

OPUS-RS solution : 018773_14_251_A0.14O OP1410734854146

opus <opus@ngs.noaa.gov>

Sun 9/14/2014 4:51 PM

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

FILE: 018773_14_251_A0.14O OP1410734854146

NGS OPUS-RS SOLUTION REPORT

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All computed coordinate accuracies are listed as 1-sigma RMS values.

For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>USER: john.freetly@neciusa.com
RINEX FILE: 0187251q.14oDATE: September 14, 2014
TIME: 22:51:18 UTCSOFTWARE: rsgps 1.37 RS93.prl 1.99.2 START: 2014/09/08 16:18:15
EPHEMERIS: igr18091.eph [rapid] STOP: 2014/09/08 18:07:45
NAV FILE: brdc2510.14n OBS USED: 3872 / 5372 : 72%
ANT NAME: CHCX90D-OPUS NONE QUALITY IND. 17.72/ 46.67
ARP HEIGHT: 1.8000 NORMALIZED RMS: 0.345

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.68690)

X: -1365905.105(m) 0.008(m) -1365905.963(m) 0.008(m)
Y: -4305975.192(m) 0.028(m) -4305973.937(m) 0.028(m)
Z: 4489345.753(m) 0.020(m) 4489345.709(m) 0.020(m)LAT: 45 0 49.56479 0.007(m) 45 0 49.58524 0.007(m)
E LON: 252 24 1.33551 0.006(m) 252 24 1.28084 0.006(m)
W LON: 107 35 58.66449 0.006(m) 107 35 58.71916 0.006(m)
EL HGT: 1294.480(m) 0.034(m) 1293.787(m) 0.034(m)
ORTHO HGT: 1306.123(m) 0.035(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters] 4987767.732 86711.612
Easting (X) [meters] 295158.481 749786.418
Convergence [degrees] -1.83929404 1.39012936
Point Scale 1.00011598 0.99999176
Combined Factor 0.99991304 0.99978885

US NATIONAL GRID DESIGNATOR: 13TBK9515887767(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	52265.9
DI3062	BIL5 BILLINGS 5 CORS ARP	N455816.237	W1075947.298	110855.1
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	113028.5
DL7758	P722 YNPBASSRCHMT2005 CORS ARP	N452725.985	W1093415.586	162479.4

NEAREST NGS PUBLISHED CONTROL POINT

QV0344	LH 52	N450419.736	W1073520.458	6552.3
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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.