

OPUS solution : 018506_14_269_A0.14O OP1412003594681

opus <opus@ngs.noaa.gov>

Mon 9/29/2014 9:17 AM

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

FILE: 018506_14_269_A0.14O OP1412003594681

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

DATE: September 29, 2014

RINEX FILE: 0185269q.14o

TIME: 15:16:25 UTC

SOFTWARE: page5 1209.04 master91.pl 022814 START: 2014/09/26 16:37:00

EPHEMERIS: igr18115.eph [rapid] STOP: 2014/09/26 20:21:00

NAV FILE: brdc2690.14n OBS USED: 8148 / 8825 : 92%

ANT NAME: CHCX90D-OPUS NONE # FIXED AMB: 44 / 55 : 80%

ARP HEIGHT: 1.8000 OVERALL RMS: 0.014(m)

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

IGS08 (EPOCH:2014.7364)

X: -1414856.011(m) 0.014(m) -1414856.872(m) 0.014(m)

Y: -4269045.281(m) 0.025(m) -4269044.031(m) 0.025(m)

Z: 4509877.141(m) 0.012(m) 4509877.101(m) 0.012(m)

LAT: 45 16 18.35714 0.015(m) 45 16 18.37730 0.015(m)

E LON: 251 39 49.18302 0.012(m) 251 39 49.12750 0.012(m)

W LON: 108 20 10.81698 0.012(m) 108 20 10.87250 0.012(m)

EL HGT: 1721.489(m) 0.023(m) 1720.816(m) 0.023(m)

ORTHO HGT: 1733.205(m) 0.040(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 12) SPC (2500 MT)

Northing (Y) [meters] 5016592.651 114242.785

Easting (X) [meters] 708941.886 691299.029

Convergence [degrees] 1.89308813 0.85122361

Point Scale 1.00013681 0.99984774

Combined Factor 0.99986695 0.99957796

US NATIONAL GRID DESIGNATOR: 12TYR0894116592(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	116930.4
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	56655.0
DI3064	BIL6 BILLINGS 6 CORS ARP	N455816.251	W1075948.499	82142.4

NEAREST NGS PUBLISHED CONTROL POINT

QW0533	ICE	N451006.165	W1082006.454	11509.3
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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.