

GPS Calibration Report

Project : B3710

TIP Number	B-3710	Date & Time	8:13:46 AM 9/5/03
User name	rgmiller	Zone	North Carolina 3200
Coordinate System	US State Plane 1983	Geoid Model	Geoid99 NC Sub Grid
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	924213.372sft
Easting coordinate of rotation center	1174755.647sft
Rotation about the center point	-0°00'01"
Translation north	0.167sft
Translation east	-0.263sft
Scale factor	1.00009435

Vertical Adjustment Parameters

Northing coordinate of origin point	907312.193sft
Easting coordinate of origin point	1137188.054sft
Vertical separation at origin	-0.396sft
Slope north	-0.992ppm
Slope east	9.967ppm

Geoid Model Definition

Geoid99 NC Sub Grid

Residual Differences Between GPS (WGS84) And Local Coordinates

Summary

	Maximum error	Root Mean Square error	Point
Horizontal	0.035sft	0.007	Silverstone - WG
Vertical	0.034sft	0.005	Silverstone - WG
Three-dimensional	0.049sft	0.009	Silverstone - WG

Point Residuals

WGS84 Coordinates		Calculated point FOR DISPLAY ONLY		Local Coordinates	
Point	Page - WGS84	Northing	907312.193sft	Point	Page - Local
Latitude	36°12'28.64169"N	Easting	1137188.054sft	Northing	907312.183sft
Longitude	81°55'29.39080"W	Elevation	4323.988sft	Easting	1137188.054sft
Height	4222.990sft	Horz error	0.010sft	Elevation	4323.981sft
		Vert error	0.007sft	Utilized	Horz and Vert
		3D error	0.012sft	Quality	Survey quality
Point	K 123 - WGS84	Northing	935418.943sft	Point	K 123 - Local
Latitude	36°17'19.24816"N	Easting	1182355.057sft	Northing	935418.923sft
Longitude	81°46'28.11713"W	Elevation	2766.948sft	Easting	1182355.045sft
Height	2665.228sft	Horz error	0.023sft	Elevation	2766.973sft
		Vert error	0.025sft	Utilized	Horz and Vert

3D error	0.034sft
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Quality	Survey quality
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Point	Silverstone - WG
Latitude	36°17'18.11814"N
Longitude	81°44'49.33147"W
Height	2976.028sft

Northing	935079.825sft
Easting	1190437.358sft
Elevation	3077.751sft
Horz error	0.035sft
Vert error	0.034sft
3D error	0.049sft

Point	Silverstone - Lo
Northing	935079.812sft
Easting	1190437.390sft
Elevation	3077.717sft
Utilized	Horz and Vert
Quality	Survey quality

Point	Willowdale - WGS
Latitude	36°15'16.55420"N
Longitude	81°46'15.38580"W
Height	2637.711sft

Northing	922985.532sft
Easting	1183050.835sft
Elevation	2739.554sft
Horz error	0.025sft
Vert error	0.005sft
3D error	0.025sft

Point	Willowdale - Loc
Northing	922985.552sft
Easting	1183050.821sft
Elevation	2739.559sft
Utilized	Horz and Vert
Quality	Survey quality

Point	B3710-2 - WGS84
Latitude	36°15'12.12800"N
Longitude	81°47'21.13565"W
Height	2570.546sft

Northing	922688.832sft
Easting	1177654.479sft
Elevation	2672.336sft
Horz error	0.008sft
Vert error	0.008sft
3D error	0.011sft

Point	B3710-2 - Local
Northing	922688.840sft
Easting	1177654.480sft
Elevation	2672.344sft
Utilized	Horz and Vert
Quality	Survey quality

Point	B3710-1 - WGS84
Latitude	36°15'03.35605"N
Longitude	81°47'18.48613"W
Height	2591.061sft

Northing	921795.909sft
Easting	1177846.520sft
Elevation	2692.859sft
Horz error	0.016sft
Vert error	0.004sft
3D error	0.016sft

Point	B3710-1 - Local
Northing	921795.923sft
Easting	1177846.513sft
Elevation	2692.863sft
Utilized	Horz and Vert
Quality	Survey quality