

SE 1/4 SECTION 34 & SW 1/4 SECTION 35, T.21S., R.12W., W.M. ALL IN DOUGLAS COUNTY, OREGON.

NARRATIVE

THE PURPOSE OF THIS SURVEY IS TO RESOLVE THE EXISTING RIGHT OF WAY CENTER LINE AND RIGHT OF WAY LINES AS SHOWN ON ODOT DRAWING 4B-21-22 FOR AN ODOT PROJECT RECONSTRUCTING THE UMPQUA HIGHWAY AT THE CORP RAILROAD CROSSING IN REEDSPORT. THE ORIGINAL FIELD NOTES FOR THIS SURVEY ARE ARCHIVED AT THE ODOT MAP AND PLAN CENTER IN SALEM IN BOOK # 4401.

FIELD WORK WAS PERFORMED BY ODOT STAFF BETWEEN MAY 3 AND JULY 11, 2007. SURVEY INSTRUMENTS USED FOR THIS PROJECT INCLUDED: A LEICA TCA 1800 TOTAL STATION (SERIAL # 418939), AND LEICA GX1230 DUAL FREQUENCY GPS RECEIVERS (ONE BASE STATION SERIAL #458018 AND ONE ROVER SERIAL # 457653).

OREGON SOUTH ZONE STATE PLANE NAD 83 (CORS96) (EPOCH: 2002) COORDINATES WERE ESTABLISHED ON AN EXISTING MONUMENT NAMED "REED" USING POST PROCESSED STATIC GPS METHODS: HORIZONTAL ERROR OF 3 MM + 0.5 PPM, AND A VERTICAL ERROR OF 10 MM, + 0.5 PPM. "REED" HAS A HORIZONTAL NETWORK ACCURACY OF 0.004 METERS (ACCORDING TO THE REPORT FROM OPUS) AND WAS USED AS THE PRIMARY CONTROL FOR THIS PROJECT. THE GPS BASE STATION WAS SET UP ON "REED" AND THE SECONDARY CONTROL AND EXISTING MONUMENTS WERE DOUBLE OCCUPIED USING A GPS ROVER AND PHASED DIFFERENTIAL REAL TIME KINEMATIC (RTK) METHODS: HORIZONTAL ERROR OF 10 MM, + 1 PPM, AND A VERTICAL ERROR OF 20 MM, + 1 PPM. POINTS WITH NO OR POOR RTK ACCURACY RESULTS WERE DOUBLE TIED USING THE TOTAL STATION FROM GPS TIED SECONDARY CONTROL. THE LEICA TCA 1800 TOTAL STATION HAS THE FOLLOWING ACCURACY: STANDARD ANGULAR ERROR OF +/- 1 SECOND; STANDARD DISTANCE ERROR OF +/- 2MM, +/- 2PPM.

ALL STATE PLANE COORDINATES WERE CONVERTED TO LOCAL DATUM PLANE (LDP) COORDINATES BY DIVIDING BY 0.99993909. THE BASIS OF BEARING IS OREGON SOUTH ZONE NAD 83 (CORS96) (EPOCH: 2002).

THE RIGHT OF WAY CENTERLINE LOCATION WAS ESTABLISHED UTILIZING THE RECORD ALIGNMENT DATA AS SHOWN ON ODOT MAP 4B-21-22. THE POSITION OF THE CENTERLINE POINTS ESTABLISHED BY THIS SURVEY ARE LISTED IN THE COORDINATE TABLE AND CAN BE LOCATED USING THE CONTROL MONUMENTS SHOWN ON THIS MAP.

THE RIGHT OF WAY CENTERLINE WAS RESOLVED USING A COMBINATION OF A BEST FIT ANALYSIS BASED ON THE EXISTING HIGHWAY FEATURES AND THE EXISTING MONUMENTS AS ESTABLISHED BY PREVIOUS SURVEYS.

THE PRIMARY ALIGNMENT CURVE CROSSING THE CORP RAILROAD AS SHOWN ON ODOT MAP 4B-21-22 WAS RECONSTRUCTED BY ESTABLISHING THE TANGENT LINES AND ACCEPTING THE RECORD CURVE RADII AS SHOWN ON ODOT MAP 4B-21-22.

THE LINE ESTABLISHING THE WESTERN TANGENT OF THE CURVE WAS RECONSTRUCTED BY ESTABLISHING THE NORTHBOUND ENTRANCE CURVE ONTO THE OREGON COAST HIGHWAY AND BY ESTABLISHING THE CENTERLINE OF THE UMPQUA HIGHWAY AT THE CROSSING POINT OF THE CORP RAILROAD MAINLINE (CENTERLINE OF WESTERLY TRACK AS SHOWN ON ODOT MAP 4B-21-22, STATION 15+17.5). THE CENTERLINE OF THE NORTHBOUND ENTRANCE CURVE ONTO THE OREGON COAST HIGHWAY WAS ESTABLISHED FROM A BEST FIT ANALYSIS BASED ON THE EXISTING EDGE OF PAVEMENT AND CONCRETE CURB LINE. THIS RETRACEMENT IS BASED ON THE ODOT AS BUILT DRAWINGS TITLED "UMPOUA HWY JCT. (REEDSPORT)" (5-1-76), AND ODOT MAP 6B-31-3 TITLED "TRAFFIC ISLAND AT JUNCTION OREGON COAST WITH UMPQUA HWY. (MAY 1947)". THE CENTERLINE OF THE UMPQUA HIGHWAY AT THE CROSSING POINT OF THE CORP RAILROAD MAINLINE WAS ESTABLISHED BASED ON A BEST FIT OF THE FOUR MONUMENTS: 1001, 1002, 1005, & 1006 SHOWN ON THIS MAP (SET PER FILED DOUGLAS COUNTY SURVEY M124-55 AND M143-30). THESE MONUMENTS WERE ESTABLISHED BY PRIVATE SURVEY BASED ON THE CENTERLINE TIE OF THE EXISTING HIGHWAY AT THE TIME OF SURVEY. HAVING BEEN GENERALLY ACCEPTED AND UNDISPUTED PROPERTY CORNERS, THEY SERVE AS SUFFICIENT EVIDENCE TO RECONSTRUCT THE CENTERLINE OF THE UMPQUA HIGHWAY AT THE CORP RAILROAD CROSSING. FROM THE CROSSING POINT OF THE UMPQUA HIGHWAY AND THE CENTERLINE OF THE CORP MAINLINE TRACK AS TIED; AN OFFSET DISTANCE WAS CALCULATED FROM THE POINT ON THE SPIRAL CURVE AT STATION 15+17.5 AS SHOWN ON ODOT MAP 4B-21-22 TO THE LINE BETWEEN THE POINT OF SPIRAL AND THE POINT OF INTERSECTION. WITH TWO POINTS ESTABLISHED, THE POINT OF TANGENCY FROM THE RECONSTRUCTED NORTHBOUND ENTRANCE CURVE ONTO THE OREGON COAST HIGHWAY AND THE OFFSET POINT AS CALCULATED FROM THE CROSSING OF THE CORP RAILROAD MAINLINE AND THE UMPQUA HIGHWAY, THE WESTERN MOST TANGENT LINE OF THE CURVE WAS ESTABLISHED.

THE EASTERNMOST TANGENT LINE WAS ESTABLISHED BY ACCEPTING THE CENTER OF THE MANHOLE LID AT THE INTERSECTION OF 4TH STREET AND THE UMPQUA HIGHWAY, AND BY A RECORD OFFSET FROM THE MONUMENT 1017. THE CENTER OF THE MANHOLE LID AT THE INTERSECTION OF 4TH STREET AND FIR AVE (UMPOUA HIGHWAY) IS THE GENERALLY ACCEPTED CENTERLINE OF THE HIGHWAY AS NOTED ON DOUGLAS COUNTY FILE CS 51/228-5 AND FURTHER PERPETUATED. A RECORD OFFSET OF 40' FROM MONUMENT 1017 (AS ESTABLISHED BY BYRON PER DOUGLAS COUNTY SURVEY M35-26 AND FURTHER PERPETUATED) WAS ACCEPTED AS THE SECOND POINT ESTABLISHING THE EASTERNMOST TANGENT LINE OF THE CURVE.

WITH THE INTERSECTION OF THE TWO TANGENT LINES FORMING THE POINT OF INTERSECTION FOR THE CURVE, THE RECORD CURVE RADII FROM ODOT MAP 4B-21-22 WAS USED TO RECONSTRUCT THE ALIGNMENT. THE RECONSTRUCTED ALIGNMENT GENERALLY CONFORMS TO THE EXISTING FEATURES AND PRIVATE SURVEY MONUMENTS TIED IN THE FIELD.

SURVEY CONTROL POINTS SET OR FOUND FOR THIS PROJECT DO NOT REPRESENT PROPERTY LINES OR RIGHT OF WAY LINES, AND ARE INTENDED SOLELY FOR ODOT USE IN SUPPORT OF ANY PROPOSED OR FUTURE TRANSPORTATION RELATED PROJECTS AND TO PERPETUATE THE LOCATION OF THE RESOLVED RIGHT OF WAY.

IT IS NOT THE INTENT OF THIS SURVEY TO ESTABLISH ANY BOUNDARIES OF PRIVATE LANDS NOT DIRECTLY AFFECTING THE ODOT RIGHT OF WAY. WE HAVE NOTED SUCH BOUNDARY EVIDENCE AS FOUND IN OUR WORK SOLELY TO PERPETUATE THE EVIDENCE AS REQUIRED BY ORS 209.

RESOLVED CENTERLINE OF RIGHT OF WAY									
STATION	BEARING	DISTANCE	TOTAL DELTA	RADIUS	LENGTH	TAN	NORTHING	EASTING	DESCRIPTION
2+86.08 PC							763139.79	3968691.31	
6+22.48 PI			99°09'47"	286.48'	495.82'	336.39'	762895.45	396846.10	
7+81.9 PT							762706.10	3968738.13	
12+16.28 PS	S.55°44'38"E.	434.38'			434.38'		762461.59	3969097.16	
16+16.28 PSC					400.00'		762260.43	3969441.99	
18+48.55 PI			51°20'32"	954.93'	455.71'	662.04'	762172.46	3969656.97	
20+71.98 PCS							762193.05	3969888.33	
24+71.98 PT					400.00'		762283.45	3970277.18	
28+53.70 POT	N.72°54'49"E.	381.72'			381.72'		762395.61	3970642.05	CTR.MANHOLE @ 4TH ST.INT.

FILED
 Date: 11-5-2007 By: JC
 This survey consists of:
 Map: ST HWY 38-016 A-B
 Narrative:
 Corner Rpt.
DOUGLAS COUNTY SURVEYOR

RECOVERED AND SET MONUMENT LIST					
PT. NO.	LDP NORTHING	LDP EASTING	STATION	OFFSET FEET	POINT DESCRIPTION
500	762141.81	3969925.95	21+01.42	54.90	SET 1" BRASS PLUG STAMPED "ODOT CONTROL 500" FLUSH IN CONC. SIDEWALK
501	762291.06	3969418.33	15+80.35	-18.80	SET 5/8" I.REBAR 30" LONG WITH A 1 1/2" BRASS CAP STAMPED "ODOT CONTROL 501" 0.1 FT. BELOW SURFACE
502	762574.91	3968973.85	10+48.76	-24.16	SET 5/8" I.REBAR 30" LONG WITH A 1 1/2" BRASS CAP STAMPED "ODOT CONTROL 502" 0.1 FT. BELOW SURFACE
503	762952.74	3968567.12	4+93.28	46.54	SET 1" BRASS PLUG STAMPED "ODOT CONTROL 503" FLUSH IN CONC. CURB.
529	762301.87	3970240.16	24+40.20	-28.47	SET 1" BRASS PLUG STAMPED "ODOT CONTROL 529" SET IN CONCRETE CURB.
REED	762746.01	3968620.80	6+77.79	54.90	FD.3 3/4" BRASS DISK SET IN 10" DIAMETER CONC. PEDESTAL STAMPED "FOR INFORMATION CONTACT OREGON DEPT. OF TRANS. OR COUNTY SURVEYORS N.G.S. OREGON PRIMARY GPS STATION 1989 REED". FLUSH WITH GRASS SURFACE IN GOOD COND.
1000	762273.57	3969527.59	16+92.21	-41.56	FD.5/8" I.REBAR BENT TO THE NW.0.60 FT BELOW SURFACE, IN POOR COND. TIED WHERE ROD ENTERS GROUND. (M 124-55)
1001	762316.26	3969412.83	15+64.40	-39.41	FD.5/8" I.REBAR WITH 1 1/4" PLASTIC CAP STAMPED "PLS 2009".0.1 FT. ABOVE SURFACE, IN GOOD COND. (M 124-55)
1002	762341.33	3969361.85	15+05.66	-39.07	FD.5/8" I.REBAR WITH 1 1/4" PLASTIC CAP STAMPED BUT NOT READABLE.0.1 FT. ABOVE SURFACE, IN GOOD COND. (M 124-55)
1003	762409.12	3969248.87	13+70.74	-40.38	FD.5/8" I.REBAR WITH 1 1/4" PLASTIC CAP STAMPED "PLS 2009".0.1 FT. ABOVE SURFACE, IN GOOD COND. (M 124-55)
1004	762348.01	3969196.38	13+59.38	39.37	FD.5/8" I.REBAR 0.20 FT. ABOVE SURFACE IN GOOD COND. (M 124-55)
1005	762279.66	3969309.00	14+88.32	40.27	FD.5/8" I.REBAR WITH 1 1/4" PLASTIC CAP STAMPED "PLS 2009".0.1 FT. ABOVE SURFACE, IN GOOD COND. CAP IN FAIR COND. (M 124-55)
1006	762252.51	3969362.68	15+46.62	39.73	FD.PK NAIL AND WASHER SET IN OLD CONC. SIGN BASE. (M 143-30)
1007	762208.56	3969469.51	16+57.88	38.61	FD.5/8" I.REBAR WITH 1 1/4" PLASTIC CAP STAMPED "LS 2865".1.0 FT. BELOW SURFACE, IN GOOD COND. (M 143-30)
1008	762765.48	3968612.86	6+60.37	50.82	FD.3" BRASS DISK STAMPED "DOUGLAS CO. SURVEYORS OFFICE". SET IN CONC. CURB, IN GOOD COND.
1009	763293.67	3968888.76			FD.3 1/2" BRASS DISK (CANNOT SEE ROD) STAMPED "CORP OF ENGINEERS SURVEY MARK T21S R12W 1/4 34 35 1966 DO NOT DISTURB THIS MARK". SET FLUSH WITH SURFACE, IN GOOD COND.
1010	762735.97	3968609.33	6+79.09	70.06	FD.3" BRASS DISK STAMPED "DOUGLAS CO. SURVEYORS OFFICE". SET IN CONC. CURB, IN GOOD COND.
1011	762395.61	3970642.05	28+51.93	0.00	FD.CENTER OF MANHOLE AT INTERSECTION OF FIR AND FOURTH STREETS, STRADDLE MARKS NOT FOUND. (CS 51/228-5)
1012	762245.42	3969977.22	21+67.08	-39.93	FD.1 1/4" PLASTIC CAP STAMPED "STUNTZNER ENG." FLUSH WITH OLD AC PARKING, IN GOOD COND. ROD LIKELY 5/8" BUT NOT VISIBLE. (M 123-10)
1013	762272.31	3969926.50	21+18.83	-76.46	FD.5/8" IRON ROD WITH 1 1/4" PLASTIC CAP STAMPED "STUNTZNER ENG.". ROD IN GOOD COND. PLASTIC CAP IN POOR COND. SET FLUSH WITH OLD AC. (M 123-10)
1014	762307.73	3969859.57	20+49.15	-116.58	FD.5/8" IRON REBAR WITH PLASTIC CAP PROTRUDING DOWN THRU IRON ROD. SET FLUSH WITH SURFACE, IN GOOD COND. (M 96-21)
1015	762321.70	3969833.01	20+19.49	-131.89	FD.5/8" IRON REBAR 0.10 FT. BELOW SURFACE, IN GOOD COND. REMNANTS OF PLASTIC CAP FOUND NEARBY. (M 96-21)
1016	762112.21	3969856.34	20+34.13	78.42	FD.2 1/2" BRASS CAP STAMPED "COUNTY SURVEYORS OFFICE DOUGLAS COUNTY LOT 1 COR NO.2 BLK 84 1956".0.90 FT. BELOW EDGE OF CONCRETE SIDEWALK. LEANS WESTERLY, IN GOOD TO FAIR COND. (M 96-21)
1017	762068.31	3969713.39	19+05.50	124.76	FD.5/8" I.REBAR 0.9 FT. BELOW SURFACE, IN POOR COND. (CS 51/252-1)

OFFSETS IN FEET WITH MINUS INDICATING A LEFT OFFSET.

REGISTERED PROFESSIONAL LAND SURVEYOR
 Marshall R. Wagstaff
 OREGON
 JANUARY 09, 2001
 MARSHALL R. WAGSTAFF
 49476LS
 EXPIRES 06/30/08

REGISTERED PROFESSIONAL LAND SURVEYOR
 Christine V. Blevins
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 JULY 19, 1994
 CHRISTINE V. BLEVINS
 02669LS
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Field Work & Horizontal Control Work As Noted On This Survey Was Completed Under The Direct Supervision Of Marshall R. Wagstaff, PLS. Retracement Work As Shown On This Survey Was Completed Under The Direct Supervision Of Christine V. Blevins, PLS.

SI FEET OREGON DEPARTMENT OF TRANSPORTATION
 HORIZONTAL CONTROL, RECOVERY AND RETRACEMENT MAP
 OR 38: CORP RAILROAD CROSSING (REEDSPORT)
 UMPQUA HWY.
 FILENAME: 13862rw.dgn
 DOUGLAS COUNTY

FOR ODOT REGION 3
 3500 NW. STEWART PKWY.
 ROSEBURG, OR. 97470
 OCTOBER 30, 2007
 SCALE: 1" = 100'
 SHEET 1 OF 2