178	8.8	20.9	18.4	-52	37	-61
3	CTBR-NYCI	33176.4954	-46169.8044	-61658.3434	83869.4342	13.6	32.4	25.7	-32	27	-57
4	CTDA-log0406b_IRY8	18466.6632	9968.6252	4876.1372	21544.5551	4.5	10.2	9.5	-47	35	-60
5	CTDA-NYCI	31339.4828	-13798.9556	-25616.0500	42763.9611	9.5	20.4	17.8	-39	28	-57
6	NYCI-log0406b_IRY8	-12872.8197	23767.5783	30492.1924	40747.7737	8.4	18.7	18.2	-48	33	-59
Mean weight matrix's estimations:						7.6	17.3	15.7	-45	33	-59

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTBR-CTDA	-47899.0347	-7477.4797	-251.2628	48479.8242	14.3	9.9	27.5	10	-16	-14
2	CTBR-log0406b_IRY8	-41408.3669	13066.0970	-229.0645	43421.5178	12.3	7.4	25.4	5	-10	-11
3	CTBR-NYCI	-81773.8762	18620.7140	-619.8110	83869.4342	18.8	13.3	36.8	18	-20	-24
4	CTDA-log0406b_IRY8	6511.6036	20536.9009	-50.7189	21544.5551	6.2	3.9	12.7	6	-1	-11
5	CTDA-NYCI	-33850.0178	26132.5832	-144.0978	42763.9611	12.5	8.7	24.4	5	-9	-13
6	NYCI-log0406b_IRY8	40381.0308	-5452.7619	-144.2361	40747.7737	12.0	7.2	23.6	2	5	-11
Mean weight matrix's estimations:						10.6	6.7	21.2	6	-5	-12

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTBR-CTDA	48479.8242	188°52'22.02"	- 0°17'49.04"	14.3	9.8	27.6	-2	16	11
2	CTBR-log0406b_IRY8	43421.5178	162°29'14.29"	- 0°18'08.13"	11.8	8.1	25.4	33	7	14
3	CTBR-NYCI	83869.4342	167°10'18.93"	- 0°25'24.35"	18.0	14.3	36.8	30	15	28
4	CTDA-log0406b_IRY8	21544.5551	72°24'28.16"	- 0°08'05.58"	4.3	6.0	12.7	-32	-10	-1
5	CTDA-NYCI	42763.9611	142°19'53.29"	- 0°11'35.04"	10.9	10.5	24.4	34	1	16
6	NYCI-log0406b_IRY8	40747.7737	352°18'34.96"	- 0°12'10.13"	11.9	7.3	23.6	16	5	-9
Mean weight matrix's estimations:					7.9	8.0	21.0	-4	-4	3

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 742590.8019 E = 816940.5169	N 41°29'49.86446" W 73°25'05.67398" h 175.2621 H **	X = 14696313.3007 Y = -49355195.3560 Z = 45251012.6735
CTBR	Az = 189°18'49.72230" O = - 0°26'35.10489" t-T Con = -7.40802" Dist = 521826.9753 Scale= 0.999983341915	NSFA = 188°52'22.02544" NSBA = 8°48'50.72266" Ell Dist = 159053.5727 Delta h = -218.4379 Delta H = ** Gnd Dist= 159054.0747 Rad(A) = 6364041.7907	D X= -43730682.3604 D Y= +146776473.0602 D Z= -134786743.2166 S D= 204017577.1119

cluster6

			Skew Con = -0.00025"		
			GsFA = 188°52'22.02658"		
			Gsc Dist = 159053.5727		
			GsBA = 8°48'50.72380"		
Pt# 2 COORDINATES	N = 585635.4343	N 41°03'57.06991"	X = 1367174.6589		
CTDA	E = 791193.1539	W 73°30'25.94231"	Y = -4617636.8921		
		h -43.1758	Z = 4167931.1749		
		H _**_			
Pt# 0 COORDINATES	N = 742590.8019	N 41°29'49.86446"	X = 14696313.3007		
CTBR	E = 816940.5169	W 73°25'05.67398"	Y = -49355195.3560		
		h 175.2621	Z = 45251012.6735		
		H _**_			
	Az = 162°55'44.42289"	NSFA = 162°29'14.29962"	D X= -43670096.3176		
	O = - 0°26'35.10489"	NSBA = 342°35'24.07116"	D Y= +146809178.4569		
	t-T Con = -4.98161"	Ell Dist = 142458.2253	D Z= -134770745.4258		
	Dist = 467379.0591	Delta h = -265.5913	S D= 204017563.0042		
	Scale= 0.999983341915	Delta H = _**_			
		Gnd Dist= 142458.5144			
		Rad(A) = 6365642.6061			
		Skew Con = +0.00097"			
		GsFA = 162°29'14.29790"			
		Gsc Dist = 142458.2253			
		GsBA = 342°35'24.06944"			
Pt# 1 COORDINATES	N = 606408.9137	N 41°07'27.21863"	X = 1385641.3217		
log0406b_IRY8	E = 858756.9066	W 73°15'45.54209"	Y = -4607668.2673		
		h -90.3292	Z = 4172807.3113		
		H _**_			
Pt# 0 COORDINATES	N = 742590.8019	N 41°29'49.86446"	X = 14696313.3007		
CTBR	E = 816940.5169	W 73°25'05.67398"	Y = -49355195.3560		
		h 175.2621	Z = 45251012.6735		
		H _**_			
	Az = 167°36'44.94242"	NSFA = 167°10'18.94283"	D X= -43627862.7455		
	O = - 0°26'35.10489"	NSBA = 347°19'01.13886"	D Y= +146731200.9733		
	t-T Con = -9.10530"	Ell Dist = 275160.6971	D Z= -134870785.2106		
	Dist = 902776.2396	Delta h = -220.3736	S D= 204018539.4766		
	Scale= 0.999983341915	Delta H = _**_			
		Gnd Dist= 275161.5528			
		Rad(A) = 6364653.2722			
		Skew Con = +0.00037"			
		GsFA = 167°10'18.93796"			
		Gsc Dist = 275160.6971			
		GsBA = 347°19'01.13399"			
Pt# 3 COORDINATES	N = 473828.0132	N 40°45'38.23714"	X = 1398514.1402		
NYCI	E = 875960.0280	W 73°11'51.78743"	Y = -4631435.8518		
		h -45.1115	Z = 4142315.1239		
		H _**_			
Pt# 2 COORDINATES	N = 585635.4343	N 41°03'57.06991"	X = 14716086.6882		

cluster6

CTDA	E = 791193.1539	W 73°30'25.94231"	Y = -49703631.0288
		h -43.1758	Z = 44863058.3368
		H _**_	
-----			
	Az = 72°54'36.42457"	NSFA = 72°24'28.16077"	D X= -43734969.5065
	O = - 0°30'07.46183"	NSBA = 252°34'06.85671"	D Y= +147952337.8268
	t-T Con = +0.80197"	Ell Dist = 70684.3016	D Z= -133497931.9060
	Dist = 231906.3749	Delta h = -47.1534	S D= 204020439.2930
	Scale= 1.000016261299	Delta H = _**_	
		Gnd Dist= 70684.0761	
		Rad(A) = 6385135.5811	
		Skew Con = -0.00098"	
		GsFA = 72°24'28.16120"	
		Gsc Dist = 70684.3016	
		GsBA = 252°34'06.85714"	
-----			
Pt# 1 COORDINATES	N = 606408.9137	N 41°07'27.21863"	X = 1385641.3217
log0406b_IRY8	E = 858756.9066	W 73°15'45.54209"	Y = -4607668.2673
		h -90.3292	Z = 4172807.3113
		H _**_	
-----			
Pt# 2 COORDINATES	N = 585635.4343	N 41°03'57.06991"	X = 14716086.6882
CTDA	E = 791193.1539	W 73°30'25.94231"	Y = -49703631.0288
		h -43.1758	Z = 44863058.3368
		H _**_	
-----			
	Az = 142°49'56.75609"	NSFA = 142°19'53.30853"	D X= -43692735.9345
	O = - 0°30'07.46183"	NSBA = 322°32'02.98938"	D Y= +147874360.3432
	t-T Con = -4.01427"	Ell Dist = 140301.7282	D Z= -133597971.6909
	Dist = 460327.0173	Delta h = -1.9357	S D= 204020341.2904
	Scale= 1.000016261299	Delta H = _**_	
		Gnd Dist= 140301.4323	
		Rad(A) = 6372074.5511	
		Skew Con = +0.00082"	
		GsFA = 142°19'53.30568"	
		Gsc Dist = 140301.7282	
		GsBA = 322°32'02.98653"	
-----			
Pt# 3 COORDINATES	N = 473828.0132	N 40°45'38.23714"	X = 1398514.1402
NYCI	E = 875960.0280	W 73°11'51.78743"	Y = -4631435.8518
		h -45.1115	Z = 4142315.1239
		H _**_	
-----			
Pt# 3 COORDINATES	N = 473828.0132	N 40°45'38.23714"	X = 15053420.7081
NYCI	E = 875960.0280	W 73°11'51.78743"	Y = -49852161.2004
		h -45.1115	Z = 44587330.5614
		H _**_	
-----			
	Az = 352°36'27.91749"	NSFA = 352°18'34.97116"	D X= -44841706.2035
	O = - 0°17'48.71090"	NSBA = 172°16'01.79111"	D Y= +148439640.5647
	t-T Con = +4.23544"	Ell Dist = 133687.0787	D Z= -132593315.0296
	Dist = 438622.2953	Delta h = -45.2177	S D= 204024735.5023
	Scale= 1.000073449441	Delta H = _**_	
		Gnd Dist= 133686.6460	
		Rad(A) = 6363094.1623	
		Skew Con = +0.00045"	
		GsFA = 352°18'34.97045"	



cluster6

Gsc Dist = 133687.0787  
 GsBA = 172°16'01.79040"

Pt#	1	COORDINATES	N =	606408.9137	N	41°07'27.21863"	X =	1385641.3217
		log0406b_IRY8	E =	858756.9066	W	73°15'45.54209"	Y =	-4607668.2673
					h	-90.3292	Z =	4172807.3113
					H	__**__		

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTBR-CTDA		-3.6	9.7	-7.9	-0.33	0.41	-0.40	1.81
2	CTBR-log0406b_IRY8		-1.5	2.6	-3.0	-0.17	0.12	-0.16	1.42
3	CTBR-NYCI		-0.8	8.5	-3.6	-0.06	0.26	-0.14	2.08
4	CTDA-log0406b_IRY8		0.8	-0.1	0.4	0.17	-0.01	0.04	0.58
5	CTDA-NYCI		1.9	-0.9	4.2	0.20	-0.04	0.24	1.65
6	NYCI-log0406b_IRY8		-1.3	-1.7	1.4	-0.16	-0.09	0.08	1.46
R.M.S.			1.9	5.4	4.2	0.20	0.21	0.21	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTBR-CTDA		0.9	-0.6	-13.0	0.07	-0.06	-0.47	1.81
2	CTBR-log0406b_IRY8		-0.3	-0.7	-4.2	-0.03	-0.09	-0.16	1.42
3	CTBR-NYCI		2.8	1.7	-8.6	0.15	0.13	-0.23	2.08
4	CTDA-log0406b_IRY8		0.1	0.7	0.5	0.02	0.18	0.04	0.58
5	CTDA-NYCI		2.2	1.5	3.8	0.18	0.18	0.16	1.65
6	NYCI-log0406b_IRY8		0.2	-1.8	1.8	0.02	-0.24	0.08	1.46
R.M.S.			1.5	1.3	6.8	0.10	0.16	0.24	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTBR-CTDA		-0.8	0.8	-13.0	-0.05	0.08	-0.47	1.81
2	CTBR-log0406b_IRY8		0.1	0.7	-4.2	0.01	0.09	-0.16	1.42

		cluster6						
3	CTBR-NYCI	-2.3	-2.3	-8.7	-0.13	-0.16	-0.23	2.08
4	CTDA-log0406b_IRY8	0.7	0.1	0.5	0.17	0.02	0.04	0.58
5	CTDA-NYCI	-0.9	-2.6	3.8	-0.08	-0.25	0.16	1.65
6	NYCI-log0406b_IRY8	0.5	-1.7	1.9	0.04	-0.23	0.08	1.46
R.M.S.		1.1	1.6	6.8	0.09	0.16	0.24	( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)		from - to		( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTBR-CTDA		48479.8	-0.6	3.1	-1.9	10.8	23.6	19.6	0.06	0.13	0.10	1.81
2	CTBR-log0406b_IRY8		43421.5	0.6	-3.0	1.6	8.8	20.9	18.4	0.07	0.15	0.09	1.42
3	CTBR-NYCI		83869.4	0.1	1.7	0.1	13.6	32.4	25.7	0.00	0.05	0.01	2.08
4	CTDA-log0406b_IRY8		21544.6	-0.1	0.9	-1.0	4.5	10.2	9.5	0.03	0.09	0.10	0.58
5	CTDA-NYCI		42764.0	-0.2	-1.1	2.0	9.5	20.4	17.8	0.02	0.05	0.11	1.65
6	NYCI-log0406b_IRY8		40747.8	-0.1	-0.6	2.2	8.4	18.7	18.2	0.01	0.03	0.12	1.46

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
		from - to		(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTBR-CTDA		48479.8	0.7	0.3	-3.6	14.3	9.9	27.5	0.05	0.03	0.13	1.81
2	CTBR-log0406b_IRY8		43421.5	-0.9	-0.3	3.4	12.3	7.4	25.4	0.07	0.04	0.13	1.42
3	CTBR-NYCI		83869.4	1.2	0.5	-1.1	18.8	13.3	36.8	0.06	0.04	0.03	2.08
4	CTDA-log0406b_IRY8		21544.6	-0.2	0.1	-1.3	6.2	3.9	12.7	0.03	0.04	0.10	0.58
5	CTDA-NYCI		42764.0	0.8	-0.5	2.0	12.5	8.7	24.4	0.07	0.06	0.08	1.65
6	NYCI-log0406b_IRY8		40747.8	1.4	-0.2	1.8	12.0	7.2	23.6	0.11	0.03	0.08	1.46

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)		from - to		(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTBR-CTDA		48479.8	-0.7	-0.2	-3.6	11.1	7.9	20.9	-0.06	-0.02	-0.17	1.81
2	CTBR-log0406b_IRY8		43421.5	0.7	0.5	3.4	8.3	5.3	18.2	0.09	0.10	0.19	1.42
3	CTBR-NYCI		83869.4	-1.0	-0.8	-1.1	14.9	12.3	30.5	-0.07	-0.06	-0.04	2.08
4	CTDA-log0406b_IRY8		21544.6	0.1	0.2	-1.3	1.8	2.6	5.7	0.05	0.07	-0.23	0.58
5	CTDA-NYCI		42764.0	-1.0	-0.1	2.0	8.1	7.9	17.8	-0.12	-0.01	0.11	1.65
6	NYCI-log0406b_IRY8		40747.8	1.4	-0.1	1.8	8.5	4.9	16.8	0.16	-0.01	0.11	1.46

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status	Coordinates			Sigmas (mm)		
	Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTBR	Fixed	Fixed	41°29'49.86446"N	73°25'05.67398"W	53.4200		
2	CTDA	Fixed	Fixed	41°03'57.06991"N	73°30'25.94231"W	-13.1600		
3	NYCI	Fixed	Fixed	40°45'38.23714"N	73°11'51.78743"W	-13.7500		

```

;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

```

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cluster6
;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTBR, 742590.8019, 816940.5169, 175.2621, 0.0000, 0.0000, 0.0000, ""
CTDA, 585635.4343, 791193.1539, -43.1758, 0.0000, 0.0000, 0.0000, ""
log0406b_IRY8, 606408.9137, 858756.9066, -90.3292, 0.0032, 0.0019, 0.0064, ""
NYCI, 473828.0132, 875960.0280, -45.1115, 0.0000, 0.0000, 0.0000, ""
```

ADJUSTMENT SUMMARY

Item Name	Item Value
-----	
SubNet	
Name	New Subnet
Number of points	4
Number of unknowns	3
Degree of freedom	15
Declared adjustment type	with fixed and weighted points
Aposteriori standard error of unit weight	0.224
Adjustment Date and Time	3.May.07 13:44:23
Reference points	
Number	3
Plane coordinates - fixed	6
Heights - fixed	3
Plane coordinates - weighted	0
Heights - weighted	0
Apriori standard error of unit weight	1.000
Processed vectors	
Total number	6
Unused vectors	0
Rejected vectors	0
Downweighted vectors	0
Apriori standard error of unit weight	1.000
Aposteriori standard error of unit weight	0.023
Vectors' VPV test	
Confidence level (%)	95
Lower bound	2.70
Upper bound	19.02
Degree of freedom	9
VPV	0.00
VPV test	failed
Vectors' Tau test	
Confidence level (%)	95
Tau critical value	3.00
Number of flagged observations	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA		41°03'57.06991"N	73°30'25.94231"W	-13.1600	0.0	0.0	0.0	0	0	0
2	CTGU		41°17'21.74249"N	72°40'04.44445"W	-18.0000	0.0	0.0	0.0	0	0	0
3	log0406c_IRY8		41°09'43.43529"N	73°06'52.17601"W	-26.4106	1.3	1.1	2.8	-13	-12	-11
4	NYRH		40°55'24.08901"N	72°42'50.56086"W	-7.8400	0.0	0.0	0.0	0	0	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA		585635.43431	791193.15386	-43.17577	0.000	0.000	0.000	0	0	0
2	CTGU		666173.46667	1022562.42746	-59.05500	0.000	0.000	0.000	0	0	0
3	log0406c_IRY8		619988.28190	899634.36135	-86.64884	0.004	0.004	0.009	-13	-12	-11
4	NYRH		532803.40438	1009936.75218	-25.72173	0.000	0.000	0.000	0	0	0

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

cluster7											
#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z
1	CTDA-CTGU	62622.9526	36126.9937	18680.7578	74671.0424	15.4	28.9	24.7	-41	30	-62
2	CTDA-log0406c_IRY8	29573.8627	16211.8208	8041.3753	34671.3167	9.2	16.3	13.9	-45	22	-63
3	CTDA-NYRH	66875.9274	9452.3304	-11940.4182	68587.9713	14.3	28.2	23.4	-37	26	-63
4	CTGU-log0406c_IRY8	-33049.0895	-19915.1737	-10639.3821	40025.6532	10.1	18.7	16.5	-39	23	-65
5	CTGU-NYRH	4252.9746	-26674.6638	-30621.1760	40832.3634	9.7	19.5	16.6	-30	20	-62
6	NYRH-log0406c_IRY8	-37302.0648	6759.4892	19981.7945	42853.3178	10.1	20.8	17.3	-28	15	-65
Mean weight matrix's estimations:						10.8	20.6	17.6	-37	22	-64

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA-CTGU	25161.6949	70302.6228	-441.4904	74671.0424	16.7	13.6	34.9	-2	-13	-3
2	CTDA-log0406c_IRY8	10759.1530	32959.5100	-107.3809	34671.3167	9.5	7.9	19.8	-21	-14	-2
3	CTDA-NYRH	-15520.7587	66807.8145	-363.0018	68587.9713	15.7	13.1	33.6	-1	-15	-12
4	CTGU-log0406c_IRY8	-14042.0996	-37481.3878	-133.8747	40025.6532	10.7	9.1	22.9	-12	-9	-11
5	CTGU-NYRH	-40646.7744	-3886.7767	-120.8448	40832.3634	11.1	9.4	23.3	2	-11	-21
6	NYRH-log0406c_IRY8	26586.3223	-33608.7473	-162.5356	42853.3178	11.4	9.9	24.6	-3	-13	-26
Mean weight matrix's estimations:						11.7	9.8	24.8	-8	-12	-13

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTDA-CTGU	74671.0424	70°18'26.76"	- 0°20'19.55"	13.9	16.5	34.9	-12	-10	11
2	CTDA-log0406c_IRY8	34671.3167	71°55'17.34"	- 0°10'38.83"	7.5	9.8	19.8	6	-8	12
3	CTDA-NYRH	68587.9713	103°04'44.12"	- 0°18'11.66"	13.3	15.5	33.6	9	-8	17
4	CTGU-log0406c_IRY8	40025.6532	249°27'43.00"	- 0°11'29.90"	8.9	10.9	22.9	-2	13	-5
5	CTGU-NYRH	40832.3634	185°27'43.93"	- 0°10'10.45"	11.1	9.4	23.3	-2	12	20
6	NYRH-log0406c_IRY8	42853.3178	308°20'45.20"	- 0°13'02.33"	10.7	10.7	24.6	15	10	-26
Mean weight matrix's estimations:					10.1	11.1	24.4	4	3	4

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 585635.4343 E = 791193.1539	N 41°03'57.06991" W 73°30'25.94231" h -43.1758 H **	X = 14716086.6882 Y = -49703631.0288 Z = 44863058.3368
CTDA	Az = 70°48'35.25743" O = - 0°30'07.46183" t-T Con = +1.03588" Dist = 803758.0691 Scale= 1.000016261299	NSFA = 70°18'26.75972" NSBA = 250°51'36.12382" Ell Dist = 244983.8404 Delta h = -15.8792 Delta H = ** Gnd Dist= 244983.2420 Rad(A) = 6384592.7159	D X= -43590100.0768 D Y= +148038159.0705 D Z= -133452641.2500 S D= 204022059.6463

cluster7

Skew Con = -0.00070"  
 GsFA = 70°18'26.76538"  
 Gsc Dist = 244983.8404  
 GsBA = 250°51'36.12948"

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 1429797.6122  
 | E = 1022562.4275 | W 72°40'04.44445" | Y = -4581509.8999  
 CTGU | h -59.0550 | Z = 4186611.9309  
 | H \*\*\_

Pt# 0 COORDINATES | N = 585635.4343 | N 41°03'57.06991" | X = 14716086.6882  
 | E = 791193.1539 | W 73°30'25.94231" | Y = -49703631.0288  
 CTDA | h -43.1758 | Z = 44863058.3368  
 | H \*\*\_

Az = 72°25'25.90743" | NSFA = 71°55'17.34009" | D X= -43698528.6351  
 O = - 0°30'07.46183" | NSBA = 252°10'46.97650" | D Y= +147972820.7167  
 t-T Con = +1.10552" | Ell Dist = 113751.1557 | D Z= -133487547.2939  
 Dist = 373202.7394 | Delta h = -43.4731 | S D= 204020691.0052  
 Scale= 1.000016261299 | Delta H = \*\*\_  
 | Gnd Dist= 113750.8028  
 | Rad(A) = 6385014.5486  
 | Skew Con = -0.00096"  
 | GsFA = 71°55'17.34122"  
 | Gsc Dist = 113751.1557  
 | GsBA = 252°10'46.97764"

Pt# 1 COORDINATES | N = 619988.2819 | N 41°09'43.43529" | X = 1396748.5216  
 | E = 899634.3614 | W 73°06'52.17601" | Y = -4601425.0699  
 log0406c\_IRY8 | h -86.6488 | Z = 4175972.5474  
 | H \*\*\_

Pt# 0 COORDINATES | N = 585635.4343 | N 41°03'57.06991" | X = 14716086.6882  
 | E = 791193.1539 | W 73°30'25.94231" | Y = -49703631.0288  
 CTDA | h -43.1758 | Z = 44863058.3368  
 | H \*\*\_

Az = 103°34'50.80610" | NSFA = 103°04'44.12866" | D X= -43576146.7787  
 O = - 0°30'07.46183" | NSBA = 283°35'57.24288" | D Y= +147950643.9672  
 t-T Con = -0.78439" | Ell Dist = 225026.0769 | D Z= -133553104.2420  
 Dist = 738296.7451 | Delta h = +17.4540 | S D= 204021335.3330  
 Scale= 1.000016261299 | Delta H = \*\*\_  
 | Gnd Dist= 225025.7064  
 | Rad(A) = 6386117.2934  
 | Skew Con = +0.00021"  
 | GsFA = 103°04'44.12533"  
 | Gsc Dist = 225026.0769  
 | GsBA = 283°35'57.23954"

Pt# 3 COORDINATES | N = 532803.4044 | N 40°55'24.08901" | X = 1434050.5860  
 | E = 1009936.7522 | W 72°42'50.56086" | Y = -4608184.5567  
 NYRH | h -25.7217 | Z = 4155990.7497  
 | H \*\*\_

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510

cluster7

CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 249°24'26.38493"	NSFA = 249°27'43.00244"	D X= -45910024.0899
	O = 0°03'15.97091"	NSBA = 69°10'03.45968"	D Y= +146697015.6798
	t-T Con = -0.64661"	Ell Dist = 131317.9493	D Z= -134147248.0065
	Dist = 430832.0170	Delta h = -27.5938	S D= 204017717.0468
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 131317.4921	
		Rad(A) = 6384463.0481	
		Skew Con = -0.00107"	
		GsFA = 249°27'43.00412"	
		Gsc Dist = 131317.9493	
		GsBA = 69°10'03.46136"	
-----			
Pt# 1 COORDINATES	N = 619988.2819	N 41°09'43.43529"	X = 1396748.5216
log0406c_IRY8	E = 899634.3614	W 73°06'52.17601"	Y = -4601425.0699
		h -86.6488	Z = 4175972.5474
		H _**_	
-----			
Pt# 2 COORDINATES	N = 666173.4667	N 41°17'21.74249"	X = 15390151.8510
CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 185°24'28.39180"	NSFA = 185°27'43.91796"	D X= -45787642.2336
	O = 0°03'15.97091"	NSBA = 5°25'54.70280"	D Y= +146674838.9303
	t-T Con = +0.44474"	Ell Dist = 133964.4444	D Z= -134212804.9546
	Dist = 439521.2453	Delta h = +33.3333	S D= 204017385.4609
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 133964.1730	
		Rad(A) = 6363459.4944	
		Skew Con = -0.00009"	
		GsFA = 185°27'43.91847"	
		Gsc Dist = 133964.4444	
		GsBA = 5°25'54.70330"	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 1434050.5860
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -4608184.5567
		h -25.7217	Z = 4155990.7497
		H _**_	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 15435930.2966
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -49601887.3439
		h -25.7217	Z = 44734533.1834
		H _**_	
-----			
	Az = 308°19'20.68575"	NSFA = 308°20'45.20443"	D X= -46060215.5403
	O = 0°01'25.82585"	NSBA = 128°04'58.60587"	D Y= +147639016.6438
	t-T Con = +1.30717"	Ell Dist = 140594.9603	D Z= -133065877.6865
	Dist = 461278.8697	Delta h = -60.9271	S D= 204022916.5943
	Scale= 1.000039473120	Delta H = _**_	
		Gnd Dist= 140594.5828	
		Rad(A) = 6377871.8220	
		Skew Con = +0.00159"	
		GsFA = 308°20'45.20156"	

cluster7

Gsc Dist = 140594.9603  
 GsBA = 128°04'58.60301"

```

Pt# 1 COORDINATES | N = 619988.2819 | N 41°09'43.43529" | X = 1396748.5216
                  | E = 899634.3614 | W 73°06'52.17601" | Y = -4601425.0699
log0406c_IRY8     |                   | h -86.6488      | Z = 4175972.5474
                  |                   | H              | _**_
    
```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTDA-CTGU		0.5	0.2	0.2	0.03	0.01	0.01	2.04
2	CTDA-log0406c_IRY8		0.6	-2.0	2.1	0.06	-0.12	0.15	0.94
3	CTDA-NYRH		1.5	-10.3	9.0	0.10	-0.37	0.39	1.94
4	CTGU-log0406c_IRY8		0.5	-3.1	2.3	0.05	-0.17	0.14	1.34
5	CTGU-NYRH		0.8	-11.1	8.7	0.08	-0.57	0.52	1.26
6	NYRH-log0406c_IRY8		-0.9	7.1	-5.8	-0.09	0.34	-0.34	1.47
R.M.S.			0.9	7.0	5.8	0.07	0.32	0.31	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTDA-CTGU		0.2	0.5	0.1	0.01	0.04	0.00	2.04
2	CTDA-log0406c_IRY8		0.2	0.0	3.0	0.02	0.00	0.15	0.94
3	CTDA-NYRH		0.0	-1.5	13.7	0.00	-0.12	0.41	1.94
4	CTGU-log0406c_IRY8		-0.4	-0.5	3.9	-0.03	-0.05	0.17	1.34
5	CTGU-NYRH		-0.6	-2.6	13.9	-0.05	-0.28	0.60	1.26
6	NYRH-log0406c_IRY8		0.2	1.2	-9.1	0.02	0.12	-0.37	1.47
R.M.S.			0.3	1.3	9.0	0.03	0.13	0.34	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTDA-CTGU		0.6	0.0	0.1	0.04	0.00	0.00	2.04
2	CTDA-log0406c_IRY8		0.0	-0.2	3.0	0.01	-0.02	0.15	0.94



		cluster7						
3	CTDA-NYRH	-1.6	0.4	13.7	-0.12	0.02	0.41	1.94
4	CTGU-log0406c_IRY8	0.6	-0.2	3.9	0.06	-0.02	0.17	1.34
5	CTGU-NYRH	0.8	2.5	13.9	0.07	0.27	0.60	1.26
6	NYRH-log0406c_IRY8	-0.8	0.9	-9.1	-0.07	0.08	-0.37	1.47

R.M.S. 0.8 1.1 9.0 0.07 0.12 0.34 ( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTDA-CTGU		74671.0	0.1	-0.6	0.2	15.4	28.9	24.7	0.00	0.02	0.01	2.04
2	CTDA-log0406c_IRY8		34671.3	-0.1	0.3	-0.2	9.2	16.3	13.9	0.01	0.02	0.02	0.94
3	CTDA-NYRH		68588.0	0.1	-0.4	0.4	14.3	28.2	23.4	0.01	0.01	0.02	1.94
4	CTGU-log0406c_IRY8		40025.7	0.2	0.0	0.0	10.1	18.7	16.5	0.02	0.00	0.00	1.34
5	CTGU-NYRH		40832.4	-0.2	-0.3	0.1	9.7	19.5	16.6	0.02	0.02	0.01	1.26
6	NYRH-log0406c_IRY8		42853.3	-0.2	-0.6	0.4	10.1	20.8	17.3	0.02	0.03	0.02	1.47

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTDA-CTGU		74671.0	-0.2	-0.1	0.6	16.7	13.6	34.9	0.01	0.01	0.02	2.04
2	CTDA-log0406c_IRY8		34671.3	0.0	0.0	-0.4	9.5	7.9	19.8	0.00	0.00	0.02	0.94
3	CTDA-NYRH		68588.0	0.1	0.0	0.6	15.7	13.1	33.6	0.00	0.00	0.02	1.94
4	CTGU-log0406c_IRY8		40025.7	-0.1	0.2	0.1	10.7	9.1	22.9	0.01	0.03	0.00	1.34
5	CTGU-NYRH		40832.4	0.0	-0.3	0.3	11.1	9.4	23.3	0.00	0.03	0.01	1.26
6	NYRH-log0406c_IRY8		42853.3	0.0	-0.4	0.6	11.4	9.9	24.6	0.00	0.04	0.03	1.47

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTDA-CTGU		74671.0	-0.2	0.2	0.6	11.6	13.6	28.8	-0.01	0.01	0.02	2.04
2	CTDA-log0406c_IRY8		34671.3	0.0	0.0	-0.4	4.1	5.7	11.1	0.01	-0.01	-0.03	0.94
3	CTDA-NYRH		68588.0	0.0	0.0	0.6	10.6	12.5	27.1	0.00	0.00	0.02	1.94
4	CTGU-log0406c_IRY8		40025.7	-0.2	-0.2	0.1	5.8	7.3	15.4	-0.03	-0.02	0.00	1.34
5	CTGU-NYRH		40832.4	0.1	0.3	0.3	7.3	6.1	15.0	0.01	0.05	0.02	1.26
6	NYRH-log0406c_IRY8		42853.3	0.3	-0.2	0.6	7.5	7.5	17.4	0.04	-0.03	0.04	1.47

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status		Coordinates			Sigmas (mm)		
		Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTDA	Fixed	Fixed	41°03'57.06991"N	73°30'25.94231"W	-13.1600			
2	CTGU	Fixed	Fixed	41°17'21.74249"N	72°40'04.44445"W	-18.0000			
3	NYRH	Fixed	Fixed	40°55'24.08901"N	72°42'50.56086"W	-7.8400			

```

;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

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cluster7

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;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTDA, 585635.4343, 791193.1539, -43.1758, 0.0000, 0.0000, 0.0000, ""
CTGU, 666173.4667, 1022562.4275, -59.0550, 0.0000, 0.0000, 0.0000, ""
log0406c_IRY8, 619988.2819, 899634.3614, -86.6488, 0.0044, 0.0037, 0.0093, ""
NYRH, 532803.4044, 1009936.7522, -25.7217, 0.0000, 0.0000, 0.0000, ""
```

ADJUSTMENT SUMMARY

Item Name	Item Value
SubNet	
Name	New Subnet
Number of points	4
Number of unknowns	3
Degree of freedom	15
Declared adjustment type	with fixed and weighted points
Aposteriori standard error of unit weight	0.282
Adjustment Date and Time	3.May.07 13:51:50
Reference points	
Number	3
Plane coordinates - fixed	6
Heights - fixed	3
Plane coordinates - weighted	0
Heights - weighted	0
Apriori standard error of unit weight	1.000
Processed vectors	
Total number	6
Unused vectors	0
Rejected vectors	0
Downweighted vectors	0
Apriori standard error of unit weight	1.000
Aposteriori standard error of unit weight	0.042
Vectors' VPV test	
Confidence level (%)	95
Lower bound	2.70
Upper bound	19.02
Degree of freedom	9
VPV	0.02
VPV test	failed
Vectors' Tau test	
Confidence level (%)	95
Tau critical value	3.00
Number of flagged observations	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA		41°03'57.06991"N	73°30'25.94231"W	-13.1600	0.0	0.0	0.0	0	0	0
2	CTGU		41°17'21.74249"N	72°40'04.44445"W	-18.0000	0.0	0.0	0.0	0	0	0
3	log0409a_IRY8		41°12'37.75677"N	73°02'46.67642"W	-26.6728	1.7	1.2	3.6	10	-17	-15
4	NYRH		40°55'24.08901"N	72°42'50.56086"W	-7.8400	0.0	0.0	0.0	0	0	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA		585635.43431	791193.15386	-43.17577	0.000	0.000	0.000	0	0	0
2	CTGU		666173.46667	1022562.42746	-59.05500	0.000	0.000	0.000	0	0	0
3	log0409a_IRY8		637559.73479	918472.53476	-87.50906	0.006	0.004	0.012	10	-17	-15
4	NYRH		532803.40438	1009936.75218	-25.72173	0.000	0.000	0.000	0	0	0

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

cluster8											
#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z
1	CTDA-CTGU	62622.9484	36127.0075	18680.7467	74671.0428	12.8	31.1	23.4	-43	42	-65
2	CTDA-log0409a_IRY8	34016.8743	21265.0588	12088.2846	41898.4139	9.3	20.5	17.1	-47	36	-63
3	CTDA-NYRH	66875.9238	9452.3448	-11940.4311	68587.9720	11.9	30.4	21.9	-41	40	-66
4	CTGU-log0409a_IRY8	-28606.0722	-14861.9505	-6592.4599	32903.5784	7.1	16.3	13.3	-44	35	-63
5	CTGU-NYRH	4252.9760	-26674.6642	-30621.1764	40832.3641	8.3	21.0	15.5	-34	39	-65
6	NYRH-log0409a_IRY8	-32859.0484	11812.7132	24028.7167	42386.7489	8.9	21.3	16.9	-39	34	-63
Mean weight matrix's estimations:						9.1	21.6	17.0	-42	37	-64

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTDA-CTGU	25161.6961	70302.6227	-441.5085	74671.0428	16.1	11.7	35.9	21	-27	-16
2	CTDA-log0409a_IRY8	16164.7485	38654.3036	-151.0178	41898.4139	11.4	8.0	24.6	5	-15	-9
3	CTDA-NYRH	-15520.7586	66807.8152	-363.0216	68587.9720	15.3	11.1	34.5	24	-31	-22
4	CTGU-log0409a_IRY8	-8691.6737	-31734.7057	-93.4348	32903.5784	9.0	6.4	19.2	11	-17	-16
5	CTGU-NYRH	-40646.7751	-3886.7756	-120.8445	40832.3641	10.6	8.2	23.9	30	-28	-27
6	NYRH-log0409a_IRY8	31939.9288	-27864.8866	-159.7725	42386.7489	11.5	8.4	24.8	16	-19	-22
Mean weight matrix's estimations:						11.6	8.4	25.3	17	-21	-18

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTDA-CTGU	74671.0428	70°18'26.76"	- 0°20'19.60"	13.3	14.9	35.8	-35	-25	23
2	CTDA-log0409a_IRY8	41898.4139	67°18'21.34"	- 0°12'23.46"	8.8	10.8	24.6	-28	-16	12
3	CTDA-NYRH	68587.9720	103°04'44.12"	- 0°18'11.72"	10.6	15.7	34.5	-8	-14	33
4	CTGU-log0409a_IRY8	32903.5784	254°40'59.29"	- 0°09'45.72"	6.8	8.7	19.2	-27	20	-14
5	CTGU-NYRH	40832.3641	185°27'43.92"	- 0°10'10.45"	10.8	7.9	23.9	25	29	24
6	NYRH-log0409a_IRY8	42386.7489	318°53'53.00"	- 0°12'57.50"	9.5	10.6	24.8	33	-5	-26
Mean weight matrix's estimations:					8.9	9.9	24.4	-5	4	3

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USfeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 585635.4343 E = 791193.1539	N 41°03'57.06991" W 73°30'25.94231" h -43.1758 H **	X = 14716086.6882 Y = -49703631.0288 Z = 44863058.3368
CTDA	Az = 70°48'35.25743" O = - 0°30'07.46183" t-T Con = +1.03588" Dist = 803758.0691 Scale= 1.000016261299	NSFA = 70°18'26.75972" NSBA = 250°51'36.12382" Ell Dist = 244983.8404 Delta h = -15.8792 Delta H = ** Gnd Dist= 244983.2420 Rad(A) = 6384592.7159	D X= -43590100.0768 D Y= +148038159.0705 D Z= -133452641.2500 S D= 204022059.6463

cluster8

Skew Con = -0.00070"  
 GsFA = 70°18'26.76538"  
 Gsc Dist = 244983.8404  
 GsBA = 250°51'36.12948"

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 1429797.6122  
 | E = 1022562.4275 | W 72°40'04.44445" | Y = -4581509.8999  
 CTGU | h -59.0550 | Z = 4186611.9309  
 | H \*\* |

Pt# 0 COORDINATES | N = 585635.4343 | N 41°03'57.06991" | X = 14716086.6882  
 | E = 791193.1539 | W 73°30'25.94231" | Y = -49703631.0288  
 CTDA | h -43.1758 | Z = 44863058.3368  
 | H \*\* |

Az = 67°48'30.32098" | NSFA = 67°18'21.34190" | D X= -43683951.8410  
 O = - 0°30'07.46183" | NSBA = 247°36'32.93859" | D Y= +147989399.5144  
 t-T Con = +1.51726" | Ell Dist = 137462.1364 | D Z= -133474270.0295  
 Dist = 450994.3550 | Delta h = -44.3333 | S D= 204020907.6958  
 Scale= 1.000016261299 | Delta H = \*\* |  
 Gnd Dist= 137461.7072  
 Rad(A) = 6383729.8059  
 Skew Con = -0.00117"  
 GsFA = 67°18'21.34390"  
 Gsc Dist = 137462.1364  
 GsBA = 247°36'32.94059"

Pt# 1 COORDINATES | N = 637559.7348 | N 41°12'37.75677" | X = 1401191.5373  
 | E = 918472.5348 | W 73°02'46.67642" | Y = -4596371.8423  
 log0409a\_IRY8 | h -87.5091 | Z = 4180019.4657  
 | H \*\* |

Pt# 0 COORDINATES | N = 585635.4343 | N 41°03'57.06991" | X = 14716086.6882  
 | E = 791193.1539 | W 73°30'25.94231" | Y = -49703631.0288  
 CTDA | h -43.1758 | Z = 44863058.3368  
 | H \*\* |

Az = 103°34'50.80610" | NSFA = 103°04'44.12866" | D X= -43576146.7787  
 O = - 0°30'07.46183" | NSBA = 283°35'57.24288" | D Y= +147950643.9672  
 t-T Con = -0.78439" | Ell Dist = 225026.0769 | D Z= -133553104.2420  
 Dist = 738296.7451 | Delta h = +17.4540 | S D= 204021335.3330  
 Scale= 1.000016261299 | Delta H = \*\* |  
 Gnd Dist= 225025.7064  
 Rad(A) = 6386117.2934  
 Skew Con = +0.00021"  
 GsFA = 103°04'44.12533"  
 Gsc Dist = 225026.0769  
 GsBA = 283°35'57.23954"

Pt# 3 COORDINATES | N = 532803.4044 | N 40°55'24.08901" | X = 1434050.5860  
 | E = 1009936.7522 | W 72°42'50.56086" | Y = -4608184.5567  
 NYRH | h -25.7217 | Z = 4155990.7497  
 | H \*\* |

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510

cluster8

CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 254°37'43.01176"	NSFA = 254°40'59.29855"	D X= -45895447.2958
	O = 0°03'15.97091"	NSBA = 74°26'01.11551"	D Y= +146713594.4775
	t-T Con = -0.31589"	Ell Dist = 107951.5297	D Z= -134133970.7421
	Dist = 354169.7408	Delta h = -28.4541	S D= 204017629.1257
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 107951.1516	
		Rad(A) = 6385757.5726	
		Skew Con = -0.00083"	
		GsFA = 254°40'59.29943"	
		Gsc Dist = 107951.5297	
		GsBA = 74°26'01.11639"	
-----			
Pt# 1 COORDINATES	N = 637559.7348	N 41°12'37.75677"	X = 1401191.5373
log0409a_IRY8	E = 918472.5348	W 73°02'46.67642"	Y = -4596371.8423
		h -87.5091	Z = 4180019.4657
		H _**_	
-----			
Pt# 2 COORDINATES	N = 666173.4667	N 41°17'21.74249"	X = 15390151.8510
CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 185°24'28.39180"	NSFA = 185°27'43.91796"	D X= -45787642.2336
	O = 0°03'15.97091"	NSBA = 5°25'54.70280"	D Y= +146674838.9303
	t-T Con = +0.44474"	Ell Dist = 133964.4444	D Z= -134212804.9546
	Dist = 439521.2453	Delta h = +33.3333	S D= 204017385.4609
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 133964.1730	
		Rad(A) = 6363459.4944	
		Skew Con = -0.00009"	
		GsFA = 185°27'43.91847"	
		Gsc Dist = 133964.4444	
		GsBA = 5°25'54.70330"	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 1434050.5860
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -4608184.5567
		h -25.7217	Z = 4155990.7497
		H _**_	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 15435930.2966
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -49601887.3439
		h -25.7217	Z = 44734533.1834
		H _**_	
-----			
	Az = 318°52'28.43545"	NSFA = 318°53'53.00083"	D X= -46045638.7462
	O = 0°01'25.82585"	NSBA = 138°40'47.22199"	D Y= +147655595.4416
	t-T Con = +1.26046"	Ell Dist = 139064.2220	D Z= -133052600.4222
	Dist = 456255.1931	Delta h = -61.7873	S D= 204022964.8639
	Scale= 1.000039473120	Delta H = _**_	
		Gnd Dist= 139063.8458	
		Rad(A) = 6373392.8097	
		Skew Con = +0.00163"	
		GsFA = 318°53'52.99798"	

cluster8

Gsc Dist = 139064.2220  
GsBA = 138°40'47.21914"

```

Pt# 1 COORDINATES | N = 637559.7348 | N 41°12'37.75677" | X = 1401191.5373
                  | E = 918472.5348 | W 73°02'46.67642" | Y = -4596371.8423
log0409a_IRY8     |                   | h -87.5091       | Z = 4180019.4657
                  |                   | H                | _**_
    
```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTDA-CTGU		-3.7	14.0	-10.8	-0.29	0.45	-0.46	2.00
2	CTDA-log0409a_IRY8		-3.4	8.5	-7.3	-0.37	0.42	-0.43	1.28
3	CTDA-NYRH		-2.2	4.1	-3.9	-0.18	0.14	-0.18	1.82
4	CTGU-log0409a_IRY8		2.1	-7.3	5.8	0.30	-0.45	0.44	1.05
5	CTGU-NYRH		2.1	-11.4	8.3	0.25	-0.54	0.54	1.33
6	NYRH-log0409a_IRY8		-0.2	3.6	-2.4	-0.02	0.17	-0.14	1.53
R.M.S.			2.6	9.0	7.0	0.26	0.39	0.39	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTDA-CTGU		1.4	0.5	-18.0	0.09	0.04	-0.50	2.00
2	CTDA-log0409a_IRY8		0.5	-0.9	-11.7	0.05	-0.11	-0.48	1.28
3	CTDA-NYRH		0.1	-0.9	-6.0	0.00	-0.08	-0.17	1.82
4	CTGU-log0409a_IRY8		-0.6	-0.1	9.5	-0.07	-0.02	0.50	1.05
5	CTGU-NYRH		-1.3	-1.4	14.2	-0.13	-0.17	0.59	1.33
6	NYRH-log0409a_IRY8		0.5	0.9	-4.2	0.05	0.11	-0.17	1.53
R.M.S.			0.9	0.9	11.6	0.07	0.10	0.43	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTDA-CTGU		1.0	-1.1	-18.0	0.07	-0.08	-0.50	2.00
2	CTDA-log0409a_IRY8		-0.6	-0.8	-11.7	-0.07	-0.08	-0.48	1.28

		cluster8						
3	CTDA-NYRH	-0.9	0.2	-6.0	-0.08	0.01	-0.17	1.82
4	CTGU-log0409a_IRY8	0.3	-0.6	9.5	0.04	-0.07	0.50	1.05
5	CTGU-NYRH	1.4	1.3	14.2	0.13	0.16	0.59	1.33
6	NYRH-log0409a_IRY8	-0.2	1.0	-4.2	-0.02	0.10	-0.17	1.53

R.M.S. 0.8 0.9 11.6 0.08 0.09 0.43 ( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTDA-CTGU		74671.0	0.9	-1.1	1.3	12.8	31.1	23.4	0.07	0.03	0.06	2.00
2	CTDA-log0409a_IRY8		41898.4	-0.7	0.6	-0.7	9.3	20.5	17.1	0.07	0.03	0.04	1.28
3	CTDA-NYRH		68588.0	0.3	0.1	0.1	11.9	30.4	21.9	0.03	0.00	0.00	1.82
4	CTGU-log0409a_IRY8		32903.6	0.3	-0.1	0.3	7.1	16.3	13.3	0.04	0.01	0.02	1.05
5	CTGU-NYRH		40832.4	0.0	-0.3	0.2	8.3	21.0	15.5	0.01	0.02	0.01	1.33
6	NYRH-log0409a_IRY8		42386.7	0.1	-0.3	0.3	8.9	21.3	16.9	0.01	0.01	0.01	1.53

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTDA-CTGU		74671.0	0.1	0.6	1.8	16.1	11.7	35.9	0.01	0.05	0.05	2.00
2	CTDA-log0409a_IRY8		41898.4	-0.1	-0.5	-1.0	11.4	8.0	24.6	0.00	0.06	0.04	1.28
3	CTDA-NYRH		68588.0	0.1	0.3	0.0	15.3	11.1	34.5	0.00	0.03	0.00	1.82
4	CTGU-log0409a_IRY8		32903.6	0.1	0.3	0.3	9.0	6.4	19.2	0.01	0.04	0.02	1.05
5	CTGU-NYRH		40832.4	-0.1	-0.1	0.4	10.6	8.2	23.9	0.01	0.02	0.02	1.33
6	NYRH-log0409a_IRY8		42386.7	0.0	0.0	0.4	11.5	8.4	24.8	0.00	0.00	0.02	1.53

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTDA-CTGU		74671.0	0.6	0.1	1.8	11.0	12.1	29.4	0.05	0.01	0.06	2.00
2	CTDA-log0409a_IRY8		41898.4	-0.4	-0.1	-1.0	5.5	7.3	15.9	-0.08	-0.02	-0.07	1.28
3	CTDA-NYRH		68588.0	0.3	-0.1	0.0	8.2	12.4	27.2	0.04	-0.01	0.00	1.82
4	CTGU-log0409a_IRY8		32903.6	-0.3	0.0	0.3	3.9	5.2	11.2	-0.07	0.00	0.03	1.05
5	CTGU-NYRH		40832.4	0.1	0.1	0.4	7.2	5.4	16.1	0.01	0.03	0.02	1.33
6	NYRH-log0409a_IRY8		42386.7	0.0	0.0	0.4	6.9	7.5	17.6	-0.01	0.00	0.02	1.53

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status		Coordinates			Sigmas (mm)		
		Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTDA	Fixed	Fixed	41°03'57.06991"N	73°30'25.94231"W	-13.1600			
2	CTGU	Fixed	Fixed	41°17'21.74249"N	72°40'04.44445"W	-18.0000			
3	NYRH	Fixed	Fixed	40°55'24.08901"N	72°42'50.56086"W	-7.8400			

```

;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

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cluster8

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;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTDA, 585635.4343, 791193.1539, -43.1758, 0.0000, 0.0000, 0.0000, ""
CTGU, 666173.4667, 1022562.4275, -59.0550, 0.0000, 0.0000, 0.0000, ""
log0409a_IRY8, 637559.7348, 918472.5348, -87.5091, 0.0056, 0.0039, 0.0119, ""
NYRH, 532803.4044, 1009936.7522, -25.7217, 0.0000, 0.0000, 0.0000, ""
```

ADJUSTMENT SUMMARY

Item Name	Item Value
SubNet	
Name	New Subnet
Number of points	4
Number of unknowns	3
Degree of freedom	15
Declared adjustment type	with fixed and weighted points
Aposteriori standard error of unit weight	0.164
Adjustment Date and Time	3.May.07 13:58:31
Reference points	
Number	3
Plane coordinates - fixed	6
Heights - fixed	3
Plane coordinates - weighted	0
Heights - weighted	0
Apriori standard error of unit weight	1.000
Processed vectors	
Total number	6
Unused vectors	0
Rejected vectors	0
Downweighted vectors	0
Apriori standard error of unit weight	1.000
Aposteriori standard error of unit weight	0.068
Vectors' VPV test	
Confidence level (%)	95
Lower bound	2.70
Upper bound	19.02
Degree of freedom	9
VPV	0.04
VPV test	failed
Vectors' Tau test	
Confidence level (%)	95
Tau critical value	3.00
Number of flagged observations	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTBR		41°29'49.86446"N	73°25'05.67398"W	53.4200	0.0	0.0	0.0	0	0	0
2	CTGU		41°17'21.74249"N	72°40'04.44445"W	-18.0000	0.0	0.0	0.0	0	0	0
3	log0410a_IRY8		41°15'37.21781"N	72°56'09.09343"W	-27.0501	0.8	0.6	1.8	28	-16	-29
4	NYRH		40°55'24.08901"N	72°42'50.56086"W	-7.8400	0.0	0.0	0.0	0	0	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTBR		742590.80193	816940.51688	175.26212	0.000	0.000	0.000	0	0	0
2	CTGU		666173.46667	1022562.42746	-59.05500	0.000	0.000	0.000	0	0	0
3	log0410a_IRY8		655638.51827	948899.32615	-88.74695	0.003	0.002	0.006	28	-16	-29
4	NYRH		532803.40438	1009936.75218	-25.72173	0.000	0.000	0.000	0	0	0

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

cluster9												
#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)			
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z	
1	CTBR-CTGU	64459.9650	3756.1432	-17361.5346	66862.6845	12.4	29.3	22.3	-26	32	-68	
2	CTBR-log0410a_IRY8	43640.0283	-4907.5365	-19790.9278	48168.6288	9.4	24.7	18.7	-29	34	-66	
3	CTBR-NYRH	68712.9407	-22918.5098	-47982.7181	86885.3702	16.2	33.3	24.2	-32	23	-63	
4	CTGU-log0410a_IRY8	-20819.9364	-8663.6810	-2429.3939	22681.0730	4.5	11.2	9.4	-30	37	-64	
5	CTGU-NYRH	4252.9758	-26674.6528	-30621.1843	40832.3626	9.4	20.1	16.1	-26	15	-64	
6	NYRH-log0410a_IRY8	-25072.9102	18010.9690	28191.7924	41806.9729	8.0	21.3	16.5	-21	29	-67	
Mean weight matrix's estimations:						7.8	19.1	15.3	-28	32	-65	

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTBR-CTGU	-22807.0703	62851.2404	-421.5446	66862.6845	14.2	12.6	33.8	24	-25	-27
2	CTBR-log0410a_IRY8	-26191.4982	40424.6634	-262.3143	48168.6288	12.4	9.7	28.3	29	-25	-30
3	CTBR-NYRH	-63485.3444	59314.8518	-653.4202	86885.3702	17.9	15.4	37.4	5	-32	-18
4	CTGU-log0410a_IRY8	-3189.9019	-22455.5821	-49.3208	22681.0730	6.0	4.6	13.3	27	-12	-27
5	CTGU-NYRH	-40646.7739	-3886.7723	-120.8579	40832.3626	10.9	9.4	23.3	2	-17	-29
6	NYRH-log0410a_IRY8	37446.7629	-18588.6648	-156.4341	41806.9729	10.4	8.8	24.6	31	-19	-39
Mean weight matrix's estimations:						9.9	8.0	22.3	24	-18	-29

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTBR-CTGU	66862.6845	109°56'40.24"	- 0°21'40.44"	11.7	15.0	33.8	-11	-18	30
2	CTBR-log0410a_IRY8	48168.6288	122°56'22.42"	- 0°18'43.28"	8.9	12.9	28.3	10	-10	33
3	CTBR-NYRH	86885.3702	136°56'42.40"	- 0°25'51.23"	16.3	17.0	37.5	15	12	34
4	CTGU-log0410a_IRY8	22681.0730	261°54'54.03"	- 0°07'28.53"	4.8	5.8	13.3	-33	27	-9
5	CTGU-NYRH	40832.3626	185°27'43.90"	- 0°10'10.52"	10.9	9.4	23.3	-1	19	27
6	NYRH-log0410a_IRY8	41806.9729	333°36'00.31"	- 0°12'51.81"	9.0	10.3	24.6	32	-4	-38
Mean weight matrix's estimations:					7.9	9.0	21.4	-9	13	4

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USfeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 742590.8019 E = 816940.5169	N 41°29'49.86446" W 73°25'05.67398" h 175.2621 H **	X = 14696313.3007 Y = -49355195.3560 Z = 45251012.6735
CTBR	Az = 110°23'14.52712" O = - 0°26'35.10489" t-T Con = -0.82823" Dist = 719692.3467 Scale= 0.999983341915	NSFA = 109°56'40.25047" NSBA = 290°26'26.38804" Ell Dist = 219364.5911 Delta h = -234.3171 Delta H = ** Gnd Dist= 219365.2002 Rad(A) = 6384721.4832	D X= -43525226.8879 D Y= +146894999.7006 D Z= -134725454.7698 S D= 204018466.0162

cluster9

Skew Con = +0.00070"  
 GsFA = 109°56'40.24592"  
 Gsc Dist = 219364.5911  
 GsBA = 290°26'26.38349"

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 1429797.6122  
 CTGU | E = 1022562.4275 | W 72°40'04.44445" | Y = -4581509.8999  
 | | h -59.0550 | Z = 4186611.9309  
 | | H \*\* |

Pt# 0 COORDINATES | N = 742590.8019 | N 41°29'49.86446" | X = 14696313.3007  
 CTBR | E = 816940.5169 | W 73°25'05.67398" | Y = -49355195.3560  
 | | h 175.2621 | Z = 45251012.6735  
 | | H \*\* |

Az = 123°22'55.59393" | NSFA = 122°56'22.43803" | D X= -43593533.6317  
 O = - 0°26'35.10489" | NSBA = 303°15'30.38719" | D Y= +146866575.6126  
 t-T Con = -1.94898" | Ell Dist = 158032.6988 | D Z= -134733425.2079  
 Dist = 518473.6841 | Delta h = -264.0091 | S D= 204017849.8929  
 Scale= 0.999983341915 | Delta H = \*\* |  
 Gnd Dist= 158033.0255  
 Rad(A) = 6380397.8891  
 Skew Con = +0.00151"  
 GsFA = 122°56'22.43467"  
 Gsc Dist = 158032.6988  
 GsBA = 303°15'30.38383"

Pt# 1 COORDINATES | N = 655638.5183 | N 41°15'37.21781" | X = 1408977.6751  
 log0410a\_IRY8 | E = 948899.3261 | W 72°56'09.09343" | Y = -4590173.5792  
 | | h -88.7470 | Z = 4184182.5364  
 | | H \*\* |

Pt# 0 COORDINATES | N = 742590.8019 | N 41°29'49.86446" | X = 14696313.3007  
 CTBR | E = 816940.5169 | W 73°25'05.67398" | Y = -49355195.3560  
 | | h 175.2621 | Z = 45251012.6735  
 | | H \*\* |

Az = 137°23'14.83498" | NSFA = 136°56'42.42018" | D X= -43511273.5898  
 O = - 0°26'35.10489" | NSBA = 317°24'32.65100" | D Y= +146807484.5973  
 t-T Con = -2.69008" | Ell Dist = 285055.3269 | D Z= -134825917.7617  
 Dist = 935229.1444 | Delta h = -200.9839 | S D= 204018863.2541  
 Scale= 0.999983341915 | Delta H = \*\* |  
 Gnd Dist= 285056.3455  
 Rad(A) = 6374662.1446  
 Skew Con = +0.00048"  
 GsFA = 136°56'42.40816"  
 Gsc Dist = 285055.3269  
 GsBA = 317°24'32.63897"

Pt# 3 COORDINATES | N = 532803.4044 | N 40°55'24.08901" | X = 1434050.5860  
 NYRH | E = 1009936.7522 | W 72°42'50.56086" | Y = -4608184.5567  
 | | h -25.7217 | Z = 4155990.7497  
 | | H \*\* |

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510

cluster9

CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 261°51'37.99917"	NSFA = 261°54'54.03600"	D X= -45869902.2754
	O = 0°03'15.97091"	NSBA = 81°44'17.68334"	D Y= +146733929.9455
	t-T Con = -0.06593"	Ell Dist = 74413.0774	D Z= -134120312.4008
	Dist = 244135.3957	Delta h = -29.6920	S D= 204017529.4687
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 74412.8146	
		Rad(A) = 6386972.3397	
		Skew Con = -0.00046"	
		GsFA = 261°54'54.03623"	
		Gsc Dist = 74413.0774	
		GsBA = 81°44'17.68357"	
-----			
Pt# 1 COORDINATES	N = 655638.5183	N 41°15'37.21781"	X = 1408977.6751
log0410a_IRY8	E = 948899.3261	W 72°56'09.09343"	Y = -4590173.5792
		h -88.7470	Z = 4184182.5364
		H _**_	
-----			
Pt# 2 COORDINATES	N = 666173.4667	N 41°17'21.74249"	X = 15390151.8510
CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 185°24'28.39180"	NSFA = 185°27'43.91796"	D X= -45787642.2336
	O = 0°03'15.97091"	NSBA = 5°25'54.70280"	D Y= +146674838.9303
	t-T Con = +0.44474"	Ell Dist = 133964.4444	D Z= -134212804.9546
	Dist = 439521.2453	Delta h = +33.3333	S D= 204017385.4609
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 133964.1730	
		Rad(A) = 6363459.4944	
		Skew Con = -0.00009"	
		GsFA = 185°27'43.91847"	
		Gsc Dist = 133964.4444	
		GsBA = 5°25'54.70330"	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 1434050.5860
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -4608184.5567
		h -25.7217	Z = 4155990.7497
		H _**_	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 15435930.2966
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -49601887.3439
		h -25.7217	Z = 44734533.1834
		H _**_	
-----			
	Az = 333°34'35.38903"	NSFA = 333°36'00.32429"	D X= -46020093.7258
	O = 0°01'25.82585"	NSBA = 153°27'15.47267"	D Y= +147675930.9096
	t-T Con = +0.89059"	Ell Dist = 137162.0727	D Z= -133038942.0809
	Dist = 450013.0567	Delta h = -63.0252	S D= 204023012.6886
	Scale= 1.000039473120	Delta H = _**_	
		Gnd Dist= 137161.6975	
		Rad(A) = 6367660.5282	
		Skew Con = +0.00133"	
		GsFA = 333°36'00.32206"	

cluster9

Gsc Dist = 137162.0727  
 GsBA = 153°27'15.47044"

```

-----
Pt# 1 COORDINATES | N = 655638.5183 | N 41°15'37.21781" | X = 1408977.6751
                  | E = 948899.3261 | W 72°56'09.09343" | Y = -4590173.5792
log0410a_IRY8     |                   | h -88.7470       | Z = 4184182.5364
                  |                   | H                | _**_
-----
  
```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTBR-CTGU		-2.5	7.8	-6.6	-0.20	0.27	-0.30	1.90
2	CTBR-log0410a_IRY8		-2.4	8.4	-5.2	-0.25	0.34	-0.28	1.45
3	CTBR-NYRH		-0.5	7.6	-5.4	-0.03	0.23	-0.22	2.05
4	CTGU-log0410a_IRY8		0.4	-0.8	0.6	0.08	-0.07	0.06	0.58
5	CTGU-NYRH		2.0	0.0	0.5	0.21	0.00	0.03	1.55
6	NYRH-log0410a_IRY8		0.5	-3.6	2.2	0.06	-0.17	0.13	1.46
R.M.S.			1.7	5.8	4.2	0.16	0.21	0.20	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTBR-CTGU		0.5	-0.1	-10.5	0.03	-0.01	-0.31	1.90
2	CTBR-log0410a_IRY8		1.9	0.1	-10.0	0.15	0.01	-0.35	1.45
3	CTBR-NYRH		0.9	1.7	-9.1	0.05	0.11	-0.24	2.05
4	CTGU-log0410a_IRY8		-0.1	0.1	1.0	-0.02	0.03	0.08	0.58
5	CTGU-NYRH		-0.1	1.9	0.8	-0.01	0.20	0.03	1.55
6	NYRH-log0410a_IRY8		-0.7	-0.6	4.1	-0.06	-0.07	0.17	1.46
R.M.S.			0.9	1.1	7.2	0.07	0.10	0.23	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTBR-CTGU		-0.2	-0.4	-10.5	-0.02	-0.03	-0.31	1.90
2	CTBR-log0410a_IRY8		-0.9	-1.6	-10.0	-0.10	-0.12	-0.35	1.45

		cluster9						
3	CTBR-NYRH	0.5	-1.8	-9.1	0.03	-0.11	-0.24	2.05
4	CTGU-log0410a_IRY8	-0.1	-0.1	1.0	-0.02	-0.02	0.08	0.58
5	CTGU-NYRH	-0.1	-1.9	0.8	-0.01	-0.20	0.03	1.55
6	NYRH-log0410a_IRY8	-0.3	-0.9	4.1	-0.04	-0.08	0.17	1.46

R.M.S. 0.5 1.3 7.2 0.05 0.11 0.23 ( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTBR-CTGU		66862.7	0.1	-0.4	-0.5	12.4	29.3	22.3	0.01	0.01	0.02	1.90
2	CTBR-log0410a_IRY8		48168.6	-0.4	1.2	-0.1	9.4	24.7	18.7	0.04	0.05	0.01	1.45
3	CTBR-NYRH		86885.4	1.0	-1.6	0.8	16.2	33.3	24.2	0.06	0.05	0.03	2.05
4	CTGU-log0410a_IRY8		22681.1	-0.2	0.3	-0.4	4.5	11.2	9.4	0.05	0.02	0.04	0.58
5	CTGU-NYRH		40832.4	0.9	-1.0	0.6	9.4	20.1	16.1	0.10	0.05	0.03	1.55
6	NYRH-log0410a_IRY8		41807.0	0.9	-1.5	1.1	8.0	21.3	16.5	0.12	0.07	0.07	1.46

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTBR-CTGU		66862.7	-0.7	0.0	0.0	14.2	12.6	33.8	0.05	0.00	0.00	1.90
2	CTBR-log0410a_IRY8		48168.6	0.7	-0.1	-1.0	12.4	9.7	28.3	0.06	0.01	0.04	1.45
3	CTBR-NYRH		86885.4	-0.6	0.5	1.9	17.9	15.4	37.4	0.03	0.03	0.05	2.05
4	CTGU-log0410a_IRY8		22681.1	-0.1	-0.1	-0.5	6.0	4.6	13.3	0.01	0.03	0.04	0.58
5	CTGU-NYRH		40832.4	-0.4	0.6	1.3	10.9	9.4	23.3	0.04	0.06	0.06	1.55
6	NYRH-log0410a_IRY8		41807.0	-0.3	0.4	2.1	10.4	8.8	24.6	0.03	0.05	0.08	1.46

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTBR-CTGU		66862.7	0.2	0.7	0.0	9.5	11.8	27.0	0.02	0.06	0.00	1.90
2	CTBR-log0410a_IRY8		48168.6	-0.4	-0.6	-1.0	6.0	9.2	20.2	-0.07	-0.06	-0.05	1.45
3	CTBR-NYRH		86885.4	0.8	0.1	1.9	14.0	13.8	30.2	0.05	0.01	0.06	2.05
4	CTGU-log0410a_IRY8		22681.1	0.1	-0.1	-0.5	2.1	2.6	6.0	0.07	-0.02	-0.08	0.58
5	CTGU-NYRH		40832.4	0.4	-0.6	1.3	7.9	7.0	16.2	0.05	-0.09	0.08	1.55
6	NYRH-log0410a_IRY8		41807.0	-0.5	0.2	2.1	6.0	7.5	17.9	-0.08	0.03	0.11	1.46

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status		Coordinates			Sigmas (mm)		
		Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTBR	Fixed	Fixed	41°29'49.86446"N	73°25'05.67398"W	53.4200			
2	CTGU	Fixed	Fixed	41°17'21.74249"N	72°40'04.44445"W	-18.0000			
3	NYRH	Fixed	Fixed	40°55'24.08901"N	72°42'50.56086"W	-7.8400			

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;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

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cluster9

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;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTBR, 742590.8019, 816940.5169, 175.2621, 0.0000, 0.0000, 0.0000, ""
CTGU, 666173.4667, 1022562.4275, -59.0550, 0.0000, 0.0000, 0.0000, ""
log0410a_IRY8, 655638.5183, 948899.3261, -88.7470, 0.0026, 0.0020, 0.0058, ""
NYRH, 532803.4044, 1009936.7522, -25.7217, 0.0000, 0.0000, 0.0000, ""
```



ADJUSTMENT SUMMARY

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-----
Item Name                      Item Value
-----
SubNet
  Name                          New Subnet
  Number of points              4
  Number of unknowns           3
  Degree of freedom             15
  Declared adjustment type      with fixed and weighted points
Aposteriori standard error of unit weight 0.273
  Adjustment Date and Time      3.May.07 14:06:59
  Reference points
    Number                      3
  Plane coordinates - fixed     6
    Heights - fixed             3
  Plane coordinates - weighted  0
    Heights - weighted          0
Apriori standard error of unit weight 1.000
  Processed vectors
    Total number                6
    Unused vectors              0
    Rejected vectors            0
    Downweighted vectors        0
  Apriori standard error of unit weight 1.000
Aposteriori standard error of unit weight 0.055
  Vectors' VPV test
    Confidence level (%)        95
    Lower bound                 2.70
    Upper bound                 19.02
    Degree of freedom           9
    VPV                         0.03
    VPV test                    failed
  Vectors' Tau test
    Confidence level (%)        95
    Tau critical value          3.00
  Number of flagged observations 0
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SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

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Point                               Coordinates                               Sigmas(mm)                               Corr.(%)
#  Name      Comment Latitude           Longitude           height(m) s(N)   s(E)   s(U)   N-E  N-U  E-U
-----
1  CTGU      41°17'21.74249"N  72°40'04.44445"W  -18.0000   0.0   0.0   0.0   0   0   0
2  CTNE      41°40'24.71766"N  72°42'52.25227"W  41.8500   0.0   0.0   0.0   0   0   0
3  log0411a_IRY8  41°18'05.53699"N  72°54'12.63360"W  -28.2277   1.3   0.9   2.7   6   0  -2
4  NYRH      40°55'24.08901"N  72°42'50.56086"W  -7.8400   0.0   0.0   0.0   0   0   0
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SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

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Point                               Coordinates                               Sigmas(USFeet)                               Corr.(%)
#  Name      Comment Northing(USFeet) Easting(USFeet) Height (USFeet) s(N)   s(E)   s(U)   N-E  N-U  E-U
-----
1  CTGU      666173.46667     1022562.42746     -59.05500   0.000  0.000  0.000   0   0   0
2  CTNE      806142.80905     1009694.65733     137.30288   0.000  0.000  0.000   0   0   0
3  log0411a_IRY8  670632.76658     957820.37072     -92.61054   0.004  0.003  0.009   6   0  -2
4  NYRH      532803.40438     1009936.75218     -25.72173   0.000  0.000  0.000   0   0   0
-----

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SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

#	Stations from - to	Coordinates (m)				Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z	s(X)		s(Y)	s(Z)	X-Y	X-Z	Y-Z	
1	CTGU-CTNE	-12111.7382	25780.1079	32003.7644	42843.3087	9.6	19.6	18.7	-46	30	-61	
2	CTGU-log0411a_IRY8	-19116.2092	-4981.2145	1008.3182	19780.2593	4.5	9.1	8.8	-50	40	-60	
3	CTGU-NYRH	4252.9737	-26674.6601	-30621.1810	40832.3646	8.7	19.0	17.8	-41	24	-62	
4	CTNE-log0411a_IRY8	-7004.4699	-30761.3215	-30995.4448	44227.1308	10.0	20.5	19.1	-50	42	-59	
5	CTNE-NYRH	16364.7119	-52454.7673	-62624.9456	83313.8057	13.6	30.0	28.2	-39	24	-61	
6	NYRH-log0411a_IRY8	-23369.1824	21693.4432	31629.5016	44912.6879	9.7	21.0	19.5	-44	36	-61	
Mean weight matrix's estimations:						7.7	16.0	15.2	-47	36	-60	

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGU-CTNE	42667.0223	-3881.6492	-84.3471	42843.3087	12.2	8.4	24.7	-3	1	-9
2	CTGU-log0411a_IRY8	1377.8191	-19732.1718	-40.8516	19780.2593	5.6	3.7	11.5	6	1	-1
3	CTGU-NYRH	-40646.7756	-3886.7765	-120.8510	40832.3646	11.5	7.9	23.6	-3	0	-20
4	CTNE-log0411a_IRY8	-41297.1332	-15828.3240	-223.7155	44227.1308	12.7	8.3	25.6	10	-5	0
5	CTNE-NYRH	-83311.6708	39.5763	-595.1167	83313.8057	18.3	12.5	37.2	0	-1	-21
6	NYRH-log0411a_IRY8	42015.8834	-15867.6748	-178.8080	44912.6879	12.6	8.6	26.1	9	-1	-11
Mean weight matrix's estimations:						9.9	6.6	20.2	4	0	-6

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTGU-CTNE	42843.3087	354°48'06.50"	- 0°06'46.08"	12.2	8.4	24.7	4	1	-9
2	CTGU-log0411a_IRY8	19780.2593	273°59'39.32"	- 0°07'06.00"	3.7	5.7	11.5	0	1	1
3	CTGU-NYRH	40832.3646	185°27'43.92"	- 0°10'10.48"	11.4	8.0	23.6	-10	1	20
4	CTNE-log0411a_IRY8	44227.1308	200°58'14.81"	- 0°17'23.36"	12.5	8.6	25.6	-21	4	-3
5	CTNE-NYRH	83313.8057	179°58'22.02"	- 0°24'33.38"	18.3	12.5	37.2	-1	0	21
6	NYRH-log0411a_IRY8	44912.6879	339°18'37.83"	- 0°13'41.19"	11.9	9.5	26.1	31	1	-10
Mean weight matrix's estimations:					7.6	7.9	20.1	0	1	2

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 666173.4667 E = 1022562.4275	N 41°17'21.74249" W 72°40'04.44445" h -59.0550 H **	X = 15390151.8510 Y = -49314764.8758 Z = 45064135.5161
CTGU	Az = 354°44'50.06756" O = 0°03'15.97091" t-T Con = -0.46138" Dist = 461152.5645 Scale= 0.999992181193	NSFA = 354°48'06.49985" NSBA = 174°46'15.34642" Ell Dist = 140561.3670 Delta h = +196.3579 Delta H = ** Gnd Dist= 140561.6298 Rad(A) = 6363438.9335	D X= -45841332.1405 D Y= +146846934.3258 D Z= -134007342.9789 S D= 204018180.1349

cluster10

Skew Con = -0.00046"  
 GsFA = 354°48'06.49932"  
 Gsc Dist = 140561.3670  
 GsBA = 174°46'15.34590"

Pt# 2 COORDINATES | N = 806142.8090 | N 41°40'24.71766" | X = 1417685.8696  
 | E = 1009694.6573 | W 72°42'52.25227" | Y = -4555729.7752  
 CTNE | h 137.3029 | Z = 4218615.6851  
 | H \_\*\*\_

Pt# 0 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510  
 | E = 1022562.4275 | W 72°40'04.44445" | Y = -49314764.8758  
 CTGU | h -59.0550 | Z = 45064135.5161  
 | H \_\*\*\_

Az = 273°56'23.38166" | NSFA = 273°59'39.33091" | D X= -45864312.6302  
 O = 0°03'15.97091" | NSBA = 93°50'19.57483" | D Y= +146746011.5110  
 t-T Con = +0.02165" | Ell Dist = 64895.9591 | D Z= -134109033.8425  
 Dist = 212911.1514 | Delta h = -33.5555 | S D= 204017548.3276  
 Scale= 0.999992181193 | Delta H = \_\*\*\_  
 | Gnd Dist= 64895.7239  
 | Rad(A) = 6387335.1220  
 | Skew Con = +0.00024"  
 | GsFA = 273°59'39.33082"  
 | Gsc Dist = 64895.9591  
 | GsBA = 93°50'19.57474"

Pt# 1 COORDINATES | N = 670632.7666 | N 41°18'05.53699" | X = 1410681.4023  
 | E = 957820.3707 | W 72°54'12.63360" | Y = -4586491.1107  
 log0411a\_IRY8 | h -92.6105 | Z = 4187620.2479  
 | H \_\*\*\_

Pt# 0 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510  
 | E = 1022562.4275 | W 72°40'04.44445" | Y = -49314764.8758  
 CTGU | h -59.0550 | Z = 45064135.5161  
 | H \_\*\*\_

Az = 185°24'28.39180" | NSFA = 185°27'43.91796" | D X= -45787642.2336  
 O = 0°03'15.97091" | NSBA = 5°25'54.70280" | D Y= +146674838.9303  
 t-T Con = +0.44474" | Ell Dist = 133964.4444 | D Z= -134212804.9546  
 Dist = 439521.2453 | Delta h = +33.3333 | S D= 204017385.4609  
 Scale= 0.999992181193 | Delta H = \_\*\*\_  
 | Gnd Dist= 133964.1730  
 | Rad(A) = 6363459.4944  
 | Skew Con = -0.00009"  
 | GsFA = 185°27'43.91847"  
 | Gsc Dist = 133964.4444  
 | GsBA = 5°25'54.70330"

Pt# 3 COORDINATES | N = 532803.4044 | N 40°55'24.08901" | X = 1434050.5860  
 | E = 1009936.7522 | W 72°42'50.56086" | Y = -4608184.5567  
 NYRH | h -25.7217 | Z = 4155990.7497  
 | H \_\*\*\_

Pt# 2 COORDINATES | N = 806142.8090 | N 41°40'24.71766" | X = 15259782.6604

cluster10

CTNE	E = 1009694.6573	W 72°42'52.25227"	Y = -49037271.0338
		h 137.3029	Z = 45408619.6821
		H _**_	
-----			
	Az = 200°56'49.30594"	NSFA = 200°58'14.80527"	D X= -45436593.0442
	O = 0°01'24.70434"	NSBA = 20°50'44.07637"	D Y= +145835600.4643
	t-T Con = -0.79500"	Ell Dist = 145101.5207	D Z= -135239228.9770
	Dist = 476047.8225	Delta h = -229.9134	S D= 204015086.2180
	Scale= 0.999986112756	Delta H = _**_	
		Gnd Dist= 145101.6756	
		Rad(A) = 6366722.2726	
		Skew Con = -0.00115"	
		GsFA = 200°58'14.80734"	
		Gsc Dist = 145101.5207	
		GsBA = 20°50'44.07844"	
-----			
Pt# 1 COORDINATES	N = 670632.7666	N 41°18'05.53699"	X = 1410681.4023
log0411a_IRY8	E = 957820.3707	W 72°54'12.63360"	Y = -4586491.1107
		h -92.6105	Z = 4187620.2479
		H _**_	
-----			
Pt# 2 COORDINATES	N = 806142.8090	N 41°40'24.71766"	X = 15259782.6604
CTNE	E = 1009694.6573	W 72°42'52.25227"	Y = -49037271.0338
		h 137.3029	Z = 45408619.6821
		H _**_	
-----			
	Az = 179°56'57.94901"	NSFA = 179°58'22.01827"	D X= -45359922.6476
	O = 0°01'24.70434"	NSBA = 359°58'23.13460"	D Y= +145764427.8836
	t-T Con = +0.63508"	Ell Dist = 273337.9389	D Z= -135343000.0891
	Dist = 896781.3819	Delta h = -163.0246	S D= 204015976.5605
	Scale= 0.999986112756	Delta H = _**_	
		Gnd Dist= 273338.6676	
		Rad(A) = 6363667.3950	
		Skew Con = +0.00000"	
		GsFA = 179°58'22.01826"	
		Gsc Dist = 273337.9389	
		GsBA = 359°58'23.13459"	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 1434050.5860
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -4608184.5567
		h -25.7217	Z = 4155990.7497
		H _**_	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 15435930.2966
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -49601887.3439
		h -25.7217	Z = 44734533.1834
		H _**_	
-----			
	Az = 339°17'12.80837"	NSFA = 339°18'37.82816"	D X= -46014504.0806
	O = 0°01'25.82585"	NSBA = 159°11'09.33693"	D Y= +147688012.4750
	t-T Con = +0.80605"	Ell Dist = 147351.4445	D Z= -133027663.5226
	Dist = 483442.2338	Delta h = -66.8888	S D= 204023142.9933
	Scale= 1.000039473120	Delta H = _**_	
		Gnd Dist= 147351.0279	
		Rad(A) = 6365881.0192	
		Skew Con = +0.00115"	
		GsFA = 339°18'37.82603"	

cluster10

Gsc Dist = 147351.4445  
GsBA = 159°11'09.33479"

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Pt# 1 COORDINATES | N = 670632.7666 | N 41°18'05.53699" | X = 1410681.4023
                  | E = 957820.3707 | W 72°54'12.63360" | Y = -4586491.1107
log0411a_IRY8     |                   | h -92.6105       | Z = 4187620.2479
                  |                   | H                | _**_
-----

```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTGU-CTNE		4.3	-12.0	6.4	0.45	-0.61	0.34	1.59
2	CTGU-log0411a_IRY8		0.4	-2.4	0.9	0.08	-0.27	0.10	0.52
3	CTGU-NYRH		-0.1	-7.3	3.7	-0.01	-0.38	0.21	1.48
4	CTNE-log0411a_IRY8		-2.9	10.5	-4.1	-0.29	0.51	-0.22	1.63
5	CTNE-NYRH		-4.5	5.4	-2.8	-0.33	0.18	-0.10	2.07
6	NYRH-log0411a_IRY8		1.0	2.5	-0.4	0.10	0.12	-0.02	1.70
R.M.S.			2.8	7.6	3.6	0.26	0.39	0.19	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGU-CTNE		-3.6	0.5	13.8	-0.30	0.07	0.56	1.59
2	CTGU-log0411a_IRY8		-1.0	-0.4	2.4	-0.17	-0.10	0.21	0.52
3	CTGU-NYRH		-1.8	-2.3	7.7	-0.16	-0.29	0.32	1.48
4	CTNE-log0411a_IRY8		4.2	0.4	-10.9	0.33	0.04	-0.43	1.63
5	CTNE-NYRH		2.2	-2.7	-6.7	0.12	-0.22	-0.18	2.07
6	NYRH-log0411a_IRY8		1.1	1.7	-1.8	0.09	0.20	-0.07	1.70
R.M.S.			2.6	1.6	8.4	0.21	0.18	0.34	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGU-CTNE		-3.7	0.2	13.8	-0.31	0.03	0.56	1.59
2	CTGU-log0411a_IRY8		0.3	-1.0	2.4	0.08	-0.17	0.21	0.52

		cluster10						
3	CTGU-NYRH	2.0	2.1	7.7	0.17	0.26	0.32	1.48
4	CTNE-log0411a_IRY8	-4.0	1.2	-10.9	-0.32	0.13	-0.43	1.63
5	CTNE-NYRH	-2.2	2.7	-6.8	-0.12	0.22	-0.18	2.07
6	NYRH-log0411a_IRY8	0.4	2.0	-1.8	0.03	0.21	-0.07	1.70

R.M.S. 2.5 1.7 8.4 0.20 0.19 0.34 ( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTGU-CTNE		42843.3	0.4	0.4	0.5	9.6	19.6	18.7	0.04	0.02	0.03	1.59
2	CTGU-log0411a_IRY8		19780.3	-0.2	0.1	-0.4	4.5	9.1	8.8	0.03	0.01	0.04	0.52
3	CTGU-NYRH		40832.4	0.2	-0.9	0.9	8.7	19.0	17.8	0.02	0.05	0.05	1.48
4	CTNE-log0411a_IRY8		44227.1	0.5	0.6	0.6	10.0	20.5	19.1	0.05	0.03	0.03	1.63
5	CTNE-NYRH		83313.8	-0.2	-0.6	0.3	13.6	30.0	28.2	0.02	0.02	0.01	2.07
6	NYRH-log0411a_IRY8		44912.7	0.2	-1.4	1.2	9.7	21.0	19.5	0.02	0.07	0.06	1.70

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGU-CTNE		42843.3	0.5	0.5	0.1	12.2	8.4	24.7	0.04	0.06	0.00	1.59
2	CTGU-log0411a_IRY8		19780.3	-0.1	-0.1	-0.4	5.6	3.7	11.5	0.03	0.03	0.03	0.52
3	CTGU-NYRH		40832.4	0.1	-0.1	1.3	11.5	7.9	23.6	0.01	0.01	0.05	1.48
4	CTNE-log0411a_IRY8		44227.1	0.7	0.7	0.1	12.7	8.3	25.6	0.06	0.09	0.00	1.63
5	CTNE-NYRH		83313.8	-0.1	-0.4	0.6	18.3	12.5	37.2	0.01	0.03	0.02	2.07
6	NYRH-log0411a_IRY8		44912.7	0.0	-0.2	1.8	12.6	8.6	26.1	0.00	0.03	0.07	1.70

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGU-CTNE		42843.3	0.5	0.5	0.1	8.8	6.1	17.9	0.05	0.09	0.01	1.59
2	CTGU-log0411a_IRY8		19780.3	0.1	-0.2	-0.4	1.5	2.4	4.9	0.06	-0.07	-0.07	0.52
3	CTGU-NYRH		40832.4	-0.1	0.1	1.3	8.0	5.7	16.6	-0.01	0.02	0.08	1.48
4	CTNE-log0411a_IRY8		44227.1	-1.0	-0.4	0.1	9.4	6.2	18.9	-0.10	-0.06	0.00	1.63
5	CTNE-NYRH		83313.8	0.1	0.4	0.6	15.2	10.5	31.0	0.01	0.04	0.02	2.07
6	NYRH-log0411a_IRY8		44912.7	0.1	-0.2	1.8	8.8	7.3	19.7	0.01	-0.03	0.09	1.70

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status		Coordinates		Sigmas (mm)			
		Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTGU	Fixed	Fixed	41°17'21.74249"N	72°40'04.44445"W	-18.0000			
2	CTNE	Fixed	Fixed	41°40'24.71766"N	72°42'52.25227"W	41.8500			
3	NYRH	Fixed	Fixed	40°55'24.08901"N	72°42'50.56086"W	-7.8400			

```
;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04
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cluster10
;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTGU, 666173.4667, 1022562.4275, -59.0550, 0.0000, 0.0000, 0.0000, ""
CTNE, 806142.8090, 1009694.6573, 137.3029, 0.0000, 0.0000, 0.0000, ""
log0411a_IRY8, 670632.7666, 957820.3707, -92.6105, 0.0043, 0.0028, 0.0087, ""
NYRH, 532803.4044, 1009936.7522, -25.7217, 0.0000, 0.0000, 0.0000, ""
```

ADJUSTMENT SUMMARY

Item Name	Item Value
SubNet	
Name	New Subnet
Number of points	4
Number of unknowns	3
Degree of freedom	15
Declared adjustment type	with fixed and weighted points
Aposteriori standard error of unit weight	0.415
Adjustment Date and Time	3.May.07 14:14:12
Reference points	
Number	3
Plane coordinates - fixed	6
Heights - fixed	3
Plane coordinates - weighted	0
Heights - weighted	0
Apriori standard error of unit weight	1.000
Processed vectors	
Total number	6
Unused vectors	0
Rejected vectors	0
Downweighted vectors	0
Apriori standard error of unit weight	1.000
Aposteriori standard error of unit weight	0.043
Vectors' VPV test	
Confidence level (%)	95
Lower bound	2.70
Upper bound	19.02
Degree of freedom	9
VPV	0.02
VPV test	failed
Vectors' Tau test	
Confidence level (%)	95
Tau critical value	3.00
Number of flagged observations	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGU		41°17'21.74249"N	72°40'04.44445"W	-18.0000	0.0	0.0	0.0	0	0	0
2	CTNE		41°40'24.71766"N	72°42'52.25227"W	41.8500	0.0	0.0	0.0	0	0	0
3	log0413a_IRY8		41°16'00.11178"N	72°48'34.04269"W	-25.4847	1.4	0.9	2.8	8	-6	0
4	NYRH		40°55'24.08901"N	72°42'50.56086"W	-7.8400	0.0	0.0	0.0	0	0	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGU		666173.46667	1022562.42746	-59.05500	0.000	0.000	0.000	0	0	0
2	CTNE		806142.80905	1009694.65733	137.30288	0.000	0.000	0.000	0	0	0
3	log0413a_IRY8		657906.33528	983654.50051	-83.61107	0.005	0.003	0.009	8	-6	0
4	NYRH		532803.40438	1009936.75218	-25.72173	0.000	0.000	0.000	0	0	0

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)



#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z
1	CTGU-CTNE	-12111.7337	25780.1017	32003.7699	42843.3078	9.7	19.6	18.7	-47	26	-58
2	CTGU-log0413a_IRY8	-10834.0900	-5100.2306	-1897.4697	12123.9536	2.8	5.9	5.4	-51	42	-59
3	CTGU-NYRH	4252.9734	-26674.6517	-30621.1844	40832.3616	9.1	19.1	17.5	-47	24	-59
4	CTNE-log0413a_IRY8	1277.6445	-30880.3336	-33901.2393	45875.0629	10.3	21.6	19.5	-51	41	-59
5	CTNE-NYRH	16364.7070	-52454.7534	-62624.9537	83313.8020	14.4	29.8	28.0	-46	24	-58
6	NYRH-log0413a_IRY8	-15087.0633	21574.4186	28723.7163	38963.1479	8.6	18.3	16.8	-49	39	-60
Mean weight matrix's estimations:						5.9	12.1	11.1	-50	39	-59

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGU-CTNE	42667.0216	-3881.6467	-84.3380	42843.3078	12.7	8.3	24.5	-7	-1	-9
2	CTGU-log0413a_IRY8	-2508.6130	-11861.5661	-18.9917	12123.9536	3.6	2.4	7.3	8	-6	0
3	CTGU-NYRH	-40646.7727	-3886.7743	-120.8593	40832.3616	11.9	7.8	23.4	-9	-5	-13
4	CTNE-log0413a_IRY8	-45179.3679	-7955.6246	-232.7057	45875.0629	13.1	8.6	26.6	9	-8	-2
5	CTNE-NYRH	-83311.6670	39.5758	-595.1331	83313.8020	19.1	12.5	36.8	-7	-3	-12
6	NYRH-log0413a_IRY8	38133.8196	-7994.9957	-136.9039	38963.1479	11.1	7.3	22.7	8	-4	-5
Mean weight matrix's estimations:						7.5	4.9	15.0	6	-6	-2

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTGU-CTNE	42843.3078	354°48'06.51"	- 0°06'46.04"	12.7	8.3	24.5	1	-1	-9
2	CTGU-log0413a_IRY8	12123.9536	258°03'30.36"	- 0°05'23.11"	2.5	3.5	7.3	-24	1	-6
3	CTGU-NYRH	40832.3616	185°27'43.91"	- 0°10'10.53"	11.8	8.0	23.4	-17	5	12
4	CTNE-log0413a_IRY8	45875.0629	189°59'12.55"	- 0°17'26.31"	13.1	8.6	26.6	-7	7	-1
5	CTNE-NYRH	83313.8020	179°58'22.02"	- 0°24'33.42"	19.1	12.5	36.8	-7	2	12
6	NYRH-log0413a_IRY8	38963.1479	348°09'32.70"	- 0°12'04.75"	10.9	7.7	22.7	24	-4	-6
Mean weight matrix's estimations:					5.5	6.3	15.0	-16	1	-3

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 666173.4667 E = 1022562.4275	N 41°17'21.74249" W 72°40'04.44445" h -59.0550 H **	X = 15390151.8510 Y = -49314764.8758 Z = 45064135.5161
CTGU	Az = 354°44'50.06756" O = 0°03'15.97091" t-T Con = -0.46138" Dist = 461152.5645 Scale= 0.999992181193	NSFA = 354°48'06.49985" NSBA = 174°46'15.34642" Ell Dist = 140561.3670 Delta h = +196.3579 Delta H = ** Gnd Dist= 140561.6298 Rad(A) = 6363438.9335	D X= -45841332.1405 D Y= +146846934.3258 D Z= -134007342.9789 S D= 204018180.1349

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Skew Con = -0.00046"  
 GsFA = 354°48'06.49932"  
 Gsc Dist = 140561.3670  
 GsBA = 174°46'15.34590"

Pt# 2 COORDINATES | N = 806142.8090 | N 41°40'24.71766" | X = 1417685.8696  
 | E = 1009694.6573 | W 72°42'52.25227" | Y = -4555729.7752  
 CTNE | h 137.3029 | Z = 4218615.6851  
 | H \_\*\*\_

Pt# 0 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510  
 | E = 1022562.4275 | W 72°40'04.44445" | Y = -49314764.8758  
 CTGU | h -59.0550 | Z = 45064135.5161  
 | H \_\*\*\_

Az = 258°00'14.38948" | NSFA = 258°03'30.36696" | D X= -45837140.3775  
 O = 0°03'15.97091" | NSBA = 77°57'54.17778" | D Y= +146745621.0308  
 t-T Con = -0.00658" | Ell Dist = 39776.7995 | D Z= -134118567.2463  
 Dist = 130500.1615 | Delta h = -24.5561 | S D= 204017427.7112  
 Scale= 0.999992181193 | Delta H = \_\*\*\_  
 | Gnd Dist= 39776.6639  
 | Rad(A) = 6386412.6672  
 | Skew Con = -0.00063"  
 | GsFA = 258°03'30.36706"  
 | Gsc Dist = 39776.7995  
 | GsBA = 77°57'54.17787"

Pt# 1 COORDINATES | N = 657906.3353 | N 41°16'00.11178" | X = 1418963.5215  
 | E = 983654.5005 | W 72°48'34.04269" | Y = -4586610.1293  
 log0413a\_IRY8 | h -83.6111 | Z = 4184714.4606  
 | H \_\*\*\_

Pt# 0 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510  
 | E = 1022562.4275 | W 72°40'04.44445" | Y = -49314764.8758  
 CTGU | h -59.0550 | Z = 45064135.5161  
 | H \_\*\*\_

Az = 185°24'28.39180" | NSFA = 185°27'43.91796" | D X= -45787642.2336  
 O = 0°03'15.97091" | NSBA = 5°25'54.70280" | D Y= +146674838.9303  
 t-T Con = +0.44474" | Ell Dist = 133964.4444 | D Z= -134212804.9546  
 Dist = 439521.2453 | Delta h = +33.3333 | S D= 204017385.4609  
 Scale= 0.999992181193 | Delta H = \_\*\*\_  
 | Gnd Dist= 133964.1730  
 | Rad(A) = 6363459.4944  
 | Skew Con = -0.00009"  
 | GsFA = 185°27'43.91847"  
 | Gsc Dist = 133964.4444  
 | GsBA = 5°25'54.70330"

Pt# 3 COORDINATES | N = 532803.4044 | N 40°55'24.08901" | X = 1434050.5860  
 | E = 1009936.7522 | W 72°42'50.56086" | Y = -4608184.5567  
 NYRH | h -25.7217 | Z = 4155990.7497  
 | H \_\*\*\_

Pt# 2 COORDINATES | N = 806142.8090 | N 41°40'24.71766" | X = 15259782.6604

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CTNE	E = 1009694.6573	W 72°42'52.25227"	Y = -49037271.0338
		h 137.3029	Z = 45408619.6821
		H _**_	
-----			
	Az = 189°57'47.56670"	NSFA = 189°59'12.53890"	D X= -45409420.7915
	O = 0°01'24.70434"	NSBA = 9°55'26.19241"	D Y= +145835209.9841
	t-T Con = -0.26785"	Ell Dist = 150508.0902	D Z= -135248762.3807
	Dist = 493786.0378	Delta h = -220.9139	S D= 204015077.1224
	Scale= 0.999986112756	Delta H = _**_	
		Gnd Dist= 150508.2833	
		Rad(A) = 6364384.4205	
		Skew Con = -0.00053"	
		GsFA = 189°59'12.54003"	
		Gsc Dist = 150508.0902	
		GsBA = 9°55'26.19355"	
-----			
Pt# 1 COORDINATES	N = 657906.3353	N 41°16'00.11178"	X = 1418963.5215
log0413a_IRY8	E = 983654.5005	W 72°48'34.04269"	Y = -4586610.1293
		h -83.6111	Z = 4184714.4606
		H _**_	
-----			
Pt# 2 COORDINATES	N = 806142.8090	N 41°40'24.71766"	X = 15259782.6604
CTNE	E = 1009694.6573	W 72°42'52.25227"	Y = -49037271.0338
		h 137.3029	Z = 45408619.6821
		H _**_	
-----			
	Az = 179°56'57.94901"	NSFA = 179°58'22.01827"	D X= -45359922.6476
	O = 0°01'24.70434"	NSBA = 359°58'23.13460"	D Y= +145764427.8836
	t-T Con = +0.63508"	Ell Dist = 273337.9389	D Z= -135343000.0891
	Dist = 896781.3819	Delta h = -163.0246	S D= 204015976.5605
	Scale= 0.999986112756	Delta H = _**_	
		Gnd Dist= 273338.6676	
		Rad(A) = 6363667.3950	
		Skew Con = +0.00000"	
		GsFA = 179°58'22.01826"	
		Gsc Dist = 273337.9389	
		GsBA = 359°58'23.13459"	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 1434050.5860
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -4608184.5567
		h -25.7217	Z = 4155990.7497
		H _**_	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 15435930.2966
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -49601887.3439
		h -25.7217	Z = 44734533.1834
		H _**_	
-----			
	Az = 348°08'07.10885"	NSFA = 348°09'32.71100"	D X= -45987331.8279
	O = 0°01'25.82585"	NSBA = 168°05'46.93641"	D Y= +147687621.9948
	t-T Con = +0.22369"	Ell Dist = 127831.9205	D Z= -133037196.9263
	Dist = 419401.6443	Delta h = -57.8893	S D= 204022950.0452
	Scale= 1.000039473120	Delta H = _**_	
		Gnd Dist= 127831.5865	
		Rad(A) = 6363862.3840	
		Skew Con = +0.00063"	
		GsFA = 348°09'32.71002"	

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Gsc Dist = 127831.9205  
GsBA = 168°05'46.93543"

```

Pt# 1 COORDINATES | N = 657906.3353 | N 41°16'00.11178" | X = 1418963.5215
                  | E = 983654.5005 | W 72°48'34.04269" | Y = -4586610.1293
log0413a_IRY8     |                   | h -83.6111       | Z = 4184714.4606
                  |                   | H                | **
    
```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTGU-CTNE		8.8	-18.3	11.9	0.91	-0.93	0.64	1.63
2	CTGU-log0413a_IRY8		0.5	-0.8	0.6	0.16	-0.13	0.12	0.24
3	CTGU-NYRH		-0.5	1.1	0.4	-0.05	0.06	0.02	1.70
4	CTNE-log0413a_IRY8		-7.6	16.2	-10.8	-0.74	0.75	-0.56	1.75
5	CTNE-NYRH		-9.4	19.4	-10.9	-0.65	0.65	-0.39	2.11
6	NYRH-log0413a_IRY8		1.0	-4.3	1.9	0.12	-0.23	0.11	1.56
R.M.S.			6.1	12.9	8.0	0.55	0.57	0.39	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGU-CTNE		-4.3	3.0	22.9	-0.34	0.36	0.94	1.63
2	CTGU-log0413a_IRY8		-0.1	0.2	1.1	-0.03	0.09	0.15	0.24
3	CTGU-NYRH		1.1	-0.1	-0.7	0.09	-0.02	-0.03	1.70
4	CTNE-log0413a_IRY8		3.7	-2.4	-20.5	0.28	-0.28	-0.77	1.75
5	CTNE-NYRH		6.0	-3.2	-23.1	0.31	-0.26	-0.63	2.11
6	NYRH-log0413a_IRY8		-1.5	-0.3	4.6	-0.13	-0.04	0.20	1.56
R.M.S.			3.4	2.1	15.8	0.23	0.22	0.57	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGU-CTNE		-4.6	2.6	22.9	-0.36	0.31	0.94	1.63
2	CTGU-log0413a_IRY8		-0.2	-0.1	1.1	-0.08	-0.04	0.15	0.24

	cluster11							
3	CTGU-NYRH	-1.0	0.2	-0.7	-0.09	0.03	-0.03	1.70
4	CTNE-log0413a_IRY8	-3.1	3.0	-20.5	-0.24	0.35	-0.77	1.75
5	CTNE-NYRH	-5.8	3.2	-23.2	-0.30	0.26	-0.63	2.11
6	NYRH-log0413a_IRY8	-1.4	-0.6	4.6	-0.13	-0.08	0.20	1.56

R.M.S. 3.4 2.1 15.8 0.23 0.22 0.57 ( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)	from - to			( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTGU-CTNE		42843.3	0.3	-0.6	0.3	9.7	19.6	18.7	0.03	0.03	0.02	1.63
2	CTGU-log0413a_IRY8		12124.0	0.0	0.2	-0.1	2.8	5.9	5.4	0.01	0.03	0.02	0.24
3	CTGU-NYRH		40832.4	0.0	-1.1	0.7	9.1	19.1	17.5	0.00	0.06	0.04	1.70
4	CTNE-log0413a_IRY8		45875.1	0.4	-0.5	0.0	10.3	21.6	19.5	0.04	0.02	0.00	1.75
5	CTNE-NYRH		83313.8	-0.3	-0.5	1.0	14.4	29.8	28.0	0.02	0.02	0.03	2.11
6	NYRH-log0413a_IRY8		38963.1	0.0	-1.2	0.9	8.6	18.3	16.8	0.00	0.06	0.05	1.56

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
	from - to			(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGU-CTNE		42843.3	-0.2	0.1	0.7	12.7	8.3	24.5	0.02	0.01	0.03	1.63
2	CTGU-log0413a_IRY8		12124.0	0.0	0.0	-0.2	3.6	2.4	7.3	0.01	0.01	0.02	0.24
3	CTGU-NYRH		40832.4	-0.2	-0.3	1.2	11.9	7.8	23.4	0.02	0.04	0.05	1.70
4	CTNE-log0413a_IRY8		45875.1	-0.4	0.3	0.5	13.1	8.6	26.6	0.03	0.03	0.02	1.75
5	CTNE-NYRH		83313.8	0.5	-0.4	0.9	19.1	12.5	36.8	0.02	0.03	0.03	2.11
6	NYRH-log0413a_IRY8		38963.1	-0.1	-0.4	1.4	11.1	7.3	22.7	0.01	0.05	0.06	1.56

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)	from - to			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGU-CTNE		42843.3	-0.2	0.1	0.7	9.4	6.1	17.8	-0.02	0.01	0.04	1.63
2	CTGU-log0413a_IRY8		12124.0	0.0	0.0	-0.2	0.7	1.0	2.1	-0.03	0.04	-0.08	0.24
3	CTGU-NYRH		40832.4	0.2	0.3	1.2	8.9	6.1	17.5	0.02	0.04	0.07	1.70
4	CTNE-log0413a_IRY8		45875.1	0.3	-0.3	0.5	10.1	6.4	20.6	0.03	-0.05	0.02	1.75
5	CTNE-NYRH		83313.8	-0.5	0.4	0.9	16.1	10.5	30.8	-0.03	0.04	0.03	2.11
6	NYRH-log0413a_IRY8		38963.1	0.0	-0.4	1.4	7.7	5.6	16.6	0.00	-0.07	0.09	1.56

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status	Coordinates			Sigmas (mm)		
	Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTGU	Fixed	Fixed	41°17'21.74249"N	72°40'04.44445"W	-18.0000		
2	CTNE	Fixed	Fixed	41°40'24.71766"N	72°42'52.25227"W	41.8500		
3	NYRH	Fixed	Fixed	40°55'24.08901"N	72°42'50.56086"W	-7.8400		

```
;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04
```

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cluster11
;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTGU, 666173.4667, 1022562.4275, -59.0550, 0.0000, 0.0000, 0.0000, ""
CTNE, 806142.8090, 1009694.6573, 137.3029, 0.0000, 0.0000, 0.0000, ""
log0413a_IRY8, 657906.3353, 983654.5005, -83.6111, 0.0045, 0.0030, 0.0091, ""
NYRH, 532803.4044, 1009936.7522, -25.7217, 0.0000, 0.0000, 0.0000, ""
```

ADJUSTMENT SUMMARY

Item Name	Item Value
SubNet	
Name	New Subnet
Number of points	4
Number of unknowns	3
Degree of freedom	15
Declared adjustment type	with fixed and weighted points
Aposteriori standard error of unit weight	0.592
Adjustment Date and Time	3.May.07 14:20:23
Reference points	
Number	3
Plane coordinates - fixed	6
Heights - fixed	3
Plane coordinates - weighted	0
Heights - weighted	0
Apriori standard error of unit weight	1.000
Processed vectors	
Total number	6
Unused vectors	0
Rejected vectors	0
Downweighted vectors	0
Apriori standard error of unit weight	1.000
Aposteriori standard error of unit weight	0.562
Vectors' VPV test	
Confidence level (%)	95
Lower bound	2.70
Upper bound	19.02
Degree of freedom	9
VPV	2.85
VPV test	passed
Vectors' Tau test	
Confidence level (%)	95
Tau critical value	3.00
Number of flagged observations	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGU		41°17'21.74249"N	72°40'04.44445"W	-18.0000	0.0	0.0	0.0	0	0	0
2	CTNE		41°40'24.71766"N	72°42'52.25227"W	41.8500	0.0	0.0	0.0	0	0	0
3	log0413b_IRY8		41°16'18.35754"N	72°39'49.50743"W	-28.7263	0.5	0.4	0.9	-5	-6	-7
4	NYRH		40°55'24.08901"N	72°42'50.56086"W	-7.8400	0.0	0.0	0.0	0	0	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGU		666173.46667	1022562.42746	-59.05500	0.000	0.000	0.000	0	0	0
2	CTNE		806142.80905	1009694.65733	137.30288	0.000	0.000	0.000	0	0	0
3	log0413b_IRY8		659759.23836	1023709.10857	-94.24636	0.001	0.001	0.003	-5	-6	-7
4	NYRH		532803.40438	1009936.75218	-25.72173	0.000	0.000	0.000	0	0	0

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z
1	CTGU-CTNE	-12111.7379	25780.1002	32003.7684	42843.3070	10.4	20.6	17.2	-32	20	-64
2	CTGU-log0413b_IRY8	713.7870	-1120.2205	-1476.5418	1986.0920	0.7	1.3	1.1	-35	25	-61
3	CTGU-NYRH	4252.9720	-26674.6549	-30621.1856	40832.3645	9.7	19.8	16.3	-28	15	-65
4	CTNE-log0413b_IRY8	12825.5316	-26900.3516	-33480.2887	44822.4598	11.7	20.6	18.6	-41	35	-66
5	CTNE-NYRH	16364.7102	-52454.7539	-62624.9549	83313.8039	14.9	31.6	25.6	-25	11	-66
6	NYRH-log0413b_IRY8	-3539.1785	25554.4006	29144.6685	38922.5497	9.8	18.5	15.9	-34	27	-66
Mean weight matrix's estimations:						1.8	3.1	2.8	-35	25	-61

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGU-CTNE	42667.0204	-3881.6512	-84.3389	42843.3070	11.4	9.8	24.5	-3	-15	-20
2	CTGU-log0413b_IRY8	-1955.3970	347.6522	-11.0371	1986.0920	0.8	0.7	1.6	-5	-6	-7
3	CTGU-NYRH	-40646.7754	-3886.7766	-120.8581	40832.3645	10.8	9.5	23.4	-5	-15	-26
4	CTNE-log0413b_IRY8	-44619.6165	4253.2990	-228.4239	44822.4598	11.5	10.3	25.9	-3	-8	-1
5	CTNE-NYRH	-83311.6689	39.5786	-595.1328	83313.8039	16.9	15.0	36.9	-2	-18	-31
6	NYRH-log0413b_IRY8	38693.5151	4213.9286	-139.8749	38922.5497	10.0	9.1	22.5	-1	-10	-12
Mean weight matrix's estimations:						1.8	1.6	3.8	-5	-7	-7

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTGU-CTNE	42843.3070	354°48'06.48"	- 0°06'46.04"	11.4	9.8	24.5	0	-13	-21
2	CTGU-log0413b_IRY8	1986.0920	169°55'07.18"	- 0°19'06.26"	0.8	0.7	1.6	0	4	8
3	CTGU-NYRH	40832.3645	185°27'43.92"	- 0°10'10.52"	10.7	9.5	23.4	-7	16	24
4	CTNE-log0413b_IRY8	44822.4598	174°33'17.35"	- 0°17'31.17"	11.5	10.3	25.9	-1	7	1
5	CTNE-NYRH	83313.8039	179°58'22.01"	- 0°24'33.42"	16.9	15.0	37.0	-3	16	31
6	NYRH-log0413b_IRY8	38922.5497	6°12'55.15"	- 0°12'21.25"	10.0	9.1	22.5	-3	-12	-11
Mean weight matrix's estimations:					1.9	1.6	3.8	0	4	8

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 666173.4667 E = 1022562.4275	N 41°17'21.74249" W 72°40'04.44445" h -59.0550 H **	X = 15390151.8510 Y = -49314764.8758 Z = 45064135.5161
CTGU	Az = 354°44'50.06756" O = 0°03'15.97091" t-T Con = -0.46138" Dist = 461152.5645 Scale= 0.999992181193	NSFA = 354°48'06.49985" NSBA = 174°46'15.34642" Ell Dist = 140561.3670 Delta h = +196.3579 Delta H = ** Gnd Dist= 140561.6298 Rad(A) = 6363438.9335	D X= -45841332.1405 D Y= +146846934.3258 D Z= -134007342.9789 S D= 204018180.1349



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Skew Con = -0.00046"  
 GsFA = 354°48'06.49932"  
 Gsc Dist = 140561.3670  
 GsBA = 174°46'15.34590"

Pt# 2 COORDINATES | N = 806142.8090 | N 41°40'24.71766" | X = 1417685.8696  
 | E = 1009694.6573 | W 72°42'52.25227" | Y = -4555729.7752  
 CTNE | h 137.3029 | Z = 4218615.6851  
 | H \*\* |

Pt# 0 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510  
 | E = 1022562.4275 | W 72°40'04.44445" | Y = -49314764.8758  
 CTGU | h -59.0550 | Z = 45064135.5161  
 | H \*\* |

Az = 169°51'51.25386" | NSFA = 169°55'07.18949" | D X= -45799253.7155  
 O = 0°03'15.97091" | NSBA = 349°55'17.04437" | D Y= +146758678.7754  
 t-T Con = +0.03527" | Ell Dist = 6515.9657 | D Z= -134117186.2490  
 Dist = 21377.6448 | Delta h = -35.1914 | S D= 204017403.8756  
 Scale= 0.999992181193 | Delta H = \*\* |  
 Gnd Dist= 6515.9419  
 Rad(A) = 6363980.0934  
 Skew Con = +0.00061"  
 GsFA = 169°55'07.18949"  
 Gsc Dist = 6515.9657  
 GsBA = 349°55'17.04437"

Pt# 1 COORDINATES | N = 659759.2384 | N 41°16'18.35754" | X = 1430511.3992  
 | E = 1023709.1086 | W 72°39'49.50743" | Y = -4582630.1208  
 log0413b\_IRY8 | h -94.2464 | Z = 4185135.3894  
 | H \*\* |

Pt# 0 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510  
 | E = 1022562.4275 | W 72°40'04.44445" | Y = -49314764.8758  
 CTGU | h -59.0550 | Z = 45064135.5161  
 | H \*\* |

Az = 185°24'28.39180" | NSFA = 185°27'43.91796" | D X= -45787642.2336  
 O = 0°03'15.97091" | NSBA = 5°25'54.70280" | D Y= +146674838.9303  
 t-T Con = +0.44474" | Ell Dist = 133964.4444 | D Z= -134212804.9546  
 Dist = 439521.2453 | Delta h = +33.3333 | S D= 204017385.4609  
 Scale= 0.999992181193 | Delta H = \*\* |  
 Gnd Dist= 133964.1730  
 Rad(A) = 6363459.4944  
 Skew Con = -0.00009"  
 GsFA = 185°27'43.91847"  
 Gsc Dist = 133964.4444  
 GsBA = 5°25'54.70330"

Pt# 3 COORDINATES | N = 532803.4044 | N 40°55'24.08901" | X = 1434050.5860  
 | E = 1009936.7522 | W 72°42'50.56086" | Y = -4608184.5567  
 NYRH | h -25.7217 | Z = 4155990.7497  
 | H \*\* |

Pt# 2 COORDINATES | N = 806142.8090 | N 41°40'24.71766" | X = 15259782.6604

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CTNE	E = 1009694.6573	W 72°42'52.25227"	Y = -49037271.0338
		h 137.3029	Z = 45408619.6821
		H _**_	
-----			
	Az = 174°31'53.29972"	NSFA = 174°33'17.34714"	D X= -45371534.1295
	O = 0°01'24.70434"	NSBA = 354°35'18.37375"	D Y= +145848267.7287
	t-T Con = +0.65691"	Ell Dist = 147054.6898	D Z= -135247381.3834
	Dist = 482456.0473	Delta h = -231.5492	S D= 204015066.7961
	Scale= 0.999986112756	Delta H = _**_	
		Gnd Dist= 147054.8411	
		Rad(A) = 6363882.0584	
		Skew Con = +0.00033"	
		GsFA = 174°33'17.34654"	
		Gsc Dist = 147054.6898	
		GsBA = 354°35'18.37315"	
-----			
Pt# 1 COORDINATES	N = 659759.2384	N 41°16'18.35754"	X = 1430511.3992
log0413b_IRY8	E = 1023709.1086	W 72°39'49.50743"	Y = -4582630.1208
		h -94.2464	Z = 4185135.3894
		H _**_	
-----			
Pt# 2 COORDINATES	N = 806142.8090	N 41°40'24.71766"	X = 15259782.6604
CTNE	E = 1009694.6573	W 72°42'52.25227"	Y = -49037271.0338
		h 137.3029	Z = 45408619.6821
		H _**_	
-----			
	Az = 179°56'57.94901"	NSFA = 179°58'22.01827"	D X= -45359922.6476
	O = 0°01'24.70434"	NSBA = 359°58'23.13460"	D Y= +145764427.8836
	t-T Con = +0.63508"	Ell Dist = 273337.9389	D Z= -135343000.0891
	Dist = 896781.3819	Delta h = -163.0246	S D= 204015976.5605
	Scale= 0.999986112756	Delta H = _**_	
		Gnd Dist= 273338.6676	
		Rad(A) = 6363667.3950	
		Skew Con = +0.00000"	
		GsFA = 179°58'22.01826"	
		Gsc Dist = 273337.9389	
		GsBA = 359°58'23.13459"	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 1434050.5860
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -4608184.5567
		h -25.7217	Z = 4155990.7497
		H _**_	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 15435930.2966
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -49601887.3439
		h -25.7217	Z = 44734533.1834
		H _**_	
-----			
	Az = 6°11'28.76374"	NSFA = 6°12'55.16178"	D X= -45949445.1658
	O = 0°01'25.82585"	NSBA = 186°14'54.17630"	D Y= +147700679.7395
	t-T Con = -0.57219"	Ell Dist = 127698.7549	D Z= -133035815.9290
	Dist = 418964.6208	Delta h = -68.5246	S D= 204022965.9290
	Scale= 1.000039473120	Delta H = _**_	
		Gnd Dist= 127698.3889	
		Rad(A) = 6363121.2309	
		Skew Con = -0.00038"	
		GsFA = 6°12'55.16230"	

cluster12

Gsc Dist = 127698.7549  
 GsBA = 186°14'54.17682"

```

-----
Pt# 1 COORDINATES | N = 659759.2384 | N 41°16'18.35754" | X = 1430511.3992
                  | E = 1023709.1086 | W 72°39'49.50743" | Y = -4582630.1208
log0413b_IRY8     |                   | h -94.2464         | Z = 4185135.3894
                  |                   | H _**_            |
-----
  
```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTGU-CTNE		4.6	-19.7	10.4	0.45	-0.96	0.60	1.69
2	CTGU-log0413b_IRY8		0.0	0.2	-0.2	-0.07	0.15	-0.15	0.01
3	CTGU-NYRH		-1.9	-2.1	-0.9	-0.19	-0.11	-0.05	1.75
4	CTNE-log0413b_IRY8		2.1	-10.9	11.0	0.18	-0.53	0.59	1.80
5	CTNE-NYRH		-6.2	18.8	-12.1	-0.42	0.59	-0.47	2.09
6	NYRH-log0413b_IRY8		8.3	-31.5	25.4	0.85	-1.71	1.60	1.65
R.M.S.			4.8	17.6	13.0	0.44	0.87	0.77	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGU-CTNE		-5.5	-1.5	22.0	-0.49	-0.15	0.90	1.69
2	CTGU-log0413b_IRY8		0.0	0.0	-0.3	0.00	0.01	-0.16	0.01
3	CTGU-NYRH		-1.6	-2.4	0.5	-0.15	-0.25	0.02	1.75
4	CTNE-log0413b_IRY8		0.9	-1.2	15.6	0.08	-0.12	0.60	1.80
5	CTNE-NYRH		4.1	-0.4	-22.8	0.24	-0.02	-0.62	2.09
6	NYRH-log0413b_IRY8		-2.2	-1.4	41.2	-0.22	-0.15	1.83	1.65
R.M.S.			3.1	1.4	22.2	0.25	0.15	0.91	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGU-CTNE		-5.4	-2.0	22.0	-0.48	-0.20	0.90	1.69
2	CTGU-log0413b_IRY8		0.0	0.0	-0.3	0.00	-0.01	-0.16	0.01

		cluster12						
3	CTGU-NYRH	1.8	2.2	0.5	0.17	0.24	0.02	1.75
4	CTNE-log0413b_IRY8	-1.1	1.2	15.6	-0.09	0.11	0.60	1.80
5	CTNE-NYRH	-4.0	0.4	-22.8	-0.24	0.02	-0.62	2.09
6	NYRH-log0413b_IRY8	-2.4	-1.2	41.2	-0.24	-0.13	1.83	1.65
R.M.S.		3.0	1.4	22.2	0.25	0.14	0.91 (	1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)	from - to			( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTGU-CTNE		42843.3	2.8	-15.5	10.3	10.4	20.6	17.2	0.27	0.75	0.60	1.69
2	CTGU-log0413b_IRY8		1986.1	0.0	0.1	-0.1	0.7	1.3	1.1	0.04	0.10	0.09	0.01
3	CTGU-NYRH		40832.4	2.8	-17.6	12.4	9.7	19.8	16.3	0.29	0.89	0.76	1.75
4	CTNE-log0413b_IRY8		44822.5	4.0	-15.2	11.1	11.7	20.6	18.6	0.34	0.74	0.60	1.80
5	CTNE-NYRH		83313.8	0.3	-1.0	1.2	14.9	31.6	25.6	0.02	0.03	0.05	2.09
6	NYRH-log0413b_IRY8		38922.5	3.7	-16.0	12.1	9.8	18.5	15.9	0.37	0.87	0.77	1.65

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
	from - to			(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGU-CTNE		42843.3	-2.5	-2.0	18.5	11.4	9.8	24.5	0.22	0.20	0.76	1.69
2	CTGU-log0413b_IRY8		1986.1	0.0	0.0	-0.2	0.8	0.7	1.6	0.02	0.01	0.11	0.01
3	CTGU-NYRH		40832.4	-2.3	-2.5	21.5	10.8	9.5	23.4	0.22	0.27	0.92	1.75
4	CTNE-log0413b_IRY8		44822.5	-2.2	-0.8	19.1	11.5	10.3	25.9	0.19	0.07	0.74	1.80
5	CTNE-NYRH		83313.8	0.2	0.0	1.6	16.9	15.0	36.9	0.01	0.00	0.04	2.09
6	NYRH-log0413b_IRY8		38922.5	-1.6	-1.3	20.3	10.0	9.1	22.5	0.16	0.14	0.90	1.65

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)	from - to			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGU-CTNE		42843.3	-2.4	-2.2	18.5	8.7	7.3	18.4	-0.27	-0.30	1.01	1.69
2	CTGU-log0413b_IRY8		1986.1	0.0	0.0	-0.2	0.1	0.0	0.1	-0.24	-0.25	-1.64	0.01
3	CTGU-NYRH		40832.4	2.5	2.3	21.5	8.3	7.3	17.9	0.30	0.32	1.20	1.75
4	CTNE-log0413b_IRY8		44822.5	2.0	1.0	19.1	8.8	8.0	20.2	0.23	0.12	0.95	1.80
5	CTNE-NYRH		83313.8	-0.2	0.0	1.6	14.2	12.7	31.1	-0.02	0.00	0.05	2.09
6	NYRH-log0413b_IRY8		38922.5	-1.8	-1.1	20.3	7.3	6.7	16.7	-0.24	-0.16	1.22	1.65

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status	Coordinates			Sigmas (mm)		
	Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTGU	Fixed	Fixed	41°17'21.74249"N	72°40'04.44445"W	-18.0000		
2	CTNE	Fixed	Fixed	41°40'24.71766"N	72°42'52.25227"W	41.8500		
3	NYRH	Fixed	Fixed	40°55'24.08901"N	72°42'50.56086"W	-7.8400		

```

;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

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cluster12

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;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTGU, 666173.4667, 1022562.4275, -59.0550, 0.0000, 0.0000, 0.0000, ""
CTNE, 806142.8090, 1009694.6573, 137.3029, 0.0000, 0.0000, 0.0000, ""
log0413b_IRY8, 659759.2384, 1023709.1086, -94.2464, 0.0015, 0.0013, 0.0030, ""
NYRH, 532803.4044, 1009936.7522, -25.7217, 0.0000, 0.0000, 0.0000, ""
```

ADJUSTMENT SUMMARY

Item Name	Item Value
SubNet	
Name	New Subnet
Number of points	4
Number of unknowns	3
Degree of freedom	15
Declared adjustment type	with fixed and weighted points
Aposteriori standard error of unit weight	0.751
Adjustment Date and Time	3.May.07 14:32:56
Reference points	
Number	3
Plane coordinates - fixed	6
Heights - fixed	3
Plane coordinates - weighted	0
Heights - weighted	0
Apriori standard error of unit weight	1.000
Processed vectors	
Total number	6
Unused vectors	0
Rejected vectors	0
Downweighted vectors	0
Apriori standard error of unit weight	1.000
Aposteriori standard error of unit weight	0.091
Vectors' VPV test	
Confidence level (%)	95
Lower bound	2.70
Upper bound	19.02
Degree of freedom	9
VPV	0.07
VPV test	failed
Vectors' Tau test	
Confidence level (%)	95
Tau critical value	3.00
Number of flagged observations	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGR		41°20'07.03570"N	72°02'58.96956"W	-18.2400	0.0	0.0	0.0	0	0	0
2	CTGU		41°17'21.74249"N	72°40'04.44445"W	-18.0000	0.0	0.0	0.0	0	0	0
3	log0418a_IRY8		41°15'06.60356"N	72°32'45.02898"W	-26.9278	2.1	1.5	4.6	17	-16	-21
4	NYRH		40°55'24.08901"N	72°42'50.56086"W	-7.8400	0.0	0.0	0.0	0	0	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGR		683671.79920	1192315.39179	-59.84240	0.000	0.000	0.000	0	0	0
2	CTGU		666173.46667	1022562.42746	-59.05500	0.000	0.000	0.000	0	0	0
3	log0418a_IRY8		652551.34679	1056139.25531	-88.34576	0.007	0.005	0.015	17	-16	-21
4	NYRH		532803.40438	1009936.75218	-25.72173	0.000	0.000	0.000	0	0	0

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

cluster13												
#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)			
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z	
1	CTGR-CTGU	-48310.0646	-18895.6894	-3830.0435	52015.1771	10.3	25.3	20.6	-31	33	-63	
2	CTGR-log0418a_IRY8	-37730.3042	-18456.2478	-6969.3559	42576.7643	8.2	21.6	16.9	-27	30	-65	
3	CTGR-NYRH	-44057.0945	-45570.3385	-34451.2386	72142.7139	12.0	30.5	23.4	-31	35	-62	
4	CTGU-log0418a_IRY8	10579.7606	439.4420	-3139.3124	11044.4432	2.4	5.6	4.6	-41	37	-65	
5	CTGU-NYRH	4252.9697	-26674.6463	-30621.1969	40832.3671	8.1	20.6	16.2	-31	33	-63	
6	NYRH-log0418a_IRY8	6326.7916	27114.0820	27481.8878	39121.0415	8.0	19.6	15.7	-39	38	-65	

Mean weight matrix's estimations: 5.0 11.9 9.7 -39 37 -65

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGR-CTGU	-4914.7816	-51782.0317	-211.5834	52015.1771	13.7	10.5	29.6	24	-15	-29
2	CTGR-log0418a_IRY8	-9149.3555	-41581.8164	-150.6432	42576.7643	11.1	8.8	24.9	27	-20	-37
3	CTGR-NYRH	-45532.7260	-55956.9825	-397.6808	72142.7139	16.3	12.4	34.7	30	-23	-30
4	CTGU-log0418a_IRY8	-4161.7951	10230.2906	-18.4827	11044.4432	3.0	2.2	6.6	16	-16	-19
5	CTGU-NYRH	-40646.7780	-3886.7762	-120.8723	40832.3671	10.9	8.3	23.7	26	-19	-29
6	NYRH-log0418a_IRY8	36492.3333	14097.7340	-139.2608	39121.0415	10.2	7.6	23.0	21	-18	-22

Mean weight matrix's estimations: 6.3 4.7 14.1 18 -16 -22

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTGR-CTGU	52015.1771	264°34'41.29"	- 0°13'59.03"	10.8	13.4	29.6	-28	29	-13
2	CTGR-log0418a_IRY8	42576.7643	257°35'26.88"	- 0°12'09.80"	9.5	10.5	24.9	-34	37	-14
3	CTGR-NYRH	72142.7139	230°51'51.93"	- 0°18'57.03"	16.0	12.7	34.8	-33	32	-4
4	CTGU-log0418a_IRY8	11044.4432	112°08'13.33"	- 0°05'45.18"	2.1	3.0	6.6	10	-11	20
5	CTGU-NYRH	40832.3671	185°27'43.92"	- 0°10'10.59"	11.1	8.0	23.8	20	21	27
6	NYRH-log0418a_IRY8	39121.0415	21°07'21.24"	- 0°12'14.25"	10.5	7.3	23.0	-5	-23	-12

Mean weight matrix's estimations: 4.7 5.9 13.8 5 -6 15

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USfeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 683671.7992	N 41°20'07.03570"	X = 15910154.8703
	E = 1192315.3918	W 72°02'58.96956"	Y = -49111374.0218
CTGR		h -59.8424	Z = 45105361.3680
		H **	
	Az = 264°06'50.03489"	NSFA = 264°34'41.30150"	D X= -47507638.7710
	O = 0°27'51.59308"	NSBA = 84°10'12.11643"	D Y= +146095062.5399
	t-T Con = +0.32647"	Ell Dist = 170653.5930	D Z= -134247597.1117
	Dist = 559882.2642	Delta h = +0.7874	S D= 204017549.1727
	Scale= 0.999989103095	Delta H = **	
		Gnd Dist= 170653.1082	
		Rad(A) = 6387253.4095	

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Skew Con = -0.00021"  
 GsFA = 264°34'41.30231"  
 Gsc Dist = 170653.5930  
 GsBA = 84°10'12.11724"

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 1429797.6122  
 CTGU | E = 1022562.4275 | W 72°40'04.44445" | Y = -4581509.8999  
 | h -59.0550 | Z = 4186611.9309  
 | H \_\*\*\_

Pt# 0 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 CTGR | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 | h -59.8424 | Z = 45105361.3680  
 | H \_\*\*\_

Az = 257°07'36.04548" | NSFA = 257°35'26.89372" | D X= -47472928.3408  
 O = 0°27'51.59308" | NSBA = 77°15'48.23763" | D Y= +146096504.2736  
 t-T Con = +0.74483" | Ell Dist = 139687.7397 | D Z= -134257896.6721  
 Dist = 458289.3517 | Delta h = -28.5034 | S D= 204017279.4276  
 Scale= 0.999989103095 | Delta H = \_\*\*\_  
 Gnd Dist= 139687.2451  
 Rad(A) = 6386349.5234  
 Skew Con = -0.00069"  
 GsFA = 257°35'26.89493"  
 Gsc Dist = 139687.7397  
 GsBA = 77°15'48.23884"

Pt# 1 COORDINATES | N = 652551.3468 | N 41°15'06.60356" | X = 1440377.3725  
 log0418a\_IRY8 | E = 1056139.2553 | W 72°32'45.02898" | Y = -4581070.4586  
 | h -88.3458 | Z = 4183472.6186  
 | H \_\*\*\_

Pt# 0 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 CTGR | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 | h -59.8424 | Z = 45105361.3680  
 | H \_\*\*\_

Az = 230°24'02.85380" | NSFA = 230°51'51.93133" | D X= -47493685.4729  
 O = 0°27'51.59308" | NSBA = 50°25'38.81675" | D Y= +146007547.4366  
 t-T Con = +2.51554" | Ell Dist = 236688.6662 | D Z= -134348060.1037  
 Dist = 776547.9589 | Delta h = +34.1207 | S D= 204017781.8767  
 Scale= 0.999989103095 | Delta H = \_\*\*\_  
 Gnd Dist= 236688.1823  
 Rad(A) = 6377816.4686  
 Skew Con = -0.00047"  
 GsFA = 230°51'51.93948"  
 Gsc Dist = 236688.6662  
 GsBA = 50°25'38.82490"

Pt# 3 COORDINATES | N = 532803.4044 | N 40°55'24.08901" | X = 1434050.5860  
 NYRH | E = 1009936.7522 | W 72°42'50.56086" | Y = -4608184.5567  
 | h -25.7217 | Z = 4155990.7497  
 | H \_\*\*\_

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510



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CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 112°04'57.50766"	NSFA = 112°08'13.33423"	D X= -45766885.1014
	O = 0°03'15.97091"	NSBA = 292°13'03.18023"	D Y= +146763795.7673
	t-T Con = +0.14433"	Ell Dist = 36235.0920	D Z= -134122641.5230
	Dist = 118880.5564	Delta h = -29.2908	S D= 204017407.3186
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 36234.9644	
		Rad(A) = 6384003.8120	
		Skew Con = +0.00115"	
		GsFA = 112°08'13.33410"	
		Gsc Dist = 36235.0920	
		GsBA = 292°13'03.18009"	
-----			
Pt# 1 COORDINATES	N = 652551.3468	N 41°15'06.60356"	X = 1440377.3725
log0418a_IRY8	E = 1056139.2553	W 72°32'45.02898"	Y = -4581070.4586
		h -88.3458	Z = 4183472.6186
		H _**_	
-----			
Pt# 2 COORDINATES	N = 666173.4667	N 41°17'21.74249"	X = 15390151.8510
CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 185°24'28.39180"	NSFA = 185°27'43.91796"	D X= -45787642.2336
	O = 0°03'15.97091"	NSBA = 5°25'54.70280"	D Y= +146674838.9303
	t-T Con = +0.44474"	Ell Dist = 133964.4444	D Z= -134212804.9546
	Dist = 439521.2453	Delta h = +33.3333	S D= 204017385.4609
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 133964.1730	
		Rad(A) = 6363459.4944	
		Skew Con = -0.00009"	
		GsFA = 185°27'43.91847"	
		Gsc Dist = 133964.4444	
		GsBA = 5°25'54.70330"	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 1434050.5860
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -4608184.5567
		h -25.7217	Z = 4155990.7497
		H _**_	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 15435930.2966
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -49601887.3439
		h -25.7217	Z = 44734533.1834
		H _**_	
-----			
	Az = 21°05'54.26435"	NSFA = 21°07'21.24023"	D X= -45917076.5517
	O = 0°01'25.82585"	NSBA = 201°13'59.20411"	D Y= +147705796.7314
	t-T Con = -1.15004"	Ell Dist = 128349.9428	D Z= -133041271.2031
	Dist = 421101.5852	Delta h = -62.6240	S D= 204022940.2553
	Scale= 1.000039473120	Delta H = _**_	
		Gnd Dist= 128349.5930	
		Rad(A) = 6366004.0354	
		Skew Con = -0.00112"	
		GsFA = 21°07'21.24188"	

cluster13

Gsc Dist = 128349.9428  
GsBA = 201°13'59.20576"

```

-----
Pt# 1 COORDINATES | N = 652551.3468 | N 41°15'06.60356" | X = 1440377.3725
log0418a_IRY8     | E = 1056139.2553 | W 72°32'45.02898" | Y = -4581070.4586
                  |                   | h -88.3458        | Z = 4183472.6186
                  |                   | H                | _**_
-----

```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTGR-CTGU		-10.9	17.1	-21.1	-1.06	0.68	-1.02	1.98
2	CTGR-log0418a_IRY8		-10.6	16.4	-20.8	-1.29	0.76	-1.23	1.52
3	CTGR-NYRH		-14.7	20.7	-31.5	-1.22	0.68	-1.34	1.98
4	CTGU-log0418a_IRY8		0.4	-0.3	0.3	0.19	-0.06	0.07	0.19
5	CTGU-NYRH		-4.1	6.5	-12.2	-0.51	0.32	-0.75	1.72
6	NYRH-log0418a_IRY8		5.3	-13.1	15.8	0.66	-0.67	1.01	1.60
R.M.S.			9.1	14.2	19.4	0.91	0.58	1.00	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGR-CTGU		-2.9	-5.1	-28.7	-0.21	-0.49	-0.97	1.98
2	CTGR-log0418a_IRY8		-3.1	-5.1	-27.9	-0.28	-0.58	-1.12	1.52
3	CTGR-NYRH		-7.6	-7.6	-39.0	-0.47	-0.61	-1.12	1.98
4	CTGU-log0418a_IRY8		-0.1	0.3	0.5	-0.02	0.15	0.08	0.19
5	CTGU-NYRH		-4.2	-2.0	-13.6	-0.39	-0.24	-0.57	1.72
6	NYRH-log0418a_IRY8		2.7	1.2	21.0	0.26	0.16	0.91	1.60
R.M.S.			4.1	4.4	25.0	0.31	0.42	0.88	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGR-CTGU		5.5	-2.4	-28.7	0.51	-0.18	-0.97	1.98
2	CTGR-log0418a_IRY8		5.7	-2.0	-27.8	0.60	-0.19	-1.12	1.52

		cluster13						
3	CTGR-NYRH	10.9	-1.1	-38.9	0.68	-0.09	-1.12	1.98
4	CTGU-log0418a_IRY8	0.3	-0.1	0.5	0.15	-0.02	0.08	0.19
5	CTGU-NYRH	4.4	1.6	-13.6	0.40	0.20	-0.57	1.72
6	NYRH-log0418a_IRY8	2.9	0.2	21.0	0.27	0.02	0.91	1.60

R.M.S. 5.9 1.5 25.0 0.47 0.14 0.88 ( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTGR-CTGU		52015.2	0.0	1.3	-0.7	10.3	25.3	20.6	0.00	0.05	0.03	1.98
2	CTGR-log0418a_IRY8		42576.8	-0.2	1.1	-0.7	8.2	21.6	16.9	0.03	0.05	0.04	1.52
3	CTGR-NYRH		72142.7	0.5	-4.0	2.3	12.0	30.5	23.4	0.04	0.13	0.10	1.98
4	CTGU-log0418a_IRY8		11044.4	0.0	0.2	-0.1	2.4	5.6	4.6	0.01	0.04	0.03	0.19
5	CTGU-NYRH		40832.4	0.2	-2.3	1.1	8.1	20.6	16.2	0.02	0.11	0.07	1.72
6	NYRH-log0418a_IRY8		39121.0	0.5	-3.7	2.1	8.0	19.6	15.7	0.07	0.19	0.13	1.60

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGR-CTGU		52015.2	0.3	0.4	-1.3	13.7	10.5	29.6	0.02	0.04	0.04	1.98
2	CTGR-log0418a_IRY8		42576.8	0.2	0.1	-1.3	11.1	8.8	24.9	0.02	0.01	0.05	1.52
3	CTGR-NYRH		72142.7	-0.9	-0.7	4.4	16.3	12.4	34.7	0.05	0.06	0.13	1.98
4	CTGU-log0418a_IRY8		11044.4	0.1	0.0	-0.2	3.0	2.2	6.6	0.02	0.02	0.04	0.19
5	CTGU-NYRH		40832.4	-0.7	-0.5	2.5	10.9	8.3	23.7	0.06	0.06	0.10	1.72
6	NYRH-log0418a_IRY8		39121.0	-0.9	-0.6	4.2	10.2	7.6	23.0	0.09	0.08	0.18	1.60

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGR-CTGU		52015.2	-0.4	0.3	-1.3	8.7	10.9	23.9	-0.05	0.02	-0.06	1.98
2	CTGR-log0418a_IRY8		42576.8	-0.1	0.1	-1.3	6.9	7.4	17.9	-0.02	0.02	-0.07	1.52
3	CTGR-NYRH		72142.7	1.1	-0.2	4.4	13.2	10.3	28.1	0.08	-0.02	0.16	1.98
4	CTGU-log0418a_IRY8		11044.4	0.0	-0.1	-0.2	0.6	0.7	1.7	0.04	-0.09	-0.15	0.19
5	CTGU-NYRH		40832.4	0.7	0.4	2.5	8.5	6.1	17.9	0.08	0.07	0.14	1.72
6	NYRH-log0418a_IRY8		39121.0	-1.0	-0.2	4.2	7.5	5.3	17.0	-0.14	-0.05	0.25	1.60

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status		Coordinates		Sigmas (mm)			
		Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTGR	Fixed	Fixed	41°20'07.03570"N	72°02'58.96956"W	-18.2400			
2	CTGU	Fixed	Fixed	41°17'21.74249"N	72°40'04.44445"W	-18.0000			
3	NYRH	Fixed	Fixed	40°55'24.08901"N	72°42'50.56086"W	-7.8400			

```

;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

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```
;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTGR, 683671.7992, 1192315.3918, -59.8424, 0.0000, 0.0000, 0.0000, ""
CTGU, 666173.4667, 1022562.4275, -59.0550, 0.0000, 0.0000, 0.0000, ""
log0418a_IRY8, 652551.3468, 1056139.2553, -88.3458, 0.0068, 0.0050, 0.0152, ""
NYRH, 532803.4044, 1009936.7522, -25.7217, 0.0000, 0.0000, 0.0000, ""
```

ADJUSTMENT SUMMARY

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-----
Item Name                      Item Value
-----
SubNet
  Name      New Subnet
  Number of points      4
  Number of unknowns    3
  Degree of freedom     15
  Declared adjustment type with fixed and weighted points
Aposteriori standard error of unit weight 0.438
  Adjustment Date and Time 3.May.07 14:45:04
  Reference points
    Number      3
  Plane coordinates - fixed      6
    Heights - fixed      3
  Plane coordinates - weighted    0
    Heights - weighted    0
Apriori standard error of unit weight 1.000
  Processed vectors
    Total number      6
    Unused vectors    0
    Rejected vectors  0
    Downweighted vectors 0
  Apriori standard error of unit weight 1.000
Aposteriori standard error of unit weight 0.044
  Vectors' VPV test
    Confidence level (%) 95
    Lower bound          2.70
    Upper bound         19.02
    Degree of freedom    9
    VPV                  0.02
    VPV test            failed
  Vectors' Tau test
    Confidence level (%) 95
    Tau critical value   3.00
  Number of flagged observations 0
-----

```

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

```

-----
Point                               Coordinates                Sigmas(mm)                Corr.(%)
#  Name      Comment Latitude      Longitude      height(m) s(N)  s(E)  s(U)  N-E  N-U  E-U
-----
1  CTGU      41°17'21.74249"N  72°40'04.44445"W  -18.0000    0.0  0.0  0.0  0  0  0
2  CTNE      41°40'24.71766"N  72°42'52.25227"W  41.8500    0.0  0.0  0.0  0  0  0
3  log0418b_IRY8  41°16'27.17076"N  72°27'45.02365"W  -28.1778    1.7  1.6  3.9  9 -13  0
4  NYRH      40°55'24.08901"N  72°42'50.56086"W  -7.8400    0.0  0.0  0.0  0  0  0
-----

```

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

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-----
Point                               Coordinates                Sigmas(USFeet)            Corr.(%)
#  Name      Comment Northing(USFeet) Easting(USFeet) Height (USFeet) s(N)  s(E)  s(U)  N-E  N-U  E-U
-----
1  CTGU      666173.46667    1022562.42746    -59.05500    0.000  0.000  0.000  0  0  0
2  CTNE      806142.80905    1009694.65733    137.30288    0.000  0.000  0.000  0  0  0
3  log0418b_IRY8  660770.87691    1079027.34518    -92.44655    0.005  0.005  0.013  9 -13  0
4  NYRH      532803.40438    1009936.75218    -25.72173    0.000  0.000  0.000  0  0  0
-----

```

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

cluster14											
#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z
1	CTGU-CTNE	-12111.7395	25780.1050	32003.7689	42843.3107	11.1	20.5	16.9	-40	40	-67
2	CTGU-log0418b_IRY8	16747.0244	4103.1771	-1271.8371	17289.2006	4.6	8.2	7.0	-41	43	-67
3	CTGU-NYRH	4252.9700	-26674.6607	-30621.1872	40832.3693	10.0	20.0	15.9	-33	35	-67
4	CTNE-log0418b_IRY8	28858.7638	-21676.9247	-33275.6081	49091.5819	13.1	23.2	19.5	-39	45	-64
5	CTNE-NYRH	16364.7097	-52454.7640	-62624.9571	83313.8118	15.4	32.1	24.7	-29	32	-69
6	NYRH-log0418b_IRY8	12494.0547	30777.8377	29349.3512	44325.6259	11.0	21.3	17.7	-34	37	-68
Mean weight matrix's estimations:						8.4	15.5	13.0	-39	41	-67

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGU-CTNE	42667.0240	-3881.6512	-84.3424	42843.3107	10.7	9.8	24.8	7	-17	-2
2	CTGU-log0418b_IRY8	-1663.1671	17208.9862	-33.5766	17289.2006	4.3	4.0	10.1	8	-13	2
3	CTGU-NYRH	-40646.7799	-3886.7802	-120.8555	40832.3693	10.2	9.4	23.7	14	-21	-14
4	CTNE-log0418b_IRY8	-44318.1198	21114.4604	-259.2878	49091.5819	12.4	11.6	28.2	15	-17	3
5	CTNE-NYRH	-83311.6768	39.5753	-595.1272	83313.8118	15.8	15.0	37.4	16	-26	-20
6	NYRH-log0418b_IRY8	38994.4993	21075.0958	-174.5849	44325.6259	10.9	10.2	25.8	12	-14	-10
Mean weight matrix's estimations:						8.1	7.6	18.9	10	-15	-2

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTGU-CTNE	42843.3107	354°48'06.49"	- 0°06'46.06"	10.6	9.9	24.8	9	-18	-4
2	CTGU-log0418b_IRY8	17289.2006	95°31'12.80"	- 0°06'40.58"	4.0	4.3	10.1	-7	3	13
3	CTGU-NYRH	40832.3693	185°27'43.94"	- 0°10'10.51"	10.3	9.3	23.7	12	21	11
4	CTNE-log0418b_IRY8	49091.5819	154°31'31.77"	- 0°18'09.44"	11.5	12.5	28.2	15	17	5
5	CTNE-NYRH	83313.8118	179°58'22.02"	- 0°24'33.41"	15.7	15.0	37.5	16	24	20
6	NYRH-log0418b_IRY8	44325.6259	28°23'22.54"	- 0°13'32.42"	11.3	9.9	25.8	1	-17	-2
Mean weight matrix's estimations:					7.7	7.8	18.8	0	4	9

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 666173.4667 E = 1022562.4275	N 41°17'21.74249" W 72°40'04.44445" h -59.0550 H **	X = 15390151.8510 Y = -49314764.8758 Z = 45064135.5161
CTGU	Az = 354°44'50.06756" O = 0°03'15.97091" t-T Con = -0.46138" Dist = 461152.5645 Scale= 0.999992181193	NSFA = 354°48'06.49985" NSBA = 174°46'15.34642" Ell Dist = 140561.3670 Delta h = +196.3579 Delta H = ** Gnd Dist= 140561.6298 Rad(A) = 6363438.9335	D X= -45841332.1405 D Y= +146846934.3258 D Z= -134007342.9789 S D= 204018180.1349

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Skew Con = -0.00046"  
 GsFA = 354°48'06.49932"  
 Gsc Dist = 140561.3670  
 GsBA = 174°46'15.34590"

Pt# 2 COORDINATES | N = 806142.8090 | N 41°40'24.71766" | X = 1417685.8696  
 | E = 1009694.6573 | W 72°42'52.25227" | Y = -4555729.7752  
 CTNE | | h 137.3029 | Z = 4218615.6851  
 | | H \_\*\*\_

Pt# 0 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510  
 | E = 1022562.4275 | W 72°40'04.44445" | Y = -49314764.8758  
 CTGU | | h -59.0550 | Z = 45064135.5161  
 | | H \_\*\*\_

Az = 95°27'56.90043" | NSFA = 95°31'12.79465" | D X= -45746651.3341  
 O = 0°03'15.97091" | NSBA = 275°39'20.63749" | D Y= +146775815.8786  
 t-T Con = +0.07668" | Ell Dist = 56723.1839 | D Z= -134116514.6499  
 Dist = 186098.0203 | Delta h = -33.3916 | S D= 204017488.8017  
 Scale= 0.999992181193 | Delta H = \_\*\*\_  
 Gnd Dist= 56722.9786  
 Rad(A) = 6387228.1443  
 Skew Con = +0.00033"  
 GsFA = 95°31'12.79456"  
 Gsc Dist = 56723.1839  
 GsBA = 275°39'20.63740"

Pt# 1 COORDINATES | N = 660770.8769 | N 41°16'27.17076" | X = 1446544.6371  
 | E = 1079027.3452 | W 72°27'45.02365" | Y = -4577406.7213  
 log0418b\_IRY8 | | h -92.4466 | Z = 4185340.0932  
 | | H \_\*\*\_

Pt# 0 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510  
 | E = 1022562.4275 | W 72°40'04.44445" | Y = -49314764.8758  
 CTGU | | h -59.0550 | Z = 45064135.5161  
 | | H \_\*\*\_

Az = 185°24'28.39180" | NSFA = 185°27'43.91796" | D X= -45787642.2336  
 O = 0°03'15.97091" | NSBA = 5°25'54.70280" | D Y= +146674838.9303  
 t-T Con = +0.44474" | Ell Dist = 133964.4444 | D Z= -134212804.9546  
 Dist = 439521.2453 | Delta h = +33.3333 | S D= 204017385.4609  
 Scale= 0.999992181193 | Delta H = \_\*\*\_  
 Gnd Dist= 133964.1730  
 Rad(A) = 6363459.4944  
 Skew Con = -0.00009"  
 GsFA = 185°27'43.91847"  
 Gsc Dist = 133964.4444  
 GsBA = 5°25'54.70330"

Pt# 3 COORDINATES | N = 532803.4044 | N 40°55'24.08901" | X = 1434050.5860  
 | E = 1009936.7522 | W 72°42'50.56086" | Y = -4608184.5567  
 NYRH | | h -25.7217 | Z = 4155990.7497  
 | | H \_\*\*\_

Pt# 2 COORDINATES | N = 806142.8090 | N 41°40'24.71766" | X = 15259782.6604

cluster14

CTNE	E = 1009694.6573	W 72°42'52.25227"	Y = -49037271.0338
		h 137.3029	Z = 45408619.6821
		H _**_	
-----			
	Az = 154°30'09.00268"	NSFA = 154°31'31.79090"	D X= -45318931.7481
	O = 0°01'24.70434"	NSBA = 334°41'32.63638"	D Y= +145865404.8320
	t-T Con = +1.91612"	Ell Dist = 161060.9633	D Z= -135246709.7844
	Dist = 528407.9271	Delta h = -229.7494	S D= 204015181.8103
	Scale= 0.999986112756	Delta H = _**_	
		Gnd Dist= 161061.1360	
		Rad(A) = 6368080.4678	
		Skew Con = +0.00133"	
		GsFA = 154°31'31.78794"	
		Gsc Dist = 161060.9633	
		GsBA = 334°41'32.63342"	
-----			
Pt# 1 COORDINATES	N = 660770.8769	N 41°16'27.17076"	X = 1446544.6371
log0418b_IRY8	E = 1079027.3452	W 72°27'45.02365"	Y = -4577406.7213
		h -92.4466	Z = 4185340.0932
		H _**_	
-----			
Pt# 2 COORDINATES	N = 806142.8090	N 41°40'24.71766"	X = 15259782.6604
CTNE	E = 1009694.6573	W 72°42'52.25227"	Y = -49037271.0338
		h 137.3029	Z = 45408619.6821
		H _**_	
-----			
	Az = 179°56'57.94901"	NSFA = 179°58'22.01827"	D X= -45359922.6476
	O = 0°01'24.70434"	NSBA = 359°58'23.13460"	D Y= +145764427.8836
	t-T Con = +0.63508"	Ell Dist = 273337.9389	D Z= -135343000.0891
	Dist = 896781.3819	Delta h = -163.0246	S D= 204015976.5605
	Scale= 0.999986112756	Delta H = _**_	
		Gnd Dist= 273338.6676	
		Rad(A) = 6363667.3950	
		Skew Con = +0.00000"	
		GsFA = 179°58'22.01826"	
		Gsc Dist = 273337.9389	
		GsBA = 359°58'23.13459"	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 1434050.5860
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -4608184.5567
		h -25.7217	Z = 4155990.7497
		H _**_	
-----			
Pt# 3 COORDINATES	N = 532803.4044	N 40°55'24.08901"	X = 15435930.2966
NYRH	E = 1009936.7522	W 72°42'50.56086"	Y = -49601887.3439
		h -25.7217	Z = 44734533.1834
		H _**_	
-----			
	Az = 28°21'55.02121"	NSFA = 28°23'22.53635"	D X= -45896842.7844
	O = 0°01'25.82585"	NSBA = 208°33'17.80192"	D Y= +147717816.8427
	t-T Con = -1.68929"	Ell Dist = 145425.3618	D Z= -133035144.3300
	Dist = 477123.6864	Delta h = -66.7248	S D= 204023094.8134
	Scale= 1.000039473120	Delta H = _**_	
		Gnd Dist= 145424.9512	
		Rad(A) = 6368353.4774	
		Skew Con = -0.00145"	
		GsFA = 28°23'22.53899"	



cluster14

Gsc Dist = 145425.3618  
 GsBA = 208°33'17.80455"

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-----
Pt# 1 COORDINATES | N = 660770.8769 | N 41°16'27.17076" | X = 1446544.6371
log0418b_IRY8     | E = 1079027.3452 | W 72°27'45.02365" | Y = -4577406.7213
                   |                   | h -92.4466         | Z = 4185340.0932
                   |                   | H                 | _**_
-----
    
```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTGU-CTNE		3.1	-15.0	10.9	0.28	-0.73	0.64	1.51
2	CTGU-log0418b_IRY8		-0.2	-2.6	0.8	-0.05	-0.31	0.11	0.40
3	CTGU-NYRH		-3.8	-7.9	-2.5	-0.38	-0.40	-0.16	1.52
4	CTNE-log0418b_IRY8		-3.3	15.5	-12.2	-0.26	0.67	-0.62	1.84
5	CTNE-NYRH		-6.6	8.7	-14.3	-0.43	0.27	-0.58	2.02
6	NYRH-log0418b_IRY8		3.9	5.3	4.4	0.35	0.25	0.25	1.71
R.M.S.			4.0	10.3	9.1	0.32	0.48	0.45	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGU-CTNE		-1.9	-1.5	18.6	-0.17	-0.16	0.75	1.51
2	CTGU-log0418b_IRY8		-1.0	-1.0	2.3	-0.23	-0.25	0.23	0.40
3	CTGU-NYRH		-6.1	-6.0	3.2	-0.60	-0.64	0.13	1.52
4	CTNE-log0418b_IRY8		1.4	1.4	-19.9	0.11	0.12	-0.70	1.84
5	CTNE-NYRH		-3.8	-3.7	-17.2	-0.24	-0.25	-0.46	2.02
6	NYRH-log0418b_IRY8		5.9	5.3	0.0	0.54	0.52	0.00	1.71
R.M.S.			3.9	3.7	13.2	0.37	0.37	0.47	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGU-CTNE		-1.8	-1.7	18.6	-0.17	-0.17	0.75	1.51
2	CTGU-log0418b_IRY8		-0.9	1.1	2.3	-0.22	0.25	0.23	0.40

		cluster14						
3	CTGU-NYRH	6.6	5.4	3.2	0.64	0.58	0.14	1.52
4	CTNE-log0418b_IRY8	-0.6	-1.9	-19.9	-0.05	-0.15	-0.70	1.84
5	CTNE-NYRH	4.0	3.7	-17.2	0.25	0.25	-0.46	2.02
6	NYRH-log0418b_IRY8	7.7	1.9	0.0	0.68	0.19	0.00	1.71
R.M.S.		4.5	3.0	13.2	0.41	0.30	0.47 (	1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)		from - to		( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTGU-CTNE		42843.3	0.1	1.3	-0.8	11.1	20.5	16.9	0.00	0.06	0.05	1.51
2	CTGU-log0418b_IRY8		17289.2	0.0	-0.2	0.0	4.6	8.2	7.0	0.01	0.02	0.01	0.40
3	CTGU-NYRH		40832.4	0.1	-0.1	0.5	10.0	20.0	15.9	0.01	0.01	0.03	1.52
4	CTNE-log0418b_IRY8		49091.6	-0.1	1.6	-1.2	13.1	23.2	19.5	0.01	0.07	0.06	1.84
5	CTNE-NYRH		83313.8	0.3	0.2	0.3	15.4	32.1	24.7	0.02	0.01	0.01	2.02
6	NYRH-log0418b_IRY8		44325.6	0.2	-0.1	0.8	11.0	21.3	17.7	0.02	0.01	0.04	1.71

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
(0..3)		from - to		(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGU-CTNE		42843.3	0.2	0.4	-1.5	10.7	9.8	24.8	0.02	0.04	0.06	1.51
2	CTGU-log0418b_IRY8		17289.2	-0.1	-0.1	0.1	4.3	4.0	10.1	0.02	0.02	0.01	0.40
3	CTGU-NYRH		40832.4	0.2	0.0	0.4	10.2	9.4	23.7	0.02	0.00	0.02	1.52
4	CTNE-log0418b_IRY8		49091.6	0.1	0.4	-2.0	12.4	11.6	28.2	0.01	0.03	0.07	1.84
5	CTNE-NYRH		83313.8	0.3	0.3	0.1	15.8	15.0	37.4	0.02	0.02	0.00	2.02
6	NYRH-log0418b_IRY8		44325.6	0.5	0.2	0.7	10.9	10.2	25.8	0.04	0.02	0.03	1.71

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)		from - to		(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGU-CTNE		42843.3	0.2	0.5	-1.5	7.6	6.9	17.7	0.02	0.07	-0.08	1.51
2	CTGU-log0418b_IRY8		17289.2	-0.1	0.1	0.1	1.5	1.6	3.7	-0.05	0.05	0.04	0.40
3	CTGU-NYRH		40832.4	-0.2	0.0	0.4	7.4	6.6	16.8	-0.03	0.00	0.02	1.52
4	CTNE-log0418b_IRY8		49091.6	0.1	-0.4	-2.0	9.0	9.9	22.0	0.01	-0.04	-0.09	1.84
5	CTNE-NYRH		83313.8	-0.3	-0.3	0.1	12.9	12.5	31.0	-0.02	-0.03	0.00	2.02
6	NYRH-log0418b_IRY8		44325.6	0.5	0.0	0.7	8.4	7.5	19.5	0.06	-0.01	0.03	1.71

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status	Coordinates			Sigmas (mm)		
	Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTGU	Fixed	Fixed	41°17'21.74249"N	72°40'04.44445"W	-18.0000		
2	CTNE	Fixed	Fixed	41°40'24.71766"N	72°42'52.25227"W	41.8500		
3	NYRH	Fixed	Fixed	40°55'24.08901"N	72°42'50.56086"W	-7.8400		

```

;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

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;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTGU, 666173.4667, 1022562.4275, -59.0550, 0.0000, 0.0000, 0.0000, ""
CTNE, 806142.8090, 1009694.6573, 137.3029, 0.0000, 0.0000, 0.0000, ""
log0418b_IRY8, 660770.8769, 1079027.3452, -92.4466, 0.0055, 0.0051, 0.0128, ""
NYRH, 532803.4044, 1009936.7522, -25.7217, 0.0000, 0.0000, 0.0000, ""
```

ADJUSTMENT SUMMARY

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-----
Item Name                      Item Value
-----
SubNet
      Name      New Subnet
      Number of points      4
      Number of unknowns    3
      Degree of freedom      15
      Declared adjustment type with fixed and weighted points
Aposteriori standard error of unit weight 0.502
      Adjustment Date and Time 3.May.07 14:51:16
      Reference points
      Number      3
      Plane coordinates - fixed 6
      Heights - fixed 3
      Plane coordinates - weighted 0
      Heights - weighted 0
Apriori standard error of unit weight 1.000
      Processed vectors
      Total number 6
      Unused vectors 0
      Rejected vectors 0
      Downweighted vectors 0
      Apriori standard error of unit weight 1.000
Aposteriori standard error of unit weight 0.039
      Vectors' VPV test
      Confidence level (%) 95
      Lower bound 2.70
      Upper bound 19.02
      Degree of freedom 9
      VPV 0.01
      VPV test failed
      Vectors' Tau test
      Confidence level (%) 95
      Tau critical value 3.00
      Number of flagged observations 0
-----

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SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGR		41°20'07.03570"N	72°02'58.96956"W	-18.2400	0.0	0.0	0.0	0	0	0
2	CTGU		41°17'21.74249"N	72°40'04.44445"W	-18.0000	0.0	0.0	0.0	0	0	0
3	CTMA		41°43'52.91712"N	72°12'38.87752"W	55.2900	0.0	0.0	0.0	0	0	0
4	log0419a_IRY8		41°18'05.27086"N	72°14'26.05112"W	-28.1936	1.9	1.5	4.2	18	-20	-31

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGR		683671.79920	1192315.39179	-59.84240	0.000	0.000	0.000	0	0	0
2	CTGU		666173.46667	1022562.42746	-59.05500	0.000	0.000	0.000	0	0	0
3	CTMA		827673.81037	1147177.54345	181.39728	0.000	0.000	0.000	0	0	0
4	log0419a_IRY8		670980.97119	1139975.13791	-92.49853	0.006	0.005	0.014	18	-20	-31

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

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#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z
1	CTGR-CTGU	-48310.0624	-18895.6960	-3830.0384	52015.1771	9.8	26.1	19.9	-25	27	-66
2	CTGR-CTMA	-21727.9379	23583.2829	32978.4763	45998.4176	9.6	22.4	19.1	-37	32	-65
3	CTGR-log0419a_IRY8	-14452.3194	-7253.1977	-2827.8528	16415.6988	3.3	8.5	6.5	-31	28	-65
4	CTGU-CTMA	26582.1245	42478.9781	36808.5150	62176.6813	11.6	27.0	23.3	-37	32	-64
5	CTGU-log0419a_IRY8	33857.7429	11642.4998	1002.1835	35817.5784	7.7	17.3	14.8	-41	32	-64
6	CTMA-log0419a_IRY8	7275.6180	-30836.4782	-35806.3301	47811.2569	10.1	23.4	19.8	-38	27	-64
Mean weight matrix's estimations:						6.4	15.8	12.6	-33	29	-65

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGR-CTGU	-4914.7823	-51782.0316	-211.5749	52015.1771	13.2	10.7	29.7	27	-23	-40
2	CTGR-CTMA	44002.5951	-13402.1438	-92.6593	45998.4176	12.2	9.2	26.9	14	-11	-25
3	CTGR-log0419a_IRY8	-3738.8489	-15984.2176	-31.0546	16415.6988	4.4	3.4	9.7	21	-23	-35
4	CTGU-CTMA	49189.4606	38030.0375	-230.0157	62176.6813	14.9	11.0	32.5	13	-9	-22
5	CTGU-log0419a_IRY8	1430.9111	35788.8137	-110.6045	35817.5784	9.6	7.0	20.9	7	-11	-19
6	CTMA-log0419a_IRY8	-47745.4773	-2493.2833	-263.1027	47811.2569	13.1	9.5	27.9	7	-13	-25
Mean weight matrix's estimations:						8.3	6.4	18.4	18	-19	-31

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTGR-CTGU	52015.1771	264°34'41.29"	- 0°13'59.00"	11.0	12.9	29.7	-30	40	-20
2	CTGR-CTMA	45998.4176	343°03'37.84"	- 0°06'55.50"	11.6	9.9	26.9	27	-6	-26
3	CTGR-log0419a_IRY8	16415.6988	256°50'04.97"	- 0°06'30.21"	3.7	4.2	9.7	-30	37	-17
4	CTGU-CTMA	62176.6813	37°42'31.77"	- 0°12'43.06"	14.4	11.8	32.5	-26	-19	-9
5	CTGU-log0419a_IRY8	35817.5784	87°42'37.50"	- 0°10'36.95"	7.1	9.6	20.9	-9	-20	11
6	CTMA-log0419a_IRY8	47811.2569	182°59'21.44"	- 0°18'55.07"	13.1	9.5	27.9	3	13	24
Mean weight matrix's estimations:					6.7	7.4	17.8	-19	23	-8

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 683671.7992 E = 1192315.3918	N 41°20'07.03570" W 72°02'58.96956"	X = 15910154.8703 Y = -49111374.0218
CTGR		h -59.8424 H **	Z = 45105361.3680
	Az = 264°06'50.03489" O = 0°27'51.59308" t-T Con = +0.32647" Dist = 559882.2642 Scale= 0.999989103095	NSFA = 264°34'41.30150" NSBA = 84°10'12.11643" Ell Dist = 170653.5930 Delta h = +0.7874 Delta H = ** Gnd Dist= 170653.1082 Rad(A) = 6387253.4095	D X= -47507638.7710 D Y= +146095062.5399 D Z= -134247597.1117 S D= 204017549.1727

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Skew Con = -0.00021"  
 GsFA = 264°34'41.30231"  
 Gsc Dist = 170653.5930  
 GsBA = 84°10'12.11724"

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 1429797.6122  
 | E = 1022562.4275 | W 72°40'04.44445" | Y = -4581509.8999  
 CTGU | h -59.0550 | Z = 4186611.9309  
 | H \*\* |

Pt# 0 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 CTGR | h -59.8424 | Z = 45105361.3680  
 | H \*\* |

Az = 342°35'40.73998" | NSFA = 343°03'37.83947" | D X= -47420427.2759  
 O = 0°27'51.59308" | NSBA = 162°57'13.32332" | D Y= +146234429.0153  
 t-T Con = -5.50641" | Ell Dist = 150912.5013 | D Z= -134126834.5725  
 Dist = 495112.4766 | Delta h = +241.2397 | S D= 204017677.9225  
 Scale= 0.999989103095 | Delta H = \*\* |  
 Gnd Dist= 150912.9396  
 Rad(A) = 6365337.2787  
 Skew Con = -0.00187"  
 GsFA = 343°03'37.83760"  
 Gsc Dist = 150912.5013  
 GsBA = 162°57'13.32145"

Pt# 3 COORDINATES | N = 827673.8104 | N 41°43'52.91712" | X = 1456379.7291  
 | E = 1147177.5434 | W 72°12'38.87752" | Y = -4539030.9132  
 CTMA | h 181.3973 | Z = 4223420.4264  
 | H \*\* |

Pt# 0 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 CTGR | h -59.8424 | Z = 45105361.3680  
 | H \*\* |

Az = 256°22'13.85478" | NSFA = 256°50'04.97692" | D X= -47396557.1820  
 O = 0°27'51.59308" | NSBA = 76°42'31.33590" | D Y= +146133259.6603  
 t-T Con = +0.47094" | Ell Dist = 53857.3550 | D Z= -134244309.1537  
 Dist = 176695.3182 | Delta h = -32.6561 | S D= 204016905.5539  
 Scale= 0.999989103095 | Delta H = \*\* |  
 Gnd Dist= 53857.1590  
 Rad(A) = 6386211.3220  
 Skew Con = -0.00077"  
 GsFA = 256°50'04.97711"  
 Gsc Dist = 53857.3550  
 GsBA = 76°42'31.33609"

Pt# 1 COORDINATES | N = 670980.9712 | N 41°18'05.27086" | X = 1463655.3483  
 | E = 1139975.1379 | W 72°14'26.05112" | Y = -4569867.3943  
 log0419a\_IRY8 | h -92.4985 | Z = 4187614.1025  
 | H \*\* |

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510

cluster15

CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 37°39'11.77600"	NSFA = 37°42'31.76846"	D X= -45714384.0366
	O = 0°03'15.97091"	NSBA = 218°00'42.39282"	D Y= +146901720.5090
	t-T Con = -4.02156"	Ell Dist = 203990.5608	D Z= -133991579.4234
	Dist = 669252.1097	Delta h = +240.4523	S D= 204018782.8430
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 203991.1571	
		Rad(A) = 6372277.5118	
		Skew Con = +0.00326"	
		GsFA = 37°42'31.77438"	
		Gsc Dist = 203990.5608	
		GsBA = 218°00'42.39874"	
-----			
Pt# 3 COORDINATES	N = 827673.8104	N 41°43'52.91712"	X = 1456379.7291
CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -4539030.9132
		h 181.3973	Z = 4223420.4264
		H _**_	
-----			
Pt# 2 COORDINATES	N = 666173.4667	N 41°17'21.74249"	X = 15390151.8510
CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 87°39'21.43313"	NSFA = 87°42'37.51831"	D X= -45690513.9426
	O = 0°03'15.97091"	NSBA = 267°59'32.77067"	D Y= +146800551.1539
	t-T Con = -0.11428"	Ell Dist = 117511.9094	D Z= -134109054.0046
	Dist = 385534.3067	Delta h = -33.4435	S D= 204017801.3053
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 117511.4838	
		Rad(A) = 6387414.2552	
		Skew Con = -0.00014"	
		GsFA = 87°42'37.51847"	
		Gsc Dist = 117511.9094	
		GsBA = 267°59'32.77083"	
-----			
Pt# 1 COORDINATES	N = 670980.9712	N 41°18'05.27086"	X = 1463655.3483
log0419a_IRY8	E = 1139975.1379	W 72°14'26.05112"	Y = -4569867.3943
		h -92.4985	Z = 4187614.1025
		H _**_	
-----			
Pt# 3 COORDINATES	N = 827673.8104	N 41°43'52.91712"	X = 15676278.2312
CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -48857526.6979
		h 181.3973	Z = 45460337.2803
		H _**_	
-----			
	Az = 182°37'59.61544"	NSFA = 182°59'21.43638"	D X= -46629246.9086
	O = 0°21'27.07962"	NSBA = 2°58'10.39699"	D Y= +145300428.8987
	t-T Con = +5.25868"	Ell Dist = 156860.1837	D Z= -135408925.9591
	Dist = 514625.8788	Delta h = -273.8958	S D= 204014897.8256
	Scale= 0.999989079707	Delta H = _**_	
		Gnd Dist= 156860.5169	
		Rad(A) = 6363796.3697	
		Skew Con = -0.00018"	
		GsFA = 182°59'21.43676"	

cluster15

Gsc Dist = 156860.1837  
 GsBA = 2°58'10.39736"

```

-----
Pt# 1 COORDINATES | N =      670980.9712 | N      41°18'05.27086" | X = 1463655.3483
                  | E =      1139975.1379 | W      72°14'26.05112" | Y = -4569867.3943
log0419a_IRY8     |                   | h              -92.4985 | Z = 4187614.1025
                  |                   | H              _**_   |
-----
  
```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTGR-CTGU		-8.7	10.5	-16.0	-0.89	0.40	-0.81	2.03
2	CTGR-CTMA		-0.4	5.9	-0.9	-0.05	0.26	-0.05	1.68
3	CTGR-log0419a_IRY8		-1.2	1.4	-1.9	-0.37	0.17	-0.30	0.36
4	CTGU-CTMA		8.3	-5.4	15.3	0.72	-0.20	0.66	1.84
5	CTGU-log0419a_IRY8		7.4	-7.6	12.0	0.97	-0.44	0.81	1.28
6	CTMA-log0419a_IRY8		-1.3	-2.0	-2.0	-0.13	-0.09	-0.10	1.81
R.M.S.			5.8	6.3	10.4	0.63	0.29	0.55	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGR-CTGU		-3.6	-5.1	-20.1	-0.27	-0.47	-0.68	2.03
2	CTGR-CTMA		3.1	1.4	-4.9	0.25	0.15	-0.18	1.68
3	CTGR-log0419a_IRY8		-0.3	-0.7	-2.6	-0.07	-0.21	-0.27	0.36
4	CTGU-CTMA		6.5	6.3	15.9	0.43	0.57	0.49	1.84
5	CTGU-log0419a_IRY8		2.8	4.8	15.0	0.29	0.69	0.72	1.28
6	CTMA-log0419a_IRY8		-2.5	-1.8	-0.2	-0.19	-0.19	-0.01	1.81
R.M.S.			3.6	4.0	12.3	0.27	0.44	0.47	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGR-CTGU		5.5	-3.1	-20.1	0.50	-0.24	-0.67	2.03
2	CTGR-CTMA		2.5	2.2	-4.9	0.22	0.23	-0.18	1.68



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3	CTGR-log0419a_IRY8	0.8	-0.1	-2.6	0.21	-0.03	-0.27	0.36
4	CTGU-CTMA	8.9	1.1	15.9	0.62	0.09	0.49	1.84
5	CTGU-log0419a_IRY8	4.9	-2.6	15.0	0.70	-0.27	0.72	1.28
6	CTMA-log0419a_IRY8	2.6	1.7	-0.2	0.20	0.18	-0.01	1.81

R.M.S. 5.0 2.1 12.3 0.46 0.19 0.47 ( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTGR-CTGU		52015.2	0.0	0.8	-1.0	9.8	26.1	19.9	0.00	0.03	0.05	2.03
2	CTGR-CTMA		45998.4	-0.2	1.2	-0.6	9.6	22.4	19.1	0.02	0.05	0.03	1.68
3	CTGR-log0419a_IRY8		16415.7	0.0	-0.2	0.2	3.3	8.5	6.5	0.01	0.03	0.03	0.36
4	CTGU-CTMA		62176.7	-0.1	-0.4	0.7	11.6	27.0	23.3	0.01	0.01	0.03	1.84
5	CTGU-log0419a_IRY8		35817.6	0.0	0.5	-0.8	7.7	17.3	14.8	0.00	0.03	0.06	1.28
6	CTMA-log0419a_IRY8		47811.3	-0.3	1.0	-0.2	10.1	23.4	19.8	0.03	0.04	0.01	1.81

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGR-CTGU		52015.2	-0.3	0.2	-1.2	13.2	10.7	29.7	0.02	0.02	0.04	2.03
2	CTGR-CTMA		45998.4	0.3	0.2	-1.3	12.2	9.2	26.9	0.03	0.02	0.05	1.68
3	CTGR-log0419a_IRY8		16415.7	0.0	-0.1	0.3	4.4	3.4	9.7	0.00	0.02	0.03	0.36
4	CTGU-CTMA		62176.7	0.3	-0.2	0.7	14.9	11.0	32.5	0.02	0.02	0.02	1.84
5	CTGU-log0419a_IRY8		35817.6	-0.3	0.2	-0.9	9.6	7.0	20.9	0.03	0.02	0.04	1.28
6	CTMA-log0419a_IRY8		47811.3	0.6	0.0	-0.9	13.1	9.5	27.9	0.04	0.00	0.03	1.81

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGR-CTGU		52015.2	-0.2	-0.3	-1.2	9.3	10.6	24.7	-0.02	-0.03	-0.05	2.03
2	CTGR-CTMA		45998.4	0.2	0.3	-1.3	8.6	7.4	20.2	0.03	0.04	-0.06	1.68
3	CTGR-log0419a_IRY8		16415.7	0.1	0.0	0.3	1.3	1.4	3.4	0.04	0.00	0.09	0.36
4	CTGU-CTMA		62176.7	0.1	-0.3	0.7	11.3	9.2	25.5	0.01	-0.04	0.03	1.84
5	CTGU-log0419a_IRY8		35817.6	0.1	0.3	-0.9	4.5	6.3	13.7	0.03	0.05	-0.07	1.28
6	CTMA-log0419a_IRY8		47811.3	-0.6	0.0	-0.9	10.2	7.4	21.6	-0.06	0.00	-0.04	1.81

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status		Coordinates		Sigmas (mm)			
		Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTGR	Fixed	Fixed	41°20'07.03570"N	72°02'58.96956"W	-18.2400			
2	CTGU	Fixed	Fixed	41°17'21.74249"N	72°40'04.44445"W	-18.0000			
3	CTMA	Fixed	Fixed	41°43'52.91712"N	72°12'38.87752"W	55.2900			

```

;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

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```
;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTGR, 683671.7992, 1192315.3918, -59.8424, 0.0000, 0.0000, 0.0000, ""
CTGU, 666173.4667, 1022562.4275, -59.0550, 0.0000, 0.0000, 0.0000, ""
CTMA, 827673.8104, 1147177.5434, 181.3973, 0.0000, 0.0000, 0.0000, ""
log0419a_IRY8, 670980.9712, 1139975.1379, -92.4985, 0.0063, 0.0048, 0.0138, ""
```

ADJUSTMENT SUMMARY

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-----
Item Name                      Item Value
-----
SubNet
  Name                          New Subnet
  Number of points              4
  Number of unknowns           3
  Degree of freedom             15
  Declared adjustment type      with fixed and weighted points
Aposteriori standard error of unit weight 0.539
  Adjustment Date and Time      3.May.07 14:59:47
  Reference points
    Number                      3
  Plane coordinates - fixed     6
    Heights - fixed             3
  Plane coordinates - weighted  0
    Heights - weighted          0
Apriori standard error of unit weight 1.000
  Processed vectors
    Total number                6
    Unused vectors              0
    Rejected vectors            0
    Downweighted vectors        0
  Apriori standard error of unit weight 1.000
Aposteriori standard error of unit weight 0.343
  Vectors' VPV test
    Confidence level (%)        95
    Lower bound                 2.70
    Upper bound                 19.02
    Degree of freedom           9
    VPV                        1.06
    VPV test                    failed
  Vectors' Tau test
    Confidence level (%)        95
    Tau critical value          3.00
  Number of flagged observations 0
-----

```

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

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-----
Point                               Coordinates                               Sigmas(mm)                               Corr.(%)
#  Name      Comment Latitude      Longitude      height(m) s(N)  s(E)  s(U)  N-E  N-U  E-U
-----
1  CTGR      41°20'07.03570"N  72°02'58.96956"W  -18.2400  0.0  0.0  0.0  0  0  0
2  CTGU      41°17'21.74249"N  72°40'04.44445"W  -18.0000  0.0  0.0  0.0  0  0  0
3  CTMA      41°43'52.91712"N  72°12'38.87752"W  55.2900  0.0  0.0  0.0  0  0  0
4  log0420a_IRY8  41°18'12.71747"N  72°06'55.96146"W  -20.8734  1.1  0.7  2.0 -15  7 -23
-----

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SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

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-----
Point                               Coordinates                               Sigmas(USFeet)                               Corr.(%)
#  Name      Comment Northing(USFeet) Easting(USFeet) Height (USFeet) s(N)  s(E)  s(U)  N-E  N-U  E-U
-----
1  CTGR      683671.79920  1192315.39179  -59.84240  0.000  0.000  0.000  0  0  0
2  CTGU      666173.46667  1022562.42746  -59.05500  0.000  0.000  0.000  0  0  0
3  CTMA      827673.81037  1147177.54345  181.39728  0.000  0.000  0.000  0  0  0
4  log0420a_IRY8  671962.01779  1174321.89285  -68.48210  0.004  0.002  0.007 -15  7 -23
-----

```

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

#	Stations from - to	Coordinates (m)				Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z	s(X)		s(Y)	s(Z)	X-Y	X-Z	Y-Z	
1	CTGR-CTGU	-48310.0565	-18895.6976	-3830.0316	52015.1717	10.2	24.7	21.3	-37	26	-58	
2	CTGR-CTMA	-21727.9326	23583.2702	32978.4832	45998.4135	9.3	22.6	19.0	-36	27	-59	
3	CTGR-log0420a_IRY8	-4528.7963	-3909.4166	-2650.4415	6543.5750	1.4	3.0	3.1	-44	13	-56	
4	CTGU-CTMA	26582.1238	42478.9680	36808.5152	62176.6742	11.9	26.5	23.6	-44	30	-56	
5	CTGU-log0420a_IRY8	43781.2643	14986.2592	1179.6098	46290.1561	10.3	21.6	19.8	-51	26	-57	
6	CTMA-log0420a_IRY8	17199.1403	-27492.7071	-35628.9075	48177.5717	10.9	22.5	20.6	-52	25	-56	
Mean weight matrix's estimations:							3.3	7.2	7.2	-44	15	-56

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGR-CTGU	-4914.7794	-51782.0265	-211.5679	52015.1717	14.8	9.9	29.2	12	-10	-29
2	CTGR-CTMA	44002.5912	-13402.1427	-92.6444	45998.4135	13.2	9.1	26.4	15	-12	-29
3	CTGR-log0420a_IRY8	-3524.6171	-5513.2035	-5.9908	6543.5750	2.1	1.3	3.9	-16	8	-24
4	CTGU-CTMA	49189.4545	38030.0338	-230.0085	62176.6742	16.6	10.6	31.8	6	-7	-15
5	CTGU-log0420a_IRY8	1719.7033	46257.8866	-170.5689	46290.1561	13.9	8.6	26.4	-9	-6	-9
6	CTMA-log0420a_IRY8	-47511.8262	7977.3406	-258.5131	48177.5717	14.7	8.9	27.5	-10	-7	-10
Mean weight matrix's estimations:						4.9	3.0	9.0	-14	7	-23

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTGR-CTGU	52015.1717	264°34'41.29"	- 0°13'58.97"	10.1	14.6	29.2	-19	28	-8
2	CTGR-CTMA	45998.4135	343°03'37.84"	- 0°06'55.44"	12.5	10.0	26.4	32	-7	-30
3	CTGR-log0420a_IRY8	6543.5750	237°24'32.50"	- 0°03'08.84"	1.4	2.0	3.9	-39	11	15
4	CTGU-CTMA	62176.6742	37°42'31.77"	- 0°12'43.03"	15.0	12.8	31.8	-40	-13	-4
5	CTGU-log0420a_IRY8	46290.1561	87°52'15.34"	- 0°12'40.04"	8.6	13.9	26.4	5	-11	6
6	CTMA-log0420a_IRY8	48177.5717	170°28'07.73"	- 0°18'26.79"	14.7	8.9	27.5	7	5	12
Mean weight matrix's estimations:					3.3	4.5	9.0	-35	11	13

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 683671.7992 E = 1192315.3918	N 41°20'07.03570" W 72°02'58.96956"	X = 15910154.8703 Y = -49111374.0218
CTGR		h -59.8424 H **	Z = 45105361.3680
	Az = 264°06'50.03489" O = 0°27'51.59308" t-T Con = +0.32647" Dist = 559882.2642 Scale= 0.999989103095	NSFA = 264°34'41.30150" NSBA = 84°10'12.11643" Ell Dist = 170653.5930 Delta h = +0.7874 Delta H = ** Gnd Dist= 170653.1082 Rad(A) = 6387253.4095	D X= -47507638.7710 D Y= +146095062.5399 D Z= -134247597.1117 S D= 204017549.1727

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Skew Con = -0.00021"  
 GsFA = 264°34'41.30231"  
 Gsc Dist = 170653.5930  
 GsBA = 84°10'12.11724"

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 1429797.6122  
 | E = 1022562.4275 | W 72°40'04.44445" | Y = -4581509.8999  
 CTGU | h -59.0550 | Z = 4186611.9309  
 | H \*\* |

Pt# 0 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 CTGR | h -59.8424 | Z = 45105361.3680  
 | H \*\* |

Az = 342°35'40.73998" | NSFA = 343°03'37.83947" | D X= -47420427.2759  
 O = 0°27'51.59308" | NSBA = 162°57'13.32332" | D Y= +146234429.0153  
 t-T Con = -5.50641" | Ell Dist = 150912.5013 | D Z= -134126834.5725  
 Dist = 495112.4766 | Delta h = +241.2397 | S D= 204017677.9225  
 Scale= 0.999989103095 | Delta H = \*\* |  
 Gnd Dist= 150912.9396  
 Rad(A) = 6365337.2787  
 Skew Con = -0.00187"  
 GsFA = 343°03'37.83760"  
 Gsc Dist = 150912.5013  
 GsBA = 162°57'13.32145"

Pt# 3 COORDINATES | N = 827673.8104 | N 41°43'52.91712" | X = 1456379.7291  
 | E = 1147177.5434 | W 72°12'38.87752" | Y = -4539030.9132  
 CTMA | h 181.3973 | Z = 4223420.4264  
 | H \*\* |

Pt# 0 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 CTGR | h -59.8424 | Z = 45105361.3680  
 | H \*\* |

Az = 236°56'41.41372" | NSFA = 237°24'32.50906" | D X= -47363999.7596  
 O = 0°27'51.59308" | NSBA = 57°21'56.03355" | D Y= +146144230.0489  
 t-T Con = +0.49774" | Ell Dist = 21468.4434 | D Z= -134243727.0999  
 Dist = 70433.6911 | Delta h = -8.6397 | S D= 204016819.6877  
 Scale= 0.999989103095 | Delta H = \*\* |  
 Gnd Dist= 21468.3776  
 Rad(A) = 6380436.3366  
 Skew Con = -0.00116"  
 GsFA = 237°24'32.50913"  
 Gsc Dist = 21468.4434  
 GsBA = 57°21'56.03361"

Pt# 1 COORDINATES | N = 671962.0178 | N 41°18'12.71747" | X = 1473578.8705  
 | E = 1174321.8928 | W 72°06'55.96146" | Y = -4566523.6132  
 log0420a\_IRY8 | h -68.4821 | Z = 4187791.5128  
 | H \*\* |

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510

cluster16

CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 37°39'11.77600"	NSFA = 37°42'31.76846"	D X= -45714384.0366
	O = 0°03'15.97091"	NSBA = 218°00'42.39282"	D Y= +146901720.5090
	t-T Con = -4.02156"	Ell Dist = 203990.5608	D Z= -133991579.4234
	Dist = 669252.1097	Delta h = +240.4523	S D= 204018782.8430
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 203991.1571	
		Rad(A) = 6372277.5118	
		Skew Con = +0.00326"	
		GsFA = 37°42'31.77438"	
		Gsc Dist = 203990.5608	
		GsBA = 218°00'42.39874"	
-----			
Pt# 3 COORDINATES	N = 827673.8104	N 41°43'52.91712"	X = 1456379.7291
CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -4539030.9132
		h 181.3973	Z = 4223420.4264
		H _**_	
-----			
Pt# 2 COORDINATES	N = 666173.4667	N 41°17'21.74249"	X = 15390151.8510
CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 87°48'59.21268"	NSFA = 87°52'15.35242"	D X= -45657956.5202
	O = 0°03'15.97091"	NSBA = 268°14'07.66776"	D Y= +146811521.5425
	t-T Con = -0.16884"	Ell Dist = 151870.7570	D Z= -134108471.9508
	Dist = 498259.5725	Delta h = -9.4271	S D= 204018023.9592
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 151870.2941	
		Rad(A) = 6387419.5007	
		Skew Con = -0.00009"	
		GsFA = 87°52'15.35267"	
		Gsc Dist = 151870.7570	
		GsBA = 268°14'07.66801"	
-----			
Pt# 1 COORDINATES	N = 671962.0178	N 41°18'12.71747"	X = 1473578.8705
log0420a_IRY8	E = 1174321.8928	W 72°06'55.96146"	Y = -4566523.6132
		h -68.4821	Z = 4187791.5128
		H _**_	
-----			
Pt# 3 COORDINATES	N = 827673.8104	N 41°43'52.91712"	X = 15676278.2312
CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -48857526.6979
		h 181.3973	Z = 45460337.2803
		H _**_	
-----			
	Az = 170°06'46.70504"	NSFA = 170°28'07.71849"	D X= -46596689.4862
	O = 0°21'27.07962"	NSBA = 350°31'55.02288"	D Y= +145311399.2873
	t-T Con = +6.06617"	Ell Dist = 158061.9611	D Z= -135408343.9053
	Dist = 518568.6667	Delta h = -249.8794	S D= 204014886.3027
	Scale= 0.999989079707	Delta H = _**_	
		Gnd Dist= 158062.3876	
		Rad(A) = 6364384.1721	
		Skew Con = +0.00041"	
		GsFA = 170°28'07.71729"	

cluster16

Gsc Dist = 158061.9611  
 GsBA = 350°31'55.02168"

```

Pt# 1 COORDINATES | N = 671962.0178 | N 41°18'12.71747" | X = 1473578.8705
                  | E = 1174321.8928 | W 72°06'55.96146" | Y = -4566523.6132
log0420a_IRY8     |                   | h -68.4821         | Z = 4187791.5128
                  |                   | H                 | H
  
```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTGR-CTGU		-2.8	8.9	-9.2	-0.28	0.36	-0.43	1.91
2	CTGR-CTMA		4.9	-6.9	6.0	0.53	-0.31	0.32	1.72
3	CTGR-log0420a_IRY8		-0.1	0.9	-0.9	-0.05	0.29	-0.29	0.06
4	CTGU-CTMA		7.6	-15.5	15.5	0.64	-0.59	0.66	1.75
5	CTGU-log0420a_IRY8		6.8	-29.8	28.0	0.66	-1.38	1.41	1.71
6	CTMA-log0420a_IRY8		-1.0	-12.6	10.4	-0.09	-0.56	0.50	1.86
R.M.S.			4.8	15.4	14.4	0.45	0.69	0.71	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGR-CTGU		-0.7	0.1	-13.1	-0.05	0.01	-0.45	1.91
2	CTGR-CTMA		-0.8	2.5	10.0	-0.06	0.28	0.38	1.72
3	CTGR-log0420a_IRY8		-0.1	0.2	-1.2	-0.06	0.16	-0.32	0.06
4	CTGU-CTMA		0.4	2.6	23.1	0.02	0.24	0.73	1.75
5	CTGU-log0420a_IRY8		0.9	-2.4	41.4	0.06	-0.27	1.57	1.71
6	CTMA-log0420a_IRY8		0.0	-4.8	15.7	0.00	-0.54	0.57	1.86
R.M.S.			0.6	2.6	21.5	0.05	0.30	0.79	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGR-CTGU		0.1	-0.7	-13.1	0.01	-0.05	-0.45	1.91
2	CTGR-CTMA		-1.5	2.2	10.0	-0.12	0.22	0.38	1.72

		cluster16						
3	CTGR-log0420a_IRY8	-0.1	-0.2	-1.2	-0.07	-0.11	-0.32	0.06
4	CTGU-CTMA	1.8	1.8	23.1	0.12	0.14	0.73	1.75
5	CTGU-log0420a_IRY8	-2.5	-1.0	41.4	-0.29	-0.07	1.57	1.71
6	CTMA-log0420a_IRY8	-0.8	4.7	15.6	-0.06	0.53	0.57	1.86
R.M.S.		1.4	2.3	21.5	0.14	0.25	0.79	( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)				( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTGR-CTGU		52015.2	1.8	-11.6	10.0	10.2	24.7	21.3	0.17	0.47	0.47	1.91
2	CTGR-CTMA		45998.4	1.6	-10.5	8.4	9.3	22.6	19.0	0.18	0.46	0.44	1.72
3	CTGR-log0420a_IRY8		6543.6	-0.1	0.4	-0.4	1.4	3.0	3.1	0.04	0.13	0.13	0.06
4	CTGU-CTMA		62176.7	-0.3	1.4	-1.3	11.9	26.5	23.6	0.03	0.05	0.05	1.75
5	CTGU-log0420a_IRY8		46290.2	2.2	-9.8	9.3	10.3	21.6	19.8	0.22	0.45	0.47	1.71
6	CTMA-log0420a_IRY8		48177.6	2.2	-9.5	8.5	10.9	22.5	20.6	0.21	0.42	0.41	1.86

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGR-CTGU		52015.2	-0.1	-1.9	15.3	14.8	9.9	29.2	0.01	0.19	0.52	1.91
2	CTGR-CTMA		45998.4	-0.6	-1.7	13.4	13.2	9.1	26.4	0.04	0.18	0.51	1.72
3	CTGR-log0420a_IRY8		6543.6	0.0	0.1	-0.6	2.1	1.3	3.9	0.02	0.05	0.14	0.06
4	CTGU-CTMA		62176.7	0.0	0.1	-1.9	16.6	10.6	31.8	0.00	0.01	0.06	1.75
5	CTGU-log0420a_IRY8		46290.2	0.3	-0.8	13.7	13.9	8.6	26.4	0.02	0.09	0.52	1.71
6	CTMA-log0420a_IRY8		48177.6	-0.2	-0.8	12.9	14.7	8.9	27.5	0.01	0.09	0.47	1.86

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)				(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGR-CTGU		52015.2	1.8	0.1	15.3	8.3	11.6	23.5	0.22	0.01	0.65	1.91
2	CTGR-CTMA		45998.4	-0.1	-1.8	13.4	9.2	7.9	20.2	-0.01	-0.22	0.66	1.72
3	CTGR-log0420a_IRY8		6543.6	0.0	-0.1	-0.6	0.2	0.3	0.5	-0.12	-0.24	-1.02	0.06
4	CTGU-CTMA		62176.7	0.1	0.1	-1.9	11.6	9.7	24.2	0.00	0.01	-0.08	1.75
5	CTGU-log0420a_IRY8		46290.2	-0.8	-0.4	13.7	6.4	10.7	19.9	-0.13	-0.03	0.69	1.71
6	CTMA-log0420a_IRY8		48177.6	0.0	0.8	12.9	11.8	6.8	21.6	0.00	0.12	0.60	1.86

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status	Coordinates			Sigmas (mm)		
	Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTGR	Fixed	Fixed	41°20'07.03570"N	72°02'58.96956"W	-18.2400		
2	CTGU	Fixed	Fixed	41°17'21.74249"N	72°40'04.44445"W	-18.0000		
3	CTMA	Fixed	Fixed	41°43'52.91712"N	72°12'38.87752"W	55.2900		

```

;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

```



cluster16

```
;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTGR, 683671.7992, 1192315.3918, -59.8424, 0.0000, 0.0000, 0.0000, ""
CTGU, 666173.4667, 1022562.4275, -59.0550, 0.0000, 0.0000, 0.0000, ""
CTMA, 827673.8104, 1147177.5434, 181.3973, 0.0000, 0.0000, 0.0000, ""
log0420a_IRY8, 671962.0178, 1174321.8928, -68.4821, 0.0037, 0.0022, 0.0067, ""
```

ADJUSTMENT SUMMARY

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-----
Item Name                               Item Value
-----
SubNet
  Name New Subnet
  Number of points 4
  Number of unknowns 3
  Degree of freedom 15
  Declared adjustment type with fixed and weighted points
Aposteriori standard error of unit weight 0.732
  Adjustment Date and Time 3.May.07 15:07:35
  Reference points
    Number 3
  Plane coordinates - fixed 6
    Heights - fixed 3
  Plane coordinates - weighted 0
    Heights - weighted 0
Apriori standard error of unit weight 1.000
  Processed vectors
    Total number 6
    Unused vectors 0
    Rejected vectors 0
    Downweighted vectors 0
  Apriori standard error of unit weight 1.000
Aposteriori standard error of unit weight 0.501
  Vectors' VPV test
    Confidence level (%) 95
    Lower bound 2.70
    Upper bound 19.02
    Degree of freedom 9
    VPV 2.26
    VPV test failed
  Vectors' Tau test
    Confidence level (%) 95
    Tau critical value 3.00
  Number of flagged observations 0
-----

```

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

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-----
Point                                     Coordinates                               Sigmas(mm)                               Corr.(%)
#  Name      Comment Latitude           Longitude           height(m) s(N)  s(E)  s(U)  N-E  N-U  E-U
-----
1  CTGR      41°20'07.03570"N  72°02'58.96956"W  -18.2400  0.0  0.0  0.0  0  0  0
2  CTGU      41°17'21.74249"N  72°40'04.44445"W  -18.0000  0.0  0.0  0.0  0  0  0
3  CTMA      41°43'52.91712"N  72°12'38.87752"W  55.2900  0.0  0.0  0.0  0  0  0
4  log0420b_IRY8  41°21'16.70961"N  72°04'44.38060"W   9.0852  0.9  0.6  1.6 -17 -21 -20
-----

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SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

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-----
Point                                     Coordinates                               Sigmas(USFeet)                               Corr.(%)
#  Name      Comment Northing(USFeet) Easting(USFeet) Height (USFeet) s(N)  s(E)  s(U)  N-E  N-U  E-U
-----
1  CTGR      683671.79920  1192315.39179  -59.84240  0.000  0.000  0.000  0  0  0
2  CTGU      666173.46667  1022562.42746  -59.05500  0.000  0.000  0.000  0  0  0
3  CTMA      827673.81037  1147177.54345  181.39728  0.000  0.000  0.000  0  0  0
4  log0420b_IRY8  690659.69229  1184219.57622   29.80703  0.003  0.002  0.005 -17 -21 -20
-----

```

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

cluster17											
#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z
1	CTGR-CTGU	-48310.0555	-18895.6975	-3830.0334	52015.1709	11.8	24.2	21.1	-35	18	-63
2	CTGR-CTMA	-21727.9377	23583.2789	32978.4747	45998.4142	10.4	22.1	18.9	-33	17	-64
3	CTGR-log0420b_IRY8	-2762.5046	576.7099	1631.7411	3259.8474	1.0	1.9	1.5	-42	7	-53
4	CTGU-CTMA	26582.1179	42478.9764	36808.5078	62176.6731	12.7	25.7	24.0	-34	15	-62
5	CTGU-log0420b_IRY8	45547.5585	19472.3815	5461.8020	49835.5797	12.5	25.1	18.4	-47	15	-53
6	CTMA-log0420b_IRY8	18965.4426	-23006.5941	-31346.7089	43262.0798	10.6	21.2	17.0	-43	12	-55
Mean weight matrix's estimations:						2.3	4.6	3.7	-42	7	-54

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGR-CTGU	-4914.7810	-51782.0255	-211.5689	52015.1709	14.1	11.1	29.2	-6	-9	-23
2	CTGR-CTMA	44002.5913	-13402.1449	-92.6575	45998.4142	12.5	10.0	26.4	-3	-11	-27
3	CTGR-log0420b_IRY8	2149.8676	-2450.3005	26.4922	3259.8474	1.2	0.9	2.2	-17	-21	-20
4	CTGU-CTMA	49189.4555	38030.0308	-230.0206	62176.6731	15.6	11.9	31.9	-11	0	-22
5	CTGU-log0420b_IRY8	7415.8792	49280.4398	-167.2910	49835.5797	15.5	10.7	27.7	-13	-31	-12
6	CTMA-log0420b_IRY8	-41831.9783	11029.7693	-193.1971	43262.0798	13.3	9.3	24.2	-13	-22	-18
Mean weight matrix's estimations:						2.9	2.1	5.2	-17	-21	-20

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTGR-CTGU	52015.1709	264°34'41.29"	- 0°13'58.98"	11.0	14.1	29.2	1	23	-8
2	CTGR-CTMA	45998.4142	343°03'37.83"	- 0°06'55.50"	12.4	10.2	26.4	10	-5	-29
3	CTGR-log0420b_IRY8	3259.8474	311°15'48.13"	0°27'56.30"	1.1	1.0	2.2	35	-2	-31
4	CTGU-CTMA	62176.6731	37°42'31.76"	- 0°12'43.08"	13.7	14.1	31.8	-28	-13	-14
5	CTGU-log0420b_IRY8	49835.5797	81°26'31.78"	- 0°11'32.41"	10.5	15.6	27.7	1	-20	29
6	CTMA-log0420b_IRY8	43262.0798	165°13'44.72"	- 0°15'21.13"	13.4	9.2	24.2	6	17	26
Mean weight matrix's estimations:					2.7	2.4	5.2	33	-2	-30

Datum = NAD83  
 Coordinate system = SPC83(sft)  
 Projection = LC83  
 Zone = CT\_\_  
 Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 683671.7992 E = 1192315.3918	N 41°20'07.03570" W 72°02'58.96956"	X = 15910154.8703 Y = -49111374.0218
CTGR		h -59.8424 H **	Z = 45105361.3680
	Az = 264°06'50.03489" O = 0°27'51.59308" t-T Con = +0.32647" Dist = 559882.2642 Scale= 0.999989103095	NSFA = 264°34'41.30150" NSBA = 84°10'12.11643" Ell Dist = 170653.5930 Delta h = +0.7874 Delta H = ** Gnd Dist= 170653.1082 Rad(A) = 6387253.4095	D X= -47507638.7710 D Y= +146095062.5399 D Z= -134247597.1117 S D= 204017549.1727

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Skew Con = -0.00021"  
 GsFA = 264°34'41.30231"  
 Gsc Dist = 170653.5930  
 GsBA = 84°10'12.11724"

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 1429797.6122  
 | E = 1022562.4275 | W 72°40'04.44445" | Y = -4581509.8999  
 CTGU | h -59.0550 | Z = 4186611.9309  
 | H \*\* |

Pt# 0 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 CTGR | h -59.8424 | Z = 45105361.3680  
 | H \*\* |

Az = 342°35'40.73998" | NSFA = 343°03'37.83947" | D X= -47420427.2759  
 O = 0°27'51.59308" | NSBA = 162°57'13.32332" | D Y= +146234429.0153  
 t-T Con = -5.50641" | Ell Dist = 150912.5013 | D Z= -134126834.5725  
 Dist = 495112.4766 | Delta h = +241.2397 | S D= 204017677.9225  
 Scale= 0.999989103095 | Delta H = \*\* |  
 Gnd Dist= 150912.9396  
 Rad(A) = 6365337.2787  
 Skew Con = -0.00187"  
 GsFA = 343°03'37.83760"  
 Gsc Dist = 150912.5013  
 GsBA = 162°57'13.32145"

Pt# 3 COORDINATES | N = 827673.8104 | N 41°43'52.91712" | X = 1456379.7291  
 | E = 1147177.5434 | W 72°12'38.87752" | Y = -4539030.9132  
 CTMA | h 181.3973 | Z = 4223420.4264  
 | H \*\* |

Pt# 0 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 CTGR | h -59.8424 | Z = 45105361.3680  
 | H \*\* |

Az = 310°47'56.23900" | NSFA = 311°15'48.13997" | D X= -47358204.8507  
 O = 0°27'51.59308" | NSBA = 131°14'38.50472" | D Y= +146158948.2852  
 t-T Con = -0.30789" | Ell Dist = 10694.6481 | D Z= -134229677.9755  
 Dist = 35086.9564 | Delta h = +89.6494 | S D= 204016774.2611  
 Scale= 0.999989103095 | Delta H = \*\* |  
 Gnd Dist= 10694.6405  
 Rad(A) = 6376930.7842  
 Skew Con = -0.00055"  
 GsFA = 311°15'48.13995"  
 Gsc Dist = 10694.6481  
 GsBA = 131°14'38.50470"

Pt# 1 COORDINATES | N = 690659.6923 | N 41°21'16.70961" | X = 1475345.1622  
 | E = 1184219.5762 | W 72°04'44.38060" | Y = -4562037.4858  
 log0420b\_IRY8 | h 29.8070 | Z = 4192073.6945  
 | H \*\* |

Pt# 2 COORDINATES | N = 666173.4667 | N 41°17'21.74249" | X = 15390151.8510

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CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 37°39'11.77600"	NSFA = 37°42'31.76846"	D X= -45714384.0366
	O = 0°03'15.97091"	NSBA = 218°00'42.39282"	D Y= +146901720.5090
	t-T Con = -4.02156"	Ell Dist = 203990.5608	D Z= -133991579.4234
	Dist = 669252.1097	Delta h = +240.4523	S D= 204018782.8430
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 203991.1571	
		Rad(A) = 6372277.5118	
		Skew Con = +0.00326"	
		GsFA = 37°42'31.77438"	
		Gsc Dist = 203990.5608	
		GsBA = 218°00'42.39874"	
-----			
Pt# 3 COORDINATES	N = 827673.8104	N 41°43'52.91712"	X = 1456379.7291
CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -4539030.9132
		h 181.3973	Z = 4223420.4264
		H _**_	
-----			
Pt# 2 COORDINATES	N = 666173.4667	N 41°17'21.74249"	X = 15390151.8510
CTGU	E = 1022562.4275	W 72°40'04.44445"	Y = -49314764.8758
		h -59.0550	Z = 45064135.5161
		H _**_	
-----			
	Az = 81°23'15.07898"	NSFA = 81°26'31.80218"	D X= -45652161.6113
	O = 0°03'15.97091"	NSBA = 261°49'51.66718"	D Y= +146826239.7789
	t-T Con = -0.75230"	Ell Dist = 163502.3237	D Z= -134094422.8264
	Dist = 536419.8518	Delta h = +88.8620	S D= 204018084.4448
	Scale= 0.999992181193	Delta H = _**_	
		Gnd Dist= 163502.2095	
		Rad(A) = 6386914.9041	
		Skew Con = +0.00016"	
		GsFA = 81°26'31.80335"	
		Gsc Dist = 163502.3237	
		GsBA = 261°49'51.66835"	
-----			
Pt# 1 COORDINATES	N = 690659.6923	N 41°21'16.70961"	X = 1475345.1622
log0420b_IRY8	E = 1184219.5762	W 72°04'44.38060"	Y = -4562037.4858
		h 29.8070	Z = 4192073.6945
		H _**_	
-----			
Pt# 3 COORDINATES	N = 827673.8104	N 41°43'52.91712"	X = 15676278.2312
CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -48857526.6979
		h 181.3973	Z = 45460337.2803
		H _**_	
-----			
	Az = 164°52'23.20117"	NSFA = 165°13'44.72997"	D X= -46590894.5773
	O = 0°21'27.07962"	NSBA = 345°18'59.41095"	D Y= +145326117.5236
	t-T Con = +5.55082"	Ell Dist = 141934.8781	D Z= -135394294.7809
	Dist = 465658.5667	Delta h = -151.5902	S D= 204014722.3884
	Scale= 0.999989079707	Delta H = _**_	
		Gnd Dist= 141935.5944	
		Rad(A) = 6365278.8341	
		Skew Con = -0.00027"	
		GsFA = 165°13'44.72851"	

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Gsc Dist = 141934.8781  
 GsBA = 345°18'59.40949"

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Pt# 1 COORDINATES | N =      690659.6923 | N      41°21'16.70961" | X = 1475345.1622
                  | E =     1184219.5762 | W      72°04'44.38060" | Y = -4562037.4858
log0420b_IRY8     |                   | h              29.8070 | Z = 4192073.6945
                  |                   | H              _**_  |
-----
    
```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTGR-CTGU		-1.8	8.9	-11.1	-0.15	0.37	-0.52	1.87
2	CTGR-CTMA		-0.3	1.8	-2.6	-0.03	0.08	-0.14	1.82
3	CTGR-log0420b_IRY8		-0.1	0.4	-0.5	-0.12	0.22	-0.31	0.02
4	CTGU-CTMA		1.7	-7.1	8.2	0.13	-0.28	0.34	1.73
5	CTGU-log0420b_IRY8		9.3	-34.5	38.0	0.74	-1.38	2.07	1.83
6	CTMA-log0420b_IRY8		9.6	-26.5	26.7	0.91	-1.25	1.58	1.73
R.M.S.			5.5	18.4	19.8	0.49	0.79	1.10	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGR-CTGU		-2.3	1.0	-14.1	-0.16	0.09	-0.48	1.87
2	CTGR-CTMA		-0.7	0.3	-3.1	-0.06	0.03	-0.12	1.82
3	CTGR-log0420b_IRY8		-0.1	0.0	-0.6	-0.05	0.02	-0.29	0.02
4	CTGU-CTMA		1.3	-0.5	10.9	0.09	-0.04	0.34	1.73
5	CTGU-log0420b_IRY8		5.0	-1.4	51.9	0.32	-0.13	1.87	1.83
6	CTMA-log0420b_IRY8		1.2	1.0	38.8	0.09	0.11	1.61	1.73
R.M.S.			2.4	0.9	27.5	0.16	0.08	1.04	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGR-CTGU		-0.8	-2.4	-14.1	-0.07	-0.17	-0.48	1.87
2	CTGR-CTMA		-0.8	0.1	-3.1	-0.06	0.01	-0.12	1.82

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3	CTGR-log0420b_IRY8	-0.1	0.0	-0.6	-0.05	-0.03	-0.29	0.02
4	CTGU-CTMA	0.7	-1.2	10.9	0.05	-0.09	0.34	1.73
5	CTGU-log0420b_IRY8	-0.8	-5.2	51.9	-0.08	-0.33	1.87	1.83
6	CTMA-log0420b_IRY8	-1.0	-1.3	38.8	-0.08	-0.14	1.60	1.73
R.M.S.		0.8	2.4	27.5	0.07	0.17	1.04	( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTGR-CTGU		52015.2	4.0	-13.7	15.1	11.8	24.2	21.1	0.34	0.56	0.72	1.87
2	CTGR-CTMA		45998.4	4.5	-13.3	14.0	10.4	22.1	18.9	0.43	0.60	0.74	1.82
3	CTGR-log0420b_IRY8		3259.8	-0.1	0.2	-0.2	1.0	1.9	1.5	0.06	0.09	0.11	0.02
4	CTGU-CTMA		62176.7	0.7	0.3	-1.3	12.7	25.7	24.0	0.05	0.01	0.06	1.73
5	CTGU-log0420b_IRY8		49835.6	3.5	-12.2	12.2	12.5	25.1	18.4	0.28	0.49	0.66	1.83
6	CTMA-log0420b_IRY8		43262.1	4.9	-11.6	10.4	10.6	21.2	17.0	0.46	0.55	0.61	1.73

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGR-CTGU		52015.2	1.9	-0.4	20.6	14.1	11.1	29.2	0.14	0.03	0.71	1.87
2	CTGR-CTMA		45998.4	1.2	0.2	19.8	12.5	10.0	26.4	0.10	0.02	0.75	1.82
3	CTGR-log0420b_IRY8		3259.8	0.0	0.0	-0.2	1.2	0.9	2.2	0.01	0.00	0.11	0.02
4	CTGU-CTMA		62176.7	-0.9	0.7	-0.9	15.6	11.9	31.9	0.06	0.06	0.03	1.73
5	CTGU-log0420b_IRY8		49835.6	0.8	-0.3	17.6	15.5	10.7	27.7	0.05	0.03	0.63	1.83
6	CTMA-log0420b_IRY8		43262.1	-0.6	1.1	16.3	13.3	9.3	24.2	0.04	0.12	0.67	1.73

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGR-CTGU		52015.2	0.1	2.0	20.6	8.8	10.9	23.4	0.01	0.18	0.88	1.87
2	CTGR-CTMA		45998.4	1.1	0.5	19.8	9.3	8.1	20.9	0.11	0.07	0.95	1.82
3	CTGR-log0420b_IRY8		3259.8	0.0	0.0	-0.2	0.1	0.1	0.2	-0.05	-0.08	-1.37	0.02
4	CTGU-CTMA		62176.7	-0.3	1.1	-0.9	10.3	10.7	24.5	-0.03	0.11	-0.04	1.73
5	CTGU-log0420b_IRY8		49835.6	-0.2	-0.8	17.6	8.2	12.7	21.5	-0.03	-0.07	0.82	1.83
6	CTMA-log0420b_IRY8		43262.1	0.8	-0.9	16.3	10.6	6.9	18.1	0.07	-0.13	0.90	1.73

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status		Coordinates		Sigmas (mm)			
		Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTGR	Fixed	Fixed	41°20'07.03570"N	72°02'58.96956"W	-18.2400			
2	CTGU	Fixed	Fixed	41°17'21.74249"N	72°40'04.44445"W	-18.0000			
3	CTMA	Fixed	Fixed	41°43'52.91712"N	72°12'38.87752"W	55.2900			

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;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

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;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTGR, 683671.7992, 1192315.3918, -59.8424, 0.0000, 0.0000, 0.0000, ""
CTGU, 666173.4667, 1022562.4275, -59.0550, 0.0000, 0.0000, 0.0000, ""
CTMA, 827673.8104, 1147177.5434, 181.3973, 0.0000, 0.0000, 0.0000, ""
log0420b_IRY8, 690659.6923, 1184219.5762, 29.8070, 0.0029, 0.0021, 0.0052, ""
```



ADJUSTMENT SUMMARY

Item Name	Item Value
SubNet	
Name	New Subnet
Number of points	4
Number of unknowns	3
Degree of freedom	15
Declared adjustment type	with fixed and weighted points
Aposteriori standard error of unit weight	0.437
Adjustment Date and Time	3.May.07 15:16:29
Reference points	
Number	3
Plane coordinates - fixed	6
Heights - fixed	3
Plane coordinates - weighted	0
Heights - weighted	0
Apriori standard error of unit weight	1.000
Processed vectors	
Total number	6
Unused vectors	0
Rejected vectors	0
Downweighted vectors	0
Apriori standard error of unit weight	1.000
Aposteriori standard error of unit weight	0.140
Vectors' VPV test	
Confidence level (%)	95
Lower bound	2.70
Upper bound	19.02
Degree of freedom	9
VPV	0.18
VPV test	failed
Vectors' Tau test	
Confidence level (%)	95
Tau critical value	3.00
Number of flagged observations	0

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGR		41°20'07.03570"N	72°02'58.96956"W	-18.2400	0.0	0.0	0.0	0	0	0
2	CTMA		41°43'52.91712"N	72°12'38.87752"W	55.2900	0.0	0.0	0.0	0	0	0
3	CTPU		41°53'58.88887"N	71°53'20.88990"W	57.2100	0.0	0.0	0.0	0	0	0
4	log0423a_IRY8		41°31'15.99494"N	72°04'51.09411"W	-20.9811	1.8	1.3	3.9	18	-13	-22

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGR		683671.79920	1192315.39179	-59.84240	0.000	0.000	0.000	0	0	0
2	CTMA		827673.81037	1147177.54345	181.39728	0.000	0.000	0.000	0	0	0
3	CTPU		889719.77777	1234363.71789	187.69648	0.000	0.000	0.000	0	0	0
4	log0423a_IRY8		751310.17800	1183237.90342	-68.83537	0.006	0.004	0.013	18	-13	-22

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

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#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z
1	CTGR-CTMA	-21727.9380	23583.2864	32978.4729	45998.4169	10.1	22.6	18.5	-42	43	-65
2	CTGR-CTPU	-142.9999	43677.3383	46913.8221	64098.6508	13.0	27.3	23.0	-46	43	-62
3	CTGR-log0423a_IRY8	-6682.5431	12192.3172	15472.0562	20801.2862	4.3	10.4	8.7	-35	36	-64
4	CTMA-CTPU	21584.9382	20094.0521	13935.3496	32617.0884	7.0	16.4	12.9	-42	44	-64
5	CTMA-log0423a_IRY8	15045.3949	-11390.9634	-17506.4182	25740.8747	5.6	12.6	10.8	-45	39	-64
6	CTPU-log0423a_IRY8	-6539.5415	-31485.0267	-31441.7613	44973.9576	9.2	21.9	18.8	-36	34	-65
Mean weight matrix's estimations:						6.7	15.6	12.9	-40	39	-64

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	CTGR-CTMA	44002.5947	-13402.1428	-92.6640	45998.4169	12.0	9.2	26.9	21	-17	-15
2	CTGR-CTPU	62697.8591	13324.9523	-247.2954	64098.6508	15.4	11.3	32.8	16	-15	-7
3	CTGR-log0423a_IRY8	20638.1623	-2599.6950	-36.7330	20801.2862	5.6	4.2	12.4	21	-14	-26
4	CTMA-CTPU	18745.8719	26691.9485	-81.4307	32617.0884	8.6	6.4	19.2	24	-24	-16
5	CTMA-log0423a_IRY8	-23344.0016	10845.9098	-128.2998	25740.8747	7.0	5.0	15.3	13	-13	-15
6	CTPU-log0423a_IRY8	-42029.8520	-16002.8814	-237.0520	44973.9576	11.8	9.0	26.4	18	-11	-26
Mean weight matrix's estimations:						8.4	6.3	18.6	19	-15	-20

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	CTGR-CTMA	45998.4169	343°03'37.85"	- 0°06'55.53"	11.2	10.1	26.9	32	-15	-19
2	CTGR-CTPU	64098.6508	11°59'54.06"	- 0°13'15.78"	15.6	11.0	32.8	1	-16	-3
3	CTGR-log0423a_IRY8	20801.2862	352°49'13.90"	- 0°06'04.25"	5.5	4.4	12.4	27	-12	-27
4	CTMA-CTPU	32617.0884	54°55'10.08"	- 0°08'34.96"	8.1	7.1	19.2	-35	-26	15
5	CTMA-log0423a_IRY8	25740.8747	155°04'47.43"	- 0°17'08.09"	6.4	5.7	15.3	32	7	19
6	CTPU-log0423a_IRY8	44973.9576	200°50'39.66"	- 0°18'07.20"	12.0	8.7	26.4	-6	16	20
Mean weight matrix's estimations:					7.7	6.4	18.1	14	-6	-5

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 0 COORDINATES	N = 683671.7992 E = 1192315.3918	N 41°20'07.03570" W 72°02'58.96956"	X = 15910154.8703 Y = -49111374.0218
CTGR		h -59.8424 H **	Z = 45105361.3680
	Az = 342°35'40.73998" O = 0°27'51.59308" t-T Con = -5.50641" Dist = 495112.4766 Scale= 0.999989103095	NSFA = 343°03'37.83947" NSBA = 162°57'13.32332" Ell Dist = 150912.5013 Delta h = +241.2397 Delta H = ** Gnd Dist= 150912.9396 Rad(A) = 6365337.2787	D X= -47420427.2759 D Y= +146234429.0153 D Z= -134126834.5725 S D= 204017677.9225

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Skew Con = -0.00187"  
 GsFA = 343°03'37.83760"  
 Gsc Dist = 150912.5013  
 GsBA = 162°57'13.32145"

Pt# 2 COORDINATES | N = 827673.8104 | N 41°43'52.91712" | X = 1456379.7291  
 | E = 1147177.5434 | W 72°12'38.87752" | Y = -4539030.9132  
 CTMA | | h 181.3973 | Z = 4223420.4264  
 | | H \_\*\*\_

Pt# 0 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 CTGR | | h -59.8424 | Z = 45105361.3680  
 | | H \_\*\*\_

Az = 11°31'51.77670" | NSFA = 11°59'54.07140" | D X= -47349610.6922  
 O = 0°27'51.59308" | NSBA = 192°06'18.01225" | D Y= +146300354.3256  
 t-T Con = -10.70162" | Ell Dist = 210296.2134 | D Z= -134081115.0559  
 Dist = 689941.6303 | Delta h = +247.5389 | S D= 204018442.1152  
 Scale= 0.999989103095 | Delta H = \_\*\*\_  
 | Gnd Dist= 210296.8559  
 | Rad(A) = 6364332.9547  
 | Skew Con = +0.00141"  
 | GsFA = 11°59'54.07404"  
 | Gsc Dist = 210296.2134  
 | GsBA = 192°06'18.01488"

Pt# 3 COORDINATES | N = 889719.7778 | N 41°53'58.88887" | X = 1477964.6670  
 | E = 1234363.7179 | W 71°53'20.88990" | Y = -4518936.8384  
 CTPU | | h 187.6965 | Z = 4237355.7630  
 | | H \_\*\*\_

Pt# 0 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 CTGR | | h -59.8424 | Z = 45105361.3680  
 | | H \_\*\*\_

Az = 352°21'19.34195" | NSFA = 352°49'13.90475" | D X= -47371065.8429  
 O = 0°27'51.59308" | NSBA = 172°47'59.71402" | D Y= +146197057.1631  
 t-T Con = -2.96973" | Ell Dist = 68245.7634 | D Z= -134184270.2126  
 Dist = 223899.7751 | Delta h = -8.9930 | S D= 204017194.8017  
 Scale= 0.999989103095 | Delta H = \_\*\*\_  
 | Gnd Dist= 68245.5535  
 | Rad(A) = 6363668.1066  
 | Skew Con = +0.00032"  
 | GsFA = 352°49'13.90458"  
 | Gsc Dist = 68245.7634  
 | GsBA = 172°47'59.71385"

Pt# 1 COORDINATES | N = 751310.1780 | N 41°31'15.99494" | X = 1471425.1240  
 | E = 1183237.9034 | W 72°04'51.09411" | Y = -4550421.8765  
 log0423a\_IRY8 | | h -68.8354 | Z = 4205914.0083  
 | | H \_\*\*\_

Pt# 2 COORDINATES | N = 827673.8104 | N 41°43'52.91712" | X = 15676278.2312

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CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -48857526.6979
		h 181.3973	Z = 45460337.2803
		H _**_	
-----			
	Az = 54°33'39.99438"	NSFA = 54°55'10.07636"	D X= -46582300.4188
	O = 0°21'27.07962"	NSBA = 235°08'02.14871"	D Y= +145467523.5640
	t-T Con = -3.00236"	Ell Dist = 107010.3140	D Z= -135245731.8613
	Dist = 351081.8368	Delta h = +6.2992	S D= 204014997.2694
	Scale= 0.999989079707	Delta H = _**_	
		Gnd Dist= 107011.2577	
		Rad(A) = 6379707.7486	
		Skew Con = +0.00324"	
		GsFA = 54°55'10.07792"	
		Gsc Dist = 107010.3140	
		GsBA = 235°08'02.15027"	
-----			
Pt# 3 COORDINATES	N = 889719.7778	N 41°53'58.88887"	X = 1477964.6670
CTPU	E = 1234363.7179	W 71°53'20.88990"	Y = -4518936.8384
		h 187.6965	Z = 4237355.7630
		H _**_	
-----			
Pt# 2 COORDINATES	N = 827673.8104	N 41°43'52.91712"	X = 15676278.2312
CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -48857526.6979
		h 181.3973	Z = 45460337.2803
		H _**_	
-----			
	Az = 154°43'23.43082"	NSFA = 155°04'47.42858"	D X= -46603755.5695
	O = 0°21'27.07962"	NSBA = 335°09'58.16654"	D Y= +145364226.4016
	t-T Con = +3.08186"	Ell Dist = 84450.9214	D Z= -135348887.0180
	Dist = 277065.4312	Delta h = -250.2326	S D= 204014679.7844
	Scale= 0.999989079707	Delta H = _**_	
		Gnd Dist= 84451.1485	
		Rad(A) = 6367959.2489	
		Skew Con = +0.00097"	
		GsFA = 155°04'47.42778"	
		Gsc Dist = 84450.9214	
		GsBA = 335°09'58.16574"	
-----			
Pt# 1 COORDINATES	N = 751310.1780	N 41°31'15.99494"	X = 1471425.1240
log0423a_IRY8	E = 1183237.9034	W 72°04'51.09411"	Y = -4550421.8765
		h -68.8354	Z = 4205914.0083
		H _**_	
-----			
Pt# 3 COORDINATES	N = 889719.7778	N 41°53'58.88887"	X = 15908615.6396
CTPU	E = 1234363.7179	W 71°53'20.88990"	Y = -48641236.7423
		h 187.6965	Z = 45610335.3944
		H _**_	
-----			
	Az = 200°16'31.31442"	NSFA = 200°50'39.67487"	D X= -47366015.8833
	O = 0°34'14.89427"	NSBA = 20°43'00.43065"	D Y= +144654615.1055
	t-T Con = +6.53381"	Ell Dist = 147551.4281	D Z= -135841005.8310
	Dist = 484087.6667	Delta h = -256.5318	S D= 204012930.9557
	Scale= 1.000003512975	Delta H = _**_	
		Gnd Dist= 147551.8472	
		Rad(A) = 6366917.5243	
		Skew Con = -0.00084"	
		GsFA = 200°50'39.67698"	

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Gsc Dist = 147551.4281  
 GsBA = 20°43'00.43276"

Pt# 1 COORDINATES | N = 751310.1780 | N 41°31'15.99494" | X = 1471425.1240  
 | E = 1183237.9034 | W 72°04'51.09411" | Y = -4550421.8765  
 log0423a\_IRY8 | | h -68.8354 | Z = 4205914.0083  
 | | H \*\_\* |

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	CTGR-CTMA		-0.5	9.3	-4.3	-0.05	0.41	-0.23	2.13
2	CTGR-CTPU		0.2	-13.0	6.9	0.01	-0.48	0.30	2.22
3	CTGR-log0423a_IRY8		-0.3	0.5	-0.8	-0.08	0.04	-0.09	0.59
4	CTMA-CTPU		0.9	-22.1	11.5	0.12	-1.35	0.90	1.12
5	CTMA-log0423a_IRY8		0.2	-3.2	2.1	0.03	-0.25	0.19	1.03
6	CTPU-log0423a_IRY8		1.2	7.8	-3.0	0.13	0.36	-0.16	1.91
R.M.S.			0.7	11.7	6.0	0.08	0.63	0.41	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGR-CTMA		2.7	2.4	-9.6	0.23	0.26	-0.36	2.13
2	CTGR-CTPU		-3.1	-3.8	13.9	-0.20	-0.34	0.42	2.22
3	CTGR-log0423a_IRY8		-0.2	-0.2	-0.9	-0.04	-0.04	-0.07	0.59
4	CTMA-CTPU		-5.6	-5.9	23.6	-0.65	-0.92	1.23	1.12
5	CTMA-log0423a_IRY8		-0.5	-0.8	3.7	-0.07	-0.16	0.24	1.03
6	CTPU-log0423a_IRY8		2.5	3.6	-7.2	0.21	0.40	-0.27	1.91
R.M.S.			3.0	3.4	12.3	0.31	0.45	0.57	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGR-CTMA		1.9	3.1	-9.6	0.17	0.30	-0.36	2.13
2	CTGR-CTPU		-3.9	-3.1	13.8	-0.25	-0.28	0.42	2.22

cluster18								
3	CTGR-log0423a_IRY8	-0.2	-0.2	-0.9	-0.04	-0.04	-0.07	0.59
4	CTMA-CTPU	-8.1	1.1	23.6	-1.01	0.16	1.23	1.12
5	CTMA-log0423a_IRY8	0.1	0.9	3.7	0.01	0.16	0.24	1.03
6	CTPU-log0423a_IRY8	-3.5	-2.5	-7.3	-0.29	-0.29	-0.27	1.91

R.M.S. 4.0 2.1 12.3 0.45 0.23 0.57 ( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	CTGR-CTMA		45998.4	0.2	2.6	-0.3	10.1	22.6	18.5	0.02	0.12	0.02	2.13
2	CTGR-CTPU		64098.7	0.6	-0.6	0.9	13.0	27.3	23.0	0.04	0.02	0.04	2.22
3	CTGR-log0423a_IRY8		20801.3	-0.1	-0.5	0.0	4.3	10.4	8.7	0.03	0.05	0.00	0.59
4	CTMA-CTPU		32617.1	0.5	-3.0	1.6	7.0	16.4	12.9	0.07	0.18	0.12	1.12
5	CTMA-log0423a_IRY8		25740.9	-0.3	2.6	-1.1	5.6	12.6	10.8	0.05	0.20	0.11	1.03
6	CTPU-log0423a_IRY8		44974.0	1.1	-5.6	3.7	9.2	21.9	18.8	0.11	0.26	0.20	1.91

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	CTGR-CTMA		45998.4	1.4	1.0	-2.0	12.0	9.2	26.9	0.11	0.11	0.08	2.13
2	CTGR-CTPU		64098.7	0.2	0.4	1.1	15.4	11.3	32.8	0.01	0.03	0.03	2.22
3	CTGR-log0423a_IRY8		20801.3	-0.3	-0.3	0.3	5.6	4.2	12.4	0.06	0.06	0.03	0.59
4	CTMA-CTPU		32617.1	-0.8	-0.4	3.3	8.6	6.4	19.2	0.09	0.06	0.17	1.12
5	CTMA-log0423a_IRY8		25740.9	0.8	0.5	-2.6	7.0	5.0	15.3	0.12	0.10	0.17	1.03
6	CTPU-log0423a_IRY8		44974.0	-1.0	-0.7	6.7	11.8	9.0	26.4	0.09	0.08	0.25	1.91

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	CTGR-CTMA		45998.4	1.0	1.3	-2.0	9.4	8.6	22.7	0.11	0.16	-0.09	2.13
2	CTGR-CTPU		64098.7	0.3	0.3	1.1	13.5	9.5	28.1	0.02	0.03	0.04	2.22
3	CTGR-log0423a_IRY8		20801.3	-0.3	-0.3	0.3	2.4	2.0	5.5	-0.12	-0.15	0.06	0.59
4	CTMA-CTPU		32617.1	-0.8	0.4	3.3	5.0	4.3	11.8	-0.16	0.10	0.28	1.12
5	CTMA-log0423a_IRY8		25740.9	-0.5	-0.8	-2.6	3.8	3.2	9.0	-0.14	-0.25	-0.30	1.03
6	CTPU-log0423a_IRY8		44974.0	1.2	0.3	6.7	9.5	7.0	21.2	0.13	0.05	0.32	1.91

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status		Coordinates		Sigmas (mm)			
		Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	CTGR	Fixed	Fixed	41°20'07.03570"N	72°02'58.96956"W	-18.2400			
2	CTMA	Fixed	Fixed	41°43'52.91712"N	72°12'38.87752"W	55.2900			
3	CTPU	Fixed	Fixed	41°53'58.88887"N	71°53'20.88990"W	57.2100			

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;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

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cluster18
;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
CTGR, 683671.7992, 1192315.3918, -59.8424, 0.0000, 0.0000, 0.0000, ""
CTMA, 827673.8104, 1147177.5434, 181.3973, 0.0000, 0.0000, 0.0000, ""
CTPU, 889719.7778, 1234363.7179, 187.6965, 0.0000, 0.0000, 0.0000, ""
log0423a_IRY8, 751310.1780, 1183237.9034, -68.8354, 0.0059, 0.0044, 0.0129, ""
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ADJUSTMENT SUMMARY

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-----
Item Name                      Item Value
-----
SubNet
  Name      New Subnet
  Number of points      4
  Number of unknowns    3
  Degree of freedom     15
  Declared adjustment type with fixed and weighted points
Aposteriori standard error of unit weight 1.143
  Adjustment Date and Time 3.May.07 21:01:15
  Reference points
    Number      3
  Plane coordinates - fixed      6
    Heights - fixed      3
  Plane coordinates - weighted    0
    Heights - weighted    0
Apriori standard error of unit weight 1.000
  Processed vectors
    Total number      6
    Unused vectors    0
    Rejected vectors  0
    Downweighted vectors 0
  Apriori standard error of unit weight 1.000
Aposteriori standard error of unit weight 0.403
  Vectors' VPV test
    Confidence level (%) 95
    Lower bound      2.70
    Upper bound     19.02
    Degree of freedom 9
    VPV      1.46
    VPV test failed
  Vectors' Tau test
    Confidence level (%) 95
    Tau critical value 3.00
  Number of flagged observations 0
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SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

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-----
Point                               Coordinates                               Sigmas(mm)                               Corr.(%)
#  Name      Comment Latitude      Longitude      height(m) s(N)  s(E)  s(U)  N-E  N-U  E-U
-----
1  acu5      41°44'36.79685"N  70°53'13.02743"W  6.5600  0.0  0.0  0.0  0  0  0
2  CTGR      41°20'07.03570"N  72°02'58.96956"W -18.2400 0.0  0.0  0.0  0  0  0
3  CTMA      41°43'52.91712"N  72°12'38.87752"W  55.2900 0.0  0.0  0.0  0  0  0
4  log0424a_IRY8 41°21'50.83366"N  71°57'36.97929"W -14.1443 3.0  1.8  5.4 -5 -5 -8
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SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

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-----
Point                               Coordinates                               Sigmas(USFeet)                               Corr.(%)
#  Name      Comment Northing(USFeet) Easting(USFeet) Height (USFeet) s(N)  s(E)  s(U)  N-E  N-U  E-U
-----
1  acu5      837136.92106  1508396.46679  21.52227  0.000 0.000 0.000  0  0  0
2  CTGR      683671.79920  1192315.39179  -59.84240 0.000 0.000 0.000  0  0  0
3  CTMA      827673.81037  1147177.54345  181.39728 0.000 0.000 0.000  0  0  0
4  log0424a_IRY8 694388.84868  1216781.58149  -46.40501 0.010 0.006 0.018 -5 -5 -8
-----

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SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)



cluster19												
#	Stations from - to	Coordinates (m)				Length	Sigmas (mm)			Corr.(%)		
		X	Y	Z	s(X)		s(Y)	s(Z)	X-Y	X-Z	Y-Z	
1	acu5-log0424a_IRY8	-75977.0373	-55006.5832	-31549.6840	98962.7049	16.0	33.1	29.7	-53	28	-53	
2	CTGR-acu5	82443.5476	59328.1357	33956.2607	107097.1235	16.6	32.7	32.8	-44	30	-55	
3	CTGR-log0424a_IRY8	6466.5003	4321.5751	2406.5512	8141.4450	2.0	4.0	3.7	-50	26	-53	
4	CTMA-acu5	104171.4928	35744.8247	977.8217	110137.8616	16.4	33.8	32.8	-45	28	-54	
5	CTMA-CTGR	21727.9453	-23583.3106	-32978.4395	45998.4089	9.9	20.9	20.6	-37	29	-57	
6	CTMA-log0424a_IRY8	28194.4549	-19261.7599	-30571.8619	45832.1003	10.0	21.2	20.0	-46	29	-57	
Mean weight matrix's estimations:						4.5	9.2	8.6	-50	26	-54	

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	acu5-log0424a_IRY8	-41581.3025	-89799.7303	-787.8312	98962.7049	21.9	13.1	39.8	-3	-10	-11
2	CTGR-acu5	45991.7617	96714.9859	-873.6191	107097.1235	22.2	14.5	41.4	1	5	-8
3	CTGR-log0424a_IRY8	3206.0370	7483.6122	-1.0984	8141.4450	2.7	1.6	4.8	-6	-5	-8
4	CTMA-acu5	2200.5973	110111.3507	-998.1781	110137.8616	22.7	14.4	42.0	2	1	-11
5	CTMA-CTGR	-43977.0181	13483.9924	-239.6841	45998.4089	13.6	9.2	26.3	7	4	-16
6	CTMA-log0424a_IRY8	-40757.0482	20961.6209	-234.2780	45832.1003	13.6	8.7	26.3	0	-2	-13
Mean weight matrix's estimations:						6.1	3.8	11.2	-5	-4	-8

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	acu5-log0424a_IRY8	98962.7049	245°09'13.49"	- 0°27'22.07"	14.8	20.8	39.8	-36	13	-7
2	CTGR-acu5	107097.1235	64°34'01.50"	- 0°28'02.58"	16.3	20.9	41.4	-33	-5	-7
3	CTGR-log0424a_IRY8	8141.4450	66°48'33.61"	- 0°00'27.83"	1.8	2.6	4.8	-31	-9	3
4	CTMA-acu5	110137.8616	88°51'18.31"	- 0°31'09.40"	14.4	22.7	42.0	-4	-13	-1
5	CTMA-CTGR	45998.4089	162°57'13.32"	- 0°17'54.79"	13.1	9.9	26.3	27	-8	13
6	CTMA-log0424a_IRY8	45832.1003	152°46'58.59"	- 0°17'34.36"	12.7	10.0	26.3	35	-2	11
Mean weight matrix's estimations:					4.1	5.7	11.2	-26	-9	3

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 2 COORDINATES	N = 837136.9211 E = 1508396.4668	N 41°44'36.79685" W 70°53'13.02743"	X = 16797566.1766 Y = -48472773.7733
acu5		h 21.5223 H **	Z = 45470861.8275
	Az = 243°55'16.93004" O = 1°14'07.12160" t-T Con = +10.56392" Dist = 1065216.6777 Scale= 0.999989834894	NSFA = 245°09'13.48772" NSBA = 64°26'30.38062" Ell Dist = 324680.3018 Delta h = -67.9273 Delta H = ** Gnd Dist= 324680.1088 Rad(A) = 6383393.2199	D X= -50239374.6156 D Y= +144076093.5752 D Z= -135426282.0382 S D= 204015179.2596

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Skew Con = -0.00066"  
 GsFA = 245°09'13.49951"  
 Gsc Dist = 324680.3018  
 GsBA = 64°26'30.39242"

Pt# 3 COORDINATES | N = 694388.8487 | N 41°21'50.83366" | X = 1484574.1678  
 | E = 1216781.5815 | W 71°57'36.97929" | Y = -4558292.6226  
 log0424a\_IRY8 | | h -46.4050 | Z = 4192848.5062  
 | | H \_\*\*\_ |

Pt# 1 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 CTGR | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 | | h -59.8424 | Z = 45105361.3680  
 | | H \_\*\*\_ |

Az = 64°05'55.32709" | NSFA = 64°34'01.49870" | D X= -47078658.0266  
 O = 0°27'51.59308" | NSBA = 245°20'17.41640" | D Y= +146351701.9413  
 t-T Con = -14.57853" | Ell Dist = 351368.0893 | D Z= -134123626.6841  
 Dist = 1152776.6635 | Delta h = +81.3647 | S D= 204020508.6201  
 Scale= 0.999989103095 | Delta H = \_\*\*\_  
 | Gnd Dist= 351367.7675  
 | Rad(A) = 6382997.0688  
 | Skew Con = +0.00031"  
 | GsFA = 64°34'01.51275"  
 | Gsc Dist = 351368.0893  
 | GsBA = 245°20'17.43046"

Pt# 2 COORDINATES | N = 837136.9211 | N 41°44'36.79685" | X = 1560551.2046  
 acu5 | E = 1508396.4668 | W 70°53'13.02743" | Y = -4503286.0539  
 | | h 21.5223 | Z = 4224398.1928  
 | | H \_\*\*\_ |

Pt# 1 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 CTGR | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 | | h -59.8424 | Z = 45105361.3680  
 | | H \_\*\*\_ |

Az = 66°20'41.49105" | NSFA = 66°48'33.61117" | D X= -47327926.0217  
 O = 0°27'51.59308" | NSBA = 246°52'06.33527" | D Y= +146171234.5570  
 t-T Con = -0.52704" | Ell Dist = 26710.7884 | D Z= -134227135.9474  
 Dist = 87632.6237 | Delta h = +13.4374 | S D= 204016877.7775  
 Scale= 0.999989103095 | Delta H = \_\*\*\_  
 | Gnd Dist= 26710.7206  
 | Rad(A) = 6383708.6847  
 | Skew Con = -0.00063"  
 | GsFA = 66°48'33.61125"  
 | Gsc Dist = 26710.7884  
 | GsBA = 246°52'06.33535"

Pt# 3 COORDINATES | N = 694388.8487 | N 41°21'50.83366" | X = 1484574.1678  
 log0424a\_IRY8 | E = 1216781.5815 | W 71°57'36.97929" | Y = -4558292.6226  
 | | h -46.4050 | Z = 4192848.5062  
 | | H \_\*\*\_ |

Pt# 0 COORDINATES | N = 827673.8104 | N 41°43'52.91712" | X = 15676278.2312

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CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -48857526.6979
		h 181.3973	Z = 45460337.2803
		H _**_	
-----			
	Az = 88°29'50.39144"	NSFA = 88°51'18.33643"	D X= -46311347.7532
	O = 0°21'27.07962"	NSBA = 269°44'11.12891"	D Y= +145518871.1797
	t-T Con = -0.86537"	Ell Dist = 361342.1642	D Z= -135288243.4895
	Dist = 1185505.6934	Delta h = -159.8750	S D= 204018115.9275
	Scale= 0.999989079707	Delta H = _**_	
		Gnd Dist= 361343.9162	
		Rad(A) = 6387607.6643	
		Skew Con = +0.00002"	
		GsFA = 88°51'18.33719"	
		Gsc Dist = 361342.1642	
		GsBA = 269°44'11.12967"	
-----			
Pt# 2 COORDINATES	N = 837136.9211	N 41°44'36.79685"	X = 1560551.2046
acu5	E = 1508396.4668	W 70°53'13.02743"	Y = -4503286.0539
		h 21.5223	Z = 4224398.1928
		H _**_	
-----			
Pt# 0 COORDINATES	N = 827673.8104	N 41°43'52.91712"	X = 15676278.2312
CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -48857526.6979
		h 181.3973	Z = 45460337.2803
		H _**_	
-----			
	Az = 162°35'52.26333"	NSFA = 162°57'13.32582"	D X= -46581831.2603
	O = 0°21'27.07962"	NSBA = 343°03'37.84197"	D Y= +145324225.4346
	t-T Con = +6.01713"	Ell Dist = 150912.5013	D Z= -135399648.2524
	Dist = 495112.4766	Delta h = -241.2397	S D= 204014857.9114
	Scale= 0.999989079707	Delta H = _**_	
		Gnd Dist= 150912.9396	
		Rad(A) = 6365777.2105	
		Skew Con = +0.00062"	
		GsFA = 162°57'13.32395"	
		Gsc Dist = 150912.5013	
		GsBA = 343°03'37.84010"	
-----			
Pt# 1 COORDINATES	N = 683671.7992	N 41°20'07.03570"	X = 1478107.6667
CTGR	E = 1192315.3918	W 72°02'58.96956"	Y = -4562614.1956
		h -59.8424	Z = 4190441.9531
		H _**_	
-----			
Pt# 0 COORDINATES	N = 827673.8104	N 41°43'52.91712"	X = 15676278.2312
CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -48857526.6979
		h 181.3973	Z = 45460337.2803
		H _**_	
-----			
	Az = 152°25'37.60806"	NSFA = 152°46'58.60596"	D X= -46560615.7483
	O = 0°21'27.07962"	NSBA = 332°56'56.79150"	D Y= +145338403.7954
	t-T Con = +6.08172"	Ell Dist = 150366.8495	D Z= -135391752.7528
	Dist = 493322.1758	Delta h = -227.8023	S D= 204014875.1197
	Scale= 0.999989079707	Delta H = _**_	
		Gnd Dist= 150367.3345	
		Rad(A) = 6368713.2674	
		Skew Con = +0.00070"	
		GsFA = 152°46'58.60326"	

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Gsc Dist = 150366.8495  
 GsBA = 332°56'56.78880"

Pt# 3 COORDINATES | N = 694388.8487 | N 41°21'50.83366" | X = 1484574.1678  
 | E = 1216781.5815 | W 71°57'36.97929" | Y = -4558292.6226  
 log0424a\_IRY8 | | h -46.4050 | Z = 4192848.5062  
 | | H \_\*\*\_ |

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	acu5-log0424a_IRY8		-2.1	-14.1	5.9	-0.13	-0.43	0.20	1.85
2	CTGR-acu5		11.5	-6.5	17.5	0.69	-0.20	0.53	1.97
3	CTGR-log0424a_IRY8		-0.6	2.1	-2.2	-0.29	0.53	-0.59	0.07
4	CTMA-acu5		19.3	-40.3	55.8	1.18	-1.19	1.70	1.81
5	CTMA-CTGR		7.9	-33.6	37.7	0.79	-1.60	1.83	1.66
6	CTMA-log0424a_IRY8		16.6	-55.9	62.1	1.65	-2.63	3.10	1.63
R.M.S.			11.9	31.9	38.1	0.94	1.38	1.66	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	acu5-log0424a_IRY8		-4.0	-6.6	13.4	-0.18	-0.51	0.34	1.85
2	CTGR-acu5		6.7	8.9	18.8	0.30	0.62	0.46	1.97
3	CTGR-log0424a_IRY8		-0.2	0.1	-3.0	-0.07	0.07	-0.63	0.07
4	CTMA-acu5		12.1	6.0	70.2	0.53	0.42	1.67	1.81
5	CTMA-CTGR		5.3	-2.8	50.8	0.39	-0.30	1.93	1.66
6	CTMA-log0424a_IRY8		7.5	-1.3	84.8	0.55	-0.15	3.23	1.63
R.M.S.			7.0	5.3	50.4	0.38	0.39	1.72	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	acu5-log0424a_IRY8		7.6	-0.9	13.4	0.52	-0.04	0.34	1.85
2	CTGR-acu5		10.8	-2.2	18.9	0.66	-0.11	0.46	1.97

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3	CTGR-log0424a_IRY8	0.0	0.2	-3.0	0.01	0.09	-0.63	0.07
4	CTMA-acu5	5.6	-12.0	70.3	0.39	-0.53	1.67	1.81
5	CTMA-CTGR	-6.1	1.1	50.7	-0.47	0.11	1.93	1.66
6	CTMA-log0424a_IRY8	-7.7	-2.3	84.8	-0.60	-0.23	3.23	1.63
R.M.S.		7.1	5.1	50.4	0.49	0.25	1.72 (	1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)	from - to			( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	acu5-log0424a_IRY8		98962.7	4.8	-11.0	11.6	16.0	33.1	29.7	0.30	0.33	0.39	1.85
2	CTGR-acu5		107097.1	4.9	-11.2	13.3	16.6	32.7	32.8	0.29	0.34	0.41	1.97
3	CTGR-log0424a_IRY8		8141.4	-0.2	0.6	-0.6	2.0	4.0	3.7	0.12	0.15	0.16	0.07
4	CTMA-acu5		110137.9	0.3	0.1	0.6	16.4	33.8	32.8	0.02	0.00	0.02	1.81
5	CTMA-CTGR		45998.4	-4.5	11.6	-13.3	9.9	20.9	20.6	0.45	0.56	0.65	1.66
6	CTMA-log0424a_IRY8		45832.1	4.6	-12.2	12.6	10.0	21.2	20.0	0.46	0.58	0.63	1.63

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
	from - to			(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	acu5-log0424a_IRY8		98962.7	0.7	1.0	16.6	21.9	13.1	39.8	0.03	0.07	0.42	1.85
2	CTGR-acu5		107097.1	2.0	1.2	17.9	22.2	14.5	41.4	0.09	0.08	0.43	1.97
3	CTGR-log0424a_IRY8		8141.4	0.0	-0.1	-0.9	2.7	1.6	4.8	0.01	0.03	0.18	0.07
4	CTMA-acu5		110137.9	0.5	0.4	0.4	22.7	14.4	42.0	0.02	0.02	0.01	1.81
5	CTMA-CTGR		45998.4	-1.7	-0.7	-18.1	13.6	9.2	26.3	0.12	0.08	0.69	1.66
6	CTMA-log0424a_IRY8		45832.1	0.7	0.6	18.1	13.6	8.7	26.3	0.05	0.07	0.69	1.63

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number
(0..3)	from - to			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	acu5-log0424a_IRY8		98962.7	-1.3	0.2	16.6	11.4	16.6	31.5	-0.11	0.01	0.53	1.85
2	CTGR-acu5		107097.1	1.8	-1.3	17.9	13.3	16.8	33.4	0.13	-0.08	0.54	1.97
3	CTGR-log0424a_IRY8		8141.4	-0.1	0.0	-0.9	0.3	0.4	0.7	-0.22	0.03	-1.16	0.07
4	CTMA-acu5		110137.9	0.4	-0.4	0.4	11.2	17.7	32.6	0.03	-0.03	0.01	1.81
5	CTMA-CTGR		45998.4	1.5	1.2	-18.1	9.6	7.6	19.5	0.16	0.15	-0.93	1.66
6	CTMA-log0424a_IRY8		45832.1	-0.4	-0.9	18.1	9.5	7.2	19.5	-0.04	-0.12	0.93	1.63

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status	Coordinates			Sigmas (mm)		
	Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	acu5	Fixed	Fixed	41°44'36.79685"N	70°53'13.02743"W	6.5600		
2	CTGR	Fixed	Fixed	41°20'07.03570"N	72°02'58.96956"W	-18.2400		
3	CTMA	Fixed	Fixed	41°43'52.91712"N	72°12'38.87752"W	55.2900		

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;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

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;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description  
acu5, 837136.9211, 1508396.4668, 21.5223, 0.0000, 0.0000, 0.0000, ""  
CTGR, 683671.7992, 1192315.3918, -59.8424, 0.0000, 0.0000, 0.0000, ""  
CTMA, 827673.8104, 1147177.5434, 181.3973, 0.0000, 0.0000, 0.0000, ""  
log0424a_IRY8, 694388.8487, 1216781.5815, -46.4050, 0.0097, 0.0060, 0.0177, ""
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ADJUSTMENT SUMMARY

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-----
Item Name                      Item Value
-----
SubNet
      Name      New Subnet
      Number of points      4
      Number of unknowns    3
      Degree of freedom      15
      Declared adjustment type with fixed and weighted points
Aposteriori standard error of unit weight 1.015
      Adjustment Date and Time 3.May.07 21:09:42
      Reference points
      Number      3
      Plane coordinates - fixed      6
      Heights - fixed      3
      Plane coordinates - weighted    0
      Heights - weighted      0
Apriori standard error of unit weight 1.000
      Processed vectors
      Total number      6
      Unused vectors      0
      Rejected vectors      0
      Downweighted vectors      0
      Apriori standard error of unit weight 1.000
Aposteriori standard error of unit weight 0.075
      Vectors' VPV test
      Confidence level (%)      95
      Lower bound      2.70
      Upper bound      19.02
      Degree of freedom      9
      VPV      0.05
      VPV test      failed
      Vectors' Tau test
      Confidence level (%)      95
      Tau critical value      3.00
      Number of flagged observations      0
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SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in NAD83( BLH )

#	Point Name	Comment	Coordinates		Sigmas(mm)			Corr.(%)			
			Latitude	Longitude	height(m)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	acu5		41°44'36.79685"N	70°53'13.02743"W	6.5600	0.0	0.0	0.0	0	0	0
2	CTGR		41°20'07.03570"N	72°02'58.96956"W	-18.2400	0.0	0.0	0.0	0	0	0
3	CTMA		41°43'52.91712"N	72°12'38.87752"W	55.2900	0.0	0.0	0.0	0	0	0
4	log0424b_IRY8		41°20'14.17742"N	71°52'33.48537"W	-29.4082	3.9	3.2	8.4	-5	-17	-19

SUBNET 'New Subnet' POINTS: ADJUSTED COORDINATES in SPC83(sft)(Grid, Zone CT\_\_)

#	Point Name	Comment	Coordinates			Sigmas(USFeet)			Corr.(%)		
			Northing(USFeet)	Easting(USFeet)	Height (USFeet)	s(N)	s(E)	s(U)	N-E	N-U	E-U
1	acu5		837136.92106	1508396.46679	21.52227	0.000	0.000	0.000	0	0	0
2	CTGR		683671.79920	1192315.39179	-59.84240	0.000	0.000	0.000	0	0	0
3	CTMA		827673.81037	1147177.54345	181.39728	0.000	0.000	0.000	0	0	0
4	log0424b_IRY8		684829.25043	1240021.32592	-96.48341	0.013	0.010	0.028	-5	-17	-19

SUBNET 'New Subnet' PROCESSED VECTORS (X-Y-Z)

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#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)			
		X	Y	Z		s(X)	s(Y)	s(Z)	X-Y	X-Z	Y-Z	
1	acu5-log0424b_IRY8	-68662.4258	-54678.5868	-33798.2498	94056.3568	16.3	33.5	27.3	-39	17	-67	
2	CTGR-acu5	82443.5592	59328.0822	33956.3092	107097.1182	17.7	34.4	30.3	-40	21	-63	
3	CTGR-log0424b_IRY8	13781.1297	4649.4988	158.0547	14545.1833	3.7	7.4	6.1	-40	24	-65	
4	CTMA-acu5	104171.4948	35744.8095	977.8280	110137.8585	19.0	33.5	31.6	-46	27	-61	
5	CTMA-CTGR	21727.9368	-23583.2714	-32978.4826	45998.4157	11.0	21.8	19.0	-37	21	-63	
6	CTMA-log0424b_IRY8	35509.0664	-18933.7711	-32820.4278	51928.4312	11.7	24.7	20.8	-32	16	-67	
Mean weight matrix's estimations:						7.8	15.6	13.0	-39	23	-65	

SUBNET 'New Subnet' PROCESSED VECTORS (N-E-U)

#	Stations from - to	Coordinates (m)			Length	Sigmas (mm)			Corr.(%)		
		N	E	U		s(N)	s(E)	s(U)	N-E	N-U	E-U
1	acu5-log0424b_IRY8	-44647.3051	-82780.9444	-729.1384	94056.3568	18.3	15.1	39.7	-11	-19	-27
2	CTGR-acu5	45991.7621	96714.9806	-873.5462	107097.1182	20.1	15.9	41.9	-11	-9	-16
3	CTGR-log0424b_IRY8	234.8864	14543.2602	-27.7253	14545.1833	4.1	3.4	8.8	-5	-17	-17
4	CTMA-acu5	2200.5919	110111.3479	-998.1626	110137.8585	20.8	16.1	42.3	-13	-4	-2
5	CTMA-CTGR	-43977.0237	13483.9963	-239.7426	45998.4157	12.6	10.1	26.4	-6	-11	-18
6	CTMA-log0424b_IRY8	-43714.7339	28026.7046	-296.3576	51928.4312	13.4	11.3	29.6	-5	-14	-27
Mean weight matrix's estimations:						8.7	7.1	18.7	-6	-16	-18

SUBNET 'New Subnet' PROCESSED VECTORS (Distance-Azimuth-Elevation)

#	Stations from - to	Coordinates			Sigmas (mm)			Corr.(%)		
		Distance(m)	Azimuth	Elevation	s(D)	s(A)	s(E)	D-A	D-E	A-E
1	acu5-log0424b_IRY8	94056.3568	241°39'36.42"	- 0°26'39.01"	14.9	18.3	39.7	-10	33	-7
2	CTGR-acu5	107097.1182	64°34'01.50"	- 0°28'02.44"	16.0	20.1	41.9	-11	-21	2
3	CTGR-log0424b_IRY8	14545.1833	89°04'28.94"	- 0°06'33.17"	3.4	4.1	8.8	5	-18	17
4	CTMA-acu5	110137.8585	88°51'18.32"	- 0°31'09.38"	16.1	20.8	42.3	12	-5	4
5	CTMA-CTGR	45998.4157	162°57'13.31"	- 0°17'55.06"	12.6	10.1	26.4	7	5	21
6	CTMA-log0424b_IRY8	51928.4312	147°20'05.87"	- 0°19'37.17"	13.1	11.6	29.6	12	-2	31
Mean weight matrix's estimations:					7.2	8.4	18.5	5	-13	17

Datum = NAD83  
Coordinate system = SPC83(sft)  
Projection = LC83  
Zone = CT\_\_  
Linear unit = USFeet

POINT	MAPPING PROJECTION	GEODETIC	EC CARTESIAN
Pt# 3	COORDINATES	N = 41°44'36.79685" E = 70°53'13.02743" h = 21.5223 H = _**_	X = 16797566.1766 Y = -48472773.7733 Z = 45470861.8275
acu5		Az = 240°25'41.12902" O = 1°14'07.12160" t-T Con = +11.82751" Dist = 1012406.0694 Scale = 0.999989834894	NSFA = 241°39'36.42311" NSBA = 61°00'15.26247" Ell Dist = 308583.7502 Delta h = -118.0057 Delta H = _**_ Gnd Dist = 308583.1975 Rad(A) = 6382225.7736
			D X = -50215376.5405 D Y = +144077169.4524 D Z = -135433658.9969 S D = 204014927.8553



cluster20

Skew Con = -0.00149"  
 GsFA = 241°39'36.43479"  
 Gsc Dist = 308583.7502  
 GsBA = 61°00'15.27415"

Pt# 0 COORDINATES | N = 684829.2504 | N 41°20'14.17742" | X = 1491888.7957  
 | E = 1240021.3259 | W 71°52'33.48537" | Y = -4557964.6946  
 log0424b\_IRY8 | | h -96.4834 | Z = 4190600.0047  
 | | H \_\*\*\_

Pt# 2 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 CTGR | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 | | h -59.8424 | Z = 45105361.3680  
 | | H \_\*\*\_

Az = 64°05'55.32709" | NSFA = 64°34'01.49870" | D X= -47078658.0266  
 O = 0°27'51.59308" | NSBA = 245°20'17.41640" | D Y= +146351701.9413  
 t-T Con = -14.57853" | Ell Dist = 351368.0893 | D Z= -134123626.6841  
 Dist = 1152776.6635 | Delta h = +81.3647 | S D= 204020508.6201  
 Scale= 0.999989103095 | Delta H = \_\*\*\_  
 | Gnd Dist= 351367.7675  
 | Rad(A) = 6382997.0688  
 | Skew Con = +0.00031"  
 | GsFA = 64°34'01.51275"  
 | Gsc Dist = 351368.0893  
 | GsBA = 245°20'17.43046"

Pt# 3 COORDINATES | N = 837136.9211 | N 41°44'36.79685" | X = 1560551.2046  
 acu5 | E = 1508396.4668 | W 70°53'13.02743" | Y = -4503286.0539  
 | | h 21.5223 | Z = 4224398.1928  
 | | H \_\*\*\_

Pt# 2 COORDINATES | N = 683671.7992 | N 41°20'07.03570" | X = 15910154.8703  
 CTGR | E = 1192315.3918 | W 72°02'58.96956" | Y = -49111374.0218  
 | | h -59.8424 | Z = 45105361.3680  
 | | H \_\*\*\_

Az = 88°36'37.28994" | NSFA = 89°04'28.94417" | D X= -47303927.9466  
 O = 0°27'51.59308" | NSBA = 269°11'22.06240" | D Y= +146172310.4342  
 t-T Con = -0.06115" | Ell Dist = 47720.4858 | D Z= -134234512.9061  
 Dist = 156561.2788 | Delta h = -36.6410 | S D= 204016936.5322  
 Scale= 0.999989103095 | Delta H = \_\*\*\_  
 | Gnd Dist= 47720.3076  
 | Rad(A) = 6387463.7567  
 | Skew Con = -0.00006"  
 | GsFA = 89°04'28.94418"  
 | Gsc Dist = 47720.4858  
 | GsBA = 269°11'22.06241"

Pt# 0 COORDINATES | N = 684829.2504 | N 41°20'14.17742" | X = 1491888.7957  
 log0424b\_IRY8 | E = 1240021.3259 | W 71°52'33.48537" | Y = -4557964.6946  
 | | h -96.4834 | Z = 4190600.0047  
 | | H \_\*\*\_

Pt# 1 COORDINATES | N = 827673.8104 | N 41°43'52.91712" | X = 15676278.2312

cluster20

CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -48857526.6979
		h 181.3973	Z = 45460337.2803
		H _**_	
-----			
	Az = 88°29'50.39144"	NSFA = 88°51'18.33643"	D X= -46311347.7532
	O = 0°21'27.07962"	NSBA = 269°44'11.12891"	D Y= +145518871.1797
	t-T Con = -0.86537"	Ell Dist = 361342.1642	D Z= -135288243.4895
	Dist = 1185505.6934	Delta h = -159.8750	S D= 204018115.9275
	Scale= 0.999989079707	Delta H = _**_	
		Gnd Dist= 361343.9162	
		Rad(A) = 6387607.6643	
		Skew Con = +0.00002"	
		GsFA = 88°51'18.33719"	
		Gsc Dist = 361342.1642	
		GsBA = 269°44'11.12967"	
-----			
Pt# 3 COORDINATES	N = 837136.9211	N 41°44'36.79685"	X = 1560551.2046
acu5	E = 1508396.4668	W 70°53'13.02743"	Y = -4503286.0539
		h 21.5223	Z = 4224398.1928
		H _**_	
-----			
Pt# 1 COORDINATES	N = 827673.8104	N 41°43'52.91712"	X = 15676278.2312
CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -48857526.6979
		h 181.3973	Z = 45460337.2803
		H _**_	
-----			
	Az = 162°35'52.26333"	NSFA = 162°57'13.32582"	D X= -46581831.2603
	O = 0°21'27.07962"	NSBA = 343°03'37.84197"	D Y= +145324225.4346
	t-T Con = +6.01713"	Ell Dist = 150912.5013	D Z= -135399648.2524
	Dist = 495112.4766	Delta h = -241.2397	S D= 204014857.9114
	Scale= 0.999989079707	Delta H = _**_	
		Gnd Dist= 150912.9396	
		Rad(A) = 6365777.2105	
		Skew Con = +0.00062"	
		GsFA = 162°57'13.32395"	
		Gsc Dist = 150912.5013	
		GsBA = 343°03'37.84010"	
-----			
Pt# 2 COORDINATES	N = 683671.7992	N 41°20'07.03570"	X = 1478107.6667
CTGR	E = 1192315.3918	W 72°02'58.96956"	Y = -4562614.1956
		h -59.8424	Z = 4190441.9531
		H _**_	
-----			
Pt# 1 COORDINATES	N = 827673.8104	N 41°43'52.91712"	X = 15676278.2312
CTMA	E = 1147177.5434	W 72°12'38.87752"	Y = -48857526.6979
		h 181.3973	Z = 45460337.2803
		H _**_	
-----			
	Az = 146°58'45.85051"	NSFA = 147°20'05.89054"	D X= -46536617.6732
	O = 0°21'27.07962"	NSBA = 327°33'25.15884"	D Y= +145339479.6726
	t-T Con = +7.03958"	Ell Dist = 170367.9554	D Z= -135399129.7115
	Dist = 558942.0886	Delta h = -277.8807	S D= 204015061.8523
	Scale= 0.999989079707	Delta H = _**_	
		Gnd Dist= 170368.3011	
		Rad(A) = 6370671.1801	
		Skew Con = +0.00162"	
		GsFA = 147°20'05.88667"	

cluster20

Gsc Dist = 170367.9554  
 GsBA = 327°33'25.15496"

```

-----
Pt# 0 COORDINATES | N =      684829.2504 | N      41°20'14.17742" | X = 1491888.7957
                  | E =      1240021.3259 | W      71°52'33.48537" | Y = -4557964.6946
log0424b_IRY8     |                   | h              -96.4834 | Z = 4190600.0047
                  |                   | H              _**_   |
-----
    
```

- Az - Grid Azimuth
- NSFA - Normal Section Forward Azimuth
- NSBA - Normal Section Back Azimuth
- GsFA - Direct Geodetic Azimuth
- t - Geometric azimuth
- T - Azimuth Projected Geodetic
- t-T Con - t-T Correction
- Dist - Distance
- Ell Dist - Ellipsoidal Distance
- Gsc Dist - Geodetic Distance
- S D - Slope Distance
- Gnd Dist - Ground Distance
- O - Convergence
- Scale - Scale
- Delta h - Delta h Ellipsoidal
- Delta H - Delta H orthometric
- Rad(A) - Radius of curvature of normal section
- Skew Con - Inclination Correction

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (X-Y-Z)

#	Points from - to	Vector status	Residuals(mm)			Normalized Residuals			Redundancy number (0..3)
			(X)	(Y)	(Z)	(X)	(Y)	(Z)	
1	acu5-log0424b_IRY8		-18.3	53.5	-58.1	-1.12	1.60	-2.13	1.77
2	CTGR-acu5		23.2	-59.9	66.0	1.31	-1.74	2.18	1.96
3	CTGR-log0424b_IRY8		1.0	-3.0	3.1	0.28	-0.40	0.52	0.20
4	CTMA-acu5		21.2	-55.6	62.0	1.12	-1.66	1.96	1.82
5	CTMA-CTGR		-0.7	5.7	-5.4	-0.06	0.26	-0.28	1.51
6	CTMA-log0424b_IRY8		0.3	4.2	-2.1	0.02	0.17	-0.10	1.73
R.M.S.			14.9	40.0	44.0	0.85	1.20	1.50	( 1.50)

SUBNET 'New Subnet' ADJUSTED GPS-VECTOR RESIDUALS (N-E-U)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0...3)
			(North)	(East)	(Up)	(North)	(East)	(Up)	
1	acu5-log0424b_IRY8		-5.7	0.2	-80.9	-0.31	0.01	-2.04	1.77
2	CTGR-acu5		7.2	3.6	91.7	0.36	0.22	2.19	1.96
3	CTGR-log0424b_IRY8		0.3	0.1	4.4	0.07	0.02	0.50	0.20
4	CTMA-acu5		6.7	3.2	85.7	0.32	0.20	2.02	1.82
5	CTMA-CTGR		-0.3	1.1	-7.8	-0.02	0.11	-0.29	1.51
6	CTMA-log0424b_IRY8		1.1	1.5	-4.3	0.08	0.13	-0.14	1.73
R.M.S.			4.7	2.1	61.1	0.24	0.14	1.49	( 1.50)

SUBNET 'New Subnet' ADJUSTED VECTOR RESIDUALS (Distance-Azimuth-Elevation)

#	Points from - to	Vector status	Residuals (mm)			Normalized Residuals			Redundancy number (0..3)
			(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	acu5-log0424b_IRY8		3.1	-5.1	-80.9	0.21	-0.28	-2.04	1.77
2	CTGR-acu5		5.6	-5.0	91.8	0.35	-0.25	2.19	1.96

cluster20								
3	CTGR-log0424b_IRY8	0.1	-0.3	4.4	0.02	-0.07	0.50	0.20
4	CTMA-acu5	2.6	-6.7	85.7	0.16	-0.32	2.03	1.82
5	CTMA-CTGR	0.6	-0.9	-7.8	0.05	-0.09	-0.29	1.51
6	CTMA-log0424b_IRY8	0.0	-1.9	-4.3	0.00	-0.16	-0.14	1.73

R.M.S. 2.8 4.1 61.1 0.18 0.22 1.49 ( 1.50)

SUBNET 'New Subnet' Tau-VALUES(X-Y-Z) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				( X )	( Y )	( Z )	( X )	( Y )	( Z )	( X )	( Y )	( Z )	
1	acu5-log0424b_IRY8		94056.4	1.8	-2.7	3.0	16.3	33.5	27.3	0.11	0.08	0.11	1.77
2	CTGR-acu5		107097.1	1.8	-0.7	1.6	17.7	34.4	30.3	0.10	0.02	0.05	1.96
3	CTGR-log0424b_IRY8		14545.2	-0.1	0.0	-0.1	3.7	7.4	6.1	0.02	0.00	0.02	0.20
4	CTMA-acu5		110137.9	0.6	-2.2	2.5	19.0	33.5	31.6	0.03	0.07	0.08	1.82
5	CTMA-CTGR		45998.4	0.0	-0.1	-0.6	11.0	21.8	19.0	0.00	0.01	0.03	1.51
6	CTMA-log0424b_IRY8		51928.4	-0.2	1.4	-0.5	11.7	24.7	20.8	0.02	0.05	0.02	1.73

SUBNET 'New Subnet' Tau-VALUES(N-E-U) for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(North)	(East)	(Up)	(North)	(East)	(Up)	(North)	(East)	(Up)	
1	acu5-log0424b_IRY8		94056.4	0.2	0.9	4.3	18.3	15.1	39.7	0.01	0.06	0.11	1.77
2	CTGR-acu5		107097.1	0.4	1.5	2.0	20.1	15.9	41.9	0.02	0.10	0.05	1.96
3	CTGR-log0424b_IRY8		14545.2	-0.1	-0.1	-0.1	4.1	3.4	8.8	0.02	0.02	0.01	0.20
4	CTMA-acu5		110137.9	0.3	-0.1	3.4	20.8	16.1	42.3	0.02	0.01	0.08	1.82
5	CTMA-CTGR		45998.4	-0.5	0.0	-0.3	12.6	10.1	26.4	0.04	0.00	0.01	1.51
6	CTMA-log0424b_IRY8		51928.4	0.5	0.2	-1.3	13.4	11.3	29.6	0.04	0.02	0.05	1.73

SUBNET 'New Subnet' Tau-VALUES for VECTORS (Tau critical value = 3.00)

#	Points from - to	Vector status	Distance (m)	Residuals (mm)			Residual Sigmas (mm)			Tau Values			Redundancy number (0..3)
				(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	(Dist)	(Azim)	(Elev)	
1	acu5-log0424b_IRY8		94056.4	-0.9	-0.3	4.3	11.5	14.1	31.1	-0.08	-0.02	0.14	1.77
2	CTGR-acu5		107097.1	1.5	0.3	2.0	12.9	16.3	33.8	0.12	0.02	0.06	1.96
3	CTGR-log0424b_IRY8		14545.2	-0.1	0.1	-0.1	0.9	1.1	2.3	-0.09	0.06	-0.05	0.20
4	CTMA-acu5		110137.9	-0.1	-0.3	3.4	12.5	16.4	32.8	-0.01	-0.02	0.10	1.82
5	CTMA-CTGR		45998.4	0.5	0.2	-0.3	9.0	7.2	18.6	0.05	0.03	-0.01	1.51
6	CTMA-log0424b_IRY8		51928.4	-0.3	-0.5	-1.3	9.9	8.9	22.7	-0.03	-0.05	-0.06	1.73

SUBNET 'New Subnet': CONTROL POINTS SUMMARY in NAD83( BLH )

#	Point name	Status		Coordinates			Sigmas (mm)		
		Plane	Height	Latitude	Longitude	height (m)	s(Lat)	s(Lon)	s(Hei)
1	acu5	Fixed	Fixed	41°44'36.79685"N	70°53'13.02743"W	6.5600			
2	CTGR	Fixed	Fixed	41°20'07.03570"N	72°02'58.96956"W	-18.2400			
3	CTMA	Fixed	Fixed	41°43'52.91712"N	72°12'38.87752"W	55.2900			

```

;SOFTWARE: Pinnacle Ver. 1000
;Project Name: FEMA TASK 9 CT SHORE
;Subnet Name: New Subnet
;Coordinate System: SPC83(sft)
;Zone: CT
;Linear Units: USFeet
;Geoid: g2003u04

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cluster20

```
;Name, N, E, Ell.H, Ortho.H, Sigma N, Sigma E, Sigma H, Description
acu5, 837136.9211, 1508396.4668, 21.5223, 0.0000, 0.0000, 0.0000, ""
CTGR, 683671.7992, 1192315.3918, -59.8424, 0.0000, 0.0000, 0.0000, ""
CTMA, 827673.8104, 1147177.5434, 181.3973, 0.0000, 0.0000, 0.0000, ""
log0424b_IRY8, 684829.2504, 1240021.3259, -96.4834, 0.0127, 0.0105, 0.0275, ""
```

## **APPENDIX III**

### **RTK RAW DATA WITH ADJUSTMENT CLUSTER 1 THROUGH 20**

FEMA\_Cluster\_1\_ADJUSTED

```

JB,NMFEMA_CHKPTRSVY_CT_RI_SHORE,DT03-13-2007,TM09:12:33
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--DATE 3/13/07
--DATE 3/13/07 MKW M.SUN 55*F
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000, OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNNGEOID03 (Conus)
CG,AO1,GO1
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
SP,PN100,N 0.0,E 0.0,EL,--Cogo
DP,PN100
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--12:52:52,Get autonomous base position at BASE:LA41.24102127,LN-72.504745158,HT-65.424136
--New point created by GPS autonomous base setup
EE,GF32,SG313125259
EP,TM12:52:59,LA41.24102127,LN-72.504745158,HT-65.424136,RH0.0,RV0.0,GM1,CL1
SP,PN100,N 0.0,E 0.0,EL-65.424136,--
--03/13:12:52:59,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,HO0.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN100,LA41.24102127,LN-72.504745158,HT-65.424136,SG313125259
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--12:53:52,Set ROVER receiver with base reference position:LA41.24102127,LN-72.504745158,HT-65.424136
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,HO0.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 707520.075304,E 973522.057115,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 707520.075304,E 973522.057115,LZ0.0,SO0.00000,SA0.00000,GNNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CHKPTRSVY_CT_RI_SHORE,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN100,N 707520.075304,E 973522.057115,EL31.6718,--
EE,GF0,SG313125259
EP,TM12:54:46,LA41.24102127,LN-72.504745158,HT-65.424136,RH0.0,RV0.0,GM1,CL1
GP,PN100,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM13:19:36,LA41.233182258,LN-72.513749085,HT-
83.622207,RH0.023361,RV0.031424,DH0.699324,DV0.940686,GM4,CL1
BL,DCROVER,PN101,DX-2890.607081,DY-3566.692671,DZ-2926.690122,--
URBAN_BITLOT_S&S,GM4,CL1,HP0.023361,VP0.031424
CV,DCROVER,SV4,SC0.007121,XX1.691747e-005,XY-7.333233e-006,XZ-3.146017e-006,YY6.432331e-005,YZ-3.132172e-005,ZZ6.119981e-005
GS,PN101,N 703639.036916,E 969703.794361,EL13.495241,--URBAN_BITLOT_S&S
EP,TM13:51:08,LA41.221652516,LN-
72.534421437,HT82.26454,RH0.037867,RV0.048139,DH0.891048,DV1.132771,GM4,CL1
BL,DCROVER,PN102,DX-10602.919867,DY-11344.626324,DZ-8535.408934,--LX6542,GM4,CL1,HP0.037867,VP0.048139
CV,DCROVER,SV4,SC0.011542,XX3.756302e-005,XY-3.512482e-005,XZ1.427673e-005,YY2.294269e-004,YZ-4.697600e-005,ZZ8.151439e-005
GS,PN102,N 696032.238158,E 960032.267412,EL179.377141,--LX6542
EP,TM13:53:50,LA41.221652512,LN-
72.534421426,HT82.293017,RH0.039195,RV0.052758,DH0.907312,DV1.221281,GM4,CL1
BL,DCROVER,PN103,DX-10602.906248,DY-11344.640012,DZ-8535.392311,--
LX6542_CHK,GM4,CL1,HP0.039195,VP0.052758

```

FEMA\_Cluster\_1\_ADJUSTED

CV,DCROVER,SV4,SC0.011947,XX5.065411e-005,XY-3.733936e-005,XZ4.290578e-005,YY2.362194e-004,YZ-6.356692e-005,ZZ1.144428e-004

GS,PN103,N 696032.234131,E 960032.275938,EL179.405618,--LX6542\_CHK

EP,TM14:13:09,LA41.230595413,LN-72.522655518,HT-99.060937,RH0.035592,RV0.064139,DH0.962368,DV1.734272,GM4,CL1

BL,DCROVER,PN104,DX-5957.962406,DY-6311.627212,DZ-4901.242844,--MXDVGTM,GM4,CL1,HP0.035592,VP0.064139

CV,DCROVER,SV4,SC0.010848,XX5.604950e-005,XY-5.483203e-005,XZ5.661290e-005,YY2.712741e-004,YZ-1.378171e-004,ZZ1.725529e-004

GS,PN104,N 701025.872905,E 965960.423138,EL-1.949352,--MXDVGTM

EP,TM14:23:47,LA41.230350447,LN-72.522887981,HT-95.542211,RH0.038965,RV0.064624,DH0.998312,DV1.655705,GM4,CL1

BL,DCROVER,PN105,DX-6078.302628,DY-6522.940034,DZ-5084.9831,--LX1627,GM4,CL1,HP0.038965,VP0.064624

CV,DCROVER,SV4,SC0.011877,XX1.109055e-004,XY-9.918105e-005,XZ9.979058e-005,YY2.043289e-004,YZ-1.302703e-004,ZZ2.138146e-004

GS,PN105,N 700778.189889,E 965782.865624,EL1.571966,--LX1627

EP,TM14:25:14,LA41.230350493,LN-72.522888001,HT-95.646109,RH0.036764,RV0.067775,DH0.971822,DV1.791574,GM4,CL1

BL,DCROVER,PN106,DX-6078.307052,DY-6522.885479,DZ-5084.964679,--LX1627\_CHK,GM4,CL1,HP0.036764,VP0.067775

CV,DCROVER,SV4,SC0.011206,XX7.600821e-005,XY-8.849087e-005,XZ8.581351e-005,YY2.637655e-004,YZ-1.491796e-004,ZZ2.125429e-004

GS,PN106,N 700778.236148,E 965782.850501,EL1.468067,--LX1627\_CHK

EP,TM14:39:04,LA41.232094612,LN-72.511012022,HT-69.773338,RH0.030644,RV0.052374,DH0.984397,DV1.682436,GM4,CL1

BL,DCROVER,PN107,DX-679.474586,DY-3657.180251,DZ-3743.464748,--LX2863,GM4,CL1,HP0.030644,VP0.052374

CV,DCROVER,SV4,SC0.00934,XX2.512167e-005,XY-1.205553e-005,XZ2.329197e-005,YY1.712284e-004,YZ-9.627860e-005,ZZ1.457333e-004

GS,PN107,N 702535.61709,E 971788.635492,EL27.406394,--LX2863

EP,TM14:41:06,LA41.232094608,LN-72.511012031,HT-69.684769,RH0.042442,RV0.100567,DH1.408083,DV3.336506,GM4,CL1

BL,DCROVER,PN108,DX-679.448206,DY-3657.291429,DZ-3743.372833,--LX2863\_CHK,GM4,CL1,HP0.042442,VP0.100567

CV,DCROVER,SV4,SC0.012936,XX1.455953e-004,XY-1.975479e-004,XZ1.842807e-004,YY4.977833e-004,YZ-3.770755e-004,ZZ4.635706e-004

GS,PN108,N 702535.613099,E 971788.628461,EL27.494963,--LX2863\_CHK

EP,TM15:17:48,LA41.220362607,LN-72.514461175,HT-81.473598,RH0.033059,RV0.042844,DH0.814043,DV1.054984,GM4,CL1

BL,DCROVER,PN109,DX-1669.94028,DY-9367.204911,DZ-9623.413735,--FORSTCONV1,GM4,CL1,HP0.033059,VP0.042844

CV,DCROVER,SV4,SC0.010077,XX2.885146e-005,XY-2.306357e-005,XZ5.322919e-006,YY1.337926e-004,YZ-4.604345e-005,ZZ1.094279e-004

GS,PN109,N 694713.065059,E 969149.439146,EL15.84059,--FORSTCONV1

EP,TM15:21:42,LA41.220266708,LN-72.514585285,HT-81.541917,RH0.033508,RV0.051424,DH0.821111,DV1.260148,GM4,CL1

BL,DCROVER,PN110,DX-1741.48321,DY-9456.339957,DZ-9696.30321,--FORSTCONV2,GM4,CL1,HP0.033508,VP0.051424

CV,DCROVER,SV4,SC0.010213,XX5.947128e-005,XY-5.396566e-005,XZ4.936461e-005,YY1.207783e-004,YZ-7.908526e-005,ZZ1.697396e-004

GS,PN110,N 694616.126376,E 969054.682221,EL15.772951,--FORSTCONV2

EP,TM15:39:06,LA41.230595409,LN-72.522655537,HT-99.031116,RH0.040597,RV0.051163,DH1.062853,DV1.339471,GM4,CL1

BL,DCROVER,PN111,DX-5957.970711,DY-6311.658206,DZ-4901.224191,--CHK\_PT104,GM4,CL1,HP0.040597,VP0.051163

CV,DCROVER,SV4,SC0.012374,XX3.822762e-005,XY-1.396276e-005,XZ-3.336009e-005,YY1.457722e-004,YZ-8.323017e-005,ZZ2.123035e-004

GS,PN111,N 701025.868935,E 965960.408734,EL-1.919531,--CHK\_PT104

EP,TM15:47:57,LA41.233182313,LN-72.513749052,HT-83.581866,RH0.024522,RV0.029968,DH0.688147,DV0.840969,GM4,CL1

BL,DCROVER,PN112,DX-2890.58839,DY-3566.673102,DZ-2926.642779,--CHK\_PT101,GM4,CL1,HP0.024522,VP0.029968

CV,DCROVER,SV4,SC0.007474,XX2.518532e-005,XY-2.135168e-005,XZ4.676749e-006,YY5.888580e-005,YZ-2.073657e-005,ZZ5.522785e-005

GS,PN112,N 703639.091981,E 969703.819826,EL13.53558,--CHK\_PT101

EP,TM15:59:12,LA41.241074846,LN-72.504680825,HT-65.720999,RH0.022316,RV0.025867,DH0.788513,DV0.913981,GM4,CL1

BL,DCROVER,PN113,DX36.247502,DY48.809051,DZ40.591183,--GRASS,GM4,CL1,HP0.022316,VP0.025867

CV,DCROVER,SV4,SC0.006802,XX2.018807e-005,XY-1.314860e-005,XZ-4.100873e-006,YY3.816882e-005,YZ-1.761357e-005,ZZ5.007291e-005

GS,PN113,N 707574.247158,E 973571.143244,EL31.374563,--GRASS

--Survey Pro Version: 4.2.1

--Data Collector Serial Number: SS35A22511

--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

DP,PN1

--Import GPS Control - create GPS control point

EE,GF14,SG313125259

EP,TM13:35:14,LA41.24102127,LN-72.504745158,HT-65.424136,RH0.0,RV0.0,GM1,CL1

SP,PN100,N 707518.794867,E 973518.506,EL47.48183,--

--Solve calibration from control points.

CT,PN100,DM4,RH0.0,RV0.0

EP,TM13:35:26,LA41.24102127,LN-72.504745158,HT-65.424136,RH0.0,RV0.0,GM1,CL2

RP,PN100,N 707518.794867,E 973518.506,EL47.48183,--

--Solve calibration from control points.

HA,N 707520.075304,E 973522.057115,TH-1.280438,TE-3.551115,RT0.0000,SC1.000000000



FEMA\_Cluster\_1\_ADJUSTED

VA,PV3,N 707518.794867,E 973518.506,LZ15.81003,SO0.00000,SA0.00000,GNCEOID03 (Conus)  
 CS,CO3,ZGSite,ZNFEMA\_CHKPTSrvy\_CT\_RI\_SHORE,DNNAD 1983 (Conus)

-->>

-->> Begin Adjust with Projection.

GR,PN101,N 703637.756478,E 969700.243246,EL29.305271,--URBAN\_BITLOT\_S&S  
 GR,PN102,N 696030.95772,E 960028.716297,EL195.187171,--LX6542  
 GR,PN103,N 696030.953694,E 960028.724823,EL195.215648,--LX6542\_CHK  
 GR,PN104,N 701024.592468,E 965956.872022,EL13.860678,--MXDVGTVN  
 GR,PN105,N 700776.909452,E 965779.314509,EL17.381997,--LX1627  
 GR,PN106,N 700776.955711,E 965779.299386,EL17.278097,--LX1627\_CHK  
 GR,PN107,N 702534.336652,E 971785.084377,EL43.216424,--LX2863  
 GR,PN108,N 702534.332662,E 971785.077346,EL43.304993,--LX2863\_CHK  
 GR,PN109,N 694711.784622,E 969145.888031,EL31.65062,--FORSTCONV1  
 GR,PN110,N 694614.845938,E 969051.131106,EL31.582981,--FORSTCONV2  
 GR,PN111,N 701024.588497,E 965956.857619,EL13.890499,--CHK\_PT104  
 GR,PN112,N 703637.811544,E 969700.268711,EL29.345611,--CHK\_PT101  
 GR,PN113,N 707572.96672,E 973567.592129,EL47.184593,--GRASS

-->> End Adjust with Projection.

-->>

--Survey Pro Version: 4.2.1

--Data Collector Serial Number: SS35A22511

--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

--Survey Pro Version: 4.2.1

--Data Collector Serial Number: SS35A22511

--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

--Survey Pro Version: 4.2.1

--Data Collector Serial Number: SS35A22511

--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

--Survey Pro Version: 4.2.1

--Data Collector Serial Number: SS35A22511

--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

--Survey Pro Version: 4.2.1

--Data Collector Serial Number: SS35A22511

--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

--Survey Pro Version: 4.2.1

--Data Collector Serial Number: SS35A22511

--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

--Survey Pro Version: 4.2.1

--Data Collector Serial Number: SS35A22511

--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

--Survey Pro Version: 4.2.1

--Data Collector Serial Number: SS35A22511

--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

--Survey Pro Version: 4.2.1

--Data Collector Serial Number: SS35A22511

--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

--Survey Pro Version: 4.2.1

--Data Collector Serial Number: SS35A22511

--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

--Survey Pro Version: 4.2.1

--Data Collector Serial Number: SS35A22511

--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity

--4-11-07 MKW BC SUN 50°F

--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm

--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm

OC,OP109,N 694711.784622,E 969145.888031,EL31.65062,--FORSTCONV1

--HR:0.0 (0.0 + 0.0 Offset)

LS,HI0.0,HR0.0

BK,OP109,BP110,BS224.205253,BC0.0000

--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm

--BS check 109 - 110:ZE90.0002,SD135.56,HD err= 0.001956, VD err= 0.066324

--BS Circle check : angular err= 0.0000

SS,OP109,FP114,AR128.2454,ZE90.1733,SD138.615,--FOREST

--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm

--HR:1.0 (1.0 + 0.0 Offset)

LS,HI0.0,HR1.0

SS,OP109,FP115,AR128.2454,ZE89.5227,SD138.62,--FORESTCHK

--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity

--12:16:04,Set BASE receiver at known position

RX,DCBASE,RA6.737853,RE0,FI

EQ,DCBASE,RXLegacy E,RSAB7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,HO0.0,VO0.175853

AH,DCBASE,MA6.562,ME2,RA6.737853

BP,PN100,LA41.24102127,LN-72.504745158,HT-65.424136,SG313125259

--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

--12:20:58,Set ROVER receiver with base reference position:LA41.24102127,LN-72.504745158,HT-65.424136

RX,DCROVER,RA6.909768,RE0,FI

FEMA\_Cluster\_1\_ADJUSTED

EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768  
 AH,DCROVER,MA6.562,ME2,RA6.909768  
 EP,TM12:37:08,LA41.250813601,LN-72.504527303,HT-  
 75.70292,RH0.027757,RV0.04009,DH0.795804,DV1.149417,GM4,CL1  
 BL,DCROVER,PN116,DX-987.362539,DY3761.615983,DZ4390.264328,--BITLOT,GM4,CL1,HP0.027757,VP0.04009  
 CV,DCROVER,SV4,SC0.00846,XX2.713722e-005,XY-1.882284e-005,XZ3.406364e-005,YY5.798315e-005,YZ-4.521082e-  
 005,ZZ1.357706e-004  
 GS,PN116,N 713381.251601,E 973691.031928,EL37.075556,--BITLOT  
 EP,TM12:56:18,LA41.235210232,LN-72.514086833,HT-  
 97.068164,RH0.031999,RV0.051882,DH0.942638,DV1.528326,GM4,CL1  
 BL,DCROVER,PN117,DX-3539.547843,DY-2335.917264,DZ-1395.788973,--GRASS,GM4,CL1,HP0.031999,VP0.051882  
 CV,DCROVER,SV4,SC0.009753,XX4.266333e-005,XY-3.546785e-005,XZ4.956704e-005,YY1.081503e-004,YZ-8.615226e-  
 005,ZZ1.943849e-004  
 GS,PN117,N 705690.672668,E 969445.461576,EL15.806061,--GRASS  
 EP,TM13:06:01,LA41.230595401,LN-72.522655521,HT-  
 99.044597,RH0.034162,RV0.050318,DH0.849681,DV1.251519,GM4,CL1  
 BL,DCROVER,PN118,DX-5957.976195,DY-6311.643792,DZ-4901.251241,--  
 PT104CHK4\_11\_07,GM4,CL1,HP0.034162,VP0.050318  
 CV,DCROVER,SV4,SC0.010413,XX3.904552e-005,XY-2.739825e-005,XZ3.423503e-005,YY1.313277e-004,YZ-7.529771e-  
 005,ZZ1.732766e-004  
 GS,PN118,N 701024.580439,E 965956.869444,EL13.877019,--PT104CHK4\_11\_07  
 EP,TM13:10:47,LA41.230350447,LN-72.522888026,HT-  
 95.449932,RH0.031791,RV0.045632,DH0.868851,DV1.247141,GM4,CL1  
 BL,DCROVER,PN119,DX-6078.279105,DY-6523.043493,DZ-5084.899342,--  
 LX1627CHK4\_11\_07,GM4,CL1,HP0.031791,VP0.045632  
 CV,DCROVER,SV4,SC0.00969,XX3.927709e-005,XY-3.085134e-005,XZ3.964677e-005,YY8.371316e-005,YZ-5.833650e-  
 005,ZZ1.643558e-004  
 GS,PN119,N 700776.90904,E 965779.279828,EL17.474274,--LX1627CHK4\_11\_07  
 EP,TM13:20:54,LA41.220362583,LN-72.514461212,HT-  
 81.498145,RH0.035268,RV0.043956,DH0.769841,DV0.959489,GM4,CL1  
 BL,DCROVER,PN120,DX-1669.963326,DY-9367.198321,DZ-9623.458018,--  
 PT109CHK4\_11\_07,GM4,CL1,HP0.035268,VP0.043956  
 CV,DCROVER,SV4,SC0.01075,XX4.615060e-005,XY-3.406147e-005,XZ2.003819e-005,YY1.016001e-004,YZ-4.640601e-  
 005,ZZ1.473117e-004  
 GS,PN120,N 694711.760687,E 969145.859915,EL31.626073,--PT109CHK4\_11\_07  
 EP,TM13:24:10,LA41.220266662,LN-72.51458531,HT-  
 81.547493,RH0.037723,RV0.048349,DH0.793631,DV1.017195,GM4,CL1  
 BL,DCROVER,PN121,DX-1741.488632,DY-9456.358519,DZ-9696.349388,--  
 PT110CHK4\_11\_07,GM4,CL1,HP0.037723,VP0.048349  
 CV,DCROVER,SV4,SC0.011498,XX5.960726e-005,XY-4.513760e-005,XZ3.141713e-005,YY1.249387e-004,YZ-5.750212e-  
 005,ZZ1.648353e-004  
 GS,PN121,N 694614.799283,E 969051.111848,EL31.577406,--PT110CHK4\_11\_07  
 --Survey Pro Version: 4.2.1  
 --Data Collector Serial Number: SS35A22511  
 --Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
 --Survey Pro Version: 4.2.1  
 --Data Collector Serial Number: SS35A22511  
 --Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
 --Survey Pro Version: 4.2.1  
 --Data Collector Serial Number: SS35A22511  
 --Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
 --Survey Pro Version: 4.2.1  
 --Data Collector Serial Number: SS35A22511  
 --Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
 --Survey Pro Version: 4.2.1  
 --Data Collector Serial Number: SS35A22511  
 --Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
 DP,PN101  
 DP,PN112  
 DP,PN113  
 --Import GPS Control - create GPS control point  
 EE,GF14,SG313125259  
 EP,TM09:25:43,LA41.24102127,LN-72.504745158,HT-65.424136,RH0.0,RV0.0,GM1,CL1  
 SP,PN100,N 707518.791827,E 973518.509045,EL47.463129,--  
 --Solve calibration from control points.  
 CT,PN100,DM4,RH0.0,RV0.0  
 EP,TM09:25:56,LA41.24102127,LN-72.504745158,HT-65.424136,RH0.0,RV0.0,GM1,CL2  
 RP,PN100,N 707518.791827,E 973518.509045,EL47.463129,--  
 --Solve calibration from control points.  
 HA,N 707520.075304,E 973522.057115,TH-1.283477,TE-3.54807,RT0.0000,SC1.0000000000  
 VA,PV3,N 707518.791827,E 973518.509045,LZ15.79133,SO0.00000,SA0.00000,GNNGEOID03 (Conus)  
 CS,CO3,ZGSite,ZNFEMA\_CHKPTS RVY\_CT\_RI\_SHORE,DNNAD 1983 (Conus)  
 -->>  
 -->> Begin Adjust with Projection.

FEMA\_Cluster\_1\_ADJUSTED

GR,PN102,N 696030.95772,E 960028.716297,EL195.168471,--LX6542  
GR,PN103,N 696030.953694,E 960028.724823,EL195.196948,--LX6542\_CHK  
GR,PN104,N 701024.592468,E 965956.872022,EL13.841978,--MXDVGTN  
GR,PN105,N 700776.909452,E 965779.314509,EL17.363296,--LX1627  
GR,PN106,N 700776.955711,E 965779.299386,EL17.259396,--LX1627\_CHK  
GR,PN107,N 702534.336652,E 971785.084377,EL43.197724,--LX2863  
GR,PN108,N 702534.332662,E 971785.077346,EL43.286293,--LX2863\_CHK  
GR,PN109,N 694711.784622,E 969145.888031,EL31.631919,--FORSTCONV1  
GR,PN110,N 694614.845938,E 969051.131106,EL31.564281,--FORSTCONV2  
GR,PN111,N 701024.588497,E 965956.857619,EL13.871798,--CHK\_PT104  
GR,PN116,N 713381.251601,E 973691.031928,EL37.056855,--BITLOT  
GR,PN117,N 705690.672668,E 969445.461576,EL15.78736,--GRASS  
GR,PN118,N 701024.580439,E 965956.869444,EL13.858319,--PT104CHK4\_11\_07  
GR,PN119,N 700776.90904,E 965779.279828,EL17.455574,--LX1627CHK4\_11\_07  
GR,PN120,N 694711.760687,E 969145.859915,EL31.607373,--PT109CHK4\_11\_07  
GR,PN121,N 694614.799283,E 969051.111848,EL31.558705,--PT110CHK4\_11\_07  
-->> End Adjust with Projection.  
-->>  
SP,PN114,N 694849.290538,E 969128.429205,EL30.923981,--FOREST  
SP,PN115,N 694849.296959,E 969128.42839,EL30.936058,--FORESTCHK  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

FEMA\_SHORE\_CLUSTER\_2\_ADJ

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JB,NMFEMA_SHORE_CLUSTER_2,DT04-02-2007,TM08:04:25
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--4/02/07 MKW BC CLOUDY 50°F
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000,OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0,SP0.0
00000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNGEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--11:07:32,Get autonomous base position at BASE:LA41.003950422,LN-73.372034388,HT-103.489071
--New point created by GPS autonomous base setup
EE,GF32,SG402110740
EP,TM11:07:40,LA41.003950422,LN-73.372034388,HT-103.489071,RH0.0,RV0.0,GM1,CL1
SP,PN200,N 0.0,E 0.0,EL-103.489071,--
--04/02:11:07:40,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,HOO.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN200,LA41.003950422,LN-73.372034388,HT-103.489071,SG402110740
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--11:08:57,Set ROVER receiver with base reference position:LA41.003950422,LN-73.372034388,HT-103.489071
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,HOO.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 565939.956601,E 759249.198315,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 565939.956601,E 759249.198315,LZ0.0,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_SHORE_CLUSTER_2,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN200,N 565939.956601,E 759249.198315,EL-3.081215,--
EE,GF0,SG402110740
EP,TM11:09:33,LA41.003950422,LN-73.372034388,HT-103.489071,RH0.0,RV0.0,GM1,CL1
GP,PN200,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM11:29:59,LA41.012410495,LN-73.381300299,HT-
29.889471,RH0.040744,RV0.057181,DH0.870858,DV1.222174,GM4,CL1
BL,DCROVER,PN201,DX-4692.24529,DY1651.224869,DZ3454.262429,--LX1147,GM4,CL1,HP0.040744,VP0.057181
CV,DCROVER,SV4,SC0.012419,XX4.133966e-005,XY4.216186e-006,XZ-2.150885e-005,YY2.184096e-004,YZ-1.150610e-
004,ZZ1.982366e-004
GS,PN201,N 570494.891843,E 755258.622057,EL70.478201,--LX1147
EP,TM11:32:25,LA41.012410461,LN-73.381300313,HT-
29.885046,RH0.03068,RV0.045358,DH0.745547,DV1.102224,GM4,CL1
BL,DCROVER,PN202,DX-4692.242923,DY1651.239779,DZ3454.228952,--LX1147CHK,GM4,CL1,HP0.03068,VP0.045358
CV,DCROVER,SV4,SC0.009351,XX2.937925e-005,XY-6.574519e-006,XZ2.351246e-006,YY1.678524e-004,YZ-6.748175e-
005,ZZ8.135341e-005
GS,PN202,N 570494.857586,E 755258.611098,EL70.482628,--LX1147CHK
EP,TM11:55:24,LA41.010423521,LN-73.373429351,HT-
99.200703,RH0.019685,RV0.032156,DH0.58395,DV0.95391,GM4,CL1
BL,DCROVER,PN203,DX-1488.134578,DY1271.204592,DZ1891.545936,--GRASS,GM4,CL1,HP0.019685,VP0.032156
CV,DCROVER,SV4,SC0.006,XX1.546236e-005,XY-8.710082e-006,XZ3.194883e-006,YY6.630435e-005,YZ-3.723582e-
005,ZZ5.029927e-005
GS,PN203,N 568453.692047,E 758205.182961,EL1.165223,--GRASS
EP,TM12:41:42,LA41.000693911,LN-73.342258267,HT-
100.416559,RH0.034647,RV0.057283,DH0.830653,DV1.373347,GM4,CL1
BL,DCROVER,PN204,DX13685.322852,DY1771.587949,DZ-2485.030564,--LX7439,GM4,CL1,HP0.034647,VP0.057283

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FEMA\_SHORE\_CLUSTER\_2\_ADJ

CV,DCROVER,SV4,SCO.01056,XX6.378296e-005,XY-5.172504e-005,XZ6.385637e-005,YY2.156035e-004,YZ-1.012123e-004,ZZ1.369859e-004  
GS,PN204,N 562510.485166,E 772845.241626,EL-0.162031,--LX7439  
EP,TM12:42:59,LA41.000693913,LN-73.342258279,HT-  
100.431561,RH0.034714,RV0.057361,DH0.832259,DV1.375223,GM4,CL1  
BL,DCROVER,PN205,DX13685.322223,DY1771.605917,DZ-2485.037653,--LX7439CHK,GM4,CL1,HP0.034714,VP0.057361  
CV,DCROVER,SV4,SCO.010581,XX6.497374e-005,XY-5.311663e-005,XZ6.533424e-005,YY2.140753e-004,YZ-1.012608e-004,ZZ1.385877e-004  
GS,PN205,N 562510.487875,E 772845.231756,EL-0.177033,--LX7439CHK  
EP,TM13:03:11,LA41.000713931,LN-73.341767123,HT-  
97.501764,RH0.035584,RV0.103093,DH0.859012,DV2.488693,GM4,CL1  
BL,DCROVER,PN206,DX14043.391317,DY1888.720833,DZ-2467.826363,--MXDVEG,GM4,CL1,HP0.035584,VP0.103093  
CV,DCROVER,SV4,SCO.010846,XX9.147777e-005,XY-1.378596e-004,XZ1.378714e-004,YY5.769329e-004,YZ-4.335014e-004,ZZ4.366205e-004  
GS,PN206,N 562527.163635,E 773222.004909,EL2.745748,--MXDVEG  
EP,TM13:28:48,LA41.002880007,LN-73.341799065,HT-  
104.7381,RH0.034646,RV0.055569,DH0.770249,DV1.235415,GM4,CL1  
BL,DCROVER,PN207,DX13611.559138,DY3266.691109,DZ-818.196596,--FORSTCONV1,GM4,CL1,HP0.034646,VP0.055569  
CV,DCROVER,SV4,SCO.01056,XX4.952999e-005,XY-3.908670e-005,XZ5.546254e-005,YY1.223960e-004,YZ-1.004167e-004,ZZ2.264674e-004  
GS,PN207,N 564719.601016,E 773218.36061,EL-4.539943,--FORSTCONV1  
EP,TM13:31:49,LA41.002859862,LN-73.341660371,HT-  
104.061434,RH0.037589,RV0.07105,DH0.83353,DV1.575529,GM4,CL1  
BL,DCROVER,PN208,DX13717.477461,DY3283.44169,DZ-833.138344,--FORSTCONV2,GM4,CL1,HP0.037589,VP0.07105  
CV,DCROVER,SV4,SCO.011457,XX7.084828e-005,XY-6.371723e-005,XZ7.050239e-005,YY2.348295e-004,YZ-1.857844e-004,ZZ2.945764e-004  
GS,PN208,N 564698.201688,E 773324.496533,EL-3.864669,--FORSTCONV2  
EP,TM14:00:09,LA41.023344889,LN-73.352608522,HT-  
92.546286,RH0.031947,RV0.0398,DH0.705518,DV0.878944,GM4,CL1  
BL,DCROVER,PN209,DX6267.176104,DY9725.668425,DZ8707.155882,--BIT\_PAVEMNT,GM4,CL1,HP0.031947,VP0.0398  
CV,DCROVER,SV4,SCO.009738,XX3.324025e-005,XY-2.385143e-005,XZ4.769580e-006,YY9.657050e-005,YZ-4.005103e-005,ZZ1.121726e-004  
GS,PN209,N 577385.030647,E 768120.605516,EL7.455817,--BIT\_PAVEMNT  
EP,TM14:21:40,LA41.010423505,LN-73.37342938,HT-  
99.168561,RH0.021823,RV0.027736,DH0.667929,DV0.848903,GM4,CL1  
BL,DCROVER,PN210,DX-1488.139935,DY1271.178275,DZ1891.533201,--CHKPT203,GM4,CL1,HP0.021823,VP0.027736  
CV,DCROVER,SV4,SCO.006652,XX1.983108e-005,XY-1.701839e-005,XZ4.234546e-006,YY5.147552e-005,YZ-1.899269e-005,ZZ4.440744e-005  
GS,PN210,N 568453.67581,E 758205.160334,EL1.197365,--CHKPT203  
DP,PN1  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
OC,OP207,N 564719.601016,E 773218.36061,EL-4.539943,--FORSTCONV1  
--HR:0.0 (0.0 + 0.0 Offset)  
LS,HI0.0,HR0.0  
BK,OP207,BP208,BS101.235733,BC0.0000  
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
--BS check 207 - 208:ZE89.3817,SD108.255,HD err= -0.01888, VD err= 0.008582  
--BS Circle check : angular err= 0.0000  
OC,OP207,N 564719.601016,E 773218.36061,EL-4.539943,--FORSTCONV1  
BK,OP207,BP208,BS101.235733,BC0.0000  
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
SS,OP207,FP211,AR200.3241,ZE89.1422,SD107.74,--FOREST  
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--HR:1.0 (1.0 + 0.0 Offset)  
LS,HI0.0,HR1.0  
SS,OP207,FP212,AR200.3245,ZE88.4238,SD107.735,--FORESTCHK  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
--4-05-07 MKW BC CLOUDY 42°F FOREST SHOTS  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511

FEMA\_SHORE\_CLUSTER\_2\_ADJ

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--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE,GF14,SG402110740
EP,TM08:31:09,LA41.003950422,LN-73.372034388,HT-103.489071,RH0.0,RV0.0,GM1,CL1
SP,PN200,N 565945.494074,E 759245.293496,EL7.300039,--
--Solve calibration from control points.
CT,PN200,DM4,RH0.0,RV0.0
EP,TM08:33:24,LA41.003950422,LN-73.372034388,HT-103.489071,RH0.0,RV0.0,GM1,CL2
RP,PN200,N 565945.494074,E 759245.293496,EL7.300039,--
--Solve calibration from control points.
HA,N 565939.956601,E 759249.198315,TH5.537473,TE-3.904819,RT0.0000,SC1.0000000000
VA,PV3,N 565945.494074,E 759245.293496,LZ10.381254,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_SHORE_CLUSTER_2,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN201,N 570500.429316,E 755254.717238,EL80.859455,--LX1147
GR,PN202,N 570500.395059,E 755254.706279,EL80.863881,--LX1147CHK
GR,PN203,N 568459.22952,E 758201.278142,EL11.546476,--GRASS
GR,PN204,N 562516.022639,E 772841.336807,EL10.219223,--LX7439
GR,PN205,N 562516.025348,E 772841.326937,EL10.204221,--LX7439CHK
GR,PN206,N 562532.701108,E 773218.10009,EL13.127001,--MXDVEG
GR,PN207,N 564725.138489,E 773214.455791,EL5.841311,--FORSTCONV1
GR,PN208,N 564703.739161,E 773320.591713,EL6.516584,--FORSTCONV2
GR,PN209,N 577390.56812,E 768116.700697,EL17.837071,--BIT_PAVEMNT
GR,PN210,N 568459.213283,E 758201.255515,EL11.578619,--CHKPT203
-->> End Adjust with Projection.
-->>
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
SP,PN211,N 564782.1376,E 773123.0394,EL7.271431,--FOREST
SP,PN212,N 564782.1273,E 773123.0598,EL7.265688,--FORESTCHK
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

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FEMA\_SHORE\_CLUSTER\_3\_ADJ

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JB,NMFEMA_SHORE_CLUSTER_3,DT04-02-2007,TM19:05:58
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--4/03/07 MKW BC CLOUDY 50°F
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000,OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNCEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--07:24:35,Get autonomous base position at BASE:LA41.023027795,LN-73.31104143,HT-109.594425
--New point created by GPS autonomous base setup
EE,GF32,SG403072437
EP,TM07:24:37,LA41.023027795,LN-73.31104143,HT-109.594425,RH0.0,RV0.0,GM1,CL1
SP,PN300,N 0.0,E 0.0,EL-109.594425,--
--04/03:07:24:37,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN300,LA41.023027795,LN-73.31104143,HT-109.594425,SG403072437
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--07:25:36,Set ROVER receiver with base reference position:LA41.023027795,LN-73.31104143,HT-
109.594425
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 576881.58302,E 787708.46425,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 576881.58302,E 787708.46425,LZ0.0,SO0.00000,SA0.00000,GNCEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_SHORE_CLUSTER_3,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN300,N 576881.58302,E 787708.46425,EL-9.926507,--
EE,GF0,SG403072437
EP,TM07:26:15,LA41.023027795,LN-73.31104143,HT-109.594425,RH0.0,RV0.0,GM1,CL1
GP,PN300,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM07:31:04,LA41.022985638,LN-73.31092269,HT-
109.308535,RH0.02685,RV0.040842,DH0.921076,DV1.401068,GM4,CL1
BL,DCROVER,PN301,DX95.288155,DY-1.386655,DZ-31.887597,--FORSTCONV1,GM4,CL1,HP0.02685,VP0.040842
CV,DCROVER,SV4,SC0.008184,XX2.361268e-005,XY-1.158078e-005,XZ1.182134e-005,YY5.828690e-005,YZ-
5.908226e-005,ZZ1.400449e-004
GS,PN301,N 576838.107237,E 787799.070167,EL-9.64091,--FORSTCONV1
EP,TM07:34:46,LA41.023122444,LN-73.31098048,HT-
109.656104,RH0.027785,RV0.041406,DH0.937586,DV1.39818,GM4,CL1
BL,DCROVER,PN302,DX26.97176,DY73.487233,DZ72.316346,--FORSTCONV2,GM4,CL1,HP0.027785,VP0.041406
CV,DCROVER,SV4,SC0.008469,XX2.545763e-005,XY-1.390825e-005,XZ1.270196e-005,YY6.144223e-005,YZ-
5.893364e-005,ZZ1.441015e-004
GS,PN302,N 576976.958838,E 787756.020661,EL-9.991235,--FORSTCONV2
EP,TM07:44:27,LA41.024204872,LN-73.312540534,HT-
108.293628,RH0.029787,RV0.039035,DH0.915047,DV1.199147,GM4,CL1

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BL,DCROVER,PN303,DX-1323.065339,DY423.202024,DZ899.464555,--GRASS,GM4,CL1,HP0.029787,VP0.039035  
CV,DCROVER,SV4,SC0.009079,XX2.924469e-005,XY-1.515938e-005,XZ4.383666e-006,YY6.455511e-005,YZ-  
4.674365e-005,ZZ1.301902e-004  
GS,PN303,N 578083.123788,E 786570.427361,EL-8.633303,--GRASS  
EP,TM08:04:21,LA41.025496986,LN-73.301059631,HT-  
108.051941,RH0.025629,RV0.040387,DH0.817752,DV1.288633,GM4,CL1  
BL,DCROVER,PN304,DX3929.556187,DY2873.172215,DZ1885.883109,--BITLOT,GM4,CL1,HP0.025629,VP0.040387  
CV,DCROVER,SV4,SC0.007812,XX2.236550e-005,XY-3.087087e-007,XZ-7.427253e-006,YY1.077861e-004,YZ-  
6.381163e-005,ZZ8.240342e-005  
GS,PN304,N 579340.197339,E 792313.860747,EL-8.520463,--BITLOT  
EP,TM08:20:22,LA41.023687047,LN-73.301924765,HT-  
109.704504,RH0.023305,RV0.037033,DH0.696156,DV1.106216,GM4,CL1  
BL,DCROVER,PN305,DX3635.165338,DY1532.759542,DZ503.284686,--MIXEDVEG,GM4,CL1,HP0.023305,VP0.037033  
CV,DCROVER,SV4,SC0.007103,XX1.902287e-005,XY4.070509e-006,XZ-3.811524e-006,YY7.983599e-005,YZ-  
5.586137e-005,ZZ7.900983e-005  
GS,PN305,N 577514.197013,E 791634.99851,EL-10.11886,--MIXEDVEG  
EP,TM08:39:01,LA41.03413403,LN-73.290453796,HT-  
56.426659,RH0.035033,RV0.047903,DH0.977143,DV1.336134,GM4,CL1  
BL,DCROVER,PN306,DX7917.166975,DY7229.063177,DZ5458.745357,--LX0771,GM4,CL1,HP0.035033,VP0.047903  
CV,DCROVER,SV4,SC0.010678,XX5.166908e-005,XY-2.286369e-005,XZ-4.353647e-006,YY1.159385e-004,YZ-  
7.950270e-005,ZZ1.595979e-004  
GS,PN306,N 583989.658589,E 797415.030783,EL42.90466,--LX0771  
EP,TM08:40:43,LA41.034134044,LN-73.290453838,HT-  
56.38865,RH0.031174,RV0.046256,DH0.818401,DV1.214367,GM4,CL1  
BL,DCROVER,PN307,DX7917.125811,DY7229.053099,DZ5458.795874,--LX0771CHK,GM4,CL1,HP0.031174,VP0.046256  
CV,DCROVER,SV4,SC0.009502,XX3.360692e-005,XY-2.783716e-006,XZ-4.106413e-006,YY9.811651e-005,YZ-  
8.251905e-005,ZZ1.573411e-004  
GS,PN307,N 583989.672832,E 797414.998692,EL42.942669,--LX0771CHK  
EP,TM08:51:49,LA41.031540467,LN-  
73.304962247,HT14.559817,RH0.026429,RV0.040305,DH0.754143,DV1.150107,GM4,CL1  
BL,DCROVER,PN308,DX703.207495,DY3238.106002,DZ3526.044234,--LX7428,GM4,CL1,HP0.026429,VP0.040305  
CV,DCROVER,SV4,SC0.008056,XX2.903215e-005,XY-7.615475e-006,XZ1.358029e-005,YY7.147132e-005,YZ-  
5.928629e-005,ZZ1.153102e-004  
GS,PN308,N 581434.5847,E 789342.030199,EL114.092552,--LX7428  
EP,TM08:53:44,LA41.031540432,LN-  
73.304962255,HT14.539765,RH0.032564,RV0.048527,DH0.976087,DV1.454571,GM4,CL1  
BL,DCROVER,PN309,DX703.207655,DY3238.07563,DZ3526.039129,--LX7428CHK,GM4,CL1,HP0.032564,VP0.048527  
CV,DCROVER,SV4,SC0.009925,XX2.624166e-005,XY-4.364501e-006,XZ5.853193e-006,YY7.329109e-005,YZ-  
8.667642e-005,ZZ2.177554e-004  
GS,PN309,N 581434.549318,E 789342.023711,EL114.072501,--LX7428CHK  
EP,TM09:39:41,LA41.022985645,LN-73.310922704,HT-  
109.323022,RH0.018973,RV0.03076,DH0.650854,DV1.055197,GM4,CL1  
BL,DCROVER,PN310,DX95.285027,DY-1.386913,DZ-31.882677,--PT301CHK,GM4,CL1,HP0.018973,VP0.03076  
CV,DCROVER,SV4,SC0.005783,XX1.580721e-005,XY-1.346688e-005,XZ1.414807e-005,YY5.421755e-005,YZ-  
3.005791e-005,ZZ5.131810e-005  
GS,PN310,N 576838.11465,E 787799.059277,EL-9.655397,--PT301CHK  
EP,TM09:41:32,LA41.023122446,LN-73.310980512,HT-  
109.727679,RH0.018792,RV0.030462,DH0.645161,DV1.04581,GM4,CL1  
BL,DCROVER,PN311,DX26.929067,DY73.527918,DZ72.270618,--PT302CHK,GM4,CL1,HP0.018792,VP0.030462  
CV,DCROVER,SV4,SC0.005728,XX1.508176e-005,XY-1.203033e-005,XZ1.381784e-005,YY5.151642e-005,YZ-  
2.986470e-005,ZZ5.241701e-005  
GS,PN311,N 576976.960765,E 787755.996504,EL-10.06281,--PT302CHK  
EP,TM09:55:53,LA41.024204876,LN-73.312540565,HT-  
108.315388,RH0.020136,RV0.035488,DH0.661284,DV1.165443,GM4,CL1  
BL,DCROVER,PN312,DX-1323.108762,DY423.237575,DZ899.445013,--PT303CHK,GM4,CL1,HP0.020136,VP0.035488  
CV,DCROVER,SV4,SC0.006137,XX1.893170e-005,XY-1.861771e-005,XZ1.977037e-005,YY6.391919e-005,YZ-  
4.255509e-005,ZZ7.181846e-005  
GS,PN312,N 578083.127657,E 786570.403716,EL-8.655062,--PT303CHK  
EP,TM10:05:49,LA41.025497026,LN-73.301059631,HT-  
108.132499,RH0.022723,RV0.040963,DH0.672415,DV1.214696,GM4,CL1  
BL,DCROVER,PN313,DX3929.543394,DY2873.257583,DZ1885.855866,--PT304CHK,GM4,CL1,HP0.022723,VP0.040963  
CV,DCROVER,SV4,SC0.006926,XX2.534170e-005,XY-2.645804e-005,XZ2.717122e-005,YY8.121053e-005,YZ-  
5.734462e-005,ZZ9.730456e-005  
GS,PN313,N 579340.238389,E 792313.860823,EL-8.601022,--PT304CHK  
EP,TM10:13:30,LA41.023687059,LN-73.30192471,HT-  
109.7129,RH0.023516,RV0.042242,DH0.679363,DV1.220374,GM4,CL1  
BL,DCROVER,PN314,DX3635.202725,DY1532.806219,DZ503.26606,--PT305CHK,GM4,CL1,HP0.023516,VP0.042242  
CV,DCROVER,SV4,SC0.007168,XX2.782385e-005,XY-2.934508e-005,XZ2.931023e-005,YY8.425137e-005,YZ-  
6.086449e-005,ZZ1.050788e-004  
GS,PN314,N 577514.209036,E 791635.040591,EL-10.127258,--PT305CHK  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
--Survey Pro Version: 4.2.1



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--Data Collector Serial Number: SS35A22511
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--4-05-07 MKW BC CLOUDY 42°F FOREST SHOTS
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
OC,OP301,N 576838.107237,E 787799.070167,EL-9.64091,--FORSTCONV1
--HR:0.0 (0.0 + 0.0 Offset)
LS,HI0.0,HR0.0
BK,OP301,BP302,BS342.462816,BC0.0000
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
--BS check 301 - 302:ZE90.0835,SD145.375,HD err= 0.002517, VD err= -0.012646
--BS Circle check : angular err= 0.0000
SS,OP301,FP315,AR122.0333,ZE90.0332,SD131.555,--FOREST
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--HR:1.0 (1.0 + 0.0 Offset)
LS,HI0.0,HR1.0
SS,OP301,FP316,AR122.0258,ZE89.3723,SD131.575,--FORESTCHK
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
DP,PN1
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE,GF14,SG403072437
EP,TM09:40:33,LA41.023027795,LN-73.31104143,HT-109.594425,RH0.0,RV0.0,GM1,CL1
SP,PN300,N 576876.166589,E 787710.102685,EL6.181653,--
--Solve calibration from control points.
CT,PN300,DM4,RH0.0,RV0.0
EP,TM09:40:43,LA41.023027795,LN-73.31104143,HT-109.594425,RH0.0,RV0.0,GM1,CL2
RP,PN300,N 576876.166589,E 787710.102685,EL6.181653,--
--Solve calibration from control points.
HA,N 576881.58302,E 787708.46425,TH-5.416431,TE1.638435,RT0.0000,SC1.0000000000
VA,PV3,N 576876.166589,E 787710.102685,LZ16.10816,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_SHORE_CLUSTER_3,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN301,N 576832.690805,E 787800.708601,EL6.46725,--FORSTCONV1
GR,PN302,N 576971.542406,E 787757.659096,EL6.116925,--FORSTCONV2
GR,PN303,N 578077.707357,E 786572.065796,EL7.474857,--GRASS
GR,PN304,N 579334.780907,E 792315.499182,EL7.587697,--BITLOT
GR,PN305,N 577508.780581,E 791636.636945,EL5.9893,--MIXEDVEG
GR,PN306,N 583984.242158,E 797416.669218,EL59.01282,--LX0771
GR,PN307,N 583984.256401,E 797416.637127,EL59.050829,--LX0771CHK
GR,PN308,N 581429.168268,E 789343.668634,EL130.200712,--LX7428
GR,PN309,N 581429.132886,E 789343.662145,EL130.180661,--LX7428CHK
GR,PN310,N 576832.698219,E 787800.697711,EL6.452763,--PT301CHK
GR,PN311,N 576971.544334,E 787757.634939,EL6.04535,--PT302CHK
GR,PN312,N 578077.711226,E 786572.042151,EL7.453098,--PT303CHK
GR,PN313,N 579334.821958,E 792315.499258,EL7.507137,--PT304CHK
GR,PN314,N 577508.792605,E 791636.679025,EL5.980902,--PT305CHK
-->> End Adjust with Projection.
-->>
SP,PN315,N 576799.011138,E 787927.878788,EL6.331877,--FOREST
SP,PN316,N 576799.028553,E 787927.90115,EL6.332705,--FORESTCHK

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FEMA\_SHORE\_CLUSTER\_4\_ADJ

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JB,NMFEMA_SHORE_CLUSTER_4,DT04-02-2007,TM19:11:04
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--4/03/07 MKW BC P SUN 50*F
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000,OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNGEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--13:45:36,Get autonomous base position at BASE:LA41.054874088,LN-73.242866795,HT-114.625237
--New point created by GPS autonomous base setup
EE,GF32,SG403134539
EP,TM13:45:39,LA41.054874088,LN-73.242866795,HT-114.625237,RH0.0,RV0.0,GM1,CL1
SP,PN400,N 0.0,E 0.0,EL-114.625237,--
--04/03:13:45:39,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAX7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN400,LA41.054874088,LN-73.242866795,HT-114.625237,SG403134539
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--13:46:21,Set ROVER receiver with base reference position:LA41.054874088,LN-73.242866795,HT-
114.625237
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 596713.341277,E 818645.815992,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 596713.341277,E 818645.815992,LZ0.0,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_SHORE_CLUSTER_4,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN400,N 596713.341277,E 818645.815992,EL-15.910953,--
EE,GF0,SG403134539
EP,TM13:46:56,LA41.054874088,LN-73.242866795,HT-114.625237,RH0.0,RV0.0,GM1,CL1
GP,PN400,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM13:54:30,LA41.054936884,LN-73.242756333,HT-
116.587602,RH0.020078,RV0.022503,DH0.744399,DV0.834287,GM4,CL1
BL,DCROVER,PN401,DX68.7255,DY65.487524,DZ46.713536,--MIXEDVEG,GM4,CL1,HP0.020078,VP0.022503
CV,DCROVER,SV4,SC0.00612,XX1.194745e-005,XY-7.970106e-006,XZ5.894446e-007,YY3.151966e-005,YZ-
1.019237e-005,ZZ4.103049e-005
GS,PN401,N 596776.251978,E 818730.871917,EL-17.875706,--MIXEDVEG
EP,TM14:08:15,LA41.050852285,LN-73.233801443,HT-
112.538604,RH0.0264,RV0.029865,DH0.74247,DV0.839928,GM4,CL1
BL,DCROVER,PN402,DX4481.650753,DY-1457.497205,DZ-3066.251741,--
FORESTCONV1,GM4,CL1,HP0.0264,VP0.029865
CV,DCROVER,SV4,SC0.008047,XX2.331910e-005,XY-1.708457e-005,XZ1.308544e-006,YY6.087384e-005,YZ-
1.784961e-005,ZZ6.342056e-005
GS,PN402,N 592613.731149,E 822493.637268,EL-13.758008,--FORESTCONV1
EP,TM14:11:13,LA41.050826938,LN-73.233971335,HT-
112.048881,RH0.028022,RV0.031678,DH0.791064,DV0.89425,GM4,CL1

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## FEMA\_SHORE\_CLUSTER\_4\_ADJ

BL,DCROVER,PN403,DX4361.90434,DY-1511.189187,DZ-3085.275446,--  
FORESTCONV2,GM4,CL1,HP0.028022,VP0.031678  
CV,DCROVER,SV4,SCO.008541,XX2.441822e-005,XY-1.900971e-005,XZ1.372646e-006,YY8.023993e-005,YZ-  
1.828265e-005,ZZ6.151974e-005  
GS,PN403,N 592589.046762,E 822363.350675,EL-13.266517,--FORESTCONV2  
EP,TM14:38:03,LA41.065866764,LN-73.245405539,HT-  
79.881639,RH0.046776,RV0.052568,DH1.347334,DV1.514169,GM4,CL1  
BL,DCROVER,PN404,DX-3183.489906,DY3879.305815,DZ5355.577564,--LX1857,GM4,CL1,HP0.046776,VP0.052568  
CV,DCROVER,SV4,SCO.014257,XX1.121338e-004,XY-8.839140e-005,XZ-1.703052e-005,YY2.704169e-004,YZ-  
6.603052e-005,ZZ1.431688e-004  
GS,PN404,N 603805.37775,E 816756.561931,EL18.677646,--LX1857  
EP,TM14:39:27,LA41.065866742,LN-73.24540552,HT-  
79.885406,RH0.077692,RV0.054494,DH2.161953,DV1.516427,GM4,CL1  
BL,DCROVER,PN405,DX-3183.467961,DY3879.293857,DZ5355.562439,--  
LX1857CHK,GM4,CL1,HP0.077692,VP0.054494  
CV,DCROVER,SV4,SCO.023681,XX2.657513e-004,XY-2.434215e-004,XZ-1.342999e-004,YY3.606505e-  
004,YZ5.274218e-005,ZZ1.823701e-004  
GS,PN405,N 603805.3548,E 816756.576239,EL18.673879,--LX1857CHK  
EP,TM14:53:55,LA41.061483052,LN-  
73.254890607,HT2.518794,RH0.03501,RV0.052488,DH0.826576,DV1.239252,GM4,CL1  
BL,DCROVER,PN406,DX-6357.659989,DY-174.100023,DZ2066.910182,--LX0782,GM4,CL1,HP0.03501,VP0.052488  
CV,DCROVER,SV4,SCO.010671,XX5.361359e-005,XY-6.620507e-005,XZ1.364386e-005,YY2.443084e-004,YZ-  
7.430498e-005,ZZ7.189755e-005  
GS,PN406,N 599401.389987,E 812523.39397,EL101.235061,--LX0782  
EP,TM15:17:58,LA41.031534983,LN-  
73.304963878,HT8.51105,RH0.047167,RV0.071032,DH0.78947,DV1.188918,GM4,CL1  
BL,DCROVER,PN407,DX-25040.395796,DY-18173.603692,DZ-11622.097812,--  
LX7428,GM4,CL1,HP0.047167,VP0.071032  
CV,DCROVER,SV4,SCO.014377,XX1.202361e-004,XY-1.336411e-004,XZ4.013657e-005,YY4.035732e-004,YZ-  
1.412818e-004,ZZ1.516314e-004  
GS,PN407,N 581429.045677,E 789340.732016,EL108.043938,--LX7428  
EP,TM15:21:57,LA41.031534915,LN-  
73.304963909,HT8.821301,RH0.051641,RV0.076655,DH0.798045,DV1.184593,GM4,CL1  
BL,DCROVER,PN408,DX-25040.35973,DY-18173.893183,DZ-11621.954263,--  
LX7428CHK,GM4,CL1,HP0.051641,VP0.076655  
CV,DCROVER,SV4,SCO.01574,XX1.563195e-004,XY-1.620982e-004,XZ5.612957e-005,YY4.475516e-004,YZ-  
1.652192e-004,ZZ1.897800e-004  
GS,PN408,N 581428.977591,E 789340.707485,EL108.354191,--LX7428CHK  
EP,TM16:03:42,LA41.07007827,LN-73.24468119,HT-  
92.546036,RH0.02783,RV0.0531,DH0.797879,DV1.522397,GM4,CL1  
BL,DCROVER,PN409,DX-2695.045215,DY4181.609674,DZ5508.529801,--BITLOT,GM4,CL1,HP0.02783,VP0.0531  
CV,DCROVER,SV4,SCO.008482,XX3.138161e-005,XY-2.351174e-005,XZ3.301290e-005,YY1.157210e-004,YZ-  
1.082102e-004,ZZ1.868040e-004  
GS,PN409,N 604015.177922,E 817312.617431,EL6.002154,--BITLOT  
EP,TM16:14:40,LA41.062739165,LN-73.242159578,HT-  
82.838346,RH0.025449,RV0.04772,DH0.70045,DV1.31344,GM4,CL1  
BL,DCROVER,PN410,DX-208.635607,DY2596.088222,DZ2968.723252,--GRASS,GM4,CL1,HP0.025449,VP0.04772  
CV,DCROVER,SV4,SCO.007757,XX3.735938e-005,XY-2.768710e-005,XZ3.439885e-005,YY1.031429e-004,YZ-  
8.529074e-005,ZZ1.312239e-004  
GS,PN410,N 600620.999105,E 819216.974969,EL15.7737,--GRASS  
EP,TM16:25:09,LA41.050852313,LN-73.233801435,HT-  
112.61964,RH0.023073,RV0.039794,DH0.659639,DV1.13766,GM4,CL1  
BL,DCROVER,PN411,DX4481.635845,DY-1457.422756,DZ-3066.276998,--  
PT402CHK,GM4,CL1,HP0.023073,VP0.039794  
CV,DCROVER,SV4,SCO.007033,XX3.132239e-005,XY-2.120831e-005,XZ2.288016e-005,YY7.681840e-005,YZ-  
5.721212e-005,ZZ8.843659e-005  
GS,PN411,N 592613.7589,E 822493.643714,EL-13.839044,--PT402CHK  
EP,TM16:26:45,LA41.050826912,LN-73.233971425,HT-  
112.029572,RH0.024087,RV0.041899,DH0.703023,DV1.222908,GM4,CL1  
BL,DCROVER,PN412,DX4361.851771,DY-1511.224728,DZ-3085.297077,--  
PT403CHK,GM4,CL1,HP0.024087,VP0.041899  
CV,DCROVER,SV4,SCO.007342,XX3.063045e-005,XY-1.755037e-005,XZ2.075222e-005,YY9.916983e-005,YZ-  
6.419086e-005,ZZ8.719457e-005  
GS,PN412,N 592589.021193,E 822363.281827,EL-13.247207,--PT403CHK  
EP,TM16:28:11,LA41.050852324,LN-73.233801425,HT-  
112.598481,RH0.023355,RV0.039735,DH0.656824,DV1.117501,GM4,CL1  
BL,DCROVER,PN413,DX4481.637781,DY-1457.410995,DZ-3066.268121,--  
PT402CHK2,GM4,CL1,HP0.023355,VP0.039735  
CV,DCROVER,SV4,SCO.007119,XX3.295974e-005,XY-2.235013e-005,XZ2.367444e-005,YY7.664237e-005,YZ-  
5.646957e-005,ZZ8.775277e-005  
GS,PN413,N 592613.769755,E 822493.651249,EL-13.817885,--PT402CHK2  
EP,TM16:37:43,LA41.054936887,LN-73.242756334,HT-  
116.555028,RH0.019183,RV0.029576,DH0.616158,DV0.949989,GM4,CL1  
BL,DCROVER,PN414,DX68.745692,DY65.448411,DZ46.754076,--PT401CHK,GM4,CL1,HP0.019183,VP0.029576

FEMA\_SHORE\_CLUSTER\_4\_ADJ

CV,DCROVER,SV4,SC0.005847,XX1.924942e-005,XY-1.239564e-005,XZ8.108661e-006,YY4.893443e-005,YZ-2.978426e-005,ZZ4.727117e-005  
GS,PN414,N 596776.255114,E 818730.871111,EL-17.843132,--PT401CHK  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
DP,PN1  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
--4-05-07 MKW BC CLOUDY 42\*F FOREST SHOTS  
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
OC,OP402,N 592613.731149,E 822493.637268,EL-13.758008,--FORESTCONV1  
--HR:0.0 (0.0 + 0.0 Offset)  
LS,HI0.0,HR0.0  
BK,OP402,BP403,BS259.161839,BC0.0000  
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
--BS check 402 - 403:ZE89.4547,SD132.675,HD err= 0.06951, VD err= 0.05718  
--BS Circle check : angular err= 0.0000  
--BS check 402 - 403:ZE89.4544,SD132.68,HD err= 0.074502, VD err= 0.05913  
--BS Circle check : angular err= 0.0000  
SS,OP402,FP415,AR166.3827,ZE89.4942,SD139.945,--FOREST  
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--HR:1.0 (1.0 + 0.0 Offset)  
LS,HI0.0,HR1.0  
SS,OP402,FP416,AR166.3827,ZE89.2459,SD139.955,--FORESTCHK  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Import GPS Control - create GPS control point  
EE,GF14,SG403134539  
EP,TM09:51:32,LA41.054874088,LN-73.242866795,HT-114.625237,RH0.0,RV0.0,GM1,CL1  
SP,PN400,N 596713.399294,E 818648.69764,EL6.148166,--  
--Solve calibration from control points.  
CT,PN400,DM4,RH0.0,RV0.0  
EP,TM09:51:45,LA41.054874088,LN-73.242866795,HT-114.625237,RH0.0,RV0.0,GM1,CL2  
RP,PN400,N 596713.399294,E 818648.69764,EL6.148166,--  
--Solve calibration from control points.  
HA,N 596713.341277,E 818645.815992,TH0.058017,TE2.881648,RT0.0000,SC1.0000000000  
VA,PV3,N 596713.399294,E 818648.69764,LZ22.05912,S00.00000,SA0.00000,GNGE0ID03 (Conus)  
CS,CO3,ZGSite,ZNFEMA\_SHORE\_CLUSTER\_4,DNNAD 1983 (Conus)  
-->>  
-->> Begin Adjust with Projection.  
GR,PN401,N 596776.309995,E 818733.753566,EL4.183414,--MIXEDVEG  
GR,PN402,N 592613.789166,E 822496.518916,EL8.301112,--FORESTCONV1  
GR,PN403,N 592589.104779,E 822366.232324,EL8.792603,--FORESTCONV2  
GR,PN404,N 603805.435767,E 816759.443579,EL40.736765,--LX1857  
GR,PN405,N 603805.412817,E 816759.457887,EL40.732999,--LX1857CHK  
GR,PN406,N 599401.448004,E 812526.275618,EL123.29418,--LX0782  
GR,PN407,N 581429.103694,E 789343.613664,EL130.103058,--LX7428  
GR,PN408,N 581429.035608,E 789343.589133,EL130.413311,--LX7428CHK  
GR,PN409,N 604015.235939,E 817315.499079,EL28.061273,--BITLOT  
GR,PN410,N 600621.057122,E 819219.856617,EL37.83282,--GRASS  
GR,PN411,N 592613.816917,E 822496.525363,EL8.220076,--PT402CHK  
GR,PN412,N 592589.07921,E 822366.163475,EL8.811912,--PT403CHK  
GR,PN413,N 592613.827772,E 822496.532897,EL8.241234,--PT402CHK2  
GR,PN414,N 596776.313131,E 818733.75276,EL4.215988,--PT401CHK  
-->> End Adjust with Projection.  
-->>  
SP,PN415,N 592670.904585,E 822624.277846,EL8.720287,--FOREST  
SP,PN416,N 592670.90596,E 822624.28092,EL8.72654,--FORESTCHK

## FEMA\_CLUSTER\_5\_ADJ

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JB,NMFEMA_CLUSTER_5,DT04-05-2007,TM06:04:46
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000,OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNGEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--09:05:57,Get autonomous base position at BASE:LA41.065232076,LN-73.193988824,HT-88.299953
--New point created by GPS autonomous base setup
EE,GF32,SG405090600
EP,TM09:06:00,LA41.065232076,LN-73.193988824,HT-88.299953,RH0.0,RV0.0,GM1,CL1
SP,PN500,N 0.0,E 0.0,EL-88.299953,--
--04/05:09:06:00,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,HO0.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN500,LA41.065232076,LN-73.193988824,HT-88.299953,SG405090600
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--09:06:49,Set ROVER receiver with base reference position:LA41.065232076,LN-73.193988824,HT-
88.299953
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,HO0.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 602990.097297,E 840798.555452,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 602990.097297,E 840798.555452,LZ0.0,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_5,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN500,N 602990.097297,E 840798.555452,EL10.116639,--
EE,GF0,SG405090600
EP,TM09:07:28,LA41.065232076,LN-73.193988824,HT-88.299953,RH0.0,RV0.0,GM1,CL1
GP,PN500,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
--4-05-07 MKW BC CLOUDY 42°F
EP,TM09:23:44,LA41.064435834,LN-73.195468125,HT-
74.569626,RH0.041887,RV0.041025,DH1.370629,DV1.342604,GM4,CL1
BL,DCROVER,PN501,DX-929.715147,DY-842.472501,DZ-598.009301,--
FORESTCONV1,GM4,CL1,HP0.041887,VP0.041025
CV,DCROVER,SV4,SC0.012767,XX3.216292e-005,XY-1.776534e-005,XZ5.469268e-005,YY8.120569e-005,YZ-
2.535868e-006,ZZ2.059977e-004
GS,PN501,N 602191.827173,E 839660.840981,EL23.870434,--FORESTCONV1
EP,TM09:30:15,LA41.064116157,LN-73.195300851,HT-
82.826396,RH0.036177,RV0.056242,DH1.123838,DV1.747148,GM4,CL1
BL,DCROVER,PN502,DX-747.840692,DY-1003.583492,DZ-847.213011,--
FORESTCONV2,GM4,CL1,HP0.036177,VP0.056242
CV,DCROVER,SV4,SC0.011027,XX5.509870e-005,XY-4.898778e-005,XZ3.807510e-005,YY2.029816e-004,YZ-
9.32052e-005,ZZ1.573839e-004
GS,PN502,N 601867.424521,E 839786.703392,EL15.621285,--FORESTCONV2
EP,TM09:50:27,LA41.081088666,LN-73.213817989,HT-
93.230009,RH0.03308,RV0.0524,DH0.701789,DV1.111663,GM4,CL1
BL,DCROVER,PN503,DX-10173.080356,DY2419.123906,DZ5986.615431,--MIXEDVEG,GM4,CL1,HP0.03308,VP0.0524
CV,DCROVER,SV4,SC0.010083,XX4.718444e-005,XY-3.257777e-005,XZ3.098894e-005,YY1.625573e-004,YZ-
9.025858e-005,ZZ1.470095e-004
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FEMA\_CLUSTER\_5\_ADJ

GS,PN503,N 611003.908212,E 831800.461419,EL5.037352,--MIXEDVEG  
 EP,TM09:59:08,LA41.082601463,LN-73.214269474,HT-  
 89.535176,RH0.032164,RV0.055792,DH0.675079,DV1.170998,GM4,CL1  
 BL,DCROVER,PN504,DX-10791.689873,DY3282.669683,DZ7142.158577,--BITLOT,GM4,CL1,HP0.032164,VP0.055792  
 CV,DCROVER,SV4,SC0.009804,XX4.789789e-005,XY-5.031736e-005,XZ4.523416e-005,YY1.681455e-004,YZ-  
 1.028589e-004,ZZ1.692536e-004  
 GS,PN504,N 612537.434833,E 831465.842932,EL8.700287,--BITLOT  
 EP,TM10:14:29,LA41.065629652,LN-73.195222278,HT-  
 84.712316,RH0.021625,RV0.03781,DH0.672356,DV1.175545,GM4,CL1  
 BL,DCROVER,PN505,DX-979.530811,DY-20.073896,DZ305.634048,--GRASS,GM4,CL1,HP0.021625,VP0.03781  
 CV,DCROVER,SV4,SC0.006591,XX2.366644e-005,XY-2.582559e-005,XZ2.034577e-005,YY7.663140e-005,YZ-  
 4.752099e-005,ZZ7.596263e-005  
 GS,PN505,N 603398.810994,E 839857.149719,EL13.697125,--GRASS  
 EP,TM10:20:41,LA41.063749109,LN-73.194921653,HT-  
 87.177093,RH0.022089,RV0.03839,DH0.682653,DV1.186422,GM4,CL1  
 BL,DCROVER,PN506,DX-400.627398,DY-1151.197163,DZ-1129.965718,--LX7472,GM4,CL1,HP0.022089,VP0.03839  
 CV,DCROVER,SV4,SC0.006733,XX2.419972e-005,XY-2.641765e-005,XZ1.989873e-005,YY7.806695e-005,YZ-  
 4.722807e-005,ZZ7.428980e-005  
 GS,PN506,N 601493.987622,E 840074.468304,EL11.278901,--LX7472  
 EP,TM10:39:29,LA41.072084291,LN-73.195512656,HT-  
 64.65809,RH0.024184,RV0.039575,DH0.744832,DV1.218868,GM4,CL1  
 BL,DCROVER,PN507,DX-1656.720276,DY1466.819831,DZ2190.375521,--LX0813,GM4,CL1,HP0.024184,VP0.039575  
 CV,DCROVER,SV4,SC0.007371,XX2.733116e-005,XY-3.379069e-005,XZ1.743377e-005,YY1.051339e-004,YZ-  
 4.724154e-005,ZZ6.737467e-005  
 GS,PN507,N 605884.619036,E 839651.624652,EL33.690242,--LX0813  
 --Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
 --Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
 OC,OP501,N 602191.827173,E 839660.840981,EL23.870434,--FORESTCONV1  
 --HR:0.0 (0.0 + 0.0 Offset)  
 LS,HI0.0,HR0.0  
 BK,OP501,BP502,BS158.47407,BC0.0000  
 --Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
 OC,OP501,N 602191.827173,E 839660.840981,EL23.870434,--FORESTCONV1  
 BK,OP501,BP502,BS158.47407,BC0.0000  
 --Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
 --BS check 501 - 502:ZE91.2238,SD348.11,HD err= 0.046184, VD err= -0.117586  
 --BS Circle check : angular err= 0.0000  
 --BS check 501 - 502:ZE91.2240,SD348.125,HD err= 0.061098, VD err= -0.121322  
 --BS Circle check : angular err= 0.0000  
 SS,OP501,FP508,AR54.0900,ZE91.4801,SD308.63,--FOREST  
 --Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
 --HR:1.0 (1.0 + 0.0 Offset)  
 LS,HI0.0,HR1.0  
 SS,OP501,FP509,AR54.0901,ZE91.3651,SD308.655,--FORESTCHK  
 --Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
 EP,TM11:28:47,LA41.064435938,LN-73.195468209,HT-  
 74.583021,RH0.02848,RV0.036683,DH0.901227,DV1.160782,GM4,CL1  
 BL,DCROVER,PN510,DX-929.798648,DY-842.425732,DZ-597.943774,--  
 FORESTCONV1CHK,GM4,CL1,HP0.02848,VP0.036683  
 CV,DCROVER,SV4,SC0.008681,XX1.797012e-005,XY-4.862132e-006,XZ-9.813981e-006,YY5.742559e-005,YZ-  
 4.371954e-005,ZZ1.249743e-004  
 GS,PN510,N 602191.932652,E 839660.777333,EL23.857036,--FORESTCONV1CHK  
 EP,TM11:31:37,LA41.064116231,LN-73.195300937,HT-  
 82.895987,RH0.028397,RV0.038474,DH0.911074,DV1.234388,GM4,CL1  
 BL,DCROVER,PN511,DX-747.912056,DY-1003.526533,DZ-847.199676,--  
 FORESTCONV2CHK,GM4,CL1,HP0.028397,VP0.038474  
 CV,DCROVER,SV4,SC0.008655,XX2.175282e-005,XY-1.452668e-006,XZ-1.189303e-005,YY9.807283e-005,YZ-  
 5.088763e-005,ZZ9.261187e-005  
 GS,PN511,N 601867.498979,E 839786.63819,EL15.551692,--FORESTCONV2CHK  
 EP,TM11:58:14,LA41.08108863,LN-73.213817993,HT-  
 93.152739,RH0.037926,RV0.05705,DH0.733685,DV1.103641,GM4,CL1  
 BL,DCROVER,PN512,DX-10173.060814,DY2419.063983,DZ5986.635437,--  
 MIXEDVEGCHK,GM4,CL1,HP0.037926,VP0.05705  
 CV,DCROVER,SV4,SC0.01156,XX5.041007e-005,XY1.933116e-005,XZ-1.192716e-005,YY2.761087e-004,YZ-  
 1.245740e-004,ZZ1.094895e-004  
 GS,PN512,N 611003.872356,E 831800.457992,EL5.114624,--MIXEDVEGCHK  
 EP,TM12:06:41,LA41.082601386,LN-73.21426938,HT-  
 89.570509,RH0.030426,RV0.049337,DH0.660244,DV1.070631,GM4,CL1  
 BL,DCROVER,PN513,DX-10791.615754,DY3282.64227,DZ7142.097093,--  
 BITLOTCHK,GM4,CL1,HP0.030426,VP0.049337  
 CV,DCROVER,SV4,SC0.009274,XX3.146461e-005,XY-1.882445e-005,XZ1.560788e-005,YY1.970469e-004,YZ-  
 7.962258e-005,ZZ8.363074e-005  
 GS,PN513,N 612537.35695,E 831465.914172,EL8.664955,--BITLOTCHK

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EP, TM12:20:00, LA41.065629537, LN-73.19522222, HT-
84.692604, RH0.022344, RV0.035099, DH0.68409, DV1.074602, GM4, CL1
BL, DCROVER, PN514, DX-979.454061, DY-20.147066, DZ305.554398, --GRASSCHK, GM4, CL1, HP0.022344, VP0.035099
CV, DCROVER, SV4, SC0.00681, XX1.748228e-005, XY-1.350344e-005, XZ1.053437e-005, YY9.845029e-005, YZ-
3.764428e-005, ZZ4.490090e-005
GS, PN514, N 603398.694149, E 839857.193369, EL13.71684, --GRASSCHK
EP, TM12:25:51, LA41.063749023, LN-73.194921547, HT-
87.19089, RH0.022272, RV0.036502, DH0.723035, DV1.184978, GM4, CL1
BL, DCROVER, PN515, DX-400.535254, DY-1151.214979, DZ-1130.05001, --
LX7472CHK, GM4, CL1, HP0.022272, VP0.036502
CV, DCROVER, SV4, SC0.006789, XX2.361724e-005, XY-2.119590e-005, XZ2.035413e-005, YY9.233736e-005, YZ-
4.095141e-005, ZZ5.391358e-005
GS, PN515, N 601493.900207, E 840074.54904, EL11.265106, --LX7472CHK
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
DP, PNI
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE, GF14, SG405090600
EP, TM10:01:52, LA41.065232076, LN-73.193988824, HT-88.299953, RH0.0, RV0.0, GM1, CL1
SP, PN500, N 602985.990871, E 840800.098711, EL10.289897, --
--Solve calibration from control points.
CT, PN500, DM4, RH0.0, RV0.0
EP, TM10:02:20, LA41.065232076, LN-73.193988824, HT-88.299953, RH0.0, RV0.0, GM1, CL2
RP, PN500, N 602985.990871, E 840800.098711, EL10.289897, --
--Solve calibration from control points.
HA, N 602990.097297, E 840798.555452, TH-4.106426, TE1.543259, RT0.0000, SC1.0000000000
VA, PV3, N 602985.990871, E 840800.098711, LZ0.173258, SO0.00000, SA0.00000, GNGEOID03 (Conus)
CS, CO3, ZGSite, ZNFEMA_CLUSTER_5, DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR, PN501, N 602187.720747, E 839662.38424, EL24.043692, --FORESTCONV1
GR, PN502, N 601863.318095, E 839788.246651, EL15.794543, --FORESTCONV2
GR, PN503, N 610999.801787, E 831802.004678, EL5.210611, --MIXEDVEG
GR, PN504, N 612533.328407, E 831467.386191, EL8.873545, --BITLOT
GR, PN505, N 603394.704569, E 839858.692978, EL13.870383, --GRASS
GR, PN506, N 601489.881196, E 840076.011563, EL11.452159, --LX7472
GR, PN507, N 605880.512611, E 839653.167911, EL33.8635, --LX0813
GR, PN510, N 602187.826226, E 839662.320591, EL24.030294, --FORESTCONV1CHK
GR, PN511, N 601863.392553, E 839788.181449, EL15.72495, --FORESTCONV2CHK
GR, PN512, N 610999.76593, E 831802.001251, EL5.287882, --MIXEDVEGCHK
GR, PN513, N 612533.250525, E 831467.457431, EL8.838213, --BITLOTCHK
GR, PN514, N 603394.587724, E 839858.736628, EL13.890098, --GRASSCHK
GR, PN515, N 601489.793781, E 840076.092299, EL11.438364, --LX7472CHK
-->> End Adjust with Projection.
-->>
SP, PN508, N 601928.847825, E 839494.625053, EL14.347636, --FOREST
SP, PN509, N 601928.802602, E 839494.593965, EL14.348994, --FORESTCHK

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FEMA\_CLUSTER\_6\_ADJ

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JB,NMFEMA_CLUSTER_6,DT04-06-2007,TM05:42:07
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--4-06-07 MKW BC CLOUDY 40°F
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000, OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNGEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--08:43:37,Get autonomous base position at BASE:LA41.072726595,LN-73.154558416,HT-89.645288
--New point created by GPS autonomous base setup
EE,GF32,SG406084404
EP,TM08:44:04,LA41.072726595,LN-73.154558416,HT-89.645288,RH0.0,RV0.0,GM1,CL1
SP,PN600,N 0.0,E 0.0,EL-89.645288,--
--04/06:08:44:04,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN600,LA41.072726595,LN-73.154558416,HT-89.645288,SG406084404
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--08:44:47,Set ROVER receiver with base reference position:LA41.072726595,LN-73.154558416,HT-
89.645288
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 606413.723373,E 858753.715178,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 606413.723373,E 858753.715178,LZ0.0,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_6,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN600,N 606413.723373,E 858753.715178,EL8.684041,--
EE,GF0,SG406084404
EP,TM08:45:13,LA41.072726595,LN-73.154558416,HT-89.645288,RH0.0,RV0.0,GM1,CL1
GP,PN600,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM08:52:52,LA41.072415994,LN-73.154324052,HT-
95.193292,RH0.03274,RV0.035684,DH1.117148,DV1.217494,GM4,CL1
BL,DCROVER,PN601,DX230.142952,DY-142.464246,DZ-240.342241,--MIXEDVEG,GM4,CL1,HP0.03274,VP0.035684
CV,DCROVER,SV4,SC0.009979,XX2.057293e-005,XY-9.331970e-006,XZ2.074615e-005,YY6.015043e-005,YZ-
1.881978e-005,ZZ1.371567e-004
GS,PN601,N 606098.30226,E 858931.213856,EL3.144205,--MIXEDVEG
EP,TM09:06:58,LA41.073159819,LN-73.160666371,HT-
91.910691,RH0.03345,RV0.036908,DH1.068188,DV1.178568,GM4,CL1
BL,DCROVER,PN602,DX-1628.392931,DY-186.797813,DZ328.923286,--
FORESTCONV1,GM4,CL1,HP0.03345,VP0.036908
CV,DCROVER,SV4,SC0.010196,XX2.676755e-005,XY-1.726239e-005,XZ3.564819e-005,YY7.701284e-005,YZ-
1.562868e-005,ZZ1.267269e-004
GS,PN602,N 606861.812867,E 857143.105103,EL6.40407,--FORESTCONV1
EP,TM09:09:04,LA41.073038729,LN-73.160726109,HT-
91.479297,RH0.037883,RV0.047155,DH1.230181,DV1.531257,GM4,CL1
BL,DCROVER,PN603,DX-1648.886625,DY-277.482144,DZ236.863799,--
FORESTCONV2,GM4,CL1,HP0.037883,VP0.047155
CV,DCROVER,SV4,SC0.011547,XX2.864401e-005,XY-7.120027e-006,XZ3.063604e-005,YY1.298015e-004,YZ-
5.081511e-005,ZZ1.814595e-004

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## FEMA\_CLUSTER\_6\_ADJ

GS,PN603,N 606739.532889,E 857096.651648,EL6.83839,--FORESTCONV2  
EP,TM09:22:33,LA41.084766215,LN-73.145764262,HT-  
88.79063,RH0.028783,RV0.045356,DH0.722895,DV1.12717,GM4,CL1  
BL,DCROVER,PN604,DX1970.990613,DY6181.954967,DZ6129.056556,--BITLOT,GM4,CL1,HP0.028783,VP0.045356  
CV,DCROVER,SV4,SCO.008773,XX3.749138e-005,XY-3.925215e-005,XZ2.935940e-005,YY1.357316e-004,YZ-  
6.010637e-005,ZZ9.485627e-005  
GS,PN604,N 614529.103523,E 862469.758178,EL9.351131,--BITLOT  
EP,TM09:39:00,LA41.080702724,LN-73.143128579,HT-  
93.114014,RH0.037792,RV0.06176,DH0.617802,DV1.009619,GM4,CL1  
BL,DCROVER,PN605,DX4681.059638,DY4175.481489,DZ3028.979712,--GRASS,GM4,CL1,HP0.037792,VP0.06176  
CV,DCROVER,SV4,SCO.011519,XX6.232567e-005,XY-5.199444e-005,XZ4.727801e-005,YY2.240981e-004,YZ-  
1.246362e-004,ZZ2.006315e-004  
GS,PN605,N 610404.891143,E 864462.771199,EL5.13658,--GRASS  
EP,TM10:13:56,LA41.063749759,LN-73.19492375,HT-  
86.30403,RH0.031596,RV0.058417,DH0.655045,DV1.211082,GM4,CL1  
BL,DCROVER,PN606,DX-16909.419015,DY-8535.252456,DZ-3792.416476,--  
LX7472,GM4,CL1,HP0.031596,VP0.058417  
CV,DCROVER,SV4,SCO.009631,XX5.870139e-005,XY-6.092598e-005,XZ5.183728e-005,YY1.653796e-004,YZ-  
1.202233e-004,ZZ1.856998e-004  
GS,PN606,N 601494.656583,E 840072.867344,EL12.151953,--LX7472  
EP,TM10:15:27,LA41.063749759,LN-73.194923767,HT-  
86.272446,RH0.039526,RV0.071872,DH0.629715,DV1.145044,GM4,CL1  
BL,DCROVER,PN607,DX-16909.414219,DY-8535.276145,DZ-3792.406564,--  
LX7472CHK,GM4,CL1,HP0.039526,VP0.071872  
CV,DCROVER,SV4,SCO.012047,XX8.719048e-005,XY-9.047457e-005,XZ7.511691e-005,YY2.530411e-004,YZ-  
1.804682e-004,ZZ2.848064e-004  
GS,PN607,N 601494.656637,E 840072.854666,EL12.183537,--LX7472CHK  
EP,TM10:47:08,LA41.083451776,LN-73.151874008,HT-  
79.087518,RH0.041438,RV0.061702,DH1.297929,DV1.932661,GM4,CL1  
BL,DCROVER,PN608,DX679.675101,DY4871.649651,DZ5133.616004,--LX0829,GM4,CL1,HP0.041438,VP0.061702  
CV,DCROVER,SV4,SCO.01263,XX5.725794e-005,XY-5.486451e-005,XZ2.492543e-006,YY2.276713e-004,YZ-  
1.221370e-004,ZZ2.282898e-004  
GS,PN608,N 613208.147196,E 860847.918544,EL19.080233,--LX0829  
EP,TM10:47:33,LA41.083451813,LN-73.151874053,HT-  
79.057259,RH0.048585,RV0.065998,DH1.441284,DV1.957865,GM4,CL1  
BL,DCROVER,PN609,DX679.643921,DY4871.659882,DZ5133.659794,--LX0829CHK,GM4,CL1,HP0.048585,VP0.065998  
CV,DCROVER,SV4,SCO.014809,XX7.106684e-005,XY-7.452057e-005,XZ-2.033784e-006,YY2.777779e-004,YZ-  
1.212234e-004,ZZ2.751202e-004  
GS,PN609,N 613208.18547,E 860847.883718,EL19.11049,--LX0829CHK  
EP,TM11:00:39,LA41.073159795,LN-73.160666368,HT-  
91.961492,RH0.031542,RV0.043132,DH1.007163,DV1.37724,GM4,CL1  
BL,DCROVER,PN610,DX-1628.417281,DY-186.800087,DZ328.886492,--  
FORESTCONV1CHK,GM4,CL1,HP0.031542,VP0.043132  
CV,DCROVER,SV4,SCO.009614,XX2.110681e-005,XY-3.167356e-006,XZ-2.186129e-005,YY7.462981e-005,YZ-  
6.841055e-005,ZZ1.695287e-004  
GS,PN610,N 606861.787962,E 857143.107092,EL6.35327,--FORESTCONV1CHK  
EP,TM11:02:11,LA41.07303874,LN-73.160726083,HT-  
91.453591,RH0.030464,RV0.039497,DH0.972069,DV1.260291,GM4,CL1  
BL,DCROVER,PN611,DX-1648.874767,DY-277.495421,DZ236.908982,--  
FORESTCONV2CHK,GM4,CL1,HP0.030464,VP0.039497  
CV,DCROVER,SV4,SCO.009286,XX2.215820e-005,XY-7.300236e-006,XZ-1.639752e-005,YY6.164223e-005,YZ-  
5.318005e-005,ZZ1.473543e-004  
GS,PN611,N 606739.543415,E 857096.672244,EL6.864096,--FORESTCONV2CHK  
EP,TM11:06:10,LA41.072415939,LN-73.154324245,HT-  
95.228542,RH0.030561,RV0.042174,DH0.991145,DV1.367769,GM4,CL1  
BL,DCROVER,PN612,DX230.005072,DY-142.504722,DZ-240.389062,--  
MIXEDVEGCHK,GM4,CL1,HP0.030561,VP0.042174  
CV,DCROVER,SV4,SCO.009315,XX2.180269e-005,XY-6.825337e-006,XZ-1.724095e-005,YY7.319655e-005,YZ-  
6.236768e-005,ZZ1.488824e-004  
GS,PN612,N 606098.247134,E 858931.065498,EL3.108956,--MIXEDVEGCHK  
EP,TM11:06:52,LA41.072415967,LN-73.154324257,HT-  
95.231352,RH0.028856,RV0.039573,DH0.984694,DV1.350437,GM4,CL1  
BL,DCROVER,PN613,DX229.981753,DY-142.507806,DZ-240.351453,--  
MIXEDVEGCHK2,GM4,CL1,HP0.028856,VP0.039573  
CV,DCROVER,SV4,SCO.008795,XX2.022559e-005,XY-6.565795e-006,XZ-1.589229e-005,YY6.620351e-005,YZ-  
5.644668e-005,ZZ1.364182e-004  
GS,PN613,N 606098.27564,E 858931.057056,EL3.106145,--MIXEDVEGCHK2  
EP,TM11:07:47,LA41.072415965,LN-73.154324258,HT-  
95.221236,RH0.029216,RV0.039831,DH0.979639,DV1.335599,GM4,CL1  
BL,DCROVER,PN614,DX230.003041,DY-142.507794,DZ-240.374854,--  
MIXEDVEGCHK3,GM4,CL1,HP0.029216,VP0.039831  
CV,DCROVER,SV4,SCO.008905,XX2.083894e-005,XY-6.939554e-006,XZ-1.644436e-005,YY6.835586e-005,YZ-  
5.679196e-005,ZZ1.374975e-004  
GS,PN614,N 606098.274057,E 858931.056406,EL3.116261,--MIXEDVEGCHK3

FEMA\_CLUSTER\_6\_ADJ

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--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
OC,OP602,N 606861.812867,E 857143.105103,EL6.40407,--FORESTCONV1
--HR:0.0 (0.0 + 0.0 Offset)
LS,HI0.0,HR0.0
BK,OP602,BP603,BS200.480538,BC0.0000
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
--BS check 602 - 603:ZE89.4753,SD130.805,HD err= -0.002221, VD err= 0.026714
--BS Circle check : angular err= 0.0000
SS,OP602,FP615,AR180.2155,ZE90.0617,SD98.725,--FOREST
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--HR:1.0 (1.0 + 0.0 Offset)
LS,HI0.0,HR1.0
SS,OP602,FP616,AR180.2155,ZE89.3124,SD98.735,--FORESTCHK
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
DP,PN1
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE,GF14,SG406084404
EP,TM10:13:49,LA41.072726595,LN-73.154558416,HT-89.645288,RH0.0,RV0.0,GM1,CL1
SP,PN600,N 606408.915041,E 858756.906429,EL8.000239,--
--Solve calibration from control points.
CT,PN600,DM4,RH0.0,RV0.0
EP,TM10:14:00,LA41.072726595,LN-73.154558416,HT-89.645288,RH0.0,RV0.0,GM1,CL2
RP,PN600,N 606408.915041,E 858756.906429,EL8.000239,--
--Solve calibration from control points.
HA,N 606413.723373,E 858753.715178,TH-4.808332,TE3.191251,RT0.0000,SC1.0000000000
VA,PV3,N 606408.915041,E 858756.906429,LZ-0.683802,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_6,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN601,N 606093.493928,E 858934.405107,EL2.460403,--MIXEDVEG
GR,PN602,N 606857.004535,E 857146.296354,EL5.720268,--FORESTCONV1
GR,PN603,N 606734.724557,E 857099.842899,EL6.154588,--FORESTCONV2
GR,PN604,N 614524.295191,E 862472.949429,EL8.667329,--BITLOT
GR,PN605,N 610400.082812,E 864465.96245,EL4.452778,--GRASS
GR,PN606,N 601489.848251,E 840076.058595,EL11.468151,--LX7472
GR,PN607,N 601489.848305,E 840076.045917,EL11.499735,--LX7472CHK
GR,PN608,N 613203.338864,E 860851.109795,EL18.396431,--LX0829
GR,PN609,N 613203.377138,E 860851.074969,EL18.426688,--LX0829CHK
GR,PN610,N 606856.97963,E 857146.298343,EL5.669468,--FORESTCONV1CHK
GR,PN611,N 606734.735083,E 857099.863495,EL6.180294,--FORESTCONV2CHK
GR,PN612,N 606093.438802,E 858934.256749,EL2.425154,--MIXEDVEGCHK
GR,PN613,N 606093.467308,E 858934.248307,EL2.422343,--MIXEDVEGCHK2
GR,PN614,N 606093.465725,E 858934.247657,EL2.432459,--MIXEDVEGCHK3
-->> End Adjust with Projection.
-->>
SP,PN615,N 606949.069069,E 857181.944044,EL5.539626,--FOREST
SP,PN616,N 606949.075362,E 857181.946481,EL5.541477,--FORESTCHK

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## FEMA\_CLUSTER\_7\_ADJ

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JB,NMFEMA_CLUSTER_7,DT04-06-2007,TM10:35:09
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--4-06-07 MKW BC CLOUDY 40°F
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000, OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GN GEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--13:45:24,Get autonomous base position at BASE:LA41.094345416,LN-73.065219293,HT-105.962247
--New point created by GPS autonomous base setup
EE,GF32,SG406134526
EP,TM13:45:26,LA41.094345416,LN-73.065219293,HT-105.962247,RH0.0,RV0.0,GM1,CL1
SP,PN700,N 0.0,E 0.0,EL-105.962247,--
--04/06:13:45:26,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RS AE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN700,LA41.094345416,LN-73.065219293,HT-105.962247,SG406134526
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--13:46:51,Set ROVER receiver with base reference position:LA41.094345416,LN-73.065219293,HT-
105.962247
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 619990.19819,E 899633.074733,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 619990.19819,E 899633.074733,LZ0.0,SO0.00000,SA0.00000,GN GEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_7,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN700,N 619990.19819,E 899633.074733,EL-7.721858,--
EE,GF0,SG406134526
EP,TM13:47:14,LA41.094345416,LN-73.065219293,HT-105.962247,RH0.0,RV0.0,GM1,CL1
GP,PN700,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM13:56:37,LA41.094839879,LN-73.063318897,HT-
109.183258,RH0.020851,RV0.025703,DH0.673525,DV0.830261,GM4,CL1
BL,DCROVER,PN701,DX1294.50923,DY739.641981,DZ374.755883,--MIXEDVEG,GM4,CL1,HP0.020851,VP0.025703
CV,DCROVER,SV4,SC0.006355,XX1.627924e-005,XY-1.411869e-005,XZ2.692969e-006,YY4.333946e-005,YZ-
1.542074e-005,ZZ4.215054e-005
GS,PN701,N 620484.560321,E 901088.720292,EL-10.943741,--MIXEDVEG
EP,TM14:08:44,LA41.090763102,LN-73.061131727,HT-
97.285157,RH0.022974,RV0.028144,DH0.662638,DV0.815696,GM4,CL1
BL,DCROVER,PN702,DX3687.066014,DY-1381.102872,DZ-2723.984179,--LX3693,GM4,CL1,HP0.022974,VP0.028144
CV,DCROVER,SV4,SC0.007003,XX2.271417e-005,XY-2.009294e-005,XZ3.728757e-006,YY5.459221e-005,YZ-
1.806534e-005,ZZ4.531815e-005
GS,PN702,N 616351.535524,E 902744.734357,EL1.077776,--LX3693
EP,TM14:10:09,LA41.090763102,LN-73.061131719,HT-
97.28337,RH0.022189,RV0.027307,DH0.661988,DV0.817243,GM4,CL1
BL,DCROVER,PN703,DX3687.07766,DY-1381.10584,DZ-2723.990784,--LX3693CHK,GM4,CL1,HP0.022189,VP0.027307
CV,DCROVER,SV4,SC0.006763,XX2.166426e-005,XY-1.929119e-005,XZ3.756716e-006,YY5.146311e-005,YZ-
1.710629e-005,ZZ4.188627e-005
GS,PN703,N 616351.536156,E 902744.740801,EL1.079563,--LX3693CHK
```

FEMA\_CLUSTER\_7\_ADJ

EP, TM14:28:30, LA41.091615057, LN-73.071163761, HT-90.090251, RH0.034286, RV0.039883, DH1.074258, DV1.249619, GM4, CL1  
 BL, DCROVER, PN704, DX-891.551994, DY-2183.843936, DZ-2070.020126, --FORESTCON1, GM4, CL1, HP0.034286, VP0.039883  
 CV, DCROVER, SV4, SC0.01045, XX3.259883e-005, XY-2.837499e-005, XZ-1.316374e-005, YY1.105301e-004, YZ-3.625225e-005, ZZ1.138578e-004  
 GS, PN704, N 617233.109467, E 898133.971382, EL8.208963, --FORESTCON1  
 EP, TM14:30:48, LA41.091708407, LN-73.071086278, HT-88.163256, RH0.033707, RV0.04894, DH0.751999, DV1.091722, GM4, CL1  
 BL, DCROVER, PN705, DX-852.45419, DY-2108.528142, DZ-1997.607196, --FORESTCON2, GM4, CL1, HP0.033707, VP0.04894  
 CV, DCROVER, SV4, SC0.010274, XX5.369243e-005, XY-6.496504e-005, XZ1.331251e-005, YY2.038467e-004, YZ-6.251498e-005, ZZ7.052955e-005  
 GS, PN705, N 617327.335826, E 898193.646958, EL10.134039, --FORESTCON2  
 EP, TM14:44:17, LA41.094759554, LN-73.074376987, HT-106.954251, RH0.045608, RV0.066281, DH1.482493, DV2.154487, GM4, CL1  
 BL, DCROVER, PN706, DX-3855.302741, DY-880.82573, DZ315.019276, --LX0868, GM4, CL1, HP0.045608, VP0.066281  
 CV, DCROVER, SV4, SC0.013901, XX3.749261e-005, XY4.738673e-006, XZ4.534641e-006, YY4.993839e-004, YZ-1.258963e-004, ZZ6.451517e-005  
 GS, PN706, N 620426.317141, E 895689.923825, EL-8.753748, --LX0868  
 EP, TM14:45:44, LA41.094759614, LN-73.074376876, HT-107.098936, RH0.03175, RV0.054699, DH0.910801, DV1.569136, GM4, CL1  
 BL, DCROVER, PN707, DX-3855.264882, DY-880.641537, DZ314.972938, --LX0868CHK, GM4, CL1, HP0.03175, VP0.054699  
 CV, DCROVER, SV4, SC0.009677, XX3.749655e-005, XY-3.710023e-005, XZ8.432411e-006, YY2.674233e-004, YZ-9.951118e-005, ZZ6.669957e-005  
 GS, PN707, N 620426.377746, E 895690.008346, EL-8.898433, --LX0868CHK  
 EP, TM15:11:10, LA41.121589744, LN-73.072817273, HT-90.659301, RH0.030983, RV0.044287, DH0.723885, DV1.034718, GM4, CL1  
 BL, DCROVER, PN708, DX-5579.274719, DY8911.722157, DZ11622.113292, --GRASS, GM4, CL1, HP0.030983, VP0.044287  
 CV, DCROVER, SV4, SC0.009444, XX5.750796e-005, XY-5.631624e-005, XZ1.256538e-005, YY1.560719e-004, YZ-5.498323e-005, ZZ5.781351e-005  
 GS, PN708, N 635430.843501, E 896947.937937, EL7.176959, --GRASS  
 EP, TM15:31:33, LA41.120207633, LN-73.070311419, HT-101.241988, RH0.032028, RV0.056704, DH0.778417, DV1.377186, GM4, CL1  
 BL, DCROVER, PN709, DX-3481.069128, DY8593.73464, DZ10562.667791, --BITLOT, GM4, CL1, HP0.032028, VP0.056704  
 CV, DCROVER, SV4, SC0.009762, XX3.909650e-005, XY-1.782840e-005, XZ1.771465e-005, YY1.867878e-004, YZ-1.226816e-004, ZZ1.681300e-004  
 GS, PN709, N 634023.774441, E 898857.408947, EL-3.359749, --BITLOT  
 EP, TM16:10:17, LA41.094839887, LN-73.063318948, HT-109.2899, RH0.025326, RV0.046536, DH0.778789, DV1.430999, GM4, CL1  
 BL, DCROVER, PN710, DX1294.446441, DY739.711779, DZ374.694496, --PT701CHK, GM4, CL1, HP0.025326, VP0.046536  
 CV, DCROVER, SV4, SC0.007719, XX3.752459e-005, XY-2.991460e-005, XZ4.224326e-005, YY8.197789e-005, YZ-7.809642e-005, ZZ1.412790e-004  
 GS, PN710, N 620484.568473, E 901088.681042, EL-11.050383, --PT701CHK  
 EP, TM16:11:55, LA41.094839874, LN-73.06331896, HT-109.271462, RH0.021367, RV0.038794, DH0.778162, DV1.412799, GM4, CL1  
 BL, DCROVER, PN711, DX1294.439866, DY739.693111, DZ374.687021, --PT701CHK2, GM4, CL1, HP0.021367, VP0.038794  
 CV, DCROVER, SV4, SC0.006513, XX2.741567e-005, XY-2.149290e-005, XZ3.016330e-005, YY5.704297e-005, YZ-5.387096e-005, ZZ9.777338e-005  
 GS, PN711, N 620484.554762, E 901088.672117, EL-11.031945, --PT701CHK2  
 --Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
 --Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
 --Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
 OC, OP704, N 617233.109467, E 898133.971382, EL8.208963, --FORESTCON1  
 --HR:0.0 (0.0 + 0.0 Offset)  
 LS, HI0.0, HR0.0  
 BK, OP704, BP705, BS32.204905, BC0.0000  
 --Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
 --BS check 704 - 705:ZE88.5853, SD111.585, HD err= 0.0336, VD err= 0.058591  
 --BS Circle check : angular err= 0.0000  
 SS, OP704, FP712, AR252.4005, ZE90.4815, SD130.36, --FOREST  
 --Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
 --HR:1.0 (1.0 + 0.0 Offset)  
 LS, HI0.0, HR1.0  
 SS, OP704, FP713, AR252.4006, ZE90.2155, SD130.32, --FORESTCHK  
 --Survey Pro Version: 4.2.1  
 --Data Collector Serial Number: SS35A22511  
 --Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
 DP, PN1  
 --Survey Pro Version: 4.2.1  
 --Data Collector Serial Number: SS35A22511  
 --Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
 --Import GPS Control - create GPS control point  
 EE, GF14, SG406134526

FEMA\_CLUSTER\_7\_ADJ

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EP, TM10:25:40, LA41.094345416, LN-73.065219293, HT-105.962247, RH0.0, RV0.0, GM1, CL1
SP, PN700, N 619988.282888, E 899634.360845, EL11.591672, --
--Solve calibration from control points.
CT, PN700, DM4, RH0.0, RV0.0
EP, TM10:27:17, LA41.094345416, LN-73.065219293, HT-105.962247, RH0.0, RV0.0, GM1, CL2
RP, PN700, N 619988.282888, E 899634.360845, EL11.591672, --
--Solve calibration from control points.
HA, N 619990.19819, E 899633.074733, TH-1.915302, TE1.286112, RT0.0000, SC1.0000000000
VA, PV3, N 619988.282888, E 899634.360845, LZ19.313529, SO0.00000, SA0.00000, GNGEOID03 (Conus)
CS, CO3, ZGSite, ZNFEMA_CLUSTER_7, DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR, PN701, N 620482.645019, E 901090.006404, EL8.369788, --MIXEDVEG
GR, PN702, N 616349.620222, E 902746.020469, EL20.391305, --LX3693
GR, PN703, N 616349.620854, E 902746.026913, EL20.393092, --LX3693CHK
GR, PN704, N 617231.194165, E 898135.257494, EL27.522493, --FORESTCON1
GR, PN705, N 617325.420524, E 898194.93307, EL29.447568, --FORESTCON2
GR, PN706, N 620424.401839, E 895691.209937, EL10.559782, --LX0868
GR, PN707, N 620424.462444, E 895691.294458, EL10.415096, --LX0868CHK
GR, PN708, N 635428.928199, E 896949.224049, EL26.490489, --GRASS
GR, PN709, N 634021.859139, E 898858.695059, EL15.953781, --BITLOT
GR, PN710, N 620482.653172, E 901089.967154, EL8.263146, --PT701CHK
GR, PN711, N 620482.639461, E 901089.958229, EL8.281584, --PT701CHK2
-->> End Adjust with Projection.
-->>
SP, PN712, N 617264.963786, E 898009.360538, EL25.693374, --FOREST
SP, PN713, N 617264.956673, E 898009.389492, EL25.69214, --FORESTCHK

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## FEMA\_CLUSTER\_8\_ADJ

```
JB,NMFEMA_CLUSTER_8,DT04-09-2007,TM04:24:45
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--4-09-07 MKW BC M SUN 45*F
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000, OY0.00000000, OZ0.00000000, LX0.0, LY0.0, LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNGEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--09:22:43,Get autonomous base position at BASE:LA41.123779411,LN-73.024670859,HT-107.102059
--New point created by GPS autonomous base setup
EE,GF32,SG409092244
EP,TM09:22:44,LA41.123779411,LN-73.024670859,HT-107.102059,RH0.0,RV0.0,GM1,CL1
SP,PN800,N 0.0,E 0.0,EL-107.102059,--
--04/09:09:22:44,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAB7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN800,LA41.123779411,LN-73.024670859,HT-107.102059,SG409092244
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--09:26:01,Set ROVER receiver with base reference position:LA41.123779411,LN-73.024670859,HT-
107.102059
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 637563.522771,E 918470.088624,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 637563.522771,E 918470.088624,LZ0.0,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_8,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN800,N 637563.522771,E 918470.088624,EL-9.133768,--
EE,GF0,SG409092244
EP,TM09:26:28,LA41.123779411,LN-73.024670859,HT-107.102059,RH0.0,RV0.0,GM1,CL1
GP,PN800,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM09:30:10,LA41.123842391,LN-73.024819393,HT-
110.283614,RH0.018672,RV0.031827,DH0.628786,DV1.07182,GM4,CL1
BL,DCROVER,PN801,DX-121.493193,DY9.240766,DZ45.949732,--LX0900,GM4,CL1,HP0.018672,VP0.031827
CV,DCROVER,SV4,SC0.005691,XX1.593069e-005,XY-1.447676e-005,XZ1.270236e-005,YY5.819564e-005,YZ-
3.399508e-005,ZZ5.237279e-005
GS,PN801,N 637627.654928,E 918356.781404,EL-12.318474,--LX0900
EP,TM09:35:21,LA41.123839777,LN-73.024818338,HT-
110.332564,RH0.018985,RV0.033821,DH0.639363,DV1.138992,GM4,CL1
BL,DCROVER,PN802,DX-120.232613,DY7.844802,DZ43.940479,--LX0901,GM4,CL1,HP0.018985,VP0.033821
CV,DCROVER,SV4,SC0.005787,XX1.741563e-005,XY-1.745024e-005,XZ1.680513e-005,YY6.014486e-005,YZ-
3.894031e-005,ZZ6.218999e-005
GS,PN802,N 637625.006386,E 918357.579089,EL-12.367339,--LX0901
EP,TM09:43:08,LA41.122976925,LN-73.023737859,HT-
111.240194,RH0.021489,RV0.039313,DH0.682213,DV1.248084,GM4,CL1
BL,DCROVER,PN803,DX837.291726,DY-301.004462,DZ-613.649264,--MIXEDVEG,GM4,CL1,HP0.021489,VP0.039313
CV,DCROVER,SV4,SC0.00655,XX2.002356e-005,XY-2.051033e-005,XZ1.837513e-005,YY9.500167e-005,YZ-
5.338848e-005,ZZ7.145889e-005
GS,PN803,N 636748.882618,E 919180.428778,EL-13.239842,--MIXEDVEG
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FEMA\_CLUSTER\_8\_ADJ

EP, TM09:55:05, LA41.131597328, LN-73.031405852, HT-  
 109.296813, RH0.021038, RV0.039258, DH0.622382, DV1.161418, GM4, CL1  
 BL, DCROVER, PN804, DX-2742.144111, DY1827.587573, DZ2905.41944, --GRASS, GM4, CL1, HP0.021038, VP0.039258  
 CV, DCROVER, SV4, SC0.006412, XX2.479022e-005, XY-2.695305e-005, XZ2.264436e-005, YY7.819520e-005, YZ-  
 5.394342e-005, ZZ8.131301e-005  
 GS, PN804, N 641434.941655, E 916393.29717, EL-11.461797, --GRASS  
 EP, TM10:18:50, LA41.13406968, LN-72.594798074, HT-  
 98.078055, RH0.180725, RV0.086362, DH4.632665, DV2.213784, GM4, CL1  
 BL, DCROVER, PN805, DX11840.22862, DY7994.156992, DZ4794.884617, --BITLOT, GM4, CL1, HP0.180725, VP0.086362  
 CV, DCROVER, SV4, SC0.055085, XX6.468352e-004, XY-1.057913e-003, XZ-6.858833e-004, YY1.919113e-  
 003, YZ1.024636e-003, ZZ1.161348e-003  
 GS, PN805, N 643887.07489, E 932148.620904, EL-0.104285, --BITLOT  
 EP, TM11:24:06, LA41.131643327, LN-73.030695002, HT-  
 87.89535, RH0.033777, RV0.047891, DH0.966943, DV1.370986, GM4, CL1  
 BL, DCROVER, PN806, DX-2226.758807, DY1999.854243, DZ2954.545328, --  
 FORSTCONV1, GM4, CL1, HP0.033777, VP0.047891  
 CV, DCROVER, SV4, SC0.010295, XX3.780399e-005, XY-1.484901e-005, XZ1.720970e-005, YY1.223629e-004, YZ-  
 7.303232e-005, ZZ1.588988e-004  
 GS, PN806, N 641479.59359, E 916936.680718, EL9.944201, --FORSTCONV1  
 EP, TM11:28:35, LA41.131644102, LN-73.03025142, HT-  
 87.628166, RH0.022302, RV0.033665, DH0.726284, DV1.096334, GM4, CL1  
 BL, DCROVER, PN807, DX-1902.60348, DY2098.967508, DZ2955.311306, --  
 FORSTCONV2, GM4, CL1, HP0.022302, VP0.033665  
 CV, DCROVER, SV4, SC0.006798, XX1.614992e-005, XY-8.227084e-006, XZ1.335413e-006, YY9.412956e-005, YZ-  
 3.681000e-005, ZZ4.122224e-005  
 GS, PN807, N 641479.1961, E 917275.661623, EL10.215033, --FORSTCONV2  
 EP, TM11:42:37, LA41.13118697, LN-73.034192983, HT-  
 88.063609, RH0.024605, RV0.037816, DH0.688748, DV1.060826, GM4, CL1  
 BL, DCROVER, PN808, DX-4695.19433, DY929.805546, DZ2607.029686, --GRASS, GM4, CL1, HP0.024605, VP0.037816  
 CV, DCROVER, SV4, SC0.007499, XX1.862960e-005, XY-8.275146e-006, XZ7.092136e-006, YY1.086586e-004, YZ-  
 4.661668e-005, ZZ6.181251e-005  
 GS, PN808, N 641027.199158, E 914261.914069, EL9.760201, --GRASS  
 DP, PN804  
 DP, PN1  
 EP, TM11:59:22, LA41.134069566, LN-72.594798043, HT-  
 98.012927, RH0.032348, RV0.050868, DH0.670008, DV1.0536, GM4, CL1  
 BL, DCROVER, PN809, DX11840.289562, DY7994.040353, DZ4794.841566, --PT805CHK, GM4, CL1, HP0.032348, VP0.050868  
 CV, DCROVER, SV4, SC0.00986, XX3.796082e-005, XY-2.757671e-005, XZ2.370307e-005, YY2.010171e-004, YZ-  
 8.031673e-005, ZZ9.863256e-005  
 GS, PN809, N 643886.960138, E 932148.644058, EL-0.039154, --PT805CHK  
 EP, TM12:15:27, LA41.122976931, LN-73.023737853, HT-  
 111.124103, RH0.032025, RV0.053346, DH1.178226, DV1.962656, GM4, CL1  
 BL, DCROVER, PN810, DX837.321394, DY-301.084875, DZ-613.561986, --PT803CHK, GM4, CL1, HP0.032025, VP0.053346  
 CV, DCROVER, SV4, SC0.009761, XX4.894007e-005, XY-3.974218e-005, XZ4.770146e-005, YY1.972592e-004, YZ-  
 8.889956e-005, ZZ1.134593e-004  
 GS, PN810, N 636748.888616, E 919180.433651, EL-13.12375, --PT803CHK  
 EP, TM12:19:02, LA41.122976931, LN-73.023737844, HT-  
 111.062527, RH0.032326, RV0.054379, DH1.199135, DV2.017153, GM4, CL1  
 BL, DCROVER, PN811, DX837.342791, DY-301.139281, DZ-613.52047, --PT803CHK2, GM4, CL1, HP0.032326, VP0.054379  
 CV, DCROVER, SV4, SC0.009853, XX5.064942e-005, XY-4.282122e-005, XZ5.042984e-005, YY2.024823e-004, YZ-  
 9.262125e-005, ZZ1.186698e-004  
 GS, PN811, N 636748.889133, E 919180.440881, EL-13.062174, --PT803CHK2  
 EP, TM12:19:51, LA41.122976939, LN-73.023737834, HT-  
 111.14339, RH0.032945, RV0.055355, DH1.202228, DV2.019991, GM4, CL1  
 BL, DCROVER, PN812, DX837.330021, DY-301.09021, DZ-613.567928, --PT803CHK3, GM4, CL1, HP0.032945, VP0.055355  
 CV, DCROVER, SV4, SC0.010042, XX5.294932e-005, XY-4.515738e-005, XZ5.295716e-005, YY2.089217e-004, YZ-  
 9.566409e-005, ZZ1.236411e-004  
 GS, PN812, N 636748.896799, E 919180.448572, EL-13.143038, --PT803CHK3  
 --Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
 --Foresight Target: My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
 --Foresight Target: My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
 OC, OP806, N 641479.59359, E 916936.680718, EL9.944201, --FORSTCONV1  
 --HR:0.0 (0.0 + 0.0 Offset)  
 LS, HI0.0, HR0.0  
 BK, OP806, BP807, BS90.040187, BC0.0000  
 --Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
 --BS check 806 - 807: ZE89.5633, SD338.995, HD err= 0.013692, VD err= 0.069372  
 --BS Circle check : angular err= 0.0000  
 SS, OP806, FP813, AR106.3208, ZE90.1212, SD267.56, --FOREST  
 --Foresight Target: My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
 --HR:1.0 (1.0 + 0.0 Offset)  
 LS, HI0.0, HR1.0  
 SS, OP806, FP814, AR106.3209, ZE89.5919, SD267.56, --FORESTCHK  
 --Survey Pro Version: 4.2.1

FEMA\_CLUSTER\_8\_ADJ

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--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE,GF14,SG409092244
EP,TM10:38:29,LA41.123779411,LN-73.024670859,HT-107.102059,RH0.0,RV0.0,GM1,CL1
SP,PN800,N 637559.735115,E 918472.53445,EL10.459416,--
--Solve calibration from control points.
CT,PN800,DM4,RH0.0,RV0.0
EP,TM10:38:39,LA41.123779411,LN-73.024670859,HT-107.102059,RH0.0,RV0.0,GM1,CL2
RP,PN800,N 637559.735115,E 918472.53445,EL10.459416,--
--Solve calibration from control points.
HA,N 637563.522771,E 918470.088624,TH-3.787656,TE2.445826,RT0.0000,SC1.0000000000
VA,PV3,N 637559.735115,E 918472.53445,LZ19.593184,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_8,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN801,N 637623.867271,E 918359.22723,EL7.27471,--LX0900
GR,PN802,N 637621.21873,E 918360.024915,EL7.225845,--LX0901
GR,PN803,N 636745.094962,E 919182.874604,EL6.353342,--MIXEDVEG
GR,PN805,N 643883.287234,E 932151.06673,EL19.488899,--BITLOT
GR,PN806,N 641475.805933,E 916939.126544,EL29.537385,--FORSTCONV1
GR,PN807,N 641475.408444,E 917278.107449,EL29.808217,--FORSTCONV2
GR,PN808,N 641023.411502,E 914264.359895,EL29.353386,--GRASS
GR,PN809,N 643883.172482,E 932151.089885,EL19.554031,--PT805CHK
GR,PN810,N 636745.10096,E 919182.879477,EL6.469434,--PT803CHK
GR,PN811,N 636745.101477,E 919182.886707,EL6.53101,--PT803CHK2
GR,PN812,N 636745.109143,E 919182.894398,EL6.450146,--PT803CHK3
-->> End Adjust with Projection.
-->>
SP,PN813,N 641219.402073,E 916862.676155,EL28.587677,--FOREST
SP,PN814,N 641219.400834,E 916862.674432,EL28.590385,--FORESTCHK

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## CLUSTER\_9\_ADJ

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JB,NMCLUSTER_9,DT04-09-2007,TM16:32:59
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--4-10-07 MKW BC M SUN 45°F
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000, OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNGEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--10:19:14,Get autonomous base position at BASE:LA41.153722046,LN-72.560906164,HT-92.504512
--New point created by GPS autonomous base setup
EE,GF32,SG410101916
EP,TM10:19:16,LA41.153722046,LN-72.560906164,HT-92.504512,RH0.0,RV0.0,GM1,CL1
SP,PN900,N 0.0,E 0.0,EL-92.504512,--
--04/10:10:19:16,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN900,LA41.153722046,LN-72.560906164,HT-92.504512,SG410101916
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--10:19:55,Set ROVER receiver with base reference position:LA41.153722046,LN-72.560906164,HT-
92.504512
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 655638.781703,E 948901.754471,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 655638.781703,E 948901.754471,LZ0.0,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNCLUSTER_9,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN900,N 655638.781703,E 948901.754471,EL5.455581,--
EE,GF0,SG410101916
EP,TM10:20:19,LA41.153722046,LN-72.560906164,HT-92.504512,RH0.0,RV0.0,GM1,CL1
GP,PN900,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM10:35:40,LA41.154209234,LN-72.555895205,HT-
94.961635,RH0.03251,RV0.047868,DH1.0229,DV1.506151,GM4,CL1
BL,DCROVER,PN901,DX642.150943,DY539.120838,DZ369.131287,--MIXEDVEG,GM4,CL1,HP0.03251,VP0.047868
CV,DCROVER,SV4,SC0.009909,XX2.131523e-005,XY-3.168665e-006,XZ-1.827358e-005,YY8.445010e-005,YZ-
8.783265e-005,ZZ2.053013e-004
GS,PN901,N 656130.225938,E 949674.897573,EL3.000419,--MIXEDVEG
EP,TM10:56:59,LA41.161488711,LN-72.572638999,HT-
85.550524,RH0.073096,RV0.097197,DH2.176936,DV2.8947,GM4,CL1
BL,DCROVER,PN902,DX-6381.521155,DY666.919635,DZ2870.284027,--BITLOT,GM4,CL1,HP0.073096,VP0.097197
CV,DCROVER,SV4,SC0.02228,XX1.943812e-004,XY2.561965e-004,XZ-3.145662e-004,YY4.949287e-004,YZ-
5.139910e-004,ZZ6.847479e-004
GS,PN902,N 659464.533003,E 943005.113954,EL12.17892,--BITLOT
EP,TM11:06:15,LA41.161797724,LN-72.573734713,HT-
64.819316,RH0.064903,RV0.075733,DH1.821742,DV2.125737,GM4,CL1
BL,DCROVER,PN903,DX-7237.371565,DY604.103901,DZ3118.989106,--VERTCONV1,GM4,CL1,HP0.064903,VP0.075733
CV,DCROVER,SV4,SC0.019782,XX1.417169e-004,XY1.275378e-004,XZ-1.969531e-004,YY3.711006e-004,YZ-
2.668169e-004,ZZ4.113827e-004
GS,PN903,N 659779.313161,E 942169.181644,EL32.881932,--VERTCONV1

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## CLUSTER\_9\_ADJ

EP, TM11:09:16, LA41.161693937, LN-72.573679302, HT-  
68.746689, RH0.026425, RV0.040351, DH0.674529, DV1.029992, GM4, CL1  
BL, DCROVER, PN904, DX-7177.478927, DY553.040727, DZ3037.48489, --VERTCONV2, GM4, CL1, HP0.026425, VP0.040351  
CV, DCROVER, SV4, SC0.008054, XX2.208856e-005, XY-1.325741e-006, XZ1.331726e-006, YY1.193455e-004, YZ-  
5.828344e-005, ZZ7.470416e-005  
GS, PN904, N 659674.164713, E 942211.23784, EL28.958478, --VERTCONV2  
EP, TM11:32:43, LA41.175185711, LN-72.565884317, HT-  
93.884743, RH0.025105, RV0.040992, DH0.528998, DV0.860415, GM4, CL1  
BL, DCROVER, PN905, DX-6270.996315, DY7480.563064, DZ10239.910064, --GRASS, GM4, CL1, HP0.025105, VP0.040992  
CV, DCROVER, SV4, SC0.007652, XX3.024773e-005, XY-1.912446e-005, XZ1.028691e-005, YY1.130287e-004, YZ-  
5.927136e-005, ZZ7.139237e-005  
GS, PN905, N 669274.12075, E 945131.285034, EL3.621816, --GRASS  
EP, TM11:48:51, LA41.18346208, LN-72.571572245, HT-  
95.486203, RH0.034771, RV0.054575, DH0.788578, DV1.237707, GM4, CL1  
BL, DCROVER, PN906, DX-8340.557443, DY9835.340395, DZ13490.33507, --  
FORESTCONV1, GM4, CL1, HP0.034771, VP0.054575  
CV, DCROVER, SV4, SC0.010598, XX3.454523e-005, XY-1.530446e-005, XZ1.975068e-005, YY2.607834e-004, YZ-  
9.399126e-005, ZZ9.369867e-005  
GS, PN906, N 673605.345098, E 943853.142148, EL1.873717, --FORESTCONV1  
EP, TM11:51:04, LA41.183340473, LN-72.571564298, HT-  
97.619705, RH0.030792, RV0.0467, DH0.695575, DV1.054925, GM4, CL1  
BL, DCROVER, PN907, DX-8311.411269, DY9760.977715, DZ13396.47318, --  
FORESTCONV2, GM4, CL1, HP0.030792, VP0.0467  
CV, DCROVER, SV4, SC0.009385, XX3.409737e-005, XY-1.972700e-005, XZ2.116878e-005, YY1.715581e-004, YZ-  
6.647276e-005, ZZ8.504416e-005  
GS, PN907, N 673482.249725, E 943858.916278, EL-0.256316, --FORESTCONV2  
EP, TM12:24:27, LA41.150069273, LN-72.541384784, HT-  
82.216504, RH0.035048, RV0.071824, DH0.846871, DV1.735496, GM4, CL1  
BL, DCROVER, PN908, DX9130.142176, DY246.739027, DZ-2772.47667, --LX7598, GM4, CL1, HP0.035048, VP0.071824  
CV, DCROVER, SV4, SC0.010683, XX7.403574e-005, XY-6.820135e-005, XZ8.089383e-005, YY2.959136e-004, YZ-  
1.904230e-004, ZZ2.234225e-004  
GS, PN908, N 651924.442748, E 957694.385996, EL15.989828, --LX7598  
EP, TM12:55:35, LA41.154209261, LN-72.555895148, HT-  
95.017784, RH0.02585, RV0.045236, DH0.800921, DV1.401582, GM4, CL1  
BL, DCROVER, PN909, DX642.183098, DY539.153882, DZ369.14237, --PT901CHK, GM4, CL1, HP0.02585, VP0.045236  
CV, DCROVER, SV4, SC0.007879, XX3.547130e-005, XY-3.003291e-005, XZ3.658509e-005, YY8.494052e-005, YZ-  
7.072501e-005, ZZ1.317723e-004  
GS, PN909, N 656130.252922, E 949674.941001, EL2.94427, --PT901CHK  
EP, TM13:24:06, LA41.161488701, LN-72.572638992, HT-  
85.544316, RH0.027581, RV0.042394, DH0.733709, DV1.127768, GM4, CL1  
BL, DCROVER, PN910, DX-6381.505306, DY666.918068, DZ2870.274522, --PT902CHK, GM4, CL1, HP0.027581, VP0.042394  
CV, DCROVER, SV4, SC0.008407, XX4.079744e-005, XY-3.576307e-005, XZ2.603351e-005, YY8.828917e-005, YZ-  
5.620384e-005, ZZ1.085592e-004  
GS, PN910, N 659464.522837, E 943005.119786, EL12.185128, --PT902CHK  
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
--Foresight Target: My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--Foresight Target: My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
OC, OP903, N 659779.313161, E 942169.181644, EL32.881932, --VERTCONV1  
--HR:0.0 (0.0 + 0.0 Offset)  
LS, HI0.0, HR0.0  
BK, OP903, BP904, BS158.120031, BC0.0000  
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
--BS check 903 - 904: ZE91.5939, SD113.42, HD err= 0.104147, VD err= -0.023307  
--BS Circle check : angular err= 0.0000  
SS, OP903, FP911, AR111.0130, ZE89.0113, SD128.66, --LX0369DWN2.48FT  
--Foresight Target: My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--HR:1.0 (1.0 + 0.0 Offset)  
LS, HI0.0, HR1.0  
SS, OP903, FP912, AR111.0117, ZE88.3428, SD128.715, --LX0369DWN2.48FT  
--LX0369 DWN 2.48 FEET FROM TOP WINGWALL  
--Foresight Target: My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
OC, OP906, N 673605.345098, E 943853.142148, EL1.873717, --FORESTCONV1  
--HR:0.0 (0.0 + 0.0 Offset)  
LS, HI0.0, HR0.0  
BK, OP906, BP907, BS177.185166, BC0.0000  
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
--BS check 906 - 907: ZE90.5844, SD123.3, HD err= 0.051281, VD err= 0.023575  
--BS Circle check : angular err= 0.0000  
SS, OP906, FP913, AR237.1443, ZE87.2533, SD128.795, --FOREST  
--Foresight Target: My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--HR:1.0 (1.0 + 0.0 Offset)  
LS, HI0.0, HR1.0  
SS, OP906, FP914, AR237.1443, ZE86.5852, SD128.83, --FORESTCHK  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity

CLUSTER\_9\_ADJ

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DP,PN1
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE,GF14,SG410101916
EP,TM10:50:10,LA41.153722046,LN-72.560906164,HT-92.504512,RH0.0,RV0.0,GM1,CL1
SP,PN900,N 655638.518713,E 948899.326,EL9.213182,--
--Solve calibration from control points.
CT,PN900,DM4,RH0.0,RV0.0
EP,TM10:50:39,LA41.153722046,LN-72.560906164,HT-92.504512,RH0.0,RV0.0,GM1,CL2
RP,PN900,N 655638.518713,E 948899.326,EL9.213182,--
--Solve calibration from control points.
HA,N 655638.781703,E 948901.754471,TH-0.26299,TE-2.428471,RT0.0000,SC1.0000000000
VA,PV3,N 655638.518713,E 948899.326,LZ3.757602,SO0.00000,SA0.00000,GNGEID03 (Conus)
CS,CO3,ZGSite,ZNCLUSTER_9,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN901,N 656129.962948,E 949672.469102,EL6.758021,--MIXEDVEG
GR,PN902,N 659464.270013,E 943002.685483,EL15.936522,--BITLOT
GR,PN903,N 659779.050171,E 942166.753173,EL36.639534,--VERTCONV1
GR,PN904,N 659673.901723,E 942208.809369,EL32.71608,--VERTCONV2
GR,PN905,N 669273.85776,E 945128.856563,EL7.379418,--GRASS
GR,PN906,N 673605.082108,E 943850.713677,EL5.631319,--FORESTCONV1
GR,PN907,N 673481.986735,E 943856.487807,EL3.501286,--FORESTCONV2
GR,PN908,N 651924.179758,E 957691.957525,EL19.74743,--LX7598
GR,PN909,N 656129.989932,E 949672.51253,EL6.701872,--PT901CHK
GR,PN910,N 659464.259848,E 943002.691315,EL15.94273,--PT902CHK
-->> End Adjust with Projection.
-->>
SP,PN913,N 673679.68921,E 943955.540053,EL11.416232,--FOREST
SP,PN914,N 673679.681195,E 943955.528791,EL11.416572,--FORESTCHK
SP,PN911,N 659777.310368,E 942038.124218,EL36.359831,--LX0369DWN2.48FT
SP,PN912,N 659777.301799,E 942038.090361,EL36.362113,--LX0369DWN2.48FT

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## CLUSTER\_10\_ADJ

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JB,NMCLUSTER_10,DT04-10-2007,TM19:07:28
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--4-11-07 MKW BC SUN 50°F
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000, OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNGEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--07:47:14,Get autonomous base position at BASE:LA41.18055622,LN-72.541261264,HT-99.272865
--New point created by GPS autonomous base setup
EE,GF32,SG411074717
EP,TM07:47:17,LA41.18055622,LN-72.541261264,HT-99.272865,RH0.0,RV0.0,GM1,CL1
SP,PN1000,N 0.0,E 0.0,EL-99.272865,--
--04/11:07:47:17,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN1000,LA41.18055622,LN-72.541261264,HT-99.272865,SG411074717
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--07:47:56,Set ROVER receiver with base reference position:LA41.18055622,LN-72.541261264,HT-
99.272865
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 670635.315759,E 957821.97511,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 670635.315759,E 957821.97511,LZ0.0,S00.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNCLUSTER_10,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1000,N 670635.315759,E 957821.97511,EL-1.557337,--
EE,GF0,SG411074717
EP,TM07:48:51,LA41.18055622,LN-72.541261264,HT-99.272865,RH0.0,RV0.0,GM1,CL1
GP,PN1000,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM07:51:10,LA41.180597984,LN-72.541226171,HT-
98.612437,RH0.017392,RV0.027699,DH0.690329,DV1.099453,GM4,CL1
BL,DCROVER,PN1001,DX17.574578,DY33.942338,DZ32.307938,--GRASS,GM4,CL1,HP0.017392,VP0.027699
CV,DCROVER,SV4,SC0.005301,XX1.071540e-005,XY1.601794e-006,XZ-1.497062e-006,YY4.455965e-005,YZ-
3.113685e-005,ZZ4.410680e-005
GS,PN1001,N 670677.538444,E 957848.834435,EL-0.897601,--GRASS
EP,TM08:07:36,LA41.190893706,LN-72.531868233,HT-
92.673316,RH0.025377,RV0.041585,DH0.685907,DV1.123972,GM4,CL1
BL,DCROVER,PN1002,DX2689.794813,DY5252.680606,DZ4822.588624,--
FORESTCONV1,GM4,CL1,HP0.025377,VP0.041585
CV,DCROVER,SV4,SC0.007735,XX3.285508e-005,XY-1.297926e-005,XZ1.301343e-005,YY9.656000e-005,YZ-
6.507949e-005,ZZ9.107422e-005
GS,PN1002,N 677042.692398,E 961948.471859,EL4.940143,--FORESTCONV1
EP,TM08:15:24,LA41.190813865,LN-72.53172617,HT-
91.841731,RH0.024179,RV0.036133,DH0.645091,DV0.963904,GM4,CL1
BL,DCROVER,PN1003,DX2809.282369,DY5232.986865,DZ4762.449044,--
FORESTCONV2,GM4,CL1,HP0.024179,VP0.036133
CV,DCROVER,SV4,SC0.00737,XX2.870441e-005,XY-7.903895e-006,XZ1.557669e-005,YY6.705824e-005,YZ-
4.587419e-005,ZZ7.984151e-005

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## CLUSTER\_10\_ADJ

GS,PN1003,N 676961.709104,E 962056.742114,EL5.775411,--FORESTCONV2  
EP, TM08:37:24, LA41.192264915, LN-72.531031646, HT-  
99.368401, RHO.031113, RV0.041039, DH0.814326, DV1.074114, GM4, CL1  
BL, DCROVER, PN1004, DX3028.755404, DY6321.109574, DZ5860.480071, --MIXEDVEG, GM4, CL1, HP0.031113, VP0.041039  
CV, DCROVER, SV4, SCO.009483, XX3.568430e-005, XY-2.114505e-005, XZ4.572343e-005, YY6.022923e-005, YZ-  
4.012352e-005, ZZ1.504838e-004  
GS,PN1004,N 678429.514439,E 962589.009381,EL-1.779695,--MIXEDVEG  
EP, TM08:45:43, LA41.185587969, LN-72.541335048, HT-  
86.484652, RHO.039816, RV0.050187, DH1.123672, DV1.416362, GM4, CL1  
BL, DCROVER, PN1005, DX-1039.267357, DY3187.416614, DZ3834.076286, --BITLOT, GM4, CL1, HP0.039816, VP0.050187  
CV, DCROVER, SV4, SCO.012136, XX3.460861e-005, XY-1.944138e-005, XZ5.093944e-005, YY9.718142e-005, YZ-  
5.535068e-005, ZZ2.494953e-004  
GS,PN1005,N 675728.174997,E 957774.71843,EL11.095669,--BITLOT  
EP, TM08:49:25, LA41.185841591, LN-72.54150331, HT-  
87.737897, RHO.034892, RV0.052818, DH1.165445, DV1.764054, GM4, CL1  
BL, DCROVER, PN1006, DX-1212.082641, DY3312.540072, DZ4026.068358, --  
VERTCONV1, GM4, CL1, HP0.034892, VP0.052818  
CV, DCROVER, SV4, SCO.010635, XX3.007339e-005, XY1.887272e-005, XZ5.604622e-006, YY2.110266e-004, YZ-  
1.014026e-004, ZZ1.311835e-004  
GS,PN1006,N 675985.10141,E 957646.779024,EL9.83347,--VERTCONV1  
EP, TM09:19:03, LA41.150071548, LN-72.541385856, HT-  
85.074292, RHO.03087, RV0.053019, DH0.657469, DV1.129211, GM4, CL1  
BL, DCROVER, PN1007, DX3540.508891, DY-11834.863229, DZ-14050.966953, --  
LX7598, GM4, CL1, HP0.03087, VP0.053019  
CV, DCROVER, SV4, SCO.009409, XX4.375969e-005, XY-4.040435e-005, XZ4.368373e-005, YY1.465081e-004, YZ-  
9.337545e-005, ZZ1.594174e-004  
GS,PN1007,N 651926.746471,E 957693.571028,EL13.131968,--LX7598  
EP, TM09:20:05, LA41.150071539, LN-72.541385865, HT-  
85.082354, RHO.030331, RV0.052535, DH0.656327, DV1.136807, GM4, CL1  
BL, DCROVER, PN1008, DX3540.499971, DY-11834.840294, DZ-14051.002352, --  
LX7598CHK, GM4, CL1, HP0.030331, VP0.052535  
CV, DCROVER, SV4, SCO.009245, XX4.210296e-005, XY-3.962499e-005, XZ4.300556e-005, YY1.429202e-004, YZ-  
9.205488e-005, ZZ1.568520e-004  
GS,PN1008,N 651926.736903,E 957693.564408,EL13.123905,--LX7598CHK  
EP, TM09:48:37, LA41.180598016, LN-72.541226168, HT-  
98.634973, RHO.021313, RV0.03845, DH0.68543, DV1.236606, GM4, CL1  
BL, DCROVER, PN1009, DX17.575335, DY33.974968, DZ32.316601, --PT1001CHK, GM4, CL1, HP0.021313, VP0.03845  
CV, DCROVER, SV4, SCO.006496, XX2.343531e-005, XY-2.535524e-005, XZ2.386272e-005, YY7.082962e-005, YZ-  
5.014989e-005, ZZ8.528401e-005  
GS,PN1009,N 670677.57113,E 957848.837368,EL-0.920138,--PT1001CHK  
EP, TM10:02:53, LA41.19089377, LN-72.531868197, HT-  
92.627071, RHO.037408, RV0.065278, DH0.998726, DV1.742774, GM4, CL1  
BL, DCROVER, PN1010, DX2689.816972, DY5252.705405, DZ4822.657877, --  
PT1002CHK, GM4, CL1, HP0.037408, VP0.065278  
CV, DCROVER, SV4, SCO.011402, XX7.263030e-005, XY-7.939854e-005, XZ6.351696e-005, YY2.196243e-004, YZ-  
1.409517e-004, ZZ2.336301e-004  
GS,PN1010,N 677042.75675,E 961948.499555,EL4.986387,--PT1002CHK  
EP, TM10:04:29, LA41.190813916, LN-72.531726128, HT-  
91.829511, RHO.028383, RV0.045948, DH0.682626, DV1.10508, GM4, CL1  
BL, DCROVER, PN1011, DX2809.31176, DY5233.016604, DZ4762.499218, --PT1003CHK, GM4, CL1, HP0.028383, VP0.045948  
CV, DCROVER, SV4, SCO.008651, XX4.133725e-005, XY-3.915111e-005, XZ3.289685e-005, YY9.944377e-005, YZ-  
6.763157e-005, ZZ1.301979e-004  
GS,PN1011,N 676961.760453,E 962056.774761,EL5.787631,--PT1003CHK  
EP, TM10:10:51, LA41.192264931, LN-72.531031627, HT-  
99.388894, RHO.026603, RV0.040195, DH0.713024, DV1.077312, GM4, CL1  
BL, DCROVER, PN1012, DX3028.757932, DY6321.141087, DZ5860.475701, --  
PT1004CHK, GM4, CL1, HP0.026603, VP0.040195  
CV, DCROVER, SV4, SCO.008109, XX3.704794e-005, XY-2.948289e-005, XZ2.554989e-005, YY8.052778e-005, YZ-  
4.973954e-005, ZZ9.826961e-005  
GS,PN1012,N 678429.530772,E 962589.023934,EL-1.800188,--PT1004CHK  
EP, TM10:19:36, LA41.185587958, LN-72.541335064, HT-  
86.464468, RHO.060238, RV0.091863, DH1.730935, DV2.632939, GM4, CL1  
BL, DCROVER, PN1013, DX-1039.270715, DY3187.378666, DZ3834.104432, --  
PT1005CHK, GM4, CL1, HP0.060238, VP0.091863  
CV, DCROVER, SV4, SCO.01836, XX7.941660e-005, XY-6.224927e-005, XZ-3.120363e-005, YY3.626581e-004, YZ-  
3.023595e-004, ZZ6.790250e-004  
GS,PN1013,N 675728.163665,E 957774.70656,EL11.115854,--PT1005CHK  
EP, TM10:21:27, LA41.185841565, LN-72.541503319, HT-  
87.797094, RHO.02575, RV0.038227, DH0.773032, DV1.147591, GM4, CL1  
BL, DCROVER, PN1014, DX-1212.104564, DY3312.574123, DZ4026.020611, --  
PT1006CHK, GM4, CL1, HP0.02575, VP0.038227  
CV, DCROVER, SV4, SCO.007849, XX2.824053e-005, XY-3.252298e-005, XZ1.560274e-005, YY1.021546e-004, YZ-  
3.975755e-005, ZZ6.696446e-005  
GS,PN1014,N 675985.075295,E 957646.77168,EL9.774273,--PT1006CHK

CLUSTER\_10\_ADJ

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--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
OC,OP1002,N 677042.692398,E 961948.471859,EL4.940143,--FORESTCONV1
--HR:0.0 (0.0 + 0.0 Offset)
LS,HI0.0,HR0.0
BK,OP1002,BP1003,BS126.474387,BC0.0000
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
--BS check 1002 - 1003:ZE89.3839,SD135.205,HD err= -0.003902, VD err= 0.004412
--BS Circle check : angular err= 0.0000
SS,OP1002,FP1015,AR216.0157,ZE91.2223,SD165.155,--FOREST
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--HR:1.0 (1.0 + 0.0 Offset)
LS,HI0.0,HR1.0
SS,OP1002,FP1016,AR216.0157,ZE91.0133,SD165.12,--FORESTCHK
--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
OC,OP1006,N 675985.10141,E 957646.779024,EL9.83347,--VERTCONV1
--HR:0.0 (0.0 + 0.0 Offset)
LS,HI0.0,HR0.0
BK,OP1006,BP1005,BS153.31425,BC0.0000
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
--BS check 1006 - 1005:ZE89.4542,SD287.02,HD err= -0.001077, VD err= -0.068286
--BS Circle check : angular err= 0.0000
SS,OP1006,FP1017,AR127.1008,ZE90.3944,SD329.965,--LX1621
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--HR:1.0 (1.0 + 0.0 Offset)
LS,HI0.0,HR1.0
SS,OP1006,FP1018,AR127.1008,ZE90.2917,SD329.95,--LX1621CHK
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
DP,PN1
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE,GF14,SG411074717
EP,TM11:19:02,LA41.18055622,LN-72.541261264,HT-99.272865,RH0.0,RV0.0,GM1,CL1
SP,PN1000,N 670632.767036,E 957820.370812,EL5.105191,--
--Solve calibration from control points.
CT,PN1000,DM4,RH0.0,RV0.0
EP,TM11:19:22,LA41.18055622,LN-72.541261264,HT-99.272865,RH0.0,RV0.0,GM1,CL2
RP,PN1000,N 670632.767036,E 957820.370812,EL5.105191,--
--Solve calibration from control points.
HA,N 670635.315759,E 957821.97511,TH-2.548723,TE-1.604298,RT0.0000,SC1.0000000000
VA,PV3,N 670632.767036,E 957820.370812,LZ6.662528,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNCLUSTER_10,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1001,N 670674.989721,E 957847.230137,EL5.764927,--GRASS
GR,PN1002,N 677040.143675,E 961946.867561,EL11.602671,--FORESTCONV1
GR,PN1003,N 676959.16038,E 962055.137816,EL12.437939,--FORESTCONV2
GR,PN1004,N 678426.965716,E 962587.405083,EL4.882833,--MIXEDVEG
GR,PN1005,N 675725.626273,E 957773.114132,EL17.758197,--BITLOT
GR,PN1006,N 675982.552687,E 957645.174726,EL16.495998,--VERTCONV1
GR,PN1007,N 651924.197748,E 957691.96673,EL19.794495,--LX7598
GR,PN1008,N 651924.188179,E 957691.96011,EL19.786433,--LX7598CHK
GR,PN1009,N 670675.022407,E 957847.23307,EL5.74239,--PT1001CHK
GR,PN1010,N 677040.208026,E 961946.895256,EL11.648915,--PT1002CHK
GR,PN1011,N 676959.21173,E 962055.170463,EL12.450159,--PT1003CHK
GR,PN1012,N 678426.982048,E 962587.419636,EL4.86234,--PT1004CHK
GR,PN1013,N 675725.614942,E 957773.102262,EL17.778382,--PT1005CHK
GR,PN1014,N 675982.526572,E 957645.167382,EL16.436801,--PT1006CHK
-->> End Adjust with Projection.
-->>
SP,PN1015,N 677197.890953,E 961898.121357,EL7.645691,--FOREST
SP,PN1016,N 677197.877536,E 961898.125503,EL7.646965,--FORESTCHK
SP,PN1017,N 676043.796875,E 957320.966028,EL12.682833,--LX1621
SP,PN1018,N 676043.79596,E 957320.970874,EL12.685931,--LX1621CHK

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## CLUSTER\_11\_ADJ

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JB,NMFEMA_CLUSTER_11,DT04-13-2007,TM04:30:33
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--4-13-07 MKW BC SUN 50°F
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000, OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNGEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--07:41:06,Get autonomous base position at BASE:LA41.160018597,LN-72.483408999,HT-87.929356
--New point created by GPS autonomous base setup
EE,GF32,SG413074109
EP,TM07:41:09,LA41.160018597,LN-72.483408999,HT-87.929356,RH0.0,RV0.0,GM1,CL1
SP,PN1100,N 0.0,E 0.0,EL-87.929356,--
--04/13:07:41:09,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAB7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN1100,LA41.160018597,LN-72.483408999,HT-87.929356,SG413074109
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--07:42:19,Set ROVER receiver with base reference position:LA41.160018597,LN-72.483408999,HT-
87.929356
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 657913.847418,E 983650.893267,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 657913.847418,E 983650.893267,LZ0.0,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_11,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1100,N 657913.847418,E 983650.893267,EL10.470846,--
EE,GF0,SG413074109
EP,TM07:42:43,LA41.160018597,LN-72.483408999,HT-87.929356,RH0.0,RV0.0,GM1,CL1
GP,PN1100,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM07:48:21,LA41.160027757,LN-72.483319051,HT-
87.601847,RH0.020617,RV0.033317,DH0.695826,DV1.12447,GM4,CL1
BL,DCROVER,PN1101,DX63.933999,DY25.790253,DZ7.286246,--GRASS,GM4,CL1,HP0.020617,VP0.033317
CV,DCROVER,SV4,SC0.006284,XX1.573721e-005,XY-1.060779e-006,XZ-2.450482e-006,YY6.513989e-005,YZ-
4.463922e-005,ZZ6.174014e-005
GS,PN1101,N 657923.071213,E 983719.589052,EL10.798991,--GRASS
EP,TM08:01:35,LA41.162833831,LN-72.485517099,HT-
92.295088,RH0.020232,RV0.032301,DH0.70122,DV1.119502,GM4,CL1
BL,DCROVER,PN1102,DX-2094.211144,DY1322.885734,DZ2138.820727,--
MIXEDVEG,GM4,CL1,HP0.020232,VP0.032301
CV,DCROVER,SV4,SC0.006167,XX2.153982e-005,XY-8.647581e-006,XZ6.736499e-006,YY5.883505e-005,YZ-
3.911470e-005,ZZ5.458558e-005
GS,PN1102,N 660764.372108,E 982043.18458,EL6.002109,--MIXEDVEG
EP,TM08:12:34,LA41.16397454,LN-72.491679171,HT-
69.949853,RH0.020772,RV0.032419,DH0.615356,DV0.960413,GM4,CL1
BL,DCROVER,PN1103,DX-3891.399264,DY1546.815373,DZ3021.251635,--BITLOT,GM4,CL1,HP0.020772,VP0.032419
CV,DCROVER,SV4,SC0.006331,XX2.387466e-005,XY-1.446267e-005,XZ1.834806e-005,YY5.114428e-005,YZ-
3.464962e-005,ZZ6.270827e-005
GS,PN1103,N 661920.215296,E 980393.257443,EL28.291619,--BITLOT

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CLUSTER\_11\_ADJ

EP, TM08:26:17, LA41.164056913, LN-72.481534622, HT-  
89.917085, RH0.030689, RV0.039043, DH1.026704, DV1.306178, GM4, CL1  
BL, DCROVER, PN1104, DX569.934072, DY3000.037542, DZ3070.704991, --LX0413, GM4, CL1, HP0.030689, VP0.039043  
CV, DCROVER, SV4, SC0.009354, XX2.330864e-005, XY-1.426618e-005, XZ3.318833e-005, YY4.424429e-005, YZ-  
3.490734e-005, ZZ1.615589e-004  
GS, PN1104, N 662000.176797, E 985084.838617, EL8.381368, --LX0413  
EP, TM08:40:24, LA41.1640103, LN-72.481052142, HT-  
92.146581, RH0.050039, RV0.051111, DH1.60406, DV1.638436, GM4, CL1  
BL, DCROVER, PN1105, DX930.561719, DY3080.783514, DZ3033.796293, --  
FORESTCONV1, GM4, CL1, HP0.050039, VP0.051111  
CV, DCROVER, SV4, SC0.015252, XX3.200084e-005, XY-1.436581e-005, XZ6.339383e-005, YY8.415819e-005, YZ-  
1.927825e-005, ZZ3.591626e-004  
GS, PN1105, N 661952.770122, E 985453.194907, EL6.157923, --FORESTCONV1  
EP, TM08:54:07, LA41.154777005, LN-72.462346793, HT-  
96.806467, RH0.029472, RV0.044123, DH0.735148, DV1.100504, GM4, CL1  
BL, DCROVER, PN1106, DX9772.030874, DY2165.738147, DZ-950.30891, --LX6423, GM4, CL1, HP0.029472, VP0.044123  
CV, DCROVER, SV4, SC0.008983, XX3.983289e-005, XY-4.288049e-005, XZ2.934479e-005, YY1.330629e-004, YZ-  
5.217813e-005, ZZ8.867153e-005  
GS, PN1106, N 656652.434218, E 993625.585381, EL1.763573, --LX6423  
EP, TM08:55:39, LA41.154776987, LN-72.462346791, HT-  
96.766188, RH0.029621, RV0.046245, DH0.714647, DV1.115734, GM4, CL1  
BL, DCROVER, PN1107, DX9772.043054, DY2165.721568, DZ-950.319962, --  
LX6423CHK, GM4, CL1, HP0.029621, VP0.046245  
CV, DCROVER, SV4, SC0.009028, XX3.868939e-005, XY-3.971393e-005, XZ3.105731e-005, YY1.398811e-004, YZ-  
6.192271e-005, ZZ1.016252e-004  
GS, PN1107, N 656652.416066, E 993625.586707, EL1.803853, --LX6423CHK  
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
--Foresight Target: My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--Foresight Target: My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
OC, OP1105, N 661952.770122, E 985453.194907, EL6.157923, --FORESTCONV1  
--HR:0.0 (0.0 + 0.0 Offset)  
LS, HI0.0, HR0.0  
BK, OP1105, BP1104, BS277.200072, BC0.0000  
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
--BS check 1105 - 1104:ZE89.4113, SD371.43, HD err= 0.030124, VD err= -0.194017  
--BS Circle check : angular err= 0.0000  
--BS check 1105 - 1104:ZE89.4114, SD371.395, HD err= -0.004865, VD err= -0.196009  
--BS Circle check : angular err= 0.0000  
SS, OP1105, FP1108, AR305.5109, ZE91.4517, SD97.155, --FOREST  
--Foresight Target: My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--HR:1.0 (1.0 + 0.0 Offset)  
LS, HI0.0, HR1.0  
SS, OP1105, FP1109, AR305.5109, ZE91.1005, SD97.12, --FORESTCHK  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
EP, TM09:49:55, LA41.160027684, LN-72.483319021, HT-  
87.58106, RH0.02094, RV0.036084, DH0.672695, DV1.15921, GM4, CL1  
BL, DCROVER, PN1110, DX63.96041, DY25.739795, DZ7.24528, --PT1101CHK, GM4, CL1, HP0.02094, VP0.036084  
CV, DCROVER, SV4, SC0.006382, XX2.289936e-005, XY-2.465528e-005, XZ1.836870e-005, YY6.957570e-005, YZ-  
4.285738e-005, ZZ6.922314e-005  
GS, PN1110, N 657922.997421, E 983719.611637, EL10.81978, --PT1101CHK  
EP, TM10:03:22, LA41.162833825, LN-72.485517111, HT-  
92.336813, RH0.021937, RV0.035997, DH0.68839, DV1.129574, GM4, CL1  
BL, DCROVER, PN1111, DX-2094.218028, DY1322.899502, DZ2138.805391, --  
PT1102CHK, GM4, CL1, HP0.021937, VP0.035997  
CV, DCROVER, SV4, SC0.006686, XX2.542151e-005, XY-2.588189e-005, XZ1.864662e-005, YY6.656640e-005, YZ-  
4.146927e-005, ZZ7.310195e-005  
GS, PN1111, N 660764.365983, E 982043.175644, EL5.960384, --PT1102CHK  
EP, TM10:10:08, LA41.163974517, LN-72.491679139, HT-  
70.009429, RH0.025065, RV0.039906, DH0.745208, DV1.186435, GM4, CL1  
BL, DCROVER, PN1112, DX-3891.388448, DY1546.846101, DZ3021.211729, --  
PT1103CHK, GM4, CL1, HP0.025065, VP0.039906  
CV, DCROVER, SV4, SC0.00764, XX2.927763e-005, XY-3.544378e-005, XZ1.719437e-005, YY1.082365e-004, YZ-  
4.690205e-005, ZZ6.880429e-005  
GS, PN1112, N 661920.191596, E 980393.281545, EL28.232043, --PT1103CHK  
EP, TM10:16:24, LA41.164056902, LN-72.48153459, HT-  
90.002662, RH0.041951, RV0.056756, DH1.278554, DV1.73448, GM4, CL1  
BL, DCROVER, PN1113, DX569.934669, DY3000.089054, DZ3070.695174, --LX0413CHK, GM4, CL1, HP0.041951, VP0.056756  
CV, DCROVER, SV4, SC0.012787, XX3.493889e-005, XY-1.983531e-005, XZ-1.458274e-005, YY1.217591e-004, YZ-  
1.050664e-004, ZZ3.060722e-004  
GS, PN1113, N 662000.166165, E 985084.863222, EL8.295791, --LX0413CHK  
EP, TM10:19:05, LA41.16401034, LN-72.481052174, HT-  
92.081751, RH0.03574, RV0.049889, DH1.068645, DV1.491719, GM4, CL1  
BL, DCROVER, PN1114, DX930.5492, DY3080.777609, DZ3033.879508, --PT1105CHK, GM4, CL1, HP0.03574, VP0.049889



## CLUSTER\_11\_ADJ

CV,DCROVER,SV4,SC0.010894,XX2.546600e-005,XY-3.938963e-006,XZ-2.012544e-005,YY9.147818e-005,YZ-9.087600e-005,ZZ2.329563e-004  
GS,PN1114,N 661952.81125,E 985453.170667,EL6.222752,--PT1105CHK  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
DP,PN1  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Import GPS Control - create GPS control point  
EE,GF14,SG413074109  
EP,TM11:33:44,LA41.160018597,LN-72.483408999,HT-87.929356,RH0.0,RV0.0,GM1,CL1  
SP,PN1100,N 657906.335998,E 983654.500192,EL14.789412,--  
--Solve calibration from control points.  
CT,PN1100,DM4,RH0.0,RV0.0  
EP,TM11:33:58,LA41.160018597,LN-72.483408999,HT-87.929356,RH0.0,RV0.0,GM1,CL2  
RP,PN1100,N 657906.335998,E 983654.500192,EL14.789412,--  
--Solve calibration from control points.  
HA,N 657913.847418,E 983650.893267,TH-7.51142,TE3.606925,RT0.0000,SC1.0000000000  
VA,PV3,N 657906.335998,E 983654.500192,LZ4.318566,SO0.00000,SA0.00000,GNGEOID03 (Conus)  
CS,CO3,ZGSite,ZNFEMA\_CLUSTER\_11,DNNAD 1983 (Conus)  
-->>  
-->> Begin Adjust with Projection.  
GR,PN1101,N 657915.559793,E 983723.195977,EL15.117556,--GRASS  
GR,PN1102,N 660756.860687,E 982046.791505,EL10.320674,--MIXEDVEG  
GR,PN1103,N 661912.703876,E 980396.864368,EL32.610184,--BITLOT  
GR,PN1104,N 661992.665376,E 985088.445542,EL12.699933,--LX0413  
GR,PN1105,N 661945.258702,E 985456.801832,EL10.476489,--FORESTCONV1  
GR,PN1106,N 656644.922798,E 993629.192306,EL6.082138,--LX6423  
GR,PN1107,N 656644.904646,E 993629.193632,EL6.122418,--LX6423CHK  
GR,PN1110,N 657915.486001,E 983723.218562,EL15.138346,--PT1101CHK  
GR,PN1111,N 660756.854563,E 982046.782569,EL10.278949,--PT1102CHK  
GR,PN1112,N 661912.680176,E 980396.88847,EL32.550609,--PT1103CHK  
GR,PN1113,N 661992.654745,E 985088.470146,EL12.614357,--LX0413CHK  
GR,PN1114,N 661945.29983,E 985456.777592,EL10.541317,--PT1105CHK  
-->> End Adjust with Projection.  
-->>  
SP,PN1108,N 661874.453184,E 985390.343178,EL7.50195,--FOREST  
SP,PN1109,N 661874.4602,E 985390.349763,EL7.497131,--FORESTCHK

FEMA\_CLUSTER\_12\_ADJ

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JB,NMFEMA_CLUSTER_12,DT04-13-2007,TM07:59:43
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--4-13-07 MKW BC CLOUDY BREEZY 50°F
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000,OY0.00000000,OZO.00000000,LX0.0,LY0.0,LZO.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNCEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--13:32:43,Get autonomous base position at BASE:LA41.161840931,LN-72.394950908,HT-109.212771
--New point created by GPS autonomous base setup
EE,GF32,SG413133245
EP,TM13:32:45,LA41.161840931,LN-72.394950908,HT-109.212771,RH0.0,RV0.0,GM1,CL1
SP,PN1200,N 0.0,E 0.0,EL-109.212771,--
--04/13:13:32:45,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAB7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN1200,LA41.161840931,LN-72.394950908,HT-109.212771,SG413133245
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--13:33:17,Set ROVER receiver with base reference position:LA41.161840931,LN-72.394950908,HT-
109.212771
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 659764.479173,E 1023708.976873,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 659764.479173,E 1023708.976873,LZ0.0,S00.000000,SA0.000000,GNCEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_12,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1200,N 659764.479173,E 1023708.976873,EL-10.285004,--
EE,GF0,SG413133245
EP,TM13:33:41,LA41.161840931,LN-72.394950908,HT-109.212771,RH0.0,RV0.0,GM1,CL1
GP,PN1200,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM13:42:35,LA41.160691164,LN-72.400949512,HT-
108.983923,RH0.022149,RV0.026477,DH0.693576,DV0.826568,GM4,CL1
BL,DCROVER,PN1201,DX-1228.073906,DY-1187.715295,DZ-874.389327,--
BAREEARTHGRAVLOT,GM4,CL1,HP0.022149,VP0.026477
CV,DCROVER,SV4,SC0.006751,XX2.056897e-005,XY-1.772654e-005,XZ3.827204e-006,YY4.880316e-005,YZ-
1.496589e-005,ZZ4.133062e-005
GS,PN1201,N 658599.299681,E 1022183.937444,EL-10.045467,--BAREEARTHGRAVLOT
EP,TM13:52:25,LA41.155841271,LN-72.400334197,HT-
106.227545,RH0.034677,RV0.044103,DH1.056202,DV1.349723,GM4,CL1
BL,DCROVER,PN1202,DX-609.894093,DY-1591.311944,DZ-1519.123977,--LX6270,GM4,CL1,HP0.034677,VP0.044103
CV,DCROVER,SV4,SC0.01057,XX4.541687e-005,XY-5.039259e-005,XZ-4.299583e-006,YY1.483977e-004,YZ-
4.494139e-005,ZZ8.946945e-005
GS,PN1202,N 657739.54789,E 1022654.632688,EL-7.257397,--LX6270

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FEMA\_CLUSTER\_12\_ADJ

EP, TM13:54:04, LA41.155841247, LN-72.400334169, HT-  
 106.231192, RH0.034243, RV0.043387, DH1.059204, DV1.344978, GM4, CL1  
 BL, DCROVER, PN1203, DX-609.866204, DY-1591.323236, DZ-1519.133751, --  
 LX6270CHK, GM4, CL1, HP0.034243, VP0.043387  
 CV, DCROVER, SV4, SC0.010437, XX4.689008e-005, XY-5.316026e-005, XZ-3.533884e-006, YY1.510993e-004, YZ-  
 4.370127e-005, ZZ8.582895e-005  
 GS, PN1203, N 657739.523954, E 1022654.653908, EL-7.261043, --LX6270CHK  
 EP, TM14:09:15, LA41.16584193, LN-72.405420747, HT-  
 97.569631, RH0.028105, RV0.043651, DH0.753718, DV1.170636, GM4, CL1  
 BL, DCROVER, PN1204, DX-5508.759777, DY1070.506786, DZ3051.11144, --  
 FORESTCONV1, GM4, CL1, HP0.028105, VP0.043651  
 CV, DCROVER, SV4, SC0.008566, XX3.164887e-005, XY-4.135531e-005, XZ1.123530e-005, YY1.668272e-004, YZ-  
 5.322253e-005, ZZ5.192107e-005  
 GS, PN1204, N 663809.566127, E 1018765.431898, EL1.167929, --FORESTCONV1  
 EP, TM14:12:02, LA41.165724138, LN-72.40537101, HT-  
 99.286078, RH0.02801, RV0.04309, DH0.741054, DV1.140006, GM4, CL1  
 BL, DCROVER, PN1205, DX-5449.468435, DY1007.922969, DZ2960.397073, --  
 FORESTCONV2, GM4, CL1, HP0.02801, VP0.04309  
 CV, DCROVER, SV4, SC0.008538, XX3.321579e-005, XY-4.440617e-005, XZ1.240851e-005, YY1.601923e-004, YZ-  
 5.054607e-005, ZZ5.197924e-005  
 GS, PN1205, N 663690.376065, E 1018803.498809, EL-0.544462, --FORESTCONV2  
 EP, TM14:21:10, LA41.171793941, LN-72.404528349, HT-  
 89.717719, RH0.027781, RV0.043627, DH0.738858, DV1.160271, GM4, CL1  
 BL, DCROVER, PN1206, DX-5244.682747, DY2512.190296, DZ4540.874372, --BITLOT, GM4, CL1, HP0.027781, VP0.043627  
 CV, DCROVER, SV4, SC0.008468, XX3.542501e-005, XY-4.790337e-005, XZ1.359788e-005, YY1.612375e-004, YZ-  
 5.293808e-005, ZZ5.186301e-005  
 GS, PN1206, N 665785.79114, E 1019445.12983, EL8.972786, --BITLOT  
 EP, TM14:30:41, LA41.171403744, LN-72.392236069, HT-  
 42.143995, RH0.036933, RV0.066976, DH1.013282, DV1.837525, GM4, CL1  
 BL, DCROVER, PN1207, DX886.595255, DY4115.258794, DZ4275.493895, --MIXEDVEG, GM4, CL1, HP0.036933, VP0.066976  
 CV, DCROVER, SV4, SC0.011257, XX4.111596e-005, XY-3.470717e-005, XZ-2.200258e-006, YY3.865226e-004, YZ-  
 1.636574e-004, ZZ1.158359e-004  
 GS, PN1207, N 665396.890251, E 1025775.906458, EL56.65235, --MIXEDVEG  
 EP, TM14:39:45, LA41.172064754, LN-72.392879252, HT-  
 28.374095, RH0.035549, RV0.058001, DH0.990301, DV1.615746, GM4, CL1  
 BL, DCROVER, PN1208, DX289.39825, DY4380.358799, DZ4787.311807, --LX0438, GM4, CL1, HP0.035549, VP0.058001  
 CV, DCROVER, SV4, SC0.010835, XX4.991073e-005, XY-3.946557e-005, XZ-2.107849e-006, YY2.937800e-004, YZ-  
 1.154664e-004, ZZ8.625220e-005  
 GS, PN1208, N 666065.385957, E 1025284.178946, EL70.395836, --LX0438  
 EP, TM14:41:04, LA41.172064761, LN-72.392879209, HT-  
 28.403761, RH0.037491, RV0.065408, DH1.012362, DV1.766425, GM4, CL1  
 BL, DCROVER, PN1209, DX289.417739, DY4380.341517, DZ4787.29346, --LX0438CHK, GM4, CL1, HP0.037491, VP0.065408  
 CV, DCROVER, SV4, SC0.011427, XX5.394789e-005, XY-4.338615e-005, XZ-6.237343e-007, YY3.288526e-004, YZ-  
 1.569762e-004, ZZ1.452409e-004  
 GS, PN1209, N 666065.393397, E 1025284.211818, EL70.366171, --LX0438CHK  
 EP, TM15:34:25, LA41.160691154, LN-72.40094952, HT-  
 108.921171, RH0.021706, RV0.041185, DH0.715193, DV1.357033, GM4, CL1  
 BL, DCROVER, PN1210, DX-1228.060109, DY-1187.786462, DZ-874.337, --PT1201CHK, GM4, CL1, HP0.021706, VP0.041185  
 CV, DCROVER, SV4, SC0.006616, XX2.271084e-005, XY-1.849662e-005, XZ1.943864e-005, YY7.491187e-005, YZ-  
 6.451720e-005, ZZ1.037317e-004  
 GS, PN1210, N 658599.289724, E 1022183.931251, EL-9.982715, --PT1201CHK  
 EP, TM15:55:36, LA41.165841867, LN-72.405420766, HT-  
 97.389096, RH0.02322, RV0.034426, DH0.665723, DV0.986989, GM4, CL1  
 BL, DCROVER, PN1211, DX-5508.727734, DY1070.337498, DZ3051.170064, --  
 PT1204CHK, GM4, CL1, HP0.02322, VP0.034426  
 CV, DCROVER, SV4, SC0.007078, XX2.588777e-005, XY-1.641482e-005, XZ1.018040e-005, YY6.631952e-005, YZ-  
 3.888213e-005, ZZ6.798714e-005  
 GS, PN1211, N 663809.50197, E 1018765.417651, EL1.348465, --PT1204CHK  
 EP, TM15:56:13, LA41.165841848, LN-72.405420779, HT-  
 97.362009, RH0.023448, RV0.035256, DH0.707827, DV1.064266, GM4, CL1  
 BL, DCROVER, PN1212, DX-5508.723516, DY1070.321899, DZ3051.178039, --  
 PT1204CHK2, GM4, CL1, HP0.023448, VP0.035256  
 CV, DCROVER, SV4, SC0.007147, XX2.374436e-005, XY-1.280741e-005, XZ8.645128e-006, YY7.984736e-005, YZ-  
 4.132953e-005, ZZ6.296777e-005  
 GS, PN1212, N 663809.482624, E 1018765.407959, EL1.375552, --PT1204CHK2  
 EP, TM15:58:24, LA41.165724155, LN-72.405371001, HT-  
 99.206576, RH0.023344, RV0.034364, DH0.66016, DV0.974371, GM4, CL1  
 BL, DCROVER, PN1213, DX-5449.465763, DY1007.933098, DZ2960.428436, --  
 PT1205CHK, GM4, CL1, HP0.023344, VP0.034364  
 CV, DCROVER, SV4, SC0.007115, XX2.738843e-005, XY-1.797045e-005, XZ1.131559e-005, YY6.478177e-005, YZ-  
 3.825906e-005, ZZ6.816510e-005  
 GS, PN1213, N 663690.39288, E 1018803.506108, EL-0.464961, --PT1205CHK  
 EP, TM16:05:03, LA41.171793976, LN-72.404528293, HT-  
 89.666367, RH0.035147, RV0.051067, DH0.950194, DV1.380606, GM4, CL1

FEMA\_CLUSTER\_12\_ADJ

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BL,DCROVER,PN1214,DX-5244.656692,DY2512.172664,DZ4540.90865,--
PT1206CHK,GM4,CL1,HP0.035147,VP0.051067
CV,DCROVER,SV4,SC0.010713,XX7.119527e-005,XY-4.832982e-005,XZ3.582815e-005,YY1.389872e-004,YZ-
8.151808e-005,ZZ1.468617e-004
GS,PN1214,N 665785.826401,E 1019445.172984,EL9.024138,--PT1206CHK
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
OC,OP1204,N 663809.566127,E 1018765.431898,EL1.167929,--FORESTCONV1
--HR:0.0 (0.0 + 0.0 Offset)
LS,HI0.0,HR0.0
BK,OP1204,BP1205,BS162.171523,BC0.0000
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
--BS check 1204 - 1205:ZE90.4645,SD125.135,HD err= 0.002046, VD err= 0.01073
--BS Circle check : angular err= 0.0000
SS,OP1204,FP1215,AR251.3453,ZE89.3249,SD133.62,--FOREST
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--HR:1.0 (1.0 + 0.0 Offset)
LS,HI0.0,HR1.0
SS,OP1204,FP1216,AR251.3453,ZE89.0708,SD133.65,--FORESTCHK
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
DP,PN1
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE,GF14,SG413133245
EP,TM11:42:14,LA41.161840931,LN-72.394950908,HT-109.212771,RH0.0,RV0.0,GM1,CL1
SP,PN1200,N 659759.239541,E 1023709.108097,EL4.681717,--
--Solve calibration from control points.
CT,PN1200,DM4,RH0.0,RV0.0
EP,TM11:42:25,LA41.161840931,LN-72.394950908,HT-109.212771,RH0.0,RV0.0,GM1,CL2
RP,PN1200,N 659759.239541,E 1023709.108097,EL4.681717,--
--Solve calibration from control points.
HA,N 659764.479173,E 1023708.976873,TH-5.239632,TE0.131223,RT0.0000,SC1.0000000000
VA,PV3,N 659759.239541,E 1023709.108097,LZ14.966721,SO0.00000,SA0.00000,GNCEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_12,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1201,N 658594.060049,E 1022184.068668,EL4.921254,--BAREEARTHGRAVLOT
GR,PN1202,N 657734.308258,E 1022654.763911,EL7.709324,--LX6270
GR,PN1203,N 657734.284322,E 1022654.785131,EL7.705678,--LX6270CHK
GR,PN1204,N 663804.326495,E 1018765.563121,EL16.13465,--FORESTCONV1
GR,PN1205,N 663685.136433,E 1018803.630032,EL14.422259,--FORESTCONV2
GR,PN1206,N 665780.551508,E 1019445.261053,EL23.939508,--BITLOT
GR,PN1207,N 665391.650619,E 1025776.037681,EL71.619071,--MIXEDVEG
GR,PN1208,N 666060.146325,E 1025284.31017,EL85.362557,--LX0438
GR,PN1209,N 666060.153765,E 1025284.343041,EL85.332892,--LX0438CHK
GR,PN1210,N 658594.050092,E 1022184.062474,EL4.984007,--PT1201CHK
GR,PN1211,N 663804.262338,E 1018765.548874,EL16.315187,--PT1204CHK
GR,PN1212,N 663804.242992,E 1018765.539183,EL16.342274,--PT1204CHK2
GR,PN1213,N 663685.153248,E 1018803.637331,EL14.501761,--PT1205CHK
GR,PN1214,N 665780.586769,E 1019445.304207,EL23.99086,--PT1206CHK
-->> End Adjust with Projection.
-->>
SP,PN1215,N 663883.110574,E 1018873.480454,EL17.191493,--FOREST
SP,PN1216,N 663883.121408,E 1018873.495294,EL17.190156,--FORESTCHK

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FEMA\_CLUSTER\_13\_ADJ

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JB,NMFEMA_CLUSTER_13,DT04-18-2007,TM06:04:25
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--4-18-07 MKW BC CLOUDY 42°F
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000, OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNGEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--09:06:53,Get autonomous base position at BASE:LA41.150664887,LN-72.324503782,HT-99.942989
--New point created by GPS autonomous base setup
EE,GF32,SG418090700
EP,TM09:07:00,LA41.150664887,LN-72.324503782,HT-99.942989,RH0.0,RV0.0,GM1,CL1
SP,PN1300,N 0.0,E 0.0,EL-99.942989,--
--04/18:09:07:00,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN1300,LA41.150664887,LN-72.324503782,HT-99.942989,SG418090700
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--09:08:00,Set ROVER receiver with base reference position:LA41.150664887,LN-72.324503782,HT-
99.942989
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 652555.932094,E 1056138.56903,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 652555.932094,E 1056138.56903,LZ0.0,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_13,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1300,N 652555.932094,E 1056138.56903,EL-0.357145,--
EE,GF0,SG418090700
EP,TM09:08:33,LA41.150664887,LN-72.324503782,HT-99.942989,RH0.0,RV0.0,GM1,CL1
GP,PN1300,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM09:20:20,LA41.15245481,LN-72.331058176,HT-
103.992687,RH0.021114,RV0.038505,DH0.619391,DV1.129586,GM4,CL1
BL,DCROVER,PN1301,DX-2220.36834,DY557.298557,DZ1359.401897,--MIXEDVEG,GM4,CL1,HP0.021114,VP0.038505
CV,DCROVER,SV4,SC0.006435,XX2.391491e-005,XY-2.360944e-005,XZ2.212410e-005,YY6.948251e-005,YZ-
5.210866e-005,ZZ8.576232e-005
GS,PN1301,N 654363.0167,E 1054183.319639,EL-4.485378,--MIXEDVEG
EP,TM09:28:54,LA41.160938759,LN-72.333349318,HT-
102.511506,RH0.022213,RV0.039301,DH0.629043,DV1.112938,GM4,CL1
BL,DCROVER,PN1302,DX-4786.551815,DY2887.155806,DZ4771.774735,--GRASS,GM4,CL1,HP0.022213,VP0.039301
CV,DCROVER,SV4,SC0.006771,XX2.725015e-005,XY-2.651913e-005,XZ2.343186e-005,YY7.174267e-005,YZ-
5.326551e-005,ZZ9.034308e-005
GS,PN1302,N 658897.383839,E 1052423.399668,EL-3.15212,--GRASS
EP,TM09:37:27,LA41.163382186,LN-72.324533516,HT-
94.99011,RH0.024512,RV0.040929,DH0.635653,DV1.061374,GM4,CL1
BL,DCROVER,PN1303,DX-1765.870043,DY5540.57909,DZ6635.454161,--LX0466,GM4,CL1,HP0.024512,VP0.040929
CV,DCROVER,SV4,SC0.007471,XX3.288303e-005,XY-3.061270e-005,XZ2.464225e-005,YY7.924774e-005,YZ-
5.579888e-005,ZZ9.932420e-005
GS,PN1303,N 661378.82576,E 1056095.020621,EL4.356291,--LX0466

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## FEMA\_CLUSTER\_13\_ADJ

EP, TM09:43:12, LA41.164240272, LN-72.320762116, HT-  
83.778425, RH0.031919, RV0.048134, DH0.908118, DV1.369428, GM4, CL1  
BL, DCROVER, PN1304, DX811.684713, DY6943.083315, DZ7295.512979, --LX0467, GM4, CL1, HP0.031919, VP0.048134  
CV, DCROVER, SV4, SC0.009729, XX3.242813e-005, XY-2.417878e-005, XZ2.400087e-006, YY9.731957e-005, YZ-  
8.102875e-005, ZZ1.801494e-004  
GS, PN1304, N 662254.28735, E 1058972.49477, EL15.588701, --LX0467  
EP, TM09:47:35, LA41.164622989, LN-72.314915113, HT-  
88.004991, RH0.028877, RV0.045089, DH0.707409, DV1.104559, GM4, CL1  
BL, DCROVER, PN1305, DX2079.222929, DY7613.155752, DZ7583.829746, --BITLOT, GM4, CL1, HP0.028877, VP0.045089  
CV, DCROVER, SV4, SC0.008802, XX3.885177e-005, XY-4.132952e-005, XZ2.372576e-005, YY1.279705e-004, YZ-  
6.067921e-005, ZZ9.952814e-005  
GS, PN1305, N 662645.185909, E 1060381.72642, EL11.37327, --BITLOT  
EP, TM09:53:05, LA41.163643247, LN-72.310347408, HT-  
95.033173, RH0.032272, RV0.050078, DH0.732555, DV1.136724, GM4, CL1  
BL, DCROVER, PN1306, DX5600.668147, DY8041.527276, DZ6833.964365, --  
FORESTCONV1, GM4, CL1, HP0.032272, VP0.050078  
CV, DCROVER, SV4, SC0.009837, XX4.465205e-005, XY-5.036763e-005, XZ2.486103e-005, YY1.745579e-004, YZ-  
7.316995e-005, ZZ1.105300e-004  
GS, PN1306, N 661662.692232, E 1063871.851917, EL4.424297, --FORESTCONV1  
EP, TM09:56:53, LA41.163619599, LN-72.310219473, HT-  
95.733086, RH0.05295, RV0.065708, DH1.297117, DV1.609636, GM4, CL1  
BL, DCROVER, PN1307, DX5698.42042, DY8056.338627, DZ6815.518532, --  
FORESTCONV2, GM4, CL1, HP0.05295, VP0.065708  
CV, DCROVER, SV4, SC0.016139, XX6.195996e-005, XY-4.168312e-005, XZ-5.005374e-005, YY1.943733e-004, YZ-  
1.301929e-004, ZZ4.052581e-004  
GS, PN1307, N 661639.020357, E 1063969.598928, EL3.726501, --FORESTCONV2  
EP, TM10:18:45, LA41.162721598, LN-72.274503243, HT-  
104.028132, RH0.054071, RV0.071048, DH0.980437, DV1.288286, GM4, CL1  
BL, DCROVER, PN1308, DX20233.806379, DY12019.952275, DZ6127.003635, --  
BASE1400SS, GM4, CL1, HP0.054071, VP0.071048  
CV, DCROVER, SV4, SC0.016481, XX6.177418e-005, XY-8.544718e-006, XZ-6.597090e-005, YY2.157117e-004, YZ-  
1.802654e-004, ZZ4.630916e-004  
GS, PN1308, N 660775.452372, E 1079026.659883, EL-4.328965, --BASE1400SS  
EP, TM11:55:38, LA41.163619632, LN-72.310219495, HT-  
95.717914, RH0.033364, RV0.052528, DH0.817876, DV1.287665, GM4, CL1  
BL, DCROVER, PN1309, DX5698.391296, DY8056.352788, DZ6815.535468, --  
PT1307CHK, GM4, CL1, HP0.033364, VP0.052528  
CV, DCROVER, SV4, SC0.010169, XX3.471392e-005, XY-4.857320e-006, XZ2.580144e-005, YY1.613444e-004, YZ-  
9.319826e-005, ZZ1.527897e-004  
GS, PN1309, N 661639.053298, E 1063969.582017, EL3.741671, --PT1307CHK  
EP, TM11:56:35, LA41.163643241, LN-72.310347448, HT-  
95.02132, RH0.032537, RV0.054917, DH0.851207, DV1.436681, GM4, CL1  
BL, DCROVER, PN1310, DX5600.64683, DY8041.507327, DZ6833.99483, --PT1306CHK, GM4, CL1, HP0.032537, VP0.054917  
CV, DCROVER, SV4, SC0.009917, XX3.294308e-005, XY9.106682e-007, XZ1.976226e-005, YY1.853455e-004, YZ-  
1.141265e-004, ZZ1.602514e-004  
GS, PN1310, N 661662.685461, E 1063871.821339, EL4.43615, --PT1306CHK  
EP, TM12:02:37, LA41.164622995, LN-72.314915092, HT-  
88.053522, RH0.033484, RV0.055241, DH0.844077, DV1.392544, GM4, CL1  
BL, DCROVER, PN1311, DX2079.222079, DY7613.19006, DZ7583.822006, --PT1305CHK, GM4, CL1, HP0.033484, VP0.055241  
CV, DCROVER, SV4, SC0.010206, XX3.572326e-005, XY-5.753379e-006, XZ2.736037e-005, YY1.839920e-004, YZ-  
1.099889e-004, ZZ1.679400e-004  
GS, PN1311, N 662645.192131, E 1060381.7425, EL11.324739, --PT1305CHK  
EP, TM12:06:57, LA41.164240239, LN-72.32076207, HT-  
83.730312, RH0.029764, RV0.043801, DH0.745614, DV1.09725, GM4, CL1  
BL, DCROVER, PN1312, DX811.743475, DY6943.025367, DZ7295.534674, --PT1304CHK, GM4, CL1, HP0.029764, VP0.043801  
CV, DCROVER, SV4, SC0.009072, XX3.538083e-005, XY-2.336562e-005, XZ3.959348e-005, YY7.946766e-005, YZ-  
5.587662e-005, ZZ1.456929e-004  
GS, PN1312, N 662254.254031, E 1058972.529656, EL15.636815, --PT1304CHK  
EP, TM12:11:32, LA41.16338221, LN-72.32453349, HT-  
95.075095, RH0.02773, RV0.041909, DH0.74268, DV1.122414, GM4, CL1  
BL, DCROVER, PN1313, DX-1765.879016, DY5540.685203, DZ6635.392933, --  
PT1303CHK, GM4, CL1, HP0.02773, VP0.041909  
CV, DCROVER, SV4, SC0.008452, XX3.167742e-005, XY-2.268984e-005, XZ3.624425e-005, YY6.759728e-005, YZ-  
5.265447e-005, ZZ1.353351e-004  
GS, PN1313, N 661378.84943, E 1056095.040178, EL4.271306, --PT1303CHK  
EP, TM12:12:06, LA41.163382212, LN-72.324533506, HT-  
95.067228, RH0.02777, RV0.042096, DH0.743743, DV1.127431, GM4, CL1  
BL, DCROVER, PN1314, DX-1765.889167, DY5540.677744, DZ6635.400221, --  
PT1303CHK2, GM4, CL1, HP0.02777, VP0.042096  
CV, DCROVER, SV4, SC0.008464, XX3.182783e-005, XY-2.295611e-005, XZ3.651365e-005, YY6.788523e-005, YZ-  
5.329472e-005, ZZ1.365634e-004  
GS, PN1314, N 661378.852192, E 1056095.028251, EL4.279173, --PT1303CHK2  
EP, TM12:17:58, LA41.160938754, LN-72.33334933, HT-  
102.565774, RH0.026507, RV0.041239, DH0.750624, DV1.167811, GM4, CL1

FEMA\_CLUSTER\_13\_ADJ

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BL,DCROVER,PN1315,DX-4786.571631,DY2887.188329,DZ4771.734584,--
PT1302CHK,GM4,CL1,HP0.026507,VP0.041239
CV,DCROVER,SV4,SC0.008079,XX2.968707e-005,XY-2.276558e-005,XZ3.426874e-005,YY6.315143e-005,YZ-
5.257281e-005,ZZ1.304293e-004
GS,PN1315,N 658897.378024,E 1052423.390523,EL-3.206389,--PT1302CHK
EP,TM12:25:11,LA41.152454854,LN-72.331058198,HT-
104.009429,RH0.027619,RV0.047828,DH0.810233,DV1.403074,GM4,CL1
BL,DCROVER,PN1316,DX-2220.398378,DY557.330359,DZ1359.416778,--
PT1301CHK,GM4,CL1,HP0.027619,VP0.047828
CV,DCROVER,SV4,SC0.008418,XX3.978697e-005,XY-3.347057e-005,XZ3.903403e-005,YY9.439194e-005,YZ-
7.891079e-005,ZZ1.492082e-004
GS,PN1316,N 654363.061898,E 1054183.303425,EL-4.502122,--PT1301CHK
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
OC,OP1306,N 661662.692232,E 1063871.851917,EL4.424297,--FORESTCONV1
--HR:0.0 (0.0 + 0.0 Offset)
LS,HI0.0,HR0.0
BK,OP1306,BP1307,BS103.364861,BC0.0000
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
--BS check 1306 - 1307:ZE90.2156,SD100.575,HD err= 0.000413, VD err= 0.056118
--BS Circle check : angular err= 0.0000
SS,OP1306,FP1317,AR244.3411,ZE90.4320,SD96.57,--FOREST
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--HR:1.0 (1.0 + 0.0 Offset)
LS,HI0.0,HR1.0
SS,OP1306,FP1318,AR244.3411,ZE90.0734,SD96.54,--FORESTCHK
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
DP,PN1
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE,GF14,SG418090700
EP,TM11:49:32,LA41.150664887,LN-72.324503782,HT-99.942989,RH0.0,RV0.0,GM1,CL1
SP,PN1300,N 652551.347782,E 1056139.255089,EL11.240359,--
--Solve calibration from control points.
CT,PN1300,DM4,RH0.0,RV0.0
EP,TM11:49:41,LA41.150664887,LN-72.324503782,HT-99.942989,RH0.0,RV0.0,GM1,CL2
RP,PN1300,N 652551.347782,E 1056139.255089,EL11.240359,--
--Solve calibration from control points.
HA,N 652555.932094,E 1056138.56903,TH-4.584312,TE0.686059,RT0.0000,SC1.0000000000
VA,PV3,N 652551.347782,E 1056139.255089,LZ11.597504,SO0.00000,SA0.00000,GNGEID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_13,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1301,N 654358.432388,E 1054184.005697,EL7.112126,--MIXEDVEG
GR,PN1302,N 658892.799527,E 1052424.085726,EL8.445384,--GRASS
GR,PN1303,N 661374.241448,E 1056095.706679,EL15.953795,--LX0466
GR,PN1304,N 662249.703037,E 1058973.180829,EL27.186205,--LX0467
GR,PN1305,N 662640.601596,E 1060382.412479,EL22.970774,--BITLOT
GR,PN1306,N 661658.107919,E 1063872.537976,EL16.021801,--FORESTCONV1
GR,PN1307,N 661634.436045,E 1063970.284987,EL15.324004,--FORESTCONV2
GR,PN1308,N 660770.86806,E 1079027.345941,EL7.268539,--BASE1400SS
GR,PN1309,N 661634.468986,E 1063970.268075,EL15.339175,--PT1307CHK
GR,PN1310,N 661658.101149,E 1063872.507398,EL16.033654,--PT1306CHK
GR,PN1311,N 662640.607818,E 1060382.428558,EL22.922243,--PT1305CHK
GR,PN1312,N 662249.669719,E 1058973.215714,EL27.234319,--PT1304CHK
GR,PN1313,N 661374.265117,E 1056095.726237,EL15.86881,--PT1303CHK
GR,PN1314,N 661374.26788,E 1056095.71431,EL15.876676,--PT1303CHK2
GR,PN1315,N 658892.793711,E 1052424.076582,EL8.391115,--PT1302CHK
GR,PN1316,N 654358.477586,E 1054183.989484,EL7.095382,--PT1301CHK
-->> End Adjust with Projection.
-->>
SP,PN1317,N 661752.62416,E 1063852.763628,EL14.80505,--FOREST
SP,PN1318,N 661752.602076,E 1063852.768248,EL14.809808,--FORESTCHK

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FEMA\_CLUSTER\_14\_ADJ

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JB,NMFEMA_CLUSTER_14,DT04-18-2007,TM10:36:44
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--4-18-07 MKW BC CLOUDY 42°F
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000, OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNGEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--14:11:06,Get autonomous base position at BASE:LA41.162722458,LN-72.274501449,HT-111.558317
--New point created by GPS autonomous base setup
EE,GF32,SG418141108
EP,TM14:11:08,LA41.162722458,LN-72.274501449,HT-111.558317,RH0.0,RV0.0,GM1,CL1
SP,PN1400,N 0.0,E 0.0,EL-111.558317,--
--04/18:14:11:08,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN1400,LA41.162722458,LN-72.274501449,HT-111.558317,SG418141108
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--14:11:39,Set ROVER receiver with base reference position:LA41.162722458,LN-72.274501449,HT-
111.558317
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 660776.326846,E 1079028.026489,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 660776.326846,E 1079028.026489,LZ0.0,SO0.000000,SA0.000000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_14,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1400,N 660776.326846,E 1079028.026489,EL-11.859155,--
EE,GF0,SG418141108
EP,TM14:12:03,LA41.162722458,LN-72.274501449,HT-111.558317,RH0.0,RV0.0,GM1,CL1
GP,PN1400,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM14:20:00,LA41.17242727,LN-72.263979237,HT-
85.381495,RH0.02802,RV0.039617,DH0.732314,DV1.03539,GM4,CL1
BL,DCROVER,PN1401,DX3605.349293,DY5114.622907,DZ4356.349831,--GRASS,GM4,CL1,HP0.02802,VP0.039617
CV,DCROVER,SV4,SC0.008541,XX4.224087e-005,XY-4.227421e-005,XZ9.543911e-006,YY1.265529e-004,YZ-
4.268694e-005,ZZ4.995835e-005
GS,PN1401,N 666567.358912,E 1083987.728276,EL14.227833,--GRASS
EP,TM14:26:40,LA41.164975787,LN-72.255398715,HT-
112.097667,RH0.025552,RV0.034339,DH0.67329,DV0.9058,GM4,CL1
BL,DCROVER,PN1402,DX7628.745067,DY3991.40959,DZ1713.712001,--MIXEDVEG,GM4,CL1,HP0.025552,VP0.034339
CV,DCROVER,SV4,SC0.007788,XX2.604270e-005,XY-1.899286e-005,XZ6.558131e-006,YY8.604049e-005,YZ-
3.238061e-005,ZZ5.812317e-005
GS,PN1402,N 663086.677482,E 1087497.264222,EL-12.342196,--MIXEDVEG
EP,TM14:32:21,LA41.17097314,LN-72.245709467,HT-
97.154394,RH0.029793,RV0.04343,DH0.720604,DV1.050432,GM4,CL1
BL,DCROVER,PN1403,DX11370.132969,DY6563.857925,DZ3242.702239,--BITLOT,GM4,CL1,HP0.029793,VP0.04343
CV,DCROVER,SV4,SC0.009081,XX3.555439e-005,XY-1.543919e-005,XZ3.977809e-006,YY1.346323e-004,YZ-
6.347989e-005,ZZ8.750346e-005
GS,PN1403,N 665124.62988,E 1091833.126096,EL2.611474,--BITLOT
EP,TM15:09:21,LA41.162880995,LN-72.304111949,HT-
105.574942,RH0.041095,RV0.076584,DH0.824431,DV1.536386,GM4,CL1

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BL,DCROVER,PN1404,DX-12853.968335,DY-3949.91493,DZ124.658068,--
FORESTCONV1,GM4,CL1,HP0.041095,VP0.076584
CV,DCROVER,SV4,SC0.012526,XX8.808329e-005,XY-6.381828e-005,XZ8.755989e-005,YY2.242607e-004,YZ-
2.209316e-004,ZZ3.894473e-004
GS,PN1404,N 660895.853375,E 1065580.833056,EL-6.070319,--FORESTCONV1
EP,TM15:27:29,LA41.163019911,LN-72.304353342,HT-
104.064517,RH0.045513,RV0.071214,DH0.75781,DV1.185757,GM4,CL1
BL,DCROVER,PN1405,DX-13057.297121,DY-3917.949406,DZ231.323659,--
FORESTCONV2,GM4,CL1,HP0.045513,VP0.071214
CV,DCROVER,SV4,SC0.013872,XX1.198793e-004,XY-7.327715e-005,XZ7.538531e-005,YY2.224743e-004,YZ-
1.742009e-004,ZZ3.212439e-004
GS,PN1405,N 661035.944659,E 1065396.128432,EL-4.567135,--FORESTCONV2
EP,TM15:40:41,LA41.163382998,LN-72.324531735,HT-
102.594762,RH0.048212,RV0.06651,DH0.705904,DV0.973821,GM4,CL1
BL,DCROVER,PN1406,DX-21999.647646,DY-6479.465246,DZ508.472013,--LX0466,GM4,CL1,HP0.048212,VP0.06651
CV,DCROVER,SV4,SC0.014695,XX1.249890e-004,XY-7.852788e-005,XZ3.677989e-005,YY2.409264e-004,YZ-
1.383616e-004,ZZ2.609945e-004
GS,PN1406,N 661379.65048,E 1056096.37876,EL-3.248362,--LX0466
EP,TM15:42:26,LA41.163383043,LN-72.324531755,HT-
102.54108,RH0.042226,RV0.057968,DH0.711792,DV0.977143,GM4,CL1
BL,DCROVER,PN1407,DX-21999.659327,DY-6479.47945,DZ508.541942,--
LX0466CHK,GM4,CL1,HP0.042226,VP0.057968
CV,DCROVER,SV4,SC0.012871,XX1.002512e-004,XY-6.498428e-005,XZ3.122143e-005,YY1.832980e-004,YZ-
1.036387e-004,ZZ1.942862e-004
GS,PN1407,N 661379.69637,E 1056096.363249,EL-3.194682,--LX0466CHK
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
OC,OP1404,N 660895.853375,E 1065580.833056,EL-6.070319,--FORESTCONV1
--HR:0.0 (0.0 + 0.0 Offset)
LS,HI0.0,HR0.0
BK,OP1404,BP1405,BS307.104406,BC0.0000
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
--BS check 1404 - 1405:ZE89.3559,SD231.875,HD err= 0.0475, VD err= 0.11672
--BS Circle check : angular err= 0.0000
SS,OP1404,FP1408,AR285.2743,ZE90.3419,SD73.195,--FOREST
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--HR:1.0 (1.0 + 0.0 Offset)
LS,HI0.0,HR1.0
SS,OP1404,FP1409,AR285.2823,ZE89.4718,SD73.17,--FORESTCHK
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
EP,TM16:33:07,LA41.172427268,LN-72.263979211,HT-
85.369867,RH0.040179,RV0.059562,DH1.12633,DV1.669706,GM4,CL1
BL,DCROVER,PN1410,DX3605.376903,DY5114.605771,DZ4356.368543,--
PT1401CHK,GM4,CL1,HP0.040179,VP0.059562
CV,DCROVER,SV4,SC0.012246,XX5.727824e-005,XY-9.288817e-005,XZ3.207194e-005,YY3.681795e-004,YZ-
7.867084e-005,ZZ5.410400e-005
GS,PN1410,N 666567.356934,E 1083987.747804,EL14.239461,--PT1401CHK
EP,TM16:39:08,LA41.164975753,LN-72.255398726,HT-
112.094443,RH0.043633,RV0.067959,DH1.135493,DV1.768552,GM4,CL1
BL,DCROVER,PN1411,DX7628.750106,DY3991.379007,DZ1713.697522,--
PT1402CHK,GM4,CL1,HP0.043633,VP0.067959
CV,DCROVER,SV4,SC0.013299,XX7.434197e-005,XY-1.252363e-004,XZ4.299763e-005,YY4.622623e-004,YZ-
1.102435e-004,ZZ6.933047e-005
GS,PN1411,N 663086.64281,E 1087497.255309,EL-12.338971,--PT1402CHK
EP,TM16:43:12,LA41.170973138,LN-72.245709531,HT-
97.118527,RH0.055682,RV0.083394,DH1.264698,DV1.894099,GM4,CL1
BL,DCROVER,PN1412,DX11370.090898,DY6563.837793,DZ3242.728232,--
PT1403CHK,GM4,CL1,HP0.055682,VP0.083394
CV,DCROVER,SV4,SC0.016972,XX1.025905e-004,XY-1.882475e-004,XZ6.038320e-005,YY7.318953e-004,YZ-
1.508258e-004,ZZ9.966199e-005
GS,PN1412,N 665124.62799,E 1091833.076809,EL2.64734,--PT1403CHK
DP,PN1
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE,GF14,SG418141108
EP,TM12:32:19,LA41.162722458,LN-72.274501449,HT-111.558317,RH0.0,RV0.0,GM1,CL1
SP,PN1400,N 660770.877302,E 1079027.345188,EL7.252641,--
--Solve calibration from control points.
CT,PN1400,DM4,RH0.0,RV0.0
EP,TM12:32:28,LA41.162722458,LN-72.274501449,HT-111.558317,RH0.0,RV0.0,GM1,CL2
RP,PN1400,N 660770.877302,E 1079027.345188,EL7.252641,--
--Solve calibration from control points.

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FEMA\_CLUSTER\_14\_ADJ

HA,N 660776.326846,E 1079028.026489,TH-5.449544,TE-0.681301,RT0.0000,SC1.0000000000  
 VA,PV3,N 660770.877302,E 1079027.345188,LZ19.111796,SO0.00000,SA0.00000,GNGEOID03 (Conus)  
 CS,CO3,ZGSite,ZNFEMA\_CLUSTER\_14,DNNAD 1983 (Conus)

-->>

-->> Begin Adjust with Projection.

GR,PN1401,N 666561.909369,E 1083987.046975,EL33.339629,--GRASS  
 GR,PN1402,N 663081.227939,E 1087496.582921,EL6.7696,--MIXEDVEG  
 GR,PN1403,N 665119.180337,E 1091832.444795,EL21.72327,--BITLOT  
 GR,PN1404,N 660890.403831,E 1065580.151755,EL13.041477,--FORESTCONV1  
 GR,PN1405,N 661030.495115,E 1065395.447131,EL14.544661,--FORESTCONV2  
 GR,PN1406,N 661374.200936,E 1056095.697459,EL15.863434,--LX0466  
 GR,PN1407,N 661374.246826,E 1056095.681948,EL15.917114,--LX0466CHK  
 GR,PN1410,N 666561.90739,E 1083987.066503,EL33.351257,--PT1401CHK  
 GR,PN1411,N 663081.193266,E 1087496.574007,EL6.772825,--PT1402CHK  
 GR,PN1412,N 665119.178447,E 1091832.395507,EL21.759136,--PT1403CHK

-->> End Adjust with Projection.

-->>

SP,PN1408,N 660845.99181,E 1065521.976096,EL12.312962,--FOREST  
 SP,PN1409,N 660846.01472,E 1065521.984856,EL12.312009,--FORESTCHK

## FEMA\_CLUSTER\_15\_ADJ

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JB,NMFEMA_CLUSTER_15,DT04-18-2007,TM17:29:55
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--4-19-07 MKW BC CLOUDY 48°F
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000,OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNGEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--09:15:47,Get autonomous base position at BASE:LA41.180528797,LN-72.142604997,HT-92.198024
--New point created by GPS autonomous base setup
EE,GF32,SG419091549
EP,TM09:15:49,LA41.180528797,LN-72.142604997,HT-92.198024,RH0.0,RV0.0,GM1,CL1
SP,PN1500,N 0.0,E 0.0,EL-92.198024,--
--04/19:09:15:49,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN1500,LA41.180528797,LN-72.142604997,HT-92.198024,SG419091549
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--09:17:05,Set ROVER receiver with base reference position:LA41.180528797,LN-72.142604997,HT-
92.198024
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 670982.704681,E 1139975.21489,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 670982.704681,E 1139975.21489,LZ0.0,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_15,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1500,N 670982.704681,E 1139975.21489,EL8.071933,--
EE,GF0,SG419091549
EP,TM09:17:28,LA41.180528797,LN-72.142604997,HT-92.198024,RH0.0,RV0.0,GM1,CL1
GP,PN1500,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM09:22:03,LA41.18055189,LN-72.142781886,HT-
89.506768,RH0.021062,RV0.035699,DH0.685736,DV1.162311,GM4,CL1
BL,DCROVER,PN1501,DX-132.628649,DY-28.532398,DZ19.446364,--GRASS,GM4,CL1,HP0.021062,VP0.035699
CV,DCROVER,SV4,SC0.00642,XX2.263722e-005,XY-2.255928e-005,XZ2.037820e-005,YY6.033091e-005,YZ-
4.169883e-005,ZZ7.664332e-005
GS,PN1501,N 671005.281692,E 1139840.069556,EL10.761057,--GRASS
EP,TM09:29:28,LA41.185512328,LN-72.142852821,HT-
79.899349,RH0.036228,RV0.047531,DH0.986414,DV1.294171,GM4,CL1

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BL,DCROVER,PN1502,DX-1192.83249,DY3104.302554,DZ3797.139749,--  
FORESTCONV1,GM4,CL1,HP0.036228,VP0.047531  
CV,DCROVER,SV4,SC0.011042,XX3.691530e-005,XY-2.715862e-005,XZ1.965019e-006,YY7.946496e-005,YZ-  
6.764934e-005,ZZ2.154421e-004  
GS,PN1502,N 676025.467416,E 1139756.370892,EL20.25095,--FORESTCONV1  
EP,TM09:31:50,LA41.185716696,LN-72.142872309,HT-  
77.77584,RH0.02315,RV0.038072,DH0.685692,DV1.13862,GM4,CL1  
BL,DCROVER,PN1503,DX-1248.158415,DY3228.303742,DZ3953.881286,--  
FORESTCONV2,GM4,CL1,HP0.02315,VP0.038072  
CV,DCROVER,SV4,SC0.007056,XX2.796390e-005,XY-2.768200e-005,XZ2.174889e-005,YY7.147334e-005,YZ-  
4.650195e-005,ZZ8.501397e-005  
GS,PN1503,N 676232.222389,E 1139740.282375,EL22.369673,--FORESTCONV2  
EP,TM09:38:47,LA41.190415258,LN-72.143836223,HT-  
87.123485,RH0.024335,RV0.039223,DH0.684446,DV1.103202,GM4,CL1  
BL,DCROVER,PN1504,DX-2093.171973,DY3455.248518,DZ4478.739166,--  
MIXEDVEG,GM4,CL1,HP0.024335,VP0.039223  
CV,DCROVER,SV4,SC0.007417,XX3.130867e-005,XY-3.111085e-005,XZ2.154135e-005,YY7.981498e-005,YZ-  
4.859079e-005,ZZ8.681713e-005  
GS,PN1504,N 676934.925639,E 1139000.611535,EL12.99826,--MIXEDVEG  
EP,TM09:45:46,LA41.174980839,LN-72.152977669,HT-  
76.422894,RH0.02899,RV0.042179,DH0.732873,DV1.066296,GM4,CL1  
BL,DCROVER,PN1505,DX-4313.653744,DY-2479.1504,DZ-1166.53541,--LX0121,GM4,CL1,HP0.02899,VP0.042179  
CV,DCROVER,SV4,SC0.008836,XX3.787683e-005,XY-3.818599e-005,XZ2.030751e-005,YY1.126849e-004,YZ-  
4.926645e-005,ZZ9.279857e-005  
GS,PN1505,N 669387.825457,E 1135120.27746,EL23.826038,--LX0121  
EP,TM10:11:28,LA41.192098836,LN-72.12135629,HT-  
80.093959,RH0.067261,RV0.087983,DH1.010013,DV1.32118,GM4,CL1  
BL,DCROVER,PN1506,DX8086.142621,DY7894.748731,DZ5763.133626,--BITLOT,GM4,CL1,HP0.067261,VP0.087983  
CV,DCROVER,SV4,SC0.020501,XX9.150097e-005,XY-6.419501e-006,XZ-1.075484e-004,YY3.167524e-004,YZ-  
2.796424e-004,ZZ7.312017e-004  
GS,PN1506,N 678706.160952,E 1150038.653897,EL20.125626,--BITLOT  
EP,TM10:32:34,LA41.175120977,LN-72.144786475,HT-  
74.050608,RH0.019121,RV0.031105,DH0.576544,DV0.937909,GM4,CL1  
BL,DCROVER,PN1507,DX-1294.743228,DY-1416.540343,DZ-1058.381222,--  
LX5421,GM4,CL1,HP0.019121,VP0.031105  
CV,DCROVER,SV4,SC0.005828,XX1.357559e-005,XY-5.258302e-006,XZ6.610688e-007,YY5.846991e-005,YZ-  
3.564295e-005,ZZ4.805462e-005  
GS,PN1507,N 669548.080537,E 1138318.533106,EL26.231801,--LX5421  
EP,TM10:34:45,LA41.17512098,LN-72.14478647,HT-  
74.060464,RH0.018957,RV0.031156,DH0.571613,DV0.939428,GM4,CL1  
BL,DCROVER,PN1508,DX-1294.745812,DY-1416.505547,DZ-1058.404306,--  
LX5421CHK,GM4,CL1,HP0.018957,VP0.031156  
CV,DCROVER,SV4,SC0.005778,XX1.374391e-005,XY-5.443619e-006,XZ8.349577e-007,YY6.030473e-005,YZ-  
3.703695e-005,ZZ4.951741e-005  
GS,PN1508,N 669548.084046,E 1138318.537058,EL26.221945,--LX5421CHK  
EP,TM11:21:02,LA41.18055189,LN-72.142781875,HT-  
89.517581,RH0.019371,RV0.036609,DH0.652065,DV1.232347,GM4,CL1  
BL,DCROVER,PN1509,DX-132.61666,DY-28.537221,DZ19.441845,--PT1501CHK,GM4,CL1,HP0.019371,VP0.036609  
CV,DCROVER,SV4,SC0.005904,XX2.131768e-005,XY-2.068427e-005,XZ2.032425e-005,YY8.282554e-005,YZ-  
4.659783e-005,ZZ5.522763e-005  
GS,PN1509,N 671005.282221,E 1139840.077908,EL10.750244,--PT1501CHK  
EP,TM11:26:44,LA41.185512315,LN-72.142852839,HT-  
79.816119,RH0.040634,RV0.075108,DH1.187123,DV2.194294,GM4,CL1  
BL,DCROVER,PN1510,DX-1192.829242,DY3104.252628,DZ3797.15728,--  
PT1502CHK,GM4,CL1,HP0.040634,VP0.075108  
CV,DCROVER,SV4,SC0.012385,XX4.207765e-005,XY-1.531234e-006,XZ2.690053e-005,YY4.811858e-004,YZ-  
2.115705e-004,ZZ1.542227e-004  
GS,PN1510,N 676025.454624,E 1139756.357478,EL20.334181,--PT1502CHK  
EP,TM11:30:05,LA41.185716679,LN-72.142872321,HT-  
77.729955,RH0.020422,RV0.039299,DH0.672392,DV1.293916,GM4,CL1  
BL,DCROVER,PN1511,DX-1248.161275,DY3228.278041,DZ3953.891338,--  
PT1503CHK,GM4,CL1,HP0.020422,VP0.039299  
CV,DCROVER,SV4,SC0.006225,XX3.088469e-005,XY-3.062147e-005,XZ3.275432e-005,YY8.084843e-005,YZ-  
5.275302e-005,ZZ7.049339e-005  
GS,PN1511,N 676232.205498,E 1139740.273586,EL22.415558,--PT1503CHK  
EP,TM11:36:51,LA41.190415241,LN-72.143836218,HT-  
87.171264,RH0.023268,RV0.053964,DH0.716864,DV1.662617,GM4,CL1  
BL,DCROVER,PN1512,DX-2093.168335,DY3455.268141,DZ4478.684199,--  
PT1504CHK,GM4,CL1,HP0.023268,VP0.053964  
CV,DCROVER,SV4,SC0.007092,XX3.981167e-005,XY-4.409552e-005,XZ4.652723e-005,YY1.515835e-004,YZ-  
1.121817e-004,ZZ1.294493e-004  
GS,PN1512,N 676934.908415,E 1139000.615445,EL12.950482,--PT1504CHK  
EP,TM11:44:06,LA41.174980798,LN-72.152977658,HT-  
76.491912,RH0.026931,RV0.068085,DH0.749413,DV1.894622,GM4,CL1

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BL,DCROVER,PN1513,DX-4313.646683,DY-2479.135792,DZ-1166.607789,--  
PT1505CHK,GM4,CL1,HP0.026931,VP0.068085  
CV,DCROVER,SV4,SCO.008209,XX5.650531e-005,XY-7.221474e-005,XZ7.340562e-005,YY2.416303e-004,YZ-  
1.811153e-004,ZZ1.999013e-004  
GS,PN1513,N 669387.784154,E 1135120.285851,EL23.757021,--PT1505CHK  
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
DP,PN1  
--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
OC,OP1502,N 676025.467416,E 1139756.370892,EL20.25095,--FORESTCONV1  
--HR:0.0 (0.0 + 0.0 Offset)  
LS,HI0.0,HR0.0  
BK,OP1502,BP1503,BS355.33019,BC0.0000  
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
--BS check 1502 - 1503:ZE89.2507,SD207.415,HD err= 0.024335, VD err= -0.014088  
--BS Circle check : angular err= 0.0000  
SS,OP1502,FP1514,AR167.5114,ZE91.1334,SD164.4,--FOREST  
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--HR:1.0 (1.0 + 0.0 Offset)  
LS,HI0.0,HR1.0  
SS,OP1502,FP1515,AR167.5114,ZE90.5242,SD164.395,--FOREST  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Import GPS Control - create GPS control point  
EE,GF14,SG419091549  
EP,TM12:56:22,LA41.180528797,LN-72.142604997,HT-92.198024,RH0.0,RV0.0,GM1,CL1  
SP,PN1500,N 670980.972446,E 1139975.137327,EL7.771493,--  
--Solve calibration from control points.  
CT,PN1500,DM4,RH0.0,RV0.0  
EP,TM12:56:28,LA41.180528797,LN-72.142604997,HT-92.198024,RH0.0,RV0.0,GM1,CL2  
RP,PN1500,N 670980.972446,E 1139975.137327,EL7.771493,--  
--Solve calibration from control points.  
HA,N 670982.704681,E 1139975.21489,TH-1.732235,TE-0.077563,RT0.0000,SC1.0000000000  
VA,PV3,N 670980.972446,E 1139975.137327,LZ-0.30044,SO0.00000,SA0.00000,GNGEOID03 (Conus)  
CS,CO3,ZGSite,ZNFEMA\_CLUSTER\_15,DNNAD 1983 (Conus)  
-->>  
-->> Begin Adjust with Projection.  
GR,PN1501,N 671003.549457,E 1139839.991993,EL10.460617,--GRASS  
GR,PN1502,N 676023.735182,E 1139756.293329,EL19.95051,--FORESTCONV1  
GR,PN1503,N 676230.490154,E 1139740.204812,EL22.069233,--FORESTCONV2  
GR,PN1504,N 676933.193405,E 1139000.533973,EL12.69782,--MIXEDVEG  
GR,PN1505,N 669386.093222,E 1135120.199897,EL23.525598,--LX0121  
GR,PN1506,N 678704.428717,E 1150038.576334,EL19.825186,--BITLOT  
GR,PN1507,N 669546.348302,E 1138318.455543,EL25.931361,--LX5421  
GR,PN1508,N 669546.351812,E 1138318.459496,EL25.921505,--LX5421CHK  
GR,PN1509,N 671003.549986,E 1139840.000345,EL10.449804,--PT1501CHK  
GR,PN1510,N 676023.722389,E 1139756.279915,EL20.033741,--PT1502CHK  
GR,PN1511,N 676230.473263,E 1139740.196023,EL22.115118,--PT1503CHK  
GR,PN1512,N 676933.17618,E 1139000.537882,EL12.650042,--PT1504CHK  
GR,PN1513,N 669386.051919,E 1135120.208288,EL23.456581,--PT1505CHK  
-->> End Adjust with Projection.  
-->>  
SP,PN1514,N 675866.219638,E 1139803.273162,EL16.433112,--FOREST  
SP,PN1515,N 675866.206868,E 1139803.24968,EL16.430905,--FOREST

FEMA\_CLUSTER\_16\_ADJ

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JB,NMFEMA_CLUSTER_16,DT04-19-2007,TM17:32:39
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--4-20-07 MKW BC SUN 65°F
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000,OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNCEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--08:27:28,Get autonomous base position at BASE:LA41.181280761,LN-72.065593863,HT-70.520714
--New point created by GPS autonomous base setup
EE,GF32,SG420082729
EP,TM08:27:29,LA41.181280761,LN-72.065593863,HT-70.520714,RH0.0,RV0.0,GM1,CL1
SP,PN1600,N 0.0,E 0.0,EL-70.520714,--
--04/20:08:27:29,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN1600,LA41.181280761,LN-72.065593863,HT-70.520714,SG420082729
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--08:28:49,Set ROVER receiver with base reference position:LA41.181280761,LN-72.065593863,HT-
70.520714
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 671971.154632,E 1174323.567687,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 671971.154632,E 1174323.567687,LZ0.0,SO0.00000,SA0.00000,GNCEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_16,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1600,N 671971.154632,E 1174323.567687,EL30.068305,--
EE,GF0,SG420082729
EP,TM08:29:11,LA41.181280761,LN-72.065593863,HT-70.520714,RH0.0,RV0.0,GM1,CL1
GP,PN1600,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM08:32:22,LA41.181079233,LN-72.065388417,HT-
69.132612,RH0.019088,RV0.030322,DH0.630405,DV1.001434,GM4,CL1
BL,DCROVER,PN1601,DX190.929549,DY-81.0868,DZ-152.19883,--FORESTCIN1,GM4,CL1,HP0.019088,VP0.030322
CV,DCROVER,SV4,SC0.005818,XX1.510204e-005,XY-1.217720e-005,XZ1.134398e-005,YY5.700868e-005,YZ-
2.909631e-005,ZZ4.715483e-005
GS,PN1601,N 671768.339988,E 1174481.863858,EL31.461774,--FORESTCIN1
EP,TM08:34:30,LA41.181202231,LN-72.065612042,HT-
71.563489,RH0.019687,RV0.031805,DH0.632555,DV1.021883,GM4,CL1
BL,DCROVER,PN1602,DX2.702151,DY-53.567302,DZ-60.28117,--FORESTCONV2,GM4,CL1,HP0.019687,VP0.031805
CV,DCROVER,SV4,SC0.006001,XX1.620056e-005,XY-1.335357e-005,XZ1.230269e-005,YY6.262207e-005,YZ-
3.249264e-005,ZZ5.116213e-005
GS,PN1602,N 671891.572384,E 1174310.276586,EL29.02705,--FORESTCONV2
EP,TM08:44:43,LA41.184088547,LN-72.063253213,HT-
69.546332,RH0.019551,RV0.034654,DH0.620307,DV1.099483,GM4,CL1
BL,DCROVER,PN1603,DX1124.061459,DY2333.085135,DZ2135.489358,--GRASS,GM4,CL1,HP0.019551,VP0.034654

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CV,DCROVER,SV4,SC0.005959,XX1.789048e-005,XY-1.769309e-005,XZ1.511028e-005,YY6.895508e-005,YZ-4.099862e-005,ZZ6.023771e-005  
GS,PN1603,N 674826.094617,E 1176088.88087,EL30.997281,--GRASS  
EP,TM08:52:43,LA41.1833366656,LN-72.060202192,HT-97.389088,RH0.021373,RV0.040292,DH0.6204,DV1.169569,GM4,CL1  
BL,DCROVER,PN1604,DX3487.751348,DY2590.384659,DZ1545.484057,--BITLOT,GM4,CL1,HP0.021373,VP0.040292  
CV,DCROVER,SV4,SC0.006514,XX2.381965e-005,XY-2.610885e-005,XZ2.153279e-005,YY8.873160e-005,YZ-5.707899e-005,ZZ8.070972e-005  
GS,PN1604,N 674082.492488,E 1178422.870422,EL3.187678,--BITLOT  
EP,TM09:13:39,LA41.203187101,LN-72.063879787,HT22.977526,RH0.047114,RV0.086663,DH1.093524,DV2.011454,GM4,CL1  
BL,DCROVER,PN1605,DX-1588.252079,DY9179.360524,DZ10632.291471,--LX0146,GM4,CL1,HP0.047114,VP0.086663  
CV,DCROVER,SV4,SC0.01436,XX8.819415e-005,XY-1.204962e-004,XZ8.891159e-005,YY4.862296e-004,YZ-2.481743e-004,ZZ3.295381e-004  
GS,PN1605,N 686055.410884,E 1175527.638833,EL123.294994,--LX0146  
EP,TM09:14:32,LA41.203187085,LN-72.063879786,HT22.927439,RH0.030607,RV0.05885,DH0.733702,DV1.41072,GM4,CL1  
BL,DCROVER,PN1606,DX-1588.258757,DY9179.381535,DZ10632.238487,--LX0146CHK,GM4,CL1,HP0.030607,VP0.05885  
CV,DCROVER,SV4,SC0.009329,XX4.143478e-005,XY-5.542450e-005,XZ4.225399e-005,YY2.135852e-004,YZ-1.189605e-004,ZZ1.537685e-004  
GS,PN1606,N 686055.39487,E 1175527.63909,EL123.244907,--LX0146CHK  
EP,TM09:29:43,LA41.175953441,LN-72.080233941,HT-99.079774,RH0.021371,RV0.038712,DH0.630921,DV1.142855,GM4,CL1  
BL,DCROVER,PN1607,DX-4557.773847,DY-2379.204214,DZ-1027.971469,--LX5416,GM4,CL1,HP0.021371,VP0.038712  
CV,DCROVER,SV4,SC0.006514,XX2.735943e-005,XY-2.809800e-005,XZ2.305954e-005,YY7.057927e-005,YZ-5.185496e-005,ZZ8.372161e-005  
GS,PN1607,N 670591.104415,E 1169265.408132,EL1.495784,--LX5416  
EP,TM09:30:39,LA41.17595346,LN-72.080233924,HT-99.083721,RH0.022508,RV0.040417,DH0.63151,DV1.133989,GM4,CL1  
BL,DCROVER,PN1608,DX-4557.766089,DY-2379.180622,DZ-1027.96805,--LX5416CHK,GM4,CL1,HP0.022508,VP0.040417  
CV,DCROVER,SV4,SC0.00686,XX3.025606e-005,XY-3.082837e-005,XZ2.507279e-005,YY7.711089e-005,YZ-5.625950e-005,ZZ9.146237e-005  
GS,PN1608,N 670591.124693,E 1169265.420692,EL1.491837,--LX5416CHK  
EP,TM09:41:28,LA41.181125469,LN-72.070360914,HT-100.012798,RH0.02123,RV0.034822,DH0.681362,DV1.117569,GM4,CL1  
BL,DCROVER,PN1609,DX-532.062909,DY-257.542341,DZ-137.433785,--MIXEDVEG,GM4,CL1,HP0.02123,VP0.034822  
CV,DCROVER,SV4,SC0.006471,XX2.367504e-005,XY-2.559740e-005,XZ1.583819e-005,YY7.146296e-005,YZ-3.785543e-005,ZZ5.938978e-005  
GS,PN1609,N 671809.692972,E 1173739.301164,EL0.574915,--MIXEDVEG  
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
OC,OP1601,N 671768.339988,E 1174481.863858,EL31.461774,--FORESTCINI  
--HR:0.0 (0.0 + 0.0 Offset)  
LS,HI0.0,HR0.0  
BK,OP1601,BP1602,BS305.410801,BC0.0000  
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
--BS check 1601 - 1602:ZE90.3945,SD211.27,HD err= 0.001491, VD err= -0.008096  
--BS Circle check : angular err= 0.0000  
SS,OP1601,FP1610,AR180.5527,ZE90.3920,SD179.375,--FOREST  
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--HR:1.0 (1.0 + 0.0 Offset)  
LS,HI0.0,HR1.0  
SS,OP1601,FP1611,AR180.5527,ZE90.2009,SD179.385,--FORESTCHK  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
EP,TM10:27:20,LA41.181079217,LN-72.065388433,HT-69.148802,RH0.020239,RV0.028891,DH0.668433,DV0.954191,GM4,CL1  
BL,DCROVER,PN1612,DX190.917596,DY-81.088937,DZ-152.221494,--PT1601CHK,GM4,CL1,HP0.020239,VP0.028891  
CV,DCROVER,SV4,SC0.006169,XX1.294518e-005,XY-3.944387e-006,XZ-2.887529e-006,YY5.001028e-005,YZ-2.960462e-005,ZZ5.264777e-005  
GS,PN1612,N 671768.323955,E 1174481.851944,EL31.445585,--PT1601CHK  
EP,TM10:29:14,LA41.181202262,LN-72.065612017,HT-71.608093,RH0.018767,RV0.028975,DH0.593789,DV0.916761,GM4,CL1  
BL,DCROVER,PN1613,DX2.71407,DY-53.513989,DZ-60.281687,--PT1602CHK,GM4,CL1,HP0.018767,VP0.028975  
CV,DCROVER,SV4,SC0.00572,XX1.300806e-005,XY-5.119748e-006,XZ9.421477e-007,YY5.465862e-005,YZ-3.034326e-005,ZZ4.305472e-005  
GS,PN1613,N 671891.603912,E 1174310.295733,EL28.982446,--PT1602CHK  
EP,TM10:33:52,LA41.184088548,LN-72.063253233,HT-69.59649,RH0.020518,RV0.032398,DH0.608926,DV0.961508,GM4,CL1  
BL,DCROVER,PN1614,DX1124.038604,DY2333.119283,DZ2135.468003,--PT1603CHK,GM4,CL1,HP0.020518,VP0.032398

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CV,DCROVER,SV4,SC0.006254,XX1.537062e-005,XY-7.107502e-006,XZ1.321459e-006,YY6.900142e-005,YZ-3.806095e-005,ZZ5.225329e-005  
GS,PN1614,N 674826.095943,E 1176088.865578,EL30.947122,--PT1603CHK  
DP,PN1  
--Survey Pro Version: 4.2.1  
--Data Collector Serial Number: SS35A22511  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--Import GPS Control - create GPS control point  
EE,GF14,SG420082729  
EP,TM13:03:10,LA41.181280761,LN-72.065593863,HT-70.520714,RH0.0,RV0.0,GM1,CL1  
SP,PN1600,N 671962.018779,E 1174321.892278,EL32.107045,--  
--Solve calibration from control points.  
CT,PN1600,DM4,RH0.0,RV0.0  
EP,TM13:03:23,LA41.181280761,LN-72.065593863,HT-70.520714,RH0.0,RV0.0,GM1,CL2  
RP,PN1600,N 671962.018779,E 1174321.892278,EL32.107045,--  
--Solve calibration from control points.  
HA,N 671971.154632,E 1174323.567687,TH-9.135852,TE-1.675409,RT0.0000,SC1.0000000000  
VA,PV3,N 671962.018779,E 1174321.892278,LZ2.038741,SO0.00000,SA0.00000,GNCEOID03 (Conus)  
CS,CO3,ZGSite,ZNFEMA\_CLUSTER\_16,DNNAD 1983 (Conus)  
-->>  
-->> Begin Adjust with Projection.  
GR,PN1601,N 671759.204136,E 1174480.188449,EL33.500515,--FORESTCIN1  
GR,PN1602,N 671882.436532,E 1174308.601177,EL31.065791,--FORESTCONV2  
GR,PN1603,N 674816.958764,E 1176087.205461,EL33.036022,--GRASS  
GR,PN1604,N 674073.356635,E 1178421.195013,EL5.226419,--BITLOT  
GR,PN1605,N 686046.275031,E 1175525.963424,EL125.333735,--LX0146  
GR,PN1606,N 686046.259017,E 1175525.96368,EL125.283648,--LX0146CHK  
GR,PN1607,N 670581.968562,E 1169263.732722,EL3.534525,--LX5416  
GR,PN1608,N 670581.988841,E 1169263.745283,EL3.530578,--LX5416CHK  
GR,PN1609,N 671800.557119,E 1173737.625755,EL2.613656,--MIXEDVEG  
GR,PN1612,N 671759.188103,E 1174480.176535,EL33.484325,--PT1601CHK  
GR,PN1613,N 671882.46806,E 1174308.620324,EL31.021186,--PT1602CHK  
GR,PN1614,N 674816.96009,E 1176087.190169,EL32.985863,--PT1603CHK  
-->> End Adjust with Projection.  
-->>  
SP,PN1610,N 671652.238711,E 1174624.166663,EL31.448481,--FOREST  
SP,PN1611,N 671652.227583,E 1174624.181641,EL31.449333,--FORESTCHK



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JB,NMFEMA_CLUSTER_1700,DT04-20-2007,TM07:45:45
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000,OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GN GEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--12:26:38,Get autonomous base position at BASE:LA41.211674433,LN-72.044438518,HT26.443189
--New point created by GPS autonomous base setup
EE,GF32,SG420122640
EP,TM12:26:40,LA41.211674433,LN-72.044438518,HT26.443189,RH0.0,RV0.0,GM1,CL1
SP,PN1700,N 0.0,E 0.0,EL26.443189,--
--04/20:12:26:40,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,HO0.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN1700,LA41.211674433,LN-72.044438518,HT26.443189,SG420122640
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--12:28:04,Set ROVER receiver with base reference position:LA41.211674433,LN-
72.044438518,HT26.443189
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,HO0.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 690663.204698,E 1184219.19902,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 690663.204698,E 1184219.19902,LZ0.0,SO0.00000,SA0.00000,GN GEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_1700,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1700,N 690663.204698,E 1184219.19902,EL126.74577,--
EE,GF0,SG420122640
EP,TM12:28:27,LA41.211674433,LN-72.044438518,HT26.443189,RH0.0,RV0.0,GM1,CL1
GP,PN1700,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM12:33:01,LA41.211765546,LN-
72.044268235,HT22.74329,RH0.024761,RV0.034193,DH0.83325,DV1.153455,GM4,CL1
BL,DCROVER,PN1701,DX103.995101,DY100.466525,DZ66.887246,--GRASS,GM4,CL1,HP0.024761,VP0.034193
CV,DCROVER,SV4,SC0.007547,XX2.124734e-005,XY-1.582875e-005,XZ2.059967e-005,YY4.719882e-005,YZ-
3.125464e-005,ZZ9.713393e-005
GS,PN1701,N 690756.429528,E 1184348.340662,EL123.045018,--GRASS
EP,TM12:46:50,LA41.185791896,LN-72.035825105,HT-
74.138601,RH0.030861,RV0.035245,DH0.752724,DV0.85967,GM4,CL1
BL,DCROVER,PN1702,DX6181.877425,DY-7674.633669,DZ-10616.645221,--
LX5210,GM4,CL1,HP0.030861,VP0.035245
CV,DCROVER,SV4,SC0.009406,XX2.694073e-005,XY-1.932606e-005,XZ4.293288e-006,YY7.762940e-005,YZ-
2.473302e-005,ZZ9.931472e-005
GS,PN1702,N 676640.298106,E 1187848.590872,EL26.451125,--LX5210
EP,TM12:47:31,LA41.185791894,LN-72.035825133,HT-
74.114757,RH0.031869,RV0.036272,DH0.751819,DV0.855709,GM4,CL1
BL,DCROVER,PN1703,DX6181.85793,DY-7674.64031,DZ-10616.639661,--
LX5210CHK,GM4,CL1,HP0.031869,VP0.036272
CV,DCROVER,SV4,SC0.009714,XX2.882759e-005,XY-2.068798e-005,XZ4.400147e-006,YY8.270388e-005,YZ-
2.595049e-005,ZZ1.050523e-004
GS,PN1703,N 676640.296204,E 1187848.569149,EL26.474969,--LX5210CHK

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EP, TM12:58:10, LA41.195706757, LN-72.032268769, HT-  
100.025363, RH0.032598, RV0.037406, DH0.734459, DV0.842788, GM4, CL1  
BL, DCROVER, PN1704, DX7539.851486, DY-3059.460415, DZ-6137.880143, --  
MIXEDVEG, GM4, CL1, HP0.032598, VP0.037406  
CV, DCROVER, SV4, SC0.009936, XX3.461648e-005, XY-2.729626e-005, XZ5.690401e-006, YY9.310887e-005, YZ-  
2.735880e-005, ZZ1.009841e-004  
GS, PN1704, N 682648.33402, E 1190514.205597, EL0.466138, --MIXEDVEG  
EP, TM13:13:27, LA41.200797517, LN-72.015999593, HT-  
95.991961, RH0.083866, RV0.086738, DH1.286698, DV1.330755, GM4, CL1  
BL, DCROVER, PN1705, DX13317.116181, DY-424.029727, DZ-5306.257475, --  
FORESTCONV1, GM4, CL1, HP0.083866, VP0.086738  
CV, DCROVER, SV4, SC0.025562, XX2.118870e-004, XY-1.322885e-004, XZ-9.380142e-005, YY4.170845e-004, YZ-  
1.528168e-004, ZZ7.234216e-004  
GS, PN1705, N 683803.767874, E 1196813.27133, EL4.509803, --FORESTCONV1  
EP, TM13:18:22, LA41.20094583, LN-72.020246872, HT-  
101.96185, RH0.055275, RV0.054255, DH1.050846, DV1.031466, GM4, CL1  
BL, DCROVER, PN1706, DX13105.710044, DY-383.649782, DZ-5197.490269, --  
FORESTCONV2, GM4, CL1, HP0.055275, VP0.054255  
CV, DCROVER, SV4, SC0.016848, XX9.349694e-005, XY-4.298147e-005, XZ-6.175193e-005, YY1.438815e-004, YZ-  
6.376973e-005, ZZ3.199400e-004  
GS, PN1706, N 683952.311067, E 1196623.397163, EL-1.463712, --FORESTCONV2  
EP, TM13:27:43, LA41.204517634, LN-72.020233033, HT-  
85.790497, RH0.041038, RV0.050569, DH0.858584, DV1.057994, GM4, CL1  
BL, DCROVER, PN1707, DX12382.907039, DY1879.567339, DZ-2472.589841, --LX3421, GM4, CL1, HP0.041038, VP0.050569  
CV, DCROVER, SV4, SC0.012508, XX5.992488e-005, XY-6.041849e-005, XZ1.520338e-005, YY2.464597e-004, YZ-  
4.853047e-005, ZZ8.765408e-005  
GS, PN1707, N 687567.405363, E 1196603.998438, EL14.638732, --LX3421  
EP, TM13:29:01, LA41.204517756, LN-72.020232973, HT-  
85.700412, RH0.092916, RV0.062525, DH2.165823, DV1.457426, GM4, CL1  
BL, DCROVER, PN1708, DX12382.975292, DY1879.593605, DZ-2472.393273, --  
LX3421CHK, GM4, CL1, HP0.092916, VP0.062525  
CV, DCROVER, SV4, SC0.028321, XX7.159197e-005, XY-7.588104e-005, XZ-7.716443e-005, YY3.291732e-  
004, YZ1.522272e-004, ZZ7.644888e-004  
GS, PN1708, N 687567.529278, E 1196604.04345, EL14.728815, --LX3421CHK  
EP, TM13:29:35, LA41.204517751, LN-72.020232988, HT-  
85.680484, RH0.03862, RV0.038348, DH0.885091, DV0.878863, GM4, CL1  
BL, DCROVER, PN1709, DX12382.962584, DY1879.577969, DZ-2472.407886, --  
LX3421CHK2, GM4, CL1, HP0.03862, VP0.038348  
CV, DCROVER, SV4, SC0.011771, XX4.025801e-005, XY-3.142750e-005, XZ-7.917288e-006, YY8.428179e-005, YZ-  
1.883126e-005, ZZ1.506519e-004  
GS, PN1709, N 687567.523662, E 1196604.032057, EL14.748743, --LX3421CHK2  
EP, TM13:42:42, LA41.204496458, LN-72.025980139, HT-  
86.712234, RH0.045061, RV0.069971, DH0.776051, DV1.205039, GM4, CL1  
BL, DCROVER, PN1710, DX8217.11645, DY515.2332, DZ-2489.268698, --BITLOT, GM4, CL1, HP0.045061, VP0.069971  
CV, DCROVER, SV4, SC0.013735, XX9.579726e-005, XY-1.268405e-004, XZ3.679003e-005, YY4.272938e-004, YZ-  
1.335946e-004, ZZ1.203950e-004  
GS, PN1710, N 687510.056056, E 1192220.837527, EL13.695769, --BITLOT  
EP, TM14:25:53, LA41.211765567, LN-  
72.044268238, HT22.621873, RH0.021353, RV0.035215, DH0.674518, DV1.112414, GM4, CL1  
BL, DCROVER, PN1711, DX103.962622, DY100.545731, DZ66.829954, --PT1701CHK, GM4, CL1, HP0.021353, VP0.035215  
CV, DCROVER, SV4, SC0.006508, XX1.653566e-005, XY-5.711419e-006, XZ3.021623e-006, YY8.572541e-005, YZ-  
4.624771e-005, ZZ5.530729e-005  
GS, PN1711, N 690756.449926, E 1184348.337988, EL122.9236, --PT1701CHK  
EP, TM14:26:43, LA41.211765572, LN-  
72.044268215, HT22.708986, RH0.020756, RV0.034735, DH0.687679, DV1.150793, GM4, CL1  
BL, DCROVER, PN1712, DX104.001297, DY100.502395, DZ66.890411, --PT1701CHK2, GM4, CL1, HP0.020756, VP0.034735  
CV, DCROVER, SV4, SC0.006327, XX1.516364e-005, XY-5.459510e-006, XZ4.696112e-006, YY7.798696e-005, YZ-  
4.505571e-005, ZZ5.896261e-005  
GS, PN1712, N 690756.455965, E 1184348.35563, EL123.010713, --PT1701CHK2  
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
--Foresight Target: My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--Foresight Target: My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
OC, OP1705, N 683803.767874, E 1196813.27133, EL4.509803, --FORESTCONV1  
--HR:0.0 (0.0 + 0.0 Offset)  
LS, HI0.0, HR0.0  
BK, OP1705, BP1706, BS308.021298, BC0.0000  
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
OC, OP1705, N 683803.767874, E 1196813.27133, EL4.509803, --FORESTCONV1  
BK, OP1705, BP1706, BS308.021298, BC0.0000  
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
--BS check 1705 - 1706: ZE91.2319, SD241.165, HD err= 0.018919, VD err= 0.129251  
--BS Circle check : angular err= 0.0000  
SS, OP1705, FP1713, AR124.1754, ZE89.3950, SD266.605, --FOREST  
--Foresight Target: My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm

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--HR:1.0 (1.0 + 0.0 Offset)
LS,HI0.0,HR1.0
SS,OP1705,FP1714,AR124.1805,ZE89.2649,SD266.585,--FORESTCHK
DP,PN1
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE,GF14,SG420122640
EP,TM13:19:43,LA41.211674433,LN-72.044438518,HT26.443189,RH0.0,RV0.0,GM1,CL1
SP,PN1700,N 690659.693394,E 1184219.57558,EL130.109673,--
--Solve calibration from control points.
CT,PN1700,DM4,RH0.0,RV0.0
EP,TM13:19:56,LA41.211674433,LN-72.044438518,HT26.443189,RH0.0,RV0.0,GM1,CL2
RP,PN1700,N 690659.693394,E 1184219.57558,EL130.109673,--
--Solve calibration from control points.
HA,N 690663.204698,E 1184219.19902,TH-3.511304,TE0.37656,RT0.0000,SC1.0000000000
VA,PV3,N 690659.693394,E 1184219.57558,LZ3.363903,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_1700,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1701,N 690752.918224,E 1184348.717222,EL126.408921,--GRASS
GR,PN1702,N 676636.786802,E 1187848.967432,EL29.815028,--LX5210
GR,PN1703,N 676636.7849,E 1187848.945709,EL29.838872,--LX5210CHK
GR,PN1704,N 682644.822716,E 1190514.582157,EL3.830041,--MIXEDVEG
GR,PN1705,N 683800.25657,E 1196813.64789,EL7.873706,--FORESTCONV1
GR,PN1706,N 683948.799763,E 1196623.773722,EL1.900191,--FORESTCONV2
GR,PN1707,N 687563.89406,E 1196604.374997,EL18.002635,--LX3421
GR,PN1708,N 687564.017974,E 1196604.42001,EL18.092718,--LX3421CHK
GR,PN1709,N 687564.012358,E 1196604.408617,EL18.112646,--LX3421CHK2
GR,PN1710,N 687506.544752,E 1192221.214087,EL17.059672,--BITLOT
GR,PN1711,N 690752.938622,E 1184348.714548,EL126.287503,--PT1701CHK
GR,PN1712,N 690752.944661,E 1184348.73219,EL126.374616,--PT1701CHK2
-->> End Adjust with Projection.
-->>
SP,PN1713,N 683881.155842,E 1197067.678125,EL9.437764,--FOREST
SP,PN1714,N 683881.133851,E 1197067.655919,EL9.447012,--FORESTCHK

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## FEMA\_CLUSTER\_18\_ADJ

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JB,NMFEMA_CLUSTER_18,DT04-23-2007,TM04:01:47
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000,OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GN GEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--08:47:37,Get autonomous base position at BASE:LA41.311605718,LN-72.045112149,HT-91.463928
--New point created by GPS autonomous base setup
EE,GF32,SG423084741
EP,TM08:47:41,LA41.311605718,LN-72.045112149,HT-91.463928,RH0.0,RV0.0,GM1,CL1
SP,PN1800,N 0.0,E 0.0,EL-91.463928,--
--04/23:08:47:41,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,HO0.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN1800,LA41.311605718,LN-72.045112149,HT-91.463928,SG423084741
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--08:48:36,Set ROVER receiver with base reference position:LA41.311605718,LN-72.045112149,HT-
91.463928
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,HO0.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 751316.461952,E 1183235.771925,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 751316.461952,E 1183235.771925,LZ0.0,SO0.00000,SA0.00000,GN GEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_18,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1800,N 751316.461952,E 1183235.771925,EL7.968076,--
EE,GF0,SG423084741
EP,TM08:48:59,LA41.311605718,LN-72.045112149,HT-91.463928,RH0.0,RV0.0,GM1,CL1
GP,PN1800,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM08:52:19,LA41.31159228,LN-72.045103551,HT-
91.990681,RH0.020299,RV0.033894,DH0.663857,DV1.108443,GM4,CL1
BL,DCROVER,PN1801,DX8.922864,DY-6.313949,DZ-10.421754,--LX3397,GM4,CL1,HP0.020299,VP0.033894
CV,DCROVER,SV4,SC0.006187,XX1.782627e-005,XY-1.629085e-005,XZ1.710588e-005,YY5.405514e-005,YZ-
3.773725e-005,ZZ7.312837e-005
GS,PN1801,N 751302.911593,E 1183242.417259,EL7.4416,--LX3397
EP,TM09:22:51,LA41.295149086,LN-72.045817645,HT-
119.812875,RH0.029727,RV0.041312,DH0.788004,DV1.095086,GM4,CL1
BL,DCROVER,PN1802,DX1228.055996,DY-5542.673875,DZ-6428.452922,--LX7637,GM4,CL1,HP0.029727,VP0.041312
CV,DCROVER,SV4,SC0.009061,XX6.370112e-005,XY-4.643374e-005,XZ3.148784e-005,YY8.147503e-005,YZ-
4.977933e-005,ZZ9.547933e-005
GS,PN1802,N 742753.15022,E 1182765.219922,EL-20.225803,--LX7637
EP,TM09:24:38,LA41.295149086,LN-72.045817623,HT-
119.755296,RH0.032228,RV0.045376,DH0.854305,DV1.202805,GM4,CL1
BL,DCROVER,PN1803,DX1228.087542,DY-5542.711303,DZ-6428.423227,--
LX7637CHK,GM4,CL1,HP0.032228,VP0.045376
CV,DCROVER,SV4,SC0.009823,XX7.144956e-005,XY-6.323081e-005,XZ3.417570e-005,YY1.212740e-004,YZ-
5.608079e-005,ZZ9.505499e-005
GS,PN1803,N 742753.150416,E 1182765.236671,EL-20.168224,--LX7637CHK
```

FEMA\_CLUSTER\_18\_ADJ

EP, TM09:50:52, LA41.312313061, LN-72.051679169, HT-  
 28.226246, RH0.037549, RV0.040811, DH1.164354, DV1.265516, GM4, CL1  
 BL, DCROVER, PN1804, DX-1989.377572, DY-194.246389, DZ578.066001, --BITLOT, GM4, CL1, HP0.037549, VP0.040811  
 CV, DCROVER, SV4, SC0.011445, XX3.513583e-005, XY-1.788818e-005, XZ-3.106807e-005, YY7.575658e-005, YZ-  
 4.362993e-005, ZZ1.748279e-004  
 GS, PN1804, N 752017.342831, E 1181277.674509, EL71.185618, --BITLOT  
 EP, TM09:58:59, LA41.312211138, LN-72.043979076, HT-  
 115.406217, RH0.028571, RV0.039809, DH0.911821, DV1.270465, GM4, CL1  
 BL, DCROVER, PN1805, DX689.618861, DY668.655258, DZ443.03919, --GRASS, GM4, CL1, HP0.028571, VP0.039809  
 CV, DCROVER, SV4, SC0.008709, XX1.836396e-005, XY-3.555211e-006, XZ-1.561276e-005, YY7.080255e-005, YZ-  
 5.832181e-005, ZZ1.339026e-004  
 GS, PN1805, N 751935.912855, E 1184092.880121, EL-15.983569, --GRASS  
 EP, TM10:23:56, LA41.291430059, LN-72.035396465, HT-  
 63.195168, RH0.024246, RV0.040127, DH0.575659, DV0.952706, GM4, CL1  
 BL, DCROVER, PN1806, DX6658.140261, DY-6451.80307, DZ-9210.538212, --  
 MIXEDVEG, GM4, CL1, HP0.024246, VP0.040127  
 CV, DCROVER, SV4, SC0.00739, XX2.467735e-005, XY-1.199759e-005, XZ5.956290e-006, YY9.903766e-005, YZ-  
 6.024160e-005, ZZ8.049279e-005  
 GS, PN1806, N 739027.27896, E 1187681.114709, EL36.48186, --MIXEDVEG  
 EP, TM10:47:37, LA41.292581412, LN-72.042137775, HT-  
 44.952106, RH0.031526, RV0.050483, DH0.716573, DV1.14746, GM4, CL1  
 BL, DCROVER, PN1807, DX4439.685142, DY-6372.605175, DZ-8325.497832, --  
 FORESTCONV1, GM4, CL1, HP0.031526, VP0.050483  
 CV, DCROVER, SV4, SC0.009609, XX4.529797e-005, XY-2.154362e-005, XZ3.227221e-005, YY1.857657e-004, YZ-  
 8.475292e-005, ZZ9.804147e-005  
 GS, PN1807, N 740176.1388, E 1185585.709113, EL54.694254, --FORESTCONV1  
 EP, TM10:50:39, LA41.292588212, LN-72.042606784, HT-  
 44.938946, RH0.035181, RV0.055801, DH0.768207, DV1.218453, GM4, CL1  
 BL, DCROVER, PN1808, DX4098.672725, DY-6478.150634, DZ-8320.344501, --  
 FORESTCONV2, GM4, CL1, HP0.035181, VP0.055801  
 CV, DCROVER, SV4, SC0.010723, XX5.219431e-005, XY-2.534597e-005, XZ3.967760e-005, YY2.350961e-004, YZ-  
 1.009146e-004, ZZ1.169739e-004  
 GS, PN1808, N 740180.226277, E 1185228.734, EL54.705504, --FORESTCONV2  
 --Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
 --Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
 --Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
 OC, OP1807, N 740176.1388, E 1185585.709113, EL54.694254, --FORESTCONV1  
 --HR:0.0 (0.0 + 0.0 Offset)  
 LS, HI0.0, HR0.0  
 BK, OP1807, BP1808, BS270.392169, BC0.0000  
 --Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
 --BS check 1807 - 1808:ZE89.5912, SD357.025, HD err= 0.026477, VD err= 0.071833  
 --BS Circle check : angular err= 0.0000  
 SS, OP1807, FP1809, AR286.3948, ZE90.0905, SD250.8, --FOREST  
 --Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
 --HR:1.0 (1.0 + 0.0 Offset)  
 LS, HI0.0, HR1.0  
 SS, OP1807, FP1810, AR286.3948, ZE89.5520, SD250.82, --FORESTCHK  
 --Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
 EP, TM11:53:26, LA41.312313043, LN-72.051679153, HT-  
 28.171839, RH0.024153, RV0.04366, DH0.841957, DV1.521974, GM4, CL1  
 BL, DCROVER, PN1811, DX-1989.349738, DY-194.285469, DZ578.08449, --PT1804CHK, GM4, CL1, HP0.024153, VP0.04366  
 CV, DCROVER, SV4, SC0.007362, XX3.937449e-005, XY-3.508206e-005, XZ4.904882e-005, YY6.193243e-005, YZ-  
 6.348897e-005, ZZ1.299822e-004  
 GS, PN1811, N 752017.324472, E 1181277.686765, EL71.240026, --PT1804CHK  
 EP, TM12:03:13, LA41.312211155, LN-72.043979033, HT-  
 115.338654, RH0.024627, RV0.041472, DH0.798938, DV1.345395, GM4, CL1  
 BL, DCROVER, PN1812, DX689.658557, DY668.625788, DZ443.093204, --PT1805CHK, GM4, CL1, HP0.024627, VP0.041472  
 CV, DCROVER, SV4, SC0.007506, XX2.692140e-005, XY-2.321657e-005, XZ3.431406e-005, YY6.042237e-005, YZ-  
 5.610979e-005, ZZ1.287853e-004  
 GS, PN1812, N 751935.930984, E 1184092.912704, EL-15.916005, --PT1805CHK  
 EP, TM12:09:14, LA41.31159225, LN-72.045103563, HT-  
 92.012203, RH0.023617, RV0.038615, DH0.785121, DV1.283711, GM4, CL1  
 BL, DCROVER, PN1813, DX8.910214, DY-6.32144, DZ-10.458316, --PT1801CHK, GM4, CL1, HP0.023617, VP0.038615  
 CV, DCROVER, SV4, SC0.007198, XX2.504138e-005, XY-1.995724e-005, XZ3.026269e-005, YY4.876661e-005, YZ-  
 4.811929e-005, ZZ1.165405e-004  
 GS, PN1813, N 751302.88072, E 1183242.408838, EL7.420079, --PT1801CHK  
 --4-23-07 MKW BC M.SUN 75\*F  
 --Survey Pro Version: 4.2.1  
 --Data Collector Serial Number: SS35A22511  
 --Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
 DP, PN1  
 --Survey Pro Version: 4.2.1  
 --Data Collector Serial Number: SS35A22511

FEMA\_CLUSTER\_18\_ADJ

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--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE,GF14,SG423084741
EP,TM13:27:17,LA41.311605718,LN-72.045112149,HT-91.463928,RH0.0,RV0.0,GM1,CL1
SP,PN1800,N 751310.178607,E 1183237.903375,EL30.596637,--
--Solve calibration from control points.
CT,PN1800,DM4,RH0.0,RV0.0
EP,TM13:27:28,LA41.311605718,LN-72.045112149,HT-91.463928,RH0.0,RV0.0,GM1,CL2
RP,PN1800,N 751310.178607,E 1183237.903375,EL30.596637,--
--Solve calibration from control points.
HA,N 751316.461952,E 1183235.771925,TH-6.283345,TE2.13145,RT0.0000,SC1.0000000000
VA,PV3,N 751310.178607,E 1183237.903375,LZ22.628562,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_18,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1801,N 751296.628248,E 1183244.548709,EL30.070162,--LX3397
GR,PN1802,N 742746.866875,E 1182767.351373,EL2.402759,--LX7637
GR,PN1803,N 742746.867071,E 1182767.368121,EL2.460338,--LX7637CHK
GR,PN1804,N 752011.059485,E 1181279.805959,EL93.81418,--BITLOT
GR,PN1805,N 751929.62951,E 1184095.011572,EL6.644993,--GRASS
GR,PN1806,N 739020.995615,E 1187683.24616,EL59.110421,--MIXEDVEG
GR,PN1807,N 740169.855455,E 1185587.840563,EL77.322815,--FORESTCONV1
GR,PN1808,N 740173.942932,E 1185230.86545,EL77.334066,--FORESTCONV2
GR,PN1811,N 752011.041127,E 1181279.818216,EL93.868588,--PT1804CHK
GR,PN1812,N 751929.647639,E 1184095.044155,EL6.712556,--PT1805CHK
GR,PN1813,N 751296.597375,E 1183244.540289,EL30.04864,--PT1801CHK
-->> End Adjust with Projection.
-->>
SP,PN1809,N 739930.427841,E 1185513.177851,EL76.660582,--FOREST
SP,PN1810,N 739930.408133,E 1185513.171706,EL76.663736,--FORESTCHK

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FEMA\_CLUSTER\_19\_ADJ

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JB,NMFEMA_CLUSTER_19,DT04-24-2007,TM04:43:19
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--4-24-07 MKW BC M.SUN 70°F
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000, OY0.00000000, OZ0.00000000, LX0.0, LY0.0, LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNGEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--07:47:39,Get autonomous base position at BASE:LA41.215093978,LN-71.573696558,HT-43.288817
--New point created by GPS autonomous base setup
EE,GF32,SG424074740
EP,TM07:47:40,LA41.215093978,LN-71.573696558,HT-43.288817,RH0.0,RV0.0,GM1,CL1
SP,PN1900,N 0.0,E 0.0,EL-43.288817,--
--04/24:07:47:40,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAE7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN1900,LA41.215093978,LN-71.573696558,HT-43.288817,SG424074740
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--07:48:38,Set ROVER receiver with base reference position:LA41.215093978,LN-71.573696558,HT-
43.288817
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 694399.59969,E 1216782.528494,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 694399.59969,E 1216782.528494,LZ0.0,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_19,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1900,N 694399.59969,E 1216782.528494,EL57.091331,--
EE,GF0,SG424074740
EP,TM07:49:04,LA41.215093978,LN-71.573696558,HT-43.288817,RH0.0,RV0.0,GM1,CL1
GP,PN1900,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM07:57:04,LA41.215037538,LN-71.573716259,HT-
42.856608,RH0.020561,RV0.02812,DH0.706688,DV0.966499,GM4,CL1
BL,DCROVER,PN1901,DX-2.453149,DY-40.980975,DZ-42.473932,--GRASS,GM4,CL1,HP0.020561,VP0.02812
CV,DCROVER,SV4,SC0.006267,XX1.764938e-005,XY-1.397360e-005,XZ1.143267e-005,YY5.411211e-005,YZ-
2.004793e-005,ZZ4.097523e-005
GS,PN1901,N 694342.339977,E 1216768.028521,EL57.52453,--GRASS
EP,TM08:05:09,LA41.222411917,LN-71.573763802,HT-
77.668183,RH0.02377,RV0.036609,DH0.749217,DV1.153907,GM4,CL1
BL,DCROVER,PN1902,DX-744.007277,DY2118.882457,DZ2497.638493,--BITLOT,GM4,CL1,HP0.02377,VP0.036609
CV,DCROVER,SV4,SC0.007245,XX2.546297e-005,XY-2.770663e-005,XZ1.999066e-005,YY9.078010e-005,YZ-
3.715461e-005,ZZ6.076214e-005
GS,PN1902,N 697757.188463,E 1216700.572549,EL22.652546,--BITLOT
EP,TM08:15:54,LA41.232643545,LN-71.57323989,HT-
90.347404,RH0.039281,RV0.066229,DH0.743505,DV1.253574,GM4,CL1
BL,DCROVER,PN1903,DX-1658.475768,DY6216.25602,DZ7221.759009,--
FORESTCONV1,GM4,CL1,HP0.039281,VP0.066229
CV,DCROVER,SV4,SC0.011973,XX7.841592e-005,XY-9.422284e-005,XZ6.621939e-005,YY2.794407e-004,YZ-
1.326455e-004,ZZ1.929874e-004
GS,PN1903,N 704067.828371,E 1217042.254426,EL9.868386,--FORESTCONV1

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FEMA\_CLUSTER\_19\_ADJ

EP, TM08:18:51, LA41.232868369, LN-71.573146309, HT-  
88.87967, RH0.032664, RV0.053492, DH0.66612, DV1.090884, GM4, CL1  
BL, DCROVER, PN1904, DX-1636.915342, DY6380.362562, DZ7393.450378, --  
FORESTCONV2, GM4, CL1, HP0.032664, VP0.053492  
CV, DCROVER, SV4, SCO.009956, XX4.525086e-005, XY-3.875801e-005, XZ4.390156e-005, YY1.580111e-004, YZ-  
9.113267e-005, ZZ1.616922e-004  
GS, PN1904, N 704296.024416, E 1217111.495705, EL11.332743, --FORESTCONV2  
EP, TM08:30:43, LA41.214063214, LN-71.565707787, HT-  
84.551962, RH0.028566, RV0.049947, DH0.681724, DV1.191979, GM4, CL1  
BL, DCROVER, PN1905, DX3095.993639, DY315.99987, DZ-810.180532, --MIXEDVEG, GM4, CL1, HP0.028566, VP0.049947  
CV, DCROVER, SV4, SCO.008707, XX3.690170e-005, XY-3.737366e-005, XZ3.854744e-005, YY1.307524e-004, YZ-  
8.252416e-005, ZZ1.399170e-004  
GS, PN1905, N 693384.366194, E 1219833.564255, EL15.849428, --MIXEDVEG  
EP, TM08:38:11, LA41.210163483, LN-71.573430785, HT-  
86.543917, RH0.024104, RV0.044868, DH0.66286, DV1.233893, GM4, CL1  
BL, DCROVER, PN1906, DX1203.850856, DY-3041.781548, DZ-3774.256612, --LW0720, GM4, CL1, HP0.024104, VP0.044868  
CV, DCROVER, SV4, SCO.007347, XX2.937720e-005, XY-3.111804e-005, XZ3.204424e-005, YY1.004870e-004, YZ-  
6.951763e-005, ZZ1.111398e-004  
GS, PN1906, N 689411.348056, E 1217030.825215, EL13.926345, --LW0720  
EP, TM08:39:04, LA41.210163476, LN-71.573430771, HT-  
86.53972, RH0.025941, RV0.046887, DH0.685097, DV1.238283, GM4, CL1  
BL, DCROVER, PN1907, DX1203.860057, DY-3041.794271, DZ-3774.248747, --  
LW0720CHK, GM4, CL1, HP0.025941, VP0.046887  
CV, DCROVER, SV4, SCO.007907, XX3.229551e-005, XY-3.486772e-005, XZ3.443653e-005, YY1.116492e-004, YZ-  
7.406787e-005, ZZ1.228104e-004  
GS, PN1907, N 689411.341807, E 1217030.83597, EL13.930542, --LW0720CHK  
EP, TM09:51:02, LA41.201898498, LN-71.562140836, HT-  
70.003188, RH0.1752, RV0.288617, DH3.056978, DV5.035949, GM4, CL1  
BL, DCROVER, PN1908, DX7378.007972, DY-4041.89932, DZ-7004.130041, --LW3409, GM4, CL1, HP0.1752, VP0.288617  
CV, DCROVER, SV4, SCO.053401, XX1.350591e-004, XY-1.850477e-004, XZ4.299832e-004, YY1.224679e-003, YZ-  
3.061243e-003, ZZ9.230775e-003  
GS, PN1908, N 685146.327515, E 1222630.948342, EL30.539111, --LW3409  
EP, TM09:57:54, LA41.201898238, LN-71.562140901, HT-  
70.507075, RH0.039576, RV0.049479, DH1.004402, DV1.255719, GM4, CL1  
BL, DCROVER, PN1909, DX7377.922997, DY-4041.708721, DZ-7004.689332, --  
LW3409CHK, GM4, CL1, HP0.039576, VP0.049479  
CV, DCROVER, SV4, SCO.012063, XX3.589823e-005, XY-6.993102e-006, XZ-3.569034e-005, YY1.096686e-004, YZ-  
8.384449e-005, ZZ2.273848e-004  
GS, PN1909, N 685146.06358, E 1222630.901892, EL30.035228, --LW3409CHK  
EP, TM10:12:36, LA41.214063208, LN-71.565707834, HT-  
84.565782, RH0.026588, RV0.038406, DH0.757376, DV1.094016, GM4, CL1  
BL, DCROVER, PN1910, DX3095.9661, DY315.978847, DZ-810.203782, --PT1905CHK, GM4, CL1, HP0.026588, VP0.038406  
CV, DCROVER, SV4, SCO.008104, XX2.224022e-005, XY1.498933e-006, XZ2.200306e-006, YY1.157157e-004, YZ-  
5.136963e-005, ZZ6.475027e-005  
GS, PN1910, N 693384.359557, E 1219833.528272, EL15.835608, --PT1905CHK  
EP, TM10:20:11, LA41.232643444, LN-71.573239803, HT-  
90.419429, RH0.03074, RV0.039861, DH0.81873, DV1.040551, GM4, CL1  
BL, DCROVER, PN1911, DX-1658.393264, DY6216.268803, DZ7221.638896, --  
PT1903CHK, GM4, CL1, HP0.03074, VP0.039861  
CV, DCROVER, SV4, SCO.00937, XX2.913450e-005, XY-1.560635e-005, XZ-1.065400e-005, YY9.707496e-005, YZ-  
4.983566e-005, ZZ1.091996e-004  
GS, PN1911, N 704067.727542, E 1217042.321518, EL9.796362, --PT1903CHK  
EP, TM10:22:31, LA41.232868358, LN-71.573146279, HT-  
88.94642, RH0.02491, RV0.040437, DH0.612001, DV0.993494, GM4, CL1  
BL, DCROVER, PN1912, DX-1636.905657, DY6380.395885, DZ7393.404647, --  
PT1904CHK, GM4, CL1, HP0.02491, VP0.040437  
CV, DCROVER, SV4, SCO.007593, XX2.413506e-005, XY-1.245828e-005, XZ8.074200e-006, YY9.941515e-005, YZ-  
5.916744e-005, ZZ8.600992e-005  
GS, PN1912, N 704296.014187, E 1217111.518786, EL11.265993, --PT1904CHK  
EP, TM10:29:33, LA41.222411849, LN-71.57376378, HT-  
77.764399, RH0.01911, RV0.033526, DH0.552087, DV0.968539, GM4, CL1  
BL, DCROVER, PN1913, DX-744.002145, DY2118.925554, DZ2497.537249, --PT1902CHK, GM4, CL1, HP0.01911, VP0.033526  
CV, DCROVER, SV4, SCO.005825, XX1.648189e-005, XY-1.099749e-005, XZ6.399257e-006, YY7.663934e-005, YZ-  
4.149610e-005, ZZ4.523058e-005  
GS, PN1913, N 697757.119721, E 1216700.590121, EL22.556331, --PT1902CHK  
EP, TM10:30:25, LA41.222411878, LN-71.573763796, HT-  
77.721016, RH0.022176, RV0.033199, DH0.675998, DV1.011987, GM4, CL1  
BL, DCROVER, PN1914, DX-744.010829, DY2118.907415, DZ2497.583003, --  
PT1902CHK2, GM4, CL1, HP0.022176, VP0.033199  
CV, DCROVER, SV4, SCO.006759, XX1.859219e-005, XY-9.335714e-006, XZ1.498908e-006, YY6.923897e-005, YZ-  
3.844150e-005, ZZ6.025061e-005  
GS, PN1914, N 697757.148908, E 1216700.577361, EL22.599714, --PT1902CHK2  
EP, TM10:34:38, LA41.215037515, LN-71.573716281, HT-  
42.875073, RH0.018059, RV0.030048, DH0.580604, DV0.966078, GM4, CL1



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BL,DCROVER,PN1915,DX-2.470943,DY-40.972624,DZ-42.512784,--PT1901CHK,GM4,CL1,HP0.018059,VP0.030048
CV,DCROVER,SV4,SC0.005504,XX1.409171e-005,XY-8.604015e-006,XZ5.388565e-006,YY5.888796e-005,YZ-
3.247442e-005,ZZ4.120175e-005
GS,PN1915,N 694342.316577,E 1216768.012477,EL57.506066,--PT1901CHK
DP,PN1
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
OC,OP1903,N 704067.828371,E 1217042.254426,EL9.868386,--FORESTCONV1
--HR:0.0 (0.0 + 0.0 Offset)
LS,HI0.0,HR0.0
BK,OP1903,BP1904,BS16.524553,BC0.0000
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm
--BS check 1903 - 1904:ZE89.3832,SD238.605,HD err= 0.130665, VD err= 0.025578
--BS Circle check : angular err= 0.0000
--BS check 1903 - 1904:ZE89.3832,SD238.595,HD err= 0.120665, VD err= 0.025516
--BS Circle check : angular err= 0.0000
SS,OP1903,FP1916,AR148.1513,ZE90.4430,SD138.0,--FOREST
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm
--HR:1.0 (1.0 + 0.0 Offset)
LS,HI0.0,HR1.0
SS,OP1903,FP1917,AR148.1512,ZE90.1929,SD138.0,--FORESTCHK
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE,GF14,SG424074740
EP,TM13:34:27,LA41.215093978,LN-71.573696558,HT-43.288817,RH0.0,RV0.0,GM1,CL1
SP,PN1900,N 694388.849828,E 1216781.58129,EL53.975247,--
--Solve calibration from control points.
CT,PN1900,DM4,RH0.0,RV0.0
EP,TM13:34:38,LA41.215093978,LN-71.573696558,HT-43.288817,RH0.0,RV0.0,GM1,CL2
RP,PN1900,N 694388.849828,E 1216781.58129,EL53.975247,--
--Solve calibration from control points.
HA,N 694399.59969,E 1216782.528494,TH-10.749862,TE-0.947204,RT0.0000,SC1.0000000000
VA,PV3,N 694388.849828,E 1216781.58129,LZ-3.116085,SO0.00000,SA0.00000,GNGEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_19,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN1901,N 694331.590115,E 1216767.081318,EL54.408446,--GRASS
GR,PN1902,N 697746.438601,E 1216699.625345,EL19.536461,--BITLOT
GR,PN1903,N 704057.078509,E 1217041.307222,EL6.752301,--FORESTCONV1
GR,PN1904,N 704285.274554,E 1217110.548501,EL8.216658,--FORESTCONV2
GR,PN1905,N 693373.616332,E 1219832.617052,EL12.733343,--MIXEDVEG
GR,PN1906,N 689400.598194,E 1217029.878012,EL10.81026,--LW0720
GR,PN1907,N 689400.591945,E 1217029.888767,EL10.814458,--LW0720CHK
GR,PN1908,N 685135.577653,E 1222630.001139,EL27.423026,--LW3409
GR,PN1909,N 685135.313718,E 1222629.954688,EL26.919144,--LW3409CHK
GR,PN1910,N 693373.609695,E 1219832.581069,EL12.719524,--PT1905CHK
GR,PN1911,N 704056.97768,E 1217041.374314,EL6.680277,--PT1903CHK
GR,PN1912,N 704285.264325,E 1217110.571583,EL8.149908,--PT1904CHK
GR,PN1913,N 697746.369859,E 1216699.642918,EL19.440247,--PT1902CHK
GR,PN1914,N 697746.399046,E 1216699.630157,EL19.483629,--PT1902CHK2
GR,PN1915,N 694331.566715,E 1216767.065274,EL54.389981,--PT1901CHK
-->> End Adjust with Projection.
-->>
SP,PN1916,N 703923.709277,E 1217076.712142,EL4.966091,--FOREST
SP,PN1917,N 703923.700416,E 1217076.715186,EL4.970279,--FORESTCHK

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FEMA\_CLUSTER\_20\_ADJ

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JB,NMFEMA_CLUSTER_20,DT04-24-2007,TM09:20:14
MO,AD0,UN2,SF1.0,EC0,E00.0,AU0
SP,PN1,N 500000.0,E 1000000.0,EL100.0,--JNKSTART(VOID)
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--No coordinate system is defined.
ES,RD,IF,EM
PJ,TP2048,LA,LN,HT,N ,E ,EL,SC1.0000000000,OO,OT
CS,CO2,ZG,ZN,DN
--Select zone record from database
ES,RD20925604.474167,IF298.2572215381,EMGeodetic Ref System 1980
ST,LA,LN,HT,SC1.0000000000,N 0.0,E 0.0
PJ,TP2066,LA40.5000,LN-72.4500,HT,N 499999.999998,E 999999.999996,EL,SC,OO41.5200,OT41.1200
DT,DA513,RD20925604.474167,IF298.2572229329,OX0.00000000,OY0.00000000,OZ0.00000000,LX0.0,LY0.0,LZ0.0
,SP0.000000
HA,N ,E ,TH,TE,RT,SC
VA,PV2,N ,E ,LZ,SO,SA,GNCEOID03 (Conus)
CG,A01,G01
CS,CO3,ZGUS State Plane 1983,ZNConnecticut 0600,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
-->> End Adjust with Projection.
-->>
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--Activating GPS Receiver: Topcon TPS Legacy E [base reciver], COM1, 115200 baud, no parity
--12:39:24,Get autonomous base position at BASE:LA41.20141825,LN-71.523353233,HT-110.977845
--New point created by GPS autonomous base setup
EE,GF32,SG424123926
EP,TM12:39:26,LA41.20141825,LN-71.523353233,HT-110.977845,RH0.0,RV0.0,GM1,CL1
SP,PN2000,N 0.0,E 0.0,EL-110.977845,--
--04/24:12:39:26,Set BASE receiver at autonomous position
RX,DCBASE,RA6.737853,RE0,FI
EQ,DCBASE,RXLegacy E,RSAR7R2AQIRY8,AN0,AI0,ATLegAnt,TS,TA0.0,H00.0,VO0.175853
AH,DCBASE,MA6.562,ME2,RA6.737853
BP,PN2000,LA41.20141825,LN-71.523353233,HT-110.977845,SG424123926
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--12:39:57,Set ROVER receiver with base reference position:LA41.20141825,LN-71.523353233,HT-
110.977845
RX,DCROVER,RA6.909768,RE0,FI
EQ,DCROVER,RXHiPer,RS8RBXW35NFNK,AN0,AI0,ATTopcon HiPer,TS,TA0.0,H00.0,VO0.347768
AH,DCROVER,MA6.562,ME2,RA6.909768
--A temporary localization was applied to start data collection.
HA,N 684829.728945,E 1240017.738118,TH0.0,TE0.0,RT0.0000,SC1.0000000000
VA,PV3,N 684829.728945,E 1240017.738118,LZ0.0,SO0.000000,SA0.000000,GNCEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_20,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN2000,N 684829.728945,E 1240017.738118,EL-10.45244,--
EE,GF0,SG424123926
EP,TM12:40:18,LA41.20141825,LN-71.523353233,HT-110.977845,RH0.0,RV0.0,GM1,CL1
GP,PN2000,PTUSER_INPUT
-->> End Adjust with Projection.
-->>
EP,TM12:41:21,LA41.201356957,LN-71.523374061,HT-
112.729895,RH0.022566,RV0.025908,DH0.736971,DV0.846127,GM4,CL1
BL,DCROVER,PN2001,DX-2.730684,DY-42.745916,DZ-47.638615,--MIXEDVEG,GM4,CL1,HP0.022566,VP0.025908
CV,DCROVER,SV4,SC0.006878,XX1.733430e-005,XY-1.302795e-005,XZ1.783374e-006,YY4.518072e-005,YZ-
1.373249e-005,ZZ4.715066e-005
GS,PN2001,N 684767.534939,E 1240002.478341,EL-12.203503,--MIXEDVEG
EP,TM12:57:36,LA41.203012305,LN-71.524070122,HT-
80.423218,RH0.034776,RV0.033827,DH1.071715,DV1.042484,GM4,CL1
BL,DCROVER,PN2002,DX-844.04755,DY820.800432,DZ1231.644824,--
FORESTCONV1,GM4,CL1,HP0.034776,VP0.033827
CV,DCROVER,SV4,SC0.0106,XX3.527178e-005,XY-1.531581e-005,XZ-2.850749e-005,YY5.699276e-005,YZ-
2.536228e-005,ZZ1.263993e-004
GS,PN2002,N 686437.513355,E 1239454.620376,EL20.078896,--FORESTCONV1
EP,TM12:59:39,LA41.203240135,LN-71.524139469,HT-
83.839119,RH0.036859,RV0.044575,DH1.207152,DV1.459844,GM4,CL1
BL,DCROVER,PN2003,DX-942.487396,DY951.519288,DZ1402.542794,--
FORESTCONV2,GM4,CL1,HP0.036859,VP0.044575
CV,DCROVER,SV4,SC0.011235,XX4.744017e-005,XY-3.751645e-005,XZ-1.737514e-005,YY1.439829e-004,YZ-
5.247217e-005,ZZ1.193876e-004

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GS,PN2003,N 686667.560819,E 1239399.400702,EL16.659524,--FORESTCONV2  
EP,TM13:10:46,LA41.205639658,LN-71.544606743,HT-  
102.20376,RH0.031079,RV0.038378,DH0.681818,DV0.841944,GM4,CL1  
BL,DCROVER,PN2004,DX-10483.784322,DY-465.411471,DZ3213.662735,--LW0726,GM4,CL1,HP0.031079,VP0.038378  
CV,DCROVER,SV4,SC0.009473,XX5.028591e-005,XY-3.480683e-005,XZ3.617909e-006,YY1.041472e-004,YZ-  
3.912653e-005,ZZ7.213566e-005  
GS,PN2004,N 689002.038977,E 1229866.670748,EL-1.730691,--LW0726  
EP,TM13:12:40,LA41.205639698,LN-71.544606732,HT-  
102.261267,RH0.051387,RV0.064299,DH0.990604,DV1.239505,GM4,CL1  
BL,DCROVER,PN2005,DX-10483.801296,DY-465.394517,DZ3213.687904,--  
LW0726CHK,GM4,CL1,HP0.051387,VP0.064299  
CV,DCROVER,SV4,SC0.015663,XX8.406438e-005,XY-7.891167e-005,XZ-2.204210e-005,YY3.511221e-004,YZ-  
1.023387e-004,ZZ1.942351e-004  
GS,PN2005,N 689002.079636,E 1229866.678946,EL-1.788198,--LW0726CHK  
EP,TM13:26:11,LA41.195848095,LN-71.554706891,HT-  
113.815728,RH0.052527,RV0.079244,DH0.815172,DV1.229801,GM4,CL1  
BL,DCROVER,PN2006,DX-13708.341465,DY-5581.935325,DZ-1195.044464,--  
LW3405,GM4,CL1,HP0.052527,VP0.079244  
CV,DCROVER,SV4,SC0.01601,XX1.249330e-004,XY-1.541388e-004,XZ3.833237e-005,YY5.546194e-004,YZ-  
1.708396e-004,ZZ1.601640e-004  
GS,PN2006,N 683095.867369,E 1225269.991978,EL-13.24145,--LW3405  
EP,TM13:28:22,LA41.195848014,LN-71.55470691,HT-  
113.776184,RH0.046562,RV0.068915,DH0.8345,DV1.235135,GM4,CL1  
BL,DCROVER,PN2007,DX-13708.329552,DY-5582.02172,DZ-1195.073107,--  
LW3405CHK,GM4,CL1,HP0.046562,VP0.068915  
CV,DCROVER,SV4,SC0.014192,XX1.004049e-004,XY-1.212745e-004,XZ2.639793e-005,YY4.169960e-004,YZ-  
1.274937e-004,ZZ1.252395e-004  
GS,PN2007,N 683095.785114,E 1225269.978054,EL-13.201905,--LW3405CHK  
EP,TM13:48:19,LA41.195323996,LN-71.542643693,HT-  
110.164595,RH0.029579,RV0.049323,DH0.731381,DV1.219594,GM4,CL1  
BL,DCROVER,PN2008,DX-7751.174884,DY-4008.402278,DZ-1590.937719,--  
BITLOT,GM4,CL1,HP0.029579,VP0.049323  
CV,DCROVER,SV4,SC0.009016,XX4.728888e-005,XY-5.855679e-005,XZ2.113635e-005,YY1.975642e-004,YZ-  
7.377306e-005,ZZ6.244305e-005  
GS,PN2008,N 682624.623399,E 1231426.137168,EL-9.589368,--BITLOT  
EP,TM13:57:33,LA41.21068087,LN-71.531675477,HT-  
109.532431,RH0.025622,RV0.040902,DH0.704012,DV1.12388,GM4,CL1  
BL,DCROVER,PN2009,DX-4227.155041,DY2317.781038,DZ3999.938168,--GRASS,GM4,CL1,HP0.025622,VP0.040902  
CV,DCROVER,SV4,SC0.007809,XX3.808912e-005,XY-4.103300e-005,XZ1.696645e-005,YY1.261976e-004,YZ-  
5.034461e-005,ZZ5.212640e-005  
GS,PN2009,N 690122.803668,E 1236667.63476,EL-9.085121,--GRASS  
DP,PN1  
--Activating Total Station: Topcon GTS Series [gts-603], COM1, 1200 baud, even parity  
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--Foresight Target:My Prism, HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
OC,OP2002,N 686437.513355,E 1239454.620376,EL20.078896,--FORESTCONV1  
--HR:0.0 (0.0 + 0.0 Offset)  
LS,HI0.0,HR0.0  
BK,OP2002,BP2003,BS346.300834,BC0.0000  
--Backsight HR:0.0 (0.0 + 0.0 Offset), Prism Const.:0.0mm  
--BS check 2002 - 2003:ZE90.4913,SD236.52,HD err= -0.08625, VD err= 0.033338  
--BS Circle check : angular err= 0.0000  
SS,OP2002,FP2010,AR24.3528,ZE90.2937,SD97.655,--FOREST  
--Foresight Target:My Prism, HR:1.0 (1.0 + 0.0 Offset), Prism Const.:0.0mm  
--HR:1.0 (1.0 + 0.0 Offset)  
LS,HI0.0,HR1.0  
SS,OP2002,FP2011,AR24.3527,ZE89.5412,SD97.65,--FOREST  
SP,PN2011,N 686533.338694,E 1239473.408662,EL19.243646,--FORESTCHK  
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity  
--4-24-07 MKW BC M.SUN 70\*F  
EP,TM14:36:43,LA41.203012364,LN-71.524070132,HT-  
80.487751,RH0.022463,RV0.044933,DH0.74004,DV1.480347,GM4,CL1  
BL,DCROVER,PN2012,DX-844.064896,DY820.876115,DZ1231.650568,--PT2002CHK,GM4,CL1,HP0.022463,VP0.044933  
CV,DCROVER,SV4,SC0.006847,XX2.347547e-005,XY-1.868211e-005,XZ2.102781e-005,YY8.986302e-005,YZ-  
7.954354e-005,ZZ1.211094e-004  
GS,PN2012,N 686437.572802,E 1239454.61261,EL20.014362,--PT2002CHK  
EP,TM14:38:22,LA41.203240129,LN-71.524139409,HT-  
83.837777,RH0.029378,RV0.069615,DH0.929527,DV2.202607,GM4,CL1  
BL,DCROVER,PN2013,DX-942.439435,DY951.547335,DZ1402.518699,--PT2003CHK,GM4,CL1,HP0.029378,VP0.069615  
CV,DCROVER,SV4,SC0.008955,XX8.932922e-005,XY-8.887996e-005,XZ1.144910e-004,YY1.737061e-004,YZ-  
1.859772e-004,ZZ2.673812e-004  
GS,PN2013,N 686667.555317,E 1239399.445912,EL16.660866,--PT2003CHK  
EP,TM14:43:24,LA41.201357005,LN-71.523374059,HT-  
112.700256,RH0.022242,RV0.042714,DH0.738404,DV1.418047,GM4,CL1

FEMA\_CLUSTER\_20\_ADJ

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BL,DCROVER,PN2014,DX-2.726615,DY-42.746367,DZ-47.567305,--PT2001CHK,GM4,CL1,HP0.022242,VP0.042714
CV,DCROVER,SV4,SC0.006779,XX2.495546e-005,XY-1.948045e-005,XZ2.206511e-005,YY7.881274e-005,YZ-
6.999567e-005,ZZ1.116889e-004
GS,PN2014,N 684767.583309,E 1240002.479059,EL-12.173865,--PT2001CHK
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Survey Pro Version: 4.2.1
--Data Collector Serial Number: SS35A22511
--Activating GPS Receiver: Topcon TPS HiPer [rover], COM1, 115200 baud, no parity
--Import GPS Control - create GPS control point
EE,GF14,SG424123926
EP,TM13:42:47,LA41.20141825,LN-71.523353233,HT-110.977845,RH0.0,RV0.0,GM1,CL1
SP,PN2000,N 684829.251042,E 1240021.325383,EL4.042001,--
--Solve calibration from control points.
CT,PN2000,DM4,RH0.0,RV0.0
EP,TM13:42:57,LA41.20141825,LN-71.523353233,HT-110.977845,RH0.0,RV0.0,GM1,CL2
RP,PN2000,N 684829.251042,E 1240021.325383,EL4.042001,--
--Solve calibration from control points.
HA,N 684829.728945,E 1240017.738118,TH-0.477903,TE3.587265,RT0.0000,SC1.0000000000
VA,PV3,N 684829.251042,E 1240021.325383,LZ14.494441,SO0.00000,SA0.00000,GN GEOID03 (Conus)
CS,CO3,ZGSite,ZNFEMA_CLUSTER_20,DNNAD 1983 (Conus)
-->>
-->> Begin Adjust with Projection.
GR,PN2001,N 684767.057036,E 1240006.065606,EL2.290938,--MIXEDVEG
GR,PN2002,N 686437.035452,E 1239458.20764,EL34.573337,--FORESTCONV1
GR,PN2003,N 686667.082916,E 1239402.987966,EL31.153965,--FORESTCONV2
GR,PN2004,N 689001.561074,E 1229870.258012,EL12.76375,--LW0726
GR,PN2005,N 689001.601733,E 1229870.266211,EL12.706243,--LW0726CHK
GR,PN2006,N 683095.389466,E 1225273.579242,EL1.252991,--LW3405
GR,PN2007,N 683095.307211,E 1225273.565319,EL1.292536,--LW3405CHK
GR,PN2008,N 682624.145496,E 1231429.724433,EL4.905073,--BITLOT
GR,PN2009,N 690122.325765,E 1236671.222025,EL5.40932,--GRASS
GR,PN2012,N 686437.0949,E 1239458.199875,EL34.508803,--PT2002CHK
GR,PN2013,N 686667.077414,E 1239403.033176,EL31.155307,--PT2003CHK
GR,PN2014,N 684767.105406,E 1240006.066323,EL2.320576,--PT2001CHK
-->> End Adjust with Projection.
-->>
SP,PN2010,N 68653.862089,E 1239476.996418,EL33.731595,--FOREST
SP,PN2011,N 686532.860694,E 1239476.995662,EL33.737646,--FORESTCHK
SP,PN2010,N 686532.862089,E 1239476.996418,EL33.731595,--FOREST

```

## **APPENDIX IV**

### **OPUS BASE STATION SOLUTIONS FOR CLUSTERS 1 THROUGH 20 AND COMPARISON TO PINNACLE SOFTWARE SOLUTION**

OPUS solution Cluster\_1

From: opus@ngs.noaa.gov  
 Sent: Monday, March 19, 2007 11:23 AM  
 To: Michael Wilson  
 Subject: OPUS solution : log0313a.jps 000097115

FILE: log0313a.jps 000097115

NGS OPUS SOLUTION REPORT

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USER: mwilson@rhiengineering.com  
 RINEX FILE: log0072q.07o

DATE: March 19, 2007  
 TIME: 15:22:59 UTC

SOFTWARE: page5 0612.06 master4.pl                    START: 2007/03/13 16:54:00  
 EPHEMERIS: igr14182.eph [rapid]                      STOP: 2007/03/13 19:59:00  
 NAV FILE: brdc0720.07n                                OBS USED: 7253 / 7350 : 99%  
 ANT NAME: TPSLEGANT2                                 # FIXED AMB: 43 / 43 : 100%  
 ARP HEIGHT: 2.0                                        OVERALL RMS: 0.013(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                    ITRF00 (EPOCH:2007.1966)

X:	1413052.848(m)	0.001(m)	1413052.128(m)	0.001(m)
Y:	-4577993.235(m)	0.015(m)	-4577991.797(m)	0.015(m)
Z:	4196073.749(m)	0.007(m)	4196073.669(m)	0.007(m)

LAT:	41 24 10.19998	0.004(m)	41 24 10.23204	0.004(m)
E LON:	287 9 12.50174	0.004(m)	287 9 12.49038	0.004(m)
W LON:	72 50 47.49826	0.004(m)	72 50 47.50962	0.004(m)
EL HGT:	-15.164(m)	0.015(m)	-16.407(m)	0.015(m)
ORTHO HGT:	14.431(m)	0.029(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4585714.745	215652.159
Easting (X) [meters]	680008.583	296729.032
Convergence [degrees]	1.42457861	-0.06400334
Point Scale	0.99999879	0.99998573
Combined Factor	1.00000116	0.99998811

US NATIONAL GRID DESIGNATOR: 18TXL8000985715(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH7113	CTNE PAQUETTE CORS ARP	N414024.717	W0724252.252	32019.8
DI1874	NYRH RIVERHEAD CORS ARP	N405524.088	W0724250.560	54397.3
DH5833	CTGU GILFORD CORS ARP	N411721.742	W0724004.444	19552.0

NEAREST NGS PUBLISHED CONTROL POINT

LX1630	M 51	N412413.	W0725050.	104.2
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_2

From: opus@ngs.noaa.gov  
 Sent: Thursday, April 12, 2007 4:42 PM  
 To: Michael Wilson  
 Subject: OPUS solution : log0402a.tps 000113625

FILE: log0402a.tps 000113625

NGS OPUS SOLUTION REPORT

=====

USER: mwilson@rhiengineering.com  
 RINEX FILE: log0092p.07o

DATE: April 12, 2007  
 TIME: 20:42:11 UTC

SOFTWARE: page5 0612.06 master10.pl                    START: 2007/04/02 15:10:00  
 EPHEMERIS: igr14211.eph [rapid]                        STOP: 2007/04/02 18:33:00  
 NAV FILE: brdc0920.07n                                 OBS USED: 8807 / 8892 : 99%  
 ANT NAME: TPSLEGANT2                                   # FIXED AMB: 42 / 42 : 100%  
 ARP HEIGHT: 2.0   OVERALL RMS: 0.012(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                   ITRF00 (EPOCH:2007.2512)

X:	1359018.304(m)	0.003(m)	1359017.585(m)	0.003(m)
Y:	-4624201.702(m)	0.020(m)	-4624200.263(m)	0.020(m)
Z:	4163325.458(m)	0.009(m)	4163325.373(m)	0.009(m)

LAT:	41 0 39.55844	0.006(m)	41 0 39.59004	0.006(m)
E LON:	286 22 39.60445	0.005(m)	286 22 39.59230	0.005(m)
W LON:	73 37 20.39555	0.005(m)	73 37 20.40770	0.005(m)
EL HGT:	-28.417(m)	0.020(m)	-29.667(m)	0.020(m)
ORTHO HGT:	2.187(m)	0.032(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4540890.910	172500.528
Easting (X) [meters]	615846.308	231418.428
Convergence [degrees]	0.90413121	-0.57840805
Point Scale	0.99976517	1.00002447
Combined Factor	0.99976963	1.00002893

US NATIONAL GRID DESIGNATOR: 18TXL1584640891(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DI0624	NYVH VALHALLA CORS ARP	N410456.221	W0734904.125	18243.2
DI0616	NYQN QUEENS CORS ARP	N404310.261	W0734348.267	33618.5
DH5827	CTDA DARIEN CORS ARP	N410357.069	W0733025.942	11438.3

NEAREST NGS PUBLISHED CONTROL POINT

LX1157	34 M 31	N410040.	W0733720.	16.5
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_3

From: opus@ngs.noaa.gov  
 Sent: Thursday, April 12, 2007 4:43 PM  
 To: Michael Wilson  
 Subject: OPUS solution : log0403a.jps 000113627

FILE: log0403a.jps 000113627

NGS OPUS SOLUTION REPORT

=====

USER: mwilson@rhiengineering.com  
 RINEX FILE: log00931.07o

DATE: April 12, 2007  
 TIME: 20:43:06 UTC

SOFTWARE: page5 0612.06 master22.pl                    START: 2007/04/03 11:25:00  
 EPHEMERIS: igr14212.eph [rapid]                        STOP: 2007/04/03 13:44:00  
 NAV FILE: brdc0930.07n                                 OBS USED: 3962 / 4032 : 98%  
 ANT NAME: TPSLEGANT2                                   # FIXED AMB: 31 / 31 : 100%  
 ARP HEIGHT: 2.0   OVERALL RMS: 0.013(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                   ITRF00 (EPOCH:2007.2535)

X:	1366675.401(m)	0.011(m)	1366674.682(m)	0.011(m)
Y:	-4619607.563(m)	0.020(m)	-4619606.124(m)	0.020(m)
Z:	4165900.854(m)	0.018(m)	4165900.769(m)	0.018(m)

LAT:	41 2 30.22429	0.002(m)	41 2 30.25592	0.002(m)
E LON:	286 28 49.60754	0.005(m)	286 28 49.59550	0.005(m)
W LON:	73 31 10.39246	0.005(m)	73 31 10.40450	0.005(m)
EL HGT:	-28.481(m)	0.028(m)	-29.731(m)	0.028(m)
ORTHO HGT:	1.898(m)	0.038(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4544445.059	175832.198
Easting (X) [meters]	624431.198	240094.515
Convergence [degrees]	0.97219830	-0.51025970
Point Scale	0.99979056	1.00001976
Combined Factor	0.99979503	1.00002423

US NATIONAL GRID DESIGNATOR: 18TXL2443144445(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DI0624	NYVH VALHALLA CORS ARP	N410456.221	W0734904.125	25472.1
DI0616	NYQN QUEENS CORS ARP	N404310.261	W0734348.267	39940.0
DH5827	CTDA DARIEN CORS ARP	N410357.069	W0733025.942	2873.1

NEAREST NGS PUBLISHED CONTROL POINT

LX3907	ELM	N410259.086	W0733128.484	987.2
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.



OPUS solution Cluster\_4

From: opus@ngs.noaa.gov  
 Sent: Thursday, April 12, 2007 4:44 PM  
 To: Michael Wilson  
 Subject: OPUS solution : log0403b.jps 000113629

FILE: log0403b.jps 000113629

NGS OPUS SOLUTION REPORT

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USER: mwilson@rhiengineering.com  
 RINEX FILE: log0093r.07o

DATE: April 12, 2007  
 TIME: 20:43:45 UTC

SOFTWARE: page5 0612.06 master10.pl                    START: 2007/04/03 17:45:00  
 EPHEMERIS: igr14212.eph [rapid]                        STOP: 2007/04/03 20:38:00  
 NAV FILE: brdc0930.07n                                 OBS USED: 7027 / 7125 : 99%  
 ANT NAME: TPSLEGANT2                                   # FIXED AMB: 33 / 33 : 100%  
 ARP HEIGHT: 2.0   OVERALL RMS: 0.011(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                   ITRF00 (EPOCH:2007.2542)

X:	1374522.061(m)	0.005(m)	1374521.341(m)	0.005(m)
Y:	-4613081.231(m)	0.004(m)	-4613079.792(m)	0.004(m)
Z:	4170517.995(m)	0.003(m)	4170517.911(m)	0.003(m)

LAT:	41 5 48.74188	0.002(m)	41 5 48.77359	0.002(m)
E LON:	286 35 31.36998	0.004(m)	286 35 31.35802	0.004(m)
W LON:	73 24 28.63002	0.004(m)	73 24 28.64198	0.004(m)
EL HGT:	-28.208(m)	0.006(m)	-29.458(m)	0.006(m)
ORTHO HGT:	1.880(m)	0.026(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4550732.127	181878.614
Easting (X) [meters]	633699.752	249524.629
Convergence [degrees]	1.04666168	-0.43626182
Point Scale	0.99982001	1.00001202
Combined Factor	0.99982443	1.00001644

US NATIONAL GRID DESIGNATOR: 18TXL3370050732(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DI0624	NYVH VALHALLA CORS ARP	N410456.221	W0734904.125	34475.2
DH5827	CTDA DARIEN CORS ARP	N410357.069	W0733025.942	9023.9
DI0446	NYCI CENTRAL ISLIP CORS ARP	N404538.237	W0731151.787	41326.9

NEAREST NGS PUBLISHED CONTROL POINT

LX0792	W 32	N410603.	W0732431.	444.3
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_5

From: opus@ngs.noaa.gov  
 Sent: Thursday, April 12, 2007 4:45 PM  
 To: Michael Wilson  
 Subject: OPUS solution : log0405a.tps 000113632

FILE: log0405a.tps 000113632

NGS OPUS SOLUTION REPORT

=====

USER: mwilson@rhiengineering.com  
 RINEX FILE: log0095n.07o

DATE: April 12, 2007  
 TIME: 20:44:49 UTC

SOFTWARE: page5 0612.06 master30.pl                    START: 2007/04/05 13:06:00  
 EPHEMERIS: igr14214.eph [rapid]                        STOP: 2007/04/05 15:39:00  
 NAV FILE: brdc0950.07n                                 OBS USED: 6384 / 6591 : 97%  
 ANT NAME: TPSLEGANT2                                 # FIXED AMB: 33 / 33 : 100%  
 ARP HEIGHT: 2.0                                        OVERALL RMS: 0.015(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                    ITRF00 (EPOCH:2007.2592)

X:	1380609.407(m)	0.002(m)	1380608.687(m)	0.002(m)
Y:	-4609918.909(m)	0.011(m)	-4609917.470(m)	0.011(m)
Z:	4171995.775(m)	0.014(m)	4171995.691(m)	0.014(m)

LAT:	41 6 52.28018	0.010(m)	41 6 52.31191	0.010(m)
E LON:	286 40 20.13207	0.003(m)	286 40 20.12020	0.003(m)
W LON:	73 19 39.86793	0.003(m)	73 19 39.87980	0.003(m)
EL HGT:	-26.891(m)	0.017(m)	-28.140(m)	0.017(m)
ORTHO HGT:	3.106(m)	0.030(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4552817.718	183790.494
Easting (X) [meters]	640398.559	256276.378
Convergence [degrees]	1.09980026	-0.38307670
Point Scale	0.99984260	1.00000973
Combined Factor	0.99984682	1.00001395

US NATIONAL GRID DESIGNATOR: 18TXL4039952818(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DI0624	NYVH VALHALLA CORS ARP	N410456.221	W0734904.125	41326.4
DH5827	CTDA DARIEN CORS ARP	N410357.069	W0733025.942	16018.1
DI0446	NYCI CENTRAL ISLIP CORS ARP	N404538.237	W0731151.787	40798.3

NEAREST NGS PUBLISHED CONTROL POINT

LX7473	SHERWOOD 2 AZ MK	N410647.449	W0731937.377	160.2
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_6

From: opus@ngs.noaa.gov  
 Sent: Thursday, April 12, 2007 4:45 PM  
 To: Michael Wilson  
 Subject: OPUS solution : log0406b.tps 000113634

FILE: log0406b.tps 000113634

NGS OPUS SOLUTION REPORT

=====

USER: mwilson@rhiengineering.com  
 RINEX FILE: log0096m.07o

DATE: April 12, 2007  
 TIME: 20:44:58 UTC

SOFTWARE: page5 0612.06 master10.pl                    START: 2007/04/06 12:43:00  
 EPHEMERIS: igr14215.eph [rapid]                        STOP: 2007/04/06 15:11:00  
 NAV FILE: brdc0960.07n                                 OBS USED: 5663 / 5785 : 98%  
 ANT NAME: TPSLEGANT2                                   # FIXED AMB: 29 / 29 : 100%  
 ARP HEIGHT: 2.0   OVERALL RMS: 0.012(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                   ITRF00 (EPOCH:2007.2619)

X:	1385641.317(m)	0.009(m)	1385640.597(m)	0.009(m)
Y:	-4607668.260(m)	0.011(m)	-4607666.821(m)	0.011(m)
Z:	4172807.289(m)	0.006(m)	4172807.206(m)	0.006(m)

LAT:	41 7 27.21826	0.013(m)	41 7 27.25003	0.013(m)
E LON:	286 44 14.45781	0.006(m)	286 44 14.44602	0.006(m)
W LON:	73 15 45.54219	0.006(m)	73 15 45.55398	0.006(m)
EL HGT:	-27.553(m)	0.006(m)	-28.802(m)	0.006(m)
ORTHO HGT:	2.418(m)	0.026(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4554002.116	184833.795
Easting (X) [meters]	645842.122	261749.626
Convergence [degrees]	1.14284500	-0.33991783
Point Scale	0.99986178	1.00000852
Combined Factor	0.99986610	1.00001284

US NATIONAL GRID DESIGNATOR: 18TXL4584254002(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH5827	CTDA DARIEN CORS ARP	N410357.069	W0733025.942	21544.5
DH5825	CTBR BROOKFIELD CORS ARP	N412949.864	W0732505.674	43421.5
DI0446	NYCI CENTRAL ISLIP CORS ARP	N404538.237	W0731151.787	40747.8

NEAREST NGS PUBLISHED CONTROL POINT

LX7466	SASCO	N410736.573	W0731626.960	1007.2
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_7

From: opus@ngs.noaa.gov  
 Sent: Thursday, April 12, 2007 4:46 PM  
 To: Michael Wilson  
 Subject: OPUS solution : log0406c.tps 000113636

FILE: log0406c.tps 000113636

NGS OPUS SOLUTION REPORT

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USER: mwilson@rhiengineering.com  
 RINEX FILE: log0096r.07o

DATE: April 12, 2007  
 TIME: 20:45:40 UTC

SOFTWARE: page5 0612.06 master12.pl                    START: 2007/04/06 17:46:00  
 EPHEMERIS: igr14215.eph [rapid]                        STOP: 2007/04/06 20:22:00  
 NAV FILE: brdc0960.07n                                 OBS USED: 6266 / 6372 : 98%  
 ANT NAME: TPSLEGANT2                                 # FIXED AMB: 30 / 32 : 94%  
 ARP HEIGHT: 2.0                                        OVERALL RMS: 0.010(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)            ITRF00 (EPOCH:2007.2624)

X:	1396748.513(m)	0.006(m)	1396747.793(m)	0.006(m)
Y:	-4601425.042(m)	0.007(m)	-4601423.603(m)	0.007(m)
Z:	4175972.524(m)	0.006(m)	4175972.441(m)	0.006(m)

LAT:	41 9 43.43534	0.001(m)	41 9 43.46715	0.001(m)
E LON:	286 53 7.82399	0.004(m)	286 53 7.81237	0.004(m)
W LON:	73 6 52.17601	0.004(m)	73 6 52.18763	0.004(m)
EL HGT:	-26.448(m)	0.010(m)	-27.697(m)	0.010(m)
ORTHO HGT:	3.496(m)	0.027(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4558461.622	188972.808
Easting (X) [meters]	658188.814	274209.102
Convergence [degrees]	1.24128068	-0.24168075
Point Scale	0.99990798	1.00000405
Combined Factor	0.99991213	1.00000820

US NATIONAL GRID DESIGNATOR: 18TXL5818958462(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH5827	CTDA DARIEN CORS ARP	N410357.069	W0733025.942	34671.3
DI1874	NYRH RIVERHEAD CORS ARP	N405524.088	W0724250.560	42853.3
DH5833	CTGU GILFORD CORS ARP	N411721.742	W0724004.444	40025.7

NEAREST NGS PUBLISHED CONTROL POINT

AC7677	BDR AP STA A	N410954.578	W0730714.056	615.0
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_8

From: opus@ngs.noaa.gov  
 Sent: Thursday, April 12, 2007 4:47 PM  
 To: Michael Wilson  
 Subject: OPUS solution : log0409a.jps 000113637

FILE: log0409a.jps 000113637

NGS OPUS SOLUTION REPORT

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USER: mwilson@rhiengineering.com  
 RINEX FILE: log0099n.07o

DATE: April 12, 2007  
 TIME: 20:46:30 UTC

SOFTWARE: page5 0612.06 master28.pl                    START: 2007/04/09 13:25:00  
 EPHEMERIS: igr14221.eph [rapid]                        STOP: 2007/04/09 16:21:00  
 NAV FILE: brdc0990.07n                                 OBS USED: 7776 / 7792 : 100%  
 ANT NAME: TPSLEGANT2                                 # FIXED AMB: 39 / 40 : 98%  
 ARP HEIGHT: 2.0                                        OVERALL RMS: 0.015(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                    ITRF00 (EPOCH:2007.2702)

X:	1401191.527(m)	0.002(m)	1401190.806(m)	0.002(m)
Y:	-4596371.814(m)	0.007(m)	-4596370.375(m)	0.007(m)
Z:	4180019.438(m)	0.012(m)	4180019.356(m)	0.012(m)

LAT:	41 12 37.75674	0.004(m)	41 12 37.78862	0.004(m)
E LON:	286 57 13.32352	0.002(m)	286 57 13.31192	0.002(m)
W LON:	73 2 46.67648	0.002(m)	73 2 46.68808	0.002(m)
EL HGT:	-26.714(m)	0.013(m)	-27.961(m)	0.013(m)
ORTHO HGT:	3.147(m)	0.028(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4563963.805	194328.595
Easting (X) [meters]	663789.664	279950.987
Convergence [degrees]	1.28743692	-0.19646387
Point Scale	0.99993017	0.99999896
Combined Factor	0.99993436	1.00000315

US NATIONAL GRID DESIGNATOR: 18TXL6379063964(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH5827	CTDA DARIEN CORS ARP	N410357.069	W0733025.942	41898.4
DI1874	NYRH RIVERHEAD CORS ARP	N405524.088	W0724250.560	42386.8
DH5833	CTGU GILFORD CORS ARP	N411721.742	W0724004.444	32903.6

NEAREST NGS PUBLISHED CONTROL POINT

LX0901	13 RM 1	N411237.	W0730247.	24.6
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_9

From: opus@ngs.noaa.gov  
 Sent: Thursday, April 12, 2007 4:47 PM  
 To: Michael Wilson  
 Subject: OPUS solution : log0410a.jps 000113638

FILE: log0410a.jps 000113638

NGS OPUS SOLUTION REPORT

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USER: mwilson@rhiengineering.com  
 RINEX FILE: log0100o.07o

DATE: April 12, 2007  
 TIME: 20:46:47 UTC

SOFTWARE: page5 0612.06 master13.pl                    START: 2007/04/10 14:21:00  
 EPHEMERIS: igr14222.eph [rapid]                        STOP: 2007/04/10 17:12:00  
 NAV FILE: brdc1000.07n                                 OBS USED: 7234 / 7304 : 99%  
 ANT NAME: TPSLEGANT2                                 # FIXED AMB: 38 / 39 : 97%  
 ARP HEIGHT: 2.0                                        OVERALL RMS: 0.012(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)            ITRF00 (EPOCH:2007.2730)

X:	1408977.667(m)	0.004(m)	1408976.946(m)	0.004(m)
Y:	-4590173.552(m)	0.005(m)	-4590172.113(m)	0.005(m)
Z:	4184182.511(m)	0.009(m)	4184182.430(m)	0.009(m)

LAT:	41 15 37.21780	0.004(m)	41 15 37.24975	0.004(m)
E LON:	287 3 50.90658	0.005(m)	287 3 50.89511	0.005(m)
W LON:	72 56 9.09342	0.005(m)	72 56 9.10489	0.005(m)
EL HGT:	-27.088(m)	0.009(m)	-28.335(m)	0.009(m)
ORTHO HGT:	2.770(m)	0.027(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4569712.343	199839.020
Easting (X) [meters]	672917.481	289225.093
Convergence [degrees]	1.36159920	-0.12323575
Point Scale	0.99996800	0.99999446
Combined Factor	0.99997225	0.99999871

US NATIONAL GRID DESIGNATOR: 18TXL7291769712(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH5825	CTBR BROOKFIELD CORS ARP	N412949.864	W0732505.674	48168.6
DI1874	NYRH RIVERHEAD CORS ARP	N405524.088	W0724250.560	41807.0
DH5833	CTGU GILFORD CORS ARP	N411721.742	W0724004.444	22681.1

NEAREST NGS PUBLISHED CONTROL POINT

LX6514	BEACH	N411537.017	W0725607.718	32.6
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_10

From: opus@ngs.noaa.gov  
 Sent: Thursday, April 12, 2007 4:48 PM  
 To: Michael Wilson  
 Subject: OPUS solution : log0411a.jps 000113641

FILE: log0411a.jps 000113641

NGS OPUS SOLUTION REPORT

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USER: mwilson@rhiengineering.com  
 RINEX FILE: log01011.07o

DATE: April 12, 2007  
 TIME: 20:47:41 UTC

SOFTWARE: page5 0612.06 master31.pl                    START: 2007/04/11 11:47:00  
 EPHEMERIS: igr14223.eph [rapid]                        STOP: 2007/04/11 14:28:00  
 NAV FILE: brdc1010.07n                                 OBS USED: 5790 / 5798 : 100%  
 ANT NAME: TPSLEGANT2                                 # FIXED AMB: 31 / 31 : 100%  
 ARP HEIGHT: 2.0                                        OVERALL RMS: 0.011(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                    ITRF00 (EPOCH:2007.2755)

X:	1410681.390(m)	0.005(m)	1410680.669(m)	0.005(m)
Y:	-4586491.079(m)	0.004(m)	-4586489.641(m)	0.004(m)
Z:	4187620.217(m)	0.008(m)	4187620.136(m)	0.008(m)

LAT:	41 18 5.53696	0.003(m)	41 18 5.56893	0.003(m)
E LON:	287 5 47.36629	0.004(m)	287 5 47.35484	0.004(m)
W LON:	72 54 12.63371	0.004(m)	72 54 12.64516	0.004(m)
EL HGT:	-28.274(m)	0.009(m)	-29.519(m)	0.009(m)
ORTHO HGT:	1.510(m)	0.027(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4574351.457	204409.275
Easting (X) [meters]	675517.187	291944.230
Convergence [degrees]	1.38408217	-0.10178583
Point Scale	0.99997914	0.99999130
Combined Factor	0.99998358	0.99999574

US NATIONAL GRID DESIGNATOR: 18TXL7551774351(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH7113	CTNE PAQUETTE CORS ARP	N414024.717	W0724252.252	44227.1
DI1874	NYRH RIVERHEAD CORS ARP	N405524.088	W0724250.560	44912.7
DH5833	CTGU GILFORD CORS ARP	N411721.742	W0724004.444	19780.3

NEAREST NGS PUBLISHED CONTROL POINT

LX0392	152 T OF NH	N411756.	W0725422.	366.5
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_11

From: opus@ngs.noaa.gov  
 Sent: Saturday, April 21, 2007 10:42 AM  
 To: Michael Wilson  
 Subject: OPUS solution : log0413a.jps 000119843

FILE: log0413a.jps 000119843

NGS OPUS SOLUTION REPORT

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USER: mwilson@rhiengineering.com  
 RINEX FILE: log01031.07o

DATE: April 21, 2007  
 TIME: 14:41:39 UTC

SOFTWARE: page5 0612.06 master28.pl                    START: 2007/04/13 11:41:00  
 EPHEMERIS: igr14225.eph [rapid]                        STOP: 2007/04/13 14:24:00  
 NAV FILE: brdc1030.07n                                 OBS USED: 5892 / 5949 : 99%  
 ANT NAME: TPSLEGANT2                                 # FIXED AMB: 33 / 33 : 100%  
 ARP HEIGHT: 2.0   OVERALL RMS: 0.014(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                   ITRF00 (EPOCH:2007.2810)

X:	1418963.511(m)	0.005(m)	1418962.790(m)	0.005(m)
Y:	-4586610.111(m)	0.007(m)	-4586608.672(m)	0.007(m)
Z:	4184714.440(m)	0.007(m)	4184714.359(m)	0.007(m)

LAT:	41 16 0.11172	0.005(m)	41 16 0.14369	0.005(m)
E LON:	287 11 25.95712	0.004(m)	287 11 25.94579	0.004(m)
W LON:	72 48 34.04288	0.004(m)	72 48 34.05421	0.004(m)
EL HGT:	-25.514(m)	0.008(m)	-26.761(m)	0.008(m)
ORTHO HGT:	4.479(m)	0.026(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4570677.819	200530.250
Easting (X) [meters]	683489.373	299818.487
Convergence [degrees]	1.44520804	-0.03942310
Point Scale	1.00001437	0.99999394
Combined Factor	1.00001837	0.99999794

US NATIONAL GRID DESIGNATOR: 18TXL8348970678(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH7113	CTNE PAQUETTE CORS ARP	N414024.717	W0724252.252	45875.1
DI1874	NYRH RIVERHEAD CORS ARP	N405524.088	W0724250.560	38963.2
DH5833	CTGU GILFORD CORS ARP	N411721.742	W0724004.444	12124.0

NEAREST NGS PUBLISHED CONTROL POINT

LX6436	MALLEABLE IRON CO ELEVATED TK	N411620.147	W0724903.496	923.3
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.



OPUS solution Cluster\_12

From: opus@ngs.noaa.gov  
 Sent: Saturday, April 21, 2007 10:41 AM  
 To: Michael Wilson  
 Subject: OPUS solution : log0413b.jps 000119842

FILE: log0413b.jps 000119842

NGS OPUS SOLUTION REPORT

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USER: mwilson@rhiengineering.com  
 RINEX FILE: log0103r.07o

DATE: April 21, 2007  
 TIME: 14:40:48 UTC

SOFTWARE: page5 0612.06 master10.pl                    START: 2007/04/13 17:33:00  
 EPHEMERIS: igr14225.eph [rapid]                        STOP: 2007/04/13 20:15:00  
 NAV FILE: brdc1030.07n                                 OBS USED: 6234 / 6355 : 98%  
 ANT NAME: TPSLEGANT2                                   # FIXED AMB: 32 / 32 : 100%  
 ARP HEIGHT: 2.0   OVERALL RMS: 0.010(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                   ITRF00 (EPOCH:2007.2816)

X:	1430511.398(m)	0.008(m)	1430510.676(m)	0.008(m)
Y:	-4582630.124(m)	0.020(m)	-4582628.684(m)	0.020(m)
Z:	4185135.390(m)	0.014(m)	4185135.310(m)	0.014(m)
LAT:	41 16 18.35749	0.007(m)	41 16 18.38953	0.007(m)
E LON:	287 20 10.49249	0.002(m)	287 20 10.48131	0.002(m)
W LON:	72 39 49.50751	0.002(m)	72 39 49.51869	0.002(m)
EL HGT:	-28.724(m)	0.025(m)	-29.972(m)	0.025(m)
ORTHO HGT:	1.429(m)	0.035(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4571558.722	201095.017
Easting (X) [meters]	695679.911	312027.158
Convergence [degrees]	1.54155053	0.05718749
Point Scale	1.00007126	0.99999353
Combined Factor	1.00007577	0.99999804

US NATIONAL GRID DESIGNATOR: 18TXL9568071559(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH7113	CTNE PAQUETTE CORS ARP	N414024.717	W0724252.252	44822.5
DI1874	NYRH RIVERHEAD CORS ARP	N405524.088	W0724250.560	38922.6
DH5833	CTGU GILFORD CORS ARP	N411721.742	W0724004.444	1986.1

NEAREST NGS PUBLISHED CONTROL POINT

LX6266	GUILFORD HARBOR GABLE E SIDE	N411606.459	W0723942.259	404.7
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_13

From: opus@ngs.noaa.gov  
 Sent: Saturday, April 21, 2007 10:40 AM  
 To: Michael Wilson  
 Subject: OPUS solution : log0418a.tps 000119841

FILE: log0418a.tps 000119841

NGS OPUS SOLUTION REPORT

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USER: mwilson@rhiengineering.com  
 RINEX FILE: log0108n.07o

DATE: April 21, 2007  
 TIME: 14:40:26 UTC

SOFTWARE: page5 0612.06 master30.pl                    START: 2007/04/18 13:10:00  
 EPHEMERIS: igr14233.eph [rapid]                        STOP: 2007/04/18 16:31:00  
 NAV FILE: brdc1080.07n                                 OBS USED: 8550 / 8622 : 99%  
 ANT NAME: TPSLEGANT2                                 # FIXED AMB: 45 / 45 : 100%  
 ARP HEIGHT: 2.0                                        OVERALL RMS: 0.011(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                    ITRF00 (EPOCH:2007.2948)

X:	1440377.361(m)	0.006(m)	1440376.639(m)	0.006(m)
Y:	-4581070.427(m)	0.006(m)	-4581068.986(m)	0.006(m)
Z:	4183472.586(m)	0.004(m)	4183472.506(m)	0.004(m)

LAT:	41 15 6.60348	0.002(m)	41 15 6.63554	0.002(m)
E LON:	287 27 14.97096	0.006(m)	287 27 14.95994	0.006(m)
W LON:	72 32 45.02904	0.006(m)	72 32 45.04006	0.006(m)
EL HGT:	-26.975(m)	0.008(m)	-28.224(m)	0.008(m)
ORTHO HGT:	3.379(m)	0.026(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4569618.264	198898.046
Easting (X) [meters]	705619.224	321911.887
Convergence [degrees]	1.61876419	0.13536929
Point Scale	1.00012036	0.99999517
Combined Factor	1.00012459	0.99999940

US NATIONAL GRID DESIGNATOR: 18TYL0561969618(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DI1874	NYRH RIVERHEAD CORS ARP	N405524.088	W0724250.560	39121.0
DH5833	CTGU GILFORD CORS ARP	N411721.742	W0724004.444	11044.4
DH5831	CTGR GROTON CORS ARP	N412007.035	W0720258.969	42576.8

NEAREST NGS PUBLISHED CONTROL POINT

LX6194	MEIGS POINT CHIMNEY	N411507.419	W0723246.776	47.8
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_14

From: opus@ngs.noaa.gov  
 Sent: Thursday, May 03, 2007 2:01 PM  
 To: Michael Wilson  
 Subject: OPUS solution : log0418b.tps 000128155

FILE: log0418b.tps 000128155

NGS OPUS SOLUTION REPORT

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USER: mwilson@rhiengineering.com                   DATE: May 03, 2007  
 RINEX FILE: log0108s.07o                            TIME: 18:00:56 UTC

SOFTWARE: page5 0612.06 master13.pl                START: 2007/04/18 18:13:00  
 EPHEMERIS: igs14233.eph [precise]                 STOP: 2007/04/18 20:53:00  
 NAV FILE: brdc1080.07n                            OBS USED: 5288 / 5391 : 98%  
 ANT NAME: TPSLEGANT2                              # FIXED AMB: 29 / 29 : 100%  
 ARP HEIGHT: 2.0                                    OVERALL RMS: 0.010(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                ITRF00 (EPOCH:2007.2954)

X:	1446544.627(m)	0.005(m)	1446543.905(m)	0.005(m)
Y:	-4577406.690(m)	0.006(m)	-4577405.249(m)	0.006(m)
Z:	4185340.064(m)	0.008(m)	4185339.984(m)	0.008(m)
LAT:	41 16 27.17075	0.003(m)	41 16 27.20284	0.003(m)
E LON:	287 32 14.97634	0.006(m)	287 32 14.96542	0.006(m)
W LON:	72 27 45.02366	0.006(m)	72 27 45.03458	0.006(m)
EL HGT:	-28.222(m)	0.008(m)	-29.471(m)	0.008(m)
ORTHO HGT:	2.166(m)	0.026(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4572303.757	201403.366
Easting (X) [meters]	712529.317	328888.192
Convergence [degrees]	1.67451719	0.19062524
Point Scale	1.00015592	0.99999334
Combined Factor	1.00016035	0.99999776

US NATIONAL GRID DESIGNATOR: 18TYL1252972304(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH7113	CTNE PAQUETTE CORS ARP	N414024.717	W0724252.252	49091.6
DI1874	NYRH RIVERHEAD CORS ARP	N405524.088	W0724250.560	44325.6
DH5833	CTGU GILFORD CORS ARP	N411721.742	W0724004.444	17289.2

NEAREST NGS PUBLISHED CONTROL POINT

LX5869	SEAVIEW HOTEL	N411632.763	W0722740.818	198.6
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_15

From: opus@ngs.noaa.gov  
 Sent: Saturday, April 21, 2007 10:39 AM  
 To: Michael Wilson  
 Subject: OPUS solution : log0419a.tps 000119839

FILE: log0419a.tps 000119839

NGS OPUS SOLUTION REPORT  
 =====

USER: mwilson@rhiengineering.com  
 RINEX FILE: log0109n.07o

DATE: April 21, 2007  
 TIME: 14:39:04 UTC

SOFTWARE: page5 0612.06 master22.pl                    START: 2007/04/19 13:18:00  
 EPHEMERIS: igr14234.eph [rapid]                        STOP: 2007/04/19 15:53:30  
 NAV FILE: brdc1090.07n                                 OBS USED: 6583 / 6644 : 99%  
 ANT NAME: TPSLEGANT2                                 # FIXED AMB: 37 / 37 : 100%  
 ARP HEIGHT: 2.0                                        OVERALL RMS: 0.012(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)            ITRF00 (EPOCH:2007.2976)

X:	1463655.344(m)	0.007(m)	1463654.621(m)	0.007(m)
Y:	-4569867.375(m)	0.006(m)	-4569865.934(m)	0.006(m)
Z:	4187614.086(m)	0.007(m)	4187614.007(m)	0.007(m)

LAT:	41 18 5.27087	0.005(m)	41 18 5.30303	0.005(m)
E LON:	287 45 33.94897	0.008(m)	287 45 33.93826	0.008(m)
W LON:	72 14 26.05103	0.008(m)	72 14 26.06174	0.008(m)
EL HGT:	-28.219(m)	0.007(m)	-29.468(m)	0.007(m)
ORTHO HGT:	2.343(m)	0.026(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4575896.652	204515.410
Easting (X) [meters]	731023.358	347465.119
Convergence [degrees]	1.82208562	0.33778256
Point Scale	1.00025689	0.99999131
Combined Factor	1.00026132	0.99999574

US NATIONAL GRID DESIGNATOR: 18TYL3102375897(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH7113	CTNE PAQUETTE CORS ARP	N414024.717	W0724252.252	57220.3
DH5835	CTMA MANSFIELD CORS ARP	N414352.917	W0721238.877	47811.2
DH5831	CTGR GROTON CORS ARP	N412007.035	W0720258.969	16415.7

NEAREST NGS PUBLISHED CONTROL POINT

LX5422	PULZE CHIMNEY	N411759.047	W0721400.321	627.9
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_16

From: opus@ngs.noaa.gov  
 Sent: Friday, April 27, 2007 10:25 AM  
 To: Michael Wilson  
 Subject: OPUS solution : log0420a.jps 000123470

FILE: log0420a.jps 000123470

NGS OPUS SOLUTION REPORT

=====

USER: mwilson@rhiengineering.com  
 RINEX FILE: log0110m.07o

DATE: April 27, 2007  
 TIME: 14:24:48 UTC

SOFTWARE: page5 0612.06 master4.pl                    START: 2007/04/20 12:30:00  
 EPHEMERIS: igr14235.eph [rapid]                        STOP: 2007/04/20 14:39:30  
 NAV FILE: brdc1100.07n                                 OBS USED: 5767 / 5827 : 99%  
 ANT NAME: TPSLEGANT2                                   # FIXED AMB: 33 / 33 : 100%  
 ARP HEIGHT: 2.0                                        OVERALL RMS: 0.012(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                    ITRF00 (EPOCH:2007.3002)

X:	1473578.870(m)	0.004(m)	1473578.147(m)	0.004(m)
Y:	-4566523.626(m)	0.004(m)	-4566522.184(m)	0.004(m)
Z:	4187791.515(m)	0.005(m)	4187791.436(m)	0.005(m)

LAT:	41 18 12.71726	0.005(m)	41 18 12.74945	0.005(m)
E LON:	287 53 4.03836	0.005(m)	287 53 4.02782	0.005(m)
W LON:	72 6 55.96164	0.005(m)	72 6 55.97218	0.005(m)
EL HGT:	-20.863(m)	0.002(m)	-22.113(m)	0.002(m)
ORTHO HGT:	9.797(m)	0.025(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4576466.897	204814.426
Easting (X) [meters]	741484.101	357934.024
Convergence [degrees]	1.90479717	0.42068145
Point Scale	1.00031773	0.99999116
Combined Factor	1.00032101	0.99999444

US NATIONAL GRID DESIGNATOR: 18TYL4148476467(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH7113	CTNE PAQUETTE CORS ARP	N414024.717	W0724252.252	64735.3
DH5835	CTMA MANSFIELD CORS ARP	N414352.917	W0721238.877	48177.6
DH5831	CTGR GROTON CORS ARP	N412007.035	W0720258.969	6543.6

NEAREST NGS PUBLISHED CONTROL POINT

LX5250	HARKNESS WINDMILL	N411810.581	W0720645.553	250.6
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_17

From: opus@ngs.noaa.gov  
 Sent: Friday, April 27, 2007 10:25 AM  
 To: Michael Wilson  
 Subject: OPUS solution : log0420b.jps 000123473

FILE: log0420b.jps 000123473

NGS OPUS SOLUTION REPORT

=====

USER: mwilson@rhiengineering.com  
 RINEX FILE: log0110q.07o

DATE: April 27, 2007  
 TIME: 14:25:19 UTC

SOFTWARE: page5 0612.06 master12.pl                    START: 2007/04/20 16:28:00  
 EPHEMERIS: igr14235.eph [rapid]                        STOP: 2007/04/20 18:29:00  
 NAV FILE: brdc1100.07n                                 OBS USED: 5344 / 5374 : 99%  
 ANT NAME: TPSLEGANT2                                   # FIXED AMB: 31 / 31 : 100%  
 ARP HEIGHT: 2.0   OVERALL RMS: 0.015(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                   ITRF00 (EPOCH:2007.3006)

X:	1475345.159(m)	0.005(m)	1475344.436(m)	0.005(m)
Y:	-4562037.476(m)	0.006(m)	-4562036.035(m)	0.006(m)
Z:	4192073.695(m)	0.005(m)	4192073.617(m)	0.005(m)

LAT:	41 21 16.70984	0.002(m)	41 21 16.74207	0.002(m)
E LON:	287 55 15.61941	0.004(m)	287 55 15.60889	0.004(m)
W LON:	72 4 44.38059	0.004(m)	72 4 44.39111	0.004(m)
EL HGT:	9.078(m)	0.008(m)	7.830(m)	0.008(m)
ORTHO HGT:	39.650(m)	0.026(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4582244.188	210513.502
Easting (X) [meters]	744353.179	360950.849
Convergence [degrees]	1.93091356	0.44491647
Point Scale	1.00033488	0.99998800
Combined Factor	1.00033346	0.99998657

US NATIONAL GRID DESIGNATOR: 18TYL4435382244(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH5833	CTGU GILFORD CORS ARP	N411721.742	W0724004.444	49835.6
DH5835	CTMA MANSFIELD CORS ARP	N414352.917	W0721238.877	43262.1
DH5831	CTGR GROTON CORS ARP	N412007.035	W0720258.969	3259.9

NEAREST NGS PUBLISHED CONTROL POINT

LX5217	GROTON MONUMENT	N412117.860	W0720445.884	49.8
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_18

From: opus@ngs.noaa.gov  
 Sent: Friday, April 27, 2007 10:26 AM  
 To: Michael Wilson  
 Subject: OPUS solution : log0423a.tps 000123474

FILE: log0423a.tps 000123474

NGS OPUS SOLUTION REPORT

=====

USER: mwilson@rhiengineering.com                   DATE: April 27, 2007  
 RINEX FILE: log0113m.07o                            TIME: 14:26:00 UTC

SOFTWARE: page5 0612.06 master.pl                    START: 2007/04/23 12:54:00  
 EPHEMERIS: igr14241.eph [rapid]                    STOP: 2007/04/23 16:10:00  
 NAV FILE: brdc1130.07n                            OBS USED: 7913 / 8263 : 96%  
 ANT NAME: TPSLEGANT2                                # FIXED AMB: 55 / 56 : 98%  
 ARP HEIGHT: 2.0                                    OVERALL RMS: 0.015(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                    ITRF00 (EPOCH:2007.3085)

X:	1471425.121(m)	0.001(m)	1471424.397(m)	0.001(m)
Y:	-4550421.866(m)	0.010(m)	-4550420.427(m)	0.010(m)
Z:	4205913.996(m)	0.014(m)	4205913.920(m)	0.014(m)

LAT:	41 31 15.99488	0.005(m)	41 31 16.02724	0.005(m)
E LON:	287 55 8.90591	0.004(m)	287 55 8.89529	0.004(m)
W LON:	72 4 51.09409	0.004(m)	72 4 51.10471	0.004(m)
EL HGT:	-20.997(m)	0.017(m)	-22.240(m)	0.017(m)
ORTHO HGT:	9.310(m)	0.030(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (0600 CT )
Northing (Y) [meters]	4600722.886	228999.798
Easting (X) [meters]	743573.371	360651.635
Convergence [degrees]	1.93603600	0.44367996
Point Scale	1.00033017	0.99998316
Combined Factor	1.00033346	0.99998646

US NATIONAL GRID DESIGNATOR: 18TYM4357300723(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH5835	CTMA MANSFIELD CORS ARP	N414352.917	W0721238.877	25740.9
DH5831	CTGR GROTON CORS ARP	N412007.035	W0720258.969	20801.3
DH5837	CTPU PUTNAM CORS ARP	N415358.888	W0715320.889	44974.0

NEAREST NGS PUBLISHED CONTROL POINT

LX3397	M 97	N413115.	W0720450.	39.9
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

OPUS solution Cluster\_19

From: opus@ngs.noaa.gov  
 Sent: Friday, April 27, 2007 10:27 AM  
 To: Michael Wilson  
 Subject: OPUS solution : log0424a.tps 000123476

FILE: log0424a.tps 000123476

NGS OPUS SOLUTION REPORT

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USER: mwilson@rhiengineering.com  
 RINEX FILE: log01141.07o

DATE: April 27, 2007  
 TIME: 14:26:36 UTC

SOFTWARE: page5 0612.06 master22.pl                    START: 2007/04/24 11:55:00  
 EPHEMERIS: igr14242.eph [rapid]                        STOP: 2007/04/24 14:35:00  
 NAV FILE: brdc1140.07n                                 OBS USED: 7006 / 7073 : 99%  
 ANT NAME: TPSLEGANT2                                   # FIXED AMB: 37 / 37 : 100%  
 ARP HEIGHT: 2.0   OVERALL RMS: 0.015(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)            ITRF00 (EPOCH:2007.3111)

X:	1484574.175(m)	0.003(m)	1484573.452(m)	0.003(m)
Y:	-4558292.649(m)	0.018(m)	-4558291.207(m)	0.018(m)
Z:	4192848.529(m)	0.013(m)	4192848.451(m)	0.013(m)

LAT:	41 21 50.83362	0.002(m)	41 21 50.86589	0.002(m)
E LON:	288 2 23.02066	0.008(m)	288 2 23.01029	0.008(m)
W LON:	71 57 36.97934	0.008(m)	71 57 36.98971	0.008(m)
EL HGT:	-14.109(m)	0.020(m)	-15.357(m)	0.020(m)
ORTHO HGT:	16.487(m)	0.032(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 19)	SPC (0600 CT )
Northing (Y) [meters]	4583408.175	211650.143
Easting (X) [meters]	252397.608	370875.767
Convergence [degrees]	-1.95726418	0.52363659
Point Scale	1.00035456	0.99998750
Combined Factor	1.00035677	0.99998971

US NATIONAL GRID DESIGNATOR: 19TBF5239883408(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH5835	CTMA MANSFIELD CORS ARP	N414352.917	W0721238.877	45832.1
DH5831	CTGR GROTON CORS ARP	N412007.035	W0720258.969	8141.4
A13285	NPRI NAVAL STATION NEW CORS ARP	N413035.415	W0711939.125	55302.8

NEAREST NGS PUBLISHED CONTROL POINT

LW3433	ROSSIE VELVET CO TALL STACK	N412151.940	W0715744.778	184.2
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.



OPUS solution Cluster\_20

From: opus@ngs.noaa.gov  
 Sent: Friday, April 27, 2007 10:27 AM  
 To: Michael Wilson  
 Subject: OPUS solution : log0424b.tps 000123477

FILE: log0424b.tps 000123477

NGS OPUS SOLUTION REPORT

=====

USER: mwilson@rhiengineering.com  
 RINEX FILE: log0114q.07o

DATE: April 27, 2007  
 TIME: 14:27:02 UTC

SOFTWARE: page5 0612.06 master22.pl                    START: 2007/04/24 16:43:00  
 EPHEMERIS: igr14242.eph [rapid]                        STOP: 2007/04/24 18:44:00  
 NAV FILE: brdc1140.07n                                 OBS USED: 4909 / 4988 : 98%  
 ANT NAME: TPSLEGANT2                                   # FIXED AMB: 26 / 31 : 84%  
 ARP HEIGHT: 2.0   OVERALL RMS: 0.015(m)

REF FRAME: NAD\_83(CORS96)(EPOCH:2002.0000)                   ITRF00 (EPOCH:2007.3116)

X:	1491888.770(m)	0.064(m)	1491888.047(m)	0.064(m)
Y:	-4557964.691(m)	0.038(m)	-4557963.249(m)	0.038(m)
Z:	4190599.995(m)	0.018(m)	4190599.917(m)	0.018(m)

LAT:	41 20 14.17743	0.007(m)	41 20 14.20968	0.007(m)
E LON:	288 7 26.51364	0.072(m)	288 7 26.50338	0.072(m)
W LON:	71 52 33.48636	0.072(m)	71 52 33.49662	0.072(m)
EL HGT:	-29.423(m)	0.023(m)	-30.673(m)	0.023(m)
ORTHO HGT:	1.217(m)	0.034(m)	[Geoid03 NAVD88]	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 19)	SPC (0600 CT )
Northing (Y) [meters]	4580189.462	208736.373
Easting (X) [meters]	259350.735	377959.233
Convergence [degrees]	-1.90045903	0.57953490
Point Scale	1.00031277	0.99998898
Combined Factor	1.00031739	0.99999360

US NATIONAL GRID DESIGNATOR: 19TBF5935180189(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DH5835	CTMA MANSFIELD CORS ARP	N414352.917	W0721238.877	51928.4
DH5831	CTGR GROTON CORS ARP	N412007.035	W0720258.969	14545.1
AI3285	NPRI NAVAL STATION NEW CORS ARP	N413035.415	W0711939.125	49690.3

NEAREST NGS PUBLISHED CONTROL POINT

LW3354	4	N412011.578	W0715241.328	199.0
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This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

CONNECTICUT COASTLINE

COMPARISON OF BASE STATION OPUS AND PINNACLE SOFTWARE SOLUTIONS

BASE PT.	OPUS(M)			OPUS(sFt)			PINNACLE(sFt)			DELTA(sFt)			
	Northing	Easting	Elip. Ht.	Northing	Easting	Elip. Ht.	Northing	Easting	Elip. Ht.	Northing	Easting	Elip. Ht.	
100	215652.159	296729.032	-15.164	707,518.79	973,518.50	-49.75	707,518.79	973,518.51	-49.63	0.00	0.01	0.12	
200	172500.528	231418.428	-28.417	565,945.48	759,245.29	-93.23	565,945.49	759,245.29	-93.11	0.01	0.00	0.12	
300	175832.198	240094.515	-28.481	576,876.14	787,710.09	-93.44	576,876.17	787,710.10	-93.49	0.03	0.01	0.05	
400	181878.614	249524.629	-28.208	596,713.42	818,648.72	-92.55	596,713.40	818,648.70	-92.57	0.02	0.02	0.02	
500	183790.494	256276.378	-26.891	602,985.98	840,800.08	-88.22	602,985.99	840,800.10	-88.13	0.01	0.02	0.10	
600	184833.795	261749.626	-27.553	606,408.88	858,756.90	-90.40	606,408.91	858,756.91	-90.33	0.04	0.01	0.07	
700	188972.808	274209.102	-26.448	619,988.29	899,634.36	-86.77	619,988.28	899,634.36	-86.65	0.01	0.00	0.12	
800	194328.595	279950.987	-26.714	637,559.73	918,472.53	-87.64	637,559.73	918,472.53	-87.51	0.00	0.00	0.14	
900	199839.02	289225.093	-27.088	655,638.52	948,899.33	-88.87	655,638.52	948,899.33	-88.75	0.00	0.00	0.12	
1000	204409.275	291944.23	-28.274	670,632.76	957,820.36	-92.76	670,632.77	957,820.37	-92.61	0.00	0.01	0.15	
1100	200530.25	299818.487	-25.514	657,906.33	983,654.49	-83.71	657,906.34	983,654.50	-83.61	0.01	0.01	0.10	
1200	201095.017	312027.158	-28.724	659,759.23	1,023,709.10	-94.24	659,759.24	1,023,709.11	-94.25	0.00	0.01	0.01	
1300	198898.046	321911.887	-26.975	652,551.34	1,056,139.25	-88.50	652,551.35	1,056,139.26	-88.35	0.01	0.01	0.15	
1400	201403.366	328888.192	-28.222	660,770.88	1,079,027.34	-92.59	660,770.88	1,079,027.35	-92.45	0.00	0.00	0.15	
1500	204515.41	347465.119	-28.219	670,980.97	1,139,975.14	-92.58	670,980.97	1,139,975.14	-92.50	0.00	0.01	0.08	
1600	204814.426	357934.024	-20.863	671,962.00	1,174,321.88	-68.45	671,962.02	1,174,321.89	-68.48	0.02	0.02	0.03	
1700	210513.502	360950.849	9.078	690,659.71	1,184,219.58	29.78	690,659.69	1,184,219.58	29.81	0.02	0.00	0.02	
1800	228999.798	360651.635	-20.997	751,310.17	1,183,237.91	-68.89	751,310.18	1,183,237.90	-68.84	0.01	0.00	0.05	
1900	211650.143	370875.767	-14.109	694,388.84	1,216,781.58	-46.29	694,388.85	1,216,781.58	-46.41	0.00	0.00	0.12	
2000	208736.373	377959.233	-29.423	684,829.25	1,240,021.25	-96.53	684,829.25	1,240,021.33	-96.48	0.00	0.08	0.05	
										<b>AVGΔ</b>	0.01	0.01	0.09
										<b>MINΔ</b>	0.00	0.00	0.01
										<b>MAXΔ</b>	0.04	0.08	0.15

**APPENDIX V**

**PUBLISHED NGS DATASHEETS  
FOR ESTABLISHED MONUMENTS  
AND CORS STATION**

## DATASHEETS

The NGS Data SheetSee file dsdata.txt for more information about the datasheet.DATABASE  
= Sybase ,PROGRAM = datasheet, VERSION = 7.45

1 National Geodetic Survey, Retrieval Date = MAY 7, 2007

LW0720 \*\*\*\*\*

LW0720 DESIGNATION - Y 37  
LW0720 PID - LW0720  
LW0720 STATE/COUNTY- CT/NEW LONDON  
LW0720 USGS QUAD - MYSTIC (1984)

LW0720  
LW0720 \*CURRENT SURVEY CONTROL

LW0720*	NAD 83(1986)-	41 21 01.	(N)	071 57 35.	(W)	SCALED
LW0720*	NAVD 88	-	3.316 (meters)	10.88 (feet)		ADJUSTED
LW0720	GEOID HEIGHT-	-30.62 (meters)				GEOID03
LW0720	DYNAMIC HT -	3.315 (meters)		10.88 (feet)		COMP
LW0720	MODELED GRAV-	980,273.3 (mgal)				NAVD 88

LW0720 VERT ORDER - FIRST CLASS I

LW0720  
LW0720.The horizontal coordinates were scaled from a topographic map and have  
LW0720.an estimated accuracy of +/- 6 seconds.

LW0720  
LW0720.The orthometric height was determined by differential leveling  
LW0720.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.

LW0720  
LW0720.The geoid height was determined by GEOID03.

LW0720  
LW0720.The dynamic height is computed by dividing the NAVD 88  
LW0720.geopotential number by the normal gravity value computed on the  
LW0720.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
LW0720.degrees latitude (g = 980.6199 gals.).

LW0720  
LW0720.The modeled gravity was interpolated from observed gravity values.

LW0720;	North	East	Units	Estimated Accuracy
LW0720;SPC CT -	210,110.	370,940.	MT	(+/- 180 meters Scaled)

LW0720  
LW0720 SUPERSEDED SURVEY CONTROL

LW0720	NGVD 29 (??/??/92)	3.607 (m)	11.83 (f)	ADJ UNCH	1 1
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LW0720  
LW0720.Superseded values are not recommended for survey control.  
LW0720.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LW0720.See file dsdata.txt to determine how the superseded data were derived.

LW0720  
LW0720\_U.S. NATIONAL GRID SPATIAL ADDRESS: 19TBF523818(NAD 83)

LW0720\_MARKER: DB = BENCH MARK DISK

LW0720\_SETTING: 66 = SET IN ROCK OUTCROP

LW0720\_SP\_SET: BEDROCK

LW0720\_STAMPING: Y 37 1965

LW0720\_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD

LW0720+STABILITY: POSITION/ELEVATION WELL

LW0720	HISTORY	- Date	Condition	Report By
LW0720	HISTORY	- 1965	MONUMENTED	CGS
LW0720	HISTORY	- 1984	GOOD	USPSQD
LW0720	HISTORY	- 1988	GOOD	USPSQD
LW0720	HISTORY	- 20000110	GOOD	USPSQD

LW0720  
LW0720 STATION DESCRIPTION

LW0720'DESCRIBED BY COAST AND GEODETIC SURVEY 1965  
LW0720'0.5 MI SE FROM MYSTIC.  
LW0720'0.5 MILE SOUTHEAST ALONG U.S. HIGHWAY 1 FROM THE POST OFFICE  
LW0720'AT MYSTIC, NEAR THE ENTRANCE TO THE MYSTIC MOTOR INN, ACROSS  
LW0720'THE HIGHWAY FROM THE EAST CORNER OF A CEMETERY, SET ON THE TOP  
LW0720'OF A LARGE MASS OF EXPOSED BEDROCK, 73 FEET NORTHEAST OF THE  
LW0720'CENTER LINE OF THE HIGHWAY, 111 FEET NORTH OF AND ACROSS A  
LW0720'DRIVEWAY FROM THE NORTHWEST END OF THE NORTHEAST IRON GUARD RAIL

LW0720'FOR BRIDGE OVER PEQUOSEPOS BROOK, 22.5 FEET NORTHWEST OF THE  
 LW0720'NORTHWEST CURB OF ENTRANCE TO MYSTIC MOTOR INN, AND ABOUT 2 FEET  
 LW0720'ABOVE THE LEVEL OF THE HIGHWAY.

LW0720  
 LW0720 STATION RECOVERY (1984)  
 LW0720

LW0720'RECOVERY NOTE BY US POWER SQUADRON 1984  
 LW0720'RECOVERED IN GOOD CONDITION.

LW0720  
 LW0720 STATION RECOVERY (1988)  
 LW0720

LW0720'RECOVERY NOTE BY US POWER SQUADRON 1988 (AFA)  
 LW0720'RECOVERED IN GOOD CONDITION.

LW0720  
 LW0720 STATION RECOVERY (2000)  
 LW0720

LW0720'RECOVERY NOTE BY US POWER SQUADRON 2000  
 LW0720'RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = MAY 7, 2007

LW0726 \*\*\*\*\*

LW0726 DESIGNATION - YY 37  
 LW0726 PID - LW0726  
 LW0726 STATE/COUNTY- CT/NEW LONDON  
 LW0726 USGS QUAD - MYSTIC (1984)

LW0726 \*CURRENT SURVEY CONTROL

LW0726*	NAD 83(1986)-	41 20 56.	(N)	071 54 46.	(W)	SCALED
LW0726*	NAVD 88	-	3.853 (meters)	12.64	(feet)	ADJUSTED

LW0726	GEOID HEIGHT-	-30.62 (meters)				GEOID03
LW0726	DYNAMIC HT -	3.852 (meters)		12.64 (feet)		COMP
LW0726	MODELED GRAV-	980,274.3 (mgal)				NAVD 88

LW0726 VERT ORDER - FIRST CLASS I

LW0726.The horizontal coordinates were scaled from a topographic map and have  
 LW0726.an estimated accuracy of +/- 6 seconds.

LW0726.The orthometric height was determined by differential leveling  
 LW0726.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.

LW0726.The geoid height was determined by GEOID03.

LW0726.The dynamic height is computed by dividing the NAVD 88  
 LW0726.geopotential number by the normal gravity value computed on the  
 LW0726.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 LW0726.degrees latitude (g = 980.6199 gals.).

LW0726.The modeled gravity was interpolated from observed gravity values.

LW0726;		North	East	Units	Estimated Accuracy
LW0726;SPC CT	-	210,000.	374,870.	MT	(+/- 180 meters Scaled)

LW0726 SUPERSEDED SURVEY CONTROL

LW0726	NGVD 29 (??/??/92)	4.143 (m)	13.59 (f)	ADJ UNCH	1 1
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LW0726.Superseded values are not recommended for survey control.  
 LW0726.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 LW0726.See file dsdata.txt to determine how the superseded data were derived.

LW0726\_U.S. NATIONAL GRID SPATIAL ADDRESS: 19TBF563815(NAD 83)

LW0726\_MARKER: DB = BENCH MARK DISK

LW0726\_SETTING: 66 = SET IN ROCK OUTCROP

LW0726\_SP\_SET: BEDROCK

LW0726\_STAMPING: YY 37 1965

LW0726\_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD

LW0726+STABILITY: POSITION/ELEVATION WELL

LW0726\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

LW0726+SATELLITE: SATELLITE OBSERVATIONS - February 19, 2002

LW0726	HISTORY	- Date	Condition	Report By
LW0726	HISTORY	- 1965	MONUMENTED	CGS

LW0726 HISTORY - 1984 GOOD USPSQD  
 LW0726 HISTORY - 1987 GOOD USPSQD  
 LW0726 HISTORY - 20000110 GOOD USPSQD  
 LW0726 HISTORY - 20020219 GOOD USPSQD

LW0726  
 LW0726 STATION DESCRIPTION

LW0726 DESCRIBED BY COAST AND GEODETIC SURVEY 1965  
 LW0726 0.8 MI NW FROM STONINGTON.  
 LW0726 0.2 MILE WEST ALONG TRUMBULL AVENUE FROM THE NORTHEAST END OF  
 LW0726 THE OVERPASS OVER THE NY, NH AND H RAILROAD AT STONINGTON, THENCE  
 LW0726 0.6 MILE NORTHWEST ALONG FLANDERS ROAD, AT THE INTERSECTION OF  
 LW0726 U.S. HIGHWAY 1 AND FLANDERS ROAD, SET ON TOP AND AT THE HIGHEST  
 LW0726 PART OF A MASS OF EXPOSED BEDROCK WHICH PROJECTS 1 FOOT ABOVE  
 LW0726 THE LEVEL OF THE GROUND, 34 FEET SOUTH OF THE CENTER LINE OF THE  
 LW0726 HIGHWAY, 41 1/2 FEET EAST OF THE CENTER LINE OF FLANDERS ROAD,  
 LW0726 19 FEET NORTHEAST OF THE NORTHEAST CORNER OF THE NORTH GATE POST  
 LW0726 AT ENTRANCE TO GOLF COURSE, ABOUT 2 FEET ABOVE THE LEVEL OF THE  
 LW0726 HIGHWAY. NOTE-- MARK MAY BE REACHED BY GOING 3.2 MILES SOUTHEAST  
 LW0726 ALONG U.S. HIGHWAY 1 FROM THE POST OFFICE AT MYSTIC.

LW0726  
 LW0726 STATION RECOVERY (1984)

LW0726 RECOVERY NOTE BY US POWER SQUADRON 1984  
 LW0726 THIS GOLF COURSE NO LONGER EXISTS. A GAS STATION IS NOW ON THIS SITE.

LW0726  
 LW0726 STATION RECOVERY (1987)

LW0726 RECOVERY NOTE BY US POWER SQUADRON 1987 (THB)  
 LW0726 RECOVERED IN GOOD CONDITION.

LW0726  
 LW0726 STATION RECOVERY (2000)

LW0726 RECOVERY NOTE BY US POWER SQUADRON 2000  
 LW0726 RECOVERED IN GOOD CONDITION.

LW0726  
 LW0726 STATION RECOVERY (2002)

LW0726 RECOVERY NOTE BY US POWER SQUADRON 2002 (AES)  
 LW0726 RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = MAY 7, 2007

LW3405 \*\*\*\*\*

LW3405 DESIGNATION - LORDS POINT  
 LW3405 PID - LW3405  
 LW3405 STATE/COUNTY- CT/NEW LONDON  
 LW3405 USGS QUAD - MYSTIC (1984)

LW3405  
 LW3405 \*CURRENT SURVEY CONTROL

LW3405*	NAD 83(1996)-	41 19 58.47564(N)	071 55 47.01880(W)	ADJUSTED
LW3405*	NAVD 88	- 1. (meters)	3. (feet)	SCALED

LW3405	LAPLACE CORR-	0.06 (seconds)	DEFLEC99
LW3405	GEOID HEIGHT-	-30.66 (meters)	GEOID03

LW3405  
 LW3405 HORZ ORDER - THIRD

LW3405 The horizontal coordinates were established by classical geodetic methods  
 LW3405 and adjusted by the National Geodetic Survey in August 1998.

LW3405  
 LW3405 The orthometric height was scaled from a topographic map.

LW3405  
 LW3405 The Laplace correction was computed from DEFLEC99 derived deflections.

LW3405  
 LW3405 The geoid height was determined by GEOID03.

LW3405;		North	East	Units	Scale	Factor	Converg.
LW3405;SPC CT	-	208,207.884	373,464.207	MT	0.99998925	+0 32 38.0	
LW3405;SPC CT	-	683,095.37	1,225,273.82	sFT	0.99998925	+0 32 38.0	
LW3405;SPC RI	-	27,806.378	64,027.512	MT	1.00000967	-0 17 01.7	
LW3405;SPC RI	-	91,228.09	210,063.60	sFT	1.00000967	-0 17 01.7	
LW3405;SPC NY L	-	131,559.893	473,292.531	MT	1.00003036	+1 21 14.9	
LW3405;SPC NY L	-	431,626.08	1,552,793.91	sFT	1.00003036	+1 21 14.9	
LW3405;UTM 19	-	4,579,855.848	254,835.531	MT	1.00033977	-1 56 09.1	



LW3405' STATION MARK AND RM 2 WERE RECOVERED IN GOOD CONDITION. RM 1  
 LW3405' HAS BEEN COVERED BY A NEW CONCRETE BULKHEAD. STATION MARK WILL  
 LW3405' EVENTUALLY BE COVERED, OR MADE UNUSABLE, BY FORTHCOMING BULKHEAD  
 LW3405' CONSTRUCTION, SO A NEW STATION, LORDS POINT 2, WAS ESTABLISHED  
 LW3405' NEARBY.

LW3405'  
 LW3405' FOR ADDITIONAL INFORMATION SEE DESCRIPTION FOR LORDS POINT 2.  
 LW3405'  
 LW3405' THE OLD STATION MARK WAS LEFT IN PLACE AFTER WORK WAS COMPLETED.  
 LW3405'

LW3405' AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN  
 LW3405' 1 MILE WEST OF STONINGTON.

LW3405  
 LW3405 STATION RECOVERY (2002)

LW3405' RECOVERY NOTE BY US POWER SQUADRON 2002 (TB)  
 LW3405' RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = MAY 7, 2007

LW3409 \*\*\*\*\*

LW3409 DESIGNATION - QUAMBAUG  
 LW3409 PID - LW3409  
 LW3409 STATE/COUNTY- CT/NEW LONDON  
 LW3409 USGS QUAD - MYSTIC (1984)

LW3409  
 LW3409 \*CURRENT SURVEY CONTROL

LW3409\* NAD 83(1996)- 41 20 18.87571(N) 071 56 21.42356(W) ADJUSTED  
 LW3409\* NAVD 88 - 9. (meters) 30. (feet) VERTCON

LW3409 LAPLACE CORR- 0.00 (seconds) DEFLEC99  
 LW3409 GEOID HEIGHT- -30.64 (meters) GEOID03

LW3409 HORZ ORDER - SECOND  
 LW3409

LW3409.The horizontal coordinates were established by classical geodetic methods  
 LW3409.and adjusted by the National Geodetic Survey in August 1998.

LW3409.The NAVD 88 height was computed by applying the VERTCON shift value to  
 LW3409.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)

LW3409.The Laplace correction was computed from DEFLEC99 derived deflections.  
 LW3409

LW3409.The geoid height was determined by GEOID03.  
 LW3409

	North	East	Units	Scale Factor	Converg.
LW3409:SPC CT	- 208,829.644	372,658.337	MT	0.99998891	+0 32 15.2
LW3409:SPC CT	- 685,135.26	1,222,629.89	sFT	0.99998891	+0 32 15.2
LW3409:SPC RI	- 28,439.727	63,230.691	MT	1.00001038	-0 17 24.6
LW3409:SPC RI	- 93,306.00	207,449.36	sFT	1.00001038	-0 17 24.6
LW3409:SPC NY L	- 132,170.220	472,477.914	MT	1.00003120	+1 20 52.4
LW3409:SPC NY L	- 433,628.46	1,550,121.29	sFT	1.00003120	+1 20 52.4
LW3409:UTM 19	- 4,580,512.126	254,057.042	MT	1.00034448	-1 56 32.6
LW3409:UTM 18	- 4,580,863.890	756,104.879	MT	1.00040728	+2 01 21.8

	Elev Factor	x	Scale Factor	=	Combined Factor
LW3409!SPC CT	- 1.00000344	x	0.99998891	=	0.99999235
LW3409!SPC RI	- 1.00000344	x	1.00001038	=	1.00001382
LW3409!SPC NY L	- 1.00000344	x	1.00003120	=	1.00003464
LW3409!UTM 19	- 1.00000344	x	1.00034448	=	1.00034792
LW3409!UTM 18	- 1.00000344	x	1.00040728	=	1.00041072

	Primary Azimuth Mark	Grid Az
LW3409:SPC CT	- PALMERS FLAGPOLE	019 22 00.2
LW3409:SPC RI	- PALMERS FLAGPOLE	020 11 40.0
LW3409:SPC NY L	- PALMERS FLAGPOLE	018 33 23.0
LW3409:UTM 19	- PALMERS FLAGPOLE	021 50 48.0
LW3409:UTM 18	- PALMERS FLAGPOLE	017 52 53.6

	PID	Reference Object	Distance	Geod. Az
LW3409				ddmmss.s
LW3409	LW3406	PALMERS FLAGPOLE	APPROX. 2.6 KM	0195415.4
LW3409	LW3404	MONTAUK	APPROX. 2.6 KM	0210852.2
LW3409	LW3437	STONINGTON MUN TANK	APPROX. 3.3 KM	0933911.5



LW3409	LW3374	ATWOOD MACHINE CO CUPOLA	APPROX. 2.9 KM	1084229.2
LW3409	LW3370	ATWOOD MACHINE CO STACK	APPROX. 2.9 KM	1085214.7
LW3409	CB8448	QUAMBAUG RM 1	11.593 METERS	20009
LW3409	LW3434	ENDERS CUPOLA	APPROX. 2.7 KM	2270502.2
LW3409	LW3424	BURROW COAL CO STACK	APPROX. 1.3 KM	2420241.6
LW3409	LW3431	ALLENS CHIMNEY	APPROX. 2.1 KM	2643333.7
LW3409	LW3414	WILCOX LOOKOUT TOWER	308.714 METERS	28553
LW3409	LW3445	QUAMBAUG 1934 A PT	8.818 METERS	32943
LW3409	CB8449	QUAMBAUG RM 2	24.562 METERS	34211

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LW3409  
LW3409  
LW3409

SUPERSEDED SURVEY CONTROL

LW3409	NAD 83(1992)-	41 20 18.87440(N)	071 56 21.42275(W)	AD( ) 2
LW3409	NAD 83(1986)-	41 20 18.87482(N)	071 56 21.42623(W)	AD( ) 2
LW3409	NAD 27	- 41 20 18.52153(N)	071 56 23.16850(W)	AD( ) 2
LW3409	NGVD 29 (07/19/86)	9. (m)	30. (f)	VERT ANG

LW3409  
LW3409.Superseded values are not recommended for survey control.  
LW3409.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LW3409.See file dsdata.txt to determine how the superseded data were derived.  
LW3409

LW3409\_U.S. NATIONAL GRID SPATIAL ADDRESS: 19TBF5405780512(NAD 83)

LW3409\_MARKER: DS = TRIANGULATION STATION DISK

LW3409\_SETTING: 66 = SET IN ROCK OUTCROP

LW3409\_SP\_SET: IN DRILL HOLE IN ROCK OUTCROP

LW3409\_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD

LW3409+STABILITY: POSITION/ELEVATION WELL

LW3409\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

LW3409+SATELLITE: SATELLITE OBSERVATIONS - February 19, 2002

LW3409	HISTORY	- Date	Condition	Report By
LW3409	HISTORY	- 1934	MONUMENTED	CGS
LW3409	HISTORY	- 1948	GOOD	CGS
LW3409	HISTORY	- 1954	GOOD	CGS
LW3409	HISTORY	- 1975	GOOD	NGS
LW3409	HISTORY	- 1989	GOOD	USPSQD
LW3409	HISTORY	- 20020206	GOOD	USPSQD
LW3409	HISTORY	- 20020219	GOOD	USPSQD

LW3409  
LW3409  
LW3409

STATION DESCRIPTION

LW3409'DESCRIBED BY COAST AND GEODETIC SURVEY 1934 (GCM)  
LW3409'THE STATION IS LOCATED ON A PROMINENT LEDGE S OF THE BOSTON POST  
LW3409'ROAD, 152 METERS W OF QUAMBAUG COVE AND 90 METERS N OF THE NEW  
LW3409'YORK, NEW HAVEN AND HARTFORD RAILROAD. THE LEDGE IS MUCH HIGHER  
LW3409'THAN THE SURROUNDING FIELD AND CAN BE SEEN FROM THE HIGHWAY. THE  
LW3409'STATION IS MARKED BY A STANDARD DISC SET IN A DRILL HOLE IN THE  
LW3409'HIGHEST PART OF THE LEDGE.  
LW3409'  
LW3409'STATION IS A STANDARD DISC WEDGED IN A DRILL HOLE IN  
LW3409'OUTCROPPING BEDROCK AS DESCRIBED IN NOTE 2. REFERENCE MARKS NO.1  
LW3409'AND NO.2 ARE STANDARD BRONZE DISCS SET IN OUTCROPPING BEDROCK  
LW3409'AS DESCRIBED IN NOTE 12A.  
LW3409'  
LW3409'REFERENCE MARKS NO.1 AND NO.2 ARE STANDARD DISCS SET IN DRILL  
LW3409'HOLES IN THE LEDGE SOUTHWESTERLY AND WESTERLY OF THE STATION  
LW3409'RESPECTIVELY.

LW3409'  
LW3409'HEIGHT OF LIGHT ABOVE STATION MARK 2 METERS.  
LW3409

LW3409  
LW3409  
LW3409

STATION RECOVERY (1948)

LW3409  
LW3409'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1948 (RJS)  
LW3409'STATION AND REFERENCE MARKS RECOVERED IN GOOD  
LW3409'CONDITION. DESCRIPTION IS ADEQUATE.  
LW3409

LW3409  
LW3409  
LW3409

STATION RECOVERY (1954)

LW3409  
LW3409'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1954 (LFW)  
LW3409'STATION RECOVERED IN GOOD CONDITION. ORIGINAL DESCRIPTION IS  
LW3409'ADEQUATE AND COMPLETE.  
LW3409

LW3409  
LW3409  
LW3409

STATION RECOVERY (1975)

LW3409  
 LW3409'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1975 (HRR)  
 LW3409'THE STATION, REFERENCE MARKS 1 AND 2 WERE RECOVERED IN GOOD  
 LW3409'CONDITION. THE DIRECTIONS TO THE REFERENCE MARKS CHECKED WITH  
 LW3409'THE PREVIOUS DESCRIPTION. THE 1934 MEASUREMENTS WERE MADE ON AN  
 LW3409'INCLINE.  
 LW3409'  
 LW3409'DUE TO CHANGES A NEW DESCRIPTION FOLLOWS.  
 LW3409'  
 LW3409'THE STATION IS LOCATED 2 MILES SOUTHEAST OF MYSTIC, 2 MILES  
 LW3409'WEST OF STONINGTON, 1/4 MILE SOUTH OF U.S. HIGHWAY 1 AND ON THE  
 LW3409'WEST EDGE OF QUAMBAUG COVE.  
 LW3409'  
 LW3409'TO REACH THE STATION FROM THE POST OFFICE IN MYSTIC, GO  
 LW3409'SOUTHEASTERLY ON HIGHWAY 1 FOR 1.4 MILES TO THE JUNCTION WITH  
 LW3409'OLD STONINGTON ROAD. TURN RIGHT AND GO SOUTH AND EAST ON OLD  
 LW3409'STONINGTON ROAD FOR 0.4 MILE TO A TRACK ROAD RIGHT THAT LEADS  
 LW3409'TO THE MINER BURIAL GROUNDS. TURN RIGHT AND GO SOUTH FOR ABOUT  
 LW3409'150 FEET TO A GATE. CONTINUE THRU THE GATE GOING SOUTHEAST  
 LW3409'ACROSS A PASTURE FOR 0.1 MILE TO A GAP IN A ROCK FENCE.  
 LW3409'CONTINUE THRU THE GAP AND GO SOUTHWEST ALONG SOUTH SIDE OF ROCK  
 LW3409'FENCE TO THE TOP OF A SMALL HILL AND THE STATION.  
 LW3409'  
 LW3409'STATION MARK, STAMPED QUAMBAUG 1934, IS A STANDARD DISK SET  
 LW3409'IN A DRILL HOLE IN A BOULDER THAT PROJECTS ABOUT 2 FEET ON THE  
 LW3409'NORTH SIDE AND ABOUT 4 FEET ON THE SOUTH SIDE. IT IS 247 FEET  
 LW3409'EAST OF A ROCK FENCE CORNER, 124 FEET SOUTHEAST OF A ROCK FENCE  
 LW3409'AND 77 FEET NORTHEAST OF AN 8 INCH TREE.  
 LW3409'  
 LW3409'REFERENCE MARK 1, STAMPED QUAMBAUG NO 1 1934, IS A STANDARD  
 LW3409'DISK SET IN A DRILL HOLE IN BEDROCK THAT IS FLUSH WITH THE  
 LW3409'GROUND SURFACE ON THE NORTH SIDE AND PROJECTS 6 FEET ON THE  
 LW3409'SOUTH SIDE. IT IS 221 FEET EAST OF A ROCK FENCE CORNER AND 39  
 LW3409'FEET NORTHEAST OF AN 8 INCH TREE.  
 LW3409'  
 LW3409'REFERENCE MARK 2, STAMPED QUAMBAUG NO 2 1934, IS A STANDARD  
 LW3409'DISK SET IN A DRILL HOLE IN BEDROCK AND IS FLUSH WITH THE  
 LW3409'GROUND SURFACE ON THE SOUTH SIDE AND PROJECTS 8 FEET ON THE  
 LW3409'NORTH SIDE. IT IS 162 FEET SOUTH-SOUTHWEST OF A ROCK FENCE  
 LW3409'CORNER AND 59 FEET SOUTHEAST OF A ROCK FENCE.  
 LW3409'  
 LW3409'HEIGHT OF LIGHT ABOVE STATION MARK 4 FEET.  
 LW3409'  
 LW3409'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN  
 LW3409'2 MILES SOUTHEAST OF MYSTIC.  
 LW3409  
 LW3409 STATION RECOVERY (1989)  
 LW3409  
 LW3409'RECOVERY NOTE BY US POWER SQUADRON 1989 (FW)  
 LW3409'RECOVERED IN GOOD CONDITION.  
 LW3409  
 LW3409 STATION RECOVERY (2002)  
 LW3409  
 LW3409'RECOVERY NOTE BY US POWER SQUADRON 2002 (TB)  
 LW3409'STATION ONLY - NO RM'S  
 LW3409  
 LW3409 STATION RECOVERY (2002)  
 LW3409  
 LW3409'RECOVERY NOTE BY US POWER SQUADRON 2002 (AES)  
 LW3409'FIRST RECOVERY OF 2,6,2002 DID NOT RECOVER RM'S. SECOND SEARCH OF  
 LW3409'2,19,2002 RECOVERED RM1 AND RM 2 AS DESCRIBED.  
 LW3409'  
 1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
 LX0121 \*\*\*\*\*  
 LX0121 DESIGNATION - X 35  
 LX0121 PID - LX0121  
 LX0121 STATE/COUNTY- CT/NEW LONDON  
 LX0121 USGS QUAD - OLD LYME (1976)  
 LX0121  
 LX0121 \*CURRENT SURVEY CONTROL  
 LX0121  
 LX0121\* NAD 83(1986)- 41 17 50. (N) 072 15 30. (W) SCALED  
 LX0121\* NAVD 88 - 7.147 (meters) 23.45 (feet) ADJUSTED  
 LX0121

LX0121 GEOID HEIGHT- -30.56 (meters) GEOID03  
 LX0121 DYNAMIC HT - 7.145 (meters) 23.44 (feet) COMP  
 LX0121 MODELED GRAV- 980,278.7 (mgal) NAVD 88  
 LX0121  
 LX0121 VERT ORDER - FIRST CLASS I  
 LX0121  
 LX0121.The horizontal coordinates were scaled from a topographic map and have  
 LX0121.an estimated accuracy of +/- 6 seconds.  
 LX0121  
 LX0121.The orthometric height was determined by differential leveling  
 LX0121.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
 LX0121  
 LX0121.The geoid height was determined by GEOID03.  
 LX0121  
 LX0121.The dynamic height is computed by dividing the NAVD 88  
 LX0121.geopotential number by the normal gravity value computed on the  
 LX0121.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 LX0121.degrees latitude (g = 980.6199 gals.).  
 LX0121  
 LX0121.The modeled gravity was interpolated from observed gravity values.  
 LX0121  
 LX0121;  

	North	East	Units	Estimated Accuracy
LX0121;SPC CT -	204,040.	345,980.	MT	(+/- 180 meters Scaled)

 LX0121  
 LX0121 SUPERSEDED SURVEY CONTROL  
 LX0121  
 LX0121 NGVD 29 (??/??/92) 7.454 (m) 24.46 (f) ADJ UNCH 1 1  
 LX0121  
 LX0121.Superseded values are not recommended for survey control.  
 LX0121.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 LX0121.See file dsdata.txt to determine how the superseded data were derived.  
 LX0121  
 LX0121\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TYL295753(NAD 83)  
 LX0121\_MARKER: DB = BENCH MARK DISK  
 LX0121\_SETTING: 66 = SET IN ROCK OUTCROP  
 LX0121\_SP\_SET: BEDROCK  
 LX0121\_STAMPING: X 35 1965  
 LX0121\_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD  
 LX0121+STABILITY: POSITION/ELEVATION WELL  
 LX0121\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 LX0121+SATELLITE: SATELLITE OBSERVATIONS - December 06, 2005  
 LX0121  

HISTORY	- Date	Condition	Report By
LX0121 HISTORY	- 1965	MONUMENTED	CGS
LX0121 HISTORY	- 1983	GOOD	USPSQD
LX0121 HISTORY	- 1987	GOOD	USPSQD
LX0121 HISTORY	- 1988	GOOD	USPSQD
LX0121 HISTORY	- 1989	GOOD	USPSQD
LX0121 HISTORY	- 19900414	GOOD	USPSQD
LX0121 HISTORY	- 19901206	GOOD	USPSQD
LX0121 HISTORY	- 20011001	GOOD	USPSQD
LX0121 HISTORY	- 20041115	GOOD	USPSQD
LX0121 HISTORY	- 20051206	GOOD	USPSQD

 LX0121  
 LX0121  
 LX0121 STATION DESCRIPTION  
 LX0121  
 LX0121'DESCRIBED BY COAST AND GEODETIC SURVEY 1965  
 LX0121'AT SOUTH LYME.  
 LX0121'AT SOUTH LYME, 122 FEET NORTHEAST OF THE NORTHEAST CORNER OF  
 LX0121'THE POST OFFICE (FORMERLY THE RAILROAD STATION), NEAR THE  
 LX0121'INTERSECTION OF STATE HIGHWAY 156 AND BLACK TOP ROAD WHICH  
 LX0121'LEADS UNDER THE TRACKS TO THE SOUTH, 85 FEET NORTH OF THE NORTH  
 LX0121'RAIL OF THE NY, NH AND H RR, 56 FEET SOUTH OF THE CENTER LINE  
 LX0121'OF THE HIGHWAY, 83 FEET WEST OF THE CENTER LINE OF THE BLACK  
 LX0121'TOP ROAD, SET ON THE TOP OF A 6-BY-5 FOOT EXPOSED PART OF  
 LX0121'BEDROCK WHICH IS FLUSH WITH THE GROUND, AND ABOUT 1 FOOT ABOVE  
 LX0121'THE LEVEL OF THE HIGHWAY.  
 LX0121  
 LX0121  
 LX0121 STATION RECOVERY (1983)  
 LX0121  
 LX0121'RECOVERY NOTE BY US POWER SQUADRON 1983  
 LX0121'NOTE: ORIGINAL STRUCTURE DESTROYED BY FIRE SINCE 1965, RE BUILT AS A  
 LX0121'GROUP OF CONVIENCE STORES. POST OFFICE RE-LOCATED AT WEST END OF  
 LX0121'BUILDING. MARK IS NOW 90' NORTHEAST OF THE NORTHEAST CORNER OF THE

LX0121 BUILDING. RAILROAD NOW AMTRACK AND SO MARKED.  
LX0121  
LX0121 STATION RECOVERY (1987)  
LX0121  
LX0121 RECOVERY NOTE BY US POWER SQUADRON 1987 (RMS)  
LX0121 RECOVERED IN GOOD CONDITION.  
LX0121  
LX0121 STATION RECOVERY (1988)  
LX0121  
LX0121 RECOVERY NOTE BY US POWER SQUADRON 1988 (RMS)  
LX0121 RECOVERED IN GOOD CONDITION.  
LX0121  
LX0121 STATION RECOVERY (1989)  
LX0121  
LX0121 RECOVERY NOTE BY US POWER SQUADRON 1989 (RMS)  
LX0121 RECOVERED IN GOOD CONDITION.  
LX0121  
LX0121 STATION RECOVERY (1990)  
LX0121  
LX0121 RECOVERY NOTE BY US POWER SQUADRON 1990 (RMS)  
LX0121 RECOVERED IN GOOD CONDITION.  
LX0121  
LX0121 STATION RECOVERY (1990)  
LX0121  
LX0121 RECOVERY NOTE BY US POWER SQUADRON 1990 (RMS)  
LX0121 RECOVERED IN GOOD CONDITION.  
LX0121  
LX0121 STATION RECOVERY (2001)  
LX0121  
LX0121 RECOVERY NOTE BY US POWER SQUADRON 2001 (HHG)  
LX0121 RECOVERED IN GOOD CONDITION.  
LX0121  
LX0121 STATION RECOVERY (2004)  
LX0121  
LX0121 RECOVERY NOTE BY US POWER SQUADRON 2004 (JRR)  
LX0121 RECOVERED IN GOOD CONDITION.  
LX0121  
LX0121 STATION RECOVERY (2005)  
LX0121  
LX0121 RECOVERY NOTE BY US POWER SQUADRON 2005 (JRR)  
LX0121 RECOVERED IN GOOD CONDITION.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX0146 \*\*\*\*\*  
LX0146 DESIGNATION - M 38  
LX0146 PID - LX0146  
LX0146 STATE/COUNTY- CT/NEW LONDON  
LX0146 USGS QUAD - NEW LONDON (1984)  
LX0146  
LX0146 \*CURRENT SURVEY CONTROL  
LX0146  
LX0146\* NAD 83(1986)- 41 20 32. (N) 072 06 38. (W) SCALED  
LX0146\* NAVD 88 - 38.206 (meters) 125.35 (feet) ADJUSTED  
LX0146  
LX0146 GEOID HEIGHT- -30.58 (meters) GEOID03  
LX0146 DYNAMIC HT - 38.192 (meters) 125.30 (feet) COMP  
LX0146 MODELED GRAV- 980,273.6 (mgal) NAVD 88  
LX0146  
LX0146 VERT ORDER - FIRST CLASS I  
LX0146  
LX0146.The horizontal coordinates were scaled from a topographic map and have  
LX0146.an estimated accuracy of +/- 6 seconds.  
LX0146  
LX0146.The orthometric height was determined by differential leveling  
LX0146.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
LX0146  
LX0146.The geoid height was determined by GEOID03.  
LX0146  
LX0146.The dynamic height is computed by dividing the NAVD 88  
LX0146.geopotential number by the normal gravity value computed on the  
LX0146.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
LX0146.degrees latitude (g = 980.6199 gals.).  
LX0146  
LX0146.The modeled gravity was interpolated from observed gravity values.  
LX0146



LX0146 STATION RECOVERY (1990)  
LX0146  
LX0146 RECOVERY NOTE BY US POWER SQUADRON 1990 (RMS)  
LX0146 RECOVERED IN GOOD CONDITION.  
LX0146  
LX0146 STATION RECOVERY (2000)  
LX0146  
LX0146 RECOVERY NOTE BY US POWER SQUADRON 2000 (RMS)  
LX0146 RECOVERED IN GOOD CONDITION.  
LX0146  
LX0146 STATION RECOVERY (2001)  
LX0146  
LX0146 RECOVERY NOTE BY US POWER SQUADRON 2001 (RMS)  
LX0146 RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = MAY 7, 2007

LX0369 \*\*\*\*\*  
LX0369 DESIGNATION - S 34  
LX0369 PID - LX0369  
LX0369 STATE/COUNTY- CT/NEW HAVEN  
LX0369 USGS QUAD - NEW HAVEN (1984)  
LX0369  
LX0369 \*CURRENT SURVEY CONTROL  
LX0369

LX0369*	NAD 83(1986)-	41 16 18.	(N)	072 57 38.	(W)	SCALED
LX0369*	NAVD 88	- 11.092	(meters)	36.39	(feet)	ADJUSTED
LX0369	GEOID HEIGHT-	-29.78	(meters)			GEOID03
LX0369	DYNAMIC HT -	11.088	(meters)	36.38	(feet)	COMP
LX0369	MODELED GRAV-	980,304.7	(mgal)			NAVD 88

LX0369 VERT ORDER - FIRST CLASS I  
LX0369  
LX0369.The horizontal coordinates were scaled from a topographic map and have  
LX0369.an estimated accuracy of +/- 6 seconds.  
LX0369  
LX0369.The orthometric height was determined by differential leveling  
LX0369.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
LX0369  
LX0369.The geoid height was determined by GEOID03.  
LX0369  
LX0369.The dynamic height is computed by dividing the NAVD 88  
LX0369.geopotential number by the normal gravity value computed on the  
LX0369.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
LX0369.degrees latitude (g = 980.6199 gals.).  
LX0369  
LX0369.The modeled gravity was interpolated from observed gravity values.  
LX0369

	North	East	Units	Estimated Accuracy
LX0369;SPC CT	- 201,100.	287,160.	MT	(+/- 180 meters Scaled)

LX0369  
LX0369 SUPERSEDED SURVEY CONTROL  
LX0369  
LX0369 NGVD 29 (??/??/92) 11.413 (m) 37.44 (f) ADJ UNCH 1 1  
LX0369  
LX0369.Superseded values are not recommended for survey control.  
LX0369.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LX0369.See file dsdata.txt to determine how the superseded data were derived.  
LX0369  
LX0369\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL708709(NAD 83)  
LX0369\_MARKER: DB = BENCH MARK DISK  
LX0369\_SETTING: 36 = SET IN A MASSIVE STRUCTURE  
LX0369\_SP\_SET: OVERPASS  
LX0369\_STAMPING: S 34 1965  
LX0369\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
LX0369  
LX0369 HISTORY - Date Condition Report By  
LX0369 HISTORY - 1965 MONUMENTED CGS  
LX0369 HISTORY - 1985 GOOD USPSQD  
LX0369 HISTORY - 1988 GOOD USPSQD  
LX0369  
LX0369 STATION DESCRIPTION  
LX0369  
LX0369 DESCRIBED BY COAST AND GEODETIC SURVEY 1965  
LX0369 AT WEST HAVEN.

LX0369'AT WEST HAVEN ABOUT 60 YARDS NORTHWEST OF THE JUNCTION OF STATE  
 LX0369'HIGHWAY 162 (SAWMILL ROAD) AND HOOD TERRACE, SET VERTICALLY IN  
 LX0369'THE EAST FACE OF THE SOUTH WING WALL OF THE NEW YORK, NEW HAVEN  
 LX0369'AND HARTFORD RAILROAD OVERPASS OVER THE HIGHWAY, 16 FEET SOUTHWEST  
 LX0369'OF THE SOUTHWEST CURB OF THE HIGHWAY, DIRECTLY OVER THE NORTH  
 LX0369'EDGE OF A ROCK CUT, 3 FEET ABOVE THE LEVEL OF THE GROUND AND  
 LX0369'4 FEET ABOVE THE LEVEL OF THE HIGHWAY.

LX0369  
 LX0369 STATION RECOVERY (1985)

LX0369 RECOVERY NOTE BY US POWER SQUADRON 1985  
 LX0369 RECOVERED IN GOOD CONDITION.

LX0369  
 LX0369 STATION RECOVERY (1988)

LX0369 RECOVERY NOTE BY US POWER SQUADRON 1988 (JAC)  
 LX0369 RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = MAY 7, 2007

LX0413 \*\*\*\*\*

LX0413 DESIGNATION - H 35  
 LX0413 PID - LX0413  
 LX0413 STATE/COUNTY- CT/NEW HAVEN  
 LX0413 USGS QUAD - BRANFORD (1984)

LX0413  
 LX0413 \*CURRENT SURVEY CONTROL

LX0413\* NAD 83(1986)- 41 16 40. (N) 072 48 12. (W) SCALED  
 LX0413\* NAVD 88 - 3.826 (meters) 12.55 (feet) ADJUSTED

LX0413  
 LX0413 GEOID HEIGHT- -29.96 (meters) GEOID03  
 LX0413 DYNAMIC HT - 3.824 (meters) 12.55 (feet) COMP  
 LX0413 MODELED GRAV- 980,295.5 (mgal) NAVD 88

LX0413 VERT ORDER - FIRST CLASS I

LX0413.The horizontal coordinates were scaled from a topographic map and have  
 LX0413.an estimated accuracy of +/- 6 seconds.

LX0413.The orthometric height was determined by differential leveling  
 LX0413.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.

LX0413.The geoid height was determined by GEOID03.

LX0413.The dynamic height is computed by dividing the NAVD 88  
 LX0413.geopotential number by the normal gravity value computed on the  
 LX0413.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 LX0413.degrees latitude (g = 980.6199 gals.).

LX0413.The modeled gravity was interpolated from observed gravity values.

LX0413;  
 LX0413;SPC CT - North East Units Estimated Accuracy  
 LX0413; 201,760. 300,330. MT (+/- 180 meters Scaled)

LX0413  
 LX0413 SUPERSEDED SURVEY CONTROL

LX0413 NGVD 29 (??/??/92) 4.138 (m) 13.58 (f) ADJ UNCH 1 1

LX0413.Superseded values are not recommended for survey control.  
 LX0413.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 LX0413.See file dsdata.txt to determine how the superseded data were derived.

LX0413\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL839719(NAD 83)

LX0413\_MARKER: DB = BENCH MARK DISK

LX0413\_SETTING: 36 = SET IN A MASSIVE STRUCTURE

LX0413\_SP\_SET: BRIDGE

LX0413\_STAMPING: H 35 1965

LX0413\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

LX0413  
 LX0413 HISTORY - Date Condition Report By  
 LX0413 HISTORY - 1965 MONUMENTED CGS  
 LX0413 HISTORY - 19910316 GOOD USPSQD  
 LX0413 HISTORY - 19950728 GOOD USPSQD

LX0413  
 LX0413 STATION DESCRIPTION

LX0413  
LX0413'DESCRIBED BY COAST AND GEODETIC SURVEY 1965  
LX0413'AT BRANFORD.  
LX0413'AT BRANFORD, ABOUT 0.4 MILE SOUTH ALONG MONTOWESE STREET FROM  
LX0413'THE POST OFFICE AT BRANFORD, THENCE 0.1 MILE SOUTHEAST ALONG  
LX0413'DAMASCUS ROAD, SET ON THE TOP OF THE NORTHWEST END OF THE  
LX0413'PEDESTRAIN WALK ALONG THE SOUTHWEST SIDE OF THE 75-FOOT CONCRETE  
LX0413'BRIDGE OVER THE BRANFORD RIVER, 4 1/2 FEET SOUTHWEST OF THE  
LX0413'SOUTHWEST CURB OF THE ROAD, 1.3 FEET SOUTHEAST OF THE NORTHWEST  
LX0413'END OF THE WALKWAY AND IS DIRECTLY OVER THE NORTHWEST BRIDGE  
LX0413'ABUTMENT.  
LX0413  
LX0413 STATION RECOVERY (1991)  
LX0413  
LX0413'RECOVERY NOTE BY US POWER SQUADRON 1991 (JAC)  
LX0413'RECOVERED IN GOOD CONDITION.  
LX0413  
LX0413 STATION RECOVERY (1995)  
LX0413  
LX0413'RECOVERY NOTE BY US POWER SQUADRON 1995  
LX0413'RECOVERED IN GOOD CONDITION.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX0438 \*\*\*\*\*  
LX0438 DESIGNATION - M 36  
LX0438 PID - LX0438  
LX0438 STATE/COUNTY- CT/NEW HAVEN  
LX0438 USGS QUAD - GUILFORD (1984)  
LX0438  
LX0438 \*CURRENT SURVEY CONTROL  
LX0438  
LX0438\* NAD 83(1986)- 41 17 17. (N) 072 39 29. (W) SCALED  
LX0438\* NAVD 88 - 26.081 (meters) 85.57 (feet) ADJUSTED  
LX0438  
LX0438 GEOID HEIGHT- -30.11 (meters) GEOID03  
LX0438 DYNAMIC HT - 26.072 (meters) 85.54 (feet) COMP  
LX0438 MODELED GRAV- 980,291.2 (mgal) NAVD 88  
LX0438  
LX0438 VERT ORDER - FIRST CLASS I  
LX0438  
LX0438.The horizontal coordinates were scaled from a topographic map and have  
LX0438.an estimated accuracy of +/- 6 seconds.  
LX0438  
LX0438.The orthometric height was determined by differential leveling  
LX0438.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
LX0438  
LX0438.The geoid height was determined by GEOID03.  
LX0438  
LX0438.The dynamic height is computed by dividing the NAVD 88  
LX0438.geopotential number by the normal gravity value computed on the  
LX0438.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
LX0438.degrees latitude (g = 980.6199 gals.).  
LX0438  
LX0438.The modeled gravity was interpolated from observed gravity values.  
LX0438  
LX0438;  
LX0438;SPC CT - North East Units Estimated Accuracy  
LX0438; - 202,910. 312,500. MT (+/- 180 meters Scaled)  
LX0438  
LX0438 SUPERSEDED SURVEY CONTROL  
LX0438  
LX0438 NGVD 29 (??/??/92) 26.387 (m) 86.57 (f) ADJ UNCH 1 1  
LX0438  
LX0438.Superseded values are not recommended for survey control.  
LX0438.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LX0438.See file dsdata.txt to determine how the superseded data were derived.  
LX0438  
LX0438\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL961733(NAD 83)  
LX0438\_MARKER: DB = BENCH MARK DISK  
LX0438\_SETTING: 36 = SET IN A MASSIVE STRUCTURE  
LX0438\_SP\_SET: ABUTMENT  
LX0438\_STAMPING: M 36 1965  
LX0438\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
LX0438  
LX0438 HISTORY - Date Condition Report By  
LX0438 HISTORY - 1965 MONUMENTED CGS



LX0438 HISTORY - 19910317 GOOD USPSQD

LX0438

LX0438 STATION DESCRIPTION

LX0438

LX0438 DESCRIBED BY COAST AND GEODETIC SURVEY 1965

LX0438 1.4 MI E FROM GUILFORD.

LX0438 1.3 MILES EAST ALONG STATE HIGHWAY 146 FROM THE POST OFFICE

LX0438 AT GUILFORD, THENCE 0.1 MILE SOUTHEAST ALONG U.S. HIGHWAY 1,

LX0438 ABOUT 100 YARDS NORTH OF THE JUNCTION OF THE HIGHWAY AND

LX0438 TANNER MARSH ROAD, SET ON THE TOP OF THE SOUTH END OF THE

LX0438 EAST CONCRETE GUARD RAIL BASE OF THE TANNER MARSH ROAD

LX0438 OVERPASS OVER THE CONNECTICUT TURNPIKE, 24 FEET EAST OF THE

LX0438 CENTER LINE OF THE ROAD, 11 1/2 FEET NORTH OF THE SOUTH END

LX0438 OF THE GUARD RAIL BASE, DIRECTLY OVER THE EAST END OF THE

LX0438 SOUTH ABUTMENT AND 1 FOOT ABOVE THE LEVEL OF THE ROADWAY.

LX0438

LX0438 STATION RECOVERY (1991)

LX0438

LX0438 RECOVERY NOTE BY US POWER SQUADRON 1991 (JAC)

LX0438 RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = MAY 7, 2007

LX0466 \*\*\*\*\*

LX0466 DESIGNATION - V 36

LX0466 PID - LX0466

LX0466 STATE/COUNTY- CT/MIDDLESEX

LX0466 USGS QUAD - CLINTON (1984)

LX0466

LX0466 \*CURRENT SURVEY CONTROL

LX0466

LX0466\* NAD 83(1996)- 41 16 33.77665(N) 072 32 45.32701(W) ADJUSTED

LX0466\* NAVD 88 - 4.800 (meters) 15.75 (feet) ADJUSTED

LX0466

LX0466 X - 1,439,839.096 (meters) COMP

LX0466 Y - -4,579,381.614 (meters) COMP

LX0466 Z - 4,185,495.044 (meters) COMP

LX0466 LAPLACE CORR- -2.68 (seconds) DEFLEC99

LX0466 ELLIP HEIGHT- -25.46 (meters) (06/04/02) GPS OBS

LX0466 GEOID HEIGHT- -30.28 (meters) GEOID03

LX0466 DYNAMIC HT - 4.798 (meters) 15.74 (feet) COMP

LX0466 MODELED GRAV- 980,288.6 (mgal) NAVD 88

LX0466

LX0466 HORZ ORDER - FIRST

LX0466 VERT ORDER - FIRST CLASS I

LX0466 ELLP ORDER - FOURTH CLASS I

LX0466

LX0466.The horizontal coordinates were established by GPS observations

LX0466.and adjusted by the National Geodetic Survey in May 2000.

LX0466

LX0466.The orthometric height was determined by differential leveling

LX0466.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.

LX0466

LX0466.The X, Y, and Z were computed from the position and the ellipsoidal ht.

LX0466

LX0466.The Laplace correction was computed from DEFLEC99 derived deflections.

LX0466

LX0466.The ellipsoidal height was determined by GPS observations

LX0466.and is referenced to NAD 83.

LX0466

LX0466.The geoid height was determined by GEOID03.

LX0466

LX0466.The dynamic height is computed by dividing the NAVD 88

LX0466.geopotential number by the normal gravity value computed on the

LX0466.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

LX0466.degrees latitude (g = 980.6199 gals.).

LX0466

LX0466.The modeled gravity was interpolated from observed gravity values.

LX0466

LX0466; North East Units Scale Factor Converg.

LX0466;SPC CT - 201,587.275 321,898.599 MT 0.99999319 +0 08 07.1

LX0466;SPC CT - 661,374.25 1,056,095.65 sFT 0.99999319 +0 08 07.1

LX0466;UTM 18 - 4,572,306.586 705,536.294 MT 1.00011994 +1 37 10.2

LX0466

LX0466! - Elev Factor x Scale Factor = Combined Factor

LX0466!SPC CT - 1.00000399 x 0.99999319 = 0.99999718

LX0466!UTM 18 - 1.00000399 x 1.00011994 = 1.00012393  
LX0466  
LX0466 SUPERSEDED SURVEY CONTROL  
LX0466  
LX0466 NAVD 88 (05/22/00) 4.80 (m) 15.7 (f) LEVELING 3  
LX0466 NGVD 29 (??/??/92) 5.124 (m) 16.81 (f) ADJ UNCH 1 1  
LX0466  
LX0466.Superseded values are not recommended for survey control.  
LX0466.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LX0466.See file dsdata.txt to determine how the superseded data were derived.  
LX0466  
LX0466.U.S. NATIONAL GRID SPATIAL ADDRESS: 18TYL0553672307(NAD 83)  
LX0466\_MARKER: DB = BENCH MARK DISK  
LX0466\_SETTING: 36 = SET IN A MASSIVE STRUCTURE  
LX0466\_SP\_SET: BRIDGE  
LX0466\_STAMPING: V 36 1965  
LX0466\_MARK LOGO: CGS  
LX0466\_MAGNETIC: N = NO MAGNETIC MATERIAL  
LX0466\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
LX0466\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
LX0466+SATELLITE: SATELLITE OBSERVATIONS - March 20, 2007  
LX0466  
LX0466 HISTORY - Date Condition Report By  
LX0466 HISTORY - 1965 MONUMENTED CGS  
LX0466 HISTORY - 1974 GOOD CTGS  
LX0466 HISTORY - 1985 GOOD NGS  
LX0466 HISTORY - 1989 GOOD USPSQD  
LX0466 HISTORY - 19940625 GOOD USPSQD  
LX0466 HISTORY - 19970204 GOOD USPSQD  
LX0466 HISTORY - 19991206 GOOD WOOLPT  
LX0466 HISTORY - 19991215 GOOD USPSQD  
LX0466 HISTORY - 20070320 GOOD INDIV  
LX0466  
LX0466 STATION DESCRIPTION  
LX0466  
LX0466'DESCRIBED BY COAST AND GEODETIC SURVEY 1965  
LX0466'1 MI W FROM CLINTON.  
LX0466'1.0 MILE WEST ALONG U.S. HIGHWAY 1 FROM THE POST OFFICE AT  
LX0466'CLINTON, ABOUT 2.6 MILES EAST OF THE POST OFFICE AT MADISON,  
LX0466'ABOUT 0.2 MILE EAST OF THE JUNCTION OF A DRIVE LEADING TO  
LX0466'GRISWOLD AIRPORT, SET ON THE TOP OF THE EAST END OF THE SOUTH  
LX0466'CONCRETE GUARD RAIL BASE FOR A 165 FOOT LONG BRIDGE OVER THE  
LX0466'HAMMONASSET RIVER, 21 FEET SOUTH OF THE CENTER LINE OF THE  
LX0466'HIGHWAY, DIRECTLY OVER THE SOUTH END OF THE EAST ABUTMENT OF THE  
LX0466'BRIDGE AND 1 FOOT ABOVE THE LEVEL OF THE ROADWAY.  
LX0466  
LX0466 STATION RECOVERY (1974)  
LX0466  
LX0466'RECOVERY NOTE BY CONNECTICUT GEODETIC SURVEY 1974  
LX0466'RECOVERED IN GOOD CONDITION.  
LX0466  
LX0466 STATION RECOVERY (1985)  
LX0466  
LX0466'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1985  
LX0466'RECOVERED IN GOOD CONDITION.  
LX0466  
LX0466 STATION RECOVERY (1989)  
LX0466  
LX0466'RECOVERY NOTE BY US POWER SQUADRON 1989 (MW)  
LX0466'RECOVERED IN GOOD CONDITION.  
LX0466  
LX0466 STATION RECOVERY (1994)  
LX0466  
LX0466'RECOVERY NOTE BY US POWER SQUADRON 1994  
LX0466'RECOVERED IN GOOD CONDITION.  
LX0466  
LX0466 STATION RECOVERY (1997)  
LX0466  
LX0466'RECOVERY NOTE BY US POWER SQUADRON 1997  
LX0466'RECOVERED IN GOOD CONDITION.  
LX0466  
LX0466 STATION RECOVERY (1999)  
LX0466  
LX0466'RECOVERY NOTE BY WOOLPERT CONSULTANTS 1999 (ARL)

LX0466 RECOVERED AS DESCRIBED. NOTE-- THIS STATION IS ON THE RIVER SIDE OF  
 LX0466 THE BRIDGE EXPANSION JOINT. THE VERTICAL POSITION OF THIS STATION  
 LX0466 SHOULD BE RELIABLE, BUT THE HORIZONTAL POSITION COULD BE SUBJECT TO  
 LX0466 MOTION.

LX0466  
 LX0466 STATION RECOVERY (1999)  
 LX0466

LX0466 RECOVERY NOTE BY US POWER SQUADRON 1999  
 LX0466 RECOVERED IN GOOD CONDITION.

LX0466  
 LX0466 STATION RECOVERY (2007)  
 LX0466

LX0466 RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2007 (HAS)  
 LX0466 RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = MAY 7, 2007

LX0467 \*\*\*\*\*

LX0467 DESIGNATION - W 36  
 LX0467 PID - LX0467  
 LX0467 STATE/COUNTY- CT/MIDDLESEX  
 LX0467 USGS QUAD - CLINTON (1984)

LX0467  
 LX0467 \*CURRENT SURVEY CONTROL

LX0467*	NAD 83(1986)-	41 16 43.	(N)	072 32 08.	(W)	SCALED
LX0467*	NAVD 88	- 8.252	(meters)	27.07	(feet)	ADJUSTED
LX0467	GEOID HEIGHT-	-30.29	(meters)			GEOID03
LX0467	DYNAMIC HT -	8.250	(meters)	27.07	(feet)	COMP
LX0467	MODELED GRAV-	980,287.8	(mgal)			NAVD 88

LX0467  
 LX0467 VERT ORDER - FIRST CLASS I  
 LX0467

LX0467.The horizontal coordinates were scaled from a topographic map and have  
 LX0467.an estimated accuracy of +/- 6 seconds.

LX0467  
 LX0467.The orthometric height was determined by differential leveling  
 LX0467.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.

LX0467  
 LX0467.The geoid height was determined by GEOID03.  
 LX0467

LX0467.The dynamic height is computed by dividing the NAVD 88  
 LX0467.geopotential number by the normal gravity value computed on the  
 LX0467.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 LX0467.degrees latitude (g = 980.6199 gals.).  
 LX0467

LX0467.The modeled gravity was interpolated from observed gravity values.  
 LX0467

	North	East	Units	Estimated Accuracy
LX0467;SPC CT	- 201,870.	322,770.	MT	(+/- 180 meters Scaled)

LX0467  
 LX0467 SUPERSEDED SURVEY CONTROL

LX0467	NGVD 29 (??/??/92)	8.577 (m)	28.14 (f)	ADJ UNCH	1 1
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LX0467  
 LX0467.Superseded values are not recommended for survey control.  
 LX0467.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 LX0467.See file dsdata.txt to determine how the superseded data were derived.  
 LX0467

LX0467\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TYL063726(NAD 83)  
 LX0467\_MARKER: DB = BENCH MARK DISK  
 LX0467\_SETTING: 65 = SET IN UNSPECIFIED ROCK OR BOULDER  
 LX0467\_SP\_SET: UNSPECIFIED ROCK  
 LX0467\_STAMPING: W 36 1965  
 LX0467\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
 LX0467

LX0467	HISTORY	- Date	Condition	Report By
LX0467	HISTORY	- 1965	MONUMENTED	CGS
LX0467	HISTORY	- 1974	GOOD	CTGS
LX0467	HISTORY	- 19940625	GOOD	USPSQD
LX0467	HISTORY	- 1997	GOOD	USPSQD
LX0467	HISTORY	- 19990227	GOOD	USPSQD
LX0467	HISTORY	- 20070210	GOOD	USPSQD

LX0467  
 LX0467 STATION DESCRIPTION

LX0467  
LX0467'DESCRIBED BY COAST AND GEODETIC SURVEY 1965  
LX0467'AT CLINTON.  
LX0467'AT CLINTON, ABOUT 0.45 MILE WEST ALONG U.S. HIGHWAY 1 FROM THE  
LX0467'POST OFFICE, ABOUT 75 YARDS EAST OF THE JUNCTION OF THE HIGHWAY  
LX0467'AND MAPLE AVENUE, ON THE EAST SIDE OF THE AMERICAN LEGION POST  
LX0467'NO. 66, ON LAND OWNED BY THE AMERICAN LEGIONAIRES, SET IN THE TOP  
LX0467'AND AT ABOUT THE HIGHEST POINT ON A SLOPING ROCK WHICH IS LARGE  
LX0467'AND LONG, 81 1/2 FEET EAST OF THE SOUTHEAST CORNER OF THE EAST  
LX0467'WING OF THE LEGION BLDG, 46 FEET SOUTH OF THE CENTER LINE OF  
LX0467'THE HIGHWAY AND ABOUT 8 FEET ABOVE THE LEVEL OF THE HIGHWAY.  
LX0467  
LX0467 STATION RECOVERY (1974)  
LX0467  
LX0467'RECOVERY NOTE BY CONNECTICUT GEODETIC SURVEY 1974  
LX0467'RECOVERED IN GOOD CONDITION.  
LX0467  
LX0467 STATION RECOVERY (1994)  
LX0467  
LX0467'RECOVERY NOTE BY US POWER SQUADRON 1994  
LX0467'RECOVERED IN GOOD CONDITION.  
LX0467  
LX0467 STATION RECOVERY (1997)  
LX0467  
LX0467'RECOVERY NOTE BY US POWER SQUADRON 1997  
LX0467'RECOVERED IN GOOD CONDITION.  
LX0467  
LX0467 STATION RECOVERY (1999)  
LX0467  
LX0467'RECOVERY NOTE BY US POWER SQUADRON 1999  
LX0467'RECOVERED IN GOOD CONDITION.  
LX0467  
LX0467 STATION RECOVERY (2007)  
LX0467  
LX0467'RECOVERY NOTE BY US POWER SQUADRON 2007 (AA)  
LX0467'RECOVERED IN GOOD CONDITION  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX0771 \*\*\*\*\*  
LX0771 DESIGNATION - J 32  
LX0771 PID - LX0771  
LX0771 STATE/COUNTY- CT/FAIRFIELD  
LX0771 USGS QUAD - NORWALK SOUTH (1984)  
LX0771  
LX0771 \*CURRENT SURVEY CONTROL  
LX0771  
LX0771 \* NAD 83(1986)- 41 03 41. (N) 073 29 03. (W) SCALED  
LX0771 \* NAVD 88 - 18.009 (meters) 59.08 (feet) ADJUSTED  
LX0771  
LX0771 GEOID HEIGHT- -30.28 (meters) GEOID03  
LX0771 DYNAMIC HT - 18.003 (meters) 59.06 (feet) COMP  
LX0771 MODELED GRAV- 980,292.4 (mgal) NAVD 88  
LX0771  
LX0771 VERT ORDER - FIRST CLASS I  
LX0771  
LX0771.The horizontal coordinates were scaled from a topographic map and have  
LX0771.an estimated accuracy of +/- 6 seconds.  
LX0771  
LX0771.The orthometric height was determined by differential leveling  
LX0771.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
LX0771  
LX0771.The geoid height was determined by GEOID03.  
LX0771  
LX0771.The dynamic height is computed by dividing the NAVD 88  
LX0771.geopotential number by the normal gravity value computed on the  
LX0771.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
LX0771.degrees latitude (g = 980.6199 gals.).  
LX0771  
LX0771.The modeled gravity was interpolated from observed gravity values.  
LX0771  
LX0771;  
LX0771:SPC CT - North East Units Estimated Accuracy  
LX0771: 177,990. 243,090. MT (+/- 180 meters Scaled)  
LX0771  
LX0771 SUPERSEDED SURVEY CONTROL  
LX0771

LX0771 NGVD 29 (??/??/92) 18.346 (m) 60.19 (f) ADJ UNCH 1 1

LX0771

LX0771.Superseded values are not recommended for survey control.  
 LX0771.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 LX0771.See file dsdata.txt to determine how the superseded data were derived.

LX0771

LX0771\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL273466(NAD 83)

LX0771\_MARKER: DB = BENCH MARK DISK

LX0771\_SETTING: 80 = SET IN A BOULDER

LX0771\_SP\_SET: BOULDER

LX0771\_STAMPING: J 32 1965

LX0771\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

LX0771+STABILITY: SURFACE MOTION

LX0771

LX0771 HISTORY - Date Condition Report By

LX0771 HISTORY - 1965 MONUMENTED CGS

LX0771 HISTORY - 1983 GOOD NGS

LX0771 HISTORY - 19990214 GOOD USPSQD

LX0771

LX0771 STATION DESCRIPTION

LX0771

LX0771'DESCRIBED BY COAST AND GEODETIC SURVEY 1965

LX0771'1.3 MI SW FROM DARIEN.

LX0771'1.3 MILES SOUTHWEST ALONG U.S. HIGHWAY 1 FROM THE NY, NH AND

LX0771'H RAILROAD OVERPASS AT DARIEN, ABOUT 0.1 MILE EAST OF THE

LX0771'NOROTON STATION POST OFFICE (DARIEN CONN.), NEAR THE

LX0771'INTERSECTION OF DICKINSON ROAD AND U.S. HIGHWAY 1, ON THE

LX0771'PROPERTY OF THE NOROTON FIRE DEPARTMENT, SET ON THE TOP OF A

LX0771'9-BY-4-FOOT BURIED BOULDER WHICH PROJECTS 1 1/2 FEET ABOVE THE

LX0771'LEVEL OF THE GROUND, 64.9 FEET SOUTHWEST OF THE SOUTHWEST CORNER

LX0771'OF THE NOROTON FIRE HOUSE, 56 FEET NORTH OF THE CENTER LINE OF

LX0771'THE HIGHWAY, 19 FEET WEST OF THE CENTER LINE OF DICKINSON ROAD

LX0771'AND 2 FEET ABOVE THE LEVEL OF THE HIGHWAY.

LX0771

LX0771 STATION RECOVERY (1983)

LX0771

LX0771'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1983

LX0771'RECOVERED IN GOOD CONDITION.

LX0771

LX0771 STATION RECOVERY (1999)

LX0771

LX0771'RECOVERY NOTE BY US POWER SQUADRON 1999

LX0771'RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = MAY 7, 2007

LX0782 \*\*\*\*\*

LX0782 DESIGNATION - T 32

LX0782 PID - LX0782

LX0782 STATE/COUNTY- CT/FAIRFIELD

LX0782 USGS QUAD - NORWALK SOUTH (1984)

LX0782

LX0782 \*CURRENT SURVEY CONTROL

LX0782

LX0782\* NAD 83(1986)- 41 06 16. (N) 073 25 50. (W) SCALED

LX0782\* NAVD 88 - 37.609 (meters) 123.39 (feet) ADJUSTED

LX0782

LX0782 GEOID HEIGHT- -30.09 (meters) GEOID03

LX0782 DYNAMIC HT - 37.597 (meters) 123.35 (feet) COMP

LX0782 MODELED GRAV- 980,303.2 (mgal) NAVD 88

LX0782

LX0782 VERT ORDER - FIRST CLASS I

LX0782

LX0782.The horizontal coordinates were scaled from a topographic map and have

LX0782.an estimated accuracy of +/- 6 seconds.

LX0782

LX0782.The orthometric height was determined by differential leveling

LX0782.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.

LX0782

LX0782.The geoid height was determined by GEOID03.

LX0782

LX0782.The dynamic height is computed by dividing the NAVD 88

LX0782.geopotential number by the normal gravity value computed on the

LX0782.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

LX0782.degrees latitude (g = 980.6199 gals.).

LX0782

LX0782.The modeled gravity was interpolated from observed gravity values.  
LX0782  
LX0782; North East Units Estimated Accuracy  
LX0782;SPC CT - 182,730. 247,630. MT (+/- 180 meters Scaled)  
LX0782  
LX0782 SUPERSEDED SURVEY CONTROL  
LX0782  
LX0782 NGVD 29 (??/??/92) 37.943 (m) 124.48 (f) ADJ UNCH 1 1  
LX0782  
LX0782.Superseded values are not recommended for survey control.  
LX0782.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LX0782.See file dsdata.txt to determine how the superseded data were derived.  
LX0782  
LX0782\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL317515(NAD 83)  
LX0782\_MARKER: DB = BENCH MARK DISK  
LX0782\_SETTING: 36 = SET IN A MASSIVE STRUCTURE  
LX0782\_SP\_SET: ABUTMENT  
LX0782\_STAMPING: T 32 1965  
LX0782\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
LX0782  
LX0782 HISTORY - Date Condition Report By  
LX0782 HISTORY - 1965 MONUMENTED CGS  
LX0782 HISTORY - 1983 GOOD NGS  
LX0782 HISTORY - 1985 GOOD USPSQD  
LX0782 HISTORY - 1989 GOOD USPSQD  
LX0782 HISTORY - 1989 GOOD USPSQD  
LX0782 HISTORY - 19990209 GOOD USPSQD  
LX0782  
LX0782 STATION DESCRIPTION  
LX0782  
LX0782'DESCRIBED BY COAST AND GEODETIC SURVEY 1965  
LX0782'0.8 MI SW FROM NORWALK.  
LX0782'0.75 MILE SOUTHWEST ALONG U.S. HIGHWAY 1 FROM THE INTERSECTION  
LX0782'OF WEST AVENUE AT NORWALK, NEAR THE INTERSECTION OF THE HIGHWAY  
LX0782'AND NORTH TAYLOR AVENUE, SET ON THE TOP OF THE SOUTHWEST END OF  
LX0782'THE NORTHWEST CONCRETE ABUTMENT OF THE NORTH TAYLOR AVENUE  
LX0782'OVERPASS OVER THE CONNECTICUT TURNPIKE, 230 FEET SOUTHEAST OF  
LX0782'THE CENTER LINE OF THE HIGHWAY, 7.7 FEET SOUTHWEST OF THE  
LX0782'SOUTHWEST CURB OF THE AVENUE AND 1/2 FOOT ABOVE THE LEVEL OF  
LX0782'THE AVENUE.  
LX0782  
LX0782 STATION RECOVERY (1983)  
LX0782  
LX0782'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1983  
LX0782'RECOVERED IN GOOD CONDITION.  
LX0782  
LX0782 STATION RECOVERY (1985)  
LX0782  
LX0782'RECOVERY NOTE BY US POWER SQUADRON 1985  
LX0782'RECOVERED IN GOOD CONDITION.  
LX0782  
LX0782 STATION RECOVERY (1989)  
LX0782  
LX0782'RECOVERY NOTE BY US POWER SQUADRON 1989 (AV)  
LX0782'RECOVERED IN GOOD CONDITION.  
LX0782  
LX0782 STATION RECOVERY (1989)  
LX0782  
LX0782'RECOVERY NOTE BY US POWER SQUADRON 1989 (RS)  
LX0782'RECOVERED IN GOOD CONDITION.  
LX0782  
LX0782 STATION RECOVERY (1999)  
LX0782  
LX0782'RECOVERY NOTE BY US POWER SQUADRON 1999  
LX0782'RECOVERED IN GOOD CONDITION.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX0813 \*\*\*\*\*  
LX0813 DESIGNATION - E 33  
LX0813 PID - LX0813  
LX0813 STATE/COUNTY- CT/FAIRFIELD  
LX0813 USGS QUAD - SHERWOOD POINT (1971)  
LX0813  
LX0813 \*CURRENT SURVEY CONTROL  
LX0813

LX0813\* NAD 83(1986)- 41 07 20. (N) 073 19 54. (W) SCALED  
LX0813\* NAVD 88 - 10.324 (meters) 33.87 (feet) ADJUSTED  
LX0813  
LX0813 GEOID HEIGHT- -29.98 (meters) GEOID03  
LX0813 DYNAMIC HT - 10.321 (meters) 33.86 (feet) COMP  
LX0813 MODELED GRAV- 980,306.6 (mgal) NAVD 88  
LX0813  
LX0813 VERT ORDER - FIRST CLASS I  
LX0813  
LX0813.The horizontal coordinates were scaled from a topographic map and have  
LX0813.an estimated accuracy of +/- 6 seconds.  
LX0813  
LX0813.The orthometric height was determined by differential leveling  
LX0813.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
LX0813  
LX0813.The geoid height was determined by GEOID03.  
LX0813  
LX0813.The dynamic height is computed by dividing the NAVD 88  
LX0813.geopotential number by the normal gravity value computed on the  
LX0813.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
LX0813.degrees latitude (g = 980.6199 gals.).  
LX0813  
LX0813.The modeled gravity was interpolated from observed gravity values.  
LX0813  
LX0813;  
LX0813: North East Units Estimated Accuracy  
LX0813:SPC CT - 184,650. 255,950. MT (+/- 180 meters Scaled)  
LX0813  
LX0813 SUPERSEDED SURVEY CONTROL  
LX0813  
LX0813 NGVD 29 (??/??/92) 10.659 (m) 34.97 (f) ADJ UNCH 1 1  
LX0813  
LX0813.Superseded values are not recommended for survey control.  
LX0813.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LX0813.See file dsdata.txt to determine how the superseded data were derived.  
LX0813  
LX0813\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL400536(NAD 83)  
LX0813\_MARKER: DB = BENCH MARK DISK  
LX0813\_SETTING: 36 = SET IN A MASSIVE STRUCTURE  
LX0813\_SP\_SET: ABUTMENT  
LX0813\_STAMPING: E 33 1965  
LX0813\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
LX0813  
LX0813 HISTORY - Date Condition Report By  
LX0813 HISTORY - 1965 MONUMENTED CGS  
LX0813 HISTORY - 1983 GOOD NGS  
LX0813 HISTORY - 1984 GOOD USPSQD  
LX0813 HISTORY - 1989 GOOD USPSQD  
LX0813 HISTORY - 1989 GOOD USPSQD  
LX0813 HISTORY - 20040310 GOOD INDIV  
LX0813  
LX0813  
LX0813 STATION DESCRIPTION  
LX0813  
LX0813'DESCRIBED BY COAST AND GEODETIC SURVEY 1965  
LX0813'2.4 MI E FROM SAUGATUCK.  
LX0813'2.1 MILES EAST ALONG STATE HIGHWAY 136 FROM THE EAST END OF THE  
LX0813'BRIDGE OVER THE SAUGATUCK RIVER, THENCE 0.3 MILE SOUTH ALONG  
LX0813'SHERWOOD ISLAND ROAD, SET ON THE TOP OF THE WEST END OF THE  
LX0813'NORTH CONCRETE ABUTMENT OF THE OVERPASS OVER THE CONNECTICUT  
LX0813'TURNPIKE, 10 1/2 FEET WEST OF THE WEST CURB OF THE BRIDGE, 1.2  
LX0813'FEET WEST OF THE WEST FACE OF THE WEST GUARD RAIL BASE AND ABOUT  
LX0813'LEVEL WITH THE ROAD.  
LX0813  
LX0813  
LX0813 STATION RECOVERY (1983)  
LX0813  
LX0813'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1983  
LX0813'RECOVERED IN GOOD CONDITION.  
LX0813  
LX0813 STATION RECOVERY (1984)  
LX0813  
LX0813'RECOVERY NOTE BY US POWER SQUADRON 1984  
LX0813'RECOVERED IN GOOD CONDITION.  
LX0813  
LX0813  
LX0813 STATION RECOVERY (1989)  
LX0813

LX0813'RECOVERY NOTE BY US POWER SQUADRON 1989 (HOP)  
LX0813'RECOVERED IN GOOD CONDITION.  
LX0813  
LX0813 STATION RECOVERY (1989)  
LX0813  
LX0813'RECOVERY NOTE BY US POWER SQUADRON 1989 (HP)  
LX0813'RECOVERED IN GOOD CONDITION.  
LX0813  
LX0813 STATION RECOVERY (2004)  
LX0813  
LX0813'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2004 (DLL)  
LX0813'RECOVERED AS DESCRIBED BY TOWN OF WESTPORT, SURVEY DIV.,GPS- CLOSE  
LX0813'FENCE APPEARS TO AFFECT BY MULTIPATH ERROR.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX0829 \*\*\*\*\*  
LX0829 DESIGNATION - N 33  
LX0829 PID - LX0829  
LX0829 STATE/COUNTY- CT/FAIRFIELD  
LX0829 USGS QUAD - WESTPORT (1975)  
LX0829  
LX0829 \*CURRENT SURVEY CONTROL  
LX0829  
LX0829\* NAD 83(1986)- 41 08 35. (N) 073 15 16. (W) SCALED  
LX0829\* NAVD 88 - 5.595 (meters) 18.36 (feet) ADJUSTED  
LX0829  
LX0829 GEOID HEIGHT- -29.92 (meters) GEOID03  
LX0829 DYNAMIC HT - 5.593 (meters) 18.35 (feet) COMP  
LX0829 MODELED GRAV- 980,307.2 (mgal) NAVD 88  
LX0829  
LX0829 VERT ORDER - FIRST CLASS I  
LX0829  
LX0829.The horizontal coordinates were scaled from a topographic map and have  
LX0829.an estimated accuracy of +/- 6 seconds.  
LX0829  
LX0829.The orthometric height was determined by differential leveling  
LX0829.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
LX0829  
LX0829.The geoid height was determined by GEOID03.  
LX0829  
LX0829.The dynamic height is computed by dividing the NAVD 88  
LX0829.geopotential number by the normal gravity value computed on the  
LX0829.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
LX0829.degrees latitude (g = 980.6199 gals.).  
LX0829  
LX0829.The modeled gravity was interpolated from observed gravity values.  
LX0829  
LX0829;  
LX0829; North East Units Estimated Accuracy  
LX0829; SPC CT - 186,920. 262,450. MT (+/- 180 meters Scaled)  
LX0829  
LX0829 SUPERSEDED SURVEY CONTROL  
LX0829  
LX0829 NGVD 29 (??/??/92) 5.927 (m) 19.45 (f) ADJ UNCH 1 1  
LX0829  
LX0829.Superseded values are not recommended for survey control.  
LX0829.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LX0829.See file dsdata.txt to determine how the superseded data were derived.  
LX0829  
LX0829\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL464561(NAD 83)  
LX0829\_MARKER: DB = BENCH MARK DISK  
LX0829\_SETTING: 36 = SET IN A MASSIVE STRUCTURE  
LX0829\_SP\_SET: BUILDING  
LX0829\_STAMPING: N 33 1965  
LX0829\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
LX0829  
LX0829 HISTORY - Date Condition Report By  
LX0829 HISTORY - 1965 MONUMENTED CGS  
LX0829 HISTORY - 1983 GOOD USPSQD  
LX0829  
LX0829 STATION DESCRIPTION  
LX0829  
LX0829'DESCRIBED BY COAST AND GEODETIC SURVEY 1965  
LX0829'AT FAIRFIELD.  
LX0829'AT FAIRFIELD, ALONG U.S. HIGHWAY 1, (POST ROAD), IN THE 1200  
LX0829'BLOCK OF POST ROAD, AT THE SOUTH CORNER OF THE MAIN POST OFFICE



LX0829' BUILDING, SET ON THE TOP OF THE SOUTH CORNER OF A CONCRETE  
LX0829' WALL THAT IS AROUND A BASEMENT WINDOW (THE WALL FORMS A BOX  
LX0829' WHICH IS 11 FEET LONG, 4 FEET WIDE AND 6 FEET DEEP), 28 FEET  
LX0829' NORTHWEST OF THE NORTHWEST CURB LINE OF POST ROAD, 3.6 FEET  
LX0829' SOUTHWEST OF THE SOUTH CORNER OF THE POST OFFICE BUILDING AND  
LX0829' 2 FEET ABOVE THE LEVEL OF THE HIGHWAY.  
LX0829  
LX0829 STATION RECOVERY (1983)  
LX0829  
LX0829 RECOVERY NOTE BY US POWER SQUADRON 1983  
LX0829' AT FAIRFIELD, ALONG U.S. HIGHWAY 1, (POST ROAD), IN THE 1200 BLOCK OF  
LX0829' POST ROAD, AT THE SOUTH CORNER OF THE MAIN POST OFFICE BUILDING, SET  
LX0829' ON THE TOP OF THE SOUTH CORNER OF A CONCRETE WALL THAT IS AROUND A  
LX0829' BASEMENT WINDOW (THE WALL FORMS A BOX WHICH IS 11 FEET LONG, 4 FEET  
LX0829' WIDE AND 6 FEET DEEP), 28 FEET NORTHWEST OF CORNER OF THE POST OFFICE  
LX0829' BUILDING AND 2 FEET ABOVE THE LEVEL OF THE HIGHWAY.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX0868 \*\*\*\*\*  
LX0868 DESIGNATION - E 31  
LX0868 PID - LX0868  
LX0868 STATE/COUNTY- CT/FAIRFIELD  
LX0868 USGS QUAD - BRIDGEPORT (1984)  
LX0868  
LX0868 \*CURRENT SURVEY CONTROL  
LX0868  
LX0868\* NAD 83(1986)- 41 09 48. (N) 073 07 43. (W) SCALED  
LX0868\* NAVD 88 - 3.167 (meters) 10.39 (feet) ADJUSTED  
LX0868  
LX0868 GEOID HEIGHT- -29.93 (meters) GEOID03  
LX0868 DYNAMIC HT - 3.166 (meters) 10.39 (feet) COMP  
LX0868 MODELED GRAV- 980,302.9 (mgal) NAVD 88  
LX0868  
LX0868 VERT ORDER - FIRST CLASS I  
LX0868  
LX0868.This mark is at Igor I Sikorsky Mem Airport (BDR)  
LX0868  
LX0868.The horizontal coordinates were scaled from a topographic map and have  
LX0868.an estimated accuracy of +/- 6 seconds.  
LX0868  
LX0868.The orthometric height was determined by differential leveling  
LX0868.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
LX0868  
LX0868.The geoid height was determined by GEOID03.  
LX0868  
LX0868.The dynamic height is computed by dividing the NAVD 88  
LX0868.geopotential number by the normal gravity value computed on the  
LX0868.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
LX0868.degrees latitude (g = 980.6199 gals.).  
LX0868  
LX0868.The modeled gravity was interpolated from observed gravity values.  
LX0868  
LX0868;  
LX0868; North East Units Estimated Accuracy  
LX0868; SPC CT - 189,120. 273,030. MT (+/- 180 meters Scaled)  
LX0868  
LX0868 SUPERSEDED SURVEY CONTROL  
LX0868  
LX0868 NGVD 29 (??/??/92) 3.495 (m) 11.47 (f) ADJ UNCH 1 1  
LX0868  
LX0868.Superseded values are not recommended for survey control.  
LX0868.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LX0868.See file dsdata.txt to determine how the superseded data were derived.  
LX0868  
LX0868\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL570585(NAD 83)  
LX0868\_MARKER: DB = BENCH MARK DISK  
LX0868\_SETTING: 36 = SET IN A MASSIVE STRUCTURE  
LX0868\_SP\_SET: FLAGPOLE CONCRETE BASE  
LX0868\_STAMPING: E 31 1963  
LX0868\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
LX0868  
LX0868 HISTORY - Date Condition Report By  
LX0868 HISTORY - 1963 MONUMENTED CGS  
LX0868 HISTORY - 1965 GOOD NGS  
LX0868 HISTORY - 1971 GOOD NGS  
LX0868 HISTORY - 1982 GOOD NGS

LX0868 HISTORY - 1985 GOOD USPSQD  
LX0868  
LX0868 STATION DESCRIPTION  
LX0868  
LX0868 DESCRIBED BY NATIONAL GEODETIC SURVEY 1965  
LX0868 AT BRIDGEPORT AIRPORT.  
LX0868 AT THE BRIDGEPORT MUNICIPAL AIRPORT, SET ON THE TOP AND NEAR  
LX0868 THE WEST CORNER OF THE CONCRETE BASE SUPPORTING THE LARGE FLAG  
LX0868 POLE (CONCRETE BASE IS 8 FEET DEEP) 9.1 FEET NORTHWEST OF THE  
LX0868 WEST CORNER OF THE ADMINISTRATION BUILDING AND FLUSH WITH THE  
LX0868 GROUND.  
LX0868  
LX0868 STATION RECOVERY (1971)  
LX0868  
LX0868 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1971  
LX0868 RECOVERED IN GOOD CONDITION.  
LX0868  
LX0868 STATION RECOVERY (1982)  
LX0868  
LX0868 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1982  
LX0868 RECOVERED IN GOOD CONDITION.  
LX0868  
LX0868 STATION RECOVERY (1985)  
LX0868  
LX0868 RECOVERY NOTE BY US POWER SQUADRON 1985  
LX0868 EXCEPT THAT AIRPORT IS NOW CALLED 'IGOR SIKORSKY MEMORIAL AIRPORT'.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
\*\*\*\*\*  
LX0900 CBN - This is a Cooperative Base Network Control Station.  
LX0900 TIDAL BM - This is a Tidal Bench Mark.  
LX0900 DESIGNATION - TIDAL 3 STA 26  
LX0900 PID - LX0900  
LX0900 STATE/COUNTY- CT/NEW HAVEN  
LX0900 USGS QUAD - MILFORD (1984)  
LX0900  
LX0900 \*CURRENT SURVEY CONTROL  
LX0900  
LX0900 \* NAD 83(1996)- 41 12 38.38672(N) 073 02 48.16279(W) ADJUSTED  
LX0900 \* NAVD 88 - 2.213 (meters) 7.26 (feet) ADJUSTED  
LX0900  
LX0900 X - 1,401,154.465 (meters) COMP  
LX0900 Y - -4,596,368.982 (meters) COMP  
LX0900 Z - 4,180,033.435 (meters) COMP  
LX0900 LAPLACE CORR- -2.25 (seconds) DEFLEC99  
LX0900 ELLIP HEIGHT- -27.66 (meters) (06/22/01) GPS OBS  
LX0900 GEOID HEIGHT- -29.86 (meters) GEOID03  
LX0900 DYNAMIC HT - 2.212 (meters) 7.26 (feet) COMP  
LX0900 MODELED GRAV- 980,308.9 (mgal) NAVD 88  
LX0900  
LX0900 HORZ ORDER - A  
LX0900 VERT ORDER - FIRST CLASS I  
LX0900 ELLP ORDER - FOURTH CLASS I  
LX0900  
LX0900.The horizontal coordinates were established by GPS observations  
LX0900.and adjusted by the National Geodetic Survey in June 2001.  
LX0900  
LX0900.The orthometric height was determined by differential leveling  
LX0900.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
LX0900  
LX0900.This Tidal Bench Mark is designated as VM 2275  
LX0900.by the Center for Operational Oceanographic Products and Services.  
LX0900  
LX0900.The X, Y, and Z were computed from the position and the ellipsoidal ht.  
LX0900  
LX0900.The Laplace correction was computed from DEFLEC99 derived deflections.  
LX0900  
LX0900.The ellipsoidal height was determined by GPS observations  
LX0900.and is referenced to NAD 83.  
LX0900  
LX0900.The geoid height was determined by GEOID03.  
LX0900  
LX0900.The dynamic height is computed by dividing the NAVD 88  
LX0900.geopotential number by the normal gravity value computed on the  
LX0900.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

LX0900.degrees latitude (g = 980.6199 gals.).

LX0900

LX0900.The modeled gravity was interpolated from observed gravity values.

LX0900

LX0900;		North	East	Units	Scale	Factor	Converg.
LX0900;SPC CT	-	194,348.148	279,916.428	MT	0.99999894	-0 11	48.3
LX0900;SPC CT	-	637,623.88	918,359.15	sFT	0.99999894	-0 11	48.3
LX0900;UTM 18	-	4,563,982.456	663,754.613	MT	0.99993003	+1 17	13.8

LX0900!

LX0900!		Elev Factor	x	Scale Factor	=	Combined Factor
LX0900!SPC CT	-	1.00000434	x	0.99999894	=	1.00000328
LX0900!UTM 18	-	1.00000434	x	0.99993003	=	0.99993437

LX0900

SUPERSEDED SURVEY CONTROL

LX0900

LX0900	NAVD 88 (06/22/01)	2.21	(m)	7.3	(f)	LEVELING	3
LX0900	NGVD 29 (??/??/92)	2.54	(m)	8.3	(f)	COMPUTED	1 1

LX0900

LX0900.Superseded values are not recommended for survey control.

LX0900.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

LX0900.See file dsdata.txt to determine how the superseded data were derived.

LX0900

LX0900\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL6375563982(NAD 83)

LX0900\_MARKER: DJ = TIDAL STATION DISK

LX0900\_SETTING: 36 = SET IN A MASSIVE STRUCTURE

LX0900\_SP\_SET: BRIDGE WINGWALL

LX0900\_STAMPING: NO 3 1917

LX0900\_MARK LOGO: CGS

LX0900\_MAGNETIC: N = NO MAGNETIC MATERIAL

LX0900\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

LX0900\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

LX0900+SATELLITE: SATELLITE OBSERVATIONS - April 10, 2005

LX0900

LX0900	HISTORY	- Date	Condition	Report By
LX0900	HISTORY	- 1917	MONUMENTED	CGS
LX0900	HISTORY	- 1965	GOOD	NGS
LX0900	HISTORY	- 20001121	GOOD	CTGS
LX0900	HISTORY	- 20010716	GOOD	CTGS
LX0900	HISTORY	- 20040328	GOOD	USPSQD
LX0900	HISTORY	- 20050410	GOOD	CTGS

LX0900

STATION DESCRIPTION

LX0900

LX0900'DESCRIBED BY NATIONAL GEODETIC SURVEY 1965

LX0900'AT MILFORD.

LX0900'AT MILFORD, ABOUT 0.8 MILE SOUTH ALONG GULF STREET FROM THE

LX0900'INTERSECTION OF NEW HAVEN AVENUE, NEAR THE MOUTH OF MILFORD

LX0900'HARBOR, 73 FEET SOUTHWEST OF THE SOUTHWEST CORNER OF THE NEW

LX0900'CONCRETE BRIDGE OVER GULF POND, SET IN THE TOP OF THE SOUTHWEST

LX0900'STONE WING WALL OF THE OLD STEEL BRIDGE OVER GULF POND, 52 1/2

LX0900'FEET SOUTH OF THE SOUTHWEST CORNER OF THE OLD BRIDGE, 5.3 FEET

LX0900'NORTH OF THE SOUTH END OF THE WING WALL AND 4 FEET BELOW THE

LX0900'LEVEL OF THE STREET.

LX0900

STATION RECOVERY (2000)

LX0900

LX0900'RECOVERY NOTE BY CONNECTICUT GEODETIC SURVEY 2000 (RB)

LX0900'A CGS TIDAL MARK DISK, STAMPED NO 3 1917 , SET IN THE TOP OF THE

LX0900'SOUTHWEST STONE WING WALL OF THE OLD STEEL BRIDGE OVER GULF

LX0900'POND AT MILFORD, ABOUT 0.8 MILE SOUTH ALONG GULF STREET FROM

LX0900'THE INTERSECTION OF NEW HAVEN AVENUE, NEAR THE MOUTH OF MILFORD

LX0900'HARBOR, 73 FEET SOUTHWEST OF THE SOUTHWEST CORNER OF THE NEW

LX0900'CONCRETE BRIDGE OVER GULF POND, 52 1/2 FEET SOUTH OF THE

LX0900'SOUTHWEST CORNER OF THE OLD BRIDGE, 5.3 FEET NORTH OF THE SOUTH

LX0900'END OF THE WING WALL, 4 FEET BELOW THE LEVEL OF THE STREET.

LX0900'TIDAL STATION 26, CONNECTICUT, MILFORD, MILFORD HARBOR

LX0900'WIDE OPEN FOR GPS. 07/25/2000 BONGI

LX0900'2 LEG SET-UP FOR GPS (FIXED TRIPOD). 7/19/00 CTGS/DMC

LX0900'

LX0900

STATION RECOVERY (2001)

LX0900

LX0900'RECOVERY NOTE BY CONNECTICUT GEODETIC SURVEY 2001 (DM)

LX0900'RECOVERED AS DESCRIBED.

LX0900'  
LX0900  
LX0900 STATION RECOVERY (2004)  
LX0900  
LX0900 RECOVERY NOTE BY US POWER SQUADRON 2004 (WDM)  
LX0900 RECOVERED IN GOOD CONDITION.  
LX0900  
LX0900 STATION RECOVERY (2005)  
LX0900  
LX0900 RECOVERY NOTE BY CONNECTICUT GEODETIC SURVEY 2005  
LX0900 RECOVERED AS DESCRIBED IN NGS DATABASE  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX0901 \*\*\*\*\*  
LX0901 TIDAL BM - This is a Tidal Bench Mark.  
LX0901 DESIGNATION - 13 RM 1  
LX0901 PID - LX0901  
LX0901 STATE/COUNTY- CT/NEW HAVEN  
LX0901 USGS QUAD - MILFORD (1984)  
LX0901  
LX0901 \*CURRENT SURVEY CONTROL  
LX0901  
LX0901\* NAD 83(1986)- 41 12 37. (N) 073 02 47. (W) SCALED  
LX0901\* NAVD 88 - 2.196 (meters) 7.20 (feet) ADJUSTED  
LX0901  
LX0901 GEOID HEIGHT- -29.86 (meters) GEOID03  
LX0901 DYNAMIC HT - 2.195 (meters) 7.20 (feet) COMP  
LX0901 MODELED GRAV- 980,308.9 (mgal) NAVD 88  
LX0901  
LX0901 VERT ORDER - FIRST CLASS I  
LX0901  
LX0901.The horizontal coordinates were scaled from a topographic map and have  
LX0901.an estimated accuracy of +/- 6 seconds.  
LX0901  
LX0901.The orthometric height was determined by differential leveling  
LX0901.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
LX0901  
LX0901.This Tidal Bench Mark is designated as VM 2279  
LX0901.by the Center for Operational Oceanographic Products and Services.  
LX0901  
LX0901.The geoid height was determined by GEOID03.  
LX0901  
LX0901.The dynamic height is computed by dividing the NAVD 88  
LX0901.geopotential number by the normal gravity value computed on the  
LX0901.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
LX0901.degrees latitude (g = 980.6199 gals.).  
LX0901  
LX0901.The modeled gravity was interpolated from observed gravity values.  
LX0901  
LX0901;  
LX0901;SPC CT - North East Units Estimated Accuracy  
LX0901; 194,310. 279,940. MT (+/- 180 meters Scaled)  
LX0901  
LX0901 SUPERSEDED SURVEY CONTROL  
LX0901  
LX0901 NGVD 29 (??/??/92) 2.52 (m) 8.3 (f) COMPUTED 1 1  
LX0901  
LX0901.Superseded values are not recommended for survey control.  
LX0901.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LX0901.See file dsdata.txt to determine how the superseded data were derived.  
LX0901  
LX0901\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL637639(NAD 83)  
LX0901\_MARKER: DR = REFERENCE MARK DISK  
LX0901\_SETTING: 36 = SET IN A MASSIVE STRUCTURE  
LX0901\_SP\_SET: BRIDGE  
LX0901\_STAMPING: USE 13 NO 1  
LX0901\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
LX0901\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
LX0901+SATELLITE: SATELLITE OBSERVATIONS - March 28, 2006  
LX0901  
LX0901 HISTORY - Date Condition Report By  
LX0901 HISTORY - 1933 MONUMENTED CGS  
LX0901 HISTORY - 1965 GOOD NGS  
LX0901 HISTORY - 1988 GOOD USPSQD  
LX0901 HISTORY - 20040328 GOOD USPSQD  
LX0901 HISTORY - 20060328 GOOD USPSQD

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LX0901
LX0901          STATION DESCRIPTION
LX0901
LX0901'DESCRIBED BY NATIONAL GEODETIC SURVEY 1965
LX0901'AT MILFORD.
LX0901'AT MILFORD, ABOUT 0.8 MILE SOUTH ALONG GULF STREET FROM THE
LX0901'INTERSECTION OF NEW HAVEN AVENUE, AT THE MOUTH OF MILFORD HARBOR,
LX0901'74 FEET SOUTHWEST OF THE SOUTHWEST CORNER OF THE NEW CONCRETE
LX0901'BRIDGE OVER GULF POND, SET ON TOP OF THE SOUTH END OF THE
LX0901'SOUTHWEST STONE WING WALL OF THE OLD STEEL BRIDGE OVER GULF
LX0901'POND, 55.3 FEET SOUTH OF THE SOUTHWEST CORNER OF THE OLD
LX0901'BRIDGE, 2.5 FEET NORTH OF THE SOUTH END OF THE WING WALL, 2.8
LX0901'FEET SOUTH OF TIDAL MARK 3 AND ABOUT 4 FEET BELOW THE LEVEL OF
LX0901'THE STREET.
LX0901
LX0901          STATION RECOVERY (1988)
LX0901
LX0901'RECOVERY NOTE BY US POWER SQUADRON 1988 (JAC)
LX0901'RECOVERED IN GOOD CONDITION.
LX0901
LX0901          STATION RECOVERY (2004)
LX0901
LX0901'RECOVERY NOTE BY US POWER SQUADRON 2004 (WDM)
LX0901'RECOVERED IN GOOD CONDITION.
LX0901
LX0901          STATION RECOVERY (2006)
LX0901
LX0901'RECOVERY NOTE BY US POWER SQUADRON 2006 (WDM)
LX0901'RECOVERED IN GOOD CONDITION.
1   National Geodetic Survey, Retrieval Date = MAY 7, 2007
LX1147 *****
LX1147 DESIGNATION - J 31
LX1147 PID - LX1147
LX1147 STATE/COUNTY- CT/FAIRFIELD
LX1147 USGS QUAD - GLENNVILLE (1971)
LX1147
LX1147          *CURRENT SURVEY CONTROL
LX1147
LX1147* NAD 83(1986)- 41 01 25. (N) 073 38 10. (W) SCALED
LX1147* NAVD 88 - 24.628 (meters) 80.80 (feet) ADJUSTED
LX1147
LX1147 GEOID HEIGHT- -30.59 (meters) GEOID03
LX1147 DYNAMIC HT - 24.619 (meters) 80.77 (feet) COMP
LX1147 MODELED GRAV- 980,276.8 (mgal) NAVD 88
LX1147
LX1147 VERT ORDER - FIRST CLASS I
LX1147
LX1147.The horizontal coordinates were scaled from a topographic map and have
LX1147.an estimated accuracy of +/- 6 seconds.
LX1147
LX1147.The orthometric height was determined by differential leveling
LX1147.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.
LX1147
LX1147.The geoid height was determined by GEOID03.
LX1147
LX1147.The dynamic height is computed by dividing the NAVD 88
LX1147.geopotential number by the normal gravity value computed on the
LX1147.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
LX1147.degrees latitude (g = 980.6199 gals.).
LX1147
LX1147.The modeled gravity was interpolated from observed gravity values.
LX1147
LX1147; North East Units Estimated Accuracy
LX1147;SPC CT - 173,910. 230,270. MT (+/- 180 meters Scaled)
LX1147
LX1147          SUPERSEDED SURVEY CONTROL
LX1147
LX1147 NGVD 29 (??/??/92) 24.963 (m) 81.90 (f) ADJ UNCH 1 1
LX1147
LX1147.Superseded values are not recommended for survey control.
LX1147.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
LX1147.See file dsdata.txt to determine how the superseded data were derived.
LX1147
LX1147_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL146422(NAD 83)

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LX1147\_MARKER: DB = BENCH MARK DISK  
 LX1147\_SETTING: 80 = SET IN A BOULDER  
 LX1147\_SP\_SET: BOULDER  
 LX1147\_STAMPING: J 31 1965  
 LX1147\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
 LX1147+STABILITY: SURFACE MOTION

LX1147  
 LX1147 HISTORY - Date Condition Report By  
 LX1147 HISTORY - 1965 MONUMENTED CGS  
 LX1147 HISTORY - 1983 GOOD NGS  
 LX1147 HISTORY - 1984 GOOD USPSQD

LX1147 STATION DESCRIPTION

LX1147'DESCRIBED BY COAST AND GEODETIC SURVEY 1965  
 LX1147'AT GREENWICH.  
 LX1147'AT GREENWICH, ABOUT 0.5 MILE SOUTHWEST ALONG U.S. HIGHWAY 1 FROM  
 LX1147'THE INTERSECTION OF GREENWICH AVENUE, NEAR THE SOUTHWEST END OF  
 LX1147'A SMALL PARK, SET ON THE TOP AND NEAR THE SOUTHEAST SIDE AND AT  
 LX1147'ABOUT THE HIGHEST PART OF A 10-BY-6-FOOT EXPOSED PART OF A  
 LX1147'BOULDER WHICH PROJECTS 1 1/4 FEET ABOVE THE LEVEL OF THE GROUND,  
 LX1147'45.5 FEET SOUTHEAST OF THE SOUTHEAST CURB OF THE HIGHWAY, 135  
 LX1147'FEET WEST OF THE CENTER LINE OF EDGEWOOD AVENUE, 30 FEET  
 LX1147'NORTHWEST OF THE CENTER LINE OF A STREET ON THE SOUTHEAST SIDE  
 LX1147'OF THE PARK, AND ABOUT 2 FEET ABOVE THE LEVEL OF THE HIGHWAY.  
 LX1147'NOTE-- MARK MAY BE REACHED BY GOING 0.9 MILE NORTHEAST ALONG  
 LX1147'U.S. HIGHWAY 1 FROM THE WEST PUTNAM POST OFFICE.

LX1147 STATION RECOVERY (1983)

LX1147'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1983  
 LX1147'RECOVERED IN GOOD CONDITION.

LX1147 STATION RECOVERY (1984)

LX1147'RECOVERY NOTE BY US POWER SQUADRON 1984  
 LX1147'RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = MAY 7, 2007

LX1621 \*\*\*\*\*

LX1621 DESIGNATION - C 51  
 LX1621 PID - LX1621  
 LX1621 STATE/COUNTY- CT/NEW HAVEN  
 LX1621 USGS QUAD - NEW HAVEN (1984)

LX1621 \*CURRENT SURVEY CONTROL

LX1621*	NAD 83(1986)-	41 18 58.	(N)	072 54 20.	(W)	SCALED
LX1621*	NAVD 88	- 3.872	(meters)	12.70	(feet)	ADJUSTED
LX1621	GEOID HEIGHT-	-29.74	(meters)			GEOID03
LX1621	DYNAMIC HT -	3.870	(meters)	12.70	(feet)	COMP
LX1621	MODELED GRAV-	980,304.4	(mgal)			NAVD 88

LX1621 VERT ORDER - FIRST CLASS II

LX1621.The horizontal coordinates were scaled from a topographic map and have  
 LX1621.an estimated accuracy of +/- 6 seconds.

LX1621.The orthometric height was determined by differential leveling  
 LX1621.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.

LX1621.The geoid height was determined by GEOID03.

LX1621.The dynamic height is computed by dividing the NAVD 88  
 LX1621.geopotential number by the normal gravity value computed on the  
 LX1621.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 LX1621.degrees latitude (g = 980.6199 gals.).

LX1621.The modeled gravity was interpolated from observed gravity values.

LX1621;	North	East	Units	Estimated Accuracy
LX1621;SPC CT	- 206,030.	291,780.	MT	(+/- 180 meters Scaled)

LX1621 SUPERSEDED SURVEY CONTROL

LX1621  
 LX1621.No superseded survey control is available for this station.  
 LX1621  
 LX1621\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL753759(NAD 83)  
 LX1621\_MARKER: DB = BENCH MARK DISK  
 LX1621\_SETTING: 36 = SET IN A MASSIVE STRUCTURE  
 LX1621\_SP\_SET: ABUTMENT  
 LX1621\_STAMPING: C 51 1978  
 LX1621\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
 LX1621  

LX1621	HISTORY	- Date	Condition	Report By
LX1621	HISTORY	- 1978	MONUMENTED	NGS

 LX1621  
 LX1621  
 LX1621 STATION DESCRIPTION  
 LX1621  
 LX1621 DESCRIBED BY NATIONAL GEODETIC SURVEY 1978  
 LX1621 IN NEW HAVEN.  
 LX1621 IN NEW HAVEN 0.7 MILE NORTHEAST ALONG STATE HIGHWAY 5 WHICH IS ALSO  
 LX1621 STATE STREET, FROM THE U.S. HIGHWAY 91 OVERPASS BRIDGE OVER HIGHWAY 5  
 LX1621 SET IN THE SOUTHEAST ABUTMENT OF THE BRIDGE OVER MILL RIVER, 0.6 FEET  
 LX1621 NORTHEAST OF THE SOUTHEAST CORNER OF THE BRIDGE, 11.5 FEET WEST OF  
 LX1621 THE CORNER POST OF A CHAIN LINK FENCE, 30 FEET SOUTH OF THE CENTER  
 LX1621 LINE OF HIGHWAY 5.  
 1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
 LX1627 \*\*\*\*\*  
 LX1627 DESIGNATION - J 51  
 LX1627 PID - LX1627  
 LX1627 STATE/COUNTY- CT/NEW HAVEN  
 LX1627 USGS QUAD - MOUNT CARMEL (1984)  
 LX1627  
 LX1627 \*CURRENT SURVEY CONTROL  
 LX1627  

LX1627*	NAD 83(1986)-	41 23 03.	(N)	072 52 29.	(W)	SCALED
LX1627*	NAVD 88	-	5.297 (meters)	17.38	(feet)	ADJUSTED

 LX1627  

LX1627	GEOID HEIGHT-	-29.60 (meters)			GEOID03
LX1627	DYNAMIC HT -	5.296 (meters)	17.38	(feet)	COMP
LX1627	MODELED GRAV-	980,309.2 (mgal)			NAVD 88

 LX1627  
 LX1627 VERT ORDER - FIRST CLASS II  
 LX1627  
 LX1627.The horizontal coordinates were scaled from a topographic map and have  
 LX1627.an estimated accuracy of +/- 6 seconds.  
 LX1627  
 LX1627.The orthometric height was determined by differential leveling  
 LX1627.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
 LX1627  
 LX1627.The geoid height was determined by GEOID03.  
 LX1627  
 LX1627.The dynamic height is computed by dividing the NAVD 88  
 LX1627.geopotential number by the normal gravity value computed on the  
 LX1627.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 LX1627.degrees latitude (g = 980.6199 gals.).  
 LX1627  
 LX1627.The modeled gravity was interpolated from observed gravity values.  
 LX1627  

LX1627;		North	East	Units	Estimated Accuracy
LX1627;SPC CT	-	213,580.	294,370.	MT	(+/- 180 meters Scaled)

 LX1627  
 LX1627  
 LX1627 SUPERSEDED SURVEY CONTROL  
 LX1627  
 LX1627.No superseded survey control is available for this station.  
 LX1627  
 LX1627\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL777835(NAD 83)  
 LX1627\_MARKER: DB = BENCH MARK DISK  
 LX1627\_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)  
 LX1627\_SP\_SET: STAINLESS STEEL ROD  
 LX1627\_STAMPING: J 51 1978  
 LX1627\_MARK LOGO: NGS  
 LX1627\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
 LX1627  

LX1627	HISTORY	- Date	Condition	Report By
LX1627	HISTORY	- 1978	MONUMENTED	NGS
LX1627	HISTORY	- 1985	GOOD	NGS

LX1627  
LX1627 STATION DESCRIPTION  
LX1627  
LX1627'DESCRIBED BY NATIONAL GEODETIC SURVEY 1978  
LX1627'1.35 MILE SW FROM NORTH HAVEN.  
LX1627'0.3 MILE SOUTHWEST ALONG STATE HIGHWAY 5 FROM THE POST OFFICE IN  
LX1627'NORTH HAVEN, THENCE 0.6 MILE EAST ALONG STATE HIGHWAYS 5 AND 22  
LX1627'WHICH IS ALSO BROADWAY TO THE JUNCTION OF HIGHWAYS 5 AND 22,  
LX1627'THENCE 0.45 MILE SOUTHWEST ALONG HIGHWAY 5 WHICH IS ALSO STATE  
LX1627'STREET TO THE MARK ON THE LEFT, 2 FEET SOUTH OF POWER POLE NUMBER  
LX1627'1750 WITH STREET LIGHTS AND GUY WIRE, 12 FEET WEST OF GUY WIRE  
LX1627'OF THE POWER POLE, 22 FEET EAST OF THE CENTER LINE OF HIGHWAY  
LX1627'5, 40.5 FEET SOUTHWEST OF THE SOUTHWEST CORNER OF A CONCRETE  
LX1627'BLOCK BUILDING, ROBBYS FIX-IT SHOP, ROD DRIVEN TO REFUSAL.  
LX1627  
LX1627 STATION RECOVERY (1985)  
LX1627  
LX1627'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1985  
LX1627'RECOVERED IN GOOD CONDITION.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX1857 \*\*\*\*\*  
LX1857 DESIGNATION - 11  
LX1857 PID - LX1857  
LX1857 STATE/COUNTY- CT/FAIRFIELD  
LX1857 USGS QUAD - NORWALK SOUTH (1984)  
LX1857  
LX1857 \*CURRENT SURVEY CONTROL  
LX1857  
LX1857\* NAD 83(1986)- 41 06 58. (N) 073 24 54. (W) SCALED  
LX1857\* NAVD 88 - 12.407 (meters) 40.71 (feet) ADJUSTED  
LX1857  
LX1857 GEOID HEIGHT- -30.04 (meters) GEOID03  
LX1857 DYNAMIC HT - 12.403 (meters) 40.69 (feet) COMP  
LX1857 MODELED GRAV- 980,306.6 (mgal) NAVD 88  
LX1857  
LX1857 VERT ORDER - FIRST CLASS II  
LX1857  
LX1857.The horizontal coordinates were scaled from a topographic map and have  
LX1857.an estimated accuracy of +/- 6 seconds.  
LX1857  
LX1857.The orthometric height was determined by differential leveling  
LX1857.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
LX1857  
LX1857.The geoid height was determined by GEOID03.  
LX1857  
LX1857.The dynamic height is computed by dividing the NAVD 88  
LX1857.geopotential number by the normal gravity value computed on the  
LX1857.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
LX1857.degrees latitude (g = 980.6199 gals.).  
LX1857  
LX1857.The modeled gravity was interpolated from observed gravity values.  
LX1857  
LX1857;  
LX1857;SPC CT - North East Units Estimated Accuracy  
LX1857; 184,020. 248,950. MT (+/- 180 meters Scaled)  
LX1857  
LX1857 SUPERSEDED SURVEY CONTROL  
LX1857  
LX1857.No superseded survey control is available for this station.  
LX1857  
LX1857\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL330528(NAD 83)  
LX1857\_MARKER: DD = SURVEY DISK  
LX1857\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT  
LX1857\_SP\_SET: CONCRETE POST  
LX1857\_STAMPING: 11  
LX1857\_MARK LOGO: LOCENG  
LX1857\_PROJECTION: FLUSH  
LX1857\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
LX1857+STABILITY: SURFACE MOTION  
LX1857  
LX1857 HISTORY - Date Condition Report By  
LX1857 HISTORY - UNK MONUMENTED LOCENG  
LX1857 HISTORY - 1984 GOOD NGS  
LX1857  
LX1857 STATION DESCRIPTION



LX1857  
 LX1857'DESCRIBED BY NATIONAL GEODETIC SURVEY 1984  
 LX1857'IN NORWALK.  
 LX1857'IN NORWALK, AT THE INTERSECTION OF WEST AVENUE AND WALL STREET, IN A  
 LX1857'HEDGE ROW ON THE SOUTH SIDE OF THE ENTRANCE TO THE NORWALK UNITED  
 LX1857'METHODIST CHURCH, 3.66 METERS (12.0 FT) WEST OF THE WEST CURB OF WEST  
 LX1857'AVENUE, 7.77 METERS (25.3 FT) EAST-NORTHEAST OF THE SOUTHEAST CORNER  
 LX1857'OF THE CHURCH, 3.47 METERS (11.4 FT) NORTHWEST OF IRON LAMP POST 28879  
 LX1857'WITH A SECURITY LIGHT.  
 LX1857'THE MARK IS 0.30 M ABOVE WEST AVENUE.

1 National Geodetic Survey, Retrieval Date = MAY 7, 2007

LX2863 \*\*\*\*\*  
 LX2863 DESIGNATION - V 78  
 LX2863 PID - LX2863  
 LX2863 STATE/COUNTY- CT/NEW HAVEN  
 LX2863 USGS QUAD - BRANFORD (1984)  
 LX2863  
 LX2863 \*CURRENT SURVEY CONTROL

LX2863*	NAD 83(1986)-	41 23 21.	(N)	072 51 10.	(W)	SCALED
LX2863*	NAVD 88	- 13.162	(meters)	43.18	(feet)	ADJUSTED
LX2863	GEOID HEIGHT-	-29.62	(meters)			GEOID03
LX2863	DYNAMIC HT -	13.158	(meters)	43.17	(feet)	COMP
LX2863	MODELED GRAV-	980,307.3	(mgal)			NAVD 88

LX2863  
 LX2863 VERT ORDER - FIRST CLASS II  
 LX2863  
 LX2863.The horizontal coordinates were scaled from a topographic map and have  
 LX2863.an estimated accuracy of +/- 6 seconds.  
 LX2863  
 LX2863.The orthometric height was determined by differential leveling  
 LX2863.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
 LX2863  
 LX2863.The geoid height was determined by GEOID03.  
 LX2863  
 LX2863.The dynamic height is computed by dividing the NAVD 88  
 LX2863.geopotential number by the normal gravity value computed on the  
 LX2863.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 LX2863.degrees latitude (g = 980.6199 gals.).  
 LX2863  
 LX2863.The modeled gravity was interpolated from observed gravity values.  
 LX2863  

LX2863;	North	East	Units	Estimated Accuracy
LX2863;SPC CT -	214,140.	296,210.	MT	(+/- 180 meters Scaled)

LX2863  
 LX2863 SUPERSEDED SURVEY CONTROL  
 LX2863  
 LX2863.No superseded survey control is available for this station.  
 LX2863  
 LX2863\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL795841(NAD 83)  
 LX2863\_MARKER: I = METAL ROD  
 LX2863\_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)  
 LX2863\_SP\_SET: STAINLESS STEEL ROD  
 LX2863\_STAMPING: V 78 1985  
 LX2863\_MARK LOGO: NGS  
 LX2863\_PROJECTION: FLUSH  
 LX2863\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
 LX2863\_ROD/PIPE-DEPTH: 12.2 meters  
 LX2863  

LX2863	HISTORY	- Date	Condition	Report By
LX2863	HISTORY	- 1985	MONUMENTED	NGS

LX2863  
 LX2863 STATION DESCRIPTION  
 LX2863  
 LX2863'DESCRIBED BY NATIONAL GEODETIC SURVEY 1985  
 LX2863'0.9 KM (0.55 MI) EAST FROM NORTH HAVEN.  
 LX2863'0.2 KM (0.15 MI) SOUTH ALONG U.S. HIGHWAY 5 FROM THE POST OFFICE IN  
 LX2863'NORTH HAVEN, THENCE 0.6 KM (0.4 MI) EAST ALONG STATE HIGHWAY 22 TO THE  
 LX2863'MARK ON THE LEFT, IN FRONT OF THE SIGN FOR THE FAITH UNITED METHODIST  
 LX2863'CHURCH, 5.49 METERS (18.0 FT) NORTH OF THE CENTER LINE OF THE HIGHWAY,  
 LX2863'2.77 METERS (9.1 FT) SOUTH OF THE SOUTH EDGE OF THE CHURCH SIGN, 0.40  
 LX2863'METER (1.3 FT) WEST OF A SIDE ROAD SIGN. NOTE--ACCESS TO DATUM POINT  
 LX2863'IS HAD THROUGH A 5-INCH LOGO CAP.

LX2863'THE MARK IS ABOVE LEVEL WITH HIGHWAY.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX3397 \*\*\*\*\*  
LX3397 TIDAL BM - This is a Tidal Bench Mark.  
LX3397 DESIGNATION - M 97  
LX3397 PID - LX3397  
LX3397 STATE/COUNTY- CT/NEW LONDON  
LX3397 USGS QUAD - NORWICH (1983)  
LX3397  
LX3397 \*CURRENT SURVEY CONTROL  
LX3397  
LX3397\* NAD 83(1986)- 41 31 15. (N) 072 04 50. (W) SCALED  
LX3397\* NAVD 88 - 9.155 (meters) 30.04 (feet) ADJUSTED  
LX3397  
LX3397 GEOID HEIGHT- -30.31 (meters) GEOID03  
LX3397 DYNAMIC HT - 9.152 (meters) 30.03 (feet) COMP  
LX3397 MODELED GRAV- 980,282.1 (mgal) NAVD 88  
LX3397  
LX3397 VERT ORDER - FIRST CLASS II  
LX3397  
LX3397.The horizontal coordinates were scaled from a topographic map and have  
LX3397.an estimated accuracy of +/- 6 seconds.  
LX3397  
LX3397.The orthometric height was determined by differential leveling  
LX3397.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
LX3397  
LX3397.This Tidal Bench Mark is designated as VM 2228  
LX3397.by the Center for Operational Oceanographic Products and Services.  
LX3397  
LX3397.The geoid height was determined by GEOID03.  
LX3397  
LX3397.The dynamic height is computed by dividing the NAVD 88  
LX3397.geopotential number by the normal gravity value computed on the  
LX3397.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
LX3397.degrees latitude (g = 980.6199 gals.).  
LX3397  
LX3397.The modeled gravity was interpolated from observed gravity values.  
LX3397  
LX3397;  
LX3397;SPC CT - North East Units Estimated Accuracy  
LX3397; 228,970. 360,680. MT (+/- 180 meters Scaled)  
LX3397  
LX3397 SUPERSEDED SURVEY CONTROL  
LX3397  
LX3397.No superseded survey control is available for this station.  
LX3397  
LX3397\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TYM436006(NAD 83)  
LX3397\_MARKER: I = METAL ROD  
LX3397\_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)  
LX3397\_SP\_SET: STAINLESS STEEL ROD  
LX3397\_STAMPING: M 97 1986  
LX3397\_MARK LOGO: NGS  
LX3397\_PROJECTION: FLUSH  
LX3397\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
LX3397\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
LX3397+SATELLITE: SATELLITE OBSERVATIONS - April 12, 2006  
LX3397\_ROD/PIPE-DEPTH: 3.3 meters  
LX3397  
LX3397 HISTORY - Date Condition Report By  
LX3397 HISTORY - 1986 MONUMENTED NGS  
LX3397 HISTORY - 19901129 GOOD USPSQD  
LX3397 HISTORY - 20060412 GOOD USPSQD  
LX3397  
LX3397 STATION DESCRIPTION  
LX3397  
LX3397'DESCRIBED BY NATIONAL GEODETIC SURVEY 1986  
LX3397'0.3 KM (0.2 MI) SE FROM NORWICH.  
LX3397'0.3 KM (0.2 MI) SOUTHEAST ALONG STATE HIGHWAY HIGHWAY 32 FROM THE  
LX3397'INTERSECTION OF STATE HIGHWAY 82 IN NORWICH TO THE MARK ON THE LEFT IN  
LX3397'A GRASS MEDIAN BETWEEN THE SIDEWALK AND THE PARKING LOT AT THE  
LX3397'ENTRANCE TO THE PARKING LOT FOR THE NORWICH POLICE DEPARTMENT. IT IS  
LX3397'7.38 METERS (24.2 FT) NORTHEAST OF THE CENTERLINE OF THE HIGHWAY,  
LX3397'13.17 METERS (43.2 FT) NORTH OF UTILITY POLE NO. T113 WITH ONE GUY  
LX3397'WIRE AND STREET LAMP, 5.49 METERS (18.0 FT) NORTH-NORTHWEST OF THE  
LX3397'CENTER OF ENTRANCE DRIVE TO PARKING LOT AND 1.00 METER (3.3 FT)

LX3397'NORTHEAST OF THE NORTHEAST CURB OF THE SIDEWALK.  
LX3397'NOTE--ACCESS TO DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP.  
LX3397'THE MARK IS 0.09 M ABOVE HIGHWAY.  
LX3397  
LX3397 STATION RECOVERY (1990)  
LX3397  
LX3397'RECOVERY NOTE BY US POWER SQUADRON 1990 (RMS)  
LX3397'RECOVERED IN GOOD CONDITION.  
LX3397  
LX3397 STATION RECOVERY (2006)  
LX3397  
LX3397'RECOVERY NOTE BY US POWER SQUADRON 2006 (AES)  
LX3397'MISSING HINGE PINS FOR CAP. SUITABLE FOR SATELLITE.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX3421 \*\*\*\*\*  
LX3421 DESIGNATION - 2091  
LX3421 PID - LX3421  
LX3421 STATE/COUNTY- CT/NEW LONDON  
LX3421 USGS QUAD - NEW LONDON (1984)  
LX3421  
LX3421 \*CURRENT SURVEY CONTROL  
LX3421  
LX3421\* NAD 83(1986)- 41 20 45. (N) 072 02 01. (W) SCALED  
LX3421\* NAVD 88 - 5.518 (meters) 18.10 (feet) ADJUSTED  
LX3421  
LX3421 GEOID HEIGHT- -30.61 (meters) GEOID03  
LX3421 DYNAMIC HT - 5.516 (meters) 18.10 (feet) COMP  
LX3421 MODELED GRAV- 980,276.2 (mgal) NAVD 88  
LX3421  
LX3421 VERT ORDER - FIRST CLASS II  
LX3421  
LX3421.The horizontal coordinates were scaled from a topographic map and have  
LX3421.an estimated accuracy of +/- 6 seconds.  
LX3421  
LX3421.The orthometric height was determined by differential leveling  
LX3421.and adjusted by the NATIONAL GEODETIC SURVEY in June 1991.  
LX3421  
LX3421.The geoid height was determined by GEOID03.  
LX3421  
LX3421.The dynamic height is computed by dividing the NAVD 88  
LX3421.geopotential number by the normal gravity value computed on the  
LX3421.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
LX3421.degrees latitude (g = 980.6199 gals.).  
LX3421  
LX3421.The modeled gravity was interpolated from observed gravity values.  
LX3421  
LX3421;  
LX3421;SPC CT - North East Units Estimated Accuracy  
LX3421; 209,570. 364,760. MT (+/- 180 meters Scaled)  
LX3421  
LX3421 SUPERSEDED SURVEY CONTROL  
LX3421  
LX3421.No superseded survey control is available for this station.  
LX3421  
LX3421\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TYL481813(NAD 83)  
LX3421\_MARKER: DD = SURVEY DISK  
LX3421\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT  
LX3421\_SP\_SET: CONCRETE POST  
LX3421\_STAMPING: 2091  
LX3421\_MARK LOGO: CTGS  
LX3421\_PROJECTION: FLUSH  
LX3421\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
LX3421+STABILITY: SURFACE MOTION  
LX3421  
LX3421 HISTORY - Date Condition Report By  
LX3421 HISTORY - 1964 MONUMENTED CTGS  
LX3421 HISTORY - 1986 GOOD NGS  
LX3421 HISTORY - 1989 GOOD USPSQD  
LX3421  
LX3421 STATION DESCRIPTION  
LX3421  
LX3421'DESCRIBED BY NATIONAL GEODETIC SURVEY 1986  
LX3421'0.5 KM (0.3 MI) WEST FROM POQUONOCK BRIDGE.  
LX3421'0.5 KM (0.3 MI) WEST ALONG U.S. HIGHWAY 1 FROM THE JUNCTION OF STATE  
LX3421'HIGHWAY 117 IN POQUONOCK BRIDGE TO THE INTERSECTION OF NORTH ROAD AND

LX3421'DEPOT ROAD AND THE MARK ON THE RIGHT, IN THE NORTHWEST ANGLE OF THE  
LX3421'INTERSECTION, 4.72 METERS (15.0 FT) WEST OF THE CENTERLINE OF NORTH  
LX3421'ROAD, 5.21 METERS (17.1 FT) EAST OF AN IRON LIGHT POLE WITH WALK  
LX3421'SIGNAL, 0.52 METER (1.7 FT) EAST OF ROAD SIGN (FORT HILL ROAD-NORTH  
LX3421'ROAD-NO TURN ON RED.  
LX3421'THE MARK IS 0.46 M ABOVE U.S. HIGHWAY 1.  
LX3421  
LX3421 STATION RECOVERY (1989)  
LX3421  
LX3421'RECOVERY NOTE BY US POWER SQUADRON 1989 (RMS)  
LX3421'RECOVERED IN GOOD CONDITION.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX3693 \*\*\*\*\*  
LX3693 DESIGNATION - STRATFORD  
LX3693 PID - LX3693  
LX3693 STATE/COUNTY- CT/FAIRFIELD  
LX3693 USGS QUAD - MILFORD (1984)  
LX3693  
LX3693 \*CURRENT SURVEY CONTROL  
LX3693  
LX3693\* NAD 83(1996)- 41 09 07.61354(N) 073 06 11.30094(W) ADJUSTED  
LX3693\* NAVD 88 - 4. (meters) 13. (feet) SCALED  
LX3693  
LX3693 LAPLACE CORR- -1.87 (seconds) DEFLEC99  
LX3693 GEOID HEIGHT- -29.98 (meters) GEOID03  
LX3693  
LX3693 HORZ ORDER - FIRST  
LX3693  
LX3693.The horizontal coordinates were established by classical geodetic methods  
LX3693.and adjusted by the National Geodetic Survey in August 1998.  
LX3693  
LX3693.The orthometric height was scaled from a topographic map.  
LX3693  
LX3693.The Laplace correction was computed from DEFLEC99 derived deflections.  
LX3693  
LX3693.The geoid height was determined by GEOID03.  
LX3693  
LX3693;  

	North	East	Units	Scale Factor	Converg.
LX3693;SPC CT	- 187,863.783	275,157.524	MT	1.00000518	-0 14 02.9
LX3693;SPC CT	- 616,349.76	902,745.98	sFT	1.00000518	-0 14 02.9
LX3693;UTM 18	- 4,557,377.614	659,165.525	MT	0.99991180	+1 14 54.6

	Elev Factor	x	Scale Factor	=	Combined Factor
LX3693!SPC CT	- 1.00000407	x	1.00000518	=	1.00000925
LX3693!UTM 18	- 1.00000407	x	0.99991180	=	0.99991587

PID	Reference Object	Distance	Geod. Az
LX7649	STRATFORD RM 1	22.904 METERS	05130
LX6482	AVIATION BCN REV WHITE GREEN	APPROX.22.5 KM	0523534.2
LX3721	STRATFORD SHOAL LTHSE	APPROX.10.2 KM	1790722.1
CB4916	STRATFORD RM 2	23.626 METERS	19742
LX3692	STRATFORD POINT LIGHTHOUSE	21.169 METERS	22657
CB4917	STRATFORD RM 3 AZIMUTH	23.628 METERS	28932

  
LX3693  
LX3693 SUPERSEDED SURVEY CONTROL  
LX3693  
LX3693 NAD 83(1992)- 41 09 07.61255(N) 073 06 11.30040(W) AD( ) 1  
LX3693 NAD 83(1986)- 41 09 07.61679(N) 073 06 11.30514(W) AD( ) 1  
LX3693 NAD 83(1986)- 41 09 07.61746(N) 073 06 11.30341(W) AD( ) 1  
LX3693 NAD 27 - 41 09 07.26844(N) 073 06 12.91364(W) AD( ) 1  
LX3693  
LX3693.Superseded values are not recommended for survey control.  
LX3693.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LX3693.See file dsdata.txt to determine how the superseded data were derived.  
LX3693  
LX3693\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL5916657378(NAD 83)  
LX3693\_MARKER: DO = NOT SPECIFIED OR SEE DESCRIPTION  
LX3693\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT  
LX3693\_SP\_SET: TOP OF SQUARE CONCRETE MONUMENT  
LX3693\_STAMPING: STRATFORD 1932  
LX3693\_MAGNETIC: N = NO MAGNETIC MATERIAL

LX3693\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
LX3693+STABILITY: SURFACE MOTION

LX3693	HISTORY	- Date	Condition	Report By
LX3693	HISTORY	- 1932	MONUMENTED	CGS
LX3693	HISTORY	- 1960	SEE DESCRIPTION	CGS
LX3693	HISTORY	- 1972	SEE DESCRIPTION	CTGS
LX3693	HISTORY	- 1977	SEE DESCRIPTION	NGS
LX3693	HISTORY	- 1982	GOOD	NGS
LX3693	HISTORY	- 1988	GOOD	USPSQD
LX3693	HISTORY	- 19910803	GOOD	USPSQD
LX3693	HISTORY	- 19920101	GOOD	USE
LX3693	HISTORY	- 19920101	GOOD	USE

LX3693

STATION DESCRIPTION

LX3693

LX3693'DESCRIBED BY COAST AND GEODETIC SURVEY 1932 (CDM)  
LX3693'STATION IS LOCATED ON STRATFORD POINT ABOUT 3.5 MILES S OF THE  
LX3693'VILLAGE OF STRATFORD, CONN., ON LAND BELONGING TO THE LIGHTHOUSE  
LX3693'SERVICE.

LX3693'SURFACE AND UNDERGROUND MARKS ARE STANDARD BRONZE DISKS SET  
LX3693'IN CONCRETE AS DESCRIBED IN NOTES 1A AND 7A. REFERENCE MARKS  
LX3693'NOS. 1, 2 AND 3 ARE STANDARD BRONZE DISKS IN OUTCROPPING BEDROCK  
LX3693'AS DESCRIBED IN NOTE 12A.

LX3693'TO REACH POINT GO S ON MAIN STREET IN STRATFORD, BY AVIATION  
LX3693'FIELD AND THE SIKORSKY MANUFACTURING CORPORATION, 2.5 MILES TO A  
LX3693'POINT WHERE MAIN PAVED ROAD TURNS TO THE RIGHT, A DIRT ROAD GOES  
LX3693'STRAIGHT AHEAD, AND ANOTHER DIRT ROAD TURNS LEFT. TURN LEFT ON  
LX3693'THE DIRT ROAD AND GO 0.9 MILE TO THE POINT AND STATION. STATION  
LX3693'MARK IS IN A BLOCK OF CONCRETE FLUSH WITH THE GROUND, E OF  
LX3693'KEEPERS HOUSE AND NE OF THE LIGHTHOUSE.

LX3693'REFERENCE MARK NO. 1 IS IN ROCK ENE OF STATION. REFERENCE MARK  
LX3693'NO. 2 IS IN ROCK SSW OF STATION, 9 METERS S OF OUTSIDE OF  
LX3693'LIGHTHOUSE. REFERENCE MARK NO. 3 IS NW OF STATION SET IN ROCK, 11  
LX3693'METERS S OF E AND W ROAD TO LIGHTHOUSE. 12 METERS NE OF NE CORNER  
LX3693'OF OLD FOUNDATION. IN S ANGLE OF TRIANGLE FORMED BY THE  
LX3693'INTERSECTION OF ROAD TO LIGHTHOUSE, AND ROAD COMING INTO IT FROM  
LX3693'THE SE.

LX3693'HEIGHT OF SIGNAL ABOVE STATION MARK - 26 METERS.

LX3693

STATION RECOVERY (1960)

LX3693

LX3693'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1960 (CHO)  
LX3693'RECOVERED STATION AND R.M. 1 AND R.M. 2 IN EXCELLENT  
LX3693'CONDITION. R.M. 3 WAS NOT RECOVERED.

LX3693'TO REACH STATION GO S ON MAIN STREET IN STRATFORD BY AVIATION  
LX3693'FIELD AND THE LYCOMING DIVISION OF AVCO 2.5 MILES TO THE  
LX3693'INTERSECTION OF IVY STREET AND PROSPECT DRIVE. TURN LEFT (E) ON  
LX3693'PROSPECT DRIVE AND GO 0.9 MILE TO STATION.

LX3693

STATION RECOVERY (1972)

LX3693

LX3693'RECOVERY NOTE BY CONNECTICUT GEODETIC SURVEY 1972 (AK)  
LX3693'STRATFORD 1932 EXCELLENT

LX3693'

LX3693'STRATFORD NO. 1 1932 EXCELLENT

LX3693'

LX3693'STRATFORD NO. 2 1932 EXCELLENT

LX3693'

LX3693'STRATFORD NO. 3 1932 NOT FOUND

LX3693

STATION RECOVERY (1977)

LX3693

LX3693'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1977 (RPD)  
LX3693'THE STATION AND RM 2 WERE RECOVERED AS DESCRIBED. RM 1 HAS BEEN  
LX3693'SCAVENGERED BUT THE HOLE IN THE ROCK REMAINS. RM 3 WAS NOT  
LX3693'RECOVERED.

LX3693'

LX3693'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN

LX3693' 3.5 MILES SOUTH OF STRATFORD.  
LX3693  
LX3693 STATION RECOVERY (1982)  
LX3693  
LX3693 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1982 (VDN)  
LX3693 THE STATION AND REFERENCE MARK 2 WAS RECOVERED IN GOOD CONDITION,  
LX3693 REFERENCE MARK 1 DISK WAS GONE, BUT THE DRILL HOLE WAS RECOVERED  
LX3693 IN GOOD CONDITION. REFERENCE MARK 3 WAS SEARCHED FOR BUT WAS  
LX3693 NOT RECOVERED, AS WAS NOTED IN PREVIOUS YEARS. IT IS  
LX3693 BELIEVED DESTROYED DUE TO THE HOUSES IN THE AREA, ACCORDING TO  
LX3693 PROPERTY OWNERS, THE WHOLE AREA HAS BEEN RELANDSCAPED. THE  
LX3693 ANGLE BETWEEN REFERENCE MARKS 1 AND 2 CHECKED THE 1932 DATA.  
LX3693 THE DISTANCE TO REFERENCE MARK 2 CHECKED THE 1932 DATA, ONLY  
LX3693 THE SLOPE DISTANCE WAS MEASURED TO REFERENCE MARK 1 IN 1932,  
LX3693 THE HORIZONTAL DISTANCE MEASURED AT THIS TIME WAS LESS BY 0.12  
LX3693 FEET.  
LX3693'  
LX3693 THE STATION IS LOCATED ABOUT 5.6 KM (3.5 MI) SOUTHEAST OF  
LX3693 STRATFORD AND ON STRATFORD POINT.  
LX3693 OWNERSHIP--COMMANDER, COAST GUARD GROUP LONG ISLAND SOUND,  
LX3693 120 WOODWARD AVE, NEW HAVEN CT 06512.  
LX3693'  
LX3693 TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 1 AND  
LX3693 STATE HIGHWAY 113 IN STRATFORD, GO SOUTH ON HIGHWAY 113 FOR  
LX3693 0.6 KM (0.35 MI) TO INTERSTATE 95 OVERPASS, CONTINUE SOUTH  
LX3693 ON HIGHWAY 113 FOR 0.8 KM (0.5 MI) TO A CROSSROAD (STRATFORD AVE),  
LX3693 CONTINUE SOUTH ON HIGHWAY 113 (MAIN STREET) FOR  
LX3693 2.9 KM (1.8 MI) TO A FORK, BEAR RIGHT AND CONTINUE SOUTH ON  
LX3693 HIGHWAY 113 FOR 1.1 KM (0.7 MI) TO A FIVE-WAY INTERSECTION.  
LX3693 TURN LEFT AND GO EAST ON PROSPECT DRIVE FOR 1.3 KM (0.8 MI)  
LX3693 TO THE END OF PAVEMENT AND ENTRANCE TO THE LAWN OF A LIGHTHOUSE  
LX3693 AND LIGHTKEEPERS HOUSE. BEAR TO THE LEFT OF THE HOUSE ACROSS  
LX3693 LAWN FOR 0.1 KM (0.05 MI) TO THE STATION AS DESCRIBED.  
LX3693'  
LX3693 THE STATION IS A STANDARD NGS DISK  
LX3693 STAMPED---STRATFORD 1932---,  
LX3693 SET INTO THE TOP OF A SQUARE CONCRETE MONUMENT 35 CM ON A SIDE  
LX3693 FLUSH WITH GROUND. IT IS LOCATED  
LX3693 30.18 METERS (99.0 FT) SOUTHWEST FROM A WIRE FENCE,  
LX3693 28.53 METERS (93.6 FT) NORTHEAST FROM THE NORTHEAST CORNER OF A  
LX3693 BRICK GENERATOR HOUSE,  
LX3693 12.80 METERS (42.0 FT) EAST-SOUTHEAST FROM THE SOUTHEAST CORNER  
LX3693 OF THE LIGHTKEEPERS HOUSE AND  
LX3693 7.19 METERS (23.6 FT) NORTHWEST FROM A WIRE FENCE.  
LX3693 THE UNDERGROUND MARK IS STATED TO EXIST IN THE 1932 DATA.  
LX3693'  
LX3693 REFERENCE MARK NUMBER 1 IS A DRILL HOLE IN A ROCK OUTCROP.  
LX3693 IT IS LOCATED  
LX3693 34.1 METERS (112.0 FT) EAST-NORTHEAST FROM THE SOUTHEAST CORNER  
LX3693 OF THE LIGHTKEEPERS HOUSE,  
LX3693 10.09 METERS (33.1 FT) SOUTH-SOUTHWEST FROM A FENCE CORNER AND  
LX3693 3.35 METERS (11.0 FT) SOUTHEAST FROM A WIRE FENCE.  
LX3693 MARK IS BELOW STATION 1.2 METERS.  
LX3693'  
LX3693 REFERENCE MARK NUMBER 2 IS A STANDARD NGS DISK  
LX3693 STAMPED---STRATFORD NO 2 1932---,  
LX3693 SET INTO A ROCK OUTCROP. IT IS LOCATED  
LX3693 22.86 METERS (75.0 FT) SOUTH FROM THE SOUTHEAST CORNER OF  
LX3693 THE LIGHTKEEPERS HOUSE,  
LX3693 8.17 METERS (26.8 FT) WEST FROM THE NORTHEAST CORNER OF THE  
LX3693 BRICK GENERATOR HOUSE,  
LX3693 1.89 METERS (6.2 FT) SOUTHWEST FROM THE SOUTHEAST CORNER  
LX3693 OF A LARGE CONCRETE PAD AND  
LX3693 1.74 METERS (5.7 FT) NORTHWEST FROM A WIRE FENCE.  
LX3693 MARK IS LEVEL WITH STATION.  
LX3693'  
LX3693 HEIGHT OF LIGHT SHOWN ABOVE THE MARK WAS 1.5 METERS.  
LX3693 NO SUITABLE LOCATION FOR AN AZIMUTH MARK.  
LX3693'  
LX3693 DESCRIBED BY L.D. ACRES, CHECKED BY D.R. VARNEY.  
LX3693  
LX3693 STATION RECOVERY (1988)  
LX3693  
LX3693 RECOVERY NOTE BY US POWER SQUADRON 1988 (JW)

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LX3693 RECOVERED IN GOOD CONDITION.
LX3693
LX3693 STATION RECOVERY (1991)
LX3693
LX3693 RECOVERY NOTE BY US POWER SQUADRON 1991 (VF)
LX3693 RECOVERED IN GOOD CONDITION.
LX3693
LX3693 STATION RECOVERY (1992)
LX3693
LX3693 RECOVERY NOTE BY US ENGINEERS 1992 (JC)
LX3693 DESCRIPTION IS ADEQUATE, REFERENCE MARKS WERE NOT SEARCHED FOR.
LX3693
LX3693 STATION RECOVERY (1992)
LX3693
LX3693 RECOVERY NOTE BY US ENGINEERS 1992 (JC)
LX3693 DESCRIPTION IS ADEQUATE, REFERENCE MARKS WERE NOT SEARCHED FOR.
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007
LX5210 *****
LX5210 FBN - This is a Federal Base Network Control Station.
LX5210 DESIGNATION - PLANT
LX5210 PID - LX5210
LX5210 STATE/COUNTY- CT/NEW LONDON
LX5210 USGS QUAD - NEW LONDON (1984)
LX5210
LX5210 *CURRENT SURVEY CONTROL
LX5210
LX5210 NAD 83(1996)- 41 18 57.88446(N) 072 03 58.24651(W) ADJUSTED
LX5210 NAVD 88 - 9.1 (meters) 30. (feet) GPS OBS
LX5210
LX5210 X - 1,477,229.393 (meters) COMP
LX5210 Y - -4,564,376.695 (meters) COMP
LX5210 Z - 4,188,837.724 (meters) COMP
LX5210 LAPLACE CORR- -1.03 (seconds) DEFLEC99
LX5210 ELLIP HEIGHT- -21.54 (meters) (06/22/01) GPS OBS
LX5210 GEOID HEIGHT- -30.66 (meters) GEOID03
LX5210
LX5210 HORZ ORDER - A
LX5210 ELLP ORDER - FOURTH CLASS I
LX5210
LX5210.The horizontal coordinates were established by GPS observations
LX5210.and adjusted by the National Geodetic Survey in July 1997.
LX5210
LX5210.The orthometric height was determined by GPS observations and a
LX5210.high-resolution geoid model.
LX5210
LX5210.The X, Y, and Z were computed from the position and the ellipsoidal ht.
LX5210
LX5210.The Laplace correction was computed from DEFLEC99 derived deflections.
LX5210
LX5210.The ellipsoidal height was determined by GPS observations
LX5210.and is referenced to NAD 83.
LX5210
LX5210.The geoid height was determined by GEOID03.
LX5210
LX5210; North East Units Scale Factor Converg.
LX5210;SPC CT - 206,239.312 362,057.089 MT 0.99999031 +0 27 12.3
LX5210;SPC CT - 676,636.81 1,187,848.97 sFT 0.99999031 +0 27 12.3
LX5210;SPC NY L - 129,430.005 461,913.965 MT 1.00002793 +1 15 53.6
LX5210;SPC NY L - 424,638.27 1,515,462.73 sFT 1.00002793 +1 15 53.6
LX5210;UTM 18 - 4,577,998.624 745,570.258 MT 1.00034223 +1 56 16.5
LX5210;UTM 19 - 4,578,382.005 243,349.510 MT 1.00041073 -2 01 31.6
LX5210
LX5210! - Elev Factor x Scale Factor = Combined Factor
LX5210!SPC CT - 1.00000338 x 0.99999031 = 0.99999369
LX5210!SPC NY L - 1.00000338 x 1.00002793 = 1.00003131
LX5210!UTM 18 - 1.00000338 x 1.00034223 = 1.00034561
LX5210!UTM 19 - 1.00000338 x 1.00041073 = 1.00041411
LX5210
LX5210 |-----|
LX5210 | PID Reference Object Distance Geod. Az |
LX5210 | | | | dddmss.s |
LX5210 | CZ7771 PLANT RM 2 17.849 METERS 01955 |
LX5210 | LX5370 PLANT A PT 4.065 METERS 03015 |
LX5210 | LX7657 STA 32022 198.776 METERS 06911 |

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LX5210| LX5347 MANSION 163.972 METERS 08116 |
LX5210| LX5303 BLACK LEDGE BEACON APPROX. 1.3 KM 2002837.3 |
LX5210| LX5339 BLACK LEDGE ROCKS THAMES R ENT APPROX. 1.3 KM 2002837.2 |
LX5210| LX5215 NEW LONDON LEDGE LIGHTHOUSE APPROX. 1.5 KM 2194533.6 |
LX5210| CZ7770 PLANT RM 1 39.255 METERS 24149 |
LX5210| LX5300 ARMSTRONGS FLAGPOLE APPROX. 2.5 KM 2611117.0 |
LX5210| LX5228 CLARKE FLAGPOLE APPROX. 1.9 KM 2854908.9 |
LX5210| LX5229 JOHNSTONS FLAGPOLE APPROX. 2.2 KM 2970705.4 |
LX5210| LX5212 PHELPS FLAGPOLE APPROX. 0.9 KM 3081422.7 |
LX5210| -----|
LX5210|
LX5210| SUPERSEDED SURVEY CONTROL
LX5210|
LX5210| ELLIP H (07/24/97) -21.58 (m) GP( ) 3 2
LX5210| NAD 83(1992)- 41 18 57.88331(N) 072 03 58.24537(W) AD( ) A
LX5210| ELLIP H (04/16/93) -21.66 (m) GP( ) 3 1
LX5210| NAD 83(1986)- 41 18 57.88403(N) 072 03 58.25210(W) AD( ) 2
LX5210| NAD 27 - 41 18 57.53392(N) 072 03 59.98144(W) AD( ) 2
LX5210| NGVD 29 (07/19/86) 9.4 (m) 31. (f) VERT ANG
LX5210|
LX5210|.Superseded values are not recommended for survey control.
LX5210|.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
LX5210|.See file dsdata.txt to determine how the superseded data were derived.
LX5210|
LX5210|.U.S. NATIONAL GRID SPATIAL ADDRESS: 18TYL4557077999(NAD 83)
LX5210|.MARKER: DS = TRIANGULATION STATION DISK
LX5210|.SETTING: 66 = SET IN ROCK OUTCROP
LX5210|.SP_SET: IN DRILL HOLE IN ROCK OUTCROP
LX5210|.STAMPING: PLANT
LX5210|.MARK LOGO: CGS
LX5210|.MAGNETIC: N = NO MAGNETIC MATERIAL
LX5210|.STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
LX5210|.STABILITY: POSITION/ELEVATION WELL
LX5210|.SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
LX5210|.SATELLITE: SATELLITE OBSERVATIONS - April 10, 2005
LX5210|
LX5210| HISTORY - Date Condition Report By
LX5210| HISTORY - 1932 MONUMENTED CGS
LX5210| HISTORY - 1932 GOOD USE
LX5210| HISTORY - 1934 GOOD CGS
LX5210| HISTORY - 1947 GOOD CGS
LX5210| HISTORY - 1954 GOOD CGS
LX5210| HISTORY - 1960 GOOD CGS
LX5210| HISTORY - 1975 GOOD NGS
LX5210| HISTORY - 1976 GOOD USCG
LX5210| HISTORY - 1984 GOOD USPSQD
LX5210| HISTORY - 19900314 GOOD USPSQD
LX5210| HISTORY - 19920428 GOOD NGS
LX5210| HISTORY - 19991206 GOOD WOOLPT
LX5210| HISTORY - 20000615 GOOD NGS
LX5210| HISTORY - 20010805 GOOD CTGS
LX5210| HISTORY - 20011003 GOOD USPSQD
LX5210| HISTORY - 20030522 GOOD USPSQD
LX5210| HISTORY - 20050410 GOOD CTGS
LX5210|
LX5210| STATION DESCRIPTION
LX5210|
LX5210|.DESCRIBED BY COAST AND GEODETIC SURVEY 1932 (MHR)
LX5210|.STATION IS LOCATED ON AVERY POINT ON THE E SIDE OF THE ENTRANCE
LX5210|.TO NEW LONDON HARBOR. STATION IS ON THE PROPERTY OF THE PLANT
LX5210|.ESTATE. IT IS MARKED WITH A STANDARD DISC STAMPED PLANT CEMENTED
LX5210|.IN A DRILL HOLE IN A LARGE OUTCROPPING LEDGE. THE FOLLOWING
LX5210|.MEASUREMENTS WERE TAKEN FROM THE STATION--CENTER OF LARGE ROCK
LX5210|.TO N, NEAR ROAD TO MANSION, 19.45 METERS, CENTER OF OLD WELL TO
LX5210|.E 31.34 METERS, 1/2-INCH DRILL HOLE IN LEDGE TO SW 6.46 METERS.
LX5210|
LX5210| STATION RECOVERY (1932)
LX5210|
LX5210|.RECOVERY NOTE BY US ENGINEERS 1932
LX5210|.RECOVERED IN GOOD CONDITION.
LX5210|
LX5210| STATION RECOVERY (1934)
LX5210|
LX5210|.RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1934 (GCM)
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LX5210' THE STATION WAS FOUND AS DESCRIBED AND IN GOOD CONDITION. TWO  
LX5210' REFERENCE MARKS WERE ESTABLISHED AS FOLLOWS--REFERENCE MARK NO. 1  
LX5210' A STANDARD DISC SET IN A DRILL HOLE IN LEDGE 39.90 METERS  
LX5210' SOUTHWESTERLY OF STATION. REFERENCE MARK NO. 2 SET IN A DRILL  
LX5210' HOLE IN THE SAME LEDGE 17.86 METERS NORTHWESTERLY OF THE STATION.  
LX5210'  
LX5210' STATION RECOVERY (1947)  
LX5210'  
LX5210' RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1947 (JCS)  
LX5210' RECOVERED AS DESCRIBED. MARK IS IN GOOD CONDITION. ORIGINAL  
LX5210' DESCRIPTION IS ADEQUATE EXCEPT THAT THE PROPERTY IS NOW USED BY THE  
LX5210' U.S. COAST GUARD AS A TRAINING SCHOOL. NO SEARCH WAS MADE FOR  
LX5210' REFERENCE MARKS AND NO MEASUREMENTS WERE TAKEN. THE OLD WELL  
LX5210' MENTIONED IN THE ORIGINAL DESCRIPTION IS STILL IN PLACE AND IS IN  
LX5210' GOOD CONDITION. REFERENCE MARK 2 (G.C.M., 1934) IS IN PLACE AND  
LX5210' IN GOOD CONDITION.  
LX5210'  
LX5210' STATION RECOVERY (1954)  
LX5210'  
LX5210' RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1954 (LFW)  
LX5210' STATION AND BOTH REFERENCE MARKS RECOVERED IN GOOD CONDITION. THE  
LX5210' AREA BETWEEN THE STATION AND SEAWALL HAS BEEN FILLED. THE PLANT  
LX5210' ESTATE IS NOW THE COAST GUARD TRAINING STATION. A COMPLETE NEW  
LX5210' DESCRIPTION FOLLOWS--  
LX5210'  
LX5210' STATION IS LOCATED ON AVERY POINT. IT IS A STANDARD DISK,  
LX5210' STAMPED PLANT 1934 AND SET IN A DRILL HOLE IN AN OUTCROPPING  
LX5210' LEDGE ON THE W SIDE OF AVERY POINT, ON THE GROUNDS OF THE COAST  
LX5210' GUARD TRAINING STATION.  
LX5210'  
LX5210' REFERENCE MARK 1 IS A STANDARD DISK, STAMPED PLANT NO 1 1934 AND  
LX5210' SET IN A DRILL HOLE IN A LEDGE NEAR THE SHORELINE, AND AT TIME  
LX5210' OF RECOVERY WAS PARTIALLY COVERED BY A LARGE STONE WHICH HAD  
LX5210' BEEN DISPLACED FROM A RETAINING WALL ALONG THE W SIDE OF THE LAWN.  
LX5210'  
LX5210' REFERENCE MARK 2 IS A STANDARD DISK, STAMPED PLANT NO 2 1934 AND  
LX5210' SET IN A DRILL HOLE IN THE SAME LEDGE AS THE STATION.  
LX5210'  
LX5210' STATION RECOVERY (1960)  
LX5210'  
LX5210' RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1960 (GFW)  
LX5210' RECOVERED AS DESCRIBED. STATION AND REFERENCE MARKS ARE IN GOOD  
LX5210' CONDITION. DESCRIPTIONS ARE ADEQUATE.  
LX5210'  
LX5210' STATION RECOVERY (1975)  
LX5210'  
LX5210' RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1975 (HRR)  
LX5210' THE STATION, REFERENCE MARKS 1 AND 2 WERE RECOVERED IN GOOD  
LX5210' CONDITION. THE DISTANCE TO REFERENCE MARK 1 WAS FOUND  
LX5210' SHORTER BY 0.645 METERS AND THE DISTANCE TO REFERENCE MARK 2  
LX5210' WAS FOUND SHORTER BY 0.011 METERS. THE DIRECTION TO BOTH  
LX5210' REFERENCE MARKS CHECKED. A COMPLETE NEW DESCRIPTION FOLLOWS.  
LX5210'  
LX5210' STATION IS ABOUT 3-1/4 MILES SOUTHEAST OF NEW LONDON, 3  
LX5210' MILES SOUTH OF GROTON, 2 MILES EAST-NORTHEAST OF OCEAN BEACH,  
LX5210' AT THE MOUTH OF AND ON THE EAST SIDE OF THE THAMES RIVER,  
LX5210' AT THE SITE OF THE UNIVERSITY OF CONNECTICUT SOUTHWESTERN  
LX5210' BRANCH MARINE SCIENCE INSTITUTE AND COAST GUARD RESEARCH AND  
LX5210' DEVELOPMENT CENTER AND ON PROPERTY OWNED BY THE STATE.  
LX5210'  
LX5210' TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 1 AND  
LX5210' POQUONOCK ROAD, WHICH IS ABOUT 1/4 MILE SOUTH OF THE POST  
LX5210' OFFICE IN GROTON, GO SOUTHWEST AND WEST ON POQUONOCK ROAD FOR  
LX5210' 0.9 MILE TO THE JUNCTION OF RAINVILLE AVENUE. TURN  
LX5210' LEFT AND GO SOUTHWEST AND WEST ON RAINVILLE AVENUE FOR 0.45  
LX5210' MILE TO THE JUNCTION OF BENHAM ROAD. TURN LEFT AND GO  
LX5210' SOUTHERLY ON BENHAM ROAD FOR 0.55 MILE TO THE JUNCTION OF  
LX5210' EASTERN POINT ROAD. CONTINUE SOUTHERLY ON EASTERN POINT ROAD  
LX5210' FOR 1.3 MILES TO THE ENTRANCE OF THE UNIVERSITY OF  
LX5210' CONNECTICUT SOUTHWESTERN BRANCH MARINE SCIENCE INSTITUTE AND  
LX5210' COAST GUARD RESEARCH AND DEVELOPMENT CENTER ON THE RIGHT.  
LX5210' TURN RIGHT INTO THE ENTRANCE AND GO SOUTHEASTERLY ON WEST  
LX5210' ROAD FOR 0.2 MILE TO THE JUNCTION OF WEST CIRCLE. (TO REACH  
LX5210' MANSION WHICH IS USED AS AN AZIMUTH MARK FROM HERE, CONTINUE

LX5210'SOUTHEASTERLY ON WEST ROAD FOR 0.5 MILE TO THE JUNCTION SOUTH  
LX5210'ROAD. TURN LEFT AND GO EAST ON SOUTH ROAD FOR 0.1 MILE TO THE  
LX5210'OLD CASTLE MANSION ON THE RIGHT AND THE MARK ON THE ROOF OF THE  
LX5210'ROUND WATCH TOWER WHICH IS PART OF THE BUILDING). TURN RIGHT  
LX5210'AND GO SOUTHWEST AND SOUTH ON WEST CIRCLE FOR 0.1 MILE TO A  
LX5210'LARGE ROCK OUTCROP ON THE RIGHT AND THE STATION ON RIGHT AS  
LX5210'DESCRIBED.  
LX5210'  
LX5210'STATION MARK, STAMPED PLANT, IS A STANDARD DISK CEMENTED IN  
LX5210'A DRILL HOLE IN A LARGE ROCK OUTCROP WITH THE PROJECTION  
LX5210'VARYING FROM THE GROUND SURFACE. IT IS 110 FEET NORTHEAST OF  
LX5210'THE EDGE OF A BANK NEAR THE WATERS EDGE, 100 FEET WEST OF THE  
LX5210'WEST SIDE OF AN OLD WELL, 77.5 FEET SOUTHWEST OF CENTER OF  
LX5210'WEST CIRCLE AND 8.3 FEET NORTH OF A FLAG POLE.  
LX5210'  
LX5210'REFERENCE MARK 1, STAMPED PLANT NO 1 1934, IS A STANDARD DISK  
LX5210'CEMENTED IN A DRILL HOLE IN A LARGE ROCK OUTCROP WHICH IS ABOUT  
LX5210'3 FEET HIGHER THAN THE HIGH WATER LINE. IT IS 130 FEET WEST  
LX5210'OF THE FLAG POLE, 27 FEET EAST OF THE HIGH WATER LINE AND 21  
LX5210'FEET WEST OF THE EDGE OF THE BANK.  
LX5210'  
LX5210'REFERENCE MARK 2, STAMPED PLANT NO 2 1934, IS A STANDARD DISK  
LX5210'CEMENTED IN A DRILL HOLE IN THE SAME LARGE ROCK OUTCROP AS  
LX5210'THE STATION. IT IS 104 FEET NORTHWEST OF THE NORTHWEST SIDE  
LX5210'OF THE WELL, 65 FEET NORTHEAST OF THE FLAG POLE, 17 FEET  
LX5210'SOUTHWEST OF CENTER OF WEST CIRCLE AND 1 FOOT SOUTHWEST OF A  
LX5210'LARGE 10 BY 12 FOOT BOULDER WHICH PROJECTS ABOUT 6 FEET  
LX5210'ABOVE THE GROUND SURFACE.  
LX5210'  
LX5210'AZIMUTH MARK, STAMPED MANSION 1975, IS A STANDARD TRIANGULATION  
LX5210'STATION DISK SET IN A SQUARE CONCRETE BLOCK WHICH IS BONDED  
LX5210'TO THE ROOF OF A BUILDING AND PROJECTS ABOUT 3 INCHES ABOVE  
LX5210'THE ROOF. IT IS 8 FEET WEST OF CENTER OF A 2 BY 2 FOOT  
LX5210'CONCRETE BLOCK THAT PROJECTS ABOUT 2-1/2 FEET ABOVE THE ROOF  
LX5210'OF THE WATCH TOWER AND 3 FEET SOUTHEAST OF THE WEST EDGE OF  
LX5210'THE ROOF.  
LX5210'  
LX5210'HEIGHT OF LIGHT ABOVE STATION MARK 4.8 FEET.  
LX5210'  
LX5210'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN  
LX5210'2 MILES EAST-NORTHEAST OF OCEAN BEACH.  
LX5210'  
LX5210'  
LX5210' STATION RECOVERY (1976)  
LX5210'  
LX5210'RECOVERY NOTE BY US COAST GUARD 1976 (RM)  
LX5210'PLANT USE GOOD  
LX5210'  
LX5210' STATION RECOVERY (1984)  
LX5210'  
LX5210'RECOVERY NOTE BY US POWER SQUADRON 1984 (HJW)  
LX5210'STATION AND REFERENCE MARKS WERE FOUND AS DESCRIBED AND IN GOOD  
LX5210'CONDITION.  
LX5210'  
LX5210' STATION RECOVERY (1990)  
LX5210'  
LX5210'RECOVERY NOTE BY US POWER SQUADRON 1990 (CGS)  
LX5210'RECOVERED IN GOOD CONDITION.  
LX5210'  
LX5210' STATION RECOVERY (1992)  
LX5210'  
LX5210'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992  
LX5210'STATION WAS FOUND WITH NO DATE STAMPED ON DISK. RM 1 NOT SEARCHED  
LX5210'FOR. RM 2 FOUND IN GOOD CONDITION. AN UPDATED DESCRIPTION FOLLOWS.  
LX5210'STATION IS LOCATED ABOUT 5.6 KM (3.45 MI) SOUTHEAST OF NEW LONDON, 4.8  
LX5210'KM (3.00 MI) SOUTH OF GROTON, 3.2 KM (2.00 MI) EAST-NORTHEAST OF  
LX5210'OCEAN BEACH, AT THE MOUTH AND ON THE EAST SIDE OF THE THAMES RIVER,  
LX5210'AT THE SITE OF THE UNIVERSITY OF CONNECTICUT SOUTHWESTERN BRANCH  
LX5210'MARINE SCIENCE INSTITUTE AND COAST GUARD RESEARCH AND DEVELOPMENT  
LX5210'CENTER, AT AVERY POINT. OWNERSHIP--UNIVERSITY OF CONNECTICUT,  
LX5210'CONTACT WAS JAY SPALDING USCG, PHONE 203-441-2687. NOTE-NOTIFY OF  
LX5210'WORK SCHEDULE.  
LX5210'TO REACH THE STATION FROM THE JUNCTION OF STATE ROUTE 349 (RAINVILLE  
LX5210'AVE.) AND BENHAM ROAD, LOCATED ABOUT 2.3 KM (1.40 MI) SOUTH OF  
LX5210'INTERSTATE HIGHWAY 95 EXIT 86, AND ON THE SOUTH SIDE OF GROTON, GO

LX5210'SOUTH ALONG BENHAM ROAD FOR 1.1 KM (0.70 MI) TO THE PFIZER PLANT ON  
 LX5210'THE LEFT. CONTINUE SOUTH ALONG BENHAM ROAD WHICH IS NOW ALSO STATE  
 LX5210'ROUTE 349 FOR 1.6 KM (1.00 MI) TO THE END OF STATE ROUTE 349 AND THE  
 LX5210'ENTRANCE TO THE UNIVERSITY OF CONNECTICUT AND U.S. COAST GUARD  
 LX5210'RESEARCH CENTER ON THE RIGHT. GO RIGHT THROUGH ENTRANCE SOUTHERLY  
 LX5210'ALONG THE MAIN TRAVELED ASPHALT ROAD FOR 0.24 KM (0.15 MI) TO NORTH  
 LX5210'ROAD ON THE LEFT. CONTINUE SOUTHERLY ALONG MAIN TRAVELED ASPHALT  
 LX5210'ROAD FOR 0.2 KM (0.10 MI) TO JUNCTION OF WEST CR. (WEST CIRCLE).  
 LX5210'BEAR RIGHT SOUTHWESTERLY ALONG ONE-WAY WEST CR. FOR 0.2 KM  
 LX5210'(0.10 MI) TO THE SOUTHERNMOST POINT, HIGHEST GROUND AND THE STATION  
 LX5210'ON THE RIGHT IN A LARGE OUTCROP OF ROCK WHICH ALSO HAS A FLAGPOLE AND  
 LX5210'A 10 FT (3.0 M) BY 12 FT (3.7 M) BOULDER ON TOP OF IT.  
 LX5210'STATION IS SET IN THE TOP OF THE ROCK OUTCROP AND IS ABOUT 33.5 M  
 LX5210'(109.9 FT) NORTHEAST OF THE BANK NEAR THE WATERS EDGE, 30.5 M  
 LX5210'(100.1 FT) WEST OF AN OLD WELL, 23.6 M (77.4 FT) SOUTHWEST OF THE  
 LX5210'CENTER OF WEST CR. AND 2.5 M (8.2 FT) NORTH OF A FLAGPOLE.  
 LX5210  
 LX5210  
 LX5210 STATION RECOVERY (1999)  
 LX5210  
 LX5210 RECOVERY NOTE BY WOOLPERT CONSULTANTS 1999 (ARL)  
 LX5210 RECOVERED AS DESCRIBED.  
 LX5210  
 LX5210 STATION RECOVERY (2000)  
 LX5210  
 LX5210 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000 (CSM)  
 LX5210 THE STATION, RM 1 AND RM 2 WERE RECOVERED IN GOOD CONDITION, NEW  
 LX5210 DESCRIPTION FOLLOWS. THE STATION IS LOCATED ABOUT 4.8 K M SOUTH OF  
 LX5210 GROTON, ON THE PROPERTY OF THE UNIVERSITY OF CONNECTICUT AT  
 LX5210 AVERY POINT LOCATED ON THE MOUTH OF THE THAMES RIVER, SET IN A  
 LX5210 MASSIVE LEDGE OF ROCK OUTCROP, ABOUT 33.53 M (110.01 FT) NORTHEAST  
 LX5210 OF THE EAST BANK OF THE THAMES RIVER AND ON THE SOUTHWEST SIDE  
 LX5210 OF WEST CIRCLE ROAD WHICH PASSES BETWEEN THE ROCK LEDGE.  
 LX5210 OWNERSHIP--UNIVERSITY OF CONNECTICUT, CONTACT MS CAROLYN  
 LX5210 BUOZISZEWSKI OR MR JOE COMPRONE (DIRECTORS OFFICE) ONE DAY IN  
 LX5210 ADVANCE BEFORE OCCUPYING THE STATION, PHONE 860-405-9010. TO  
 LX5210 REACH THE STATION FROM THE JUNCTION OF INTERSTATE HIGHWAY 95  
 LX5210 (NORTH BOUND EXIT 85 AND US HIGHWAY 1) LOCATED ON THE EAST SIDE OF  
 LX5210 GROTON, FROM THE NORTH BOUND LANE OF INTERSTATE 95 AND THE EXIT  
 LX5210 RAMP OF EXIT 85 GO SOUTHEAST ON THE EXIT RAMP FOR 1.21 KM (0.75 MI)  
 LX5210 TO THE JUNCTION OF US HIGHWAY 1 (AT A TRAFFIC LIGHT), TURN RIGHT,  
 LX5210 SOUTHEAST ON HIGHWAY 1 FOR 0.16 KM (0.10 MI) TO THE ENTRANCE RAMP  
 LX5210 FOR STATE HIGHWAY 349 ON THE RIGHT, BEAR RIGHT, SOUTH ON HIGHWAY  
 LX5210 349 FOR 2.17 KM (1.35 MI) TO A TRAFFIC LIGHT AT THE JUNCTION OF  
 LX5210 HIGHWAY  
 LX5210 349 TURNING RIGHT (RAINVILLE AVENUE) AND BRANDEGEE AVENUE  
 LX5210 STRAIGHT AHEAD, TURN RIGHT, EASTERLY ON HIGHWAY 349 (RAINVILLE  
 LX5210 AVENUE) FOR 0.32 KM (0.20 MI) TO THE JUNCTION OF BENHAM ROAD ON THE  
 LX5210 LEFT (AT TRAFFIC LIGHT), TURN LEFT, SOUTHERLY ON BENHAM ROAD FOR  
 LX5210 0.80 KM (0.50 MI) TO AN AMBER FLASHING LIGHT AT THE EAST POINT FIRE  
 LX5210 STATION ON THE LEFT, CONTINUE STRAIGHT AHEAD, SOUTHERLY ON (WHAT  
 LX5210 IS NOW) EASTERN POINT ROAD FOR 1.93 KM (1.20 MI) TO THE ENTRANCE  
 LX5210 DRIVE OF THE UNIVERSITY OF CONNECTICUT ON THE RIGHT, BEAR RIGHT,  
 LX5210 SOUTHEAST ON THE DRIVE FOR 0.32 KM (0.20 MI) TO A SMALL TRAFFIC  
 LX5210 ROTARY AT THE POLICE STATION ON THE RIGHT, BEAR RIGHT AND TURN  
 LX5210 RIGHT, SOUTHWESTERLY PASSING THE POLICE STATION ON WEST CIRCLE  
 LX5210 ROAD (ONE WAY NARROW ROAD) FOR 0.24 KM (0.15 MI) TO A LARGE BOULDER  
 LX5210 ON THE RIGHT AT THE HIGHEST POINT OF THE ROAD WHERE IT PASSES  
 LX5210 THROUGH A MASSIVE ROCK LEDGE AND TO THE STATION ON THE RIGHT IN  
 LX5210 THE ROCK LEDGE JUST NORTH OF A SQUARE CONCRETE FOUNDATION (OLD  
 LX5210 FLAG POLE BASE). THE STATION IS AN NGS TRIANGULATION STATION DISK  
 LX5210 CEMENTED IN A DRILL HOLE ON THE SOUTHWEST SIDE OF THE MASSIVE  
 LX5210 ROCK LEDGE ABOUT 1.53 M (5.02 FT) ABOVE THE BANK OF THE RIVER.  
 LX5210 LOCATED 26.52 M (87.01 FT) EAST OF THE NORTHEAST CORNER OF A 14 X 5-FT  
 LX5210 CONCRETE SLAB FLUSH WITH THE GROUND AT THE BANK OF THE RIVER  
 LX5210 WITH A 5 CM BRASS DISK IN ITS CENTER, 23.63 M (77.53 FT) SOUTHWEST OF  
 LX5210 THE CENTER OF THE ROAD 17.99 M (59.02 FT) SOUTH-SOUTHWEST OF RM 2  
 LX5210 (LOCATED AT THE BASE OF THE LARGE BOULDER ALONG THE SOUTHWEST  
 LX5210 SIDE OF THE ROAD) AND 1.92 M (6.30 FT) NORTH OF THE NORTH CORNER OF  
 LX5210 A SMALL SQUARE CONCRETE FOUNDATION ATTACHED TO THE LEDGE (OLD  
 LX5210 FLAG POLE BASE).  
 LX5210  
 LX5210  
 LX5210 STATION RECOVERY (2001)  
 LX5210  
 LX5210

LX5210'RECOVERY NOTE BY CONNECTICUT GEODETIC SURVEY 2001 (RJB)  
LX5210'RECOVERED AS DESCRIBED.  
LX5210'  
LX5210'  
LX5210  
LX5210 STATION RECOVERY (2001)  
LX5210  
LX5210'RECOVERY NOTE BY US POWER SQUADRON 2001 (BWR)  
LX5210'FOUND IN GOOD CONDITION  
LX5210  
LX5210 STATION RECOVERY (2003)  
LX5210  
LX5210'RECOVERY NOTE BY US POWER SQUADRON 2003 (BWR)  
LX5210'RECOVERED IN GOOD CONDITION.  
LX5210  
LX5210 STATION RECOVERY (2005)  
LX5210  
LX5210  
LX5210'RECOVERY NOTE BY CONNECTICUT GEODETIC SURVEY 2005  
LX5210'RECOVERED AS DESCRIBED IN NGS DATABASE  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX5416 \*\*\*\*\*  
LX5416 DESIGNATION - SEASIDE  
LX5416 PID - LX5416  
LX5416 STATE/COUNTY- CT/NEW LONDON  
LX5416 USGS QUAD - NIAN TIC (1983)  
LX5416  
LX5416 \*CURRENT SURVEY CONTROL  
LX5416  
LX5416\* NAD 83(1996)- 41 17 59.44403(N) 072 08 02.36671(W) ADJUSTED  
LX5416\* NAVD 88 - -0. (meters) -0. (feet) SCALED  
LX5416  
LX5416 LAPLACE CORR- -1.47 (seconds) DEFLEC99  
LX5416 GEOID HEIGHT- -30.66 (meters) GEOID03  
LX5416  
LX5416 HORZ ORDER - THIRD  
LX5416  
LX5416.The horizontal coordinates were established by classical geodetic methods  
LX5416.and adjusted by the National Geodetic Survey in August 1998.  
LX5416  
LX5416.The orthometric height was scaled from a topographic map.  
LX5416  
LX5416.The Laplace correction was computed from DEFLEC99 derived deflections.  
LX5416  
LX5416.The geoid height was determined by GEOID03.  
LX5416  
LX5416;  

	North	East	Units	Scale Factor	Converg.
LX5416:SPC CT	- 204,393.785	356,392.194	MT	0.99999142	+0 24 30.4
LX5416:SPC CT	- 670,581.94	1,169,263.39	sFT	0.99999142	+0 24 30.4
LX5416:SPC NY L	- 127,504.337	456,275.583	MT	1.00002566	+1 13 13.9
LX5416:SPC NY L	- 418,320.48	1,496,964.14	sFT	1.00002566	+1 13 13.9
LX5416:UTM 18	- 4,576,006.316	739,953.189	MT	1.00030866	+1 53 32.9

LX5416  
LX5416!  

	Elev Factor	x	Scale Factor	=	Combined Factor
LX5416:SPC CT	- 1.00000486	x	0.99999142	=	0.99999628
LX5416:SPC NY L	- 1.00000486	x	1.00002566	=	1.00003052
LX5416:UTM 18	- 1.00000486	x	1.00030866	=	1.00031352

LX5416  
LX5416:  

	Primary Azimuth Mark	Grid Az
LX5416:SPC CT	- SEASIDE SANITARIUM ELEV TANK	018 45 36.6
LX5416:SPC NY L	- SEASIDE SANITARIUM ELEV TANK	017 56 53.1
LX5416:UTM 18	- SEASIDE SANITARIUM ELEV TANK	017 16 34.1

LX5416  
LX5416|-----|  

LX5416	PID	Reference Object	Distance	Geod. Az
LX5416	LX5417	SEASIDE SANITARIUM ELEV TANK	455.225 METERS	0191007.0
LX5416	CZ7915	SEASIDE RM 2	3.120 METERS	02322
LX5416	LX5418	SEASIDE SANITARIUM SPIRE	426.660 METERS	0615837.2
LX5416	LX5250	HARKNESS WINDMILL	APPROX. 1.8 KM	0790633.3
LX5416	LX5505	BARTLETT REEF LIGHT	APPROX. 2.8 KM	1853024.6
LX5416	LX5483	MILLSTONE	APPROX. 2.6 KM	2833104.0
LX5416	CZ7914	SEASIDE RM 1	8.915 METERS	32750

LX5416|-----|  
LX5416

LX5416 SUPERSEDED SURVEY CONTROL  
LX5416  
LX5416 NAD 83(1992)- 41 17 59.44280(N) 072 08 02.36594(W) AD( ) 3  
LX5416 NAD 83(1986)- 41 17 59.44440(N) 072 08 02.37102(W) AD( ) 3  
LX5416 NAD 27 - 41 17 59.09700(N) 072 08 04.09200(W) AD( ) 3  
LX5416  
LX5416.Superseded values are not recommended for survey control.  
LX5416.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LX5416.See file dsdata.txt to determine how the superseded data were derived.  
LX5416  
LX5416\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TYL3995376006(NAD 83)  
LX5416\_MARKER: DS = TRIANGULATION STATION DISK  
LX5416\_SETTING: 66 = SET IN ROCK OUTCROP  
LX5416\_SP\_SET: IN DRILL HOLE IN ROCK OUTCROP  
LX5416\_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD  
LX5416+STABILITY: POSITION/ELEVATION WELL  
LX5416\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
LX5416+SATELLITE: SATELLITE OBSERVATIONS - April 08, 2001  
LX5416  
LX5416 HISTORY - Date Condition Report By  
LX5416 HISTORY - 1934 MONUMENTED CGS  
LX5416 HISTORY - 1954 GOOD CGS  
LX5416 HISTORY - 1971 GOOD CTDT  
LX5416 HISTORY - 1984 GOOD USPSQD  
LX5416 HISTORY - 1989 GOOD USPSQD  
LX5416 HISTORY - 20010408 GOOD USPSQD  
LX5416  
LX5416 STATION DESCRIPTION  
LX5416  
LX5416'DESCRIBED BY COAST AND GEODETIC SURVEY 1934 (GCM)  
LX5416'THE STATION IS LOCATED ON THE FIRST PROMINENT LEDGE POINT W OF  
LX5416'THE SEASIDE SANITARIUM, AND IS ABOUT 150 METERS W OF THE  
LX5416'SUPERINTENDENTS HOME. IT IS MARKED BY A STANDARD DISC SET IN  
LX5416'LEDGE 1.5 METERS ABOVE AND 3 METERS NORTHERLY OF HIGH WATER  
LX5416'MARK. THE PROPERTY DOES NOT BELONG TO THE SANITARIUM.  
LX5416'  
LX5416'STATION MARK IS A STANDARD BRONZE DISC WEDGED IN A DRILL HOLE IN  
LX5416'OUTCROPPING BEDROCK. REFERENCE MARKS  
LX5416'NO. 1 AND NO. 2 ARE STANDARD BRONZE DISCS SET IN OUTCROPPING  
LX5416'BEDROCK.  
LX5416'  
LX5416'REFERENCE MARK NO. 1 AND REFERENCE MARK NO. 2 ARE STANDARD DISCS  
LX5416'SET IN LEDGE W AND NW OF THE STATION RESPECTIVELY.  
LX5416'  
LX5416'HEIGHT OF LIGHT ABOVE STATION MARK 2 METERS.  
LX5416  
LX5416 STATION RECOVERY (1954)  
LX5416  
LX5416'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1954 (LFW)  
LX5416'STATION AND REFERENCE MARKS RECOVERED IN GOOD CONDITION. THE  
LX5416'PUBLISHED DESCRIPTION IS ADEQUATE.  
LX5416'  
LX5416'STATION MARK IS STAMPED SEASIDE 1934.  
LX5416'  
LX5416'REFERENCE MARK 1 IS STAMPED SEASIDE NO 1 1934.  
LX5416'  
LX5416'REFERENCE MARK 2 IS STAMPED SEASIDE NO 2 1934.  
LX5416  
LX5416 STATION RECOVERY (1971)  
LX5416  
LX5416'RECOVERY NOTE BY CT DEPT OF TRANSP 1971  
LX5416'THE STATION AND REFERENCE MARKS WERE FOUND IN GOOD CONDITION. TO  
LX5416'REACH THE STATION FROM WATERFORD AT THE INTERSECTION OF ROUTE 156  
LX5416'AND ROUTE 213 (GREAT NECK ROAD) GO SOUTH ON ROUTE 213 FOR 2.5 MILE  
LX5416'TO SHORE ROAD, TURN RIGHT, (WEST), GO 0.5 MILE TO MAGONK POINT  
LX5416'ROAD, THEN, TURN LEFT (SOUTH) GO 0.2 MILE TO THE CUL-DE-SAC, AND  
LX5416'STATION IS 40 FEET SOUTH OF THE SOUTHWEST CORNER OF THE CONCRETE  
LX5416'RETAINING WALL.  
LX5416  
LX5416 STATION RECOVERY (1984)  
LX5416  
LX5416'RECOVERY NOTE BY US POWER SQUADRON 1984 (BR)  
LX5416'SEASIDE 1934 GOOD RECOVERED IN GOOD CONDITION.  
LX5416'

LX5416 PUBLISHED DESCRIPTION IS ADEQUATE.  
LX5416 R. M. NO. 1 RECOVERED IN GOOD CONDITION. R. M. NO. 2 IS EAST OF  
LX5416 THE STATION INSTEAD OF WEST. A CHECK OF THE DESCRIPTION WILL  
LX5416 VERIFY THIS. STATION, R.M. NO. 2 FOUND IN GOOD ORDER.  
LX5416  
LX5416 STATION RECOVERY (1989)  
LX5416  
LX5416 RECOVERY NOTE BY US POWER SQUADRON 1989 (RMS)  
LX5416 RECOVERED IN GOOD CONDITION.  
LX5416  
LX5416 STATION RECOVERY (2001)  
LX5416  
LX5416 RECOVERY NOTE BY US POWER SQUADRON 2001 (RMS)  
LX5416 RECOVERED IN GOOD CONDITION.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX5421 \*\*\*\*\*  
LX5421 DESIGNATION - ROCKY NECK  
LX5421 PID - LX5421  
LX5421 STATE/COUNTY- CT/NEW LONDON  
LX5421 USGS QUAD - NIAN TIC (1983)  
LX5421  
LX5421 \*CURRENT SURVEY CONTROL  
LX5421  
LX5421 \* NAD 83(1996)- 41 17 51.19573(N) 072 14 47.86741(W) ADJUSTED  
LX5421 \* NAVD 88 - -0. (meters) -0. (feet) SCALED  
LX5421  
LX5421 LAPLACE CORR- -2.05 (seconds) DEFLEC99  
LX5421 GEOID HEIGHT- -30.57 (meters) GEOID03  
LX5421  
LX5421 HORZ ORDER - THIRD  
LX5421  
LX5421 The horizontal coordinates were established by classical geodetic methods  
LX5421 and adjusted by the National Geodetic Survey in August 1998.  
LX5421  
LX5421 The orthometric height was scaled from a topographic map.  
LX5421  
LX5421 The Laplace correction was computed from DEFLEC99 derived deflections.  
LX5421  
LX5421 The geoid height was determined by GEOID03.  
LX5421  
LX5421 ; North East Units Scale Factor Converg.  
LX5421 ; SPC CT - 204,078.229 346,960.123 MT 0.99999159 +0 20 01.6  
LX5421 ; SPC CT - 669,546.66 1,138,318.34 sFT 0.99999159 +0 20 01.6  
LX5421 ; SPC NY L - 127,055.035 446,848.615 MT 1.00002535 +1 08 48.7  
LX5421 ; SPC NY L - 416,846.39 1,466,035.83 sFT 1.00002535 +1 08 48.7  
LX5421 ; UTM 18 - 4,575,446.419 730,529.726 MT 1.00025409 +1 49 04.6  
LX5421  
LX5421 ! - Elev Factor x Scale Factor = Combined Factor  
LX5421 ! SPC CT - 1.00000484 x 0.99999159 = 0.99999643  
LX5421 ! SPC NY L - 1.00000484 x 1.00002535 = 1.00003019  
LX5421 ! UTM 18 - 1.00000484 x 1.00025409 = 1.00025893  
LX5421  
LX5421 |-----|  
LX5421 | PID Reference Object Distance Geod. Az  
LX5421 | | | | dddmmss.s  
LX5421 | CZ7852 ROCKY NECK RM 2 15.850 METERS 05215  
LX5421 | LX5422 PULZE CHIMNEY APPROX. 1.1 KM 0773840.9  
LX5421 | LX5429 GRISWOLD ISLAND CHIMNEY APPROX. 2.1 KM 1045358.0  
LX5421 | LX5826 HOLMN APPROX. 0.9 KM 2064749.8  
LX5421 | CZ7851 ROCKY NECK RM 1 21.450 METERS 35146  
LX5421 |-----|  
LX5421  
LX5421 SUPERSEDED SURVEY CONTROL  
LX5421  
LX5421 NAD 83(1992)- 41 17 51.19463(N) 072 14 47.86701(W) AD( ) 3  
LX5421 NAD 83(1986)- 41 17 51.19630(N) 072 14 47.87100(W) AD( ) 3  
LX5421 NAD 27 - 41 17 50.84200(N) 072 14 49.59400(W) AD( ) 3  
LX5421  
LX5421 Superseded values are not recommended for survey control.  
LX5421 NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LX5421 See file dsdata.txt to determine how the superseded data were derived.  
LX5421  
LX5421 U.S. NATIONAL GRID SPATIAL ADDRESS: 18TYL3053075446(NAD 83)

LX5421\_MARKER: DS = TRIANGULATION STATION DISK  
 LX5421\_SETTING: 66 = SET IN ROCK OUTCROP  
 LX5421\_SP\_SET: SET IN DRILL HOLE IN ROCK LEDGE  
 LX5421\_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD  
 LX5421+STABILITY: POSITION/ELEVATION WELL  
 LX5421\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 LX5421+SATELLITE: SATELLITE OBSERVATIONS - December 06, 2005

LX5421	HISTORY	- Date	Condition	Report By
LX5421	HISTORY	- 1934	MONUMENTED	CGS
LX5421	HISTORY	- 1968	GOOD	CGS
LX5421	HISTORY	- 1983	GOOD	USPSQD
LX5421	HISTORY	- 1989	GOOD	USPSQD
LX5421	HISTORY	- 20011001	GOOD	USPSQD
LX5421	HISTORY	- 20041115	GOOD	USPSQD
LX5421	HISTORY	- 20051202	GOOD	USPSQD
LX5421	HISTORY	- 20051206	GOOD	USPSQD

LX5421  
 LX5421  
 LX5421 STATION DESCRIPTION

LX5421'DESCRIBED BY COAST AND GEODETIC SURVEY 1934 (GCM)  
 LX5421'THE STATION IS LOCATED ON A BARE LEDGE POINT AT THE E SIDE OF THE  
 LX5421'MOUTH OF FOUR MILE RIVER, AND KNOWN AS ROCKY NECK POINT. THE  
 LX5421'STATION IS NOT ON THE HIGHEST POINT OF THE BARE LEDGE BUT IS  
 LX5421'ABOUT MIDWAY BETWEEN THE HIGHEST POINT AND THE SOUTHERN END. IT  
 LX5421'IS A STANDARD DISC SET IN A DRILL HOLE 17 METERS E OF THE W  
 LX5421'HIGH WATER LINE AND 40 METERS N OF THE S HIGH WATER LINE.  
 LX5421'

LX5421'REFERENCE MARK NO. 1 IS N OF THE STATION AND IS A STANDARD DISC  
 LX5421'SET IN A DRILL HOLE IN LEDGE. REFERENCE MARK NO. 2 IS A STANDARD  
 LX5421'DISC SET IN A DRILL HOLE IN THE LEDGE N 63 DEG E (MAGNETIC) FROM  
 LX5421'THE STATION AND 10 METERS W OF THE HIGH WATER LINE.  
 LX5421'

LX5421'HEIGHT OF LIGHT ABOVE STATION MARK 5 METERS.

LX5421  
 LX5421 STATION RECOVERY (1968)  
 LX5421

LX5421'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1968 (RFA)  
 LX5421'RECOVERED. STATION AND RMS 1 AND 2 RECOVERED AS DESCRIBED BY  
 LX5421'G.C.M. IN 1934.

LX5421  
 LX5421 STATION RECOVERY (1983)  
 LX5421

LX5421'RECOVERY NOTE BY US POWER SQUADRON 1983 (JCB)  
 LX5421'ROCKY NECK 1934 RECOVERED GOOD.

LX5421'  
 LX5421'ROCKY NECK NO 2 1934 RECOVERED GOOD.

LX5421'  
 LX5421'ROCKY NECK NO 1 1934 RECOVERED GOOD.

LX5421'  
 LX5421'STATION AND REFERENCE MARKS WERE FOUND IN GOOD COND AS  
 LX5421'DESCRIBED.

LX5421  
 LX5421 STATION RECOVERY (1989)  
 LX5421

LX5421'RECOVERY NOTE BY US POWER SQUADRON 1989 (RMS)  
 LX5421'RECOVERED IN GOOD CONDITION.

LX5421  
 LX5421 STATION RECOVERY (2001)  
 LX5421

LX5421'RECOVERY NOTE BY US POWER SQUADRON 2001 (HHG)  
 LX5421'RECOVERED IN GOOD CONDITION.

LX5421  
 LX5421 STATION RECOVERY (2004)  
 LX5421

LX5421'RECOVERY NOTE BY US POWER SQUADRON 2004 (JRR)  
 LX5421'RECOVERED IN GOOD CONDITION.

LX5421  
 LX5421 STATION RECOVERY (2005)  
 LX5421

LX5421'RECOVERY NOTE BY US POWER SQUADRON 2005 (JRR)  
 LX5421'RECOVERED IN GOOD CONDITION.

LX5421  
 LX5421 STATION RECOVERY (2005)

LX5421  
LX5421 RECOVERY NOTE BY US POWER SQUADRON 2005 (JRR)  
LX5421 RECOVERED IN GOOD CONDITION.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX6270 \*\*\*\*\*  
LX6270 DESIGNATION - GUILFORD  
LX6270 PID - LX6270  
LX6270 STATE/COUNTY- CT/NEW HAVEN  
LX6270 USGS QUAD - GUILFORD (1984)  
LX6270  
LX6270 \*CURRENT SURVEY CONTROL  
LX6270  
LX6270 \* NAD 83(1996)- 41 15 58.36208(N) 072 40 03.34096(W) ADJUSTED  
LX6270 \* NAVD 88 - 2.3 (meters) 8. (feet) VERTCON  
LX6270  
LX6270 LAPLACE CORR- -2.74 (seconds) DEFLEC99  
LX6270 GEOID HEIGHT- -30.17 (meters) GEOID03  
LX6270  
LX6270 HORZ ORDER - FIRST  
LX6270  
LX6270.The horizontal coordinates were established by classical geodetic methods  
LX6270.and adjusted by the National Geodetic Survey in August 1998.  
LX6270  
LX6270.The NAVD 88 height was computed by applying the VERTCON shift value to  
LX6270.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)  
LX6270  
LX6270.The Laplace correction was computed from DEFLEC99 derived deflections.  
LX6270  
LX6270.The geoid height was determined by GEOID03.  
LX6270  
LX6270;  

	North	East	Units	Scale Factor	Converg.
LX6270;SPC CT	- 200,477.853	311,705.780	MT	0.99999398	+0 03 16.7
LX6270;SPC CT	- 657,734.42	1,022,654.71	sFT	0.99999398	+0 03 16.7
LX6270;SPC NY L	- 122,953.458	411,647.974	MT	1.00002123	+0 52 17.4
LX6270;SPC NY L	- 403,389.80	1,350,548.39	sFT	1.00002123	+0 52 17.4
LX6270;UTM 18	- 4,570,933.393	695,374.604	MT	1.00006980	+1 32 19.8

LX6270  
LX6270!  

LX6270!SPC CT	-	1.00000437	x	0.99999398	=	0.99999835
LX6270!SPC NY L	-	1.00000437	x	1.00002123	=	1.00002560
LX6270!UTM 18	-	1.00000437	x	1.00006980	=	1.00007417

LX6270  
LX6270:  

	Primary Azimuth Mark	Grid Az
LX6270:SPC CT	- DUDLEYS CUPOLA	012 31 30.0
LX6270:SPC NY L	- DUDLEYS CUPOLA	011 42 29.3
LX6270:UTM 18	- DUDLEYS CUPOLA	011 02 26.9

LX6270  
LX6270|-----  

PID	Reference Object	Distance	Geod. Az
LX6270	LX6267 DUDLEYS CUPOLA	APPROX. 3.0 KM	0123446.7
LX6270	LX6265 GUILFORD STANDPIPE	APPROX. 2.6 KM	0174209.2
LX6270	LX6237 DEFOREST AND HOTCHKISS CUPOLA	APPROX. 3.3 KM	0540854.3
LX6270	LX6266 GUILFORD HARBOR GABLE E SIDE	APPROX. 0.6 KM	0630113.2
LX6270	LX6351 FALKNER IS LIGHTHOUSE	APPROX. 6.1 KM	1685823.0
LX6270	LX6258 MULBERRY	APPROX. 1.4 KM	2483708.6
LX6270	CZ6561 GUILFORD RM 1	32.140 METERS	25331
LX6270	LX6240 GUILFORD POINT GABLE	153.314 METERS	27815
LX6270	CZ6562 GUILFORD RM 2	22.327 METERS	32030
LX6270	LX6243 KNOWLES LOMBARD STACK	APPROX. 1.2 KM	3423056.2

LX6270|-----  
LX6270  
LX6270  
LX6270 SUPERSEDED SURVEY CONTROL  
LX6270  
LX6270 NAD 83(1992)- 41 15 58.36118(N) 072 40 03.34081(W) AD( ) 1  
LX6270 NAD 83(1986)- 41 15 58.36339(N) 072 40 03.34371(W) AD( ) 1  
LX6270 NAD 27 - 41 15 58.01500(N) 072 40 05.00400(W) AD( ) 1  
LX6270 NGVD 29 (07/19/86) 2.6 (m) 9. (f) VERT ANG  
LX6270  
LX6270.Superseded values are not recommended for survey control.  
LX6270.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LX6270.See file dsdata.txt to determine how the superseded data were derived.  
LX6270  
LX6270\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL9537570933(NAD 83)



LX6270\_MARKER: DO = NOT SPECIFIED OR SEE DESCRIPTION  
 LX6270\_SETTING: 66 = SET IN ROCK OUTCROP  
 LX6270\_SP\_SET: IN DRILL HOLE IN ROCK OUTCROP  
 LX6270\_STAMPING: GUILFORD 1933  
 LX6270\_MAGNETIC: O = OTHER; SEE DESCRIPTION  
 LX6270\_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD  
 LX6270+STABILITY: POSITION/ELEVATION WELL

LX6270	HISTORY	- Date	Condition	Report By
LX6270	HISTORY	- 1933	MONUMENTED	CGS
LX6270	HISTORY	- 1962	SEE DESCRIPTION	CGS
LX6270	HISTORY	- 1976	SEE DESCRIPTION	NGS
LX6270	HISTORY	- 19920101	GOOD	USE
LX6270	HISTORY	- 19920101	GOOD	USE

LX6270  
 LX6270 STATION DESCRIPTION  
 LX6270

LX6270'DESCRIBED BY COAST AND GEODETIC SURVEY 1933 (GCM)  
 LX6270'THIS STATION IS ON THE EASTERLY OF TWO SMALL ROCKY POINTS THAT  
 LX6270'MARK THE SE EXTREMITY OF GUILFORD POINT. IT BEARS S 80 DEG E  
 LX6270'(MAGNETIC) AND IS 37.4 METERS DISTANT FROM SE CORNER OF  
 LX6270'UNPAINTED SHACK. ALSO IT BEARS S 45 DEG E (MAGNETIC) AND IS  
 LX6270'116.6 METERS DISTANT FROM THE SE CORNER OF THE GUILFORD POINT  
 LX6270'HOUSE. AT HIGH WATER THE TIDE CUTS BETWEEN STATION AND  
 LX6270'MAINLAND.

LX6270'  
 LX6270'STATION, AND REFERENCE MARKS ARE STANDARD BRONZE DISKS SET IN  
 LX6270'OUTCROPPING BEDROCK AS DESCRIBED IN NOTES 2, AND 12A.

LX6270'  
 LX6270'REFERENCE MARK NO.1 BEARS W (MAGNETIC) AND IS ON WESTERLY OF  
 LX6270'TWO ROCKY POINTS ALMOST S OF UNPAINTED SHACK.

LX6270'  
 LX6270'REFERENCE MARK NO.2 BEARS N 25 DEG W (MAGNETIC) AND IS SET IN  
 LX6270'LEDGE SIMILAR TO, BUT SMALLER THAN, THAT BEARING STATION.

LX6270'  
 LX6270'HEIGHT OF LIGHT ABOVE STATION MARK 3.0 METERS.

LX6270  
 LX6270 STATION RECOVERY (1962)  
 LX6270

LX6270'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1962 (JPP)  
 LX6270'THE STATION AND BOTH REFERENCE MARKS WERE RECOVERED AS DESCRIBED  
 LX6270'AND ALL MARKS WERE FOUND TO BE IN GOOD CONDITION.

LX6270'  
 LX6270'THE ORIGINAL DESCRIPTION IS ADEQUATE.

LX6270  
 LX6270 STATION RECOVERY (1976)  
 LX6270

LX6270'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1976 (JLC)  
 LX6270'THE STATION MARK, REFERENCE MARK 1 AND 2 WERE RECOVERED AN  
 LX6270'FOUND IN GOOD CONDITION. THE DIRECTION AND THE ANGLE BETWEEN  
 LX6270'REFERENCE MARK 1 AND 2 CHECKED THE 1934 DATA. THE DISTANCE  
 LX6270'TO REFERENCE MARK 1 WAS LESS BY 0.080 OF A METER AND THE  
 LX6270'DISTANCE TO REFERENCE MARK 2 WAS LESS BY 0.033 OF A METER.

LX6270'  
 LX6270'THE STATION IS LOCATED ABOUT 2-1/4 MILES NORTHEAST OF SACHEM  
 LX6270'HEAD, 1-1/2 MILES SOUTHEAST OF GUILFORD AND IS ON GUILFORD  
 LX6270'POINT. FOLLOWING IS A COMPLETE NEW DESCRIPTION.  
 LX6270'TO REACH THE STATION FROM THE POST OFFICE IN GUILFORD, GO EAST  
 LX6270'ON STATE HIGHWAY 146 FOR 0.1 MILE TO A CROSS STREET (WHITEFIELD  
 LX6270'STREET). TURN RIGHT AND GO SOUTHERLY ON WHITEFIELD STREET FOR  
 LX6270'0.9 MILE TO A CROSS ROAD (SEASIDE AVENUE). TURN RIGHT AND GO  
 LX6270'SOUTH ON SEASIDE AVENUE FOR 0.45 MILE TO THE END OF THE ROAD  
 LX6270'AND THE EDGE OF A LAWN AT A PRIVATE RESIDENCE. FROM HERE  
 LX6270'WALK SOUTHERLY FOR ABOUT 300 FEET TO THE HIGHEST PART OF A  
 LX6270'ROCK OUTCROP AND THE STATION SITE.

LX6270'  
 LX6270'STATION MARK, STAMPED---GUILFORD 1933---, IS A STANDARD DISK  
 LX6270'CEMENTED IN A DRILL HOLE IN A LARGE OUTCROP OF BEDROCK THAT  
 LX6270'PROJECTS ABOUT 8 FEET ABOVE THE SHORE LINE AT LOW TIDE. IT IS  
 LX6270'30 FEET WEST OF THE WATER LINE AT LOW TIDE, 23 FEET SOUTH OF  
 LX6270'THE NORTH EDGE OF THE ROCK OUTCROP AND 3 FEET EAST OF THE  
 LX6270'WEST EDGE OF THE OUTCROP.

LX6270'  
 LX6270'REFERENCE MARK 1, STAMPED---GUILFORD NO 1 1933---, IS A

LX6270' STANDARD DISK CEMENTED IN A DRILL HOLE IN A 5 FOOT BY 20 FOOT  
 LX6270' ROCK OUTCROP THAT PROJECTS ABOUT 4 FEET ABOVE THE SHORE LINE AT  
 LX6270' LOW TIDE. IT IS 31 FEET SOUTH OF A ROCK FENCE, 25.5 FEET EAST  
 LX6270' OF A SHARP DROP-OFF AT THE OUTCROP EDGE AND 13 FEET WEST OF THE  
 LX6270' EAST EDGE OF THE ROCK OUTCROP.  
 LX6270'  
 LX6270' REFERENCE MARK 2, STAMPED---GUILFORD NO 2 1933---, IS A  
 LX6270' STANDARD DISK CEMENTED IN A DRILL HOLE IN A 15 FOOT BY 20 FOOT  
 LX6270' ROCK OUTCROP THAT PROJECTS ABOUT 3 FEET ABOVE THE GROUND AT LOW  
 LX6270' TIDE. IT IS 43 FEET SOUTHEAST OF A ROCK FENCE AND 19 FEET WEST  
 LX6270' OF THE WATER AT LOW TIDE.  
 LX6270'  
 LX6270' NO SUITABLE PLACE WAS FOUND TO SET AN AZIMUTH MARK.  
 LX6270'  
 LX6270' THE HEIGHT OF LIGHT ABOVE THE STATION MARK WAS 1.4 METERS.  
 LX6270'  
 LX6270' DESCRIBED BY L. D. ACRES  
 LX6270'  
 LX6270' STATION RECOVERY (1992)  
 LX6270'  
 LX6270' RECOVERY NOTE BY US ENGINEERS 1992 (RMG)  
 LX6270' DESCRIPTION IS ADEQUATE.  
 LX6270'  
 LX6270' STATION RECOVERY (1992)  
 LX6270'  
 LX6270' RECOVERY NOTE BY US ENGINEERS 1992 (RMG)  
 LX6270' DESCRIPTION IS ADEQUATE.  
 1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
 LX6423 \*\*\*\*\*  
 LX6423 DESIGNATION - BROWN  
 LX6423 PID - LX6423  
 LX6423 STATE/COUNTY- CT/NEW HAVEN  
 LX6423 USGS QUAD - BRANFORD (1984)  
 LX6423  
 LX6423 \*CURRENT SURVEY CONTROL  
 LX6423  
 LX6423\* NAD 83(1996)- 41 15 47.69667(N) 072 46 23.41886(W) ADJUSTED  
 LX6423\* NAVD 88 - 1. (meters) 3. (feet) SCALED  
 LX6423  
 LX6423 LAPLACE CORR- -2.64 (seconds) DEFLEC99  
 LX6423 GEOID HEIGHT- -30.04 (meters) GEOID03  
 LX6423  
 LX6423 HORZ ORDER - THIRD  
 LX6423  
 LX6423.The horizontal coordinates were established by classical geodetic methods  
 LX6423.and adjusted by the National Geodetic Survey in August 1998.  
 LX6423  
 LX6423.The orthometric height was scaled from a topographic map.  
 LX6423  
 LX6423.The Laplace correction was computed from DEFLEC99 derived deflections.  
 LX6423  
 LX6423.The geoid height was determined by GEOID03.  
 LX6423  
 LX6423;  

	North	East	Units	Scale	Factor	Converg.
LX6423;SPC CT	- 200,145.798	302,858.826	MT	0.99999422	-0 00	55.3
LX6423;SPC CT	- 656,645.01	993,629.33	sFT	0.99999422	-0 00	55.3
LX6423;SPC NY L	- 122,495.225	402,806.418	MT	1.00002086	+0 48	08.8
LX6423;SPC NY L	- 401,886.42	1,321,540.72	sFT	1.00002086	+0 48	08.8
LX6423;UTM 18	- 4,570,372.254	686,538.735	MT	1.00002826	+1 28	08.6

 LX6423  
 LX6423!  

	Elev Factor	x	Scale Factor	=	Combined Factor
LX6423!SPC CT	- 1.00000460	x	0.99999422	=	0.99999882
LX6423!SPC NY L	- 1.00000460	x	1.00002086	=	1.00002546
LX6423!UTM 18	- 1.00000460	x	1.00002826	=	1.00003286

 LX6423  

PID	Reference Object	Distance	Geod. Az
			ddmmss.s
LX6423	CZ7110 BROWN RM 1	8.540 METERS	04631
LX6423	LX6421 LEWIS ISLAND CHIMNEY	APPROX. 0.8 KM	0831529.3
LX6423	CZ7111 BROWN RM 2	5.400 METERS	08449
LX6423	LX6445 MONONOTTO ISLAND CUPOLA	APPROX. 1.8 KM	1023316.0
LX6423	LX6430 ROGERS ISLAND CHIMNEY	APPROX. 0.9 KM	1153253.4
LX6423	LX6443 GOVERNORS ISLAND CHIMNEY	APPROX. 1.7 KM	1250209.7

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LX6423 | LX6444 HUBINGERS CHIMNEY | APPROX. 2.0 KM 1280840.9 |
LX6423 | LX6354 HORSE ISLAND CHIMNEY | APPROX. 2.4 KM 1485130.4 |
LX6423 | LX6353 TWO TREE ISLAND CHIMNEY | APPROX. 2.6 KM 1552243.7 |
LX6423 | LX6359 SUMAC ISLAND BOATHOUSE CHIM | APPROX. 3.6 KM 2380642.1 |
LX6423 | LX6358 SUMAC ISLAND CHIMNEY | APPROX. 3.6 KM 2390329.1 |
LX6423 | LX6420 GOSS TURRET | APPROX. 0.5 KM 3003705.4 |
LX6423 | LX6422 BROWN POINT CHIMNEY | 66.676 METERS 33351 |
LX6423 |-----|
LX6423
LX6423
LX6423 SUPERSEDED SURVEY CONTROL
LX6423
LX6423 NAD 83(1992)- 41 15 47.69578(N) 072 46 23.41869(W) AD( ) 3
LX6423 NAD 83(1986)- 41 15 47.69778(N) 072 46 23.42182(W) AD( ) 3
LX6423 NAD 27 - 41 15 47.35000(N) 072 46 25.07100(W) AD( ) 3
LX6423
LX6423.Superseded values are not recommended for survey control.
LX6423.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
LX6423.See file dsdata.txt to determine how the superseded data were derived.
LX6423
LX6423.U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL8653970372(NAD 83)
LX6423.MARKER: DO = NOT SPECIFIED OR SEE DESCRIPTION
LX6423.SETTING: 66 = SET IN ROCK OUTCROP
LX6423.SP_SET: IN DRILL HOLE IN ROCK OUTCROP
LX6423.STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
LX6423+STABILITY: POSITION/ELEVATION WELL
LX6423
LX6423 HISTORY - Date Condition Report By
LX6423 HISTORY - 1933 MONUMENTED CGS
LX6423 HISTORY - 1961 SEE DESCRIPTION CGS
LX6423
LX6423 STATION DESCRIPTION
LX6423
LX6423'DESCRIBED BY COAST AND GEODETIC SURVEY 1933 (GCM)
LX6423'THE STATION IS LOCATED ON THE LEDGE AT THE SE EXTREMITY OF BROWN
LX6423'POINT. A CURVED MASONRY SEA-WALL JOINS THE LEDGE TO THE
LX6423'MAINLAND. ABOUT 5 METERS NE OF STATION THIS SEA-WALL RIGHT ANGLES
LX6423'TO THE EASTWARD TO JOIN THE SHORE END OF A RIP-RAP
LX6423'BREAKWATER. THIS BREAKWATER PROTECTS THE SMALL BOAT ANCHORAGE
LX6423'OFF THE PINE ORCHARD CLUB. POINT WHERE SEA-WALL LEAVES MAINLAND
LX6423'AT PROPERTY CORNER BEARS N 5 DEG E (MAGNETIC) AND IS 26 METERS
LX6423'DISTANT. STATION IS 11.5 METERS FROM SOUTHWESTERLY EXTREMITY
LX6423'OF LEDGE.
LX6423'
LX6423'STATION AND REFERENCE MARKS ARE STANDARD BRONZE DISKS SET IN
LX6423'OUTCROPPING BEDROCK AS DESCRIBED IN NOTES 2, AND 12A.
LX6423'
LX6423'REFERENCE MARK NO.1 IS IN CONCRETE TOP OF SEA-WALL NEAR ITS
LX6423'NORTHERLY EDGE AND BEARS N 58 DEG E (MAGNETIC).
LX6423'
LX6423'REFERENCE MARK NO.2 IS IN SAME LEDGE AS STATION AND BEARS S
LX6423'85 DEG E (MAGNETIC).
LX6423'
LX6423'HEIGHT OF LIGHT ABOVE STATION MARK 3.0 METERS.
LX6423
LX6423
LX6423 STATION RECOVERY (1961)
LX6423
LX6423'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1961 (GFW)
LX6423'STATION AND R.M.S WERE RECOVERED IN GOOD CONDITION. THE STATION
LX6423'IS STAMPED, BROWN 1933 AND THE R.M.S ARE STAMPED, NO.1 1933 AND
LX6423'NO.2 1933. THE ORIGINAL DESCRIPTION BY G.C.M. IN 1933 IS
LX6423'COMPLETE AND ADEQUATE.
LX6423'
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007
LX6542 *****
LX6542 DESIGNATION - RIDGE
LX6542 PID - LX6542
LX6542 STATE/COUNTY- CT/NEW HAVEN
LX6542 USGS QUAD - NEW HAVEN (1984)
LX6542
LX6542 *CURRENT SURVEY CONTROL
LX6542
LX6542* NAD 83(1996)- 41 22 16.51147(N) 072 53 44.26153(W) ADJUSTED
LX6542* NAVD 88 - 59.3 (meters) 195. (feet) VERTCON
LX6542
LX6542 LAPLACE CORR- -3.90 (seconds) DEFLEC99

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LX6542 GEOID HEIGHT-          -29.60 (meters)          GEOID03
LX6542
LX6542 HORZ ORDER  - FIRST
LX6542
LX6542.The horizontal coordinates were established by classical geodetic methods
LX6542.and adjusted by the National Geodetic Survey in August 1998.
LX6542
LX6542.The NAVD 88 height was computed by applying the VERTCON shift value to
LX6542.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
LX6542
LX6542.The Laplace correction was computed from DEFLEC99 derived deflections.
LX6542
LX6542.The geoid height was determined by GEOID03.
LX6542
LX6542;          North          East          Units Scale Factor Converg.
LX6542;SPC CT          -    212,150.630    292,617.324    MT 0.99998714    -0 05 47.6
LX6542;SPC CT          -    696,030.86     960,028.67    sFT 0.99998714    -0 05 47.6
LX6542;UTM 18          -   4,582,107.601   675,989.185    MT 0.99998118    +1 23 28.4
LX6542
LX6542!          - Elev Factor x Scale Factor = Combined Factor
LX6542!SPC CT          -    0.99999534 x    0.99998714 =    0.99998248
LX6542!UTM 18          -    0.99999534 x    0.99998118 =    0.99997652
LX6542
LX6542:          Primary Azimuth Mark          Grid Az
LX6542:SPC CT          - PELLOW          049 26 36.2
LX6542:UTM 18          - PELLOW          047 57 20.2
LX6542
LX6542 |-----|
LX6542 |PID      Reference Object          Distance          Geod. Az
LX6542 |-----|-----|-----|
LX6542 |LX6394 PELLOW          APPROX. 7.7 KM 0492048.6
LX6542 |CZ7833 RIDGE RM 2          31.628 METERS 18249
LX6542 |CZ7832 RIDGE RM 1          16.563 METERS 35159
LX6542 |-----|-----|-----|
LX6542
LX6542          SUPERSEDED SURVEY CONTROL
LX6542
LX6542 NAD 83(1992)- 41 22 16.51059(N)    072 53 44.26143(W) AD( ) 1
LX6542 NAD 83(1986)- 41 22 16.51292(N)    072 53 44.26444(W) AD( ) 1
LX6542 NAD 27          - 41 22 16.17422(N)    072 53 45.89608(W) AD( ) 1
LX6542 NGVD 29 (07/19/86) 59.6 (m)          196. (f) VERT ANG
LX6542
LX6542.Superseded values are not recommended for survey control.
LX6542.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
LX6542.See file dsdata.txt to determine how the superseded data were derived.
LX6542
LX6542_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL7598982108(NAD 83)
LX6542_MARKER: DO = NOT SPECIFIED OR SEE DESCRIPTION
LX6542_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
LX6542_SP_SET: SET IN TOP OF CONCRETE MONUMENT
LX6542_MAGNETIC: R = STEEL ROD IMBEDDED IN MONUMENT
LX6542_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
LX6542+STABILITY: SURFACE MOTION
LX6542
LX6542 HISTORY          - Date          Condition          Report By
LX6542 HISTORY          - 1976          MONUMENTED          NGS
LX6542 HISTORY          - 1982          GOOD          NGS
LX6542
LX6542          STATION DESCRIPTION
LX6542
LX6542'DESCRIBED BY NATIONAL GEODETIC SURVEY 1976 (JLC)
LX6542'THE STATION IS ABOUT 4-1/2 MILES NORTH OF NEW HAVEN, 2-1/2
LX6542'MILES SOUTHWEST OF NORTH HAVEN, 1 MILE SOUTHEAST OF HAMDEN
LX6542'AND ON THE PROPERTY OF THE RIDGE ROAD ELEMENTARY SCHOOL. DR.
LX6542'DELIO J. ROTONDO, SUPERINTENDENT OF SCHOOLS, 1151 HARTFORD
LX6542'TURNPIKE, NORTH HAVEN, CONNECTICUT WAS CONTACTED FOR PERMISSION
LX6542'FOR THE USE OF THIS STATION. HIS TELEPHONE NUMBER IS 288-9216.
LX6542'
LX6542'TO REACH THE STATION FROM THE JUNCTION OF SKIFF STREET AND
LX6542'RIDGE ROAD IN NORTH HAVEN, GO NORTHERLY ON
LX6542'RIDGE ROAD FOR 0.25 MILE TO THE ENTRANCE TO THE RIDGE ROAD
LX6542'ELEMENTARY SCHOOL ON THE RIGHT. TURN RIGHT AND FOLLOW THE
LX6542'DRIVE UPHILL FOR 0.1 MILE TO THE TOP OF THE HILL, A PARKING
LX6542'LOT AND THE STATION AS DESCRIBED.

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LX6542'  
LX6542'THE STATION MARKS, STAMPED---RIDGE 1976---, ARE STANDARD DISKS.  
LX6542'THE SURFACE MARK IS SET IN THE TOP OF A 12-INCH CYLINDRICAL  
LX6542'CONCRETE MONUMENT WHICH IS FLUSH WITH THE GROUND SURFACE. THE  
LX6542'UNDERGROUND MARK IS SET IN THE TOP OF AN IRREGULAR MASS OF  
LX6542'CONCRETE WHICH IS ABOUT 48 INCHES BELOW THE GROUND SURFACE.  
LX6542'THEY ARE 75 FEET NORTH OF A LAMP POLE, 28 FEET SOUTHWEST OF A  
LX6542'SIDEWALK AND 15 FEET WEST OF THE WEST EDGE OF THE PARKING LOT.  
LX6542'A 30-INCH STEEL ROD IS EMBEDDED IN THE TOP OF THE MONUMENT.  
LX6542'  
LX6542'REFERENCE MARK 1, STAMPED---RIDGE NO 1 1976---, IS A STANDARD  
LX6542'DISK CEMENTED IN A DRILL HOLE IN THE TOP OF A BOULDER WHICH IS  
LX6542'ABOUT 20 BY 24 INCHES AND PROJECTS ABOUT 4 INCHES ABOVE  
LX6542'THE GROUND SURFACE. IT IS 35 FEET SOUTH OF THE CENTER OF THE  
LX6542'PAVED DRIVE, 7 FEET EAST OF THE CENTER OF THE SIDEWALK AND 4.8  
LX6542'FEET WEST OF A LAMP POLE.  
LX6542'  
LX6542'REFERENCE MARK 2, STAMPED---RIDGE NO 2 1976---, IS A STANDARD  
LX6542'DISK CEMENTED IN A DRILL HOLE IN THE TOP OF AN OUTCROP OF  
LX6542'BEDROCK WITH AN EXPOSED SURFACE OF 10 INCHES ACROSS AND ABOUT  
LX6542'1 INCH BELOW THE GROUND SURFACE. IT IS 43 FEET SOUTH OF THE  
LX6542'SOUTHWEST CORNER OF THE PARKING LOT, 35 FEET SOUTHEAST OF A  
LX6542'LARGE BUSH AND 32 FEET SOUTHWEST OF A LAMP POLE.  
LX6542'  
LX6542'NO SUITABLE LOCATION WAS FOUND FOR AN AZIMUTH MARK FOR THIS  
LX6542'STATION.  
LX6542'  
LX6542'THE HEIGHT OF LIGHT SHOWN ABOVE THE MARK WAS 22.3 METERS.  
LX6542'  
LX6542'DESCRIBED BY NOLAN B. JOHNSON.  
LX6542'  
LX6542'  
LX6542' STATION RECOVERY (1982)  
LX6542'  
LX6542'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1982 (VDN)  
LX6542'THE STATION MARK, REFERENCE MARKS 1 AND 2 WERE RECOVERED IN  
LX6542'GOOD CONDITION. THE DIRECTIONS TO BOTH MARKS COMPARED WITH  
LX6542'THE 1976 DATA, ALSO THE MEASUREMENT TO REFERENCE MARK 2  
LX6542'COMPARED, REFERENCE MARK 1 WAS FOUND TO BE 0.013 METER LONGER.  
LX6542'THIS WAS VERIFIED IN THE FIELD.  
LX6542'A NEW DESCRIPTION FOLLOWS.  
LX6542'THE STATION IS LOCATED ABOUT 6.4 KM (4.0 MI) NORTH-  
LX6542'NORTHEAST OF THE APPROXIMATE CENTER OF NEW HAVEN, 5.6 KM  
LX6542'(3.5 MI) NORTH OF THE JUNCTION OF U.S. HIGHWAY 5  
LX6542'AND INTERSTATE HIGHWAY 91, 4 KM (2.5 MI) SOUTHWEST OF NORTH  
LX6542'HAVEN, 1.6 KM (1.0 MI) WEST OF INTERSTATE HIGHWAY 91 AND ON  
LX6542'THE PROPERTY OF RIDGE ROAD ELEMENTARY SCHOOL.  
LX6542'OWNERSHIP--STATE OF CONNECTICUT, MR FRANK SAMUELSON,  
LX6542'SUPERINTENDENT OF SCHOOLS, 5 LINSLEY STREET, NEW HAVEN CT,  
LX6542'PHONE 203-239-2581.  
LX6542'  
LX6542'TO REACH THE STATION FROM THE JUNCTIONS OF STATE HIGHWAY 10  
LX6542'(WHITNEY AVENUE) AND DIXWELL AVENUE IN HAMDEN AT THE COURT  
LX6542'HOUSE, GO EAST ON DIXWELL AVENUE FOR 0.7 KM (0.45 MI) TO  
LX6542'THE ON RAMP OF STATE HIGHWAY 15, ON THE LEFT. CONTINUE  
LX6542'AHED EAST ON DIXWELL AVENUE FOR 0.2 KM (0.1 MI) TO A TRAFFIC  
LX6542'LIGHT AND RIDGE ROAD. TURN RIGHT AND GO SOUTH ON RIDGE ROAD  
LX6542'FOR 1.3 KM (0.8 MI) TO A PAVED ROAD LEFT IN A SCHOOL ZONE AND  
LX6542'A SIGN (RIDGE RD ELEMENTARY SCHOOL). TURN LEFT AND GO EAST  
LX6542'FOR 0.2 KM (0.1 MI) TO THE STATION ON RIGHT AT THE WEST END  
LX6542'THE PARKING AREA.  
LX6542'  
LX6542'THE STATION IS A STANDARD NGS DISK  
LX6542'STAMPED---RIDGE 1976---,  
LX6542'SET INTO THE TOP OF A ROUND CONCRETE MONUMENT 30 CM IN DIAMETER  
LX6542'FLUSH WITH GROUND. IT IS LOCATED  
LX6542'23.47 METERS (77.0 FT) SOUTH-SOUTHWEST FROM THE APPROXIMATE  
LX6542'CENTER OF A PAVED ROAD,  
LX6542'17.98 METERS (59.0 FT) NORTH FROM THE SOUTHWEST CORNER OF THE  
LX6542'PARKING LOT,  
LX6542'16.31 METERS (53.5 FT) EAST FROM A WITNESS POST AND  
LX6542'4.94 METERS (16.2 FT) WEST FROM THE WEST EDGE OF THE PARKING AREA.  
LX6542'THE UNDERGROUND MARK IS A STANDARD NGS DISK  
LX6542'STAMPED---RIDGE 1976---,  
LX6542'SET INTO AN IRREGULAR MASS OF CONCRETE 1.2 METERS BELOW THE SURFACE.

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LX6542'
LX6542'REFERENCE MARK NUMBER 1 IS A STANDARD NGS DISK
LX6542'STAMPED---RIDGE NO 1 1976---,
LX6542'SET INTO ROCK OUTCROP FLUSH WITH SURFACE. IT IS LOCATED
LX6542'20.12 METERS (66.0 FT) NORTHEAST FROM A WITNESS POST,
LX6542'13.11 METERS (43.0 FT) NORTHWEST THE NORTHWEST CORNER OF
LX6542'THE PARKING LOT,
LX6542'7.92 METERS (26.0 FT) SOUTH THE APPROXIMATE CENTER OF A
LX6542'PAVED ROAD AND
LX6542'1.43 METERS (4.7 FT) WEST-SOUTHWEST FROM A 50 CM
LX6542'SQUARE CONCRETE PAD.
LX6542'MARK IS BELOW STATION 0.3 METER.
LX6542'
LX6542'REFERENCE MARK NUMBER 2 IS A STANDARD NGS DISK
LX6542'STAMPED---RIDGE NO 2 1976---,
LX6542'SET INTO A ROCK OUTCROP. IT IS LOCATED
LX6542'36.48 METERS (119.7 FT) SOUTH-SOUTHEAST FROM A WITNESS POST,
LX6542'34.29 METERS (112.5 FT) NORTHEAST FROM A 60 CM IN DIAMETER OAK
LX6542'TREE AND
LX6542'13.72 METERS (45.0 FT) SOUTHEAST FROM THE SOUTHWEST CORNER
LX6542'OF THE PARKING LOT.
LX6542'MARK IS BELOW STATION 0.15 METER.
LX6542'
LX6542'NO SUITABLE LOCATION FOR AN AZIMUTH MARK.
LX6542'
LX6542'HEIGHT OF LIGHT SHOWN ABOVE THE MARK WAS 25.4 METERS.
LX6542'
LX6542'DESCRIBED BY J.N. LEONHARDT, CHECKED BY D.R. VARNEY.
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007
LX7428 *****
LX7428 DESIGNATION - CLAIROL
LX7428 PID - LX7428
LX7428 STATE/COUNTY- CT/FAIRFIELD
LX7428 USGS QUAD - STAMFORD (1984)
LX7428
LX7428 *CURRENT SURVEY CONTROL
LX7428
LX7428 *-----*
LX7428* NAD 83(1996)- 41 03 15.35290(N) 073 30 49.59843(W) ADJUSTED
LX7428* NAVD 88 - 39.6 (meters) 130. (feet) VERTCON
LX7428 *-----*
LX7428 LAPLACE CORR- 3.28 (seconds) DEFLEC99
LX7428 GEOID HEIGHT- -30.34 (meters) GEOID03
LX7428
LX7428 HORZ ORDER - FIRST
LX7428
LX7428.The horizontal coordinates were established by classical geodetic methods
LX7428.and adjusted by the National Geodetic Survey in August 1998.
LX7428
LX7428.The NAVD 88 height was computed by applying the VERTCON shift value to
LX7428.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
LX7428
LX7428.The Laplace correction was computed from DEFLEC99 derived deflections.
LX7428
LX7428.The geoid height was determined by GEOID03.
LX7428
LX7428;
LX7428; North East Units Scale Factor Converg.
LX7428;SPC CT - 177,220.014 240,592.479 MT 1.00001792 -0 30 23.1
LX7428;SPC CT - 581,429.33 789,343.82 sFT 1.00001792 -0 30 23.1
LX7428;UTM 18 - 4,545,844.976 624,892.983 MT 0.99979198 +0 58 34.5
LX7428
LX7428!
LX7428! SPC CT - Elev Factor x Scale Factor = Combined Factor
LX7428! SPC CT - 0.99999854 x 1.00001792 = 1.00001646
LX7428! UTM 18 - 0.99999854 x 0.99979198 = 0.99979052
LX7428
LX7428|-----|
LX7428| PID Reference Object Distance Geod. Az |
LX7428| | | | dddmmss.s |
LX7428| LX7429 CLAIROL RM 3 199.126 METERS 15924 |
LX7428| CR9109 CLAIROL RM 2 29.379 METERS 26555 |
LX7428| CR9108 CLAIROL RM 1 28.620 METERS 35930 |
LX7428|-----|
LX7428
LX7428
LX7428 SUPERSEDED SURVEY CONTROL
LX7428

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LX7428 NAD 83(1992)- 41 03 15.35188(N) 073 30 49.59816(W) AD( ) 1  
 LX7428 NAD 83(1986)- 41 03 15.35393(N) 073 30 49.59777(W) AD( ) 1  
 LX7428 NAD 83(1986)- 41 03 15.35097(N) 073 30 49.59593(W) AD( ) 1  
 LX7428 NGVD 29 (10/23/89) 40.0 (m) 131. (f) VERT ANG  
 LX7428  
 LX7428.Superseded values are not recommended for survey control.  
 LX7428.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 LX7428.See file dsdata.txt to determine how the superseded data were derived.  
 LX7428  
 LX7428\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL2489345845(NAD 83)  
 LX7428\_MARKER: DS = TRIANGULATION STATION DISK  
 LX7428\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT  
 LX7428\_SP\_SET: SET IN TOP OF CONCRETE MONUMENT  
 LX7428\_MAGNETIC: N = NO MAGNETIC MATERIAL  
 LX7428\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
 LX7428+STABILITY: SURFACE MOTION  
 LX7428\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 LX7428+SATELLITE: SATELLITE OBSERVATIONS - June 15, 2000  
 LX7428  

HISTORY	Date	Condition	Report By
HISTORY	- 1983	MONUMENTED	NGS
HISTORY	- 20000615	GOOD	LOCENG

 LX7428  
 LX7428 STATION DESCRIPTION  
 LX7428  
 LX7428'DESCRIBED BY NATIONAL GEODETIC SURVEY 1983 (VDN)  
 LX7428'THE STATION IS LOCATED ABOUT 2.4 KM (1.5 MI) EAST OF  
 LX7428'THE STAMFORD CITY HALL, 0.5 KM (0.3 MI) SOUTHWEST OF THE  
 LX7428'JUNCTION OF U.S. HIGHWAY 1 AND STATE HIGHWAY 106 AND  
 LX7428'75 METERS (246 FT) NORTHEAST OF THE GUARD BOOTH AT THE  
 LX7428'MAIN ENTRANCE TO THE CLAIROL COMPANY COMPLEX.  
 LX7428'OWNERSHIP--CLAIROL COMPANY, RICHARD A SOJKA,  
 LX7428'DIRECTOR OF ENGINEERING, ONE BLACHLEY ROAD,  
 LX7428'STAMFORD CT 06922, PHONE 203-357-5249.  
 LX7428'  
 LX7428'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 1  
 LX7428'AND STATE HIGHWAY 106 IN EAST STAMFORD, GO SOUTHWEST ON  
 LX7428'HIGHWAY 1 FOR 0.2 KM (0.15 MI) TO A PAVED ROAD LEFT.  
 LX7428'TURN LEFT AND GO SOUTH ON BLACHLEY ROAD FOR 0.3 KM  
 LX7428'(0.2 MI) TO A LOCKED GATE IN THE FENCE ON LEFT, ABOUT 50  
 LX7428'METERS (164 FT) BEFORE THE GUARD BOOTH. TURN LEFT THRU  
 LX7428'GATE FOR ABOUT 60 METERS (197 FT) TO THE STATION ON RIGHT.  
 LX7428'  
 LX7428'THE STATION IS A STANDARD NGS DISK  
 LX7428'STAMPED---CLAIROL 1983---,  
 LX7428'SET INTO THE TOP OF A ROUND CONCRETE MONUMENT 30 CM IN DIAMETER  
 LX7428'FLUSH WITH GROUND. IT IS LOCATED  
 LX7428'31.55 METERS (103.5 FT) SOUTH FROM A WITNESS POST,  
 LX7428'16.60 METERS (54.4 FT) NORTHEAST FROM THE WESTERN MOST OF 14 PINE  
 LX7428'TREES,  
 LX7428'14.3 METERS (47.0 FT) SOUTH FROM THE APPROXIMATE CENTER OF A  
 LX7428'PAVED ROAD AND  
 LX7428'4.85 METERS (15.9 FT) EAST FROM A WITNESS POST.  
 LX7428'THE UNDERGROUND MARK IS A STANDARD NGS DISK  
 LX7428'STAMPED---CLAIROL 1983---,  
 LX7428'SET INTO AN IRREGULAR MASS OF CONCRETE 1.2 METERS BELOW THE SURFACE.  
 LX7428'  
 LX7428'REFERENCE MARK NUMBER 1 IS A STANDARD NGS DISK  
 LX7428'STAMPED---CLAIROL NO 1 1983---,  
 LX7428'SET INTO THE TOP OF A ROUND CONCRETE MONUMENT 30 CM IN DIAMETER  
 LX7428'FLUSH WITH GROUND. IT IS LOCATED  
 LX7428'14.4 METERS (47.0 FT) NORTH FROM THE APPROXIMATE ROAD CENTER,  
 LX7428'5.69 METERS (18.7 FT) SOUTH FROM A FENCE AND  
 LX7428'3.0 METERS (9.9 FT) SOUTH FROM THE WITNESS POST.  
 LX7428'MARK IS LEVEL WITH STATION.  
 LX7428'  
 LX7428'REFERENCE MARK NUMBER 2 IS A STANDARD NGS DISK  
 LX7428'STAMPED---CLAIROL NO 2 1983---,  
 LX7428'SET INTO THE TOP OF A ROUND CONCRETE MONUMENT 30 CM IN DIAMETER  
 LX7428'FLUSH WITH GROUND. IT IS LOCATED  
 LX7428'16.5 METERS (54.1 FT) EAST-SOUTHEAST FROM A 0.6 METER IN DIAMETER  
 LX7428'MAPLE TREE,  
 LX7428'24.54 METERS (80.5 FT) WEST FROM A WITNESS POST AND  
 LX7428'13.8 METERS (45.3 FT) SOUTH FROM THE APPROXIMATE ROAD CENTER.

LX7428 MARK IS ABOVE STATION 1.2 METERS.  
 LX7428'  
 LX7428 REFERENCE MARK NUMBER 3 IS A STANDARD NGS DISK  
 LX7428 STAMPED---CLAIROL NO 3 1983---,  
 LX7428 SET INTO THE TOP OF A ROUND CONCRETE MONUMENT 30 CM IN DIAMETER  
 LX7428 FLUSH WITH GROUND. IT IS LOCATED  
 LX7428 8.45 METERS (27.7 FT) EAST FROM THE EDGE OF A PARKING LOT,  
 LX7428 3.6 METERS (11.8 FT) WEST FROM THE CENTER OF A GATE LEADING TO A  
 LX7428 BALL FIELD AND  
 LX7428 0.35 METER (1.2 FT) NORTH FROM A WITNESS POST IN THE FENCE LINE  
 LX7428 AROUND THE BALL FIELD.  
 LX7428 MARK IS BELOW STATION 5.0 METERS.  
 LX7428'  
 LX7428 HEIGHT OF LIGHT SHOWN ABOVE THE MARK WAS 30.4 METERS.  
 LX7428'  
 LX7428 DESCRIBED BY J.N. LEONHARDT, CHECKED BY R.J. WOODRUFF.  
 LX7428  
 LX7428 STATION RECOVERY (2000)  
 LX7428  
 LX7428 RECOVERY NOTE BY LOCAL ENGINEER (INDIVIDUAL OR FIRM) 2000 (DH)  
 LX7428 STATION AND RM1 RECOVERED AS DESCRIBED IN 1983 IN GOOD CONDITON.  
 LX7428 CONTACT IS NOW GREG CSERNICA, PHONE 203-357-5342. CHECK IN AT GUARD  
 LX7428 BOOTH BEFORE PROCEEDING TO THE STATION. STATION LOCATION IS GENERALLY  
 LX7428 SUITABLE FOR GPS OBSERVATIONS WITH SOME MINOR SKY OBSTRUCTION.  
 1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
 LX7439 \*\*\*\*\*  
 LX7439 DESIGNATION - GREENWICH POINT 3 RM 4  
 LX7439 PID - LX7439  
 LX7439 STATE/COUNTY- CT/FAIRFIELD  
 LX7439 USGS QUAD - STAMFORD (1984)  
 LX7439  
 LX7439 \*CURRENT SURVEY CONTROL  
 LX7439  

LX7439*	NAD 83(1996)-	41 00 06.99396(N)	073 34 22.62636(W)	ADJUSTED
LX7439*	NAVD 88 -	3. (meters)	10. (feet)	VERTCON
LX7439	LAPLACE CORR-	3.22 (seconds)		DEFLEC99
LX7439	GEOID HEIGHT-	-30.56 (meters)		GEOID03

LX7439  
 LX7439 HORZ ORDER - SECOND  
 LX7439  
 LX7439 The horizontal coordinates were established by classical geodetic methods  
 LX7439 and adjusted by the National Geodetic Survey in August 1998.  
 LX7439  
 LX7439 The NAVD 88 height was computed by applying the VERTCON shift value to  
 LX7439 the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)  
 LX7439  
 LX7439 The Laplace correction was computed from DEFLEC99 derived deflections.  
 LX7439  
 LX7439 The geoid height was determined by GEOID03.  
 LX7439  

LX7439;	North	East	Units	Scale	Factor	Converg.
LX7439;SPC CT	- 171,455.240	235,562.696	MT	1.00002592	-0 32 44.4	
LX7439;SPC CT	- 562,516.07	772,841.95	sFT	1.00002592	-0 32 44.4	
LX7439;UTM 18	- 4,539,953.414	620,015.169	MT	0.99977728	+0 56 11.0	

LX7439  
 LX7439!  
 LX7439!SPC CT - Elev Factor x Scale Factor = Combined Factor  
 LX7439!SPC CT - 1.00000429 x 1.00002592 = 1.00003021  
 LX7439!UTM 18 - 1.00000429 x 0.99977728 = 0.99978157  
 LX7439  
 LX7439 SUPERSEDED SURVEY CONTROL  
 LX7439  

LX7439	NAD 83(1992)-	41 00 06.99318(N)	073 34 22.62636(W)	AD( ) 2
LX7439	NAD 83(1986)-	41 00 06.99372(N)	073 34 22.62464(W)	AD( ) 2
LX7439	NAD 83(1986)-	41 00 06.99438(N)	073 34 22.62164(W)	AD( ) 2
LX7439	NGVD 29 (10/23/89)	4. (m)	13. (f)	VERT ANG

LX7439  
 LX7439 Superseded values are not recommended for survey control.  
 LX7439 NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 LX7439 See file dsdata.txt to determine how the superseded data were derived.  
 LX7439  
 LX7439 U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL2001539953(NAD 83)  
 LX7439\_MARKER: DR = REFERENCE MARK DISK  
 LX7439\_SETTING: 66 = SET IN ROCK OUTCROP



LX7439\_SP\_SET: IN DRILL HOLE IN ROCK OUTCROP  
LX7439\_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD  
LX7439+STABILITY: POSITION/ELEVATION WELL  
LX7439  
LX7439 HISTORY - Date Condition Report By  
LX7439 HISTORY - 1983 MONUMENTED NGS  
LX7439  
LX7439 STATION DESCRIPTION  
LX7439  
LX7439'DESCRIBED BY NATIONAL GEODETIC SURVEY 1983 (VDN)  
LX7439'THE STATION IS LOCATED ABOUT 4.8 KM (3.0 MI) SOUTHEAST OF  
LX7439'GREENWICH, 4.0 KM (2.5 MI) WEST-SOUTHWEST OF SHIPPAN POINT,  
LX7439'2.7 KM (1.7 MI) SOUTH OF OLD GREENWICH, 0.2 KM (0.1 MI)  
LX7439'SOUTHWEST OF TRIANGULATION STATION GREENWICH PT 3 1931, IN  
LX7439'THE GREENWICH POINT STATE PARK.  
LX7439'OWNERSHIP--STATE PARKS AND RECREATION, C/O BOB CHARD,  
LX7439'GREENWICH CT 06830, PHONE 203-622-7818.  
LX7439'  
LX7439'TO REACH THE STATION FROM THE ENTRANCE TO THE GREENWICH  
LX7439'POINT STATE PARK (AT THE END OF SHORE ROAD), GO SOUTHERLY  
LX7439'FOR 0.3 KM (0.2 MI) TO A FORK AND PARKING LOT ON THE RIGHT.  
LX7439'KEEP LEFT INTO THE FIRST PARKING LOT ENTRANCE AND GO SOUTH  
LX7439'FOR 0.2 KM (0.1 MI) TO A BATH HOUSE. CONTINUE SOUTHERLY  
LX7439'ON EAST SIDE OF BATH HOUSE ON GRAVEL ROAD FOR 0.2 KM (0.1 MI) TO AN  
LX7439'OPEN AREA. KEEP RIGHT, NORTH, ACROSS GRASS FOR  
LX7439'0.2 KM (0.1 MI) TO HIGH GROUND AND STATION GREENWICH PT 3  
LX7439'1931. TURN LEFT, SOUTHWEST, ON OPEN LANE THRU TREES  
LX7439'FOR 0.2 KM (0.1 MI) TO A DIRT ROAD. TURN LEFT ON THE DIRT  
LX7439'ROAD FOR ABOUT 45 METERS (147 FT), THEN TURN RIGHT  
LX7439'ACROSS MARSH ALONG A FOOT PATH TO HIGH GROUND AND THE MARK  
LX7439'ON THE RIGHT.  
LX7439'  
LX7439'THE STATION IS A STANDARD NGS REFERENCE DISK  
LX7439'STAMPED---GREENWICH POINT 1931 NO 4 1983---,  
LX7439'SET INTO A ROCK OUTCROP.  
LX7439'IT IS LOCATED  
LX7439'13.9 METERS (45.6 FT) EAST FROM EAST END OF WOODEN FOOT BRIDGE,  
LX7439'2.65 METERS (8.7 FT) SOUTHWEST FROM CENTER OF DIRT FOOT PATH, AND  
LX7439'1.04 METERS (3.4 FT) WEST FROM A WITNESS POST.  
LX7439'  
LX7439'HEIGHT OF LIGHT SHOWN ABOVE THE MARK WAS 1.3 METERS.  
LX7439'  
LX7439'DESCRIBED BY J.N. LEONHARDT, TYPED BY G.R. HEID.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX7472 \*\*\*\*\*  
LX7472 DESIGNATION - SHERWOOD 2  
LX7472 PID - LX7472  
LX7472 STATE/COUNTY- CT/FAIRFIELD  
LX7472 USGS QUAD - SHERWOOD POINT (1971)  
LX7472  
LX7472 \*CURRENT SURVEY CONTROL  
LX7472  
LX7472\* NAD 83(1996)- 41 06 37.45046(N) 073 19 49.19716(W) ADJUSTED  
LX7472\* NAVD 88 - 3.5 (meters) 11. (feet) GPS OBS  
LX7472  
LX7472 X - 1,380,487.270 (meters) COMP  
LX7472 Y - -4,610,269.784 (meters) COMP  
LX7472 Z - 4,171,651.345 (meters) COMP  
LX7472 LAPLACE CORR- 0.66 (seconds) DEFLEC99  
LX7472 ELLIP HEIGHT- -26.52 (meters) (06/16/04) GPS OBS  
LX7472 GEOID HEIGHT- -30.01 (meters) GEOID03  
LX7472  
LX7472 HORZ ORDER - B  
LX7472 ELLP ORDER - FOURTH CLASS II  
LX7472  
LX7472.The horizontal coordinates were established by GPS observations  
LX7472.and adjusted by the National Geodetic Survey in June 2004.  
LX7472  
LX7472.The orthometric height was determined by GPS observations and a  
LX7472.high-resolution geoid model.  
LX7472  
LX7472.The X, Y, and Z were computed from the position and the ellipsoidal ht.  
LX7472  
LX7472.The Laplace correction was computed from DEFLEC99 derived deflections.

LX7472

LX7472.The ellipsoidal height was determined by GPS observations  
LX7472.and is referenced to NAD 83.

LX7472

LX7472.The geoid height was determined by GEOID03.

LX7472

	North	East	Units	Scale	Factor	Converg.
LX7472;SPC CT	- 183,334.478	256,055.654	MT	1.00001026	-0 23 05.3	
LX7472;SPC CT	- 601,489.87	840,075.92	sFT	1.00001026	-0 23 05.3	
LX7472;UTM 18	- 4,552,356.220	640,189.744	MT	0.99984188	+1 05 52.8	

LX7472

LX7472!  
LX7472!SPC CT - Elev Factor x Scale Factor = Combined Factor

LX7472!UTM 18 - 1.00000416 x 1.00001026 = 1.00001442

LX7472!UTM 18 - 1.00000416 x 0.99984188 = 0.99984604

LX7472

	Primary Azimuth Mark	Grid Az
LX7472:SPC CT	- SHERWOOD 2 AZ MK	042 10 54.2
LX7472:UTM 18	- SHERWOOD 2 AZ MK	040 41 56.1

LX7472

PID	Reference Object	Distance	Geod. Az
			ddmmss.s
LX7473	SHERWOOD 2 AZ MK	413.766 METERS	0414748.9
CR9142	SHERWOOD 2 RM 1	22.251 METERS	06319
LX7465	ROWAYTON OLD WITCH STANDPIPE	APPROX. 9.6 KM	2444235.1
AA9692	SHERWOOD 80	4.102 METERS	29820
LX3772	SHERWOOD	4.275 METERS	29954
CR9143	SHERWOOD 2 RM 2	29.532 METERS	30416

LX7472

LX7472

## SUPERSEDED SURVEY CONTROL

LX7472

LX7472	NAD 83(1996)-	41 06 37.45634(N)	073 19 49.20115(W)	AD( ) 1
LX7472	NAD 83(1992)-	41 06 37.45592(N)	073 19 49.20002(W)	AD( ) 1
LX7472	NAD 83(1986)-	41 06 37.45803(N)	073 19 49.20418(W)	AD( ) 1
LX7472	NAD 83(1986)-	41 06 37.45534(N)	073 19 49.19734(W)	AD( ) 1
LX7472	NGVD 29 (10/23/89)	3.4 (m)	11. (f)	VERT ANG

LX7472

LX7472.Superseded values are not recommended for survey control.

LX7472.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

LX7472.See file dsdata.txt to determine how the superseded data were derived.

LX7472

LX7472\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL4019052356(NAD 83)

LX7472\_MARKER: DD = SURVEY DISK

LX7472\_SETTING: 66 = SET IN ROCK OUTCROP

LX7472\_SP\_SET: IN DRILL HOLE IN ROCK OUTCROP

LX7472\_STAMPING: SHERWOOD 2 1983

LX7472\_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET

LX7472\_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD

LX7472+STABILITY: POSITION/ELEVATION WELL

LX7472\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

LX7472+SATELLITE: SATELLITE OBSERVATIONS - March 09, 2004

LX7472

HISTORY	Date	Condition	Report By	
LX7472	HISTORY	- 19830101	MONUMENTED	NGS
LX7472	HISTORY	- 20030424	GOOD	CTGS
LX7472	HISTORY	- 20040309	GOOD	INDIV

LX7472

LX7472

LX7472

## STATION DESCRIPTION

LX7472

LX7472'DESCRIBED BY NATIONAL GEODETIC SURVEY 1983 (VDN)

LX7472'THE STATION IS LOCATED ABOUT 5 KM (3.1 MI) SOUTHWEST OF

LX7472'SOUTHPORT, 3.5 KM (2.2 MI) SOUTHEAST OF WESTPORT, IN THE

LX7472'SHERWOOD ISLAND STATE PARK, IN A FLAT GRASSY AREA NEAR

LX7472'THE WATER.

LX7472'OWNERSHIP--OFFICE OF PARKS AND RECREATION, DEPARTMENT

LX7472'OF ENVIRONMENTAL PROTECTION, STATE OFFICE BUILDING, 165

LX7472'CAPITOL AVENUE, HARTFORD CT 06106, PARK OFFICE

LX7472'PHONE 203-226-6983.

LX7472'

LX7472'TO REACH THE STATION FROM THE INTERSECTION OF THE CONNECTICUT

LX7472'TURNPIKE AND THE SHERWOOD ISLAND CONNECTOR AT EXIT 18, GO

LX7472'SOUTH ON THE SHERWOOD ISLAND CONNECTOR FOR 0.6 KM (0.35 MI)

LX7472'TO THE TOLL BOOTH AT THE PARK ENTRANCE. CONTINUE AHEAD FOR

LX7472'0.5 KM (0.3 MI) TO A PARKING LOT ENTRANCE ON THE RIGHT,  
 LX7472'TURN RIGHT, WEST, INTO LOT, THEN BEAR LEFT TO A PIPE  
 LX7472'GATE, 0.1 KM (0.05 MI), AT SOUTH EDGE OF LOT THAT LEADS  
 LX7472'TO THE PAVILION. PASS THROUGH GATE, THEN TURN RIGHT ON  
 LX7472'PAVED LANE FOR 0.1 KM (0.05 MI) TO A T-LANE. TURN LEFT,  
 LX7472'SOUTH, FOR 0.25 KM (0.15 MI) ON THE PAVED ROAD, THEN TRACK LANE  
 LX7472'TO A FLAGPOLE AND THE STATION ON THE LEFT.  
 LX7472'  
 LX7472'THE STATION IS A STANDARD NGS DISK  
 LX7472'STAMPED---SHERWOOD 2 1983---,  
 LX7472'SET INTO A ROCK OUTCROP. IT IS LOCATED  
 LX7472'37.8 METERS (124.0 FT) NORTHWEST FROM A LARGE BOULDER CLOSE TO  
 LX7472'THE BEACH,  
 LX7472'28.9 METERS (95.0 FT) EAST-NORTHEAST FROM A BOULDER BY THE BEACH,  
 LX7472'16.0 METERS (52.5 FT) SOUTH FROM A FLAG POLE AND  
 LX7472'8.8 METERS (29.0 FT) SOUTH-SOUTHEAST FROM A LARGE  
 LX7472'BOULDER BY THE FLAG POLE.  
 LX7472'  
 LX7472'REFERENCE MARK NUMBER 1 IS A STANDARD NGS DISK  
 LX7472'STAMPED---SHERWOOD 2 NO 1 1983---,  
 LX7472'SET INTO A ROCK OUTCROP. IT IS LOCATED  
 LX7472'36.3 METERS (119.0 FT) NORTH FROM THE LARGE BOULDER BY THE BEACH,  
 LX7472'25.9 METERS (85.0 FT) WEST-SOUTHWEST FROM THE FLAG POLE AND  
 LX7472'23.8 METERS (78.0 FT) WEST-NORTHWEST FROM THE LARGE BOULDER BY  
 LX7472'THE FLAGPOLE.  
 LX7472'MARK IS LEVEL WITH STATION.  
 LX7472'  
 LX7472'REFERENCE MARK NUMBER 2 IS A STANDARD NGS DISK  
 LX7472'STAMPED---SHERWOOD 2 NO 2 1983---,  
 LX7472'SET INTO A ROCK OUTCROP. IT IS LOCATED  
 LX7472'20.7 METERS (68.0 FT) SOUTHEAST FROM THE LARGE BOULDER BY THE  
 LX7472'FLAG POLE,  
 LX7472'18.9 METERS (62.0 FT) EAST-SOUTHEAST FROM THE FLAG POLE AND  
 LX7472'13.9 METERS (45.5 FT) SOUTH FROM A 60 CM IN DIAMETER TREE.  
 LX7472'MARK IS LEVEL WITH STATION.  
 LX7472'  
 LX7472'HEIGHT OF LIGHT SHOWN ABOVE THE MARK WAS 1.4 METERS.  
 LX7472'  
 LX7472'DESCRIBED BY D.W. SMITH, CHECKED BY J.N. LEONHARDT.  
 LX7472'  
 LX7472'  
 LX7472' STATION RECOVERY (2003)  
 LX7472'  
 LX7472'  
 LX7472'RECOVERY NOTE BY CONNECTICUT GEODETIC SURVEY 2003 (RB)  
 LX7472'THE STATION IS A STANDARD NGS DISK, STAMPED SHERWOOD 2 1983, SET  
 LX7472'INTO A ROCK OUTCROP, WHICH IS FLUSH WITH THE SURFACE OF THE GROUND.  
 LX7472'TO REACH THE STATION FROM THE INTERSECTION OF THE CONNECTICUT  
 LX7472'TURNPIKE AND THE SHERWOOD ISLAND CONNECTOR AT EXIT 18, GO SOUTH ON  
 LX7472'THE SHERWOOD ISLAND CONNECTOR FOR 0.6 KM (0.35 MI) TO THE TOLL BOOTH  
 LX7472'AT THE PARK ENTRANCE. CONTINUE AHEAD FOR 0.5 KM (0.3 MI) TO A  
 LX7472'PARKING LOT ENTRANCE ON THE RIGHT. TURN RIGHT INTO THE LOT, THEN BEAR  
 LX7472'LEFT TO A PIPE GATE, 0.1 KM (0.05 MI), AT SOUTH EDGE OF LOT THAT LEADS  
 LX7472'TO THE PAVILION. PASS THROUGH GATE, THEN TURN RIGHT ON PAVED LANE  
 LX7472'FOR 0.1 KM (0.05 MI) TO A T-LANE. TURN LEFT, SOUTH, FOR 0.25 KM  
 LX7472'(0.15 MI) ON THE PAVED ROAD, THEN TRACK LANE TO A FLAGPOLE AND THE  
 LX7472'STATION ON THE LEFT. THE STATION IS LOCATED 37.8 METERS (124.0 FT)  
 LX7472'NORTHWEST FROM A LARGE BOULDER CLOSE TO THE BEACH, 28.9 METERS (95.0  
 LX7472'FT) EAST-NORTHEAST FROM A BOULDER BY THE BEACH, 16.0 METERS (52.5 FT)  
 LX7472'SOUTH FROM A FLAG POLE, 8.8 METERS (29.0 FT) SOUTH-SOUTHEAST FROM A  
 LX7472'LARGE BOULDER BY THE FLAG POLE, 131.3 FT. SOUTHEAST OF A 30 IN. OAK  
 LX7472'TREE, 54.4 FT. NORTHEAST OF THE NORTHEAST CORNER OF A 9-11 MEMORIAL,  
 LX7472'AND 4 FT. NORTHEAST OF A WITNESS POST. RM 1 A STANDARD NGS DISK,  
 LX7472'STAMPED SHERWOOD 2 NO 1 1983, SET INTO A ROCK OUTCROP. IT IS 119.0  
 LX7472'FT NORTH OF THE LARGE BOULDER BY THE BEACH, 85.0 FT WEST-SOUTHWEST OF  
 LX7472'A FLAG POLE, AND 78.0 FT WEST-NORTHWEST OF THE LARGE BOULDER BY THE  
 LX7472'FLAGPOLE. RM 2 A STANDARD NGS DISK, STAMPED SHERWOOD 2 NO 2 1983,  
 LX7472'SET INTO A ROCK OUTCROP. IT IS 68.0 FT SOUTHEAST OF THE LARGE  
 LX7472'BOULDER BY THE FLAG POLE, 62.0 FT EAST-SOUTHEAST OF THE FLAG POLE,  
 LX7472'AND 45.5 FT SOUTH OF A 12 IN DIAMETER TREE. AZI MARK A STANDARD NGS  
 LX7472'AZIMUTH MARK DISK, STAMPED SHERWOOD 2 1983, SET INTO A 2 X 6 FT.  
 LX7472'CONCRETE PAD WHICH IS FLUSH WITH THE GROUND. IT IS 82.0 FT. SOUTH OF  
 LX7472'THE CENTERLINE OF A GRAVEL DRIVEWAY, 75.0 FT. NORTH OF THE CENTERLINE  
 LX7472'OF ANOTHER GRAVEL DRIVEWAY, AND 30.5 FT. WEST OF THE WEST EDGE OF A  
 LX7472'BUILDING AT THE NORTHWEST CORNER OF THE SHOWERS.  
 LX7472'

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LX7472                STATION RECOVERY (2004)
LX7472
LX7472 RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2004 (DLL)
LX7472 RECOVERED AS DESCRIBED, BY THE TOWN OF WESTPORT, SURVEYING DIVISION
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007
LX7598 *****
LX7598 TIDAL BM - This is a Tidal Bench Mark.
LX7598 DESIGNATION - LIGHT
LX7598 PID - LX7598
LX7598 STATE/COUNTY- CT/NEW HAVEN
LX7598 USGS QUAD - NEW HAVEN (1984)
LX7598
LX7598 *CURRENT SURVEY CONTROL
LX7598
LX7598 * NAD 83(1996)- 41 15 00.68614(N) 072 54 13.88189(W) ADJUSTED
LX7598 * NAVD 88 - 5.4 (meters) 18. (feet) VERTCON
LX7598
LX7598 LAPLACE CORR- -3.03 (seconds) DEFLEC99
LX7598 GEOID HEIGHT- -29.93 (meters) GEOID03
LX7598
LX7598 HORZ ORDER - FIRST
LX7598
LX7598.The horizontal coordinates were established by classical geodetic methods
LX7598.and adjusted by the National Geodetic Survey in August 1998.
LX7598
LX7598.The NAVD 88 height was computed by applying the VERTCON shift value to
LX7598.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
LX7598
LX7598.This Tidal Bench Mark is designated as VM 4831
LX7598.by the Center for Operational Oceanographic Products and Services.
LX7598
LX7598.The Laplace correction was computed from DEFLEC99 derived deflections.
LX7598
LX7598.The geoid height was determined by GEOID03.
LX7598
LX7598;
LX7598; North East Units Scale Factor Converg.
LX7598; SPC CT - 198,706.765 291,905.039 MT 0.99999531 -0 06 07.3
LX7598; SPC CT - 651,923.78 957,691.78 sFT 0.99999531 -0 06 07.3
LX7598; UTM 18 - 4,568,649.926 675,625.806 MT 0.99997962 +1 22 56.8
LX7598
LX7598! - Elev Factor x Scale Factor = Combined Factor
LX7598! SPC CT - 1.00000385 x 0.99999531 = 0.99999916
LX7598! UTM 18 - 1.00000385 x 0.99997962 = 0.99998347
LX7598
LX7598 |-----|
LX7598 | PID Reference Object Distance Geod. Az |
LX7598 | | | | | dddmmss.s |
LX7598 | AC8378 LIGHT RM 1 8.302 METERS 02139 |
LX7598 | AC8379 LIGHT RM 2 4.893 METERS 28230 |
LX7598 |-----|
LX7598
LX7598 SUPERSEDED SURVEY CONTROL
LX7598
LX7598 NAD 83(1992)- 41 15 00.68523(N) 072 54 13.88165(W) AD( ) 1
LX7598 NAD 83(1986)- 41 15 00.68632(N) 072 54 13.88562(W) AD( ) 1
LX7598 NAD 83(1986)- 41 15 00.68577(N) 072 54 13.88625(W) AD( ) 1
LX7598 NGVD 29 (01/16/90) 5.7 (m) 19. (f) VERT ANG
LX7598
LX7598.Superseded values are not recommended for survey control.
LX7598.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
LX7598.See file dsdata.txt to determine how the superseded data were derived.
LX7598
LX7598_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL7562668650(NAD 83)
LX7598_MARKER: DS = TRIANGULATION STATION DISK
LX7598_SETTING: 35 = SET IN A MAT FOUNDATION OR CONCRETE SLAB OTHER THAN
LX7598+WITH SETTING: PAVEMENT
LX7598_MAGNETIC: N = NO MAGNETIC MATERIAL
LX7598_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
LX7598+STABILITY: SURFACE MOTION
LX7598
LX7598 HISTORY - Date Condition Report By
LX7598 HISTORY - 1982 MONUMENTED NGS
LX7598 HISTORY - 19910602 GOOD USPSQD
LX7598

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LX7598 STATION DESCRIPTION  
LX7598  
LX7598'DESCRIBED BY NATIONAL GEODETIC SURVEY 1982 (VDN)  
LX7598'THE STATION IS LOCATED ON THE EAST SIDE OF NEW HAVEN  
LX7598'HARBOR AT LIGHTHOUSE POINT AND ABOUT 0.2 KM (0.1 MI)  
LX7598'NORTH OF THE OLD LIGHTHOUSE.  
LX7598'OWNERSHIP--PERMISSION BY MR BERNIE SOMERS, WHO LIVES  
LX7598'BESIDE THE LIGHTHOUSE, NEW HAVEN PARKS AND  
LX7598'RECREATION DEPT, NEW HAVEN CT 06510,  
LX7598'PHONE 203-787-8005.  
LX7598'  
LX7598'TO REACH THE STATION FROM EXIT 50 ON INTERSTATE 95, IN  
LX7598'NEW HAVEN, GO EAST ON THE FRONTAGE ROAD FOR 0.3 KM  
LX7598'(0.2 MI) TO WOODWARD AVENUE. CONTINUE EAST FOR 0.2 KM  
LX7598'(0.15 MI) TO A CROSS STREET. TURN RIGHT, SOUTH, ON  
LX7598'TOWNSEND AVENUE FOR 1.9 KM (1.2 MI)  
LX7598'TO THE PUBLIC LIBRARY ON THE RIGHT. CONTINUE SOUTH  
LX7598'ON TOWNSEND AVENUE FOR 1.8 KM (1.1 MI) TO A SLANTED  
LX7598'CROSS STREET AND A FIRE HOUSE ON THE RIGHT. TURN RIGHT  
LX7598'AND GO SOUTH ON LIGHTHOUSE ROAD FOR 1.0 KM (0.6 MI) TO  
LX7598'A TRAFFIC CIRCLE. CONTINUE STRAIGHT AHEAD FOR 0.2  
LX7598'KM (0.1 MI) TO THE AZIMUTH MARK ON THE LEFT.  
LX7598'CONTINUE SOUTH ON THE PAVED ROAD FOR 0.2 KM (0.1 MI) TO  
LX7598'A CROSSROAD. TURN RIGHT AND FOLLOW A GRAVEL ROAD FOR  
LX7598'0.3 KM (0.2 MI) TO THE LIGHTHOUSE. TURN RIGHT AND  
LX7598'FOLLOW THE SHORE LINE FOR 0.2 KM (0.1 MI) TO THE  
LX7598'STATION ON THE LEFT.  
LX7598'  
LX7598'THE STATION IS A STANDARD NGS DISK  
LX7598'STAMPED---LIGHT 1982---,  
LX7598'SET IN A 1.3 BY 2.3 METER CONCRETE SLAB  
LX7598'THAT PROJECTS 0.4 OF A METER. IT IS ON HIGHEST  
LX7598'GROUND ABOUT 0.2 KM (0.1 MI) NORTH OF THE  
LX7598'LIGHTHOUSE AND NEAR THE SHORE LINE.  
LX7598'IT IS LOCATED  
LX7598'37.7 METERS (123.7 FT) SOUTHWEST FROM A 2 METER OAK TREE AND  
LX7598'10.7 METERS (35.1 FT) WEST FROM THE APPROXIMATE CENTER OF TRACK  
LX7598'ROAD.  
LX7598'  
LX7598'REFERENCE MARK NUMBER 1 IS A STANDARD NGS DISK  
LX7598'STAMPED---LIGHT NO 1 1982---,  
LX7598'SET INTO A ROCK OUTCROP. IT IS LOCATED  
LX7598'29.2 METERS (95.8 FT) SOUTHWEST FROM A 2 METER OAK TREE AND  
LX7598'6.4 METERS (21.0 FT) WEST FROM THE APPROXIMATE CENTER OF TRACK  
LX7598'ROAD.  
LX7598'MARK IS BELOW STATION 0.3 METER.  
LX7598'  
LX7598'REFERENCE MARK NUMBER 2 IS A STANDARD NGS DISK  
LX7598'STAMPED---LIGHT NO 2 1982---,  
LX7598'SET INTO A ROCK OUTCROP. IT IS LOCATED  
LX7598'38.68 METERS (126.9 FT) WEST FROM A 2 METER OAK TREE AND  
LX7598'15.0 METERS (49.2 FT) NORTHWEST FROM THE APPROXIMATE CENTER OF  
LX7598'TRACK ROAD.  
LX7598'MARK IS BELOW STATION 0.3 METER.  
LX7598'  
LX7598'HEIGHT OF LIGHT SHOWN ABOVE THE MARK WAS 1.4 METERS.  
LX7598'  
LX7598'DESCRIBED BY V.D. NOVAK, CHECKED BY D.L. MCFARLAND.  
LX7598  
LX7598 STATION RECOVERY (1991)  
LX7598  
LX7598'RECOVERY NOTE BY US POWER SQUADRON 1991 (MF)  
LX7598'RECOVERED IN GOOD CONDITION.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
LX7637 \*\*\*\*\*  
LX7637 DESIGNATION - 28 RESET  
LX7637 PID - LX7637  
LX7637 STATE/COUNTY- CT/NEW LONDON  
LX7637 USGS QUAD - UNCASVILLE (1984)  
LX7637  
LX7637 \*CURRENT SURVEY CONTROL  
LX7637  
LX7637\* NAD 83(1996)- 41 29 51.43368(N) 072 04 58.14885(W) ADJUSTED  
LX7637\* NAVD 88 - 1. (meters) 3. (feet) SCALED

LX7637

LX7637	LAPLACE CORR-	-0.81	(seconds)	DEFLEC99
LX7637	GEOID HEIGHT-	-30.35	(meters)	GEOID03

LX7637  
LX7637 HORZ ORDER - THIRD  
LX7637  
LX7637.The horizontal coordinates were established by classical geodetic methods  
LX7637.and adjusted by the National Geodetic Survey in August 1998.  
LX7637  
LX7637.The orthometric height was scaled from a topographic map.  
LX7637  
LX7637.The Laplace correction was computed from DEFLEC99 derived deflections.  
LX7637  
LX7637.The geoid height was determined by GEOID03.  
LX7637

LX7637;		North	East	Units	Scale Factor	Converg.
LX7637;SPC CT	-	226,389.854	360,508.214	MT	0.99998334	+0 26 32.6
LX7637;SPC CT	-	742,747.38	1,182,767.37	sFT	0.99998334	+0 26 32.6
LX7637;UTM 18	-	4,598,109.186	743,497.924	MT	1.00032972	+1 56 01.8
LX7637;UTM 19	-	4,598,589.346	242,674.602	MT	1.00041496	-2 02 37.5

LX7637  
LX7637!  
LX7637!SPC CT - Elev Factor x Scale Factor = Combined Factor  
LX7637!UTM 18 - 1.00000465 x 0.99998334 = 0.99998799  
LX7637!UTM 19 - 1.00000465 x 1.00032972 = 1.00033437  
LX7637!UTM 19 - 1.00000465 x 1.00041496 = 1.00041961  
LX7637

LX7637:		Primary Azimuth Mark	Grid Az
LX7637:SPC CT	-	INTERNATIONAL SILVER CO STACK	003 12 30.9
LX7637:UTM 18	-	INTERNATIONAL SILVER CO STACK	001 43 01.7
LX7637:UTM 19	-	INTERNATIONAL SILVER CO STACK	005 41 41.0

LX7637

LX7637	PID	Reference Object	Distance	Geod. Az
LX7637				dddmmss.s
LX7637	LX4760	INTERNATIONAL SILVER CO STACK	APPROX. 1.4 KM	0033903.5
LX7637	LX4766	LESTERS BARN CUPOLA	APPROX. 0.9 KM	0260200.9
LX7637	LX5103	PERCHE ROCK LIGHT 13	40.409 METERS	14508
LX7637	LX5106	PRIDE PIER LIGHT 16	APPROX. 0.7 KM	1604031.0
LX7637	LX5107	INDIAN HILL LIGHT 11	APPROX. 1.3 KM	1683322.5
LX7637	CZ6897	28 RM 1	29.790 METERS	17121
LX7637	CZ6898	28 RM 2	28.569 METERS	23831
LX7637	LX4769	SAND PIER LIGHT 15	APPROX. 0.7 KM	3465033.8
LX7637	LX4759	DAHL CO STACK	APPROX. 1.1 KM	3533210.7

LX7637

SUPERSEDED SURVEY CONTROL

LX7637

LX7637	NAD 83(1992)-	41 29 51.43269(N)	072 04 58.14820(W)	AD( ) 3
LX7637	NAD 83(1986)-	41 29 51.43325(N)	072 04 58.15066(W)	AD( ) 3

LX7637  
LX7637.Superseded values are not recommended for survey control.  
LX7637.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
LX7637.See file dsdata.txt to determine how the superseded data were derived.  
LX7637  
LX7637\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TYL4349898109(NAD 83)  
LX7637\_MARKER: DO = NOT SPECIFIED OR SEE DESCRIPTION  
LX7637\_SETTING: 66 = SET IN ROCK OUTCROP  
LX7637\_SP\_SET: IN DRILL HOLE IN ROCK OUTCROP  
LX7637\_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD  
LX7637+STABILITY: POSITION/ELEVATION WELL  
LX7637

LX7637	HISTORY	- Date	Condition	Report By
LX7637	HISTORY	- UNK	MONUMENTED	
LX7637	HISTORY	- 1985	SEE DESCRIPTION	NGS

LX7637  
LX7637

STATION DESCRIPTION

LX7637  
LX7637'DESCRIBED BY NATIONAL GEODETIC SURVEY 1985 (CLN)  
LX7637'THE STEM FOR THE STATION MARK, REFERENCE MARKS 1 AND 2 WERE  
LX7637'RECOVERED. A NEW DISK WAS SET FOR THE STATION MARK USING THE CENTER  
LX7637'STEM AS PLUMB. THE DISTANCE TO REFERENCE MARK 1 CHECKED BUT A  
LX7637'SHORTER DISTANCE OF 0.061 METER WAS NOTED TO REFERENCE MARK 2.  
LX7637'THIS WAS PROBABLY CAUSED BY THE LARGE DIFFERENCE IN ELEVATION. THE  
LX7637'DIRECTION BETWEEN THE REFERENCE MARKS CHECKED. A NEW DESCRIPTION

LX7637'FOLLOWS.

LX7637'

LX7637'THE STATION IS LOCATED ABOUT 3.2 KM (2.0 MI) NORTH OF MOHEGAN, 0.4 KM

LX7637'(0.25 MI) NORTH OF TRADERS COVE, ON THE WEST SIDE OF THE THAMES

LX7637'RIVER AND ON A ROCK OUTCROP BETWEEN THE RIVER

LX7637'AND THE RAILROAD TRACKS.

LX7637'

LX7637'TO REACH THE STATION FROM THE JUNCTION OF THE STATE HIGHWAYS 2A AND

LX7637'32, JUST NORTH OF MOHEGAN, GO NORTH ON HIGHWAY 32 FOR 2.8 KM

LX7637'(1.75 MI) TO A SIDE ROAD RIGHT. TURN RIGHT AND GO EAST ON EVERETT

LX7637'STREET FOR 0.3 KM (0.2 MI) TO THE END OF EVERETT STREET AND THE END

LX7637'OF TRUCK TRAVEL. PACK DOWN STEEP BANK FOR ABOUT 200 FT TO THE

LX7637'RAILROAD TRACKS, THENCE SOUTH ALONG TRACKS FOR ABOUT 800 YARDS TO

LX7637'THE STATION ON THE LEFT.

LX7637'

LX7637'THE STATION IS A STANDARD NGS DISK STAMPED--NO 28 USE 1934

LX7637'1985--CEMENTED IN A DRILL HOLE IN ROCK OUTCROP ALONG THE EDGE OF A

LX7637'ROCK JETTY ALONG THE RIVER.

LX7637'THE MARK IS LOCATED 40.5M (133.0 FT) NNW OF LIGHT NUMBER 33

LX7637'23.5 M (77.0 FT) E OF THE EAST RAIL OF THE RAILROAD TRACKS

LX7637'0.5 M (1.5 FT) SW OF A 3.5 BY 3.5 FT OLD LIGHT BASE WHICH

LX7637'PROJECTS 4 FEET

LX7637'

LX7637'REFERENCE MARK 1 IS A STANDARD NGS DISK STAMPED--LEDGE 28 USE NO 1

LX7637'1934--CEMENTED IN A DRILL HOLE IN A LARGE BOULDER AT THE EDGE OF THE

LX7637'RIVER. THE BOULDER PROJECTS 1.2 METERS (4 FT) AND IS 0.6 METER (2 FT)

LX7637'BELOW THE STATION.

LX7637'THE MARK IS LOCATED 19.2 M (63.0 FT) E OF THE EAST RAIL OF THE

LX7637'RAILROAD TRACKS

LX7637'

LX7637'REFERENCE MARK 2 IS A STANDARD NGS DISK STAMPED--LEDGE 28 USE NO 2

LX7637'1934--CEMENTED IN A DRILL HOLE IN THE ROCK OUTCROP ON THE WEST SIDE

LX7637'OF THE RAILROAD TRACKS. THE DISK IS ABOUT 5 FT HIGHER THAN THE

LX7637'TRACKS AND 3.0 METER (10 FT) ABOVE THE STATION.

LX7637'THE MARK IS LOCATED 11.3 M (37.0 FT) SW OF A TWIN TRUNKED

LX7637'OAK TREE AND 3.0 M (10.0 FT) W OF THE WEST RAIL OF THE

LX7637'RAILROAD TRACKS.

\*\*\* retrieval complete.

Elapsed Time = 00:00:05

CORS

DATASHEETS

The NGS Data SheetSee file dsdata.txt for more information about the datasheet.DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 7.45

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1 National Geodetic Survey, Retrieval Date = MAY 7, 2007
DH5826 *****
DH5826 CORS - This is a GPS Continuously Operating Reference Station.
DH5826 DESIGNATION - BROOKFIELD CORS L1 PHASE CENTER
DH5826 CORS_ID - CTBR
DH5826 PID - DH5826
DH5826 STATE/COUNTY- CT/FAIRFIELD
DH5826 USGS QUAD - DANBURY (1984)
DH5826
DH5826 *CURRENT SURVEY CONTROL
DH5826
DH5826* NAD 83(CORS)- 41 29 49.86446(N) 073 25 05.67398(W) ADJUSTED
DH5826* NAVD 88 -
DH5826
DH5826 EPOCH DATE - 2002.00
DH5826 X - 1,365,337.644 (meters) COMP
DH5826 Y - -4,585,266.029 (meters) COMP
DH5826 Z - 4,203,973.456 (meters) COMP
DH5826 ELLIP HEIGHT- 53.42 (meters) (09/??/05) GPS OBS
DH5826 GEOID HEIGHT- -29.79 (meters) GEOID03
DH5826
DH5826 HORZ ORDER - SPECIAL (CORS)
DH5826 ELLP ORDER - SPECIAL (CORS)
DH5826
DH5826.ITRF positions are available for this station.
DH5826.The coordinates were established by GPS observations
DH5826.and adjusted by the National Geodetic Survey in September 2005.
DH5826.The coordinates are valid at the epoch date displayed above.
DH5826.The epoch date for horizontal control is a decimal equivalence
DH5826.of Year/Month/Day.
DH5826
DH5826
DH5826.The PID for the CORS ARP is DH5825.
DH5826
DH5826.The XYZ, and position/ellipsoidal ht. are equivalent.
DH5826
DH5826.The ellipsoidal height was determined by GPS observations
DH5826.and is referenced to NAD 83.
DH5826
DH5826.The geoid height was determined by GEOID03.
DH5826
DH5826; North East Units Scale Factor Converg.
DH5826;SPC CT - 226,342.129 249,003.968 MT 0.99998334 -0 26 35.1
DH5826;SPC CT - 742,590.80 816,940.52 sFT 0.99998334 -0 26 35.1
DH5826
DH5826! - Elev Factor x Scale Factor = Combined Factor
DH5826!SPC CT - 0.99999162 x 0.99998334 = 0.99997496
DH5826
DH5826 SUPERSEDED SURVEY CONTROL
DH5826
DH5826.No superseded survey control is available for this station.
DH5826
DH5826_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL3202695159(NAD 83)
DH5826_MARKER: STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA
DH5826
DH5826 STATION DESCRIPTION
DH5826
DH5826'DESCRIBED BY NATIONAL GEODETIC SURVEY
DH5826'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND
DH5826'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE
DH5826'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.
DH5826' FTP CORS.NGS.NOAA.GOV: CORS/COORD AND CORS/STATION_LOG
DH5826' HTTP://WWW.NGS.NOAA.GOV UNDER PRODUCTS AND SERVICES.
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007
DH5828 *****
DH5828 CORS - This is a GPS Continuously Operating Reference Station.
DH5828 DESIGNATION - DARIEN CORS L1 PHASE CENTER
DH5828 CORS_ID - CTDA
DH5828 PID - DH5828
DH5828 STATE/COUNTY- CT/FAIRFIELD
DH5828 USGS QUAD - STAMFORD (1984)
DH5828
DH5828 *CURRENT SURVEY CONTROL

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CORS

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DH5828
DH5828* NAD 83(CORS)- 41 03 57.06991(N) 073 30 25.94231(W) ADJUSTED
DH5828* NAVD 88 -
DH5828
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DH5828 EPOCH DATE - 2002.00
DH5828 X - 1,367,174.659 (meters) COMP
DH5828 Y - -4,617,636.892 (meters) COMP
DH5828 Z - 4,167,931.175 (meters) COMP
DH5828 ELLIP HEIGHT- -13.16 (meters) (09/??/05) GPS OBS
DH5828 GEOID HEIGHT- -30.30 (meters) GEOID03
DH5828
DH5828 HORZ ORDER - SPECIAL (CORS)
DH5828 ELLP ORDER - SPECIAL (CORS)
DH5828
DH5828.ITRF positions are available for this station.
DH5828.The coordinates were established by GPS observations
DH5828.and adjusted by the National Geodetic Survey in September 2005.
DH5828.The coordinates are valid at the epoch date displayed above.
DH5828.The epoch date for horizontal control is a decimal equivalence
DH5828.of Year/Month/Day.
DH5828
DH5828
DH5828.The PID for the CORS ARP is DH5827.
DH5828
DH5828.The XYZ, and position/ellipsoidal ht. are equivalent.
DH5828
DH5828.The ellipsoidal height was determined by GPS observations
DH5828.and is referenced to NAD 83.
DH5828
DH5828.The geoid height was determined by GEOID03.
DH5828
DH5828; North East Units Scale Factor Converg.
DH5828;SPC CT - 178,502.037 241,156.156 MT 1.00001626 -0 30 07.5
DH5828;SPC CT - 585,635.43 791,193.16 sFT 1.00001626 -0 30 07.5
DH5828
DH5828! - Elev Factor x Scale Factor = Combined Factor
DH5828!SPC CT - 1.00000206 x 1.00001626 = 1.00001832
DH5828
DH5828 SUPERSEDED SURVEY CONTROL
DH5828
DH5828.No superseded survey control is available for this station.
DH5828
DH5828_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL2542347141(NAD 83)
DH5828_MARKER: STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA
DH5828
DH5828 STATION DESCRIPTION
DH5828
DH5828'DESCRIBED BY NATIONAL GEODETIC SURVEY
DH5828'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND
DH5828'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE
DH5828'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.
DH5828' FTP CORS.NGS.NOAA.GOV: CORS/COORD AND CORS/STATION_LOG
DH5828' HTTP://WWW.NGS.NOAA.GOV UNDER PRODUCTS AND SERVICES.
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007
DH5834 *****
DH5834 CORS - This is a GPS Continuously Operating Reference Station.
DH5834 DESIGNATION - GILFORD CORS L1 PHASE CENTER
DH5834 CORS_ID - CTGU
DH5834 PID - DH5834
DH5834 STATE/COUNTY- CT/NEW HAVEN
DH5834 USGS QUAD - GUILFORD (1984)
DH5834
DH5834 *CURRENT SURVEY CONTROL
DH5834
-----
DH5834* NAD 83(CORS)- 41 17 21.74249(N) 072 40 04.44445(W) ADJUSTED
DH5834* NAVD 88 -
DH5834
-----
DH5834 EPOCH DATE - 2002.00
DH5834 X - 1,429,797.612 (meters) COMP
DH5834 Y - -4,581,509.900 (meters) COMP
DH5834 Z - 4,186,611.931 (meters) COMP
DH5834 ELLIP HEIGHT- -18.00 (meters) (09/??/05) GPS OBS
DH5834 GEOID HEIGHT- -30.09 (meters) GEOID03
DH5834
DH5834 HORZ ORDER - SPECIAL (CORS)
DH5834 ELLP ORDER - SPECIAL (CORS)
DH5834
DH5834.ITRF positions are available for this station.
DH5834.The coordinates were established by GPS observations

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CORS

DH5834.and adjusted by the National Geodetic Survey in September 2005.  
DH5834.The coordinates are valid at the epoch date displayed above.  
DH5834.The epoch date for horizontal control is a decimal equivalence  
DH5834.of Year/Month/Day.  
DH5834  
DH5834  
DH5834.The PID for the CORS ARP is DH5833.  
DH5834  
DH5834.The XYZ, and position/ellipsoidal ht. are equivalent.  
DH5834  
DH5834.The ellipsoidal height was determined by GPS observations  
DH5834.and is referenced to NAD 83.  
DH5834  
DH5834.The geoid height was determined by GEOID03.  
DH5834  
DH5834;  

	North	East	Units	Scale Factor	Converg.
DH5834;SPC CT	- 203,050.079	311,677.651	MT	0.99999218	+0 03 16.0
DH5834;SPC CT	- 666,173.47	1,022,562.43	sFT	0.99999218	+0 03 16.0

DH5834  
DH5834!  

	Elev Factor	x	Scale Factor	=	Combined Factor
DH5834!SPC CT	- 1.00000282	x	0.99999218	=	0.99999500

DH5834  
DH5834  

SUPERSEDED SURVEY CONTROL

DH5834  
DH5834.No superseded survey control is available for this station.  
DH5834  
DH5834\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL9528073504(NAD 83)  
DH5834\_MARKER: STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA  
DH5834  
DH5834  

STATION DESCRIPTION

DH5834  
DH5834'DESCRIBED BY NATIONAL GEODETIC SURVEY  
DH5834'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND  
DH5834'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE  
DH5834'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.  
DH5834' FTP CORS.NGS.NOAA.GOV: CORS/COORD AND CORS/STATION\_LOG  
DH5834' HTTP://WWW.NGS.NOAA.GOV UNDER PRODUCTS AND SERVICES.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
DH5832 \*\*\*\*\*  
DH5832 CORS - This is a GPS Continuously Operating Reference Station.  
DH5832 DESIGNATION - GROTON CORS L1 PHASE CENTER  
DH5832 CORS\_ID - CTGR  
DH5832 PID - DH5832  
DH5832 STATE/COUNTY- CT/NEW LONDON  
DH5832 USGS QUAD - NEW LONDON (1984)  
DH5832  
DH5832  

\*CURRENT SURVEY CONTROL

DH5832  

DH5832* NAD 83(CORS)-	41 20 07.03570(N)	072 02 58.96956(W)	ADJUSTED
DH5832* NAVD 88	-		

DH5832  

DH5832 EPOCH DATE	-	2002.00	
DH5832 X	-	1,478,107.667 (meters)	COMP
DH5832 Y	-	-4,562,614.196 (meters)	COMP
DH5832 Z	-	4,190,441.953 (meters)	COMP
DH5832 ELLIP HEIGHT-	-18.24 (meters)	(09/??/05)	GPS OBS
DH5832 GEOID HEIGHT-	-30.63 (meters)		GEOID03

DH5832  
DH5832 HORZ ORDER - SPECIAL (CORS)  
DH5832 ELLP ORDER - SPECIAL (CORS)  
DH5832  
DH5832.ITRF positions are available for this station.  
DH5832.The coordinates were established by GPS observations  
DH5832.and adjusted by the National Geodetic Survey in September 2005.  
DH5832.The coordinates are valid at the epoch date displayed above.  
DH5832.The epoch date for horizontal control is a decimal equivalence  
DH5832.of Year/Month/Day.  
DH5832  
DH5832  
DH5832.The PID for the CORS ARP is DH5831.  
DH5832  
DH5832.The XYZ, and position/ellipsoidal ht. are equivalent.  
DH5832  
DH5832.The ellipsoidal height was determined by GPS observations  
DH5832.and is referenced to NAD 83.  
DH5832  
DH5832.The geoid height was determined by GEOID03.  
DH5832  
DH5832;  

	North	East	Units	Scale Factor	Converg.
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CORS

DH5832;SPC CT - 208,383.581 363,418.458 MT 0.99998910 +0 27 51.6  
 DH5832;SPC CT - 683,671.80 1,192,315.39 sFT 0.99998910 +0 27 51.6  
 DH5832  
 DH5832! - Elev Factor x Scale Factor = Combined Factor  
 DH5832!SPC CT - 1.00000286 x 0.99998910 = 0.99999196

SUPERSEDED SURVEY CONTROL

DH5832.No superseded survey control is available for this station.  
 DH5832

DH5832\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TYL4687680178(NAD 83)  
 DH5832\_MARKER: STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA

STATION DESCRIPTION

DH5832'DESCIBED BY NATIONAL GEODETIC SURVEY  
 DH5832'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND  
 DH5832'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE  
 DH5832'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.  
 DH5832' FTP CORS.NGS.NOAA.GOV: CORS/COORD AND CORS/STATION\_LOG  
 DH5832' HTTP://WWW.NGS.NOAA.GOV UNDER PRODUCTS AND SERVICES.

1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
 DH8938 \*\*\*\*\*

DH8938 CORS - This is a GPS Continuously Operating Reference Station.  
 DH8938 DESIGNATION - MANSFIELD CORS L1 PHASE CENTER  
 DH8938 CORS\_ID - CTMA  
 DH8938 PID - DH8938  
 DH8938 STATE/COUNTY- CT/TOLLAND  
 DH8938 USGS QUAD - WILLIMANTIC (1984)

\*CURRENT SURVEY CONTROL

DH8938\* NAD 83(CORS)- 41 43 52.91712(N) 072 12 38.87752(W) ADJUSTED  
 DH8938\* NAVD 88 -

DH8938 EPOCH DATE - 2002.00  
 DH8938 X - 1,456,379.729 (meters) COMP  
 DH8938 Y - -4,539,030.913 (meters) COMP  
 DH8938 Z - 4,223,420.426 (meters) COMP  
 DH8938 ELLIP HEIGHT- 55.29 (meters) (09/??/05) GPS OBS  
 DH8938 GEOID HEIGHT- -29.88 (meters) GEOID03

DH8938 HORZ ORDER - SPECIAL (CORS)  
 DH8938 ELLP ORDER - SPECIAL (CORS)

DH8938.ITRF positions are available for this station.  
 DH8938.The coordinates were established by GPS observations  
 DH8938.and adjusted by the National Geodetic Survey in September 2005.  
 DH8938.The coordinates are valid at the epoch date displayed above.  
 DH8938.The epoch date for horizontal control is a decimal equivalence  
 DH8938.of Year/Month/Day.

DH8938.The PID for the CORS ARP is DH5835.

DH8938.The XYZ, and position/ellipsoidal ht. are equivalent.

DH8938.The ellipsoidal height was determined by GPS observations  
 DH8938.and is referenced to NAD 83.

DH8938.The geoid height was determined by GEOID03.

DH8938;  
 DH8938;SPC CT - North East Units Scale Factor Converg.  
 DH8938;SPC CT - 252,275.482 349,660.415 MT 0.99998908 +0 21 27.1  
 DH8938;SPC CT - 827,673.81 1,147,177.54 sFT 0.99998908 +0 21 27.1  
 DH8938  
 DH8938! - Elev Factor x Scale Factor = Combined Factor  
 DH8938!SPC CT - 0.99999133 x 0.99998908 = 0.99998041

SUPERSEDED SURVEY CONTROL

DH8938.No superseded survey control is available for this station.  
 DH8938

DH8938\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TYM3197523711(NAD 83)  
 DH8938\_MARKER: STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA

STATION DESCRIPTION

DH8938'DESCIBED BY NATIONAL GEODETIC SURVEY

CORS

DH8938'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND  
DH8938'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE  
DH8938'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.  
DH8938' FTP CORS.NGS.NOAA.GOV: CORS/COORD AND CORS/STATION\_LOG  
DH8938' HTTP://WWW.NGS.NOAA.GOV UNDER PRODUCTS AND SERVICES.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
DH7114 \*\*\*\*\*  
DH7114 CORS - This is a GPS Continuously Operating Reference Station.  
DH7114 DESIGNATION - PAQUETTE CORS L1 PHASE CENTER  
DH7114 CORS\_ID - CTNE  
DH7114 PID - DH7114  
DH7114 STATE/COUNTY- CT/HARTFORD  
DH7114 USGS QUAD - HARTFORD SOUTH (1992)  
DH7114  
DH7114 \*CURRENT SURVEY CONTROL  
DH7114  
DH7114\* NAD 83(CORS)- 41 40 24.71766(N) 072 42 52.25227(W) ADJUSTED  
DH7114\* NAVD 88 -  
DH7114  
DH7114 EPOCH DATE - 2002.00  
DH7114 X - 1,417,685.870 (meters) COMP  
DH7114 Y - -4,555,729.775 (meters) COMP  
DH7114 Z - 4,218,615.685 (meters) COMP  
DH7114 ELLIP HEIGHT- 41.85 (meters) (11/??/05) GPS OBS  
DH7114 GEOID HEIGHT- -29.36 (meters) GEOID03  
DH7114  
DH7114 HORZ ORDER - SPECIAL (CORS)  
DH7114 ELLP ORDER - SPECIAL (CORS)  
DH7114  
DH7114.ITRF positions are available for this station.  
DH7114.The coordinates were established by GPS observations  
DH7114.and adjusted by the National Geodetic Survey in November 2005.  
DH7114.The coordinates are valid at the epoch date displayed above.  
DH7114.The epoch date for horizontal control is a decimal equivalence  
DH7114.of Year/Month/Day.  
DH7114  
DH7114.The PID for the CORS ARP is DH7113.  
DH7114  
DH7114.The XYZ, and position/ellipsoidal ht. are equivalent.  
DH7114  
DH7114.The ellipsoidal height was determined by GPS observations  
DH7114.and is referenced to NAD 83.  
DH7114  
DH7114.The geoid height was determined by GEOID03.  
DH7114  
DH7114;  
DH7114;SPC CT - North East Units Scale Factor Converg.  
DH7114;SPC CT - 245,712.820 307,755.547 MT 0.99998611 +0 01 24.7  
DH7114;SPC CT - 806,142.81 1,009,694.66 sFT 0.99998611 +0 01 24.7  
DH7114  
DH7114! - Elev Factor x Scale Factor = Combined Factor  
DH7114!SPC CT - 0.99999344 x 0.99998611 = 0.99997955  
DH7114  
DH7114 SUPERSEDED SURVEY CONTROL  
DH7114  
DH7114.No superseded survey control is available for this station.  
DH7114  
DH7114\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXM9024916054(NAD 83)  
DH7114\_MARKER: STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA  
DH7114  
DH7114 STATION DESCRIPTION  
DH7114  
DH7114'DESCRIBED BY NATIONAL GEODETIC SURVEY  
DH7114'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND  
DH7114'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE  
DH7114'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.  
DH7114' FTP CORS.NGS.NOAA.GOV: CORS/COORD AND CORS/STATION\_LOG  
DH7114' HTTP://WWW.NGS.NOAA.GOV UNDER PRODUCTS AND SERVICES.  
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
DH5838 \*\*\*\*\*  
DH5838 CORS - This is a GPS Continuously Operating Reference Station.  
DH5838 DESIGNATION - PUTNAM CORS L1 PHASE CENTER  
DH5838 CORS\_ID - CTPU  
DH5838 PID - DH5838  
DH5838 STATE/COUNTY- CT/WINDHAM  
DH5838 USGS QUAD - PUTNAM (1970)  
DH5838  
DH5838 \*CURRENT SURVEY CONTROL  
DH5838

CORS

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DH5838* NAD 83(CORS)- 41 53 58.88887(N) 071 53 20.88990(W) ADJUSTED
DH5838* NAVD 88 -
DH5838
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DH5838 EPOCH DATE - 2002.00
DH5838 X - 1,477,964.667 (meters) COMP
DH5838 Y - -4,518,936.838 (meters) COMP
DH5838 Z - 4,237,355.763 (meters) COMP
DH5838 ELLIP HEIGHT- 57.21 (meters) (09/??/05) GPS OBS
DH5838 GEOID HEIGHT- -29.62 (meters) GEOID03
DH5838
DH5838 HORZ ORDER - SPECIAL (CORS)
DH5838 ELLP ORDER - SPECIAL (CORS)
DH5838
DH5838.ITRF positions are available for this station.
DH5838.The coordinates were established by GPS observations
DH5838.and adjusted by the National Geodetic Survey in September 2005.
DH5838.The coordinates are valid at the epoch date displayed above.
DH5838.The epoch date for horizontal control is a decimal equivalence
DH5838.of Year/Month/Day.
DH5838
DH5838
DH5838.The PID for the CORS ARP is DH5837.
DH5838
DH5838.The XYZ, and position/ellipsoidal ht. are equivalent.
DH5838
DH5838.The ellipsoidal height was determined by GPS observations
DH5838.and is referenced to NAD 83.
DH5838
DH5838.The geoid height was determined by GEOID03.
DH5838
DH5838; North East Units Scale Factor Converg.
DH5838;SPC CT - 271,187.131 376,234.814 MF 1.00000351 +0 34 14.9
DH5838;SPC CT - 889,719.78 1,234,363.72 sFT 1.00000351 +0 34 14.9
DH5838
DH5838! - Elev Factor x Scale Factor = Combined Factor
DH5838!SPC CT - 0.99999103 x 1.00000351 = 0.99999454
DH5838
DH5838 SUPERSEDED SURVEY CONTROL
DH5838
DH5838.No superseded survey control is available for this station.
DH5838
DH5838_U.S. NATIONAL GRID SPATIAL ADDRESS: 19TBG6034242676(NAD 83)
DH5838_MARKER: STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA
DH5838
DH5838 STATION DESCRIPTION
DH5838
DH5838'DESCRIBED BY NATIONAL GEODETIC SURVEY
DH5838'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND
DH5838'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE
DH5838'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.
DH5838' FTP CORS.NGS.NOAA.GOV: CORS/COORD AND CORS/STATION_LOG
DH5838' HTTP://WWW.NGS.NOAA.GOV UNDER PRODUCTS AND SERVICES.
1 National Geodetic Survey, Retrieval Date = MAY 7, 2007
DI0877 *****
DI0877 CORS - This is a GPS Continuously Operating Reference Station.
DI0877 DESIGNATION - ACUSHNET 5 CORS L1 PHASE CENTER
DI0877 CORS_ID - ACU5
DI0877 PID - DI0877
DI0877 STATE/COUNTY- MA/BRISTOL
DI0877 USGS QUAD -
DI0877
DI0877 *CURRENT SURVEY CONTROL
DI0877
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DI0877* NAD 83(CORS)- 41 44 36.79685(N) 070 53 13.02743(W) ADJUSTED
DI0877* NAVD 88 -
DI0877
-----
DI0877 EPOCH DATE - 2002.00
DI0877 X - 1,560,551.205 (meters) COMP
DI0877 Y - -4,503,286.054 (meters) COMP
DI0877 Z - 4,224,398.193 (meters) COMP
DI0877 ELLIP HEIGHT- 6.56 (meters) (08/??/06) GPS OBS
DI0877 GEOID HEIGHT- -28.95 (meters) GEOID03
DI0877
DI0877 HORZ ORDER - SPECIAL (CORS)
DI0877 ELLP ORDER - SPECIAL (CORS)
DI0877
DI0877.ITRF positions are available for this station.
DI0877.The coordinates were established by GPS observations
DI0877.and adjusted by the National Geodetic Survey in August 2006.

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CORS

DI0877.The coordinates are valid at the epoch date displayed above.  
 DI0877.The epoch date for horizontal control is a decimal equivalence  
 DI0877.of Year/Month/Day.  
 DI0877  
 DI0877  
 DI0877.The PID for the CORS ARP is DI0876.  
 DI0877  
 DI0877.The XYZ, and position/ellipsoidal ht. are equivalent.  
 DI0877  
 DI0877.The ellipsoidal height was determined by GPS observations  
 DI0877.and is referenced to NAD 83.  
 DI0877  
 DI0877.The geoid height was determined by GEOID03.  
 DI0877  
 DI0877;  

	North	East	Units	Scale Factor	Converg.
DI0877;SPC MA M	- 832,769.473	250,994.275	MT	0.99999617	+0 24 42.5
DI0877;SPC MA M	- 2,732,177.85	823,470.38	sFT	0.99999617	+0 24 42.5

 DI0877  
 DI0877!  

- Elev Factor	x	Scale Factor	=	Combined Factor
DI0877!SPC MA M	- 0.99999897	x	0.99999617	= 0.99999514

 DI0877  
 DI0877  

SUPERSEDED SURVEY CONTROL

 DI0877  
 DI0877.No superseded survey control is available for this station.  
 DI0877  
 DI0877\_U.S. NATIONAL GRID SPATIAL ADDRESS: 19TCG4309823025(NAD 83)  
 DI0877\_MARKER: STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA  
 DI0877  

STATION DESCRIPTION

 DI0877  
 DI0877'DESCRIBED BY NATIONAL GEODETIC SURVEY  
 DI0877'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND  
 DI0877'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE  
 DI0877'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.  
 DI0877' FTP CORS.NGS.NOAA.GOV: CORS/COORD AND CORS/STATION\_LOG  
 DI0877' HTTP://WWW.NGS.NOAA.GOV UNDER PRODUCTS AND SERVICES.  
 1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
 DI0447 \*\*\*\*\*  
 DI0447 CORS - This is a GPS Continuously Operating Reference Station.  
 DI0447 DESIGNATION - CENTRAL ISLIP CORS L1 PHASE CENTER  
 DI0447 CORS\_ID - NYCI  
 DI0447 PID - DI0447  
 DI0447 STATE/COUNTY- NY/SUFFOLK  
 DI0447 USGS QUAD - CENTRAL ISLIP (1967)  
 DI0447  

\*CURRENT SURVEY CONTROL

 DI0447  


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DI0447* NAD 83(CORS)-	40 45 38.23714(N)	073 11 51.78743(W)	ADJUSTED
DI0447* NAVD 88	-		

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DI0447 EPOCH DATE	-	2002.00	
DI0447 X	-	1,398,514.140 (meters)	COMP
DI0447 Y	-	-4,631,435.852 (meters)	COMP
DI0447 Z	-	4,142,315.124 (meters)	COMP
DI0447 ELLIP HEIGHT-	-13.75 (meters)	(06/??/06)	GPS OBS
DI0447 GEOID HEIGHT-	-31.04 (meters)		GEOID03

 DI0447  
 DI0447 HORZ ORDER - SPECIAL (CORS)  
 DI0447 ELLP ORDER - SPECIAL (CORS)  
 DI0447  
 DI0447.ITRF positions are available for this station.  
 DI0447.The coordinates were established by GPS observations  
 DI0447.and adjusted by the National Geodetic Survey in June 2006.  
 DI0447.The coordinates are valid at the epoch date displayed above.  
 DI0447.The epoch date for horizontal control is a decimal equivalence  
 DI0447.of Year/Month/Day.  
 DI0447  
 DI0447  
 DI0447.The PID for the CORS ARP is DI0446.  
 DI0447  
 DI0447.The XYZ, and position/ellipsoidal ht. are equivalent.  
 DI0447  
 DI0447.The ellipsoidal height was determined by GPS observations  
 DI0447.and is referenced to NAD 83.  
 DI0447  
 DI0447.The geoid height was determined by GEOID03.  
 DI0447  
 DI0447;  

	North	East	Units	Scale Factor	Converg.
DI0447;SPC NY L	- 66,266.518	367,742.492	MT	0.99999611	+0 31 29.1

CORS

DI0447;SPC NY L - 217,409.40 1,206,501.83 sFT 0.99999611 +0 31 29.1  
 DI0447  
 DI0447! - Elev Factor x Scale Factor = Combined Factor  
 DI0447!SPC NY L - 1.00000216 x 0.99999611 = 0.99999827  
 DI0447  
 DI0447 SUPERSEDED SURVEY CONTROL  
 DI0447  
 DI0447.No superseded survey control is available for this station.  
 DI0447  
 DI0447\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL5212513747(NAD 83)  
 DI0447\_MARKER: STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA  
 DI0447  
 DI0447 STATION DESCRIPTION  
 DI0447  
 DI0447'DESCRIBED BY NATIONAL GEODETIC SURVEY  
 DI0447'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND  
 DI0447'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE  
 DI0447'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.  
 DI0447' FTP CORS.NGS.NOAA.GOV: CORS/COORD AND CORS/STATION\_LOG  
 DI0447' HTTP://WWW.NGS.NOAA.GOV UNDER PRODUCTS AND SERVICES.  
 1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
 DI0617 \*\*\*\*\*  
 DI0617 CORS - This is a GPS Continuously Operating Reference Station.  
 DI0617 DESIGNATION - QUEENS CORS L1 PHASE CENTER  
 DI0617 CORS\_ID - NYQN  
 DI0617 PID - DI0617  
 DI0617 STATE/COUNTY- NY/QUEENS  
 DI0617 USGS QUAD - LYNBROOK (1969)  
 DI0617  
 DI0617 \*CURRENT SURVEY CONTROL  
 DI0617  
 DI0617\* NAD 83(CORS)- 40 43 10.26198(N) 073 43 48.26704(W) ADJUSTED  
 DI0617\* NAVD 88 -  
 DI0617  
 DI0617 EPOCH DATE - 2002.00  
 DI0617 X - 1,356,259.533 (meters) COMP  
 DI0617 Y - -4,647,099.310 (meters) COMP  
 DI0617 Z - 4,138,865.439 (meters) COMP  
 DI0617 ELLIP HEIGHT- -0.28 (meters) (07/??/06) GPS OBS  
 DI0617 GEOID HEIGHT- -31.57 (meters) GEOID03  
 DI0617  
 DI0617 HORZ ORDER - SPECIAL (CORS)  
 DI0617 ELLP ORDER - SPECIAL (CORS)  
 DI0617  
 DI0617.ITRF positions are available for this station.  
 DI0617.The coordinates were established by GPS observations  
 DI0617.and adjusted by the National Geodetic Survey in July 2006.  
 DI0617.The coordinates are valid at the epoch date displayed above.  
 DI0617.The epoch date for horizontal control is a decimal equivalence  
 DI0617.of Year/Month/Day.  
 DI0617  
 DI0617  
 DI0617.The PID for the CORS ARP is DI0616.  
 DI0617  
 DI0617.The XYZ, and position/ellipsoidal ht. are equivalent.  
 DI0617  
 DI0617.The ellipsoidal height was determined by GPS observations  
 DI0617.and is referenced to NAD 83.  
 DI0617  
 DI0617.The geoid height was determined by GEOID03.  
 DI0617  
 DI0617;  
 DI0617;SPC NY L - North East Units Scale Factor Converg.  
 DI0617;SPC NY L - 61,426.873 322,806.165 MT 0.99999749 +0 10 35.6  
 DI0617;SPC NY L - 201,531.33 1,059,073.23 sFT 0.99999749 +0 10 35.6  
 DI0617  
 DI0617!  
 DI0617!SPC NY L - Elev Factor x Scale Factor = Combined Factor  
 DI0617!SPC NY L - 1.00000004 x 0.99999749 = 0.99999753  
 DI0617  
 DI0617 SUPERSEDED SURVEY CONTROL  
 DI0617  
 DI0617.No superseded survey control is available for this station.  
 DI0617  
 DI0617\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL0725608397(NAD 83)  
 DI0617\_MARKER: STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA  
 DI0617  
 DI0617 STATION DESCRIPTION  
 DI0617  
 DI0617'DESCRIBED BY NATIONAL GEODETIC SURVEY  
 DI0617'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND

CORS

DI0617'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE  
 DI0617'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.  
 DI0617' FTP CORS.NGS.NOAA.GOV: CORS/COORD AND CORS/STATION\_LOG  
 DI0617' HTTP://WWW.NGS.NOAA.GOV UNDER PRODUCTS AND SERVICES.  
 1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
 DI1875 \*\*\*\*\*  
 DI1875 CORS - This is a GPS Continuously Operating Reference Station.  
 DI1875 DESIGNATION - RIVERHEAD CORS L1 PHASE CENTER  
 DI1875 CORS\_ID - NYRH  
 DI1875 PID - DI1875  
 DI1875 STATE/COUNTY- NY/SUPFOLK  
 DI1875 USGS QUAD - RIVERHEAD (1956)  
 DI1875  
 DI1875 \*CURRENT SURVEY CONTROL  
 DI1875  
 DI1875\* NAD 83(CORS)- 40 55 24.08901(N) 072 42 50.56086(W) ADJUSTED  
 DI1875\* NAVD 88 -  
 DI1875  
 DI1875 EPOCH DATE - 2002.00  
 DI1875 X - 1,434,050.586 (meters) COMP  
 DI1875 Y - -4,608,184.557 (meters) COMP  
 DI1875 Z - 4,155,990.750 (meters) COMP  
 DI1875 ELLIP HEIGHT- -7.84 (meters) (10/??/06) GPS OBS  
 DI1875 GEOID HEIGHT- -31.22 (meters) GEOID03  
 DI1875  
 DI1875 HORZ ORDER - SPECIAL (CORS)  
 DI1875 ELLP ORDER - SPECIAL (CORS)  
 DI1875  
 DI1875.ITRF positions are available for this station.  
 DI1875.The coordinates were established by GPS observations  
 DI1875.and adjusted by the National Geodetic Survey in October 2006.  
 DI1875.The coordinates are valid at the epoch date displayed above.  
 DI1875.The epoch date for horizontal control is a decimal equivalence  
 DI1875.of Year/Month/Day.  
 DI1875  
 DI1875  
 DI1875.The PID for the CORS ARP is DI1874.  
 DI1875  
 DI1875.The XYZ, and position/ellipsoidal ht. are equivalent.  
 DI1875  
 DI1875.The ellipsoidal height was determined by GPS observations  
 DI1875.and is referenced to NAD 83.  
 DI1875  
 DI1875.The geoid height was determined by GEOID03.  
 DI1875  
 DI1875;  
 DI1875;SPC NY L - North East Units Scale Factor Converg.  
 DI1875;SPC NY L - 84,823.316 408,314.964 MT 0.99999572 +0 50 28.0  
 DI1875;SPC NY L - 278,291.16 1,339,613.34 sFT 0.99999572 +0 50 28.0  
 DI1875  
 DI1875!  
 DI1875!SPC NY L - Elev Factor x Scale Factor = Combined Factor  
 DI1875!SPC NY L - 1.00000123 x 0.99999572 = 0.99999695  
 DI1875  
 DI1875 SUPERSEDED SURVEY CONTROL  
 DI1875  
 DI1875.No superseded survey control is available for this station.  
 DI1875  
 DI1875\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TXL9248232765(NAD 83)  
 DI1875\_MARKER: STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA  
 DI1875  
 DI1875 STATION DESCRIPTION  
 DI1875  
 DI1875'DESCRIBED BY NATIONAL GEODETIC SURVEY  
 DI1875'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND  
 DI1875'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE  
 DI1875'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.  
 DI1875' FTP CORS.NGS.NOAA.GOV: CORS/COORD AND CORS/STATION\_LOG  
 DI1875' HTTP://WWW.NGS.NOAA.GOV UNDER PRODUCTS AND SERVICES.  
 1 National Geodetic Survey, Retrieval Date = MAY 7, 2007  
 DI0625 \*\*\*\*\*  
 DI0625 CORS - This is a GPS Continuously Operating Reference Station.  
 DI0625 DESIGNATION - VALHALLA CORS L1 PHASE CENTER  
 DI0625 CORS\_ID - NYVH  
 DI0625 PID - DI0625  
 DI0625 STATE/COUNTY- NY/WESTCHESTER  
 DI0625 USGS QUAD - WHITE PLAINS (1967)  
 DI0625  
 DI0625 \*CURRENT SURVEY CONTROL  
 DI0625  
 DI0625\* NAD 83(CORS)- 41 04 56.22121(N) 073 49 04.12592(W) ADJUSTED



CORS

DI0625\* NAVD 88 -  
 DI0625  
 DI0625 EPOCH DATE - 2002.00  
 DI0625 X - 1,341,803.946 (meters) COMP  
 DI0625 Y - -4,623,884.626 (meters) COMP  
 DI0625 Z - 4,169,357.097 (meters) COMP  
 DI0625 ELLIP HEIGHT- 63.42 (meters) (07/??/06) GPS OBS  
 DI0625 GEOID HEIGHT- -30.92 (meters) GEOID03  
 DI0625  
 DI0625 HORZ ORDER - SPECIAL (CORS)  
 DI0625 ELLP ORDER - SPECIAL (CORS)  
 DI0625  
 DI0625.ITRF positions are available for this station.  
 DI0625.The coordinates were established by GPS observations  
 DI0625.and adjusted by the National Geodetic Survey in July 2006.  
 DI0625.The coordinates are valid at the epoch date displayed above.  
 DI0625.The epoch date for horizontal control is a decimal equivalence  
 DI0625.of Year/Month/Day.  
 DI0625  
 DI0625  
 DI0625.The PID for the CORS ARP is DI0624.  
 DI0625  
 DI0625.The XYZ, and position/ellipsoidal ht. are equivalent.  
 DI0625  
 DI0625.The ellipsoidal height was determined by GPS observations  
 DI0625.and is referenced to NAD 83.  
 DI0625  
 DI0625.The geoid height was determined by GEOID03.  
 DI0625  
 DI0625;  
 DI0625;SPC NY E - North East Units Scale Factor Converg.  
 DI0625;SPC NY E - 249,908.883 207,318.967 MT 0.99994042 +0 26 53.9  
 DI0625;SPC NY E - 819,909.39 680,178.98 sFT 0.99994042 +0 26 53.9  
 DI0625  
 DI0625!  
 DI0625!SPC NY E - Elev Factor x Scale Factor = Combined Factor  
 DI0625!SPC NY E - 0.99999005 x 0.99994042 = 0.99993047  
 DI0625  
 DI0625  
 DI0625 SUPERSEDED SURVEY CONTROL  
 DI0625  
 DI0625.No superseded survey control is available for this station.  
 DI0625  
 DI0625\_U.S. NATIONAL GRID SPATIAL ADDRESS: 18TWL9930148565(NAD 83)  
 DI0625\_MARKER: STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA  
 DI0625  
 DI0625  
 DI0625 STATION DESCRIPTION  
 DI0625  
 DI0625'DESCRIBED BY NATIONAL GEODETIC SURVEY  
 DI0625'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND  
 DI0625'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE  
 DI0625'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.  
 DI0625' FTP CORS.NGS.NOAA.GOV: CORS/COORD AND CORS/STATION\_LOG  
 DI0625' HTTP://WWW.NGS.NOAA.GOV UNDER PRODUCTS AND SERVICES.

\*\*\* retrieval complete.  
 Elapsed Time = 00:00:02

-----  
 - This listing contains control for which complete digital -  
 - data sheets where not provided. The complete data sheets were -  
 - not provided for the reason listed below. The reason below is -  
 - associated with a horizontal control Nonpub code shown under -  
 - the heading 'H' and/or a vertical control Nonpub code shown under -  
 - the heading 'v' -  
 - -  
 - The format of the records are as follows: -  
 - Pid = Station Permanent Identifier) -  
 - Name = Station Designation -  
 - Lat = Approx. Latitude (Degrees, Minutes, truncated Seconds) -  
 - Lon = Approx. Longitude (Degrees, Minutes, truncated Seconds) -  
 - O = Horizontal Order -  
 - o = Vertical Order -  
 - H = Horizontal Nonpub Code -  
 - v = Vertical Nonpub Code -  
 - -  
 - H Nonpub HORIZONTAL CONTROL NONPUB REASON -  
 - -----  
 - X Surface Mark Reported Destroyed -  
 - Y Surface and underground mark reported destroyed -

CORS

```

-   A      A-Order Horizontal mark not tied to an adjusted HARN   -
-   C      C-Nonoperational CORS Station                         -
-   W      Weakly determined position.                          -
-   P      Purpose of position is not for network control       -
-   D      No Descriptive Text available                        -
-   R      Restricted position                                   -
-   O      Outside NGS Publication Area                          -
-   N      No geodetic control at this mark                     -

```

v Nonpub VERTICAL CONTROL NONPUB REASON

```

-----
-   X      Surface Mark Reported Destroyed                       -
-   Y      Surface and underground mark reported destroyed     -
-   F      Bench Mark not yet adjusted.                          -
-   D      No Descriptive Text available                        -
-   Z      Presumed destroyed                                    -
-   R      Restricted elevation                                   -
-   O      Outside NGS Publication Area                          -
-   N      No geodetic control at this mark                     -
-   S      Mark is in a subsidence area                          -

```

```

-   NOTE - Stations found in this listing may still have a valid
-   datasheet produced by use of other publishable values.
-   For example, an ADJUSTED height may be non-publishable
-   but a good GPS height might be found on the datasheet.
-   This listing does not imply that values found on the datasheet
-   are restricted. If it's on the datasheet, use it.

```

```

-----
Pid      Name                                     Lat      Lon      Elev      O o Hv
-----
>DH5836  MANSFIELD CORS L1 PHASE CENTER 41 43 52. /072 12 38.      NN

```

## **APPENDIX VI**

### **PHOTOS**

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 1



NO. 1

PT. 100 - BASE STATION

3/13/07



NO. 2

PT. 100 - BASE STATION - LOOKING EAST

3/13/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 1



NO. 3

3/13/07

PT. 102 - HORIZONTAL CONTROL LX6542



NO. 4

3/13/07

PT. 102 - HORIZONTAL CONTROL LX6542 - CLOSE UP

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 1**



NO. 5

PT. 102 - LOOKING EAST

3/13/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 1



NO. 6

3/13/07

PT. 104 - MIXED VEGETATION



NO. 7

3/13/07

PT. 104 - LOOKING EAST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 1



NO. 8

PT. 105 - VERTICAL CONTROL LX1627

3/13/07



NO. 9

PT. 105 - LOOKING NORTH

3/13/07



FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 1



NO. 10

3/13/07

PT. 107 - VERTICAL CONTROL LX2863



NO. 11

3/13/07

PT. 107 - VERTICAL CONTROL LX2863 - CLOSE UP

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 1**



NO. 12

PT. 107 - LOOKING WEST

3/13/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 1**



NO. 13

3/13/07

PT. 109 - FOREST CONVENTIONAL POINT NO. 1



NO. 14

3/13/07

PT. 109 - LOOKING NORTHWEST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 1



NO. 15

3/13/07

PT. 110 - FOREST - CONVENTIONAL POINT NO. 2



NO. 16

3/13/07

PT. 110 - LOOKING NORTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 1



NO. 17

PT. 114 - FOREST

4/11/07



NO. 18

PT. 114 - LOOKING NORTH

4/11/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 1**



NO. 19

PT. 116 - BITUMINOUS LOT

4/11/07



NO. 20

PT. 116 - LOOKING NORTHWEST

4/11/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 1**



NO. 21

PT. 117 - GRASS

4/11/07

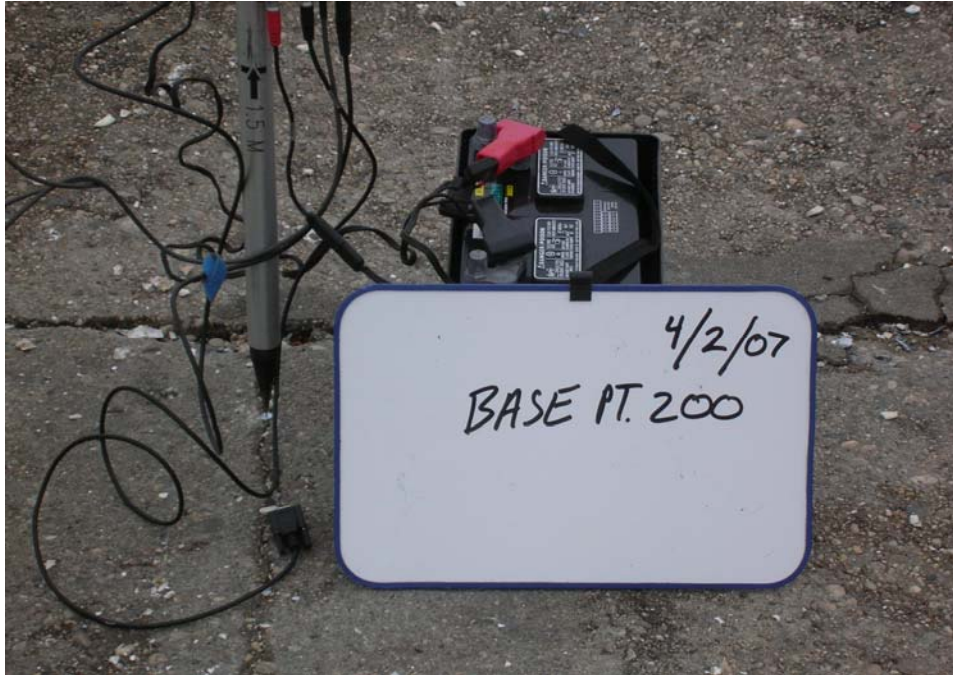


NO. 22

PT. 117 - LOOKING WEST

4/11/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 2



NO. 1

PT. 200 - BASE STATION

4/2/07



NO. 2

PT. 200 - BASE STATION - LOOKING SOUTHWEST

4/2/07



**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 2**



NO. 3

4/2/07

PT. 201 - VERTICAL CONTROL LX1147



NO. 4

4/2/07

PT. 201 - VERTICAL CONTROL LX1147 - CLOSE-UP

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 2**



NO. 5

PT. 201 – LOOKING EAST

4/2/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 2



NO. 6

PT. 203 - GRASS

4/2/07



NO. 7

PT. 203 - LOOKING EAST

4/2/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 2



NO. 8

PT. 204 - HORIZONTAL CONTROL LX7439

4/2/07



NO. 9

PT. 204 - HORIZONTAL CONTROL LX7439 - CLOSE UP

4/2/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 2**



NO. 10

PT. 204 – LOOKING SOUTH

4/2/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 2



NO. 11

PT. 206 - MIXED VEGETATION

4/2/07



NO. 12

PT. 206 - LOOKING NORTH

4/2/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 2



NO. 13

4/2/07

PT. 207 - FOREST - CONVENTIONAL POINT NO. 1



NO. 14

4/2/07

PT. 207 - LOOKING NORTHWEST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 2



NO. 15

4/2/07

PT. 208 - FOREST - CONVENTIONAL POINT NO. 2



NO. 16

4/2/07

PT. 208 - LOOKING NORTHWEST



FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 2



NO. 17

PT. 209 - URBAN

4/2/07



NO. 18

PT. 209 - LOOKING WEST

4/2/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 2**



NO. 19

PT. 211 - FOREST

4/5/07



NO. 20

PT. 211 - LOOKING NORTHWEST

4/5/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 3



NO. 1

4/3/07

PT. 300 - BASE STATION



NO. 2

4/3/07

PT. 300 - BASE STATION - LOOKING NORTHWEST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 3



NO. 3

4/3/07

PT. 301 - FOREST - CONVENTIONAL POINT NO. 1

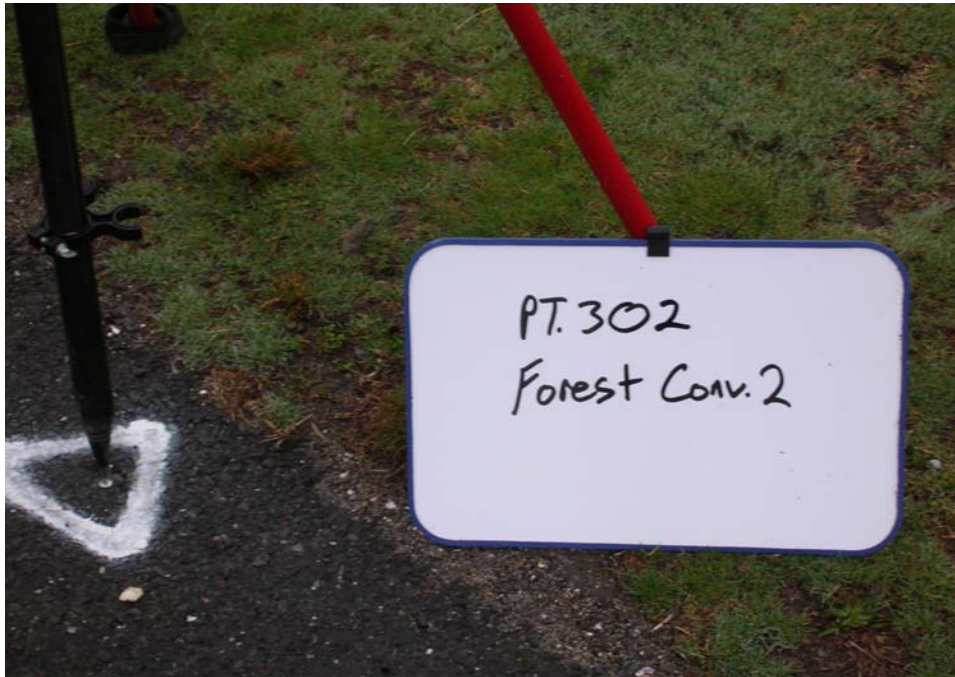


NO. 4

4/3/07

PT. 301 - LOOKING SOUTHEAST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 3



NO. 5

4/3/07

PT. 302 - FOREST - CONVENTIONAL POINT NO. 2



NO. 6

4/3/07

PT. 302 - LOOKING SOUTHEAST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 3



NO. 7

PT. 303 - GRASS

4/3/07



NO. 8

PT. 303 - LOOKING NORTHWEST

4/3/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 3



NO. 9

PT. 304 - URBAN

4/3/07



NO. 10

PT. 304 - LOOKING NORTH

4/3/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 3



NO. 11

PT. 305 - MIXED VEGETATION

4/3/07



NO. 12

PT. 305 - LOOKING NORTHEAST

4/3/07



FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 3



NO. 13

4/3/07

PT. 306 - VERTICAL CONTROL LX0771



NO. 14

4/3/07

PT. 306 - VERTICAL CONTROL LX0771 - CLOSE UP

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 3**



NO. 15

4/3/07

PT. 306 - VERTICAL CONTROL LX0771  
LOOKING NORTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 3



NO. 16

4/3/07

PT. 308 - HORIZONTAL CONTROL LX7428



NO. 17

4/3/07

PT. 308 - HORIZONTAL CONTROL LX7428 - CLOSE UP

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 3**



NO. 18

4/3/07

PT. 308 - HORIZONTAL CONTROL LX7428  
LOOKING SOUTHEAST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 3**



NO. 19

PT. 315 - FOREST

4/5/07



NO. 20

PT. 315 - LOOKING SOUTH

4/5/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 4



NO. 1

PT. 400 - BASE STATION

4/3/07



NO. 2

PT. 400 - BASE STATION - LOOKING NORTHEAST

4/3/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 4



NO. 3

PT. 401 - MIXED VEGETATION

4/3/07



NO. 4

PT. 401 - LOOKING EAST

4/3/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 4



NO. 5

4/3/07

PT. 402 - FOREST - CONVENTIONAL POINT NO. 1



NO. 6

4/3/07

PT. 402 - LOOKING EAST



**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 4**



NO. 7

4/3/07

PT. 403 - FOREST - CONVENTIONAL POINT NO. 2

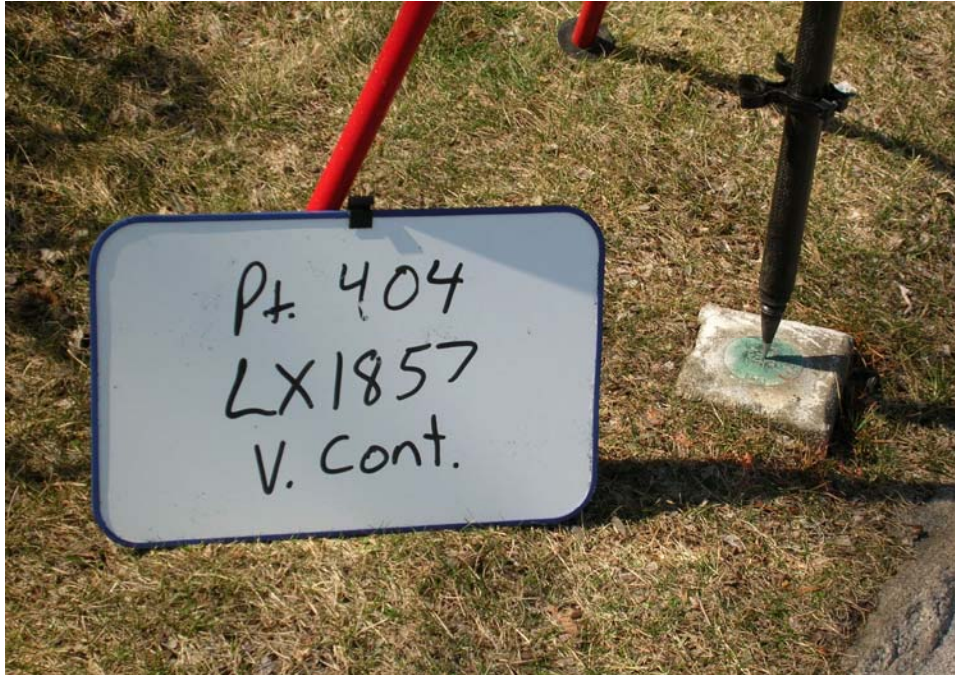


NO. 8

4/3/07

PT. 403 - LOOKING EAST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 4**



NO. 9

4/3/07

PT. 404 - VERTICAL CONTROL LX1857



NO. 10

4/3/07

PT. 404 - LOOKING NORTHWEST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 4



NO. 11

PT. 406 - VERTICAL CONTROL LX0782

4/3/07



NO. 12

PT. 406 - LOOKING SOUTH

4/3/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 4



NO. 13

PT. 407 - HORIZONTAL CONTROL LX7428

4/3/07



NO. 14

PT. 407 - LOOKING SOUTHEAST

4/3/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 4



NO. 15

PT. 409 - URBAN

4/3/07



NO. 16

PT. 409 - LOOKING SOUTHWEST

4/3/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 4**



NO. 17

PT. 410 - GRASS

4/3/07



NO. 18

PT. 410 - LOOKING NORTH

4/3/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 4**



NO. 19

PT. 415 - FOREST

4/5/07

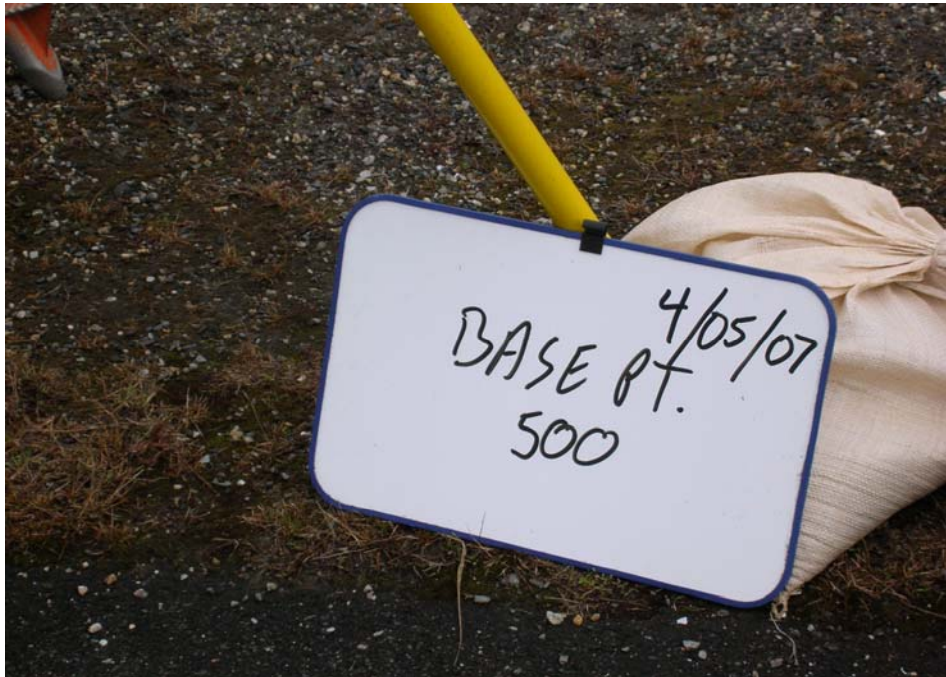


NO. 20

PT. 415 - LOOKING EAST

4/5/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 5**



NO. 1

PT. 500 - BASE STATION

4/5/07



NO. 2

PT. 500 - BASE STATION - LOOKING NORTH

4/5/07



**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 5**



NO. 3

4/5/07

PT. 501 - FOREST - CONVENTIONAL POINT NO. 1



NO. 4

4/5/07

PT. 501 - LOOKING SOUTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 5



NO. 5

4/5/07

PT. 502 - FOREST - CONVENTIONAL POINT NO. 2



NO. 6

4/5/07

PT. 502 - LOOKING WEST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 5



NO. 7

PT. 503 - MIXED VEGETATION

4/5/07



NO. 8

PT. 503 - LOOKING NORTH

4/5/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 5



NO. 9

PT. 504 - URBAN

4/5/07



NO. 10

PT. 504 - LOOKING WEST

4/5/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 5**



NO. 11

PT. 505 - GRASS

4/5/07



NO. 12

PT. 505 - LOOKING SOUTH

4/5/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 5



NO. 13

4/5/07

PT. 506 - HORIZONTAL CONTROL LX7472



NO. 14

4/5/07

PT. 506 - HORIZONTAL CONTROL LX7472 - CLOSEUP

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 5**



NO. 15

PT. 506 – LOOKING SOUTHWEST

4/5/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 5**



NO. 16

PT. 507 - VERTICAL CONTROL LX0813

4/5/07



NO. 17

PT. 507 - VERTICAL CONTROL LX0813 - CLOSEUP

4/5/07



**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 5**



NO. 18

PT. 507 – LOOKING WEST

4/5/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 5



NO. 19

PT. 508 - FOREST

4/5/07



NO. 20

PT. 508 - LOOKING WEST

4/5/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 6



NO. 1

PT. 600 - BASE STATION

4/6/07



NO. 2

PT. 600 - BASE STATION - LOOKING SOUTH

4/6/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 6



NO. 3

PT. 601 - MIXED VEGETATION

4/6/07



NO. 4

PT. 601 - LOOKING WEST

4/6/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 6



NO. 5

4/6/07

PT. 602 - FOREST - CONVENTIONAL POINT NO. 1



NO. 6

4/6/07

PT. 602 - LOOKING EAST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 6



NO. 7

4/6/07

PT. 603 - FOREST - CONVENTIONAL POINT NO. 2



NO. 8

4/6/07

PT. 603 - LOOKING EAST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 6**



NO. 9

PT. 604 - URBAN

4/6/07



NO. 10

PT. 604 - LOOKING SOUTH

4/6/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 6**



NO. 11

PT. 605 - GRASS

4/6/07



NO. 12

PT. 605 - LOOKING NORTHEAST

4/6/07



FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 6



NO. 13

PT. 606 - HORIZONTAL CONTROL LX7472

4/6/07



NO. 14

PT. 606 - LOOKING SOUTH

4/6/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 6



NO. 15

4/6/07

PT. 608 - VERTICAL CONTROL LX0829



NO. 16

4/6/07

PT. 608 - VERTICAL CONTROL LX0829 - CLOSEUP

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 6**



NO. 17

PT. 608 – LOOKING NORTH

4/6/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 6**



NO. 18

PT. 615 - FOREST

4/6/07

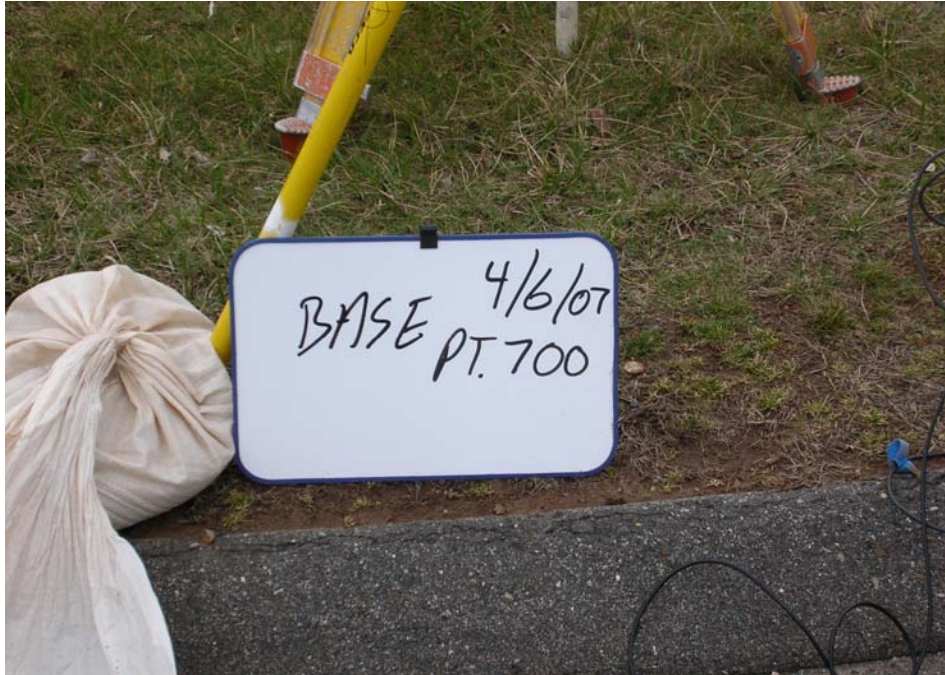


NO. 19

PT. 615 - LOOKING EAST

4/6/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 7



NO. 1

PT. 700 - BASE STATION

4/6/07



NO. 2

PT. 700 - BASE STATION - LOOKING WEST

4/6/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 7**



NO. 3

PT. 701 - MIXED VEGETATION

4/6/07



NO. 4

PT. 701 - LOOKING NORTHEAST

4/6/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 7



NO. 5

4/6/07

PT. 702 - HORIZONTAL CONTROL LX3693



NO. 6

4/6/07

PT. 702 - HORIZONTAL CONTROL LX3693 - CLOSEUP

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 7**



NO. 7

PT. 702 - LOOKING SOUTHEAST

4/6/07



NO. 8

PT. 702 - LOOKING SOUTHWEST

4/6/07



FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 7



NO. 9

4/6/07

PT. 704 - FOREST - CONVENTIONAL POINT NO. 1  
(PT 703 MISLABELED ON BOARD)



NO. 10

4/6/07

PT. 704 - LOOKING NORTH  
(PT 703 MISLABELED ON BOARD)

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 7



NO. 11

4/6/07

PT. 705 - FOREST - CONVENTIONAL POINT NO. 2



NO. 12

4/6/07

PT. 705 - LOOKING WEST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 7**



NO. 13

PT. 706 - VERTICAL CONTROL LX0868

4/6/07



NO. 14

PT. 706 - LOOKING NORTHEAST

4/6/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 7**



NO. 15

PT. 708 - GRASS

4/6/07



NO. 16

PT. 708 - LOOKING NORTHEAST

4/6/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 7



NO. 17

PT. 709 – BITUMINOUS LOT

4/6/07



NO. 18

PT. 709 – LOOKING NORTHWEST

4/6/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 7**



NO. 19

PT. 712 - FOREST

4/6/07



NO. 20

PT. 712 - LOOKING WEST

4/6/07

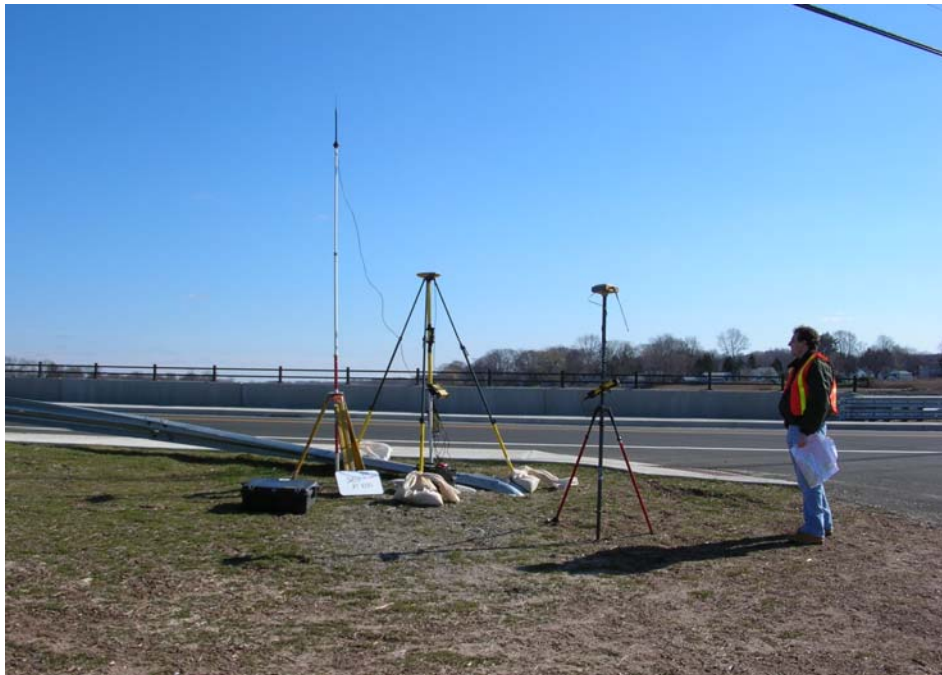
FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 8



NO. 1

PT. 800 - BASE STATION

4/9/07



NO. 2

PT. 800 - BASE STATION - LOOKING NORTHEAST

4/9/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 8



NO. 3 4/9/07  
PT. 801 - HORIZONTAL & VERTICAL CONTROL LX0900



NO. 4 4/9/07  
PT. 801 - HORIZONTAL & VERTICAL CONTROL LX0900 CLOSEUP



**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 8**



NO. 5

PT. 801 - LOOKING SOUTHWEST

4/9/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 8**



NO. 6

4/9/07

PT. 802 - VERTICAL CONTROL LX0901



NO. 7

4/9/07

PT. 802 - LOOKING SOUTHEAST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 8**



NO. 8

PT. 803 - MIXED VEGETATION

4/9/07



NO. 9

PT. 803 - LOOKING NORTH

4/9/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 8



NO. 10

4/9/07

PT. 805 - BITUMINOUS LOT



NO. 11

4/9/07

PT. 805 - LOOKING SOUTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 8



NO. 12

4/9/07

PT. 806 - FOREST - CONVENTIONAL POINT NO. 1



NO. 13

4/9/07

PT. 806 - LOOKING SOUTH

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 8**



NO. 14

4/9/07

PT. 807 - FOREST - CONVENTIONAL POINT NO. 2



NO. 15

4/9/07

PT. 807 - LOOKING WEST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 8**



NO. 16

PT. 808 - GRASS

4/9/07



NO. 17

PT. 808 - LOOKING NORTHEAST

4/9/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 8**



NO. 18

PT. 813 - FOREST

4/9/07



NO. 19

PT. 813 - LOOKING SOUTH

4/9/07



**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9**



NO. 1

PT. 900 - BASE STATION

4/10/07



NO. 2

PT. 900 - BASE STATION - LOOKING SOUTH

4/10/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9



NO. 3

PT. 901 - MIXED VEGETATION

4/10/07



NO. 4

PT. 901 - LOOKING EAST

4/10/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9



NO. 5

4/10/07

PT. 902 - BITUMINOUS LOT



NO. 6

4/10/07

PT. 902 - LOOKING NORTH

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9**



NO. 7

4/10/07

PT. 903 - VERTICAL CONVENTIONAL POINT NO. 1



NO. 8

4/10/07

PT. 903 - LOOKING WEST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9



NO. 9

4/10/07

PT. 904 - VERTICAL CONVENTIONAL POINT NO. 2



NO. 10

4/10/07

PT. 904 - LOOKING NORTH

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9**



NO. 11

PT. 905 - GRASS

4/10/07



NO. 12

PT. 905 - LOOKING SOUTHEAST

4/10/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9**



NO. 13

4/10/07

PT. 906 - FOREST - CONVENTIONAL POINT NO. 1



NO. 14

4/10/07

PT. 906 - LOOKING SOUTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9



NO. 15

4/10/07

PT. 907 - FOREST - CONVENTIONAL POINT NO. 2



NO. 16

4/10/07

PT. 907 - LOOKING NORTH



FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9



NO. 17

PT. 908 - HORIZONTAL CONTROL LX7598

4/10/07



NO. 18

PT. 908 - LOOKING WEST

4/10/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9



NO. 19

PT. 911 - VERTICAL CONTROL LX0369

4/10/07



NO. 20

PT. 911 - VERTICAL CONTROL LX0369 - CLOSE-UP

4/10/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9**



NO. 21

PT. 911 - LOOKING WEST

4/10/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9**



NO. 22

PT. 913 - FOREST

4/10/07



NO. 23

PT. 913 - LOOKING EAST

4/10/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9**



NO. 1

PT. 900 - BASE STATION

4/10/07



NO. 2

PT. 900 - BASE STATION - LOOKING SOUTH

4/10/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9



NO. 3

PT. 901 - MIXED VEGETATION

4/10/07



NO. 4

PT. 901 - LOOKING EAST

4/10/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9



NO. 5

4/10/07

PT. 902 - BITUMINOUS LOT



NO. 6

4/10/07

PT. 902 - LOOKING NORTH

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9**



NO. 7

4/10/07

PT. 903 - VERTICAL CONVENTIONAL POINT NO. 1



NO. 8

4/10/07

PT. 903 - LOOKING WEST



FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9



NO. 9

4/10/07

PT. 904 - VERTICAL CONVENTIONAL POINT NO. 2



NO. 10

4/10/07

PT. 904 - LOOKING NORTH

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9**



NO. 11

PT. 905 - GRASS

4/10/07



NO. 12

PT. 905 - LOOKING SOUTHEAST

4/10/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9**



NO. 13

4/10/07

PT. 906 - FOREST - CONVENTIONAL POINT NO. 1



NO. 14

4/10/07

PT. 906 - LOOKING SOUTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9



NO. 15

4/10/07

PT. 907 - FOREST - CONVENTIONAL POINT NO. 2



NO. 16

4/10/07

PT. 907 - LOOKING NORTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9



NO. 17

PT. 908 - HORIZONTAL CONTROL LX7598

4/10/07



NO. 18

PT. 908 - LOOKING WEST

4/10/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9



NO. 19

PT. 911 - VERTICAL CONTROL LX0369

4/10/07



NO. 20

PT. 911 - VERTICAL CONTROL LX0369 - CLOSE-UP

4/10/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9**



NO. 21

PT. 911 - LOOKING WEST

4/10/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 9**



NO. 22

PT. 913 - FOREST

4/10/07



NO. 23

PT. 913 - LOOKING EAST

4/10/07



**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 10**



NO. 1

4/11/07

PT. 1000 - BASE STATION



NO. 2

4/11/07

PT. 1000 - BASE STATION - LOOKING NORTHWEST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 10**



NO. 3

PT. 1001 - GRASS

4/11/07



NO. 4

PT. 1001 - LOOKING NORTH

4/11/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 10



NO. 5

4/11/07

PT. 1002 - FOREST - CONVENTIONAL POINT NO. 1



NO. 6

4/11/07

PT. 1002 - LOOKING NORTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 10



NO. 7

4/11/07

PT. 1003 - FOREST - CONVENTIONAL POINT NO. 2



NO. 8

4/11/07

PT. 1003 - LOOKING NORTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 10



NO. 9

4/11/07

PT. 1004 - MIXED VEGETATION



NO. 10

4/11/07

PT. 1004 - LOOKING NORTHWEST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 10



NO. 11

4/11/07

PT. 1005 - BITUMINOUS LOT



NO. 12

4/11/07

PT. 1005 - LOOKING NORTHWEST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 10



NO. 13

4/11/07

PT. 1006 - VERTICAL CONVENTIONAL POINT NO. 1



NO. 14

4/11/07

PT. 1006 - LOOKING SOUTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 10



NO. 15

PT. 1007 - HORIZONTAL CONTROL LX7598

4/10/07



NO. 16

PT. 1007 - LOOKING SOUTH

4/10/07



FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 10



NO. 17

PT. 1015 - FOREST

4/11/07



NO. 18

PT. 1015 - LOOKING NORTH

4/11/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 10**



NO. 19

PT. 1017 - VERTICAL CONTROL LX1621

4/10/07



NO. 20

PT. 1017 - LOOKING WEST

4/11/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 11**



NO. 1

PT. 1100 - BASE STATION

4/13/07



NO. 2

PT. 1100 - BASE STATION - LOOKING NORTHWEST

4/13/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 11**



NO. 3

PT. 1101 - GRASS

4/13/07



NO. 4

PT. 1101 - LOOKING NORTHEAST

4/13/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 11**



NO. 5

PT. 1102 – MIXED VEGETATION

4/13/07



NO. 6

PT. 1102 - LOOKING NORTH

4/13/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 11



NO. 7

4/13/07

PT. 1103 - BITUMINOUS LOT



NO. 8

4/13/07

PT. 1103 - LOOKING NORTHWEST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 11



NO. 9

4/13/07

PT. 1104 – VERTICAL CONTROL LX0413



NO. 10

4/13/07

PT. 1104 - LOOKING EAST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 11



NO. 11

4/13/07

PT. 1105 - FOREST - CONVENTIONAL POINT NO. 1



NO. 12

4/13/07

PT. 1105 - LOOKING WEST



FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 11



NO. 13

4/13/07

PT. 1106 - HORIZONTAL CONTROL LX6423



NO. 14

4/13/07

PT. 1106 - LOOKING WEST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 11**



NO. 15

PT. 1108 - FOREST

4/13/07



NO. 16

PT. 1108 - LOOKING SOUTHWEST

4/13/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 12



NO. 1

PT. 1200 - BASE STATION

4/13/07



NO. 2

PT. 1200 - BASE STATION - LOOKING EAST

4/13/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 12



NO. 3

PT. 1201 - BARE EARTH GRAVEL LOT

4/13/07



NO. 4

PT. 1201 - LOOKING SOUTHEAST

4/13/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 12



NO. 5

4/13/07

PT. 1202 – HORIZONTAL CONTROL LX6270



NO. 6

4/13/07

PT. 1202 - LOOKING SOUTH

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 12**



NO. 7

4/13/07

PT. 1204 - FOREST - CONVENTIONAL POINT NO. 1

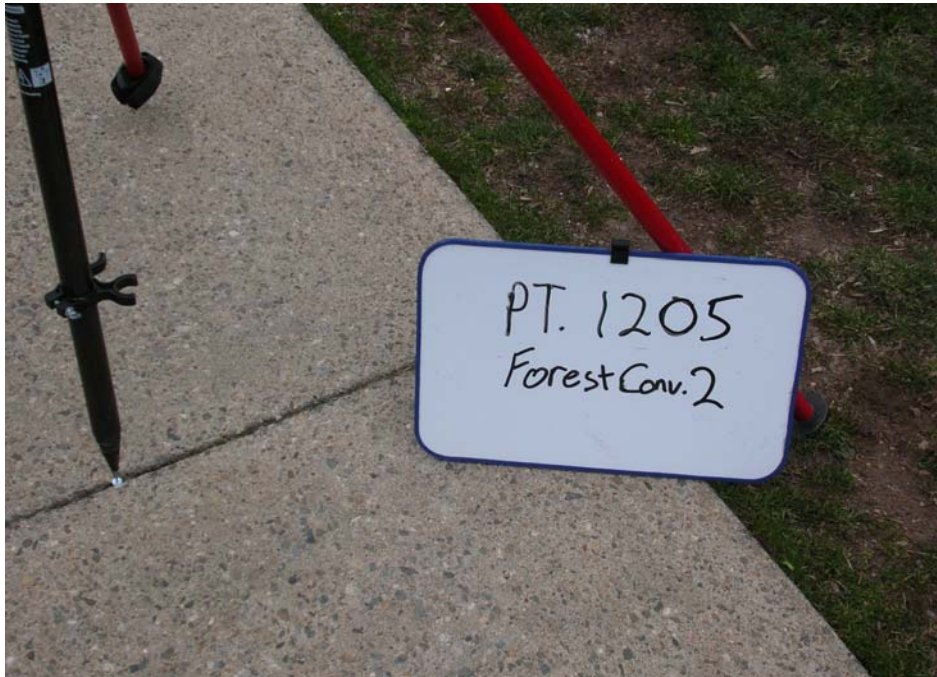


NO. 8

4/13/07

PT. 1204 - LOOKING NORTHEAST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 12



NO. 9

4/13/07

PT. 1205 – FOREST – CONVENTIONAL POINT NO. 2



NO. 10

4/13/07

PT. 1205 - LOOKING NORTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 12



NO. 11

PT. 1206 - BITUMINOUS LOT

4/13/07



NO. 12

PT. 1206 - LOOKING SOUTH

4/13/07



**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 12**



NO. 13

PT. 1207 – MIXED VEGETATION

4/13/07

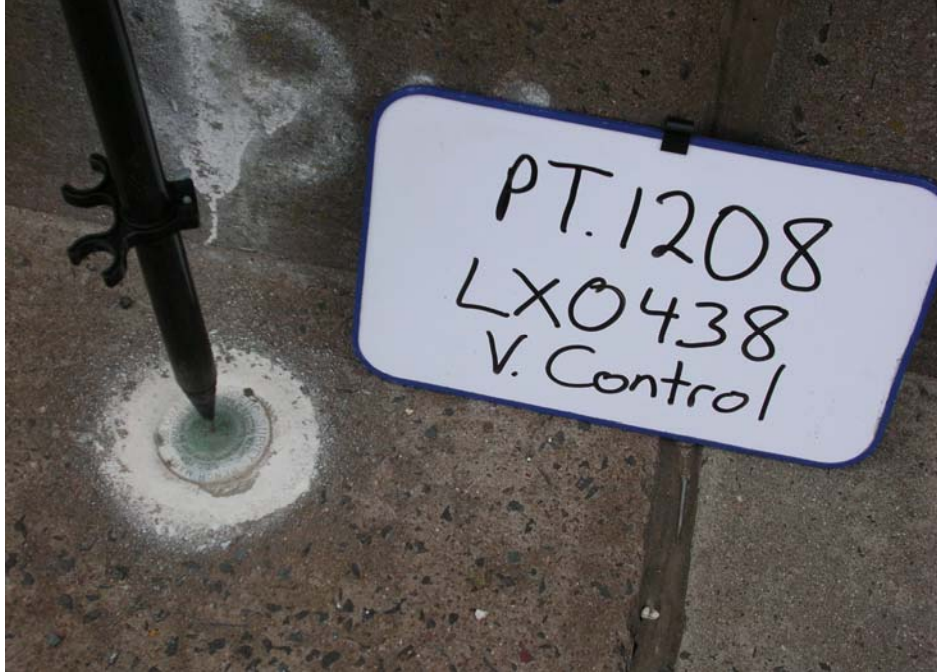


NO. 14

PT. 1207 - LOOKING NORTHEAST

4/13/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 12



NO. 15

PT. 1208 - VERTICAL CONTROL LX0438

4/13/07



NO. 16

PT. 1208 - LOOKING NORTH

4/13/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 12**



NO. 17

PT. 1215 - FOREST

4/13/07



NO. 18

PT. 1215 - LOOKING EAST

4/13/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 13



NO. 1

4/18/07

PT. 1300 - BASE STATION



NO. 2

4/18/07

PT. 1300 - BASE STATION - LOOKING NORTH

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 13**



NO. 3

PT. 1301 – MIXED VEGETATION

4/18/07



NO. 4

PT. 1301 - LOOKING NORTHWEST

4/18/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 13**



NO. 5

PT. 1302 - GRASS

4/18/07

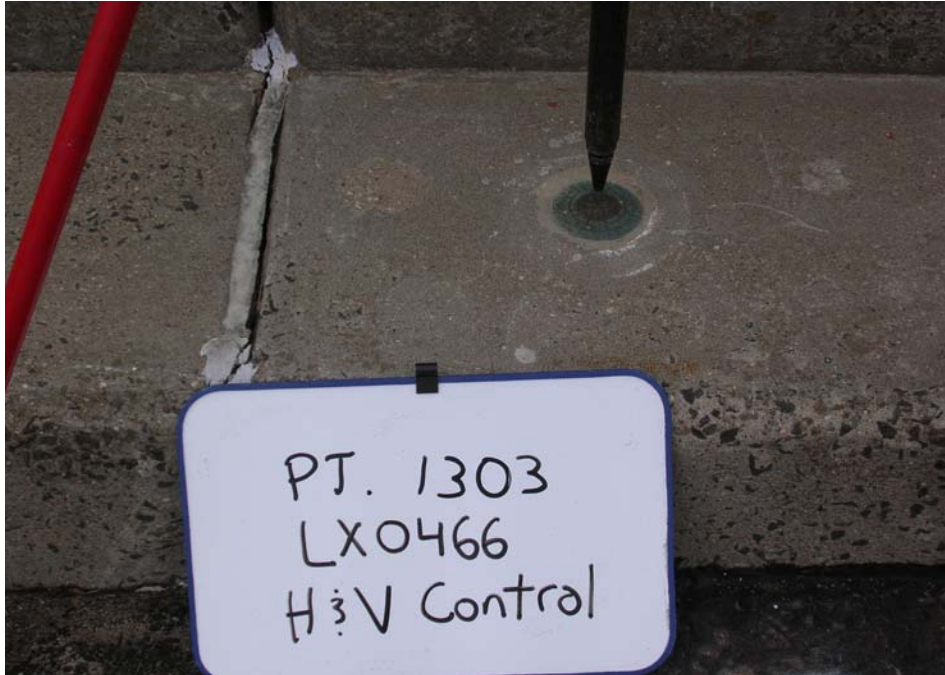


NO. 6

PT. 1302 - LOOKING WEST

4/18/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 13



NO. 7 4/18/07  
PT. 1303 – HORIZONTAL AND VERTICAL CONTROL LX0466



NO. 8 4/18/07  
PT. 1303 - LOOKING SOUTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 13



NO. 9

4/18/07

PT. 1304 - VERTICAL CONTROL LX0467



NO. 10

4/18/07

PT. 1304 - LOOKING EAST



FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 13



NO. 11

PT. 1305 - BITUMINOUS LOT

4/18/07



NO. 12

PT. 1305 - LOOKING SOUTHEAST

4/18/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 13



NO. 13

4/18/07

PT. 1306 - FOREST - CONVENTIONAL POINT NO. 1



NO. 14

4/18/07

PT. 1306 - LOOKING EAST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 13**



NO. 15

4/18/07

PT. 1307 - FOREST - CONVENTIONAL POINT NO. 2



NO. 16

4/18/07

PT. 1307 - LOOKING WEST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 13**



NO. 17

PT. 1317 - FOREST

4/18/07



NO. 18

PT. 1317 - LOOKING NORTH

4/18/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 14**



NO. 1

PT. 1400 - BASE STATION

4/18/07



NO. 2

PT. 1400 - BASE STATION - LOOKING SOUTHEAST

4/18/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 14



NO. 3

PT. 1401 - GRASS

4/18/07



NO. 4

PT. 1401 - LOOKING SOUTH

4/18/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 14**



NO. 5

PT. 1402 - MIXED VEGETATION

4/18/07



NO. 6

PT. 1402 - LOOKING NORTHEAST

4/18/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 14



NO. 7

4/18/07

PT. 1403 – BITUMINOUS LOT



NO. 8

4/18/07

PT. 1403 - LOOKING SOUTHEAST



**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 14**



NO. 9

4/18/07

PT. 1404 – FOREST – CONVENTIONAL POINT NO. 1



NO. 10

4/18/07

PT. 1404 - LOOKING SOUTH

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 14**



NO. 11

4/18/07

PT. 1405 - FOREST - CONVENTIONAL POINT NO. 2



NO. 12

4/18/07

PT. 1405 - LOOKING NORTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 14



NO. 13

4/18/07

PT. 1406 - VERTICAL AND HORIZONTAL CONTROL LX0466



NO. 14

4/18/07

PT. 1406 - LOOKING WEST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 14**



NO. 15

PT. 1408 - FOREST

4/18/07



NO. 16

PT. 1408 - LOOKING SOUTH

4/18/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 15



NO. 1

PT. 1500 - BASE STATION

4/19/07



NO. 2

PT. 1500 - BASE STATION - LOOKING NORTHWEST

4/19/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 15**



NO. 3

PT. 1501 - GRASS

4/19/07



NO. 4

PT. 1501 - LOOKING WEST

4/19/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 15



NO. 5

4/19/07

PT. 1502 - FOREST - CONVENTIONAL POINT NO. 1



NO. 6

4/19/07

PT. 1502 - LOOKING NORTHWEST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 15



NO. 7

4/19/07

PT. 1503 - FOREST - CONVENTIONAL POINT NO. 2



NO. 8

4/19/07

PT. 1503 - LOOKING SOUTH



**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 15**



NO. 9

PT. 1504 - MIXED VEGETATION

4/19/07



NO. 10

PT. 1504 - LOOKING NORTH

4/19/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 15



NO. 11

4/19/07

PT. 1505 - VERTICAL CONTROL LX0121



NO. 12

4/19/07

PT. 1505 - LOOKING EAST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 15**



NO. 13

PT. 1506 – BITUMINOUS LOT

4/19/07



NO. 14

PT. 1506 - LOOKING NORTHEAST

4/19/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 15



NO. 15

PT. 1507 - HORIZONTAL CONTROL LX5421

4/19/07



NO. 16

PT. 1507 - LOOKING SOUTHEAST

4/19/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 15**



NO. 17

PT. 1514 - FOREST

4/19/07



NO. 18

PT. 1514 - LOOKING SOUTH

4/19/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 16



NO. 1

PT. 1600 - BASE STATION

4/20/07



NO. 2

PT. 1600 - BASE STATION - LOOKING NORTH

4/20/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 16**



NO. 3

4/20/07

PT. 1601 – FOREST – CONVENTIONAL POINT NO. 1



NO. 4

4/20/07

PT. 1601 - LOOKING EAST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 16



NO. 5

4/20/07

PT. 1602 - FOREST - CONVENTIONAL POINT NO. 2



NO. 6

4/20/07

PT. 1602 - LOOKING EAST



FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 16



NO. 7

PT. 1603 - GRASS

4/20/07



NO. 8

PT. 1603 - LOOKING SOUTH

4/20/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 16



NO. 9

PT. 1604 – BITUMINOUS LOT

4/20/07



NO. 10

PT. 1604 - LOOKING SOUTHWEST

4/20/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 16**



NO. 11

4/20/07

PT. 1605 - VERTICAL CONTROL LX0146



NO. 12

4/20/07

PT. 1605 - LOOKING EAST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 16



NO. 13

4/20/07

PT. 1607 - HORIZONTAL CONTROL LX5416



NO. 14

4/20/07

PT. 1607 - LOOKING WEST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 16



NO. 15

PT. 1609 – MIXED VEGETATION

4/20/07



NO. 16

PT. 1609 – LOOKING SOUTHWEST

4/10/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 16**



NO. 17

PT. 1610 - FOREST

4/20/07



NO. 18

PT. 1610 - LOOKING SOUTHEAST

4/20/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 17



NO. 1

PT. 1700 - BASE STATION

4/20/07



NO. 2

PT. 1700 - BASE STATION - LOOKING WEST

4/20/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 17**



NO. 3

4/20/07

PT. 1700 - BASE STATION - LOOKING NORTH



**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 17**



NO. 4

PT. 1701 - GRASS

4/20/07



NO. 5

PT. 1701 - LOOKING WEST

4/20/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 17



NO. 6

4/20/07

PT. 1702 - HORIZONTAL CONTROL LX5210



NO. 7

4/20/07

PT. 1702 - LOOKING SOUTHWEST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 17**



NO. 8

PT. 1704 - MIXED VEGETATION

4/20/07



NO. 9

PT. 1704 - LOOKING NORTH

4/20/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 17



NO. 10

4/20/07

PT. 1705 - FOREST - CONVENTIONAL POINT NO. 1



NO. 11

4/20/07

PT. 1705 - LOOKING EAST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 17**



NO. 12

4/20/07

PT. 1706 - FOREST - CONVENTIONAL POINT NO. 2



NO. 13

4/20/07

PT. 1706 - LOOKING EAST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 17**



NO. 14

4/20/07

PT. 1707 - VERTICAL CONTROL LX3421



NO. 15

4/20/07

PT. 1007 - LOOKING SOUTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 17



NO. 16

PT. 1710 – BITUMINOUS LOT

4/20/07



NO. 17

PT. 1710 – LOOKING WEST

4/20/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 17**



NO. 18

PT. 1713 - FOREST

4/20/07



NO. 19

PT. 1713 - LOOKING EAST

4/20/07



**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 18**



NO. 1

PT. 1800 - BASE STATION

4/23/07



NO. 2

PT. 1800 - BASE STATION - LOOKING SOUTHEAST

4/23/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 18



NO. 3

4/23/07

PT. 1801 - VERTICAL CONTROL LX3397



NO. 4

4/23/07

PT. 1801 - VERTICAL CONTROL LX3397 - CLOSEUP

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 18**



NO. 5

PT. 1801 – LOOKING NORTHEAST

4/23/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 18



NO. 6

4/23/07

PT. 1802 – HORIZONTAL CONTROL LX7637



NO. 7

4/23/07

PT. 1802 – LOOKING NORTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 18



NO. 8

PT. 1804 – BITUMINOUS LOT

4/23/07



NO. 9

PT. 1804 – LOOKING SOUTH

4/23/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 18**



NO. 10

PT. 1805 – GRASS

4/23/07



NO. 11

PT. 1805 – LOOKING WEST

4/23/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 18**



NO. 12

PT. 1806 – MIXED VEGETATION

4/23/07



NO. 13

PT. 1806 – LOOKING EAST

4/23/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 18**



NO. 14

4/23/07

PT. 1807 – FOREST – CONVENTIONAL POINT NO. 1



NO. 15

4/23/07

PT. 1807 – LOOKING SOUTH



FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 18



NO. 16

4/23/07

PT. 1808 – FOREST – CONVENTIONAL POINT NO. 2  
(PT. 1807 MISLABELED ON BOARD)



NO. 17

4/23/07

PT. 1808 – LOOKING EAST  
(PT. 1807 MISLABELED ON BOARD)

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 18**



NO. 18

PT. 1809 – FOREST

4/23/07



NO. 19

PT. 1809 – LOOKING WEST

4/23/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 19



NO. 1

PT. 1900 - BASE STATION

4/24/07



NO. 2

PT. 1900 - BASE STATION - LOOKING SOUTHEAST

4/24/07

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 19**



NO. 3

PT. 1901 - GRASS

4/24/07



NO. 4

PT. 1901 - LOOKING SOUTH

4/24/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 19



NO. 5

4/24/07

PT. 1902 – BITUMINOUS LOT



NO. 6

4/24/07

PT. 1902 - LOOKING NORTHWEST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 19**



NO. 7

4/24/07

PT. 1903 - FOREST - CONVENTIONAL POINT NO. 1



NO. 8

4/24/07

PT. 1903 - LOOKING NORTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 19



NO. 9

4/24/07

PT. 1904 - FOREST - CONVENTIONAL POINT NO. 2



NO. 10

4/24/07

PT. 1904 - LOOKING SOUTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 19



NO. 11

PT. 1905 - MIXED VEGETATION

4/24/07



NO. 12

PT. 1905 - LOOKING SOUTHEAST

4/24/07



**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 19**



NO. 13

4/24/07

PT. 1906 - VERTICAL CONTROL LW0720



NO. 14

4/24/07

PT. 1906 - LOOKING SOUTHWEST

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 19



NO. 15

PT. 1908 - HORIZONTAL CONTROL LX3409

4/24/07



NO. 16

PT. 1908 - LOOKING WEST

4/24/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 19



NO. 17

PT. 1916 - FOREST

4/24/07



NO. 18

PT. 1916 - LOOKING SOUTHEAST

4/24/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 20



NO. 1

PT. 2000 - BASE STATION

4/24/07



NO. 2

PT. 2000 - BASE STATION - LOOKING SOUTH

4/24/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 20



NO. 3

PT. 2001 - MIXED VEGETATION

4/24/07



NO. 4

PT. 2001 - LOOKING NORTHEAST

4/24/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 20



NO. 5

4/24/07

PT. 2002 - FOREST - CONVENTIONAL POINT NO. 1



NO. 6

4/24/07

PT. 2002 - LOOKING SOUTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 20



NO. 7

4/24/07

PT. 2003 - FOREST - CONVENTIONAL POINT NO. 2



NO. 8

4/24/07

PT. 2003 - LOOKING NORTH

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 20



NO. 9

4/24/07

PT. 2004 - VERTICAL CONTROL LW0726



NO. 10

4/24/07

PT. 2004 - LOOKING SOUTHWEST



FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 20



NO. 11

4/24/07

PT. 2006 - HORIZONTAL CONTROL LW3405



NO. 12

4/24/07

PT. 2006 - LOOKING NORTHWEST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 20**



NO. 13

4/24/07

PT. 2008 – BITUMINOUS LOT



NO. 14

4/24/07

PT. 2008 - LOOKING SOUTHEAST

**FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 20**



NO. 15

PT. 2009 - GRASS

4/24/07



NO. 16

PT. 2009 - LOOKING EAST

4/24/07

FEDERAL EMERGENCY MANAGEMENT AGENCY - REGION 1  
CONNECTICUT COASTAL LIDAR CHECK POINT SURVEY (TASK 9)  
CLUSTER 20



NO. 17

PT. 2010 - FOREST

4/24/07



NO. 18

PT. 2010 - LOOKING EAST

4/24/07