

23

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MINING  
TRANSIT BOOK

384

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W155

25  
13  
4x

194  
8  
371

MICROFILMED

JAN 8 1965



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Filled



Dist to Div Wall face at E1585 = 32.37  
from 397 R.

397.00  
1590 Div Wall = 367.82  
39.18 E1. 1590

Checked in  
Book 24

Sub  
meter.

Upstream Points - Downstream Points  
Block 0+93.2<sup>4</sup> Nail in West from  
to 1+42.80 Nail in form.

Rest 397 - D-1+00 by intersection set 10' points  
on 397 line to East from in Block = 1+42.80

Set on 397-1+00 + set Nail for D.S. face  
at Dist 20.52 on Gravity Section, and 19.89  
for Overflow section for E1-1590

Set point 397-1+32.8 and at 1<sup>st</sup> set  
Nail in Wash Wall form at 29.18 for E1590

Nail for Divide Wall  
E1 1590 Gravity Section = 376.48 R.

376.09 R Div. Wall = 1603

376.73 R " " = 1604

.64 = diff 1'

$$\frac{1 \times 39}{.64} = .61$$

1603.

.61

376.48 R.

1603.61 Div. Wall E1 above

1590

13.61  $\times 1\frac{1}{4}$ " = 1.42

1.42 + 2 = 3.42

1374 1348 \* 1590.45

1576.97

Nail in Div Wall 29.18 - Fill @ 4.15

4.60

85.85

Nail in Wash D.S.F. 376.48 R.

4.78

1585.67



II. S.F. Radius -

Lift 1565-1575

	4.6948
36612	171887
	146448
	254390
	219672
	347180
	329508
	176720
	146448

47  
236  
705

36612 Radius -

1'	0-	04.6948
10'	0-	46.948
20'	1-	33.896
30'	2-	20.844
40'	3-	07.792
50'	3-	54.740
60'	4-	41.688
70'	5-	28.636
80'	6-	15.584
90'	7-	02.532
100'	7-	49.580

	302720
	292896
	9824

II. S.F. Radius

Lift 1575-1585

	4.6028
37344	171887
	149376
	225110
	224064
	104600
	74688
	299120
	298752
	368

1'	—	4.6028
10'	0-	46.028
20'	1-	32.056
30'	2-	18.084
40'	3-	04.112
50'	3-	50.140
60'	4-	36.168
70'	5-	22.196
80'	6-	08.224
90'	6-	54.252
100'	7-	40.280



11/1/21  
 Bryson  
 Fisher  
 Minter

Quarry Sections  
 For Shot # 3

#1 At 5+18 = Sight. for Zero

45° Az Right

5+18 =	stadia Dist	Vert. Angle	Hor. Angle	Rod	Elev	Corrected Dist.
	134.0	2-0	319-30	2.0	45.0	134.0 ✓
	141	10-30	312-0	4.62	+25.3 / 70.5	136.0 ✓
	141	12-45	308-5	4.62	+30.7 / 76.0	133.8 ✓
	143	10-30	294-40	4.62	+25.6	137.8 ✓
	150	13-0	289-30	4.62	+32.9 / 77.5	142.3 ✓
	148	15-15	284-0	4.62	+13.5 / 59.1	149.0 ✓
	149	2-30	280-45	4.62	+6.5 / 52.5	149.0 ✓
	151.0	2-0	275-30		60.0	151.0 ✓
	155-0	2-0	272-30		56.0	155 ✓
	159-0		268-0		60.0	159 ✓
	159-0		262-0	22	48.0	159 ✓

#2 Line

175	7-20	270-0	462	+22.2	67.9	172.4 ✓
181	7-30	270-30	"	+23.5	69.1	178 ✓
178	7-15	272-30	"	+22.3	67.9	175.3 ✓
164	5-0	273-15	"	+14.3	59.9	163 ✓
179	9-30	274-0	"	+29.2	74.8	174 ✓
162	7-0	280-0	"	+20.6	66.2	159.6 ✓
160	6-45	274-30	"	+18.2	64.3	157.6 ✓
153-0	7-0	290-30	"	+18.5	64.1	150.7 ✓
152-0	9-30	296-30	"	+24.8	70.4	147.7 ✓
150-0	10-15	302-0	"	+26.3	71.9	155.5 ✓

Platted 11/1/21  
 G. G. J.





Platted 11/1/21

147	12-0	307	462 + 275	721	140.7
163	13-0	309	462 + 352	815	154.7
150	10-30	312	462 + 270	726	145.0
160	11-30	313-0	462 + 149	625	143.6
156	9-45	316-0	462 + 280	716	151.5
162	10-30	316-0	462 + 290	746	156.6
164	10-30	319-30	462 + 295	751	158.6
147	7-0	319-0	462 + 179	735	144.8

11/1/21

Bryson  
Fisher  
Mittler

### Quarry Sections

Top of #3 Plug      1.5    1849.00      1847.50

at hole ~  
Ground

#2 Hole

60      434

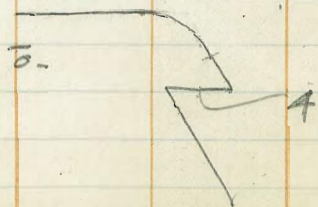
2'      60      434

5'      75      415

5'      20.5      285

#3 Hole

Platted  
11/1/21





11/2/21  
Fisher  
Mixer

U.S. F Pts. 1+94 - 2+72

At 397' Radius - Ran out Points.

Chamber  
Strip

3.82 68.82 1565.00

Top of Cliff

5.27 63.55

65.00 3.00

11/3/21

Downstream Face

1555 - 1565 - 2+72 - 3+27

At C 28 Sight T.P. North - Chain

382' from 28-3588 -

At 28-3588 Sight C 28 for 90° Turn

10

0°-48'

20

1-36'

30

2° 24'

Set nail 4.35 - South of 28-3588



1/31/21

Fisher  
Master

Location of Guy Wire -

To determine length of cable

At 42-250 Sight 42-217' for 200'

46 1511.9 1507.27

265 48-54 4.80 07.1

At 40-358.8 Sight 40-250 for 700'

40-358.8 5.4 15601 1555.1

297 32-56 10-36 5.4

Dist scaled - Horz = 288'

Elev. Top of Tower = 1657. -

Elev of guy 1653.00

Elev of Anchor -  $\frac{1507}{146} = \text{Diff in Elev.}$

146  
146  

---

584

146  
21316  

---

82944

1042'60" | 3229

62 | 142  

---

124

62 | 1860  

---

1244

6229 | 61600  

---

5539

288  
288  

---

2304  
2304  

---

576  

---

82944

323'

+ 30

---

353' = length

Checked  
C.H.B.



11/4/21

Fisher  
Mixer

Elev 1607 - for Clearing Reservoir Basin

Stake Tip of Gravity Section	3.2	1620.2		1617.00
	-0.3	1607.	12 9	1607.3

Set Flags at E1-1607-

11/5/21

Fisher  
Mixer

Star Drill Hole #1

	2.0	1854.2		1847.2
Elev of Casing			4.8	1849.4
Elev of Quarry Floor -				1745.0
				104.4
				+2.0
				106.0

Depth of Hole -



11/5/21  
Fisher  
Mixer  
H06  
18-488<sup>00</sup>

Outlet Tower -  
Beam for #2 Outlet Valve

2.19 1563.30 1561.11

3.4 am.  
of support to Beam -

4.29 1559.01

TP 6.85 70.02 0.13 63.17

Heights for 1565-Elev -1+94-2+72

1	156500	6.23	63.79	1.21	1-2 <sup>1/4</sup> "	✓
2		6.23	63.79	1.21	1-2 <sup>1/2</sup> "	✓
3		6.17	63.85	1.15	1-1 <sup>3/4</sup> "	✓
4		6.19	63.83	1.17	1-2"	✓
5		6.17	63.85	1.15	1-1 <sup>3/4</sup> "	✓
6		6.06	63.96	1.04	1-1"	✓
7		6.19	63.83	1.17	1-2"	✓
8		6.24	63.78	1.22	1-2 <sup>5/8</sup> "	✓



11/5/21  
Fisher  
Mista

Left Abutment. 12.06

D.S.F Gravity Section

At C 50 Sight R.P. South for 00

Chain - 57.77 - Set Nail

12.06

57

12.63

45.14

57.77

At Nail - 57.77 from C 50 - Sight  
C 50 Turn 90 - Does not check  
form by 0.16 -

Measured from nail - <sup>330.2</sup> Set from  
D.S.Pts - 8.92 = 339.12 -

Ran Line at right Angles from  
339.12 + measured all - for correct  
line which checks within 0.04

Difference in Sta. = 0.11

7

12.06

57

12.63



Dryson  
Fisher  
Mister

11/9/21

7+51E - 5420

D.S Face -

At 50-397 - Sight RP South chain

53.60 = 50-343 42

At 50-343 40 Sight 50-397<sup>00</sup> fr

90° - Turn -

50-33020

12.17 37.21

1525.04

2.07 35.14

1.72 35.49

397  
343.40  
53.60

53.00  
12.07  
41.53  
80

40.78 For Overflow

37.38 For Grav.

37.38

~~346.75~~

12.89

365.13

346.75

19.38

328.37

19

346.75  
343.40  
3.35

77  
20  
13.08

20

8

1535E 328x13

153528

1559.0

1559.11

35.14

23.97

346.75

346.61

.14

22

98

98

11078

Check Shot. ← 35.31 form high 2 1/4"

5  
38  
27  
266  
266  
2926



B-1  
M-1  
11/11-1  
Fisher  
Mixed

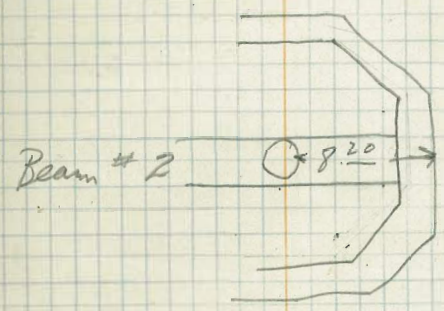
Outlet Gallery -

18-488-	3.79	64.90	156.11
		5.90	59.00
		5.89	59.01
Top of Pipe	2.10	62.80	
Bottom of Bell -	2.48	62.42	

50

9

6.250
59.01
<hr/>
3.79
25
.04



From flow line of pipe to  
Outside form = 8.20

8.20
1.25
<hr/>
9.45 = Dist to E of pipe.



11/12/21  
Fisher  
Mixer

Pts to use - on East Tangent.

At C 5+90 - Sight Tangent for  
Zero Turn. 90° -  
chain

19.07 set nail -

35.43  
54.50 = nail in Whale -

3.30  
57.80 - nail in Lift 7535

At <sup>59</sup> 342-20. Sight C 5+90 for Zero

Auxil pt  
Nail in  
Lift 1525

\$1.00 190-30

At C 62 Sight RP East Tangent for Zero  
Turn 90° - chain south

21.28 = nail = 62-378 72

26.26 = edge of concrete -

Sd nail 51.06 = nail = 62-348.94

At 62-378 72 Sight Center for Zero

Turn

Nail  
Auxil pt

296-15

4890  
19.07  
29.83

6.88  
4.12  
11.00

17.9  
1.9  
5.0  
24.80  
26.26  
51.06

2.50  
26.26

4.24  
5.0  
5.04

14.96

50.00  
51.06  
248.94



11/22/21

Final Topog.

Lift 1525	0.92	1525.42		1525.00
TP	1.15		12.5	12.92
	At 62	-348.94	Sight	6.2 for zero
TP	6.15	14.07		12.92
ac 1510	3.2	296.0		6.6 07.4
			Ard + 1.0	
Ard 40	2.0	281-30	Complete	31.9 24.3
	5.9	234-15	✓	31.8 23.7
15/10	8.1	203-45	✓	23.6 22.7
✓	6.0	191-45	✓	16.6 21.6
✓	1.9	188-0	✓	11.2 19.6
✓	1.5	70-0	✓	9.4 17.9
✓	4.5	11-15	✓	7.3 17.5
✓	7.7	3-30	✓	5.4 14.2
✓	1.2	8-0	✓	8.5 5.7
✓	14.7	359-30	✓	14.0 5.6
✓	18.4	4-0	✓	13.6 5.1
✓	18.3	0-30	✓	11.5 5.3
✓	16.0	355-15	✓	12.3 4.6
✓	11.6	345-0	✓	17.5 3.0
✓	9.5	328-30	✓	26.6 2.9
✓	8.7	316-0	✓	26.0 2.4
✓	7.6	314-0	✓	19.9 2.1
				20.0 1.8

Ard + 1.2

1515	24.0	15-0	✓
	23.6	2-30	✓
	20.7	356-0	✓
	20.1	351-30	✓
	20.4	342-0	✓
Complete	21.7	337-30	✓
	3		
	33.2	310-15	✓
	34.2	241-0	✓
Auxil pt	29.02	49-56	✓

Platted  
11/22/21  
g.s.t.



11/12/21  
Bryson  
Fisher

At Auxil Pt from 62-34894 Sight

HI 4.55

62-34894 fr Zen Az Rt -

T.P. 11.30 1524.22 1512.92

contour 1520 Rod. 4 <sup>22</sup>	Azimuth	Dist.	Cont. 1520 Rod. 4 <sup>22</sup>	Az.	Dist.
	5°	63.7 ✓		43°30'	25.4 ✓
	3°30'	61.5 ✓		43°30'	28.4 ✓
	0°45'	59.3 ✓	Concrete	44°10'	28.4 ✓
	359°45'	55.5 ✓			
	353.30	46.0 ✓			
	347.15'	41.5 ✓			
	<del>341.15</del>	<del>28.8</del> ✓			
	343.25	28.5 ✓			
	<del>341.15</del>	<del>28.9</del> ✓			
	335°30'	20.3 ✓			
	326.15'	12.0 ✓			
	299.30	4.5 ✓			
	212°45'	1.4 ✓			
	148.30	3.5 ✓			
	160 45	5.5 ✓			
	118°	11.5 ✓			
	100°45'	13.0 ✓			
	92°30'	12.6 ✓			
	85°30'	14.0 ✓			
	69°30'	16.4 ✓			
	65°45'	19.7 ✓			
	51°45'	22.7 ✓			

Platted ✓  
11/13/21  
B. J.



11/15/21  
Bryson  
Fisher  
Mixer

D. S. F Pt  
Overflow - Gravity - East Tangent

At 50-397 - chain South -

42.72 = 50 - 354.28 Set nail

45.90 = 50 - 351.10 Set nail

7.64 To D. S. Form Overflow

15.35 To D. S. F. Wash Wall

197.29  
345.40 R

4.85

49.91

1545.06

343.46  
7.64

4.52 45.39

335.75  
15.35

4.63 45.28

351.10

4.79 45.12

354.28

4.74 45.17

351.10 Radius

1' = 04.8957

10 = 49'

20 = 1°38'

351.10  
7.64  
343.46

351.10  
15.35  
335.75

From 397

12.07

72

45.90

12.79

12.79

33.11 To Overflow

42.72

12.79

29.93

1554.95 = F = 9.56 = 9' 6 3/4"

Down 34 = 4 1/8"

1544.94 = F = 9.56 = 9' 6 3/4"

64.90 = 18.78 = 18' 9 3/8"

68.98 = 23.81 = 23' 9 3/4"



11/15/21

Fisher

Maxter

Fillet - Concrete Lift - 1525

At ~~50~~ Axil Pt on Lift 1525

from 50 - 342.20 Sight Axil

from 62 - 348.94 - for Zero

14.9 215-15 ✓

11.9 207-0 ✓

9.0 173-15

2.6 151-0

2.5 72-30

Platted 11/15/21  
E.S.T.

14



11/18/21  
CHB  
FIF

# Final Topog. Left Abt

Inst. at C. 62. Sight C. 64

Topog. point	52° 24'	36.71
B.M.	3.44	152844
		1525
Az	Dist.	
Contour	270° 30'	65.3
1520	263° 45'	64.3
Rod 8.44	263° 45'	59.0
	258° 45'	49.5

Cor. Conc.

Platted  
11/18/21

Contour			Cor. Conc.		
1525	269° 40'	66.2	1525	113° 45'	6.4
Rod 344	262°	65.2	rod 3.44	31° 10'	7.4
	262° 20'	62.3		17° 15'	9.7
	260° 30'	55.3		6° 15'	9.7
	255° 50'	48.4		353° 15'	10.9
	251°	45.7		342°	15.2
	247° 45'	33.2		340° 30'	17.2
	241° 30'	29.6		316°	20.8
	234°	18.5		306° 30'	24.4
	222°	13.5		305° 45'	27.1
	214° 10'	12.6			
	174°	8.1			
	150° 40'	9.5			
	148°	11.0			
	136°	11.0			

25.21  
11.56  
36.71

Avail from

59 - 342 = 271° 36'

Underment

1.5 9.8  
1.5 8.0

12 by add

Vertical 5'  
5'

Concrete



4/21/21  
Bryson  
Fisher

Location of Concrete  
Form-

16

At C62 Sight C64 for zero

	29.0	
RC	<del>45-0</del>	45-0
△	35.4	50-50
	47.1	50-30

544 153044 152570

4.90 152554



1/23/31  
Bryson  
Fisher

# Topog - Right Abutment.

At (312° 20' 0" 1+3658) Sight P.P. North  
Chain 43.08 set nail -  
(355.78 1+3658)

At (355.78 1+3658) Sight (312° 20' 1+3658)  
for zero turn  
Dist. 37.59' to Inst. Point.

86-14'

5.21	1560.25		1555.04	
T.P.	1.08	1548.46	12.87	1547.38
T.P.	1.89	1546.07	4.28	1544.18

Contour 1535

Rod 11 <sup>07</sup>	310° 15'	7.90	✓
	281 48	8.15	✓
1335	286°	11.40	Vert- 15'
	242° 15'	19.20	✓ 16'
	229° 30'	20.40	✓
	220° 15'	19.60	✓
	214° 30'	17.90	✓
	207° 45'	17.20	✓
	201° 15'	15.80	✓
	205° 30'	13.60	✓
	203° 15'	12.20	✓
	239° 15'	11.40	✓
	248° 30'	6.50	✓

Platted

11/24/21

J. J.

1+36.58  
1+ 3280 = Station Divide Wall.  
3.78

9.72  
1.00  
26.87  
37.59

11/24/21  
(angle +)  
(Dist -)  
86° 18'  
9.72  
1.00  
26.95  
37.67

Contour 1540.  
Rod 6.07

O'Reilly



1/24/21  
Bryson  
Fisher

Final Topog  
Right Abutment

Ht Auxil Pt from 355 28 D 1436 55

Sight - D 1436 55 355 25 for zero

B.M.	1.92	1546.10		1544.18
Contour	Azimuth	Dist.	6.10	1540.00
1540	328° 45'	11.8		
Rod 6.10.	325° 10'	12.3		

Gap.		Azimuth	Dist.
229°	28.3	215°	27.4 ✓
220° 10'	24.1 ✓	209° 30'	26.0 ✓
212° 10'	22.5 ✓	Gap	

206°	23.7 ✓	181°	14.1 ✓
192° 10'	19.3 ✓	174° 30'	12.9 ✓
200° 10'	19.7 ✓	173° 10'	7.1 ✓
199° 30'	12.4 ✓	151° 30'	5.1 ✓
185° 15'	12.2 ✓	86° 30'	4.4 ✓
180° 45'	7.1 ✓	23° 45'	7.9 ✓
209° 45'	4.7 ✓	14°	8.7 ✓
264° 10'	3.9 ✓	5° 45'	12.5 ✓

C	308 45	6.5	3° 45'	19.0 ✓
Contour	337° 30'	21.7 ✓	0° 15'	19.8 ✓
1545	333° 50'	18.1 ✓	358° 45'	23.5 ✓
Rod 1.10	327° 15'	15.3 ✓	351° 15'	23.5 ✓
	321° 15'	12.0 ✓	354°	26.5 ✓

Gap.		336° 15'	26.8 ✓	concrete
229° 10'	28.8 ✓			
222°	28.5 ✓			

1544.18  
1.92  
1546.10

2.10 1546.28 1544.15

13.7	249-45	140	32.3 ✓
14.0	231-0	143	320 ✓
14.9	216-30	141	321 ✓

Undercut 2-angles

Platted  
1/24/21  
S.S.F.



11/24/21  
Bryson  
Faber

Upstream Face Hs.

Blk 2+725 - 3+27

At 3A-397 Sight 42-397 for 5° 44'

9.925	
10	0-43
19.85	
20	1-26
29.78	
30	2-09
39.70	
40	2-52
49.63	
50	3-35
60	4-18
70	
80	5° 44'

BM 3.66 1558<sup>66</sup> 1555<sup>00</sup> Champ Strip  
Form 5.30 1553<sup>36</sup> Form

5.40 1553.26 ✓

Grade for 1558.3 = .67 + 3 = 3.67



11/25/21  
Bryson  
Fisher

Final Topog

Right About

At 1+36.58 3552E Sight - 1+36.58 - 3122-

Chamber  
Strip.

for zero

5.03 1560.03

1555.0

B.M.

	Azimuth	Dist
1550 Contour	128°	20.4 <sup>sample</sup>
Red 10 <sup>03</sup>	115°15'	23.0
	103°15'	32.3 ✓
	106°45'	47.0 ✓
	107°45'	49.5 ✓
	107°30'	64.3 ✓
Boothhead ✓	99°35'	64.7 ✓
	82°15'	49.0 ✓
	81°30'	43.5 ✓
	77°30'	37.7 ✓
	75°30'	32.0 ✓
	72°30'	25.1 ✓
	69°	21.5 ✓
	71°45'	17.3 ✓
	72°	11.3 ✓
Concrete Contour 1555	65°30'	9.0

Platted

11/25/21  
EJF



11/25/21  
Benson

# Right Abut. Divide Wall

Sta	+	-	EI	Grade
B.M.	4.92	1559.96	1555.04	
Div. W. of Gray Section Nail			4.78	1555.18
Div. W. of overth. sec. Nail			4.79	1555.17 1575.92
Div. Wall at 1545-55 Wall:			4.94	1555.02 <del>1564.90</del>

Grade at 355.11 or 4.01 from D.S. Face 1545-55 1. ft.  $\rightarrow$  1555.04 1570.04

changed to

$$\begin{array}{r} 1563.74 \\ 55.02 \\ \hline 8.72 = 8 - 85/8 \end{array}$$

Fill Gravity Sect 361.80 - Lift 1555-1565  
 overflow ... 358.80  
 Station - 1+32.8 = Divide wall - (Empage 17)

$$\begin{array}{l} 20.75 = 20'9'' \\ 9.88 = 9'10\frac{5}{8}'' \\ 15.00' - 15'0'' \end{array}$$

351.1

110  
 9-14 3/4  
 7/10  
 9  
 1 1/16  
 10"  
 70.04  
 $\frac{10.25}{12.5}$   
 30  
 1+34.50



11/28/21

Fisher

Jacobson

Chamber

Strip

# Concrete Est # 22

5.45 1560.45 1555.00

C 34 - 14.6 - D.S.F 11.6.

firm

00

7.3 53.2

75

6.6

15.5

4.2

31.5

4.1

36.5

5.1

49.5

5.5

Void ✓  
S.V.D.

C 34

00

6.7

70

6.6

16.0

4.0

29

3.8

36.5

5.3

49.5

3.6

6.8



11/29/21  
Fisher  
Jacobson  
Champer.  
Strip

Concrete Est #22

BIK- 4+36 - 4+86E

8.54 63.54 1555.00

00	5.4	58.1
3	5.0	58.5
8	4.1	59.4
12	2.7	60.8
14'	2.4	61.1
14.2	2.9	60.6
27	3.1	60.4
44.9	3.3	60.2

44

*Platted*  
11/30/21

00	5.4	58.1
3	5.2	58.3
7	3.7	59.8
11	2.6	60.9
14	2.4	61.1
14.5	3.1	60.4
27.5	3.1	60.4
41.9	3.3	60.2

-46-

00	5.4	58.1
4	4.7	58.8
7	4.0	59.5
11	2.8	60.7
13	2.5	61.0
13	6.0	57.5
26	4.7	58.8

HI = 63.5

23

(46)

41.9 4.7 58.8

(45)

50	5.5	58.0
4	5.2	58.3
7	4.4	59.1
11	3.6	59.9
14	3.5	60.0
14	7.1	56.4
24	6.8	56.7
26	5.9	57.6
30	5.0	58.5

*Platted*

11/30/21

4+86.5

41.9	5.4	58.1
00	5.6	57.9
6	5.3	58.2
6	4.7	58.8
9	4.3	59.2
12	3.3	60.2
14.3	3.0	60.5
14.3	8.0	58.5
25.	7.4	56.1
31	5.7	57.5
39	5.2	58.3
43	5.2	58.3



11/29/01  
Fisher  
Jacobson  
Champ or  
strip

Concrete Est #22

47865 To 5148

0.15 55.15

-47865-

55.2

50

Platted  
11/30/01

52

68 48.4

61 49.1

54 49.8

44 50.8

41 51.0

63 48.9

64 48.8

46 50.6

48 50.4

7.2 48.0

65 48.7

54 48.8

3.7 51.5

4.0 51.2

68 48.4

5.5 49.7

4.6 50.6

4.9 50.3

67 48.5

62 49.0

49 50.3

29 52.3

24 52.8

1555.00

15

28

35

41

49.8

01

6

11

13

20

33

39

47.8

00

9

15

20.4

42

47.8

55.2

-52-

Plat  
2 sections at 52

54

Platted  
11/30/01

5148

24

59 49.3

61 49.1

57 49.5

46 50.6

48 50.4

7.2 48.0

69 48.3

56 49.6

50 50.2

47 50.5

7.3 50.9

39 51.3

49 50.3

7.1 48.1

61 49.1

39 52.3

41 51.1

42 51.0

49 50.3



## Concrete Est

HI 50.12

25

B+48 - 6+04.3					
Chamber Strip	5.06	50.06	1545.00	00	
Typ.	5+48			5	
00	50.1	7.1	43.0 ✓	10	
10 J rails		7.1	43.0 ✓	19	
14		4.5	45.6 X	31	
26		4.4	45.7 ✓	36	
39		4.1	46.0 ✓	42	
44		5.06	45.0	54	

1550.1					
Chamber Strip	5.12	1550.12	1545.0	00	
	5+60			5	
00		7.0	43.1	11	
5		5.7	44.4	16	
10.3		5.7	44.4 ✓	29	
14.3		4.9	45.2	42	
19.3		4.5	45.6 ✓	47	
24		4.5	45.6 ✓	54	
31		4.8	45.3 ✓	00	
36		3.9	46.3	7	
41		4.4	45.7	12	
5.4		5.1	45.0	21	

69	43.2
58	44.3
52	44.9
36	46.5
40	46.1
32	46.9
46	45.5
5.1	45.0

5+97.5

68	43.3
56	44.5
50	45.1
39	46.2
39	46.2
48	45.3
49	45.2
5.1	45.0
68	43.3
59	44.2
56	44.5
63	43.8

6+04.3



11/29/21  
Fisher  
O'Callahan

Outline of course -

At 1+32.8 - 361 8° Radius Sight

1+36.58 312 7° for zero -

Chamber  
Steps

	516	60.2	1555.0
19.4	135-0	/	
22.5	129-30	/	
25.4	126-30	/	
1555	27.9	124-30	/
	28.5	122-0	✓
	30.5	119-0	✓
	28.4	115-30	✓
	30.0	109-0	✓
	32.5	107-31	✓
	37.2	106-0	✓
	39.8	105-15	✓
	43.1	107-0	✓
	45.0	106-30	✓
	40.5	92-30	+ 14

Platted  
11/30/21  
E.S.

60.2

9.8

50.4

9.1  
8.9  
9.1  
10.0  
10.3

9.1  
9.1  
10.2  
10.2  
38.6  
9.8



11/29/21

using 1+81 12

Form at 1+93.78  
92

12.66 Form

9.29

8.83 = (93) Form

Form at 1+93 28 ✓

Form at 2+04.00

Mail at 2+11.90 - Use for est.

27



Dec 1 1921  
Bryson  
Fisher.

Concrete Sections  
Estimate #22

Champion  
Strip.

52 15 ft, 2 1575.00  
1493

D.S.F. 339

5.2 75.0

00

82 72.0

14.5

50 75.2

6

7.1 73.1

2+04

13

7.8 72.4

U.S.F.  
400' R.

6.7 73.5

22

5.2 75.0

10

66 73.6

25

5.1 75.1

D.S.F. 339

52 75.0

D.S.F. 339

5.2 75.0

10 24

52 75.0

00

8.0 72.2

2+20

7

7.2 73.0

00

7.5 72.7

12

7.1 73.1

10

66 73.6

17

6.3 73.9

D.S.F. 339

52 75.0

23

5.0 75.2

8 26

49 75.3

D.S.F. 339

5.2 75.0

10 24

53 74.9

2+40

00

73 72.9

Patented  
12-2-21  
1893

12

72 73.0

20

50 75.2

25

5.1 75.1

D.S.F. 339

52 75.0

80.2  
2+60

28



12/1/21  
Bryson  
Fisher.

Conate Section  
Est. #22  
2+72 - 3+27

HI, 665  
C 30

29

	1.50	66.50	156.00	00
00		79	58.6	8
7		7.6	58.9	12
14		5.3	61.2	25
20		3.3	63.2	35
30		3.6	62.9	D.S.F.
35		4.5	62.0	
D.S.F. 419		6.2	60.3	00
	C 28+0			10
00		8.2	58.3	20
7		7.1	59.4	29
13		5.4	61.1	34
20		3.4	63.1	D.S.F.
26		2.8	63.7	
30		3.4	63.1	00
35		5.9	60.6	10
D.S.F.		6.2	60.3	20
	C 29			30
00		8.1	58.4	D.S.F.
10		7.0	59.5	
16		6.6	59.9	
23		3.2	63.3	
30		2.5	64.0	
37		5.7	60.8	
D.S.F.		6.2	60.3	

	8.1	58.4
	8.0	58.5
	6.7	59.8
	4.8	61.7
	4.4	62.1
	6.2	60.3
	7.8	58.7
	7.3	59.2
	5.2	61.3
	2.8	63.7
	5.0	61.5
	6.2	60.3
	8.3	58.2
	7.7	58.8
	7.0	59.5
	6.3	60.2
	6.2	60.3

31 + 00

3+27

U.S. Firm

824 58.26

2 out - 0.17 - 3.17

Set line 2+72 to 3+27

upstream face Pts.



12-2-21  
Fisher  
Mixer.

22.7  
20  
297

At 361.80 R- 1+32.8 Sight Tangent  
West for zero - Az Rt

Arril Pt. 29.7 71°-0

At Arril Pt Sight 361.80 R- 1+32.8 for zero Az Az

4.67 1569.67 1565.00

Rod 92

1560	20.3	254-0 ✓	<del>22.0</del>	22.0	89-01
	16.4	239-40 ✓		26.5	75-30 ✓
	11.5	220-15 ✓		23.1	79-30 ✓
	8.1	299-30 ✓		23.5	72-30 ✓
	10.0	341-45 ✓		24.8	70-01
	7.3	35-30 ✓		26.3	68-01
	7.0	68-45 ✓		29.3	69-01
	7.6	68-0 ✓		32.2	74-0 ✓
	11.9	41-0 ✓		35-0	80-0 ✓
	13.0	38-15 ✓		36-0	88-0 ✓
	17.4	56-45 ✓ Rod 47			
	18.8	63-0 ✓ 1565		36.6	102-01
	20.3	76-30 ✓		34.8	100-30 ✓
	20.7	81-45 ✓		35.0	98-30 ✓
	21.0	93-0 ✓		28.9	92-30 ✓
	21.0	105-0 ✓		28-0	93-15 ✓
	21.2	109-45 ✓		29.8	110-30 ✓
	24.0	99-0 ✓		29.2	112-0 ✓
	23.8	89-30 ✓		29.2	118-0 ✓

45

Plotter  
12-6-21  
Fisher



6.9.7

And

9.7

7565

Growth  
Trest10.8  
#6

31.4	123-45 ✓	3.0	215-01
33.4	124-15 ✓	<sup>3.6</sup> <del>235-30</del>	232-30 ✓
<del>33.4</del>	<del>124-0</del>	10.9	201-01
30.9	125-0 ✓	12.0	208-01
24.7	126-15 ✓	13.4	208-30 ✓
20.8	127-30 ✓	13.5	226-01
19.3	113-0 ✓	17.8	234-30 ✓
17.4	114-45 ✓	21.2	250-01
21.2	107-00 ✓		
16.9	123-30 ✓ +0.30	11.4	185-01
19.9	128-0 ✓ 115.70	6.4	153-01
17.4	135-0 ✓	6.0	166-15 ✓
16.0	135-0 ✓	5.8	148-30 ✓
12.2	103-30 ✓	8.7	137-01 ✓
12.2	122-30 ✓	12.5	158-15 ✓
11.9	125-0 ✓	16.2	144-01
<del>13.5</del>	<del>136-0</del>	18.3	143-01
13.6	133-0 ✓	22.2	133-30 ✓
12.9	136-30 ✓	26.7	127-01
10.9	137-15 ✓	32.6	125-01
8.1	119-0 ✓	36.1	125-0 ✓
3.1	97-0 ✓	35.0	123-01
1.5	38 ✓	38.4	121-01
1.5	320-0 ✓		
1.0	194-30 ✓ 1569.1	83.0	103-0

Plotted 12-6-21  
E.T.T.



1499.43  
353.10      5.26    1560.30      1555.04

5146.4  
2 from D.S.F.      BM      5.17    1555.13

T.P.      7.12    65.41    2.01    1558.29

Chamber  
Strip      BK-4136 - 41865 -      0.41    1565.00

D.S.F. Overflow - Gravity Sections

At 50-397 chain south.

B.M.      5.15    60.28      1555.13

D.S. Wide Wall      4.03    56.25

W.S.F.      7.14    53.14

97.00  
367.8  
35.2

716  
7.02  
224  
214.12  
714

361.90  
17.53  
44.27

17.53

344.49  
344.27  
22-

Break.



~~Block~~  
Block 2+72 - 3+27

Grade

18-48.8

7.55 68.66

1561.11

1 15.650

4.67 63.99

1.01 = 1-0 1/8"

2 /

4.62 64.04

.96 0-11 5/8"

3 /

4.69 63.97

1.03 1-0 3/8"

4 /

4.97 63.69

1.31 - 1-3 3/4"

5 /

4.73 63.93

1.07 1-0 7/8"

6 /

4.76 63.90

1.10

7 /

4.84 63.82



12/ 121

## Divide Wall.

34

~~B.M.~~

B.M. 6.63 61.76 1555.13

Chamber Strip, 6.68 55.08

Breaks: 6.47 55.29 7004

14-9"

64 83
55 08
75

7004

5529

---

 14.75 = 14-9"

Lift - 4 + 30 - 4 + 86 5

12.65 67.69 1555.04

41 1565 4.05 63.64 1.36 = 1 - 4 3/8" ✓

42 " 4.10 63.59 1.41 = 1 - 4 7/8" ✓

3 4.06 63.63 1.37 = 1 - 4 1/2" ✓

4 4.18 63.51 1.49 = 1 - 5 7/8" ✓

5 4.18 63.51 1.49 = 1 - 5 7/8" ✓

6 4.20 63.49 1.51 = 1 - 6 1/8" ✓

Top of Form 4.57 63.12



Fisher  
By son.  
Mister

Final Topog left Abut

At C 62 sight C 60 for zero  
Turn 90- Chain 19' 62-381

At 62-381 sight - C62 for zero

Rod 7.6  
Contour  
1530

	Dist	Azim,	1530 Cont.	Dist.	Az
Concrete	50.5	214°45'	✓	49.0	109°30'
	61.8	207°15'	✓	47.0	109°45'
	61.5	203°45'	✓	44.8	106° ✓
	50.4	198°	✓	43.0	107°15' ✓
	48.0	190°15'	✓	<del>37.8</del> <sup>37.8</sup>	107°45' ✓
	44.1	182°45'	✓	33.5	105° ✓
	44.2	175°45'	✓	31.1	105°30' ✓
	39.8	168°	✓	28.3	102° ✓
	41.4	163°30'	✓	27.7	98°45' ✓
	36.5	154°45'	✓	25.0	97°30' ✓
	37.0	147°15'	✓	21.7	93°45' ✓
	33.5	133°15'	✓	19.3	90°30' ✓
	36.4	123°45'	✓	17.0	92° ✓
	38.5	121°30'	✓	13.9	77° ✓
	38.7	119°	✓	11.5	79° ✓
	40.6	119°45'	✓	8.8	88° ✓
	41.3	122°	Cont.	8.1	90°30' ✓
	46.0	120°	✓		
	49.1	117°30'	✓		

Rod 2.6.  
Cont. 1535

Concrete Face Dam 46.	Dist.	Az	Cont 1535	Dist.	Az
	21.5	324°30'	✓	40.0	136°15' ✓
	27.1	341°15'	✓	42.0	139°30' ✓
	24.3	344°30'	✓	44.4	140° ✓
	25.7	350°30'	✓	46.0	141°43' ✓
	23.3	358°30'	✓	44.9	146°15' ✓
	22.5	6°15'	✓	42.1	160° ✓
	25.5	38°45'	✓	42.0	165°30' ✓
	24.3	50°45'	✓	41.5	169°15' ✓
	23.0	51°45'	✓	47.0	177°30' ✓
	20.0	63°45'	✓	49.0	180°30' ✓
	20.1	78°	✓	58.0	198°15' ✓
	23.0	90°30'	✓	61.7	203°30' ✓
	27.0	97°30'	✓	61.8	207°15' ✓
	33.2	103°15'	✓		
	34.2	101°30'	✓		
	38.9	105°30'	✓		
	47.0	104°30'	✓		
	48.9	104°45'	✓		
	50.5	109°15'	✓		
	50.7	117°45'	✓		
	48.9	124°30'	✓		
	46.5	125°	✓		
	44.0	127°15'	✓		
	38.6	128°15'	✓		
	39.0	134°	✓		



12/9/02  
Bryson  
Fisher  
Mixer

Final Topog.

At 1+328 - 366' Radius - Sight  
1+61' frozen

Rod	Dist.	Azimuth	
	0.73	1565.23	1565.00
Rod 73			
1565°	34.8	253°15' ✓	
Rod 0.85	29.7	248.00 ✓	1564.5
Rod 1.00	24.6	251.30 ✓	64.7
Rod 0.70	20.7	248°45' ✓	65.0
	34.0	248° ✓	
	37.4	239° ✓	
	36.5	236°15' ✓	
	41.3	227°15' ✓	
	46.8	222°45' ✓	
	48.6	221° ✓	
	53.8	218°15' ✓	
	50.4	218°15' ✓	
	47.9	216°45' ✓	
	51.0	212°15' ✓	
Ring	47.8	210°45' ✓	
	44.8	209°15' ✓	
	40.4	203°15' ✓	
not closed	47.1	201° ✓	

Plotted  
12-10-21  
B.F.



12/11/21  
Fisher  
Stroke

U.S. Fuel Form - Fillett

At C62 Sight C60 for zero

R.C. 10.5 39-0  
V.S.E. Dam 15.9 9-50

Gallery Pt.

10.66 65.70

15.55

Gallery Pt

6.85 58.85 59.35

9.4 64.05

9.06 56.64 64.05 7.39

7-4  $\frac{5}{8}$ "

Prod 7.7

59.35  
47  

---

64.05  
56.64  

---

7.39

$\frac{77}{74}$   

---

30 = 3  $\frac{5}{8}$ " High



12/13/21  
Fisher  
Mixer

Final Topog - Left Abut.

At C 60 Sight C 70 for Zero Az Pt

Rod 84

3.43 1538.43 1535.00

-1530-

1530	13.7	330-15	✓	1535-	
	19.5	340-30	✓	1535	48.0 9-0 ✓
	19.8	348-30	✓	48.8	359-30 ✓
	24.2	351-0	✓	43.8	358-0 ✓
	26.6	349-15	✓	36.7	351-0 ✓
	28.3	348-30	✓	30.4	349-30 ✓
	34.2	354-30	✓	26.1	343-15 ✓
	38.5	0-30	✓	25.0	348-0 ✓
	43.3	1-0	✓	20.3	338-0
	41.3	4-0	✓	17-0	328-0
	43.5	9-30	✓	13.8	289-45
	47-0	13-30	✓		
	47.5	<sup>20</sup> / <sub>10</sub> -30	✓		
	54.8	21-30	✓		
	58.6	20-0	✓		

Rod 34

1535-

1535	57.6	16-40	✓
	<del>54.5</del> <sup>55.00</sup>	14-45	✓
	54.0	13-0	✓
	52.0	13.0	✓

Platted  
12-15-21  
Fisher



# Champer Strip

Right Adt. adj. to Wash Wall

12/14/52  
Bydon  
Mixer

B.M. 9.67 1570.78 1561.11 18-488.0

Conc. Check  
Champer Strip 5.78 1565.00

12-15-21  
Fisher  
Mixer U S Face Pts

Champer  
Strip 9.98 1554.98 1545.00

11.72 1543.26

6.72 1548.3

Dust out  
1.68

5.20 1560.24 1555.04

Elev - beginning of  
Slope Divide Wall  $\rightarrow$  4.02 56.22 = .24 low.  
56.46



12-15-21.  
Fisher  
Mixer.

Tue 2 four

Final Topog

At C60 sight R.P. Feet for Zero

Auxil. Pt. 57.00 4-15

At Auxil. Sight. C60 for Zero Az. Rt.

Champion  
Ships 9.98 54.98 1545.02

Rod 52 15 50 15 55

15 50 41.2 14-45 ✓ 1535 5.4 173-30 ✓

36.8 18-30 ✓ ✓ 3.5 141-45 ✓

30.5 15-20 ✓ ✓ 4.2 109-0 ✓

25.2 17-15 ✓ ✓ 5.8 79-30 ✓

22.8 25-0 ✓ ✓ 11.6 24-30 ✓

9.2 25-0 ✓ ✓ 17.9 24-0 ✓

Overhang  
7.0 44-30 ✓ ✓ 24.0 25-30 ✓

5.2 63-0 ✓ ✓ 29.5 20-30 ✓

2.6 33-0 ✓ 35.8 18-30 ✓

2.8 212 15 ✓ 43.4 12-30 ✓

.87 280-0 ✓

Form 12.8 273 0 ✓

8.4 - south

Form 41.7 270-07

00 10.6 244-45 ✓

15 55 8.3 244-30 ✓

5.8 223-30 ✓

5.6 195-0 ✓

Platted  
12-15-21



155500

## Outline Cornets

41

At Axvil pt from C 60 Sight C 60 for Zero Az. Pt

R.C. from	46.0	9.30 ✓	16.3	38.7
Kadun from	38.7	4.45 ✓	11.7	43.3
R.C.	36.1	11-15 ✓	11.7	
	33.8	10-0 ✓	11.0	
	33.0	16 0 ✓	10.5	
	27.7	16-30 ✓	10.0	
	22.8	23-15 ✓	9.0	
	14.2	24-30 ✓	8.2	
From U.S.F.	11.1	24-30 ✓	8.2	
Average Elevation			9.4	45.6

12/16/21  
Bryson  
Mixer

## Champer Strip

## U.S. Form Points

B.M.	2.95	1558.08	1555.13	—
Check on 45 lft.		13.03	1555.05	Grade
U.S. Form.		9.60	1548.48	1553.99
Champer Strip 1555		3.08	1555.00	1555.00
		3.00	1558.08	

= #61.15'



12-24-21  
Fisher  
Mixer

# Outlet Gallery Pts East Tangent

42

At C 56 - Sight C 72 for zero  
Chain - 19.32 Set nail = C 5779.32

At C + 5 + 79 <sup>32</sup> Turn 90° Chain.

82' = 392 - Radius - 5 + 73.32 - Set nail ← One to Set. 1554.326.

Present At 5473 <sup>32</sup> - 392 - R - Chained to  
end of Gallery = 14.23 = 5 + 59.09  
or - .08 - off -

Chained 28-27 To nail South =

1-5-22 6 + 01.59 - 392 - Radius -  
Fisher  
Mixer

- 25.62 to nail in Contr Joint + 2.65 to nail in  
Lift - 1558.4

10.20 1565.29 15509  
1568.46 6.02 59.27

68.46  
59.27  

---

9.19 = 9-2 1/4

TP

11.81 53.78

7.30 58.00



12/24  
Bryson  
Fisher  
Mixer

Upstream Face Points

B.M.	6.91	1561.95	1555.04
Check on B.M. 20' E. Wash Wall		6.86	1555.09

U.S.F. Firms -		3.55	58.40
----------------	--	------	-------

	4.78	59.78	55.00
--	------	-------	-------

Elev <del>of</del> end of Present Gallery -	12.64	47.14	Grade. 47.17	5459.09
--	-------	-------	-----------------	---------

T.P.		11.99	
------	--	-------	--

12-24-21  
Fisher Elev Top of Star Drill Hole #2.  
Mixer.

4-437E to Lift #4 Quarry -				1847.20
	5.70	52.70		1847.20
	6.4	55.00	4.3	48.60
Top of Gibbing -			1.7	53.3 -
Ground - Top of Hole #2			6.6	48.9

53.30
45.60
<hr/>
107.70
2
<hr/>
109.70 = 110



Bryson  
Fisher 12/24/21  
Mixer

Levels for Cutting Channel  
through Spoil dump D.S. from Jam.

13.14	5.20	1480.20	1475.00
Gallery Floor			1465.00
Gallery Roof			1472.00
Water surft at Neck 300 DS	6.00		1474.20
To crack in left channel	9.90		1470.30
In Center Chann near end	13.00		1467.00
Readings across Channel	8.40		1471.80
	6.80		1473.46
	7.20		1473.00

12-31-21  
Bub  
Fisher  
Mixer  
B.M. Nail  
54465

Up stream face Pts.

7+865	to	5+48	
8.85	63.94		1555.09

584	58.10
	63.1

Dirt out  
0.19

12-31-21  
Bub  
Fisher  
Mixer

Chamber Strip -

8.51	63.60	1555.09
	8.60	1555.00
10.56	65.65	1555.09



12/30/21  
Fisher  
Mixer

Estimate #23 December 1921

75

- Excavation -

- 56 -

60-250 (58-298.2)	2.1	70.4		1568.29
58-250	1.6	61.0	11.0	59.4
2.98.2			+0.7	61.7
306.5			5.3	56.7
314.5			9.7	51.3
316.0			14.6	46.4

58 line -

58-250	2.6	62.0		59.40
300			0.2	61.8
308			0.5	61.5
311			2.5	59.5
312			3.2	58.8
314.2			5.7	56.3

60 line

60-250	2.1	70.4		68.3
312.0			6.1	64.3
314			7.0	63.4
314			19.0	51.4

Platted  
1-1-22



Final Topog

At 59-386 - Sight <sup>to</sup> Insection of  
Wash wall + lift 1555 - for zero

5.2 1540 153500

Rod 0.20

28.1 309-01

1540 29.0 290-01

✓ 20.5 276-01

✓ 21.5 270-301

✓ 18.5 260-01

✓ 21.0 245-01

✓ 21.5 230-01

✓ 26.0 219-01

✓ 28.9 199-01

✓ 32.5 197-30 ✓

36.3 184-0 ✓

✓ 40.5 177-30 ✓

✓ 46.3 171-45 ✓

56.5 170-0 ✓

*Plotted*

5 + 79.32  
28.27  
6 + 07.59



12/30/21  
Fisher  
Mixer

Monthly Estimate  
Concrete Sections

67 04.3

10.15 15.65.15 1555.0

U.S.F = 0.0

00	6.9	58.3
9	6.0	59.2
21	6.0	59.2
29	7.6	58.6
39	10.0	55.2
46.4	10.2	55.0

62 line.

00	6.9	58.3
152	5.2	60.0
280	7.6	58.6
350	9.8	55.4
464	10.15	55.0

Platted  
1-1-22

63

00	6.9	58.3
6	5.8	59.4
12	4.7	60.5
23	5.0	60.2
33	8.0	57.2
42	9.8	55.4
488	10.2	55.0

65.2  
64 line

00	6.7	58.5
10	4.7	60.5
20	5.1	60.1
28	7.6	58.6
37	9.7	55.5
46.4	10.2	55.0

6 + 50 54.8

00	6.8	58.4
13	6.0	59.2
26	8.0	57.2
38	9.9	55.3
47.3	10.2	55.0

64 61  
end section

00	58.4	
13.5	7.7	57.15

Platted  
1-1-22



12-31-21  
Bub  
Fisher  
Mister

Excavation Est. # 23

East Tangent

Radius (346.8) = 00

Chamber  
Strip

5.1 1550.10 1545.00

D.S.F. Lift. 1535 - 1545 = 00 ✓  
(62 line)

00 12.8 37.3 ✓

16 11.7 38.4 ✓

19 5.7 44.4

Slope - 1 to 1

-64-

00 10.6 39.5 ✓

54 10.8 39.3 ✓

62 8.2 41.9

1 to 1 slope

(66)

From = 00

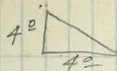
00 54 44.9

24.4 78 42.3

44.7 1.1 49.0

48.7 7.60 56.1  
158.6 = 1

1 to 1 for 5'





10/31-21

# Est # 23 Excavation East Tangent

68 line

64-428 1.14 87.20 1586.06

68 line - 400 = 00

4.00 8.6 78.6

40.3 10.8 76.4

- 6 6.7 80.5

13.4 5.9 81.3

19.7 7.5 79.7

23.0 14.2 73.0

36 24.0 63.2

T.P. 12.8 95.5 4.50 82.7

T.P. 9.5 1603.8 1.2 74.3

Plotted 1st - 2nd

70

40.2 7.0 96.8

- 2 8.2 95.6

11.3 4.6 99.2

15.2 4.8 99.0

18.3 7.6 96.2

25.7 9.0 94.8

30 9.0 94.8

39 3.0 00.8

level to bank

# Est # 23 East Tangent. 49

74 - 5.5 1' over

74-350 -

(72) 1.5 35.1 1633.56

72-361 7.4 27.7

(70) 5.7 28.7 1623.02

70-349.5 6.3 22.4

68.

68-275 (2.2) 1617.1 1614.90

46.2 68-312.2 4.6 1612.5

(66)

66-275 6.1 1606.6 1600.51

66-311 3.3 1603.3

(64)

64-275 6.8 95.5 1588.61

64-306 3.7 91.8

30.6 10.7 84.5

64-308 10.7 84.8

1-1.5 slope (62)

62-275 6.6 86.4 1579.76

22.5 302.5 5.0 81.4

(39) 3.11 13.0 73.4

cut



12/31/21  
Busher  
Mixer

# Excavation - Est # 23

## West Tangent

At 1+61.12 366.12 Radius

0+92.65 Station on 366.12 Radius - Form  
1+40 Section -

Chamber  
Strip  
30.4

5.1 1570.10 1565.00

27.2

6.3 63.8

21.7

7.2 62.9

15.1

12.7 57.4

4ft - 15' x 5' - 55

15.1 55.0

North

35.9 35.9

11.8 58.3

38.6

1.1 69.0

(1+20) -

South -

21.2

12.6 57.5

25.3

2.8 62.3

25.3

00 70.1

Platted

1-2-2-2

1+11 -

Same as 1+20

1+00 South

12.2

11.7 58.4

20.7

9.8 60.3

27.0

7.3 62.8

35.0

1.3 68.8

TP

131 805 2.7 67.4

267

80.5

50

1+00 South

7.0 73.5

+20 82.5

(0+80) South  
1570.10

00

10.8 59.3

9

9.7 60.4

20

5.2 64.9

TP

12.9 83.0 0.0 70.1

28.5

70.1

30.7

6.0 77.0

30.7

+20 85.0

(0+66) South

10

18.0 65.0

14.2

19.6 68.4

23

10.0 73.0

25

10.4 72.6

31.3

6.2 76.8

31.3

1.2 81.8

35.0

+6.0 89.0

Platted  
1-2-2-2

0+00 North  
- 70.1 -

7.9

7.4 62.7

26

7.4 62.7

26

4.4 65.7

(0+66) North

6.8

5.5 64.6

18.5

2.4 67.7

24.5

0.9 69.2



12/31/21

Bub  
Fisher  
Mixer  
Chamber  
strip

Concrete Est- #23 Dec 1921

- 0+92.65 to 1+43 -

5.1 1570.10 156500  
West of - 1+43-c 366.12 = 00 -

South 00  
7.3  
North 18.7  
u.s.f.  
34.1

9.5 60.6  
9.3 60.8  
11.4 58.7  
11.0 59.1

00  
5 43  
RC 62

1+30

South 00  
7.3  
14.0  
26.4  
RC 38.0

9.6 60.4 ✓  
9.4 60.6 ✓  
10.0 60.1 ✓  
12.2 57.9 ✓  
11.5 58.6 ✓

00  
409.25  
408.  
406.  
403

1+20

South 00  
4.3  
7  
17.8

9.3 60.8 ✓  
9.3 60.8 ✓  
9.8 60.3 ✓  
11.1 59.0 ✓

0+60-418.42 0.4 1608.5  
414  
409  
404  
404

1+10

South 00  
4.3  
6.5  
RC 11.0

9.7 60.4 ✓  
9.7 60.4 ✓  
10.6 59.5 ✓  
10.3 59.3 ✓

70.1  
17.00

5/

92 60.9 ✓  
92 60.9 ✓  
99 60.2 ✓  
90 41.1 ✓  
90 61.1 ✓  
92 60.9 ✓

(0+92.65)

Excavation

1+00 -

lower than nail

00 =

95.5 ✓  
2.5 93.0 ✓  
5.5 90.0 ✓  
10.0 85.5 ✓

0+66 -

1608.14  
40 04.5  
53 03.2  
12.8 95.7  
22.8 85.7

Platted  
1-1-22

Platted  
1-2-22



0460 71  
418.42

100

12

195

323

43.5

TP

115

20.9

256

34.6

34.6

Platted 1-2-22

Excavation

0+50

3+66.12 = 00 -

0.79 08, 93

South

14.5

1608.14

94.4'

11.2

97.7'

9.1

99.8'

5.6

03.3'

2.8

06.1'

North

1.1

967

13.3

95.6

3.7

93.0'

9.6

87.1'

8.8

87.9'

00

96.7'

+ 50

1601.7'

Concrete Est - Dec. <sup>52</sup> 423

55

1570.5

1565.00

51

34

50

73

4/218 155

55

650







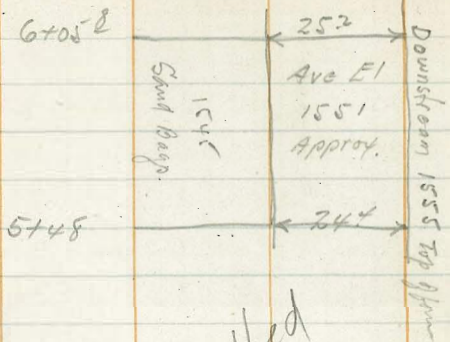
11/31/71  
3rd  
Fisher  
N.F. Fisher

Estimate # 23

37

Block 5+48 to 6+05 on 100' R.

EI Between 1548-1555.



Platted  
1-1-21  
on Est.



1-3-21  
Fisher  
Mixer.  
Chamber  
Strip

Average Elev. Spillway  
Section Center of Dam

5 24 1560.24 1555.00

75

34.27  
~~71.70~~ = 00

10

13

20

27

30

34.0

40

44

50

55

60

66

70

75

80

85

90

95

100

103

TP

3.4

3.1

3.9

3.4

4.4

3.8

3.4

3.5

3.4

4.4

4.8

4.1

4.3

4.1

3.9

~~4.8~~ 4.6

5.2

5.2

5.1

5.4

5.3

9.05

5.0

2.9

Dist

103.2

24' from U.S.F.  
East End

22' from U.S.F.  
West End

7.7

58.99

51.19

56

34

34

38

35

44

41

41

46

52

54

53

53

53

53

53

53

53

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503

48

123

96

70

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70

70

70

70

70

70

70

70

70

70

70

70

70

70

70

70

70

70

70

70

70

60.2

3.9

66.3

60.2  
4.2  
56.0

66.3



1-4-22  
Fisher  
Mixer

U.S.F. Elevations -

5+98 - 6+04.5

56

8.41 63.41 155500

3.09 55.60 10.90 52.51

8.0 47.60

47.60

8.3 47.3

Top of Forms

Water in  
Sump

7.84 47.76

5.02 50.51

4.2 → 51.4

4.6

Chamber  
strip

3.19 1568.19 156500

319



1-6-22  
Fisher  
Mixer

D.S.F Pts - 1565-1575

1+32.8 West -

Ran in 397' Pts at Random -

Set on pt - Sight R.P. + Turn 90°

Chain 28.39 South Set nail =

368.61 Radius -

Made intersection of D1436.58

57



1/9/21

Bryson  
Fisher.

Sta

B.M.

# Left Abt Divide Wall

Sta	+	π	-	Elev.
B.M.	5.00	1570.00		1565 <sup>00</sup>
366.12			4.90	1565.10
368.61			4.91	1565.09
355.11			4.31	1565.69
351.94			4.28	1565.72
358.46			4.14	1565.86

## Upsream Face

~~1-6-49~~

Sta	+	π	-	Elev.
1-6-49			6.48	1563.52
2			6.49	1563.51
3			6.48	1563.52
4			6.40	1563.60
5			6.31	1563.69
6			6.35	1563.65
7			6.40	1563.60

grad 1565.00

## Right Abt Gallery & Divide Wall

Sta	+	π	-	Elev.
B.M.	2.92	1567.92		1565 <sup>00</sup>
End Gallery			3.80	1564.12
Nail for Insp. Gallery			3.90	1564.02
Grade = 50% for 14.31 Hor Dist. = +7.15'				
Grade on Champ Strip for Wash Wall on Rad. 358.80			2.92	1565.00

## Champer Strip

Nail in Conc. face Div. Wall

" " " " " "

Nail in form at Break

9' 5 1/2" Check on end forms

Nail on post on 55-65 panel form

right end

1567.92	1564.12
1571.27	7.15
1564.14	7.15
7.08	1564.02
	7.25

## Champer strip

= 7' 2 1/2" = 7' 3"

= 10' 10 1/4"



1-1032  
Bryson  
Pholes  
Mix'er.

Chamber  
Strip

D.S.F.

3.22 156822

156500

156500

4.48 63.74

4.27 63.95

5.09 63.13

4.88 63.34

5.19 63.03

4.67 63.55

1.26 - 1 - 3/8

1.05 - 1 - 0 5/8

1.87 - 1 - 10 1/4

1.66 - 1 - 7"

1.97 - 1 - 11 5/8 ✓

1.45 - 1 - 5 3/8 ✓



1-11-22  
Fisher  
Mixer

Final Topog.

At 6+17 <sup>96</sup> 397' Radius -  
Chain - east -

16-0 209-30 ✓  
20-0 210-0 ✓

40.44 58.40

11.50

4.01

At 6+58.40 Sight RP East  
for zero at Rt -

46

12.29 67.29 1555.00

Red 222

Red 729

17.3 221-15 ✓ 18.0 70-0 ✓

13.1 224-30 ✓ 15.8 73-0 ✓

10.6 239-0 ✓ 13.2 66-0 ✓

3.0 296-0 ✓ 9.0 61-0 ✓

8.9 349-30 ✓ 6.0 27-0 ✓

9.7 10-0 ✓ 6.0 348-0 ✓

9.7 40-0 ✓ 3.0 342-0 ✓

13.4 58-15 ✓ 5.2 219-30 ✓

20.5 57-30 ✓ 9.0 204-0 ✓

25.5 59-0 ✓ 11.9 212-45 ✓

7.20 1.45 65.84

TP

Avail Pt. 16.55 44-45

1560.00  
P/A Head 1-11-22



1-11-22

Final Topog.

397 A.

At Auxil Pt from 6758<sup>40</sup> } Sight

6758<sup>40</sup> for zero

TP	7.17	73.01	156584
Rod 30			
1570	23.2	16-45 ✓	
	18.7	20-0 ✓	
	14.3	26-15 ✓	
	13.3	55-0 ✓	
	8.5	54-30 ✓	
	8.6	61-15 ✓	
	37	133-30 ✓	
	4.4	176-30 ✓	
	5.4	169-15 ✓	
	9.0	179-30 ✓	
	10 x 3	156-30 ✓	

Platted 1-11-22

T.P.

092 7209

1-11-22

Final Topog -

At 34884 - 6707<sup>52</sup> from 55-65' lift - Sight

South for zero -

Chamber Strip	5.04	1550 <sup>04</sup>	1545 <sup>00</sup>
Rod 10'			
1540	48.4	58-0	34.6 38-0
	45.8	56-30 ✓	31.0 34-30
	45.0	46-00 ✓	29.6 23-0
	38.1	43-15 ✓	26.4 16-0
Wat 10'	34.9	41-0	27.6 11-0

Platted 1-12-22

1 nearby cut

796

61

276 -	2-15 ✓	32.3	357-30
268 -	352-0 ✓	32.3	350-30
237	336-0 ✓	35.4	299-0
248	316-0 ✓	48.6	283-30
267	296-0 ✓		
Rod 54	1545 -	5.15 (1560.2)	1555-0
		00	43.5 357-0 ✓
30.0	299-30 - 1560	47-0	352-0 ✓
268	316-30 ✓	48-0	316-0 ✓
272	348-0 ✓	60-0	296-30 ✓
289	351-0 ✓	64.2	280 ✓
31.0	2-0 ✓	70-0	277-30 ✓
33.2	7-30 ✓		
28.5	18-4.5 ✓		
	15 50 -		
520	52-45 ✓		
520	48-30 ✓		
49.5	44-30 ✓		
36.4	42-0 ✓		
35.4	36-0 ✓		
33.1	29-0 ✓		
33.2	24-30 ✓		
31.6	19-45 ✓		
35.5	9-00 ✓		

Platted 1-12-22

Platted 1-12-22



1-12

30,3

## Final Topog.

At 1+61.12 - 1565 - 1570 Lift -  
 Chained 30.3 West - 1+30.82

Chamber STP 45F - 60in J 18'	10.14	75.14	1565.00
35.5	289-30		
Core Filled Down RC 15-15'	34.5	283-30	42.6 233-0
	38.6	279-0	40.0 237-0
			38.3 244-45
Rod 5'	39.2	276-15 ✓	38.0 248-30
1570	39.5	272-0 ✓	40.2 253-45
	40.4	267-30 ✓	38.0 260-0
	39.3	263-0 ✓	40.6 265-0
	37.4	258-30 ✓	41.8 268-30
	36.9	253-45 ✓	
	35.6	253-0 ✓	
	38.4	238-30 ✓	
	41.4	234-0 ✓	
	43.0	230-0 ✓	
	44.8	227-0 ✓	
	46.2	223-30 ✓	
	49.5	228-0 ✓	
Rod 01 1575	49.6	221-50 ✓	
	47.8	223-0 ✓	
	44.1	228-30 ✓	

## 1-13-21 Derrick Levels

62

1+90 - To 2+72 -

Bullwheel 2.42 .. 00  
 5.67 - -3.2 = 32<sup>3</sup>/<sub>8</sub>

5.69 - 3.22 = 3-2<sup>5</sup>/<sub>8</sub>

Fisher 1-13-21  
 Mixer. Upstream Face Pts.

2 2+72 - 3+27-00

Chained from 1+61.12 -

1+61.12

92.91

2+03.53

2.00

2+05.53 -

11.03

2+16.53 - nail lift 1575 -

21.28

2+37.81

31.76

2+69.60 - Nail lift 1575 -

10.40 -

2+80.00

At C 28 Sight RP. East for Zero - Turn -

9.93 - 0°-43'

18.75 - 1°-26'

29.78 2-09

39.70 2-52

4.95 From 3-13

checked on - 044 - - 12-53

Check OK



1-12-22  
Fisher  
Mixer

Right About Gallery

BM Nail in stump		19	
16-468-	1.24	1574.18	1572.94
end of gallery		2.91	71.27
mail		3.02	71.16
14.31-	78.42	72.6	69.92

71.27  
 7.15  
 78.42  
 69.92  
 8.50

8.50 = 8-6"

	1.25	1574.19	1572.94
366.12	1587.33	3.4.3	70.76

16-57 = 16-6 3/4"

87.33

70.76

16.57 = 16-6 7/8

1+43 - to 0+93  
 11 SF -

8.94 70.05 1561.11

1565.70

6.67	63.38
6.71	63.34
6.67	63.38
6.66	63.39
6.59	63.46
6.13	63.92
6.14	63.91

1-62 = 1-7 1/2 ✓
1-66 = 1-8" ✓
1-62 = 1-7 1/2 ✓
1-61 = 1-7 1/4 ✓
1-54 = 1-6 1/2 ✓
108 = 1-1"
1-09 = 1-1"



1-14-22  
Bryson  
Fisher  
Mixer  
HI 5.1

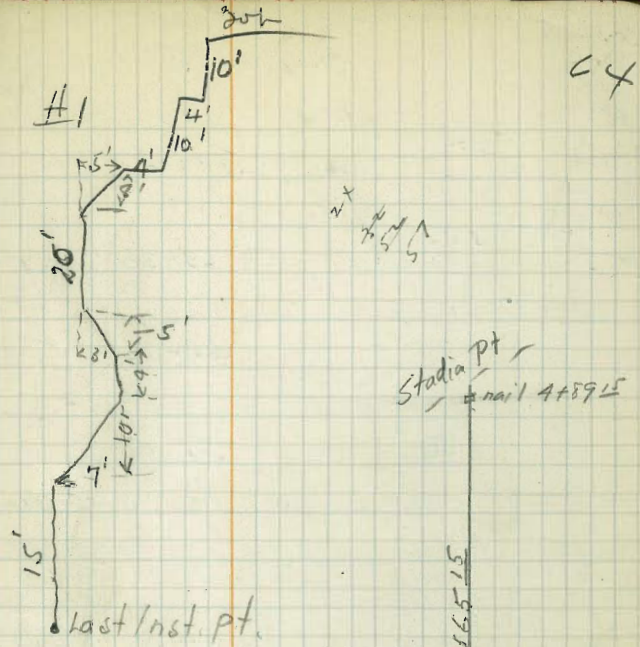
Quarry Sections

At-4789.15 sight 0.0 for zero

Ground Elev. (1745.00)

3+24 8.47 1750.10 Ref 1741.63

Stadia Dist	Vert. Angle	Horz. Angle	Rod	Cor.	Elev.
106		316-15	4.5	106 <sup>0</sup>	456 ✓
110		306-0	4.5	110	456 ✓
104					
335-442		295-45	3.9	104	462 ✓
102					
470-368		284-0	4.2	102	459 ✓
107					
392-499		267-30	4.5	107	456 ✓
100					
395-495		259-15	4.5	100	45.6 ✓
181					
362-473		247-0	4.2	111	45.9 ✓
116					
204-320		236-30	3.6	116	46.5 ✓
111					
		267-30	0.7	111	1749.4 ✓
Vert. up 40 50	117	267-35	5.1	116	96 1759.6 ✓
4° 15'	121	242°	5.1	120	8.9 1753.9 ✓
7° 33'	123	241° 30'	5.1	122	15.9 1760.9 ✓
9° 45'	134	242° 13'	✓	130	22.3 1767.3 ✓
10° 40'	130	246°	✓	126	24 1769.0 ✓
9° 39'	120	248° 15'	✓	116.5	19.8 1764.5 ✓
11° 10'	125	248° 30'	✓	121	23.7 1768.7 ✓
10° 30'	140	234° 30'	✓	135	25.1 1770.1 ✓
6° 50'	124	237° 15'	✓	123	14.6 1759.6 ✓
2° 35'	112	256° 45'	✓	112	5.1 1750.1 ✓
36° 50'	218 - 208	247° 15'		125 104 42 140 97 1849.0	
37° 05'	207	255°		131 100 1845.0	
36° 05'	210	254° 15'		137 100 1845.0	
36° 05'	210	247° 15'		137 1845	



Vertical for 50 up +9.6

STAR Drill Hole - Plumb 60'

See sketch #1 from here up.

Hole #2 ✓  
#1

E Plumb 48  
angles

64



1-14-22  
Bryson  
Fisher  
Mixer

### Quarry Sections

H+

4.80 18520 18472

5.3  
2.8  
2.5

65

# 1 357 175 382 63-30 4.7 47.3

158 65-20 4.2 15428

T.P. 3.70 51.5

Hole #2 4.00 47.5 ✓ Ground.

- 2 1/2 4.00 47.5 ✓

- 2 1/2 2.80 48.7 ✓

- 6 -2.00 ~~49.0~~ 54.0 ✓ 5.3 higher than - 2 1/2

+ 3' 4.00 47.5 ✓

+ 12' 7.00 44.5 First Reading from below.

+ 12' 17.00 34.5

+ 15' 27.00 1824.5

+ 24' 31.00 20.5

Hole #1 4.30 47.2 ✓ Ground.

- 5' 2.90 48.6 ✓ Vert

- 5' .40 about H 519 1 to 1 slope for 3' up.

+ 4' 4.90 46.6 ✓

+ 8' 6.20 45.3 ✓

+ 8' 26.20 1825.3



1-14-22  
Bryson  
Fisher  
Mixer

### Quarry Sections

H+

4.80 18520 18472

5.3  
2.8  
2.5

65

# 1 357 175 382 63-30 4.7 47.3

158 65-20 4.2 15428

T.P. 3.70 51.5

Hole #2 4.00 47.5 ✓

- 2 1/2 4.00 47.5 ✓

- 2 1/2 2.80 48.7 ✓

- 6 -2.00 ~~49.0~~ 54.0 ✓

+ 3' 4.00 47.5 ✓

+ 12' 7.00 44.5

+ 12' 17.00 34.5

+ 15' 27.00 1824.5

+ 24' 31.00 20.5

Hole #1 4.30 47.2 ✓

- 5' 2.90 48.6 ✓

- 5' .40 about H59

+ 4' 4.90 46.6 ✓

+ 8' 6.20 45.3 ✓

+ 8' 26.20 1825.3

Ground.

5.3 higher than - 2 1/2

First Reading from below.

Ground.

vert

1 to 1 slope for 3' up.



# Elevation of Coordinate

Reference	Points.		
	Top of Fillet		Nail in concrete
	SW cor. Outlet 1524.18		Center of fillet.
	MW" Tower		Nail in Concrete.
6-470 <sup>65</sup>	1515.38	Hub	
	Top of Fillet 1524.30		
	"D" Line - "		
	"D" 0+20		Nail in Post cement Landing
8-450	1601.89	Hub.	Iron Pin under
	3+71.28		8 1/2 Smith Shop
	"D" 0+20		
	425.73		
	1626.95		
	"D" 0+60		
10-446 <sup>58</sup>	1597.77	End Steel Pipe sewer Joint	
	3+17.76		Hub
	R.P. 0+60		
10-350	1576.97	Hub. On Rock bins	Nail.
	BN		
	Nail in "D" 0+60		
12-330	1570.96	stump.	Hub
	418.42		
	D 0+80		
12-426 <sup>32</sup>	1587.35	Nail in Rock	Nail in Rock
12-437 <sup>00</sup>	1588.38	Nail in Rock	
	"D" 1+00		
12-502 <sup>09</sup>	1600.83	Nail in Rock.	Hub.
	307.49		
	"D" 1+00		
12-455 <sup>79</sup>	1587.34	Nail in Rock.	
	409.28		1595.49 Nail.
	"D" 1+36.58		
14-417 <sup>92</sup>	1575.02	+ on Rock	
	"D" 1+36.58		
14-436 <sup>28</sup>	1574.94	+ on Rock	
	4+12.16		1573.21
	1+36.58		
14-455 <sup>79</sup>	1577.19	Hub	Nail in Rock
	3+12.70		
14-496 <sup>10</sup>	1588.91	Nail in Rock.	
	R.P. on Rock		
	"D" 1+80		Nail in Rock
	- Out -		
	3+06.55		
	"D" 1+80		
16-446 <sup>12</sup>	1567.82	Nail in Rock	Hub
	4+14.23		
	"D" 1+20		
16-468 <sup>00</sup>	1572.94	Nail in stump.	
	4+03.67		1581.28
	D 1+60		
16-490 <sup>09</sup>	1577.79	Nail in Rock	
	4+14.23		1557.00
	D 1+20		
	3+35.20		1572.30
18-438 <sup>09</sup>	1554.12	Hub.	
		Nail in Rock	
18-470 <sup>75</sup>	1561.57		
18-488 <sup>00</sup>	1561.11	Hub.	
		Nail in Rock.	
18-502 <sup>12</sup>	1564.95		
	0+20.08		
± Tunnel	1541.11	Hub.	

# Elevation of Coordinate + Reference Points

Harris B.M. - Iron Pin Set in Rock 40' South of Conveyer # 2 Barrett Dam Datum.	1526.33
Nail in rock 30' North of 3+00 (Cableway West)	1764.33
End of "P" Line above Quarry Road	1751.67
Top of nail 2+70	1548.85
1+99.43 - 353 <sup>10</sup> Nail in Lift D.S.F.	1555.04
1+85.62 353 <sup>10</sup> " " " " "	1555.01
1+97.29-345 <sup>40</sup> " " " " "	1545.06
1+83.98-345 <sup>40</sup> " " " " "	1546.07
1+97.19-337 <sup>70</sup> " " " " "	1535.02
1+81.88-337 <sup>70</sup> " " " " "	1535.05
34-382.36 Nail 4 <sup>th</sup> Lift Curtain Wall, out	1529.79
34-274.14 + on rock	1467.17
38-250 + on rock	1491.69
40-250 Hub	1496.43
42-250 Nail in rock	1507.27
44-250 Hub.	1513.15
46-250 Hub.	1520.08
48-250 Hub.	1526.32
50-250 Hub.	1526.80
52-250 Hub.	1538.45
60-250 Hub.	1568.29
60-275 Hub	1567.83
62-275 Hub	1579.76
64-275 Hub	1588.67



Elevation of Coordinate + Reference Pts.

66-275	Hvb	1600.51
68-275	Hvb	1614.90
70-275	Hvb	1622.83
72-275	Hvb	1633.37
60-300	Hvb	1571.58
56-325	Hvb	1553
58-325	Hvb	1562.11
62-325	Hvb	1582.64
64-325	Hvb	1591.63
66-325	Hvb	1602.66
68-325	Hvb	1612.60
70-325	Hvb	1623.05
72-325	Hvb	1633.56
66-360		1598.55
68-360		1607.89

~~Nails - 1565 L171~~

1+51'<sup>12</sup> to 1+91'<sup>12</sup> on 397' Radius



Fisher  
Bryson 4/15/22. Divide Wall  
Rt. Abt.

24.92  
10  
24.92

B.M.	5.04	1580.04	1575-
374.14R.		5.02	1575.02 1599.94
366.12		5.04	1575 1587.33

24.92 = 24" + 24" + 4 7/8"  
12.33 = 12' 4" Fill.

1-15-22 Final Topog

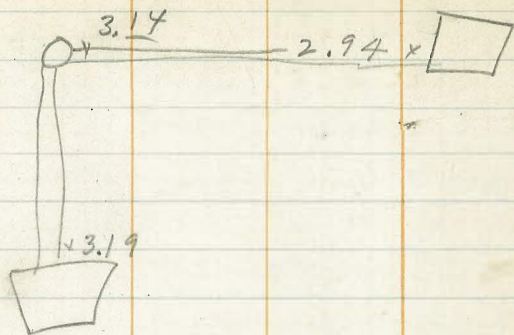
	At	1+36 <sup>58</sup>	374.14	Sight RP North
Contour	5.04	1580.04		75.00 1575.00
1580	Dist	Az.		
Rod. 04	35.2	331°	✓	
	38.2	321°45'	✓	
Form Int	38.7	313°30'	✓	
	41.4	315°	✓	
	44.0	309°30'	✓	
Contour	47.0	305°30'	✓	
+ Form Int.	50.5	302°05'	✓	

1-15-22 Gallery Pt.  
5 15' 1580.15 1575.00

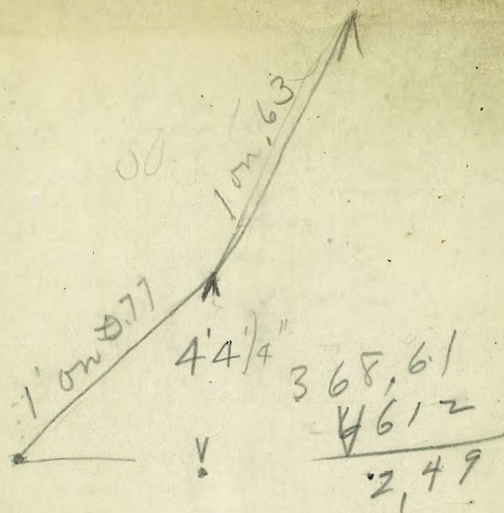
end of Gallery			1.77	1578.38
12.52	1584.64		+4.5	1580.69

4.04 = 4-0 1/2"









9.12

1400  
606  

---

0493-93

7 horn mixer

8015  

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122  
8137

464  

---

8137  
3.27

7127  

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715  
742

426  

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122  
504