

FILED

OREGON DEPARTMENT OF TRANSPORTATION  
PHOTOGRAMMETRY UNIT  
Room 26, Transportation Building  
355 Capitol St. NE  
Salem, Oregon 97310-3154  
Phone: 986-3539 Fax: 986-3548

Date: 1-6-97 By: J.C.  
This survey consists of:

Map: \_\_\_\_\_  
Narrative: \_\_\_\_\_  
Control  
Camer Rpt: CS 65/11-1A-D

DOUGLAS COUNTY  
SURVEYOR

**HORIZONTAL CONTROL DATA SHEET**

STATION NAME: SAND 1993  
SECTION: 34 TOWNSHIP: 21S RANGE: 5W  
1/4 SECTION: SW COUNTY: DOUGLAS  
DATE SET: 03/16/93 STATE: OR

GPS: YES TYPE: STATIC  
GROUP: C ORDER: 1  
PPM: 10

GEODETIC DATUM: NAD 83/91  
LAT.: N 43° 41' 58.97930"  
LONG.: W 123° 16' 54.21772"

VERTICAL DATUM:  
ELLIPSOID ELEV: 78.843 ± meters  
ORTHOMETRIC ELEV: N/A meters  
SEPARATION: \_\_\_\_\_ meters

SPCS DATUM: OREGON SOUTH  
NORTHING: 229583.959 meters  
EASTING: 1275821.306 meters

CONVERGENCE: - 1° 54' 11.2000"  
SCALE FACTOR: 0.99993754

**STATEMENT PER ORS 209.260(6) (g)**

The purpose of this survey was to establish GPS stations for horizontal geodetic control for the Drain Bypass project. The survey was completed in May, 1993. GPS sessions were done using three ASHTECH MD-XII 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 WELK, SOAM and AIRWAY BEACON 43 RESET were the basis for processing this data. Data for this project is located in Control File 93-005 in the Photogrammetry Unit, Oregon Department of Transportation in Salem, OR.

**DIRECTIONS TO THE MONUMENT:** From the Jct. of Oregon Hwy. 38 and old Oregon Hwy. 99 in Drain; go northerly on Oregon Hwy. 38 for 3.33 miles to the mark on the left (north) side of Oregon Hwy. 38.

**MONUMENT TYPE:** 3" Brass Disk set in concrete post.

**STAMPING:** SAND 1993

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

OREGON  
JULY 26, 1991  
CLIFFORD P. CALDWELL  
2492

Exp. Date 12-31-97

**DESCRIPTION OF THE MONUMENT:** Mark is an ORDOT standard Geodetic Control Disk set in a 1' x 1' concrete post flush with ground; west side of a paved driveway and 7.0 ft. from asphaltic concrete.

**REFERENCE MARK:** LEON 1993 (SAND 1993 and LEON 1993 were established for basis of bearing).

For conversion of meters to U.S. Survey Feet multiply the meters by 39.37/12.0 which is 3.28083333333 to 12 significant figures.  
For conversion of meters to International Feet multiply the meters by 100.0/30.48 which is 3.28083989501 to 12 significant figures.  
Elevation Factor (in the North American Continent) = 1 - (Ellipsoid Elevation in meters / 6,372,000).

C.S. File No. 65/11-1A

FILED

Date: 1-16-97 By: JC

This survey consists of:

Map: \_\_\_\_\_

Narrative: \_\_\_\_\_

Control Corner Rpt: 65/11-1A-D

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**DOUGLAS COUNTY  
SURVEYOR**

**HORIZONTAL CONTROL DATA SHEET**

**STATION NAME:** LEON 1993  
**SECTION:** 35 **TOWNSHIP:** 21S **RANGE:** 5W  
**1/4 SECTION:** SW **COUNTY:** DOUGLAS  
**DATE SET:** 03/16/93 **STATE:** OR

**GPS:** YES **TYPE:** STATIC  
**GROUP:** C **ORDER:** 1  
**PPM:** 10

**GEODETIC DATUM:** NAD 83/91  
**LAT.:** N 43° 41' 58.18217"  
**LONG.:** W 123° 15' 56.59208"

**VERTICAL DATUM:**  
**ELLIPSOID ELEV:** 92.068 ± meters  
**ORTHOMETRIC ELEV:** N/A meters  
**SEPARATION:** meters

**SPCS DATUM:** OREGON SOUTH  
**NORTHING:** 229496.648 meters  
**EASTING:** 1277110.033 meters

**CONVERGENCE:** - 1° 53' 31.7800"  
**SCALE FACTOR:** 0.99993751

**STATEMENT PER ORS 209.250(6) (g)**

The purpose of this survey was to establish GPS stations for horizontal geodetic control for the Drain Bypass project. The survey was completed in May, 1993. GPS sessions were done using three ASHTECH MD-XII dual frequency GPS 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 WELK, SOAM and AIRWAY BEACON 43 RESET were the basis for processing this data. Data for this project is located in Control File 93-005 in the Photogrammetry Unit, Oregon Department of Transportation in Salem, OR.

**DIRECTIONS TO THE MONUMENT:** From the Jct. of Oregon Hwy. 38 and old Oregon Hwy. 99 in Drain; go northerly on Oregon Hwy. 38 for 4.13 miles to the mark on the right (south) side of Oregon Hwy. 38.

**MONUMENT TYPE:** 3" Brass Disk set in concrete post.

**STAMPING:** LEON 1993

**REGISTERED  
PROFESSIONAL  
LAND SURVEYOR**

*Clifford P. Caldwell*  
**OREGON  
JULY 26, 1991  
CLIFFORD P. CALDWELL  
2492**

Exp. Date 12-31-97

**DESCRIPTION OF THE MONUMENT:** Mark is an ORDOT standard Geodetic Control Disk set in a 1' x 1' concrete post flush with ground; 134 ft. south of power pole #7/83; and 14.5 ft. south of edge of asphaltic concrete.

**REFERENCE MARK:** SAND 1993 (LEON 1993 and SAND 1993 were established for basis of bearing).

For conversion of meters to U.S. Survey Feet multiply the meters by 39.37/12.0 which is 3.28083333333 to 12 significant figures.  
For conversion of meters to International Feet multiply the meters by 100.0/30.48 which is 3.28083989501 to 12 significant figures.  
Elevation Factor (in the North American Continent) = 1 - (Ellipsoid Elevation in meters / 6,372,000).

C.S. File No. 65/11-1B

FILED

Date: 1-16-97 By: JC

This survey consists of:

Map: \_\_\_\_\_

Narrative: \_\_\_\_\_

Control Corner Rpt: 65/11-1A-0

**OREGON DEPARTMENT OF TRANSPORTATION**  
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Phone: 986-3539 Fax: 986-3548

**DOUGLAS COUNTY**  
**SURVEYOR**

**HORIZONTAL CONTROL DATA SHEET**

**STATION NAME:** SHOP 1993  
**SECTION:** 17 **TOWNSHIP:** 22S **RANGE:** 5W  
**1/4 SECTION:** SW **COUNTY:** DOUGLAS  
**DATE SET:** 03/16/93 **STATE:** OR

**GPS:** YES **TYPE:** STATIC  
**GROUP:** C **ORDER:** 1  
**PPM:** 10

**GEODETIC DATUM:** NAD 83/91  
**LAT.:** N 43° 39' 21.44518"  
**LONG.:** W 123° 19' 06.30745"

**VERTICAL DATUM:**  
**ELLIPSOID ELEV:** 70.346 ± meters  
**ORTHOMETRIC ELEV:** N/A meters  
**SEPARATION:** meters

**SPCS DATUM:** OREGON SOUTH  
**NORTHING:** 224803.959 meters  
**EASTING:** 1272701.868 meters

**CONVERGENCE:** - 1° 55' 41.5700"  
**SCALE FACTOR:** 0.99993075

**STATEMENT PER ORS 209.250(6) (g)**

The purpose of this survey was to establish GPS stations for horizontal geodetic control for the Drain Bypass project. The survey was completed in May, 1993. GPS sessions were done using three ASHTECH MD-XII 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 WELK, SOAM and AIRWAY BEACON 43 RESET were the basis for processing this data. Data for this project is located in Control File 93-005 in the Photogrammetry Unit, Oregon Department of Transportation in Salem, OR.

**DIRECTIONS TO THE MONUMENT:** From the Jct. of Oregon Hwy. 38 and old Oregon Hwy. 99 (Cedar St.) in Drain; go southerly on Cedar St. for 0.47 miles to the intersection of Cedar St. and Lane Ave; mark is on the west edge of Cedar St. and north edge of Lane Ave..

**MONUMENT TYPE:** 3" Brass Disk set in concrete post.

**STAMPING:** SHOP 1993

**REGISTERED**  
**PROFESSIONAL**  
**LAND SURVEYOR**



**OREGON**  
JULY 25, 1991  
**CLIFFORD P. CALDWELL**  
2492

Exp. Date 12-31-97

**DESCRIPTION OF THE MONUMENT:** Mark is an ORDOT standard Geodetic Control Disk set in a 1' x 1' concrete post flush with ground; 28.7 ft. southwest of a power pole and 51.5 ft. northeast of street sign.

**REFERENCE MARK:** MILL 1993 (SHOP 1993 and MILL 1993 were established for basis of bearing).

For conversion of meters to U.S. Survey Feet multiply the meters by 39.37/12.0 which is 3.28083333333 to 12 significant figures.  
For conversion of meters to International Feet multiply the meters by 100.0/30.48 which is 3.28083989501 to 12 significant figures.  
Elevation Factor (in the North American Continent) = 1 - (Ellipsoid Elevation in meters / 6,372,000).

G.S. File No. 65/11-1A-C

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Date: 1-6-97 By: JC  
This survey consists of:  
Map: \_\_\_\_\_  
Narrative: \_\_\_\_\_  
Control: \_\_\_\_\_  
Corner Rpt: 65/11-1A-D

DOUGLAS COUNTY  
SURVEYOR

**HORIZONTAL CONTROL DATA SHEET**

STATION NAME: MILL 1993  
SECTION: 17 TOWNSHIP: 22S RANGE: 5W  
1/4 SECTION: NW COUNTY: DOUGLAS  
DATE SET: 03/18/93 STATE: OR

GPS: YES TYPE: STATIC  
GROUP: C ORDER: 1  
PPM: 10

GEODETTIC DATUM: NAD 83/91  
LAT.: N 43° 39' 32.56021"  
LONG.: W 123° 19' 40.22234"

VERTICAL DATUM:  
ELLIPSOID ELEV: 68.272 ± meters  
ORTHOMETRIC ELEV: N/A meters  
SEPARATION: \_\_\_\_\_ meters

SPCS DATUM: OREGON SOUTH  
NORTHING: 225172.391 meters  
EASTING: 1271953.974 meters

CONVERGENCE: -1° 56' 04.7700"  
SCALE FACTOR: 0.99993121

**STATEMENT PER ORS 209.250(6) (g)**

The purpose of this survey was to establish GPS stations for horizontal geodetic control for the Drain Bypass project. The survey was completed in May, 1993. GPS sessions were done using three ASHTECH MD-XII dual frequency GPS 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 WELK, SOAM and AIRWAY BEACON 43 RESET were the basis for processing this data. Data for this project is located in Control File 93-005 in the Photogrammetry Unit, Oregon Department of Transportation in Salem, OR.

**DIRECTIONS TO THE MONUMENT:** From the Jct. of Oregon Hwy. 38 and old Oregon Hwy. 99 (Cedar St.) in Drain; go southerly on Cedar St. for 0.32 miles to the intersection of Cedar St. and Applegate Ave; go westerly on Applegate for 0.23 miles to mill property; continue past buildings to road around mill ponds; mark is on northerly road about 0.17 miles from east end of ponds.

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR

*Clifford P. Caldwell*  
OREGON  
JULY 25, 1991  
CLIFFORD P. CALDWELL  
2482

Exp. Date 12-31-97

MONUMENT TYPE: 3" Brass Disk set in concrete post.

STAMPING: MILL 1993

**DESCRIPTION OF THE MONUMENT:** Mark is an ORDOT standard Geodetic Control Disk set in a 1' x 1' concrete post flush with ground; on south edge of road.

**REFERENCE MARK:** SHOP 1993 (MILL 1993 and SHOP 1993 were established for basis of bearing).

For conversion of meters to U.S. Survey Feet multiply the meters by 39.37/12.0 which is 3.28083333333 to 12 significant figures.  
For conversion of meters to International Feet multiply the meters by 100.0/30.48 which is 3.28083989501 to 12 significant figures.  
Elevation Factor (in the North American Continent) = 1 - (Ellipsoid Elevation in meters / 6,372,000).

C.S. File No. 65/11-1D