



BASIS OF BEARING AND CONTROL NETWORK SCHEMATIC
NOT TO SCALE

LEGEND	
	SET TRAVERSE/ NETWORK POINT
	LINES OF OBSERVATION
	FOUND MONUMENT

RECEIVED BY
Morrow County Surveyor
Date 6/2000
Rec'd By DE
No. C-1263-E 1036

NARRATIVE

THE PURPOSE OF THIS SURVEY IS TO ESTABLISH NETWORK AND MAPPING FOR THE VERTICAL ALIGNMENT CORRECTION PROJECT ON THE LEXINGTON-ECHO HIGHWAY, FROM MILEPOST 10.00 TO MILEPOST 10.20.

THE SURVEY CREW CONSISTED OF CHUCK LONGFIELD, BRENT REYNOLDS, JOEL ESTRADA, AND AL QUARISA. THE CREW STARTED THE FIELD WORK ON APRIL 12, 1999 AND COMPLETED IT ON MAY 28, 1999. THIS SURVEY TOOK PLACE IN TOWNSHIP 1 NORTH; RANGE 26 EAST; SECTIONS 17 & 20.

NETWORK POINT 1 IS A 2 1/2" IRON PIPE WITH BRASS CAP. THIS POINT IS THE 1/4 CORNER BETWEEN SECTION 17 AND SECTION 20 FROM MORROW COUNTY SURVEY NO. C-1194-E968. NETWORK POINT 2 IS A PK NAIL AT SECTION CORNER 17, 18, 19, AND 20. THIS POINT IS THE NORTH WEST CORNER OF SECTION 20 FROM MORROW COUNTY SURVEY NO. C-1194-E968. NETWORK POINTS 3, 4, 5, 6, AND 7, ARE 760 MM LONG X 15 MM DIAMETER REBAR WITH ALUMINUM CAPS STAMPED "NET PT. X"

THIS SURVEY USED EXISTING MONUMENTS FROM MORROW COUNTY SURVEY NO. C-1194-E968. THE NORTH WEST CORNER AND THE EAST QUARTER CORNER OF SECTION 20 ARE THE BASIS OF BEARING N. 89°53' 00" W. THE RECORD DISTANCE IS 2622.84 FEET. THE DISTANCE USED FROM MORROW COUNTY SURVEY NO. C-1194-E91503 IS 2638.64 FEET (MORE RECENT SURVEY) CONVERTED TO METRIC 804.257 METERS.

NET POINT 1, THE QUARTER CORNER BETWEEN SECTION 17 AND 20 WAS ASSIGNED LOCAL COORDINATES (NORTH 10,000.000, EAST 10,000.000). NET POINT 2, THE N. W. CORNER OF SECTION 20, COORDINATES WERE CALCULATED FROM BASIS OF BEARING AND MOST RECENT RECORD DISTANCE.

HORIZONTAL LEAST SQUARES ADJUSTMENT WAS THEN CALCULATED IN LISCAD TO ESTABLISH COORDINATES FOR OTHER NETWORK POINTS. THE LEAST SQUARES ADJUSTMENT METHOD PRODUCED ANGULAR AND DISTANCE RESIDUALS (THE AMOUNT THE FIELD OBSERVED MEASUREMENTS WERE CHANGED DUE TO THE ADJUSTMENT). THE ANGULAR RESIDUALS AVERAGED 2 SECONDS, WITH THE GREATEST RESIDUAL BEING 4 SECONDS. THE DISTANCE RESIDUALS AVERAGED 1.3 MM THE GREATEST BEING 4 MM. THE NETWORK MEETS ODOT STANDARDS.

THE VERTICAL DATA FOR THIS PROJECT WAS OBTAINED FROM BENCH MARK G 327, ELEVATION 348.078 AND BENCH MARK D 518, ELEVATION 360.581 THE DATA WAS OBTAINED, EDITED AND CONVERTED TO A TERRAIN MODEL BY LISCAD (4.1). THE EQUIPMENT USED ON THIS PROJECT WAS A TCA 1800 (98-TS10), AND A LIETZ LEVEL B1.

NETWORK POINT COORDINATE TABLE

PT ID	NORTHING	EASTING	DESCRIPTION
1	10000.000	10000.000	FND 2 1/2 IN IRON PIPE WITH BRASS CAP 1/4 CORNER BETWEEN SECTION 17 AND 20
2	10001.638	9195.745	FND PK NAIL N W CORNER SECTION 20
3	10280.209	9521.655	SET 15 mm X 760 mm REBAR WITH ALUM CAP MARKED OSHD STAMPED NET PT 3
4	9988.931	9361.946	SET 15 mm X 760 mm REBAR WITH ALUM CAP MARKED OSHD STAMPED NET PT 4
5	9446.179	9018.954	SET 15 mm X 760 mm REBAR WITH ALUM CAP MARKED OSHD STAMPED NET PT 5
6	10006.693	9292.354	SET 15 mm X 760 mm REBAR WITH ALUM CAP MARKED OSHD STAMPED NET PT 6
7	9804.058	9209.747	SET 15 mm X 760 mm REBAR WITH ALUM CAP MARKED OSHD STAMPED NET PT 7
200	10006.938	9584.778	FOUND 5/8 in X 30 in IRON PIN WITH ALUMINUM CAP STAMPED PLS 933
201	10055.719	9584.874	FOUND 5/8 in X 30 in IRON PIN WITH ALUMINUM CAP STAMPED PLS 933
202	10106.856	9448.234	FOUND 5/8 in X 30 in IRON PIN WITH ALUMINUM CAP STAMPED PLS 933
203	9671.022	9187.211	FOUND 5/8 in X 30 in IRON PIN WITH ALUMINUM CAP MARKED OSHD
204	9681.386	9187.575	FOUND 5/8 in X 30 in IRON PIN WITH ALUMINUM CAP MARKED OSHD

LINE TABLE

AT	TO	DISTANCE	BEARING	AT	TO	DISTANCE	BEARING
1	3	554.374 m	N 59°38'19"W	3	6	356.917 m	S 39°58'29"W
1	4	638.150 m	S 89° 0'22"W	4	5	642.046 m	S 32°17'27"W
1	5	1126.574 m	S 60°33'16"W	4	6	71.823 m	N 75°40'55"W
2	6	96.741 m	N 87° 0'17"E	4	7	239.463 m	S 39°27'48"W
2	7	198.076 m	S 4°03'13"E	5	6	632.637 m	N 26° 0' 6"E
3	4	332.189 m	S 28°44'10"W	5	7	405.561 m	N 28° 3'47"E
3	5	973.814 m	S 31° 4'44"W	6	7	218.826 m	S 22°10'44"W



REGISTERED PROFESSIONAL LAND SURVEYOR

Ken W. Eddy
OREGON
FEBRUARY 14, 1985
KEN W. EDDY
2129

EXPIRES 12/31/01

OREGON DEPARTMENT OF TRANSPORTATION

CONTROL SURVEY

VERTICAL ALIGNMENT CORRECTION

LEXINGTON - ECHO HIGHWAY

MORROW COUNTY

FOR O.D.O.T. REGION 5 80788 KIK ROAD, HERMISTON, OR 97838

NOVEMBER 24, 1999

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