

GPS Calibration Report

Project : u3816

TIP Number		Date & Time	4:39:05 PM 11/8/2005
User name	scranford	Zone	North Carolina 3200
Coordinate System	US State Plane 1983(at ground)	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	35°00'57.62474"N
Longitude	79°11'39.30702"W
Site Scale Factor	1.0001157434
Height	182.836sft

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	433250.135sft
Easting coordinate of rotation center	1921291.356sft
Rotation about the center point	0°00'00"
Translation north	0.005sft
Translation east	-0.008sft

Scale factor 1.00000009

Vertical Adjustment Parameters

Northing coordinate of origin point 460811.370sft
 Easting coordinate of origin point 1941839.586sft
 Vertical separation at origin -0.027sft
 Slope north 0.553ppm
 Slope east 0.056ppm

Geoid Model Definition

GEOID99 (Conus)

Residual Differences Between GPS (WGS84) And Local Coordinates

Summary

	Maximum error	Root Mean Square error	Point
Horizontal	0.016sft	0.003	HOFFMAN SCH GPS
Vertical	0.090sft	0.015	PROSPECT GPS
Three-dimensional	0.090sft	0.015	PROSPECT GPS

Point Residuals

WGS84 Coordinates		Calculated point FOR DISPLAY ONLY		Local Coordinates	
Point	RAEFORD 000 GPS	Northing	460811.370sft	Point	RAEFORD 000
Latitude	35°00'57.62474"N	Easting	1941839.586sft	Northing	460811.365sft
Longitude	79°11'39.30702"W	Elevation	289.999sft	Easting	1941839.587sft
Height	182.809sft	Horz error	0.005sft	Elevation	290.026sft
		Vert error	0.027sft	Utilized	Horz and Vert
		3D error	0.027sft	Quality	Control quality
Point	ACACIA GPS	Northing	466066.877sft	Point	ACACIA
Latitude	35°01'50.12720"N	Easting	1984263.797sft	Northing	466066.887sft
Longitude	79°03'09.30117"W	Elevation	221.108sft	Easting	1984263.789sft

Height	112.724sft
---------------	------------

Horz error	0.013sft
Vert error	0.057sft
3D error	0.058sft

Elevation	221.164sft
Utilized	Horz and Vert
Quality	Control quality

Point	PROSPECT_GPS
Latitude	34°46'19.34203"N
Longitude	79°12'12.83922"W
Height	88.803sft

Northing	372019.279sft
Easting	1938868.333sft
Elevation	197.012sft
Horz error	0.009sft
Vert error	0.090sft
3D error	0.090sft

Point	PROSPECT
Northing	372019.275sft
Easting	1938868.324sft
Elevation	196.922sft
Utilized	Horz and Vert
Quality	Control quality

Point	DELI_GPS
Latitude	34°44'26.86075"N
Longitude	79°29'45.62981"W
Height	112.369sft

Northing	360956.676sft
Easting	1850981.133sft
Elevation	218.329sft
Horz error	0.014sft
Vert error	0.086sft
3D error	0.087sft

Point	DELI
Northing	360956.662sft
Easting	1850981.134sft
Elevation	218.415sft
Utilized	Horz and Vert
Quality	Control quality

Point	HOFFMAN SCH_GPS
Latitude	35°01'38.56328"N
Longitude	79°32'51.68192"W
Height	313.621sft

Northing	465345.909sft
Easting	1836029.198sft
Elevation	417.687sft
Horz error	0.016sft
Vert error	0.047sft
3D error	0.050sft

Point	HOFFMAN SCH
Northing	465345.920sft
Easting	1836029.210sft
Elevation	417.640sft
Utilized	Horz and Vert
Quality	Control quality

Point	U3816-1_GPS
Latitude	34°58'03.55854"N
Longitude	79°13'25.54854"W
Height	135.565sft

Northing	443231.128sft
Easting	1932962.941sft
Elevation	242.792sft
Horz error	0.006sft
Vert error	0.001sft
3D error	0.006sft

Point	U3816-1
Northing	443231.127sft
Easting	1932962.947sft
Elevation	242.793sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	U3816-2_GPS
Latitude	34°57'48.39977"N
Longitude	79°13'20.68873"W
Height	135.488sft

Northing	441697.605sft
Easting	1933363.976sft
Elevation	242.750sft
Horz error	0.005sft
Vert error	0.006sft
3D error	0.007sft

Point	U3816-2
Northing	441697.608sft
Easting	1933363.979sft
Elevation	242.745sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	U3816-3_GPS
Latitude	34°58'20.89011"N
Longitude	79°12'44.50139"W

Northing	444975.917sft
Easting	1936382.936sft
Elevation	249.221sft

Point	U3816-3
Northing	444975.915sft
Easting	1936382.933sft

Height	141.924sft

Horz error	0.004sft
Vert error	0.012sft
3D error	0.013sft

Elevation	249.208sft
Utilized	Horz and Vert
Quality	Adjusted quality

Point	U3816-4 GPS
Latitude	34°58'12.69810"N
Longitude	79°12'37.90397"W
Height	141.283sft

Northing	444146.501sft
Easting	1936930.233sft
Elevation	248.608sft
Horz error	0.005sft
Vert error	0.016sft
3D error	0.017sft

Point	U3816-4
Northing	444146.501sft
Easting	1936930.228sft
Elevation	248.593sft
Utilized	Horz and Vert
Quality	Adjusted quality