

Reference and Recovery Data Sheets



County of Mathews, Virginia 1999 Supplemental Geodetic Control Network

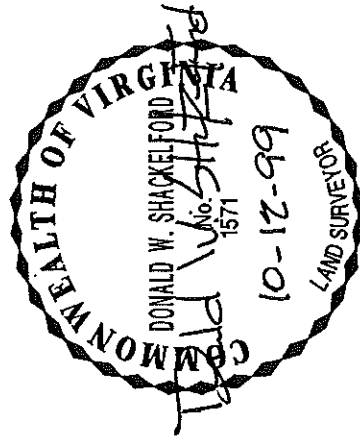
September 1999

Prepared By

Rouse-Sirine Associates, Ltd.

Surveyors and Mapping Consultants
333 Office Square Lane • Virginia Beach, VA 23462
(800) 276-2023

NOTICE TO USERS
OF THE
COUNTY OF MATHEWS, VIRGINIA
1999 SUPPLEMENTAL GEODETIC
GROUND CONTROL NETWORK



THE COUNTY OF MATHEWS 1999 GEODETIC NETWORK CONFORMS TO FEDERAL
GEODETIC CONTROL COMMITTEE FIRST ORDER ACCURACY STANDARDS
FOR GLOBAL POSITIONING SYSTEM HORIZONTAL NETWORKS.

Physical Description of Stations

The stations consist of 3 1/4" diameter domed aluminum disks set in 8" diameter concrete posts. The station disks are stamped "County of Mathews Planning and Zoning" and with the corresponding station number. The concrete posts are cast-in-place, 36" in depth, and contain a 5/8" diameter reinforcing bar and other metallic objects for ease of recovery through the use of magnetic locators.

The reference and recovery data sheets provide a complete and detailed description of the location of each individual station, and its respective reference marks and primary azimuth marks, if any. To avoid unnecessary excavation, please note the location of the monument with respect to the depth below the ground surface and pinpoint the location with the ties depicted in the location sketch on the reference and recovery data sheet before digging.

Units

The coordinates of each station refer to the Virginia Coordinate System of 1983, South Zone NAD83 (1993) Virginia HARN and are provided in meters and U.S. survey feet. Additionally, all bearings are state plane grid bearings. The conversions from meters to the respective feet values are as follows:

1. To convert from meters to U.S. survey feet, multiply meters by $(39.37 \div 12)$ exact, or 3.280833333 (approximate).
2. To convert from meters to International feet, multiply meters by $(100 \div 2.54 \div 12)$ exact, or 3.280839895 (approximate).

As you will note, the difference between the two conversions is very small, less than 1 part in 150,000, and can be ignored for conversions of most field measurements. The difference does become significant when converting or multiplying numbers larger than 1,500 feet, i.e., meter coordinates.

Elevations shown on the reference and recovery data sheets as NAVD88 (North American Vertical Datum of 1988) are identified as either GPS derived from GPS observed ellipsoid heights and GEOID96 modeled geoid heights or existing National Geodetic Survey published elevations.

Combined Factor:

The combined factor is used to convert field measurements to grid distances. The combined factor is derived by multiplying the grid scale factor by the elevation factor. Throughout the County of Mathews project area, the grid scale factor ranges slightly less than one, this is a function of latitude (northing). The elevation factor, as the name implies, is a function of the elevation and is also slightly less than one. The grid scale factor at each control station is printed on the reference and recovery data sheet. The elevation factor is computed by the following formula:

Example

$$E_f \text{ (Elevation factor)} = 1 - \frac{E}{R}$$

Where R = Mean Radius of the Earth (20,906,000 ft.)

E = Elevation (in feet)

For most small survey projects, an average combined factor will produce adequate results. All published distances between control monuments are grid distances.

Example

A survey project is located midway between Stations 37 and 38.

To determine the average combined factor for the survey project, simply average the combined factors for Stations 37 and 38.

Scale factor at Station 37	=	0.999945444	
Elevation factor at Station 37	=	$1 - \frac{3.7}{20,906,000}$	= 0.999999982
Combined factor at Station 37	=	$0.999945444 \times 0.999999982$	= 0.99994527
Scale factor at Station 38	=	0.999945469	
Elevation factor at Station 38	=	$1 - \frac{5.4}{20,906,000}$	= 0.999999974
Combined factor at Station 38	=	$0.999945469 \times 0.999999974$	= 0.99994521
Project combined factor	=	$\begin{array}{r} 0.99994527 \\ + 0.99994521 \\ \hline 1.99989048 \end{array}$	$\div 2 = 0.99994524$
To determine the grid distance from a reduced horizontal field measurement of 1634.91 feet, multiply the field measurement by the project combined factor.			
		$1634.91 \times 0.99994524$	= 1634.82 feet

The combined factor must be applied to all reduced field distances to compute grid coordinates.

Convergence:

The convergence angle is used to convert geodetic* or astronomic azimuth to state plane azimuth. The convergence angle at each control station is printed on the reference and recovery data sheet and is to be subtracted from an astronomic azimuth to determine the state plane azimuth of a line.

*While the geodetic azimuth and the astronomic azimuth are not exactly equal, the difference is negligible for most survey projects.

Example: A geodetic azimuth of a line from Station 37 to monument 38 is determined to be $341^{\circ}07'41.21''$. The state plane azimuth equals the geodetic azimuth minus the convergence angle. Attention must be given to the algebraic sign of the angle. For projects east of the central meridian the sign of the convergence angle is positive (+). For projects west of the central meridian the sign of the convergence angle is negative (-).

$$\begin{array}{lcl} \text{State Plane Azimuth} & = & 341^{\circ}07'41.21'' - (+ 01^{\circ}20'22.40'') = 339^{\circ}47'18.81'' \\ \text{State Plane Grid Bearing} & = & N20^{\circ}12'41.2''W \end{array}$$

Notification of Disturbed or Destroyed Monuments

Your assistance is requested in reporting any monument found to have been or subject to being moved, disturbed or destroyed. Please contact: The County of Mathews, Virginia, Department of Planning and Zoning at (804) 725-4034.

Use of Published Data By Other Agencies

EXTREME CAUTION SHOULD BE EXERCISED IN ATTEMPTING TO INTEGRATE PREVIOUSLY OR FUTURE PUBLISHED HORIZONTAL AND VERTICAL VALUES OF CONTROL MONUMENTS OF OTHERS WITHIN THE PROJECT AREA WITH THE DATA CONTAINED HEREIN.

NAD27/NGVD29 Data

NAD27 Datum: The user must be aware that the NAD27 coordinate values included within this report are a product of a transformation from GPS vectors processed in the World Geodetic System of 1984 (WGS84) and adjusted utilizing the NAD27 1866 Clark ellipsoid parameters. The accuracy of the transformation should be viewed with some caution as transformations to older datums (i.e., NAD27) could incur small undefined error uncertainties.

NGVD29 Datum: NGVD29 elevations were derived using Vertcon 2.0 NGS conversion software. The Vertcon 2.0 model expresses datum differences between NAVD88 and NGVD29 due to removal of distortions in the level data, as well as due to the physical differences in the height systems. In some rare cases, these local NGVD29 distortions could be 20 cm or more.

A key part of the software computation procedure was the development of the predictable, physical components of the differences between the NAVD88 and NGVD29 datums. This included models of refraction effects on geodetic leveling, and gravity and elevation influences on the new NAVD88 datum.

It should be emphasized that Vertcon 2.0 is a datum transformation model, and cannot maintain the full vertical control accuracy of geodetic leveling.

County of Mathews, Virginia

Virginia Coordinate System of 1927, South Zone (NAD27)

POINT	NORTHING-Y	EASTING-X	NGVD29 ELEV/FEET	LATITUDE	LONGITUDE
0033	385158.640	2633677.109	12.8	37 22 16.03769	76 19 09.16090
0034	386635.130	2633242.925	9.0	37 22 30.73181	76 19 14.11601
0035	394957.055	2631759.892	8.5	37 23 53.33139	76 19 30.10918
0036	396010.157	2630735.205	9.7	37 24 03.97441	76 19 42.50427
0037	390081.485	2641116.398	4.8	37 23 02.99024	76 17 35.60096
0038	391615.579	2640551.633	6.6	37 23 18.28498	76 17 42.15278
0039	385409.648	2646416.688	2.7	37 22 15.58004	76 16 31.31055
0040	385577.686	2647543.603	2.7	37 22 16.97828	76 16 17.30484
0041	393771.186	2645795.730	2.9	37 23 38.37677	76 16 36.56181
0042	394983.503	2644635.994	4.5	37 23 50.63004	76 16 50.57615
0043	398458.730	2642752.486	1.9	37 24 25.41905	76 17 12.90170
0044	399592.912	2643378.634	1.9	37 24 36.48499	76 17 04.81342
0045	398054.198	2636211.263	5.9	37 24 22.92867	76 18 34.06908
0046	399477.064	2635118.052	7.9	37 24 37.24405	76 18 47.20625
0047	403122.134	2642695.843	4.5	37 25 11.52885	76 17 12.24859
0048	402016.283	2641483.531	3.6	37 25 00.87849	76 17 27.59335
0049	404403.116	2639490.244	8.9	37 25 24.93225	76 17 51.60478
0050	404939.582	2638503.561	9.8	37 25 30.46249	76 18 03.67834
0051	399188.729	2630386.249	10.4	37 24 35.47357	76 19 45.92214
0052	400290.540	2630592.811	9.7	37 24 46.31787	76 19 43.04847
0053	406323.545	2623382.857	10.8	37 25 47.58380	76 21 10.69290
0054	407394.231	2624611.399	11.6	37 25 57.89089	76 20 55.16303
0055	416894.691	2622714.440	13.8	37 27 32.22847	76 21 15.99931
0056	417130.334	2620166.499	19.3	37 27 35.12911	76 21 47.52640
0057	414536.758	2613912.948	15.5	37 27 10.88418	76 23 05.78928
0058	415417.296	2614615.458	9.72	37 27 19.43253	76 22 56.83421
0059	412449.020	2606214.191	10.0	37 26 51.94151	76 24 41.81643
0060	411211.164	2607777.576	9.5	37 26 39.36294	76 24 22.77431
0061	416464.946	2602496.119	12.79	37 27 32.44971	76 25 26.81752
0062	417603.321	2601982.295	14.1	37 27 43.81422	76 25 32.87860
0063	421157.150	2603459.170	6.0	37 28 18.62255	76 25 13.59413
0064	421827.923	2603897.852	13.0	37 28 25.15755	76 25 07.97026
0065	418218.858	2597129.663	17.7	37 27 50.94869	76 26 32.88620
0066	438021.802	2607848.909	30.9	37 31 04.36831	76 24 14.50924
0067	439539.051	2607639.070	11.9	37 31 19.41212	76 24 16.69524
0068	431334.751	2618501.403	21.7	37 29 55.90958	76 22 04.19433
0069	429933.585	2618492.415	16.4	37 29 42.06134	76 22 04.69849
0070	425214.071	2622778.891	12.8	37 28 54.44957	76 21 12.85431
0071	424615.943	2624174.546	11.6	37 28 48.22313	76 20 55.71275
0072	421445.523	2639039.770	8.2	37 28 13.49577	76 17 52.25982
0073	422819.044	2638306.973	7.7	37 28 27.24150	76 18 00.95042
0074	422191.096	2613166.778	24.8	37 28 26.71183	76 23 12.91613
0075	421039.522	2612594.643	22.3	37 28 15.45519	76 23 20.33121
0076	429224.571	2616757.225	15.9	37 29 35.43975	76 22 26.42249
0077	428542.187	2614739.452	20.0	37 29 29.14301	76 22 51.64342
0078	429634.442	2597155.134	44.8	37 29 43.78634	76 26 29.48312
0079	402829.969	2613392.553	15.1	37 25 15.27819	76 23 15.48981
0080	402524.860	2614794.422	13.0	37 25 11.95172	76 22 58.20083
0081	389929.469	2622556.181	9.2	37 23 05.71497	76 21 25.55261
0082	391263.733	2622861.345	10.9	37 23 18.83565	76 21 21.39701

G082	429609.477	2596036.245	52.6	37 29 43.78054	76 26 43.37055
G113	405204.878	2593790.474	8.5	37 25 43.02168	76 27 17.79083
HARP	366956.712	2645227.986	2.5	37 19 13.45187	76 16 51.40535
Z457	418501.855	2595788.697	13.1	37 27 54.03476	76 26 49.43868

COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM
SOUTH ZONE (4502) NAD83(1993) VA HARN

LATITUDE	NORTHING	EASTING
N 37° 22' 16.50718"	W 76° 19' 07.93764"	

UNITS	NORTHING	EASTING
METERS	1117414.432	3693170.172

U.S. SURVEY FT.	
3666050.516	12116675.806

CONVERGENCE: +01° 19' 25.61"

SCALE FACTOR: 0.999945404

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 34	N 16° 23' 14.6" W	1539.08'

VERTICAL DATA

NAVD 88	NAVD 88
---------	---------

ELEVATION IN METERS	ELEVATION IN FEET
---------------------	-------------------

3.54	11.6
------	------

(GPS DERIVED) (GPS DERIVED)

STATION NUMBER:

33

GPS SERVICES PROVIDED BY:

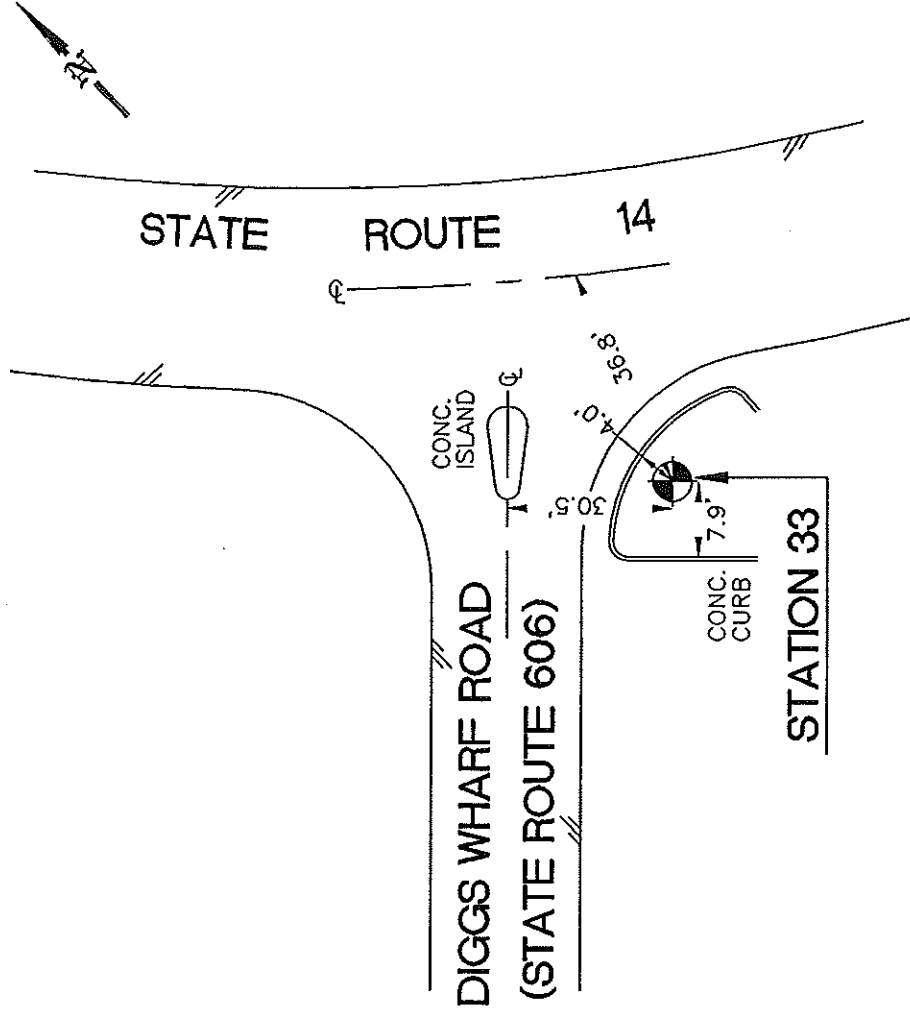
ROUSE-SIRINE ASSOCIATES, LTD.

(SEPTEMBER 1999)

TO REACH DESCRIPTION

THE STATION IS LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF STATE ROUTE 14 AND STATE ROUTE 606 (DIGGS WHARF ROAD) IN A SMALL GRASS MEDIAN. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST, STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 33".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 22' 31.20170"	W 76° 19' 12.89329"		
UNITS	NORTHING	EASTING	
METERS	1117864.489	3693037.820	
U.S. SURVEY FT.	3667527.078	12116241.581	

CONVERGENCE:	+01° 19' 22.60"
SCALE FACTOR:	0.999945411

REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 33	S 16° 23' 14.6" E	1539.08'	

VERTICAL DATA			
NAVD 88	NAVD 88		
ELEVATION IN METERS	ELEVATION IN FEET		
2.39	7.8		
(GPS DERIVED)	(GPS DERIVED)		

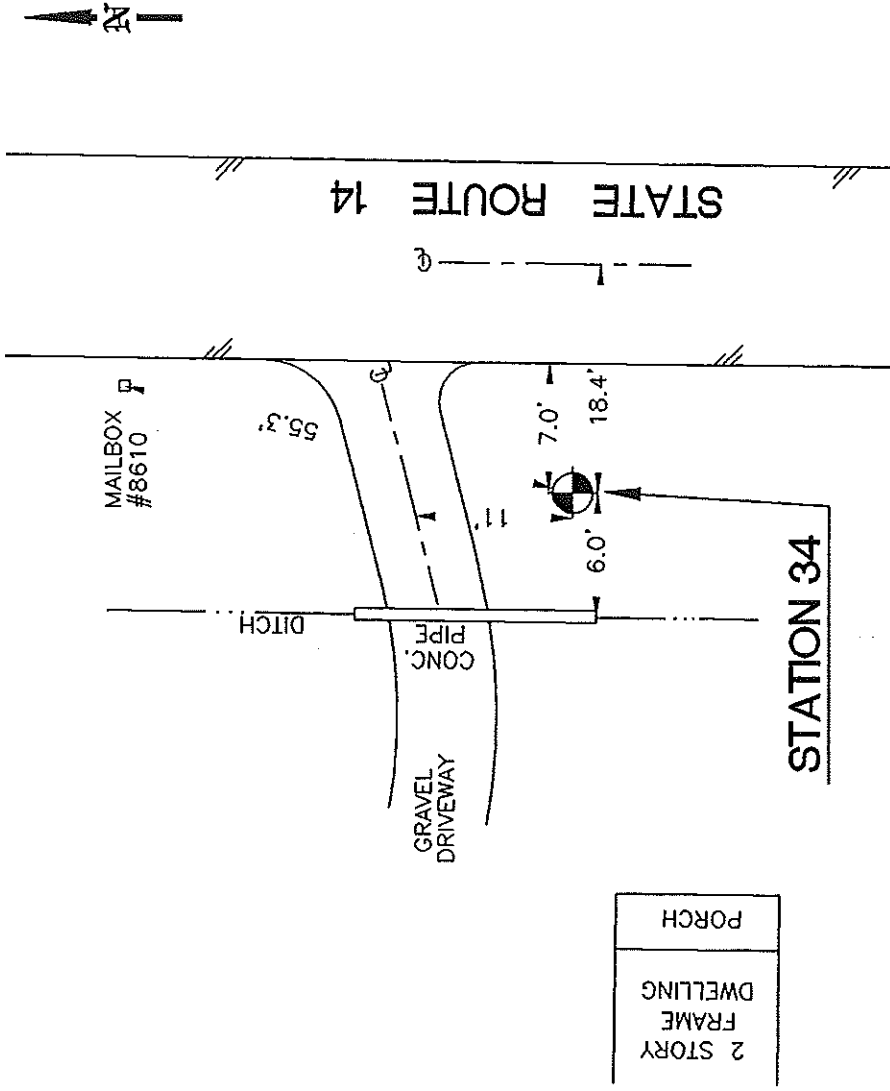
STATION NUMBER:	34
-----------------	----

GPS SERVICES PROVIDED BY:
 ROUSE-SIRINE ASSOCIATES, LTD.
 (SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 14 AND STATE ROUTE 606 (DIGGS WHARF ROAD), PROCEED NORTH 0.3 MILES ON STATE ROUTE 14. THE STATION IS LOCATED IN THE WEST GRASS SHOULDER OF STATE ROUTE 14. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST, STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 34".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE		LONGITUDE	
N 37° 23' 53.80290"		W 76° 19' 28.88831"	
UNITS	NORTHING	EASTING	
METERS	1120401.122	3692585.744	
U.S. SURVEY FT.	3675849.348	12114758.395	

CONVERGENCE: +01° 19' 12.90"

SCALE FACTOR: 0.999945545

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 36	N 44° 13' 00.9" W	1469.43'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
2.25	7.4
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

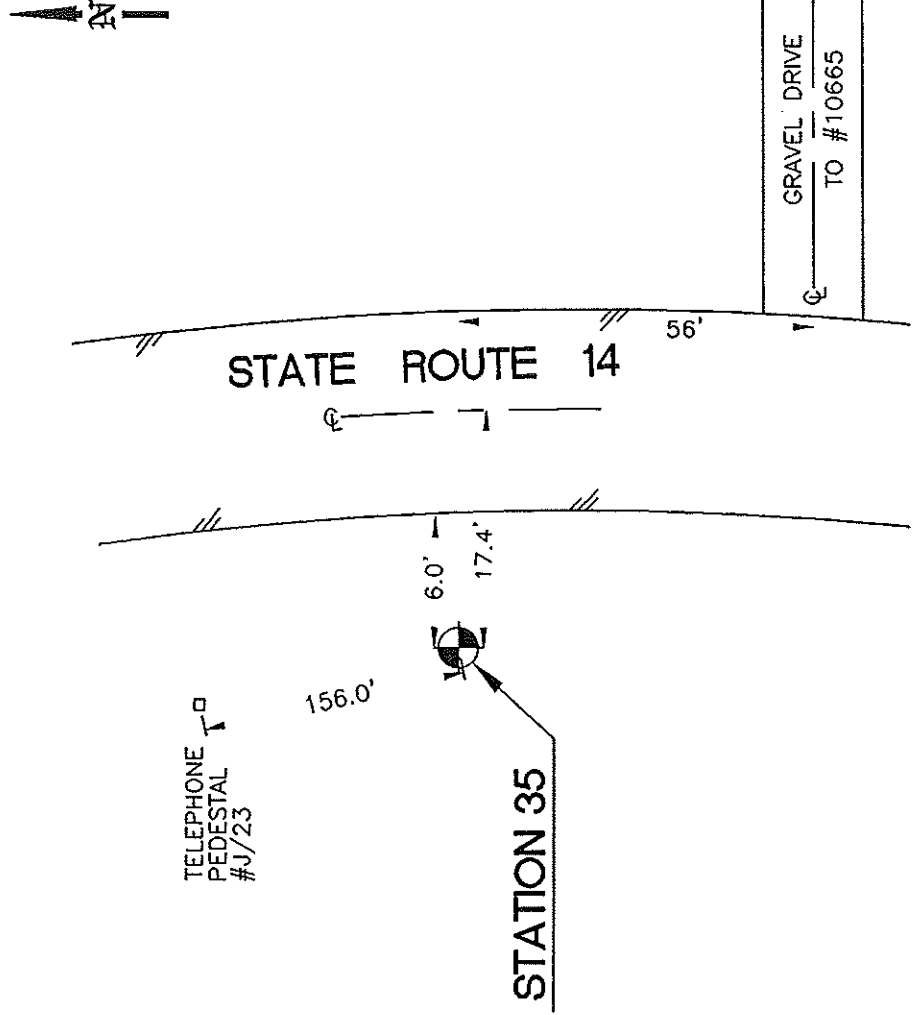
35

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 14 AND STATE ROUTE 613 (BEAVER DAM ROAD), PROCEED SOUTH 0.3 MILES ON STATE ROUTE 14. THE STATION IS LOCATED IN THE WEST SHOULDER OF STATE ROUTE 14. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST, STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 35".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 24' 04.44620"	W 76° 19' 41.28442"		
UNITS	NORTHING	EASTING	
METERS	1120722.123	3692273.400	
U.S. SURVEY FT.	3676902.499	12113733.647	

CONVERGENCE: +01° 19' 05.37"

SCALE FACTOR: 0.999945574

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 35	S 44° 13' 00.9" E	1469.43'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
2.60	8.5
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

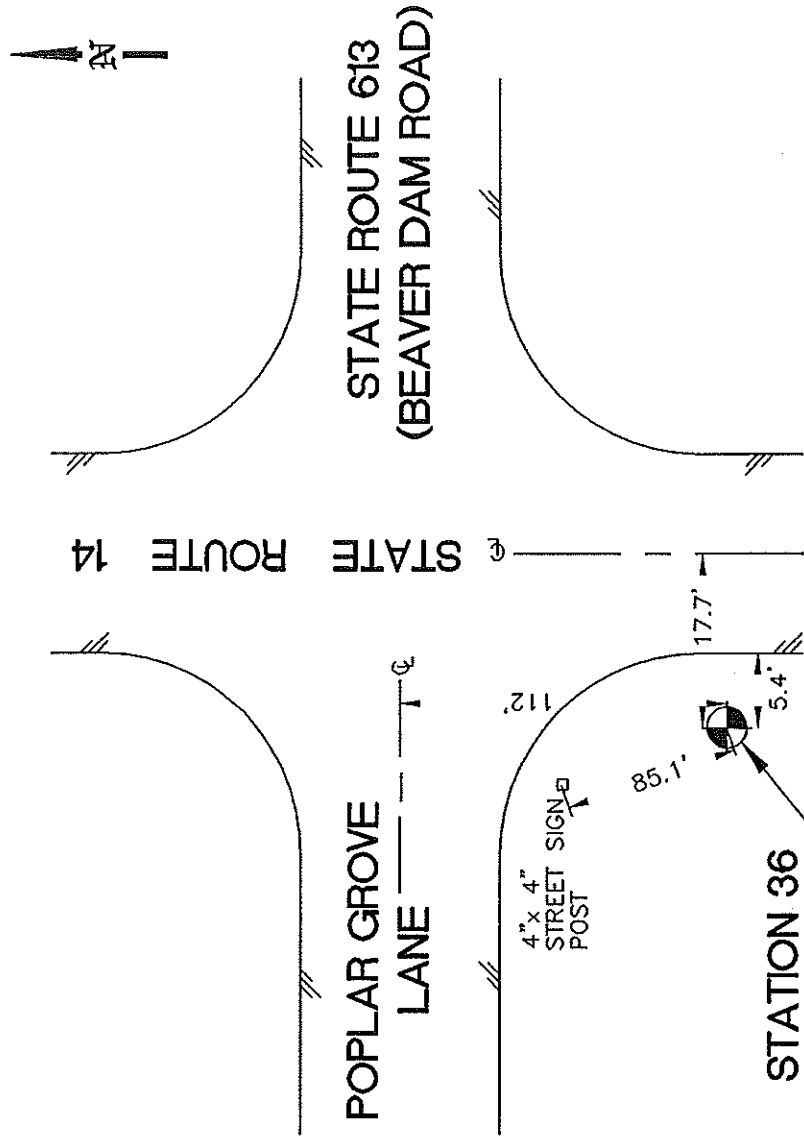
36

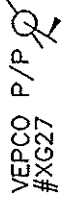
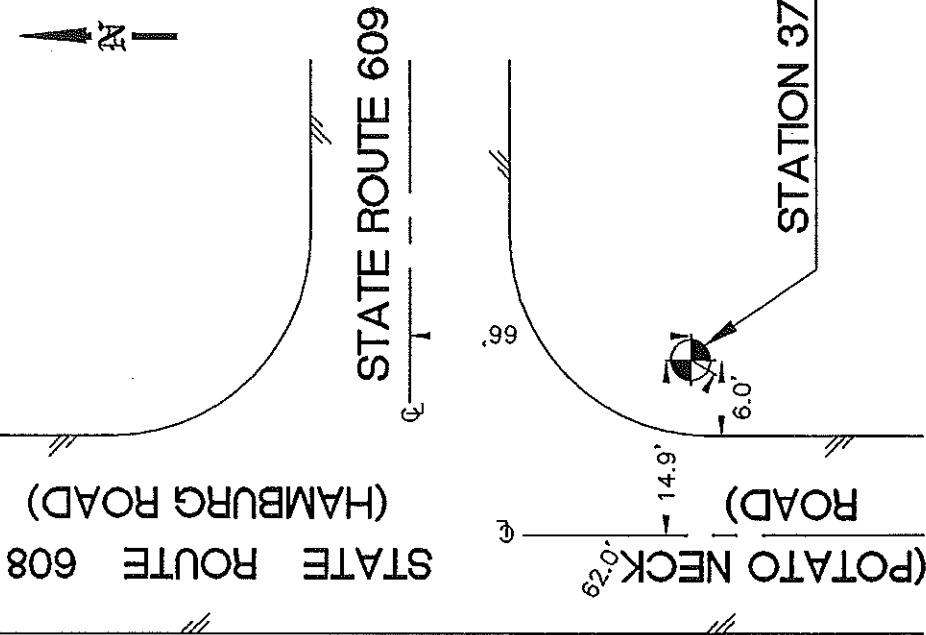
GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 14 AND STATE ROUTE 613 (BEAVER DAM ROAD), PROCEED SOUTH 115 FEET ON STATE ROUTE 14. THE STATION IS LOCATED IN THE WEST SHOULDER OF STATE ROUTE 14. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST, STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 36".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA			
HORIZONTAL DATA		TO REACH DESCRIPTION	
VIRGINIA COORDINATE SYSTEM SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 23' 03.46128"	W 76° 17' 34.37155"		
UNITS	NORTHING	EASTING	
METERS	1118915.009	3695437.755	
U.S. SURVEY FT.	3670973.659	12124115.368	
CONVERGENCE: +01° 20' 22.40"			
SCALE FACTOR: 0.999945444			
REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 38	N 20° 12' 41.2" W	1634.82'	
VERTICAL DATA			
NAVD 88	NAVD 88		
ELEVATION IN METERS	ELEVATION IN FEET		
1.13	3.7		
(GPS DERIVED)	(GPS DERIVED)		
STATION NUMBER:			
37			
GPS SERVICES PROVIDED BY:			
ROUSE-SIRINE ASSOCIATES, LTD. (SEPTEMBER 1999)			
		VEPCO P/P  #XG27	
			
		TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 608 (POTATO NECK ROAD)/HAMBURG ROAD) AND STATE ROUTE 609, PROCEED SOUTH 66 FEET FROM THE CENTERLINE OF STATE ROUTE 609. THE STATION IS LOCATED IN THE EAST SHOULDER OF STATE ROUTE 608. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET 6" BELOW THE GROUND SURFACE IN THE TOP OF A CONCRETE POST, STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 37".	
LOCATION SKETCH (NOT TO SCALE)			

COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA	
VIRGINIA COORDINATE SYSTEM	
SOUTH ZONE (4502) NAD83(1993) VA HARN	
LATITUDE	LONGITUDE
N 37° 23' 18.75629"	W 76° 17' 40.92395"
UNITS	NORTHING
METERS	1119382.620
U.S. SURVEY FT.	3672507.812
	12123550.563

CONVERGENCE:	+01° 20' 18.42"
SCALE FACTOR:	0.999945469

REFERENCE AND AZIMUTH MARK LOCATIONS		
OBJECTS	BEARING	DISTANCE
STATION 37	S 20° 12' 41.2" E	1634.82'

VERTICAL DATA	
NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
166	5.4
(GPS DERIVED)	(GPS DERIVED)

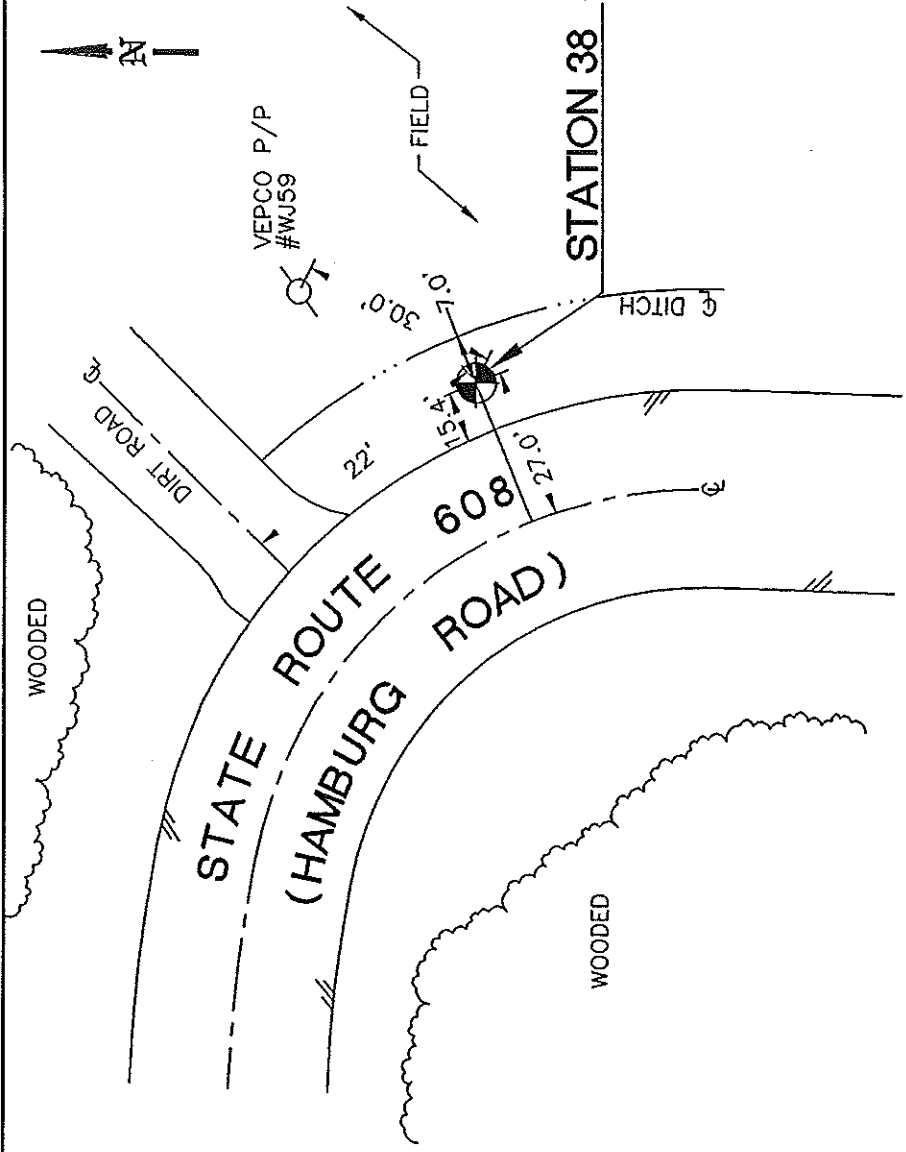
STATION NUMBER:	38
-----------------	----

GPS SERVICES PROVIDED BY:
 ROUSE-SIRINE ASSOCIATES, LTD.
 (SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 608 (HAMBURG ROAD) AND STATE ROUTE 609, PROCEED NORTH 0.3 MILES ON STATE ROUTE 608. THE STATION IS LOCATED IN THE EAST SHOULDER OF STATE ROUTE 608 MIDWAY AROUND THE CURVE IN THE PAVEMENT. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST, STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 38".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 22' 16.05040"	NORTHING	EASTING	
	1117490.984	3697053.375	
U.S. SURVEY FT.	3666301.670	12129415.948	

CONVERGENCE: +01° 21' 01.42"

SCALE FACTOR: 0.999945403

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 40	N 81° 31' 06.0" E	1139.42'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
0.47	15
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

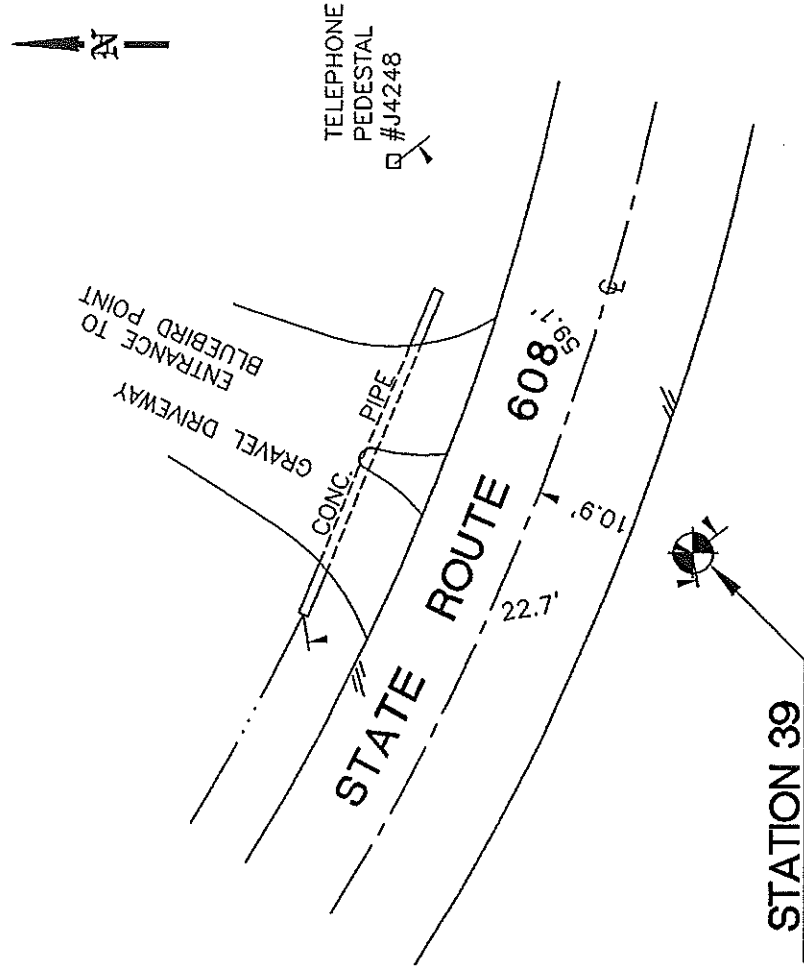
39

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 649 (PEARY ROAD) AND STATE ROUTE 608, PROCEED EAST 0.3 MILES ON STATE ROUTE 608. THE STATION IS LOCATED IN THE SOUTH SHOULDER OF STATE ROUTE 608. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST, STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 39".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA		TO REACH DESCRIPTION	
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 22' 17.44875"	W 76° 16' 16.06943"		
UNITS	NORTHING	EASTING	
METERS	1117542.208	3697396.874	
U.S. SURVEY FT.	3666469.727	12130542.911	
CONVERGENCE: +01° 21' 09.92"			
SCALE FACTOR: 0.999945404			
REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 39	S 81° 31' 06.0" W	1139.42'	
VERTICAL DATA			
NAVD 88	NAVD 88		
ELEVATION IN METERS	ELEVATION IN FEET		
0.46	15		
(GPS DERIVED)	(GPS DERIVED)		
STATION NUMBER:			
40			
GPS SERVICES PROVIDED BY:			
ROUSE-SIRINE ASSOCIATES, LTD.			
(SEPTEMBER 1999)			
LOCATION SKETCH (NOT TO SCALE)			

The sketch shows State Route 608 running horizontally. A monument is located at Station 40 on the route. To the left of the monument is a marsh area. To the right is another marsh area. A north arrow points upwards. A scale bar indicates 10.0' and 169.0'.

COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 23' 38.84890"	W 76° 16' 35.32848"		
UNITS	NORTHING	EASTING	
METERS	1120039.697	3696864.071	
U.S. SURVEY FT.	3674663.573	12128794.873	

CONVERGENCE: +01° 20' 58.23"

SCALE FACTOR: 0.999945509

REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 42	N 43° 43' 51.2" W	1677.78'	

VERTICAL DATA			
NAVD 88	NAVD 88		
ELEVATION IN METERS	ELEVATION IN FEET		
0.54	18		
(GPS DERIVED)	(GPS DERIVED)		

STATION NUMBER:

41

GPS SERVICES PROVIDED BY:

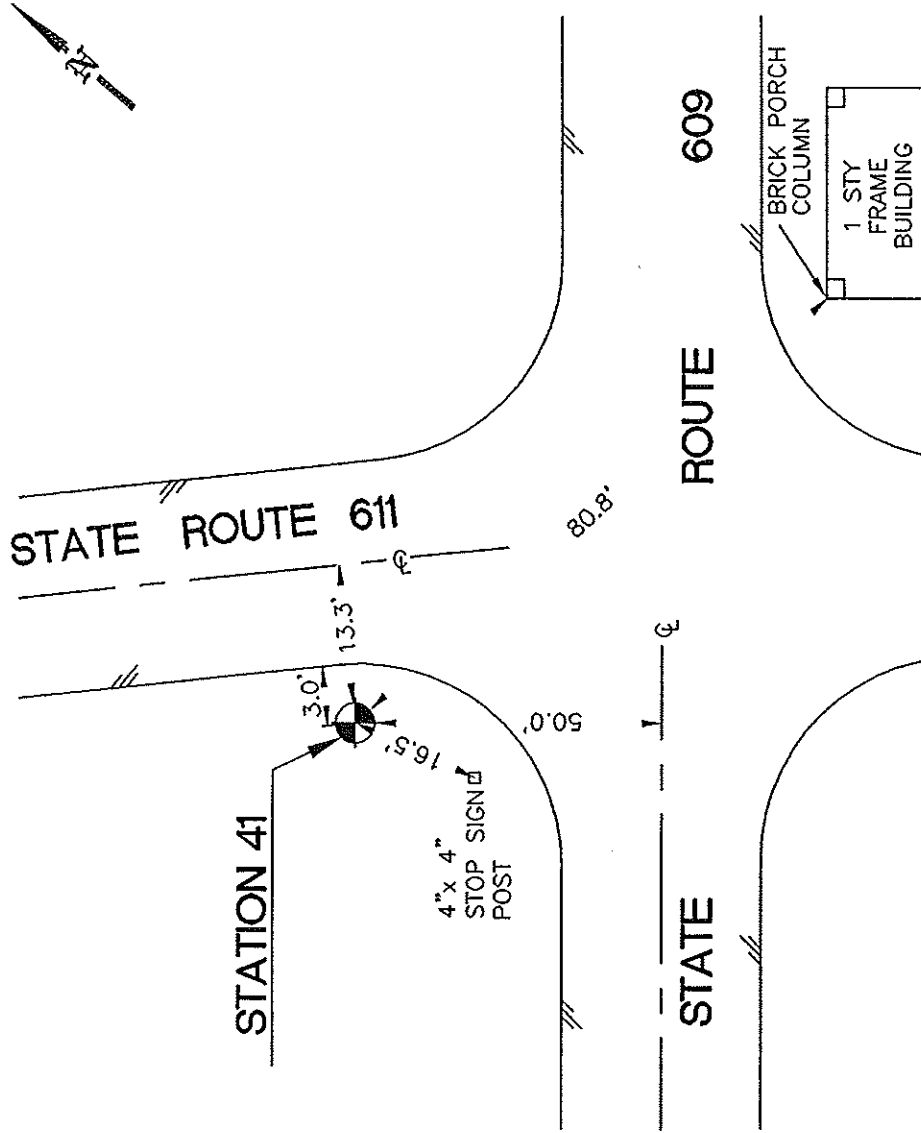
ROUSE-SIRINE ASSOCIATES, LTD.

(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 609 AND STATE ROUTE 611, PROCEED NORTH 50 FEET FROM THE CENTERLINE OF STATE ROUTE 609. THE STATION IS LOCATED IN THE WEST SHOULDER OF STATE ROUTE 611. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST, STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 41".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE		LONGITUDE	
N 37° 23' 51.10234"		W 76° 16' 49.34396"	
UNITS	NORTHING		EASTING
METERS	1120409.224		3696510.562
U.S. SURVEY FT.	3675875.929		12127635.069

CONVERGENCE: +01° 20' 49.73"

SCALE FACTOR: 0.999945538

REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 41	S 43° 43' 51.2" E	1677.78'	

VERTICAL DATA			
NAVD 88		NAVD 88	
ELEVATION IN METERS		ELEVATION IN FEET	
102		3.3	
(GPS DERIVED)		(GPS DERIVED)	

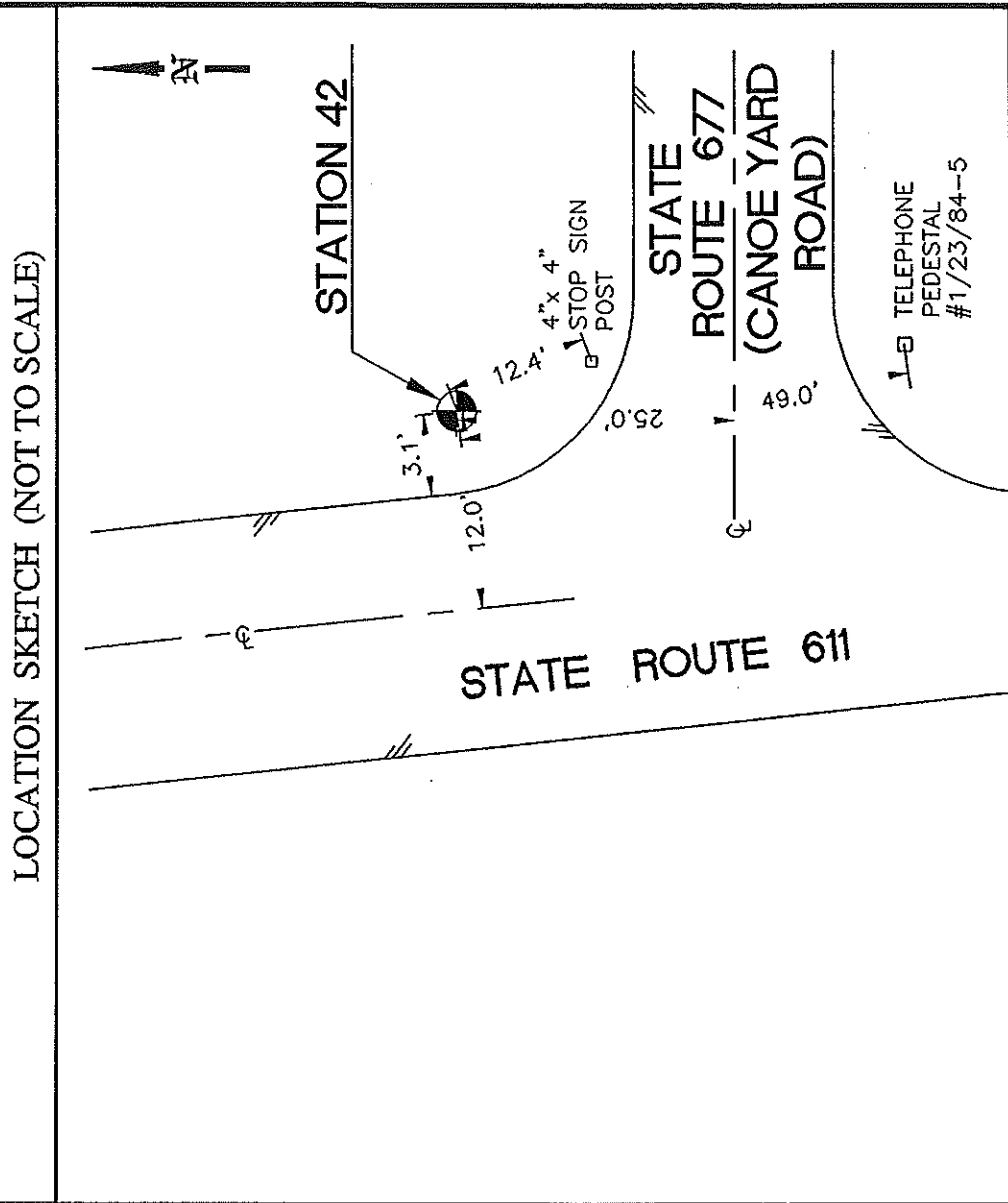
STATION NUMBER:

42

GPS SERVICES PROVIDED BY:

ROUSE-SIRINE ASSOCIATES, LTD.

(SEPTEMBER 1999)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM

SOUTH ZONE (4502) NAD83(1993) VA HARN

LATITUDE LONGITUDE

N 37° 24' 25.89194" W 76° 17' 11.67143"

UNITS NORTHING EASTING

METERS 1121468.515 3695936.430

U.S. SURVEY FT. 3679351.286 12125751.437

CONVERGENCE: +01° 20' 36.18"

SCALE FACTOR: 0.999945641

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 44	N 28° 54' 04.0" E	1295.61'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
0.23	0.7
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

43

GPS SERVICES PROVIDED BY:

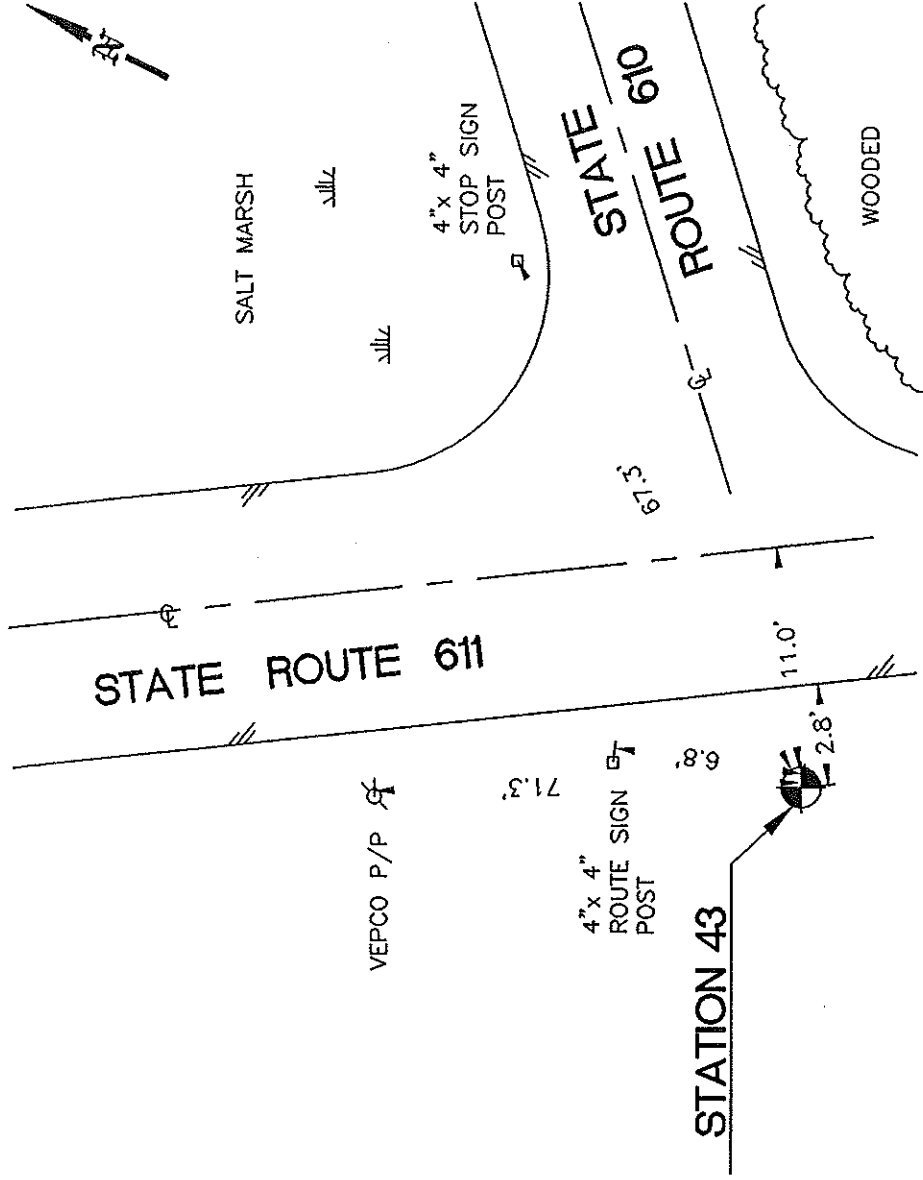
ROUSE-SIRINE ASSOCIATES, LTD.

(SEPTEMBER 1999)

TO REACH DESCRIPTION

THE STATION IS LOCATED IN THE WEST SHOULDER OF STATE ROUTE 611 AT THE INTERSECTION OF STATE ROUTE 611 AND STATE ROUTE 610. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 43".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 24' 36.95823"	W 76° 17' 03.58264"		
UNITS	NORTHING	EASTING	
METERS	1121814.234	3696127.286	
U.S. SURVEY FT.	3680485.533	12126377.604	

CONVERGENCE: +01° 20' 41.09"

SCALE FACTOR: 0.999945679

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 43	S 28° 54' 04.0" W	1295.61'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
0.25	0.8
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

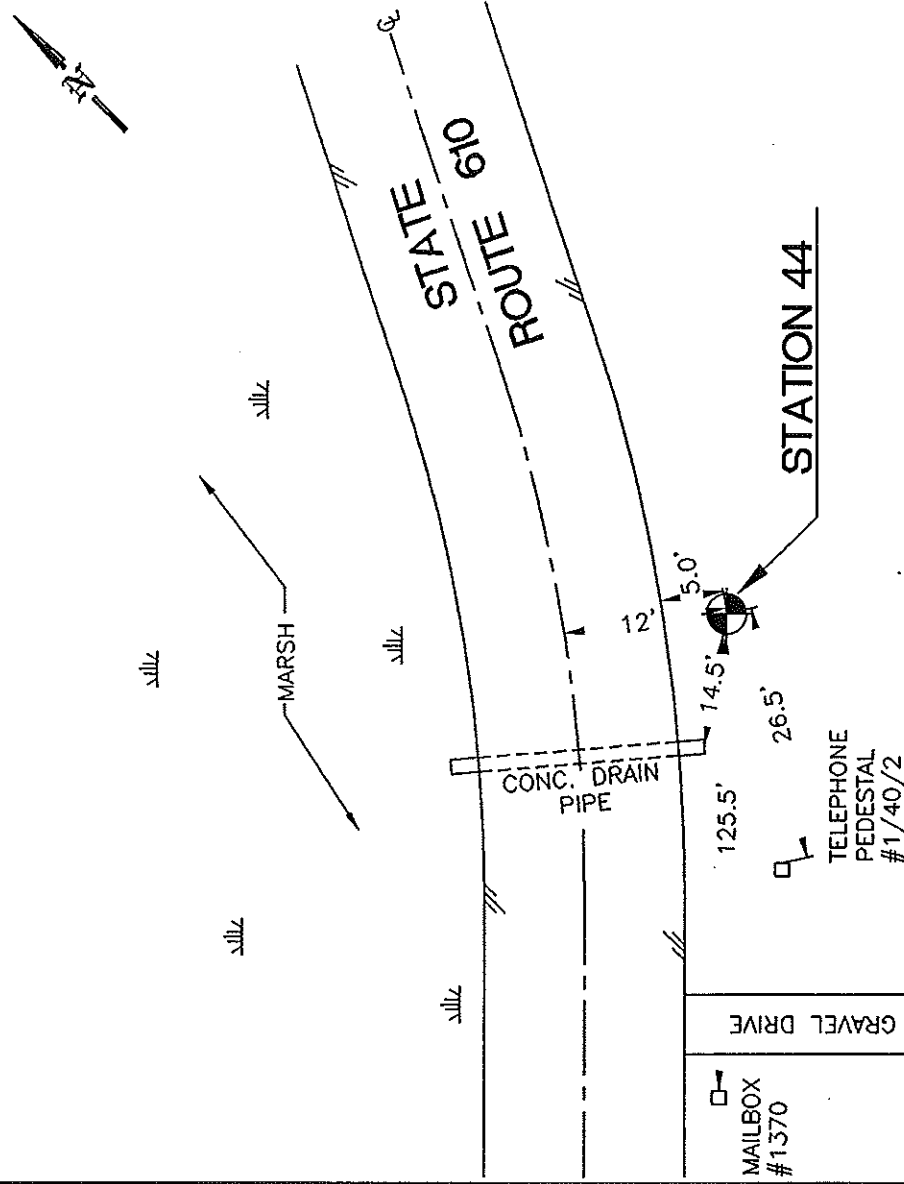
44

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 611 AND STATE ROUTE 610, PROCEED EAST 0.20 MILES ON STATE ROUTE 610. THE STATION IS LOCATED IN THE SOUTH SHOULDER OF STATE ROUTE 610. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 44".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE		LONGITUDE	
N 37° 24' 23.40112"		W 76° 18' 32.84454"	
UNITS		NORTHING	EASTING
METERS		1121345.189	3693942.574
U.S. SURVEY FT.		3678946.674	12119209.928

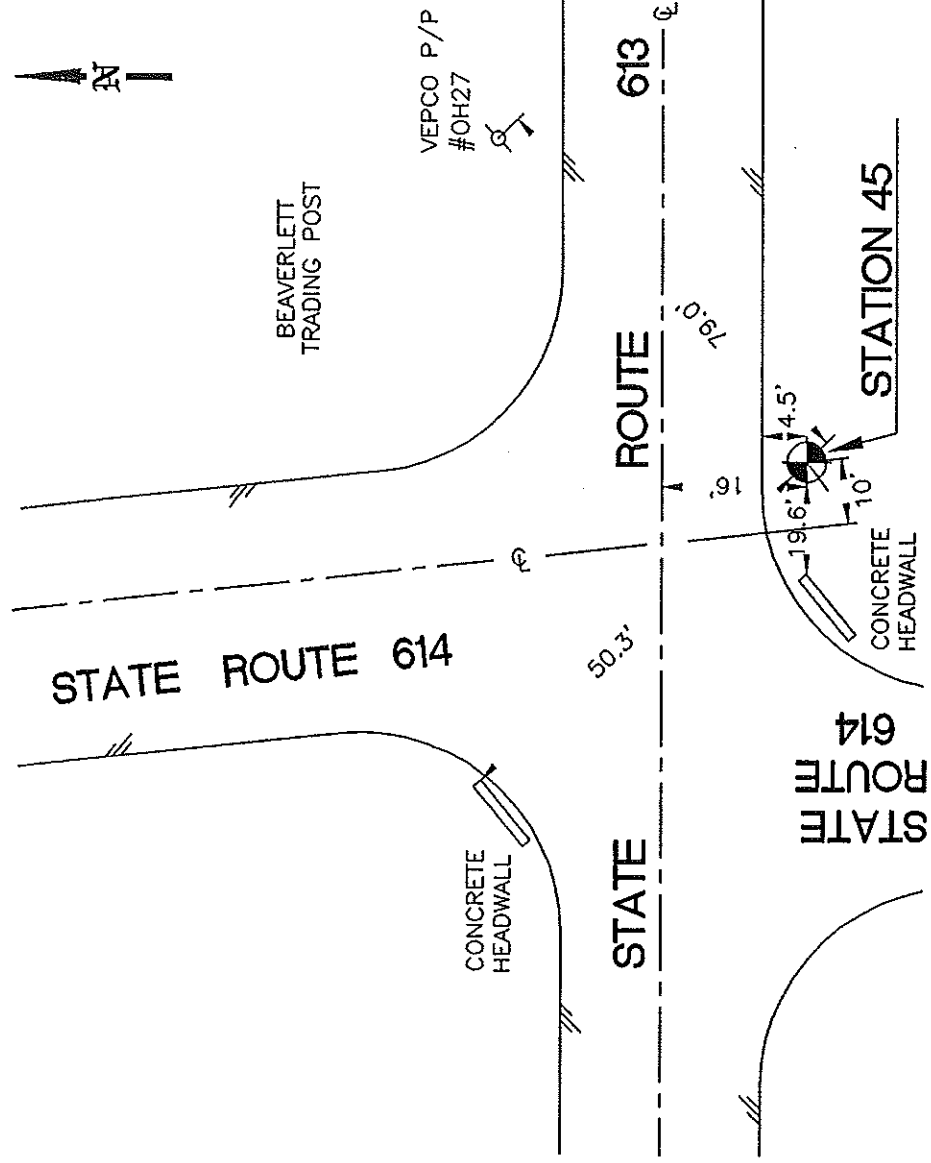
CONVERGENCE:	+01° 19' 46.91"
SCALE FACTOR:	0.999945632

REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 46	N 37° 32' 10.4" W	1794.42'	

VERTICAL DATA			
NAVD 88		NAVD 88	
ELEVATION IN METERS		ELEVATION IN FEET	
144		4.7	
(GPS DERIVED)		(GPS DERIVED)	

STATION NUMBER:	45
-----------------	----

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
 (SEPTEMBER 1999)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 24' 37.71680"	W 76° 18' 45.98277"		
UNITS	NORTHING	EASTING	
METERS	1121778.897	3693609.343	
U.S. SURVEY FT.	3680369.598	12118116.653	

CONVERGENCE: +01° 19' 38.94"

SCALE FACTOR: 0.999945682

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 45	S 37° 32' 10.4" E	1794.42'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
2.07	6.8
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

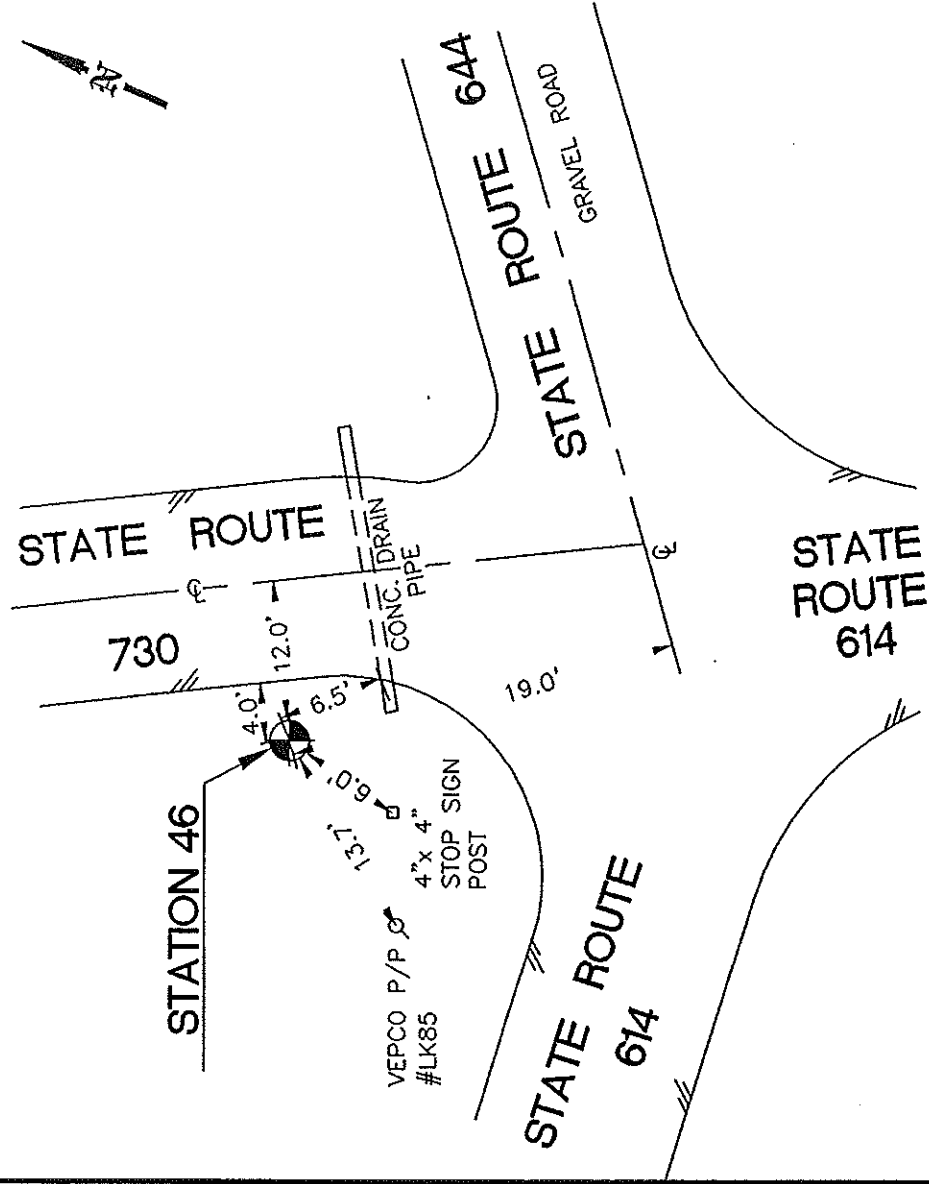
46

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

THE STATION IS LOCATED IN THE WEST SHOULDER OF STATE ROUTE 730, 19 FEET NORTH OF THE CENTERLINE OF STATE ROUTE 644. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 46".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 25' 12.00283"	W 76° 17' 11.01869"		
UNITS	NORTHING	EASTING	
METERS	1122889.989	3695919.149	
U.S. SURVEY FT.	3684014.906	12125694.741	

CONVERGENCE: +01° 20' 36.57"

SCALE FACTOR: 0.999945820

REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 48	S 47° 37' 43.2" W	1640.99'	

VERTICAL DATA			
NAVD 88	NAVD 88		
ELEVATION IN METERS	ELEVATION IN FEET		
102	3.4		
(GPS DERIVED)	(GPS DERIVED)		

STATION NUMBER:

47

GPS SERVICES PROVIDED BY:

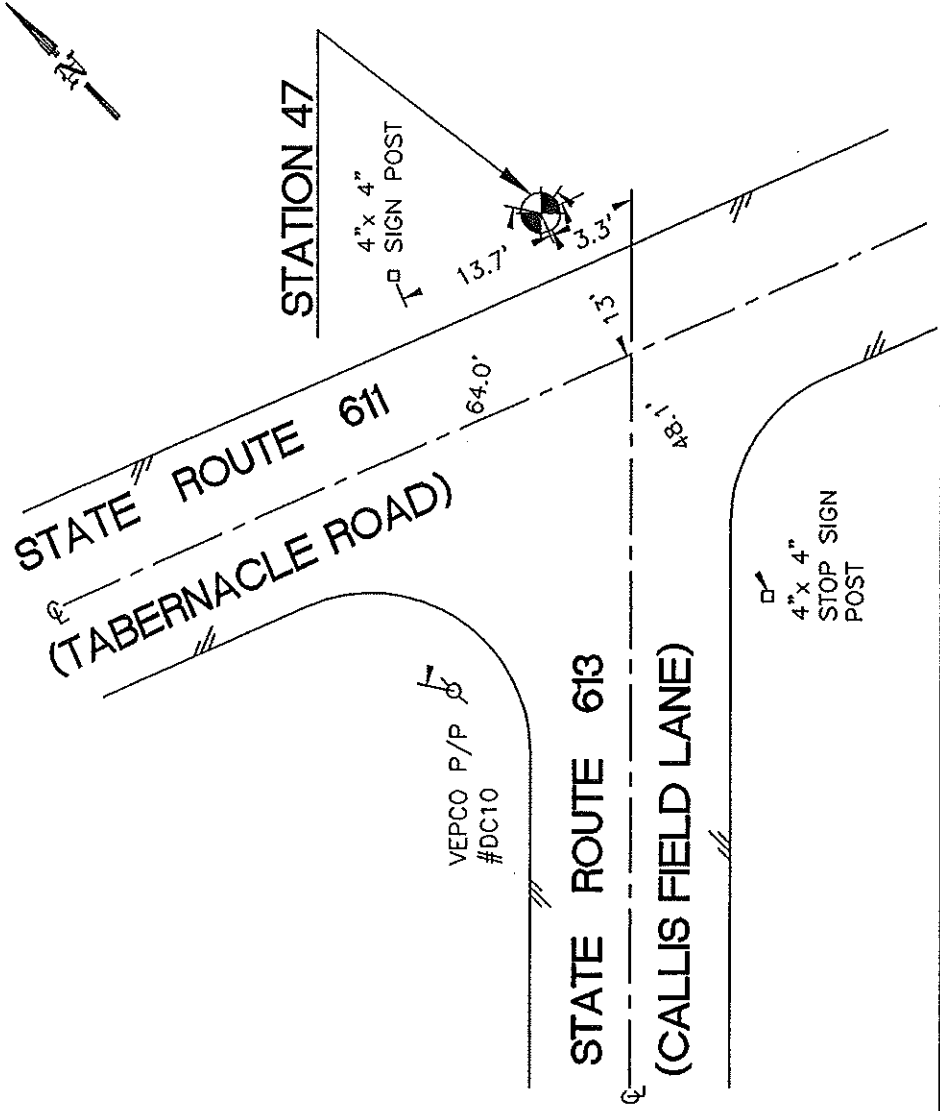
ROUSE-SIRINE ASSOCIATES, LTD.

(SEPTEMBER 1999)

TO REACH DESCRIPTION

THE STATION IS LOCATED IN THE EAST SHOULDER OF STATE ROUTE 611, 3.3 FEET NORTH OF THE CENTERLINE OF STATE ROUTE 613 AT ITS INTERSECTION WITH STATE ROUTE 611. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 47".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 25' 01.35213"	W 76° 17' 26.36439"		
UNITS	NORTHING	EASTING	
METERS	1122552.905	3695549.624	
U.S. SURVEY FT.	3682908.989	12124482.391	

CONVERGENCE: +01° 20' 27.26"

SCALE FACTOR: 0.999945774

REFERENCE AND AZIMUTH MARK LOCATIONS		
OBJECTS	BEARING	DISTANCE
STATION 47	N 47° 37' 43.2" E	1640.99'

VERTICAL DATA		
NAVD 88	NAVD 88	
ELEVATION IN METERS	ELEVATION IN FEET	
0.77	2.5	
(GPS DERIVED)	(GPS DERIVED)	

STATION NUMBER:

48

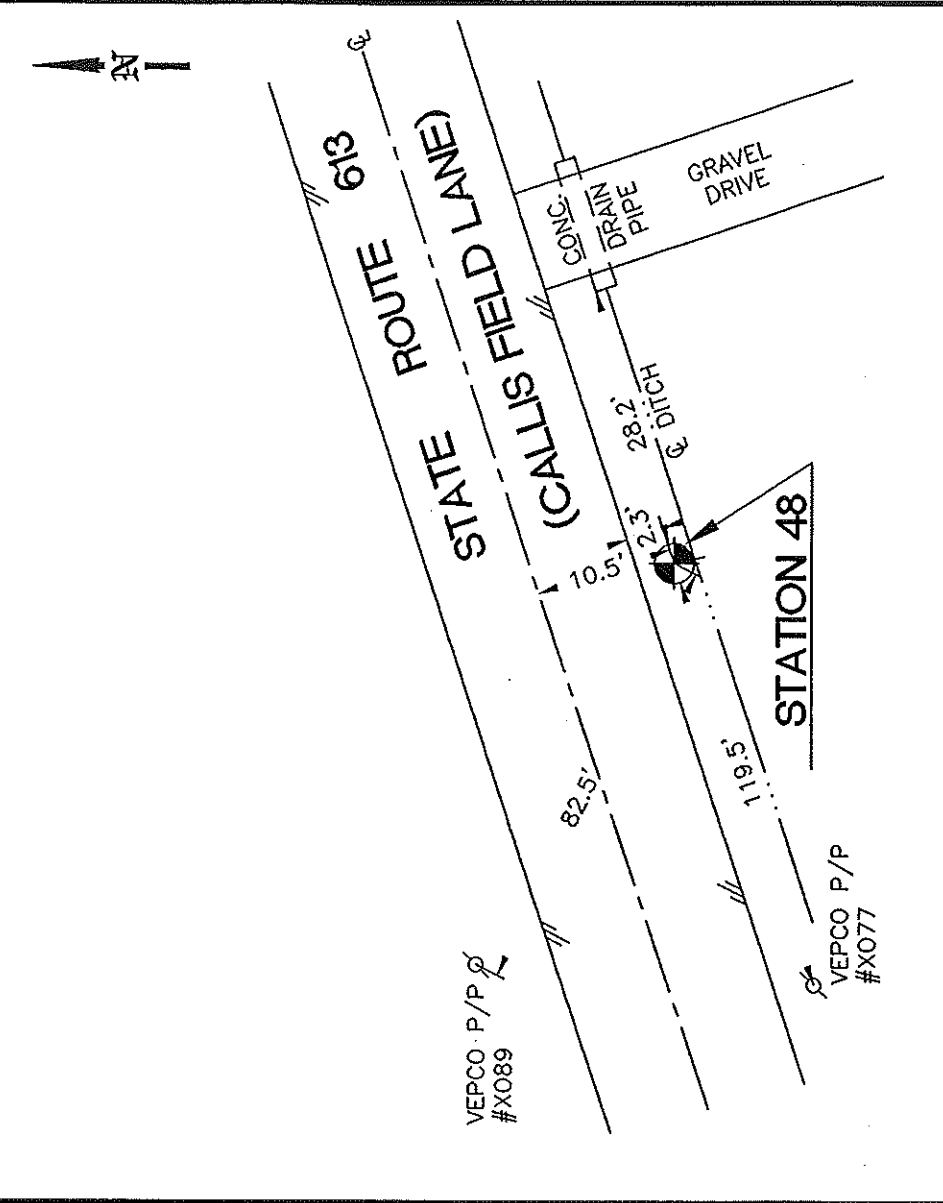
GPS SERVICES PROVIDED BY:

ROUSE-SIRINE ASSOCIATES, LTD.

(SEPTEMBER 1999)

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 611 AND STATE ROUTE 613 (CALLIS FIELD LANE), PROCEED WEST 0.30 MILES ON STATE ROUTE 613. THE STATION IS LOCATED IN THE SOUTH SHOULDER OF STATE ROUTE 613. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST, STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 48".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 25' 25.40629"	W 76° 17' 50.37779"		
UNITS	NORTHING	EASTING	
METERS	1123280.440	3694942.033	
U.S. SURVEY FT.	3685295.910	12122488.987	

CONVERGENCE: +01° 20' 12.68"

SCALE FACTOR: 0.999945881

REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 50	N 61° 28' 02.8" W	1123.14'	

VERTICAL DATA			
NAVD 88	NAVD 88		
ELEVATION IN METERS	ELEVATION IN FEET		
236	7.7		
(GPS DERIVED)	(GPS DERIVED)		

STATION NUMBER:

49

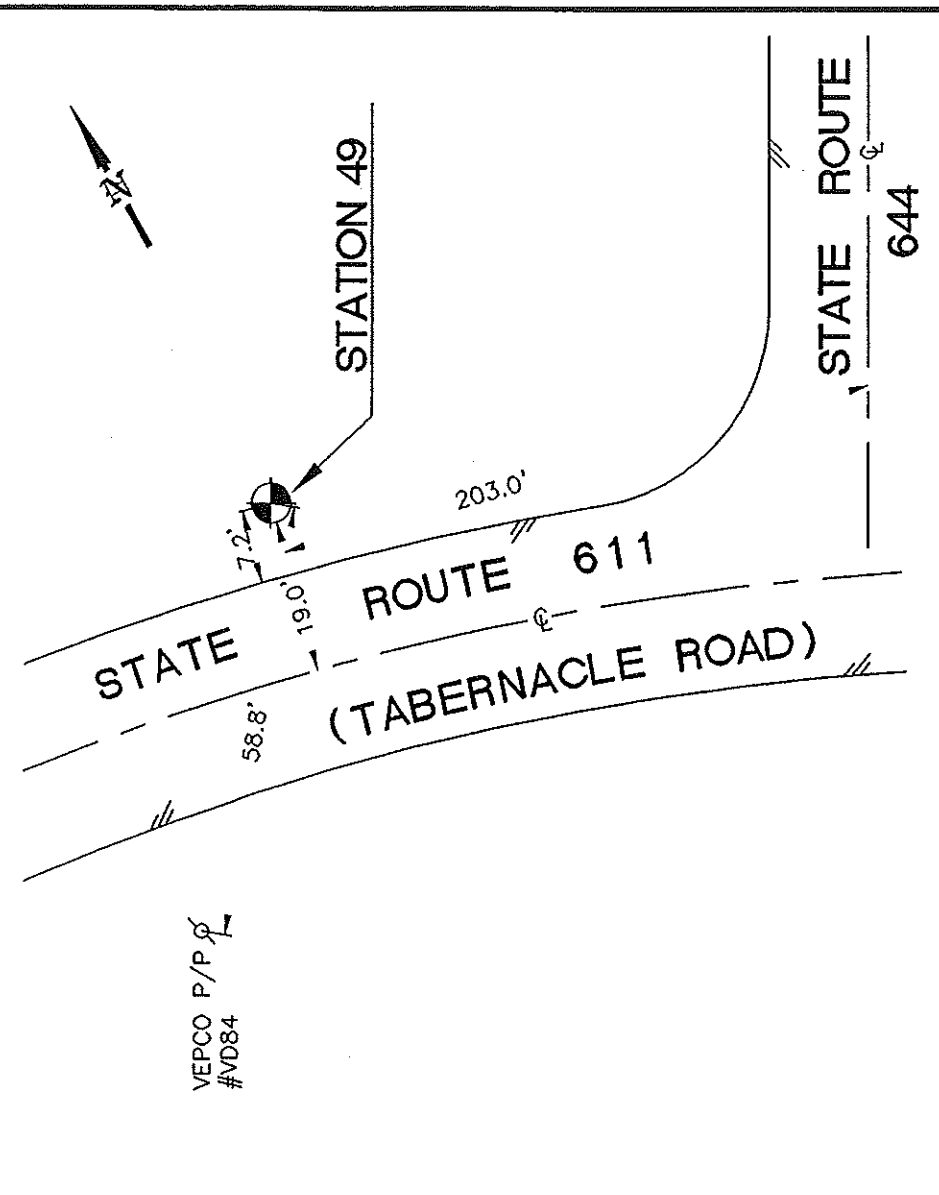
GPS SERVICES PROVIDED BY:

ROUSE-SIRINE ASSOCIATES, LTD.

(SEPTEMBER 1999)

TO REACH THE STATION FROM THE EASTERN INTERSECTION OF STATE ROUTE 644 AND STATE ROUTE 611 (TABERNACLE ROAD), PROCEED WEST 203 FEET ON STATE ROUTE 611. THE STATION IS LOCATED IN THE NORTH SHOULDER OF STATE ROUTE 611. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 49".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 25' 30.93658"	W 76° 18' 02.45227"		
UNITS	NORTHING	EASTING	
METERS	1123443.959	3694641.276	
U.S. SURVEY FT.	3685832.389	12121502.253	

CONVERGENCE: +01° 20' 05.36"

SCALE FACTOR: 0.999945908

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 49	S 61° 28' 02.8" E	1123.14'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
2.64	8.7
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

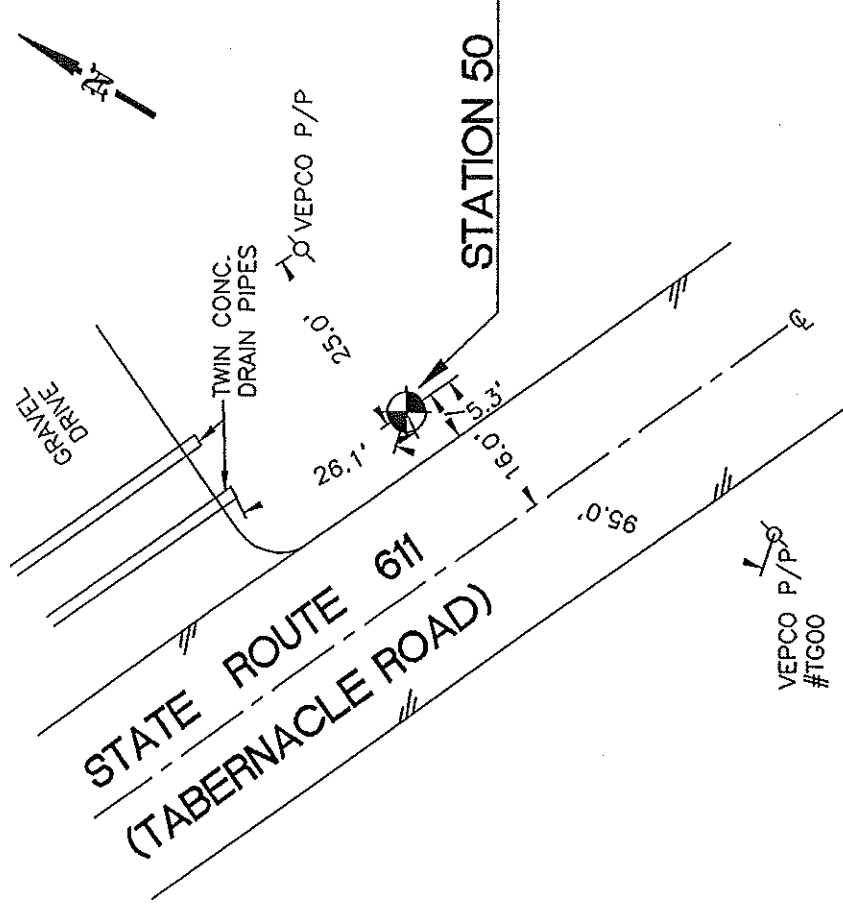
50

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE EASTERN INTERSECTION OF STATE ROUTE 644 AND STATE ROUTE 611 (TABERNACLE ROAD), PROCEED WEST 0.25 MILES ON STATE ROUTE 611. THE STATION IS LOCATED IN THE NORTH SHOULDER OF STATE ROUTE 611. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 50".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM

SOUTH ZONE (4502) NAD83(1993) VA HARN

LATITUDE LONGITUDE

N 37° 24' 35.94598" W 76° 19' 44.70281"

UNITS	NORTHING	EASTING
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

METERS	1121690.994	3692167.023
--------	-------------	-------------

U.S. SURVEY FT.	3680081.203	12113384.641
-----------------	-------------	--------------

CONVERGENCE: +01° 19' 03.30"

SCALE FACTOR: 0.999945675

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
---------	---------	----------

STATION 52	N 10° 37' 03.7" E	1121.06'
------------	-------------------	----------

VERTICAL DATA

NAVD 88

NAVD 88

ELEVATION IN METERS		ELEVATION IN FEET	
1	100	328	1056
2	100	328	1056
3	100	328	1056
4	100	328	1056
5	100	328	1056
6	100	328	1056
7	100	328	1056
8	100	328	1056
9	100	328	1056
10	100	328	1056
11	100	328	1056
12	100	328	1056
13	100	328	1056
14	100	328	1056
15	100	328	1056
16	100	328	1056
17	100	328	1056
18	100	328	1056
19	100	328	1056
20	100	328	1056
21	100	328	1056
22	100	328	1056
23	100	328	1056
24	100	328	1056
25	100	328	1056
26	100	328	1056
27	100	328	1056
28	100	328	1056
29	100	328	1056
30	100	328	1056
31	100	328	1056
32	100	328	1056
33	100	328	1056
34	100	328	1056
35	100	328	1056
36	100	328	1056
37	100	328	1056
38	100	328	1056
39	100	328	1056
40	100	328	1056
41	100	328	1056
42	100	328	1056
43	100	328	1056
44	100	328	1056
45	100	328	1056
46	100	328	1056
47	100	328	1056
48	100	328	1056
49	100	328	1056
50	100	328	1056
51	100	328	1056
52	100	328	1056
53	100	328	1056
54	100	328	1056
55	100	328	1056
56	100	328	1056
57	100	328	1056
58	100	328	1056
59	100	328	1056
60	100	328	1056
61	100	328	1056
62	100	328	1056
63	100	328	1056
64	100	328	1056
65	100	328	1056
66	100	328	1056
67	100	328	1056
68	100	328	1056
69	100	328	1056
70	100	328	1056
71	100	328	1056
72	100	328	1056
73	100	328	1056
74	100	328	1056
75	100	328	1056
76	100	328	1056
77	100	328	1056
78	100	328	1056
79	100	328	1056
80	100	328	1056
81	100	328	1056
82	100	328	1056
83	100	328	1056
84	100	328	1056
85	100	328	1056
86	100	328	1056
87	100	328	1056
88	100	328	1056
89	100	328	1056
90	100	328	1056
91	100	328	1056
92	100	328	1056
93	100	328	1056
94	100	328	1056
95			

2.82

32

(GPS DERIVED)

STATION NUMBER:

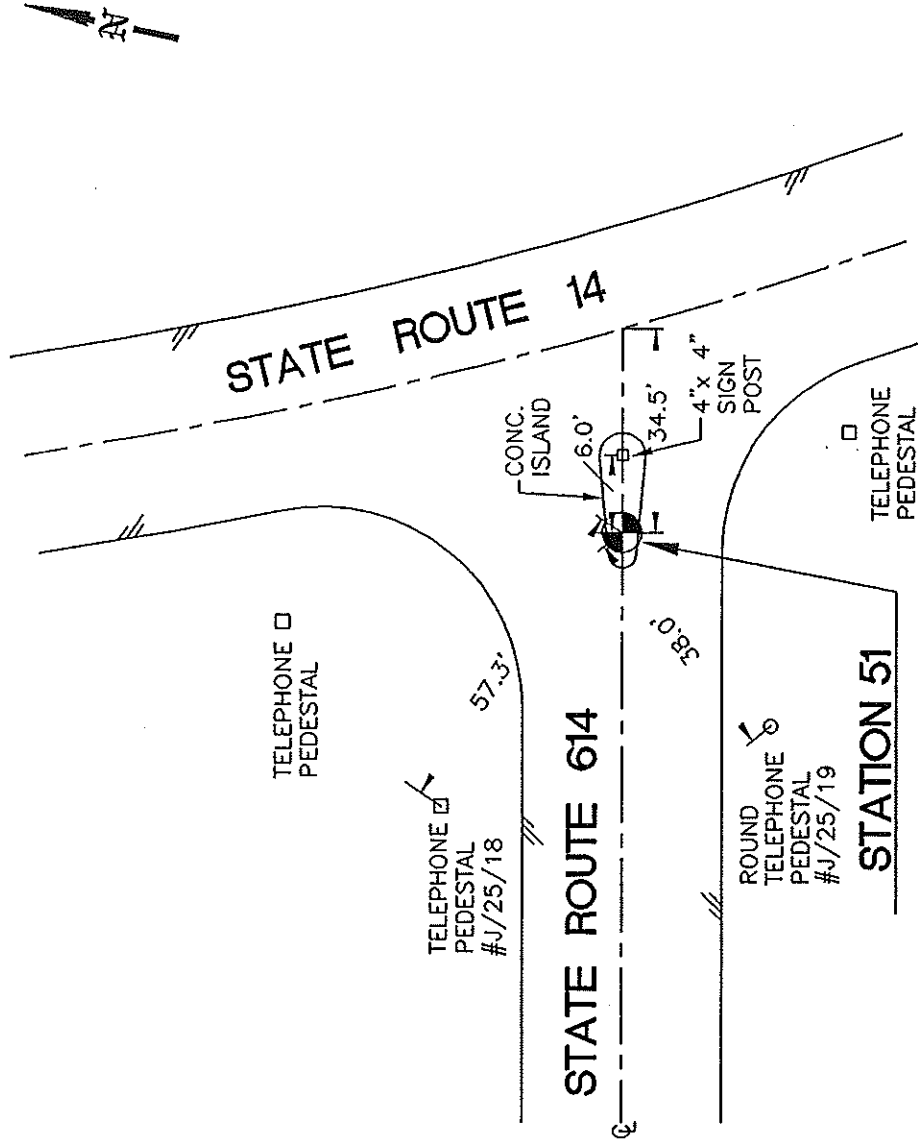
5

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

THE STATION IS LOCATED IN THE CONCRETE ISLAND AT THE INTERSECTION OF STATE ROUTE 14 AND STATE ROUTE 614. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH IN THE TOP OF A CONCRETE ISLAND LOCATED IN THE CENTERLINE OF STATE ROUTE 614, 34.5' WEST OF THE CENTERLINE OF STATE ROUTE 14. STAMPED "COUNTY OF MATHEW, PLANNING AND ZONING, NO. 51".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 24' 46.79052"	W 76° 19' 41.82902"		
UNITS	NORTHING	EASTING	
METERS	1122026.842	3692229.983	
U.S. SURVEY FT.	3681183.064	12113591.203	

CONVERGENCE: +01° 19' 05.04"

SCALE FACTOR: 0.999945716

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 51	S 10° 37' 03.7" W	1121.06'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
2.60	8.5
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

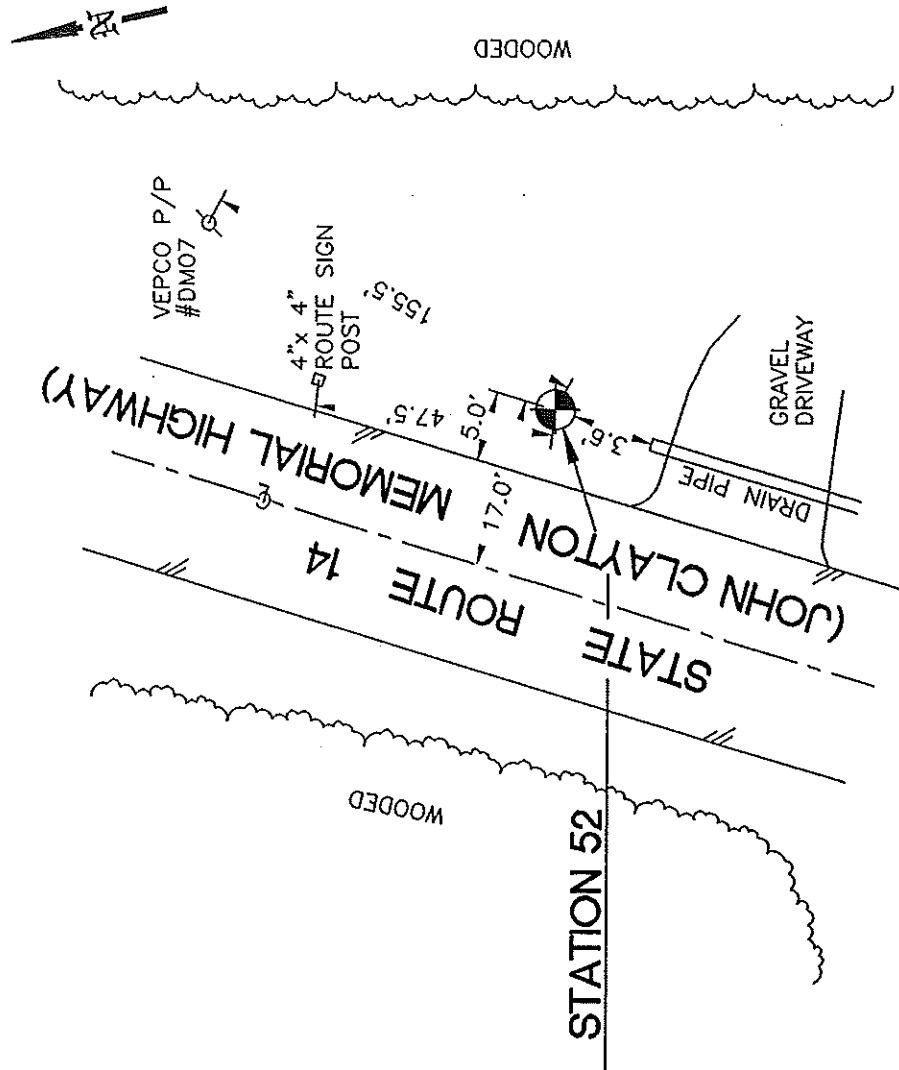
52

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 14 (JOHN CLAYTON MEMORIAL HIGHWAY) AND STATE ROUTE 614, PROCEED NORTH 0.2 MILES ON STATE ROUTE 14. THE STATION IS LOCATED IN THE EAST SHOULDER OF STATE ROUTE 14. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST, STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 52".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 25' 48.05756"	NORTHING	EASTING	
UNITS	1123865.772	3690032.258	
METERS	3687216.287	12106380.833	
U.S. SURVEY FT.			

CONVERGENCE: +01° 18' 11.84"

SCALE FACTOR: 0.999945995

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 54	N 48° 55' 39.0" E	1629.70'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
2.93	9.6
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

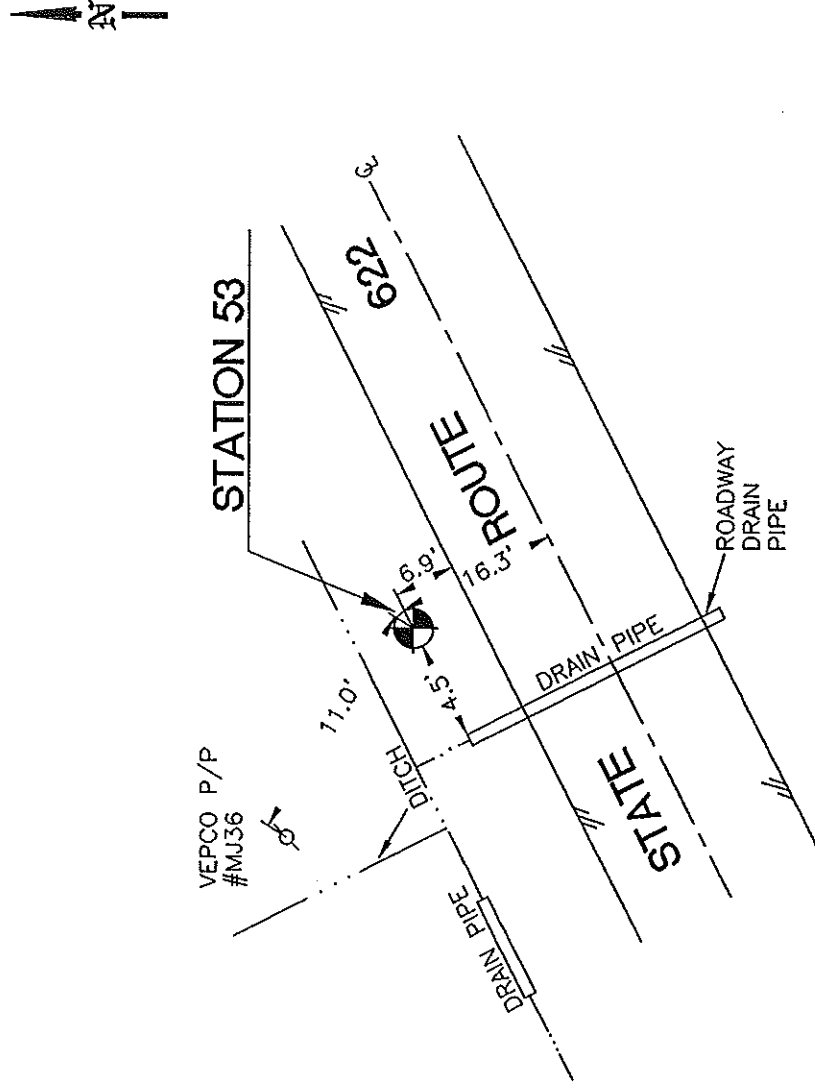
53

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE SOUTHERN INTERSECTION OF STATE ROUTE 622 AND STATE ROUTE 623 (MAGNOLIA ROAD), PROCEED EAST 0.08 MILES ON STATE ROUTE 622. THE STATION IS LOCATED IN THE NORTH SHOULDER OF STATE ROUTE 622. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 53".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA	
VIRGINIA COORDINATE SYSTEM	
SOUTH ZONE (4502) NAD83(1993) VA HARN	
LATITUDE	LONGITUDE
N 37° 25' 58.36486"	W 76° 20' 53.94955"
UNITS	NORTHING
METERS	1124192.133
U.S. SURVEY FT.	3688287.023
	12107609.430

CONVERGENCE: +01° 18' 21.27"

SCALE FACTOR: 0.999946050

REFERENCE AND AZIMUTH MARK LOCATIONS		
OBJECTS	BEARING	DISTANCE
STATION 53	S 48° 55' 39.0" W	1629.70'

VERTICAL DATA	
NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
3.18	10.4
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

54

GPS SERVICES PROVIDED BY:

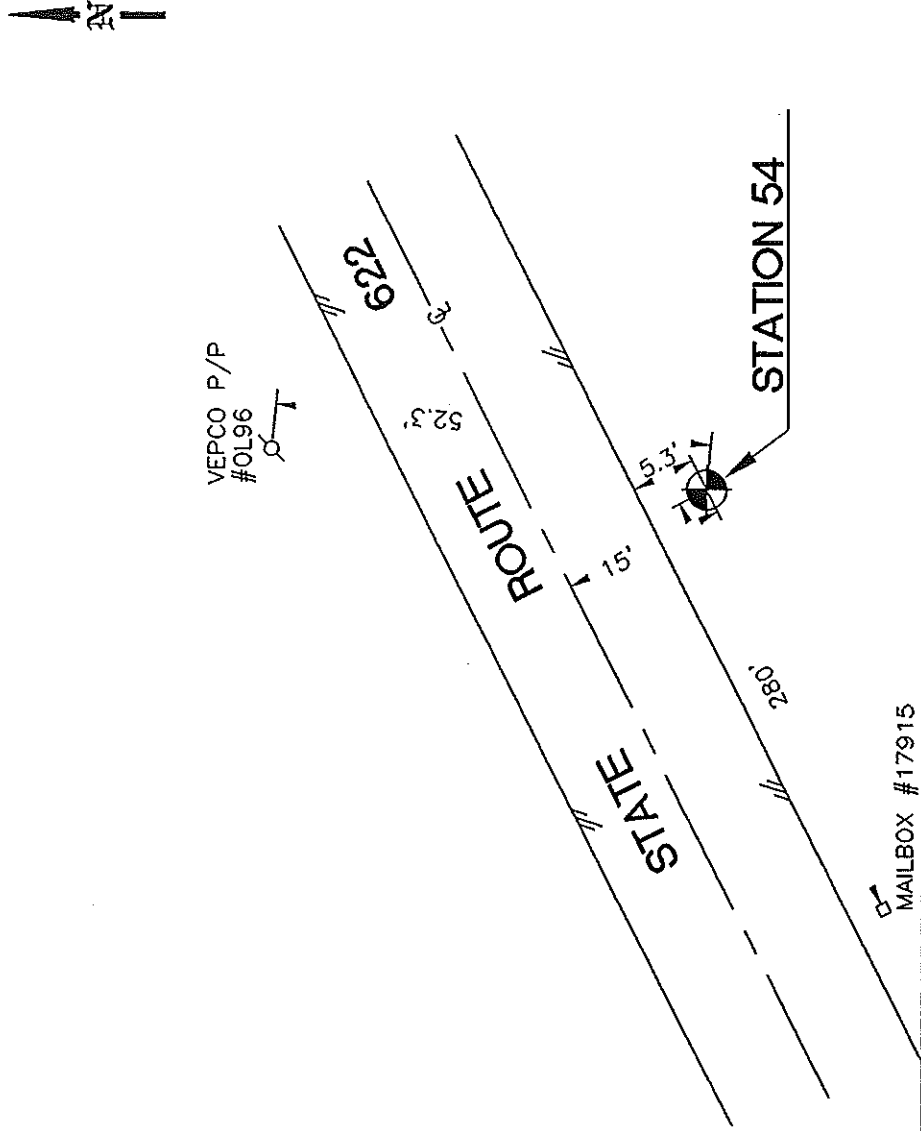
ROUSE-SIRINE ASSOCIATES, LTD.

(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE NORTHERN INTERSECTION OF STATE ROUTE 623 AND STATE ROUTE 622, PROCEED WEST 0.1 MILES ON STATE ROUTE 622. THE STATION IS LOCATED IN THE SOUTH SHOULDER OF STATE ROUTE 622. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 54".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 27' 32.70426"	W 76° 21' 14.78816"		
UNITS	NORTHING	EASTING	
METERS	1127087.998	3689828.484	
U.S. SURVEY FT.	3697787.873	12105712.285	

CONVERGENCE:	+01° 18' 08.62"
SCALE FACTOR:	0.999946675

REFERENCE AND AZIMUTH MARK LOCATIONS		
OBJECTS	BEARING	DISTANCE
STATION 56	N 84° 42' 59.1" W	2558.93'

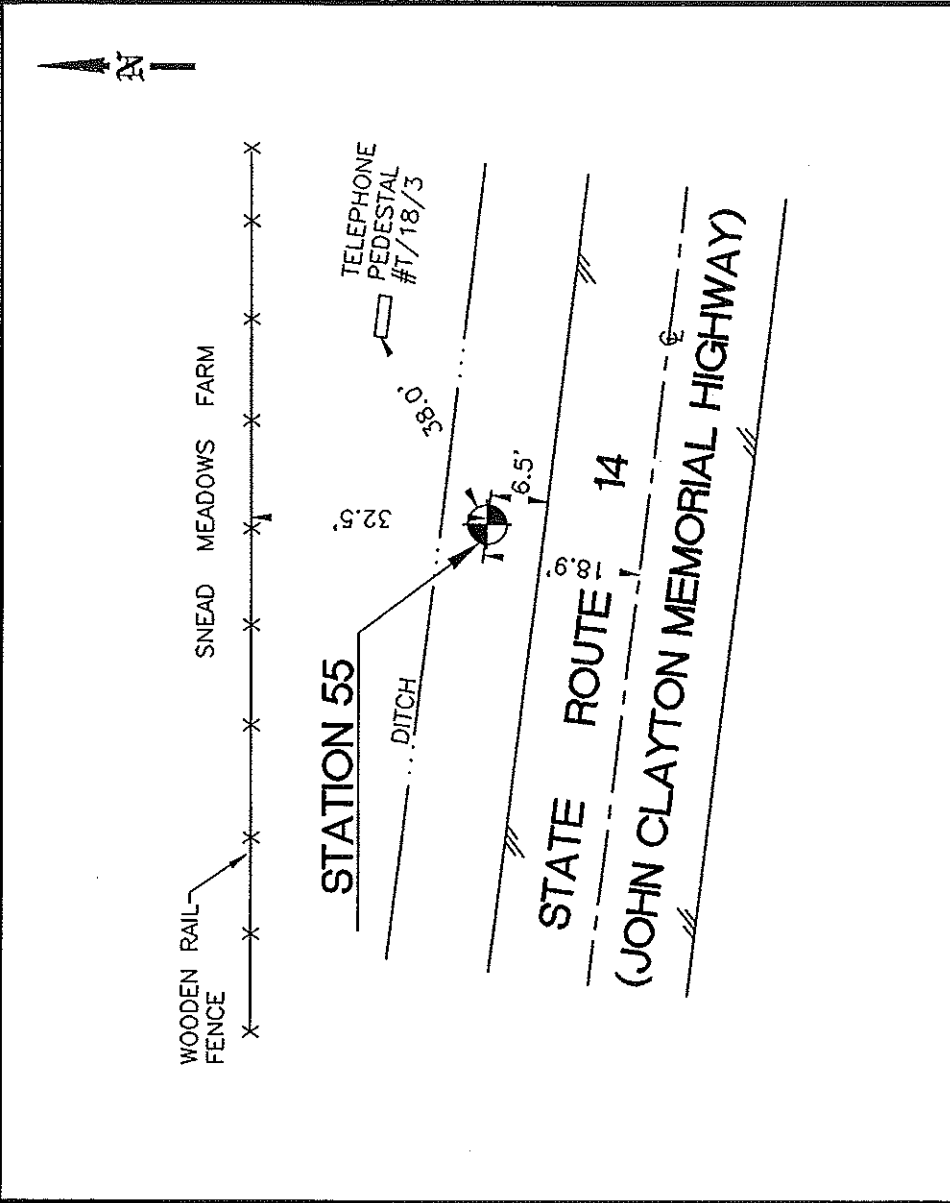
VERTICAL DATA	
NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
3.84	12.6
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:	55
-----------------	----

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
 (SEPTEMBER 1999)

TO REACH THE STATION FROM THE WESTERN INTERSECTION OF STATE ROUTE 611 AND STATE ROUTE 14 (JOHN CLAYTON MEMORIAL HIGHWAY), PROCEED WEST 0.7 MILES ON STATE ROUTE 14. THE STATION IS LOCATED IN THE NORTH SHOULDER OF STATE ROUTE 14. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 55".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 27' 35.60491"	W 76° 21' 46.31749"		
UNITS	NORTHING	EASTING	
METERS	1127159.821	3689051.835	
U.S. SURVEY FT.	3698023.513	12103164.229	

CONVERGENCE: +01° 17' 49.49"

SCALE FACTOR: 0.999946697

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 55	S 84° 42' 59.1" E	2558.93'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
5.52	18.1
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

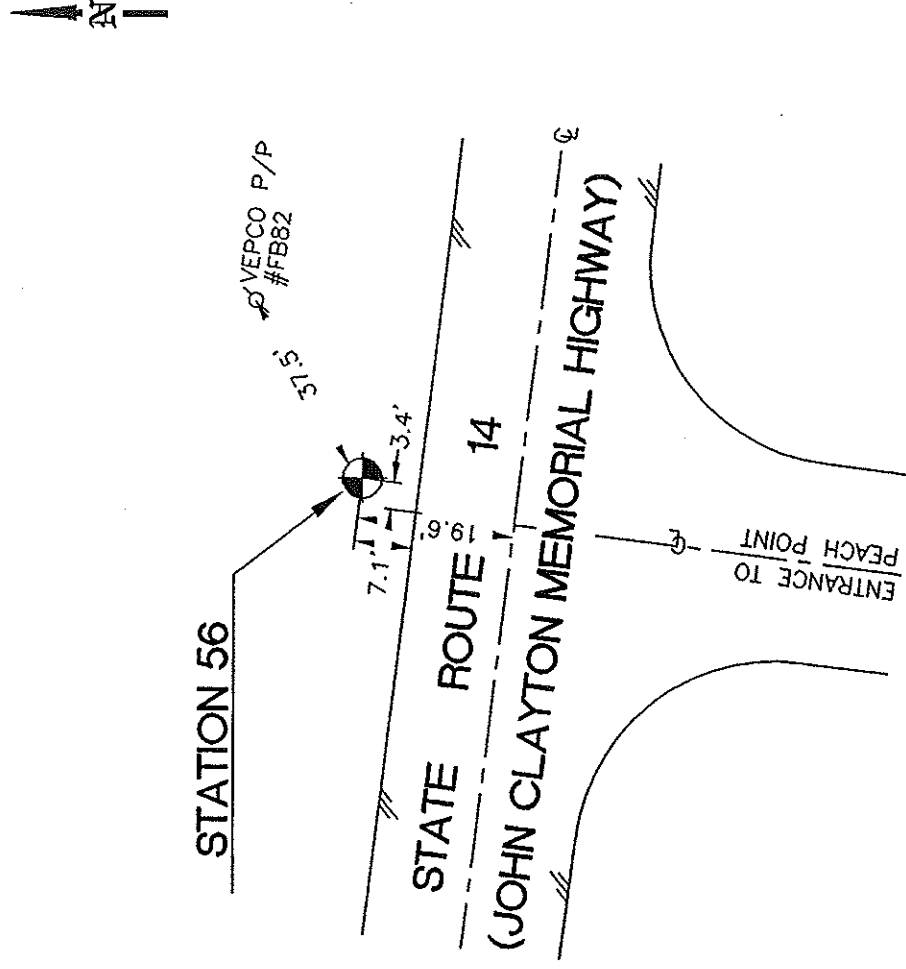
56

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
 (SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE WESTERN INTERSECTION OF STATE ROUTE 611 AND STATE ROUTE 14 (JOHN CLAYTON MEMORIAL HIGHWAY), PROCEED WEST 1.16 MILES ON STATE ROUTE 14. THE STATION IS LOCATED IN THE NORTH SHOULDER OF STATE ROUTE 14. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 56".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 27' 11.35911"	W 76° 23' 04.58572"		
UNITS	NORTHING	EASTING	
METERS	1126369.245	3687145.672	
U.S. SURVEY FT.	3695429.765	12096910.426	

CONVERGENCE: +01° 17' 01.98"

SCALE FACTOR: 0.999946515

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 58	N 38° 34' 58.7" E	1126.49'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
4.36	14.3
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

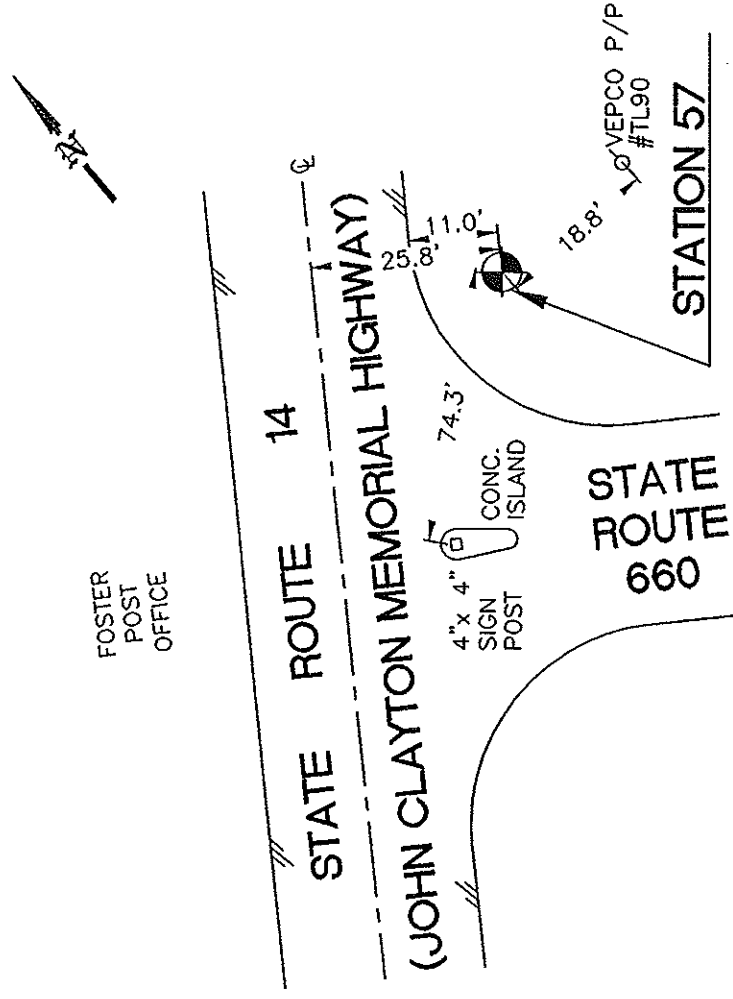
57

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

THE STATION IS LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF STATE ROUTE 14 (JOHN CLAYTON MEMORIAL HIGHWAY) AND STATE ROUTE 660. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET 0.3' BELOW THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 57".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 27' 19.90767"	W 76° 22' 55.63010"		
UNITS	NORTHING	EASTING	
METERS	1126637.647	3687359.804	
U.S. SURVEY FT.	3696310.347	12097612.957	

CONVERGENCE:	+01° 17' 07.42"		
SCALE FACTOR:	0.999946578		

REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 57	S 38° 34' 58.7" W	1126.49'	

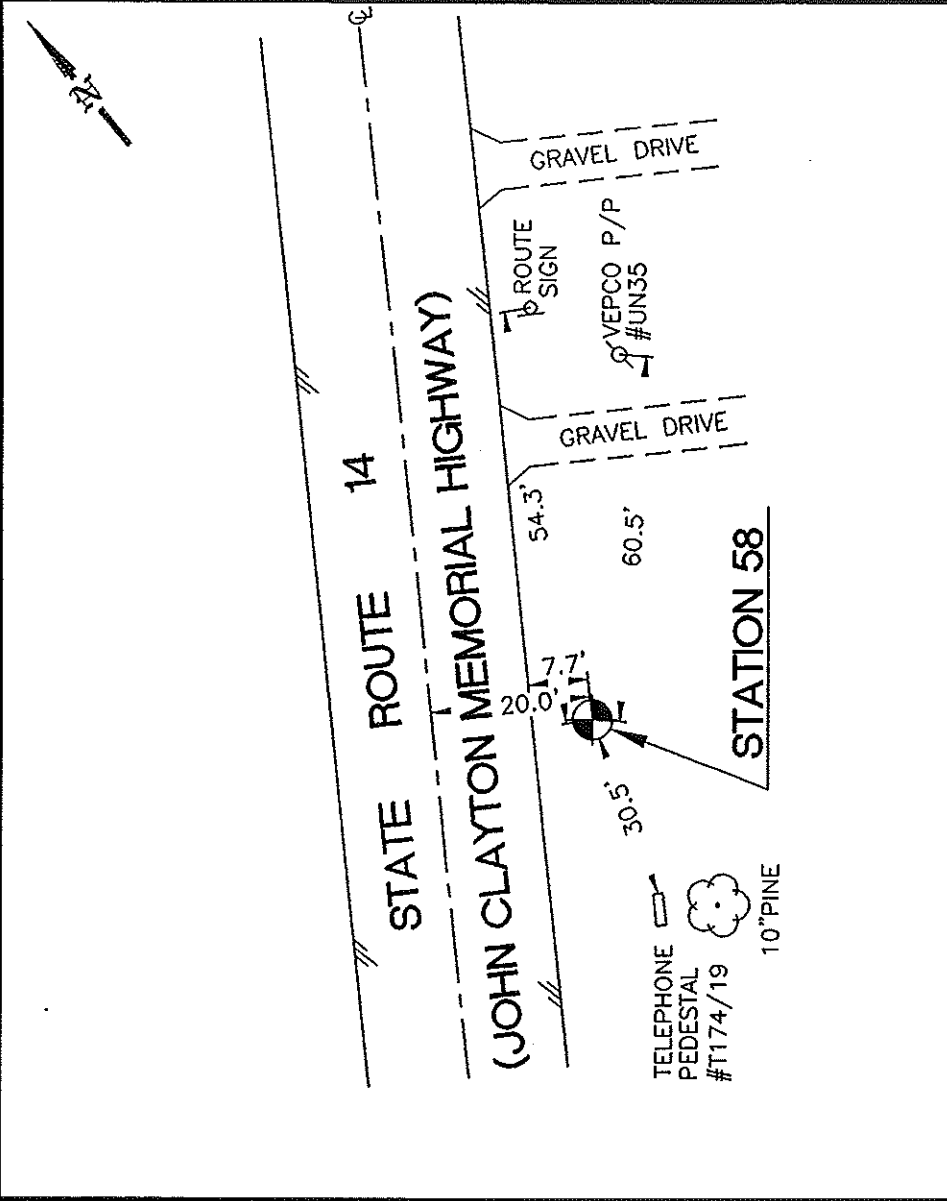
VERTICAL DATA		
NAVD 88	NAVD 88	
ELEVATION IN METERS	ELEVATION IN FEET	
2.612	8.57	

STATION NUMBER:	58
-----------------	----

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
 (SEPTEMBER 1999)

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 14 (JOHN CLAYTON MEMORIAL HIGHWAY) AND STATE ROUTE 626, PROCEED WEST 0.1 MILES ON STATE ROUTE 14. THE STATION IS LOCATED IN THE SOUTH SHOULDER OF STATE ROUTE 14. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 58".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 26' 52.41552"	W 76° 24' 40.61958"		
UNITS	NORTHING	EASTING	
METERS	1125732.849	3684798.987	
U.S. SURVEY FT.	3693341.855	12089211.343	

CONVERGENCE: +01° 16' 03.70"

SCALE FACTOR: 0.999946382

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 60	S 51° 37' 45.6" E	1994.20'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
2.70	8.8
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

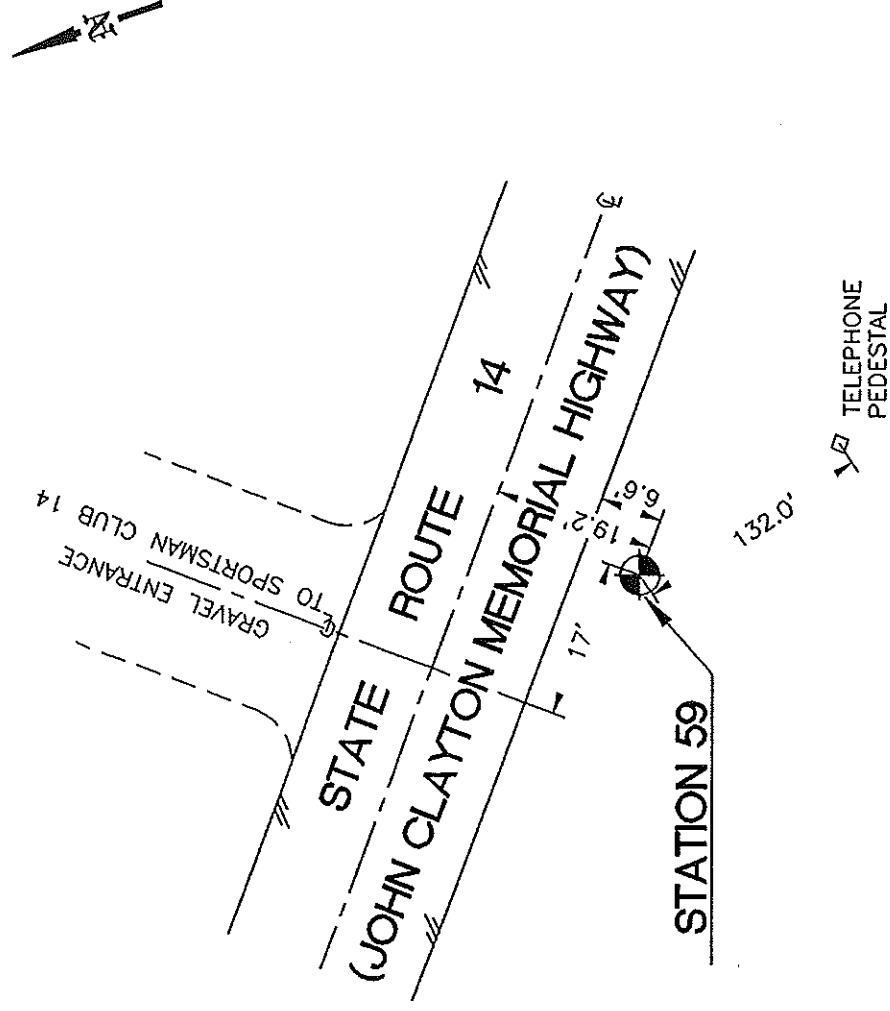
59

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 14 (JOHN CLAYTON MEMORIAL HIGHWAY) AND STATE ROUTE 620, PROCEED EAST 0.15 MILES ON STATE ROUTE 14. THE STATION IS LOCATED IN THE SOUTH SHOULDER OF STATE ROUTE 14. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 59".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 26' 39.83678"	W 76° 24' 21.57587"		
UNITS	NORTHING	EASTING	
METERS	1125355.538	3685275.536	
U.S. SURVEY FT.	3692103.961	12090774.821	

CONVERGENCE: +01° 16' 15.26"

SCALE FACTOR: 0.999946299

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 59	N 57° 37' 45.6" W	1994.20'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
2.54	8.3
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

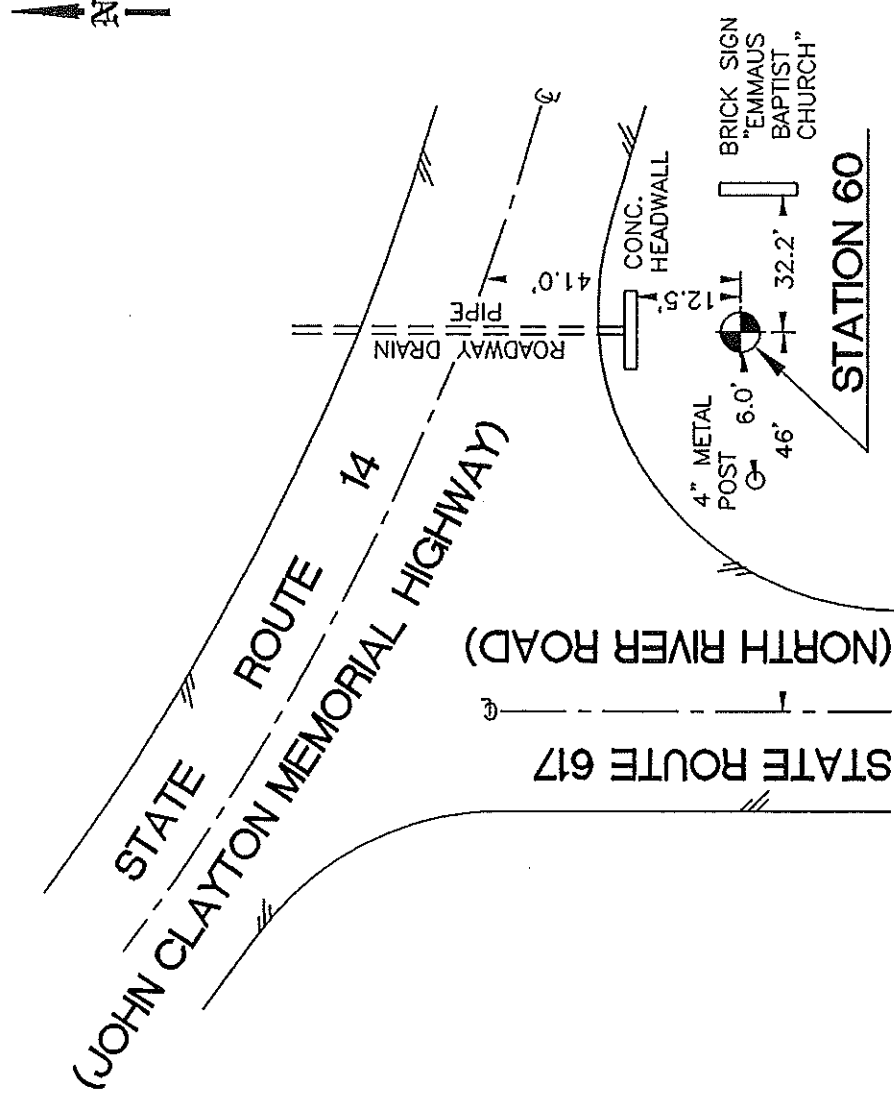
60

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

THE STATION IS LOCATED AT THE SOUTHEAST CORNER OF STATE ROUTE 14 (JOHN CLAYTON MEMORIAL HIGHWAY) AND STATE ROUTE 617 (NORTH RIVER ROAD). THE STATION IS ADJACENT TO THE EMMAUS BAPTIST CHURCH PROPERTY. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 60".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 27' 32.92424"	NORTHING	EASTING	
	1126956.945	3683665.656	
U.S. SURVEY FT.	3697357.910	12085493.073	

CONVERGENCE: +01° 15' 36.38"

SCALE FACTOR: 0.999946676

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 62	N 24° 17' 37.0" W	1249.02'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
3.544	11.63

STATION NUMBER:

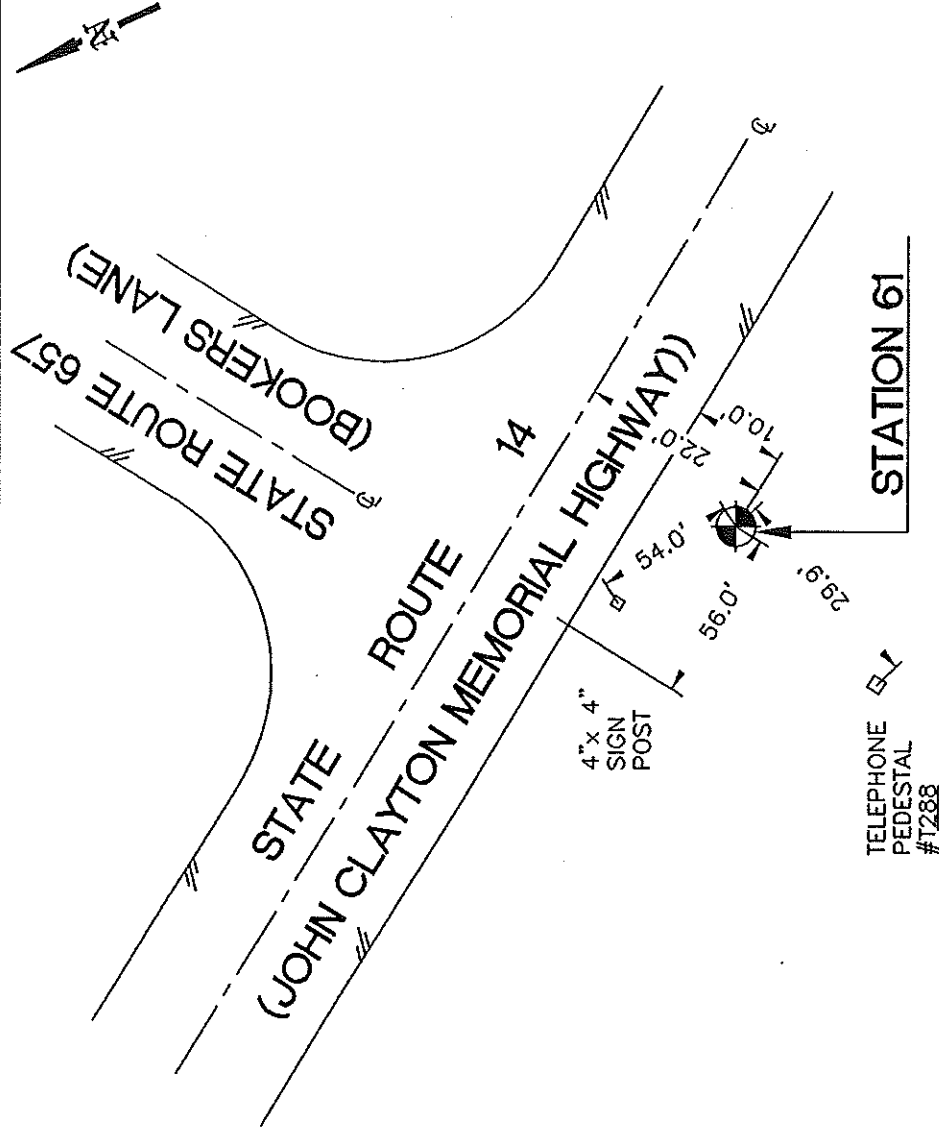
61

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

THE STATION IS LOCATED IN THE WEST SHOULDER OF STATE ROUTE 14 (JOHN CLAYTON MEMORIAL HIGHWAY), 56' SOUTH OF THE INTERSECTION WITH STATE ROUTE 657 (BOOKERS LANE). THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 61".

LOCATION SKETCH (NOT TO SCALE)



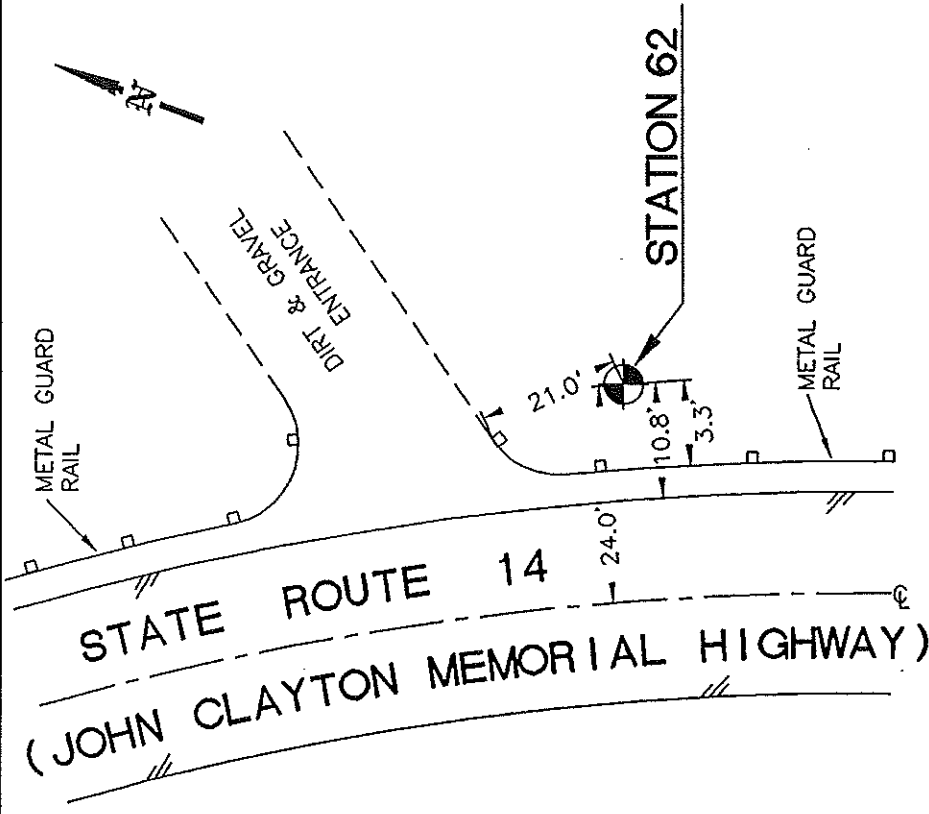
COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE		LONGITUDE	
N 37° 27' 44.28896"		W 76° 25' 31.68577"	
UNITS	NORTHING	EASTING	
METERS	1127303.936	3683509.030	
U.S. SURVEY FT.	3698496.330	12084979.209	
CONVERGENCE: +01° 15' 32.71"			

SCALE FACTOR: 0.999946766			
REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 61	S 24° 17' 37.0" E	1249.02'	

VERTICAL DATA		
NAVD 88	NAVD 88	
ELEVATION IN METERS	ELEVATION IN FEET	
3.97	13.0	
(GPS DERIVED)	(GPS DERIVED)	

STATION NUMBER:	
62	
GPS SERVICES PROVIDED BY:	
ROUSE-SIRINE ASSOCIATES, LTD.	
(SEPTEMBER 1999)	



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 28' 19.09816"	W 76° 25' 12.40023"		
UNITS	NORTHING	EASTING	
METERS	1128387.198	3683959.191	
U.S. SURVEY FT.	3702050.332	12086456.112	

CONVERGENCE: +01° 15' 44.41"

SCALE FACTOR: 0.999947058

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 64	N 33° 11' 02.4" E	801.53'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
1.49	4.9
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

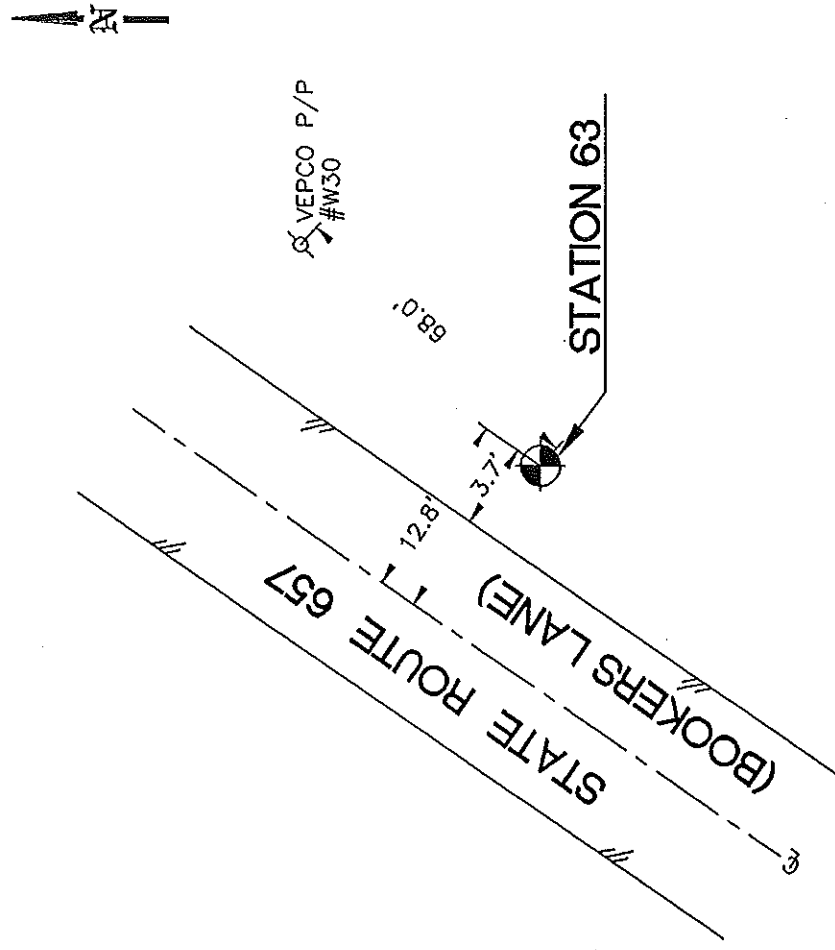
63

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
 (SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 14 (JOHN CLAYTON MEMORIAL HIGHWAY) AND STATE ROUTE 657 (BOOKERS LANE), PROCEED NORTH 0.90 MILES ON STATE ROUTE 657. THE STATION IS LOCATED IN THE EAST SHOULDER OF STATE ROUTE 657. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 63".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 28' 25.63338"	W 76° 25' 06.77600"		
UNITS	NORTHING	EASTING	
METERS	1128591.662	3684092.906	
U.S. SURVEY FT.	3702721.144	12086894.809	

CONVERGENCE: +01° 15' 47.82"

SCALE FACTOR: 0.999947116

REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 63	S 33° 11' 02.4" W	801.53'	

VERTICAL DATA		
NAVD 88	NAVD 88	
ELEVATION IN METERS	ELEVATION IN FEET	
3.62	11.9	
(GPS DERIVED)	(GPS DERIVED)	

STATION NUMBER:

64

GPS SERVICES PROVIDED BY:

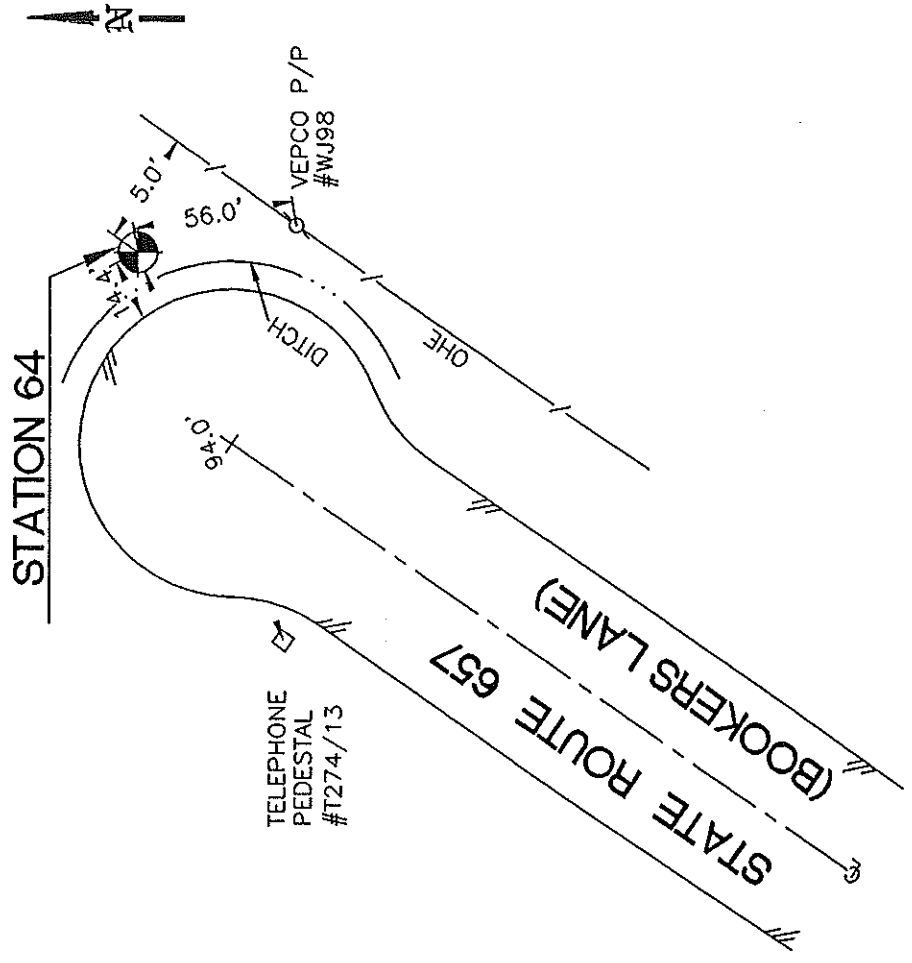
ROUSE-SIRINE ASSOCIATES, LTD.

(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 14 (JOHN CLAYTON MEMORIAL HIGHWAY) AND STATE ROUTE 657 (BOOKERS LANE), PROCEED NORTH 1.1 MILES ON STATE ROUTE 657. THE STATION IS LOCATED IN THE EAST SIDE OF STATE ROUTE 657 AT THE PRESENT NORTHERN TERMINUS OF THE ROADWAY. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST, 3' NORTHEAST OF A DITCH. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 64".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE		LONGITUDE	
N 37° 27' 51.42339"		W 76° 26' 31.69772"	
UNITS	NORTHING	EASTING	
METERS	1127491.549	3682029.876	
U.S. SURVEY FT.	3699111.857	12080126.352	

CONVERGENCE: +01° 14' 56.28"

SCALE FACTOR: 0.999946823

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION Z457	N 78° 05' 00.0" W	1370.58'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
5.09	16.7
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

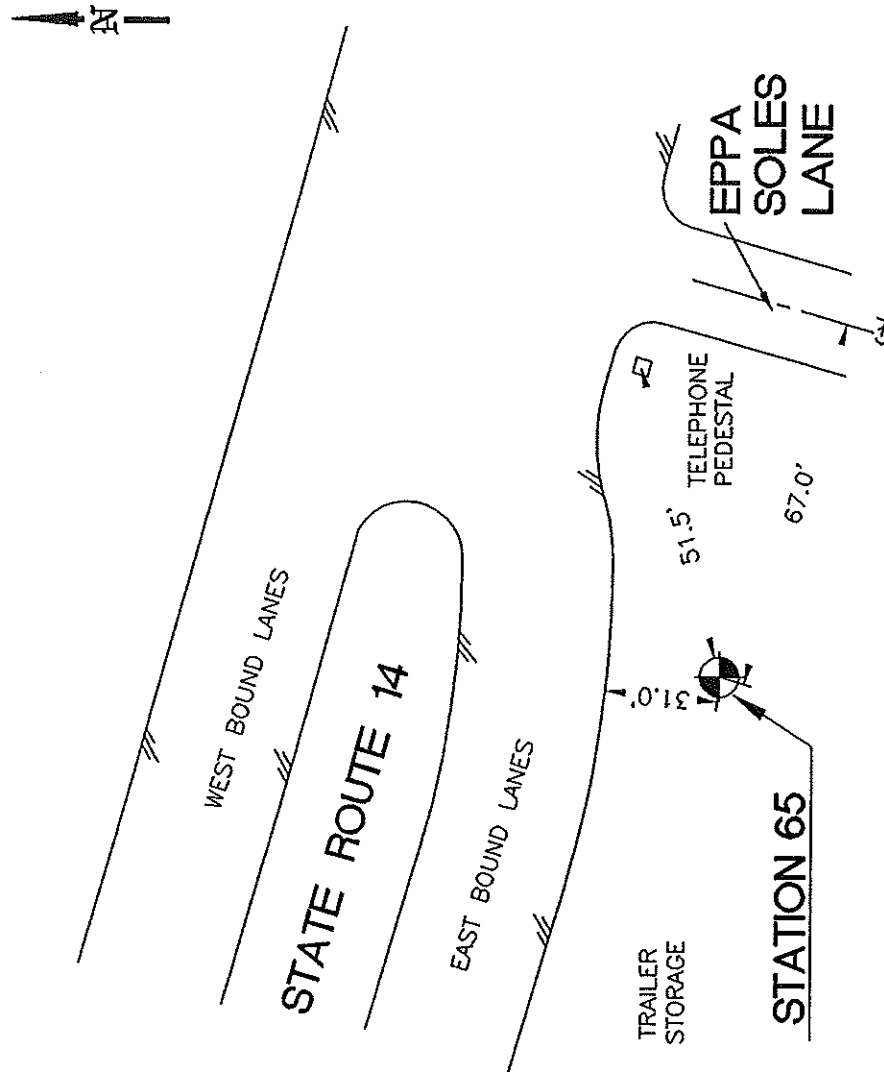
65

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 3 AND STATE ROUTE 14, PROCEED EAST 0.15 MILES ON STATE ROUTE 14. THE STATION IS LOCATED ON THE SOUTH SIDE OF STATE ROUTE 14, 67 FEET WEST OF THE CENTERLINE OF EPPA SOLES LANE. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 65".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 31' 04.84801"	W 76° 24' 13.31263"		
UNITS	NORTHING	EASTING	
METERS	1133527.801	3685297.191	
U.S. SURVEY FT.	3718915.794	12090845.867	

CONVERGENCE: +01° 16' 20.27"

SCALE FACTOR: 0.999948840

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 67	N 07° 52' 29.3" W	1531.76'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
9.10	29.9
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

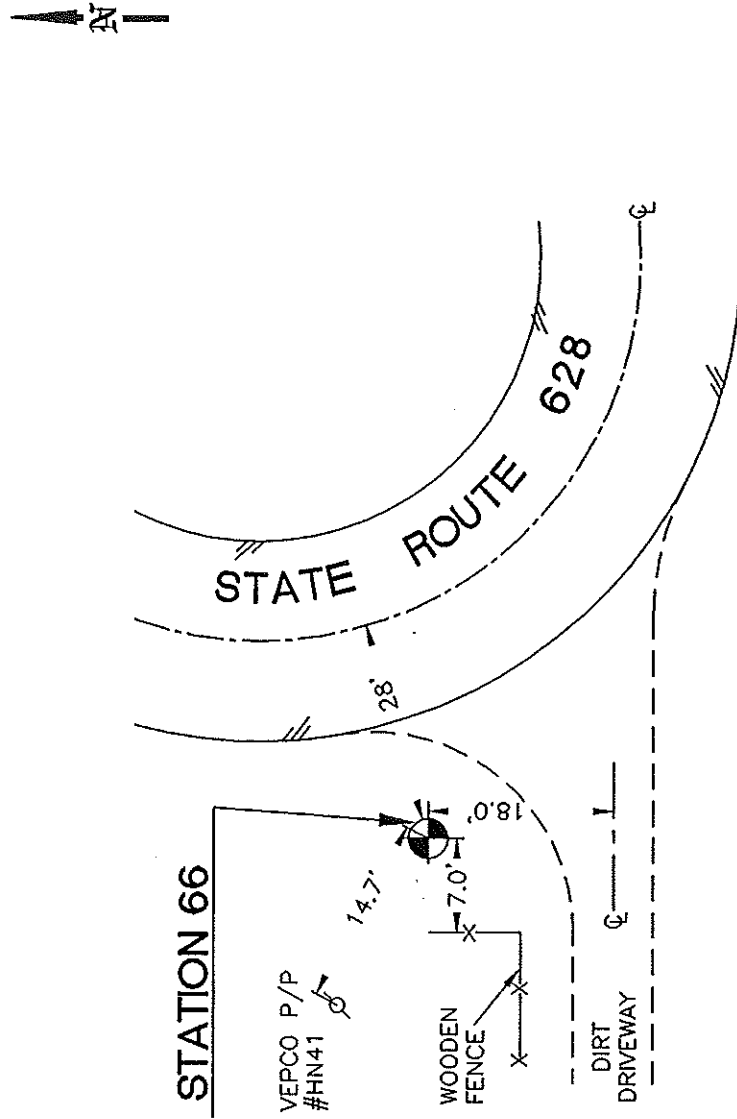
66

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
 (SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 628 AND STATE ROUTE 724, PROCEED SOUTH 0.30 MILES ON STATE ROUTE 628. THE STATION IS LOCATED IN THE WEST SHOULDER OF STATE ROUTE 628, MIDWAY AROUND THE CURVE. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 66".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM

SOUTH ZONE (4502) NAD83(1993) VA HARN

LATITUDE LONGITUDE

N 37° 31' 19.89213" W 76° 24' 15.49892"

UNITS NORTHING EASTING

METERS 1133990.279 3685233.224

U.S. SURVEY FT. 3720433.107 12090636.002

CONVERGENCE: +01° 16' 18.95"

SCALE FACTOR: 0.999949034

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 66	S 07° 52' 29.3" E	1531.76'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
3.32	10.9
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

67

GPS SERVICES PROVIDED BY:

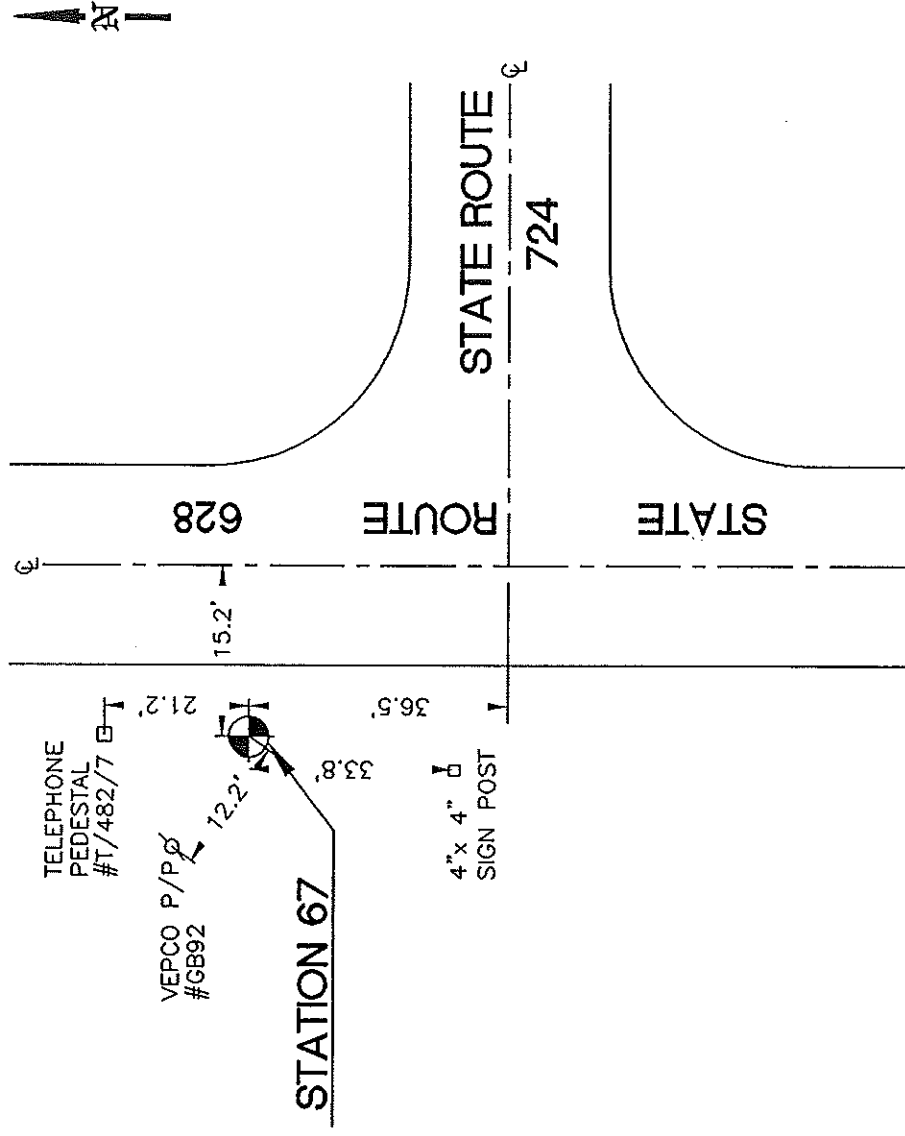
ROUSE-SIRINE ASSOCIATES, LTD.

(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 724 AND STATE ROUTE 628, PROCEED NORTH 36.5 FEET ON STATE ROUTE 628. THE STATION IS LOCATED IN THE WEST SHOULDER OF STATE ROUTE 628. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 67".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 29' 56.38847"	NORTHING	EASTING	
	1131489.526	3688544.246	
U.S. SURVEY FT.	3712228.553	12101498.914	

CONVERGENCE: +01° 17' 39.37"

SCALE FACTOR: 0.999948026

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 69	S 00° 21' 59.5" W	1401.28'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
6.28	20.6
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

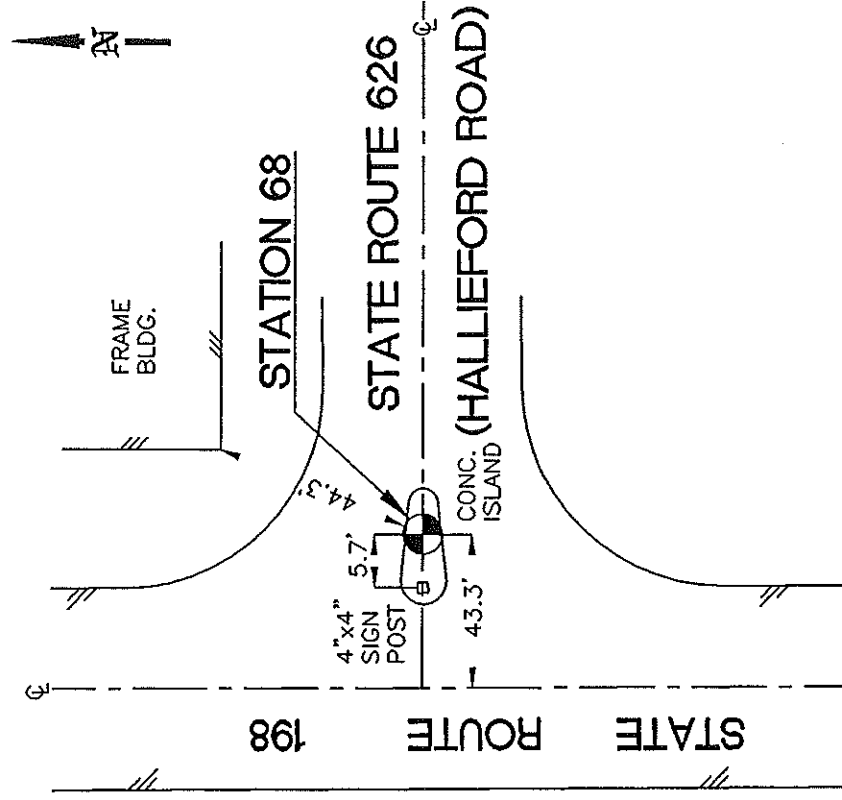
68

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

THIS STATION IS LOCATED AT THE NORTHERN INTERSECTION OF STATE ROUTE 198 AND STATE ROUTE 626 (HALLIEFORD ROAD) ON THE EAST SIDE OF STATE ROUTE 198 AT THE CENTERLINE EXTENDED OF STATE ROUTE 626. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH IN THE TOP OF A CONCRETE MEDIAN ISLAND. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 68".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 29' 42.53973"	W 76° 22' 03.49176"		
UNITS	NORTHING	EASTING	
METERS	1131062.425	3688541.513	
U.S. SURVEY FT.	3710827.306	12101489.947	

CONVERGENCE: +01° 17' 39.06"

SCALE FACTOR: 0.999947875

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 68	N 00° 21' 59.5" E	1401.28'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
4.65	15.3
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

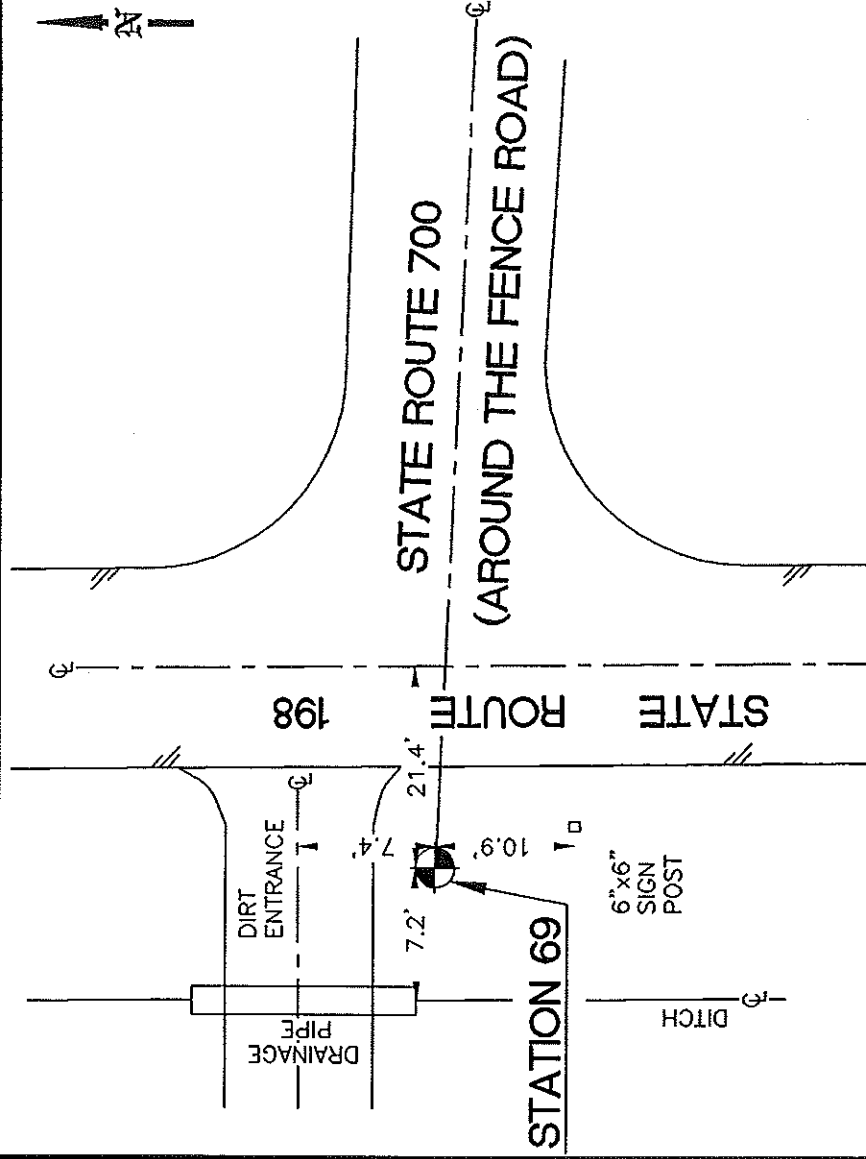
69

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

THIS STATION IS LOCATED IN THE WEST SHOULDER OF STATE ROUTE 198 ON THE PROJECTED CENTERLINE OF STATE ROUTE 700 (AROUND THE FENCE ROAD). THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 69".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE		LONGITUDE	
N 37° 28' 54.92724"		W 76° 21' 11.64357"	
UNITS	NORTHING	EASTING	
METERS	1129623.865	3689848.105	
U.S. SURVEY FT.	3706107.630	12105776.658	

CONVERGENCE: +01° 18' 10.53"

SCALE FACTOR: 0.999947389

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 71	S 66° 48' 06.9" E	1518.49'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
3.55	11.6
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

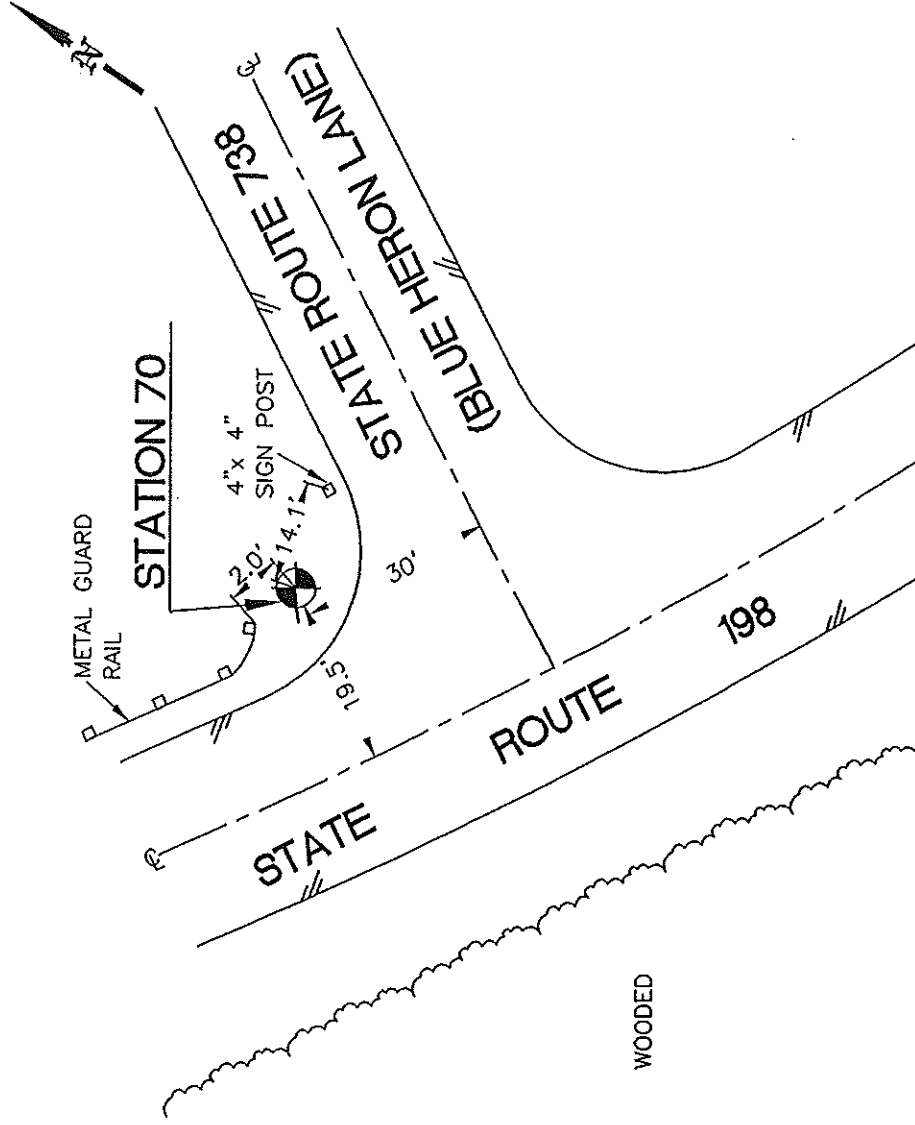
70

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

THE STATION IS LOCATED AT THE NORTHWEST INTERSECTION OF STATE ROUTE 198 AND STATE ROUTE 738 (BLUE HERON LANE), 2.0 FEET SOUTHEAST OF THE END OF A STEEL GUARDRAIL. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 70".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 28' 48.70067"	W 76° 20' 54.50084"		
UNITS	NORTHING	EASTING	
METERS	1129441.549	3690273.520	
U.S. SURVEY FT.	3705509.482	12107172.374	

CONVERGENCE:	+01° 18' 20.94"
SCALE FACTOR:	0.999947329

REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 70	N 66° 48' 06.9" W	1518.49'	

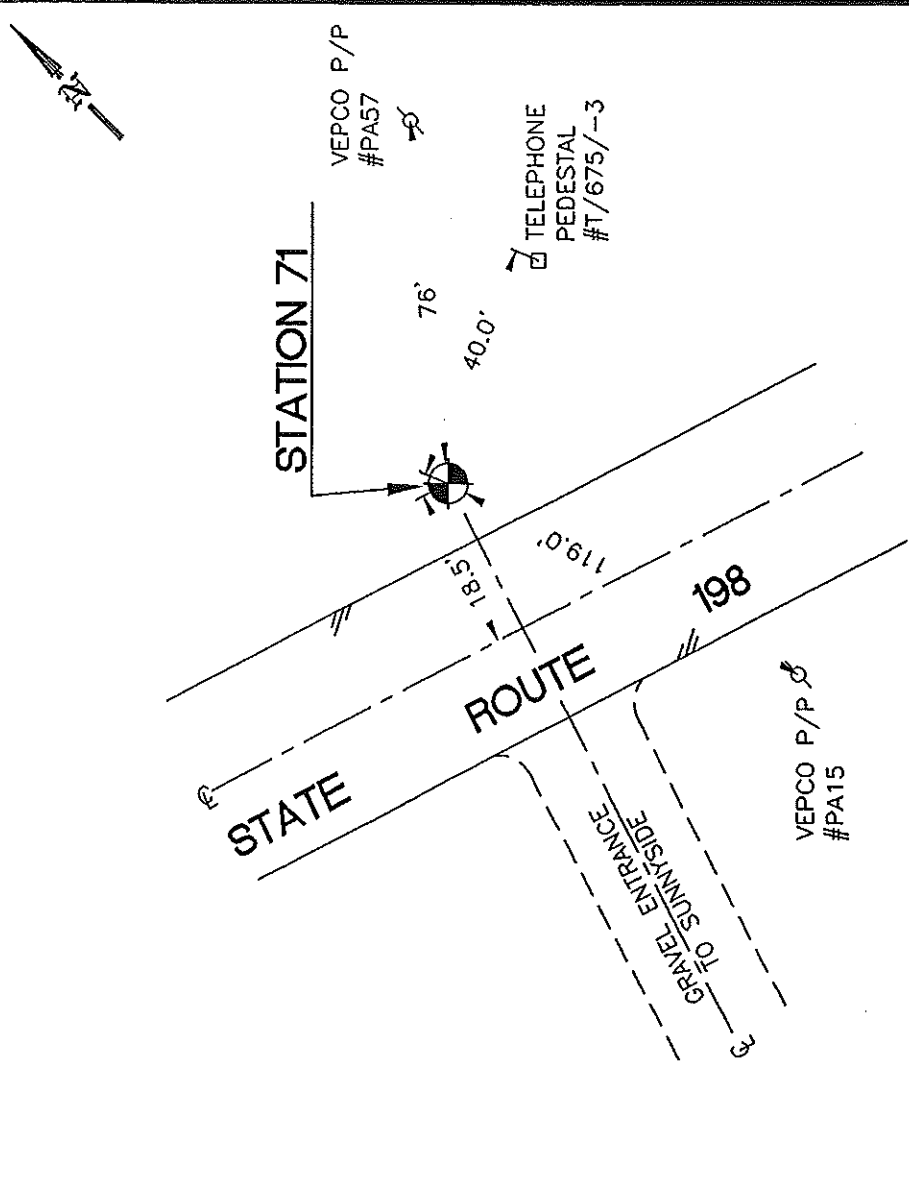
VERTICAL DATA			
NAVD 88	NAVD 88		
ELEVATION IN METERS	ELEVATION IN FEET		
3.20	10.5		
(GPS DERIVED)	(GPS DERIVED)		

STATION NUMBER:	71
-----------------	----

GPS SERVICES PROVIDED BY:	ROUSE-SIRINE ASSOCIATES, LTD.
	(SEPTEMBER 1999)

TO REACH DESCRIPTION
TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 198 AND STATE ROUTE 694 (WAVERLY LANE), PROCEED WEST 0.10 MILES ON STATE ROUTE 198. THE STATION IS LOCATED IN THE NORTH SHOULDER OF STATE ROUTE 198 OPPOSITE THE CENTERLINE OF A GRAVEL ENTRANCE TO "SUNNYSIDE". THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 71".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 28' 13.97363"	W 76° 17' 51.03435"		
UNITS	NORTHING	EASTING	
METERS	1128475.210	3694804.667	
U.S. SURVEY FT.	3702339.085	12122038.312	

CONVERGENCE: +01° 20' 12.29"

SCALE FACTOR: 0.999947013

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 73	N 28° 04' 51.9" W	1556.85'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
217	71.1
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

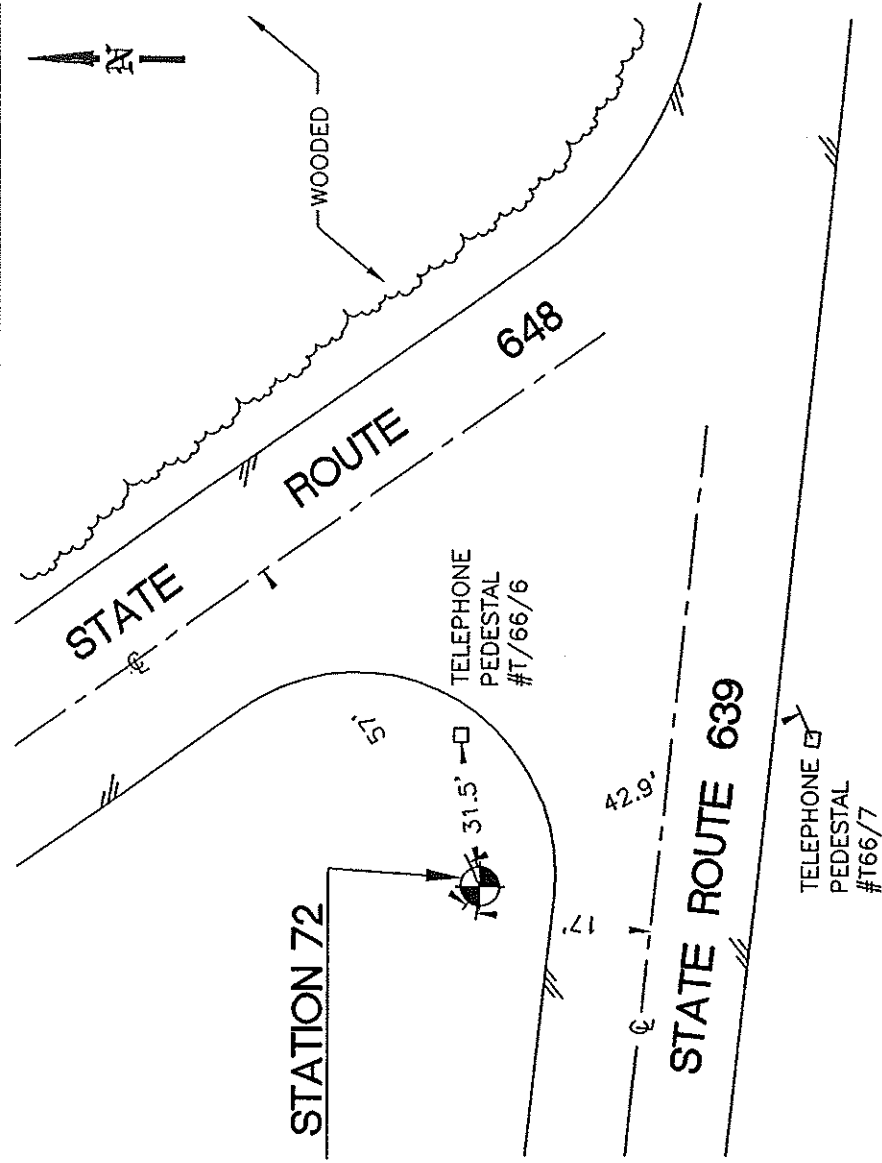
72

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

THE STATION IS LOCATED AT THE NORTHWEST INTERSECTION OF STATE ROUTE 648 AND STATE ROUTE 639 IN THE NORTH SHOULDER OF STATE ROUTE 639. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 72".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 28' 27.71973"	W 76° 17' 59.72567"		
UNITS	NORTHING	EASTING	
METERS	1128893.880	3694581.296	
U.S. SURVEY FT.	3703712.671	12121305.469	

CONVERGENCE: +01° 20' 07.01"

SCALE FACTOR: 0.999947135

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 72	S 28° 04' 51.9" E	1556.85'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
2.00	6.6
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

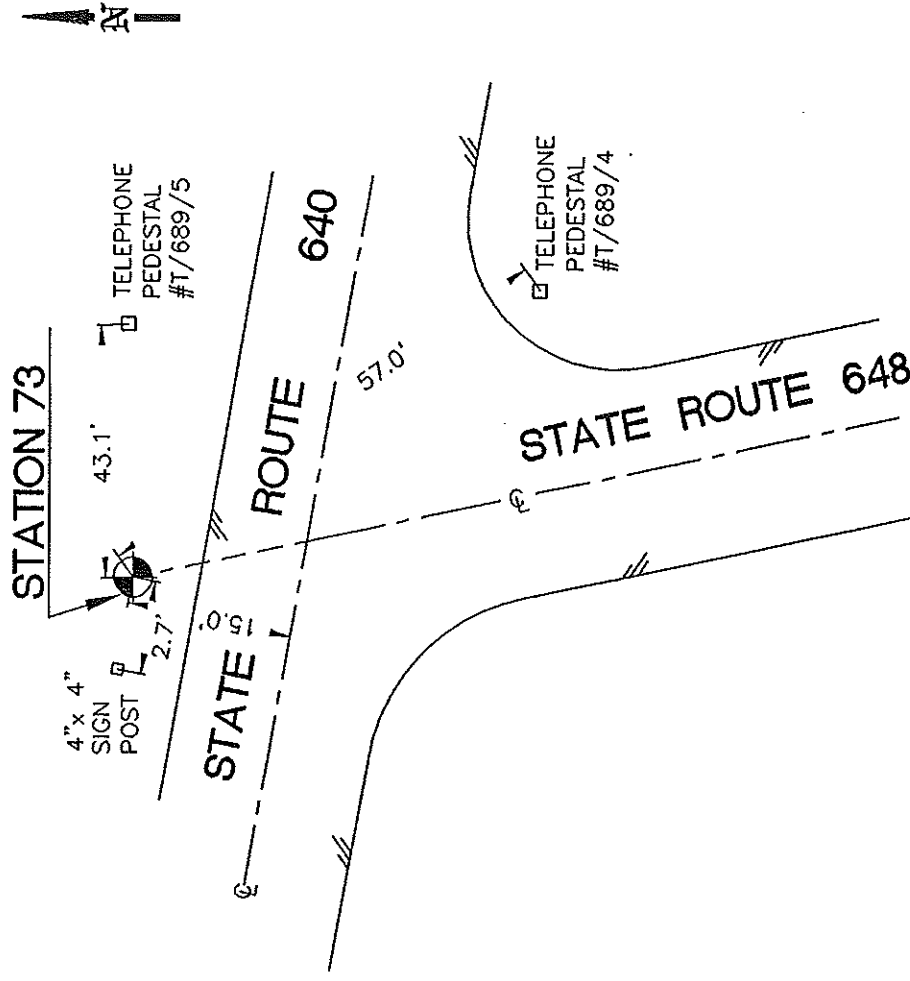
73

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

THE STATION IS LOCATED IN THE NORTH SHOULDER OF STATE ROUTE 640 ON THE NORTHERN PROJECTION OF THE CENTERLINE OF STATE ROUTE 648. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 73".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 28' 27.18837"	NORTHING	EASTING	
	1128702.393	3686918.202	
U.S. SURVEY FT.	3703084.434	12096164.134	

CONVERGENCE: +01° 16' 57.66"

SCALE FACTOR: 0.999947130

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 75	S 26° 25' 07.5" W	1285.92'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
7.24	23.7
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

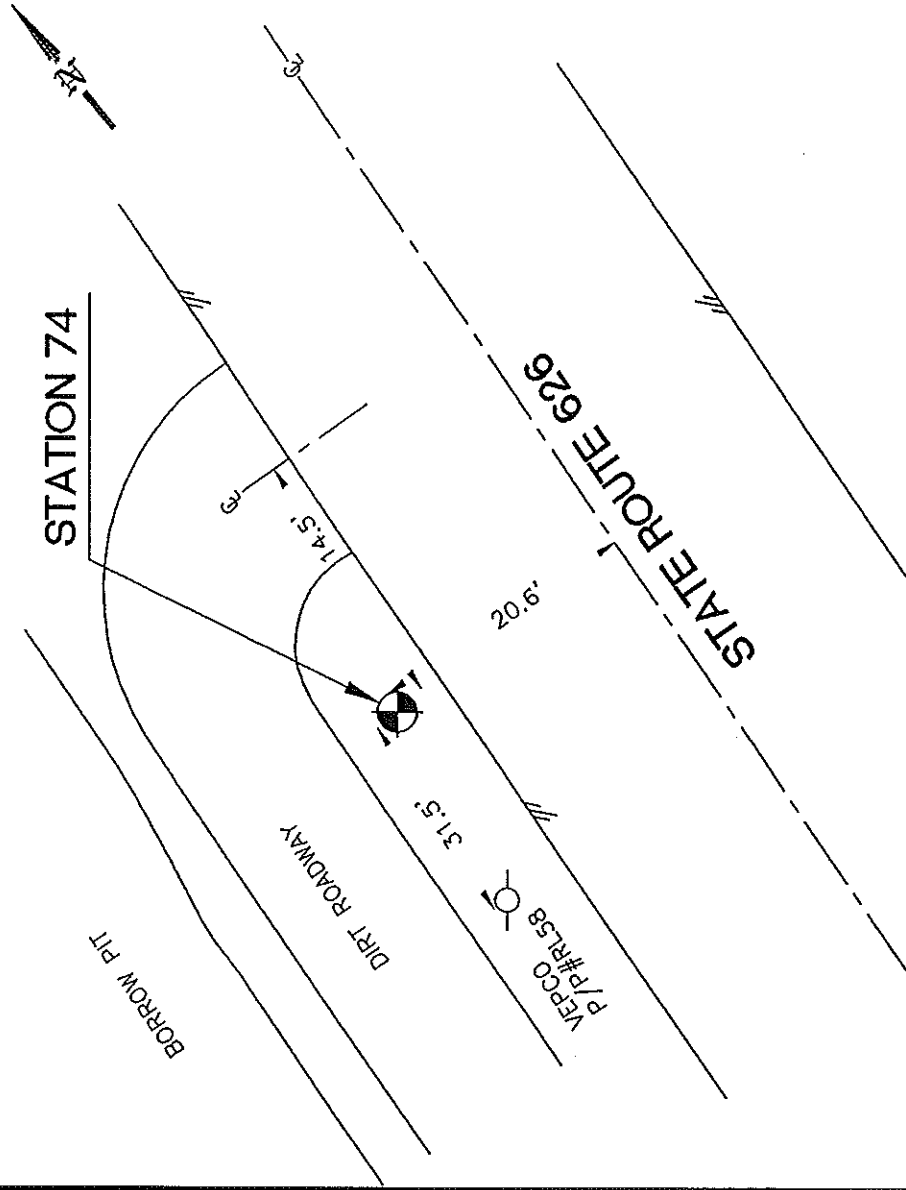
74

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 14 AND STATE ROUTE 626, PROCEED NORTH 1.45 MILES ON STATE ROUTE 626. THE STATION IS LOCATED IN THE WEST SHOULDER OF STATE ROUTE 626 OPPOSITE A BORROW PIT. THE MONUMENT IS A 3 1/4" ALUMINUM DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 74".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM

SOUTH ZONE (4502) NAD83(1993) VA HARN

LATITUDE	LONGITUDE
N 37° 28' 15.93147"	W 76° 23' 19.12926"

UNITS	NORTHING	EASTING
METERS	1128351.376	3686743.813

U.S. SURVEY FT. 3701932.806 12095591.993

CONVERGENCE: +01° 16' 53.16"

SCALE FACTOR: 0.999947030

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 74	N 26° 25' 07.5" E	1285.92'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
6.46	21.2
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

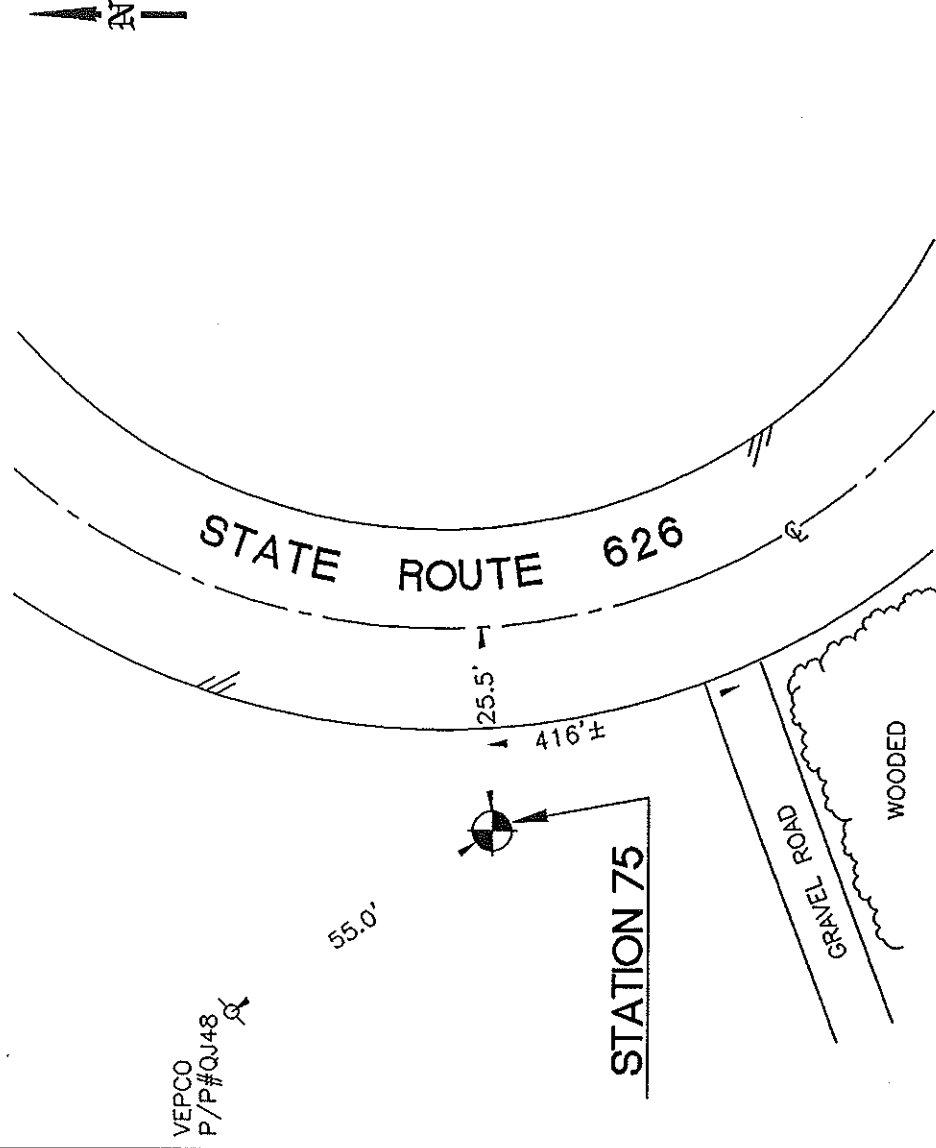
75

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 14 AND STATE ROUTE 626. PROCEED NORTH 1.2 MILES ON STATE ROUTE 626, THE STATION IS LOCATED ON THE WEST SIDE OF STATE ROUTE 626. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET 0.2' BELOW THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 75".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 29' 35.91798"	W 76° 22' 25.21732"		
UNITS	NORTHING	EASTING	
METERS	1130846.305	3688012.603	
U.S. SURVEY FT.	3710118.252	12099754.682	

CONVERGENCE: +01° 17' 25.88"

SCALE FACTOR: 0.999947804

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 77	S 71° 18' 52.9" W	2130.12'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
4.52	14.8
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

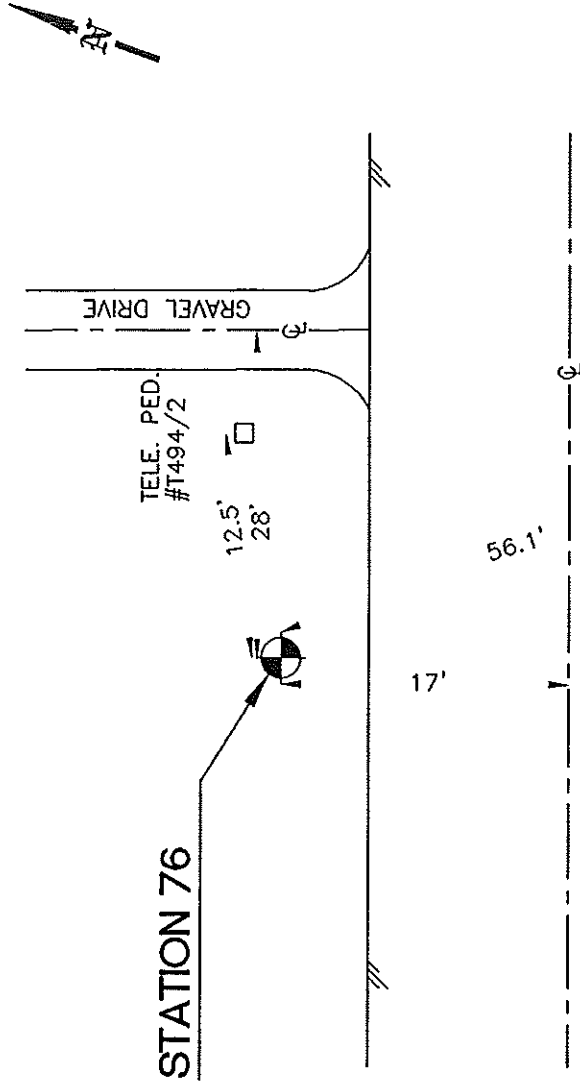
76

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH STATION FROM THE INTERSECTION OF STATE ROUTE 198 AND STATE ROUTE 626, PROCEED WEST 0.35 MILES ON STATE ROUTE 626. THE STATION IS LOCATED IN THE NORTH SHOULDER OF STATE ROUTE 626. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 76".

LOCATION SKETCH (NOT TO SCALE)



VEPCO
P/P#AK41

COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE		LONGITUDE	
N 37° 29' 29.62102"		W 76° 22' 50.43992"	
UNITS	NORTHING		EASTING
METERS	1130638.300		3687397.561
U.S. SURVEY FT.	3709435.823		12097736.831

CONVERGENCE: +01° 17' 10.57"

SCALE FACTOR: 0.999947738

REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 76	N 71° 18' 52.9" E	2130.12'	

VERTICAL DATA			
NAVD 88	NAVD 88		
ELEVATION IN METERS	ELEVATION IN FEET		
5.76	18.9		
(GPS DERIVED)	(GPS DERIVED)		

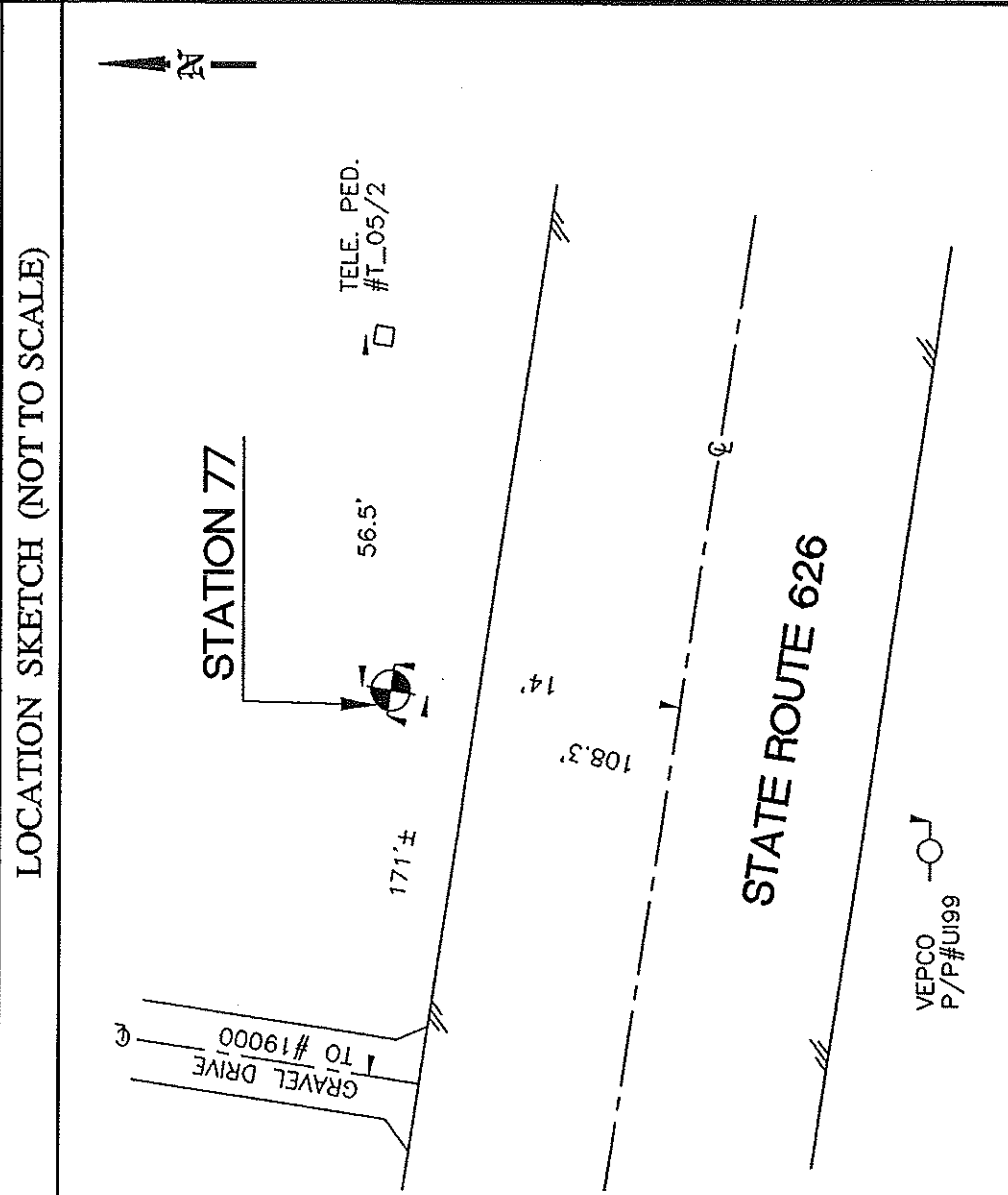
STATION NUMBER:

77

GPS SERVICES PROVIDED BY:

ROUSE-SIRINE ASSOCIATES, LTD.

(SEPTEMBER 1999)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 29' 44.26364"	W 76° 26' 28.29549"		
UNITS	NORTHING	EASTING	
METERS	1130971.184	3682037.601	
U.S. SURVEY FT.	3710527.960	12080151.696	

CONVERGENCE: +01° 14' 58.35"

SCALE FACTOR: 0.999947893

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
GLOUCESTER DISK 082	S 88° 43' 16.3" W	1119.22'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
13.34	43.8
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

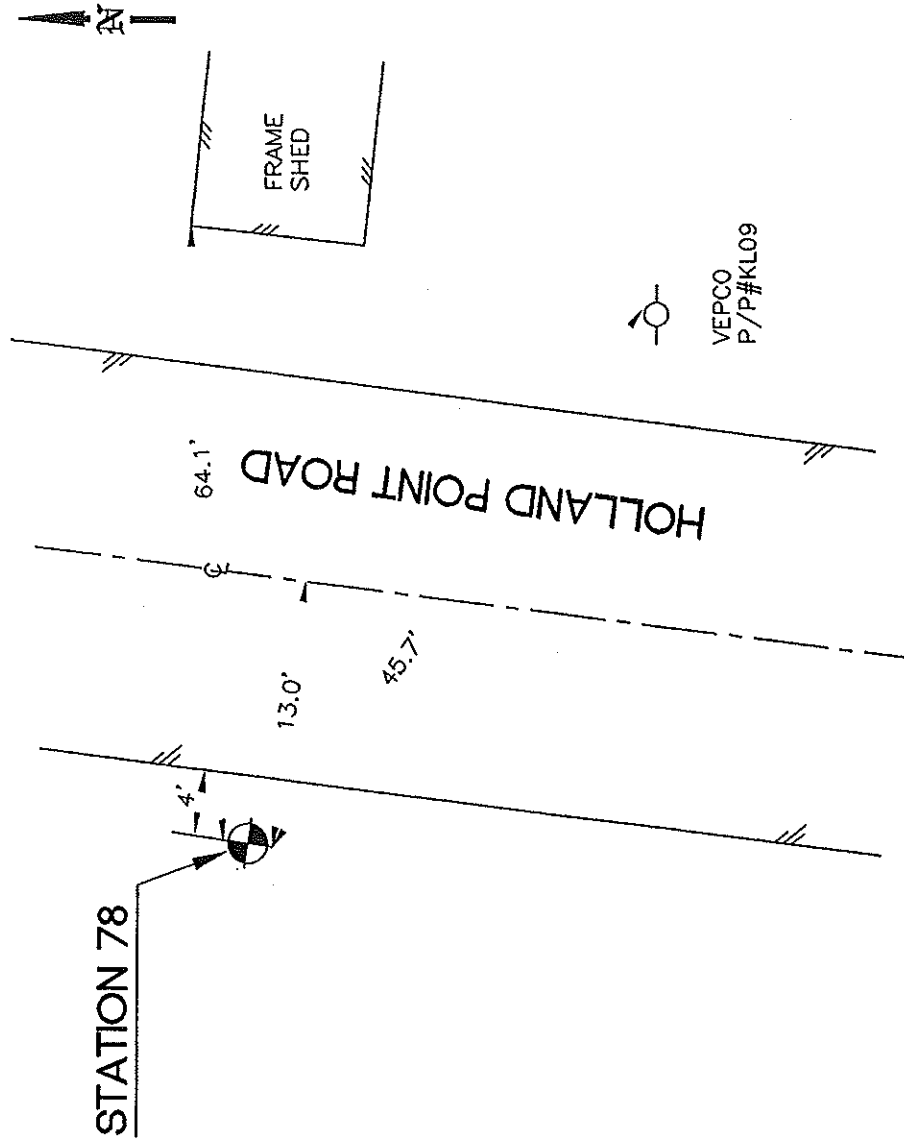
78

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH STATION FROM THE INTERSECTION OF STATE ROUTE 198 AND HOLLAND POINT ROAD, PROCEED NORTH 0.05 MILES ON HOLLAND POINT ROAD. THE STATION IS LOCATED IN THE WEST SHOULDER OF HOLLAND POINT ROAD. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET 0.2' BELOW THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 78".

LOCATION SKETCH (NOT TO SCALE)



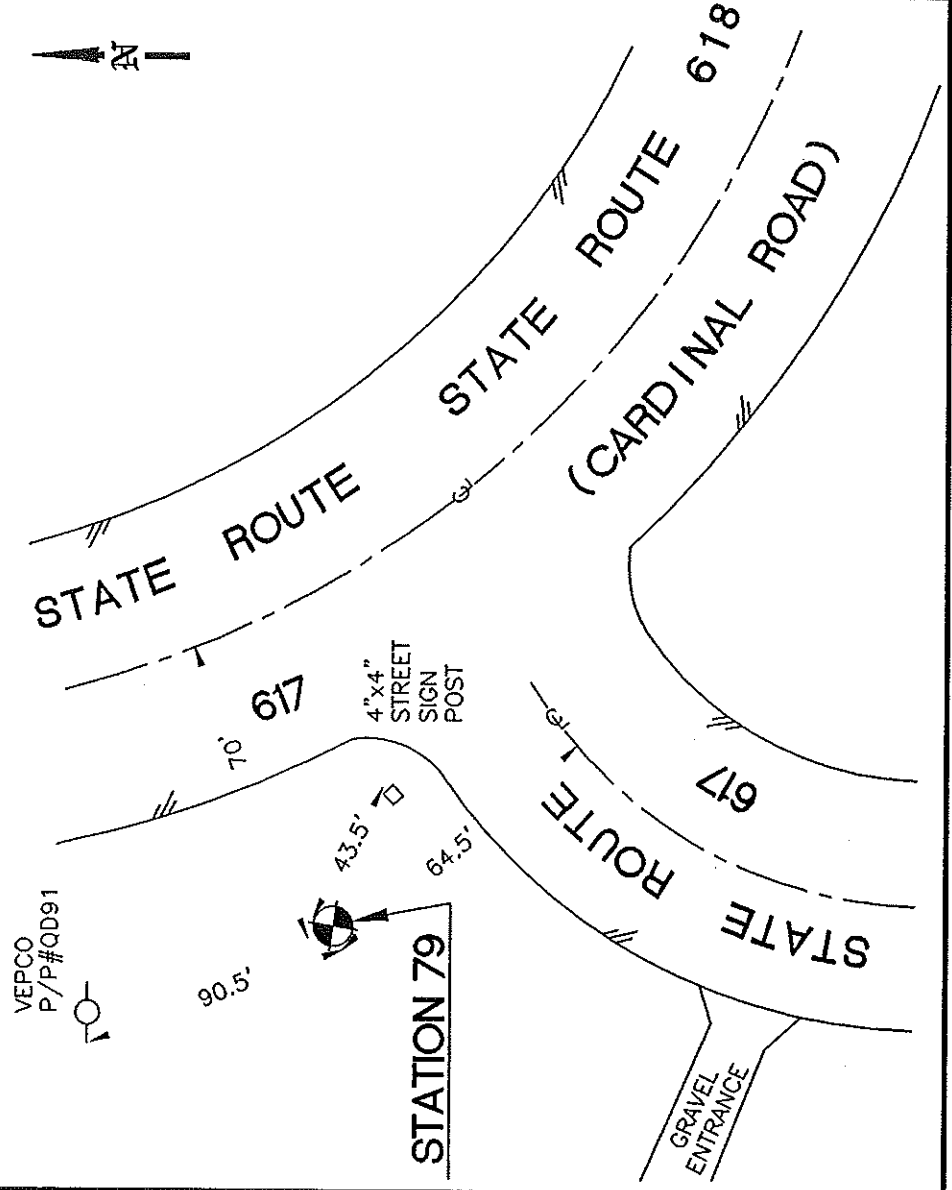
COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE		LONGITUDE	
N 37° 25' 15.75044"		W 76° 23' 14.28584"	
UNITS	NORTHING		EASTING
METERS	1122800.845		3686987.088
U.S. SURVEY FT.	3683722.439		12096390.138
CONVERGENCE: +01° 16' 56.10"			

TO REACH DESCRIPTION

THE STATION IS LOCATED ON THE NORTHWEST CORNER OF STATE ROUTE 617 AND STATE ROUTE 618 (CARDINAL ROAD) IN AN OPEN SPACE. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 79".

LOCATION SKETCH (NOT TO SCALE)



SCALE FACTOR: 0.999945837

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 80	S 77° 43' 22.5" E	1434.75'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
4.24	13.9
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

79

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE		LONGITUDE	
N 37° 25' 12.42421"		W 76° 22' 56.99558"	
UNITS	NORTHING		EASTING
METERS	1122707.855		3687414.399
U.S. SURVEY FT.	3683417.354		12097792.074

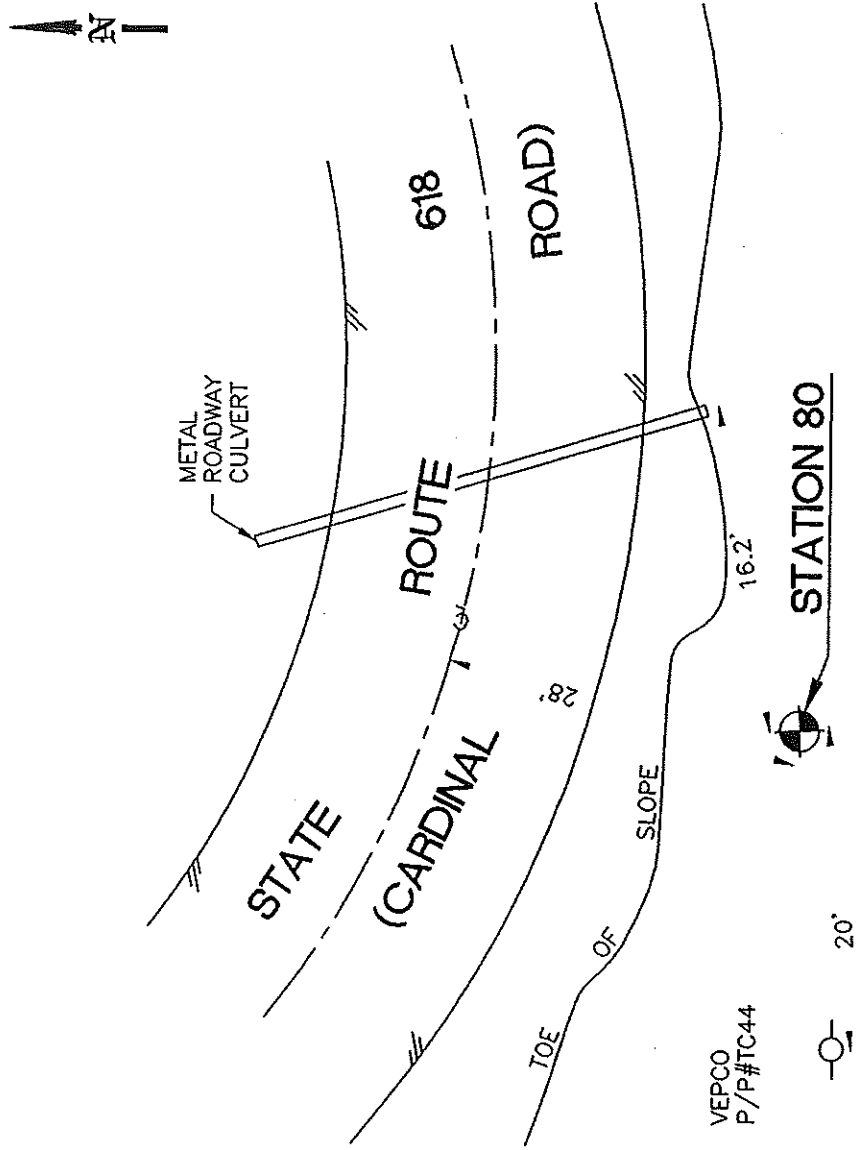
CONVERGENCE:	+01° 17' 06.59"
SCALE FACTOR:	0.999945822

REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	
STATION 79	N 77° 43' 22.5" W	1434.75'	

VERTICAL DATA			
NAVD 88		NAVD 88	
ELEVATION IN METERS		ELEVATION IN FEET	
3.60		11.8	
(GPS DERIVED)		(GPS DERIVED)	

STATION NUMBER:	80
-----------------	----

GPS SERVICES PROVIDED BY:
 ROUSE-SIRINE ASSOCIATES, LTD.
 (SEPTEMBER 1999)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM

SOUTH ZONE (4502) NAD83(1993) VA HARN

LATITUDE	LONGITUDE	
N 37° 23' 06.18493"	NORTHING	W 76° 21' 24.33961"

UNITS	NORTHING	EASTING
METERS	1118868.617	3689780.336

U.S. SURVEY FT.	3670821.454	12105554.319
-----------------	-------------	--------------

CONVERGENCE: +01° 18' 02.83"

SCALE FACTOR: 0.999945448

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 82	N 12° 52' 55.4" E	1368.78'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
2.44	8.0
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

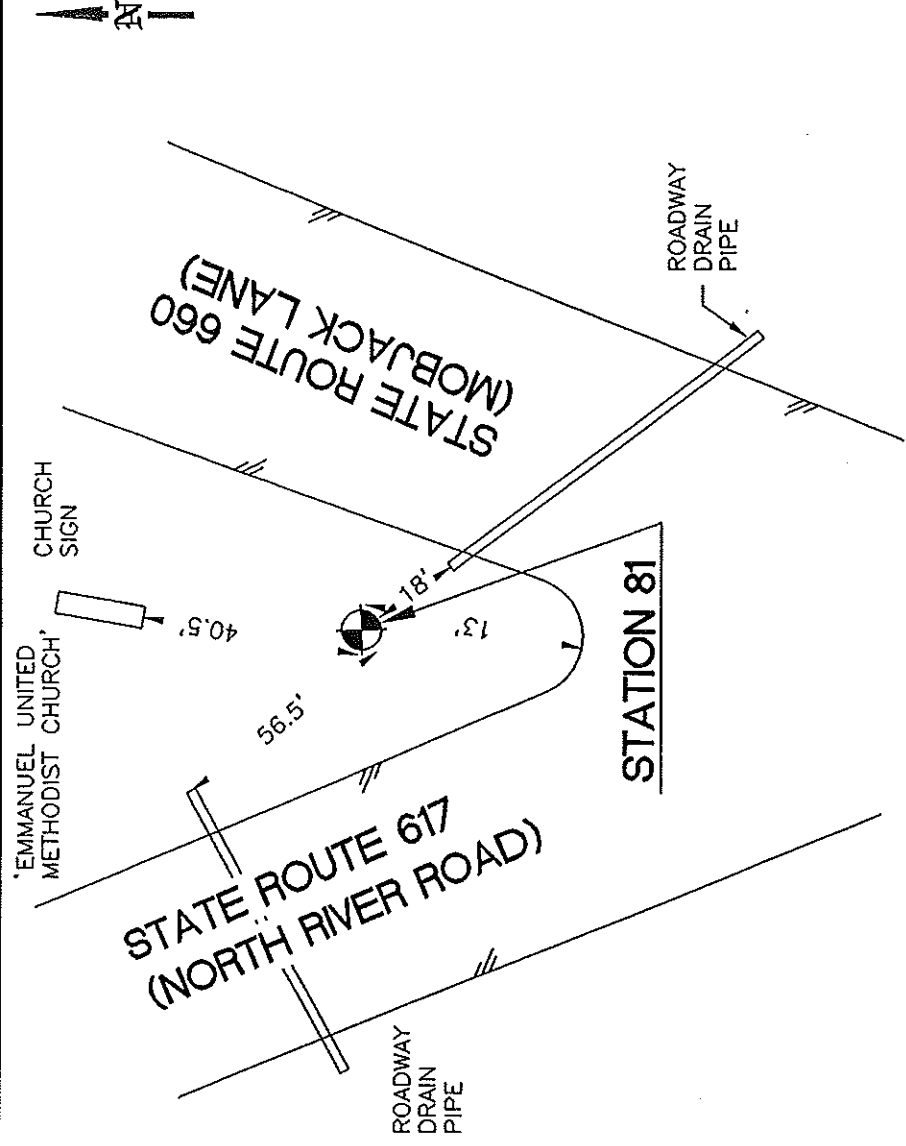
81

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

THE STATION IS LOCATED IN THE YARD OF "EMMANUEL UNITED METHODIST CHURCH" LOCATED AT THE INTERSECTION OF STATE ROUTE 617 (NORTH RIVER ROAD) AND STATE ROUTE 660 (MOBJACK LANE). THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET 0.3' BELOW THE GROUND SURFACE IN THE TOP OF A CONCRETE POST, STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 81".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE	LONGITUDE		
N 37° 23' 19.30596"	W 76° 21' 20.18383"		
UNITS	NORTHING	EASTING	
METERS	1119275.322	3689873.350	
U.S. SURVEY FT.	3672155.786	12105859.482	

CONVERGENCE: +01° 18' 05.35"

SCALE FACTOR: 0.999945470

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 81	S 12° 52' 55.4" W	1368.78'

VERTICAL DATA

NAVD 88	NAVD 88
ELEVATION IN METERS	ELEVATION IN FEET
297	9.8
(GPS DERIVED)	(GPS DERIVED)

STATION NUMBER:

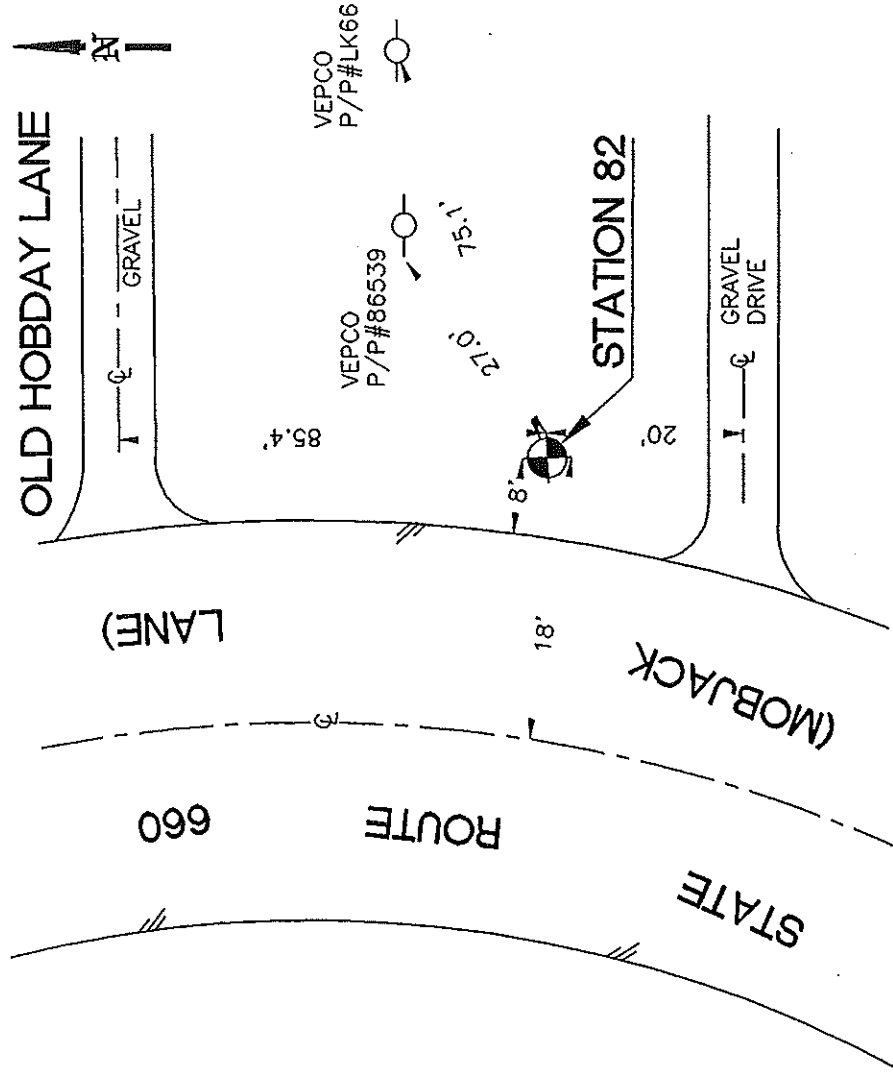
82

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF ROUTE 651 (MYRTLE GROVE LANE) AND STATE ROUTE 660 (MOBJACK LANE), PROCEED NORTH 0.05 MILES ON STATE ROUTE 660. THE STATION IS LOCATED IN THE EAST SHOULDER OF STATE ROUTE 660. THE MONUMENT IS A 3 1/4" ALUMINUM DOME DISK SET FLUSH WITH THE GROUND SURFACE IN THE TOP OF A CONCRETE POST. STAMPED "COUNTY OF MATHEWS, PLANNING AND ZONING, NO. 82".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM
SOUTH ZONE (4502) NAD83(1993) VA HARN

LATITUDE LONGITUDE

N 37° 29' 44.25774" W 76° 26' 42.18390"

UNITS NORTHING EASTING

METERS 1130963.570 3681696.548

U.S. SURVEY FT. 3710502.979 12079032.758

CONVERGENCE: +01° 14' 49.92"

SCALE FACTOR: 0.999947893

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 78	N 88° 43' 16.3" E	1119.22'

VERTICAL DATA

NAVD 88 NAVD 88

ELEVATION IN METERS ELEVATION IN FEET

15.715 51.55

STATION NUMBER:

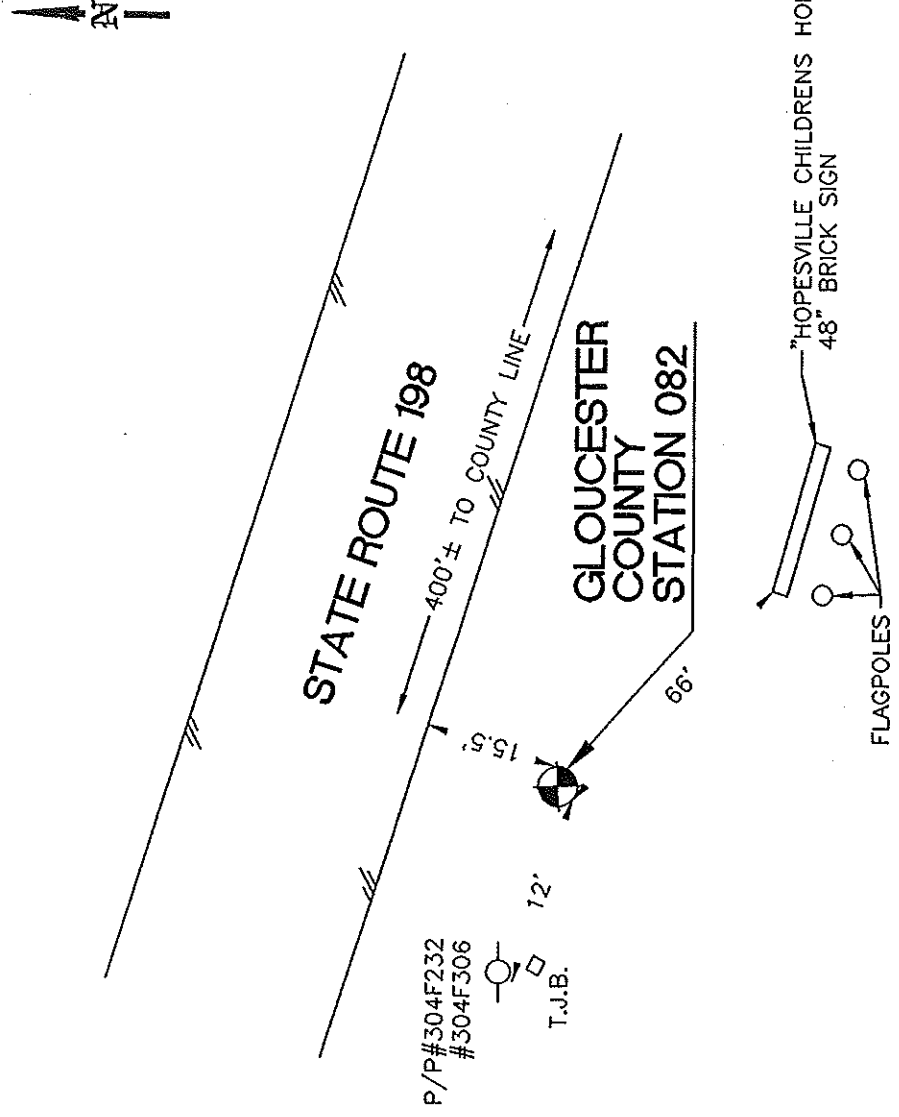
County of Gloucester Disk 082

GPS SERVICES PROVIDED BY:
ROUSE-SIRINE ASSOCIATES, LTD.
(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 3 AND STATE ROUTE 198, PROCEED WEST ALONG STATE ROUTE 198 0.5 MILES. THE STATION IS LOCATED ON THE SOUTH SIDE OF STATE ROUTE 198. THE MONUMENT IS A 3 1/4" ALUMINUM DISK SET APPROXIMATELY FLUSH WITH THE GROUND SURFACE AND IS STAMPED "GLOUCESTER COUNTY SURVEY MONUMENT 082 1992 51.55".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA

VIRGINIA COORDINATE SYSTEM

SOUTH ZONE (4502) NAD83(1993) V A HARN

LATITUDE LONGITUDE

N 37° 27' 54.50956" W 76° 26' 48.25154"

UNITS NORTHING EASTING

METERS 1127577.810 3681621.126

U.S. SURVEY FT. 3699394.865 12078785.311

CONVERGENCE: +01° 14' 46.24"

SCALE FACTOR: 0.999946848

REFERENCE AND AZIMUTH MARK LOCATIONS

OBJECTS	BEARING	DISTANCE
STATION 65	S 78° 05' 00.0" E	1370.58'

VERTICAL DATA

NAVD 88 NAVD 88

ELEVATION IN METERS ELEVATION IN FEET

3.696 1213

STATION NUMBER:

Z 457 1971

GPS SERVICES PROVIDED BY:

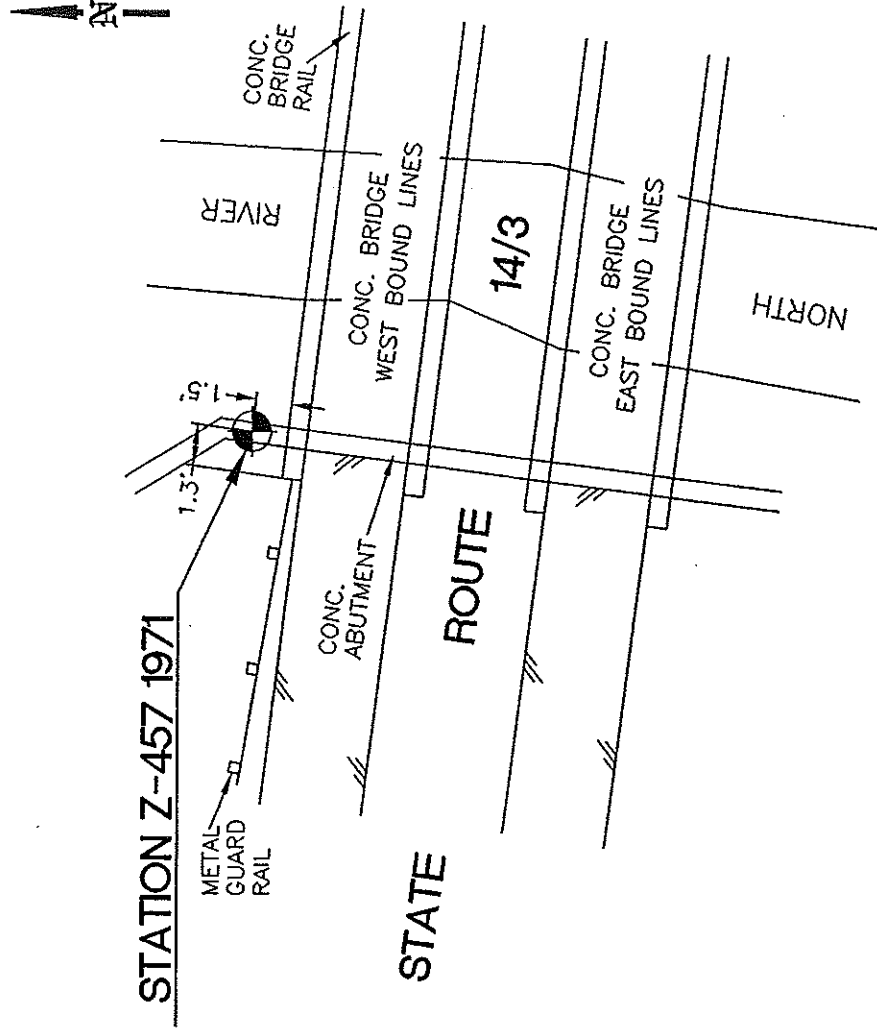
ROUSE-SIRINE ASSOCIATES, LTD.

(SEPTEMBER 1999)

TO REACH DESCRIPTION

TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE ROUTE 14 AND STATE ROUTE 3, PROCEED WEST 0.10 MILES ON STATE ROUTE 14/3. THE STATION IS LOCATED IN THE TOP OF THE WEST BRIDGE ABUTMENT OF THE NORTHERN CONCRETE BRIDGE OVER THE NORTH RIVER. THE STATION IS AN EXISTING 3 1/2" BRASS USGS DISK SET IN THE TOP OF THE EXISTING BRIDGE ABUTMENT. STAMPED "Z-457 1971".

LOCATION SKETCH (NOT TO SCALE)



COUNTY OF MATHEWS 1999 GEODETIC SURVEY MARK REFERENCE AND RECOVERY DATA

HORIZONTAL DATA			
VIRGINIA COORDINATE SYSTEM			
SOUTH ZONE (4502) NAD83(1993) VA HARN			
LATITUDE		LONGITUDE	
N 37° 19' 13.91789"		W 76° 16' 50.17073"	
UNITS	NORTHING	EASTING	
METERS	1111866.255	3696691.102	
U.S. SURVEY FT.	3647847.872	12128227.390	

CONVERGENCE:	+01° 20' 49.23"				
SCALE FACTOR:	0.999945736				

REFERENCE AND AZIMUTH MARK LOCATIONS			
OBJECTS	BEARING	DISTANCE	

VERTICAL DATA			
NAVD 88	NAVD 88		
ELEVATION IN METERS	ELEVATION IN FEET		
0.42	1.4		
(GPS DERIVED)	(GPS DERIVED)		

STATION NUMBER:	HARP GPS 1991		
-----------------	---------------	--	--

GPS SERVICES PROVIDED BY:	ROUSE-SIRINE ASSOCIATES, LTD.		
	(SEPTEMBER 1999)		

TO REACH THE STATION FROM THE SOUTHERN INTERSECTION OF STATE ROUTE 14 AND STATE ROUTE 600, PROCEED SOUTH 1.05± MILES ALONG STATE ROUTE 600. THE STATION IS LOCATED ON THE NORTH SIDE OF STATE ROUTE 600 NEAR IT'S SOUTHERN TERMINUS. THE MONUMENT IS A 3 1/4" BRASS DISK SET IN CONCRETE FLUSH WITH THE GROUND SURFACE AND IS STAMPED "NATIONAL OCEAN SERVICE HARP GPS 1991".

LOCATION SKETCH (NOT TO SCALE)

