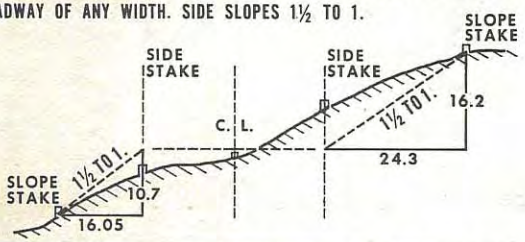
CR 351(2) A LINE

CR 351(2)
A LINE

# DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

ROADWAY OF ANY WIDTH. SIDE SLOPES 1½ TO 1.




| 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 00 | 0 15 | 0.30 | 0.45 | 0.60 | 0.75 | 0.90 | 1.05 | 1.20 | 1.35 | 0 |
| 1 | 1.50 | 1 65 | 1 80 | 1.95 | 2.10 | 2.25 | 2.40 | 2.55 | 2.70 | 2.85 | 1 |
| 2 | 3.00 | 3.15 | 3.30 | 3 45 | 3.60 | 3 75 | 3.90 | 4.05 | 4.20 | 4 35 | 2 |
| 3 | 4.50 | 4 65 | 4.80 | 4.95 | 5.10 | 5 25 | 5 40 | 5.55 | 5.70 | 5.85 | 3 |
| 4 | 6.00 | 6 15 | 6.30 | 6.45 | 6.60 | 6.75 | 6.90 | 7.05 | 7.20 | 7.35 | 4 |
| 5 | 7 50 | 7.65 | 7.80 | 7.95 | 8.10 | 8.25 | 8.40 | 8.55 | 8.70 | 8.85 | 5 |
| 6 | 9 00 | 9 15 | 9.30 | 9.45 | 9.60 | 9.75 | 9.90 | 10.05 | 10.20 | 10.35 | 6 |
| 7 | 10.50 | 10 65 | 10.80 | 10.95 | 11.10 | 11.25 | 11.40 | 11.55 | 11 70 | 11.85 | 7 |
| 8 | 12.00 | 12 15 | 12.30 | 12.45 | 12.60 | 12.75 | 12.90 | 13.05 | 13.20 | 13.35 | 8 |
| 9 | 13 50 | 13.65 | 18 80 | 13 95 | 14.10 | 14.25 | 14.40 | 14 55 | 14.70 | 14.85 | 9 |
| 10 | 15.00 | 15 15 | 15 30 | 15 45 | 15.60 | 15.75 | 15.90 | 16.05 | 16.20 | 16 35 | 10 |
| 11 | 16 50 | 16 65 | 16 80 | 16.95 | 17 10 | 17.25 | 17.40 | 17.55 | 17.70 | 17.85 | 11 |
| 12 | 18 00 | 18.15 | 18.30 | 18 45 | 18.60 | 18 75 | 18.90 | 19.05 | 19.20 | 19 35 | 12 |
| 13 | 19 50 | 19 65 | 19.80 | 19.95 | 20.10 | 20.25 | 20 40 | 20.55 | 20.70 | 20.85 | 13 |
| 14 | 21.00 | 21 15 | 21.30 | 21.45 | 21 60 | 21.75 | 21.90 | 22 05 | 22 20 | 22 35 | 14 |
| 15 | 22 50 | 22 65 | 22 80 | 22 95 | 23.10 | 23.25 | 23.40 | 23.55 | 23.70 | 23.85 | 15 |
| 16 | 24.00 | 24 15 | 24 30 | 24 45 | 24.60 | 24.75 | 24 90 | 25 05 | 25.20 | 25.35 | 16 |
| 17 | 25.50 | 25 65 | 25.80 | 25 95 | 26.10 | 26 25 | 26 40 | 26.55 | 26.70 | 26.85 | 17 |
| 18 | 27.00 | 27 15 | 27.30 | 27 45 | 27.60 | 27.75 | 27.90 | 28.05 | 28 20 | 28.35 | 18 |
| 19 | 28 50 | 28 65 | 28 80 | 28.95 | 29.10 | 29.25 | 29.40 | 29.55 | 29.70 | 29.85 | 19 |
| 20 | 30 00 | 30 15 | 30.30 | 30.45 | 30.60 | 30.75 | 30.90 | 31.05 | 31.20 | 31.35 | 20 |
| 21 | 31 50 | 31 65 | 31.80 | 31.95 | 32 10 | 32 25 | 32.40 | 32.55 | 32 70 | 32 85 | 21 |
| 22 | 33 00 | 33 15 | 33 30 | 33 45 | 33.60 | 33 75 | 33.90 | 34.05 | 34.20 | 34.35 | 22 |
| 23 | 34 50 | 34 65 | 34.80 | 34.95 | 35.10 | 35 25 | 35 40 | 35.55 | 35.70 | 35 85 | 23 |
| 24 | 36.00 | 36 15 | 36.30 | 36 45 | 36.60 | 36.75 | 36.90 | 37.05 | 37.20 | 37.35 | 24 |
| 25 | 37.50 | 37.65 | 37 80 | 37.95 | 38.10 | 38.25 | 38.40 | 38.55 | 38.70 | 38.85 | 25 |
| 26 | 39 00 | 39 15 | 39.30 | 39 45 | 39 60 | 39.75 | 39.90 | 40.05 | 40.20 | 40.35 | 26 |
| 27 | 40 50 | 40 65 | 40 80 | 40.95 | 41.10 | 41.25 | 41 40 | 41.55 | 41.70 | 41.85 | 27 |
| 28 | 42 00 | 42 15 | 42.30 | 42.45 | 42.60 | 42 75 | 42.90 | 43.05 | 43.20 | 43.35 | 28 |
| 29 | 43 50 | 43 65 | 43.80 | 43 95 | 44.10 | 44 25 | 44 40 | 44.55 | 44.70 | 44 85 | 29 |
| 30 | 45 00 | 45 15 | 45.30 | 45 45 | 45.60 | 45.75 | 45.90 | 46.05 | 46 20 | 46.35 | 30 |
| 31 | 46.50 | 46.65 | 46.80 | 46 95 | 47.10 | 47.25 | 47.40 | 47.55 | 47.70 | 47.85 | 31 |
| 32 | 48 00 | 48.15 | 48.30 | 48 45 | 48.60 | 48 75 | 48.90 | 49.05 | 49 20 | 49.35 | 32 |
| 33 | 49.50 | 49 65 | 49.80 | 49.95 | 50.10 | 50.25 | 50.40 | 50.55 | 50.70 | 50.85 | 33 |
| 34 | 51 00 | 51.15 | 51.30 | 51.45 | 51.60 | 51.75 | 51.90 | 52.05 | 52.20 | 52.35 | 34 |
| 35 | 52 50 | 52.65 | 52.80 | 52.95 | 53.10 | 53.25 | 53.40 | 53.55 | 53.70 | 53.85 | 35 |
| 36 | 54 00 | 54.15 | 54.30 | 54 45 | 54.60 | 54.75 | 54.90 | 55.05 | 55.20 | 55.35 | 36 |
| 37 | 55 50 | 55 65 | 55.80 | 55.95 | 56.10 | 56.25 | 56.40 | 56.55 | 56.70 | 56.85 | 37 |
| 38 | 57.00 | 57.15 | 57.30 | 57 45 | 57.60 | 57.75 | 57.90 | 58.05 | 58.20 | 58 35 | 38 |
| 39 | 58 50 | 58.65 | 58 80 | 58.95 | 59.10 | 59 25 | 59.40 | 59 55 | 59.70 | 59.85 | 39 |
| 40 | 60 00 | 60.15 | 60 30 | 60 45 | 60 60 | 60.75 | 60 90 | 61.05 | 61 20 | 61.35 | 40 |

4680 92

Property of Cache County Engineering Dept.

Address _____

_____

Telephone _____

This Book is manufactured of a High Grade 50% Rag Paper having a Water Resisting Surface, and is sewed with Nylon Waterproof Thread.

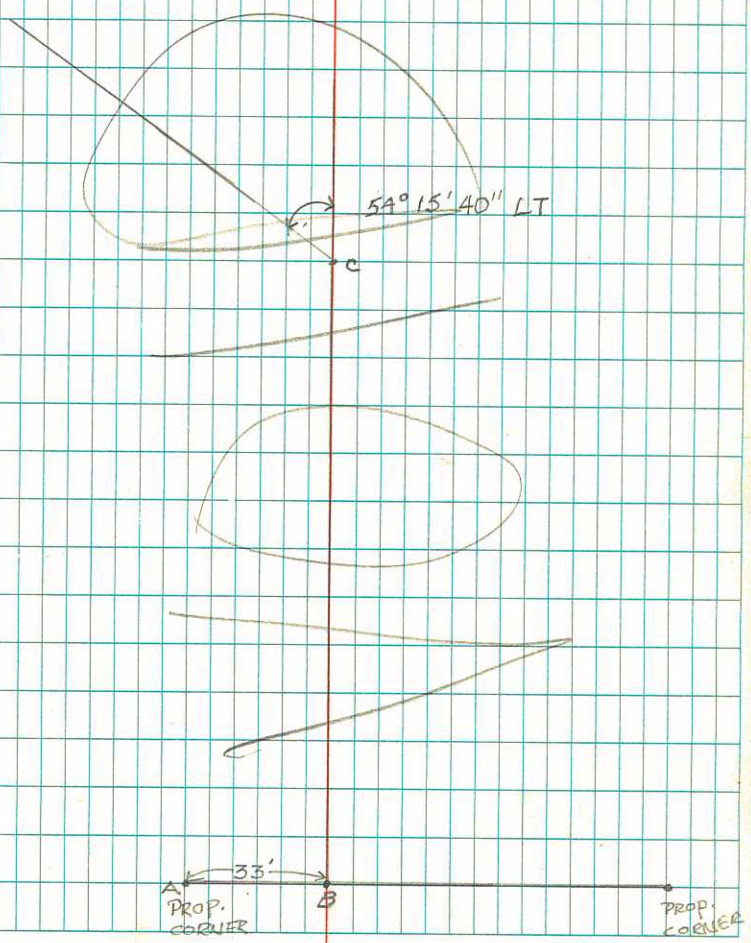
# INDEX


| | |
|---|---|
| A-LINE | 7-11 |
| LOCATED LINE | 15-21 |
| BM LEVELS | 25-27 |
| CROSS-SECTIONS OF LOCATED LINE | 31-91 |

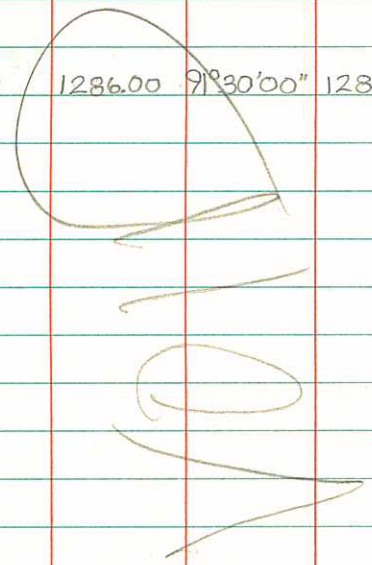
| | SLP. DIST. | VERT ∠ | HOR. DIST | |
|---|---|---|---|---|
| B- C | 284.46 | 91°37'30" | 284.35 | |
| A-B | 33.01 | 88°57'00" | 33.00' | |

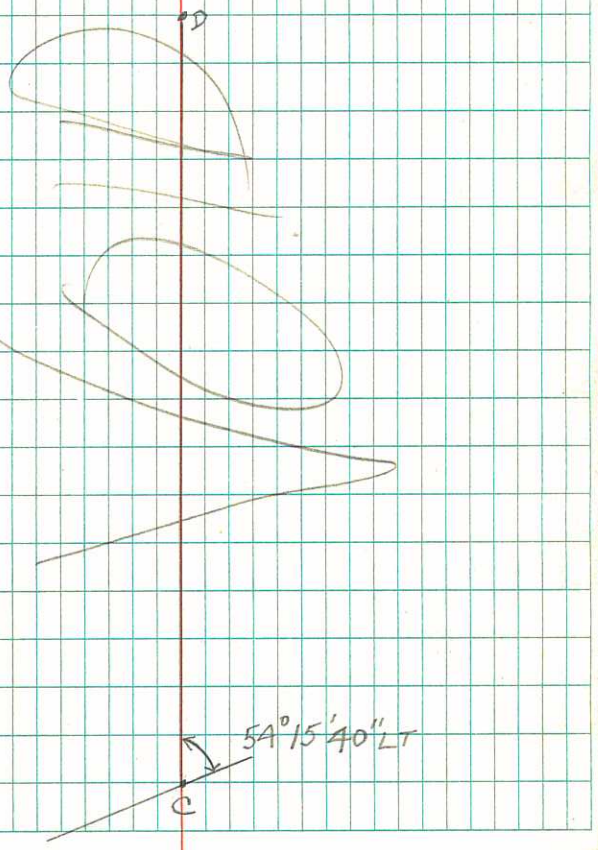
ALIGNMENT Á LINE 11-17-76

WARD FAIR COOL



| | SLP. DIST. | VERT. ∠ | HOR. DIST. |
|---|---|---|---|
| C - D | 1286.00 | 91°30'00" | 1285.56 |





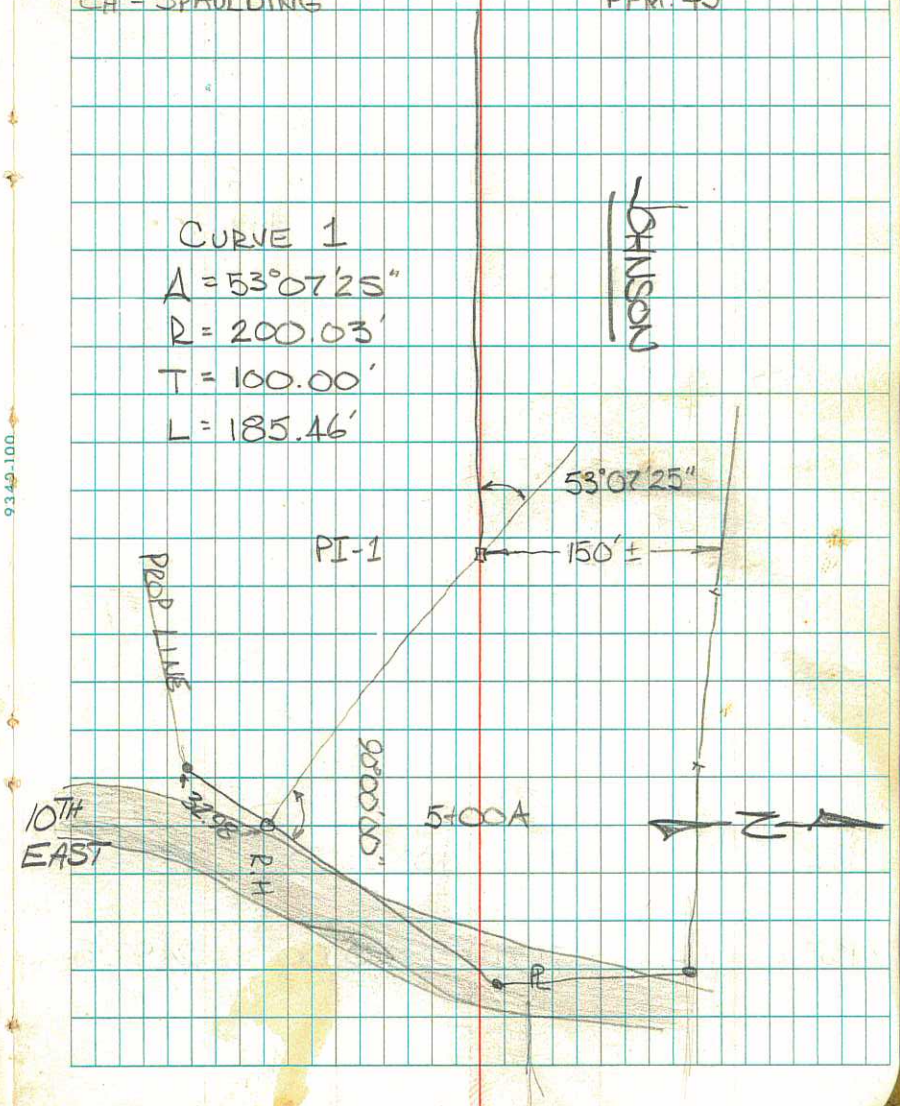
# A - LINE

T & NOTES - WILLIAMS
Φ - WARD
CH - SPAULDING

11/17/76
COOL, CLEAR
PPM: 45

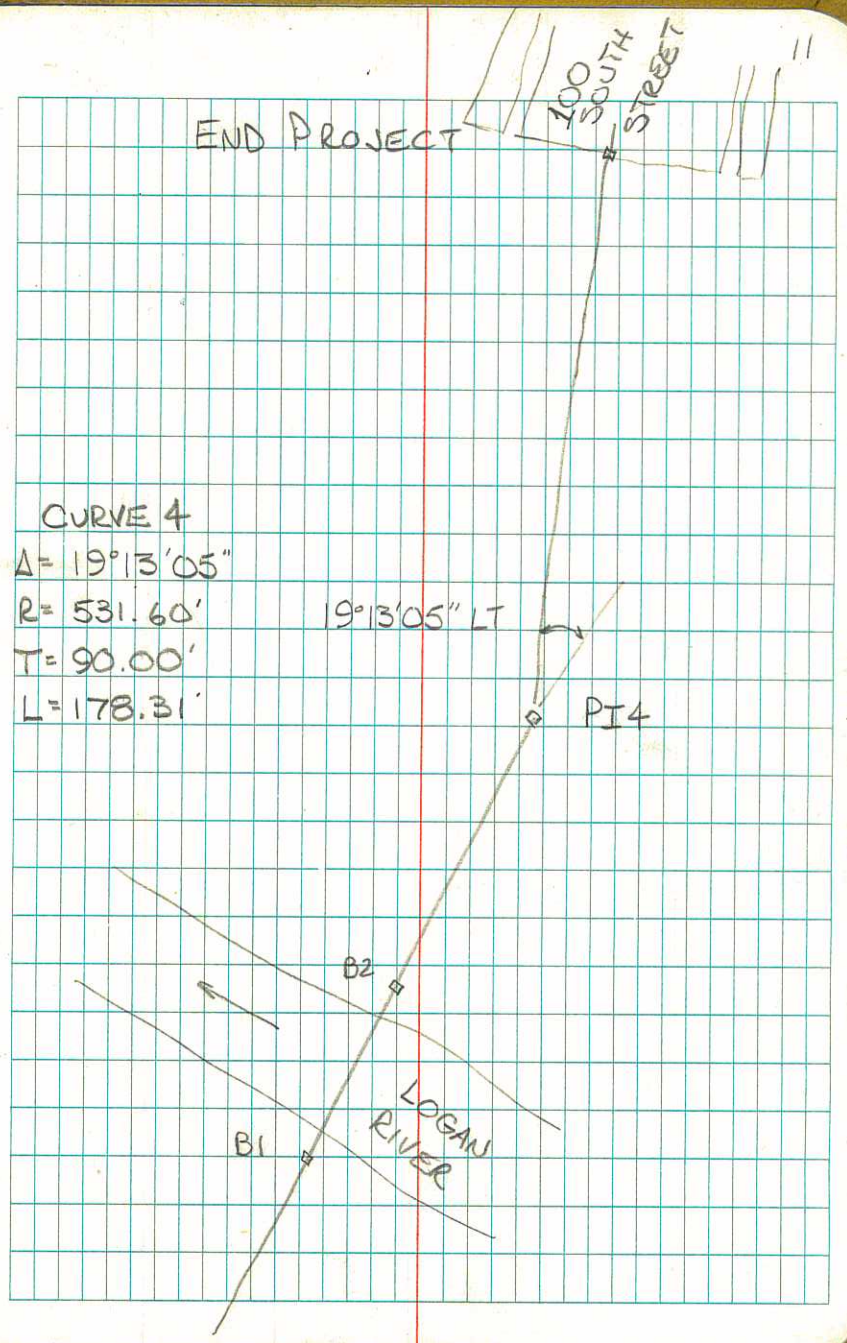
| STA | to STA | SLP DIST | VERT Δ | | HOR DIST |
|---|---|---|---|---|---|
| | | | 32.95 | | |
| PI1 | POT 1 | 1268.96 | 90° 57' | 50" | 1268.78 |
| 5+00 A | PI-1 | 291.86 | 91° 51' | 30" | 291.71 |

CURVE 1
Δ = 53°07'25"
R = 200.03'
T = 100.00'
L = 185.46'



| STA | TO STA | SLP DIST | VERT Δ | HOR DIST |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

| STA | to STA | SLP DIST | VERT Δ | HOR DIST |
|---|---|---|---|---|
| PI4 | E. Proj. | 547.57 | 90°47'00" | 547.52' |
| B2 | PI4 | | | 99.40' |
| B1 | B2 | | | 55.19' |
| PI3 | B1 | 157.10 | 92°27'00" | 156.96' |

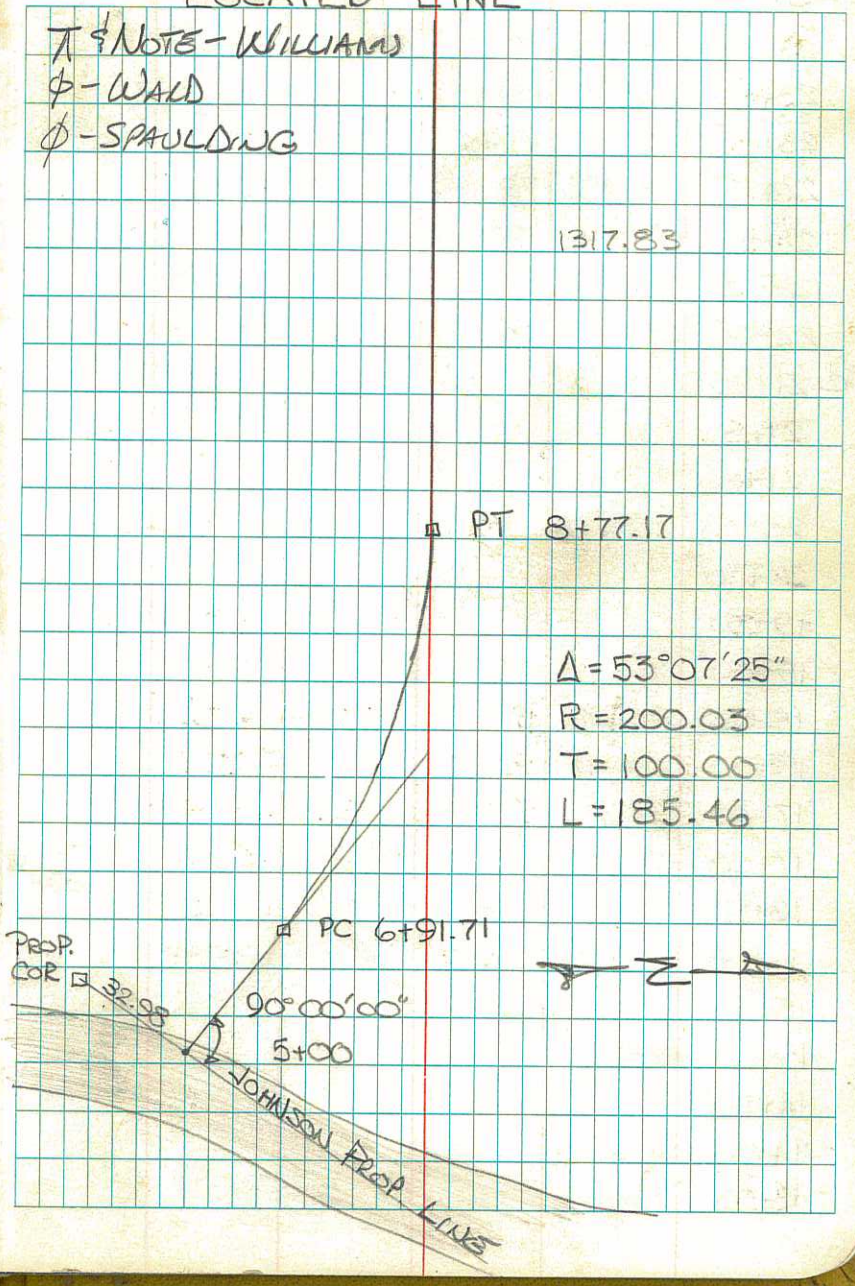


| STA | Δ/2 | LC' | PI DIST. | Θ |
|---|---|---|---|---|
| | | | | |
| 13+00 | | | | |
| 12+50 | | | | |
| 12+00 | | | | |
| 11+50 | | | | |
| 11+00 | | | | |
| 10+50 | | | | |
| 10+00 | | | | |
| 9+50 | | | | |
| 9+00 | | | | |
| | | | | |
| 8+77.17 | 26°33'41" PT | 178.89' | 100.00 | 126°52'35" |
| 8+50 | 22°40'13" | 154.19 | 72.93' | 125°25'43" |
| 8+25 | 19°05'23" | 130.84 | 48.89' | 118°55'18" |
| 8+00 | 15°30'38" | 106.97' | 28.77' | 96°08'26" |
| 7+75 | 11°55'43" | 82.69' | 25.63' | 41°49'46" |
| 7+50 | 8°20'54" | 58.08' | 43.36' | 11°12'55" |
| 7+25 | 4°46'04" | 33.25' | 66.92' | 2°22'01" |
| 7+00 | 1°11'14" | 8.29' | 91.71' | 0°06'26" |
| 6+91.71 | PC 0°00'00" | 00.00' | 100.00' | 0°00'00" |
| | | | | |
| 6+50 | | | | |
| 6+00 | | | | |
| 5+50 | | | | |
| 5+00 | | | | |

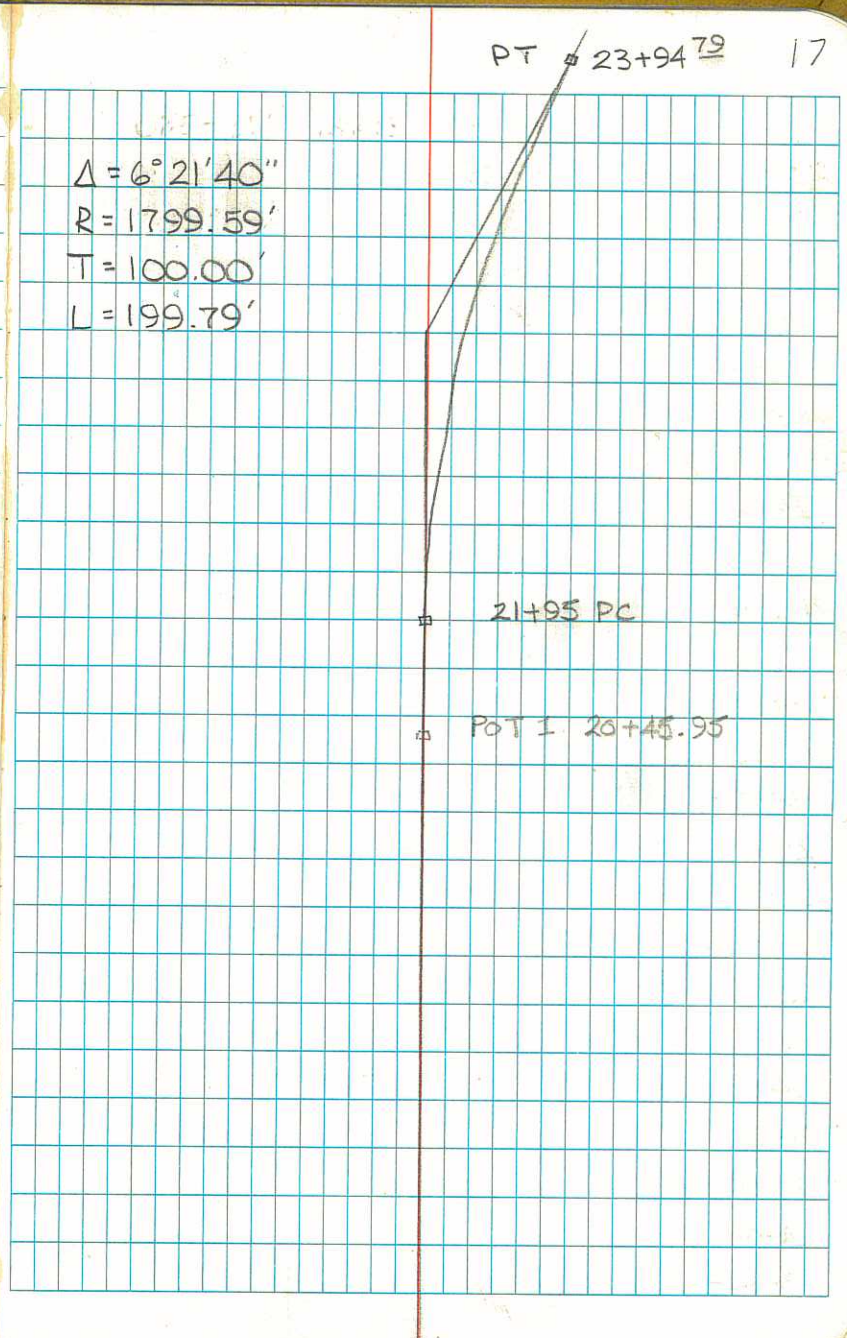


# LOCATED LINE

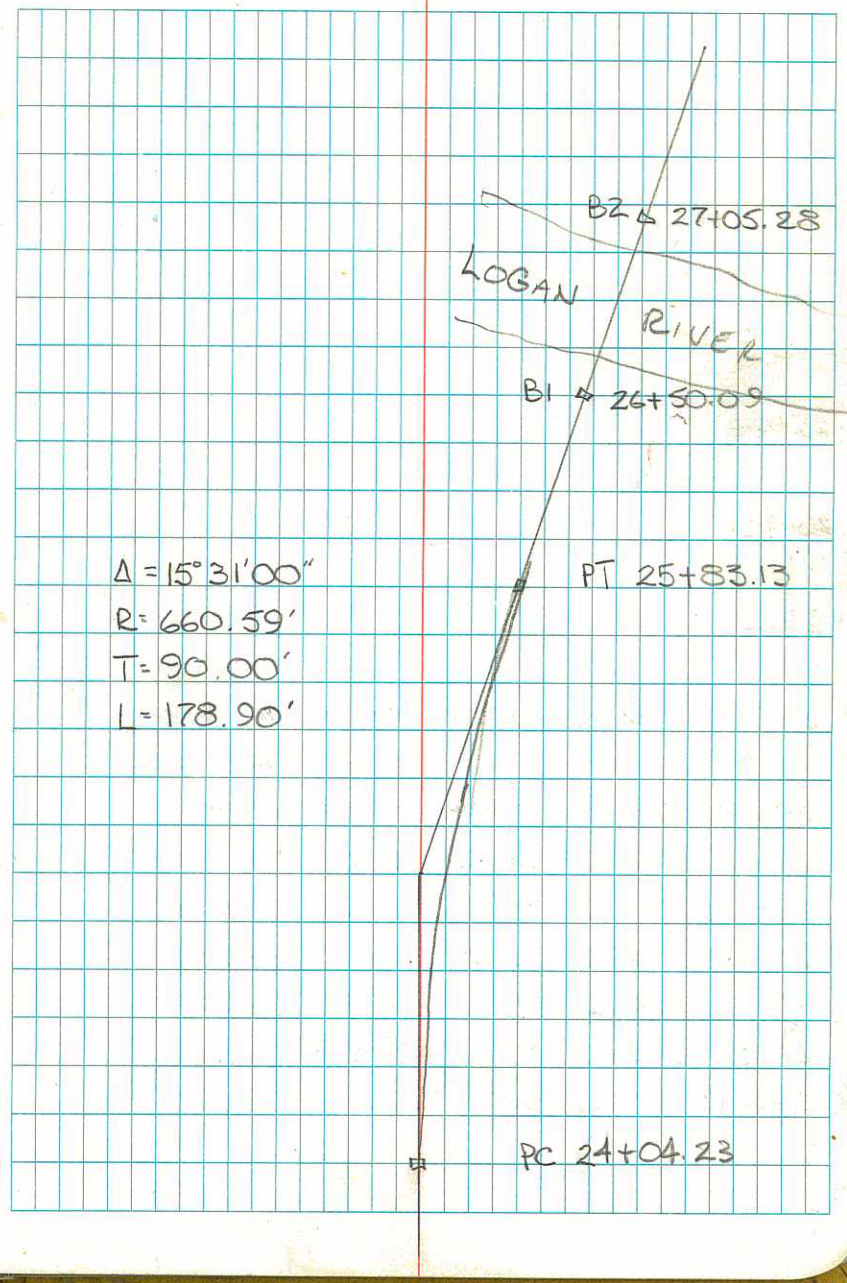
℄ NOTE - WILLIAMS
℄ - WALD
℄ - SPAULDING



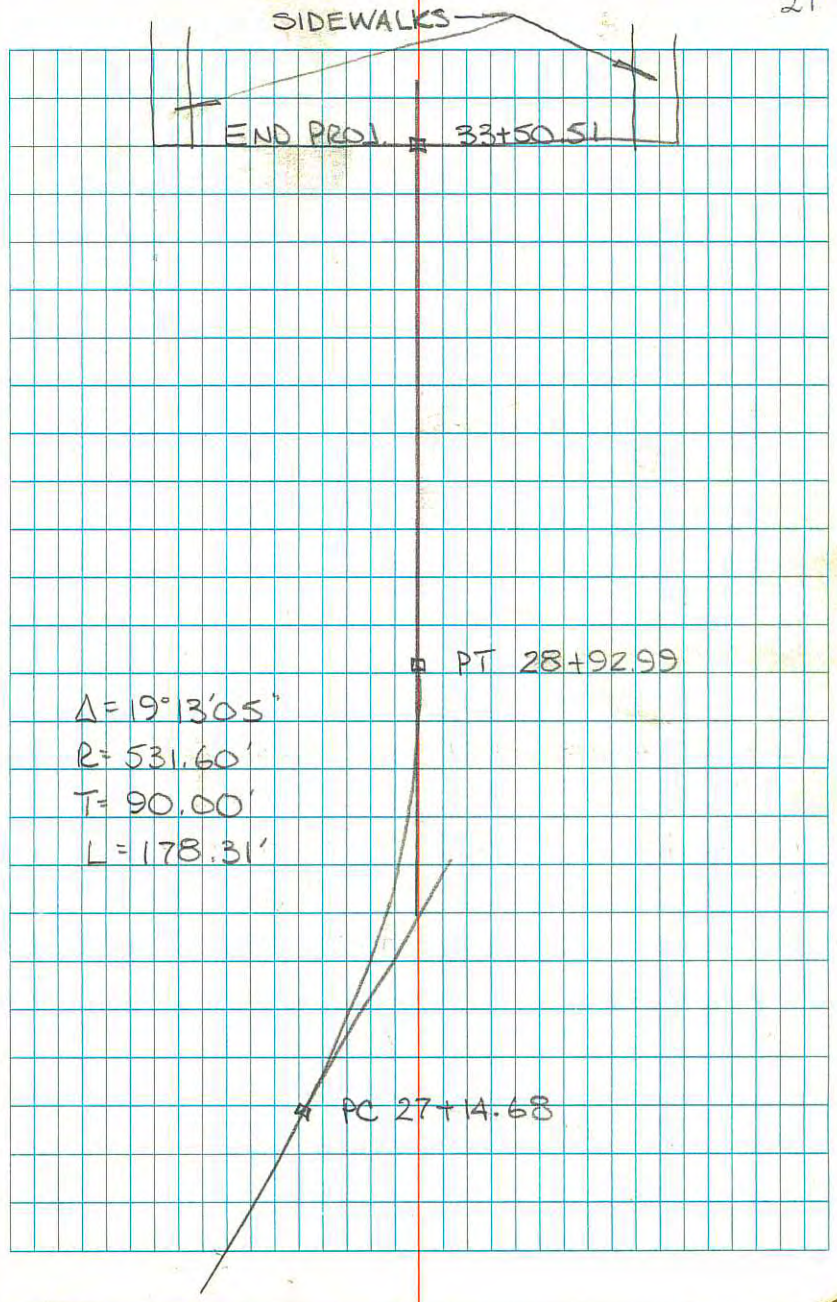
| STA | Δ/2 | LC' | PI DIST | ⊙ |
|---|---|---|---|---|
| 23+75 | 2°51'56" | 179.92' | 80.21' | 173°33'40" |
| 23+50 | 2°28'03" | 154.95' | 55.21' | 173°03'37" |
| 23+25 | 2°04'10" | 129.97' | 30.25' | 171°04'30" |
| 23+00 | 1°40'17" | 104.99' | 5.81' | 148°12'26" |
| 22+75 | 1°16'25" | 79.99' | 20.11' | 5°04'24" |
| 22+50 | 0°52'32" | 55.00' | 45.02' | 1°04'11" |
| 22+25 | 0°28'39" | 30.00' | 70.00 | 0°12'17" |
| 22+00 | 0°04'47" | 5.00' | 95.00' | 0°00'15" |
| PC 21+95.00 | 0°00'00" | 0.00' | 100.00' | 0°00'00" |
| 21+50 | | | | |
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| 27+00 | | | | | |
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| 26+50 | | | | | |
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| 26+00 | | | | | |
| | | | | | |
| PT 25+83.13 | 7°45'30" | 178.35' | 90.00' | 164°29'00" | |
| 25+75 | 7°24'21" | 170.29' | 81.87' | 164°26'54" | |
| 25+50 | 6°19'18" | 145.47' | 56.89' | 163°38'49" | |
| 25+25 | 5°14'15" | 120.60' | 32.05' | 159°54'33" | |
| 25+00 | 4°09'12" | 95.69' | 8.81' | 128°06'18" | |
| 24+75 | 3°04'09" | 70.74' | 19.73' | 11°03'56" | |
| 24+50 | 1°59'06" | 45.76' | 44.29' | 2°03'02" | |
| 24+25 | 0°54'03" | 20.77' | 69.23' | 0°16'13" | |
| PC 24+04.23 | 0°00'00" | 0.00' | 90.00' | 0°00'00" | |
| 24+00 | | | | | |
| PT 23+94.79 | 3°10'50" | 199.69' | 100.00 | 173°38'20" | |



| STA | Δ/2 | LC' | PI DIST | Θ |
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| 29+00 | | | | |
| | | | | |
| PT 28+92.99 | 9-36-33 | 177.48 | 90.00 | 160-46-55 |
| 28+75 | 8-38-23 | 159.71 | 72.01 | 160-32-23 |
| 28+50 | 7-17-32 | 134.95 | 47.09 | 158-40-04 |
| 28+25 | 5°56'42" | 110.12' | 22.62' | 149°42'50" |
| 28+00 | 4°35'52" | 85.23' | 8.49 | 53°33'08" |
| 27+75 | 3°15'02" | 60.29' | 30.00' | 6°32'32" |
| 27+50 | 1°54'12" | 35.31' | 54.72' | 1°13'42" |
| 27+25 | 0°33'22" | 10.32' | 79.68' | 0°04'19" |
| PC 27+14.68 | 0°00'00" | 0.00' | 90.00' | 0°00'00" |



| B.M. | LEVEL LOOP + | HI | − | ELEV |
|---|---|---|---|---|
| BM#4 | 4.96 | 34.39 | 1.82 | 4629.43 |
| TP 6 | 5.69 | 31.25 | 4.70 | 4625.56 |
| TP 5 | 12.10 | 4630.26 | 0.15 | 4618.16 |
| BM#3 | 12.77 | 18.31 | 1.14 | 4605.54 |
| TP 4 | 13.16 | 4606.68 | 0.32 | 4593.52 |
| TP 3 | 12.04 | 93.84 | 0.01 | 4581.80 |
| TP 2 | 12.58 | 81.81 | 0.05 | 4569.23 |
| TP 1 | 12.91 | 4569.28 | 4.58 | 4556.37 |
| BM#2 | | | 4.99 | 4555.96 |
| BM#1 | | | 7.17 | 4553.78 |
| | 4.58 | 4560.95 | | |
| B.M. | | | | 4556.37 |

B.M. DESCRIPTION

BOLT WITH DOUBLE NUT ON TOE OF NORTH BANK SURROUNDED BY FOUR LARGE ROCKS STA. 16+25

BOLT WITH DOUBLE NUT ON S. EDGE OF CONC. SLAB AT TOE OF SOUTH BANK STA 22+00

SOUTHEAST ANGLE IRON OF EX. BRIDGE

NORTH WEST FENCE CORNER OF LOGAN CITY PROP.

| | + | HI | − | ELEV | DESCRIPTION |
|---|---|---|---|---|---|
| BM#8 | | | 4.66 | 4680.86 | WEST CORNER OF CONC. FOUNDATION LAMPLIGHTER DRIVE. EST. BY VALLEY ENGR. 1976 EL. 4680.92 |
| TP 11 | 7.31 | 85.52 | 2.10 | 4678.21 | |
| BM#7 | | | 12.81 | 4667.50 | BEGINNING OF PROJ. |
| TP 10 | 11.50 | 4680.31 | 0.12 | 4668.81 | |
| TP 9 | 12.70 | 68.93 | 3.03 | 4656.23 | |
| BM#6 | 12.62 | 59.26 | 1.18 | 4646.64 | BOLT WITH DOUBLE NUT NORTH TOE OF ROAD ON SOUTH SIDE OF PIT. STA. 8+00 |
| TP 8 | 7.08 | 47.82 | 9.61 | 4640.74 | |
| BM#5 | 5.90 | 50.35 | 1.34 | 4644.45 | BOLT WITH DOUBLE NUT NO. TOE STA 12+85 |
| TP 7 | 12.20 | 45.79 | 0.80 | 4633.59 | |
| | | 34.39 | | | |

9340-100

| | + | HI | − | EL | |
|---|---|---|---|---|---|
| | 0 80 | 4665 68 | 7 25 | 4664 88 | |
| STA 5+00 | | | | | |
| | 4 63 | 4672 13 | | 4667 50 | BM BEG. PROJ |



# CROSS-SECTIONS

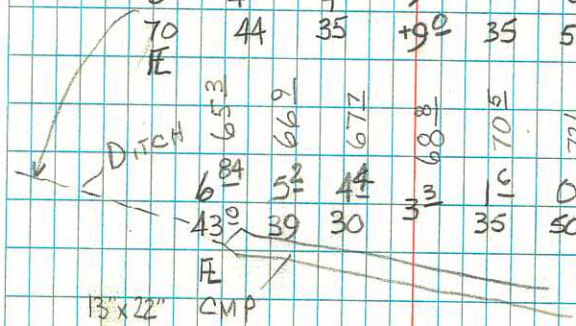
NOTES - WILLIAMS
T - WARD
I - ~~Red~~ SPAULDING

12/3/76
COOL - CLEAR

| | | | | | | |
|---|---|---|---|---|---|---|
| 65 8 | 69 6 | 72 4 | 70 3 | 64 7 | 61 2 | 69 5 |
| 6 3 | 2 5 | +0 3 | 1 8 | 7 4 | 10 9 | 2 6 |
| 50 | 7 | +43 5 | 12 | 27 | 36 | 58 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 66 2 | 66 4 | 66 9 | 73 0 | 73 9 | 75 8 | |
| 5 9 | 5 7 | 2 2 | +0 9 | +1 18 | +3 7 | |
| 53 | 37 5 | +34 5 | 11 | 27 | 40 | |
| | | | 23 | 1 4 | -0 5 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 65 4 | 67 8 | 67 7 | 69 3 | 70 4 | 71 2 | |
| 6 7 | 4 3 | 4 4 | 2 8 | -1 7 | 0 9 | |
| 70 | 44 | 35 | +9 0 | 35 | 50 | |
| FL | | | | | | |

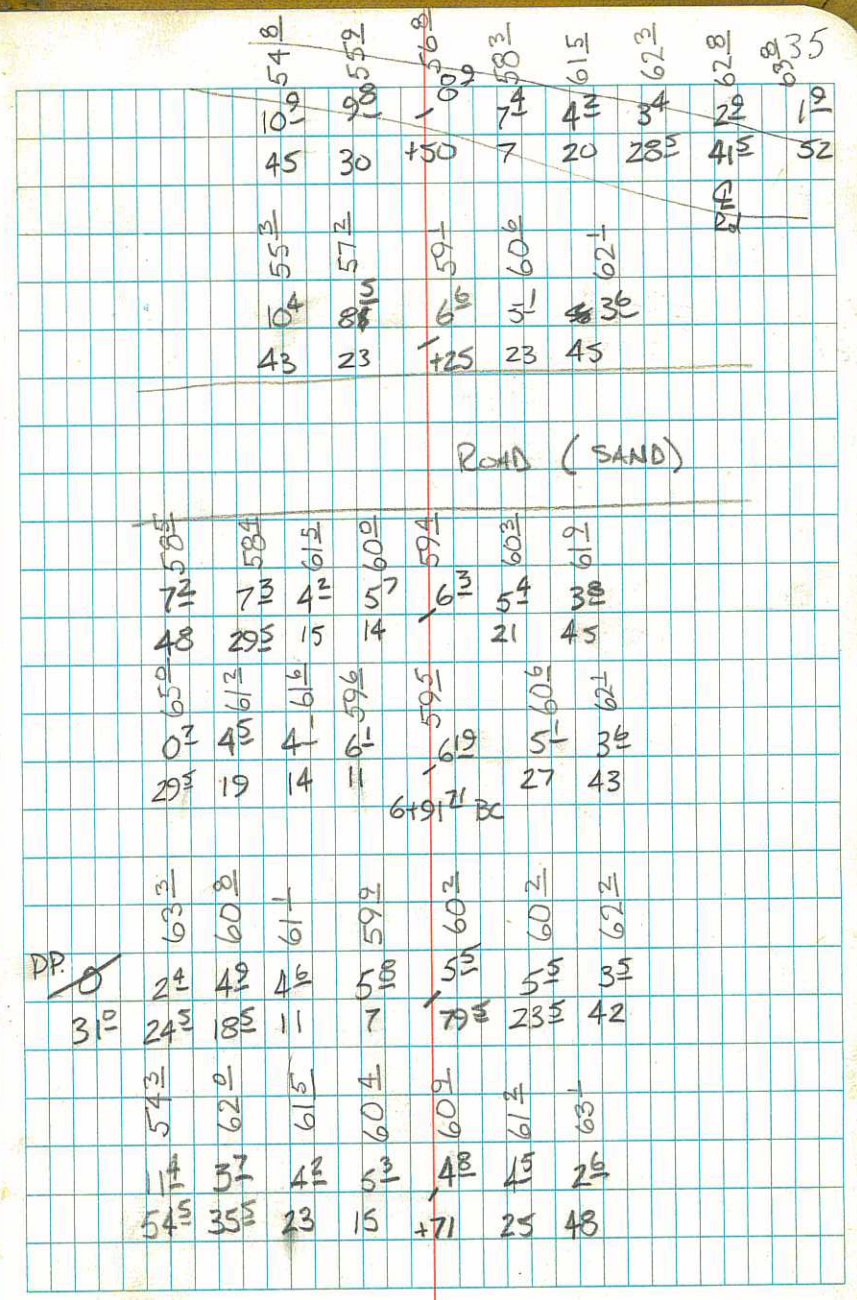



| | | | | | | |
|---|---|---|---|---|---|---|
| 65 3 | 66 9 | 67 7 | 68 8 | 70 6 | 72 4 | |
| 6 84 | 5 2 | 4 4 | 3 3 | 1 6 | 0 5 | |
| 43 0 | 39 | 30 | | 35 | 50 | |
| FL | | | | | | |

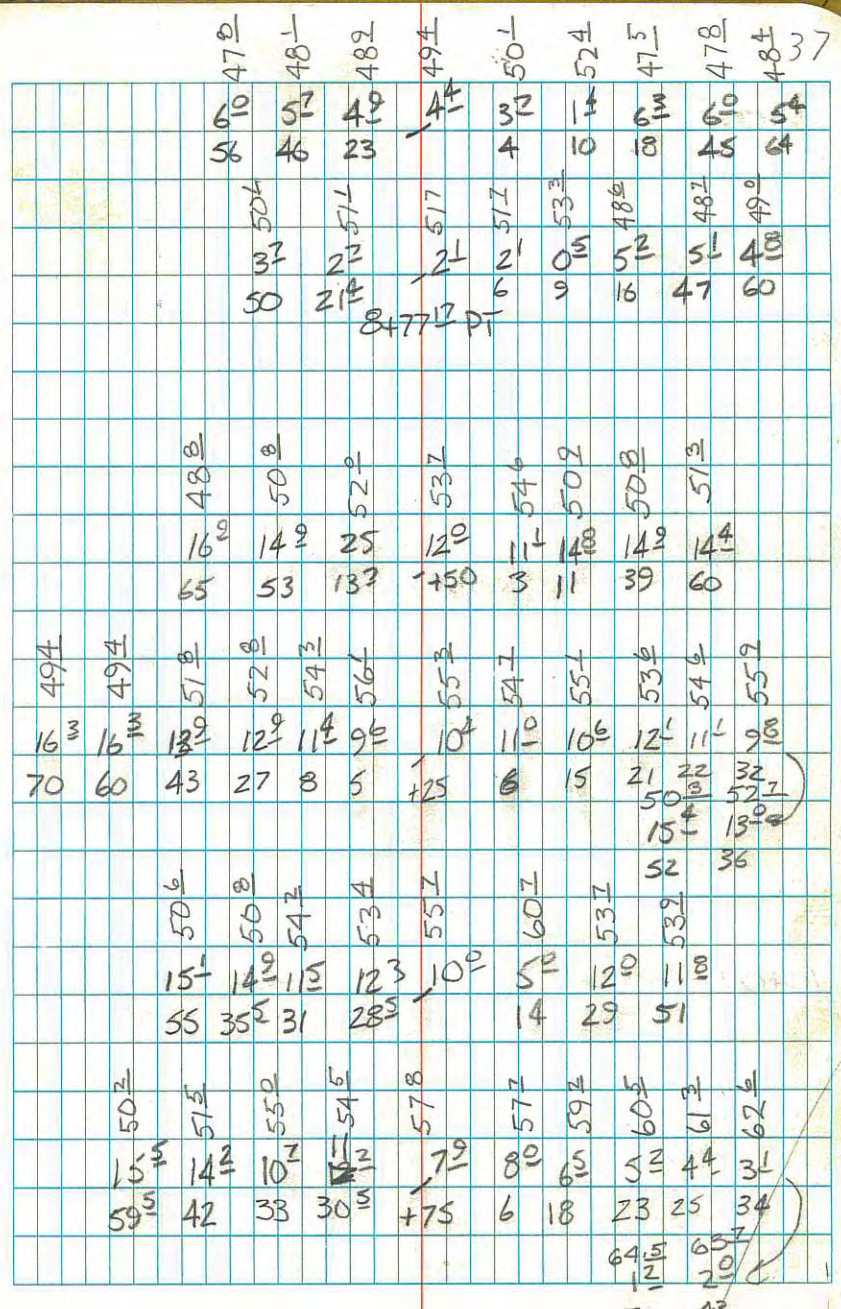
6+00

+50

7+00



| | + | HI | − | EL |
|---|---|---|---|---|
| 9+00 | | | | |
| | 0 11 | 4653 76 | 12 03 | 4653 65 |
| 8+00 | | | | |
| | | 65 68 | | |



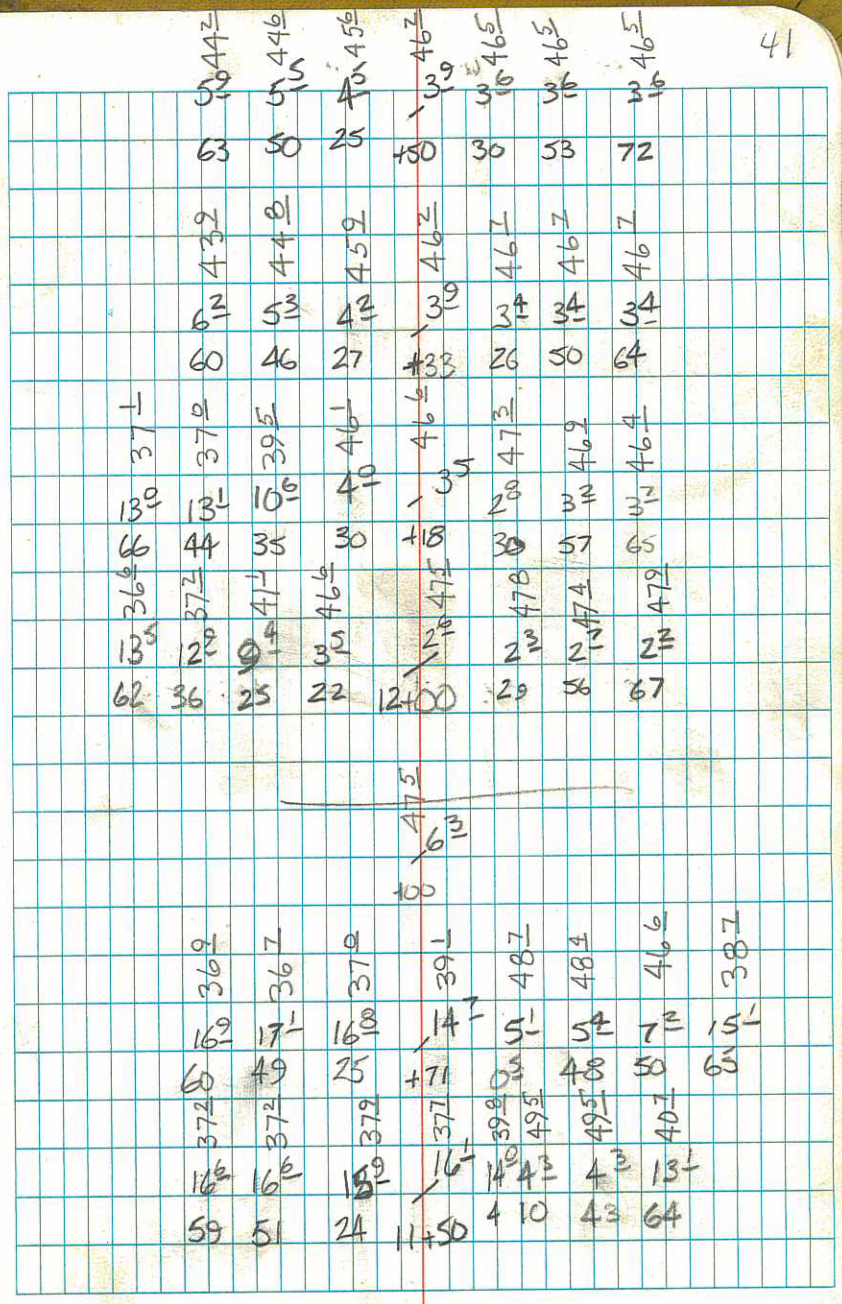
11+00

10+00



| | | |

| | + | H1 | − | E2 |
|---|---|---|---|---|
| | $2^{64}$ | $4650^{11}$ | $6^{29}$ | $4647^{47}$ |
| 12+00 | | | | |
| | | $53^{75}$ | | |



14+50

14+00

13+50

13+00

4.10 4648.55

12/6/76 T-SPAULDING & WARD NOTES-WILLIAMS

5.65 46.44.43 4644.45 BM #5

4650.11

9340-100

32.1 16.5 90

32.4 16.2 66

36.3 12.3 53 EP

37.4 11.7 26 ER

39.4 9.2 3

40.4 8.2

46.0 2.6 10

39.0 9.6 20

38.2 10.4 38

43.6 5.0 40

44.3 4.4 77

32.8 15.8 87

35.7 12.8 56

35.9 12.7 46

37.6 11.9 35

41.4 7.2 14 EP

42.2 6.4

44.2 4.4 31

44.6 4.9 65

44.9 3.7 86

35.2 13.4 92

42.4 6.2 70

41.9 6.7 65

41.5 7.1 64

42.1 6.5 35.6

43.9 4.7

45.4 3.2 35

45.5 3.1 35

45.2 3.4 35

43.8 6.3 66

44.1 6.0 38

44.6 5.5 26

46.2 5.3

45.1 5.0 27

45.7 4.4 63

| | + | HI | − | EL | |
|---|---|---|---|---|---|
| 15+74 | | | | | |
| | | | | | |
| | | | | | |
| 15+50 | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| 15+00 | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| 14+77 | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | 0 73 | 46 38 52 | 10 76 | 46 37 79 | TP |
| | | | | | |
| 14+58 | | | | | |
| | | | | | |
| | | | | | |
| | | 46 48 55 | | | |

9340-100

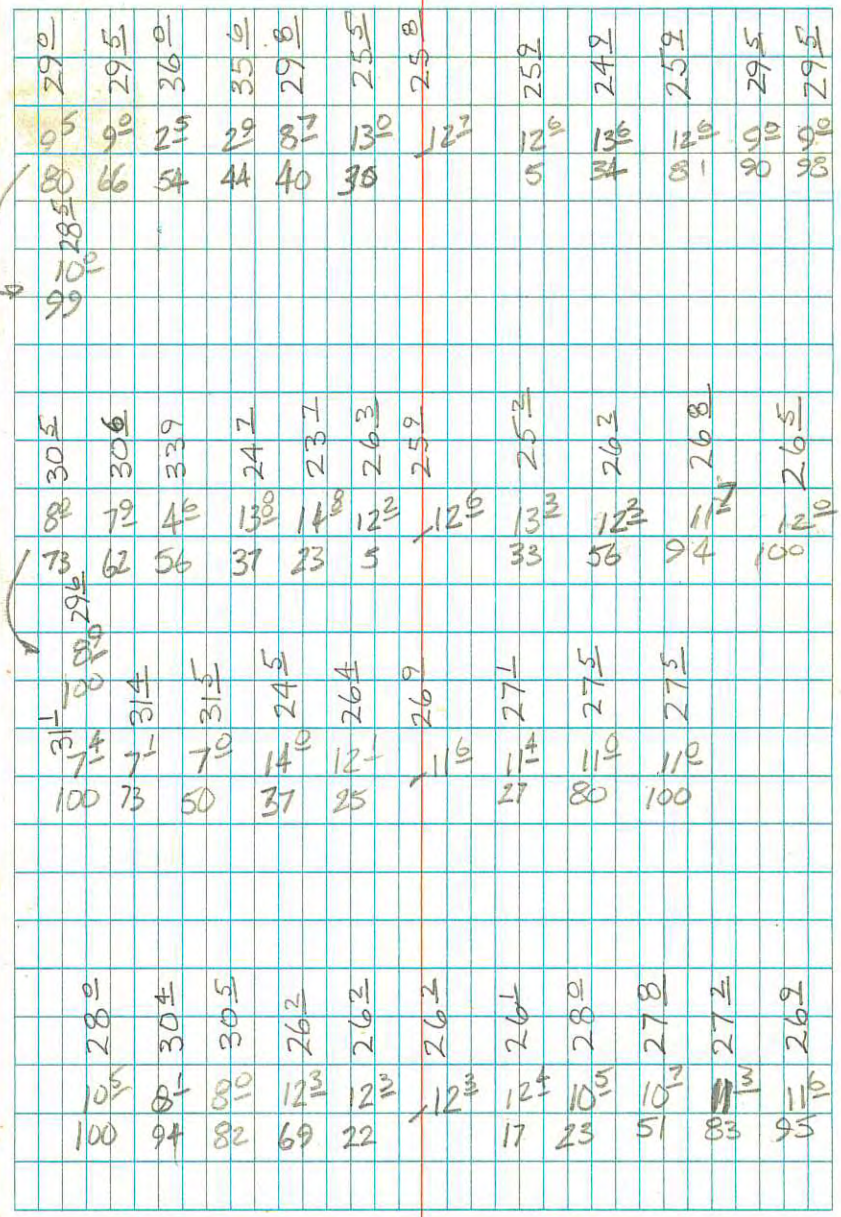
100 68

17+45

17+00

16+50

16+00



18+50

18+00

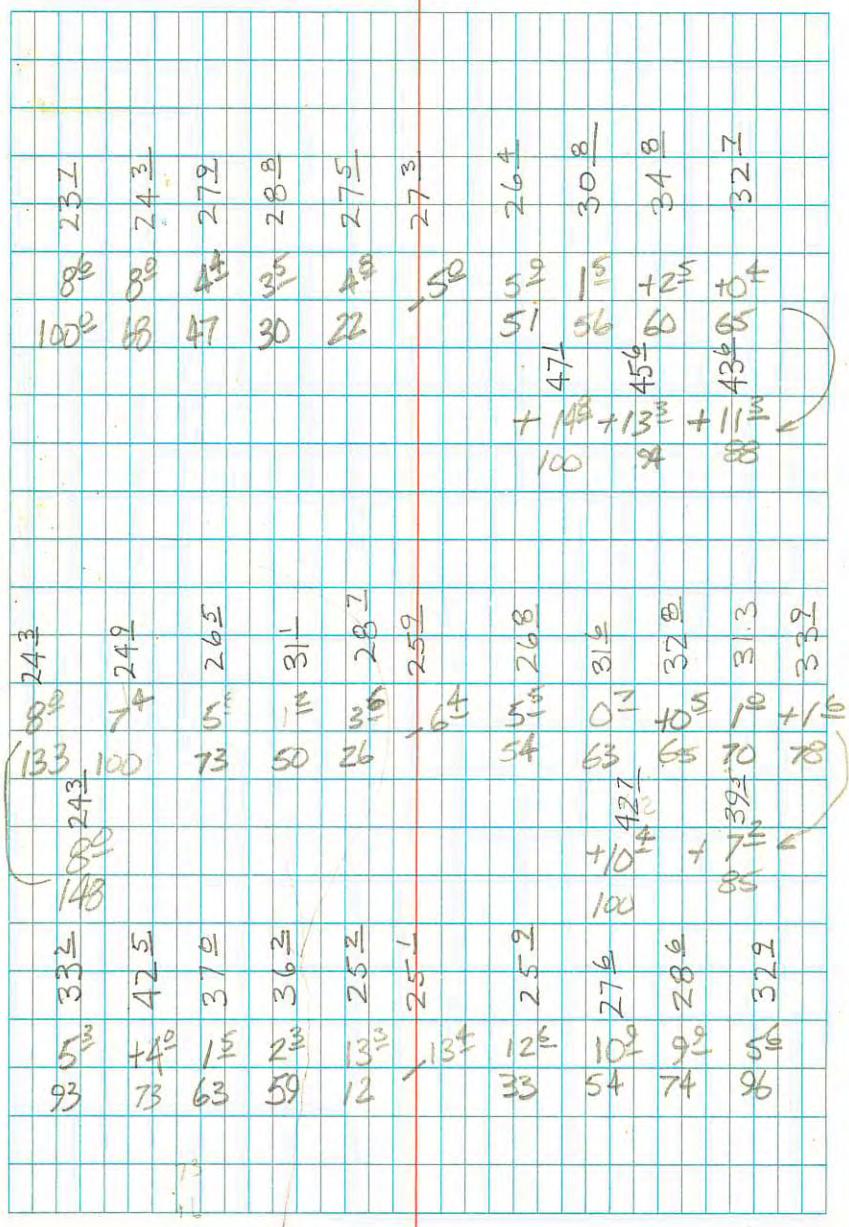
17+71

17+55

LARGE PILE CRUSHED GRAVEL

| | | |

| | + | HI | − | EL | |
|---|---|---|---|---|---|
| 19+50 | | | | | |
| 19+35 | | | | | |
| | + 3 00 | 4632 29 | 9 23 | 4629 29 | TP |
| 19+00 | | | | | |
| | | 38 52 | | | |



20+41.5

20+35

20+16

20+00

48" CMP (Manhole)

STA

MANHOLE

20+92

20+80

20+63

20+50

5⅜

Same slope as Previous station

| | + | HI | − | EL | |
|---|---|---|---|---|---|
| 21+30 | | | | | |
| | $10^{26}$ | $4615^{80}$ | | | |
| | | | $-6^{78}$ | $4605^{54}$ | $4605^{54}$ |
| | $+3^{11}$ | $4612^{32}$ | $-14^{04}$ | $4609^{21}$ | |
| | $+0^{59}$ | $4620^{25}$ | $-12^{63}$ | $4619^{66}$ | |
| 21+00 | | | | | |

$2^{7}$ $4^{4}$ $4^{6}$ $5^{1}$ $4^{6}$ $2^{4}$ $+6^{3}$ $5^{4}$ $+10^{2}$ $+12^{3}$ $+10^{9}$ $+12^{2}$ $+11^{4}$

129 112 100 84 61 22 5 13 27 38 49 61

Turn Des[1] along bank $10^{3}$ $10^{2}$

200 240

$+29^{8}$ $+21^{0}$ $+21^{6}$ $+21^{0}$ $+16^{7}$

155 127 102 100 93

$7^{3}$ $11^{1}$ $10^{7}$ $9^{4}$ $7^{5}$

293 279 271 261 255

90° turn to west $+20^{8}$ $+7^{7}$

175 155

$4^{3}$ $15^{8}$

216 232

TOP OF CANAL

$7^{8}$ $15^{2}$

300 315

$11^{5}$ $13^{0}$ $16^{6}$ $26^{2}$ $28^{2}$ $26^{2}$ $29^{1}$ $29^{2}$ $29^{0}$ $38^{6}$

$20^{8}$ $19^{3}$ $15^{7}$ $5^{4}$ $-3^{4}$ $5^{4}$ $3^{3}$ $3^{1}$ $3^{3}$ $+6^{3}$

100 17 10 7 2 47 68 74 91

$28^{31}$

94

21+77

21+56

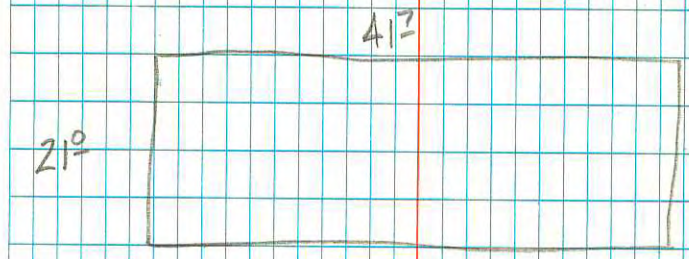
21+37

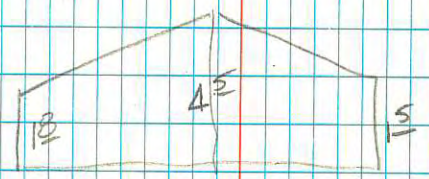
CONC. BUILD.

9340-100

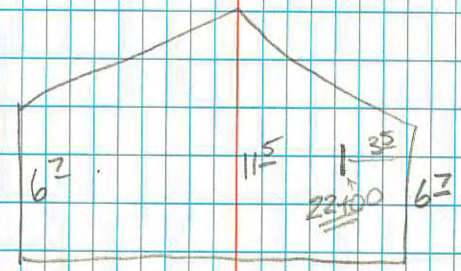
AT 51 59 100

# BUILDING DETAIL




BACK

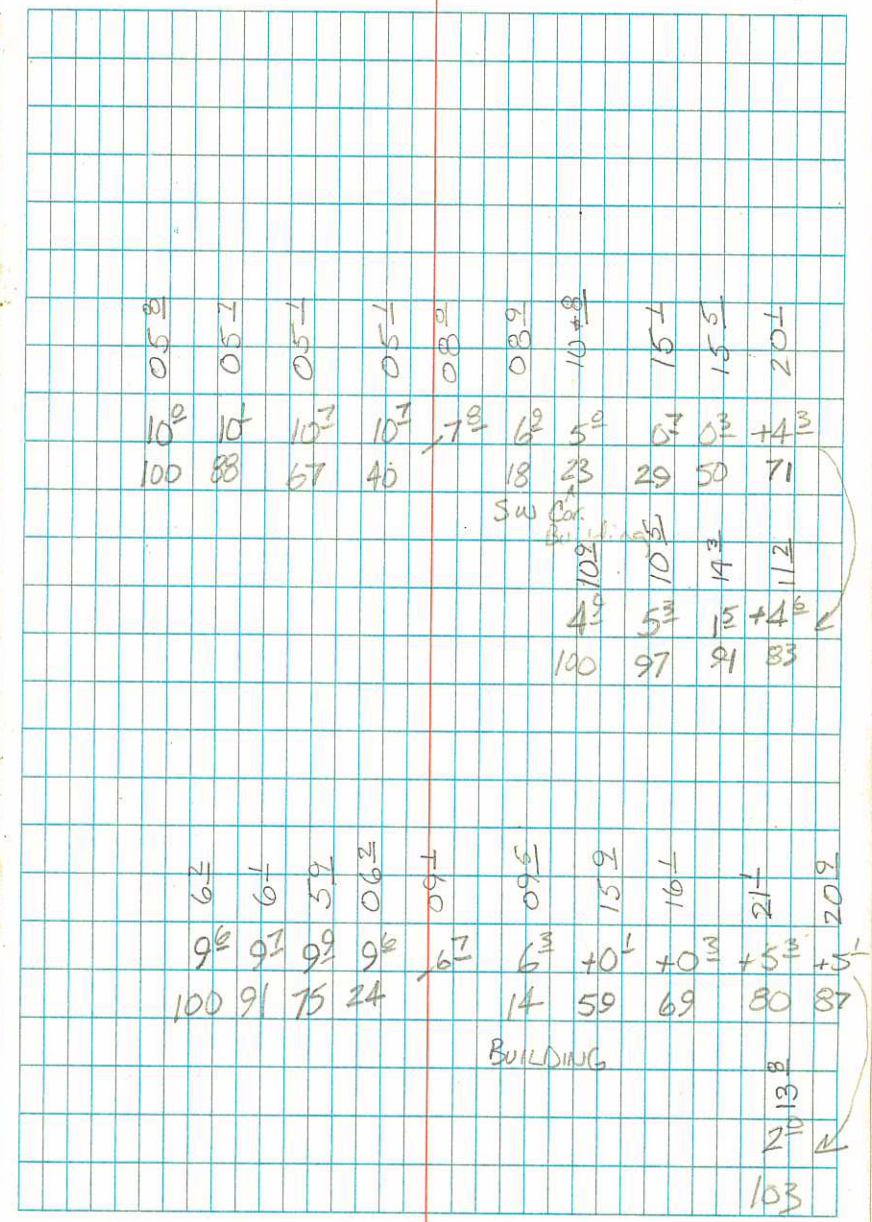



FRONT

9340-100

22+14

22+00



22+75

22+50

22+25

| | 07.7 | 08.1 | 08.2 | 04.3 | 03.9 | 02.1 | 01.9 | 00.8 | 00.4 | 98.3 | 90.8 | 84.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 81 | 72 | 76 | 115 | 119 | 137 | 139 | 159 | 154 | 175 | 259 | 315 |
| | 100 | 96 | 87 | 75 | 44 | 7 | | 9 | 15 | 21 | 63 | 120 |
| | Toe | | | | | | | | TOP PIPE | | | |

| | 03.8 | 03.1 | 04.6 | 03.6 | 04.3 | 04.6 | 04.3 | 03.8 | 94.3 |
|---|---|---|---|---|---|---|---|---|---|
| | 120 | 127 | 112 | 122 | 115 | 112 | 115 | 120 | 215 |
| | 100 | 93 | 64 | 42 | | 35 | 50 | 91 | 112 |
| | Toe | | | | | | | | Toe |

| | 03.2 | 4604.8 | 04.1 | 04.6 | 08.2 | 08.9 | 03.5 | 11.01 | 108.8 | Toe 19.1 |
|---|---|---|---|---|---|---|---|---|---|---|
| | 112 | 119 | 114 | 112 | 76 | 69 | 73 | 48 | +32 | +33 |
| | 100 | 72 | 58 | 40 | | 23 | 32 | 39 | 56 | 65 |
| | | | | | 056 | 068 | 088 | 063 | 083 | |
| | | | | | 103 | 90 | 70 | 90 | 73 | |
| | | | | | 119 | 100 | 85 | 80 | 85 | |

| | + | HI | − | |
|---|---|---|---|---|
| | 1 65 | 4575 96 | 1219 | 4574 31 |
| 23+50 | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| 23+25 | | | | |
| TP | 1 20 | 4586 50 | 1245 | 4585 30 |
| | | 12 | | |
| TP | 1 35 | 4597 75 | 13 15 | 4596 40 |
| | | 12 | | |
| 23+02 | | | | |
| | | | | |
| | | | | |
| | | | | |
| 23+00 | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | 4.01 | 4609 55 | | 4605 54 |
| | | 12 | | |
| | | | | |
| | | | 10 26 | 4605 54 BM1 |

95 5 96 2 94 0 84 0 71 6

+9 0 +9 7 +7 5 25 14 2

80 69 46 25

05 9 04 8 03 7 97 3 96 1 86 9 85 3 79 1 74 0 68 3 68 6 63 3 63 5

+19 1 +18 2 +17 2 +10 2 +9 2 +0 1 12 74 12 5 18 4 17 9 23 2 23 0

85 75 70 33 24 9 10 24 42 54 66 100

68 5

18 2

124 112

08 7 06 4 07 4 05 7 07 6 03 9 03 1 00 8 02 3 96 6 13 0

02 32 22 38 29 57 65 85 73 00 2 10 0 10 2 24 0

96 90 84 79 73 62 13 10 7 94 9 24 100

99 6

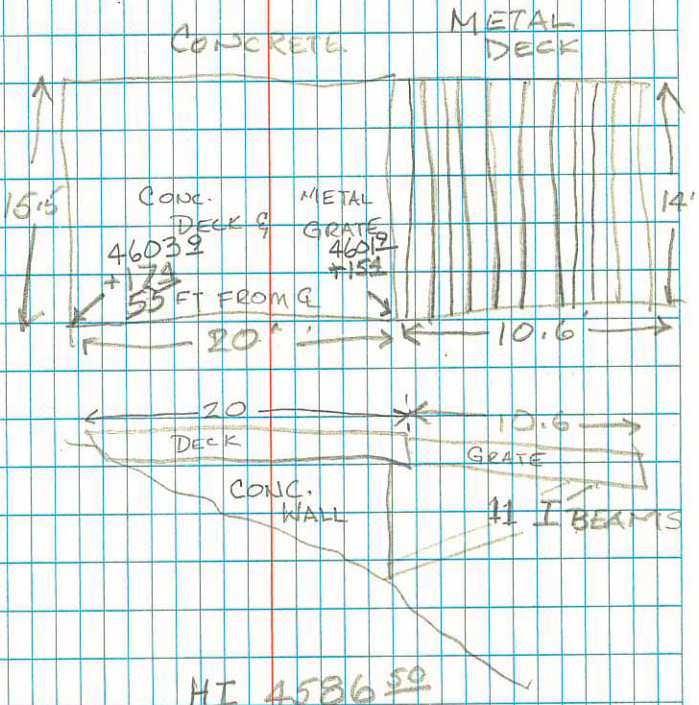
98 7

85 6

STA

23+25

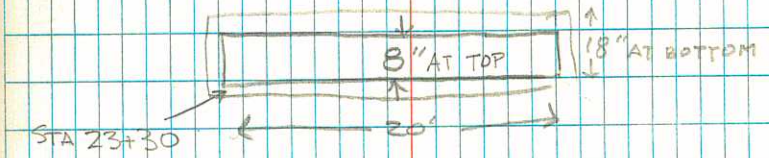



CONCRETE
METAL DECK
16.5'
CONC. DECK @
METAL GRATE @
14'
46039
+174
55 FT FROM ℄
46012
+154
20'
10.6'
20'
10.6'
DECK
GRATE
CONC. WALL
11 I BEAMS
HI 45865Q

23+30

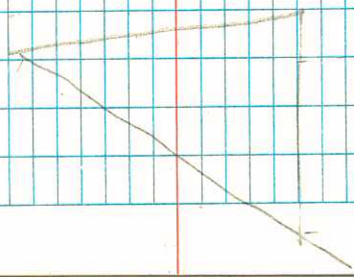
23+55

CONCRETE WALL









| | + | HI | − | EL | |
|---|---|---|---|---|---|
| 24+25 | | | | | |
| | 6 70 | 4563 07 | | 4556 37 | BRIDGE BM |
| 12/8/76 | | | COOL | | |
| NOTES - WILLIAMS | | | CLEAR | | |
| Δ - WARD | | | | | |
| Φ - SPAULDING | | | | | |
| | | | 10 33 | 4556 46 | |
| TP | 2 67 | 66 79 | 11 84 | 4564 12 | |
| 23+75 | | | | | |
| 23+50 | | 75 96 | | | |



627 583 584 581 585 593 582 623 619 614

04 48 47 50 46 38 49 08 12 17

64 54 45 12 70 14 26 41 43

628 612 609

03 10 12

84 60 52

BRUSHY +5 3 +3 7 +1 6 +17 2 5 5 0

AREA 80 67 57 50 25 16 9

813 791 776 771 735 710 693 671 652 625 617 634

67 52 13 5 14 3 12 6

32 100

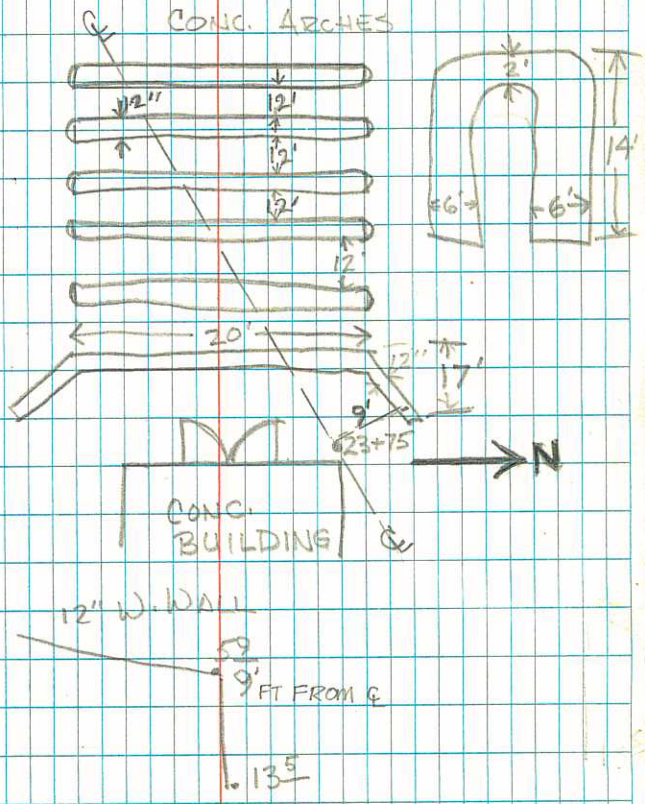
716 699 625 679

41 93 13 5 13 1

10 61 100

NOTE: 5 CONCRETE ARCHES 12" INCHES THICK AT THE TOP AND 18 INCHES THICK AT THE BOTTOM ARE SPACED 12 FEET APART. A RETAINING WALL 20' IN LENGTH WITH 17' WINGWALLS IS 12' EAST OF THE ARCHES

23+75

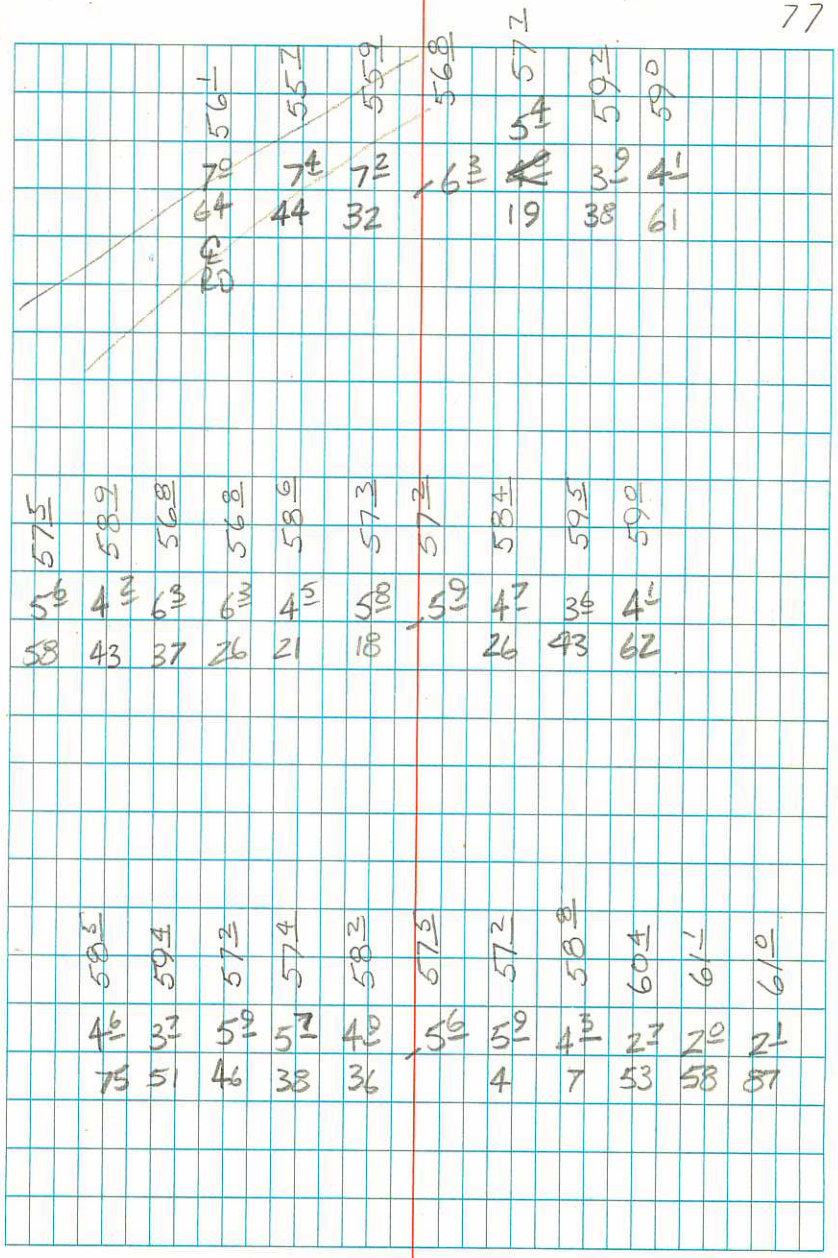



9340-100

25+00

24+75

24+50

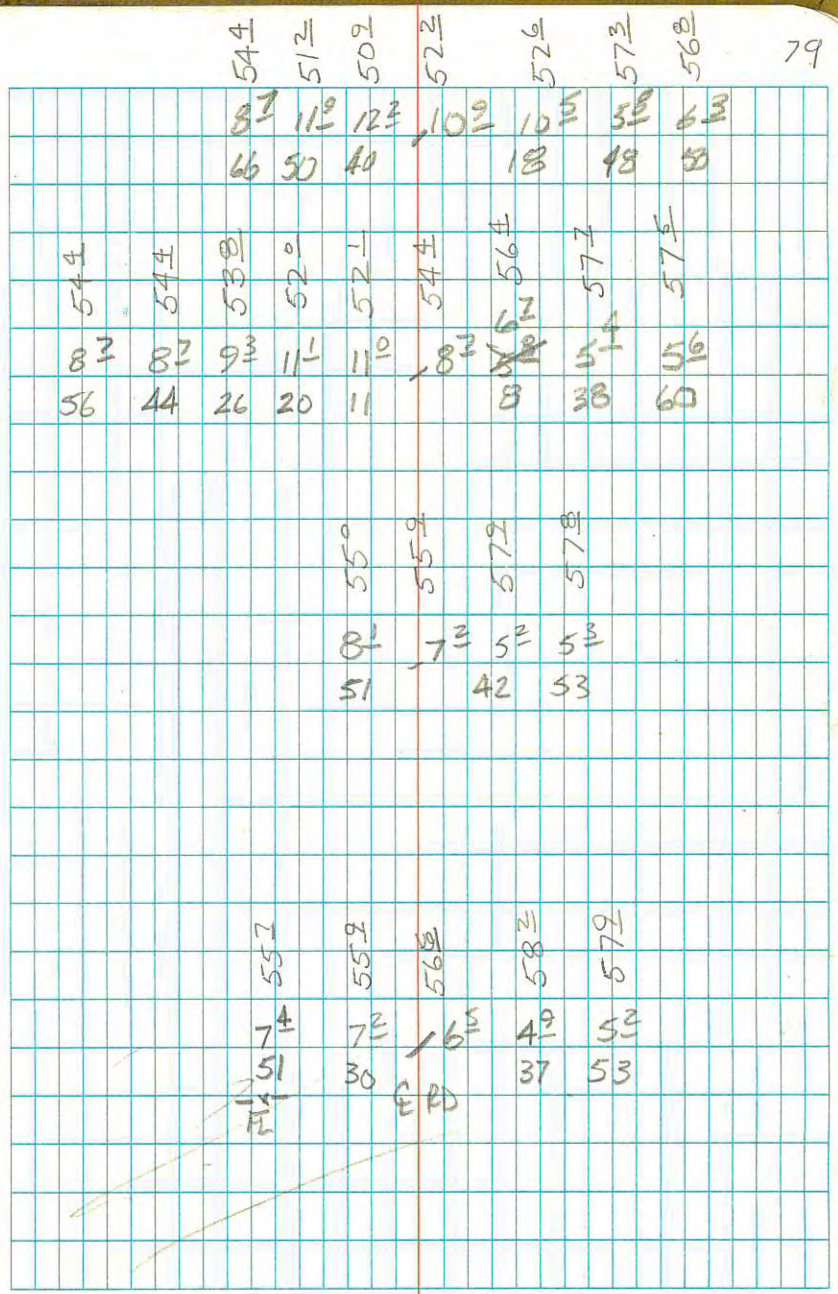


26+00

25+75

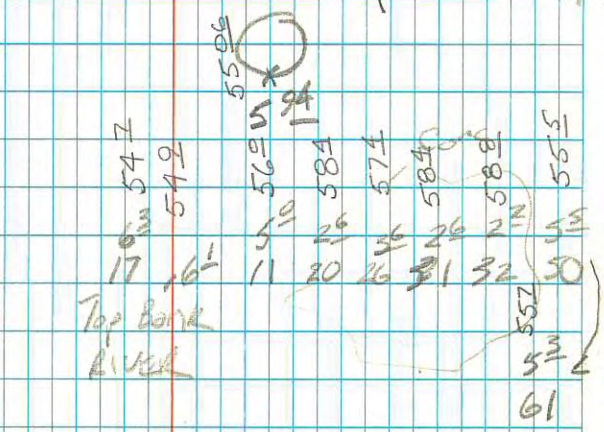
25+50

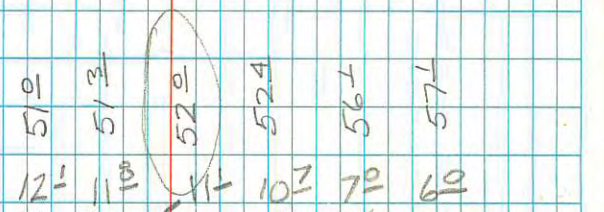
25+25



| | + | HI | − | EL |
|---|---|---|---|---|
| 27+25 | | | | |
| | 3.85 | 4561.00 | 5.92 | 4557.15 |
| 26+25 | | | | |
| | | 63.07 | | |

27+39 8.5' RIGHT OF ℄ (SEWER M.H.)



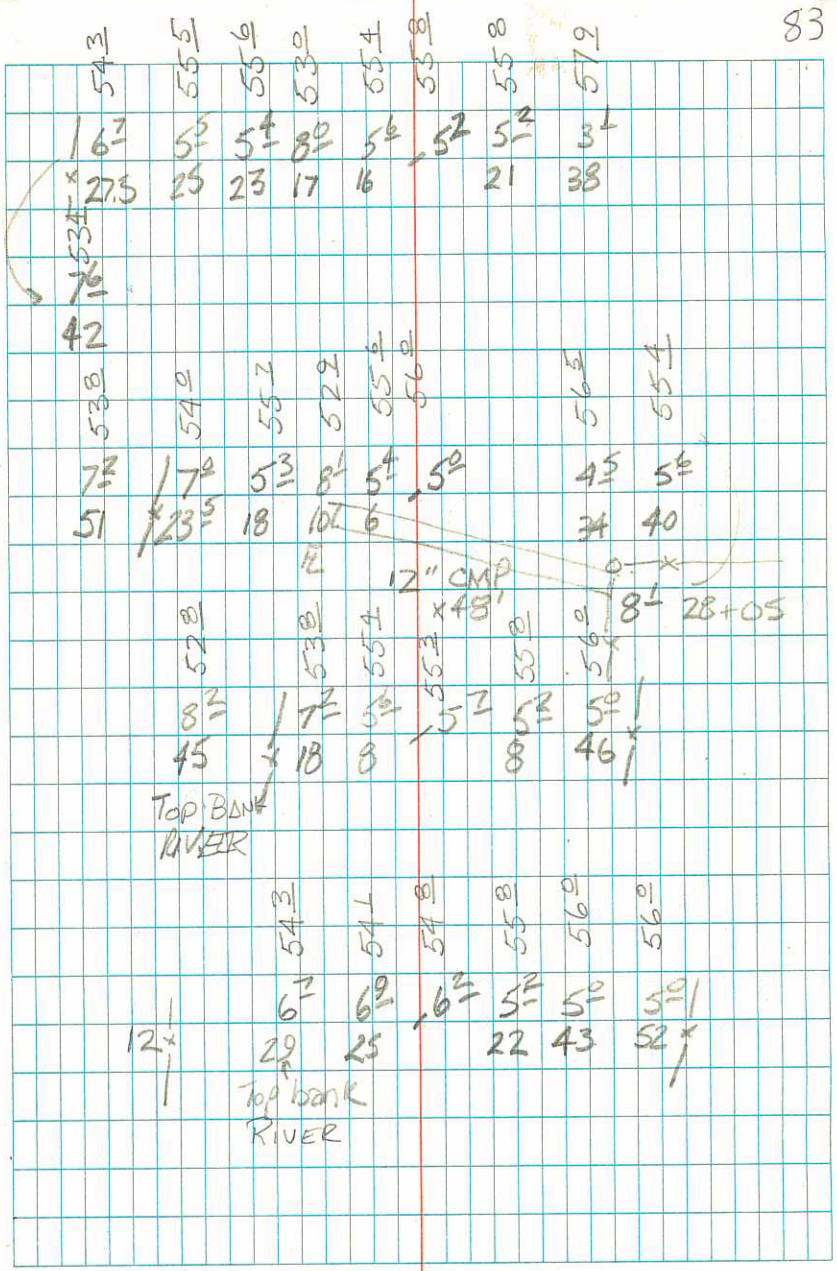



28+25

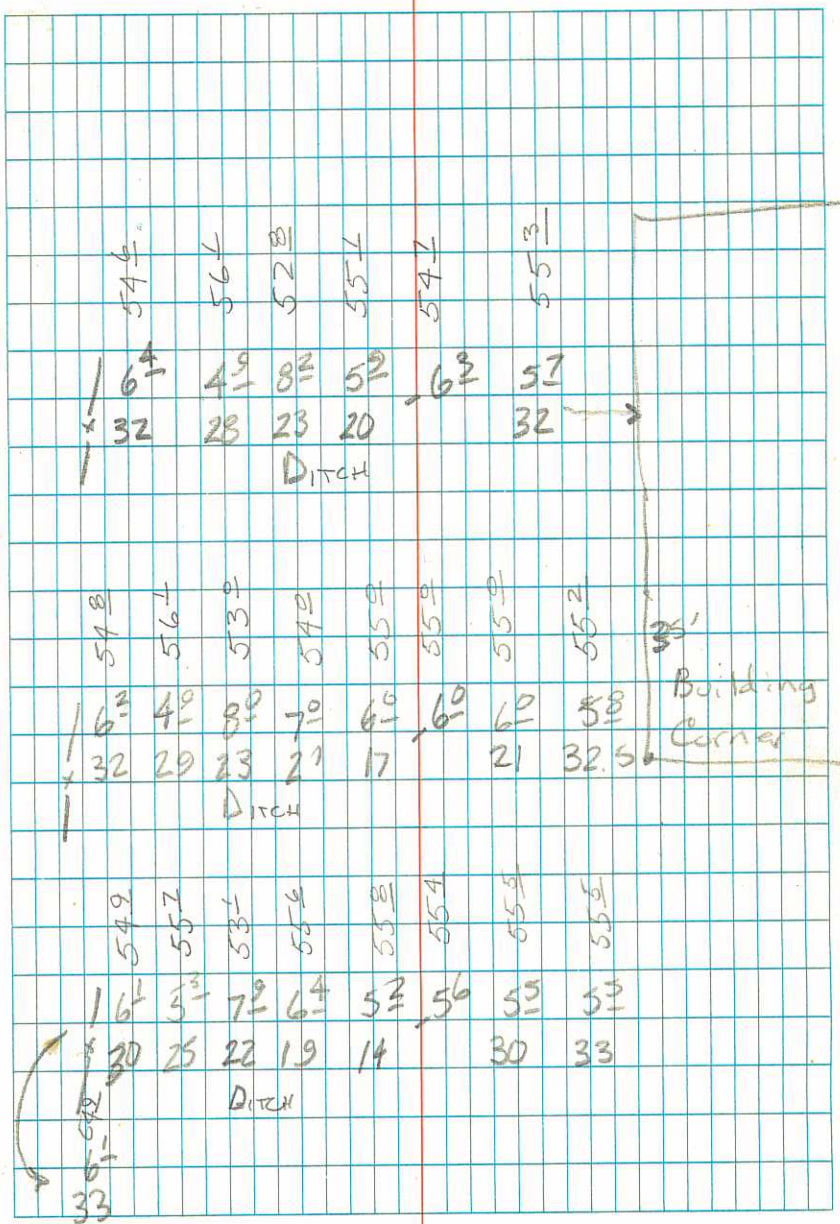
28+00

27+75

27+50



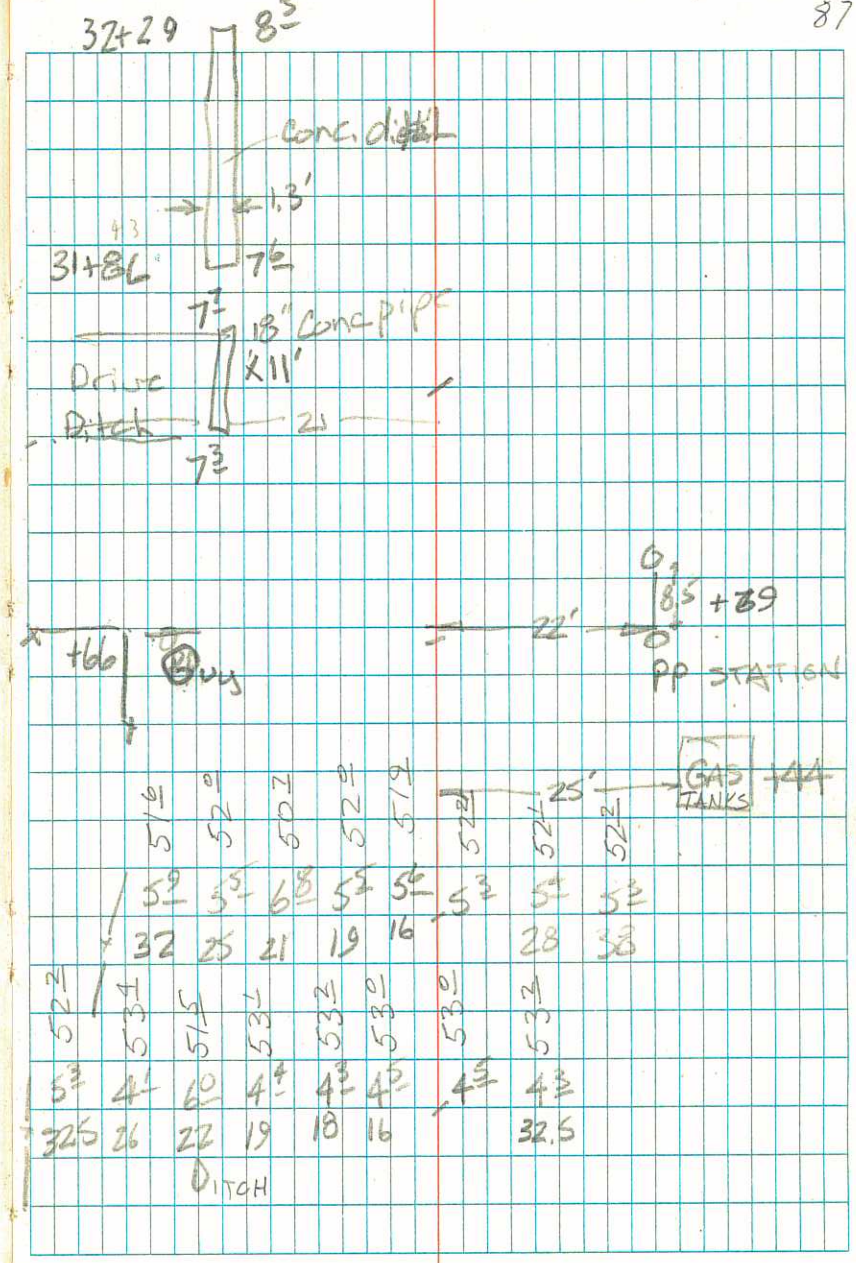
| | + | HI | − | EL |
|---|---|---|---|---|
| | $3^{59}$ | $4557^{51}$ | $7^{08}$ | $4553^{92}$ |
| 29+00 | | | | |
| 28+75 | | | | |
| 28+50 | | | | |
| | | $61^{00}$ | | |



31+80

31+05

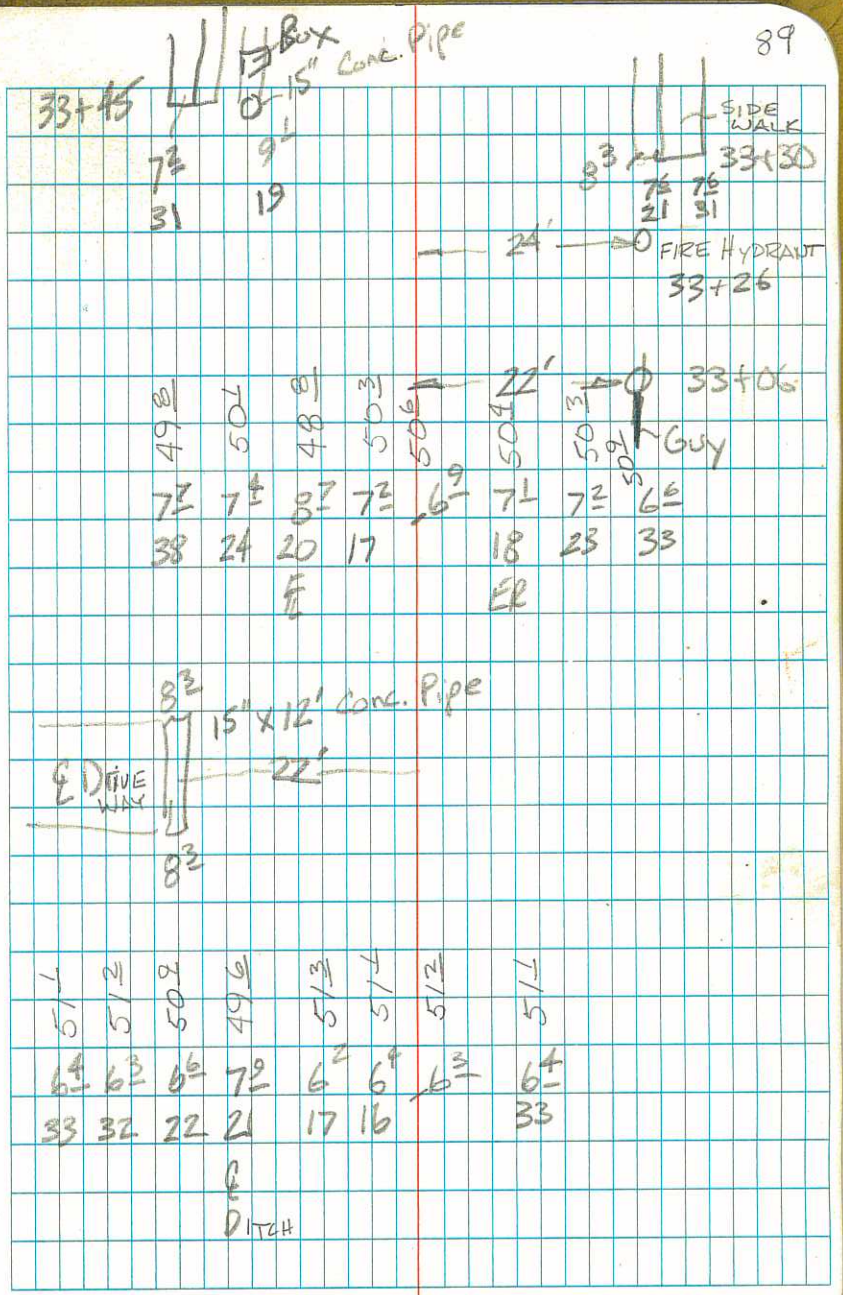
30+00



33+00

32+35

32+06



| | + | HI | − | EL | |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

| STA | TO STAT | SLP DIST | VERT ∠ | | HOR DIST |
|---|---|---|---|---|---|
| $B_1$ | | | | | |
| $B_2$ | | | | | 671.36 |
| $B_2$ TO $B_3$ | | | | | 120.10 |

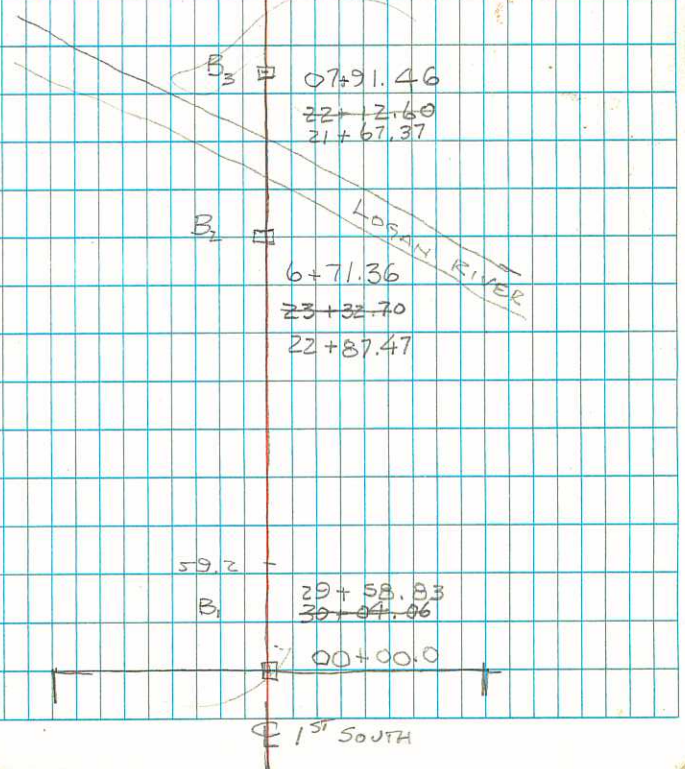
ALIGNMENT CR 351(A)

SUNNY, WARM 85° 21 JUNE 77

HUDSON T, NOTES 22 JUNE 77 PPM 41

BOSCHE 9

START AT STATION 33+50.51 OF SURVEY PAGE 21 THIS BOOK.




9340-100

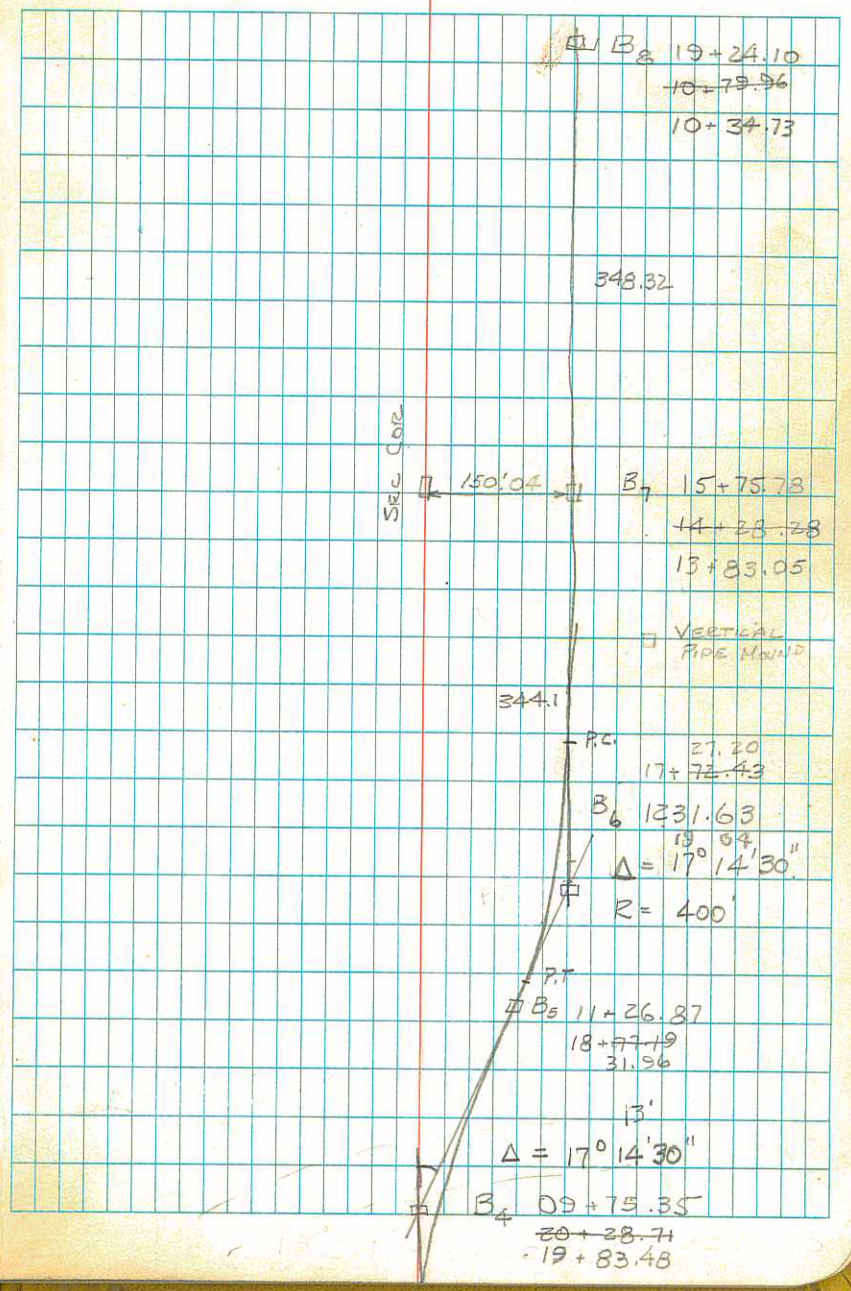
| STAT | TO STAT | SLP DIST | VERT ∠ | STAT | HORIZ DIST |
|---|---|---|---|---|---|
| $B_3$ | $B_4$ (P.T.) | 184.07 ~~159.09~~ | 87°04'30" ~~110°16'~~ | | 183.89 ~~149.24~~ |
| P.I. | $B_5$ | 162.55 | 68°36'30" | | 151.52 |
| | | 106.70 | 85°30' | | |
| $B_6$ | $B_5$ | ∠ 104.85 | 92°43' | | 104.76 |
| $B_7$ | $B_6$ | 344.20 | 88°57'30" | | 344.15 |
| $B_7$ | $B_8$ | 348.84 | 86°47" | | 348.32 ~~331.96~~ |
| $B_8$ | $B_9$ | 831.60 | 87°18" | | ~~830.86~~ |

| CURVE # 2 | | | |
|---|---|---|---|
| P.I. | $B_6$ 17+27.20 | T = 60.64 | |
| P.C. | 16+66.4 | L = 120.4 | |
| P.T. | 17.86.8 | D = 14°19'26" | |

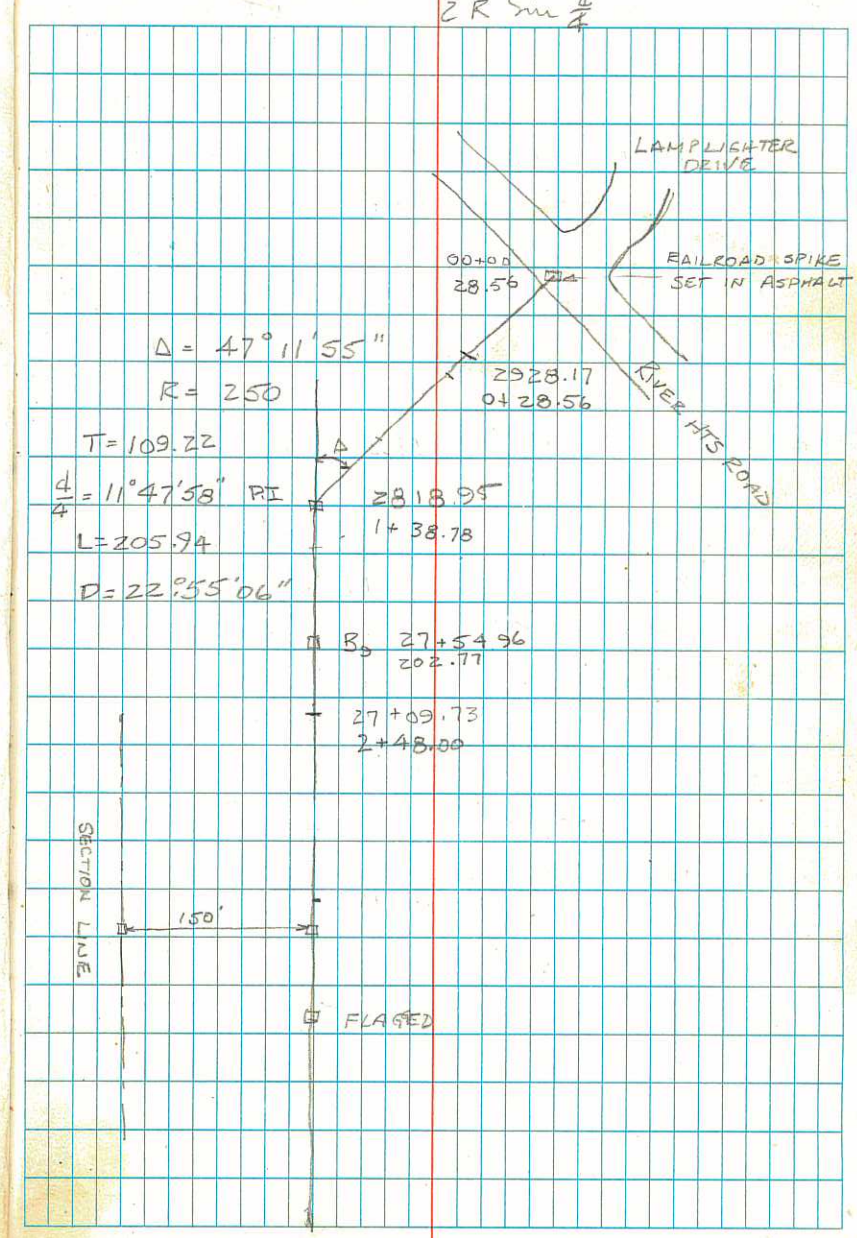
| STAT | DIST. CHORD | ∠ P.C. | DIRECT DIST. |
|---|---|---|---|
| 16+66.4 | 33.6 | | |
| 17+00.0 | 50.0 | 2°24'20" | 33.58 |
| 17+50.0 | 36.8 | 5°59'08" | 83.42 |
| 17+86.8 | | 8°37'13" | 119.91 |

| CURVE # 3 | | | |
|---|---|---|---|
| P.I. | 19+83.48 | T = 60.64 | |
| P.C. | 19+22.84 | L = 120.4 | |
| P.T. | 20+43.24 | D = 14°19'26" | |

| STAT | DIST CHORD | ∠ FROM P.C. | DIST FROM P.C. |
|---|---|---|---|
| 19+22.84 | 27.16 | | |
| 19+50.0 | 50.0 | 1°56'40" | 27.14 |
| 20+00.0 | 43.24 | 5°17'21" | 73.75 |
| 20+43.24 | | 8°23'06" | 116.66 |



| STAT | to STAT | SLP DIST | VERT ∠ | HORIZ DIST |
|---|---|---|---|---|
| B9 | PT | 64.05 | 267°16'20" | 63.99 |
| PT | SPIKE | 138.88 | 272°12' ~~267°16'20"~~ | 138.78 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| ℄ ⊥ | ℄/4 | | CHORD DIST. | STAT |
| | 2+48.00 | | | |
| | ~~4°37'17"~~ | | ~~38.11~~ | ~~207.67~~ |
| | ~~16°52'15"~~ | | ~~142.19~~ | ~~157.67~~ |
| | ~~38°43'13"~~ | | ~~236.75~~ | ~~107.67~~ |
| | ~~39°41'46"~~ | | ~~317.48~~ | ~~57.67~~ |
| | ℄/4 | | | |
| ~~2+34.50~~ P | 000 | 000 | | |
| 2+00 | 4°37'17" | 40.29 | | |
| 1+50 | 10°21'03" | 89.84 | | |
| 1+00 | 16°04'50" | 138.49 | | |
| 0+50 | 21°48'36" | 185.76 | | |
| 0+28.56 | 23°35'58" | 200.17 | | |



| STATION | + | HI | - | ELEV | |
|---|---|---|---|---|---|
| B.M. # 8 | 8.04 | 4688.86 | ~~8.04~~ | 4680.86 | |
| R.R. SPIKE | | | 3.1 | 4685.76 | |
| 0+28 56 | | | 2.8 | 4686.06 | |
| 0+50 | | | 10.2 | 4678.66 | |
| 1+00 | | | 9.7 | 4679.16 | |
| 1+50 | | | 10.9 | 4677.96 | |
| B9 | 0.1 | 4677.58 | 11.38 | 4677.48 | |
| P.T | | | 8.8 | 4668.78 | |
| 3+00 | | | 14.9 | 4662.68 | |
| T.P 1 | 0.07 | 4668.88 | 8.77 | 4668.81 | |
| 4+00 | | | 12.1 | 4656.78 | |
| T.P. 2 | 0.4 | 4656.08 | 13.2 | 4655.68 | |
| 5+00 | | | 10.4 | 4645.68 | |
| 6+00 | | | 12.8 | 4643.28 | |
| 7+00 | | | 11.2 | 4644.88 | |
| T.P. 3 | 0.26 | 4644.14 | 12.2 | 4643.88 | |
| 8+00 | | | 11.9 | 4632.24 | |
| 9+00 | | | 12.6 | 4631.54 | |
| T.P. 4 | 2.40 | 4645.34 | 1.16 | 4642.94 | |
| 10+00 | | 4633.68 | 2.20 | 4643.14 | |
| TP 5 | 0.81 | ~~4645.34~~ | 12.5 | 4632.84 | |
| 11+00 | | | 10.0 | 4635.34 | 4623.68 |
| 12+00 | | | 8.1 | 4637.24 | 4625.58 |

WEST CORNER CONCRETE FOUNDATION LAMPLIGHTER DRIVE EST BY VALLEY ENGR ELEV 4680.86

07+30 DROP OFF WITH PILES OF RUBBLE

09+25 DROP OFF OF ABOUT 15' VERTICAL

10+40 DROP OFF OF 20' WITH RUBBLE

| STATION | + | HI | − | ELEV | |
|---|---|---|---|---|---|
| 13+00 | | | 9.43 | 4636.04 | 4624.38 |
| 14+00 | | 4631.58 | 8.64 | 4636.94 | 4625.28 |
| T.R 6 | 6.3 | 4643.24 | 8.4 | 4636.94 | 4625.28 |
| 15+00 | | | 6.9 | 4636.34 | 4624.68 |
| 16+00 | | | 2.7 | 4640.54 | 4628.88 |
| 17+00 | | 4631.44 | 4.3 | 4638.94 | 4627.58 |
| $B_5$ HUB | 3.96 | 4643.09 | 4.11 | 4639.13 | 4627.48 |
| 16+66.4 | | | 4.1 | 4638.99 | 4627.34 |
| 17+00.0 | | | | | |
| 17+50.0 | | | 19.5 | 4623.59 | 4611.94 |
| 17+86.6 | | 4619.41 | 17.0 | 4626.09 | 4614.44 |
| $B_5$ T.P.7 | 0.57 | 4631.06 | 12.60 | 4630.49 | 4618.84 |
| T.P #8 | +~~2.36~~ 1.31 | 4608.36 | ~~4.31~~ 12.36 | 4618.70 | 4607.05 ✗ |
| FLUME | | 4610.64 | 8.5 | 4622.56 | ~~4610.91~~ 4599.86 |
| T.P. 9 | 0.39 | ~~4622.29~~ | 9.70 16 | 4621.90 | ~~4610.25~~ |
| ROAD # 1 | | | 11.1 | 4611.19 | ~~4599.54~~ |
| ROAD # 2 | | 4598.05 | 12.1 | 4610.19 | ~~4598.54~~ |
| T.P.10 | .51 | ~~4609.70~~ 4585.68 | 13.10 | 4609.19 | ~~4597.54~~ |
| T.P. 11 | .21 | ~~4597.33~~ | 12.58 | 4597.12 | ~~4585.47~~ |
| P.C. 19+22.8 | | | 6.1 | 4591.23 | ~~4579.58~~ |
| 19+50 | | | 13.6 | 4583.73 | ~~4572.08~~ |
| 20+00 | | | 12.6 | 4584.73 | ~~4573.08~~ |
| 20+43.24 | | 4572.74 | 14.2 | 4583.13 | ~~4571.48~~ |
| T.P. 12 | .30 | ~~4584.39~~ | 13.24 | 4584.09 | ~~4572.44~~ |
| 21+00 | | | 5.2 | 4579.19 | ~~4567.54~~ |

T.P 15 HUB & TACK ON $B_7$ 14+28.28

17+50 IN GULLY

17+86.6 IS ON CONCRETE BUILDING GRADE TAKEN NORTH OF BUILDING END.

FLUME

ROAD #2 #1 ROAD #1, 2 ARE ON GL.

ROAD #1

ROAD #2

| STATION | + | HI | − | ELEV | |
|---|---|---|---|---|---|
| 22+00 | | | 6.4 | 4577.99 | 4566.34 |
| 23+00 | | 4567.06 | 8.1 | 4576.29 | 4564.64 |
| T.P. 24+00 | 2.05 | 4578.71 | 7.73 | 4576.66 | 4565.01 |
| 25+00 | | | 3.1 | 4575.61 | 4563.96 |
| 26+00 | | | 4.6 | 4574.11 | 4562.46 |
| 27+00 | | | 5.5 | 4573.21 | 4561.56 |
| 28+00 | | | 6.6 | 4572.11 | 4560.46 |
| 29+00 | | | 7.3 | 4571.41 | 4559.73 |
| 29+59.2 | | | 7.89 | 4570.82 | 4559.17 |

T

26+50 ± JOHNSON CONST OFFICE

END PROJECT ℄ 1ST SOUTH NAIL IN ASPHALT

RHudson
23 June 77

| STATION | + (13.5') | HI (7') | − | ELEV | C/F |
|---|---|---|---|---|---|
| BM #8 | 5.95 | 4686.87 | | 4680.92 | |
| R.R. SPIKE | | | 0.1 | 4686.77 | |
| 0+28.56 | | | 09 | 4685.97 | C .67 |
| 0+50 | | | 8.2 | 4678.67 | F 6.23 |
| 1+00 | | | 7.6 | 4679.27 | F 3.98 |
| ~~1+50~~ BS | | | 9.3 | 4677.57 | |
| ~~P.C.~~ T.P. | 0.38 | 4674.60 | 12.65 | 4674.22 | |
| P.T. | | | 5.7 | 4668.9c | |
| 3+00 | | | 11.8 | 4662.80 | F 9.63 |
| T.P | 1.81 | 4663.74 | 12.67 | 4661.93 | |
| 4+00 | | | 6.8 | 4656.94 | F 9.99 |
| 5+00 | | | 18.0 | 4645.74 | 15.69 F |
| T.P. | 0.56 | 4652.00 | 12.30 | 4651.44 | |
| 6+00 | | | 8.5 | 4643.50 | F 12.43 |
| 7+00 | | | 6.8 | 4645.20 | F 5.23 |
| T.P. | 2.07 | 4641.87 | 12.20 | 4639.80 | |
| 8+00 | | | 9.4 | 4632.47 | 12.46 F |
| 9+00 | | | 10.1 | 4631.77 | 7.66 F |
| T.P. | 4.37 | 4645.04 | 1.21 | 4640.67 | |
| 10+00 | | | 1.50 | 4643.54 | 9.61 C |
| T.P. | 1.57 | 4633.54 | 13.07 | 4631.97 | |
| 11+00 | | | 9 3 | 4624.24 | 4.19 F |
| 12+00 | | | 7.4 | 4626.14 | 3.21 C |
| 13+00 | | | 8.3 | 4625.24 | 7.81 C |
| 14+00 | | | 7.7 | 4625.84 | 13.91 C |
| T.P. | 8.99 | 4635.19 | 7.34 | 4626.20 | |

WEST CORNER CONCRETE FOUNDATION
LAMPLIGHTER DRIVE SET BY VALLEY
ENGRS ELEV 4680.86



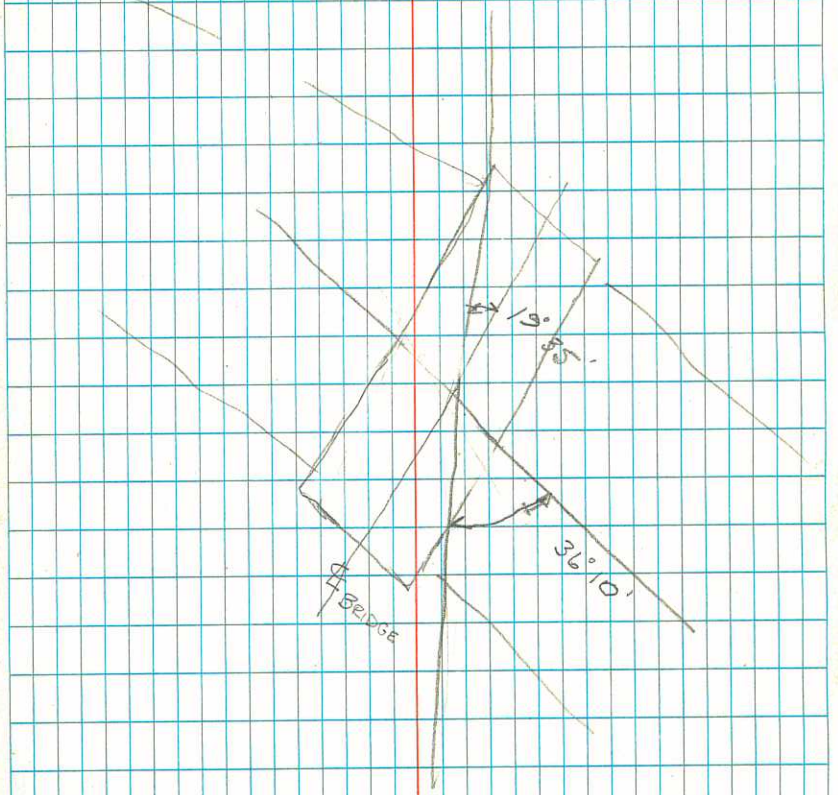
| STAT | 13.0 + | H.I. | − | ELEV | |
|---|---|---|---|---|---|
| 15 ~~13~~+00 | | | 10.0 | 4625.19 | 18.76 C |
| 16 ~~14~~+00 | | | 5.7 | 4629.49 | 26.29C |
| P.C 16+ | | | 7.1 | 4628.09 | |
| 17+00 | | | 7.2 | 4627.99 | 31.69C |
| ~~17~~+ TP | 1.44 | 4629.34 | 7.29 | 4627.90 | |
| 17+50 | | | 16.0 | 4613.34 | |
| P.T. | | | 13.8 | 4615.54 | |
| B5 T.P | 0.89 | 4620.43 | 9.80 | 4619.54 | 33.54 C |
| T.P. | 0.21 | 4608.70 | 11.94 | 4608.49 | |
| T.P. | .33 | 4601.05 | 7.98 | 4600.72 | |
| E FLUME | | | 4.59 | 4596.46 | ↓ |
| ROAD & | | | 12.9 | 4588.15 | 5.31 C |
| T.P. | 0.92 | 4588.96 | 13.01 | 45.88.04 | |
| T.P | 0.54 | 4577.25 | 12.25 | 4576.71 | |
| P.C. | | | 8.0 | 4569.25 | 8.7 F |
| 19+50 | | | 15.5 | 4561.75 | 14.13 F |
| 20+00 | | | 14.6 | 4562.65 | 9.38 F |
| T.P. | 0.61 | 4566.05 | 11.81 | 4565.44 | |
| 21+00 | | | 8.9 | 4557.15 | 7.15 F |
| 22+00 | | | 10.1 | 4555.95 | .7 F |
| T.P | 4.25 | 4560.18 | 10.12 | 4555.93 | ~~.27~~ |
| B.M | | | 5.41 | 4554.77 | |
| 23+00 | | | 5.8 | 4554.38 | .27 F |
| 24+00 | | | 6.0 | 4554.18 | .02 F |
| 25+00 | | | 8.3 | 4551.88 | .23 F |
| TP | 4.22 | 4556.03 | 8.37 | 4551.81 | |

9340-100

ANGLE IRON ON BRIDGE

| STAT | + | H.I | − | ELEV | |
|---|---|---|---|---|---|
| 26+00 | | | 5.60 | 4550.43 | .82 E |
| B.M | | | 3.87 | 4552.16<br>~~4556.09~~ | |
| 29+00 | | | 6.6 | ~~4548.43~~ | .96 E |
| 29+59.2 | | | ~~7.3~~ 7.28 | 4548.75 | G |
| | | | | 4549.75 | |

BM ST 30 ELEV ~~3.87~~ 4553.48




9340-100

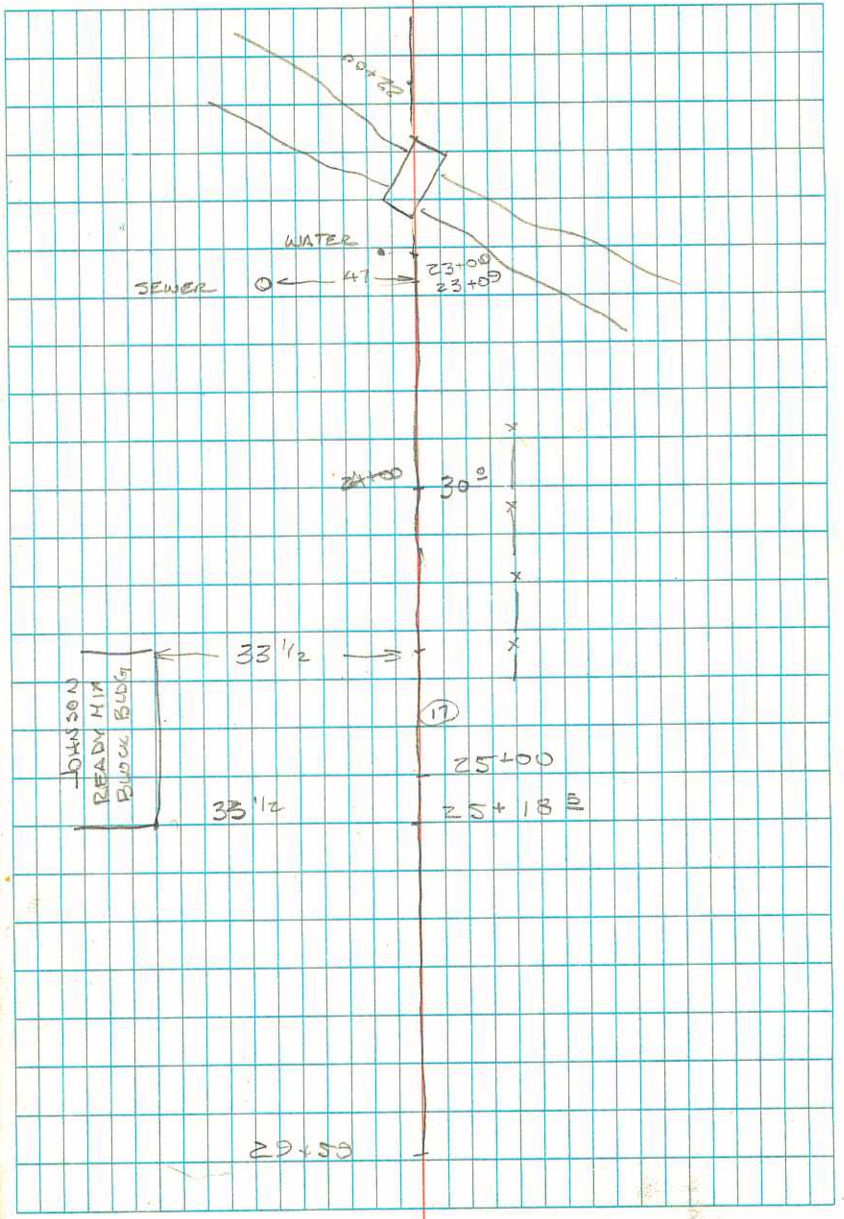
23+00 WATER LINE VALVE 5 5/5

23+09 SEWER MAN HOLE 47°

24+00 FENCE LINE 30°

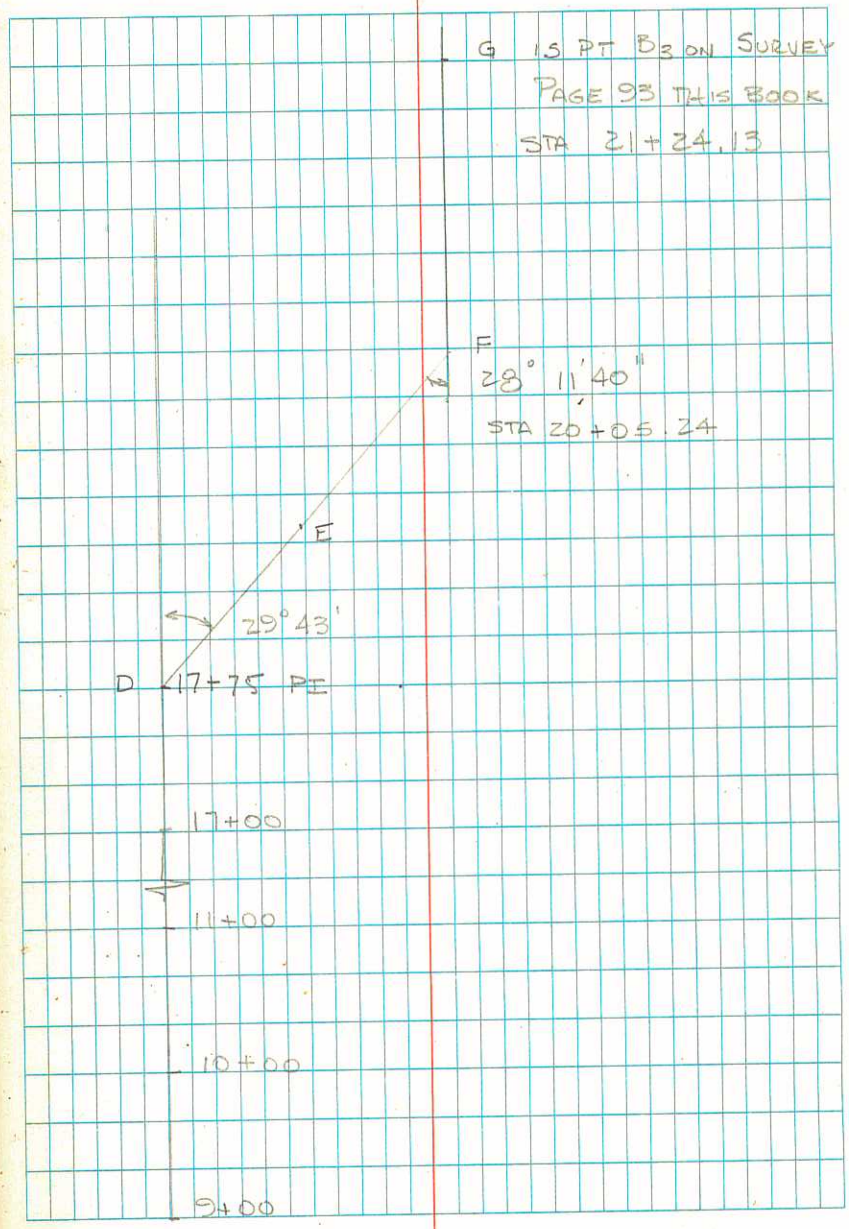
24+83 SAME 33 1/2

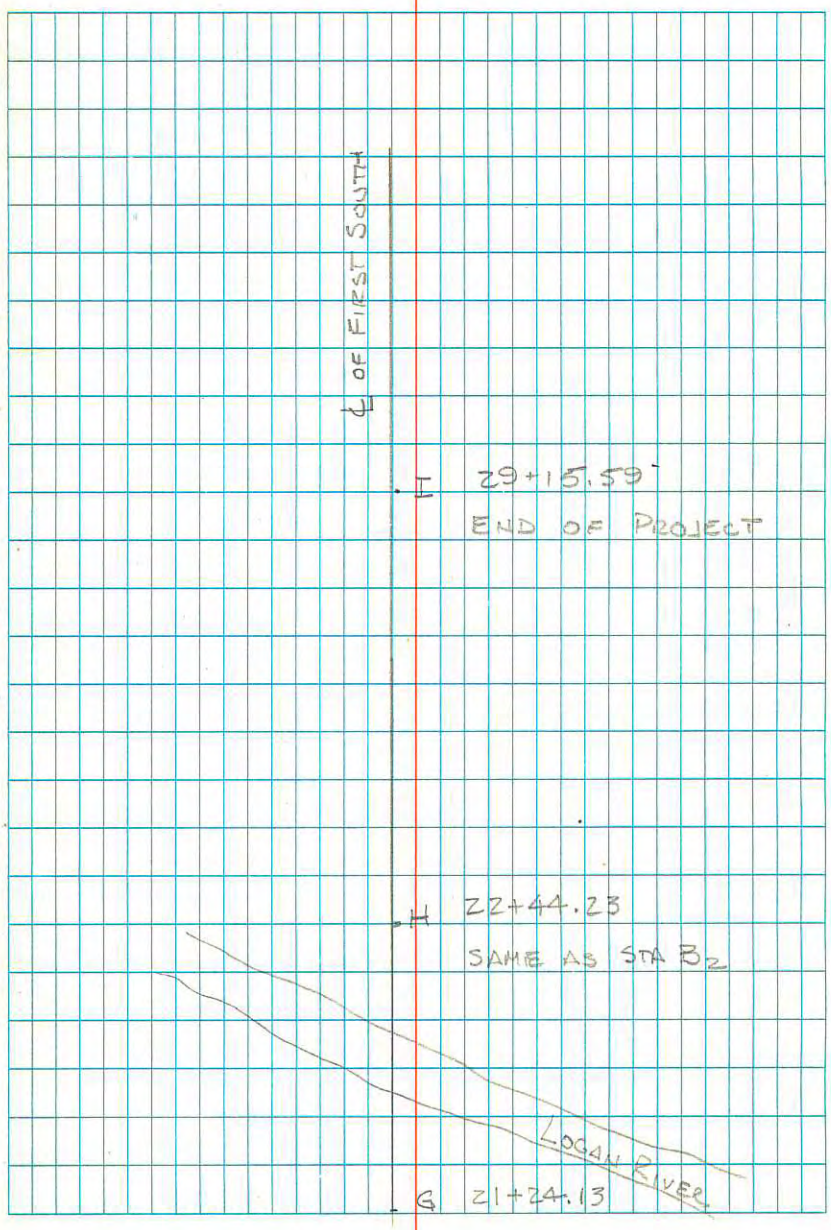
25+18.5 JOHNSON READY MIX ~~BLOCK~~ BUILDING 33 1/2



| STA TO STA | HOR ∠ | VERT ∠ | SLOPE DIST | HORIZ DIST |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

| | Horiz ∠ | Vert ∠ | Slope Dist | Horiz. Dist | |
|---|---|---|---|---|---|
| F to G | 28°11'40" | | | 118.89 | |
| E to F | 0° | 257.01' | 190.49' | | |
| D to E | 29°43 | 4°33 | 45.15 | | |




℄ OF FIRST SOUTH
H
29+15.59'
END OF PROJECT
H
22+44.23
SAME AS STA B2
LOGAN RIVER
G
21+24.13

| STA | 11⅛ + | 12.7 HI | − | ELEV | |
|---|---|---|---|---|---|
| BM#8 | 1.79 | 4682.71 | | | 4680.92 |
| 0+00 | ~~13.9~~ | | 13.9 | 4668.81 | |
| TP#1 | 4.17 | 4677.91 | 8.97 | 4673.74 | |
| TP#2 | 1.91 | 4668.55 | 11.27 | 4666.64 | |
| 1+00 | ⁄ | | 15.8 | 4652.75 | |
| 1+50 | | | 0.3 | 4668.25 | |
| 2+00 | | | 2.8 | 4665.75 | |
| 2+50 | | | 6.9 | 4661.65 | |
| 3+00 | | | 7.5 | 4661.05 | |
| 4+00 | | | 15.7 | 4652.85 | |
| TP#3 | 0.35 | 4655.88 | 13.02 | 4655.53 | |
| 5+00 | | | 11.70 | 4644.18 | |
| TP#4 | 3.02 | 4646.40 | 12.50 | 4643.38 | |
| 6+00 | | | 6.00 | 4640.40 | |
| 7+00 | | | 13.3 | 4633.10 | |
| 8+00 | | | 12 14.0 | 4632.40 | |
| 9+00 | | | 2.8 | 4643.60 | |
| 10+00 | | | 8.0 | 4638.40 | |
| TP | 2.10 | 4640.76 | 7.74 | 4638.66 | |
| TP | 3.02 | 4631.23 | 12.55 | 4628.21 | |
| 11+00 | | | 6.2 | 4625.03 | |
| 12+00 | | | 4.5 | 4626.73 | |
| 13+00 | | | 5.9 | 4625.33 | |
| 14+00 | | | 5.3 | 4625.93 | |
| 15+00 | | | 4.3 | 4626.93 | |
| BM#4 | | | 1.85 | 4629.38 | 4629.43 |

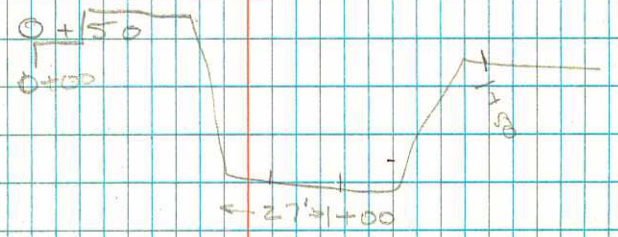
8 July 77 & Profiles.

Hudson's Notes — Hot, sunny

Ward

Boshe

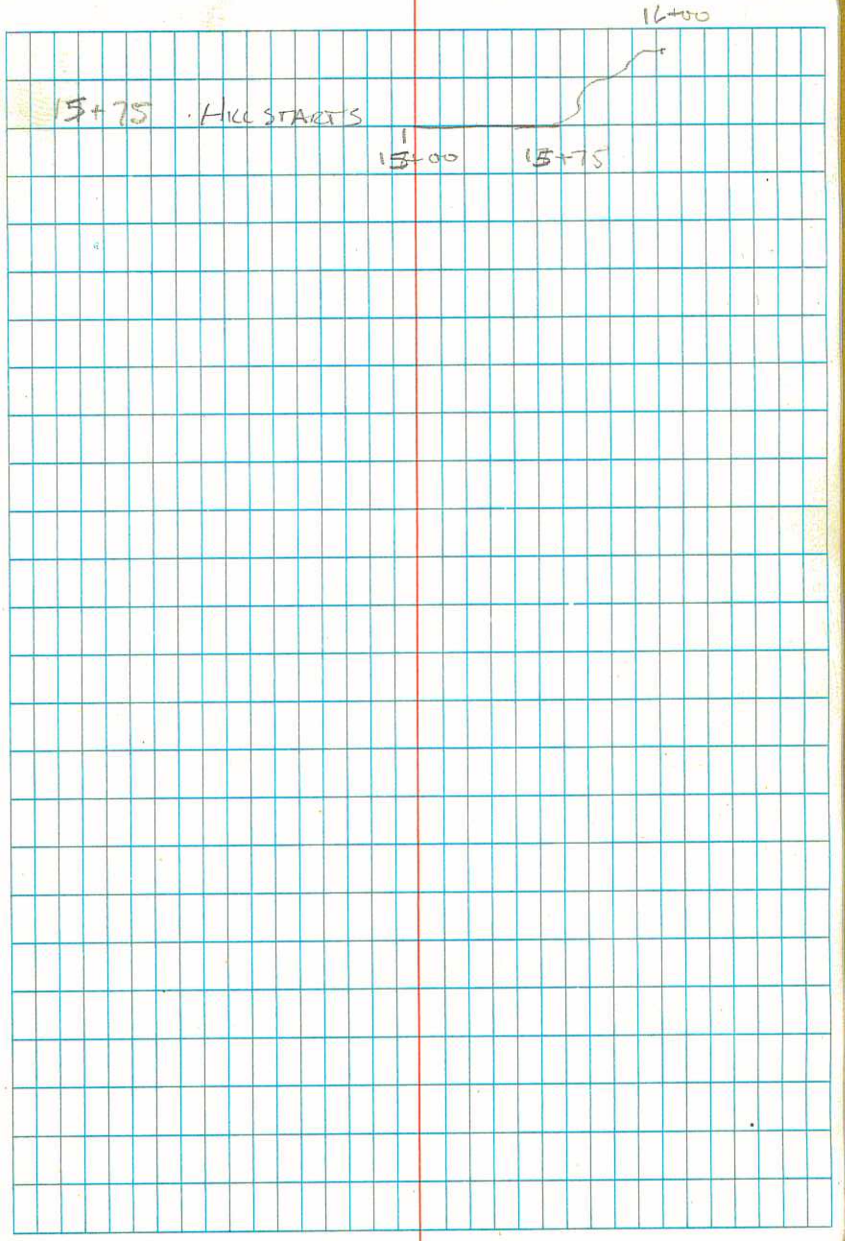
B.M.#8 is corner of lamplighter drive post




8+80 Vertical rise 15'

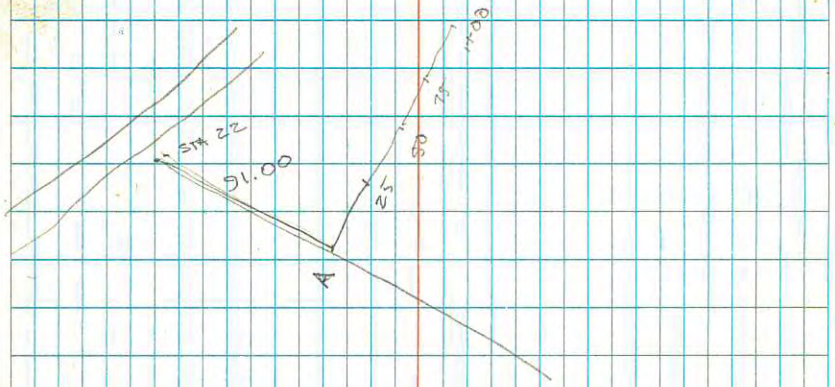
10+12 Drop of 20'

| STA | + | HI | − | ELEV | BM ELEV |
|---|---|---|---|---|---|
| TP | 10.21 | 4640.53 | 0.91 | 4630.32 | |
| 16+00 | | | 3.24 | 4637.29 | |
| TP | 1.76 | 4629.21 | 13.08 | 4627.45 | |
| TP | 0.56 | 4617.66 | 12.11 | 4617.10 | |
| ~~16+~~ | | | | | |
| 17+00 | | | 4.2 | 4613.46 | |
| 17+75 PI | | | 9.7 | 4607.96 | |
| BM # 3 | | | 12.35 | 4605.31 | 4605.54 |



| STA | B.S | HI | F.S. | ELEV | |
|---|---|---|---|---|---|
| B.M #2 | 6.66 | | | | 4555.96 |
| A | | | 4.80 | ~~4.8~~ | |
| B +25 | | | 5.67 | | |
| +50 | | | 7.22 | | |
| +75 | | | 8.53 | | |
| 1+00 | | | 9.48 | | |

ELDER'S DRIVE WAY




177 +00 - 91

9340-100

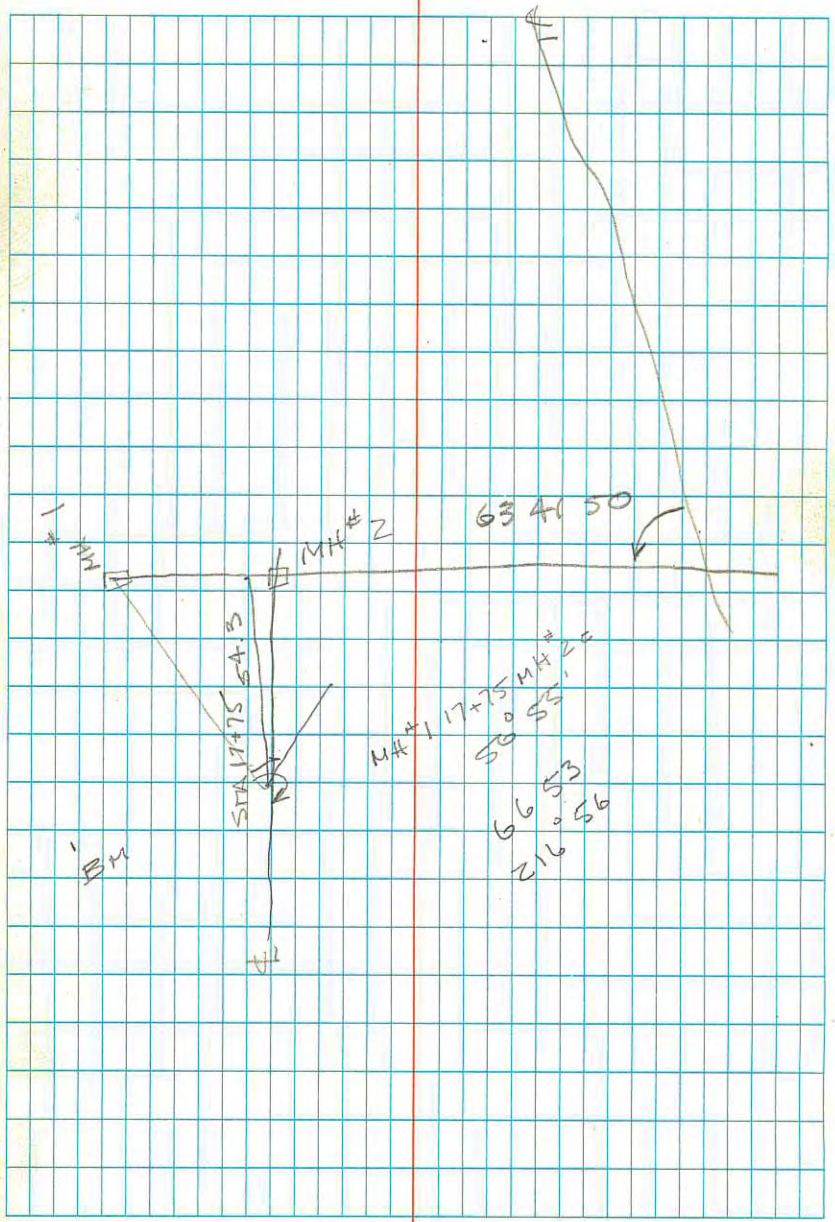
# FLUME ℄ & ELEVATION

| | | | | |
|---|---|---|---|---|
| STA 17+75 | | | | 54.3 |
| MANHOLE #2 | | | | 8 |
| MANHOLE #1 | | | | 88+48 |
| ℄ 1ST So. | | 634150 | | |
| ℄ CANAL | | | | |
| BM #3 | 3.66 | 4609.2 | ~~3.85~~ 3.73 | 4605.54 |
| MH #1 | 11.92 | 4609.43 | 11.79 | 4597.41 |
| MH #2 | ~~11.85~~ | ~~4609.36~~ | 11.69 FL | 4597.51 |
| MH #3 | ~~11.85~~ | ~~11.4~~ | 11.40 | ~~4597.26~~ 4598.00 |

9340-100

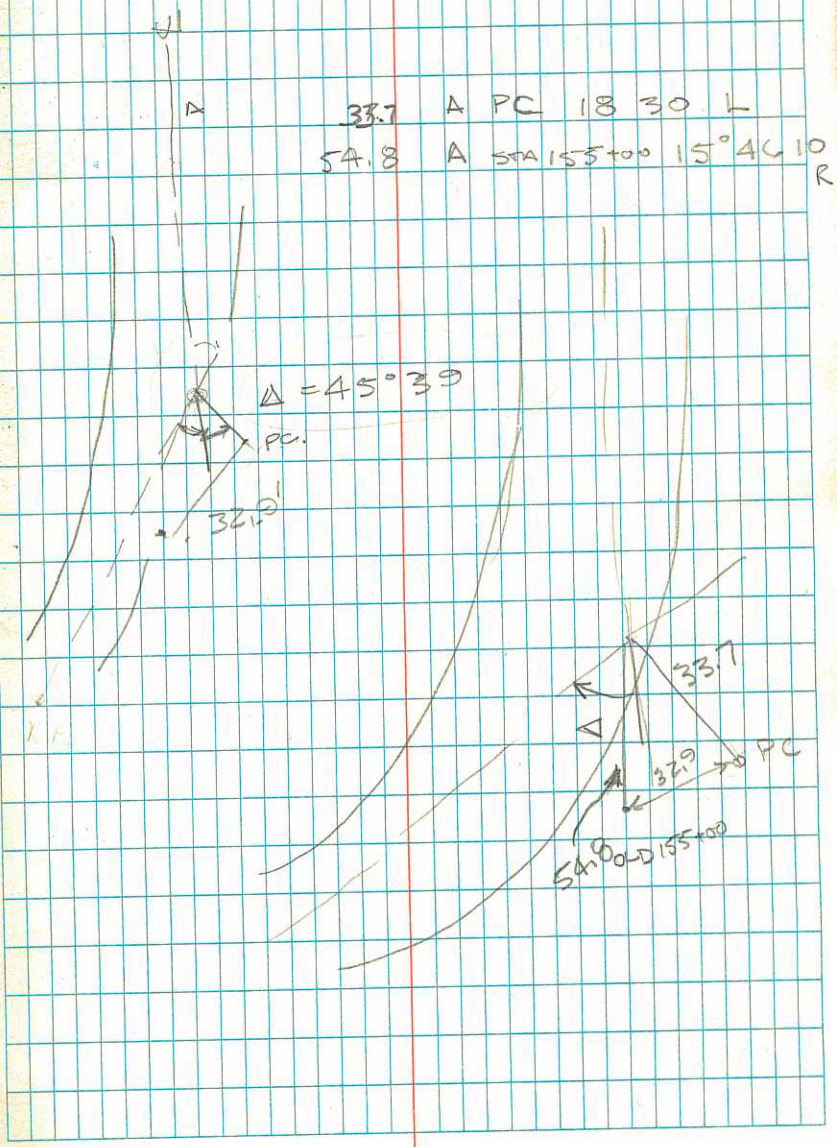
125

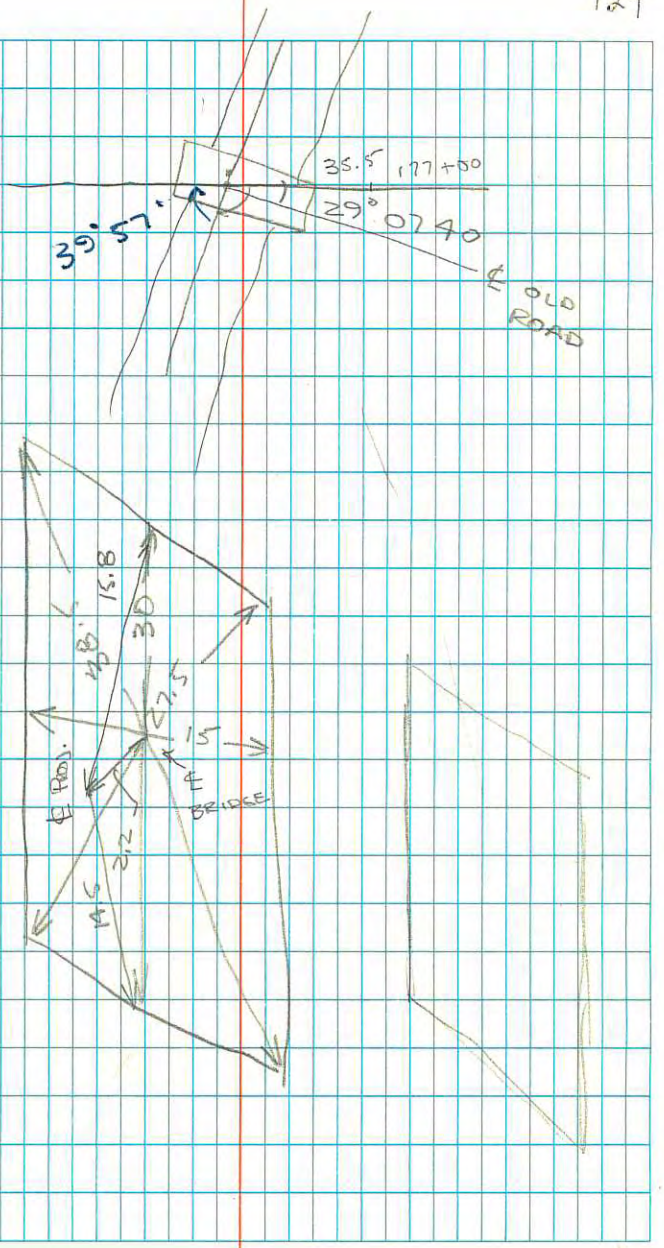
63° 41 50



33.7 A PC 18 30 L

54.8 A STA 155+00 15° 46 10 R




35.5
177+00
29°
0740
R
0.40
ROAD
39°57'
15.8
45°
30
27.5
15
℄
BRIDGE
2.2
4.6

1 AUG 77 SET FINAL ℄ CR 351 (2)

HUDSON NOTES HOT, SUNNY 80°

WARD T PPM 43

BOSHE ϕ

SET ON BLUFF TO CHK SECTION CORNER

| | | | |
|---|---|---|---|
| FENCE CORN | 268°52' | 404.37 | 404.29 |
| PROV. CEMET. BLUFF SUBD. | | | |
| CORN TO SEC COR | 94°17 | 398.57 | 397.51 |

SET ON SEC COR TURNED 90° FROM SECTION LINE AND SET 180°.00' ℄

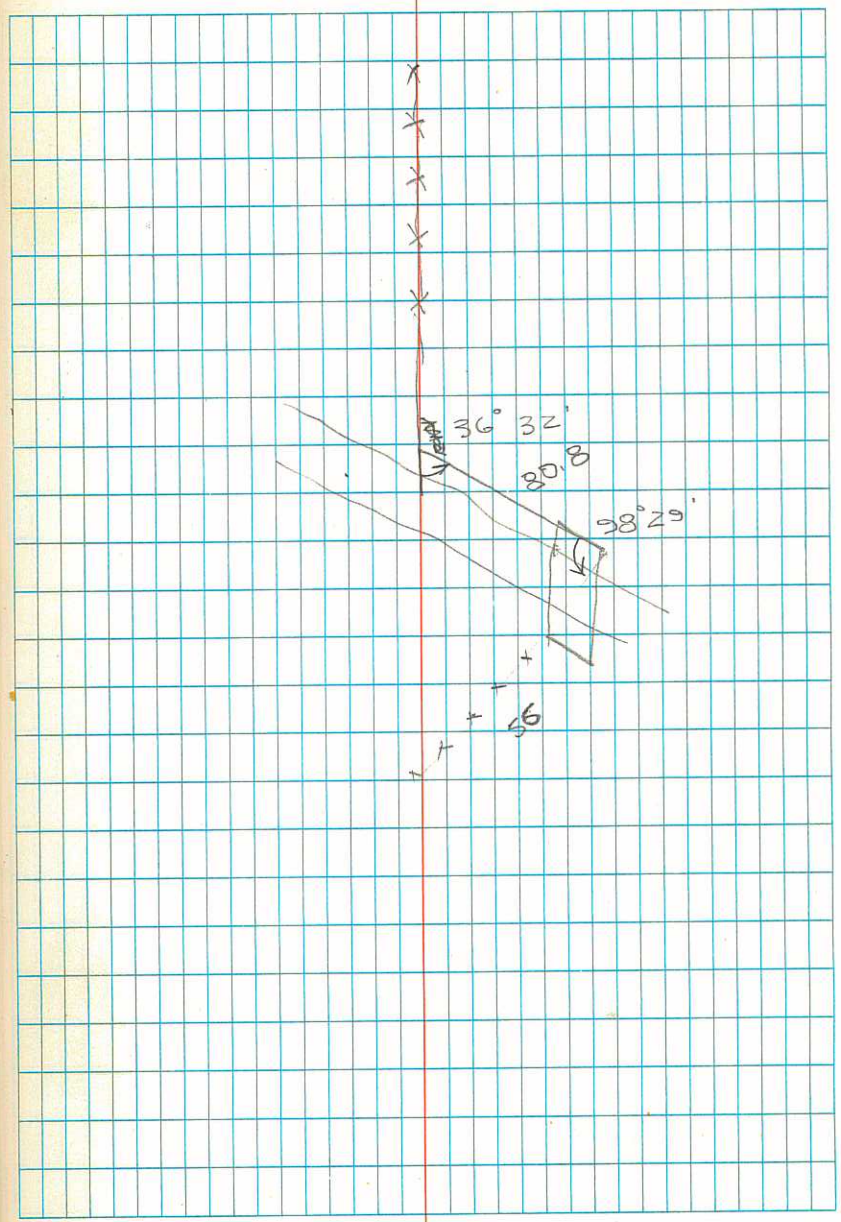
| | | |
|---|---|---|
| 266°35' | 180.39 | 180.0 |
| 93°43 | 180.38 | 180.0 |

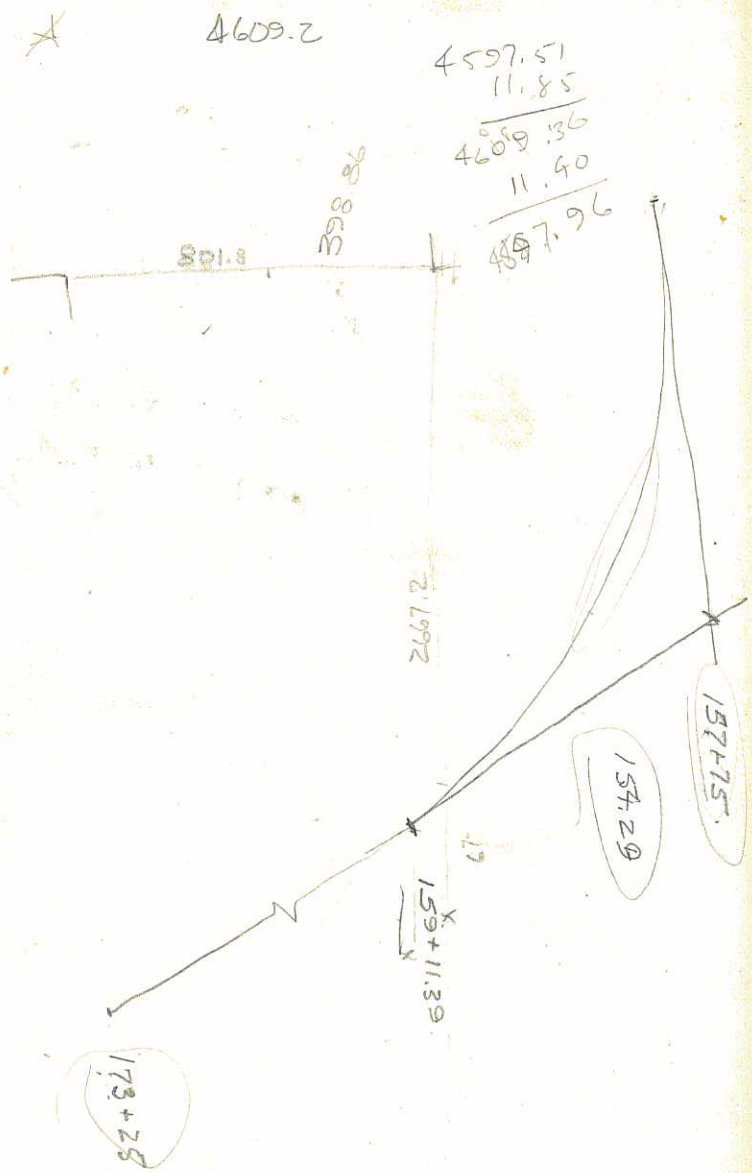
SET ON ℄ 10TH E. AND SHOT TO STA 143+

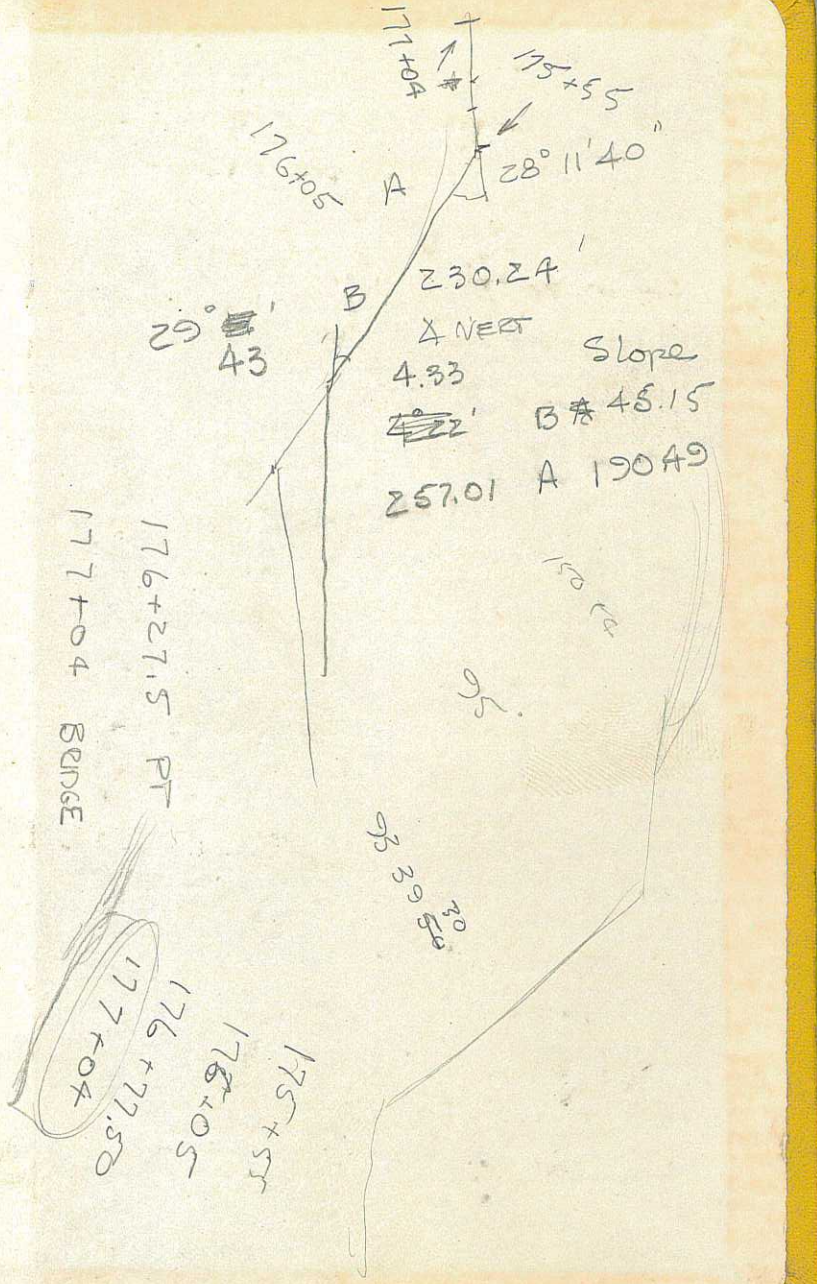
| | | | |
|---|---|---|---|
| 0° | 268°10' | 1157.23 | 1156.64 |
| 0° | | | 56.1 |

7 SEPT 77

SET UP ON FENCE LINE END AT RIVER BANK AND SHOOT TO NW CORNER OF BRIDGE.




4609.2
4597.51
11.85
4609.36
11.40
4597.96
S01.8
35°00'
2667.2
157+75.
154.29
157+11.39
173+28


177+04
175+55
28° 11' 40"
176+05
A
B
230.24'
29°
43'
4.33
257.01
A 19049
Slope
B 45.15
176+27.5 PT
177+04 BRIDGE
177+04
176+77.50
176+05
175+55