

OPUS-RS solution : 033845_14_260_A1.14O OP1411139856008

opus <opus@ngs.noaa.gov>

Fri 9/19/2014 9:25 AM

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

FILE: 033845_14_260_A1.14O OP1411139856008

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: 0338260w.14oDATE: September 19, 2014
TIME: 15:24:21 UTCSOFTWARE: rsgps 1.37 RS92.prl 1.99.2 START: 2014/09/17 22:59:00
EPHEMERIS: igr18103.eph [rapid] STOP: 2014/09/18 00:36:15
NAV FILE: brdc2600.14n OBS USED: 4080 / 4552 : 90%
ANT NAME: CHCX90D-OPUS NONE QUALITY IND. 8.76/ 37.85
ARP HEIGHT: 1.8000 NORMALIZED RMS: 0.349

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.71230)

X: -1321903.557(m) 0.004(m) -1321904.420(m) 0.004(m)
Y: -4241155.222(m) 0.010(m) -4241153.974(m) 0.010(m)
Z: 4562561.989(m) 0.012(m) 4562561.954(m) 0.012(m)LAT: 45 57 24.78445 0.003(m) 45 57 24.80542 0.003(m)
E LON: 252 41 18.73687 0.003(m) 252 41 18.68138 0.003(m)
W LON: 107 18 41.26313 0.003(m) 107 18 41.31862 0.003(m)
EL HGT: 896.987(m) 0.016(m) 896.312(m) 0.016(m)
ORTHO HGT: 911.887(m) 0.018(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters] 5091854.923 192056.967
Easting (X) [meters] 320880.742 769566.403
Convergence [degrees] -1.66195782 1.60092476
Point Scale 0.99999443 0.99956068
Combined Factor 0.99985383 0.99942014

US NATIONAL GRID DESIGNATOR: 13TCL2088091854(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	130692.3
DI3064	BIL6 BILLINGS 6 CORS ARP	N455816.251	W1075948.499	53154.2
DL7758	P722 YNPBASSRCHMT2005 CORS ARP	N452725.985	W1093415.586	184529.3
DM7133	MTLW LEWISTOWN CORS ARP	N470314.929	W1092633.764	204064.6

NEAREST NGS PUBLISHED CONTROL POINT

RU0594	AGATE	N460027.890	W1071437.488	7713.3
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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.