

PURPOSE

THE PURPOSE OF THIS SURVEY WAS TO PROVIDE TOPOGRAPHICAL DATA; DIGITAL TERRAIN MODEL; AND A CONTROL, RECOVERY, RETRACEMENT AND RIGHT OF WAY BOUNDARY MONUMENTATION MAP FOR A PROJECT NAMED "US 101: REEDSPORT TO WINCHESTER BAY PAVING" KEY NUMBER 13769. SURVEY CONTROL AND MONUMENT TIE FIELD WORK WAS COMPLETED ON AUGUST 11, 2009. THE ORIGINAL FIELD NOTES FOR THIS PROJECT ARE ARCHIVED IN SALEM IN FIELD BOOK NUMBER 4401.

COORDINATES AND BASIS OF BEARINGS

THIS PROJECT UTILIZES A LOCAL DATUM PLANE (LDP) WHICH IS RELATIVE TO THE OREGON COORDINATE SYSTEM OF 1983 (CORS 96) (EPOCH 2002) SOUTH ZONE WITH RESPECT TO THE LOCAL LATITUDE AND GROUND ELEVATION. THE LDP COORDINATES DEFINE TRUE GROUND DISTANCES. TO CONVERT THE LDP COORDINATES TO THE OREGON COORDINATE SYSTEM OF 1983 (CORS 96) (EPOCH 2002) SOUTH ZONE MULTIPLY THE LDP COORDINATES BY 0.99993909

HORIZONTAL CONTROL

"REED" WHICH IS A N.G.S. PRIMARY GPS STATION MONUMENT AND "SURF" A MONUMENT SET FOR THIS PROJECT WERE USED AS CONTROL MONUMENTS. STATIC GPS OBSERVATIONS WERE COLLECTED ON EACH POINT. AN OPUS SOLUTION WAS USED TO PRODUCE NAD 83 (CORS 96) (EPOCH 2002) SOUTH ZONE COORDINATES THAT WERE USED TO CONTROL THIS PROJECT. THE OPUS COORDINATES OF "REED" FIT THIS PROJECT BETTER THAN THE RECORD COORDINATES; THEREFORE THE N.G.S. COORDINATES WERE DISREGARDED.

HORIZONTAL CONTROL EQUIPMENT

A LEICA GX1230 DUAL FREQUENCY GPS RECEIVER WAS USED FOR GPS OBSERVATIONS. IT HAS THE FOLLOWING ACCURACY. PHASED DIFFERENTIAL STATIC METHOD ERROR OF 5 MM + 0.5 PPM, AND A VERTICAL ERROR OF 10 MM + 0.5 PPM. PHASED DIFFERENTIAL RTK METHOD HORIZONTAL ERROR OF 10 MM + 1 PPM, AND A VERTICAL ERROR OF 20 MM + 1 PPM.

VERTICAL CONTROL

BENCH MARKS A755, E755, G755, AND X457 WERE HELD AS VERTICAL CONTROL FOR THIS PROJECT. LEVEL CIRCUITS WERE RUN TO ESTABLISH ELEVATIONS ON CONTROL POINTS USED FOR TOPOGRAPHY.

VERTICAL CONTROL EQUIPMENT

A LEICA NA2002 DIGITAL LEVEL AND A LEICA GBNL4C ALUMINUM LEVEL ROD WAS USED TO COMPLETE THE LEVEL CIRCUITS. THIS INSTRUMENT HAS THE FOLLOWING STANDARD DEVIATION OF 1.5 MM IN A 1 KILOMETER DOUBLE RUN LEVEL CIRCUIT.

CURRENT EXISTING HIGHWAY RIGHT OF WAY CENTER LINE

THIS CENTER LINE HAS NO CENTER LINE DESIGNATOR AND WAS RESOLVED USING ODOT RIGHT OF WAY DRAWING (DRG.) 7B-7-12. THE CENTERLINE WAS RESOLVED WORKING BACKWARDS ALONG THE ALIGNMENT STARTING WITH THE LAST TANGENT ON THE PROJECT. ON THIS LAST TANGENT THE RECORD OFFSET FROM POINT 1026 WAS HELD AND A BEST FIT THE OTHER RIGHT OF WAY MONUMENTS ON THAT TANGENT. FOR THE CURVE, INITIALLY THE RECORD CURVE DATA WAS HELD. A TANGENT WAS THEN PROJECTED BACK ON LINE FROM THIS CURVE TO THE RECORD ANGLE POINT. USING THE RECORD ANGLE AT THIS ANGLE POINT ANOTHER TANGENT WAS PROJECTED TO THE BRIDGE. THIS METHOD DID NOT FIT THE BRIDGE WITHIN AN ACCEPTABLE TOLERANCE. NEXT, WORKING BACKWARDS FROM THE LAST TANGENT AGAIN THE RECORD DEGREE OF CURVE AND SPIRAL LENGTH WAS HELD FOR THE CURVE. THE NEXT TANGENT BACK WAS RESOLVED BY HOLDING THE RECORD OFFSET FROM POINT 1021 AND SPLITTING THE EXISTING CURBS JUST WEST OF 19TH STREET. THE NEXT TANGENT WAS RESOLVED USING A SPLIT OF THE EXISTING CURBS JUST EAST OF 19TH STREET AND A SPLIT OF THE EXISTING CURBS AT THE EASTERLY END OF THE BRIDGE OVER SCHOFIELD CREEK (ODOT BRIDGE NO. 00983). THE ANGLE POINT WAS THEN PLACED AT THE INTERSECTION OF THESE TWO TANGENTS. INFORMATION SHOWN WITHOUT BRACKETS IS MEASURED/RESOLVED. IF MEASURED/RESOLVED DATA DIFFERS FROM RECORD DATA BOTH ARE SHOWN. IF ONLY RECORD INFORMATION IS SHOWN IT WAS HELD.

"J" CENTERLINE

THIS CENTER LINE USES "J" AS A CENTER LINE DESIGNATOR AND WAS AN ATTEMPT TO RESOLVE THE EXISTING RIGHT OF WAY USING DRG. 7B-7-12. UNFORTUNATELY THE "J" LINE WAS RESOLVED IN ERROR BY A PREVIOUS PROJECT SURVEYOR. RIGHT OF WAY WAS ALREADY PURCHASED IN THE AREA SHOWN IN "DETAIL A" ON SHEET 5 BASED ON THE "J" ALIGNMENT BEFORE THE ERROR WAS FOUND. THE "J" ALIGNMENT WAS ALSO RESOLVED WORKING BACKWARDS ALONG THE ALIGNMENT STARTING WITH THE LAST TANGENT ON THE PROJECT. THIS LAST TANGENT USES THE SAME TANGENT AS THE CURRENT EXISTING HIGHWAY RIGHT OF WAY CENTER LINE ABOVE. A CURVE WAS THEN PROJECTED THAT DOES NOT MATCH ANY CURVE DATA. THE CURVE DATA FOR THE "J" ALIGNMENT IS SHOWN ON THE FACE OF THIS MAP. THE "J" ALIGNMENT DOES NOT REPRESENT THE CURRENT EXISTING HIGHWAY RIGHT OF WAY CENTER LINE.

STATIONING

RECORD STATIONING OF 29+44.37 FROM DRG. 7B-7-12 WAS HELD ON POINT 1025 FOR BOTH CENTER LINES ABOVE.

ABANDONED HIGHWAY

THE ABANDONED HIGHWAY (LONGWOOD DRIVE) SOUTHWESTERLY OF THE INTERSECTION OF HIGHWAY US101 AND 22ND STREET WAS RESOLVED USING DRG. 3B-12-15. THIS CENTER LINE IS NOT SHOWN ON THIS SURVEY TO AVOID CLUTTER, BUT THE RIGHT OF WAY LINES, BEARINGS, AND CALCULATED POINTS DERIVED FROM THIS ALIGNMENT ARE SHOWN. THE CENTER LINE WAS BACKED IN FROM THE EQUATION AT 0+00.00 P.O.T AHEAD EQUALS 499+78.63 P.S. AHEAD (SEE DRG. 7B-7-12) HOLDING STATION 499+78.63 P.S. AHEAD. THE BACK TANGENT WAS TAKEN FROM THE CURRENT EXISTING HIGHWAY RIGHT OF WAY CENTER LINE (DESCRIBED ABOVE). THE RECORD CURVE DATA WAS TAKEN FROM DRG. 3B-12-15. ON THE INITIAL ATTEMPT TO RESOLVE THE CENTER LINE THE FORWARD TANGENT FELL 0.19 FEET FROM THE RECORD OFFSET TO POINT 1024. THE ONLY CHANGE TO THIS CENTER LINE IS THAT THE FORWARD TANGENT WAS MOVED PARALLEL TO HOLD THE RECORD OFFSET FROM POINT 1024. THE STATIONING ON THIS CENTER LINE INCREASES IN THE OPPOSITE DIRECTION OF THE CURRENT EXISTING HIGHWAY RIGHT OF WAY CENTER LINE ABOVE.

LINE LEGEND	
	EXISTING HIGHWAY RIGHT OF WAY
	NEW HIGHWAY RIGHT OF WAY
	FALSE CALL (DEFINES DIRECTION OF LINE)
	EXISTING STREET RIGHT OF WAY
	EXISTING HIGHWAY ACCESS CONTROL / RIGHT OF WAY
	EXISTING EASEMENT
	EXISTING PROPERTY
	CITY LIMITS
	TOWNSHIP
	SECTION
	1/4 SECTION
	1/16 SECTION OR GOVERNMENT LOT
	STATION WIDTH ACCESS RESERVATION



OREGON DEPARTMENT OF TRANSPORTATION
CONTROL, RECOVERY, RETRACEMENT AND
RIGHT OF WAY BOUNDARY MONUMENTATION MAP
US101: REEDSPORT TO WINCHESTER BAY PAVING
OREGON COAST HIGHWAY NO. 9, US101, M.P. 211.41 - 215.77
DOUGLAS COUNTY

FILE: 13769RW.DGN MODEL: RWM

FOR ODOT REGION 3
3500 NW. STEWART PKWY.
ROSEBURG, OR. 97470

JUNE 29, 2011

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