

OPUS solution : 033845_14_251_A0.14O OP1410292646922

opus <opus@ngs.noaa.gov>

Tue 9/9/2014 2:00 PM

To:John Freetly <John.Freetly@neciusa.com>;

FILE: 033845_14_251_A0.14O OP1410292646922

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.

For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: john.freetly@neciusa.com

DATE: September 09, 2014

RINEX FILE: 0338251r.14o

TIME: 20:00:37 UTC

SOFTWARE: page5 1209.04 master93.pl 022814 START: 2014/09/08 17:55:00

EPHEMERIS: igr18091.eph [rapid]

STOP: 2014/09/08 23:22:00

NAV FILE: brdc2510.14n

OBS USED: 11868 / 12653 : 94%

ANT NAME: CHCX90D-OPUS NONE

FIXED AMB: 72 / 77 : 94%

ARP HEIGHT: 2.000

OVERALL RMS: 0.015(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000)

IGS08 (EPOCH:2014.6873)

X: -1410727.179(m) 0.008(m) -1410728.040(m) 0.008(m)

Y: -4258938.789(m) 0.021(m) -4258937.540(m) 0.021(m)

Z: 4520034.935(m) 0.012(m) 4520034.896(m) 0.012(m)

LAT: 45 24 20.47654 0.009(m) 45 24 20.49675 0.009(m)

E LON: 251 40 23.19258 0.002(m) 251 40 23.13695 0.002(m)

W LON: 108 19 36.80742 0.002(m) 108 19 36.86305 0.002(m)

EL HGT: 1290.194(m) 0.024(m) 1289.524(m) 0.024(m)

ORTHO HGT: 1302.625(m) 0.042(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 12) SPC (2500 MT)

Northing (Y) [meters] 5031494.943 129133.283

Easting (X) [meters] 709188.860 691817.308

Convergence [degrees] 1.90419730 0.85813420

Point Scale 1.00013806 0.99978071

Combined Factor 0.99993580 0.99957852

US NATIONAL GRID DESIGNATOR: 12TYR0918831494(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DL7758	P722 YNPBASSRCHMT2005	CORS ARP N452725.985	W1093415.586	97542.2
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	43471.9
DL7728	P051 BILLINGSAPMT2005	CORS ARP N454823.741	W1083246.070	47737.1

NEAREST NGS PUBLISHED CONTROL POINT

QW0678	22 DHW	N452420.	W1081934.	62.7
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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.