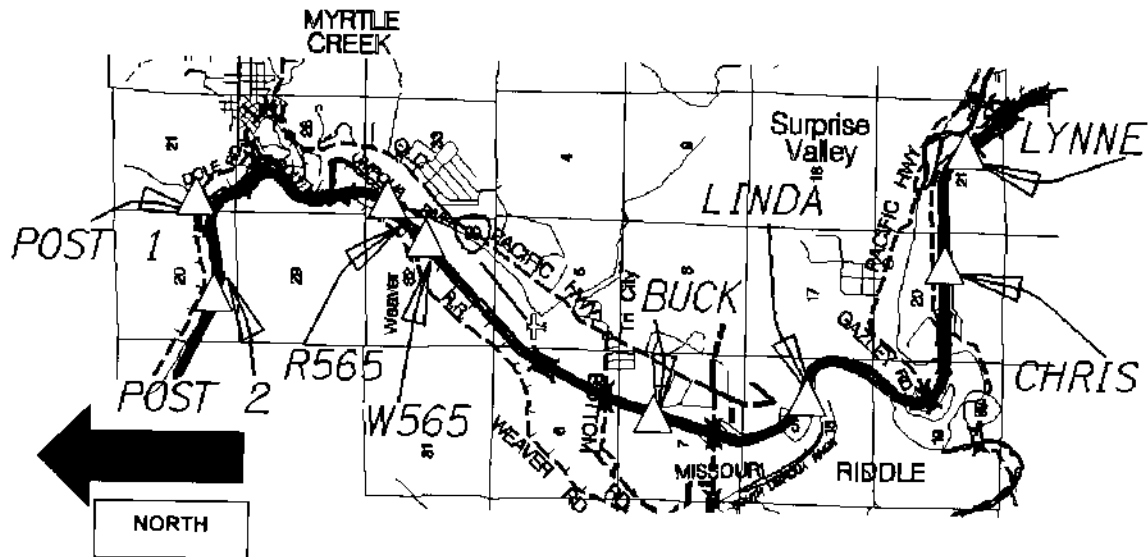


**OREGON DEPARTMENT OF TRANSPORTATION - GEOMETRONICS UNIT
 GEODETIC SURVEY REPORT**

200 Hawthorne Ave SE, Suite B-250 Salem, Oregon 97310
 Phone. (503)986-3540 FAX (503)986-3548

NETWORK SITE MAP

▲ - MONUMENT



NOT TO SCALE

NGS Accuracy Standard

Horizontal: Group: C Order 1 PPM 10
 Vertical Order. 3

Horizontal DATUM NAD 83 (1991)

NGS HARN Point Values Used:

	LATITUDE	LONGITUDE	ELLIP ELEV
AZAL	42°47'56 60346"	123°15'10 17752"	486 017 m
ROSE	43°14'44 10722"	123°21'18 97548"	140 893 m
WCAM.	43°00'36 90832"	123°41'58 63498"	302 693 m

NARRATIVE The purpose of this survey was to establish GPS stations for horizontal geodetic control for the Myrtle cr -Canyonville project. The survey was completed in Sept, 1997. GPS sessions were done using three Leica dual frequency receivers. The procedures used are from the recommended GPS guidelines in the Geometric Geodetic Accuracy Standards and Specifications For Using GPS Relative Positioning Techniques by the Federal Geodetic Control Committee. Oregon HPGN control stations AZAL, ROSE and WCAM, were the basis for processing this data. The orthometric elevation was determined by differential leveling from benchmark K747, J747, L499, P353 and L747 Oregon level line 6. Data for this project is located in Control File 97-016 in the ODOT - GEOMETRONICS Unit, Salem, Oregon.

FILED

Date: 6-4-1998 By: JP
 This survey consists of: 17 pg
 Map: CONTROL REPORTS
 Narrative: _____
 Corner Rpt.: _____

**DOUGLAS COUNTY
 SURVEYOR**

REGISTERED
 PROFESSIONAL
 LAND SURVEYOR

J. David Hinton
 OREGON
 DECEMBER 2, 1983
 J. DAVID HINTON

Exp Date 12-31-99

State: Oregon County: Douglas Station Name: POST 2
 Section: SE 1/4 20 Township: 29 S Range: 5 W WM Date Found: 19 Aug, 1997

Geodetic Datum: WGS 84 Latitude: N 43°01'46.03702" +/- 0.011 m 2 sigma
 Longitude: W 123°18'50.38536" +/- 0.008 m 2 sigma

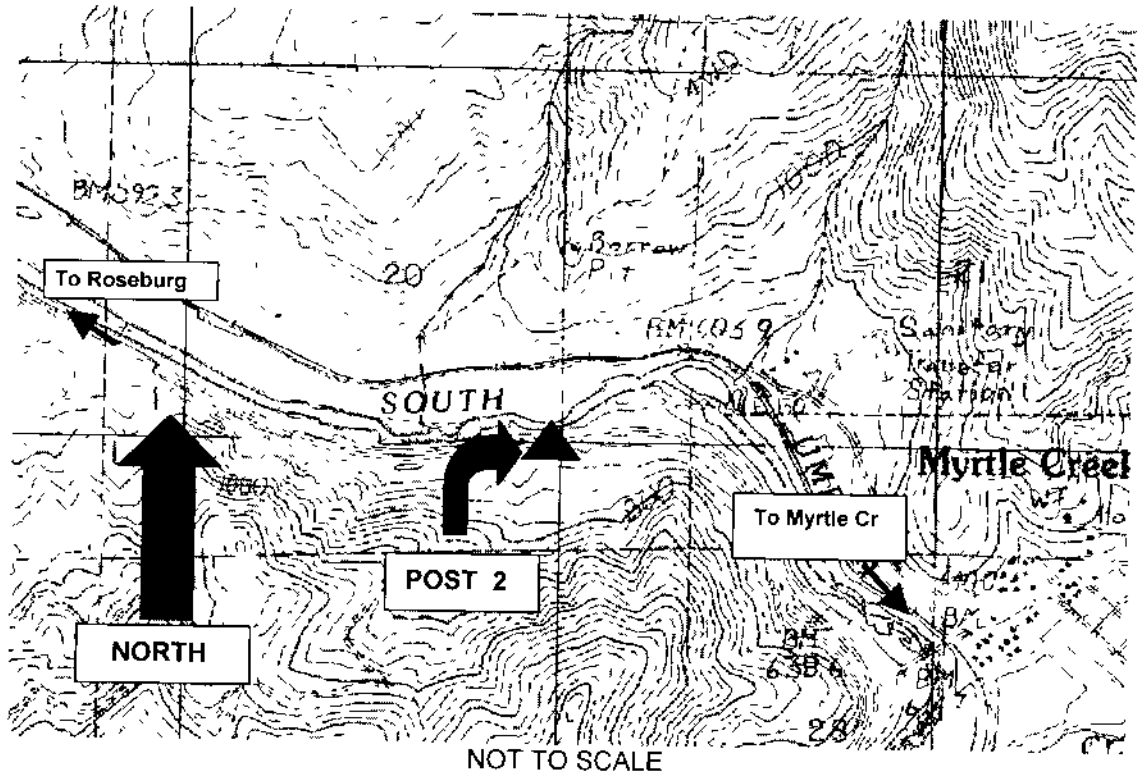
SPCS Datum: NAD 83 (1991) Northing: 155233.8815 meters
 OREGON SOUTH Easting: 1270720.3298 meters

Convergence: - 1°55'30.67641" Point Scale Factor: 0.999897543

Vertical Datum: NAVD 1988 Ortho. Height: N/A m +/- N/A m
 Ellips. Height: N/A
 Separation: N/A
 Geoid Model: Geoid 96 Geoid Height: N/A

DIRECTIONS TO MONUMENT To reach the station from the Myrtle Creek Interchange on Interstate-5, travel Northbound 0.9 miles to the mark which is 30 meters South of the I-5 Centerline. Approx. M.P. 109.2. Mark is Engineer Station 850+00 BK PT with a paddle board which reads SHRW POST 850+00 BK PT. Monument is on ODOT Right of Way - Permission is not needed to access this monument.

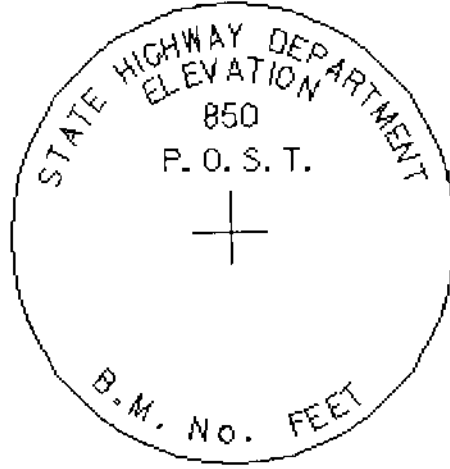
LOCATION SKETCH ▲ - MONUMENT



MONUMENT AND CAP DESCRIPTION

Monument Type Concrete

Cap Type Brass Disk Size 0 70 mm Diameter Monument is flush with ground

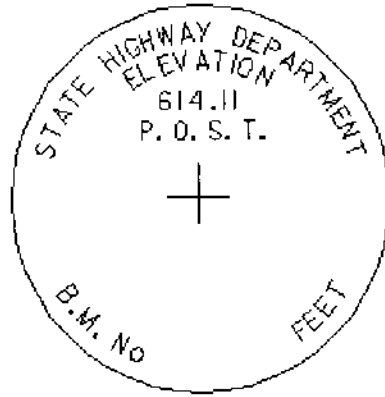


State Oregon	County. Douglas	Station Name: POST 1	
Section: SE 1/4 20	Township: 29 S	Range: 5 W	WM
		Date Found 19 Aug, 1997	
Geodetic Datum WGS 84	Latitude: N 43°01'49.91962"	+/- 0.006 m	2 sigma
	Longitude: W 123°18'16.25156"	+/- 0.005 m	2 sigma
SPCS Datum NAD 83 (1991)	Northing	155327.7015 meters	
OREGON SOUTH	Easting:	1271496.5974 meters	
Convergence - 01°55'07.32386"	Point Scale Factor: 0.999897498		
Vertical Datum: NAVD 1988	Ortho Height N/A m	+/- N/A m	
	Ellips Height N/A		
	Seperation N/A		
Geoid Model Geoid 96	Geoid Height N/A		
DIRECTIONS TO MONUMENT. To reach the station from the Myrtle Creek Interchange on Interstate-5, travel Northbound 0.4 miles to the mark which is 17.6 meters North of the I-5 Centerline. Approx. M.P. 106.5. Mark is Engineer Station 3368+29.54 and is marked by a Post and paddle marked 3368+29.54 SHRW.			
Monument is on ODOT Right of Way – Permission is not needed to access this monument			
LOCATION SKETCH ▲ - MONUMENT			
NOT TO SCALE			

MONUMENT AND CAP DESCRIPTION

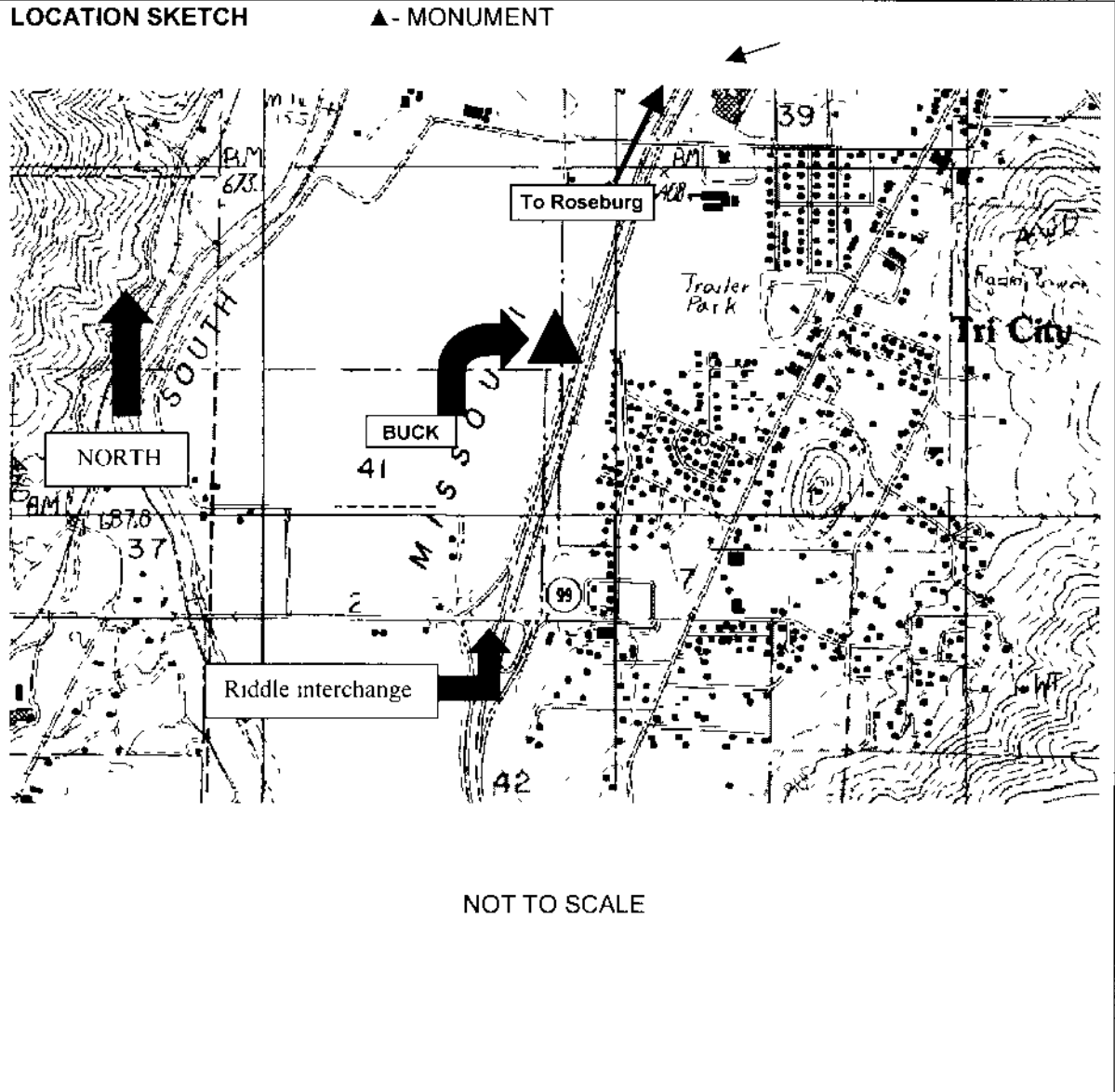
Monument Type Concrete

Cap Type Brass Disk Size 0 070 M Diameter Monument is flush with ground



State: Oregon	County: Douglas	Station Name BUCK	
Section: NW 1/4 7	Township: 30 S	Range: 5 W	WM
Geodetic Datum WGS 84	Latitude: N 42°58'45 50319"	+/- 0 008 m	2 sigma
	Longitude W 123°20'03 18081"	+/- 0 007 m	2 sigma
SPCS Datum NAD 83 (1991)	Northing: 149722 079 meters		
OREGON SOUTH	Easting: 1268884 902 meters		
Convergence: - 1°56'20 47923"	Point Scale Factor: 0 999900039		
Vertical Datum NAVD 1988	Ortho Height 195 582 m	+/- 0 002 m	
	Ellips Height N/A		
	Seperation: N/A		
Geoid Model Geoid 96	Geoid Height: N/A		

DIRECTIONS TO MONUMENT. To reach the station from the Riddle Interchange on Interstate 5 travel North 0.4 miles to the mark, 43 meters West of the I-5 centerline. Approx M P 104.4 Engineer's Station 205+75
 Monument is on ODOT Right of Way – Permission is not needed to access this monument



MONUMENT AND CAP DESCRIPTION

Monument Type Concrete post Size 0.30 m x 0.30 m x 0.9 m

Cap Type Brass Disk Size 0.76 cm Diameter

Monument is flush with ground

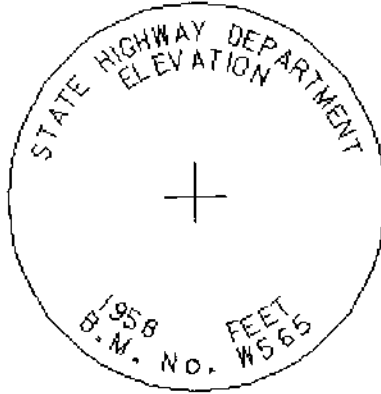


State Oregon	County. Douglas	Station Name. W565
Section SE 1/4 32	Township: 29 S	Range: 5 W
WM	Date Found: 19 Aug , 1997	
Geodetic Datum: WGS 84	Latitude N 43°00'15 76338"	+/- 0 005 m 2 sigma
	Longitude: W 123°18'38 40486"	+/- 0 005 m 2 sigma
SPCS Datum NAD 83 (1991)	Northing 152440 85711 meters	
OREGON SOUTH	Easting 1270897 91449 meters	
Convergence - 1°55'22 47998"	Point Scale Factor 0 999898696	
Vertical Datum: NAVD 1988	Ortho Height N/A m +/- N/A m	
	Ellips Height N/A	
	Seperation: N/A	
Geoid Model Geoid 96	Geoid Height N/A	
DIRECTIONS TO MONUMENT To reach the station from the Jct Weaver Rd interchange on interstate 5, travel Southwesterly 0.2 miles to the mark at the center of interstate 5. Approx M P 106.5 Metal Witness post and paddle set near by. Monument is on ODOT Right of Way – Permission is not needed to access this monument.		
LOCATION SKETCH ▲ - MONUMENT		

MONUMENT AND CAP DESCRIPTION

Monument Type Concrete

Cap Type Brass Disk Size 0.70 m Diameter Monument is flush with ground

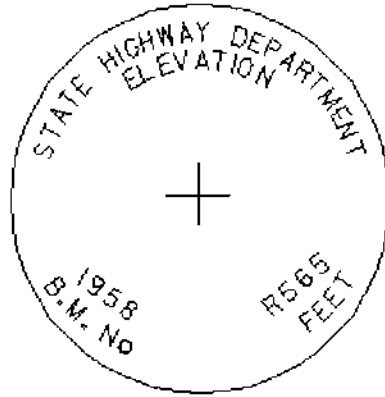


State: Oregon	County: Douglas	Station Name R 565
Section: NE 1/4 32	Township: 29 S	Range 5 W WM
Date Found: 19 Aug, 1997		
Geodetic Datum WGS 84	Latitude N 43°00'34.26132"	+/- 0.006 m 2 sigma
	Longitude W 123°18'12.08525"	+/- 0.005 m 2 sigma
SPCS Datum. NAD 83 (1991)	Northing 152991.336 meters	
OREGON SOUTH	Easting 1271512.726 meters	
Convergence - 1°55'04.47349"	Point Scale Factor: 0.999898444	
Vertical Datum NAVD 1988	Ortho. Height N/A m +/- N/A m	
	Ellips Height N/A	
	Seperation. N/A	
Geoid Model Geoid 96	Geoid Height N/A	
DIRECTIONS TO MONUMENT To reach the station from the Jct Of Weaver Rd Interchange travel Northeasterly 0.3 miles to the mark at the centerline of Interstate 5 Approx M P 107		
Monument is on ODOT Right of Way – Permission is not needed to access this monument		
LOCATION SKETCH ▲ - MONUMENT		
NOT TO SCALE		

MONUMENT AND CAP DESCRIPTION

Monument Type Concrete

Cap Type Brass Disk Size 0.70 m Diameter Monument is flush with ground

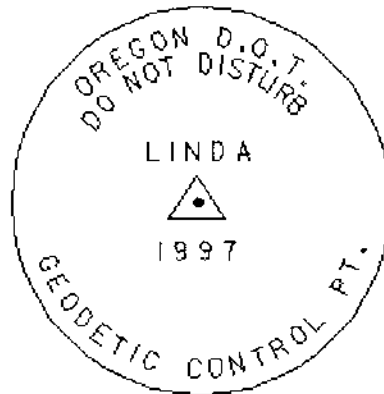


State Oregon	County: Douglas	Station Name LINDA
Section. NE 1/4 18	Township: 30 S	Range: 5 W
WM	Date Set: 19 Aug, 1997	
Geodetic Datum WGS 84	Latitude: N 42°57'44.47021"	+/- 0.007 m 2 sigma
	Longitude W 123°19'47.94721"	+/- 0.007 m 2 sigma
SPCS Datum NAD 83 (1991)	Northing: 147828 25995 meters	
OREGON SOUTH	Easting 1269166 20597 meters	
Convergence: - 1°56'10.05720"	Point Scale Factor 0.999901055	
Vertical Datum: NAVD 1988	Ortho Height: 198.911 m +/- 0.002 m	
	Ellips. Height: N/A	
	Seperation: N/A	
Geoid Model Geoid 96	Geoid Height N/A	
DIRECTIONS TO MONUMENT: To reach the station from the Jct of the Riddle Interchange on Interstate 5, travel Southerly 0.9 miles to the mark which is in an old road which ends at a fence. The monument is 72 meters right of the I-5 centerline. Approx M P 107 and engineer's station 275+71.		
Monument is on ODOT Right of Way – Permission is not needed to access this monument		
LOCATION SKETCH ▲ - MONUMENT		
NOT TO SCALE		

MONUMENT AND CAP DESCRIPTION

Monument Type Brass Disk set in rock outcrop

Cap Type Brass Disk Size 0.76 cm Diameter Monument is flush with ground

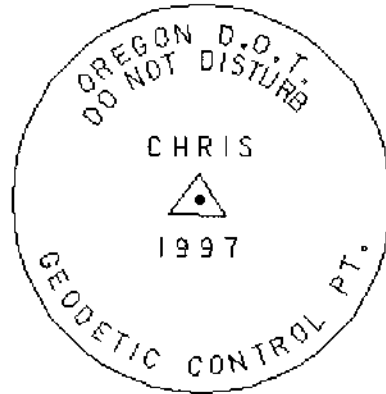


MONUMENT AND CAP DESCRIPTION

Monument Type Concrete post Size 0.30 m x 0.30 m x 0.9 m

Cap Type Brass Disk Size 0.76 cm Diameter

Monument is flush with ground



State: Oregon	County: Douglas	Station Name: LYNNE
Section SE 1/4 21	Township 30 S	Range 5 W WM
Date Set: 19 Aug, 1997		
Geodetic Datum: WGS 84	Latitude N 42°56'39.92840"	+/- 0.006 m 2 sigma
	Longitude W 123°17'33.69991"	+/- 0.006 m 2 sigma
SPCS Datum NAD 83 (1991)	Northing 145735.769 meters	
OREGON SOUTH	Easting 1272140.387 meters	
Convergence . - 1°54'38.21226"	Point Scale Factor: 0.999902224	
Vertical Datum NAVD 1988	Ortho. Height: 219.139 m +/- 0.002 m	
	Ellips. Height: N/A	
	Seperation N/A	
Geoid Model Geoid 96	Geoid Height: N/A	
DIRECTIONS TO MONUMENT To reach the station from the Jct. Of the North Canyonville Interchange on Interstate 5, travel Northbound for 0.3 miles to the mark on the West side of I-5, 44 meters from the I-5 centerline. Approx. M P 100 Engineer's Station 443+50.		
Monument is on ODOT Right of Way – Permission is not needed to access this monument.		
LOCATION SKETCH ▲ - MONUMENT		
NOT TO SCALE		

MONUMENT AND CAP DESCRIPTION

Monument Type Concrete post Size 0.30 m x 0.30 m x 0.9 m

Cap Type Brass Disk Size 0.76 cm Diameter

Monument is flush with ground

