

Bonneville Power Administration  
Geodetic Control Data Sheet

Station: WM037 (237)  
 Project: Wallula-Smiths Harbor-McNary  
 Section: SE 1/4 9                      Township: 5 North                      Range: 30 East                      Meridian: Willamette  
 County: Umatilla                      State: OR                      USGS Quad: Juniper, Oregon  
 Surveyor: M R Heidecke                      Date Surveyed: July, 2001

Instrument:

The horizontal coordinates and orthometric elevation were established by GPS observations using two Trimble 4000 SSI dual frequency receivers with Compact L1/L2 antennae with RTK ground plane, and observing for 30 minutes and using the mean values. The sigma values shown are the difference from the two measurements and not the 95% confidence values from the network adjustment. The ellipsoid height is an average between WM036 and WM038.

Adjustment:

The Basis of Coordinates for this survey is the Oregon State Coordinate System, North Zone, NAD 83 (1998). The horizontal component of the least squares adjustment was constrained by holding NGS Stations B 340 (A), B 502 (B), PENDLETON (B), STANFIELD EAST BASE RESET (B), and BURDEN (B). The vertical component of the least squares adjustment was constrained by holding NGS Benchmarks B 340 (First Order Class II), B 502 (First Order Class II), BURDEN (Second Order Class II), V 203 (Second Order Class 0), G 640 (First Order Class I). The elevation for point 106, 201, 249, and 255 were determined by differential leveling from G 640, D 502, E 525 and F 431 respectively and held.

Horizontal Datum: NAD83 (1998)                      Linear Unit: International Feet  
 Vertical Datum: NAVD88                      Linear Unit: U.S. Survey Feet

Latitude: <u>N 45-55-41.92246</u>	Longitude: <u>W 119-03-33.10986</u>
US State Plane Coordinate System: <u>Oregon North Zone - 3601</u>	
Northing: <u>827,831.541</u>	Easting: <u>8,568,718.884</u>
Orthometric Elevation: <u>883.38</u>	Ellipsoid Height: <u>812.74</u>
Combined Factor: <u>0.99994042</u>	Convergence: <u>- 1-01-18</u>
Confidence: <u>Mean measured values difference</u>	
<u>    Northing-0.007</u>	<u>    Easting-0.004</u> <u>    Elevation-0.007</u>

Monumentation: BPA 3/4-inch Aluminum Cap on 5/8-inch aluminum rod, flush with ground.  
 Stamping: U.S.D.O.E. Bonneville Pwr. Adm., WM037 - FEC-01 - ATB - GPS

To-Reach Description:

Begin at Umatilla Post Office, Umatilla, OR. 97882. Drive east on Highway 730, 9.2 miles to intersection of State Highway #37 to right (south). Drive southeasterly on State Highway #37, 1.3 miles to intersect BPA 500kV transmission line crossing Highway #37 northeast to southwest. Drive northeasterly on the transmission line access road 2.9 miles to intersection of a Pacific Power & Light 230kV transmission line at PP&L structure 2/16. Drive north on the PP&L transmission line access road 0.4 miles to PP&L structure 5/16 to the station. The station is west 162 feet from the center of pole of PP&L structure 5/16.

Witness post is a yellow carsonite marker inscribed with BPA logo, bearing and distance to station.

RECEIVED BY  
 Umatilla County Surveyor  
 Date \_\_\_\_\_  
 Rec'd By \_\_\_\_\_  
 No. 02-19-9