HORIZONTAL CONTROL, RECOVERY & RETRACEMENT SURVEY HOOD RIVER HWY. 281 AT PACIFIC AVE.

MILE POST 0.67 TO 1.17 LOCATED IN THE SE. 1/4, SEC. 35 AND IN THE SW. 1/4, SEC. 36 T.3 N., R. 10 E., WILLAMETTE MERIDIAN JAMES M. BENSON D.L.C. 39 HOOD RIVER COUNTY, OREGON NOVEMBER 30,2001

SURVEY RECORDS FILED 3/13/03 Roudy Shot CS 2003 013 REGISTER NUMBER

HOOD RIVER COUNTY

NARRATIVE

PURPOSE

THIS IS A RECOVERY SURVEY TO REFERENCE FOUND MONUMENTS. LOCATE CERTAIN RIGHT-OF-WAY (R/W) LINES, AND IDENTIFY PERMANENT HORIZONTAL CONTROL ESTABLISHED FOR A PROPOSED OREGON DEPARTMENT OF TRANSPORTATION (ODOT) PROJECT, SAID PROJECT HAS BEEN ASSIGNED ODOT KEY NUMBER 11915, THIS SURVEY MEETS THE REQUIREMENTS OF ORS 209,155(1b)(5).

BASIS OF BEARING, COORDINATES

COORDINATES WERE ASSUMED AND HELD ON POINT 47, (THE SW. CORNER OF SECTION 36), THE BEARING BETWEEN POINTS 47 AND 125 (THE WEST 1/4 CORNER OF SECTION 36) WAS HELD FOR THE BASIS OF BEARINGS AS S 00°07'00" W AS SHOWN ON ODOT R/W MAP 8B-36-13.

ALIGNMENT DESCRIPTION

'HR' IS THE RECORD ALIGNMENT OF THE HOOD RIVER HWY. SECTION SHOWN ON ODOT R/W MAP 8B-36-13, FOUND MONUMENT POINT 125 WAS HELD FOR CENTERLINE OF THE HWY, AND FOR STATIONING AS NOTED ON SAID ODOT MAP. POINT 125 WAS STATIONED AS 'HR' 3+078,480 (101+00 ON MAP 8B-36-13).

'PACIFIC' IS THE RECORD ALIGNMENT OF PACIFIC AVE. AS SHOWN ON HOOD RIVER COUNTY SURVEY NUMBER (SN)7324. POINT 1034 WAS HELD FOR CENTERLINE. THE ANGLE BETWEEN PACIFIC AVE. AND HOOD RIVER HWY, ALIGNMENTS WAS HELD AT 89°37′10" AS PER SN 7324.

R/W LINES

R/W LINES FOR HOOD RIVER HWY, ARE AS SHOWN ON ODOT MAP 8B-36-13, R/W LINES FOR PACIFIC AVE. ARE AS DESCRIBED IN HOOD RIVER COUNTY DEED DOCUMENTS 731329,731330 AND 73/33/.

REFERENCE DOCUMENTS

ODOT R/W MAP 8B-36-13 (JULY 1966) HOOD RIVER COUNTY SURVEYS 98059 99067 2000 045 90067 99007 99083

81014 99012 7562 99024 7324 99037

HOOD RIVER COUNTY DEED RECORD (DOC) 731329, 731330, 731331

INDEX

SHEET I - NARRATIVE, QUALITY CONTROL SHEET 2 - PROJECT CONTROL SHEET SHEET 3, 4, 5 & 6 PROJECT RECOVERY SHEETS

PROJECT TEAM

FIELD LEADER : B.GIGSTAD DRAWN BY : T.HALE CALCULATED BY : T.HALE PROJECT SURVEYOR: F.OBIJIOFOR STANDARDS : L.HOOVER SENIOR SURVEYOR : R. HAMILTON SURVEY MANAGER : B. TANDY

SPECIAL NOTES

THIS SURVEY WAS PERFORMED USING METRIC MEASURE. TO CONVERT FROM METRIC TO INTERNATIONAL FEET, DIVIDE BY THE FOLLOWING CONVERSION FACTORS:

> 25,40 MILLIMETERS (mm)/INCH 0.3048 METERS (m)/FOOT

ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.

THIS SURVEY WAS PREPARED USING HEWLETT-PACKARD PRODUCT NO. 51645A ON CONTINENTAL JPC4M2 POLYESTER FILM.

QUALITY CONTROL

HORIZONTAL CONTROL WAS ESTABLISHED BY EXECUTING A NETWORK USING FORCED CENTERING METHODS. TWO SETS OF HORIZONTAL ANGLES WERE TURNED AT EACH STATION. THE LENGTH OF EACH LEG OF THE NETWORK WAS DETERMINED BY MEASURING TWO SETS OF SLOPE DISTANCES AND TURNING TWO SETS OF ZENITH (VERTICAL) ANGLES BOTH IN THE AHEAD AND BACK DIRECTION. THE MEAN VALUES OF THE HORIZONTAL ANGLES AND DISTANCES WERE RECORDED AND USED FOR NETWORK COMPUTATIONS,

THE NETWORK WAS ADJUSTED USING THE LEAST SQUARES METHOD, SEE SHEET 2 FOR THE RESULTS OF THE NETWORK COMPUTATIONS.

INSTRUMENT USED:

LEICA TCA 1800 TOTAL STATION

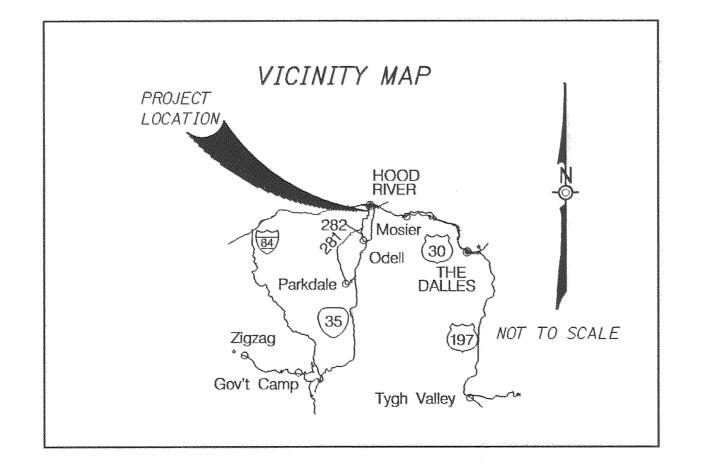
(SER. #419153)

THE TOTAL STATION WAS CHECKED FOR CALIBRATION AND COLLIMATION PRIOR TO EXECUTING THE NETWORK, BASELINE RECORDS AND DETAILS REGARDING NETWORK PROCEDURES ARE ON FILE AT THE ADDRESS BELOW.

A SEARCH FOR SURVEY MONUMENTS WAS MADE WITHIN THE PROJECT LIMITS. FOUND MONUMENTS WERE TIED BETWEEN NOVEMBER 30, 2001 AND MARCH 21, 2002, THE HORIZONTAL POSITIONS OF THE FOUND MONUMENTS WERE ESTABLISHED BY TIEING THE MONUMENTS FROM THE HORIZONTAL CONTROL, TWO INDEPENDENT MEASUREMENTS WERE MADE TO MONUMENTS THAT FELL WITHIN THE PROJECT LIMITS. THE EXTRA MEASUREMENTS WERE PERFORMED TO INCREASE THE CONFIDENCE AND CREDIBILITY OF PRESERVING THE MONUMENT LOCATIONS. MONUMENTS OUTSIDE THE LIMITS OF THE PROJECT WERE TIED AS SUPPORTING EVIDENCE TO ESTABLISH BOUNDARY LINES AND DETERMINE CENTERLINE RECOVERY.

ALL PIPE SIZES ARE INSIDE DIAMETER.

A COPY OF THE ORIGINAL FIELD NOTES IS ON FILE AT THE ADDRESS BELOW.





PROFESSIONAL LAND SURVEYOR Bim P. Tandy OREGON BRIAN P. TANDY

REGISTERED

REGION 1, SURVEY GROUP 123 NW FLANDERS STREET PORTLAND, OR 97209-4012 (503) 731-3240

SHEET 1 OF 6 RENEWAL DATE 6-30-2004

CS 2003 013 (6)

RODI 3-7-03

HORIZONTAL CONTROL, RECOVERY & RETRACEMENT SURVEY HOOD RIVER HWY. 281 AT PACIFIC AVE.

MILE POST 0.67 TO 1.17

LOCATED IN THE SE. 1/4, SEC. 35 AND

IN THE SW. 1/4, SEC. 36

T. 3 N., R. 10 E., WILLAMETTE MERIDIAN

JAMES M. BENSON D.L.C. 39

HOOD RIVER COUNTY, OREGON

NOVEMBER 30, 2001

PROJECT NETWORK CONTROL POINTS

POINT ID	NORTHING	EASTING	DESCRIPTION
1 2 3 4 5 10 11 12 46	5906.704 6071.024 6136.146 6230.782 6351.676 5676.872 5836.827 6089.521 5676.553	20277.338 20268.027 20267.429 20288.494 20272.996 20675.164 20678.923 20679.544 21079.533	SET P-K NAIL IN CONCRETE ISLAND WITH 1 1/2" BRASS WASHER STAMPED "ODOT CONTROL". SET BRASS SCREW IN CONCRETE WALK WITH 1 1/4" BRASS WASHER STAMPED "ODOT CONTROL". SET 5/8" IRON ROD WITH RED PLASTIC CAP STAMPED "ODOT TRAVERSE", FLUSH. SET BRASS SCREW IN CONCRETE WALK WITH 1 1/4" BRASS WASHER STAMPED "ODOT CONTROL". SET BRASS SCREW IN CONCRETE WALK WITH 1 1/4" BRASS WASHER STAMPED "ODOT CONTROL". FOUND 5/8" REBAR IN MONUMENT BOX, LID MARKED "WATER". FOUND 5/8" REBAR IN MONUMENT BOX, LID MARKED "WATER". FOUND 5/8" REBAR DOWN 0.20 m. (UNKNOWN ORIGIN) FOUND 3" BRASS DISC MARKED "HOOD BLVER COUNTY TANK DAGE WAY AND SERVICE WASHER STAMPED TO SERVICE WASHER.
47 125 1011	5676.922 6475.370 5836.936	20276.250 20277.876 20290.252	FOUND 3" BRASS DISC MARKED "HOOD RIVER COUNTY T3N, R10E W.M., S36-S1" IN MONUMENT BOX, LID MARKED "WATER". HOOD RIVER COUNTY SURVEY RECORDS. FOUND NAIL WITH PUNCH MARK IN ASPHALT. CORNER CARD 621, HOOD RIVER COUNTY SURVEY RECORDS. REPLACED WITH 5/8" IRON ROD WITH 1 1/2" BRASS CAP STAMPED "ODOT 35 36 + 1 2 2002". FOUND 5/8" REBAR IN MONUMENT BOX, LID MARKED "WATER". CORNER CARD 620 HOOD RIVER COUNTY SURVEY RECORDS. FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP STAMPED "OR LS 932 WA LS 22098", FLUSH. (UNKNOWN ORIGIN)

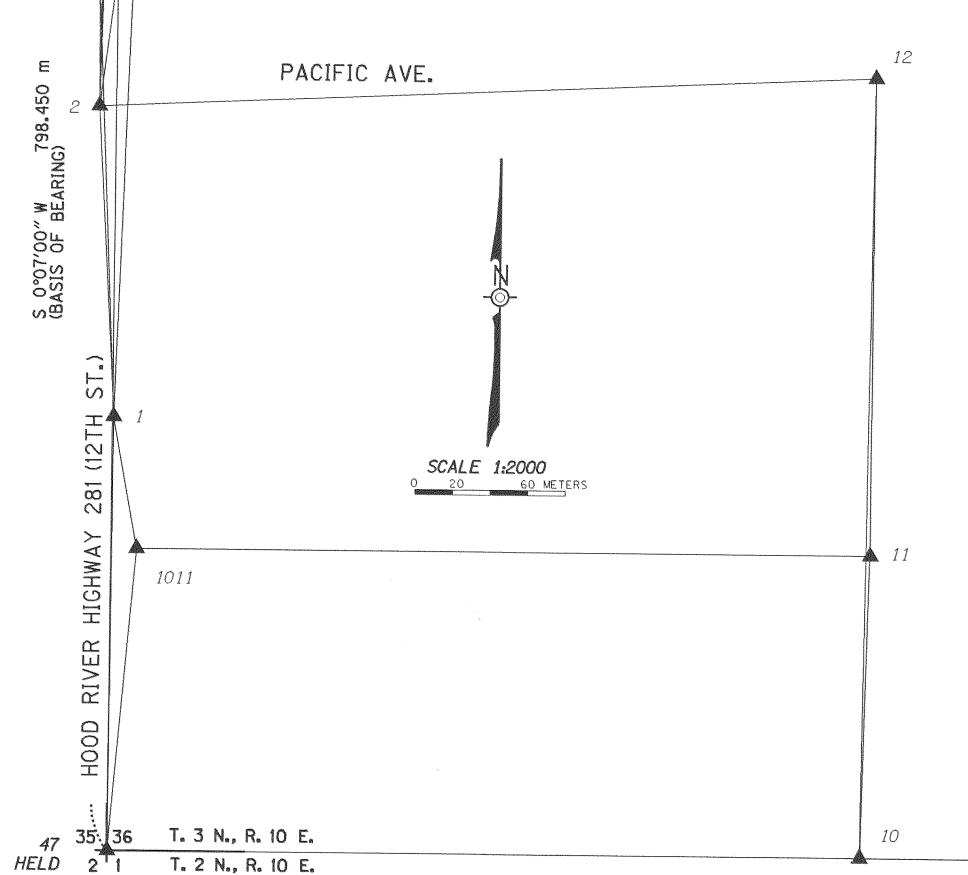
James M. Benson D.L.C. No. 39 125 HELD

S

281 (12TH

HIGHWAY

RIVER



NETWORK LINES OF OBSERVATION

From	То	BEARING	Length
1 1 2 2 2 2 2 3 4 10 12 47 47 47 47 47 125 1011 1011	1011 3 2 12 3 4 5 4 1 5 11 10 46 125 10 2 5 47 11	\$10°29'12"E N2°28'22"W N3°14'35"W N87°25'35"E N0°31'33"W N7°18'01"E N1°00'52"E N12°32'54"E \$1°58'17"W N7°18'18"W N1°20'46"E \$0°08'27"W \$0°36'29"W \$89°58'25"E N0°07'00"E N0°16'17"E \$89°59'34"E \$1°23'43"W \$2°15'32"W \$5°00'04"W \$89°59'02"E	70.954 229.655 164.583 411.932 65.125 161.064 280.696 96.952 324.270 121.883 159.999 252.695 412.672 803.283 798.450 229.785 398.914 404.466 123.791 160.625 388.671

NETWORK LEAST SQUARES ADJUSTMENT ERROR ELLIPSES

ADDUSTMENT ERROR ELLIPSES					
POINT ID	ERROR	ONFIDENCE L ELLIPSE DI SEMI MINOR			
1 2 3 4 5 10 11 12 46 1011	0.003 0.003 0.004 0.004 0.005 0.006 0.006 0.020 0.003	0.002 0.002 0.003 0.003 0.003 0.003 0.003 0.006 0.002	170°43'41" 174°13'41" 2°22'46" 178°11'27" 2°21'55" 13°48'39" 171°55'00" 148°27'06" 0°01'35" 0°14'32"		
ORIENTATION IS OF MAJOR AXIS FROM NORTH AZIMUTH					

SEC. 36, T.3 N., R. 10 E., W.M.

SEC. 1, T.2 N., R. 10 E., W.M.

HOOD RIVER COUNTY
SURVEY RECORDS

DATE
FILED 3/13/03 Pauls Alt

C5 2003 013

REGISTER NUMBER

LEGEND

A NETWORK STATION AS NOTED

LINES OF OBSERVATION

REGISTERED
PROFESSIONAL
LAND SURVEYOR

Buin P. Tanoly

OREGON
JULY 17, 1986
BRIAN P. TANDY
2222

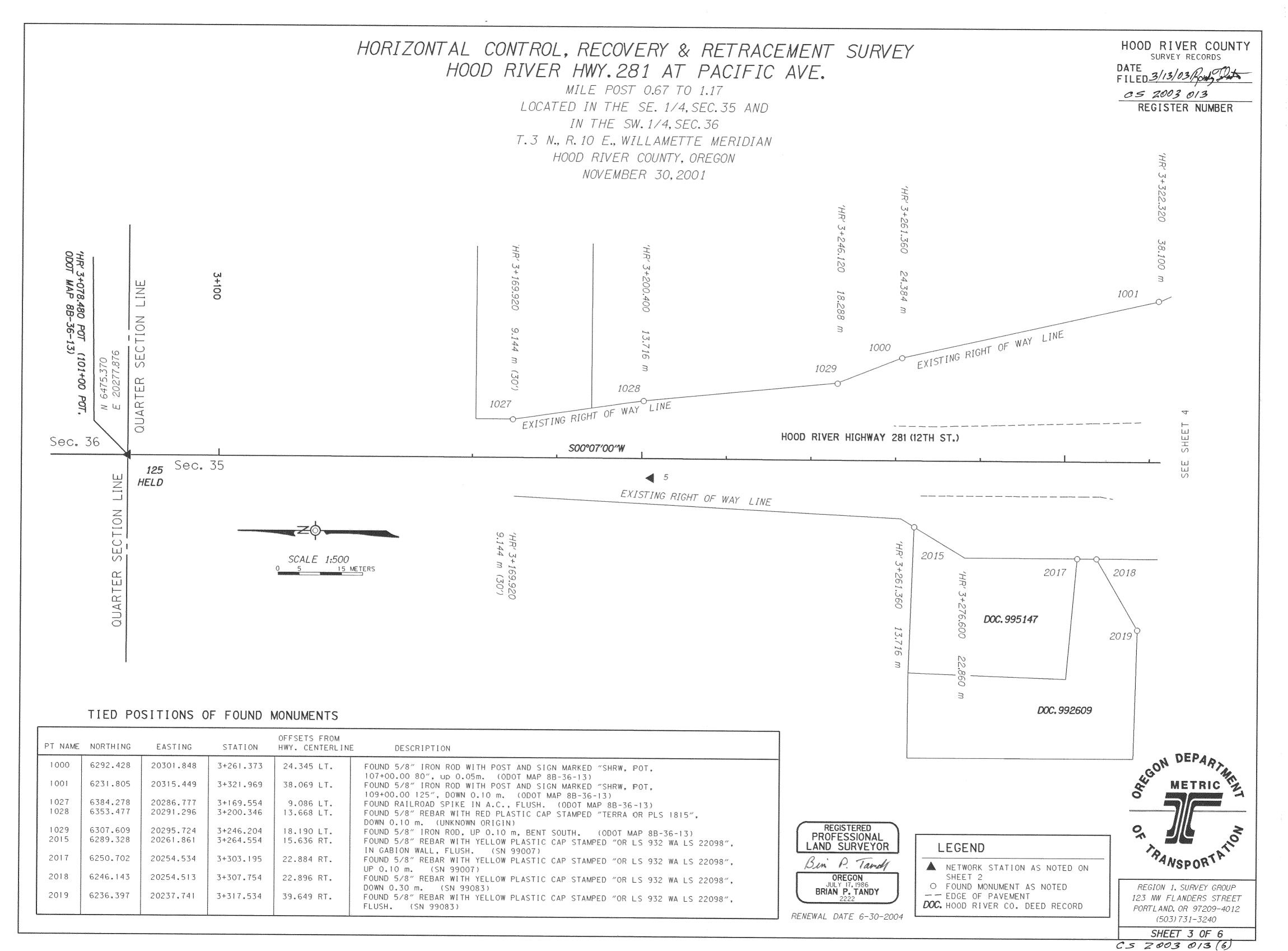
RENEWAL DATE 6-30-2004

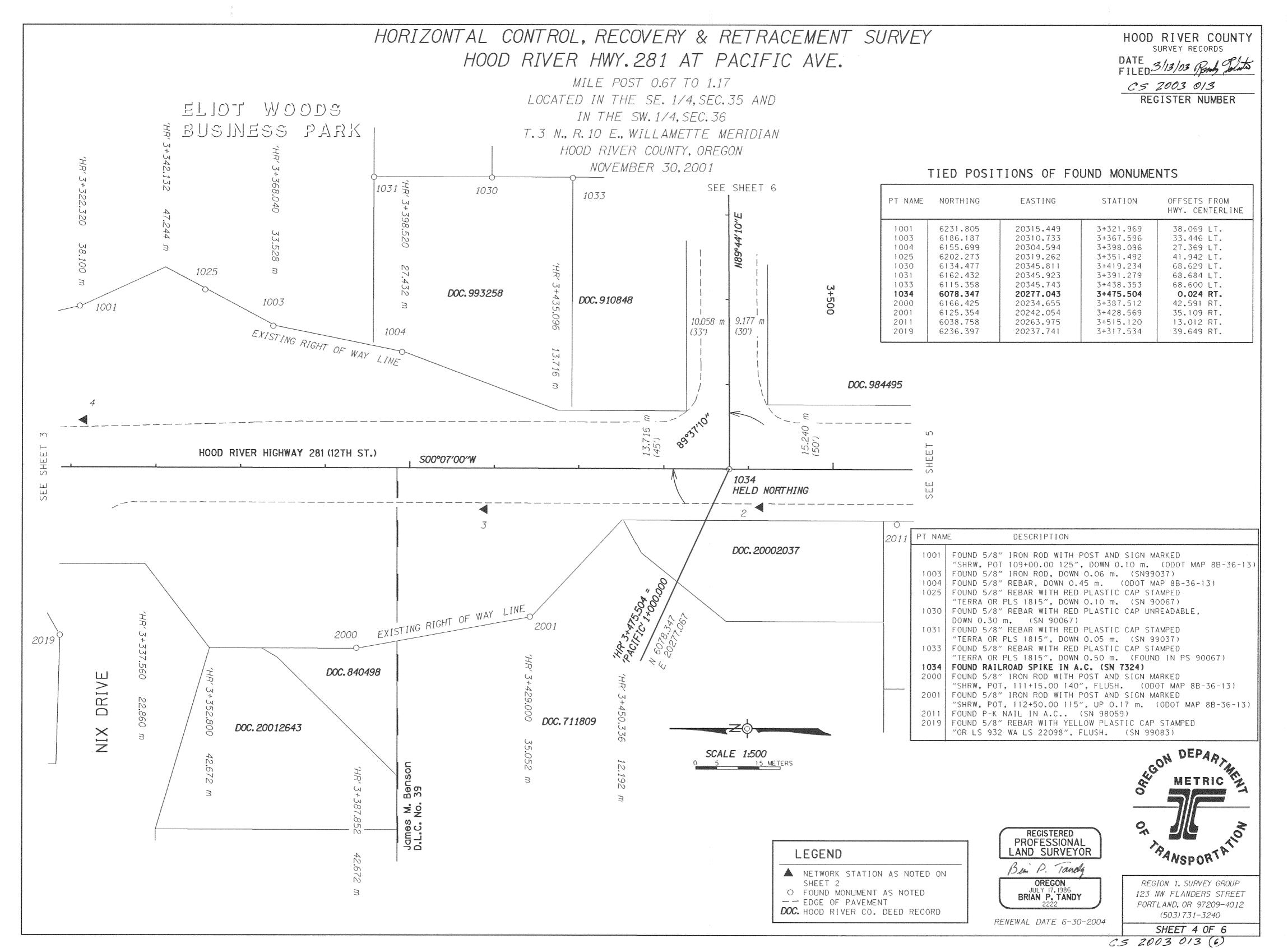


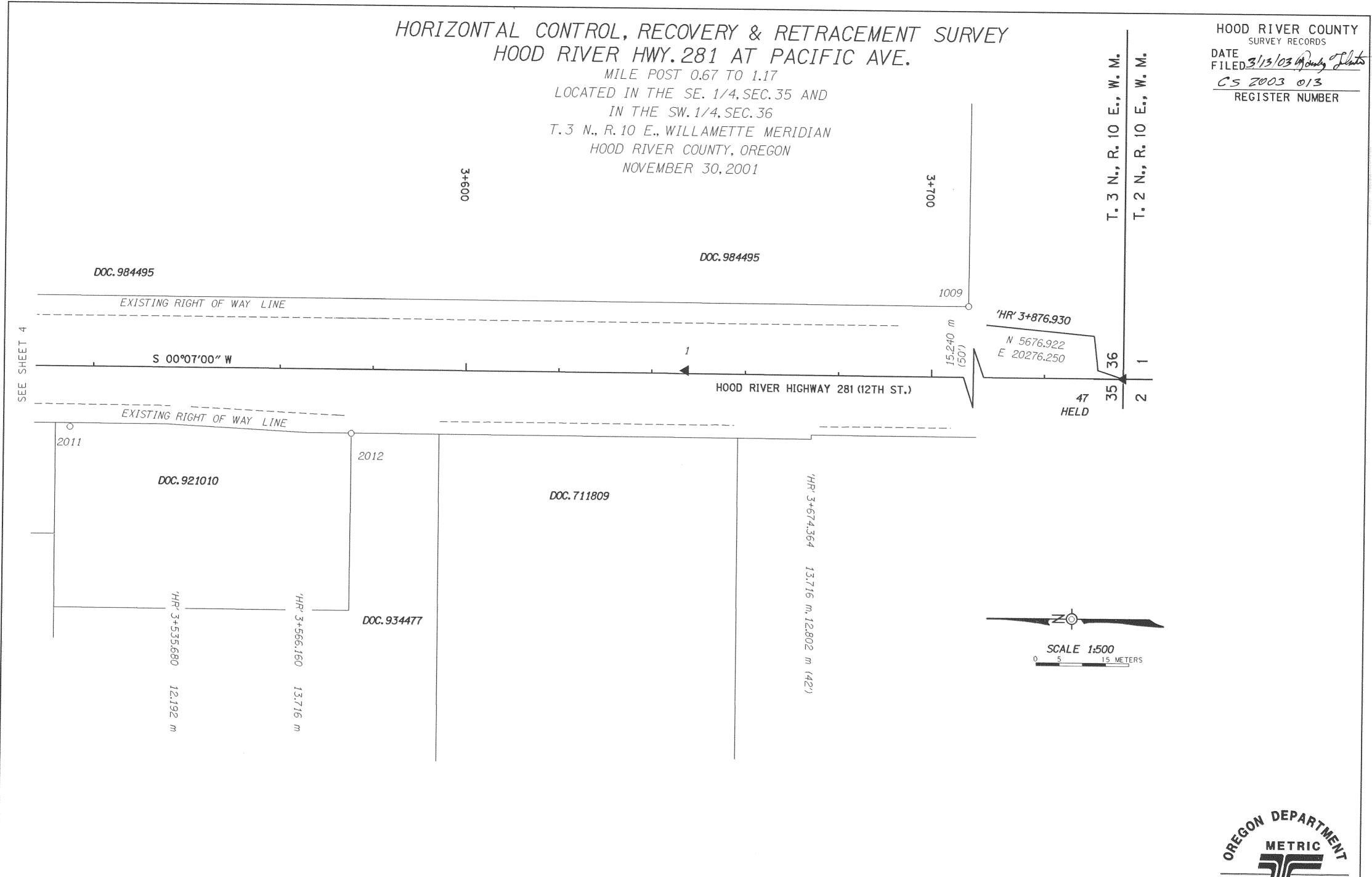
REGION 1, SURVEY GROUP 123 NW FLANDERS STREET PORTLAND, OR 97209-4012 (503) 731-3240

SHEET 2 OF 6

C 5 2003 013 (6)







TIED POSITIONS OF FOUND MONUMENTS

PT ID	NORTHING	EASTING	STATION	OFFSETS FROM HWY. CENTERLINE	DESCRIPTION
1009 2011 2012	5846.076 6038.758 5978.392	20291.825 20263.975 20263.123	3+707.744 3+515.120 3+575.487	13.012 RT. 13.740 RT.	1

LEGEND

A NETWORK STATION AS NOTED ON

O FOUND MONUMENT AS NOTED DOC. HOOD RIVER CO. DEED RECORD REGISTERED PROFESSIONAL LAND SURVEYOR

Bui P. Tandy OREGON JULY 17, 1981 BRIAN P. TANDY

RENEWAL DATE 6-30-2004



REGION 1, SURVEY GROUP 123 NW FLANDERS STREET PORTLAND, OR 97209-4012 (503) 731-3240

SHEET 5 OF 6

CS 2003 (013 (6)

HORIZONTAL CONTROL, RECOVERY & RETRACEMENT SURVEY HOOD RIVER HWY. 281 AT PACIFIC AVE.

MILE POST 0.67 TO 1.17

LOCATED IN THE SW. 1/4. SEC. 36

T. 3 N., R. 10 E., WILLAMETTE MERIDIAN

HOOD RIVER COUNTY, OREGON

NOVEMBER 30, 2001

HOOD RIVER COUNTY

SURVEY RECORDS

DATE

FILED \$\frac{13}{0} \frac{3}{0} \frac

REGISTER NUMBER

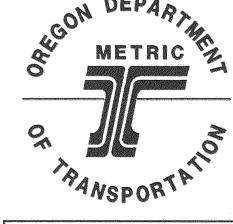
COURT COURT 1033 WOODS BTH 9TH DOC. 910848 DOC. 961298 DOC. 971516 (60')(60') 1019 1046 1020 1044 1042 1045 EXISTING RIGHT OF WAY LINE Doc. 731329 PACIFIC AVE. PACIFIC AVE. 3 SHEE **N89°44′10″E** (30′) N89°44′10″E 9.177 1041 Doc. 731330 Doc. 731331 EXISTING RIGHT OF WAY LINE 0 1026 1017 1018 1043 DOC. 984495 LEGEND A NETWORK STATION AS NOTED ON SHEET 2 O FOUND MONUMENT AS NOTED -- EDGE OF PAVEMENT DOC. HOOD RIVER CO. DEED RECORD SCALE 1:500

TIED POSITIONS OF FOUND MONUMENTS

PT NAM	ME NORTHING	EASTING	STATION	OFFSET FRO PACIFIC	DM DESCRIPTION
1017	6069.981	20444.363	1+167.255	9.137 RT.	FOUND 1/2" REBAR, FLUSH, (FOUND IN SN 99012)
1018	6070.017	20443.174	1+166.066	9.096 RT.	FOUND 2" INSIDE DIAMETER IRON PIPE, DOWN 0.16 m. (FOUND IN SN 99012)
1019	6090.384	20440.142	1+163.128	11.285 LT.	FOUND 5/8" REBAR, DOWN 0.10 m. (UNKNOWN ORIGIN)
1020	6089,259	20459.056	1+182.037	10.073 LT.	FOUND 5/8" REBAR WITH RED PLASTIC CAP STAMPED "TERRA OR PLS 1815", DOWN 0.15 m. (SN 99024)
1026	6069.609	20365.174	1+088.065	9.144 RT.	FOUND 5/8" REBAR, DOWN 0.15 m. (SN 7562)
1033	6115.358	20345.743	1+068.845	36.694 LT.	FOUND 5/8" REBAR WITH RED PLASTIC CAP STAMPED "TERRA OR PLS 1815", DOWN 0.50 m. (FOUND IN SN 90067)
1041	6080.258	20695.677	1+418.613	0.018 RT.	FOUND 5/8" IRON ROD WITH YELLOW CAP STAMPED "WYEAST SURVEY LS2393", FLUSH. (SN 2000 045)
1042	6089.380	20695.710	1+418.689	9.104 LT.	FOUND 5/8" IRON ROD WITH YELLOW CAP STAMPED "WYEAST SURVEY LS2393", DOWN 0.05 m. (SN 2000 045)
1043	6069.056	20670.923	1+393.809	11.105 RT.	FOUND 3/4" IRON PIPE, DOWN 0.20 m. (UNKNOWN ORIGIN)
1044	6089,909	20591.636	1+314.619	10.113 LT.	FOUND 5/8" IRON ROD, DOWN 0.13 m. (FOUND IN SN 81014)
1045	6089.798	20573.331	1+296.313	10.086 LT.	FOUND 5/8" IRON ROD, DOWN 0.05 m. (UNKNOWN ORIGIN)
1046	6089.621	20532.326	1+255.308	10.097 LT.	FOUND 5/8" IRON ROD WITH RED CAP STAMPED "TERRA OR-PLS 1815", FLUSH. (SN 99024)



15 METERS



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SHEET 6 OF 6

CS 2003 013 (6)