

OPUS solution : 018773_14_251_A1.14O OP1412284951410

opus <opus@ngs.noaa.gov>

Thu 10/2/2014 3:26 PM

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

FILE: 018773_14_251_A1.14O OP1412284951410

NGS OPUS SOLUTION REPORT

=====

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: October 02, 2014
 RINEX FILE: 0187251t.14o TIME: 21:26:41 UTC

SOFTWARE: page5 1209.04 master50.pl 022814 START: 2014/09/08 19:17:00
 EPHEMERIS: igs18091.eph [precise] STOP: 2014/09/08 23:41:00
 NAV FILE: brdc2510.14n OBS USED: 8926 / 9717 : 92%
 ANT NAME: CHCX90D-OPUS NONE # FIXED AMB: 58 / 62 : 94%
 ARP HEIGHT: 1.8000 OVERALL RMS: 0.016(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.6874)

X: -1366763.481(m) 0.007(m) -1366764.339(m) 0.007(m)
 Y: -4306815.449(m) 0.009(m) -4306814.193(m) 0.009(m)
 Z: 4488342.745(m) 0.014(m) 4488342.701(m) 0.014(m)

LAT: 45 0 2.30764 0.013(m) 45 0 2.32811 0.013(m)
 E LON: 252 23 35.58328 0.009(m) 252 23 35.52860 0.009(m)
 W LON: 107 36 24.41672 0.009(m) 107 36 24.47140 0.009(m)
 EL HGT: 1334.952(m) 0.006(m) 1334.258(m) 0.006(m)
 ORTHO HGT: 1346.425(m) 0.021(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (4902 WYEC)

Northing (Y) [meters] 4986327.613 599971.994
 Easting (X) [meters] 294547.866 378440.992
 Convergence [degrees] -1.84393664 -0.19336061
 Point Scale 1.00011906 0.99994321
 Combined Factor 0.99990978 0.99973396

US NATIONAL GRID DESIGNATOR: 13TBK9454786327(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	52136.0
DL7728	P051 BILLINGSAPMT2005 CORS ARP	N454823.741	W1083246.070	115915.1
DI3062	BIL5 BILLINGS 5 CORS ARP	N455816.237	W1075947.298	112104.8

NEAREST NGS PUBLISHED CONTROL POINT

PW0551	PASS	N445744.926	W1073140.265	7528.1
--------	------	-------------	--------------	--------

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.