

**MONUMENTATION SURVEY
2ND ST. INTERCHANGE (HOOD RIVER)
& HOOD RIVER BRIDGE SEC.**

M.P. 63.74 TO M.P. 64.28 ON HWY. 2

S.W. 1/4 SEC. 25

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

NATHANIEL COE D.L.C. 37

NATHAN L. BENSON D.L.C. 40

HOOD RIVER COUNTY, OREGON

MARCH 1999

NARRATIVE

PURPOSE

To monument the centerlines and permanent survey control point network referencing the new right-of-way (R/W) purchased for the Oregon Department of Transportation (ODOT) highway project:

Project Name: 2nd St. Intchge. (Hood River) & Hood River Bridge Secs.

Contract Number: 11536

Contract Date: September 1994

Construction Plans: 26V-007

BASIS OF BEARING AND SURVEY CONTROL

Bearings are Oregon Coordinate System of 1927, North Zone per ODOT R/W map 1A-22-14. This map utilizes a Local Datum Plane (LDP) which is relative to the Oregon Coordinate System of 1927, north zone, with respect to the local latitude and ground elevation. The LDP coordinates define true ground distances. To convert LDP coordinates to the Oregon Coordinate System of 1927, north zone, multiply the LDP coordinates by .9999294.

The bearing between found monument points 1 and 2, (ODOT R/W map 1A-22-14, Bearing S 65°13'45" E) was held.

METHOD OF SURVEY

The center line of 2nd Street was established by holding the deed call of instrument (Inst.#) 95-3382.

The "R" center line was established by holding the deed call of instrument (Inst.#) 94-3591.

The "AC" center line was established by holding the deed call of instrument (Inst.#) 94-3572.

The "BW" center line was established by holding the deed call of instrument (Inst.#) 94-3573.

These alignments fit found monuments and are consistent with ODOT R/W map 1A-22-14. Network points 1, 2, and 7 are part of the original control used to develop and construct this project and are used in this network in accordance with ORS 209.155 (2b).

REFERENCE SURVEYS

ODOT R/W map 1A-22-14 (July 1995)

INDEX

- SHEET 1 - Narrative, Quality Control
- SHEET 2 - Control Monuments
- SHEET 3 to 8 - Monumentation Survey
- SHEET 9 - Found Monuments Table

QUALITY CONTROL

Horizontal control was established by a network using forced centering methods. Two sets of horizontal angles were turned to each network point. 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.

Instruments used:

LEICA TCA 1800 Total Station (Ser.#419728)

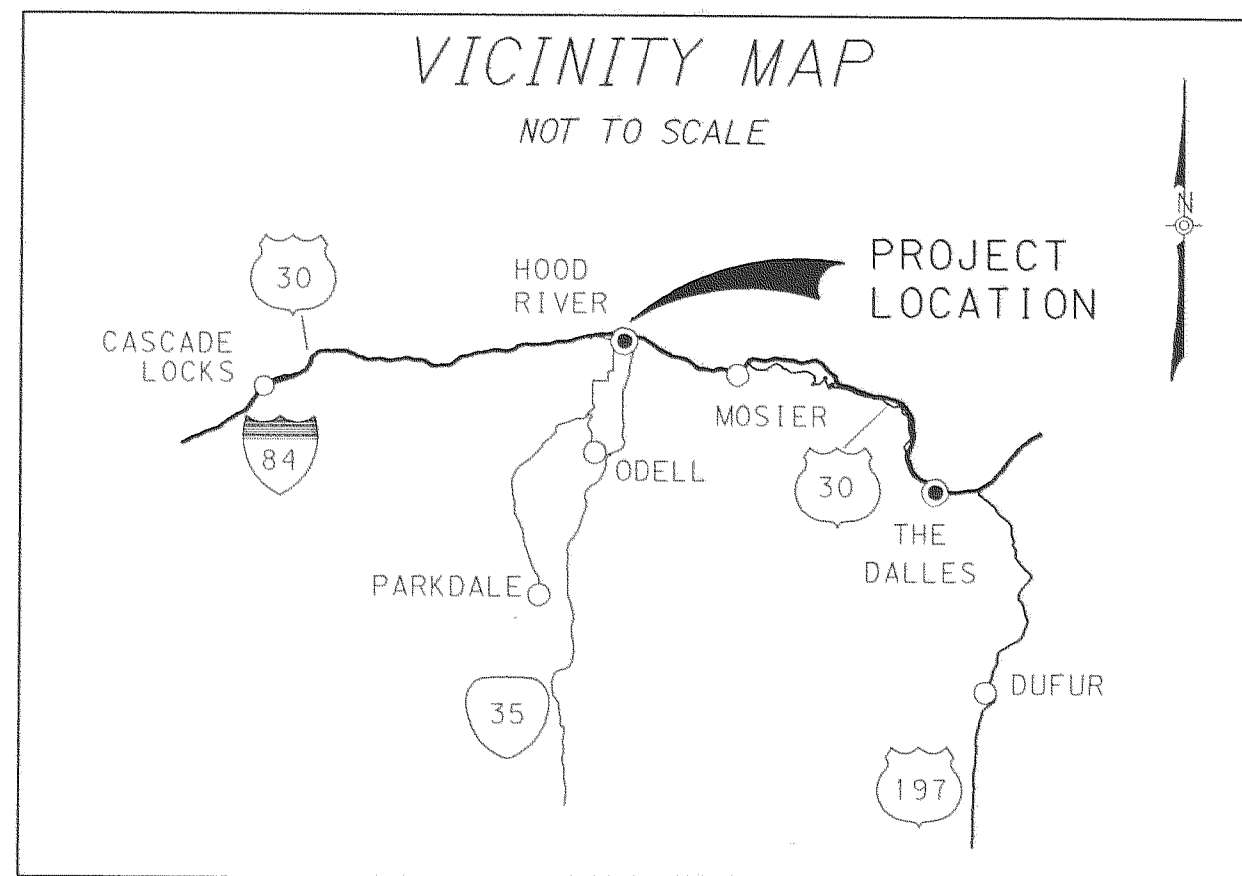
The electronic distance meter and theodolite were checked for calibration and collimation prior to establishing the network. Baseline records and details regarding network procedures are on file at the address below.

A search for survey monuments was made within the project limits. The horizontal positions of the found monuments were established by tying the monuments from the horizontal control.

All iron pipe sizes are inside diameter.

A copy of the original field notes is on file at the address below.

Drawn By : M. Keyes
Calculated By : M. Keyes
Party Chief : E. Roberts



FILED

JUN 16 1999

Rivera, A.M.
COUNTY SURVEYOR

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 18, 1984
MARJORIE J. WEST
2685

RENEWAL DATE 6-30-00



REGION 1 CONST. OFFICE
9010 SE McLOUGHLIN BLVD
MILWAUKIE, OR 97222
(503) 731-3142

SHEET 1 OF 9

99036

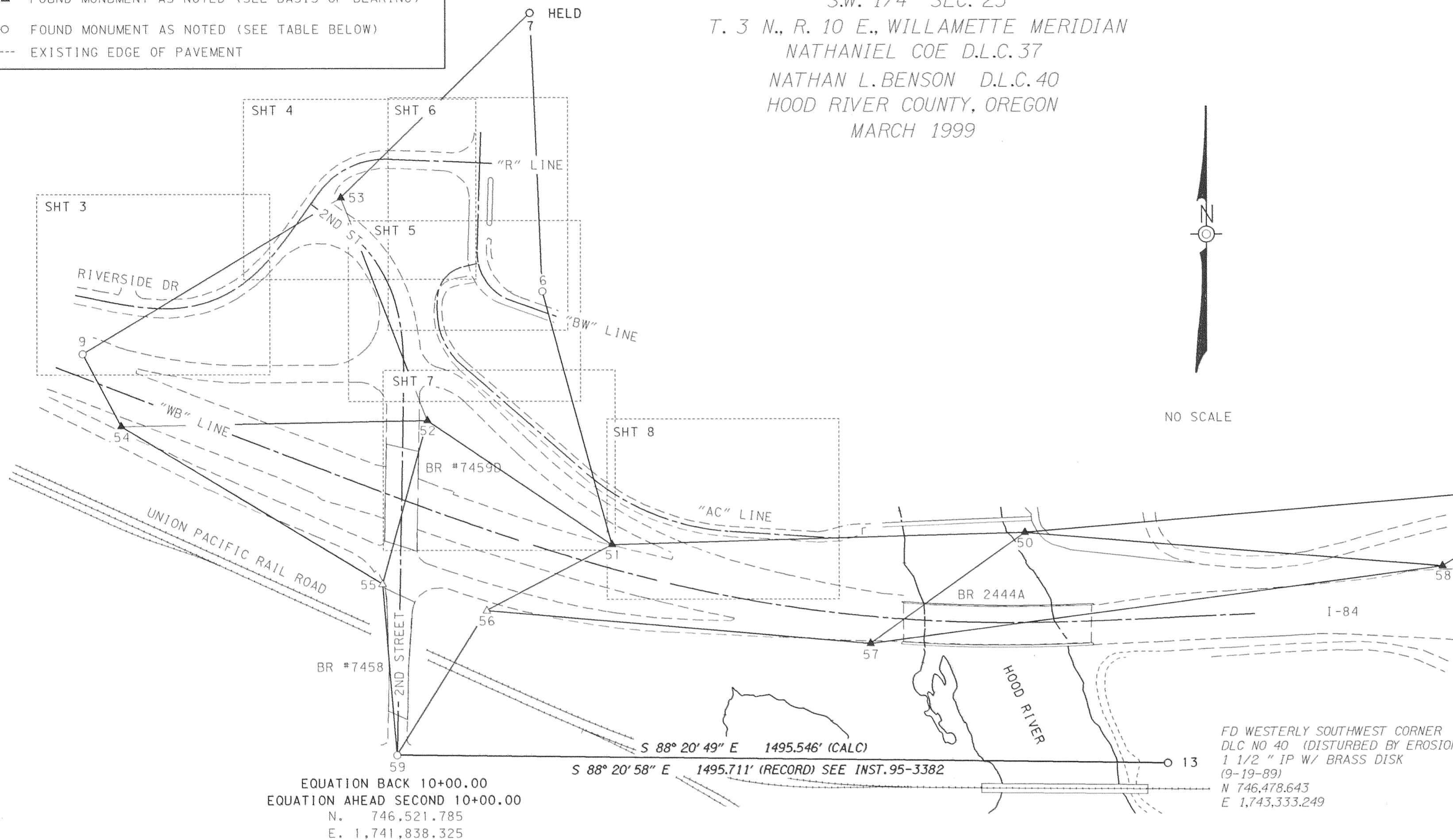
LEGEND

- ▲ SET 5/8" X 30" SQUARE IRON ROD W/RED PLASTIC CAP STAMPED "ODOT-TRAVERSE"
- △ SET BRASS PLUG WITH PUNCH MARK STAMPED "ODOT"
- ▲ FOUND MONUMENT AS NOTED (SEE BASIS OF BEARING)
- FOUND MONUMENT AS NOTED (SEE TABLE BELOW)
- EXISTING EDGE OF PAVEMENT

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HOOD RIVER COUNTY, OREGON
MARCH 1999

CONTROL NETWORK		
POINTS	BEARING	DISTANCE
2 TO 1	S 65°13'45" E	3657.147'
2 TO 58	S 60°19'03" W	686.261'
6 TO 51	S 15°20'19" E	514.479'
7 TO 6	S 02°33'25" E	546.759'
7 TO 53	S 45°43'04" W	519.205'
50 TO 2	N 79°06'00" E	1441.420'
50 TO 51	S 88°23'04" W	812.805'
50 TO 57	S 54°21'45" W	373.973'
51 TO 52	N 56°08'53" W	437.065'
52 TO 53	N 21°11'38" W	468.055'
52 TO 55	S 15°23'14" W	333.380'
53 TO 9	S 58°54'51" W	591.389'
54 TO 9	N 27°56'45" W	160.544'
54 TO 52	N 88°58'20" E	600.535'
55 TO 54	N 58°45'05" W	598.858'
56 TO 51	N 62°15'14" E	278.764'
56 TO 59	S 31°52'18" W	333.391'
57 TO 56	N 85°03'57" W	758.067'
57 TO 58	N 82°21'41" E	1133.195'
58 TO 50	N 85°18'21" W	821.961'
59 TO 55	N 04°53'42" W	336.168'



CONTROL MONUMENTS

PT. #	EASTING	NORTHING	CALCULATED CENTERLINE STATION	CALCULATED OFFSET	DESCRIPTION
1	1747809.630	745697.870			FOUND 3 1/2" BRASS DISC "CITY" (HELD)
2	1744488.970	747230.170			FOUND 3 1/2" BRASS DISC "CLOVER" (HELD)
6	1742124.982	747430.845	"BW" 6+08.64	37.36 LT	FOUND RAILROAD SPIKE WITH CROSS
7	1742100.590	747977.060			FOUND RAILROAD SPIKE WITH PUNCH (HELD)
9	1741222.424	747309.208	"WB" 1187+87.71	19.45 LT	FOUND PK NAIL CENTERED INSIDE LARGE PAINTED WHITE "X" (PHOTOGRAMMETRY POINT)
50	1743073.555	746957.606			SET 5/8" SQUARE I.R. IN CONCRETE, WITH RED PLASTIC CAP STAMPED "ODOT-TRAVERSE", DOWN 1/2', ORANGE WITNESS POST
51	1742261.073	746934.692	"WB" 1198+94.45	28.50 LT	SET 5/8" SQUARE I.R. IN CONCRETE, WITH RED PLASTIC CAP STAMPED "ODOT-TRAVERSE", DOWN 1/2', ORANGE WITNESS POST
52	1741898.099	747178.158	"2ND" 16+57.39	47.54 RT	SET 5/8" SQUARE I.R. IN CONCRETE, WITH RED PLASTIC CAP STAMPED "ODOT-TRAVERSE", DOWN 1/2', ORANGE WITNESS POST
53	1741728.886	747614.555	"2ND" 21+08.83	44.50 RT	SET 5/8" SQUARE I.R. IN CONCRETE, WITH RED PLASTIC CAP STAMPED "ODOT-TRAVERSE", DOWN 1/2', ORANGE WITNESS POST
54	1741297.660	747167.385	"WB" 1189+08.75	86.02 RT	SET 5/8" SQUARE I.R. IN CONCRETE, WITH RED PLASTIC CAP STAMPED "ODOT-TRAVERSE", DOWN 1/2', ORANGE WITNESS POST
55	1741809.639	746856.727	"2ND" 13+34.37	34.95 LT	SET BRASS PLUG IN SIDEWALK, WITH PUNCH MARK AND STAMPED "ODOT", FLUSH
56	1742014.361	746804.911	"2ND" 12+86.36	170.70 RT	SET BRASS PLUG IN BIKEPATH, WITH PUNCH MARK AND STAMPED "ODOT", FLUSH
57	1742769.619	746739.709	"WB" 1204+27.15	69.83 RT	SET 5/8" SQUARE I.R. IN CONCRETE, WITH RED PLASTIC CAP STAMPED "ODOT-TRAVERSE", DOWN 1/2', ORANGE WITNESS POST
58	1743892.759	746890.338			SET 5/8" SQUARE I.R. IN CONCRETE, WITH RED PLASTIC CAP STAMPED "ODOT-TRAVERSE", DOWN 1/2', ORANGE WITNESS POST
59	1741838.325	746521.785	"2ND" 10+00.00	00.00	FOUND 2 1/2" ALUMINUM DISK IN MONUMENT BOX, WITH PUNCH MARK AND STAMPED "1992 LS 872"

REGISTERED
PROFESSIONAL
LAND SURVEYOR
Marjorie J. West
OREGON
JULY 19, 1984
MARJORIE J. WEST
2685

RENEWAL DATE 6-30-00

FILED

JUN 16 1999
Rich 9 All
COUNTY SURVEYOR

OREGON DEPARTMENT
OF TRANSPORTATION

REGION 1 CONST. OFFICE
9010 SE McLOUGHLIN BLVD
MILWAUKIE, OR 97222
(503) 731-3142

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M.P. 63.74 TO M.P. 64.28 ON HWY. 2

S.W. 1/4 SEC. 25

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

NATHANIEL COE D.L.C. 37

NATHAN L. BENSON D.L.C. 40

HOOD RIVER COUNTY, OREGON

MARCH 1999



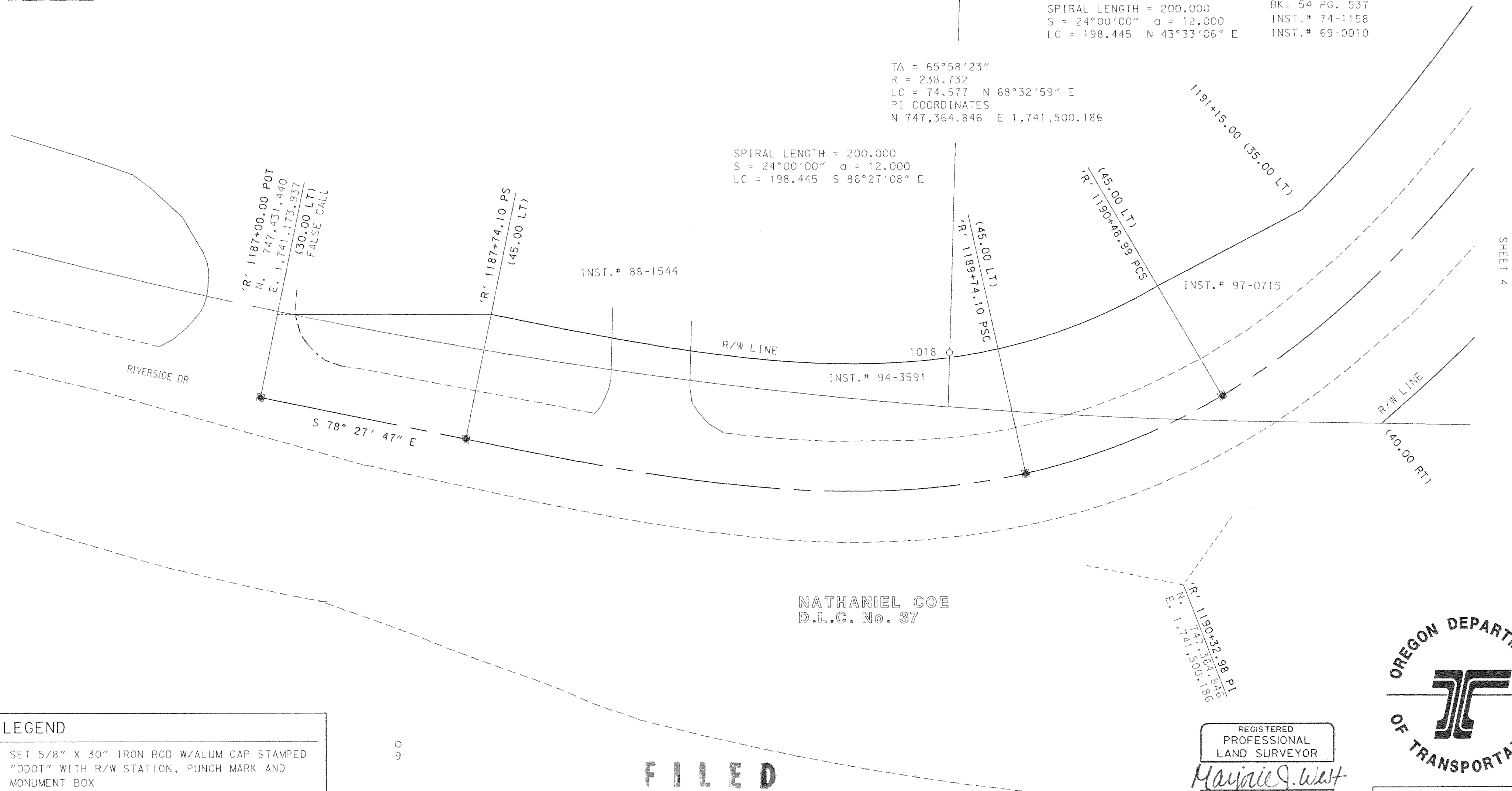
SCALE: 1" = 25'



SPIRAL LENGTH = 200.000 BK. 54 PG. 537
S = 24°00'00" α = 12.000 INST. # 74-1158
LC = 198.445 N 43°33'06" E INST. # 69-0010

Δ = 65°58'23"
R = 238.732
LC = 74.577 N 68°32'59" E
PI COORDINATES
N 747,364.846 E 1,741,500.186

SPIRAL LENGTH = 200.000
S = 24°00'00" α = 12.000
LC = 198.445 S 86°27'08" E



SHEET 4

INST. # 88-1544

INST. # 97-0715

INST. # 94-3591

NATHANIEL COE
D.L.C. No. 37

'R' 1190+32.98 PI
N. 747,364.846
E. 1,741,500.186

FILED

JUN 16 1999

Rick S. ...
COUNTY SURVEYOR

DEPUY

REGISTERED
PROFESSIONAL
LAND SURVEYOR
Marjorie J. West
OREGON
JULY 19, 1984
MARJORIE J. WEST
2685

RENEWAL DATE 6-30-00



REGION 1 CONST. OFFICE
9010 SE McLOUGHLIN BLVD
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SHEET 3 OF 9

#99036

- LEGEND**
- SET 5/8" X 30" IRON ROD W/ALUM CAP STAMPED "ODOT" WITH R/W STATION, PUNCH MARK AND MONUMENT BOX
 - FOUND MONUMENT AS NOTED IN TABLE ON SHEET 9
 - EXISTING EDGE OF PAVEMENT
 - PROPERTY LINE

LEGEND

- SET 5/8" X 30" IRON ROD W/ALUM CAP STAMPED "ODOT" WITH R/W STATION, PUNCH MARK AND MONUMENT BOX
- ▲ SET 5/8" X 30" SQUARE IRON ROD W/RED PLASTIC CAP STAMPED "ODOT-TRAVERSE"
- FOUND MONUMENT AS NOTED IN TABLE ON SHEET 9
- EXISTING EDGE OF PAVEMENT
- PROPERTY LINE



SCALE: 1" = 25'
0 10 20 30

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NATHAN L. BENSON D.L.C. 40

HOOD RIVER COUNTY, OREGON

MARCH 1999

'R' 1193+94.53 PI
N. 747,693.834
E. 1,741,735.404

'R' 1193+06.05 PC
'2ND' 21+49.62 POT =
'R' 1192+81.75 POT
N. 747,602.084
E. 1,741,669.805

'R' 1192+48.99 POT

BK. 54 PG. 537
INST. # 74-1158
INST. # 69-0010

**NATHANIEL COE
D.L.C. No. 37**

Δ = 56°47'18"
R = 163.702
LC = 155.692 N 63°57'28" E
PI COORDINATES
N 747,693.834 E 1,741,735.404

INST. # 89-0675

'2ND' 19+47.39 PI
N. 747,468.999
E. 1,741,855.946

TA = 55°29'54"
R = 286.479
LC = 174.671 N 36°41'13" W
PI COORDINATES
N 747,468.999 E 1,741,855.946

FILED

JUN 16 1999

Richard J. West
COUNTY SURVEYOR

EPHEM

REGISTERED
PROFESSIONAL
LAND SURVEYOR

Marjorie J. West

OREGON
JULY 15, 1994
MARJORIE J. WEST
2685

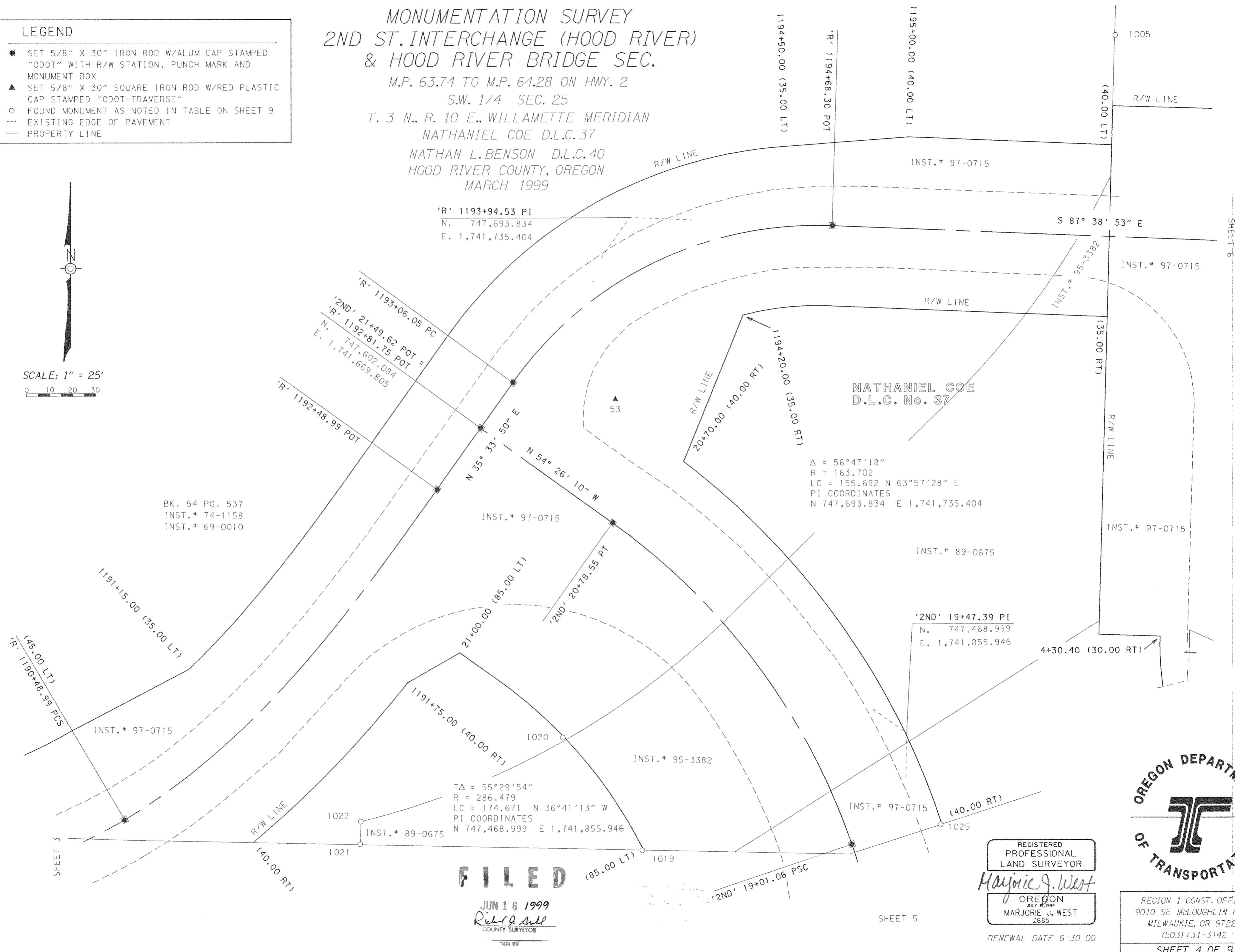
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SHEET 4 OF 9

#99036



SHEET 6

SHEET 3

SHEET 5

LEGEND

- SET 5/8" X 30" IRON ROD W/ALUM CAP STAMPED "ODOT" WITH R/W STATION, PUNCH MARK AND MONUMENT BOX
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0 10 20 30

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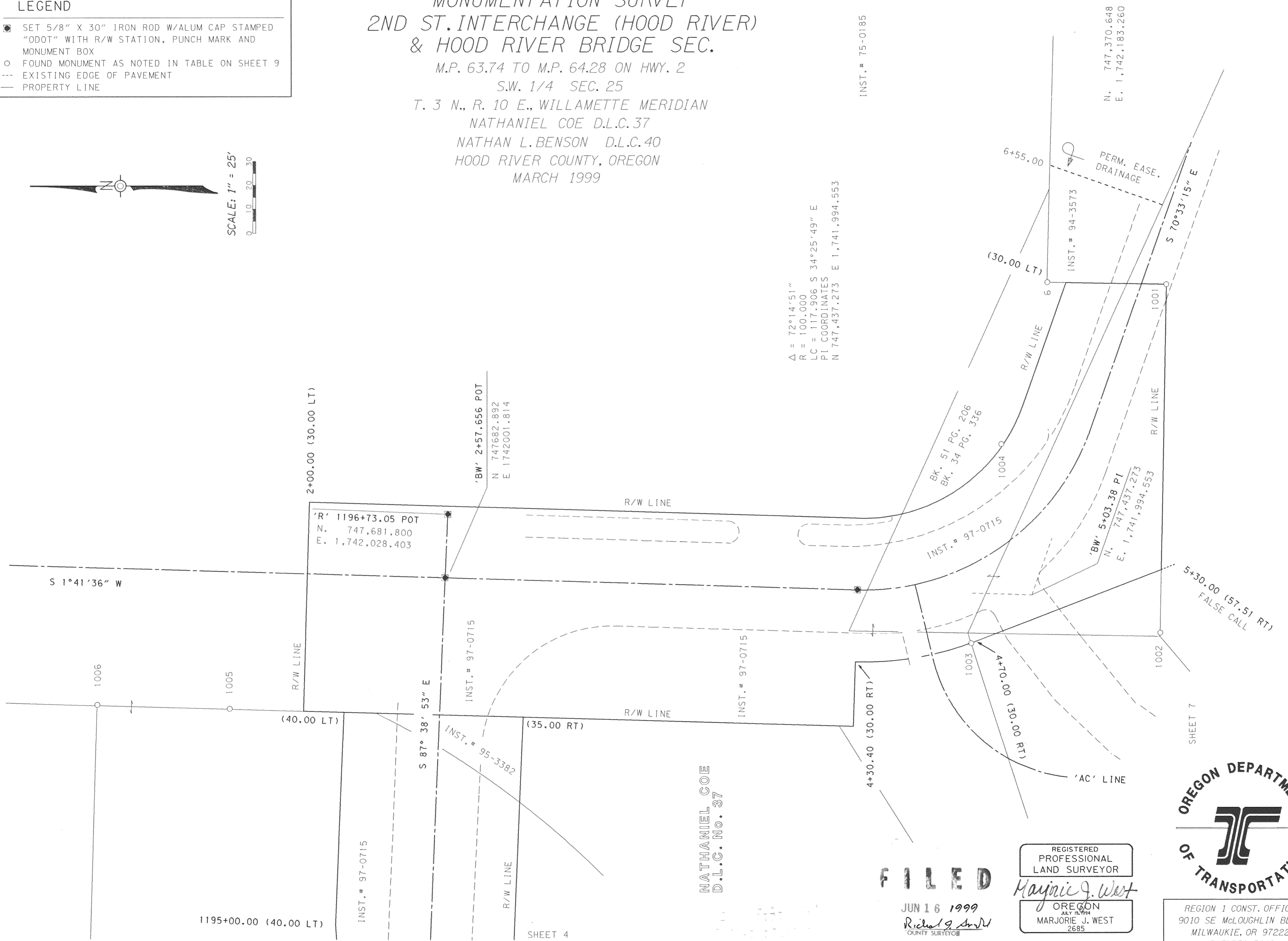
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NATHAN L. BENSON D.L.C. 40
HOOD RIVER COUNTY, OREGON
MARCH 1999

$\Delta = 72^{\circ}14'51"$
R = 100.000
LC = 117.906 S $34^{\circ}25'49"$ E
PI COORDINATES
N 747,437.273 E 1,741,994.553

INST. # 75-0185

N. 747,370.648
E. 1,742,183.260



NATHANIEL COE
D.L.C. No. 37

FILED

JUN 16 1999
Richard J. West
COUNTY SURVEYOR

REGISTERED
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LAND SURVEYOR

Marjorie J. West
OREGON
JULY 18, 1994
MARJORIE J. WEST
2685

RENEWAL DATE 6-30-00



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MILWAUKIE, OR 97222
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SHEET 6 OF 9

#99036

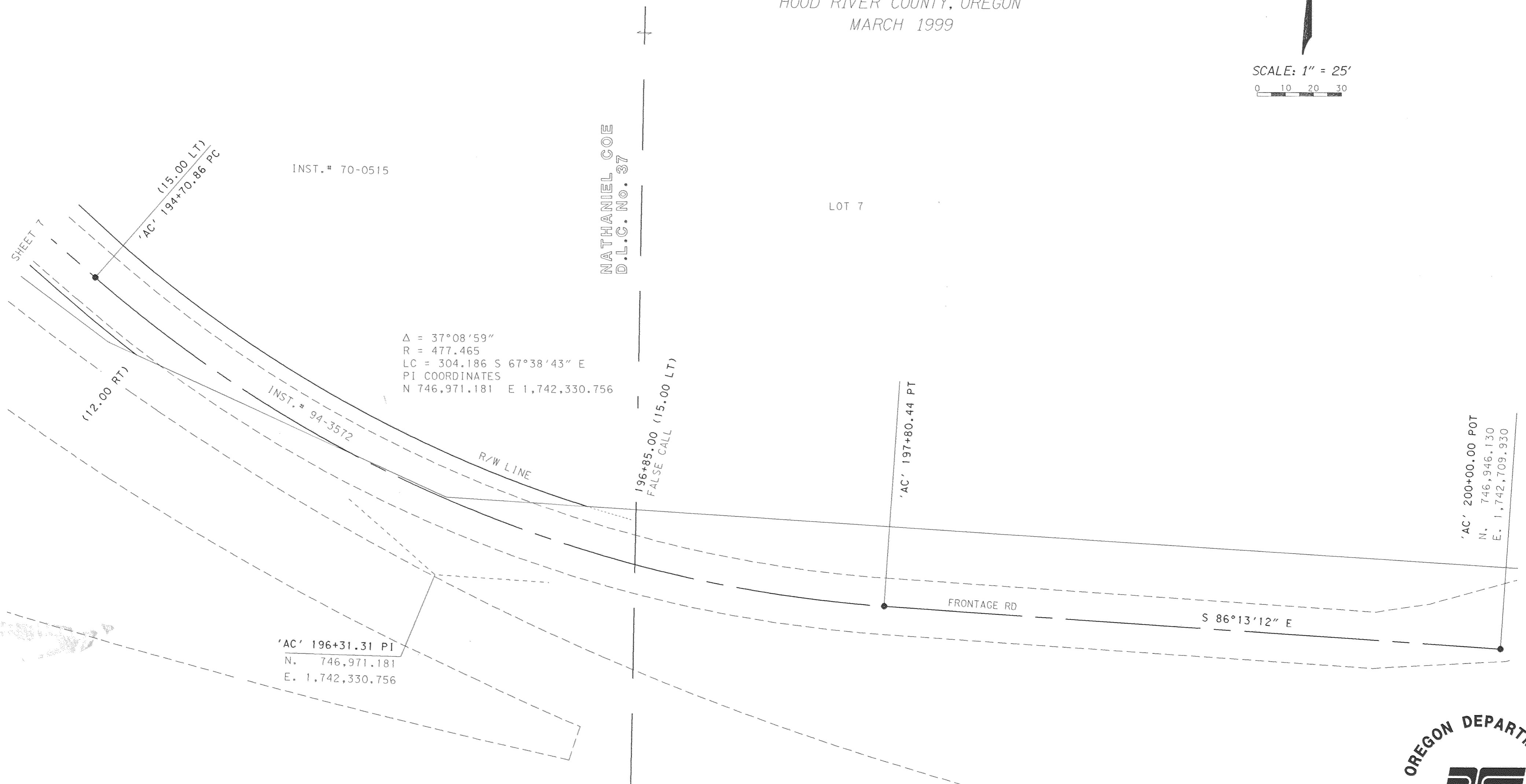
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 NATHAN L. BENSON D.L.C. 40
 HOOD RIVER COUNTY, OREGON
 MARCH 1999



SCALE: 1" = 25'
 0 10 20 30



LEGEND

- SET 5/8" X 30" IRON ROD W/ALUM CAP STAMPED "ODOT" WITH R/W STATION, PUNCH MARK, SET 1" DOWN
- FOUND MONUMENT AS NOTED IN TABLE ON SHEET 9
- EXISTING EDGE OF PAVEMENT
- PROPERTY LINE

FILED

JUN 16 1999
 Richard G. Amel
 COUNTY SURVEYOR

REGISTERED
 PROFESSIONAL
 LAND SURVEYOR
 Marjorie J. West
 OREGON
 JULY 19, 1994
 MARJORIE J. WEST
 2685
 RENEWAL DATE 6-30-00



REGION 1 CONST. OFFICE
 9010 SE McLOUGHLIN BLVD
 MILWAUKIE, OR 97222
 (503) 731-3142
 SHEET 8 OF 9

#99036

MONUMENTATION SURVEY 2ND ST. INTERCHANGE (HOOD RIVER) & HOOD RIVER BRIDGE SEC.

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NATHANIEL COE D.L.C. 37

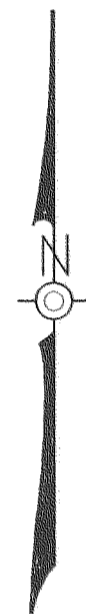
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HOOD RIVER COUNTY, OREGON

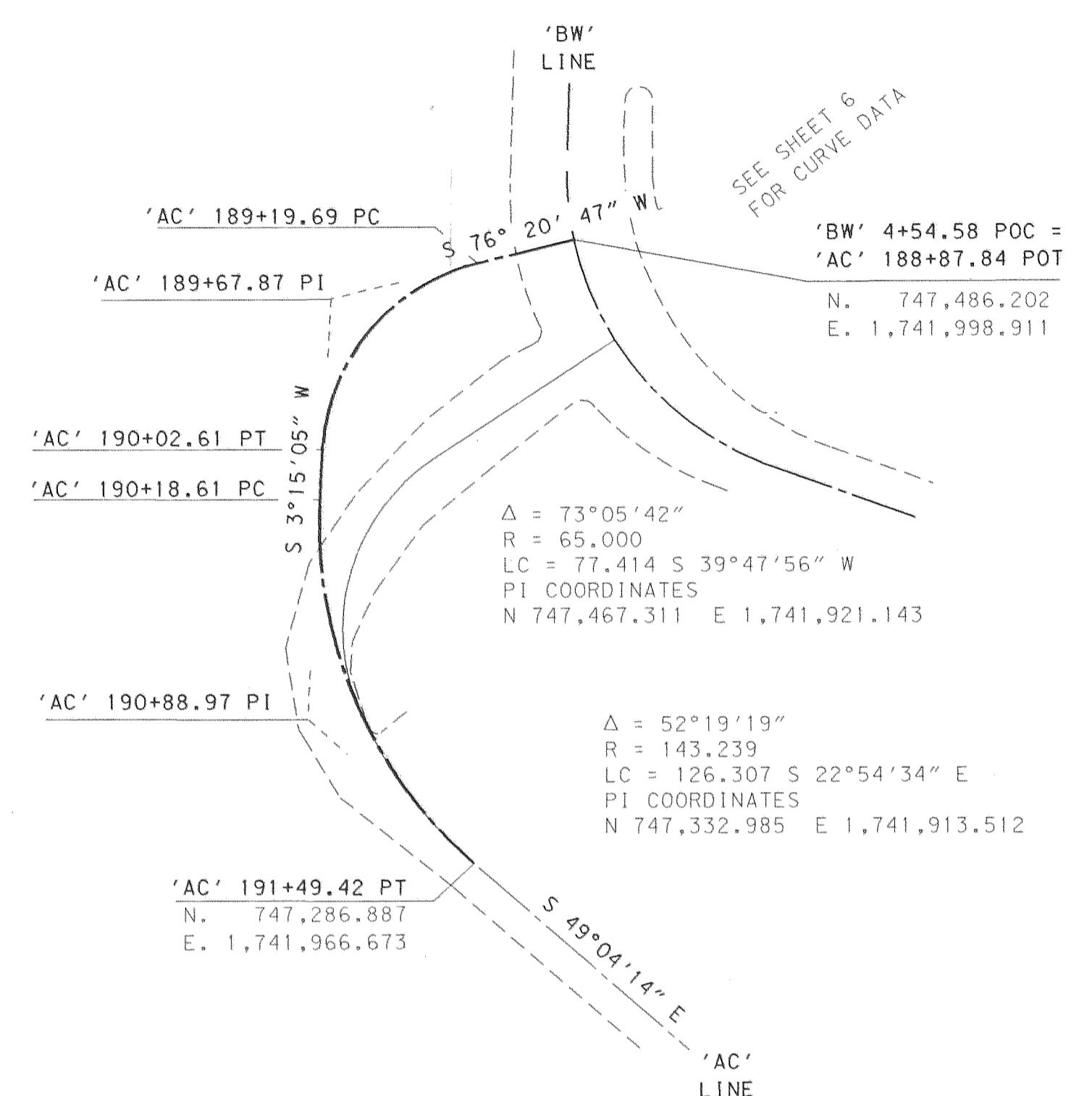
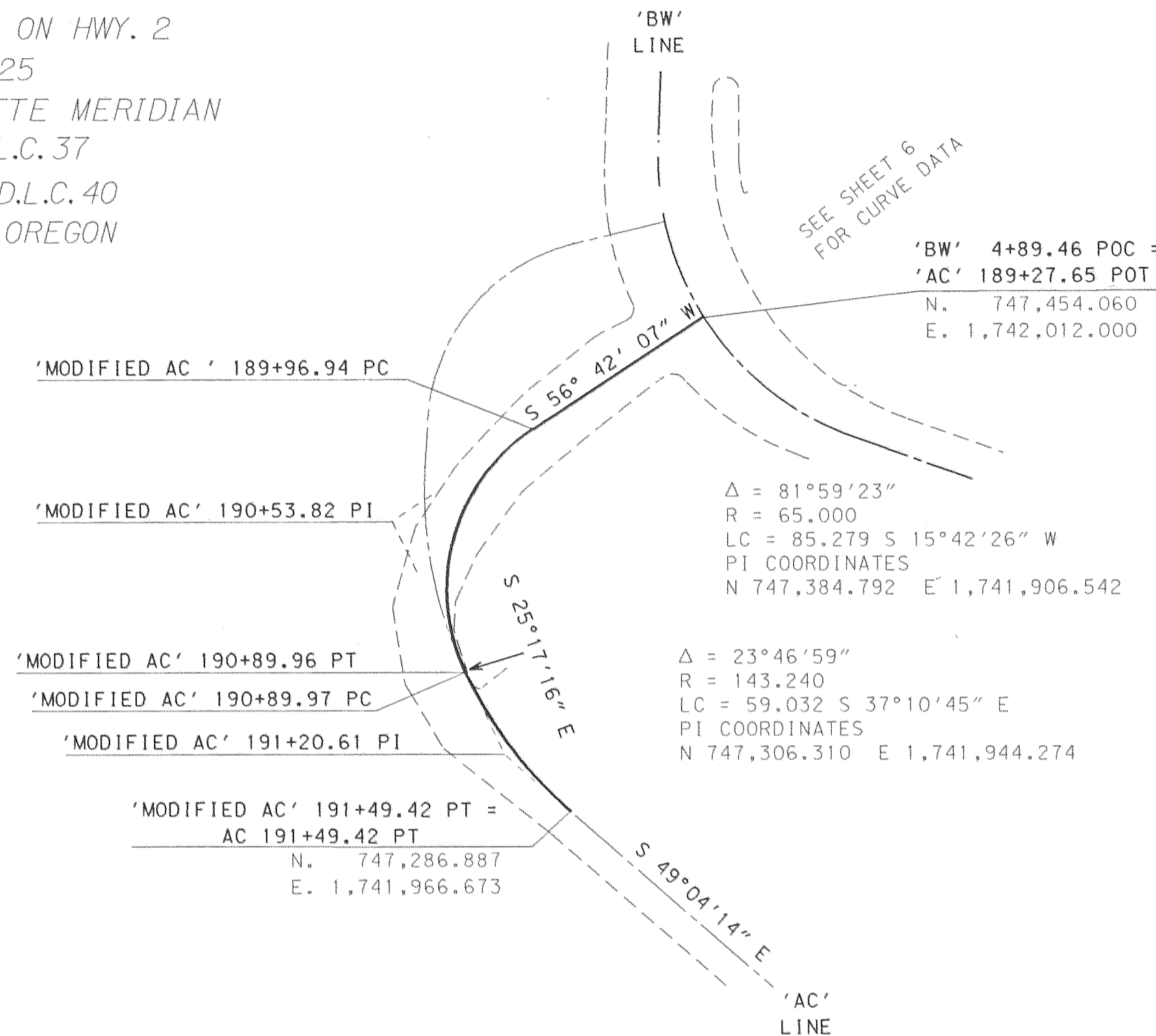
MARCH 1999

AS CONSTRUCTED
"MODIFIED AC" ALIGNMENT

"AC" R/W ALIGNMENT AS PER
DEED CALLS IN INST. # 94-3572



NO SCALE



TIED POSITIONS TO FOUND MONUMENTS (TIED NOV. 12, 1997)

PT. #	EASTING	NORTHING	CALCULATED CENTERLINE STATION	CALCULATED OFFSET	DESCRIPTION
13	1743333.249	746478.643			1 1/2" IRON PIPE WITH BRASS DISK, DISTURBED DUE TO EROSION (WESTERLY SOUTHWEST CORNER OF D.L.C. NO.40)
1000	1742727.938	746974.041			3/4" IRON PIPE
1001	1742124.122	747381.096	"BW" 6+24.39	9.84 RT	1/2" IRON PIPE WITH 1/2" IRON ROD, DISTURBED
1002	1741978.474	747383.678	"AC" 190+46.57	60.41 LT	3/4" IRON PIPE, BENT
1003	1741974.428	747462.635	"BW" 4+68.36	30.13 RT	IRON ROD WITH RED PLASTIC CAP, STAMPED "TERRA L.S. 1815". FLUSH
1004	1742057.690	747450.057	"BW" 5+30.63	30.77 LT	5/8" IRON ROD, BENT
1005	1741947.410	747773.027	"BW" 1+69.17	57.04 RT	3/4" IRON PIPE WITH MUSHROOMED HEAD, BENT
1006	1741949.017	747828.323	"BW" 1+13.85	57.07 RT	3/4" IRON PIPE WITH MUSHROOMED HEAD, BENT
1007	1741953.324	747995.895			5/8" IRON ROD WITH CAP STAMPED "TERRA L.S. 1815", SLIGHTLY BENT SOUTHEAST
1008	1742070.224	747867.000	"BW" 0+71.61	62.94 LT	5/8" IRON ROD
1009	1741434.198	748011.292			3/4" IRON PIPE
1016	1741433.598	747991.260			5/8" IRON ROD WITH YELLOW PLASTIC CAP, BENT AND DAMAGED
1017	1741429.928	747862.857			5/8" IRON ROD
1018	1741417.764	747447.048	"R" 1189+53.21	46.77 LT	IRON ROD WITH YELLOW PLASTIC CAP STAMPED "PSO 872"
1019	1741740.480	747418.072	"2ND" 19+40.00	85.54 LT	IRON ROD WITH RED PLASTIC CAP, STAMPED "TERRA L.S. 1815", FLUSH
1020	1741705.751	747467.214	"R" 1191+96.11	108.25 RT	IRON ROD WITH RED PLASTIC CAP, STAMPED "TERRA L.S. 1815", FLUSH
1021	1741615.245	747420.564	"R" 1191+15.10	70.79 RT	IRON ROD WITH RED PLASTIC CAP, STAMPED "TERRA L.S. 1815", FLUSH
1022	1741615.408	747430.535	"R" 1191+21.06	63.75 RT	IRON ROD WITH RED PLASTIC CAP, STAMPED "TERRA L.S. 1815", FLUSH
1025	1741870.675	747429.219	"2ND" 18+97.12	39.40 RT	IRON ROD WITH RED PLASTIC CAP, STAMPED "TERRA L.S. 1815", FLUSH
1026	1741031.778	747336.218	"WB" 1186+00.03	23.62 RT	NAIL AND SHINER WITH METAL PLATE, STAMPED "1186+00 P.O.T."
1027	1740873.659	747500.258			3/4" IRON PIPE
1028	1741879.649	746607.371	"2ND" 10+86.36	39.67 RT	3/8" IRON ROD WITH YELLOW PLASTIC CAP, STAMPED "LS 1028"

LEGEND

- EXISTING EDGE OF PAVEMENT
- RIGHT OF WAY CENTER LINE
- AS CONSTRUCTED CENTER LINE

FILED
JUN 16 1999
Richard J. West
COUNTY SURVEYOR
DEPLER

REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON JULY 15, 1994
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RENEWAL DATE 6-30-00



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