

OPUS-RS solution : 401289227U.14O OP1408556584143

opus <opus@ngs.noaa.gov>

Wed 8/20/2014 11:49 AM

To:Chad Mozol <Chad.Mozol@neciusa.com>;

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NGS OPUS-RS SOLUTION REPORT =====

All computed coordinate accuracies are listed as 1-sigma RMS values.
For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: cmozol@neciusa.com DATE: August 20, 2014
RINEX FILE: 4012227u.14o TIME: 17:48:46 UTC

SOFTWARE: rsgps 1.37 RS91.prl 1.99.2 START: 2014/08/15 20:05:25
EPHEMERIS: igr18055.eph [rapid] STOP: 2014/08/15 21:03:15
NAV FILE: brdc2270.14n OBS USED: 3204 / 4008 : 80%
ANT NAME: CHCX91R NONE QUALITY IND. 4.64/ 23.81
ARP HEIGHT: 1.8 NORMALIZED RMS: 0.372

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.62153)

X: -1377582.221(m) 0.012(m) -1377583.096(m) 0.012(m)
Y: -4036830.975(m) 0.020(m) -4036829.751(m) 0.020(m)
Z: 4727392.018(m) 0.030(m) 4727392.009(m) 0.030(m)

LAT: 48 7 55.71313 0.006(m) 48 7 55.73404 0.006(m)
E LON: 251 9 27.42956 0.008(m) 251 9 27.37040 0.008(m)
W LON: 108 50 32.57044 0.008(m) 108 50 32.62960 0.008(m)
EL HGT: 935.506(m) 0.036(m) 934.914(m) 0.036(m)
ORTHO HGT: 951.023(m) 0.037(m) [NAVD88 (Computed using GEOID12A)]

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 12)	SPC (2500 MT)
Northing (Y) [meters]	5333238.914	431588.023
Easting (X) [meters]	660533.152	648928.691
Convergence [degrees]	1.60709047	0.48105130
Point Scale	0.99991666	0.99958421
Combined Factor	0.99977007	0.99943767

US NATIONAL GRID DESIGNATOR: 12UXU6053333238(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DG9749	MTMS MONTANA STATE UNI	CORS ARP	N483227.426 W1094111.858	77366.5
DL7731	P053 WHITEWATERMT2007	CORS ARP	N484333.865 W1074331.456	105816.5
DM7133	MTLW LEWISTOWN	CORS ARP	N470314.929 W1092633.764	128095.5
DI3425	P052 LRRNCHJRDNMT2006	CORS ARP	N472229.026 W1070107.185	160605.9
DI2257	P049 ARMINGTON_MT2006	CORS ARP	N472059.850 W1105422.382	177557.5
DI3422	P050 WICKUMRNCHMT2006	CORS ARP	N484834.096 W1111454.296	193212.7

NEAREST NGS PUBLISHED CONTROL POINT

Information on nearest mark is not available due to database connectivity issues or has restrictions on when or how it can be published.

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.