

## OPUS solution : 018773\_14\_252\_A1.14O OP1410739438728

opus &lt;opus@ngs.noaa.gov&gt;

Sun 9/14/2014 6:07 PM

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## 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  
RINEX FILE: 0187252q.14oDATE: September 15, 2014  
TIME: 00:06:59 UTCSOFTWARE: page5 1209.04 master90.pl 022814    START: 2014/09/09 16:52:00  
EPHEMERIS: igr18092.eph [rapid]            STOP: 2014/09/09 21:34:00  
NAV FILE: brdc2520.14n                    OBS USED: 10519 / 11383 : 92%  
ANT NAME: CHCX90D-OPUS    NONE            # FIXED AMB: 47 / 54 : 87%  
ARP HEIGHT: 1.8000                        OVERALL RMS: 0.013(m)

REF FRAME: NAD\_83(2011)(EPOCH:2010.0000)            IGS08 (EPOCH:2014.6899)

X: -1357104.105(m) 0.003(m)    -1357104.963(m) 0.003(m)  
Y: -4305148.571(m) 0.009(m)    -4305147.316(m) 0.009(m)  
Z: 4492702.994(m) 0.002(m)    4492702.950(m) 0.002(m)LAT: 45 3 25.27044 0.006(m)    45 3 25.29096 0.006(m)  
E LON: 252 30 13.24935 0.000(m)    252 30 13.19472 0.000(m)  
W LON: 107 29 46.75065 0.000(m)    107 29 46.80528 0.000(m)  
EL HGT: 1237.733(m) 0.008(m)    1237.038(m) 0.008(m)  
ORTHO HGT: 1250.275(m) 0.017(m) [NAVD88 (Computed using GEOID12A)]

## UTM COORDINATES    STATE PLANE COORDINATES

UTM (Zone 13)            SPC (2500 MT )

Northing (Y) [meters]    4992316.252            91719.524  
Easting (X) [meters]    303447.107            757804.545  
Convergence [degrees]    -1.76748396            1.46570062  
Point Scale            1.00007506            0.99996626  
Combined Factor            0.99988102            0.99977225

US NATIONAL GRID DESIGNATOR: 13TCK0344792316(NAD 83)

## BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	47833.2
DL7728	P051 BILLINGSAPMT2005 CORS ARP	N454823.741	W1083246.070	117017.1
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	115515.2

## NEAREST NGS PUBLISHED CONTROL POINT

QV0323	POWER	N450320.820	W1072550.446	5163.6
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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.