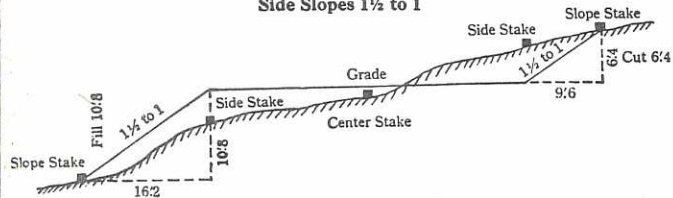


Book 1-77  
JOB No. 1-77-001  
to 1-77-005

Book 1-77 JOB No. 1-77-001 to 005

**DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING**  
 Roadway of any Width  
 Side Slopes 1½ to 1



In the figure above: Opposite 6 under "Cut or Fill" and under .4 read 9:6 the distance from the side stake to the slope stake at right. Opposite 10 under "Cut or Fill" and under .8 read 16:2, the distance from the side stake to the slope stake at the left.

Cut or Fill	Distance out from Side or Shoulder Stake										Cut or Fill
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

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ENGINEER

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This Field Book contains special paper which is impregnated with resin to make it substantially stronger as well as water resistant. Your field notes will come out sharp and clear even when the page is wet.

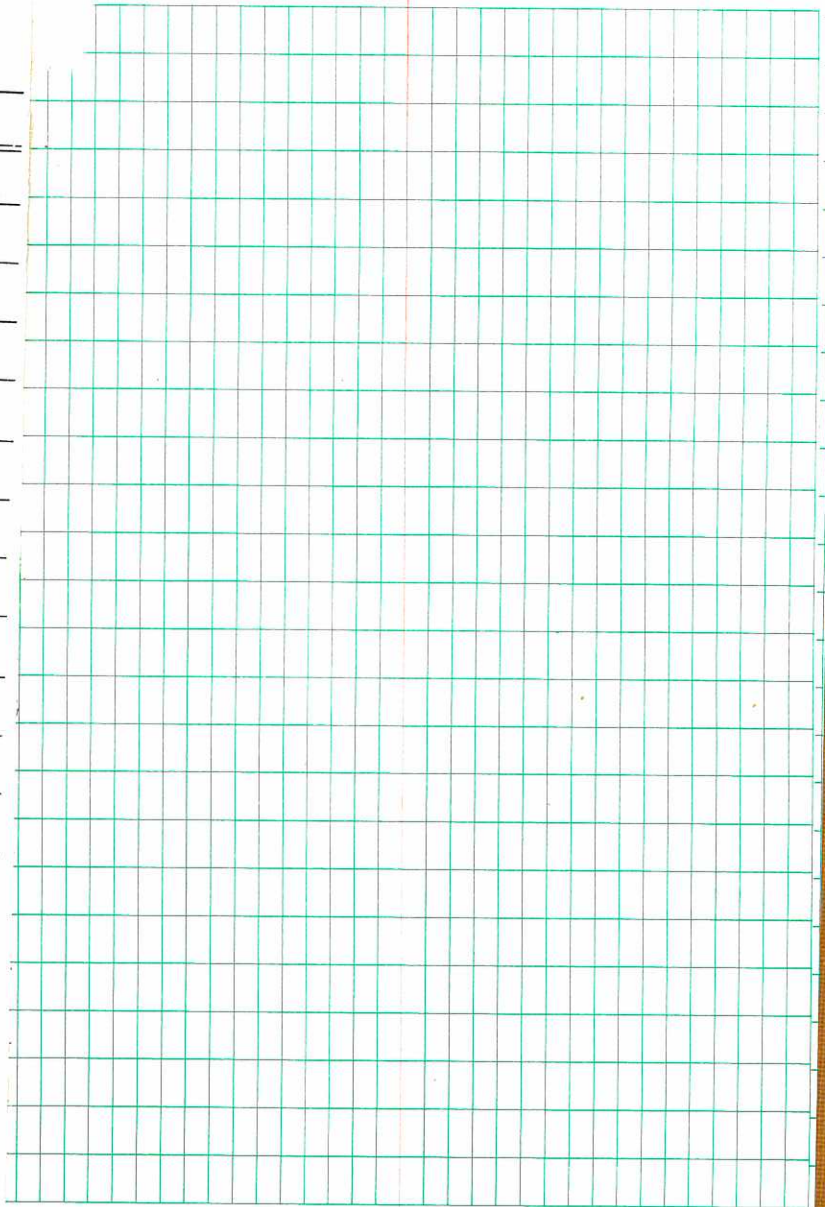
Made in U. S. A.

D

## INDEX PAGE

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	JOB NO.	PROJECT	PAGE NUMBER
	1-77-001	YOUNG WARD WATER LEVELS	3
Slope Sta	1-77-002	AMALGA ROAD SURVEY	
In the fig stake to t	1-77-003	HYRUM STAKE CNTR GUTTER	9
Out or Fill	1-77-004	SEC 13 TN: 10RLW @ $\frac{1}{4}$ COR. <small>PROPORTION OUT AT</small>	13
0	(OFF 1-77-005)	RICHMOND BRIDGE 4 <sup>TH</sup> WEST	15-20
1		SYSTEM	
2		OCT 78	
3			
4			
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YOUNG WARD ROAD PIPE (COX SURVEY)  
 13 JULY 77 JOB No. 1-77-001

SUNNY WARM (SEE BOOK 1-74 JOB 1-74-007)

HUDSON-NOTES COX PROPERTY SURVEY

WARD -  $\pi$

BOSHE -  $\phi$

COMMENCE UPSTREAM 75'

STA	+	HI	-	ELEV	
A	8.7			100.0	LEVEL WATER
B	8.		8.7	100.0	WATER LEVEL
C			8.7	100.0	WATER LEVEL
			9.1	99.6	BOTTOM LEVEL
D			8.7	100.0	LEVEL
			9.7	99.0	BOTTOM
E			8.7	100.0	LEVEL
			9.8	98.9	
UPPER END CULVERT TOP			5.8	102.9	
CULVERT BOTTOM			10.6	98.1	
BOTTOM NEAR CULV			10.7	98.2	
LOWER END TOP CULVERT			5.8	102.9	
LOWER END BOTTOM CULVERT			10.3	98.4	
IN FRONT			10.9	97.6	
F			9.7	99.0	LOWER CUL +25 LEVEL
			11.0	97.7	BOTTOM
G			9.7		+50 LEVEL
			10.0		BOTT

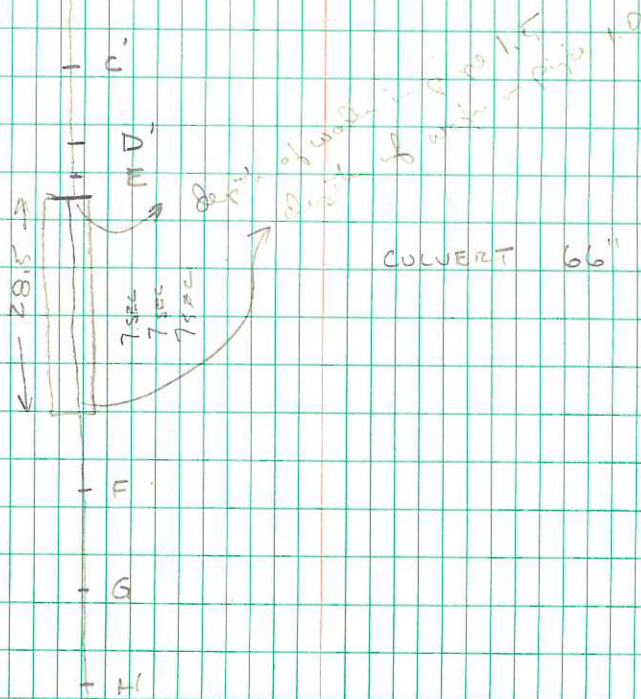
2

WATER VEL 75' UPSTREAM 1 FT/SEC



A 75' UPSTREAM

B 50' UPSTREAM



STA	+	HI	-	ELEV	
			9.8		LEVEL
H			10.2		75 CURB
			10.6		BOTT
I			9.8		
			10.1		
			3.6	105.1	ROAD SURFACE

SURVEY OF AMALGA ROAD, ~~FOOT~~ FACTORY ROAD  
CHEESE

20 JULY 77

HUDSON - NOTES

CLOUDY, WARM

WARD - K

JOB 1-77-002

BOSHE  $\phi$

STA	HORIZ $\angle$	VERT $\angle$	SLP DIST	HORIZ DIST
-----	----------------	---------------	----------	------------

D TO E	$\Delta \neq$ 75° 09' R	90° 07'	227.80	227.80
--------	----------------------------	---------	--------	--------

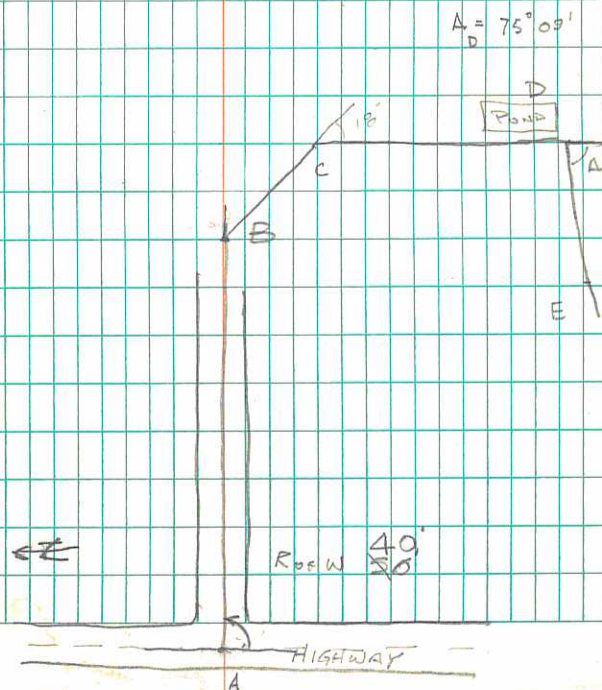
C TO D	18° 19' 30" R	90° 02'	668.06	668.06
--------	------------------	---------	--------	--------

B TO C	25° 05' 50" R	90° 05'	209.82	209.82
--------	------------------	---------	--------	--------

A TO B	89° 51' 40"	90° 05'	911.73	911.73
--------	-------------	---------	--------	--------

5

SET UP ON  $\phi$  OF HIGHWAY AT  $\phi$  OF  
AMALGA ROAD AND TURNED  $\angle$  FROM  $\phi$   
STRIP OF HIGHWAY.



STA TO STA	HORIZ $\angle$	VERT $\angle$	SLOPE DISTANCE	HORIZ DISTANCE
------------	----------------	---------------	----------------	----------------

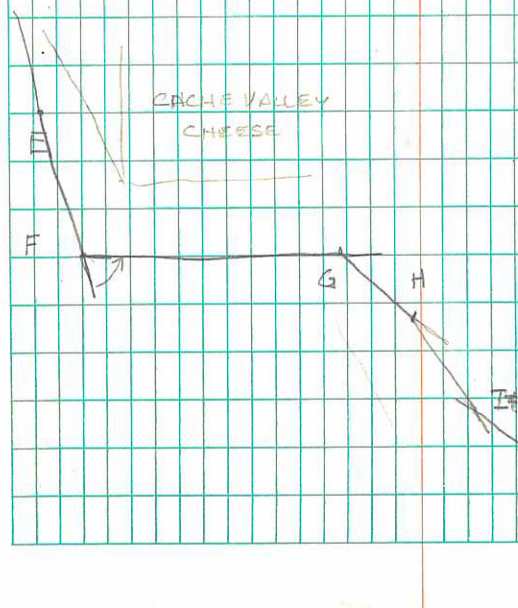
I TO J	A <sup>L</sup> 56°30'	90°02'30"	1597.30	1597.30
--------	-----------------------	-----------	---------	---------

H TO I	19°37'50" <sup>K</sup>	89°56'	185.33	185.33
--------	------------------------	--------	--------	--------

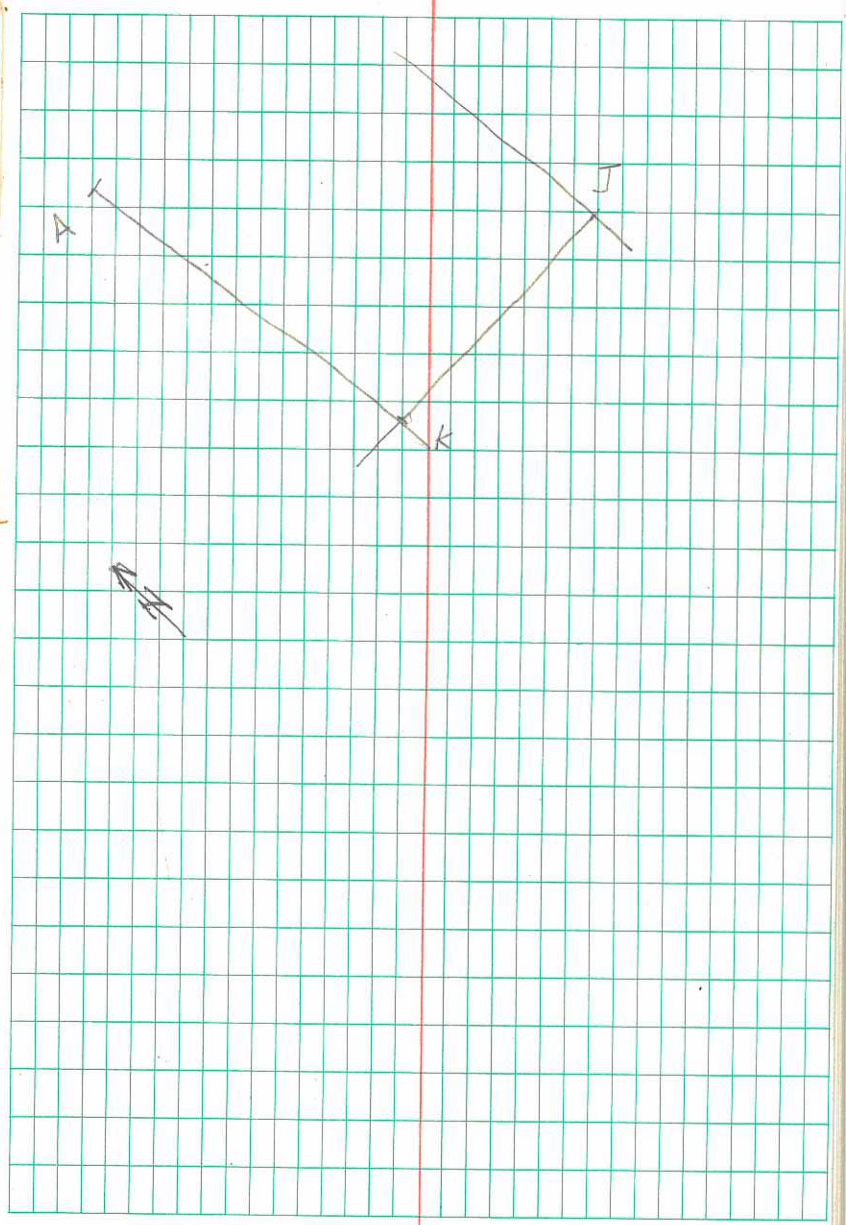
G TO H	34°03'50" <sup>K</sup>	89°37'	108.53	108.52
--------	------------------------	--------	--------	--------

F TO G	75°35'10" <sup>L</sup>	89°40'	394.69	394.58
--------	------------------------	--------	--------	--------

E TO F	0°	90°40'	89 <sup>x</sup> .12	89.11
--------	----	--------	---------------------	-------

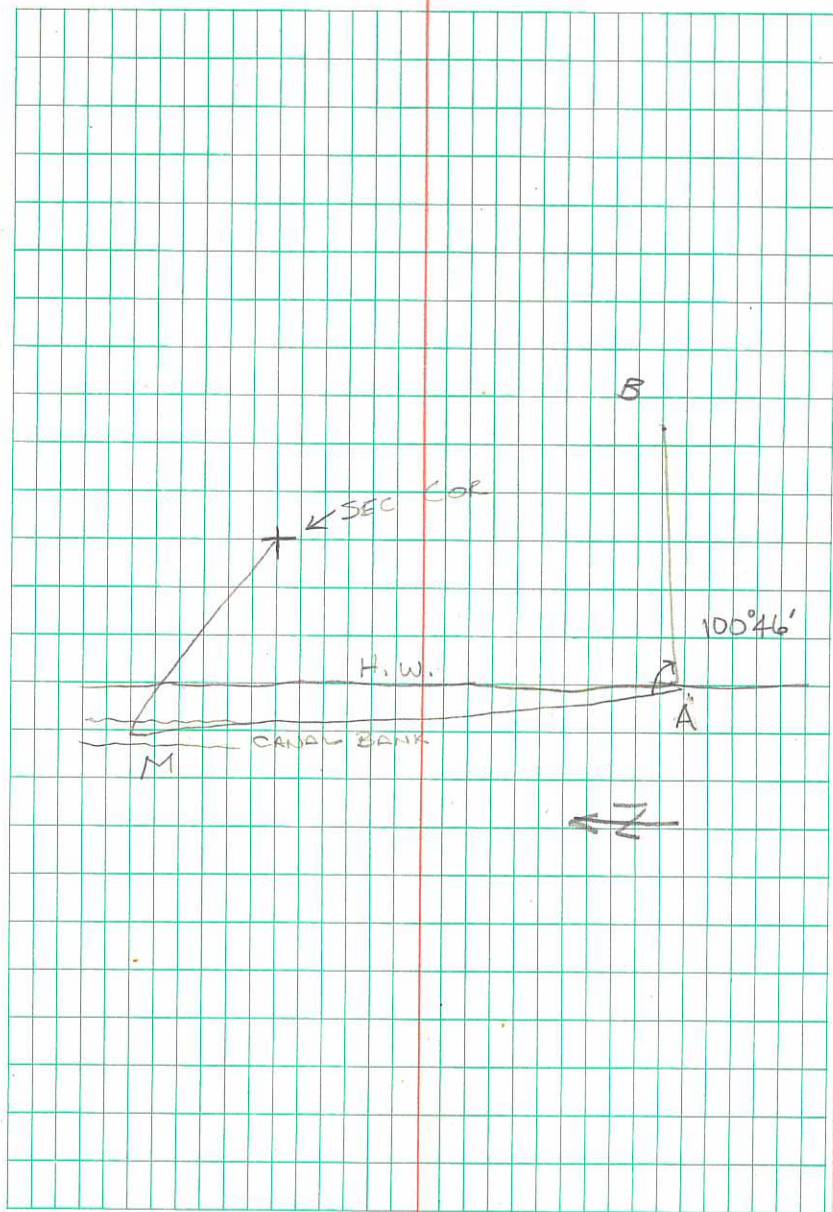


	HORIZ	VELT	SLOPE	HORIZ
	$\alpha$	$\alpha$	$\beta$	$\beta$
A <sup>R</sup> B	90	25.30		
K <sup>R</sup> A	64° 43'	90° 06'	2146.69	2146.69
<del>H</del>				
J <sup>R</sup> OK	114° 48'	90° 14'	1928.80	1928.80





STA TO STA	HORIZ X	VERT Y	Slope D	HORIZ D
	$44^{\circ}42'20''$	$91^{\circ}58'$	884.72	
M - SEC COR	$47^{\circ}9'$	$92^{\circ}07'30''$	864.10	884.20
A - M	$0^{\circ}$	$90^{\circ}$	<del>3688.24</del> <del>3444.96</del> 3694. =	3688.24
A - B	$100^{\circ}46'$			



# HYRUM STAKE HOUSE GUTTER LEVELS

27 JULY 77

WARM, SUNNY

HUDSON - NOTES

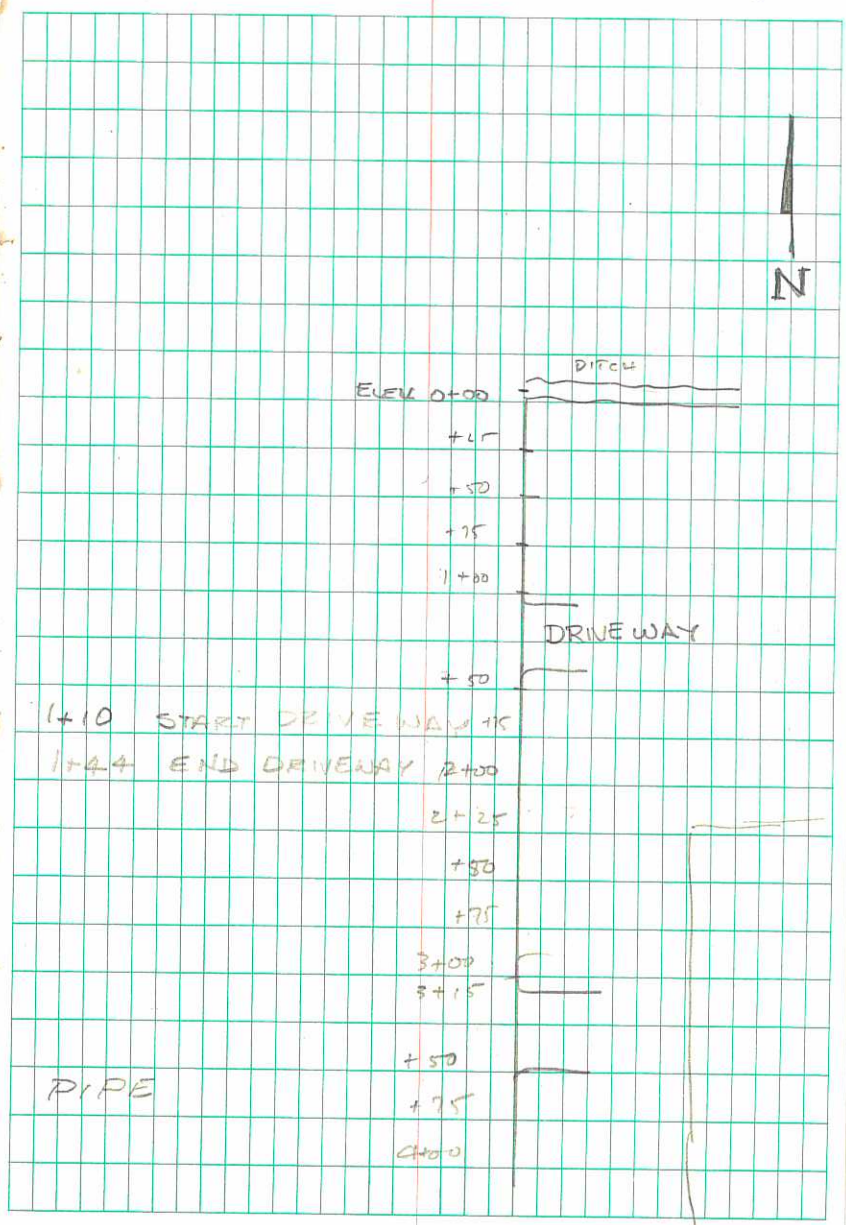
JOB 1-77-003

BOSHE  $\phi$

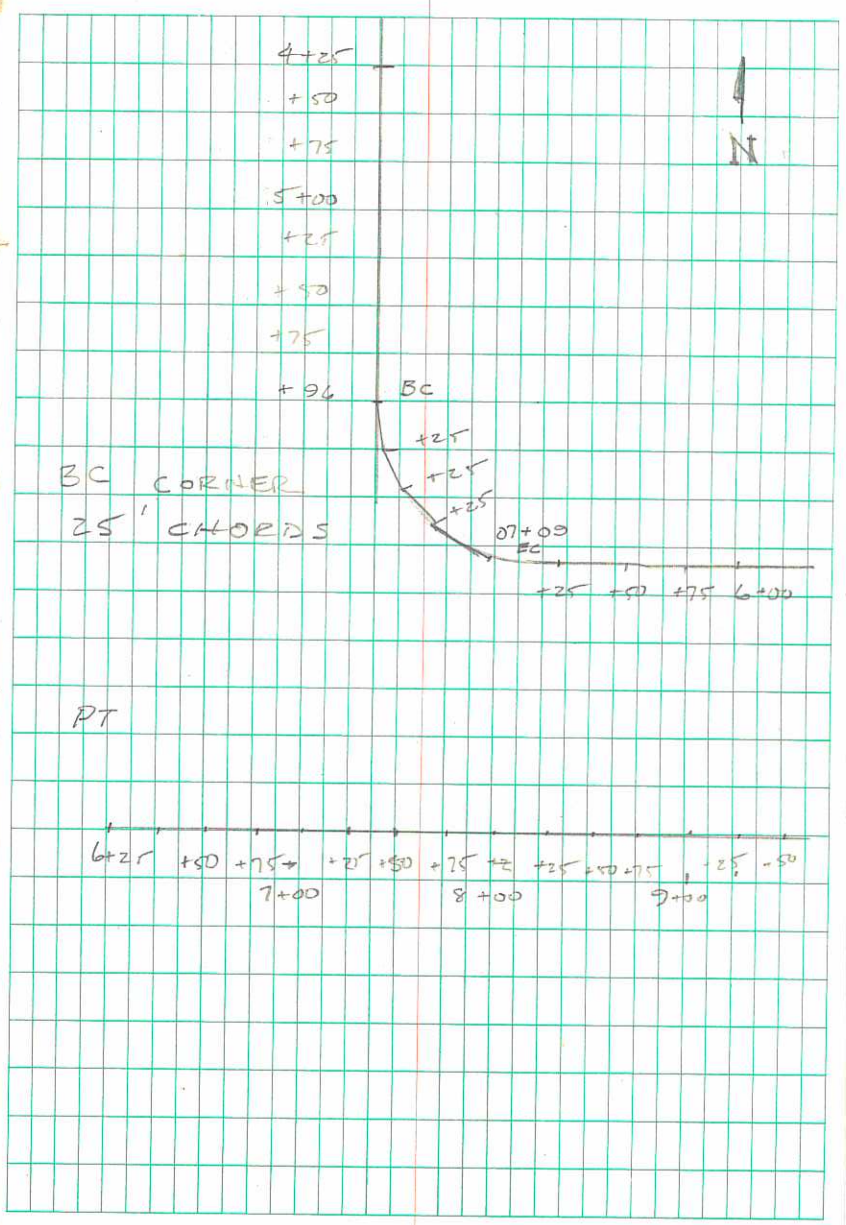
WARD -  $\pi$

DITCH  
START AT GULLY ON LOW END - NORTH  
END OF STREET

STA.	+	HI	-	ELEV
GULLY 0+00	11.21	11.21		0+00
0+00	9.98		9.98	1.23
0+25			9.79	1.42
0+50			9.62	1.59
0+75			9.34	1.87
1+00			9.05	2.16
1+25			8.80	2.41
1+50			8.44	2.77
1+75			8.10	3.11
2+00			7.76	3.45
2+25			7.45	3.76
+50			7.25	3.96
+75			6.98	4.23
3+00 TOP			6.77	4.44
+15.5			6.24	4.97
BOTT			6.64	4.57
END PIPE +50 BOTTOM			6.48	4.73

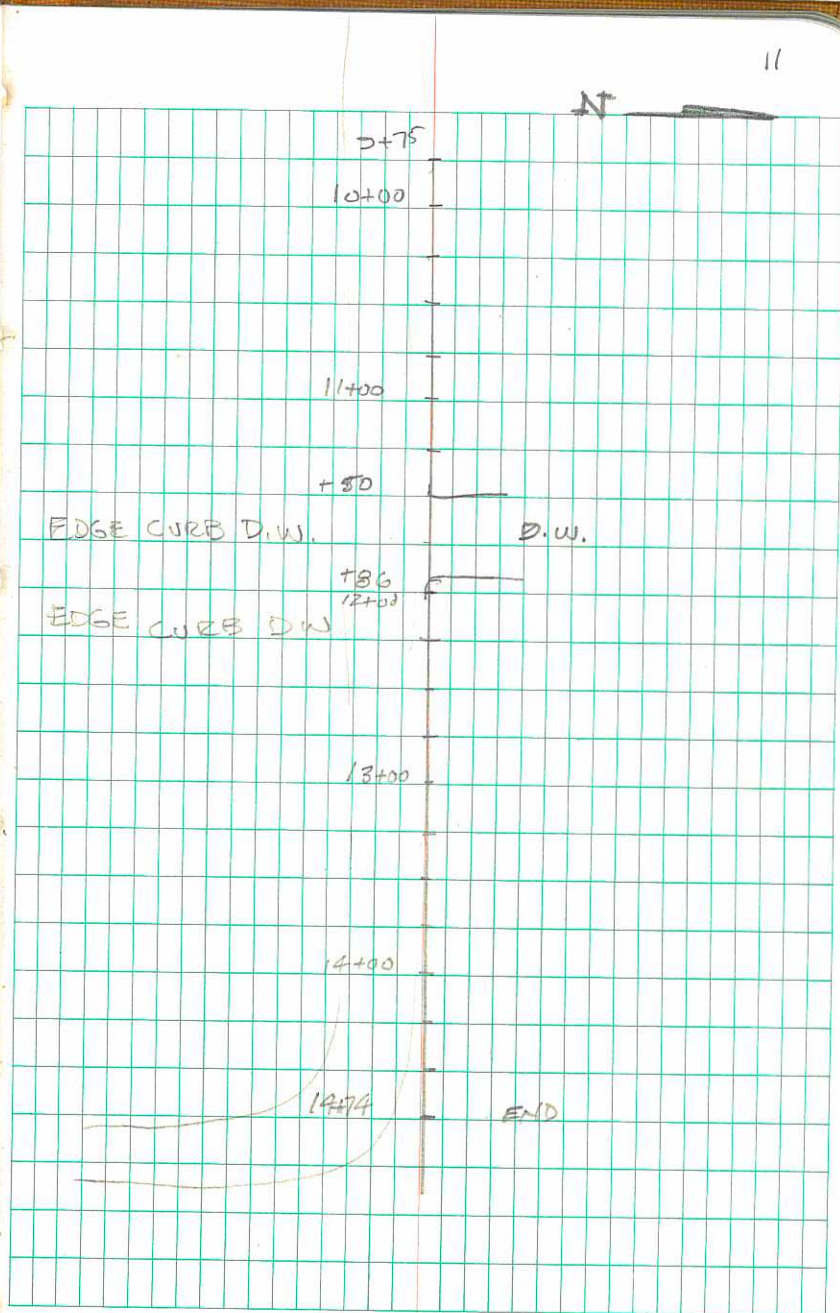


STA	+	HI	-	ELEV	
+75			6.40	4.81	
4+00			6.25	4.96	
+25			6.20	5.01	
+50			6.01	5.20	
+75			5.97	5.24	
5+00			5.86	5.35	
+25			5.78 <sup>3</sup>	5.48	
+50			5.59	5.62	
+75			5.48	5.73	
+96			5.38	5.83	
6+00	8.00	13.86	5.35	5.86	TP
6+25			7.88	5.98	
+50			7.78	6.08	
+75			7.67	6.19	
7+00			7.54	6.32	
+25			7.53	6.33	
+50			7.37	6.49	
+75			7.25 <sup>4</sup>	6.62	
8+00			7.10	6.76	
+25			6.93	6.93	
+50			6.73	7.13	
+75			6.64	7.22	
9+00			6.51	7.35	
9+25			6.40	7.46	
+50			6.33	7.53	



	+	HI	-	ELEV
9+75			6.16	7.70
+82				
10+00			6.12	7.74
+25			6.04	7.82
+50			5.96	7.90
+75			5.93	7.93
11+00			5.82	8.04
+25			5.73	8.13
+50			5.60	8.26
+75			5.58	8.28
+86				
12+00			5.45	8.41
+25			5.35	8.51
+50			5.25	8.61
+75			5.18	8.68
13+00			5.15	8.71
+25			5.04	8.82
+50			4.98	<del>8.88</del> 8.88
+705			4.85	9.01
14+00			4.82	9.04
+25			4.75	9.11
+50			4.70	9.16
+74			4.70	9.16

Abandon



SECTION 13 TNS. 10 R1W North 1/4 CORNER

1 AUG 77

SUNNY WARM

PPM=43

HUDSON - NOTES

JOB No 1-77-004

WARD - K

BOSHE - b

SET ON SEC CORNER OF SECTIONS  $\frac{12}{13} \frac{7}{18}$

RAN DUE WEST ON SECTION LINE TO NEXT

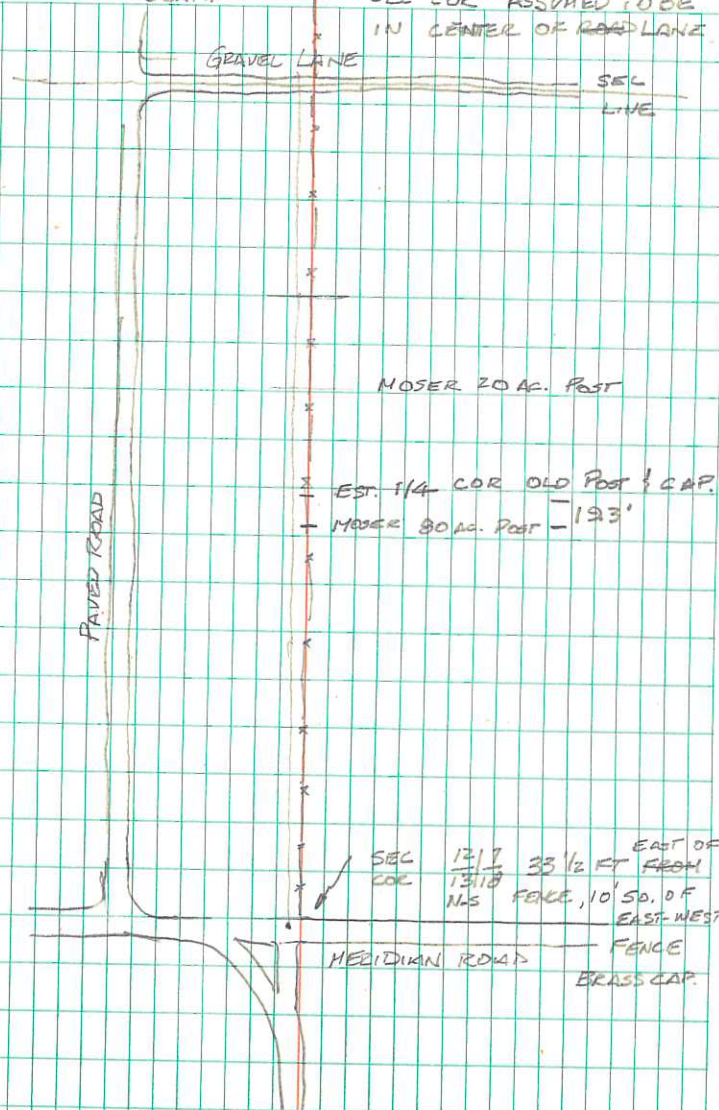
SECTION CORNER THEN RAN BACK 1/2 DISTANCE.

STATION	HORIZ $\angle$	VERT $\angle$	SLOPE DISTANCE	VERT. DIST.	
SEC COR $\frac{12}{13} \frac{7}{18}$	0°	90°	1658.75	1658.75	1658.75
MOSER'S 30 AC. POST	0°	90° 33'	980.41	980.36	2639.11
ESTABLISHED 1/4 CORNER	0°	90° 33'	999.73	999.71	2658.46
MOSER 20 AC. 1/2 R. POST	0°	90° 35'	1657.12	1657.03	3315.78
FENCE LINE INTERSECTION	0°	92° 48'	673.09	672.29	
SEC COR E OR LANE	0°	92° 17'	2001.13	1999.54	

TOTAL DISTANCE BETWEEN SEC. CORNERS 5330.29

USGS - MT PISGAH.

SEC COR ASSUMED TO BE  
IN CENTER OF ROAD LANE

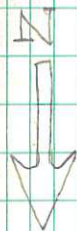


MR. STORKEY SAID EST. 1/4 CORNER HAS BEEN  
USED FOR 30 YEARS AS 1/4 COR.

RICHMOND CULVERT JOB  
OFF-SYSTEMS 4<sup>TH</sup> WEST

OCT 5, 1978

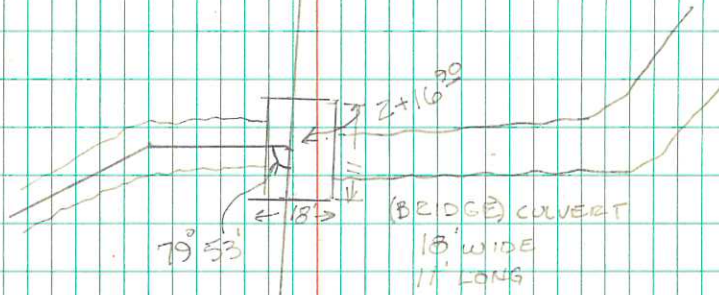
JOB 1-77-005



79° 53' 27" 20 15

0+00

0° 23' 20" R  
ROAD 22.5' WIDE



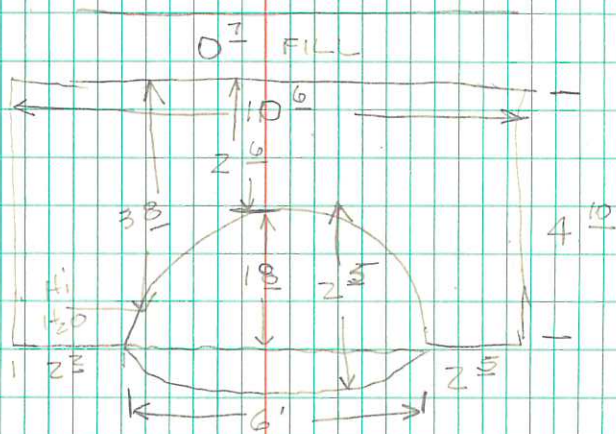
79° 53'

(BRIDGE) CULVERT  
18' WIDE  
11' LONG

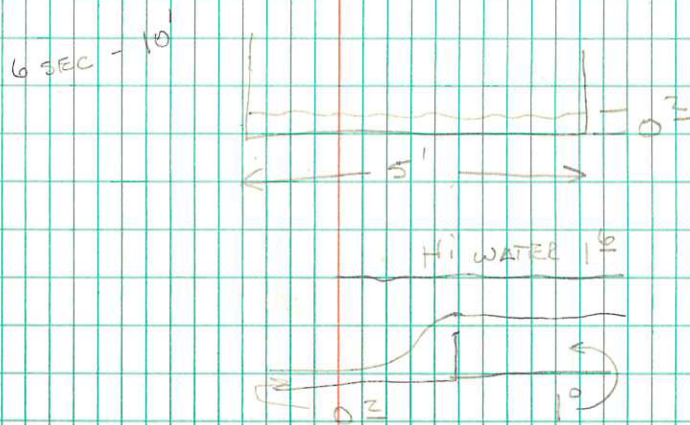
4.25

0° 52' 00" L  
ROAD 22' WIDE

UPSTREAM SIDE



FLOW - WATER UPSTREAM



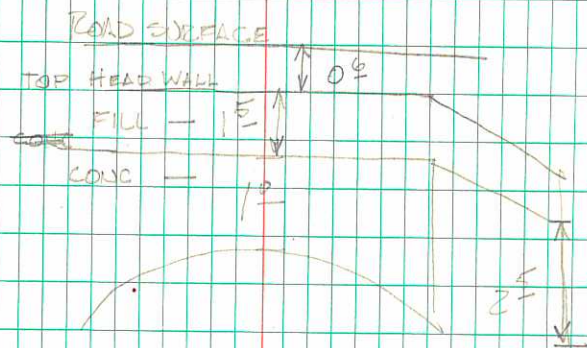
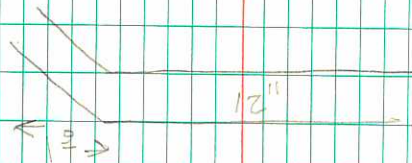
CROSS SECTIONS

	FS	HI	B.S.	ELEV
2+00	4 <sup>2</sup>			
1+50	5 <sup>2</sup>			
1+00	5 <sup>1</sup>			
0+50	5 <sup>4</sup>			
0+00	5 <sup>2</sup>	106 <sup>30</sup>		
BM		106 <sup>30</sup>	6 <sup>30</sup>	100 <sup>2</sup>
B.M IS R.R. SPIKE IN TELEPHONE POLE				

	99.9	97.9	101.2	101.4	101.6	99.6	100.2	17
	6 <sup>1</sup> <sub>4</sub>	8 <sup>4</sup>	5 <sup>1</sup>	4 <sup>10</sup>	4 <sup>1</sup>	6 <sup>1</sup>	6 <sup>1</sup>	
	25 <sup>30</sup>	18 <sup>4</sup>	11 <sup>10</sup>		7 <sup>10</sup>	14 <sup>5</sup>	29 <sup>9</sup>	
		10 <sup>0</sup> OF	SHLD		SHLDR			
	99.3	99.2	100.3	101.3	101.0	100.2	100.7	
	7 <sup>10</sup>	6 <sup>1</sup> <sub>4</sub>	5 <sup>4</sup>	5 <sup>1</sup> <sub>10</sub>	5 <sup>2</sup>	6 <sup>1</sup>	5 <sup>15</sup>	
	31 <sup>2</sup>	10 <sup>10</sup>	10 <sup>10</sup>		8 <sup>8</sup>	18 <sup>10</sup>	28	
	GENERAL		SHLD		SHLDR	DITCH	LINE	
	99.0	99.2	100.3	101.2	101.0		101.2	
	7 <sup>1</sup>	7 <sup>1</sup>	5 <sup>1</sup> <sub>10</sub>	5 <sup>1</sup>	5 <sup>1</sup> <sub>10</sub>		5 <sup>1</sup>	
	30 <sup>10</sup>	18 <sup>10</sup>	11 <sup>10</sup>		11 <sup>10</sup>		29	
	LINE	DITCH	SHLD		SHLDR		LINE	
	98.9	98.7	100.4	100.9	100.8	99.9	100.6	
	7 <sup>4</sup>	7 <sup>6</sup>	5 <sup>15</sup>	5 <sup>1</sup> <sub>10</sub>	5 <sup>1</sup> <sub>10</sub>	6 <sup>4</sup>	5 <sup>1</sup> <sub>10</sub>	
	29 <sup>10</sup>	18 <sup>10</sup>	8 <sup>10</sup>		11 <sup>10</sup>	21 <sup>10</sup>	28 <sup>10</sup>	
	LINE	D	SHLDR		SHLD	DITCH	FENCE	
	98.5	98.5	100.2	100.6	100.2	98.6	99.2	
	7 <sup>10</sup>	7 <sup>10</sup>	6 <sup>1</sup>	5 <sup>1</sup> <sub>10</sub>	6 <sup>1</sup>	7 <sup>10</sup>	7 <sup>1</sup>	
	29	16 <sup>1</sup>	11 <sup>10</sup>		10 <sup>10</sup>	18 <sup>10</sup>	29	
	SHLD	DITCH	SHLD		E.F.O.L	DITCH	FENCE	
	LINE							
	FENCE							







Bu <sup>#</sup> 8	1.49	4682.35		4680.86
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TP	2.76	4674.17	10.94	4671.41
----	------	---------	-------	---------

+50			5 <sup>0</sup>	4669.17
-----	--	--	----------------	---------

+1+00			7 <sup>8</sup>	4666.57
-------	--	--	----------------	---------

+25			13 <sup>2</sup>	4660.87
-----	--	--	-----------------	---------

+60			14 <sup>2</sup>	4659.47
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2+00			15 <sup>5</sup>	4658.67
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TOP CURV			7 <sup>9</sup>	4666.27
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