

OPUS solution : 033845_14_258_A1.14O OP1410891799944

opus <opus@ngs.noaa.gov>

Tue 9/16/2014 12:26 PM

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

FILE: 033845_14_258_A1.14O OP1410891799944

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 16, 2014
 RINEX FILE: 0338258r.14o TIME: 18:26:09 UTC

SOFTWARE: page5 1209.04 master90.pl 022814 START: 2014/09/15 17:59:00
 EPHEMERIS: igr18101.eph [rapid] STOP: 2014/09/15 20:35:00
 NAV FILE: brdc2580.14n OBS USED: 2186 / 5021 : 44%
 ANT NAME: CHCX90D-OPUS NONE # FIXED AMB: 41 / 51 : 80%
 ARP HEIGHT: 1.804 OVERALL RMS: 0.030(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.7063)

X: -1302538.569(m) 0.242(m) -1302539.432(m) 0.242(m)
 Y: -4241106.752(m) 0.590(m) -4241105.504(m) 0.590(m)
 Z: 4568189.414(m) 0.401(m) 4568189.379(m) 0.401(m)

LAT: 46 1 45.79217 0.107(m) 46 1 45.81328 0.107(m)
 E LON: 252 55 37.59217 0.340(m) 252 55 37.53678 0.340(m)
 W LON: 107 4 22.40783 0.340(m) 107 4 22.46322 0.340(m)
 EL HGT: 935.753(m) 0.627(m) 935.075(m) 0.627(m)
 ORTHO HGT: 950.641(m) 1.062(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters] 5099401.534 200652.789
 Easting (X) [meters] 339577.452 787795.521
 Convergence [degrees] -1.49216825 1.77544039
 Point Scale 0.99991638 0.99953846
 Combined Factor 0.99976972 0.99939185

US NATIONAL GRID DESIGNATOR: 13TCL3957799401(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DL7728	P051 BILLINGSAPMT2005	CORS ARP N454823.741	W1083246.070	116957.4
DM7161	WYSH SHERIDAN	CORS ARP N444801.769	W1070035.715	136688.9
DI3425	P052 LRRNCHJRDNMT2006	CORS ARP N472229.026	W1070107.185	149630.2

NEAREST NGS PUBLISHED CONTROL POINT

RU0566	BEAR	N460507.648	W1065827.103	9853.3
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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.