

RIGHT OF WAY SURVEY
U.S. HIGHWAY 26, FIELDS CR. - MOON CR. SECTION
Located as Follows:

SW1/4 and SE1/4 of Section 13, T.13S., R.28E., WM.,
SW1/4 and SE1/4 of Section 18, T.13S., R.29E., WM.,
NE1/4 and SE1/4 of Section 19, T.13S., R.29E., WM.,
SW1/4 and SE1/4 of Section 20, T.13S., R.29E., WM.,
SW1/4 of Section 21, T.13S., R.29E., WM.,
NW1/4 and NE1/4 of Section 28, T.13S., R.29E., WM.,
ALL IN GRANT COUNTY, OREGON.

REFERENCES

OREGON DEPARTMENT OF TRANSPORTATION DRAWINGS	RECORD DEED DESCRIPTIONS base on Drawing No. 7B-20-5 and Drawing No. 8B-28-3
7B-20-6, Dated March, 1953	Book 68, Page 284
8B-28-3, Dated February, 1963	Book 67, Page 472
Fields Creek Rd. - Mt. Vernon, Key No. 05975, Dated 1993	Book 68, Page 83
10B-6-7, Dated January 1995. Revised April, 1996	Book 69, Page 566
	Book 68, Page 381
	Book 132, Page 198
	Book 70, Page 460
GRANT COUNTY MAPS OF SURVEY	RECORD DEED DESCRIPTIONS base on Drawing No. 10B-6-7
156 511 643	951605 961014
413 601 942	960104 951119
510 641 1133	960324 952217
GRANT COUNTY SUBDIVISION PLATS	
River Estates	960325 960023
Amended Plat of Block A & Lot 17, Block B, River Estates	951593 952217
	951410 952273

This survey is performed at the request of Oregon Department of Transportation, (DDOT), the purpose of which is to locate and monument the right of way for a portion of the John Day Highway (U.S. Highway 26) from Engineers Station 870+00 to 1119+00 of the record alignment as shown on DDOT Drawing No. 7B-20-5 and to locate and monument additional right of way through the same section of highway, as shown on DDOT Drawing No. 10B-6-7.

In 1995, DDOT created a new construction alignment through the above described portion of this highway as shown on DDOT Drawing No. 10B-6-7. Control for that new alignment was based on a control traverse run by DDOT from N.G.S. Tri Sta. "H-13", bearing turned from N.G.S. Tri Sta. "Birch", westerly to N.G.S. "Viley" Azimuth Mark with a closing angle turned to N.G.S. Tri Sta. "Viley". This control survey was conducted in 1993 and is shown on a drawing titled "Fields Creek Rd. - Mt. Vernon, Key No. 05975".

In an attempt to follow and utilize the work previously performed by DDOT, this survey began at N.G.S. Tri Sta. "H-13", back-sighting N.G.S. Tri Sta. "Birch" using the coordinates & bearings as published on the above described DDOT control survey drawing (Key No. 05975). The control for this survey is then continued southerly to the easterly end of this right of way survey, thence westerly along the subject portion of the highway, and continuing westerly to "Viley" Azimuth with a closing angle turned to Tri Sta. "Viley". The control survey for this project located the following control points as shown on DDOT's control survey No. 3, No. 4 which is the 1/4 S16/S21 T.13S., R.29E., No. 6 which is the corner to S21-S22-S27-S28, T.13S., R.29E., No. 9, No. 10 which is the 1/4 S19/S20, T.13S., R.29E., No. 11, No. 13, No. 14 & No. 19. The remainder of the DDOT control has either been destroyed or lost.

The corners to S11-S12-S13-S14 and 1/4 S12/S13, T.13S., R.28E., and the corner to S17-S18-S19-S20, T.13S., R.29E., which were not previously located by DDOT, are located by this survey. Pertinent monuments as shown on Grant County Maps of Survey No. 156, 413, 510, 511, 601, 641, 643, 942 & 1133 as well as River Estates Subdivision are located on this survey.

Raw closure of the survey control as described above at Viley Az. with closing angle to Tri Sta. Viley is as follows: Raw coordinates are North 1.77 ft. & East 0.76 ft. from coordinates published by DDOT. control drawing (Key No. 05975). Our raw Az. is 329°44'07". DDOT's control drawing (Key No. 05975) is 329°44'07". As opposed to said published Az. of 329°43'04", which results in an apparent angle error of 0°01'03". This results in a raw closure of 127.990. DDOT's raw closure between Tri Sta. "H-13" & "Viley" Az. using the same back-sight at the beginning & same closing for-sight are as follows: Raw coordinates are North 0.62 ft. & East 0.66 ft. from the published data. DDOT's field files show their raw Az. from Viley Az. to Viley to be 329°44'21", as opposed to the published 329°43'04" for an apparent angle error of 0°01'17". This results in a raw closure of 159.975. Comparing the two raw control surveys, this survey fell N23°E, 1.93 ft. & DDOT fell N47°E, 0.90 ft. from the published position of Viley Az.

Examining angle error in either survey we find that angle adjustments adversely affect the lineal closures. This normally indicates a blunder in measurements. Therefore we checked our survey angles and distance measurements over the entire control survey and found no such blunders. It should be noted that our angular measurements conform very well with those of DDOT, and that overall mis-closures are in the same direction and in reasonable conformance.

NARRATIVE

At this point our opinion is that the locations we are using from "H-13" to "Viley Az." do not conform. We cannot explain this, however due to our conformance with the DDOT survey, I am unwilling to attempt to utilize both points as hard control & adjust or balance to them. The DDOT survey attempted to accomplish this. In my opinion the DDOT adjustments or balances adversely affect the positional accuracy of that control survey.

After considering what we suspected, we ran an independent closed control survey loop, as based on the published data of "H-13" and the bearing from "H-13" to "Birch". Our raw closure back to "H-13" is as follows: We fell South 0.22 ft. & East 1.42 ft. from our starting point at "H-13" for a raw lineal closure of 1.41724. Our raw Az. from "H-13" to "Birch" is 354°14'34", as opposed to the published Az. of 354°14'24" or 0°00'10" angle error. Using an equal angle adjustment over the entire loop, we fell South 0.14 ft. & East 1.14 ft. from the said beginning point, for a lineal closure of 1.52338. We then ran a compass rule adjustment on this loop to produce the final un-rotated coordinates.

Comparisons between DDOT's positions & the positions as determined by our control survey as described above reveal no consistency, however positional differences are not excessive. This strengthens our opinion that the basis between "H-13" & "Viley Az." are not on the same datum.

The next task then is that of relating our control & positioning to that of DDOT's. We accomplished this by searching for the best fit. We determined that by translating our position at DDOT control point No. 9, which is a move of S78°51'45"E, 0.83 ft. and rotating by -0°00'12", that we conform to DDOT's positioning reasonably well.

The positions differ as follows:

DDOT Control Point	Move from our Translated/Rotated Position To DDOT's Published Position
Pt. 3	S30°14'W, 0.38 ft.
Pt. 4	S50°14'W, 0.36 ft.
Pt. 6	N27°E, 0.13 ft.
Pt. 8	S50°E, 0.10 ft.
Pt. 9	0.00
Pt. 11	N81°14'W, 0.04 ft.
Pt. 13	N32°14'W, 0.14 ft.
Pt. 14	N38°14'W, 0.50 ft.
Pt. 19	N39°14'W, 0.42 ft.

This provides a condition whereby we are able to utilize the alignment as shown on DDOT Drawing 10B-6-7 and conform reasonable well to the existing monumentation. This alignment is referred to as the CURRENT ALIGNMENT on this survey.

The alignment as shown on drawing No. 7B-20-5 of 1953 is placed on this survey by using a single rotation, which best fits all the existing right of way monuments at the west end of the project, through River Estates Subdivision & monuments set along the right of way as shown on contiguous survey work. This alignment is referred to as the RECORD ALIGNMENT on this survey.

As stated, the 1953(record) alignment as shown on drawing No. 7B-20-5 is unchanged, however the basis of bearing is changed to conform to this survey. We find that the physical location of the record & current alignments conform reasonably well, with each alignment within 25 feet of the other through the project. There is one area through the curve at Record P.L. Station 956+67.08 where an actual alignment change has been made and there is just over 5 feet separating the record & current alignments. Both alignments conform to the actual location of the roadway as it currently exists, and with adjacent fences and other cultural features.

Right of Way along the 1953(record) alignment, as shown on drawing No. 7B-20-5, is located as based on recorded deed descriptions. Those descriptions are shown in the "References" section of this survey, and are sub-headed as "Record Deed Descriptions based on Drawing No. 7B-20-5".

Right of Way along the 1995 (current) alignment, as shown on drawing No. 10B-6-7 is located based on recorded deed descriptions. Those descriptions are shown in the "Reference" section of this survey and are sub-headed "Record Deed Descriptions based on Drawing No. 10B-6-7".

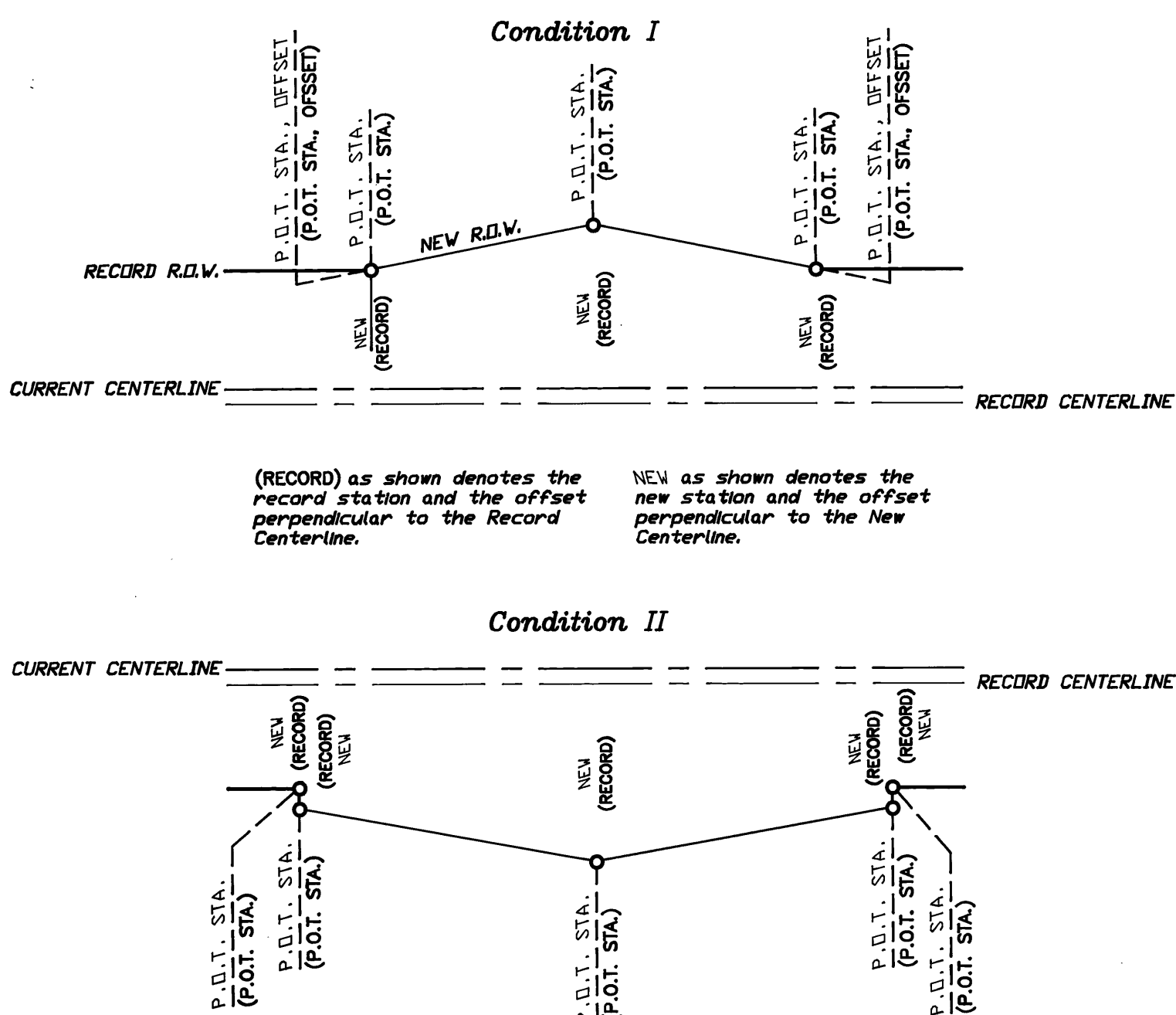
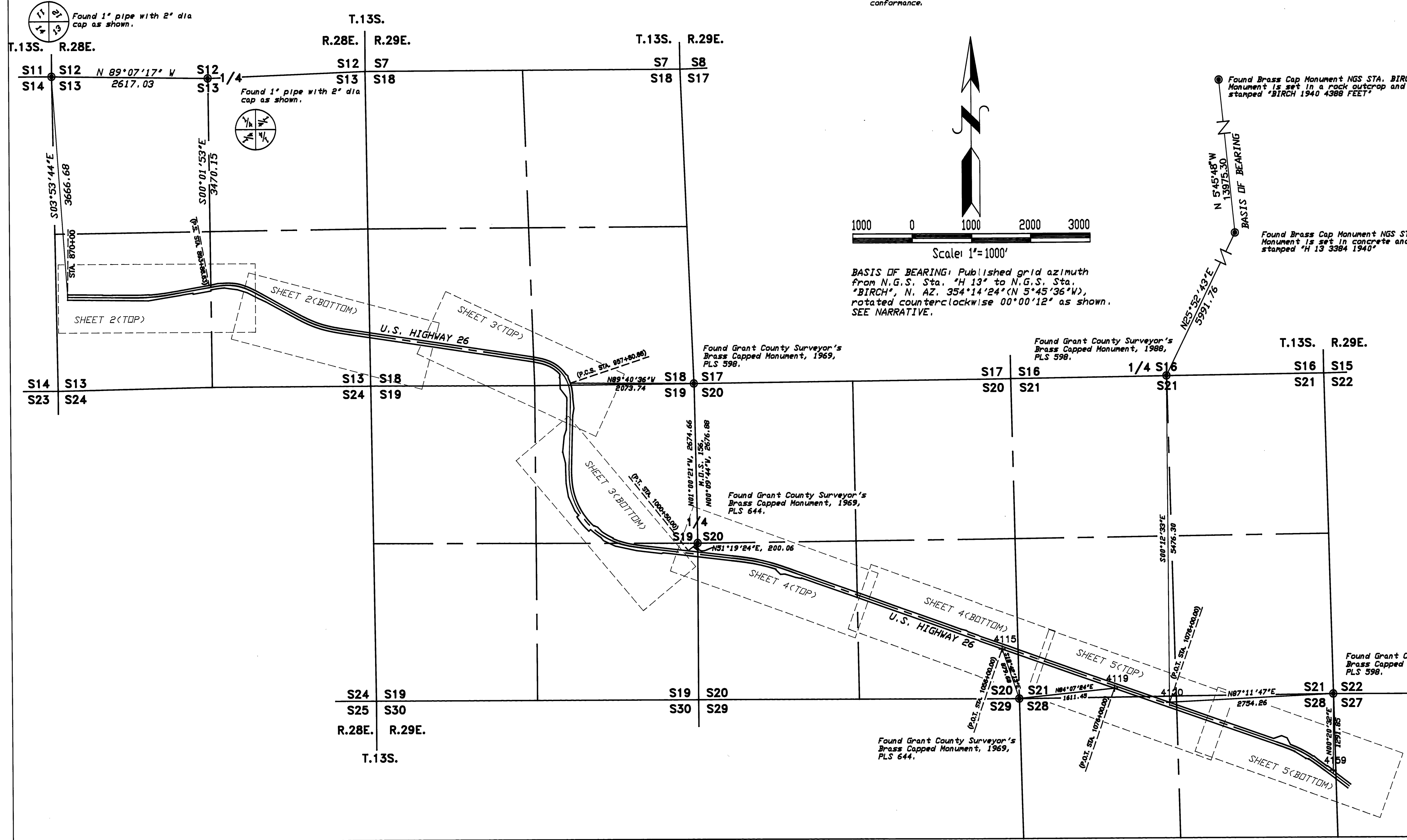
It is apparent that it was not recognized that the 1953(record) & the 1995(current) alignments were not in the same location when additional right of way was acquired based on the 1955 alignment. This created a situation where there are two conditions which must be addressed.

Condition I
Right of Way offset from the current alignment falls inside the record right of way. In this case, the taper is extended from inside the record right of way line to a point where the new right of way intersects the record. At that intersection point a monument is set. The taper then continues to its prescribed offset & station from the new alignment. This offset from the new alignment is continued as required and connected back to the record alignment at a point where the new right of way intersects the record right of way as described above.

Condition II
Right of Way offset from the current alignment falls outside the existing right of way. In this case a monument is set at the prescribed point on the record right of way line & another monument is set at the same station, at the prescribed offset and perpendicular to the current alignment. This forms a jog in the right of way which is the same as the offset between the two centerlines at that point. New right of way is then located and monumented at prescribed station and offset from the current alignment as required. The new right of way is then connected back to the record right of way as described above by ending at a point outside the record right of way, thence jogging back, perpendicular to the current alignment, to the record right of way.

Refer to the sketch found below which gives a graphic representation of the above stated conditions.

In the above described manner, all the required monuments are located and set as shown on this Map of Survey.



FIELDS CR. - MOON CR.
RIGHT OF WAY SURVEY

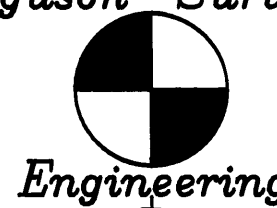
GRANT COUNTY MAP OF SURVEY NO. 1508
MARCH - APRIL, 1999 SHEET 1 OF 5

Ferguson Surveying

REGISTERED
PROFESSIONAL
LAND-SURVEYOR

OREGON
JULY 12, 1988
DOUGLAS M. FERGUSON
848

RENEWAL DATE:
12/31/99



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FILED

JUN 17 1999

APPROVED BY: [Signature]
Notary Public for Oregon