

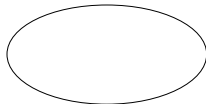
GPS Calibration Report

Project : p34140

TIP Number	p34140	Date & Time	8:39:12 AM 1/31/2013
User name	asmith	Zone	North Carolina 3200
Coordinate System	US State Plane 1983(at ground)	Geoid Model	Geoid03 (Conus) NC Sub Grid
Horizontal Datum	NAD 1983 (Conus)		
Vertical Datum	NAVD 88		
Coordinate Units	US survey feet		
Distance Units	US survey feet		
Height Units	US survey feet		

LOCAL SITE INFORMATION

Localized around	P34140-4
Latitude	36°04'53.25550"N
Longitude	79°23'10.40386"W
Site Scale Factor	1.0000456000
Height	488.086sft



The North Carolina Department of Transportation uses a **Localized Coordinate System**

which is very similar to North Carolina Zone 3200 from which it is derived.

Please take care in utilizing these coordinates to eliminate confusion of the two systems.

This file is to aid in the use of Real Time Kinematic (RTK) GPS during construction layout.

Datum Transformation Parameters

Datum Transformation computation not requested

Updated Default Projection (Transverse Mercator) Definition

Updated default projection not requested

Horizontal Adjustment Parameters

Northing coordinate of rotation center	849537.536sft
Easting coordinate of rotation center	1885553.668sft
Rotation about the center point	0°00'00"
Translation north	0.014sft
Translation east	-0.013sft
Scale factor	1.00000040

Vertical Adjustment Parameters

Northing coordinate of origin point	848492.301sft
Easting coordinate of origin point	1879482.427sft
Vertical separation at origin	0.203sft
Slope north	-11.040ppm
Slope east	2.116ppm

Geoid Model Definition

Geoid03 (Conus) NC Sub Grid

Residual Differences Between GPS (WGS84) And Local Coordinates

Summary

	Maximum error	Root Mean Square error	Point
Horizontal	0.004sft	0.001	P3414O-3 GPS
Vertical	0.019sft	0.003	p3414o-5 GPS
Three-dimensional	0.019sft	0.003	p3414o-5 GPS

Point Residuals

WGS84 Coordinates		Calculated point FOR DISPLAY ONLY		Local Coordinates	
Point	P34140-1_GPS	Northing	848492.301sft	Point	P34140-1
Latitude	36°04'50.21626"N	Easting	1879482.427sft	Northing	848492.300sft
Longitude	79°24'28.21536"W	Elevation	648.224sft	Easting	1879482.427sft
Height	548.925sft	Horz error	0.001sft	Elevation	648.222sft
		Vert error	0.002sft	Utilized	Horz and Vert
		3D error	0.002sft	Quality	Adjusted quality
Point	P34140-2_GPS	Northing	849208.087sft	Point	P34140-2
Latitude	36°04'57.28921"N	Easting	1879354.948sft	Northing	849208.084sft
Longitude	79°24'29.80418"W	Elevation	653.708sft	Easting	1879354.948sft
Height	554.408sft	Horz error	0.003sft	Elevation	653.709sft
		Vert error	0.001sft	Utilized	Horz and Vert
		3D error	0.003sft	Quality	Adjusted quality
Point	P34140-3_GPS	Northing	847725.817sft	Point	P34140-3
Latitude	36°04'42.89301"N	Easting	1885962.031sft	Northing	847725.821sft
Longitude	79°23'09.24499"W	Elevation	609.799sft	Easting	1885962.030sft
Height	510.473sft	Horz error	0.004sft	Elevation	609.796sft
		Vert error	0.003sft	Utilized	Horz and Vert
		3D error	0.005sft	Quality	Adjusted quality
Point	P34140-4_GPS	Northing	848774.074sft	Point	P34140-4
Latitude	36°04'53.25534"N	Easting	1885870.992sft	Northing	848774.076sft
Longitude	79°23'10.40369"W	Elevation	587.407sft	Easting	1885870.991sft
Height	488.084sft	Horz error	0.002sft	Elevation	587.410sft
		Vert error	0.003sft	Utilized	Horz and Vert
		3D error	0.004sft	Quality	Adjusted quality
Point	p34140-5_GPS	Northing	851338.988sft	Point	p34140-5
Latitude	36°05'18.81047"N	Easting	1890964.634sft	Northing	851338.988sft
Longitude	79°22'08.46880"W	Elevation	505.425sft	Easting	1890964.635sft
Height	406.076sft	Horz error	0.001sft	Elevation	505.445sft
		Vert error	0.019sft	Utilized	Horz and Vert
		3D error	0.019sft	Quality	Adjusted quality
Point	p34140-6_GPS	Northing	851686.030sft	Point	p34140-6
Latitude	36°05'22.26871"N	Easting	1891686.899sft	Northing	851686.026sft

Longitude	79°21'59.68497"W	Elevation	534.233sft	Easting	1891686.901sft
Height	434.880sft	Horz error	0.004sft	Elevation	534.215sft
		Vert error	0.018sft	Utilized	Horz and Vert
		3D error	0.019sft	Quality	Adjusted quality