

GPS Calibration Report

Project : R2245c

TIP Number	R-2245	Date & Time	10:22:54 AM 7/12/2006
User name	jneal	Zone	North Carolina 3200
Coordinate System	US State Plane 1983	Geoid Model	GEOID99 (Conus)
Horizontal Datum	calibration		
Vertical Datum	NVGD 29		
Coordinate Units	US survey feet		
Distance Units	US survey feet		
Height Units	US survey feet		

LOCAL SITE INFORMATION

Localized around	R2245-A7
Latitude	33°55'43.12505"N
Longitude	78°09'33.47364"W
Site Scale Factor	N/A
Height	38.2719sft

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	75325.2296sft
Easting coordinate of rotation center	2258713.6073sft
Rotation about the center point	0°00'01"
Translation north	-0.0001sft
Translation east	0.0000sft
Scale factor	0.99987285

Vertical Adjustment Parameters

Northing coordinate of origin point	92714.3020sft
Easting coordinate of origin point	2258413.8734sft
Vertical separation at origin	-0.0376sft
Slope north	-5.823ppm
Slope east	7.449ppm

Geoid Model Definition

GEOID99 (Conus)

Residual Differences Between GPS (WGS84) And Local Coordinates

Summary			
	Maximum error	Root Mean Square error	Point
Horizontal	0.0438sft	0.007	SOUTHPORT W_wgs
Vertical	0.0558sft	0.009	ROAD_WGS84
Three-dimensional	0.0662sft	0.012	SOUTHPORT W_wgs

Point Residuals

WGS84 Coordinates		Calculated point FOR DISPLAY ONLY		Local Coordinates	
Point	LEROY_WGS84	Northing	92714.3020sft	Point	LEROY_Local
Latitude	34°00'06.09572"N	Easting	2258413.8734sft	Northing	92714.2870sft
Longitude	78°08'50.96846"W	Elevation	35.4939sft	Easting	2258413.8550sft
Height	-84.6455sft	Horz error	0.0237sft	Elevation	35.4930sft
		Vert error	0.0009sft	Utilized	Horz and Vert
		3D error	0.0238sft	Quality	Survey quality
Point	SOUTHPORT W_wgs	Northing	83832.7962sft	Point	SOUTHPORT WESTBA
Latitude	33°58'38.37544"N	Easting	2256791.2970sft	Northing	83832.7610sft
Longitude	78°09'11.13988"W	Elevation	48.7447sft	Easting	2256791.3230sft
Height	-71.4598sft	Horz error	0.0438sft	Elevation	48.6950sft
		Vert error	0.0497sft	Utilized	Horz and Vert
		3D error	0.0662sft	Quality	Survey quality
Point	R2245-18_WGS84	Northing	83759.6077sft	Point	R2245-18_Local
Latitude	33°58'37.06730"N	Easting	2263626.1121sft	Northing	83759.6150sft
Longitude	78°07'49.99173"W	Elevation	43.3792sft	Easting	2263626.1170sft
Height	-77.1488sft	Horz error	0.0088sft	Elevation	43.3960sft
		Vert error	0.0168sft	Utilized	Horz and Vert
		3D error	0.0190sft	Quality	Survey quality
Point	R2245-17_WGS84	Northing	82601.6660sft	Point	R2245-17_Local
Latitude	33°58'25.61064"N	Easting	2263650.7089sft	Northing	82601.6790sft
Longitude	78°07'49.82003"W	Elevation	44.7335sft	Easting	2263650.7130sft
Height	-75.8168sft	Horz error	0.0136sft	Elevation	44.7480sft
		Vert error	0.0145sft	Utilized	Horz and Vert
		3D error	0.0199sft	Quality	Survey quality
Point	ROAD_WGS84	Northing	80009.8349sft	Point	ROAD_Local
Latitude	33°57'59.36921"N	Easting	2270521.5861sft	Northing	80009.9800sft
Longitude	78°06'28.51613"W	Elevation	52.5428sft	Easting	2270521.5490sft
Height	-68.3857sft	Horz error	?	Elevation	52.4870sft
		Vert error	0.0558sft	Utilized	Vertical
		3D error	0.0558sft	Quality	Survey quality
Point	R2245-15_WGS84	Northing	76843.7966sft	Point	R2245-15_Local
Latitude	33°57'28.84703"N	Easting	2261400.7689sft	Northing	76843.8060sft

Longitude	78°08'17.12765"W
Height	-61.2499sft

Elevation	59.3047sft
Horz error	0.0162sft
Vert error	0.0333sft
3D error	0.0370sft

Easting	2261400.7820sft
Elevation	59.3380sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R2245-16_WGS84
Latitude	33°57'25.02507"N
Longitude	78°08'04.19256"W
Height	-60.0360sft

Northing	76466.9356sft
Easting	2262493.6805sft
Elevation	60.5794sft
Horz error	0.0260sft
Vert error	0.0276sft
3D error	0.0379sft

Point	R2245-16_Local
Northing	76466.9610sft
Easting	2262493.6860sft
Elevation	60.6070sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R2245-14_WGS84
Latitude	33°56'50.03337"N
Longitude	78°08'49.00886"W
Height	-63.5038sft

Northing	72897.2049sft
Easting	2258749.0525sft
Elevation	56.9993sft
Horz error	0.0089sft
Vert error	0.0417sft
3D error	0.0426sft

Point	R2245-14_Local
Northing	72897.2110sft
Easting	2258749.0590sft
Elevation	57.0410sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R2245-13_WGS84
Latitude	33°56'41.94814"N
Longitude	78°08'56.01343"W
Height	-66.6895sft

Northing	72074.8606sft
Easting	2258165.9709sft
Elevation	53.8011sft
Horz error	0.0121sft
Vert error	0.0279sft
3D error	0.0304sft

Point	R2245-13_Local
Northing	72074.8720sft
Easting	2258165.9670sft
Elevation	53.8290sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R2245-A7_WGS84
Latitude	33°55'43.12613"N
Longitude	78°09'33.47165"W
Height	-82.1783sft

Northing	66102.0411sft
Easting	2255060.6231sft
Elevation	38.2758sft
Horz error	0.0323sft
Vert error	0.0138sft
3D error	0.0351sft

Point	R2245-A7_Local
Northing	66102.0500sft
Easting	2255060.5920sft
Elevation	38.2620sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R2245-A5_WGS84
Latitude	33°55'35.24066"N
Longitude	78°09'34.54167"W
Height	-98.8318sft

Northing	65304.1841sft
Easting	2254977.2053sft
Elevation	21.6337sft
Horz error	0.0178sft
Vert error	0.0133sft
3D error	0.0222sft

Point	R2245-A5_Local
Northing	65304.1990sft
Easting	2254977.2150sft
Elevation	21.6470sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R2245-A8_WGS84
Latitude	33°55'42.43365"N
Longitude	78°09'27.06364"W
Height	-83.5431sft

Northing	66036.6175sft
Easting	2255601.1673sft
Elevation	36.9395sft
Horz error	0.0147sft
Vert error	0.0035sft
3D error	0.0151sft

Point	R2245-A8_Local
Northing	66036.6070sft
Easting	2255601.1570sft
Elevation	36.9430sft
Utilized	Horz and Vert
Quality	Survey quality

Point	R2245-A6_WGS84
Latitude	33°55'34.83512"N
Longitude	78°09'26.76522"W
Height	-96.6862sft

Northing	65268.7418sft
Easting	2255632.8281sft
Elevation	23.8133sft
Horz error	0.0363sft
Vert error	0.0493sft
3D error	0.0613sft

Point	R2245-A6_Local
Northing	65268.7060sft
Easting	2255632.8220sft
Elevation	23.7640sft
Utilized	Horz and Vert
Quality	Survey quality

Point	WALTER_WGS84
Latitude	33°55'21.94687"N

Northing	63912.3083sft
Easting	2249240.2459sft

Point	WALTER_Local
Northing	63912.4150sft

Longitude	78°10'42.75662"W
Height	-104.4322sft

Elevation	15.7642sft
Horz error	?
Vert error	0.0092sft
3D error	0.0092sft

Easting	2249240.1730sft
Elevation	15.7550sft
Utilized	Vertical
Quality	Survey quality

Point	JORDAN_WGS84
Latitude	33°55'11.34371"N
Longitude	78°09'06.86390"W
Height	-99.9900sft

Northing	?
Easting	?
Elevation	?
Horz error	?
Vert error	?
3D error	?

Point	JORDAN_Local
Northing	62908.2950sft
Easting	2257330.1100sft
Elevation	20.5390sft
Utilized	(Ignored)
Quality	Survey quality