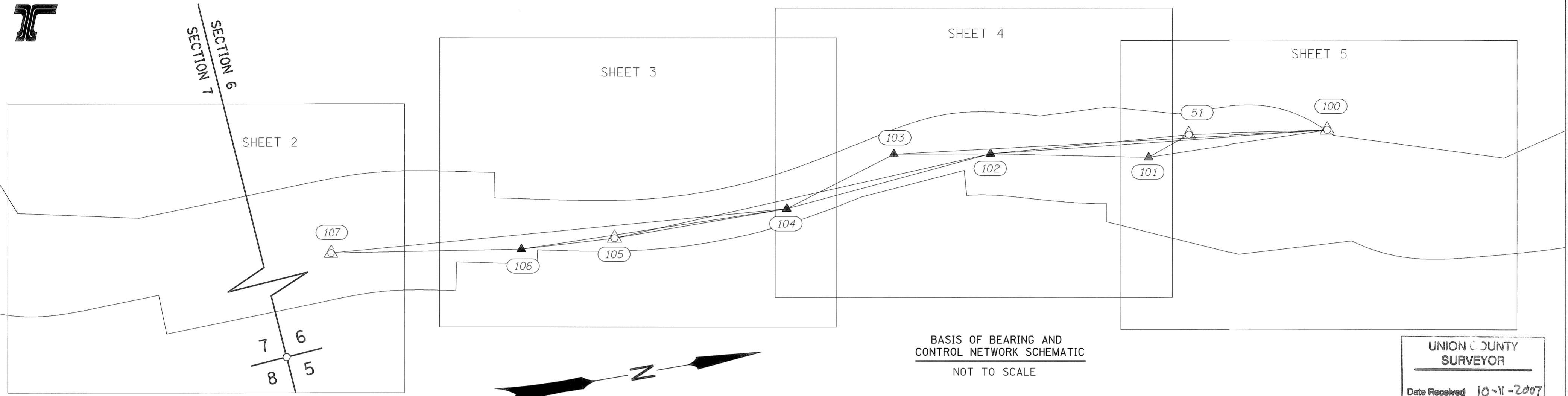




N.E. 1/4 SEC. 07, E 1/2 SEC. 06,  
T. 1 N, R. 41 E., W.M.



UNION COUNTY  
SURVEYOR  
Date Received 10-11-2007  
Date Filed 10-11-2007  
By R. Robinson, Deputy  
File No. 028-2007

RESIDUALS FOR ANGLES AND DISTANCES

AT	TO	DISTANCE*	DISTANCE RESIDUAL	ANGLE** RESIDUAL
100	51	386.202'	0.000'	0.00
	101	503.795'	0.013'	3.12
	102	938.155'	0.012'	2.59
	103	1205.166'	0.014'	2.30
101	51	128.555'	0.012'	13.06
	102	437.860'	0.015'	4.65
	103	705.261'	0.016'	3.36
102	51	552.413'	0.012'	4.40
	103	267.460'	0.014'	6.15
	104	584.106'	0.013'	2.80
	105	1066.391'	0.011'	2.28
103	104	332.707'	0.016'	5.48
104	105	483.460'	0.014'	4.36
	106	743.068'	0.017'	4.04
	107	1268.522'	0.021'	4.53
105	106	259.807'	0.017'	7.87
106	107	528.078'	0.019'	6.92

\*CALCULATED HORIZONTAL DISTANCE IN FEET DERIVED FROM THE MEASURED SLOPE DISTANCE  
\*\* RELATIVE CONFIDENCE OF BEARINGS IS IN SECONDS

CONFIDENCE LEVEL LIMITS

POINT ID	SEMI MAJOR	SEMI MINOR	ORIENTATION*
101	0.013'	0.008'	177°22'
102	0.012'	0.011'	72°58'
103	0.015'	0.012'	142°33'
104	0.014'	0.010'	177°49'
106	0.017'	0.010'	3°19'
107	0.024'	0.023'	91°20'

\* NORTH AZIMUTH  
FIXED POINTS NOT SUBJECT TO LEAST SQUARES ADJUSTMENT OR CONFIDENCE LEVEL ANALYSIS:  
100, 105 AND 51

LEGEND	
	SET NETWORK POINT
	FOUND MONUMENT USED AS NETWORK POINT
	LINES OF OBSERVATION



NARRATIVE

THIS SURVEY WAS PREPARED FOR THE OREGON BRIDGE DEVELOPMENT PARTNERSHIP, (O.B.D.P), AND THE OREGON DEPARTMENT OF TRANSPORTATION, (O.D.O.T), IN PREPARATION FOR THE REPLACEMENT OF BRIDGE #05192 ON THE MINAM GRADE. THE FIELD WORK WAS CONDUCTED BEGINNING IN MARCH OF 2007 AND COMPLETED IN MAY OF 2007.

THE HORIZONTAL COMPONENT OF THIS SURVEY UTILIZES THE LOCAL DATUM PLANE (LDP) FROM THE MONUMENTATION SURVEY AS RECORDED IN SURVEY NO. 047-1995, UNION COUNTY SURVEY RECORDS. THE LDP IS RELATIVE TO THE OREGON COORDINATE SYSTEM (OCS), NORTH ZONE, NAD 27. THE LDP COORDINATES DEFINE TRUE GROUND DISTANCES. TO RETURN THE COORDINATES TO GRID, MULTIPLY BOTH THE NORTH AND EAST COORDINATE BY 0.99978100. THE VERTICAL COMPONENT WAS DERIVED BY DIFFERENTIAL LEVELING FROM THE NATIONAL GEODETIC CONTROL STATION "R 84 RESET", (PID# AA3537).

THE CENTERLINE LOCATION WAS RESOLVED BY LOCATING RIGHT OF WAY MONUMENTATION FROM SURVEY NO. 047-1995, AND USING THE ODOT RIGHT OF WAY MAPS 10B-3-1 AND 5B-29-3. THE MONUMENTS 100, 51 AND 105 WERE HELD FOR POSITION, AND THE ALIGNMENT ROTATED TO THE FOUND MONUMENTS. THE CENTERLINE THUS LOCATED WAS COMPARED TO MONUMENT 107 FOR STATION AND OFFSET AND WAS FOUND TO AGREE TO WITHIN 0.01'. THE RIGHT OF WAY WAS THEN CALCULATED FROM THE ESTABLISHED CENTERLINES.

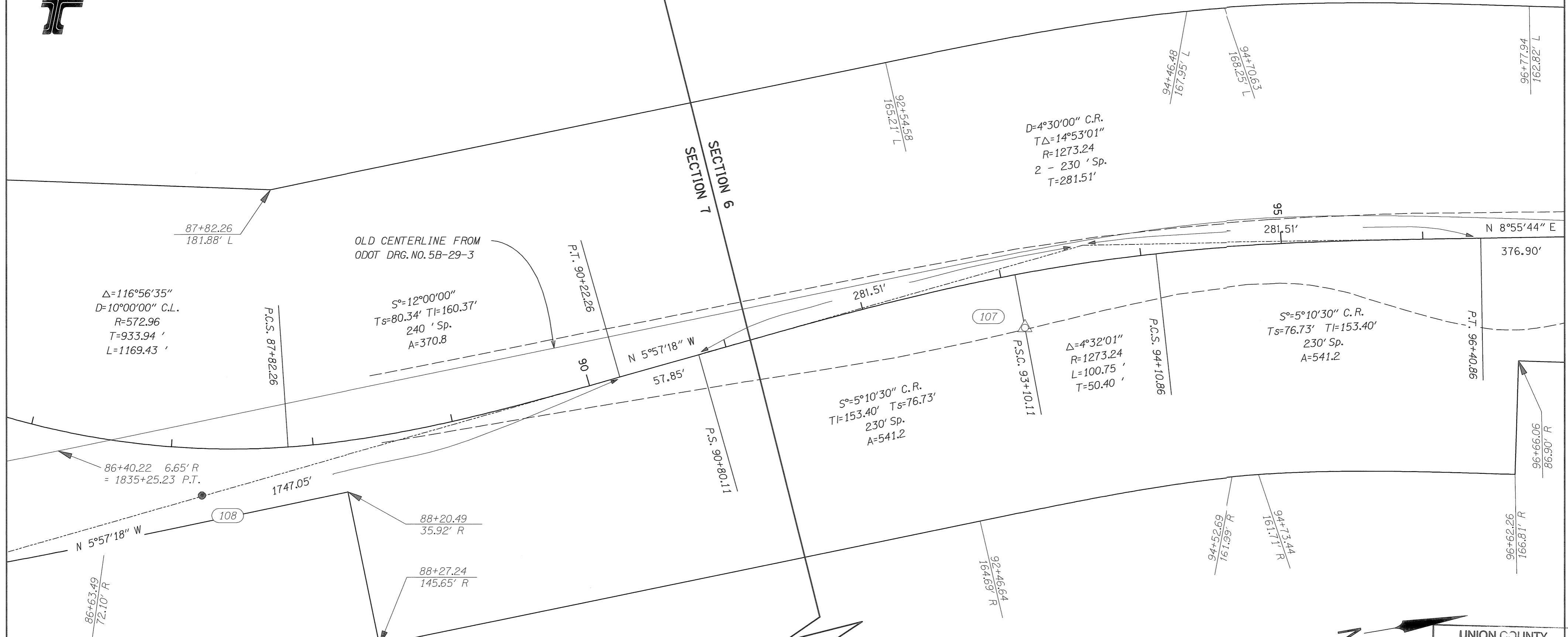
NETWORK POINT COORDINATE TABLE

PT. NO.	LDP NORTHING	LDP EASTING	DATE	DESCRIPTION
100	715698.7000	2709231.7930	3/22/07	FND 3/2" BRASS CAP IN CONCRETE MARKED "R 84 RESET 1993" REMAINING MARKINGS COVERED WITH CONCRETE AND UNABLE TO READ
101	715195.0342	2709220.3672	3/22/07	SET 5/8" x 30" IRON ROD (REBAR) WITH 1/2" ALUMINUM CAP MARKED "APA OR 2537 WA 35140 NET 1"
102	714765.5237	2709135.2672	3/22/07	SET 5/8" x 30" IRON ROD (REBAR) WITH 1/2" ALUMINUM CAP MARKED "APA OR 2537 WA 35140 NET 2"
103	714501.8639	2709090.3384	3/22/07	SET 5/8" x 30" IRON ROD (REBAR) WITH 1/2" ALUMINUM CAP MARKED "APA OR 2537 WA 35140 NET 3"
104	714183.7981	2709187.9487	3/22/07	SET 5/8" x 30" IRON ROD (REBAR) WITH 1/2" ALUMINUM CAP MARKED "APA OR 2537 WA 35140 NET 4"
105	713700.3420	2709186.0320	3/22/07	FND 5/8" IRON ROD (REBAR) WITH RED PLASTIC CAP MARKED "OTAK CONTROL" SET IN SN 047-1995
106	713440.8937	2709172.3789	3/22/07	SET 5/8" x 30" IRON ROD (REBAR) WITH 1/2" ALUMINUM CAP MARKED "APA OR 2537 WA 35140 NET 6"
107	712918.8531	2709092.7549	3/22/07	FND 2" ALUMINUM CAP MARKED "OTAK INC." 0.2' BELOW ASPHALT SURFACE. SET IN SN 047-1995
51	715316.3040	2709177.7050	3/26/07	FND 5/8" IRON ROD (REBAR) WITH RED PLASTIC CAP MARKED "OTAK CONTROL." SET IN SN 047-1995

**ANDERSON-PERRY & ASSOCIATES**  
1901 N. FIR ST., LA GRANDE, OR., 97850  
HORIZONTAL CONTROL, RECOVERY AND RETRACEMENT MAP  
HIGHWAY 10 (OR 82) AT MINAM VIADUCT  
HIGHWAY 10 (OR 82) MP 31.15  
UNION COUNTY  
FOR OREGON BRIDGE DELIVERY PARTNERS AUGUST 23, 2007  
1165 UNION STREET NE, SUITE 200 SCALE: N/A  
SALEM, OR 97301 SHEET 1 OF 5



N.E. 1/4 SEC. 07, E 1/2 SEC. 06,  
T. 1 N., R. 41 E., W.M.



**LEGEND**

- SET STRATEGIC POINT NOTED IN TABLE
- ▲ SET NETWORK POINT
- △ FOUND MONUMENT USED AS NETWORK POINT
- EDGE OF PAVEMENT
- RIGHT-OF-WAY

$T_s$  = SHORT TANGENT OF SPIRAL CURVE  
 $T_l$  = LONG TANGENT OF SPIRAL CURVE

**SET MONUMENT LIST**

PT. NO.	LDP NORTHING	LDP EASTING	STATION	OFFSET	DESCRIPTION & REFERENCE DOCUMENTS
108	712326.4636	2709109.0134	87+22.74	33.17 R	SET 1/2" IRON ROD (REBAR) WITH RED PLASTIC CAP MARKED "APA CONTROL"

THE POSITION OF THIS CORNER WAS CALCULATED FROM ODOT RIGHT OF WAY MAP 10B-3-1. THE SECTION LINE IS FOR GRAPHICAL REPRESENTATION ONLY.

REGISTERED PROFESSIONAL LAND SURVEYOR  
  
 OREGON  
 JAN. 21, 1992  
 HARMON E. McLENDON  
 2537  
 RENEWS 12/31/05

**UNION COUNTY SURVEYOR**

Date Received 10-11-2007  
 Date Filed 10-11-2007  
 By R. Robinson, Deputy  
 File No. 028-2007

SCALE 1" = 50'

**ANDERSON-PERRY & ASSOCIATES**  
 1901 N. FIR ST., LA GRANDE, OR., 97850

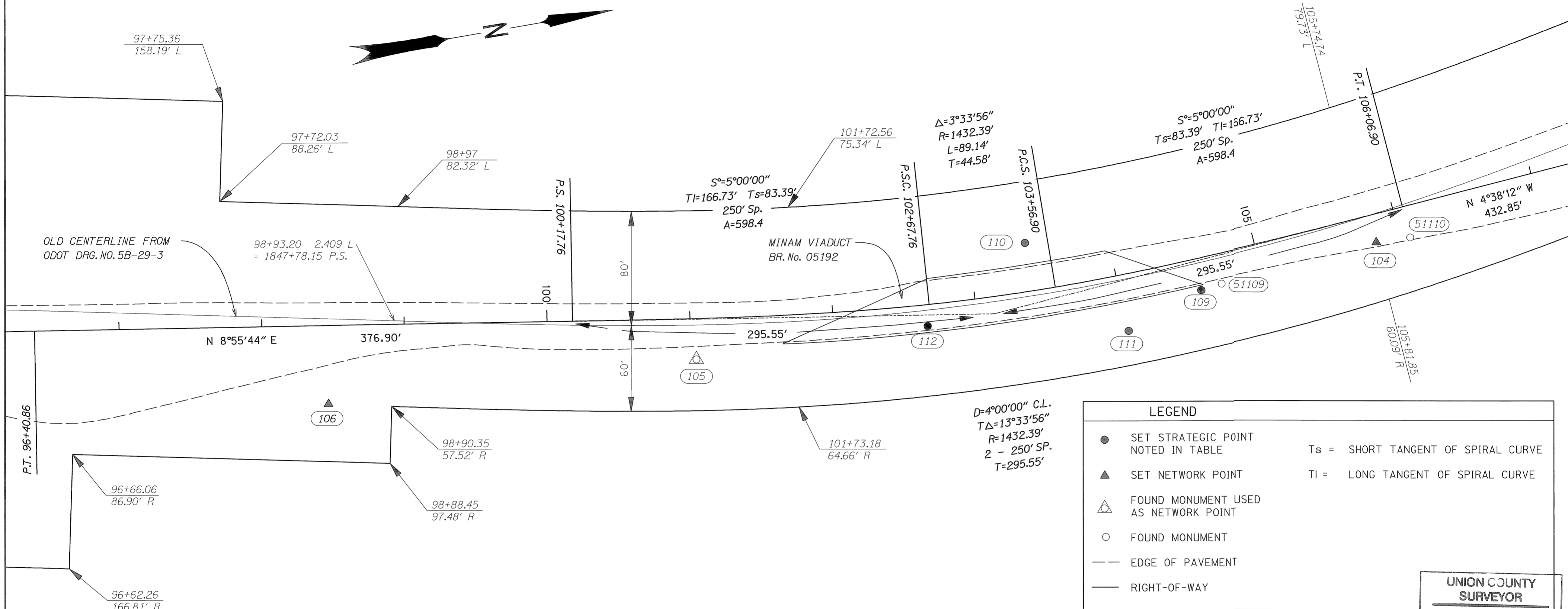
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 UNION COUNTY

FOR OREGON BRIDGE DELIVERY PARTNERS  
 1165 UNION STREET NE, SUITE 200  
 SALEM, OR 97301

AUGUST 23, 2007  
 SCALE: 1" = 50'  
 SHEET 2 OF 5



E 1/2 SEC. 06, T. 1 N, R. 41 E., W.M.



**LEGEND**

- SET STRATEGIC POINT NOTED IN TABLE
- ▲ SET NETWORK POINT
- △ FOUND MONUMENT USED AS NETWORK POINT
- FOUND MONUMENT
- EDGE OF PAVEMENT
- RIGHT-OF-WAY

Ts = SHORT TANGENT OF SPIRAL CURVE  
 TI = LONG TANGENT OF SPIRAL CURVE

**UNION COUNTY SURVEYOR**

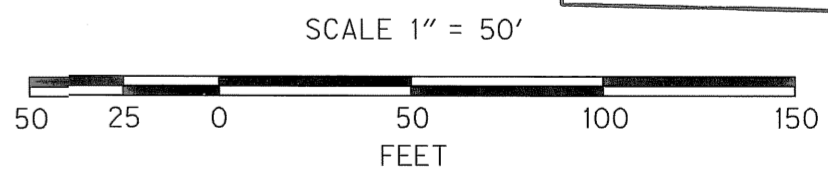
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REGISTERED PROFESSIONAL LAND SURVEYOR

*R.M.*

OREGON  
 JAN. 21, 1992  
 HARMON S. McLENDON  
 2997

Renews 12/31/08



RECOVERED MONUMENT LIST

PT. NO.	LDP NORTHING	LDP EASTING	STATION	OFFSET	DATE	DESCRIPTION & REFERENCE DOCUMENTS
51109	714071.5588	2709197.5436	104+70.93	21.069 R	05/08/07	FND 1 1/2" ALUMINUM CAP MARKED "OREGON STATE HWY DIV" - FLUSH WITH GROUND
51110	714207.7586	2709188.633	106+06.86	22.021 R	05/08/07	FND 2" ALUMINUM CAP MARKED "OTAK INC" - 0.3' BELOW SURFACE OF ASPHALT

SET MONUMENT LIST

PT. NO.	LDP NORTHING	LDP EASTING	STATION	OFFSET	DESCRIPTION & REFERENCE DOCUMENTS
109	714056.7506	2709199.4905	104+56.16	22.241 R	SET 1/2" IRON ROD (REBAR) WITH RED PLASTIC CAP MARKED "APA CONTROL"
110	713940.7937	2709145.5395	103+40.66	33.902 L	SET 1/2" IRON ROD (REBAR) WITH RED PLASTIC CAP MARKED "APA CONTROL"
111	714001.7852	2709218.6813	104+01.39	39.428 R	SET 1/2" IRON ROD (REBAR) WITH RED PLASTIC CAP MARKED "APA CONTROL"
112	713863.758	2709191.0163	102+65.19	14.938 R	SET 1/2" IRON ROD (REBAR) WITH RED PLASTIC CAP MARKED "APA CONTROL"

**ANDERSON-PERRY & ASSOCIATES**  
 1901 N. FIR ST., LA GRANDE, OR., 97850

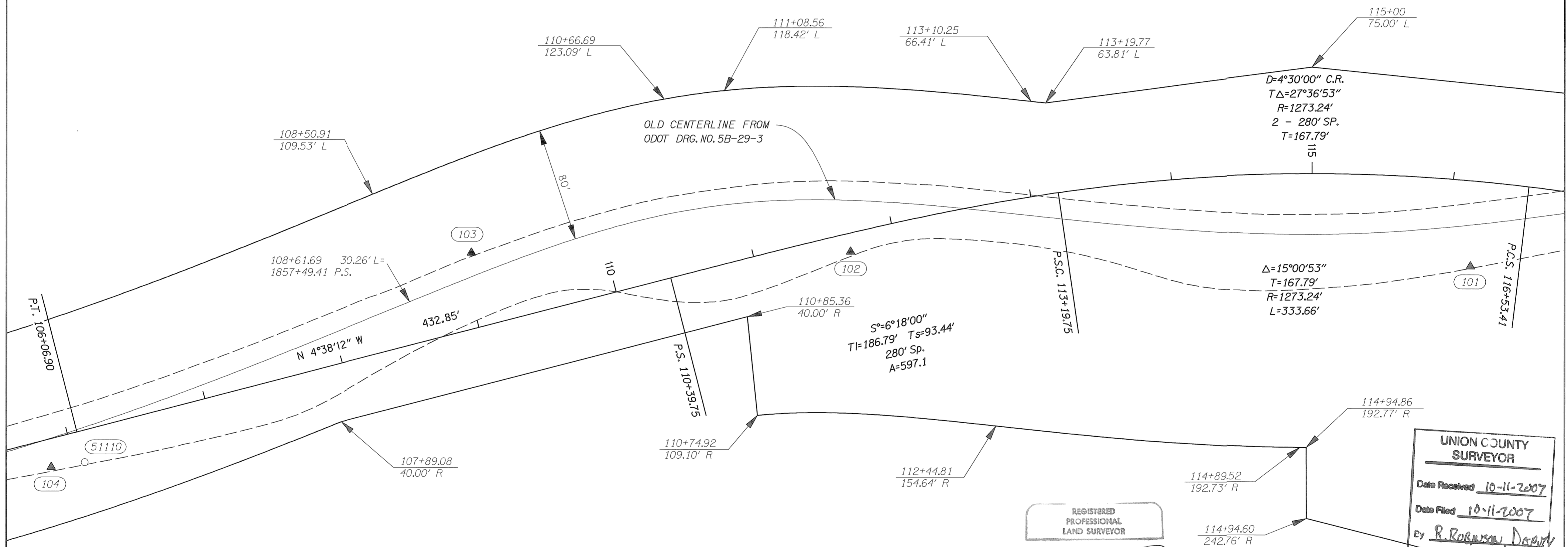
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 HIGHWAY 10 (OR 82) MP 31.15  
 UNION COUNTY

FOR OREGON BRIDGE DELIVERY PARTNERS  
 1165 UNION STREET NE, SUITE 200  
 SALEM, OR 97301

AUGUST 23, 2007  
 SCALE: 1" = 50'  
 SHEET 3 OF 5



E 1/2 SEC. 06, T. 1 N., R. 41 E., W.M.



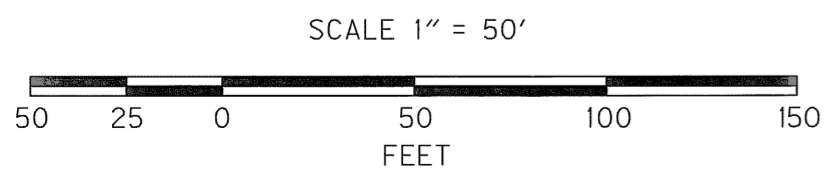
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REGISTERED PROFESSIONAL LAND SURVEYOR

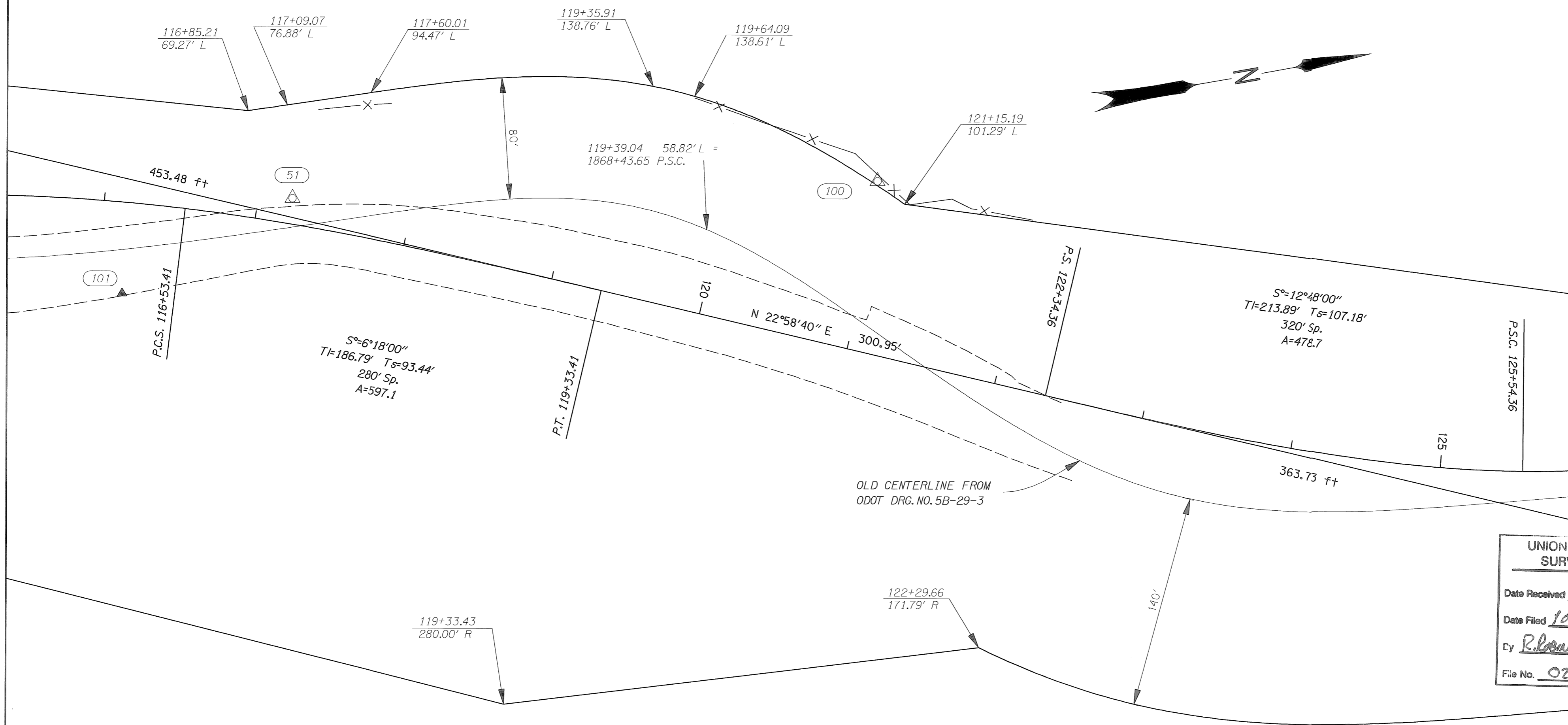
*H.M.*  
OREGON  
JAN. 21, 1982  
HARMON E. McLENDON  
2837

Renews 12/31/08

LEGEND	
●	SET STRATEGIC POINT NOTED IN TABLE
▲	SET NETWORK POINT
△	FOUND MONUMENT USED AS NETWORK POINT
○	FOUND MONUMENT
---	EDGE OF PAVEMENT
—	RIGHT-OF-WAY
	Ts = SHORT TANGENT OF SPIRAL CURVE
	TI = LONG TANGENT OF SPIRAL CURVE



**ANDERSON-PERRY & ASSOCIATES**  
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1165 UNION STREET NE, SUITE 200  
SALEM, OR 97301  
AUGUST 23, 2007  
SCALE: 1" = 50'  
SHEET 4 OF 5



UNION COUNTY  
SURVEYOR  
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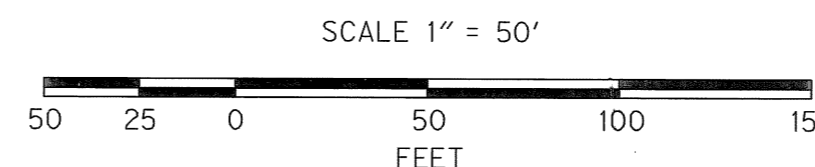
LEGEND	
●	SET STRATEGIC POINT NOTED IN TABLE
▲	SET NETWORK POINT
△	FOUND MONUMENT USED AS NETWORK POINT
---	EDGE OF PAVEMENT
---	RIGHT-OF-WAY
-X-	WIRE FENCE
Ts =	SHORT TANGENT OF SPIRAL CURVE
TI =	LONG TANGENT OF SPIRAL CURVE

REGISTERED PROFESSIONAL LAND SURVEYOR

*A.M. [Signature]*

OREGON  
JAN. 21, 1992  
HARMON E. MCLENDON  
2537

Renews 12/31/08



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