

GPS Calibration Report

Project : U3302

TIP Number	U-3302	Date & Time	2:46:32 PM 6/30/03
User name	jgordon	Zone	North Carolina 3200
Coordinate System	Site	Geoid Model	GEOID99 (Conus)
Horizontal Datum	NAD 1983 (Conus)		
Vertical Datum			
Coordinate Units	US survey feet		
Distance Units	US survey feet		
Height Units	US survey feet		

LOCAL SITE INFORMATION

Localized around

Latitude	N/A
Longitude	N/A
Site Scale Factor	N/A

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	699692.160sft
Easting coordinate of rotation center	929284.467sft
Rotation about the center point	0°00'00"
Translation north	1.514sft
Translation east	-3.015sft
Scale factor	1.00020201

Vertical Adjustment Parameters

Northing coordinate of origin point	761739.340sft
Easting coordinate of origin point	950744.983sft
Vertical separation at origin	0.064sft
Slope north	5.856ppm
Slope east	-6.772ppm

Geoid Model Definition

GEOID99 (Conus)

Residual Differences Between GPS (WGS84) And Local Coordinates

Summary

	Maximum error	Root Mean Square error	Point
Horizontal	0.011sft	0.002	K 138 WGS84
Vertical	0.329sft	0.050	MONTFORD WGS84
Three-dimensional	0.329sft	0.050	MONTFORD WGS84

Point Residuals

WGS84 Coordinates		Calculated point FOR DISPLAY ONLY		Local Coordinates	
Point	K 138 WGS84	Northing	761739.340sft	Point	K 138 Local
Latitude	35°47'29.58515"N	Easting	950744.983sft	Northing	761739.331sft
Longitude	82°32'19.65981"W	Elevation	1977.845sft	Easting	950744.977sft
Height	1878.713sft	Horz error	0.011sft	Elevation	1977.926sft
		Vert error	0.081sft	Utilized	Horz and Vert
		3D error	0.082sft	Quality	Survey quality
Point	PLEMMONS WGS84	Northing	702912.202sft	Point	PLEMMONS Local
Latitude	35°37'29.91986"N	Easting	899885.478sft	Northing	702912.213sft
Longitude	82°42'09.86717"W	Elevation	2208.756sft	Easting	899885.479sft
Height	2111.088sft	Horz error	0.011sft	Elevation	2208.631sft
		Vert error	0.125sft	Utilized	Horz and Vert

	3D error	0.125sft	Quality	Survey quality
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Point	27EG1 WGS84
Latitude	35°29'55.04183"N
Longitude	82°43'58.11475"W
Height	2208.795sft

Northing	657280.584sft
Easting	889225.000sft
Elevation	2305.290sft
Horz error	0.008sft
Vert error	0.132sft
3D error	0.133sft

Point	27EG1 Local
Northing	657280.578sft
Easting	889224.994sft
Elevation	2305.422sft
Utilized	Horz and Vert
Quality	Survey quality

Point	BASE WGS84
Latitude	35°35'58.01135"N
Longitude	82°32'46.31828"W
Height	2167.515sft

Northing	691925.444sft
Easting	946052.039sft
Elevation	2265.576sft
Horz error	0.005sft
Vert error	0.171sft
3D error	0.171sft

Point	BASE Local
Northing	691925.446sft
Easting	946052.044sft
Elevation	2265.747sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3302-1 WGS84
Latitude	35°35'59.18026"N
Longitude	82°32'52.57463"W
Height	2081.846sft

Northing	692062.033sft
Easting	945539.874sft
Elevation	2179.907sft
Horz error	0.005sft
Vert error	0.109sft
3D error	0.109sft

Point	U3302-1 Local
Northing	692062.035sft
Easting	945539.878sft
Elevation	2180.016sft
Utilized	Horz and Vert
Quality	Survey quality

Point	U3302-2 WGS84
Latitude	35°36'00.50401"N
Longitude	82°33'08.36524"W
Height	2062.647sft

Northing	692242.441sft
Easting	944241.337sft
Elevation	2160.705sft
Horz error	0.003sft
Vert error	0.040sft
3D error	0.040sft

Point	U3302-2 Local
Northing	692242.441sft
Easting	944241.340sft
Elevation	2160.665sft
Utilized	Horz and Vert
Quality	Survey quality

Point	MONTFORD WGS84
Latitude	35°35'48.56383"N
Longitude	82°33'35.52073"W
Height	2115.957sft

Northing	691116.100sft
Easting	941956.700sft
Elevation	2214.003sft
Horz error	?
Vert error	0.329sft
3D error	0.329sft

Point	MONTFORD Local
Northing	691116.101sft
Easting	941956.704sft
Elevation	2213.674sft
Utilized	Vertical
Quality	Survey quality